

## 1:1 Transmission Line Transformer 5 - 1200 MHz

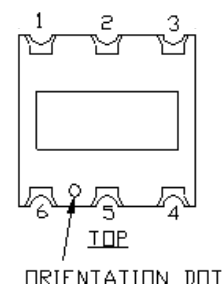
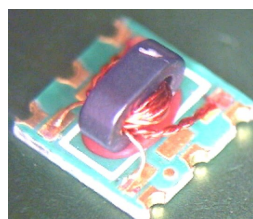
Rev. V2

### Features

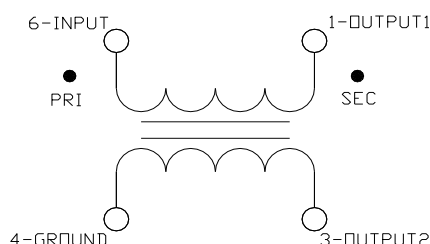
- Surface Mount Package
- 1:1 Impedance
- RoHS Compliant, Lead Free
- Available on Tape and Reel

### 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	$\pm 0.9$
Phase Unbalance (nom. $180^\circ$ )	5 - 200 MHz 200 - 1200 MHz	$^\circ$	—	3 7	$\pm 4$ $\pm 9$
Input Return Loss	5 - 200 MHz 200 - 400 MHz 400 - 1000 MHz 1000 - 1200 MHz	dB	20 18 16 14	21 23 20 20	—

### Ordering Information

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

### Absolute Maximum Ratings

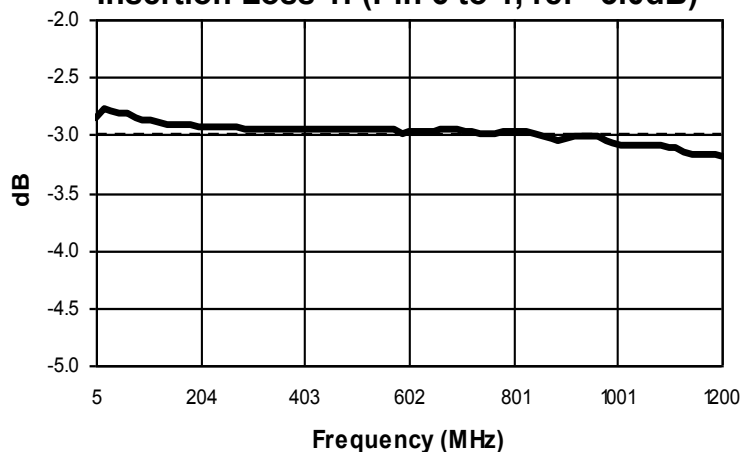
Parameter	Absolute Maximum
RF Input Power	24 dBm, 250 mW
DC Current	30 mA
Operating Temperature	$-40^\circ\text{C}$ to $+85^\circ\text{C}$
Storage Temperature	$-55^\circ\text{C}$ to $+100^\circ\text{C}$

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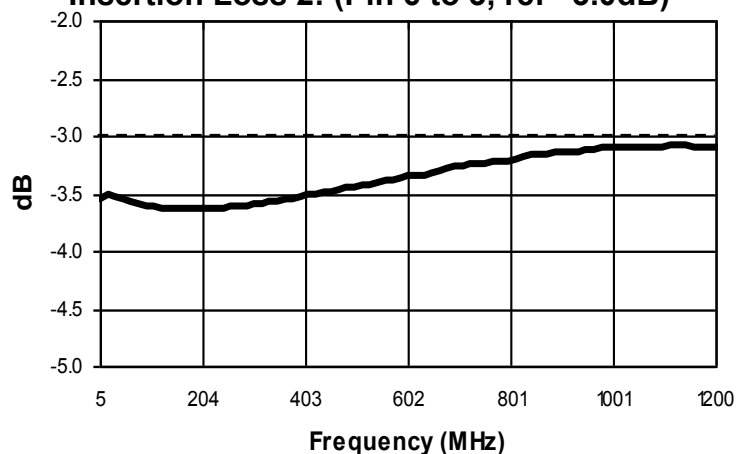
Rev. V2

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

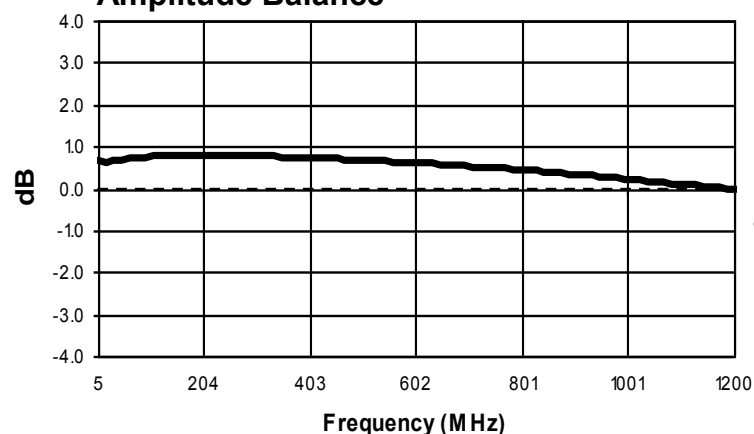
Insertion Loss 1: (Pin 6 to 1, ref -3.0dB)



