

# 3 Way, 0° Power Divider 5 - 1500 MHz



**MAPD-011027**  
Rev. V3

## Features

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

## Applications

- CATV / Broadband

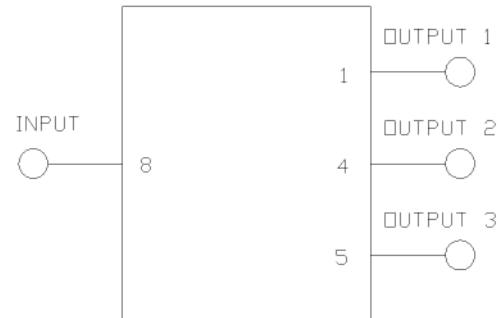
## Description

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.

## Ordering Information

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

## Functional Schematic



## Pin Configuration

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

## Absolute Maximum Ratings<sup>1,2</sup>

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.

# 3 Way, 0° Power Divider

## 5 - 1500 MHz



MAPD-011027

Rev. V3

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

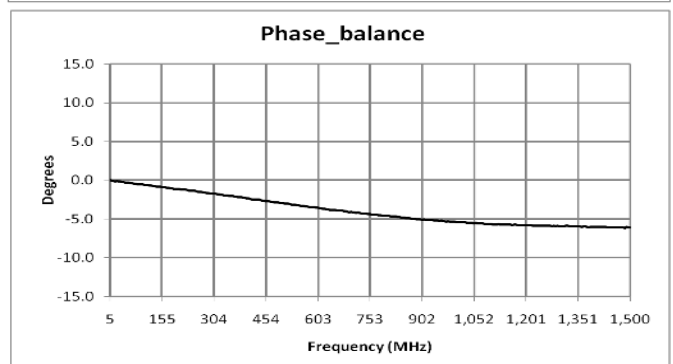
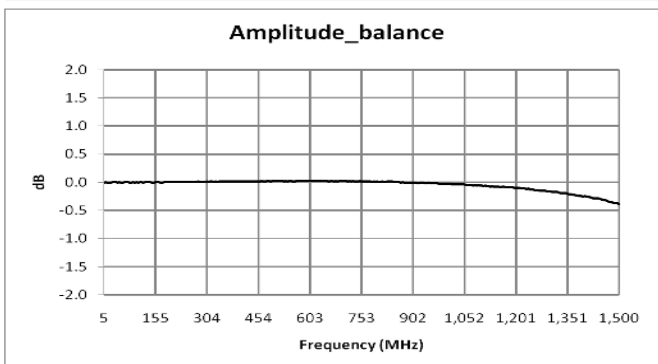
