

MABA-011010

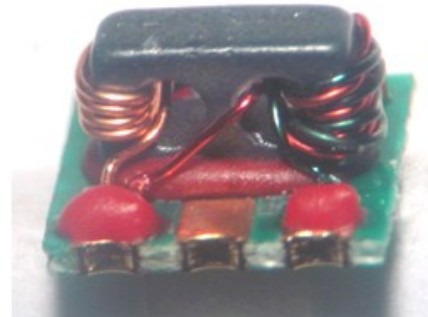


Transformer, 1:1.33
5 – 1200 MHz

Rev. V2

Features

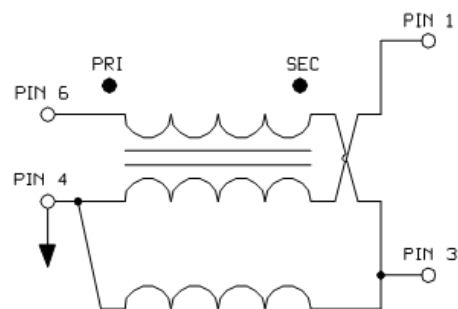
- Surface mount
- 1:1.33 Impedance ratio
- RoHS compliant and Pb free
- 260°C reflow compatible
- Excellent temperature stability
- Available on tape and reel
- Suitable for all CATV, Broadband and FTTx applications



Description

MACOM's MABA-011010 is a 1:1.33 transformer with tertiary winding in a low cost surface mount package. Ideally suited for CATV Broadband applications.

Functional Schematic



Ordering Information

Part Number	Package
MABA-011010	Tape & Reel
MABA-011010-TB	Customer Test Board

Pin Configuration

Pin No.	Function
1	Secondary Dot
2	Not Used
3	Secondary
4	Primary
6	Primary Dot

Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{in} = 0\text{dBm}$

Parameter	Conditions	Units	Min	Typ	Max
Frequency Range		MHz	5		1200
Impedance		Ω		75	
Impedance Ratio				1:1.33	
Insertion Loss (Pin6 - Pin1)	5 - 500 MHz	dB	-	0.95	1.1
	500 - 1000 MHz	dB	-	0.95	1.2
	1000 - 1200 MHz	dB	-	0.98	1.3
Insertion Loss (Pin6 - Pin3)	5 - 500 MHz	dB	-	0.90	1.1
	500 - 1000 MHz	dB	-	1.00	1.4
	1000 - 1200 MHz	dB	-	1.30	1.65
Amplitude Balance	5 - 500 MHz	dB	-	0.06	0.3
	500 - 1200 MHz	dB	-	0.1	0.9
Phase Balance	5 - 500 MHz	$^\circ$	-	3.0	± 6
	500 - 1200 MHz	$^\circ$	-	5.0	± 8
Input Return Loss (Pin6)	5 - 500 MHz	dB	20	25	-
	500 - 1000 MHz	dB	17	21	-
	1000 - 1200 MHz	dB	15.5	19	-

Recommended Maximum Ratings

Parameter	Units	Min	Max
Input RF Power	mW		250
DC Current	mA		200
Operating Temperature Range	$^\circ\text{C}$	-40	+85

Full temperature plots available on request

Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel size	mm	330
Tape width (W)	mm	12.00
Pitch (P_1)	mm	8.00
A_0	mm	4.5
B_0	mm	4.5
K_0	mm	2.73
Orientation	-	F31

