

## Features

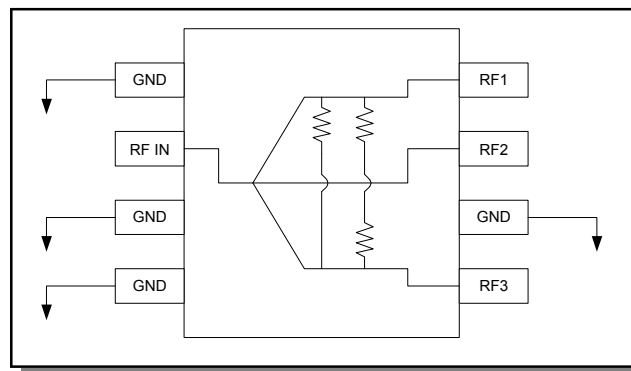
- Small Size and Low Profile
- Industry Standard SOIC-8 SMT Plastic Package
- Excellent Amplitude and Phase Balance
- Superior Repeatability
- Typical Insertion Loss: 1.0 dB
- Typical Isolation: 18 dB
- 1 Watt Power Handling
- Lead-Free SOIC-8 Package
- 100% Matte Tin Plating over Copper
- Halogen-Free “Green” Mold Compound
- 260°C Reflow Compatible
- RoHS Compliant

## Description

M/A-COM’s MAPD-007352-000100 is an IC-based monolithic power divider using M/A-COM’s GMIC technology in a low cost SOIC-8 plastic package. This 3-way power divider is ideally suited for applications where small size, low insertion loss, superior phase/amplitude tracking and low cost are required. Typical applications include personal communication systems and other communication applications where size and PCB real estate are at a premium. Available in tape and reel.

The MAPD-007352-000100 is fabricated using a passive-integrated circuit process. The process features full-chip passivation for increased performance and reliability.

## Functional Diagram



## Pin Configuration

| Pin No. | Function | Pin No. | Function |
|---------|----------|---------|----------|
| 1       | GND      | 5       | RF3      |
| 2       | RF IN    | 6       | GND      |
| 3       | GND      | 7       | RF2      |
| 4       | GND      | 8       | RF1      |

## Ordering Information

| Part Number        | Package           |
|--------------------|-------------------|
| MAPD-007352-000100 | Bulk Packaging    |
| MAPD-007352-0001TR | 1000 piece reel   |
| MAPD-007352-0001TB | Sample Test Board |

Note: Reference Application Note M513 for reel size information.

## Electrical Specifications: $T_A = 25^\circ\text{C}^1$

| Parameter                   | Units | Min | Typ   | Max   |
|-----------------------------|-------|-----|-------|-------|
| Insertion Loss above 4.8 dB | dB    | —   | 1.0   | 1.4   |
| Isolation                   | dB    | 12  | 18    | —     |
| VSWR Input                  | Ratio | —   | 1.8:1 | 2.0:1 |
| Amplitude Balance           | dB    | —   | 0.3   | 0.6   |

1. All specifications apply with a 50-ohm source and load impedance.

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

### Absolute Maximum Ratings <sup>2,3</sup>

| Parameter                | Absolute Maximum |
|--------------------------|------------------|
| Input Power <sup>4</sup> | 1W CW            |
| Operating Temperature    | -40°C to +85°C   |
| Storage Temperature      | -65°C to +150°C  |

- Exceeding any one or combination of these limits may cause permanent damage to this device.
- M/A-COM does not recommend sustained operation near these survivability limits.
- With internal load dissipation of 0.125W maximum.

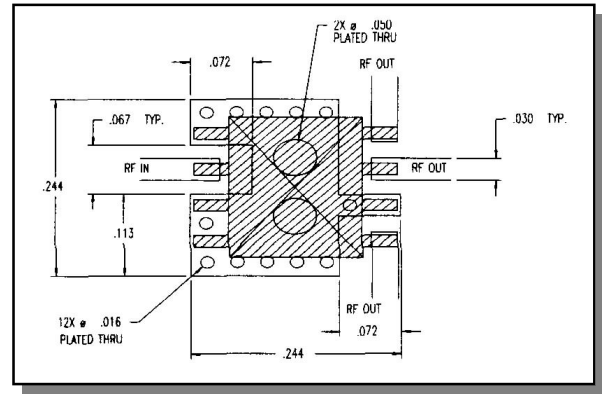
### Handling Procedures

Please observe the following precautions to avoid damage:

### Static Sensitivity

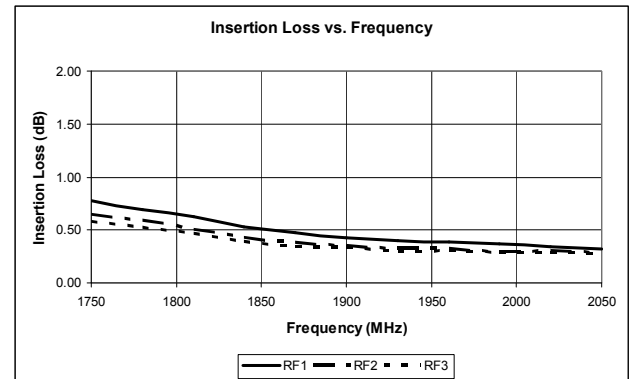
GMIC Circuits are sensitive to electrostatic discharge (ESD) and can be damaged by static electricity. Proper ESD control techniques should be used when handling these devices.

