

7 dB Coupler 5 - 1225 MHz

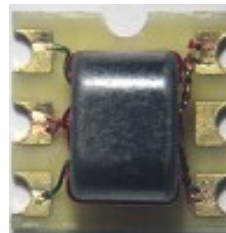
Rev. V1

Features

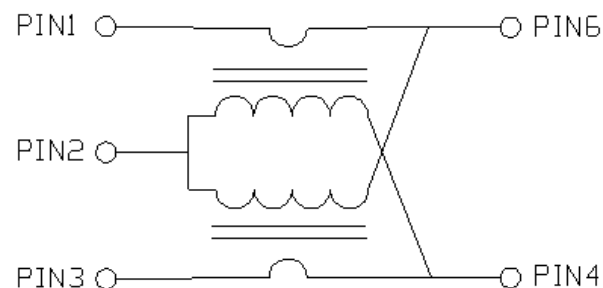
- 7 dB Coupling Ratio
- Surface Mount
- Available on Tape and Reel
- Excellent Temperature Stability
- RoHS Compliant and lead free
- 260°C Reflow Compatible

Description

The MACP-011032 is a 7 dB coupler in a low cost, surface mount package. Ideally suited for broadband CATV applications.



Functional Schematic



Ordering Information

Part Number	Description
MACP-011032	900 piece reel
MACP-011032-TB	Sample Test Board

Pin Configuration

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

7 dB Coupler 5 - 1225 MHz

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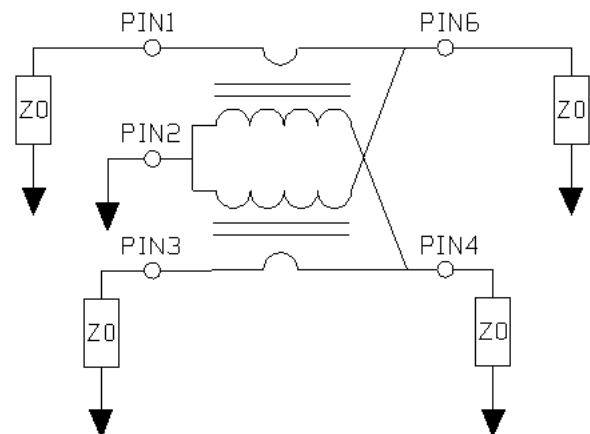
Electrical Specifications: Freq. = 5 - 1225 MHz, $T_A = 25^\circ\text{C}$, $Z_0 = 75\ \Omega$, $P_{in} = 0\ \text{dBm}$

Parameter	Conditions	Units	Min.	Typ.	Max.
Coupling Ratio	—	dB	—	7	—
Coupling (Pin 1- Pin 3)	5 - 1225 MHz	dB	7.6	7.0	6.3
Main Line Loss (Pin 1- Pin 6)	5 - 1000 MHz 1000 - 1225 MHz	dB	—	2.1 2.6	2.3 2.8
Isolation (Pin 1- Pin 4)	5 - 1000 MHz 1000 - 1225 MHz	dB	18 17	20 19	—
Input Return Loss (Pin 1)	5 - 500 MHz 500 - 1225 MHz	dB	15 12	17 14	—
Output Return Loss (Pin 6)	5 - 500 MHz 500 - 1225 MHz	dB	17 12	19 14	—
Coupling Return Loss (Pin 3)	5 - 500 MHz 500 - 1225 MHz	dB	13 11	15 13	—

