

# SKYFR-001023: 2110—2170 MHz Single Junction Robust Lead Circulator

## Applications

- Wireless infrastructure
- Power amplifiers



## Features

- Small surface mount package
- Operating frequency range: 2110 to 2170 MHz
- BeO free
- RoHS compliant
- Very low insertion loss

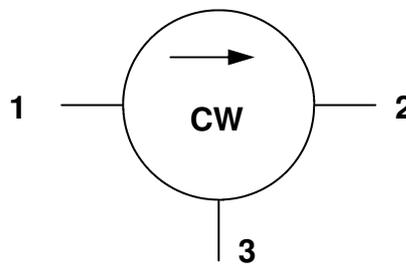
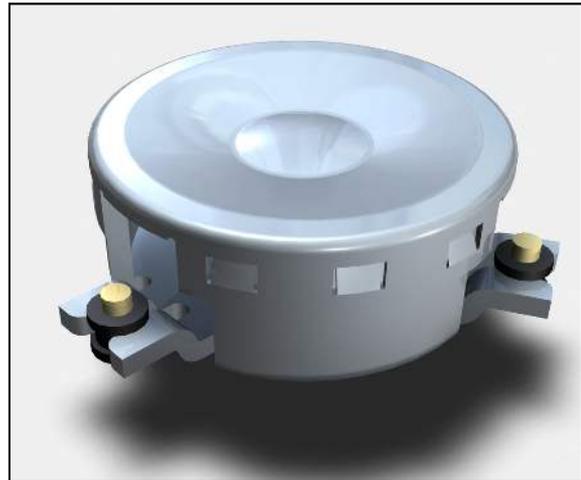


Figure 1. Block Diagram

Table 1. Absolute Maximum Ratings

Parameter	Symbol	Test Condition	Min	Max	Units
Average power	$P_{AVG}$			200	W
Peak power	$P_{PK}$			650	W
Operating temperature range	$T_{OP}$		-40	+105	°C
Storage temperature range	$T_{STOR}$		-55	+125	°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		2110		2170	MHz
Impedance				50		$\Omega$
Insertion loss	IL			0.10	0.15	dB
Isolation	ISO		20			dB
Return loss	RL		20			dB
Intermodulation distortion (Note 2)	IMD	2 x 40W CW tones, 5MHz spacing	65			dBc
2nd harmonic			10			dB

**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.

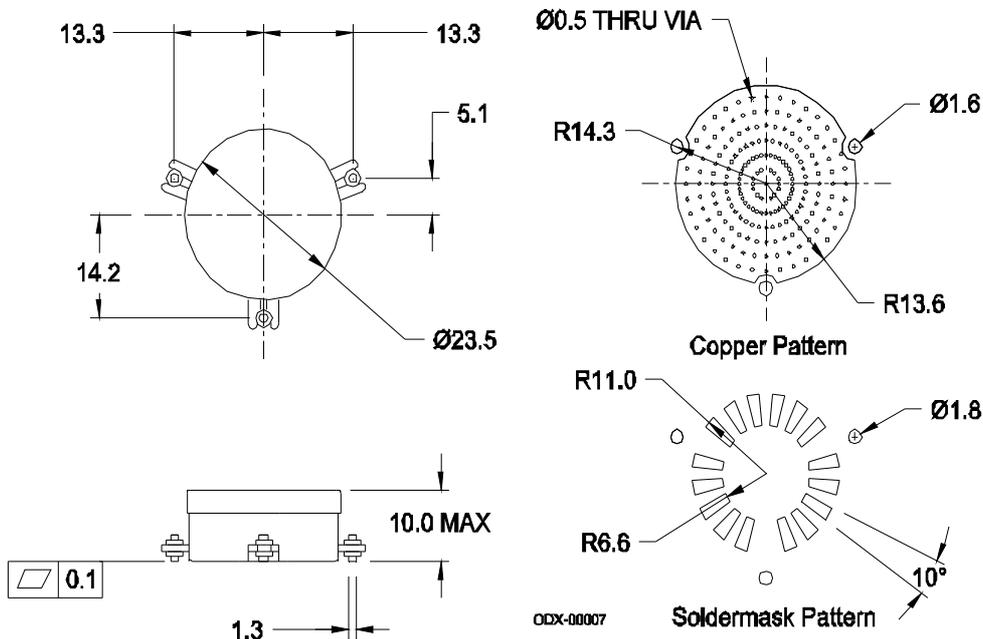
**Table 3. Plating Specification**

Section	Base Material	Plating
Pins	Bronze	Gold
Housing	Steel	Silver

**Table 4. Ordering Information**

Manufacturing Part Number	Evaluation Board Part Number
SKYFR-001023	TFX-00052

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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. Package Dimensions and Recommended PCB Layout**

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