

Ultra Low Loss Isolator 860 MHz — 960 MHz

MAFRIN0448
Version 02

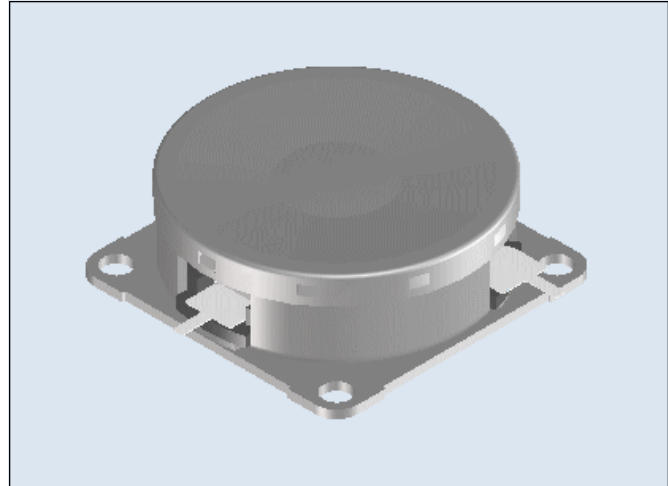
Features

- <0.1 dB Insertion Loss
- Designed for wireless base station market
- 25 dB Isolation typical
- Low cost 31.75mm Drop-In package
- RoHs Compliant

Description

This circulator is designed specifically for wireless base station applications and features high reliability performance at a low cost. It is in a low cost package ideally suited for high volume manufacturing.

M/A-Com is one of the largest suppliers of isolators and circulators in the world.



Electrical Specifications: $T_A = +25^\circ\text{C}$, $Z_0 = 50\ \text{Ohms}$

Parameter	Test Conditions	Units	Minimum	Typical	Maximum
Frequency Range	Over T_{op}^1	MHz	860		960
Insertion Loss	Over T_{op}^1	dB		0.08	0.1
Isolation	Over T_{op}^1	dB	23.0	25.0	
Return Loss	Over T_{op}^1	dB	22.0	25.0	
Intermodulation Product	IM3, 2 tones, 30 Watts each over T_{op}^1 (see table) IM5, 2 tones, 30 Watts each over T_{op}^1	dBc			
Harmonics	1 tone @ 30 Watts of T_{op}^1	dBc			
Insertion Delay	@ 883MHz, Test Fixture	Degree			
Delay	Test Fixture Removed	nSec			
Circulation	Over T_{op}^1			CW	

1. See "Absolute Maximum Ratings" for T_{op} .

Absolute Maximum Ratings:

Parameter	Absolute Maximum
Forward Power	200 Watts
Operating Temperature	-20°C to +70°C
Storage Temperature	-40°C to +100°C

1. Operation of this device above any one of these parameters may cause permanent damage.

Ordering Information

Part Number	Packaging
MAFRIN0448	Flat Pack

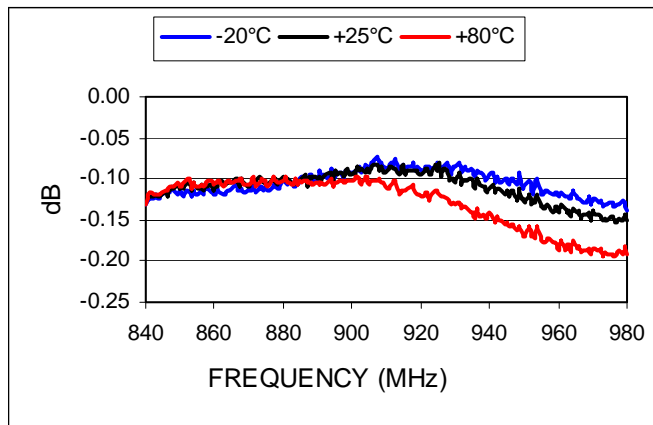
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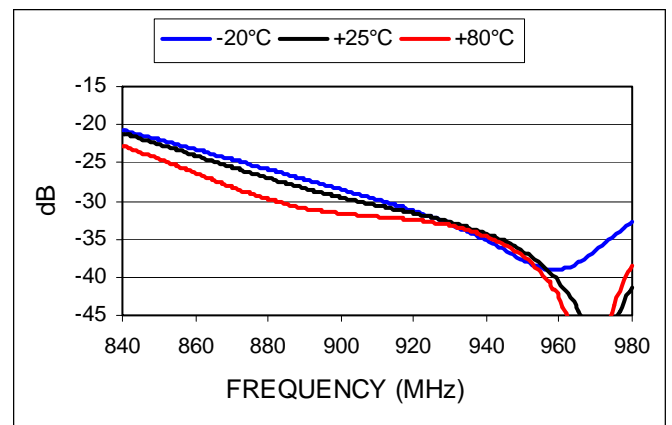
• **North America** Tel: 800.366.2266 / Fax: 978.366.2266
 • **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
 • **Asia/Pacific** Tel: 81.44.844.8296 / Fax: 81.44.844.8298

Visit www.macom.com for additional data sheets and product information.

