## MABA-010245-CT1160

1:1 Transmission Line Transformer 50 to 1002 MHz



Rev. V1

#### Features

- Surface mount
- Wide Frequency Range
- 260°C reflow compatible
- RoHS\* compliant and lead free
- Available on Tape and Reel

#### Description

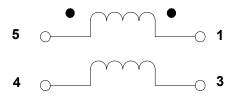
M/A-Com Technology Solutions MABA-010245-CT1160 is a 1:1 transmission line transformer. The windings are welded to the package substrate for improved reliability and to eliminate lead content. This transformer is ideally suited for CATV broadband AND Satellite STB/Subscriber applications.



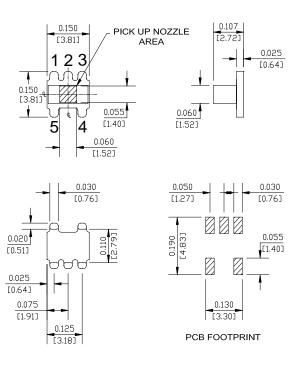
### **Pin Configuration**

Pin no.	Function	
1	Secondary Dot	
2	Not Connected	
3	Secondary	
4	Primary	
5	Primary Dot	

### Schematic



#### **Component dimensions**



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

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

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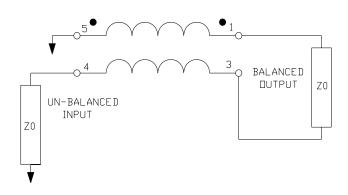
## Electrical Specifications: $T_A = 25^{\circ}C$ , 0dBm, $Z_0 = 75\Omega$ , $P_{in} = 0dBm$

Parameter	Frequency	Units	Min	Тур	Мах
Insertion Loss 1 (Pin 4 to Pin 3)	50 - 1002MHz	dB	-	0.1	0.6
Insertion Loss 2 (Pin 4 to Pin 1)	50 - 1002MHz	dB	-	0.4	0.7
Amplitude Balance (Nominal 0dB)	5 - 1002MHz	dB	-	0.3	±0.8
Phase Balance (Nominal 180º)	50 - 100MHz 100 - 1002MHz	0 0	-	2.4 1.2	±5.0 ±2.5
Input Return Loss (Pin4)	50 - 300 MHz 300 - 1002 MHz	dB dB	25 17.5	42 30	

### **Recommended Maximum Ratings**

Parameter	Value	
Input power	+24dBm (250mW)	
DC current (tested at 5V)	At least 600mA	
Operating Temperature	-40°C to +85°C	
Storage Temperature	-40°C to +100°C	

### **Application Circuit**



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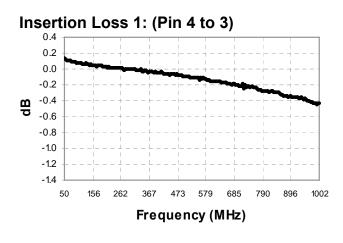
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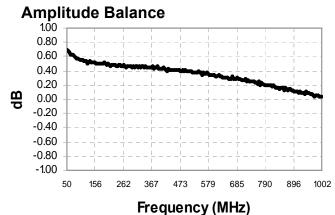
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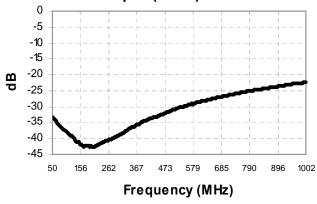
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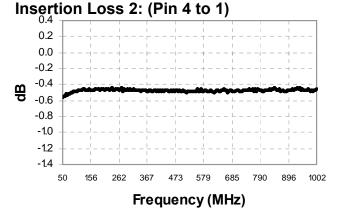
## Typical Performance Curves: $T_A = 25^{\circ}C$ , 0dBm, $Z_0 = 75\Omega$ , $P_{in} = 0dBm$



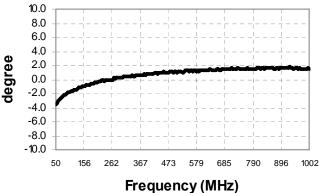


Return Loss: Input (Pin 4)





#### Phase Balance



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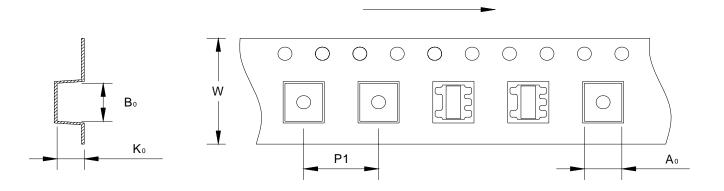
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#### **Tape & Reel Information**



DIRECTION OF FEED

ltem	Dimension		
Ao	4.0mm +/- 0.1mm		
Во	4.0mm +/- 0.1mm		
Ko	2.90mm +/- 0.1mm		
W	12.0mm +/- 0.3mm		
P1	8.00mm +/- 0.1mm		

#### **Ordering Information**

Part number	Description
MABA-010245-CT1160	2000 piece reel
MABA-010245-CT11TB	Customer Test Board

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