DS56-0001

Low Cost Six-Way SMT Power Divider
824 - 960 MHz

Rev. V5

Features

- Small Size, Low Profile
- Superior Repeatability (Lot-to-lot Variation)
- Industry Standard SOW-16 SMT Plastic Package
- Typical Isolation: 25 dB
- Typical Insertion Loss: 0.3 dB
- Low Cost
- 1 Watt Power Handling
- SOW-16 Package

Description

M/A-COM's DS56-0001 is an IC-based monolithic power divider in a low cost SOW-16 plastic package. This 6-way power divider is ideally suited for applications where PCB real estate is at a premium and part count reduction and cost are critical. Typical applications include base station switching networks and other cellular equipment, including subscriber units. Available in tape and reel.

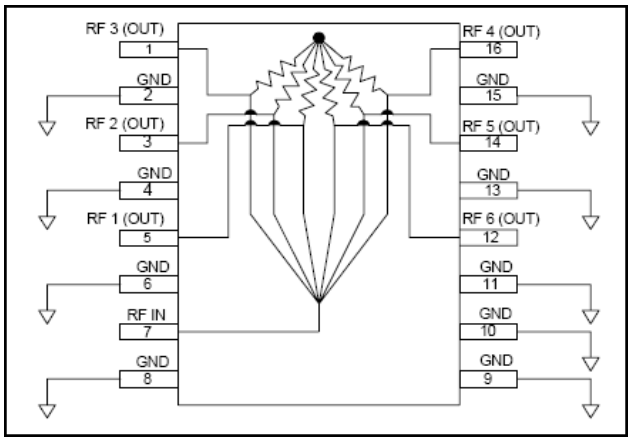
The DS56-0001 is fabricated using a passive-integrated circuit process. The process features full-chip passivation for increased performance and reliability.

Ordering Information

Part Number	Package
DS56-0001	Bulk Packaging
DS56-0001-TR	1000 piece reel
DS56-0001SAM	Sample Test Board

Note: Reference Application Note M513 for reel size information.

Functional Diagram[1]



1. Pins 2, 4, 6, 8, 9, 10, 11, 13, and 15 must be DC and RF grounded.

Pin Configuration

Pin No.	Function	Pin No.	Function
1	RF3 (OUT)	9	GND
2	GND	10	GND
3	RF2 (OUT)	11	GND
4	GND	12	RF6 (OUT)
5	RF1 (OUT)	13	GND
6	GND	14	RF5 (OUT)
7	RF IN	15	GND
8	GND	16	RF4 (OUT)

• **North America** Tel: 800.366.2266 • **Europe** Tel: +353.21.244.6400
• **India** Tel: +91.80.4155721 • **China** Tel: +86.21.2407.1588
Visit www.macomtech.com for additional data sheets and product information.

Electrical Specifications: T_A = 25°C, Z_0 = 50Ω

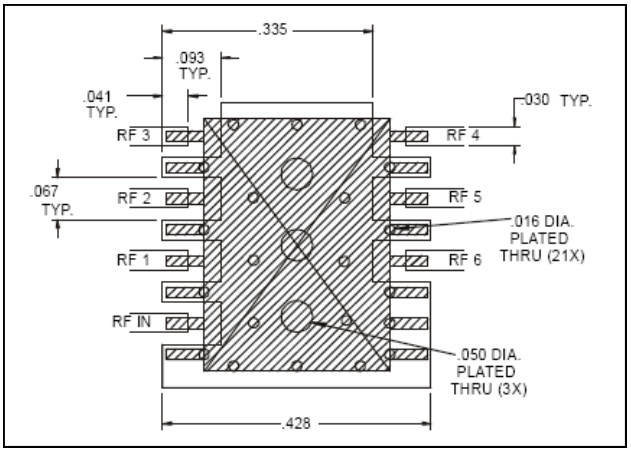
Parameter	Units	Min	Typ	Max
Insertion Loss Above 7.8 dB	dB	—	1.3	1.5
Isolation	dB	20	25	—
VSWR	—	—	1.4:1	1.6:1
Amplitude Balance	dB	—	0.2	0.5
Phase Balance	Deg.	—	6	8

Absolute Maximum Ratings [2,3]

Parameter	Absolute Maximum
Input Power[4]	1 W CW
Operating Temperature	-40°C to +85°C
Storage Temperature	-65°C to 150°C

2. Exceeding any one or combination of these limits may cause permanent damage to this device.
3. M/A-COM does not recommend sustained operation near these survivability limits.
4. With internal load dissipation of 0.125 W maximum.

Recommended PCB Configuration



Handling Procedures

Please observe the following precautions to avoid damage:

Static Sensitivity

GMIC Circuits are sensitive to electrostatic discharge (ESD) and can be damaged by static electricity. Proper ESD control techniques should be used when handling these devices.

