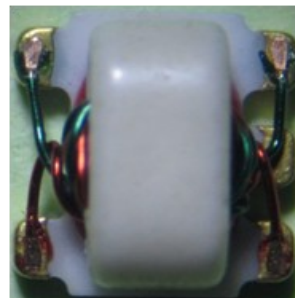


## Features

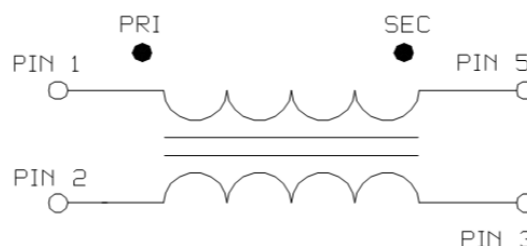
- 1:1 impedance
- Surface mount
- Available on tape and reel
- 260° reflow compatible
- RoHS compliant and Pb free
- Excellent temperature stability
- Suitable for all CATV, Broadband and FTTX applications.



## Description

MACOM's MABA-011042 is a 1:1 transformer. This transformer is ideally suited for CATV Broadband applications.

## Functional Schematic



## Ordering Information

Part Number	Package
MABA-011042	Tape & Reel
MABA-011042-TB	Customer test board

## Pin Configuration

Pin No.	Function
1	Primary Dot (ground)
2	Primary (input)
3	Secondary (output 2)
4	Not Connected
5	Secondary Dot (output 1)

**1:1 Transformer**  
**2500 – 3200 MHz**

Rev. V2

**Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 50 \Omega$ ,  $P_{in} = 0\text{dBm}$**

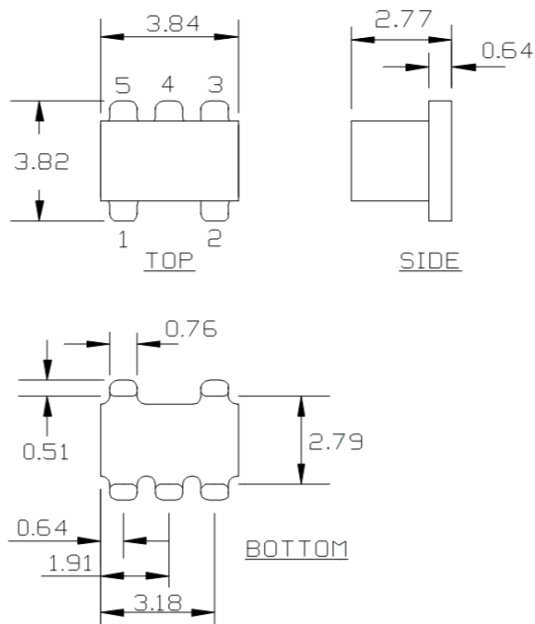
Parameter	Conditions	Units	Min	Typ	Max
Frequency Range		MHz	2500		3200
Impedance		$\Omega$		50	
Impedance Ratio				1:1	
Insertion Loss 1 (Pin2 - Pin5)	2500 - 2800 MHz	dB	-	0.9	1.4
	2800 - 3200 MHz	dB	-	1.0	1.9
Insertion Loss 2 (Pin2 - Pin3)	2500 - 2800 MHz	dB	-	0.6	1.3
	2800 - 3200 MHz	dB	-	0.8	1.6
Amplitude Balance	2500 - 3200 MHz	dB	-	0.2	1.1
Phase Balance	2500 - 2800 MHz	$^\circ$	-	1.5	6.0
	2800 - 3200 MHz	$^\circ$	-	0.2	7.0
Input Return Loss (Pin2)	2500 - 3200 MHz	dB	10	20	-

## Recommended Maximum Ratings

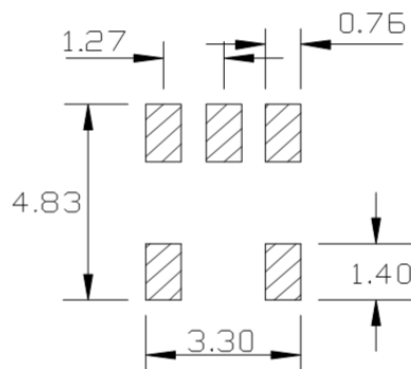
Parameter	Units	Min	Max
Input Power	mW		500
DC Current	mA		500
Operating Temperature Range	$^\circ\text{C}$	-40	+125

