

M/A-COM Technology Solutions, Inc.

4 East Gate Road,
Little Island,
Co. Cork,
Ireland.
www.macomtech.com



17th March 2016

Digi-Key Corporation

701 Brooks Ave South

Thief River Falls, Minnesota 56701

ATTN: Quality/Purchasing Manager

Subject: Packaging Tape and Reel Carrier Pocket – Depth Change.

PCN-00844

Dear Valued Customer:

Please accept this PCN letter as formal notification for the change of M/A-COM Technology Solutions part number(s) shown below.

The device(s) listed on this page are the affected device(s).

According to our records, this device has been purchased by your company within the past twenty-four (24) months.

M/A-COM Part Number(s):

MABACT0059

Technical details of this change notice follow on the next page(s).

Please contact me if you have any questions.

Sincerely,

Alan Miller

Product Line Manager
M/A-COM Technology Solutions
Cell: +978-427-7482

Email: Alan.Miller@macomtech.com

M/A-COM TECHNOLOGY SOLUTIONS CONFIDENTIAL & PROPRIETARY

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PCN Number: 00844		PCN Date: 17 th March 2016
Title: Change to Tape and Reel carrier pocket depth.		
Proposed 1st Ship Date: Effective Immediately		Estimated Sample Availability: N/A
Change Type:		
Assembly Site	Design	Electrical Specification
Test Site	Assembly Process	Mechanical Specification
Test Process	Assembly Materials	Packing/Shipping/Labeling X
PCN Details		
Description of Change: MACOM is changing the Tape and Reel carrier pocket depth to 3.0mm on the product Data Sheet. This is reflected as Ko dimension in the Tape and Reel Information table on page 4 of the Data Sheet. See Updated Data Sheet in Appendix I.		
Reason for Change: To standardize tape and reel carrier pocket depth across MACOM's contract manufacturers.		
Products Affected: MABACT0059		
Anticipated impact on Fit, Form, Function: None – No change to form, fit or function of device. Depth of Packaging Tape and Reel carrier pocket is changing to 3.0mm.		
Changes to product identification resulting from this PCN: None		
Qualification: N/A		

Appendix I:

MABACT0059



1:1 Transmission Line Transformer
 4.5 to 3000 MHz

Rev. V6

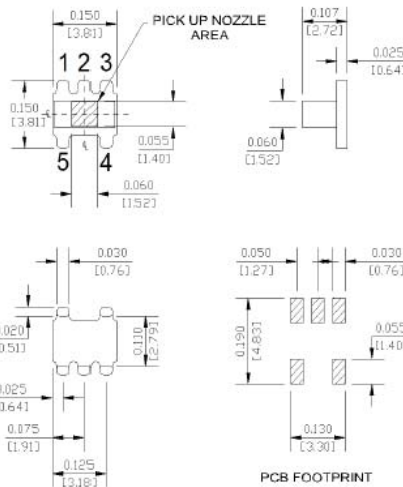
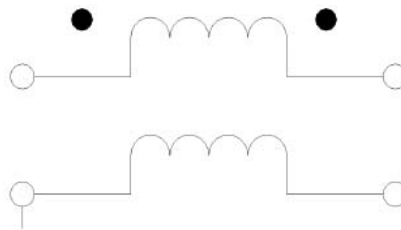
Features

- Surface mount
- Wide frequency range
- 1:1 impedance
- Pb free
- 260°C reflow compatible
- RoHS Compliant

Description

1:1 Transmission Line Transformer. The windings 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.

Functional Schematic



Pin Configuration

Pin No.	Function
1	Secondary Dot
2	Not Connected
3	Secondary
4	Primary
5	Primary Dot

1. Dimensions in inches [mm].
2. Tolerance: ±0.2mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Finish: Sn finish, 4µ–8µ over metallisation layer as required by supplier process.

