

**17dB Broadband CATV, Coupler  
5-1200MHz**

**MACP-007741-CG09E0  
V1**

**Features**

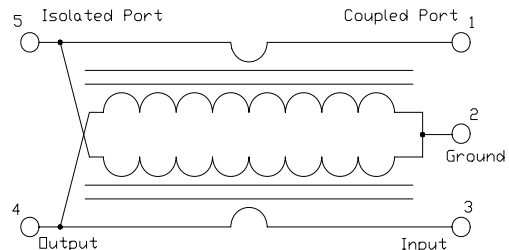
- Surface Mount
- Typical Coupling 17dB
- RoHS\* Compliant
- RoHS version of EMDC-17-1-75
- 260°C Reflow Compatible
- Available on Tape and Reel, reel qty. 2000

**Description**

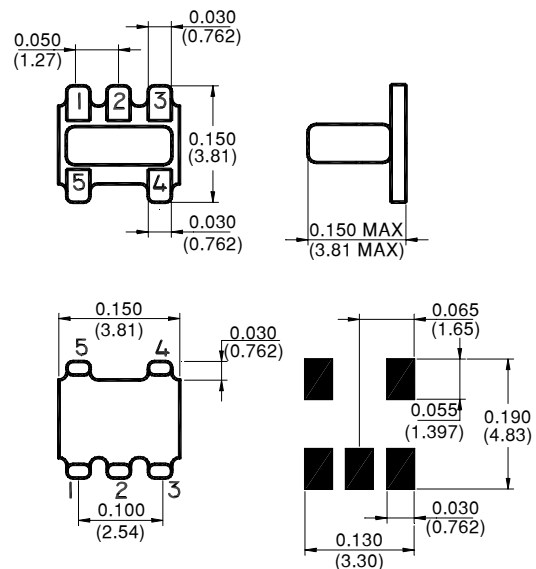
M/A-COM's MACP-007741-CG09E0 is a high performance 75 Ohm Coupler, in a SM-22 low cost, surface mount package. The MACP-007741-CG09E0 is designed for use in high volume CATV applications. Typical applications include Set-top Boxes, Network Interface Units, Broadband Amplifiers and Headend equipment.



**Schematic**



**Case Style: SM-22**



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

**Pin Configuration**

Pin No.	Function
1	Coupled
2	Ground
3	Input
4	Output
5	Isolated (external 75 Ohms termination)

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

**Ordering Information**

Part Number	Package
MACP-007741-CG09E0	2000 piece reel
MACP-007741-CG09TB	Customer Test Board

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

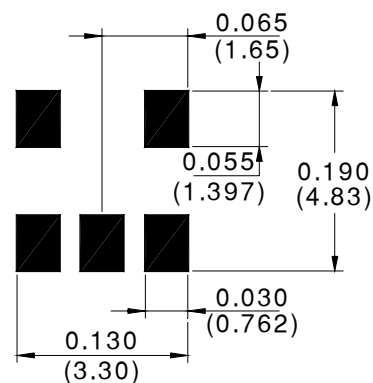
**Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$  <sup>1</sup>**

Parameter	Frequency	Units	Min	Typ	Max
Mainline Loss	5 - 500 MHz	dB	-	0.5	0.9
	500 - 1000 MHz	dB	-	0.8	1.6
	1000 - 1200MHz	dB	-	1.5	2.8
Coupling	5 - 1200 MHz	dB	-	17	$\pm 1.5$
Coupling Flatness	5 - 1200 MHz	dB	-	-	$\pm 1.0$
Directivity	5 - 50 MHz	dB	25	35	-
	50 - 500 MHz	dB	7	15	-
	500 - 1200MHz	dB	5	12	-
Return Loss	5 - 50 MHz	dB	23	27	-
	50 - 500MHz	dB	15	21	-
	500 - 1000MHz	dB	9	16	-
	1000 - 1200MHz	dB	7	15	-

**Recommended PCB Configuration**

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

Parameter	Absolute Maximum
Max Input Power	250mW
DC current	30mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C



