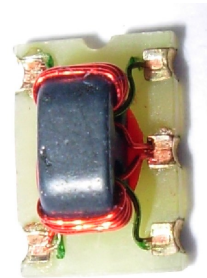


14dB Coupler 5 - 3250 MHz

V1

Features

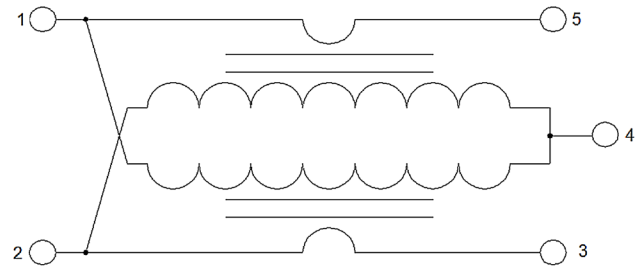
- Coupling 14 dB Typical
- Surface mount
- Low profile
- 260°C reflow compatible
- Available on Tape & Reel
- Suitable for DOCSIS 3.1
- RoHS compliant and Pb free
- Very wide band of operation
- Available on tape and reel



Description

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

Functional Schematic



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

14dB Coupler 5 - 3250 MHz

V1

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

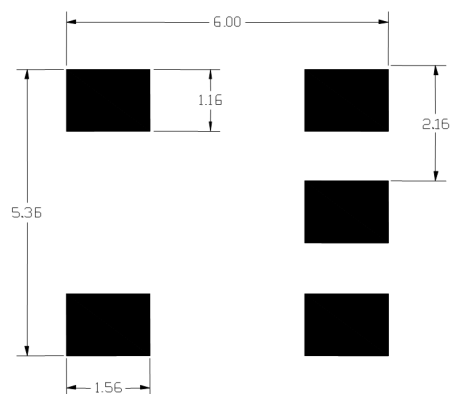
Parameter	Conditions	Units	Min	Typ	Max
Frequency Range		MHz	5	-	3250
Impedance		Ω	-	75	-
Coupling Pin3-5	5 - 3250 MHz	dB	13	14.5	15.6
Main Line Loss Pin3-2	5 - 1500 MHz	dB	-	1.0	1.4
	1500 - 3250 MHz	dB	-	2.0	3.6
Input Return Loss Pin3	5 - 1000 MHz	dB	17	21	-
	1000 - 3250 MHz	dB	10	17	-
Output Return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

Recommended Maximum Ratings

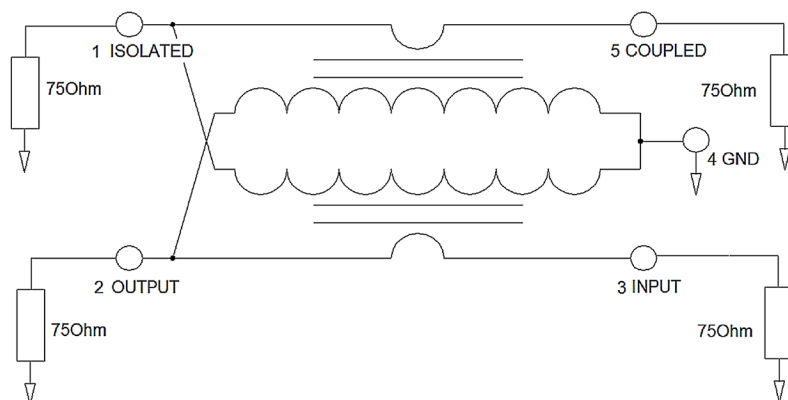
Parameter	Units	Min	Max
Input Power	mW	-	500
DC Current	mA	-	500
Operating Temperature Range	$^\circ\text{C}$	-40	+85

