

# 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

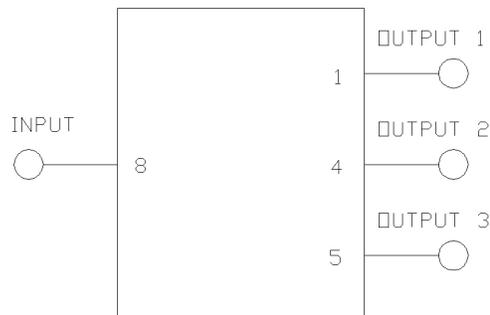
## Description

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.

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

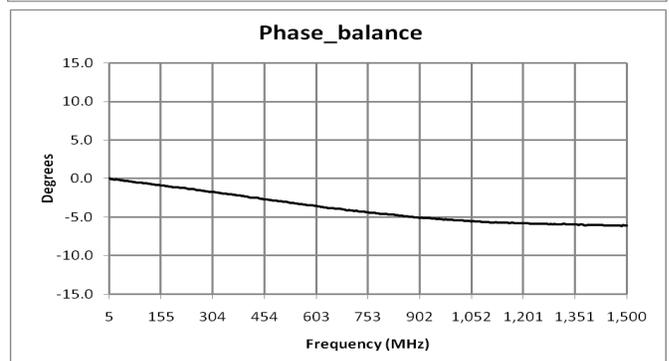
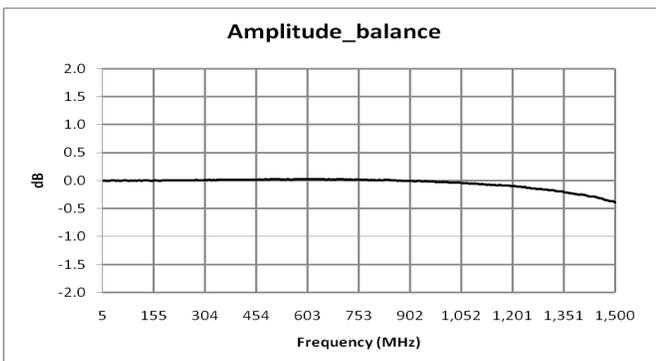
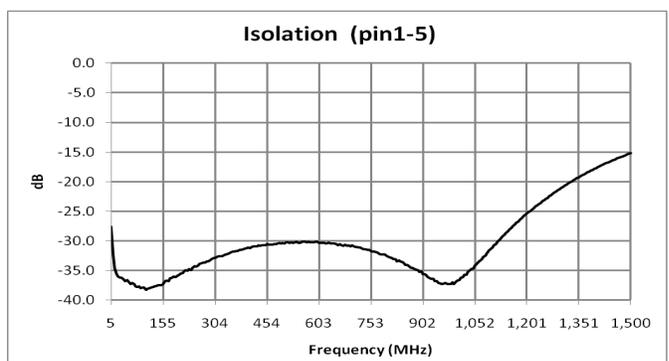
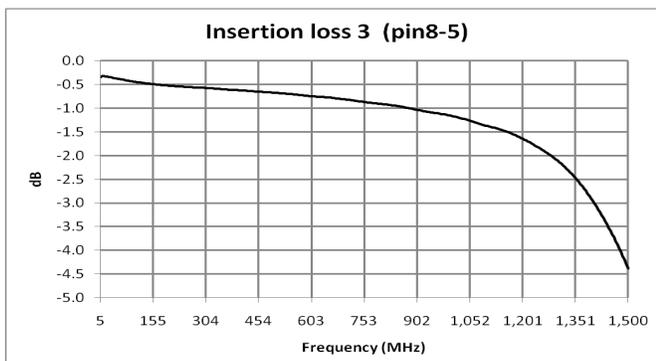
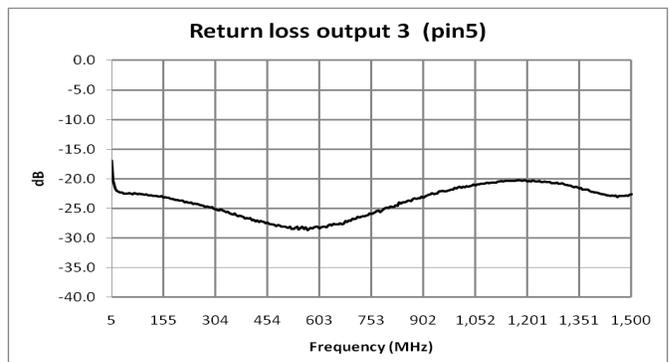
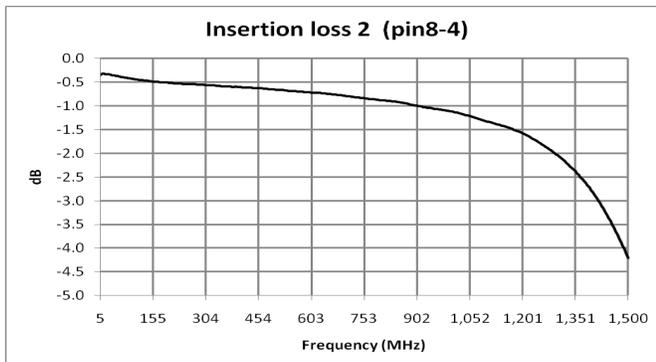
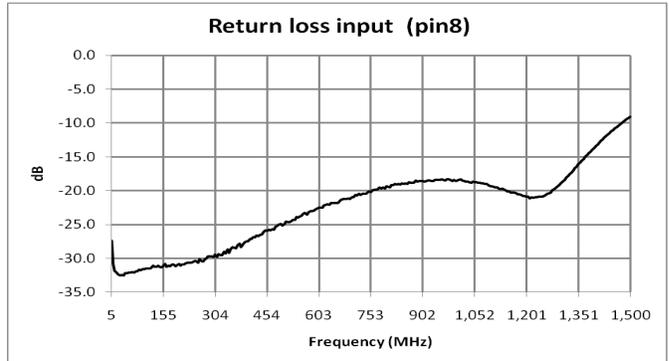
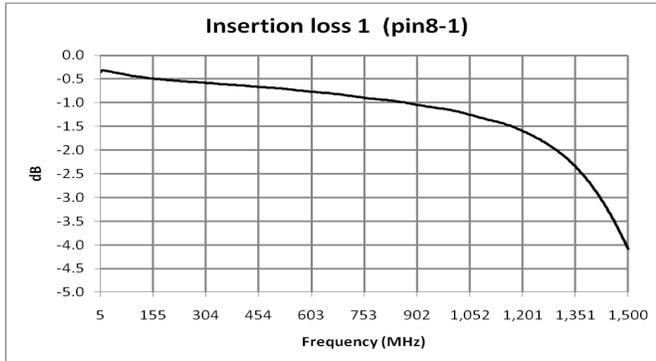
Parameter	Test Condition Frequency (MHz)	Units	Min.	Typ.	Max.
Insertion Loss 1 ( pin 8 - pin 1 )	5 - 46	dB	—	0.37	0.55
	46 - 870			1.15	1.65
	870 - 1002			1.3	2.0
	1002 - 1218			2.0	2.4
	1218 - 1500			4.6	5.5
Insertion Loss 2 ( pin 8 - pin 4 )	5 - 46	dB	—	0.37	0.55
	46 - 870			1.0	1.3
	870 - 1002			1.2	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

