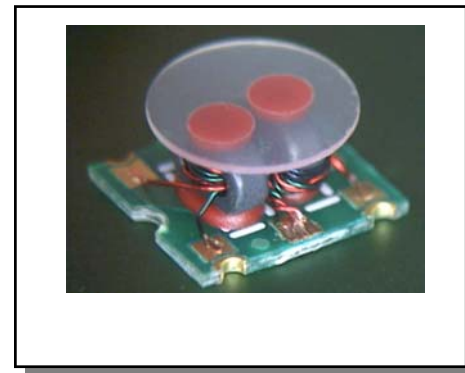


Transformer, 1:3  
5 MHz - 1200MHz

Rev. V1

## Features

- ◆ 1:3 impedance ratio
- ◆ 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



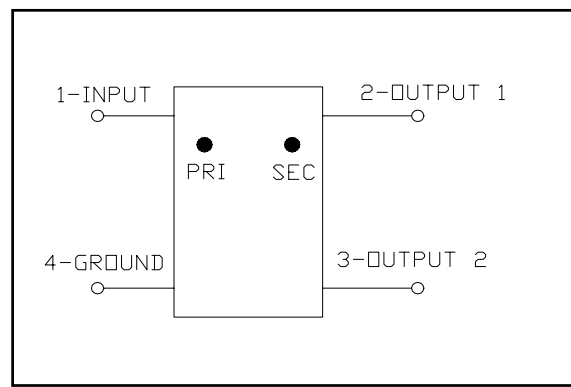
**Electrical Specifications:**  $Z_0 = 75\Omega$ ,  $T_A = 25^\circ\text{C}$ ,  $P_{in} = 0\text{dBm}$

Parameter	Conditions	Units	Min	Typ	Max
Frequency Range		MHz	5		1200
Impedance		$\Omega$		75	
Impedance Ratio				1:3	
Insertion Loss1 Pin1 to Pin2	5 - 50 MHz	dB	-	0.75	1.20
	50 - 1000 MHz	dB	-	1.10	1.90
	1000 - 1200 MHz	dB	-	1.75	2.25
Insertion Loss2 Pin1 to Pin3	5 - 50 MHz	dB	-	0.70	1.30
	50 - 1000 MHz	dB	-	1.10	2.20
	1000 - 1200 MHz	dB	-	1.90	2.50
Amplitude Unbalance	5 - 50 MHz	dB	-	0.02	$\pm 0.70$
	50 - 1000 MHz	dB	-	0.05	$\pm 0.70$
	1000 - 1200 MHz	dB	-	0.15	$\pm 0.80$
Phase Balance	5 - 50 MHz	dB	-	0.6	$\pm 5.0$
	50 - 1200 MHz	dB	-	6.6	$\pm 10.0$
Input Return Loss	5 - 50 MHz	dB	19	21	-
	50 - 1000 MHz	dB	15	21	-
	1000 - 1200 MHz	dB	15	24	-

