MACP-007727-CI07B0

Broadband CATV, 18 dB Coupler
5 - 1200 MHz

Rev. V2

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

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Electrical Specifications: T_A = +25°C, Z_0 = 75 Ω

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Coupling	5 - 40 MHz 40 - 1000 MHz 1000 - 1200MHz	dB	—	18.2 18.2 18.7	18.3 20.0 22.0
Main Line Loss	5 - 1000 MHz 1000 - 1200 MHz	dB	—	1.00 1.40	1.25 1.8
Input Return Loss	5 - 40 MHz 40 - 1000 MHz 1000 - 1200 MHz	dB	25.0 23.0 19.0	27.3 31.9 23.4	—
Output Return Loss	5 - 40 MHz 40 - 1000 MHz 1000 - 1200 MHz	dB	25.0 23..0 19.0	29.20 27.10 21.24	—
Isolation	5 - 1000 MHz 1000 - 1200 MHz	dB	23.0 20.0	28.90 26.25	—
Coupling Return Loss	5 - 1000 MHz 1000 - 1200 MHz	dB	15.0 10.0	21.15 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

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

Recommended PCB Configuration

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Typical Performance Curves T_A = 25°C, Z_0 = 75 Ω

Coupling

Main Line Loss

Output Return Loss

Input Return Loss

Coupling Return Loss

Isolation

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