

SPECIFICATION SHEET

# SKYFR-001400: 925—960 MHz Single Junction Robust Lead Circulator

## Applications

- Wireless infrastructure
- Power amplifiers



## Features

- Small surface mount package
- Operating frequency range: 925 to 960 MHz
- BeO free
- RoHS compliant
- Tape & Reel

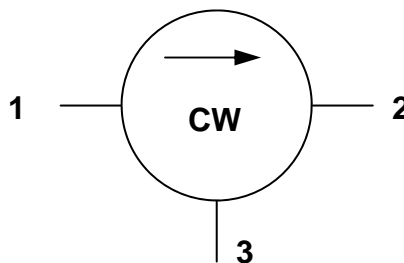
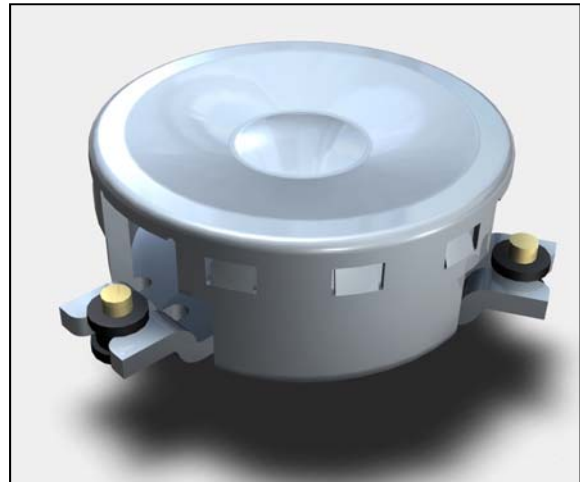


Figure 1. Block Diagram

Table 1. Absolute Maximum Ratings

Parameter	Symbol	Test Condition	Min	Max	Units
Average power	$P_{AVG}$		70	80	W
Peak power	$P_{PK}$		200	250	W
Operating temperature range	$T_{OP}$		-40	+110	°C
Storage temperature range	$T_{STOR}$		-65	+150	°C

Note: Exceeding any of the limits listed here may result in permanent damage to the device or may reduce device reliability.

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**Table 2. Electrical Specifications (Note 1)**

Parameter	Symbol	Test Condition	Min	Typical	Max	Units
Frequency range	f		925		960	MHz
Impedance				50		$\Omega$
Input impedance, real			45	50	55	$\Omega$
Input impedance, imaginary			-j5		+5j	$\Omega$
Insertion loss	IL				0.30	dB
Isolation	ISO		22	23		dB
Return loss	RL		22	23		dB
Intermodulation distortion (Note 2)	IMD	2 x 20W CW tones, 1 MHz spacing (-40—+85°C)	58			dBc
Intermodulation distortion (Note 2)	IMD	2 x 20W CW tones, 1 MHz spacing (+85—+110°C)	56			dBc
Harmonics, 2nd			15			dB
Harmonics, 3rd			10			dB
Out of band resonance point			>300			MHz
Group delay					2.0	ns
Group delay variation					0.5	ns