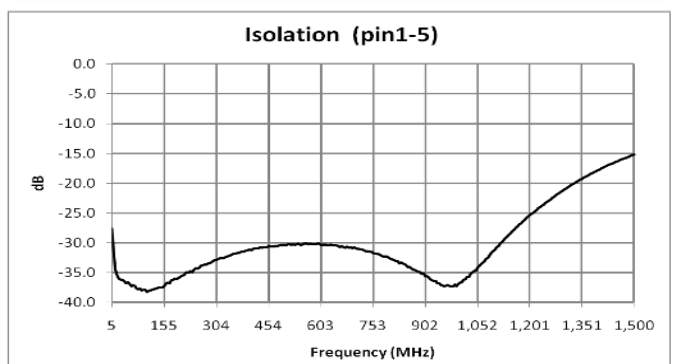
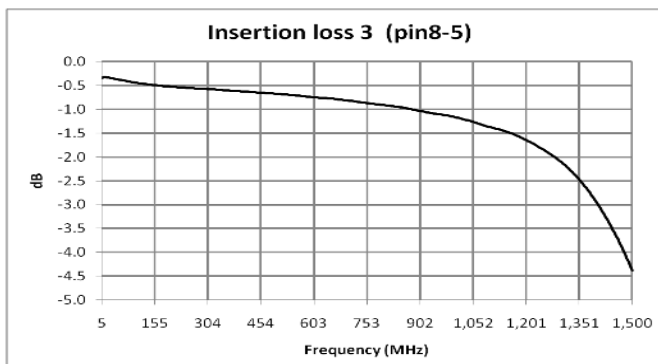
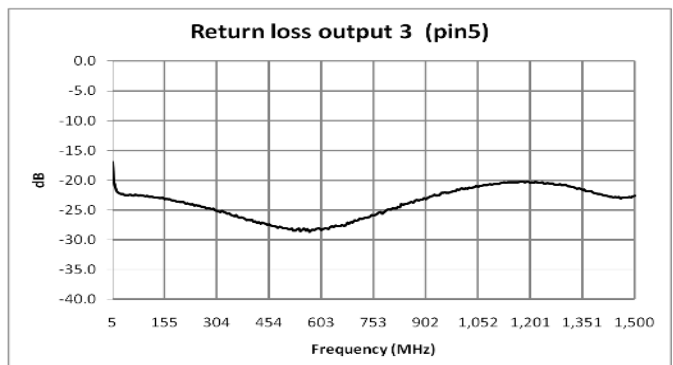
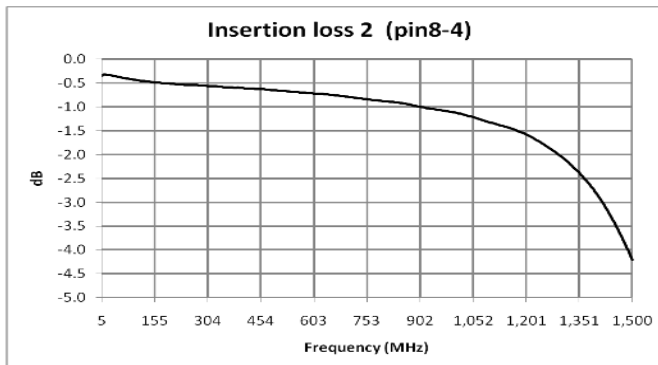
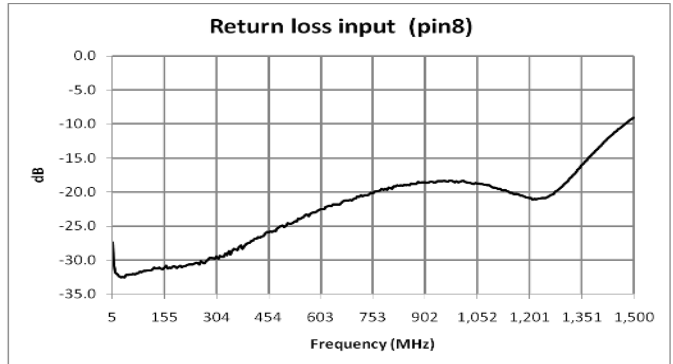
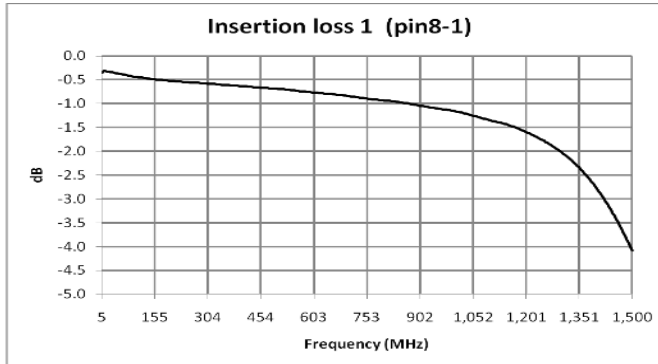
Parameter	Test Condition Frequency (MHz)	Units	Min.	Typ.	Max.
Insertion Loss 1 ( pin 8 - pin 1 )	5 - 46	dB	—	0.37	0.55
	46 - 870			1.15	1.65
	870 - 1002			1.3	2.0
	1002 - 1218			2.0	2.4
	1218 - 1500			4.6	5.5
Insertion Loss 2 ( pin 8 - pin 4 )	5 - 46	dB	—	0.37	0.55
	46 - 870			1.0	1.3
	870 - 1002			1.2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

# 3 Way, 0° Power Divider 5 - 1500 MHz



MAPD-011027  
Rev. V3

## Typical Performance Curves<sup>3</sup>



<sup>3</sup> 3. Full temperature plot data available on request.

