

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

Rev. V1

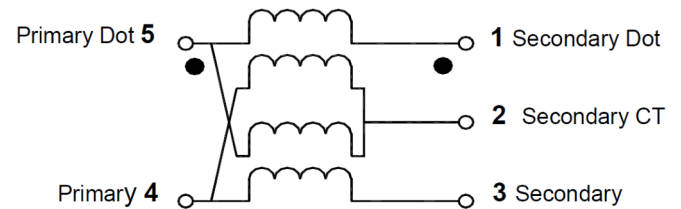
Features

- 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.

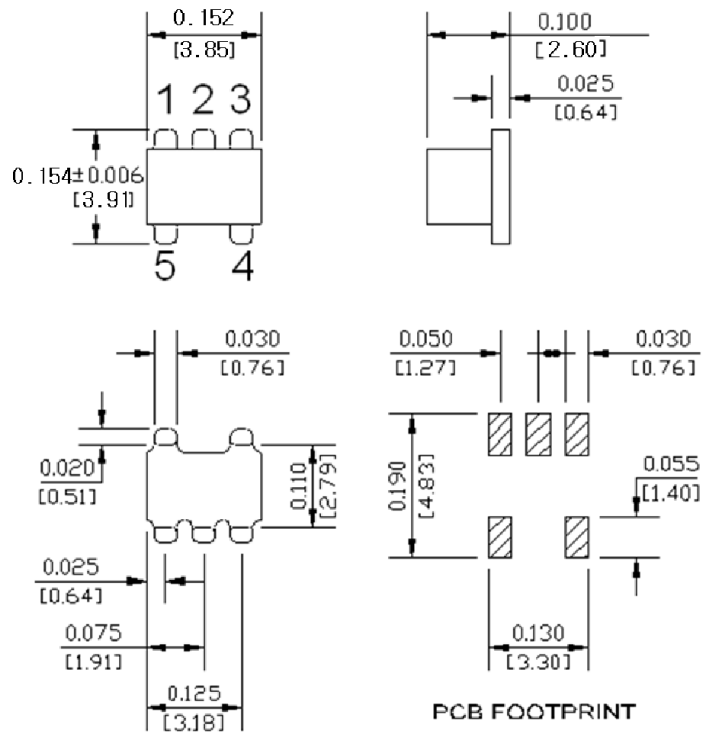
Schematic



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.

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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}

