

**M/A-COM****DS52-0007**

## Low Cost Two-Way GMIC SMT Power Divider 2200 - 2500 MHz



### Features

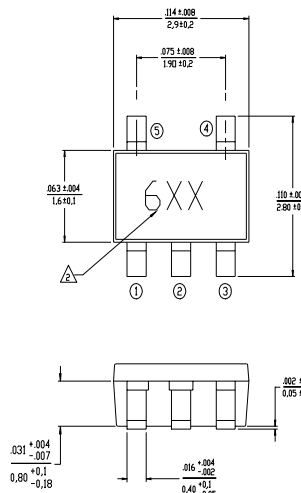
- Small Size and Low Profile
- Industry Standard SOT-25 SMT Plastic Package
- Typical Insertion Loss: 1.0 dB
- Typical Amplitude Balance 0.1 dB
- 1 Watt Power Handling

### Description

M/A-COM's DS52-0007 is an IC-based monolithic power divider using M/A-COM's GMIC technology in a low cost SOT-25 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 DS52-0007 is fabricated using a passive-integrated circuit process. The process features full-chip passivation for increased performance and reliability.

### SOT-25



All lower dimensions are in millimeters

### Ordering Information

Part Number	Package
DS52-0007	SOT-25Lead Plastic Package
DS52-0007-TR	Forward Tape and Reel <sup>1</sup>
DS52-0007-RTR	Reverse Tape and Reel <sup>1</sup>

1. If specific reel size is required, consult factory for part number assignment.

### Typical Electrical Specifications<sup>1</sup>, T<sub>A</sub> = +25°C

Parameter	Units	Min	Typ	Max
Insertion Loss above 3.0dB	dB	—	1.0	1.1
Isolation	dB	15	22	—
VSWR RF Input	—	—	1.6 : 1	1.8 : 1
RF1, RF2 Outputs	—	—	1.3 : 1	1.5 : 1
Amplitude Balance	dB	—	0.1	0.25
Phase Balance	Degrees	—	2.0	4.0

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

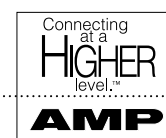


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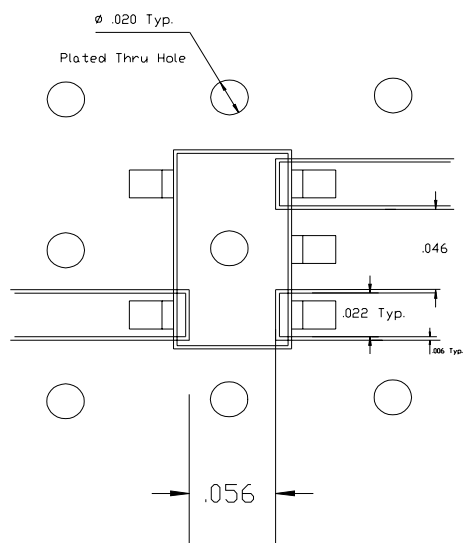
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V2.00 S1502 A



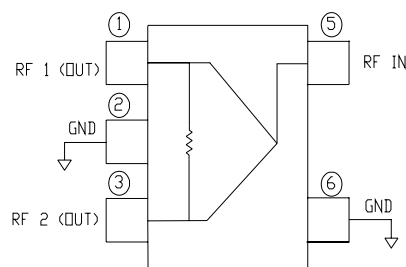
## Recommended PCB Configuration

(Dimensions in Inches)



CIRCUIT MATERIAL: FR-4, .016 THICK

## Functional Diagram



## Absolute Maximum Ratings<sup>1</sup>

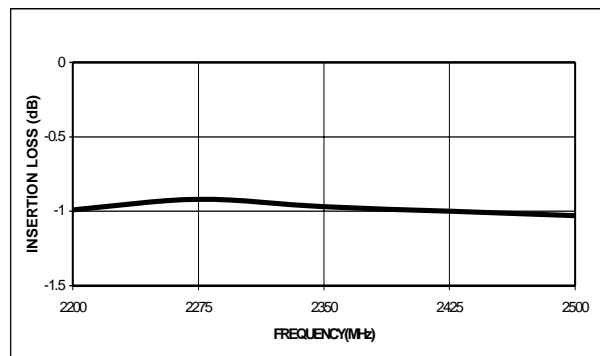
Parameter	Absolute Maximum
Input Power <sup>2</sup>	1 W CW
Operating Temperature	-40°C to +85°C
Storage Temperature	-65°C to +150°C

1. Exceeding these limits may cause permanent damage.

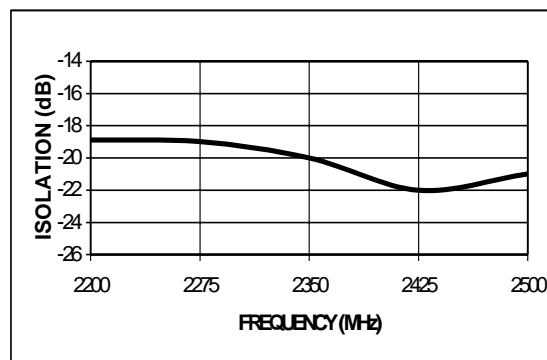
2. With internal load dissipation of 0.125 W Maximum.

## Typical Performance @ +25°C

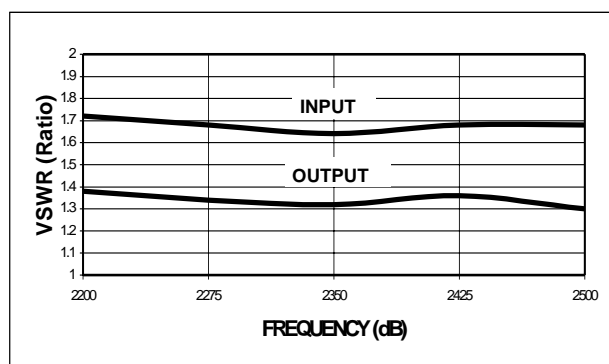
Insertion Loss Vs Frequency



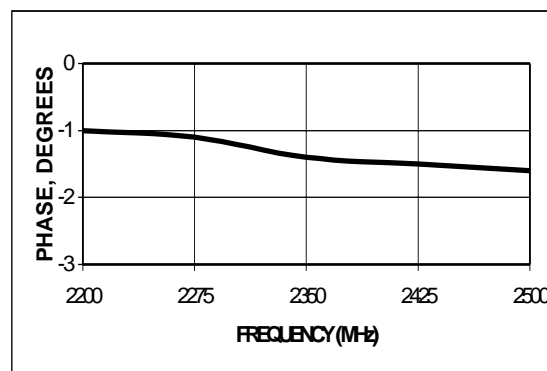
Isolation Vs Frequency



VSWR Vs Frequency



Phase Balance Vs Frequency Relative to RF1



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