

Balun Transformer, 1:1 Transmission Line 50 - 1200 MHz

Rev. V3

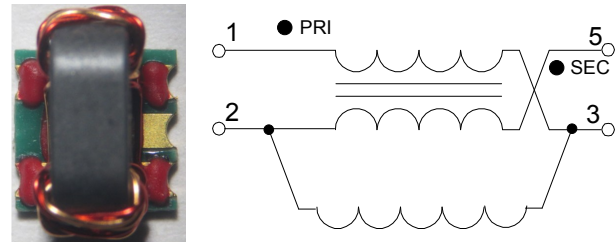
Features

- Surface Mount Package
- 1:1 Impedance Ratio
- Excellent Temperature Stability
- RoHS Compliant and Pb Free
- 260° Reflow Compatible
- Available on Tape and Reel

Description

The MABA-011058 is a 1:1 RF transmission line transformer in a low cost surface mount package. Ideally suited for high volume CATV/Broadband application. Suitable for use in 50 Ω and 75 Ω systems.

Functional Schematic



Pin Configuration

Pin #	Function	Pin #	Function
1	Primary Dot	4	No Connection
2	Primary	5	Secondary Dot
3	Secondary		

Electrical Specifications: Freq. = 50 - 1200 MHz, $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{IN} = 0 \text{ dBm}$

Parameter	Frequency Test Conditions (MHz)	Units	Min.	Typ.	Max.
Impedance Ratio	—	—	—	1:1	—
Insertion Loss 1 Through (Pin 1 - Pin 3)	50	dB	—	0.2	0.4
	870			0.6	0.8
	1002			0.7	0.9
	1200			0.9	1.1
Insertion Loss 2 Coupled (Pin 1 - Pin 5)	50	dB	—	0.4	0.5
	870			0.4	0.5
	1002			0.4	0.5
	1200			0.4	0.6
Amplitude Balance	50 - 870	dB	—	0.05	0.5
	870 - 1002			0.3	0.7
	1002 - 1200			0.4	0.8
Phase Balance (ref. value 180°)	50 - 1002	°	—	0.2	4.0
	1002 - 1200			1.8	5.0
Input Return Loss (Pin 1)	50 - 500	dB	21	29	—
	500 - 1002		17	27	
	1002 - 1200		16	24	

