

SKYFR-001875: 1995—2020 MHz Single Junction Isolator

Applications

- Wireless infrastructure
- Power amplifiers

Features

- Operating frequency range: 1995MHz to 2020MHz
- BeO free
- RoHS compliant



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.

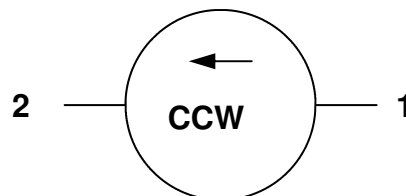
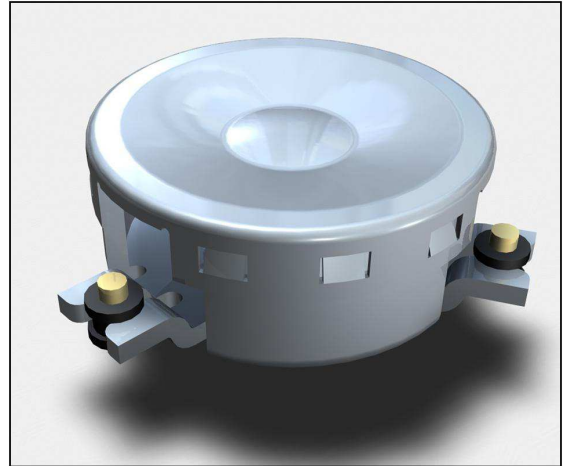


Figure 1. Block Diagram

Table 1. Absolute Maximum Ratings

Parameter	Symbol	Test Condition	Min	Max	Units
Average power, forward	P _{AVG}			100	W
Peak power, forward	P _{PK}			1000	W
Average power, reverse	P _{REV}	No time limit		40	W
Operating temperature range	T _{OP}		-40	+115	°C
Storage temperature range	T _{STOR}		-40	+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-001875

Table 2. Electrical Specifications (Note 1)

Parameter	Symbol	Test Condition	Min	Typical	Max	Units
Frequency range	f		1995		2020	MHz
Impedance				50		Ω
Insertion loss	IL	P1 to P2			0.20	dB
Isolation	ISO	P2 to P1, 1995MHz to 2020MHz	22			dB
Isolation	ISO	P2 to P1, 1975MHz to 2040MHz	20			dB
Isolation	ISO	P2 to P1, 1970MHz to 2045MHz	10			dB
Isolation	ISO	P2 to P1, 1945MHz to 2070MHz	8			dB
Isolation	ISO	P2 to P1, 1920MHz to 2095MHz	6			dB
Return loss	RL	P1 and P2, 1995MHz to 2020MHz, 0°C to +115°C	23			dB
Return loss	RL	P1 and P2, 1995MHz to 2020MHz, -40°C to +0°C	20			dB
Return loss	RL	P1 and P2, 1975MHz to 2040MHz	20			dB
Return loss	RL	P1 and P2, 1920MHz to 2095MHz	6			dB
Intermodulation distortion, 3rd order	IMD3	2 x 50W CW tones, 5MHz spacing			-69	dBc
Intermodulation distortion, 5th order	IMD5	2 x 50W CW tones, 5MHz spacing			-79	dBc
Harmonics		2 x f_0 , 100W CW			0	dBm
Harmonics		3-4 x f_0 , 100W CW			-10	dBm
Harmonics		5 x f_0 , 100W CW			-35	dBm
Harmonics		6-7 x f_0 , 100W CW			-25	dBm
Out of band attenuation Port 1 to Port 2		2 x f_0	10			dB
Out of band attenuation Port 1 to Port 2		3 x f_0	5			dB
Out of band attenuation Port 1 to Port 2		n x f_0	5			dB
Group delay		1995MHz to 2020MHz	0.5		2.8	ns
Deviation over temperature range		With fixed frequency for 1995MHz to 2020MHz			± 0.05	ns

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.