Full temperature plots available on request

## Outline Drawing

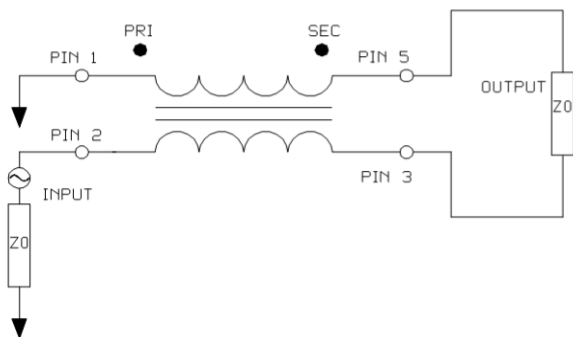


## PCB Layout



1. Dimensions in mm.
2. Tolerance:  $\pm 0.2$ mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Lead plating (Au)

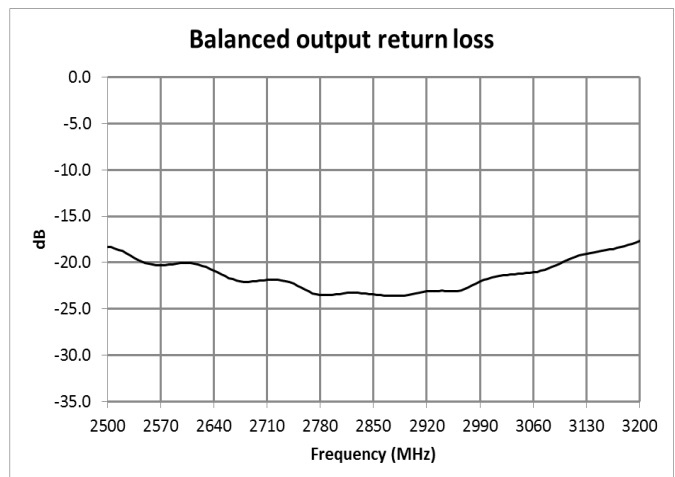
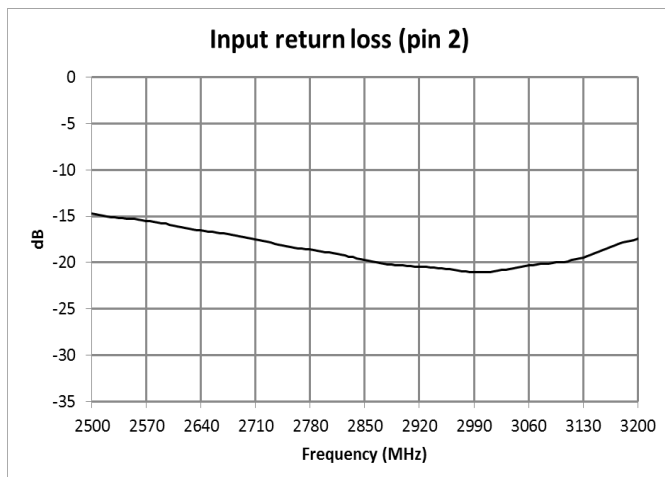
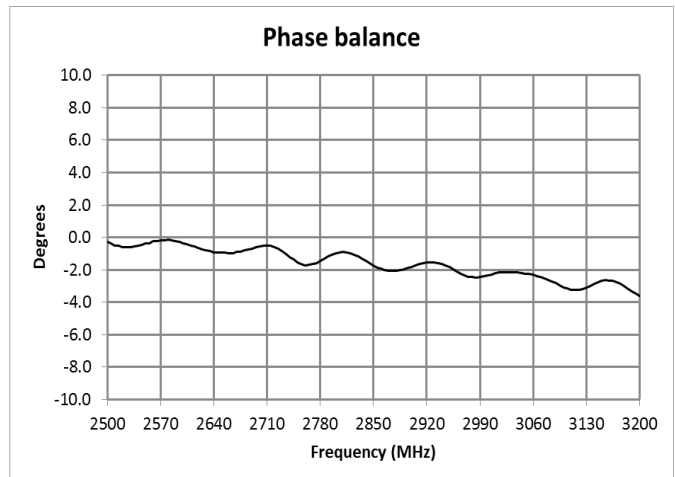
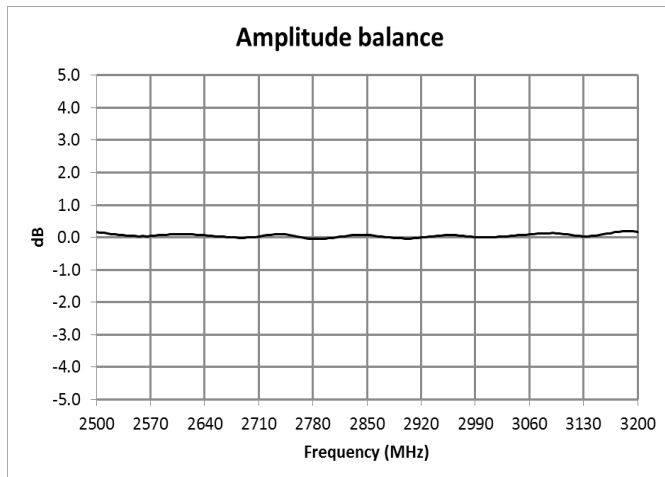