Ordering Information

Part Number	Package
MABA-011058	Tape & Reel
MABA-011058-TB	Customer Test Board

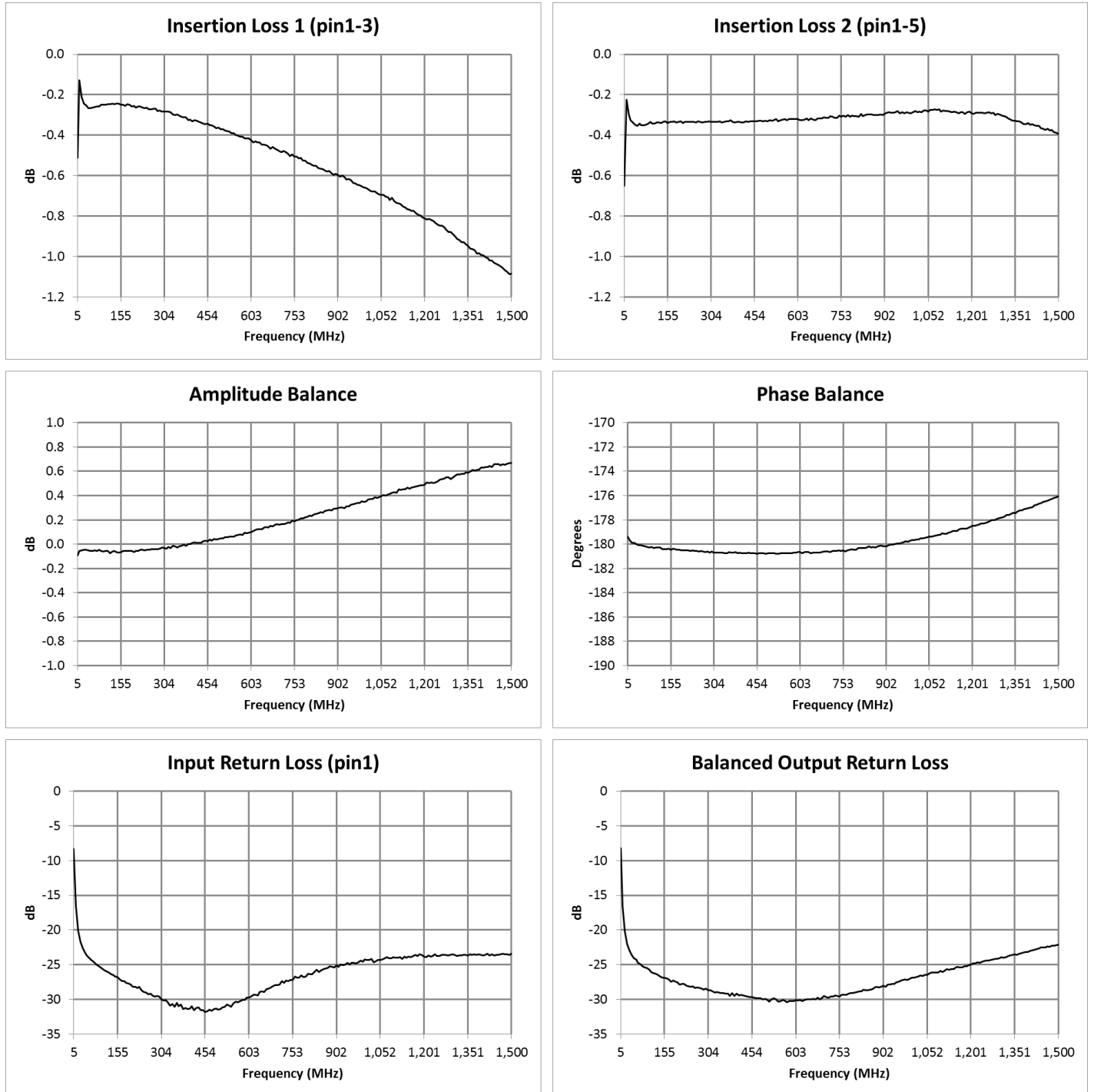
Recommended Maximum Ratings

Parameter	Rating
Input Power	500 mW
DC Current	500 mA
Operating Temperature	-40°C to $+85^\circ\text{C}$

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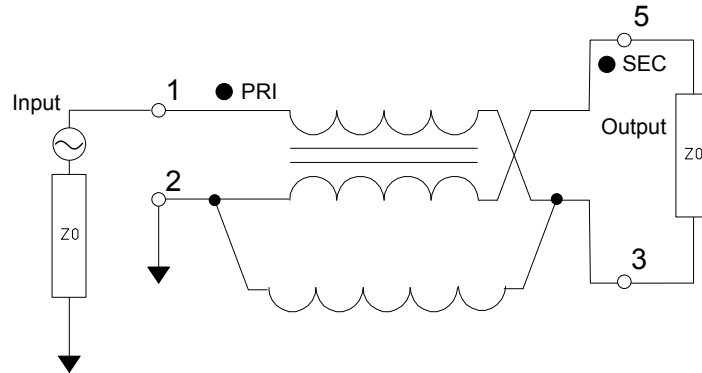
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Typical Performance Curves: $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{IN} = 0 \text{ dBm}$

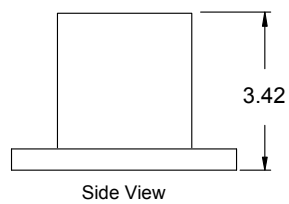
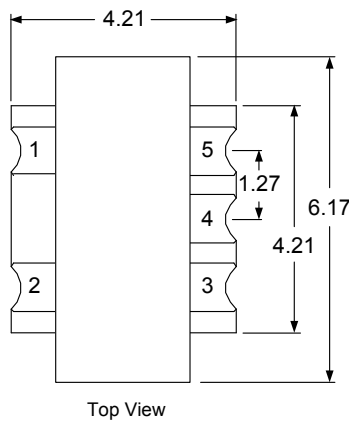


Full temperature plots available on request

Application Schematic

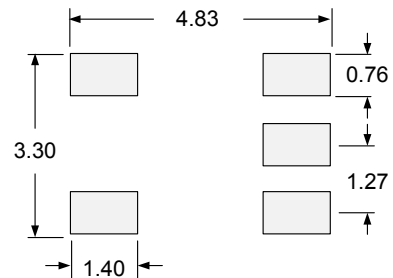


Outline Drawing



1. Dimensions in mm.
2. Tolerance: ± 0.2 mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Lead plating ENIG.

PCB Layout



Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel Size	mm	330
Tape Width	mm	16.00
Pitch	mm	8.00
Ao	mm	4.40
Bo	mm	6.50
Ko	mm	3.60
Orientation	-	F31
Reference Application Note ANI-019 for orientation		

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