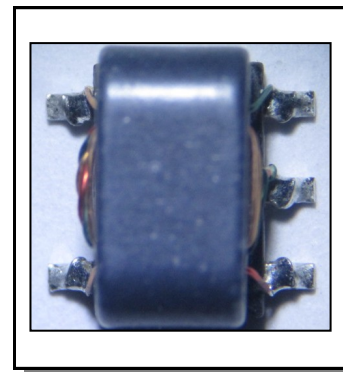


4:1 Step Down Transformer 5 - 200 MHz

V2

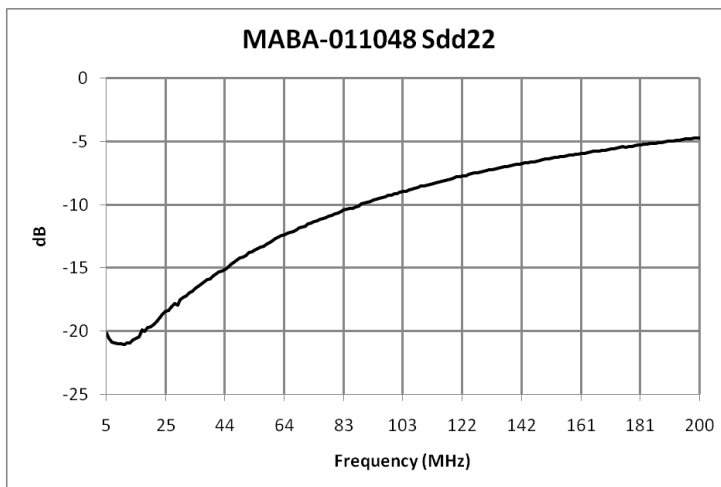
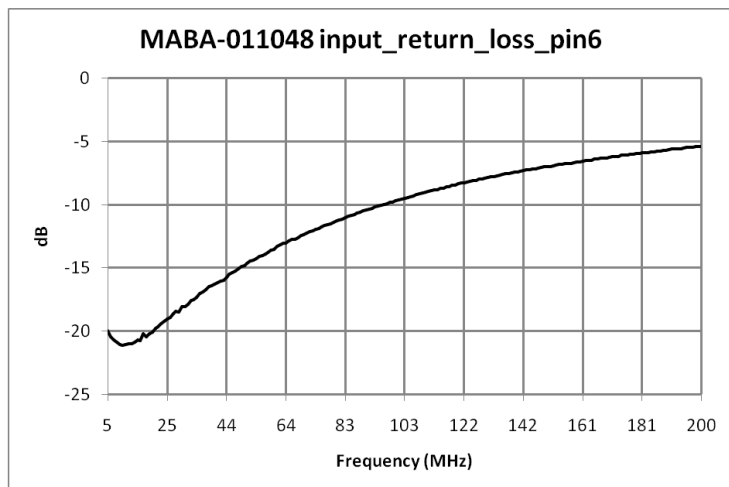
