

Features

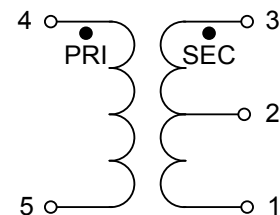
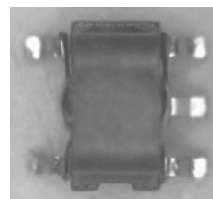
- Surface Mount
- 1:4 Impedance Ratio
- CT on Secondary
- Available on Tape & Reel

Description

The MABAES0031 is a 1:4 RF flux coupled step-up transformer. This transformer is offered in a SM-138 surface mount package.

Ideally suited for high volume cellular and wireless applications. Typical applications include single to balanced mode conversion and impedance matching.

Functional Schematic



Pin Configuration

| Pin # | Function |
|-------|---------------|
| 1 | Secondary |
| 2 | Secondary CT |
| 3 | Secondary Dot |
| 4 | Primary Dot |
| 5 | Primary |

Electrical Specifications: Freq. = 1 - 650 MHz, $T_A = 25^\circ\text{C}$, $Z_0 = 50 \Omega$, $P_{in} = 0 \text{ dBm}$

| Parameter | Conditions | Units | Min. | Typ. | Max. |
|--------------------------------|---------------|-------|------|------|------|
| Impedance Ratio | — | ratio | — | 1:4 | — |
| Insertion Loss ($f_L - f_U$) | 10 - 200 MHz | dB | — | 0.7 | 1.0 |
| | 1 - 450 MHz | | | 1.5 | 2.0 |
| Amplitude Unbalance | 10 - 200 MHz | dB | — | 0.12 | 0.25 |
| Phase Unbalance | 10 - 200 MHz | ° | — | 1 | 2.0 |
| | 1 - 500 MHz | | | 3 | 5.0 |
| | 500 - 650 MHz | | | 7 | 10.0 |

Ordering Information

| Part Number | Description |
|-------------|-----------------|
| MABAES0031 | 2000 piece reel |

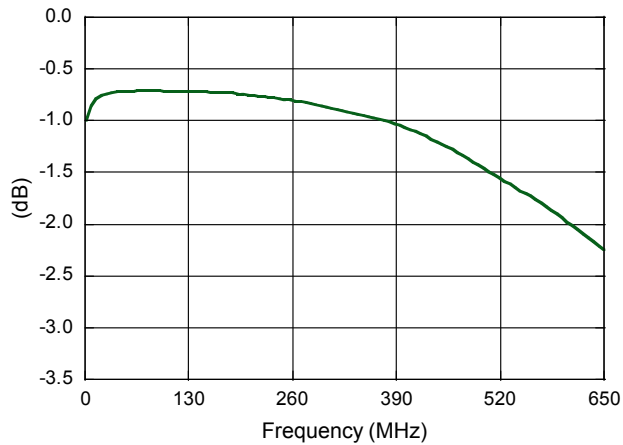
Absolute Maximum Ratings¹

| Parameter | Absolute Maximum |
|---------------------------------|------------------|
| RF Input Power | 250 mW |
| DC Current | 200 mA |
| Operating & Storage Temperature | -40°C to +85°C |

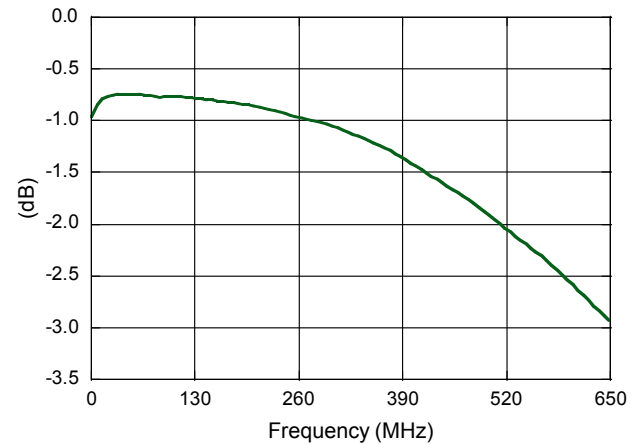
1. Operation of this device above any one of these parameters may cause permanent damage.

