

# MACP-009944-CK07F0



Broadband CATV 20 dB Coupler  
5 to 1000 MHz

Rev. V2

## Features

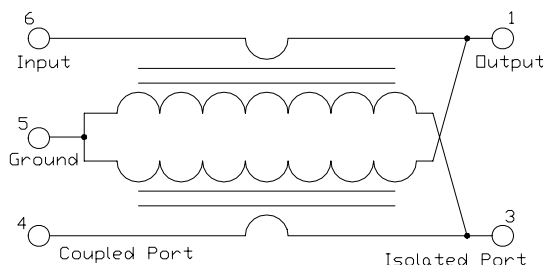
- Surface Mount
- Typical Coupling 20dB
- 260°C Reflow Compatible
- RoHS\* Compliant, lead free
- Available on Tape and Reel.
- All wires are welded to the substrate

## Description

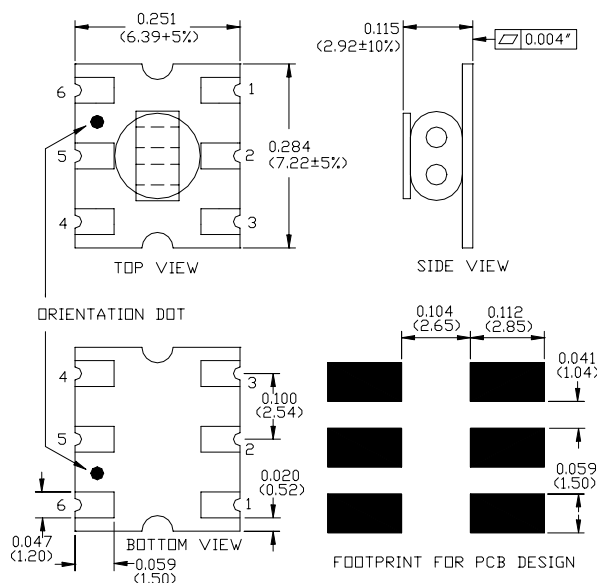
M/A-COM Technology Solutions MACP-009944-CK07F0 is a 20dB Coupler in a low cost, surface mount package. Ideally suited for high volume CATV/Broadband applications. Typical applications include Set-Top boxes, Network Interface Units, Broadband Amplifiers and Head end equipment.



## Schematic



## Case Style: SM-127



## Pin Configuration

Pin No.	Function
1	Output
2	Not Used (connect to ground)
3	Isolated (external 75 Ohms termination)
4	Coupled
5	Ground
6	Input

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

## Ordering Information

Part number	Description
MACP-009944-CK07F0	900 piece reel
MACP-009944-CK07TB	Customer Test Board

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

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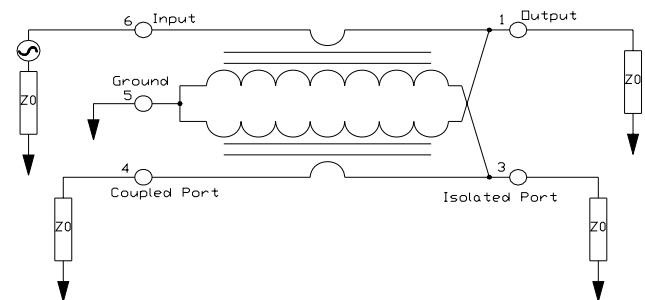
**Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $0\text{dBm}$ ,  $Z_0 = 75\Omega$ ,  $P_{in} = 0\text{dBm}$**

Parameter	Test Conditions	Units	Min	Typ	Max
Coupling	5 - 870 MHz	dB	-	20	$\pm 0.8$
	870 - 1000 MHz	dB	-	20	$\pm 1.0$
Main Line 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 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	-
Coupling Return Loss	5 - 50 MHz	dB	20	22	-
	50 - 1000 MHz	dB	20	27	-

