

Coupler 8dB 5 – 1218 MHz

Rev. V2

Features

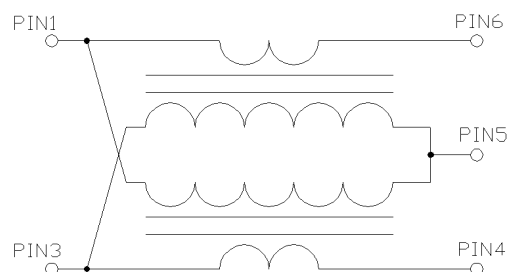
- Surface mount
- Typical Coupling 8dB
- 260° reflow compatible
- RoHS compliant and lead free
- Stable over large temperature range

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		Ω		75	
Coupling				8	
Coupling (Pin6 - Pin4)	5 - 1218 MHz	dB	-	8.6	± 0.8
Main Line Loss (Pin6 - Pin1)	5 - 500 MHz 500 - 1218 MHz	dB dB	- -	1.5 1.6	1.8 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 250 - 1218 MHz	dB dB	25 18	27 24	-

Recommended Maximum Ratings

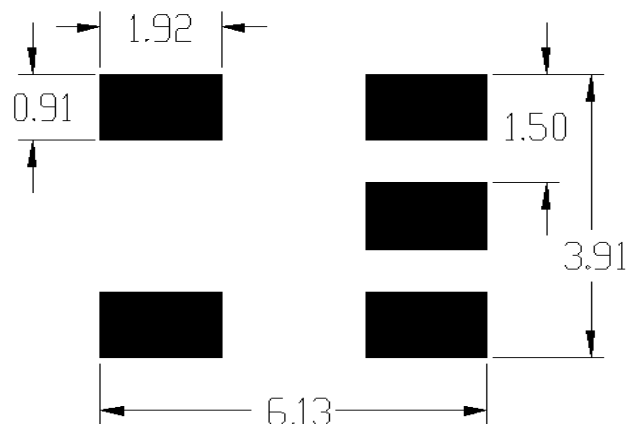
Parameter	Units	Min	Max
Input Power	mW		631
DC Current	mA		600
Operating Temperature Range	$^{\circ}\text{C}$	-40	105

Full temperature plots available on request

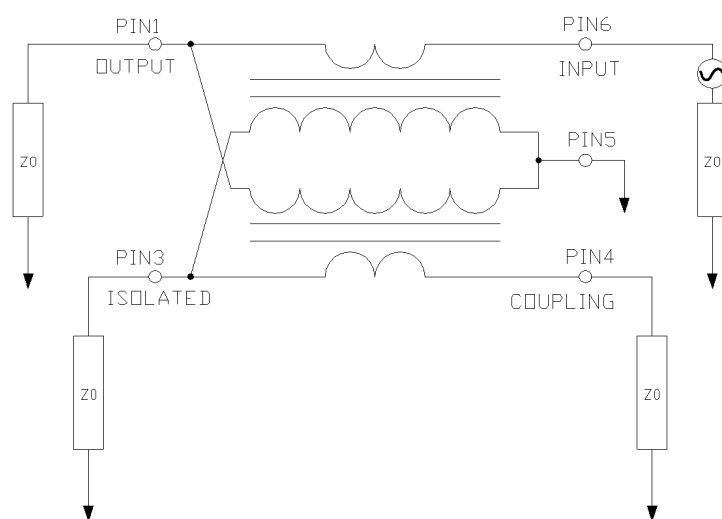
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PCB Layout



