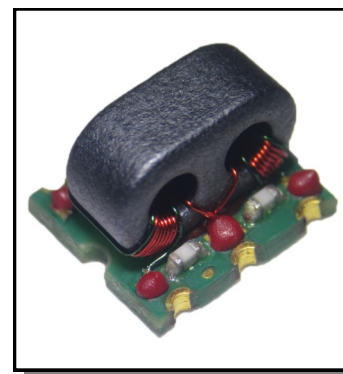


## 12 dB Coupler 5 - 1225 MHz

V2

### Features

- Surface mount
- 12dB Coupler
- 260°C reflow compatible
- RoHS Compliant, lead-free
- Available on tape and reel



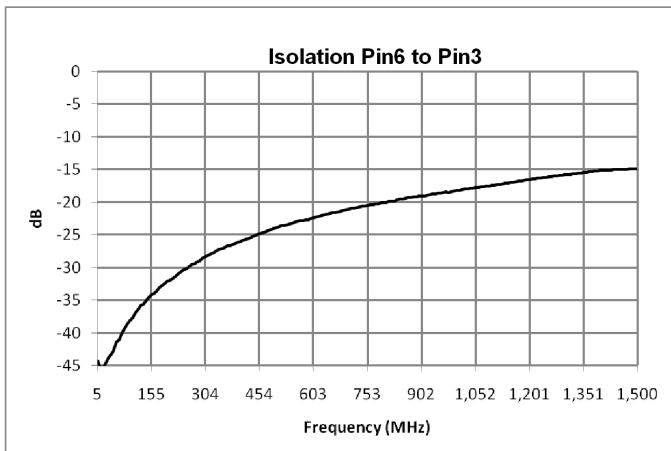
