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## 2 Way 0° Power Divider 5 - 2150 MHz

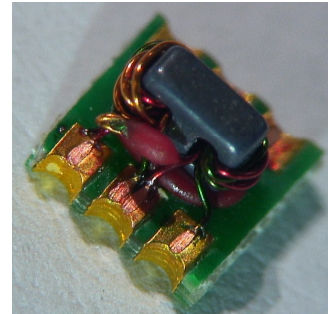
Rev. V4

### Features

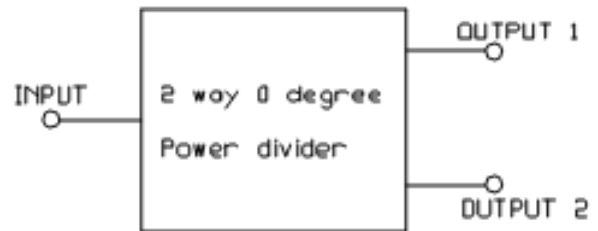
- 2 way 0 Degree
- Surface Mount
- Available on Tape and Reel
- 260°C Reflow Compatible
- RoHS\* Compliant and Pb free

### Description

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



### Functional Schematic



### Ordering Information

Part Number	Package
MAPD-011007	2000 piece reel
MAPD-011007-TB	Customer Test Board

### Pin Configuration

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

## 2 Way 0° Power Divider 5 - 2150 MHz

Rev. V4

Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75 \Omega$ ,  $P_{IN} = 0 \text{ dBm}$

Parameter	Conditions	Units	Min.	Typ.	Max.
Impedance	—	$\Omega$	—	75	—
Power Split	—	dB	—	3	—
Insertion Loss 1 (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 2 (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 4)	5 - 1002 MHz	dB	17	28	—
	1003 - 1600 MHz		13	18	
	1600 - 2150 MHz		9	14	
Output Return Loss (pin 3)	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	

### Recommended Maximum Ratings

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

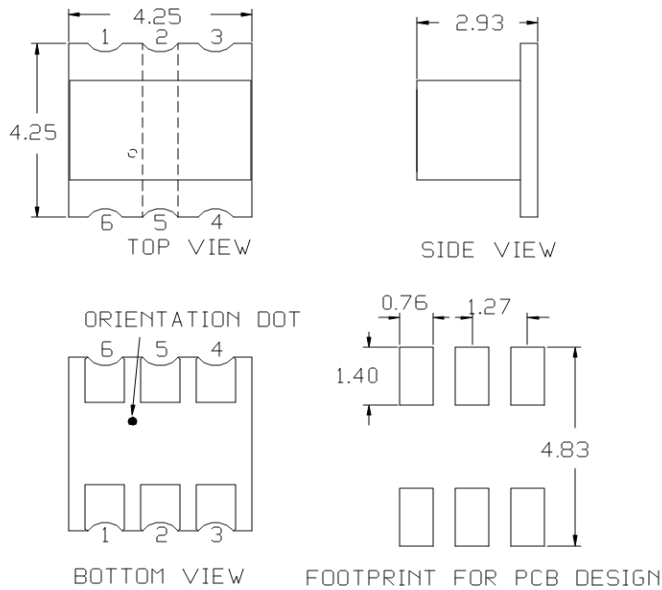
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.

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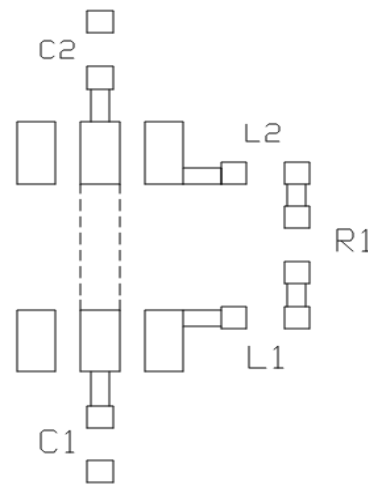
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## Outline Drawing



Dimensions in mm.  
 Tolerance:  $\pm 0.2$ mm unless otherwise noted.  
 Model number and lot code are printed on the reel.  
 Plating finish: ENIG on both sides, 0.05 to 0.1  $\mu$ m gold over 3 to 6  $\mu$ m nickel

