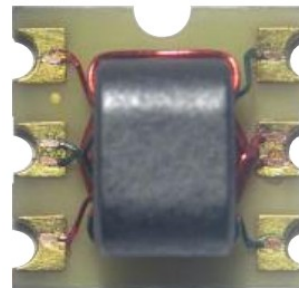


Features

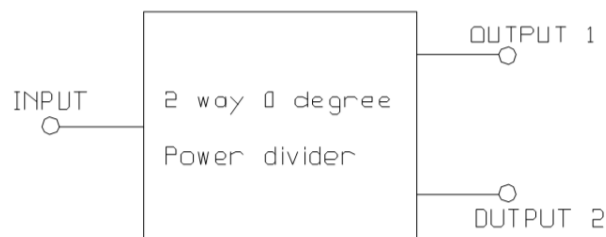
- 2 Way 0 Degree
- Surface mount
- Available on tape and reel
- 260° reflow compatible
- RoHS compliant and Pb free
- Excellent temperature stability
- Suitable for all CATV, Broadband and FTTX applications



Description

The MAPD-011040 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-011040 | Tape & Reel |
| MAPD-011040-TB | Customer Test Board |

Pin Configuration

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

2 Way 0° Power Divider 5 - 1225 MHz

Rev. V3

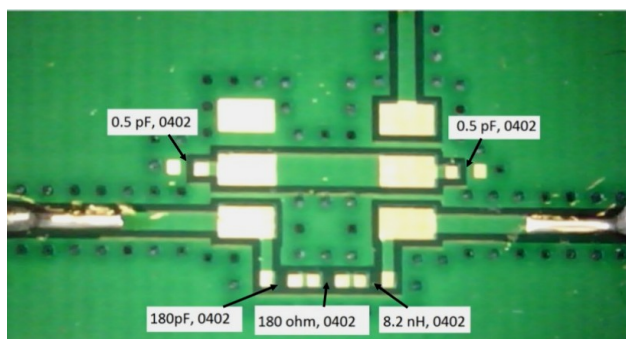
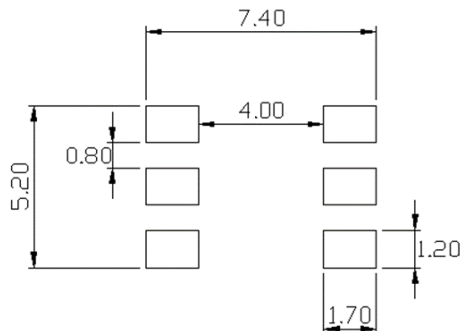
Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{in} = 0 \text{ dBm}$

| Parameter | Conditions | Units | Min. | Typ. | Max. |
|--|-----------------|----------|------|------|------|
| Impedance | — | Ω | — | 75 | — |
| Power Split | — | dB | — | 3 | — |
| Insertion Loss 1 (Above 3 dB) (pin 6 - pin 3) | 5 - 1000 MHz | dB | — | 1.1 | 1.4 |
| | 1000 - 1225 MHz | | | 1.6 | 1.9 |
| Insertion Loss 1 (Above 3 dB) (pin 6 - pin 4) | 5 - 1000 MHz | dB | — | 1.4 | 1.5 |
| | 1000 - 1225 MHz | | | 1.9 | 2.1 |
| Amplitude Balance | 5 - 1000 MHz | dB | -0.6 | 0.35 | 0.6 |
| | 1000 - 1225 MHz | | -0.6 | 0.35 | 0.6 |
| Phase Balance | 5 - 1000 MHz | ° | -6.0 | 5.0 | 6.0 |
| | 1000 - 1225 MHz | | -7.0 | 6.0 | 7.0 |
| Input Return Loss (pin 6) | 5 - 1000 MHz | dB | 12 | 14 | — |
| | 1000 - 1225 MHz | | 10 | 12 | — |
| Output Return Loss 1 (pin 3) | 5 - 1000 MHz | dB | 13 | 15 | — |
| | 1000 - 1225 MHz | | 11 | 13 | — |
| Output Return Loss 2 (pin 4) | 5 - 1000 MHz | dB | 16 | 18 | — |
| | 1000 - 1225 MHz | | 13 | 15 | — |
| Isolation (between outputs) (pin 3 - pin 4) | 5 - 1000 MHz | dB | 17 | 19 | — |
| | 1000 - 1225 MHz | | 15 | 17 | — |

