

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



Features

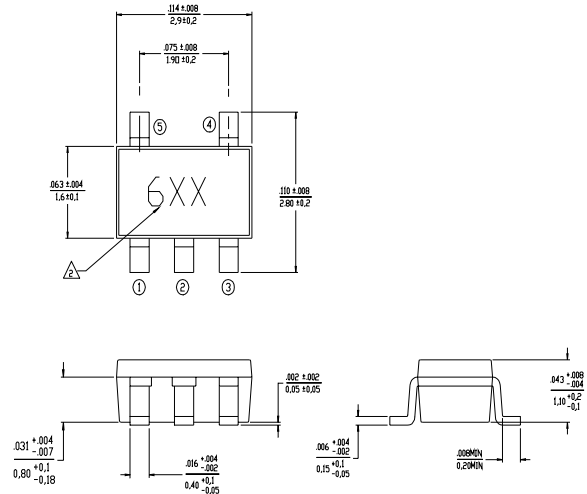
- Small Size and Low Profile
- Industry Standard SOT-25 SMT Plastic Package
- Typical Insertion Loss: 1.0 dB
- Typical Amplitude Balance 0.1 dB
- 1 Watt Power Handling

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 ¹ |
| DS52-0007-RTR | Reverse Tape and Reel ¹ |

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

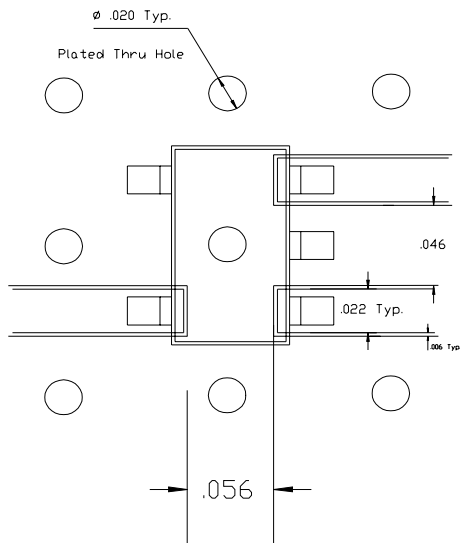
Typical Electrical Specifications¹, T_A = +25°C

| 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.

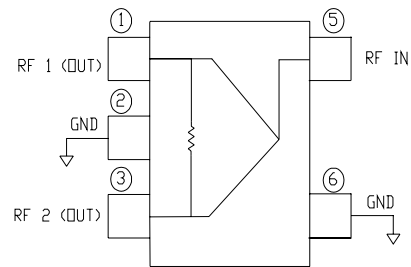
Recommended PCB Configuration

(Dimensions in Inches)



CIRCUIT MATERIAL: FR-4, .016 THICK

Functional Diagram



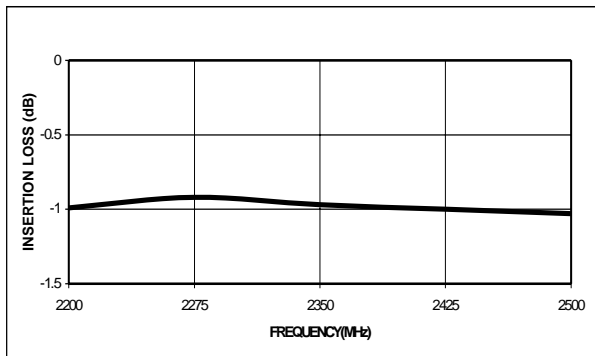
Absolute Maximum Ratings¹

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

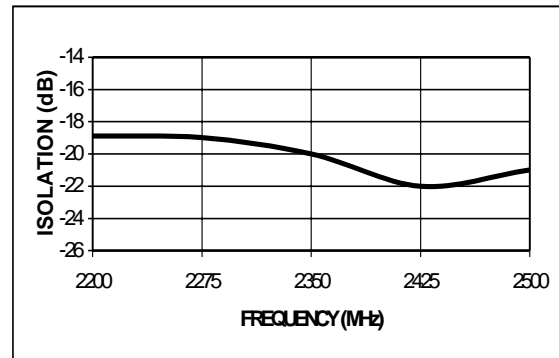
- Exceeding these limits may cause permanent damage.
- With internal load dissipation of 0.125 W Maximum.

Typical Performance @ +25°C

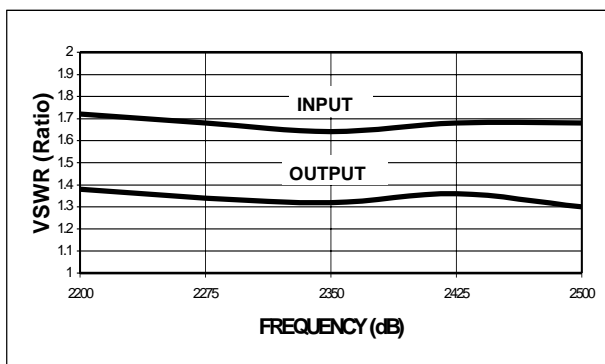
Insertion Loss Vs Frequency



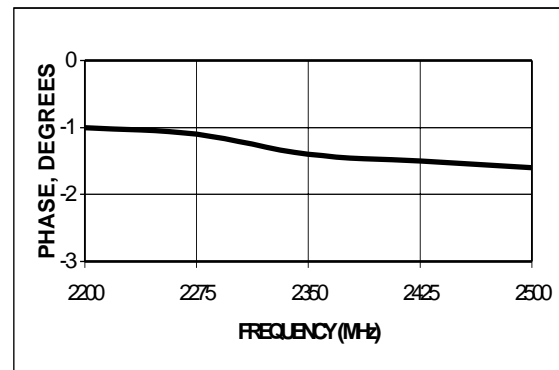
Isolation Vs Frequency



VSWR Vs Frequency



Phase Balance Vs Frequency Relative to RF1



V2.00 S1502 A



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