

# MABA-010238-CT4A80

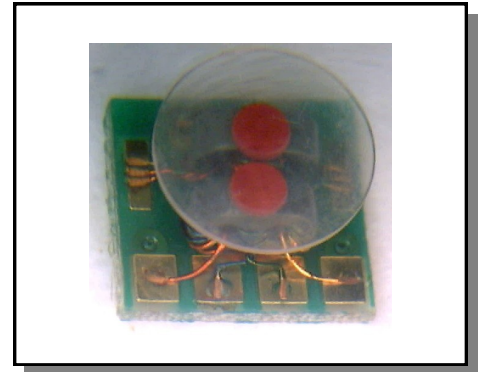


Transformer, 1:2  
5 MHz - 1200MHz

Rev. V2

## Features

- ◆ 1:2 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



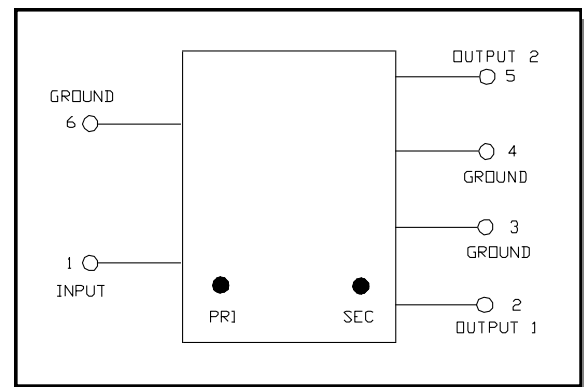
**Electrical Specifications:**  $Z_0 = 75\Omega$ ,  $T_A = 25^\circ\text{C}$ ,  $P_{in} = 0\text{dBm}$

Parameter	Conditions	Units	Min	Typ	Max
Frequency Range		MHz	5		1200
Impedance		$\Omega$		75	
Impedance Ratio				1:2	
Insertion Loss1 Pin1 to Pin2	5 - 50 MHz	dB	-	0.40	0.60
	50 - 1000 MHz	dB	-	1.80	1.80
	1000 - 1200 MHz	dB	-	1.35	2.10
Insertion Loss2 Pin1 to Pin5	5 - 50 MHz	dB	-	0.55	0.90
	50 - 1000 MHz	dB	-	1.00	2.20
	1000 - 1200 MHz	dB	-	1.85	2.60
Amplitude Unbalance	5 - 50 MHz	dB	-	0.15	$\pm 0.60$
	50 - 1000 MHz	dB	-	0.20	$\pm 1.40$
	1000 - 1200 MHz	dB	-	0.50	$\pm 1.70$
Phase Balance	5 - 50 MHz	dB	-	0.50	$\pm 3.0$
	50 - 1200 MHz	dB	-	3.00	$\pm 8.0$
Input Return Loss	5 - 50 MHz	dB	21	26	-
	50 - 1000 MHz	dB	11	26	-
	1000 - 1200 MHz	dB	9	13	-

## Pin Configuration

Pin No.	Function
1	Input (PRI dot)
2	Output 1 (SEC dot)
3,4,6	Ground
5	Output 2 (SEC)

