### Transformer, 1:1 4.5 MHz - 1200 MHz

### Features

- ♦ 1:1 impedance ratio
- Transmission line transformer
- Surface mount
- Available on tape and reel
- ♦ 260°C reflow compatible
- RoHS Compliant and Pb free
- Excellent temperature stability
- Can be used on  $50\Omega$  and  $75\Omega$  systems
- Suitable for all CATV, Broadband and FTTx applications.

## **Schematic**

PIN6 O PRI SEC PIN4 PIN3 -O

PIN1

•		

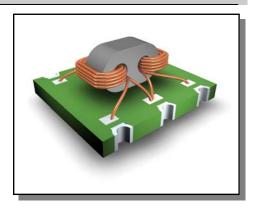
ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions • North America Tel: 800.366.2266 • Europe Tel: +353.21.244.6400 is considering for development. Performance is based on target specifications, simulated results, • India Tel: +91.80.43537383 • China Tel: +86.21.2407.1588 and/or prototype measurements. Commitment to develop is not guaranteed. **PRELIMINARY:** Data Sheets contain information regarding a product M/A-COM Technology Visit www.macomtech.com for additional data sheets and product information. Solutions has under development. Performance is based on engine ng testo. Spi cifications are or test cata n ay be available A COM Technology Solutions Inc. an wits affiliates reserve the right to make an jess to the product (s) or information of mained herein without notice. typical. Mechanical outline has been fixed. Endir series Commitment to produce in volume is not outpracticed sample

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

Parameter	Conditions	Units	Min	Тур	Max
Frequency Range		MHz	4.5		1200
Impedance		Ω		75	
Impedance Ratio				1:1	
Insertion Loss 1 (Pin 6 to Pin 1)	4.5 - 870 MHz 870 - 1200 MHz	dB dB	-	0.50 1.20	1.0 2.0
Insertion Loss 2 (Pin 6 to Pin 3)	4.5 - 870 MHz 870 - 1200 MHz	dB dB		0.60 0.70	1.0 1.4
Amplitude Balance (Nominal 0dB)	4.5 - 50 MHz 50 - 1000 MHz 1000 - 1200 MHz	dB dB dB	- - -	±0.9 ±0.4 ±0.7	±1.3 ±1.0 ±1.1
Phase Balance (Nominal 180 <sup>0</sup> )	4.5 - 50 MHz 50 - 1200 MHz	0 0	-	±5 ±6	±15 ±10
Input Return Loss (Pin 6)	4.5 - 350 MHz 350 - 1000 MHz 1000 - 1200 MHz	dB dB dB	20 16 13	28 23 19	- - -

## **Pin Configuration**

Pin No.	Function	
1	Secondary Dot	
2, 5	Not Connected (ground)	
3	Secondary	
4	Primary	
6	Primary Dot	





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1.0

0.5

0.0

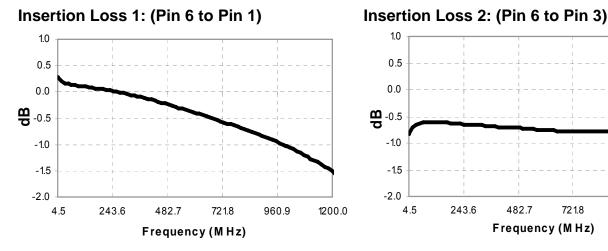
- 1.5

-2.0

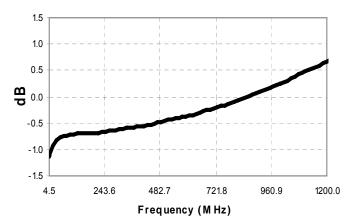
4.5

**9**-0.5 -1.0

#### Rev. V1

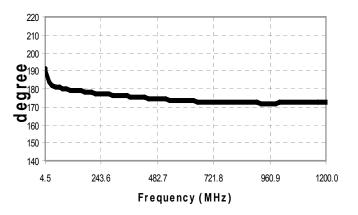


### **Amplitude Balance:**



### **Phase Balance:**

243.6



482.7

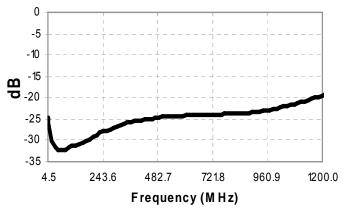
Frequency (MHz)

721.8

960.9

1200.0





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

<sup>2</sup> 

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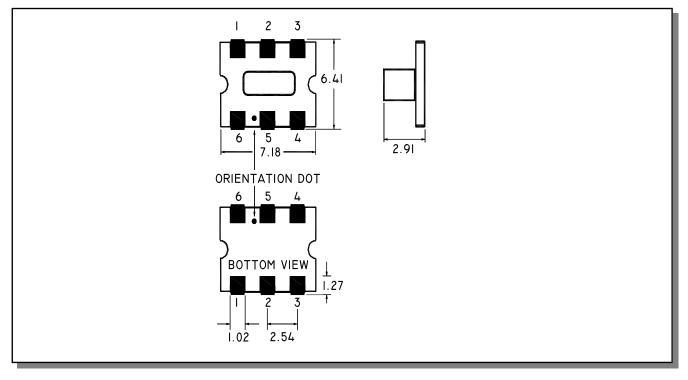


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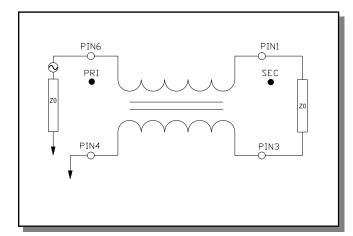
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### **Outline Drawing**

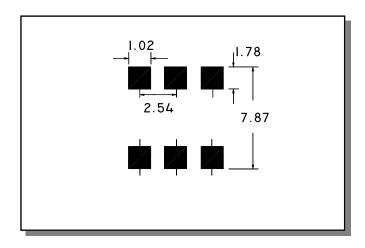


- 1. Dimensions in mm.
- 2. Tolerance: ±0.2mm unless otherwise noted.
- 3. Model number and lot code printed on reel.
- 4. Finish: Electreless nickel immersion gold

## **Application Circuit**



### **Recommended Footprint**



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### **Tape & Reel Information**

Parameter	Units	Value	
Qty per reel	-	900	
Reel Size	mm	330	
Tape Width	mm	16	
Pitch	mm	12	
Ao	mm	6.7	
Во	mm	7.4	
Ko	mm	3.1	
Orientation	-	F-15	
Reference Application Note ANI-019 for orientation			

### **Ordering Information**

Part Number	Description
MABA-010314-CT1370	Tape & Reel
MABA-010314-CT13TB	Customer Evaluation Board

### **Recommended Maximum Ratings**

Parameter	Units	Min	Max
Input Power	mW		250
DC Current	mA		200
Operating Temperature Range	°C	-40	+85
Storage Temperature Range	°C	-55	+125

Temperature data available on request

## **ECO History**

Rev	Date	Description	ECO
V1	28 May 2010	Created datasheet	20100510

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