Application Schematic

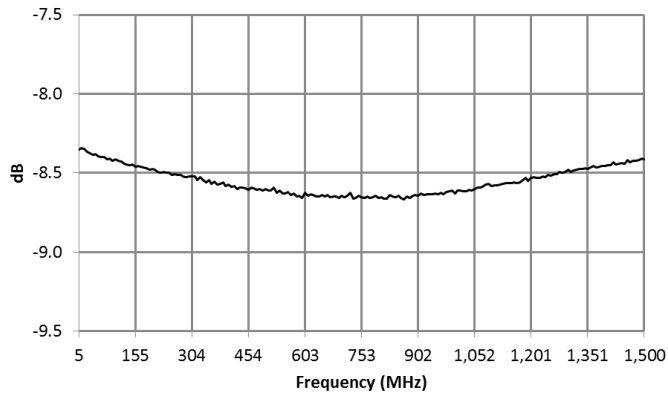


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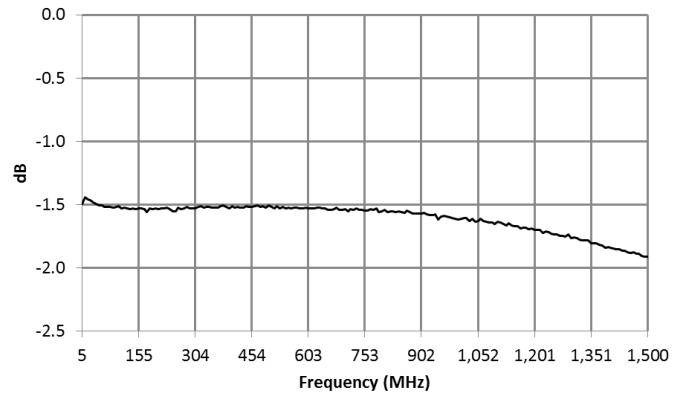
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Typical Performance Curves

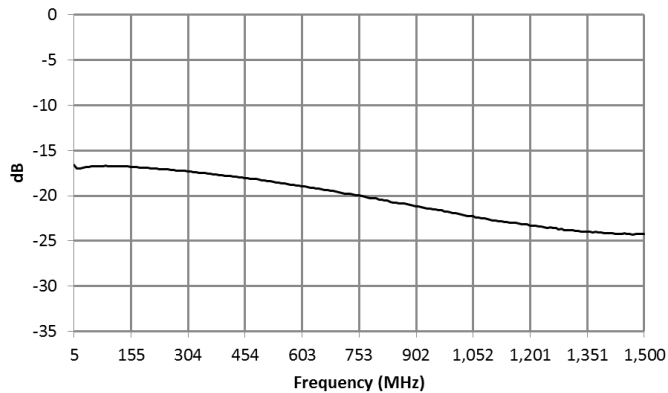
Coupling (pin6-4)



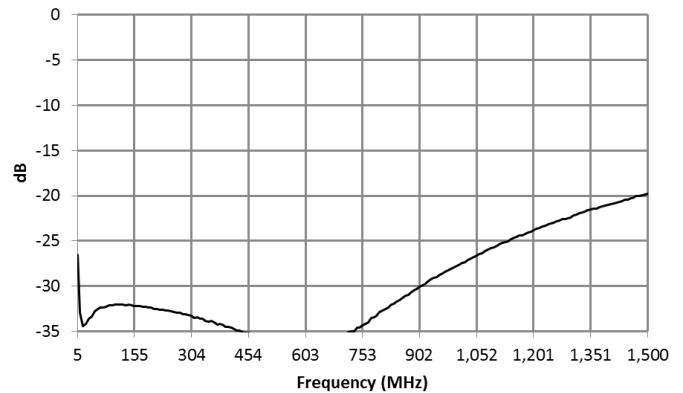
Main Line Loss (pin6-1)



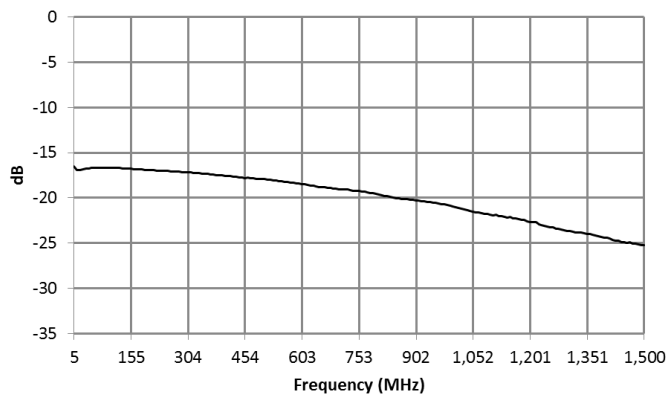
Input Return Loss (pin6)



