

DATA SHEET

SKYFR-001657: 3400 to 3600 MHz Single-Junction Robust Lead Circulator

Applications

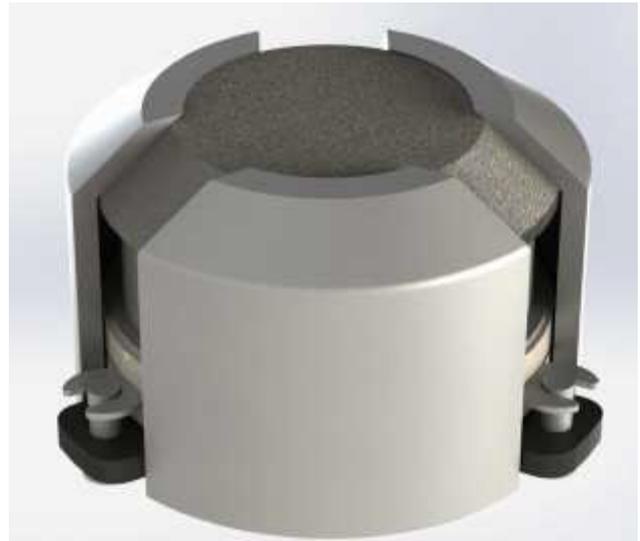
- Power amplifiers
- Wireless infrastructure

Features

- Operating frequency range: 3400 MHz to 3600 MHz
- BeO free
- RoHS compliant
- 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-001657 is a single-junction, surface-mount circulator designed for wireless infrastructure and power-amplifier applications. It operates over the frequency range of 3400 MHz to 3600 MHz with an operating temperature range of -40 °C to +105 °C.

The SKYFR-001657 comes in an industry-standard surface-mount package and is designed for automated SMT placement.

A block diagram of the SKYFR-001657 is shown in Figure 1.

For tape and reel information, refer to the *Tape and Reel Guidelines for Isolators and Circulators* Application Note.

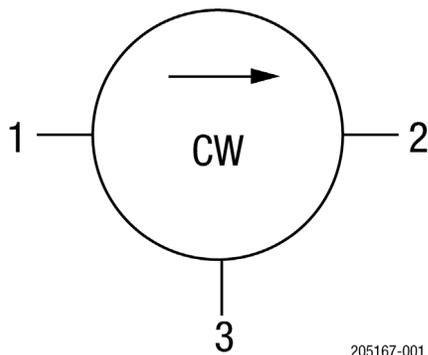


Figure 1. SKYFR-001657 Block Diagram

Electrical and Mechanical Specifications

The absolute maximum ratings of the SKYFR-001657 are provided in Table 1. Electrical specifications are provided in

Table 2. Plating information is shown in Table 3. Package dimensions are shown in Figure 2.

Table 1. SKYFR-001657 Absolute Maximum Ratings¹

Parameter	Symbol	Minimum	Maximum	Units
Average power	P _{AVR}		15	W
Peak power	P _{PEAK}		30	W
Operating temperature	T _{OP}	-40	+105	°C
Storage temperature	T _{STOR}	-55	+150	°C

¹ 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-001657 Electrical Specifications¹

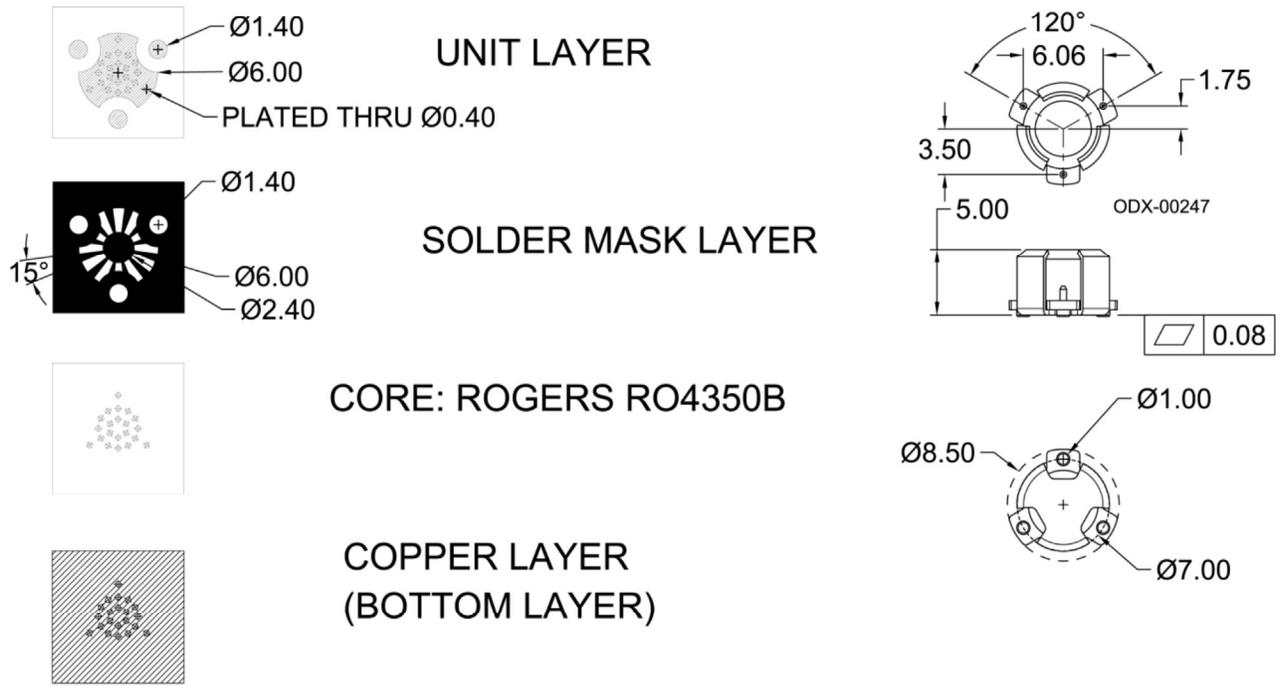
Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Frequency range	f		3400		3600	MHz
Impedance				50		Ω
Insertion loss	IL			0.25	0.32	dB
Isolation	ISO		18	20		dB
Return loss	RL		18	20		dB
Intermodulation distortion ²	IMD	2 x 1 W CW tones, 5 MHz spacing	50	58		dBc

¹ Performance is guaranteed under the conditions listed in this table and over the operating temperature range.

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

Table 3. SKYFR-001657 Plating Specification

Section	Base Material	Plating
Pins	Bronze	Silver
Housing	Steel	Silver



All dimensions in millimeters.
 Tolerance: $\pm 0.2\text{mm}$ unless otherwise specified.
 Coplanarity specification: 0.1mm maximum.
 Model number, lot code and port designation printed on top side of device.

Figure 2. SKYFR-001657 Package Dimensions

Ordering Information

Part Number	Product Description	Evaluation Board Part Number
SKYFR-001657	3400 to 3600 MHz Single-Junction Robust Lead Circulator	PCB-00210

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