DATA SHEET

SKYFR-000779: 2110-2170 MHz Single Junction Robust Lead Isolator

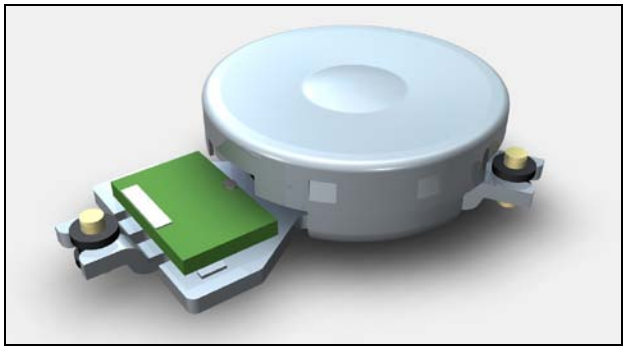
Applications

- Wireless infrastructure
- Power amplifiers

Features

- BeO free
- Small, surface mount package
- Operating frequency range: 2110 MHz to 2170 MHz
- Parts delivered on tape and reel

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



Description

The SKYFR-000779 is a single-junction, surface mount isolator designed for wireless infrastructure applications. It operates over the frequency range of 2110 MHz to 2170 MHz. Insertion loss is less than 0.25 dB over an operating temperature range of –40 °C to +90 °C.

The SKYFR-000779 comes in an industry-standard surface mount package and is designed for automated SMT placement.

A block diagram of the SKYFR-000779 is shown in Figure 1. The absolute maximum ratings of the SKYFR-000779 are provided in Table 1.

Electrical specifications are provided in Table 2. Plating information is shown in Table 3. Figure 2 shows the package dimensions, and Figure 3 provides the tape and reel dimensions.

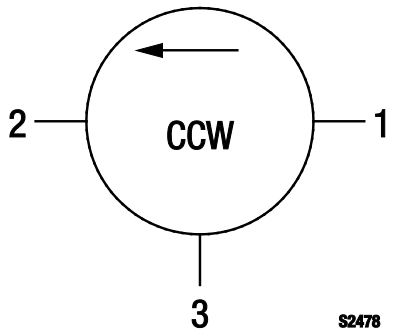


Figure 1. SKYFR-000779 Block Diagram

Table 1. SKYFR-000779 Absolute Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Units
Input power	P_{IN}	70	140	W
Peak power	P_{PEAK}	200	500	W
Reverse power	P_{REV}		70	W
Operating temperature	T_{OP}	–40	+90	°C
Storage temperature	T_{ST}	–55	+125	°C

Note: Exposure to maximum rating conditions for extended periods may reduce device reliability. There is no damage to device with only one parameter set at the limit and all other parameters set at or below their nominal value. Exceeding any of the limits listed here may result in permanent damage to the device.

Table 2. SKYFR-000779 Electrical Specifications (Note 1)
(T_{OP} = –40 °C to +90 °C)

