

MABA-010012-ES4302



E-Series 1:4 Transmission Line Transformer 30MHz-2500M

Rev. V1P

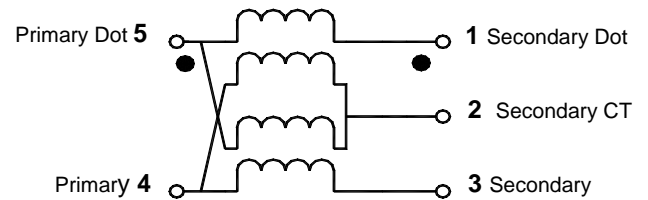
Features

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

Description

M/A-COM's MABA-010012-ES4302 is a RoHS compliant 1:4 RF transmission line step-up transformer in a low cost, surface mount package. Ideally suited for high volume cellular and wireless applications. Typical applications include single to balanced mode conversion and impedance matching.

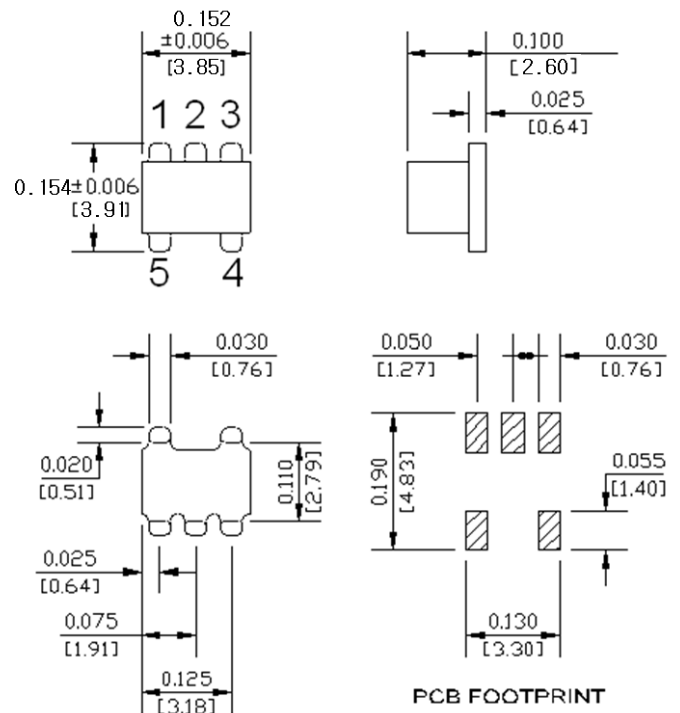
Schematic



Product Image



Component Dimensions



Pin Configuration

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

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

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

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

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.

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

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

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
RF Frequency	—	30 - 2500	MHz	—	—	—
Insertion Loss	F_L — f_U	30 - 150	dB	—	2.0	3.0
		150 - 1000	dB	—	1.0	2.0
		1000 - 2000	dB	—	2.5	3.0
		2000—2500	dB	—	2.0	4.0
Amplitude Balance	F_L — f_U	30 - 1000	dB	—	0.3	0.5
		1000 - 2000	dB	—	0.8	1.5
		2000—2500	dB	—	1.0	2.0
Phase Balance	F_L — f_U	30 - 1000	Degree	—	1	2
		1000 - 2000	Degree	—	5	8
		2000—2500	Degree	—	8	13

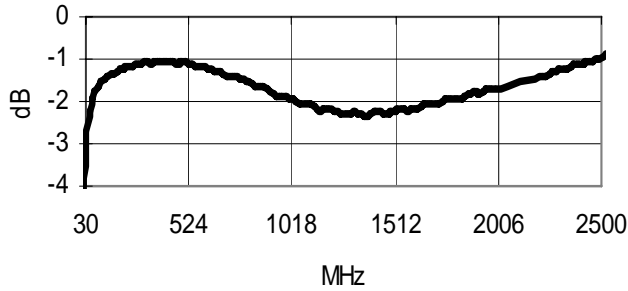
Absolute Maximum Ratings ^{1,2}

Parameter	Absolute Maximum
DC Power	250 mW
DC Current	50 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +125°C

