

1:1 Transmission Line Transformer 50-2150MHz

MABA-007731-CT1980
V1

Features

- Surface Mount
- 1:1 Impedance
- 260°C Reflow Compatible
- RoHS* Compliant
- RoHS version of MABACT0013
- Available on Tape and Reel. Reel quantity 2000

Description

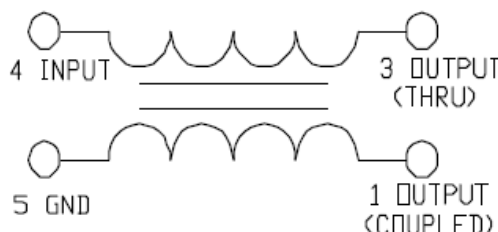
M/A-COM's MABA-007731-CT1980 is a 1:1 RF Transmission line Transformer in a low cost, surface mount package. The windings are welded to the package substrate for improved reliability and reduced lead content. Ideally suited for high volume CATV/Broadband applications.



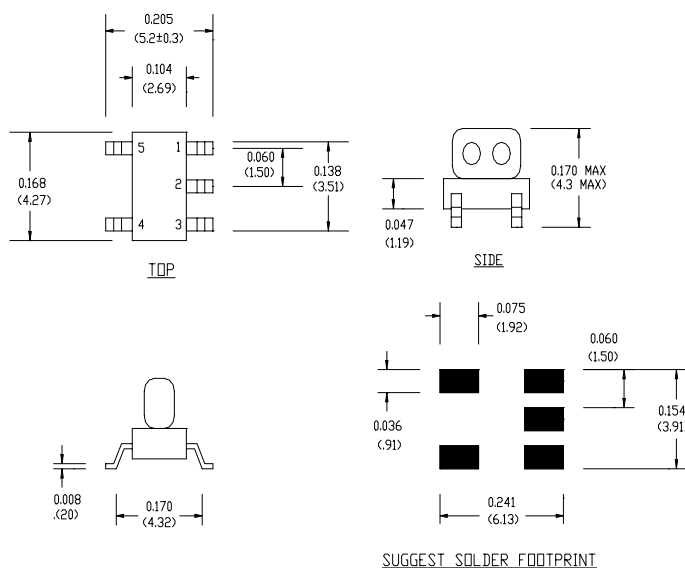
Pin Configuration

Pin No.	Function
1	Secondary (Output coupled)
2	Not connected (Ground)
3	Secondary Dot (Output thru)
4	Primary Dot (Input)
5	Primary (Ground)

Schematic



Case Style: SM-152



Ordering Information

Part Number	Package
MABA-007731-CT1980	2000
MABA-007731-CT19TB	Customer Test Board

Note: Reference Application Note **M513** for reel size information.

* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

Dimensions in inches [mm] Tolerance: .xx ± .02, .xxx ± .010

1:1 Transmission Line Transformer
50-2150MHz

MABA-007731-CT1980
V1

Electrical Specifications: $T_A = 25^{\circ}\text{C}$, $Z_0 = 75\Omega$ ¹

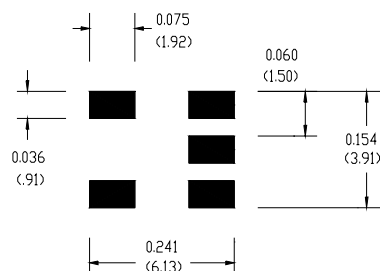
Parameter	Frequency	Units	Min	Typ	Max
Insertion Loss (above -3dB)	50 - 950 MHz	dB	-	0.5	1.2
	950 - 2150 MHz	dB	-	1.2	3.1
Amplitude Unbalance	50 - 2150 MHz	dB	-	0.3	2.0
Phase Unbalance	50 - 2150 MHz	°	-	7	17
Input Return Loss	50 - 2150 MHz	dB	13	16	-

Absolute Maximum Ratings ^{1,2}

Parameter	Absolute Maximum
RF Power	1 Watt
Internal Load Dissipation	0.125 Watt
Operating Temperature	-40°C to +80°C
Storage Temperature	-40°C to +85°C

- Exceeding any one or combination of these limits may cause permanent damage to this device.
- M/A-COM does not recommend sustained operation near these survivability limits.

