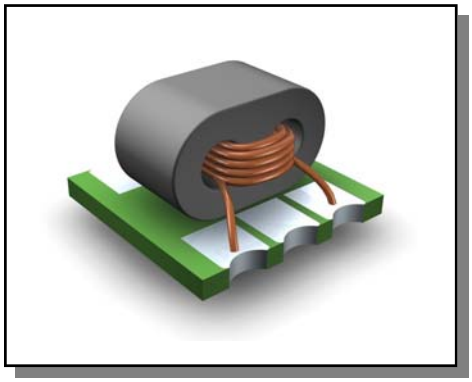
MABA-010321-CT1A42

1:1 Transmission Line Transformer with tertiary winding
50 - 1200 MHz

Rev. V1

Features

- 1:1 Impedance
- Surface mount
- Excellent amplitude and phase balance
- 260ºC reflow compatible
- RoHS Compliant and Pb free
- Suitable for all CATV, Broadband and FTTx applications.
- Available on tape and reel.



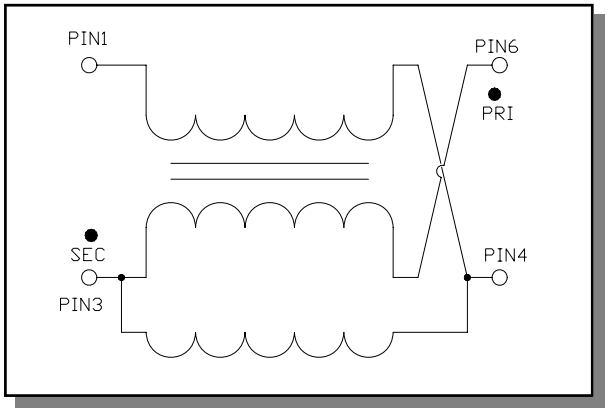
Electrical Specifications: Z_0 = 75Ω, T_A = 25°C, P_{in} = 0dBm

Parameter	Conditions	Units	Min	Typ	Max
Frequency Range		MHz	5		1200
Impedance		Ω		75	
Impedance Ratio		dB		1:1	
Insertion Loss 1: Pin 6-3 (Through)	50 - 150 MHz 150 - 500 MHz 500 - 870 MHz 870 - 1200 MHz	dB dB dB dB	- - - -	0.2 0.5 0.8 1.3	0.4 0.6 0.95 1.65
Insertion Loss 1: Pin 6-1 (Coupled)	50 - 350 MHz 350-1200 MHz	dB dB	- -	0.5 0.7	0.6 1.1
Amplitude Balance	50 - 500 MHz 500-1000 MHz 1000-1200 MHz	dB dB dB	- - -	0.2 0.4 0.6	±0.35 ±0.65 ±0.95
Phase Balance	50 - 500 MHz 500-1000 MHz 1000-1200 MHz	º º º	- - -	0.9 3.1 6.7	±2.0 ±6.0 ±10.0
Input Return Loss	50 - 150 MHz 150 - 700 MHz 700 - 1200 MHz	dB dB dB	20 13 8	22 16 11	- - -

Pin Configuration

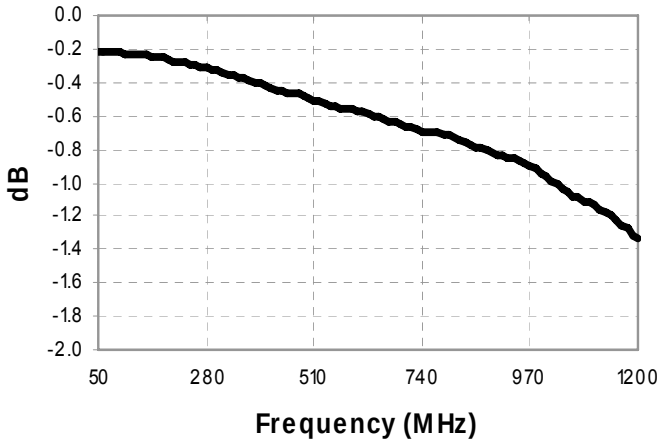
Pin No.	Function
1	Output 2
2	Not used (ground)
3	Output 1
4	Ground
5	Not used (ground)
6	Input

