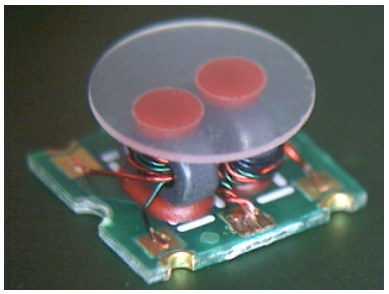
MABA-007681-CT2010

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
- 260ºC reflow compatible
- RoHS Compliant and Pb free
- Excellent temperature stability
- Can be used on 50Ω and 75Ω systems



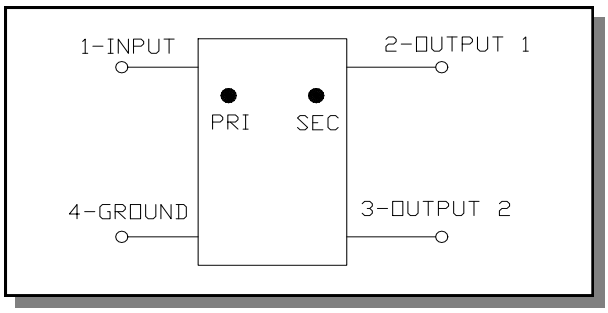
Electrical Specifications: Z_0 = 75Ω, T_A = 25°C, P_{in} = 0dBm

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 50 - 1000 MHz 1000 -1200 MHz	dB dB dB	- - -	0.35 0.60 0.60	0.50 1.10 1.40
Insertion Loss 2 (Pin 1 to pin 3)	5 - 50 MHz 50 - 1000 MHz 1000 -1200 MHz	dB dB dB	- - -	0.5 0.9 1.8	0.70 1.50 2.20
Amplitude Balance	5 - 50 MHz 50 - 1000 MHz 1000 - 1200 MHz	dB dB dB	- - -	±0.10 ±0.30 ±0.60	±0.40 ±1.50 ±1.80
Phase Balance	5 - 50 MHz 50 - 1200 MHz	° °	- -	±0.2 ±3.0	±1.50 ±7.00
Input Return Loss (Pin 1)	5 - 50 MHz 50 - 1000 MHz 1000 - 1200 MHz	dB dB dB	22 14 8	25 22 17	- - -

Pin Configuration

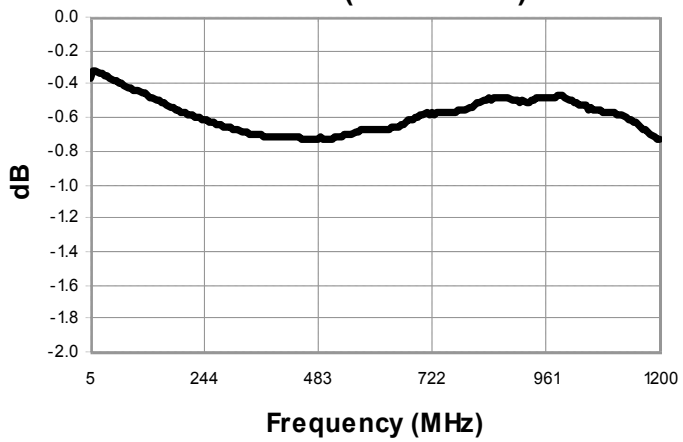
Pin No.	Function
1	Input (PRI dot)
2	Output 1 (SEC dot)
3	Output 2 (SEC)
4	Ground (PRI)

Schematic

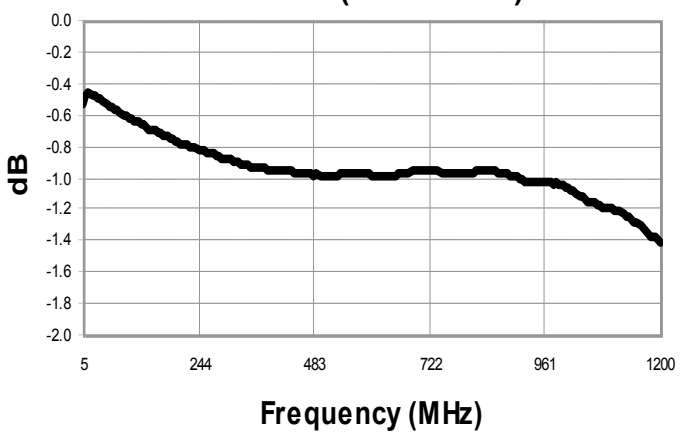


• **North America** Tel: 800.366.2266 • **Europe** Tel: +353.21.244.6400
• **India** Tel: +91.80.43537383 • **China** Tel: +86.21.2407.1588
Visit www.macomtech.com for additional data sheets and product information.

