

8 dB Coupler 5 - 1225 MHz

V3

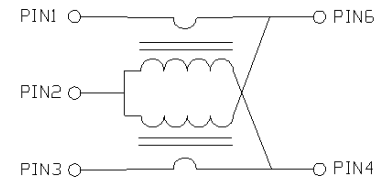
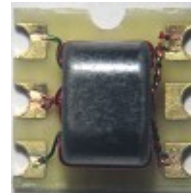
Features

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

Description

The MACP-011033 is an 8 dB coupler in a surface mount package. Ideally suited for broadband CATV applications.

Functional Schematic



Pin Configuration

Pin #	Function	Pin #	Function
1	Input	4	Isolated
2	Ground	5	Not Connected
3	Coupled	6	Output

Electrical Specifications: Freq. = 5 - 1225 MHz, T_A = 25°C, Z₀ = 75 Ω, P_{IN} = 0 dBm

Parameter	Conditions	Units	Min.	Typ.	Max.
Coupling Ratio	—	dB	—	8	—
Coupling (Pin 1 - Pin 3)	5 - 1225 MHz	dB	8.5	8.0	6.6
Main Line Loss (Pin 1 - Pin 6)	5 - 1000 MHz 1000 - 1225 MHz	dB	—	1.9 2.6	2.2 2.8
Isolation (Pin 1 - Pin 4)	5 - 1000 MHz 1000 - 1225 MHz	dB	16 14	18 16	—
Input Return Loss (Pin 1)	5 - 1000 MHz 1000 - 1225 MHz	dB	15 12	18 14	—
Output Return Loss (Pin 6)	5 - 1000 MHz 1000 - 1225 MHz	dB	14 12	16 14	—
Coupling Return Loss (Pin 3)	5 - 1000 MHz 1000 - 1225 MHz	dB	13 11	16 13	—

Ordering Information

Part Number	Description
MACP-011033	900 piece reel
MACP-011033-TB	Sample Test Board

Absolute Maximum Ratings

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

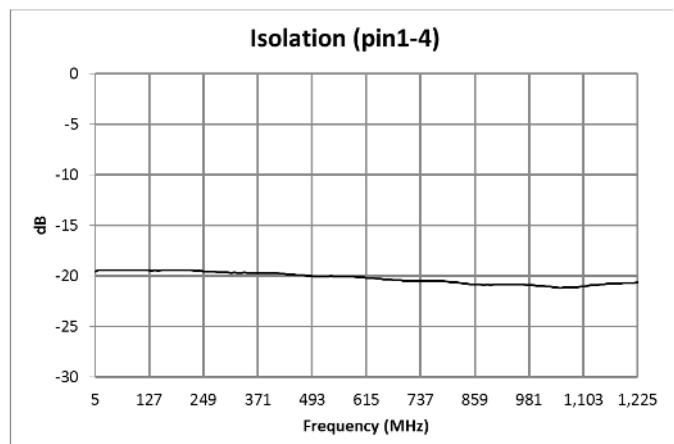
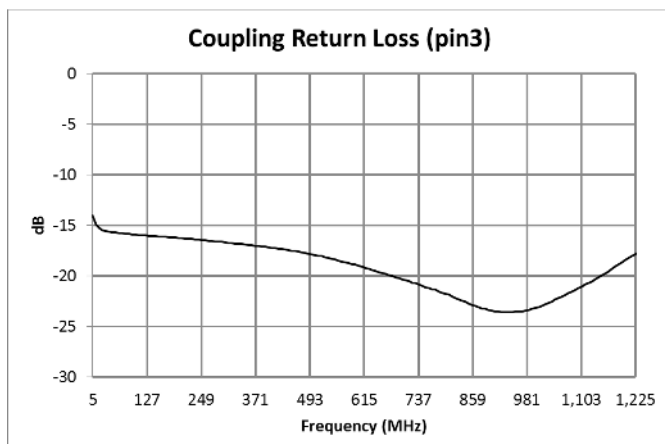
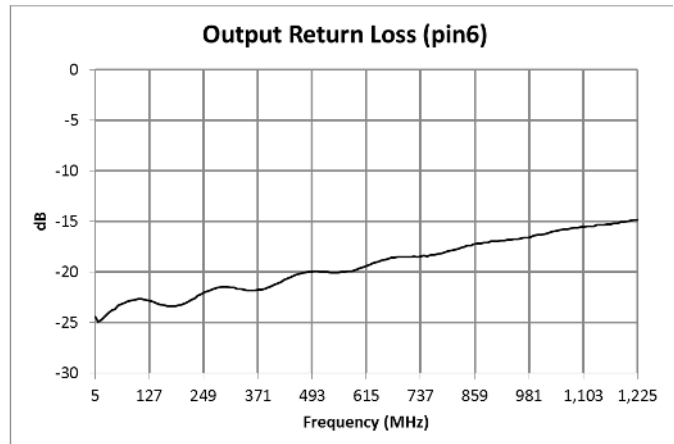
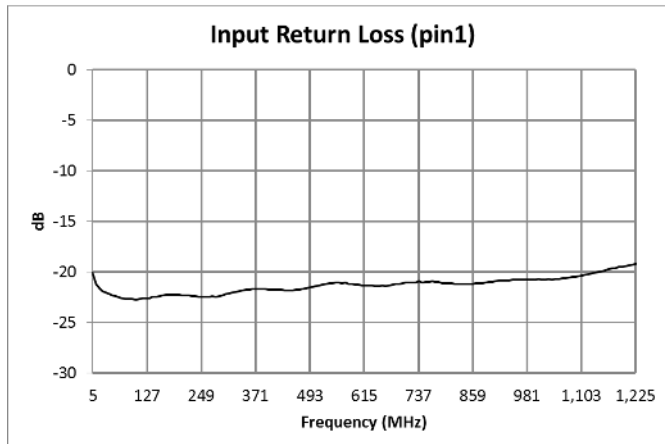
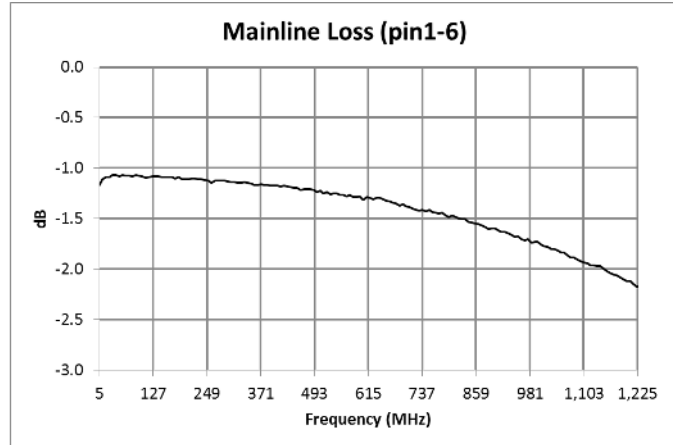
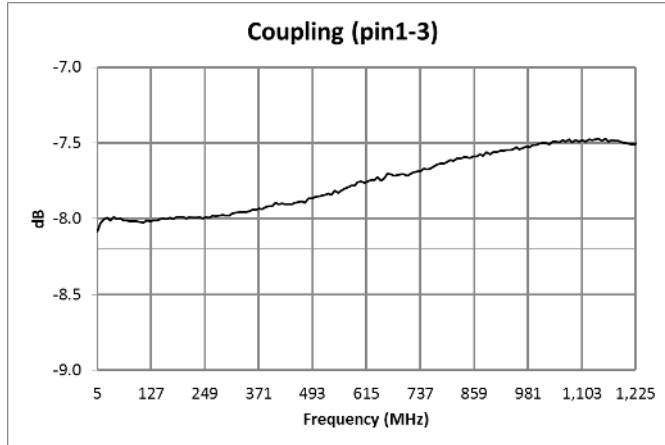
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Typical Performance Curves¹

