

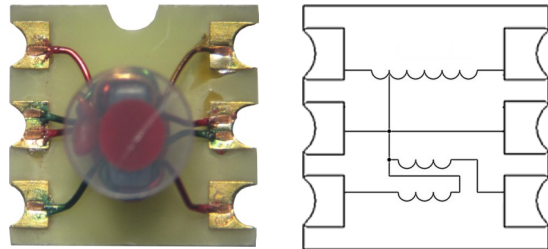
2-Way 0° Power Divider 5 - 1225 MHz

Rev. V3

Features

- 2 Way 0 Degree Power Divider
- Surface Mount
- Available on Tape and Reel
- RoHS Compliant and Pb Free
- 260°C Reflow Compatible
- Excellent Temperature Stability
- Suitable for all CATV, Broadband and FTTX applications

Functional Schematic



Description

The MAPD-011051 is a 2 way 0 degree power divider in a low cost surface mount package.

Electrical Specifications: Freq. = 5 - 1225 MHz, T_A = 25°C, Z₀ = 75 Ω, P_{IN} = 0 dBm

Parameter	Test Frequency (MHz)	Units	Min	Typ	Max
Power Split	5 - 1225	dB	—	3	—
Insertion Loss 1 (pin 1 - pin 3)	5 - 1000	dB	—	1.0	1.2
	1000 - 1225			1.2	1.5
Insertion Loss 1 (pin 1 - pin 4)	5 - 1000	dB	—	0.6	0.8
	1000 - 1225			0.8	1.0
Amplitude Balance	5 - 1000	dB	—	0.5	±0.6
	1000 - 1225			0.6	±0.7
Phase Balance	5 - 1000	°	—	5.0	±6.5
	1000 - 1225			6.0	±8.0
Input Return Loss (pin 1)	5 - 1000	dB	16.5	18	—
	1000 - 1225		16.5	20	
Output Return Loss 1 (pin 3)	5 - 1000	dB	17.0	20	—
	1000 - 1225		13.5	16	
Output Return Loss 2 (pin 4)	5 - 1000	dB	15.5	17	—
	1000 - 1225		13.5	16	
Isolation (pin 3 - pin 4)	5 - 1000	dB	29	27	—
	1000 - 1225		27	25	

