

RoHS Compliant



MAFRIN0493 V2

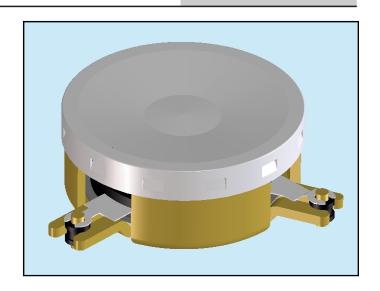
Surface Mount Robust Lead Circulator 902 MHz—928 MHz

Features

- Designed for RFID market
- 22dB Isolation typical
- 0.25dB Insertion Loss
- Low cost package
- 260°C Reflow Compatible
- RoHS* Compliant Version of the MAFRIN0332

Description

This circulator is designed specifically for RFID 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 isolator and circulators in the world.



Electrical Specifications $T_A = +25$ °C, $Z_0 = 50$ Ohms

Parameter	Test Conditions	Units	Min	Тур	Max
Frequency Range	Over T _{op} ¹	MHz	902		928
Insertion Loss	902 MHz—928 MHz, over T _{op} ¹	dB		0.21	0.35
Isolation	902 MHz—928 MHz, over T _{op} ¹	dB	22.0	29.0	
Return Loss	902 MHz—928 MHz, all ports, over T _{op} ¹	dB	20.0	28.0	
Circulation	Over T _{op} ¹			CW	

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

Absolute Maximum Ratings

Parameter	Absolute Maximum		
Forward Power	100 Watts		
Operating Temperature	-10°C to +85°C		
Storage Temperature	-40°C to +100°C		

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

^{*} Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

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[•] Europe Tel: 44.1908.574.200 / Fax: 44.1908.574.300

Asia/Pacific Tel: 81.44.844.8296 / Fax: 81.44.844.8298



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Ordering Information

Part Number	Packaging
MAFRIN0493	Tape and Reel

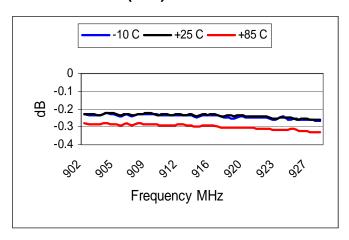
Environmental Specifications

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.

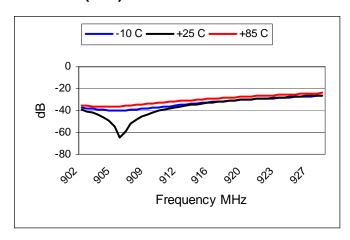
S-Parameters

S-parameters are available on the M/A Com website at: S-Parameters

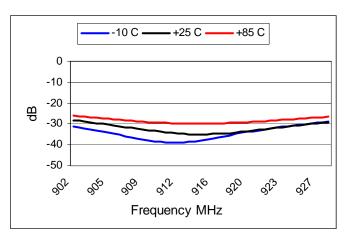
Insertion Loss (S21)



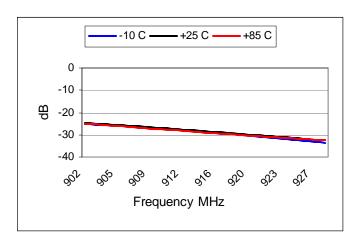
Isolation (S12)



Return Loss (S11)



Return Loss (S22)



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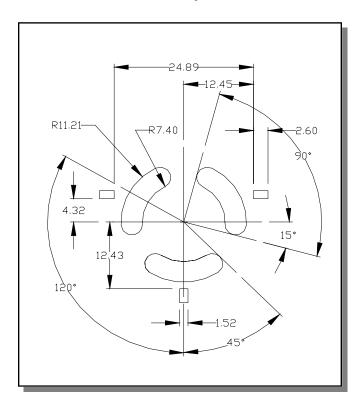
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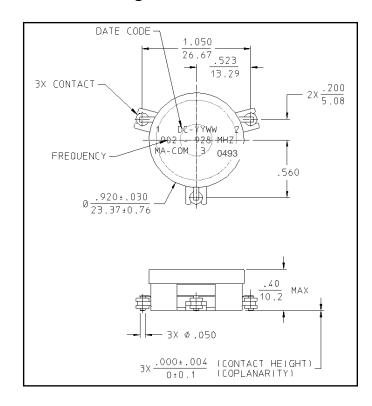
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Recommended PCB Layout



- 1. Dimensions in mm.
- 2. Tolerances: ± 0.2 mm unless otherwise noted.
- Use multiple plated thru holes in ground area under the housing.

Outline Drawing



- 1. Dimensions in mm.
- 2. Tolerances: ± 0.3 mm unless otherwise noted.
- 3. Housing: Cold Rolled Steel with Gold over Nickel Plate.
- 4. Cover: CRS with Nickel plating.
- 5. Leads: Copper.

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