

# E-Series RF 4:1 Flux Coupled Transformer

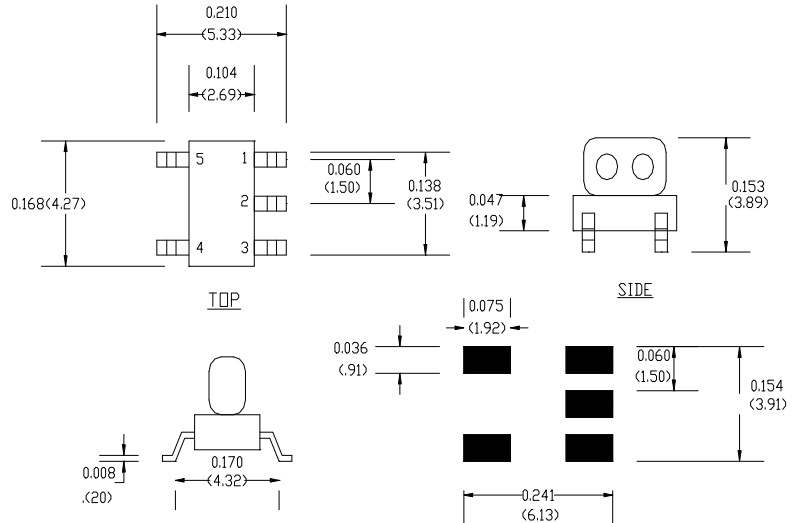
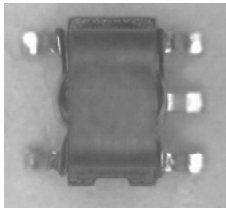
## 1.0 - 650 MHz



### SM-138 Package

#### Features

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

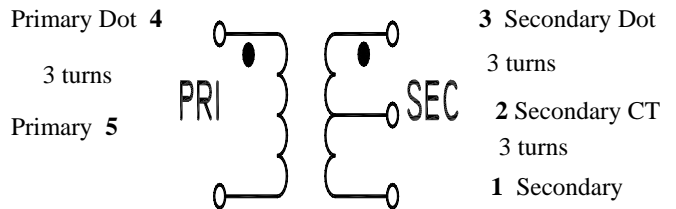


SUGGEST SOLDER FOOTPRINT

#### Description

M/A-COM's MABAES0031 is a 1:4 RF flux coupled step-up transformer in a low cost, surface mount package. Ideally suited for high volume cellular and wireless applications. Typical applications include single to balanced mode conversion and impedance matching.

#### Schematic



#### Electrical Specifications @25°C

Parameter	Units	Typical	Minimum	Maximum
Frequency Range 1 - 650	MHz	—	—	—
Insertion Loss ( $f_L - f_U$ )				
10 - 200 MHz	dB	0.7	—	1.0
1 - 450 MHz	dB	1.5	—	2.0
Amplitude Unbalance				
10 - 200 MHz	dB	0.12	—	0.25
Phase Unbalance				
10 - 200 MHz	Degrees	1	—	2.0
1 - 500 MHz	Degrees	3	—	5.0
500 - 650 MHz	Degrees	7	—	10

V 1.0

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**Absolute Maximum Ratings**

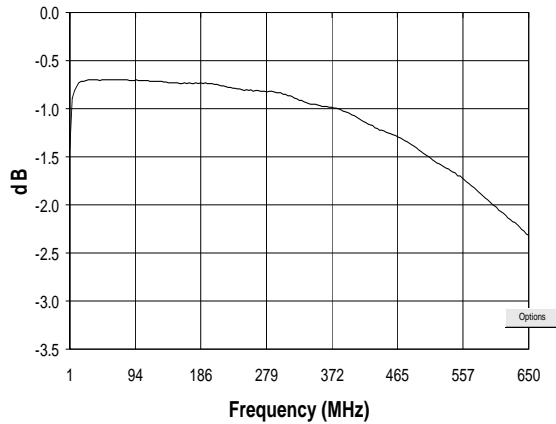
Parameter	Absolute Maximum
RF Power	250 mW
DC Current	200 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C

**Functional Configuration**

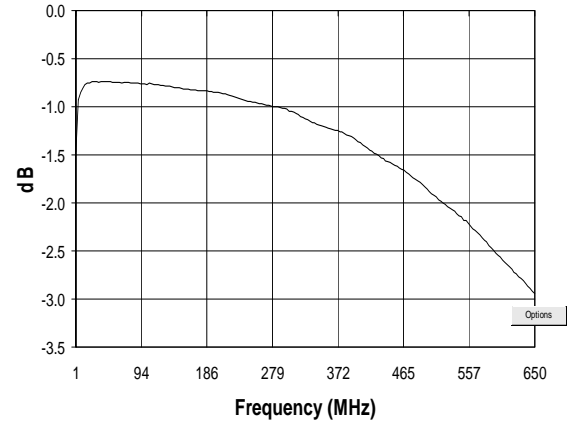
Function	Pin No.
Secondary	1
Secondary CT	2
Secondary Dot	3
Primary Dot	4
Primary	5

**Typical Performance @ +25°C**

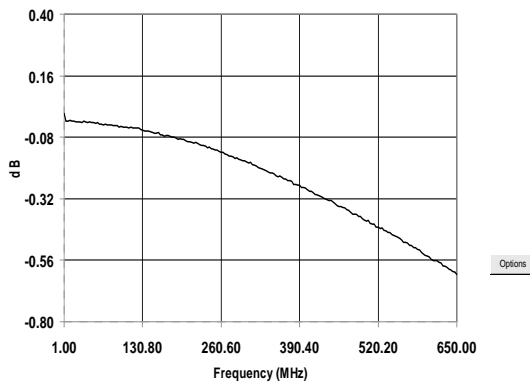
**Primary to Secondary Dot Insertion Loss**



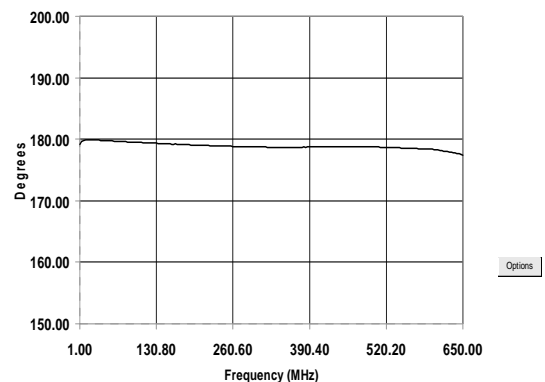
**Primary to Secondary Insertion Loss**



**Amplitude Unbalance**



**Phase Balance**



Note: All measurements performed on Hewlett Packard 8753D Network Analyzer (201 sample points, linear scale) in a 50 ohm coplanar waveguide environment. Tables created using MDS software.

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