

3 Way, 0° Power Divider 5 - 1200 MHz



MAPDCT0032

Rev. V7

Features

- 3 Way 0°
- Surface Mount Technology
- RoHS* Compliant
- Available on Tape & Reel

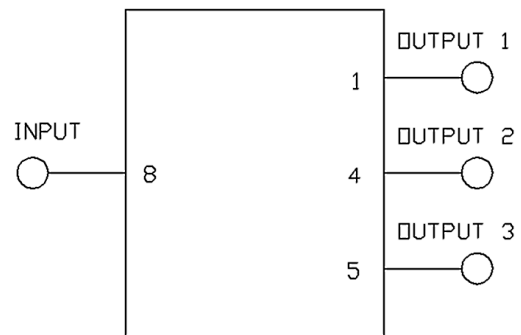
Applications

- CATV / Broadband

Description

The MAPDCT0032 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.

Block Diagram



Ordering Information

Part Number	Package
MAPDCT0032	500 piece reel
MAPD-008112-CT32TB	Customer Test Board

Pin Configuration

Pin #	Function
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 (MHz)	Units	Min	Typ	Max
Insertion Loss 1 (pin 8 - pin 1) Ref value -4.77 dB	5 - 46	dB	—	0.37	0.5
	46 - 870			1.23	1.5
	870 - 1002			1.50	1.8
	1002 - 1200			2.23	3.2
Insertion Loss 2 (pin 8 - pin 4) Ref value -4.77 dB	5 - 46	dB	—	0.37	0.5
	46 - 870			1.0	1.3
	870 - 1002			1.2	1.5
	1002 - 1200			2.0	2.8
Insertion Loss 3 (pin 8 - pin 5) Ref value -4.77 dB	5 - 46	dB	—	0.38	0.5
	46 - 870			1.5	1.8
	870 - 1002			1.8	2.2
	1002 - 1200			2.8	3.3
Input Return Loss	5 - 8	dB	26	28	—
	8 - 46		27	31	
	46 - 405		20	25	
	405 - 1002		17.5	20	
	1002 - 1200		11	18	
Output Return Loss 1 & 2 (pin 1, pin 4)	5 - 46	dB	11	18	—
	46 - 1200		20	25	
Output Return Loss 3 (pin 5)	5 - 46	dB	11	18	—
	46 - 740		20	20	
	740 - 1002		17	25	
	1002 - 1200		14	18	
Isolation Between all Outputs	5 - 46	dB	18	28	—
	46 - 1002		20	25	
	1002 - 1200		18	24	
Amplitude Unbalance, Output 1 to Output 2 (pin 1, 4)	5 - 46	dB	—	0.0	-0.1
	46 - 1002		0.3	0.5	
Amplitude Unbalance, Output 1 to Output 3 (pin 1, 5) & Output 2 to Output 3 (pin 4, 5)	5 - 46	dB	—	-0.1	-0.2
	46 - 1002		-0.3	-0.5	
Phase Unbalance between all Outputs	5 - 50	°	—	0.4	0.5
	50 - 1200		3.0	4.0	

Absolute Maximum Ratings^{1,2}

Parameter	Absolute Maximum
RF Power	250 mW
DC Current	30 mA
Operating & Storage Temperature	-40°C to +85°C

- Exceeding any one or combination of these limits may cause permanent damage to this device.
- MACOM does not recommend sustained operation near these survivability limits.

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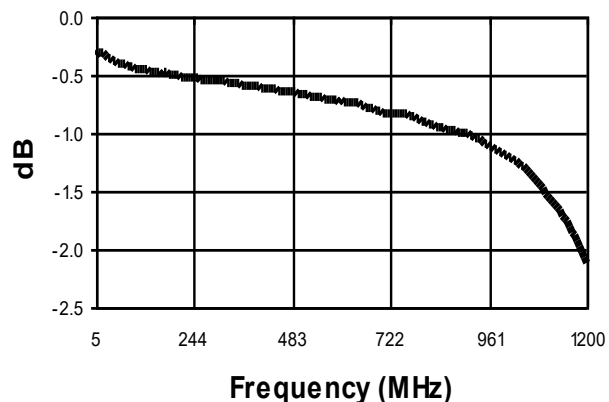


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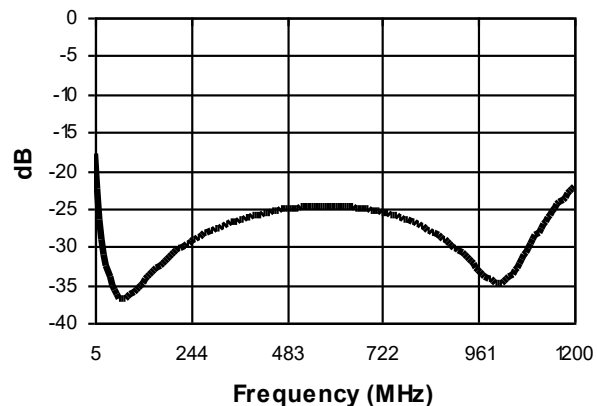
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Typical Performance Curves³ @ T_A = 25°C, Z₀ = 75 Ω

