

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
- Lead-Free SOW-16 Package
- 100% Matte Tin Plating over Copper
- Halogen-Free “Green” Mold Compound
- 260°C Reflow Compatible
- RoHS* Compliant Version of DS56-0001

Description

M/A-COM's MAPDCC0017 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.

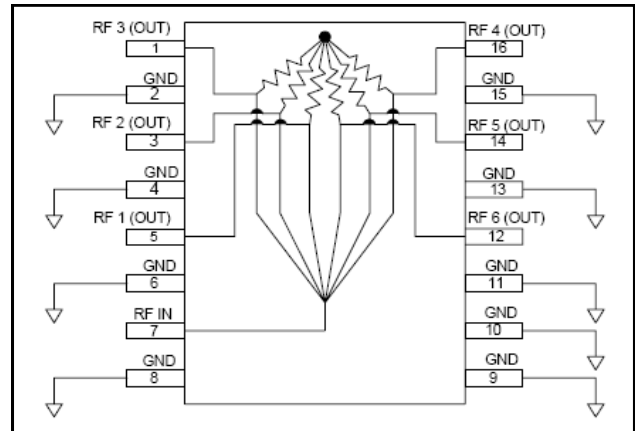
The MAPDCC0017 is fabricated using a passive-integrated circuit process. The process features full-chip passivation for increased performance and reliability.

Ordering Information

Part Number	Package
MAPDCC0017	Bulk Packaging
MAPDCC0017-TR	1000 piece reel
MAPDCC0017-TB	Sample Test Board

Note: Reference Application Note M513 for reel size information.

Functional Diagram¹



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)

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

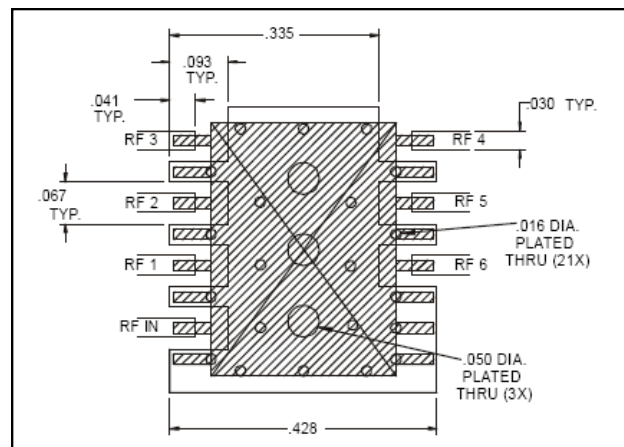
Parameter	Units	Min	Typ	Max
Insertion Loss Above 7.8 dB	dB	—	1.3	1.5
Isolation	dB	20	25	—
VSWR	—	—	1.4:1	1.6:1
Amplitude Balance	dB	—	0.2	0.5
Phase Balance	Deg.	—	6	8

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

- 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.
- With internal load dissipation of 0.125 W maximum.

Recommended PCB Configuration



Handling Procedures

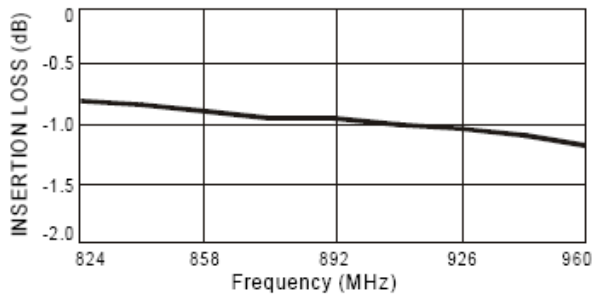
Please observe the following precautions to avoid damage:

Static Sensitivity

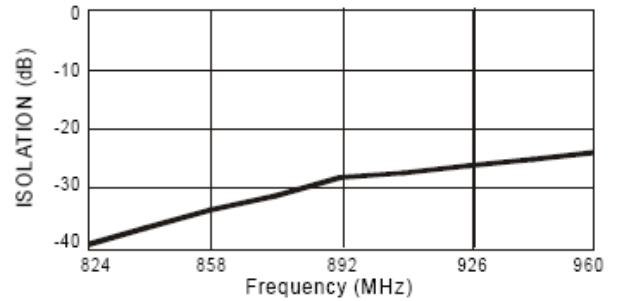
GMIC Circuits are sensitive to electrostatic discharge (ESD) and can be damaged by static electricity. Proper ESD control techniques should be used when handling these devices.

Typical Performance Curves

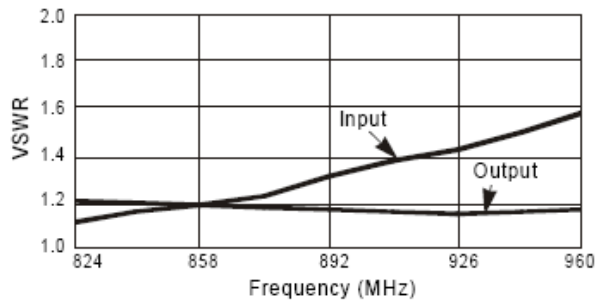
Insertion Loss vs. Frequency



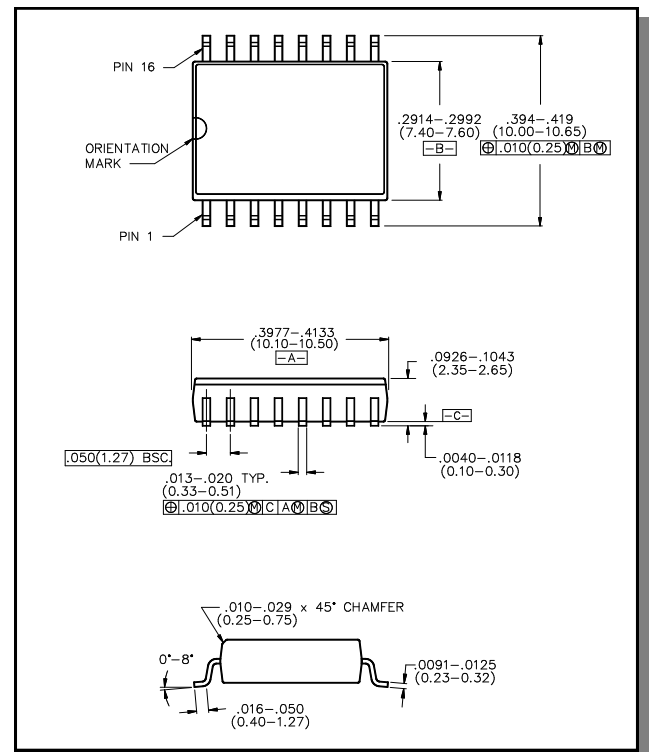
Isolation vs. Frequency



VSWR vs. Frequency



Lead-Free, SOW-16[†]



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

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