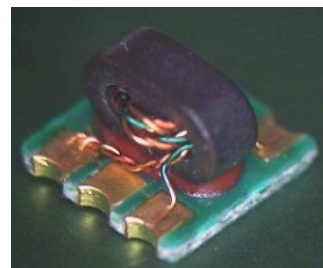


Features

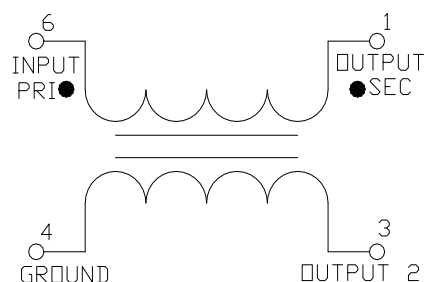
- Surface Mount
- 1:1 Impedance
- Excellent MoCA band performance
- Excellent amplitude and phase balance
- Can be used in both 50Ω and 75Ω systems
- 260°C Reflow Compatible
- RoHS* Compliant, Pb Free
- Available on Tape and Reel.



Description

MABA-007871-CT1A40 is a 1:1 RF Transmission Line step up transformer in a low cost, surface mount package. Ideally suited for MoCA band applications.

Schematic



Ordering Information¹

Part Number	Package
MABA-007871-CT1A40	2000 piece reel
MABA-007871-CT1ATB	Customer Test Board

1. Reference Application Note M513 for reel size information.

Pin Configuration

Pin No.	Function
1	Secondary Dot (Output 1)
2	Not used (Ground)
3	Secondary (Output 2)
4	Primary (Ground)
6	Primary Dot (Input)

* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

Transformer 1:1 transmission line balun 5 to 3000 MHz

Rev. V6

Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 50 \Omega$

Parameter	Test Conditions	Units	Min	Typ	Max
Insertion Loss	5 - 50 MHz	dB	—	0.35	2.50
	50 - 975 MHz			0.4	0.60
	975 - 1525 MHz			0.3	1.00
	1525 - 2150 MHz			0.65	2.30
	2150 - 3000 MHz			2.5	6.00
Input Return Loss	5 - 50 MHz	dB	12	28	—
	50 - 975 MHz		15	23	
	975 - 1525 MHz		13	21	
	1525 - 2150 MHz		6	12	
	2150 - 3000 MHz		3	6	
Amplitude Unbalance (Nominal 0dB)	5 - 50 MHz	dB	—	0.45	± 3.8
	50 - 975 MHz			0.15	± 0.7
	975 - 1525 MHz			0.15	± 0.7
	1525 - 2150 MHz			0.38	± 0.9
	2150 - 3000 MHz			0.05	1.6
Phase Unbalance (Nominal 180°)	5 - 50 MHz	°	—	6.5	± 50
	50 - 975 MHz			0.1	± 5
	975 - 1525 MHz			0.1	± 4
	1525 - 2150 MHz			3	± 12
	2150 - 3000 MHz			13	35

Temperature data available on request

Absolute Maximum Ratings

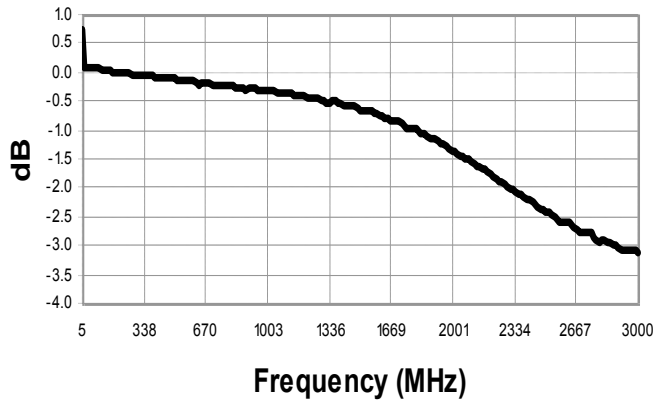
Parameter	Absolute Maximum
Max Input Power	250 mW
DC current	200 mA
Operating Temperature	-40°C to +105°C
Storage Temperature	-40°C to +85°C

