

2 Way 0° Power Divider 5 – 1218 MHz

Rev. V1

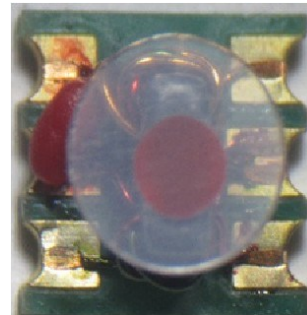
Features

- 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

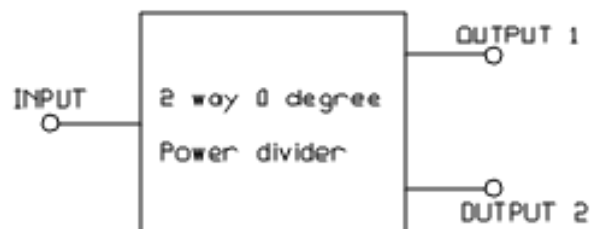
Description

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

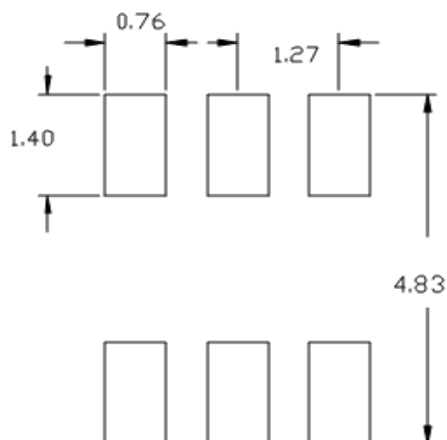
| Parameter | Units | Min | Max |
|-----------------------------|------------------|-----|-------|
| Input Power | W | - | 1 |
| Internal Load Dissipation | W | - | 0.125 |
| Operating Temperature Range | $^\circ\text{C}$ | -40 | +85 |

Full temperature plots available on request

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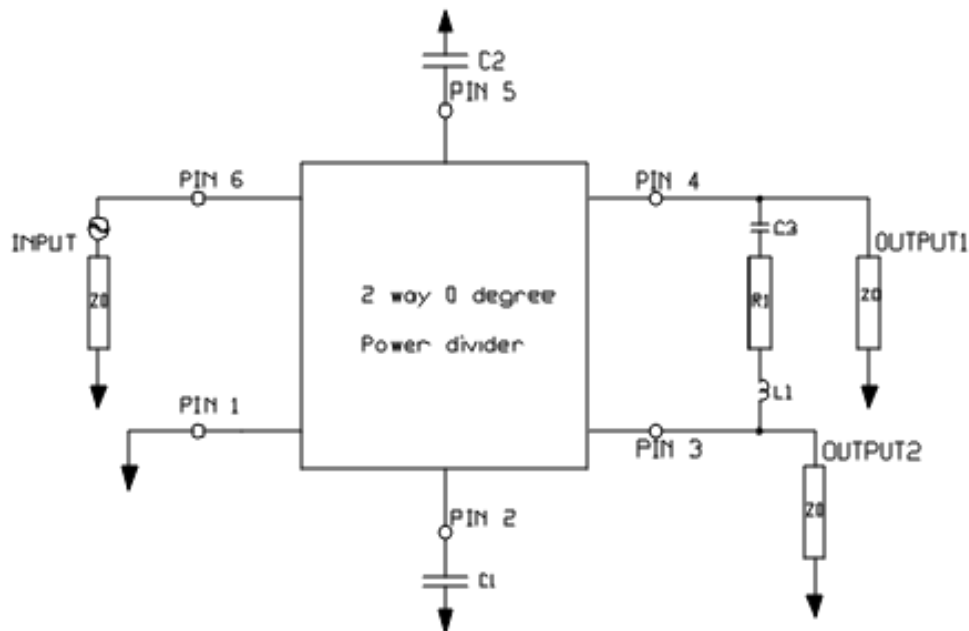
PCB Layout



