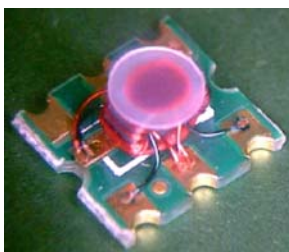


Features

- Surface Mount
- Typical Coupling +17dB
- 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-009943-CH07F0 is a 17dB broadband Coupler in a low cost, surface mount package. It offers low loss, good Isolation, good input/output matching and exceptional coupling repeatability. Ideally suited for high volume CATV/Broadband applications.

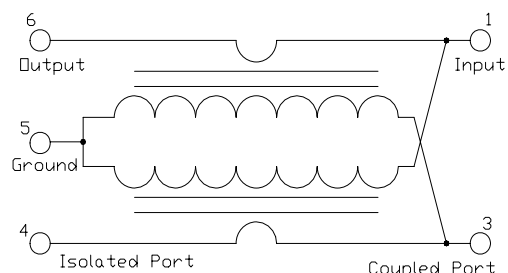


Pin Configuration

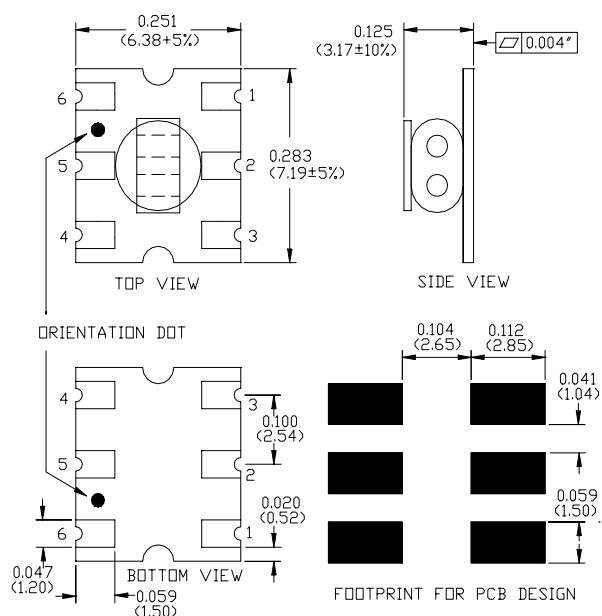
Pin No.	Function
1	Input
2	Not Used (short to ground)
3	Coupled
4	Isolated (external 75 Ohms termination)
5	Ground
6	Output

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

Schematic



Case Style: SM-55A



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

Ordering Information

Part number	Description
MACP-009943-CH07F0	900 piece reel
MABA-009943-CH07TB	Customer Test Board

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

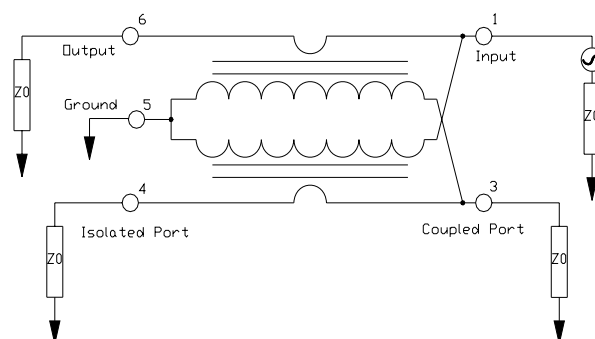
Electrical Specifications: $T_A = 25^\circ\text{C}$, 0dBm , $Z_0 = 75\Omega$, $P_{in} = 0\text{dBm}$