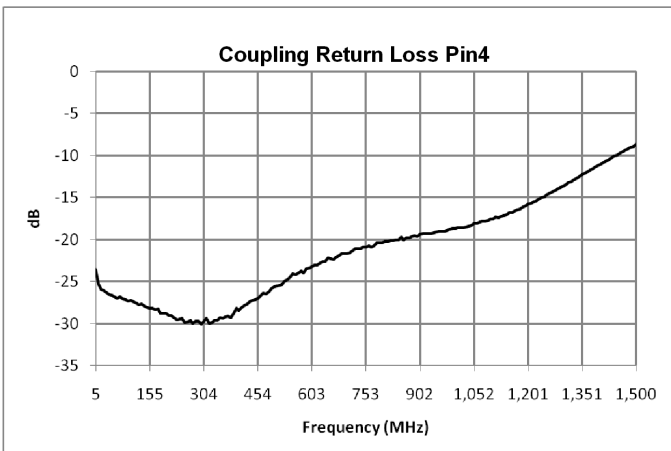
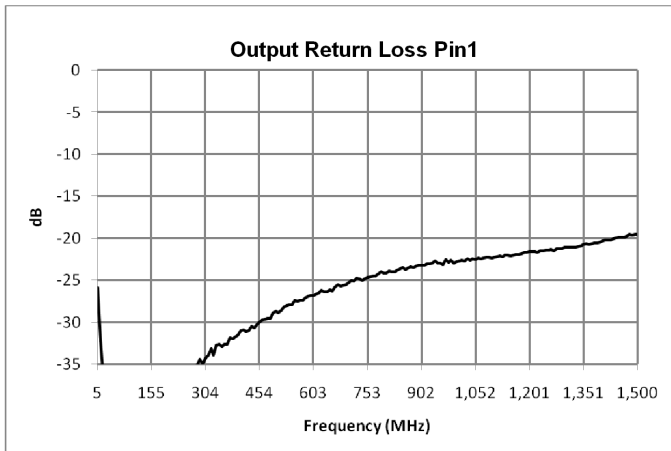
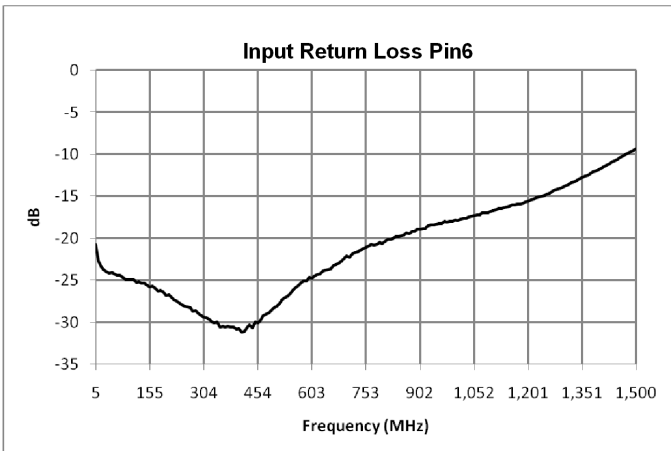
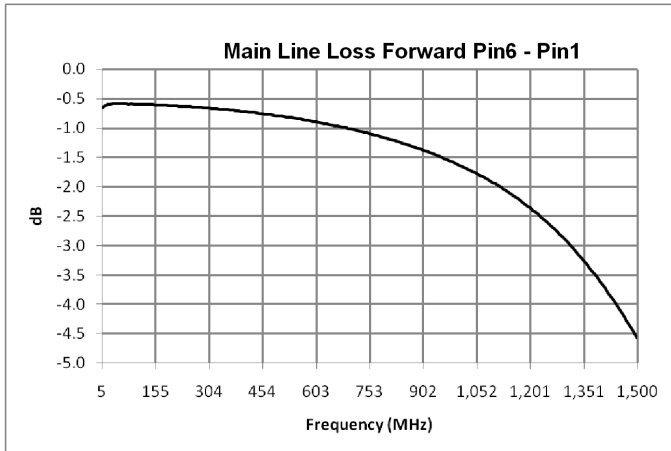
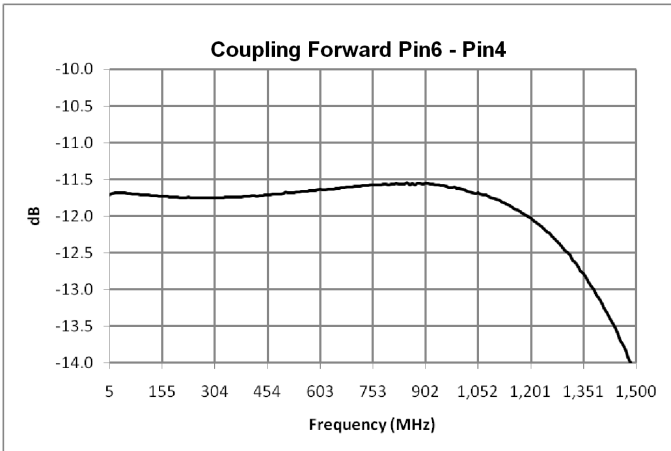
### Description

