

2 Way 0° Power Divider 5 - 2150 MHz

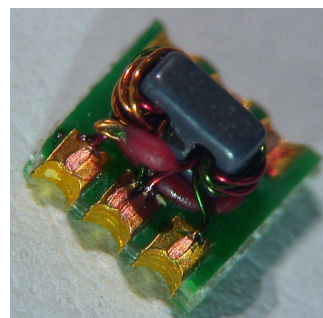
Rev. V4

Features

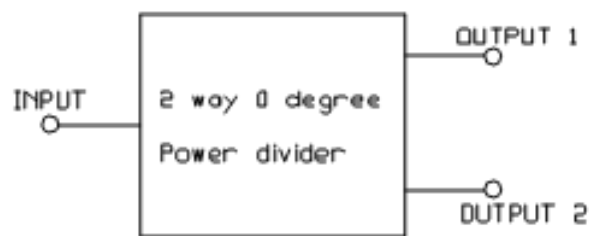
- 2 way 0 Degree
- Surface Mount
- Available on Tape and Reel
- 260°C Reflow Compatible
- RoHS* Compliant and Pb free

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	—	Ω	—	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

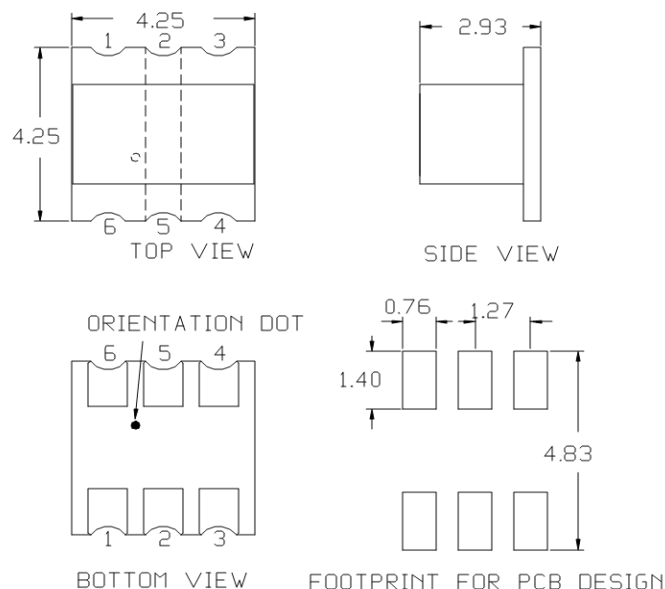
Parameter	Absolute Maximum
Input RF Power	0.5 W
DC Current	500 mA
Operating Temperature	-40°C to +85°C

