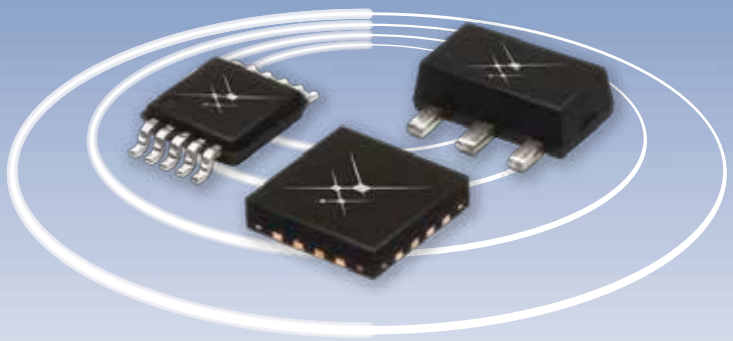
SKYWORKS®



Product Selection Guide

June 2014

Skyworks Solutions

Skyworks Solutions, Inc. is an innovator of high performance analog semiconductors. Leveraging core technologies, Skyworks supports automotive, broadband, wireless infrastructure, energy management, GPS, industrial, medical, military, wireless networking, smartphone, and tablet applications. The Company's portfolio includes amplifiers, attenuators, circulators, demodulators, detectors, diodes, directional couplers, front-end modules, hybrids, infrastructure RF subsystems, isolators, lighting and display solutions, mixers, modulators, optocouplers, optoisolators, phase shifters, PLLs/synthesizers/VCOs, power dividers/combiners, power management devices, receivers, switches, and technical ceramics.

Headquartered in Woburn, Massachusetts, USA, Skyworks is worldwide with engineering, manufacturing, sales and service facilities throughout Asia, Europe, and North America.

New products are continually being introduced at Skyworks. For the latest information, visit our Web site at **www.skyworksinc.com**, contact your local sales office, or email us at **sales@skyworksinc.com**.

The Skyworks Advantage

- Broad front-end module and precision analog product portfolio
- Market leadership in key product segments
- Solutions for all air interface standards, including CDMA, GSM / GPRS / EDGE, LTE, WCDMA, and WLAN
- Engagements with a diverse set of top-tier customers
- Strategic partnerships with all leading baseband suppliers
- Analog, RF and mixed-signal design capabilities
- Access to all key process technologies: GaAs HBT, pHEMT, BiCMOS, SiGe, CMOS and RF CMOS, and Silicon
- World-class manufacturing capabilities and scale
- Unparalleled level of customer service and technical support
- Commitment to technology innovation







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Products

Reference Material

NEW New products (indicated in blue, bold) are continually being introduced at Skyworks. For the latest information, please visit the new products section of our Web site at www.skyworksinc.com.

Innovation to Go™
Select products and sample/designer kits available for purchase online at www.skyworksinc.com.

Skyworks' Green™ products are compliant to all applicable materials legislation and are halogen-free. For additional information, refer to *Skyworks' Definition of Green™*, document number SQ04-0074.

The (Pb)-free symbol or "LF" in the part number denotes lead (Pb)-free, RoHS-compliant package. Tin/lead (SnPb) packaging is not recommended for new designs.

Products

AMPLIFIERS

Skyworks Solutions is pleased to offer a broad selection of power amplifiers (PAs) and low noise amplifiers (LNAs) for cellular applications and diverse markets such as wireless infrastructure, WiFi connectivity, automotive, test & measurement, energy management, and other high performance microwave applications. These amplifier solutions leverage the extensive design knowledge, technical leadership, manufacturing expertise, and superior quality of Skyworks.

Select Ultra Low Noise Amplifiers (LNAs)

Select LNAs Available from Stock for Prototype or High Volume Production

Skyworks' family of low noise amplifiers consists of a series of devices which cover a frequency range from 400 to 5900 MHz. Skyworks also offers low cost, discrete pHEMT FET packaged devices for those designers seeking the ultimate in application flexibility and customization. Applications include high performance GPS, WLAN/WiFi, and cellular infrastructure base station receivers for GSM, WCDMA, and LTE modulation schemes, as well as any other high performance LNA application in the 400–5900 MHz frequency range. These devices come packaged in a variety of industry-standard plastic packages which offer excellent thermal performance.

LNAs for Cellular Infrastructure, GPS, Broadband, ISM Band, and WLAN Applications

Part Number	Application	Frequency Range (GHz)	Test Frequency (MHz)	Gain (dB)	NF (dB)	OIP3 (dBm)	$OP_{1\ dB}$ (dBm)	V_{DD} (V) (Operating Range)	I_{DD} (mA) (Operating Range)	Package (mm)
SKY67151-396LF	Cellular Infrastructure	500–3800	2500	19	0.50	35.0	19	5 (3.0–5.0)	70 (20–100)	DFN 8L 2 x 2 x 0.75
SKY67101-396LF	Cellular Infrastructure	0.4–1.2	900	17.5	0.50	34.0	19.0	4 (3.3–5.0)	50 (20–90)	DFN 8L 2 x 2 x 0.75
SKY67100-396LF	Cellular Infrastructure	1.2–2.3	1950	17.5	0.70	34.0	18.5	4 (3.3–5.0)	50 (20–90)	DFN 8L 2 x 2 x 0.75
SKY67102-396LF	Cellular Infrastructure	2.0–3.0	2600	17.2	0.80	33.8	15.0	4 (3.3–5.0)	50 (20–90)	DFN 8L 2 x 2 x 0.75
SKY67110-396LF	Cellular Infrastructure	0.3–0.75	450	21.0	0.65	37.0	21.0	5	75 (50–120)	DFN 8L 2 x 2 x 0.75
SKY67111-396LF	Cellular Infrastructure	0.7–1.2	900	20.5	0.50	40	20.0	5	75 (50–120)	DFN 8L 2 x 2 x 0.75
SKY67021-396LF	Cellular Infrastructure	0.6–1.2	900	17.5	0.60	40.5	21.0	5 (3.3–5.0)	100 (50–120)	DFN 8L 2 x 2 x 0.75
SKY67022-396LF	Cellular Infrastructure	1.6–2.1	1850	17.5	0.65	39.5	20.0	5 (3.3–5.0)	100 (50–120)	DFN 8L 2 x 2 x 0.75
SKY67023-396LF	Cellular Infrastructure	2.0–3.0	2600	17.5	0.88	39.0	19.7	5 (3.3–5.0)	100 (50–120)	DFN 8L 2 x 2 x 0.75
SKY67161-306LF	Cellular Infrastructure	0.6–1.1	850	38.0	0.30	40.0	25.0	5 (4.0–5.0)	120 (80–140)	QFN 16L 4 x 4 x 0.90
SKY67105-306LF	Cellular Infrastructure	0.6–1.1	850	37.0	0.70	41.0	26.0	5 (3.5–5.0)	140 (120–155)	QFN 16L 4 x 4 x 0.90
SKY67106-306LF	Cellular Infrastructure	1.5–3.0	1950	35.0	0.65	37.0	24.0	5 (3.5–5.0)	100 (80–125)	QFN 16L 4 x 4 x 0.90
SKY67107-306LF	Cellular Infrastructure	2.3–2.8	2600	32.0	0.85	37.5	18.5	5 (3.5–5.0)	125 (50–145)	QFN 16L 4 x 4 0.75
SKY67015-396LF	General Purpose	0.05–0.3	250	17.5	0.80	25	12.5	3.3 (1.8–5.0)	18 (5–30)	DFN 8L 2 x 2 x 0.75

Select Ultra Low Noise Amplifiers (LNAs)

LNAs for Cellular Infrastructure, GPS, Broadband, ISM Band, and WLAN Applications

Part Number	Application	Frequency Range (GHz)	Test Frequency (MHz)	Gain (dB)	NF (dB)	OIP3 (dBm)	$OP_{1\ dB}$ (dBm)	V_{DD} (V) (Operating Range)	I_{DD} (mA) (Operating Range)	Package (mm)
SKY67012-396LF	General Purpose	0.3–0.6	450	16.5	0.85	24.0	14.0	3.3 (1.8–5.0)	18 (5–30)	DFN 8L 2 x 2 x 0.75
SKY67013-396LF	General Purpose	0.6–1.5	900	14.0	0.85	26.0	15.5	3.3 (1.8–5.0)	18 (5–30)	DFN 8L 2 x 2 x 0.75
SKY67014-396LF	General Purpose	1.5–3.0	2450	13.0	0.85	28.0	15.5	3.3 (1.8–5.0)	18 (5–30)	DFN 8L 2 x 2 x 0.75
SKY65404-31	5.8 GHz WLAN and ISM Band	4.9–5.9	5800	13.0	1.20	20.0	9.0	3.3 (2.8–5.0)	11 (10–15)	DFN 6L 1.5 x 1.5 x 0.45
SKY65405-21	2.4 GHz WLAN and ISM Band	2.4–2.5	2450	15.0	1.10	24.0	15.0	3.3 (2.8–5.0)	12 (10–16)	DFN 6L 1.5 x 1.5 x 0.45

Cellular Power Amplifiers

CDMA PAs

PCS Band

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77176	824–849 1850–1910	Dual-band Power Amplifier Module (PAM) for CDMA/PCS	40	28.0	3.2–4.2	12-pin MCM 3 x 5 x 1.0
SKY77732	1850–1910	PAM for CDMA/PCS	TBD	27.5	3.2–4.2	10-pad MCM 3 x 3 x 0.9

Cell Band

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77176	824–849 1850–1910	Dual-band PAM for CDMA/PCS	40	28.0	3.2–4.2	12-pin MCM 3 x 5 x 1.0
SKY77735	824–849	PAM for CDMA	TBD	TBD	3.2–4.2	10-pad MCM 3 x 3 x 0.9 Bottom of Form

Other Bands

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
CX77144	887–925	PAM for J-CDMA	40	27.5	3.2–4.2	10-pin MCM 4 x 4 x 1.5
SKY77166	450–460	PAM for CDMA2000	37	29.0	3.1–4.6	10-pad MCM 4 x 4 x 1.15

Cellular Power Amplifiers

GSM / GPRS Quad-band CMOS Power Amplifier

Our CMOS power amplifier allows the use of 0.13 µm Silicon CMOS process technology, integrating all of the functions between transmitter output and transmit/receive switch. The power gain stages, small signal control circuitry, and 50 Ω matching are all realized on a single die.

The AX508 PA amplifies low-level radio frequency (RF) signals to the required high-power levels needed for transmission in GSM/GPRS mobile phone handsets or data modules. The device supports quad-band (GSM 850/900/1800/1900) operation. The integrated 50 Ω input and output matching circuitry enables direct connection to the transceiver output and the transmit/receive switch input without the use of the external matching components. The power level is regulated via a fully integrated closed-loop power controller which ensures that the GSM power/time mask and switching spectrum may be met with adequate margin to allow robust mass production when subjected to a real world cell phone environment, such as highly elevated VSWR, and low supply voltage.

The reliability of our GSM/GPRS quad band CMOS power amplifier has been proven through thousands of hours of life testing, at accelerated operating conditions, including greater than recommended operating temperature, extended duty cycle, load mismatches of greater than VSWR 10:1 at worst case phase angles, and elevated supply voltages.

Our GSM/GPRS quad-band CMOS power amplifier also offers the following:

- **GSM/GPRS class 12 operation**
- **Power supply range of 2.9 to 5.5 V**
- **RF input range: -2 to 8 dBm**
- **Fully integrated on chip 50 Ω matching circuits**
- **Fully integrated closed-loop power control**
- **<100 dB/V power control slope**
- **MSL JEDEC Level 2A, lead (Pb)-free, RoHS-compliant package**
  - **Low profile 5 x 3.5 x 0.9 mm micro lead frame package**

Part Number	Description	Package (mm)
AX508	GSM/GPRS Quad-band Power Amplifier	Micro Lead Frame 5 x 3.5 x 0.9

Cellular Power Amplifiers

GSM / GPRS / EDGE PAs

Part Number	Frequency (MHz)	Description	Typical Output Power (dBm) GSM/EDGE	Typical PAE (%)	Supply Voltage (V)	Package (mm)
SKY77336		iPAC™ PAM for Quad-band GSM/GPRS/EDGE			3.0–4.8	16-pad MCM
	824–849	GSM850	35.0	52		5 x 5 x 1
	880–915	GSM900	35.0	52		
	1710–1785	DCS1800	33.0	50		
	1850–1910	PCS1900	33.0	50		
SKY77344		iPAC™ PAM for Quad-band GSM/EDGE			3.0–4.8	20-pad MCM
	824–849	GSM850	35.0	52		5 x 5 x 0.9
	880–915	GSM900	35.0	52		
	1710–1785	DCS1800	33.5	45		
	1850–1910	PCS1900	33.5	45		
SKY77346		iPAC™ PAM for Quad-band GSM/GPRS			2.9–4.8	26-pin MCM
	824–849	GSM850	35.0	52		5 x 6 x 0.9
	880–915	GSM900	35.0	52		
	1710–1785	DCS1800	33.5	52		
	1850–1910	PCS1900	33.5	52		
SKY77350-13		PAM for Quad-band GSM/GPRS			3.0–4.8	13-pad MCM
	824–849	GSM850	35.5	55		5 x 5 x 1
	880–915	GSM900	35.5	55		
	1710–1785	DCS1800	33.5	55		
	1850–1910	PCS1900	33.5	55		
SKY77351-13		PAM for Quad-band GSM/GPRS			3.0–4.8	13-pad MCM
	824–849	GSM850	35.0	52		5 x 5 x 1
	880–915	GSM900	35.0	52		
	1710–1785	DCS1800	33.5	45		
	1850–1910	PCS1900	33.5	45		
SKY77354		PAM for Quad-band GSM/GPRS/EDGE	35.35	55	3.0–4.8	14-pad MCM
	824–849	GSM850	35.35	55		5 x 3.5 x 0.9
	880–915	GSM900	35.45	53		
	1710–1785	DCS1800	35.45	53		
	1850–1910	PCS1900				

LTE PAs

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Typical Linear LTE Power (dBm)	Supply Voltage (V)	Package (mm)
SKY77449	777–798	PAM for LTE/E–UTRA Bands XIII/XIV (777–798 MHz)	36	27.5	29.0	3.0–4.6	16–pad MCM 4 x 4 x 0.85
SKY77706	2500–2570	PAM for LTE FDD Band VII (2500–2570 MHz)	34	–	28.0	3.2–4.2	10–pad MCM 3 x 3 x 0.9 Bottom of Form
SKY77707	698–716	PAM for LTE/EUTRAN Bands XII/XVII (698–716 MHz)	36	28.0	–	3.2–4.2	10–pad MCM 3 x 3 x 0.9
SKY77708	777–798	PAM for LTE/EUTRAN Bands XIII/XIV (777–798 MHz)	36	28.0	–	3.2–4.2	10–pad MCM 3 x 3 x 0.9
SKY77709	2300–2400	PAM for LTE FDD Band VII (2300–2400 MHz)	36	28.0	–	3.2–4.2	10–pad MCM 3 x 3 x 0.9
SKY77731	1427.9–1462.9	PAM for WCDMA/LTE Band 11 (1427.9–1447.9 MHz) and Band 21 (1447.9–1462.9 MHz)	TBD	TBD	TBD	3.2–4.2	10–pad MCM 3 x 3 x 0.9
SKY77733	777–798	SkyHi™ PAM for LTE Bands 13/14 (777–798 MHz)	43	–	32.0	3.0–4.5	10–pad MCM 3 x 3 x 0.9

Cellular Power Amplifiers

LTE PAs (Continued)

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Typical Linear LTE Power (dBm)	Supply Voltage (V)	Package (mm)
SKY77736	832–862	SkyHi™ PAM for LTE Band 20 (832–862 MHz)	42	–	32.0	3.0–4.5	10–pad MCM 3 x 3 x 0.9
SKY77737	698–716	SkyHi™ PAM for LTE Bands 12/17 (698–716 MHz)	44	–	32.0	3.0–4.5	10–pad MCM 3 x 3 x 0.9
SKY77761-11	1920–1980	SkyHi™ PAM for CDMA/WCDMA/HSDPA/HSUPA/ HSPA+ Band I (1920–1980 MHz)	48	–	28.5	3.0–4.5	10–pad MCM 3 x 3 x 0.9
SKY77761-12	1920–1980	SkyHi™ PAM for CDMA/WCDMA/HSDPA/HSUPA/ HSPA+/LTE – Band I (1920–1980 MHz)	46	–	28.5	3.4–4.5	10–pad MCM 3 x 3 x 0.9
SKY77762	1850–1910	SkyHi™ PAM for CDMA/WCDMA/HSDPA/HSUPA/ HSPA+/ LTE – Band II (1850–1910 MHz)	46	–	28.6	3.0–4.5	10–pad MCM 3 x 3 x 0.9
SKY77764	1710–1785	SkyHi™ PAM for CDMA/WCDMA/HSDPA/HSUPA/ HSPA+/ LTE – Bands III, IV, IX (1710 MHz–1785 MHz)	46	–	28.0	3.4–4.5	10–pad MCM 3 x 3 x 0.9
SKY77767	2500–2570	SkyHi™ PAM for LTE – Band 7 (2500–2570 MHz)	TBD	TBD	TBD	3.0–4.5	10–pad MCM 3 x 3 x 0.9
SKY77768	880–915	SkyHi™ PAM for WCDMA/HSDPA/HSUPA/ HSPA+/LTE	50	–	28.0	3.2–4.2	10–pad MCM 3 x 3 x 0.9
SKY77771	1427.9–1462.9	PAM for LTE Band 11/21	TBD	TBD	TBD	TBD	10-pad MCM 2 x 2.5 x 0.9
SKY77772-11	699–748	PAM for LTE – Bands 12, 17, 28	TBD	TBD	TBD	TBD	10-pad MCM 2 x 2.5 x 0.9
SKY77773	1427.9–1462.9	PAM for LTE Band 11/21	TBD	TBD	TBD	TBD	10-pad MCM 2 x 2.5 x 0.9
SKY77778-11	2500–2570	PAM for LTE FDD Band 7	TBD	TBD	TBD	TBD	10-pad MCM 2 x 2.5 x 0.9
SKY77778-21	 2500–2570 2496–2690 2300–2400 2545–2575	PAM for LTE FDD Band 7, TDD Bands 38/41, Band 40, and AXGP Band FDD Band 7 TDD Bands 38/41 TDD Band 40 AXGP Band	TBD	TBD	TBD	TBD	10-pad MCM 2 x 2.5 x 0.9
SKY77778-51	 2500–2570 2496–2690 2300–2400 2545–2575	PAM for LTE FDD Band 7, TDD Bands 38/41, Band 40, and AXGP Band FDD Band 7 TDD Bands 38/41 TDD Band 40 AXGP Band	TBD	TBD	TBD	TBD	10–pad MCM 2 x 2.5 x 0.9
SKY77807	 2500–2570 2570–2620 2300–2400 2496–2690 2300–2400	Quad-band PAM for FDD/TDD LTE (Tx Bands 7, 38, 40, 41) LTE B7 LTE B38 LTE B40 LTE B41 TD-SCDMA B40	TBD	TBD	TBD	TBD	24-pad MCM 4 x 3 x 1 (Max.)

NEW New products (indicated in blue, bold) are continually being introduced at Skyworks. For the latest information, please visit the new products section of our Web site at www.skyworksinc.com.

Cellular Power Amplifiers

Multimode / Multiband (MMMB) PAs

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical I_{MAX} (mA)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77432		Multimode/Multiband PAM				3.0–4.6	30-pin MCM
	824–849	GSM850	55	–	–		8 x 6 x 1.1
	880–915	GSM900	55	–	–		
	1710–1785	DCS1800	52	–	–		
	1850–1910	PCS1900	52	–	–		
	1920–1980	WCDMA B1	–	515	26.7		
	1850–1910	WCDMA B2	–	610	26.5		
	1750–1780	WCDMA B4	–	535	26.5		
	824–849	WCDMA B5	–	520	26.4		
	880–915	WCDMA B8	–	515	26.4		
SKY77601		Multimode/Multiband PAM				3.0–4.5	34-pin MCM
	824–849	GSM850	55	–	33.5		6 x 8 x 0.9
	880–915	GSM900	55	–	33.5		
	1710–1785	DCS1800	51	–	33.5		
	1850–1910	PCS1900	51	–	33.5		
	1920–1980	WCDMA B1	–	450	27.0		
	1850–1910	WCDMA B2	–	550	27.0		
	824–849	WCDMA B5	–	430	27.0		
	880–915	WCDMA B8	–	450	27.0		
SKY77603		Multiband/Multimode PAM	TBD	TBD	TBD	TBD	38-pad MCM
	824–849	GSM850					6 x 8 x 0.9
	880–915	EGSM900					
	1710–1785	GSM1800					
	1850–1910	EGSM1900					
	824–849	WCDMA/LTE B5					
	832–862	WCDMA/LTE B20					
	880–915	WCDMA/LTE B8					
	830–840	LTE B6					
	830–845	LTE B19					
	1920–1980	WCDMA/LTE B1					
	1850–1910	WCDMA/LTE B2					
	1710–1785	WCDMA/LTE B3					
	1710–1755	WCDMA/LTE B4					
	1749.9–1784.9	WCDMA/LTE B9					
	1710–1770	WCDMA/LTE B10					
SKY77604–11		Multimode/Multiband PAM				2.9–4.7	34-pin MCM
	824–849	GSM850	56	–	–		6 x 8 x 0.9
	880–915	GSM900	56	–	–		
	1710–1785	DCS1800	50	–	–		
	1850–1910	PCS1900	50	–	–		
	1920–1980	WCDMA B1	–	465	25.0		
	1850–1910	WCDMA B2	–	525	25.0		
	1750–1780	WCDMA B4	–	500	25.0		
	824–849	WCDMA B5	–	420	24.6		
	880–915	WCDMA B8	–	450	25.0		

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Cellular Power Amplifiers

Multimode / Multiband (MMMB) PAs (Continued)

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical I_{MAX} (mA)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77606		Multimode/Multiband PAM				3.2–4.5	24-pad MCM
	824–849	GSM850	50	1740	–		5 x 7 x 0.9
	880–915	GSM900	50	1740	–		
	1710–1785	DCS1800	50	1075	–		
	1850–1910	PCS1900	50	1075	–		
	1920–1980	WCDMA B1	37	478	27.0		
	824–849	WCDMA B5	35	447	28.0		
	880–915	WCDMA B8	34	467	26.5		
SKY77615		Multimode/Multiband PAM	TBD	TBD	TBD	TBD	36-pad MCM
	824–849	GSM850					6 x 8 x 0.9
	880–915	GSM900					
	1710–1785	DCS1800					
	1850–1910	PCS1900					
	1920–1980	WCDMA B1					
	1850–1910	WCDMA B2					
	1710–1785	WCDMA B3					
	1710–1755	WCDMA B4					
	824–849	WCDMA B5					
	830–840	WCDMA B6					
	880–915	WCDMA B8					
	1710–1770	WCDMA B10					
SKY77619		SkyHi™ Multiband/Multimode PAM				0.5–4.2	42-pin MCM
	824–849	GSM850	53	TBD	29		7 x 9 x 0.9
	880–915	GSM900	53	TBD	29		
	1710–1785	DCS1800	53	TBD	TBD		
	1850–1910	PCS1900	53	TBD	TBD		
	1920–1980	WCDMA B1	44	TBD	TBD		
	1850–1910	WCDMA B2	44	TBD	TBD		
	1750–1780	WCDMA B4	44	TBD	TBD		
	824–849	WCDMA B5	44	TBD	TBD		
	880–915	WCDMA B8	44	TBD	TBD		
SKY77621-11		Multiband/Multimode PAM	TBD	TBD	TBD	TBD	42-pin MCM
	824–849	GSM/EDGE850					5 x 7 x 0.9
	880–915	GSM/EDGE900					
	1710–1785	GSM/EDGE1800					
	1850–1910	GSM/EDGE1900					
	1920–1980	WCDMA/LTE B1					
	1850–1910	WCDMA/LTE B2					
	1710–1785	WCDMA/LTE B3					
	1710–1755	WCDMA/LTE B4					
	824–849	WCDMA/LTE B5					
	880–915	WCDMA/LTE B8					
	777–787	LTE Band 13					
	704–716	LTE Band 17					
	832–862	LTE Band 20					
	2010–2025	TD–SCDMA Band 34					
	1880–1920	LTE Band 39					
SKY77629		Multiband/Multimode PAM	TBD	TBD	TBD	TBD	42-pad MCM
	824–849	GSM850					5 x 7 x 0.9
	880–915	GSM900					
	1710–1785	DCS1800					
	1850–1910	PCS1900					
	1920–1980	WCDMA/LTE B1					
	1850–1910	WCDMA/LTE B2					
	1710–1785	WCDMA/LTE B3					
	1710–1755	WCDMA/LTE B4					
	824–849	WCDMA/LTE B5					
	880–915	WCDMA/LTE B8					

Cellular Power Amplifiers

Multimode / Multiband (MMMB) PAs (Continued)

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical I_{MAX} (mA)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77629-21		Multiband/Multimode PAM	TBD	TBD	TBD	TBD	42-pad MCM 5 x 7 x 0.9
	824–849	GSM850					
	880–915	GSM900					
	1710–1785	DCS1800					
	1850–1910	PCS1900					
	1920–1980	WCDMA/LTE B1					
	1850–1910	WCDMA/LTE B2					
	1710–1785	WCDMA/LTE B3					
	1710–1755	WCDMA/LTE B4					
	824–849	WCDMA/LTE B5					
	880–915	WCDMA/LTE B8					
SKY77629-51		Multiband/Multimode PAM	TBD	TBD	TBD	TBD	42-pad MCM 5 x 7 x 0.9
	824–849	GSM850					
	880–915	GSM900					
	1710–1785	DCS1800					
	1850–1910	PCS1900					
	1920–1980	WCDMA/LTE B1					
	1850–1910	WCDMA/LTE B2					
	1710–1785	WCDMA/LTE B3					
	1710–1755	WCDMA/LTE B4					
	824–849	WCDMA/LTE B5					
	880–915	WCDMA/LTE B8					
	832–862	WCDMA/LTE B20					
SKY77630		Multiband/Multimode PAM	TBD	TBD	TBD	TBD	42-pad MCM 5 x 7 x 0.9
	824–849	GSM850					
	880–915	GSM900					
	1710–1785	DCS1800					
	1850–1910	PCS1900					
	1920–1980	WCDMA/LTE B1					
	1850–1910	WCDMA/LTE B2					
	1710–1785	WCDMA/LTE B3					
	824–849	WCDMA/LTE B5					
	880–915	WCDMA/LTE B8					
	832–862	WCDMA/LTE B20					
SKY77631		Multiband/Multimode PAM	TBD	TBD	TBD	TBD	42-pad MCM 5 x 7 x 0.9
	824–849	GSM850					
	880–915	GSM900					
	1710–1785	DCS1800					
	1850–1910	PCS1900					
	1920–1980	WCDMA/LTE B1					
	1850–1910	WCDMA/LTE B2					
	1710–1785	WCDMA/LTE B3					
	1710–1755	WCDMA/LTE B4					
	824–849	WCDMA/LTE B5					
	699–716	WCDMA/LTE B12					
SKY77632		Multiband PAM	TBD	TBD	TBD	TBD	42-pad MCM 5 x 7 x 0.9
	824–849	GSM850					
	880–915	GSM900					
	1710–1785	DCS1800					
	1850–1910	PCS1900					
	1920–1980	WCDMA/LTE B1					
	1850–1910	WCDMA/LTE B2					
	1710–1785	WCDMA/LTE B3					
	1710–1755	WCDMA/LTE B4					
	824–849	WCDMA/LTE B5					
	880–915	WCDMA/LTE B8					

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Cellular Power Amplifiers

Multimode / Multiband (MMMB) PAs (Continued)

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical I_{MAX} (mA)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77753		PAM for Penta-band FDD LTE/TD–SCDMA/TDD LTE	TBD	TBD	TBD	TBD	26-pad MCM 5 x 3.5 x 0.9
	2500–2570	LTE B7					
	2570–2620	LTE B38					
	1880–1920	LTE B39					
	2300–2400	LTE B40					
	2496–2690	LTE B41					
	2010–2025	TD–SCDMA B34					
	1880–1920	TD–SCDMA B39					
	2300–2400	TD–SCDMA B40					
SKY77754-11		PAM for Penta-band TD-SCDMA / TDD LTE – Bands 34, 38, 39, 40, 41	TBD	TBD	TBD	TBD	26-pad MCM 5 x 3.5 x 0.9
	2570–2620	LTE B38					
	1880–1920	LTE B39					
	2300–2400	LTE B40					
	2496–2690	LTE B41					
	2010–2025	TD-SCDMA B34					
	1880–1920	TD-SCDMA B39					

TD-SCDMA PAs

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77161	2010–2025	PAM for TD-SCDMA	41	27.5	3.2–4.2	10-pin MCM 4 x 4 x 1.2
SKY77198-12	1880–1920 2010–2025	PAM for TD-SCDMA	39	27.0	3.2–4.2	10-pad MCM 3 x 3 x 0.85
SKY77712	1880–1920 2010–2025	PAM for TD-SCDMA	39	27.0	3.2–4.2	10-pad MCM 3 x 3 x 0.85

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Cellular Power Amplifiers

WCDMA PAs

Single Band Modules—Band 1

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77174	1920–1980	PAM for WCDMA/HSDPA	38	28.5	3.1–4.6	10-pin MCM 4 x 4 x 1.1
SKY77446	1920–1980	LIPA® Module for for WCDMA/HSDPA/ HSUPA/HSPA+	31	28.0	3.0–4.6	10-pad MCM 4 x 3 x 0.9
SKY77701	1920–1980	PAM for CDMA/WCDMA/HSDPA/HSUPA/ HSPA+/LTE	39	27.0	3.2–4.2	10-pad MCM 3 x 3 x 0.9

Single Band Modules—Band 2

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77447	1850–1910	LIPA® Module for WCDMA/HSDPA/ HSUPA/HSPA+	34.5	29.0	3.0–3.4	10-pad MCM 4 x 3 x 0.9
SKY77702	1850–1910	PAM for WCDMA/HSDPA/HSUPA/HSPA+/LTE	40.0	28.5	3.2–4.2	10-pad MCM 3 x 3 x 0.85

Single Band Modules—Band 4

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77460	1710–1785	LIPA® Module for WCDMA/HSPA+	28.5	29.0	3.0–3.4	10-pad MCM 4 x 3 x 0.9
SKY77703	1710–1785	PAM for CDMA/WCDMA/HSDPA/HSUPA/ HSPA+/LTE	39.0	27.0	3.2–4.2	10-pad MCM 3 x 3 x 0.9

Single Band Modules—Band 5 & 6

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77448	824–849	LIPA® Module for WCDMA/HSDPA/HSUPA/ HSPA+	34	28.0	3.0–3.4	10-pad MCM 4 x 3 x 0.9
SKY77704	824–849	PAM for CDMA/WCDMA/HSDPA/HSUPA/ HSPA+/LTE	39	27.0	3.2–4.2	10-pad MCM 3 x 3 x 0.9
SKY77765	815–849	SkyHi™ PAM for CDMA/WCDMA/HSDPA/ HSUPA/HSPA+/LTE	50	28.0	3.2–4.2	10-pad MCM 3 x 3 x 0.9

Cellular Power Amplifiers

WCDMA PAs (Continued)

Single Band Modules—Band 8

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77461	880–915	LIPA® Module for WCDMA/HSPA+	33	28	3.0–3.4	10-pad MCM 4 x 3 x 0.9
SKY77705	880–915	PAM for WCDMA/HSDPA/HSUPA/HSPA+/LTE	39	27	3.2–4.2	10-pad MCM 3 x 3 x 0.9

Multiband Modules—Band 1 & 8

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77195	1920–1980 880–915	PAM for WCDMA/HSDPA	40	27	3.2–4.2	10-pad MCM 5 x 4 x 0.85
SKY77741	1920–1980 880–915	PAM for CDMA2000/WCDMA/ HSDPA/HSUPA	47	27	3.2–4.2	16-pad MCM 4 x 3 x 0.9
SKY77751-12	1920–1980 880–915	SkyHi™ PAM for CDMA2000/WCDMA/ HSDPA/HSUPA, LTE	47	27	3.2–4.2	16-pad MCM 4 x 3 x 0.9

Multiband Modules—Band 2 & 5

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77196	1850–1910 824–849	PAM for WCDMA/HSDPA	40	27	3.2–4.2	14-pin MCM 5 x 4 x 0.85
SKY77742	1850–1910 824–849	PAM for CDMA2000/WCDMA/ HSDPA/HSUPA	47	27	3.2–4.2	16-pad MCM 4 x 3 x 0.9
SKY77752	1850–1910 824–849	SkyHi™ PAM for CDMA2000/WCDMA/ HSDPA/HSUPA, LTE	47	27	3.2–4.2	16-pad MCM 4 x 3 x 0.9

Multiband Modules—Band 1 & 5

Part Number	Frequency (MHz)	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77197	824–849 1920–1980	PAM for WCDMA/HSDPA	40	27	3.2–4.2	14-pad MCM 5 x 4 x 0.85
SKY77745	824–849 1920–1980	PAM for CDMA2000/WCDMA/ HSDPA/HSUPA	TBD	TBD	3.2–4.2	16-pad MCM 4 x 3 x 0.9

Multiband Modules—Band 1, 2, 5, 8

Part Number	Frequency (MHz)	Description	Package (mm)
SKY77758		Broadband PAM for WCDMA/HSDPA/HSUPA/HSPA+ (Bands 1, 2, 5, 8)	14-pad MCM 3.0 x 4.2 x 0.9
	1920–1980	WCDMA B1	
	1850–1910	WCDMA B2	
	824–849	WCDMA B5	
	880–915	WCDMA B8	

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WiFi Connectivity

2.5 GHz Power Amplifiers

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$P_{1\ dB}$ (dBm)	PAE (%)	V_{CC} (V)	Typ. Quiescent Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SE2425U	2.4–2.5	2.45	28.2	–	–	–	3.3	–	–	16-pin QFN 3 x 3 x 0.5
SE2527L	2.4–2.5	2.45	33.0 34.0	–	26.5 28.5	–	3.5 5.0	–	–	16-pin QFN 4 x 4 x 0.9
SE2528L	2.4–2.5	2.45	33.0 34.0	–	26.5 28.5	–	3.3 5.0	–	–	16-pin QFN 4 x 4 x 0.9
SE2565T	2.4–2.5	2.45	31.0	–	30.0	–	3.3	–	–	16-pin QFN 3 x 3 x 0.6
SE2568L	2.4–2.5	2.45	27.0 27.0	–	25.0 25.0	–	3.3 5.0	90 100	–	8-pin QFN 2 x 2 x 0.9
SE2568U	2.4–2.5	2.45	27.0 27.0	–	25.0 25.0	–	3.3 5.0	90 100	–	8-pin QFN 2 x 2 x 0.5
SE2574BL-R	2.4–2.5	2.45	27.0	–	25.0	–	3.3	–	–	8-pin QFN 2 x 2 x 0.9
SE2574L	2.4–2.5	2.45	28.0	–	25.0	–	3.3	–	–	8-pin QFN 2 x 2 x 0.9
SE2576L	2.4–2.5	2.45	33.0	–	32.0	–	5.0	–	–	16-pin QFN 3 x 3 x 0.9
SE2597L	2.4–2.5	2.45	28.0	–	26.5	–	3.3	125	–	16-pin QFN 3 x 3 x 0.9
SE2598L	2.4–2.5	2.45	28.0	–	26.5	–	3.3	125	–	16-pin QFN 3 x 3 x 0.9
SE2604L	2.4–2.5	2.45	32.0	–	30.0	–	3.3	–	–	16-pin QFN 3 x 3 x 0.6
SE2605L	2.4–2.5	2.45	33.0	–	32.0	–	5.0	–	–	16-pin QFN 3 x 3 x 0.9
SE2609L	2.4–2.5	2.45	28.0 28.0	–	25.5 25.5	–	3.3 5.0	100	–	8-pin QFN 2 x 2 x 0.9
SE2623L	2.4–2.5	2.45	33.0	–	32.0	–	5.0	–	–	16-pin QFN 3 x 3 x 0.9
SKY65131	2.4–2.5	2.442	26.0	–	–	28	38.0	3.3	150	16-pin MCM 4 x 4 x 1.5
SKY65152-11	2.4–2.5	2.442	32.0	42	33.0	33	5.0	490	5	20-pin MCM 6 x 6 x 1.05
SKY65174-21	2.4–2.5	2.442	35.0	–	–	–	5.0	285	7	10-pin MCM 4 x 4 x 0.85

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$OP_{1\ dB}$ (dBm)	$P_{1\ dB}$ (dBm)	V_{CC} (V)	V_{DD} (V)	NF (dB)	Typ. Quiescent Current (mA)	Package (mm)
SKY65162-70LF	0.4–2.7	0.915	20.0	46.5	28.0	–	–	5	–	188	4-pin SOT-89
	0.4–2.7	1.960	15.0	43.0	30.2	–	–	5	–	188	4.5 x 2.4 x 1.5
	0.4–2.7	2.400	13.2	43.5	29.5	–	–	5	–	188	
	0.4–2.7	2.400	13.2	43.8	30.0	–	–	5	–	188	
SKY65900-11	2.4–2.5	TBD	TBD	–	34.0	–	TBD	–	TBD	275	16-pin QFN 4 x 4 x 0.9

WiFi Connectivity

5 GHz Power Amplifiers

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$P_{1\ dB}$ (dBm)	PAE (%)	V_{CC} (V)	Typ. Quiescent Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SE2537L	4.90–5.90	5.45	28	–	25	–	3.3	150	–	16-pin QFN 3 x 3 x 0.9
SE2567L	4.90–5.90	5.40	30	–	25	–	3.3	150	–	16-pin QFN 3 x 3 x 0.9
SE5003L	5.15–5.85	5.40	32	–	29	–	5.0	150	–	20-pin QFN 4 x 4 x 0.9
SE5003L1-R	5.15–5.85	5.40	32	–	32	–	5.0	120	–	20-pin QFN 4 x 4 x 0.9
SE5004L	5.15–5.85	5.40	26	–	34	–	5.0	300	–	20-pin QFN 4 x 4 x 0.9
SE5005L	5.15–5.75	5.40	27	–	25	–	3.3	–	–	16-pin QFN 3 x 3 x 0.9
SE5023L	5.15–5.85	5.40	32	–	34	–	5.0	–	–	16-pin QFN 4 x 4 x 0.9
SKY85402-11	5.15–5.9	5.45	32	–	29	–	5.0	300	–	20-pin QFN 4 x 4 x 0.85

Dual-band Power Amplifiers

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$P_{1\ dB}$ (dBm)	PAE (%)	V_{CC} (V)	Typ. Quiescent Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SE2580L	4.9–5.875 (a) 2.4–2.5 (b) 2.4–2.5 (g)	5.15, 5.45 2.45 2.45	30.0 30.0 30.0	–	24.0 27.0 27.0	–	3.3 3.3 3.3	145 TBD 115	–	20-pin QFN 3 x 3 x 0.9

2.5 GHz Low Noise Amplifiers

Part Number	Frequency (GHz)	Typ. Gain (dB)	V_{DD} (V)	Typ. Noise Figure (dB)	Package (mm)
SE2600S	2.4–2.50	12	3.3	1.8	11-pin CSP 1.07 x 1.05 x 0.38
SE2601T	2.4–2.50	12	3.3	1.8	12-pin QFN 2 x 2 x 0.6
SKY85202-11	2.4–2.5	14	3.6	2.0	15-bump WLCSP 1.04 x 1.04

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WiFi Connectivity

5 GHz Low Noise Amplifiers

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$OP_{1\ dB}$ (dBm)	V_{DD} (V)	Typ. Supply Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SE5008L	4.9–5.85	–	14	–	–	3.3	–	2.2	16-pin QFN 3 x 3 x 0.9
SKY65404-31	4.9–5.9	5.8	13	20	9	3.3	11	1.2	6-pin DFN 1.5 x 1.5 x 0.45
SKY85606-11	4.9–5.925	–	12	–	–	3.6	–	2.5	15-bump WLCSP 1.04 x 1.04 x 0.285

Wireless Infrastructure / Femtocell Power Amplifiers

High Gain Linear PA Modules

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$P_{1\ dB}$ (dBm)	V_{CC} (V)	Typ. Quiescent Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SKY65120-21	2.11–2.17	2.14	24.6	48	33.5	5.0	447	8.4	20-pin MCM 6 x 6 x 0.9
SKY65124	1.93–1.99	1.96	24.0	45	33.0	5.0	550	6.3	20-pin MCM 6 x 6 x 1.45
SKY65126-21	0.80–0.90	0.85	30.0	48	32.5	5.0	285	4.5	20-pin MCM 6 x 6 x 1.45
SKY65127	0.70–0.80	0.75	36.5	44	32.5	5.0	264	4.4	20-pin MCM 6 x 6 x 1.45
SKY65129-11	1.98–2.02	2.00	29.5	–	34.5	5.0	425	6.5	20-pin MCM 6 x 6 x 1.35
SKY65170-21	0.86–0.96	0.88	32.0	45	28.0	5.0	200	6.5	20-pin MCM 6 x 6 x 1.35
SKY65171-21	1.93–2.17	1.96	30.0	36	28.0	5.0	150	6.5	20-pin MCM 6 x 6 x 1.35
SKY66001-11	2.10–2.20	2.14	30.0	40	–	5.0	57	–	10-pin MCM 3 x 3 x 0.9
SKY66002-11	1.90–2.025	1.96	30.0	40	–	4.2	60	–	10-pin MCM 3 x 3 x 0.9
SKY66005-11	0.85–0.92	0.883	30.0	–	–	4.2	46	–	10-pin MCM 3 x 3 x 0.9
SKY66008-11	0.90–0.99	0.9425	30.0	–	–	4.2	48	–	10-pin MCM 3 x 3 x 0.9
SKY66013-11	0.70–0.80	0.746	27.5	–	–	4.2	46	–	10-pin MCM 3 x 3 x 0.9

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Smart Energy—Connected Home and Automation 802.15.4, ISM, and ZigBee®

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$P_{1\ dB}$ (dBm)	PAE (%)	V_{CC} (V)	Typ. Quiescent Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SKY65111-348LF	0.60–1.1	0.915	40.0	36	29.5	50	3.5	250	6.5	16-pin QFN 3 x 3 x 0.75
SKY65116	0.39–0.5	0.445	35.0	43	32.5	42	3.6	330	6.0	12-pin MCM 8 x 8 x 1.45
SE2425U	2.4–2.5	2.450	28.2	–	–	–	2.0–3.3	–	–	16-pin QFN 3 x 3 x 0.5
SE2433T	2.4–2.5	2.450	22.0	–	24.0	31	2.0–3.6	30	–	12-pin QFN 2 x 2.5 x 0.55

BDS / GPS / GNSS Low Noise Amplifiers

Part Number	Frequency (MHz)	Test Frequency (MHz)	Description	Gain (dB)	V_{DD} (V)	$IP_{1\ dB}$ (dBm)	NF (dB)	Package (mm)
SKY65601-477LF	1561–1606	1575	BDS/GPS/GNSS Low-Noise Amplifier	16.8	2.85	-13	0.8	6-pin DFN 2.0 x 1.3 x 0.45
SKY65602-477LF	1561–1606	1575	BDS/GPS/GNSS Low-Noise Amplifier	16.0	2.85	-7.5	0.7	6-pin DFN 2.0 x 1.3 x 0.45

Broad Market Low Noise Amplifiers (LNAs) and Low Noise Transistors

Low Noise Amplifiers

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$OP_{1\ dB}$ (dBm)	V_{DD} (V)	Typ. Supply Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SKY65047-360LF	0.4–3.0	1.575	16.5	19.5	0	3.3	5	0.80	8-pin DFN 2 x 2 x 0.9
SKY65048-360LF	0.7–1.2	0.900	16.5	35.0	18.0	5	85	0.65	8-pin QFN 2 x 2 x 0.9
SKY65050-372LF	0.45–6.0	2.400	15.5	23.5	10.5	3	20	0.65	4-pin SC-70 2.2 x 1.35 x 1.1
SKY65404-31	4.9-5.9	5.800	13.0	20.0	9.0	3.3	11	1.20	6-pin DFN 1.5 x 1.5 x 0.45
SKY65405-21	2.4–2.5	2.450	15.0	24.0	15.0	3.3	12	1.10	6-pin DFN 1.5 x 1.5 x 0.45
SKY65971-11	2.4-2.5	2.450	14.5	–	–	3.3	13	1.30	6-pin DFN 1.5 x 1.5 x 0.45
SKY65981-11	5.15-5.85	5.800	13.0	–	–	3.3	12	1.50	6-pin DFN 1.5 x 1.5 x 0.45
SKY67012-396LF	0.3–0.6 0.3–0.6	0.450 0.450	16.5 15.5	24.0 18.0	14.0 15.0	3.3 3.3	15 5	0.85 1.00	8-pin DFN 2 x 2 x 0.75
SKY67013-396LF	0.6–1.5 0.6–1.5	0.900 0.900	14.0 12.5	26.0 22.2	15.5 15.5	3.3 3.3	15 5	0.85 1.10	8-pin DFN 2 x 2 x 0.75
SKY67014-396LF	1.5–3.0	2.450	13.0 12.0	28.0 18.0	15.5 16.0	3.3 3.3	18 5	0.85 1.00	8-pin DFN 2 x 2 x 0.75
SKY67015-396LF	0.03–0.30	0.250	15.5	16.0	12.0	3.3 3.3	18 5	0.80 1.05	8-pin DFN 2 x 2 x 0.75

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Broad Market Low Noise Amplifiers (LNAs) and Low Noise Transistors

Low Noise Amplifiers (Continued)

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$OP_{1\ dB}$ (dBm)	V_{DD} (V)	Typ. Supply Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SKY67021-396LF	0.6–1.2	0.900	17.5	40.0	21.7	5	100	0.60	8-pin DFN 2 x 2 x 0.75
SKY67022-396LF	1.6–2.2	1.850	17.5	39.5	22.0	5	95	0.65	8-pin DFN 2 x 2 x 0.75
SKY67023-396LF	2.0–3.0	2.600	17.3	39.5	19.5	5	100	0.89	8-pin DFN 2 x 2 x 0.75
SKY67100-396LF	1.2–3.0	1.950	17.5	34.0	18.5	4	56	0.70	8-pin DFN 2 x 2 x 0.75
SKY67101-396LF	0.4–1.2	0.900	17.5	34.0	19.0	4	56	0.50	8-pin DFN 2 x 2 x 0.75
SKY67102-396LF	2.0–3.0	2.600	17.2	33.8	15.0	4	50	0.80	8-pin DFN 2 x 2 x 0.9
SKY67105-306LF	0.6–1.1	0.850	37.0	41.0	26.0	5	138	0.70	16-pin QFN 4 x 4 x 0.9
SKY67106-306LF	1.5–3.0	1.950	35.0	37.0	24.0	5	100	0.65	16-pin QFN 4 x 4 x 0.9
SKY67107-306LF	2.3–2.8	2.600	32.0	37.5	18.5	5	125	0.85	16-pin QFN 4 x 4 x 0.9
SKY67110-396LF	0.3-0.70	0.500	21.0	37.0	21.0	5	76	0.65	8-pin DFN 2 x 2 x 0.75
SKY67111-396LF	0.7–1.2	0.900	20.7	39.6	20.0	5	77	0.50	8-pin DFN 2 x 2 x 0.75
SKY67150-396LF	0.3–2.2	0.450 0.849 1.900	23.0 20.5 14.5	36 39 36.5	19 21 18	5 5 5	82 82 82	0.45 0.23 0.38	8-pin DFN 2 x 2 x 0.75
SKY67151-396LF	0.7–3.8	0.900 1.900 2.500 3.600	26.0 20.5 19.0 16.5	36.0 36.0 37.0 34.0	22.0 19.0 19.0 19.0	5 5 5 5	80 70 70 70	0.25 0.35 0.49 0.70	8-pin DFN 2 x 2 x 0.75
SKY67153-396LF	0.7–3.8	0.849 2.500 3.600	26.0 19.0 16.5	34.5 36.0 36.0	21.5 20.0 18.0	5 5 5	80 72 80	0.25 0.50 0.70	8-pin DFN 2 x 2 x 0.75
SKY67161-306LF	0.6–1.1	0.850	38.0	39.0	24.5	5.00	115	0.30	16-pin QFN 4 x 4 x 0.9
SKY67175-306LF	2.32-2.34	2.34	30.5	31	19	5	80	0.55	16-pin QFN 4 x 4 x 0.9
SKY67215-11	0.4–0.7	0.500	21.5	35.5	18.5	5.00	75	0.67	16-pin MCM 4 x 4 x 1.3
SKY67216-11	0.5–1.2	0.850	19.0	35.5	21.0	5.00	65	0.62	16-pin MCM 4 x 4 x 1.3
SKY67221-11	1.6–2.1	1.950	18.5	37.0	20.7	5.00	85	0.90	16-pin MCM 4 x 4 x 1.3
SKY67226-11	2.2–3.0	2.500	16.5	37.5	22.0	5.00	89	1.00	16-pin MCM 4 x 4 x 1.3

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Driver Amplifiers / Linear Amplifiers

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$OP_{1\ dB}$ (dBm)	V_{DD} (V)	Typ. Supply Current (mA)	V_{CC} (V)	Typ. Quiescent Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SKY65008	0.25–2.7	1.960	20.0	33.0	21.0	–	–	3.3	76	3.0	3-pin MCM 4 x 4 x 1.5
SKY65009-70LF	0.25–2.5	1.960	12.0	42.0	27.0	–	–	3.3 or 5	100	4.3	4-pin SOT-89 4.5 x 2.5 x 1.5
SKY65045-70LF	0.39–1.5	0.8975	14.0	37.5	25.0	–	–	5	46	1.8	4-pin SOT-89 4.5 x 2.5 x 1.5
SKY65080-70LF	1.5–2.5	1.850	15.0	40.5	21.0	–	100	5	66	2.3	4-pin SOT-89 4.5 x 2.5 x 1.5
SKY65081-70LF	2.0–3.0	2.600	14.3	43.9	22.3	–	75	5	55	2.0	4-pin SOT-89 4.5 x 2.5 x 1.5
SKY65094-360LF	0.698–0.915	0.830	17.0	46.5	25.5	–	200	5	130	3.2	8-pin DFN 2 x 2 x 0.9
SKY65095-360LF	1.6–2.1	1.880	15.0	46.5	27.0	–	320	5	135	4.4	8-pin DFN 2 x 2 x 0.9
SKY65099-360LF	0.7–2.7 0.7–2.7 0.7–2.7	0.78 2.15 2.60	23.0 15.8 14.5	41.5 41.0 41.3	24.0 24.0 24.0	–	150 170 158	5 5 5	88 88 88	2.8 2.6 2.5	8-pin DFN 2 x 2 x 0.9
SKY65112-84LF	0.4–2.3	0.940	18.0	39.0	27.0	–	–	5	260	–	SOIC-8 Exposed Paddle 5.99 x 4.73 x 1.55
SKY65113-84LF	0.4–2.3	0.940	20.0	40.0	30.0	–	–	5	450	–	SOIC-8 Exposed Paddle 5.99 x 4.73 x 1.55
SKY65162-70LF	0.4–2.7	0.915 1.960 2.400 2.400	20.0 15.0 13.2 13.2	46.5 43.0 43.5 43.8	28.0 30.2 29.5 30.0	5 5 5 5	400 400 400 400	– – – –	188 188 188 188	– – – –	4-pin SOT-89 4.5 x 2.5 x 1.5
SKY65173-70LF	0.869–0.960	0.920	16.5	44.0	26.5	–	235	5	156	2.6	4-pin SOT-89 2.4 x 4.5 x 1.5
SKY67130-396LF	0.7–2.7	2.600	13.0	39.0	16.0	–	–	3.3 or 5	22	2.6	8-pin DFN 2 x 2 x 0.75

Gain Block (General Purpose) Amplifiers

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$P_{1\ dB}$ (dBm)	Typ. Quiescent Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SKY65013-70LF	0.1–7	2.0	12.5	29	12.5	40	5.5	4-pin SOT-89 4.5 x 2.5 x 1.5
SKY65013-92LF	LF–12	2.0	12.5	29	12.5	40	5.8	6-pin SC-88 2.1 x 2.0 x 0.95
SKY65013-214LF	LF–6	2.0	11.5	29	12.5	40	5.4	Plastic Micro-X
SKY65014-70LF	0.1–6	2.0	16.0	36	18.0	70	4.8	4-pin SOT-89 2.4 x 4.5 x 1.5
SKY65014-92LF	LF–9	2.0	15.0	36	18.0	70	5.4	6-pin SC-88 2.1 x 2.0 x 0.95
SKY65015-70LF	0.1–6	2.0	18.0	35	17.0	70	4.2	4-pin SOT-89 4.5 x 2.5 x 1.5
SKY65015-92LF	LF–6	2.0	18.0	35	18.0	70	4.8	6-pin SC-88 2.1 x 2.0 x 0.95

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Gain Block (General Purpose) Amplifiers

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	$P_{1\ dB}$ (dBm)	Typ. Quiescent Current (mA)	Typ. Noise Figure (dB)	Package (mm)
SKY65016-70LF	0.1–3	2.0	20.0	27	14.0	40	4.8	4-pin SOT-89 4.5 x 2.5 x 1.5
SKY65016-92LF	LF–3	2.0	20.0	27	14.0	40	5.4	6-pin SC-88 2.1 x 2.0 x 0.95
SKY65017-70LF	0.1–6	2.0	20.0	35	20.0	100	4.5	4-pin SOT-89 4.5 x 2.5 x 1.5

Variable Gain Amplifiers (VGAs)

Part Number	Operating Frequency (MHz)	Architecture	Attenuation Type	Control Range (dB)	Step Size (dB)	Gain (dB)	Min. NF	IP3 (dBm)	$P_{1\ dB}$ (dBm)	Supply Voltage (V)	Package (mm)
SKY65175	1710–1950	Single Channel	Analog	18.0	N/A	26.0	2.8	OIP3 = 41.5	$OP_{1\ dB}$ = 29	5	12-pin MCM 8 x 8 x 1.35
SKY65185	1700–2700	Dual Channel	Digital	31.5	0.5	15.0	4.5	OIP3 = 41	$OP_{1\ dB}$ = 26	5	32-pin MCM 7 x 7 x 1.35
SKY65186-11	330–2700	Dual Channel	Digital	31.5	0.5	13.5	5.0	OIP3 = 36	$OP_{1\ dB}$ = 20	5	32-pin MCM 7 x 7 x 1.35
SKY65187-11	2000–2230	Single Channel	Analog	30.0	N/A	24.0	2.7	OIP3 = 41.5	$OP_{1\ dB}$ = 28	5	12-pin MCM 8.385 x 8.385 x 1.35
SKY65369-11	832–862	Single Channel	Analog	>35.0	Analog	42.0	0.85	IIP3 = 3.5	$IP_{1\ dB}$ = -8.5	5	16-pin MCM 8 x 8 x 1.3
SKY65370-11	814–849	Single Channel	Analog	>35.0	Analog	39.0	0.82	IIP3 = 5	$IP_{1\ dB}$ = -8.5	5	16-pin MCM 8 x 8 x 1.3
SKY65371-11	880–915	Single Channel	Analog	>35.0	Analog	39.0	0.82	IIP3 = 5	$IP_{1\ dB}$ = -7.5	5	16-pin MCM 8 x 8 x 1.3
SKY65372-11	699–748	Single Channel	Analog	>35.0	Analog	42	0.8	IIP3 = 2	$IP_{1\ dB}$ = -10	5	16-pin MCM 8 x 8 x 1.3
SKY65373-11	1710–1785	Single Channel	Analog	>35.0	Analog	42.0	0.82	IIP3 = 5	$IP_{1\ dB}$ = -11	5	16-pin MCM 8 x 8 x 1.3
SKY65374-11	1850–1915	Single Channel	Analog	>35.0	Analog	39.0	0.85	IIP3 = 5	$IP_{1\ dB}$ = -7.5	5	16-pin MCM 8 x 8 x 1.3
SKY65375-11	1920–1980	Single Channel	Analog	>35.0	Analog	43.0	0.9	IIP3 = 6	$IP_{1\ dB}$ = -5.5	5	16-pin MCM 8 x 8 x 1.3
SKY65376-11	2500–2570	Single Channel	Analog	>35.0	Analog	40.0	1.1	IIP3 = 5	$IP_{1\ dB}$ = -6	5	16-pin MCM 8 x 8 x 1.3
SKY65385-11	791–821	Single Channel	Analog	33.0	N/A	34.0	4.2	46	31	5	12-pin MCM 8.385 x 8.385 x 1.35
SKY65386-11	2620–2690	Single Channel	Analog	42.0	N/A	25.5	3.9	OIP3 = 41.5	$OP_{1\ dB}$ = 28.5	5	12-pin MCM 8.385 x 8.385 x 1.35
SKY65387-11	2000–2230	Single Channel	Analog	35.0	N/A	30.0	3.5	OIP3 = 42	$OP_{1\ dB}$ = 28	5	12-pin MCM 8.385 x 8.385 x 1.35
SKY65388-11	695–866	Single Channel	Analog	34.0	N/A	29.0	4.5	43	26	5	12-pin MCM 8.385 x 8.385 x 1.35

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ATTENUATORS

Skyworks Solutions is pleased to offer a broad selection of GaAs digital attenuators, PIN diode voltage variable attenuators, and silicon fixed attenuator pads for infrastructure, test & measurement, and other high performance microwave applications up to 40 GHz. These product solutions leverage the extensive design knowledge, technical leadership, manufacturing expertise, and superior quality of Skyworks.

Our broad product portfolio also includes plastic packaged PIN diodes for attenuator applications, covering the low frequency to 6 GHz range. Please refer to the PIN Diode section of this guide for more information.

Select Digital Attenuators

Select Digital Attenuators Available from Stock for Prototype or High Volume Production

Skyworks' extensive portfolio of RF microwave products include solutions for wireless communications infrastructure systems, such as cellular telephone base stations (4G and LTE), WiFi connectivity access points, land-mobile radio systems, point-to-point radio links, and more. Skyworks' digital attenuators attenuate signals in receive and transmit signal paths, and are controlled by serial or parallel interfaces and offer attenuation bit accuracy as great as 0.25 dB.

Digital Attenuators for IF / UHF / VHF and Broadband RF Applications

Part Number	Frequency Range (GHz)	Number of Bits	Least Significant Bit (dB)	Control Interface	Maximum Attenuation (dB)	Typical Insertion Loss (dB)	Typical IIP3 (dBm)	Package (mm)
AA103-72LF	LF–2.5	1	10	Parallel	10	0.3–0.4	41	SOT-23 5L 2.8 x 2.9 x 1.18
SKY12406-360LF	0.05–0.6	1	12	Parallel	12	0.3	46	QFN 8L 2 x 2 x 0.9
AA116-72LF	0.004–2.0	1	15	Parallel	15	0.35–0.4	41	SOT-23 5L 2.8 x 2.9 x 1.18
AA104-73LF	LF–2.5	1	32	Parallel	32	0.8–1.0	41	SOT-23 6L 2.8 x 2.9 x 1.18
SKY12407-321LF	0.05–0.6	2	12	Parallel	12 (100 Ω Differential I/O)	0.3	48	QFN 12L 3 x 3 x 0.75
SKY12324-73LF	0.3–3.0	2	4	Parallel	12	0.9–1.3	43	SOT-23 6L 2.8 x 2.9 x 1.18
SKY12338-337LF	0.35–4.0	2	6	Parallel	18	0.55–1.3	45	QFN 12L 3 x 3 x 0.75
SKY12325-350LF	0.5–6.0	3	1	Parallel	7	0.7–1.3	47	QFN 16L 3 x 3 x 0.75
SKY12348-350LF	0.1–3.0	4	1	Parallel	15	0.8–1.2	45	QFN 16L 3 x 3 x 0.75
SKY12340-364LF	0.3–2.0	5	0.5	SPI	15.5	1.4–1.8	45	QFN 32L 5 x 5 x 0.9
SKY12322-86LF	0.5–4.0	5	0.5	Parallel	15.5	1.4–3.0	45	MSOP 10L 4.9 x 3 x 0.96
SKY12323-303LF	0.5–3.0	5	1	Parallel	31	1.4–2.3	48	MSOP 10L 4.9 x 3 x 0.96
SKY12328-350LF	0.5–4.0	5	0.5	Parallel	15.5	1.1–2.3	42	QFN 16L 3 x 3 x 0.75
SKY12339-350LF	0.4–3.0	5	1	Parallel	31	1.2–2.0	39	QFN 12L 3 x 3 x 0.75
SKY12345-362LF	0.7–4.0	5	0.5	SPI	15.5	1.2–2.0	42	QFN 24L 4 x 4 x 0.9
SKY12347-362LF	LF–3.0	6	0.5	SPI or Parallel	31.5	1.2–2.0	50	QFN 24L 4 x 4 x 0.9
SKY12343-364LF	0.01–4.0	7	0.25	SPI or Parallel	31.75	1.8–1.9	50	QFN 32L 5 x 5 x 0.9

Digital Attenuators

Part Number	Frequency (GHz)	Control Bits/ Interface Parallel/Serial	Attenuation Range (dB)	LSB Attenuation (dB)	Typ. IL (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
AA103-72LF	LF–2.5	1/P	10.0	10.0	0.3–0.4	41	20	SOT-23 5L 2.8 x 2.9 x 1.18
AA104-73LF	LF–2.5	1/P	32.0	32.0	0.8–1.0	41	21	SOT-23 6L 2.8 x 2.9 x 1.18
AA116-72LF	LF–2.0	1/P	15.0	15.0	0.35–0.4	41	20	SOT 23 5L 2.8 x 2.9 x 1.18
SKY12406-360LF	0.05–0.60	1/P	12.0	12.0	0.3	46	22	QFN 8L 2 x 2 x 0.9
SKY12407-321LF	0.05–0.60	2/P	12.0	12.0	0.3	48	31	QFN 12L 3 x 3 x 0.75
SKY12408-321LF	0.05–0.6	2/P	6.0	6.0	0.3	49	34	QFN 12L 3 x 3 x 0.75
SKY12355-337LF	0.35–4.0	2/P	18.0	6.0	0.45–0.75	47	28	QFN 12L 3 x 3 x 0.75
SKY12324-73LF	0.5–3.0	2/P	12.0	4.0	0.9–1.3	43	30	SOT-23 6L 2.8 x 2.9 x 1.18
SKY12338-337LF	0.35–4.0	2/P	18.0	6.0	0.55–1.3	45	30	QFN 12L 3 x 3 x 0.75
SKY12325-350LF	0.5–6.0	3/P	7.0	1.0	0.7–1.3	47	27	QFN 16L 3 x 3 x 0.75
AA264-87LF	0.5–2.0	4/P	30.0	2.0	1.6–1.8	36	15	TSSOP 16L 6.4 x 5 x 1
SKY12348-350LF	0.1–3.0	4/P	15.0	1.0	0.8–1.2	45	30	QFN 16L 3 x 3 x 0.75
SKY12322-86LF	0.5–4.0	5/P	15.5	0.5	1.4–3.0	45	27	MSOP 10L 4.9 x 3 x 0.96
SKY12323-303LF	0.5–3.0	5/P	31.0	1.0	1.4–2.3	48	30	MSOP 10L 4.9 x 3 x 0.96
AA106-86LF	0.5–2.0	5/P	15.5	0.5	2.0–3.0	41	21	MSOP 10L 4.9 x 3 x 0.96
AA101-80LF	0.5–2.5	5/P	31.0	1.0	2.0–2.9	41	21	SSOP 16L 6 x 4.9 x 1.6
AA102-80LF	0.5–2.5	5/P	15.5	0.5	1.9–3.2	42	24	SSOP 16L 6 x 4.9 x 1.6
SKY12328-350LF	0.5–4.0	5/P	15.5	0.5	1.1–2.3	42	30	QFN 16L 3 x 3 x 0.75
SKY12329-350LF	0.4–4.0	5/P	31.0	1.0	1.2–2.7	39	29	QFN 16L 3 x 3 x 0.75
SKY12339-350LF	0.4–3.0	5/P	31.0	1.0	1.2–2.0	39	–	QFN 12L 3 x 3 x 0.75
SKY12340-364LF	0.3–2.0	5/S	15.5	0.5	1.4–1.8	45	30	QFN 32L 5 x 5 x 0.9
SKY12349-362LF	0.7–4.0	5/S	15.5	0.5	1.2–2.0	42	32	QFN 24L 4 x 4 x 0.9
SKY12345-362LF	0.7–4.0	5/S	15.5	0.5	1.2–2.0	42	32	QFN 24L 4 x 4 x 0.9
SKY12347-362LF	DC–3.0	6/P	31.5	0.5	1.2–2.0	50	–	QFN 24L 4 x 4 x 0.9
SKY12353-470LF	0.01–1.0	6/P	31.5	0.5	1.2–1.8	48	29	QFN 32L 5 x 5 x 0.9
SKY12343-364LF	0.01–4.0	7/P	31.75	0.25	1.8–1.9	50	35	QFN 32L 5 x 5 x 0.9

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Fixed Attenuator Pads

Skyworks Solutions is pleased to now offer two fixed attenuator pad options for radar, test & measurement, high frequency transceivers, and other high performance microwave applications up to 40 GHz. The next generation ATN3590 series offers enhanced RF power handling and attenuation flexibility. The unique ATN3590 die design eliminates the need for RF ground bonds enabling greatly improved return loss and attenuation flatness across multi-octave bandwidths.

These two product solutions, available in die form, leverage Skyworks extensive design knowledge, technical leadership, manufacturing expertise and superior quality.

The ATN3590 and ATN3580 attenuator families are optimized for surface mounting on co-planar waveguide or microstrip printed circuit boards. Bond wires or ribbons are used to connect the input and output ports of the attenuators to the external circuit transmission lines. Connection to ground is accomplished by through-die vias to the die backside metallization on the ATN3590 family and bond wires or ribbons on the ATN3580 family.

The dice are attached using eutectic solder or conductive epoxy and can operate over a temperature range of –65 °C to 150 °C.

