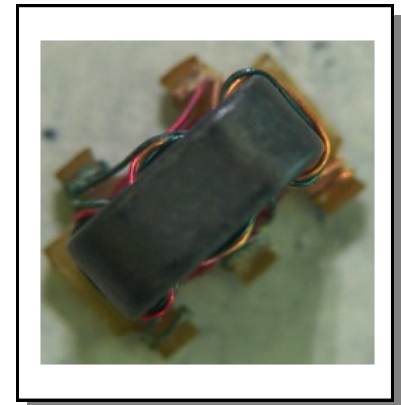


## 1:2.78 Transformer 45 - 1200 MHz

Preliminary - Rev. V2P

### Features

- 1:2.78 impedance ratio
- Surface mount
- Available on tape and reel
- 260°C reflow compatible
- RoHS Compliant, lead-free
- Excellent temperature stability
- Suitable for all CATV, Broadband and FTTx applications.



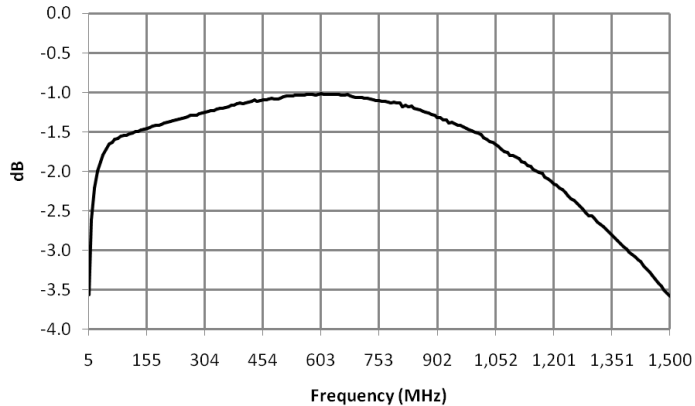
**Electrical Specifications:**  $Z_0 = 75\Omega$ ,  $T_A = 25^\circ\text{C}$ ,  $P_{in} = 0\text{dBm}$

Parameter	Conditions	Units	Min	Typ	Max
Frequency Range		MHz	45		1200
Impedance		$\Omega$		75	
Impedance Ratio				1:2.78	
Insertion Loss (Pin1 - Pin5)	45 - 200 MHz	dB	-	1.5	2.1
	200 - 600 MHz	dB	-	1.1	1.7
	600 - 1200MHz	dB	-	1.3	3.2
Insertion Loss (Pin1 - Pin3)	45 - 200 MHz	dB	-	1.7	2.3
	200 - 600 MHz	dB	-	1.8	2.4
	600 - 1200MHz	dB	-	2.3	3.7
Amplitude Balance	45 - 200 MHz	dB	-	0.3	$\pm 0.6$
	200 - 600 MHz	dB	-	0.8	$\pm 1.6$
	600 - 1200MHz	dB	-	1.1	$\pm 2.2$
Phase Balance	45 - 200 MHz	$^\circ$	-	5	$\pm 10$
	200 - 600 MHz	$^\circ$	-	12	$\pm 20$
	600 - 1200MHz	$^\circ$	-	18	$\pm 32$
Input Return Loss (Pin1)	45 - 200 MHz	dB	-11	14	-
	200 - 700 MHz	dB	-13	17	-
	700 - 1200 MHz	dB	-12	19	-

