

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

**MACPCT0039
V1P**

Features

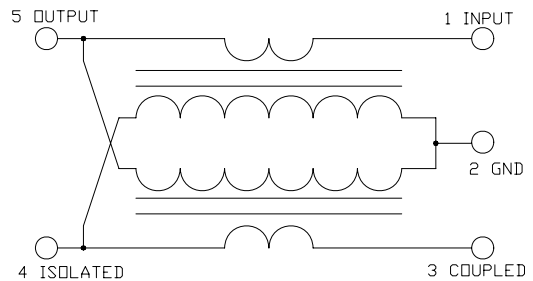
- Surface mount
- Typical coupling +10dB
- 260°C reflow compatible
- RoHS* compliant
- RoHS version of MACPES0034.
- Available on tape and reel, reel quantity 2000

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.



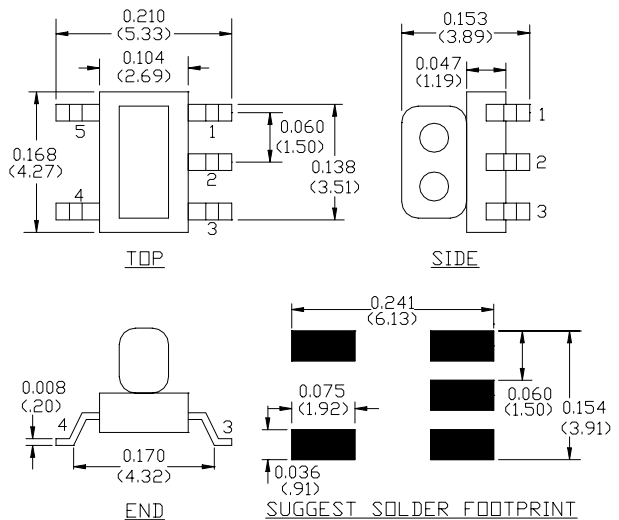
Schematic



Pin Configuration

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

Case Style: SM-138



Ordering Information

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

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

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

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

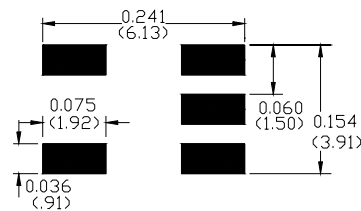
Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 75\Omega$ ¹

Parameter	Test Conditions	Units	Min	Typ	Max
Coupling	5 - 870 MHz	dB	-	10	± 0.5
	870 - 1000 MHz	dB	-	10	±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 ^{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

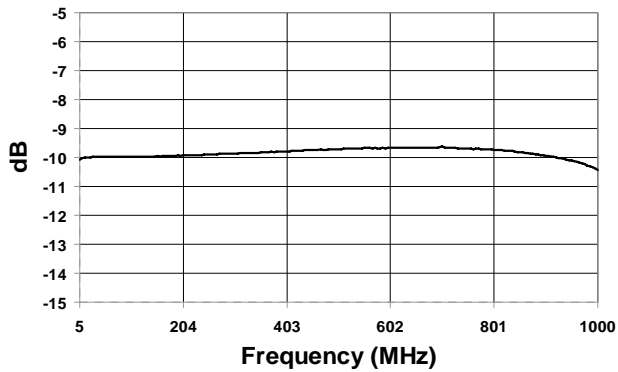
Recommended PCB Configuration



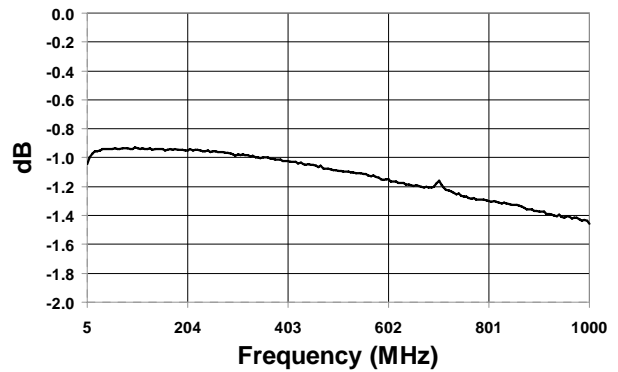
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

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

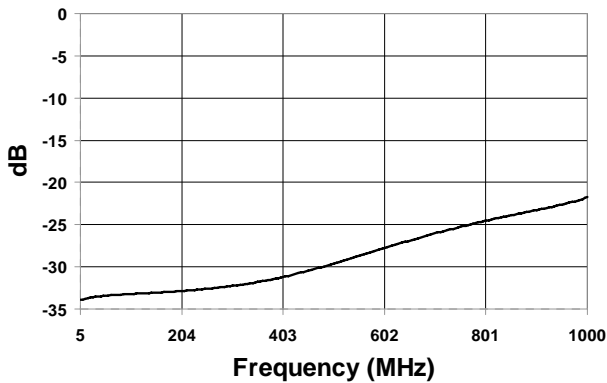
Coupling



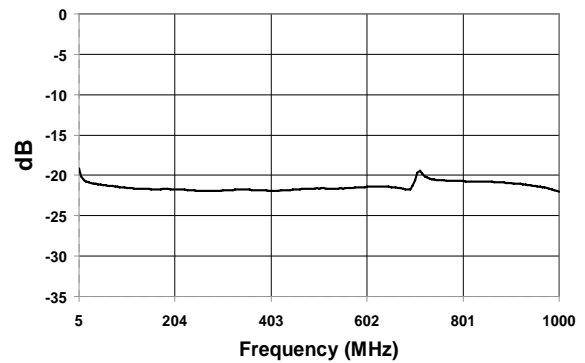
Main Line Loss



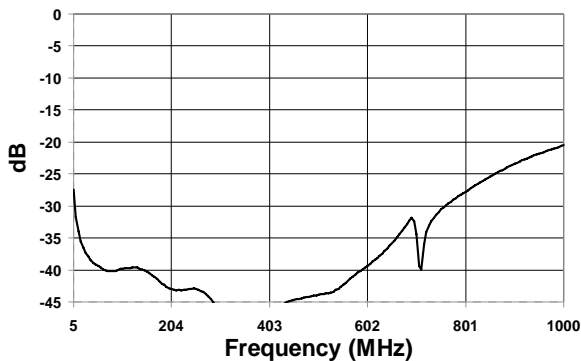
Isolation



Input Return Loss



Output Return Loss



Coupling Return Loss