### Recommended PIN Configuration

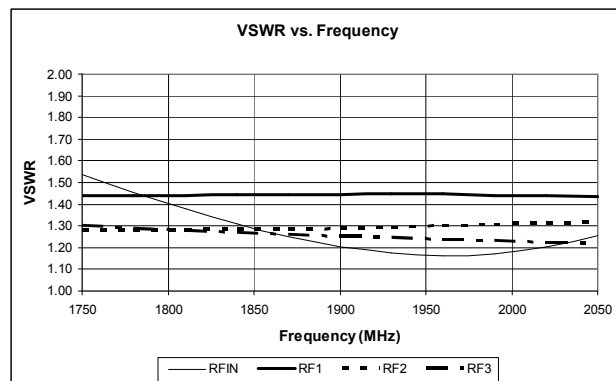


### Typical Performance Curves

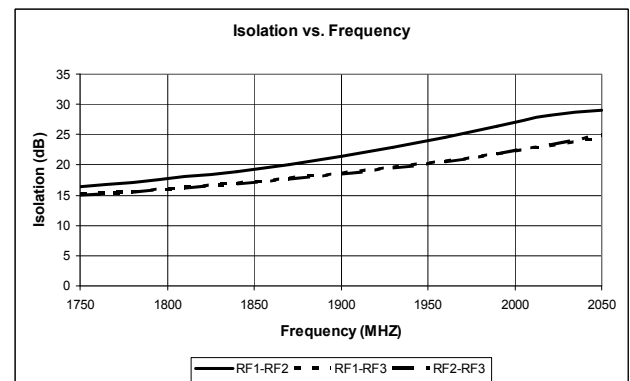
#### Insertion Loss



#### VSWR

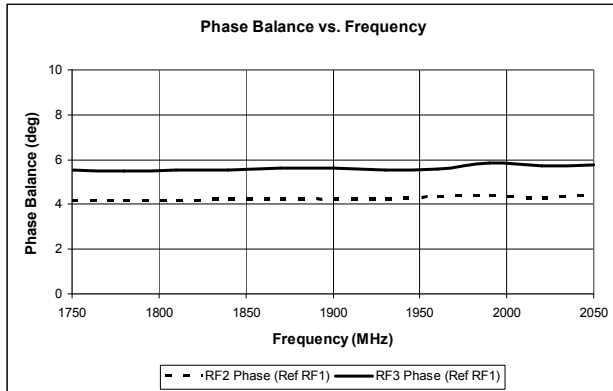


#### Isolation

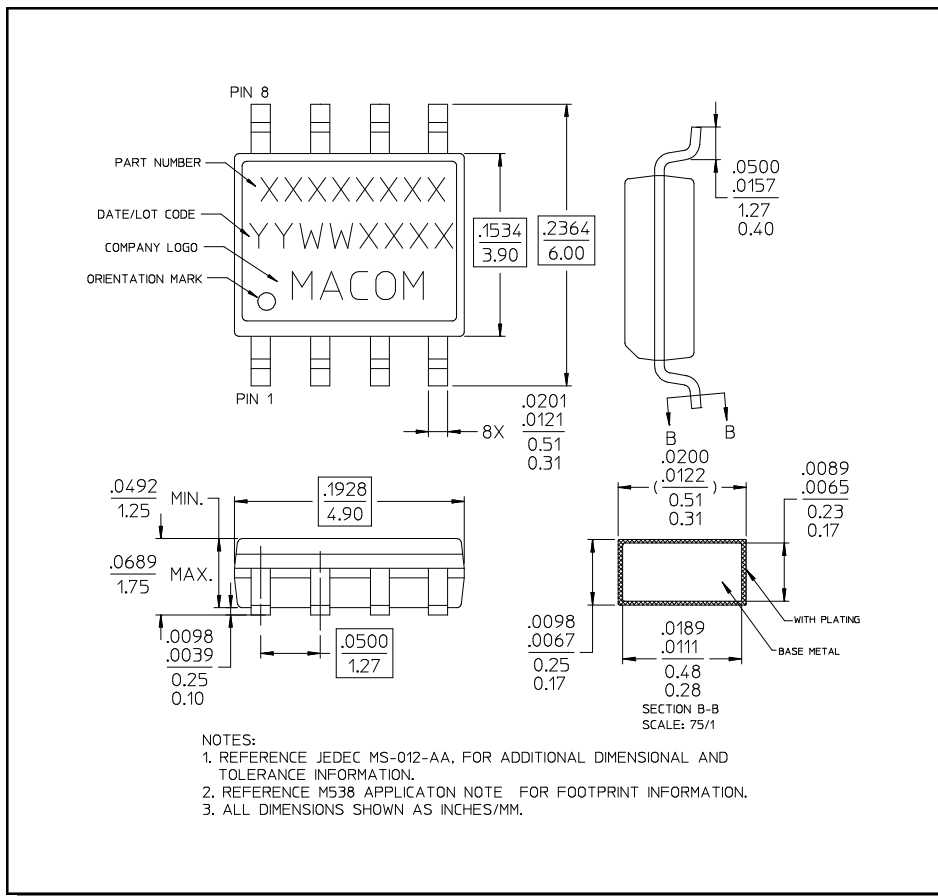


## Typical Performance Curves

### Phase Balance (Relative to RF1)



## Lead-Free SOIC-8<sup>†</sup>



<sup>†</sup> Reference Application Note M538 for lead-free solder reflow recommendations.

**ADVANCED:** Data Sheets contain information regarding a product M/A-COM is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

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