

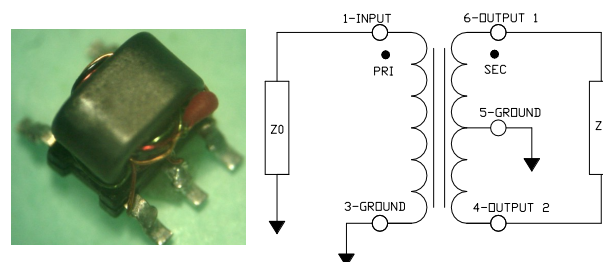
1:1 Flux Coupled Transformer 5 - 200 MHz

Rev. V4

Features

- Surface Mount Package
- 1:1 Impedance Ratio
- Centre Tap on Secondary
- Suitable for DOCSIS 3.0
- 260°C Reflow Compatible
- RoHS* Compliant, Lead Free
- Available on Tape & Reel.
- Available in Weld & Soldered Versions**

Functional Schematic



Description

The MABA-007532-CF18A0 is a 1:1 RF flux coupled transformer in a surface mount package.

Ideally suited for broadband CATV applications.

Pin Configuration

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

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

Parameter	Frequency	Units	Min.	Typ.	Max.
Insertion Loss	5 - 60 MHz 60 - 150 MHz 150 - 200 MHz	dB	—	0.3 0.4 0.7	0.5 0.8 1.1
Amplitude Unbalance	Nominal 0 dB, 5 - 60 MHz 60 - 200 MHz	dB	—	0.0 0.2	± 0.1 ± 0.6
Phase Unbalance	Nominal 180° , 5 - 60 MHz 60 - 200 MHz	$^\circ$	—	0.1 0.3	± 2.0 ± 4.0
Input Return Loss	5 - 60 MHz 60 - 200 MHz	dB	20 10	31 17	—

Ordering Information

Part number	Description
MABA-007532-CF18A0	2000 piece reel
MABA-007532-CF18TB	Customer Test Board

Recommended Maximum Ratings^{1,2}

Parameter	Value
Input Power	631 mW
DC Current	600 mA @ 5 V
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

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

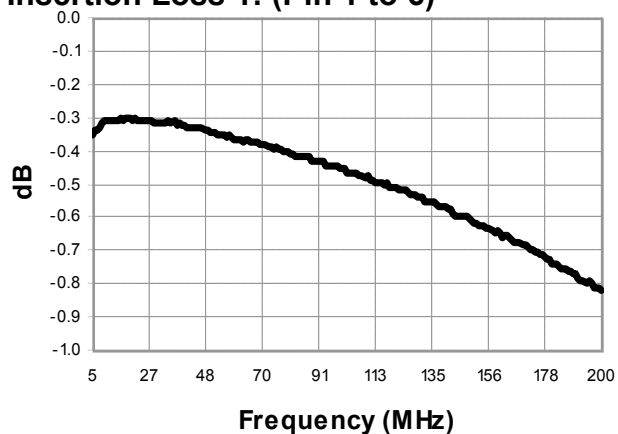
** MACOM reserves the right to supply parts with weld or solder wire attach.

