RoHS Compliant

Broadband CATV, 10dB Coupler 5-1000 MHz

MACPCT0039
V1P

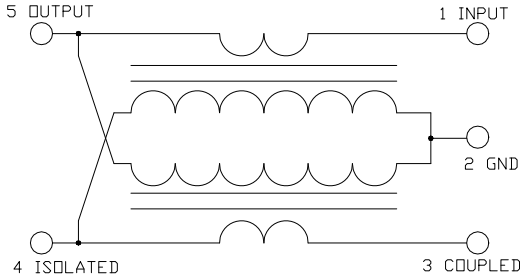
Features

- Surface mount
- Typical coupling +10dB
- 260°C reflow compatible
- RoHS* compliant
- RoHS version of MACPES0034.
- Available on tape and reel, reel quantity 2000

Description

M/A-COM's MACPCT0039 is a 10dB broadband Coupler in a low cost, surface mount package. It offers low loss, good isolation, good input/output matching and exceptional coupling repeatability. Ideally suited for high volume CATV/Broadband applications.

Schematic



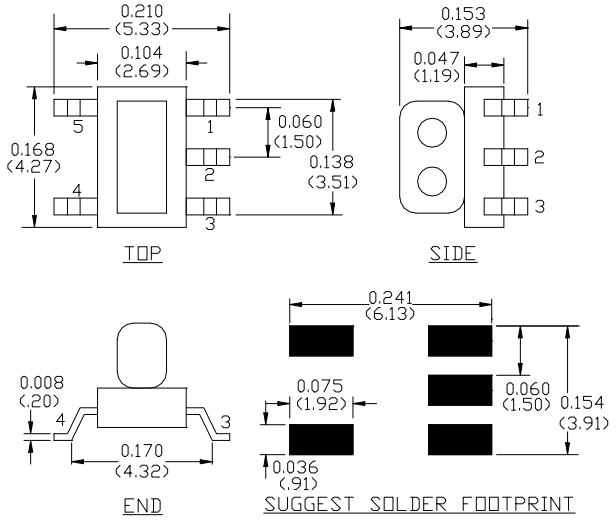
Pin Configuration

Pin No.	Function
1	Input
2	Ground
3	Coupled
4	Isolated (external 75 Ohms termination)
5	Output

Ordering Information

Part Number	Package
MACPCT0039TR	2000 piece reel
MACP-007982-CT39TB	Customer Test Board

Case Style: SM-138



Dimensions in inches [mm] Tolerance: .xx ± .02, .xxx ± .010

Note: Reference Application Note **M513** for reel size information.

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

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 and/or test data may be available. Commitment to produce in volume is not guaranteed.

• **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.

M/A-COM Technology Solutions Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.

RoHS Compliant

Broadband CATV, 10dB Coupler
5-1000 MHz

MACPCT0039
V1P

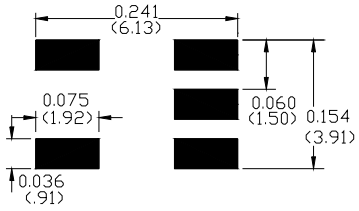
Electrical Specifications: T_A = 25°C, Z_0 = 75Ω [1]

Parameter	Test Conditions	Units	Min	Typ	Max
Coupling	5 - 870 MHz 870 - 1000 MHz	dB dB	- -	10 10	± 0.5 ±0.9
Coupling Flatness	5 - 1000 MHz	dB	-	-	1.0
Main Line Loss	5—500 MHz 500 - 870 MHz 870 - 1000 MHz	dB dB dB	- - -	0.9 1.2 1.6	1.3 1.5 1.8
Input Return Loss	5 - 1000 MHz	dB	18	20	-
Output Return Loss	5 - 1000 MHz	dB	18	20	-
Coupling Return Loss	5 - 1000MHz	dB	18	20	-
Isolation	5 - 500 MHz 500 - 1000 MHz	dB dB	25 20	30 23	-

Absolute Maximum Ratings [1,2]

Parameter	Absolute Maximum
Max Input Power	250mW
DC current	30mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

Recommended PCB Configuration



1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

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 and/or test data may be available. Commitment to produce in volume is not guaranteed.

• **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.

M/A-COM Technology Solutions Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.