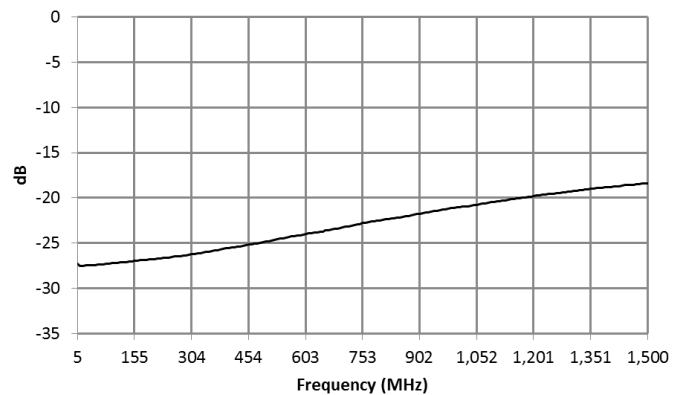
Output Return Loss (pin1)



Coupling Return Loss (pin4)



Isolation (pin6-3)

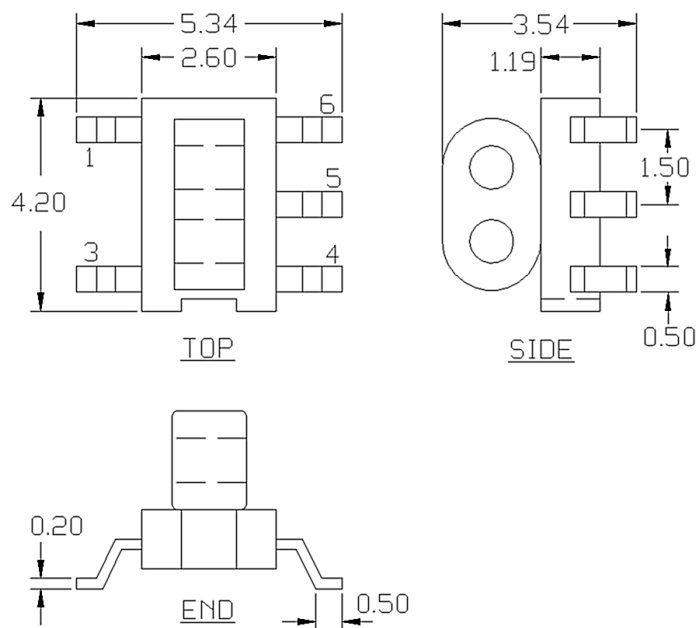


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Outline Drawing

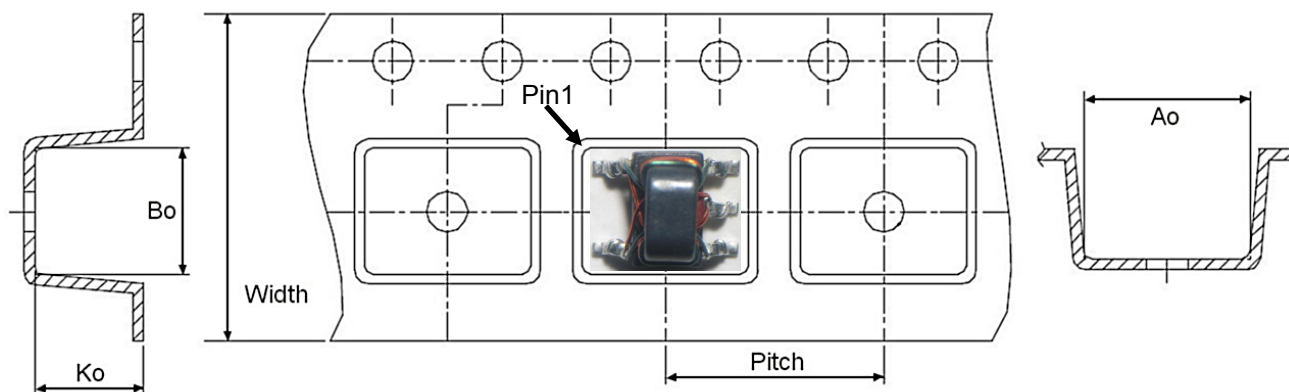


1. Dimensions in mm.
2. Tolerance: ± 0.2 mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Finish: Lead plating (CuSn6) Lead finish SAC-305

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		

Carrier Tape Orientation



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