

DATA SHEET

SKYFR-000727: 2110-2170 MHz Single Junction Robust Lead Isolator

Applications

- Power amplifiers

Features

- New smaller size
- Operating frequency range: 2110 MHz to 2170 MHz
- BeO free



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-000727 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 0.30 dB over an operating temperature range of $-40\text{ }^{\circ}\text{C}$ to $+100\text{ }^{\circ}\text{C}$.

The SKYFR-000727 comes in an industry-standard surface mount package and is designed for automated SMT placement.

A block diagram of the SKYFR-000727 is shown in Figure 1. The absolute maximum ratings of the SKYFR-000727 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.

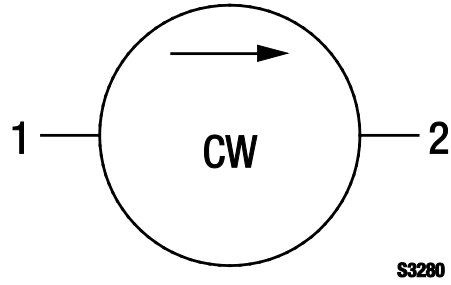


Figure 1. SKYFR-000727 Block Diagram

Table 1. SKYFR-000727 Absolute Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Units
Average power	P _{AVG}		50	W
Peak power	P _{PEAK}		200	W
Reverse power	P _{REV}		30	W
Operating temperature	T _{OP}	-40	+100	°C
Storage temperature	T _{ST}	-55	+150	°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-000727 Electrical Specifications (Note 1)
(T_{OP} = -40 °C to +100 °C)

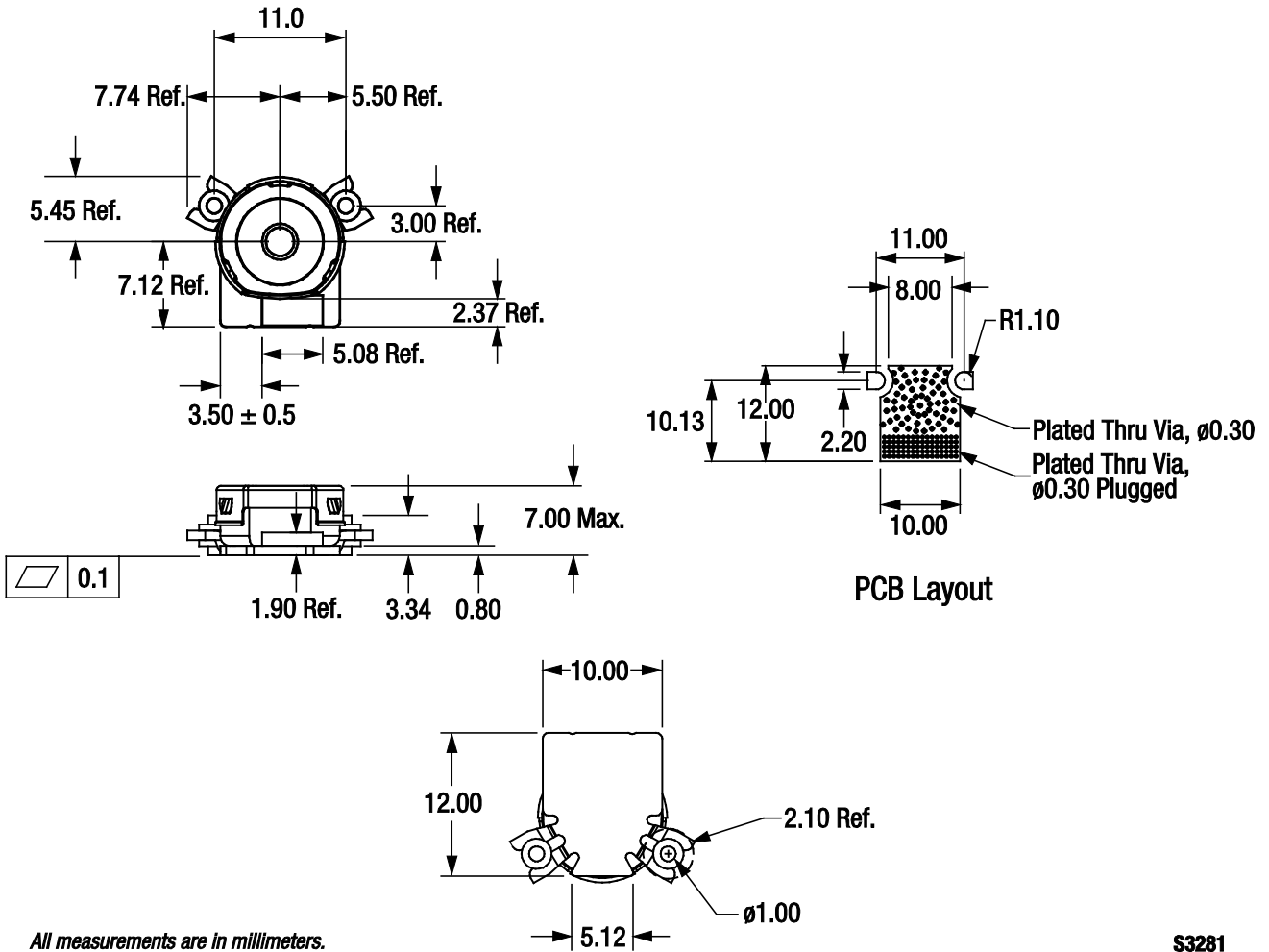
Parameter	Symbol	Test Condition	Min	Typical	Max	Units
Frequency range	f		2110		2170	MHz
Impedance				50		Ω
Insertion loss	IL				0.3	dB
Isolation	ISO		23			dB
Return loss	RL		21			dB
Group delay @ 2110 to 2170 MHz					2.0	ns
Group delay variation @ 2110 to 2170 MHz					0.5	ns
Intermodulation Distortion (Note 2)	IMD	2 x 15 W CW tones, 1 MHz spacing	60			dBc