MACOM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. Visit [www.macom.com](http://www.macom.com) for additional data sheets and product information.

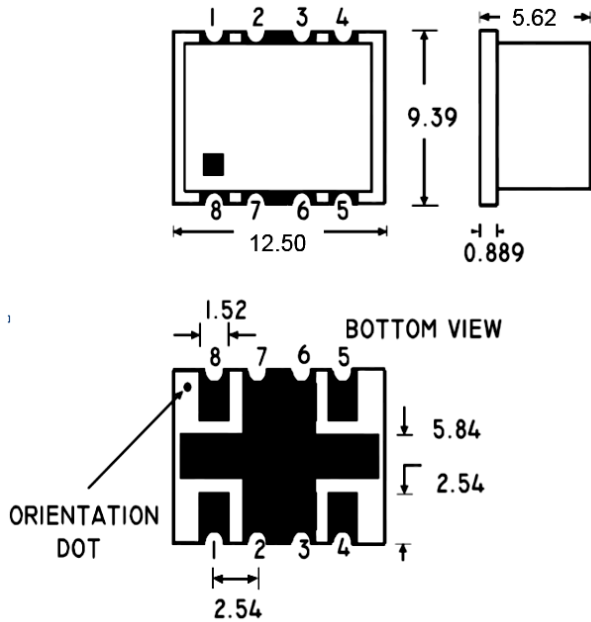
For further information and support please visit:  
<https://www.macom.com/support>

# 3 Way, 0° Power Divider 5 - 1500 MHz

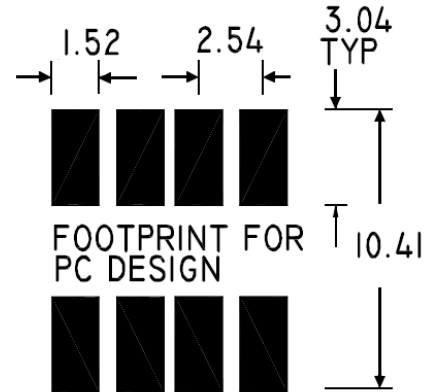


MAPD-011027  
Rev. V3

## Outline Drawing<sup>4,5,6,7</sup>



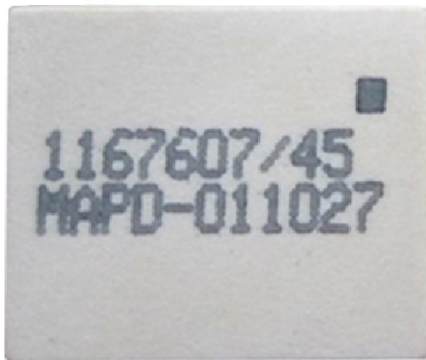
## PCB Layout



4. Dimensions in mm.
5. Tolerance:  $\pm 0.2$  mm unless otherwise noted.
6. Model number and lot code are printed on the reel.
7. Lead plating: ENIG.

## Tape & Reel Information

Item	Dimension
Ao	10.26 mm +/-0.1 mm
Bo	13.46 mm +/-0.1 mm
Ko	6.10 mm +/-0.1 mm
W	24.00 mm +/-0.3 mm
P1	16.00 mm +/-0.1 mm
Orientation	F3 (Reference Application Note: ANI-019 for Orientation)



# 3 Way, 0° Power Divider 5 - 1500 MHz



MAPD-011027

Rev. V3

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.