

**17 dB Coupler, 75 Ω
4 - 862 MHz**

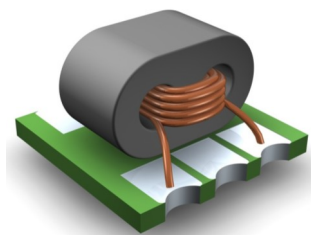
Rev. V4

Features

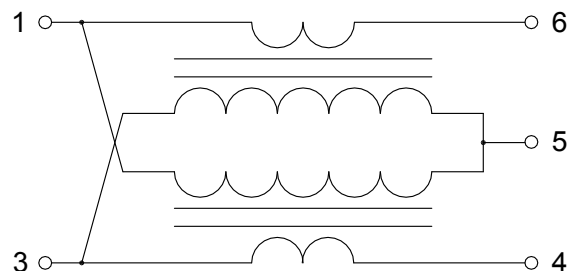
- 17 dB Coupler
- Surface Mount Package
- Excellent Temperature Stability
- RoHS Compliant & Lead-Free
- Available on Tape & Reel

Description

The MACP-010383-CH0A40 is a high performance 75 Ω coupler in a surface mount package. Ideally suited for high volume CATV applications.



Functional Schematic



Pin Configuration

Pin #	Function	Pin #	Function
1	Input	4	External 75 Ω
2	No Connection	5	Ground
3	Coupled	6	Output

Electrical Specifications: Freq. = 4 - 862 MHz, $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{IN} = 0 \text{ dBm}$

Parameter	Freq. Test Conditions (MHz)	Units	Min.	Typ.	Max.
Coupling	4 - 862	dB	—	17	± 1
Main Line Loss	4 - 862	dB	—	0.6	1.0
Isolation	4 - 862	dB	24	35	—
Input Return Loss	4 - 862	dB	18	27	—
Output Return Loss	4 - 862	dB	18	29	—
Coupling Return Loss	4 - 862	dB	18	31	—

Ordering Information

Part Number	Package
MACP-010383-CH0A40	2000 piece reel
MACP-010383-C003TB	customer test board

Recommended Maximum Ratings

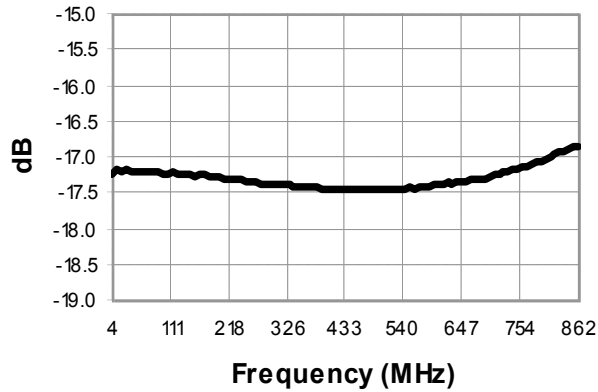
Parameter	Units
Input Power	250 mW
DC Current	200 mA
Operating Temperature	-40°C to $+85^\circ\text{C}$
Storage Temperature	-55°C to $+125^\circ\text{C}$

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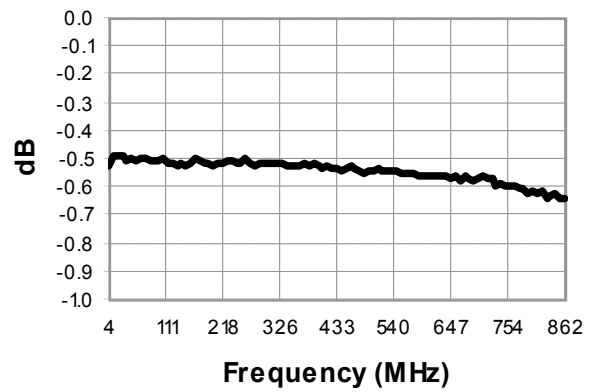
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Typical Performance Curves

