

**Coupler 8dB**  
**5 – 1218 MHz**

Rev. V2

## Features

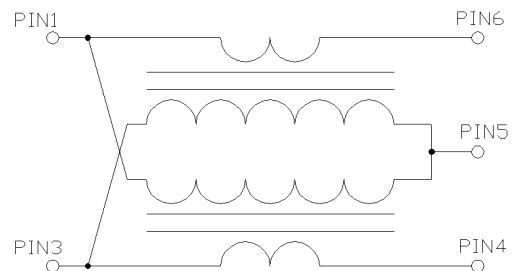
- Surface mount
- Typical Coupling 8dB
- 260° reflow compatible
- RoHS compliant and lead free
- Stable over large temperature range

## Description

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 and Broadband applications.



## Functional Schematic



## Ordering Information

Part Number	Package
MACP-010250-C808A0	Tape & Reel
MACP-010250-C808TB	Customer Test Board

## Pin Configuration

Pin No.	Function
1	Output
3	Isolation (external 75 Ohm load)
4	Coupling
5	Ground
6	Input

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

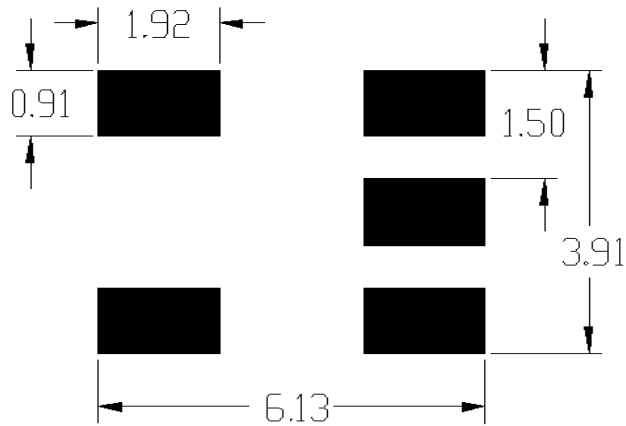
Parameter	Test Conditions	Units	Min.	Typ.	Max.
Frequency Range		MHz	5		1218
Impedance		$\Omega$		75	
Coupling				8	
Coupling (Pin6 - Pin4)	5 - 1218 MHz	dB	-	8.6	$\pm 0.8$
Main Line Loss (Pin6 - Pin1)	5 - 500 MHz	dB	-	1.5	1.8
	500 - 1218 MHz	dB	-	1.6	2.3
Input Return Loss (Pin6)	5 - 1218 MHz	dB	14	19	-
Output Return Loss (Pin1)	5 - 1218 MHz	dB	18	37	-
Coupling Return Loss (Pin4)	5 - 1218 MHz	dB	14	18	-
Isolation Return Loss (Pin3)	5 - 1218 MHz	dB	18	32	-
Isolation (Pin6-3)	5 - 250 MHz	dB	25	27	-
	250 - 1218 MHz	dB	18	24	-

## Recommended Maximum Ratings

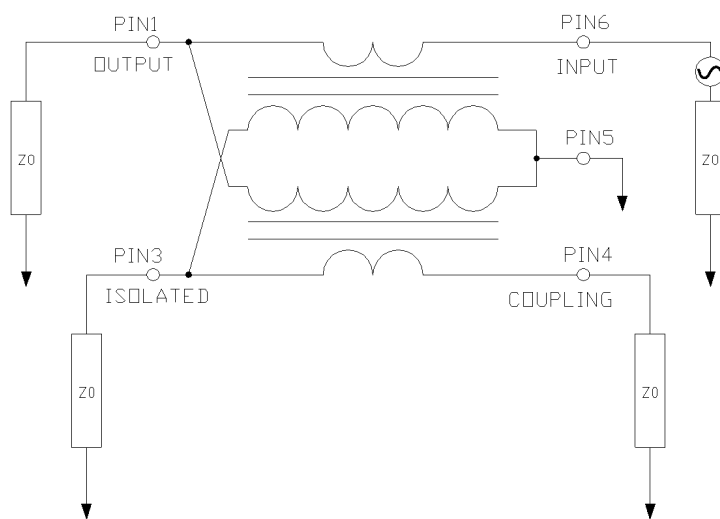
Parameter	Units	Min	Max
Input Power	mW		631
DC Current	mA		600
Operating Temperature Range	$^\circ\text{C}$	-40	105