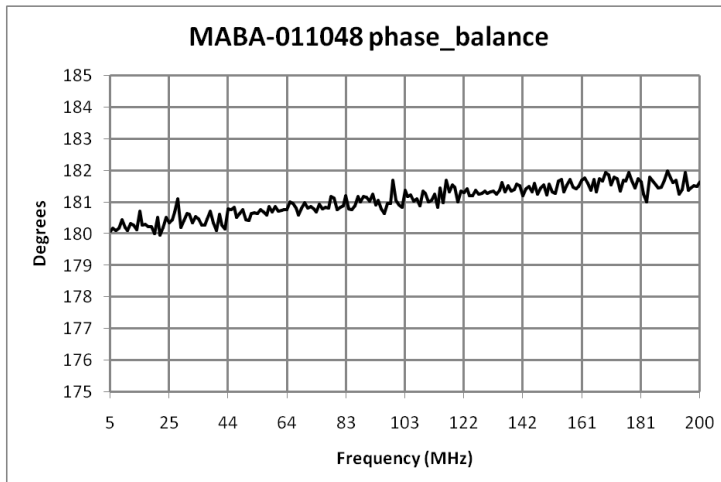
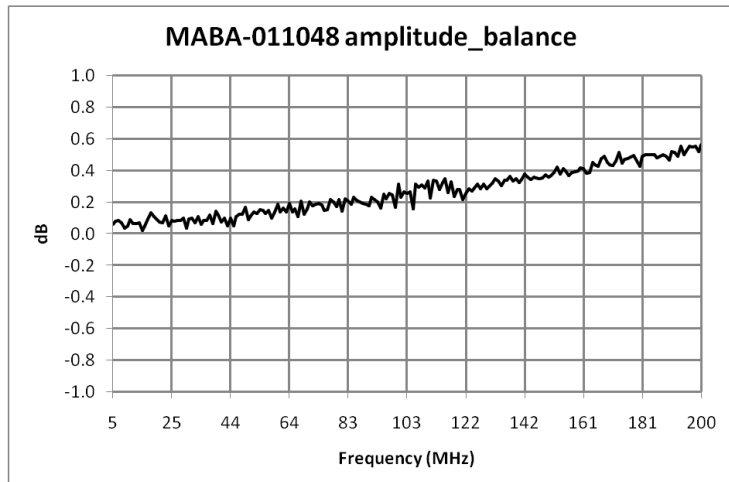
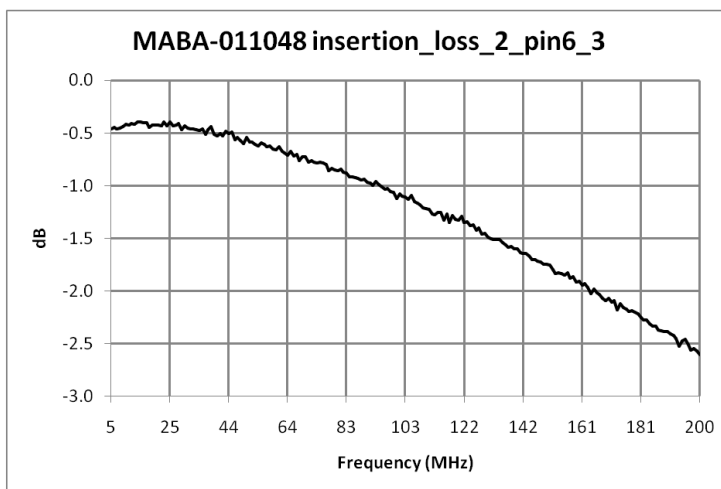
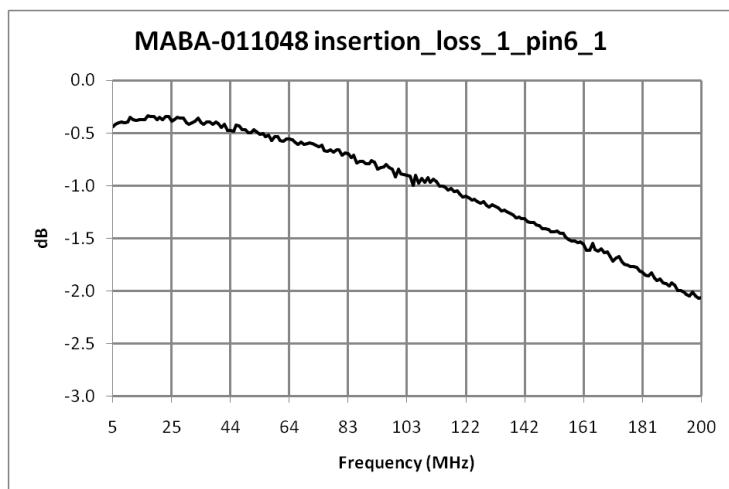
Features

