

## 12 dB Coupler 5 - 1225 MHz

V1

### Features

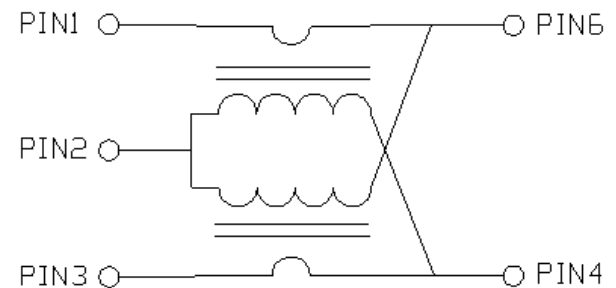
- 12 dB Coupling Ratio
- Surface Mount
- Available on Tape and Reel
- Excellent Temperature Stability
- RoHS Compliant and lead free
- 260°C Reflow Compatible

### Description

The MACP-011035 is a 12 dB coupler in a low cost, surface mount package. Ideally suited for broadband CATV applications.



### Functional Schematic



### Ordering Information

Part Number	Description
MACP-011035	900 piece reel
MACP-011035-TB	Sample Test Board

### Pin Configuration

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

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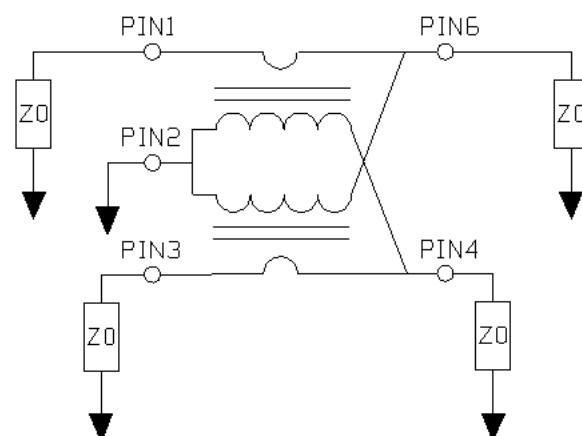
**Electrical Specifications:** Freq. = 5 - 1225 MHz,  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\ \Omega$ ,  $P_{in} = 0\ \text{dBm}$

Parameter	Conditions	Units	Min.	Typ.	Max.
Coupling Ratio	—	dB	—	12	—
Coupling (Pin 1- Pin 3)	5 - 500 MHz 500 - 1225 MHz	dB	12.1 12.6	11.5 12.3	11.3 10.8
Main Line Loss (Pin 1- Pin 6)	5 - 1000 MHz 1000 - 1225 MHz	dB	—	1.15 1.55	1.3 1.8
Isolation (Pin 1- Pin 4)	5 - 500 MHz 500 - 1225 MHz	dB	26 17	29 20	—
Input Return Loss (Pin 1)	5 - 500 MHz 500 - 1225 MHz	dB	18 16	21 19	—
Output Return Loss (Pin 6)	5 - 500 MHz 500 - 1225 MHz	dB	19 14	22 16	—
Coupling Return Loss (Pin 3)	5 - 500 MHz 500 - 1225 MHz	dB	15 7	17 9	—

## Absolute Maximum Ratings

Parameter	Absolute Maximum
Input Power	0.5 W
DC Current	500 mA
Operating Temperature	$-40^\circ\text{C}$ to $+85^\circ\text{C}$

