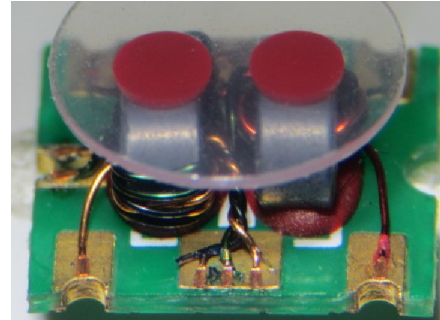


Transformer, 1:2 Transmission Line Balun 5 MHz - 1200 MHz

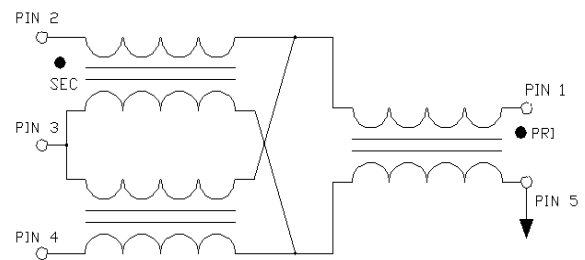
Rev. V3

Features

- 1:2 impedance ratio
- Transmission line Transformer
- Surface mount
- Available on tape and reel
- 260°C reflow compatible
- RoHS Compliant and Pb free
- Excellent temperature stability
- Can be used on 50Ω and 75Ω systems



Schematic



Pin Configuration

Pin No.	Function
1	Input (PRI dot)
2	Output 1 (SEC dot)
3	Centre tap (RF Ground)
4	Output 2 (SEC)
5	Ground (PRI)

Ordering Information

Part Number	Description
MABA-011029	Tape & Reel
MABA-011029-TB	Customer Evaluation Board

Transformer, 1:2 Transmission Line Balun
5 MHz - 1200 MHz

Rev. V3

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

Parameter	Conditions	Units	Min	Typ	Max
Frequency Range		MHz	5		1200
Impedance		Ω		75	
Impedance Ratio				1:2	
Insertion Loss 1 (Pin 1 to pin 2)	5 - 50 MHz	dB	-	0.30	0.40
	50 - 400 MHz	dB	-	0.50	0.80
	400 -1000 MHz	dB	-	0.90	2.00
	1000 -1200 MHz	dB	-	1.60	2.70
Insertion Loss 2 (Pin 1 to pin 4)	5 - 50 MHz	dB	-	0.50	0.60
	50 - 400 MHz	dB	-	0.70	1.20
	400 -1000 MHz	dB	-	1.50	3.00
	1000 -1200 MHz	dB	-	2.40	3.90
Amplitude Balance	5 - 50 MHz	dB	-0.30	0.10	0.30
	50 - 400 MHz	dB	-0.90	0.20	0.90
	400 -1200 MHz	dB	-2.20	0.50	2.20
Phase Balance	5 - 50 MHz	$^\circ$	-2.0	0.20	2.0
	50 - 400 MHz	$^\circ$	-6.0	0.70	6.0
	400 -1000 MHz	$^\circ$	-9.0	0.50	9.0
Input Return Loss (Pin 1)	5 - 50 MHz	dB	20	27	-
	50 - 400 MHz	dB	18	28	-
	400 -1000 MHz	dB	9	16	-
	1000 -1200 MHz	dB	7	12	-

Tape & Reel Information
Recommended Maximum Ratings

Parameter	Units	Min	Max
Input Power	mW		250
DC Current	mA		600
Operating Temperature Range	$^\circ\text{C}$	-40	+85

