

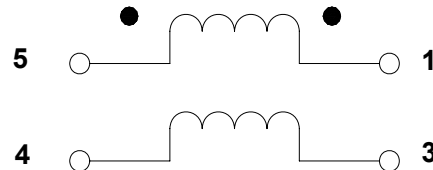
## Features

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

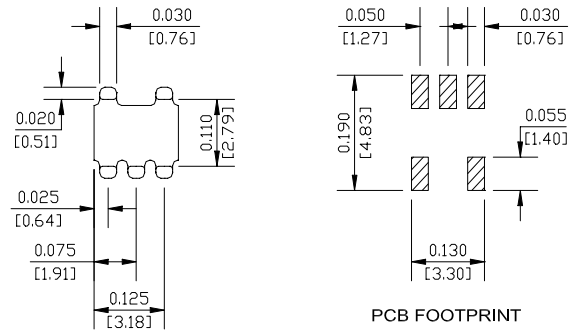
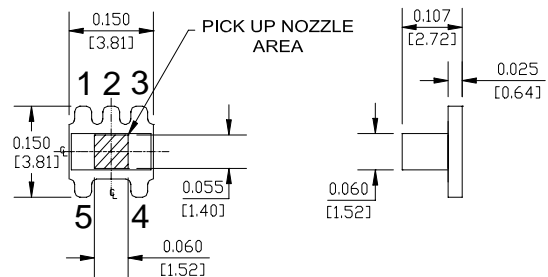
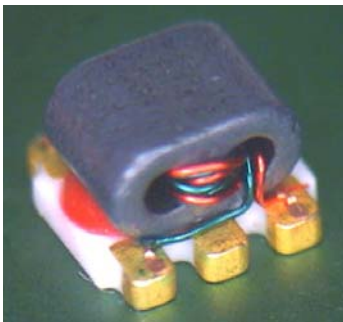
## Description

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.

## Schematic



## Component dimensions



## Pin Configuration

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

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

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

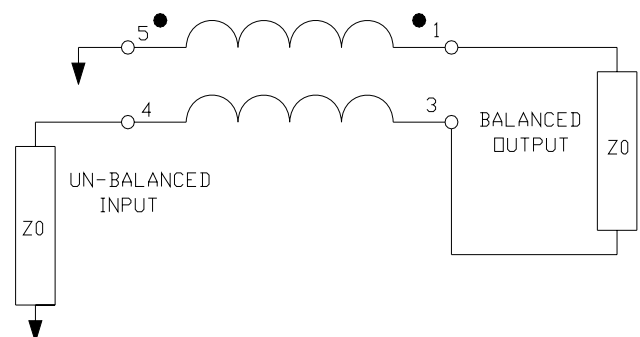
**Electrical Specifications:  $T_A = 25^\circ\text{C}$ , 0dBm,  $Z_0 = 75\Omega$ ,  $P_{in} = 0\text{dBm}$**

Parameter	Frequency	Units	Min	Typ	Max
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	$\pm 0.8$
Phase Balance (Nominal 180°)	50 - 100MHz	°	-	2.4	$\pm 5.0$
	100 - 1002MHz	°	-	1.2	$\pm 2.5$
Input Return Loss (Pin4)	50 - 300 MHz	dB	25	42	-
	300 - 1002 MHz	dB	17.5	30	-

## Recommended Maximum Ratings

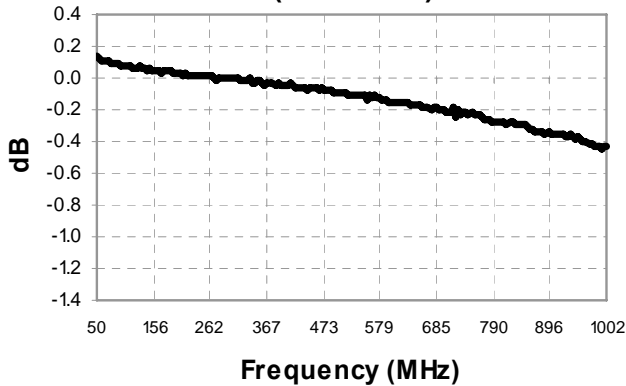
Parameter	Value
Input power	+24dBm (250mW)
DC current (tested at 5V)	At least 600mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +100°C

## Application Circuit

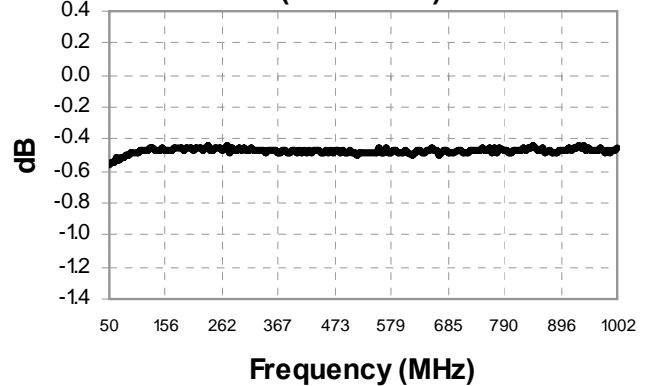


Typical Performance Curves:  $T_A = 25^\circ\text{C}$ ,  $0\text{dBm}$ ,  $Z_0 = 75\Omega$ ,  $P_{in} = 0\text{dBm}$

