

# 17 dB Coupler 5 - 300 MHz



MACP-010507

Rev. V4

## Features

- 17 dB Coupling ratio
- Surface Mount Package
- Available on Tape and Reel
- 260° Reflow Compatible
- RoHS Compliant and Lead-Free
- Excellent Temperature Stability
- Can be used on 50  $\Omega$  and 75  $\Omega$  Systems
- Suitable for all CATV, Broadband and FTTX Applications.

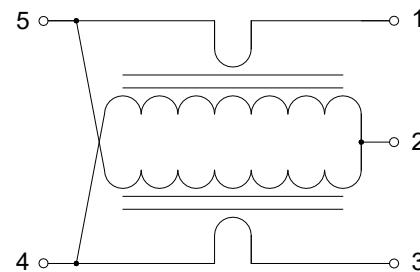
## Applications

- CATV Broadband

## Description

The MACP-010507 is a 17 dB coupler in a surface mount package. Ideally suited for CATV broadband applications.

## Functional Schematic



## Pin Configuration

Pin #	Function	Pin #	Function
1	Output	4	Coupled
2	Ground	5	Input
3	Isolated		

## Electrical Specifications: Freq. = 5 - 300 MHz, $T_A = 25^\circ\text{C}$ , $Z_0 = 75 \Omega$ , $P_{IN} = 0 \text{ dBm}$

Parameter	Freq. Test Conditions (MHz)	Units	Min.	Typ.	Max.
Coupling Ratio	—	dB	—	17	—
Coupling (Pin 5-4)	5 - 120 120 - 300	dB	16.0 16.5	17 17	18.0 17.5
Coupling Flatness	5 - 120 120 - 300	dB	—	—	0.4 0.2
Main Line Loss (Pin 5-1)	5 - 120 120 - 300	dB	—	0.4 0.4	0.8 0.5
Directivity	5 - 120 120 - 300	dB	16.0 12.5	19 19	—
Input Return Loss (Pin 5)	5 - 120 120 - 300	dB	20 20	31 31	—
Output Return Loss (Pin 1)	5 - 120 120 - 300	dB	20 20	27 27	—
Coupling Return Loss (Pin 4)	5 - 120 120 - 300	dB	20 20	31 31	—

