

2 Way 0° Power Divider 5 - 2150 MHz

Rev. V5

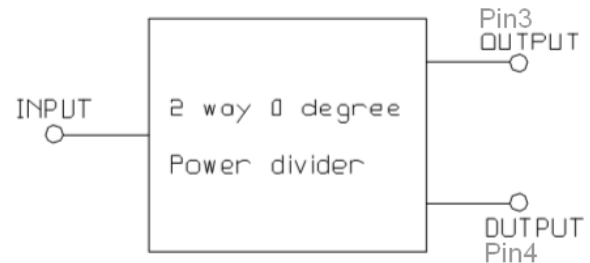
Features

- 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 Configuration³

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.

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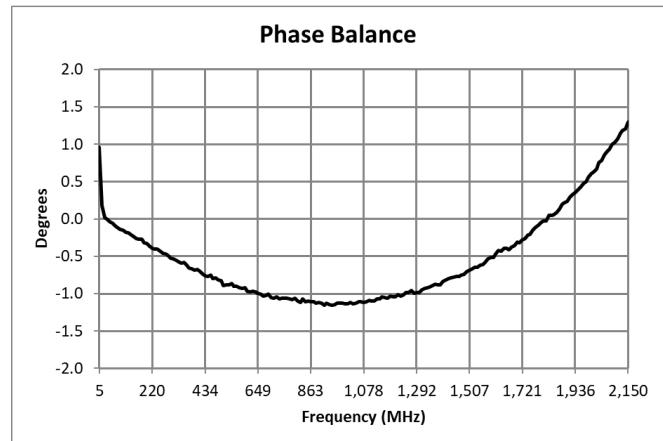
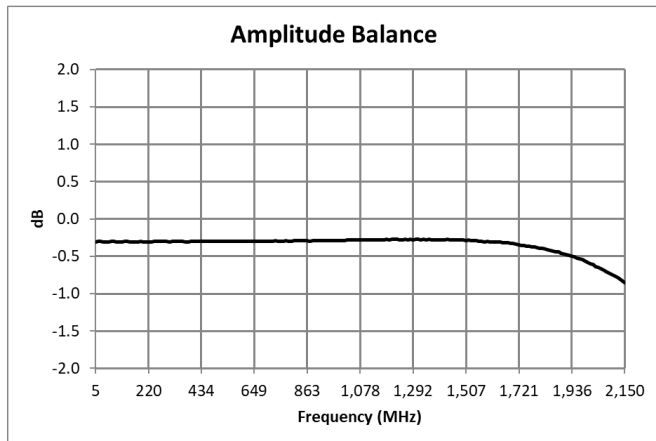
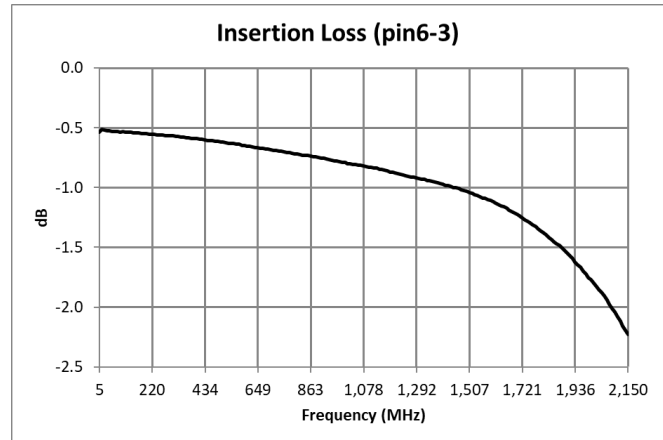
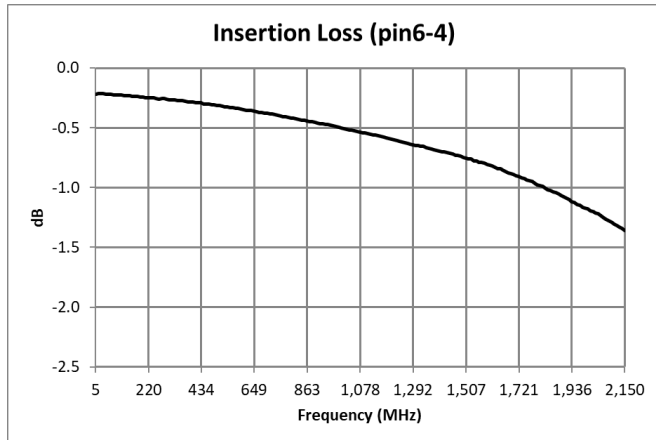
Electrical Specifications: Freq. = 5 - 3250 MHz, T_A = 25°C, Z₀ = 75 Ω, P_{IN} = 0 dBm