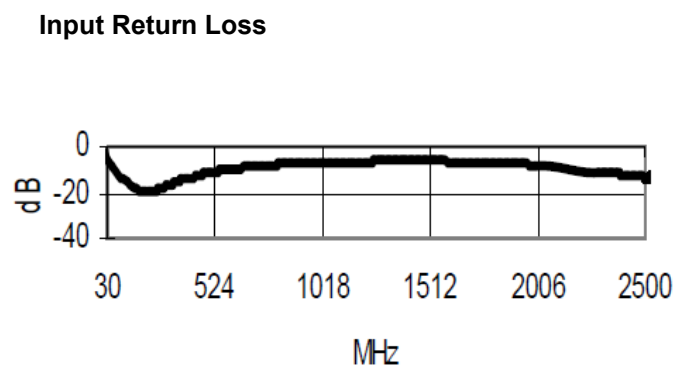
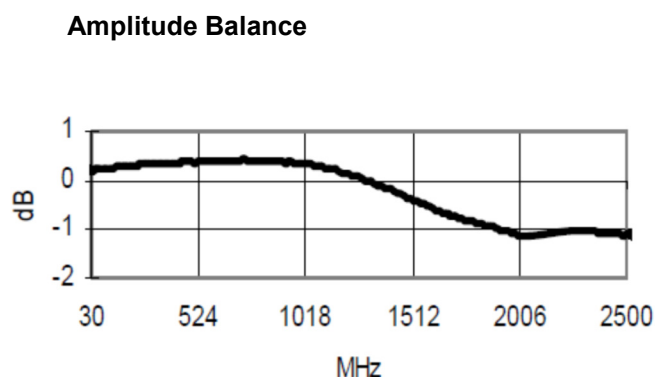
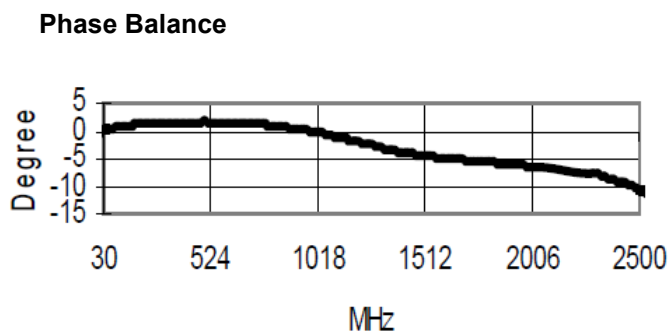
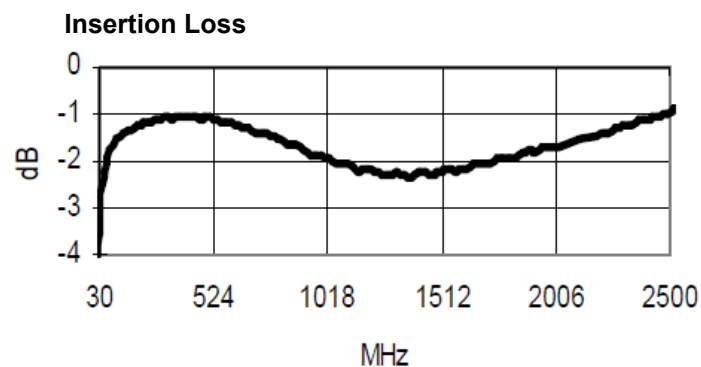
Parameter	Absolute Maximum
DC Power	250 mW
DC Current	50 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +125°C

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

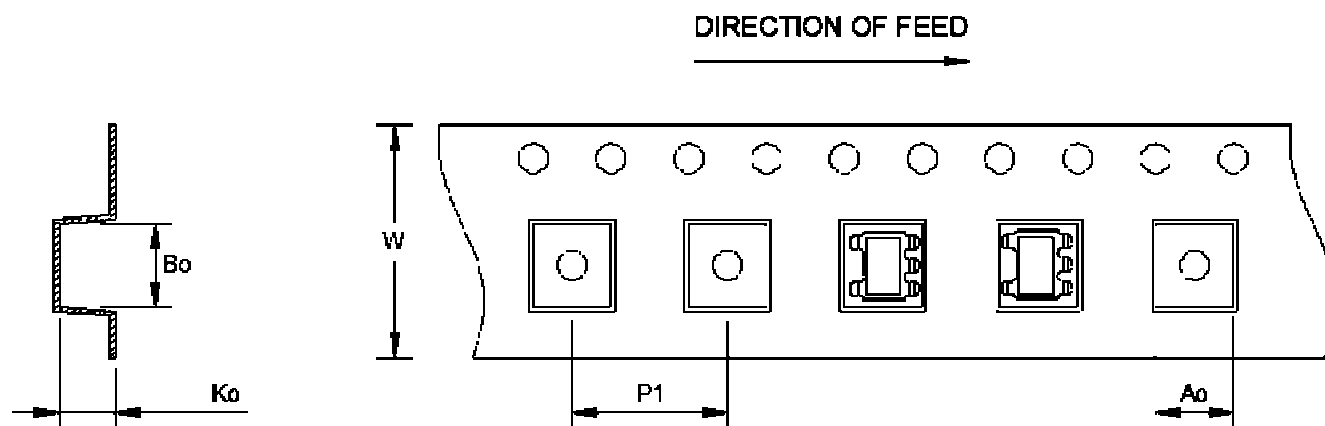
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Typical Performance Curves



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)