

MACP-009944-CK07F0



**Broadband CATV 20 dB Coupler
5 to 1000 MHz**

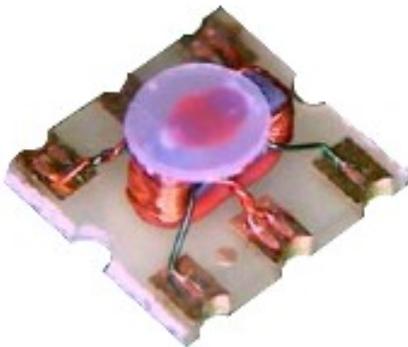
Rev. V5

Features

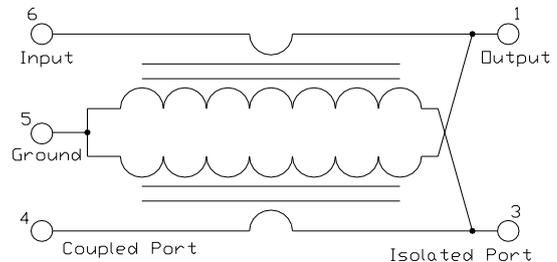
- Surface Mount
- Typical Coupling 20dB
- 260°C Reflow Compatible
- RoHS* Compliant, lead free
- Available on Tape and Reel.
- All wires are welded to the substrate

Description

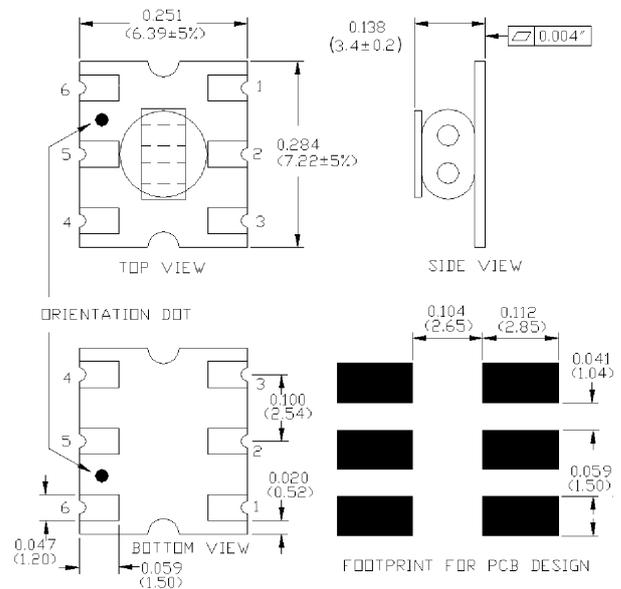
M/A-COM Technology Solutions MACP-009944-CK07F0 is a 20dB Coupler in a low cost, surface mount package. Ideally suited for high volume CATV/ Broadband applications. Typical applications include Set-Top boxes, Network Interface Units, Broadband Amplifiers and Head end equipment.



Schematic



Case Style: SM-127



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

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

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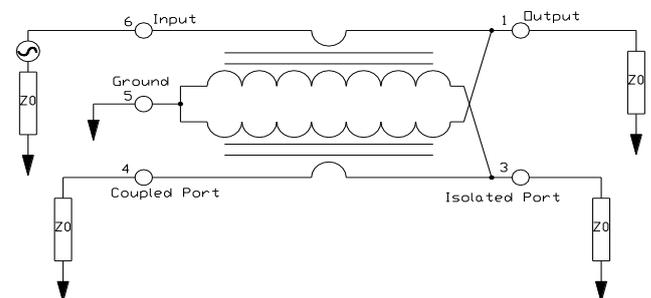
Electrical Specifications: $T_A = 25^\circ\text{C}$, 0dBm , $Z_0 = 75\Omega$, $P_{in} = 0\text{dBm}$

Parameter	Test Conditions	Units	Min	Typ	Max
Coupling	5 - 870 MHz	dB	-	20	± 0.8
	870 - 1000 MHz	dB	-	20	± 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	-	-	± 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°C to $+85^\circ\text{C}$
Storage Temperature	-55°C to $+100^\circ\text{C}$

