

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

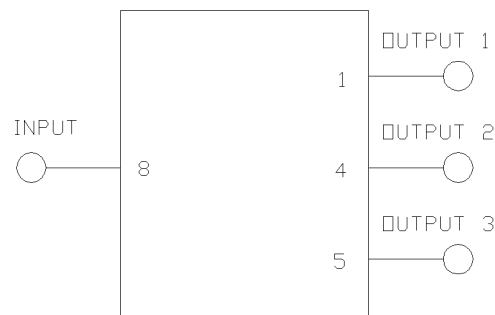
Description

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^{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.

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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 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 8 - pin 4)	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 8 - pin 5)	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 8)	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 1)	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 1 - pin 5)	5 - 46 46 - 1002 1002 - 1218 1218 - 1500	dB	18 20 18 14	28 25 24 15	—
Isolation (pin 1 - pin 4) (pin 4 - pin 5)	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 1, 4)	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 1, 5) & 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

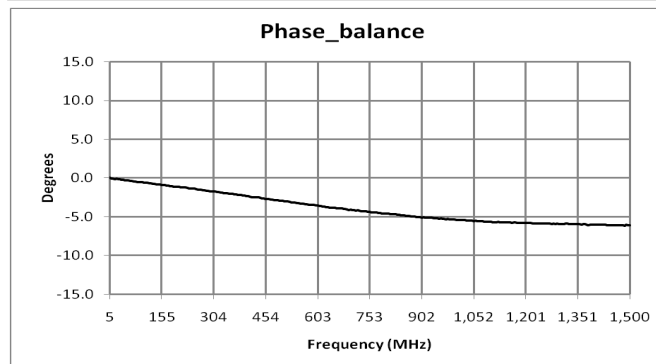
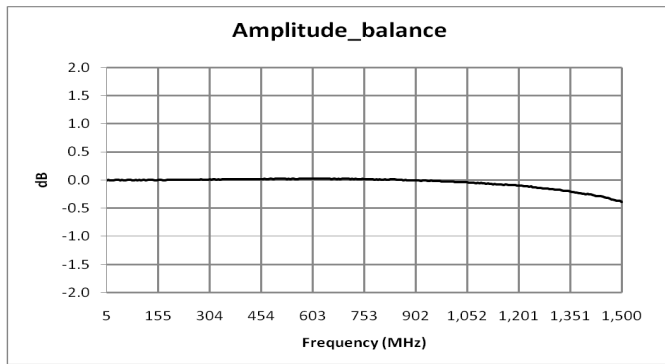
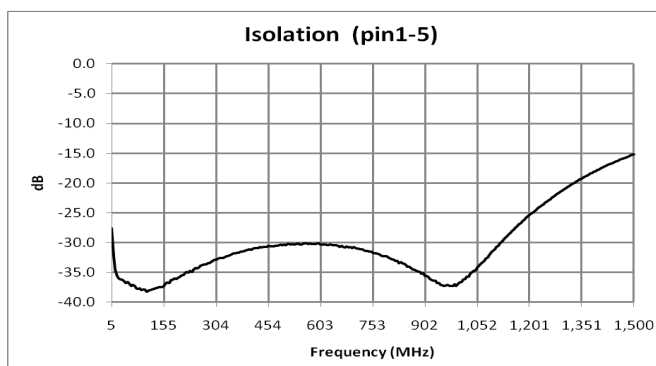
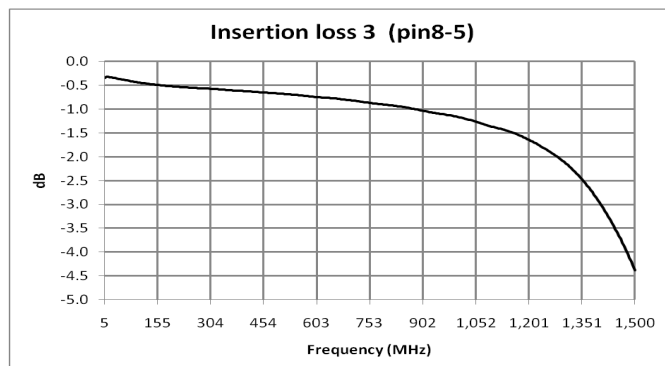
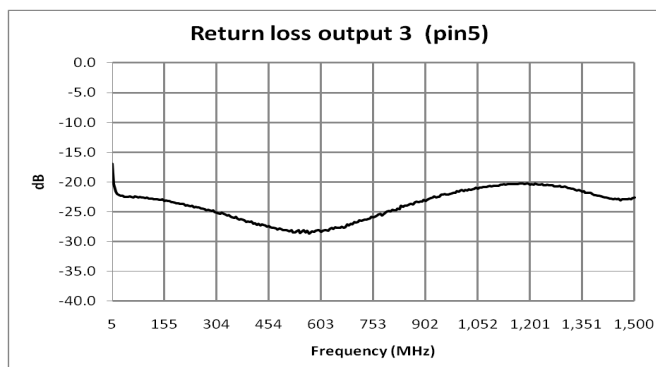
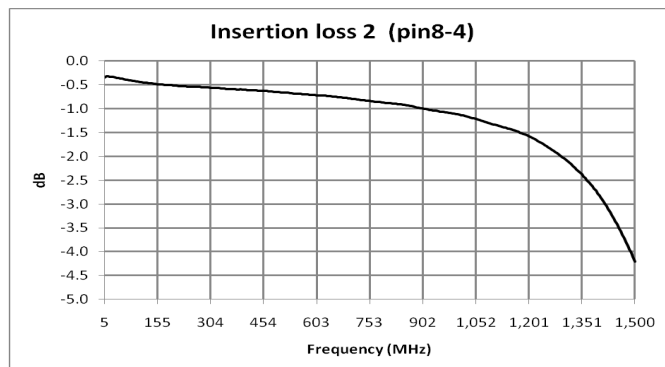
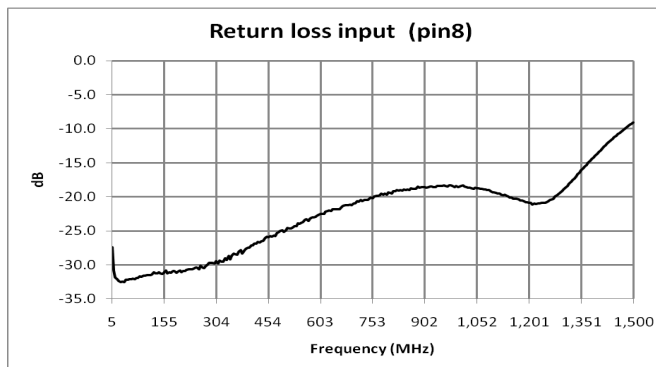
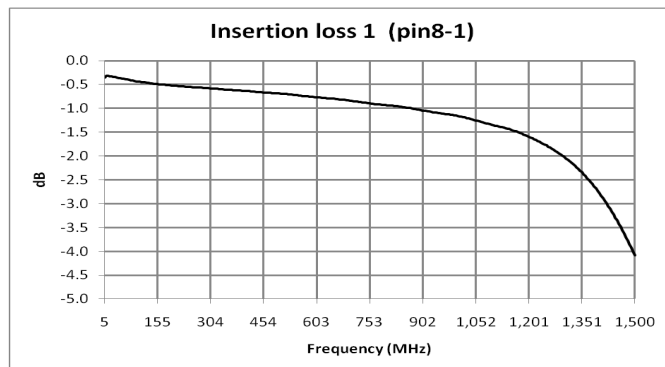
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Typical Performance Curves³



