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SPECIFICATION SHEET

# SKYFR-001388: 1930—1995 MHz Single Junction Robust Lead Circulator

## Applications

- Wireless infrastructure
- Power amplifiers



## Features

- Small surface mount package
- Operating frequency range: 1930 to 1995MHz
- BeO free
- RoHS compliant
- Tape & Reel

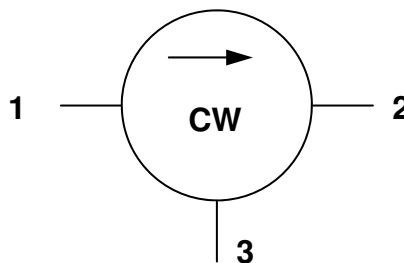
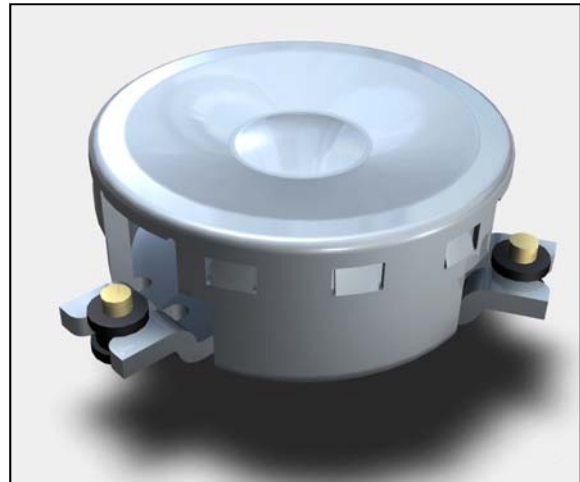


Figure 1. Block Diagram

Table 1. Absolute Maximum Ratings

Parameter	Symbol	Test Condition	Min	Max	Units
Average power	$P_{AVG}$			20	W
Peak power	$P_{PK}$			100	W
Operating temperature range	$T_{OP}$		-40	+125	°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.

**SPECIFICATION SHEET • SKYFR-001388**

**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	S <sub>21</sub> , S <sub>32</sub> , S <sub>13</sub> , -40°C to +125°C		0.18	0.25	dB
Isolation	ISO	S <sub>12</sub> , S <sub>23</sub> , S <sub>31</sub> , -40°C to +125°C	20	22		dB
Isolation	ISO	S <sub>12</sub> , S <sub>23</sub> , S <sub>31</sub> , -10°C to +105°C	22	23		dB
Return loss	RL	S <sub>11</sub> , S <sub>22</sub> , S <sub>33</sub> , -40°C to +125°C	20	22		dB
Return loss	RL	S <sub>11</sub> , S <sub>22</sub> , S <sub>33</sub> , -10°C to +105°C	22	23		dB
Group delay					2.0	ns
Intermodulation distortion (Note 2)	IMD	2 x 5W CW tones, 1MHz spacing	60	70		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.

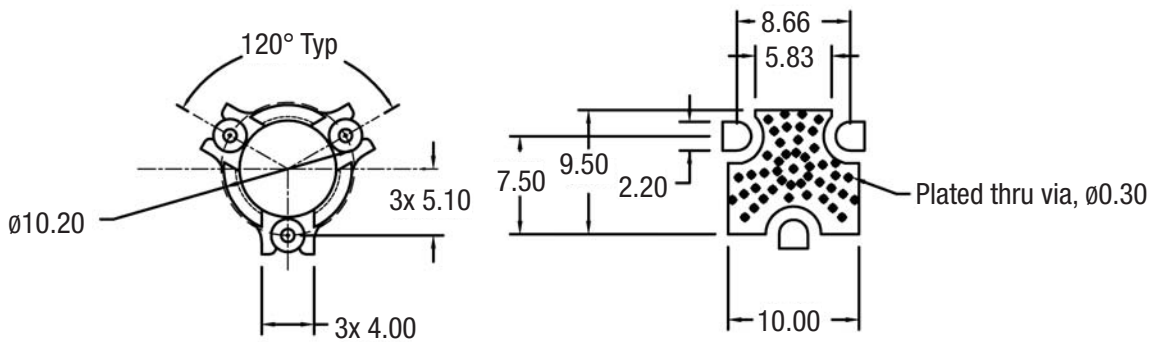
**Note 3:** Part tested on PCB-00077, 0.508mm Rogers RO4350B, trace width 1.07mm wide, 1oz copper.

**Table 3. Plating Specification**

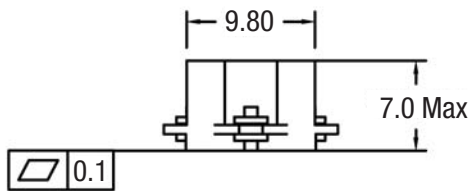
Section	Base Material	Plating
Pins	Brass	Silver
Housing	Steel	Silver

**Table 4. Ordering Information**

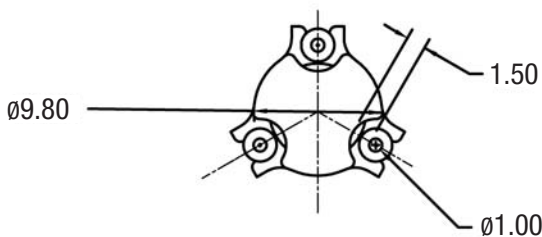
Manufacturing Part Number	Evaluation Board Part Number
SKYFR-001388	TFX-00118



ODX-00192



PCB Layout



204125-002

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