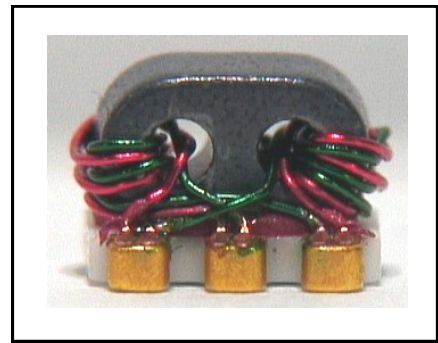


1:1 Transmission Line Transformer with center tap 5 - 1000 MHz

V2

Features

- 1:1 impedance
- Surface mount
- Centre tap on secondary
- 260° reflow compatible
- RoHS Compliant and Pb free
- Available on tape and reel



Description

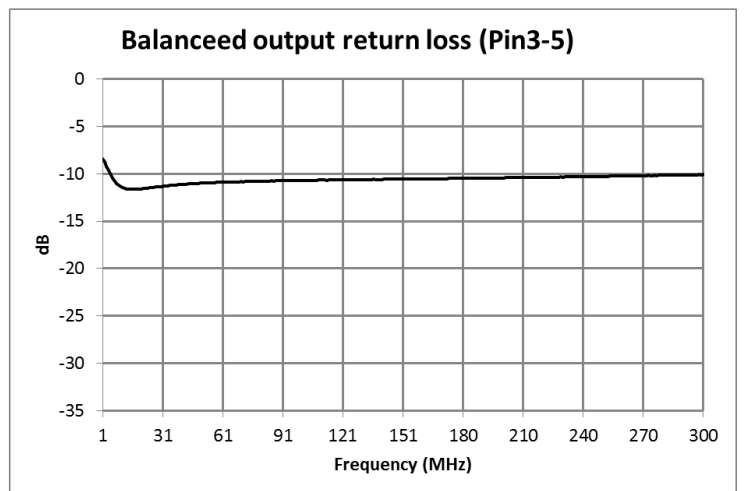
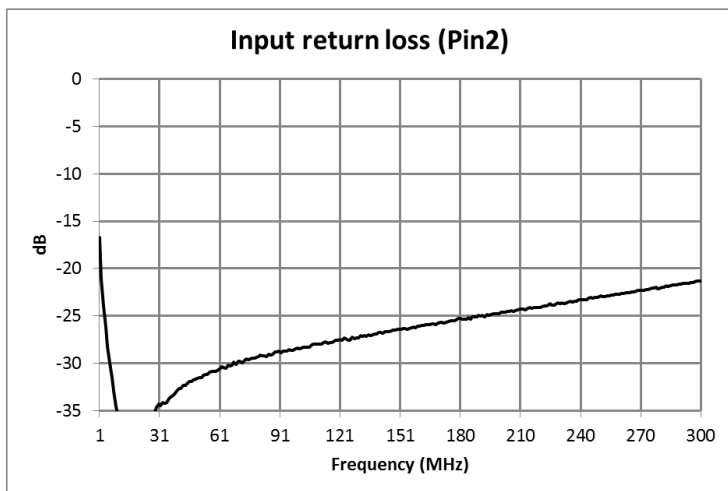
