

# MACP-010249-CI08A0



Coupler, 18dB Coupler  
5 to 1200 MHz

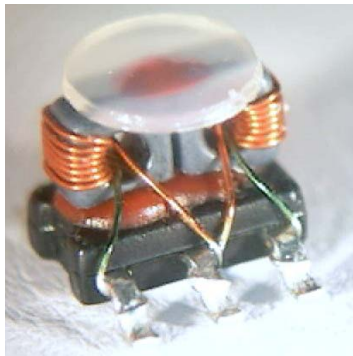
Rev. V1

## Features

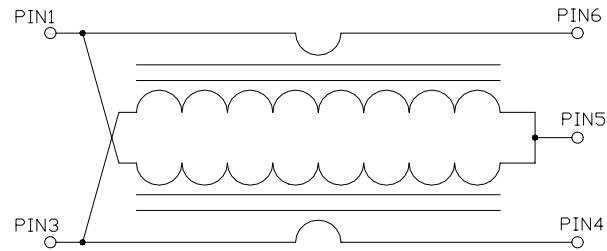
- 18dB Impedance ratio
- Excellent Insertion Loss
- Surface mount
- Available on tape and reel
- 260°C reflow compatible
- RoHS\* compliant and lead free
- Excellent temperature stability
- Can be used in both 50Ω and 75Ω systems

## Description

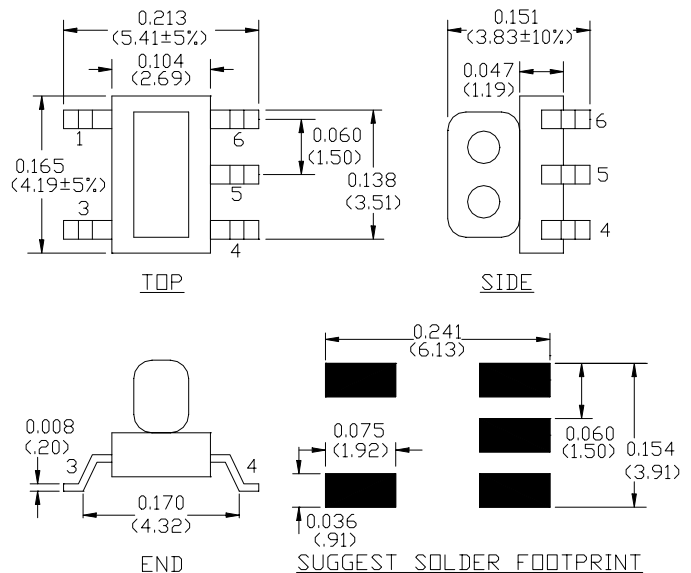
M/A-Com Technology Solutions MACP-010249-CI08A0 is a 18 dB Coupler in a low cost, surface mount package. Ideally suited for broadband CATV applications.



## Schematic



## Component Dimensions



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

## Pin Configuration

Pin no.	Function
1	Output
3	Isolated port ( $Z_0$ termination)
4	Coupling
5	Ground
6	Input

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

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• **North America** Tel: 800.366.2266 • **Europe** Tel: +353.21.244.6400  
 • **India** Tel: +91.80.43537383 • **China** Tel: +86.21.2407.1588  
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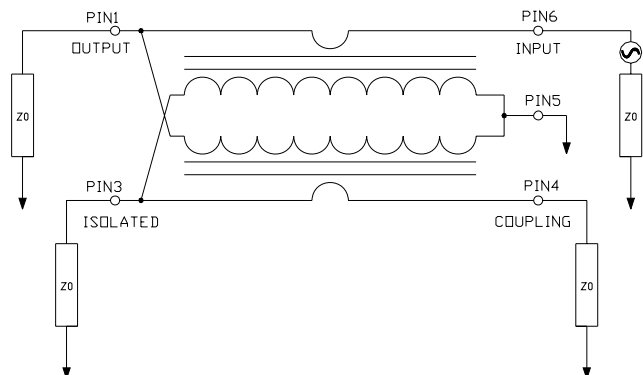
**Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $0\text{dBm}$ ,  $Z_0 = 75\Omega$ ,  $P_{in} = 0\text{dBm}$**

