MABA-011064

4:1 Step down Flux Coupled Balun Transformer
5 – 300 MHz

Rev. V2

Features

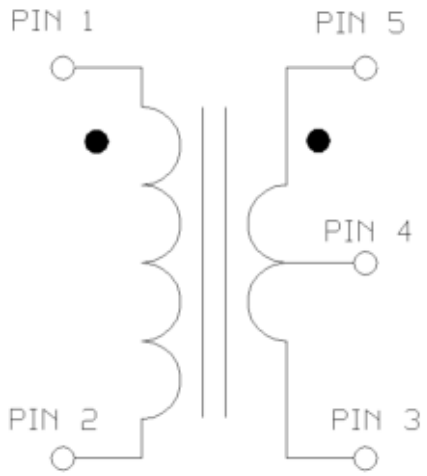
- 4:1 impedance
- Surface mount
- Available on tape and reel
- 260º reflow compatible
- RoHS compliant and Pb free
- Excellent temperature stability
- Suitable for all CATV, Broadband and FTTX applications



Description

MABA-011064 is a 4:1 flux coupled transformer. This transformer is ideally suited for DOCSIS 3.x upstream applications due to its high power and temperature performance.

Functional Schematic



Ordering Information

Part Number	Package
MABA-011064	Tape & Reel
MABA-011064-TB	Customer Test Board

Pin Configuration

Pin No.	Function
1	Primary Dot (input)
2	Primary (ground)
3	Secondary (output2)
4	Center tap (ground)
5	Secondary Dot (output1)

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

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Frequency Range	-	MHz	5	-	300
Impedance	-	Ω	-	75	-
Impedance Ratio	-	-	-	4:1	-
Insertion Loss 1 (Pin1 - Pin5)	5 - 50 MHz 50 - 150 MHz 150 - 300 MHz	dB dB dB	- - -	0.4 0.9 2.2	0.7 2.0 4.5
Insertion Loss 2 (Pin1 - Pin3)	5 - 50 MHz 50 - 150 MHz 150 - 300 MHz	dB dB dB	- - -	0.5 1.1 2.8	0.9 2.2 4.9
Amplitude Balance	5 - 50 MHz 50 - 150 MHz 150 - 300 MHz	dB dB dB	- -	0.1 0.2 0.5	±0.5 ±0.8 ±1.6
Phase Balance (ref value 180˚)	5 - 50 MHz 50 - 150 MHz 150 - 300 MHz	º º º	- - -	0.8 2.4 3.5	±3.0 ±7.0 ±10.0
Input Return Loss (Pin1)	5 - 50 MHz 50 - 150 MHz 150 - 300 MHz	dB dB dB	14 7 3	21 12 7	- - -

Recommended Maximum Ratings

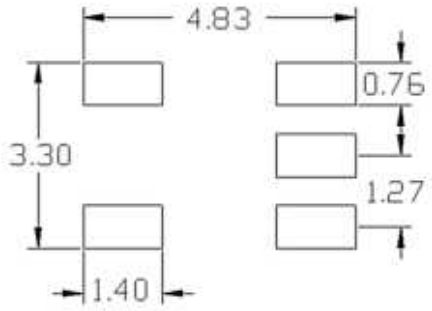
Parameter	Units	Min	Max
Input Power	mW	-	2000
DC Current	mA	-	1500
Operating Temperature Range	ºC	-40	+125