Schematic

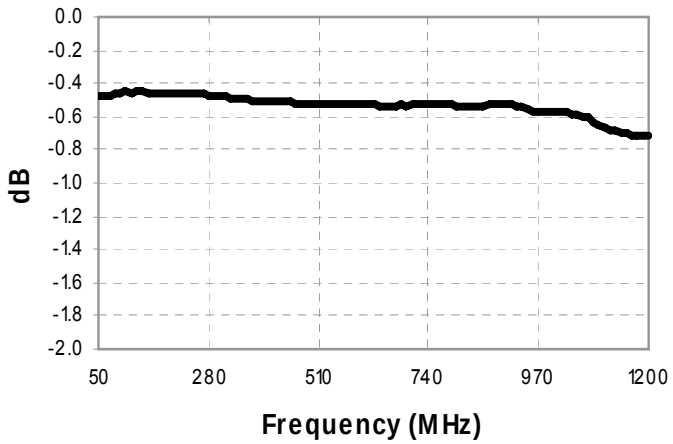


• **North America** Tel: 800.366.2266 • **Europe** Tel: +353.21.244.6400
• **India** Tel: +91.80.43537383 • **China** Tel: +86.21.2407.1588
Visit www.macomtech.com for additional data sheets and product information.

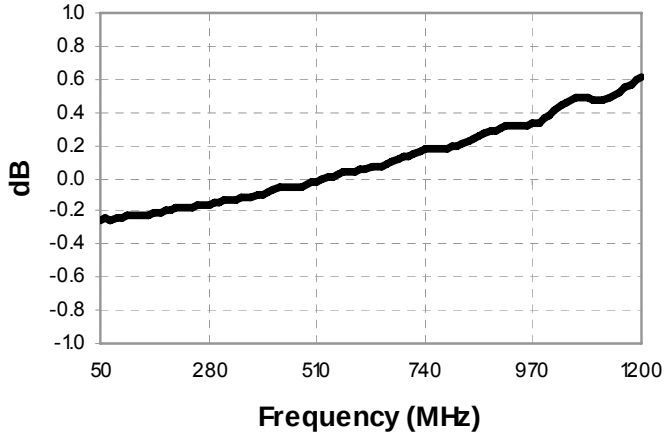
Insertion Loss1: (pin6 - pin3)



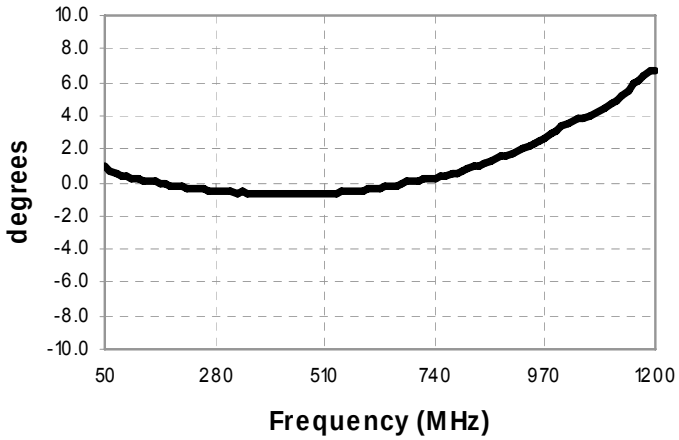
Insertion Loss2: (pin6 - pin1)



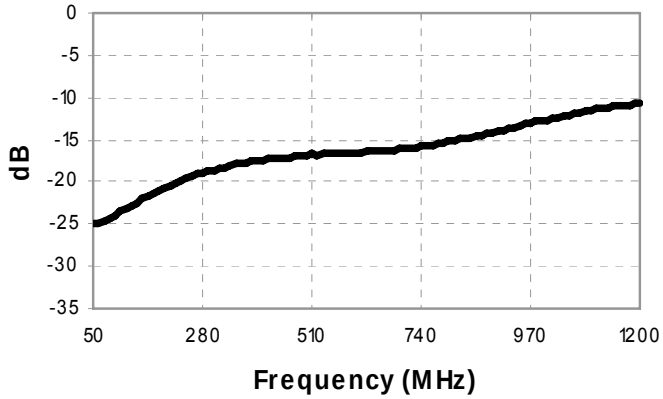
Amplitude Balance



Phase Balance



Return Loss: Input (pin6)



