

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 Ω and 75 Ω Systems
- Suitable for all CATV, Broadband and FTTX Applications.

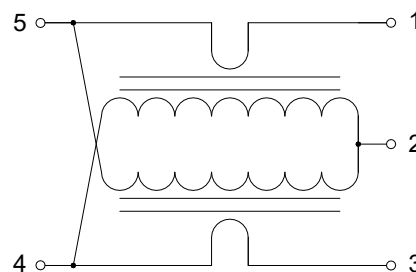
Applications

- 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

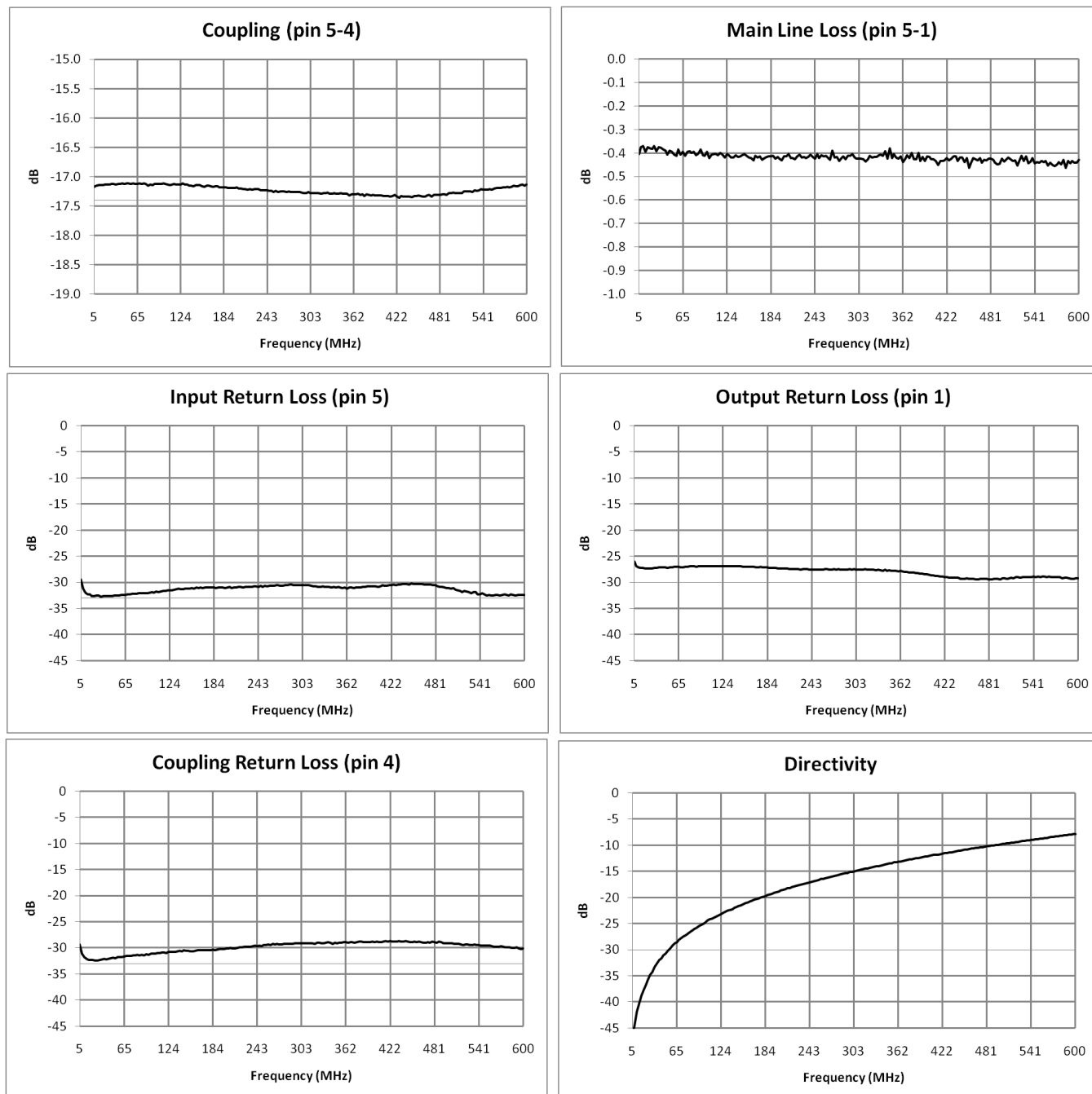
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Typical Performance Curves



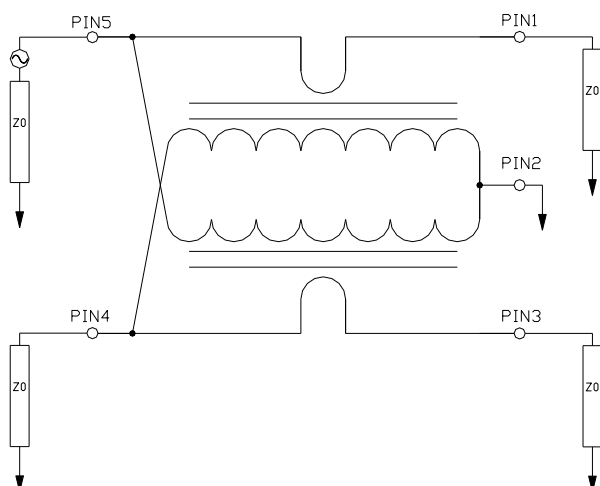
17 dB Coupler 5 - 300 MHz



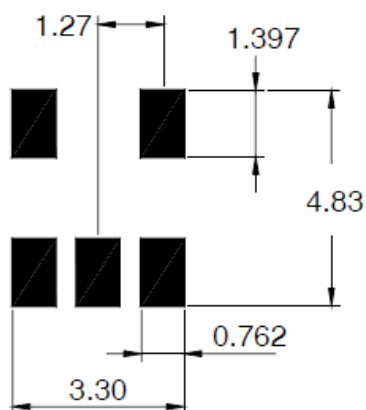
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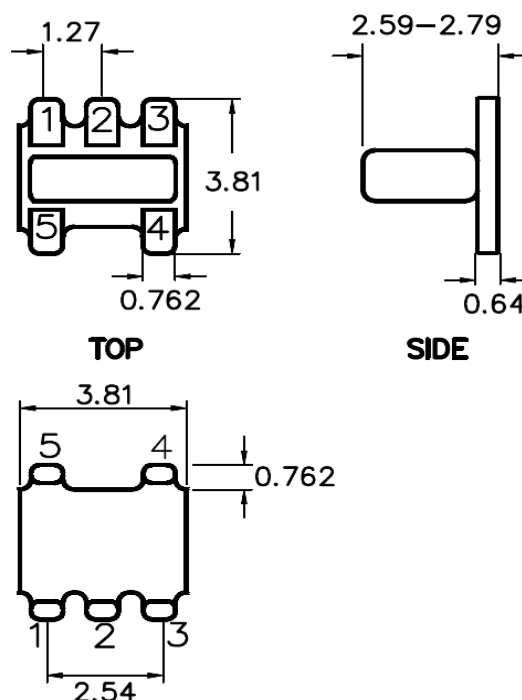
Application Circuit



PCB Footprint



Outline Drawing



1. Dimensions in mm.
2. Tolerance: ± 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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