1:4 E-Series, RF Flux Coupled Transformer
2 - 800 MHz

MABAES0061
Rev. V9

Features

- Surface Mount Package
- 1:4 Impedance Ratio
- CT on Secondary
- Available on Tape & Reel
- RoHS* Compliant version of ETC4-1-2

Applications

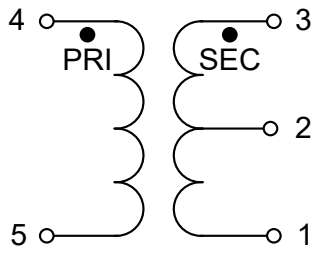
- Wireless Networking & Communication

Description

The MABAES0061 is a RoHS compliant device that is equivalent to the ETC4-1-2 transformer. This device is a 1:4 RF flux coupled step-up transformer. This transformer is offered in a SM-22 surface mount package and is designed to be utilized in both standard reflow and high temperature soldering reflow profiles.

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. = 2 - 800 MHz, T_A = 25°C, Z_0 = 50 Ω, P_{in} = 0 dBm

Parameter	Conditions	Units	Min.	Typ.	Max.
Impedance Ratio	—	ratio	—	1:4	—
Insertion Loss (f_L - f_U)	10 - 100 MHz 5 - 600 MHz 2 - 800 MHz	dB	—	— 1.21 —	1.0 2.0 3.0
Amplitude Unbalance	10 - 100 MHz 2 - 800 MHz	dB	—	—	0.25 1.00
Phase Unbalance	10 - 500 MHz 2 - 800 MHz	°	—	—	2 10

Ordering Information

Part Number	Description
MABAES0061	2000 piece reel

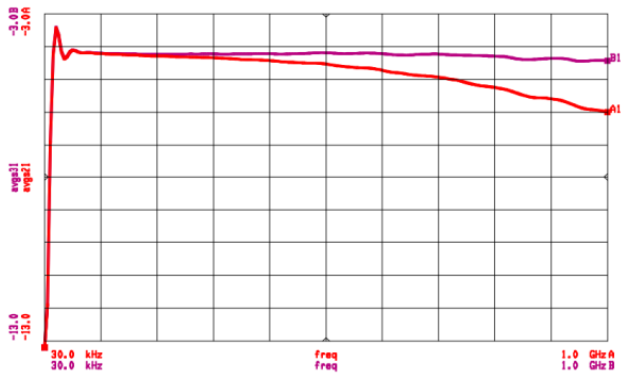
Absolute Maximum Ratings[1]

Parameter	Absolute Maximum
RF Input Power	250 mW
DC Current	240 mA[2]
Dielectric Withstanding Voltage	>2050 V
Operating Temperature	-55°C to +85°C

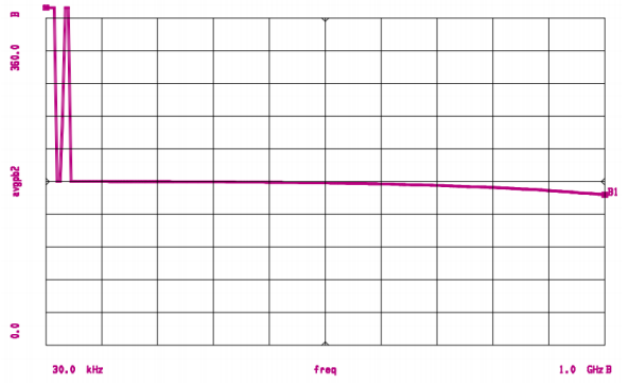
1. Operation of this device above any one of these parameters may cause permanent damage.
2. The maximum DC current applies to the secondary center tap in applications where the secondary is balanced.

Typical Performance Curves over extended Bandwidth (30 KHz - 1 GHz)

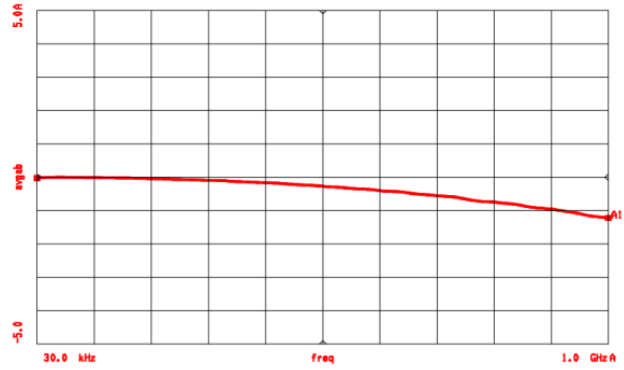
Insertion Loss (-3 to -13 dB) vs. Frequency (30 kHz to 1 GHz)