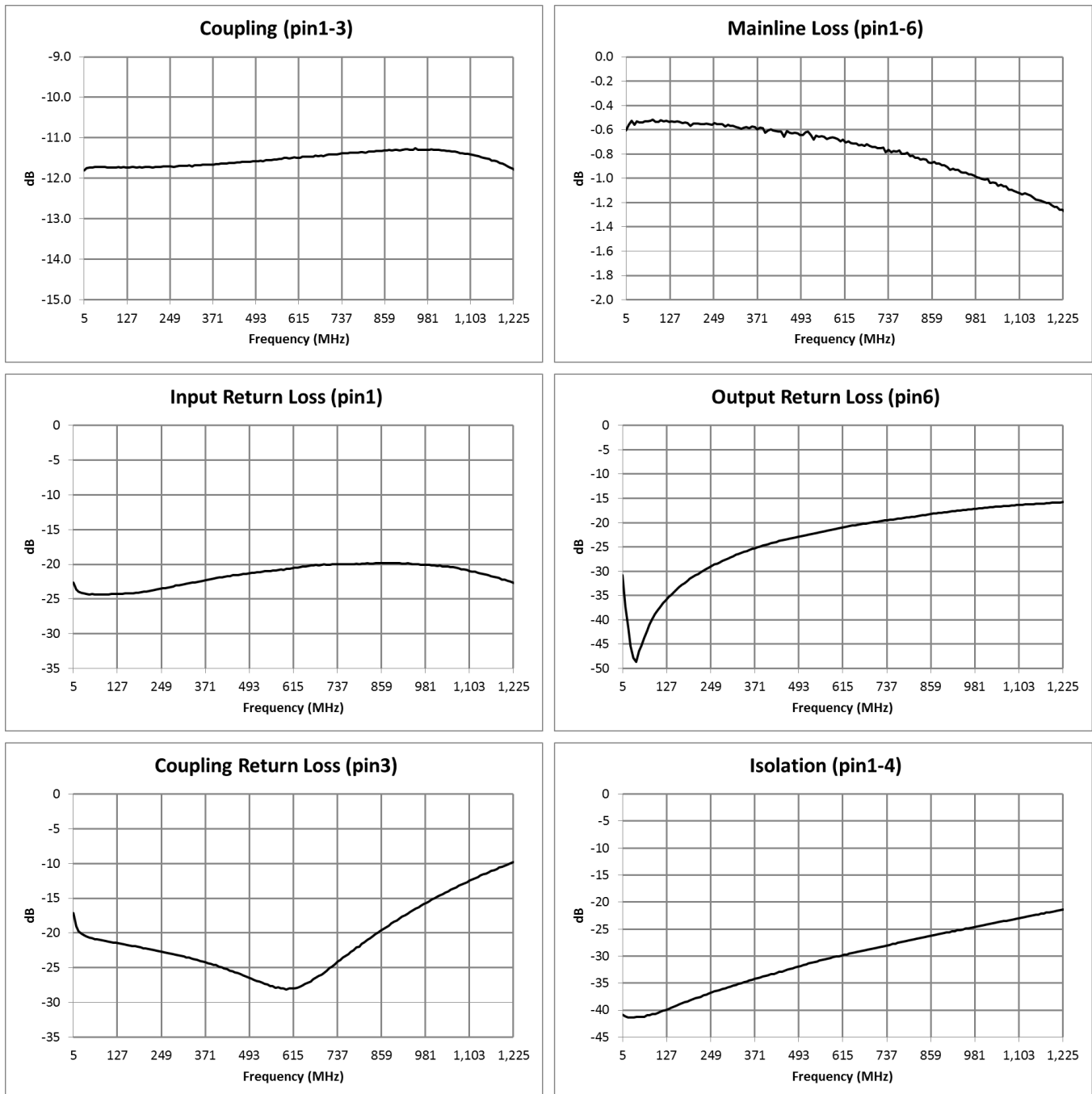
## Application Schematic



## 12 dB Coupler 5 - 1225 MHz

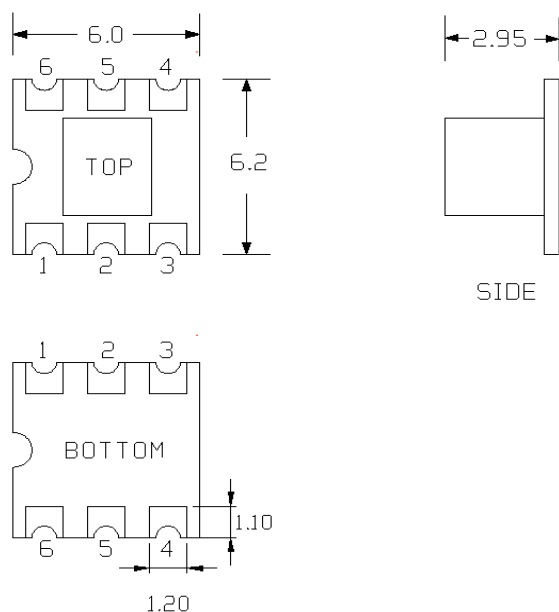
V1

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



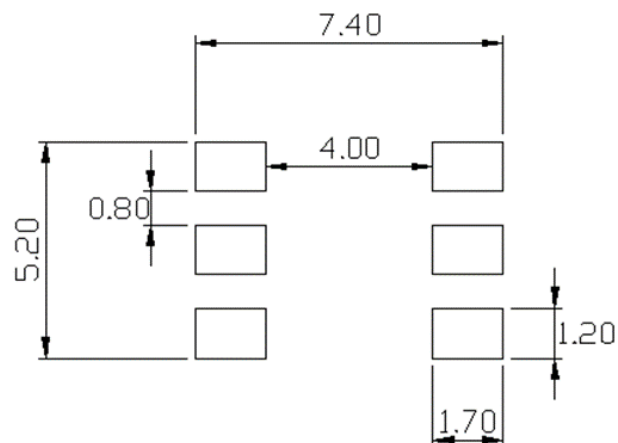
1. Full temperature plots available on request.

## Outline Drawing

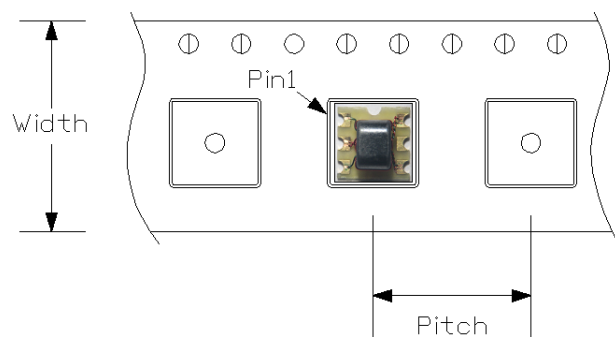


1. Dimensions in mm.
2. Tolerance:  $\pm 0.2$  mm unless otherwise noted.
3. Model number and lot code printed on reel.
4. Plating finish: ENIG on both sides, 0.05 to 0.1  $\mu\text{m}$  gold over 3 to 6  $\mu\text{m}$  nickel

## PCB Layout



## 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	-	F45
Reference Application Note ANI-019 for orientation		

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