

1:1 Transmission Line Transformer 5 - 1200 MHz

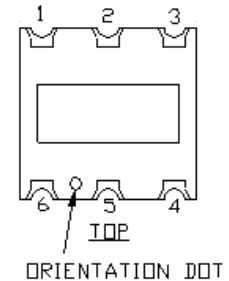
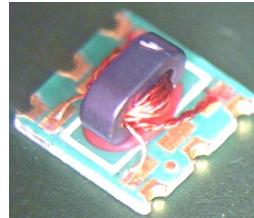
Rev. V2

Features

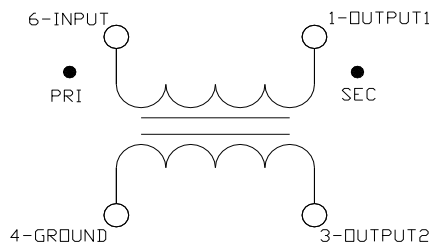
- Surface Mount Package
- 1:1 Impedance
- RoHS Compliant, Lead Free
- Available on Tape and Reel

Description

The MABA-009691-CT1881 is a 1:1 RF transmission line transformer in a surface mount package. Ideally suited for high volume CATV/ Broadband applications.



Schematic



Pin Configuration

Pin No.	Function
1	Secondary Dot
2	Not connected (ground)
3	Secondary
4	Primary (ground)
5	Primary dot

Electrical Specifications: Freq. = 5 - 1200 MHz, T_A = 25°C, Z₀ = 75 Ω, P_{IN} = 0 dBm

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Insertion Loss 1	—	dB	—	0.2	0.8
Amplitude Unbalance (nom. 0 dB)	—	dB	—	0.7	±0.9
Phase Unbalance (nom. 180°)	5 - 200 MHz	°	—	3	±4
	200 - 1200 MHz			7	±9
Input Return Loss	5 - 200 MHz	dB	20	21	—
	200 - 400 MHz		18	23	
	400 - 1000 MHz		16	20	
	1000 - 1200 MHz		14	20	

Ordering Information

Parameter	Package
MABA-009691-CT1881	2000 piece reel
MABA-009691-CT1881	Customer Test Board

Absolute Maximum Ratings

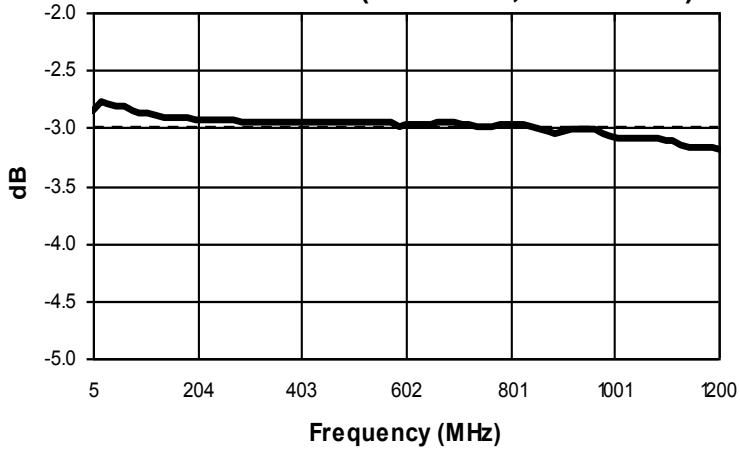
Parameter	Absolute Maximum
RF Input Power	24 dBm, 250 mW
DC Current	30 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

1:1 Transmission Line Transformer 5 - 1200 MHz

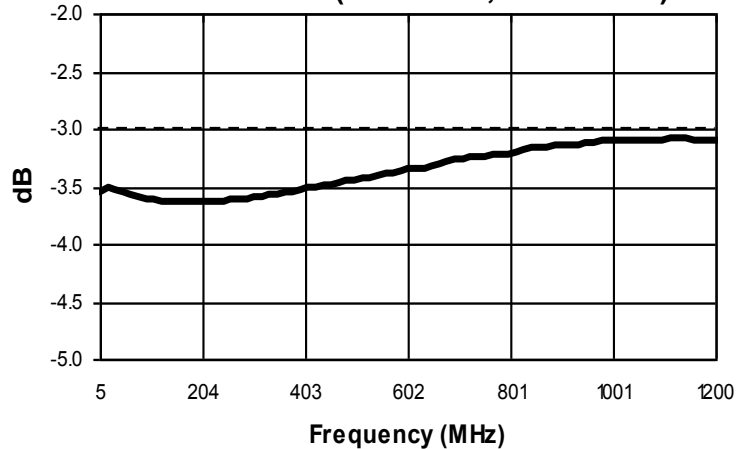
Rev. V2

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

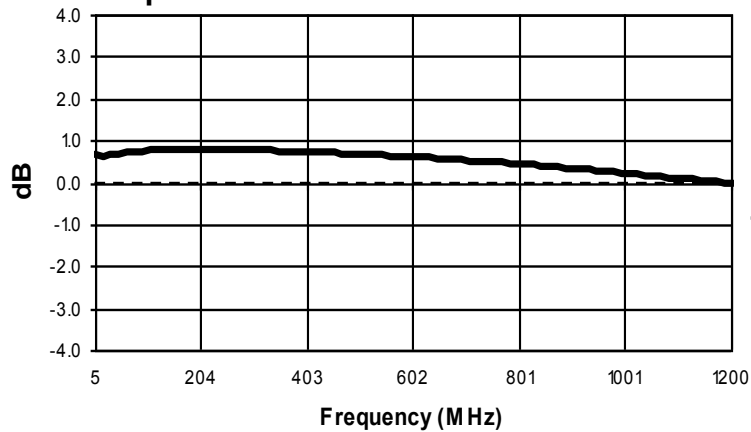
Insertion Loss 1: (Pin 6 to 1, ref -3.0dB)



