

4:1 flux Coupled Transformer 5-200MHz

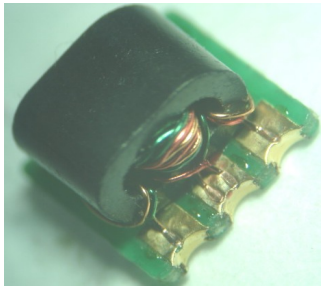
Rev. V2

Features

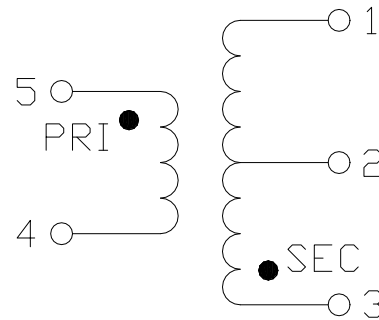
- SMT unit.
- 4:1 Impedance
- 260°C Reflow Compatible
- RoHS* Compliant
- RoHS version of MABACT0045
- Available on Tape and Reel. Reel quantity 2000

Description

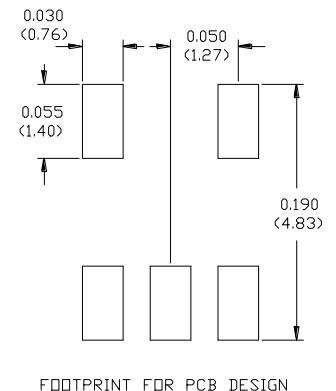
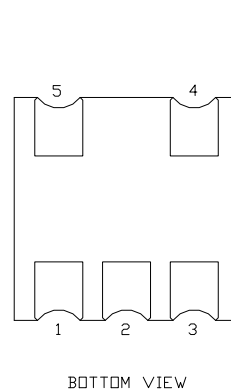
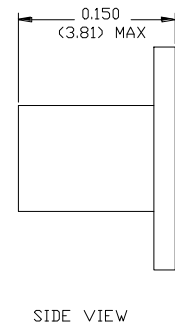
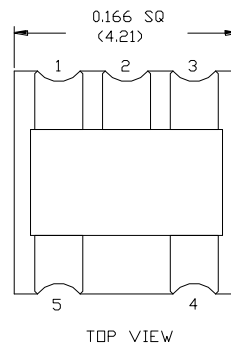
M/A-COM's MABA-008260-CF4A40 is a low cost surface mount 4:1 flux coupled transformer. Ideally suited for high volume CATV/Broadband applications. Suitable for use in 50 Ohm and 75 Ohm systems.



Schematic



Case Style: SM-164



Dimensions in inches [mm] Tolerance: .xx ± .02, .xxx ± .010

Pin Configuration

Pin No.	Function
1	Secondary Output 2
2	Centre Tap (ground)
3	Secondary Dot Output 1
4	Primary (ground)
5	Primary Dot (input)

Ordering Information

Part Number	Package
MABA-008260-CF4A40	2000
MABA-008260-CF4ATB	Customer Test Board

Note: Reference Application Note **M513** for reel size information.

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

4:1 flux Coupled Transformer 5-200MHz

Rev. V2

Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 75\Omega$ ¹

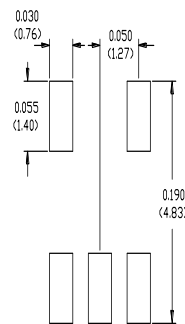
Parameter	Frequency	Units	Min	Typ	Max
Insertion Loss	5 - 65 MHz	dB	-	0.6	1.0
	65 - 200 MHz	dB	-	0.8	1.0
Amplitude Balance	5 - 200 MHz	dB	-	0.2	0.3
Phase Balance	5 - 65 MHz	dB	-	0.1	2.0
	65 - 200 MHz	dB	-	0.3	3.0
Input Return Loss	5 - 65 MHz	dB	15	25	-
	65 - 200 MHz	dB	12	17	-

Absolute Maximum Ratings ^{1,2}

Parameter	Absolute Maximum
RF Power	250 mW
DC current	30mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C

- Exceeding any one or combination of these limits may cause permanent damage to this device.
- M/A-COM does not recommend sustained operation near these survivability limits.

