

WLA0813A

0.8 – 1.3 GHz, Low Noise Amplifier

April 2013, REV B



Key Features

- 0.8 ~ 1.3 GHz, 50 Ohm impedance
- 1.0 dB noise figure
- 17 dB gain
- 1.35:1 VSWR
- 10 dBm P_{1dB}
- Precision machined housing
- RoHS compliant

Applications

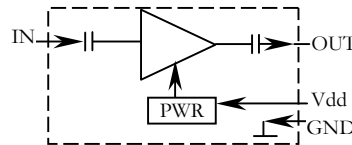
- Cellular, avionics, and GPS
- Receiver amplifiers
- RF bench tests
- Mobile base station applications



Absolute Maximum Ratings

Input CW RF Power	10 dBm
DC Voltage, V _{dd}	-0.5, +32V
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C

Functional Block Diagram



Ordering Information

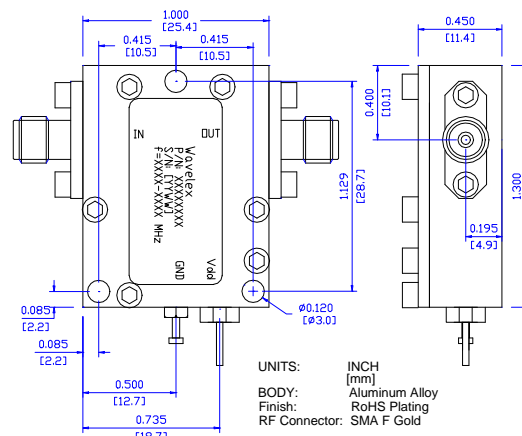
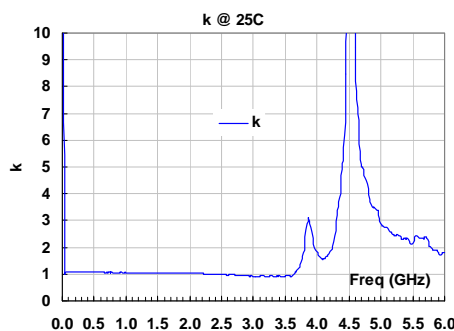
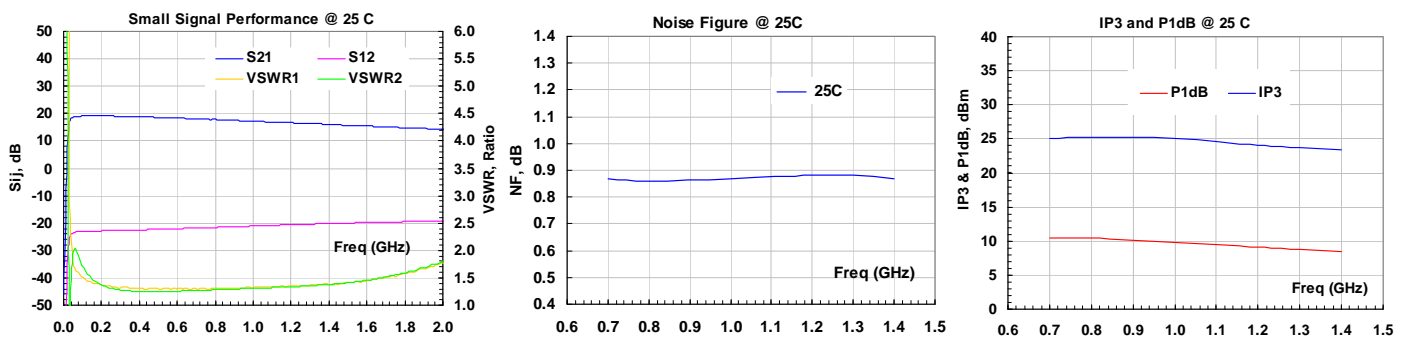
Model	Connectors
WLA0813A	SMA Female

Marking: WLA0813A

Specifications (Tested at +25°C)

tem	Symbol	Test Constraints	Min	Nom	Max	Unit
Frequency Range	BW	50 Ohm Impedance	0.8		1.3	GHz
Gain	S ₂₁	0.8 – 1.3 GHz	15	17	19	dB
Noise Figure	NF	0.8 – 1.3 GHz		1.0	1.4	dB
VSWR	SWR _i	0.8 – 1.3 GHz, all RF ports		1.35:1	1.5:1	Ratio
Gain Flatness	ΔG	0.8 – 1.3 GHz		+/- 1.5		dB
Reverse Isolation	S ₁₂	0.8 – 1.3 GHz		20		dB
Output Power 1dB Compression Point	P _{1dB}	0.8 – 1.3 GHz	8	10		dBm
Output-Third-Order Interception point	IP ₃	Two-Tone, P _{out} = 0 dBm each, 1 MHz separation	22	25		dBm
Current Consumption	I _{dd}	V _{dd} = +12.0 V		25		mA
Power Supply Operating Voltage	V _{dd}		+8	+12	+16	V
Operating Temperature	T _o		-40		+85	°C
Thermal Resistance	R _{th,c}	Junction to case			215	°C/W

Typical Performance



Outline, IP-3