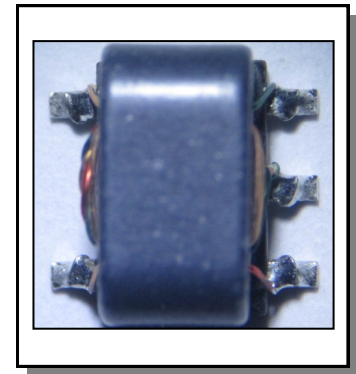


## 4:1 Step Down Transformer 5 - 200 MHz

V2

### Features

- Surface mount
- 4:1 step down transformer
- Excellent performance under DC bias current, even when current flows is imbalanced outputs
- 260°C reflow compatible
- RoHS Compliant, lead-free
- Available on tape & reel



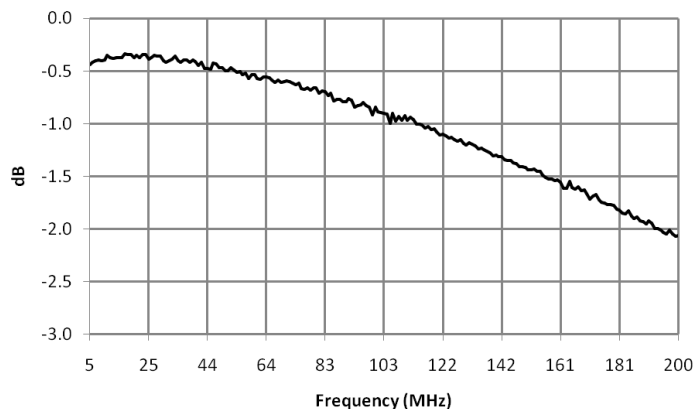
**Electrical Specifications:**  $Z_0 = 75\Omega$ ,  $T_A = 25^\circ\text{C}$ ,  $P_{in} = 0\text{dBm}$

Parameter	Conditions	Units	Min	Typ	Max
Frequency Range		MHz	5		200
Impedance		$\Omega$	-	75	-
Impedance Ratio			-	4:1	-
Insertion Loss 1 (pin6-pin1)	5 - 50 MHz	dB	-	0.3	0.8
	50 - 150 MHz	dB	-	0.8	2.2
	150 - 200 MHz	dB	-	1.7	3.1
Insertion Loss 2 (pin6-pin3)	5 - 50 MHz	dB	-	0.4	0.8
	50 - 150 MHz	dB	-	1.0	2.5
	150 - 200 MHz	dB	-	2.2	3.6
Amplitude Balance	5 - 50 MHz	dB	-	0.1	$\pm 0.4$
	50 - 150 MHz	dB	-	0.2	$\pm 1.0$
	150 - 200 MHz	dB	-	0.4	$\pm 1.4$
Phase Balance	5 - 50 MHz	$^\circ$	-	0.6	$\pm 4$
	50 - 200 MHz	$^\circ$	-	1.4	$\pm 9$
Input Return Loss (pin6)	5 - 25 MHz	dB	17	21	-
	25 - 50 MHz	dB	12	17	-
	50 - 150 MHz	dB	5	10	-
	150 - 200 MHz	dB	3	6	-

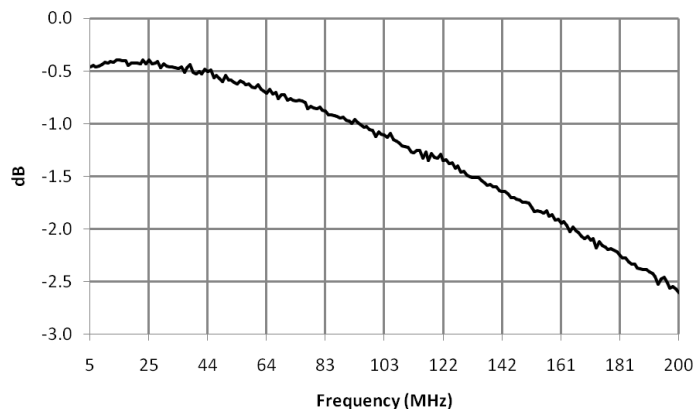
## 4:1 Step Down Transformer 5 - 200 MHz

