

2 Way 0° Power Divider 5 – 1218 MHz

Rev. V1

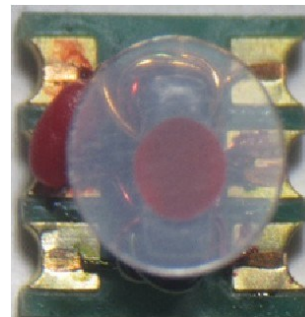
Features

- 2 Way 0 Degree
- Surface mount
- Available on tape and reel
- 260° reflow compatible
- RoHS compliant and Pb free
- Excellent temperature stability
- Suitable for all CATV, Broadband and FTTX applications

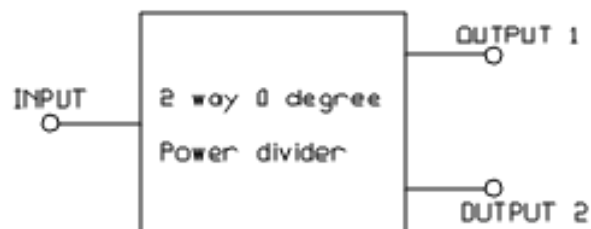
Description

The MAPD-011039 is a 2 way 0 degree power divider in a low cost surface mount package.

Ideally suited for high volume CATV/VSAT applications.



Functional Schematic



Ordering Information

Part Number	Package
MAPD-011039	Tape & Reel
MAPD-011039-TB	Customer Test Board

Pin Configuration

Pin No.	Function
1	Ground
2	External 0.5 pF Capacitor
3	Output 2
4	Output 1
5	External 0.5 pF Capacitor
6	Input

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

Parameter	Conditions	Units	Min.	Typ.	Max.
Impedance	-	Ω	-	75	-
Power Split	-	dB	-	3	-
Insertion Loss (Above 3dB)	5 - 50 MHz	dB	-	0.60	0.7
	50 - 500 MHz			0.70	0.8
	500 - 1218 MHz			1.20	1.3
Amplitude Balance	5 - 1000 MHz	dB	-	0.5	± 0.6
	1000 - 1218 MHz		-	0.6	± 0.7
Phase Balance	5 - 1218 MHz	$^\circ$	-	2.5	± 4
Input Return Loss	5 - 1218 MHz	dB	20	22	-
Output Return Loss	5 - 50 MHz	dB	18	20	-
	50 - 1218 MHz		20	22	
Isolation (between outputs)	5 - 50 MHz	dB	26	30	-
	50 - 1218 MHz		28	29	

Recommended Maximum Ratings

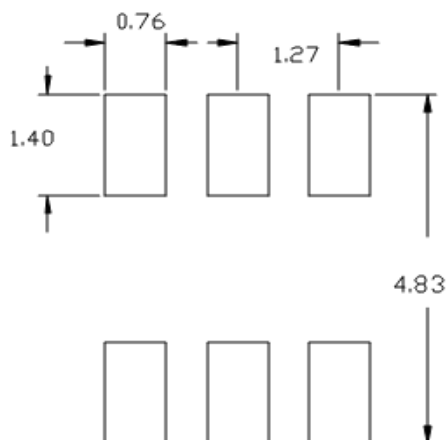
Parameter	Units	Min	Max
Input Power	W	-	1
Internal Load Dissipation	W	-	0.125
Operating Temperature Range	$^\circ\text{C}$	-40	+85

Full temperature plots available on request

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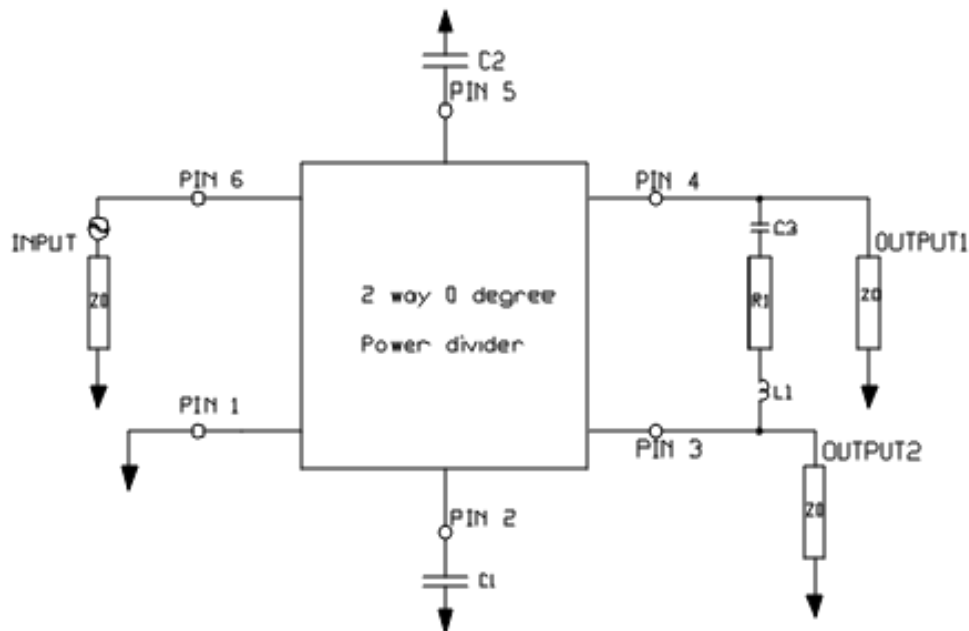
PCB Layout