## Recommended Maximum Ratings

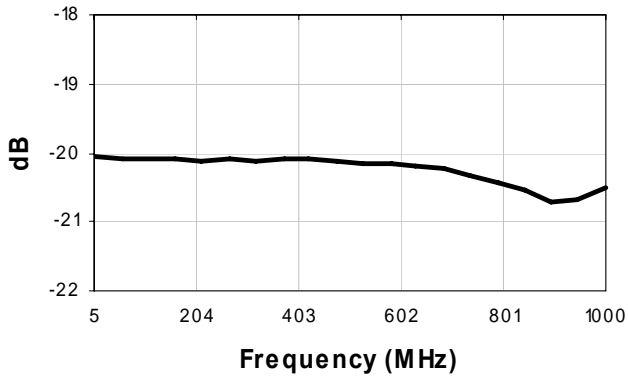
Parameter	Value
Max Input Power	250mW
DC current	30mA
Operating Temperature	$-40^\circ\text{C}$ to $+85^\circ\text{C}$
Storage Temperature	$-55^\circ\text{C}$ to $+100^\circ\text{C}$

## Application Circuit

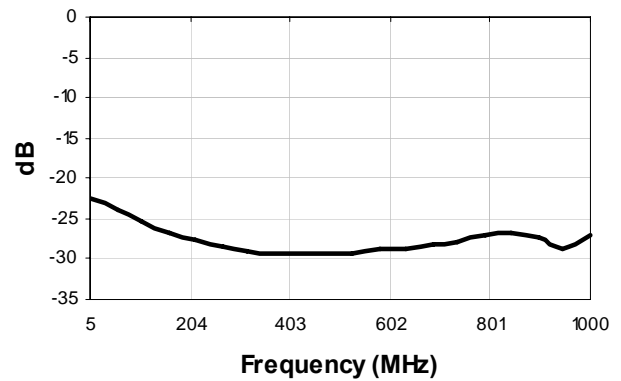


Typical Performance Curves:  $T_A = 25^\circ\text{C}$ ,  $0\text{dBm}$ ,  $Z_0 = 75\Omega$ ,  $P_{in} = 0\text{dBm}$

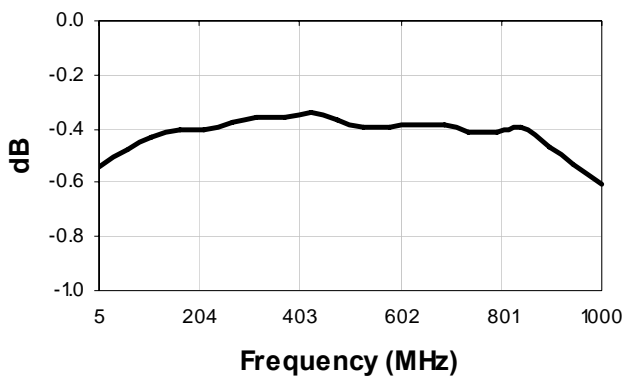
Coupling (Pin6 - Pin4)



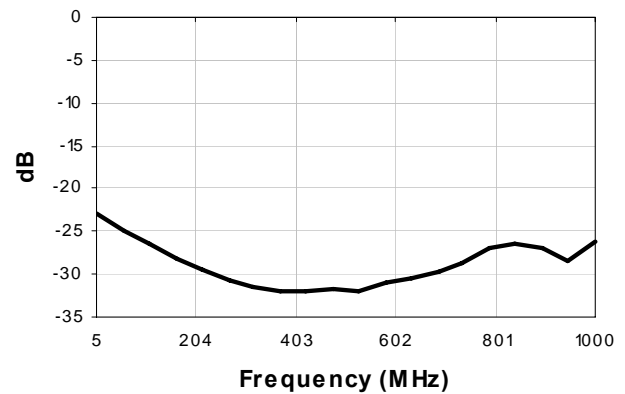
Return Loss: Input (Pin 6)



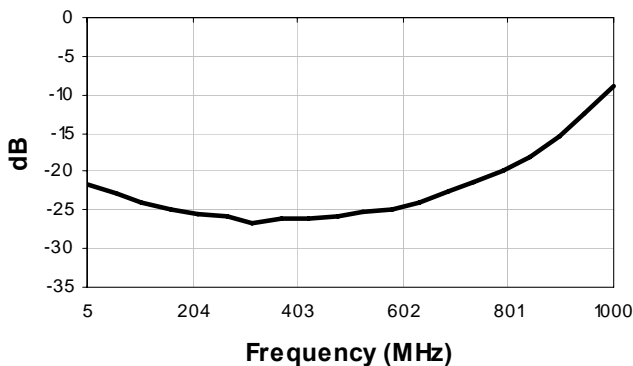
Main Line Loss (Pin6 - Pin1)



Return Loss: Output (Pin 1)



Directivity



Return Loss: Coupled (Pin 4)

