

1:1.5 Flux Coupled Transformer

5 - 350 MHz



MABA-007766-CF28A0

Rev. V1

Features

- Surface Mount Package
- 1:1.5 Impedance
- Excellent amplitude and phase balance
- RoHS* Compliant Version of MABAES0025
- Available on 2000 piece Tape and Reel

Applications

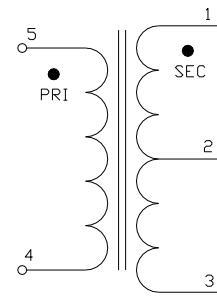
- CATV / Broadband

Description

The MABA-007766-CF28A0 is a 1:1.5 RF transformer in a surface mount package.

Ideally suited for high volume CATV/Broadband applications. Typical applications include single to balanced mode conversion and impedance matching.

Schematic



Pin Configuration³

Pin #	Function	Pin #	Function
1	Secondary Dot	4	Primary
2	Secondary CT	5	Primary Dot
3	Secondary		

3. MACOM recommends connecting unused package pins to ground.

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

Parameter	Test Conditions Frequency (MHz)	Units	Min.	Typ.	Max.
Insertion Loss	5 - 200	dB	—	0.7	1.5
	200 - 350			1.4	2.5
Amplitude Imbalance	5 - 200	dB	—	0.2	± 0.5
	200 - 350			0.4	± 1.0
Phase Imbalance	5 - 200	°	—	1.0	± 3.0
	200 - 350			2.0	± 4.0

Ordering Information^{1,2}

Part Number	Package
MABA-007766-CF28A0	2000 piece reel
MABA-007766-CF28TB	Customer Test Board

1. Reference Application Note M513 for reel size information.
2. All sample boards include 5 loose parts.

Absolute Maximum Ratings^{4,5}

Parameter	Absolute Maximum
Input Power	250 mW
DC current	200 mA
Operating Temperature	-40°C to +85°C

4. Exceeding any one or combination of these limits may cause permanent damage to this device.
5. MACOM does not recommend sustained operation near these survivability limits.

* Restrictions on Hazardous Substances, compliant to current RoHS EU directive.

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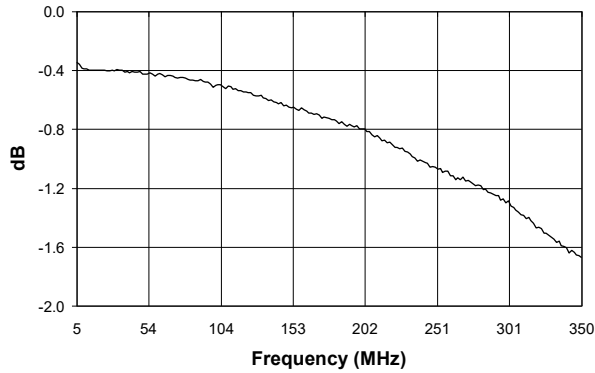


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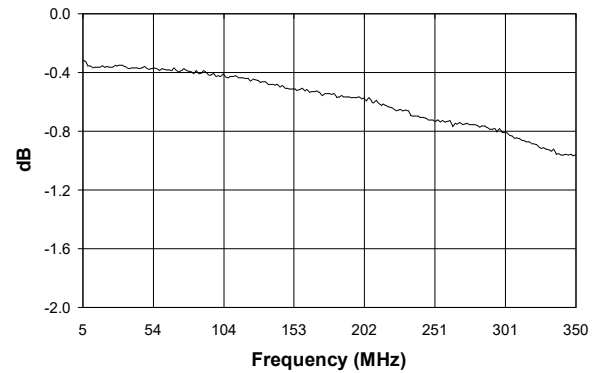
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Typical Performance Curves⁶

