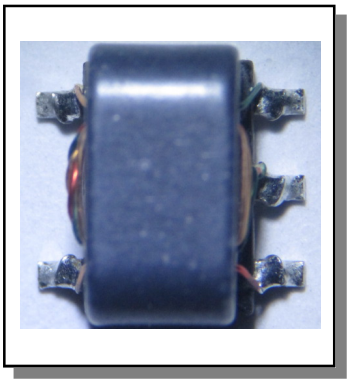
MABA-011048

4:1 Step Down Transformer
5 - 200 MHz

V1

Features

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



Electrical Specifications: Z_0 = 75Ω, T_A = 25°C, P_{in} = 0dBm

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

• **North America** Tel: 800.366.2266 / Fax: 978.366.2266
• **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
• **Asia/Pacific** Tel: 81.44.844.8296 / Fax: 81.44.844.8298

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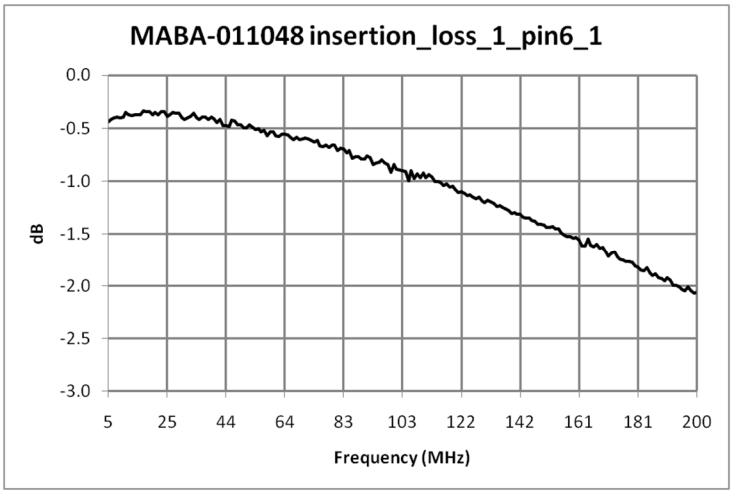