ATN3580 Fixed Attenuator Pads

Part Number	Nominal Attenuation (dB)	Attenuation Tolerance @ DC (dB)	Attenuation Flatness			Return Loss		
			0.1–12 GHz (dB)	0.1–26.5 GHz (dB)	0.1–40 GHz (dB)	0.1–12 GHz (dB)	0.1–26.5 GHz (dB)	0.1–40 GHz (dB)
ATN3580-01	1	±0.15	0.2	0.4	0.6	23	18	15
ATN3580-02	2	±0.15	0.2	0.4	0.6	23	18	15
ATN3580-03	3	±0.25	0.2	0.4	0.6	23	18	15
ATN3580-04	4	±0.25	0.2	0.4	0.6	23	18	15
ATN3580-05	5	±0.25	0.3	0.5	0.8	23	18	15
ATN3580-06	6	±0.25	0.3	0.5	0.8	23	18	15
ATN3580-07	7	±0.25	0.3	0.5	0.8	23	18	15
ATN3580-08	8	±0.35	0.3	0.5	0.8	23	18	15
ATN3580-09	9	±0.35	0.3	0.5	0.8	23	18	15
ATN3580-10	10	±0.35	0.4	0.6	1.0	23	18	15
ATN3580-12	12	±0.50	0.4	0.6	1.0	23	18	15
ATN3580-15	15	±0.50	0.4	0.6	1.0	23	18	15
ATN3580-20	20	±1.10	0.4	0.6	1.0	23	18	15
ATN3580-30	30	±1.60	0.6	1.0	2.0	23	18	15
ATN3580-40	40	±1.60	1.0	2.0	4.0	23	18	15

Fixed Attenuator Pads

The ATN3590 family of fixed resistive attenuators are integrated circuits comprising thin film resistors and through-die vias that provide excellent attenuation flatness from low frequency to 40 GHz or higher. These attenuators are available from 0 to 30 dB.

The ATN3590 attenuator family is optimized for surface mounting on co-planar waveguide or microstrip printed circuit boards. Bond wires or ribbons are used to connect the input and output ports of the attenuators to the external circuit transmission lines. Connection to ground is accomplished by through-die vias to the die backside metallization.

The dice are attached using eutectic solder or conductive epoxy and can operate over a temperature range of -65 °C to 150 °C.

ATN3590 Fixed Attenuator Pads

Part Number	Nominal Attenuation (dB)	Attenuation Tolerance @ DC (dB)	Attenuation Flatness				Return Loss			
			DC–12 GHz (dB)	12–26 GHz (dB)	26–33 GHz (dB)	33–40 GHz (dB)	DC–12 GHz (dB)	12–26 GHz (dB)	26–33 GHz (dB)	33–40 GHz (dB)
ATN3590-00	0	0.25	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-01	1	±0.20	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-02	2	±0.20	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-03	3	±0.20	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-04	4	±0.20	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-05	5	±0.20	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-06	6	±0.40	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-07	7	±0.40	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-08	8	±0.40	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-09	9	±0.40	±0.20	±0.20	±0.25	±0.30	28	24	20	16
ATN3590-10	10	±0.40	±0.20	±0.20	±0.25	±0.50	28	24	20	16
ATN3590-12	12	±0.40	±0.20	±0.20	±0.30	±0.50	28	24	20	16
ATN3590-15	15	±0.40	±0.20	±0.20	±0.50	±0.75	28	24	20	16
ATN3590-20	20	±1.0	±0.20	±0.20	±0.75	±1.0	28	24	20	16
ATN3590-30	30	±1.0	±0.20	±0.25	±0.75	±2.5	28	24	20	16

Voltage Variable Attenuators

0.7–5 GHz Plastic Packaged Voltage Variable Attenuators—PIN Diode-based

Part Number	Frequency (GHz)	Description	Max. Insertion Loss at Min. Control (dB)	Typ. Attenuation Range at Max. Control (dB)	Min. Input IP3 (dBm)	Control Input Range (mA)	Package (mm)
AV101-12LF	0.7–1.0	HIP3™ Variable Attenuator	1.5	20	47	0–3.0	SOIC 8L 6 x 4.9 x 1.6
AV102-12LF	1.7–2.0	HIP3™ Variable Attenuator	1.5	20	47	0–3.0	SOIC 8L 6 x 4.9 x 1.6
AV111-12LF	0.8–1.0	HIP3™ Variable Attenuator	1.5	25	37	0–1.4	SOIC 8L 6 x 4.9 x 1.6
AV113-12LF	2.1–2.3	HIP3™ Variable Attenuator	1.6	22	37	0–1.5	SOIC 8L 6 x 4.9 x 1.6
SKY12228-12LF	0.7–1.0	HIP3™ Variable Attenuator	1.5	30	60	0–1.5	SOIC 8L 6 x 4.9 x 1.6
SKY12230-12LF	1.7–2.3	HIP3™ Variable Attenuator	1.5	30	53	0–1.5	SOIC 8L 6 x 4.9 x 1.6
SKY12232-21	2.65–3.65	HIP3™ Variable Attenuator	1.3	27	40	0–5 V	MCM 8L 4.9 x 3.2 x 1.0
SKY12233-11	2.1–3.1	HIP3™ Variable Attenuator	1.5	34	61	0–5 V	MCM 8L 4.9 x 3.2 x 1.0
SKY12235-11	1.4–2.4	HIP3™ Variable Attenuator	2.5	36	61	0–5 V	MCM 8L 4.9 x 3.2 x 1.0
SKY12236-11	2.6–5.0	HIP3™ Variable Attenuator	2.1	25	43 (Typ.)	0–5 V	MCM 8L 4.9 x 3.2 x 1.0

3.0–3.8 GHz Plastic Packaged Voltage Variable Attenuators—FET-based

Part Number	Frequency (GHz)	Description	Typ. Insertion Loss Range (dB)	Attenuation Range (dB)	Typ. IP3 > 0.5 GHz (dBm)	Package (mm)
SKY12146-321LF	3.0–3.8	20 dB Single CTL	1.5–1.6	32–20	20	QFN 12L 3 x 3 x 0.75

NEW New products (indicated in blue, bold) are continually being introduced at Skyworks. For the latest information, please visit the new products section of our Web site at www.skyworksinc.com.

CIRCULATORS AND ISOLATORS

Skyworks is pleased to offer our customers innovative and cost-competitive ferrite circulators and isolators for both military and commercial markets. Our circulators deliver industry-leading insertion loss performance, a critical parameter in radar design, of less than 0.25 dB. Skyworks' MAFR-000493-000001, for example, is designed to operate in the L band. It has a typical insertion loss of just 0.16 dB at 1030 MHz. Our MAFR-000403 S band circulator, optimized from 2.7 GHz to 3.1 GHz, has a typical insertion loss of only 0.25 dB. And these are just a few examples of our product offerings. Skyworks achieves best-in-class performance through a systematic approach including Six Sigma tools and methodologies, which help ensure quality and reliability from product development through volume production. All production facilities are certified to ISO9001 and ISO14001 standards and our products are compliant to the European Union's RoHS directive 2002/95/EC.

Radar

Circulators

Part Number	Frequency (MHz)	Insertion Loss (dB)	Isolation (dB)	Return Loss (dB)	Rotation	Max. Power (W) F/R	Case Size (Inch/mm)	Package
MAFR-000399-000001	1450–1500	0.30	20	20	CW	1000	1.0/25.4	Drop-in
MAFR-000409-000001	960–1200	0.50	18	18	CCW	1000	1.0/25.4	Drop-in
MAFR-000428-000001	960–1200	0.50	18	18	CCW	1200	1.0/25.4	Drop-in
MAFR-000493-000001	1030–1090	0.30	18	18	CW	1200	1.0/25.4	Drop-in
MAFR-000514-000001	3100–3500	0.30	23	21	CW	1500/1500	$0.75^2/19^2$	Drop-in
MAFR-000578-000001	1200–1400	0.30	20	20	CW	1500	1.0/25.4	Drop-in
MAFR-000608-000001	1200–1400	0.30	20	20	CCW	1500	1.0/25.4	Drop-in
MAFR-000613-000001	1030–1090	0.30	18	18	CW	1200/1200	$1.0^2/25.4^2$	Drop-in
MAFR-000627-000001	1350–1850	0.50	18	18	CW	1500	1.0/25.4	Drop-in
MAFR-000645-000001	960–1215	0.50	16	16	CCW	1000/1000	$1.0^2/25.4^2$	Drop-in
MAFR-000668-000001	1350–1850	0.50	18	18	CCW	1500/1500	$1.0^2/25.4^2$	Drop-in
MAFR-000677-000001	2700–3100	0.35	20	20	CW	1300/1300	$0.75^2/19^2$	Drop-in

Isolators

Part Number	Frequency (MHz)	Insertion Loss (dB)	Isolation (dB)	Return Loss (dB)	Rotation	Max. Power (W) F/R	Case Size (Inch/mm)	Package
MAFR-000430-000001	2700–3100	0.30	20	20	CW	1300/75	0.75 x 1.0/19 x 25.4	Drop-in
MAFR-000628-000001	1200–1400	0.30	20	20	CCW	1500/2	1.0/25.4	Drop-in
MAFR-000629-000001	1200–1400	0.30	20	20	CW	1500/25	1.0 x 1.25/25.4 x 31.7	Drop-in
MAFR-000667-000001	1200–1400	0.30	20	20	CCW	1500/25	1.0 x 1.25/25.4 x 31.7	Drop-in

Wireless

Skyworks circulators and isolators are used in a variety of wireless communications, as well as aerospace and defense applications. Our circulators and isolators assure clean transmit signals by offering low insertion loss and superior intermodulation distortion (IMD) performance. We can meet high performance, high power device requirements.

- **Broad frequency spectrum: 700 MHz to 3.6 GHz**
- **High isolation capability: 32 dB single junction and >60 dB in dual junction devices**
- **Low insertion loss capability: 0.15 dB single junction and <0.30 dB in dual junction devices**
- **IMD capability: up to -85 dBc**
- **Surface mount and drop-in packaging available for standard and custom components**

Circulators

Part Number	Frequency (MHz)	Insertion Loss (dB)	Isolation/ Return Loss (dB)	IMD (dBc)	IMD Conditions	Rotation	Case Size (Inch/mm)	Package
MAFR-000565-000001	791–821	0.30	23	75	2 x 5 W CW Tones, 5 MHz Spacing	CW	1.04/26.6	SMT – Robust Lead
MAFR-000631-000001	791–821	0.25	20	80	2 x 65 W CW Tones, 1 MHz Spacing	CCW	1.00/25.4	Drop-in
SKYFR-000736	791–821	0.30	22/22	-65	2 x 25 W CW Tones, 5 MHz Spacing	CW	0.98/25	SMT – Robust Lead
MAFR-000649-000001	860–894	0.30	20	80	2 x 65 W CW Tones, 1 MHz Spacing	CCW	1.00/25.4	Drop-in
MAFR-000688-000001	860–960	0.35	20	65	2 x 15 W CW Tones, 5 MHz Spacing	CW	0.80/20.4	SMT – Robust Lead
MAFR-000601-000001	869–928	0.30	22	55	2 x 37.5 W CW Tones, 5 MHz Spacing	CW	1.04/26.6	SMT – Robust Lead
MAFR-000630-000001	925–960	0.25	20	80	2 x 65 W CW Tones, 1 MHz Spacing	CCW	1.00/25.4	Drop-in
MAFR-000562-000001	925–960	0.25	20	74	2 x 25 W CW Tones, 5 MHz Spacing	CW	1.04/26.6	SMT – Robust Lead
MAFR-000569-000001	925–960	0.25	20	74	2 x 25 W CW Tones, 5 MHz Spacing	CCW	1.04/26.6	SMT – Robust Lead
SKYFR-000700	925–960	0.25	20	90	2 x 50 W CW Tones, 5 MHz Spacing	CW	1.00/25.4	Drop-in
SKYFR-000738	925–960	0.30	22/22	-65	2 x 25 W CW Tones, 5 MHz Spacing	CW	0.98/25	SMT – Robust Lead
MAFR-000632-000001	1805–1880	0.25	20	80	2 x 65 W CW Tones, 1 MHz Spacing	CCW	1.00/25.4	Drop-in
MAFR-000644-000001	1805–1880	0.25	20	65	2 x 15 W CW Tones, 1 MHz Spacing	CW	0.61/15.5	SMT – Robust Lead
MAFR-000533-000001	1840–2055	0.35	20	70	2 x 15 W CW Tones, 5 MHz Spacing	CW	0.80/20.4	SMT – Robust Lead
MAFR-000566-000001	1840–2055	0.25	20	70	2 x 15 W CW Tones, 5 MHz Spacing	CCW	0.75/18.3	SMT – Robust Lead
MAFR-000553-000001	1880–1920	0.30	21	65	2 x 25 W CW Tones, 5 MHz Spacing	CW	0.61/15.5	SMT – Robust Lead
MAFR-000618-000001	1880–2025	0.25	23	65	2 x 25 W CW Tones, 5 MHz Spacing	CCW	0.80/20.4	SMT – Robust Lead
MAFR-000650-000001	1930–1995	0.30	20	80	2 x 65 W CW Tones, 1 MHz Spacing	CCW	1.00/25.4	Drop-in
MAFR-000663-000001	1930–1995	0.29	20	65	2 x 15 W CW Tones, 1 MHz Spacing	CW	0.61/15.5	SMT – Robust Lead
MAFR-000554-000001	2010–2025	0.30	20	63	2 x 25 W CW Tones, 5 MHz Spacing	CW	0.61/15.5	SMT – Robust Lead
MAFR-000592-000001	2010–2025	0.30	21	60	2 x 25 W CW Tones, 5 MHz Spacing	CCW	0.61/15.5	SMT – Robust Lead
MAFR-000653-000001	2110–2170	0.25	20	74	2 x 5 W CW Tones, 5 MHz Spacing	CW	0.80/20.4	SMT – Robust Lead
MAFR-000654-000001	2110–2170	0.25	20	74	2 x 5 W CW Tones, 5 MHz Spacing	CCW	0.80/20.4	SMT – Robust Lead

Wireless

Circulators (Continued)

Part Number	Frequency (MHz)	Insertion Loss (dB)	Isolation/ Return Loss (dB)	IMD (dBc)	IMD Conditions	Rotation	Case Size (Inch/mm)	Package
SKYFR-000709	2110–2170	0.32	20/20	-58	2 x 40 W CW Tones, 5 MHz Spacing	CW	0.59/15	SMT – Robust Lead
SKYFR-000782	2110–2170	0.12	23	70	2 x 4 W CW Tones, 5 MHz Spacing	CW	0.75/19.0	Drop-in
MAFR-000575-000001	2300–2400	0.30	21	65	2 x 25 W CW Tones, 5 MHz Spacing	CW	0.61/15.5	SMT – Robust Lead
MAFR-000662-000001	2300–2400	0.30	20	60	2 x 25 W CW Tones, 5 MHz Spacing	CCW	0.61/15.5	SMT – Robust Lead
SKYFR-000742	2300–2400	0.30	20/20	-60	2 x 25 W CW Tones, 5 MHz Spacing	CW	0.59/15	SMT – Robust Lead
SKYFR-000827	2300–2400	0.15	20	60	2 x 40 W CW Tones, 5 MHz Spacing	CW	1.04/26.6	SMT – Robust Lead
SKYFR-000848	2300–2400	0.25	23/23	-65	2 x 60 W CW Tones, 5 MHz Spacing	CCW	0.75/20.0	SMT – Robust Lead
SKYFR-000788	2490–2710	0.30	23/21	-66	2 x 44.8 W CW Tones, 5 MHz Spacing	CW	0.61/15.5	SMT – Robust Lead
MAFR-000583-000001	2500–2630	0.30	21	60	2 x 25 W CW Tones, 5 MHz Spacing	CCW	0.61/15.5	SMT – Robust Lead
MAFR-000633-000001	2500–2630	0.30	21	60	2 x 25 W CW Tones, 5 MHz Spacing	CW	0.61/15.5	SMT – Robust Lead
MAFR-000589-000001	2620–2690	0.28	20	65	2 x 15 W CW Tones, 1 MHz Spacing	CW	0.61/15.5	SMT – Robust Lead
MAFR-000657-000001	2620–2690	0.30	20	65	2 x 15 W CW Tones, 1 MHz Spacing	CCW	0.61/15.5	SMT – Robust Lead

Isolators

Part Number	Frequency (MHz)	Insertion Loss (dB)	Isolation/ Return Loss (dB)	IMD (dBc)	IMD Conditions	Rotation	Case Size (Inch/mm)	Package
SKYFR-000855	1930–1995	0.30	20/20	-60	2 x 15 W CW Tones, 1 MHz Spacing	CW	0.43/11	SMT – Robust Lead
SKYFR-000748	2070–2210	0.50	18/20	-76	2 x 4 W CW Tones, 5 MHz Spacing	CW	0.72/18.4	SMT – Robust Lead
SKYFR-000812	2095–2185	0.35	17/16.8	-60	2 x 2 W CW Tones, 5 MHz Spacing	CW	0.43/11	SMT – Robust Lead
SKYFR-000733	2095–2185	0.25	23/23	-74	2 x 55 W CW Tones, 5 MHz Spacing	CW	1.04/25.4	SMT – Robust Lead
SKYFR-000727	2110–2170	0.30	23/21	60	2 x 15 W CW Tones, 1 MHz Spacing	CW	0.43/11	SMT – Robust Lead
SKYFR-000779	2110–2170	0.25	25/21	-70	2 x 25 W CW Tones, 1 MHz Spacing	CCW	0.73/18.6	SMT – Robust Lead
SKYFR-000781	2620–2690	0.25	25/21	-70	2 x 25 W CW Tones, 1 MHz Spacing	CCW	0.73/18.6	SMT – Robust Lead

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DIODES

Building on a proven legacy (including products developed at Alpha Industries prior to its merger with Conexant), our diode product offering includes PIN, limiter, Schottky, and varactor diodes for a wide variety of microwave applications including WLAN, infrastructure, handset, Satcom (LNB/DBS-CATV), automotive, military, test & measurement, metering, medical, and RFID. Our discrete silicon and GaAs semiconductors are available as die, plastic packaged, surface mount (SMT), and ceramic hermetic packaged devices. Frequency ranges include low frequency, HF, VHF, UHF, L band, S band, C band, X band, KU band, K band, and Ka band. Skyworks' diode products are manufactured using the most advanced processes and leadership technology.

Select PIN, Limiter, Schottky, Varactor Diodes

Select Diodes Available from Stock for Prototype or High Volume Production

Skyworks Solutions offers a select group diodes from our diverse RF diode offering in stock and ready for immediate design into your demanding applications.

Select diodes include the most popular PIN, limiter, Schottky and tuning varactor diodes, readily available to ship in 3k reels from stock. These devices provide excellent performance and even better value for applications including low noise block converters (LNB), multiswitches, wireless local area networks (WLAN), cellular telephone networks, cable television (CATV), automotive, test and measurement equipment, land mobile radio, and more.

PIN Diodes for Switch and Attenuator Applications

Part Number	Description	Markets
Switching PIN Diodes		
SMP1345-040LF	High isolation, fast switching, CT 0.12 pF	WLAN, infrastructure, general
SMP1320-040LF	Fast switching, high isolation, low insertion loss	WLAN, infrastructure, general
SMP1352-079LF	Large signal	Infrastructure, general
SMP1302-085LF	High power (50 W) handling, shunt	Land mobile radio, LTE base station, and more
SMP1325-087LF	High Power (35 W) handling, series	Land mobile radio, LTE base station, and more
Attenuator PIN Diodes		
SMP1307-004LF	Low distortion / high IP3, dual	CATV, PON, base station, and more
SMP1307-027LF	Low distortion / high IP3, quad PI	CATV, PON, base station, and more

Select PIN, Limiter, Schottky, Varactor Diodes

Limiter Diodes for Receiver Protection Applications

Part Number	Description	Markets
Limiter Diodes		
SMP1330-005LF	Clean-up limiter, +30 dBm input power, +13 dBm flat leakage power, up to 2.5 GHz	Land mobile radio, military, infrastructure, and more
SMP1330-085LF	Low loss, high power, +30 dBm input power, +13 dBm flat leakage power, up to 4 GHz	Land mobile radio, military, infrastructure, and more
CLA4603-085LF	Medium power, low loss, +33 dBm input power, +13 dBm flat leakage power, up to 10 GHz	Land mobile radio, military, infrastructure, and more
CLA4606-085LF	Medium power, low loss, +35 dBm input power, +18 dBm flat leakage power, up to 10 GHz	Land mobile radio, military, infrastructure, and more
CLA4609-086LF	Course limiter, high power handling, +43 dBm input power, +41 dBm flat leakage power, up to 6 GHz	Land mobile radio, military, infrastructure, and more

Schottky Diodes for Detector and Mixer Applications

Detector Diodes		
SMS7621-060	Excellent sensitivity, low capacitance, 0201	WLAN, military, infrastructure, and more
SMS7621-040LF	Excellent sensitivity, low capacitance, 0402	WLAN, military, infrastructure, and more
SMS7621-005LF	Excellent sensitivity, low capacitance, series pair	Infrastructure, smart energy, infrastructure, and more
SMS7630-061	Best sensitivity, zero bias, 0201	WLAN, military, infrastructure, and more
SMS7630-040LF	Best sensitivity, zero bias, 0402	WLAN, military, infrastructure, and more
SMS3922-079LF	Medium barrier, high breakdown voltage	Infrastructure and more

Tuning Varactor Diodes for VCO, Voltage Tuned Filters, and Phase Shifter Applications

Hyperabrupt Diodes		
SMV1234-040LF	Low capacitance (6.5 pF @ 1 V, 2 pF @ 6 V), low resistance (0.8 Ω)	Automotive, smart energy, WLAN, test and measurement, infrastructure, and more
SMV1232-040LF	High capacitance ratio at low reverse voltage: C_{T1}/C_{T3} = 1.7 typical	Automotive, smart energy, WLAN, test and measurement, infrastructure, and more
SMV1247-040LF	Low capacitance (7 pF @ 0.3 V, 0.7 pF @ 4.7 V), high Q (1500)	Automotive, smart energy, WLAN, test and measurement, infrastructure, and more
SMV1249-079LF	Medium capacitance (31 pF @ 0.3 V, 2.6 pF @ 4.7 V)	Automotive, smart energy, WLAN, test and measurement, infrastructure, and more
SMV1255-079LF	High capacitance (64 pF @ 0.3 V, 5.2 pF @ 4.7 V)	Automotive, smart energy, WLAN, test and measurement, infrastructure, and more
Abrupt Diodes		
SMV1405-040LF	Ultra high Q (3200)	Automotive, smart energy, WLAN, test and measurement, infrastructure, and more
SMV1413-079LF	Low resistance, high Q	Automotive, smart energy, WLAN, test and measurement, infrastructure, and more

LIMITER DIODES

Core Components for Receiver Protection Applications

Plastic Surface Mount (SMT) Limiter Diodes—Low Frequency to 6 GHz

Part Number	V_B I_R = 10 µA (V)	Nominal I-Region Thickness (µm)	C_T 0 V, F = 1 MHz (pF)	C_T 0 V F = 1 GHz (pF)	R_S I_F = 10 mA F = 100 MHz (Ω)	Carrier Lifetime T_L I_F = 10 mA (ns)	Package
SMP1330 Series	20–50	3	0.7 Typ., 1.0 Max.	0.7 Typ.	1.25 Typ., 1.5 Max.	4 Typ.	SOT-23, 0402, QFN

			
Series Pair SOT-23	**Low Inductance SOT-23**	**Single 0402 *Green™***	**Single QFN 2 x 2 *Green™***
SMP1330-005LF Marking: RQ2	SMP1330-007LF Marking: RQB	SMP1330-040LF Marking: F	SMP1330-085LF Marking: RQ

High Power Limiter Diodes

Part Number	Min. V_B @ 10 µA (V)	Nominal I-Region Thickness (µm)	Max. C_T @ 6 V (pF)	Max. C_T @ 30 V (pF)	Max. R_S @ 10 mA (Ω)	Typ. T_L @ 10 mA (µs)
CLA4603-085LF	20–45	1.5	0.40	—	2.0	10
CLA4605-085LF	30–60	2.0	0.45	—	2.0	7
CLA4606-085LF	45–75	2.5	0.38	—	2.0	10
CLA4607-085LF	120	7.0	0.35	—	2.0	50
CLA4608-085LF	120	7.0	—	0.65	1.2	100
CLA4609-086LF	250	28.0	—	0.26	1.2	1.1
CLA4610-085LF	80–120	4.5	–	0.60	1.5	20


Single QFN 2 x 2 *Green™*
CLA4603-085LF Marking: EQ
CLA4605-085LF Marking: CQ
CLA4606-085LF Marking: FQ
CLA4607-085LF Marking: DQ


Single QFN 2 x 2 *Green™*
CLA4608-085LF Marking: GQ
CLA4609-086LF Marking: BQ
CLA4610-085LF Marking: JQ

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Silicon Limiter Diode Chips—Low Frequency to 20 GHz

Part Number	V_B @ 10 µA (V)	Nominal I-Region Thickness (µm)	Typ. C_J @ 0 V (pF)	Max. C_J @ 6 V (pF)	Max. R_S @ 10 mA (Ω)	Typ. T_L @ 10 mA (ns)	Thermal Impedance	
							Max. Average (C/W)	Typ. 1 µs Pulse (C/W)
CLA4601 Series	15–30	1.0	0.12	0.10	2.5	5	120	15
CLA4602 Series	15–30	1.0	0.20	0.15	2.0	5	80	10
CLA4603 Series	20–45	1.5	0.20	0.15	2.0	5	100	10
CLA4604 Series	30–60	2.0	0.12	0.10	2.5	7	100	10
CLA4605 Series	30–60	2.0	0.20	0.15	2.0	7	70	7.0
CLA4606 Series	45–75	2.5	0.20	0.15	2.0	10	80	7.0
CLA4607 Series	120–180	7.0	0.20	0.15 @ 50 V	2.0	50	40	1.2
CLA4608 Series	120–180	7.0	0.80	0.5 @ 50 V	1.2	100	15	0.3
CLA4609 Series	250 (Min.)	28.0	0.26	0.14	1.5	1175	15	0.3
CLA4610 Series	80–120	4.5	0.13	0.12	2.2	20	72	72

Hermetic Packaged Silicon Limiter Diodes

Hermetic Stripline 240	Hermetic Pill 203	Hermetic Pill 219	Hermetic Pill 210
CLA4601-240	CLA4601-203	CLA4601-219	CLA4601-210
CLA4602-240	CLA4602-203	CLA4602-219	CLA4602-210
CLA4603-240	CLA4603-203	CLA4603-219	CLA4603-210
CLA4604-240	CLA4604-203	CLA4604-219	CLA4604-210
CLA4605-240	CLA4605-203	CLA4605-219	CLA4605-210
CLA4606-240	CLA4606-203	CLA4606-219	CLA4606-210
CLA4607-240	CLA4607-203	CLA4607-219	CLA4607-210
CLA4608-240	CLA4608-203	CLA4608-219	CLA4608-210
CLA4609-240	CLA4609-203	CLA4609-219	CLA4609-210
CLA4610-240	CLA4610-203	CLA4610-219	CLA4610-210

Limiter Modules

Integrated Single-Stage PIN Diode Limiter Module 0.5 to 6 GHz

Part Number	Typical Insertion Loss (dB) P_{IN} = 0 dBm	Typical Threshold Level (dBm)	Max. Saturated Power (W)	Typical Flat Leakage Power (dBm)	Min. V_B I_R = 10 µA (V)	I Region Thickness (µm) Nominal	Typ. C_T (pF) 0 V, F = 1 MHz	Typ. Carrier Lifetime T_L (ns) I_F = 10 mA	Package
SKY16601-555LF	0.1	11	29	13 (P_{IN} = 20 dBm)	20–45	1.5	0.36 @ 2.5 GHz	10 @ 2.5 GHz	2-pin MLP 2.5 x 2.5 x 0.75

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PIN DIODES

Superior Building Blocks for Switch and Attenuator Applications

Switching Silicon PIN Diodes

PIN Diodes—High Power (>20 W) for Large Signal Switch and Attenuator Applications

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 20 V F = 1 MHz (pF)	Typ. C_T V_R = 30 V F = 1 MHz (pF)	Max. V_F @ I_F = 50 mA (V)	Max. R_S F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)	Package (mm)
SMP1302-085LF	200	–	0.30	0.8 @ 10 mA	3 @ 10 mA	700	50	QFN 3L 2 x 2 x 1
SMP1302-087LF	200	–	0.25	0.8 @ 10 mA Typ.	3 @ 10 mA	700	50	QFN 2L 2 x 2 x 0.9
SMP1304-085LF	200	–	0.20	1.0	7 @ 10 mA	1000	100	QFN 3L 2 x 2 x 0.9
SMP1304-087LF	200	–	0.20	1.0	7 @ 10 mA	1000	100	QFN 2L 2 x 2 x 0.9
SMP1324-087LF	200	–	0.90	0.9 Typ.	0.4 Typ. @ 50 mA	6000	100	QFN 2L 2 x 2 x 0.9
SMP1325-085LF	200	0.65	–	0.86 Typ.	1.3 Typ. @ 10 mA	5000	100	QFN 3L 2 x 2 x 1
SMP1325-087LF	200	0.6	–	0.8 Typ.	1.3 Typ. @ 10 mA	5000	100	QFN 2L 2 x 2 x 0.9
SMP1334-084LF	200		0.45 Max.	0.75 @ 10 mA Typ.	2.5 @ 10 mA	700	50	QFN 2 x 2 x 0.9
SMP1345-087LF	50	0.2 @ 5 V	–	0.89	2 @ 10 mA	100	10	QFN 2L 2 x 2 x 0.9
SMP1371-087LF	35	1.2	–	1.0	0.5 @ 10 mA	200	12	QFN 2L 2 x 2 x 0.9

	
Single (Shunt) QFN 2 x 2 *Green™*	**Single (Series) QFN 2 x 2 *Green™***
SMP1302-085LF Marking: RF1	**SMP1302-087LF** Marking: RF
SMP1304-085LF Marking: RG	SMP1304-087LF Marking: PG
	SMP1324-087LF Marking: PW
SMP1325-085LF Marking: RH	SMP1325-087LF Marking: PH
	SMP1334-084LF Marking: MG
	SMP1345-087LF Marking: RU
	SMP1371-087LF Marking: RY

NEW New products (indicated in blue, bold) are continually being introduced at Skyworks. For the latest information, please visit the new products section of our Web site at www.skyworksinc.com.

Switching Silicon PIN Diodes

Plastic Surface Mount (SMT) PIN Diodes—Low Frequency to 6 GHz

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 30 V F = 1 MHz (pF)	Typ. V_F @ I_F = 10 mA (V)	Typ. R_S I_F = 1 mA F = 100 MHz (Ω)	Max. R_S I_F = 10 mA F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)
SMP1320 Series	50	0.3	0.85	2	0.9	400	8

							
Single SOT-23 *Green™*	**Common Anode SOT-23 *Green™***	**Common Cathode SOT-23 *Green™***	**Series Pair SOT-23 *Green™***	**Low Inductance SOT-23 *Green™***	**Single SOD-323 *Green™***	**Single SC-79 *Green™***	**Single 0402 *Green™***
SMP1320-001LF Marking: RL1	SMP1320-003LF Marking: RL9	SMP1320-004LF Marking: RL3	SMP1320-005LF Marking: RL2	SMP1320-007LF Marking: RLB	SMP1320-011LF Marking: RL	SMP1320-079LF Marking: Cathode	SMP1320-040LF Marking: N
		SC-70	**SC-70**	**SC-70**			
		SMP1320-074LF Marking: RL3	SMP1320-075LF Marking: RL2	SMP1320-077LF Marking: RLB			

Low Capacitance Switching PIN Diodes

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 30 V F = 1 MHz (pF)	Typ. V_F @ I_F = 10 mA (V)	Typ. R_S I_F = 1 mA F = 100 MHz (Ω)	Max. R_S I_F = 10 mA F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)
SMP1321 Series	100	0.25	0.85	3	2	400	15

							
Single SOT-23 *Green™*	**Common Anode SOT-23 *Green™***	**Common Cathode SOT-23 *Green™***	**Series Pair SOT-23 *Green™***	**Low Inductance SOT-23 *Green™***	**Single SOD-323 *Green™***	**Single SC-79 *Green™***	**Single 0402 *Green™***
SMP1321-001LF Marking: RM1	SMP1321-003LF Marking: RM9	SMP1321-004LF Marking: RM3	SMP1321-005LF Marking: RM2	SMP1321-007LF Marking: RMB	SMP1321-011LF Marking: RM	SMP1321-079LF Marking: Cathode	SMP1321-040LF Marking: C
	SC-70	**SC-70**	**SC-70**				
	SMP1321-073LF Marking: RM3	SMP1321-074LF Marking: RM3	SMP1321-075LF Marking: RM2				

Switching Silicon PIN Diodes

Lowest Series Resistance Switching PIN Diodes

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 30 V F = 1 MHz (pF)	Typ. V_F @ I_F = 10 mA (V)	Max. R_S I_F = 1 mA F = 100 MHz (Ω)	Typ. R_S I_F = 10 mA F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)
SMP1322 Series	50	1	0.825	1.5	0.5	400	8

							
Single SOT-23 *Green™*	**Common Anode SOT-23 *Green™***	**Common Cathode SOT-23 *Green™***	**Series Pair SOT-23 *Green™***	**Single SOD-323 *Green™***	**T/R Switch SOT-143**	**Single SC-79 *Green™***	**Single 0402 *Green™***
SMP1322-001LF Marking: RN1	SMP1322-003LF Marking: RN9	SMP1322-004LF Marking: RN3	SMP1322-005LF Marking: RN2	SMP1322-011LF Marking: RN	SMP1322-016LF Marking: RN6	SMP1322-079LF Marking: Cathode	SMP1322-040LF Marking: T
		SC-70					
		SMP1322-074LF Marking: RN3					

Low Capacitance, Fast Switching PIN Diodes

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 5 V F = 1 MHz (pF)	Typ. V_F @ I_F = 10 mA (V)	Typ. R_S I_F = 1 mA F = 100 MHz (Ω)	Max. R_S I_F = 10 mA F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)
SMP1340 Series	50	0.3	0.88	1.7	1.2	100	7

						
Common Anode SOT-23 *Green™*	**Common Cathode SOT-23 *Green™***	**Series Pair SOT-23 *Green™***	**Low Inductance SOT-23 *Green™***	**Single SOD-323 *Green™***	**Single SC-79 *Green™***	**Single 0402 *Green™***
SMP1340-003LF Marking: RS9	SMP1340-004LF Marking: RS3	SMP1340-005LF Marking: RS2	SMP1340-007LF Marking: RSB	SMP1340-011LF Marking: RS	SMP1340-079LF Marking: Cathode	SMP1340-040LF Marking: D
	SC-70	**SC-70**				
	SMP1340-074LF Marking: RS3	SMP1340-075LF Marking: RS2				

Switching Silicon PIN Diodes

Lowest Capacitance Switching PIN Diodes for High Isolation

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 20 V F = 1 MHz (pF)	Typ. V_F @ I_F = 10 mA (V)	Typ. R_S I_F = 1 mA F = 100 MHz (Ω)	Max. R_S I_F = 10 mA F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)
SMP1345 Series	50	0.2	0.89	3.5	2	100	10

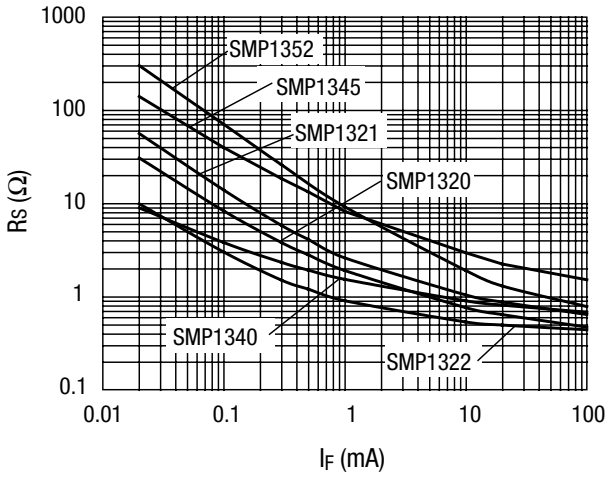
					
Common Anode SOT-23 *Green™*	**Common Cathode SOT-23 *Green™***	**Series Pair SOT-23 *Green™***	**Single SC-79 *Green™***	**Ring MIS *Green™***	**Single 0402 *Green™***
SMP1345-003LF Marking: RU9	SMP1345-004LF Marking: RU3	SMP1345-005LF Marking: RU2	SMP1345-079LF Marking: Cathode	SMP1345-518 Marking: 0	SMP1345-040LF Marking: U
		SC-70			
		SMP1345-075LF Marking: RU2			

Large Signal Switching PIN Diodes

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 20 V F = 1 MHz (pF)	Typ. V_F @ I_F = 10 mA (V)	Max. R_S I_F = 1 mA F = 100 MHz (Ω)	Max. R_S I_F = 10 mA F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)
SMP1352 Series	200	0.35	0.8	15	2.8	1000	50

			
Single SOD-323 *Green™*	**Single SC-79 *Green™***	**Single 0402 *Green™***	**Series Pair SOT-23 *Green™***
SMP1352-011LF Marking: RR	SMP1352-079LF Marking: Cathode	SMP1352-040LF Marking: S	SMP1352-005LF Marking: RR2

Typical Performance Characteristics



R_S vs. I_F

Switching Silicon PIN Diodes

PIN Diode Chips—Low Frequency to 20 GHz

Part Number	V_B @ 10 µA (V)	Nominal I-Region (µm)	Typ. C_J @ 0 V (pF)	Max. C_J @ 50 V (pF)	Max. R_S @ 10 mA (Ω)	Max. TI @ 10 mA (ns)	Max. Thermal Resistance (C/W)
APD0505-000	50	5	0.10	0.05	2.0	20	100
APD0510-000	50	5	0.20	0.10	1.5	40	80
APD0520-000	50	5	0.25	0.20	1.0	50	80
APD0805-000	100	8	0.10	0.05	2.0	100	80
APD0810-000	100	8	0.15	0.10	1.5	160	60
APD1505 Series	200	4.5	0.12	0.06 @ 10 V	2.5	350	70
APD1510-000	200	15	0.20	0.10	2.0	300	60
APD1520-000	200	15	0.25	0.20	1.2	900	30

Ceramic Hermetic Packaged General-purpose PIN Diodes for Switching and Attenuator Applications

Hermetic Stripline 240	Hermetic Pill 203	Hermetic Pill 210	Hermetic Pill 219
APD0505-240	APD0505-203	APD0505-210	APD0505-219
APD0510-240	APD0510-203	APD0510-210	APD0510-219
APD0520-240	APD0520-203	APD0520-210	APD0520-219
APD0805-240	APD0805-203	APD0805-210	APD0805-219
APD0810-240	APD0810-203	APD0810-210	APD0810-219
APD1505-240	APD1505-203	APD1505-210	APD1505-219
APD1510-240	APD1510-203	APD1510-210	APD1510-219
APD1520-240	APD1520-203	APD1520-210	APD1520-219

PIN Diode Wafer on Film Frame—Low Frequency to 20 GHz

Part Number	V_B @ 10 µA (V)	Typ. C_J @ 0 V (pF)	Max. C_J @ 30 V (pF)	Typ. V_F @ 10 mA (mV)	Max. R_S @ 1 mA (Ω)	Max. R_S @ 10 mA (Ω)	Max. T_L @ 10 mA (ns)	Nominal Chip Size (mils)	Nominal Contact Diameter (mils)
SMP1320-099	50	0.23	0.175	850	2 Typ.	0.9	400	13.5	3.0
SMP1321-099	100	0.18	0.15	860	3 Typ.	2.0	400	13.5	3.0
SMP1322-099	50	1.10	0.85	825	1.5	0.45 Typ.	400	13.5	7.5
SMP1340-099	50	0.20	0.15 @ 10 V	880	1.7 Typ.	1.2	100	11.0	3.0
SMP1353-099	200	0.35	0.13 @ 20 V	825	15	2.8	1000	11.0	7.0

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Switching Silicon PIN Diodes

Beam-Lead PIN Diodes—Low Frequency to 40 GHz

Part Number	V_B @ 10 µA (V)	Max. C_J @ 10 V (pF)	Max. C_J @ 50 V (pF)	Max. R_S @ 10 mA (Ω)	Typ. T_L @ 10 mA (ns)
DSM8100-000	60	0.025	–	3.5	25
DSG9500-000	100	–	0.025	4.0 @ 50 mA	250

Attenuator PIN Diodes

Plastic Surface Mount (SMT) PIN Diodes—Low Frequency to 6 GHz

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 30 V F = 1 MHz (pF)	Typ. V_F @ I_F = 10 mA (V)	Max. R_S I_F = 1 mA F = 100 MHz (Ω)	Max. R_S I_F = 10 mA F = 100 MHz (Ω)	Max. R_S I_F = 100 mA F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)
SMP1302 Series	200	0.3	0.8	20	3	1.5	700	50

				
Single SOT-23 *Green™*	**Common Anode SOT-23 *Green™***	**Common Cathode SOT-23 *Green™***	**Series Pair SOT-23 *Green™***	**Reverse Series Pair SOT-23 *Green™***
SMP1302-001LF Marking: RF1	SMP1302-003LF Marking: RF9	SMP1302-004LF Marking: RF3	SMP1302-005LF Marking: RF2	SMP1302-006LF Marking: RF8
		SC-70	**SC-70**	
		SMP1302-074LF Marking: RF3	SMP1302-075LF Marking: RF2	

					
Single SOD-323 *Green™*	**PI SOT-5**	**Single 0402 *Green™***	**Single SC-79 *Green™***	**Single QFN 2 x 2 *Green™***	**Single (Series) QFN 2 x 2 *Green™***
SMP1302-011LF Marking: RF	SMP1302-027LF Marking: RFM	SMP1302-040LF Marking: W	SMP1302-079LF Marking: Cathode	SMP1302-085LF Marking: RF1	SMP1302-087LF Marking: RF

Attenuator PIN Diodes

Low-Distortion Attenuator PIN Diodes

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 30 V F = 1 MHz (pF)	Typ. V_F @ I_F = 10 mA (V)	Max. R_S I_F = 1 mA F = 100 MHz (Ω)	Max. R_S I_F = 10 mA F = 100 MHz (Ω)	Max. R_S I_F = 100 mA F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)
SMP1304 Series	200	0.3	0.8	50	7	2	1000	100

				
Single SOT-23 *Green™*	**Common Cathode SOT-23 *Green™***	**Series Pair SOT-23 *Green™***	**Reverse Series Pair SOT-23 *Green™***	**Low Inductance SOT-23 *Green™***
SMP1304-001LF Marking: RG1	SMP1304-004LF Marking: RG3	SMP1304-005LF Marking: RG2	SMP1304-006LF Marking: RG8	SMP1304-007LF Marking: RG8

				
Single SOD-323 *Green™*	**PI SOT-143**	**PI SOT-5**	**Single SC-79 *Green™***	**Single (Series) QFN 2 x 2 *Green™***
SMP1304-011LF Marking: RGJ	SMP1304-019LF Marking: RGJ	SMP1304-027LF Marking: RGM	SMP1304-079LF Marking: Cathode	**SMP1334-084LF** Marking: MG

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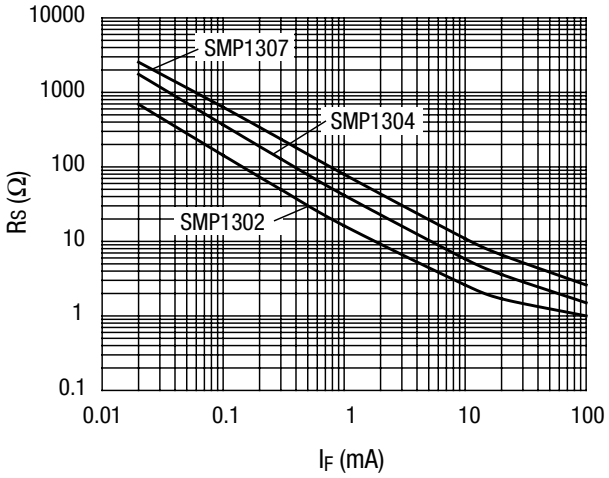
Attenuator PIN Diodes

Lowest Distortion, High IP3 Attenuator PIN Diodes

Part Number	Min. V_B I_R = 10 µA (V)	Max. C_T V_R = 30 V F = 1 MHz (pF)	Typ. V_F @ I_F = 10 mA (V)	Max. R_S I_F = 1 mA F = 100 MHz (Ω)	Max. R_S I_F = 10 mA F = 100 MHz (Ω)	Max. R_S I_F = 100 mA F = 100 MHz (Ω)	Typ. T_L I_F = 10 mA (ns)	Nominal I-Region Thickness (µm)
SMP1307 Series	200	0.3	0.85	100	15	3	1500	175

						
Single SOT-23 *Green™*	**Common Anode SOT-23 *Green™***	**Common Cathode *SOT-23***	**Series Pair SOT-23 *Green™***	**Reverse Series Pair SOT-23 *Green™***	**Single SOD-323 *Green™***	**PI SOT-5**
SMP1307-001LF Marking: RJ1	SMP1307-003LF Marking: RJ9	SMP1307-004LF Marking: RJ3	SMP1307-005LF Marking: RJ2	SMP1307-006LF Marking: RJ8	SMP1307-011LF Marking: RJ	SMP1307-027LF Marking: RJM

Typical Performance Characteristics



R_S vs. I_F

Attenuator PIN Diodes

General-purpose PIN Diode Chip for Attenuator Applications

Part Number	V_B @ 10 µA (V)	Nominal I-Region (µm)	Typ. C_J @ 0 V (pF)	Max. C_J @ 50 V (pF)	Max. R_S @ 10 mA (Ω)	Max. T_L @ 10 mA (ns)	Max. Thermal Resistance (C/W)
APD2220-000	100	50	0.2	0.2	4	700	80

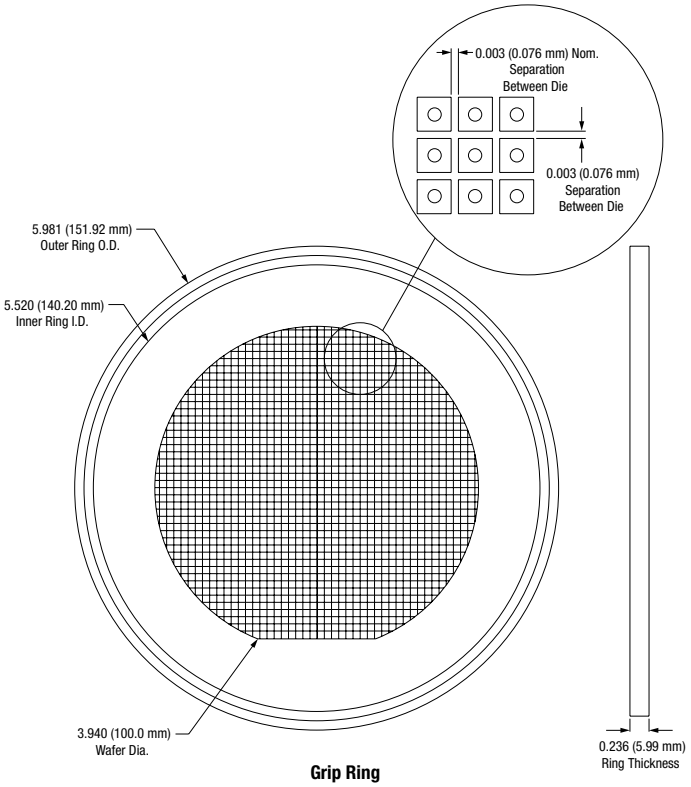
Ceramic Hermetic Packaged General-purpose PIN Diodes for Switching and Attenuator Applications

Hermetic Stripline 240	Hermetic Pill 203	Hermetic Pill 210	Hermetic Pill 219
APD2220-240	APD2220-203	APD2220-210	APD2220-219

PIN Diode Chips Supplied On Film Frame for Attenuator Applications—Low Frequency to 10 GHz

Part Number	V_B @ 10 µA (V)	Typ. C_J @ 0 V (pF)	Max. C_J @ 30 V (pF)	Typ. V_F @ 10 mA (mV)	Max. R_S @ 1 mA (Ω)	Max. R_S @ 10 mA (Ω)	Typ. T_L @ 10 mA (ns)	Nominal Chip Size (mils)	Nominal Contact Diameter (mils)
SMP1302-099	200	0.27	0.15	800	20	3	700	13.5	8.5
SMP1304-099	200	0.18	0.15	800	50	7	1000	13.5	8.5
SMP1307-099	200	0.45	0.20	850	75 Typ.	1.5	1500	18.5	11.0

The above PIN diode chips are processed on 100 mm silicon wafers, 100% DC tested, sawn and shipped on 6" film frame hoops.
Electrical rejects are identified with black ink.



Grip Ring

SCHOTTKY DIODES

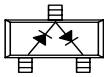
Designed for High Performance, High Volume and Cost Sensitive Mixer and Detector Applications

Plastic Surface Mount Technology (SMT) Packaged

Plastic Surface Mount (SMT) Schottky Diodes—Low Frequency to 24 GHz

Part Number	Min. V_B I_R = 10 µA (V)	Typ. I_R V_R = 1 V (nA)	Min. V_F I_F = 1 mA (mV)	Max. C_T V_R = 0 V (pF)	Max. R_T I_F = 10 mA (Ω)
SMS1546-005LF	2	300	270	0.63	8
SMS7621 Series	2	80	320	0.25	18

Delta V_F for pairs and quads is 10 mV maximum at 1 mA.
Breakdown voltage and reverse leakage cannot be measured directly on ring configurations.

								
Single SC-79 *Green™*	**Single SOT-23 *Green™***	**Common Cathode SOT-23 *Green™***	**Series Pair SOT-23 *Green™***	**Reverse Series Pair SOT-23 *Green™***	**Unconnected Pair SOT-143**	**Dual Series Pair SC-88**	**Unconnected Pair MIS**	**Single 0402 *Green™***
			SMS1546-005LF Marking: SG2					
SMS7621-079LF Marking: Cathode	SMS7621-001LF Marking: XH1		SMS7621-005LF Marking: XH2	SMS7621-006LF Marking: XH8	SMS7621-015LF Marking: XH7	SMS7621-081LF Marking: XHQ	SMS7621-517 Marking: H	SMS7621-040LF Marking: E
		SC-70	**SC-70**					
		SMS7621-074LF Marking: XH3	SMS7621-075LF Marking: XH2					

Part Number	Min. V_B I_R = 100 µA (V)	Typ. I_R V_R = 1 mA (mV)	Max. C_T V_R = 0 V (pF)	Typ. R_T I_F = 10 mA (Ω)
SMS7630 Series	1	240	0.35	22

V_B is measured at 100 µA (avalanche breakdown is typically 6 V).
Delta V_F for pairs and quads is 10 mV maximum at 1 mA.
Breakdown voltage and reverse leakage cannot be measured directly on ring configurations.

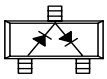
							
Single SC-79 *Green™*	**Single SOT-323 *Green™***	**Single SOT-23 *Green™***	**Series Pair SOT-23 *Green™***	**Reverse Series Pair SOT-23 *Green™***	**Reverse Unconnected Pair SOT-143**	**Unconnected Pair MIS**	**Single 0402 *Green™***
SMS7630-079LF Marking: Anode	SMS7630-011LF Marking: XD	SMS7630-001LF Marking: XD1	SMS7630-005LF Marking: XD2	SMS7630-006LF Marking: XD8	SMS7630-020LF Marking: XD0	SMS7630-517 Marking: D	SMS7630-040LF Marking: P

Plastic Surface Mount Technology (SMT) Packaged

General-purpose Plastic Packaged Schottky Diodes—Low Frequency to 10 GHz

Part Number	Min. V_B I_R = 10 µA (V)	Max. I_R V_R = 1 V (nA)	Max. V_F I_F = 1 mA (mV)	Min. V_F @ Spec. I_F (mV)	Max. C_T V_R = 0 V (pF)	Typ. R_T I_F = 10 mA (Ω)
SMS3922 Series	8	100	340	450 @ 10 mA	1.03	7
SMS3923 Series	20	500 @ 15 V	370	1000 @ 35 mA	1.23	11
SMS3924 Series	70	200 @ 50 V	550	1000 @ 15 mA	1.83	7
SMS325-079LF	40	–	670	–	0.60	10

Delta V_F for pairs and quads is 10 mV maximum at 1 mA.
Breakdown voltage and reverse leakage cannot be measured directly on ring configurations.

								
Single SC-79 *Green™*	**Single SOD-323 *Green™***	**Single SOT-23 *Green™***	**Common Cathode SOT-23 *Green™***	**Series Pair SOT-23 *Green™***	**Unconnected Pair SOT-143**	**Dual Series Pair SC-88**	**Unconnected Pair MIS *Green™***	**Single 0402 *Green™***
SMS3922-079LF Marking: Cathode	SMS3922-011LF Marking: XA	SMS3922-001LF Marking: XA1	SMS3922-004LF Marking: XA3	SMS3922-005LF Marking: XA2	SMS3922-015LF Marking: XA7			SMS3922-040LF Marking: V
SMS3923-079LF Marking: Cathode	SMS3923-011LF Marking: XB	SMS3923-001LF Marking: XB1		SMS3923-005LF Marking: XB2	SMS3923-015LF Marking: XB7	SMS3923-081LF Marking: XBQ	SMS3923-517 Marking: B	SMS3923-040LF Marking: X
SMS3924-079LF Marking: Cathode				SMS3924-005LF Marking: XC2	SMS3924-015LF Marking: XC7			SMS3924-040LF Marking: 1
				SC-70				
				SMS3924-075LF Marking: XC2				
SMS3925-079LF Marking: Cathode								SMS3925-040LF Marking: 2

Plastic Surface Mount Technology (SMT) Packaged

Silicon Schottky Mixer Quad Diodes—Low Frequency to 12 GHz

Part Number	Min. V_B I_R = 10 µA (V)	Typ. I_R V_R = 1 V (nA)	Max. V_F I_F = 1 mA (mV)	Max. C_T V_R = 0 V (pF)	Typ. R_T I_F = 10 mA (Ω)
SMS3926 Series	2	300	270	0.5	8
SMS3927 Series/SMS3930-021LF	2	50	370	0.5	8
SMS3928-023LF/SMS3931-021LF	4	5	580	0.5	8
SMS3940-026LF*	8	10	1160	0.3	16

* SMS3940-026 consists of two diodes in series in each leg.
Delta V_F for pairs and quads is 10 mV maximum at 1 mA.
Breakdown voltage and reverse leakage can not be measured directly on ring configurations.

				
Ring Quad SOT-143	**Crossover Quad SOT-143**	**Bridge Quad SOT-143**	**Octo Quad SOT-143**	**Crossover Octo Quad SOT-143**
SMS3926-022LF Marking: XE4	SMS3926-023LF Marking: XE5			
	SMS3927-023LF Marking: XJ5	SMS3930-021LF Marking: XRE		
	SMS3928-023LF Marking: XK5	SMS3931-021LF Marking: XSE	SMS3940-026LF Marking: XTG	SMS3940-029LF Marking: XTN

Surface Mount Silicon Schottky Mixer and Detector Diodes—Low Frequency to 100 GHz

Part Number	Min. V_B @ 10 µA (V)	Max. C_T @ 0 V (pF)	Typ. C_T @ 0.15 V (pF)	V_F @ 0.1 mA (mV)	V_F @ 1 mA (mV)	Max. Series Resistance (Ω)	Video Resistance @ 0 V (Ω)	Package	Configuration
SMS7621-060	2	0.18	–	–	260–320	12	–	0201	Single
SMS7630-061	1	–	0.3	60–120	135–240	–	3000–7000	0201	Single
SMS7621-092	2	0.18	–	–	260–320	12	–	0201	Anti-parallel

Ceramic

Ceramic Packaged Schottky Diodes—Low Frequency to 20 GHz

Hermetic Ceramic Packaged Detector Schottky Diodes

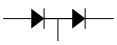
Hermetic Ceramic Pill 207	Hermetic Ceramic Pill 203
CDB7620-207	CDB7620-203
CDB7619-207	CDB7619-203
CDF7623-207	CDF7623-203
CDF7621-207	CDF7621-203
CME7660-207	CME7660-203
CDE7618-207	CDE7618-203
CDP7624-207	CDP7624-203
CDC7630-207	CDC7630-203
CDC7631-207	CDC7631-203

Epoxy and Hermetic Ceramic Packaged Single, N-Type, Low, Medium, High Drive Schottky Diodes

Epoxy Stripline 250	Epoxy Stripline 230	Hermetic Stripline 220
DMF2820-250		DMF2820-220
DME2127-250		DME2127-220
DMJ2823-250		DMJ2823-220
DMF2821-250		DMF2821-220
DME2957-250		DME2957-220
DMJ2777-250		DMJ2777-220
DMF2344-250	DMF2344-230	DMF2344-220
DME2333-250	DME2333-230	DME2333-220
DMJ2824-250	DMJ2824-230	DMJ2824-220
	DMF2822-230	DMF2822-220
	DME2458-230	DME2458-220
	DMJ2825-230	DMJ2825-220

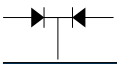
Ceramic

Ceramic Packaged Schottky Diodes—Low Frequency to 20 GHz



Epoxy and Hermetic Ceramic Packaged Series Pair, N-Type, Low, Medium, High Drive Schottky Diodes

Epoxy Stripline 252	Epoxy Stripline 232	Hermetic Stripline 222
DMF2835-252		DMF2835-222
DME2050-252		DME2050-222
DMJ2092-252		DMJ2092-222
DMF2826-252		DMF2826-222
DME2829-252		DME2829-222
DMJ2093-252		DMJ2093-222
DMF2827-252	DMF2827-232	DMF2827-222
DME2830-252	DME2830-232	DME2830-222
DMJ2832-252	DMJ2832-232	DMJ2832-222
	DMF2828-232	DMF2828-222
	DME2831-232	DME2831-222
	DMJ2833-232	DMJ2833-222

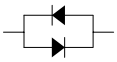


Epoxy and Hermetic Ceramic Packaged Common Cathode, N-Type, Low, Medium, High Drive Schottky Diodes

Epoxy Stripline 253	Hermetic Stripline 223
DMF2182-253	DMF2182-223
DME2205-253	DME2205-223
DMJ2208-253	DMJ2208-223
DMF2183-253	DMF2183-223
DME2206-253	DME2206-223
DMJ2209-253	DMJ2209-223
DMF2184-253	DMF2184-223
DME2207-253	DME2207-223
DMJ2210-253	DMJ2210-223
	DMF2834-223
	DME2864-223
	DMJ2836-223

Ceramic

Ceramic Packaged Schottky Diodes—Low Frequency to 20 GHz



Epoxy and Hermetic Ceramic Packaged Anti-parallel, N-Type, Low, Medium, High Drive Schottky Diodes

Epoxy Stripline 251	Hermetic Stripline 221
DMF2185-251	DMF2185-221
DME2282-251	DME2282-221
DMJ2303-251	DMJ2303-221
DMF2186-251	DMF2186-221
DME2283-251	DME2283-221
DMJ2304-251	DMJ2304-221
DMF2187-251	DMF2187-221
DME2284-251	DME2284-221
DMJ2246-251	DMJ2246-221
	DMF2837-221
	DME2838-221
	DMJ2839-221

Epoxy and Hermetic Ceramic Packaged Ring Quad, N-Type, Low, Medium, High Drive Schottky Diodes

Epoxy Stripline 254	Epoxy Stripline 234	Hermetic Stripline 224
DMF2865-254		DMF2865-224
DME2857-254		DME2857-224
DMJ2502-254		DMJ2502-224
DMF2011-254		DMF2011-224
DME2858-254		DME2858-224
DMJ2990-254		DMJ2990-224
DMF2012-254	DMF2012-234	DMF2012-224
DME2859-254	DME2859-234	DME2859-224
DMJ2667-254	DMJ2667-234	DMJ2667-224
	DMF2454-234	DMF2454-224
	DME2459-234	DME2459-224
	DMJ2455-234	DMJ2455-224

Ceramic

Ceramic Packaged Schottky Diodes—Low Frequency to 20 GHz

Epoxy and Hermetic Ceramic Packaged Bridge Quad, N-Type, Low, Medium, High Drive Schottky Diodes

Epoxy Stripline 255	Epoxy Stripline 235	Hermetic Stripline 225
DMF2076-255		DMF2076-225
DME2029-255		DME2029-225
DMJ2312-255		DMJ2312-225
DMF2077-255		DMF2077-225
DME2850-255		DME2850-225
DMJ2088-255		DMJ2088-225
DMF2078-255	DMF2078-235	DMF2078-225
DME2031-255	DME2031-235	DME2031-225
DMJ2768-255	DMJ2768-235	DMJ2768-225
	DMF2848-235	DMF2848-225
	DME2851-235	DME2851-225
	DMJ2852-235	DMJ2852-225

Epoxy Packaged Octo Quad Ring, N-Type, Low, Medium, High Drive Schottky Diodes

Part Number	Frequency Band	C_J 0 V, 1 MHz (pF)	Max. R_S @ 5 mA (W)	Min. V_B @ 10 µA (V)	V_F @ 1 mA (mV)	Drive Level
DMF3938-257	S–X	0.15–0.30	16	4	400–520	Low
DME3939-257	S–X	0.15–0.30	16	6	600–800	Medium
DMJ3940-257	S–X	0.15–0.30	16	8	1000–1200	High

Epoxy and Hermetic Ceramic Packaged P-Type Zero Bias Detector Schottky Diodes

Epoxy Stripline 250	Hermetic 220
DDC2353-250	DDC2353-220
DDC2354-250	DDC2354-220

Epoxy and Hermetic Ceramic Packaged P-Type Detector Schottky Diodes

Epoxy Stripline 250	Epoxy Stripline 230	Hermetic Stripline 220
DDB2503-250	DDB2503-230	DDB2503-220
DDB2504-250	DDB2504-230	DDB2504-220
DDB2265-250	DDB2265-230	DDB2265-220

Beam-Lead

Beam-Lead Schottky Diodes—Low Frequency to 40 GHz

Single, N-Type, Low, Medium, High Drive Schottky Diodes

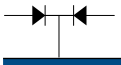
Part Number	Frequency Band	C_J 0 V @1 MHz (pF)	Max. R_S @ 5 mA (Ω)	Min. V_B @ 10 µA (V)	V_F @ 1 mA (mV)	Drive Level
DMF2820-000	S	0.30–0.50	5	2	200–260	Low
DME2127-000	S	0.30–0.50	5	3	300–400	Med
DMJ2823-000	S	0.30–0.50	5	4	500–600	High
DMF2821-000	X	0.15–0.30	8	2	250–310	Low
DME2957-000	X	0.15–0.30	8	3	325–425	Med
DMJ2777-000	X	0.15–0.30	8	4	550–650	High
DMF2344-000	Ku	0.05–0.15	13	2	260–330	Low
DME2333-000	Ku	0.05–0.15	13	3	350–450	Med
DMJ2824-000	Ku	0.05–0.15	13	4	500–680	High
DMF2822-000	K	0.1 Max.	18	2	270–350	Low
DME2458-000	K	0.1 Max.	18	3	375–550	Med
DMJ2825-000	K	0.1 Max.	18	4	600–700	High

Series Pair, N-Type, Low, Medium, High Drive Schottky Diodes

Part Number	Frequency Band	C_J 0 V, 1 MHz (pF)	Max. R_S @ 5 mA (Ω)	Min. V_B @ 10 µA (V)	V_F @ 1 mA (mV)	Drive Level
DMF2835-000	S	0.30–0.50	5	2	200–260	Low
DME2050-000	S	0.30–0.50	5	3	300–400	Med
DMJ2092-000	S	0.30–0.50	5	4	500–600	High
DMF2826-000	X	0.15–0.30	8	2	250–310	Low
DME2829-000	X	0.15–0.30	8	3	325–425	Med
DMJ2093-000	X	0.15–0.30	8	4	550–650	High
DMF2827-000	Ku	0.05–0.15	13	2	260–330	Low
DME2830-000	Ku	0.05–0.15	13	3	350–450	Med
DMJ2832-000	Ku	0.05–0.15	13	4	500–680	High
DMF2828-000	K	0.1 Max.	18	2	270–350	Low
DME2831-000	K	0.1 Max.	18	3	375–550	Med
DMJ2833-000	K	0.1 Max.	18	4	600–700	High

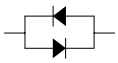
Beam-Lead

Beam-Lead Schottky Diodes—Low Frequency to 40 GHz



Common Cathode, N-Type, Low, Medium, High Drive Schottky Diodes

Part Number	Frequency Band	C_J 0 V, 1 MHz (pF)	Max. R_S @ 5 mA (Ω)	Min. V_B @ 10 µA (V)	V_F @ 1 mA (mV)	Drive Level
DMF2182-000	S	0.30–0.50	5	2	200–260	Low
DME2205-000	S	0.30–0.50	5	3	300–400	Med
DMJ2208-000	S	0.30–0.50	5	4	500–600	High
DMF2183-000	X	0.15–0.30	8	2	250–310	Low
DME2206-000	X	0.15–0.30	8	3	325–425	Med
DMJ2209-000	X	0.15–0.30	8	4	550–650	High
DMF2184-000	Ku	0.05–0.15	13	2	260–330	Low
DME2207-000	Ku	0.05–0.15	13	3	350–450	Med
DMJ2210-000	Ku	0.05–0.15	13	4	500–680	High
DMF2834-000	K	0.1 Max.	18	2	270–350	Low
DME2864-000	K	0.1 Max.	18	3	375–550	Med
DMJ2836-000	K	0.1 Max.	18	4	600–700	High



Anti-parallel, N-Type, Low, Medium, High Drive Schottky Diodes

Part Number	Frequency Band	C_J 0 V, 1 MHz (pF)	Max. R_S @ 5 mA (Ω)	Min. V_B @ 10 µA (V)	V_F @ 1 mA (mV)	Drive Level
DMF2185-000	S	0.30–0.50	5	2	200–260	Low
DME2282-000	S	0.30–0.50	5	3	300–400	Med
DMJ2303-000	S	0.30–0.50	5	4	500–600	High
DMF2186-000	X	0.15–0.30	8	2	250–310	Low
DME2283-000	X	0.15–0.30	8	3	325–425	Med
DMJ2304-000	X	0.15–0.30	8	4	550–650	High
DMF2187-000	Ku	0.05–0.15	13	2	260–330	Low
DME2284-000	Ku	0.05–0.15	13	3	350–450	Med
DMJ2246-000	Ku	0.05–0.15	13	4	500–680	High
DMF2837-000	K	0.1 Max.	18	2	270–350	Low
DME2838-000	K	0.1 Max.	18	3	375–550	Med
DMJ2839-000	K	0.1 Max.	18	4	600–700	High

