

## Broadband CATV, Coupler 5-1000MHz

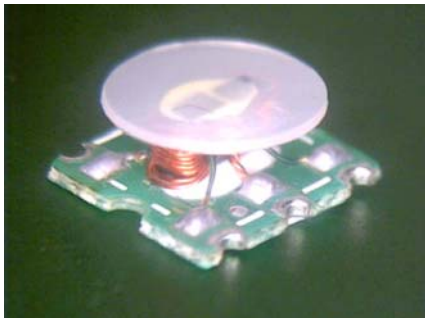
MACP-008125-CK07F0  
V1

### Features

- Surface Mount
- Typical Coupling 20dB
- RoHS\* Compliant
- RoHS version of ELDC-20.
- 260°C Reflow Compatible
- Available on Tape and Reel.
- All wires are soldered to the substrate using HMP solder

### Description

M/A-COM's MACP-008125-CK07F0 is a high performance 75 Ohm Coupler, in a SM-55 low cost, surface mount package. The MACP-008125-CK07F0 is designed for use in high volume CATV applications. Typical applications include Set-top Boxes, Network Interface Units, Broadband Amplifiers and Headend equipment.

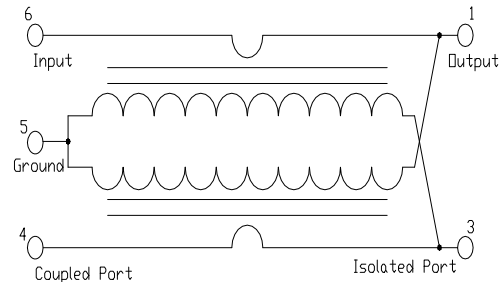


### Pin Configuration

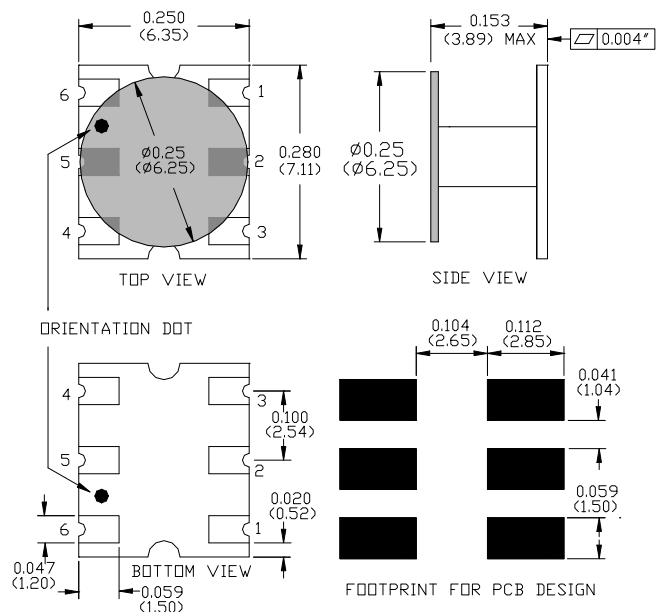
Pin No.	Function
1	Output
2	Ground, not connected
3	Isolated (external 75 Ohms termination)
4	Coupled
5	Ground
6	Input

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

### Schematic



### Case Style: SM-127



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

### Ordering Information

Part Number	Package
MACP-008125-CK07F0	900 piece reel
MACP-008125-CK07TB	Customer Test Board

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

• **North America** Tel: 800.366.2266 • **Europe** Tel: +353.21.244.6400  
• **India** Tel: +91.80.4155721 • **China** Tel: +86.21.2407.1588

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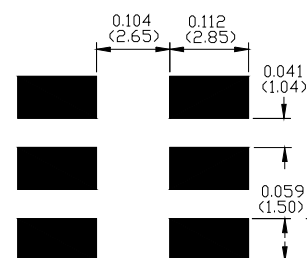
Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$  <sup>1</sup>