V2

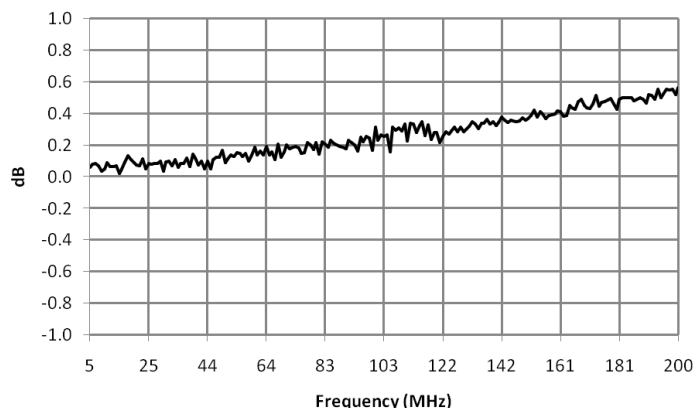
MABA-011048 insertion\_loss\_1\_pin6\_1



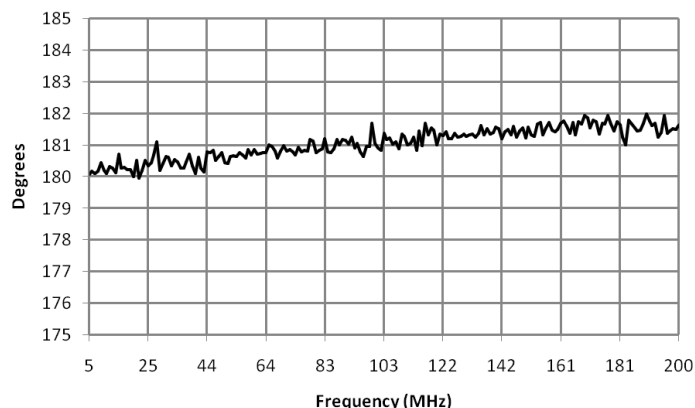
MABA-011048 insertion\_loss\_2\_pin6\_3



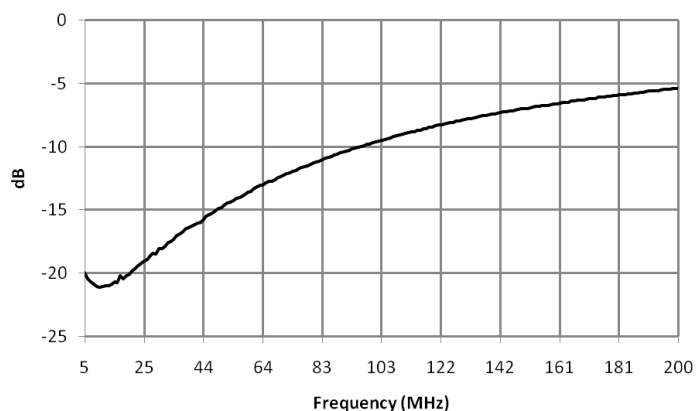
MABA-011048 amplitude\_balance