Transformer 1:1 transmission line balun 5 to 3000 MHz

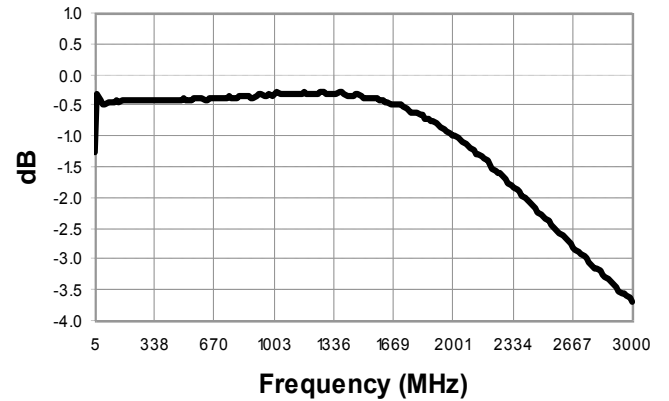
Rev. V6

Typical Performance Curves: $T_A = 25^\circ\text{C}$, $Z_0 = 50 \Omega$

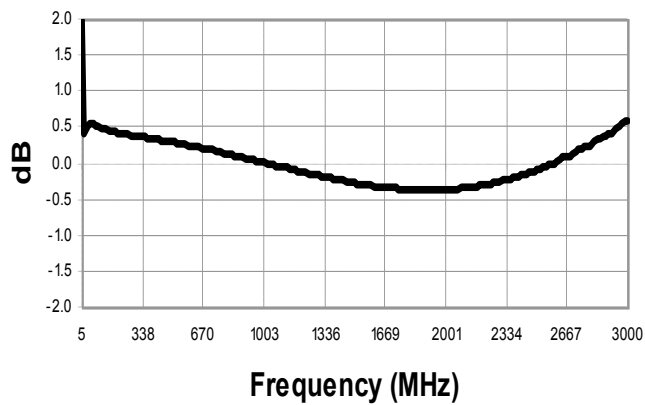
Insertion Loss 1: through pin 6 to pin 1



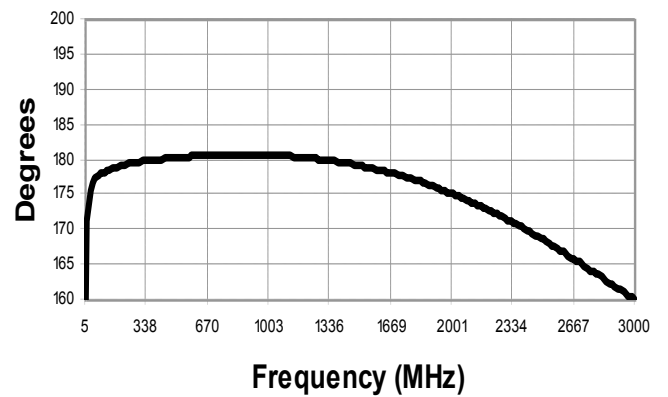
Insertion Loss 2: coupled pin 6 to pin 3