Beam-Lead

Beam-Lead Schottky Diodes—Low Frequency to 40 GHz

Ring Quad, N-Type, Low, Medium, High Drive Schottky Diodes

Part Number	Frequency Band	C_J 0 V, 1 MHz (pF)	Max. R_S @ 5 mA (Ω)	Min. V_B @ 10 µA (V)	V_F @ 1 mA (mV)	Drive Level
DMF2865-000	S	0.30–0.50	5	2	200–260	Low
DME2857-000	S	0.30–0.50	5	3	300–400	Med
DMJ2502-000	S	0.30–0.50	5	4	500–600	High
DMF2011-000	X	0.15–0.30	8	2	250–310	Low
DME2858-000	X	0.15–0.30	8	3	325–425	Med
DMJ2990-000	X	0.15–0.30	8	4	550–650	High
DMF2012-000	Ku	0.05–0.15	13	2	260–330	Low
DME2859-000	Ku	0.05–0.15	13	3	350–450	Med
DMJ2667-000	Ku	0.05–0.15	13	4	500–680	High
DMF2454-000	K	0.1 Max.	18	2	270–350	Low
DME2459-000	K	0.1 Max.	18	3	375–550	Med
DMJ2455-000	K	0.1 Max.	18	4	600–700	High

Bridge Quad, N-Type, Low, Medium, High Drive Schottky Diodes

Part Number	Frequency Band	C_J 0 V, 1 MHz (pF)	Max. R_S @ 5 mA (Ω)	Min. V_B @ 10 µA (V)	V_F @ 1 mA (mV)	Drive Level
DMF2076-000	S	0.30–0.50	5	2	200–260	Low
DME2029-000	S	0.30–0.50	5	3	300–400	Med
DMJ2312-000	S	0.30–0.50	5	4	500–600	High
DMF2077-000	X	0.15–0.30	8	2	250–310	Low
DME2850-000	X	0.15–0.30	8	3	325–425	Med
DMJ2088-000	X	0.15–0.30	8	4	550–650	High
DMF2078-000	Ku	0.05–0.15	13	2	260–330	Low
DME2031-000	Ku	0.05–0.15	13	3	350–450	Med
DMJ2768-000	Ku	0.05–0.15	13	4	500–680	High
DMF2848-000	K	0.1 Max.	18	2	270–350	Low
DME2851-000	K	0.1 Max.	18	3	375–550	Med
DMJ2852-000	K	0.1 Max.	18	4	600–700	High

Beam-Lead

Beam-Lead Schottky Diodes—Low Frequency to 40 GHz

Single, P-Type, Zero Bias Detector Schottky Diodes

Part Number	Min. EO (mV)	Z_V (Ω)	Min. T_{SS} (dBm)
DDC2353-000	8	2000–5000	-52
DDC2354-000	15	5000–15000	-56

Single, P-Type, Low and Medium Drive Detector Schottky Diodes

Part Number	Frequency Band	Min. T_{SS} (dBm)	Z_{IF} (Ω)	Max. C_J @ 0 V (pF)	V_F @ 1 mA (mV)	Min. V_B @ 10 µA (V)
DDB2503-000	X	50	500–700	0.15	200–350	2
DDB2504-000	Ku	48	500–700	0.10	200–350	2
DDB2265-000	K	50	800–1200	0.10	300–450	3

Chip

Schottky Diode Chips—Low Frequency to 40 GHz

Single N-Type and P-Type Schottky Diode Chips

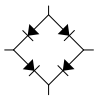
Part Number	Barrier Height	Junction Type	Max. C_J (pF)	Max. R_T (Ω)	V_F @ 1 mA (mV)	Min. V_B (V)	Typ. R_V @ 0 Bias (Ω)
CDB7619-000	Low	P	0.1	40	275–375	2	735
CDB7620-000	Low	P	0.15	30	250–350	2	537
CDC7630-000	ZBD	P	0.25	30	135–240	1	5,500
CDC7631-000	ZBD	P	0.15	80	150–300	2	7,200
CDF7621-000	Low	N	0.1	20	270–350	2	680
CDF7623-000	Low	N	0.3	10	240–300	2	245
CME7660-000	Med.	N	0.15	10	350–450	3	–
CDE7618-000	Med.	N	0.1	20	375–500	3	–
CDP7624-000	Med–High	N	0.15	15	450–575	3	–

Chip

Schottky Diode Chips—Low Frequency to 40 GHz

N-Type, Low, Medium, High Drive Ring Quad Schottky Diodes

Part Number	Frequency Band	Barrier	V_F I_F = 1 mA (mV)	ΔV_F I_F = 1 mA (mV)	C_J V_R = 0 V, F = 1 MHz (pF)	R_S I_F = 5 mA (Ω)
DMF3926-000	S	Low	200–260	10	0.30–0.50	5
DME3927-000	S	Medium	300–400	10	0.30–0.50	5
DMJ3928-000	S	High	500–600	10	0.30–0.50	5
DMF3942-000	X	Low	250–310	10	0.15–0.30	8
DME3943-000	X	Medium	325–425	10	0.15–0.30	8
DMJ3944-000	X	High	550–650	10	0.15–0.30	8

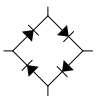


N-Type, Low, Medium, High Drive Bridge Quad Schottky Diodes

Part Number	Frequency Band	Barrier	V_F I_F = 1 mA (mV)	ΔV_F I_F = 1 mA (mV)	C_J V_R = 0 V, F = 1 MHz (pF)	R_S I_F = 5 mA (Ω)
DMF3929-000	S	Low	200–260	10	0.3–0.5	5
DME3930-000	S	Medium	300–400	10	0.3–0.5	5
DMJ3931-000	S	High	500–600	10	0.3–0.5	5

N-Type, Low, Medium, High Drive Series Pair Schottky Diodes

Part Number	Frequency Band	Barrier	V_F I_F = 1 mA (mV)	ΔV_F I_F = 1 mA (mV)	C_J V_R = 0 V, F = 1 MHz (pF)	R_S I_F = 5 mA (Ω)
DMF3932-000	S	Low	200–260	10	0.3–0.5	5
DME3933-000	S	Medium	300–400	10	0.3–0.5	5
DMJ3934-000	S	High	500–600	10	0.3–0.5	5



N-Type, Low, Medium, High Drive Back-to-Back Ring Series Pair Schottky Diodes

Part Number	Frequency Band	Barrier	V_F I_F = 1 mA (mV)	ΔV_F I_F = 1 mA (mV)	C_J V_R = 0 V, F = 1 MHz (pF)	R_S I_F = 5 mA (Ω)
DMF3935-000	S	Low	200–260	10	0.3–0.5	5
DME3936-000	S	Medium	300–400	10	0.3–0.5	5
DMJ3937-000	S	High	500–600	10	0.3–0.5	5

Chip

Schottky Diode Chips—Low Frequency to 40 GHz

N-Type, Low, Medium, High Drive Octo Quad Ring Schottky Diodes

Part Number	Frequency Band	Barrier	V_F I_F = 1 mA (mV)	ΔV_F I_F = 1 mA (mV)	C_J V_R = 0 V, F = 1 MHz (pF)	R_S I_F = 5 mA (Ω)
DMF3938-000	S-X	Low	400–520	15	0.15–0.30	16
DME3939-000	S-X	Medium	600–800	15	0.15–0.30	16
DMJ3940-000	S-X	High	1000–1200	15	0.15–0.30	16

N-Type, Low, Medium, High Drive Back-to-Back Crossover Quad Schottky Diodes

Part Number	Frequency Band	Barrier	V_F I_F = 1 mA (mV)	ΔV_F I_F = 1 mA (mV)	C_J V_R = 0 V, F = 1 MHz (pF)	R_S I_F = 5 mA (Ω)
DMF3945-000	S	Low	200–260	15	0.3–0.5	5
DME3946-000	S	Medium	300–400	15	0.3–0.5	5
DMJ3947-000	S	High	525–625	15	0.3–0.5	5

GaAs Flip Chip

GaAs Schottky Flip Chip Diodes—Low Frequency to 77 GHz

GaAs Flip Chip Schottky Diodes

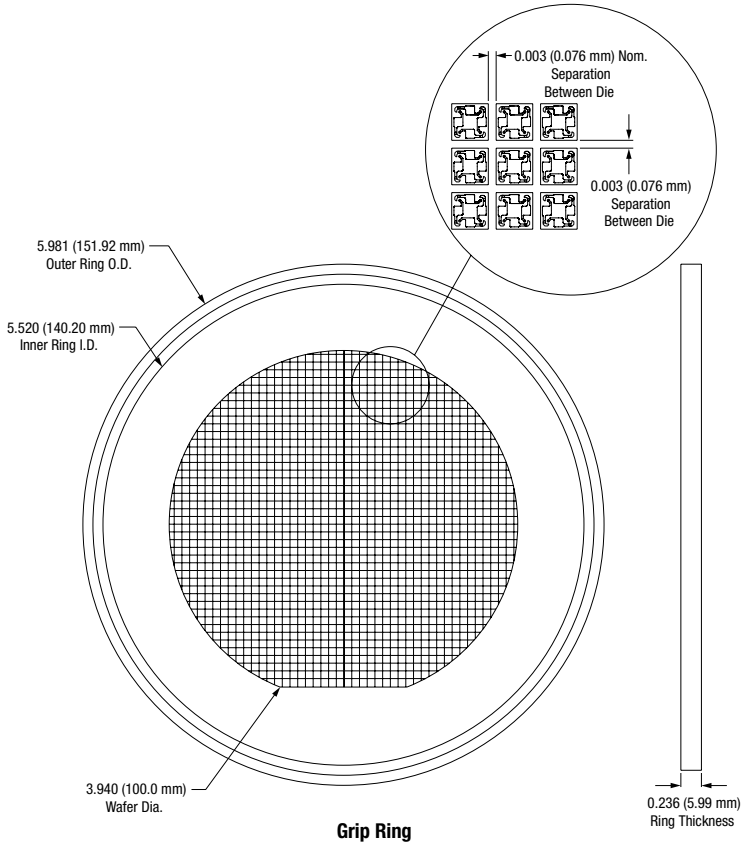
Part Number	V_B @ 10 µA (V)	C_J @ 0 V, 1 MHz (pF)	Max. R_S (Ω)	V_F @ 1 mA (mV)	Recommended Frequency (GHz)	Configuration
DMK2308-000	–	0.04–0.07	7	650–750	24–77	Anti-parallel
DMK2790-000	3	0.04–0.07	7	650–750	24–77	Single

Wafer

Silicon Schottky Mixer Diode Chips (Wafer on Film Frame)—Low Frequency to 24 GHz

Silicon Schottky Mixer Diode Chips

Part Number	Min. V_B @ 10 µA (V)	C_J V_R = 0 V, F = 1 MHz (pF)	V_F I_F = 1 mA (mV)	Max. ΔV_F @ 1 mA (mV)	Max. R_T I_F = 10 mA (Ω)
SMS3926-099	2	0.3–0.5	200–260	10	8
SMS3927-099	3	0.3–0.5	300–400	10	8
SMS3928-099	4	0.3–0.5	500–600	10	8



Grip Ring

VARACTOR DIODES

Ideal for VCO, VCXO, Tunable Filters, and Phase Shifter Products

High Quality Factor (Abrupt) Varactor Diodes

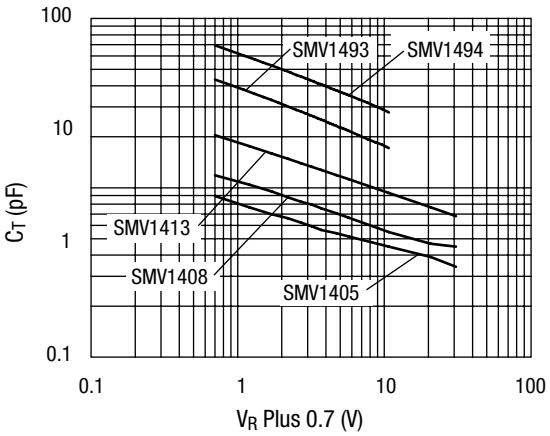
Plastic Surface Mount (SMT) Abrupt Varactor Diodes—Low Frequency to 6 GHz

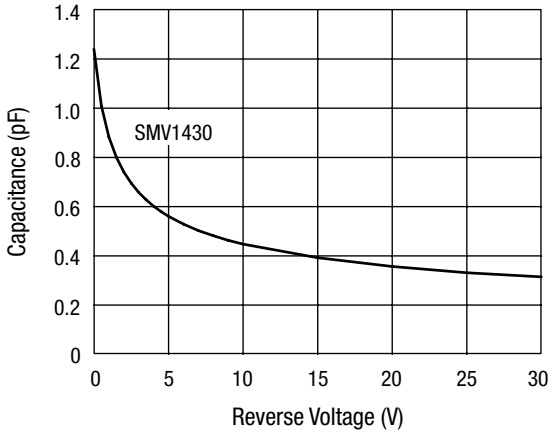
Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 10 V (pF)	Typ. C_T V_R = 30 V (pF)	Min. Total C_T = 0 V/ C_T = 30 V	Max. R_S 500 MHz (Ω)	Min. Q V_R = 4 V @ 50 MHz
SMV1405 Series	30	1.84	1.25	0.95	0.63	4.1	0.80	3200
SMV1408 Series	30	2.94	1.88	1.28	0.95	4.1	0.60	2900
SMV1413 Series	30	6.37	4.10	2.85	1.77	4.2	0.35	2400
SMV1430 Series	30	0.88	0.60	0.44	0.31	3.8	1.60	3500
SMV1493 Series	12	19.00	11.20	7.10	–	–	0.50	–
SMV1494 Series	12	38.40	23.10	14.7	–	–	0.45	–

				
Single SOT-23 *Green™*	**Common Cathode SOT-23 *Green™***	**Common Cathode SC-70**	**Single SC-79 *Green™***	**Single 0402 *Green™***
		SMV1405-074LF Marking: GE3	SMV1405-079LF Marking: Cathode	SMV1405-040LF Marking: 5
SMV1408-001LF Marking: DV1				SMV1408-040LF Marking: DV
SMV1413-001LF Marking: ER1	SMV1413-004LF Marking: ER3	SMV1413-074LF Marking: ER3	SMV1413-079LF Marking: Cathode	
			SMV1430-079LF Marking: Cathode	SMV1430-040LF Marking: 7
			SMV1493-079LF Marking: Cathode	
			SMV1494-079LF Marking: Cathode	

High Quality Factor (Abrupt) Varactor Diodes

Typical Performance Characteristics





Silicon Abrupt Varactor Diode Chips—Low Frequency to 12 GHz

Part Number	Die Sizes (mils)	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 10 V (pF)	Typ. C_T V_R = 30 V (pF)	Min. Total C_T = 0 V/ C_T = 30 V	Max. R_S 500 MHz (Ω)	Min. Q V_R = 4 V @ 50 MHz
SMV1405-000	0.014±0.001	30	1.84	1.25	0.95	0.63	4.1	0.80	3200
SMV1408-000	0.014±0.001	30	2.94	1.88	1.28	0.95	4.1	0.60	2900
SMV1413-000	0.014±0.001	30	6.37	4.10	2.85	1.77	4.2	0.35	2400
SMV1493-000	0.018±0.002	12	19.00	11.20	7.10	–	–	0.50	–
SMV1494-000	0.018±0.002	12	38.40	23.10	14.70	–	–	0.45	–

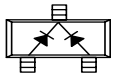
Hermetic Packaged Abrupt Junction Varactor Diodes—Low Frequency to 12 GHz

Hermetic Stripline 240	Hermetic Pill 203	Hermetic Pill 219	Hermetic Pill 210
SMV1405-240	SMV1405-203	SMV1405-219	SMV1405-210
SMV1408-240	SMV1408-203	SMV1408-219	SMV1408-210
SMV1413-240	SMV1413-203	SMV1413-219	SMV1413-210
SMV1493-240	SMV1493-203	SMV1493-219	SMV1493-210
SMV1494-240	SMV1494-203	SMV1494-219	SMV1494-210

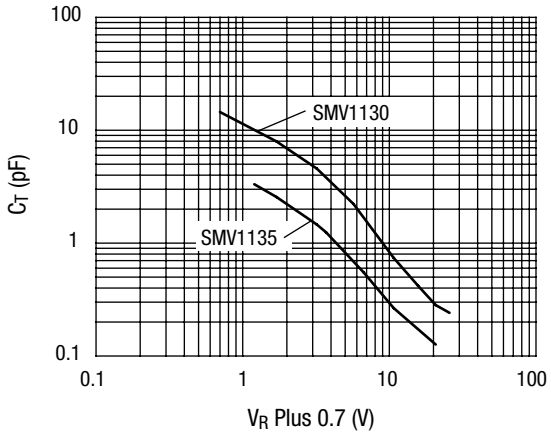
Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

Large Bandwidth Silicon Hyperabrupt Varactor Diodes

Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 20 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1130 Series	26	18.50	2.00	1.47	1 to 3	0.8
SMV1135 Series	28	8.69	1.17	1.47	1 to 3	1.2

				
Common Cathode SOT-23 ***Green ™***	**Single SC-79** ***Green ™***	**Single SOT-23** ***Green ™***	**Single SOD-323** ***Green ™***	**Single 0402** ***Green™***
	SMV1130-079LF Marking: Cathode	SMV1130-001LF Marking: HW1	SMV1130-011LF Marking: HW	SMV1130-040LF Marking: HZ1
SMV1135-004LF Marking: EG3				

Typical Performance Characteristics



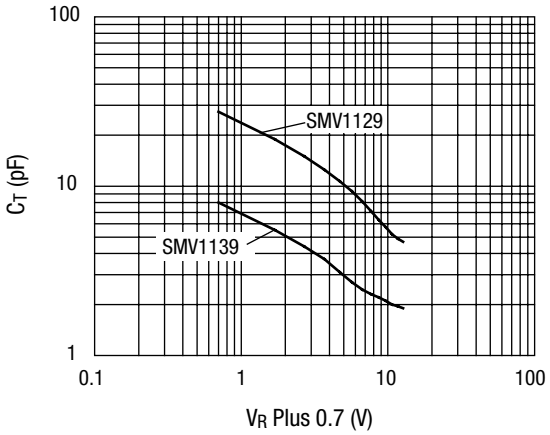
Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

Large Bandwidth Silicon Hyperabrupt Varactor Diodes (Continued)

Part Number	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 8 V (pF)	Typ. C_T V_R = 12 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1129 Series	18.9	10.7	6.3	4.7	1.4	1 to 3	0.4
SMV1139 Series	5.5	3.1	2.2	1.9	1.4	1 to 3	0.6

	
Single SOD-323 *Green ™*	**Single SC-79 *Green ™***
	SMV1129-079LF Marking: Cathode
SMV1139-011LF Marking: HG	

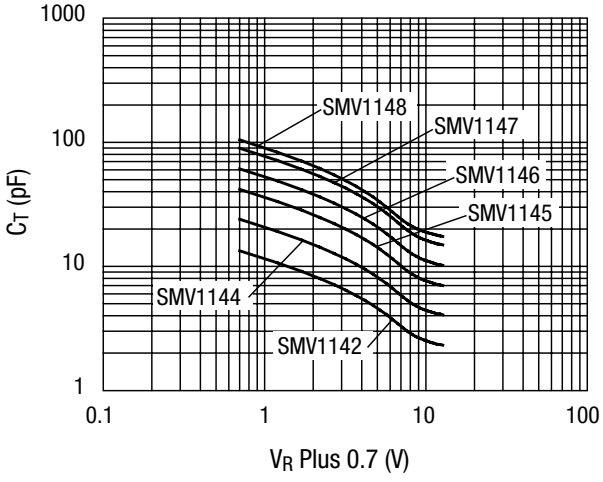
Typical Performance Characteristics



Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 8 V (pF)	Typ. C_T V_R = 12 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1142 Series	12	9.1	4.86	2.72	2.32	1.5	1 to 3	0.7
SMV1143 Series	12	12.9	6.87	3.82	3.25	1.5	1 to 3	0.65
SMV1144 Series	12	16.3	8.66	4.8	4.08	1.5	1 to 3	0.65
SMV1145 Series	12	28.35	15.02	8.29	7.02	1.5	1 to 3	0.6
SMV1147 Series	12	60.65	32.06	17.63	14.9	1.5	1 to 3	0.55
SMV1148 Series	12	70.48	36.29	20.22	17.43	1.5	1 to 3	0.5

	
Single SOD-323 *Green ™*	**Single SC-79 *Green ™***
SMV1142-011LF Marking: GU	
SMV1143-011LF Marking: GV	
SMV1144-011LF Marking: GW	
SMV1145-011LF Marking: GA	SMV1145-079LF Marking: Cathode
SMV1147-011LF Marking: GY	SMV1147-079LF Marking: Cathode
SMV1148-011LF Marking: GZ	

Typical Performance Characteristics



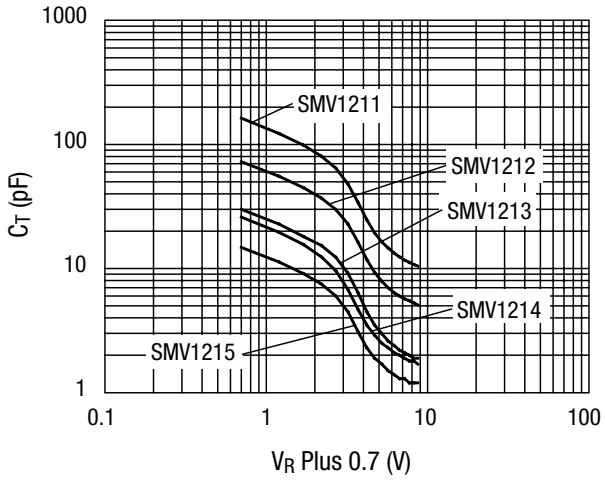
Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

Large Bandwidth Silicon Hyperabrupt Varactor Diodes (Continued)

Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 8 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1211 Series	12	98.6	19.4	10.5	5	1 to 4	0.4
SMV1212 Series	12	44.9	9.3	5.1	5	1 to 4	0.8
SMV1213 Series	12	18.1	3.5	1.9	5	1 to 4	1.4
SMV1214 Series	12	15.6	2.9	1.7	5	1 to 4	1.7
SMV1215 Series	12	9.1	1.9	1.2	5	1 to 4	2.8

					
Single SOT-23 *Green™*	**Common Cathode SOT-23 *Green™***	**Common Cathode SC-70**	**Single SOD-323 *Green™***	**Single SC-79 *Green™***	**Single 0402 *Green™***
SMV1211-001LF Marking: EA1					
SMV1212-001LF Marking: EB1	SMV1212-004LF Marking: EB3	SMV1212-074LF Marking: EB3		SMV1212-079LF Marking: Cathode	
SMV1213-001LF Marking: D86	SMV1213-004LF Marking: GD3	SMV1213-074LF Marking: GD3	SMV1213-011LF Marking: GD	SMV1213-079LF Marking: Cathode	SMV1213-040LF Marking: J
SMV1214-001LF Marking: DL1					
SMV1215-001LF Marking: DM1			SMV1215-011LF Marking: DM		

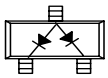
Typical Performance Characteristics



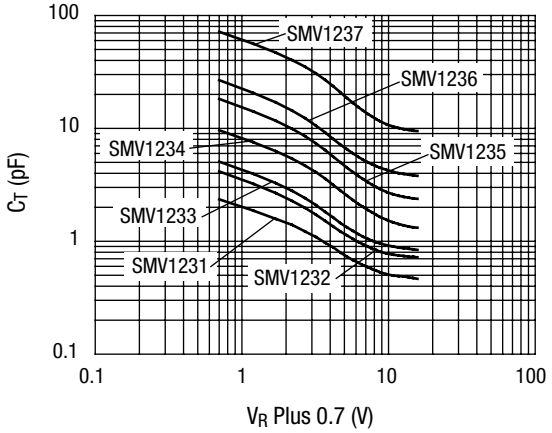
Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

Large Bandwidth Silicon Hyperabrupt Varactor Diodes (Continued)

Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 8 V (pF)	Typ. C_T V_R = 12 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1231 Series	15	1.58	0.794	0.534	0.487	1.5	1 to 3	2.9
SMV1232 Series	15	2.67	1.22	0.81	0.74	1.5	1 to 3	1.5
SMV1233 Series	15	3.28	1.45	0.96	0.87	1.5	1 to 3	1.2
SMV1234 Series	15	6.28	2.81	1.65	1.38	1.6	1 to 3	0.8
SMV1235 Series	15	11.67	4.99	2.91	2.47	1.6	1 to 3	0.6
SMV1236 Series	15	17.02	7.19	4.49	3.95	1.6	1 to 3	0.5
SMV1237 Series	15	46.89	20.83	11.61	9.84	1.6	1 to 3	0.25

						
Single SOT-23 *Green™*	**Common Cathode SOT-23 *Green™***	**Common Cathode SC-70**	**Common Anode SC-70**	**Single SOD-323 *Green™***	**Single SC-79 *Green™***	**Single 0402 *Green™***
		SMV1231-074LF Marking: KA3		SMV1231-011LF Marking: KA	SMV1231-079LF Marking: Cathode	SMV1231-040LF Marking: A
		SMV1232-074LF Marking: HC3		SMV1232-011LF Marking: HC	SMV1232-079LF Marking: Cathode	SMV1232-040LF Marking: Y
SMV1233-001LF Marking: DP1	SMV1233-004LF Marking: DP3	SMV1233-074LF Marking: DP3		SMV1233-011LF Marking: DP	SMV1233-079LF Marking: Cathode	SMV1233-040LF Marking: B
SMV1234-001LF Marking: DQ1	SMV1234-004LF Marking: DQ3		SMV1234-073LF Marking: DQ9	SMV1234-011LF Marking: DQ	SMV1234-079LF Marking: Cathode	SMV1234-040LF Marking: G
SMV1235-001LF Marking: DR1	SMV1235-004LF Marking: DR3	SMV1235-074LF Marking: DR3		SMV1235-011LF Marking: DR	SMV1235-079LF Marking: Cathode	SMV1235-040LF Marking: M
SMV1236-001LF Marking: EQ1	SMV1236-004LF Marking: EQ3	SMV1236-074LF Marking: EQ3		SMV1236-011LF Marking: EQ1	SMV1236-079LF Marking: Cathode	SMV1236-040LF Marking: R
SMV1237-001LF Marking: DT1						

Typical Performance Characteristics



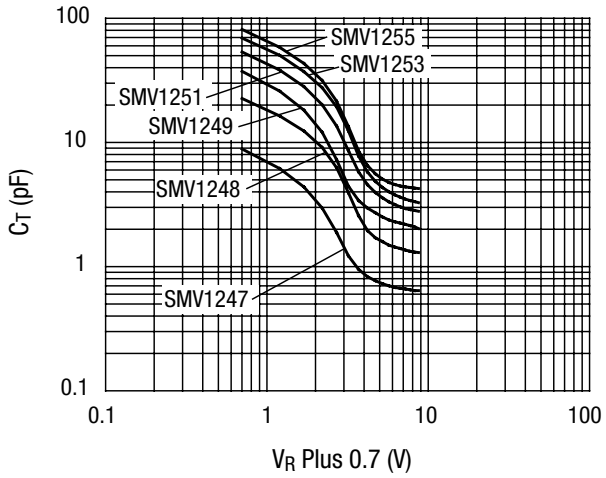
Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

Large Bandwidth Silicon Hyperabrupt Varactor Diodes (Continued)

Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 8 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1247 Series	15	4.37	0.77	0.64	9.5	0.3 to 4.7	6.0
SMV1248 Series	15	12.33	1.71	1.3	10.8	0.3 to 4.7	3.3
SMV1249 Series	15	18.18	2.72	2.03	11.0	0.3 to 4.7	2.2
SMV1251 Series	15	28.09	3.95	2.79	11.0	0.3 to 4.7	1.6
SMV1253 Series	15	37.07	4.86	3.28	11.0	0.3 to 4.7	1.4
SMV1255 Series	15	43.27	5.58	4.26	11.0	0.3 to 4.7	1.3

						
Single SOT-23 *Green™*	**Common Anode SOT-23 *Green™***	**Common Cathode SOT-23 *Green™***	**Common Cathode SC-70**	**Single SOD-323 *Green™***	**Single SC-79 *Green™***	**Single 0402 *Green™***
			SMV1247-074LF Marking: GF3	SMV1247-011LF Marking: GF	SMV1247-079LF Marking: Cathode	SMV1247-040LF Marking: H
SMV1248-001LF Marking: GG1			SMV1248-074LF Marking: GG3		SMV1248-079LF Marking: Cathode	SMV1248-040LF Marking: 8
SMV1249-001LF Marking: EF1	SMV1249-003LF Marking: EF9	SMV1249-004LF Marking: EF3	SMV1249-074LF Marking: EF3	SMV1249-011LF Marking: EF	SMV1249-079LF Marking: Cathode	SMV1249-040LF Marking: K
SMV1251-001LF Marking: EH		SMV1251-004LF Marking: EH3	SMV1251-074LF Marking: EH3	SMV1251-011LF Marking: EK	SMV1251-079LF Marking: Cathode	SMV1251-040LF Marking: EH1
		SMV1253-004LF Marking: EJ3		SMV1253-011LF Marking: EJ	SMV1253-079LF Marking: Cathode	SMV1253-040LF Marking: 3
SMV1255-001LF Marking: EK1		SMV1255-004LF Marking: EK3		SMV1255-011LF Marking: EK	SMV1255-079LF Marking: Cathode	SMV1255-040LF Marking: 4

Typical Performance Characteristics



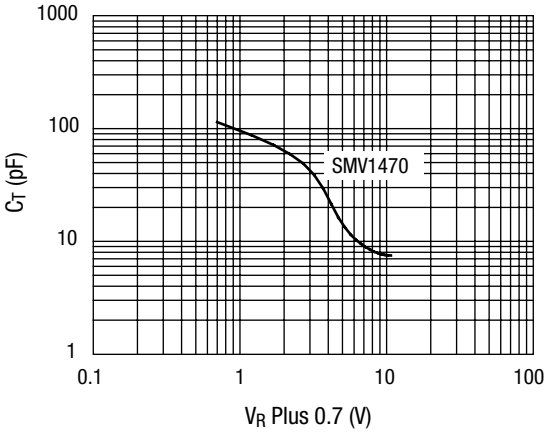
Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

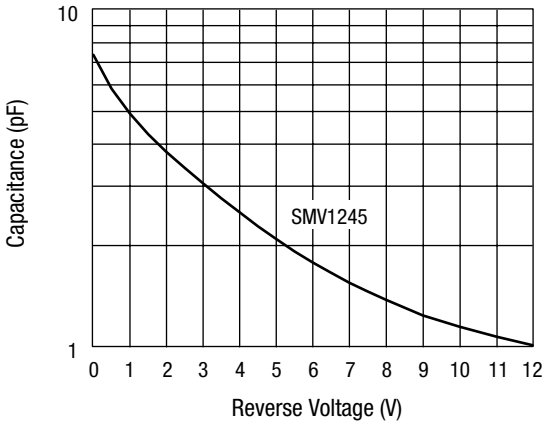
Large Bandwidth Silicon Hyperabrupt Varactor Diodes (Continued)

Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 8 V (pF)	Typ. C_T V_R = 12 V (pF)	Typ. C_T V_R = 20 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1245 Series	26	4.93	2.51	1.380	1.020	–	1.47	1 to 3	2.0
SMV1265 Series	28	14.26	5.15	1.610	1.120	0.830	17.70	1 to 26	2.4 Typ.
SMV1273-079LF	29	20.35	9.34	4.80	3.42	2.45	6.20	2 to 25	0.8 Typ.
SMV1275-079LF	10	3.06	1.58	1.05	0.89	–	1.8	1 to 4	0.7
SMV1276-079LF	10	4.32	2.03	1.37	1.26	–	2.0	1 to 4	0.7
SMV1281 Series	24	8.60	3.60	1.400	0.940	0.690	12 Typ.	1 to 20	1.7 Typ.
SMV1283-Series	28	9.13	3.64	1.16	0.815	0.589	14.00	1 to 26	2.4 Typ.
SMV1470-004LF	10	71.30	16.30	7.900	–	–	5.00	1 to 5	0.8

			
Single SOD-323 *Green™*	**Single SC-79 *Green™***	**Common Cathode SOT-23 *Green™***	**Single 0402 *Green™***
SMV1245-011LF Marking: HL	SMV1245-079LF Marking: Cathode		
SMV1265-011LF Marking: HM			SMV1265-040LF Marking: HD1
	SMV1273-079LF Marking: Cathode		
	SMV1275-079LF Marking: Cathode		
	SMV1276-079LF Marking: Cathode		
SMV1281-011LF Marking: HP	SMV1281-079LF Marking: Cathode		
SMV1283-011LF Marking: HQ			SMV1283-040LF Marking: HC1
		SMV1470-007LF Marking: ET3	

Typical Performance Characteristics

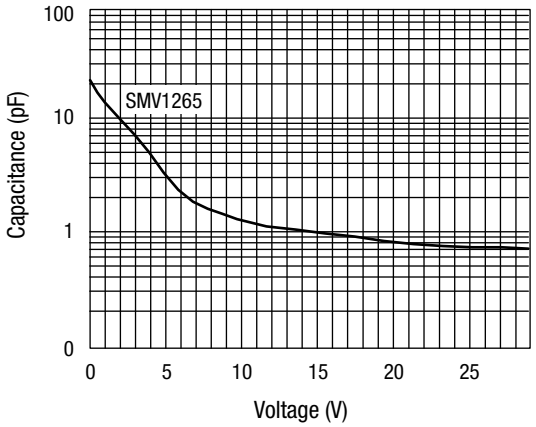


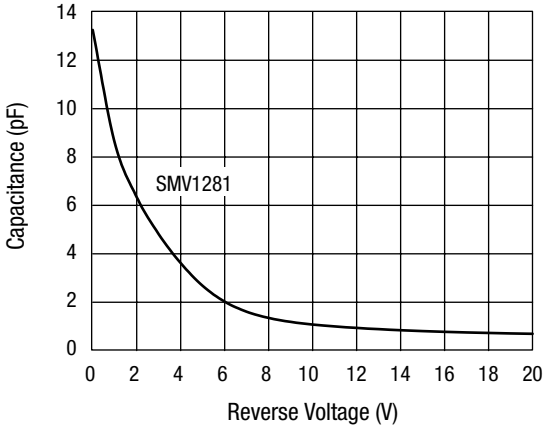


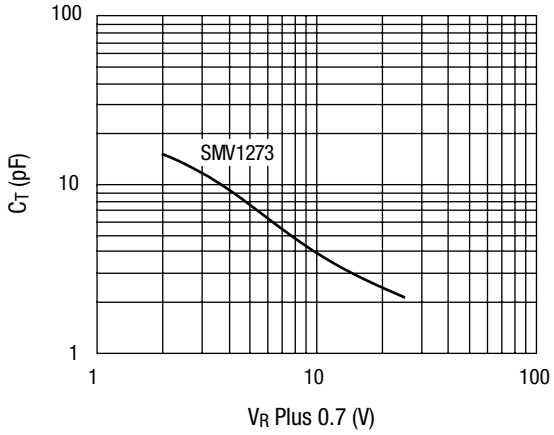
NEW New products (indicated in blue, bold) are continually being introduced at Skyworks. For the latest information, please visit the new products section of our Web site at www.skyworksinc.com.

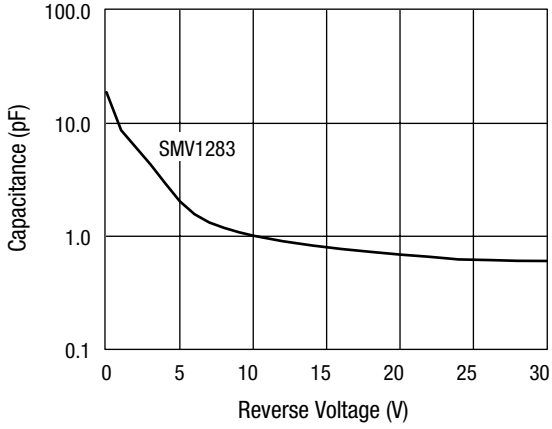
Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

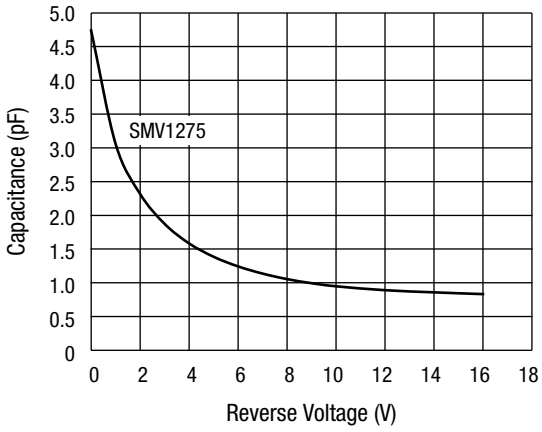
Typical Performance Characteristics (Continued)

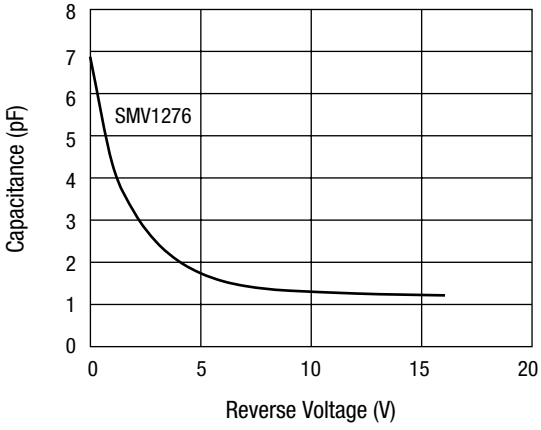












Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

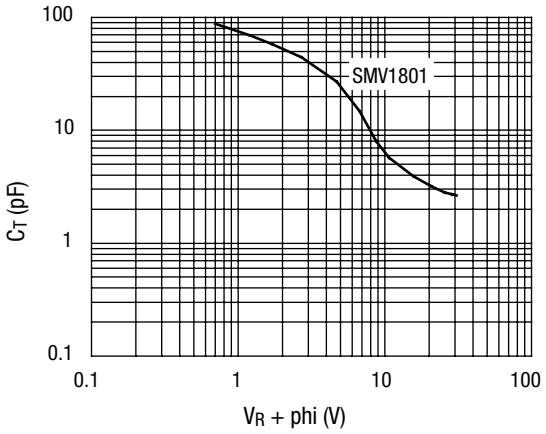
Large Bandwidth Silicon Hyperabrupt Varactor Diodes (Continued)

Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 8 V (pF)	Typ. C_T V_R = 20 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1801 Series	32	58.00	26.90	8.00	3.20	20.6	1.0 to 28	1.2

Single
SC-79
Green™

SMV1801-079LF
Marking: Cathode

Typical Performance Characteristics



Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

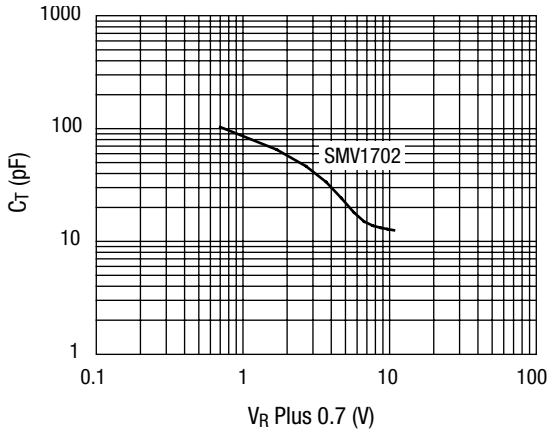
Large Bandwidth Silicon Hyperabrupt Varactor Diodes (Continued)

Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 8 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1702-011LF	10	65.1	24.2	13.21	3.6	0.1 to 4	1.25

Single
SOD-323
Green™

SMV1702-011LF
Marking: HJ

Typical Performance Characteristics

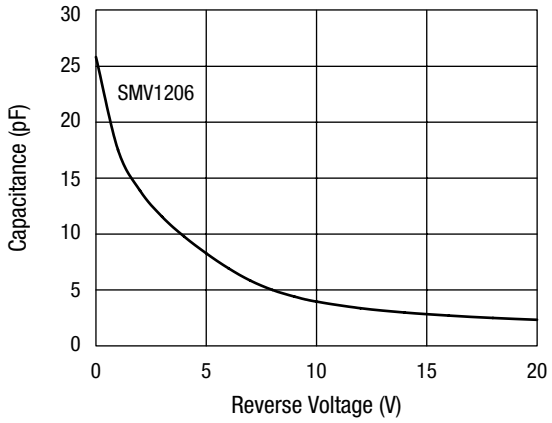


Part Number	Min. V_B I_R = 10 µA (V)	Typ. C_T V_R = 3 V (pF)	Typ. C_T V_R = 20 V (pF)	Min. C_T (Ratio)
SMV1206-079LF	22	11.55	2.34	2 to 20

Single
SC-79
Green™

SMV1206-079LF
Marking: Cathode

Typical Performance Characteristics



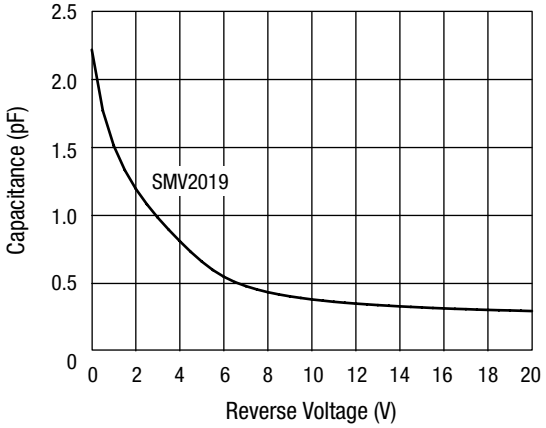
Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

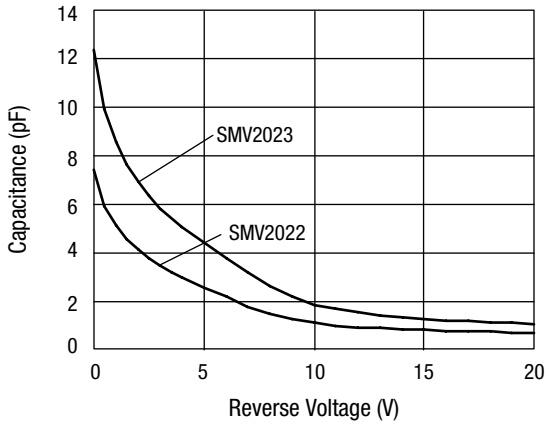
Large Bandwidth Silicon Hyperabrupt Varactor Diodes (Continued)

Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 8 V (pF)	Typ. C_T V_R = 12 V (pF)	Typ. C_T V_R = 20 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)
SMV2019 Series	22	1.51	0.81	0.44	0.35	0.30	2.3	4 to 20
SMV2020 Series	22	2.25	1.36	0.75	0.48	0.35	2.8	4 ot 20
SMV2022 Series	22	5.14	3.01	1.50	0.96	0.73	3.0	4 to 20
SMV2023 Series	22	8.60	5.09	2.63	1.54	1.09	4.2	4 to 20

				
Single SOT-23 *Green™*	**Common Cathode SOT-23 *Green™***	**Single SOD-323 *Green™***	**Single SC-79 *Green™***	**Single 0402 *Green™***
			SMV2019-079LF Marking: Cathode	SMV2019-040LF Marking: Z
			SMV2020-079LF Marking: Cathode	
	SMV2022-004LF Marking: DJ3			
SMV2023-001LF Marking: DK1	SMV2023-004LF Marking: DK3	SMV2023-011LF Marking: DK1		

Typical Performance Characteristics





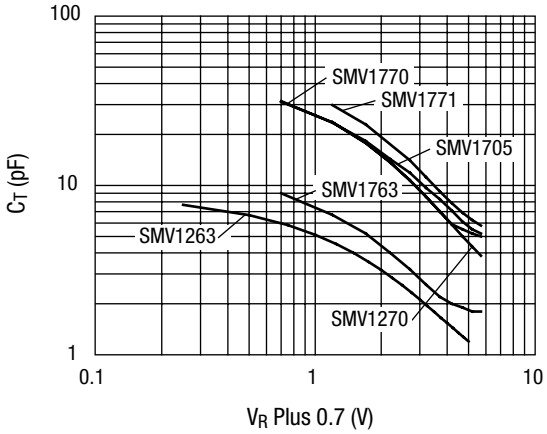
Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

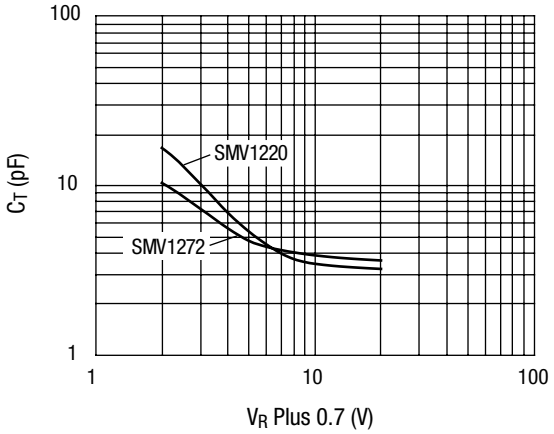
Large Bandwidth Silicon Hyperabrupt Varactor Diodes (Continued)

Part Number	Min. V_R I_R = 10 µA (V)	Typ. C_T V_R = 1 V (pF)	Typ. C_T V_R = 4 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)	Max. R_S (Ω)
SMV1220-079LF	20	4.00	6.92	3.0	1 to 4	0.65
SMV1263 Series	20	5.11	1.54	2.3	0.5 to 2.5	1.2
SMV1270 Series	20	17.81	5.00	2.3	0.5 to 2.5	0.7
SMV1272-079LF	15	16.21	5.60	2.8	1 to 4	0.5
SMV1705 Series	12	18.30	6.10	2.8	1 to 4	0.32
SMV1763-079LF	10	5.20	1.90	2.3	0.5 to 2.5	0.7
SMV1770 Series	12	17.80	5.50	2.3	0.5 to 2.5	0.5
SMV1771 Series	12	22.90	6.90	2.3	0.5 to 2.5	0.5

			
Common Cathode SOT-23 *Green™*	**Common Cathode SC-70**	**Single SC-79 *Green™***	**Single 0402 *Green™***
		SMV1220-079LF Marking: Cathode	
	SMV1263-074LF Marking: EN3	SMV1263-079LF Marking: Cathode	SMV1263-040LF Marking: EN1
		SMV1270-079LF Marking: Cathode	SMV1270-040LF Marking: HN1
		SMV1272-079LF Marking: Cathode	
SMV1705-004LF Marking: HY3		SMV1705-079LF Marking: Cathode	SMV1705-040LF Marking: 0
		SMV1763-079LF Marking: Cathode	SMV1763-040LF Marking: L
		SMV1770-079LF Marking: Cathode	SMV1770-040LF Marking:ED1
		SMV1771-079LF Marking: Cathode	SMV1771-040LF Marking:EL1

Typical Performance Characteristics





NEW New products (indicated in blue, bold) are continually being introduced at Skyworks. For the latest information, please visit the new products section of our Web site at www.skyworksinc.com.

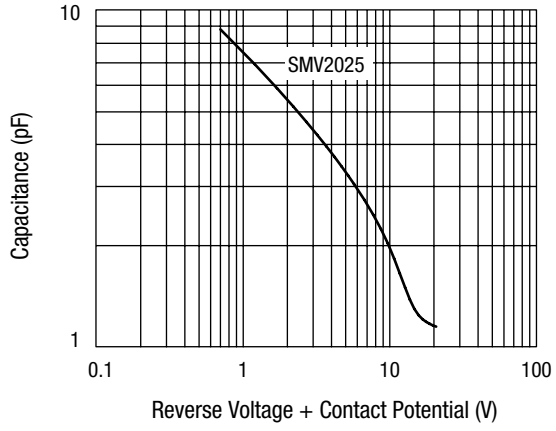
Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

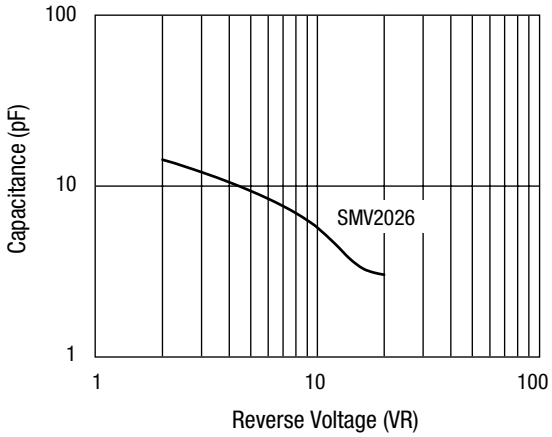
Large Bandwidth and Low Phase Noise Silicon Hyperabrupt Varactor Diodes

Part Number	Min. V_B I_R = 10 µA (V)	Typ. C_T V_R = 2 V (pF)	Typ. C_T V_R = 10 V (pF)	Typ. C_T V_R = 18 V (pF)	Min. C_T (Ratio)	Capacitance Ratio Range (V)
SMV2025 Series	20	4.67	1.83	1.17	2.2	2 to 10
SMV2026 Series	15	14.27	5.69	3.10	2.0	2 to 10

	
Single SC-79 *Green™*	**Single 0402 *Green™***
SMV2025-079LF Marking: Cathode	SMV2025-040LF Marking: DK1
SMV2026-079LF Marking: Cathode	SMV2026-040LF Marking: EC1

Typical Performance Characteristics





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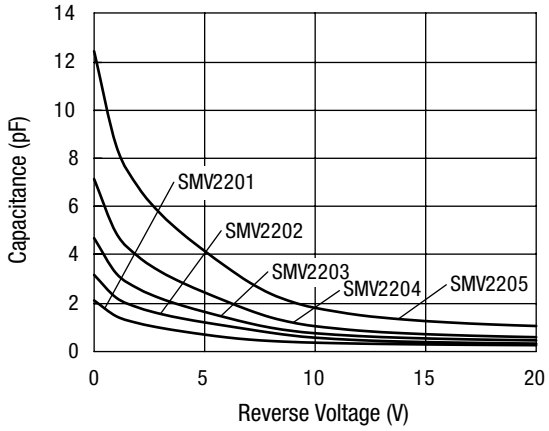
Plastic Surface Mount (SMT) Hyperabrupt Varactor Diodes—Low Frequency to 6 GHz

Large Bandwidth and Low Phase Noise Silicon Hyperabrupt Varactor Diodes

Part Number	Min. V_B I_R = 10 µA (V)	Typ. C_T V_R = 4 V (pF)	Typ. C_T V_R = 20 V (pF)	Q V_R = 4 V f = 50 MHz
SMV2201-040LF	22	0.85	0.25	500
SMV2202-040LF	22	1.35	0.35	500
SMV2203-040LF	22	1.85	0.45	400
SMV2204-040LF	22	2.85	0.65	400
SMV2205-040LF	22	4.85	1.00	400

Single 0402 *Green™*
SMV2201-040LF Marking: DC1
SMV2202-040LF Marking: DD1
SMV2203-040LF Marking: DE1
SMV2204-040LF Marking: DF1
SMV2205-040LF Marking: DH1

Typical Performance Characteristics



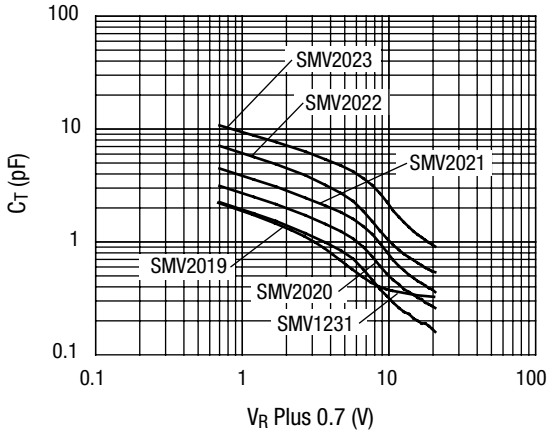
Large Bandwidth Silicon Hyperabrupt Varactor Diode Chips—Low Frequency to 12 GHz

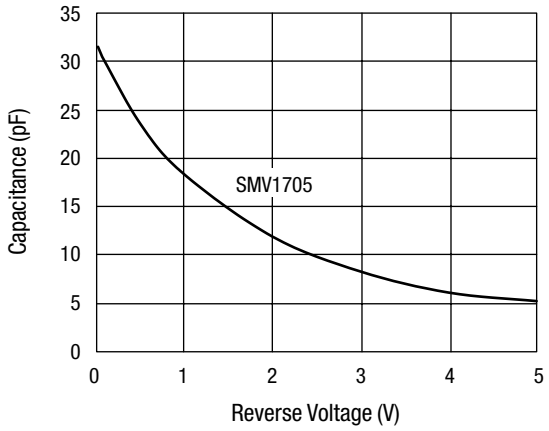
Part Number	Die Size (mils)	Min. V_R I_R = 10 µA (V)	Typ. C_J V_R = 1 V (pF)	Typ. C_J V_R = 4 V (pF)	Typ. C_J V_R = 8 V (pF)	Typ. C_J V_R = 12 V (pF)	Typ. C_J V_R = 20 V (pF)	Min. Q V_R = 4 V @ 50 MHz	Typ. R_S 1000 MHz (Ω)
SMV1705-000	0.012 ± 0.002	12	18.3	6.1	–	–	–	–	0.32
SMV2019-000	0.012 ± 0.002	22	1.53	0.84	0.38	0.24	0.16	500	4.8
SMV2020-000	0.012 ± 0.002	22	2.16	1.24	0.61	0.38	0.26	500	4.1
SMV2021-000	0.012 ± 0.002	22	3.09	1.83	0.97	0.56	0.36	500	2.8
SMV2022-000	0.012 ± 0.002	22	4.88	2.71	1.25	0.78	0.54	400	2.2
SMV2023-000	0.012 ± 0.002	22	7.67	4.75	2.68	1.49	0.91	400	1.4

Hermetic Packaged Large Bandwidth Silicon Hyperabrupt Varactor Diodes—Low Frequency to 12 GHz

Hermetic Stripline 240	Hermetic Pill 203	Hermetic Pill 219	Hermetic Pill 210
SMV2019-240	SMV2019-203	SMV2019-219	SMV2019-210
SMV2020-240	SMV2020-203	SMV2020-219	SMV2020-210
SMV2021-240	SMV2021-203	SMV2021-219	SMV2021-210
SMV2022-240	SMV2022-203	SMV2022-219	SMV2022-210
SMV2023-240	SMV2023-203	SMV2023-219	SMV2023-210

Typical Performance Characteristics





FILTERS

Skyworks Solutions is pleased to offer a selection of programmable filters for cellular applications and diverse markets such as wireless infrastructure, automotive, test & measurement, energy management and other high performance microwave applications. These solutions leverage the extensive design knowledge, technical leadership, manufacturing expertise, and superior quality of Skyworks.

Programmable Filters

Part Number	Lowest Cutoff Frequency (MHz)	Highest Cutoff Frequency (MHz)	Program Method	Corner Accuracy (%)	Max. Pass Band Ripple (dB)	Max. Group Delay Variation (ns)	Gain (dBv)	Supply Current (mA)	Supply Voltage (V)	Package (mm)
SKY73201-364LF	1	28	SPI	1	0.5	35	0 or 6	32	3.3	QFN 32L 5 x 5 x 0.9
SKY73202-364LF	1	28	SPI	1	0.5	35	0 or 6	60	3.3	QFN 32L 5 x 5 x 0.9

FRONT-END MODULES

RF Solutions

Designed with cost and space savings in mind, Skyworks' front-end modules (FEMs) combine the company's industry-leading power amplifier (PA), low noise amplifier (LNA), and switch functions into single low-cost, laminate-based multi-chip modules (MCMs). Key features of the transmit FEMs include multiband/ multimode power amplifiers, current sensing power control, high-linearity transmit/receive switches, and all associated filtering, duplexing, and control functions. Further, the new module requires no external matching components, accelerating time-to-market.

Manufactured using Skyworks' proprietary hetero-junction bipolar transistor (HBT) power amplifier process and low-loss pseudomorphic high electron mobility transistor (pHEMT) switch technologies, FEMs deliver superior handset talk and standby time.

Front-end Modules Features:

- Multimode/Multiband (MMMB) power amplifiers
- High linearity Tx/Rx switches
- Single multi-chip module design
- Reduced handset design time
- Superior handset talk and standby times

Front-end Modules for Cellular

WCDMA / CDMA Front-end Modules

Band 1 (Tx = 1920–1980 MHz) (Rx = 2110–2170 MHz)

Part Number	Description	Typical PAE (%)	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77433	FEM for WCDMA/HSDPA/HSUPA	–	–	3.5–4.45	16-pin MCM 4 x 7 x 1.2
SKY77437	FEM for WCDMA/HSDPA/HSUPA	25	24	3.2–4.2	20-pin MCM 4 x 7 x 1.2

Band 4 (Tx = 1710–1770 MHz) (Rx = 2110–2170 MHz)

Part Number	Description	Supply Voltage (V)	Package (mm)
SKY77435	FEM for WCDMA/HSDPA/HSUPA	3.4–4.45	16-pin MCM 4 x 7 x 1.2

Band 5 & 6 (Tx = 824–849 MHz) (Rx = 869–894 MHz)

Part Number	Description	Typical Gain (dB)	Supply Voltage (V)	Package (mm)
SKY77413	FEM for WCDMA	25	3.2–4.2	22-pin MCM 5 x 8 x 1.5
SKY77425	Tx FEM for CDMA	26	3.4–4.2	22-pin MCM 4 x 7 x 1.1
SKY77436	FEM for WCDMA/HSDPA/HSUPA	–	3.4–4.45	16-pin MCM 4 x 7 x 1.2

Front-end Modules for Cellular

EDGE Front-end Modules

Part Number	Frequency (MHz)	Description	Typical Output Power (dBm) GSM/EDGE	Typical PAE (%) GSM	Supply Voltage (V)	Package (mm)
SKY77521		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE– Triple-band WCDMA Antenna Switch Support			3.0–4.6	30-pin MCM 7 x 6 x 1.0
	824–849	GSM850	33.5	40		
	880–915	GSM900	33.5	40		
	1710–1785	DCS1800	31.0	34		
	1850–1910	PCS1900	31.0	34		
SKY77526		Tx FEM for Quad-band GSM/EDGE			2.9–4.8	34-pin MCM 8 x 8 x 1.2
	824–849	GSM850	33.3	41		
	880–915	GSM900	33.3	43		
	1710–1785	DCS1800	33.5	38		
	1850–1910	PCS1900	34.5	40		
SKY77527		Tx FEM for Quad-band GSM/EDGE	–	–	2.9–4.4 (GSM) 3.0–4.4 (EDGE)	34-pad MCM 8 x 6 x 1.12
	824–849	GSM850				
	880–915	GSM900				
	1710–1785	DCS1800				
	1850–1910	PCS1900				
SKY77528		Tx FEM for Quad-band GSM/EDGE	–	–	2.9–4.8 (GSM) 2.9–4.8 (EDGE)	34-pad MCM 8 x 6 x 1.1
	824–849	GSM850				
	880–915	GSM900				
	1710–1785	DCS1800				
	1850–1910	PCS1900				
SKY77529		Tx FEM for Quad-band GSM/EDGE	–	–	2.9–5.0 (GSM) 3.0–5.0 (EDGE)	26-pad MCM 7.5 x 7 x 0.9
	824–849	GSM850				
	880–915	GSM900				
	1710–1785	DCS1800				
	1850–1910	PCS1900				
SKY77544		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE– Triple-band WCDMA Antenna Switch Support			3.0–4.6	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	34.0	41		
	880–915	GSM900	34.0	41		
	1710–1785	DCS1800	40.0	40		
	1850–1910	PCS1900	40.0	40		
SKY77546		Tx-Rx FEM for Dual-band GSM/GPRS/EDGE			3.2–4.6 (GSM) 3.2–4.6 (EDGE)	30-pad MCM 7 x 6 x 1
	880–915	GSM900	34.0/–	45/18.5		
	1710–1785	DCS1800	24.0/–	21/21		
SKY77549		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE– Quad-band WCDMA Antenna Switch Support			3.0–4.6	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	34.0	41		
	880–915	GSM900	34.0	41		
	1710–1785	DCS1800	31.2	39		
	1850–1910	PCS1900	31.2	39		
SKY77558		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE– 6-band Antenna Switch Support			3.0–4.8	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	34.0	47		
	880–915	GSM900	34.0	47		
	1710–1785	DCS1800	34.0	47		
	1850–1910	PCS1900	34.0	47		
SKY77570		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE 6-band Antenna Switch Support			3.0–4.8	42-pad MCM 6 x 6 x 0.9
	824–849	GSM850	TBD	TBD		
	880–915	GSM900	TBD	TBD		
	1710–1785	DCS1800	TBD	TBD		
	1850–1910	PCS1900	TBD	TBD		

Front-end Modules for Cellular

EDGE Front-end Modules (Continued)

Part Number	Frequency (MHz)	Description	Typical Output Power (dBm) GSM/EDGE	Typical PAE (%) GSM	Supply Voltage (V)	Package (mm)
SKY77573-12		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE with 4-band Antenna Switch Support			3.0–4.8	42-pad MCM 6 x 6 x 0.9
	824–849	GSM850	TBD	TBD		
	880–915	GSM900	TBD	TBD		
	1710–1785	DCS1800	TBD	TBD		
	1850–1910	PCS1900	TBD	TBD		
SKY77573-21		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE with 4-band Antenna Switch Support			3.0–4.8	42-pad MCM 6 x 6 x 0.9
	824–849	GSM850	TBD	TBD		
	880–915	GSM900	TBD	TBD		
	1710–1785	DCS1800	TBD	TBD		
	1850–1910	PCS1900	TBD	TBD		
SKY77573-31		Tx-Rx FEM for Quad-bandGSM/GPRS/EDGE and TD-SCDMA with 4-band Antenna Switch Support			3.0–4.8	42-pad MCM 6 x 6 x 0.9
	824–849	GSM850	TBD	TBD		
	880–915	GSM900	TBD	TBD		
	1710–1785	DCS1800	TBD	TBD		
	1850–1910	PCS1900	TBD	TBD		
	2010–2025	TD-SCDMA Band 34	TBD	TBD		
	1880–1920	TD-SCDMA Band 39	TBD	TBD		
SKY77577-11		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE with 4-band Antenna Switch Support and HB PA Output for SGLTE Applications	TBD	TBD	TBD	42-pad MCM 6 x 6 x 0.9
	824–849	GSM850	TBD	TBD		
	880–915	GSM900	TBD	TBD		
	1710–1785	DCS1800	TBD	TBD		
	1850–1910	PCS1900	TBD	TBD		
SKY77590-11		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE with Six Linear TRx Switch Ports			3.0–4.6	28-pad MCM 6 x 6 x 0.85
	824–849	GSM850	34.0	40/20		
	880–915	GSM900	34.0	40/20		
	1710–1785	DCS1800	31.4	35/22		
	1850–1910	PCS1900	31.4	35/22		
SKY77590-21		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE with Six Linear TRx Switch Ports			3.0–4.6	28-pad MCM 6 x 6 x 0.85
	824–849	GSM850	34.0	40/20		
	880–915	GSM900	34.0	40/20		
	1710–1785	DCS1800	31.4	35/22		
	1850–1910	PCS1900	31.4	35/22		

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Front-end Modules for Cellular

GSM / GPRS Front-end Modules

Part Number	Frequency (MHz)	Description	Typical Output Power (dBm) GSM	Typical PAE (%)	Supply Voltage (V)	Package (mm)
SKY77517		Tx–Rx iPAC™ FEM for Dual-band GSM/GPRS			2.7–4.8	20-pin MCM
	824–849	GSM850	33.7	48		6 x 8 x 1.1
	1850–1910	PCS1900	32.0	41		
SKY77552		Quad-band Tx/Dual-band Rx iPAC™ FEM for GSM/GPRS			3.1–4.8	30-pin MCM 7 x 6 x 0.9
	824–849	GSM850	33.7	43.5		
	880–915	GSM900	33.7	43.5		
	1710–1785	DCS1800	32.0	37.5		
	1850–1910	PCS1900	32.0	37.5		
SKY77554-21		Tx Quad-band/Rx Dual-band BiFET iPAC™ FEM for GSM/GPRS w/Dual WCDMA TRx Switch			3.1–4.8	28-pin MCM 6 x 6 x 0.9
	824–849	GSM850	34.5	42		
	880–915	GSM900	34.5	42		
	1710–1785	DCS1800	32.5	41		
	1850–1910	PCS1900	32.5	42		
SKY77559		Tx Quad-band/Rx Dual-band BiFET iPAC™ FEM for GSM/GPRS w/Triple WCDMA TRx Switch			3.1–4.8	28-pin MCM 6 x 6 x 0.9
	824–849	GSM850	34.5	42		
	880–915	GSM900	34.5	42		
	1710–1785	DCS1800	32.5	41		
	1850–1910	PCS1900	32.5	42		
SKY77562		Tx-Rx FEM for Quad-band GSM/GPRS			3.0–4.8	28-pin MCM
	824–849	3-band Antenna Switch Support				6 x 6 x 0.9
	880–915	GSM850	34.0	47		
	1710–1785	GSM900	34.0	47		
	1850–1910	DCS1800	31.2	44		
		PCS1900	31.2	44		
SKY77576-11	824–849	Tx-Rx FEM for Quad-band GSM/GPRS			TBD	42-pad MCM
	880–915	4-band Antenna Switch Support				6 x 6 x 0.9
	1710–1785	GSM850	TBD	TBD		
	1850–1910	GSM900	TBD	TBD		
		DCS1800	TBD	TBD		
		PCS1900	TBD	TBD		
SKY77580		Tx Quad-band/Rx Dual-band FEM for GSM/			3.1–4.3	28-pad MCM
	824–849	GPRS	34.7	44		6 x 6 x 0.9
	880–915	GSM850	34.5	45		
	1710–1785	GSM900	32.7	42		
	1850–1910	DCS1800	32.8	39		
		PCS1900				
SKY77582		Tx Quad-band/Rx Dual-band FEM for GSM/			3.0–4.5	28-pad MCM
	824–849	GPRS	TBD	TBD		6 x 6 x 0.9
	880–915	GSM850	TBD	TBD		
	1710–1785	GSM900	TBD	TBD		
	1850–1910	DCS1800	TBD	TBD		
		PCS1900				
SKY77584		Tx-Rx Quad-band FEM for GSM/GPRS with Four Linear TRx Switch Ports			3.1–4.3	28-pad MCM 6 x 6 x 0.9
	824–849		34.4	42		
	880–915		34.3	45		
	1710–1785		32.0	39		
	1850–1910		32.0	39		
SKY77589		Tx-Rx Quad-band FEM for GSM/GPRS with Six Linear TRx Switch Ports			3.1–4.3	28-pad MCM 6 x 6 x 0.9
	824–849		34.4	42		
	880–915		34.3	45		
	1710–1785		32.0	39		
	1850–1910		32.0	39		

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Front-end Modules for Cellular

LTE Front-end Modules

Part Number	Frequency (MHz)	Description	Typical Linear LTE Power (dBm)	Supply Voltage (V)	Package (mm)
SKY77455	1920-2170	FEM for LTE/E-UTRA Band 1 (Tx 1920–1980 MHz), (Rx 2110–2170 MHz)	24.5	3.0–4.6	16-pad MCM 4 x 7 x 1.1
SKY77456	1710–2170	FEM for LTE/E-UTRA Band 4/10 (Tx 1710–1770 MHz), (Rx 2110–2170 MHz)	24.5	3.0–4.6	16-pad MCM 4 x 7 x 0.5
SKY77457	824–894	FEM for LTE/E-UTRA Band 5 (Tx 824–849 MHz), (Rx 869–894 MHz)	24.5	3.0–4.6	16-pad MCM 4 x 7 x 0.5
SKY77458	880–960	FEM for LTE/E-UTRA Band 8 (Tx 880–915 MHz), (Rx 925–960 MHz)	24.5	3.0–4.6	16-pad MCM 4 x 7 x 1.1
SKY77806	TBD	FEM for LTE Bands 12/17, 13	TBD	TBD	34-pad MCM 4.6 x 5.2 x 0.8

SkyOne™ Modules

SkyOne™ solutions leverage the SKY77619, Skyworks' high efficiency, multimode power amplifier module already in volume production with multiple customers. The highly flexible solution contains a common footprint that can be utilized by all of the world's carriers and in various regions. SkyOne™ devices are compatible with all Qualcomm WCDMA/LTE smartphone platforms with general purpose input/output (GPIO) interface.

