

1:1 Transmission Line Transformer 4.5 to 3000 MHz

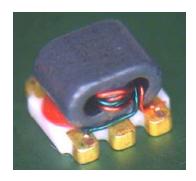
Rev V4

Features

- Surface mount
- Wide frequency range
- 1:1 Impedance
- Pb free
- RoHS Compliant and is 260°C reflow compatible
- Available on tape and reel

Description

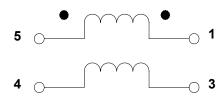
The MABACT0059 is a 1:1 Transmission Line Transformer. The windings of the MABACT0059 are welded to the package substrate for improved reliability and to eliminate lead content. This Transformer is ideally suited for CATV and Satellite STB/Subscriber applications.



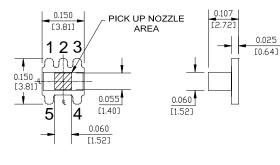
Pin Configuration

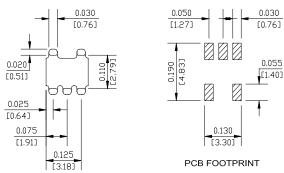
Function	Pin Number
Secondary Dot	1
Not Connected	2
Secondary	3
Primary	4
Primary Dot	5

Schematic



Component Dimensions





Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.

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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 • Europe Tel: +353.21.244.6400

• India Tel: +91.80.43537383 Visit www.macomtech.com for additional data sheets and product information.

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Electrical Specifications: : $T_A = 25$ °C, $Z_0 = 75\Omega$

Parameter	Test Conditions	Units	Min.	Тур.	Max.
Frequency Range	4.5 – 3000 MHz				
Insertion Loss 1 (Pin 4 to Pin 3)	4.5 – 1000 MHz 1000 – 2000 MHz 2000 – 2500 MHz 2500 – 3000 MHz	dB dB dB dB	-	0.07 0.63 1.93 4.20	1.0 2.0 5.0 6.5
Insertion Loss 2 (Pin 4 to Pin 1)	4.5 – 1000 MHz 1000 – 2000 MHz 2000 – 2500 MHz 2500 – 3000 MHz	dB dB dB dB	_	0.29 0.08 2.00 5.30	1.0 2.0 6.0 8.4
Amp Unbalance (Nominal 0dB)	4.5 – 20 MHz 20 – 1000 MHz	dB dB	_	±1.0 ±0.3	±1.2 ±1.0
Phase Unbalance (Nominal 180°)	4.5 – 1000 MHz	0	_	±0.03	±2.0
Input Return Loss (Pin 4)	4.5 – 1000 MHz	dB	15	26.30	_

Recommended Maximum Ratings 1,2

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

^{1.} Exceeding any one or combination of these limits may cause permanent damage to this device.

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M/A-COM Technology Solutions does not recommend sustained operation near these survivability limits.



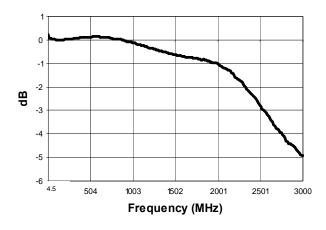
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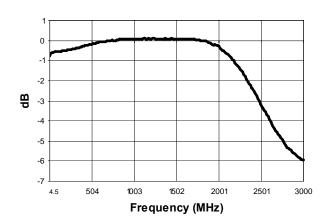
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Typical Performance Curves @ $T_A = 25$ °C, $Z_0 = 75\Omega$

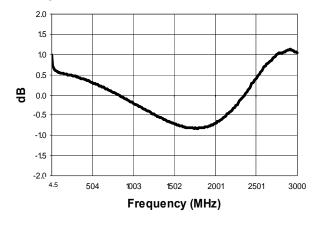
Insertion Loss 1 (Pin4 - Pin3)



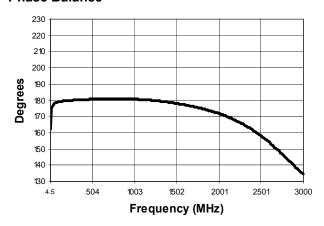
Insertion Loss 2 (Pin4 - Pin1)



Amplitude Balance



Phase Balance



3

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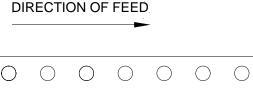
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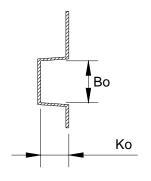


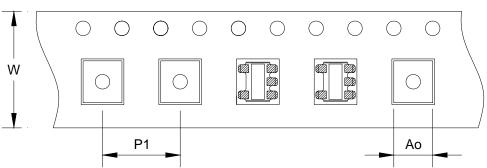
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Item	Dimension
Ao	4.05mm +/- 0.1mm
Во	4.30mm +/- 0.1mm
Ko	3.45mm +/- 0.1mm
W	12.00mm +/- 0.3mm
P1	8.00mm +/- 0.1mm

Ordering Information

Commitment to produce in volume is not guaranteed.

Part Number	Package
MABACT0059	2000 piece reel

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