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



Rev. V3

Features

- 1:1 Impedance ratio
- Surface mount
- Available on tape and reel .
- 260°C reflow compatible
- Excellent temperature stability
- Excellent amplitude and phase balance
- Can be used in both 50 Ω and 75 Ω systems

Description

Pin Configuration

Pin no.

1

2

3

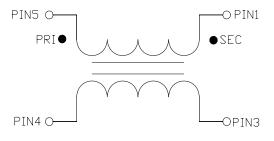
4

5

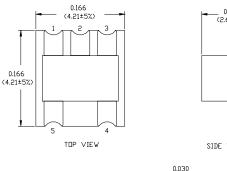
M/A-Com Technology Solutions MABACT0034 is a 1:1 RF transmission line transformer in a low cost, surface mount package. Ideally suited for broadband CATV applications.



Schematic

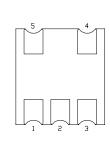


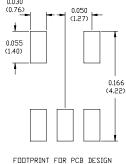
Component dimensions





SIDE VIEW





BOTTOM VIEW

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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1

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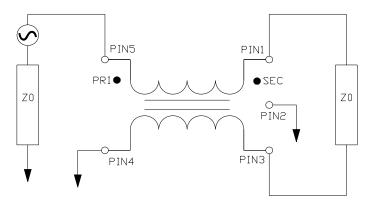
Electrical Specifications: $T_A = 25^{\circ}C$, 0dBm, $Z_0 = 75\Omega$, $P_{in} = 0dBm$

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

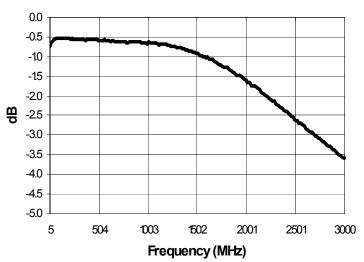
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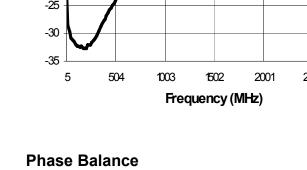
Typical Performance Curves: $T_A = 25^{\circ}C$, 0dBm, $Z_0 = 75\Omega$, $P_{in} = 0$ dBm

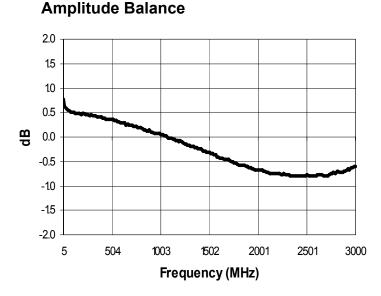
Insertion Loss

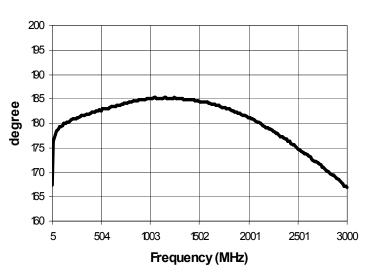


0 -5 -10 -15 呣 -20 -25 -30 -35 1003 5 504 1502 2001 2501 3000

Return Loss: Input







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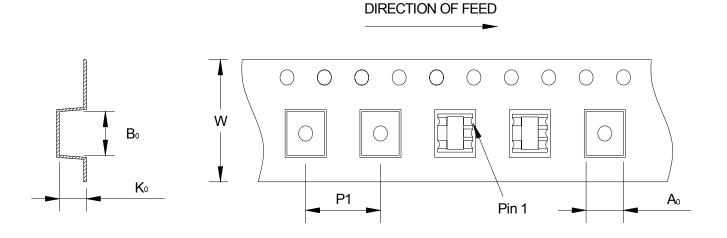


Rev. V3

Technology Solutions

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

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	
MABACT0034	2000 piece reel	

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