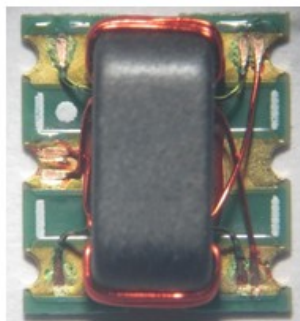


Features

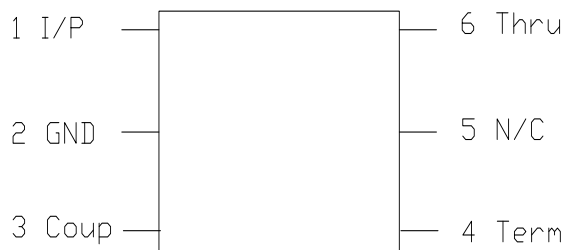
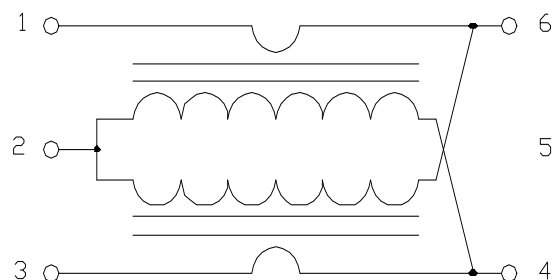
- Surface Mount
- Typical Coupling +18 dB
- 260°C Reflow Compatible
- Available on Tape and Reel,
- RoHS Compliant and Pb Free

Description

The MACP-007727-CI07B0 is an 18 dB 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.



Functional Schematic



Ordering Information^{1,2}

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

1. Reference Application Note M513 for reel size information.
2. All sample boards include x loose parts.

Pin Configuration

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

Broadband CATV, 18 dB Coupler 5 - 1200 MHz

Rev. V2

Electrical Specifications: $T_A = +25^\circ\text{C}$, $Z_0 = 75 \Omega$

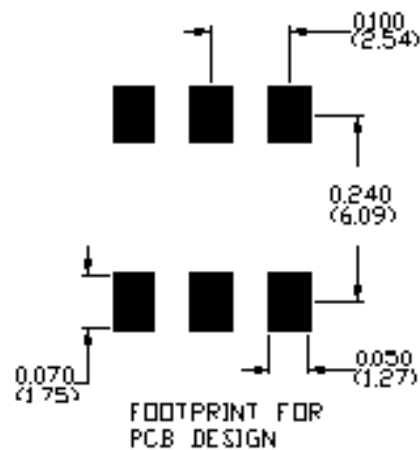
Parameter	Test Conditions	Units	Min.	Typ.	Max.
Coupling	5 - 40 MHz	dB	—	18.2	18.3
	40 - 1000 MHz			18.2	20.0
	1000 - 1200MHz			18.7	22.0
Main Line Loss	5 - 1000 MHz	dB	—	1.00	1.25
	1000 - 1200 MHz			1.40	1.8
Input Return Loss	5 - 40 MHz	dB	25.0	27.3	—
	40 - 1000 MHz		23.0	31.9	
	1000 - 1200 MHz		19.0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