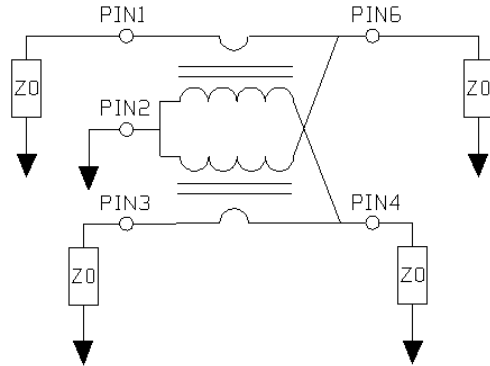


1. Full temperature plots available on request.

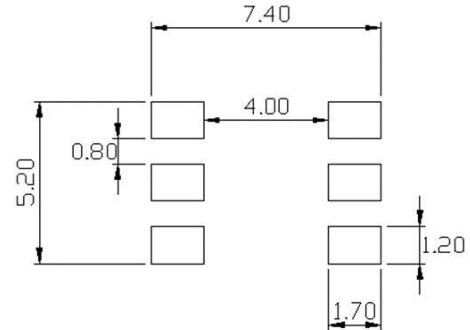
8 dB Coupler
5 - 1225 MHz

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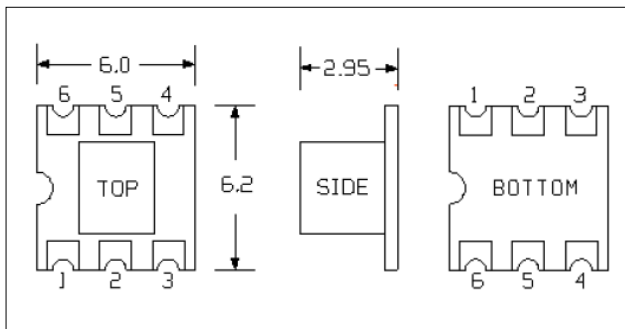
Application Schematic



PCB Layout

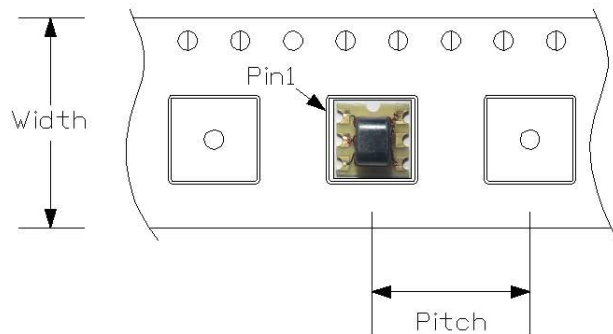


Outline Drawing



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 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	-	F45
Reference Application Note ANI-019 for orientation		

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