

## Low Cost Three-Way GMIC SMT Power Divider 1850 - 1990 MHz

### DS53-0004

V1.02

### Features

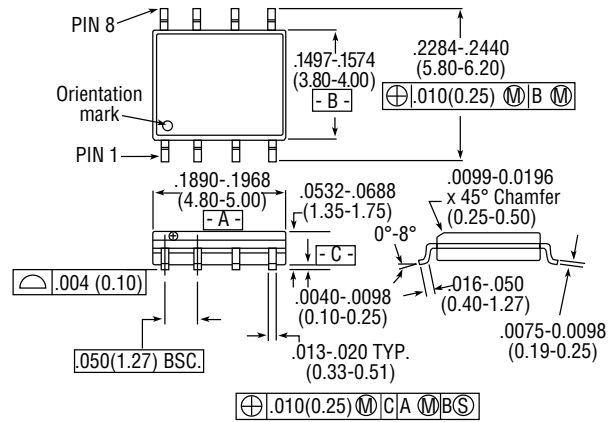
- Small Size and Low Profile
- Industry Standard SOIC-8 SMT Plastic Package
- Excellent Amplitude and Phase Balance
- Superior Repeatability
- Typical Insertion Loss 0.8 dB
- Typical Isolation 24 dB
- 1 Watt Power Handling

### Description

M/A-COM's DS53-0004 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 DS53-0004 is fabricated using a passive-integrated circuit process. The process features full chip passivation for increased performance and reliability.

### SO-8



8-Lead SOP outline dimensions  
Narrow body .150

(All dimensions per JEDEC No. MS-012-AA, Issue C)  
Dimensions in ( ) are in mm.

Unless Otherwise Noted: .xxx = ± 0.010 (.xx = ± 0.25)  
.xx = ± 0.02 (.x = ± 0.5)

### Ordering Information

Part Number	Package
DS53-0004	SOIC 8-Lead Plastic Package
DS53-0004TR	Forward Tape and Reel*
DS53-0004RTR	Reverse Tape and Reel*

\* 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 4.8 dB	dB	1.0	1.4
Isolation		dB	17	21
VSWR		—	1.8:1	2.0:1
Amplitude Balance		dB	0.3	0.6
Phase Balance		°	7	14

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

The Preliminary Specifications Data Sheet Contains Typical Electrical Specifications Which May Change Prior to Final Introduction.

**M/A-COM, Inc.**

North America: Tel. (800) 366-2266 ■ Asia/Pacific: Tel. +85 2 2111 8088 ■ Europe: Tel. +44 (1344) 869 595  
Fax (800) 618-8883 Fax +85 2 2111 8087 Fax +44 (1344) 300 020

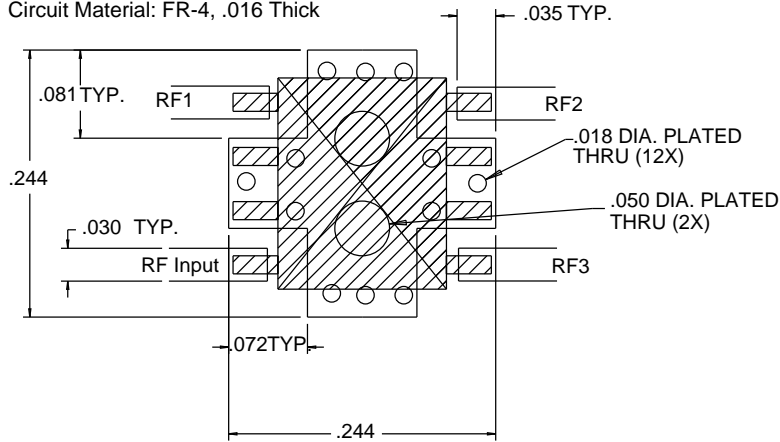
**Absolute Maximum Ratings<sup>1</sup>**