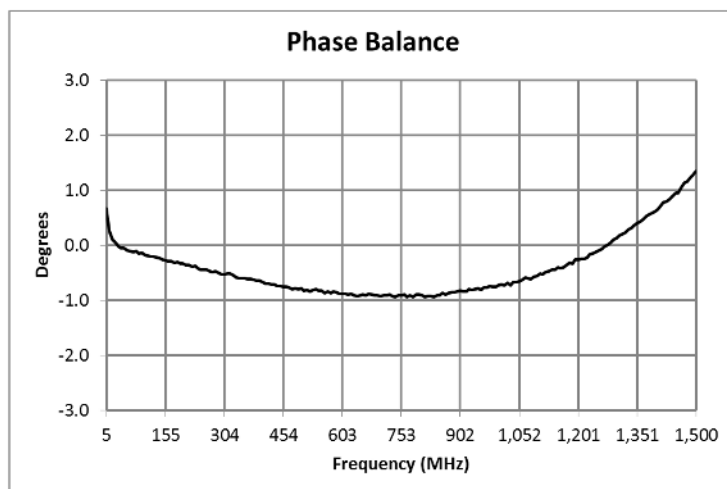
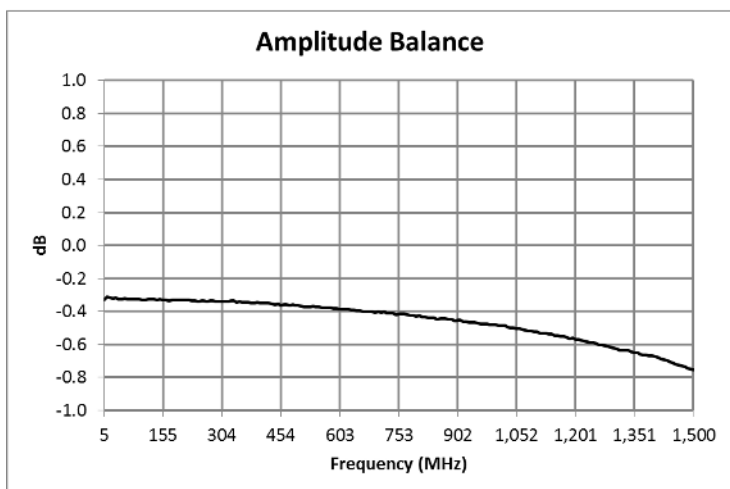
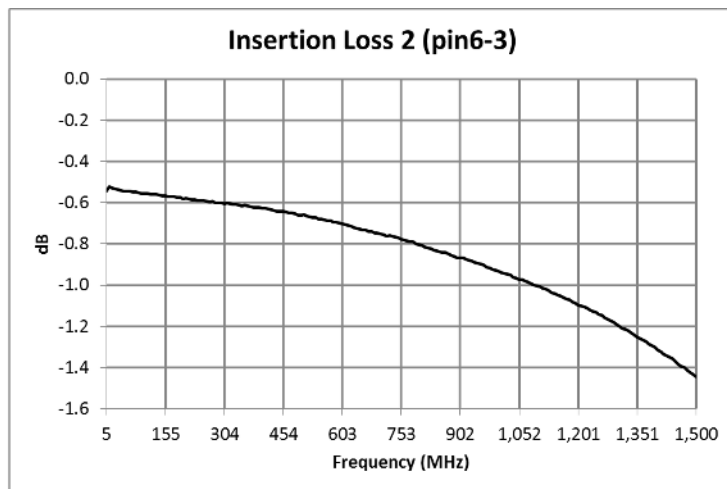
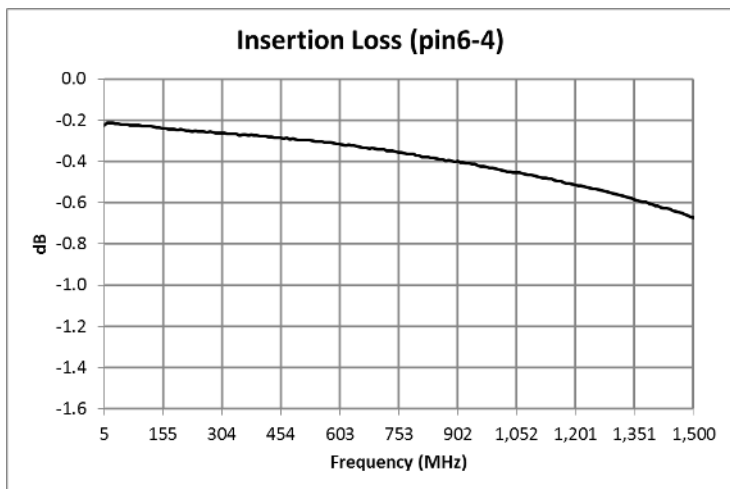
Parts List

