

1:1 Transmission Line Transformer 5 - 1200 MHz

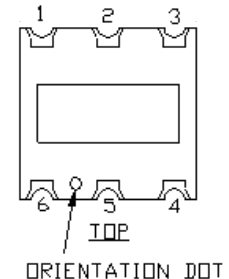
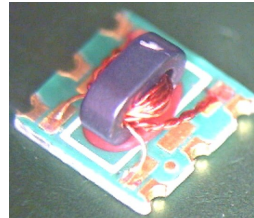
Rev. V2

Features

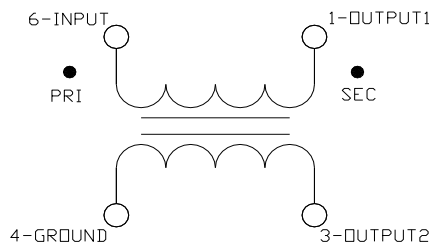
- Surface Mount Package
- 1:1 Impedance
- RoHS Compliant, Lead Free
- Available on Tape and Reel

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

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	$^\circ$	—	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

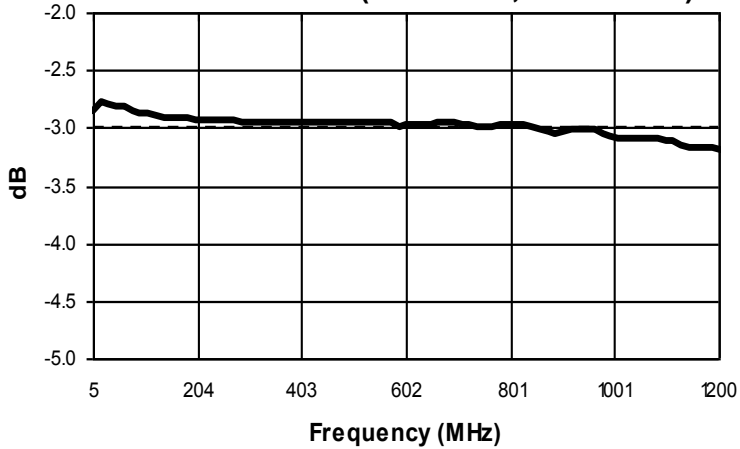
Parameter	Absolute Maximum
RF Input Power	24 dBm, 250 mW
DC Current	30 mA
Operating Temperature	-40°C to $+85^\circ\text{C}$
Storage Temperature	-55°C to $+100^\circ\text{C}$

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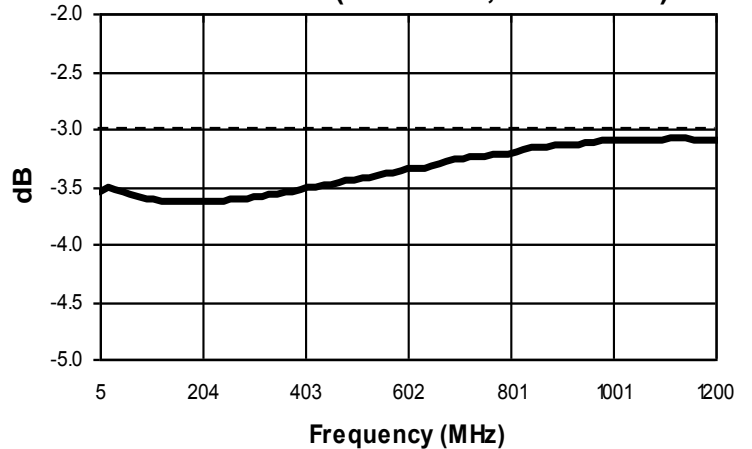
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Typical Performance: $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{IN} = 0 \text{ dBm}$

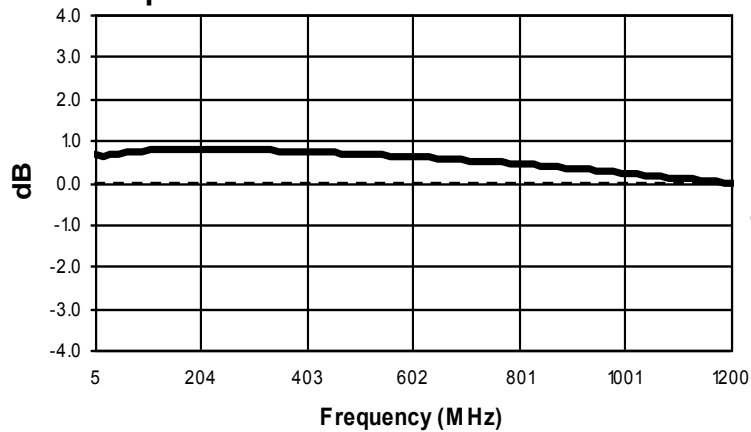
Insertion Loss 1: (Pin 6 to 1, ref -3.0dB)



