

Coupler 8dB 5 – 1218 MHz

Rev. V2

Features

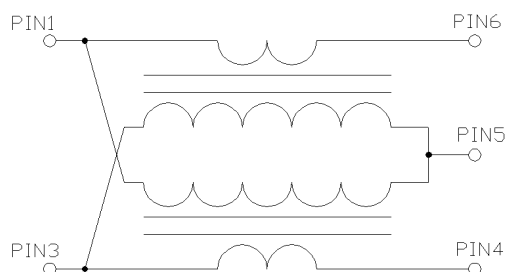
- Surface mount
- Typical Coupling 8dB
- 260° reflow compatible
- RoHS compliant and lead free
- Stable over large temperature range

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

Coupler 8dB 5 – 1218 MHz

Rev. V2

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

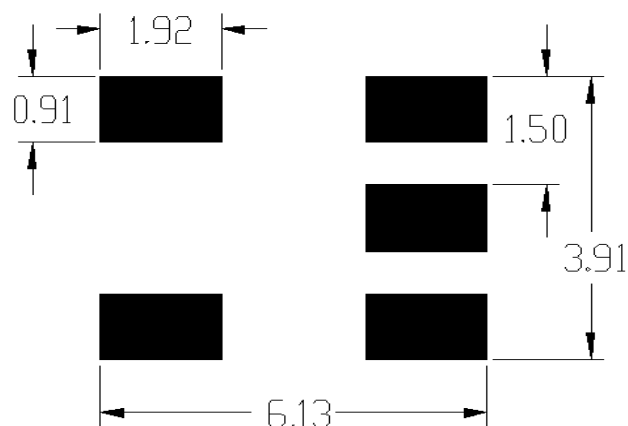
Parameter	Units	Min	Max
Input Power	mW		631
DC Current	mA		600
Operating Temperature Range	$^\circ\text{C}$	-40	105

