

Single Junction Gull Wing Circulator 860 MHz—960 MHz

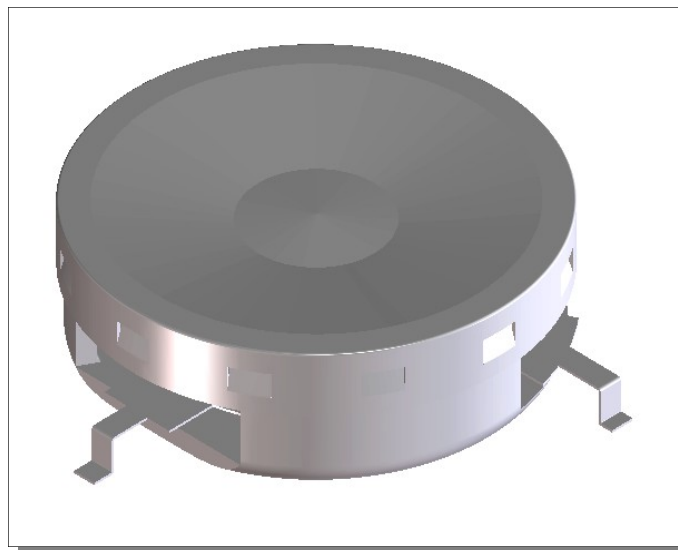
V2

Features

- Designed for RFID market
- 22dB Isolation typical
- 0.25dB Insertion Loss
- Low cost package
- 260°C Reflow Compatible
- RoHS* Compliant Version of the MAFRIN0370

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

Parameter	Test Conditions	Units	Min	Typ	Max
Frequency Range	Over T_{op}^1	MHz	860		960
Insertion Loss	860 MHz—960 MHz, over T_{op}^1	dB		0.21	0.40
Isolation	860 MHz—960 MHz, over T_{op}^1	dB	18.0	29.0	
Return Loss	860 MHz—960 MHz, all ports, over T_{op}^1	dB	18.0	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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ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.
PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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V2

Ordering Information

Part Number	Packaging
MAFRIN0494	Tray

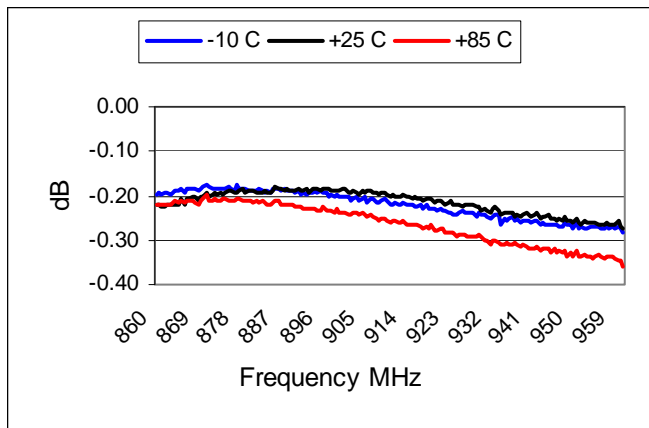
Environmental Specifications

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.

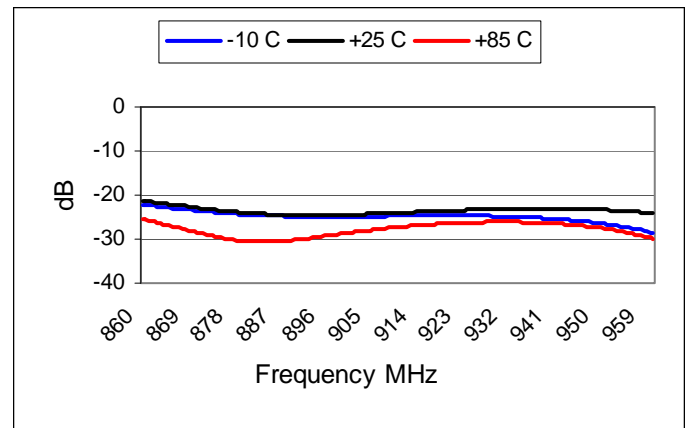
S-Parameters

S-parameters are available on the M/A Com website at: [S-Parameters](#)

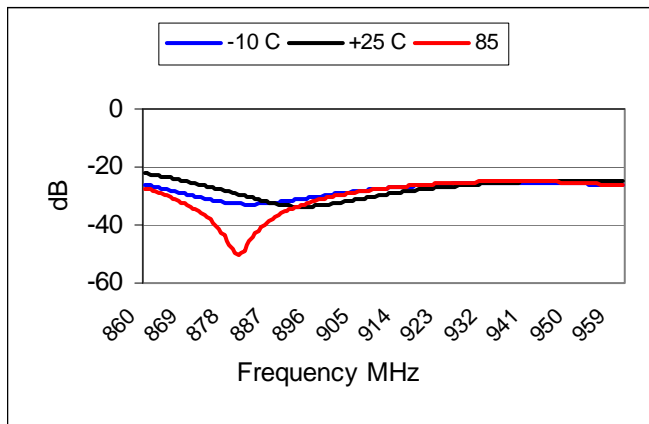
Insertion Loss (S21)



