

## Features

- Small Size and Low Profile
- Typical Insertion Loss: 0.6 dB
- Typical Amplitude Balance: 0.2 dB
- 1 Watt Power Handling
- Lead-Free SOT-26 Package
- 100% Matte Tin Plating over Copper
- Halogen-Free “Green” Mold Compound
- 260°C Reflow Compatible
- RoHS\* Compliant Version of DS52-0014

## Description

M/A-COM’s MAPD-007530-000100 is an IC-based monolithic power divider using M/A-COM’s GMIC technology in a low cost SOT-26 plastic package. This 2-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 handsets, base station switching networks and other communication applications where size and PCB real estate are at a premium. Available in Tape and Reel.

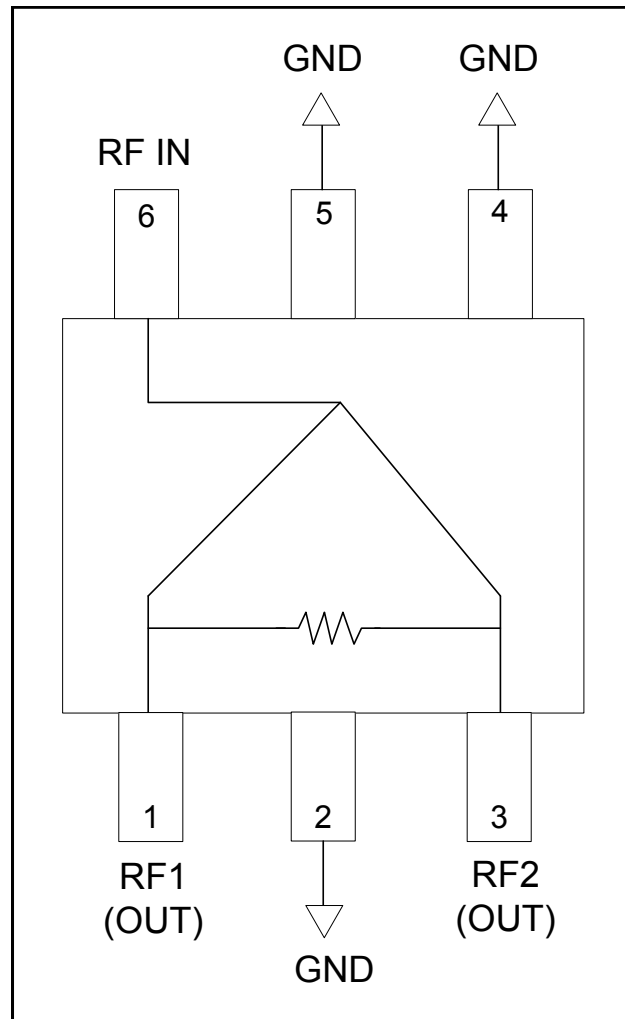
The MAPD-007530-000100 is fabricated using a passive integrated circuit process. The process features full-chip passivation for increased performance and reliability.

## Ordering Information

Part Number	Package
MAPD-007530-000100	Bulk Packaging
MAPD-007530-0001TR	1000 piece reel
MAPD-007530-0001TB	Sample Test Board

Note: Reference Application Note M513 for reel size information.

## Functional Diagram



## Pin Configuration

Pin No.	Function	Pin No.	Function
1	RF1 (OUT)	4	GND
2	GND	5	GND
3	RF2 (OUT)	6	RF IN

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

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

Parameter	Test Conditions	Units	Min	Typ	Max
Insertion Loss Above 3.0 dB	1700 - 2000 MHz	dB	—	0.6	0.8
Isolation	1700 - 2000 MHz	dB	16	20	—
VSWR Input RF1, RF2 Outputs	1700 - 2000 MHz	Ratio	—	1.2:1	1.4:1
	1700 - 2000 MHz	Ratio	—	1.1:1	1.3:1
Amplitude Balance	1700 - 2000 MHz	dB	—	0.2	0.4
Phase Balance	1700 - 2000 MHz	Deg.	—	1.5	3.0