## Schematic



1

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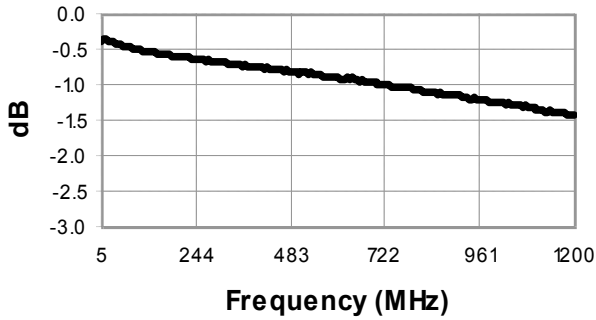
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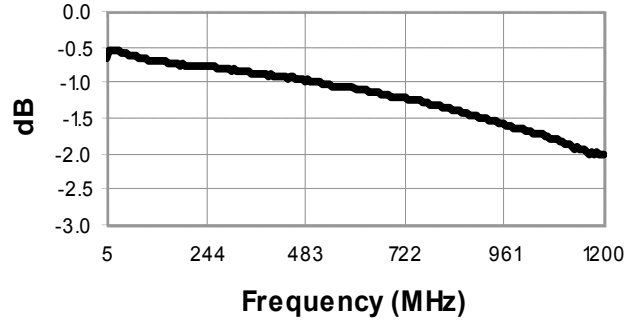
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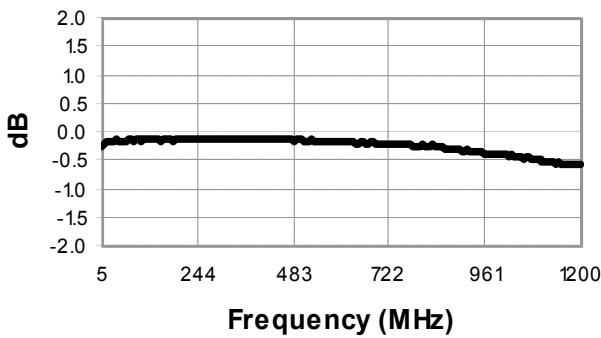
## Insertion Loss: Pin1—Pin2



