

SPECIFICATION SHEET

SKYFR-001058: 1915—2010 MHz Single Junction Robust Lead Circulator

Applications

- Wireless infrastructure
- Power amplifiers

Features

- Small surface mount package
- Operating frequency range: 1915 to 2010 MHz
- BeO free
- RoHS compliant

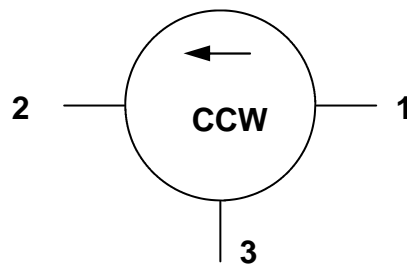
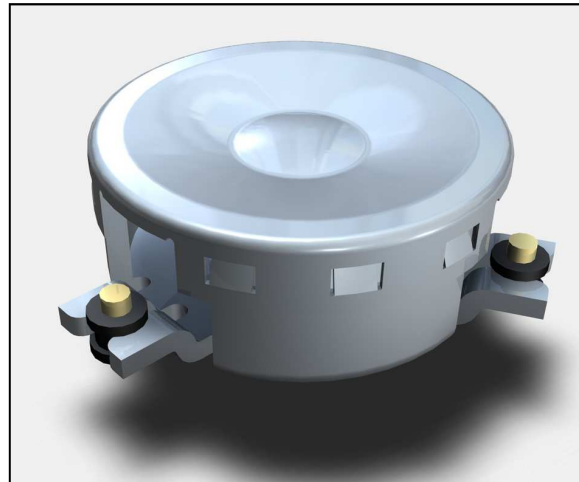


Figure 1. Block Diagram

Table 1. Absolute Maximum Ratings

Parameter	Symbol	Test Condition	Min	Max	Units
Average power	P_{AVG}			140	W
Peak power	P_{PK}			800	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		1915		2010	MHz
Impedance				50		Ω
Insertion loss	IL	1930MHz-1995MHz P1 to P2, P2 to P3, P3 to P1		0.15	0.17	dB
Insertion Loss	IL	1915MHz-2010MHz P1 to P2, P2 to P3, P3 to P1		0.16	0.19	dB
Insertion loss ripple	IL	P1 to P2, P2 to P3, P3 to P1			0.10	dB
Isolation	ISO	P2 to P1, P1 to P3, P3 to P2	23			dB
Return loss	RL	P1, P2, P3	23			dB
Forward intermodulation distortion, 3rd (Note 2)	IMD	2 x 47.4dBm CW tones, 5MHz spacing	-73			dBc
Forward intermodulation distortion, 5th (Note 2)	IMD	2 x 47.4dBm CW tones, 5MHz spacing	-84			dBc
Reverse intermodulation distortion, 3rd (Note 2)	IMD	1 x 49dBm CW tone + 1 x 19 dBm CW tone, 5MHz spacing	-84			dBc
Phase flatness vs frequency at any 50MHz band width		1930MHz-1995MHz , peak to peak			0.5	degree
Out of band attenuation		@2nd harmonic	8			dB
Out of band attenuation		@3rd 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.

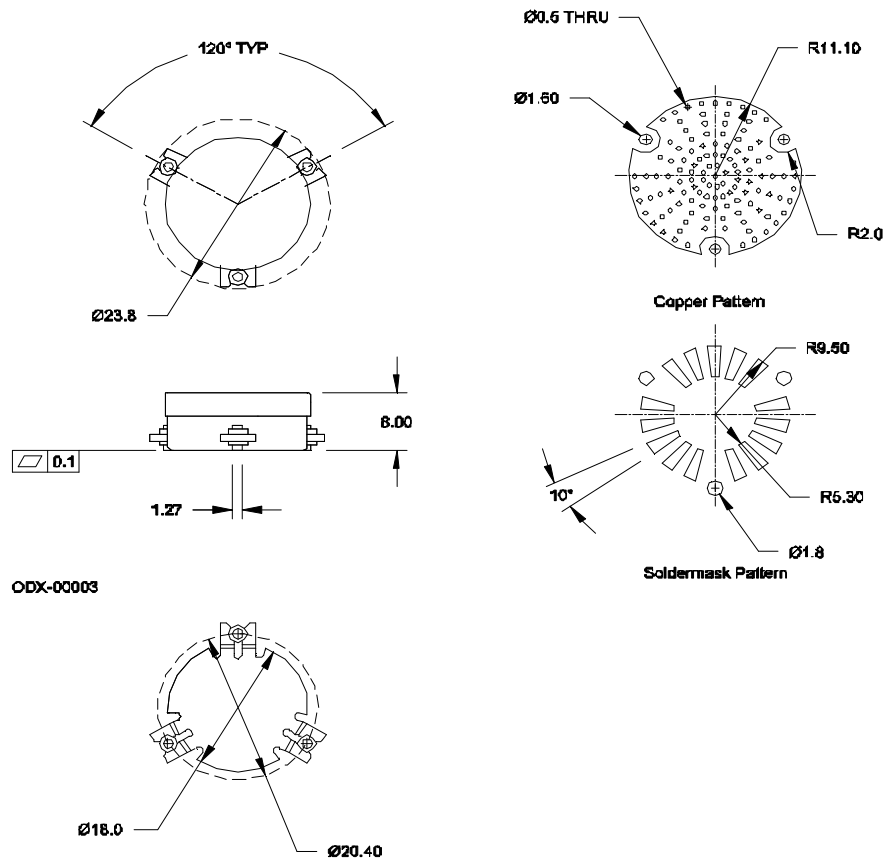
Table 3. Plating Specification

Section	Base Material	Plating
Pins	Bronze	Silver
Housing	Steel	Silver

Table 4. Ordering Information

Manufacturing Part Number	Evaluation Board Part Number
SKYFR-001058	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 port designation printed on top side of device.

Figure 2. Package Dimensions and Recommended PCB Layout

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