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

**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 0.125 W maximum.

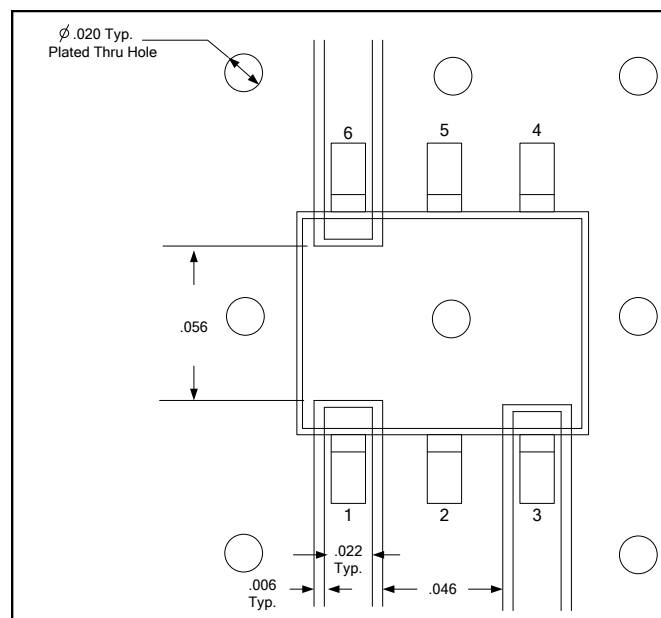
**Handling Procedures**

Please observe the following precautions to avoid damage:

**Static Sensitivity**

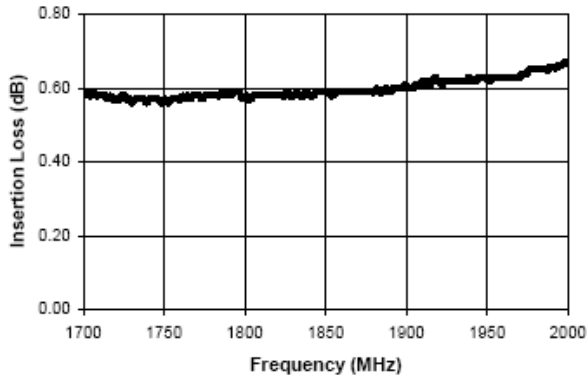
GMIC Circuits are sensitive to electrostatic discharge (ESD) and can be damaged by static electricity. Proper ESD control techniques should be used when handling these devices."