Part Number	Band	Frequency (MHz)	Package (mm)
SKY78010	1 2 4 5 8	1920–1980 1850–1910 1710–1755 824–849 880–915	60-pad MCM 7.0 x 9.8 x 1.05
SKY78011	1 2 4 5 8	1920–1980 1850–1910 1710–1755 824–849 880–915	60-pad MCM 7.0 x 9.8 x 1.05
SKY78013	GSM850 GSM900 DCS1800 PCS1900 1 3 5 8 20	824–849 880–915 1710–1785 1850–1910 1920–1980 1710–1785 824–849 880–915 832–862	60-pad MCM 7.0 x 9.8 x 0.9

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Front-end Modules for Cellular

SkyOne™ Modules (Continued)

Part Number	Band	Frequency (MHz)	Package (mm)
SKY78015	1 2 3 5 8 20	1920–1980 1850–1910 1710–1785 824–849 880–915 832–862	60-pad MCM 7.0 x 9.8 x 1.05
SKY78021	GSM850 GSM900 DCS1800 PCS1900 1 2/25 3 3 5/18/19/26 8 20 Rx only band	824–849 880–915 1710–1785 1850–1910 1920–1980 1850–1915 1710–1785 1710–1755 814–849 880–915 832–862 717–728	60-pad MCM 7.0 x 9.0 x 0.9
SKY78022	GSM850 EGSM900 DCS1800 PCS1900 1 3 25 5/18 8 34 39	824–849 880–915 1710–1785 1850–1910 1920–1980 1710–1785 1850–1910 824–849 880–915 2010–2025 1880–1920	60-pad MCM 8.0 x 9.0 x 0.9
SKY78025	GSM850 EGSM900 DCS1800 PCS1900 1 2 4 5 8	824–849 880–915 1710–1785 1850–1910 1920–1980 1850–1910 1710–1755 824–849 880–915	60-pad MCM 8.0 x 9.0 x 0.9
SKY78026	GSM850 EGSM900 DCS1800 PCS1900 1 2 5 8 20	824–849 880–915 1710–1785 1850–1910 1920–1980 1850–1910 824–849 880–915 832–862	60-pad MCM 8.0 x 9.0 x 0.9

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Front-end Modules for Cellular

TD-SCDMA Front-end Modules

Part Number	Frequency (MHz)	Description	Package (mm)
SKY77590-51		Tx-Rx FEM for Quad-band GSM/ GPRS/EDGE with Six Linear TRx Switch Ports and Dual-band TD-SCDMA	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	
	880–915	GSM900	
	1710–1785	DCS1800	
	1850–1910	PCS1900	
	880–915	EDGE850	
	880–915	EDGE900	
	1710–1785	EDGE1800	
	1850–1910	EDGE1900	
	2010–2025	TD-SCDMA Band 34	
	1880–1920	TD-SCDMA Band 39	
SKY77590-61		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE with Six Linear TRx Switch Ports and Dual-band TD-SCDMA	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	
	880–915	GSM900	
	1710–1785	DCS1800	
	1850–1910	PCS1900	
	880–915	EDGE850	
	880–915	EDGE900	
	1710–1785	EDGE1800	
	1850–1910	EDGE1900	
	2010–2025	TD-SCDMA Band 34	
	1880–1920	TD-SCDMA Band 39	
SKY77592		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE with Six Linear TRx Switch Ports and Dual-band TD-SCDMA	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	
	880–915	GSM900	
	1710–1785	DCS1800	
	1850–1910	PCS1900	
	824–849	EDGE850	
	880–915	EDGE900	
	1710–1785	EDGE1800	
	1850–1910	EDGE1900	
	2010–2025	TD-SCDMA Band 34	
	1880–1920	TD-SCDMA Band 39	
SKY77593		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE with Four Linear TRx Switch Ports and Dual-band TD-SCDMA	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	
	880–915	GSM900	
	1710–1785	DCS1800	
	1850–1910	PCS1900	
	824–849	EDGE850	
	880–915	EDGE900	
	1710–1785	EDGE1800	
	1850–1910	EDGE1900	
	2010–2025	TD-SCDMA Band 34	
	1880–1920	TD-SCDMA Band 39	

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Front-end Modules for Cellular

TD-SCDMA Front-end Modules (Continued)

Part Number	Frequency (MHz)	Description	Package (mm)
SKY77594		Tx-Rx FEM for Quad-band GSM/GPRS/EDGE with Two Rx Switch Ports and Dual-band TD-SCDMA	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	
	880–915	GSM900	
	1710–1785	DCS1800	
	1850–1910	PCS1900	
	824–849	EDGE850	
	880–915	EDGE900	
	1710–1785	EDGE1800	
	1850–1910	EDGE1900	
	2010–2025	TD-SCDMA Band 34	
	1880–1920	TD-SCDMA Band 39	
SKY77596		Tx-Rx FEM for Quad-band GSM/GPRS with Two Rx Switch Ports and Dual-band TD-SCDMA	28-pad MCM 6 x 6 x 0.9
	824–849	GSM850	
	880–915	GSM900	
	1710–1785	DCS1800	
	1850–1910	PCS1900	
	2010–2025	TD-SCDMA Band 34	
	1880–1920	TD-SCDMA Band 39	

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Front-end Modules for Cellular

Antenna Switch Modules

High Throw Count (>4T) Switches / Antenna Switch Modules

Skyworks Solutions is pleased to offer a broad selection of high throw count antenna switch modules (ASMs) leveraging both GaAs and SOI technology to respond to all cellular standards specific requirements (GSM, GPRS, EDGE, WCDMA, TD-SCDMA, and LTE). Using either multi-chip module (MCM) or quad flat no-lead (QFN) packaging allows the integration of filtering functions such as Tx harmonic filters and ESD protection, and respond to a wide range of cellular front-end switching requirements such as antenna switching, Rx diversity switching or WCDMA band-mode switching. Any cellular RF front-end that requires high performance, reduced current consumption, and low insertion loss in a compact footprint would benefit from our portfolio of antenna switch module solutions.

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IMD3 (dBm)	Package (mm)
SKY13362-389LF	SP10T (R)	0.4–2.7	0.5–1.35	21–38	-105	26-pin QFN 3.0 x 3.8 x 0.85
SKY13364-389LF	SP10T (R)	0.4–2.7	0.5–1.1	30	-105	26-pin QFN 3.0 x 3.8 x 0.85
SKY13404-466LF	SP10T (R)	0.4–2.7	0.5–1.35	45–24	-110	26-pin QFN 2.6 x 3.4 x 0.55
SKY13406-389LF	SP10T (R)	0.4–2.7	0.5–1.35	45–24	-110	26-pin QFN 2.6 x 3.4 x 0.55
SKY18106-455LF	SP8T (R)	0.4–2.2	0.4–0.8	25	-102	26-pin QFN 3.0 x 3.8 x 0.75
SKY18108-11	SP9T (R)	0.4–2.7	0.8–0.9	>35	-110	20-pin MCM 3.2 x 3.5 x 0.9
SKY13412-487LF	SP12T (R)	0.4–2.7	0.4–1.1	35–23	-110	30-pin QFN 3.0 x 3.8 x 0.75
SKY18120-11	SP9T (R)	0.4–2.7	0.5–11	24–44	-105	20-pin MCM 2.5 x 2.5 x 0.9

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
SKY13418-485LF	SP8T (R)	0.1–3.0	0.35–0.6	35–25	69	38	14-pin QFN 2.0 x 2.0 x 0.5
SKY13455-31	SP12T (R)	0.4-2.7	0.6-1.25	22-43	–	–	22-pin MCM 3.2 x 2.5 x 0.8

WiFi Connectivity

2.5 GHz Front-end Modules

Part Number	Frequency (GHz)	802.11 WLAN Standard	Antenna Ports	Architecture	Typ. Current @ V_{CC} = 3.3 V (mA)	Typ. P_{OUT} @ 2.5% EVM (dBm)	Typ. P_{OUT} @ 3.0% EVM (dBm)	Typ. Tx Gain (dB)	Package (mm)
SE2521A60	2.4–2.5	b g	2	2.4 GHz WLAN Front End	205 180	–	23 (@ 2%) 18 (@ 2%)	29 29	24-pin LGA 8 x 7 x 1.1
SE2521A80	2.4–2.5	b g	2	2.4 GHz WLAN Front End	300 275	–	20 20	30 30	24-pin LGA 8 x 7 x 1.2
SE2564L	2.4–2.5	b g	2	2.4 GHz High Efficiency WLAN Front End	160 130	–	17 17	27 27	24-pin QFN 3 x 4 x 0.9
SE2603L	2.4–2.5	b g	2	2.4 GHz High Efficiency WLAN Front End	180 145	–	17 17	27 27	24-pin QFN 3 x 4 x 0.9

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WiFi Connectivity

2.5 GHz Front-end Modules (Continued)

Part Number	Frequency (GHz)	802.11 WLAN Standard	Antenna Ports	Architecture	Typ. Current @ V_{CC} = 3.3 V (mA)	Typ. P_{OUT} @ 2.5% EVM (dBm)	Typ. P_{OUT} @ 3.0% EVM (dBm)	Typ. Tx Gain (dB)	Package (mm)
SE2611T	2.4–2.5	b g	1	2.4 GHz High Efficiency WLAN/ Bluetooth® Front End	215 185	–	20 (@ 4%) 19 (@ 4%)	27 27	20-pin QFN 3 x 3 x 0.6
SE2613T	2.4–2.5	b g	1	2.4 GHz WLAN/ Bluetooth® Front End	160 140	–	20 (@ 4%) 17.5 (@ 4%)	26 26	16-pin QFN 3 x 3 x 0.6
SE2614BT	2.4–2.5	b g	1	2.4 GHz High Efficiency WLAN Front End	190 160	–	18 18	30 30	20-pin QFN 3 x 3 x 0.6
SE2620T	2.4–2.5	b g n	1	802.11b/g/n WLAN FEM with Bluetooth Port	160 140 TBD	20 (@ 3% EVM) 18 (@ 3% EVM) TBD	–	26	16-pin QFN 3 x 3 x 0.6
SE2621L	2.4–2.5	b g n	2	802.11b/g/n WLAN FEM with Diversity	160 130 130	–	19 17 17	27	24-pin QFN 3 x 4 x 0.9
SKY65249-11	2.4–2.5	b g	2	One Single-band Tx/Rx Chain	210 180	21 18	–	26 26	Laminate 4 x 4 x 0.9
SKY65534-11	2.4–2.5	b g n	1	Integrated High-performance 2.4 GHz PA, Harmonic Filter, LNA with Bypass, and T/R Switch	190 (@ 20 dBm)	20 18	19 (@ 3% EVM)	26	16-pin QFN 2.5 x 2.5 x 0.45
SKY85302-11	2.4–2.5	b g n ac	1	2.4 GHz, 256 QAM WLAN/Bluetooth® FEM	180 (@ 19 dBm @ 3.6 V)	–	19	26	16-pin QFN 2.5 x 2.5 x 0.45
SKY85303-11	2.4–2.5	b g n ac	1	2.4 GHz, 256 QAM WLAN/Bluetooth® FEM	180 (@ 19 dBm @ 3.6 V)	–	19	26	16-pin QFN 2.5 x 2.5 x 0.45

5 GHz Front-end Modules

Part Number	Frequency (GHz)	802.11 WLAN Standard	Antenna Ports	Architecture	Typ. Current @ V_{CC} = 3.3 V (mA)	Typ. Current @ V_{CC} = 5 V (mA)	Typ. P_{OUT} @ 3.0% EVM (dBm)	Typ. Tx Gain (dB)	V_{CC} (V)	Package (mm)
SE5006L	4.9–5.85	a	1	5 GHz Front-end Module with Power Detector	195	–	17	31	–	16-pin QFN 3 x 3 x 0.9
SE5007BT	4.9–5.85	a g n	1	5 GHz Front-end Module with Power Detector	195	–	17	31	–	16-pin QFN 3 x 3 x 0.9
SE5007T	4.9–5.85	a	1	5 GHz Front-end Module with Power Detector	195	–	17	30	–	16-pin QFN 3 x 3 x 0.6

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WiFi Connectivity

5 GHz Front-end Modules (Continued)

Part Number	Frequency (GHz)	802.11 WLAN Standard	Antenna Ports	Architecture	Typ. Current @ V_{CC} = 3.3 V (mA)	Typ. Current @ V_{CC} = 5 V (mA)	Typ. P_{OUT} @ 3.0% EVM (dBm)	Typ. Tx Gain (dB)	V_{CC} (V)	Package (mm)
SE5012T	4.9–5.85	a	1	5 GHz Front-end Module with Power Detector	195	-270	17 21	TBD	3.3 5	16-pin QFN 3 x 3 x 0.6
SKY65535-11	5.15–5.95	a	1	Integrated High Performance 5 GHz PA with Harmonic Filter, LNA with Bypass, and SPDT Switch	175 (@ 17.5 dBm)	–	17.5 (@ 3 EVM)	29	–	16-pin QFN 2.5 x 2.5 x 0.45
SKY85601-11	4.9-5.9	a/n	1	5 GHz Front-end Module	TBD	–	TBD	TBD	3.0–3.6	16-pin QFN 2.5 x 2.5 x .045
SKY85702-11	4.9–5.85	n ac	1	5 GHz Front-end Module	250 (@ 19 dBm @ 3.6 V)	–	18 (802.11n) 16 (1.8% EVM, 11ac)	28	3.0–4.2	16-pin QFN 2.5 x 2.5 x .045
SKY85703-11	5.15-5.85	ac	1	5 GHz Front-end Module	TBD	TBD	TBD	28	3.0–3.6	16-pin QFN 3 x 3 x 0.55
SKY85706-11	5.15–5.85	n ac	1	5 GHz Front-end Module	220 (@ 15.5 dBm @ 3.6 V)	–	18 (802.11n) 15.5 (1.8% EVM, 11ac)	30	3.0–4.6	16-pin QFN 2.5 x 2.5 x .045
SKY85707-21	4.9–5.85	n ac	1	5 GHz Front-end Module	240 (@ 17 dBm @ 3.6 V)	–	17 (802.11n) 15 (1.8% EVM, 11ac)	28	3.2–4.6	16-pin QFN 2.5 x 2.5 x .040
SKY85709-11	4.9–5.25	n ac	1	5 GHz Front-end Module with Integrated PA, LNA with Bypass and SPDT	260 (@ 19 dBm @ 3.6 V)	–	18 (802.11n) 16 (1.5% EVM, 11ac)	30	3.0–4.8	16-pin QFN 2.5 x 2.5 x .045

Dual-band Front-end Modules

Part Number	Frequency (GHz)	802.11 WLAN Standard	Antenna Ports	Architecture	Typ. Current @ V_{CC} = 3.3 V (mA)	Typ. P_{OUT} @ 2.5% EVM (dBm)	Typ. P_{OUT} @ 3.0% EVM (dBm)	Typ. Tx Gain (dB)	Package (mm)
SE2547A	4.9–5.875 2.4–2.5	a b g	2	Dual-band 802.11a/b/g/n WLAN Front End	170 250 170	–	16.5 21.0 18.0	24 26 26	32-pin LGA 5 x 5 x 1
SE2548A	4.9–5.875 2.4–2.5	a b g	1	Dual-band 802.11a/b/g/n WLAN Front End	175 250 170	–	16.5 21.0 18.0	24 26 26	32-pin LGA 5 x 5 x 1
SE2577L	4.9–5.875 2.4–2.5	a b g n	1	Dual Band 802.11a/b/g/n WLAN Front End	–	–	–	–	20-pin QFN 3 x 3 x 0.9
SE2593A20	4.9–5.85 2.4–2.5	a b g	1	Dual-band 802.11n WLAN Front End	180 – 180	–	16.0 20.0 18.0	28 30 30	30-pin LGA 5 x 6 x 1

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WiFi Connectivity

Dual-band Front-end Modules (Continued)

Part Number	Frequency (GHz)	802.11 WLAN Standard	Antenna Ports	Architecture	Typ. Current @ V_{CC} = 3.3 V (mA)	Typ. P_{OUT} @ 2.5% EVM (dBm)	Typ. P_{OUT} @ 3.0% EVM (dBm)	Typ. Tx Gain (dB)	Package (mm)
SE2594L	4.9–5.875 2.4–2.5	a b g	1	Dual-band 802.11a/b/g/n WLAN Front End	220 180 150	–	16.5 21.0 18.0	24 27 27	32-pin QFN 5 x 5 x 0.9
SE2595L	4.9–5.85 2.4–2.485	a b g	1	Dual-band 802.11n WLAN Front End	230 TBD 180	–	16.0 20.0 18.0	23 26 26	32-pin QFN 5 x 5 x 0.9
SE5501L	5.15–5.85 2.4–2.485	a g	2	Dual-band 802.11n WLAN/BT Front End	190 130	–	18.0 20.0	18 22	30-pin QFN 3 x 5 x 0.9
SE5502L	4.9–5.875 2.4–2.5	a b g	1	Dual-band 802.11a/b/g/n WLAN Front End	210 175 150	–	16.0 21.0 18.0	26 28 28	24-pin QFN 4 x 4 x 0.9
SE5503A	4.9–5.9 2.4–2.5	a b g	1	Dual-band 802.11a/b/g/n WLAN Front End	220 190 150	–	16.0 21.0 18.0	24 27 27	24-pin LGA 4 x 4 x 1.0
SE5510T	4.9–5.9 2.4–2.5	a g	2	Dual-band 802.11n WLAN/BT Front End	205 190	–	18.0 20.0	26 26	28-pin QFN 3 x 4 x 0.6
SE5511T	4.9–5.9 2.4–2.5	a g	2	Dual-band 802.11n WLAN/BT Front End	205 190	–	18.0 20.0	26 26	28-pin QFN 3 x 4 x 0.6
SE5512L	4.9–5.85 2.4–2.5	a b g	1	Dual-band 802.11a/b/g/n WLAN Front End	210 175 150	–	16.0 19.0 18.0	–	24-pin QFN 4 x 4 x 0.9
SE5516A	2.4–2.5 4.9–5.9	a b g n (2G) n (5G) ac (2G) ac (5G)	1	802.11a/g/n/ac Wireless LAN Front End	220 205 185 TBD TBD 155 190	16 21 18 18 (@ 3.0% EVM) 16 (@ 3.0% EVM) 16 (@ 1.8% EVM) 13 (@ 1.8% EVM)	–	25–30	24-pin LGA 4 x 4 x 1.0
SKY85803	2.4–2.5 4.9–5.9	a b g n ac	1	802.11a/b/g/n/ac WLAN Front End	TBD	TBD	–	TBD	24-pin LGA 4 x 4 x 1.0

Smart Energy—Connected Home and Automation 802.15.4, ISM, and ZigBee®

Part Number	RF Frequency (MHz)	Typ. Rx Insertion Loss (dB)	Typ. Rx Gain (dB)	Typ. Rx NF (dB)	Tx Gain (dB)	Typ. Saturated Output Power (dBm)	Supply Voltage (V)	Package (mm)
SE2431L	2400–2500	2.0	12.5	2.0	23.0	24.0	2.0–3.6	24-pin QFN 3 x 4 x 0.9
SE2432L	2400–2500	3.0	11.5	2.0	22.0	24.0	2.0–3.6	24-pin QFN 3 x 4 x 0.9
SE2435L	860–930	2.0	16.0	2.0	28.0	31.5	2.0–4.8	24-pin QFN 4 x 4 x 0.9
SE2436L	2400–2500	3.0	11.5	2.5	28.0	27.0	2.0–4.8	24-pin QFN 4 x 4 x 0.9
SE2438T	2400–2500	3.5	10.5	3.5	16.0	16.0	2.0–3.6	20-pin QFN 3 x 3 x 0.55

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Smart Energy—Connected Home and Automation 802.15.4, ISM, and ZigBee® (Continued)

Part Number	RF Frequency (MHz)	Typ. Rx Insertion Loss (dB)	Typ. Rx Gain (dB)	Typ. Rx NF (dB)	Tx Gain (dB)	Typ. Saturated Output Power (dBm)	Supply Voltage (V)	Package (mm)
SE2442L	902–928	0.7	-0.7	0.7	28.0	31.5	2.0–4.8	24-pin QFN 4 x 4 x 0.9
SKY65313-21	860–900	–	16.1	1.9	20.5	30.5	3.3	28-pin MCM 6 x 6 x 0.9
SKY65326-11	380–500	0.5	–	–	34.0	30.7	3.6	12-pin MCM 8 x 8 x 1.35
SKY65336-11	2400–2500	–	10.5	2.0	17/7	20/10	3	28-pin MCM 8 x 8 x 1.3
SKY65337-11	2400–2500	1.6	–	–	17/7	20.1/10.5	3	28-pin MCM 8 x 8 x 1.3
SKY65338-21	450–470	0.6	–	–	32.0	27.0	3.6	12-pin MCM 8 x 8 x 1.35
SKY65342-11	450–470	0.6	–	–	34.6	29.1	3.6	12-pin MCM 8 x 8 x 1.35
SKY65343-11	2400–2500	1.6	–	–	17.0	20.0	3.3	20-pin MCM 6 x 6 x 1.3
SKY65344-21	2400–2500	–	10.0	2.2	17.0	20.0	3.3	20-pin MCM 6 x 6 x 1.3
SKY65352-11	2400–2500	–	8.2	2.2	17.0	20.0	3.3	20-pin MCM 6 x 6 x 1.3
SKY65364-11	890–960	0.9	15.0	1.7	22.0	30.5	3.0–3.8	28-pin MCM 6 x 6 x 0.9
SKY65366-11	400–500	0.3	22.5	1.5	22.0	30.2	3.0–3.8	28-pin MCM 6 x 6 x 0.9
SKY65367-11	169–170	0.7	-0.7	-0.7	35.0	30.0	3.3	16-pin MCM 4 x 4 x 0.9
SKY65378-11	860–930	-1.5	17.0	2.0	-1.5	N/A	2.0–4.8	24-pin QFN 4 x 4 x 0.9
SKY66100-11	169–170	0.4	-0.5	–	30.0	24.0	2.0–3.6	16-pin MCM 4 x 4 x 0.9
SKY66101-11	902–928	–	16	2.5	33	30	2.0–4.8	36-pin MCM 6 x 6 x 0.9
SKY66108	2400–2500	3.5	10.5	3.5	16	16	2.0-3–6	20-pin QFN 3 x 3 x 0.55
SKY66109-11	2400–2483	–	11.5	2.0	22	21	2.0–3.6	20-pin MCM 3 x 4 x 0.9

BDS / GPS / GNSS Front-end Modules

Part Number	Frequency (MHz)	Test Frequency (MHz)	Description	Gain (dB)	V_{DD} (V)	$IP_{1\ dB}$ (dBm)	NF (dB)	Package (mm)
SKY65702-11	1565–1606	1575	GPS/GNSS Pre-filter + LNA Front-end Module	13.5	2.85	-5.6	1.8	8-pin MCM 2.0 x 2.5 x 1.0
SKY65704-22	1565–1606	1575	GPS/GNSS Pre-filter + LNA Front-end Module Module with B13 Notch	14.0	1.8	-7	2.5	10-pin MCM 2.8 x 2.5 x 0.7
SKY65708-11	1565–1606	1575	GPS/GNSS Pre-filter + LNA Front-end Module with B13 Notch	13.9	2.85	-7	1.95	6-pin MCM 1.7 x 2.3 x 0.7

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BDS / GPS / GNSS Front-end Modules (Continued)

Part Number	Frequency (MHz)	Test Frequency (MHz)	Description	Gain (dB)	V_{DD} (V)	$IP_{1\ dB}$ (dBm)	NF (dB)	Package (mm)
SKY65708-51	1565–1606	1575	GPS/GNSS Pre-filter + LNA Front-end Module	14.4	2.85	-4.5	1.75	6-pin MCM 1.7 x 2.3 x 0.8
SKY65709-51	1565–1606	1575	GPS/GNSS Pre-filter + LNA Front-end Module	14.5	2.85	-10	2.0	6-pin MCM 1.7 x 2.3 x 0.7
SKY65709-81	1561–1606	1575	BDS/GPS/GNSS Pre-filter + LNA Front-end Module	14.5	2.85	-10	1.9	6-pin MCM 1.7 x 2.3 x 0.7

MIXERS

Single Channel Mixers

Part Number	RF Frequency (MHz)	IF Frequency (MHz)	Gain (dB)	IIP3 (dBm)	OIP3 (dBm)	$IP_{1\ dB}$ (dBm)	NF (dB)	Package (mm)
SKY42068-355LF	400–1000	50–250	3.0	34.5	38.3	18.6	10.0	20-pin QFN 5 x 5 x 0.9
SKY73032	700–1000	40–300	9.5	27.0	36.5	13.3	8.3	20-pin MCM 5 x 5 x 1.1
SKY73033-11	1700–2200	40–300	8.9	24.0	32.9	13.5	9.4	20-pin MCM 5 x 5 x 1.1
SKY73035-11	2300–2700	50–500	7.6	25.0	32.6	13.5	9.8	20-pin MCM 5 x 5 x 1.1
SKY73049-350LF	200–5000	50–500	–	27.0	–	7.0	14.0	16-pin QFN 3 x 3 x 0.75
SKY73070	700–1000	40–300	9.5	27.0	36.5	13.3	8.3	20-pin MCM 5 x 5 x 1.1

Diversity Downconverter Mixers

Part Number	RF Frequency (MHz)	IF Frequency (MHz)	Gain (dB)	IIP3 (dBm)	OIP3 (dBm)	$IP_{1\ dB}$ (dBm)	NF (dB)	Package (mm)
SKY73020-11	700–1000	50–250	7.0	27.0	34.0	16.5	10.2	36-pin MCM 6 x 6 x 1.45
SKY73021	1700–2200	50–500	8.6	23.5	32.1	12.3	9.8	36-pin MCM 6 x 6 x 1.1
SKY73022-11	700–1000	40–300	9.4	25.3	34.7	13.3	9.0	36-pin MCM 6 x 6 x 1.1
SKY73023-11	1700–2200	40–300	9.7	25.7	35.4	13.6	9.9	36-pin MCM 6 x 6 x 1.1
SKY73025-11	2300–2700	40–300	9.4	25.3	34.7	13.3	9.0	36-pin MCM 6 x 6 x 1.1
SKY73075-21	2300–2400	50–500	8.9	25.3	34.2	13.3	8.8	20-pin MCM 5 x 5 x 1.05
SKY73084-11	300–500	50–250	9.8	25.2	35.0	13.2	9.4	36-pin MCM 6 x 6 x 1.1
SKY73085-11	390–500	40–250	9.3	24.9	35.2	12.9	9.3	36-pin MCM 6 x 6 x 1.1
SKY73086	650–900	100–500	8.7	24.4	33.1	12.0	11.0	36-pin MCM 6 x 6 x 1.1
SKY73087-11	700–1000	100–500	8.8	25.3	34.1	12.7	10.7	36-pin MCM 6 x 6 x 1.05
SKY73089-11	1200–1700	50–500	9.3	26.8	36.1	13.9	9.3	36-pin MCM 6 x 6 x 1.1
SKY73090-21	1700–2200	50–500	8.7	24.2	32.8	13.3	9.4	36-pin MCM 6 x 6 x 1.05

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Diversity Downconverter Mixers (Continuted)

Part Number	RF Frequency (MHz)	IF Frequency (MHz)	Gain (dB)	IIP3 (dBm)	OIP3 (dBm)	$IP_{1\ dB}$ (dBm)	NF (dB)	Package (mm)
SKY73420-11	650–950	150–400	8.1	25.6	33.7	13.0	9.3	36-pin QFN 6 x 6 x 0.85
SKY73421-11	1400–2000	150–320	9.0	29.5	38.5	12.6	9.0	36-pin QFN 6 x 6 x 0.85
SKY73422-11	1700–2200	100–400	9.0	28.0	37.0	13.0	8.9	36-pin QFN 6 x 6 x 0.85

Upconversion / Downconversion Mixers

Part Number	IF Frequency (MHz)	RF Frequency (MHz)	IIP3 (dBm)	$IP_{1\ dB}$ (dBm)	NF (dB)	Package (mm)
SKY73049-350LF	50–500	200–5000	27.0	7.0	14.0	16-pin QFN 3 x 3 x 0.75
SKY73062-11	50–300	700–1000	32.6	20.0	7.5	20-pin MCM 5 x 5 x 1.05
SKY73063	100–200	1700–2100	30.7	19.0	6.8	20-pin MCM 5 x 5 x 1.05
SKY73069-11	50–300	700–1000	31.5	20.9	6.8	20-pin MCM 5 x 5 x 1.05

MODULATORS / DEMODULATORS

Broadband Direct Quadrature Modulators

Part Number	RF Frequency Range (MHz)	Broadband Noise Floor (dBm/Hz)	Package (mm)
SKY73077-459LF	1500–2700	-158	QFN 24L 4 x 4 x 0.9
SKY73078-459LF	500–1500	-158	QFN 24L 4 x 4 x 0.9
SKY73092-459LF	400–6000	-161	QFN 24L 4 x 4 x 0.9

Broadband Direct Quadrature Demodulator

Part Number	RF Input Frequency Range (MHz)	IF Input Frequency Range (MHz)	Voltage (V)	IIP2 (dBm)	IIP3 (dBm)	Voltage Conversion Gain (dB)	Package (mm)
SKY73012	400–3900	DC–250	3.0	60 @ 900 MHz	29 @ 900 MHz	1 @ 900 MHz	32-pin RFLGA 5 x 5 x 1

Mixer Modules with Built-in Voltage Controlled Oscillators (VCOs)

Part Number	Operating Frequency (MHz)	IF Frequency (MHz)	Architecture	Power Down	Built-In LO Drivers	Built-In PLL/VCO	Conversion Gain	IIP3 (dBm)	V_{CC} (V)	NF (dB)	Package (mm)
SKY73208-11	350–5000	50–500	Single	Yes	Yes	Integer-N	6	26	5	14	36-pin MCM 6 x 6 x 1.35
SKY73212-11	1700–2000	40–300	Diversity	Yes	Yes	Integer-N	9	24	5	11	44-pin MCM 10 x 6 x 1.05

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OPTOCOUPLERS AND OPTOISOLATORS

ISOLINK™

Isolink, Inc., a subsidiary of Skyworks Solutions, Inc., is the leading supplier of high performance and high quality optoelectronic radiation tolerant components worldwide. Isolink's mission is to provide products and services to the high-reliability, military, aerospace, hybrid, industrial, medical, and telecommunications markets. The company specializes in the manufacture of high-performance miniature hybrids and hermetically sealed devices. Isolink pioneered the miniaturization of some of the most advanced optoelectronic components. Our expertise in optoelectronic components enables us to make products of high quality, achieving high isolation voltages. A hallmark of Isolink's products is high common mode rejection and radiation tolerance for high demand environments.

Isolink is committed to providing excellent products and services to its customers, and to serving as an extension of the customer's engineering and manufacturing resources. Isolink strives for a customer/vendor relationship aimed at optimizing product performance, quality, and cost. We meet and exceed customer expectations, and are committed to delivering excellence.

Isolink works with customers from program inception to the final implementation of the most demanding design and application challenges. We are proud to provide innovative products and custom solutions with uncompromising quality and on-time delivery.

Founded by veterans in the optoelectronics industry, Isolink is headquartered in Milpitas, California.

For more information, or for customer support, please visit the Isolink Web site at www.isolink.com

PLLs / SYNTHESIZERS / VCOs

High Performance VCOs / Synthesizers

Part Number	RF Output Frequency Range (MHz)	Output Power (dBm)	Phase Noise @ 200 kHz (dBc/Hz)	Phase Noise @ 800 kHz (dBc/Hz)	Phase Settling Time (µs)	Current Consumption (mA)	Supply Voltage (V)	Package (mm)
SKY73100	865–960	-0.3	-125	-147	340	110	5.0	38-pin MCM 9 x 12 x 1.7
SKY73101-11	1930–1990	-10.0	-112	-139	300	120	5.0	38-pin MCM 9 x 12 x 1.7
SKY73103-11	1460–1665	-10.8	-126	-143	300	114	5.0	38-pin MCM 9 x 12 x 1.7
SKY73112-11	750–850	0	-128	-151	300	110	5.0	38-pin MCM 9 x 12 x 1.7
SKY73120	890–960	0	-124	-144	–	26	3.0	28-pin MCM 6 x 6 x 0.9
SKY73121-11	1805–1890	-10.0	-126	-142	227	114	5.0	38-pin MCM 9 x 12 x 1.7
SKY73126-31	160–165	10.0	-141.9	-153.1	5000 Max.	72	5.0	16-pin MCM 11.4 x 15 x 2.7
SKY73134-11	350–6000	–	-108 @ 2.7 GHz	-134 @ 2.7 GHz	–	120	3.3	32-pin RFLGA 5 x 5 x 1

Single Fractional-N Synthesizer

Part Number	Main Synthesizer Frequency (MHz)	Main Synthesizer Phase Noise (dBc/Hz)	Supply Voltage (V)	Package (mm)
SKY72310-362LF	100–2100	-91 @ 1800 MHz	2.7–3.3	24-pin QFN 4 x 4 x 0.9

Dual Fractional-N Synthesizers

Part Number	Main Synthesizer Frequency (MHz)	Auxiliary Synthesizer Frequency (MHz)	Main Synthesizer Phase Noise (dBc/Hz)	Supply Voltage (V)	Package (mm)
SKY72300-21	100–2100	100–500	-91 @ 1800 MHz	2.7–3.3	28-pin EP-TSSOP 9.7 x 6.4 x 1.1
SKY72300-362	100–2100	100–500	-91 @ 1800 MHz	2.7–3.3	24-pin QFN 4 x 4 x 0.9
SKY72301-22	100–1000	100–500	-96 @ 950 MHz	2.7–3.3	28-pin EP-TSSOP 9.7 x 6.4 x 1.1
SKY74038-21	100–2600	1–800	-85 @ 2500 MHz	2.6–3.6	20-pin TSSOP 6.5 x 4.4 x 1.1

POWER MANAGEMENT

In January 2012, Skyworks completed its acquisition of Advanced Analogic Technologies, Inc. (AATI), an analog semiconductor company focused on enabling energy-efficient devices for consumer electronics, computing, and communications markets. This acquisition expands Skyworks' portfolio with highly complementary analog semiconductor products including battery chargers, DC/DC converters, voltage regulators, and LED drivers. It also enables Skyworks to further capitalize on its strong smartphone, tablet, set-top box, and infrastructure positions with an expanded and differentiated product portfolio while accelerating entry into new vertical markets.

Skyworks is committed to developing and delivering products of unprecedented integration that improves our customers' performance in the increasingly connected wireless world.

Audio

Part Number	Number of Channels	Output Power (W)	Half Power THD+N @ 1 kHz (%) (kHz)	Min. Load (Ω)	Typ. IQ per Channel (mA)	I_{SD} (µA)	PSRR (dB)	V_{IN} (V)	Package (mm)
AAT5101	N/A	N/A	N/A	N/A	N/A	N/A	-60	-0.3–28	—
AAT5102	2	2.5	0.03%	4	4.28	0.1	-60	2.5–5.5	WLCSP-16 16L 1.645 x 1.645 x 0.595, QFN3316 16L 3 x 3 x 0.9

Battery Chargers

Charging FET

Part Number	BV_{DSS} (V)	Configuration	Max. I_D (A)	P_D (W)	$R_{DS(ON)}$ @ V_{GS} = -2.5 V (mΩ)	$R_{DS(ON)}$ @ V_{GS} = -4.5 V (mΩ)	Typical Gate Charge Q_G (nC)	Package (mm)
AAT4681	-20	Single P	±7.0	2	N/A	18	-13.6	TDFN33 10L 3 x 3 x 0.75

Linear Chargers

Part Number	Number of Cells	Max. Protected V_{IN} (V)	Max. Charging V_{IN} (V)	Max. Charge Current (mA)	Number of Input Channels	Dynamic Power Mgmt	Automatic Charge Reduction	Active Digital Thermal Loop Control	Charge Rate Control	Package (mm)
AAT3663	1/2	N/A	13.20	1000	USB or AC Adaptor	No	No	Yes	External Resistor	TDFN 14L 3 x 3 x 0.75
AAT3670	1	N/A	5.50	1600	USB and AC Adaptor	Yes	Yes	Yes	External Resistor	QFN 24L 4 x 4 x 0.90
AAT3672	1	N/A	6.50	1600	USB or AC Adaptor	Yes	Yes	Yes	External Resistor	TDFN 14L 3 x 3 x 0.75
AAT3673	1	N/A	6.50	1600	USB or AC Adaptor	Yes	Yes	Yes	External Resistor	TDFN 16L 4 x 4 x 0.8
AAT3681	1	N/A	7.50	300	USB or AC Adaptor	No	No	No	External Resistor	SC70JW 8L 2.0 x 2.1 x 1.05
AAT3681A	1	N/A	7.50	500	USB or AC Adaptor	No	No	No	External Resistor	SC70JW 8L 2.2 x 2.0 x 1.05

Battery Chargers

Linear Chargers (Continued)

Part Number	Number of Cells	Max. Protected V_{IN} (V)	Max. Charging V_{IN} (V)	Max. Charge Current (mA)	Number of Input Channels	Dynamic Power Mgmt	Automatic Charge Reduction	Active Digital Thermal Loop Control	Charge Rate Control	Package (mm)
AAT3682	1	N/A	6.00	1000	AC Adaptor	No	No	No	External Resistor	QFN44 16L 4 x 4 x 0.93
AAT3683	1	N/A	7.50	1000	USB or AC Adaptor	No	No	Yes	External Resistor	STDFN 10L 2.2 x 2.2 x 0.55 (AAT3683-2), QFN33 16L 3 x 3 0.93 (AAT3683-4)
AAT3685	1	N/A	5.50	1000	USB or AC Adaptor	No	Yes	No	External Resistors	TDFN 12L 3 x 3 x 0.75
AAT3686	1	N/A	5.50	1500	USB and AC Adaptor	No	Yes	Yes	External Resistors	TDFN34 16L 3 x 4 x 0.75
AAT3687	1	N/A	5.50	1500	USB or AC Adaptor	No	Yes	No	External Resistor	TDFN 12L 3 x 3 x 0.75
AAT3688	1	N/A	5.50	500	USB or AC Adaptor	No	Yes	No	External Resistor	TDFN 12L 3 x 3 x 0.75
AAT3689	1	N/A	5.50	1000	USB and AC Adaptor	No	No	No	External Resistor	TDFN 12L 3 x 3 x 0.75
AAT3690	1	N/A	5.50	1000	USB and AC Adaptor	No	Yes	Yes	External Resistor	TDFN 12L 3 x 3 x 0.75
AAT3691	1	28	6.75	1600	USB or AC Adaptor	No	Yes	Yes	External Resistors	TDFN 12L 3 x 3 x 0.75
AAT3692	1	28	7.20	1600	USB or AC Adaptor	No	Yes	Yes	External Resistors	TDFN 16L 3 x 4 x 0.75
AAT3693	1	N/A	7.50	1600	USB or AC Adaptor	No	No	Yes	External Resistors	TDFN 10L 2.2 x 2.2 x 0.75
AAT3696	1	28	6.80	1600	USB or AC Adaptor	No	No	No	External Resistors	TDFN33 12L 3 x 3 x 0.75
AAT3697	1	N/A	5.50	2000	USB or AC Adaptor	No	Yes	Yes	External Resistor	TDFN 12L 3 x 3 x 0.75
AAT3698	1	28	7.00	1600	USB or AC Adaptor	No	No	Yes	External Resistor	TDFN33 14L 3 x 3 x 0.75
AAT3783	1	28	7.50	1000	USB or AC Adaptor	No	No	Yes	External Resistor	TDFN 16L 3 x 4 x 0.75

Battery Chargers

Switching Chargers

Part Number	Number of Cells	Max. Protected V_{IN} (V)	Max. Charging V_{IN} (V)	Max. Charge Current (mA)	Number of Input Channels	Dynamic Power Mgmt.	Automatic Charge Reduction	Active Digital Thermal Loop Control	Charge Rate Control	Max. Switching Frequency (kHz)	Package (mm)
AAT3620	1	N/A	6	2000	USB or AC Adaptor	No	No	No	External Resistor	1500	TDFN 14L 3 x 3 x 0.75

Supercap Chargers

Part Number	Number of Channels	Enable	Fault Flag	I_{LIM}	Typ. I_Q (µA)	Typ. $R_{DS(ON)}$ (mΩ)	V_{IN} (V)	Package (mm)
AAT4620	1	Yes	Yes	Adj 1.2 A	40	65	3.0–5.5	TSOPJW 12L 3 x 2.85 x 1.02
AAT4621	1	Yes	Yes	Adj 1.2 A	40	65	3.0–5.5	TDFN 14L 3 x 3 x 0.75
AAT4710	1	No	RDY	0.75–1.2 A	70	50	2.5–5.5	TDFN 16L 3 x 4 x 0.75
AAT4712	1	Yes	POK; RDY	0.15–2.4 A	70	50	2.5–5.5	TDFN34 16L 3 x 4 x 0.75

Voltage Regulation

DC/DC Converters (Switching Regulators)

Step Up Converters

Part Number	Min. V_{IN} (V)	Max. V_{IN} (V)	Min. V_{OUT} (V)	Max. V_{OUT} (V)	I_{OUT} (mA)	f_{OSC} (kHz)	Typ. I_Q (µA)	Package (mm)
AAT1210	2.7	5.50	V_{IN}	18.0	900	2000	250	TDFN34 16L 3 x 4 x 0.75
AAT1217	0.5	V_{OUT}	2.5	5.5	600	1200	300	TSOT-23 6L 2.9 x 2.8 x 1 SOT23 6L 2.85 x 2.8 x 1.2
AAT1218	0.5	6.00	2.5	5.5	1000	1200	300	TDFN33 12L 3 x 3 x 0.75
AAT1219	2.4	V_{OUT} + 0.25	3.0	5.0	2000 1200	1200	58	TDFN33 12L 3 x 3 x 0.75
AAT1230	2.7	5.50	18	18.0	100	2000	40	TSOPJW 12L 3 x 2.85 x 1.02 TDFN34 16L 4 x 3 x 0.75
AAT1232	2.7	5.50	N/A	24.0	100	2000	40	TSOPJW 12L 3 x 2.85 x 1.02 TDFN34 16L 4 x 3 x 0.75
AAT1275	2.7	5.00	V_{IN}	5.5	500	2000	100	TSOPJW 12L 3 x 2.85 x 1.02 TDFN34 16L 4 x 3 x 0.75
AAT1275A	2.7	V_{OUT}	V_{IN}	5.5	500	2000	100	TSOPJW 12L 3 x 2.85 x 1.02 TDFN34 16L 4 x 3 x 0.75
AAT1276	2.7	5.00	V_{IN}	5.5	500	2000	100	TSOPJW 12L 3 x 2.85 x 1.02 TDFN34 16L 4 x 3 x 0.75
AAT2215	2.4	5.25	3.0	5.5	3000	600	55	TDFN33 12L 3 x 3 x 0.75
AAT2404	10.8	24.00	V_{IN} + 3	100	5000	400	1000	TQFN34-24L 3 x 4 x 0.75
AAT3125	2.7	5.50	4.6	5.25	100	750	60	QFN44 16L 4 x 4 x 0.93

Step Down Converters

Part Number	Min. V_{IN} (V)	Max. V_{IN} (V)	Min. V_{OUT} (V)	Max. V_{OUT} (V)	I_{OUT} (mA)	f_{OSC} (kHz)	Typ. I_Q (µA)	Package (mm)
AAT1106	2.5	5.5	0.6	V_{IN}	600	1500	270	TSOT23 5L 2.8 x 2.9 x 0.95
AAT1110	2.7	5.5	0.6	V_{IN}	800	1400	27	SC70JW-8 2 x 2.1 x 1.1
AAT1112	2.7	5.5	0.6	V_{IN}	1500	1400	42	TDFN33 12L 3 x 3 x 0.75 TSOPJW 12L 3 x 2.85 x 1
AAT1120	2.7	5.5	0.6	V_{IN}	500	1500	30	STDFN 8L 2 x 2 x 0.55
AAT1121	2.7	5.5	0.6	V_{IN}	250	1500	30	TDFN 8L 2 x 2 x 0.85 STDFN22 8L 2 x 2 x 0.55
AAT1123	2.7	5.5	0.6	0.6	600	1000	25	SC70JW 8L 2 x 2.1 x 1.1
AAT1126	2.7	5.5	0.6	0.6	600	1000	25	SOT-23 5L 2.85 x 2.8 x 1.2
AAT1130	2.7	5.5	0.6	1.8	400	2500	60	SC70JW 10L 2 x 2.2 x 1.1
AAT1138	2.5	5.5	0.6	V_{IN}	2000	1200	300	TDFN 16L 3 x 4 x 0.75
AAT1141	2.7	5.5	0.6	V_{IN}	600	2000	35	SOT-23 5L 2.85 x 2.8 x 1.2 TSOT23 5L 2.9 x 2.8 x 0.95
AAT1142	2.7	5.5	0.6	2.0	800	2200	35	TSOPJW 12L 3 x 2.85 x 1 TDFN33 12L 3 x 3 x 0.75
AAT1143	2.7	5.5	0.6	0.6	400	1000	25	SC70JW 8L 2 x 2.1 x 1.1
AAT1145	2.5	5.5	0.6	V_{IN}	1500	1500	300	TDFN33 10L 3 x 3 x 0.75
AAT1146	2.7	5.5	0.6	V_{IN}	400	1400	27	SC70JW-8 2.0 x 2.1 x 1.1 SOT-23 5L 2.85 x 2.8 x 1.2
AAT1147	2.7	5.5	0.6	V_{IN}	400	1400	160	–

Voltage Regulation

DC/DC Converters (Switching Regulators)

Step Down Converters (Continued)

Part Number	Min. V_{IN} (V)	Max. V_{IN} (V)	Min. V_{OUT} (V)	Max. V_{OUT} (V)	I_{OUT} (mA)	f_{OSC} (kHz)	Typ. I_Q (µA)	Package (mm)
AAT1149	2.7	5.5	1.000	V_{IN}	400	3000	45	SC70JW 8L 2 x 2.1 x 1.05 WLCSP 5L 1.235 x 0.91 x 0.58
AAT1149A	2.2	5.5	1.875	1.875	400	2200	3000	WLCSP 5L 1.235 x 0.91 x 0.58
AAT1149B	2.2	5.5	1.800	1.800	400	2200	45	WLCSP 5L 1.235 x 0.91 x 0.58
AAT1150	2.7	5.5	1.000	4.200	1000	1000	160	MSOP 8L 4.9 x 3 x 0.95
AAT1151	2.7	5.5	1.000	4.200	700	850	210	MSOP 8L 4.9 x 3 x 0.95 QFN33 16L 3 x 3 x 0.9
AAT1153	2.5	5.5	0.600	V_{IN}	2000	1200	300	TDFN33 10L 3 x 3 x 0.75
AAT1154	2.7	5.5	1.000	4.200	3000	1000	630	SOP 8L 4.9 x 6 x 1.55
AAT1155	2.7	5.5	1.000	4.200	2500	1000	630	MSOP 8L 4.9 x 3 x 0.95
AAT1157	2.7	5.5	0.800	0.800	1200	1000	160	QFN33 16L 3 x 3 x 0.85
AAT1160	4.0	13.2	0.600	V_{IN}	3000	800	150	TDFN34 16L 3 x 4 x 0.75
AAT1161	4.0	13.3	0.600	V_{IN}	3000	800	150	TDFN33 14L 3 x 3 x 0.75
AAT1162	4.0	13.4	0.600	V_{IN}	1500	800	150	TDFN34 16L 3 x 4 x 0.75
AAT1171	2.7	5.5	0.600	3.600	600	2000	420	TDFN33 12L 3 x 3 x 0.75 WLCSP 12L 2.235 x 1.535 x 0.645
AAT1184	6.0	24.0	1.500	5.500	2500	490	600	TSOPJW 12L 3 x 2.85 x 1
AAT1185	6.0	24.0	1.500	5.500	1000	490	1000	TSOPJW 14L 2.85 x 3.05 x 1.05
AAT1189	6.0	24.0	1.500	5.500	2500	490	600	TDFN34 16L 3 x 4 x 0.85
AAT2113B	2.7	5.5	1.000	2.500	1500	3300	55	FTDFN22 8L 2 x 2 x 0.75
AAT2114A	2.7	5.5	1.000	V_{IN}	2500	3000	70	QFN33 16L 3 x 3 x 0.90
AAT2120	2.7	5.5	0.600	V_{IN}	500	1800	45	STDFN22 8L 2 x 2 x 0.55
AAT2138	2.7	5.5	3.000	V_{IN}	2500	2800	90	TDFN 14L 3 x 3 x 0.75
AAT2146	2.7	5.5	0.6	VIN	600	2000	37	SC70JW 8L 2.0 x 2.1 x 1.05
AAT2146W	2.7	5.5	0.6	VIN	600	2000	37	–
AAT2148	2.7	5.5	0.600	V_{IN}	1000	2000	37	QFN33 16L 3 x 3 x 0.85
AAT2153	2.7	5.5	0.600	V_{IN}	2500	1400	42	QFN33 16L 3 x 3 x 0.85
AAT2158	2.4	5.5	0.600	V_{IN}	1500	1400	42	QFN33 16L 3 x 3 x 0.90
AAT2500	2.7	5.5	0.6	V_{IN}	400; LDO 300	1000	25; LDO 70	TDFN33 12L 3 x 3 x 0.75
AAT2500M	2.7	5.5	0.6	V_{IN}	400; LDO 300	1800	130	TSOPJW 12L 3 x 2.85 x 1.02
AAT2503	2.7	5.5	0.6	V_{IN}	800; LDO 300	2000	85	QFN34 20L 3 x 4 x 0.93
AAT2504	2.7	5.5	0.6	V_{IN}	800; LDO 300	2000	80	QFN34 20L 3 x 4 x 0.925
AAT2505	2.7	5.5	0.6	V_{IN}	600; LDO 300	1400	27; LDO 70	TDFN33 12L 3 x 3 x 0.75

Voltage Regulation

DC/DC Converters (Switching Regulators)

Step Down Converters (Continued)

Part Number	Min. V_{IN} (V)	Max. V_{IN} (V)	Min. V_{OUT} (V)	Max. V_{OUT} (V)	I_{OUT} (mA)	f_{OSC} (kHz)	Typ. I_Q (µA)	Package (mm)
AAT2506	2.7	5.5	0.6	V_{IN}	600; LDO 300	1000	25; LDO 70	TDFN33 12L 3 x 3 x 0.75
AAT2510	2.7	5.5	0.60	V_{IN}	400/ch	1000	25/ch	TDFN33 12L 3 x 3 x 0.75
AAT2511	2.7	5.5	0.60	V_{IN}	600/ch	1000	25/ch	TDFN33 12L 3 x 3 x 0.75
AAT2512	2.7	5.5	0.60	V_{IN}	400/ch	1400	27/ch	TDFN33 12L 3 x 3 x 0.75
AAT2513	2.7	5.5	0.60	V_{IN}	600/ch	1700	60	QFN33 16L 3 x 3 x 0.85
AAT2514	2.5	5.5	0.60	V_{IN}	600/ch	1500	500	TDFN33 10L 3 x 3 x 0.75
AAT2515	2.7	5.5	0.60	V_{IN}	600/ch	1400	27	TDFN33 12L 3 x 3 x 0.75
AAT2522	2.7	5.5	0.60	V_{IN}	3000/ch	1400	90	TDFN34 16L 3 x 4 x 0.85
AAT2687	6.0	24.0	1.50	5.5	4500; LDO 600	490	600	TQFN45 24L 4 x 5 x 0.75
AAT2688	6.0	24.0	0.80	5.5	4500; LDO 600	490	600	TQFN45 24L 4 x 5 x 0.75
AAT2689	6.0	24.0	1.50	5.5	2500; LDO 600	490	600	TDFN34 16L 3 x 4 x 0.75
AAT2713	2.7	5.5	0.60	V_{IN}	600/ch	1700	70	QFN33 16L 3 x 3 x 0.85
AAT2749	2.3	5.5	1.80	1.0	600; LDO 300	3000	100	WLCSP 9L 1.35 x 1.36 x 0.50 (205 µm bump in 400 µm pitch)
AAT2782	2.7	5.5	0.60	V_{IN}	1200; 600; 400	1300	N/A	TDFN34 16L 3 x 4 x 0.85
AAT2783	2.7	5.5	0.60	V_{IN}	1000; 400; LDO 400	1300	N/A	TDFN34 16L 3 x 4 x 0.85
AAT2784	2.7	5.5	0.60	V_{IN}	1500; 300	1800	45–50	TDFN34 16L 3 x 4 x 0.85
AAT2785	2.7	5.5	0.60	V_{IN}	1500; 600	1800	45–50	TDFN34 16L 3 x 4 x 0.85
AAT2786	2.5	5.5	0.60	V_{IN}	1500; LDO 150	1500	40	TDFN34 16L 3 x 4 x 0.85
AAT2789	2.7	5.5	0.60	V_{IN}	1700; 800	1400	42	TDFN34 16L 3 x 4 x 0.85
AAT3183	2.7	5.5	1.34	1.5	300	2000	35	SC70JW 8L 2 x 2.1 x 1.1
SKY87000-11	2.7	5.5	0.40	4.25	2500	2000	135	WLCSP 9B 1.42 x 1.49
SKY87000-13	2.7	5.5	0.40	4.25	2000	2000	135	WLCSP 9B 1.42 x 1.49
SKY87201-11	2.7	5.5	0.60	V_{IN}	600	2000	37	STDFN 8L 2.0 x 2.1 x 1.05
SKY87202	2.7	6.0	0.60	3.3	3500	1200	40	QFN12L 2.0 x 2.0 x 0.85
SKY87222	2.8	5.0	0.6	1.8 ($V_{OUT\ 1}$), 3.3 ($V_{OUT\ 2}$)	500/1500	1200	80	QFN-17L 2.0 x 2.5 x 0.55
SKY87250	2.7	5.5	0.60	V_{IN}	400	2000	40	DLN 8L 2.4 x 2.4 x 0.9
SKY87608	4.5	28.0	0.90	0.8 x V_{IN}	3000	450	1600	SOP 8L 4.54 x 6 x 1.75
SKY87609	4.5	28.0	0.90	0.8*V_{IN}	6000	450	1600	TSOPJW-12L 2.85 x 3.0 x 1.0

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Voltage Regulation

Low Drop-Out (LDO) Linear Regulators

Part Number	Accuracy (%)	Typ. Dropout (mV)	Max. I_{OUT} (mA)	Typ. I_Q (µA)	Power Good	Shutdown	V_{IN} (V)	V_{OUT} (V)	V_{REF} Bypass	Package (mm)
AAT3200	±2.0	200	150	20	No	No	V_{OUT} -5.5	Fixed 2–3.5	No	SC59 3L 2.85 x 2.80 x 1.20
AAT3215	±1.5	140	150	95	No	Yes	V_{OUT} -5.5	Fixed 2.5–3.3	Yes	SOT-23 5L 2.85 x 2.80 x 1.20
AAT3218	±1.5	200	150	70	No	Yes	V_{OUT} -5.5	Fixed 1.2–3.5	Yes	SOT-23 5L 2.85 x 2.80 x 1.20, SC70JW 8L 2.2 x 2.0 x 1.05
AAT3220	±2.0	180	150	1.1	No	No	V_{OUT} -5.5	Fixed 1.8–3.3	No	SC59 3L 2.85 x 2.80 x 1.20
AAT3221	±2.0	200	150	1.1	No	Yes	V_{OUT} -5.5	Fixed 1.6–3.5	No	SOT-23 5L 2.85 x 2.80 x 1.20, SC70JW 8L 2.2 x 2.0 x 1.05
AAT3222	±2.0	200	150	1.1	No	Yes	V_{OUT} -5.5	Fixed 1.6–3.5	No	SOT-23 5L 2.85 x 2.80 x 1.20
AAT3223	±2.0	190	250	1.1	Yes	Yes	V_{OUT} -5.5	Fixed 2.8–3.3	No	SOT-23 6L 2.85 x 2.80 x 1.20
AAT3236	±1.5	300	300	100	No	Yes	V_{OUT} -5.5	Fixed 2.5–3.6	Yes	SOT-23 5L 2.85 x 2.80 x 1.20, SC70JW 8L 2.2 x 2.0 x 1.05
AAT3237	±1.5	400	300	70	Yes	Yes	V_{OUT} -5.5	Fixed 1.2–3.5	No	SOT-23 6L 2.85 x 2.80 x 1.20, SC70JW 8L 2.2 x 2.0 x 1.05
AAT3238	±1.5	400	300	70	No	Yes	V_{OUT} -5.5	Fixed 1.2–3.5	Yes	SOT-23 6L 2.85 x 2.80 x 1.20, SC70JW 8L 2.2 x 2.0 x 1.05
AAT3242	±1.5	400	300, 150	70	Yes	Yes	V_{OUT} -5.5	Fixed 1.5–3.5	No	TSOPJW 12L 3 x 2.85 x 1.02, TDFN33 12L 3 x 3 x 0.75
AAT3244	±1.5	200	300	85	Yes	Yes	1.8–5.5	0.6–3.6	No	TSOPJW 12L 3 x 2.85 x 1.02
AAT3258	±2.0	400	300	71	µP Reset	Yes	V_{OUT} -5.5	Fixed 1.2–3.5	Yes	TSOPJW 8L 3 x 2.85 x 1.01

Display and Lighting

LED Camera Flash Drivers

Charge Pump™ Camera LED Flash Drivers

Part Number	Flash I_{OUT} Total (mA)	Movie Mode I_{OUT} Total (mA)	LED Channels	Min. V_{IN}	Max. V_{IN}	Max. V_{OUT}	Peak Efficiency (%)	Interface	Typ. I_Q (µA)	Max. Shutdown Current (µA)	Package (mm)
AAT3175	300	N/A	4	2.7	5.5	N/A	95	S²Cwire™	300	1	TDFN33 12L 3 x 3 x 0.75
AAT3112	500	200	2	2.7	5.0	5.0	85	Enable	26	1	QFN33 16L 3 x 3 x 0.85
AAT3176	500	100	1	2.7	5.5	5.5	93	S2Cwire™	500	1	TDFN 10L 2.2 x 2.2 x 0.75
AAT3176A	500	100	1	2.7	5.5	5.5	93	S²Cwire™	500	1	TDFN 10L 2.2 x 2.2 x 0.75
AAT3170	600	200	2	2.7	5.5	4.9	90	AS²Cwire™	300	1	TDFN33 12L 3 x 3 x 0.75
AAT3172	600	100	2	2.7	5.5	4.9	93	AS²Cwire™	300	1	TDFN33 12L 3 x 3 x 0.75
AAT3171	800	200	1	2.7	5.5	N/A	92	S²Cwire™	300	1	TDFN33 12L 3 x 3 x 0.75
AAT3174	800	200	1	2.7	5.5	N/A	92	S²Cwire™	300	1	TDFN33 12L 3 x 3 x 0.75
AAT3177	800	200	1	2.7	5.5	N/A	91	S2Cwire™	300	1	TDFN 12L 3 x 3 x 0.75
AAT3177A	800	200	1	2.7	5.5	N/A	91	S²Cwire™	N/A	1	TDFN33 12L 3 x 3 x 0.75

Serial Boost Camera LED Flash Drivers

Part Number	Flash I_{OUT} Total (mA)	Movie Mode I_{OUT} Total (mA)	LED Channels	Min. V_{IN}	Max. V_{IN}	Max. V_{OUT}	Peak Efficiency (%)	Interface	Typ. I_Q (µA)	Max. Shutdown Current (µA)	Package (mm)
AAT1270	1000	137	2	2.7	5.5	5.5	85	S²Cwire™	230	1	STDFN33 14L 3 x 3 x 0.55
AAT1271	1500	206	2	2.7	5.5	5.5	85	AS²Cwire™	230	1	TDFN33 14L 3 x 3 x 0.75
AAT1272	1500	206	2	2.7	5.5	5.5	85	I²C	230	1	TDFN 14L 3 x 3 x 0.75
AAT1274	1500	206	1	2.7	5.5	5.5	88	AS²Cwire™	230	1	TDFN33 14L 3 x 3 x 0.75
AAT1277	1500	100	2	2.7	5.5	5.5	85	Enable	230	1	WLCSP-18
AAT1278	1500	206	1	2.7	5.5	5.5	88	AS²Cwire™	230	1	WLCSP 12 2.235 x 1.535 x 0.63
AAT1282	2000	274	2	2.7	5.5	N/A	80	I²C	570	1	TDFN33 14L 3 x 3 x 0.75
AAT1290	1500	206	1	2.7	5.5	5.5	85	AS²Cwire™	230	1	TDFN33 14L 3 x 3 x 0.75
SKY81279	1500	143	1	2.7	5.5	5.5	88	AS²Cwire™	230	1	TDFN23 14L 2 x 3 x 0.75
SKY81290	1500	143	1	2.7	5.5	5.5	88	AS²Cwire™	230	1	TDFN 14L 3 x 3 x 0.75 TDFN 14L 3 x 2 x 0.75
SKY81292	1800	200	1	2.5	5.5	5.5	90	I²C	75	1	WLCSP 16B 2 x 2 x 0.445
SKY81296	2400	250	2	2.5	5.5	5.5	93	I²C	1	1	WLCSP 20B 1.75 x 2.3 x 0.4

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Display and Lighting

Large Screen LCD LED Backlight with SPI Bus or SLIBus™ Digital Interface

Part Number	Number of LEDs	LED Channels	LED(s) per/Ch	Current Accuracy (%)	Current Matching (%)	Max. I_{OUT} per/ Ch (mA)	Interface	DOT Correction (Bits)	Grey Scale (Bits)	Channel Phase Delay (Bits)	Min. V_{IN} (V)	Max. V_{IN} (V)	Package (mm)
AAT2400[1]	160	16	10	±2.5	±2.0	100	SPI	8	12	12	10.8	28	TQFN 36L 5 x 5 x 0.75
AAT2401	160	16	10	±2.5	±2.0	100	SPI	8	12	12	10.8	28	TQFN 36L 5 x 5 x 0.75
AAT2402M[1]	160	16	10	±2.5	±2.0	100	SPI	8	12	12	10.8	28	TQFN 36L 5 x 5 x 0.75
AAT2402S	160	16	10	±2.5	±2.0	100	SPI	8	12	12	10.8	28	TQFN 36L 5 x 5 x 0.75
AAT2403A	160	16	10	±1.5	±2.0	100	SPI	8	12	12	10.8	28	TQFN 42L 5 x 6 x 0.8 TQFN 48L 7 x 7 x 0.8
AAT2403B	160	16	10	±1.5	±2.0	100	SPI	8	12	12	10.8	28	TQFN 42L 5 x 6 x 0.8 TQFN 48L 7 x 7 x 0.8
AAT2428	160	16	10	±1.5	±2.0	100	SPI	8	12	12	10.8	28	TQFN 48L 7 x 7 x 0.8
AAT2430A	720	16	<45[4]	±1.5	±1.5	250	SPI	8	12	12	10.8	32	LQFP 64L 14 x 14 x 1.6 QFN 64L 9 x 9 x 0.9
AAT2430A-1[2]	720	16	< 45[4]	±1.5	±1.5	250	SPI	8	12	12	10.8	28	LQFP 64L 14 x 14 x 1.6 QFN 64L 9 x 9 x 0.9
AAT2430B	720	16	<45[4]	±1.5	±1.5	250	SPI	8	12	12	10.8	32	LQFP 64L 14 x 14 x 1.6 QFN 64L 9 x 9 x 0.9
AAT2430C	720	16	<45[4]	±1.5	±1.5	250	SPI	8	12	12	10.8	32	LQFP 64L 14 x 14 x 1.6 QFN 64L 9 x 9 x 0.9
AAT2469[3]	N/A	16	N/A	N/A	N/A	250	SPI	8	12	12	4.5	5.5	SOP 16L 10 x 6.2 x 1.7
AAT2499	90	2	<45[4]	±1.5	±2.0	300	SLI	V_{REF}	12	12	4.5	5.5	SOP-EP 16L 10 x 6.2 x 1.7

