

Ultra Low Loss Isolator
860 MHz — 894 MHz

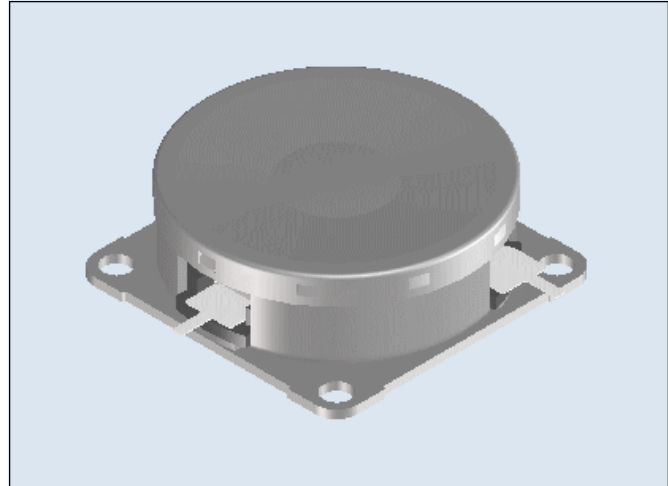
MAFRIN0436
Version 02

Features

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

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		894
Insertion Loss	Over T_{op}^1	dB		0.08	0.1
Isolation	Over T_{op}^1	dB	22.0	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	-70	-74	
Harmonics	1 tone @ 30 Watts of T_{op}^1	dBc	-50	-54	
Insertion Phase	@ 883MHz, Test Fixture	Degree ($^\circ$)		177	
Delay	Test Fixture Removed	nSec		1.4	
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
MAFRIN0436	Flat Pack

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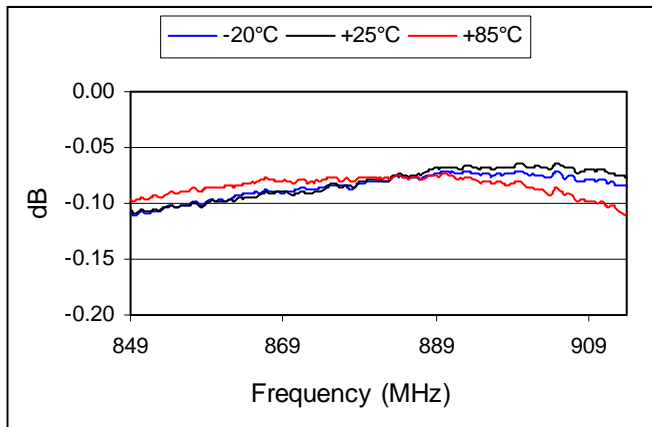
- **North America** Tel: 800.366.2266 / Fax: 978.366.2266
- **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- **Asia/Pacific** Tel: 81.44.844.8296 / Fax: 81.44.844.8298

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

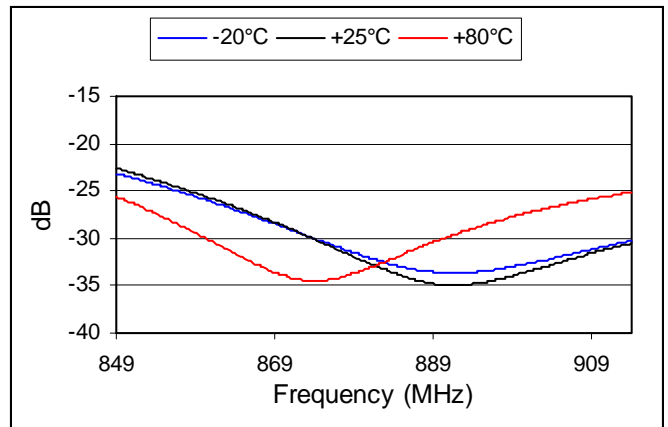
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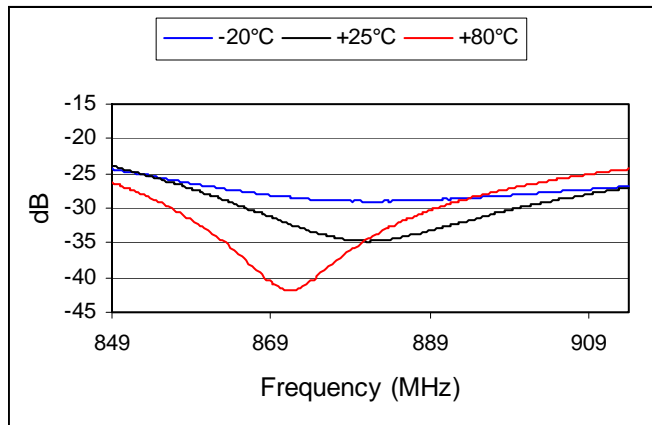
Insertion Loss (S21)



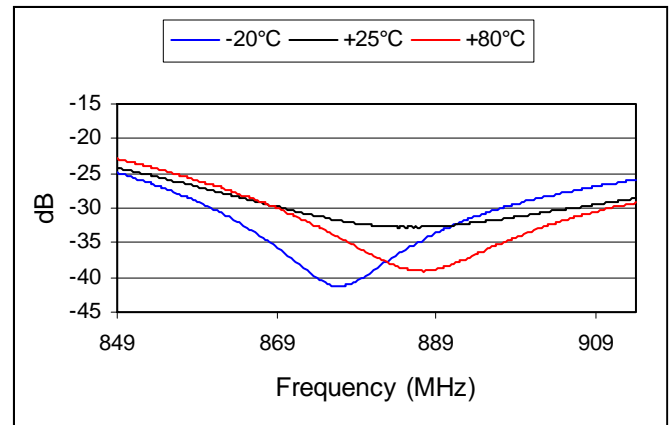
Isolation (S12)



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 website 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 inches/mm.
2. Tolerances: ± 0.3 mm unless otherwise noted.
3. Housing: Cold Rolled Steel with Silver Plating.
4. Cover: CRS with Silver Plating.
5. Leads: Copper.

