

Features

- 50 Ω Unbalanced / 50 Ω Balanced
- Wide Bandwidth
- Excellent RF Performance & Temperature Stability from -55°C to +105°C
- MIL-STD-202 Screening Available

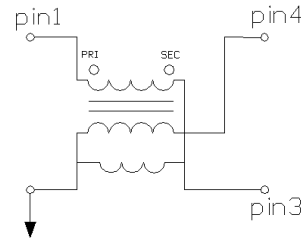
Applications

- Aerospace & Defense
- ISM

Description

The MABA-011129 is a 1:1 balun transformer ideally suited multiple wide band applications.

Functional Schematic



Pin Configuration³

Pin #	Function	Pin #	Function
2, 5, 6	Not used	3	Output 2 (Non Inverting)
1	Input	4	Output 1 (Inverting)

3. MACOM recommends connecting unused package pins to ground.

Electrical Specifications: Freq. = 50 - 3000 MHz

Parameter	Conditions	Units	Min.	Typ.	Max.
Impedance Ratio	-	ratio	—	1:1	—
Insertion Loss (pin 1 - pin 4)	50 - 1000 MHz	dB	—	0.7	1.1
	1000 - 3000 MHz			1.3	1.7
Insertion Loss (pin 1 - pin 3)	50 - 1000 MHz	dB	—	0.7	1.1
	1000 - 3000 MHz			1.9	2.5
Balanced Insertion Loss	50 - 3000 MHz	dB	—	0.7 1.4	1.1 1.8
Amplitude Balance	50 - 1000 MHz	dB	0.5	0.2	± 0.5
	1000 - 3000 MHz		0.5	1.5	± 2.1
Phase Balance	50 - 1000 MHz	°	5.0	3.0	± 3
	1000 - 3000 MHz		5.0	7.0	± 11
Input Return Loss (pin 1)	50 - 2000 MHz	dB	11	16	—
	2000 - 3000 MHz		7	9	—
Output Return Loss (pin 3-4)	50 - 2000 MHz	dB	12	16	—
	2000 - 3000 MHz		8	10	—

Ordering Information^{1,2}

Part Number	Package
MABA-011129	bulk
MABA-011129-TB	Sample Board

1. Reference Application Note M513 for reel size information.
2. All sample boards include 5 loose parts.

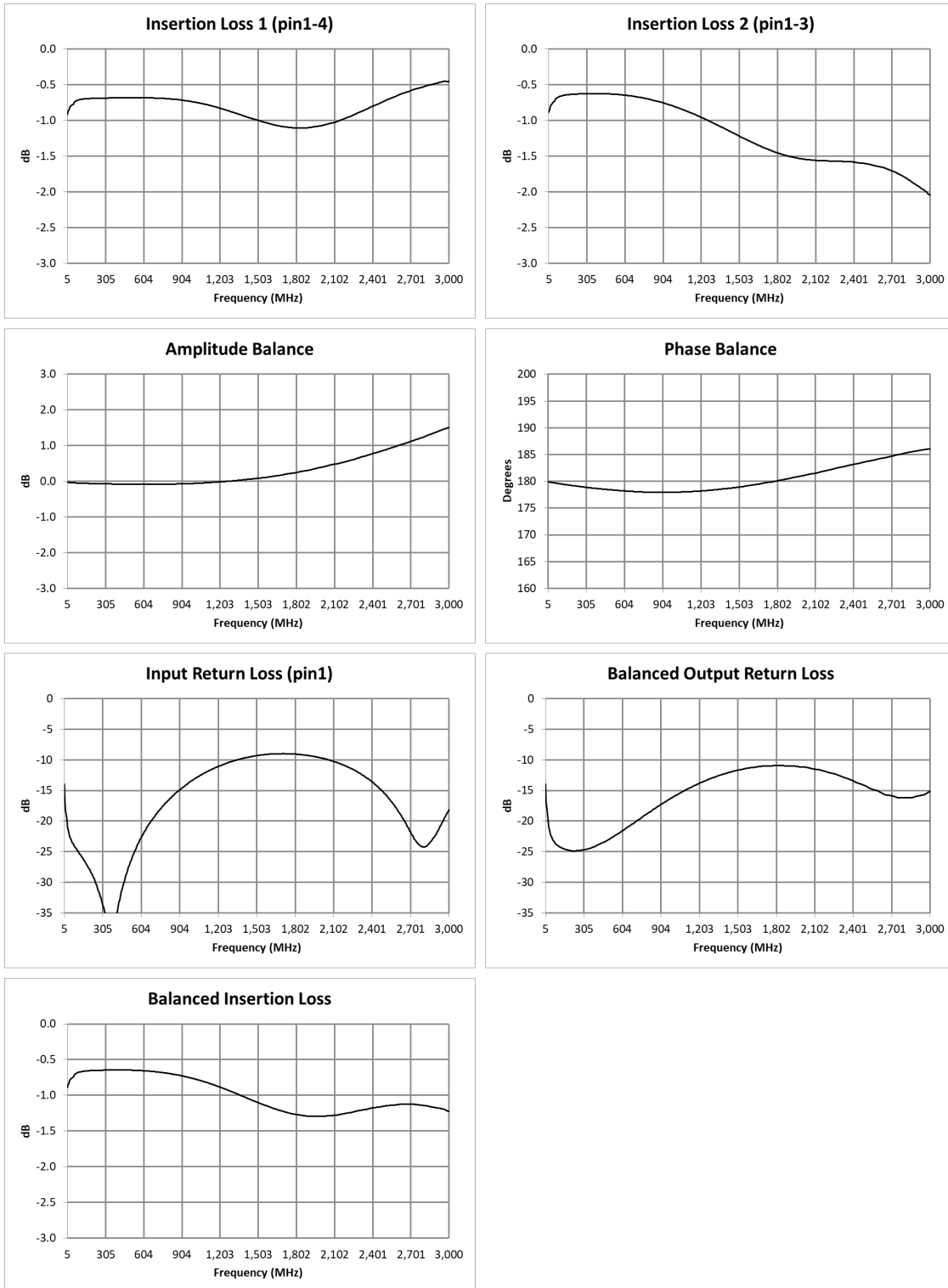
* Restrictions on Hazardous Substances, compliant to current RoHS EU directive.

