

3 Way, 0° Power Divider 5 - 1500 MHz



MAPD-011027

Rev. V5

Features

- 3 Way 0°
- Surface Mount Technology
- RoHS* Compliant
- Available on Tape & Reel

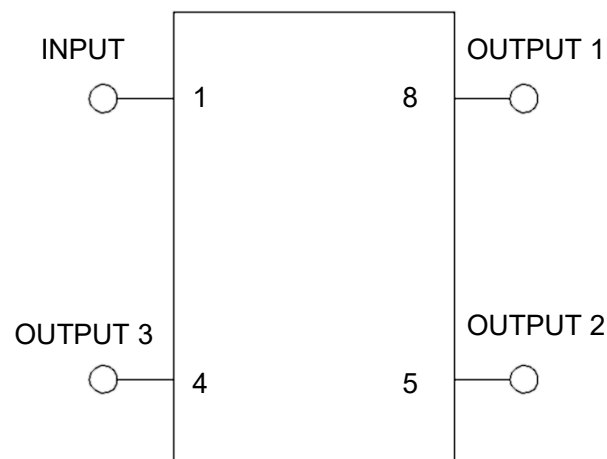
Applications

- CATV / Broadband

Description

The MAPD-011027 is a 3 way 0 degree power divider in a low cost, surface mount package. Ideally suited for high volume CATV/Broadband applications. No external components are required with this product.

Block Diagram



Pin Configuration

Function	Pin Number
1	Input
2,3,6,7	Ground
4	Output 3
5	Output 2
8	Output 1

Ordering Information

Part Number	Package
MAPD-011027	500 piece reel
MAPD-011027-TB	Customer Test Board

3 Way, 0° Power Divider

5 - 1500 MHz



MAPD-011027

Rev. V5

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

Parameter	Test Condition Frequency (MHz)	Units	Min.	Typ.	Max.
Insertion Loss 1 (pin 1 - pin 8)	5 - 46 46 - 870 870 - 1002 1002 - 1218 1218 - 1500	dB	—	0.37 1.15 1.3 2.0 4.6	0.55 1.65 2.0 2.4 5.5
Insertion Loss 2 (pin 1 - pin 5)	5 - 46 46 - 870 870 - 1002 1002 - 1218 1218 - 1500	dB	—	0.37 1.0 1.2 1.7 4.5	0.55 1.3 1.5 2.0 5.0
Insertion Loss 3 (pin 1 - pin 4)	5 - 46 46 - 870 1002 - 1218 1218 - 1500	dB	—	0.37 1.3 1.8 4.8	0.55 1.8 2.2 5.2
Input Return Loss (pin 1)	5 - 46 46 - 405 405 - 1002 1002 - 1218 1218 - 1500	dB	26 20 16 15 5	31 26 20 18 9	—
Output Return Loss 1 (pin 8)	5 - 46 46 - 1218 1218 - 1500	dB	11 20 15	18 25 18	—
Output Return Loss (pin 4, pin 5)	5 - 46 46 - 740 740 - 1218 1218 - 1500	dB	11 20 17 15	18 22 20 19	—
Isolation (pin 8 - pin 4)	5 - 46 46 - 1002 1002 - 1218 1218 - 1500	dB	18 20 18 14	28 25 24 15	—
Isolation (pin 8 - pin 5) (pin 5 - pin 4)	5 - 46 46 - 1002 1002 - 1218 1218 - 1500	dB	18 20 18 12	28 25 24 14	—
Amplitude Balance, Output 1 to Output 2 (pin 8, 5)	5 - 46 46 - 1218 1218 - 1500	dB	—	0.01 0.3 0.5	0.1 0.5 0.9
Amplitude Balance, Output 1 to Output 3 (pin 4, 8) & Output 2 to Output 3 (pin 4, 5)	5 - 46 46 - 1218 1218 - 1500	dB	—	-0.01 -0.3 -0.5	0.2 0.5 0.9
Phase Balance between all Outputs	5 - 50 50 - 1218 1218 - 1500	°	—	±0.4 ±6.0 ±8.0	±1.0 ±8.0 ±12.0