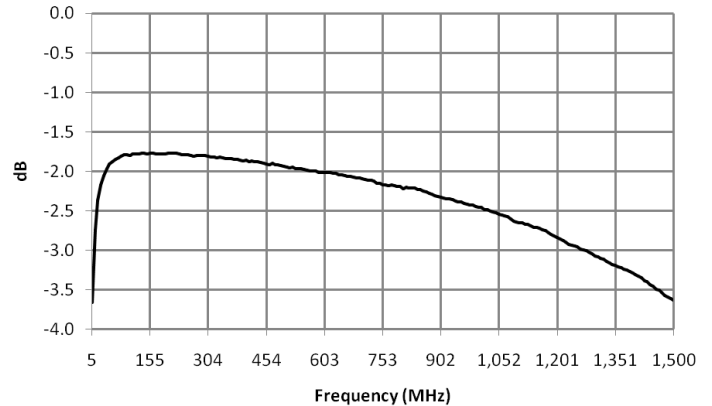
## 1:2.78 Transformer 45 - 1200 MHz

Preliminary - Rev. V2P

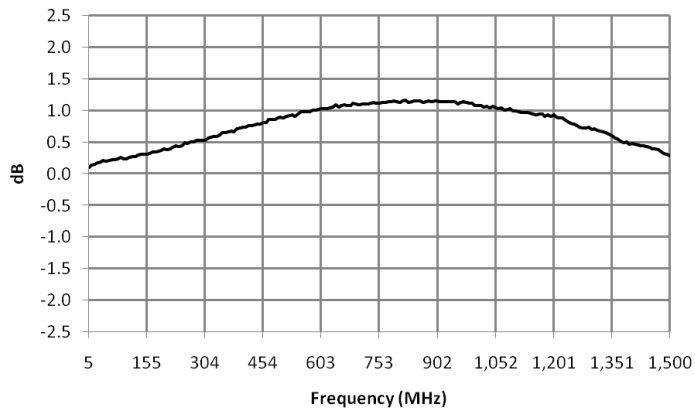
MABA-011015 insertion\_loss\_1\_pin1\_5



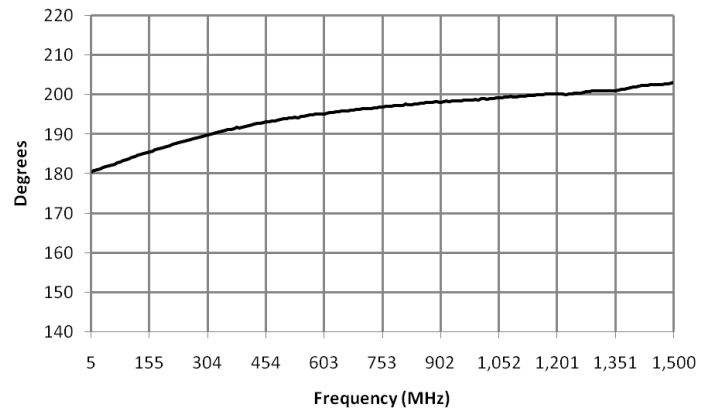
MABA-011015 insertion\_loss\_2\_pin1\_3



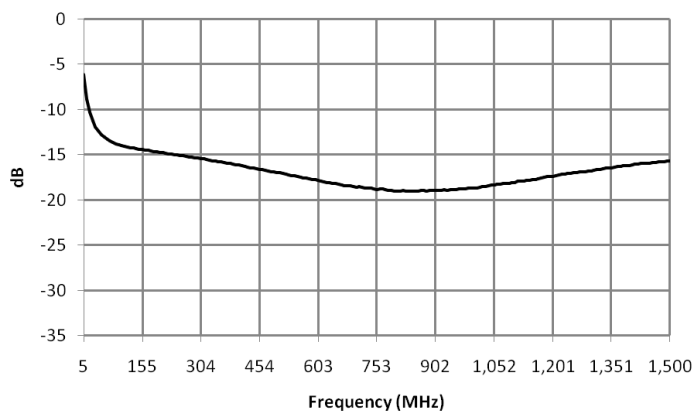
MABA-011015 amplitude\_balance



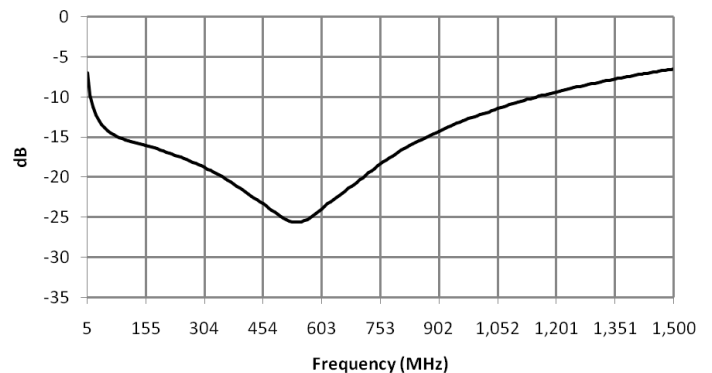
MABA-011015 phase\_balance



MABA-011015 input\_return\_loss\_pin1



MABA-011015  
