tyco Electronics

RoHS Compliant

MACOM

Broadband CATV, Coupler 5-1000MHz

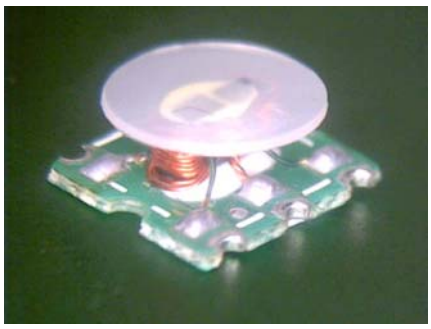
MACP-008125-CK07F0
V1

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.

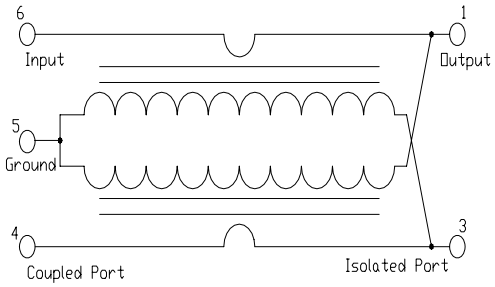


Pin Configuration

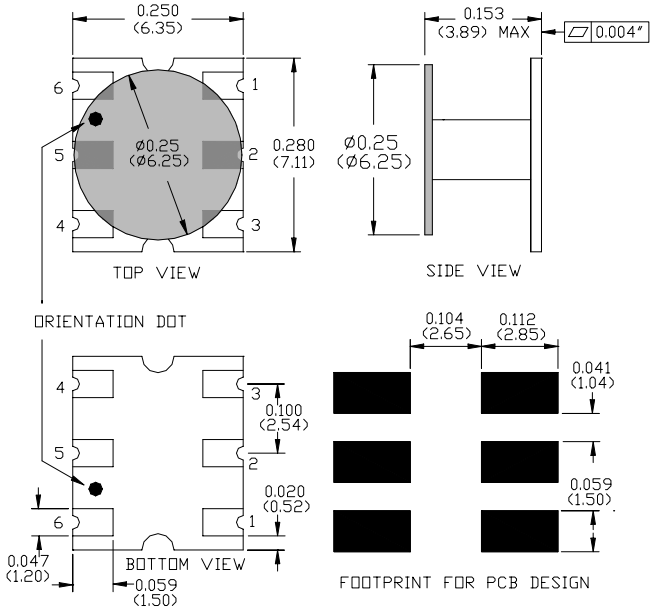
Pin No.	Function
1	Output
2	Ground, not connected
3	Isolated (external 75 Ohms termination)
4	Coupled
5	Ground
6	Input

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.

Broadband CATV, Coupler 5-1000MHz

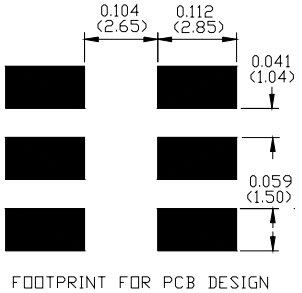
Electrical Specifications: T_A = 25°C, Z_0 = 75Ω [1]

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

Absolute Maximum Ratings [1,2]

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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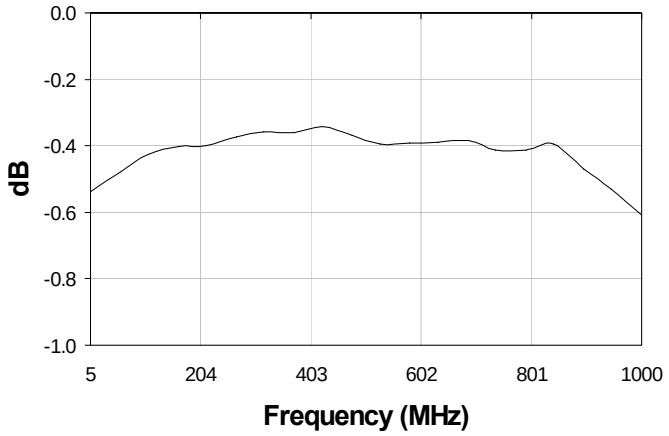
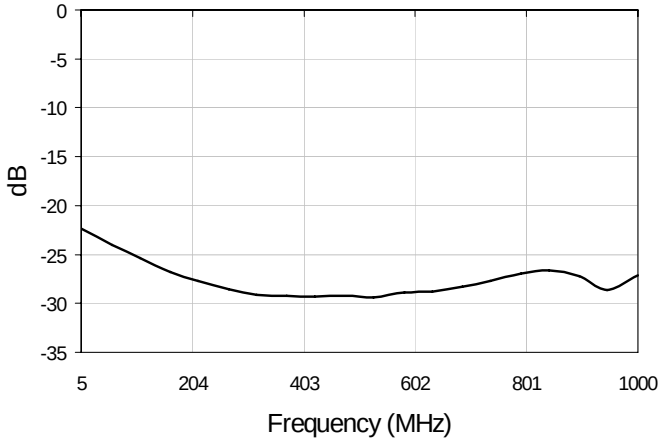
Typical Performance Curves T_A = 25°C, Z_0 = 75Ω

