MABA-011002

4:1 Step Down Balun Transformer
5 - 200 MHz

Rev. V3

Features

- Surface Mount Package
- 4:1 Step Down Transformer
- Excellent performance under DC bias current, also when current flows is imbalanced through outputs
- 260°C Reflow Compatible
- RoHS* Compliant, lead free
- Available on Tape and Reel.

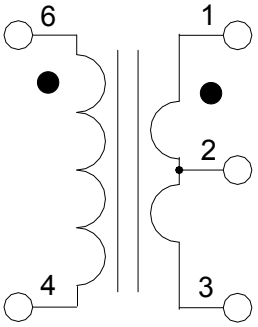
Description

The MABA-011002 is a 4:1 step down balun transformer.

This transformer is ideally suited for CATV Broadband applications.

Functional Schematic





Pin Configuration

Pin #	Function
1	Secondary Dot (output1)
2	Ground (center tap)
3	Secondary (output2)
4	Primary (RF ground)
5	Ground (not used)
6	Primary dot (input)

Electrical Specifications: Freq. = 5 - 200 MHz, T_A = +25°C, Z_0 = 75 Ω, P_{IN} = 0 dBm

Parameter	Frequency Test Conditions (MHz)	Units	Min.	Typ.	Max.
Impedance Ratio	—	ratio	—	4:1	—
Insertion Loss (pin 6 - pin 1)	5 - 50 50 - 150 150 - 200	dB	—	0.4 1.0 2.0	0.8 2.2 3.1
Insertion Loss (pin 6 - pin 3)	5 - 50 50 - 150 150 - 200	dB	—	0.4 1.1 2.4	0.8 2.5 3.6
Amplitude Balance	5 - 50 50 - 150 150 - 200	dB	—	0.0 0.0 0.3	±0.4 ±1.0 ±1.4
Phase Balance	5 - 50 50 - 200	°	—	0.6 0.8	±4 ±9
Input Return Loss (pin 6)	5 - 25 25 - 50 50 - 150 150 - 200	dB	17 12 5 3	20 15 9 5	—

Ordering Information

Part Number	Description
MABA-011002	900 piece reel
MABA-011002-TB	Customer Evaluation Board

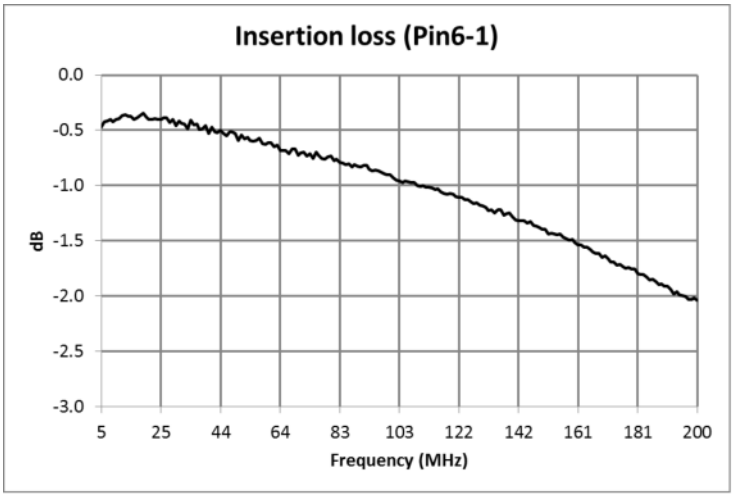
Recommended Maximum Ratings

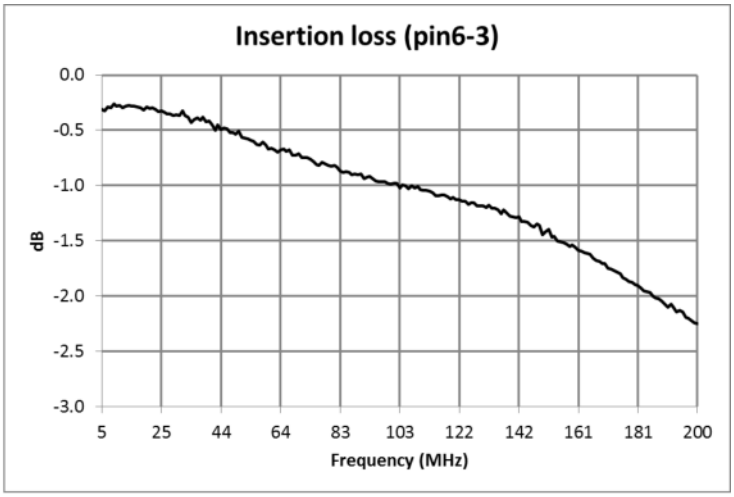
Parameter	Units
Input RF Power	1 W
Internal Load Dissipation	0.125 W
DC Bias Current	>900 mA
Operating Temperature	-40ºC - +85°C

