

# MACP-010446-C80370

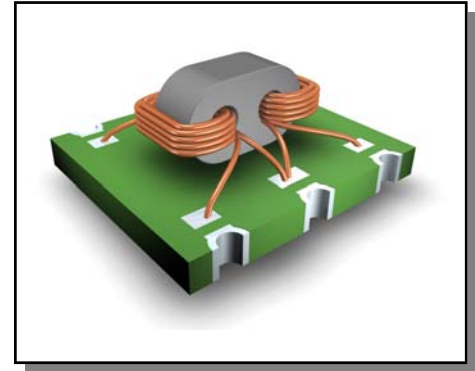


Coupler, 8dB  
5 MHz - 1200 MHz

Rev. V2

## Features

- ◆ 8dB coupling Typical
- ◆ Surface mount
- ◆ Available on tape and reel
- ◆ Low Profile
- ◆ RoHS Compliant and Pb free
- ◆ Excellent temperature stability
- ◆ All wires welded to substrate



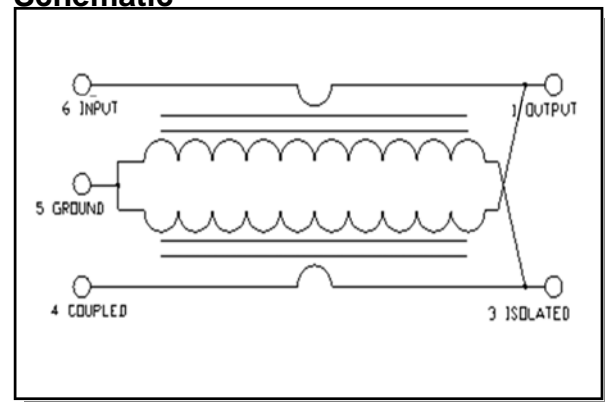
**Electrical Specifications:**  $Z_0 = 75\Omega$ ,  $T_A = 25^\circ\text{C}$ ,  $P_{in} = 0\text{dBm}$

Parameter	Conditions	Units	Min	Typ	Max
Frequency Range		MHz	5		1200
Impedance		$\Omega$		75	
Coupling Ratio		dB		8	
Main Line Loss (Pin6 - Pin1)	5 – 870MHz	dB	2.0	1.5	-
	870 – 1002 MHz	dB	2.3	1.85	-
	1002 - 1200 MHz	dB	2.6	2.1	-
Coupling (Pin6 - Pin4)	5 – 1002MHz	dB	8.5	8.0	7.5
	1002 – 1200 MHz	dB	8.7	8.0	7.3
Coupling Flatness	5 - 1200 MHz	dB	-	0.5	0.8
Directivity	5 - 870 MHz	dB	-	17.5	11.0
	870 - 1200 MHz	dB	-	12.8	9.0
Return Loss: Input (Pin6)	5 - 50 MHz	dB	17	18	-
	50 - 1200 MHz	dB	16.5	18.7	-
Return Loss: Output (Pin1)	5 - 50 MHz	dB	23	31.3	-
	50 - 870 MHz	dB	20	33.5	-
	870 - 1200 MHz	dB	20	32.0	-
Return Loss: Coupling (Pin4)	5 - 1200 MHz	dB	16	18.5	-

## Pin Configuration

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

## Schematic



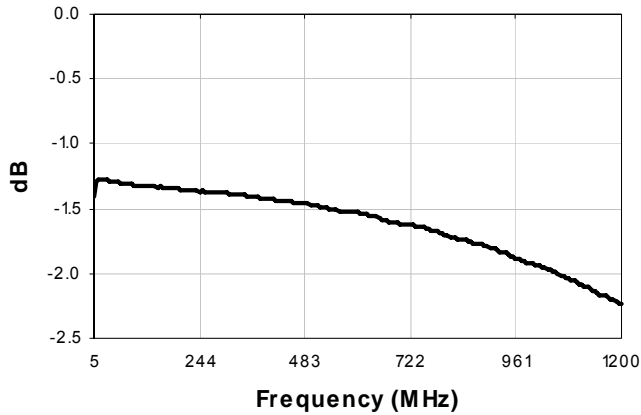
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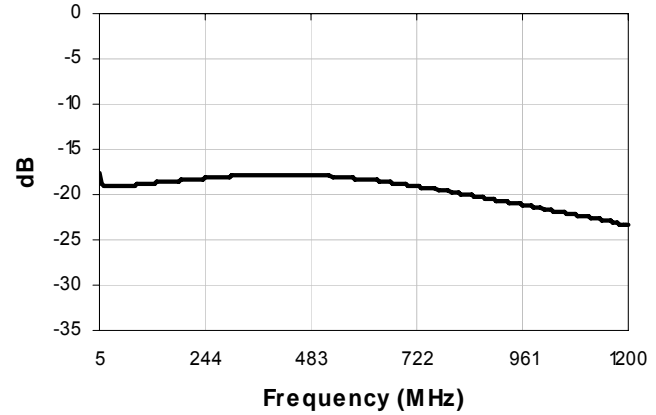
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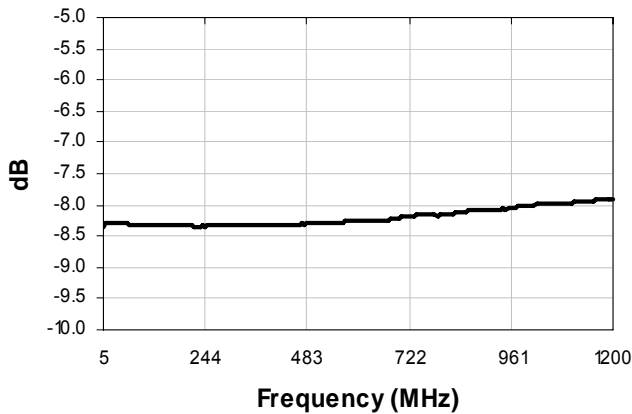
### Mainline Loss