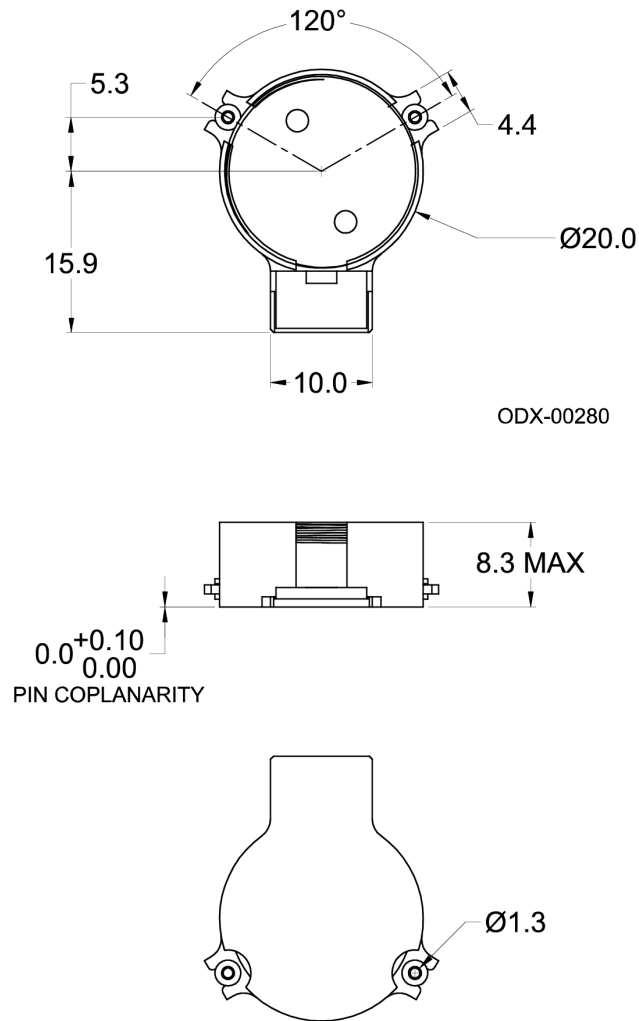
Note 3: Test fixture PCB is Rogers 4350B, 0.50mm thick, with track width of 0.95mm

Table 3. Plating Specification

Section	Base Material	Plating
Leads	Copper	Silver
Housing	Steel	Silver

Table 4. Ordering Information

Manufacturing Part Number	Ericsson Part Number
SKYFR-001875	UNH 102 3056/xx



All dimensions in millimeters.
Tolerance: $\pm 0.2\text{mm}$ unless otherwise specified.
Model number, lot code and port designation printed on top side of device.

Figure 2. Package Dimensions

Copyright © 2011 Skyworks Solutions, Inc. All Rights Reserved.

Information in the document is provided in connection with Skyworks Solutions, Inc. ("Skyworks") products or services. These materials, including the information contained herein, are provided by Skyworks as a service to its customers and may be used for informational purposes only by the customer. Skyworks assumes no responsibility for errors or omissions in these materials or the information contained herein. Skyworks may change its documentation, products, services, specifications or product descriptions at any time, without notice. Skyworks makes no commitment to update the materials or information and shall have no responsibility whatsoever for conflicts, incompatibilities, or other difficulties arising from any future changes.

No license, whether express, implied, by estoppel or otherwise, is granted to any intellectual property rights by this document. Skyworks assumes no liability for any materials, products or information provided hereunder, including the sale, distribution, reproduction or use of any Skyworks products, information or materials, except as may be provided in Skyworks Terms and Conditions of Sale.

THE MATERIALS, PRODUCTS AND INFORMATION ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, WHETHER EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE, INCLUDING FITNESS FOR A PARTICULAR PURPOSE OR USE, MERCHANTABILITY, PERFORMANCE, QUALITY OR NON-INFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHT; ALL SUCH WARRANTIES ARE HEREBY EXPRESSLY DISCLAIMED. SKYWORKS DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. SKYWORKS SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING BUT NOT LIMITED TO ANY SPECIAL, INDIRECT, INCIDENTAL, STATUTORY, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS THAT MAY RESULT FROM THE USE OF THE MATERIALS OR INFORMATION, WHETHER OR NOT THE RECIPIENT OF MATERIALS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Skyworks products are not intended for use in medical, lifesaving or life-sustaining applications, or other equipment in which the failure of the Skyworks products could lead to personal injury, death, physical or environmental damage. Skyworks customers using or selling Skyworks products for use in such applications do so at their own risk and agree to fully indemnify Skyworks for any damages resulting from such improper use or sale.

Customers are responsible for their products and applications using Skyworks products, which may deviate from published specifications as a result of design defects, errors, or operation of products outside of published parameters or design specifications. Customers should include design and operating safeguards to minimize these and other risks. Skyworks assumes no liability for applications assistance, customer product design, or damage to any equipment resulting from the use of Skyworks products outside of stated published specifications or parameters.

Skyworks, the Skyworks symbol, and "Breakthrough Simplicity" are trademarks or registered trademarks of Skyworks Solutions, Inc. in the United States and other countries. Third-party brands and names are for identification purposes only, and are the property of their respective owners. Additional information, including relevant terms and conditions, posted at www.skyworksin.com and incorporated by reference.