MACP-009945-CH0670

Broadband CATV 17.5 dB Directional Coupler 5 to 1200 MHz

Features

- Surface Mount
- Coupling 17.5dB Typical
- **Excellent Temperature stability**
- 260°C Reflow Compatible
- RoHS* Compliant, lead free
- Available on Tape and Reel.

Description

M/A-COM Technology Solutions MACP-009945-CH0670 is a low cost 17.5dB directional coupler designed in a low cost, surface mount package. Ideally suited for high volume CATV/Broadband applications. Suitable for use in 50 Ohm and 75 Ohm systems.

Note:

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There is no orientation dot on the bottom of the PCB.



Pin Configuration

Pin No.	Function		
1	Output		
2	Not Connected (ground)		
3	Isolated (external 75 Ohm Load)		
4	Coupling		
5	Ground		
6	Input		

Note: Reference Application Note M513 for reel size information.

Commitment to produce in volume is not guaranteed.

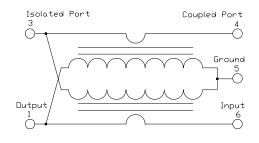
Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

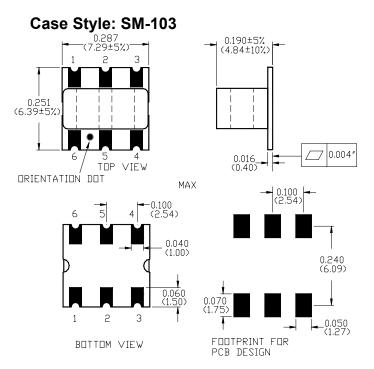
is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

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typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available.

Schematic





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

Ordering Information

Part number	Description		
MACP-009945-CH0670	900 piece reel		
MACP-009945-CH06TB	Customer Test Board		

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions North America Tel: 800.366.2266 • Europe Tel: +353.21.244.6400 India Tel: +91.80.43537383 • China Tel: +86.21.2407.1588

Visit www.macomtech.com for additional data sheets and product information.

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Rev. V3

MACP-009945-CH0670



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Rev. V3

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

* Monitored during production tune/test.

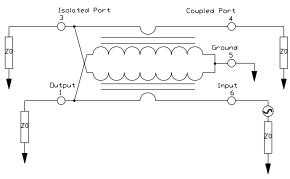
•		<i>,</i>		Monitored during production turie/tes		
Parameter	Test Conditions	Units	Min	Тур	Max	
Main Line Loss (Pin 6-1) forward *	5 - 870 MHz 870 - 1002 MHz 1002 - 1200 MHz	dB dB dB	- - -	0.5 1.0 1.3	1.0 1.2 1.6	
Main Line Loss (Pin 3-4) Reverse *	5 - 870 MHz 870 - 1002 MHz 1002 - 1200 MHz	dB dB dB	- - -	0.5 1.0 1.3	1.0 1.2 1.6	
Coupling -17.5dB (Pin 6-4) Forward *	5 - 1002 MHz 1002 - 1200 MHz	dB dB		17.5 17.5	±0.5 ±1.0	
Coupling -17.5dB (Pin 1-3) Reverse *	5 - 200 MHz 200 - 500 MHz 500 - 870 MHz 870 - 1002 MHz 1002 - 1200 MHz	dB dB dB dB dB	- - - 15.0	17.5 18.5 19.5 18.5 17.5	±0.7 ±1.5 ±1.5 ±1.5 19.5	
Input Return Loss (Pin 6) *	5 - 870 MHz 870 - 1002 MHz 1002 - 1200 MHz	dB dB dB	22 20 16	27 26 24		
Output Return Loss (Pin 1) *	5 - 870 MHz 870 - 1002 MHz 1002 - 1200 MHz	dB dB dB	22 18 15	33 33 21	- - -	
Coupling Return Loss (Pin 4) *	5 - 870 MHz 870 - 1002 MHz 1002 - 1200 MHz	dB dB dB	22 20 18	28 23 23	- - -	
Directivity	5 - 870 MHz 870 - 1002 MHz 1002 - 1200 MHz	dB dB dB	30 8 4	40 15 10		
Inductance @ 5 MHz (Pins 6-1 & 4-3)	5 MHz	nH	240	245	260	

Recommended Maximum Ratings

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Parameter	Value		
RF power	250mW		
DC current	30mA		
Operating Temperature	-40°C to +85°C		
Storage Temperature	-40°C to +85°C		

Application Circuit



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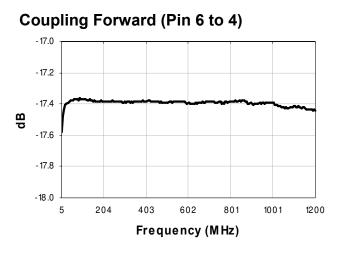
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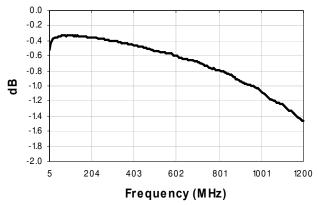


Rev. V3

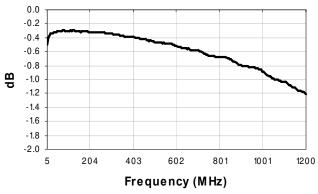
Typical Performance Curves: $T_A = 25^{\circ}C$, 0dBm, $Z_0 = 75\Omega$, $P_{in} = 0$ dBm



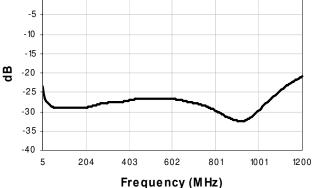
Main Line Loss Forward (Pin 6-1)



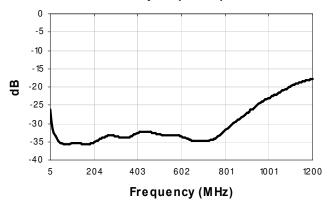




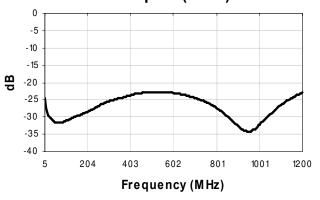
Return Loss: Input (Pin 6)



Return Loss: Output (Pin 1)



Return Loss: Coupled (Pin 4)



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