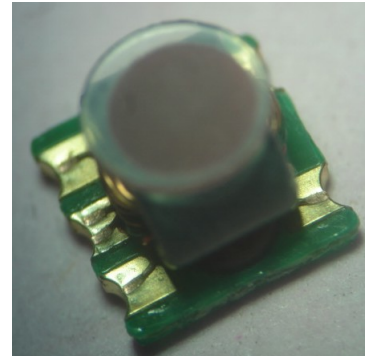


## Features

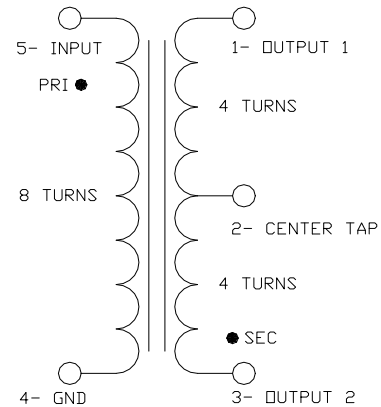
- Surface Mount
- 1:1 Impedance
- 75 Ohm
- RoHS Compliant and lead free

## Description

MABA-009005-CF1A40 is a 1:1 RF flux coupled Transformer in a low cost surface mount package. Ideally suited for high volume CATV application.



## Schematic



## Ordering Information

Part Number	Package
MABA-009005-CF1A40	2000 pieces per reel
MABA-009005-CF1ATB	Customer test board

## Pin Configuration

Pin Number	Function
1	Secondary (Output 1)
2	Secondary Centre Tap
3	Secondary Dot (Output 2)
4	Primary (Ground)
5	Primary Dot (Input)

\* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

## 1:1 Flux Coupled Balun Transformer 5 - 120 MHz

Rev. V2

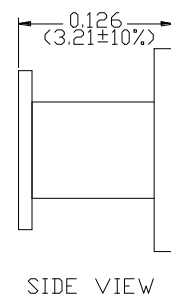
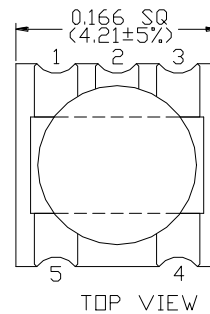
Electrical Specifications:  $T_A = 25^\circ\text{C}$ , 0 dBm,  $Z_0 = 75 \Omega$

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Frequency Range	5 – 120 MHz				
Insertion Loss 1 (Pin 5 to Pin 1)	5 – 80 MHz	dB	–	0.1	0.4
	80 – 120 MHz	dB	–	0.3	0.5
Insertion Loss 2 (Pin 5 to Pin 3)	5 – 80 MHz	dB	–	0.2	0.4
	80 – 120 MHz	dB	–	0.4	0.6
Amplitude Un-Balance	5 – 80 MHz	dB	–	$\pm 0.06$	$\pm 0.2$
	80 – 120 MHz	dB	–	$\pm 0.18$	$\pm 0.3$
Phase Un-Balance	5 – 65 MHz	$^\circ$	–	$\pm 0.05$	$\pm 1.5$
	65 – 120 MHz	$^\circ$	–	$\pm 0.10$	$\pm 3.0$
Input Return Loss (Pin 5)	5 – 70 MHz	dB	19	25	–
	70 – 120 MHz	dB	14	19	–

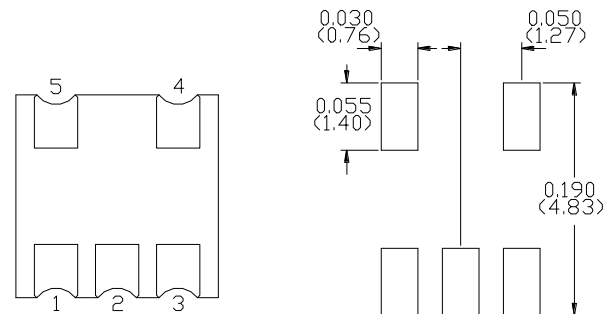
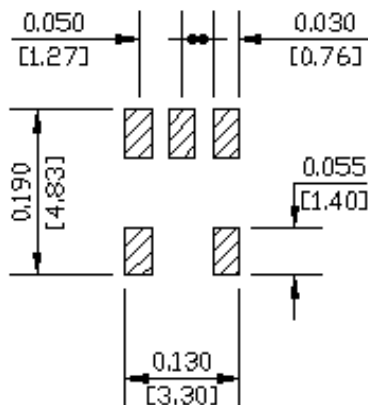
### Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Power	250 mW
DC Current	30 mA
Operating Temperature	$-40^\circ\text{C}$ to $+85^\circ\text{C}$
Storage Temperature	$-40^\circ\text{C}$ to $+85^\circ\text{C}$