Recommended PCB Configuration



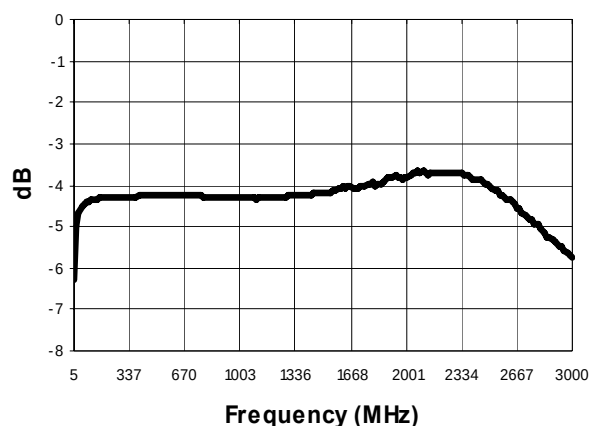
SUGGEST SOLDER FOOTPRINT

**1:1 Transmission Line Transformer
50-2150MHz**

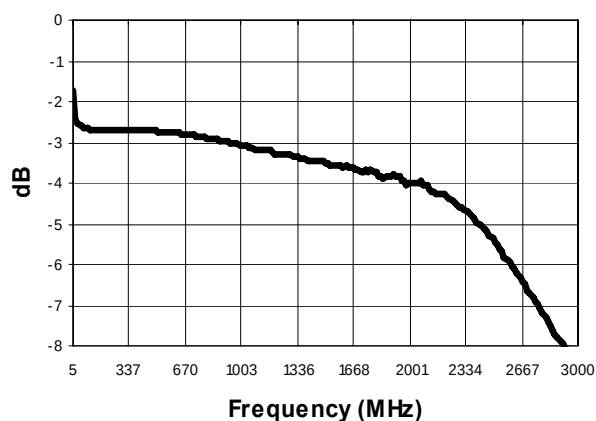
MABA-007731-CT1980
V1

Typical Performance Curves: $T_A = 25^\circ\text{C}$, $Z_0 = 75\Omega$ ¹

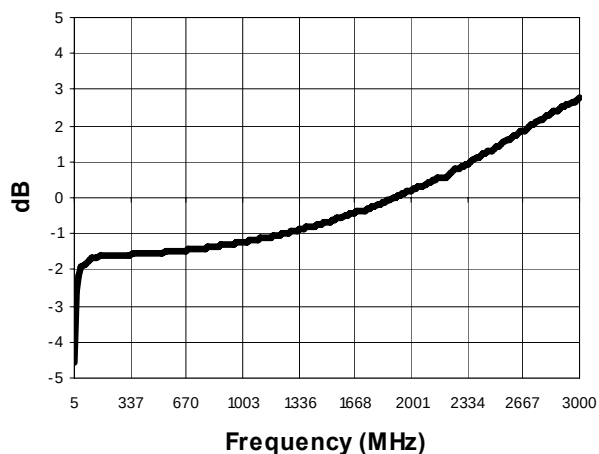
Insertion Loss: coupled (Pin4 - Pin1) ref value -3dB



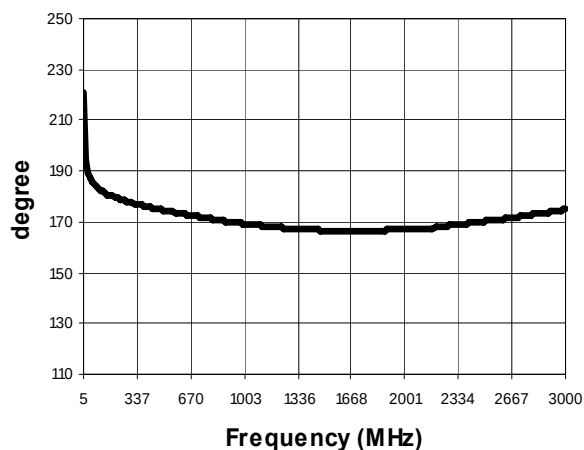
Insertion Loss: through (Pin4 - Pin3) ref value -3dB



Amplitude Unbalance



Phase Unbalance



Return Loss: Input

