

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

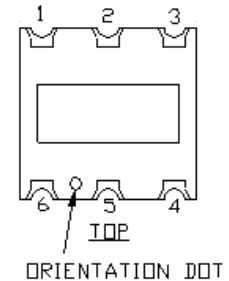
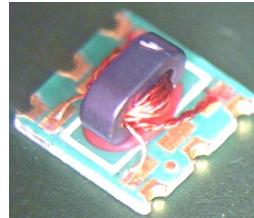
Rev. V2

### Features

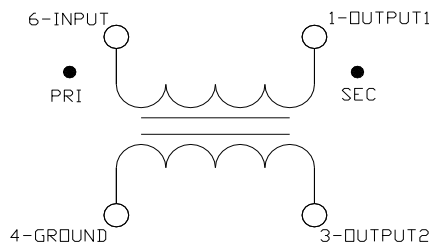
- Surface Mount Package
- 1:1 Impedance
- RoHS Compliant, Lead Free
- Available on Tape and Reel

### 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<sub>A</sub> = 25°C, Z<sub>0</sub> = 75 Ω, P<sub>IN</sub> = 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

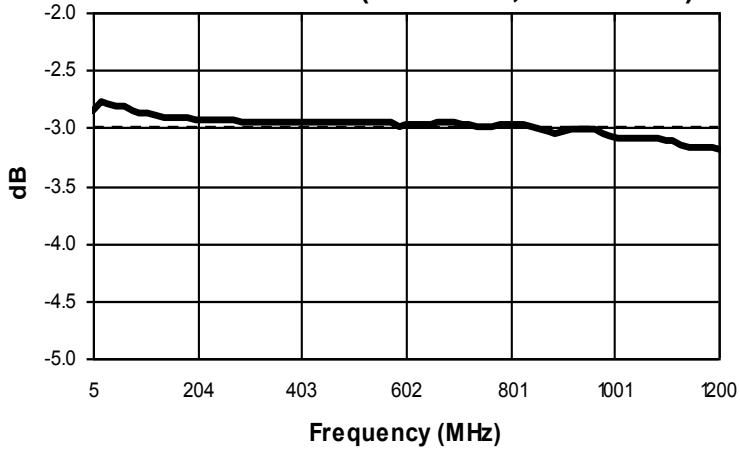
Parameter	Absolute Maximum
RF Input Power	24 dBm, 250 mW
DC Current	30 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

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

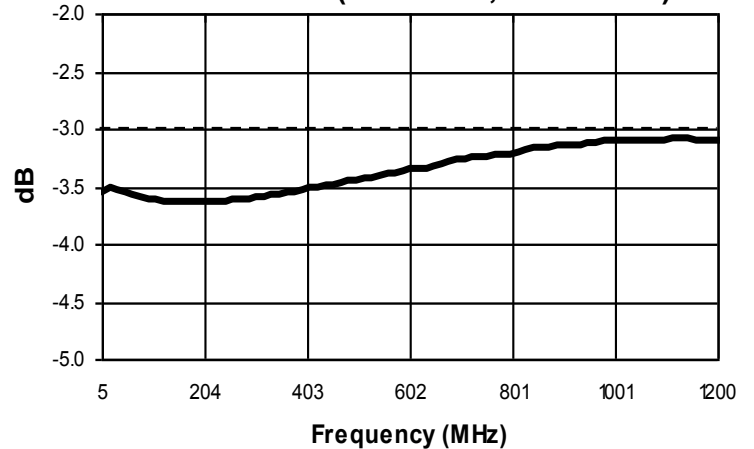
Rev. V2

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

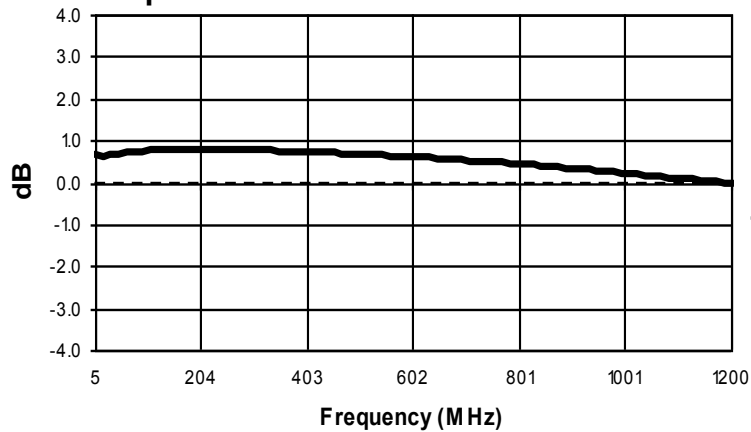
**Insertion Loss 1: (Pin 6 to 1, ref -3.0dB)**