- Surface mount
- 4:1 step down transformer
- Excellent performance under DC bias current, even when current flows is imbalanced outputs
- 260°C reflow compatible
- RoHS Compliant, lead-free
- Available on tape & reel



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

| Parameter | Conditions | Units | Min | Typ | Max |
|---------------------------------|---------------|----------|-----|-----|-----------|
| Frequency Range | | MHz | 5 | | 200 |
| Impedance | | Ω | - | 75 | - |
| Impedance Ratio | | | - | 4:1 | - |
| Insertion Loss 1 (pin6-pin1) | 5 - 50 MHz | dB | - | 0.3 | 0.8 |
| | 50 - 150 MHz | dB | - | 0.8 | 2.2 |
| | 150 - 200 MHz | dB | - | 1.7 | 3.1 |
| Insertion Loss 2 (pin6-pin3) | 5 - 50 MHz | dB | - | 0.4 | 0.8 |
| | 50 - 150 MHz | dB | - | 1.0 | 2.5 |
| | 150 - 200 MHz | dB | - | 2.2 | 3.6 |
| Amplitude Balance | 5 - 50 MHz | dB | - | 0.1 | ± 0.4 |
| | 50 - 150 MHz | dB | - | 0.2 | ± 1.0 |
| | 150 - 200 MHz | dB | - | 0.4 | ± 1.4 |
| Phase Balance | 5 - 50 MHz | $^\circ$ | - | 0.6 | ± 4 |
| | 50 - 200 MHz | $^\circ$ | - | 1.4 | ± 9 |
| Input Return Loss (pin6) | 5 - 25 MHz | dB | 17 | 21 | - |
| | 25 - 50 MHz | dB | 12 | 17 | - |
| | 50 - 150 MHz | dB | 5 | 10 | - |
| | 150 - 200 MHz | dB | 3 | 6 | - |

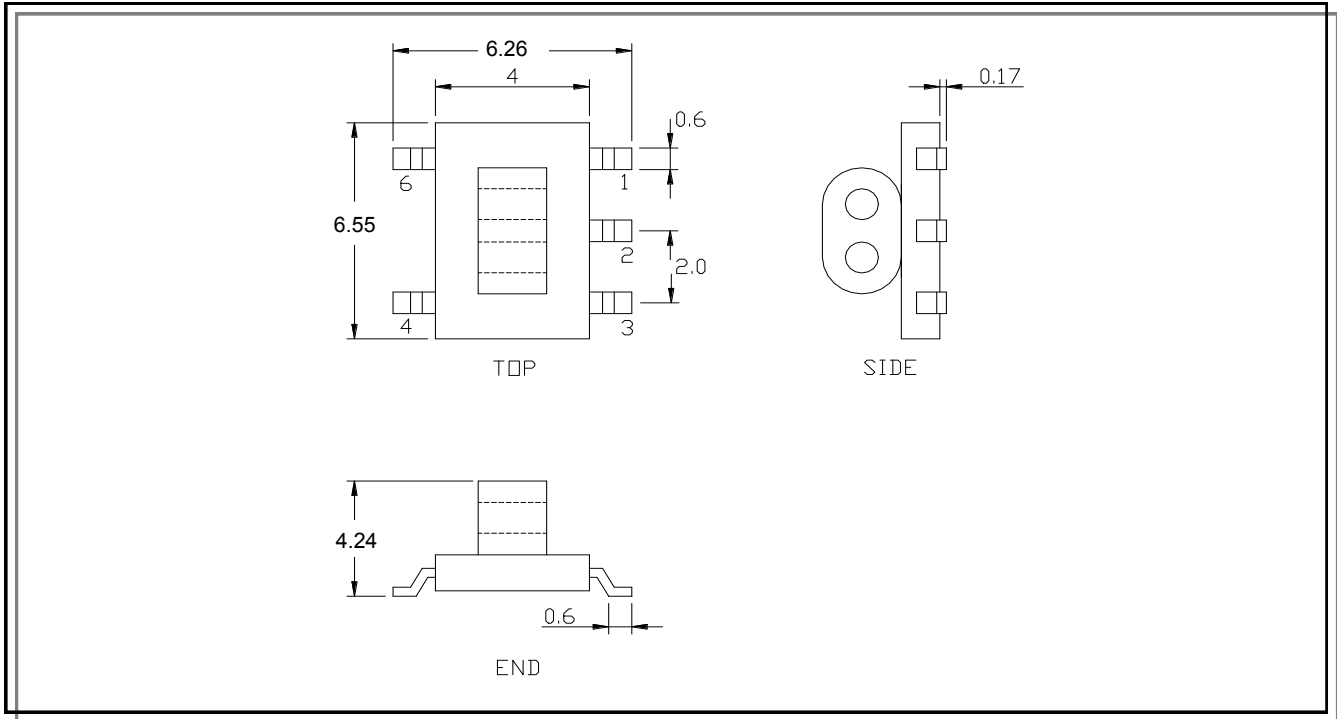


Electrical Specifications: $Z_0 = 75\Omega$, $T_A = 25^\circ\text{C}$, $P_{in} = 0\text{dBm}$