Display and Lighting

Mid to Large Screen LCD LED Backlight with PWM Interface

Part Number	Number of LEDs	LED Channels	LED(s) per/Ch	Current Accuracy (%)	Current Matching (%)	Max. I_{OUT} per/Ch (mA)	Interface	Peak Efficiency (%)	Min. V_{IN} (V)	Max. V_{IN} (V)	Package (mm)
AAT1405	44	4	11	±2	±2	30	PWM	92	4.5	26	TQFN34 24L 3 x 4 x 0.75
AAT1407	66	6	11	±2	±2	30	PWM	92	4.5	26	TQFN34 24L 3 x 4 x 0.75
AAT1409	88	8	11	±2	±2	45	PWM	92	4.5	26	TQFN34 24L 3 x 4 x 0.75
AAT1451	48	4	12	±2	±2	30	PWM	93	5.0	26	TDFN 16L 3 x 4 x 0.75
AAT2405	N/A	6	N/A	±1.5	±1.5	250	PWM	N/A	4.5	28	E-LQFP 44L 10 x 10 x 1.6

1 Actual number dependent on external MOSFET used.

Current Sense MOSFET with Cascode Clamp Protection

Part Number	Number of Channels	Cascode Clamp BV_{DSS} (V)	Cascode Clamp $r_{DS(ON)}$ (Ω)	Current Sink BV_{DSS} (V)	Current Sink $r_{DS(ON)}$ (Ω)	Max. I_{OUT} per/Ch (mA)	Temp Sense Diode V_F (V)	Temp Sense Diode Coefficient (mV/°C)	Package (mm)
AAT2491	2	150	5	14	1.5	240	3.08	5.44	SOP-EP 16L 10 x 6.2 x 1.7

Display and Lighting

Lighting Management Units

Part Number	Backlight LEDs	Max. Backlight I_{OUT} per Channel (mA)	Flash LED Channel(s)	Max. Flash I_{OUT} per/ Ch (mA)	Max. Movie Mode I_{OUT} per/ Ch (mA)	LDO Output(s)	Min.–Max. LDO V_{OUT}	LDO Accuracy (%)	LDO Load Current (mA)	Min.–Max. V_{IN}	Interface	Package (mm)
AAT2803	6	30.0	1	300	120	N/A	N/A	N/A	N/A	2.7–5.5	AS²Cwire™	QFN44 24L 4 x 4 x 0.90
AAT2842	4	30.0	4	150	48	2	1.2–V_{IN}	±2.5	200	2.7–5.5	S²Cwire™	TQFN44 28L 4 x 4 x 0.75
AAT2845	4	20.0	0	N/A	N/A	2	1.2–2.8	±2.5	200	2.7–5.5	S²Cwire™	TQFN34 20L 3 x 4 x 0.75
AAT2845A	4	20.0	0	N/A	N/A	2	1.17–1.23	±2.5	200	2.7–5.5	S²Cwire™	TQFN34 20L 3 x 4 x 0.75
AAT2846	6	30.0	2	300	N/A	2	1.2– V_{BAT}	±2.5%	200	2.7–5.5	AS²Cwire™	TQFN44 28L 4 x 4 x 0.75
AAT2847	4	20.0	0	N/A	N/A	2	1.2–2.8	±2.5	200	2.7–5.5	AS²Cwire™	TQFN34 20L 3 x 4 x 0.75
AAT2848	4	30.0	2	300	100	N/A	N/A	N/A	N/A	2.7–5.5	S²Cwire™	TQFN33 20L 3 x 3 x 0.75
AAT2856	6	30.0	0	N/A	N/A	2	1.2– V_{BAT}	±2.5%	200	2.7–5.5	AS²Cwire™	TQFN44 28L 4 x 4 x 0.75
AAT2861	6	31.0	2	300	120	3	1.2–3.3	±1.5	300	2.7–5.5	AS²Cwire™	TQFN34 24L 3 x 4 x 0.75
AAT2862	8	30.0	0	N/A	N/A	4	1.2–3.3	±1.5	200	2.7–5.5	I²C	TQFN34 24L 3 x 4 x 0.75
AAT2863	6	30.0	0	N/A	N/A	4	1.2–3.3	±1.5	300	2.7–5.5	I²C PWM	TQFN34 24L 3 x 4 x 0.75
AAT2866	7	31.0	2	300	60	3	1.2–3.3	N/A	300	2.7–5.5	I²C	TQFN34 24L 3 x 4 x 0.75
AAT2868	4	31.0	N/A	N/A	N/A	2	1.2–3.0	±3.0	150	2.7–5.5	AS²Cwire™	TQFN 18L 3 x 2.2 x 0.75
AAT2869	4	31.0	N/A	N/A	N/A	2	1.2–3.0	±3.0	150	2.7–5.5	AS²Cwire™	TQFN 18L 3 x 2.2 x 0.75
AAT2870	8	27.9	0	N/A	N/A	4	1.2–3.3	±2.0	300	2.7–5.5	I²C	30-ball CSP 3.1 x 2.6 x 0.695
AAT2893	10	N/A	0	28.6	N/A	4	1.2–3.3	±2.0	300	2.7–5.5	N/A	20-ball CSP 2 x 2.5 x 0.695

Display and Lighting

Panel Power

Part Number	Min. V_{IN}	Max. V_{IN}	Regulated Outputs (Number)	Max. V_{POS}	Max. V_{NEG}	V_{REF}	Max. I_{OUT} (mA)	Max. Switching Frequency (kHz)	Typ. I_Q (µA)	Max. Shutdown Current (µA)	Topology	Package (mm)
AAT1230	2.7	5.5	1	18	N/A	N/A	100	2000	40	1	Inductive	TDFN34 16L 3 x 4 x 0.85, TSOPJW 12L 3 x 2.85 x 1
AAT1232	2.7	5.5	1	24	N/A	N/A	100	2000	40	1	Inductive	TDFN34 16L 3 x 4 x 0.85, TSOPJW 12L 3 x 2.85 x 1
AAT2822	2.7	5.5	4	30	-30	N/A	20	1300	1100	1	Inductive Charge Pump	TQFN44 24L 4 x 4 x 0.75
AAT2823	2.7	5.5	4	30	-30	N/A	20	1300	1100	1	Inductive Charge Pump	TQFN44 24L 4 x 4 x 0.75
AAT3190	2.7	5.5	2	25	-25	1.2	30	1000	400	1	Charge Pump	MSOP 8L 4.9 x 3 x 0.95, TSOPJW 12L 3 x 2.85 x 1.02

RGB LED Controllers

Part Number	Description	Number of Channels	Enable	RGB Control	Low Side Switches	Typ. I_Q (µA)	V_{IN} (V)	Package (mm)
AAT4295	3 Channel Single RGB Controller	3	S²Cwire™	Single	3	3	1.8–5.5	SC70JW 8L 2.2 x 2.0 x 1.05
AAT4297	6 Channel Dual RGB Controller	6	S²Cwire™	Dual	6	3	1.8–5.5	TSOPJW 12L 3 x 2.85 x 1.02

RGB LED Drivers

Part Number	Min. V_{IN}	Max. V_{IN}	Number of RGB LED(s)	Number of Built-in Patterns	Color Space	Max. Switching Frequency (kHz)	Interface	Peak Efficiency (%)	Current Accuracy (%)	Max. I_{OUT} per Channel (mA)	Typ. I_Q (µA)	Package (mm)
AAT3128	2.7	5.5	2	16	64	1000	S²Cwire™	93	±5	60	3	TSOPJW 14L 3.05 x 2.85 x 1.05
AAT3129	2.7	5.5	1	0	4096	1000	AS²Cwire™	93	±5	180	1	TSOPJW 12L 3 x 2.85 x 1

Display and Lighting

White LED Drivers

Serial Boost White LED Backlight Drivers

Part Number	Number of LEDs	LED Channels	LED(s) per/ Ch	Min. V_{IN}	Max. V_{IN}	Interface	Peak Eff. (%)	Current Accuracy (%)	Current Matching (%)	Max. I_{OUT} per/Ch (mA)	Typ. I_Q (µA)	Package (mm)
AAT1231	12	1	6	2.7	5.5	S²Cwire™	82	±6	N/A	50	40	TSOPJW 12L 3 x 2.85 x 1
AAT1235	30	5	6	2.7	5.5	AS²Cwire™	85	±10	±2	30	300	TDFN 16L 3 x 4 x 0.85
AAT1236	30	5	6	2.7	5.5	I²C	85	±10	±2	30	300	TDFN 16L 3 x 4 x 0.85
AAT1239-1	10	1	10	2.7	5.5	S²Cwire™	85	±3.5	N/A	30	70	TSOPJW 12L 3 x 2.85 x 1
AAT1401	6	1	6	2.7	5.5	S²Cwire™, Filtered PWM	85	±10	N/A	31	0.43	WLCSP 10L 1.545 x 1.145 x 0.65
AAT1402	8	1	8	2.7	5.5	S²Cwire™, Filtered PWM	83	±10	N/A	31	0.43	WLCSP 10L 1.545 x 1.145 x 0.65
AAT1403	10	1	10	2.7	5.5	S²Cwire™, Filtered PWM	81	±10	N/A	31	0.43	WLCSP 10L 1.545 x 1.145 x 0.65
AAT1410	4	1	4	2.7	5.5	S²Cwire™, Direct PWM,	86	±10	N/A	31	0.43	WLCSP 10L 1.545 x 1.145 x 0.65
AHK1421	6	1	6	2.7	5.5	S²Cwire™	86	±5	N/A	31	600	SOT-23 6L 2.9 x 2.8 x 1
SKY81452-13	48	6	8	2.5	5.5	I²C, DPWM, FPWM	93%	±2%	±2%	60	4	WLCSP-25 2.44 x 2.44 x 0.73
SKY81453-13	48	6	8	2.5	5.5	I²C, FPWM	93%	±2%	±2%	60	4	WLCSP-25 2.44 x 2.44 x 0.73

Display and Lighting

White LED Drivers

Charge Pump Based White LED Backlight Drivers

Part Number	Number of LEDs	LED Channels	LED(s) per/Ch	Min. V_{IN}	Max. V_{IN}	Interface	Peak Efficiency (%)	Current Accuracy (%)	Current Matching (%)	Max. I_{OUT} per/Ch (mA)	Typ. I_Q (µA)	Package (mm)
AAT3103-1	3	3	1	2.7	5.5	S²Cwire™	90	±10	±3	30	1900	–
AAT3103-2	3	3	1	2.7	5.5	S²Cwire™	90	±10	±3	30	1900	–
AAT3103-4	3	3	1	2.7	5.5	PWM	90	±10	±3	30	1900	SC70JW 10L 2.2 x 2 x 1.1
AAT3104-1	4	4	1	2.7	5.5	S²Cwire™	83	±10	±3	31	6000	SC70JW 10L 2.2 x 2 x 1.1
AAT3104-2	4	4	1	2.7	5.5	S²Cwire™	83	±10	±3	31	6000	SC70JW 10L 2.2 x 2 x 1.1
AAT3105	4	4	1	2.7	5.5	PWM	87	±10	±3	30	3000	SC70JW 10L 2.2 x 2 x 1.1
AAT3110	1	1	1	2.7	5.0	Enable	92	N/A	N/A	100	13	SOT-23 6L 2.85 x 2.8 x 1.2 SC70JW 8L 2 x 2.1 x 1.1
AAT3111	1	1	1	1.8	3.6	Enable	90	N/A	N/A	100	20	SOT-23 6L 2.85 x 2.8 x 1.1 SC70JW 8L 2 x 2.1 x 1.05
AAT3113	4	4	1	2.7	5.5	S²Cwire™	93	±10	±0.3	20	1000	TSOPJW 12L 3 x 2.85 x 1
AAT3114	6	6	1	2.7	5.5	S²Cwire™	93	±10	±0.3	20	1000	QFN44 16L 4 x 4 x 0.9
AAT3119	1	1	1	2.7	5.5	Enable	91	N/A	N/A	250	2000	SC70JW 8L 2 x 2.1 x 1.1
AAT3120	3	3	1	2.7	5.5	S²Cwire™	86	±10	±0.5	20	1800	TSOPJW 12L 3 x 2.85 x 1
AAT3121	6	1	6	2.7	5.5	S²Cwire™	93	±10	N/A	132	1800	TSOPJW 12L 3 x 2.85 x 1
AAT3122	6	1	6	2.7	5.5	S²Cwire™	93	±10	N/A	132	1800	TSOPJW 12L 3 x 2.85 x 1
AAT3123	4	4	1	2.7	5.5	S²Cwire™	93	±10	±0.5	20	1800	TSOPJW 14L 3.05 x 2.85 x 1.05
AAT3124	6	6	1	2.7	5.5	S²Cwire™	93	±10	±0.5	20	1800	QFN44 16L 4 x 4 x 0.9 TSOPJW 14L 3.05 x 2.85 x 1.05
AAT3131	4	4	1	2.7	5.5	S²Cwire™	93	±10	±0.5	30	1800	TSOPJW 12L 3 x 2.85 x 1
AAT3132	4	4	1	2.7	5.5	S²Cwire™	93	±10	±0.5	30	1800	TSOPJW 12L 3 x 2.85 x 1
AAT3134	6	6	1	2.7	5.5	S²Cwire™	93	±10	±0.5	20	1800	QFN 16L 3 x 3 x 0.9
AAT3140	4	4	1	2.7	5.5	S²Cwire™	93	±10	±0.5	30	550	TSOPJW 12L 3 x 2.85 x 1
AAT3141	4	4	1	2.7	5.5	AS²Cwire™	93	±10	±0.5	30	550	TSOPJW 12L 3 x 2.85 x 1
AAT3142	3	3	1	2.7	5.5	S²Cwire™	93	±10	±0.5	30	550	TSOPJW 12L 3 x 2.85 x 1
AAT3143	4	4	1	2.7	5.5	PWM	93	±10	±0.5	20	550	TSOPJW 12L 3 x 2.85 x 1
AAT3150	4	4	1	2.7	5.5	AS²Cwire™	97	±10	±0.5	30	50	TDFN 12L 3 x 3 x 0.75
AAT3151	4	4	1	2.7	5.5	AS2Cwire™	97	±10	±0.5	30	50	STDFN33-12 TDFN33-12
AAT3151B	4	4	1	2.7	5.5	AS²Cwire™	97	±10	±0.5	30	50	TDFN33 12L 3 x 3 x 0.75
AAT3152	4	4	1	2.7	5.5	S²Cwire™	93	±10	±0.5	20	50	TDFN33 12L 3 x 3 x 0.75
AAT3155	4	4	1	2.7	5.5	S²Cwire™	97	±10	±0.5	20	50	TSOPJW 12L 3 x 2.85 x 1

Display and Lighting

White LED Drivers

Charge Pump Based White LED Backlight Drivers (Continued)

Part Number	Number of LEDs	LED Channels	LED(s) per/Ch	Min. V_{IN}	Max. V_{IN}	Interface	Peak Efficiency (%)	Current Accuracy (%)	Current Matching (%)	Max. I_{OUT} per/Ch (mA)	Typ. I_Q (µA)	Package (mm)
AAT3156	6	6	1	2.7	5.5	AS²Cwire™	93	±10	±0.5	30	50	QFN44 16L 4 x 4 x 0.9
AAT3157	3	3	1	2.7	5.5	S²Cwire™	97	±10	±0.5	20	50	TSOPJW 12L 3 x 2.85 x 1
AAT3158	4	4	1	2.7	5.5	S²Cwire™	93	±10	±0.5	20	50	TSOPJW 12L 3 x 2.85 x 1
AAT3159	4	4	1	2.7	5.5	S²Cwire™	93	±10	±0.5	40	50	TSOPJW 14L 3.05 x 2.85 x 1.05
AAT3164	6	6	1	2.7	5.5	S²Cwire™	94	±7	±0.5	30	70	TDFN34 16L 3 x 4 x 0.75
AAT3166	4	4	1	2.7	5.5	S²Cwire™	94	±10	±0.5	27	50	TDFN33 12L 3 x 3 x 0.75
AAT3167	5	5	1	2.7	5.5	S²Cwire™	94	±10	±0.5	27	50	STDFN33 14L 3 x 3 x 0.55 QFN44 16L 4 x 4 x 0.9
AAT3169	6	6	1	2.7	5.5	AS²Cwire™	94	±10	±0.5	30	65	QFN44 16L 4 x 4 x 0.9 STDFN33 14L 3 x 3 x 0.55 TDFN33 14L 3 x 3 x 0.75 TSOPJW 14L 3.05 x 2.85 x 1.05
AAT3192-1	2	2	1	2.7	5.5	S²Cwire™	91	±10	±3	30	2500	SC70JW-10 10L 2.2 x 2 x 1.1
AAT3193-1	3	3	1	2.7	5.5	S²Cwire™	91	±10	±3	30	600	SC70JW 10L 2.2 x 2 x 1.1
AAT3193-4	3	3	1	2.7	5.5	PWM	91	±10	±3	30	600	SC70JW 10L 2.2 x 2 x 1.1
AAT3194	4	4	1	2.7	5.5	S²Cwire™	93	±20	±0.3	20	3000	TSOPJW 12L 3 x 2.85 x 1
AAT3195	4	4	1	2.7	5.5	S²Cwire™	91	±10	±3	30	600	SC70JW 10L 2.2 x 2 x 1.1
AAT3340	4	4	1	2.7	5.5	S²Cwire™	86	±10	±3	20	1800	TSOPJW 12L 3 x 2.85 x 1 TDFN33 3 x 3 x 0.75
AAT3351	4	4	1	2.7	5.5	S²Cwire™	88	±10	±3	30	2000	TSOPJW 14L 2.85 x 3.05 x 1.05 TDFN33 12L 3 x 3 x 0.75
AAT3369-1	6	6	1	2.7	5.5	S²Cwire™	91	±10	±5	21	500	TQFN3x2.2 18L 3 x 2.2 x 0.75

Display and Lighting

White LED Drivers

Linear White LED Backlight Drivers

Part Number	Number of LEDs	LED Channels	LED(s) per/Ch	Min. V_{IN}	Max. V_{IN}	Interface	Peak Efficiency (%)	Current Accuracy (%)	Current Matching (%)	Max. I_{OUT} per/Ch (mA)	Typ. I_Q (µA)	Package (mm)
AHK3292	2	2	1	2.7	5.5	S²Cwire™	98	±10	±3	30.2	1800	SOT-23 6L 2.85 x 2.8 x 1.2
AHK3293	3	3	1	2.7	5.5	S²Cwire™	98	±10	±3	30.2	1800	SOT-23 6L 2.85 x 2.8 x 1.2
AHK3294	4	4	1	2.7	5.5	S²Cwire™	98	±10	±3	30.2	2500	SC70JW 8L 2 x 2.1 x 1.1
AHK3296	6	6	1	2.7	5.5	S²Cwire™	98	±10	±3	20.6	2500	SC70JW 10L 2.0 x 2.2 x 0.55 TDFN 10L 2.2 x 2.2 x 0.75

Multi-function Power Management Integrated Circuit (PMIC / PMU)

Part Number	Number of LDO Reg.	Min. V_{IN} (V)	Max. Reg V_{IN} (V)	Max. Charger V_{IN} (V)	Max. Charge Current (mA)	Max. Single/ Ch Output Current (mA)	Min. Single/ Ch Output Voltage (V)	Max. Step-Up Output Voltage (V)	Output Voltages Control	Operating Frequency (kHz)	Package (mm)
AAT2550	0	2.7	5.5	5.5	1000	600	0.6	V_{IN}	External Resistors	1400	QFN44 24L 4 x 4 x 0.93
AAT2552	1	2.7	5.5	7.5	500	300	0.6	V_{IN}	External Resistors	1500	TDFN34 16L 3 x 4 x 0.75
AAT2554	1	2.7	5.5	6.5	500	300	0.6	V_{IN}	External Resistors/ Fixed	1500	TDFN34 16L 3 x 4 x 0.75
AAT2556	0	2.7	5.5	6.5	500	250	0.6	V_{IN}	External Resistors	1500	TDFN33 12L 3 x 3 x 0.75
AAT2557	1	2.7	5.5	6.5	500	300	N/A	V_{IN}	Fixed	N/A	TSOPJW 14L 3.05 x 2.85 x 1.02
AAT2601	5	4.5	6.0	6.0	1440	300	1.8	N/A	Fixed	1500	TQFN55 36L 5 x 5 x 0.8
AAT2601A	5	4.5	6.0	6.0	1440	300	1.8	N/A	Fixed	1500	TQFN55 36L 5 x 5 x 0.8
AAT2601B	5	4.5	6.0	6.0	1440	300	1.8	N/A	Fixed	1500	TQFN55 36L 5 x 5 x 0.8
AAT2603	4	2.7	5.5	6.0	N/A	1200	0.6	V_{IN}	External Resistors	1500	TQFN44 28L 4 x 4 x 0.75
AAT2605	5	2.7	5.5	N/A	N/A	300	0.6	N/A	Fixed	N/A	TDFN33 14L 3 x 3 x 0.75
AAT2606	6	2.7	5.5	N/A	N/A	300	0.6	N/A	Fixed	N/A	TDFN33 14L 3 x 3 x 0.75
AAT2608	8	2.7	5.5	N/A	N/A	800	0.6	N/A	Fixed	1500	TQFN44 28L 4 x 4 x 0.75
AAT2608A	8	2.7	5.5	N/A	N/A	N/A	0.6	N/A	Fixed	1500	TQFN44 28L 4 x 4 x 0.75
AAT2610	0	1.6	5.5	N/A	N/A	1500	0.6	30	External Resistors	1500	TQFN55 40L 5 x 5 x 0.75
AAT2612	3	2.5	5.5	N/A	N/A	600/300	1.0/1.8	N/A	Enables	1500	TQFN33 20L 3 x 3 x 0.75

Multi-function Power Management Integrated Circuit (PMIC / PMU) (Continued)

Part Number	Number of LDO Reg.	Min. V_{IN} (V)	Max. Reg V_{IN} (V)	Max. Charger V_{IN} (V)	Max. Charge Current (mA)	Max. Single/ Ch Output Current (mA)	Min. Single/ Ch Output Voltage (V)	Max. Step-Up Output Voltage (V)	Output Voltages Control	Operating Frequency (kHz)	Package (mm)
AAT2614	1	2.5	5.5	N/A	N/A	600/300	1.0/1.8	N/A	Fixed	2000	TQFN33 20L 3 x 3 x 0.75 or 16-bump CSP-0.4 1.65 x 1.65
AAT2630	8	3.0	5.5	N/A	N/A	500	1.375	N/A	Fixed	1920	WLCSP 49B 3.0 x 3.0 x 0.65
AAT3601	5	4.5	6.0	6.0	1440	300	1.24	N/A	Fixed	1500	TQFN 36L 5 x 5 x 0.8
AAT3603	5	4.5	6.0	6.0	1440	300	1.8	N/A	I²C/Fixed	1500	TQFN 36L 5 x 5 x 0.8
AAT3603A	5	4.5	6.0	6.0	1440	300	1.8	N/A	I²C/Fixed	1500	TQFN 36L 5 x 5 x 0.8
AAT3604B	1	2.7	4.5	6.5	100	25	0.6	27	Enables	1600	QFN44 24L 4 x 4 x 0.9
AAT3608	5	2.7	N/A	5.5	1200	800/800/ 300/80/ 80/50/50	0.6	N/A	I²C Enables/ GPIO	1500	TQFN 40L 5 x 5 x 0.75

Power Half Bridges

Part Number	Break Before Make Time (ns)	Max. I_{OUT} (mA)	Logic Input	Typ. $R_{DS(ON)}$ (mΩ) High Side Switch	Typ. $R_{DS(ON)}$ (mΩ) Low Side Switch	V_{IN} (V)	Package (mm)
AAT4900	5	1000	Yes	130	105	2.7–5.5	SOT-23 5L 2.85 x 2.80 x 1.20, SC70JW 8L 2.0 x 2.1 x 1.05
AAT4901	5	700	Yes	220	160	2.0–5.5	SC70JW 8L 2.0 x 2.1 x 1.05
AAT4902	100	400	Yes	350	350	2.5–5.5	CSP 9L 1.2 x 1.2 x 0.62
AAT4910	50	N/A	Yes	3000	1700	4.5–28	SC70JW 8L 2.2 x 2.0 x 1.05

Port Protection and Power Distribution

Current Limited Load Switches

Multiple Input High Side Switches—Current Limiters

Part Number	Number of Channels	Enable	Fault Flag	I_{LIM}	Typ. I_Q (µA)	Typ. $R_{DS(ON)}$ (mΩ)	Shutdown	V_{IN} (V)	Package (mm)
AAT4650	2	No	Yes	Fixed 1 A	15	80	Yes	2.7–5.5	SOP 8L 4.9 x 6.0 x 1.55
AAT4670	2	No	Yes	Fixed 1 A	18	95	Yes	2.2–5.5	SOP 8L 4.9 x 6.0 x 1.55
AAT4672	2	Yes	Yes	2 A	10	120	No	2.5–6.0	TSOPJW 12L 3 x 1.85 x 1.02
AAT4674	2	Yes	No	2 A	10	120	No	2.5–6.0	TSOPJW 12L 3 x 1.85 x 1.02

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Port Protection and Power Distribution

Current Limited Load Switches

Single Input Side Switches—Current Limiters

Part Number	Number of Channels	Enable	Fault Flag	I_{LIM}	Typ. I_Q (µA)	Typ. $R_{DS(ON)}$ (mΩ)	V_{IN} (V)	Package (mm)
AAT4601	1	Yes	Yes	Adj. 1.8 A	12	70	2.7–5.5	SOP 8L 4.9 x 6.0 x 1.55
AAT4601A	1	Yes	Yes	Adj. 1.8 A	12	70	2.7–5.5	SOP 8L 4.9 x 6.0 x 1.55, MSOP 8L 4.9 x 3.0 x 0.95
AAT4608	1	No	No	Adj. 1 A	15	160	2.7–5.5	SOT-23 5L 2.85 x 2.80 x 1.20
AAT4610	1	Yes	No	Adj. 1 A	15	160	2.7–5.5	SOT-23 5L 2.85 x 2.80 x 1.20
AAT4610A	1	Yes	No	Adj. 1 A	9	145	2.4–5.5	SOT-23 5L 2.85 x 2.80 x 1.20, SC70JW 8L 2.0 x 2.1 x 1.05
AAT4610B	1	Yes	No	Adj. 1 A	9	145	2.4–5.5	SOT-23 5L 2.85 x 2.80 x 1.20, SC70JW 8L 2.0 x 2.1 x 1.05
AAT4611	1	Yes	No	Adj. 1 A	15	160	2.7–5.5	SOT-23 5L 2.85 x 2.80 x 1.20
AAT4614	1	Yes	Yes	Adj. 1.6 A	10	160	2.4–5.5	SC70JW 8L 2.0 x 2.1 x 1.05, SOT-23 6L 2.85 x 2.80 x 1.20, SOT-23 5L 2.85 x 2.80 x 1.20
AAT4616	1	Yes	Yes	300 mA to 1.6 A	10	130	2.4–5.5	SOT-23 5L 2.85 x 2.80 x 1.20, TDFN22-8 2 x 2 x 0.75
AAT4616A	1	Yes	Yes	300 mA to 1.6 A	10	130	2.4–5.5	TDFN22 6L 2 x 2 x 0.75
AAT4618	1	Yes	Yes	Fixed 400 mA, 500 mA, 1 A	10	125	2.4–5.5	SOT-23 5L 2.85 x 2.80 x 1.20, SC70JW 8L 2.0 x 2.1 x 1.05
AAT4620	1	Yes	Yes	Adj. to 1.2 A	40	65	3.0–5.5	TSOPJW 12L 3 x 2.85 x 1.02
AAT4621	1	Yes	Yes	Adj. 1.2 A	40	65	3.0–5.5	TDFN 14L 3 x 3 x 0.75
AAT4625	1	Yes	Yes	Fixed 1 A, 1.5 A, 2 A	16	60	2.7–5.5	SOP 8L 4.9 x 6.0 x 1.55, MSOP 8L 4.9 x 3.0 x 0.95
AAT4626	2	Yes	Yes	Fixed 750 mA, 1 A, 1.5 A	20	90	2.7–5.5	SOP 8L 4.9 x 6.0 x 1.55
AAT4631/4631-1	1	Yes	Yes	500 mA to 3.1 A	10	90	2.4–5.5	TDFN2222-10 2.2 x 2.2 x 0.75
AAT4644	4	No	No	Fixed 600 mA, 1 A, 1.5 A	20	100	2.7–5.5	TSSOP 8L 3.0 x 6.4 x 1.2, SOP 8L 4.9 x 6.0 x 1.55
AAT4702	1	Yes	Yes	150 mA, 1 A	15	220	2.4–5.5	FTDFN22 8L 2 x 2 x 0.75

Port Protection and Power Distribution

I/O Expander Serial Controlled Load Switches

Part Number	Number of Channels	Enable	Turn On Rise Time (T_R)	Typ. $R_{DS(ON)}$ (mΩ)	Typ. I_Q (µA)	V_{IN} (V)	Package (mm)
AAT4290	5	S²Cwire™	0.27 µs	1100	4.5	1.8–5.5	SC70JW 8L 2.0 x 2.1 x 1.05
AAT4290A	5	S²Cwire™	0.27 µs	1100	4.5	1.8–5.5	SC70JW 8L 2.0 x 2.1 x 1.05
AAT4291	3	S²Cwire™	0.27 µs	1100	4.5	1.8–5.5	SC70JW 8L 2.0 x 2.1 x 1.05
AAT4292	7	AS²Cwire™	0.27 µs	1100	6.3	1.8–5.5	SC70JW 10L 2.2 x 2.0 x 0.55
AAT4296	5	S²Cwire™	1.6 µs	Pch 2.5, Nch 1.9	3.0	1.8–5.5	SC70JW 8L 2.0 x 2.1 x 1.05
AAT4298	6	S²Cwire™	1.6 µs	Pch 2.5, Nch 1.9	3.0	1.8–5.5	SC70JW 10L 2.2 x 2.0 x 0.55, TSOPJW 12L 3 x 2.85 x 1.02

Over Voltage Protection

Part Number	Number of Channels	Enable	Fault Flag	I_{LIM}	Typ. I_Q (µA)	Typ. $R_{DS(ON)}$ (mΩ)	V_{IN} (V)	Package (mm)
AAT4684	1	Yes	Yes	1.8 A	30	100	3.0–14	TSOPJW 12L 3 x 2.85 x 1.02
AAT4685	1	Yes	Yes	1.9 A	600	120	3.0–28	TDFN33 12L 3 x 3 x 0.75
AAT4686	1	Yes	Yes	N/A	30	N/A	3.0–14	SC70JW 8L 2 x 2.1 x 1.05
AAT4687	1	Yes	Yes	N/A	30	130	3.0–14	SC70JW 10L 2 x 2 x 1.1
AAT4687-1	1	Yes	Yes	N/A	45	120	2.2–14	SC70JW 10L 2 x 2 x 1.1

Port Protection and Power Distribution

Slew Rate Controlled

Part Number	Description	Number of Channels	Enable	Turn On Rise Time (T_R)	Typ. $R_{DS(ON)}$ (mΩ)	Typ. I_Q (µA)	V_{IN} (V)	Package (mm)
AAT4250	Slew Rate Controlled Load Switch	1	Yes	1.5 ms	120	2.000	1.8–5.5	SOT-23 5L (SOT25) 2.85 x 2.8 x 1.2, SC70JW 8L 2 x 2.1 x 1.05
AAT4252A	Dual Slew Rate Controlled Load Switch	2	Yes	1.0 ms, 0.5 µs, 100 µs	87	0.500	1.5–6.5	TSOPJW 12L 3 x 2.85 x 1.02
AAT4280	Slew Rate Controlled Load Switch	1	Yes	0.5 µs, 0.1 ms, 1.0 ms	80	2.500	1.8–5.5	SOT-23 6L 2.85 x 2.8 x 1.2, SC70JW 8L 2.2 x 2 x 1.05
AAT4280A	Slew Rate Controlled Load Switch	1	Yes	0.5 µs, 0.1 ms, 1.0 ms	80	0.025	1.5–5.5	SOT-23 6L 2.85 x 2.8 x 1.2, SC70JW 8L 2.2 x 2 x 1.05
AAT4282A	Dual Slew Rate Controlled Load Switch	2	Yes	0.5 µs, 0.1 ms, 1.0 ms	60	1.000	1.5–6.5	FTDFN22-8 2 x 2 x 0.75, SC70JW 8L 2.2 x 2 x 1.05
AAT4282B	–	2	Yes	0.065 ms, 0.75 ms	67	0.040	1.5–6.5	TDFN22-8, 2 x 2 x 0.75
AAT4285	12 V Slew Rate Controlled Load Switch	1	Yes	0.1 ms	240	25.000	3.0–13.2	SC70JW 8L 2.2 x 2 x 1.05
SKY84632	–	1	Yes	2 ms	40	9.000	1.5–5.5	CSP-6 1 x 1 x 0.625

Supervisors / Monitors, Voltage Detectors—Microprocessors

Part Number	Accuracy (%)	Manual Reset	Output: Active Low, Open Drain	Output: Push-Pull Active High	Output: Push-Pull Active Low	Typ. I_Q (µA)	Threshold (V)	V_{IN} (V)	Watchdog Timer	Package (mm)
AAT3510	±1.5	Yes	No	No	Yes	5.00	2.6–5.0	1.0–5.5	Yes	SOT-23 5L 2.85 x 2.8 x 1.2
AAT3515	±1.5	Yes	No	Yes	Yes	5.00	2.6–5.0	1.0–5.5	No	SOT-23 5L 2.85 x 2.8 x 1.2
AAT3517	±1.5	Yes	Yes	No	Yes	5.00	2.6–5.0	1.0–5.5	Yes	SOT-23 5L 2.85 x 2.8 x 1.2
AAT3518	±1.5	No	Yes	No	No	5.00	2.6-5.0	1.0–5.5	Yes	SOT-23 5L 2.85 x 2.8 x 1.2
AAT3522	±1.5	No	No	No	Yes	0.85	2.2–4.6	1.2–5.5	No	SOT23 3L 2.92 x 2.37 x 0.96
AAT3524	±1.5	No	Yes	No	Yes	0.85	2.2–4.6	1.2–5.5	No	SOT23 3L 2.92 x 2.37 x 0.96
AAT3532	±2.6	Yes	Yes	Yes	No	23.00	4.5, 4.75	4.5–5.5	Yes	SOP 8L 4.9 x 6 x 1.55

RF PASSIVES

MIS Silicon Chip Capacitors

Skyworks Solutions' metal-insulator-semiconductor (MIS) chip capacitors are available in a wide range of capacitance values and die sizes for chip-and-wire circuits requiring DC blocking, RF bypassing, or as tuning elements in filters, oscillators, and matching networks.

The capacitors have a dielectric composed of thermally-grown silicon dioxide over which a layer of silicon nitride is deposited. This two-layer dielectric produces a very a low temperature coefficient of capacitance, very high insulation resistance, outstanding long-term stability, and excellent reliability. The temperature coefficient of capacitance is less than 50 ppm/°C, and the capacitors are suitable for operation from -65 °C to 200 °C. Skyworks' MIS chip capacitors offer very high Q.

Wafers can be supplied on expanded film frame for automatic pick-and-place manufacturing. To reduce cost, chips can be supplied packaged in vials with sample electrical testing. Packaging in waffle packs with 100 percent electrical test and visual inspection is available, if required.

Part Number	Capacitance Value (pF) ±20%	Die Size (mils)
SC00080912	0.8	12 x 12
SC00120912	1.2	12 x 12
SC00180912	1.8	12 x 12
SC00260912	2.6	12 x 12
SC00380912	3.8	12 x 12
SC00560912	5.6	12 x 12
SC00680912	6.8	12 x 12
SC00820710	8.2	10 x 10
SC00821518	8.2	18 x 18
SC01000710	10	10 x 10
SC01000912	10	12 x 12
SC01001518	10	18 x 18
SC01500912	15	12 x 12
SC01501518	15	18 x 18
SC02201518	22	18 x 18
SC03301518	33	18 x 18
SC04701518	47	18 x 18
SC06801518	68	18 x 18
SC10002430	100	30 x 30
SC33303440	333	40 x 40
SC50004450	500	50 x 50
SC99906068	1000	68 x 68

Couplers

Skyworks' wideband directional couplers come in low profile SOT-6 surface mount packages and address diverse markets such as WLAN, wireless infrastructure, test & measurement, distortion cancellation, RFID readers, and other RF/microwave applications. These products offer excellent insertion loss, very good directivity, high isolation, and low input/out VSWR.

Skyworks also offers a broad selection of monolithic hybrid couplers in surface mount packages for diverse markets such as WLAN, wireless infrastructure, automotive, test & measurement, energy management, and other RF/microwave applications. These couplers are utilized for generation of quadrature signals as found in balanced signal chains, I/Q modulators, I/Q demodulators, analog phase shifters, analog variable attenuators, and more. Their low insertion loss, excellent phase, and amplitude balance produce outstanding system performance.

These product solutions leverage the extensive design knowledge, technical leadership, manufacturing expertise, and superior quality of Skyworks.

Directional Couplers

Part Number	Frequency (GHz)	Typ. Insertion Loss (dB)	Typ. Isolation (dB)	Typ. Input VSWR	Typ. Output VSWR	Typ. Coupling (dB)	Typ. Coupled Port VSWR	Package (mm)
DC08-73LF	0.81–0.96	0.45	22	1.05:1	1.05:1	15.0	1.2:1	SOT-23 6L 2.8 x 2.9 x 1.18
DC09-73LF	0.81–0.96	0.20	30	1.1:1	1.1:1	19.8	1.1:1	SOT-23 6L 2.8 x 2.9 x 1.18
DC15-73LF	1.42–1.66	0.20	34	1.1:1	1.1:1	18.4	1.1:1	SOT-23 6L 2.8 x 2.9 x 1.18
DC16-73LF	1.42–1.99	0.30	24	1.1:1	1.1:1	15.0	1.1:1	SOT-23 6L 2.8 x 2.9 x 1.18
DC18-73LF	1.71–1.99	0.20	38	1.1:1	1.1:1	18.8	1.2:1	SOT-23 6L 2.8 x 2.9 x 1.18
DC25-73LF	2.30–2.60	0.20	33	1.1:1	1.1:1	17.2	1.3:1	SOT-23 6L 2.8 x 2.9 x 1.18

90-Degree Hybrid Couplers

Part Number	Frequency (GHz)	Typ. Insertion Loss (dB)	Typ. Isolation (dB)	Typ. Input VSWR	Typ. Output VSWR	Typ. Amplitude Balance (Degrees)	Typ. Phase Balance (dB)	Package (mm)
HY17-12LF	1.71–1.88	0.50	20	1.2:1	1.2:1	±0.5	±1	SOIC 8L 6.0 x 4.9 x 1.6
HY19-12LF	1.85–1.99	0.50	20	1.3:1	1.3:1	±0.5	±1	SOIC 8L 6.0 x 4.9 x 1.6
HY22-73LF	2.10–2.30	0.55	23	1.2:1	1.2:1	±0.4	±2	SOT-23 6L 2.8 x 2.9 x 1.18
HY86-12LF	0.82–0.90	0.40	30	1.15:1	1.15:1	±0.5	±1	SOIC 8L 6.0 x 4.9 x 1.6
HY92-12LF	0.88–0.96	0.40	25	1.1:1	1.1:1	±0.5	±1	SOIC 8L 6.0 x 4.9 x 1.6

Detectors

Skyworks' directional detectors incorporate innovative directional technology along with our advanced Schottky diode technology to produce a wide bandwidth, wide power range detector circuit with excellent directivity, and low insertion loss that is easily temperature compensated with a single differential amplifier. This product is well-suited for use in radio infrastructure transmitter automatic level control systems, power amplifier monitors, and many other applications.

Directional Detectors

Part Number	Frequency (GHz)	Typ. Insertion Loss (dB)	Directivity (dB)	Typ. Input VSWR	Typ. Output VSWR	Directed Output Voltage (dBm)	Package (mm)
DD02-999LF	0.65–3.0	0.2	2	1.1:1	1.1:1	80 mV @ 900 MHz 160 mV @ 1800 MHz	SC-88 6L 2.1 x 2 x 0.95

Fixed Attenuator Pads

Skyworks Solutions is pleased to now offer two fixed attenuator pad options for radar, test & measurement, high frequency transceivers, and other high performance microwave applications up to 40 GHz. The next generation ATN3590 series offers enhanced RF power handling and attenuation flexibility. The unique ATN3590 die design eliminates the need for RF ground bonds enabling greatly improved return loss and attenuation flatness across multi-octave bandwidths.

These two product solutions, available in die form, leverage Skyworks' extensive design knowledge, technical leadership, manufacturing expertise, and superior quality.

The ATN3590 and ATN3580 attenuator families are optimized for surface mounting on co-planar waveguide or microstrip printed circuit boards. Bond wires or ribbons are used to connect the input and output ports of the attenuators to the external circuit transmission lines. Connection to ground is accomplished by through-die vias to the die backside metallization on the ATN3590 family and bond wires or ribbons on the ATN3580 family.

The dice are attached using eutectic solder or conductive epoxy and can operate over a temperature range of –65 °C to 150 °C.

ATN3580 Fixed Attenuator Pads

Part Number	Nominal Attenuation (dB)	Attenuation Tolerance @ DC (dB)	Attenuation Flatness			Return Loss		
			0.1–12 GHz (dB)	0.1–26.5 GHz (dB)	0.1–40 GHz (dB)	0.1–12 GHz (dB)	0.1–26.5 GHz (dB)	0.1–40 GHz (dB)
ATN3580-01	1	±0.15	0.2	0.4	0.6	23	18	15
ATN3580-02	2	±0.15	0.2	0.4	0.6	23	18	15
ATN3580-03	3	±0.25	0.2	0.4	0.6	23	18	15
ATN3580-04	4	±0.25	0.2	0.4	0.6	23	18	15
ATN3580-05	5	±0.25	0.3	0.5	0.8	23	18	15
ATN3580-06	6	±0.25	0.3	0.5	0.8	23	18	15
ATN3580-07	7	±0.25	0.3	0.5	0.8	23	18	15
ATN3580-08	8	±0.35	0.3	0.5	0.8	23	18	15
ATN3580-09	9	±0.35	0.3	0.5	0.8	23	18	15
ATN3580-10	10	±0.35	0.4	0.6	1.0	23	18	15
ATN3580-12	12	±0.50	0.4	0.6	1.0	23	18	15
ATN3580-15	15	±0.50	0.4	0.6	1.0	23	18	15
ATN3580-20	20	±1.10	0.4	0.6	1.0	23	18	15
ATN3580-30	30	±1.60	0.6	1.0	2.0	23	18	15
ATN3580-40	40	±1.60	1.0	2.0	4.0	23	18	15

Fixed Attenuator Pads

The ATN3590 family of fixed resistive attenuators are integrated circuits comprising thin film resistors and through-die vias that provide excellent attenuation flatness from low frequency to 40 GHz or higher. These attenuators are available from 0 to 30 dB.

The ATN3590 attenuator family is optimized for surface mounting on co-planar waveguide or microstrip printed circuit boards. Bond wires or ribbons are used to connect the input and output ports of the attenuators to the external circuit transmission lines. Connection to ground is accomplished by through-die vias to the die backside metallization.

The dice are attached using eutectic solder or conductive epoxy and can operate over a temperature range of -65 °C to 150 °C.

ATN3590 Fixed Attenuator Pads

Part Number	Nominal Attenuation (dB)	Attenuation Tolerance @ DC (dB)	Attenuation Flatness				Return Loss			
			DC–12 GHz (dB)	12–26 GHz (dB)	26–33 GHz (dB)	33–40 GHz (dB)	DC–12 GHz (dB)	12–26 GHz (dB)	26–33 GHz (dB)	33–40 GHz (dB)
ATN3590-00	0	0.25	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-01	1	±0.20	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-02	2	±0.20	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-03	3	±0.20	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-04	4	±0.20	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-05	5	±0.20	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-06	6	±0.40	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-07	7	±0.40	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-08	8	±0.40	±0.15	±0.15	±0.20	±0.20	28	24	20	16
ATN3590-09	9	±0.40	±0.20	±0.20	±0.25	±0.30	28	24	20	16
ATN3590-10	10	±0.40	±0.20	±0.20	±0.25	±0.50	28	24	20	16
ATN3590-12	12	±0.40	±0.20	±0.20	±0.30	±0.50	28	24	20	16
ATN3590-15	15	±0.40	±0.20	±0.20	±0.50	±0.75	28	24	20	16
ATN3590-20	20	±1.0	±0.20	±0.20	±0.75	±1.0	28	24	20	16
ATN3590-30	30	±1.0	±0.20	±0.25	±0.75	±2.5	28	24	20	16

Power Dividers / Combiners

Skyworks Solutions offers a broad selection of monolithic 2-way and 4-way power divider/combiners in surface mount packages for diverse markets such as WLAN, wireless infrastructure, automotive, test and measurement, energy management, and other RF/microwave applications. These divider/combiners are utilized to equally split signals into in-phase signals as found in balanced signal chains, local oscillator distribution networks, and more. Conversely, they can also be used to combine two or four signals while providing excellent isolation between the individual signal sources. Their low insertion loss, excellent phase, and amplitude balance produce outstanding system performance. The solutions we offer leverage the extensive design knowledge, technical leadership, manufacturing expertise, and superior quality of Skyworks.

Power Dividers—2 Way

Part Number	Frequency (GHz)	Typ. Insertion Loss Less 3 dB Split	Typ. Isolation (dB)	Typ. Input VSWR	Typ. Output VSWR	Amplitude Balance (dB)	Typ. Phase Balance (Deg.)	Total Max. Power w/2.0:1 All Ports	Package (mm)
PD09-73LF	0.81–0.96	0.40	25	1.2:1	1.3:1	±0.1	±1	1.5 W	SOT-23 6L 2.8 x 2.9 x 1.18
PD15-73LF	1.42–1.66	0.40	23	1.2:1	1.2:1	±0.1	±1	1.5 W	SOT-23 6L 2.8 x 2.9 x 1.18
PD16-73LF	1.42–1.66	0.40	23	1.2:1	1.2:1	±0.1	±1	1.5 W	SOT-23 6L 2.8 x 2.9 x 1.18
PD18-73LF	1.71–1.99	0.40	23	1.3:1	1.2:1	±0.1	±1	1.5 W	SOT-23 6L 2.8 x 2.9 x 1.18
PD19-73LF	1.71–1.99	0.55	25	1.3:1	1.2:1	±0.1	±1	1.5 W	SOT-23 6L 2.8 x 2.9 x 1.18
PD22-73LF	2.10–2.30	0.55	18	1.5:1	1.1:1	±0.1	±1	1.5 W	SOT-23 6L 2.8 x 2.9 x 1.18
SKY16406-381LF	2.20–2.80	0.30	28	1.2:1	1.2:1	±0.1	±1	2.0 W	6-pin DFN, 1.5 x 2.0 x 0.75

Power Dividers / Combiners

Power Dividers—4 Way

Part Number	Frequency (GHz)	Typ. Insertion Loss Less 6 dB Split	Typ. Isolation (dB)	Typ. Input VSWR	Typ. Output VSWR	Amplitude Balance (dB)	Typ. Phase Balance (Deg.)	Total Max. Power w/2.0:1 All Ports	Package (mm)
PD4W09-12LF	0.81–0.96	1.3	23	1.2:1	1.2:1	±0.4	±6	1.5 W	SOIC 8L 6 x 4.9 x 1.6
PD4W09-59LF	0.81–0.96	1.3	23	1.2:1	1.2:1	±0.4	±6	1.5 W	MSOP 8L 4.9 x 3 x 0.96
PD4W18-12LF	1.71–1.99	0.7	25	1.6:1	1.2:1	±0.3	±5	1.5 W	SOIC 8L 6 x 4.9 x 1.6
PD4W18-59LF	1.71–1.99	0.7	25	1.3:1	1.3:1	±0.3	±5	1.5 W	MSOP 8L 4.9 x 3 x 0.96

Phase Shifter

Part Number	Frequency (MHz)	Description	Max. Insertion Loss (dB)	Min. Phase Shift (Deg.)	Min. IP3 (dBm)	Control Voltage Range (V)	Package (mm)
PS088-315	700–1100	Voltage Controlled Phase Shifter	2.8	85	33	0–12	MCM 4.9 x 3.2 x 1.0

SWITCHES

Skyworks Solutions is pleased to offer a broad selection of GaAs switches for diverse markets such as WLAN, handset, wireless infrastructure, SatCom (LNB/DBS–CATV), automotive, test & measurement, energy management, and other microwave applications. Skyworks' switches are available in many different configurations including broadband, high power, high isolation, low insertion loss, reflective, and non-reflective. Our lead (Pb)-free, RoHS-compliant and Green™ high quality products are available for applications including antenna transmit/receive (T/R) switches for use in cellular handsets and WLAN systems, synthesizer switches for infrastructure needs, and many other high volume, high performance requirements. These switch product solutions leverage the extensive design knowledge, technical leadership, manufacturing expertise, and superior quality of Skyworks.

Select General Purpose RF Switches

Select Switches Available from Stock for Prototype or High Volume Production

Our select switches portfolio includes the most popular, broad-market GaAs SPST, SPDT, SP3T, SP4T, and DPDT products readily available to ship from stock. These devices provide excellent performance and value while utilizing Skyworks' proven technology for high reliability. The select switches are used in a wide variety of systems, including cellular telephone handsets and base stations, WLAN front-end modules, RF microwave test instruments, satellite TV receivers, and more. All pHEMT switches are broadband by design and require DC blocking capacitors for positive voltage operation. Select switches have been fully characterized for low-frequency applications, covering the UHF and VHF ranges.

Tx/Rx WLAN/Bluetooth® (802.11a/b/g/n)

Part Number	Description	Frequency (GHz)	Insertion Loss (dB)	Isolation (dB)	Input IP3 (dBm)	Input $P_{1\ dB}$ (dBm)
AS179-92LF	SPDT (R)	0.02–3.0	0.40	23.0	43	30
SKY13351-378LF	SPDT (R)	0.02–6.0	0.35	24.0	50	30 (0.5 dB)
AS193-73LF	SPDT (R)	0.10–2.5	0.55	17.0	55	37
SKY13348-374LF	SPDT (A)	0.50–6.0	0.6–1.0	27–24	57	37
SKY13370-374LF	SPDT (A)	0.50–6.0	0.7–1.15	31–24	55	39
SKY13317-373LF	SP3T (R)	0.02–6.0	0.60	25.0	50	29
SKY13385-460LF	SP3T (R)	0.10–3.5	0.5–0.6	39–25	57	33
SKY13322-375LF	SP4T (R)	0.02–6.0	0.60	26.0	51	30
SKY13318-321LF	DPDT (R)	0.10–6.0	0.95	22.0	57	34
SKY13355-374LF	DPDT (R)	0.10–6.0	0.60	23.5	55	33
SKY13381-374LF	DPDT (R)	0.10–6.0	0.60	22.0	62	38

Select General Purpose RF Switches

Select Switches Available from Stock for Prototype or High Volume Production

Smart Energy, Broadband, Cellular Infrastructure, Test & Measurement, Military (COTS)

Part Number	Description	Frequency (GHz)	Insertion Loss (dB)	Isolation (dB)	Input IP3 (dBm)	Input $P_{1\ dB}$ (dBm)
SKY13270-92LF	SPDT (R)	0.02–2.5	0.3–0.55	30–17	56	38
SKY13286-359LF	SPDT (A)	0.10–6.0	0.8–1.50	62–42	46	30
SKY13298-360LF	SPDT (R)	3.00–8.0	0.7–0.90	25–22	47	26
AS204-80LF	SP4T (A)	LF–3.5	0.4–0.90	45–25	40	26

DBS/LNB 4 x 2 Matrix Switch

Part Number	Description	Frequency (GHz)	Insertion Loss (dB)	Isolation (dB)	Input $P_{1\ dB}$ (dBm)
SKY13272-340LF	LNB/DBS (A)	0.25–2.15	7.5–8.5	40–31	15

UHF/VHF (48–1000 MHz)

Part Number	Description	Insertion Loss f = 48 MHz (dB)	Isolation f = 48 MHz (dB)	Input $P_{1\ dB}$ f = 48 MHz (dBm)	Insertion Loss f = 1 GHz (dB)	Isolation f = 1 GHz (dB)	Input $P_{1\ dB}$ f = 1 GHz (dBm)
AS179-92LF	SPDT (R)	0.15	56	29	0.30	25	34
SKY13351-378LF	SPDT (R)	0.20	55	28	0.35	24	30 (0.5 dB)
SKY13299-321LF	SPDT (R)	0.30	42	38.5 (0.1 dB)	0.40	29	38.5 (0.1 dB)
SKY13290-313LF	SPDT (R)	0.30	44	39.8 (0.8 dB)	0.45	23	40.5 (0.1 dB)
SKY13317-373LF	SP3T (R)	0.30	49	26	0.45	27	29
SKY13322-375LF	SP4T (R)	0.30	49	26	0.60	28	30
SKY14151-350LF	SP4T (R)	0.30	54	41	0.45	24	38 (0.1 dB)

SPST RF Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
SKY13316-12LF	SPST (A)	LF–2.5	0.5–0.75	59–30	46	24	SOIC 8L 6 x 4.9 x 1.6
SKY13347-360LF	SPST (A)	0.5–3.0	0.6–0.80	45–30	40	31	DFN 8L 2 x 2 x 0.75

SPDT (SP2T) RF Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
AS177-86LF	SPDT (R)	LF–3.0	0.70–0.90	55–40	41	21	MSOP 10L 2 x 2 x 0.9
AS179-000	SPDT (R)	0.2–3.0	0.30–0.35	25–22	48	30	Chip
AS179-92LF	SPDT (R)	0.02–3.0	0.30–0.40	25–23	43	30	SC-88 6L 2.1 x 2 x 0.95
AS183-92LF	SPDT (R)	LF–2.5	0.30–0.55	20–13	48	30	SC-88 6L 2.1 x 2 x 0.95
AS186-302LF	SPDT (A)	LF–4.0	0.80–1.00	55–40	27	17	MSOP 8L 4.9 x 3 x 0.96
AS188-92LF	SPDT (R)	LF–2.0	0.35–0.55	26–17	50	33	SC-88 6L 2.1 x 2 x 0.95
AS193-000	SPDT (R)	0.1–2.5	0.30–0.55	30–17	55	37	Chip
AS193-73LF	SPDT (R)	0.1–2.5	0.30–0.55	30–17	55	37	SOT-23 6L 2.8 x 2.9 x 1.18
AS211-334	SPDT (R)	0.1–4.0	0.30–0.60	26–22	50	34	LGA-6 1.5 x 1.2 x 0.8
AS213-92LF	SPDT (R)	0.1–3.0	0.30–0.50	27–19	40	27	SC-88 6L 2.1 x 2 x 0.95
AS215-92LF	SPDT (R)	0.5–3.0	0.50–0.75	28–20	40	20	SC-88 6L 2.1 x 2 x 0.95
AS222-92LF	SPDT (R)	0.1–3.0	0.35–0.50	27–18	44	20	SC-88 6L 2.1 x 2 x 0.95
AS225-313LF	SPDT (R)	0.1–6.0	0.50–0.60	21–20	52	30	QFN 6L 2 x 3 x 1
SKY13268-344LF	SPDT (R)	0.3–3.0	0.30–0.40	25–23	43	30	SOT-666 1.65 x 1.65 x 0.6
SKY13270-92LF	SPDT (R)	0.02–2.5	0.30–0.55	30–17	56	38	SC-88 6L 2.1 x 2 x 0.95
SKY13274-349LF	SPDT (A/R)	0.5–6.0	0.50–0.80	25–17	46	25	QFN 8L 2 x 2 x 0.9
SKY13276-334	SPDT (R)	0.1–6.0	0.60–0.70	21–20	53	30	LGA 6L 1.5 x 1.2 x 0.8
SKY13278-313LF	SPDT (R)	0.1–2.5	0.40–0.55	32–18	62	40	QFN 6L 2 x 3 x 1
SKY13286-359LF	SPDT (A)	0.1–6.0	0.80–1.50	62–42	46	30	QFN 16L 4 x 4 x 0.9
SKY13290-000	SPDT (R)	0.02– 2.5	0.40–0.55	26–18	63	40	Chip
SKY13290-099	SPDT (R)	0.02–2.5	0.40–0.55	26–18	63	40	Chip on Film Frame
SKY13290-313LF	SPDT (R)	0.02–2.5	0.40–0.55	26–18	63	40	QFN 6L 2 x 3 x 1
SKY13298-360LF	SPDT (R)	3.0–8.0	0.70–0.90	25–22	47	26	QFN 8L 2 x 2 x 0.9
SKY13299-321LF	SPDT (R)	0.02–5.0	0.30–0.75	30–22	57	39	QFN 12L 3 x 3 x 0.75
SKY13306-313LF	SPDT (R)	0.1–6.0	0.40–0.55	26–18	53	35	QFN 6L 2 x 3 x 1
SKY13314-374LF	SPDT (R)	0.1–6.0	0.45–0.60	22–21	47	31	QFN 6L 1.5 x 1.5 x 0.45
SKY13319-374LF	SPDT (R)	0.1–3.0	0.35–0.60	25–17	60	36	QFN 6L 1.5 x 1.5 x 0.45
SKY13320-374LF	SPDT (R)	0.1–6.0	0.40–0.60	28–24	52	34	QFN 6L 1.5 x 1.5 x 0.45
SKY13321-360LF	SPDT (R)	0.1–3.0	0.40–0.60	26–16	62	39	QFN 8L 2 x 2 x 0.9
SKY13323-378LF	SPDT (R)	0.1–3.0	0.20–0.50	27–24	50	27	QFN 6L 1 x 1 x 0.45
SKY13330-397LF	SPDT (R)	0.1–6.0	0.30–0.55	35–16	55	39	QFN 12L 2 x 2 x 0.55
SKY13335-381LF	SPDT (R)	0.1–6.0	0.20–0.60	27–24	48	29	QFN 6L 1.5 x 2 x 0.45

SPDT (SP2T) RF Switches (Continued)

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
SKY13344-378LF	SPDT (R)	2.0–6.0	0.35–0.60	27–22	50	27	QFN 6L 1 x 1 x 0.45
SKY13348-374LF	SPDT (A)	0.5–6.0	0.60–1.00	27–24	57	37	DFN 6L 1.5 x 1.5 x 0.45
SKY13350-385LF	SPDT (R)	0.8–6.0	0.35–0.60	18–20	50	33	QFN 6L 1 x 1 x 0.45
SKY13351-378LF	SPDT (R)	0.02–6.0	0.35–0.50	24–26	50	30	QFN 6L 1 x 1 x 0.45
SKY13366-378LF	SPDT (R)	2.0–6.0	0.35–0.50	24–26	50	30	QFN 6L 1 x 1 x 0.45
SKY13370-374LF	SPDT (A)	0.5–6.0	0.70–1.15	31–24	55	39	DFN 6L 1.5 x 1.5 x 0.45
SKY13372-467LF	SP2T (A)	0.1–6.0	0.80–1.70	42–65	45	26	QFN 16L 4 x 4 x 0.9
SKY13374-397LF	SPDT (R)	0.03–6.0	0.35–0.80	22–34	68	39	QFN 12L 2 x 2 x 0.55
SKY13377-313LF	SPDT (A)	0.5–6.0	0.70–1.20	31–24	62	39	DFN 6L 2 x 3 x 0.9
SKY13405-490LF	SPDT (R)	1.0–3.0	0.35–0.50	37–27	68	38	QFN 12L 2 x 2 x 0.55
SKY13431-374LF	SPDT (A)	0.5–6.0	0.50–0.80	25–20	58	36	DFN 6L 1.5 x 1.5 x 0.45
SKY13446-374LF	SPDT (R)	0.1–6.0	0.50-0.80	38-30	50	33	QFN 6L 1.5 x 1.5 x 0.45
SKY13448-001	SPDT (R)	0.1–3.0	0.35–0.50	25–32	IMD3, -110	40	8-bump WLCSP 1.1 x 1.1 x 0.36
SKY13453-385LF	SPDT (R)	0.01–6.0	0.40–0.70	27–15	57	33	QFN 6L 1 x 1 x 0.45
SKY13472-460LF	SPDT (R)	0.1–6.0	0.35–0.80	22–40	70	39	QFN 12L 2 x 2 x 0.55
SKYA21001	SPDT (R)	0.02–3.0	0.30–0.40	23–25	43	30	SC70 2 x 1.25 x 0.9
SKYA21012	SPDT (R)	0.02–6.0	0.35–0.50	24–26	50	30	DFN 6L 1 x 1 x 0.5
SKYA21013	SPDT (R)	0.1–6.0	0.35–0.80	22–34	68	39	QFN 12L 2 x 2 x 0.55

High Power SPDT and SPST PIN Diode Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Max. CW Power (dBm)	Package (mm)
SKY12207-306LF	SPDT (R)	0.9–4.0	0.3–0.6	28–41	78	50	QFN 16L 4 x 4 x 0.9
SKY12207-478LF	SPDT (R)	0.9–4.0	0.3–0.4	30–42	78	50	QFN 16L 4 x 4 x 1.5
SKY12208-306LF	SPDT (R)	0.02–2.7	0.2–0.5	33–45	70	50	QFN 16L 4 x 4 x 0.9
SKY12208-478LF	SPDT (R)	0.02–2.7	0.2–0.5	33–50	70	50	QFN 16L 4 x 4 x 1.5
SKY12209-478LF	SPDT (R)	0.9–4.0	0.4–0.6	35–46	76	40	QFN 16L 4 x 4 x 1.5
SKY12210-478LF	SPDT (R)	0.9–4.0	0.3–0.6	25–50	78	100	QFN 16L 4 x 4 x 1.5
SKY12211-478LF	SPDT (R)	0.05–2.7	0.2–0.5	32–49	73	40	QFN 16L 4 x 4 x 1.5
SKY12212-478LF	SPDT (R)	0.05–2.7	0.2–0.5	29–50	67	100	QFN 16L 4 x 4 x 1.5
SKY12213-478LF	SPST (R)	0.5–6.0	0.5–1.0	20–34	72	150	QFN 16L 4 x 4 x 1.5
SKY12215-478LF	SPDT (R)	0.9–4.0	0.3–0.5	31–43	71	125	QFN 16L 4 x 4 x 1.5

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SP3T RF Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
AS227-000	SP3T (R)	0.2–2.0	0.45–0.70	32–20	63	37	Chip
AS227-099LF	SP3T (R)	0.2–2.0	0.45–0.70	32–20	63	37	Wafer
SKY13309-370LF	SP3T (R)	0.1–3.0	0.50–0.60	26–25	45	29	QFN 8L 2 x 2 x 0.55
SKY13317-373LF	SP3T (R)	0.02–6.0	0.40–0.80	27–55	50	29	QFN 8L 1.5 x 1.5 x 0.45
SKY13345-368LF	SP3T (R)	0.1–3.5	0.50–0.60	39–25	55	34	QFN 12L 2 x 2 x 0.5
SKY13346-368LF	SP3T (R)	0.5–2.5	0.40–0.50	28–25	47	30	QFN 8L 2 x 2 x 0.9
SKY13373-460LF	SP3T (R)	0.1–3.5	0.35–0.50	40–30	55	39	QFN 12L 2 x 2 x 0.55
SKY13385-460LF	SP3T (R)	0.1–3.5	0.50–0.60	39–25	57	33	QFN 12L 2 x 2 x 0.5
SKY13386-000	SP3T (R)	0.1–4.0	0.50–0.80	30–22	54	30	Bumped Die–200 µm Pitch
SKY13398-000	SP3T (R)	0.02–6.0	0.55–1.50	27–15	50	33	Die 0.65 x 0.45 x 0.127
SKY13408-465LF	SP3T (A)	1.0–6.0	0.80–1.30	24–28	54	34	QFN 12L 2 x 2 x 0.55
SKYA21002	SP3T (R)	0.1–3.0	0.50–0.60	25	45	29	8-pin DFN 2 x 2 x 0.55

SP4T RF Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
AS192-000	SP4T (R)	0.10–2.5	0.90–1.10	34–21	55	37	Chip
AS204-80LF	SP4T (A)	LF–3.5	0.40–0.90	45–25	40	26	SSOP 16L 6 x 4.9 x 1.6
AS221-000	SP4T (R)	0.10-2.5	0.60–1.10	34–22	55	38	Chip
AS221-306LF	SP4T (R)	0.10–2.5	0.60–1.10	34–22	55	38	QFN 16L 4 x 4 x 0.9
SKY13296-340LF	SP4T (A)	0.02–2.5	0.40–0.70	40–26	40	18	QFN 20L 4 x 4 x 0.75
SKY13322-375LF	SP4T (R)	0.02–6.0	0.45–2.00	28–18	51	30	QFN 10L 2 x 3 x 0.45
SKY13380-350LF	SP4T (R)	0.02–3.0	0.50–0.60	28–21	65	39	QFN 12L 3 x 3 x 0.75
SKY13384-350LF	SP4T (A)	0.02–4.0	0.60–1.20	50–36	51	30	QFN 16L 3 x 3 x 0.75
SKY13388-465LF	SP4T (R)	0.10–2.7	0.50–0.65	31–21	65	36	QFN 12L 3 x 3 x 0.55
SKY13392-359LF	SP4T (A)	0.02-4.0	0.90–1.50	60–46	47	30	QFN 16L 4 x 4 x 0.9
SKY14151-350LF	SP4T (R)	0.02–2.5	0.40–0.50	29–23	60	39	QFN 16L 3 x 3 x 0.75

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DPDT Antenna Diversity Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
AS172-73LF	DPDT (R)	LF–2.0	0.30–0.95	25–13	50	34	SOT 6L 2.8 x 2.9 x 1.18
AS218-000	DPDT (R)	0.1–6.0	1.60–1.40	19	54	33	Chip
AS236-321LF	DPDT (R)	LF–6.0	0.95–1.15	22–15	56	34	QFN 12L 3 x 3 x 0.75
SKY13267-321LF	DPDT (R)	LF–6.0	0.70–0.90	32–20	49	30	QFN 12L 3 x 3 x 0.75
SKY13318-321LF	DPDT (R)	0.1–6.0	0.95–1.15	22–15	57	34	QFN 12L 3 x 3 x 0.75
SKY13355-374LF	DPDT (R)	0.1–6.0	0.50–0.95	31–15	55	33	DFN 6L 1.5 x 1.5 x 0.5
SKY13381-374LF	DPDT (R)	0.1–6.0	0.50–1.40	31–14	62	38	DFN 6L 1.5 x 1.5 x 0.5
SKY13395-397LF	DPDT (R)	0.1–4.0	0.50–1.00	27–17	62	38	QFN 12L 2 x 2 x 0.5
SKY13396-397LF	DPDT (R)	0.1–3.0	0.30–0.50	31–18	58	38	QFN-12L 2 x 2 x 0.55
SKY13411-374LF	DPDT (R)	0.1–6.0	0.50–0.90	26–14	50	31	DFN 6L 1.5 x 1.5 x 0.5
SKY13438-374LF	DPDT (R)	0.1–6.0	0.5–1.2	34–25	54	31	DFN 6L 1.5 x 1.5 x 0.5

Ultra Linear (SVLTE) Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
SKY13405-490LF	SPDT (R)	0.1–3.0	0.35–0.50	37–27	68	38	QFN 12L 2 x 2 x 0.55

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Dual Pole (xT) RF Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
SKY13354-368LF	DPxDT	0.1–3.0	0.4–0.55	29–32	55	28	QFN 12L 2 x 2 x 0.55
SKY13399-468LF	DPx3T	0.7–2.7	0.3–0.45	27–21	55	37	QFN 18L 2 x 2 x 0.45
SKY13421-486LF	DPxDT	0.1–3.0	0.3–0.45	26–18	55	24	QFN 14L 1.6 x 1.6 x 0.55

High Throw Count (>4T) Switches / Antenna Switch Modules (ASMs) (GPIO and MIPI® RFFE)

High Throw Count Switches (Band Distribution, Linear Tx / Rx, Rx Diversity, General Purpose Signal Routing)

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
AS195-306LF	SP5T (R)	0.1–2.0	0.5–1.00	35–23	55	37.0	QFN 16L 4 x 4 x 0.9
SKY13358-388LF	SP5T (R)	0.1–3.0	0.5–1.00	30–21	–	37.5	DFN 16L 2.3 x 2.3 x 0.45
SKY13397-388LF	DP5T (R)	0.1–3.0	0.35	29	–	37.0	QFN 16L 2.3 x 2.3 x 0.05
SKY13414-485LF	SP4T (R)	0.1–3.0	0.35–0.55	35–25	69	39.0	QFN 14L 2 x 2 x 0.5
SKY13415-485LF	SP5T (R)	0.1–3.0	0.35–0.55	35–25	69	39.0	QFN 14L 2 x 2 x 0.5
SKY13416-485LF	SP6T (R)	0.1–3.0	0.35–0.55	35–25	69	39.0	QFN 14L 2 x 2 x 0.5
SKY13417-485LF	SP7T (R)	0.1–3.0	0.35–0.65	35–20	69	38.0	QFN 14L 2 x 2 x 0.5
SKY13418-485LF	SP8T (R)	0.1–3.0	0.35–0.65	35–20	69	38.0	QFN 14L 2 x 2 x 0.5
SKY13434-002	DP5T (R)	0.1–6.0	0.6–1.00	24–30	28–30	–	Wire Bond Die 0.5 x 0.875 x 0.127
SKY13442-553	SP10T (R)	0.4–2.7	0.35–0.90	45–27	–	39	20-pin QFN 2.5 x 2.5 x 0.75
SKY13443-11	SP10T (R)	0.4–2.7	0.35–0.90	45–27	–	39	20-pin MCM 3.2 x 3.2 x 0.8
SKY13445-000	DP5T (R)	2.4–5.9	0.7–1.1	24–20	–	31	Wire bond die 0.806 x 0.496 x 0.127
SKY13445-368LF	DP5T (R)	2.4–5.9	0.7–1.1	24–20	–	31	12-pin QFN 2 x 2 x 0.55
SKY13473-569LF	SP10T (R)	0.4–2.7	0.45–0.8	37–27	–	–	20-pin QFN 2.4 x 2.4 x 0.75
SKY13473-12-569LF	SP10T (R)	0.4–2.7	0.45–0.8	37–27	–	–	20-pin QFN 2.4 x 2.4 x 0.75
SKY13477-001A	3P4T (R)	2.3–2.7	0.35–0.66	30	–	–	WLCSP 15-bump 1.942 x 1.142 x 0.420
SKY13526-485LF	SP6T (R)	0.4–2.7	0.4–0.7	34–23	–	–	14-pin QFN 2 x 2 x 0.55

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High Throw Count (>4T) Switches / Antenna Switch Modules (ASMs)

Antenna Switch Modules

Skyworks Solutions is pleased to offer a broad selection of high throw count antenna switch modules (ASMs) leveraging both GaAs and SOI technology to respond to all cellular standards specific requirements (GSM, GPRS, EDGE, WCDMA, TD-SCDMA, and LTE). Using either multi-chip module (MCM) or quad flat no-lead (QFN) packaging allows the integration of filtering functions such as Tx harmonic filters and ESD protection, and respond to a wide range of cellular front-end switching requirements such as antenna switching, Rx diversity switching, or WCDMA band mode switching. Any cellular RF front-end that requires high performance, reduced current consumption, and low insertion loss in a compact footprint would benefit from our portfolio of antenna switch module solutions.

