MABAES0060

E-Series RF 1:1 Flux Coupled Transformer
0.3 - 200 MHz

Rev. V5

Features

- Surface Mount
- 1:1 Impedance Ratio
- CT on Secondary
- RoHS* Compliant version of the ETC1-1T
- Tape and reel packaging available

Description

M/A-COM's MABAES0060 is a RoHS compliant device that is equivalent to the ETC1-1T transformer. This device is a 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 MABAES0060 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.

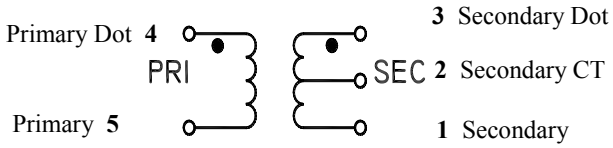
Electrical Specifications: T_A = 25°C, Z_0 = 50Ω [1]

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
RF Frequency	—	0.3 - 200	MHz	—	—	—
Insertion Loss	—	0.3 - 200	dB	—	—	1.5
Amplitude Imbalance	—	0.3 - 50 0.3 - 200	dB dB	— —	— —	0.1 0.5
Phase Imbalance	—	0.3 - 50 0.3 - 200	Degrees Degrees	— —	— —	1.0 5.0
Input Return Loss	—	0.3 - 200 5 - 120	dB dB	— —	— —	10.0 15.0

Pin Configuration

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

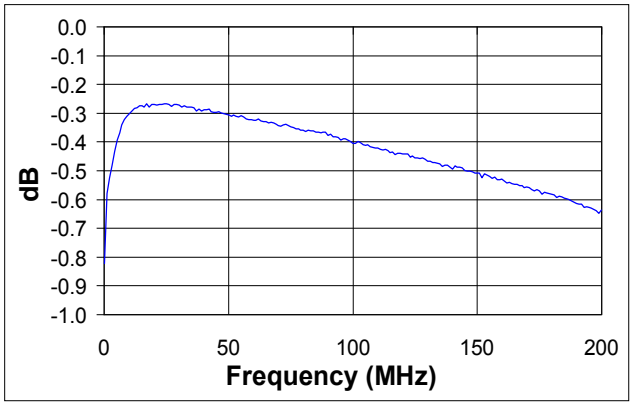
Schematic



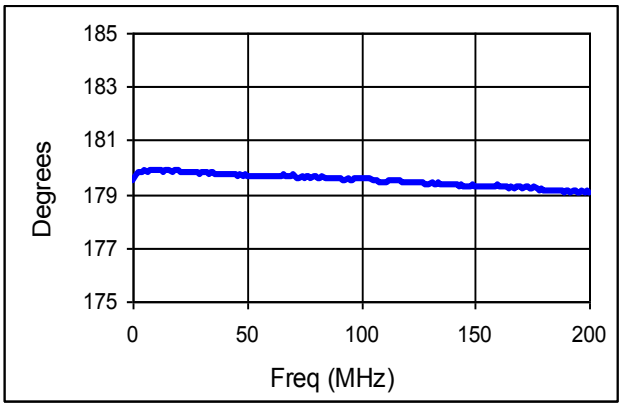
• **North America** Tel: 800.366.2266 • **Europe** Tel: +353.21.244.6400
• **India** Tel: +91.80.43537383 • **China** Tel: +86.21.2407.1588
Visit www.macomtech.com for additional data sheets and product information.

Typical Performance Curves Over Bandwidth (300kHz - 200MHz)

