

# MACP-010507-CH0160

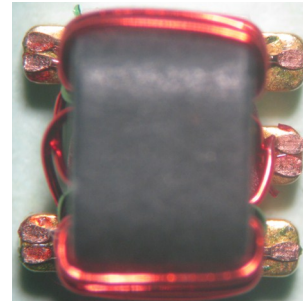


17dB Coupler  
5 – 300 MHz

Rev. V2

## Features

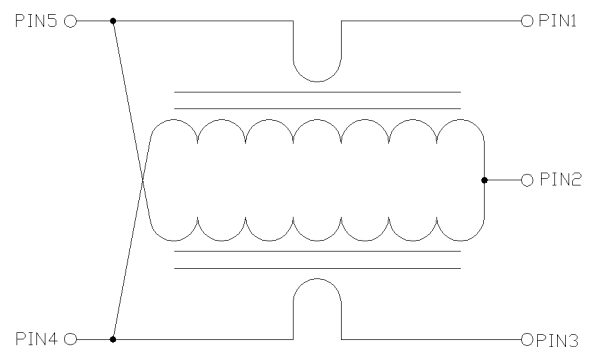
- 17dB Coupling ratio
- Surface mount
- Available on tape and reel
- 260° reflow compatible
- RoHS compliant and Pb free
- Excellent temperature stability
- Can be used on 50Ω and 75Ω systems
- Suitable for all CATV, Broadband and FTTX applications.



## Description

MACOM's MACP-010507-CH0160 is a 17dB Coupler in a low cost surface mount package. Ideally suited for CATV Broadband applications.

## Functional Schematic



## Ordering Information

Part Number	Package
MACP-010507-CH0160	Tape & Reel
MACP-010507-CH01TB	Customer test board

## Pin Configuration

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

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

Parameter	Conditions	Units	Min	Typ	Max
Frequency Range		MHz	5		300
Impedance		$\Omega$		75	
Coupling Ratio		dB		17	
Coupling (Pin5-4)	5 - 120 MHz	dB	16.0	17	18.0
	120 - 300 MHz	dB	16.5	17	17.5
Coupling Flatness	5 - 120 MHz	dB	-	-	0.4
	120 - 300 MHz	dB	-	-	0.2
Main Line Loss (Pin5-1)	5 - 120 MHz	dB	-	0.4	0.8
	120 - 300 MHz	dB	-	0.4	0.5
Directivity	5 - 120 MHz	dB	16.0	19	-
	120 - 300 MHz	dB	12.5	19	-
Input Return Loss (Pin5)	5 - 120 MHz	dB	20	31	-
	120 - 300 MHz	dB	20	31	-
Output Return Loss (Pin1)	5 - 120 MHz	dB	20	27	-
	120 - 300 MHz	dB	20	27	-
Coupling Return Loss (Pin4)	5 - 120 MHz	dB	20	31	-
	120 - 300 MHz	dB	20	31	-

## Recommended Maximum Ratings

Parameter	Units	Min	Max
Input RF Power	W		0.5
DC Current	mA		500
Operating Temperature Range	$^\circ\text{C}$	-40	+85

Full temperature plots available on request

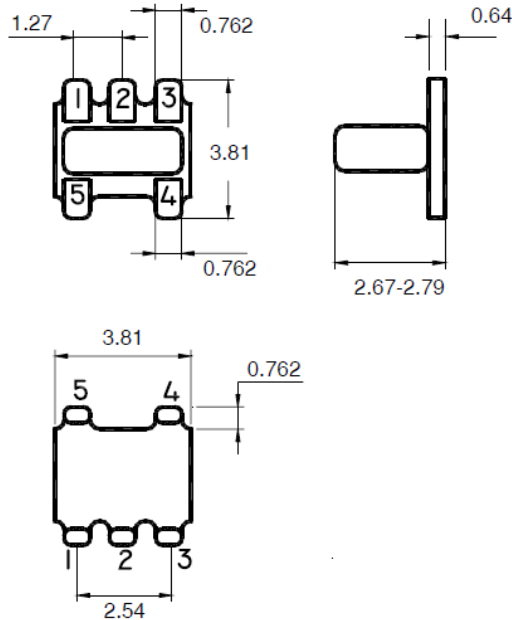
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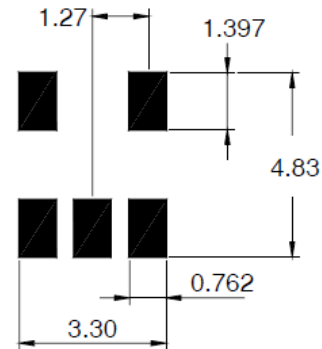
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## Outline Drawing



## PCB Layout

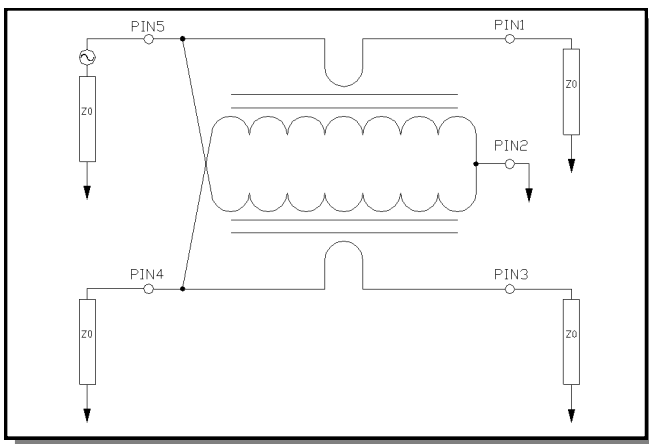


1. Dimensions in mm.
2. Tolerance:  $\pm 0.2$ mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Lead plating (CuSn6) Lead finish SAC-305.

## 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		

## Application Circuit



## 17dB Coupler 5 – 300 MHz

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### Typical Performance Curves

