

## Features

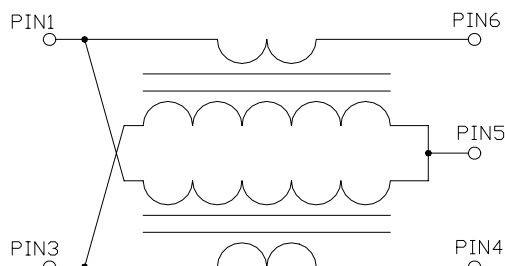
- Surface Mount
- Typical Coupling 8dB
- 260°C Reflow Compatible
- RoHS\* Compliant and lead free
- Available on Tape and Reel.
- Stable over large temperature range.

## Description

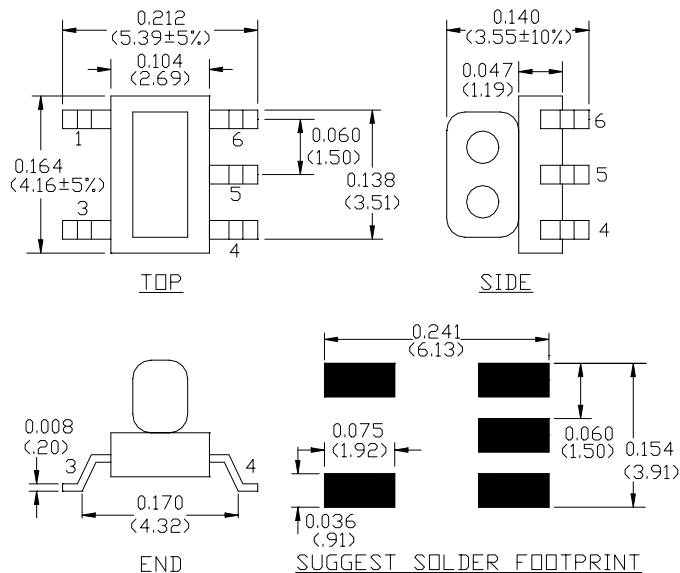
M/A-COM Tech's MACP-010250-C808A0 is a 8dB broadband Coupler in a low cost, surface mount package. It offers low loss, good Isolation, good input/output matching and exceptional coupling repeatability. Ideally suited for high volume CATV/ Broadband applications.



## Schematic



## Component Dimensions



## Pin Configuration

Pin no.	Function
1	Output
3	Isolation (External 75 Ohm Load)
4	Coupling
5	Ground
6	Input

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

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

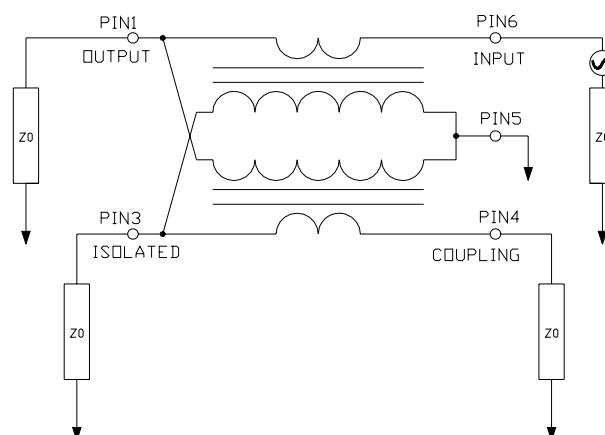
**Electrical Specifications:  $T_A = 25^\circ\text{C}$ , 0dBm,  $Z_0 = 75\Omega$ ,  $P_{in} = 0\text{dBm}$**

Parameter	Test Conditions	Units	Min	Typ	Max
Coupling (Pin 6 to Pin 4)	5- 1200 MHz	dB	-	8.5	$\pm 0.8$
Main Line Loss (Pin 6 to Pin 1)	5 - 500 MHz 500 - 1200 MHz	dB dB	- -	1.6 1.7	1.8 2.3
Return Loss: Input (Pin 6)	5 - 1200MHz	dB	14	19	-
Return Loss: Output (Pin 1)	5 - 1200MHz	dB	18	35	-
Return Loss: Coupling (Pin 4)	5 - 1200MHz	dB	14	18	-
Return Loss: Isolation (Pin 3)	5 -1200MHz	dB	18	32	-
Isolation (Pin 6 to Pin 3)	5 - 250 MHz 250 - 1200 MHz	dB dB	25 18	27 24	- -

