MAPD-011007

2 Way 0º Power Divider
5 - 2150 MHz

Rev. V5

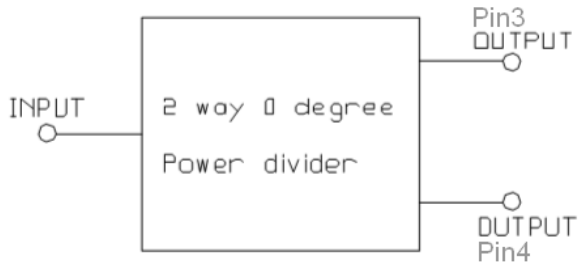
Features

- 2 way 0 Degree
- Surface Mount
- Available on Tape and Reel
- 260°C Reflow Compatible
- RoHS* Compliant and Pb free

Description

The MAPD-011007 is a 2 way 0 degree power divider in a surface mount package.
Ideally suited for all CATV Broadband and FTTx applications.

Functional Schematic



Pin Configuration[3]

Pin No.	Function
1	Ground
2	External 0.5 pF Capacitor
3	Output 2
4	Output 1
5	External 0.5 pF Capacitor
6	Input

3. MACOM recommends connecting unused package pins to ground.

Ordering Information[1,2]

Part Number	Package
MAPD-011007	bulk
MAPD-011007-TB	Sample Board

1. Reference Application Note M513 for reel size information.
2. All sample boards include 5 loose parts.

Absolute Maximum Ratings[4,5]

Parameter	Absolute Maximum
Input RF Power[6]	0.5 W
DC Current	500 mA
Operating Temperature	-40°C to +85°C

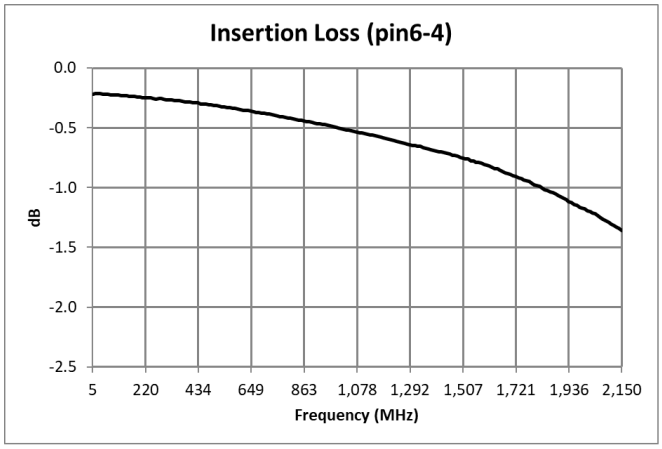
4. Exceeding any one or combination of these limits may cause permanent damage to this device.
5. MACOM does not recommend sustained operation near these survivability limits.
6. Specified at +25°C only.

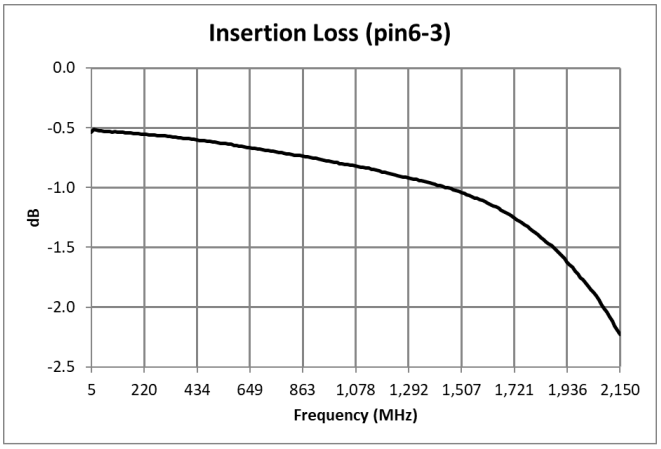
* Restrictions on Hazardous Substances, compliant to current RoHS EU directive.