3 Way, 0° Power Divider 5 - 1500 MHz



MAPD-011027

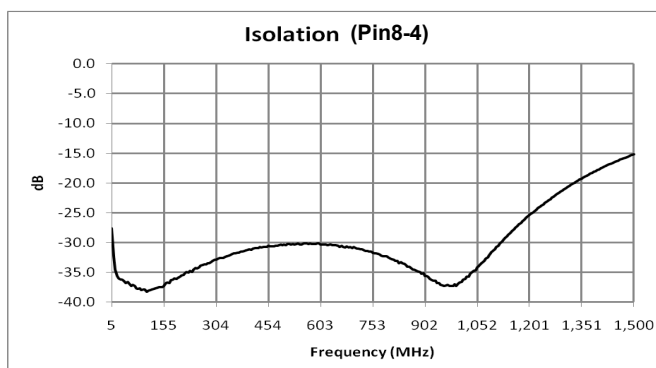
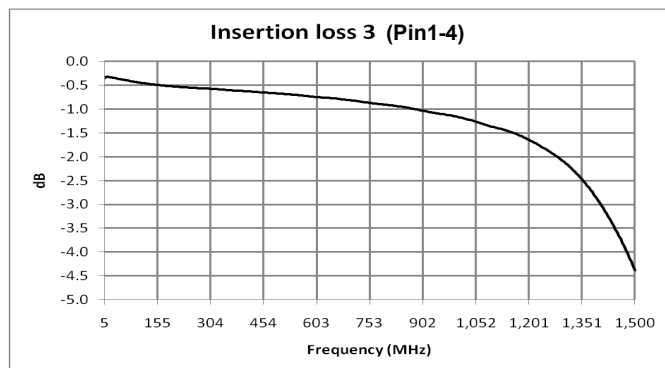
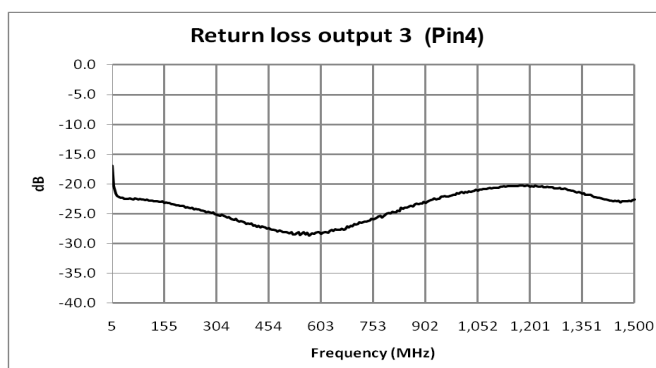
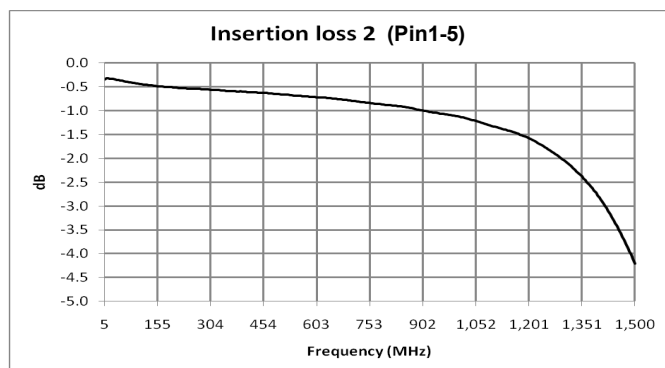
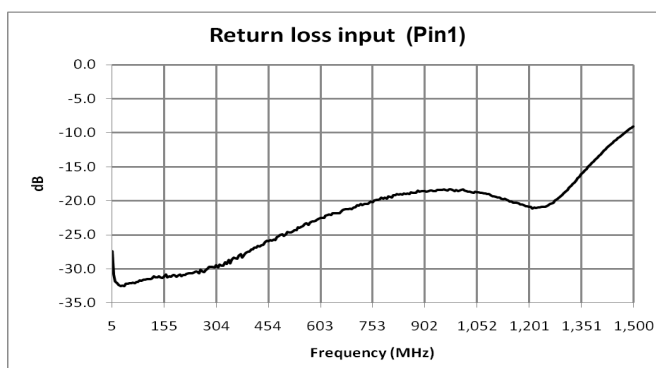
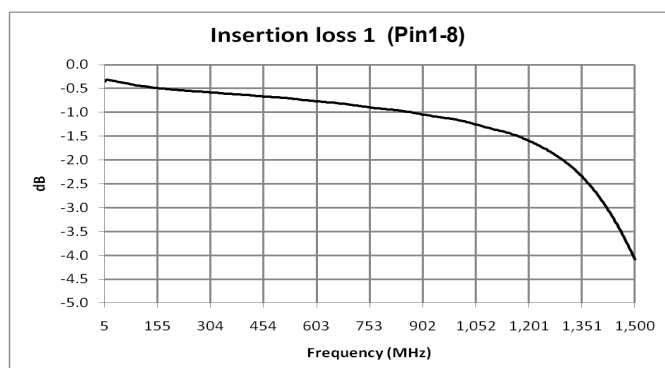
Rev. V5

Absolute Maximum Ratings^{1,2}

Parameter	Absolute Maximum
Input 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.