Reference Application note ANI-019 for orientation

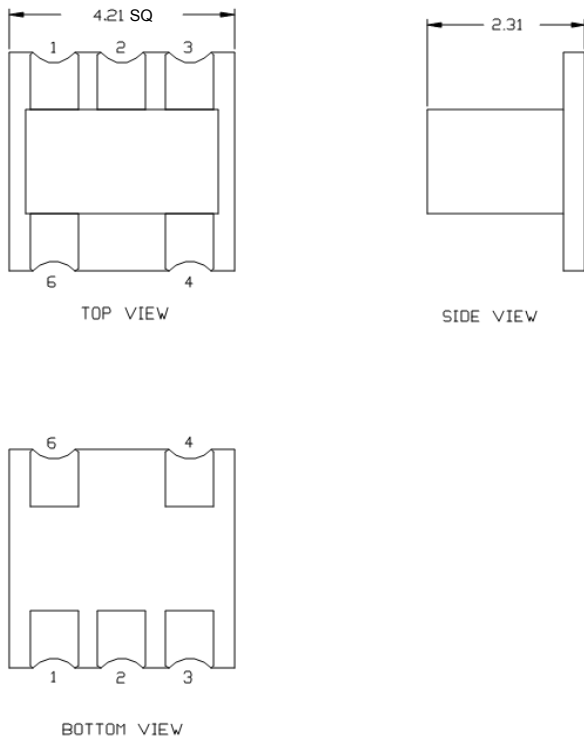
MABA-011010



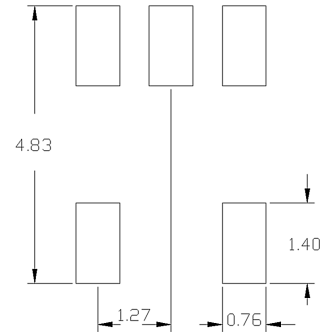
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Outline Drawing