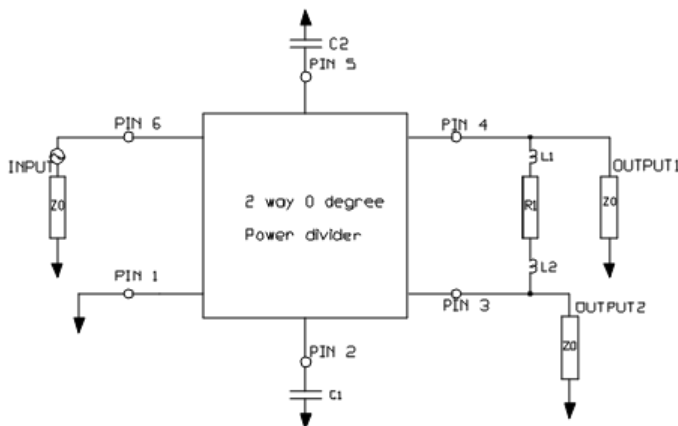
## Recommended Layout



## Component List

Part	Value	Case Style
C1, C2	0.5 pF	0402
L1, L2	8.2 nH	0402
R1	240 $\Omega$	0402

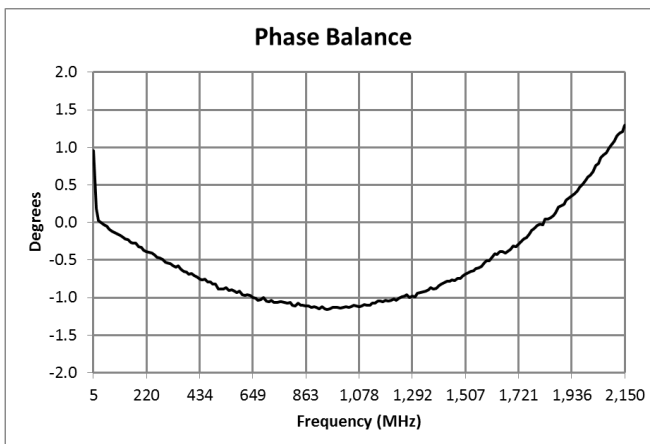
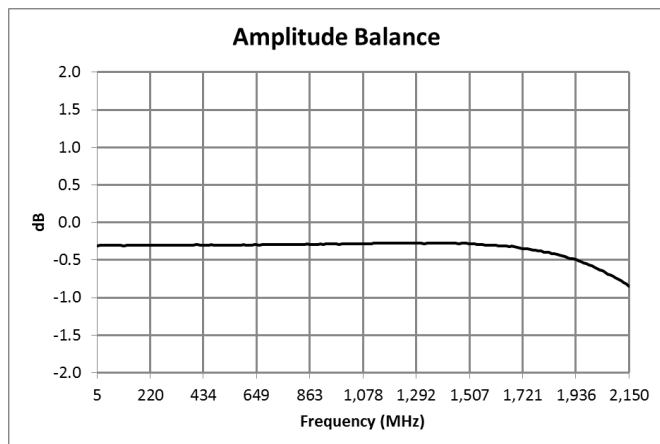
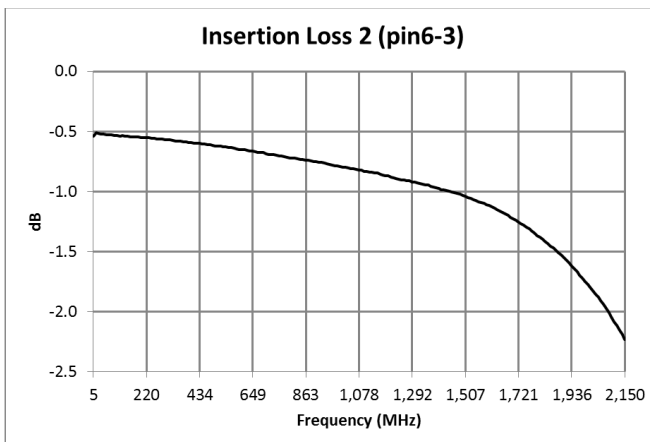
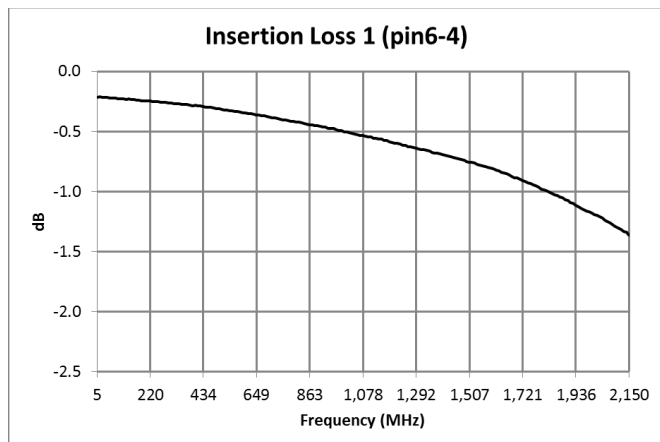
## Application Circuit



