

SPECIFICATION SHEET

SKYFR-001233: 2496—2690 MHz Single Junction Robust Lead Circulator

Applications

- Wireless infrastructure
- Power amplifiers



Features

- Small surface mount package
- Operating frequency range: 2496 to 2690 MHz
- BeO free
- RoHS compliant
- Tape & Reel

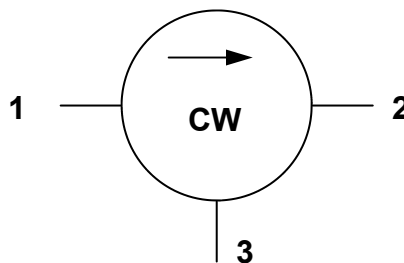
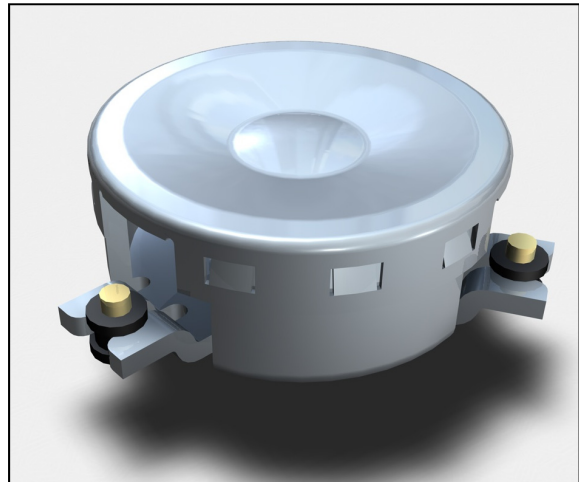


Figure 1. Block Diagram

Table 1. Absolute Maximum Ratings

Parameter	Symbol	Test Condition	Min	Max	Units
Average power	P_{AVG}			50	W
Peak power	P_{PK}			200	W
Operating temperature range	T_{OP}		-40	+90	°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		2496		2690	MHz
Impedance				50		Ω
Insertion loss	IL	S_{21}, S_{32}, S_{13}		0.21	0.25	dB
Isolation	ISO	S_{12}	21			dB
Isolation	ISO	S_{23}, S_{31}	20			dB
Return loss	RL	S_{11}, S_{22}, S_{33}	20			dB
Input impedance, real	RL		40		60	Ω
Input impedance, imaginary	RL		-j7.5		+j7.5	Ω
2nd harmonic attenuation			15			dB
3rd harmonic attenuation			6			dB
Group delay					2.0	ns
Intermodulation distortion (Note 2)	IMD	2 x 15W CW tones, 1MHz spacing	65			dBc

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.

Note 3: Performance will not degrade by > 10% with an operating temperature of up to 110°C (to be verified)

Note 4: Part tested on PCB-00060, 0.508mm Rogers RO4350B, trace width 1.07mm wide, 1oz copper.

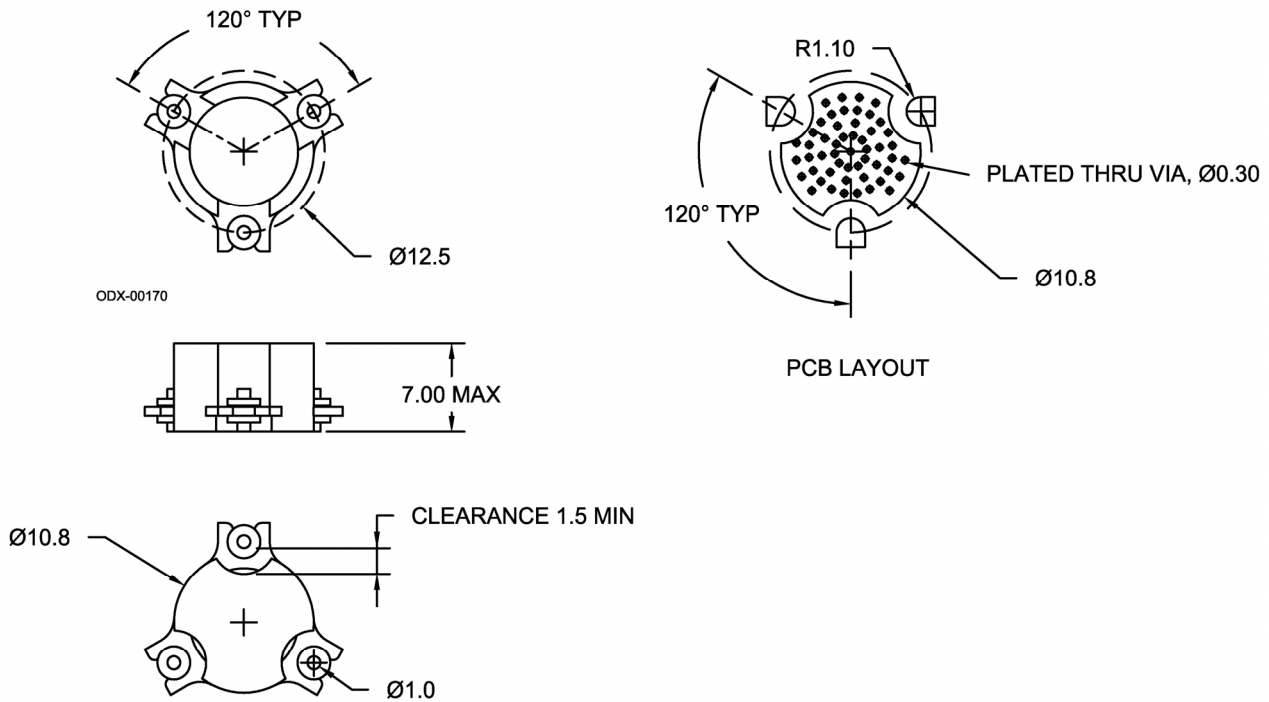
Table 3. Plating Specification

Section	Base Material	Plating
Pins	Brass	Silver
Housing	Steel	Silver

Table 4. Ordering Information

Manufacturing Part Number	Evaluation Board Part Number
SKYFR-001233	TFX-00118

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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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