Recommended Maximum Ratings

| Parameter | Absolute Maximum |
|---------------------------|------------------|
| Input Power | 1 W |
| Internal Load Dissipation | 0.125 W |
| Operating Temperature | -40°C to +85°C |

PCB Layout

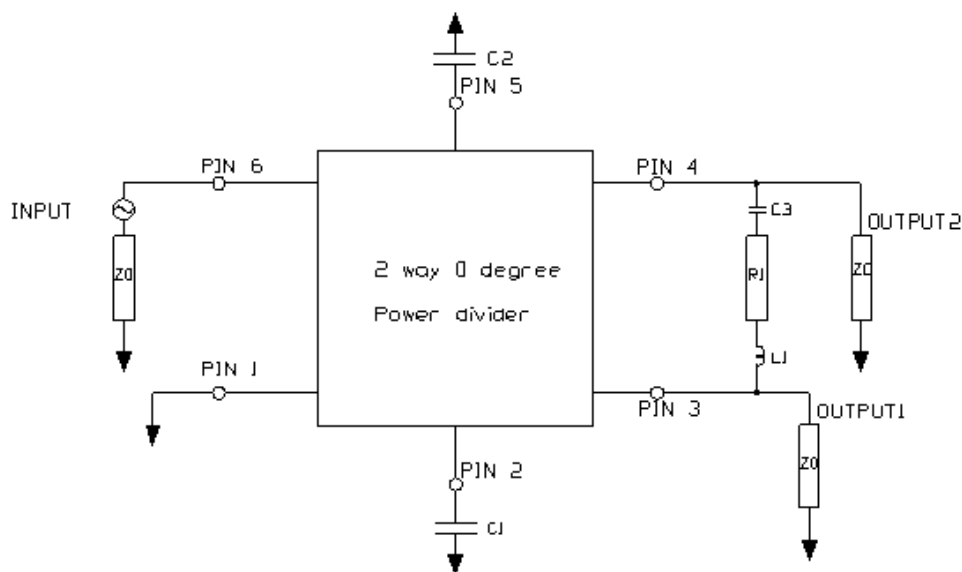


Connect centre pad to centre pad