Full temperature plots available on request

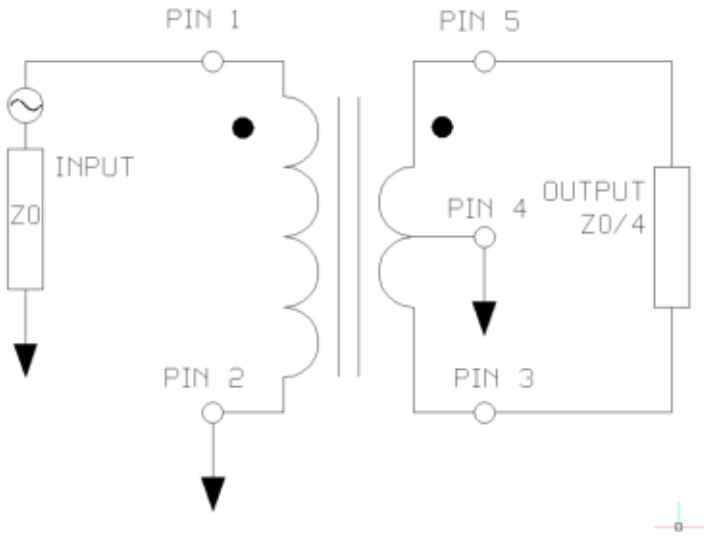
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PCB Layout