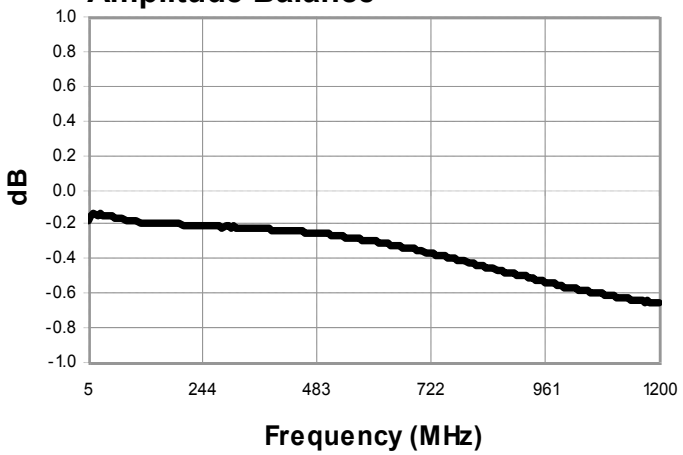
Insertion Loss 1 (Pin1 - Pin2)



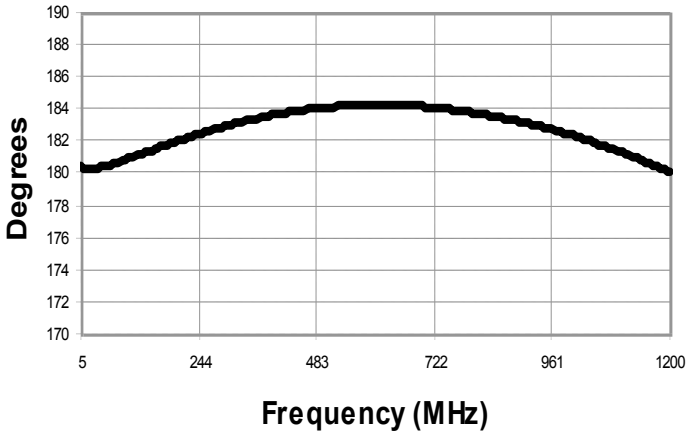
Insertion Loss 2 (Pin1 - Pin3)