REF	DESCRIPTION	P/N
R1	RES,0402	240 Ω
L1	IND,0402	12 nH
C1	CAP,0402	0.5 pF
C2	CAP,0402	0.5 pF
C3	CAP,0402	560 pF

Application Circuit

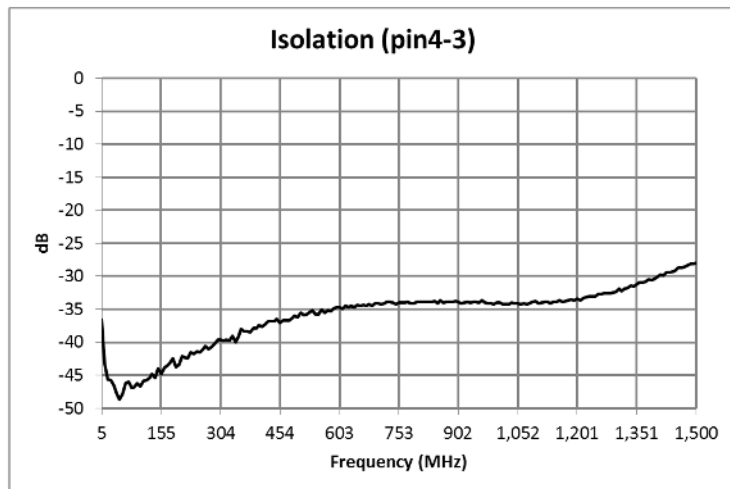
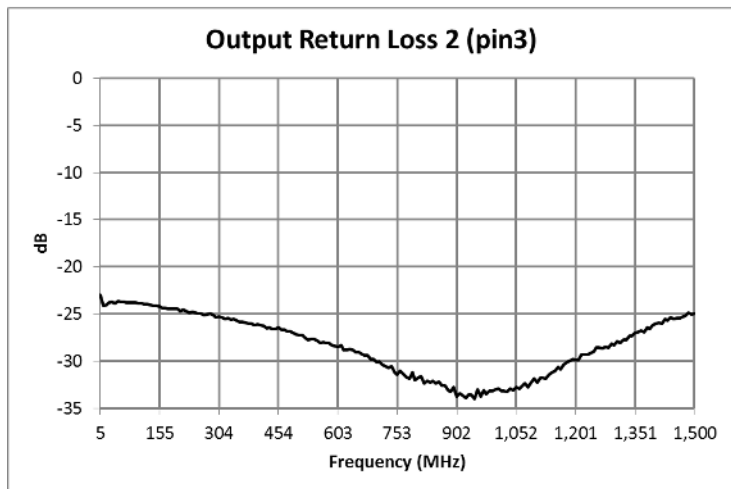
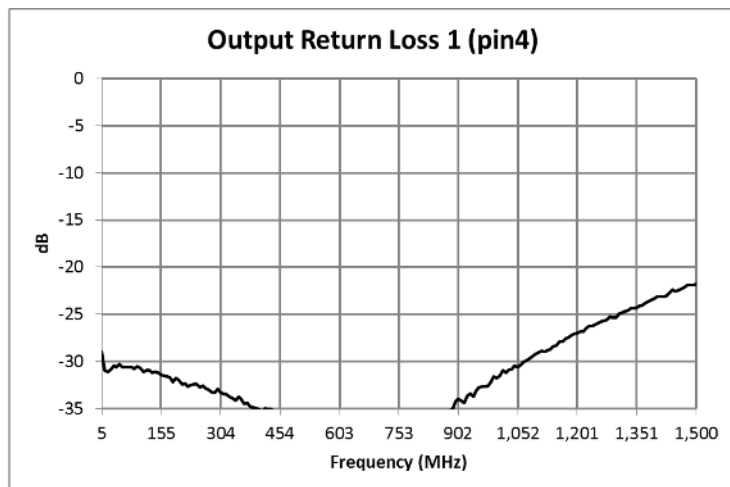
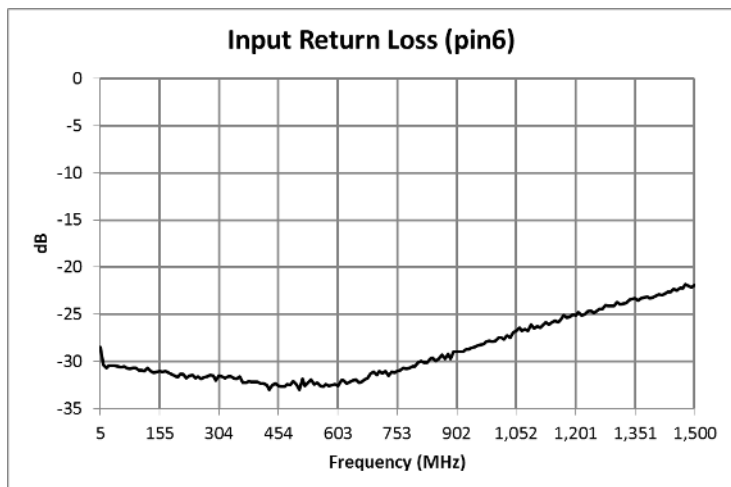