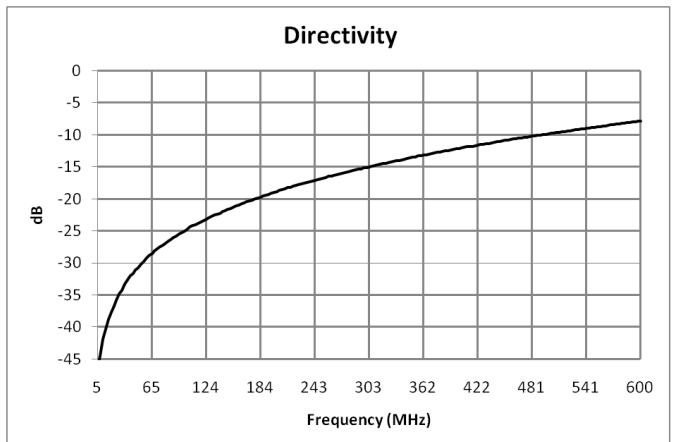
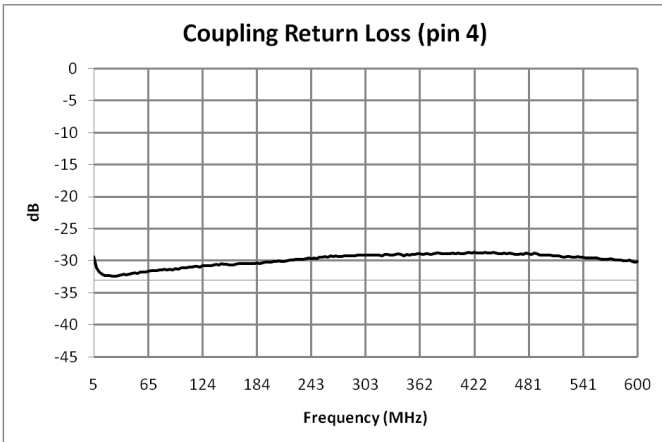
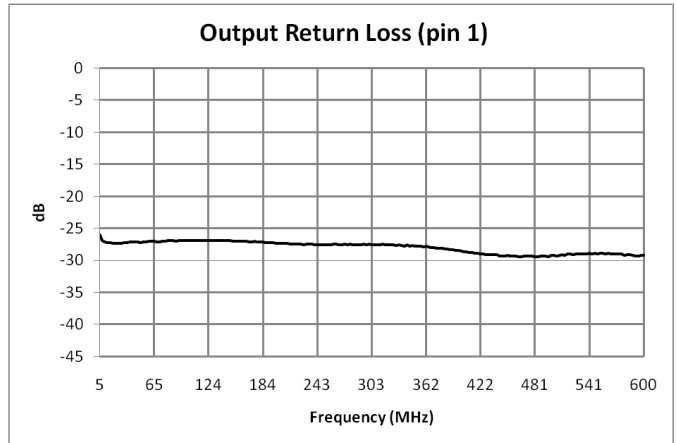
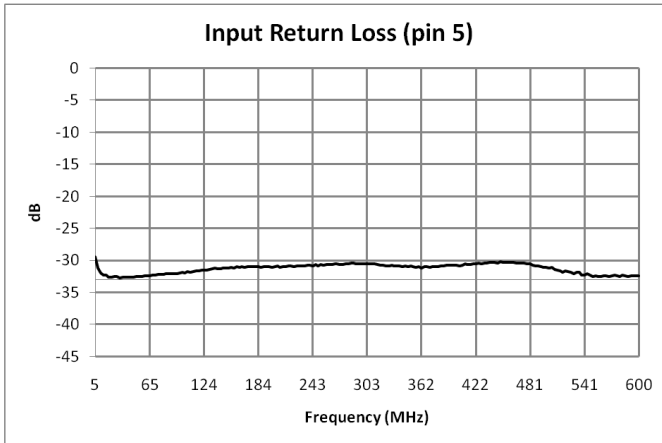
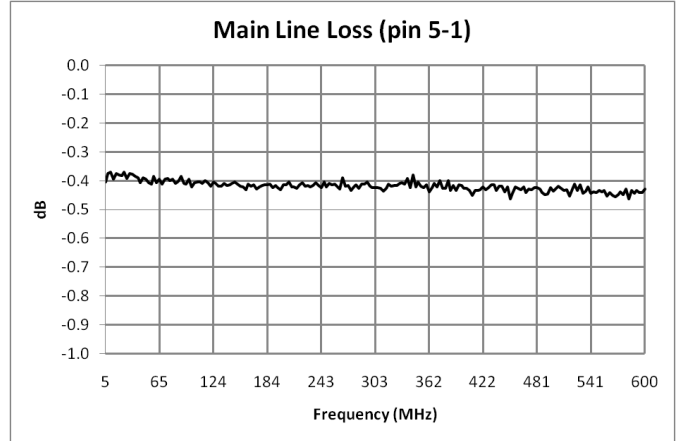
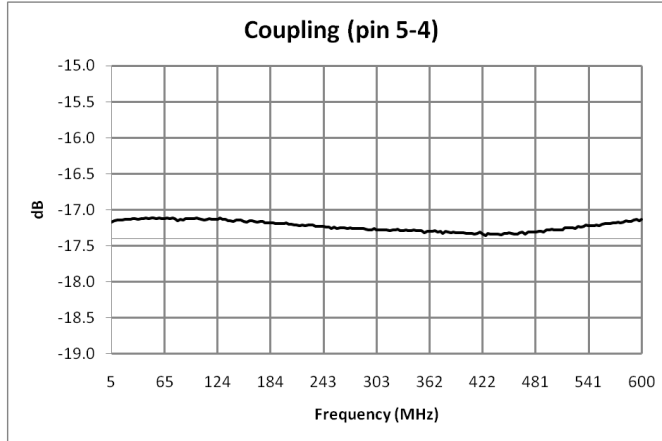
## Ordering Information