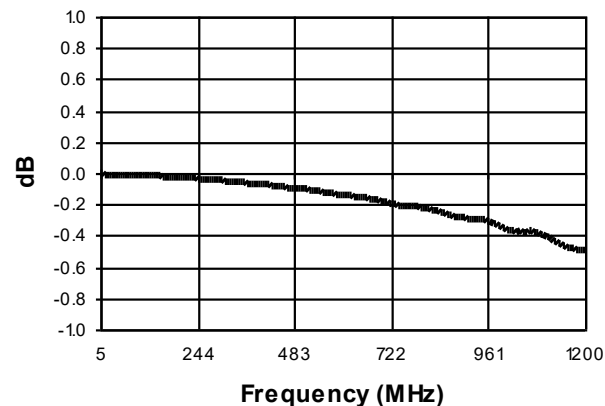
Insertion Loss



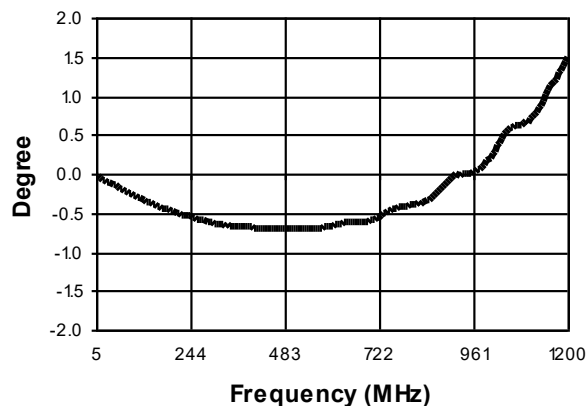
Isolation



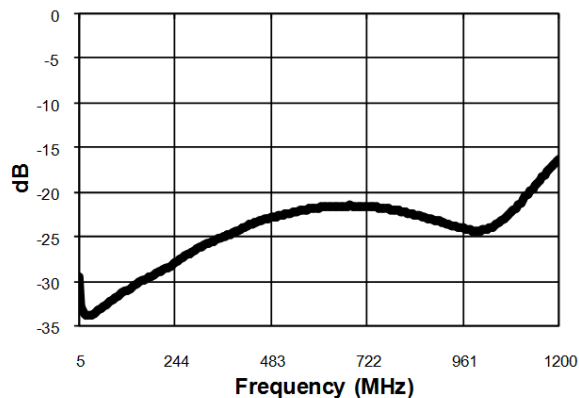
Amplitude Balance



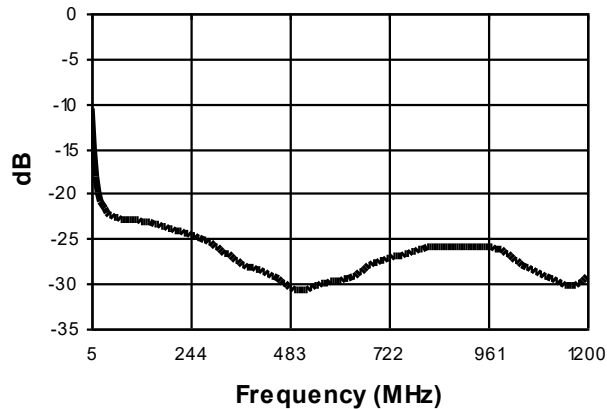
Phase Balance



Return Loss: Input



Return Loss: Output



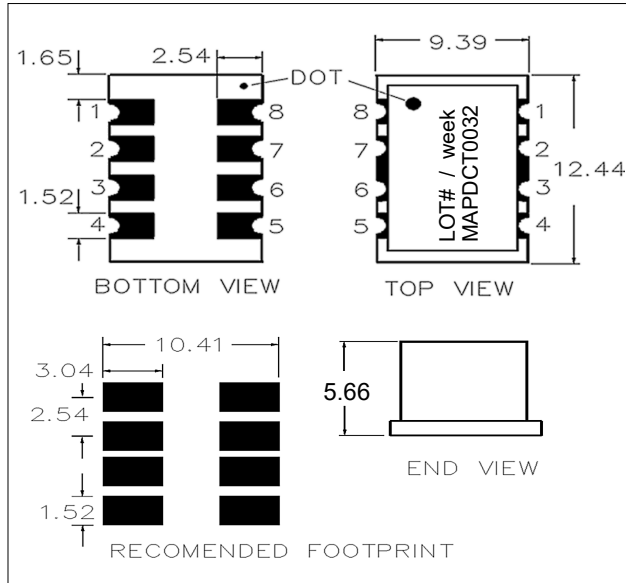
3. Full temperature plot data available on request.

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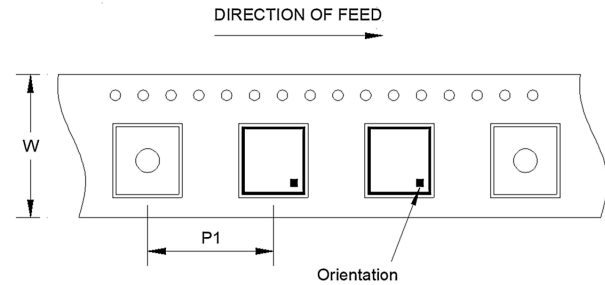


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Outline Drawing^{4,5,6,7,8,9}



Carrier Tape Orientation



Tape & Reel Information

Item	Dimension
W	24 mm +/-0.3 mm
P1	16 mm +/-0.1 mm
Orientation	F3 (Ref. App. Note: ANI-019 for Orientation)

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.
8. Reference Application Note J-STD-020E for lead-free solder reflow recommendations.
9. Meets JEDEC moisture sensitivity level 1 requirements.

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