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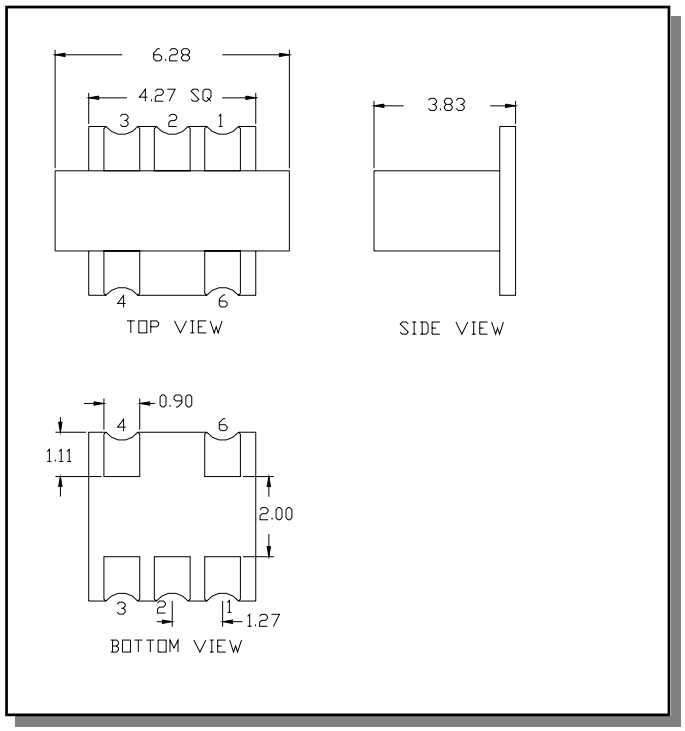
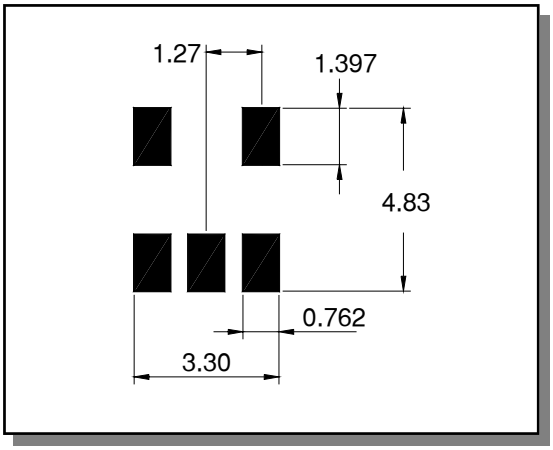
Outline Drawing

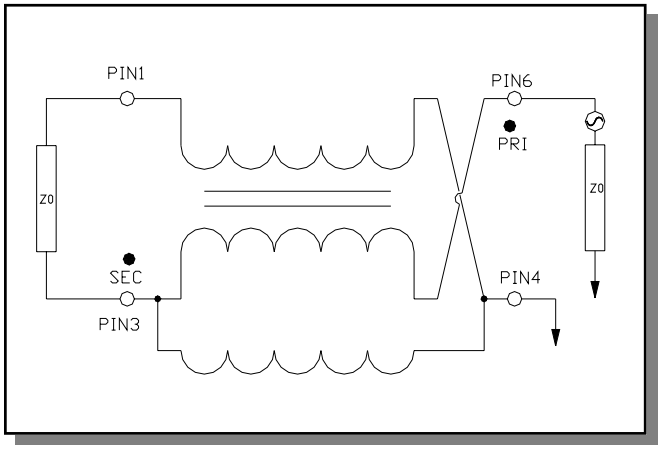


Recommended Footprint

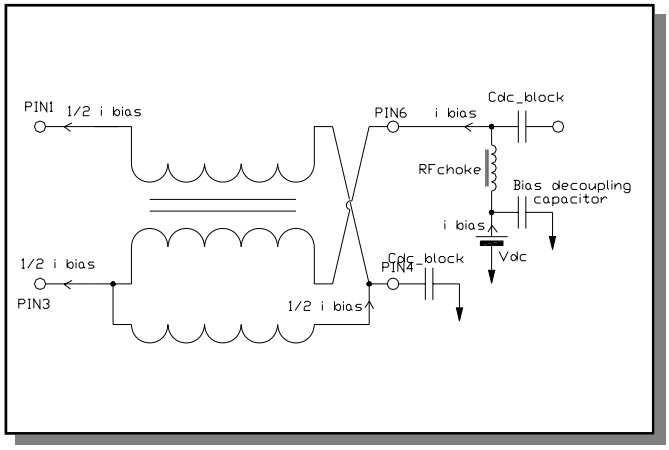


1. Dimensions in mm.
2. Tolerance: ±0.2mm unless otherwise noted.
3. Model number and lot code printed on reel.
4. Plating finish: ENIG on both sides, 0.05 to 0.1 µm gold over 3 to 6 µm nickel

Application Circuit



DC Bias Application Circuit



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Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel size	mm	330
Tape width (W)	mm	16.0
Pitch (P_1)	mm	8.0
A_0	mm	4.5
B_0	mm	6.7
K_0	mm	4.2
Orientation	-	F5
Reference Application note ANI-019 for orientation		

Ordering Information

Part Number	Description
MABA-010321-CT1A42	Tape & Reel

Recommended Maximum Ratings

Parameter	Units	Min	Max
Input Power	mW		250
DC Current	mA		500
Operating Temperature Range	ºC	-40	+85
Storage Temperature Range	ºC	-55	+100

Temperature data available on request

ECO History

Rev	Date	Description	ECO
V1	25 Nov 2010	Released	20101977