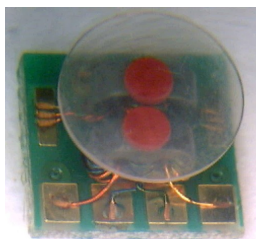
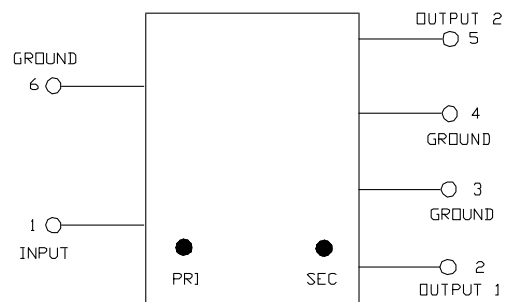


## Features

- Surface Mount Package
- 1:2 Impedance
- Excellent Temperature Stability
- Usable on both 50  $\Omega$  & 75  $\Omega$  Systems
- Wide Frequency Range
- RoHS Compliant, Lead Free
- Available on Tape and Reel



## Pin Configuration

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

## Electrical Specifications: Freq. = 5 - 1200 MHz, $T_A = 25^\circ\text{C}$ , $Z_0 = 75 \Omega$ , $P_{IN} = 0 \text{ dBm}$

Parameter	Test Conditions Frequency (MHz)	Units	Min.	Typ.	Max.
Insertion Loss 1 (pin 1 to pin 2)	5 - 50	dB	—	0.40	0.60
	50 - 1000			1.80	1.80
	1000 - 1200			1.35	2.10
Insertion Loss 2 (pin 1 to pin 5)	5 - 50	dB	—	0.55	0.90
	50 - 1000			1.00	2.20
	1000 - 1200			1.85	2.60
Amplitude Balance	5 - 50	dB	—	0.15	$\pm 0.60$
	50 - 1000			0.20	$\pm 1.40$
	1000 - 1200			0.50	$\pm 1.70$
Phase Balance	5 - 50	°	—	0.5	$\pm 3.0$
	50 - 1200			3.0	$\pm 8.0$
Input Return Loss	5 - 50	dB	21	26	—
	50 - 1000		11	26	
	1000 - 1200		9	13	

## Ordering Information

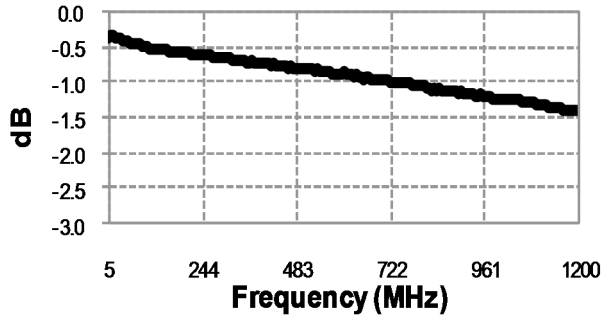
Parameter	Package
MABA-010238-CT4A80	900 piece reel
MABA-010238-CT4ATB	customer evaluation board

## Absolute Maximum Ratings

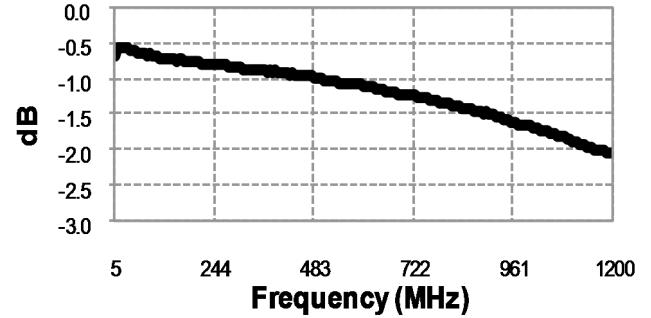
Parameter	Absolute Maximum
RF Input Power	250 mW
DC Current	200 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +125°C