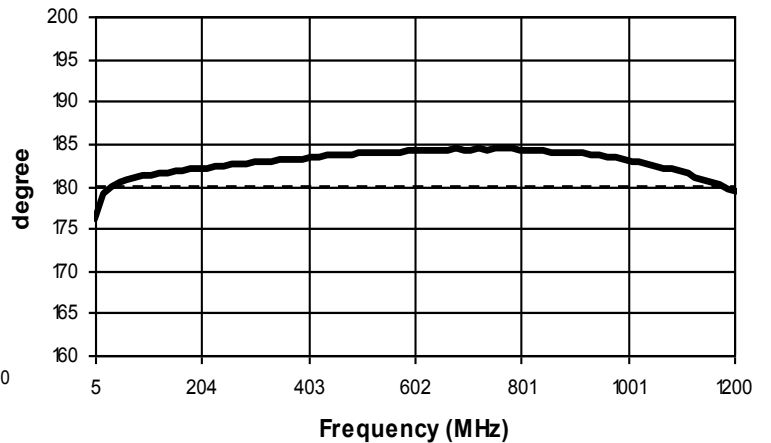
Insertion Loss 2: (Pin 6 to 3, ref -3.0dB)



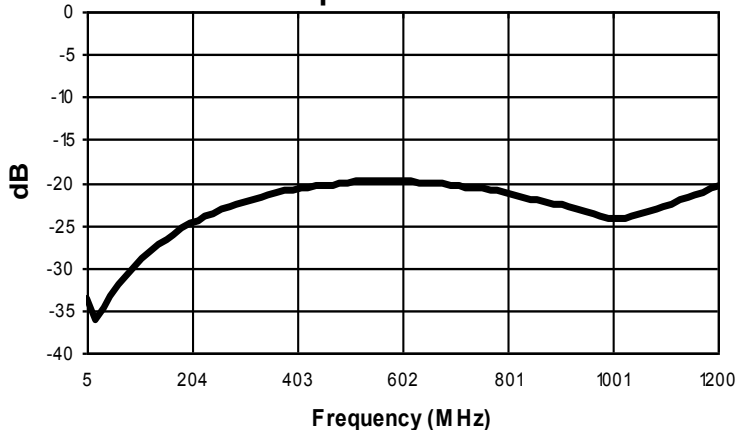
Amplitude Balance



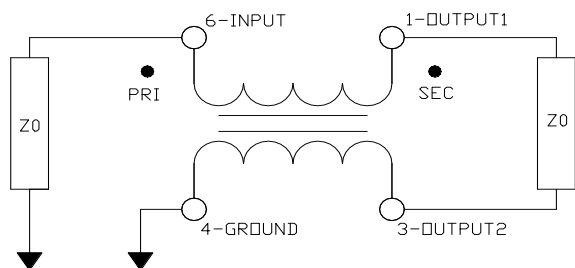
Phase Balance



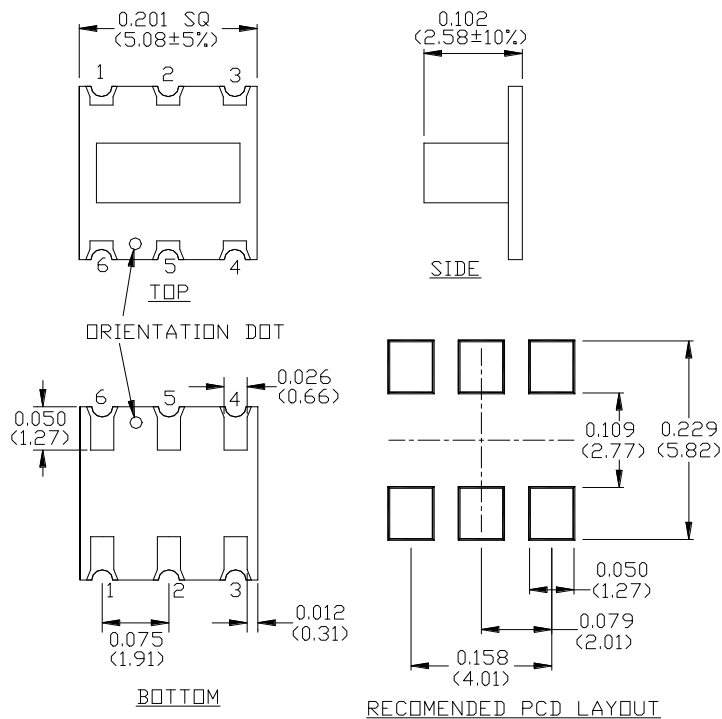
Return Loss: Input Pin 6



Application Circuit



Case Style SM-136



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

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