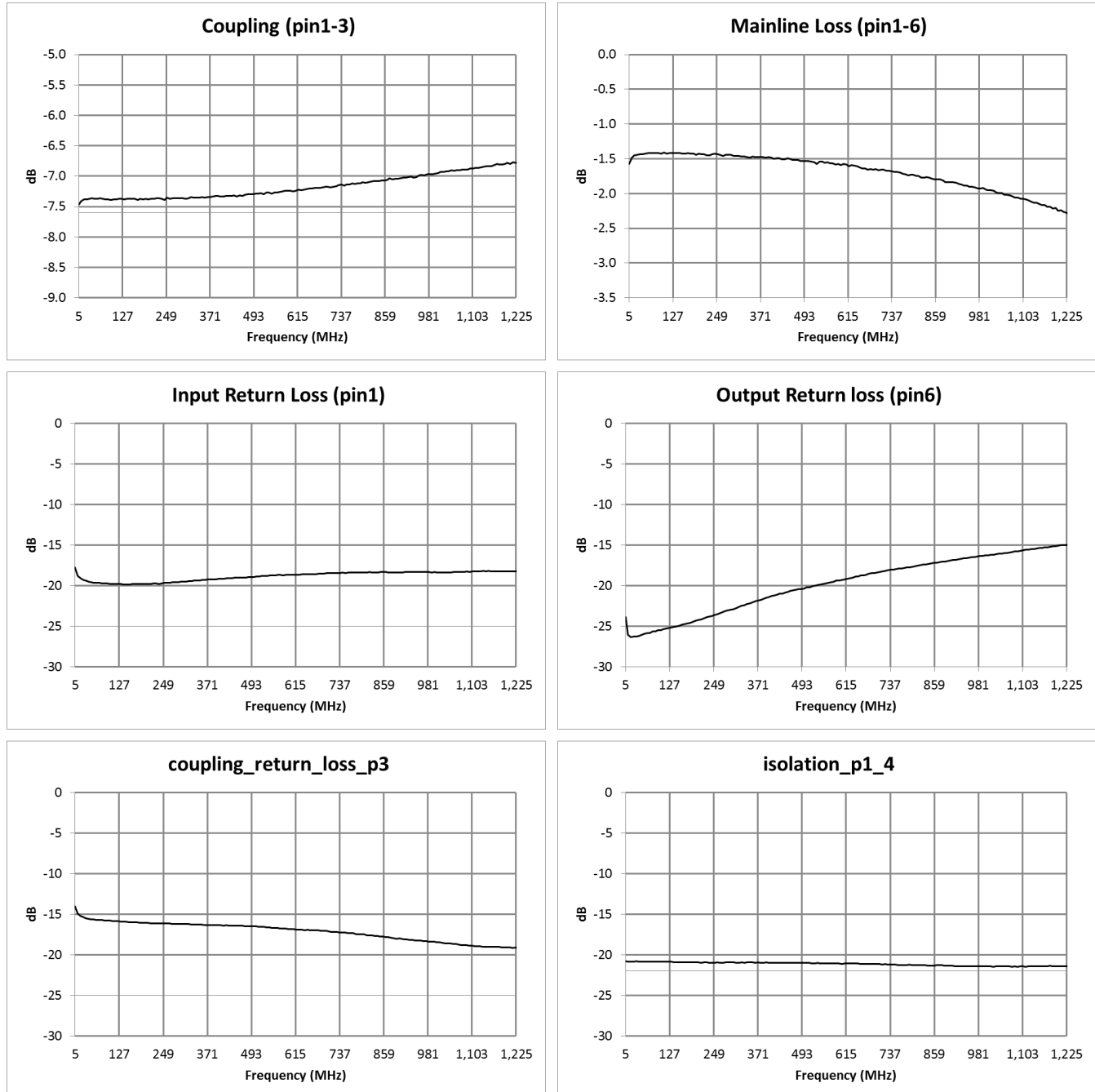
Absolute Maximum Ratings

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

Application Schematic

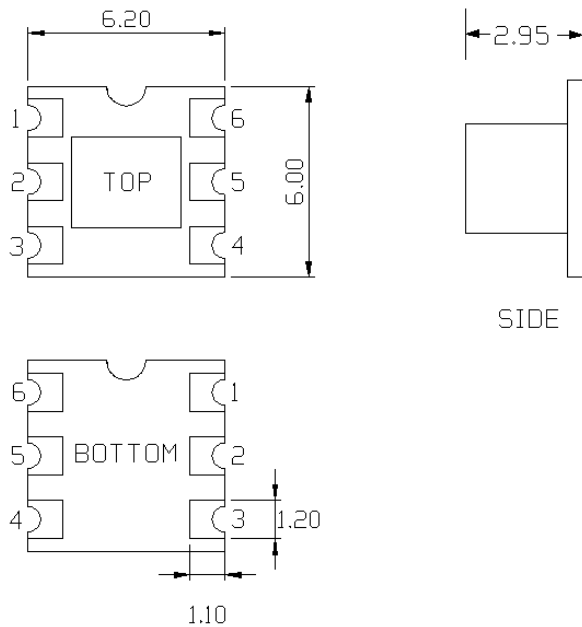


Typical Performance Curves¹



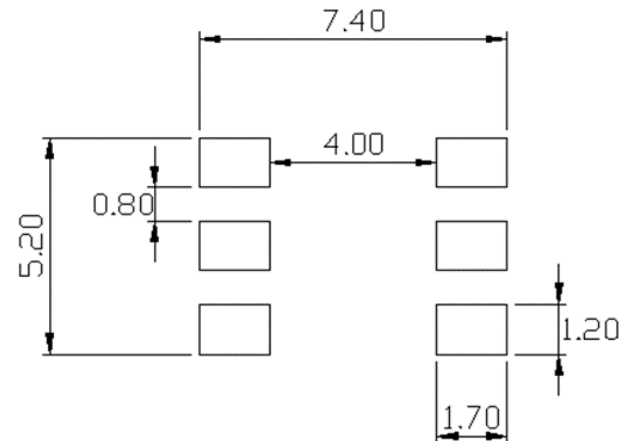
1. Full temperature plots available on request.

Outline Drawing

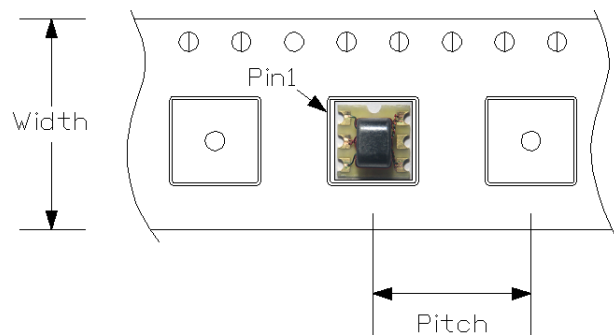


1. Dimensions in mm.
2. Tolerance: ± 0.2 mm unless otherwise noted.
3. Model number and lot code printed on reel.
4. Plating finish: ENIG on both sides, 0.05 to 0.1 μm gold over 3 to 6 μm nickel

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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