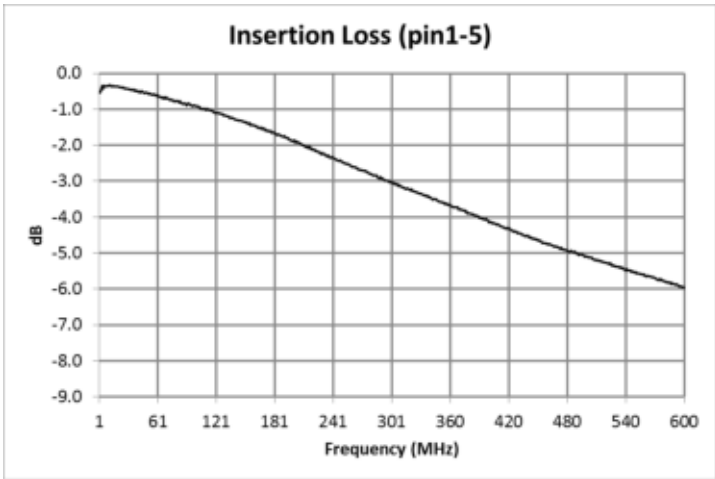
Application Schematic

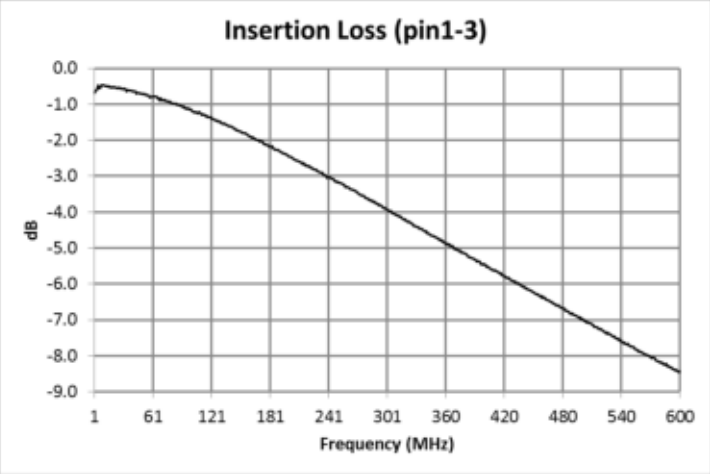


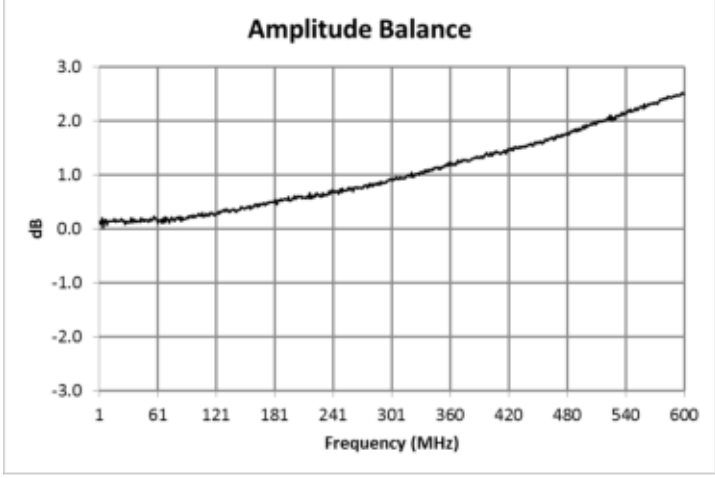
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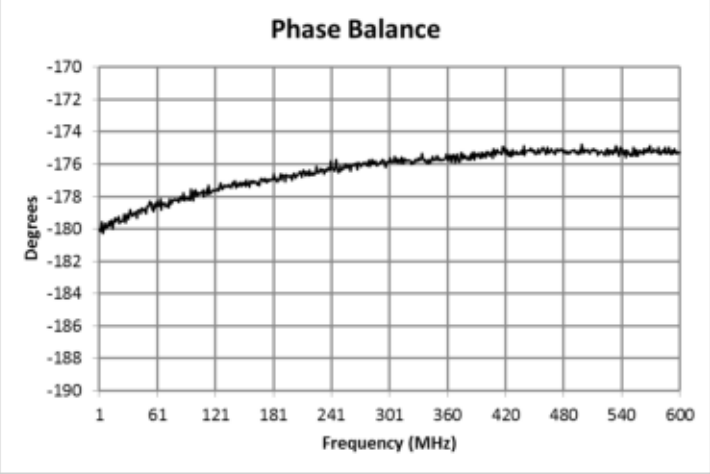
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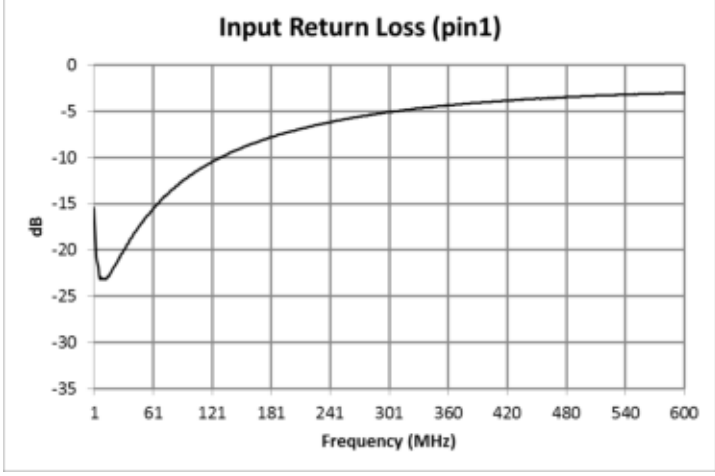
Typical Performance Curves