### Case Style SM-164A



### Recommended PCB Configuration



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

2  
2

# MABA-009005-CF1A40

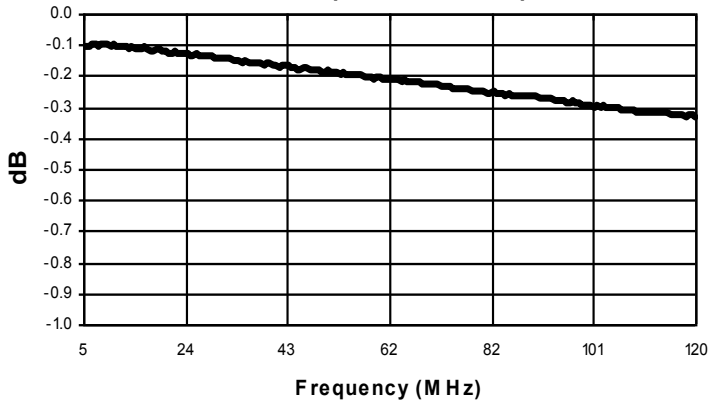


1:1 Flux Coupled Balun Transformer  
5 - 120 MHz

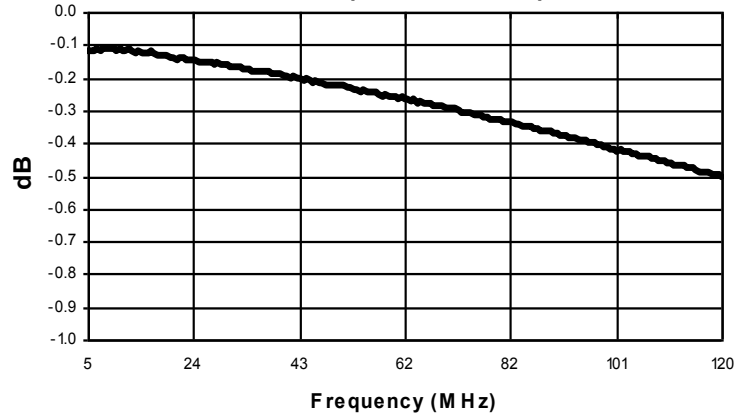
Rev. V2

Typical Performance:  $T_A = 25^\circ\text{C}$ , 0dBm,  $Z_0 = 75\Omega$

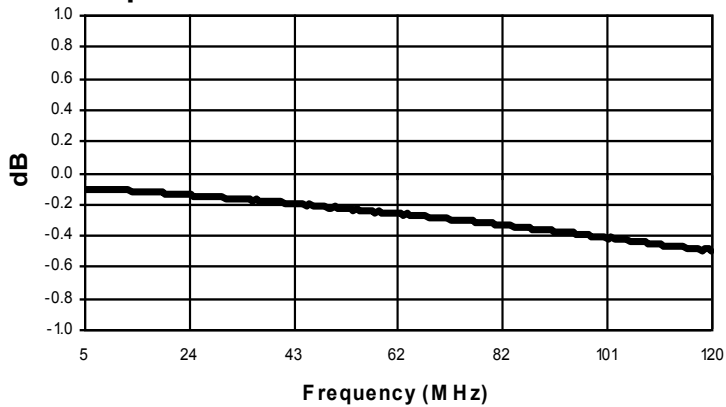
### Insertion Loss 1 (Pin 5 - Pin 1)



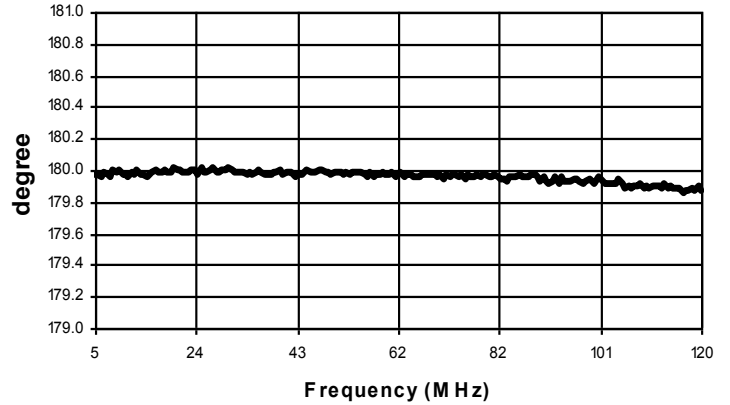
### Insertion Loss 2 (Pin 5 - Pin 3)



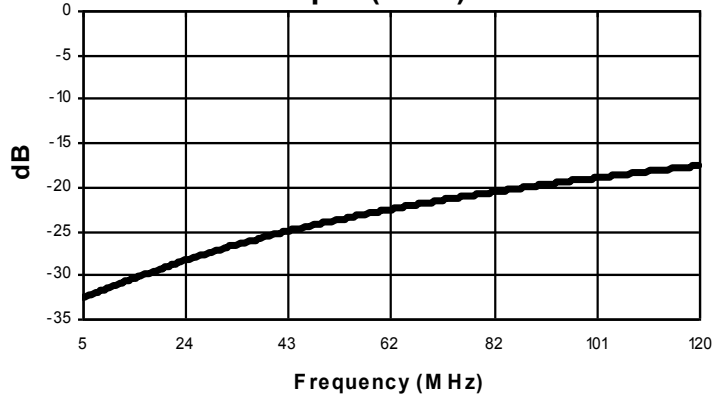
### Amplitude Balance



### Phase Balance



### Return Loss: Input (Pin 5)



3  
3

M/A-COM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. Visit [www.macom.com](http://www.macom.com) for additional data sheets and product information.

For further information and support please visit:  
<https://www.macom.com/support>

M/A-COM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with M/A-COM 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.

4  
4

---

M/A-COM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. Visit [www.macom.com](http://www.macom.com) for additional data sheets and product information.