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

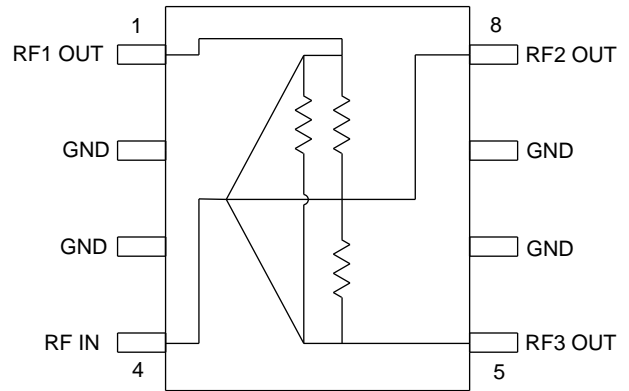
1. Exceeding these limits may cause permanent damage.
2. With internal load dissipation of 0.125 W maximum.

**Recommended PCB Configuration**

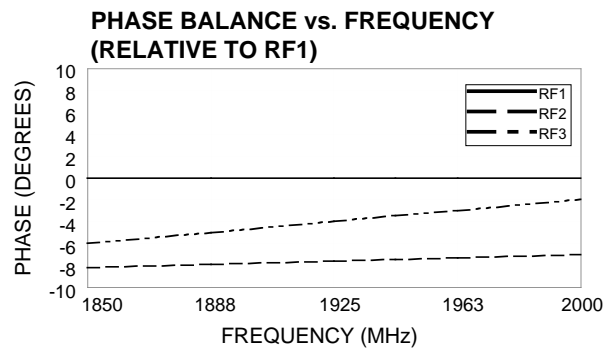
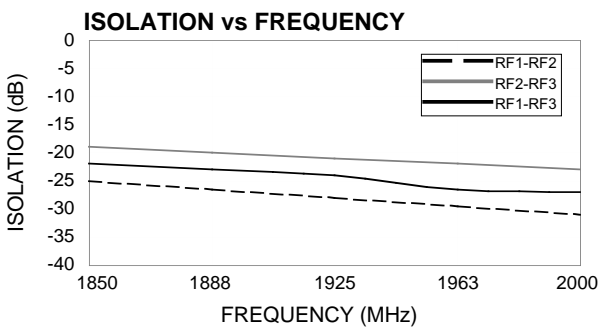
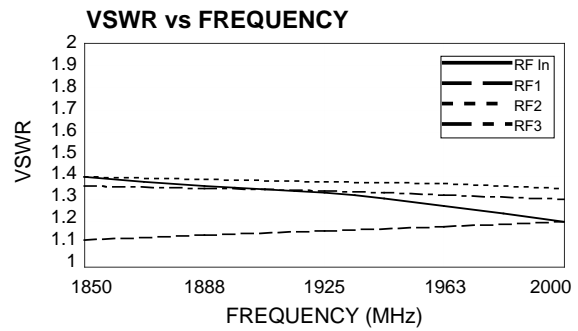
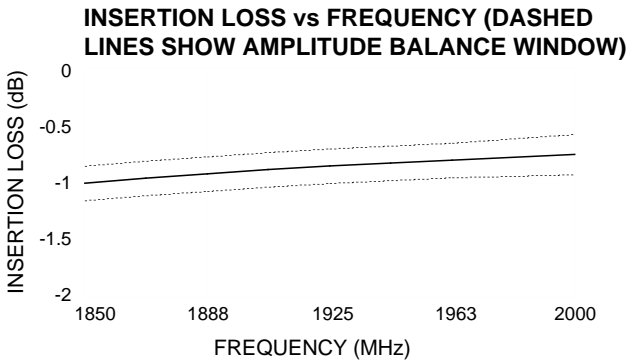
(Dimensions in Inches)  
Circuit Material: FR-4, .016 Thick



**Functional Diagram**



**Typical Performance @ +25°C**



The Preliminary Specifications Data Sheet Contains Typical Electrical Specifications Which May Change Prior to Final Introduction.