

## Broadband CATV, 18dB Coupler 5-1200 MHz

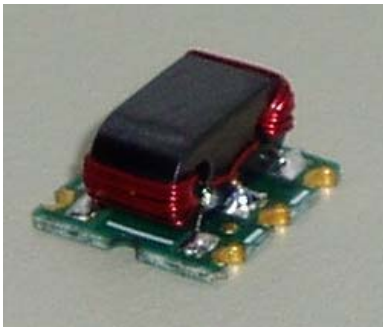
MACP-007727-CI07B0  
V1

### Features

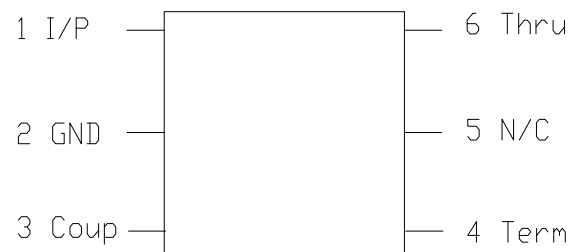
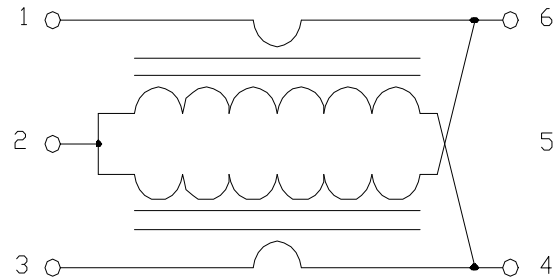
- Surface mount
- Typical coupling +18dB
- 260°C reflow compatible
- RoHS\* compliant
- Available on tape and reel, reel quantity 1000

### Description

M/A-COM's MACP-007727-CI07B0 is an 18dB broadband coupler in a low cost, surface mount package. It offers low loss, good isolation, good input/output matching and exceptional matching in return loss. Ideally suited for high volume CATV/ Broadband applications.



### Schematic

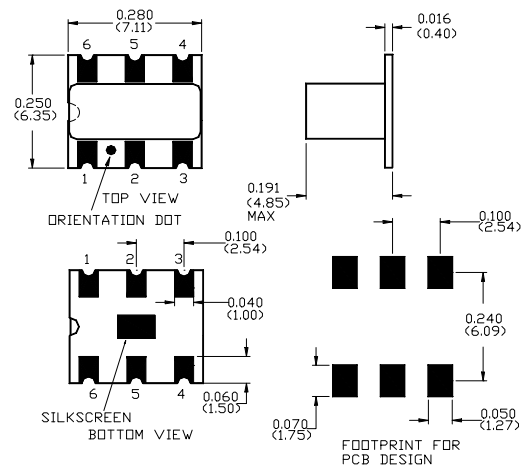


### Pin Configuration

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

Part Number	Package
MACP-007727-CI07B0	1000 piece reel
MACP-007727-CT30TB	Test Board

### Case Style: SM-123



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

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

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

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

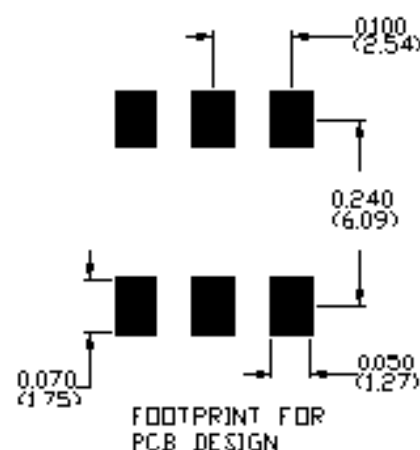
Parameter	Test Conditions	Units	Min	Typ	Max
Coupling	5 - 40 MHz	dB	-	18.2	18.3
	40 - 1000 MHz	dB	-	18.2	20.0
	1000 - 1200MHz	dB	-	18.7	22.0
Main Line Loss	5 - 1000 MHz	dB	-	1.00	1.25
	1000 - 1200 MHz	dB	-	1.40	1.8
Input Return Loss	5 - 40 MHz	dB	25.0	27.3	-
	40 - 1000 MHz	dB	23.0	31.9	-
	1000 - 1200 MHz	dB	19.0	23.4	-
Output Return Loss	5 - 40 MHz	dB	25.0	29.20	-
	40 - 1000 MHz	dB	23.0	27.10	-
	1000 - 1200 MHz	dB	19.0	21.24	-
Isolation	5 - 1000 MHz	dB	23.0	28.90	-
	1000 - 1200 MHz	dB	20.0	26.25	-
Coupling Return Loss	5 - 1000 MHz	dB	15.0	21.15	-
	1000 - 1200 MHz	dB	10.0	16.70	-

