

MAPD-011027



3 Way 0 Degree Power Divider 5 – 1500 MHz

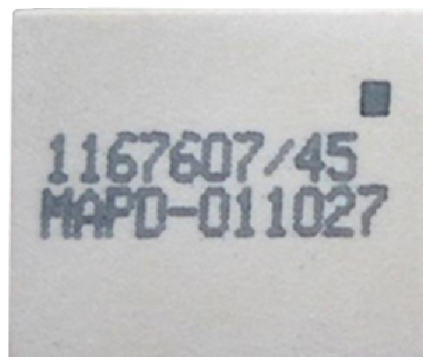
Rev. V2

Features

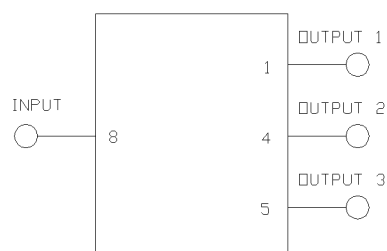
- Surface mount
- 3 Way 0 Degree
- RoHS Compliant and is 260°C reflow compatible
- Available on tape and reel

Description

MACOM's 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.



Functional Schematic



Ordering Information

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

Recommended Maximum Ratings

Parameter	Units	Min	Max
Input Power	W		0.5
DC Current	mA		500
Operating Temperature Range	°C	-40	+85