Note 1: Performance is guaranteed only under the conditions listed in this Table.

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

Table 3. SKYFR-000727 Plating

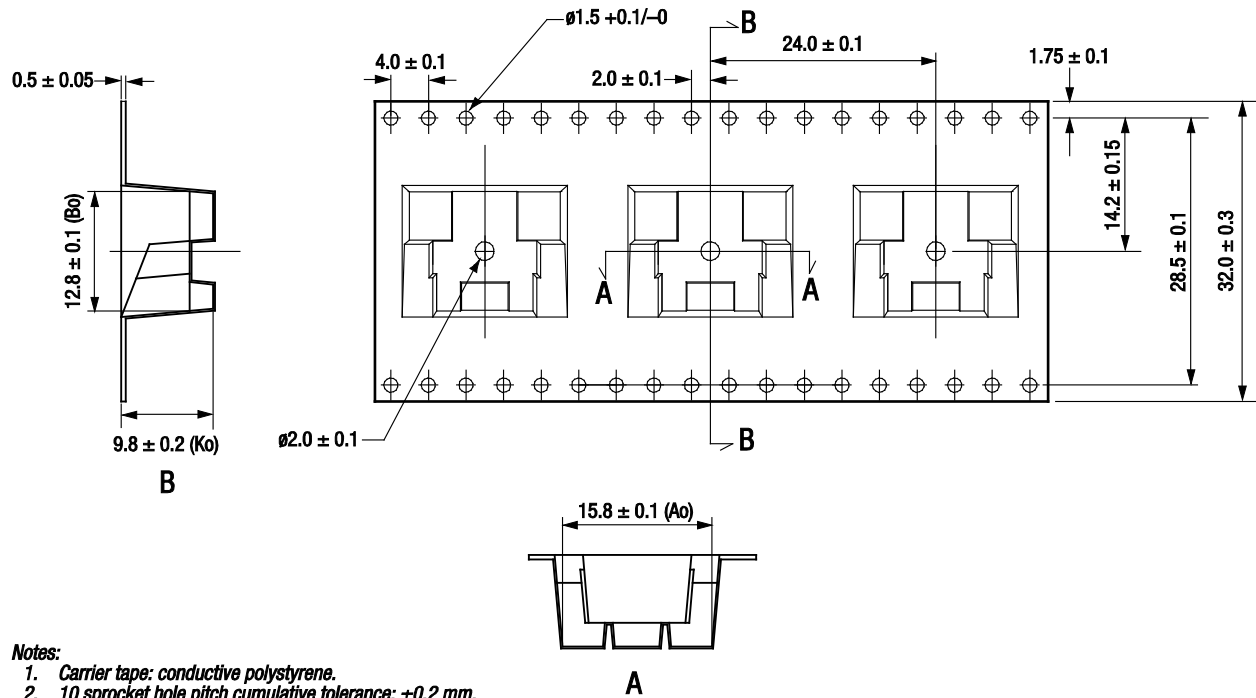
Section	Material	Plating
Pins	Bronze	Silver
Housing	Steel	Silver



All measurements are in millimeters.

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Figure 2. SKYFR-000727 Package Dimensions and PCB Footprint



Notes:

1. Carrier tape: conductive polystyrene.
2. 10 sprocket hole pitch cumulative tolerance: ± 0.2 mm.
3. Carrier camber not to exceed 1 mm in 100 mm.
4. A_o and B_o measured on a plane 0.3 mm above the bottom of the pocket.
5. K_o measured from a plane on the inside bottom of the pocket to the top surface of the carrier.
6. ESD-surface resistivity: $< 10^7$ Ohms/square per EIA, JEDEC TNR Specification.
7. All measurements are in millimeters.

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Figure 3. SKYFR-000727 Tape and Reel Dimensions

Ordering Information

Model Name	Manufacturing Part Number	Evaluation Board Part Number
SKYFR-000727 Single Junction Robust Lead Isolator	SKYFR-000727	TFX-000067

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