Typical Performance Curves



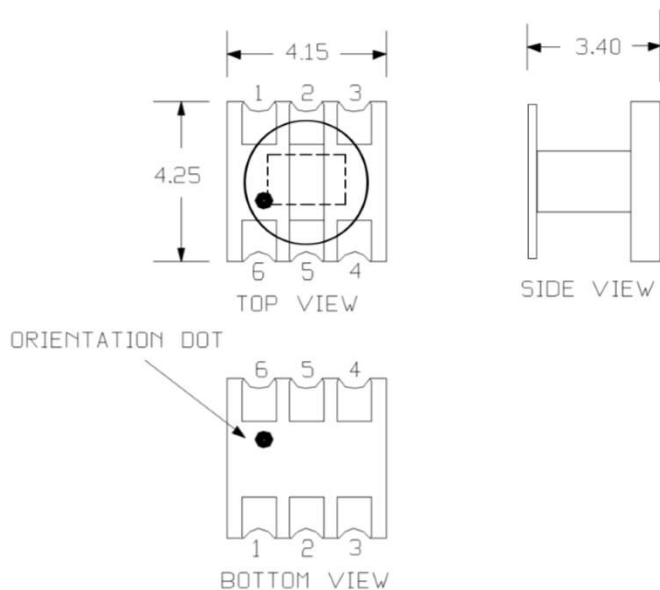
Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{in} = 0\text{dBm}$

Typical Performance Curves

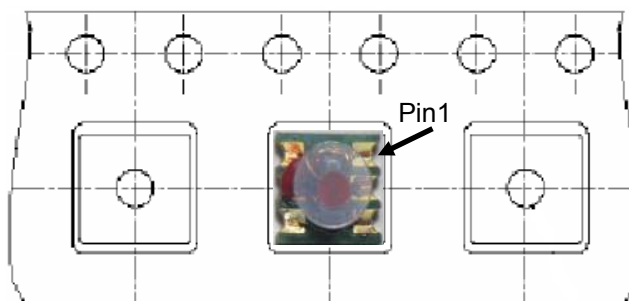


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Outline Drawing



Carrier Tape Orientation



1. Dimensions in mm.
2. Tolerance: $\pm 0.2\text{mm}$ unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Plating finish: ENIG on both sides, 0.05 to 0.1 μm gold over 3 to 6 μm nickel

Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel Size	mm	330
Tape Width	mm	12.00
Pitch	mm	8.00
Ao	mm	4.50
Bo	mm	4.40
Ko	mm	3.70
Orientation	-	F27
Reference Application Note ANI-019 for orientation		

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