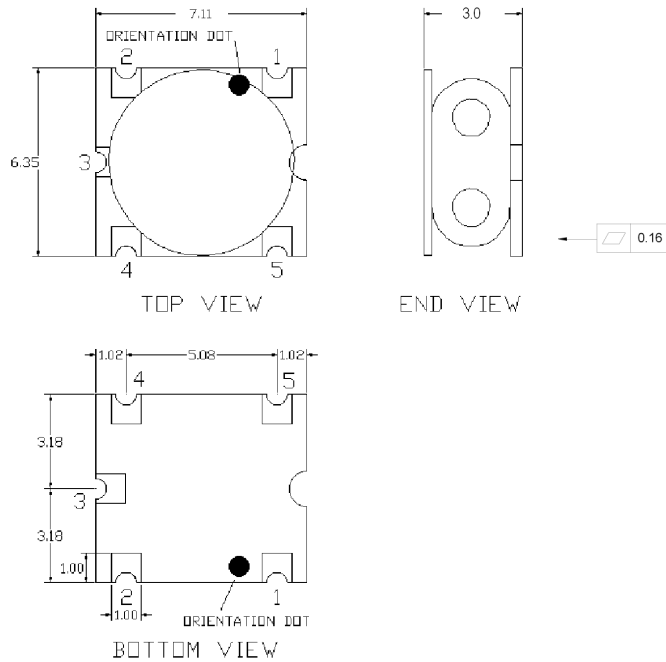
Temperature data available on request

Parameter	Units	Value
Qty per reel	-	900
Reel Size	mm	330
Tape Width	mm	16.00
Pitch	mm	12.00
Ao	mm	6.70
Bo	mm	7.50
Ko	mm	3.60
Orientation	-	F33
Reference Application Note ANI-019 for orientation		

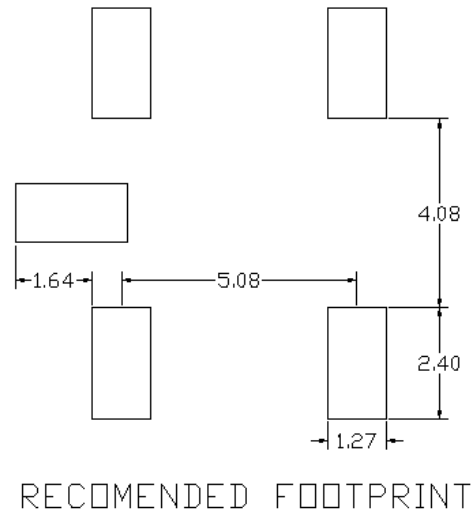
Transformer, 1:2 Transmission Line Balun 5 MHz - 1200 MHz

Rev. V3

Outline Drawing

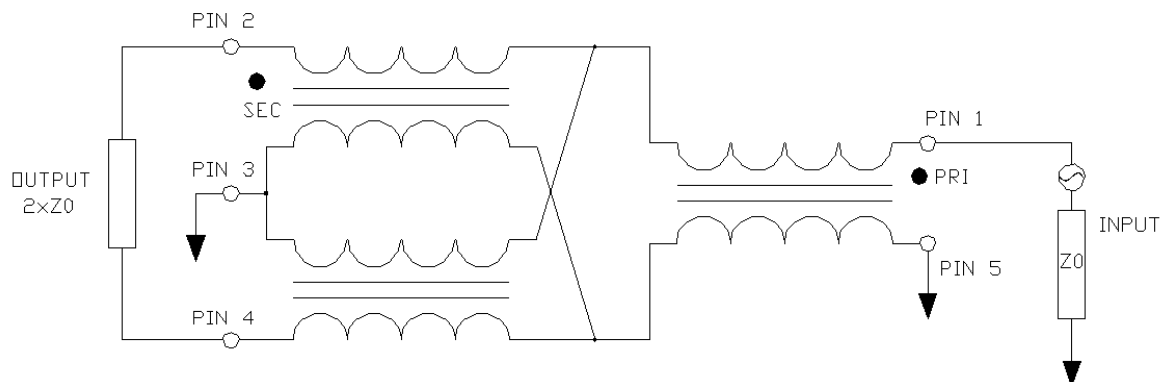


Recommended Footprint



1. Dimensions in mm.
2. Tolerance: ± 0.2 mm unless otherwise noted.
3. Model number and lot code printed on reel.
4. Plating finish: ENIG on both sides, 0.05 to 0.1 μ m gold over 3 to 6 μ m nickel

