

## 1:2 Step Up Flux Coupled Balun Transformer 3 - 300 MHz

Rev. V4

### Features

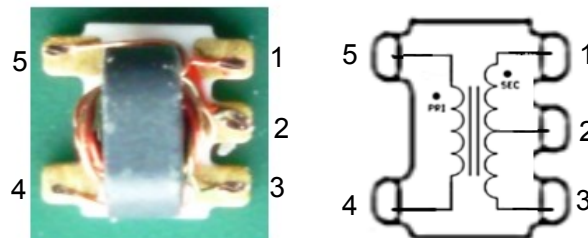
- 1:2 Impedance
- Surface Mount
- Available on Tape & Reel
- 260° Reflow Compatible
- RoHS Compliant and Pb Free

### Description

MABA-009250-CT0068 is a RoHS compliant 1:2 RF transformer in a low cost, surface mount package. Typical applications include single to balanced mode conversion and impedance matching.

The MABA-009250-CT0068 is available in a SM-22 surface mount package and is designed to be utilized in both RoHS and standard reflow profiles. Parts are packaged in tape & reel.

### Functional Schematic



### Pin Configuration

Pin #	Function	Pin #	Function
1	Secondary Dot	4	Primary
2	Centre Tap	5	Primary Dot
3	Secondary		

### Electrical Specifications: Freq. = 3 - 300 MHz, $T_A = 25^\circ\text{C}$ , $Z_0 = 50 \Omega$ , $P_{IN} = 0 \text{ dBm}$

Parameter	Units	Min.	Typ.	Max.
Impedance Ratio	ratio	—	2:1	—
Insertion Loss	dB	—	0.7	1.6
Amplitude Balance	dB	—	0.4	$\pm 1.2$
Phase Balance	$^\circ$	—	—	$\pm 2.0$

### Ordering Information<sup>1</sup>

Part Number	Description
MABA-009250-CT0068	Tape & Reel

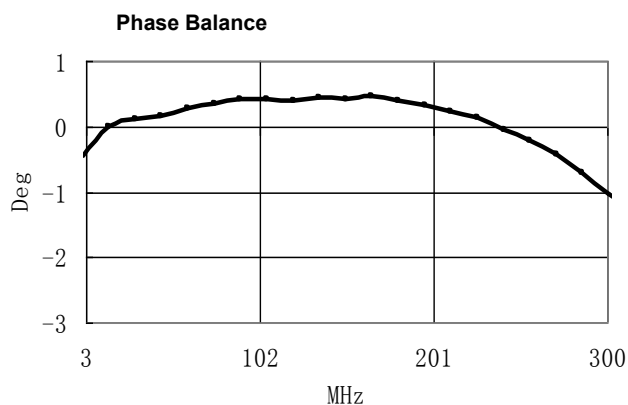
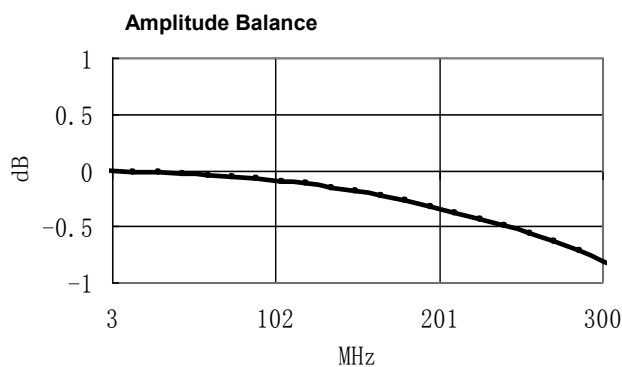
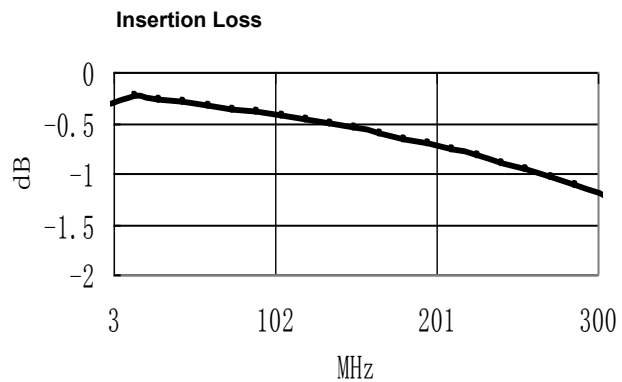
1. Reference Application Note M513 for reel size information.