## Tape & Reel Information

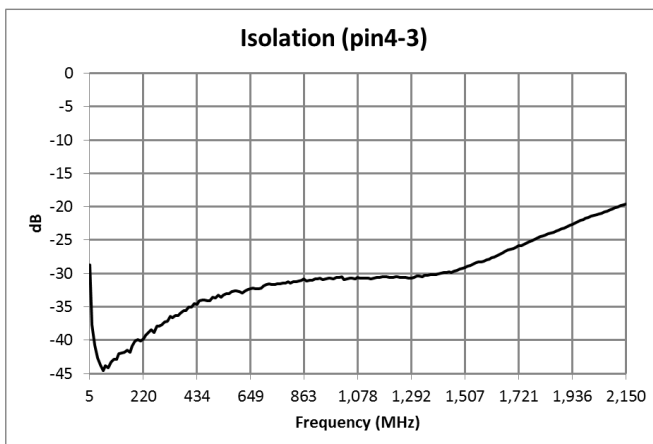
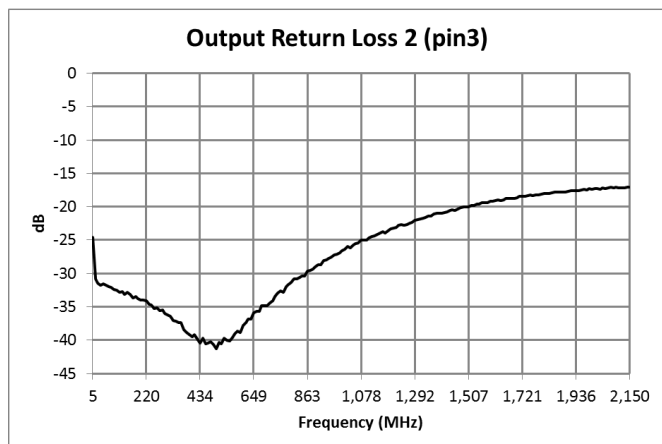
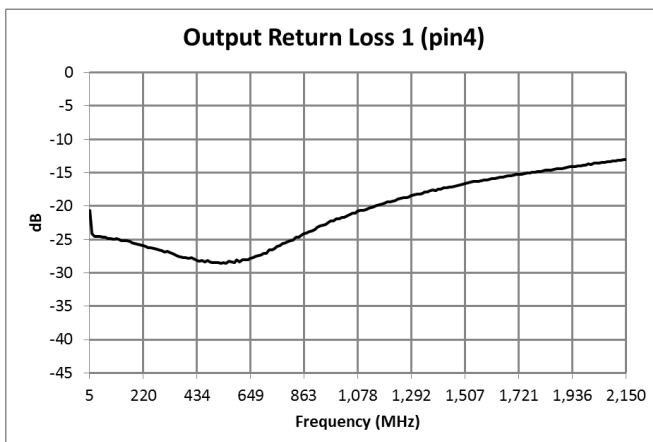
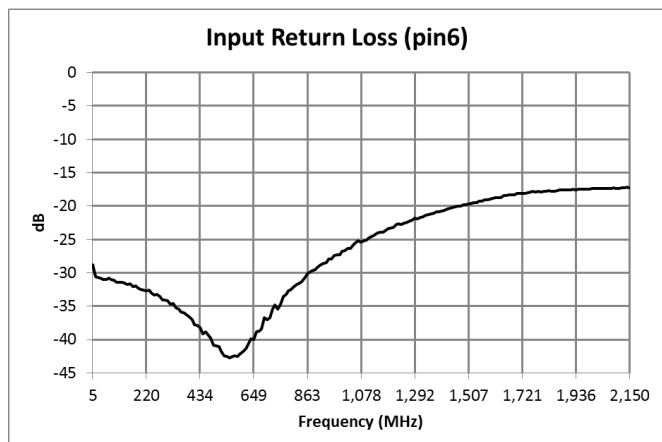
Parameter	Units	Value
Reel size	mm	330
Tape width (W)	mm	12.00
Pitch ( $P_1$ )	mm	8.00
$A_0$	mm	4.5
$B_0$	mm	4.5
$K_0$	mm	3.2
Orientation	-	F18
Reference Application note ANI-019 for orientation		

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



Full temperature plots available on request

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



Full temperature plots available on request

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