Full temperature plots available on request

Pin Configuration

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

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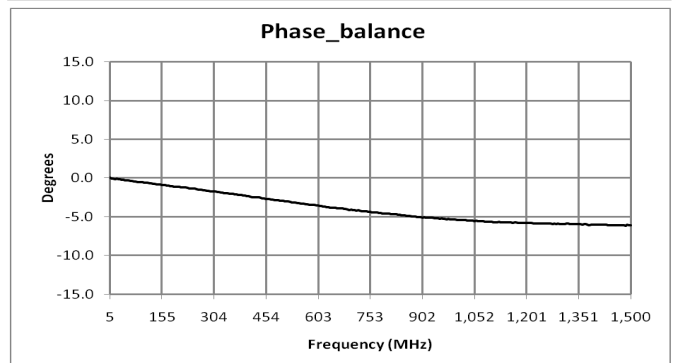
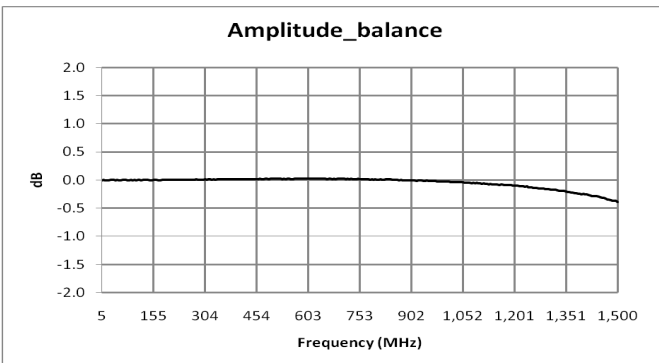
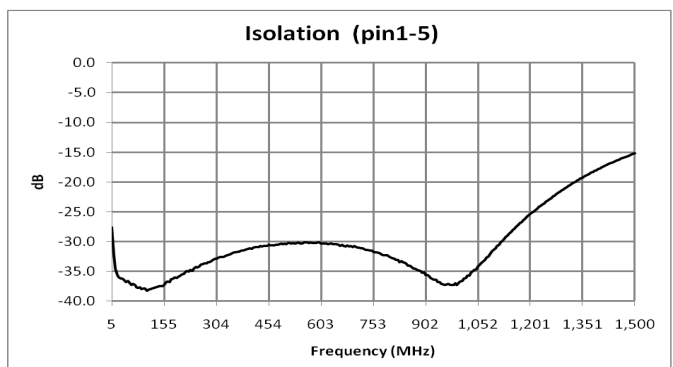
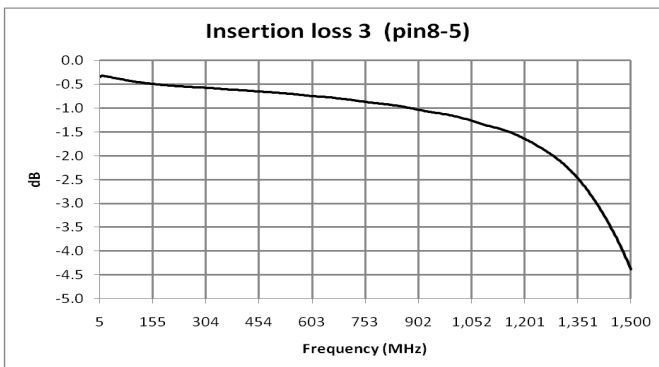
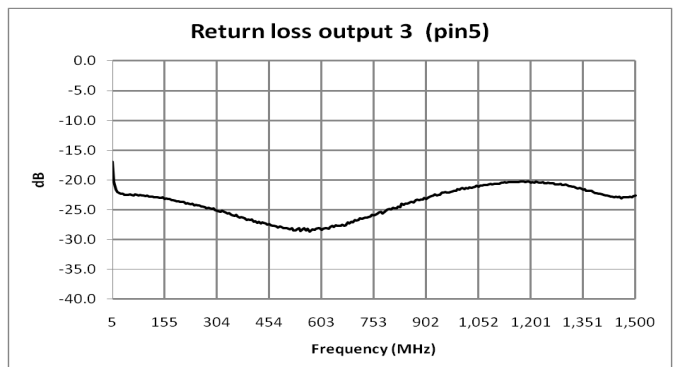
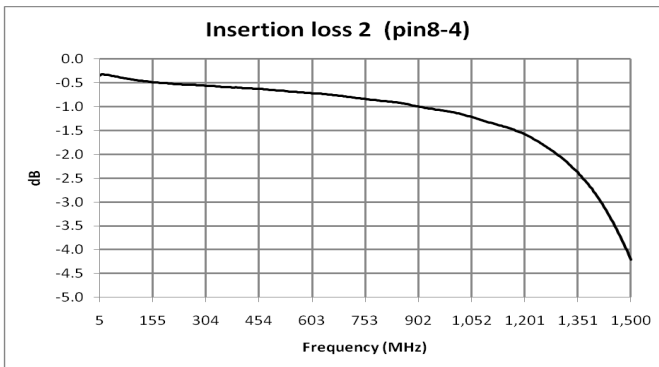
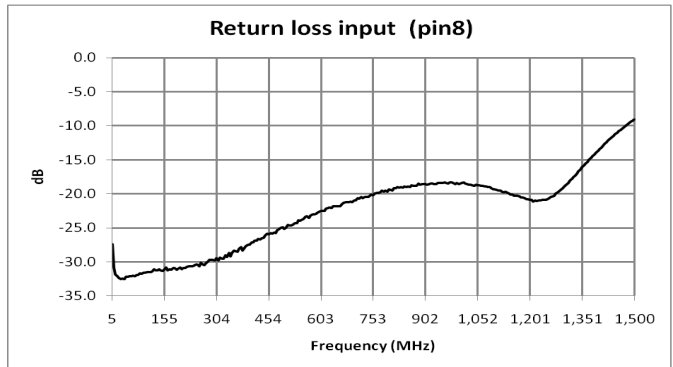
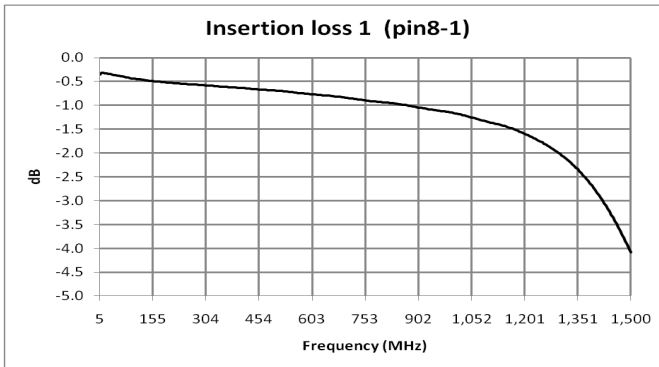
Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 75\ \Omega$, $P_{in} = 0\text{dBm}$