Full temperature plots available on request

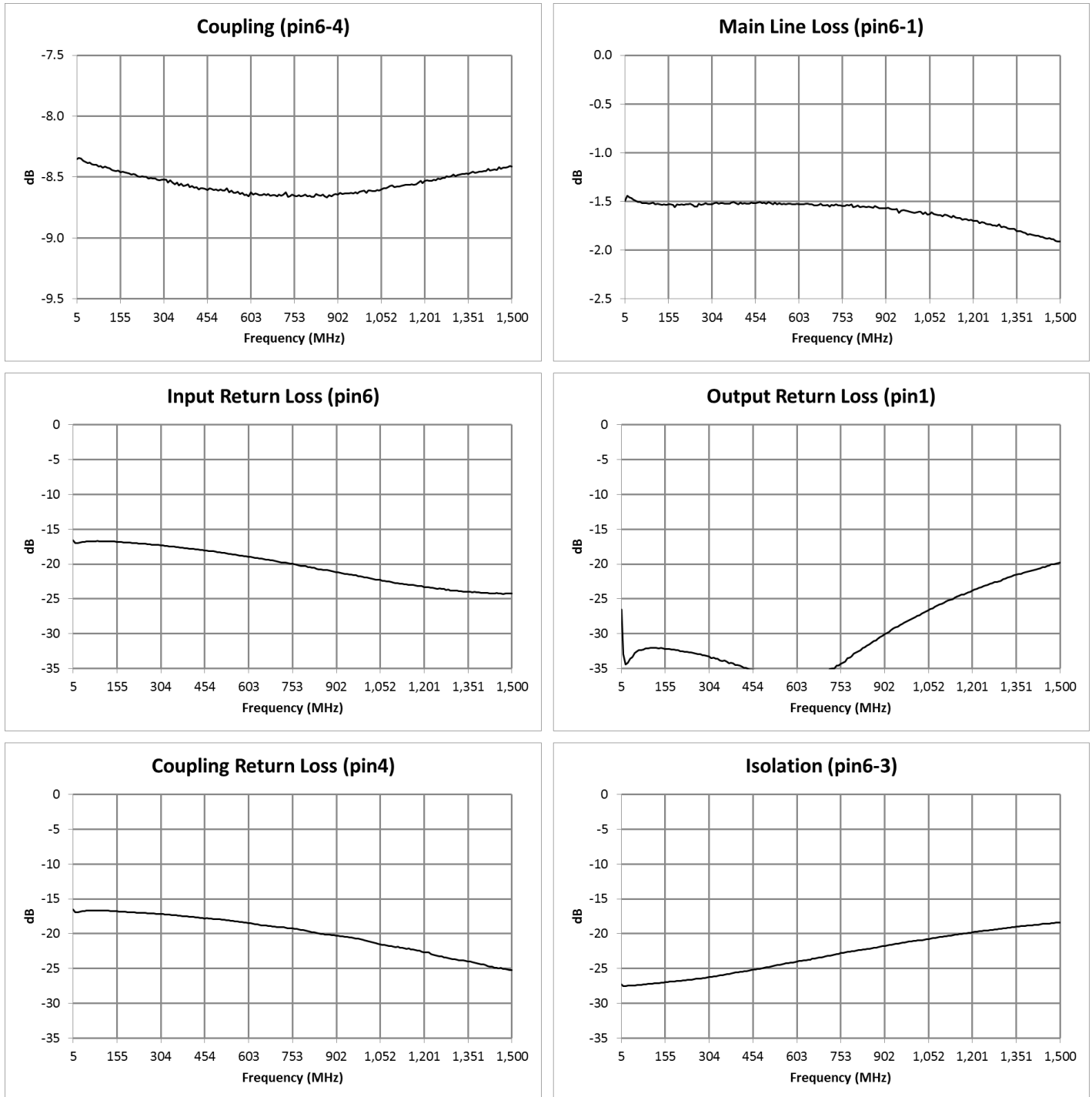
## PCB Layout



## Application Schematic



## Typical Performance Curves

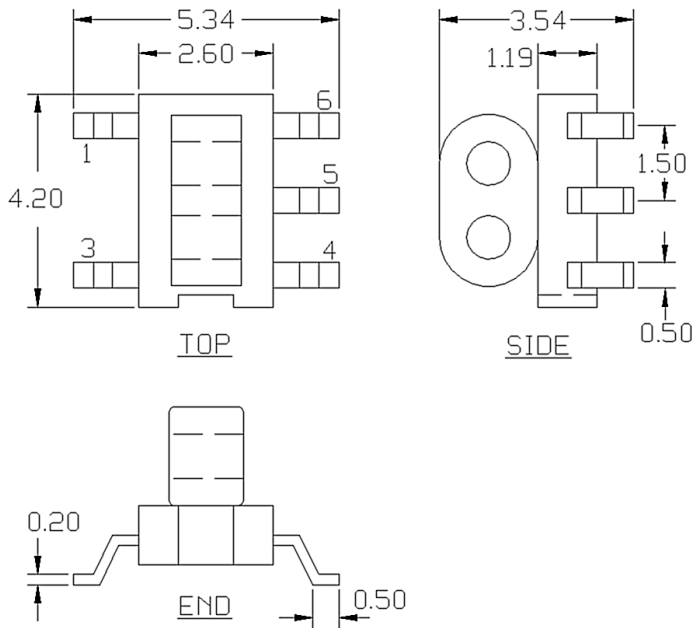


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## Outline Drawing

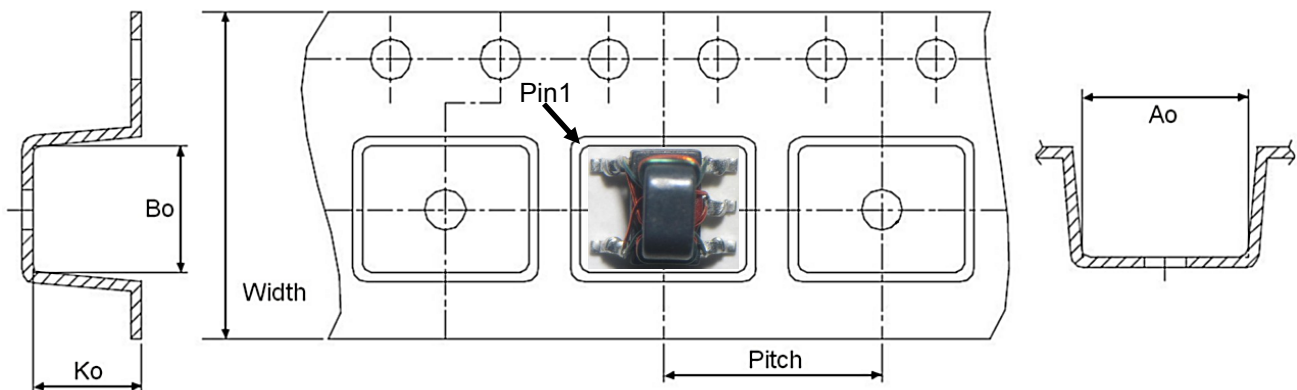


## Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel Size	mm	330
Tape Width	mm	12.00
Pitch	mm	8.00
Ao	mm	6.1
Bo	mm	4.6
Ko	mm	4.0
Orientation	-	F26
Reference Application Note ANI-019 for orientation		

1. Dimensions in mm.
2. Tolerance:  $\pm 0.2$ mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Finish: Lead plating (CuSn6) Lead finish SAC-305

## Carrier Tape Orientation



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