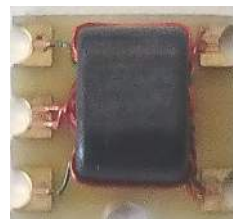


## Features

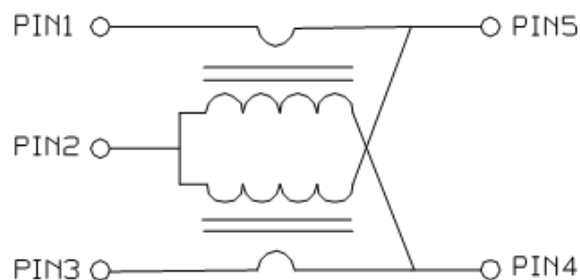
- 16 dB Coupling Ratio
- Surface Mount
- Available on Tape and Reel
- Excellent Temperature Stability
- RoHS Compliant and lead free
- 260°C Reflow Compatible



## Description

The MACP-011038 is a 16 dB coupler in a low cost, surface mount package. Ideally suited for broadband CATV applications.

## Functional Schematic



## Ordering Information

Part Number	Description
MACP-011038	900 piece reel
MACP-011038-TB	Sample Test Board

## Pin Configuration

Pin No.	Function
1	Input
2	Ground
3	Coupled
4	Isolated
5	Output

## 16 dB Coupler 5 - 1225 MHz

Rev. V2

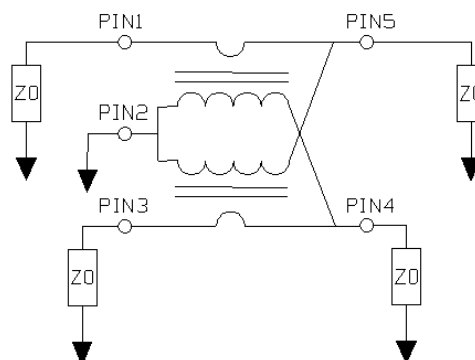
**Electrical Specifications: Freq. = 5 - 1225 MHz,  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75 \Omega$ ,  $P_{in} = 0 \text{ dBm}$**

Parameter	Conditions	Units	Min.	Typ.	Max.
Coupling Ratio	—	dB	—	16	-
Coupling (Pin 1- Pin 3)	5 - 1225 MHz	dB	16.5	16.0	15.5
Main Line Loss (Pin 1- Pin 5)	5 - 1000MHz 1000 - 1225 MHz	dB	—	0.7 0.9	0.8 1.0
Isolation (Pin 1- Pin 4)	5 - 1225 MHz	dB	30	33	—
Input Return Loss (Pin 1)	5 - 1000 MHz 1000 - 1225 MHz	dB	19 18	21 20	—
Output Return Loss (Pin 5)	5 - 1000 MHz 1000 - 1225 MHz	dB	18 16	20 18	—
Coupling Return Loss (Pin 3)	5 - 1000 MHz 1000 - 1225 MHz	dB	18 16	20 18	—