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

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Typical Performance Curves:⁷ $P_{IN} = 0 \text{ dBm}$, $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$

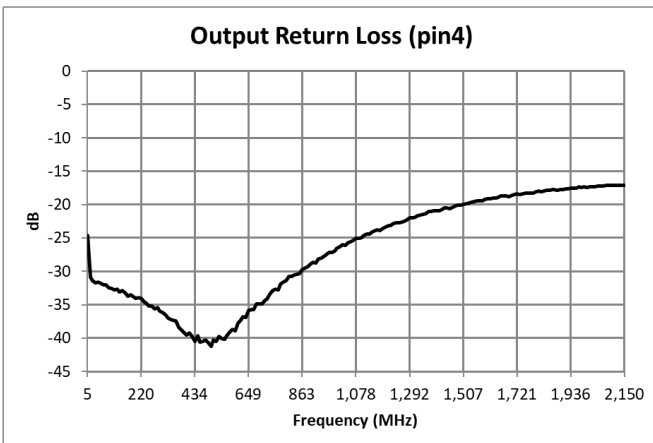
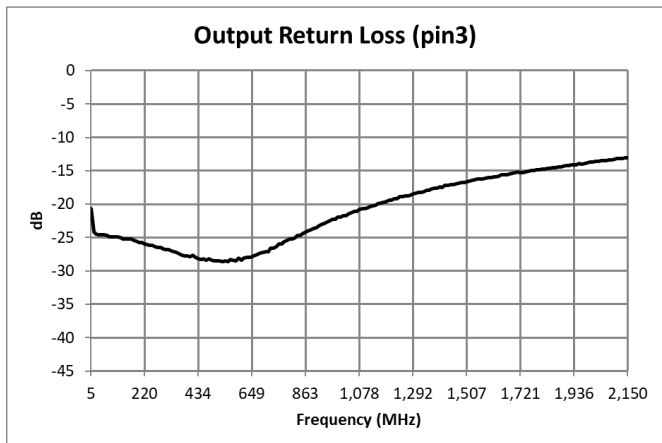
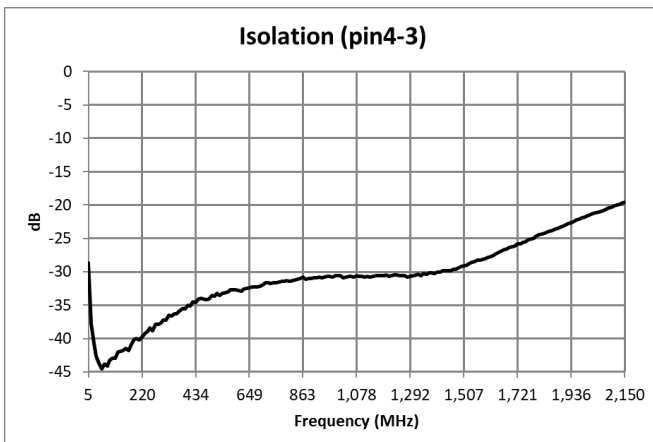
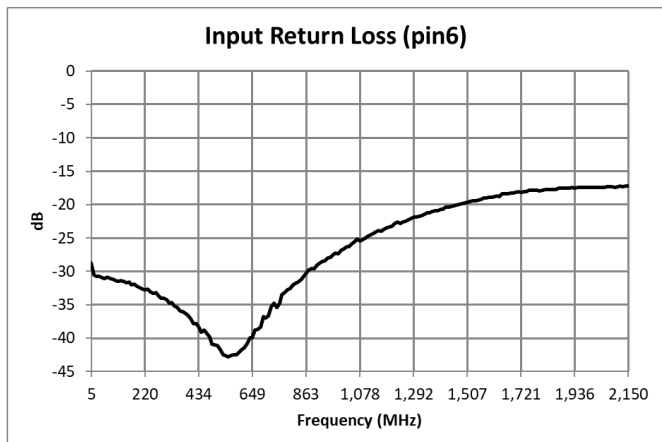