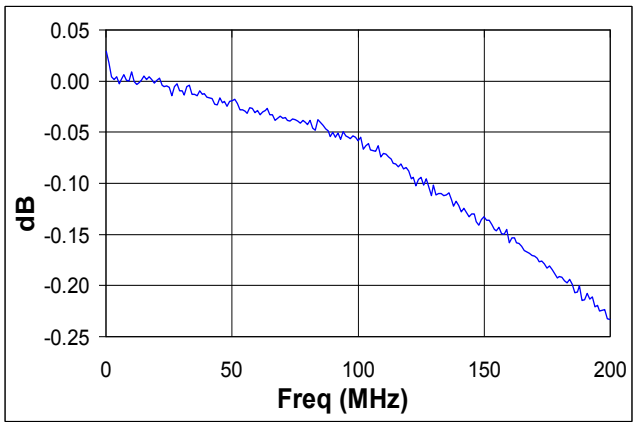
Insertion Loss



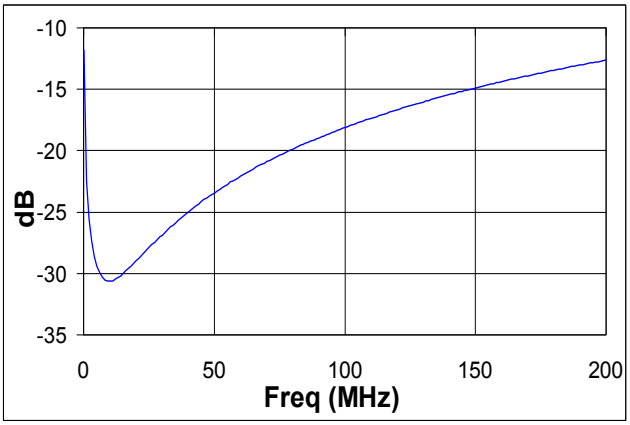
Phase Unbalance



Amplitude Unbalance



Input Return Loss



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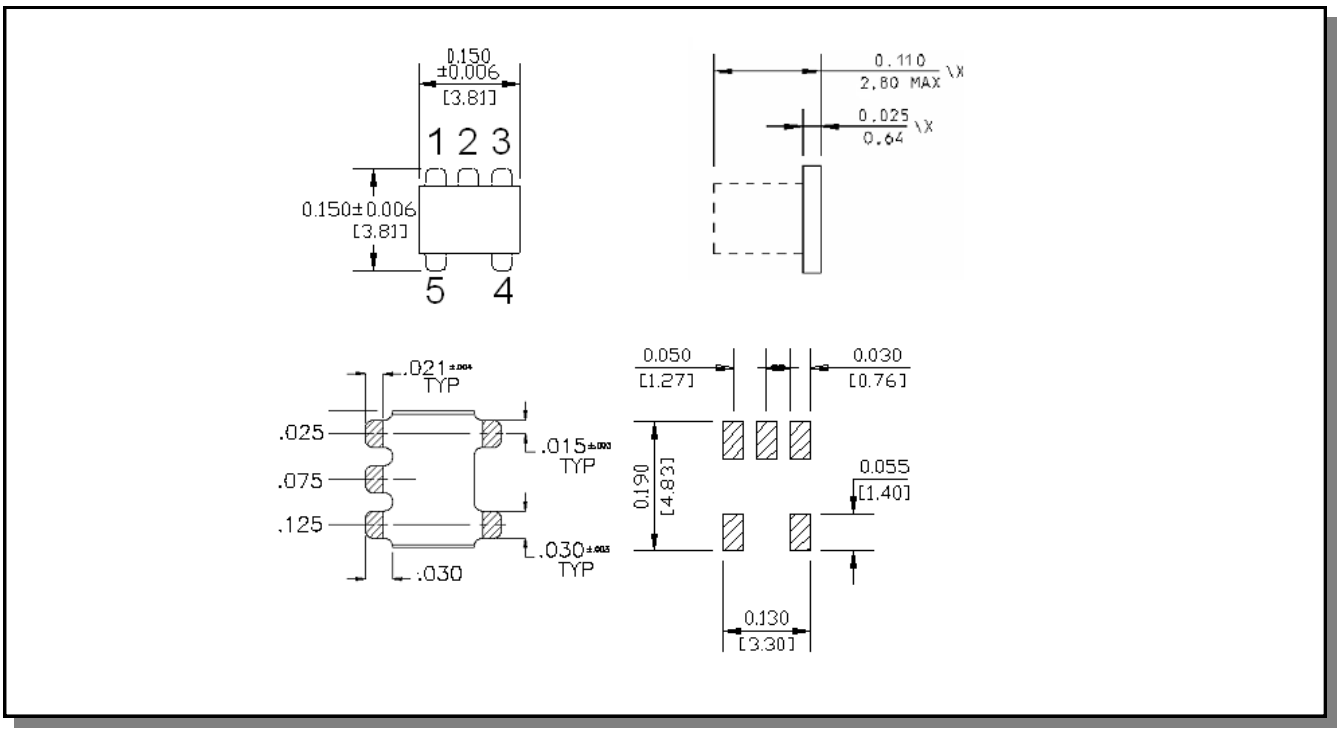
Outline Drawing



1. Dimensions are in inches (mm)
2. Tolerance: ±0.015'' (0.38mm) unless otherwise noted.
3. Model number and lot code printed on reel.
4. Plating finish: ENIG on both sides, 0.05 to 0.1 µm gold over 3 to 6 µm nickel

Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel size	mm	330
Tape width (W)	mm	12.0
Pitch (P_1)	mm	8
A_0	mm	4.0
B_0	mm	4.0
K_0	mm	2.9
Orientation	-	F5
Reference Application note ANI-019 for orientation		

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.

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