

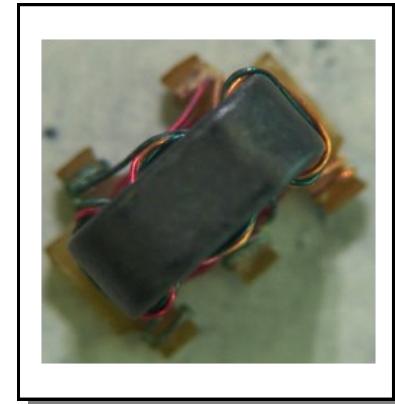
## 1:2.78 Transformer

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

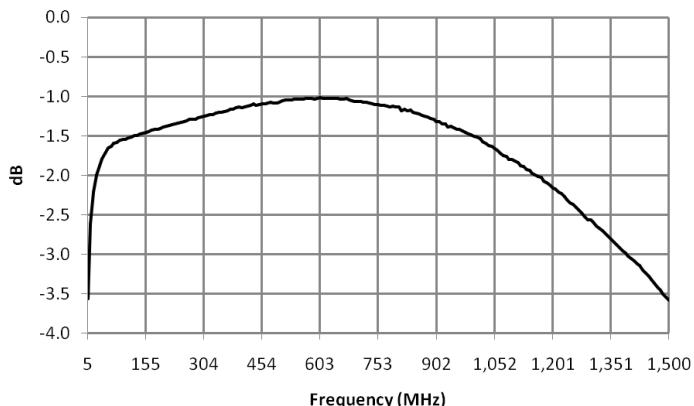
Parameter	Conditions	Units	Min	Typ	Max
Frequency Range		MHz	45		1200
Impedance		$\Omega$		75	
Impedance Ratio				1:2.78	
Insertion Loss (Pin1 - Pin5)	45 - 200 MHz 200 - 600 MHz 600 - 1200MHz	dB	-	1.5 1.1 1.3	2.1 1.7 3.2
Insertion Loss (Pin1 - Pin3)	45 - 200 MHz 200 - 600 MHz 600 - 1200MHz	dB	-	1.7 1.8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

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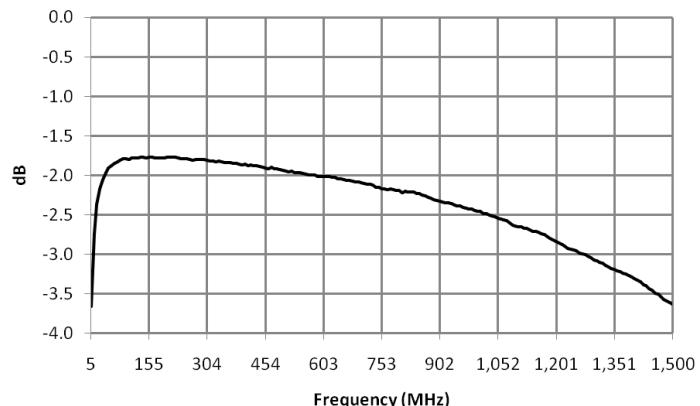
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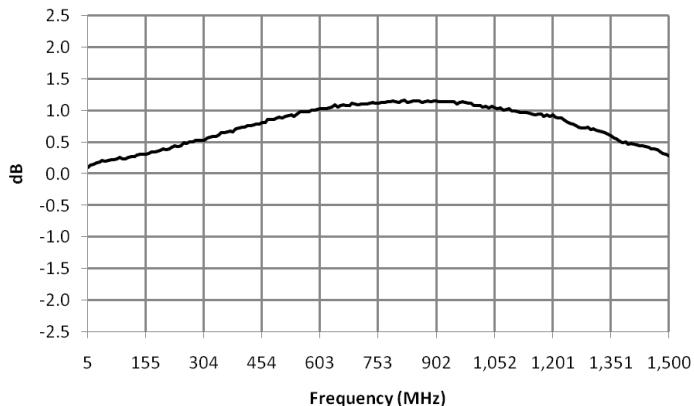
MABA-011015 insertion\_loss\_1\_pin1\_5