balance\_output\_return\_loss\_pin5\_3



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

2

**ADVANCE:** Data Sheets contain information regarding a product MACOM is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

**PRELIMINARY:** Data Sheets contain information regarding a product MACOM has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

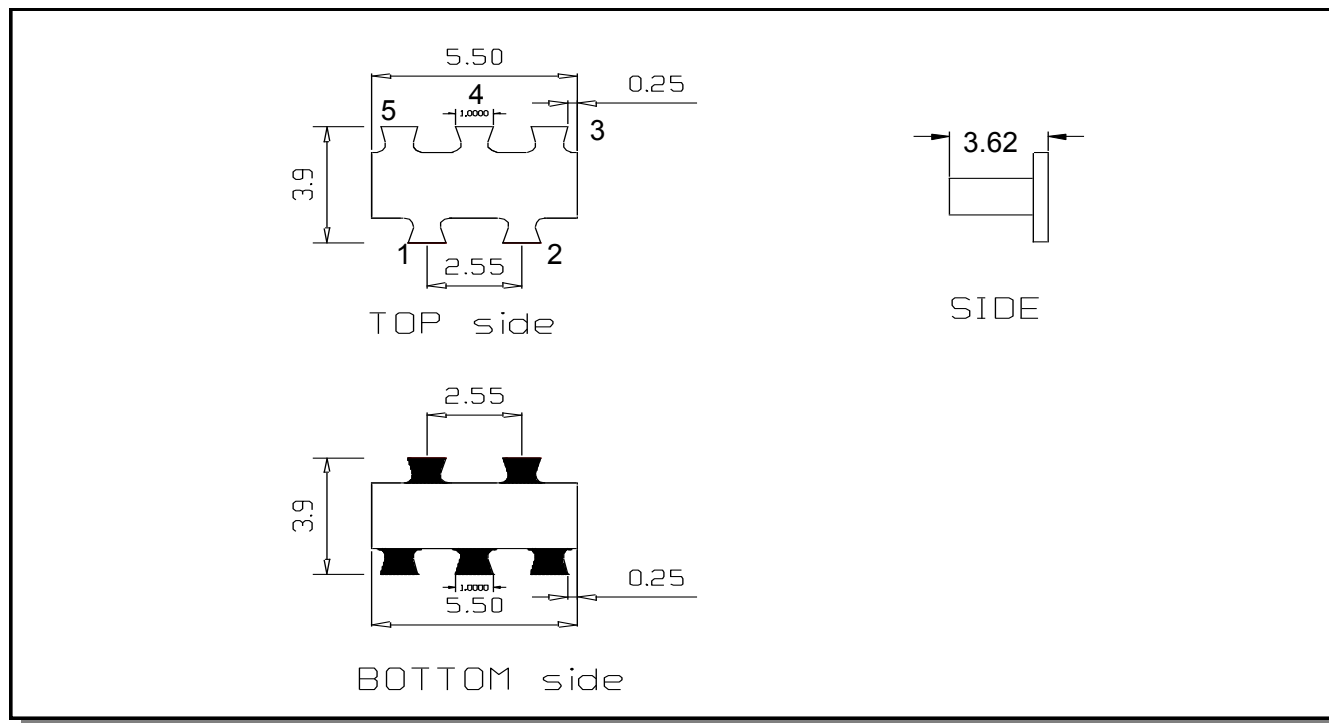
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## 1:2.78 Transformer 45 - 1200 MHz

