

**17dB Directional Coupler  
5-120 MHz**

**MACP-008249-CH09B0  
V1**

**Features**

- Surface Mount
- 17dB Coupler
- RoHS\* Compliant
- RoHS version of MACPCT0017
- Available on Tape and Reel. Reel quantity 2000

**Description**

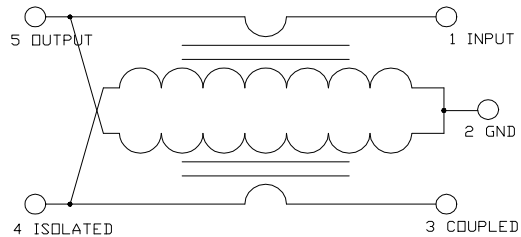
M/A-COM's MACP-008249-CH09B0 is a 17dB directional coupler in a low cost, surface mount package. Ideally suited for high volume CATV applications. A 75W external resistor is required on the isolation port with this product. Typical applications include set-top boxes, network interface units, cable amplifiers and headend equipment.



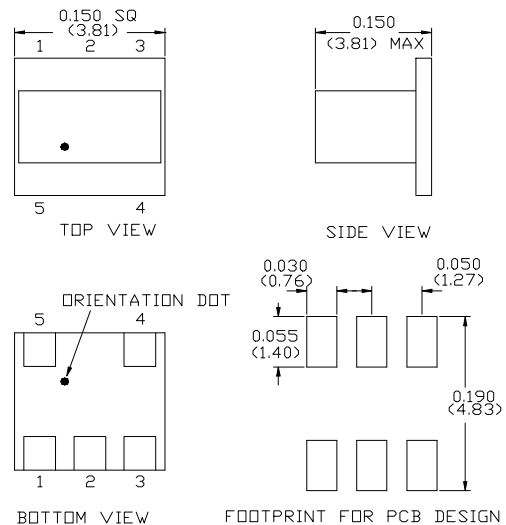
**Pin Configuration**

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

**Schematic**



**Case Style: SM-155**



**Ordering Information**

Part Number	Package
MACP-008249-CH09B0	2000
MACP-008249-CH09TB	Customer Test Board

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

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

- **North America** Tel: 800.366.2266 / Fax: 978.366.2266
- **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- **Asia/Pacific** Tel: 81.44.844.8296 / Fax: 81.44.844.8298

Visit [www.macom.com](http://www.macom.com) for additional data sheets and product information.

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

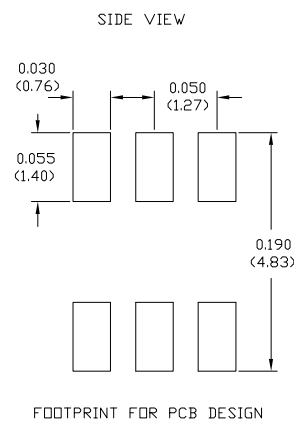
Frequency Range 50 - 1000 MHz	Test Conditions	Nominal	Units	Min.	Typ.	Max.
Coupling	5 – 120MHz	—	dB	-17.0	-17.3	-17.5
Main Line Loss	5 – 120MHz	—	dB	-0.5	-0.4	-
Isolation	5 – 120MHz	—	dB	-	-45	-35
Return Loss	5 – 120MHz	—	dB	-	-26	-20

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

Parameter	Absolute Maximum
RF Power	1 mW
Internal Load Dissipation	30mA
Operating Temperature	-40°C to +80°C
Storage Temperature	-40°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**

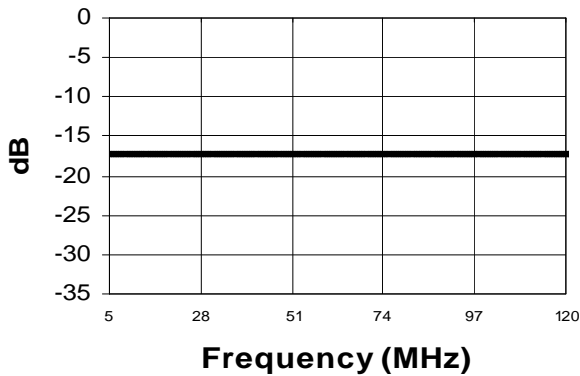


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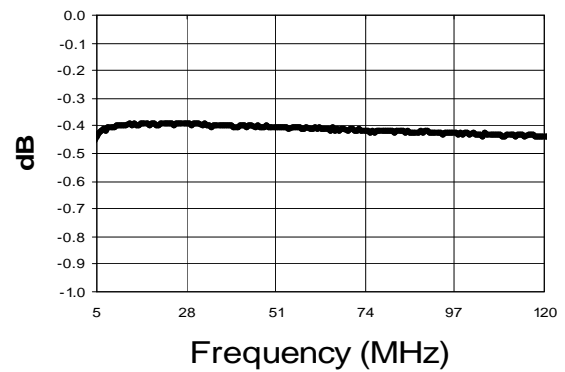
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Typical Performance Curves:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$ <sup>1</sup>

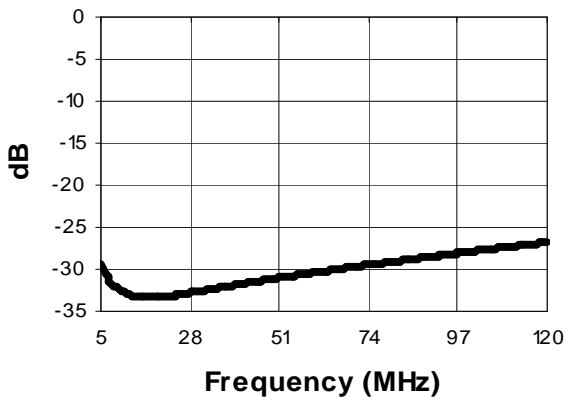
**Coupling**



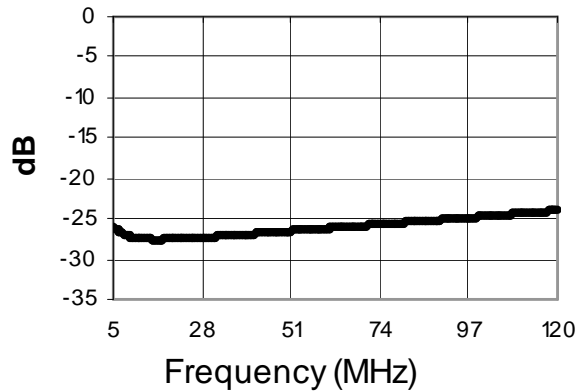
**Main Line Loss**



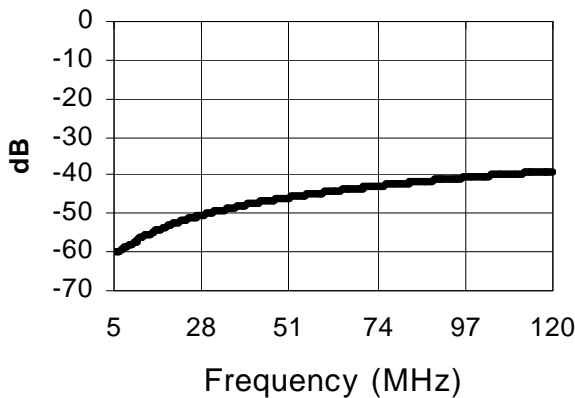
**Isolation Return Loss**



**Coupling Return Loss**



**Isolation**



**Input Return Loss**