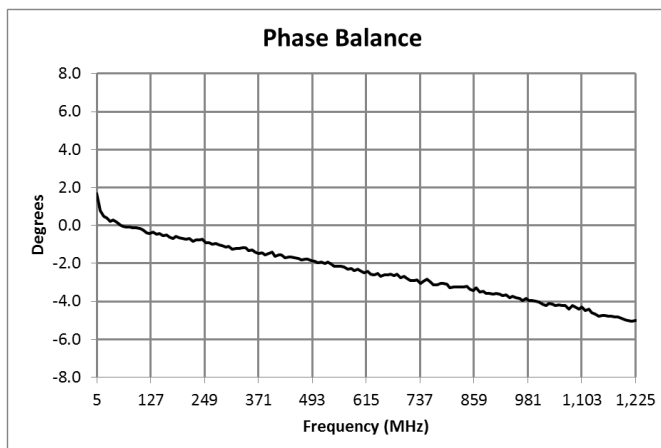
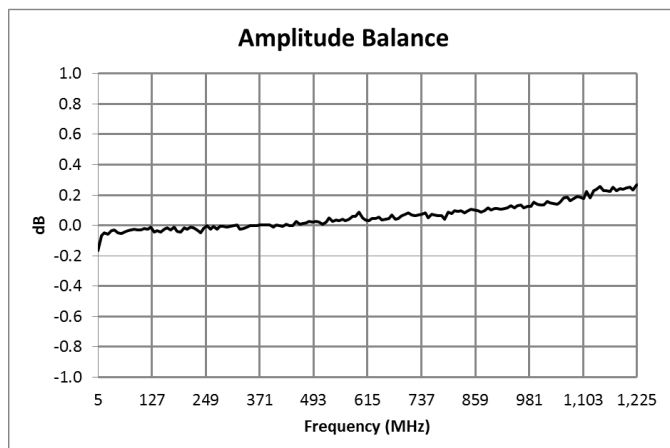
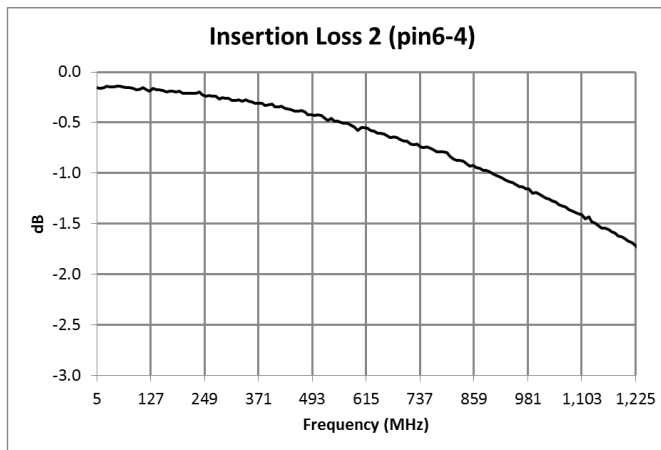
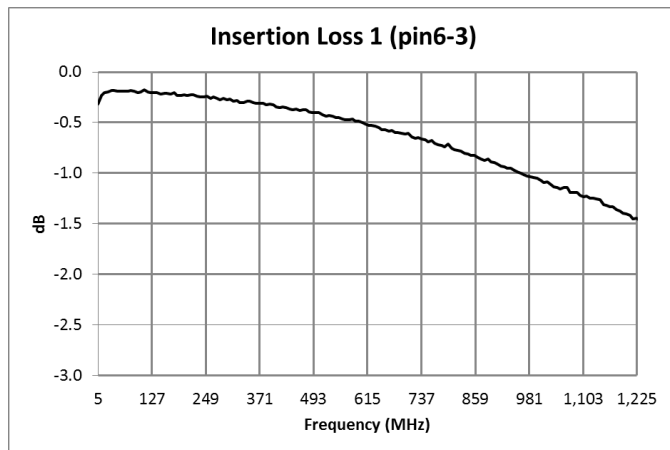
Parts List

| Part | Value | Case Style |
|--------|--------|------------|
| C1, C2 | 0.5 pF | 0402 |
| C3 | 180 pF | 0402 |
| L1 | 8.2 nH | 0402 |
| R1 | 180 Ω | 0402 |