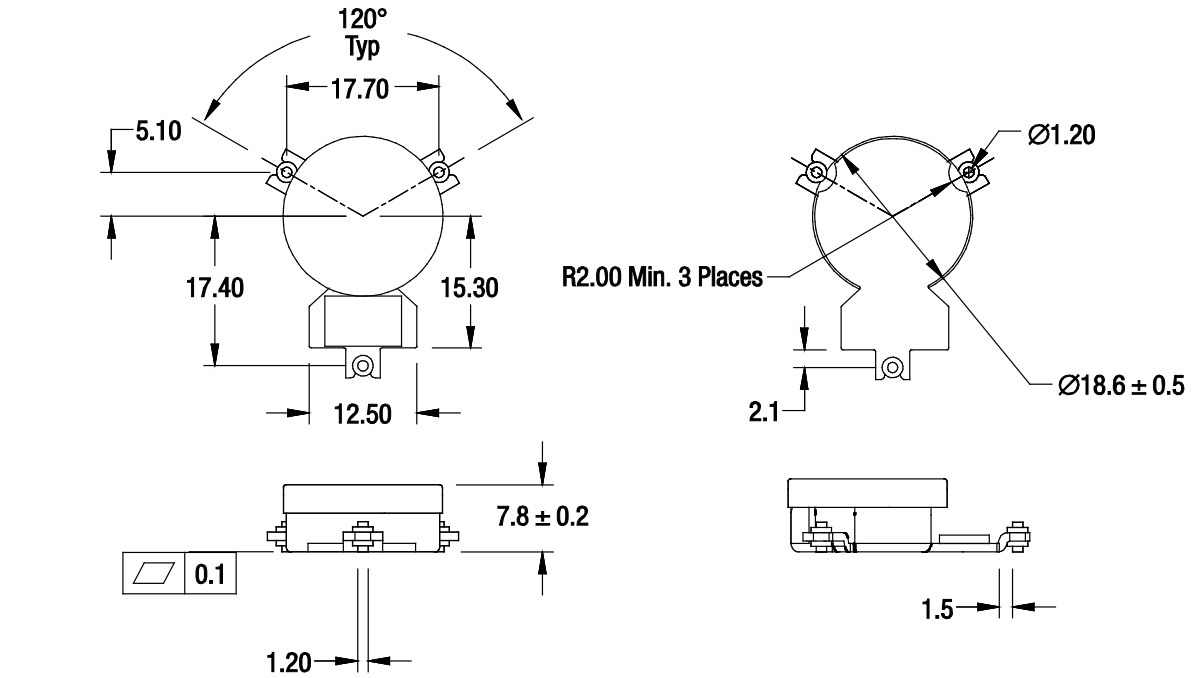
Parameter	Symbol	Test Condition	Min	Typical	Max	Units
Frequency range	f		2110		2170	MHz
Impedance				50		Ω
Insertion loss	IL			0.20	0.25	dB
Isolation	Iso	@ 2070 to 2210 MHz @ 2110 to 2170 MHz	20 25	 28		dB dB
Return loss	RL		21			dB
Intermodulation Distortion (Note 2)	IMD	2 x 25 W CW tones, 1 MHz spacing	–70			dBc
Group delay		Over the operating temperature range			2	ns
Group delay variation					0.5	ns
Group delay variation @ 2070 to 2210 MHz					1	ns
Attenuation			29		31	dB

Note 1: Performance is guaranteed only under the conditions listed in this Table. Performance will not degrade by >10% when the operating temperature increases from +90 °C to +100 °C.

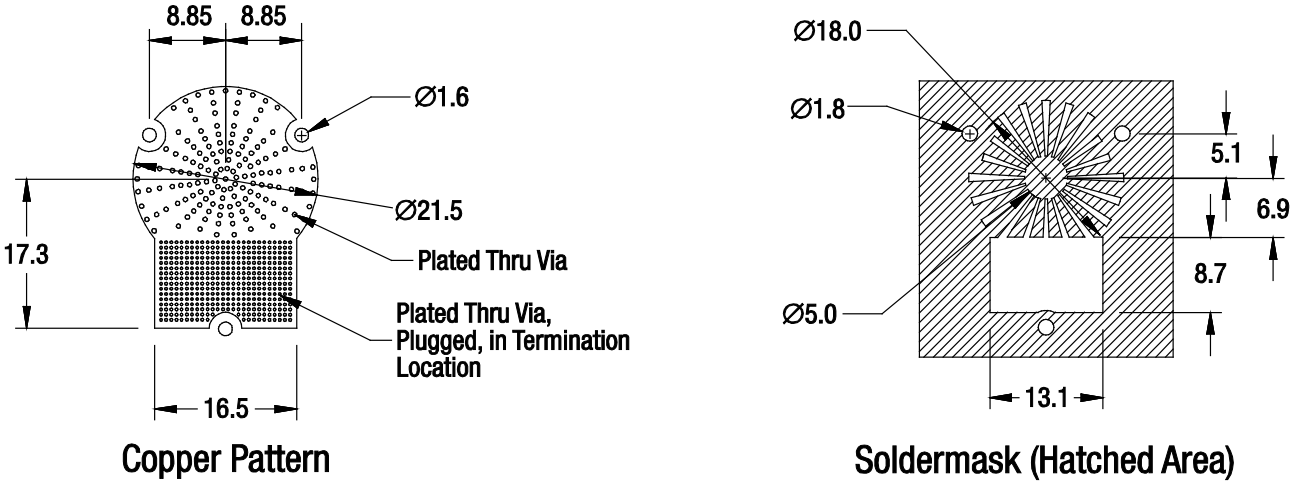
Note 2: See Skyworks Application Note, *Intermodulation Distortion Measurements of Ferrites*, document number 201537 for further details.

