

Coupler, 8dB  
5 to 1000 MHz

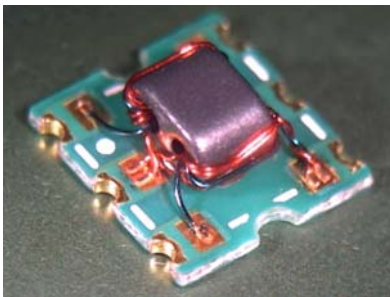
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## Features

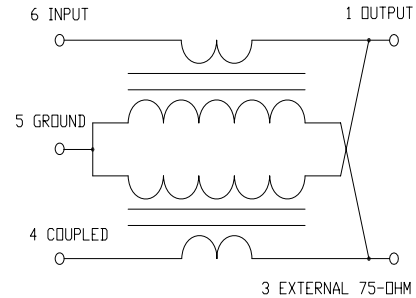
- Surface mount
- Coupling 8dB typical
- 260°C reflow compatible
- RoHS\* compliant, lead free
- Available on tape and reel.

## Description

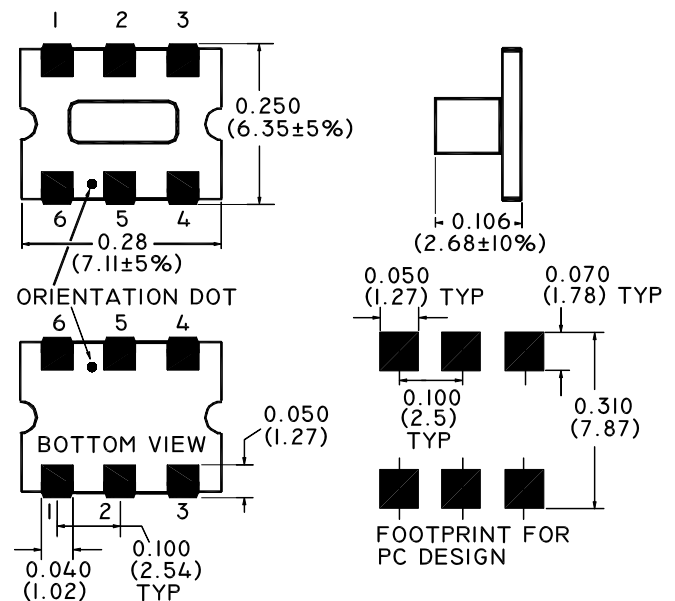
The MACP-009404-C80370 is a high performance 75Ω, 8dB coupler, in a SM-55 low cost surface mount package. It is designed for use in high volume CATV applications. Typical applications include set-top boxes, network interface units, broadband amplifiers and head-end equipment.



## Schematic



## Case style: SM-55



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

## Pin configuration

Pin no.	Function
1	Output
2	Not Connected
3	External 75 Ohm
4	Coupled
5	Ground
6	Input

## Ordering information

Part number	Description
MACP-009404-C80370	Reel quantity 900
MACP-009404-C803TB	Customer Test Board

Note: Reference Application Note **M513** for reel size information.

\* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

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## Electrical Specifications: $T_A=25^{\circ}\text{C}$ , $Z_0=75\Omega$

Parameter	Test Conditions	Units	Min	Typ	Max
Coupling	5 - 870 MHz	dB	-	7.9	$\pm 0.6$
	870 - 1000 MHz	dB	-	7.9	$\pm 0.8$
Main Line Loss	5 - 870 MHz	dB	-	1.5	2.3
	870 - 1000 MHz	dB	-	2.1	2.6
Coupling Flatness	5 - 1000 MHz	dB	-	-	0.9
Directivity	5 - 870 MHz	dB	-	17	11
	870 - 1000 MHz	dB	-	13	10
Input Return Loss	5 - 50 MHz	dB	17	18	-
	50 - 870 MHz	dB	16	18	-
	870 - 1000 MHz	dB	16	20	-
Output Return Loss	5 - 50 MHz	dB	24	22	-
	50 - 870 MHz	dB	20	34	-
	870 - 1000 MHz	dB	18	24	-
Coupled Return Loss	5 - 50 MHz	dB	16	19	-
	50 - 870 MHz	dB	16	20	-
	870 - 1000 MHz	dB	16	20	-

## Absolute Maximum Ratings

Parameter	Absolute maximum
RF power	250mW
DC current	30mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C