**Recommended PCB Configuration**

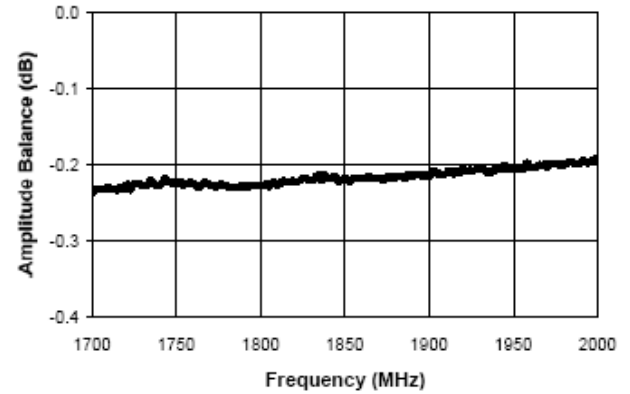


## Typical Performance Curves @ 25°C

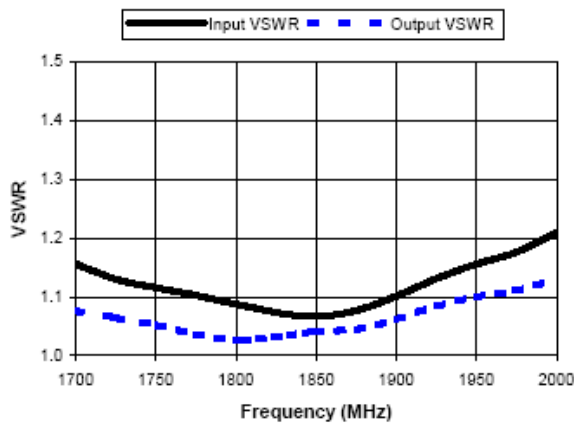
*Insertion Loss vs. Frequency*



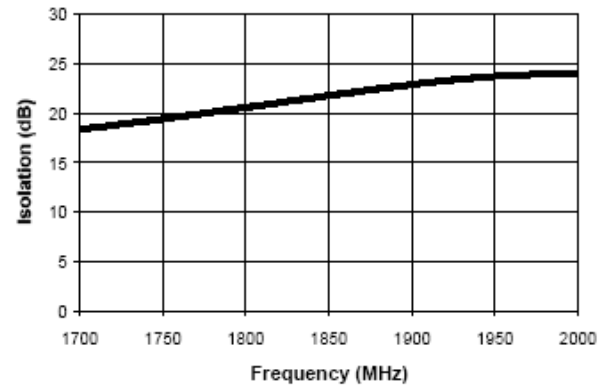
*Amplitude Balance vs. Frequency*



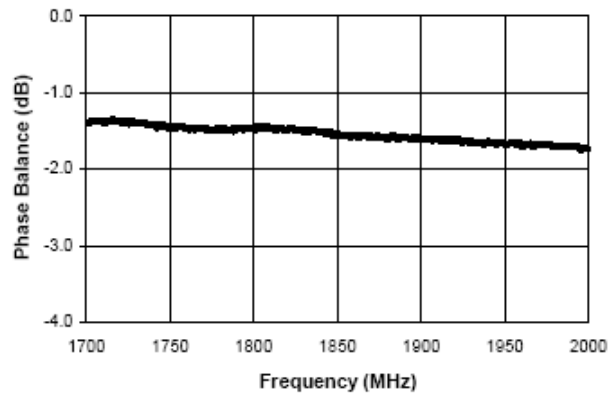
*VSWR vs. Frequency*



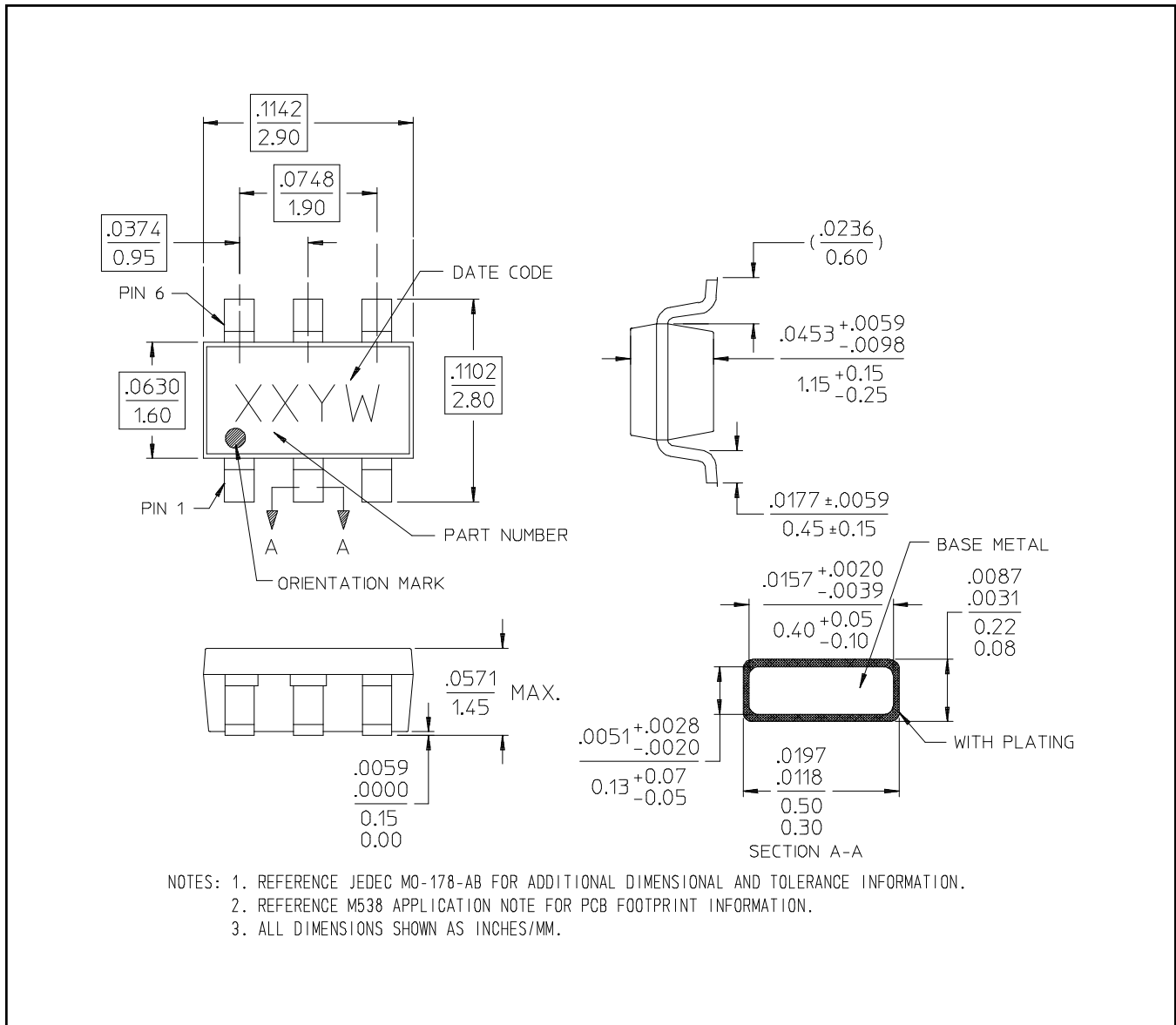
*Isolation vs. Frequency*



*Phase Balance vs. Frequency*



**Lead-Free SOT-26<sup>†</sup>**



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

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