

# MABA-009487-60HWCA



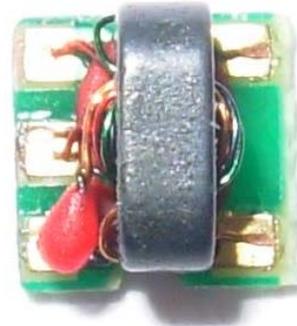
E-Series RF 1:1 Transformer  
0.4-500MHz

M/A-COM Products  
Rev. V4

## Features

- Surface Mount
- 1:1 Impedance Ratio
- CT on Secondary
- RoHS\* Compliant 1:1 transformer
- Tape and reel packaging available

## Product Image



## Description

M/A-COM's MABA-009487-60HWCA is a RoHS compliant 1:1 RF flux coupled 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 MABA-009487-60HWCA transformer is designed to be utilized in both standard reflow and high temperature soldering reflow profiles.

## Ordering Information

Part Number	Package
MABA-009487-60HWCA	Tape and Reel (2000 piece reels)

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

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
RF Frequency	—	0.4 - 500	MHz	—	—	—
Insertion Loss	—	0.4 - 200	dB	—	0.2	0.6
		200 - 400	dB	—	1.2	2
		400 - 500	dB	—	2.3	3
Amplitude Imbalance	—	0.4 - 500	dB	—	0.5	2
Phase Imbalance	—	0.4 - 500	Degrees	—	1	3
Input Return Loss	—	2 - 100	dB	—	26	20
		0.4 - 200	dB	—	20	13
		200 - 500	dB	—	10	9

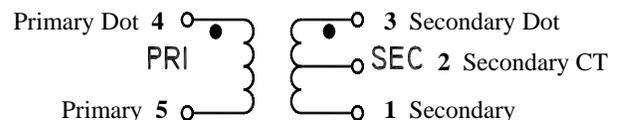
## Pin Configuration

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

## Absolute Maximum Ratings <sup>1,2</sup>

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

## Schematic



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.

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\* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

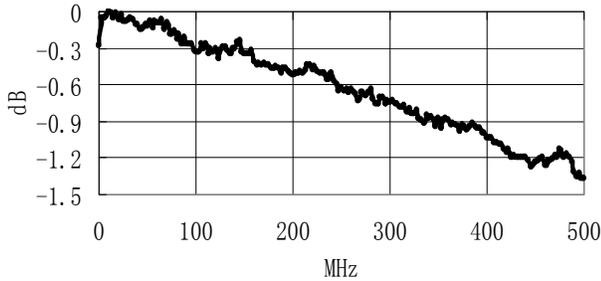
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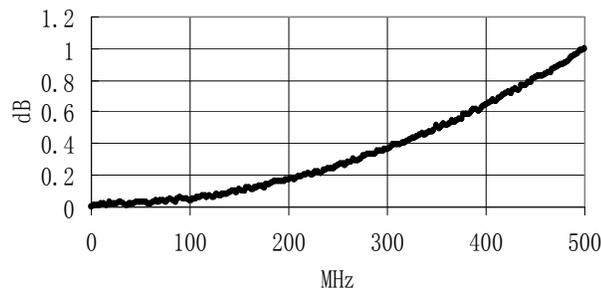
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## Typical Performance Curves

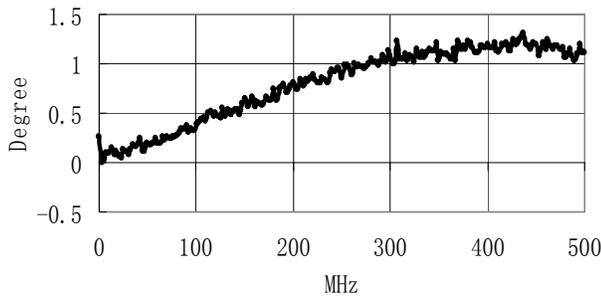
### Insertion Loss



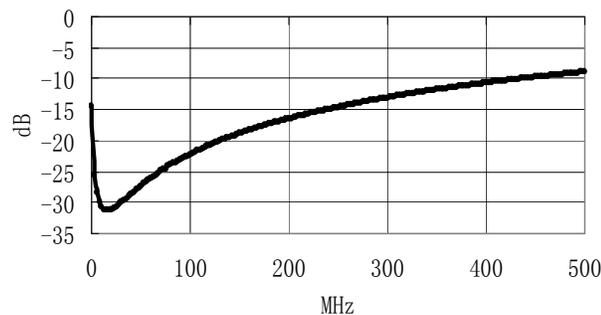
### Amplitude Unbalance



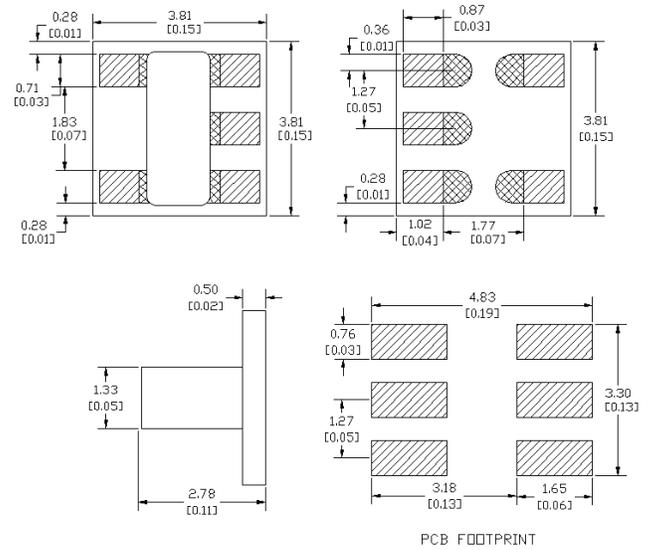
### Phase Unbalance



### Input Return Loss



## SM-195 Outline Drawing



\* Dimensions are millimeters (inches)  $\pm 0.38$  (0.015) unless otherwise specified.

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