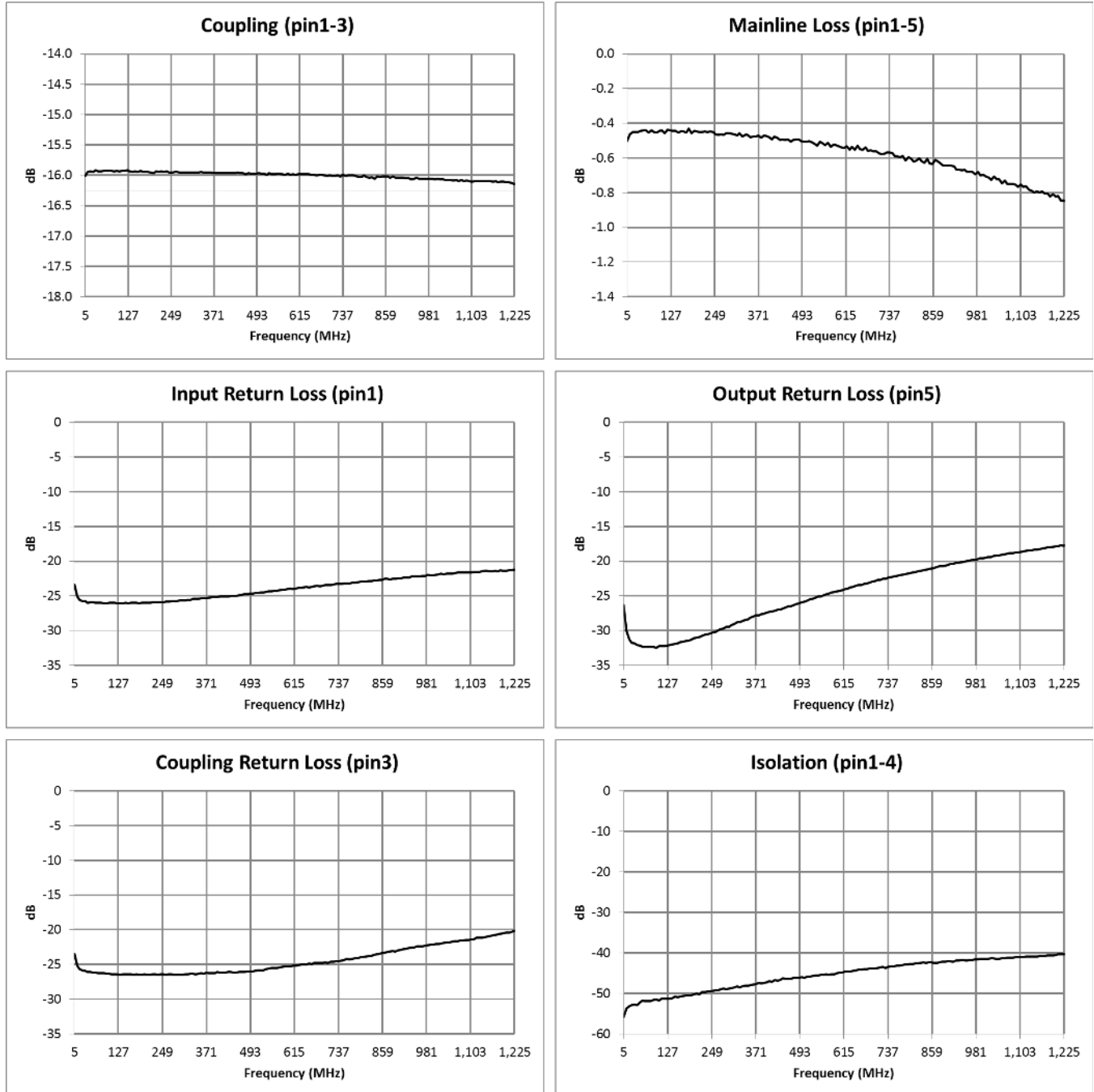
### Absolute Maximum Ratings

Parameter	Absolute Maximum
Input Power	1.5 W
DC Current	500 mA
Operating Temperature	$-40^\circ\text{C}$ to $+85^\circ\text{C}$

### Application Schematic

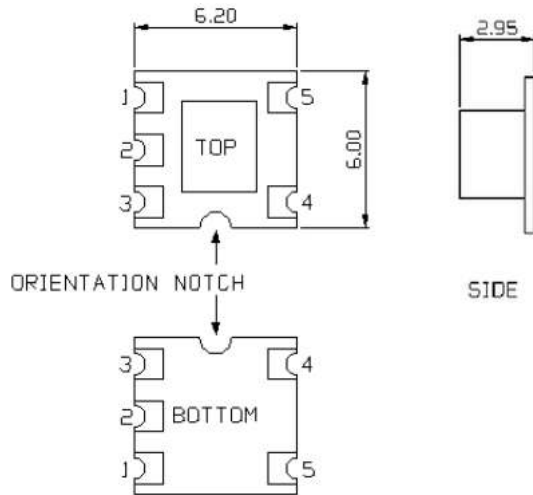


## Typical Performance Curves<sup>1</sup>

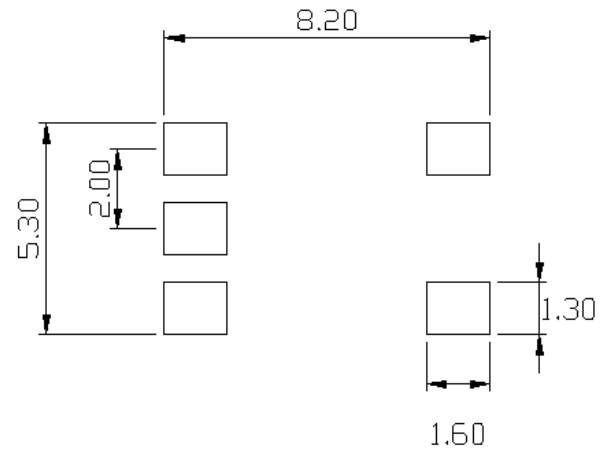


1. Full temperature plots available on request.

## Outline Drawing

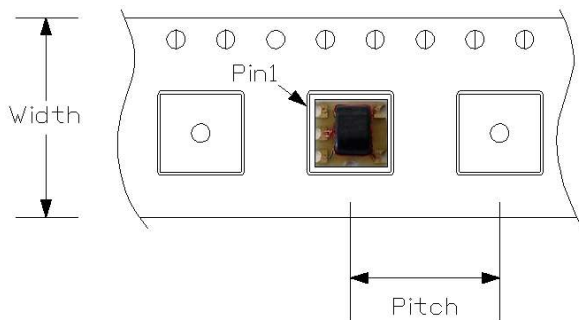


## PCB Layout



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  $\mu\text{m}$  gold over 3 to 6  $\mu\text{m}$  nickel

## Carrier Tape Orientation



## Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	900
Reel Size	mm	330
Tape Width	mm	16.00
Pitch	mm	12.00
Orientation	-	F59
Reference Application Note ANI-019 for orientation		

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