**Recommended Maximum Ratings**

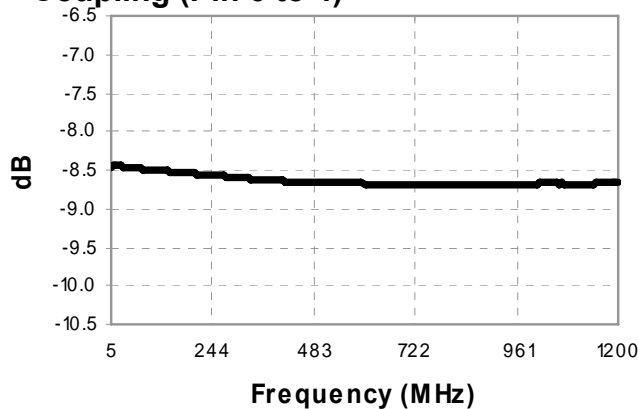
Parameter	Value
Input power	At least +28dBm (631mW)
DC current (tested at 5V)	At least 600mA
Operating Temperature	$-40^\circ\text{C}$ to $+85^\circ\text{C}$
Storage Temperature	$-55^\circ\text{C}$ to $+100^\circ\text{C}$

**Application Circuit**

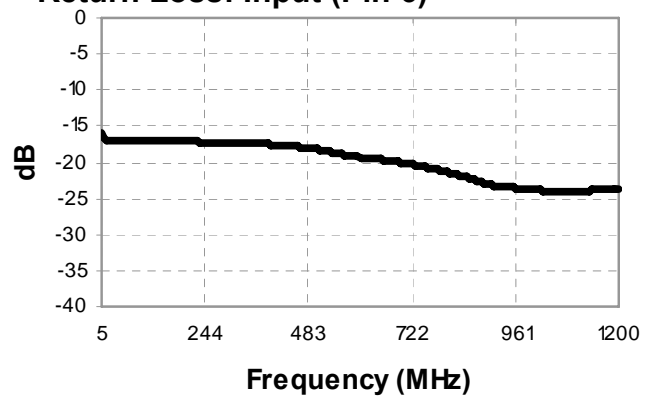


Typical Performance Curves:  $T_A = 25^\circ\text{C}$ ,  $0\text{dBm}$ ,  $Z_0 = 75\Omega$ ,  $P_{in} = 0\text{dBm}$

