

3 Way 0 Degree Power Divider  
5 to 1200 MHz

M/A-COM Products  
Part Status: Released, Rev. V2

## Features

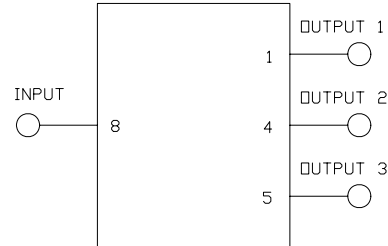
- Surface mount
- 3 Way 0 Degree
- RoHS Compliant and is 260°C reflow compatible
- RoHS version of MAPDCT0005 & MAPDCT0017
- Available on tape and reel, reel quantity 500

## Description

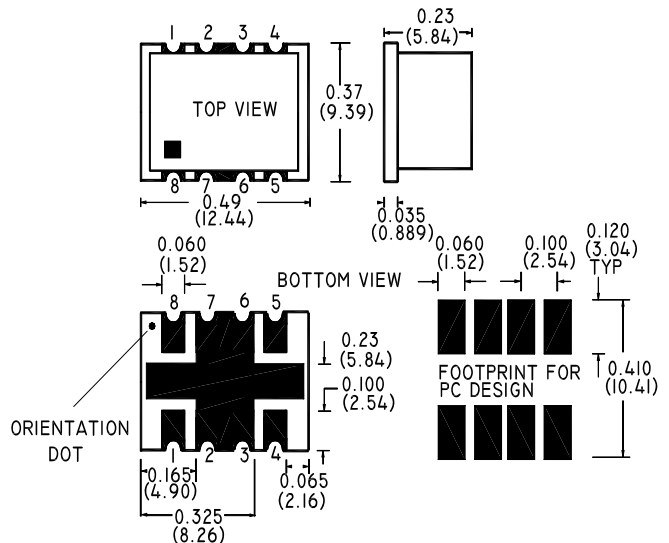
M/A-COM's MAPDCT0032 is a 3 way 0 degree Power Divider in a low cost, surface mount package. Ideally suited for high volume CATV/Broadband applications. No external components are required with this product.



## Schematic



## Case Style SM-4



\* Dimensions are inches (millimeters)  $\pm 0.015$  (0.38) unless otherwise specified.

## Pin Configuration

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

## Ordering Information

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

## Absolute Maximum Ratings <sup>1,2</sup>

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

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**RELEASED:** In full production, samples readily available, standard lead times apply.

**Electrical Specifications: :  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$** 

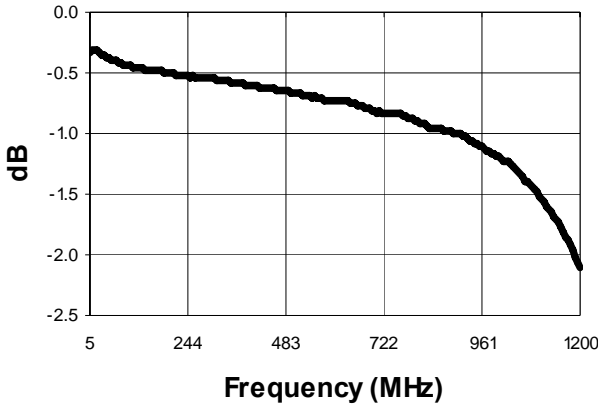
| Parameter  | Frequency       | Units | Min  | Typ  | Max  |
|--|-----------------|-------|------|------|------|
| Insertion Loss 1 (pin8 - pin1) *<br>Ref value -4.77dB  | 5 - 46 MHz      | dB    | -    | 0.37 | 0.39 |
|  | 46 - 870 MHz    | dB    | -    | 1.23 | 1.5  |
|  | 870 - 1002 MHz  | dB    | -    | 1.50 | 1.8  |
|  | 1002 - 1200 MHz | dB    | -    | 2.23 | 3.2  |
| Insertion Loss 2 (pin8 - pin4) *<br>Ref value -4.77dB  | 5 - 46 MHz      | dB    | -    | 0.37 | 0.39 |
|  | 46 - 870 MHz    | dB    | -    | 1.0  | 1.3  |
|  | 870 - 1002 MHz  | dB    | -    | 1.2  | 1.5  |
|  | 1002 - 1200 MHz | dB    | -    | 2.0  | 2.8  |
| Insertion Loss 3 (pin8 - pin5) *<br>Ref value -4.77dB  | 5 - 46 MHz      | dB    | -    | 0.38 | 0.40 |
|  | 46 - 870 MHz    | dB    | -    | 1.5  | 1.8  |
|  | 870 - 1002 MHz  | dB    | -    | 1.8  | 2.2  |
|  | 1002 - 1200 MHz | dB    | -    | 2.8  | 3.3  |
| Input Return Loss *  | 5 - 46 MHz      | dB    | 33   | 34   | -    |
|  | 46 - 405MHz     | dB    | 20   | 25   | -    |
|  | 405 - 1002 MHz  | dB    | 17.5 | 20   | -    |
|  | 1002 - 1200 MHz | dB    | 11   | 18   | -    |
| Output Return Loss 1&2<br>(Pin1, Pin4)   | 5 - 46 MHz      | dB    | 22   | 24   | -    |
|  | 46 - 1200 MHz   | dB    | 20   | 25   | -    |
| Output Return Loss 3<br>(Pin5) *   | 5 - 46 MHz      | dB    | 22   | 24   | -    |
|  | 46 - 740 MHz    | dB    | 20   | 20   | -    |
|  | 740 - 1002 MHz  | dB    | 17   | 25   | -    |
|  | 1002 - 1200 MHz | dB    | 14   | 18   | -    |
| Isolation Between all Outputs  | 5 - 46 MHz      | dB    | 34   | 40   | -    |
|  | 46 - 1002 MHz   | dB    | 20   | 25   | -    |
|  | 1002 - 1200 MHz | dB    | 18   | 24   | -    |
| Amplitude Unbalance,<br>Output 1 to Output 2 (pin 1, 4)                                      | 5 - 46 MHz      | dB    | -    | 0.0  | -0.1 |
|  | 46 - 1002 MHz   | dB    | -    | 0.3  | 0.5  |
| Amplitude Unbalance,<br>Output 1 to Output 3 (pin 1, 5) &<br>Output 2 to Output 3 (pin 4, 5) | 5 - 46 MHz      | dB    | -    | -0.1 | -0.2 |
|  | 46 - 1002 MHz   | dB    | -    | -0.3 | -0.5 |
| Phase Unbalance between all<br>Outputs   | 5 - 50 MHz      | °     | -    | 0.4  | 0.5  |
|  | 50 - 1200 MHz   | °     | -    | 3.0  | 4.0  |

