

**8 dB Coupler, 75  $\Omega$   
5 - 1000 MHz**

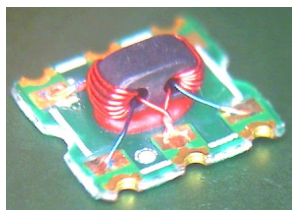
Rev. V2

## Features

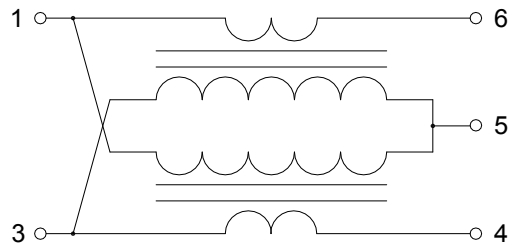
- 8 dB Coupler
- Surface Mount Package
- RoHS Compliant & Lead-Free
- Available on Tape & Reel

## Description

The MACP-009404-C80370 is a high performance 75  $\Omega$  coupler in a surface mount package. Ideally suited for high volume CATV applications.



## Functional Schematic



## Pin Configuration

Pin #	Function	Pin #	Function
1	Output	4	Coupled
2	Not Connected	5	Ground
3	External 75 $\Omega$	6	Input

## Electrical Specifications: Freq. = 5 - 1000 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	5 - 870	dB	—	7.9	$\pm 0.6$
	870 - 1000			7.9	$\pm 0.8$
Coupling Flatness	5 - 1000	dB	—	—	0.9
Main Line Loss	5 - 870	dB	—	1.5	2.3
	870 - 1000			2.1	2.6
Directivity	5 - 870	dB	—	17	11
	870 - 1000			13	10
Input Return Loss	5 - 50	dB	17	18	—
	50 - 870		16	18	
	870 - 1000		16	20	
Output Return Loss	5 - 50	dB	24	22	—
	50 - 870		20	34	
	870 - 1000		18	24	
Coupling Return Loss	5 - 50	dB	16	19	—
	50 - 870		16	20	
	870 - 1000		16	20	

## Ordering Information

Part Number	Package
MACP-009404-C80370	900 piece reel
MACP-009404-C803TB	customer test board

## Recommended Maximum Ratings

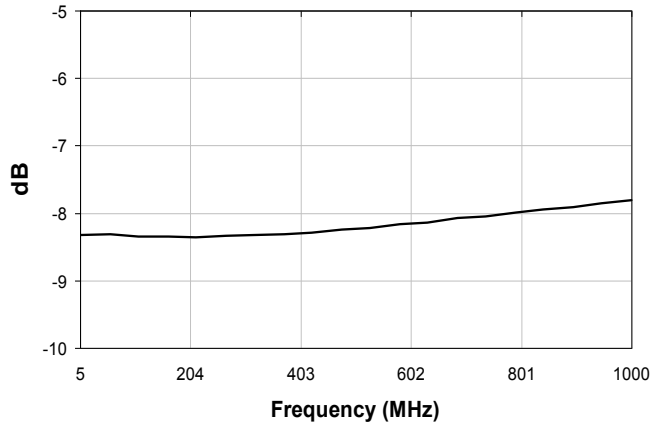
Parameter	Units
Input Power	250 mW
DC Current	30 mA
Operating & Storage Temperature	-40°C to +85°C

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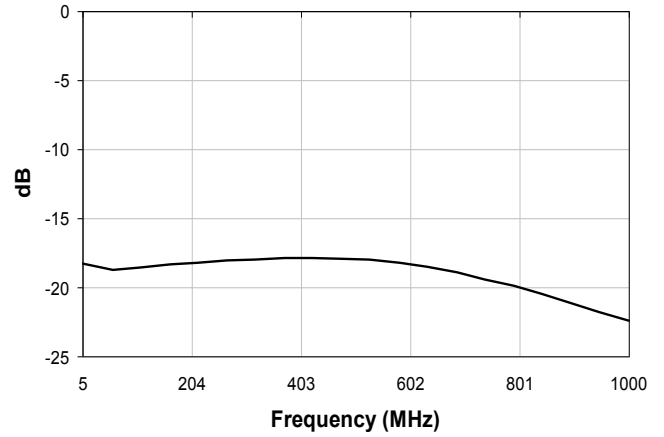
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## Typical Performance Curves