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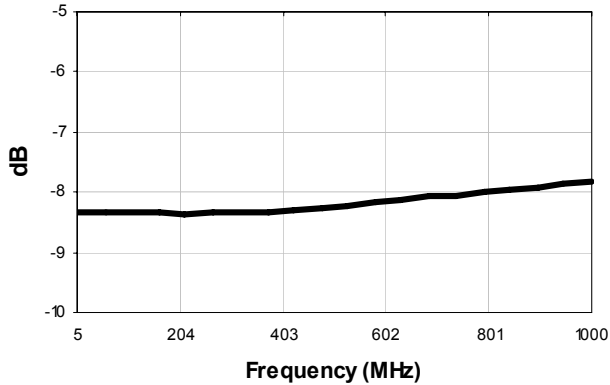
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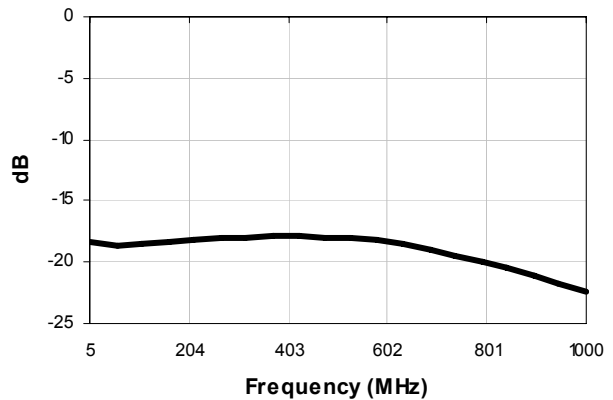
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## Typical Performance Curves: $T_A=25^\circ\text{C}$ , $Z_0=75\Omega$

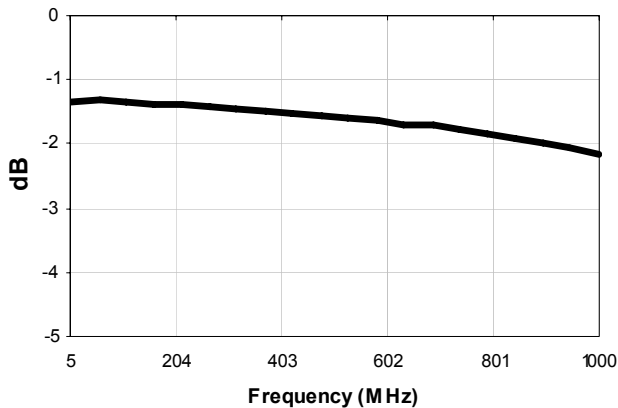
### Coupling



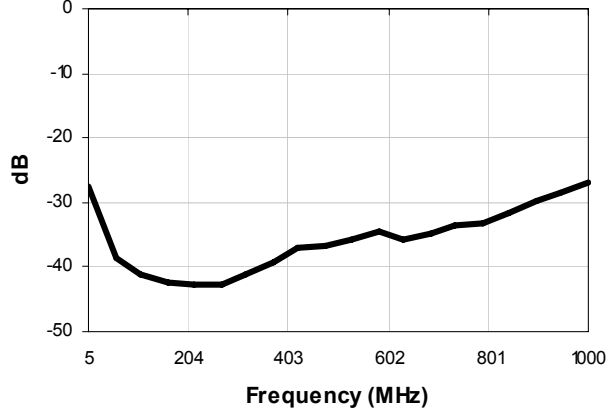
### Return Loss: Input



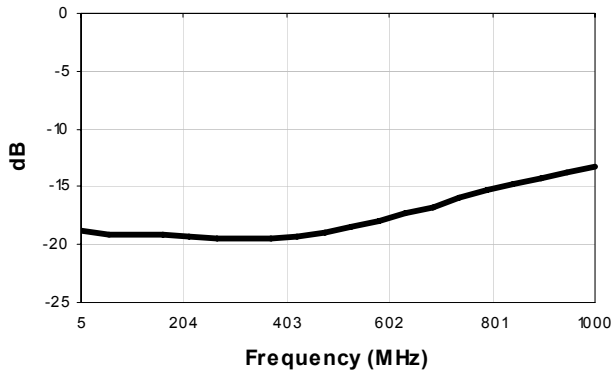
### Main Line Loss



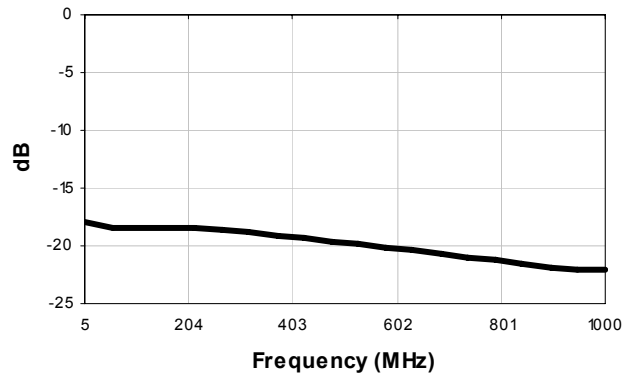
### Return Loss: Output



### Directivity



### Return Loss: Coupled



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