### Absolute Maximum Ratings<sup>2,3</sup>

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

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

## Typical Performance Curves<sup>4</sup>

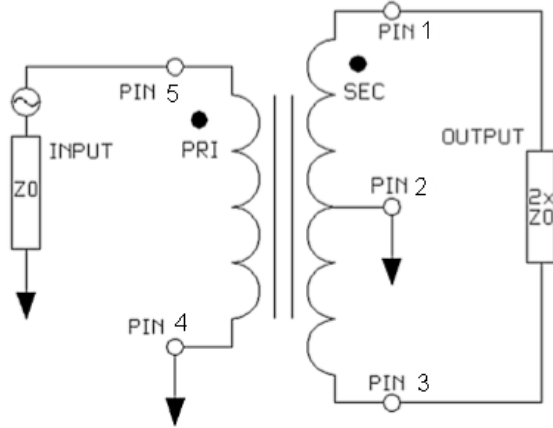


4. Full temperature plots available on request

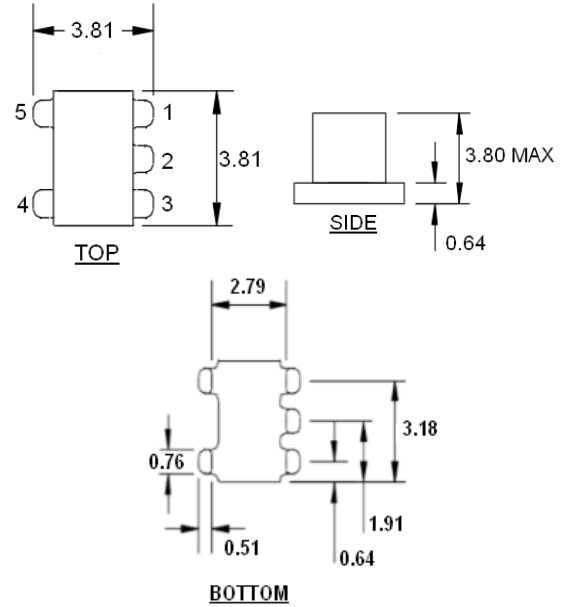
## 1:2 Step Up Flux Coupled Balun Transformer 3 - 300 MHz

Rev. V4

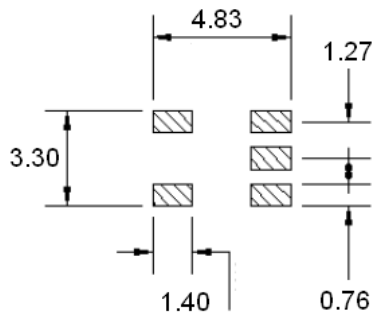
### Application Schematic



### Outline Drawing<sup>5,6,7,8</sup>



### Recommended Footprint

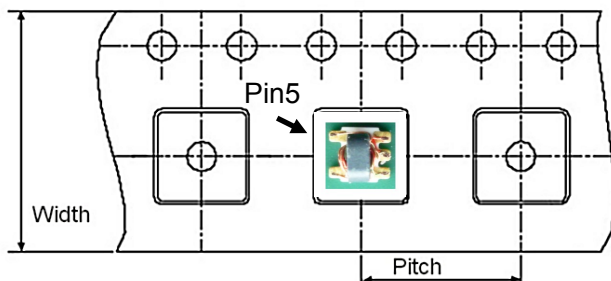


5. Dimensions in mm
6. Tolerance:  $\pm 0.2$  mm unless otherwise noted
7. Model number and lot code are printed on the reel
8. Plating finish: ENIG

### Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel Size	mm	330
Tape Width	mm	12.00
Pitch	mm	8.00
Ao	mm	4.00
Bo	mm	4.00
Ko	mm	2.90
Orientation	-	F5
Reference Application Note ANI-019 for orientation		

### Carrier Tape Orientation



MACOM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with MACOM Technology Solutions Inc ("MACOM") products. These materials are provided by MACOM as a service to its customers and may be used for informational purposes only. Except as provided in MACOM's Terms and Conditions of Sale for such products or in any separate agreement related to this document, MACOM assumes no liability whatsoever. MACOM assumes no responsibility for errors or omissions in these materials. MACOM may make changes to specifications and product descriptions at any time, without notice. MACOM makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. MACOM FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. MACOM SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.