

Electronics

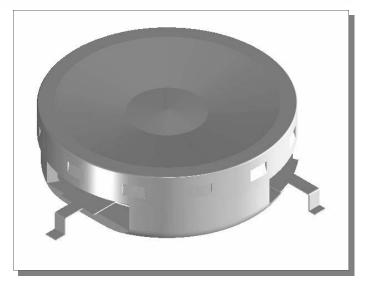
# Single Junction Gull Wing Circulator 950 MHz—956 MHz

#### Features

- Designed for RFID market
- 22dB Isolation typical
- 0.25dB Insertion Loss
- Low cost package
- 260°C Reflow Compatible
- RoHS\* Compliant Version of the MAFRIN0453

#### 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.



**RoHS** 

Compliant

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

Parameter	Test Conditions	Units	Min	Тур	Max
Frequency Range	Over T <sub>op</sub> <sup>1</sup>	MHz	950		956
Insertion Loss	950 MHz—956 MHz, over T <sub>op</sub>	dB		0.21	0.25
Isolation	950 MHz—956 MHz, over T <sub>op</sub>	dB	23.0	29.0	
Return Loss	950 MHz—956 MHz, all ports, over $T_{op}$	dB	23.0	28.0	
Circulation	Over T <sub>op</sub>			CW	

1. See "Absolute Maximum Ratings" for T<sub>op</sub>.

#### **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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- 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.



**MAFRIN0496** 

**V2** 

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#### **Ordering Information**

Insertion Loss (S21)

Part Number	Packaging
MAFRIN0496	Tray

# RoHS Compliant



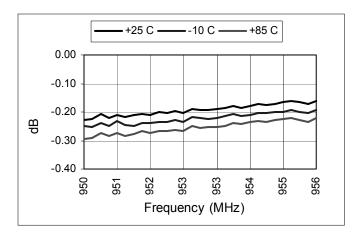
MAFRIN0496 V2

#### **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.

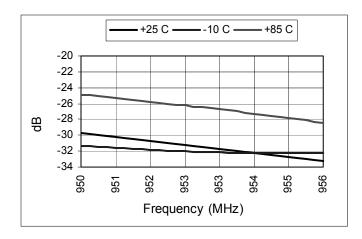
#### **S-Parameters**

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

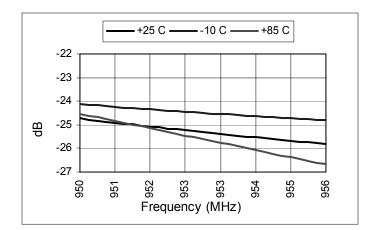


#### Return Loss (S11)

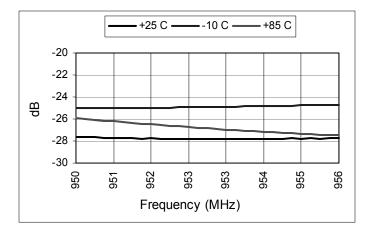
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# Isolation (S12)



# Return Loss (S22)



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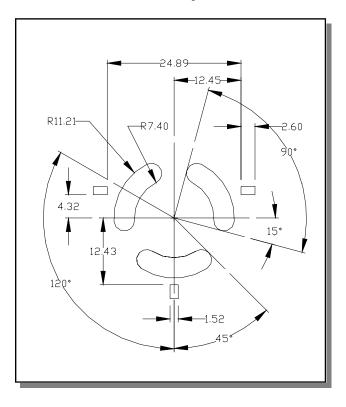
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#### **Recommended PCB Layout**



1. Dimensions in mm.

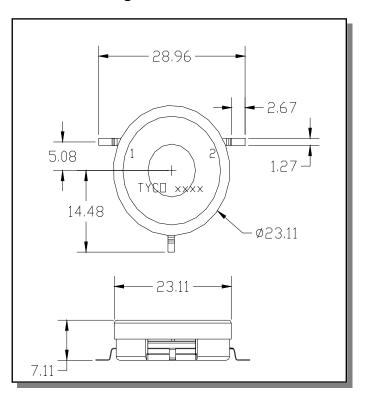
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- 2. Tolerances: ± 0.2 mm unless otherwise noted.
- 3. Use multiple plated thru holes in ground area under the housing.

#### **Outline Drawing**

**RoHS** 

Compliant



- 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.

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