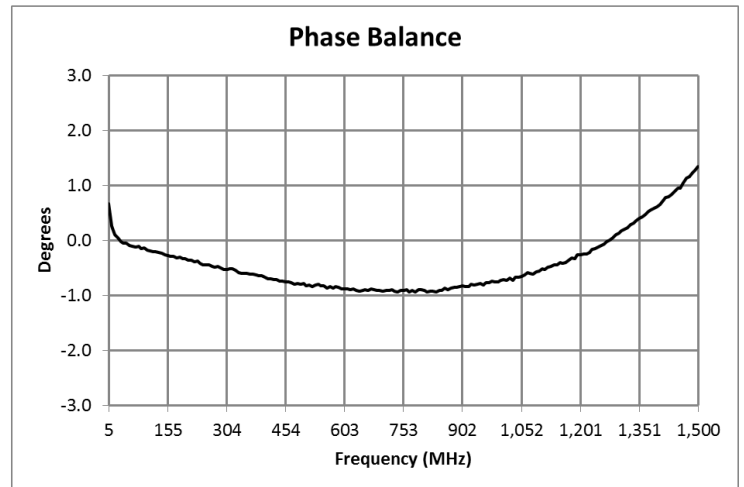
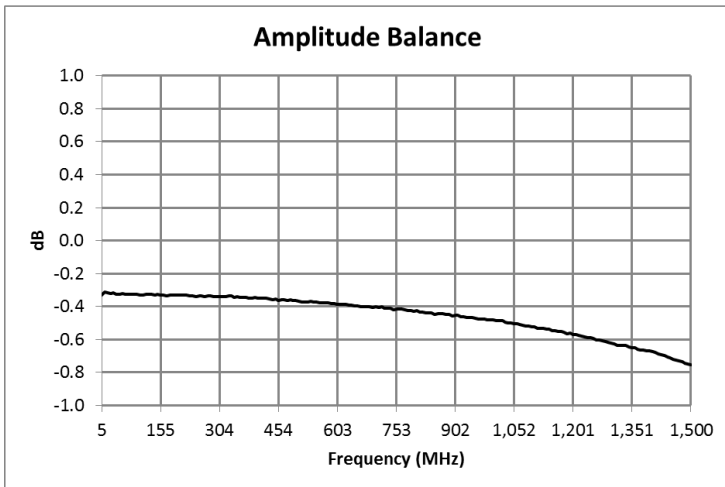
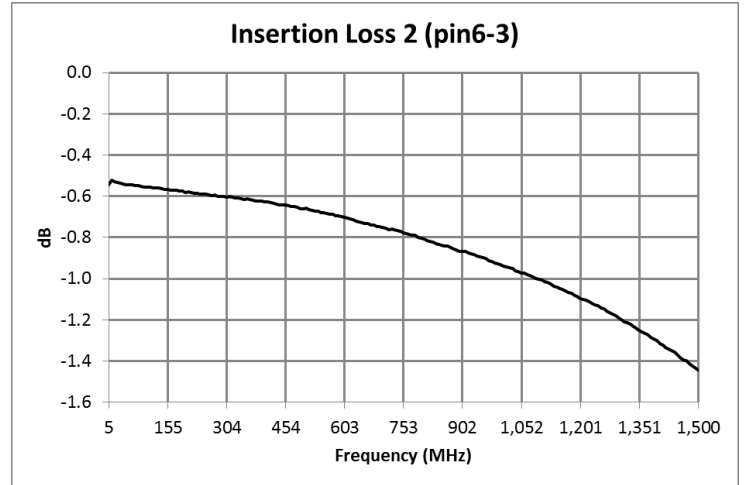
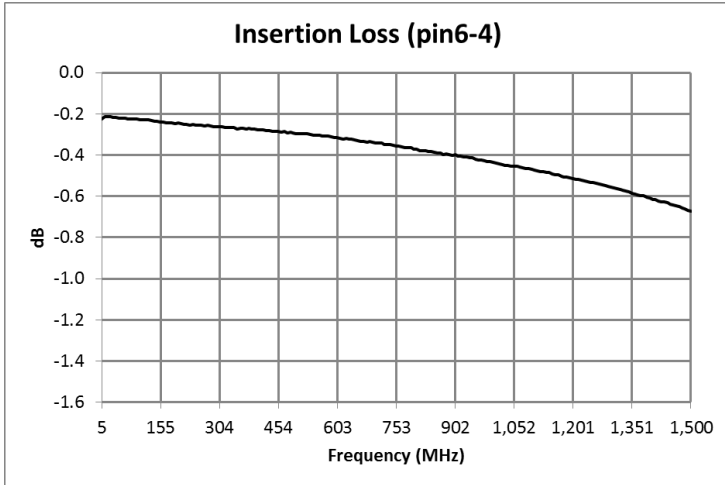
Parts List