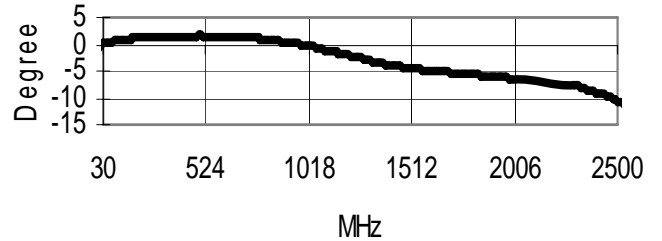
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

Typical Performance Curves

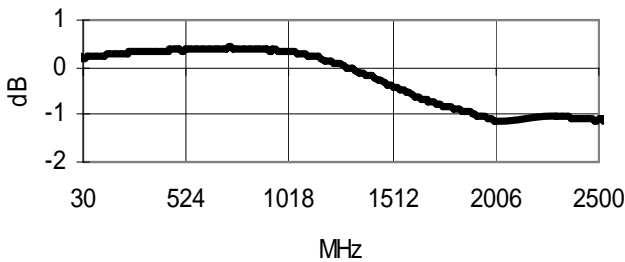
Insertion Loss



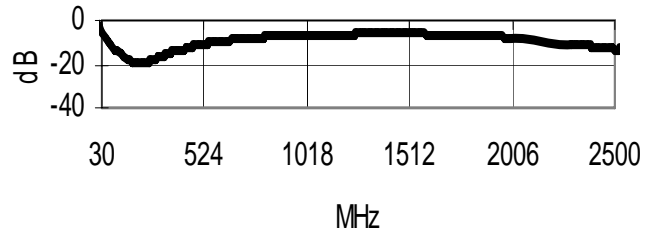
Phase Balance



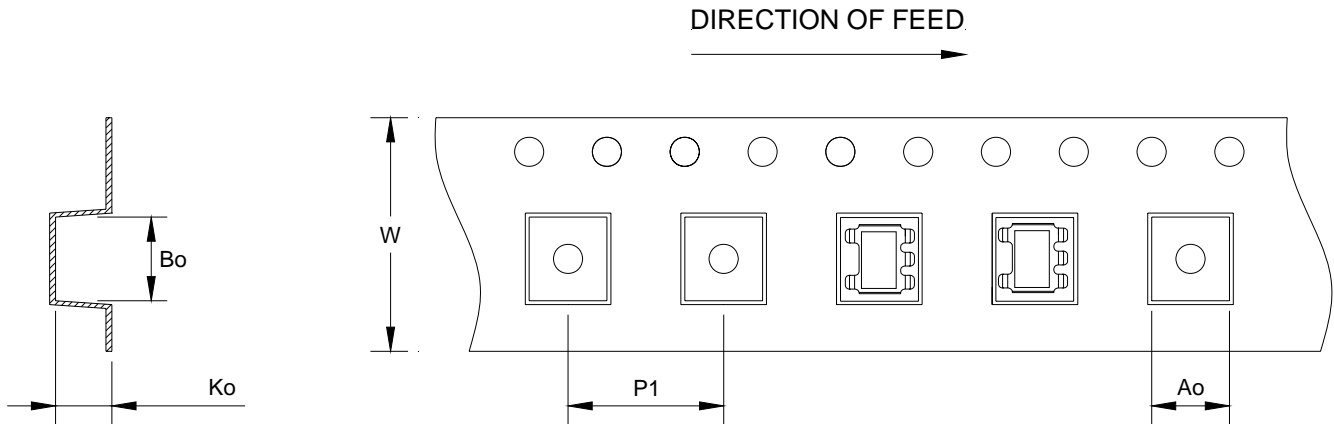
Amplitude Balance



Input Return Loss



Tape & Reel Information



Item	Dimension
Ao	4.00mm +/-0.1mm
Bo	4.30mm +/-0.1mm
Ko	2.9mm +/-0.1mm
W	12.00mm +/-0.3mm
P1	8.00mm +/-0.1mm

Ordering Information

Part Number	Package
MABA-010012-ES4302	Tape and Reel (2000 piece Reel)