

# SKYFR-001297: 729—756 MHz Single Junction Robust Lead Isolator

## Applications

- Wireless infrastructure
- Power amplifiers

## Features

- Operating frequency range: 729 to 756 MHz
- BeO free
- RoHS compliant

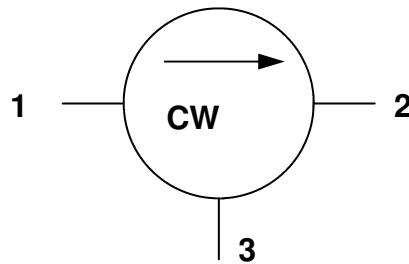


Figure 1. Block Diagram

Table 1. Absolute Maximum Ratings

Parameter	Symbol	Test Condition	Min	Max	Units
Average power, forward	$P_{AVG}$			130	W
Peak power, forward	$P_{PK}$			2250	W
Average power, reverse	$P_{REV}$	No time limit		80	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.

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**Table 2. Electrical Specifications (Note 1)**

Parameter	Symbol	Test Condition	Min	Typical	Max	Units
Frequency range	f		729		756	MHz
Impedance				50		Ω
Insertion loss	IL	P1 to P2			0.25	dB
Isolation	ISO	P2 to P1, 729MHz to 756MHz	22			dB
Isolation	ISO	P2 to P1, 709 MHz to 776 MHz	17			dB
Isolation	ISO	P2 to P1, 695 MHz to 780 MHz	8			dB
Isolation	ISO	P2 to P1, 678 MHz to 797 MHz	6			dB
Return loss	RL	P1 and P2, 729MHz to 756MHz, 0°C to +115°C	22			dB
Return loss	RL	P1 and P2, 729MHz to 756MHz, -40°C to +0°C	20			dB
Return loss	RL	P1 and P2, 709 MHz to 776 MHz	16			dB
Return loss	RL	P1 and P2, 695 MHz to 780 MHz	6			dB
Return loss	RL	P1 and P2, 678 MHz to 797 MHz	3			dB
Return loss	RL	P3	16			dB
Attenuation		P2 to P3	28	30	32	dB
Intermodulation distortion, 3rd order (Note 2)	IMD3	2 x 50W CW tones, 5MHz spacing			-65	dBc
Intermodulation distortion, 5th order (Note 2)	IMD5	2 x 50W CW tones, 5MHz spacing			-75	dBc
Harmonics		2 x f <sub>0</sub> , 50W CW			0	dBm
Harmonics		3-4 x f <sub>0</sub> , 50W CW			-10	dBm
Harmonics		5 x f <sub>0</sub> , 50W CW			-35	dBm
Harmonics		6-7 x f <sub>0</sub> , 50W CW			-25	dBm
Out of band attenuation Port 1 to Port 2		n x f <sub>0</sub>	5			dB
Group delay		729MHz to 756MHz	0.5		2.8	ns
Deviation from nominal group delay over temperature range		Measured with fixed frequency for 729MHz to 756MHz			±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:** All testing done using Ericsson specified test fixture.

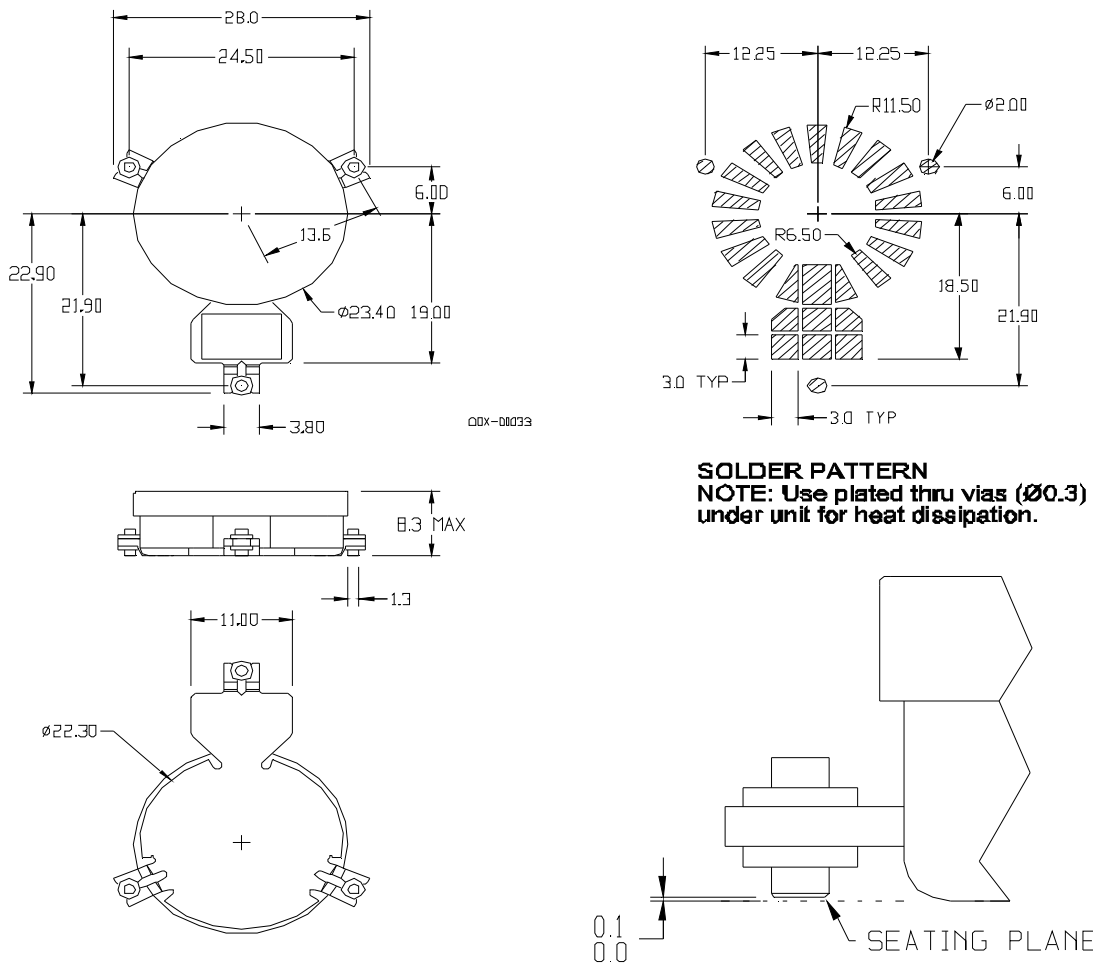
**Table 3. Plating Specification**

Section	Base Material	Plating
Leads	Copper	Silver
Housing	Steel	Silver

**Table 4. Ordering Information**

Manufacturing Part Number	Ericsson Part Number
SKYFR-001297	UNH 102 3055/01

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**SOLDER PATTERN**  
**NOTE: Use plated thru vias (Ø0.3)**  
**under unit for heat dissipation.**

All dimensions in millimeters.  
 Tolerance: ±0.2mm unless otherwise specified.  
 Model number, lot code and port designation printed on top side of device.

**Figure 2. Package Dimensions**

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