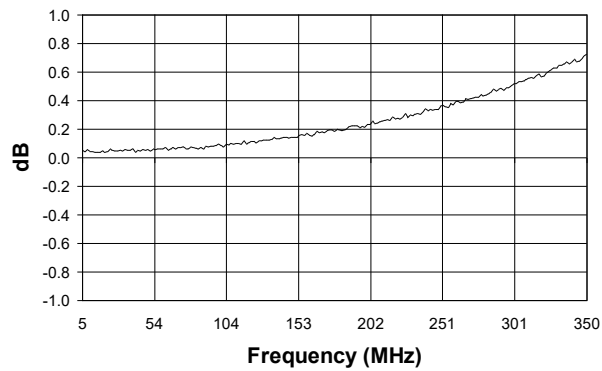
Insertion Loss 1: From pin 5 to pin 1



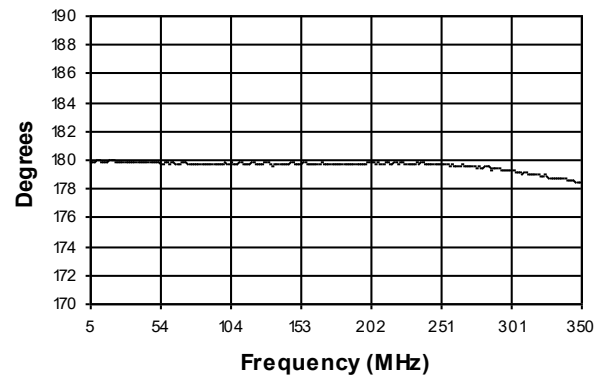
Insertion Loss 2: From pin 5 to pin 3



Amplitude Unbalance



Phase Balance



6. Temperature plots available on request.

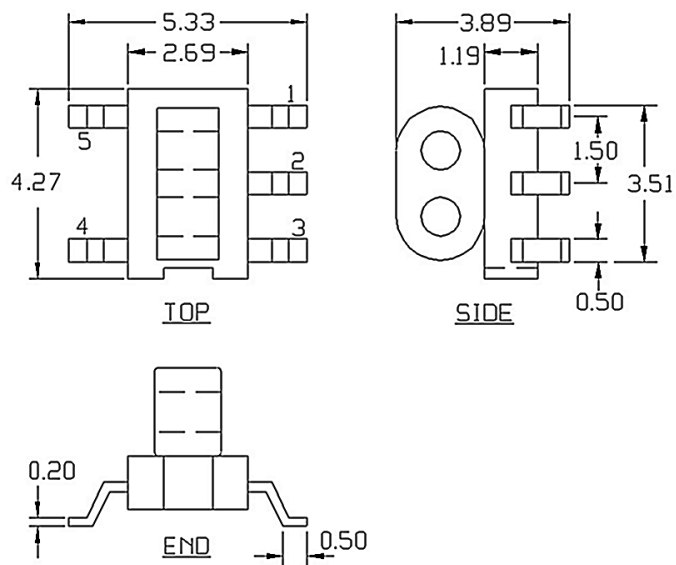
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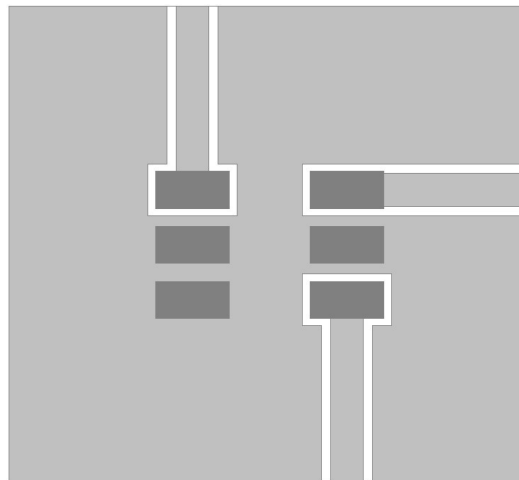
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Outline Drawing^{7,8,9,10}



- 7. Dimensions in mm.
- 8. Tolerance: ± 0.2 mm unless otherwise noted.
- 9. Model number and lot code are printed on the reel.
- 10. Plating finish: CuSn6

Recommended PCB Layout¹¹



11. Recommended PCB FR4 layout shown above uses 1.57 mm $\pm 10\%$

Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel Size	mm	330
Tape Width	mm	12.00
Pitch	mm	8.00
Orientation	-	F26
Reference Application Note ANI-019 for orientation		

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