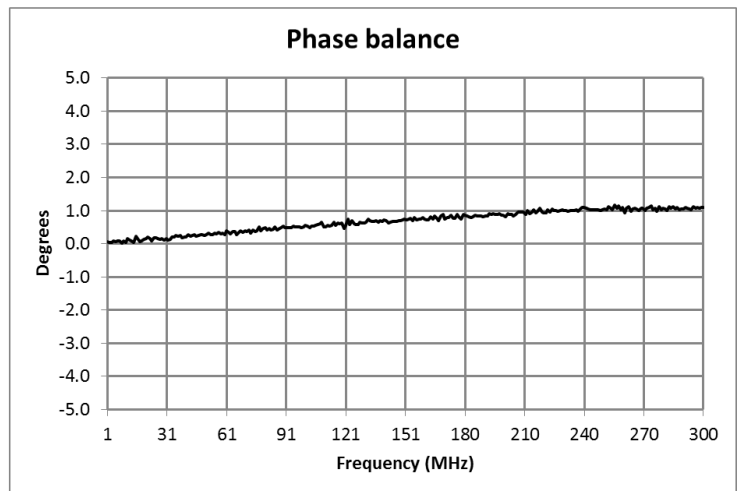
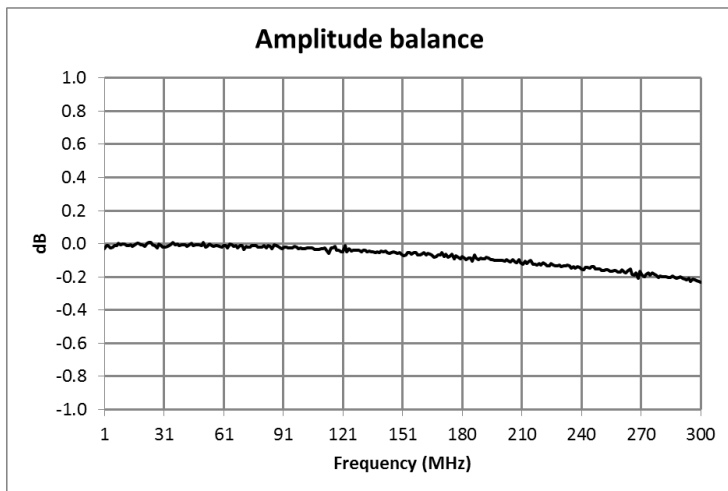
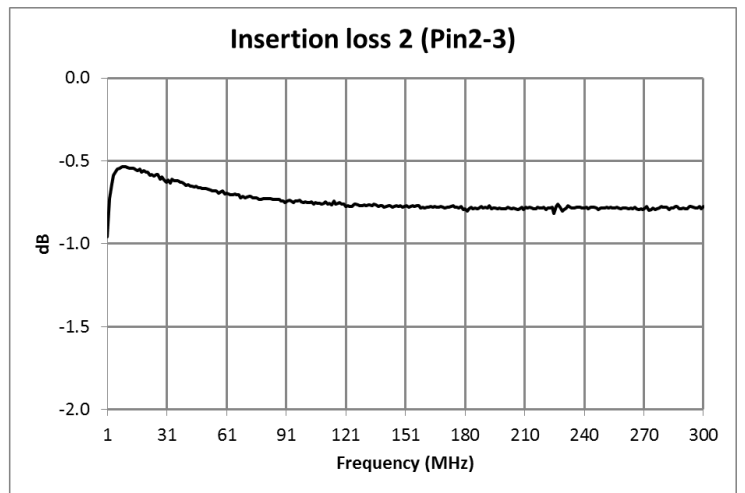
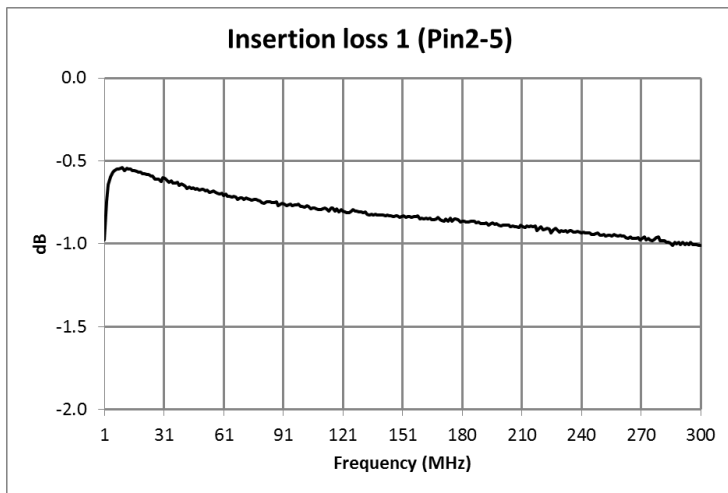
MACOM's MABA-011016 is a 1:1 RF Transmission Line transformer in a low cost, surface mount package. Excellent return loss. Ideally suited for high volume wireless applications.