M/A-Com's MACP-011010 is a 12dB coupler in a low cost, surface mount package. Ideally suited for broadband CATV applications.

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

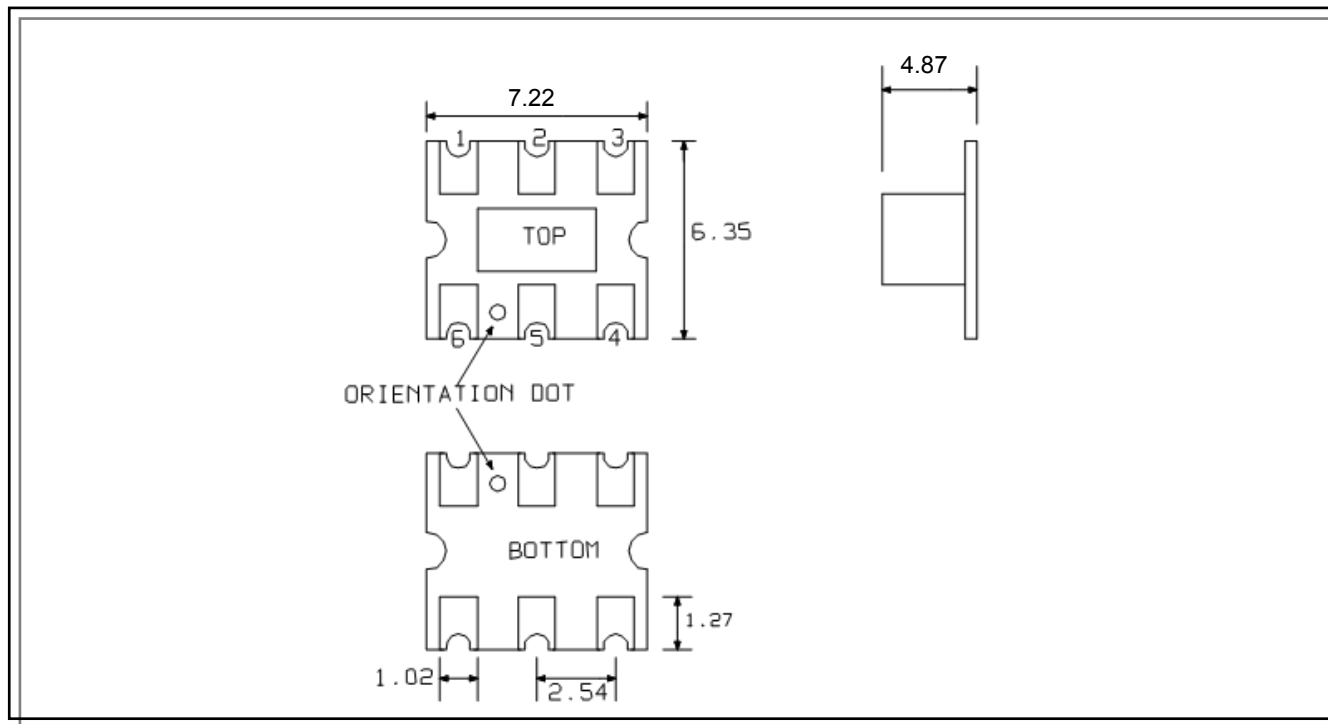
Parameter	Conditions	Units	Min	Typ	Max
Frequency Range		MHz	5		1225
Impedance		$\Omega$	-	75	
Coupling (pin6-4)	5 - 500 MHz	dB	11.4	11.7	12.0
	501 - 750 MHz	dB	11.1	11.6	12.0
	751 - 900 MHz	dB	11.1	11.6	12.1
	901 - 1140 MHz	dB	11.1	11.6	12.6
	1141 - 1225 MHz	dB	11.1	11.9	13.0
Main Line Loss (pin6-1)	5 - 46 MHz	dB	-	0.6	0.9
	47 - 870 MHz	dB	-	0.7	1.5
	871 - 1140 MHz	dB	-	1.6	2.7
	1141 - 1225 MHz	dB	-	2.2	3.0
Coupling Flatness	5 - 1225 MHz	dB	-	-	1.0
Input Return Loss (pin6)	5 - 46 MHz	dB	19	24	-
	47 - 450 MHz	dB	23	28	-
	451 - 600 MHz	dB	21	27	-
	601 - 900 MHz	dB	16	21	-
	901 - 1225 MHz	dB	12	17	-
Output Return Loss (pin1)	5 - 450 MHz	dB	22	37	-
	451 - 900 MHz	dB	18	25	-
	901 - 1,000MHz	dB	17	23	-
	1001 - 1225 MHz	dB	16	22	-
Coupled Return Loss (pin4)	5 - 46 MHz	dB	20	26	-
	47 - 300 MHz	dB	25	28	-
	301 - 450MHz	dB	22	29	-
	451 - 850 MHz	dB	17	22	-
	851 - 970 MHz	dB	14	19	-
	971 - 1225 MHz	dB	11	18	-