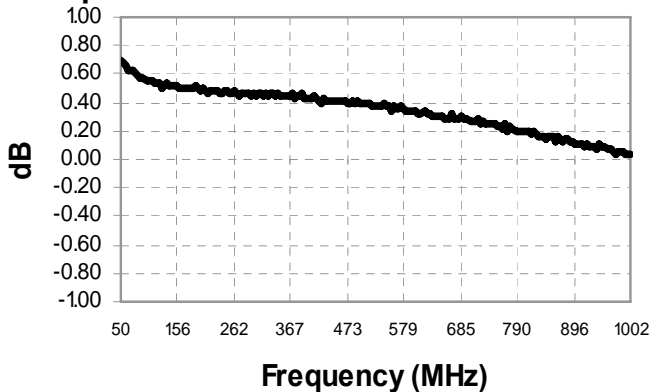
Insertion Loss 1: (Pin 4 to 3)



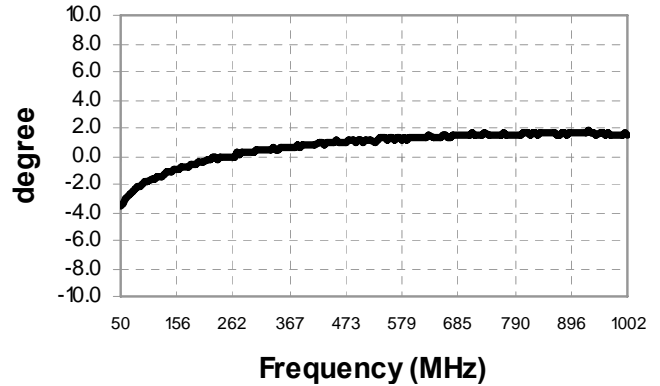
Insertion Loss 2: (Pin 4 to 1)



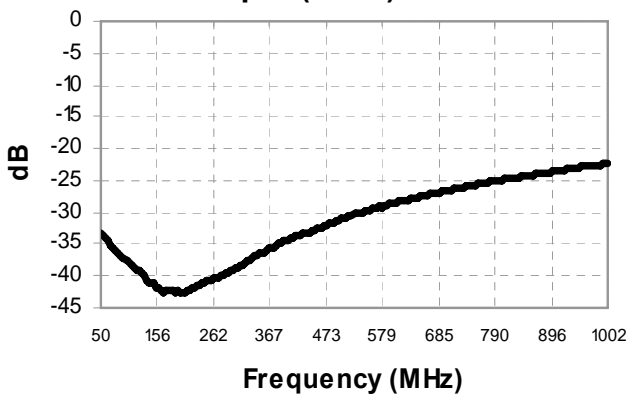
Amplitude Balance



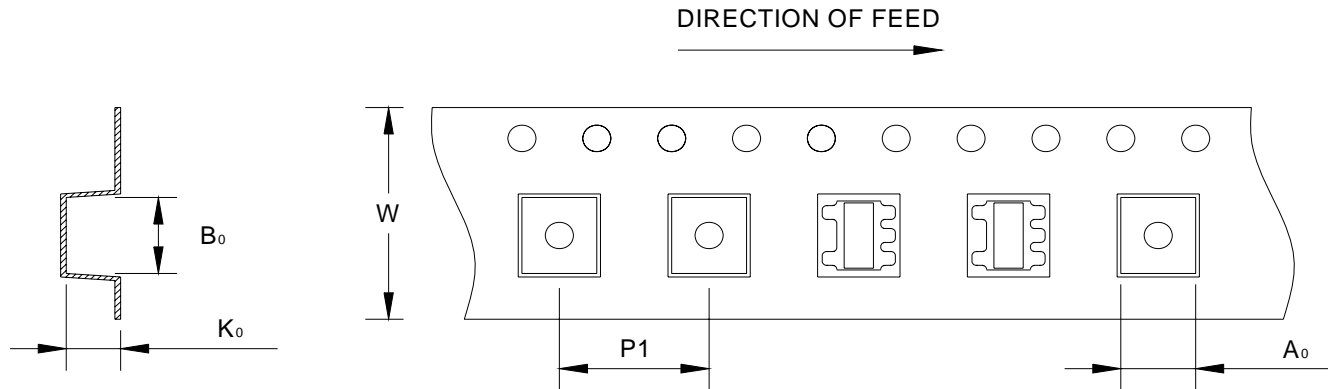
Phase Balance



Return Loss: Input (Pin 4)



## Tape & Reel Information



Item	Dimension
Ao	4.0mm +/- 0.1mm
Bo	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