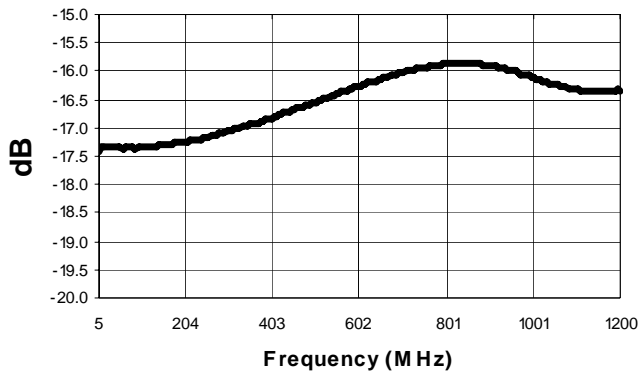
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

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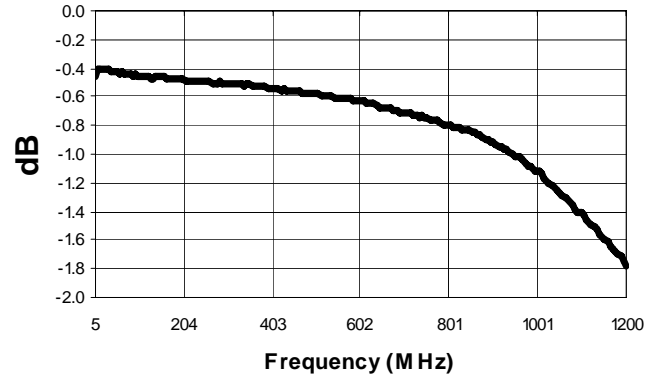
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**Typical Performance Curves  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$**

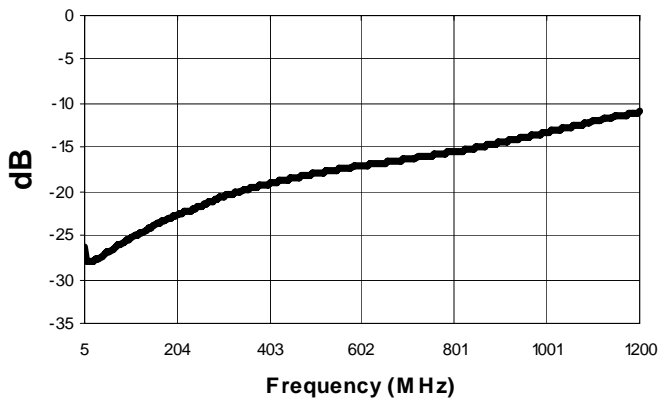
**Coupling**



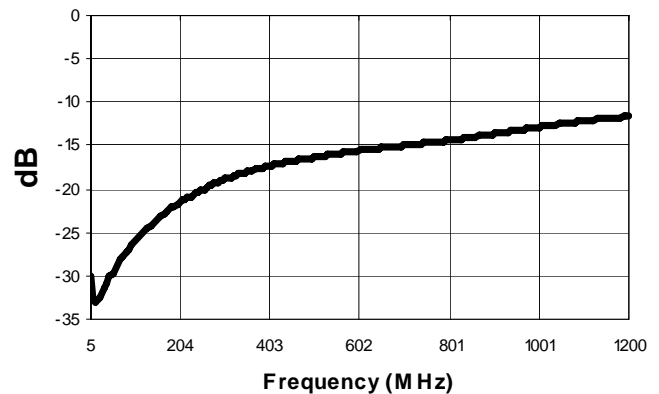
**Main Line Loss**



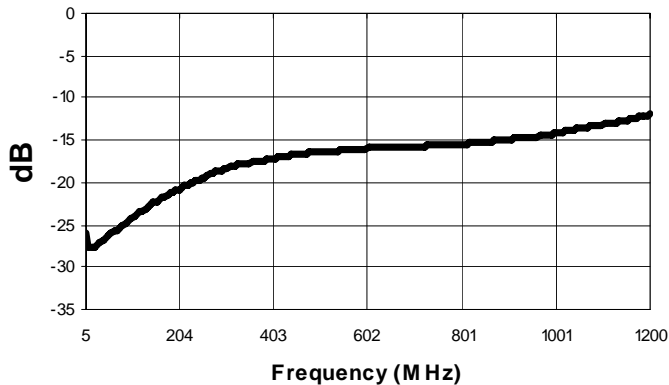
**Input Return Loss**



**Output Return Loss**



**Coupled Return Loss**



**Directivity**

