

MABAES0061



E-Series RF 1:4 Flux Coupled Transformer 2.0 – 800 MHz

Rev. V5

Features

- Surface Mount
- 1:4 Impedance Ratio
- CT on Secondary
- RoHS* Compliant version of the ETC4-1-2
- Tape and reel packaging available

Description

M/A-COM's 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 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. The MABAES0061 transformer is offered in an SM-22 surface mount package and is designed to be utilized in both standard reflow and high temperature soldering reflow profiles.

Image



Ordering Information

Part Number	Package
MABAES0061	Tape and Reel (2000 piece reels)

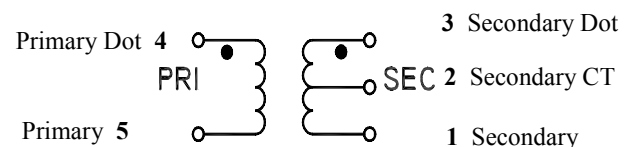
Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 50\Omega$ ¹

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
Frequency Range	—	2 — 800	MHz	—	—	—
Insertion Loss ($f_L - f_U$)	—	10 - 100 MHz	dB	—	—	1.0
	—	5 - 600 MHz	dB	—	1.21	2.0
	—	2 - 800 MHz	dB	—	—	3.0
Amplitude Unbalance	—	10 - 100 MHz	dB	—	—	0.25
	—	2 - 800 MHz	dB	—	—	1.0
Phase Unbalance	—	10 - 500 MHz	Degrees	—	—	2.0
	—	2 - 800 MHz	Degrees	—	—	10.0

Pin Configuration

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

Schematic



E-Series RF 1:4 Flux Coupled Transformer 2.0 – 800 MHz

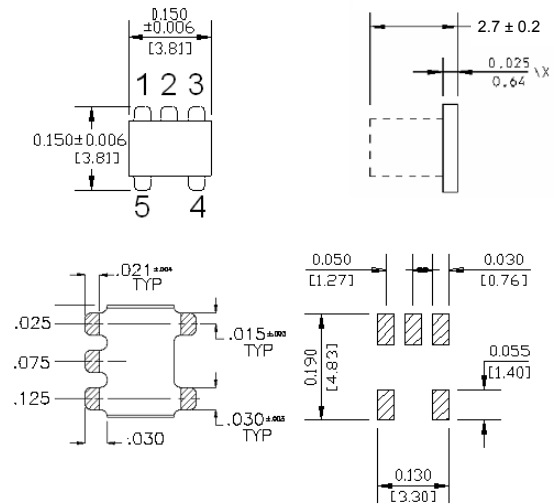
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Absolute Maximum Ratings ^{1,2}

Parameter	Absolute Maximum
RF Power	250 mW
DC Current	240 mA ²
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +125°C

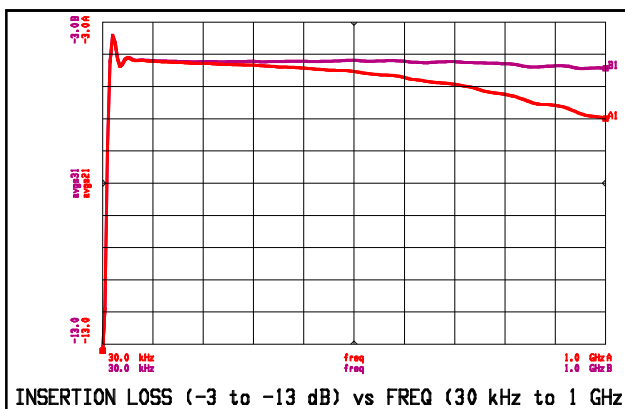
1. Operation of this device above any one of these parameters may cause permanent damage.
2. The maximum DC current applies to the secondary center tap in applications where the secondary is balanced.

Outline Drawing — SM-22

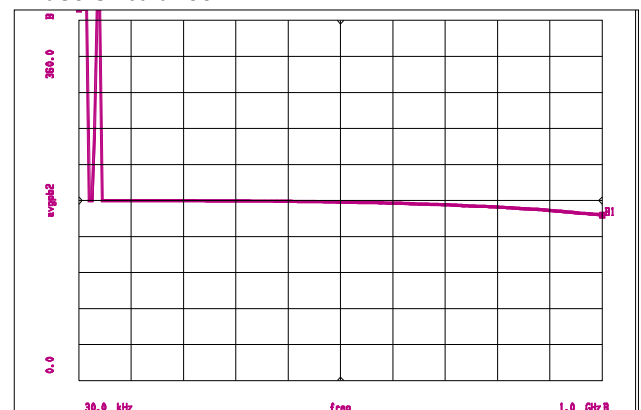


Typical Performance Curves Over Extended Bandwidth (30KHz - 1.0GHz)

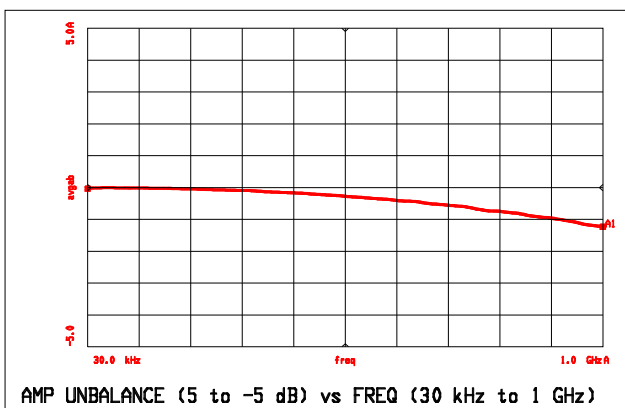
Insertion Loss



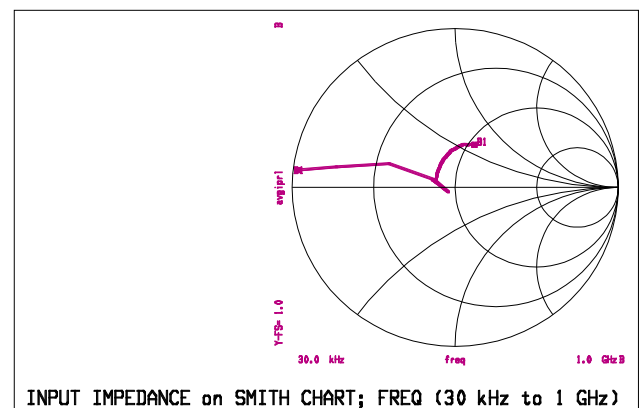
Phase Unbalance



Amplitude Unbalance



Input Return Loss



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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