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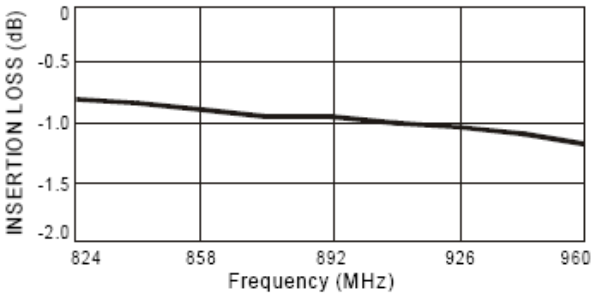
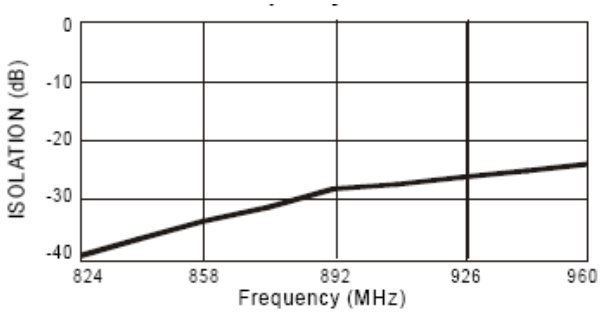
Typical Performance Curves

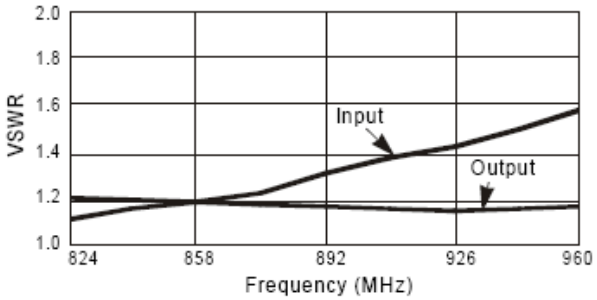
Insertion Loss vs. Frequency



Isolation vs. Frequency



VSWR vs. Frequency



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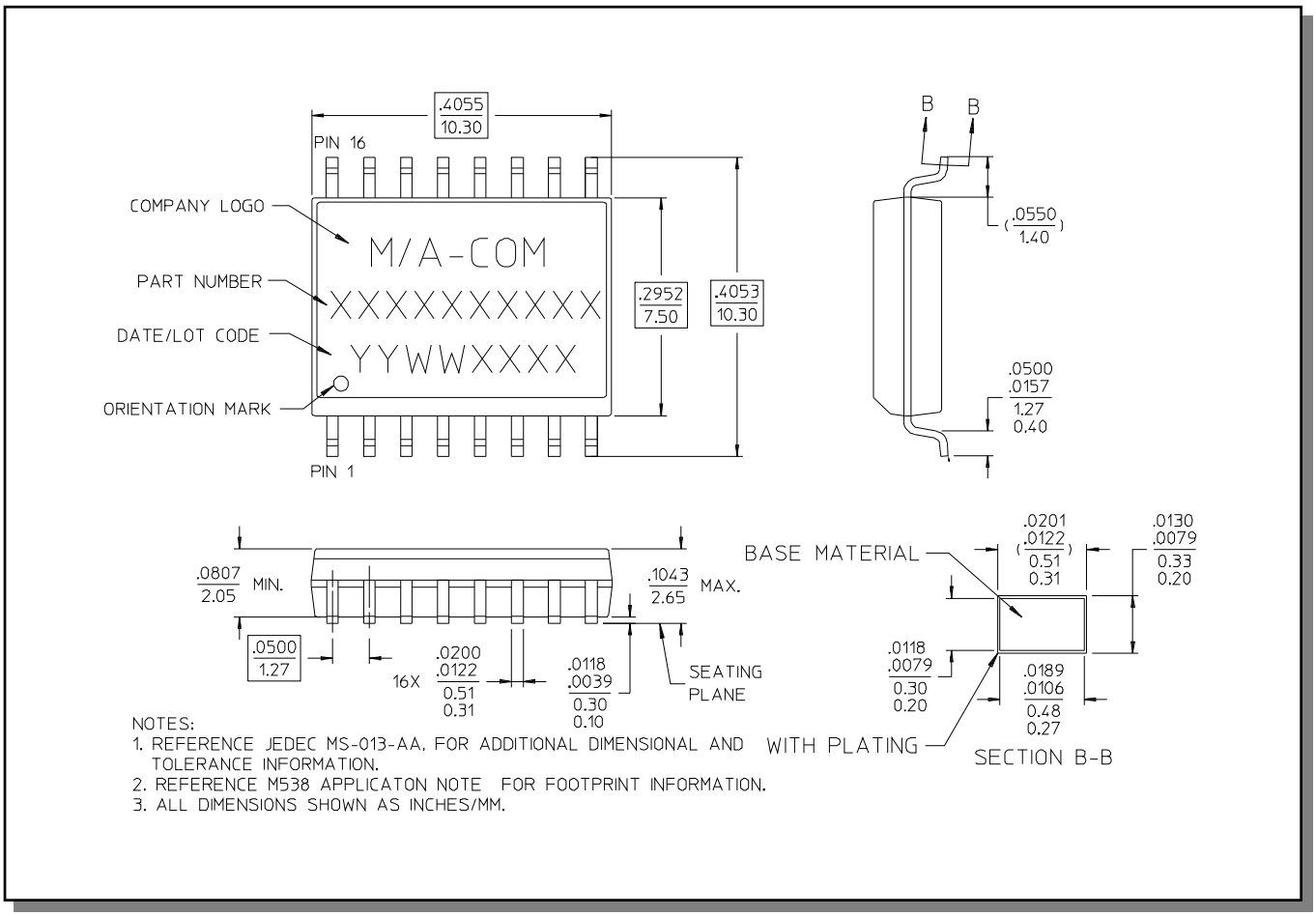
SOW-16†



† Reference Application Note M538 for lead-free solder reflow recommendations.