

MACP-010249-CI08A0



Coupler, 18dB Coupler
5 to 1200 MHz

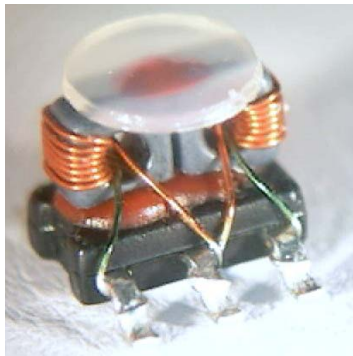
Rev. V1

Features

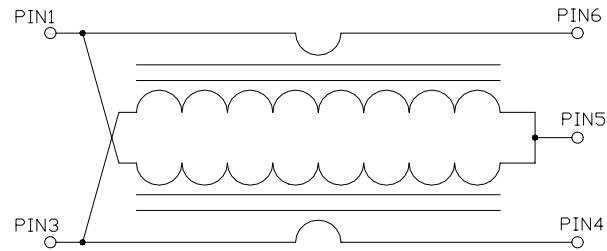
- 18dB Impedance ratio
- Excellent Insertion Loss
- Surface mount
- Available on tape and reel
- 260°C reflow compatible
- RoHS* compliant and lead free
- Excellent temperature stability
- Can be used in both 50Ω and 75Ω systems

Description

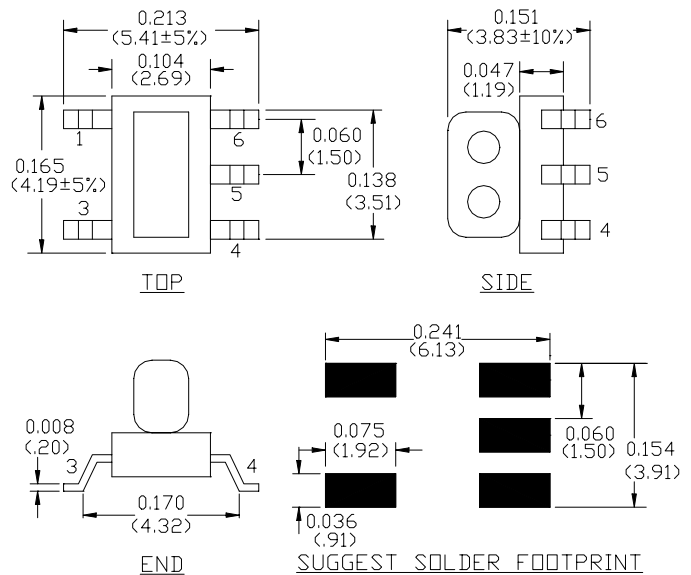
M/A-Com Technology Solutions MACP-010249-CI08A0 is a 18 dB Coupler in a low cost, surface mount package. Ideally suited for broadband CATV applications.



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.

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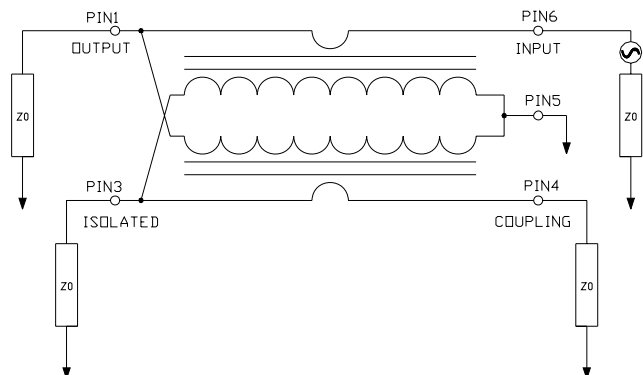
Electrical Specifications: $T_A = 25^\circ\text{C}$, 0dBm , $Z_0 = 75\Omega$, $P_{in} = 0\text{dBm}$

Parameter	Frequency	Units	Min	Typ	Max
Coupling (Pin 6 to Pin 4)	5 - 1200MHz	dB	-	18	± 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 50 - 1200MHz	dB dB	35 24	42 32	- -