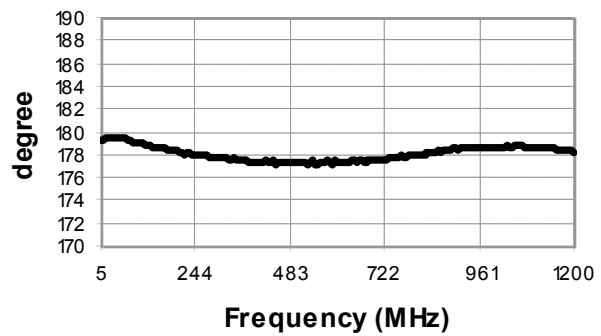
## Insertion Loss: Pin1—Pin5



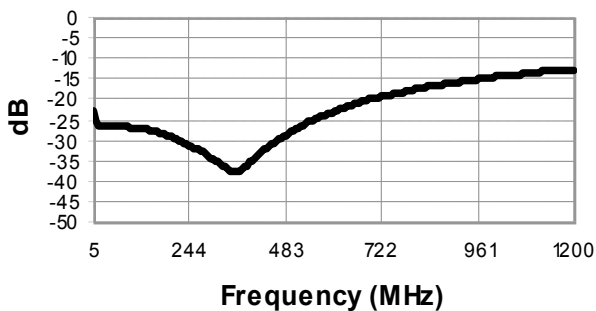
## Amplitude Balance



## Phase Balance



## Return Loss: Input



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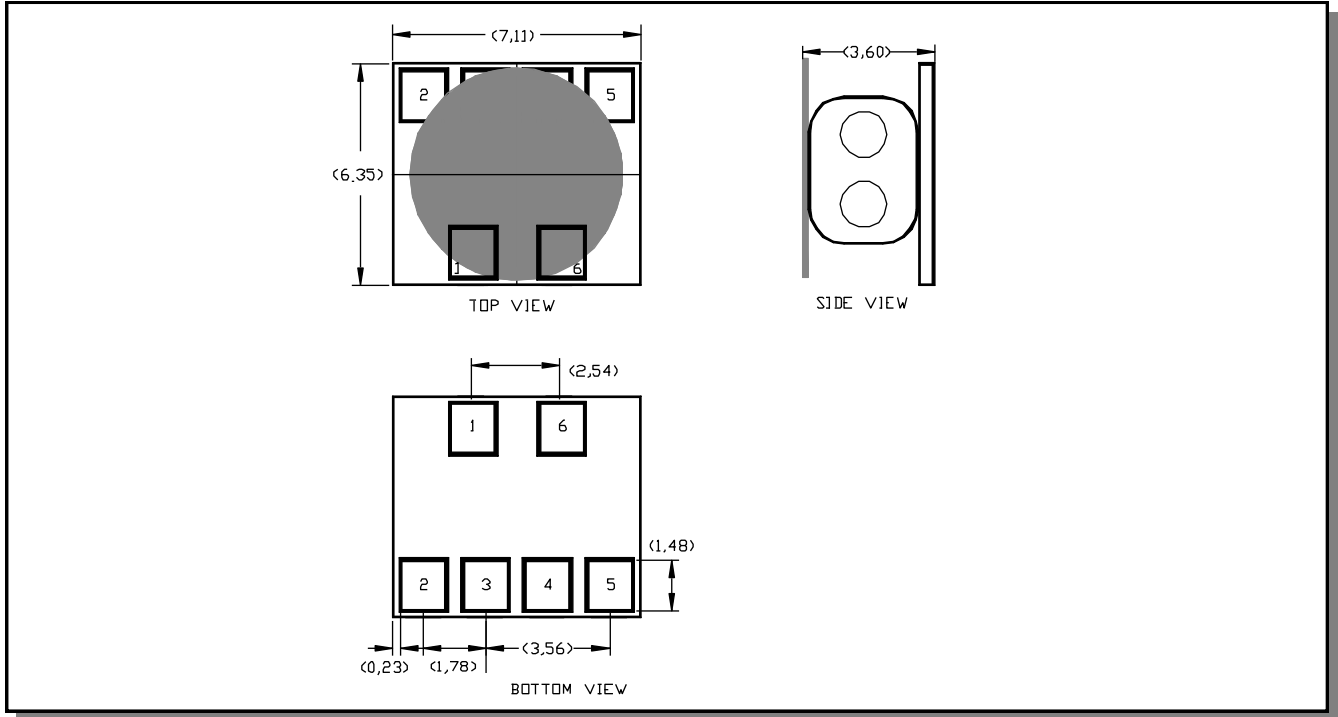
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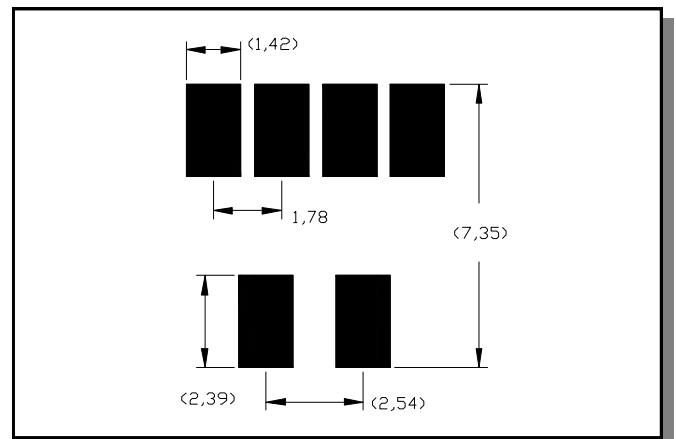
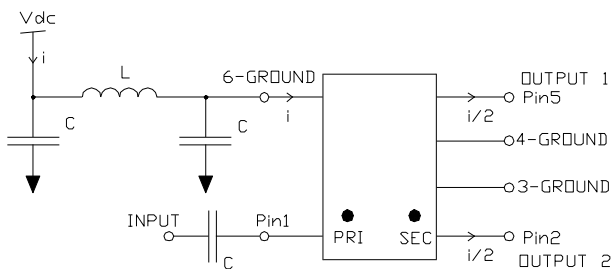
## Outline Drawing



1. Dimensions in mm.
2. Tolerance:  $\pm 0.2\text{mm}$  unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Finish: ENIG

## Recommended DC bias circuit

## Recommended Footprint



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

3

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## Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	900
Reel size	mm	330
Tape width	mm	16.0
Pitch	mm	12.0
A <sub>0</sub>	mm	6.7
B <sub>0</sub>	mm	7.5
K <sub>0</sub>	mm	3.9
Orientation	-	F42

## Ordering Information

Part Number	Description
MABA -010238-CT4A80	Tape & Reel
MABA -010238-CT4ATB	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