

## RoHS Compliant



MAFRIN0495 V1

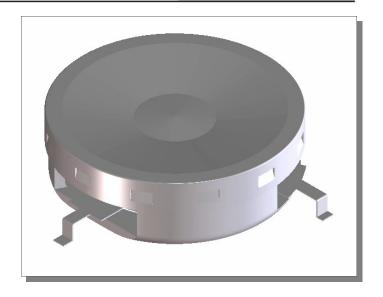
# Single Junction Surface Mount Gull Wing Circulator 860 MHz—872 MHz

#### **Features**

- Designed for RFID market
- 22dB Isolation typical
- 0.25dB Insertion Loss
- Low cost package
- 260°C Reflow Compatible
- RoHS\* Compliant Version of the MAFRIN0449

## **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 — $T = T_{op}^{1}$ , $Z_{0} = 50$ Ohms

Parameter	Test Conditions	Units	Min	Typ @25⁰C	Max
Frequency Range		MHz	860		872
Insertion Loss	860 MHz—872 MHz	dB		0.21	0.25
Isolation	860 MHz—872 MHz	dB	23.0	29.0	
Return Loss	860 MHz—872 MHz, all ports	dB	23.0	28.0	
Circulation				Clockwise	

<sup>1.</sup> See "Absolute Maximum Ratings" for Top.

## **Absolute Maximum Ratings**

information.

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

<sup>\*</sup> Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

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<sup>•</sup> North America Tel: 800.366.2266 / Fax: 978.366.2266

<sup>•</sup> Europe Tel: 44.1908.574.200 / Fax: 44.1908.574.300

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## **Ordering Information**

Part Number	Packaging
MAFRIN0495	Tape and Reel

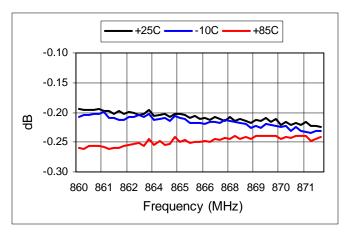
#### **Environmental Specifications**

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.

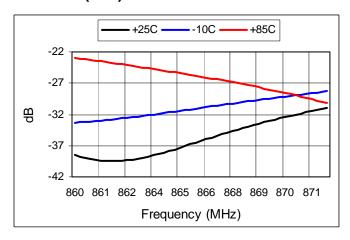
#### **S-Parameters**

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

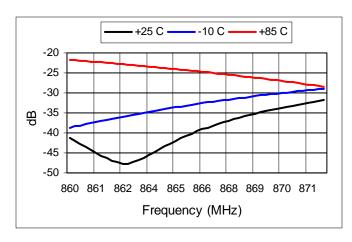
## Insertion Loss (S21)



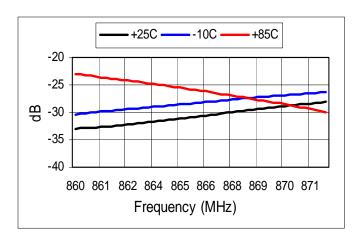
## Isolation (S12)



## Return Loss (S11)



## **Return Loss (S22)**



<sup>2</sup> 

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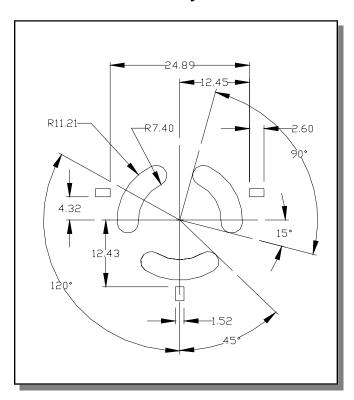
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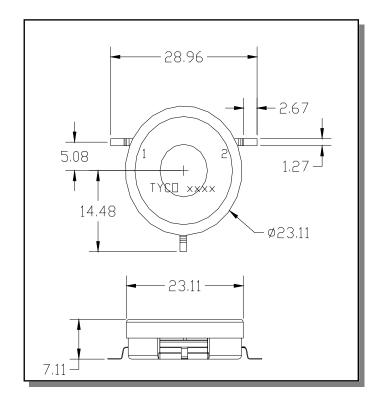
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## **Recommended PCB Layout**



- 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 Sn 100% plating.
- 4. Cover: CRS with Sn 100% plating.
- 5. Leads: Copper.

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