

E-Series RF 1:4 Transmission Line Step-up Transformer 2-1000 MHz

Rev. V2

Features

- 1:4 Impedance Ratio
- Surface Mount
- Wide frequency range
- Tape and reel packaging available
- 260°C Reflow Compatible
- RoHS* compliant

Description

M/A-COM's MABA-011037 is a RoHS compliant 1:4 RF transmission line transformer in a low cost, surface mount package. The windings of the MABA-011037 are welded to the package substrate for improved reliability and to eliminate lead content. Ideally suited for high volume cellular and wireless application. Parts are packaged in tape & reel.

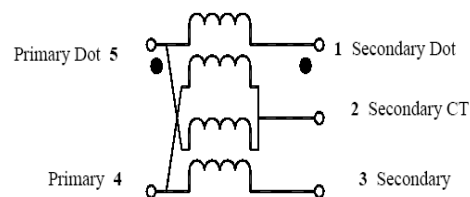
Absolute Maximum Ratings^{1,2}

Parameter	Absolute Maximum
RF Power	250 mW
DC Current	240 mA ²
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +125°C

Product Image



Functional Schematic



Pin Configuration³

Pin No.	Function
1	Secondary Dot
2	Secondary CT
3	Secondary
4	Primary
5	Primary Dot

Electrical Specifications: T_A = 25°C, Z₀ = 50Ω

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
RF Frequency	-	2.0 - 1000	MHz	-	-	-
Insertion Loss	-	3.0 - 500	dB	-	0.7	1.0
		2.0 - 700	dB	-	-	2.0
		2.0 - 1000	dB	-	-	3.0
Amplitude Unbalance	-	2.0 - 700	dB	-	-	1
		700 - 1000	dB	-	-	2
Phase Unbalance	-	2.0 - 1000	Degrees	-	-	10
Input Return Loss	-	2 - 200	dB	40	32	15

1

M/A-COM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. Visit www.macom.com for additional data sheets and product information.

For further information and support please visit:
<https://www.macom.com/support>

* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

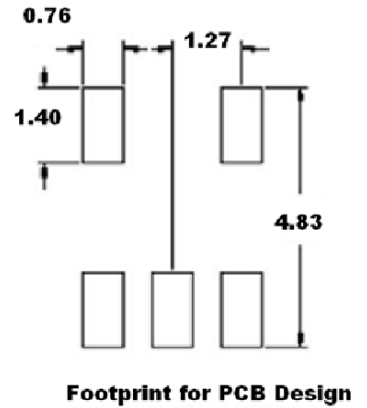
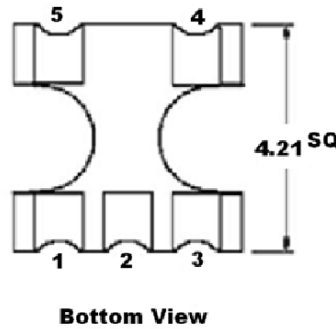
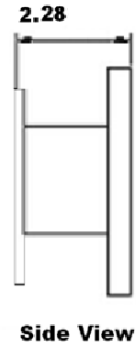
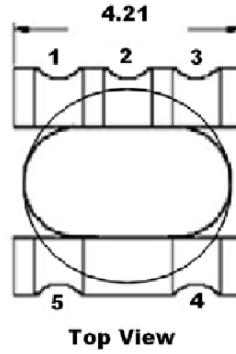
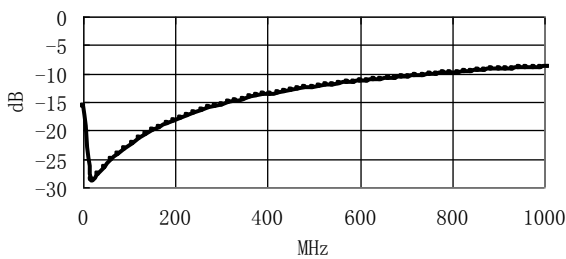
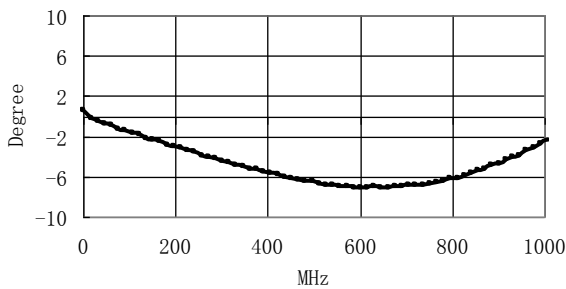
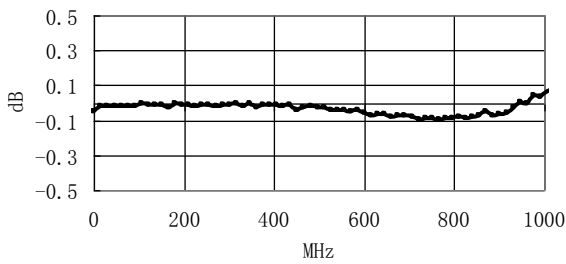
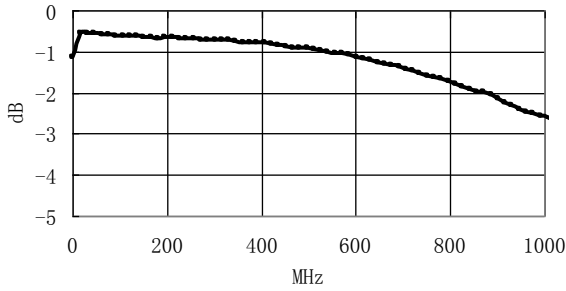
MABA-011037



E-Series RF 1:4 Transmission Line Step-up Transformer 2-1000 MHz

Rev. V2

Typical Performance Curves at +25°C



Dimensions in mm. Tol: .xx ±.20

Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel size	mm	330
Tape width (W)	mm	8.0
Pitch (P ₁)	mm	12.0
A ₀	mm	4.5
B ₀	mm	4.5
K ₀	mm	2.73
Orientation	-	F55

Reference Application Note ANI-019 for orientation

Ordering Information

Part Number	Description
MABA -011037	Tape & Reel

Recommended Maximum Ratings

Parameter	Units	Min	Max
Input Power	mW		250
DC Current	mA		200
Operating Temperature Range	°C	-40	+85
Storage Temperature Range	°C	-55	+125

Temperature data available on request

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 estoppels 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.