| 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

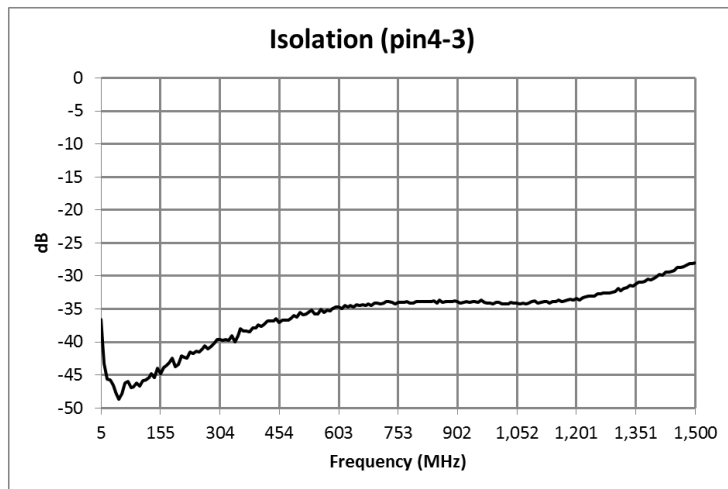
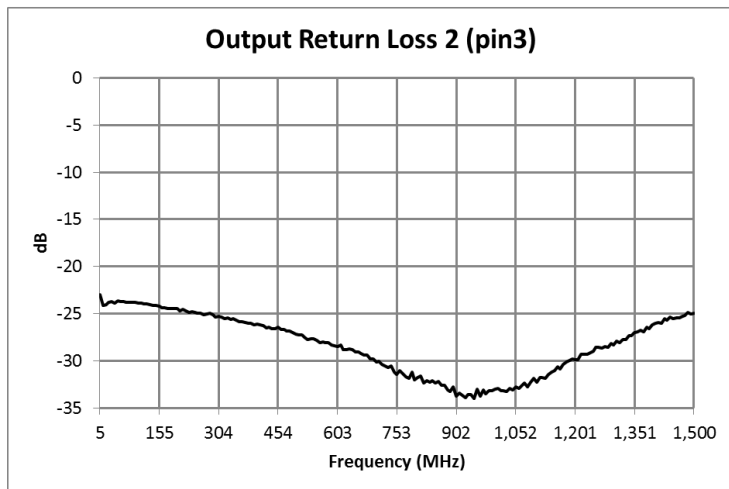
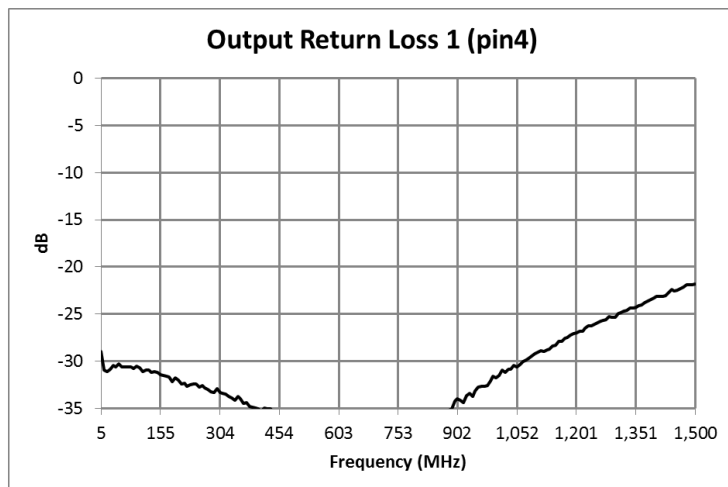
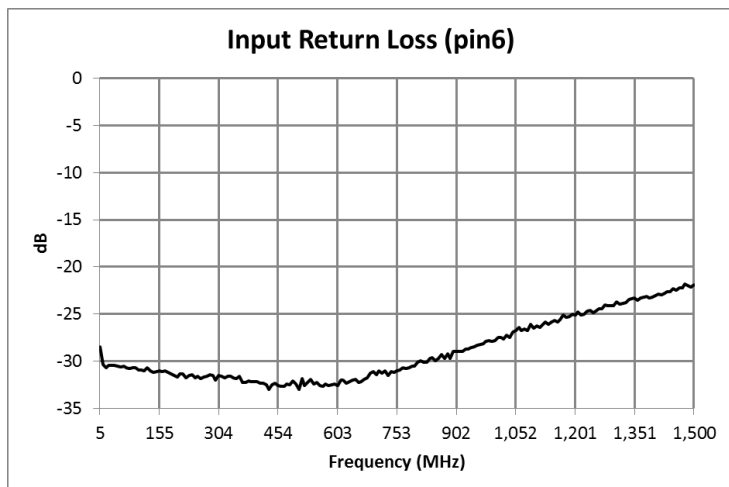