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

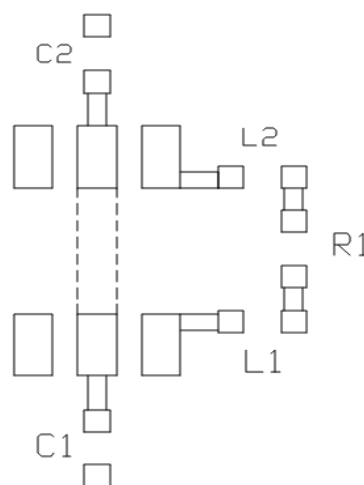
2 Way 0° Power Divider 5 - 2150 MHz

Rev. V4

Outline Drawing



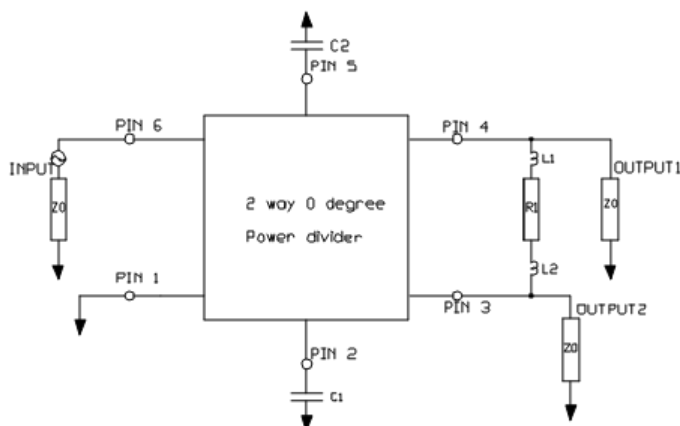
Recommended Layout



Component List

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

Application Circuit



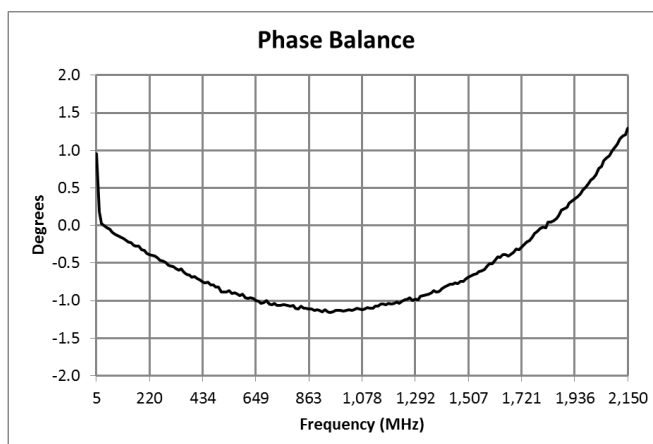
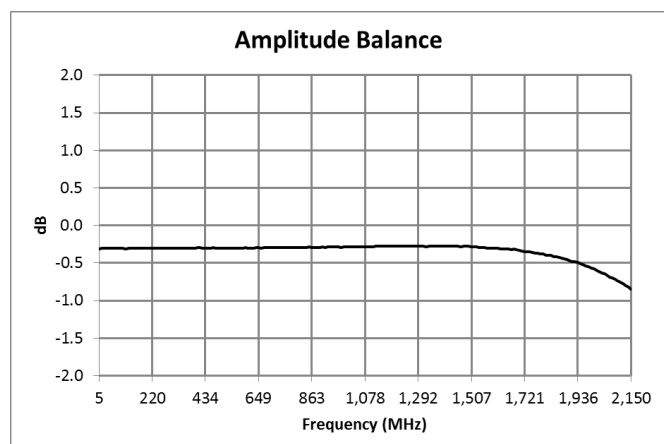
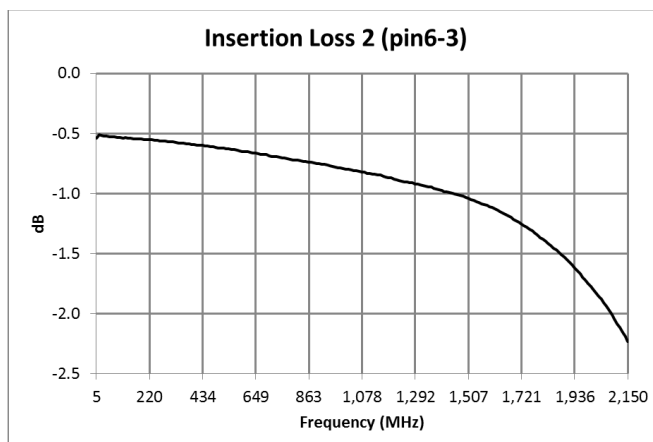
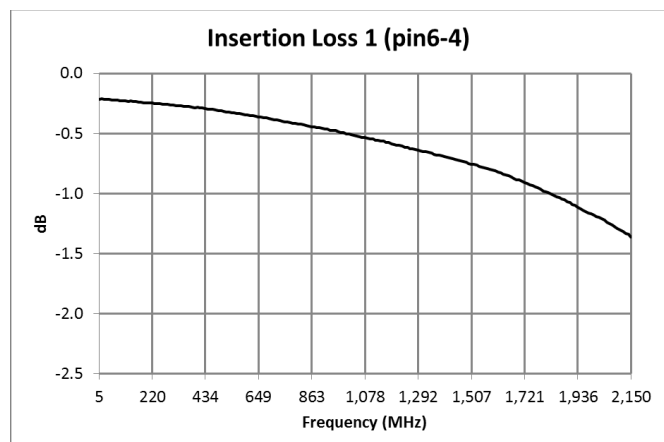
Tape & Reel Information