Full temperature plots available on request

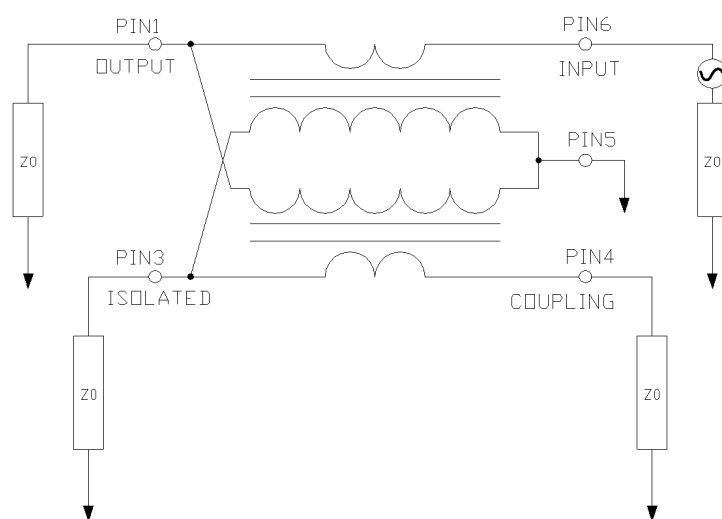
Coupler 8dB
5 – 1218 MHz

Rev. V2

PCB Layout



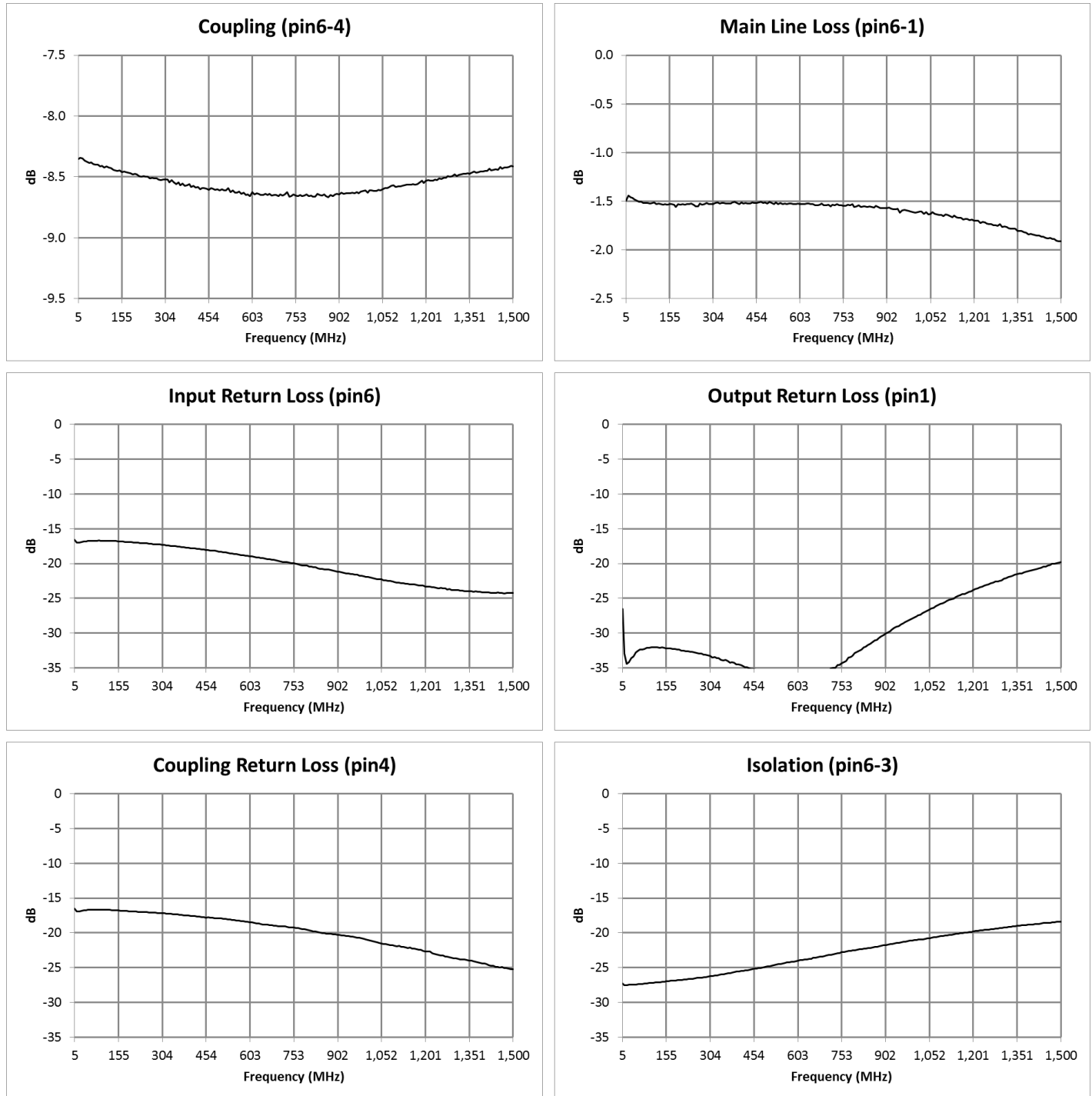
Application Schematic



Coupler 8dB 5 – 1218 MHz

Rev. V2

Typical Performance Curves

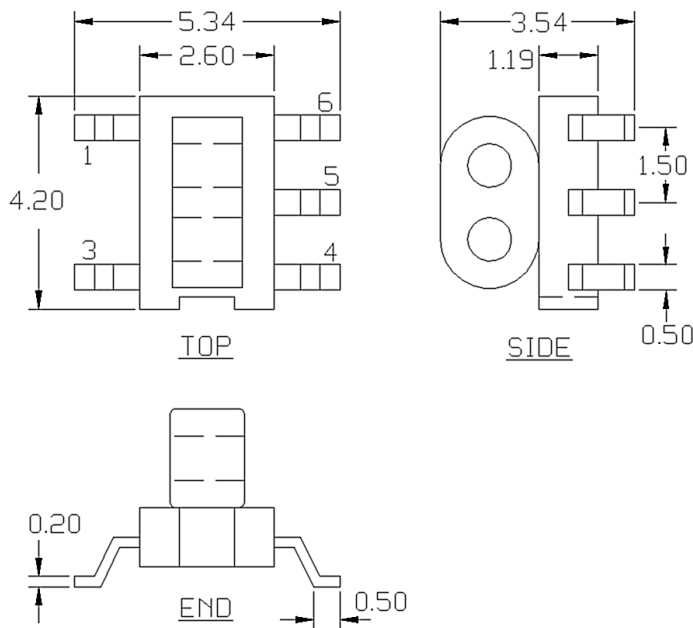


Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{in} = 0\text{dBm}$

Coupler 8dB 5 – 1218 MHz

Rev. V2

Outline Drawing

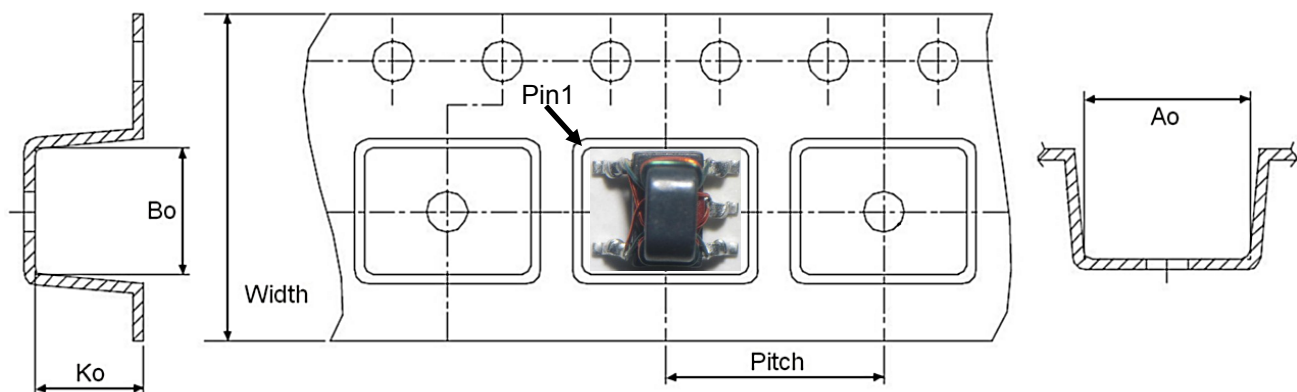


Tape & Reel Information

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: ± 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



M/A-COM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with M/A-COM Technology Solutions Inc ("MACOM") products. These materials are provided by MACOM as a service to its customers and may be used for informational purposes only. Except as provided in MACOM's Terms and Conditions of Sale for such products or in any separate agreement related to this document, MACOM assumes no liability whatsoever. MACOM assumes no responsibility for errors or omissions in these materials. MACOM may make changes to specifications and product descriptions at any time, without notice. MACOM makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppels or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. MACOM FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. MACOM SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.