Recommended Maximum Ratings

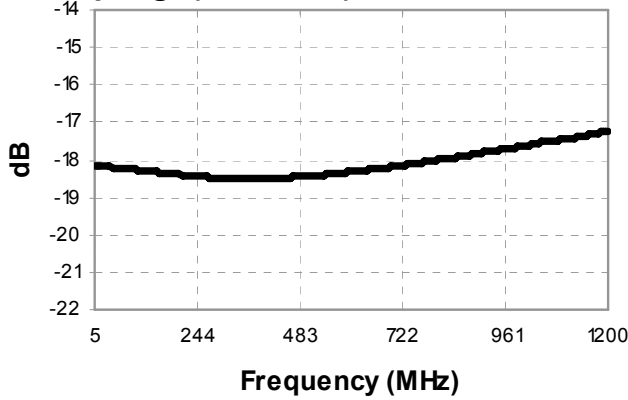
Parameter	Value
Input power	At least 250mW
DC current (tested at 5V)	At least 30mA
Operating Temperature	-40°C to $+85^\circ\text{C}$
Storage Temperature	-55°C to $+100^\circ\text{C}$

Application Circuit

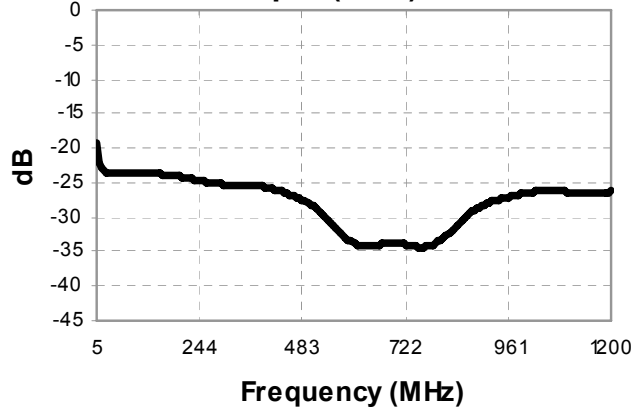


Typical Performance Curves: $T_A = 25^\circ\text{C}$, 0dBm , $Z_0 = 75\Omega$, $P_{in} = 0\text{dBm}$

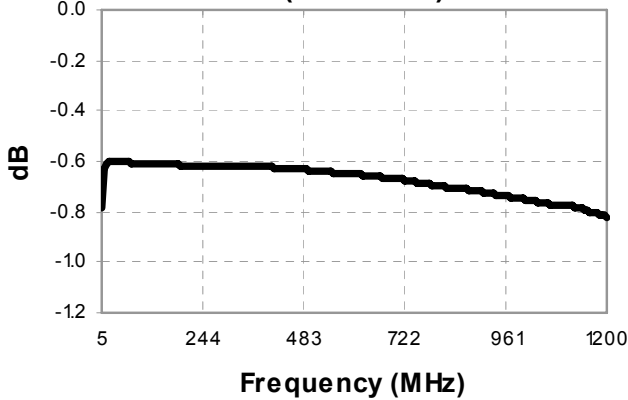
Coupling: (Pin 6 to 4)



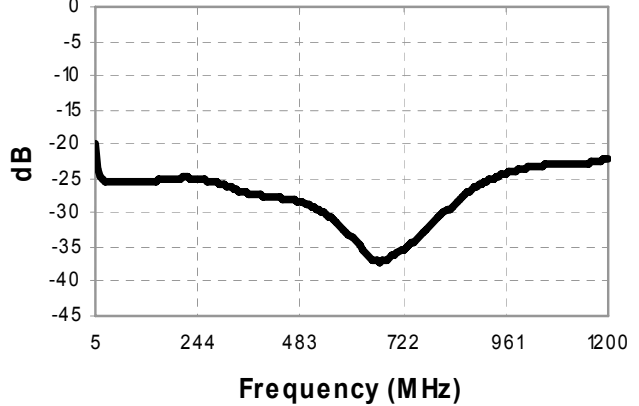
Return Loss: Input (Pin6)