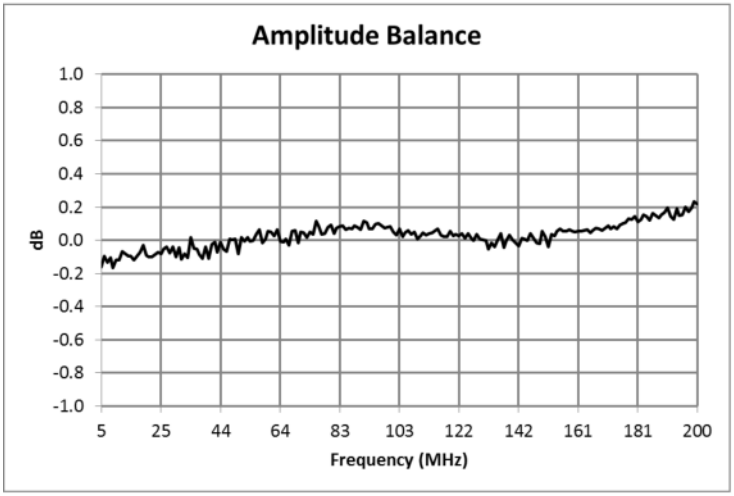
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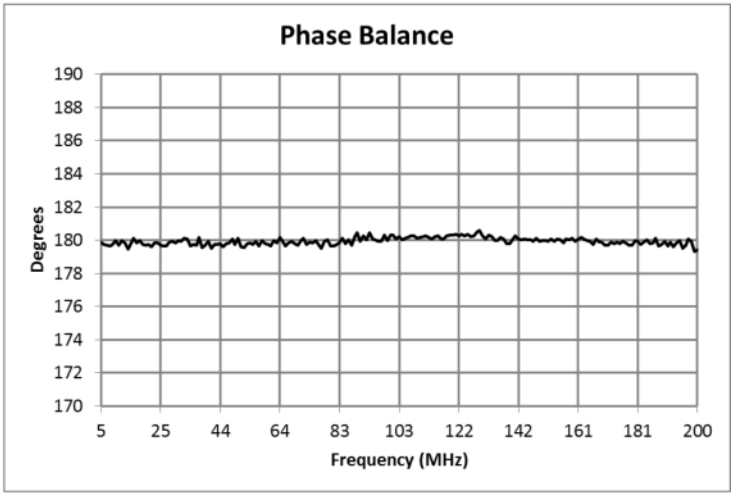
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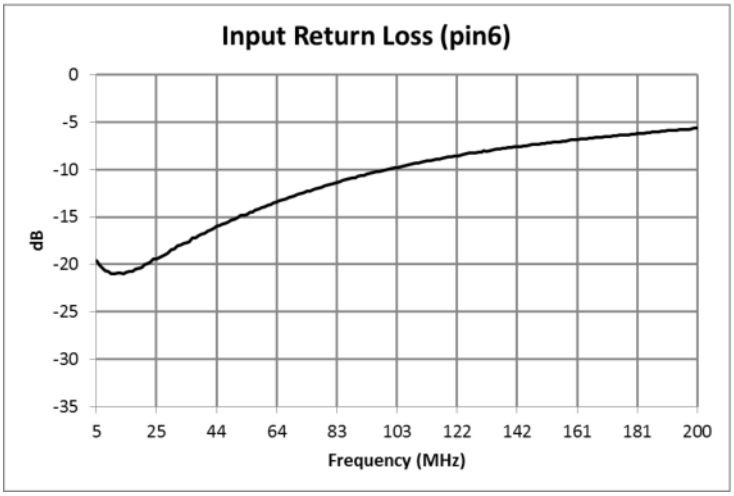
Typical Performance Curves











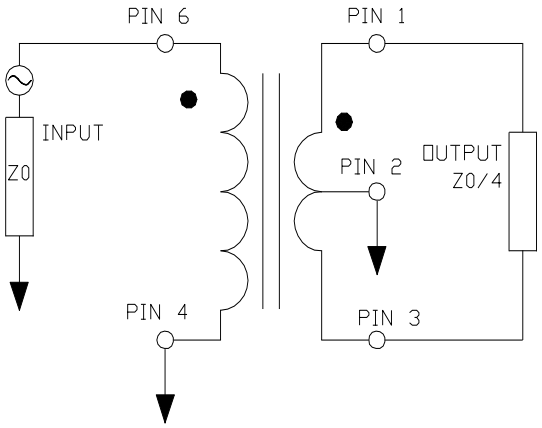
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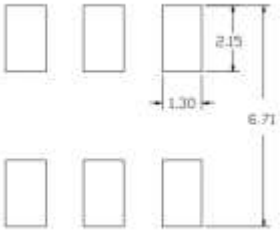
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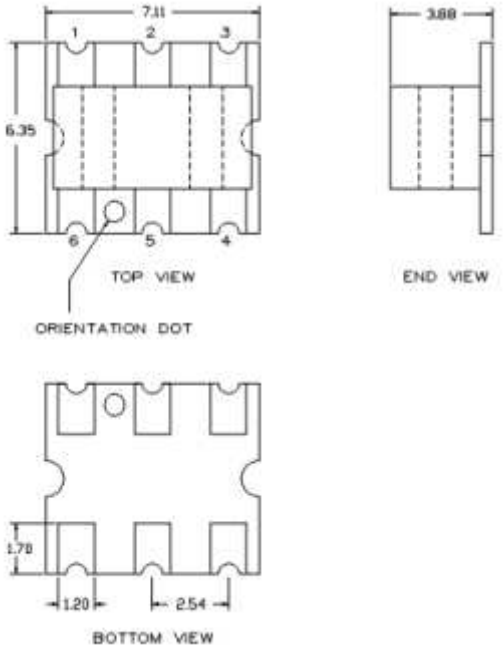
Application Circuit



PCB Layout



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.

Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	900
Reel Size	mm	330
Tape Width	mm	16.00
Pitch	mm	12.00
Ao	mm	6.60
Bo	mm	7.40
Ko	mm	4.10
Orientation	-	F38
Reference Application Note ANI-019 for orientation		

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