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		

2 Way 0° Power Divider 5 - 2150 MHz

Rev. V4

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

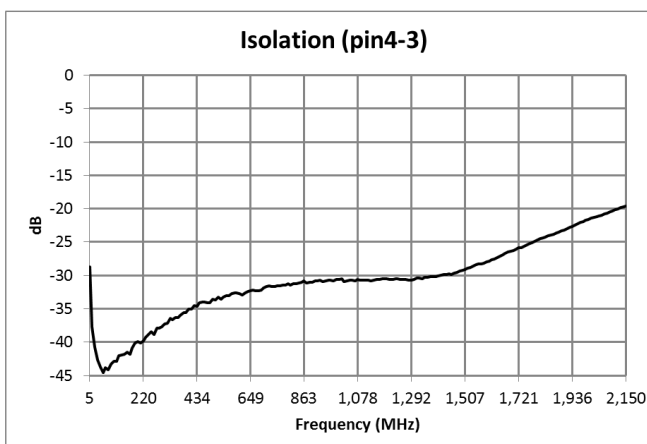
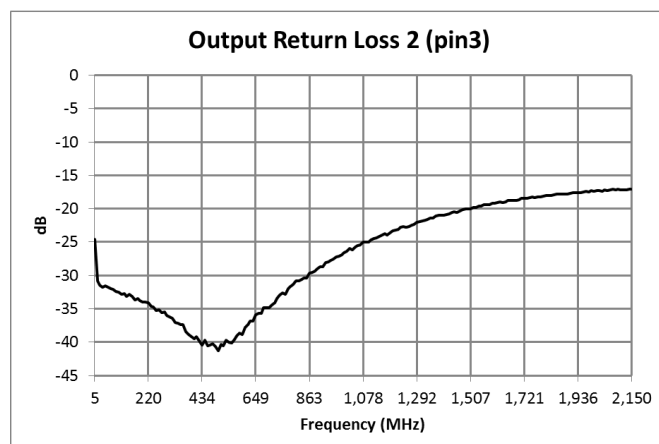
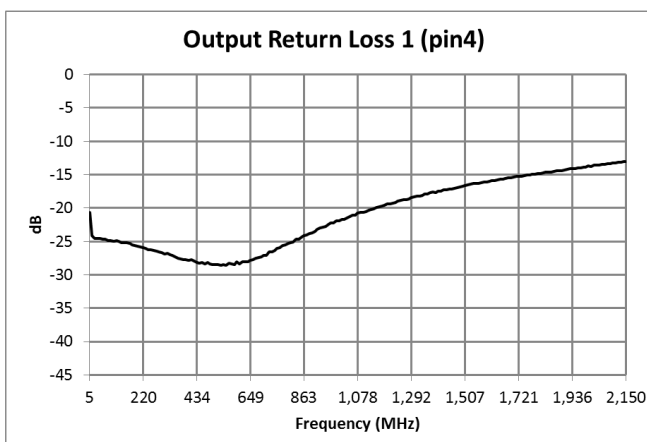
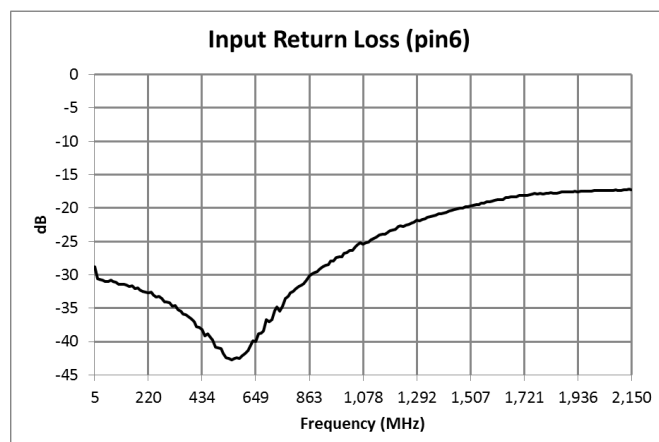


Full temperature plots available on request

2 Way 0° Power Divider 5 - 2150 MHz

Rev. V4

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



Full temperature plots available on request

M/A-COM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with M/A-COM Technology Solutions Inc ("MACOM") products. These materials are provided by MACOM as a service to its customers and may be used for informational purposes only. Except as provided in MACOM's Terms and Conditions of Sale for such products or in any separate agreement related to this document, MACOM assumes no liability whatsoever. MACOM assumes no responsibility for errors or omissions in these materials. MACOM may make changes to specifications and product descriptions at any time, without notice. MACOM makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppels or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. MACOM FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. MACOM SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.