

MAPDCT0028



4 Way 0° Power Divider
5 – 1000 MHz

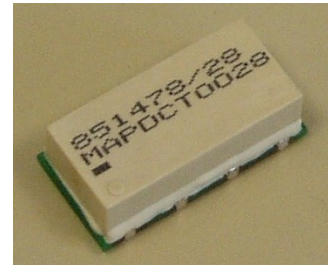
Rev. V2

Features

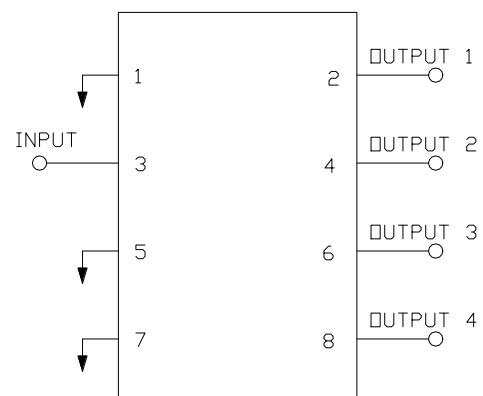
- 4 Way 0 degree
- Surface mount
- 260° reflow compatible
- RoHS compliant
- Available on tape and reel

Description

MACOM's MAPDCT0028 is a 4 way high performance 0 degree RF power divider, in a low cost surface package. Ideally suited for CATV and Broadband applications.



Functional Schematic



Ordering Information

| Part Number | Package |
|-------------|-------------|
| MAPDCT0028 | Tape & Reel |
| | |

Pin Configuration

| Pin No. | Function |
|---------|----------|
| 1 | Ground |
| 2 | Output 1 |
| 3 | Input |
| 4 | Output 2 |
| 5 | Ground |
| 6 | Output 3 |
| 7 | Ground |
| 8 | Output4 |

* Restrictions on Hazardous Substances, European Union Directive

**4 Way 0° Power Divider
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Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{in} = 0\text{dBm}$

| Parameter | Test Conditions | Units | Min. | Typ. | Max. |
|--|-----------------|----------|------|------|------|
| Frequency Range | | MHz | 5 | | 1000 |
| Impedance | | Ω | | 75 | |
| Insertion Loss | 5 - 80 MHz | dB | - | 0.6 | 0.7 |
| | 80 - 870 MHz | dB | - | 0.7 | 1.2 |
| | 870 - 1000 MHz | dB | - | 1.1 | 1.4 |
| Amplitude Balance | 5 - 80 MHz | dB | - | 0.0 | 0.1 |
| | 80 - 1000 MHz | dB | - | 0.3 | 0.5 |
| Phase Balance | 5 - 80 MHz | $^\circ$ | - | 0.1 | 1.0 |
| | 80 - 500 MHz | $^\circ$ | - | 0.5 | 3.0 |
| | 500 - 870 MHz | $^\circ$ | - | 1.0 | 6.0 |
| | 870 - 1000 MHz | $^\circ$ | - | 1.0 | 8.0 |
| Input Return Loss | 5 - 80 MHz | dB | 21 | 25 | - |
| | 80 - 870 MHz | dB | 17 | 21 | - |
| | 870 - 1000 MHz | dB | 15 | 17 | - |
| Output Return Loss | 5 - 10 MHz | dB | 13 | 18 | - |
| | 10 - 1000 MHz | dB | 16 | 19 | - |
| Isolation (between all outputs) | 5 - 800 MHz | dB | 20 | 40 | - |
| | 800 - 1000 MHz | dB | 18 | 21 | - |
| Isolation (between outputs 1&2 & 3&4) | 5 - 10 MHz | dB | 17 | 25 | - |

Recommended Maximum Ratings

| Parameter | Units | Min | Max |
|-----------------------------|------------------|-----|-----|
| Input Power | W | | 1 |
| DC Current | mA | | 240 |
| Operating Temperature Range | $^\circ\text{C}$ | -40 | +85 |