1:1 Flux Coupled Transformer 5 - 200 MHz

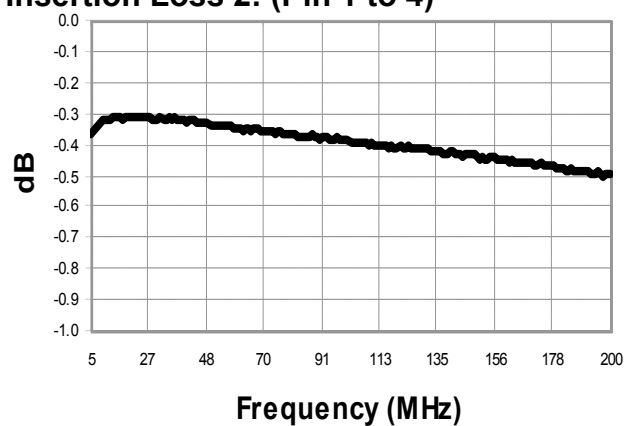
Rev. V4

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

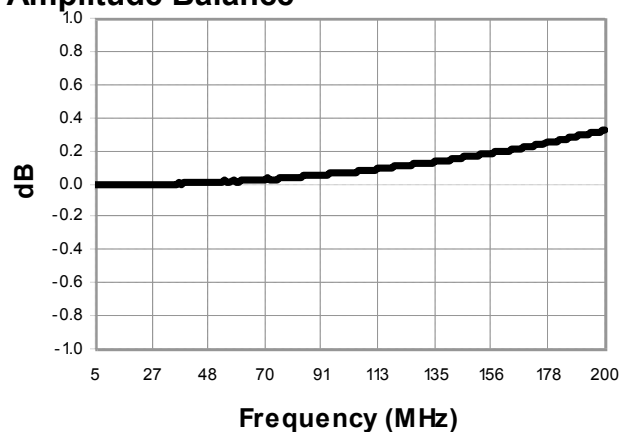
Insertion Loss 1: (Pin 1 to 6)



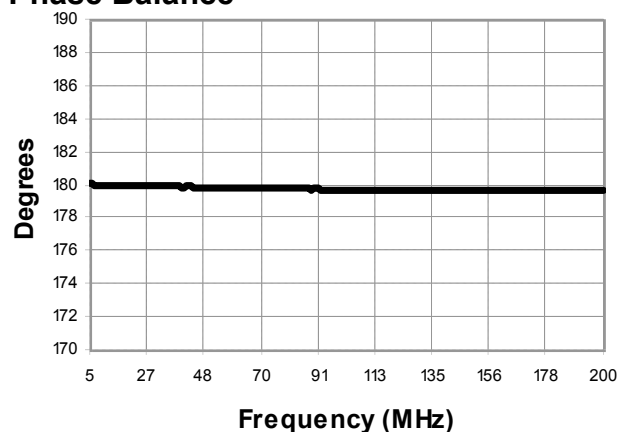
Insertion Loss 2: (Pin 1 to 4)



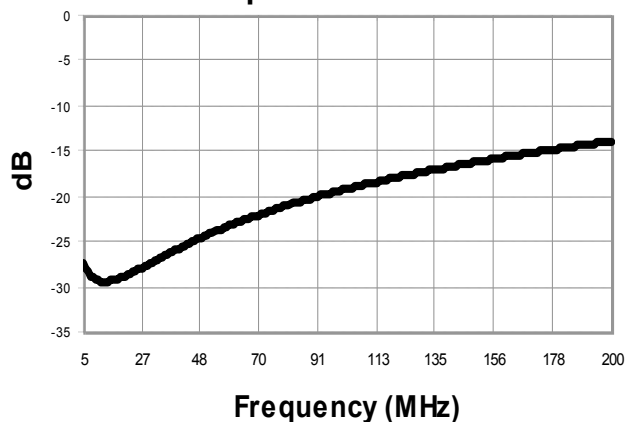
Amplitude Balance



Phase Balance



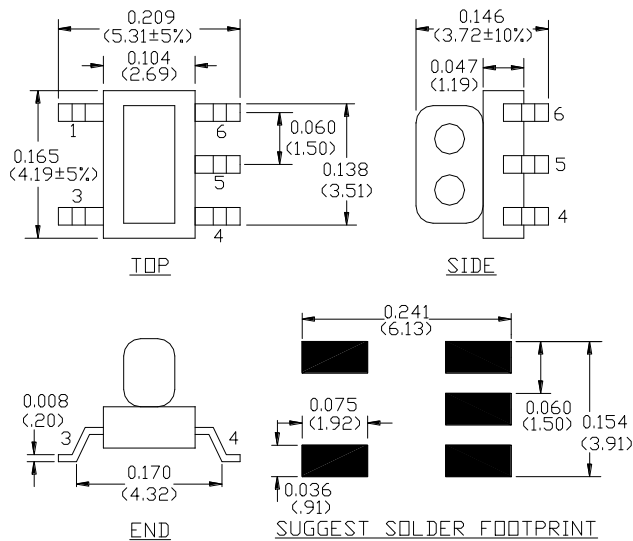
Return Loss: Input



1:1 Flux Coupled Transformer 5 - 200 MHz

Rev. V4

Outline Drawing (SM-138)



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

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	6.10
Bo	mm	4.60
Ko	mm	4.00
Orientation	-	F26
Reference Application Note ANI-019 for 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.