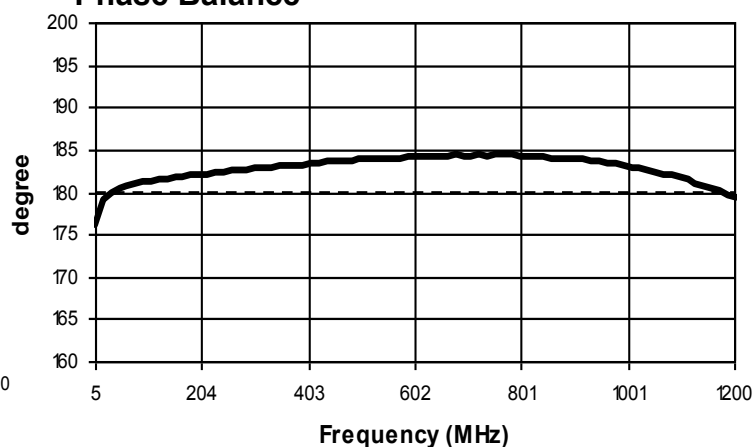
Insertion Loss 2: (Pin 6 to 3, ref -3.0dB)



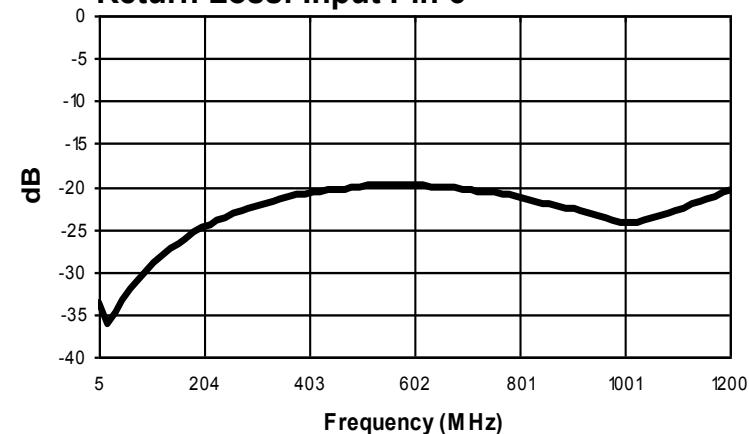
Amplitude Balance



Phase Balance



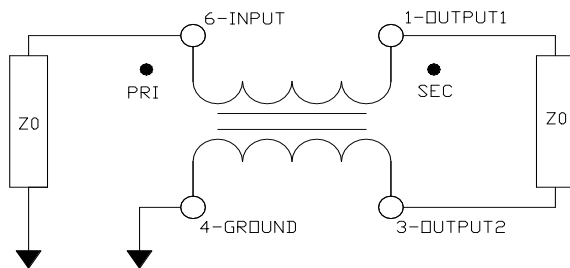
Return Loss: Input Pin 6



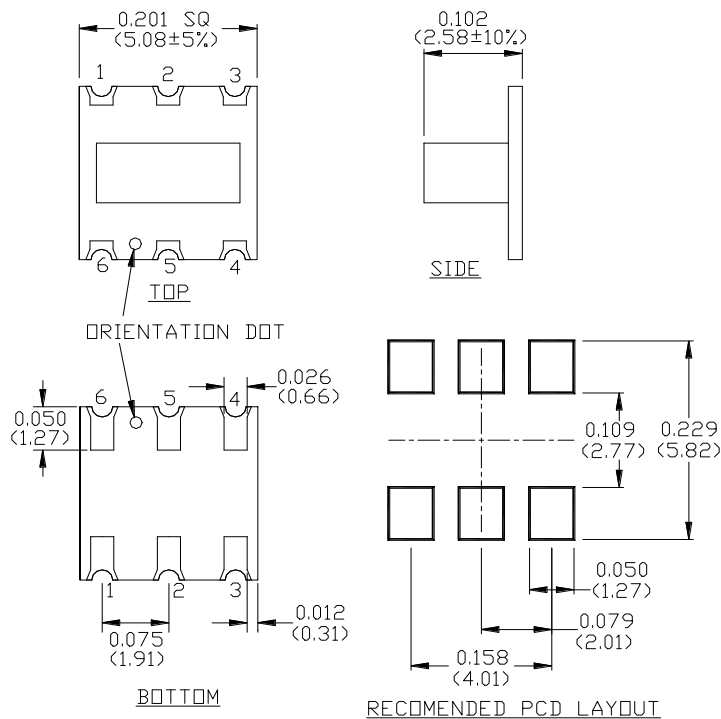
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Rev. V2

### Application Circuit



### Case Style SM-136



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

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Rev. V2

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