Full temperature plots available on request

MAPDCT0028

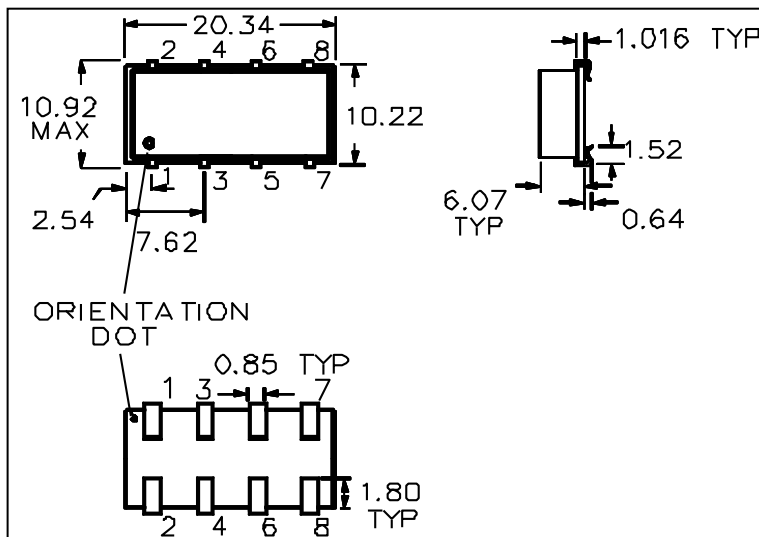


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Outline Drawing

PCB Layout



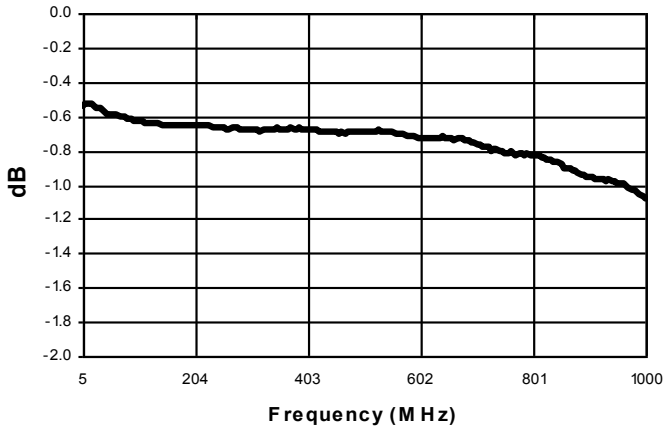
1. Dimensions in mm.
2. Tolerance: ± 0.2 mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Lead plating: Tin.

Tape & Reel Information

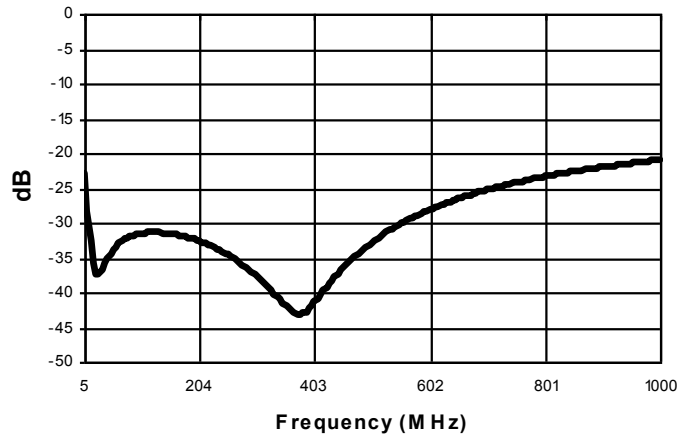
| Parameter | Units | Value |
|--|-------|-------|
| Qty per reel | - | 300 |
| Reel Size | mm | 330 |
| Tape Width | mm | 32 |
| Pitch | mm | 24.0 |
| Ao | mm | 20.9 |
| Bo | mm | 11.4 |
| Ko | mm | 6.8 |
| Orientation | - | F11 |
| Reference Application Note ANI-019 for orientation | | |