Temperature data available on request

PCB Layout



Application Schematic

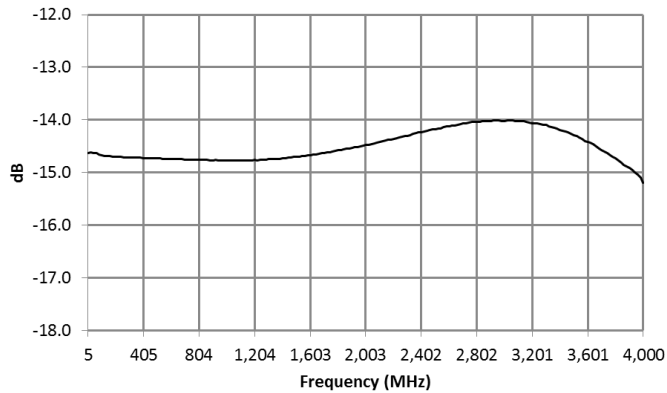


14dB Coupler 5 - 3250 MHz

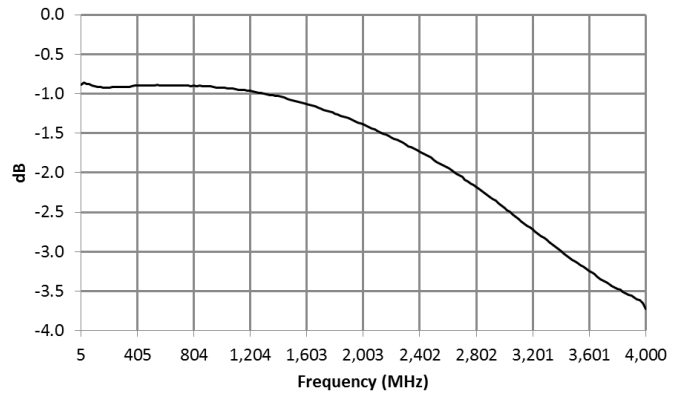
V1

Typical Performance Curves

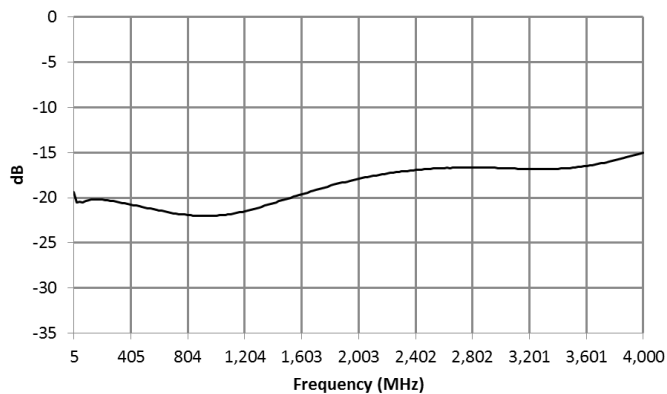
Coupling (pin3-5)



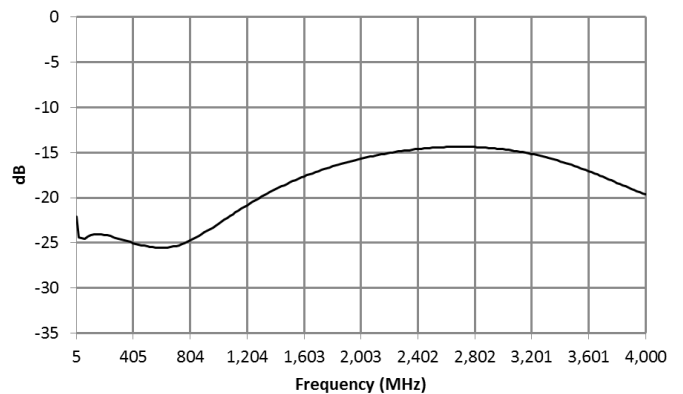
Main Line Loss (pin3-2)



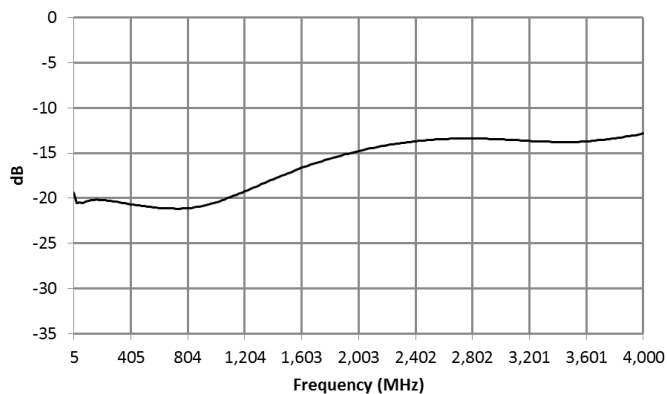
Input Return Loss (pin3)