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IMD3 (dBm)	Package (mm)
SKY13362-389LF	SP10T (R)	0.4–2.7	0.5–1.35	21–38	-105	QFN 26L 3 x 3.8 x 0.85
SKY13364-389LF	SP10T (R)	0.4–2.7	0.5–1.10	30	-105	QFN 26L 3 x 3.8 x 0.85
SKY13404-466LF	SP10T (R)	0.4–2.7	0.5–1.35	45–24	-110	QFN 26L 2.6 x 3.4 x 0.55
SKY13406-389LF	SP10T (R)	0.4–2.7	0.5–1.35	45–24	-110	QFN 26L 2.6 x 3.4 x 0.55
SKY13412-487LF	SP12T (R)	0.4–2.7	0.4–1.10	35–23	-110	QFN 30L 3 x 3.8 x 0.75
SKY13413-488LF	SP12T (R)	0.4–2.7	0.4–1.10	35–23	–	26-pin QFN 2.6 x 3.4 x 0.55
SKY13437-11	SP12T (R)	0.4–2.7	0.55–1.35	22–44.5	–	22-pin MCM 3.2 x 2.5 x 0.8
SKY13441	SP10T (R)	0.4–2.7	0.5–1.35	45–31	–	20-pin MCM 3.2 x 2.5 x 0.8
SKY13454	SP12T (R)	0.4–2.7	0.5–1.20	23–43	–	22-pin MCM 3.2 x 2.5 x 0.8
SKY13488	SP12T (R)	0.4–3.8	0.7-1.25	35–20	–	20-pin MCM 2.5 x 2.5 x 0.8
SKY13491-21	SP14T (R)	0.4–3.8	0.6-1.25	35–20	–	22-pin MCM 2.5 x 2.9 x 0.8
SKY13492	SP16T	0.7–2.7	TBD	TBD	TBD	22-pin MCM 2.5 x 3.3 x 0.8
SKY13498	SP10T (R)	0.4–3.8	0.7-1.25	35–20	–	20-pin MCM 2.5 x 2.5 x 0.8
SKY18106-455LF	SP8T (R)	0.4–2.2	0.4–0.80	25	-102	QFN 26L 3 x 3.8 x 0.75
SKY18108-11	SP9T (R)	0.4–2.7	0.8–0.90	>35	-110	20-pin MCM 3.2 x 3.5 x 0.9
SKY18120-11	SP9T (R)	0.4–2.7	0.5–11.00	24–44	-105	20-pin MCM 2.5 x 2.5 x 0.9

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
SKY13455-31	SP12T (R)	0.4-2.7	0.6-1.25	22-43	–	–	22-pin MCM 3.2 x 2.5 x 0.8

NEW New products (indicated in blue, bold) are continually being introduced at Skyworks. For the latest information, please visit the new products section of our Web site at www.skyworksinc.com.

Carrier Aggregation Switches

Part Number	Description	Main or Diversity Function	Number of Low Band Ports	Number of High Band Ports	DC Control	Package (mm)
SKY13456-11	SP7T + SP7T Carrier Aggregation Switch	Main	7	7	MIPI®	26-pin MCM 2.8 x 3.2 x 0.8
SKY13484	SP5T + SP7T Carrier Aggregation Switch	Diversity	5	7	MIPI®	22-pin MCM 2.5 x 2.9 x 0.8
SKY13530	SP6T + SP4T Carrier Aggregation Switch	Main	4	6	dMIPI®	
SKY13532	SP8T + SP6T Carrier Aggregation Switch	Main	6	8	dMIPI®	
SKY13535	SP12T + SP9T Carrier Aggregation Switch	Main	9	12	dMIPI®	

Antenna Tuning Switches

Part Number	Configuration	Number of RF Ports	Peak RF Voltage (V)	R_{ON} (Ω)	C_{OFF} (fF)	Capacitance Range (pF)	DC Control	Package (mm)
SKY19001-001	SPST	2	40	1	400	N/A	GPIO	10-bump WLCSP 1.2 x 1.6 x 0.606

LNB / DBS Matrix Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. $IP_{1\ dB}$ (dBm)	Package (mm)
SKY13272-340LF	LNB/DBS (A)	0.25–2.15	7.5–8.5	40–31	15	QFN 20L 4 x 4 x 0.75
SKY13292-365LF	LNB/DBS (A)	0.25–2.15	7.5–9.0	40–30	15	QFN 20L 4 x 4 x 0.75
SKY13293-340LF	LNB/DBS (A)	0.25–2.15	8.0–9.0	57–45	15	QFN 20L 4 x 4 x 0.75
SKY13327-365LF	LNB/DBS (A)	0.25–2.15	8.0–9.0	37–41	15	QFN 20L 4 x 4 x 0.75
SKY13369-365LF	LNB/DBS (A)	0.25–2.15	8.0–9.0	37–41	15	QFN 20L 4 x 4 x 0.75
SKY13410-365LF	LNB/DBS (A)	0.25–2.15	7.5–9.0	30–40	12	QFN 20L 4 x 4 x 0.75
SKY13419-365LF	LNB/DBS (A)	0.25–2.15	7.1–8.5	43–38	12	QFN 20L 4 x 4 x 0.75

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TECHNICAL CERAMICS

Trans-Tech
Ceramics and Advanced Materials

*Ceramic Coaxial Resonators**

Skyworks Solutions, through Trans-Tech, its industry-leading ceramic products division, designs and manufactures a complete line of RF and microwave components for commercial markets. With over 50 years of experience, we offer a complete line of high quality, low cost ceramic-based components for a number of RF and microwave markets including wireless communications, infrastructure, military, cable television, broadband access, circuit miniaturization, technical powder, and ingots. Our tightly controlled processes, from raw materials to forming, firing, finishing, assembly and test, produce the highest quality and the most consistently reproducible components available today for both low and high volume requirements. Our product portfolio includes dielectric resonators and coaxial transmission line elements for DRO and VCO applications, ceramic band pass filters, ferrite, and garnet material for circulators/isolators.

Skyworks' Green™ products are compliant to all applicable materials legislation and are halogen-free. For additional information, refer to Skyworks' Definition of Green™, document number SQ04-0074.

Recommended Frequencies 1000 Series (ε_r = 10.5 ± 0.5, T_F = 0 ± 10)

Type	Profile	Recommended Range f (MHz)	Nominal Length (in.) ± 0.030 in.	Nominal Length Range (in.)	Characteristic Impedance (Ω)
λ/4 Quarter Wave Length	HP	1150–800	L = 911/f_0 (MHz)	0.506–0.792	25.3
	EP	1150–2500		0.364–0.792	22.5
	SP	1150–3100		0.294–0.792	18.3
	LS	1150–4600		0.198–0.792	18.4
	LP	1150–4100		0.222–0.792	27.4
	MP	1150–5100		0.179–0.792	25.7
	SM	1150–5100		0.179–0.792	18.4
λ/2 Half Wave Length	HP	2300–3400	L = 1821/f_0 (MHz)	0.536–0.792	25.3
	EP	2300–5000		0.364–0.792	22.5
	SP	2300–6000		0.304–0.792	18.3
	LS	2300–6000		0.304–0.792	18.4
	LP	2300–6000		0.304–0.792	27.4
	MP	2300–6000		0.304–0.792	25.7
	SM	2300–6000		0.304–0.792	18.4

Recommended Frequencies 2000 Series (ε_r = 20.6 ± 1, T_F = 0 ±10)

Type	Profile	Recommended Range f (MHz)	Nominal Length (in.) ± 0.030 in.	Nominal Length Range (in.)	Characteristic Impedance (Ω)
λ/4 Quarter Wave Length	HP	800–1200	L = 650/f_0 (MHz)	0.542–0.813	18.1
	EP	800–1700		0.382–0.813	16.1
	SP	800–2200		0.296–0.813	13.1
	LS	800–3200		0.203–0.813	13.1
	LP	800–2900		0.224–0.813	19.6
	MP	800–3600		0.181–0.813	18.4
	SM	800–3600		0.181–0.813	13.1
λ/2 Half Wave Length	HP	1600–2500	L = 1300/f_0 (MHz)	0.520–0.813	18.1
	EP	1600–3500		0.372–0.813	16.1
	SP	1600–4500		0.289–0.813	13.1
	LS	1600–6000		0.217–0.813	13.1
	LP	1600–6000		0.217–0.813	19.6
	MP	1600–6000		0.217–0.813	18.4
	SM	1600–6000		0.217–0.813	13.1

*These products are produced by Trans-Tech (a wholly owned subsidiary of Skyworks Solutions, Inc.)

Ceramic Coaxial Resonators

Recommended Frequencies 8800 Series (ε_r = 39 ± 1.5, T_F = 4 ± 2)

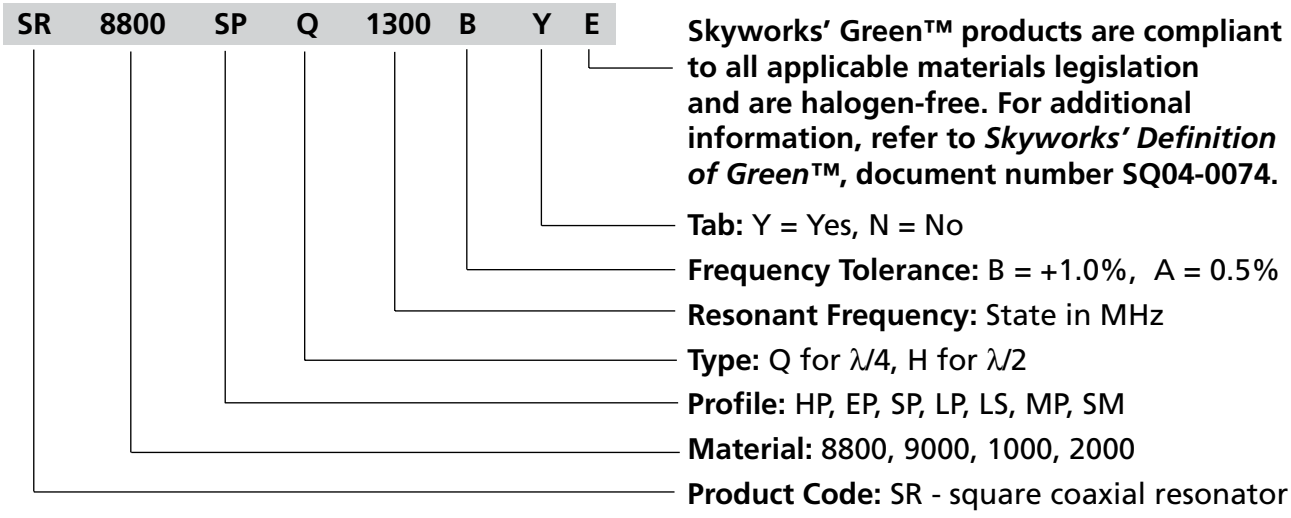
Type	Profile	Recommended Range f (MHz)	Nominal Length (in.) ± 0.030 in.	Nominal Length Range (in.)	Characteristic Impedance (Ω)
λ/4 Quarter Wave Length	HP	600–900	L = 472/f_0 (MHz)	0.525–0.787	13.1
	EP	600–1200		0.394–0.787	11.7
	SP	600–1600		0.295–0.787	9.5
	LS	600–2300		0.205–0.787	9.5
	LP	600–2100		0.225–0.787	14.2
	MP	600–2600		0.182–0.787	13.3
	SM	600–2600		0.182–0.787	9.5
λ/2 Half Wave Length	HP	1200–1900	L = 945/f_0 (MHz)	0.497–0.787	13.1
	EP	1200–2500		0.378–0.787	11.7
	SP	1200–3200		0.295–0.787	9.5
	LS	1200–4700		0.201–0.787	9.5
	LP	1200–4300		0.220–0.787	14.2
	MP	1200–5200		0.182–0.787	13.3
	SM	1200–5200		0.182–0.787	9.5

Recommended Frequencies 9000 Series (ε_r = 90 ± 3, T_F = 0 ± 10)

Type	Profile	Recommended Range f (MHz)	Nominal Length (in.) ± 0.030 in.	Nominal Length Range (in.)	Characteristic Impedance (Ω)
λ/4 Quarter Wave Length	HP	400–600	L = 311/f_0 (MHz)	0.518–0.778	8.6
	EP	300–800		0.389–1.037	7.7
	SP	300–1000		0.311–1.037	6.3
	LS	300–1500		0.207–1.037	6.3
	LP	300–1400		0.222–1.037	9.4
	MP	400–1700		0.183–0.778	8.8
	SM	400–1700		0.183–0.778	6.3
λ/2 Half Wave Length	HP	800–1200	L = 622/f_0 (MHz)	0.518–0.778	8.6
	EP	800–1700		0.366–0.778	7.7
	SP	800–2100		0.296–0.778	6.3
	LS	800–3100		0.201–0.778	6.3
	LP	800–2800		0.222–0.778	9.4
	MP	800–3400		0.183–0.778	8.8
	SM	800–3400		0.183–0.778	6.3

Coaxial Resonator Order Information

An Order Example



*Ceramic Coaxial Inductors**

Skyworks' coaxial inductors are most frequently used in the resonant circuit of voltage-controlled oscillators (VCOs), where a varactor provides the tuning capability. The designer is usually confronted with trade-offs between high Q for best phase noise and component size versus circuit board real estate. An algorithm for selecting the correct Skyworks' part follows. In addition, Skyworks' COAX Program can provide valuable assistance for determining the correct Skyworks part. Application notes and references give example circuits, basic principles, and some helpful hints.

While there is no physical distinction between a coaxial resonator and a coaxial inductor, the selection of an inductor for a VCO begins by first knowing (from analysis or experiment) the equivalent inductance that the active circuit, including the varactor, must see. In general, the VCO active circuit loads the "resonator", lowering the resonator's self-resonant frequency (SRF). The situation is analogous to externally capacitively loading a discrete parallel resonant L-C circuit.

While there is an approximate equivalent L-C circuit for the coaxial resonator close to resonance, this model has limited application.

The coaxial resonators and inductors are more accurately modeled as a transmission line. Our application notes and references delve further into this topic.

Values of inductance that can be achieved depend upon the separation between the VCO frequency and the SRF of the coaxial line element. Values less than 1 nH are not practical, since the metal connection tab itself has an equivalent inductance of this order.

Equivalent inductances in the range of 3–20 nH have been popular among designers of VCOs for wireless equipment.

Call for availability, utilize the Inductor Selection Guide, use the COAX Program, or refer to the application notes for assistance with ordering the correct part.

Skyworks' Green™ products are compliant to all applicable materials legislation and are halogen-free. For additional information, refer to *Skyworks' Definition of Green™*, document number SQ04-0074.

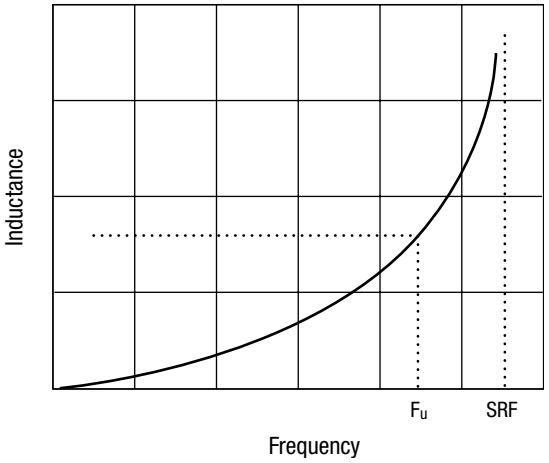


Figure 1. Frequency of Use vs. Inductance

Coaxial Inductor Order Information

An Order Example

SI 8800 LP Q 0450 Y 6.3 E

Skyworks' Green™ products are compliant to all applicable materials legislation and are halogen-free. For additional information, refer to *Skyworks' Definition of Green*™, document number SQ04-0074.

Inductance: (see Figure 1) Available in 0.01 nH increments

Tab: Y = Yes, N = No

Frequency of Use (F_u): (see Figure 1 for definition)

Type: Q for λ/4 standard

Profile: HP, EP, SP, LP, LS, MP, SM

Material: 1000, 2000, 8800, 9000

Product Code: SI - square coaxial inductor

*These products are produced by Trans-Tech (a wholly owned subsidiary of Skyworks Solutions, Inc.)

Ceramic Coaxial Inductors

Coax Line Properties vs. Profile and Material

Profile	1000	2000	8800	9000	Tab Inductors
HP	25.3 Ω	18.1 Ω	13.1 Ω	8.6 Ω	1.8 nH
EP	22.5 Ω	16.1 Ω	11.7 Ω	7.7 Ω	1.0 nH
SP	18.3 Ω	13.1 Ω	9.5 Ω	6.3 Ω	1.0 nH
LS	18.4 Ω	13.1 Ω	9.5 Ω	6.3 Ω	0.9 nH
LP	27.4 Ω	19.6 Ω	14.2 Ω	9.4 Ω	1.0 nH
SP	25.7 Ω	18.4 Ω	13.3 Ω	8.8 Ω	0.6 nH
SM	18.4 Ω	13.1 Ω	9.5 Ω	6.3 Ω	0.6 nH

Wavelength (λ_g) in Dielectric

Material	ε_r	Wavelength Formula for λ_g (inches)
1000	10.5 ± 0.5	$3642/f_0$
2000	20.6 ± 1.0	$2601/f_0$
8800	39.0 ± 1.5	$1890/f_0$
9000	90.0 ± 3.0	$1244/f_0$

Figure 2.

Inductor Selection Guide

1) Select one of Skyworks' four dielectric materials.

2) Determine the VCO's operating frequency (f_{vco}).

3) Determine the desired inductance or circuit impedance (Z_{in}).
Note: Convert inductances to impedances by using: $Z_{in} = 2*š * f_{vco} * L_{in}$ Ω.

4) Calculate the effect of the tab. Tab inductances are given in Figure 9. Use the formula ($Z_{in} = 2*š * f_{vco} * L_{tab}$ Ω) to convert the tab inductances to impedances.

5) Determine the input impedance by subtracting the effect of the tab using: $Z_{input} = Z_{in} - Z_{tab}$.

6) Calculate the wavelength (λg) of the part in the dielectric (see Figure 2 for appropriate formula).

7) Determine the characteristic impedance (Z_0) of the part (see Figure 3).

8) Calculate the physical length of the part using the formula: $1 = (\lambda_g /2 * š) \tan^{-1} (Z_{input} /Z_0)$ inches.

9) Determine the SRF of this part using: $SRF = (\lambda_g * f_{vco}) / (4 * 1)$ MHz.

10) Check the recommended frequency chart for the appropriate material to ensure a valid part.

Measurement Description of Q, f_0, and L

Evaluation of Q (quality factor) and f_0 (resonant frequency) of coaxial components is made with a one-port reflection measurement on a network analyzer. The probe is moved into the inner diameter (ID) of the device until the input resistance of the device matches the terminal resistance of the network analyzer. This is indicated by a 50 Ω circle on the Smith Chart display and is known as "critical" coupling. The point on this circle where the response is purely resistive (capacitance reactance equals inductive reactance) is the point of resonance and will be defined by a complex impedance of Z = 50 + j Ω. The Q is computed by observing the frequency span between VSWR-2.616 (Z = 50 ± j50 Ω) on either side of f_0. The Q is defined as $f_0/\Delta f$.

The inductance parameter (L) is measured with an APC-7 mm connector mounted flush with a conducting plane and a full one-port calibration (open, short, broadband 50 Ω load) is performed. The inductor is then clamped into place with the tab touching the inner conductor and the metallized body touching the grounding plane. The inductance (L) is measured at the frequency of use. The impedance vector on the Smith Chart of an ANA gives the necessary information where Z = R + jwL.

Characteristic Impedance

As shown in Figure 3, the characteristic impedance (Z_0) of the coaxial TEM mode components is a function of the profile dimensions and the dielectric constant of the material. Z_0 is reduced over its air line value by the square root of the dielectric constant of the material. At one-eighth wavelength, the short-circuit line exhibits an inductive reactance while the open-circuit line exhibits a capacitive reactance equal in magnitude to Z_0.

$$Z_0 = \text{characteristic impedance} = \frac{60}{\sqrt{\varepsilon_R}} \ln\left(1.079\ \frac{W}{d}\right)$$

where:
w = width of resonator
d = diameter of inner conductor
ε_r = dielectric constant

Profile	1000	2000	8800	9000
HP	25.3 Ω	18.1 Ω	13.1 Ω	8.6 Ω
EP	22.5 Ω	16.1 Ω	11.7 Ω	7.7 Ω
SP	18.3 Ω	13.1 Ω	9.5 Ω	6.3 Ω
LS	18.4 Ω	13.1 Ω	9.5 Ω	6.3 Ω
LP	27.4 Ω	19.6 Ω	14.2 Ω	9.4 Ω
MP	25.7 Ω	18.4 Ω	13.3 Ω	8.8 Ω
SM	18.4 Ω	13.1 Ω	9.5 Ω	6.3 Ω

Figure 3.

Ceramic Coaxial Inductors

Soldering Conditions

Skyworks' coaxial components are compatible with standard surface mount reflow and wave soldering methods. The HP profile components may require mechanical support mounting because of the larger size. Consult the factory for details.

Use silver-bearing solder such as SN62 (62Sn-36Pb-2Ag). Skyworks' tabs are pretinned to improve solderability. Additional attaching methods include hot air gun, infrared source, soldering iron, hot plate, vapor phase, and others. The coaxial component body is a ceramic and subject to thermal shock if heated or cooled too rapidly. Figure 4 is the recommended soldering profile, not to exceed 230 °C for a duration of about 10 seconds. Repeatable results can be best achieved with air cooling only, not quenching.

Figure 5 indicates the maximum tolerance of the component planarity with respect to the datum plane.

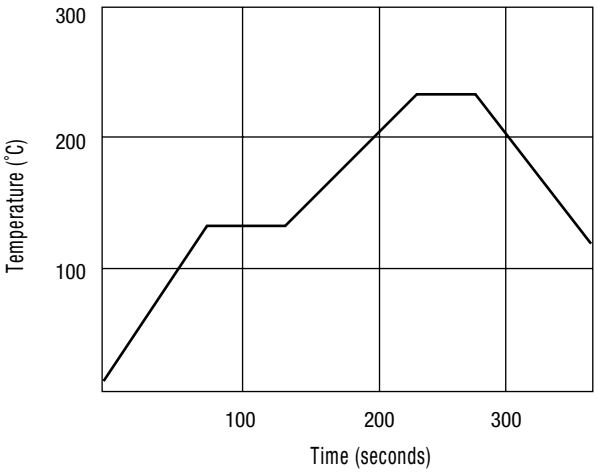


Figure 4. Soldering Profile

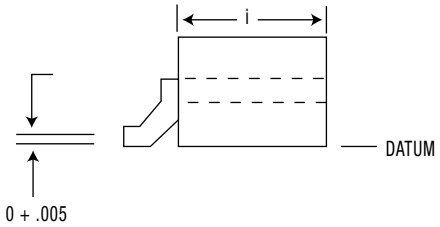


Figure 5. Surface Mount Tolerance for Components with Tabs

Equation (1) Input Impedance f_0

$$Z_{input} = fZ_0 \tan\left(\frac{2\,f_0}{4\ SRF}\right)$$

where: f_0 = use frequency

Equation (2) Resonant Frequency

$$\iota = \frac{c}{4\ SRF\sqrt{\varepsilon_r}}$$

where: c = speed of light ε_r = 39.08800 material
90.09000 material
10.51000 material
20.62000 material

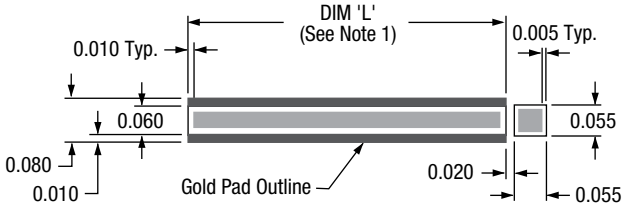
Ceramic Coaxial Inductors

Packaging

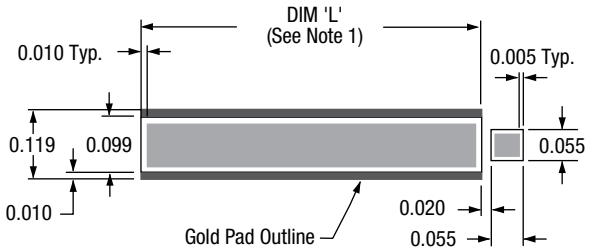
Tape and reel packaging is available. Consult the factory for details.

Notes: 1. Dimension "L" is length which depends on frequency.

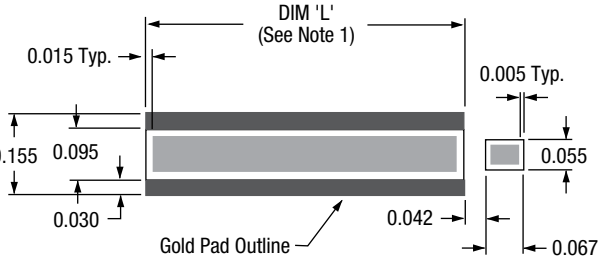
Key:
= Solder over metallic mounting pad
= Solder mask over metallic mounting pad
= Exposed metallic mounting pad



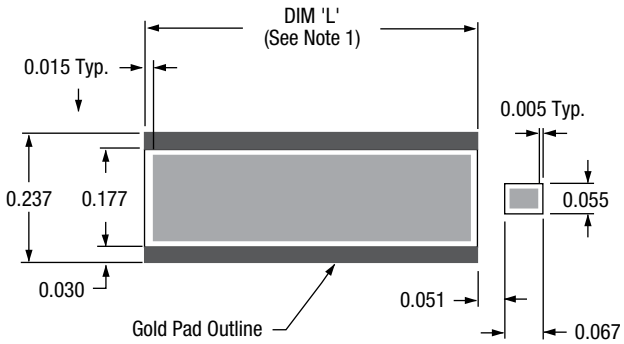
2 mm (5 m) Coaxial Resonator Footpad Dimensions



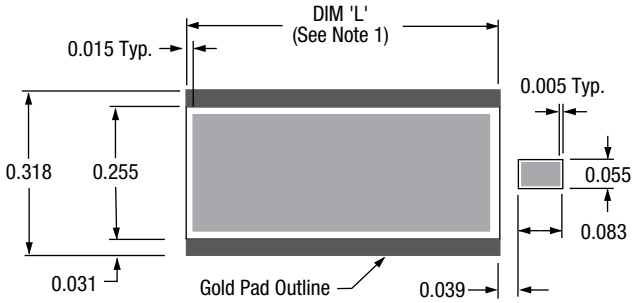
3 mm (MP) Coaxial Resonator Footpad Dimensions



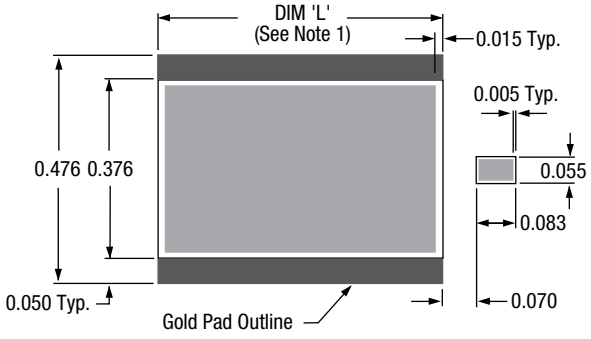
4 mm (LP/LS) Coaxial Resonator Footpad Dimensions



6 mm (SP) Coaxial Resonator Footpad Dimensions



8 mm (EP) Coaxial Resonator Footpad Dimensions



12 mm (HP) Coaxial Resonator Footpad Dimensions

*Standard Filters / Diplexers**

This list contains Skyworks' most popular filter and diplexer designs. A variety of footprints and configurations are available for application-specific needs. Please contact the factory or your local representative with your specifications or for more information on any of these designs. Skyworks maintains a list of over 700 active filters and diplexers. We welcome every opportunity to assist in the selection or creation of a filter or diplexer that will meet your specifications.

CATV

Part Number	Filter Type	Size/Poles	Center Frequency (MHz)	Bandwidth (MHz)	Insertion Loss (dB)	Package
TT3P2-1068P0-3507	Band Pass	3 mm/2 pole	1068	35	0.7	PCB SMT
TT4P2-1013P2-2020	Band Pass	4 mm/2 pole	1013	20	2.0	PCB SMT
TT4P2-1082.5P2-0720	Band Pass	4 mm/2 pole	1082.5	07	2.0	PCB SMT
TT4P2-1082P2-0620	Band Pass	4 mm/2 pole	1082	06	2.0	PCB SMT
TT4P2-1090P2-0610	Band Pass	4 mm/2 pole	1090	06	1.0	PCB SMT
TT4P3-1030P2-1535	Band Pass	4 mm/3 pole	1030	15	3.5	PCB SMT
TT4P3-1067P2-4420	Band Pass	4 mm/3 pole	1067	44	2.0	PCB SMT
TT6P4-1080P4-7015	Band Pass	6 mm/4 pole	1080	70	1.5	PCB SMT
TT6P4-1090P2-1036	Band Pass	6 mm/4 pole	1090	10	3.6	PCB SMT

WCS

Part Number	Filter Type	Size/Poles	Center Frequency (MHz)	Bandwidth (MHz)	Insertion Loss (dB)	Package
TT6P6-0750P0-5017	Band Pass	6 mm/6 pole	0750	50	1.7	PCB SMT
TT6P5-0765P0-11225	Band Pass	6 mm/5 pole	0765	112	2.5	PCB SMT
TT6P2-0770T-1215	Band Pass	6 mm/2 pole	0770	12	1.5	PCB SMT
TT6P3-0770T-1225	Band Pass	6 mm/3 pole	0770	12	2.5	PCB SMT
TT6P3-0770T-2020	Band Pass	6 mm/3 pole	0770	20	2.0	PCB SMT

MDS

Part Number	Filter Type	Size/Poles	Center Frequency (MHz)	Bandwidth (MHz)	Insertion Loss (dB)	Package
TT4P3-2120P2-6020	Band Pass	4 mm/3 pole	2120	60	2.0	PCB SMT
TT4P6-2122P0-2835	Band Pass	4 mm/6 pole	2122	28	3.5	PCB SMT
TT6P4-2158P2-1422	Band Pass	6 mm/4 pole	2158	14	2.2	PCB SMT
TT6P6-2500P3-3635	Band Pass	6 mm/6 pole	2500	36	3.5	PCB SMT

*These products are produced by Trans-Tech (a wholly owned subsidiary of Skyworks Solutions, Inc.)

*Standard Filters / Diplexers**

ISM

Part Number	Filter Type	Size/Poles	Center Frequency (MHz)	Bandwidth (MHz)	Insertion Loss (dB)	Package
TT4P2-0915P2-2620	Band Pass	4 mm/2 pole	0915	26	2.0	PCB SMT
TT6P2-0902F-2518	Band Pass	6 mm/2 pole	0902	25	1.8	PCB SMT
TT6P2-0915T-2518	Band Pass	6 mm/2 pole	0915	25	1.8	PCB SMT
TT6P3-0902T-2520	Band Pass	6 mm/3 pole	0902	25	2.0	PCB SMT
TT6P3-0915T-2520	Band Pass	6 mm/3 pole	0915	25	2.0	PCB SMT
TT6P3-0917F-1425	Band Pass	6 mm/3 pole	0917	14	2.5	PCB SMT
TT3P3-2400P1-1030	Band Pass	3 mm/3 pole	2400	10	3.0	PCB SMT
TT3P3-2450P1-1445	Band Pass	3 mm/3 pole	2450	14	4.5	PCB SMT
TT6P3-2467P0-3330	Band Pass	6 mm/3 pole	2467	33	3.0	PCB SMT

Cell, PCS, DCS, UMTS

Part Number	Filter Type	Size/Poles	Center Frequency (MHz)	Bandwidth (MHz)	Insertion Loss (dB)	Package
TT3P2-1880P0-6010	Band Pass	3 mm/2 pole	1880	60	1.0	PCB SMT
TT3P3-0881.5P2-2530	Band Pass	3 mm/3 pole	0881.5	25	3.0	PCB SMT
TT3P3-1880P0-6022	Band Pass	3 mm/3 pole	1880	60	2.2	PCB SMT
TT3P3-1960P0-6022	Band Pass	3 mm/3 pole	1960	60	2.2	PCB SMT
TT3P3-1960P2-6030	Band Pass	3 mm/3 pole	1960	60	3.0	PCB SMT
TT3P4-0836.5P2-2525	Band Pass	3 mm/4 pole	0836.5	25	2.5	PCB SMT
TT3P4-0881.5P2-2525	Band Pass	3 mm/4 pole	0881.5	25	2.5	PCB SMT
TT3P4-1880P2-6020	Band Pass	3 mm/4 pole	1880	60	2.0	PCB SMT
TT3P4-1880P2-6030	Band Pass	3 mm/4 pole	1880	60	3.0	PCB SMT
TT4P3-0863P0-0585	Band Pass	4 mm/3 pole	0863	05	8.5	PCB SMT
TT4P3-2180P1-2540	Band Pass	4 mm/3 pole	2180	25	4.0	PCB SMT
TT4P4-1880P0-6216	Band Pass	4 mm/4 pole	1880	62	1.6	PCB SMT
TT4P4-1960P0-6216	Band Pass	4 mm/4 pole	1960	62	1.6	PCB SMT
TT4P5-2240P2-1032	Band Pass	4 mm/5 pole	2240	10	3.2	PCB SMT
TT4P6-0860.5P0-1937	Band Pass	4 mm/6 pole	0860.5	19	3.7	PCB SMT
TT6P3-0836T-2520	Band Pass	6 mm/3 pole	0836	25	2.0	PCB SMT
TT6P3-0860P3-2020	Band Pass	6 mm/3 pole	0860	20	2.0	PCB SMT
TT6P3-0860T-2020	Band Pass	6 mm/3 pole	0860	20	2.0	PCB SMT
TT6P3-0881F-2520	Band Pass	6 mm/3 pole	0881	25	2.0	PCB SMT
TT6P5-1960P0-6025	Band Pass	6 mm/5 pole	1960	60	2.5	PCB SMT
TT6P5-2280P1-7032	Band Pass	6 mm/5 pole	2280	70	3.2	PCB SMT
TT6P6-1900P3-8035	Band Pass	6 mm/6 pole	1900	80	3.5	PCB SMT
TT6P3-2140P2-6011	Band Pass	6 mm/3 pole	2140	60	1.1	PCB SMT
TT6P10-R1950-T2140	Diplexer	6 mm/10 pole	1950	–	–	PCB SMT

*These products are produced by Trans-Tech (a wholly owned subsidiary of Skyworks Solutions, Inc.)

*Standard Filters / Diplexers**

GPS

Part Number	Filter Type	Size/Poles	Center Frequency (MHz)	Bandwidth (MHz)	Insertion Loss (dB)	Package
TT4P4-R1227.6-T1575.42	Diplexer	4 mm/4 pole	1227.6	-	-	PCB SMT
TT4P3-1227.6P1-2030	Band Pass	4 mm/3 pole	1227.6	20	3.0	PCB SMT
TT4P3-1575.42P2-2040	Band Pass	4 mm/3 pole	1575.42	20	4.0	PCB SMT
TT3P3-1227.6P1-1030	Band Pass	3 mm/3 pole	1227.6	10	3.0	PCB SMT
TT3P3-1575.42P2-1030	Band Pass	3 mm/3 pole	1575.42	10	3.0	PCB SMT

Other

Part Number	Filter Type	Size/Poles	Center Frequency (MHz)	Bandwidth (MHz)	Insertion Loss (dB)	Package
TT3P4-2513P2-5055	Band Pass	3 mm/4 pole	2513	50	5.5	PCB SMT
TT3P5-3687P1-7466	Band Pass	3 mm/5 pole	3687	74	6.6	PCB SMT
TT4P3-3417P2-0220	Band Pass	4 mm/3 pole	3417	02	2.0	PCB SMT
TT4P5-1090P0-1050	Band Pass	4 mm/5 pole	1090	10	5.0	PCB SMT
TT6P5-0810P3-5030	Band Pass	6 mm/5 pole	0810	50	3.0	PCB SMT
TT6P4-0509P7-0148	Band Pass	6 mm/4 pole	0509	01	4.8	PCB SMT
TT4P4-1000P2-1030	Band Pass	4 mm/4 pole	1000	10	3.0	PCB SMT
TT6P3-0826.5P3-0520	Band Pass	6 mm/3 pole	0826.5	05	2.0	PCB SMT
TT6P3-0827P3-0620	Band Pass	6 mm/3 pole	0825	06	2.0	PCB SMT
TT6P6-1000P5-8530	Band Pass	6 mm/6 pole	1000	85	3.0	PCB SMT
TT6P6-0545P6-3022	Band Pass	6 mm/6 pole	0545	30	2.2	PCB SMT
TT4P3-3500P2-10020	Band Pass	4 mm/3 pole	3500	100	2.0	PCB SMT
TT6P6-0889P3-4029	Band Pass	6 mm/6 pole	0889	40	2.9	PCB SMT
TT6P4-0722P4-4817	Band Pass	6 mm/4 pole	0722	48	1.7	PCB SMT
TT3P3-1088P2-9015	Band Pass	3 mm/3 pole	1088	90	1.5	PCB SMT
TT6P3-0740P3-2020	Band Pass	6 mm/3 pole	0740	20	2.0	PCB SMT
TT6P5-1950P3-6040	Band Pass	6 mm/5 pole	1950	60	4.0	PCB SMT
TT3P4-0917P2-4524	Band Pass	3 mm/4 pole	0917	45	2.4	PCB SMT
TT6P3-1090P2-1029	Band Pass	6 mm/3 pole	1090	10	2.9	PCB SMT
TT6P4-0770P0-1240	Band Pass	6 mm/4 pole	0770	12	4.0	PCB SMT
TT6P3-1030P2-1029	Band Pass	6 mm/3 pole	1030	10	2.9	PCB SMT
TT6P5-0881.5P0-2530	Band Pass	6 mm/5 pole	0881.5	25	3.0	PCB SMT
TT6P3-0730P3-1213	Band Pass	6 mm/3 pole	0730	12	1.3	PCB SMT
TT6P3-0445.25T-0145	Band Pass	6 mm/3 pole	0445.25	01	4.5	PCB SMT
TT4P3-2400P1-20015	Band Pass	4 mm/3 pole	2400	200	1.5	PCB SMT
TT6P3-1080P2-0650	Band Pass	6 mm/3 pole	1080	06	5.0	PCB SMT
TT6P3-0745.3P3-1920	Band Pass	6 mm/3 pole	0745.3	19	2.0	PCB SMT
TT6P4-0435P0-3019-NS	Band Pass	6 mm/4 pole	0435	30	1.9	PCB SMT
TT3P4-0895.5P2-3926	Band Pass	3 mm/4 pole	0895.5	39	2.6	PCB SMT

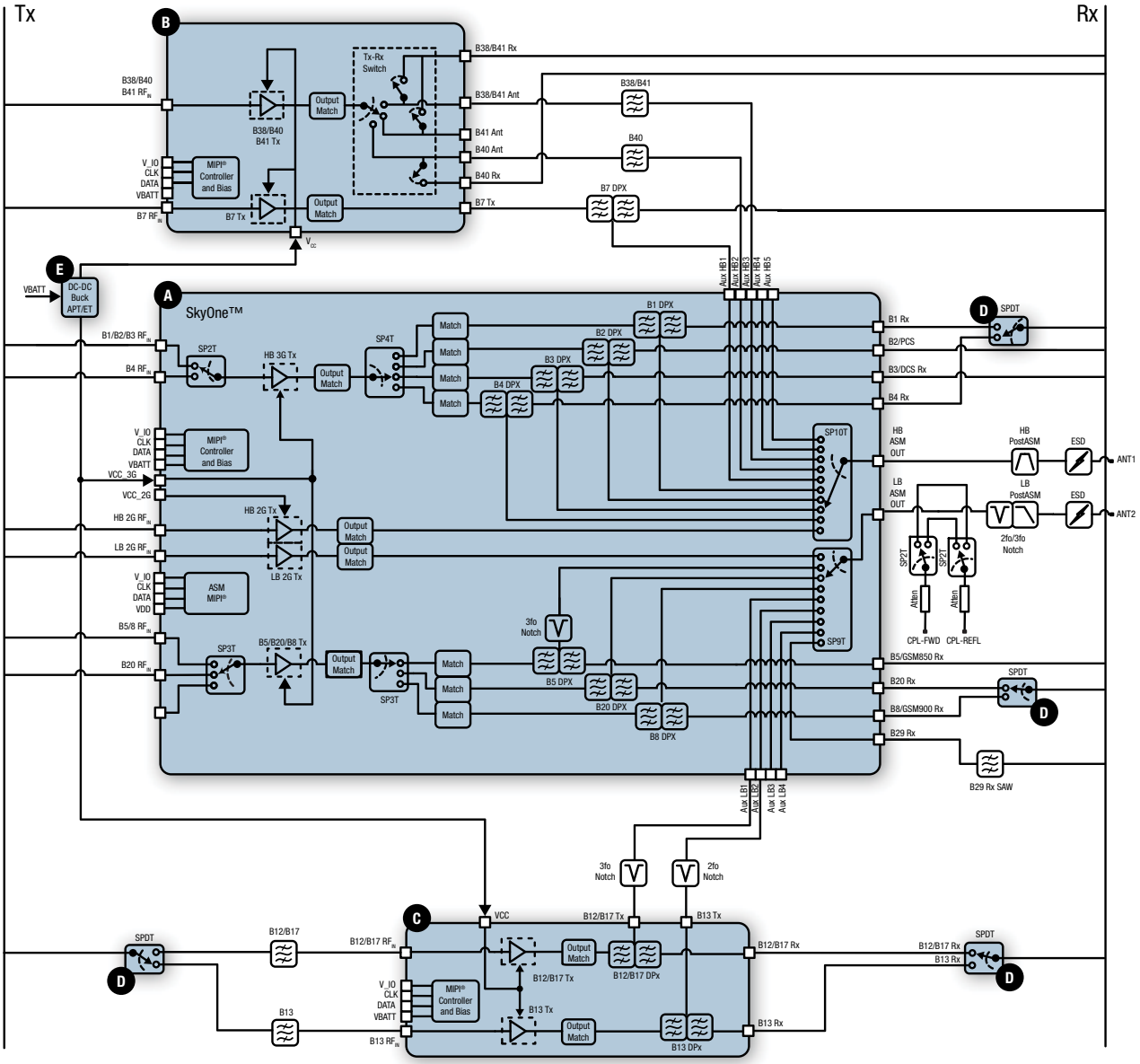
*These products are produced by Trans-Tech (a wholly owned subsidiary of Skyworks Solutions, Inc.)

Reference Material

BLOCK DIAGRAMS

Smartphone, Handset and Tablet

SkyOne™



SkyOne™ Front-end Modules

A SKY78010 SKY78021
SKY78011 SKY78022
SKY78013 SKY78025
SKY78015 SKY78026

Power Amplifier Modules

B SKY77807
SKY77771
SKY77772
SKY77773

Front-End Module

C SKY77806

SP2T Switch

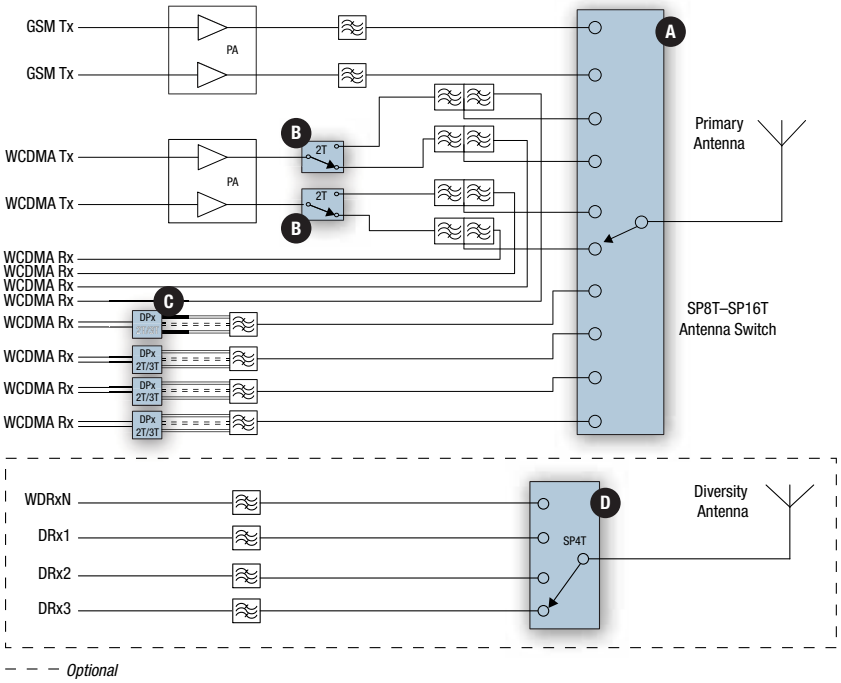
D SKY13476-001

Power Management

E **Step-down Converter**
SKY87000-13

Smartphone, Handset and Tablet

Smartphone Using Discrete Switches or Antenna Switch Modules (ASMs)



Primary Antenna Switches

A	SKY13404-466LF	SKY13454
	SKY13406-389LF	SKY13455
	SKY13412-487LF	SKY13488
	SKY13413-488LF	SKY13491-21
	SKY13437	SKY13492
	SKY13441	SKY13498

WCDMA Distribution (Mode/Band) Switches

B	SKY13405-490LF
	SKY13448-001
	SKY13449-001
	SKY13489-001

Rx Differential Switches

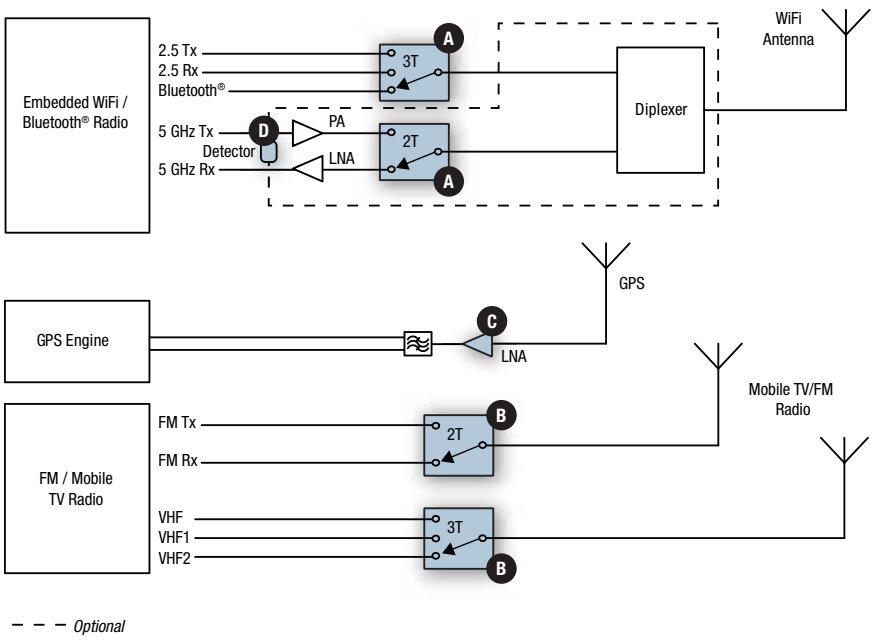
C	SKY13354-368LF
	SKY13399-468LF
	SKY13421-486LF

Diversity Antenna Switches

D	SKY13414-485LF
	SKY13415-485LF
	SKY13416-485LF
	SKY13417-485LF
	SKY13418-485LF
	SKY13473
	SKY13521
	SKY13525
	SKY13526

Smartphone, Handset and Tablet

Embedded Connectivity in Handsets



Mobile Connectivity—Embedded WiFi

A	SKY13309-370LF	SKY13383-002
	SKY13317-373LF	SKY13385-460LF
	SKY13323-378LF	SKY13386-002
	SKY13345-368LF	SKY13399-468LF
	SKY13348-374LF	SKY13408-465LF
	SKY13350-385LF	SKY13411-374LF
	SKY13351-378LF	SKY13421-486LF
	SKY13353-337LF	SKY13431-374LF
	SKY13355-374LF	SKY13445-368LF
	SKY13366-378LF	SKY13446-374LF
	SKY13370-374LF	SKY13453-385LF
	SKY13377-313LF	SKY13527-002
	SKY13381-374LF	

Mobile Connectivity—Mobile TV

B	SKY13317-373LF
	SKY13322-375LF
	SKY13323-378LF
	SKY13350-385LF
	SKY13351-378LF

GPS LNA/LNA Module

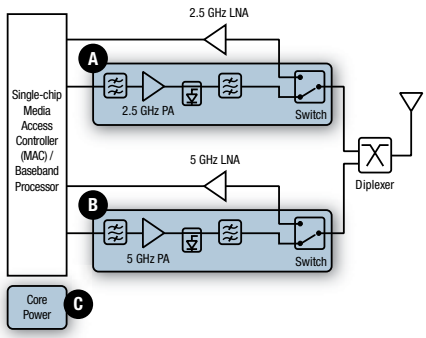
C	SKY65601-477LF	SKY65704-61
	SKY65602-477LF	SKY65708-11
	SKY65605-11	SKY65709-81
	SKY65611-11	SKY65713-11
	SKY65704-22	SKY65717-11

Detector

D	SMS7630-061

WiFi Connectivity

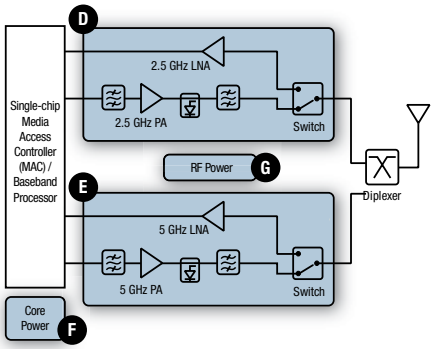
802.11a/b/g/n/ac Single-band WiFi Front-end Modules (FEMs)



2.5 GHz FEM
A SE2614BT

5 GHz FEMs
B SE5006L
SE5021L

Core Power
C AAT2113B
AAT2114A

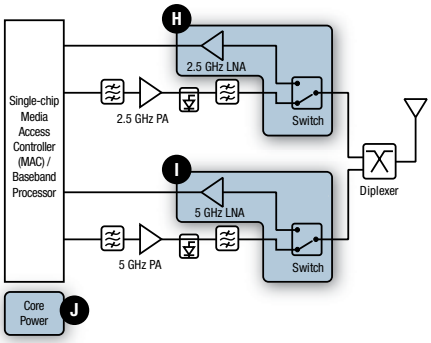


2.5 GHz FEM
D SE2620T
SKY85300

5 GHz FEMs
E SE5007T
SE5007BT
SE5012T
SE5012BT
SKY85703-11

Core Power
F AAT2113B
AAT2114A

RF Power
G SKY87201
AAT2114A



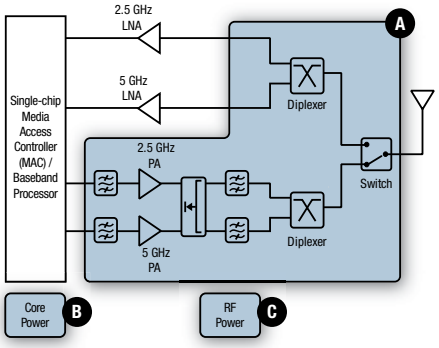
2.5 GHz FEM
H SE2601T

5 GHz FEM
I SE5008L
SKY85601-11

Core Power
J AAT2113B
AAT2114A

WiFi Connectivity

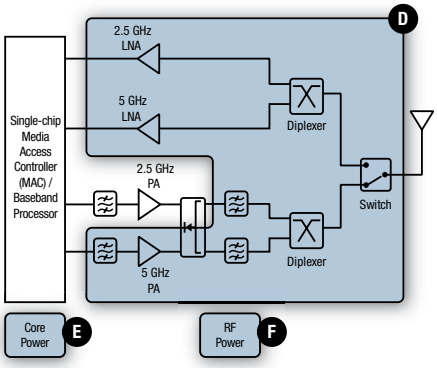
802.11a/b/g/n/ac Dual-band WiFi Front-end Modules (FEMs)



Dual-band FEMs
A SE2548A
SE2594L
SE5503A

Core Power
B AAT2113B
AAT2114A

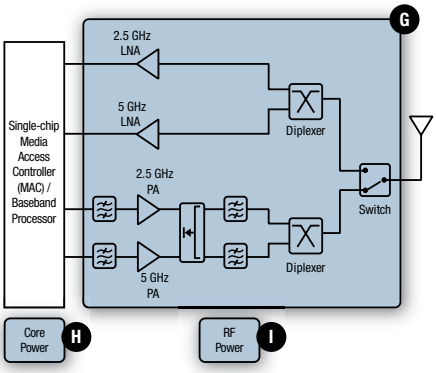
RF Power
C SKY87201
AAT2114A



Dual-band FEM
D SE2578L

Core Power
E AAT2113B
AAT2114A

RF Power
F SKY87201
AAT2114A



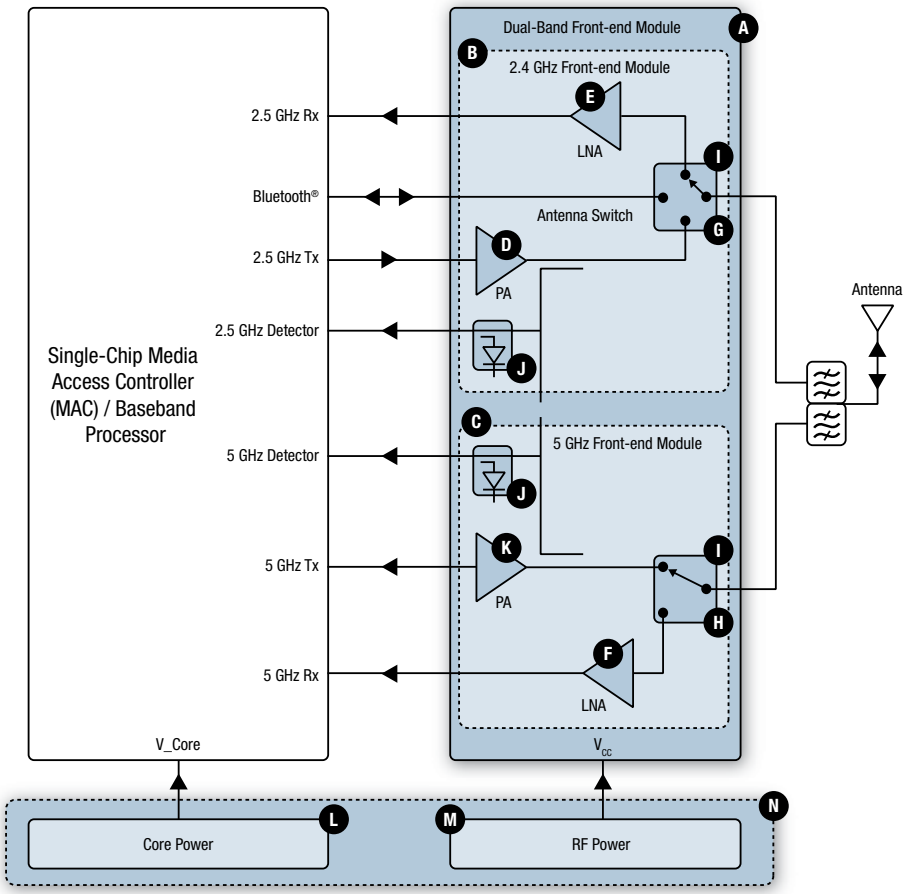
Dual-band FEMs
G SE2595L
SE5502L
SE5512L
SE5515A
SE5516A

Core Power
H AAT2113B
AAT2114A

RF Power
I SKY87201
AAT2114A

WiFi Connectivity

802.11a/b/g/n/ac Dual-band WiFi and Bluetooth® Front-end Components—Handset and Tablet



Dual-Band Front-end Modules

A SE5501L
SE5510T
SE5511T

2.5 GHz Front-end Modules

B SE2601T-R
SE2611T-R
SE2614BT-R
SKY65534-11
SKY85302-11
SKY85303-11

5 GHz Front-end Modules

C SE5007BT-R
SE5007T-R
SKY65535-11

2.5 GHz Power Amplifiers

D SE2568U-R
SE2574BL-R

5 GHz Power Amplifier

K SE5019T-R
SKY85601-11
SKY85702-11
SKY85706-11
SKY85707-21

2.5 GHz Low Noise Amplifier

E SKY65405-21

5 GHz Low Noise Amplifier

F SKY65404-31

2.5 GHz Switches

G AS179-92LF
SKY13309-370LF
SKY13317-373LF
SKY13323-378LF
SKY13345-368LF
SKY13383-000
SKY13385-460LF
SKY13386-000

5 GHz Switches

H SKY13314-374LF
SKY13348-374LF
SKY13350-385LF
SKY13351-378LF
SKY13276-334

PIN Diodes

I SMP1340-079LF
SMP1345-040LF
SMP1345-518

Schottky Diodes

J SMS7630-040LF
SMS7630-061
SMS7630-079LF

Core Power

L AAT2113B
AAT2114A

RF Power

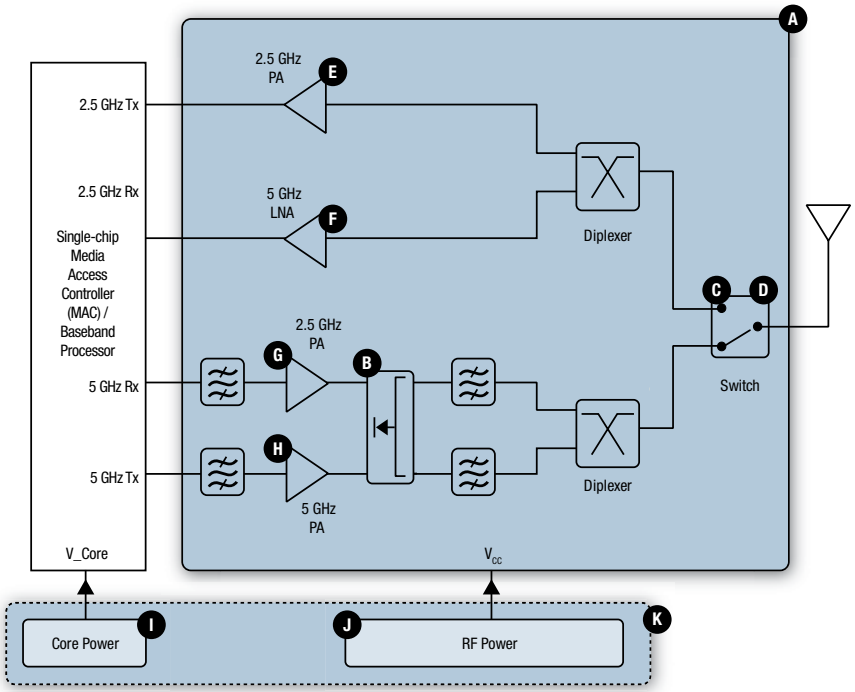
M SKY87201

PMU

N AAT2522
AAT2789

WiFi Connectivity

802.11a/b/g/n/ac Dual-band WiFi Front-end Components—Computing



Dual-band Front-end Modules
- A: SE2595L, SE5502L, SE5512L, SE5515A, SE5516A

Schottky Diodes
- B: SMS7630-061, SMS7630-040LF, SMS7630-079LF

2.5 GHz Switches
- C: AS179-92LF, SKY13309-370LF, SKY13317-373LF, SKY13323-378LF, SKY13345-368LF, SKY13383-000, SKY13385-460LF, SKY13386-000

