

**10.5dB Coupler**  
5-1000MHz

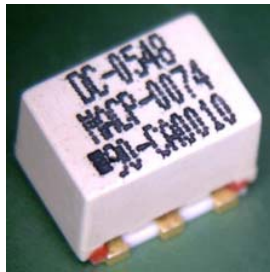
MACP-007490-CA0010  
V1P

**Features**

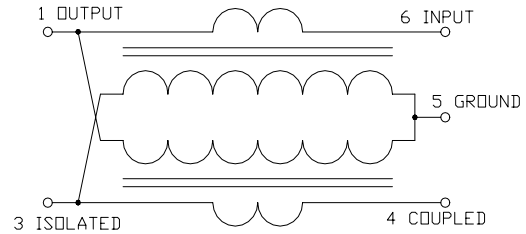
- Surface Mount
- 10.5dB Coupler
- 260°C Reflow Compatible
- RoHS\* Compliant
- RoHS version of ESDC-10-5-75
- Available on Tape and Reel. Reel quantity 900

**Description**

M/A-COM's MACP-007490-CA0010 is a 10.5dB Coupler in a low cost, surface mount package. Ideally suited for high volume CATV/Broadband applications.



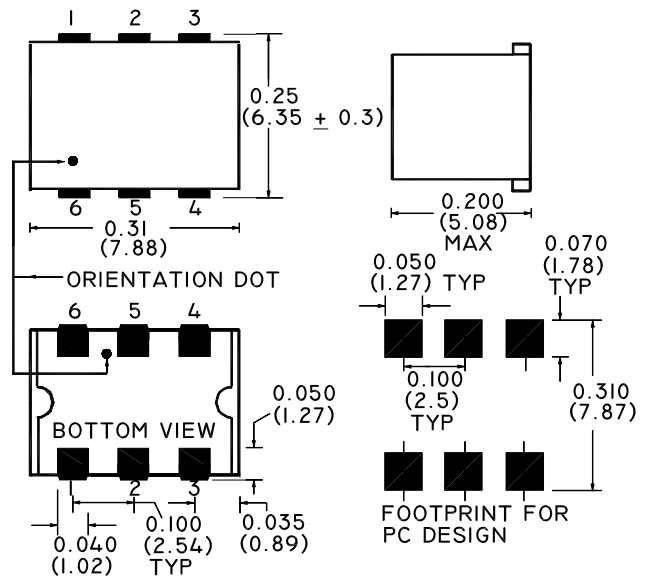
**Schematic**



**Pin Configuration**

Pin No.	Function
1	Output
2	Not connected
3	External 75 Ohm
4	Coupled
5	(ground)
6	Input

**Case Style: SM-1**



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

**Ordering Information**

Part Number	Package
MACP-007490-CA0010	900
MACP-007490-CA00TB	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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**Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$ <sup>1</sup>**

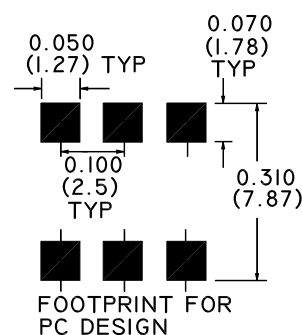
Parameter	Frequency	Units	Min	Typ	Max
Coupling	5 - 1000 MHz	dB	9.5	10.5	11.5
Coupling Flatness	5 - 1000 MHz	dB	-	-	1.2
Main Line Loss	5 - 50 MHz	dB	-	1.2	1.6
	50 - 500 MHz	dB	-	1.3	1.5
	500 - 1000 MHz	dB	-	1.4	1.7
Directivity	5 - 50 MHz	dB	18	22	-
	50 - 500 MHz	dB	15	20	-
	500 - 1000 MHz	dB	7	14	-
Input Return Loss	5 - 1000 MHz	dB	14	17	-
Output Return Loss	5 - 1000 MHz	dB	18	23	-
Coupling Return Loss	5 - 1000 MHz	dB	14	17	-

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

Parameter	Absolute Maximum
RF Power	250 mW
DC current	30mA
Operating Temperature	-20°C to +85°C
Storage Temperature	-20°C to +85°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.

