

MACP-011037

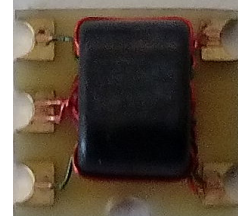


10 dB Coupler
5 - 1225 MHz

Rev. V2

Features

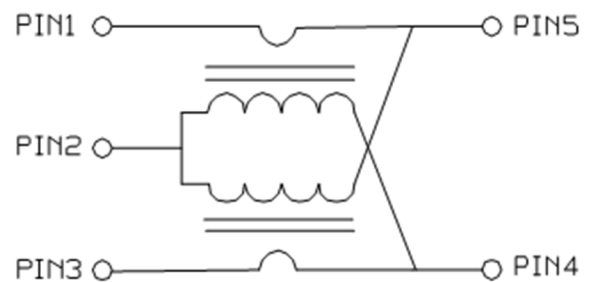
- 10 dB Coupling Ratio
- Surface Mount
- Available on Tape and Reel
- Excellent Temperature Stability
- RoHS Compliant and lead free
- 260°C Reflow Compatible



Description

The MACP-011037 is a 10 dB coupler in a low cost, surface mount package. Ideally suited for broadband CATV applications.

Functional Schematic



Ordering Information

Part Number	Description
MACP-011037	900 piece reel
MACP-011037-TB	Sample Test Board

Pin Configuration

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

10 dB Coupler 5 - 1225 MHz

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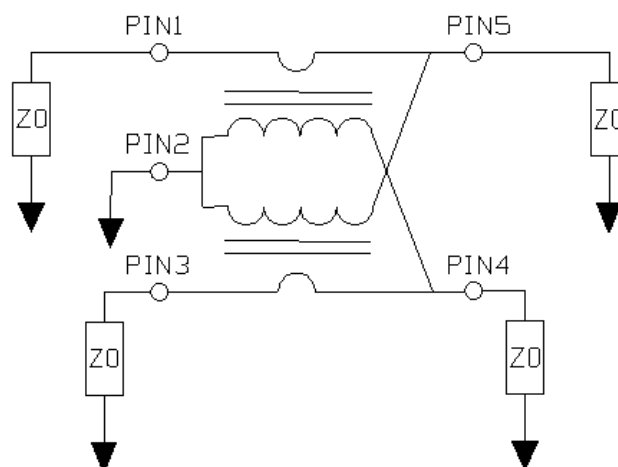
Electrical Specifications: Freq. = 5 - 1225 MHz, $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{in} = 0 \text{ dBm}$

Parameter	Conditions	Units	Min.	Typ.	Max.
Coupling Ratio	—	dB	—	10	—
Coupling (Pin 1- Pin 4)	5 - 1000 MHz 1000 - 1225 MHz	dB	10.7 10.9	10.5 10.7	9.7 9.7
Main Line Loss (Pin 1- Pin 6)	5 - 1000 MHz 1000 - 1225 MHz	dB	—	1.3 1.6	1.5 1.8
Isolation (Pin 1- Pin 4)	5 - 500 MHz 500 - 1000 MHz 1000 - 1225 MHz	dB	28 22 18	30 24 21	—
Input Return Loss (Pin 1)	5 - 500 MHz 500 - 1225 MHz	dB	19 15	21 17	—
Output Return Loss (Pin 6)	5 - 500 MHz 500 - 1000 MHz 1000 - 1225 MHz	dB	20 15 12	22 17 14	—
Coupling Return Loss (Pin 3)	5 - 65 MHz 65 - 1225 MHz	dB	12 15	14 16	—

