

Low Cost Three Way Power Splitter/Combiner 824 – 960 MHz

Rev. V3

Features

- · Small Size and Low Profile
- Excellent Insertion Loss 0.6 dB Typical
- Superior Repeatability
- Low Cost
- CSM, AMPS, CDPD, ARDIS, RAM Frequency Coverage
- Lead-Free SOIC-8 Package
- 100% Matte Tin Plating over Copper
- Halogen-Free "Green" Mold Compound
- 260°C Reflow Compatible
- RoHS* Compliant Version of DS53-0001

Description

M/A-COM's MAPDCC0005 is an IC-based monolithic power divider in a low cost SOIC-8 plastic package. This 3-way power divider is ideally suited for applications where small size, low profile, and low cost without sacrificing Performance, are required. Typical applications include Base Stations, portables and PCMCIA cards for cellular applications. Available in Tape and Reel.

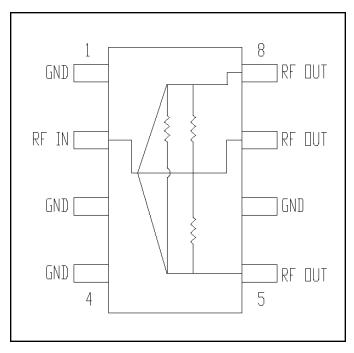
The MAPDCC0005 is fabricated using a passiveintegrated circuit process. The process features fullchip passivation for increased performance and reliability.

Ordering Information

Part Number	Package
MAPDCC0005	Bulk Packaging
MAPDCC0005TR	1000 piece reel
MAPDCC0005-TB	Sample Test Board

Note: Reference Application Note M513 for reel size information.

Functional Block Diagram¹



1. All unused pins must be RF and DC grounded.

Pin Configuration

Pin No.	Function	Pin No.	Function
1	GND	5	RF OUT
2	RF IN	6	GND
3	GND	7	RF OUT
4	GND	8	RF OUT

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

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

^{*} Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

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Visit www.macomtech.com for additional data sheets and product information.

MAPDCC0005



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Electrical Specifications: $T_A = 25$ °C, $Z_0 = 50\Omega$

Parameter	Units	Min	Тур	Max
Insertion Loss above 4.78 dB	dB	_	0.6	0.7
Isolation	dB	15	18	_
VSWR	_	_	1.4:1	1.6:1
Amplitude Balance	dB	_	0.6	0.8
Phase Balance	Deg	_	2	4

Absolute Maximum Ratings ^{2,3}

Parameter	Absolute Maximum
Input Power ⁴	1W 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.
- 4. With internal load dissipation of 0.125 W Maximum.

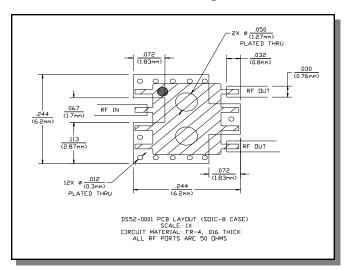
Handling Procedures

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



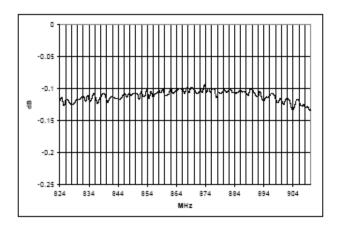


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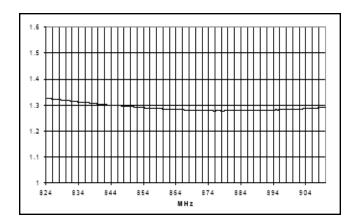
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Typical Performance Curves

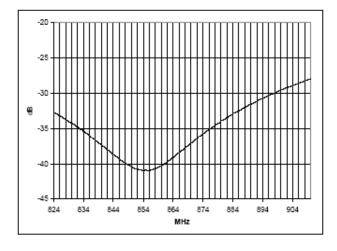
Insertion Loss vs. Frequency



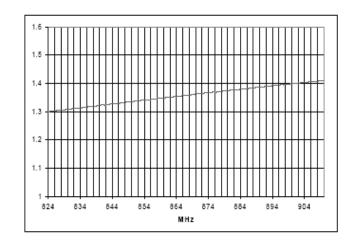
VSWR Input vs. Frequency



Isolation vs. Frequency



VSWR Output vs. Frequency



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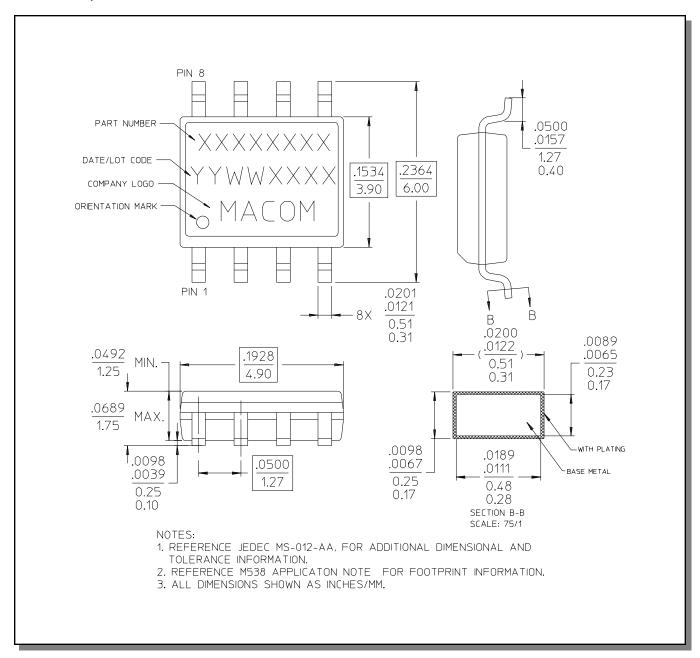
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Lead-Free, SOIC-8[†]



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

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