4:1 Step Down Transformer 5 - 200 MHz

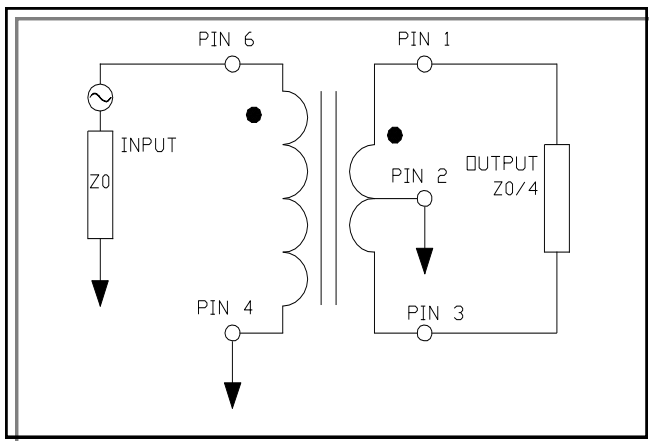
V2

Outline Drawing

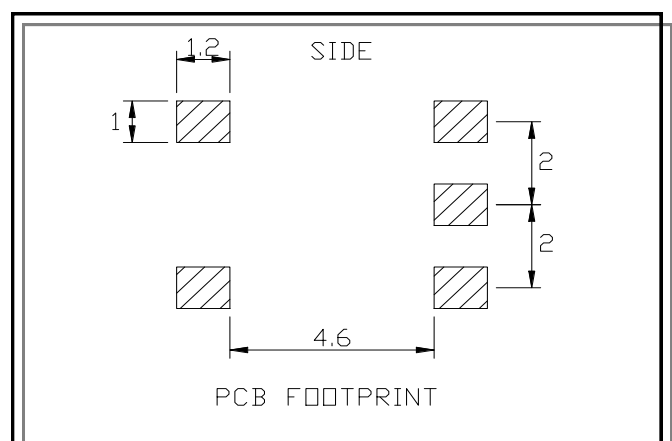


1. Dimensions in mm.
2. Tolerance: ± 0.2 mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Lead Plating: CuSn6
5. Lead Finish: SAC-305

Recommended DC bias circuit



Recommended Footprint



Tape & Reel Information

| Parameter | Units | Value |
|--------------|-------|-------|
| Qty per reel | - | 900 |
| Reel Size | mm | 330 |
| Tape Width | mm | 16.00 |
| Pitch | mm | 12.00 |
| Ao | mm | 6.6 |
| Bo | mm | 7.3 |
| Ko | mm | 4.9 |
| Orientation | - | F26 |

Reference Application Note ANI-019 for orientation

Ordering Information

| Part Number | Description |
|----------------|---------------------|
| MABA-011048 | Tape & Reel |
| MABA-011048-TB | Customer test board |

Recommended Maximum Ratings

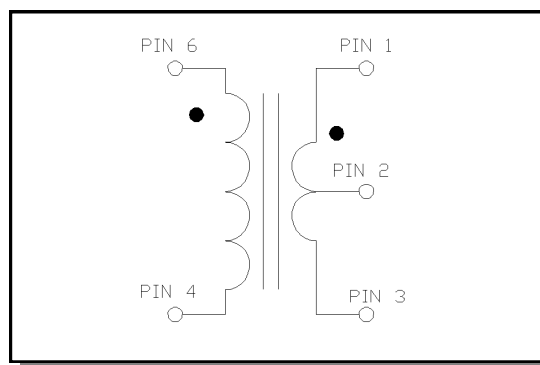
| Parameter | Units | Min | Max |
|---|-------|-----|-----|
| Input Power | W | | 1 |
| Internal Load Dissipation | W | | 200 |
| Tested up to DC bias current, will perform above this level | mA | | 900 |
| Operating Temperature Range | °C | -40 | +85 |

Full temperature plots available on request

Pin Configuration

| Pin No. | Function |
|---------|-------------------------|
| 1 | Secondary Dot (output1) |
| 2 | Ground (centre tape) |
| 3 | Secondary (output 2) |
| 4 | Primary (RF ground) |
| 5 | Ground (not used) |
| 6 | Primary Dot (input) |

Schematic



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