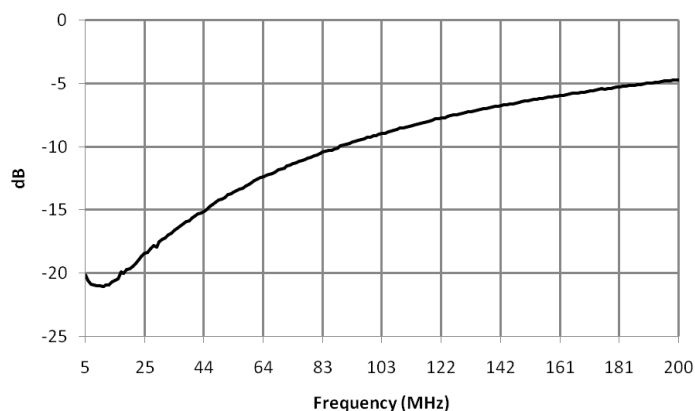
MABA-011048 phase\_balance



MABA-011048 input\_return\_loss\_pin6



MABA-011048 Sdd22

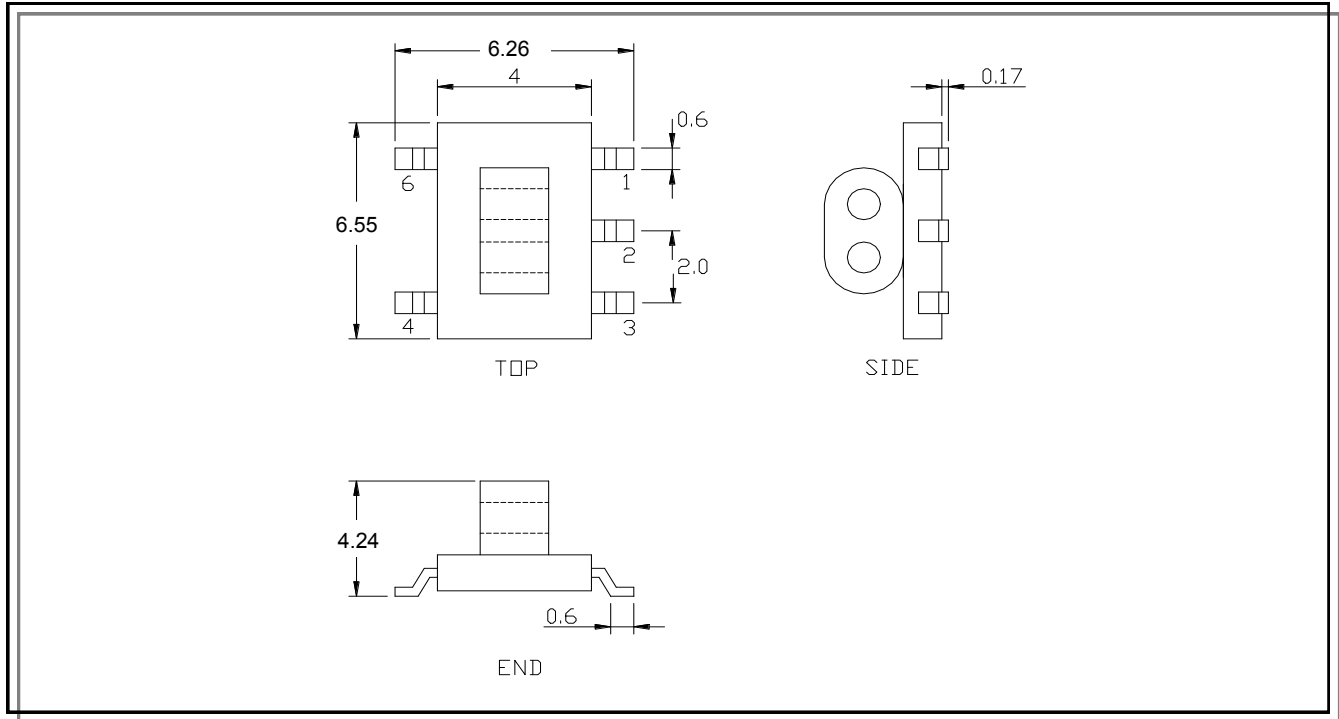


Electrical Specifications:  $Z_0 = 75\Omega$ ,  $T_A = 25^\circ\text{C}$ ,  $P_{in} = 0\text{dBm}$

