# MACP-008311-CE0370



# 14 dB Coupler/5-1000 MHz **ROHS Compliant**

Rev V1A

#### **Features**

- Surface Mount
- 14 dB Coupler
- RoHS\* Compliant
- RoHS version of ELDC-14
- Available on Tape and Reel. Reel quantity 900

## **Description**

M/A-COM Technology Solutions MACP-008311-CE0370 is a high performance 75 Ohm Coupler, in an SM-55 low cost, surface mount package. The ELDC-14 is designed for use in high volume CATV applications. Typical applications include Set-top Boxes, Network Interface Units, Cable Amplifiers and Headend equipment.



# **Pin Configuration**

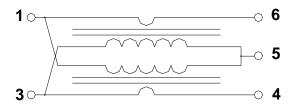
Pin No.	Function			
1	Output			
2	Not connected (ground)			
3	External 75 Ohm			
4	Coupled			
5	Ground			
6	Input			

# Ordering Information

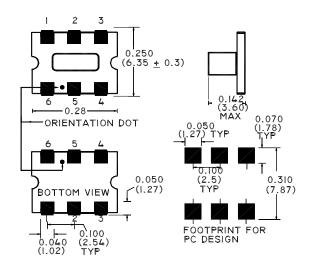
Part Number	Package		
MACP-008311-CE0370	900		
MACP-008311-CE03TB	Customer Test Board		

Note: Reference Application Note M513 for reel size information.

### **Schematic**



## Case Style: SM-55



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

typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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

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Electrical Specifications:  $T_A = 25$ °C,  $Z_0 = 75\Omega^1$ 

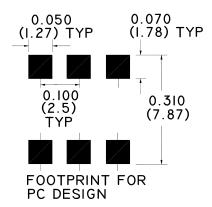
Parameter	Test Conditions	Units	Min	Тур	Max
Mainline Loss	5 - 870 MHz 870 - 1000 MHz	dB dB	1	0.8 1.0	1.5 1.8
Coupling	5 - 870 MHz 870 - 1000 MHz	dB dB	_	14.3 14.3	± 0.5 ± 0.7
Coupling Flatness		dB	_	_	0.8
Directivity	5 - 870 MHz 870 - 1000 MHz	dB dB	15 13	25 20	_ _
Input Return Loss	5 - 870 MHz 870 - 1000 MHz	dB dB	20 18	25 23	_ _
Output Return Loss	5 - 870 MHz 870 - 1000 MHz	dB dB	20 20	25 25	_ _
Coupled Return Loss	5 - 870 MHz 870 - 1000 MHz	dB dB	18 18	23 23	

# **Absolute Maximum Ratings <sup>1,2</sup>**

Parameter	<b>Absolute Maximum</b>		
RF Power	250 mW		
DC current	30 mA		
Pin Temperature (10 sec)	260°C		
Operating/Storage Temperature	-40°C to +85°C		

- Exceeding any one or combination of these limits may cause permanent damage to this device.
- M/A-COM does not recommend sustained operation near these survivability limits.

# **Recommended PCB Configuration**



typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

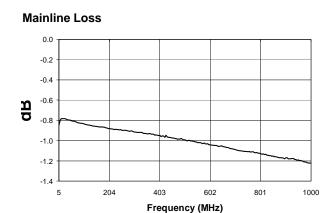
# MACP-008311-CE0370



# 14 dB Coupler/5-1000 MHz ROHS Compliant

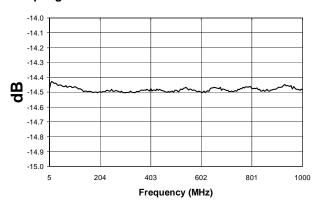
Rev V1A

Typical Performance Curves:  $T_A = 25$ °C,  $Z_0 = 75\Omega^1$ 

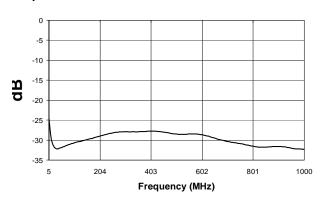


# Input Return Loss -5 -10 -15 -20 -25 -30 -35 5 204 403 602 801 10 Frequency (MHz)

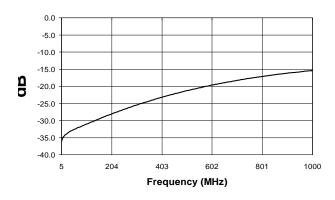
#### Coupling



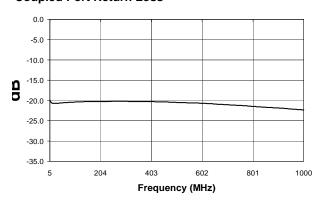
#### **Output Return Loss**



#### Directivity



#### **Coupled Port Return Loss**



prototype measurements. Commitment to develop is not guaranteed.

PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology
Solutions has under development. Performance is based on engineering tests. Specifications are
typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available.
Commitment to produce in volume is not guaranteed.

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