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

Parameter	Conditions	Units	Min	Typ	Max
Frequency Range		MHz	5		1000
Impedance		Ω		50	
Impedance Ratio				1:1	
Insertion Loss 1 (Pin5 - Pin1)	5 - 870 MHz	dB	-	0.8	1.6
	870 - 1000 MHz	dB	-	1.2	1.8
Insertion Loss 2 (Pin5 - Pin3)	5 - 630 MHz	dB	-	0.7	1.2
	630 - 1000 MHz	dB	-	1.0	1.5
Amplitude Balance	5 - 500 MHz	dB	-	0.02	0.5
	500 - 1000 MHz	dB	-	0.01	0.7
Phase Balance	5 - 500 MHz	$^\circ$	-	1.5	6.0
	500 - 1000 MHz	$^\circ$	-	2.2	8.0
Input Return Loss (Pin5)	5 - 300 MHz	dB	16	24	-
	300 - 750 MHz	dB	10	16	-
	750 - 1000 MHz	dB	8	13	-

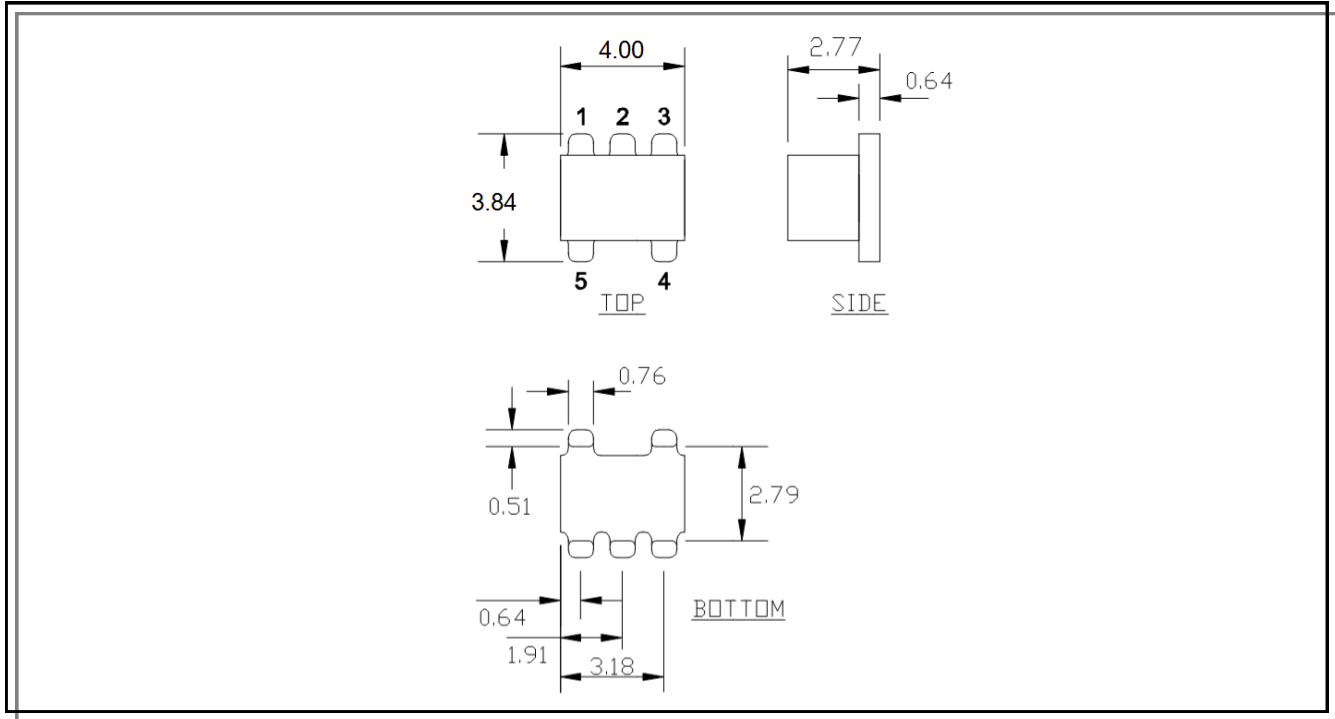
1:1 Transmission Line Transformer with center tap 5 - 1000 MHz

