

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

#### Features

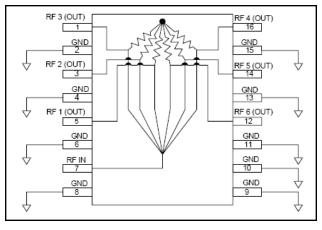
- Small Size, Low Profile
- Superior Repeatability (Lot-to-lot Variation) •
- Industry Standard SOW-16 SMT Plastic Package •
- Typical Isolation: 25 dB
- Typical Insertion Loss: 0.3 dB
- Low Cost
- 1 Watt Power Handling
- SOW-16 Package

#### 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 passiveintegrated circuit process. The process features fullchip passivation for increased performance and reliability.

### Functional Diagram<sup>1</sup>



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)

#### **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.

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PRELIMINARY: Data Sheets contain information regarding a product MA-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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• China Tel: +86.21.2407.1588

# DS56-0001



Rev. V5

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## Electrical Specifications: $T_A = 25^{\circ}C$ , $Z_0 = 50\Omega$

Parameter	Units	Min	Тур	Мах
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 <sup>2,3</sup>

Parameter	Absolute Maximum		
Input Power <sup>4</sup>	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.

 M/A-COM does not recommend sustained operation near these survivability limits.

4. With internal load dissipation of 0.125 W maximum.

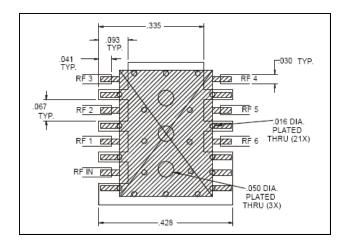
#### **Handling Procedures**

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.

#### **Recommended PCB Configuration**



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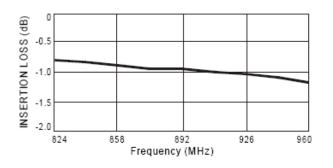
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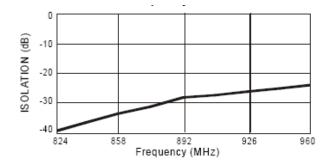


#### **Typical Performance Curves**

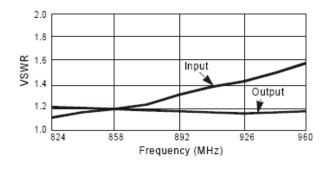
#### Insertion Loss vs. Frequency



Isolation vs. Frequency



#### VSWR vs. Frequency



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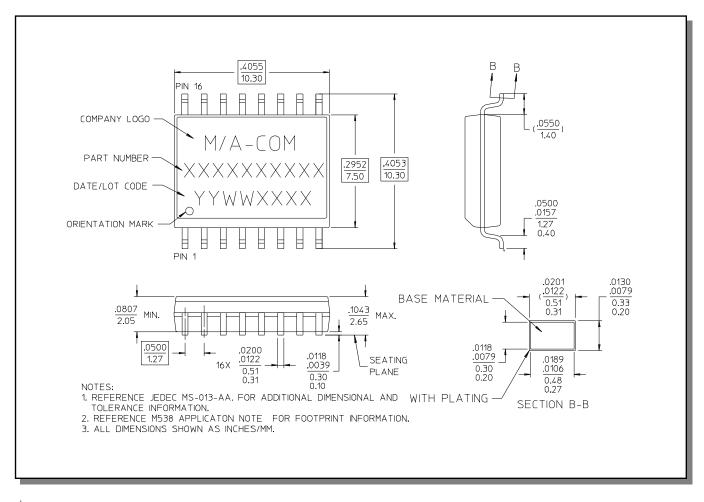
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#### SOW-16<sup>†</sup>



<sup>†</sup> Reference Application Note M538 for lead-free solder reflow recommendations.

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