Parameter	Test Conditions	Units	Min	Typ	Max
Coupling	5 - 860 MHz	dB	-	17.2	± 0.7
	860 - 1000 MHz	dB	-	17.0	± 0.8
Main Line Loss	5 - 860 MHz	dB	-	0.6	1.0
	860 - 1000 MHz	dB	-	0.8	1.2
Coupling Flatness	5 - 1000 MHz	dB	-	-	1.0
Directivity	5 - 50 MHz	dB	30	40	-
	50 - 500 MHz	dB	12	20	-
	500 - 1000 MHz	dB	5	12	-
Input Return Loss	5 - 50 MHz	dB	24	28	-
	50 - 500 MHz	dB	24	28	-
	500 - 1000 MHz	dB	20	25	-
Output Return Loss	5 - 50 MHz	dB	20	25	-
	50 - 500 MHz	dB	20	25	-
	500 - 1000 MHz	dB	20	23	-
Coupling Return Loss	5 - 50 MHz	dB	20	25	-
	50 - 500 MHz	dB	20	25	-
	500 - 1000 MHz	dB	18	23	-

Recommended Maximum Ratings

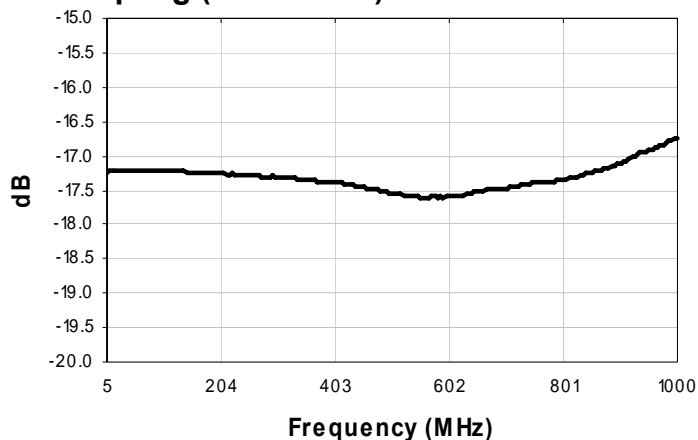
Parameter	Value
Max Input Power	250mW
DC current	30mA
Operating Temperature	-40°C to $+85^\circ\text{C}$
Storage Temperature	-55°C to $+100^\circ\text{C}$

Application Circuit

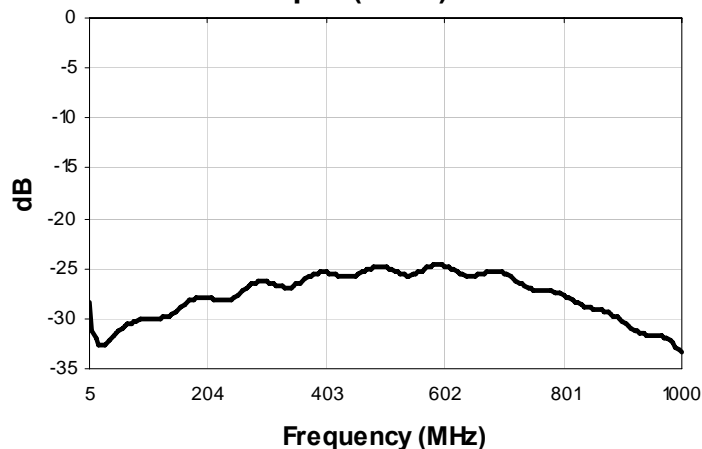


Typical Performance Curves: $T_A = 25^\circ\text{C}$, 0dBm , $Z_0 = 75\Omega$, $P_{in} = 0\text{dBm}$

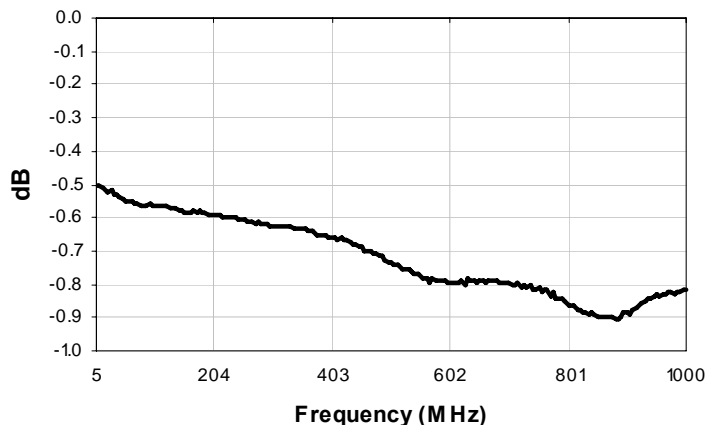
Coupling (Pin1 - Pin3)