Recommended PCB Configuration



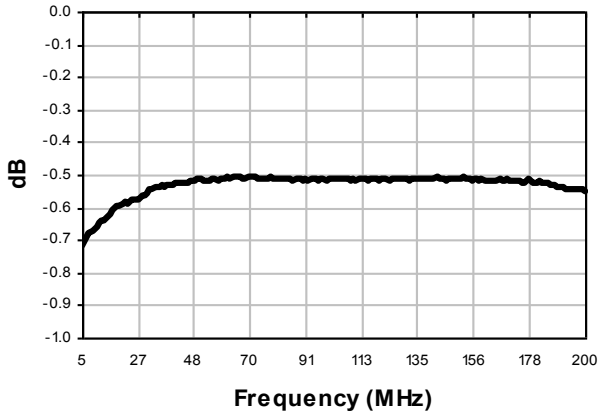
FOOTPRINT FOR PCB DESIGN

**4:1 flux Coupled Transformer
5-200MHz**

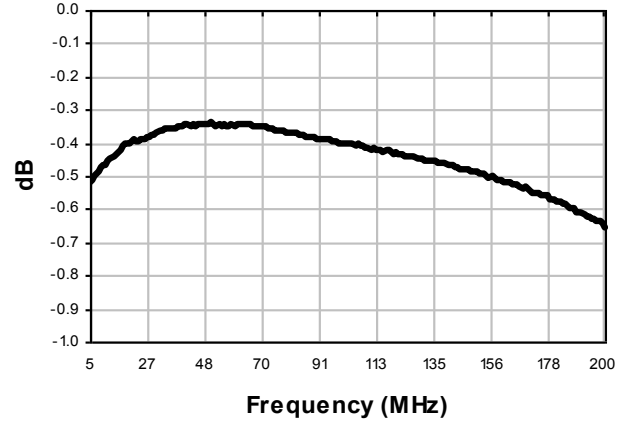
Rev. V2

Typical Performance Curves: $T_A = 25^\circ\text{C}$, $Z_0 = 75\Omega$ ¹

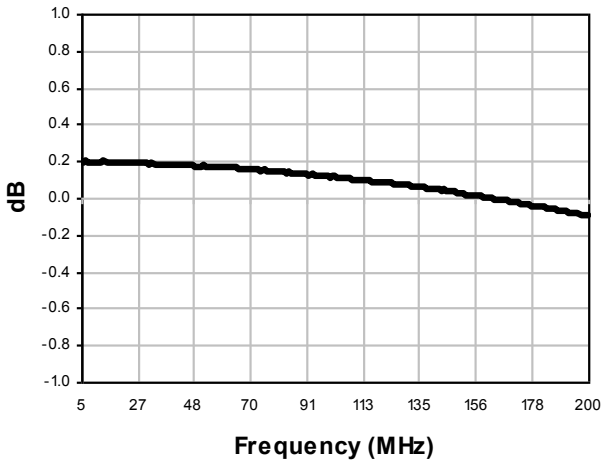
Insertion Loss 1: pin 5-3



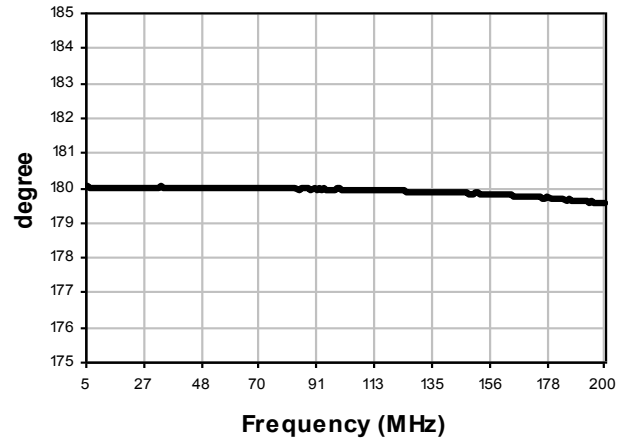
Insertion Loss 2: pin 5-1



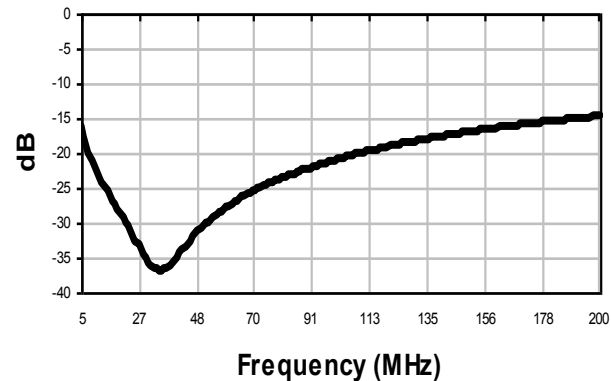
Amplitude Balance



Phase Balance



Return Loss: Input



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.