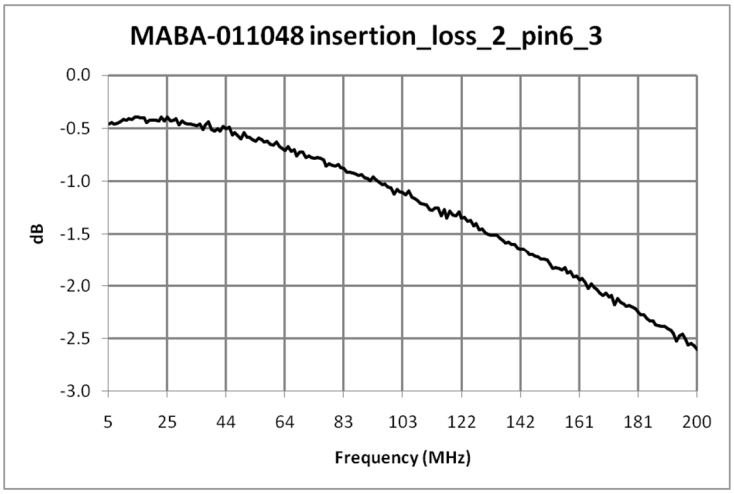

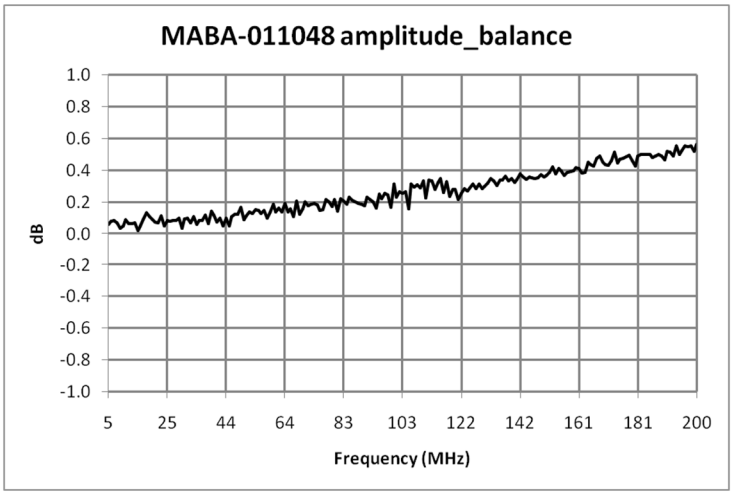

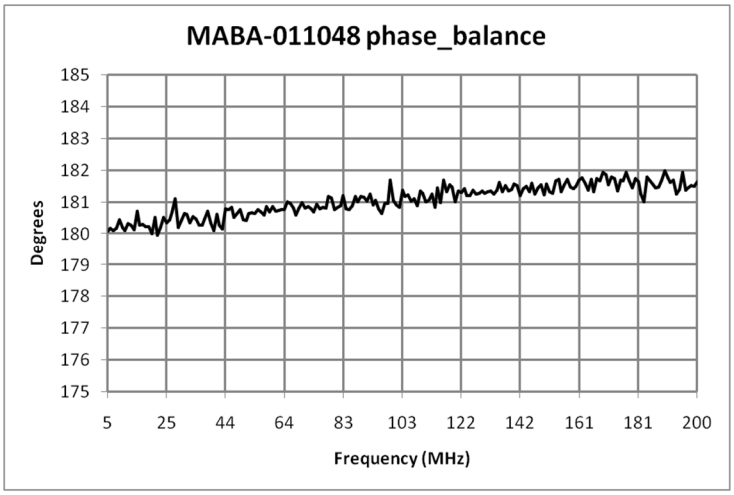

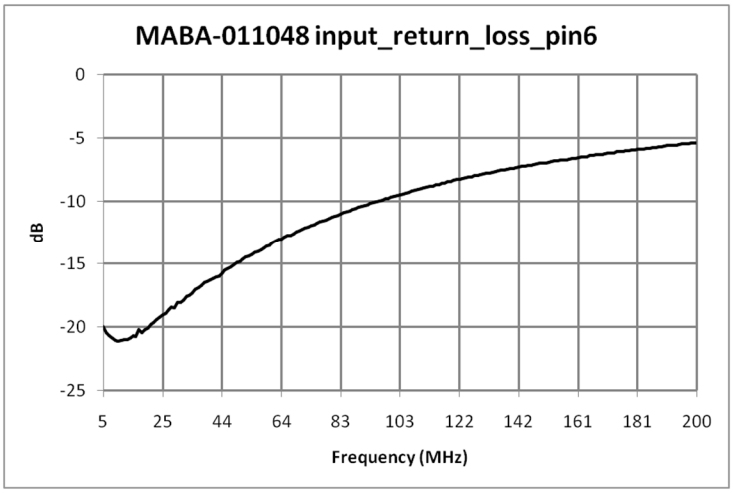

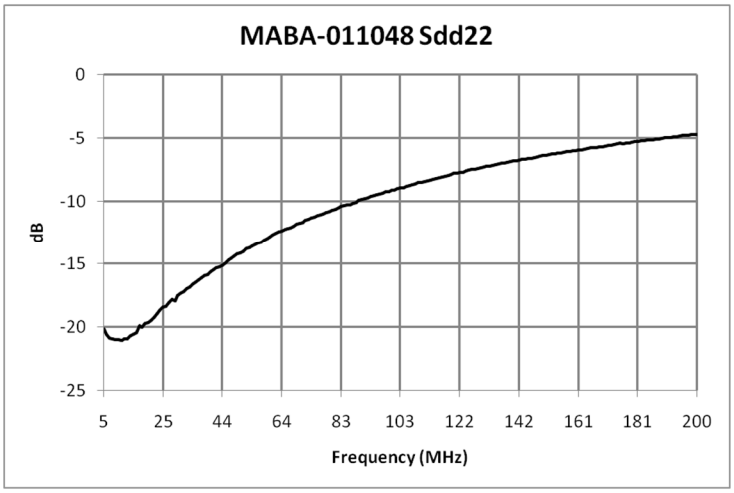

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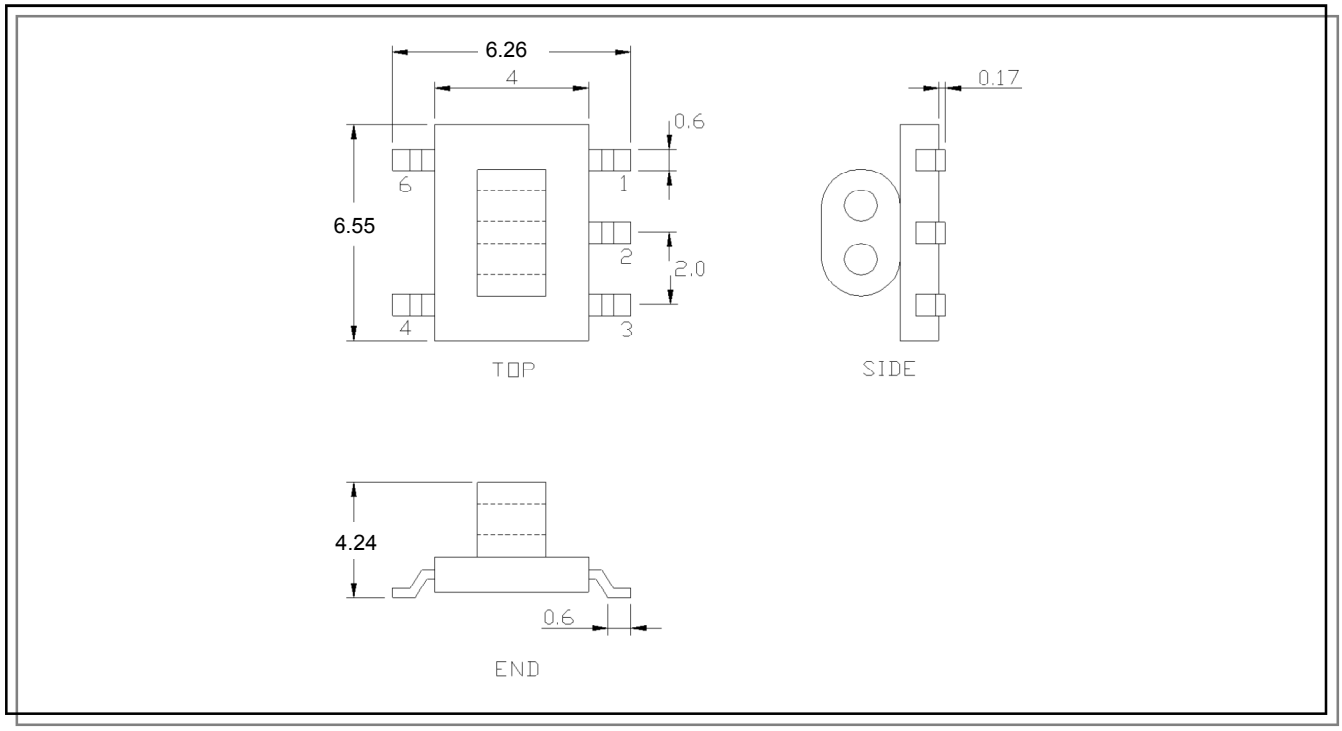
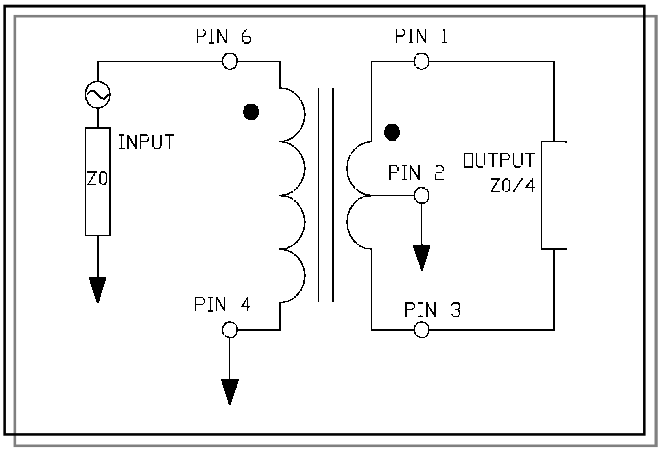
Outline Drawing

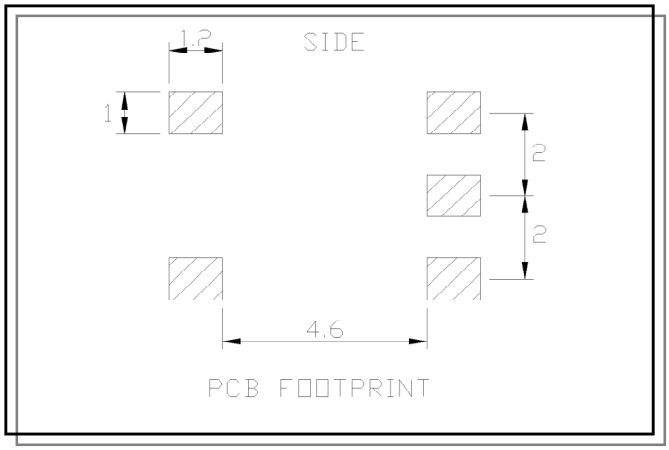


1. Dimensions in mm.
2. Tolerance: ±0.2mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Lead Plating: CuSn6
5. Lead Finish: SAC-305

Recommended DC bias circuit



Recommended Footprint



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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	ºC	-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