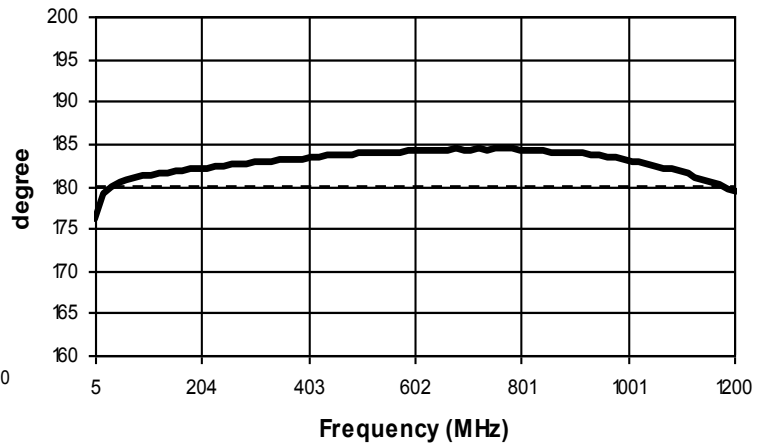
**Insertion Loss 2: (Pin 6 to 3, ref -3.0dB)**



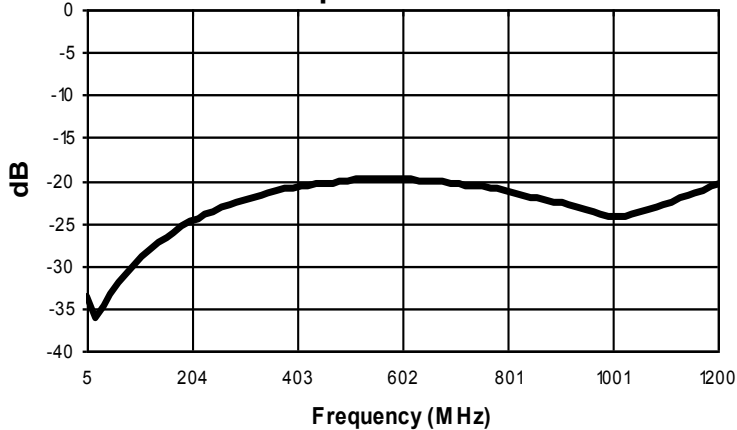
**Amplitude Balance**



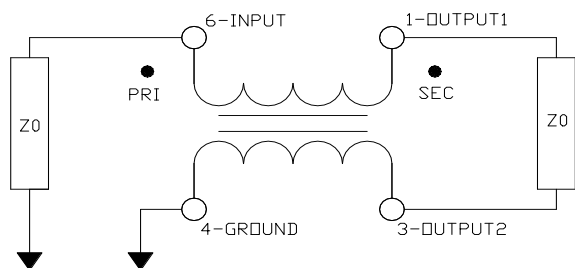
**Phase Balance**



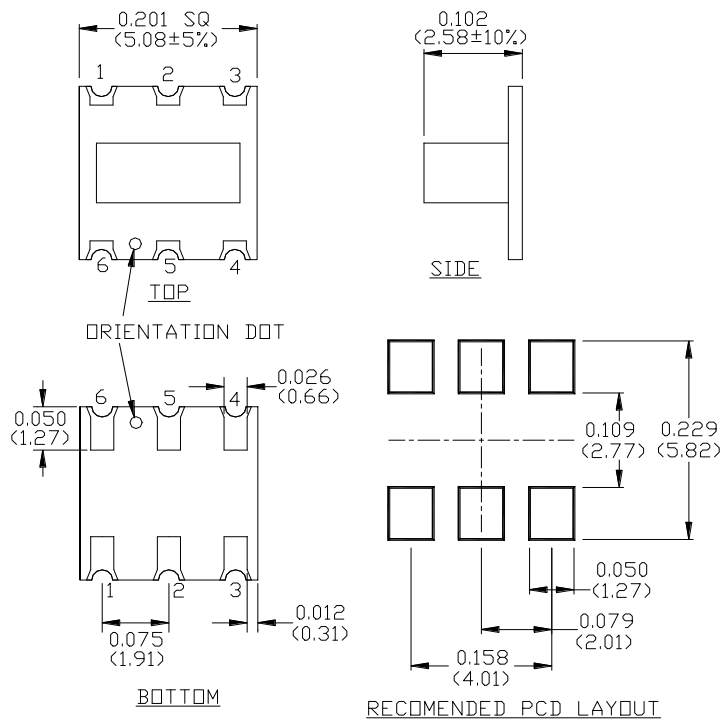
**Return Loss: Input Pin 6**



## Application Circuit



## Case Style SM-136



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

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