



**THE DATASHEET OF  
MABAES0031**



## Features

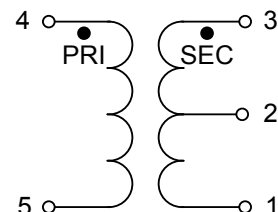
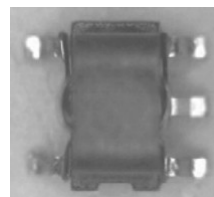
- Surface Mount
- 1:4 Impedance Ratio
- CT on Secondary
- Available on Tape & Reel

## 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

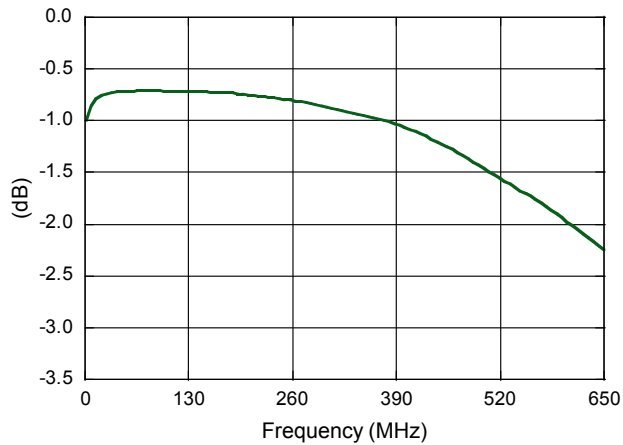
## Absolute Maximum Ratings<sup>1</sup>

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

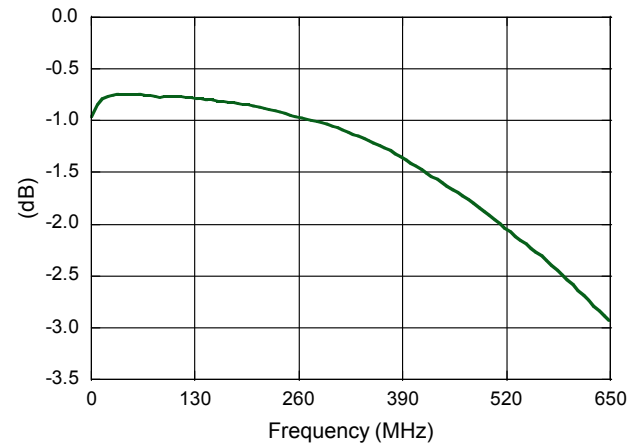
1. Operation of this device above any one of these parameters may cause permanent damage.

## Typical Performance Curves @ +25°C

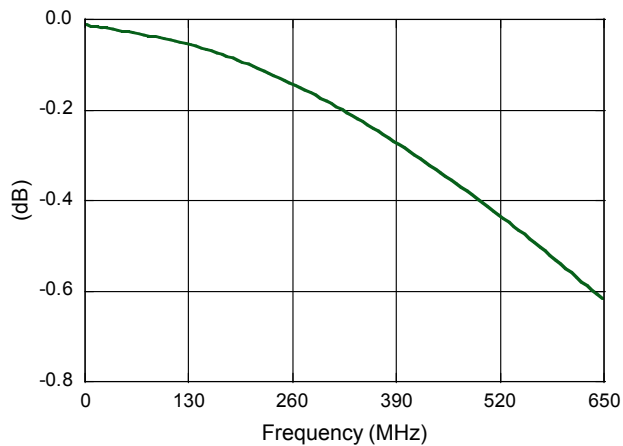
**Insertion Loss (Primary to Secondary Dot)**



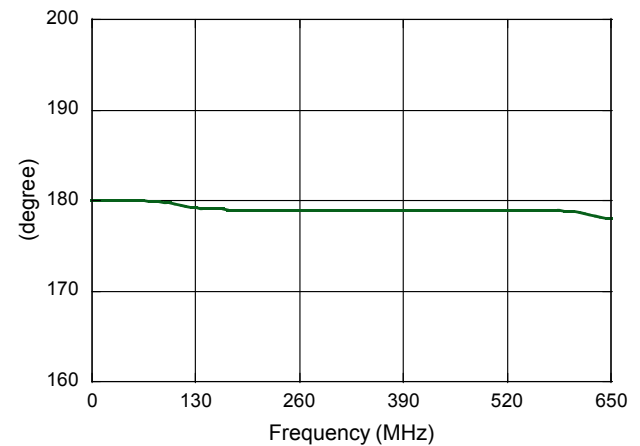
**Insertion Loss (Primary to Secondary)**



**Amplitude Unbalance**

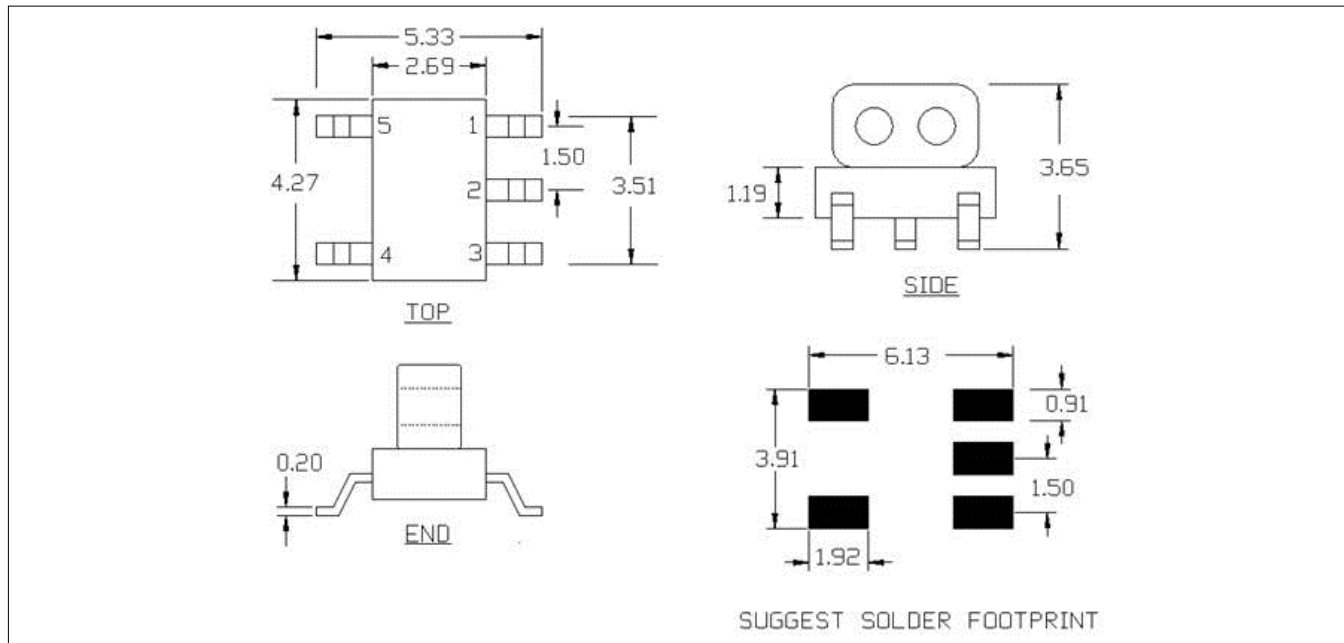


**Phase Unbalance**



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:  $\pm 0.2$  mm unless otherwise noted.  
Model number and lot code are printed on the reel.

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