

DATA SHEET

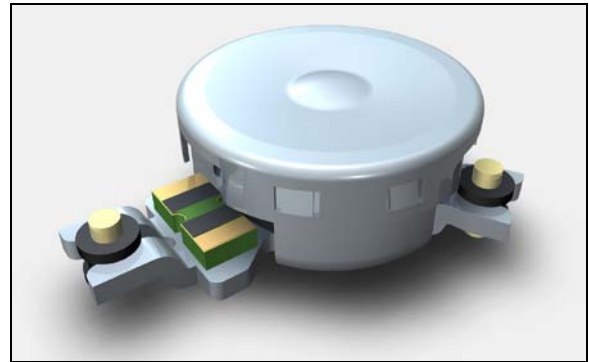
SKYFR-000748: 2070-2210 MHz Single Junction Robust Lead Isolator

Applications

- Wireless infrastructure
- Power amplifiers

Features

- BeO free
- Small, surface mount package
- Operating frequency range: 2070 MHz to 2210 MHz
- Parts delivered on tape and reel



Skyworks Green™ products are compliant with all applicable legislation and are halogen-free. For additional information, refer to *Skyworks Definition of Green™*, document number SQ04-0074.

Description

The SKYFR-000748 is a single-junction, surface mount isolator designed for wireless infrastructure applications. It operates over the frequency range of 2070 MHz to 2210 MHz. Intermodulation Distortion (IMD) performance is better than -76 dBc over an operating temperature range of -40 °C to +85 °C.

The SKYFR-000748 comes in an industry-standard surface mount package and is designed for automated SMT placement.

A block diagram of the SKYFR-000748 is shown in Figure 1. The absolute maximum ratings of the SKYFR-000748 are provided in Table 1.

Electrical specifications are provided in Table 2. Plating information is shown in Table 3. Figure 2 shows the package dimensions, and Figure 3 provides the tape and reel dimensions.

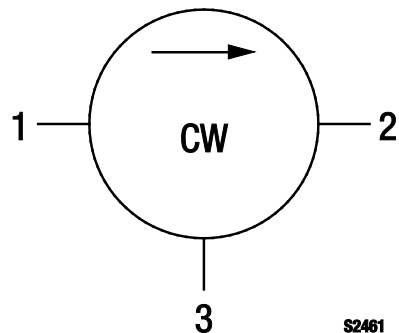


Figure 1. SKYFR-000748 Block Diagram

Table 1. SKYFR-000748 Absolute Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Units
Average forward power	PF		10	W
Peak forward power	PF_PK		60	W
Average reverse power (maximum duration = 60 sec)	PR		5	W
Average reverse power (no time limit)	PR		4	W
Operating temperature	TOP	-40	+85	°C
Storage temperature	TST	-55	+125	°C

Note: Exposure to maximum rating conditions for extended periods may reduce device reliability. There is no damage to device with only one parameter set at the limit and all other parameters set at or below their nominal value. Exceeding any of the limits listed here may result in permanent damage to the device.

Table 2. SKYFR-000748 Electrical Specifications (Note 1)
(TOP = -40 °C to +85 °C)