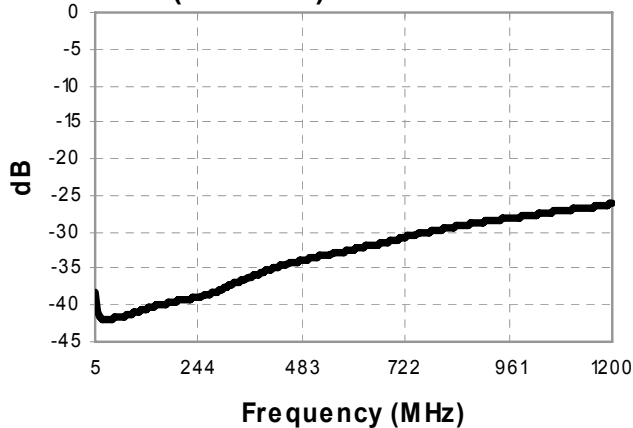
Main Line Loss: (Pin 6 to 1)



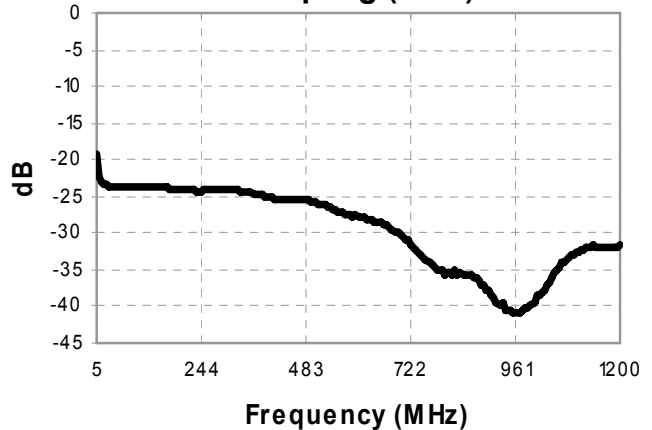
Return Loss: Output (Pin1)



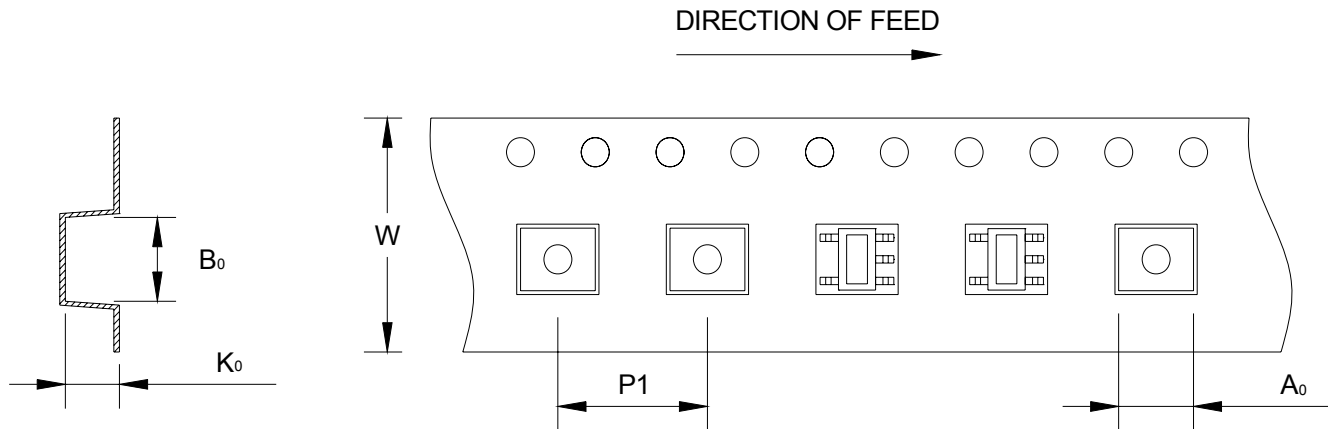
Isolation (Pin6 to 3)



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