DATA SHEET

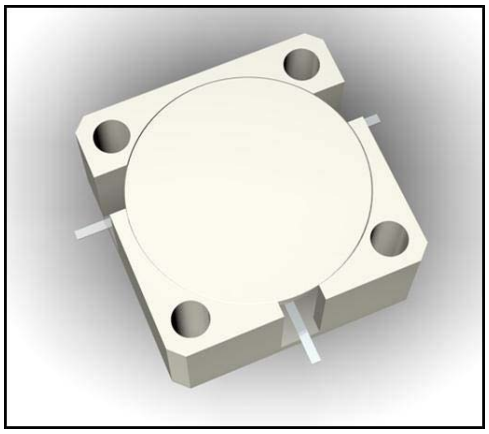
SKYFR-000700: 925-960 MHz Single Junction Drop-In Circulator

Applications

- Wireless infrastructure
- LTE systems

Features

- BeO free
- Operating frequency range: 925 MHz to 960 MHz
- Insertion loss: 0.25 dB
- Isolation: 20 dB
- IMD: –90 dBc (2 × 50 W CW tones, 5 MHz spacing)



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-000700 is a single-junction circulator designed for wireless infrastructure and LTE applications. It operates over the frequency range of 925 MHz to 960 MHz. Intermodulation Distortion (IMD) is an excellent –90 dBc (2 × 50 W CW tones, 5 MHz spacing). Insertion loss is less than 0.25 dB over an operating temperature range of –40 °C to +85 °C.

The SKYFR-000700 comes in an industry-recognized package designed for drop-in assembly.

A block diagram of the SKYFR-000700 is shown in Figure 1. The absolute maximum ratings of the SKYFR-000700 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.

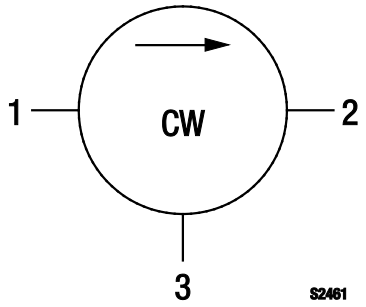


Figure 1. SKYFR-000700 Block Diagram

Table 1. SKYFR-000700 Absolute Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Units
Average power	P_{AVG}		200	W
Peak power	P_{PEAK}		1200	W
Operating temperature	T_{OP}	–40	+85	°C
Storage temperature	T_{ST}	–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-000700 Electrical Specifications (Note 1)
(T_{OP} = –40 °C to +85 °C)

Parameter	Symbol	Test Condition	Min	Typical	Max	Units
Frequency range	f		925		960	MHz
Impedance				50		Ω
Insertion loss	IL			0.20	0.25	dB
Isolation	Iso		20	23		dB
Return loss	RL		20	23		dB
Intermodulation Distortion (Note 2)	IMD	2 x 50 W CW tones, 5 MHz spacing		–93	–90	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-000700 Plating

Section	Material	Plating
Leads	Copper	Silver
Housing	Steel	Silver

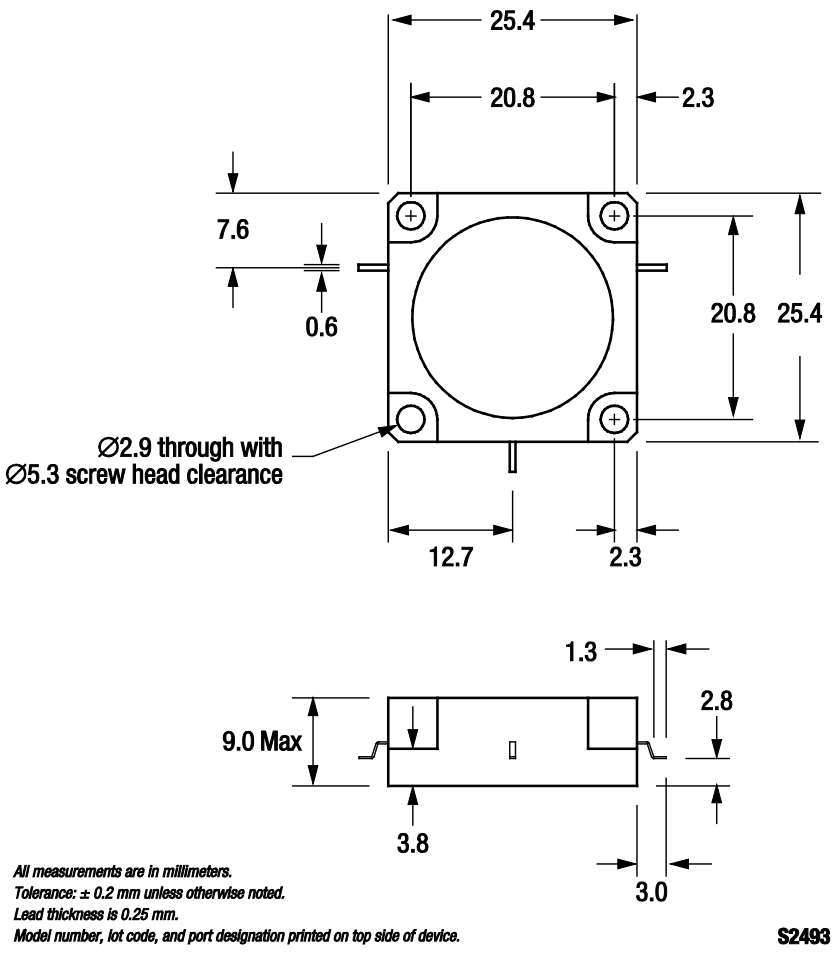


Figure 2. SKYFR-000700 Package Dimensions

Ordering Information

Model Name	Manufacturing Part Number	Evaluation Board Part Number
SKYFR-000700 Single Junction Drop-In Circulator	SKYFR-000700	MAFX-999999-000PPR

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