Absolute Maximum Ratings^{4,5,6}

Parameter	Absolute Maximum
Input RF Power	2 W
DC Current	1 A
Operating Temperature	-55°C to +105°C

4. Exceeding any one or combination of these limits may cause permanent damage to this device.
5. MACOM does not recommend sustained operation near these survivability limits.
6. Specified at +25°C only.

Typical Performance Curves



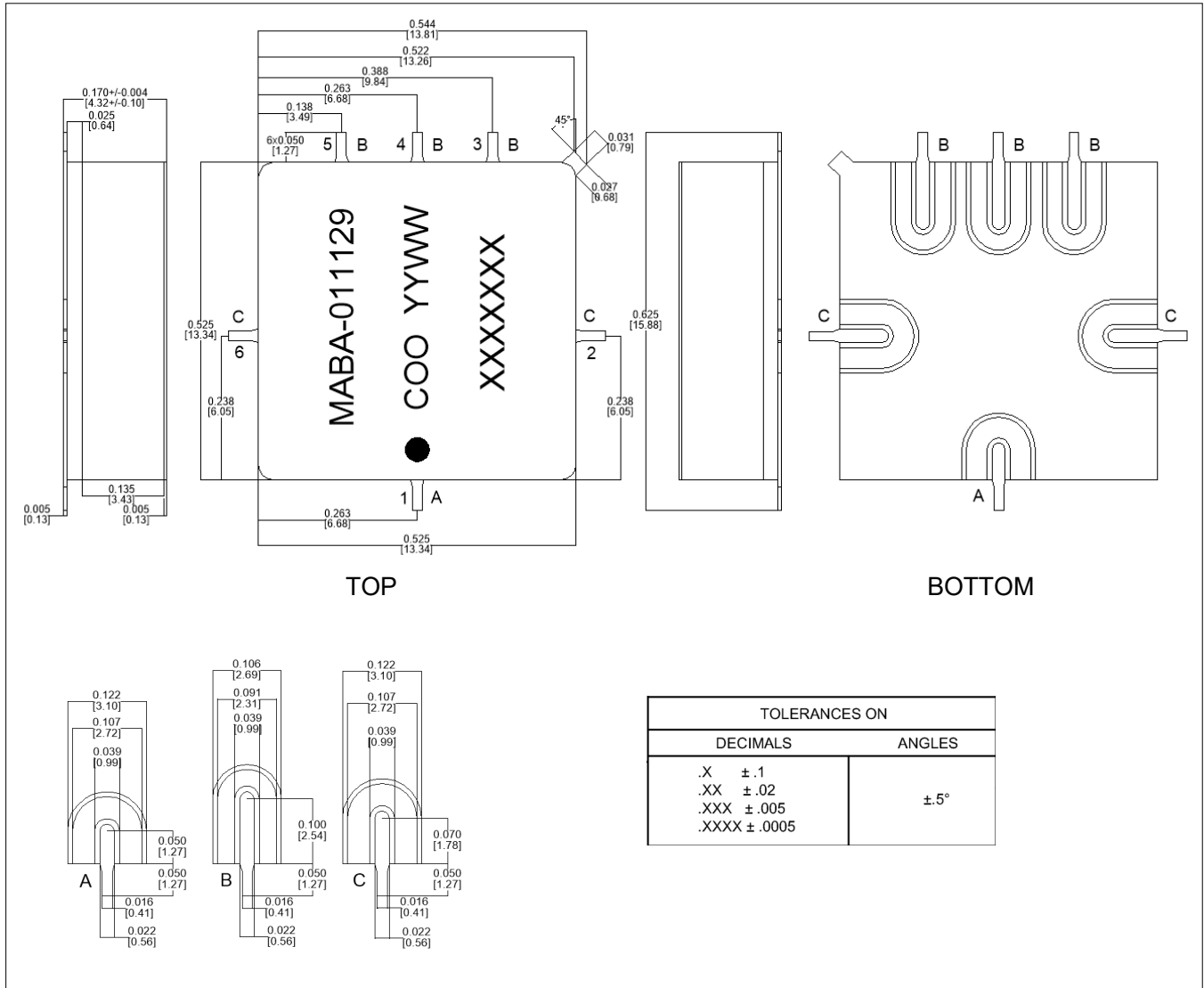
1:1 Transmission Line Balun
50 - 3000 MHz



MABA-011129

Rev. V1

Outline Drawing^{7,8,9,10}



- 7. Dimensions in inches[mm].
- 8. Model number and lot code are printed on the tray
- 9. Weight (approx.): 2 Grams

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