## MABA-007327-CT1A40

Transformer, 1:1 Transmission Line Transformer 4.5 to 3000 MHz



Rev. V2

### **Features**

- 1:1 Impedance ratio
- Surface mount
- Available on tape and reel •
- RoHS compliant and lead free
- 260°C reflow compatible
- Excellent temperature stability .
- Excellent amplitude and phase balance
- Can be used in both  $50\Omega$  and  $75\Omega$  systems

### Description

**Pin Configuration** 

Pin no.

1

2

3

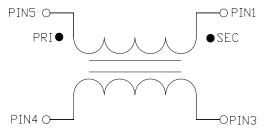
4

5

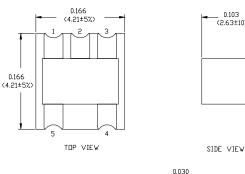
1

M/A-Com Technology Solutions MABA-007327-CT1A40 is a 1:1 RF transmission line transformer in a low cost, surface mount package. Ideally suited for broadband CATV applications.

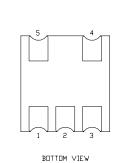
# Schematic

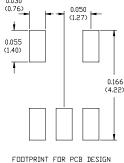


Component dimensions









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

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typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available.

Commitment to produce in volume is not guaranteed.

**Function** 

Secondary Dot

Not connected

Secondary

Primary

Primary Dot

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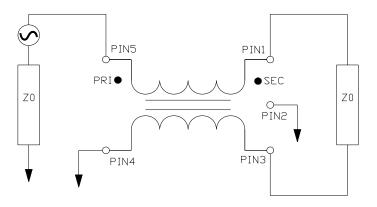
## Electrical Specifications: $T_A = 25^{\circ}C$ , 0dBm, $Z_0 = 75\Omega$ , $P_{in} = 0dBm$

Parameter	Frequency	Units	Min	Тур	Max
Insertion Loss 1	4.5 - 1000MHz 1000 - 2000MHz 2000 - 3000 MHz	dB dB dB	- -	0.8 1.6 2.5	1.0 2.0 3.5
Amplitude Balance (Nominal 0dB)	4.5 - 3000 MHz	dB	-	±0.50	±1.0
Phase Balance (Nominal 180°)	4.5 - 3000 MHz	0	-	±10.0	±20.0

## **Recommended Maximum Ratings**

Parameter	Value	
Input power	At least 250mW	
DC current	At least 30mA	
Operating Temperature	-40°C to +85°C	
Storage Temperature	-55°C to +100°C	

## **Application Circuit**



2

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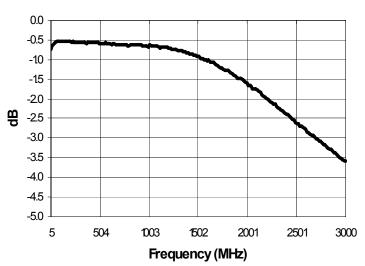
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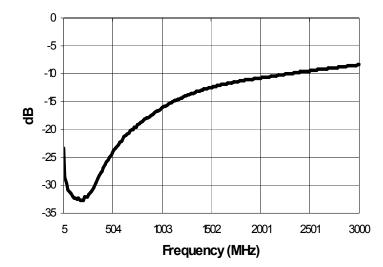
## MABA-007327-CT1A40

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

## **Insertion Loss**

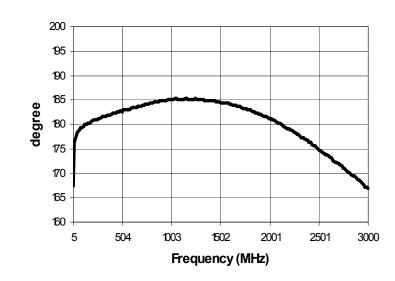




Technology Solution

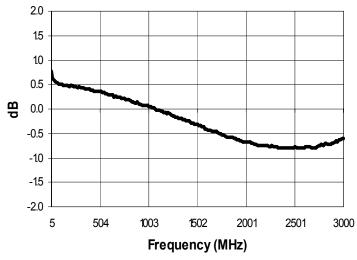
## **Return Loss: Input**

**Phase Balance** 



## **Amplitude Balance**

3



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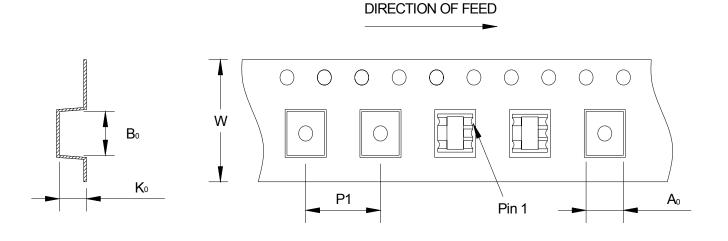
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### Tape & Reel Information



ltem	Dimension		
Ao	4.50mm +/- 0.1mm		
Во	4.50mm +/- 0.1mm		
Ko	2.73mm +/- 0.1mm		
W	12.0mm +/- 0.3mm		
P1	8.0mm +/- 0.1mm		

#### **Ordering Information**

Part number	Description	
MABA-007327-CT1A40	2000 piece reel	
MABA-007327-CT1ATB	Customer Test Board	

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