MACP-011031

14dB Coupler
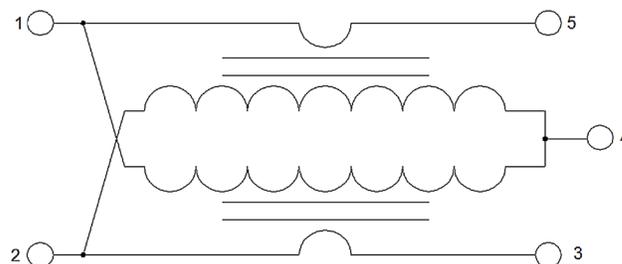## 5 - 3250 MHz

V1

Features

- Coupling 14 dB Typical
- Surface mount
- Low profile
- 260°C reflow compatible
- Available on Tape & Reel
- Suitable for DOCSIS 3.1
- RoHS compliant and Pb free
- Very wide band of operation
- Available on tape and reel

Functional Schematic

Description

MACP-011031 is a wire wound ferrite based 14dB coupler in a low cost surface mount package. Ideally suited for CATV Broadband applications.

Ordering Information

Part Number	Package
MACP-011031	Tape and Reel
MACP-011031-TB	Sample Board

Pin Configuration

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

1

MACP-011031

Electrical Specifications: P_{in} = 0dBm, T_A = 25°C, Z_0 = 75 Ω

Parameter	Conditions	Units	Min	Typ	Max
Frequency Range		MHz	5	-	3250
Impedance		Ω	-	75	-
Coupling Pin3-5	5 - 3250 MHz	dB	13	14.5	15.6
Main Line Loss Pin3-2	5 - 1500 MHz 1500 - 3250 MHz	dB dB	- -	1.0 2.0	1.4 3.6
Input Return Loss Pin3	5 - 1000 MHz 1000 - 3250 MHz	dB dB	17 10	21 17	- -
Output Return Loss Pin2	5 - 1000 MHz 1000 - 3250 MHz	dB dB	17 11	26 15	- -
Coupling Return Loss Pin5	5 - 1000 MHz 1000 - 3250 MHz	dB dB	15 7	21 14	- -
Isolation Pin3-1	5 - 1000 MHz 1000 - 3250 MHz	dB dB	27 15	36 22	- -

Recommended Maximum Ratings

Parameter	Units	Min	Max
Input Power	mW	-	500
DC Current	mA	-	500
Operating Temperature Range	ºC	-40	+85

Temperature data available on request

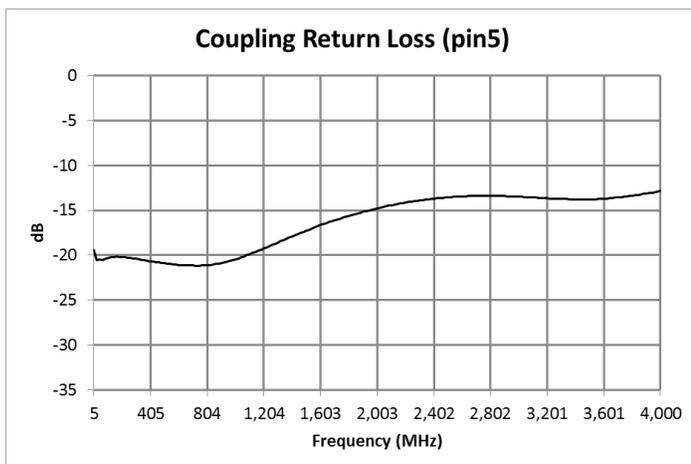*For further information and support please visit:*
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PCB Layout

Application Schematic

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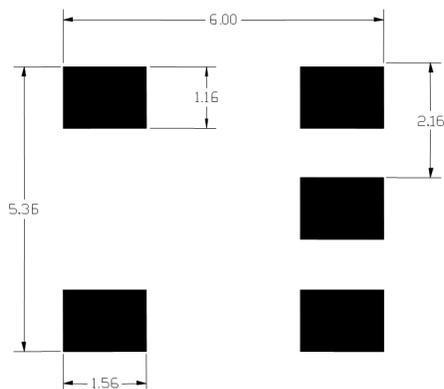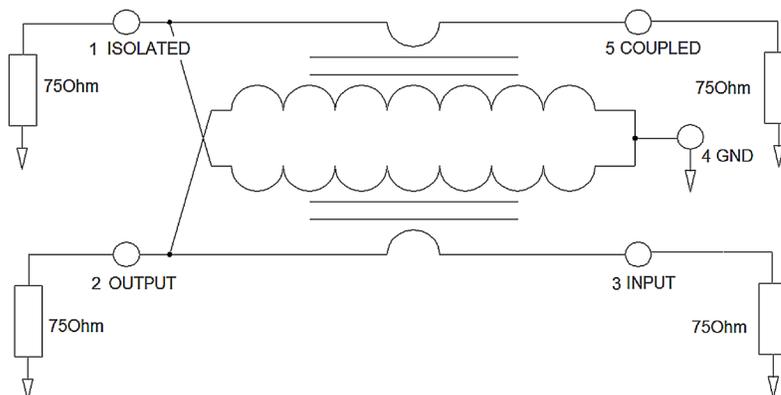
Typical Performance Curves

