

# MAPD-011007



2 way 0° Power Divider  
5 – 2150 MHz

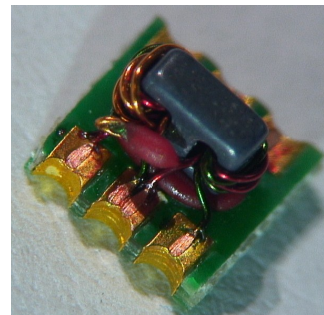
Rev. V3

## Features

- Surface mount
- 2 way 0 degree
- RoHS compliant and Pb free
- 260°C reflow compatible
- Suitable for all CATV, Broadband and FTTx applications.
- Available on tape and reel

## Description

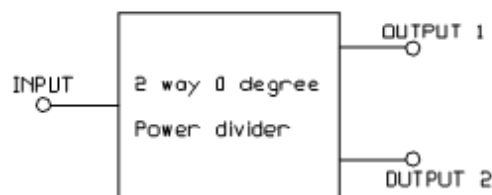
MACOM's MAPD-011007 is a 2 way 0 degree power divider in a low cost surface mount package. Ideally suited for CATV Broadband applications.



## Component BOM

Ref	Description	Value
R1	Resistor, 0402	240Ω
L1	Inductor, 0402	8.2nH
L2	Inductor, 0402	8.2nH
C1	Capacitor, 0402	0.5pF
C2	Capacitor, 0402	0.5pF

## Functional Schematic



## Ordering Information

Part Number	Package
MAPD-011007	Tape & Reel
MAPD-011007-TB	Customer Test Board

## Pin Configuration

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

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2 way 0° Power Divider  
5 – 2150 MHz

Rev. V3

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

Parameter	Conditions	Units	Min	Typ	Max
Frequency Range		MHz	5		2150
Impedance		$\Omega$		75	
Power split		dB	-	3	
Insertion Loss 1 (pin6 - pin4)	5 - 1002 MHz	dB	-	0.3	0.7
	1003 - 1218 MHz	dB	-	0.5	1.0
	1218 - 1600 MHz	dB	-	0.6	1.2
	1600 - 2150 MHz	dB	-	1.0	2.0
Insertion Loss 2 (pin6 - pin3)	5 - 1002 MHz	dB	-	0.6	1.0
	1003 - 1218 MHz	dB	-	0.8	1.2
	1218 - 1600 MHz	dB	-	1.0	1.6
	1600 - 2150 MHz	dB	-	1.5	3.2
Amplitude Balance	5 - 1002 MHz	dB	-	0.3	0.5
	1003 - 1218 MHz	dB	-	0.3	0.5
	1218 - 1600 MHz	dB	-	0.3	0.5
	1600 - 2150 MHz	dB	-	0.5	1.5
Phase Balance	5 - 1002 MHz	degree	-	0.8	4.0
	1003 - 1600 MHz	degree	-	1.0	6.0
	1600 - 2150 MHz	degree	-	0.2	7.0
Input Return Loss (pin6)	5 - 1002 MHz	dB	20	39	-
	1003 - 1600 MHz	dB	14	22	-
	1600 - 2150 MHz	dB	11	18	-
Output Return Loss (pin4)	5 - 1002 MHz	dB	17	28	-
	1003 - 1600 MHz	dB	13	18	-
	1600 - 2150 MHz	dB	9	14	-
Output Return Loss (pin3)	5 - 1002 MHz	dB	20	40	-
	1003 - 1600 MHz	dB	15	22	-
	1600 - 2150 MHz	dB	12	18	-
Isolation (pin4-pin3)	5 - 10 MHz	dB	24	30	-
	10 - 65 MHz	dB	30	42	-
	66 - 870 MHz	dB	26	34	-
	871 - 1002 MHz	dB	24	31	-
	1003 - 1600 MHz	dB	22	31	-
	1600 - 2150 MHz	dB	15	24	-

Parameter	Units	Min	Max
Input RF Power	W		0.5
DC Current	mA		500
Operating Temperature Range	$^\circ\text{C}$	-40	+85