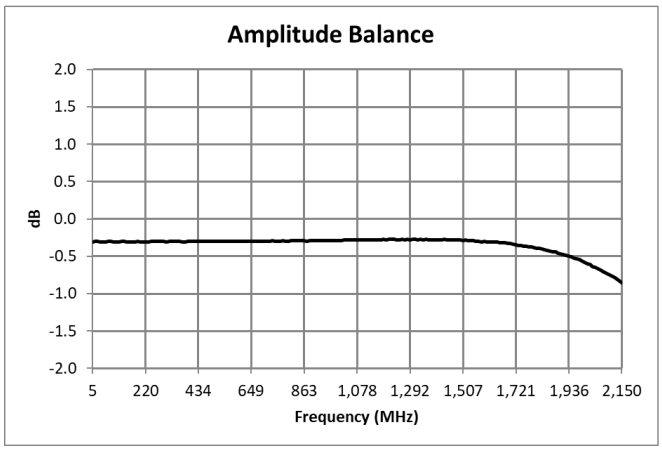
Electrical Specifications: Freq. = 5 - 3250 MHz, T_A = 25°C, Z_0 = 75 Ω, P_{IN} = 0 dBm

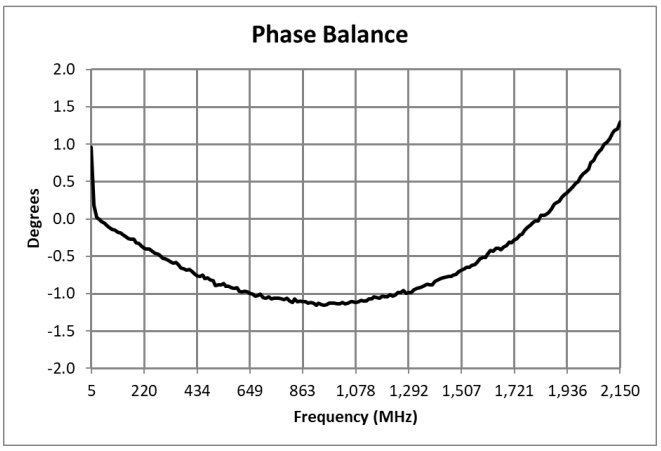
Parameter	Conditions	Units	Min.	Typ.	Max.
Impedance	—	Ω	—	75	—
Power Split	—	dB	—	3	—
Insertion Loss (pin 6 - pin 4)	5 - 1002 MHz 1003 - 1218 MHz 1218 - 1600 MHz 1600 - 2150 MHz	dB	—	0.3 0.5 0.6 1.0	0.7 1.0 1.2 2.0
Insertion Loss (pin 6 - pin 3)	5 - 1002 MHz 1003 - 1218 MHz 1218 - 1600 MHz 1600 - 2150 MHz	dB	—	0.6 0.8 1.0 1.5	1.0 1.2 1.6 3.2
Amplitude Balance	5 - 1002 MHz 1003 - 1218 MHz 1218 - 1600 MHz 1600 - 2150 MHz	dB	—	0.3 0.3 0.3 0.5	0.5 0.5 0.5 1.5
Phase Balance	5 - 1002 MHz 1003 - 1600 MHz 1600 - 2150 MHz	degree	—	0.8 1.0 0.2	4.0 6.0 7.0
Input Return Loss (pin 6)	5 - 1002 MHz 1003 - 1600 MHz 1600 - 2150 MHz	dB	20 14 11	39 22 18	—
Output Return Loss (pin 3)	5 - 1002 MHz 1003 - 1600 MHz 1600 - 2150 MHz	dB	17 13 9	28 18 14	—
Output Return Loss (pin 4)	5 - 1002 MHz 1003 - 1600 MHz 1600 - 2150 MHz	dB	20 15 12	40 22 18	—
Isolation (pin 4 - pin 3)	5 - 10 MHz 10 - 65 MHz 66 - 870 MHz 871 - 1002 MHz 1003 - 1600 MHz 1600 - 2150 MHz	dB	24 30 26 24 22 15	30 42 34 31 31 24	—