Coupling (pin3-5)

Main Line Loss (pin3-2)

Input Return Loss (pin3)

Output Return Loss (pin2)

Coupling Return Loss (pin5)

Isolation (pin3-1)

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Outline drawing

Top View

Bottom View

Typical Core Side View
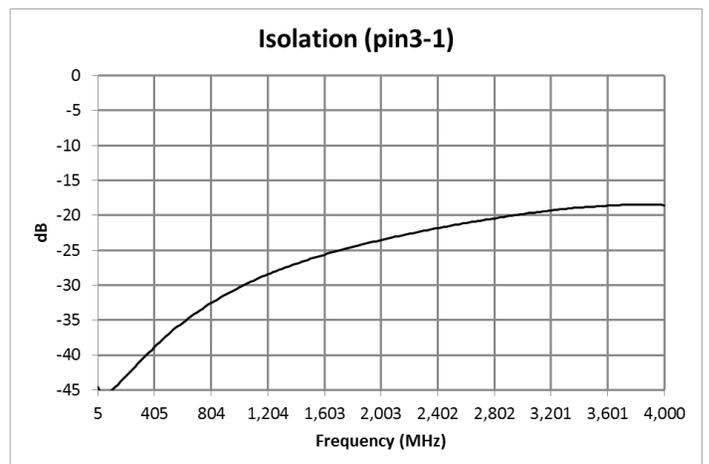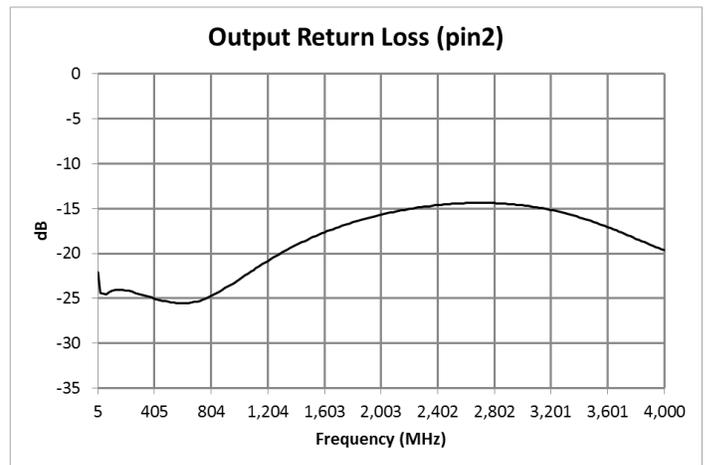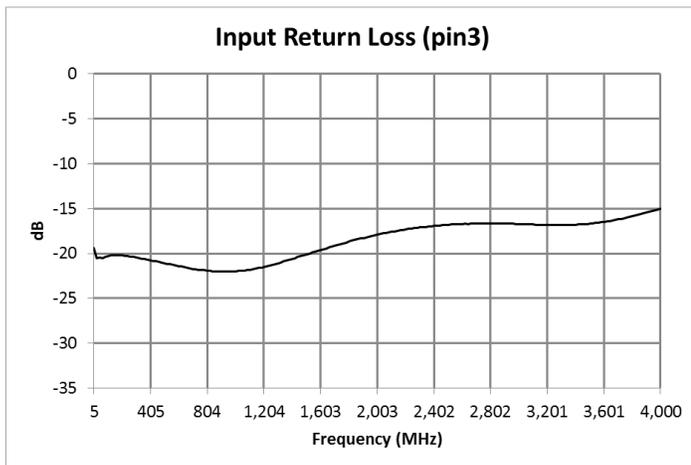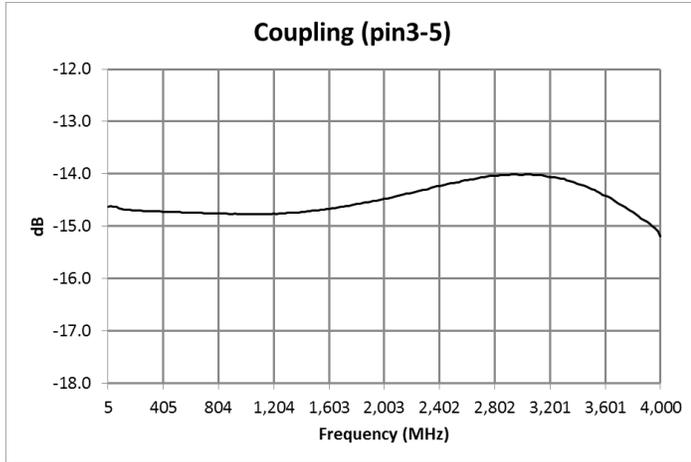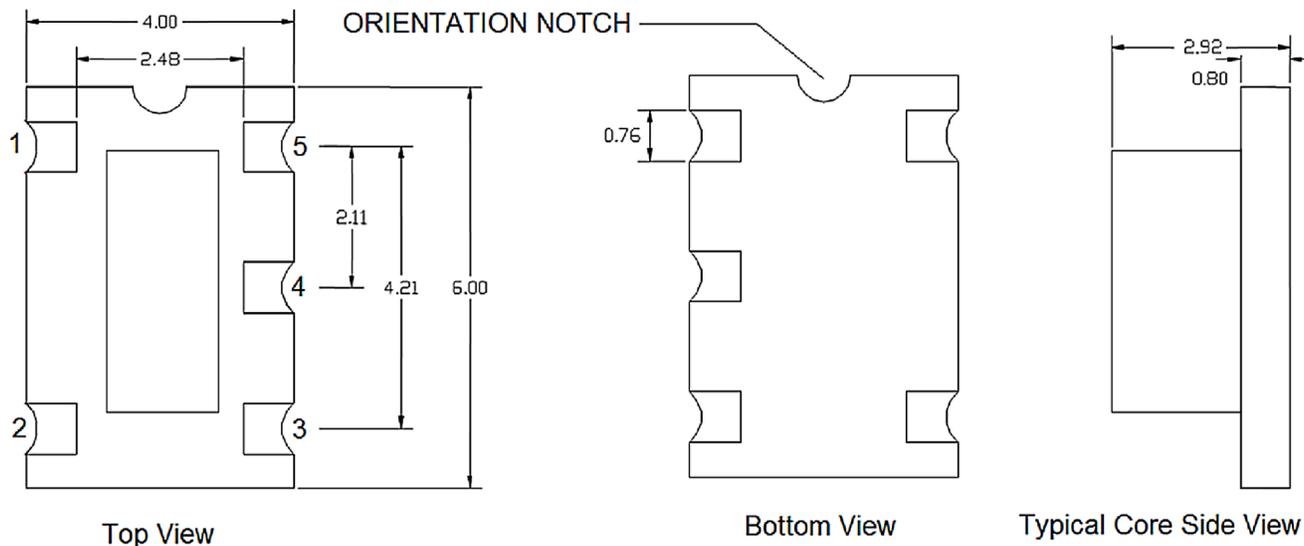
1. Dimensions in mm.
2. Tolerance: ±0.2mm unless otherwise noted.
3. Model number and lot code printed on reel.
4. Finish: Electroless Nickel Immersion Gold.

Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel size	mm	330
Tape width	mm	16.0
Pitch	mm	8.0
Orientation	-	F45
Reference Application Note ANI-019 for orientation		

Carrier Tape Orientation

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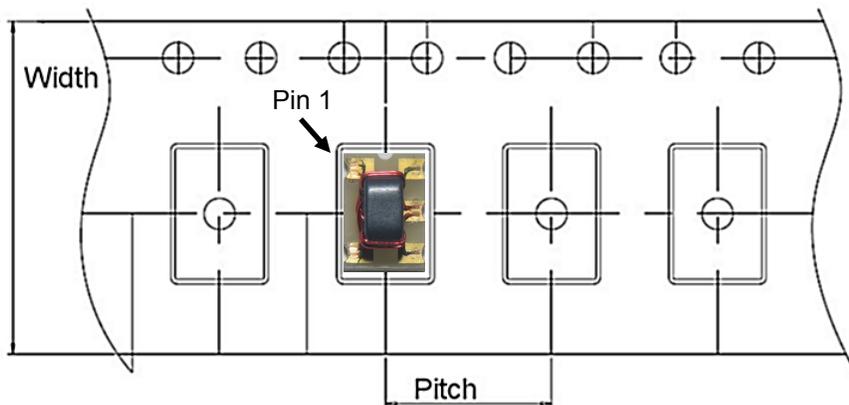
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