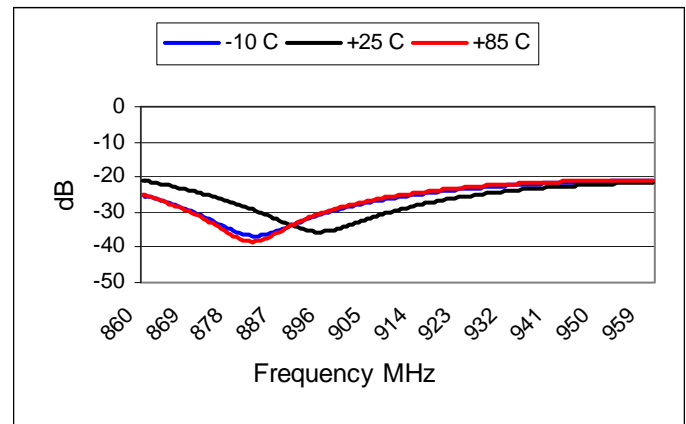
Isolation (S12)



Return Loss (S11)



Return Loss (S22)

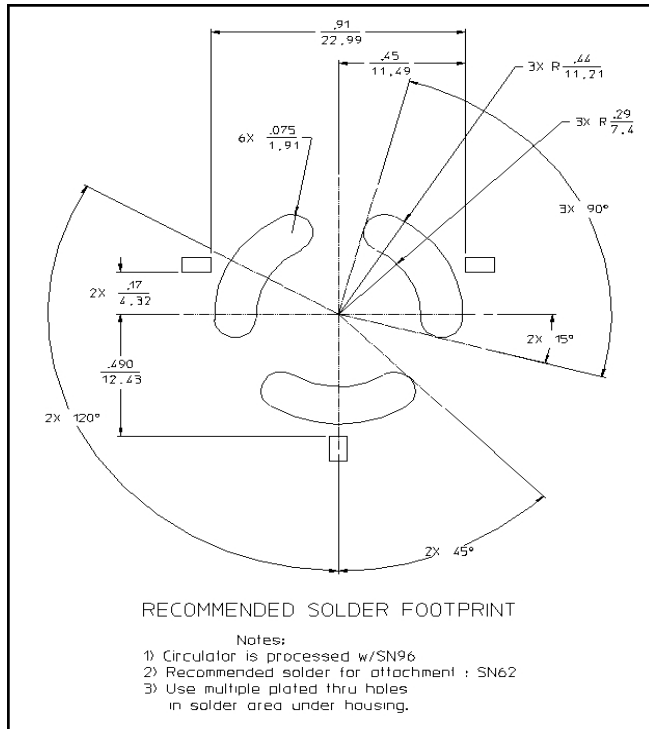


MAFRIN0494

Single Junction Gull Wing Circulator
860 MHz—960 MHz

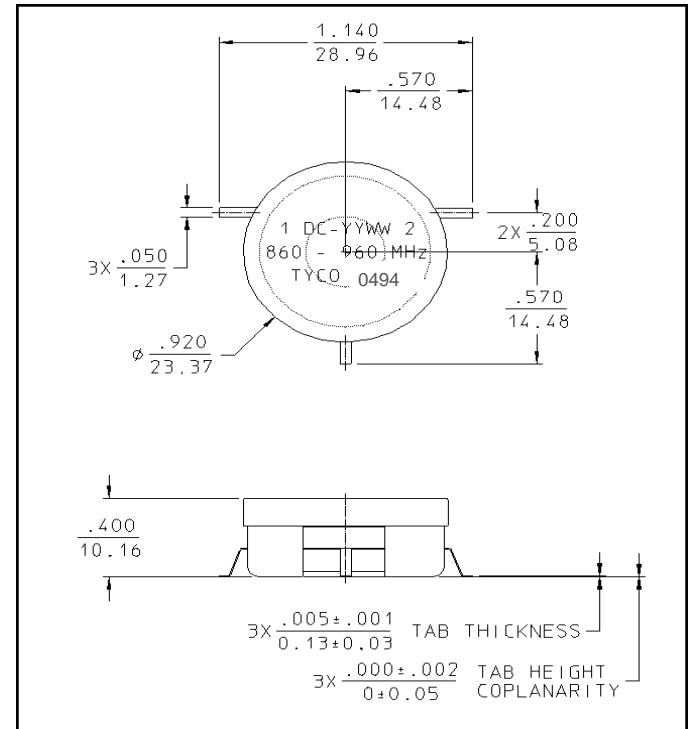
V2

Recommended PCB Layout



1. Dimensions in mm.
2. Tolerances: ± 0.2 mm unless otherwise noted.
3. 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 Sn 100% plating.
4. Cover: CRS with Sn 100% plating.
5. Leads: Copper.