Parameter	Test Conditions	Units	Min	Typ	Max
Mainline Loss	5 - 50 MHz	dB	—	0.6	0.7
	50 - 870 MHz	dB	—	0.45	0.65
	870 - 1000 MHz	dB	—	0.6	0.7
Coupling	5 - 870 MHz	dB	—	20	$\pm 0.8$
	870 - 1000 MHz	dB	—	20	$\pm 1.0$
Coupling Flatness	5 - 1000 MHz	dB	—	—	$\pm 0.5$
Directivity	5 - 870 MHz	dB	10	14	—
	870 - 1000 MHz	dB	7	9	—
Input Return Loss	5 - 50 MHz	dB	20	22	—
	50 - 1000 MHz	dB	22	27	—
Output Return Loss	5 - 50 MHz	dB	20	22	—
	50 - 1000 MHz	dB	22	28	—
Coupled Return Loss	5 - 50 MHz	dB	20	22	—
	50 - 1000 MHz	dB	20	27	—

### Absolute Maximum Ratings <sup>1,2</sup>

Parameter	Absolute Maximum
Max Input Power	250mW
DC current	30mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

### Recommended PCB Configuration



FOOTPRINT FOR PCB DESIGN

1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

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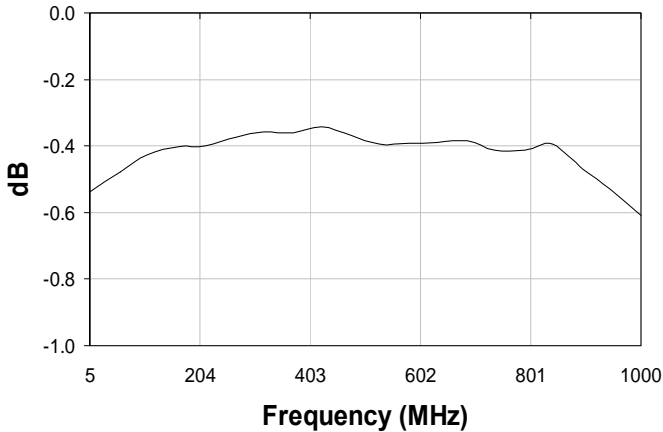
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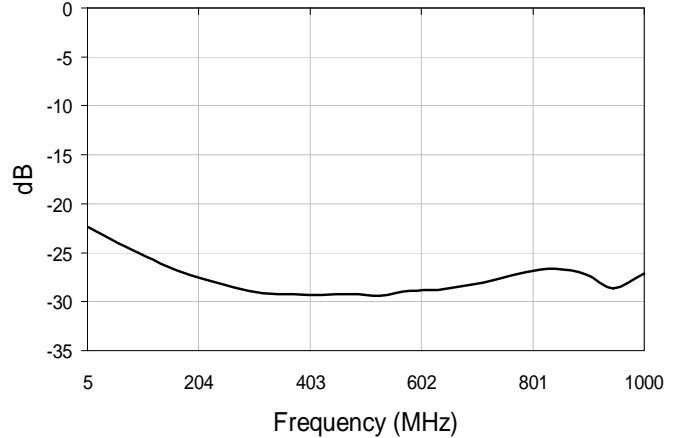
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### Typical Performance Curves $T_A = 25^\circ\text{C}$ , $Z_0 = 75\Omega$