Absolute Maximum Ratings^{3,4}

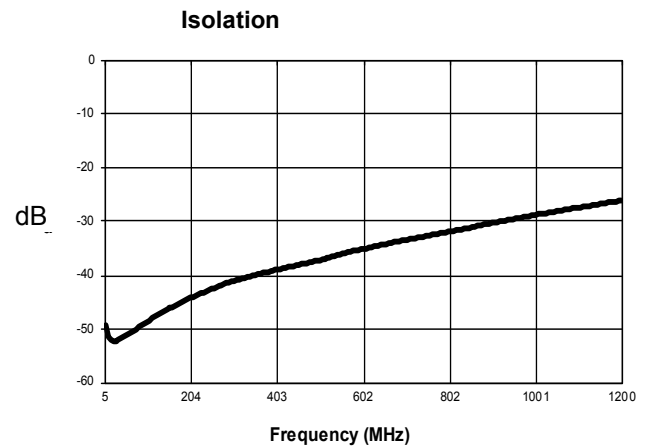
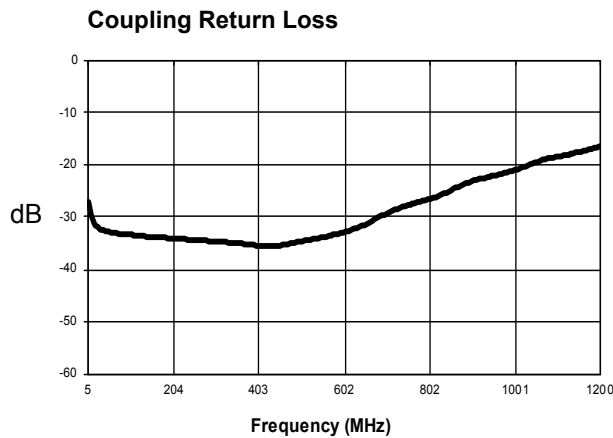
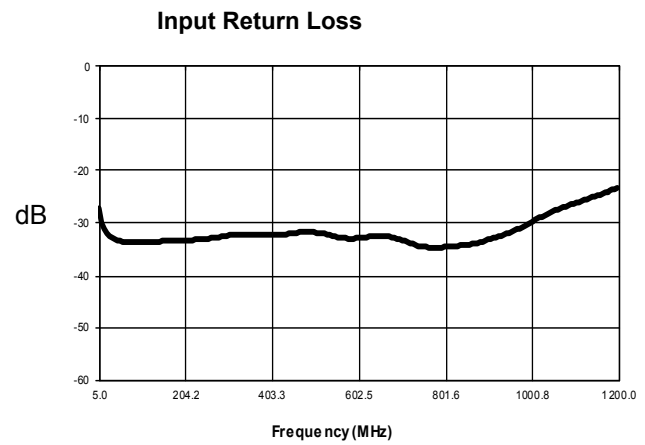
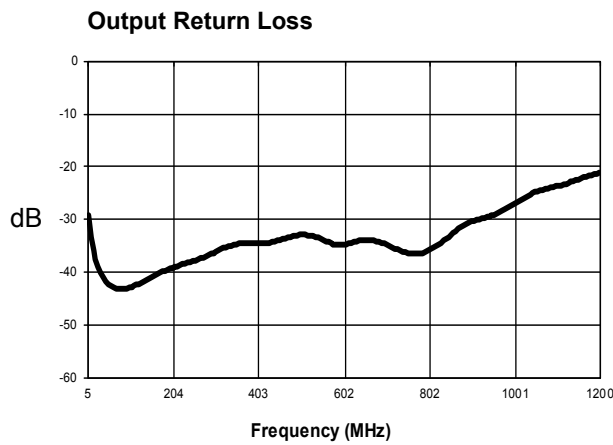
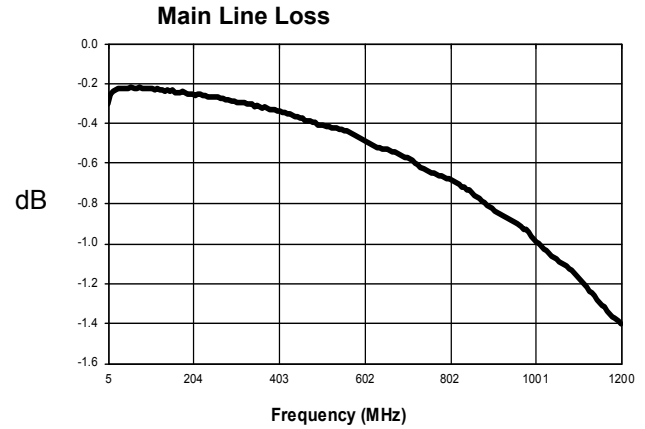
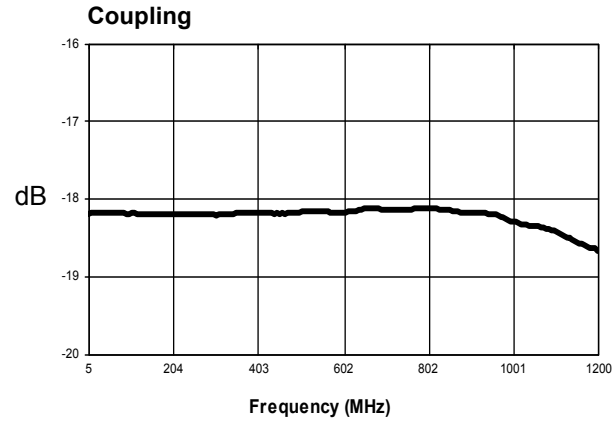
Parameter	Absolute Maximum
Input Power	250 mW
DC current	30 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

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

Recommended PCB Configuration



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



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