

# 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

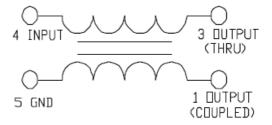
M/A-COM's MABA-007731-CT1980 is a 1:1 RF Transmission line Transformer in a low cost, surface mount package. The windings are welded to the package substrate for improved reliability and reduced lead content. Ideally suited for high volume CATV/Broadband applications.



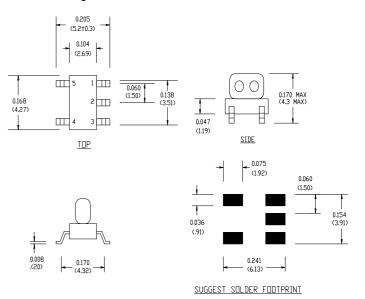
#### **Pin Configuration**

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



Dimensions in inches [mm] Tolerance:  $.xx \pm .02$ ,  $.xxx \pm .010$ 

#### **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.

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  Europe Tel: +353.21.244.6400
  India Tel: +91.80.4155721
  China Tel: +86.21.2407.1588
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<sup>1</sup> 





MABA-007731-CT1980

V1

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

Parameter	Frequency	Units	Min	Тур	Max
Insertion Loss (above -3dB)	50 - 950 MHz 950 - 2150 MHz	dB dB	-	0.5 1.2	1.2 3.1
Amplitude Unbalance	50 - 2150 MHz	dB	-	0.3	2.0
Phase Unbalance	50 - 2150 MHz	0	-	7	17
Input Return Loss	50 - 2150 MHz	dB	13	16	-

## Absolute Maximum Ratings <sup>1,2</sup>

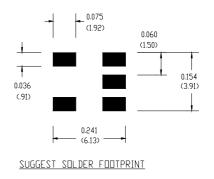
Parameter	Absolute Maximum		
RF Power	1 Watt		
Internal Load Dissipation	0.125 Watt		
Operating Temperature	-40°C to +80°C		
Storage Temperature	-40°C to +85°C		

1. Exceeding any one or combination of these limits may cause permanent damage to this device.

2. M/A-COM does not recommend sustained operation near these survivability limits.

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#### **Recommended PCB Configuration**



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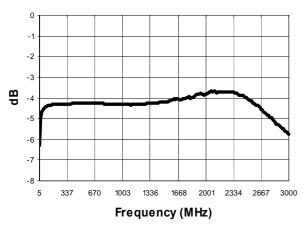
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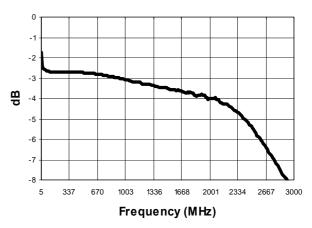
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## Typical Performance Curves: $T_A = 25^{\circ}C$ , $Z_0 = 75\Omega^{-1}$

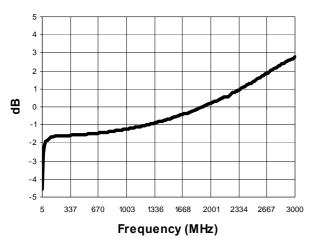
Insertion Loss: coupled (Pin4 - Pin1) ref value -3dB

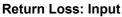


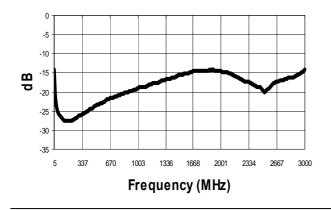


Insertion Loss: through (Pin4 - Pin3) ref value -3dB

Amplitude Unbalance





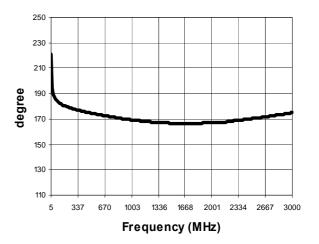


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Phase Unbalance



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