



Low Cost Two-Way GMIC SMT Power Divider 1700 – 2000 MHz



Features

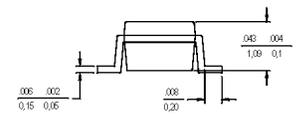
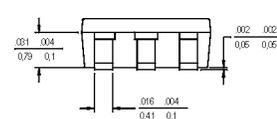
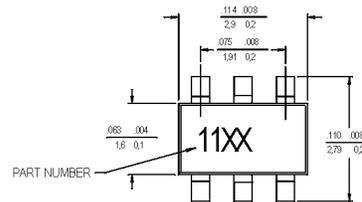
- Small Size and Low Profile
- Industry Standard SOT-26 SMT Plastic Package
- Typical Insertion Loss: 0.6 dB
- Typical Isolation: 18 dB
- 1 Watt Power Handling

Description

M/A-COM's DS52-0010 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 personal communication systems and other communication applications where size and PCB real estate are at a premium. Available in tape and reel.

The DS52-0010 is fabricated using a passive-integrated circuit process. The process features full-chip passivation for increased performance and reliability.

SOT-26



Ordering Information

| Part Number | Package |
|---------------|------------------------------------|
| DS52-0010 | SOIC 8-Lead Plastic Package |
| DS52-0010-TR | Forward Tape and Reel ¹ |
| DS52-0010-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

| Parameters | Units | Min. | Typ. | Max. |
|-----------------------------|-------|------|-------|-------|
| Insertion Loss Above 3.0 dB | dB | — | 0.6 | 0.9 |
| Isolation | dB | 15 | 18 | — |
| VSWR Input | — | — | 1.3:1 | 1.5:1 |
| RF1, RF2 Outputs | — | — | 1.2:1 | 1.4:1 |
| Amplitude Balance | dB | — | 0.1 | 0.25 |
| Phase Balance | ° | — | 3 | 4 |

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

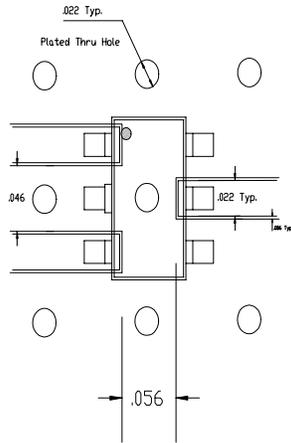


Absolute Maximum Ratings¹

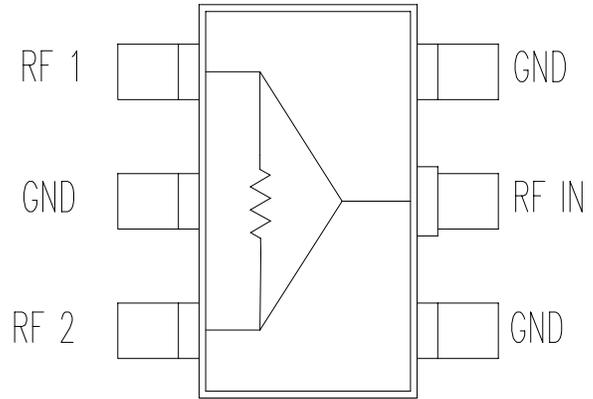
| Parameter | Absolute Maximum |
|--------------------------|------------------|
| Input Power ² | 1W CW |
| Operating Temperature | -40°C to +85°C |
| Storage Temperature | -65°C to 150°C |

1. Exceeding these limits may cause permanent damage.
2. With internal load dissipation of 0.125 W maximum.

Recommended PIN Configuration



Functional Diagram

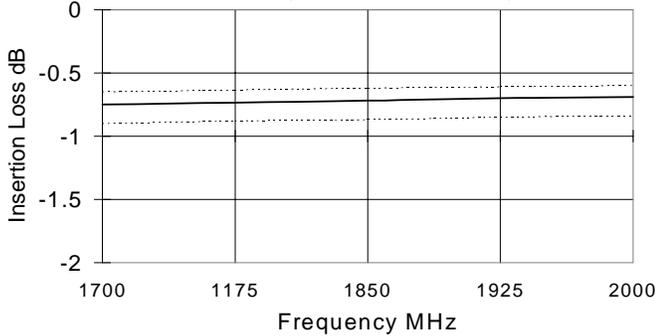


Pins labeled as ground should be DC and RF grounded.

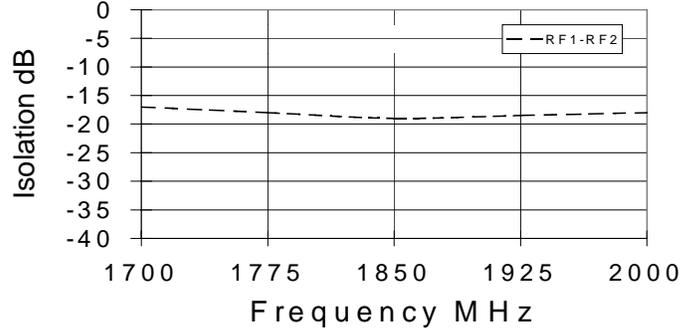
Typical Performance @ +25°C

Insertion Loss vs. Frequency

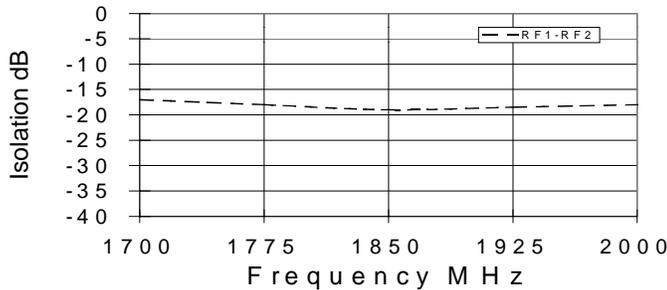
(Dashed lines show amplitude balance window)



VSWR vs. Frequency

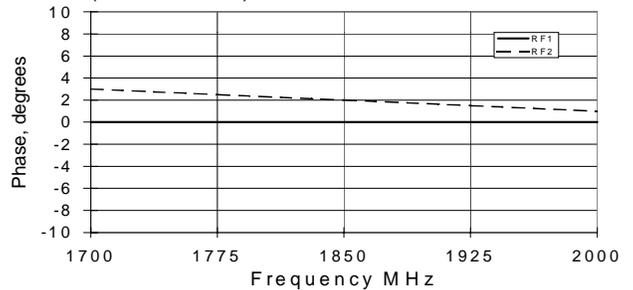


Isolation vs. Frequency



Phase Balance vs. Frequency

(Relative to RF1)



V1.00