**Typical Performance:  $T_A = 25^\circ\text{C}$**

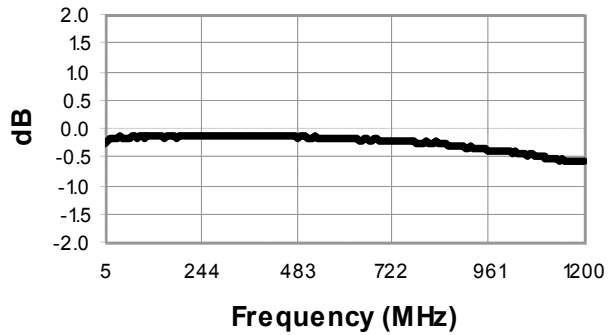
*Insertion Loss (pin1 to pin 2)*



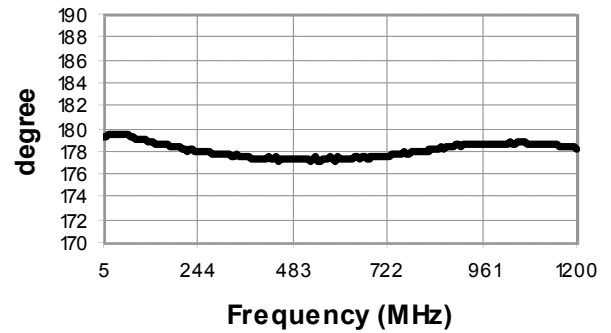
*Insertion Loss (pin1 to pin 5)*



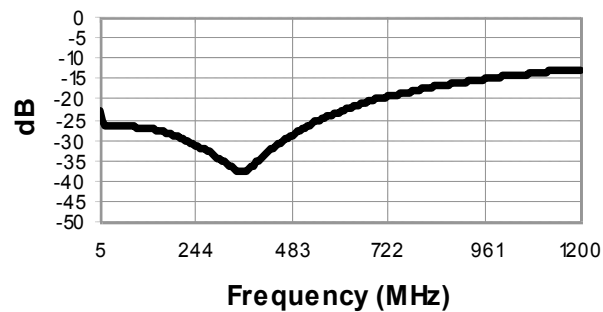
*Amplitude Unbalance*



*Phase Unbalance*



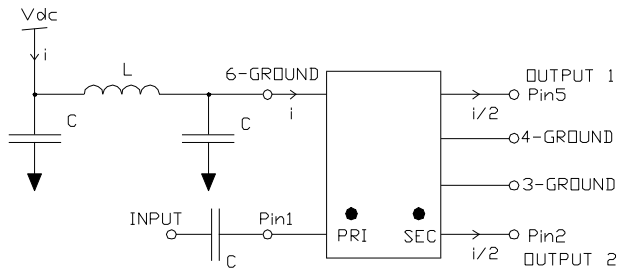
*Input Return Loss*



## 1:2 Transformer 5 - 1200 MHz

Rev. V3

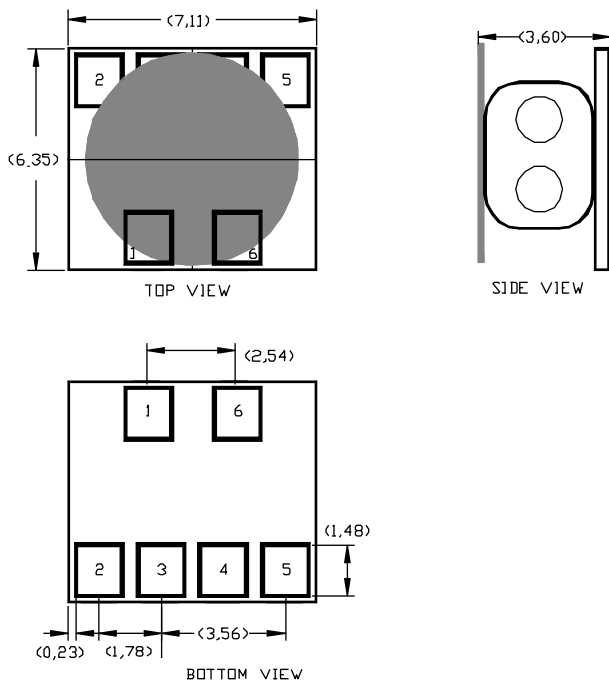
### Recommended DC Bias Circuit



Capacitance:  
5 - 50 MHz = 100 nF  
50 - 1200 MHz = 10 nF

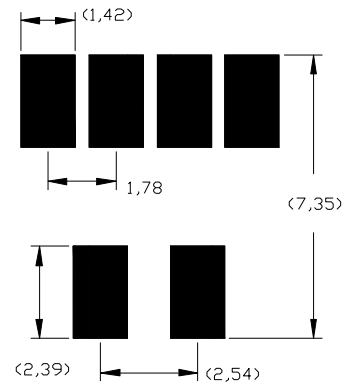
Inductance:  
5 - 50 MHz = 10  $\mu$ H  
50 - 1200 MHz = 1  $\mu$ H

### Outline Drawing



Dimensions in mm.  
Tolerance:  $\pm 0.2$  mm unless otherwise noted.  
Model number and lot code are printed on the reel.  
Finish: ENIG

### Recommended Footprint



### Tape & Reel Information

Item	Dimension
Qty. per reel	900
Reel size	330 mm
A <sub>0</sub>	6.7 mm
B <sub>0</sub>	7.5 mm
K <sub>0</sub>	3.9 mm
W	16 mm
P1	12 mm
Orientation	F42

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