Ordering Information

Part Number	Description
MAPD-011051	900 piece reel
MAPD-0110501-TB	sample board

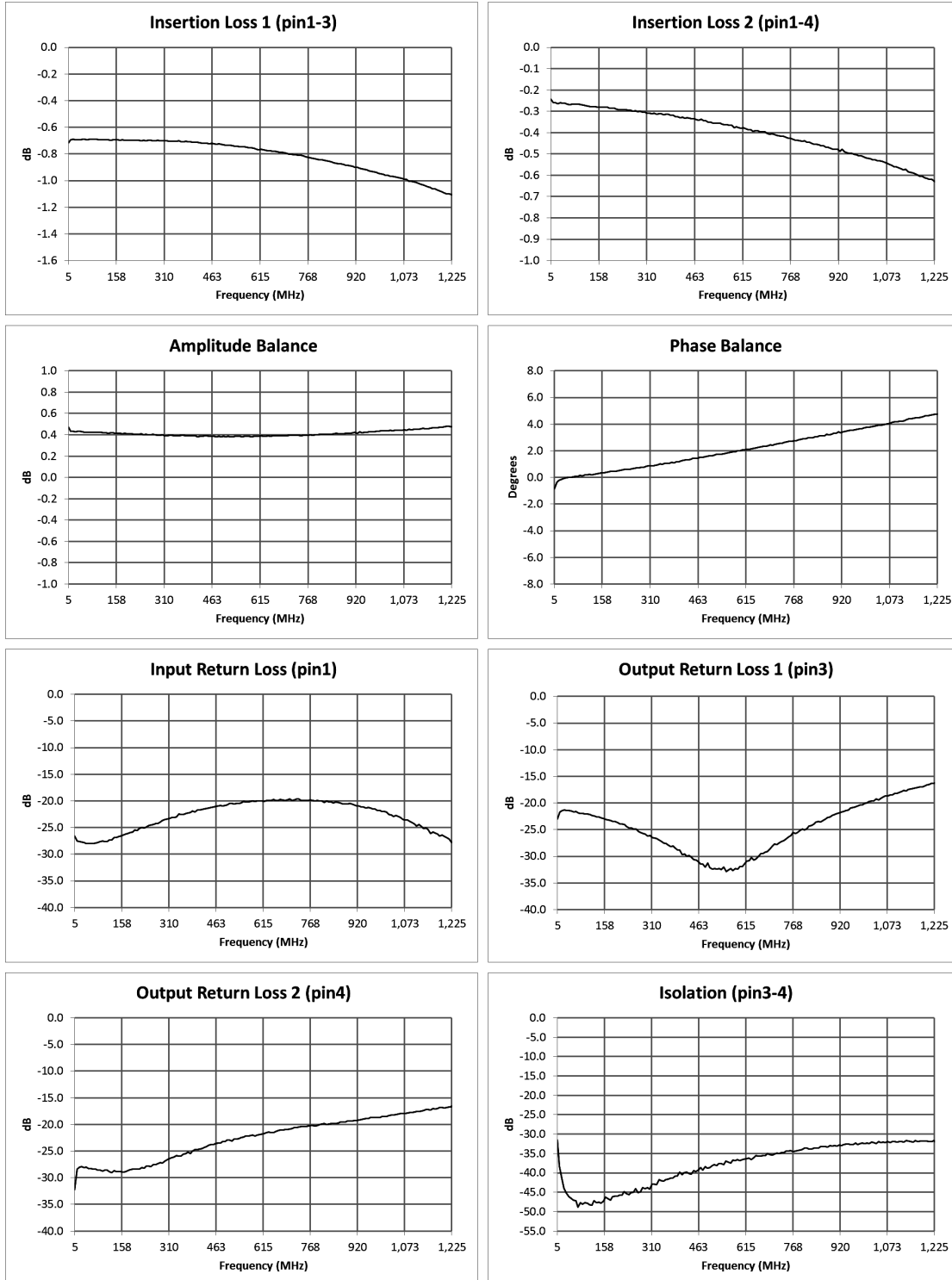
Absolute Maximum Ratings

Parameter	Absolute Maximum
Input RF Power	500 mW
DC Current	500 mA
Operating Temperature	-40°C to +85°C

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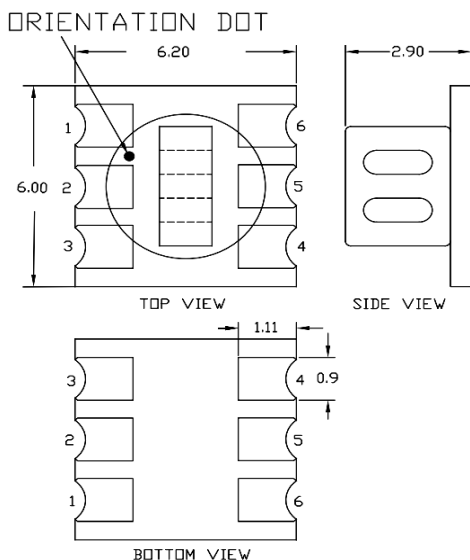
Typical Performance Curves: $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{IN} = 0 \text{ dBm}$



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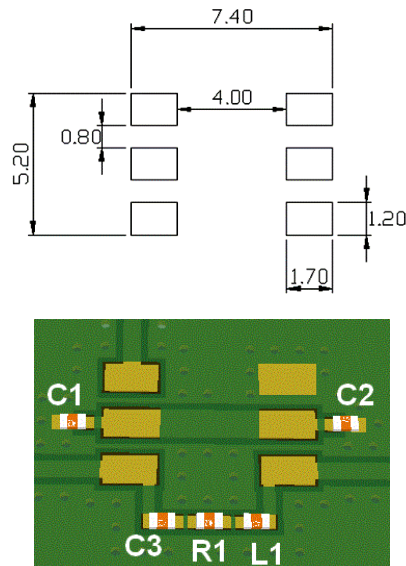
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Outline Drawing^{1,2,3,4}



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

Recommended Board Layout/Footprint⁵



5. Recommended PCB layout shown above uses 1.6 mm FR4. Grounded coplanar wave guide, transmission line width 0.70 mm and gap 0.57 mm.

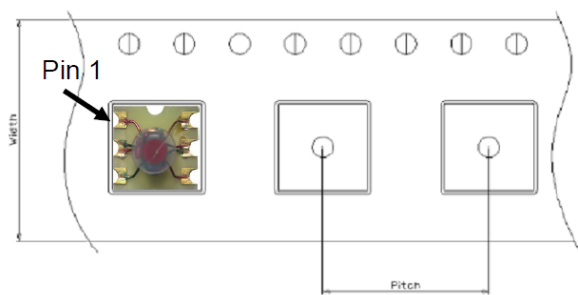
Pin Configuration

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

Parts List

Part	Value	Case Style
C1, C2	0.5 pF	0402
C3	220 pF	0402
L1	9.1 nH	0402
R1	270 Ω	0402

Carrier Tape Orientation



Tape & Reel Information

Parameter	Units	Value
Qty per reel	—	900
Reel Size	mm	330
Tape Width	mm	16.00
Pitch	mm	12.00
Orientation	—	F45
Reference Application Note ANI-019 for orientation		

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