### Recommended PCB Configuration



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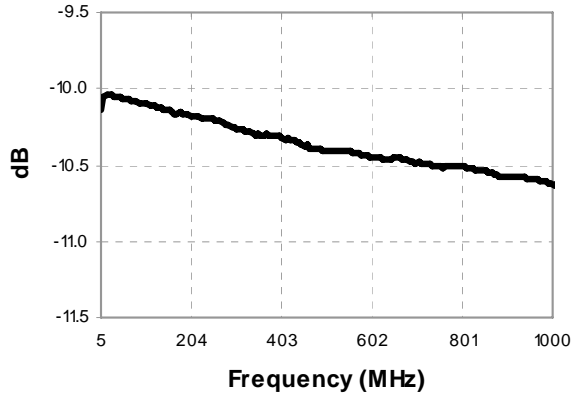
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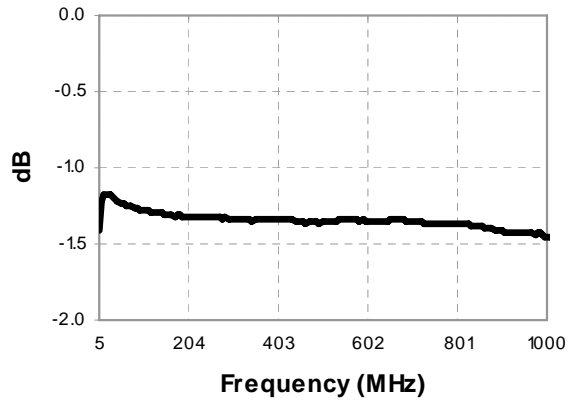
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**Typical Performance Curves:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$  <sup>1</sup>**

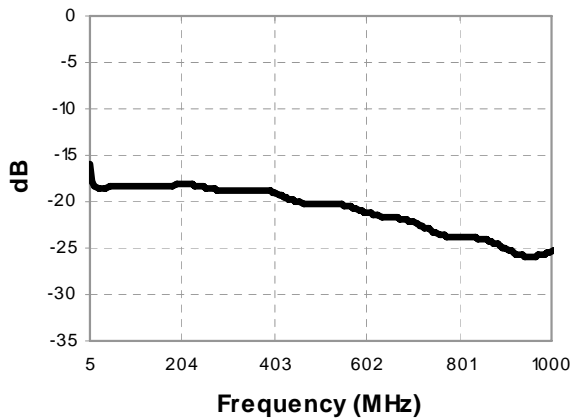
**Coupling: pin 6 - pin 4**



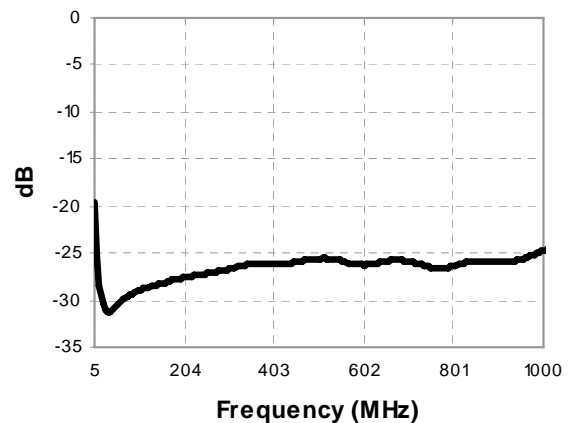
**Main Line Loss: pin 6 - pin 1**



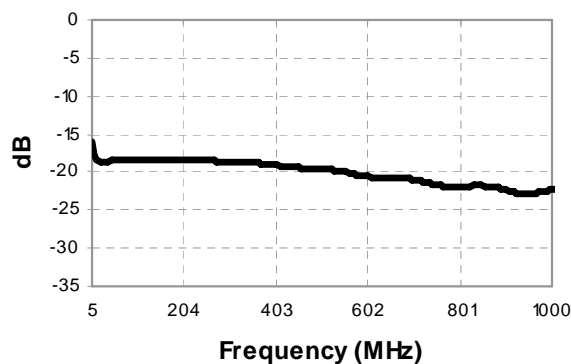
**Return Loss Input: pin 6**



**Return Loss Output: pin 1**



**Return Loss Coupling: pin 4**



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