V2



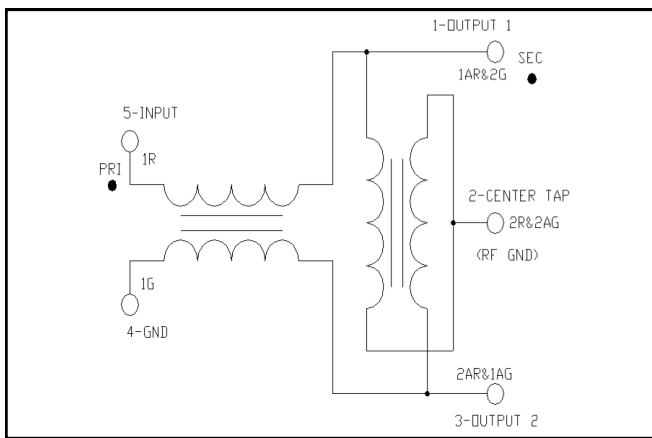
Electrical Specifications: $Z_0 = 50\Omega$, $T_A = 25^\circ\text{C}$, $P_{in} = 0\text{dBm}$

Outline Drawing

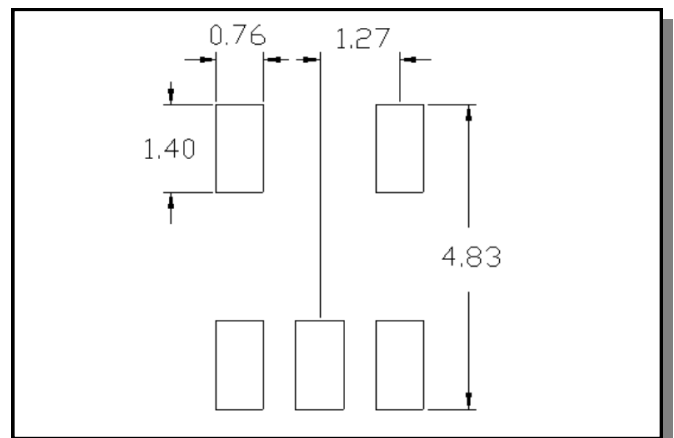


1. Dimensions in mm.
2. Tolerance: ± 0.2 mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Finish: Electroless nickel immersion gold (ENIG)

Schematic



Recommended Footprint



1:1 Transmission Line Transformer with center tap 5 - 1000 MHz

V2

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	4.20
Bo	mm	4.50
Ko	mm	3.20
Orientation	-	F5
Reference Application Note ANI-019 for orientation		

Ordering Information

Part Number	Description
MABA-011016	Tape & Reel
MABA-011016-TB	Customer test board

Recommended Maximum Ratings

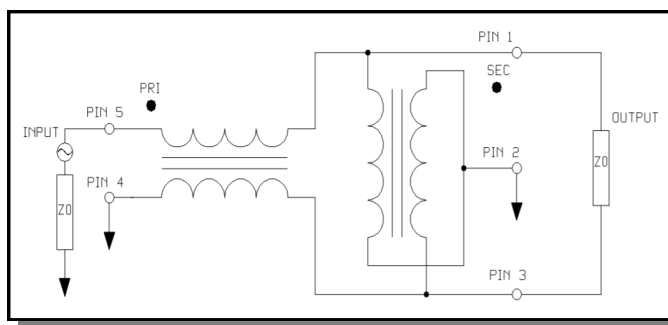
Parameter	Units	Min	Max
Input Power	mW		250
DC Current	mA		240
Operating Temperature Range	°C	-40	+85

Full temperature plots available on request

Pin Configuration

Pin No.	Function
1	Secondary Dot (output 1)
2	Secondary Centre Tap (ground)
3	Secondary (output 2)
4	Primary (ground)
5	Primary Dot (input)

Application circuit



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