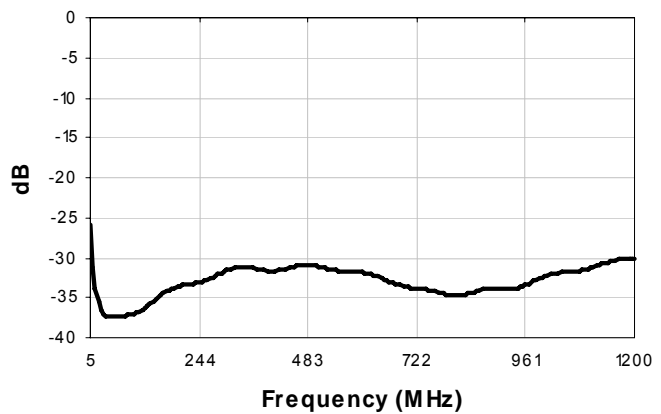
### Input Return Loss



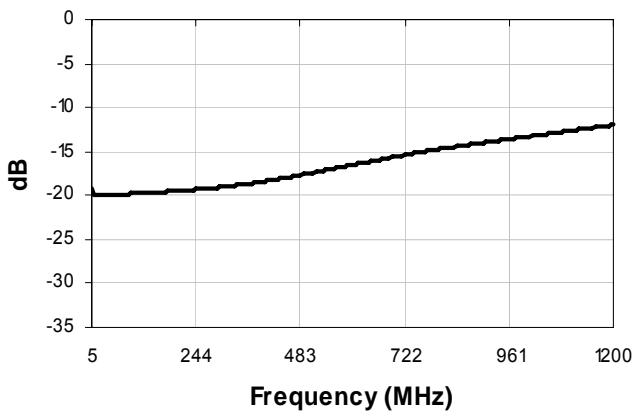
### Coupling



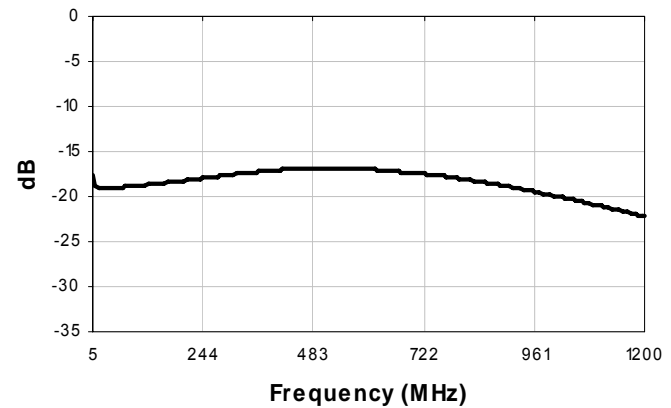
### Output Return Loss



### Directivity

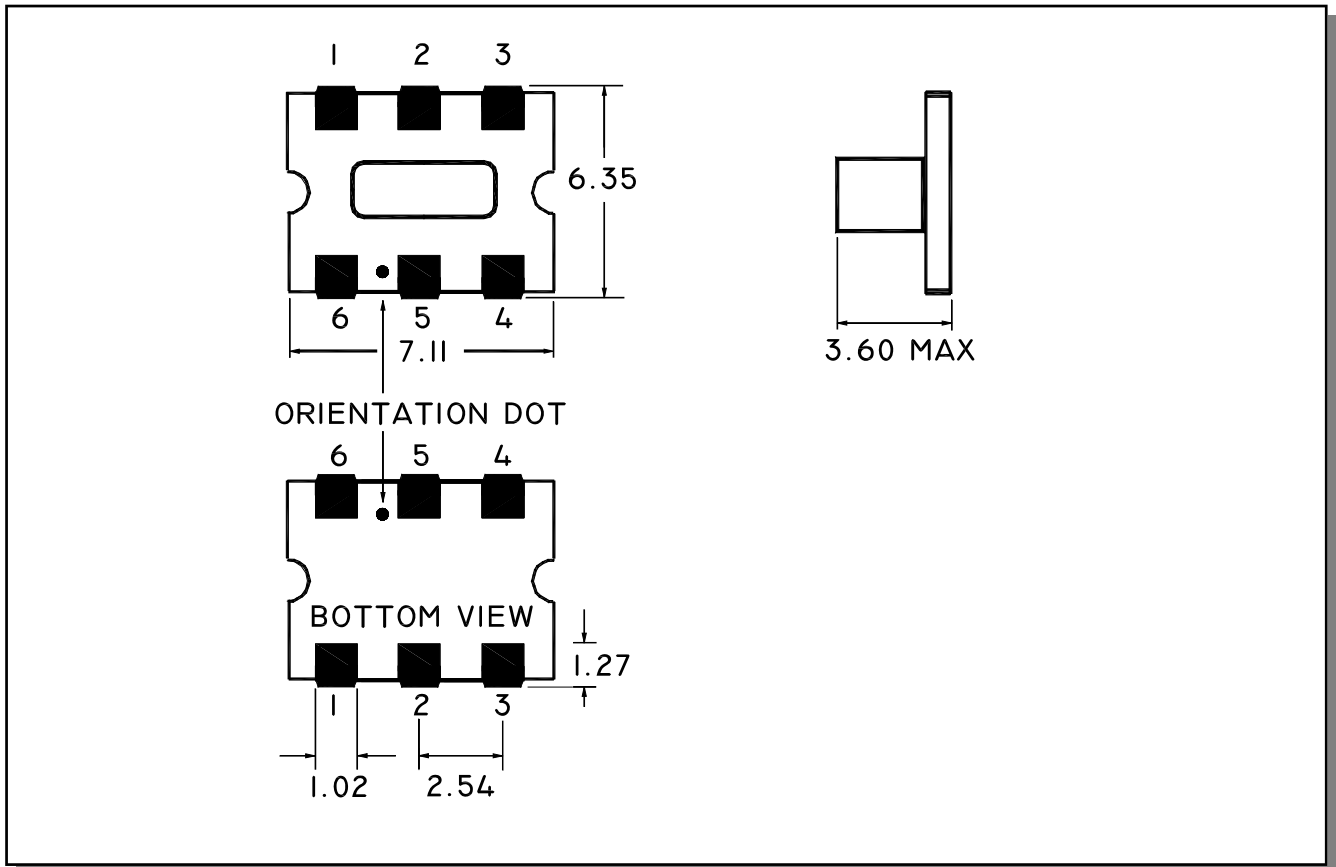


### Coupled Return Loss



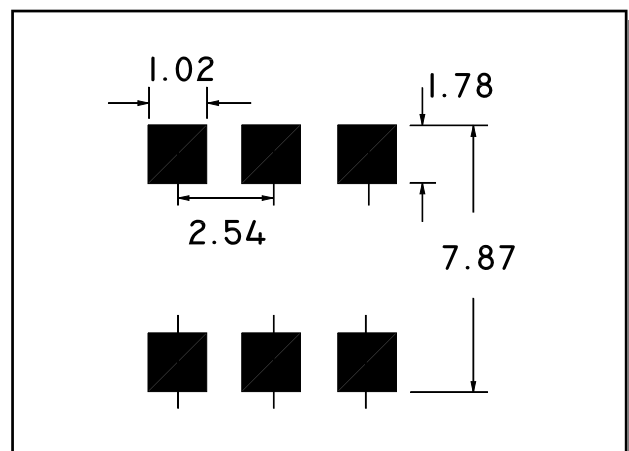
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## Outline Drawing



1. Dimensions in mm.
2. Tolerance:  $\pm 0.2$ mm unless otherwise noted.
3. Model number and lot code printed on reel.
4. Plating finish: ENIG on both sides, 0.05 to 0.1  $\mu$ m gold over 3 to 6  $\mu$ m nickel

## 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-010446-C80370	Tape & Reel
MACP-010446-C803TB	Customer Evaluation Board

## Recommended Maximum Ratings

Parameter	Units	Min	Max
Input Power	mW		250
DC Current	mA		30
Operating Temperature Range	°C	-20	+85
Storage Temperature Range	°C	-20	+85

Temperature data available on request

## ECO History

Rev	Date	Description	ECO
V1	4 Aug 2010	Released	20100998
V2	21 Sep 2010	Correct typ spec for i/p ret loss: was 1.8 is 18, on page 1/4	20101363