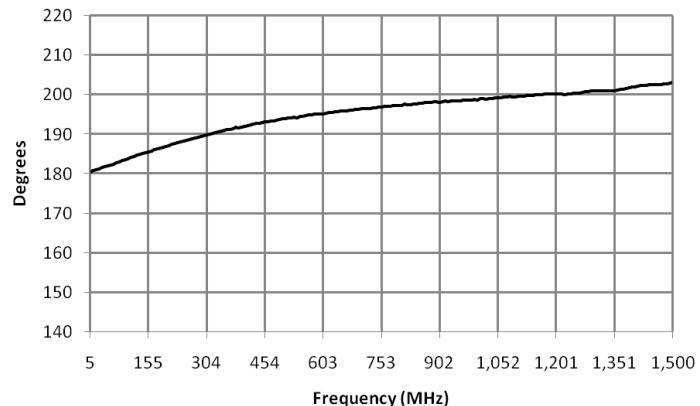
MABA-011015 insertion\_loss\_2\_pin1\_3



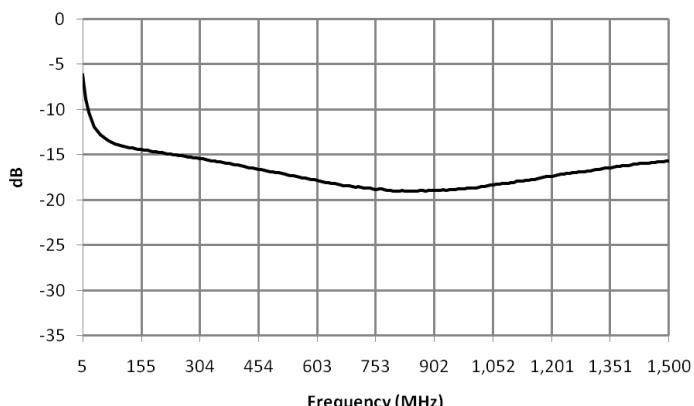
MABA-011015 amplitude\_balance



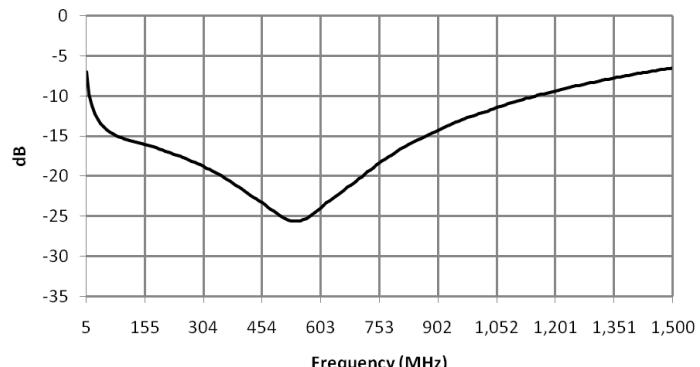
MABA-011015 phase\_balance



MABA-011015 input\_return\_loss\_pin1



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



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2

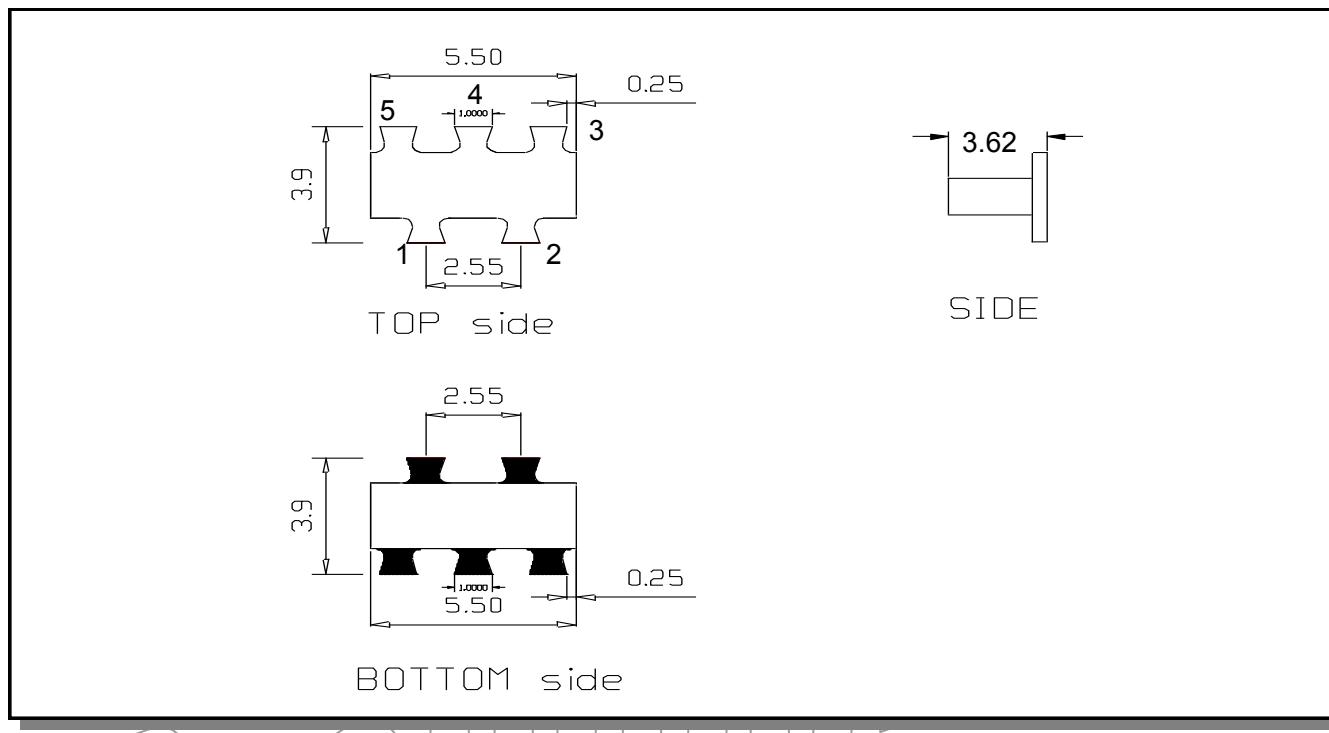
**ADVANCE:** Data Sheets contain information regarding a product MACOM is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