Parameter	Frequency	Units	Min	Typ	Max
Coupling (Pin 6 to Pin 4)	5 - 1200MHz	dB	-	18	$\pm 1.0$
Main Line Loss (Pin 6 to Pin 1)	5 - 1200MHz	dB	-	0.6	0.9
Input Return Loss (Pin6)	5 - 1200MHz	dB	18	34	-
Output Return Loss (Pin1)	5 - 1200MHz	dB	18	33	-
Coupling Return Loss (Pin4)	5 - 1200MHz	dB	18	28	-
Isolation Return Loss (Pin3)	5 - 1200MHz	dB	18	34	-
Isolation (Pin6 - Pin3)	5 - 50MHz	dB	35	42	-
	50 - 1200MHz	dB	24	32	-

## Recommended Maximum Ratings

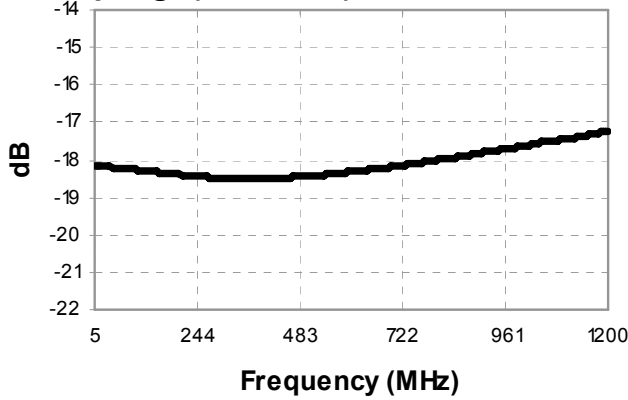
Parameter	Value
Input power	At least 250mW
DC current (tested at 5V)	At least 30mA
Operating Temperature	$-40^\circ\text{C}$ to $+85^\circ\text{C}$
Storage Temperature	$-55^\circ\text{C}$ to $+100^\circ\text{C}$

## Application Circuit

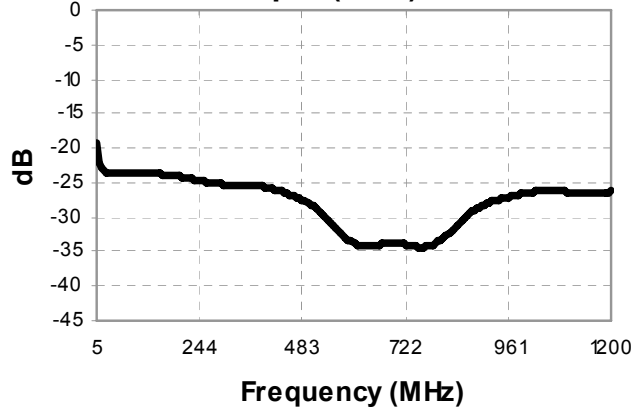


Typical Performance Curves:  $T_A = 25^\circ\text{C}$ ,  $0\text{dBm}$ ,  $Z_0 = 75\Omega$ ,  $P_{in} = 0\text{dBm}$