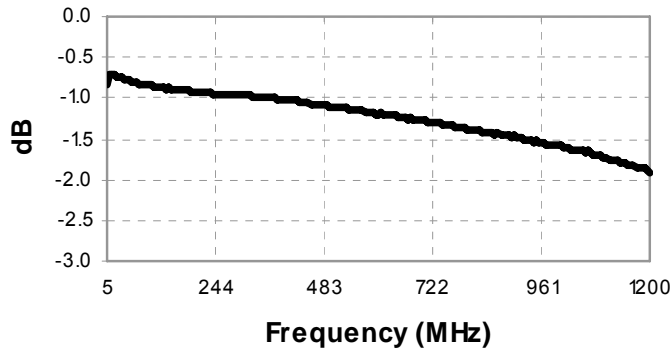
## Pin Configuration

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

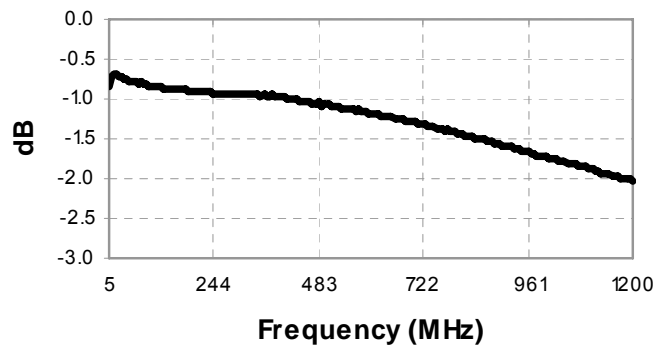
## Schematic



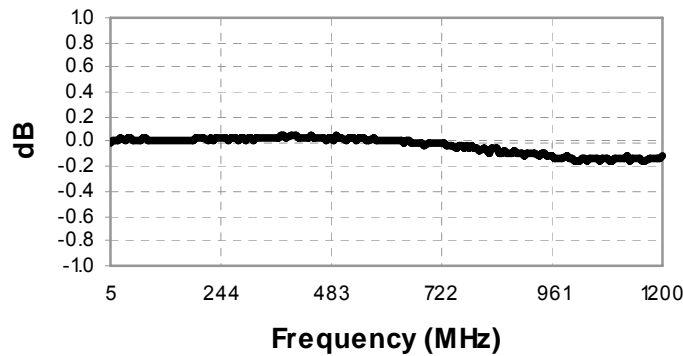
### Insertion Loss: Pin1—Pin2



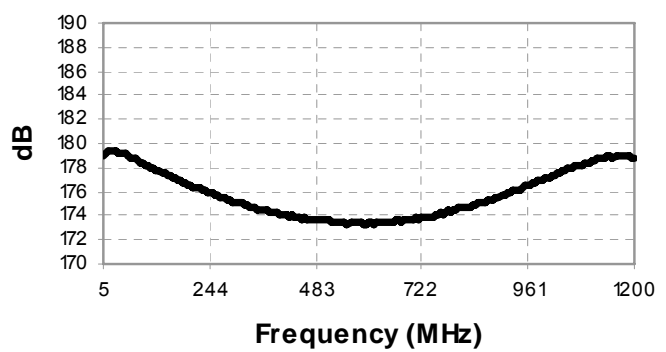
### Insertion Loss: Pin1—Pin3



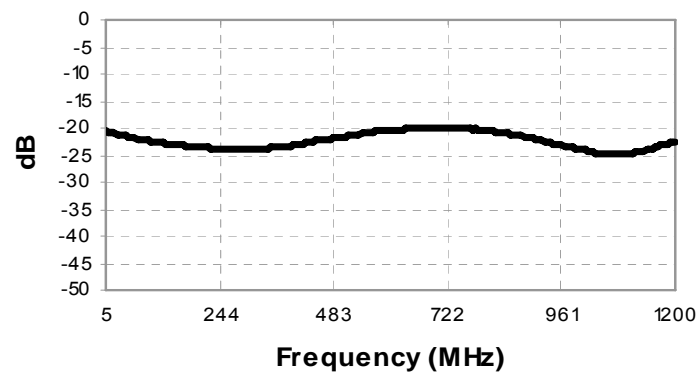
### Amplitude Balance



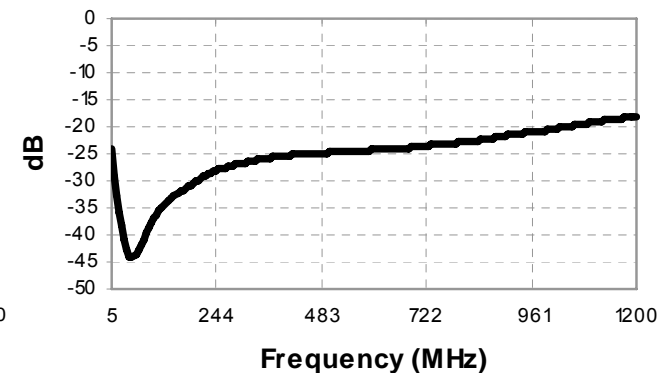
### Phase Balance



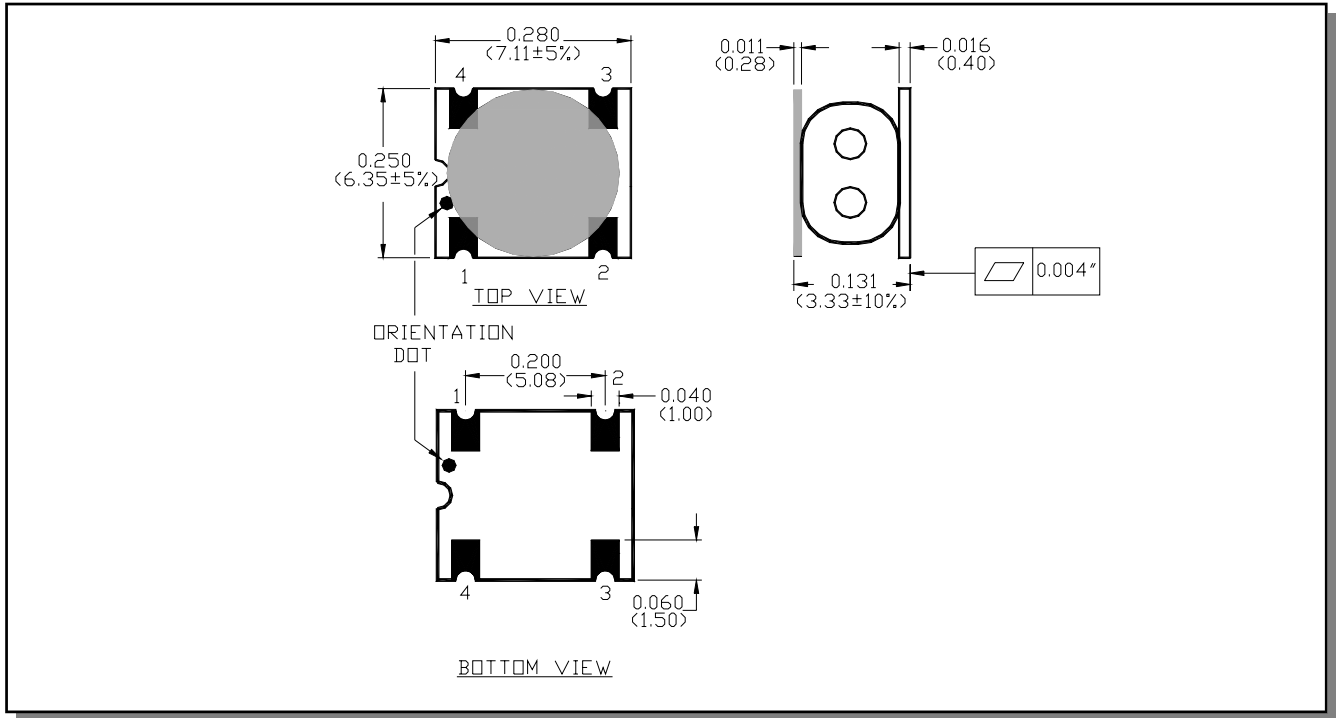
### Return Loss: Input



### Return Loss: Output

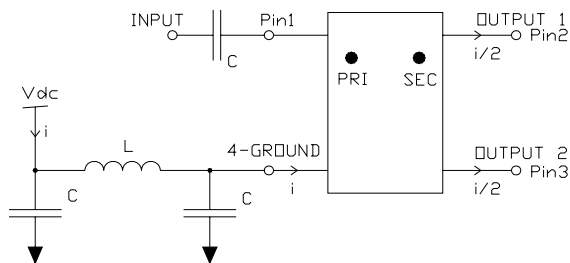


## Outline Drawing



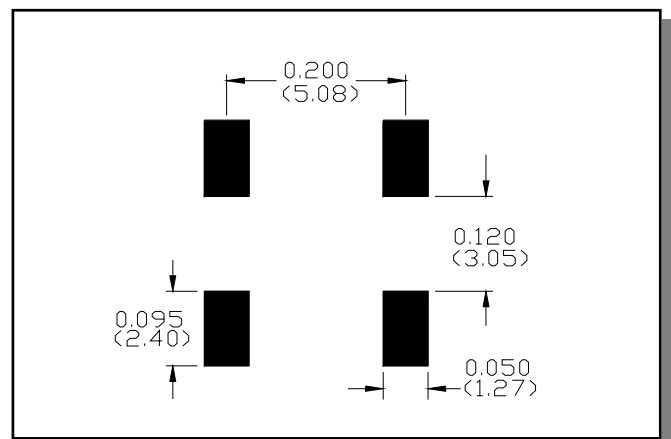
1. Dimensions in mm.
2. Tolerance: ±0.2mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Finish: ENIG

## Recommended DC bias circuit



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

## Recommended Footprint



## Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	900
Reel size	mm	330
Tape width	mm	16.00
Pitch	mm	12.00
A <sub>0</sub>	mm	6.70
B <sub>0</sub>	mm	7.50
K <sub>0</sub>	mm	3.60
Orientation	-	F27

## Ordering Information

Part Number	Description
MABA -010441-CT38A0	Tape & Reel
MABA -010441-CT38TB	Customer Evaluation Board

## Recommended Maximum Ratings

Parameter	Units	Min	Max
Input Power	mW		250
DC Current	mA		200
Operating Temperature Range	°C	-40	+85
Storage Temperature Range	°C	-55	+125

Temperature data available on request

## ECO History

Rev	Date	Description	ECN No.
V1	20 August 2010	Created datasheet	20101164