5 GHz Switches
- SKY13314-374LF, SKY13348-374LF, SKY13350-385LF, SKY13351-378LF, SKY13276-334

PIN Diodes
- D: SMP1340-079LF, SMP1345-040LF, SMP1345-518

2.5 GHz Low Noise Amplifier
- E: SKY65405-21

2.5 GHz Power Amplifiers
- G: SE2568U-R, SE2574L-R

5 GHz Low Noise Amplifier
- F: SKY65404-31

5 GHz Power Amplifier
- H: SE5019T-R

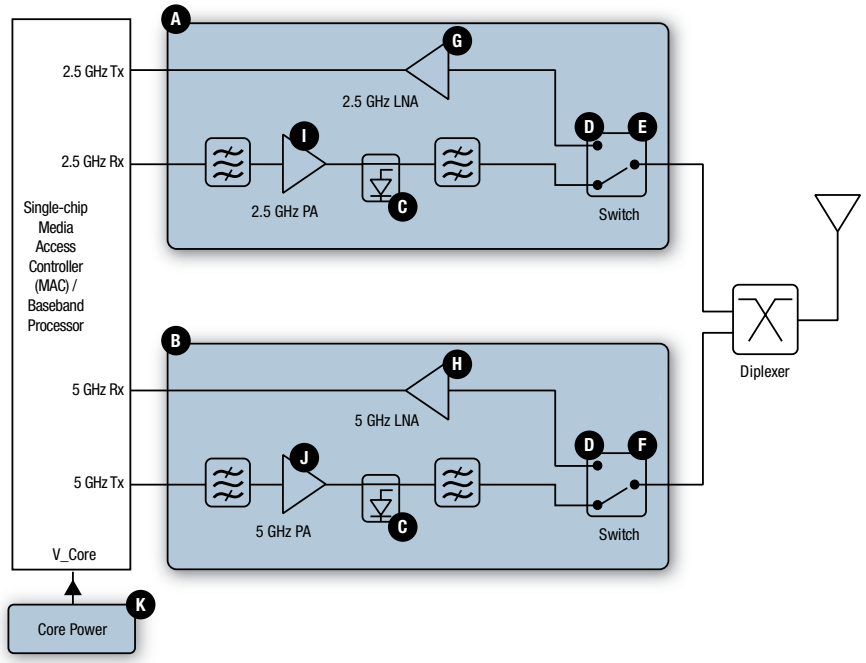
Core Power
- I: AAT2113B, AAT2114A

RF Power
- J: SKY87201, AAT2114A

PMU
- K: AAT2522, AAT2789

WiFi Connectivity

802.11a/b/g/n/ac Single-band WiFi Front-end Components—Networking



2.5 GHz Front-end Module
- A: SE2620T, SKY85300

5 GHz Front-end Modules
- B: SE5007T, SE5007BT, SE5012T, SE5012BT, SKY85703-11

Schottky Diodes
- C: SMS7630-061, SMS7630-040LF, SMS7630-079LF

PIN Diodes
- D: SMP1340-079LF, SMP1345-040LF, SMP1345-518

2.5 GHz Switches
- E: AS179-92LF, SKY13323-378LF, SKY13411-374LF, SKY13355-374LF, SKY13370-374LF

5 GHz Switches
- F: SKY13314-374LF, SKY13348-374LF, SKY13350-385LF, SKY13351-378LF

2.5 GHz Low Noise Amplifier
- G: SKY65405-21

5 GHz Low Noise Amplifier
- H: SKY65404-31

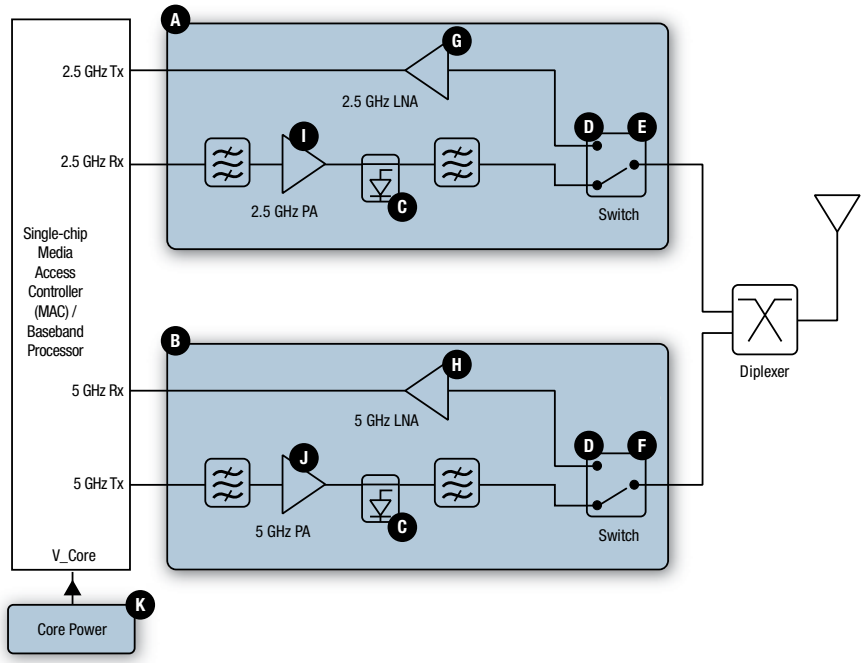
2.5 GHz Power Amplifiers
- I: SE2568U-R, SE2574L-R, SKY65900-11

5 GHz Power Amplifier
- J: SE5003L1-R, SE5019T-R, SKY85402-11

Core Power
- K: AAT2113B, AAT2114A

WiFi Connectivity

802.11a/b/g/n/ac Single-band WiFi Front-end Components—Home Entertainment



2.5 GHz Front-end Modules
- A: SE2620T, SKY85300, SKY85302-11

5 GHz Front-end Modules
- B: SE5007T, SE5007BT, SE5012T, SE5012BT, SKY85703-11, SKY85706-11

Schottky Diodes
- C: SMS7630-061, SMS7630-040LF, SMS7630-079LF

PIN Diodes
- D: SMP1340-079LF, SMP1345-040LF, SMP1345-518

2.5 GHz Switches
- E: AS179-92LF, SKY13323-378LF, SKY13411-374LF, SKY13355-374LF, SKY13370-374LF

5 GHz Switches
- F: SKY13314-374LF, SKY13348-374LF, SKY13350-385LF, SKY13351-378LF

2.5 GHz Low Noise Amplifiers
- G: SKY65405-21, SKY65971-11

5 GHz Low Noise Amplifiers
- H: SKY65404-31, SKY65981-11

2.5 GHz Power Amplifiers
- I: SE2568U-R, SE2574L-R

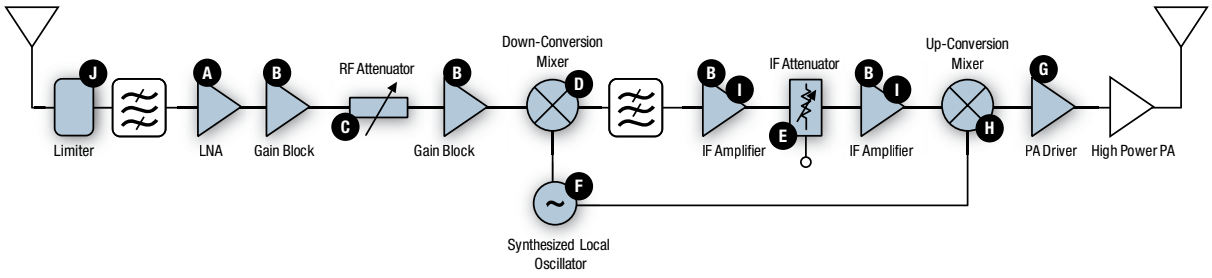
5 GHz Power Amplifiers
- J: SE5005L, SE5010L, SE5019T

Core Power
- K: AAT2113B, AAT2114A

Infrastructure

2G, 3G Base Station Repeater

Down-Link/Up-Link
RF Frequency Band: GSM, DCS, PCS, TD-SCDMA, WCDMA
800 MHz, 900 MHz, 1800/1900 MHz, LTE 2.1 GHz, 2.3–2.4 GHz
IF Frequency: 50~250 MHz



Loise Noise Amplifiers
- A: SKY65050-372LF, SKY65053-377LF, SKY65066-360LF, SKY67021-396LF, SKY67022-396LF, SKY67023-396LF, SKY67100-396LF, SKY67101-396LF, SKY67102-396LF, SKY67105-306LF, SKY67106-306LF, SKY67107-306LF, SKY67111-396LF, SKY67175-306LF

General Purpose Amplifiers
- B: SKY65013, SKY65014, SKY65015, SKY65016, SKY65017-70LF, SKY65161-70LF, SKY65162-70LF

RF Attenuators
- C:
  - **Digital**: SKY12329-350LF, SKY12339-350LF, SKY12340-364LF, SKY12343-364LF, SKY12345-362LF, SKY12347-362LF
  - **Voltage Variable**: AV101-12LF, SKY12228-12, SKY12233-11, SKY12235-11
  - **PIN Diodes**: SMP1304 Series, SMP1307 Series, SMP1352 Series

Down-Conversion Mixers
- D: SKY73032, SKY73033-11, SKY73035-11, SKY73062-11, SKY73063, SKY73069-11, SKY73070

IF Attenuators
- E:
  - **PIN Diodes**: SMP1304 Series, SMP1307 Series, SMP1352 Series
  - **Digital Attenuators**: AA116-72LF, SKY12343-364LF, SKY12348-350LF, SKY12406-360LF

PLLs/VCOs/Synthesizers
- F: SKY72300-362, SKY72310-362, SKY73100, SKY73101-11, SKY73103-11, SKY73112, SKY73120, SKY73121, SKY73134

PA Drivers
- G: SKY65009-70LF, SKY65038-70LF, SKY65045-70LF, SKY65080-70LF, SKY65112-84LF, SKY65113-84LF, SKY65120, SKY65124, SKY65126-21, SKY65127, SKY65162-70LF

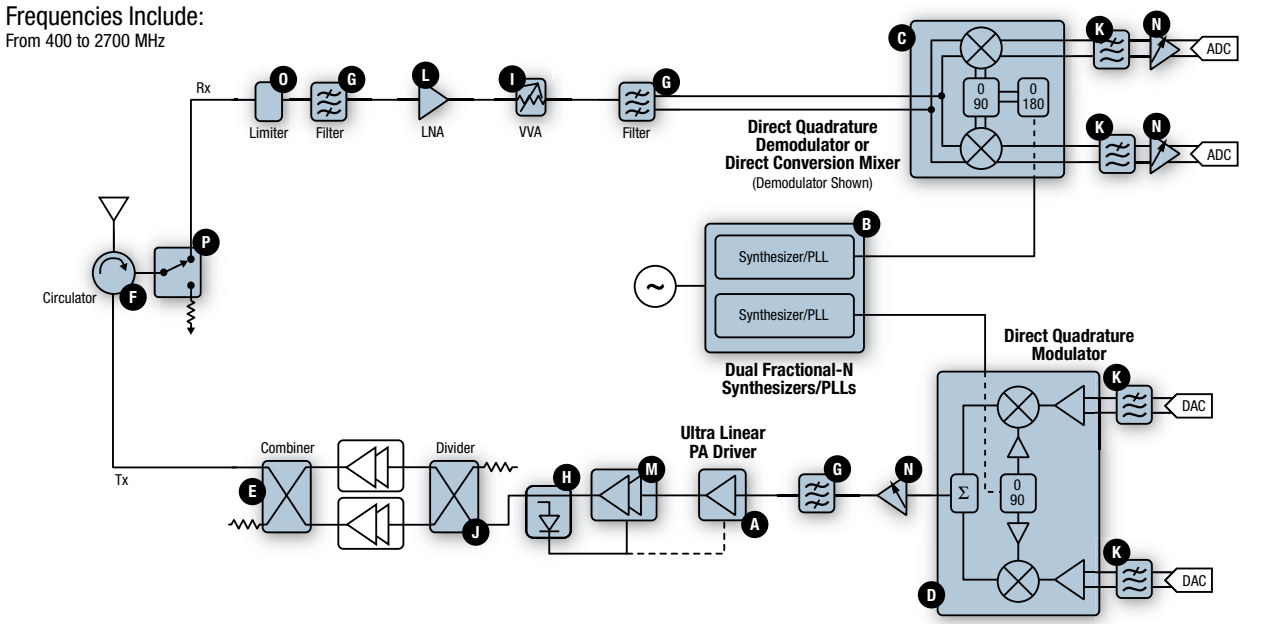
Up-Conversion Mixers
- H: SKY73062-11, SKY73063, SKY73069-11

IF Amplifiers
- I: SKY65013, SKY65014, SKY65015, SKY65016, SKY65017-70LF

Limiters
- J: CLA46XX Series, SMP1330-085LF

Infrastructure

Direct Conversion Base Station Transceiver



PA Drivers
- A: SKY65009-70LF, SKY65013-70LF, SKY65014-70LF, SKY65015-70LF, SKY65016-70LF, SKY65017-70LF, SKY65112-84LF, SKY65113-84LF, SKY65162-70LF, SKY67130-396LF

Synthesizers/PLLs
- B: SKY72310, SKY73100, SKY73101-11, SKY73103, SKY73112, SKY73126-11, SKY73134-11, SKY74038-21

Quadrature Demodulators
- C: SKY73009, SKY73012

Direct Quadrature Modulators
- D: SKY73077-459LF, SKY73078-459LF, SKY73092-459LF

Hybrids
- E: HY12-12LF, HY19-12LF, HY22-73LF, HY92-12LF

Dielectric Resonators
- F

Ceramic Band Pass Filters
- G

Directional Detectors/Couplers
- H: DD02-999LF, DC08-73LF, DC09-73LF, DC18-73LF, DC25-73LF

VVAs/PIN Diodes
- I: AV101-12LF, SKY12228-12, SKY12233-11, SJT12235-11, SMP1304 Series, SMP1307-011LF

Power Dividers
- J: PD09-73LF, PD18-73LF, PD19-73LF, PD22-73LF

Programmable Filters
- K: SKY73201-364LF, SKY73202-364LF

Low Noise Amplifiers
- L: SKY65045-70LF, SKY65080, SKY65373, SKY67021-396LF, SKY67022-396LF, SKY67023-396LF, SKY67012-396LF, SKY67013-396LF, SKY67014-396LF, SKY67100-396LF, SKY67101-396LF, SKY67102-396LF, SKY67111-396LF, SKY67130-396LF, SKY67150-396LF, SKY67151-396LF, SKY67153-396LF

High Gain PA Modules
- M: SKY65120, SKY65124, SKY65126, SKY65127

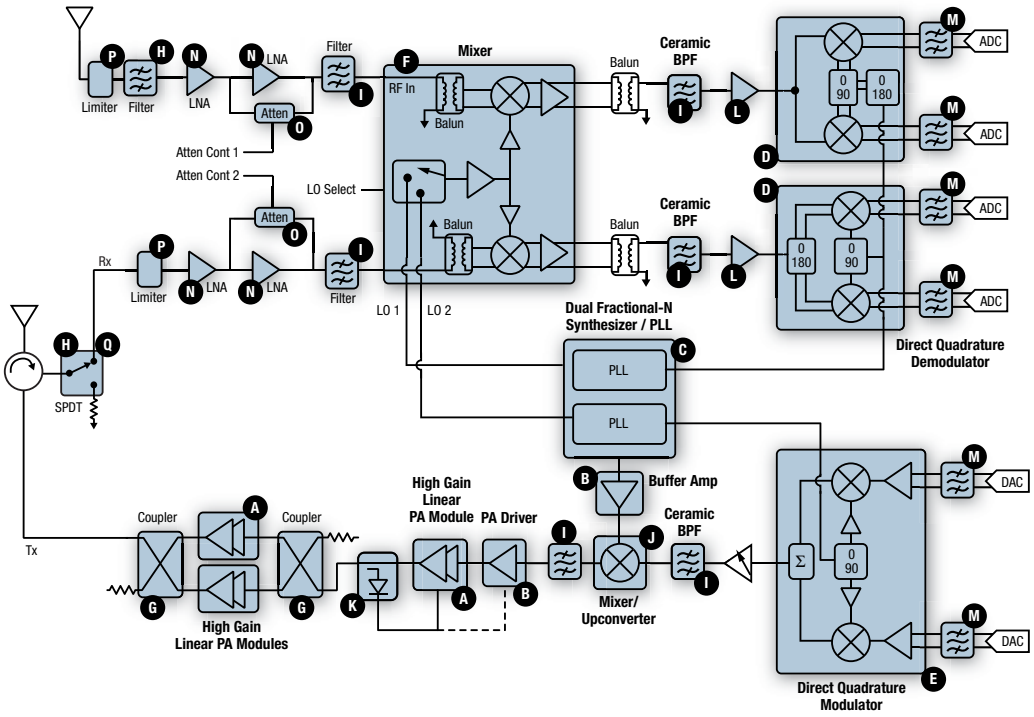
Variable Gain Amplifiers
- N: SKY65031, SKY65185

Limiter Diodes
- O: CLA46XX Series, SMP1330-085LF

High Power Fail Safe Switches
- P: SKY12207-478LF, SKY12208-478LF, SKY12210-478LF, SKY12211-478LF, SKY12212-478LF, SKY12215-478LF

Infrastructure

Superheterodyne Base Station Transceiver



High Gain PA Modules

A SKY65120 SKY65126 SKY65124 SKY65127

PA Drivers

B SKY65009-70LF SKY65016 SKY65162-70LF SKY65013 SKY65017-70LF SKY67130-396LF SKY65014 SKY65045-70LF SKY65015 SKY65080-70LF

Synthesizers/PLLs

C SKY72300-21 SKY73101 SKY73126 SKY72310 SKY73103 SKY73134 SKY73100 SKY73112 SKY74038-21

Direct Quadrature Demodulators

D SKY73009-11 SKY73012-11

Direct Quadrature Modulators

E SKY73077-459LF SKY73078-459LF SKY73092-459LF

Mixers

F SKY42068-11 (single) SKY73025 SKY73069 SKY73020-11 (dual) SKY73032 (single) SKY73084 SKY73021-11 SKY73033 (single) SKY73085 SKY73022 SKY73062 SKY73023 SKY73063

Hybrids

G HY17-12LF HY19-12LF HY92-12LF

H **Dielectric Resonators** I **Ceramic Band Pass Filters**

Schottky Diodes

J SMS3927-023LF SMS3928-023LF SMS3940-026LF

Directional Detectors/Couplers

K DC08-73LF DC09-73LF DD02-999LF

Gain Block Amplifiers

L SKY65013 SKY65015 SKY65017-70LF SKY65014 SKY65016 SKY67130-396LF

Programmable Filters

M SKY73201-364LF SKY73202-364LF

Low Noise Amplifiers

N SKY67021-396LF SKY67101-396LF SKY67150-396LF SKY67022-396LF SKY67102-396LF SKY67151-396LF SKY67023-396LF SKY67111-396LF SKY67153-396LF SKY67100-396LF

Digital Attenuators

O SKY12339-350LF SKY12343-364LF SKY12348-350LF SKY12340-364LF SKY12345-362LF

PIN Diodes

SMP1304 Series SMP1307 Series SMP1352 Series

Limiters

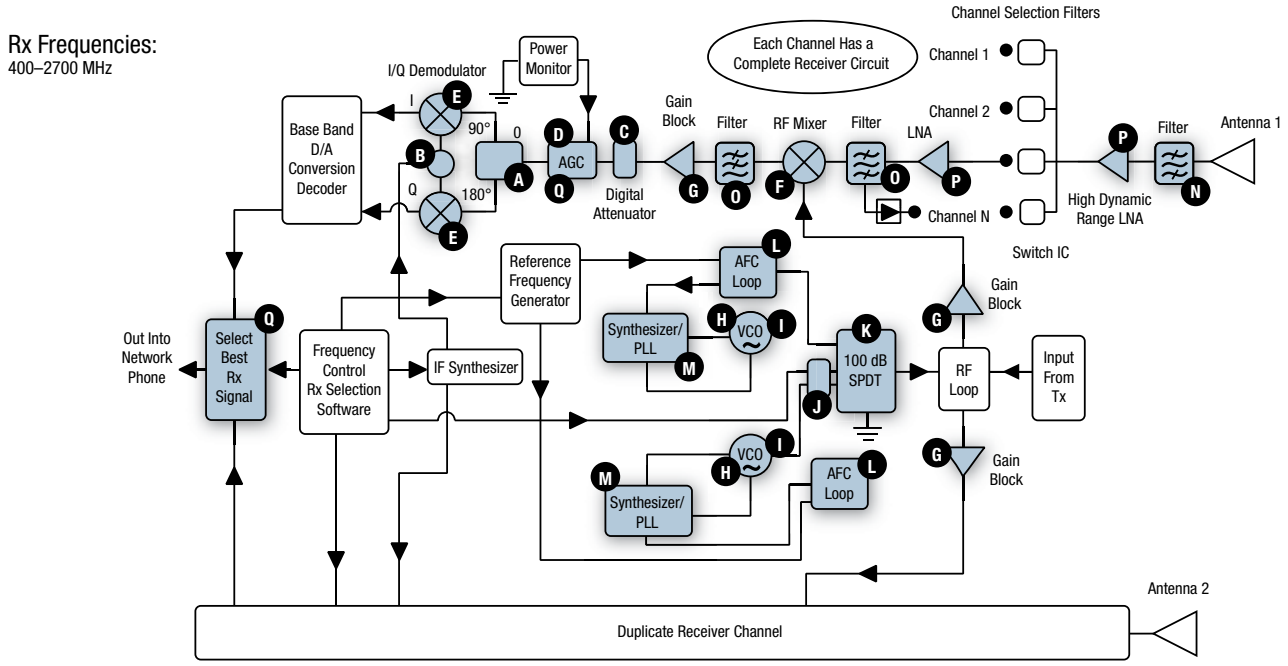
P CLA460X Series SMP1330-085LF

High Power T/R Switches

Q SKY12207-478LF SKY12208-478LF SKY12210-478LF SKY12212-478LF SKY12215-478LF

Infrastructure

Base Station Receiver System Using Antenna Diversity



Hybrids
- A HY17-12LF
- HY19-12LF
- HY92-12LF

Power Dividers
- B PD09-73LF
- PD18-73LF

Digital Attenuators
- C SKY12322-86LF
- SKY12324-73LF
- SKY12325-350LF
- SKY12328-350LF
- SKY12343-364LF
- SKY12345-362LF
- SKY12348-350LF
- SKY12406-360LF

PIN Diodes
- D SMP1304-001LF
- SMP1304-004LF
- SMP1307-001LF

Digital Attenuators
- Q SKY12329-350LF
- SKY12345-362LF

Quadrature Demodulators
- E SKY73009
- SKY73012

Mixers/Downconverters
- F SKY42068
- SKY73020
- SKY73021
- SKY73022
- SKY73023
- SKY73025-11
- SKY73032
- SKY73033
- SKY73062-11
- SKY73063
- SKY73069
- SKY73420-11
- SKY73421-11
- SKY73422-11
- SMS3926-023LF

Gain Block Amplifiers
- G SKY65009-70LF
- SKY65013
- SKY65014
- SKY65015
- SKY65016
- SKY65017-70LF
- SKY65045-70LF
- SKY65080-70LF
- SKY65081-70LF
- SKY65120
- SKY65124
- SKY65126-21
- SKY65127
- SKY65162-70LF
- SKY67130-396LF

VCO or Varactor Diodes
- H SKY73120
- SMV1233-079LF
- I SKY73120
- SMV1236-079LF

Directional Couplers
- J DC09-73LF
- DC18-73LF

Switches
- K SKY13286-359LF

PIN Diodes
- APDxxxx

Schottky Diodes
- L SMS7630-040LF
- SMS7630-061LF

Synthesizers/PLLs
- M SKY72300-21
- SKY72310-362LF
- SKY73100
- SKY73101-11
- SKY73103-11
- SKY73112-11
- SKY73134-11
- SKY74038-21

Dielectric Resonators
- N

Ceramic Band Pass Filters
- O

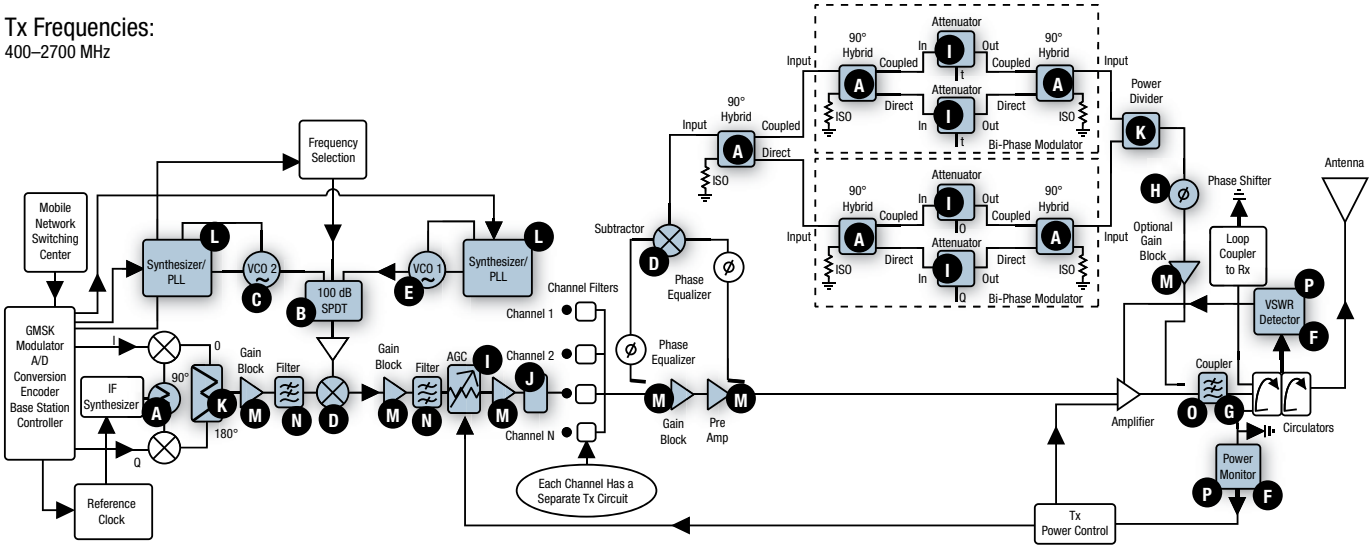
Low Noise Amplifiers
- P SKY65050-377LF
- SKY65053-372LF
- SKY65066-360LF
- SKY67021-396LF
- SKY67022-396LF
- SKY67023-396LF
- SKY67100-396LF
- SKY67101-396LF
- SKY67102-396LF
- SKY67151-396LF
- SKY67152-396LF

SPDT (SP2T) RF Switches
- Q AS179-92LF
- SKY13323-378LF
- SKY13348-374LF
- SKY13350-385LF
- SKY13370-374LF
- SKY13377-313LF
- SKY13431-374LF
- SKY13446-374LF

DPDT Antenna Diversity Switches
- SKY13411-374LF
- SKY13438-374LF

Infrastructure

Base Station Transmitter With Combining Amplifier



Hybrids
- A HY17-12LF
  HY19-12LF
  HY22-73LF
  HY92-12LF

Switches
- B **SPST RF Switch**
  SKY13347-360LF
  SPDT (SP2T) RF Switch
  SKY13286-359LF
  SP3T RF Switch
  SKY13408-465LF
  SP4T RF Switches
  SKY13384-350LF
  SKY13392-359LF
  PIN Diodes
  APDxxxx
  SMP1302-011LF

Varactor Diodes
- C SMV1233-079LF
  SMV1763-079LF
- E SMV1236-079LF

Schottky Diodes and Mixers
- D SKY73032
  SKY73033-11
  SKY73062-11
  SKY73063
  SKY73069-11
  SMS3926-023LF

Schottky Diode
- F SMS3923-005LF

Directional Couplers
- G DC09-73LF
  DC18-73LF
  DC25-73LF

Phase Shifter
- H PS088-315

PIN Diodes
- I SMP1304-001LF
  SMP1307-001LF

VV Attenuators
AV101-12LF
AV102-12LF
AV111-12LF
AV113-12LF

Digital Attenuators
- J SKY12322-86LF
  SKY12324-73LF
  SKY12325-350LF
  SKY12328-350LF
  SKY12339-350LF
  SKY12343-364LF
  SKY12345-362LF
  SKY12347-362LF
  SKY12406-360LF

Power Dividers
- K PD09-73LF
  PD18-73LF
  PD22-73LF

Synthesizers/PLLs
- L SKY72300-21
  SKY73134
  SKY74038-21

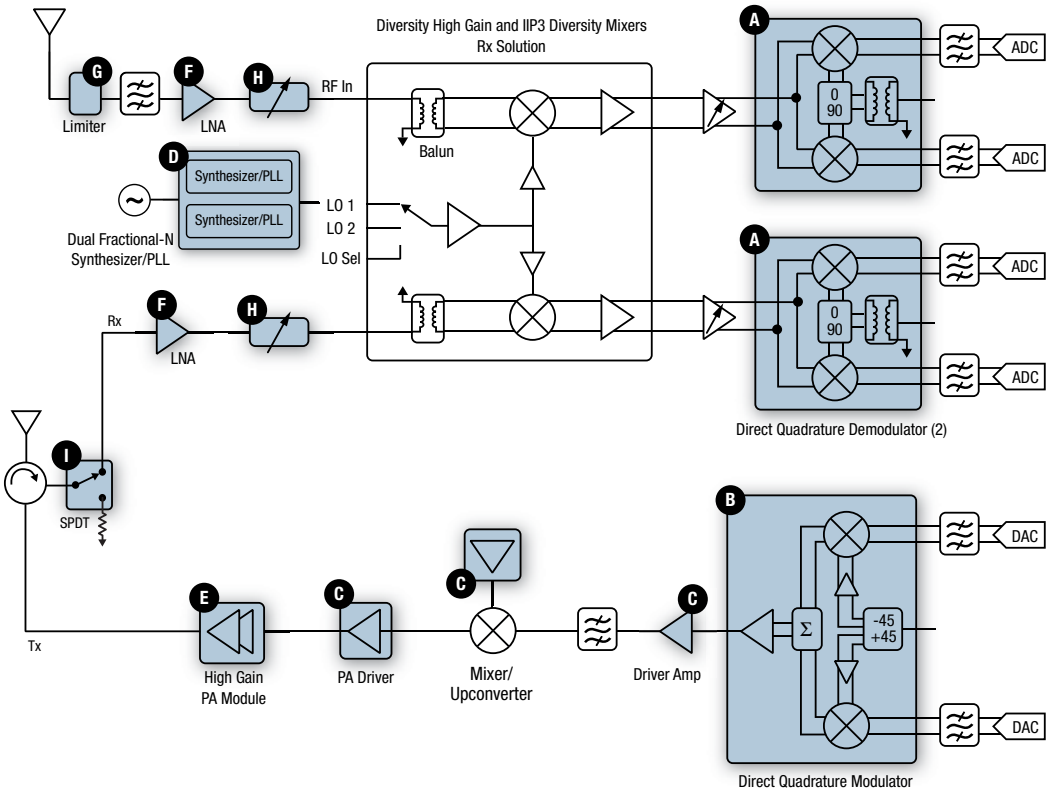
Amplifiers
- M SKY65009-70LF
  SKY65013-70LF
  SKY65014-70LF
  SKY65015-70LF
  SKY65016-70LF
  SKY65017-70LF
  SKY65038-70LF
  SKY65045-70LF
  SKY65080-70LF
  SKY65081-70LF
  SKY65120
  SKY65124
  SKY65126-21
  SKY65127
  SKY65161-70LF
  SKY65162-70LF

- N **Ceramic Band Pass Filters**
- O **Ferrites**

Directional Detector
- P DD02-999LF

Infrastructure

Transceiver



Direct Quadrature Demodulators

A	SKY73009
	SKY73012

Direct Quadrature Modulators

B	SKY73077-459LF
	SKY73078-459LF
	SKY73092-459LF

Amplifiers

C	SKY65015	SKY65081-70LF
	SKY65016	SKY65028
	SKY65017-70LF	SKY65095
	SKY65045-70LF	SKY65162-70LF
	SKY65080-70LF	SKY67130-396LF

Synthesizer/PLLs

D	SKY73100	SKY73112-11
	SKY73101-11	SKY73126-31
	SKY73103-11	SKY73134

High Gain PA Modules

E	SKY65126-21	SKY66002-11
	SKY65127	SKY66008-11

Low Noise Amplifiers

F	SKY65081-70LF	SKY67102-396LF
	SKY67021-396LF	SKY67111-396LF
	SKY67022-396LF	SKY67150
	SKY67023-396LF	SKY67151
	SKY67100-396LF	SKY67153
	SKY67101-396LF	

Limiter Diodes

G	CLA46XX Series
	SMP1330-007LF

RF Attenuators

	Digital	**Voltage Variable**
H	SKY12329-350LF	AV101-12LF
	SKY12339-350LF	SKY12228-12
	SKY12340-364LF	SKY12233-11
	SKY12343-364LF	SKY12235-11
	SKY12345-362LF	**PIN Diodes**
		SMP1304 Series
		SMP1307 Series
		SMP1352 Series

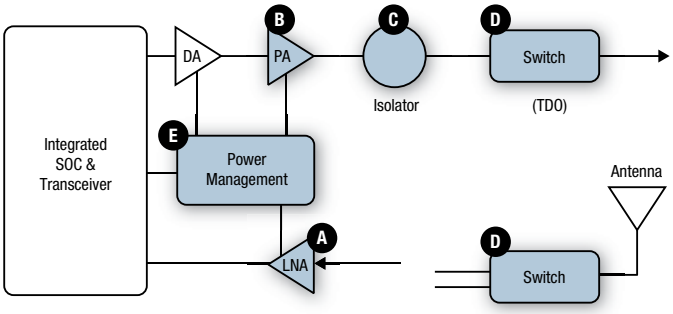
High Power T/R Switches

I	SKY12207-306LF	SKY12210-478LF
	SKY12207-478LF	SKY12212-478LF
	SKY12208-478LF	SKY12215-478LF

Infrastructure

Small Cell Basestation

<0.25 W, 0.25 W, 1 W, 5 W



Low Noise Amplifiers

A
SKY67021-396LF
SKY67022-396LF
SKY67023-396LF
SKY67150-396LF
SKY67151-396LF
SKY67153-396LF

Low Noise Amplifier + Switch

SKY65971
SKY65981

Power Amplifiers

B
SKY66001-11
SKY66002-11
SKY66005-11
SKY66008-11
SKY66013-11

High Linearity
2.4 GHz and 5 GHz

SKY65900
SE5004L

Isolators

C
SKYFR-000812
SKYFR-000748

Switches

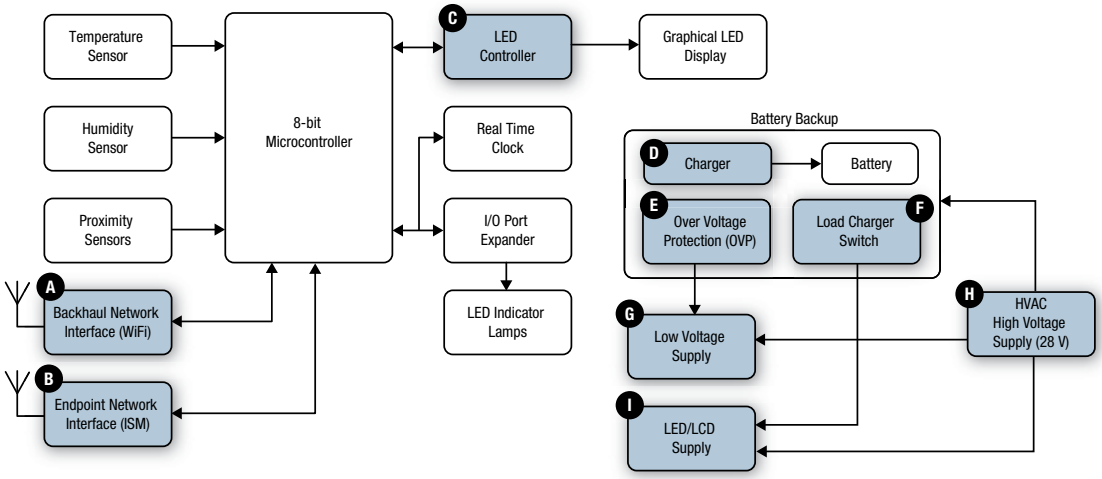
D
SKY13374-397LF
SKY13373-460LF
SKY13380-350LF

Power Management

E **Step-Down Converter**
SKY87608

Smart Energy

Thermostat



2.5 GHz Front-end Modules for WiFi Connectivity

A
SKY85302-11
SKY85303-11

Front-end Modules for ISM / Smart Energy

B
SE2431L
SE2432L
SE2436L
SE2438T
SKY65378-11

LED Controller

C AAT1401

Switching Charger

D AAT3620

Over Voltage Protection

E
AAT4684
AAT4686
AAT4687

Load Charger Switch Slew-rate Controlled Load Switches

F
AAT4250
AAT4280
AAT4282A
AAT4282B

Low Voltage Supply

G
AAT2114
AAT3221
SKY87201

High Voltage Supply

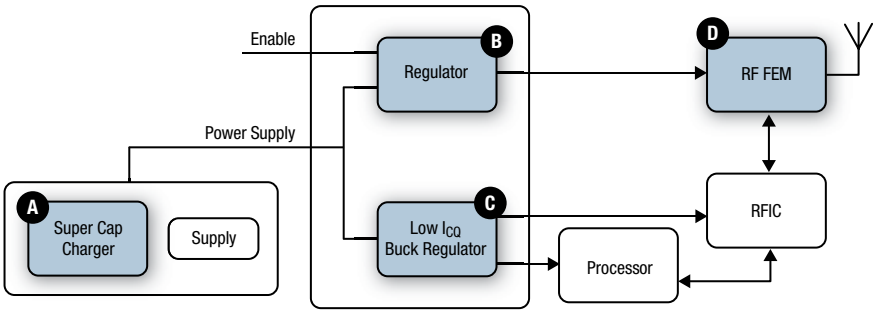
H SKY87608

LED/LCD Supply

I
AAT1403
SKY87201

Smart Energy

Smart Meter Communication Module (Simplified)



Supercap Chargers

A AAT4712

Current Limited Load Switches
AAT4621

DC/DC Converters (Switching Regulators)
Step Down Converters

B AAT1232
AAT2138
SKY87201

Step-Down Converter

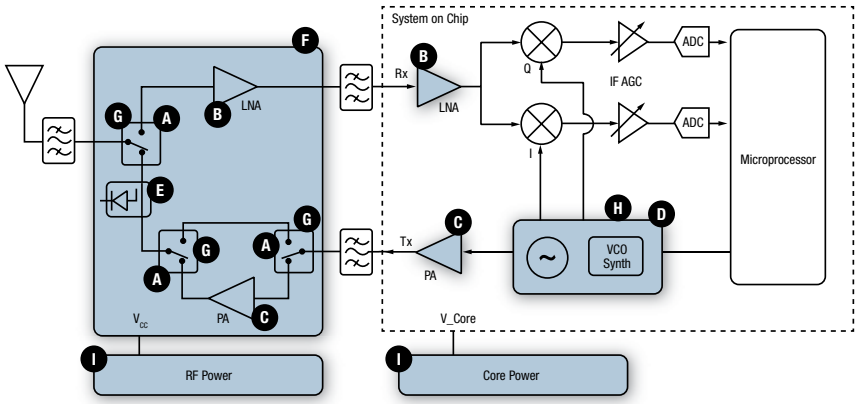
C SKY87201

Front-end Modules

D SE2435L-R
SE2438T
SE2442L-R
SKY65313-21
SKY65364-11
SKY65367
SKY65378
SKY66100
SKY66101
SKY66108
SKY66109-11

Smart Energy

Short Range Radio



Switches

A AS179-92LF
AS193-73LF
SKY13270-92LF
SKY13299-321LF
SKY13309-370LF
SKY13318-321LF
SKY13348-374LF
SKY13370-374LF

PIN Diodes

G SMP1302-040LF
SMP1302-079LF
SMP1320-040LF
SMP1320-079LF
SMP1340-040LF
SMP1340-079LF
SMP1345-518

LNAs

B SKY65045-70LF
SKY65047-360LF
SKY67013-396LF

Power Drivers/Amplifiers

C SE2425U-R
SE2433T-R
SKY65006-348LF
SKY65009-70LF
SKY65045-70LF
SKY65111-348LF
SKY65116
SKY65131
SKY65132
SKY65135
SKY65146
SKY65152
SKY65162-70LF

Synthesizers/PLLs/VCOs

D SKY72300-21
SKY72300-362
SKY72301-22
SKY72310-362
SKY73120

Varactor Diodes

H SMV1142-011LF
SMV1233-011LF
SMV1235-040LF
SMV1235-079LF
SMV1236-004LF
SMV1247-011LF
SMV1247-040LF
SMV1249-040LF
SMV1249-079LF
SMV1251-001LF
SMV1253-079LF
SMV1255-011LF
SMV1405-040LF
SMV1405-079LF
SMV1408-001LF
SMV1413-079LF
SMV1763-040LF
SMV1763-079LF

Schottky Diodes

E SMS3926-023LF
SMS3927-023LF
SMS3928-023LF
SMS7621-040LF
SMS7621-060
SMS7621-079LF
SMS7630-040LF
SMS7630-061
SMS7630-079LF

Tx/Rx Front-end Modules

F SE2431L-R
SE2432L-R
SE2435L-R
SE2436L-R
SE2438T-R
SE2442L-R
SKY66101-11
SKY66108
SKY66109 -11
SKY65313-21
SKY65342-11
SKY65346-21
SKY65364-11
SKY65366-21
SKY65367-11
SKY66100-11

Battery Chargers

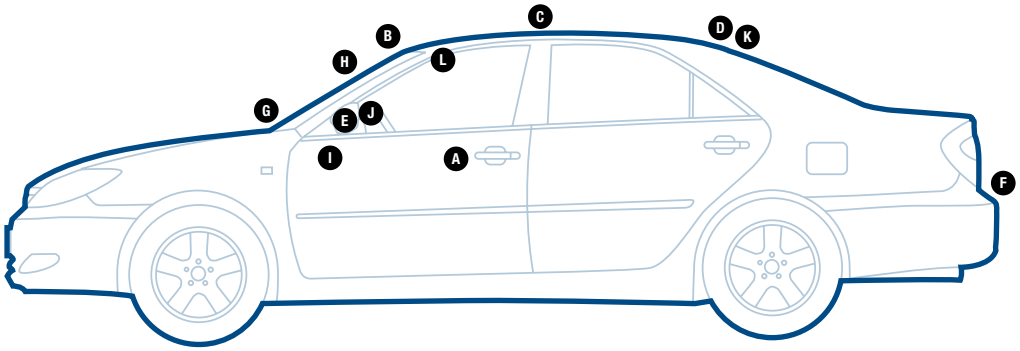
I ***Linear Chargers***
AAT3663
AAT3681

Switching Charger
AAT3620

Super Capacitor Chargers
AAT4621
AAT4712

DC/DC Converters
Step-Down Converters
AAT2114A
SKY87201

Automotive



AEC-Q101 Qualified Products*

SMPA1302-079LF	SMSA7630-061
SMPA1304-011LF	SMVA1200-999LF
SMPA1304-019LF	SMVA1211-001LF
SMPA1320-070LF	SMVA1248-079LF
SMPA3923-011LF	SMVA1253-079LF
SMSA3923-011LF	SMVA1400-611LF
SMSA7621-060	SMVA1705-004LF

*Not all stresses listed within AEC-Q101 have been performed. Qualification report available upon request. Contact your sales representative for more information. For the full details of Skyworks Quality and Reliability on our products that can be designed into automotive applications, please view the "Skyworks Quality Standards for Automotive Customers" on our Web site.

Keyless Entry

A **PIN Diode**
SMP1345-079LF

Schottky Diode
SMS7630-040LF

Switches
AS179-92LF
AS211-334
SKY13268-344LF
SKY13314-374LF
SKY13330-397LF

Garage Door Openers, Remote Controls

B **PIN Diodes**
SMPA1302-004LF*
SMPA1320-079LF*
SMPA1322-004LF*

Schottky Diode
SMSA3923-011LF*

Varactor Diodes
SMV1413-001LF
SMVA1705-004LF*

Switches
AS179-92LF
SKY13309-370LF

Infotainment

Audio/Video/Displays

C **Varactor Diodes**
SMV1212-079LF
SMV1235-079LF
SMV1255-004LF
AS179-92LF
SKY13330-397LF

PIN Diode
SMP1320-011LF

Detector Diode
SMS7630-061

Power Management

Low Drop-out (LDO) Linear Regulators
AAT3224
AAT3221 / AAT3222

Power Half Bridge
AAT1405

Mid to Large Screen LCD LED Backlight with PWM Interface
AAT1405

WiFi Connectivity 802.11a,b,g,n,ac,p

5 GHz Power Amplifier
SE5004L

2.5 GHz Front-end Module
SE2614BT

5 GHz Front-end Module
SE5007BT

Dual-band Front-end Module
SE5516A

Switches
SKY13330-397LF
SKY13370-374LF
SKY13373-460LF
SKY13351-378LF
SKY13317-373LF
SKY13309-370LF
AS179-92LF

Low Noise Amplifier
SKY65981-11

Satellite Radio

D **Switches**
AS179-92LF
AS211-344
SKY13268-344LF
SKY13314-374LF

Varactor Diode
SMV1235-011LF

Low Noise Amplifiers
SKY67175-306LF
SKY65050-372LF
SKY67107-306LF

Cruise Control/ Navigation Systems

E **Schottky Diode**
SMS7630-040LF

PIN Diodes
SMPA1304-011LF
SMPA1304-019LF

Varactor Diodes
SMVA1211-001LF
SMVA1248-079LF

GPS Receiver IC
SE4150L

Rear Collision Avoidance Sensors (24 and 77 GHz)

F **Schottky Diodes**
SMS7630-061
SMS7621-060
SMS7621-005LF
SMS7621-040LF
SMS7630-040LF

Schottky Flip Chips
DMK2308-000
DMK2790-000

Step-down Converter
AAT2148

Varactor Diode
SMV1253-011LF

In-Dash Monitor, Direction System

G **Varactor Diode**
SMV1405-074LF

Toll Tag Transponder

H **Schottky Diode**
SMS7630-006LF

Airbags

I **Switches**
AS179-92LF
AS211-334
SKY13268-344LF

Climate Control

J **LNA**
SKY67012-396LF

Switch
AS213-92LF

Intelligent Antenna

K **Switches**
SKY13330-397LF
AS179-92LF

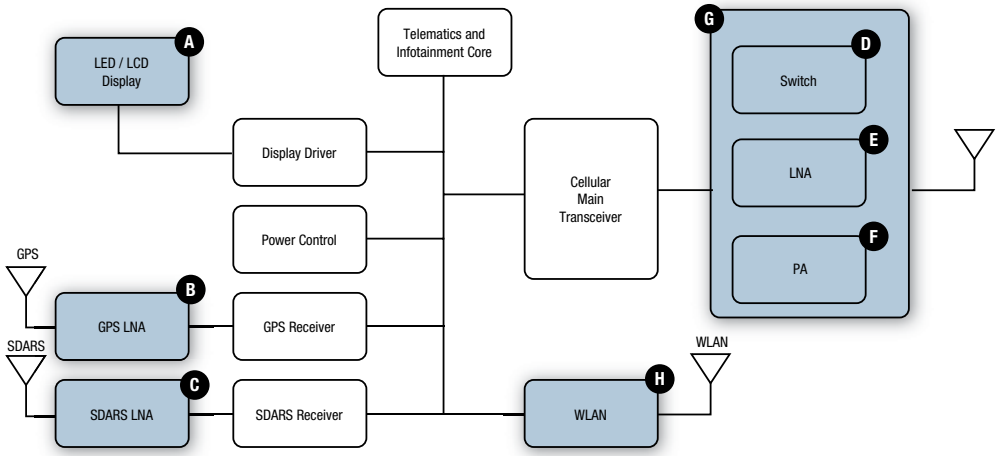
Telematics

L **Power Amplifiers**
SKY77619
SKY77701
SKY77702
SKY77703
SKY77704
SKY77705
SKY77736
SKY77737

Switches
AS172-73
SKY13290-313LF
SKY13414-485LF
SKY13323-378LF
SKY13321-360LF
SKY13418-485LF

Automotive

Telematics and Infotainment



A **LCD Panel Power Supply**
SKY82830

WLED Backlight Driver
SKYA21004

GPS Low Noise Amplifier

B SKY65902-21

Low Noise Amplifiers

C SKY65151-96LF
SKYA21007

Switches

D SKY13421-486LF
SKY13437-11
SKYA21003

E **Low Noise Amplifier**
SKY65151-396LF

Power Amplifier

F SKY77619-51

Front-end Modules

G SKY78010
SKY78011

WiFi Front-end Modules

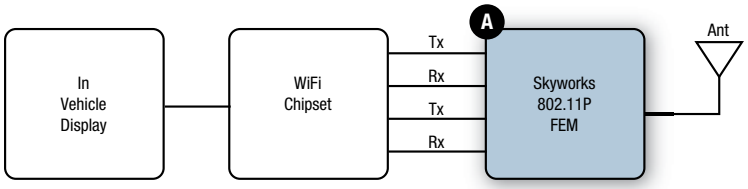
H **2.4 GHz**
SE2611T
SE2601T

5 GHz
SE5007BT

GPS Receiver
SE4150L-R

Automotive

Car to Communications 802.11P



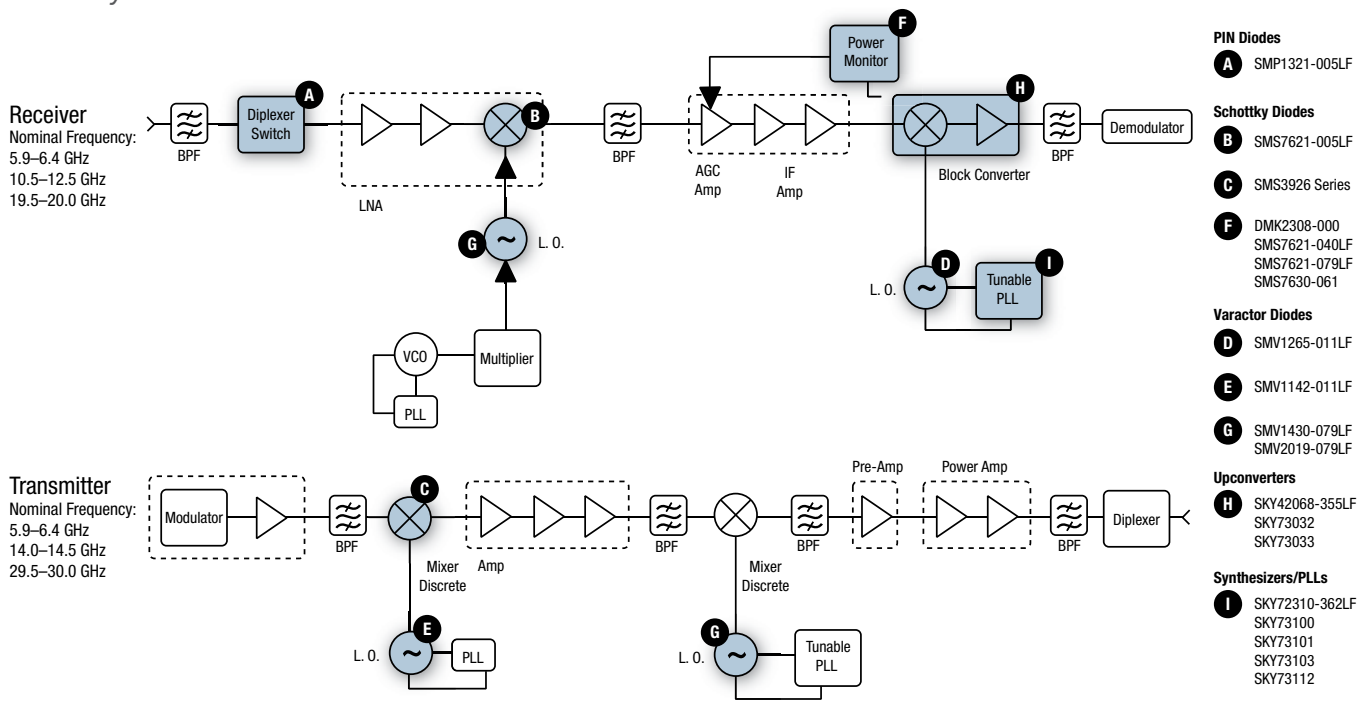
5 GHz Power Amplifiers

A SE5003L
SE5004L
SE5017L
SKY85710

Dual Band Front-End Module
SE5517A

Broadband Access Systems

Satellite Systems



PIN Diodes
- A SMP1321-005LF

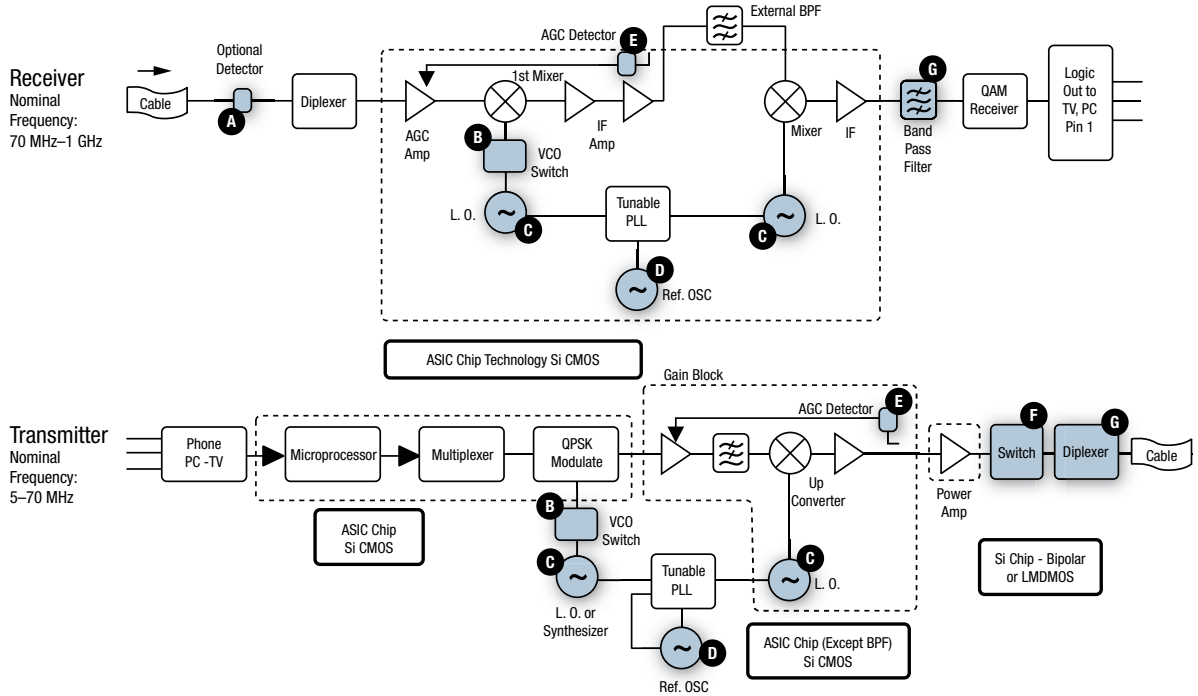
Schottky Diodes
- B SMS7621-005LF
- C SMS3926 Series
- F DMK2308-000, SMS7621-040LF, SMS7621-079LF, SMS7630-061

Varactor Diodes
- D SMV1265-011LF
- E SMV1142-011LF
- G SMV1430-079LF, SMV2019-079LF

Upconverters
- H SKY42068-355LF, SKY73032, SKY73033

Synthesizers/PLLs
- I SKY72310-362LF, SKY73100, SKY73101, SKY73103, SKY73112

CATV Modem



PIN Diodes
- A SMP1330-005LF
- B SMP1321-040LF, SMP1321-079LF

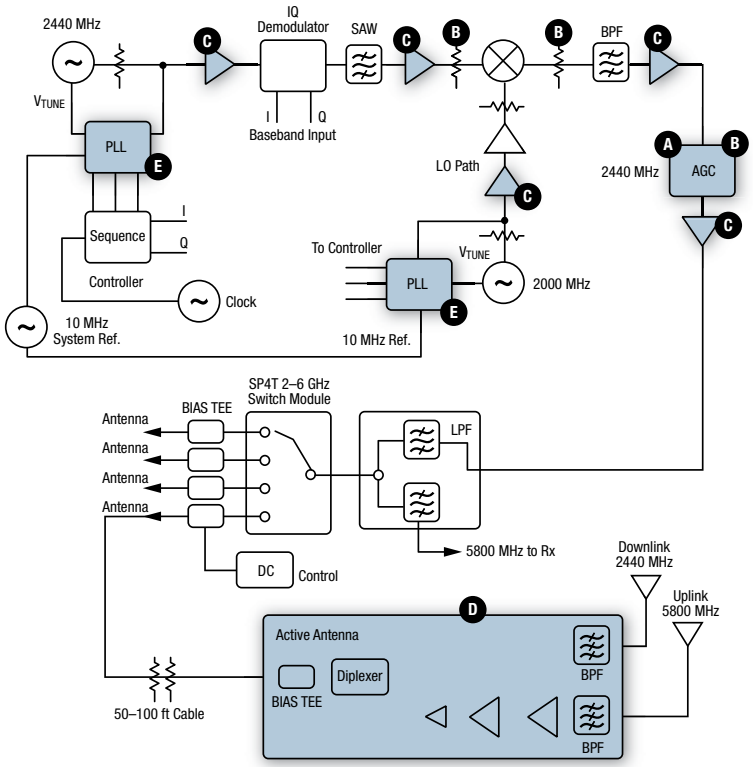
Varactor Diodes
- C SMV1265 Series
- D SMV1213-079LF

Schottky Diodes
- E SMS7621-040LF, SMS7621-079LF

Switches
- F **PIN Diodes** SMP1302-079LF, SMP1304-011LF, SMP1307-011LF
  SPDT (SP2T) RF Switch AS179-92LF

G Ceramic Band Pass Filters

Reader / Active Antennas / Transmitter, Full Duplex 2440



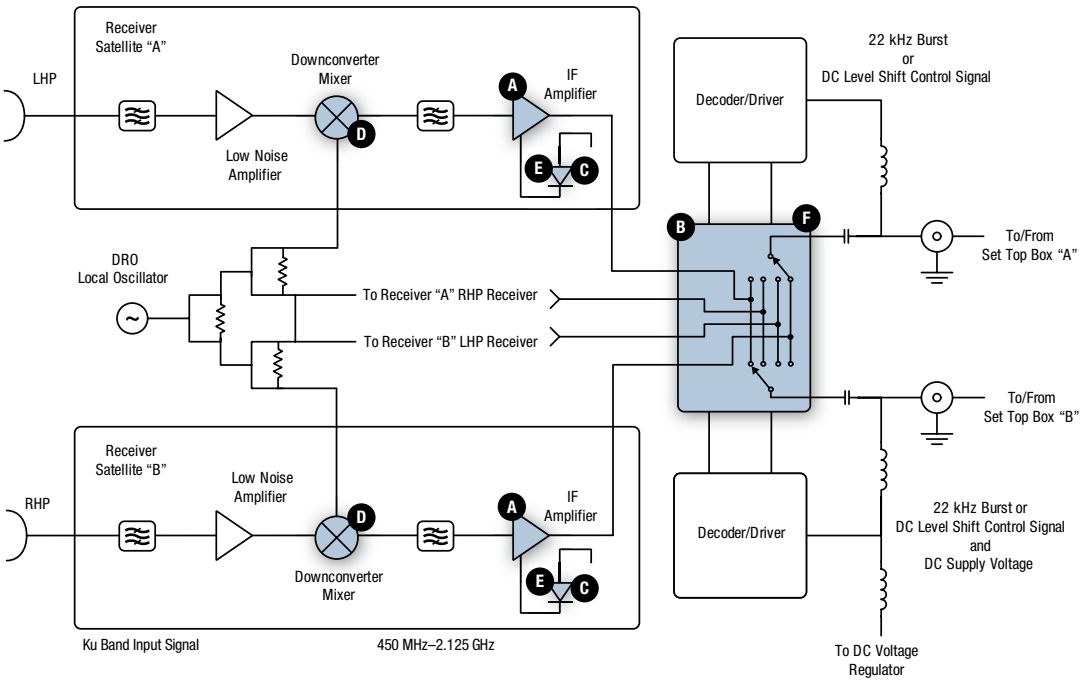
VV Attenuators
- A: AV111-12LF, AV113-12LF

PIN Diodes
- B: SMP1304 Series, SMP1307 Series

Amplifiers
- C: SKY65013, SKY65014, SKY65015, SKY65016, SKY67014-396LF, SKY67130-396LF
- D: SKY65111-348LF, SKY67014-396LF

Synthesizer/PLLs
- E: SKY72300-21, SKY74038-21

Low Noise Block (LNB)



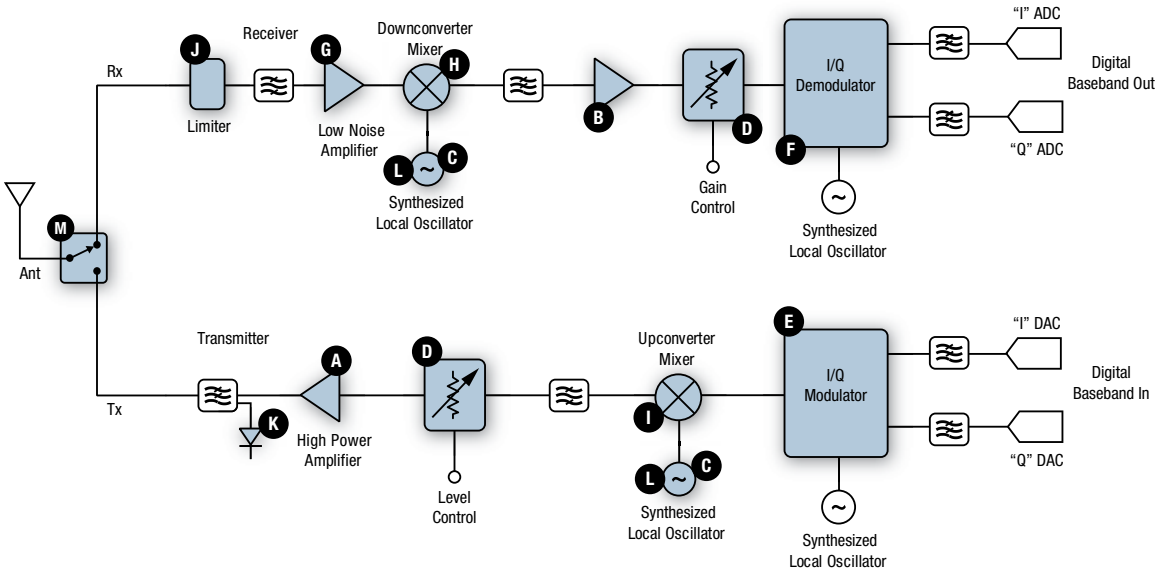
Amplifiers
- A: SKY65013, SKY65014, SKY65015, SKY65016, SKY65017-70LF

Switches
- B: SKY13264-340LF, SKY13272-340LF, SKY13292-365LF, SKY13293-340LF, SKY13327-365LF, SKY13369-365LF
- C: SMS7621-006LF

Schottky Diodes
- D: DMK2308-000, DMK2790-000
- E: SMS7621-060

PIN Diodes
- F: SMP1321-005LF, SMP1340-040LF, SMP1340-079LF

Transceiver (Simplified)



Amplifiers

A
SKY65028-70LF
SKY65095-360LF
SKY65113-84LF

B
SKY65013
SKY65014
SKY65015
SKY65016
SKY67130-396LF

Synthesizers/PLLs

C
SKY73101-11
SKY73126-31
SKY73134-11

RF Attenuators

D **Digital**
SKY12339-350LF
SKY12340-364LF
SKY12343-364LF
SKY12345-362LF
SKY12355-337LF

Voltage Variable
AV101-12LF
SKY12228-12LF
SKY12233-11LF
SKY12235-11

PIN Diodes
SMP1304 Series
SMP1307 Series
SMP1352 Series

Direct Quadrature Modulators

E
SKY73077-459LF
SKY73078-459LF
SKY73092-459LF

Direct Quadrature Demodulators

F
SKY73009
SKY73012

Low Noise Amplifiers

G
SKY67021-396LF
SKY67022-396LF
SKY67023-396LF
SKY67012-396LF
SKY67013-396LF
SKY67014-396LF
SKY67100-396LF
SKY67101-396LF
SKY67102-396LF
SKY67105-306LF
SKY67106-306LF
SKY67107-306LF
SKY67111-396LF
SKY67150-396LF
SKY67151-396LF
SKY67153-396LF

Down-conversion Mixers

H
SKY73032-11
SKY73033-11
SKY73035-11
SKY73021-11
SKY73087-11
SKY73090-21

Up-conversion Mixers

I
SKY73062-11
SKY73063
SKY73069-11

Limiter Diodes

J
CLA460X Series
SMP1330-085LF

Schottky Diodes

K
SMS3922 Series
SMS7621-040LF
SMS7630-040LF
SMS7630-060
SMS7630-061

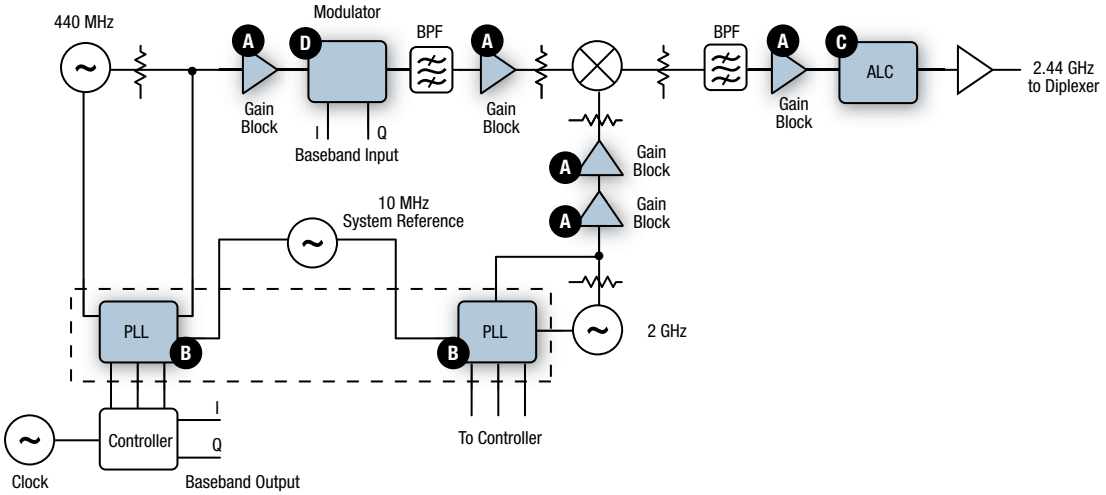
Varactor Diodes

L
SMV121X Series
SMV124X Series
SMV125X Series
SMV1263 Series
SMV1763-079LF
SMV1770-079LF
SMV1771-079LF
SMV2201-040LF

High Power T/R Switches

M
SKY12207-478LF
SKY12208-478LF
SKY12210-478LF
SKY13270-92LF
SKY13290-313LF
SKY13299-321LF
SKY13306-313LF
SKY13319-374LF
SKY13320-374LF
SKY13321-360LF