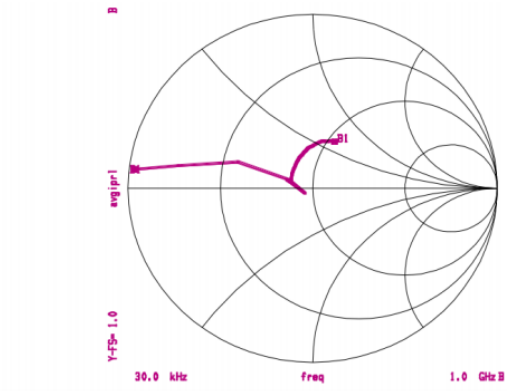
Phase Unbalance (0 to 360 deg.) vs. Frequency (30 kHz to 1 GHz)



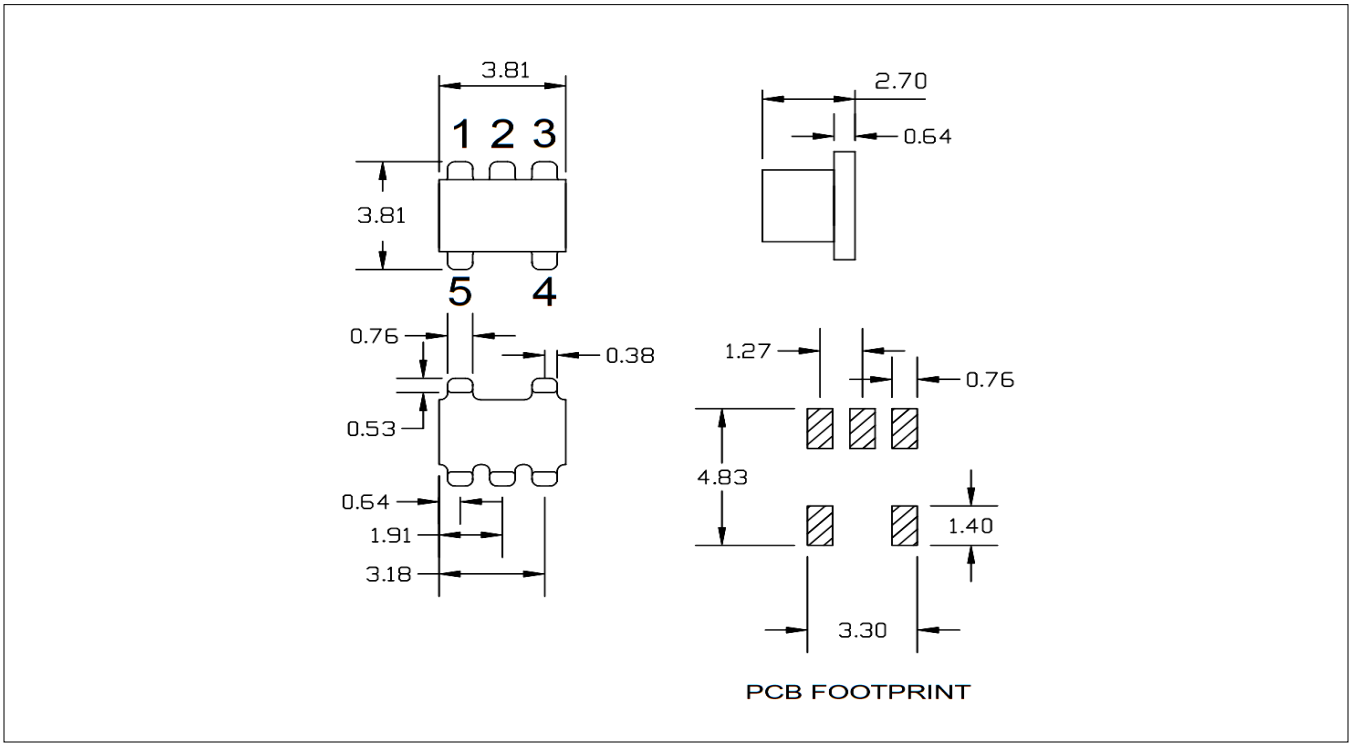
Amplitude Unbalance (5 to -5 dB) vs. Frequency (30 kHz to 1 GHz)



Input Impedance on Smith Chart vs. Frequency (30 kHz to 1 GHz)



Lead-Free Outline Drawing



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

Mouser Electronics

Authorized Distributor

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MACOM:
MABAES0061