Table 3. SKYFR-000779 Plating Specification

Section	Material	Plating
Pins	Bronze	Gold
Housing	Steel	Silver



Package Dimensions



Copper Pattern

Soldermask (Hatched Area)

All measurements are in millimeters

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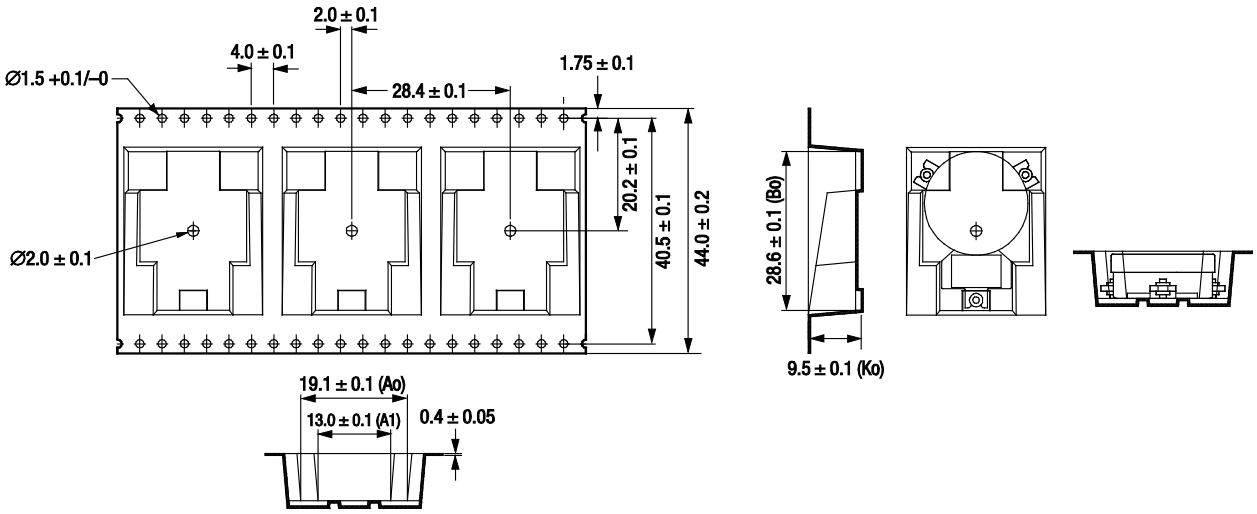
Figure 2. SKYFR-000779 Package Dimensions and PCB Footprint



Notes:
1. *All measurements are in millimeters.*
2. *Ten sprocket hole pitch cumulative tolerance* ± 0.2 mm.
3. *Carrier camber not to exceed 1 mm in 100 mm.*
4. *Ao and Bo measured on a plane 0.3 mm above the bottom of the pocket.*
5. *Ko measured from a plane on the inside bottom of the pocket to the top surface of the carrier.*

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Figure 3. SKYFR-000779 Tape and Reel Dimensions

Ordering Information

Model Name	Manufacturing Part Number	Evaluation Board Part Number
SKYFR-000779 Single Junction Lead Isolator	SKYFR-000779	TFX-00062