

# MACP-010414-CA0370

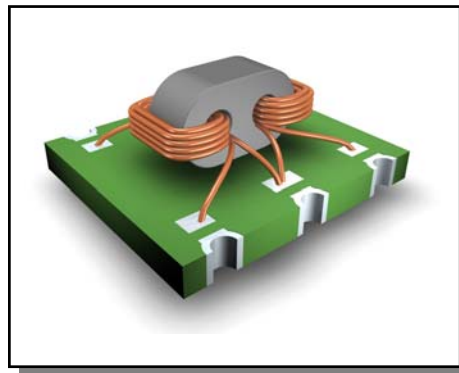


Coupler, 10dB  
5 MHz - 1200 MHz

Rev. V1

## Features

- ◆ 10dB coupling ratio
- ◆ Surface mount
- ◆ Available on tape and reel
- ◆ 260°C reflow compatible
- ◆ RoHS Compliant and Pb free
- ◆ Excellent temperature stability
- ◆ Can be used on 50Ω and 75Ω systems
- ◆ Suitable for all CATV, Broadband and FTTx applications.



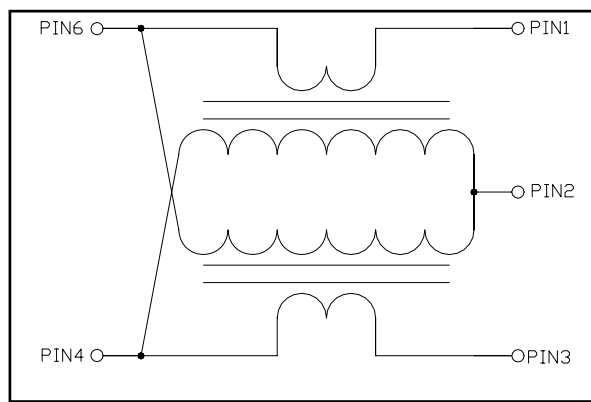
**Electrical Specifications:**  $Z_0 = 75\Omega$ ,  $T_A = 25^\circ\text{C}$ ,  $P_{in} = 0\text{dBm}$

Parameter	Conditions	Units	Min	Typ	Max
Frequency Range		MHz	5		1200
Impedance		$\Omega$		75	
Coupling Ratio		dB		10	
Coupling (Pin 3 to 1)	5 - 1200 MHz	dB	-	10.0	$\pm 0.5$
Main Line Loss (Pin 3 to 4)	5 - 500 MHz	dB	-	1.1	1.2
	500 - 1200 MHz	dB	-	1.3	1.6
Isolation (Pin 3 to 6)	5 - 1000 MHz	dB	20	22	-
	1000 - 1200 MHz	dB	18	21	-
Return Loss: Input (Pin 3)	5 - 1200 MHz	dB	17	27	-
Return Loss: Coupling (Pin 1)	5 - 1200 MHz	dB	17	26	-
Return Loss: Output (Pin 4)	5 - 1000 MHz	dB	20	23	-
	1000 - 1200MHz	dB	17	20	-

## Pin Configuration

Pin No.	Function
1	Coupled
2	Ground
3	Input
4	Output
5	Not Connected (ground)
6	Isolated

## Schematic



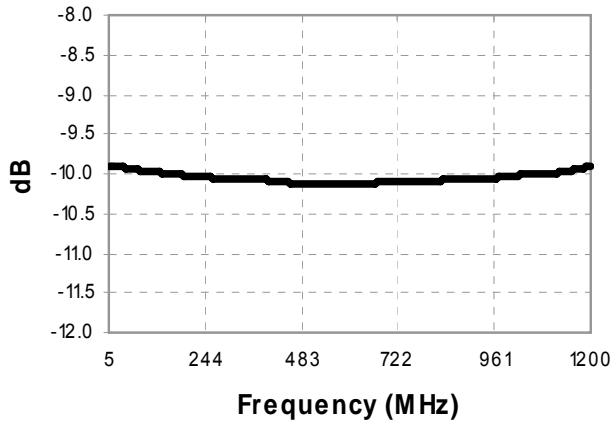
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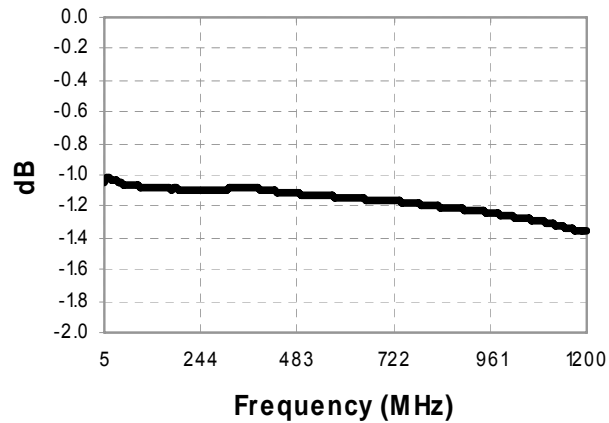
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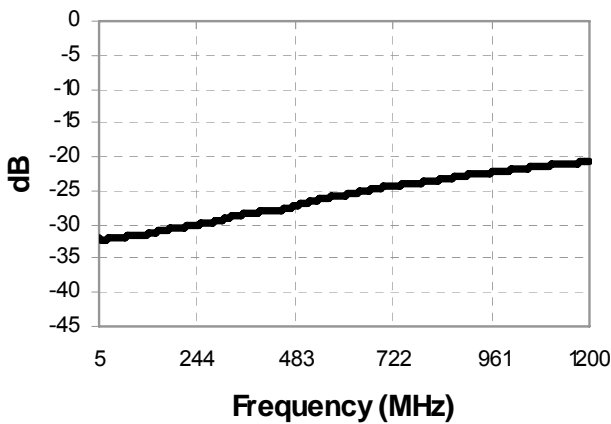
**Coupling: Pin 3 to 1**



