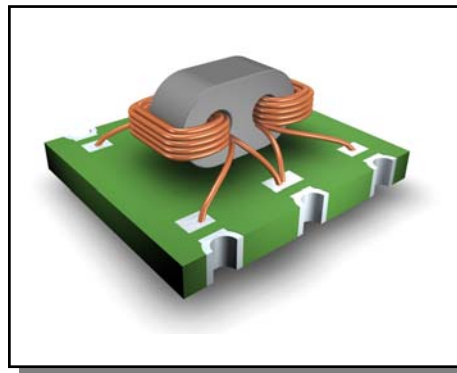


Coupler, 10dB  
5 MHz - 1200 MHz

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.



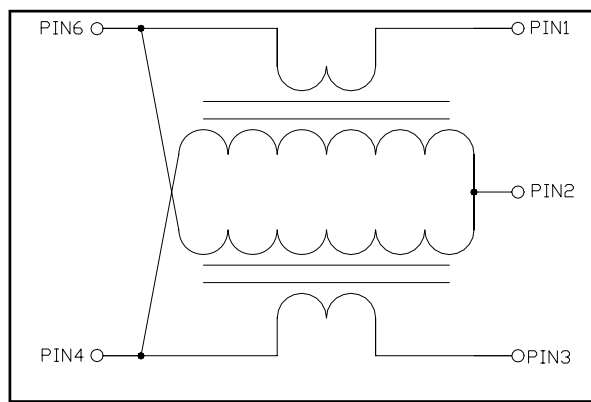
**Electrical Specifications:**  $Z_0 = 75\Omega$ ,  $T_A = 25^\circ\text{C}$ ,  $P_{in} = 0\text{dBm}$