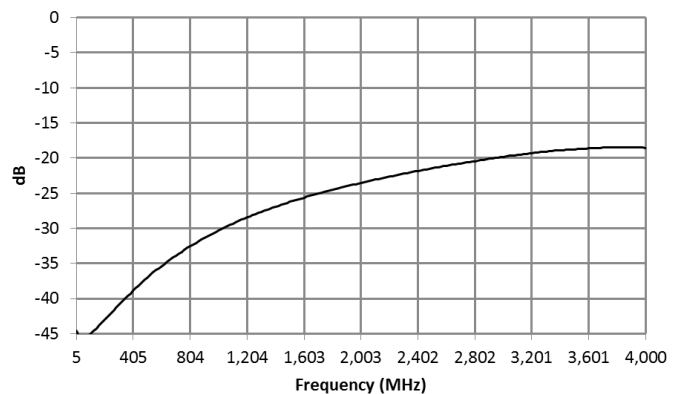
Output Return Loss (pin2)



Coupling Return Loss (pin5)



Isolation (pin3-1)

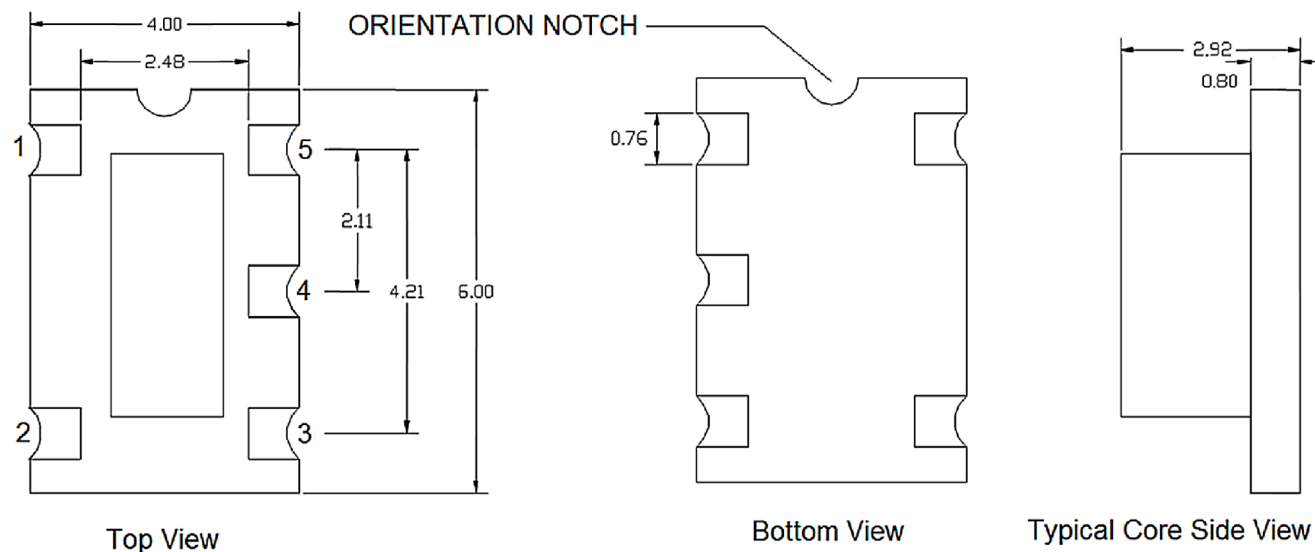


Electrical Specifications: $P_{in} = 0\text{dBm}$, $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$

14dB Coupler 5 - 3250 MHz

V1

Outline drawing

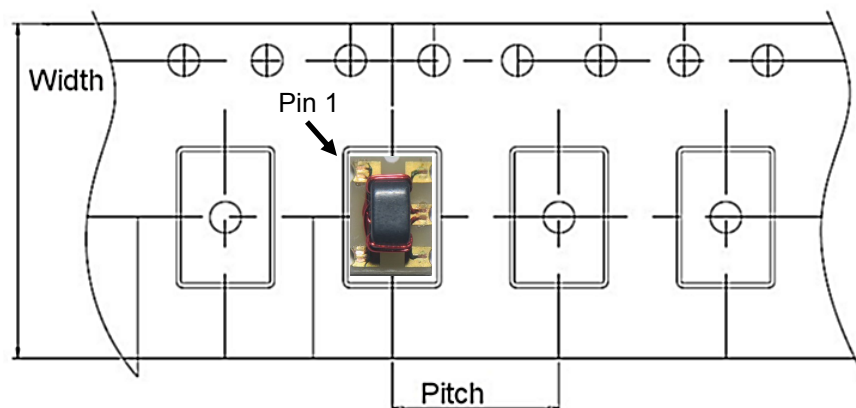


1. Dimensions in mm.
2. Tolerance: ± 0.2 mm unless otherwise noted.
3. Model number and lot code printed on reel.
4. Finish: Electroless Nickel Immersion Gold.

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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