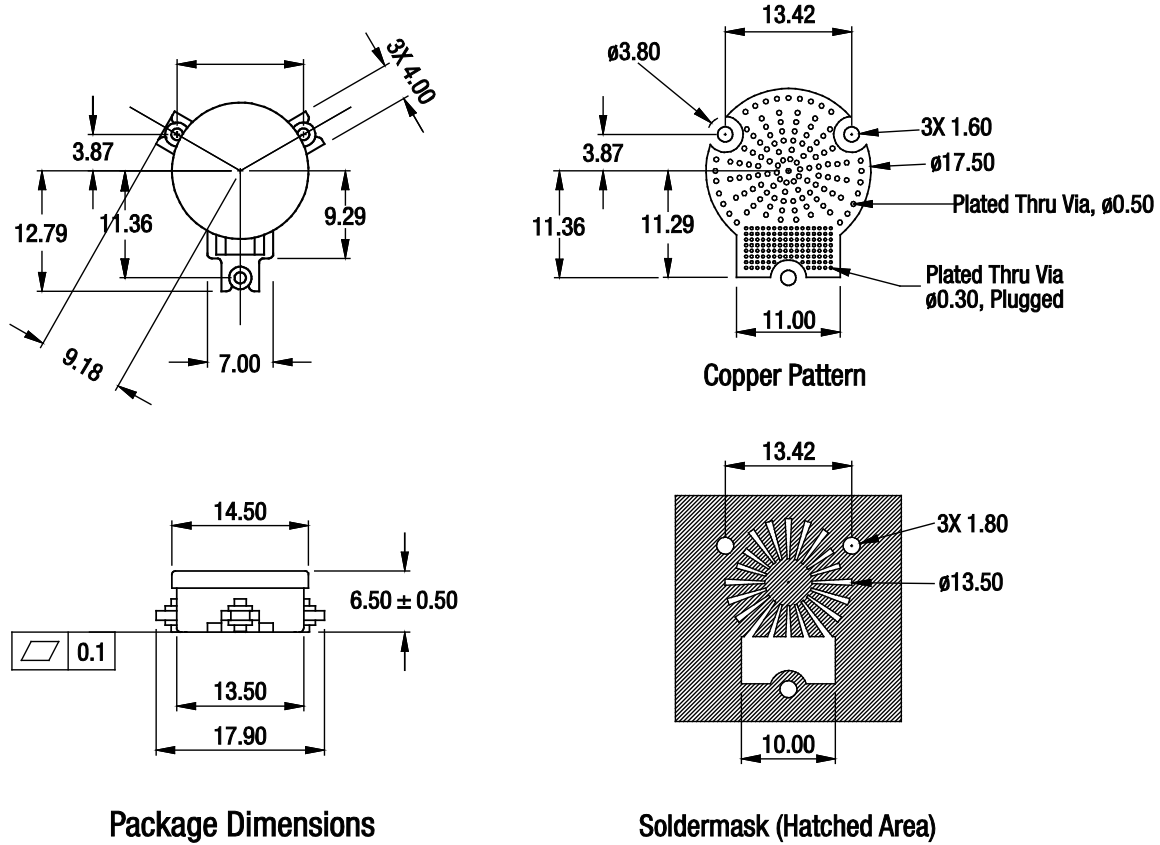
Parameter	Symbol	Test Condition	Min	Typical	Max	Units
Frequency range	f		2070		2210	MHz
Impedance				50		Ω
Insertion loss	IL				0.50	dB
Isolation	Iso		18			dB
Return loss	RL	Port 1 and port 2	20			dB
		Port 3	16			dB
Attenuation		Port 2 to port 3	18	20	22	dB
Intermodulation Distortion (Note 2)	IMD	2 x 4 W CW tones, 5 MHz spacing	-76			dBc
Harmonics	2fo	10 W, CW			-5	dB
	3fo1 to 5fo1	10 W, CW			-7	dB
Out of band attenuation, port 1 to port 2		2fo			10	dB
		3fo			10	dB
		nfo			5	dB
Group Delay		Within frequency range	0.5		2.8	ns
Deviation from nominal delay over temperature range		Measured within frequency			±0.2	ns

Note 1: Performance is guaranteed only under the conditions listed in this Table.

Note 2: See Skyworks Application Note, *Intermodulation Distortion Measurements of Ferrites*, document number 201537 for further details.

Table 3. SKYFR-000748 Plating Specification

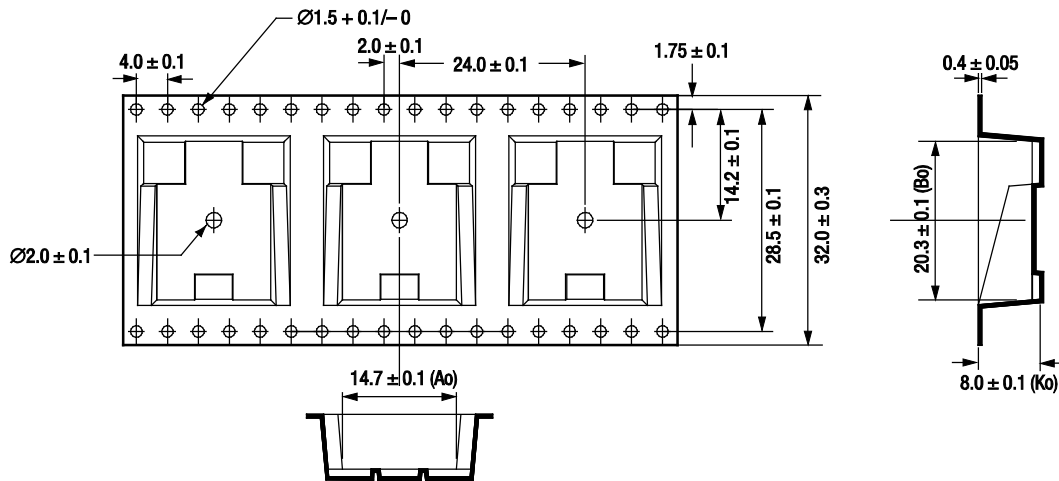
Section	Material	Plating
Leads	Bronze	Gold
Housing	Steel	Silver



All measurements are in millimeters

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Figure 2. SKYFR-000748 Package Dimensions and PCB Footprint



Notes:

1. All measurements are in millimeters.
2. Ten sprocket hole pitch cumulative tolerance ± 0.2 mm.
3. Carrier camber not to exceed 1 mm in 100 mm.
4. Ao and Bo measured on a plane 0.3 mm above the bottom of the pocket.
5. Ko measured from a plane on the inside bottom of the pocket to the top surface of the carrier.

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Figure 3. SKYFR-000748 Tape and Reel Dimensions

Ordering Information

Model Name	Manufacturing Part Number	Evaluation Board Part Number
SKYFR-000748 Single Junction Lead Isolator	SKYFR-000748	TFX-00025

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