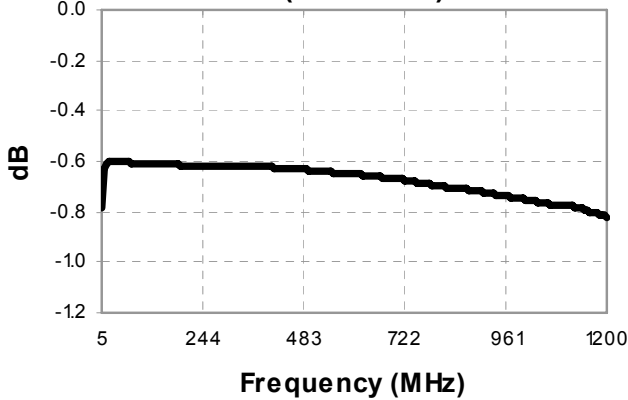
**Coupling: (Pin 6 to 4)**



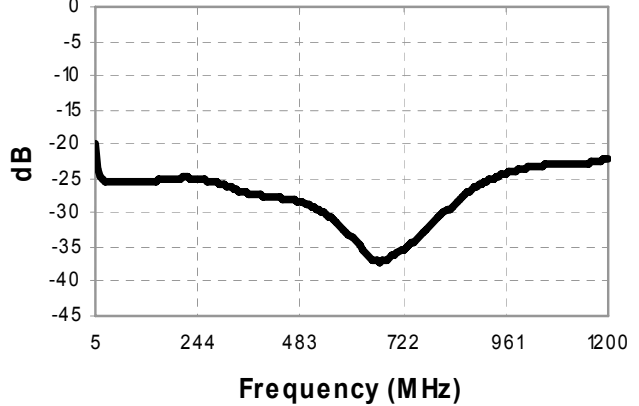
**Return Loss: Input (Pin6)**



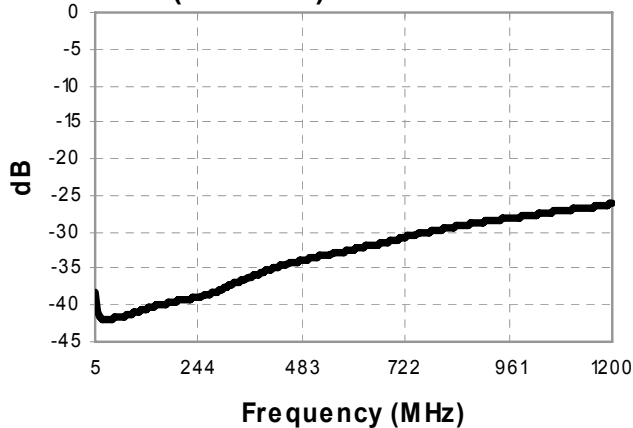
**Main Line Loss: (Pin 6 to 1)**



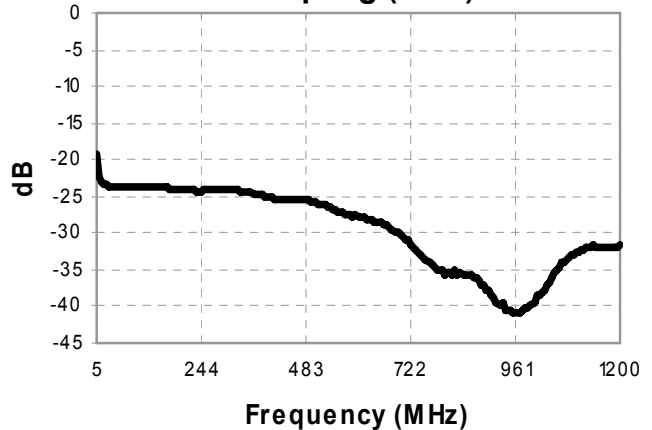
**Return Loss: Output (Pin1)**



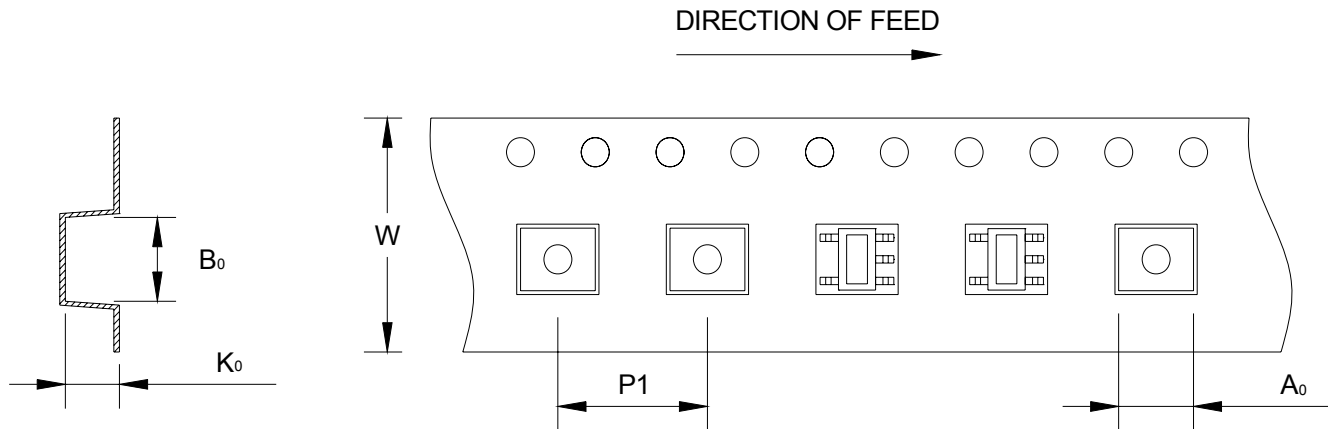
**Isolation (Pin6 to 3)**



**Return Loss: Coupling (Pin4)**



## Tape & Reel Information



Item	Dimension
Ao	6.1mm +/- 0.1mm
Bo	4.6mm +/- 0.1mm
Ko	4.0mm +/- 0.1mm
W	12.0mm +/- 0.3mm
P1	8.00mm +/- 0.1mm

## Ordering Information

Part number	Description
MACP-010249-CI08A0	2000 piece reel
MACP-010249-CI08TB	Customer Test Board