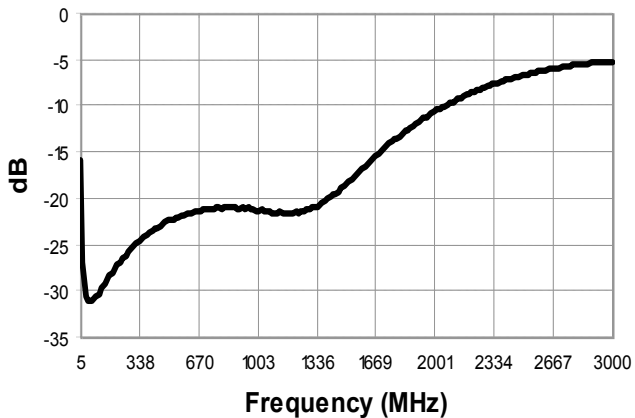
Amplitude Balance



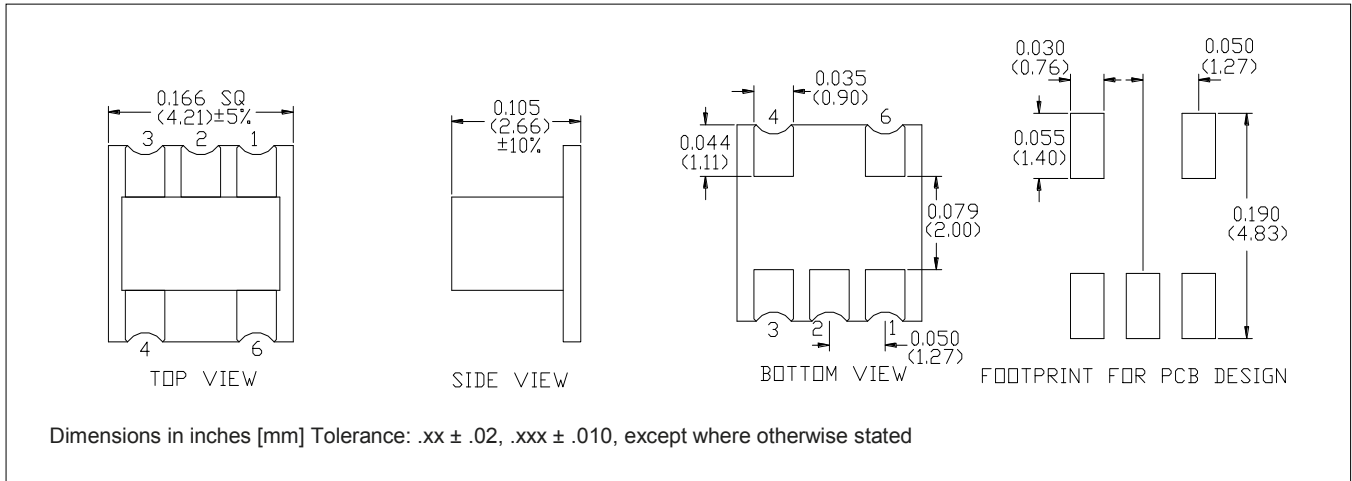
Phase Balance



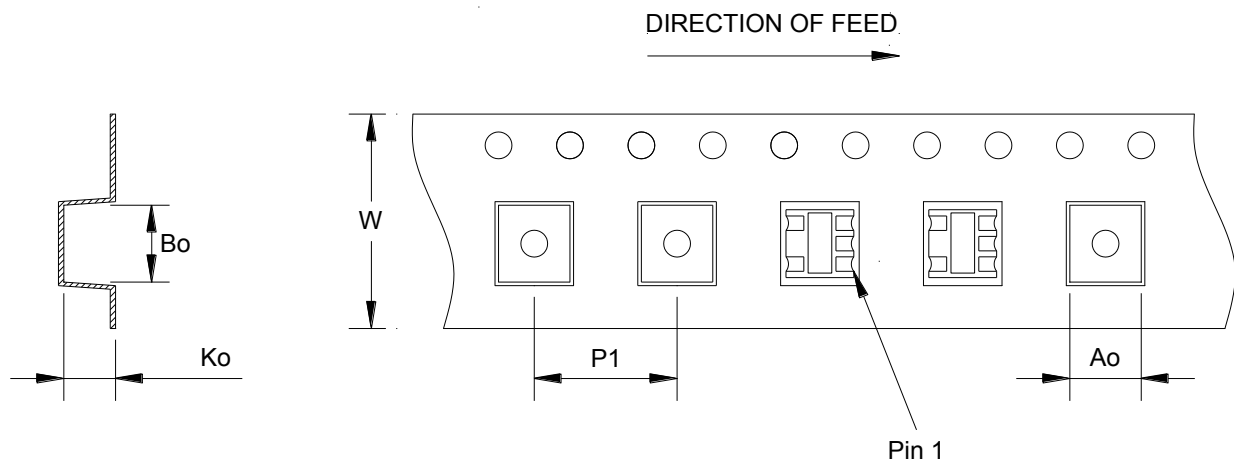
Input Return Loss



Case Style:



Tape & Reel Information



Item	Dimension
Ao	4.50mm +/- 0.1mm
Bo	4.50mm +/- 0.1mm
Ko	2.73mm +/- 0.1mm
W	12.00mm +/- 0.3mm
P1	8.00mm +/- 0.1mm

M/A-COM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with M/A-COM Technology Solutions Inc ("MACOM") products. These materials are provided by MACOM as a service to its customers and may be used for informational purposes only. Except as provided in MACOM's Terms and Conditions of Sale for such products or in any separate agreement related to this document, MACOM assumes no liability whatsoever. MACOM assumes no responsibility for errors or omissions in these materials. MACOM may make changes to specifications and product descriptions at any time, without notice. MACOM makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. MACOM FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. MACOM SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Audio Transformers](#) / [Signal Transformers](#) category:

Click to view products by [MACOM](#) manufacturer:

Other Similar products are found below :

[CU4S0506AT-2655-H1](#) [MGPWT-00449-P](#) [PE-64961](#) [1812WBT2-4](#) [BX1194WNL](#) [1879479-1](#) [PA1528ANL](#) [T1137NLT](#) [PE-65848FNLT](#)
[H5019EFNL](#) [CX2045ALNLT](#) [TG1G-E201NV6LF](#) [MGPWT-00059-P](#) [MGPWT-00266-P](#) [MGPWT-00278-P](#) [MGPWT-00431-P](#) [TTC-100](#)
[TTC-143-H](#) [TTC-5032-1](#) [4-1879391-0](#) [100213](#) [T1142NL](#) [TG1G-S001NZLF](#) [T1124NL](#) [1879732-1](#) [2-1879391-5](#) [MABA-010321-CT1A42](#)
[TX1341NL](#) [H0013FNL](#) [H5020FNL](#) [H2009FNLT](#) [H5004NLT](#) [S553-5999-52-F](#) [SCMS7D43AY100PT1](#) [T5008NLT](#) [PE-68517T](#) [MGPWT-](#)
[00339-P](#) [H5014FNLT](#) [TX1473NLT](#) [PE-69011NLT](#) [CX2043LNLT](#) [H7137FNLT](#) [H1259NLT](#) [TX1344NLT](#) [LM-LP-1005L](#) [H0013NLT](#)
[S558-5500-JV](#) [TX1193NLT](#) [T7015NL](#) [T1124NLT](#)