RF ID Transmitter



Amplifiers

- A: SKY65013, SKY65014, SKY65015, SKY65016, SKY67012-396LF, SKY67013-396LF, SKY67014-396LF, SKY67130-396LF

Synthesizers/PLLs

- B: SKY72300-21, SKY72302-21, SKY73100, SKY73112, SKY74038-21

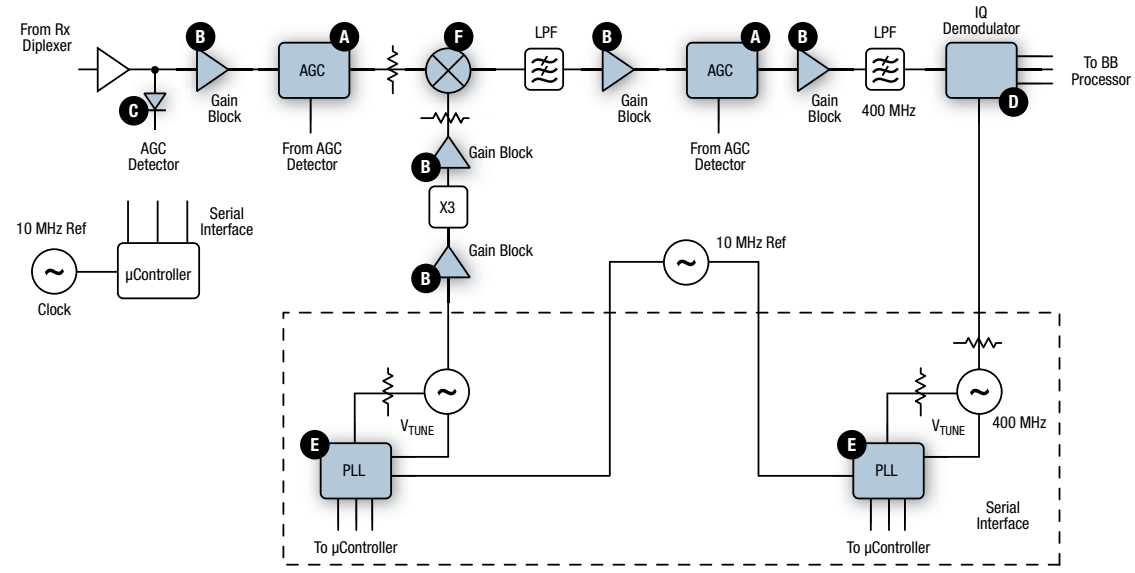
Attenuators

- C: SKY12322-86LF, SKY12323-303LF, SKY12324-73LF, SKY12325-350LF, SKY12328-350LF, SKY12329-350LF, SKY12345-362LF, SKY12347-362LF, SKY12406-360LF

Direct Quadrature Modulator

- D: SKY73010-11

RF ID Receiver



Digital Attenuators

- A: SKY12324-73LF, SKY12325-350LF, SKY12328-350LF, SKY12329-350LF, SKY12345-362LF, SKY12406-360LF

Amplifiers

- B: SKY65013, SKY65014, SKY65015, SKY65016, SKY67012-396LF, SKY67013-396LF, SKY67014-396LF, SKY67130-396LF

Schottky Diode

- C: SMS7630-040LF, SMS7630-061, SMS7630-079LF

Quadrature Demodulators

- D: SKY73009, SKY73012

Synthesizers/PLLs

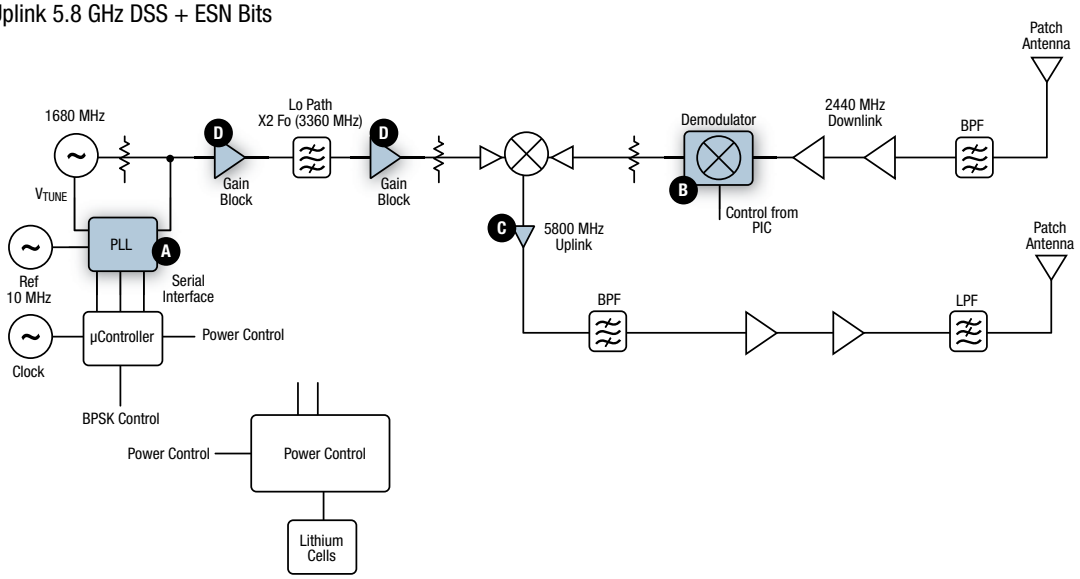
- E: SKY72300-21, SKY73100, SKY73112, SKY74038-21

Mixers

- F: SKY42068-355LF, SKY73032, SKY73035-11

RF ID Full Duplex Tag

Downlink 2.44 GHz DSS
Uplink 5.8 GHz DSS + ESN Bits



Synthesizers/PLLs

- **A** SKY72300-21, SKY74038-21

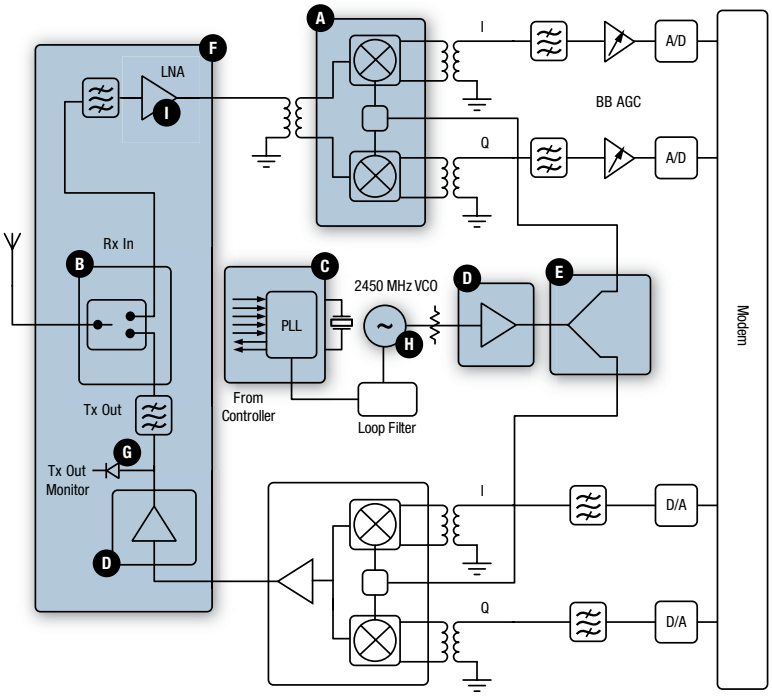
Direct Quadrature Demodulators

- **B** SKY73009, SKY73012

Amplifiers

- **C** SKY65015-70LF, SKY65015-92LF
- **D** SKY65016-70LF, SKY65016-92LF, SKY67130-396LF

2.45 GHz DSS Wireless Reader (Simplified)



Quadrature Demodulators

- **A** SKY73009, SKY73012

Switch

- **B** AS179-92LF, AS211-334, SKY13306-313LF, SKY13348-374LF, SKY13377-313LF, SMP1325-085LF

Synthesizers/PLLs

- **C** SKY74038-21

Amplifiers

- **D** SE2425U, SE2433T, SKY65006-348LF, SKY65013-70LF, SKY65013-92LF, SKY65131, SKY65132, SKY67130-396LF

Power Divider

- **E** PD22-73LF

Front-end Modules

- **F** SE2431L, SE2432L, SE2436L, SE2437L, SE2438T, SKY65344-21, SKY65352-21

Schottky Detector

- **G** SMS7630-005LF

Varactor Diodes

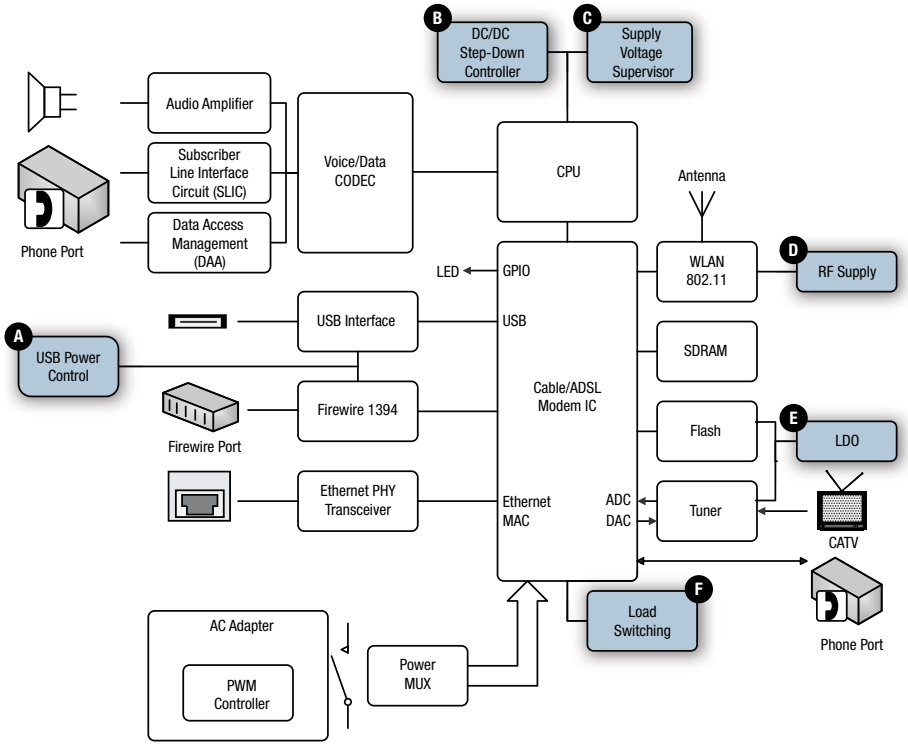
- **H** SMV1142-011LF, SMV1235-011LF, SMV1249-003LF, SMV1251-079LF, SMV1413-001LF, SMV1413-079LF

Low Noise Amplifier

- **I** SKY65047-360LF, SKY67014-396LF

Power Management

ADSL and Cable Modems



A **USB Power Control**
Step-Up Converters
AAT1275
AAT1275A
AAT1276
Single Input High Side Switches
AAT4610B
AAT4614

B **DC/DC Step-Down Controller**
Step-Down Converters
AAT1161
AAT1189
AAT2687
AAT2688

C **Supply Voltage Supervisor**
Microprocessor Supervisor
AAT3517
AAT3522

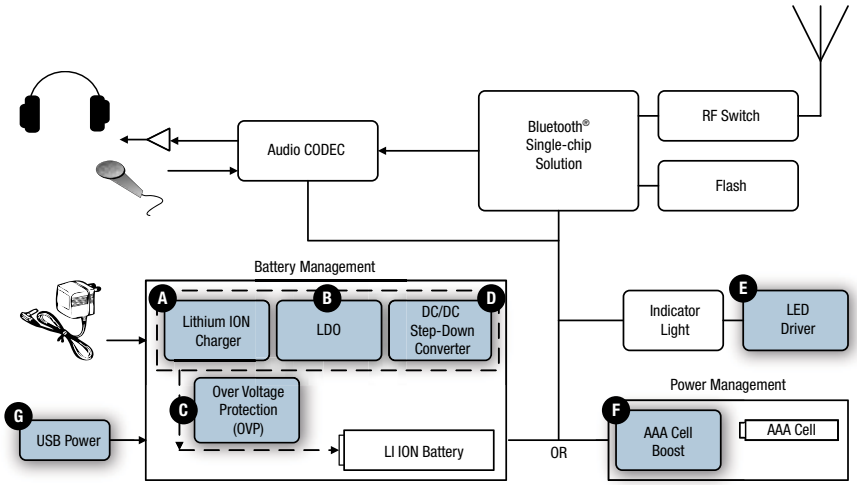
D **RF Supply**
PMIC-PMU
AAT2522
AAT2687
AAT2688

E **LDO (for FLASH)**
LDO
AAT3242
AAT3244

F **Load Switching**
Current Limiting Load Switches
AAT4610B
AAT4614

Power Management

Bluetooth® Devices



A **Lithium-Ion Charger**
Battery Chargers
AAT3681
AAT3688
AAT3698

B **LDO**
LDO
AAT3244
PMIC PMU
AAT2605
AAT2606
AAT2608A
AAT3604B

C **OVP**
AAT4684
AAT4686
AAT4687

D **DC/DC Step-Down Converter**
Step-Down Converters
AAT2120
SKY87201-11
PMIC PMU
AAT2554
AAT2605A
AAT2749
AAT3604B

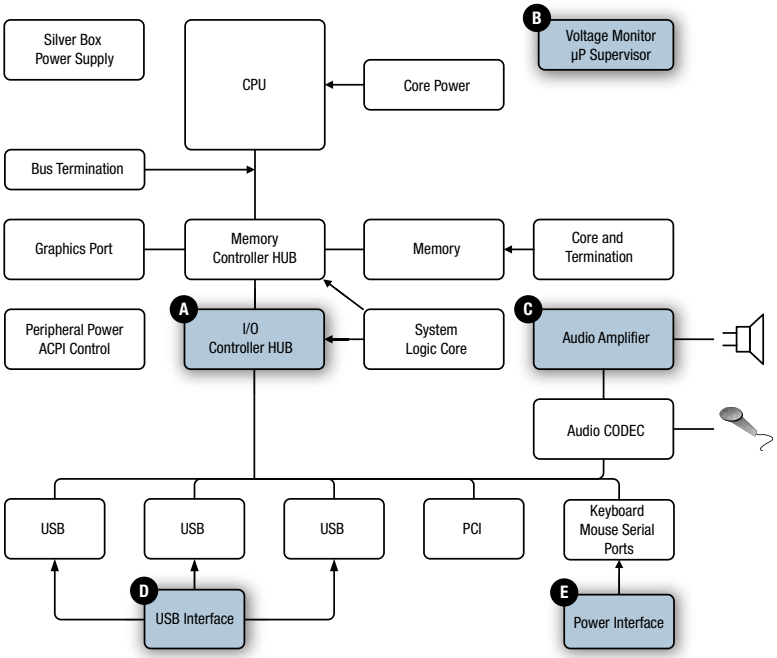
E **LED Driver**
RGB LED Driver
AAT3129

F **AA Cell Boost**
Step-Up Converters
AAT1217
AAT1218

G **USB Power**
Step-Up Converters
AAT1275
AAT1275A
AAT1276
Single Input High Side Switches
AAT4614
AAT4616

Power Management

Desktop Computers / Workstations / Servers



A **I/O Controller Hub**
Step-Down Converters
AAT1154
AAT1160
AAT1185

B **Voltage Monitor Microprocessor Supervisor**
Microprocessor Supervisor
AAT3517
AAT3522

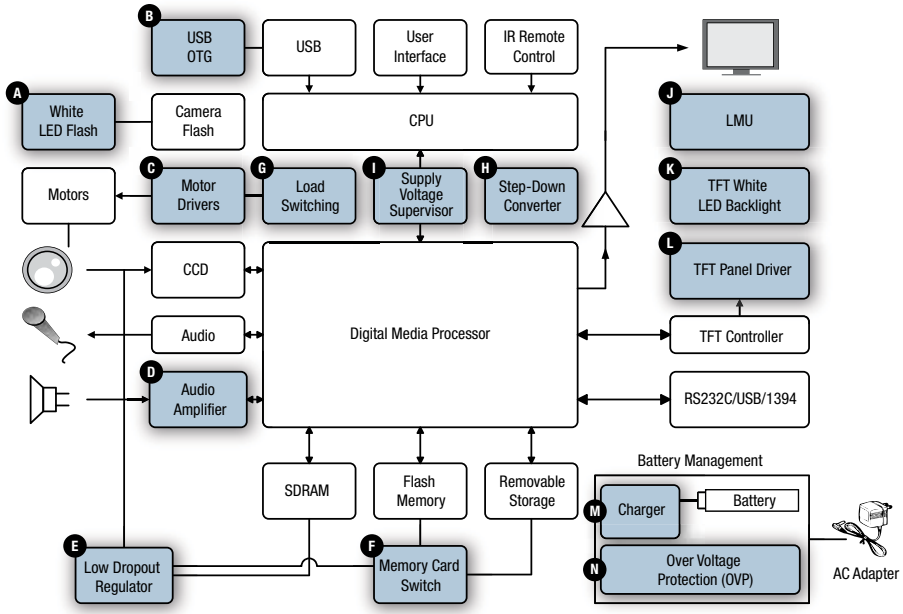
C **Audio Amplifier**
Audio
AAT5102

D **USB Interface**
Single Input High Side Switches
AAT4614
AAT4616A

E **Power Interface**
Slew Rate Controlled Load Switches
AAT4280
AAT4282A

Power Management

Digital Cameras



A **White LED Flash**
LED Camera Flash Driver
AAT1270
AAT1272
AAT1274
AAT1277
AAT1282
AAT3170
AAT3171
AAT3171A
AAT3174
AAT3176A
AAT3177A

B **USB OTG**
Step-Up Converters
AAT1276

C **Motor Driver**
Power Half Bridges
AAT4901
AAT4910
AAT4900

D **Audio Amplifier**
Audio
AAT5102

E **LDO**
LDO
AAT3244
AAT3218
AAT3220
PMIC-PMU
AAT2601A
AAT3603A

F **Memory Card Switch**
Single Input High Side Switches
AAT4610
AAT4614
AAT4618

G **Load Switching**
Slew Rate Controlled Load Switches
AAT4280
AAT4285
I/O Expander Serial Controlled Load Switches
AAT4290
AAT4291
AAT4296
AAT4298
Single Input High Side Switches
AAT4610A

H **Step-Down Converter**
AAT1142
AAT2114A
AAT2148
AAT2158
AAT2522
AAT2785
PMIC-PMU
AAT2601A
AAT3603A

I **Supply Voltage Supervisor**
Microprocessor Supervisor
AAT3517
AAT3522

J **LMU**
Lighting Management Unit
AAT2803
AAT2848
AAT2862
AAT2870

K **TFT White LED Backlight**
Serial Boost LED Driver
AAT1231
AAT1235
AAT1236
AAT1239
AAT1401
AAT1402
AAT1403
AAT1410
AHK1421

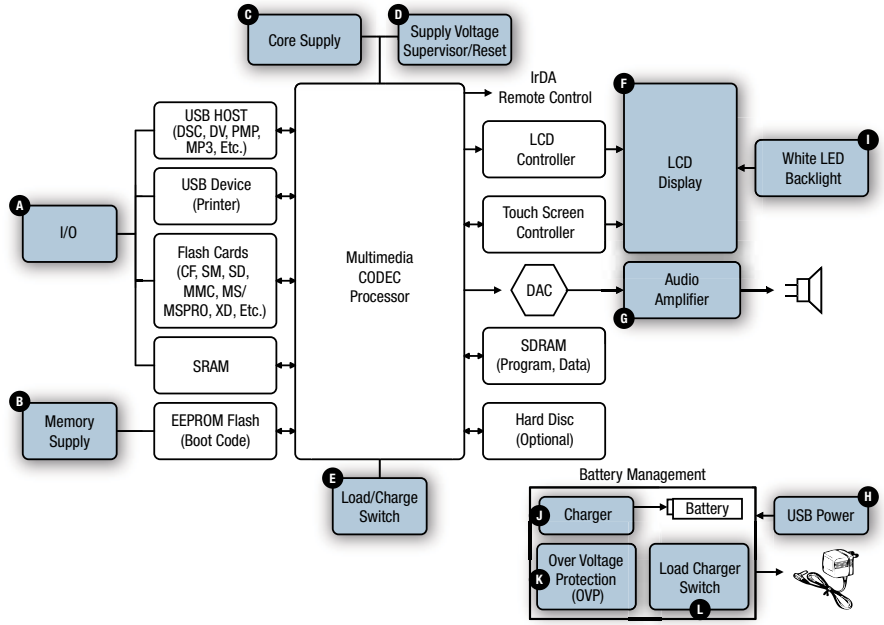
L **TFT Panel Display**
Panel Power
AAT2822
AAT2823
AAT3190

M **Chargers**
Battery Chargers
AAT3672
AAT3681
AAT3691
AAT3698
PMIC-PMU
AAT2601A
AAT3603A

N **OVP**
AAT4684
AAT4686
AAT4687

Power Management

Digital Photo Frames



A **I/O**
LDO
AAT3218
AAT3220
PMIC-PMU
AAT2601A
AAT3603A

B **Memory Supply**
LDO
AAT3220
AAT3218
PMIC-PMU
AAT2601A
AAT3603A

C **Core Supply**
LDO
AAT3218
AAT3220
AAT3236
PMIC-PMU
AAT2601A
AAT3603A
Step-Down Converters
AAT1189
AAT1185

D **Supply Voltage Supervisor/Reset**
Microprocessor Supervisor
AAT3517
AAT3522

E **Load/Charge Switch**
Single Input High Side Switches
Slew Rate Controlled Load Switches
AAT4280
AAT4250

F **LCD Display**
Panel Power
AAT2822
AAT2823
AAT3190

G **Audio Amplifier**
Audio
AAT5102

H **USB Power**
Step-Up Converters
AAT1218
AAT1276
Single Input High Side Switches
AAT4610B
AAT4618
AAT4614

I **White LED Backlight Driver**
AAT1231
AAT1235
AAT1236
AAT1405
AAT1407
AAT1409
AAT1451

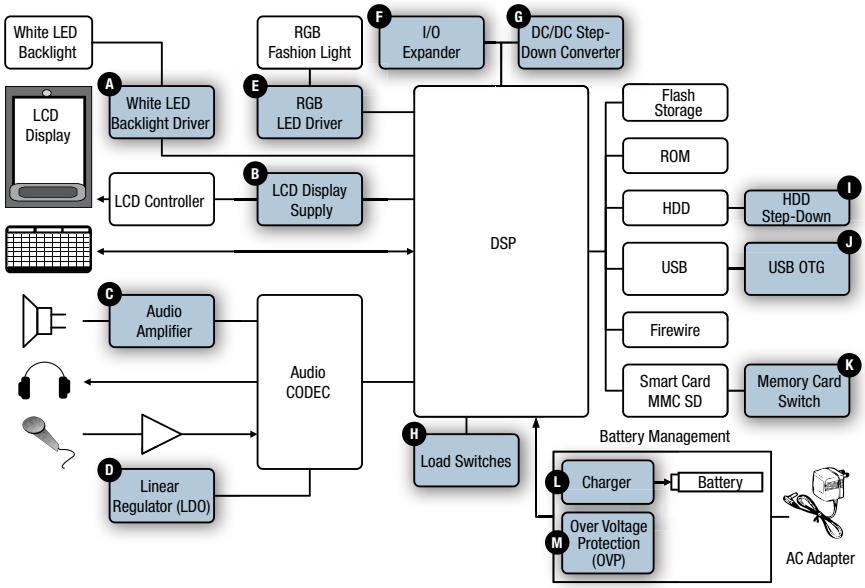
J **Charger**
Linear Chargers
AAT3670
AAT3686
AAT3691
AAT3698
AAT3673
Switching Chargers
AAT3620

K **OVP**
AAT4684
AAT4686
AAT4687
PMIC-PMU
AAT2601A
AAT3603A

L **Load Charger Switch**
Single Input High Side Switches
AAT4610A
AAT4685
Slew Rate Controlled Load Switches
AAT4280

Power Management

Media Players (MP3, MP4, PMP)



A White LED Driver
Serial Boost LED Driver
AHK3292
AAT1231
AAT1239
AAT3169
AAT1401
AHK1421

B LCD Display Driver
Panel Power
AAT2822
AAT2823
AAT3190

C Audio Amplifier
AAT5102

D LDO
LDO
AAT3244
AAT3218
AAT3236

PMIC-PMU
AAT2601A
AAT2605
AAT2606
AAT3603A

E RGB LED Driver
AAT3128

F I/O Expander
Serial Controlled Load Switches
AAT4291

RGB LED Controllers
AAT4295
AAT4297

G DC/DC Step-Down Converter
Step-Down Converter
AAT2114A
AAT2522

PMIC-PMU
AAT2608A

H Load Switching
Slew Rate Controlled Load Switches
AAT4280
AAT4282A

Single Input High Side Switches
AAT4610A
AAT4614
AAT4616

I HDD Step-Down
Step-Down Converters
AAT1160
AAT1161
AAT1185

J USB OTG
Step-Up Converters
AAT1275
AAT1276

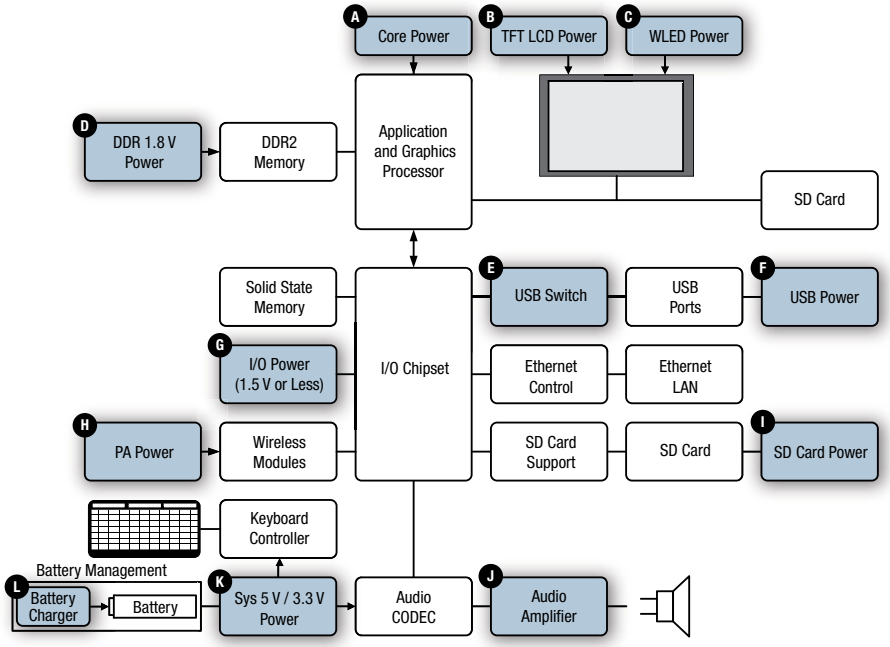
K Memory Card Switch
Single Input High Side Switches
AAT4610
AAT4618
AAT4614

L Charger
Linear Chargers
AAT3691
AAT3692

M OVP
AAT4684
AAT4686
AAT4687

Power Management

Netbooks / MID



A **Core Power**
Step-Down Converters
AAT1142*
AAT1185
AAT2114A
AAT2522
PMIC-PMU
AAT3601A
AAT3603A

B **TFT LCD Power**
Panel Power
AAT2822
AAT2823
AAT3190

C **White LED Backlight Drivers**
AAT1231
AAT1235
AAT1236
AAT1239
AAT1405
AAT1407
AAT1409
AAT1451

D **DDR 1.8 V Power**
PMIC-PMU
AAT2153
AAT2158

E **USB Switch**
Single Input High Side Switches
AAT4614
AAT4616
AAT4616A
Slew Rate Controlled Load Switches
AAT4282A

F **USB Power**
Step-Up Converters
AAT1218
AAT1276

G **I/O Power (1.5 V or Less)**
PMIC-PMU
AAT3601A
AAT3603A

H **PA Power**
LDO
AAT3218
AAT3236
AAT3244
Step-Down Converter
AAT1171

I **SD Card Power**
Single Input High Side Switches
AAT4620
AAT4621
Multiple Input High Side Switches
AAT4650

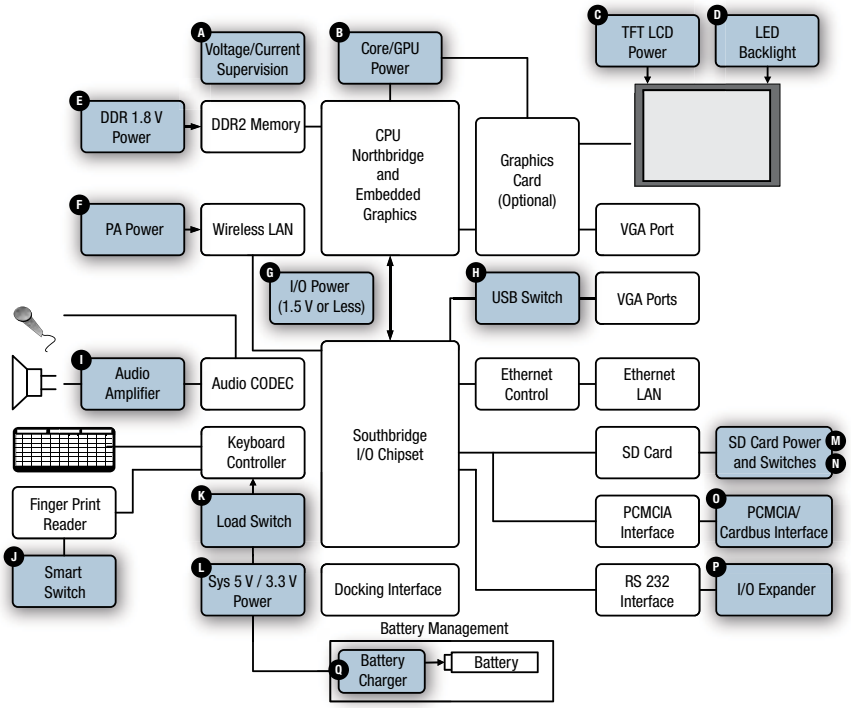
J **Audio Amplifier**
AAT5102

K **Sys 5 V / 3.3 V Power**
Step-Down Converters
AAT1160*
AAT1161
AAT1185
PMIC-PMU
AAT3601A
AAT3603A

L **Battery Charger**
Switching Charger
AAT3620

Power Management

Notebooks / Laptops / Tablet PCs



A Voltage Supervision
AHK432

Microprocessor Supervisor
AAT3512
AAT3522

B Core/GPU Power
Step-Down Converters
AAT1160
AAT1185

PMIC-PMU
AAT3601A
AAT3603A

C TFT LCD Power
Panel Power
AAT2822
AAT2823
AAT3190

D White LED Backlight Driver
AAT1409
AAT1451

E DDR 1.8 V Power
PMIC PMU
AAT2114A
AAT2153
AAT2158
AAT3603A

F PA Power
LDO
AAT3218
AAT3236
AAT3244

Step-Down Converter
AAT1171

G I/O Power (1.5V or less)
PMIC-PMU
AAT3601A
AAT3603A

H USB Switch
Single Input High Side Switches
AAT4610B
AAT4614

Slew Rate Controlled Load Switches
AAT4280
AAT4282A

I Audio Amplifier
AAT5102

J Smart Switch
Single Input High Side Switches
AAT4610
AAT4614
AAT4618

K Load Switch
Single Input High Side Switches
AAT4610B
AAT4614

Slew Rate Controlled Load Switches
AAT4280
AAT4282A

L Sys 5 V / 3.3 V Power
Step-Down Converters
AAT1160
AAT1161
AAT1185

PMIC-PMU
AAT3601A
AAT3603A

M SD Card Power
Single Input High Side Switches
AAT4620
AAT4621

N SD Card Power
Multiple Input High Side Switches
AAT4650

O PCMCIA/Cardbus Interface
Single Input High Side Switches
AAT4620
AAT4621

Multiple Input High Side Switches
AAT4650

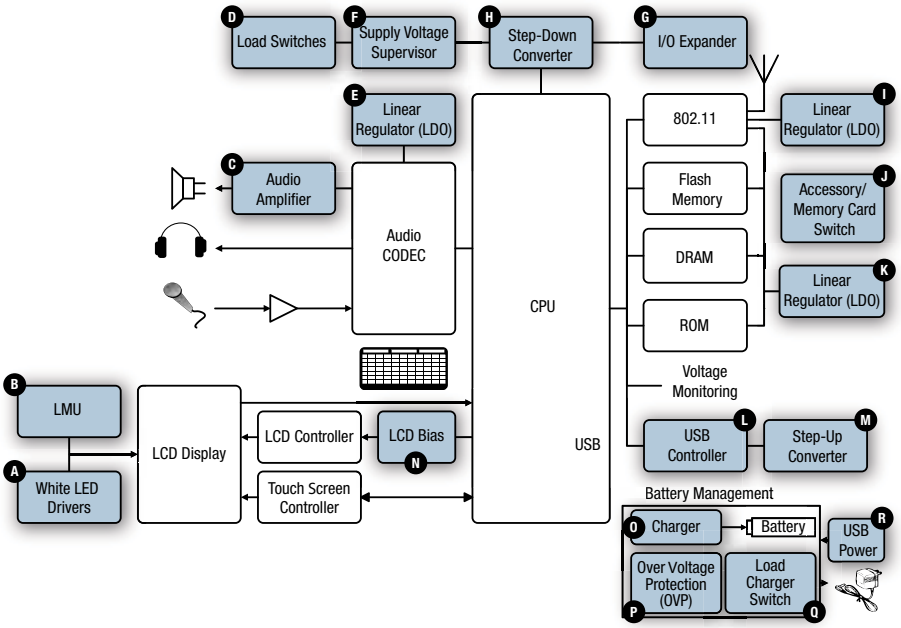
P I/O Expander
Slew Rate Controlled Load Switches
AAT4280
AAT4282A

Serial Controlled Load Switches
AAT4290
AAT4296
AAT4298

Q Battery Charger
Switching Chargers
AAT3620

Power Management

Portable Navigation Devices (PNDs)



A **White LED Backlight**
Serial Boost LED Driver
AAT1231
AAT1235
AAT1236
AAT1239
AAT1405
AAT1407
AAT1451

B **LMU**
Lighting Management Unit
AAT2848
AAT2862
AAT2822
AAT2870

C **Audio Amplifier**
AAT5102

D **Load Switching**
Slew Rate Controlled Load Switches
AAT4282A
AAT4280

Serial Controlled Load Switches
AAT4290
AAT4291

E **LDO for CPU**
LDO
AAT3218
AAT3220
AAT3236

PMIC-PMU
AAT3608

F **Supply Voltage Supervisor**
Microprocessor Supervisor
AAT3517
AAT3522

G **I/O Expander**
Serial Controlled Load Switches
AAT4296
AAT4298

H **Step-Down Converters**
AAT1185
AAT1189
AAT2114A
AAT2522
AAT2687
AAT2688
AAT2689

I **LDO for 802.11**
LDO
AAT3244
AAT3218

J **Memory Card Switch**
Single Input High Side Switches
AAT4610
AAT4614
AAT4618

K **LDO**
LDO
AAT3218
AAT3220
AAT3236

L **USB Controller**
Single Input High Side Switches
AAT4601
AAT4618
AAT4626

M **Step-Up Converters**
AAT2215
AAT1218
AAT1276

N **LCD Bias**
Panel Power
AAT2822
AAT2823
AAT3190

O **Charger**
Switching Chargers
AAT3620

P **OVP**
AAT4684
AAT4686
AAT4687

Q **Load Charger Switch**
Slew Rate Controlled Load Switches
AAT4250
AAT4280
AAT4282

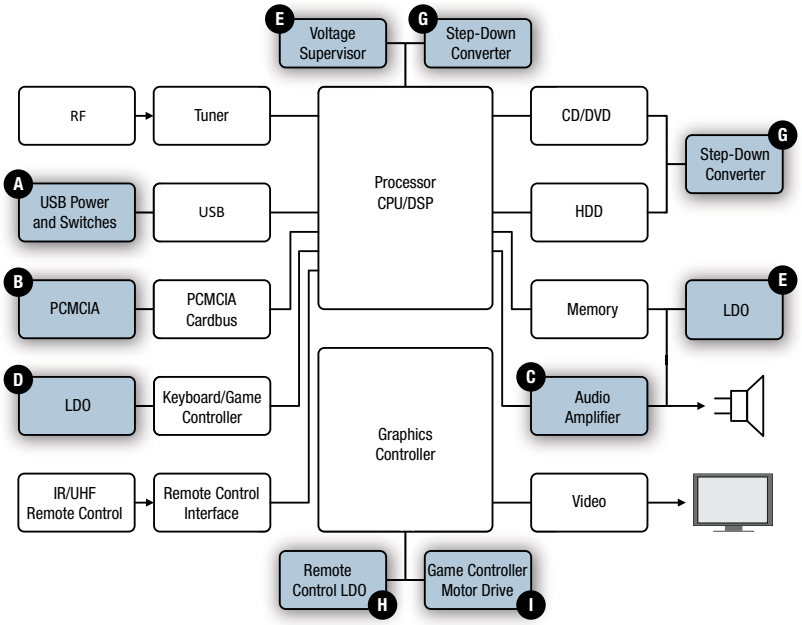
Single Input High Side Switches

R **USB Power**
PMIC-PMU
AAT2601A
AAT2608A
AAT3603A

Single Input High Side Switches
AAT4610
AAT4618
AAT4614

Power Management

Set-Top Boxes and Game Consoles



A **USB Power**
Step-Up Converters
AAT1275
AAT1275A
AAT1276

Single Input High Side Switches
AAT4614
AAT4616
AAT4616A

B **PCMCIA**
Multiple Input High Side Switches
AAT4650

C **Audio Amplifier**
AAT5102

D **LDO**
LDO
AAT3244
AAT3218

PMIC PMU
AAT2605
AAT2606

E **LDO**
LDO
AAT3221

F **Voltage Supervisor**
Microprocessor Supervisor
AAT3512
AAT3522

G **Step-Down Converters**
AAT1189
AAT1185
AAT1160*
AAT2522

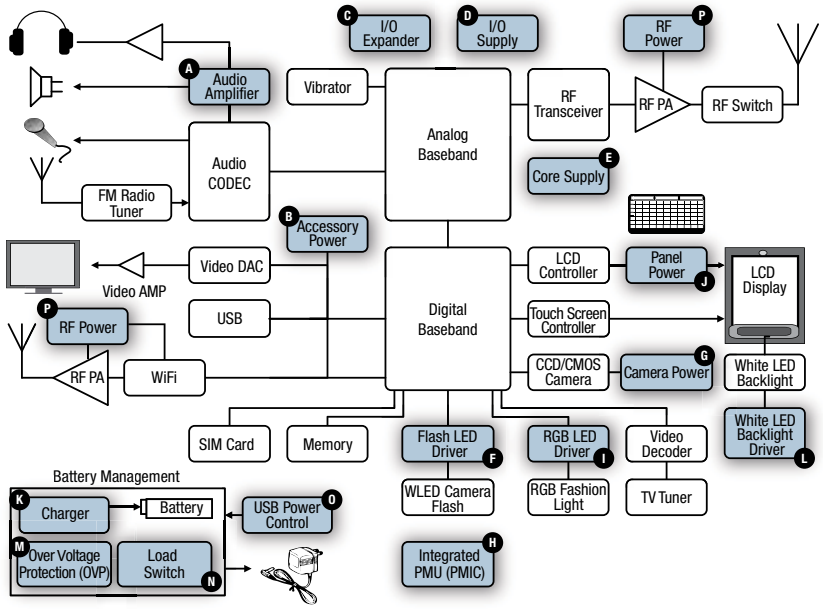
PMIC PMU
AAT2687
AAT2688
AAT2689

H **Remote Control LDO**
LDO
AAT3218
AAT3220

I **Game Controller Motor Drive**
Power Half Bridges
AAT4901
AAT4910

Power Management

Smartphones



A Audio Amplifier
AAT5102

B Accessory Power
PMIC-PMU
AAT2605
AAT2612
AAT2614

Single Input High Side Switches
AAT4610
AAT4618
AAT4614

C I/O Expander
Serial Controlled Load Switches
AAT4298
AAT4292

D I/O Supply
PMIC-PMU

LDO
AAT3218
AAT3220

E Core Supply
Step-Down Converters
AAT2158
AAT1142

LDO
AAT3236
AAT3237

PMIC-PMU
AAT2603
AAT2608

F Flash LED Driver
LED Camera Flash Driver
AAT1270
AAT1272
AAT1274
AAT1282*
AAT3176A
AAT3177A
SKY81279
SKY81292

Lighting Management Unit
AAT2862
AAT2848

G CCD Power
Camera Power
AAT3190
AAT2612
AAT2614

H Integrated PMU
PMIC-PMU
AAT2601A
AAT3603A
AAT2605
AAT2606
AAT2608A

I RGB LED Drivers
RGB LED Controllers
AAT4295

RGB LED Drivers
AAT3128
AAT3129

J LCD Display Supply
Panel Power
AAT2822
AAT2823
AAT3190

K Charger
Linear Chargers
AAT3672
AAT3683

Switching Chargers
AAT3620

L White LED Backligjt Driver
AAT1231
AAT1235
AAT1236
AAT1239
AAT3169
AHK3294
AHK3296
AAT1401
AHK1421

Lighting Management Unit
AAT2861
AAT2862
AAT2866
AAT2803
AAT2870
AAT2893

M Over Voltage Protection (OVP)
AAT4684
AAT4687

N Load Switch
Slew Rate Controlled Load Switches
AAT4250
AAT4280
AAT4282B

Power Saving Load Switches

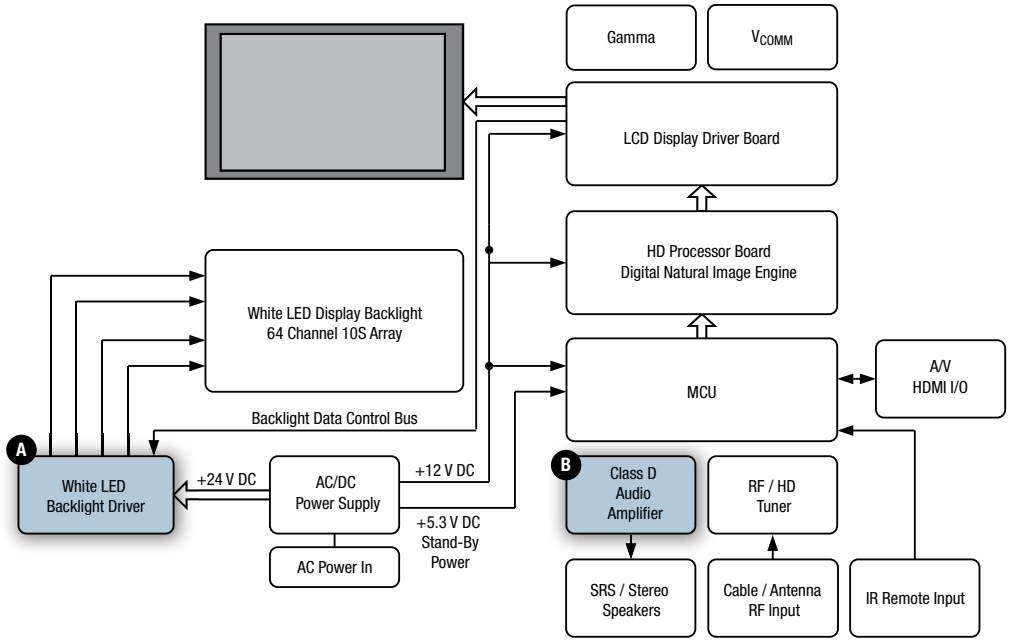
PMIC-PMU

O USB Power Control
Single Input High Side Switches
AAT4601
AAT4610
AAT4618

P RF Power
SKY87000

Power Management

LCD TVs and Monitors

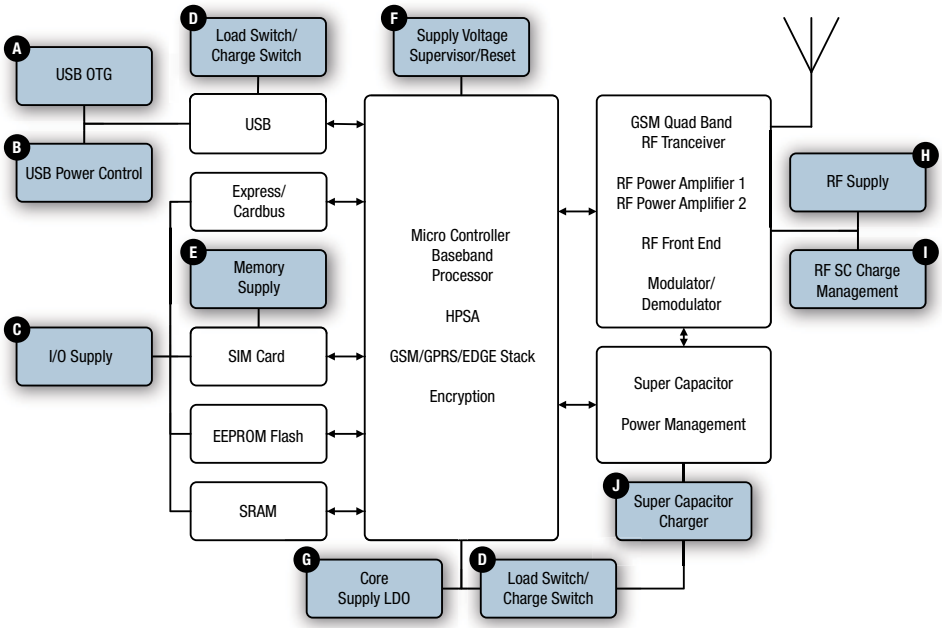


A White LED Backlight Driver
AAT1409, AAT2405, AAT2400, AAT2403A/B, AAT2401, AAT2428, AAT2402M, AAT2430A/B/C/A-1, AAT2402S, AAT2469/99, AAT2403

B Audio Amplifier
AAT5102

Power Management

Wireless LAN Cards / Clients



A **USB OTG**
Step-Up Converters
AAT1275
AAT1275A
AAT1276

B **USB Power Control**
Single Input High-Side Switches
AAT4610
AAT4601
AAT4618

C **I/O Supply**
LDO
AAT3220
AAT3236

D **Load Switch/Charge Switch**
Slew Rate Controlled Load Switches
AAT4250
AAT4280
AAT4282

Single Input High Side Switches
AAT4616
AAT4616A

E **Memory Supply**
LDO
AAT3218
AAT3220
AAT3236

F **Supply Voltage Supervisor/Reset**
Microprocessor Supervisor
AAT3512
AAT3522

G **Core Supply**
LDO
AAT3236
AAT3244

H **RF Supply**
LDO
AAT3215
AAT3218
AAT3236

I **RF SC Charge Management**
Single Input High Side Switches
AAT4616

J **Super Capacitor Charger**
Single Input High Side Switches
AAT4712

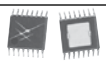
PACKAGE SELECTION GUIDE

Part Number Suffix	Package Type	Actual Size	Package Dimensions (mm) (Lead Inclusive)*
-060, -061	0201 Micro Surface Mount Device		0.60 x 0.30 x 0.27
-040	SOD-882 2L (0402)		1.00 x 0.60 x 0.46
-378, -385	QFN 6L		1.00 x 1.00 x 0.45
N/A	WLCSP 15-bump		1.04 x 1.04 x 0.285
N/A	WLCSP 8-bump		1.10 x 1.10 x 0.36
N/A	WLCSP 15-bump		1.20 x 1.60 x 0.606
-517, -518	MIS		1.47 x 1.23 x 0.813
-334	LGA 6L		1.50 x 1.20 x 0.80
-374	QFN 6L		1.50 x 1.50 x 0.45
-373	QFN 8L		1.50 x 1.50 x 0.45
-381	QFN 6L		1.50 x 2.00 x 0.50
-079	SC-79		1.60 x 0.80 x 0.60
-344	SOT-666		1.65 x 1.65 x 0.60
N/A	WLCSP 20-bump		1.75 x 2.30 x 0.65
-477	DFN 6L		2.00 x 1.30 x 0.45
-372	SC-70 4L (SOT-323)		2.00 x 1.35 x 1.10
-468	QFN 18L		2.00 x 2.00 x 0.45
-397, -460	QFN 12L		2.00 x 2.00 x 0.50
-368, -465	QFN 12L		2.00 x 2.00 x 0.55
-370	QFN 8L		2.00 x 2.00 x 0.60
-396	QFN 8L		2.00 x 2.00 x 0.75
-085, -086	QFN 3L (2 x 2)		2.00 x 2.00 x 0.90
-087	QFN 2L (2 x 2)		2.00 x 2.00 x 0.90
-335	QFN 6L (2 x 2)		2.00 x 2.00 x 0.90
-360	QFN 8L (2 x 2)		2.00 x 2.00 x 0.90
-349	QFN 8L EP (2 x 2)		2.00 x 2.00 x 0.90
-360	QFN 8L		2.00 x 2.00 x 0.90
-375	QFN 10L		2.00 x 3.00 x 0.45
-313	QFN 6L		2.00 x 3.00 x 1.00
-92, -081, -999	SC-88 (SC-70 6L)		2.10 x 2.00 x 0.95
-073, -074, -075, -076	SC-70 3L		2.10 x 2.00 x 0.95

Part Number Suffix	Package Type	Actual Size	Package Dimensions (mm) (Lead Inclusive)*
-377	QFN 4L		2.20 x 2.00 x 1.35
-388	QFN 16L		2.30 x 2.30 x 0.45
-001, -003, -004, -005, -006, -007, -39	SOT-23 3L		2.37 x 2.92 x 1.00
-015, -016, -017, -019, -020, -021, -022, -023, -026, -32	SOT-143 3L		2.37 x 2.92 x 1.00
-555LF	MLP 2-pin		2.50 x 2.50 x 0.75
-011	SOD-323		2.52 x 1.25 x 1.04
-027, -72	SOT-23 5L		2.80 x 2.90 x 1.18
-73	SOT-23 6L		2.80 x 2.90 x 1.18
-465	QFN 12L		3.00 x 3.00 x 0.55
-321, -337, -348, -350, -356	QFN (3 x 3)		3.00 x 3.00 x 0.75
-389	QFN 26L		3.00 x 3.80 x 0.75
-455	QFN 26L		3.00 x 3.80 x 0.75
N/A	Multichip Module (MCM)		3.00 x 3.00
N/A	Multichip Module (MCM)		3.00 x 5.00
N/A	Multichip Module (MCM)		3.00 x 6.00
N5A	LGA 24L		3.50 x 4.50
N/A	Multichip Module (MCM)		4.00 x 3.00
N/A	Multichip Module (MCM)		4.00 x 4.00
N/A	LGA, RFLGA		4.00 x 4.00
-340	QFN 20L (4 x 4) 2.1 mm Paddle		4.00 x 4.00 x 0.75
-359, -467	QFN 16L (4 x 4)		4.00 x 4.00 x 0.90
-306	QFN 16L EP (4 x 4)		4.00 x 4.00 x 0.90

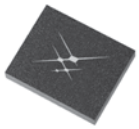
*Dimensions indicated: lead tip to lead tip x body width x total thickness.

Part Number Suffix	Package Type	Actual Size	Package Dimensions (mm) (Lead Inclusive)*
-307	QFN 16L (4 x 4) 2.8 mm Paddle		4.00 x 4.00 x 0.90
-362, -459	QFN 24L (4 x 4)		4.00 x 4.00 x 0.90
-365	QFN 20L EP (4 x 4)		4.00 x 4.00 x 0.90
-478	QFN 16L (4 x 4)		4.00 x 4.00 x 1.50
-70	SOT-89		4.50 x 2.50 x 1.50
-59	MSOP 8L		4.90 x 3.00 x 0.96
-86	MSOP 10L		4.90 x 3.00 x 0.96
-302	MSOP 8L EP		4.90 x 3.00 x 1.10 (Max.)
-303	MSOP 10L EP		4.90 x 3.00 x 1.10
-315	Multichip Module (MCM)		4.90 x 3.20 x 1.00
N/A	Multichip Module (MCM)		5.00 x 4.00
N/A	Multichip Module (MCM)		5.00 x 5.00
N/A	RFLGA		5.00 x 5.00
-355	QFN 20L		5.00 x 5.00 x 0.90
-364	QFN 32L 3.15 mm Paddle		5.00 x 5.00 x 0.90
-470	QFN 32L (5 x 5) 3.3 mm Paddle		5.00 x 5.00 x 0.90
N/A	Multichip Module (MCM)		5.00 x 6.00
N/A	LGA		5.00 x 6.00
N/A	Multichip Module (MCM)		5.00 x 7.00
-207	Hermetic Ceramic Pill		5.08 x 2.18
-210	Hermetic Pill		5.7 x 3.15
-230	Epoxy Stripline		5.98 x 1.4 x 0.76
-232	Epoxy Stripline		5.98 x 3.69 x 0.76

Part Number Suffix	Package Type	Actual Size	Package Dimensions (mm) (Lead Inclusive)*
-234, -235	Epoxy Stripline		5.98 x 5.98 x 0.76
-339, -84	SOIC 8L Exposed Pad		5.99 x 4.93 x 1.55
-12	SOIC 8L		6.00 x 4.90 x 1.60
-80	SSOP 16L		6.00 x 4.90 x 1.60
N/A	Multichip Module (MCM)		6.00 x 6.00
N/A	Multichip Module (MCM)		6.00 x 8.00
-24	SOIC 14L		6.00 x 8.70 x 1.55
-87	TSSOP 16L		6.40 x 5.00 x 1.00
-93	TSSOP 16L Exposed Pad		6.40 x 6.40 x 1.00
N/A	Multichip Module (MCM)		7.00 x 6.00
N/A	Multichip Module (MCM)		7.5 x 7.00
-85	SSOP 20L		7.80 x 7.20 x 1.90
N/A	Multichip Module (MCM)		8.00 x 6.00
N/A	Multichip Module (MCM)		8.00 x 8.00
-345, -501, N/A	Multichip Module (MCM)		8.00 x 10.00
-250, -251	Epoxy Stripline		8.12 x 2.54 x 1.27
-252, -253	Epoxy Stripline		8.12 x 5.33 x 1.27
-254	Epoxy Stripline		8.12 x 8.12 x 1.27
-255, -257	Epoxy Stripline		8.12 x 8.12 x 1.27

*Dimensions indicated: lead tip to lead tip x body width x total thickness.

Package Selection Guide

Part Number Suffix	Package Type	Actual Size	Package Dimensions (mm) (Lead Inclusive)*
N/A	CLCC 8L		8.30 x 8.30
N/A	Multichip Module (MCM)		9.10 x 11.60 x 1.50
-25	SOIC 16L		10.00 x 6.00 x 1.70
N/A	Multichip Module (MCM)		10.00 x 14.00
-220, -221	Hermetic Stripline		11.3 x 1.91 x 1.14
-224	Hermetic Stripline		11.3 x 11.3 x 1.14

Part Number Suffix	Package Type	Actual Size	Package Dimensions (mm) (Lead Inclusive)*
-225	Hermetic Stripline		11.3 x 11.3 x 1.14
-222	Hermetic Stripline		11.3 x 6.6 x 1.14
-223	Hermetic Stripline		11.3 x 6.6 x 1.14
-240	Hermetic Stripline		11.52 x 2.64 x 1.18
N/A	Multichip Module (MCM)		13.00 x 13.00

*Dimensions indicated: lead tip to lead tip x body width x total thickness.

Trans-Tech Inc., a wholly owned subsidiary of Skyworks Solutions Inc., offers filters in a number of standard packages. In addition to SMT, Trans-Tech offers a flatpack and through-hole configuration. In addition to our standard offering, Trans-Tech has the capability and experience to meet many unique footprint layouts and custom packages. For each of our 2- to 6-pole packages, Trans-Tech offers profiles ranging from 2 mm to 6 mm. Dimension "L" will vary in length, dependent upon filter's frequency.

Part Number Suffix	Package Type	Not Actual Size	Package Dimensions (mm) (Lead Inclusive)*
TT2P2-P	SMT		5.33 x L x 3.01
TT2P3-P	SMT		7.42 x L x 3.01
TT2P4-P	SMT		9.50 x L x 3.01
TT2P5-P	SMT		11.58 x L x 3.01
TT2P6-P	SMT		13.67 x L x 3.01
TT3P2-P	SMT		7.80 x L x 4.01
TT3P3-P	SMT		11.18 x L x 4.01
TT3P4-P	SMT		13.72 x L x 4.01
TT3P5-P	SMT		16.81 x L x 4.01
TT3P6-P	SMT		19.91 x L x 4.01
TT4P2-P	SMT		9.16 x L x 4.99
TT4P3-P	SMT		13.16 x L x 4.99
TT4P4-P	SMT		17.48 x L x 4.98
TT4P5-P	SMT		21.08 x L x 4.98
TT4P6-P	SMT		25.40 x L x 4.98
TT6P2-P	SMT		13.14 x L x 7.01
TT6P3-P	SMT		19.14 x L x 7.01

Part Number Suffix	Package Type	Not Actual Size	Package Dimensions (mm) (Lead Inclusive)*
TT6P4-P	SMT		25.85 x L x 7.01
TT6P5-P	SMT		31.14 x L x 7.01
TT6P6-P	SMT		37.16 x L x 7.01
TT6P2-F	Flatpack		17.00 x L x 6.50
TT6P3-F	Flatpack		24.00 x L x 6.50
TT6P2-T	Through Hole		13.00 x L x 6.50
TT6P3-T	Through Hole		20.00 x L x 6.50
TT4P4-T-R	SMT		16.10 x 19.30 x 4.98
TT6P10-T-R	SMT		62.79 x 21.23 x 7.01
Notch Filter Connecterized	SMA		57.79 x 55.75 x 20.62
Connecterized Filter Assembly	SMA		31.12 x 55.50 x 144.27

*Dimensions indicated: lead tip to lead tip x body width x total thickness.

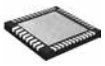
Power Management Products

Classification Package	Package Name	Package Dimensions (L x W x H)	PCB Footprint (mm^2)	Packing Standard		Moisture Sensitivity Level (MSL)	Package Classification Suffix
				Quantity/ Reel	Packing Method		
	WLCSP-5	1.235 x .910 x .58	1.12	3000	Tape and Reel	Level 1	UV
	WLCSP-9	1.35 x 1.36 x 0.62	1.14	3000	Tape and Reel	Level 1	UR
	WLCSP-10	1.545 x 1.145 x 0.62	1.15	3000	Tape and Reel	Level 1	UQ
	WLCSP-16	1.645 x 1.645 x 0.59	1.59	3000	Tape and Reel	Level 1	UN
	WLCSP-12	2.23 x 1.535 x 0.63	3.43	3000	Tape and Reel	Level 1	RG
	TDFN2.2x2.2-10L	2.20 x 2.20 x 0.75	3.63	3000	Tape and Reel	Level 1	DH
	STDFN22-8	2.00 x 2.00 x 0.55	4	3000	Tape and Reel	Level 1	ES
	TDFN22-8	2.00 x 2.00 x 0.75	4	3000	Tape and Reel	Level 1	PS
	FTDFN22-8	2.00 x 2.00 x 0.75	4	3000	Tape and Reel	Level 1	PS
	SC70JW-8	2.20 x 2.00 x 1.05	4.2	3000	Tape and Reel	Level 1	JS
	TQFN3.0x2.2-18	3.00 x 2.20 x 0.75	4.5	3000	Tape and Reel	Level 1	BO
	SC70JW-10	2.20 x 2.00 x 0.55	4.84	3000	Tape and Reel	Level 1	JQ
	STDFN2.2x2.2-10	2.20 x 2.20 x 0.55	4.84	3000	Tape and Reel	Level 1	OQ
	WLCSP-30	3.115 x 2.615 x 0.69	5.62	3000	Tape and Reel	Level 1	UW
	DLN-8L	2.4 x 2.4 x 1.00	5.76	4000	Tape and Reel	Level 1	TM
	TDFN33-10L	3.00 x 3.00 x 0.75	6.75	3000	Tape and Reel	Level 1	DE
	TDFN33-12	3.00 x 3.00 x 0.75	6.75	3000	Tape and Reel	Level 1	WP
	SOT143	2.92 x 2.37 x 1.01	6.92	3000	Tape and Reel	Level 1	CX
	SOT23-3	2.92 x 2.37 x 1.02	6.92	3000	Tape and Reel	Level 1	GY
	DLN-10L	2.95 x 2.4 x 1.00	7.08	4000	Tape and Reel	Level 1	DI
	SC59	2.85 x 2.80 x 1.20	7.98	3000	Tape and Reel	Level 1	GY
	SOT23-5	2.85 x 2.80 x 1.20	7.98	3000	Tape and Reel	Level 1	GV
	SOT23-6	2.85 x 2.80 x 1.20	7.98	3000	Tape and Reel	Level 1	GU

Power Management Products

Classification Package	Package Name	Package Dimensions (L x W x H)	PCB Footprint (mm²)	Packing Standard		Moisture Sensitivity Level (MSL)	Package Classification Suffix
				Quantity/ Reel	Packing Method		
	TSOT23-6	2.90 x 2.80 x 1.00	8.12	3000	Tape and Reel	Level 1	CA
	TSOP-6	2.95 x 2.80 x 1.05	8.26	3000	Tape and Reel	Level 1	DU
	TSOPJW-8	3.00 x 2.85 x 1.01	8.621	3000	Tape and Reel	Level 1	TS
	TSOPJW-12	3.00 x 2.85 x 1.02	8.721	3000	Tape and Reel	Level 1	TP
	TSOPJW-14	3.05 x 2.85 x 1.02	8.69	3000	Tape and Reel	Level 1	TO
	STDFN33-12	3.00 x 3.00 x 0.55	9	1500	Tape and Reel	Level 1	FP
	STDFN33-14	3.00 x 3.00 x 0.55	9	1500	Tape and Reel	Level 1	FO
	QFN33-16	3.00 x 3.00 x 0.93	9	1500	Tape and Reel	Level 1	VN
	TQFN33-20	3.00 x 3.00 x 0.75	9	1500	Tape and Reel	Level 1	DG
	TDFN33-14	3.00 x 3.00 x 0.75	9	1500	Tape and Reel	Level 1	WO
	QFN34-20	3.00 x 4.00 x 0.93	12	1500	Tape and Reel	Level 1	ZL
	TDFN34-16	3.00 x 4.00 x 0.75	12	1500	Tape and Reel	Level 1	RN
	TDFN34-16L	3.00 x 4.00 x 0.75	12	1500	Tape and Reel	Level 1	RN
	TQFN34-20	3.00 x 4.00 x 0.75	12	1500	Tape and Reel	Level 1	ML
	TQFN34-24	3.00 x 4.00 x 0.75	12	1500	Tape and Reel	Level 1	MK
	MSOP-8	4.90 x 3.00 x 0.95	14.7	1500	Tape and Reel	Level 1	KS
	TDFN44-16	4.00 x 4.00 x 0.75	16	1500	Tape and Reel	Level 1	XN
	TQFN44-28	4.00 x 4.00 x 0.75	16	1500	Tape and Reel	Level 1	BJ
	QFN44-24	4.00 x 4.00 x 0.93	16	1500	Tape and Reel	Level 1	SK
	QFN44-16	4.00 x 4.00 x 0.93	16	1500	Tape and Reel	Level 1	SN
	TQFN44-24	4.00 x 4.00 x 0.75	16	1500	Tape and Reel	Level 1	BK
	TQFN44-28-0.4	4.00 x 4.00 x 0.75	16	1500	Tape and Reel	Level 1	NJ

Power Management Products

Classification Package	Package Name	Package Dimensions (L x W x H)	PCB Footprint (mm^2)	Packing Standard		Moisture Sensitivity Level (MSL)	Package Classification Suffix
				Quantity/ Reel	Packing Method		
	SOT89	4.50 x 4.095 x 1.50	18.43	1000	Tape and Reel	Level 1	QY
	TQFN55-40	5.00 x 5.00 x 0.75	18.75	1000	Tape and Reel	Level 1	IC
	TSSOP-8	6.40 x 3.00 x 1.20	19.2	2500	Tape and Reel	Level 1	HS
	TQFN45-24	5.00 x 4.00 x 0.75	20	1500	Tape and Reel	Level 1	FK
	TQFN56-42	5.00 x 6.00 x 0.75	22.5	1000	Tape and Reel	Level 1	CG
	TQFN77-48	7.00 x 7.00 x 0.50	24.5	1000	Tape and Reel	Level 1	SZ
	SOP-8	4.90 x 6.00 x 1.55	29.4	2500	Tape and Reel	Level 1	AS
	TQFN55-36	5.50 x 5.50 x 0.75	30.25	2000	Tape and Reel	Level 1	IH
	TO-92	17.38 x 5.50 x 3.57	60.2	2000	Tape and Reel	Level 3	LY

WARRANTY / ORDER INFORMATION

How to Order

To order products from this brochure or for additional information, please contact your local representative, distributor, or contact us directly.

A worldwide list of sales offices as well as representatives and distributors appears at the back of this brochure. Please provide part numbers, quantities, and any additional information that will help us expedite your order.

Warranty

Skyworks provides world-class warranty coverage for all products purchased.

A full statement of Terms and Conditions of Sales is included with the order acknowledgment.

Customer Satisfaction

As an integral part of our total quality management, Skyworks primary focus is customer satisfaction. Our reputation with customers for impeccable quality is the result of an aggressive, ongoing Total Quality Management Program in which each employee accepts responsibility for continuously improving the company's products, processes, and procedures.

To our customers, Skyworks is a trusted partner. We work closely with you to provide product solutions that best achieve your design and manufacturing objectives. Skyworks has a worldwide network of sales representatives, distributors, and experienced application engineers ready to work with you towards your specific product requirements.

Terms of Sale

For minimum order requirements, fees, or charges, please contact your local sales representatives or contact us directly. A complete set of Skyworks Terms and Conditions of Sales is available upon request.

Returns

Skyworks requires a Returned Material Authorization (RMA) number prior to returning any product. Please contact your sales representative or contact us directly so that we may help you with your request in the quickest and most efficient manner.

Notice

The information contained in this brochure is subject to change without notice. Skyworks reserves the right to change specifications, designs, and any other information in this brochure at any time, without notice, and assumes no responsibility for errors and/or omissions.

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Fax: 1 (610) 525 9783
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2 Courthouse Lane,
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Fax: 1 (978) 458 7990
Email: atm@atmink.com

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