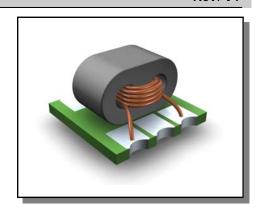


1:1 Transmission Line Transformer with tertiary winding 50 - 1200 MHz

Rev. V1

Features

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



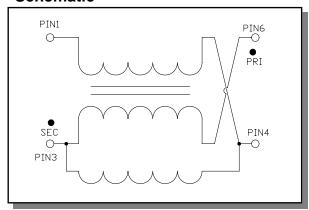
Electrical Specifications: $Z_0 = 75\Omega$, $T_A = 25$ °C, $P_{in} = 0$ dBm

Parameter	Conditions	Units	Min	Тур	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	0 0 0	- - -	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



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

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.

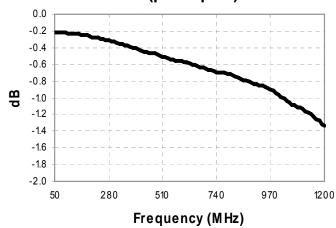
North America Tel: 800.366.2266
 India Tel: +91.80.43537383
 Europe Tel: +353.21.244.6400
 China Tel: +86.21.2407.1588
 Visit www.macomtech.com for additional data sheets and product information.



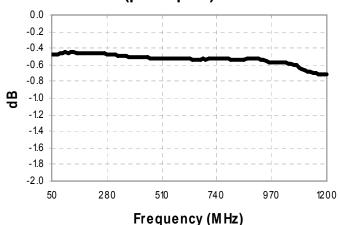
1:1 Transmission Line Transformer with tertiary winding 50 - 1200 MHz

Rev. V1

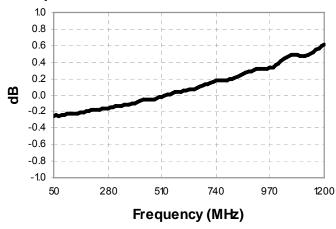
Insertion Loss1: (pin6 - pin3)



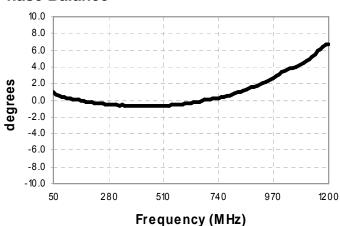
Insertion Loss2: (pin6 - pin1)



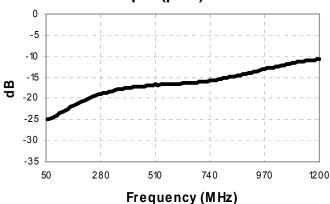
Amplitude Balance



Phase Balance



Return Loss: Input (pin6)



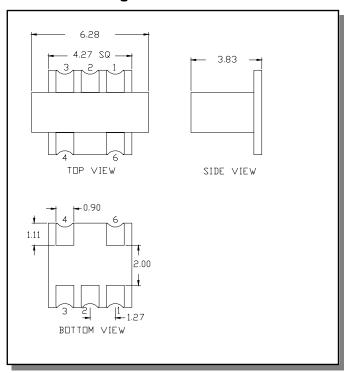
Electrical Specifications: $Z_0 = 75\Omega$, $T_A = 25$ °C, $P_{in} = 0$ dBm



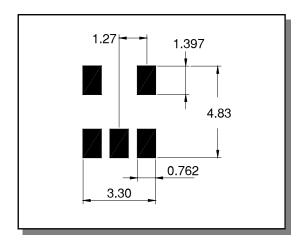
1:1 Transmission Line Transformer with tertiary winding 50 - 1200 MHz

Rev. V1

Outline Drawing

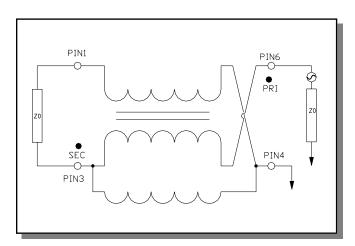


Recommended Footprint

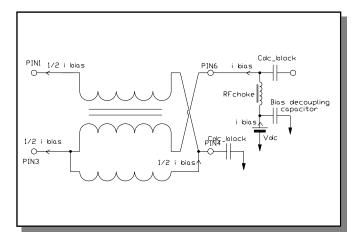


- Dimensions in mm.
- 2. Tolerance: ±0.2mm unless otherwise noted.
- 3. Model number and lot code printed on reel.
- 4. Plating finish: ENIG on both sides, 0.05 to 0.1 μm gold over 3 to 6 μm nickel

Application Circuit



DC Bias Application Circuit



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Commitment to produce in volume is not guaranteed.

| Material Product |



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

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	°C	-40	+85
Storage Temperature Range	°C	-55	+100

Temperature data available on request

ECO History

Rev	Date	Description	ECO
V1	25 Nov 2010	Released	20101977

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