

## 10.5dB Coupler 5-1000MHz

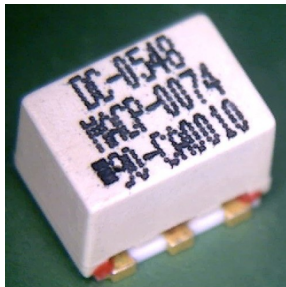
MACP-007490-CA0010  
V2

### Features

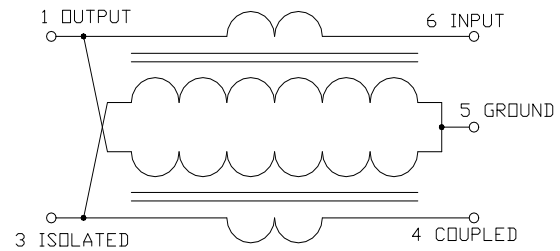
- Surface Mount
- 10.5dB Coupler
- 260°C Reflow Compatible
- RoHS\* Compliant
- RoHS version of ESDC-10-5-75
- Available on Tape and Reel. Reel quantity 900

### 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.



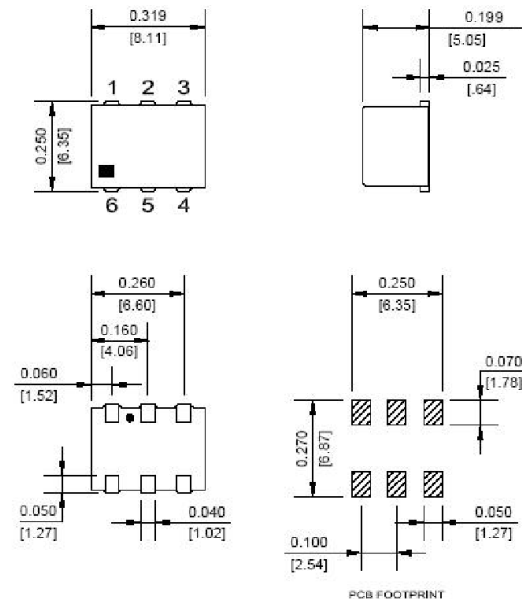
### Schematic



### 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

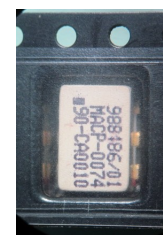
### Ordering Information

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.

### Component Package orientation



**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.

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## 10.5dB Coupler 5-1000MHz

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V2

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

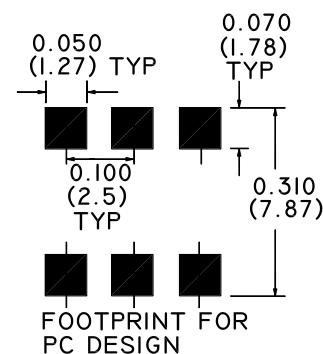
Parameter	Frequency	Units	Min	Typ	Max
Coupling	5 - 1000 MHz	dB	9.5	10.5	11.5
Coupling Flatness	5 - 1000 MHz	dB	-	-	1.2
Main Line Loss	5 - 50 MHz	dB	-	1.2	1.6
	50 - 500 MHz	dB	-	1.3	1.5
	500 - 1000 MHz	dB	-	1.4	1.7
Directivity	5 - 50 MHz	dB	18	22	-
	50 - 500 MHz	dB	15	20	-
	500 - 1000 MHz	dB	7	14	-
Input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

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.

## Recommended PCB Configuration

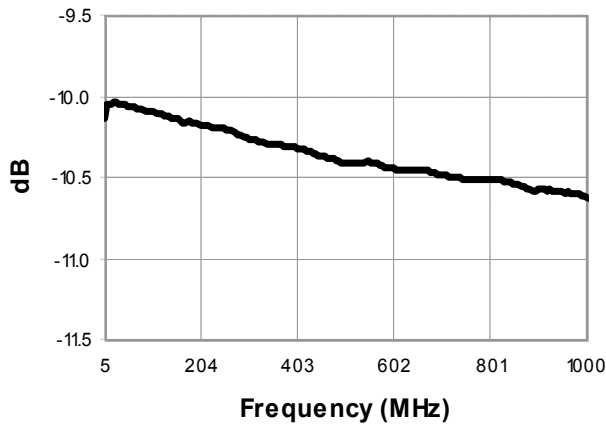


## 10.5dB Coupler 5-1000MHz

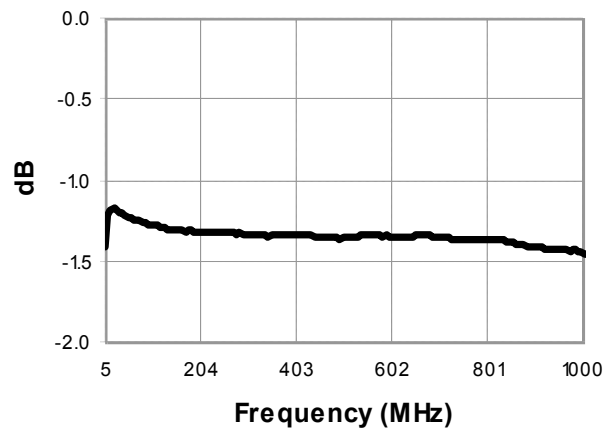
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Typical Performance Curves:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$  <sup>1</sup>

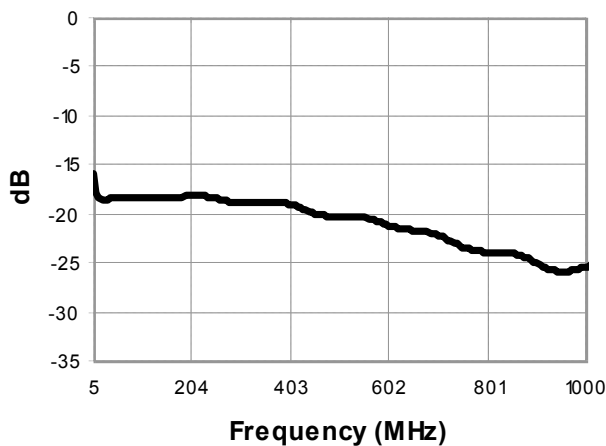
Coupling: pin 6 - pin 4



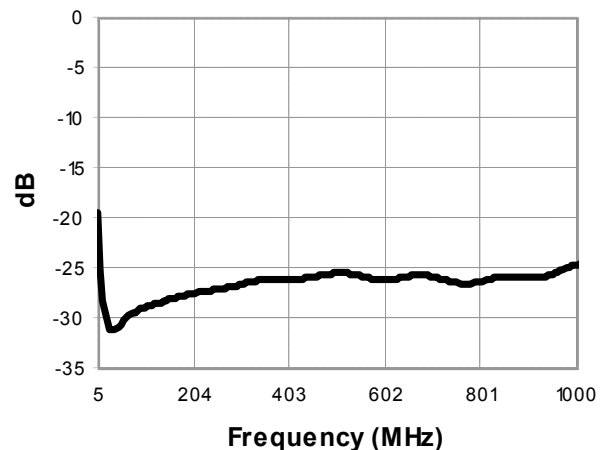
Main Line Loss: pin 6 - pin 1



Return Loss Input: pin 6



Return Loss Output: pin 1



Return Loss Coupling: pin 4