Parameter	Frequency	Units	Min	Typ	Max
Insertion Loss 1 (pin8 - pin1)	5 - 46 MHz	dB	-	0.37	0.55
	46 - 870 MHz	dB	-	1.15	1.65
	870 - 1002 MHz	dB	-	1.3	2.0
	1002 - 1218 MHz	dB	-	2.0	2.4
	1218 - 1500 MHz	dB	-	4.6	5.5
Insertion Loss 2 (pin8 - pin4)	5 - 46 MHz	dB	-	0.37	0.55
	46 - 870 MHz	dB	-	1.0	1.3
	870 - 1002 MHz	dB	-	1.2	1.5
	1002 - 1218 MHz	dB	-	1.7	2.0
	1218 - 1500 MHz	dB	-	4.5	5.0
Insertion Loss 3 (pin8 - pin5)	5 - 46 MHz	dB	-	0.37	0.55
	46 - 870 MHz	dB	-	1.3	1.8
	1002 - 1218 MHz	dB	-	1.8	2.2
	1218 - 1500 MHz	dB	-	4.8	5.2
Input Return Loss (Pin8)	5 - 46 MHz	dB	26	31	-
	46 - 405MHz	dB	20	26	-
	405 - 1002 MHz	dB	16	20	-
	1002 - 1218 MHz	dB	15	18	-
	1218 - 1500 MHz	dB	5	9	-
Output Return Loss 1 (Pin1)	5 - 46 MHz	dB	11	18	-
	46 - 1218 MHz	dB	20	25	-
	1218 - 1500 MHz	dB	15	18	-
Output Return Loss (Pin4, Pin5)	5 - 46 MHz	dB	11	18	-
	46 - 740 MHz	dB	20	22	-
	740 - 1218 MHz	dB	17	20	-
	1218 - 1500 MHz	dB	15	19	-
Isolation (Pin1 - Pin 5)	5 - 46 MHz	dB	18	28	-
	46 - 1002 MHz	dB	20	25	-
	1002 - 1218 MHz	dB	18	24	-
	1218 - 1500 MHz	dB	14	15	-
Isolation (Pin1 –Pin 4) (Pin4 –Pin 5)	5 - 46 MHz	dB	18	28	-
	46 - 1002 MHz	dB	20	25	-
	1002 - 1218 MHz	dB	18	24	-
	1218 - 1500 MHz	dB	12	14	-
Amplitude Balance, Output 1 to Output 2 (Pin1, 4)	5 - 46 MHz	dB	-	0.01	0.1
	46 - 1218 MHz	dB	-	0.3	0.5
	1218 - 1500 MHz	dB	-	0.5	0.9
Amplitude Balance, Output 1 to Output 3 (pin 1, 5) & Output 2 to Output 3 (pin 4, 5)	5 - 46 MHz	dB	-	-0.01	0.2
	46 - 1218 MHz	dB	-	-0.3	0.5
	1218 - 1500 MHz	dB	-	-0.5	0.9
Phase Balance between all Out-puts	5 - 50 MHz	°	-	±0.4	±1.0
	50 - 1218 MHz	°	-	±6.0	±8.0
	1218 - 1500 MHz	°	-	±8.0	±12.0

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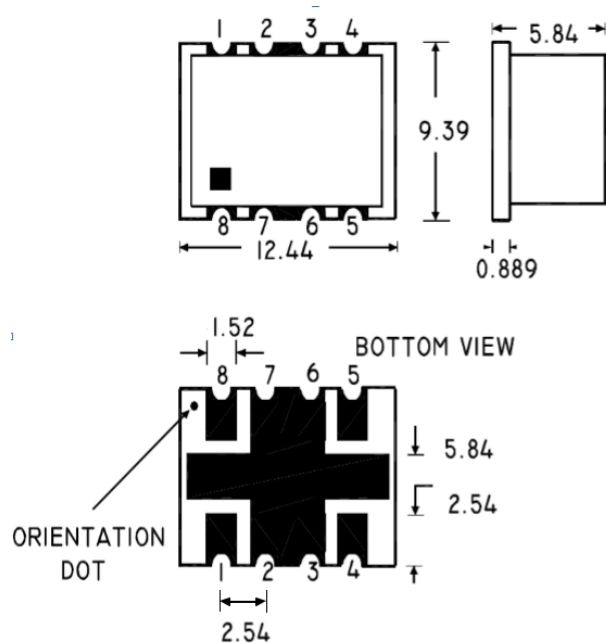
Typical Performance Curves



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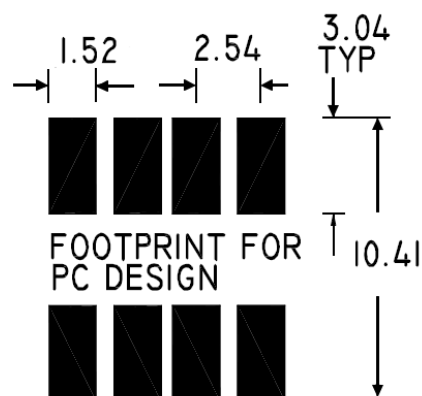
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Outline Drawing



1. Dimensions in mm.
2. Tolerance: ± 0.2 mm unless otherwise noted.
3. Model number and lot code are printed on the reel.

PCB Layout



Tape & Reel Information

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