

1:1 Transmission Line with Tap Transformer 50 - 1200 MHz



MABAES0029

Rev. V7

Features

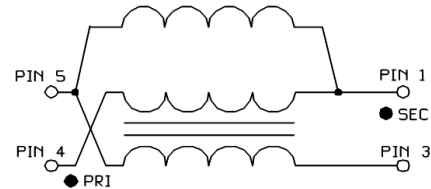
- Surface Mount
- 1:1 Impedance Ratio
- Available on Tape & Reel
- RoHS* Compliant
- 260°C Reflow Compatible

Description

The MABAES0029 is a 1:1 transmission line transformer with tap in a surface mount package.

Ideally suited for CATV Broadband applications.

Functional Schematic



Pin Configuration

| Pin # | Function |
|-------|--------------------|
| 1 | Output Thru Leg |
| 2 | No Connection |
| 3 | Output Coupled Leg |
| 4 | Input |
| 5 | Ground |

Electrical Specifications: Freq. = 50 - 1200 MHz, $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{IN} = 0 \text{ dBm}$

| Parameter | Conditions | Units | Min. | Typ. | Max. |
|---------------------------------|----------------|-------|------|------|------|
| Impedance Ratio | — | ratio | — | 1:1 | — |
| Insertion Loss (Pin4 - Pin3) | 50 - 600 MHz | dB | — | 0.8 | 1.0 |
| | 600 - 1200 MHz | | | 1.2 | 1.5 |
| Insertion Loss (Pin4 - Pin1) | 50 - 600 MHz | dB | — | 0.8 | 1.0 |
| | 600 - 1200 MHz | | | 1.2 | 1.5 |
| Amplitude Balance | 50 - 600 MHz | dB | — | 0.1 | 0.2 |
| | 600 - 1200 MHz | | | 0.4 | 0.8 |
| Phase Balance | 50 - 600 MHz | deg. | — | 1.0 | 3.0 |
| | 600 - 1200 MHz | | | 4.0 | 10.0 |

Ordering Information

| Part Number | Description |
|-------------|-----------------|
| MABAES0029 | 1500 piece reel |

Absolute Maximum Ratings

| Parameter | Absolute Maximum |
|-----------------------|------------------|
| RF Input Power | 0.5 W |
| DC Current | 500 mA |
| Operating Temperature | -40°C to +85°C |

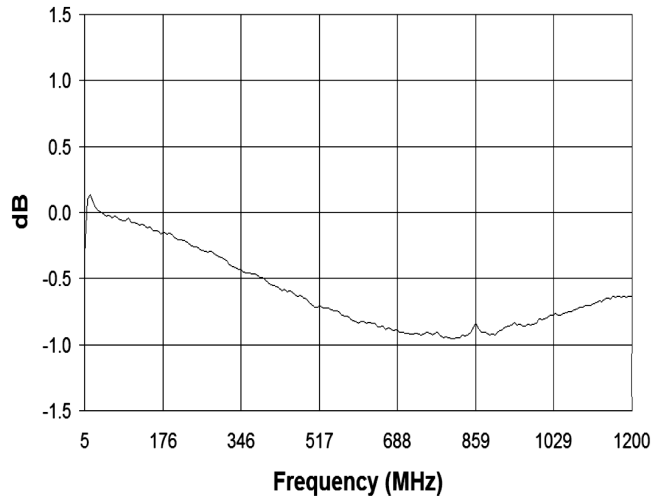
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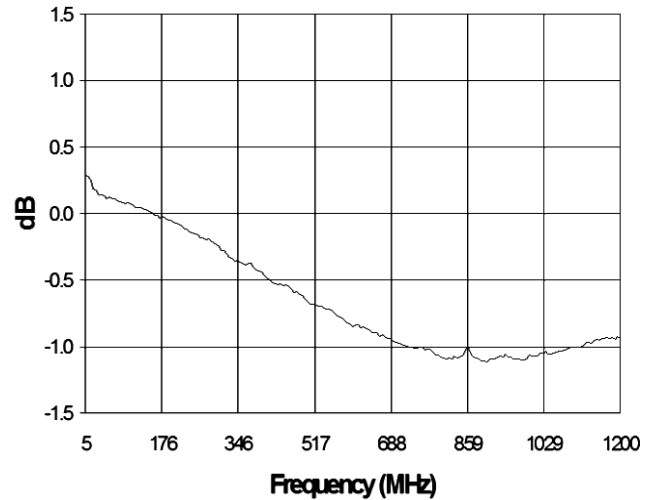
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Typical Performance Curves

