

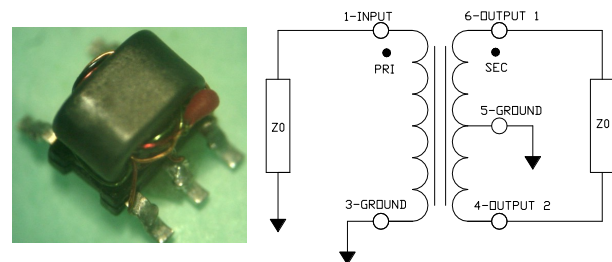
1:1 Flux Coupled Transformer 5 - 200 MHz

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 | dB | — | 0.3 | 0.5 |
| | 60 - 150 MHz | | | 0.4 | 0.8 |
| | 150 - 200 MHz | | | 0.7 | 1.1 |
| Amplitude Unbalance | Nominal 0 dB, 5 - 60 MHz | dB | — | 0.0 | ± 0.1 |
| | 60 - 200 MHz | | | 0.2 | ± 0.6 |
| Phase Unbalance | Nominal 180°, 5 - 60 MHz | ° | — | 0.1 | ± 2.0 |
| | 60 - 200 MHz | | | 0.3 | ± 4.0 |
| Input Return Loss | 5 - 60 MHz | dB | 20 | 31 | — |
| | 60 - 200 MHz | | 10 | 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

MACOM 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 for additional data sheets and product information.

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

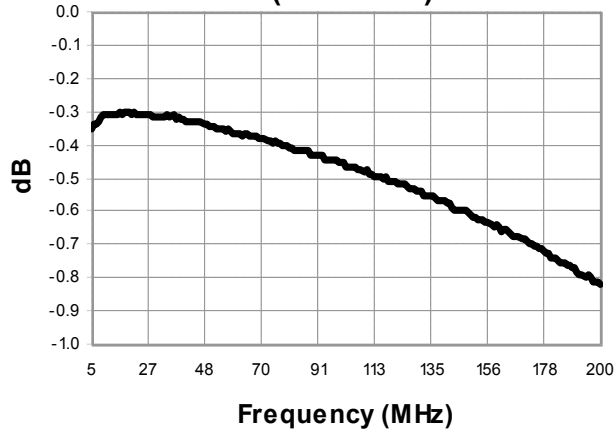
DS-MABA-007532-CF18A0

1:1 Flux Coupled Transformer 5 - 200 MHz

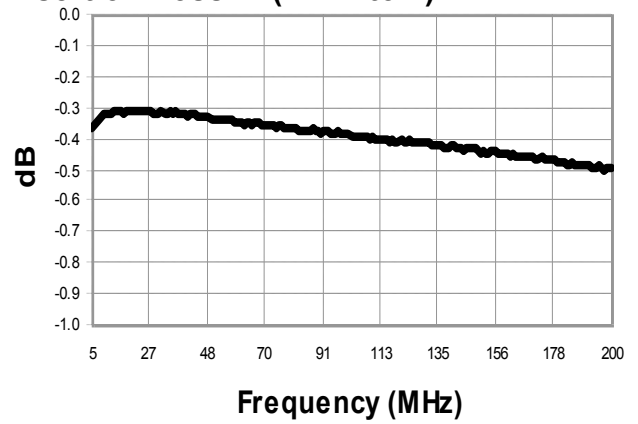
Rev. V4

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

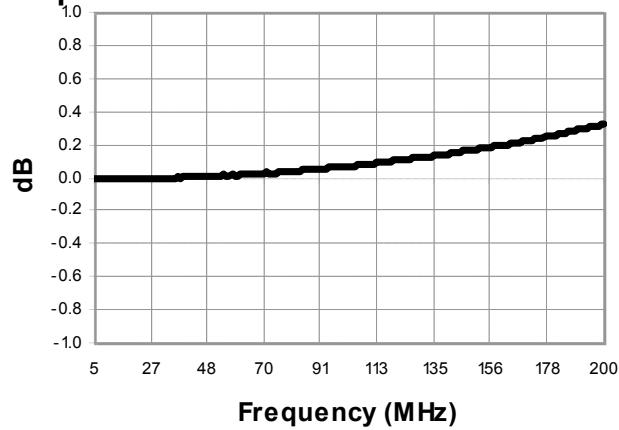
Insertion Loss 1: (Pin 1 to 6)



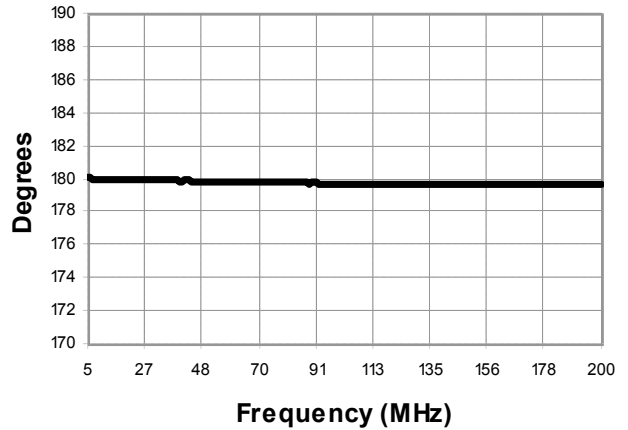
Insertion Loss 2: (Pin 1 to 4)



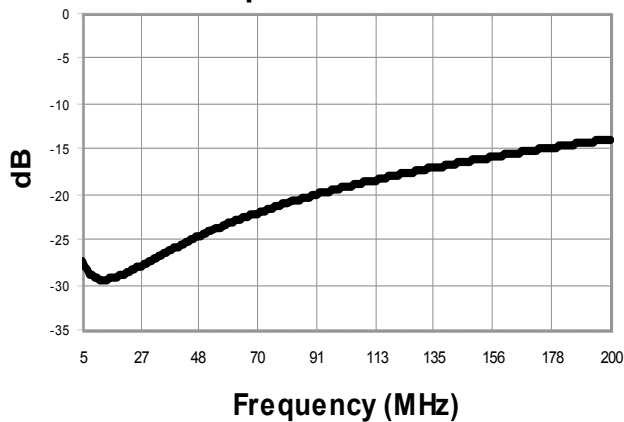
Amplitude Balance



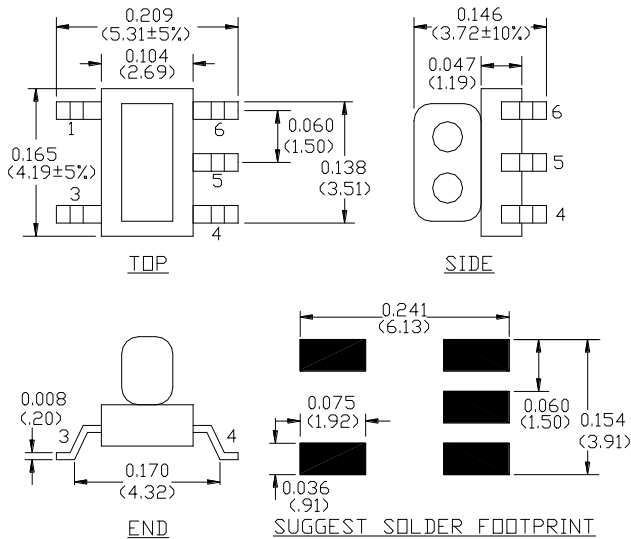
Phase Balance



Return Loss: Input



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.