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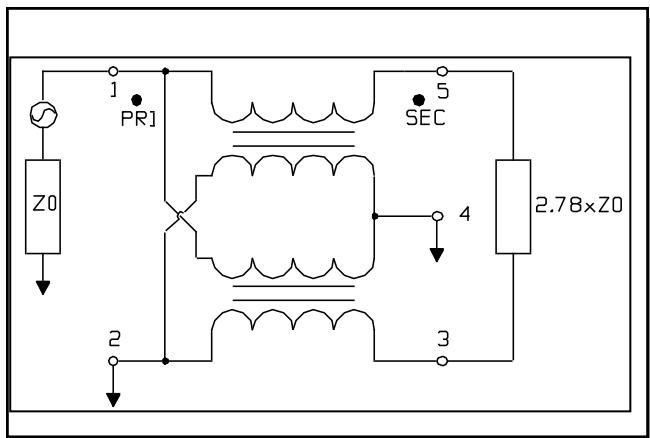
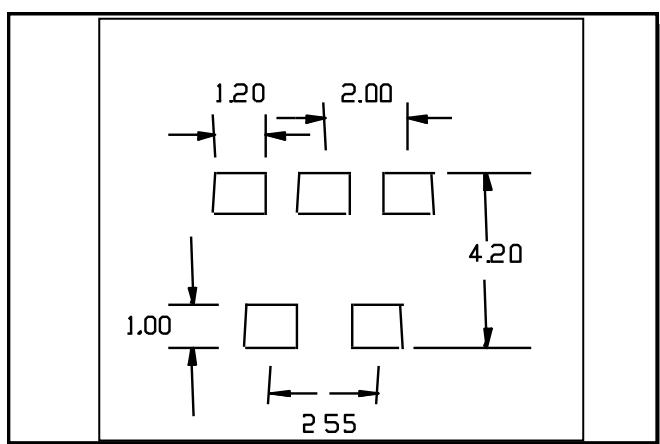
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**1:2.78 Transformer**  
**45 - 1200 MHz**
**Preliminary - Rev. V2P**
**Outline Drawing**


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**  
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**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

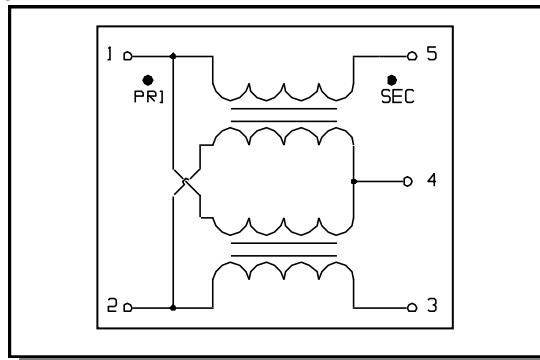
**Recommended Maximum Ratings**

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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