Typical Performance Curves

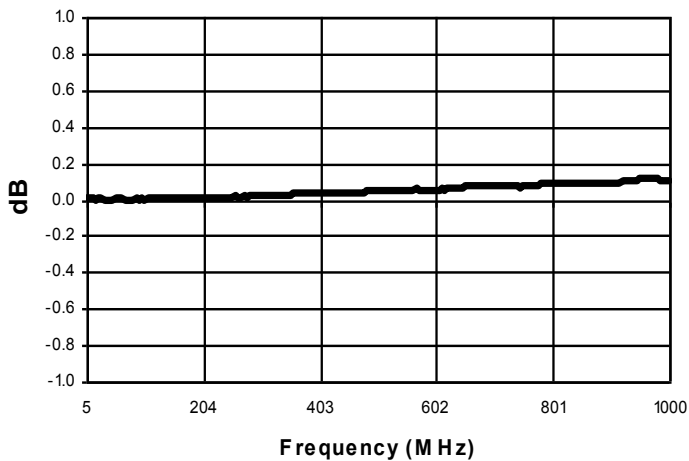
Insertion Loss



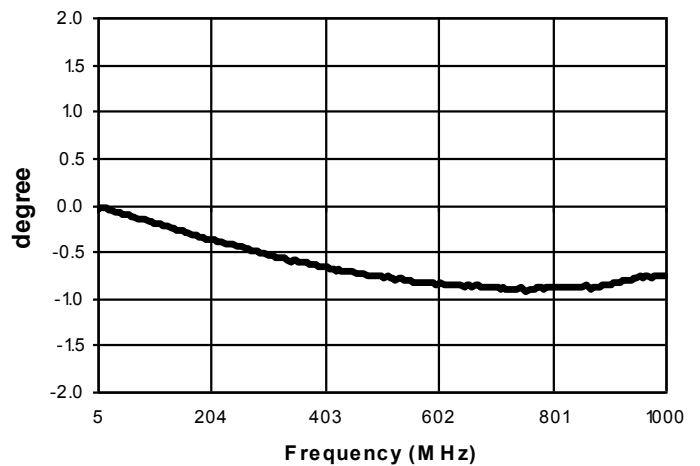
Isolation



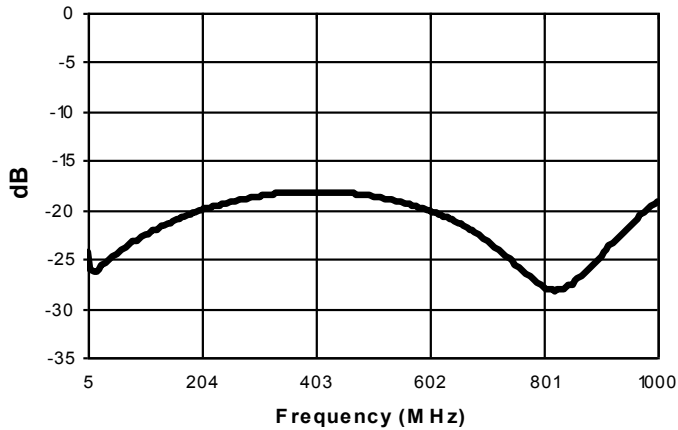
Amplitude Balance



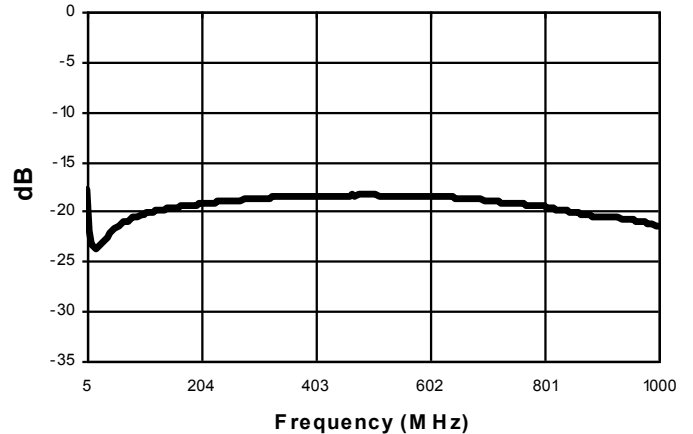
Phase Balance



Return Loss: Input



Return Loss: Output



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