Full temperature plots available on request

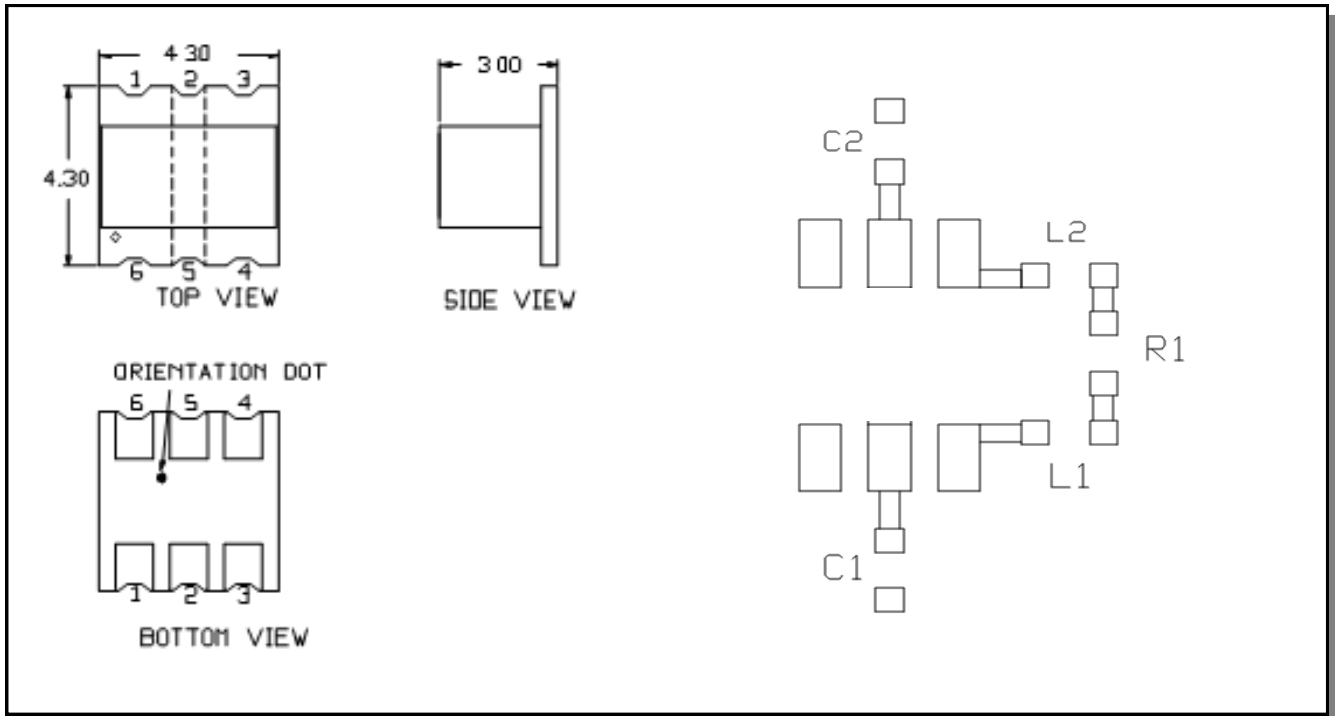
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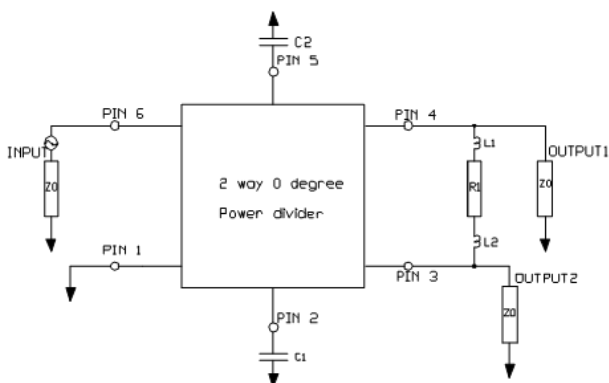
## Outline Drawing