Typical Performance Curves³



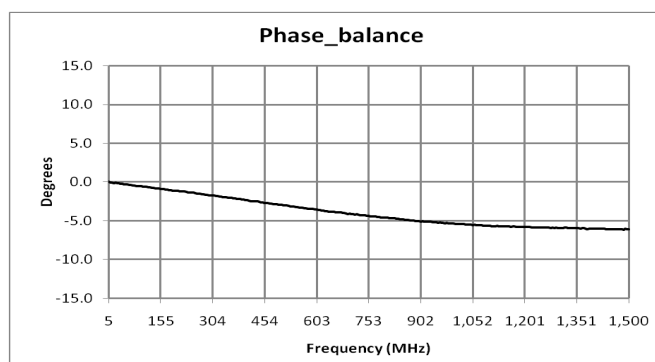
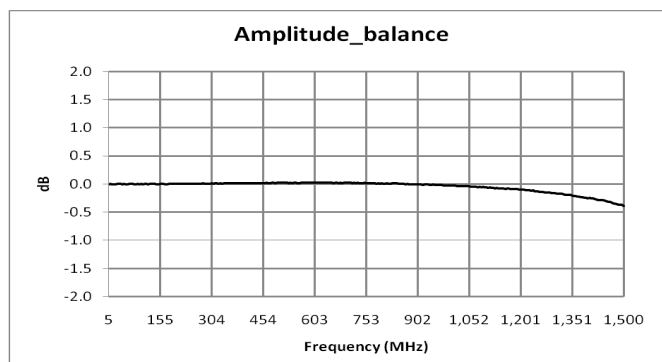
3 Way, 0° Power Divider 5 - 1500 MHz



MAPD-011027

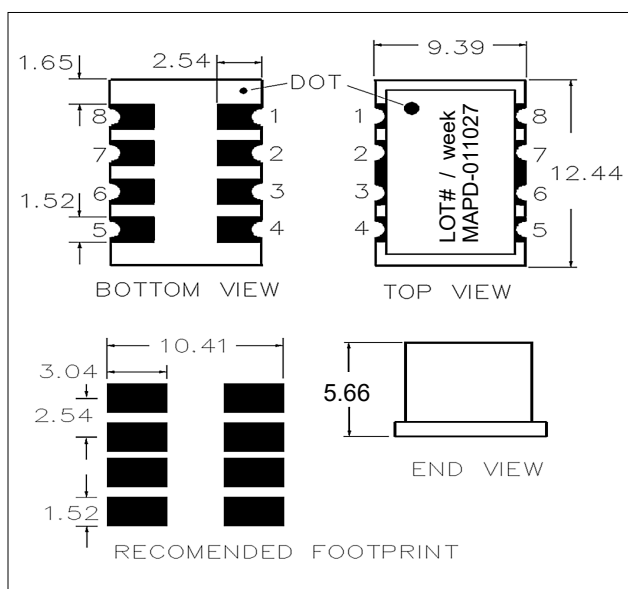
Rev. V5

Typical Performance Curves³

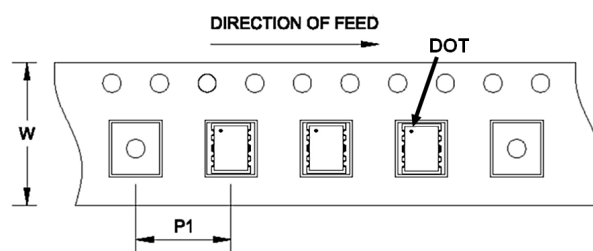


3. Full temperature plot data available on request.

Outline Drawing^{4,5,6,7,8,9}



Carrier Tape Orientation



Tape & Reel Information

Item	Dimension
W	24.00 mm +/-0.3 mm
P1	16.00 mm +/-0.1 mm
Orientation	F3 (Ref. App. Note: ANI-019 for Orientation)

4. Dimensions in mm.
5. Tolerance: ± 0.2 mm unless otherwise noted.
6. Model number and lot code are printed on the reel.
7. Lead plating: ENIG.
8. Reference Application Note J-STD-020E for lead-free solder reflow recommendations.
9. Meets JEDEC moisture sensitivity level 1 requirements.

MACOM Technology Solutions Inc. ("MACOM"). All rights reserved.

These materials are provided in connection with MACOM's products as a service to its customers and may be used for informational purposes only. Except as provided in its Terms and Conditions of Sale or any separate agreement, MACOM assumes no liability or responsibility whatsoever, including for (i) errors or omissions in these materials; (ii) failure to update these materials; or (iii) conflicts or incompatibilities arising from future changes to specifications and product descriptions, which MACOM may make at any time, without notice. These materials grant no license, express or implied, to any intellectual property rights.

THESE MATERIALS ARE PROVIDED "AS IS" WITH NO WARRANTY OR LIABILITY, EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHT, ACCURACY OR COMPLETENESS, OR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES WHICH MAY RESULT FROM 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.