

## Broadband CATV, 10dB Coupler 5-1000 MHz

MACPCT0039  
V1P

### Features

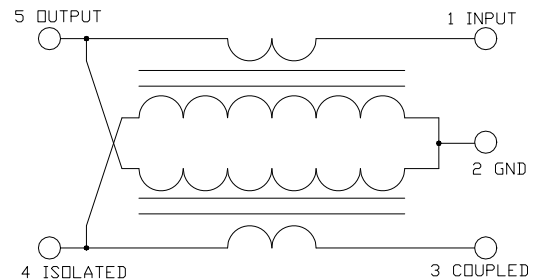
- Surface mount
- Typical coupling +10dB
- 260°C reflow compatible
- RoHS\* compliant
- RoHS version of MACPES0034.
- Available on tape and reel, reel quantity 2000

### 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



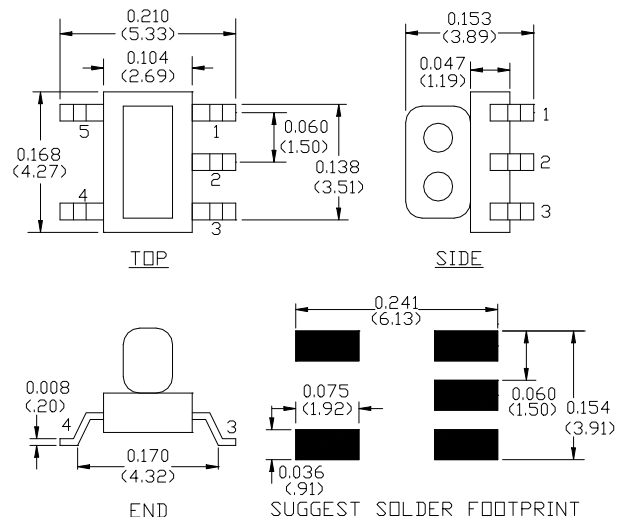
### Pin Configuration

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



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

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

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• India Tel: +91.80.4155721 • China Tel: +86.21.2407.1588

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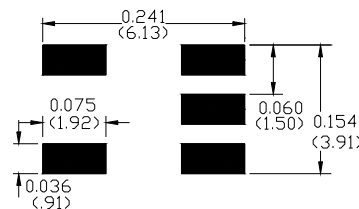
Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$  <sup>1</sup>

Parameter	Test Conditions	Units	Min	Typ	Max
Coupling	5 - 870 MHz	dB	-	10	$\pm 0.5$
	870 - 1000 MHz	dB	-	10	$\pm 0.9$
Coupling Flatness	5 - 1000 MHz	dB	-	-	1.0
Main Line Loss	5—500 MHz	dB	-	0.9	1.3
	500 - 870 MHz	dB	-	1.2	1.5
	870 - 1000 MHz	dB	-	1.6	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	dB	25	30	-
	500 - 1000 MHz	dB	20	23	-

## Absolute Maximum Ratings <sup>1,2</sup>

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.

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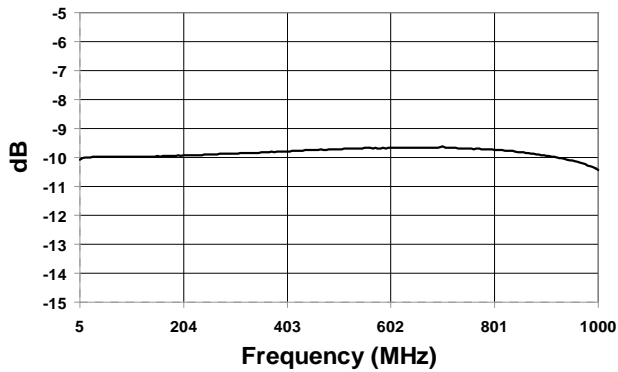
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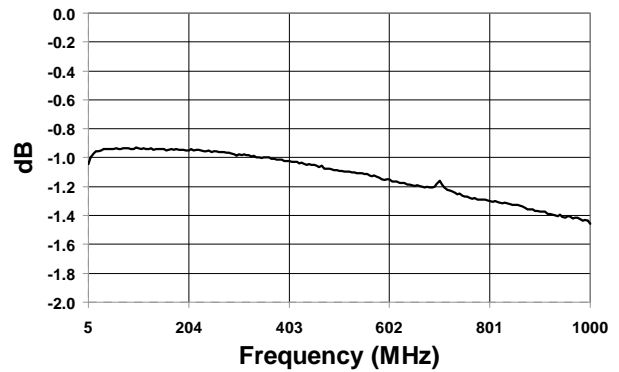
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Typical Performance Curves  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$

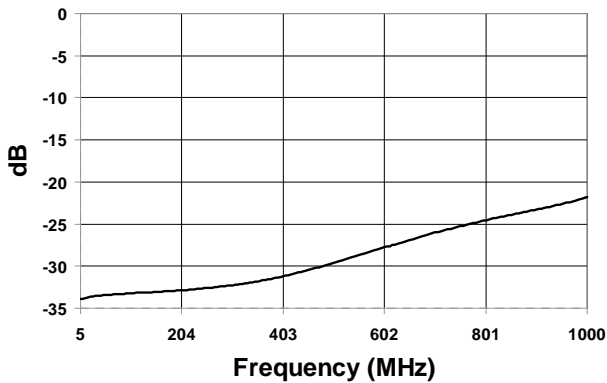
### Coupling



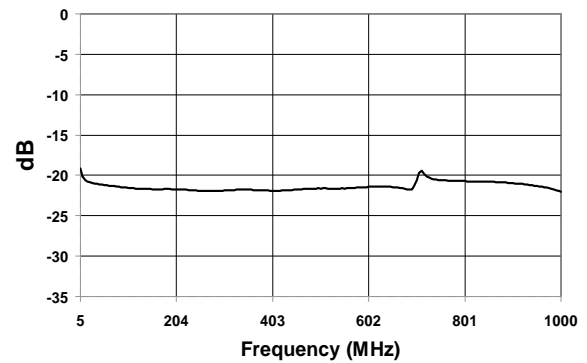
### Main Line Loss



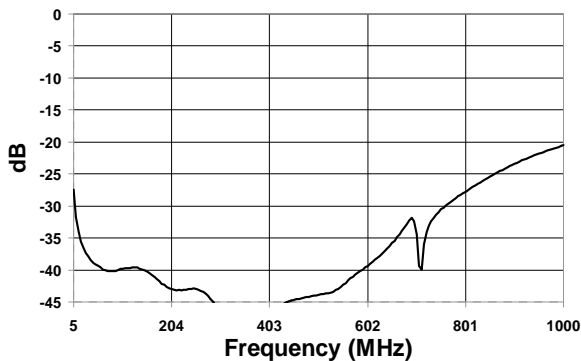
### Isolation



### Input Return Loss



### Output Return Loss



### Coupling Return Loss