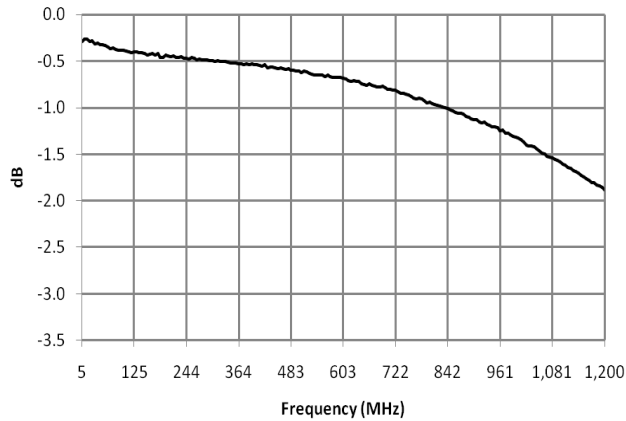
Application Circuit



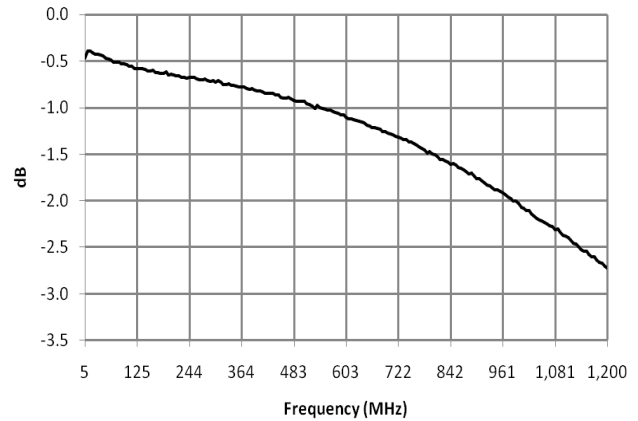
Transformer, 1:2 Transmission Line Balun 5 MHz - 1200 MHz

Rev. V3

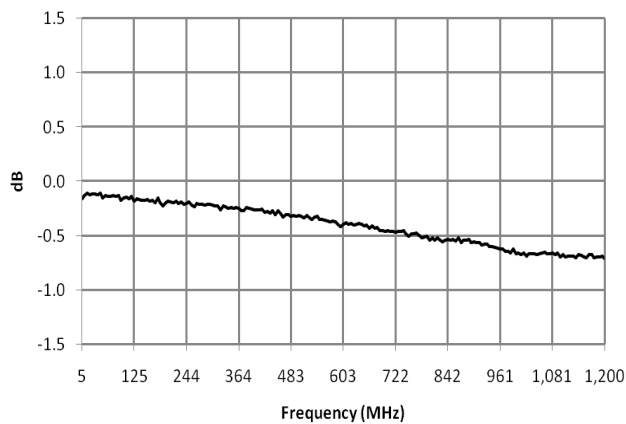
Insertion Loss 1 (pin1-2)



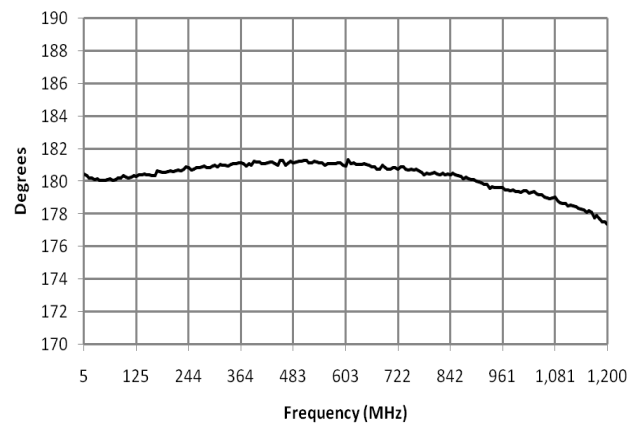
Insertion Loss 2 (pin1-4)



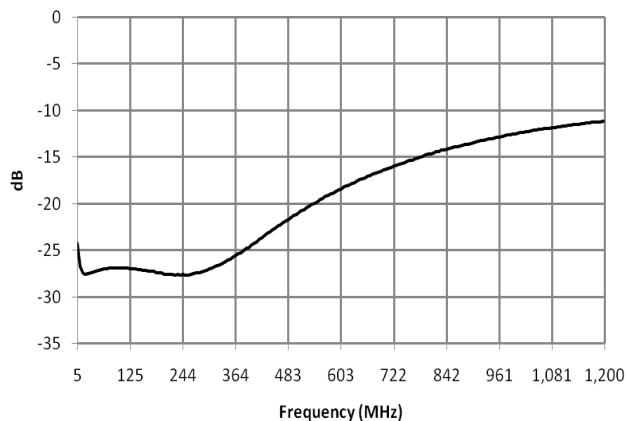
Amplitude Balance



Phase Balance



Input Return Loss (pin1)



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