

1:1 Transmission Line Transformer with Tertiary Winding
50 - 1200 MHz

M/A-COM Products
Part Status: Released Rev. V1

Features

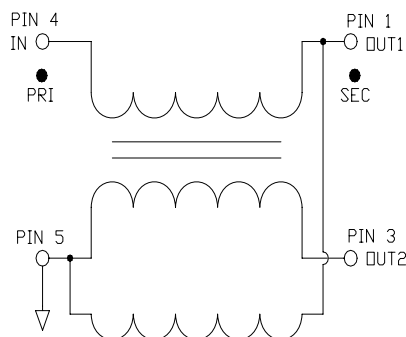
- Surface Mount
- 1:1 Impedance
- 75 Ohm
- RoHS Compliant, lead free

Description

M/A-COM's MABA-009057-CT19E0 is a 1:1 RF Transmission Line Transformer with tertiary winding in a low cost surface mount package. Ideally suited for high volume CATV application.



Schematic



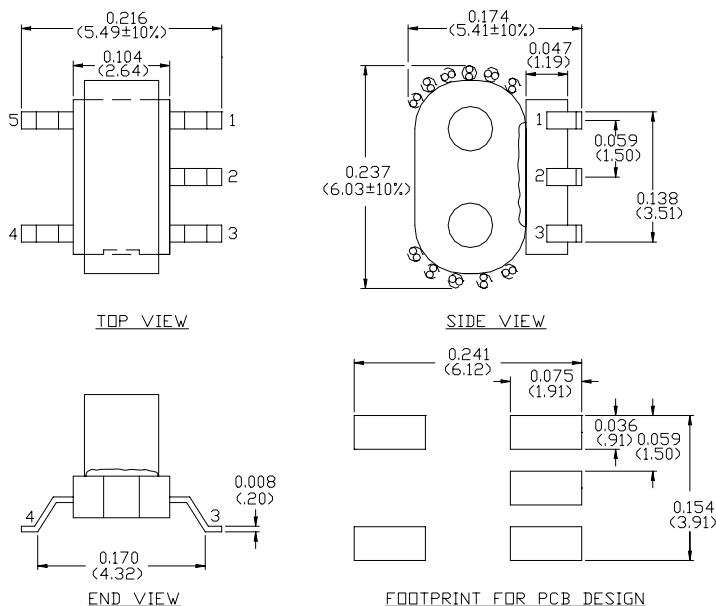
Pin Configuration

Function	Pin Number
Secondary Dot (output 1)	1
Ground (not used)	2
Secondary (output 2)	3
Primary Dot (Input)	4
Primary (ground)	5

Ordering Information

Parameter	Absolute Maximum
MABA-009057-CT19E0	1500
MABA-009057-CT19TB	Customer Test Board

Case Style SM-158



Dimensions in mm. Tolerance: .x ± 0.1, .xx ± 0.05

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PRELIMINARY: Data Sheets contain information regarding a product M/A-COM 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 / Fax: 978.366.2266
- **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- **Asia/Pacific** Tel: 81.44.844.8296 / Fax: 81.44.844.8298

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

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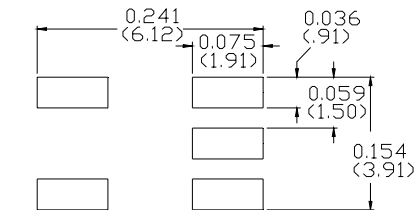
Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 75\Omega$

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Frequency Range	50 – 1200 MHz				
Insertion Loss 1 (Pin 4 to Pin 1)	50 – 600 MHz	dB	–	0.36	0.8
	600 – 1000 MHz	dB	–	0.84	1.2
	1000 – 1200 MHz	dB	–	1.23	1.7
Insertion Loss 2 (Pin 4 to Pin 3)	50 – 600 MHz	dB	–	0.51	0.7
	600 – 1200 MHz	dB	–	0.56	1.1
Amplitude Un-Balance	50 – 600 MHz	dB	–	± 0.16	± 0.4
	600 – 1200 MHz	dB	–	± 0.33	± 0.9
Phase Un-Balance	50 – 870 MHz	$^\circ$	–	± 1.5	± 4
	870 – 1000 MHz	$^\circ$	–	± 1.3	± 6
	1000 – 1200 MHz	$^\circ$	–	± 4.1	± 12
Input Return Loss (Pin 4)	50 – 600 MHz	dB	12	19	–
	600 – 1200 MHz	dB	8	12	–

Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Power	250mW
DC Current	30mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C