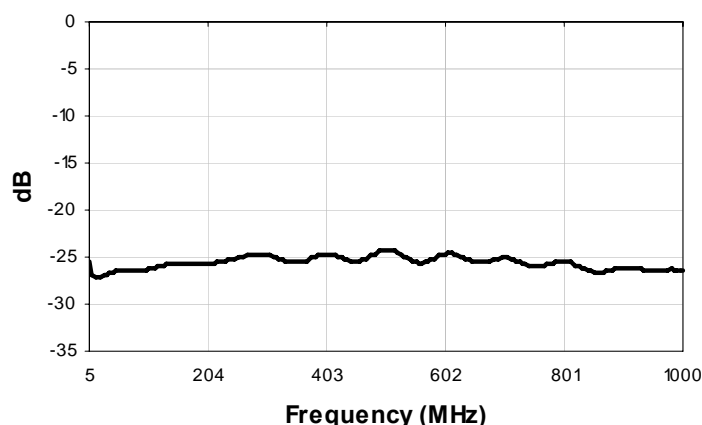
Return Loss: Input (Pin 1)



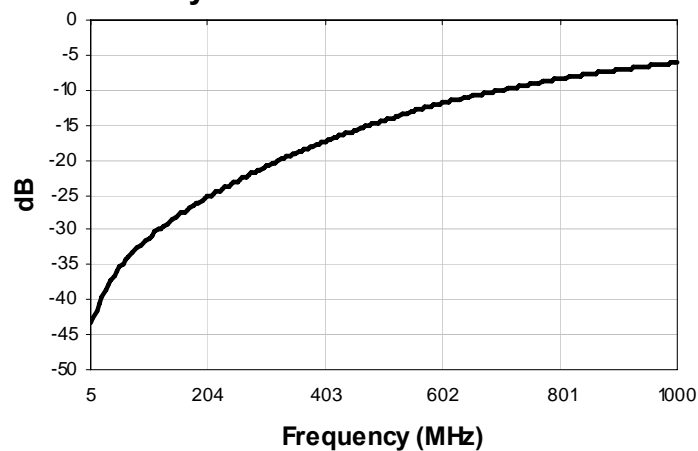
Main Line Loss (Pin1 - Pin6)



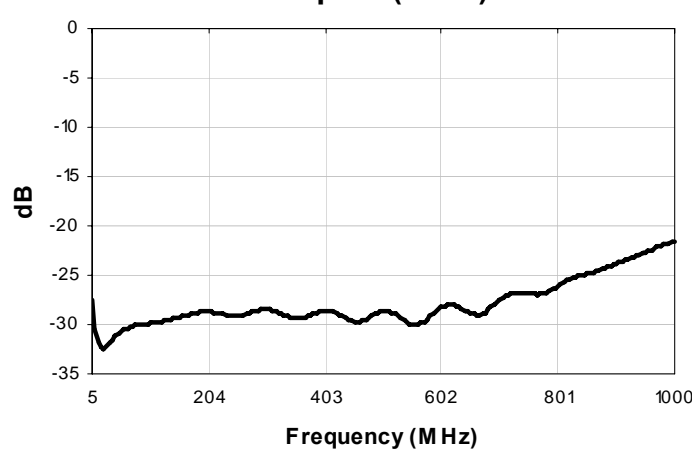
Return Loss: Output (Pin 6)



Directivity



Return Loss: Coupled (Pin 3)



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