Typical Performance Curves @ +25°C

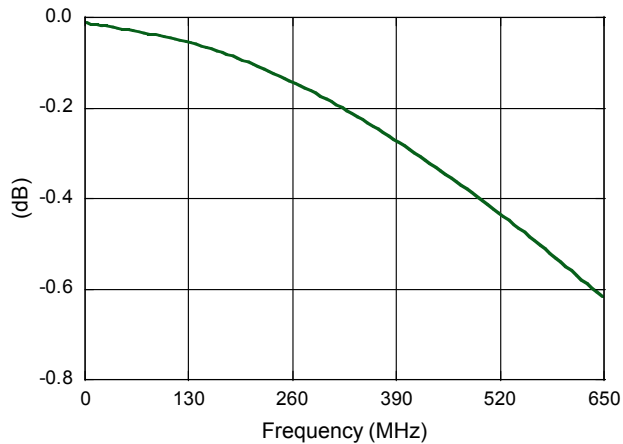
Insertion Loss (Primary to Secondary Dot)



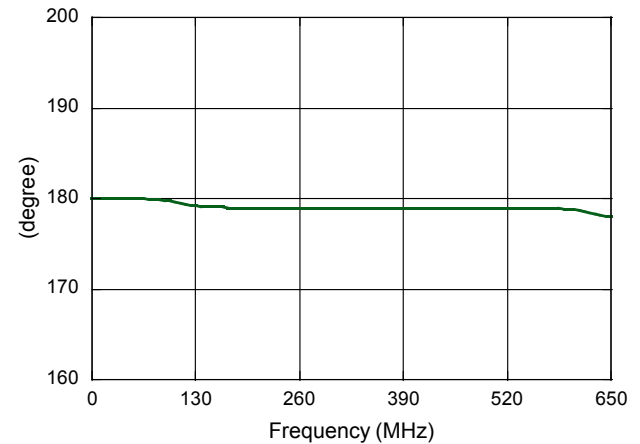
Insertion Loss (Primary to Secondary)



Amplitude Unbalance

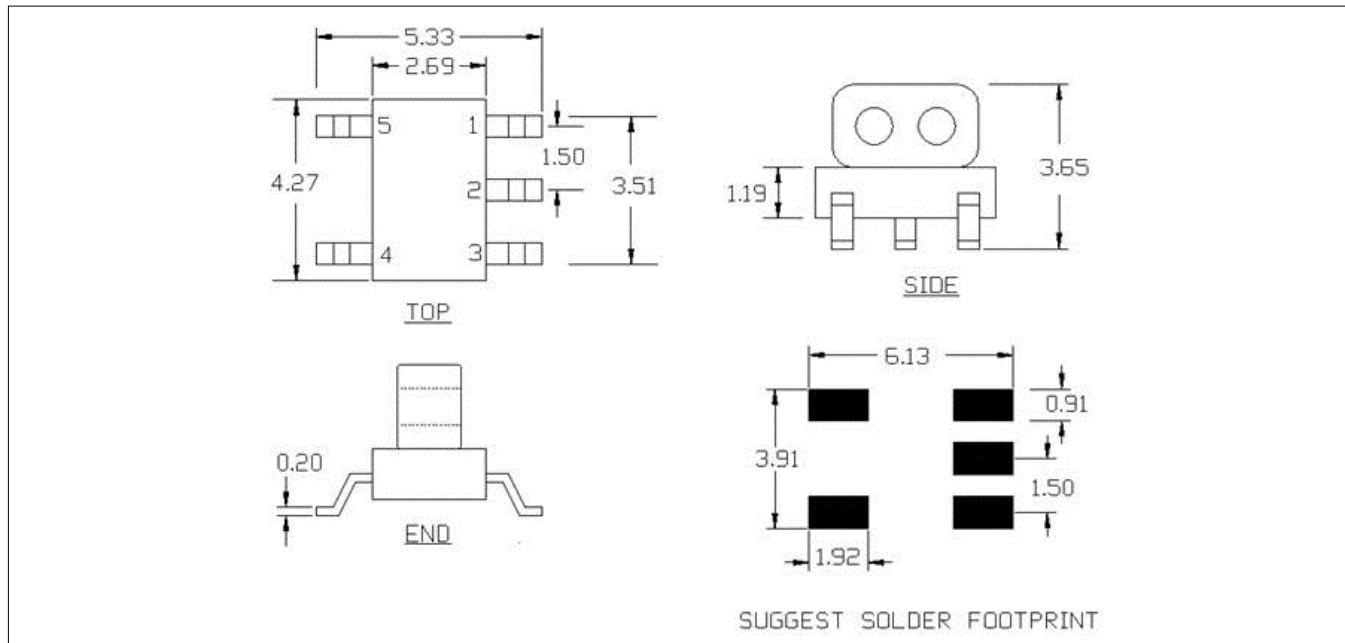


Phase Unbalance



All measurements performed on Hewlett Packard 8753D Network Analyzer (201 sample points, linear scale) in a 50 Ω coplanar waveguide environment.

Lead-Free Outline Drawing (SM-138)



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