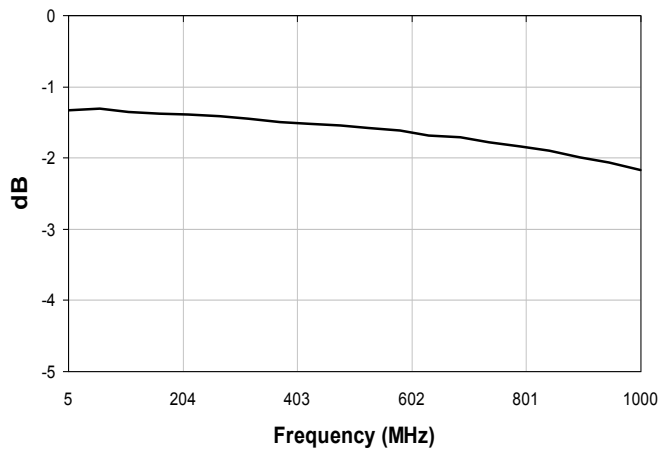
**Coupling**



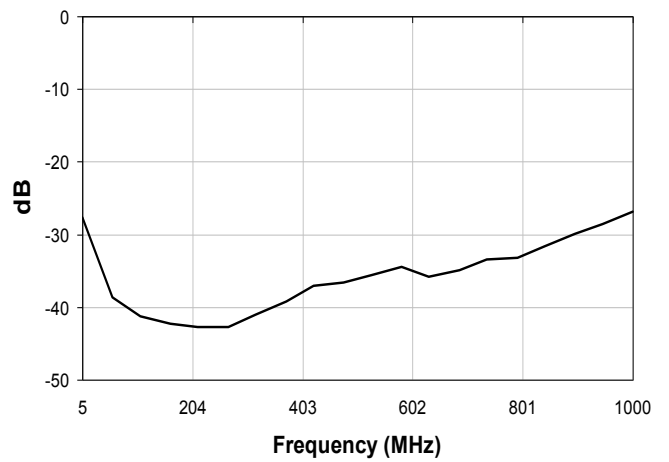
**Input Return Loss**



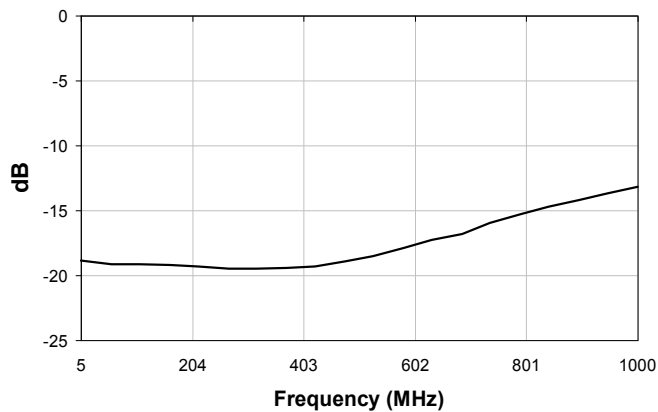
**Main Line Loss**



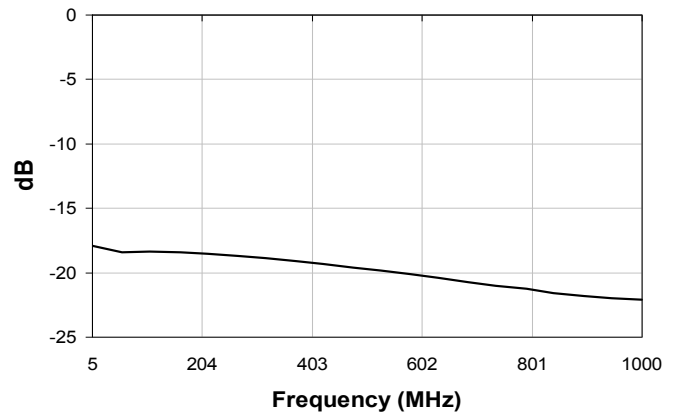
