

DATA SHEET

# SKYFR-000733: 2095-2185 MHz Single Junction Robust Lead Isolator

## Applications

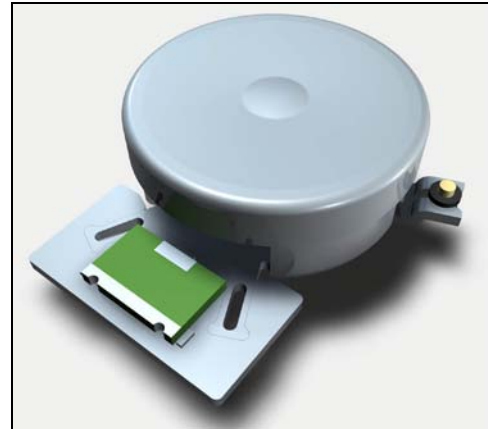
- Wireless infrastructure
- Power amplifiers

## Features

- BeO free
- Small, surface mount package
- Operating frequency range: 2095 MHz to 2185 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.



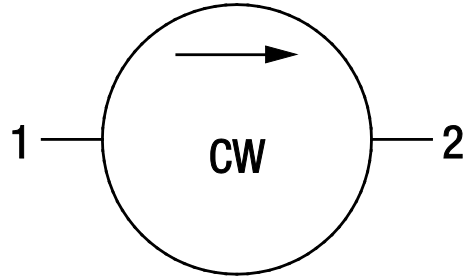
## Description

The SKYFR-000733 is a single-junction, surface mount isolator designed for wireless infrastructure applications. It operates over the frequency range of 2095 MHz to 2185 MHz. Insertion loss is less than 0.25 dB over an operating temperature range of  $-40^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$ .

The SKYFR-000733 comes in an industry-standard surface mount package and is designed for automated SMT placement.

A block diagram of the SKYFR-000733 is shown in Figure 1. The absolute maximum ratings of the SKYFR-000733 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.



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Figure 1. SKYFR-000733 Block Diagram

Table 1. SKYFR-000733 Absolute Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Units
Average power	P <sub>AVG</sub>		200	W
Peak power	P <sub>PEAK</sub>		500	W
Reverse power	P <sub>REV</sub>		100	W
Operating temperature	T <sub>OP</sub>	-40	+105	°C
Storage temperature	T <sub>ST</sub>	-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-000733 Electrical Specifications (Note 1)

(T<sub>OP</sub> = -40 °C to +105 °C)

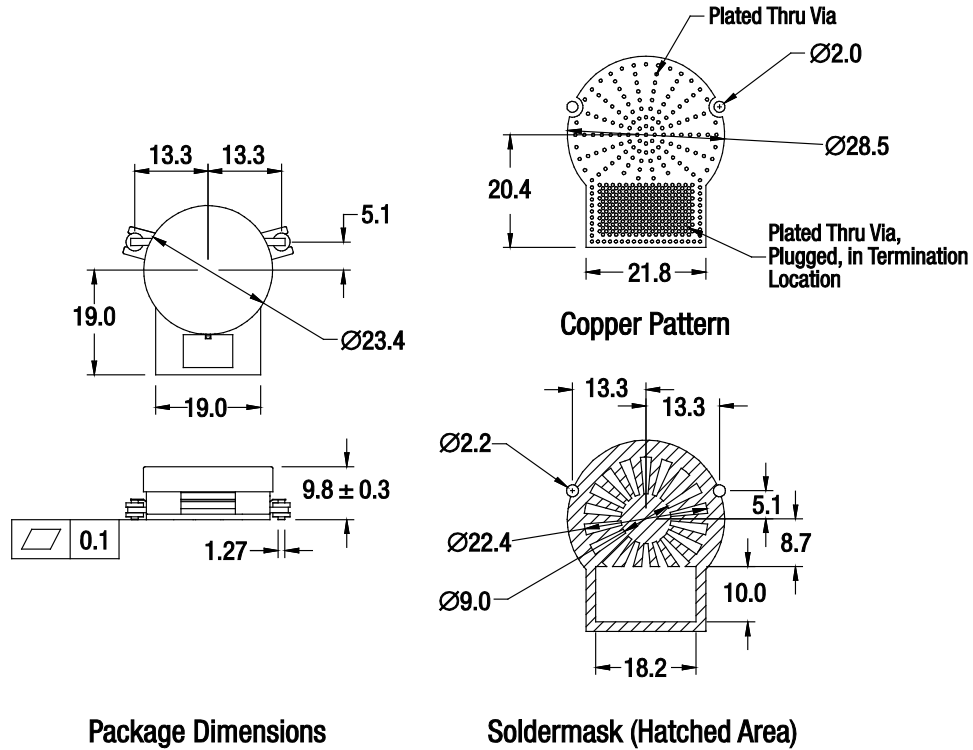
Parameter	Symbol	Test Condition	Min	Typical	Max	Units
Frequency range	f		2095		2185	MHz
Impedance				50		Ω
Insertion loss	IL				0.25	dB
Insertion loss ripple		peak to peak			0.10	dB
Isolation	Iso		23			dB
Return loss	RL		23			dB
Phase flatness		2110 to 2170 MHz			0.5	deg
3 <sup>rd</sup> Order Intermodulation Distortion (Note 2)	IMD3	2 x 55 W CW tones, 5 MHz spacing	-74			dBc
2 <sup>nd</sup> harmonic	2fo	55 W tone			-59	dBc