Part Number	Package
MACP-010507-CH0160	2000 piece reel
MACP-010507-CH01TB	customer test board

## Recommended Maximum Ratings

Parameter	Units
Input RF Power	0.5 W
DC Current	500 mA
Operating Temperature	-40°C to +85°C

Typical Performance Curves



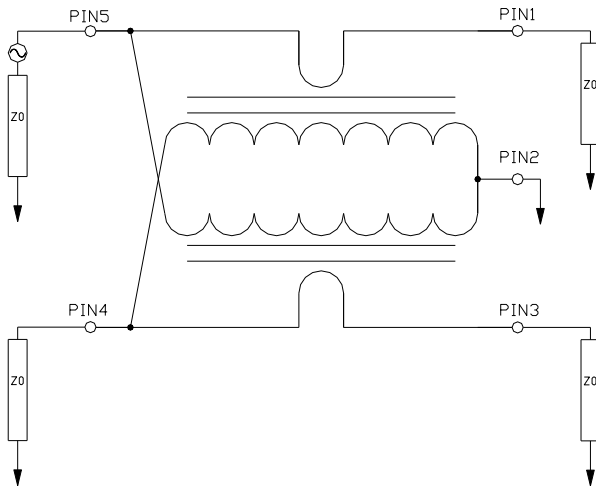
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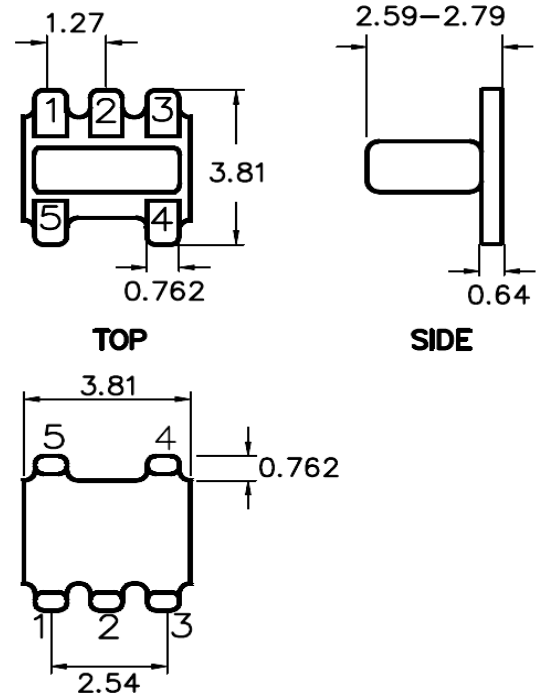
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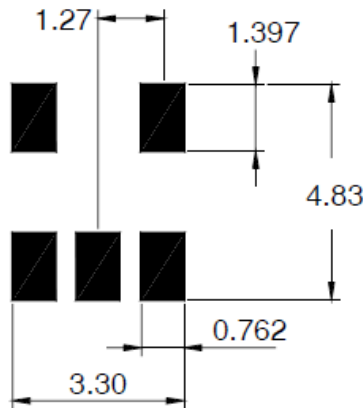
## Application Circuit



## Outline Drawing



## PCB Footprint



1. Dimensions in mm.
2. Tolerance:  $\pm 0.2$  mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Lead plating (CuSn6) Lead finish SAC-305.

## Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel Size	mm	330
Tape Width	mm	12.00
Pitch	mm	8.00
Ao	mm	4.00
Bo	mm	4.00
Ko	mm	2.90
Orientation	-	F5
Reference Application Note ANI-019 for orientation		

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