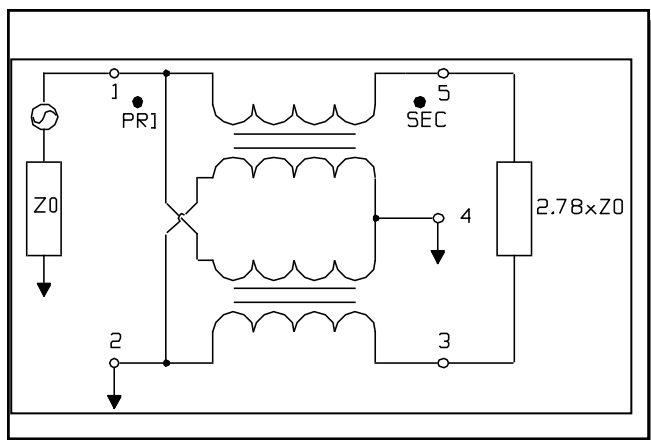
Preliminary - Rev. V2P

### Outline Drawing

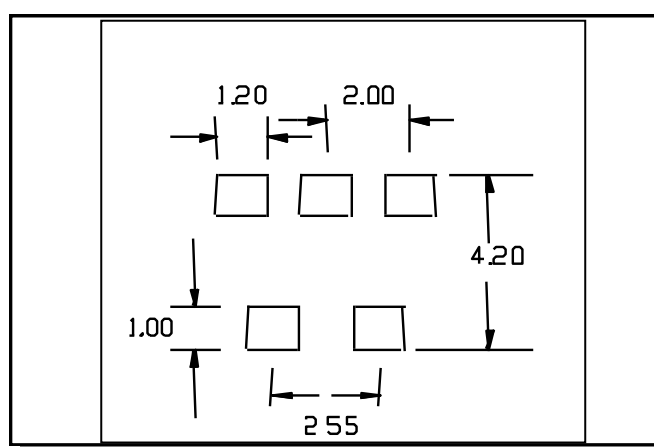


1. Dimensions in mm.
2. Tolerance:  $\pm 0.2$  mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Plating finish: ENIG

### Recommended DC bias circuit



### Recommended Footprint



## 1:2.78 Transformer 45 - 1200 MHz

Preliminary - Rev. V2P

### Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel Size	mm	330
Tape Width	mm	12.00
Pitch	mm	8.00
Ao	mm	4.10
Bo	mm	5.80
Ko	mm	3.90
Orientation	-	F52
Reference Application Note ANI-019 for orientation		

### Ordering Information

Part Number	Description
MABA-011015	Tape & Reel
MABA-011015-TB	Customer Evaluation Board

### Recommended Maximum Ratings

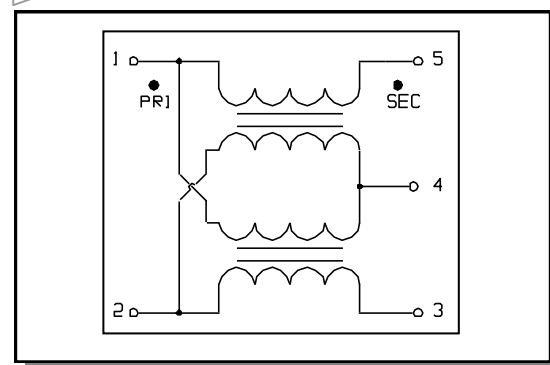
Parameter	Units	Min	Max
Input Power	mW		250
DC Current	mA		200
Operating Temperature Range	°C	-40	+85

Full temperature plots available on request

### Pin Configuration

Pin No.	Function
1	Primary Dot
2	Primary
3	Secondary
4	Centre Tap
5	Secondary Dot

### Schematic



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