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-000733 Plating

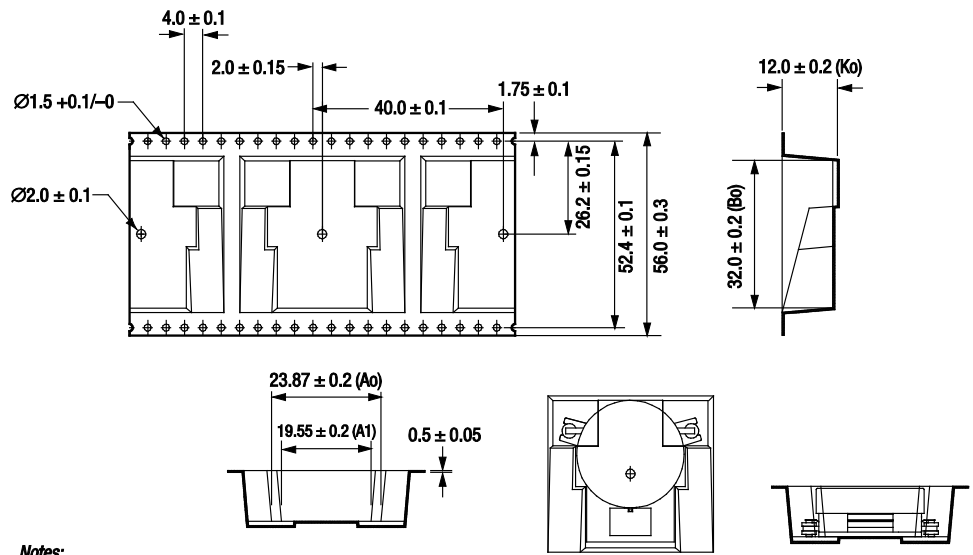
Section	Material	Plating
Pins	Bronze	Silver
Housing	Steel	Silver



All measurements are in millimeters

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Figure 2. SKYFR-000733 Package Dimensions and PCB Footprint



Notes:

1. All measurements are in millimeters.
2. Carrier tape: conductive polystyrene.
3. Ten sprocket hole pitch cumulative tolerance  $\pm 0.2$  mm.
4. Carrier camber not to exceed 1 mm in 100 mm.
5. Ao and Bo measured on a plane 0.3 mm above the bottom of the pocket.
6. 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-000733 Tape and Reel Dimensions

**Ordering Information**

Model Name	Manufacturing Part Number	Evaluation Board Part Number
SKYFR-000733 Single Junction Lead Isolator	SKYFR-000733	TFX-00021

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