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

Features

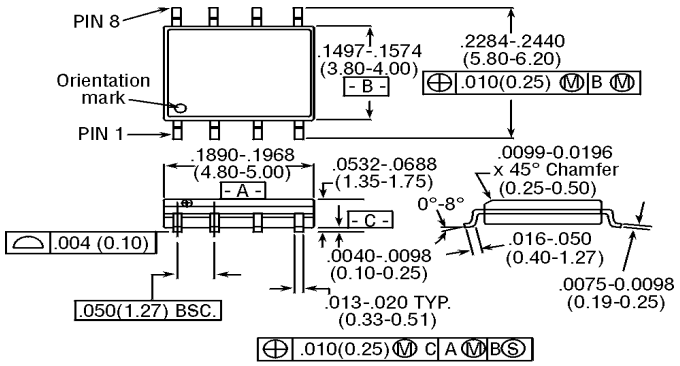
- Small Size and Low Profile
- Industry Standard SOIC-8 SMT Plastic Package
- Excellent Amplitude and Phase Balance
- Superior Repeatability
- Typical Insertion Loss: 1.0 dB
- Typical Isolation: 18 dB
- 1 Watt Power Handling

Description

M/A-COM's DS53-0005 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 DS53-0005 is fabricated using a passive-integrated circuit process. The process features full-chip passivation for increased performance and reliability.

SOIC-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
DS53-0005	SOIC 8-Lead Plastic Package
DS53-0005-TR	Forward Tape and Reel[1]
DS53-0005-RTR	Reverse Tape and Reel[1]

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

Typical Electrical Specifications[1], T_A= +25ºC

Parameters	Units	Min.	Typ.	Max.
Insertion Loss Above 4.8 dB	dB	—	1.0	1.4
Isolation	dB	12	18	—
VSWR Input	—	—	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.

M/A-COM Division of AMP Incorporated ■ North America: Tel. (800) 366-2266, Fax (800) 618-8883 ■ Asia/Pacific: Tel.+85 2 2111 8088, Fax +85 2 2111 8087
■ Europe: Tel. +44 (1344) 869 595, Fax+44 (1344) 300 020

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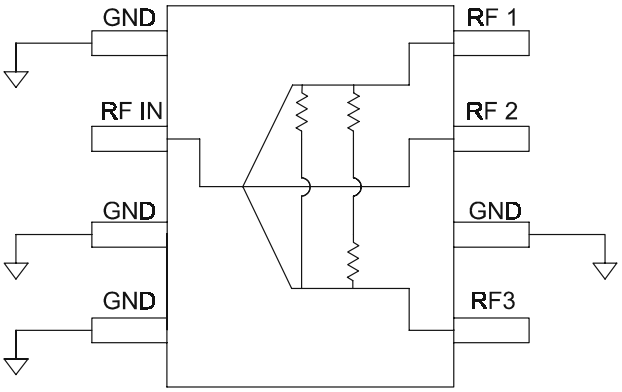
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The preliminary specifications data sheet contains typical electrical specifications which may change prior to final introduction.

Absolute Maximum Ratings[1]

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

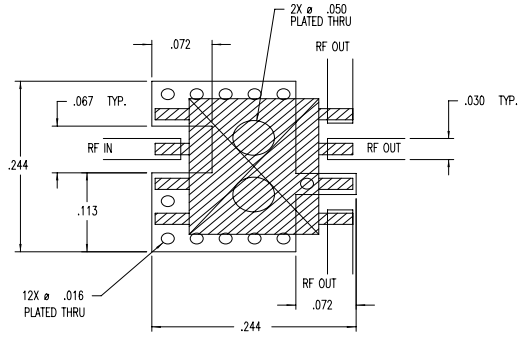
1. Exceeding these limits may cause permanent damage.
2. With internal load dissipation of 0.125 W maximum.

Functional Diagram



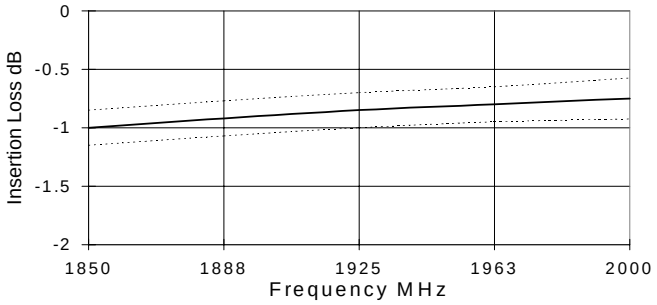
Pins labeled as ground should be DC and RF grounded.

Recommended PIN Configuration

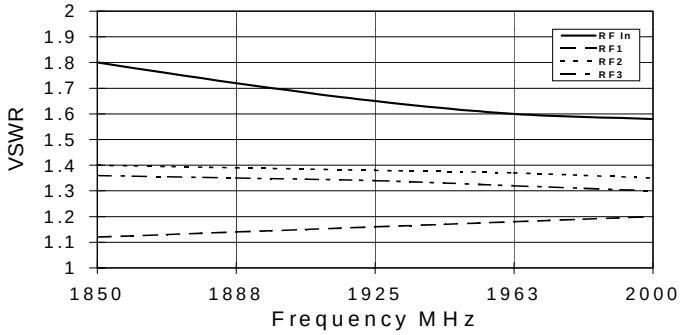


Typical Performance @ +25°C

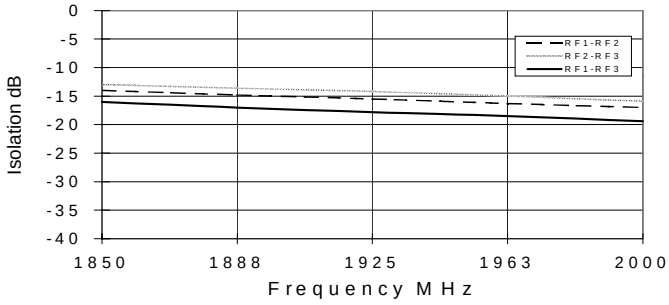
Insertion Loss vs. Frequency
(Dashed lines show amplitude balance window)



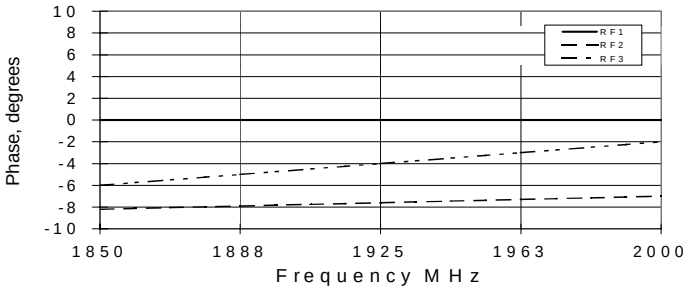
VSWR vs. Frequency



Isolation vs. Frequency



Phase Balance vs. Frequency
(Relative to RF1)



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