Application Circuit



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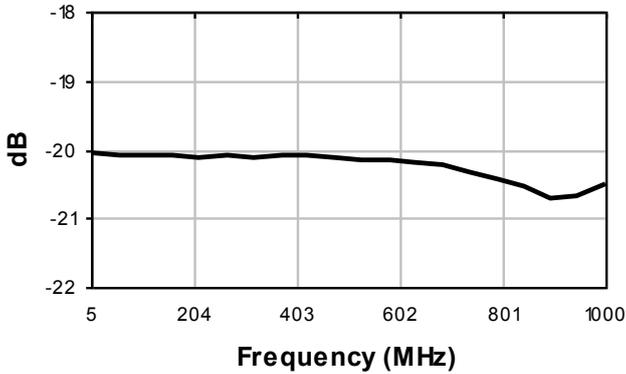


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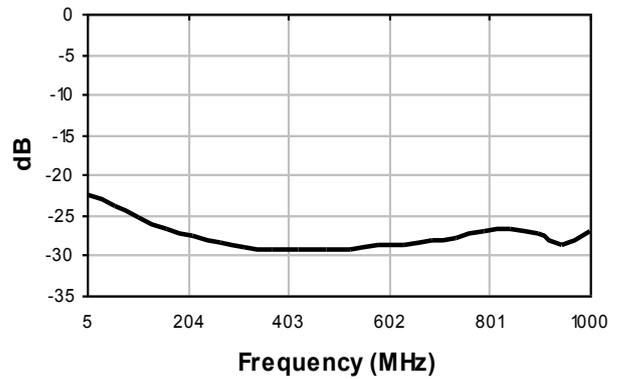
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Typical Performance Curves: $T_A = 25^\circ\text{C}$, 0dBm , $Z_0 = 75\Omega$, $P_{in} = 0\text{dBm}$

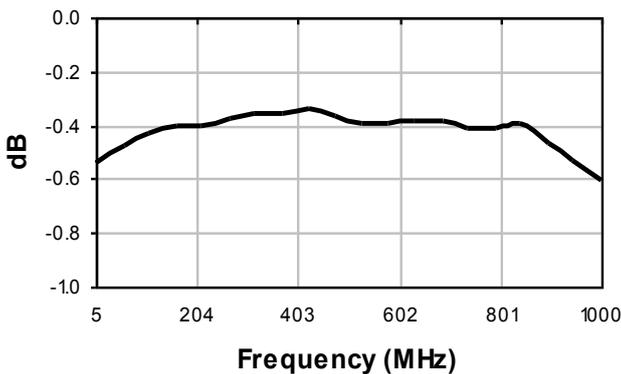
Coupling (Pin6 - Pin4)



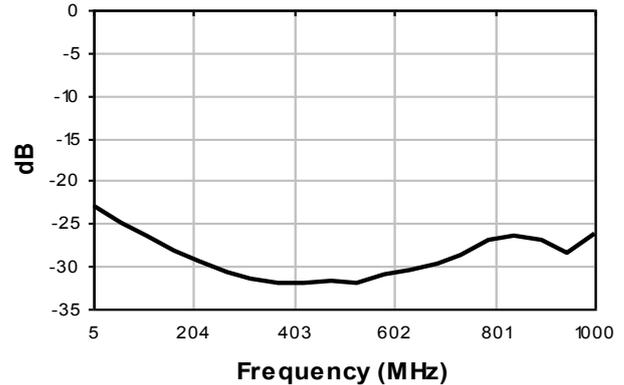
Return Loss: Input (Pin 6)



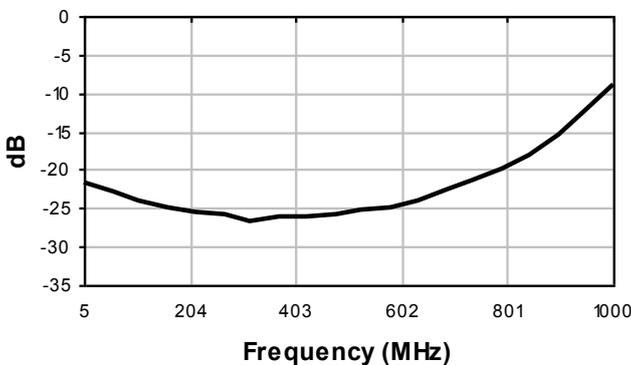
Main Line Loss (Pin6 - Pin1)



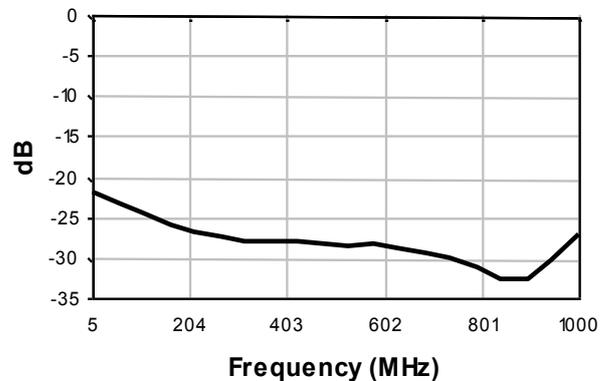
Return Loss: Output (Pin 1)