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



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

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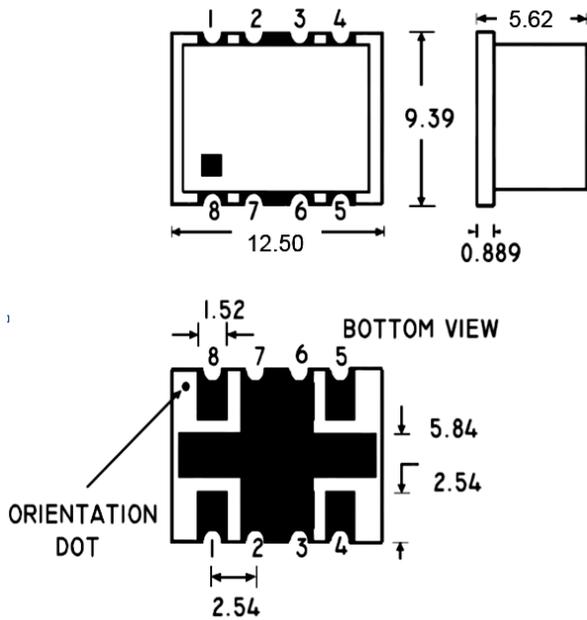
For further information and support please visit: <https://www.macom.com/support>

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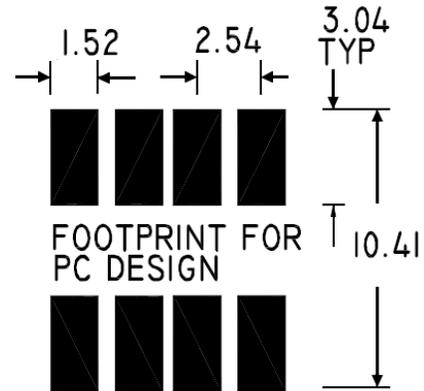


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## Outline Drawing<sup>4,5,6,7</sup>



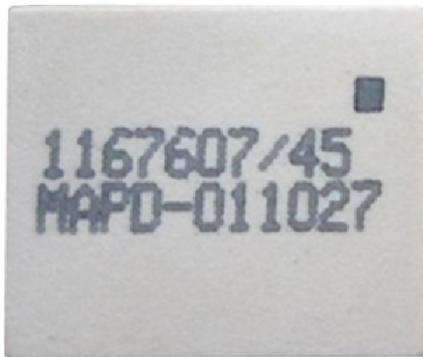
## PCB Layout



- 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)



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