MABACT0059



1:1 Transmission Line Transformer
 4.5 to 3000 MHz

Rev. V6

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

Parameter	Conditions	Units	Min	Typ	Max
Frequency Range	4.5 – 3000 MHz				
Insertion Loss 1 (Pin 4 to Pin 3)	4.5 – 1000 MHz	dB	–	0.07	1.0
	1000 – 2000 MHz	dB		0.63	2.0
	2000 – 2500 MHz	dB		1.93	5.0
	2500 – 3000 MHz	dB		4.20	6.5
Insertion Loss 2 (Pin 4 to Pin 1)	4.5 – 1000 MHz	dB	–	0.29	1.0
	1000 – 2000 MHz	dB		0.08	2.0
	2000 – 2500 MHz	dB		2.00	6.0
	2500 – 3000 MHz	dB		5.30	8.4
Amplitude Balance (Nominal 0dB)	4.5 – 20 MHz	dB	–	± 1.0	± 1.2
	20 – 1000 MHz	dB		± 0.3	± 1.0
Phase Balance (Nominal 180°)	4.5 – 1000 MHz	$^\circ$	–	± 0.03	± 20
Input Return Loss (Pin 4)	4.5 – 1000 MHz	dB	15	26.30	–

Absolute Maximum Ratings

Parameter	Units	Min	Max
Input Power	mW		250
DC Current	mA		30
Operating Temperature Range	$^\circ\text{C}$	-40	+85

Full temperature plots available on request

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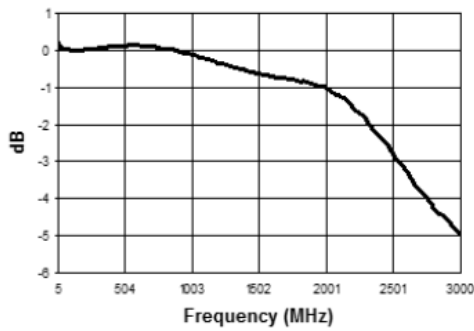
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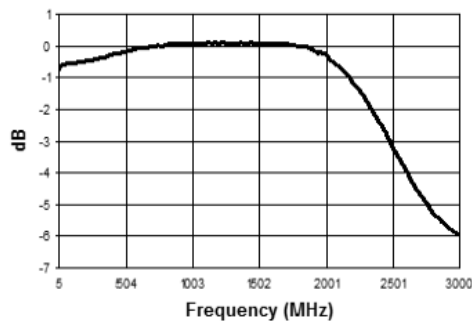
1:1 Transmission Line Transformer
 4.5 to 3000 MHz

Rev. V6

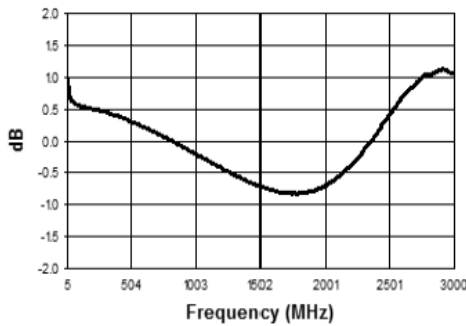
Insertion Loss 1 (Pin4 - Pin3)



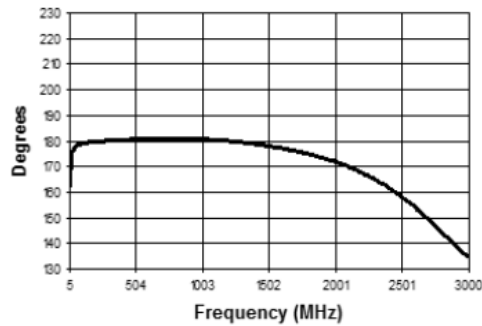
Insertion Loss 2 (Pin4 - Pin1)



Amplitude Balance



Phase Balance



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

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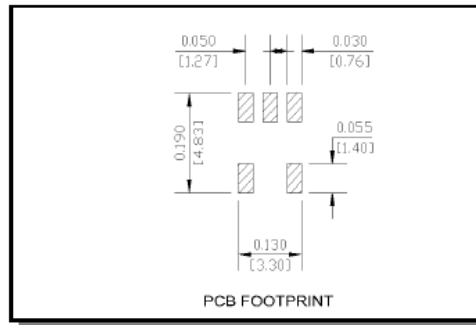
1:1 Transmission Line Transformer
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Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel Size	mm	330
Tape Width	mm	12.00
Pitch	mm	8.00
Ao	mm	4.05
Bo	mm	4.30
Ko	mm	3.0
Orientation	-	F5
Reference App Note ANI-019 for orientation		

Recommended Footprint



Ordering Information

Part Number	Description
MABACT0059	Tape & Reel

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MABACT0059



1:1 Transmission Line Transformer
4.5 to 3000 MHz

Rev. V6

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