

**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

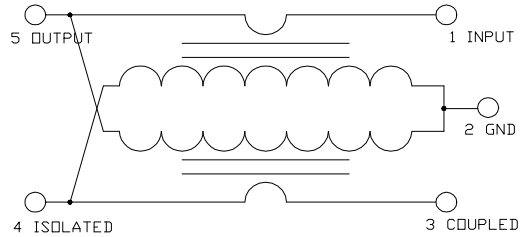
M/A-COM's MACP-008249-CH09B0 is a 17dB directional coupler in a low cost, surface mount package. Ideally suited for high volume CATV applications. A 75W external resistor is required on the isolation port with this product. Typical applications include set-top boxes, network interface units, cable amplifiers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



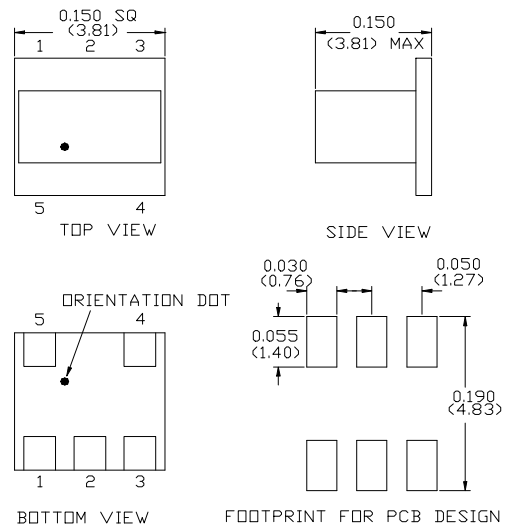
Pin Configuration

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

Schematic



Case Style: SM-155



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

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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.

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

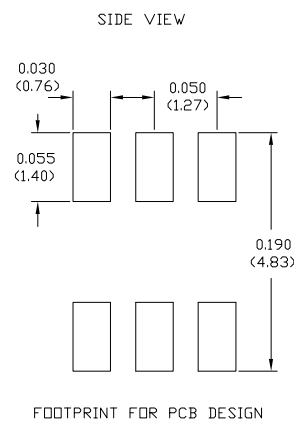
Frequency Range 50 - 1000 MHz	Test Conditions	Nominal	Units	Min.	Typ.	Max.
Coupling	5 – 120MHz	—	dB	-17.0	-17.3	-17.5
Main Line Loss	5 – 120MHz	—	dB	-0.5	-0.4	-
Isolation	5 – 120MHz	—	dB	-	-45	-35
Return Loss	5 – 120MHz	—	dB	-	-26	-20

Absolute Maximum Ratings ^{1,2}

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

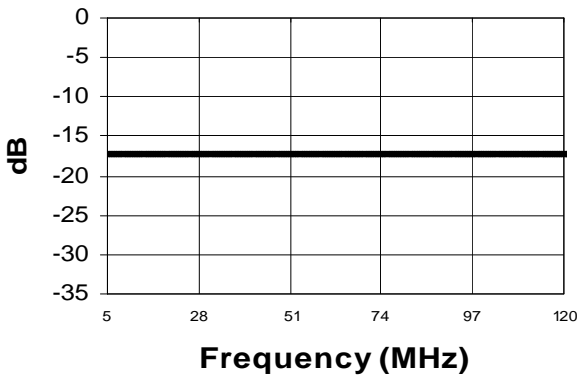


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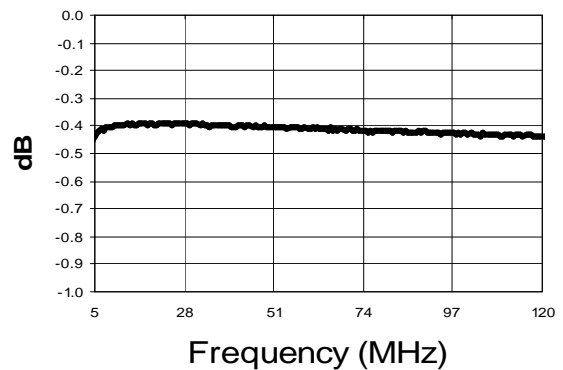
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Typical Performance Curves: $T_A = 25^\circ\text{C}$, $Z_0 = 75\Omega$ ¹

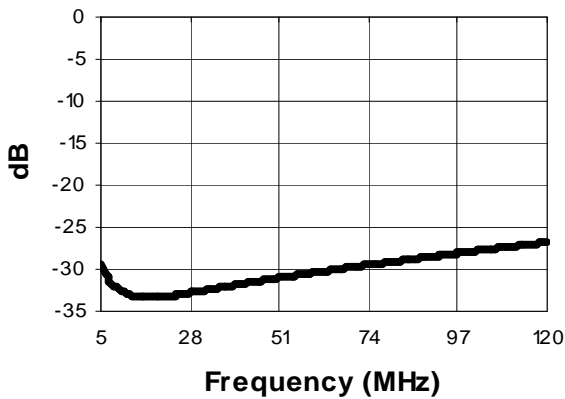
Coupling



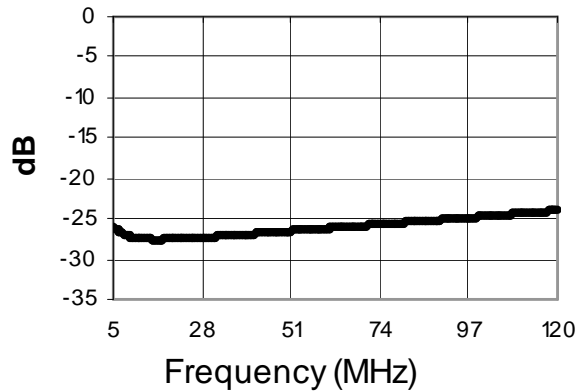
Main Line Loss



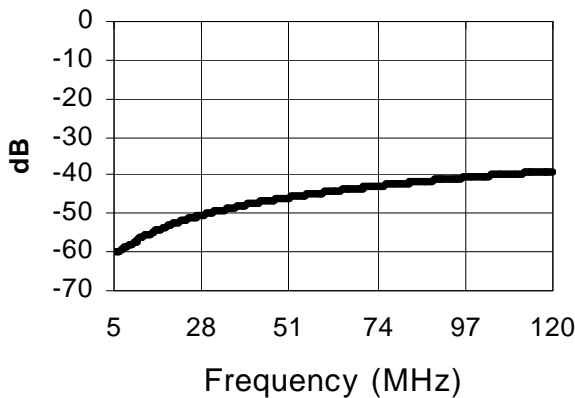
Isolation Return Loss



Coupling Return Loss



Isolation



Input Return Loss