## 4:1 Step Down Transformer 5 - 200 MHz

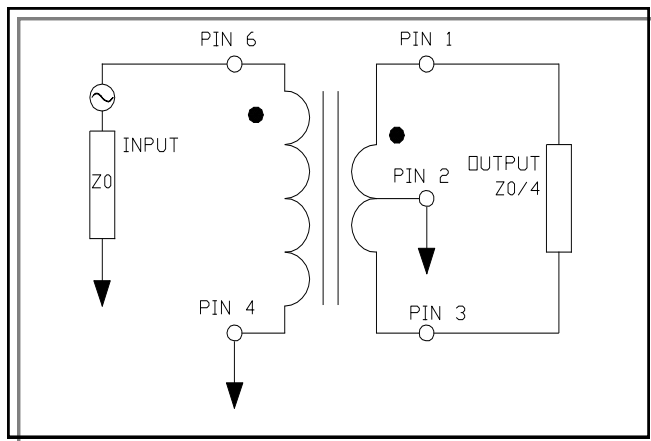
V2

### Outline Drawing

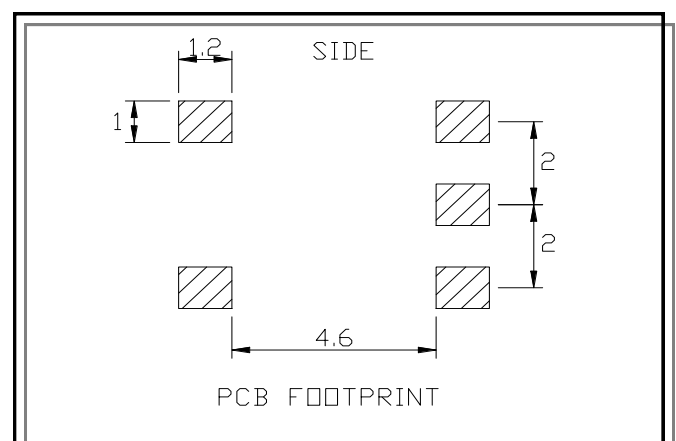


1. Dimensions in mm.
2. Tolerance:  $\pm 0.2$  mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Lead Plating: CuSn6
5. Lead Finish: SAC-305

### Recommended DC bias circuit



### Recommended Footprint



## 4:1 Step Down Transformer 5 - 200 MHz

V2

### Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	900
Reel Size	mm	330
Tape Width	mm	16.00
Pitch	mm	12.00
Ao	mm	6.6
Bo	mm	7.3
Ko	mm	4.9
Orientation	-	F26
Reference Application Note ANI-019 for orientation		

### Ordering Information

Part Number	Description
MABA-011048	Tape & Reel
MABA-011048-TB	Customer test board

### Recommended Maximum Ratings

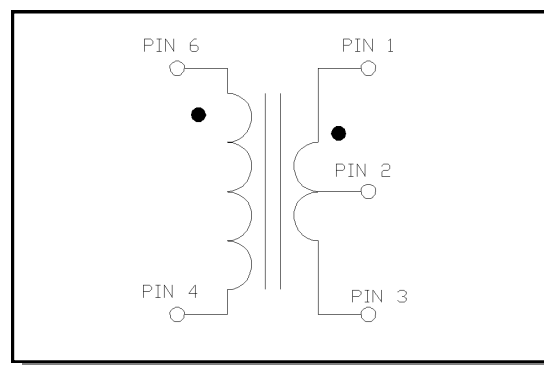
Parameter	Units	Min	Max
Input Power	W		1
Internal Load Dissipation	W		200
Tested up to DC bias current, will perform above this level	mA		900
Operating Temperature Range	°C	-40	+85

Full temperature plots available on request

### Pin Configuration

Pin No.	Function
1	Secondary Dot (output1)
2	Ground (centre tape)
3	Secondary (output 2)
4	Primary (RF ground)
5	Ground (not used)
6	Primary Dot (input)

### Schematic



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