### 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.

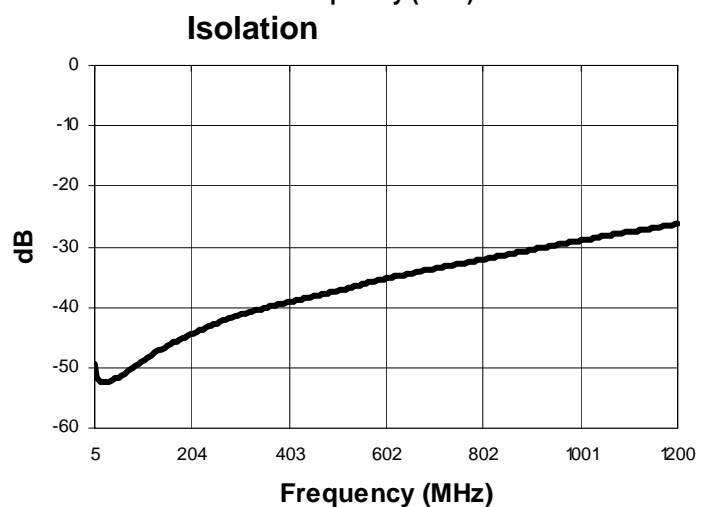
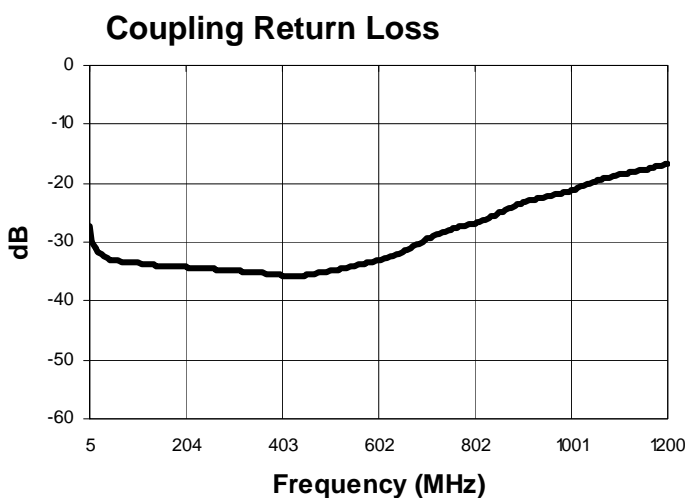
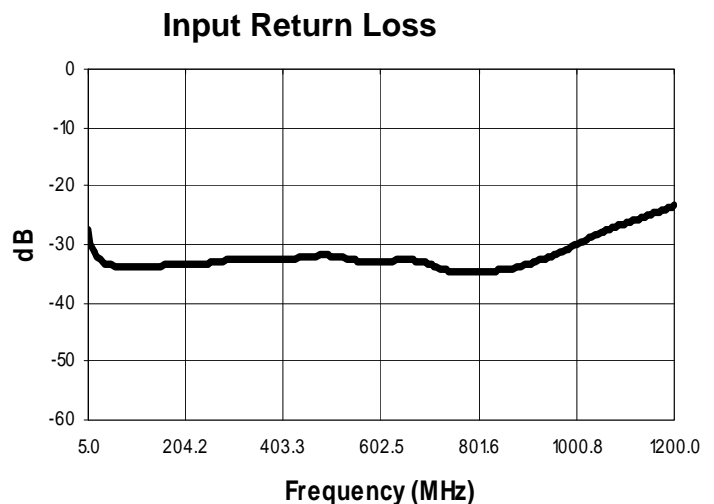
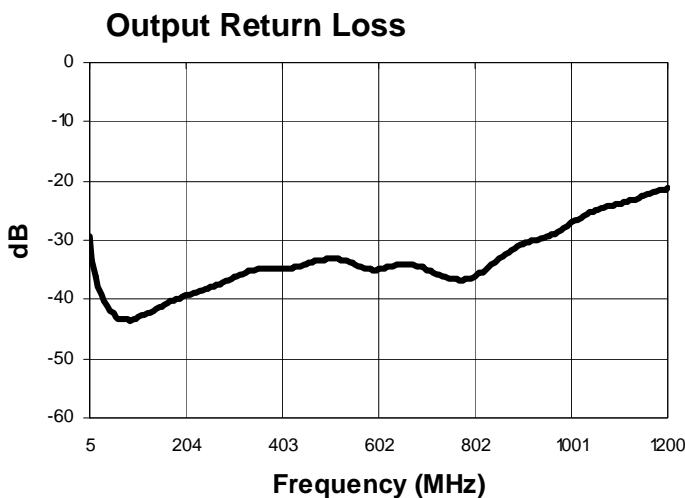