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

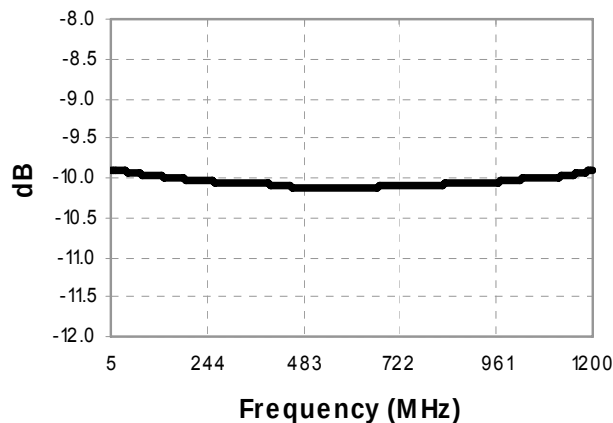
## Schematic



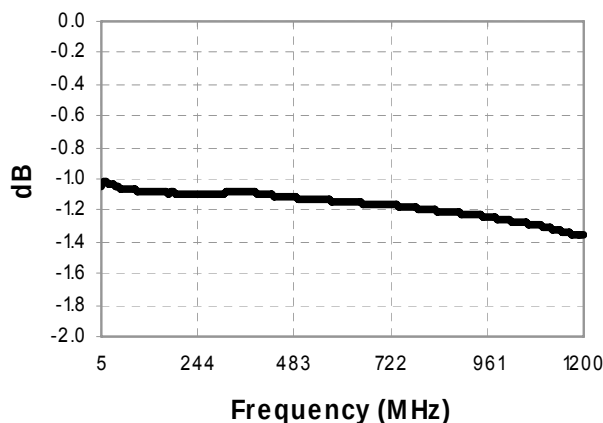
Coupler, 10dB  
5 MHz - 1200 MHz

Rev. V1

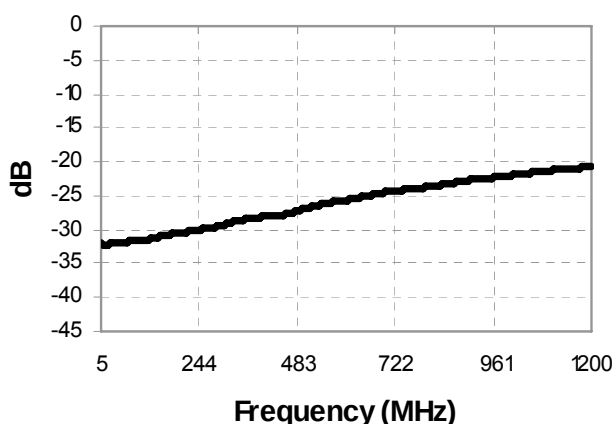
**Coupling: Pin 3 to 1**



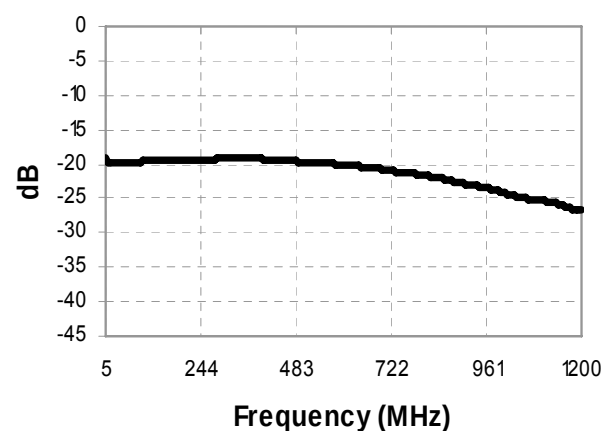
**Main Line Loss: Pin 3 to 4**



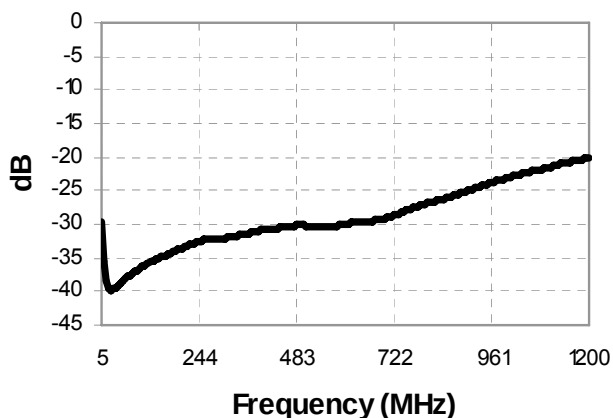
**Isolation: Pin 3 to 6**



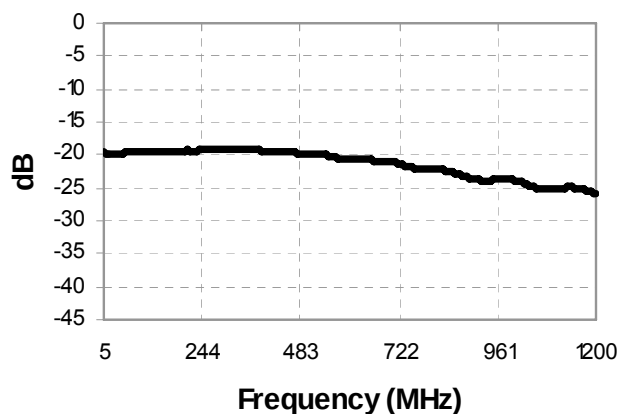
**Return Loss: Input Pin 3**



**Return Loss: Output Pin 4**



**Return Loss: Coupled Pin 1**

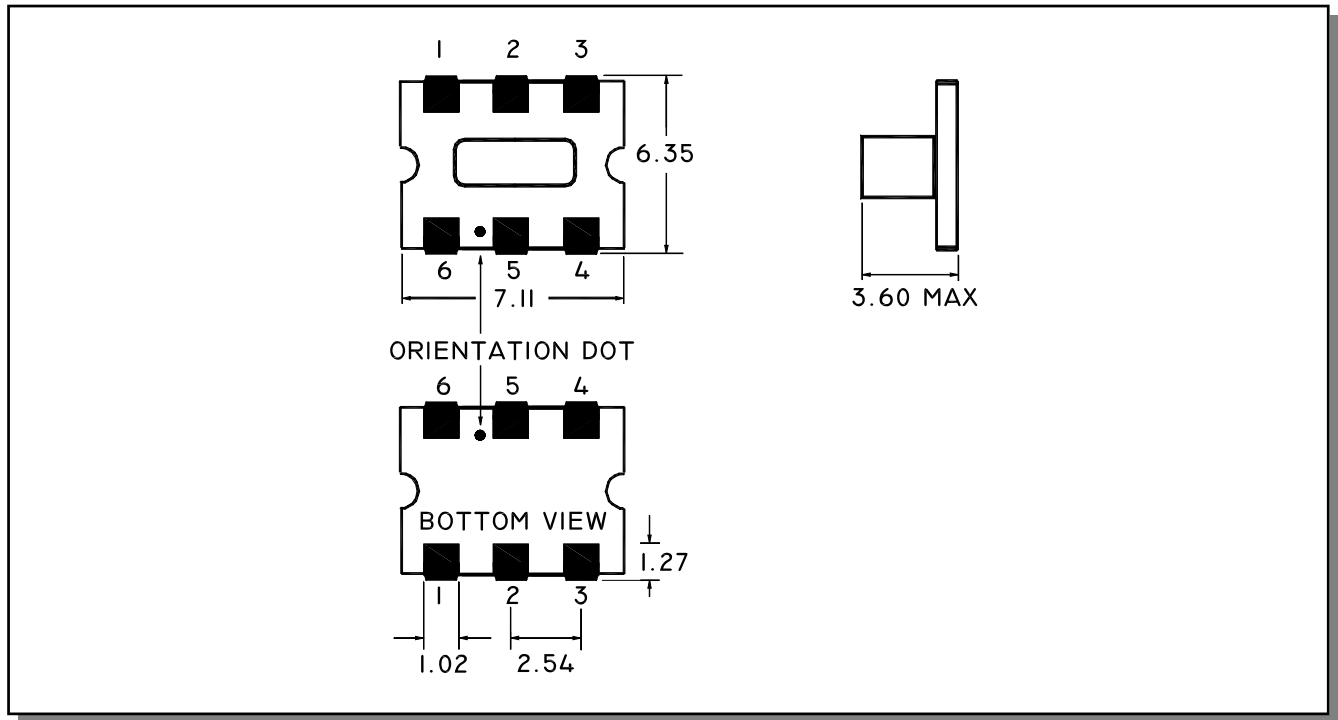