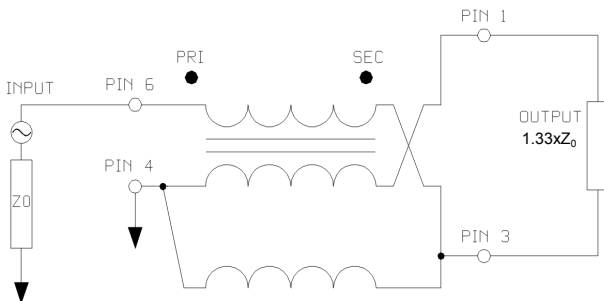


PCB Layout

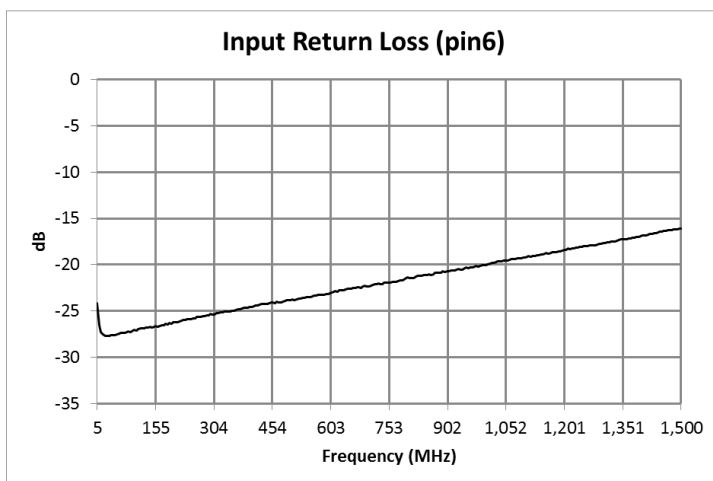
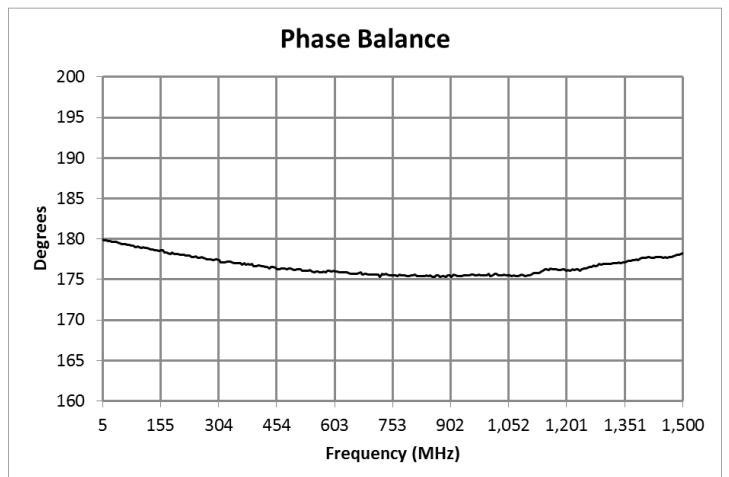
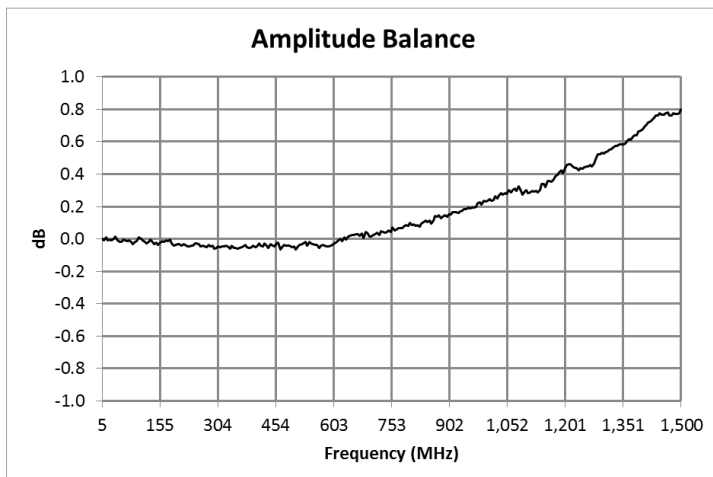
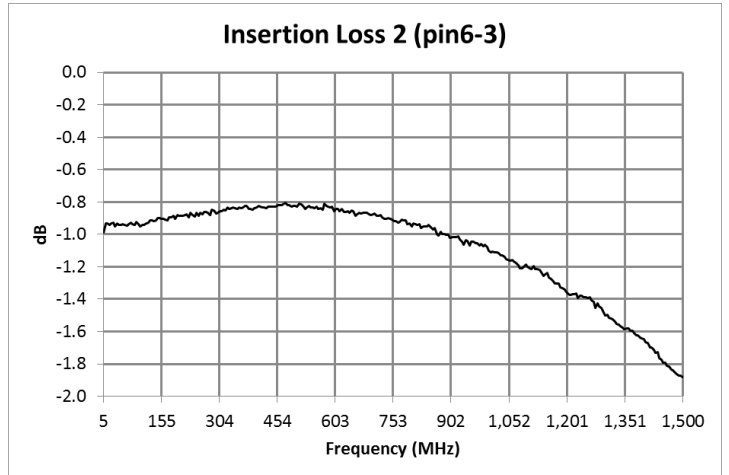
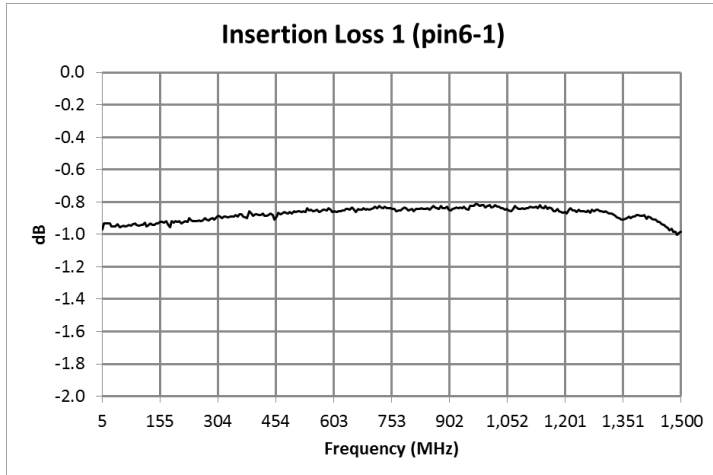


1. Dimensions in mm.
2. Tolerance: ± 0.2 mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Plating finish: CuSn6

Application Circuit



Typical Performance Curves



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Electrical Specifications: $Z_0 = 75\Omega$, $T_A = 25^\circ\text{C}$, $P_{in} = 0\text{dBm}$

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