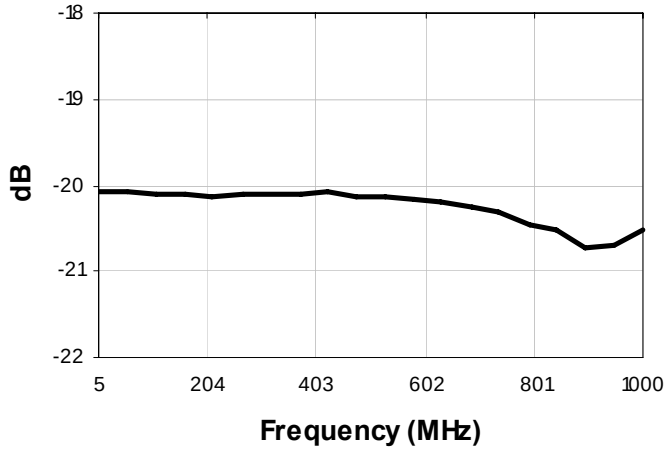
Main Line Loss



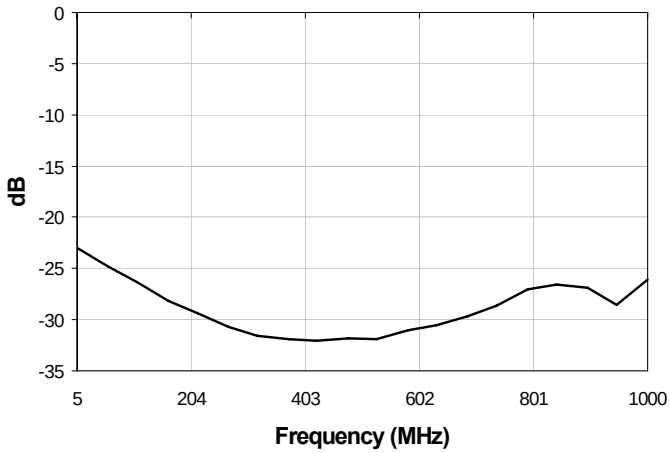
Return Loss: Input



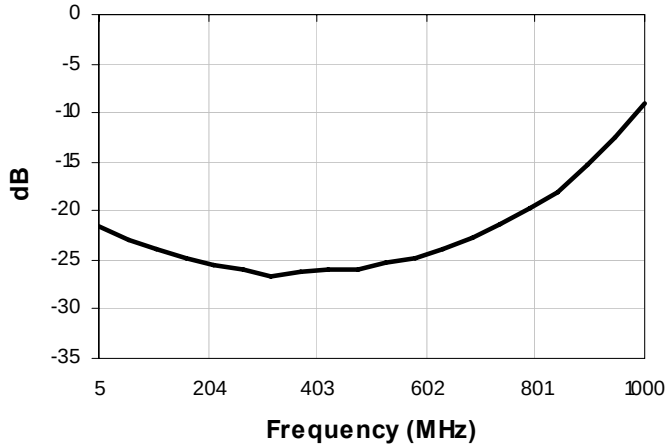
Coupling



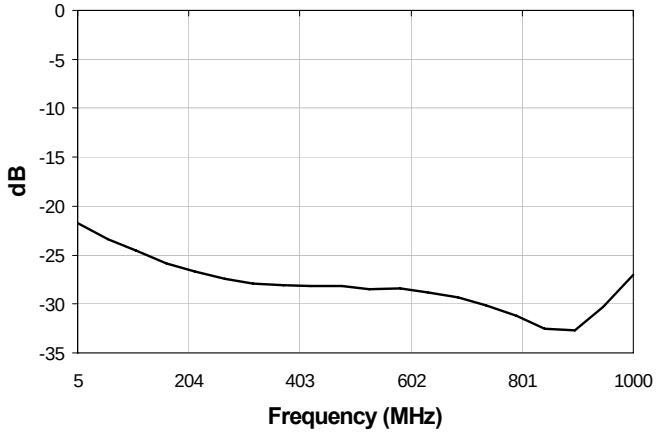
Return Loss: Output



Directivity



Return Loss: Coupled



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