3. Full temperature plot data available on request.

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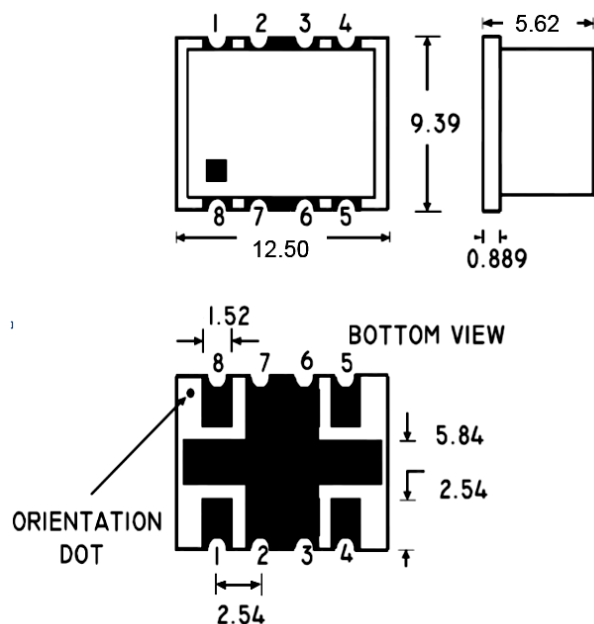
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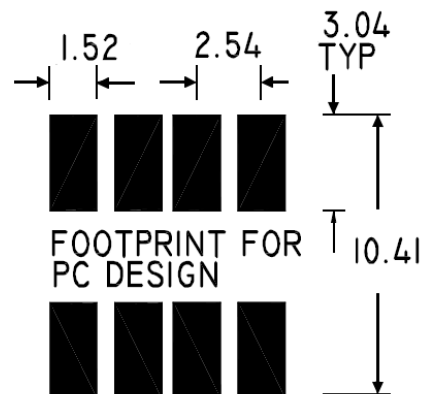
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Outline Drawing^{4,5,6,7}



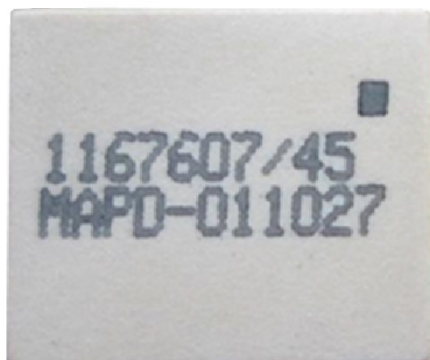
4. Dimensions in mm.
5. Tolerance: ± 0.2 mm unless otherwise noted.
6. Model number and lot code are printed on the reel.
7. Lead plating: ENIG.

PCB Layout



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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