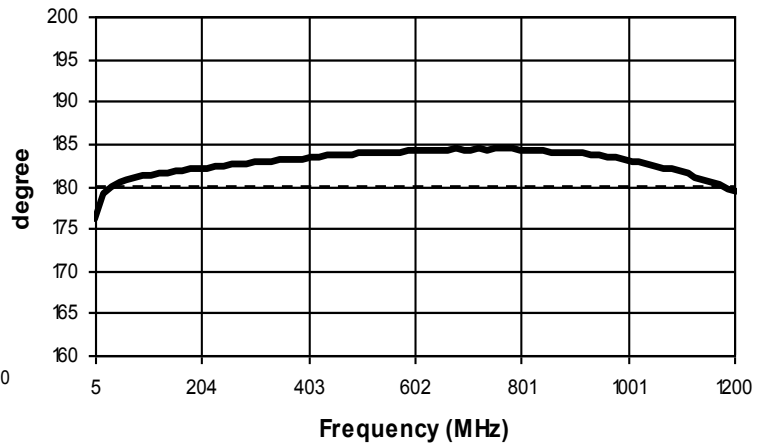
Insertion Loss 2: (Pin 6 to 3, ref -3.0dB)



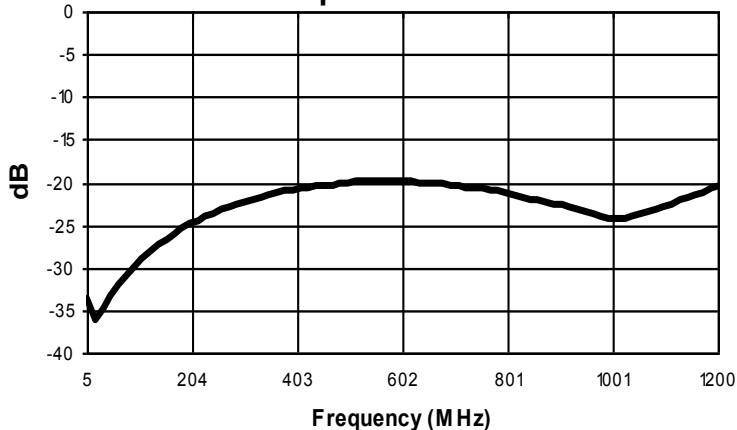
Amplitude Balance



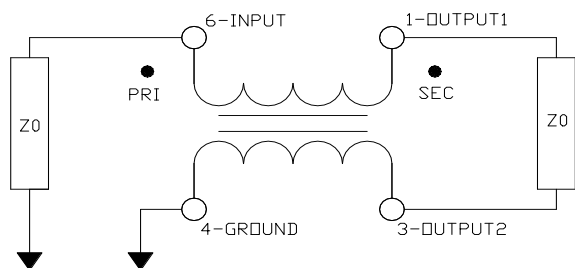
Phase Balance



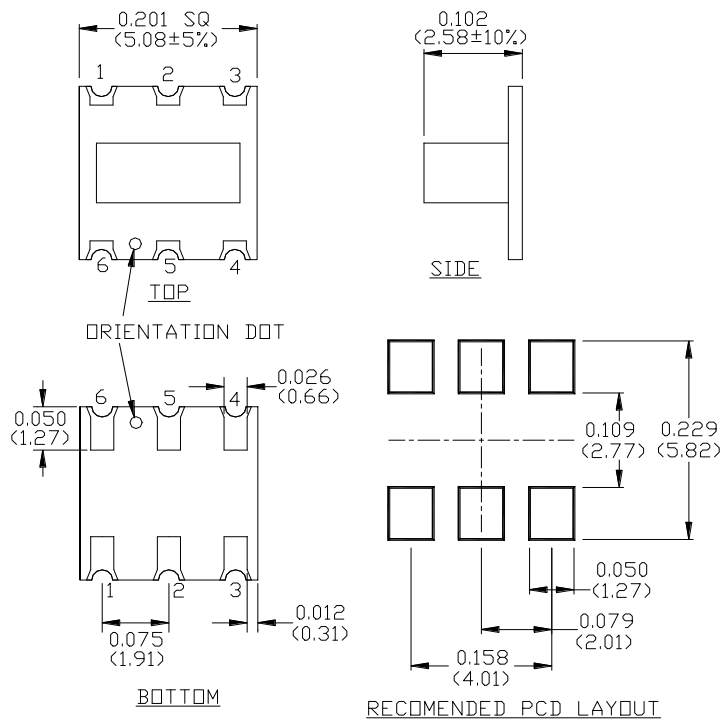
Return Loss: Input Pin 6



Application Circuit



Case Style SM-136



Dimensions in inches [mm] Tolerance: .xx ± 0.02, .xxx ± 0.010, unless otherwise stated.

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.