Electrical Specifications:  $Z_0 = 75\Omega$ ,  $T_A = 25^\circ\text{C}$ ,  $P_{in} = 0\text{dBm}$

Coupler, 10dB  
5 MHz - 1200 MHz

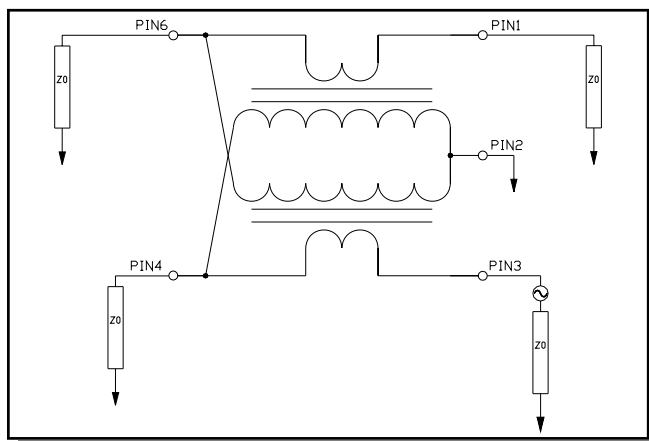
Rev. V1

## Outline Drawing

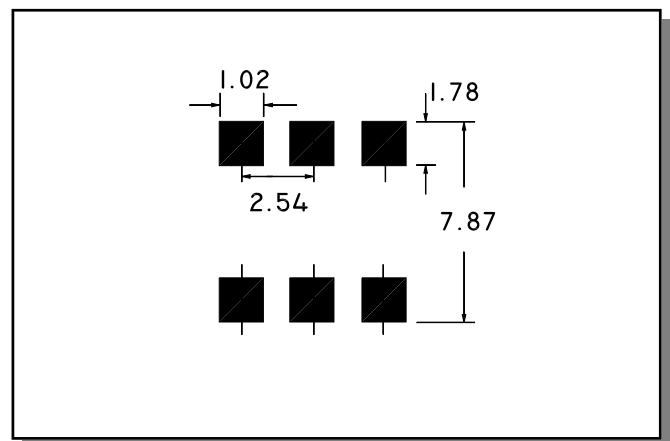


1. Dimensions in mm.
2. Tolerance:  $\pm 0.2$ mm unless otherwise noted.
3. Model number and lot code printed on reel.
4. Plating Finish: ENIG gold on Nickel

## Application Circuit



## Recommended Footprint



Coupler, 10dB  
 5 MHz - 1200 MHz

Rev. V1

## 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 |
|     |             |             |          |
|     |             |             |          |