

**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**

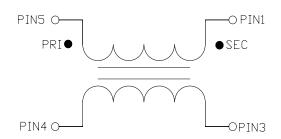
M/A-Com Technology Solutions MABA-007327-CT1A40 is a 1:1 RF transmission line transformer in a low cost, surface mount package. Ideally suited for broadband CATV applications.



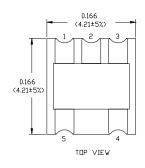
### **Pin Configuration**

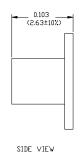
Pin no.	Function	
1	Secondary Dot	
2	Not connected	
3	Secondary	
4	Primary	
5	Primary Dot	

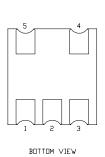
#### **Schematic**

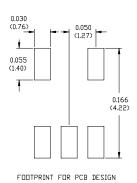


### Component dimensions









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

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 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: +91.80.43537383

• China Tel: +86.21.2407.1588

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



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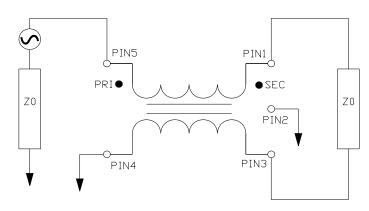
## Electrical Specifications: $T_A = 25$ °C, 0dBm, $Z_0 = 75\Omega$ , $P_{in} = 0$ dBm

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	o	-	±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**



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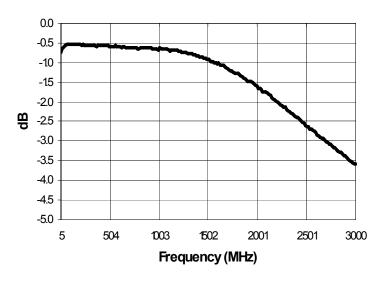


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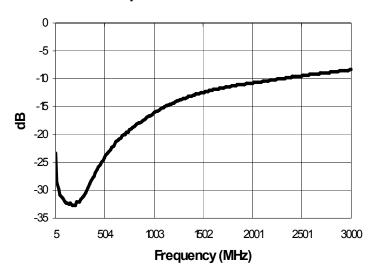
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Typical Performance Curves:  $T_A = 25^{\circ}C$ , 0dBm,  $Z_0 = 75\Omega$ ,  $P_{in} = 0dBm$ 

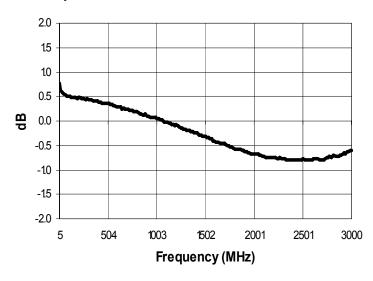
### **Insertion Loss**



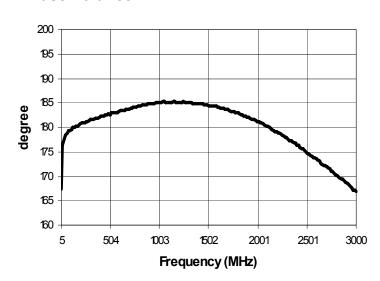
### **Return Loss: Input**



### **Amplitude Balance**



### **Phase Balance**



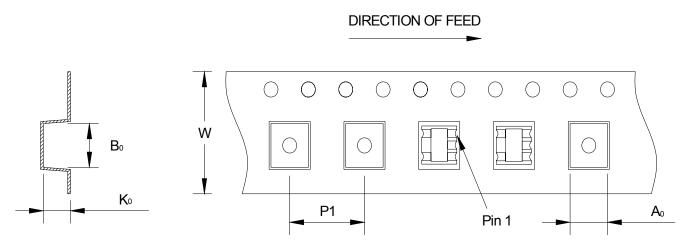
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### **Tape & Reel Information**



Item	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

<sup>•</sup> India Tel: +91.80.43537383