**Output Return Loss**



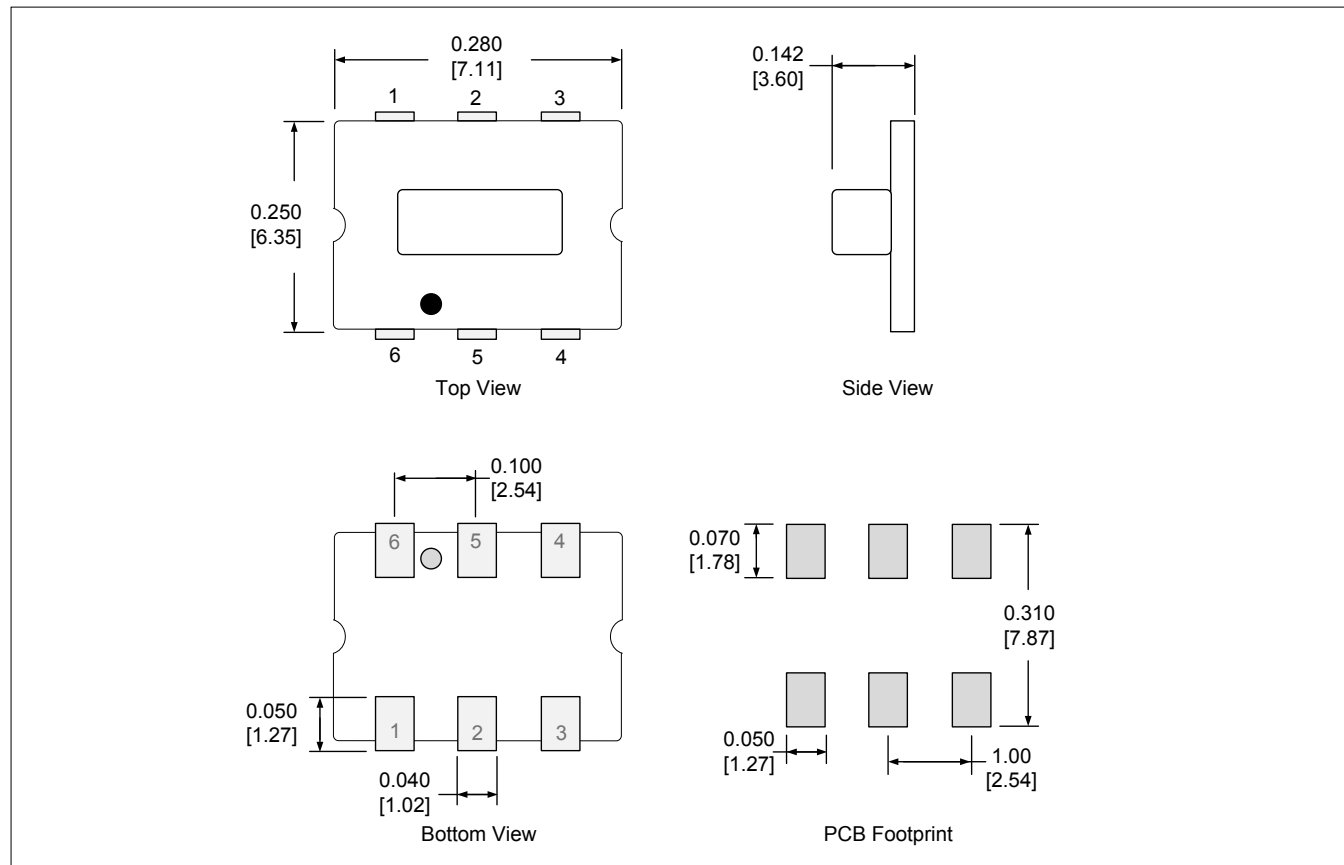
**Directivity**



**Coupled Port Return Loss**



## Outline Drawing (SM-55) & PCB Footprint



Dimensions in inches [mm] Tolerance: .xx ± .02, .xxx ± .010

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