

1:1 dB Transformer 5 - 400 MHz

Rev. V3

Features

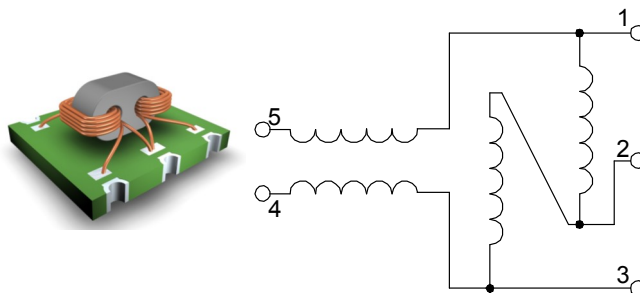
- 1:1 Transformer with Centre Tap
- Surface Mount Package
- Excellent Temperature Stability
- 260°C Reflow Compatible
- RoHS* Compliant & Lead Free
- Available on Tape & Reel

Description

The MABA-010721-CF1670 is a 1:1 RF transformer in a surface mount package.

Ideally suited for broadband CATV applications.

Schematic



Pin Configuration

Pin #	Function
1	Output 1
2	No Connection
3	Output 2
4	Ground
5	Input

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 1 (Pin 5 to pin 1)	5 - 400 MHz	dB	—	0.5	0.6
Insertion Loss 2 (pin 5 to pin 3)	5 - 400 MHz	dB	—	0.4	0.6
Amplitude Balance	5 - 400 MHz	dB	—	0.08	± 0.5
Phase Balance	5 - 400 MHz	dB	—	0.4	± 2.0
Input Return Loss (pin 5)	5 - 200 MHz 200 - 400 MHz	dB dB	20 19	28 22	—

Ordering Information

Part #	Description
MABA-010721-CF1670	900 piece reel
MABA-010721-CF16TB	customer evaluation board

Recommended Maximum Ratings

Parameter	Value
Input power	250 mW
DC Current	1200 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +125°C

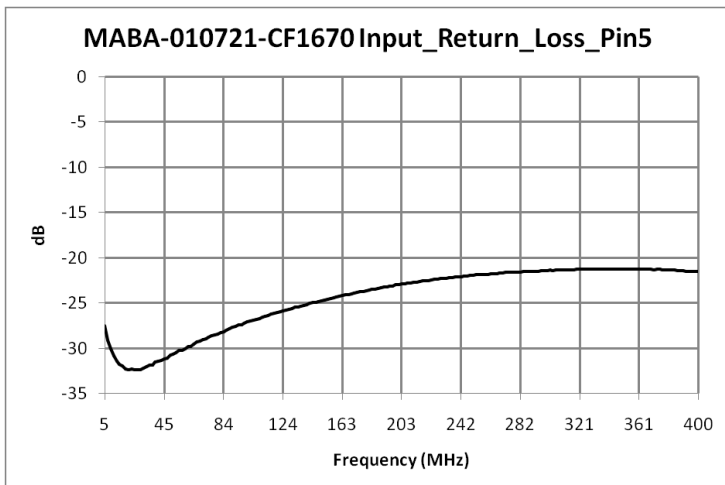
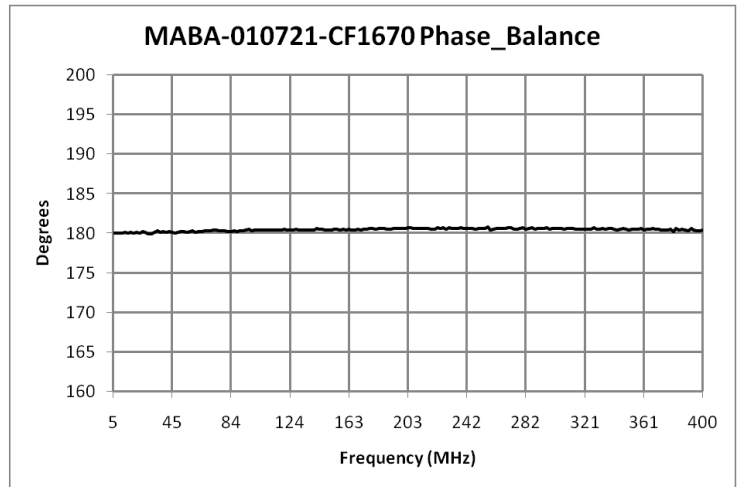
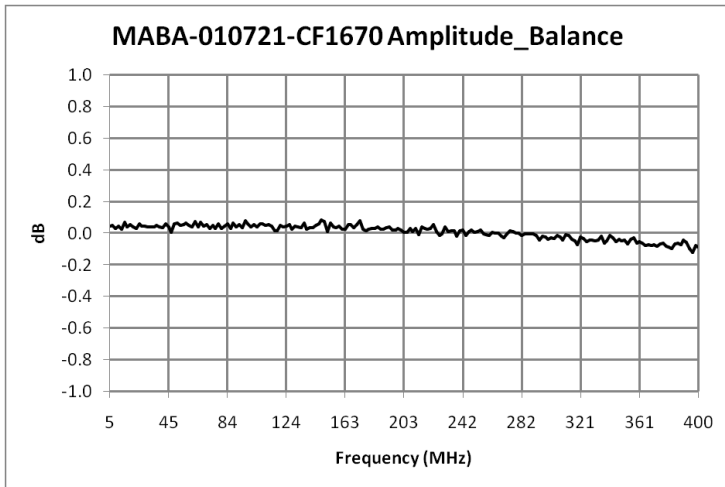
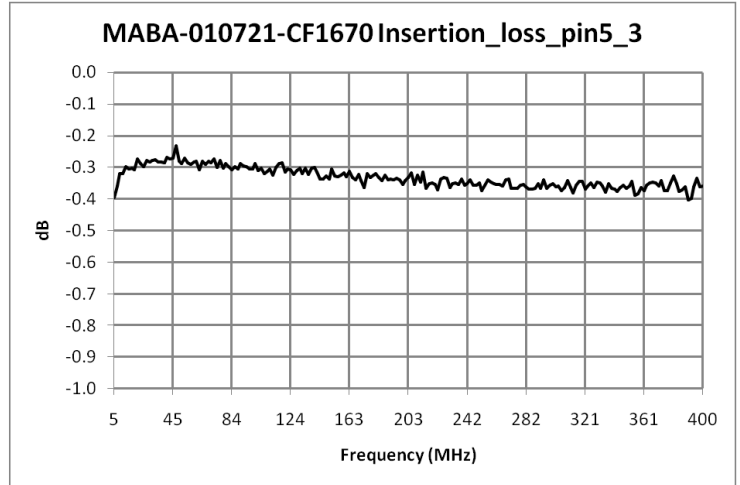
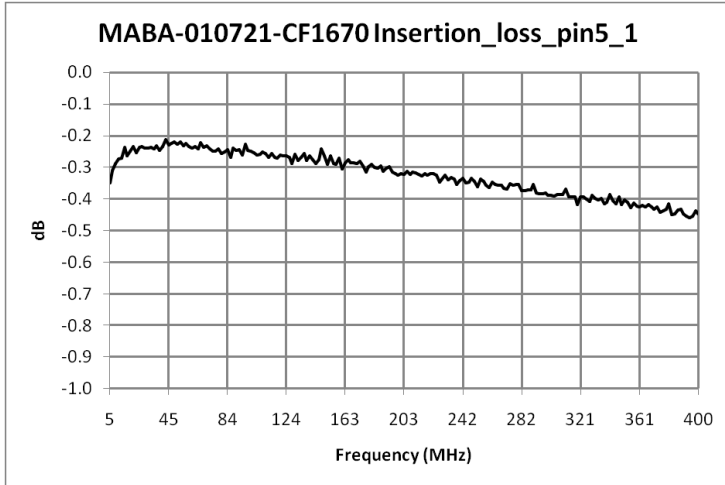
MABA-010721-CF1670