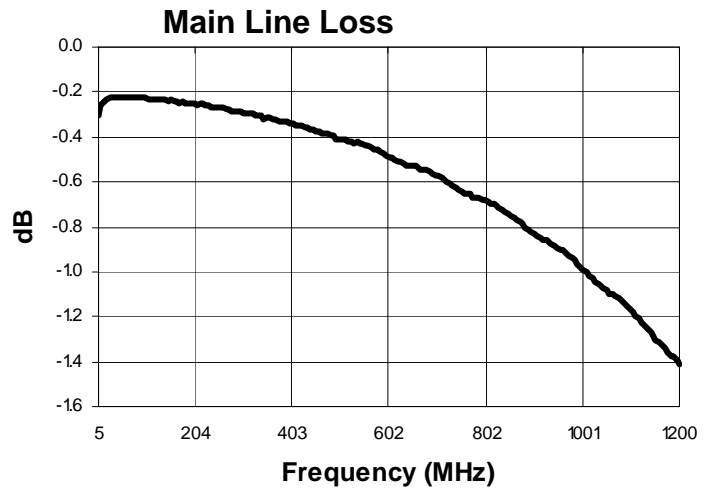
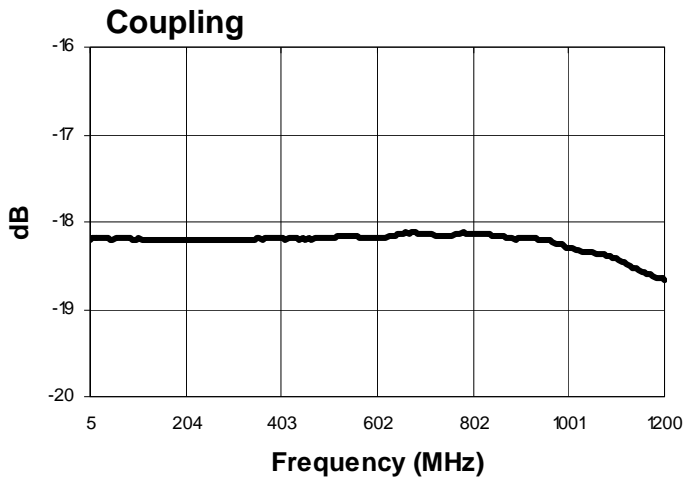
### Recommended PCB Configuration



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



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