

E-Series RF 4:1 Flux Coupled Transformer

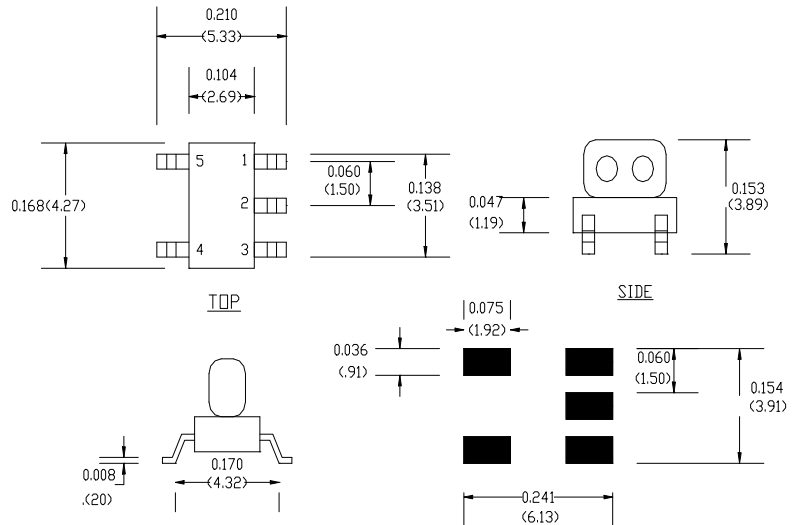
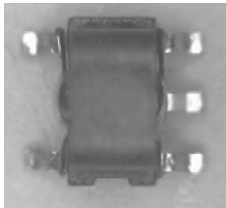
1.0 - 650 MHz



SM-138 Package

Features

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



SUGGEST SOLDER FOOTPRINT

Description

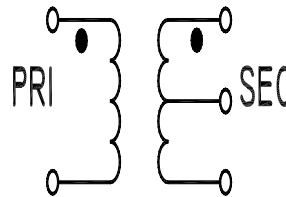
M/A-COM's MABAES0031 is a 1:4 RF flux coupled step-up transformer in a low cost, surface mount package. Ideally suited for high volume cellular and wireless applications. Typical applications include single to balanced mode conversion and impedance matching.

Schematic

Primary Dot 4

3 turns

Primary 5



3 Secondary Dot

3 turns

2 Secondary CT

3 turns

1 Secondary

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

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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Absolute Maximum Ratings

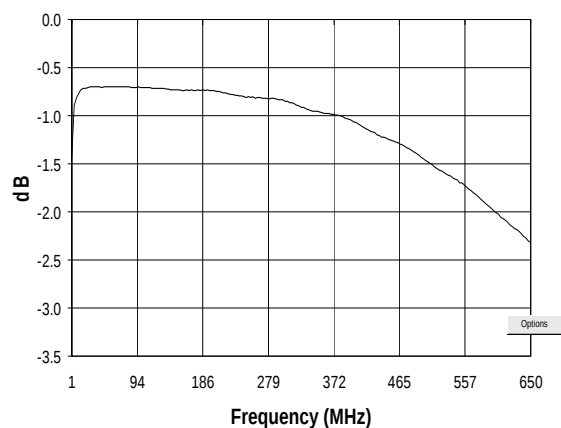
Parameter	Absolute Maximum
RF Power	250 mW
DC Current	200 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C

Functional Configuration

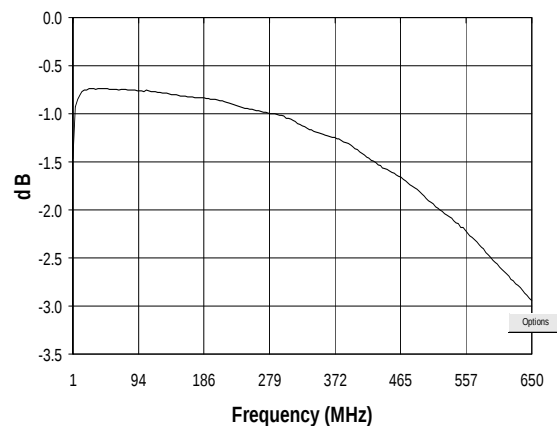
Function	Pin No.
Secondary	1
Secondary CT	2
Secondary Dot	3
Primary Dot	4
Primary	5

Typical Performance @ +25°C

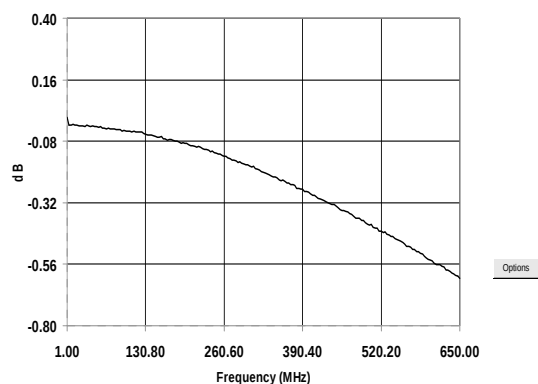
Primary to Secondary Dot Insertion Loss



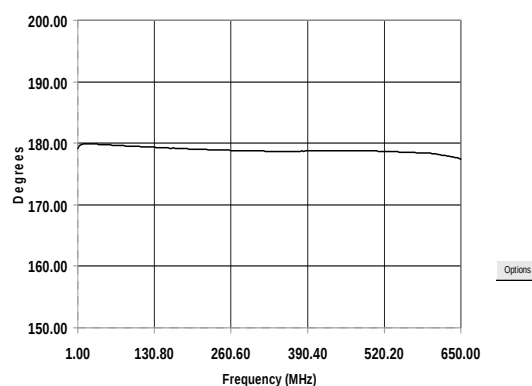
Primary to Secondary Insertion Loss



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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