

SPECIFICATION SHEET

SKYFR-001227: 1805—2170 MHz Single Junction Robust Lead Circulator

Applications

- Wireless infrastructure
- Power amplifiers



Features

- Very small surface mount package
- Operating frequency range: 1805 to 2170 MHz
- BeO free
- RoHS compliant
- Tape & Reel

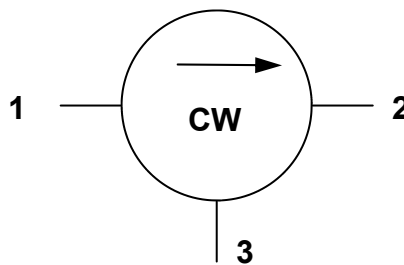
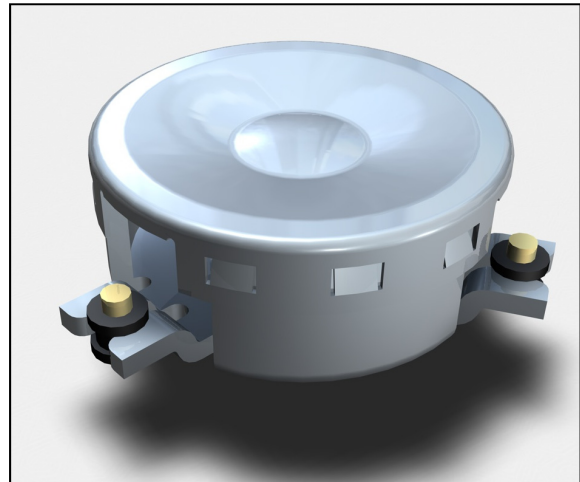


Figure 1. Block Diagram

Table 1. Absolute Maximum Ratings

Parameter	Symbol	Test Condition	Min	Max	Units
Average power	P_{AVG}			20	W
Peak power	P_{PK}			120	W
Operating temperature range	T_{OP}		-40	+100	°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		1805		2170	MHz
Impedance				50		Ω
Insertion loss	IL			0.6	0.8	dB
Isolation	ISO		18	20		dB
Isolation	ISO	1745—2230 MHz	15	17		dB
Return loss	RL		16	18		dB
Input impedance, real	RL		36		69	Ω
Input impedance, imaginary	RL		-j16		+j16	Ω
Group Delay					2.0	ns
Group Delay Variation		1745—2230 MHz			1.0	ns
2nd harmonic attenuation			10			dB
3rd harmonic attenuation			10			dB
Intermodulation distortion (Note 2)	IMD	2 x 5W CW tones, 5MHz spacing	52	58		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: Tested on PCB-00060, Rogers RO4350B, 20 mils thick, trace width 42 mils

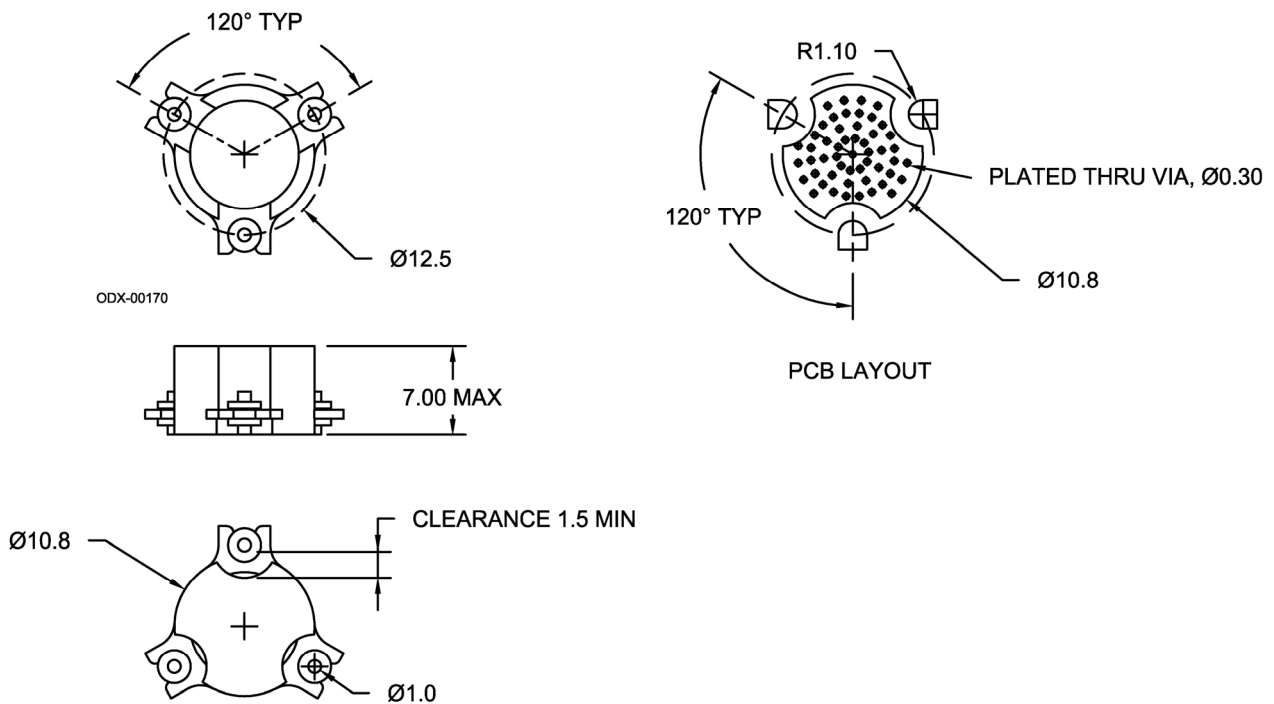
Table 3. Plating Specification

Section	Base Material	Plating
Pins	Brass	Silver
Housing	Steel	Silver

Table 4. Ordering Information

Manufacturing Part Number	Evaluation Board Part Number
SKYFR-001227	TBA

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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 part designation printed on top side of device.

Figure 2. Package Dimensions and Recommended PCB Layout

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