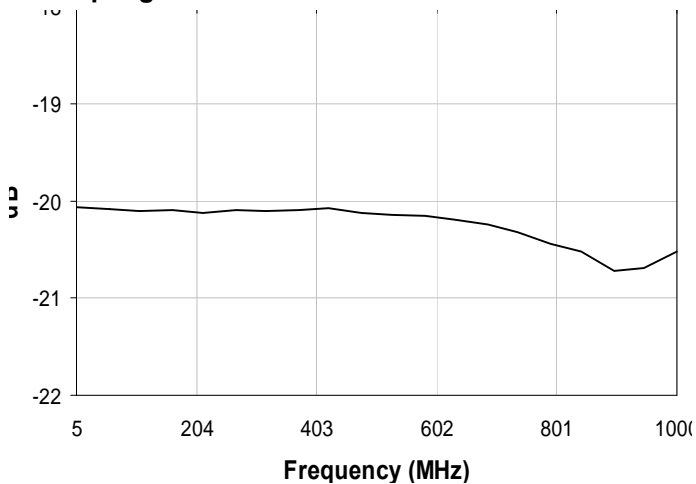
**Main Line Loss**



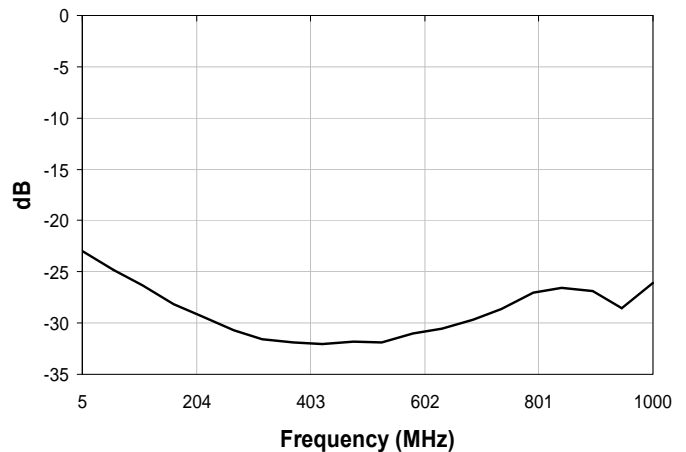
**Return Loss: Input**



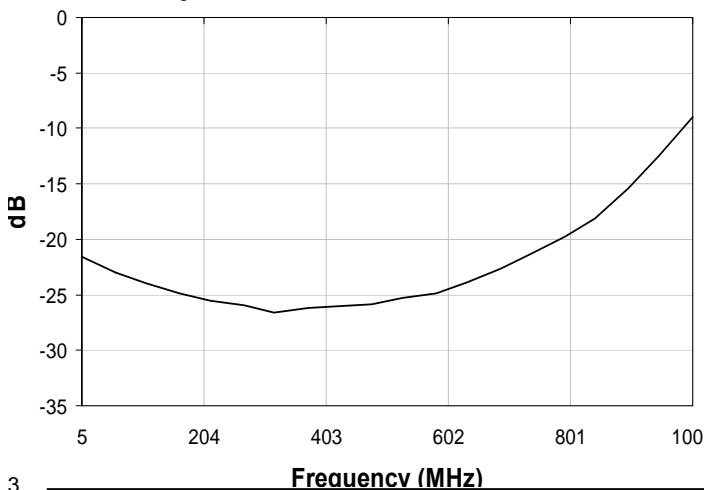
**Coupling**



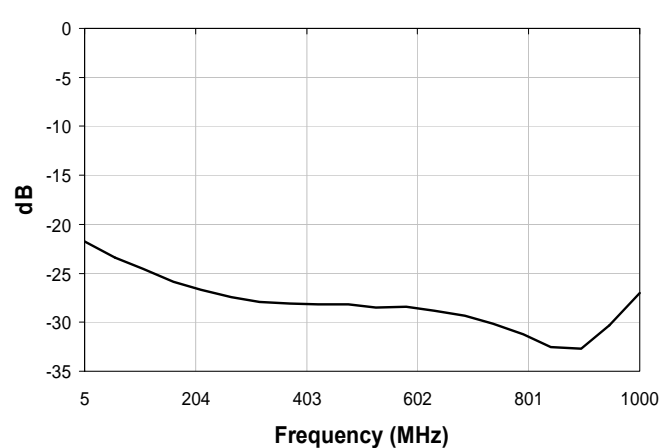
**Return Loss: Output**



**Directivity**



**Return Loss: Coupled**



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