

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

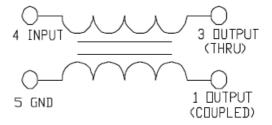
M/A-COM's MABA-007731-CT1980 is a 1:1 RF Transmission line Transformer in a low cost, surface mount package. The windings are welded to the package substrate for improved reliability and reduced lead content. Ideally suited for high volume CATV/Broadband applications.



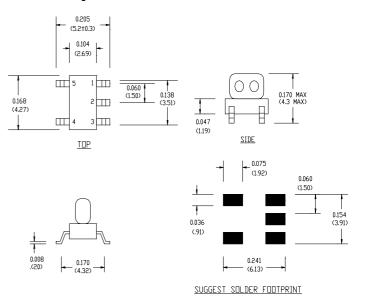
Pin Configuration

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.

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed. PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are

PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

- North America Tel: 800.366.2266
 Europe Tel: +353.21.244.6400
 India Tel: +91.80.4155721
 China Tel: +86.21.2407.1588
- Visit www.macomtech.com for additional data sheets and product information.

M/A-COM Technology Solutions Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.

¹





MABA-007731-CT1980

V1

1:1 Transmission Line Transformer 50-2150MHz

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 ^{1,2}

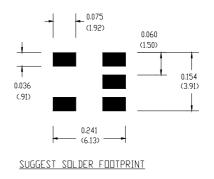
Parameter	Absolute Maximum		
RF Power	1 Watt		
Internal Load Dissipation	0.125 Watt		
Operating Temperature	-40°C to +80°C		
Storage Temperature	-40°C to +85°C		

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.

2

Recommended PCB Configuration



ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed. PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are North America Tel: 800.366.2266
 Europe Tel: +353.21.244.6400
 India Tel: +91.80.4155721
 China Tel: +86.21.2407.1588

Visit www.macomtech.com for additional data sheets and product information.

Commitment to produce in volume is not guaranteed. *MA-COM Technology Solutions Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.*



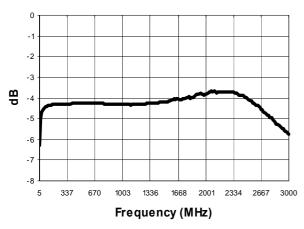
Technology Solutions

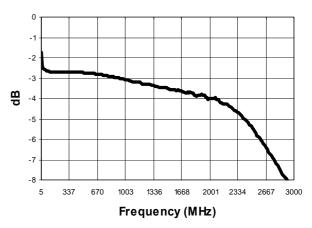
MABA-007731-CT1980 V1

1:1 Transmission Line Transformer 50-2150MHz

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

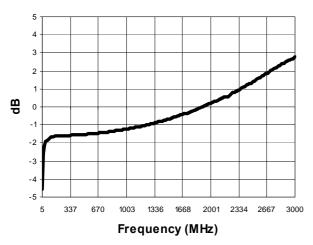
Insertion Loss: coupled (Pin4 - Pin1) ref value -3dB

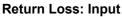


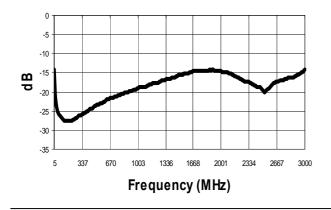


Insertion Loss: through (Pin4 - Pin3) ref value -3dB

Amplitude Unbalance





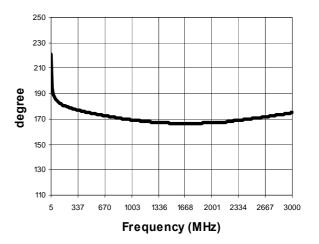


3

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed. PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology

PRELIMINARY: Data Sheets contain information regarding a product MA-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

Phase Unbalance



• North America Tel: 800.366.2266 • Europe Tel: +353.21.244.6400 • India Tel: +91.80.4155721 • China Tel: +86.21.2407.1588

Visit www.macomtech.com for additional data sheets and product information.

 $\it M/A-COM$ Technology Solutions Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.