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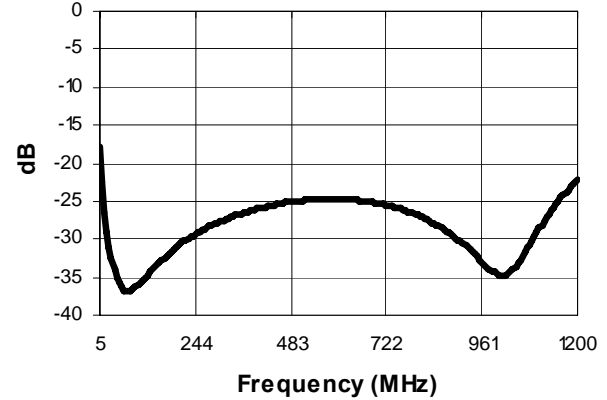
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Typical Performance Curves @  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$

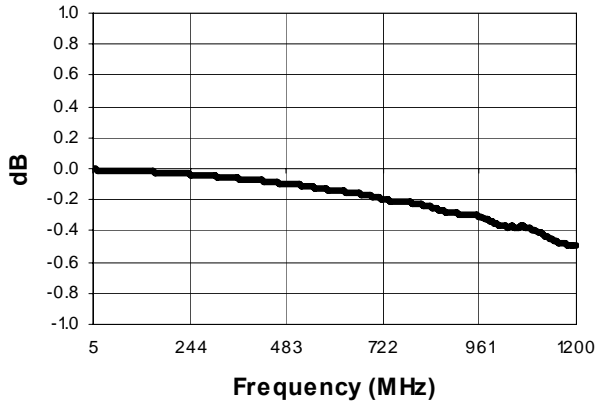
**Insertion Loss**



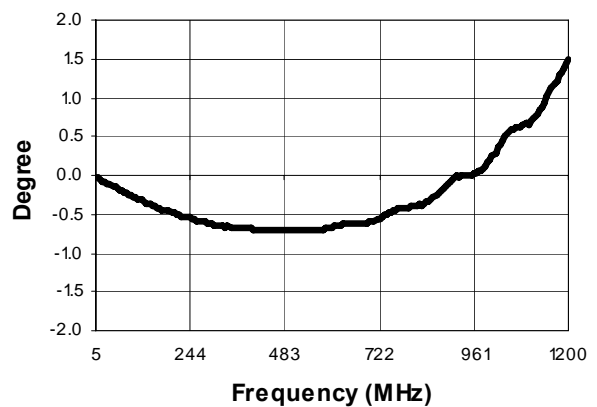
**Isolation**



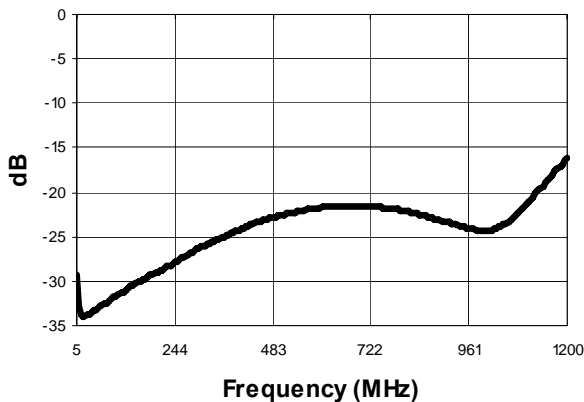
**Amplitude Balance**



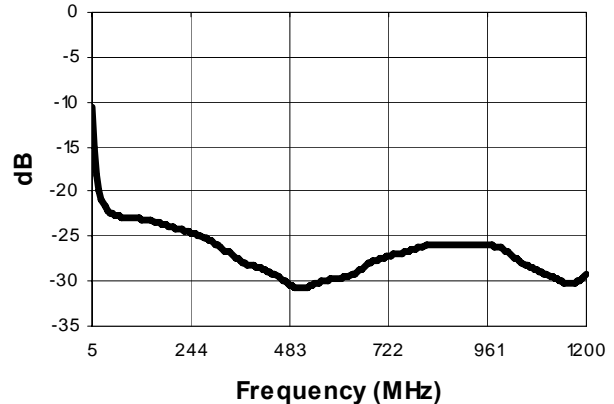
**Phase Balance**



**Return Loss: Input**



**Return Loss: Output**



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