**12 dB Coupler**  
**5 - 1225 MHz** V2



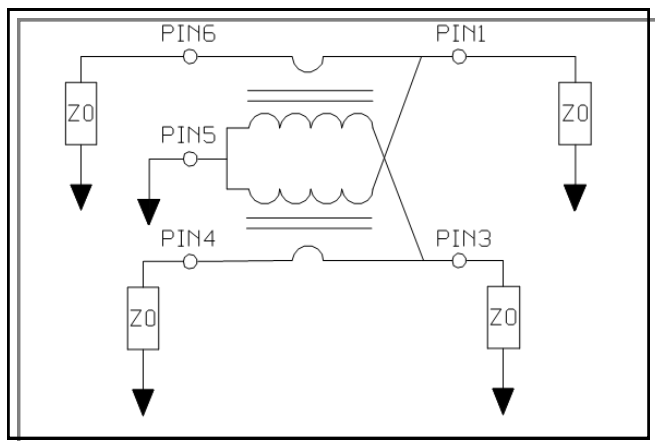
**Electrical Specifications:**  $Z_0 = 75\Omega$ ,  $T_A = 25^\circ\text{C}$ ,  $P_{in} = 0\text{dBm}$

## Outline Drawing

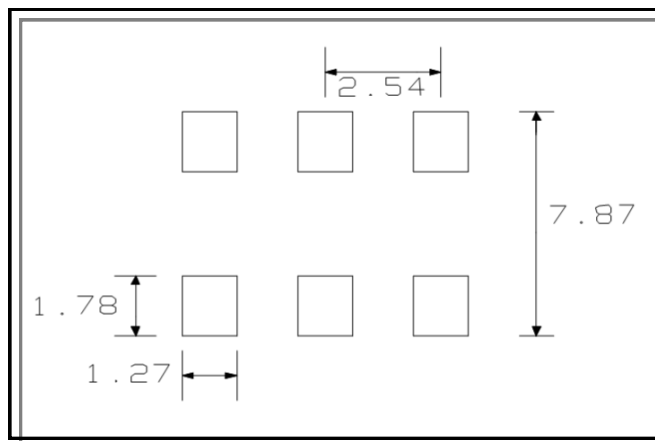


1. Dimensions in mm.
2. Tolerance:  $\pm 0.2$ mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Finish: Electroless nickel immersion gold (ENIG)

## Application Circuit



## Recommended Footprint



12 dB Coupler  
5 - 1225 MHz

V2

## Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	900
Reel Size	mm	330
Tape Width	mm	16.00
Pitch	mm	12.00
Ao	mm	6.80
Bo	mm	7.60
Ko	mm	5.30
Orientation	-	F15
Reference Application Note ANI-019 for orientation		

## Ordering Information

Part Number	Description
MACP-011010	Tape & Reel
MACP-011010-TB	Customer Test Board

## Recommended Maximum Ratings

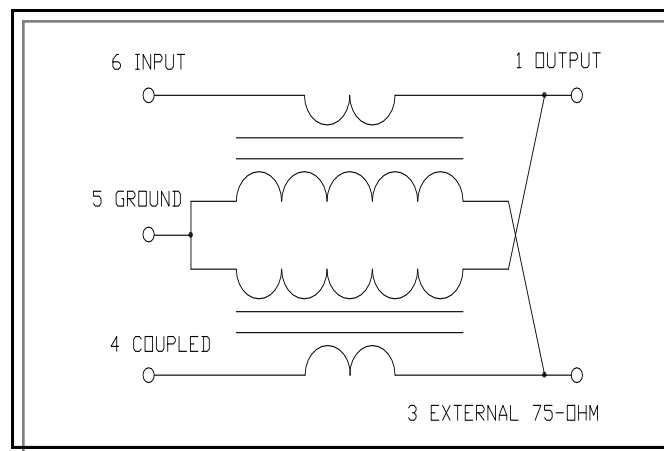
Parameter	Units	Min	Max
Input Power	mW		250
DC Current	mA		30
Operating Temperature Range	°C	-40	+85

Full temperature plots available on request

## Pin Configuration

Pin No.	Function
1	Output
2	Not Connected
3	External 75 Ohm
4	Coupled
5	Ground
6	Input

## Schematic



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 estoppel 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.