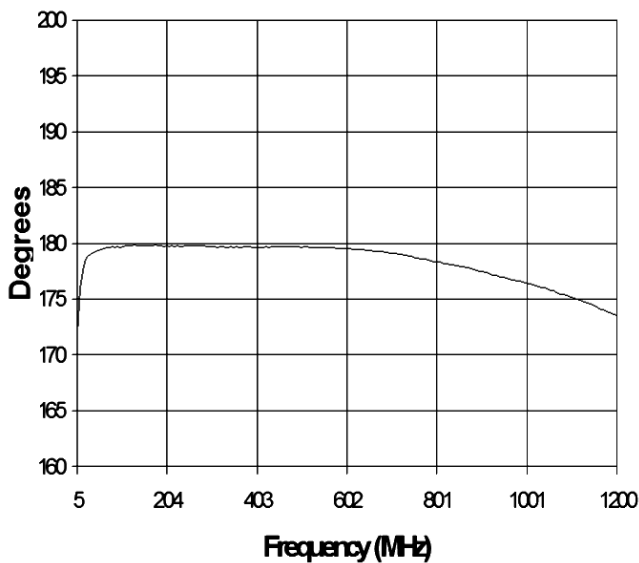
Insertion Loss (Pin 4-1)



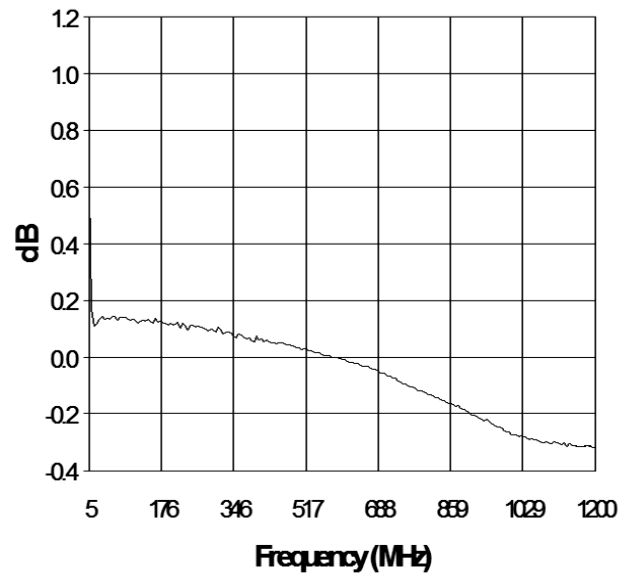
Insertion Loss (Pin 4-3)



Phase Balance



Amplitude Balance

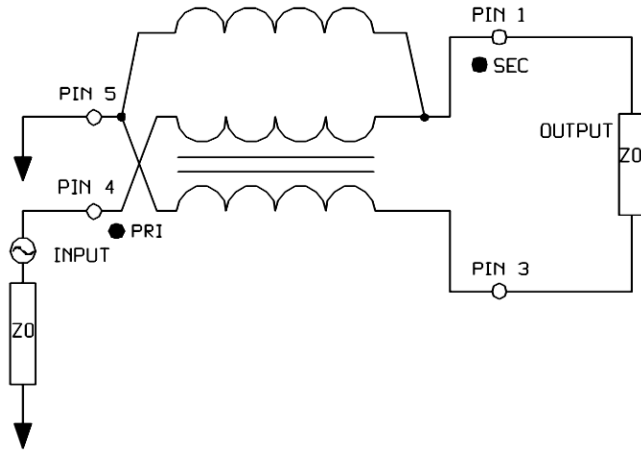


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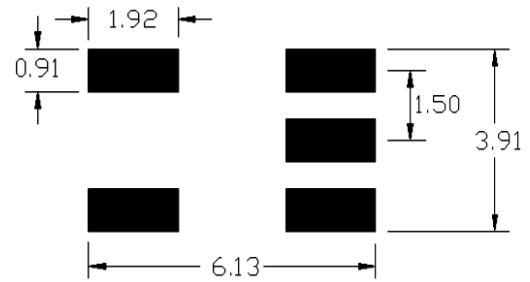


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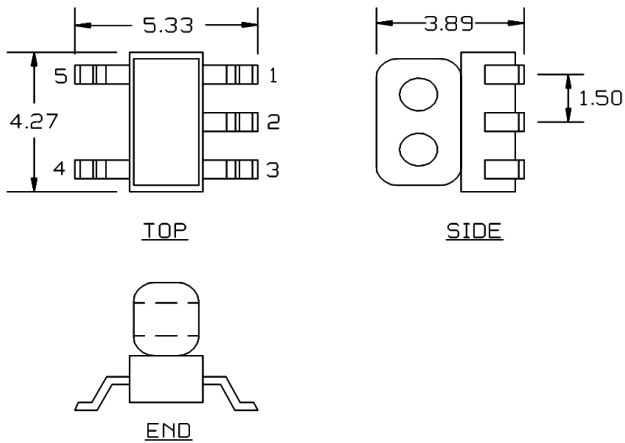
Application Circuit



PCB Layout



Lead-Free Outline Drawing



Tape & Reel Information

| Parameter | Units | Value |
|--|-------|-------|
| Qty per reel | - | 1500 |
| Reel size | mm | 330 |
| Tape width (W) | mm | 16.00 |
| Pitch (P ₁) | mm | 8.00 |
| Orientation | - | F28 |
| Reference Application note ANI-019 for orientation | | |

Dimensions in mm.
Tolerance: ± 0.2 mm unless otherwise noted.
Model number and lot code are printed on the reel.
Lead plating: SAC-305.

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