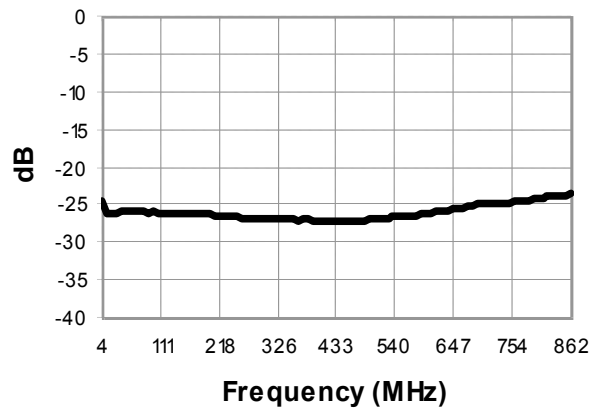
Coupling



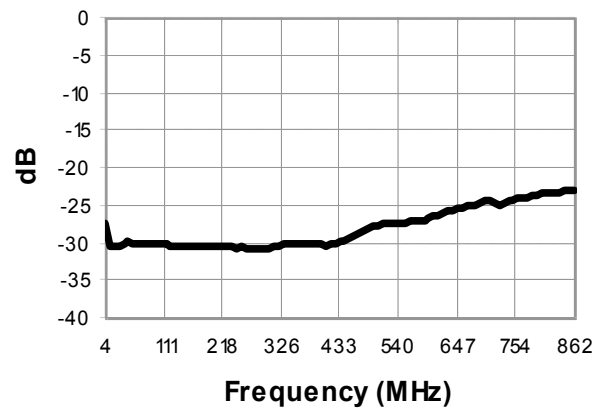
Main Line Loss



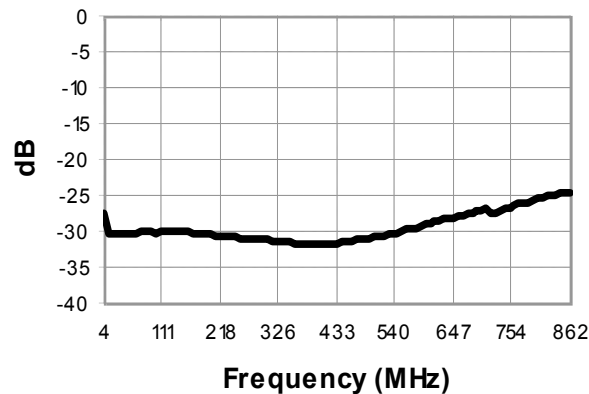
Input Return Loss



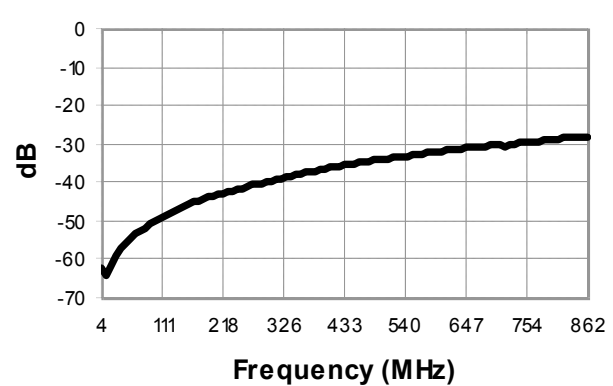
Output Return Loss



Coupled Port Return Loss



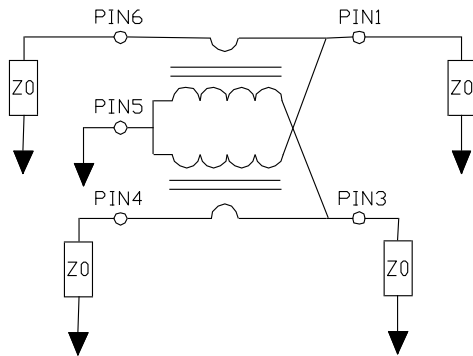
Isolation



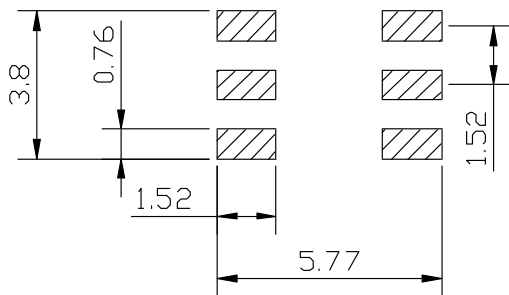
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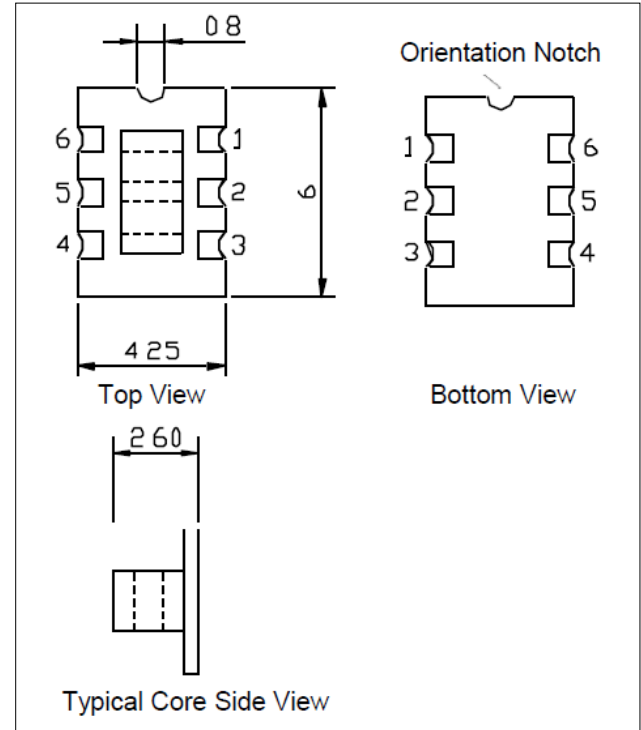
Application Schematic



Recommended Board Layout



Outline Drawing^{1,2,3,4}



1. Dimensions in mm.
2. Tolerance: ± 0.2 mm unless otherwise noted.
3. Model number and lot code are printed on the 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
Ao	mm	4.5
Bo	mm	6.4
Ko	mm	3.2
Orientation	-	F45
Reference Application Note ANI-019 for orientation		

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