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

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

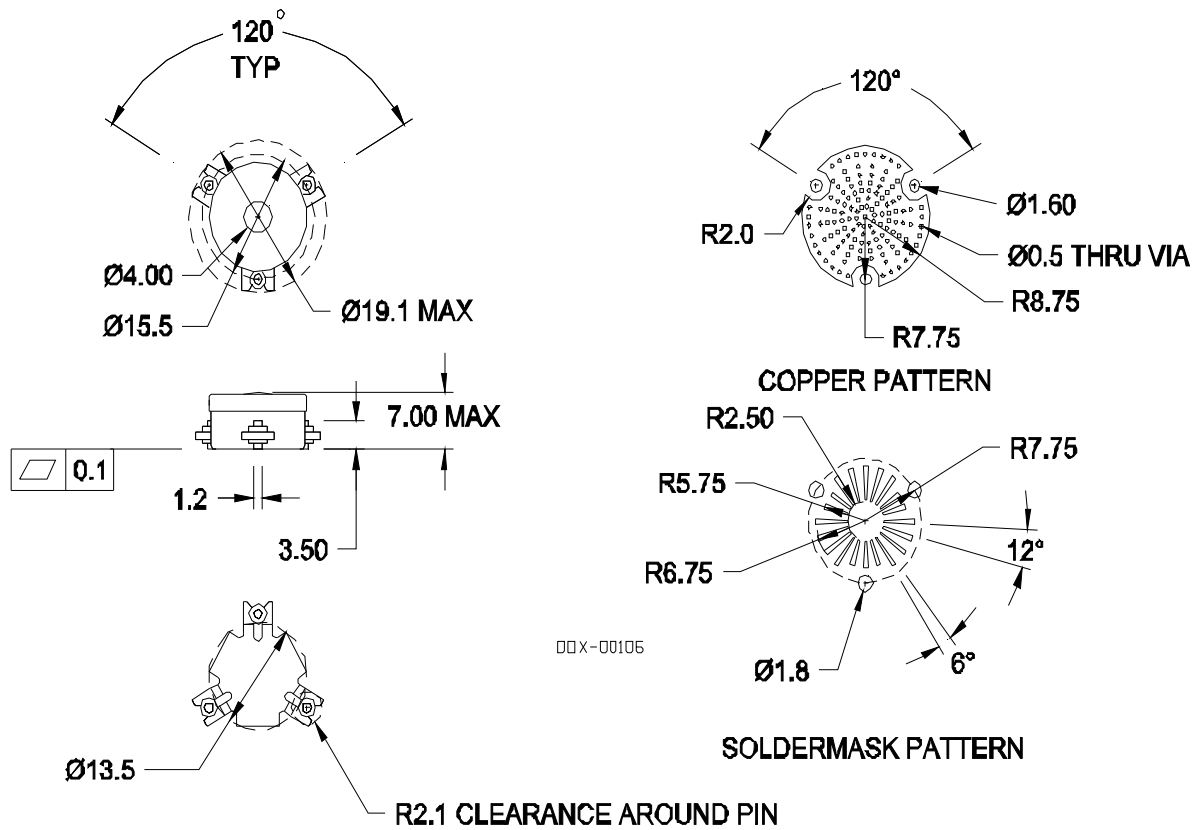
**Table 3. Plating Specification**

Section	Base Material	Plating
Pins	Brass	Silver
Housing	Steel	Silver

**Table 4. Ordering Information**

Manufacturing Part Number	Evaluation Board Part Number
SKYFR-001400	TFX-00167&PCB-00108

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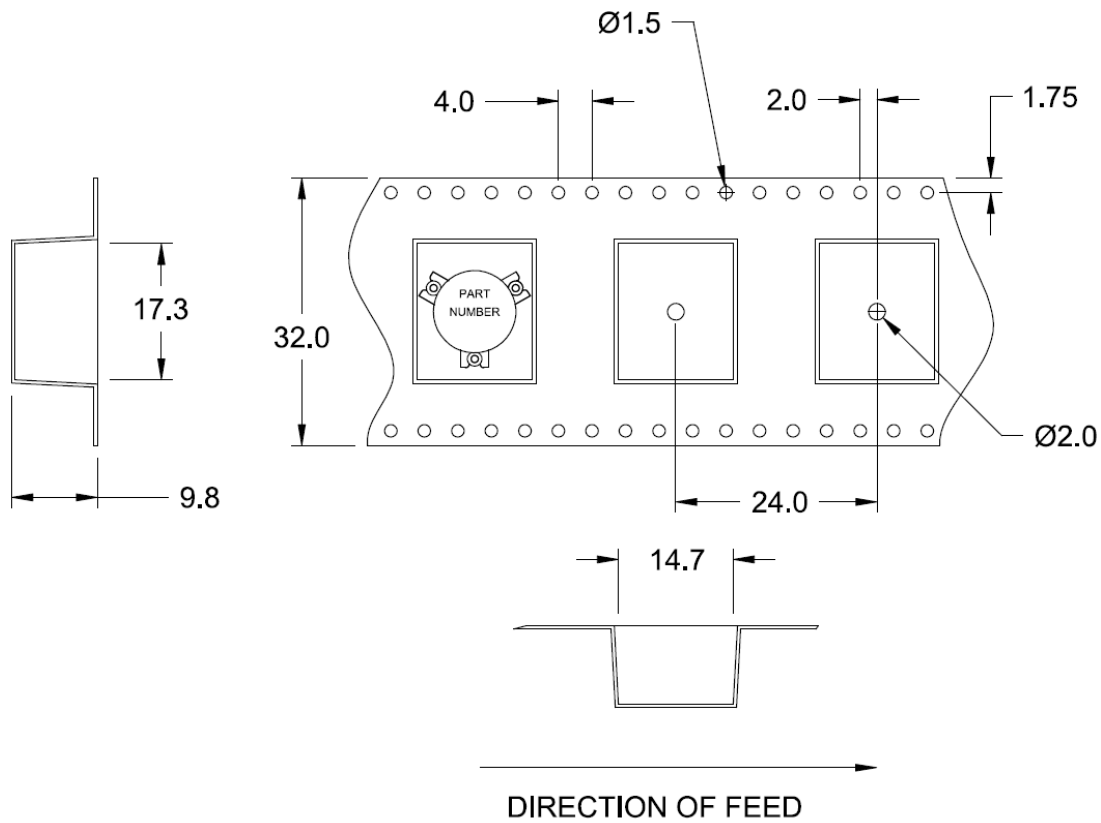


**NOTE:** Unit marking is on a paper label on top of cover.

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

Figure 2. Package Dimensions and Recommended PCB Layout

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All dimensions in millimeters.  
 Tolerance:  $\pm 0.2\text{mm}$  unless otherwise specified.  
 Carrier tape: Black conductive polycarbonate or polystyrene.  
 Reel size: 13"  
 Quantity per reel: 200

**Figure 3. Tape and Reel Dimensions**

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