Application Schematic

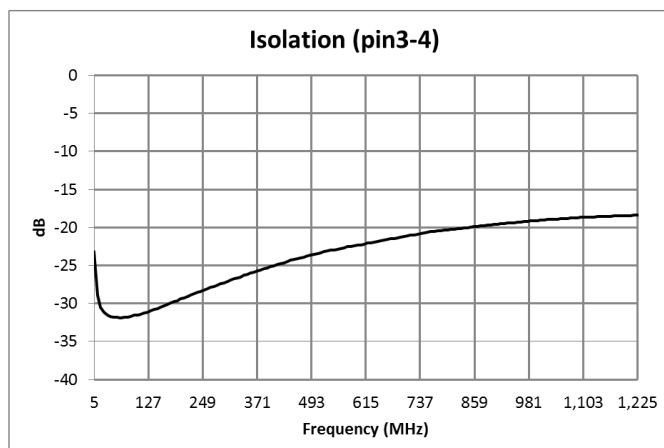
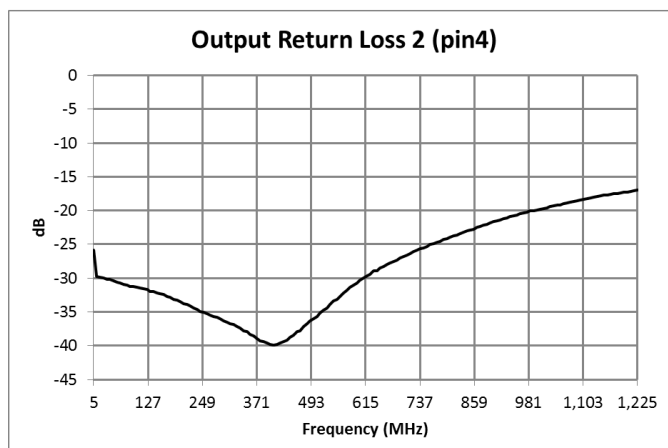
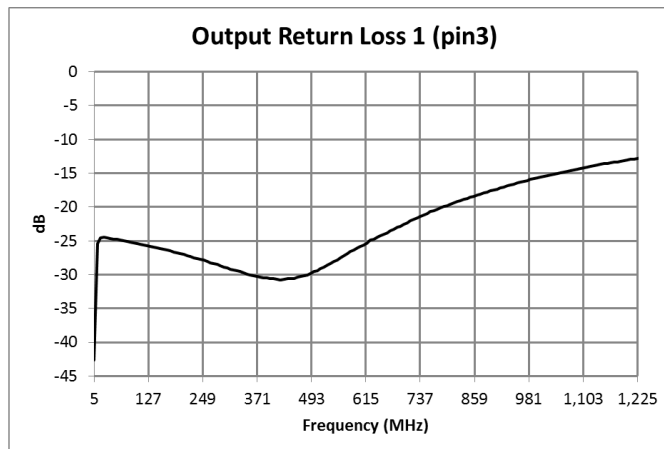
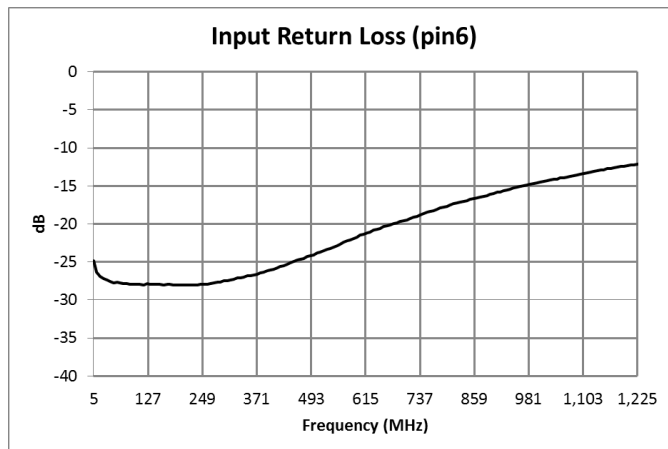


Typical Performance Curves: $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{in} = 0 \text{ dBm}$



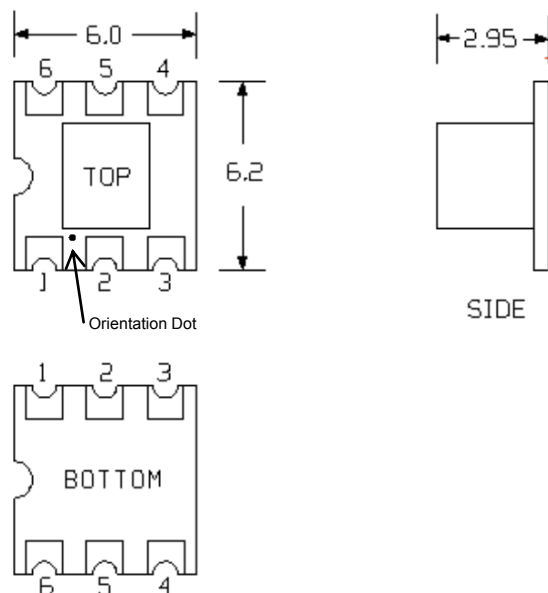
Full temperature plots available on request

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



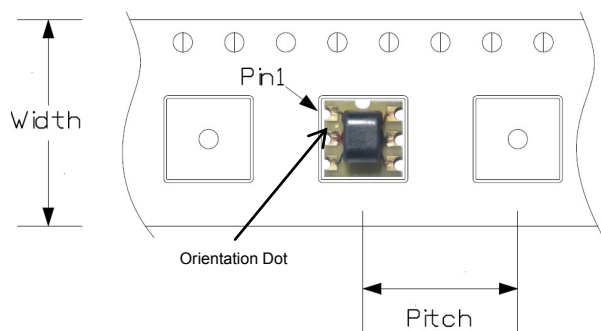
Full temperature plots available on request

Outline Drawing



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 μm gold over 3 to 6 μm nickel

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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