7. Temperature plots available on request

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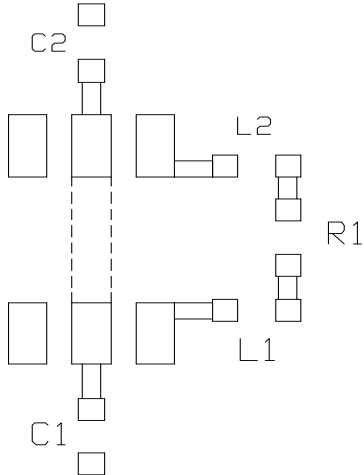
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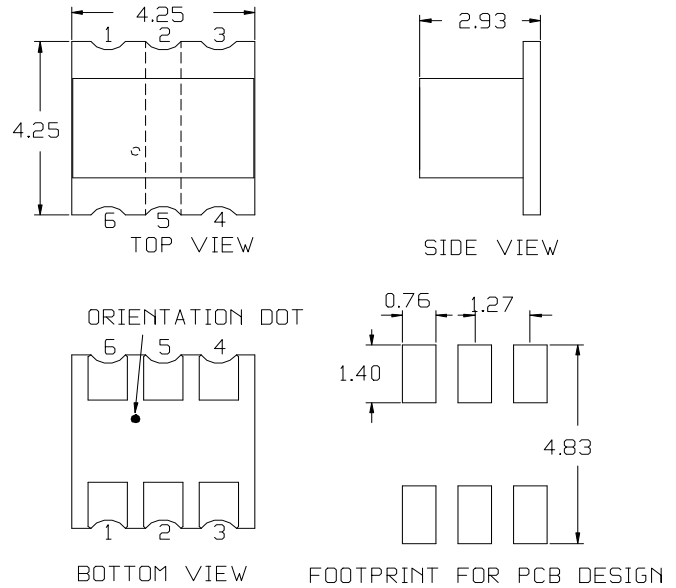


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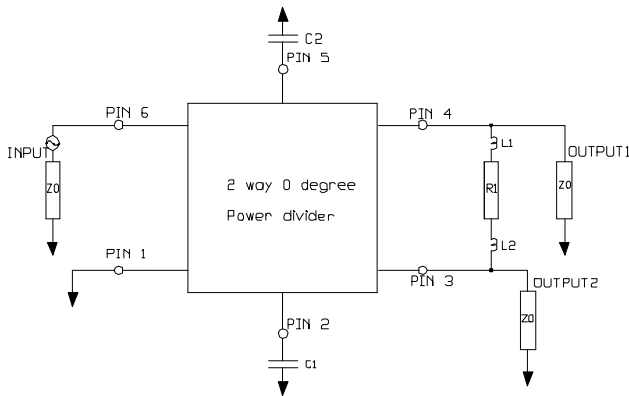
Recommended PCB Footprint



Outline Drawing^{8,9,10,11}

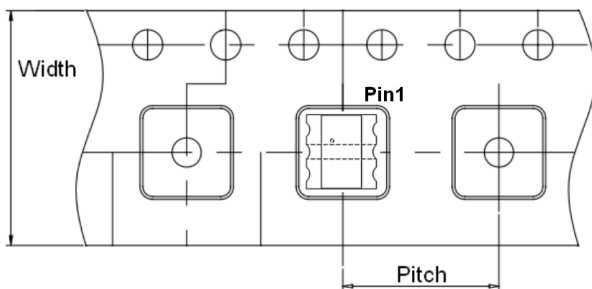


Application Schematic



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

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