Recommended PCB Configuration



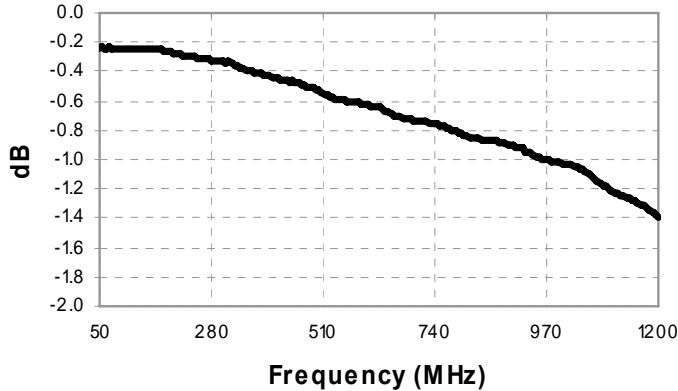
FOOTPRINT FOR PCB DESIGN

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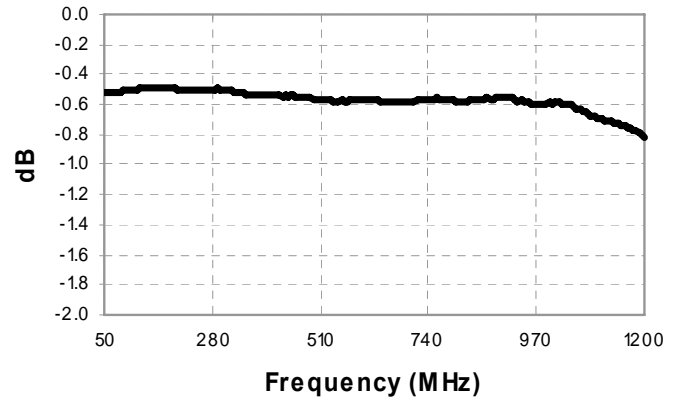
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Typical Performance: $T_A = 25^\circ\text{C}$, $Z_0 = 75\Omega$

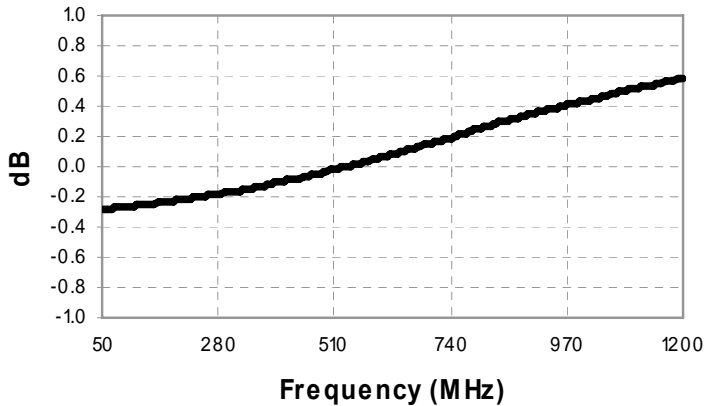
Insertion Loss 1 (Through pin 4 to pin 1)



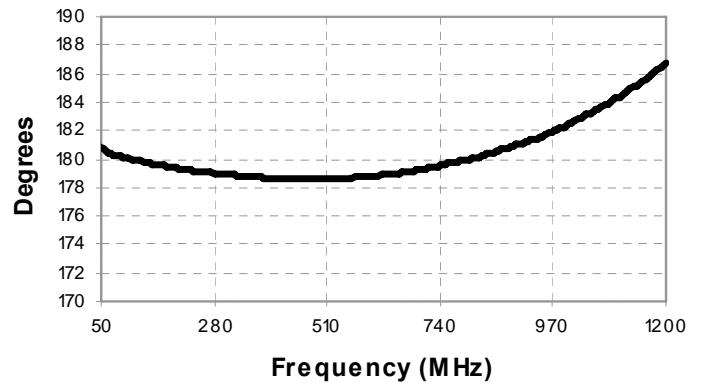
Insertion Loss 2 (Through pin 4 to pin 3)



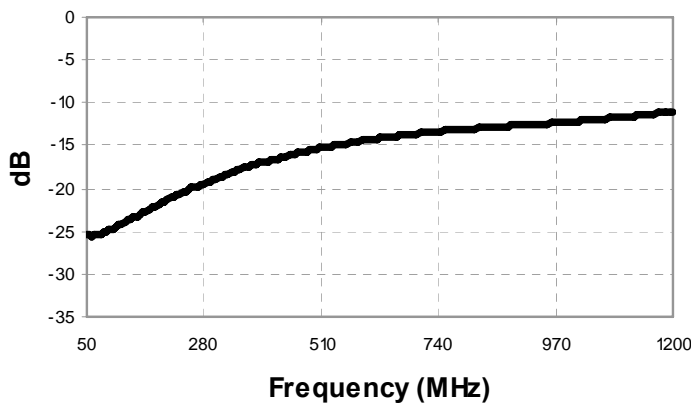
Amplitude Balance



Phase Balance



Return Loss: Input



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