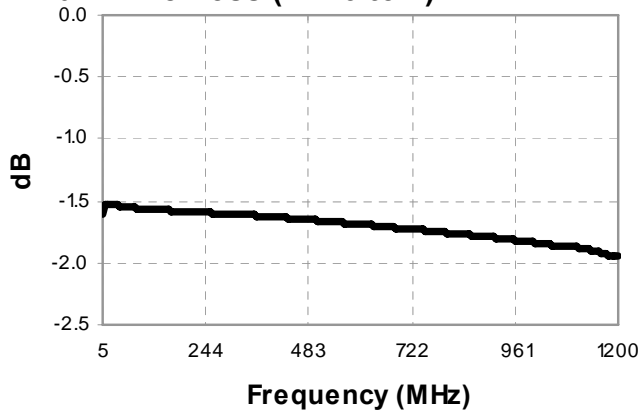
**Coupling (Pin 6 to 4)**



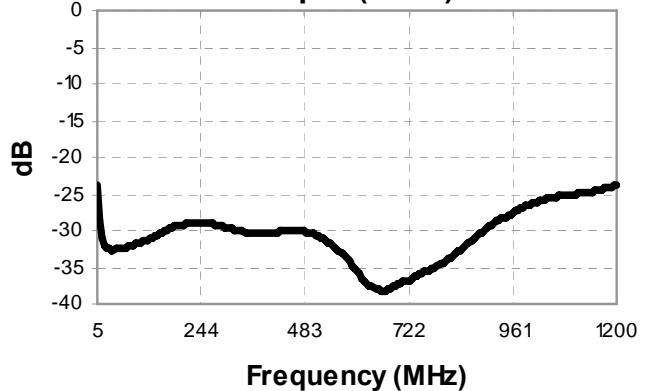
**Return Loss: Input (Pin 6)**



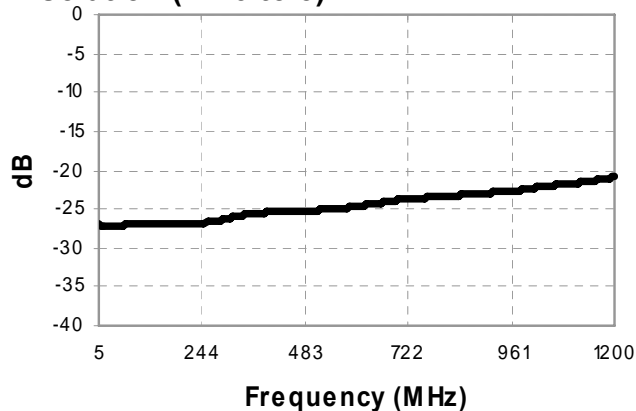
**Main Line Loss (Pin 6 to 1)**



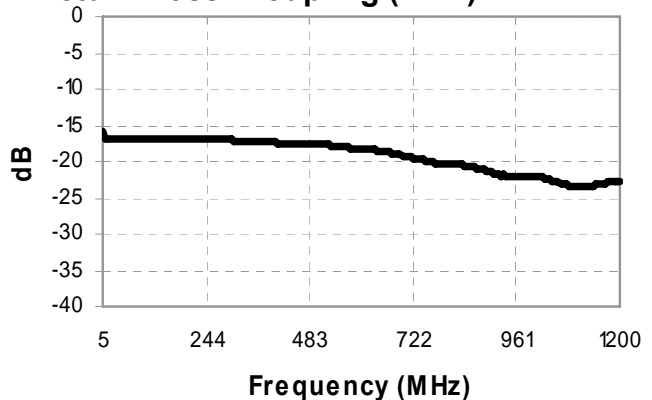
**Return Loss: Output (Pin 1)**



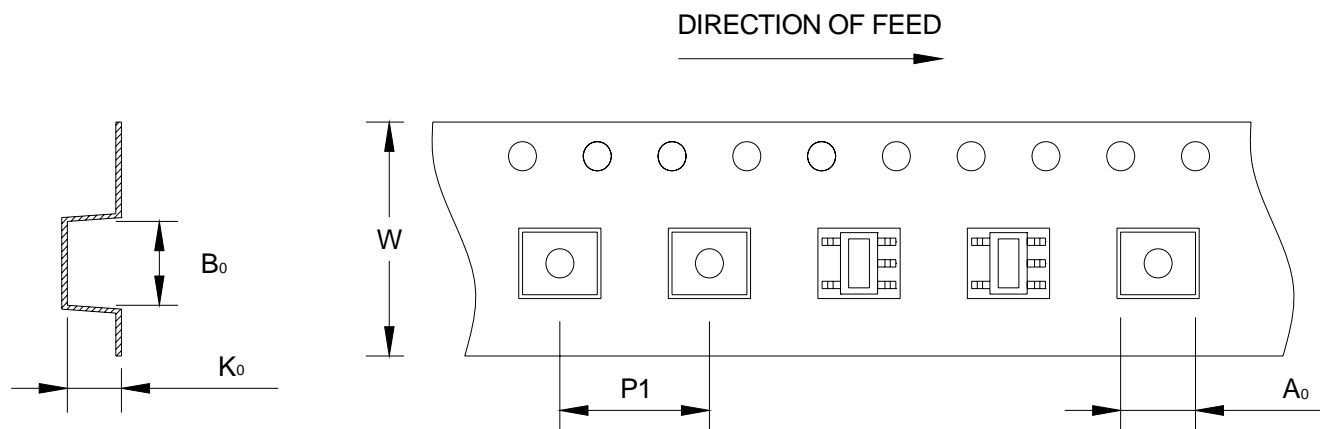
**Isolation (Pin6 to 3)**



**Return Loss: Coupling (Pin4)**



## Tape & Reel Information



Item	Dimension
Ao	5.9mm +/- 0.1mm
Bo	4.55mm +/- 0.1mm
Ko	3.8mm +/- 0.1mm
W	12.0mm +/- 0.3mm
P1	8.00mm +/- 0.1mm

## Ordering Information

Part number	Description
MACP-010250-C808A0	2000 piece reel
MACP-010250-C808TB	Customer Test Board