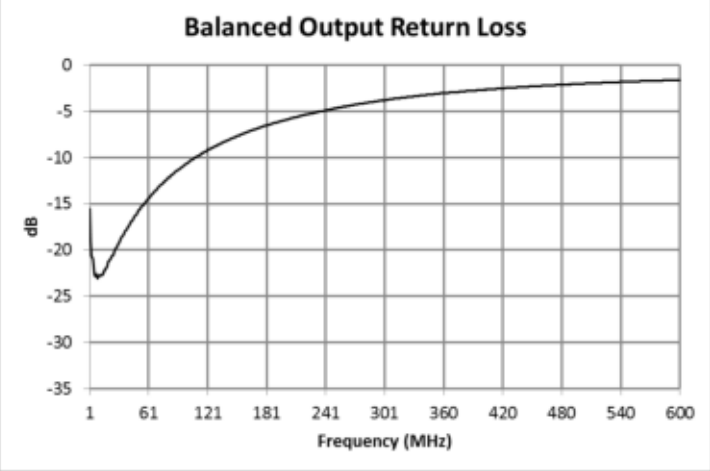












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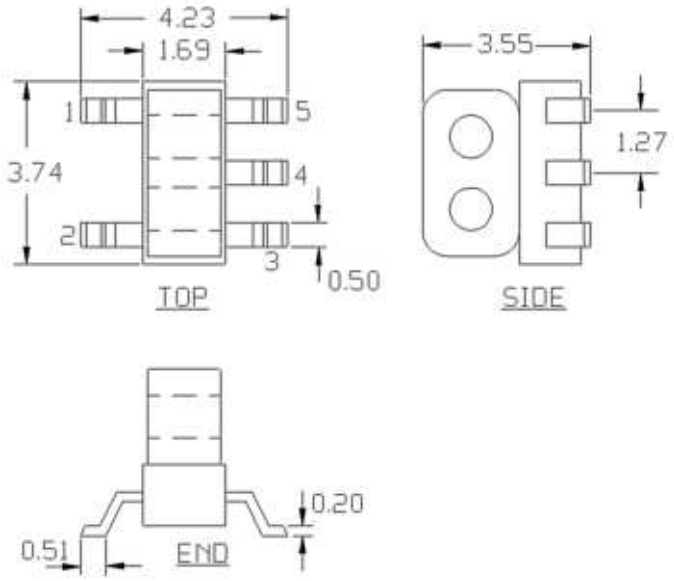
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Outline Drawing

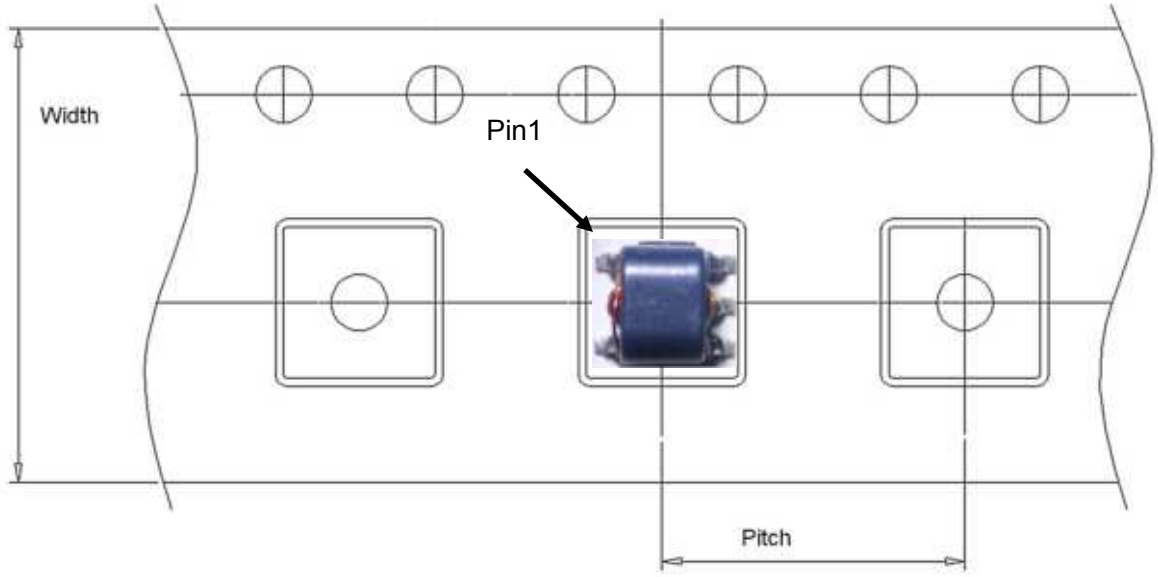


1. Dimensions in mm.
2. Tolerance: ±0.2mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Lead plating (CuSn6) Lead finish SAC-305.

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	4.40
Bo	mm	4.00
Ko	mm	3.90
Orientation	-	F26
Reference Application Note ANI-019 for orientation		

Carrier Tape Orientation



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