Typical Performance Curves:[7] P_{IN} = 0 dBm, T_A = 25°C, Z_0 = 75 Ω









7. Temperature plots available on request

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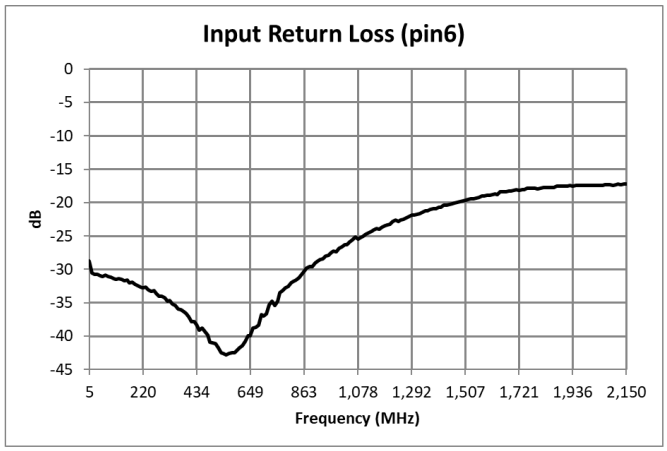

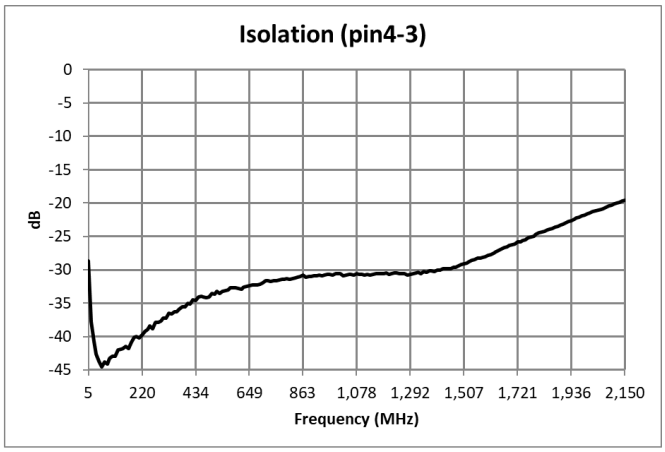

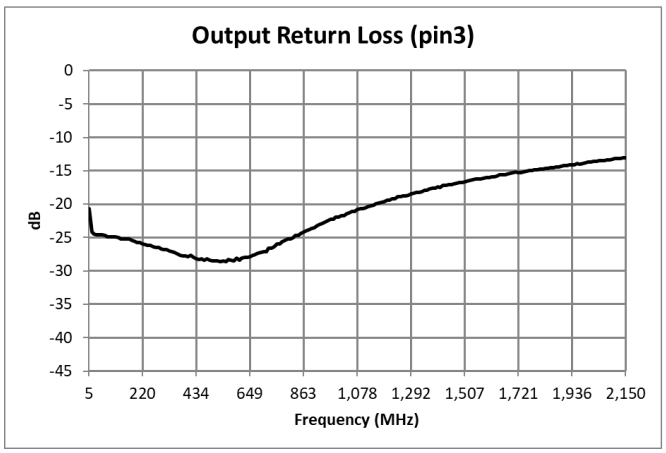

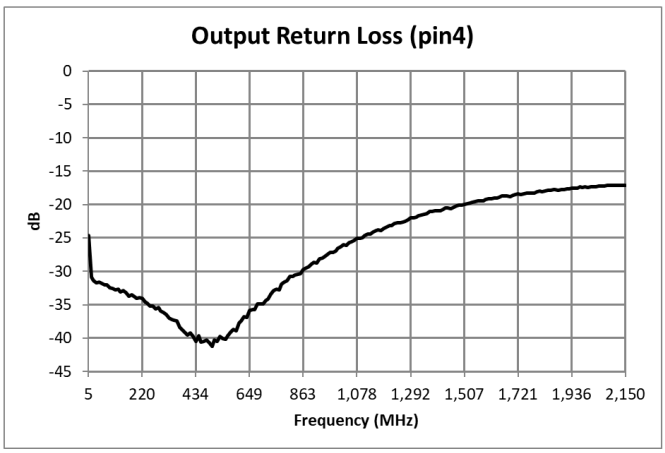

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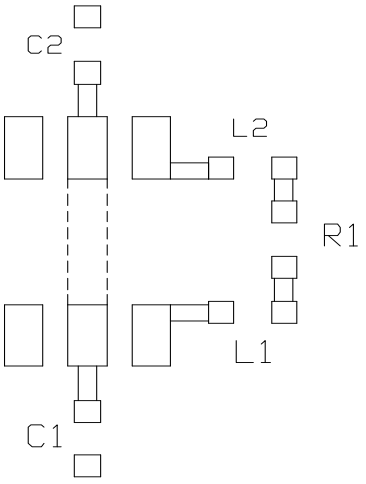
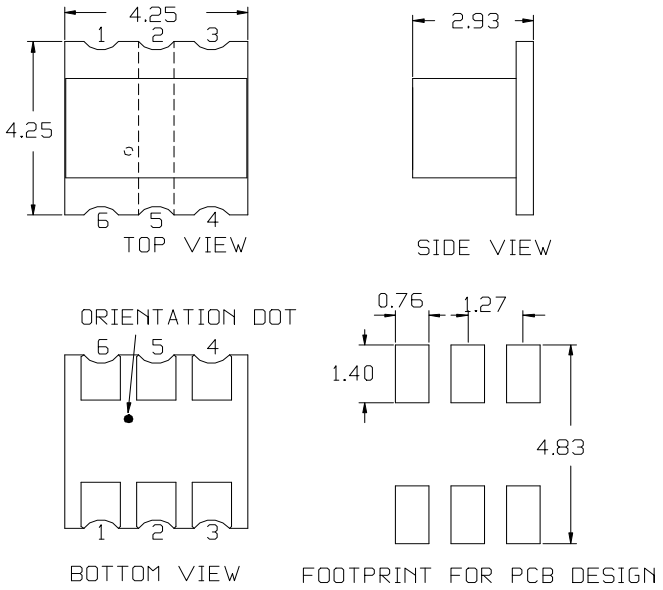
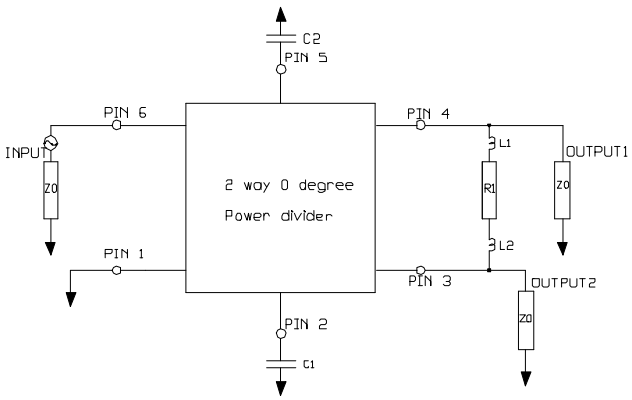
Recommended PCB Footprint



Outline Drawing[8,9,10,11]

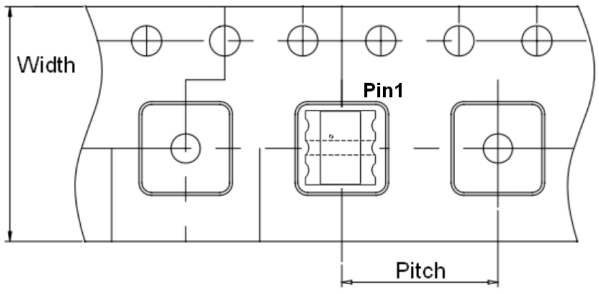


Application Schematic



8. Dimensions in mm.
9. Tolerance: ±0.2mm unless otherwise noted.
10. Model number and lot code printed on reel.
11. Plating finish: ENIG on both sides, 0.05 to 0.1 µm gold over 3 to 6 µm nickel

Carrier Tape Orientation



Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel Size	mm	330
Tape Width	mm	12.0
Pitch	mm	8.0
Orientation	-	F18
Reference Application Note ANI-019 for orientation		