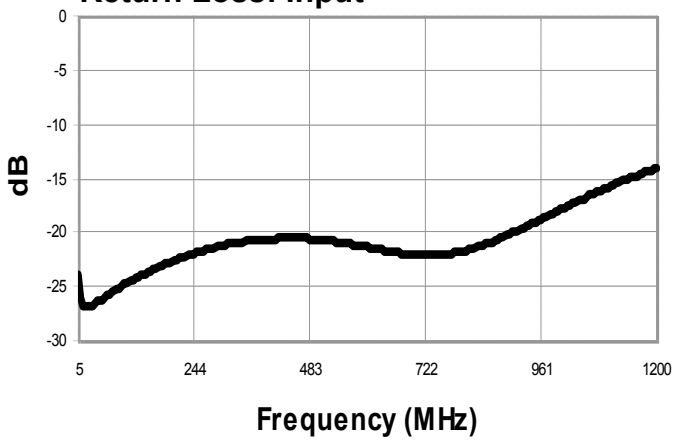
Amplitude Balance



Phase Balance



Return Loss: Input



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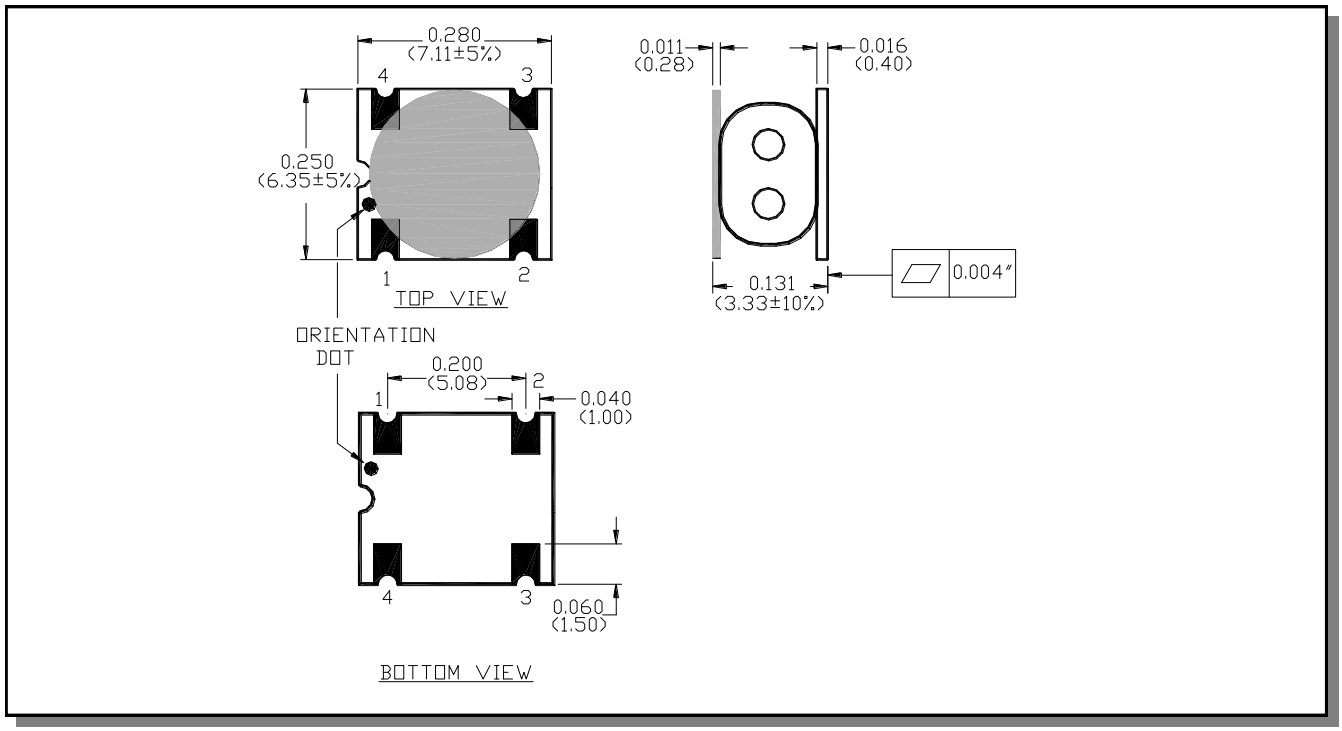
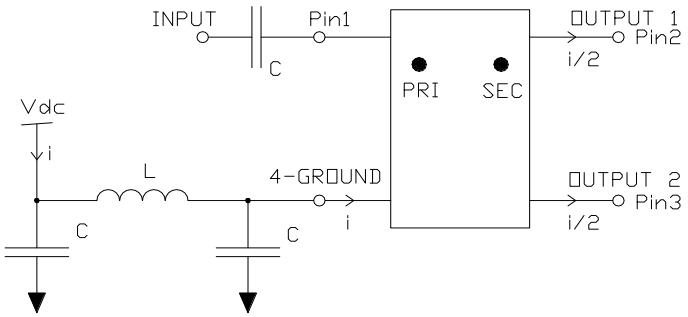
Outline Drawing



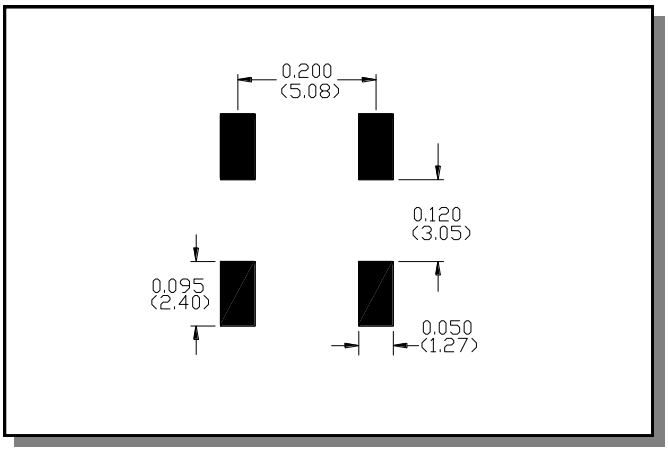
1. Dimensions in mm.
2. Tolerance: ±0.2mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Plating finish: ENIG on both sides, 0.05 to 0.1 µm gold over 3 to 6 µm nickel

Recommended DC bias circuit



Cap/Ind	5-50MHz	50-1200MHz
C	100nF	10nF
L	10µH	1µH

Recommended Footprint



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Tape & Reel Information

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		

Ordering Information

Part Number	Description
MABA-007681-CT2010	Tape & Reel
MABA-007681-CT20TB	Customer Evaluation Board

Recommended Maximum Ratings

Parameter	Units	Min	Max
Input Power	mW		250
DC Current	mA		600
Operating Temperature Range	ºC	-40	+85
Storage Temperature Range	ºC	-55	+125