

DATA SHEET

SKYFR-001982: 1200 to 1400 MHz Single-Junction Robust Lead Circulator

Applications

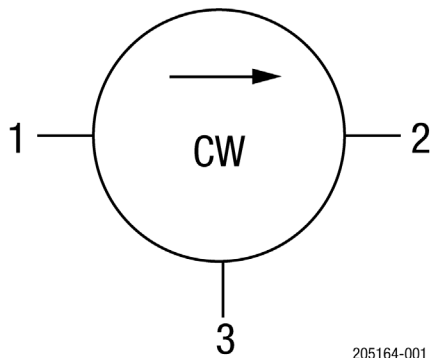
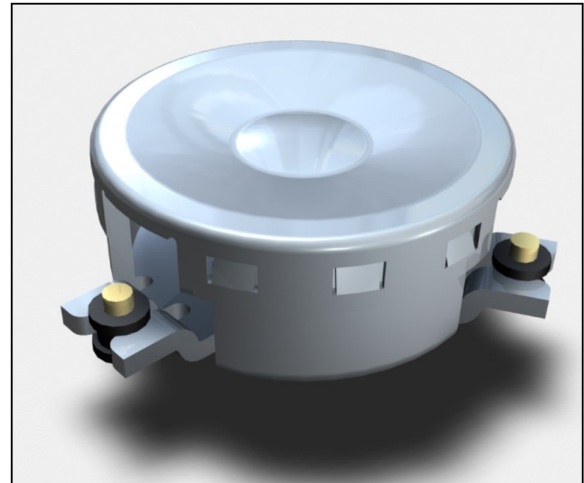
- Radar
- Power amplifiers

Features

- Small surface-mount package
- Operating frequency range: 1200 MHz to 1400 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.



205164-001

Figure 1. SKYFR-001982 Block Diagram

Description

The SKYFR-001982 is a single-junction, surface-mount circulator designed for radar and power-amplifier applications. It operates over the frequency range of 1200 MHz to 1400 MHz with an operating temperature range of -40 °C to +85 °C.

The SKYFR-001982 comes in an industry-standard surface-mount package and is designed for automated SMT placement.

A block diagram of the SKYFR-001982 is shown in Figure 1.

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

Electrical and Mechanical Specifications

The absolute maximum ratings of the SKYFR-001982 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 PCB footprint information

Table 1. SKYFR-001982 Absolute Maximum Ratings¹

Parameter	Symbol	Minimum	Maximum	Units
Average power	P_{AVG}		200	W
Peak power (10% duty cycle)	P_{PK}		400	W
Operating temperature	T_{OP}	-40	+85	°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.

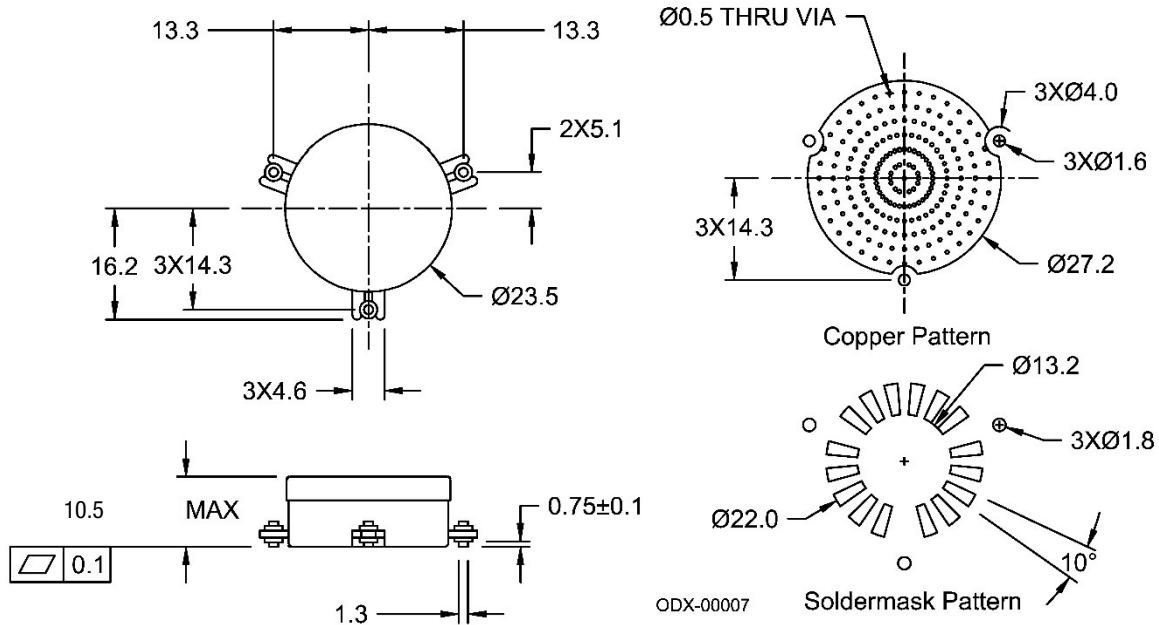
Table 2. SKYFR-001982 Electrical Specifications¹

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Frequency range	f		1200		1400	MHz
Impedance				50		ohms
Insertion loss	IL				0.30	dB
Isolation	ISO		20			dB
Return loss	RL		20			dB

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

Table 3. SKYFR-001982 Plating Specification

Section	Base Material	Plating
Pins	Brass	Silver
Housing	Steel	Silver



Notes:

1. All dimensions are in millimeters.
2. Tolerance: ± 0.2 mm unless otherwise specified.
3. Coplanarity specification: 0.1 mm maximum.
4. Model number, lot code, and port designation printed on top side of device.

Figure 2. SKYFR-001982 Package Dimensions and PCB Footprint

Ordering Information

Part Number	Product Description	Evaluation Board Part Number
SKYFR-001982	1200 to 1400 MHz Single-Junction Robust Lead Circulator	TBD

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