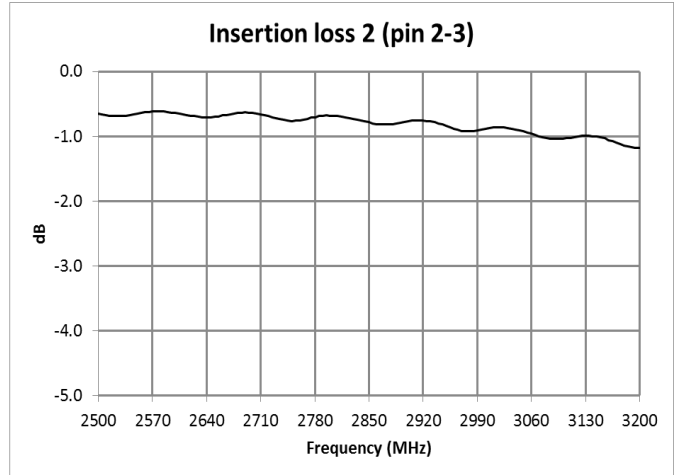
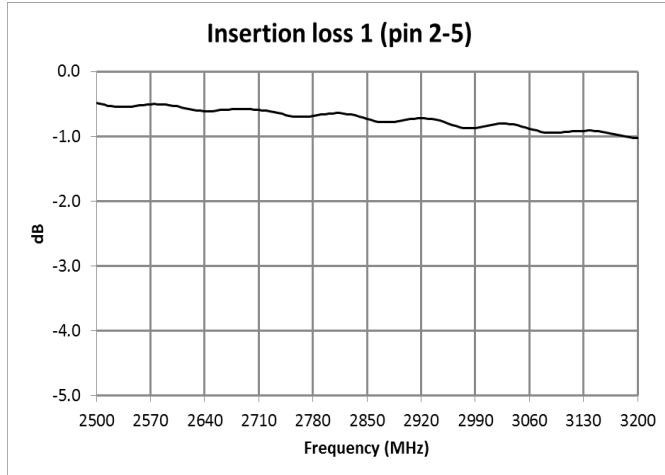
## Application circuit



## Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel Size	mm	330
Tape Width	mm	12.00
Pitch	mm	8.00
Ao	mm	4.00
Bo	mm	4.00
Ko	mm	2.90
Orientation	-	F5
Reference Application Note ANI-019 for orientation		

## Typical Performance Curves



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