Directivity



Return Loss: Coupled (Pin 4)



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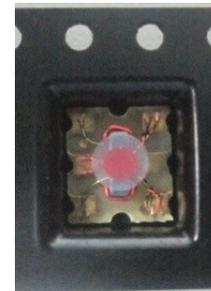
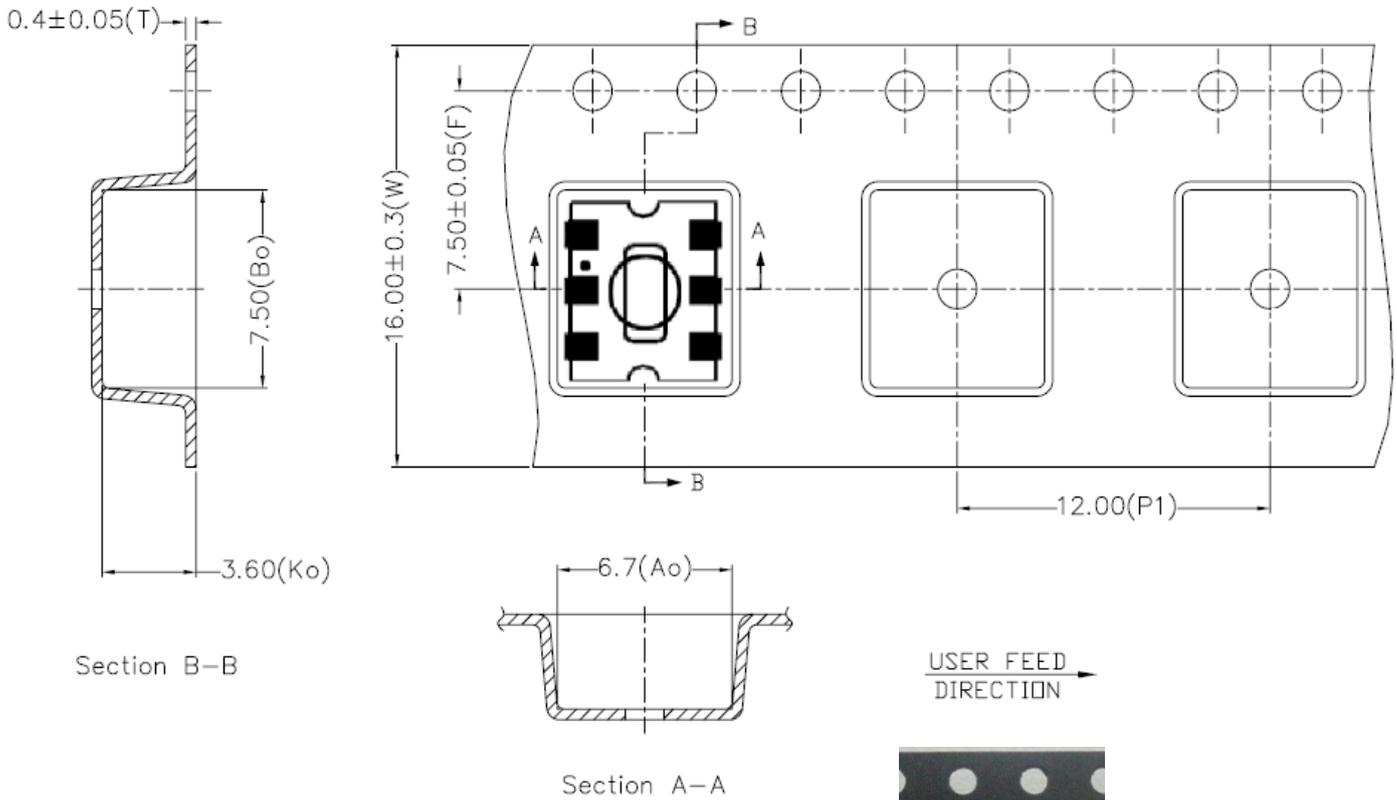
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Item	Dimension
Ao	6.70mm +/- 0.1mm
Bo	7.50mm +/- 0.1mm
Ko	3.60mm +/- 0.1mm
W	16.00mm +/- 0.3mm
P1	12.00mm +/- 0.1mm

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