## PCB Layout



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

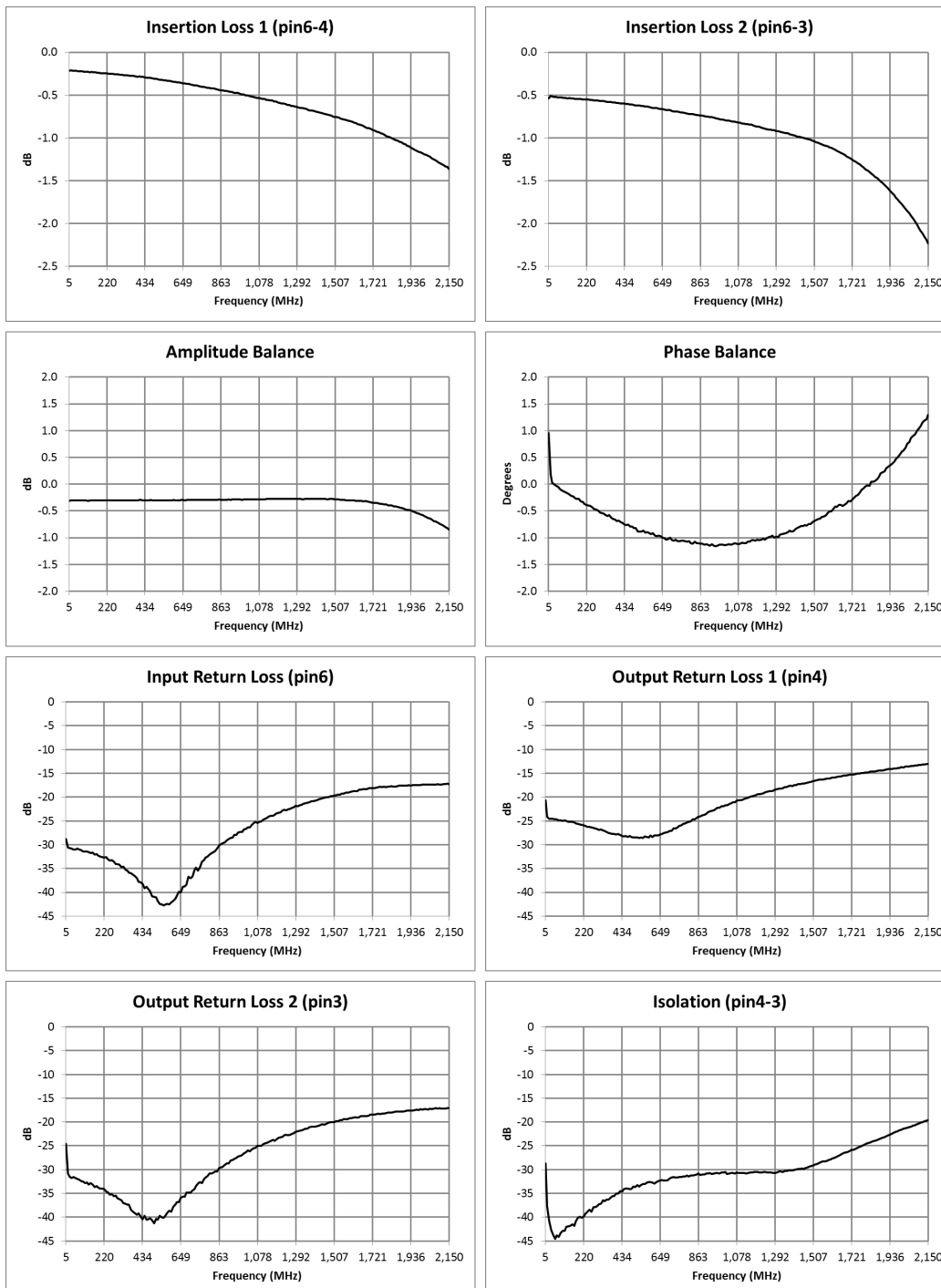
## Application Circuit



## Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel size	mm	330
Tape width (W)	mm	12.00
Pitch (P <sub>1</sub> )	mm	8.00
A <sub>0</sub>	mm	4.5
B <sub>0</sub>	mm	4.5
K <sub>0</sub>	mm	3.2
Orientation	-	F18
Reference Application note ANI-019 for orientation		

## Typical Performance Curves



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