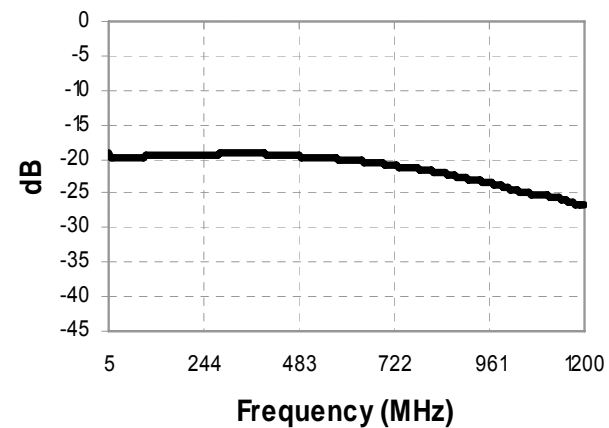
**Main Line Loss: Pin 3 to 4**



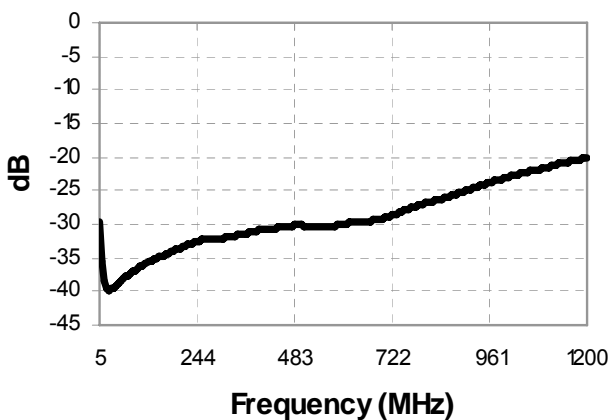
**Isolation: Pin 3 to 6**



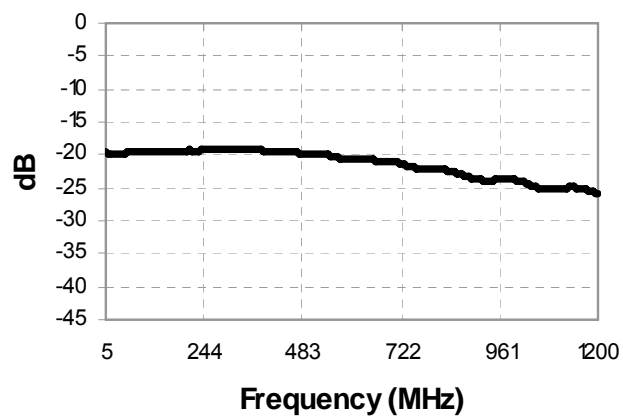
**Return Loss: Input Pin 3**



**Return Loss: Output Pin 4**

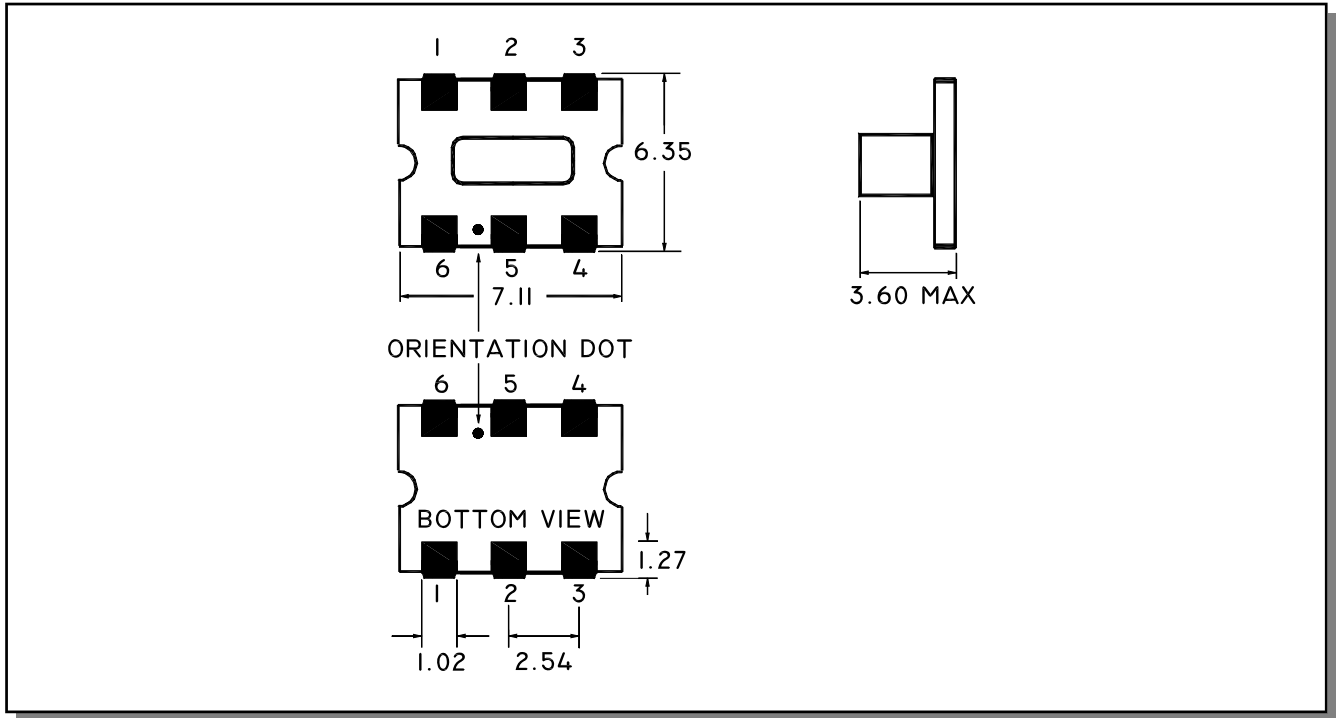


**Return Loss: Coupled Pin 1**



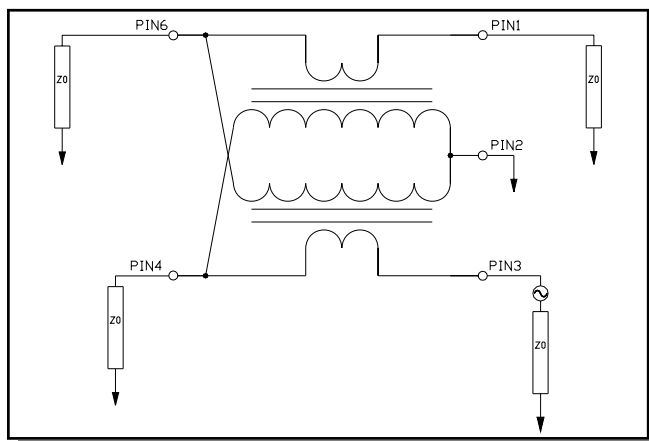
Electrical Specifications:  $Z_0 = 75\Omega$ ,  $T_A = 25^\circ\text{C}$ ,  $P_{in} = 0\text{dBm}$

## Outline Drawing

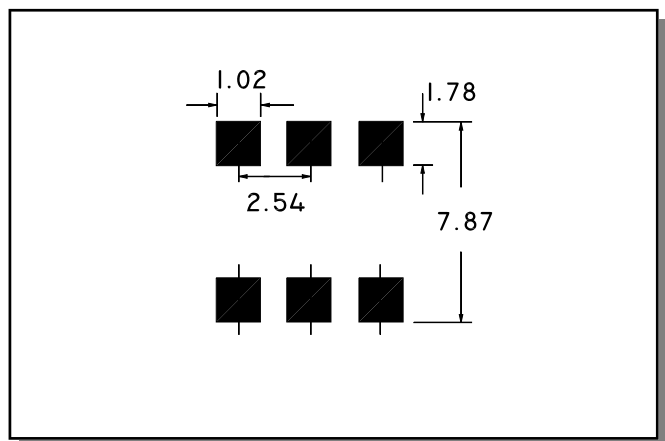


1. Dimensions in mm.
2. Tolerance:  $\pm 0.2\text{mm}$  unless otherwise noted.
3. Model number and lot code printed on reel.
4. Plating Finish: ENIG gold on Nickel

## Application Circuit



## Recommended Footprint



## Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	900
Reel size	mm	330
Tape width (W)	mm	16.0
Pitch (P <sub>1</sub> )	mm	12.0
A <sub>0</sub>	mm	6.7
B <sub>0</sub>	mm	7.4
K <sub>0</sub>	mm	3.1
Orientation	-	F15
Reference Application Note ANI-019 for orientation		

## Ordering Information

Part Number	Description
MACP-010414-CA0370	Tape & Reel
MACP-010414-CA03TB	Customer Evaluation Board

## Recommended Maximum Ratings

Parameter	Units	Min	Max
Input Power	mW		250
DC Current	mA		200
Operating Temperature Range	°C	-40	+85
Storage Temperature Range	°C	-55	+125

Temperature data available on request

## ECO History

Rev	Date	Description	ECO
V1	18 Aug 2010	Released	20101117