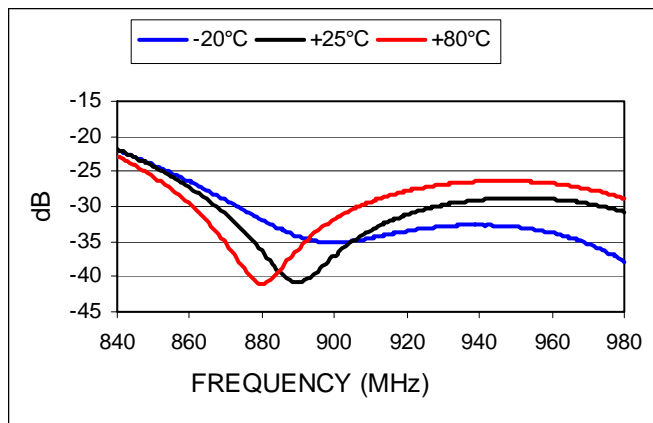
Insertion Loss (S21)



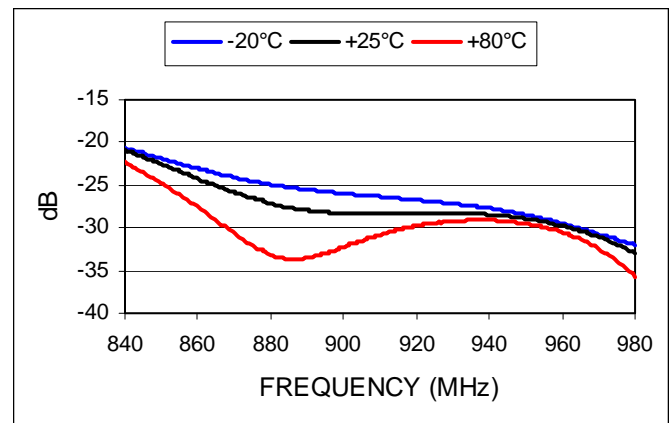
Isolation (S12)



Return Loss (S11)



Return Loss (S22)



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Environmental Specifications

Devices are designed to function after exposure to the shock, vibration, thermal shock and moisture conditions typically encountered in base station and other infrastructure environments.

S-Parameters

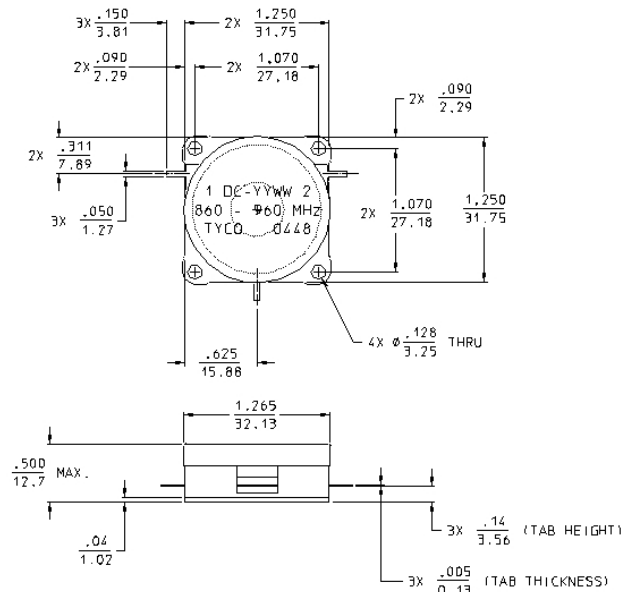
S-parameters are available on the M/A Com web-site at:

www.macom.com/tech_app_resources/techapp_design_info

Port Description:

Port Number	Description
1	RF In
2	RF Out
3	Terminated

Outline Drawing



1. Dimensions in mm.
2. Tolerances: ± 0.3 mm unless otherwise noted.
3. Housing: Cold Rolled Steel with SnPb 90/10 plating.
4. Cover: CRS with SnPb 90/10 plating.
5. Leads: Copper.