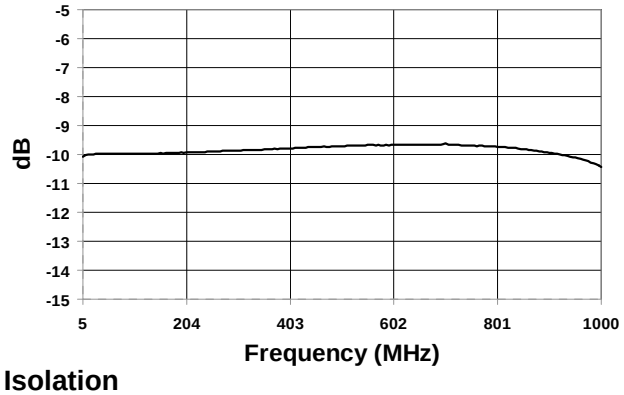
RoHS Compliant

Broadband CATV, 10dB Coupler
5-1000 MHz

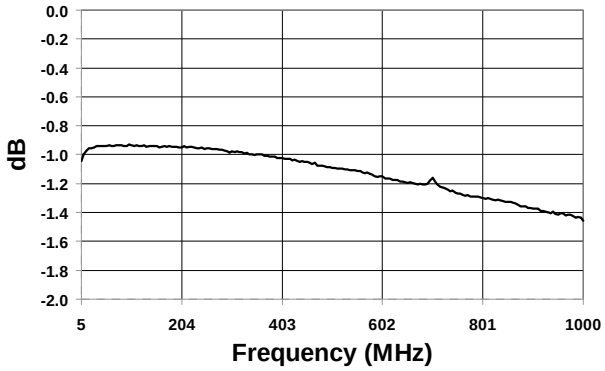
MACPCT0039
V1P

Typical Performance Curves T_A = 25°C, Z_0 = 75Ω

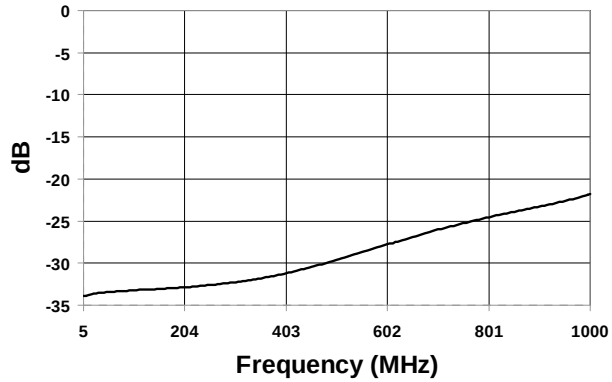
Coupling



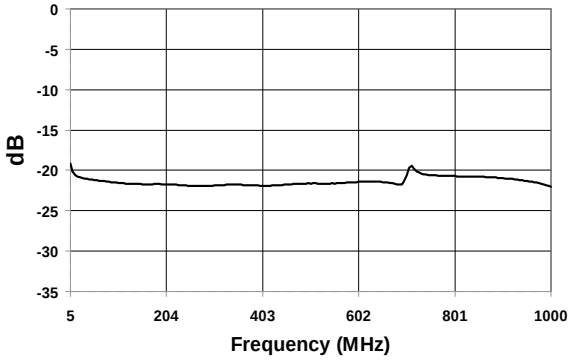
Main Line Loss



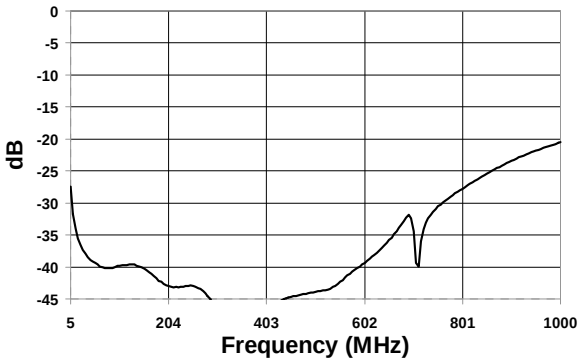
Isolation



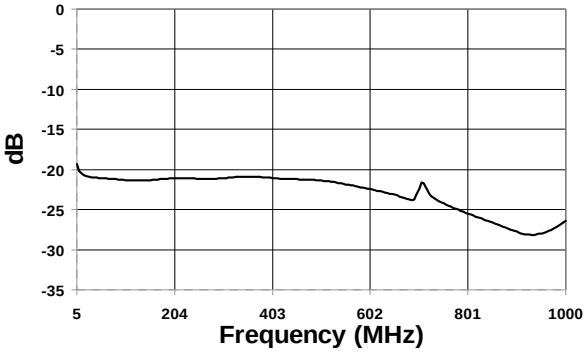
Input Return Loss



Output Return Loss



Coupling Return Loss



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 and/or test data may be available. Commitment to produce in volume is not guaranteed.

• **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.

M/A-COM Technology Solutions Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.