Typical Performance Curves



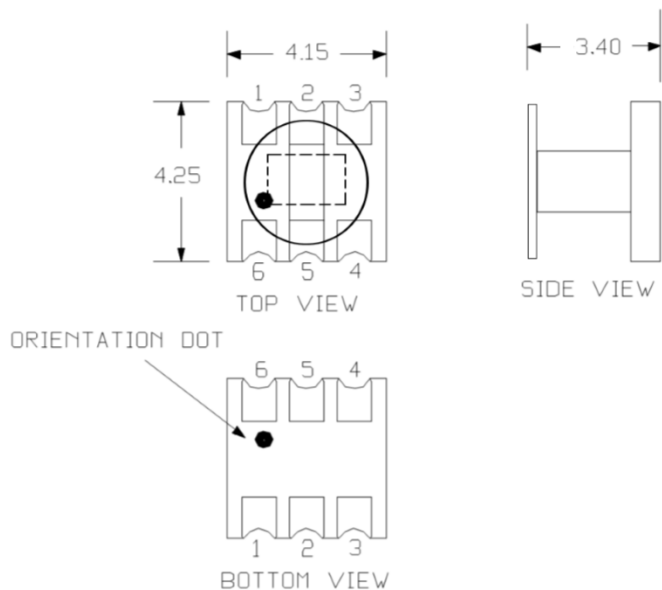
Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{in} = 0\text{dBm}$

Typical Performance Curves

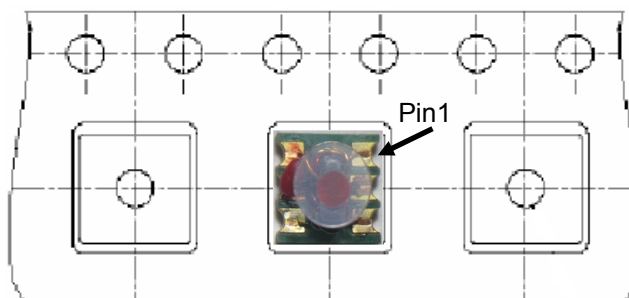


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Outline Drawing



Carrier Tape Orientation



1. Dimensions in mm.
2. Tolerance: ± 0.2 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 μ m gold over 3 to 6 μ m 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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