1:1 dB Transformer
5 - 400 MHz

Rev. V3

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



2 Full temperature plots available on request

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.

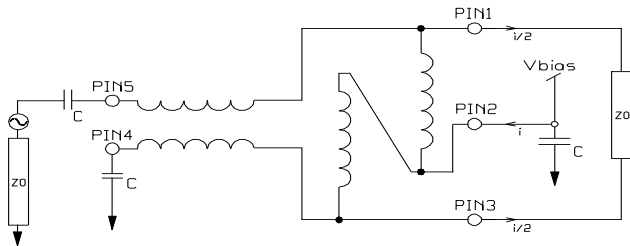
For further information and support please visit:
<https://www.macom.com/support>

DC-0000425

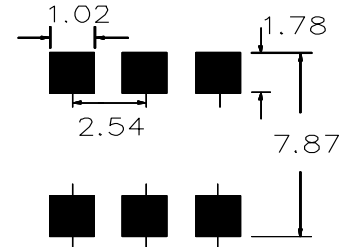
1:1 dB Transformer
5 - 400 MHz

Rev. V3

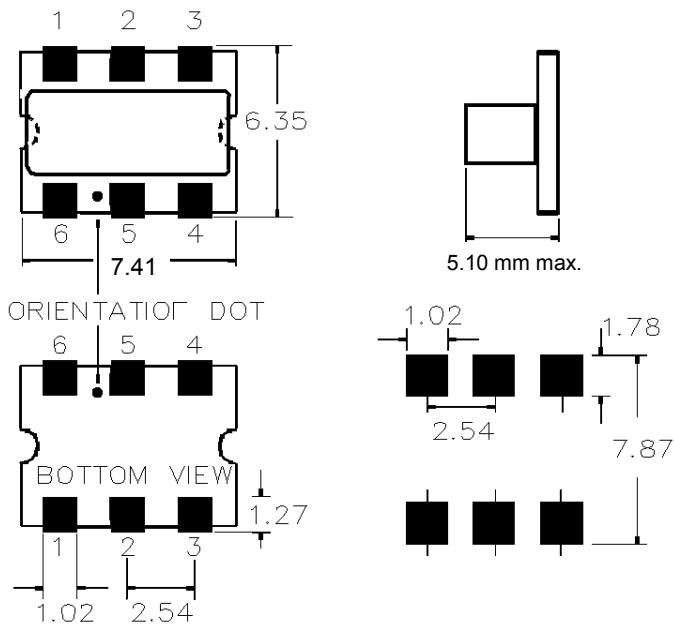
Application Circuit



Recommended Board Layout



Outline Drawing



Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	900
Reel Size	mm	330
Tape Width	mm	16.00
Pitch	mm	12.00
Ao	mm	6.6
Bo	mm	7.9
Ko	mm	5.2
Orientation	-	F15
Reference Application Note ANI-019 for orientation		

Dimensions in mm.
 Tolerance: ± 0.2 mm unless otherwise noted.
 Model number and lot code printed on reel.
 Plating finish: ENIG on both sides, 0.05 to 0.1 μ m gold over 3 to 6 μ m nickel

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.