Absolute Maximum Ratings

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

Application Schematic



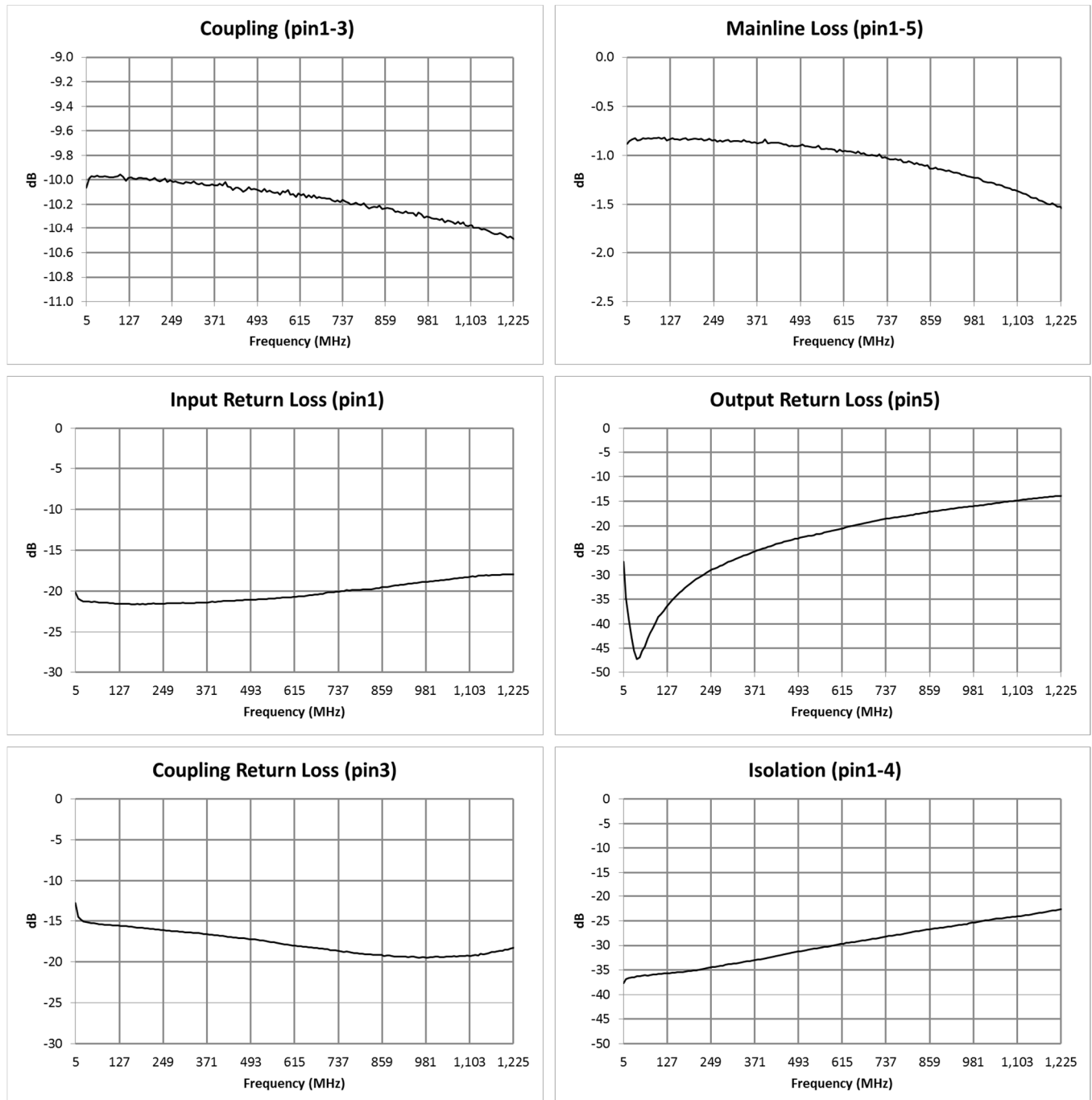
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DC-0011593

Typical Performance Curves¹



1. Full temperature plots available on request.

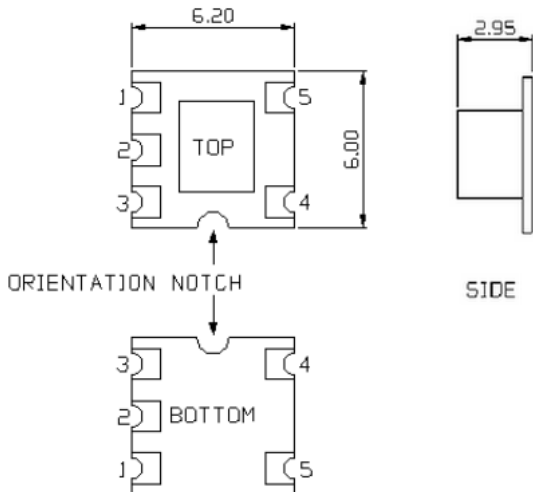
MACP-011037



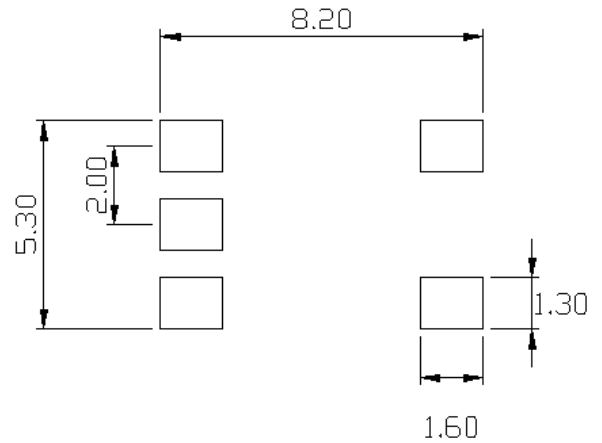
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Outline Drawing

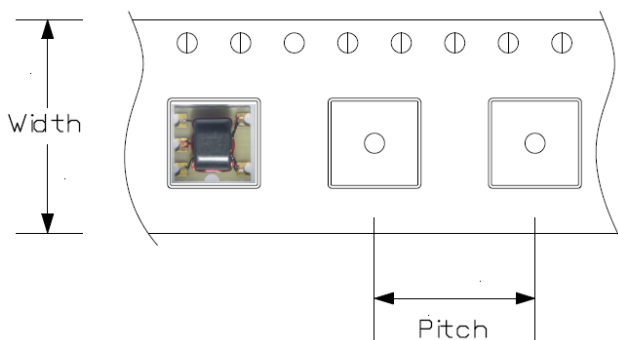


PCB Layout



1. Dimensions in mm.
2. Tolerance: ± 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 μ m gold over 3 to 6 μ 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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