

2:1 Step down Flux Coupled Balun Transformer 5 – 300 MHz

Rev. V2

Features

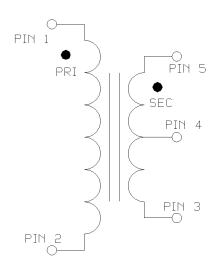
- 2:1 impedance
- Surface mount
- · Available on tape and reel
- 260° reflow compatible
- · RoHS compliant and Pb free
- · Excellent temperature stability
- Suitable for all CATV, Broadband and FTTX applications

Description

MABA-011063 is a 2:1 flux coupled transformer. This transformer is ideally suited for DOCSIS 3.0x upstream applications due to it's high power and temperature performance.



Functional Schematic



Ordering Information

Part Number	Package
MABA-011063	Tape & Reel
MABA-011063-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, $Z_0 = 75 \Omega$, $P_{in} = 0$ dBm

Parameter	Test Conditions	Units	Min.	Тур.	Max.
Frequency Range	-	MHz	5	-	300
Impedance	-	Ω	-	75	-
Impedance Ratio	-	-	-	2:1	-
Insertion Loss 1 (Pin1 - Pin5)	5 - 50 MHz 50 - 150 MHz 150 - 300 MHz	dB dB dB	- - -	0.3 0.5 1.3	0.5 1.0 2.6
Insertion Loss 2 (Pin1 - Pin3)	5 - 50 MHz 50 - 150 MHz 150 - 300 MHz	dB dB dB	- - -	0.2 0.5 1.1	0.5 1.0 2.3
Amplitude Balance	5 - 50 MHz 50 - 150 MHz 150 - 300 MHz	dB dB dB	- - -	0.01 0.01 0.2	±0.2 ±0.4 ±1.1
Phase Balance (ref value 180°)	5 - 50 MHz 50 - 150 MHz 150 - 300 MHz	0 0	- - -	0.2 1.3 1.8	±2.0 ±5.0 ±7.0
Input Return Loss (Pin1)	5 - 50 MHz 50 - 150 MHz 150 - 300 MHz	dB dB dB	18 10 5	24 15 9	- - -

Recommended Maximum Ratings

Parameter	Units	Min	Max
Input Power	mW	-	1000
DC Current	mA	-	1000
Operating Temperature Range	°C	-40	+125

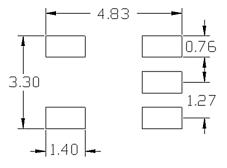
Full temperature plots available on request



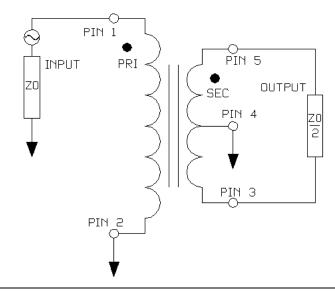
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PCB Layout



Application Schematic



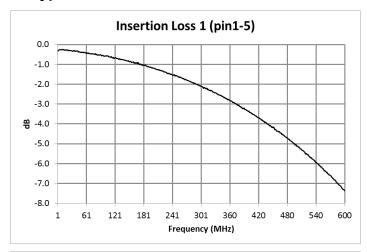


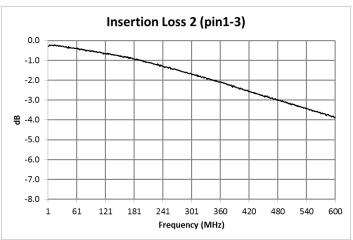
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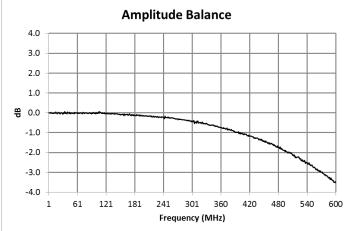
5 – 300 MHz

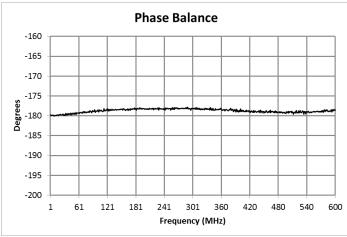
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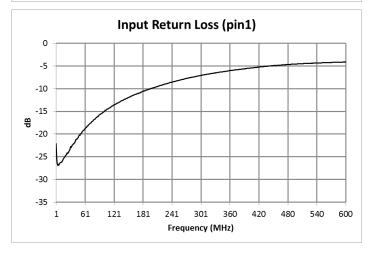
Typical Performance Curves

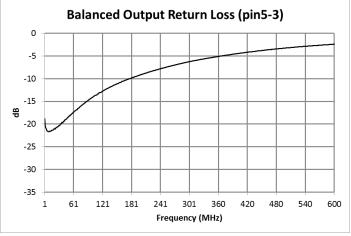












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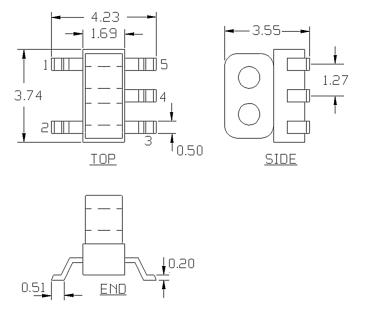
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Outline drawing



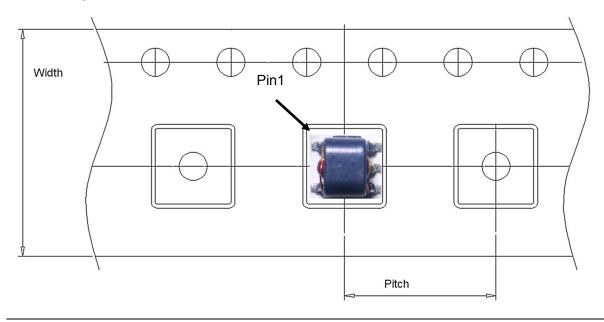
Tape & Reel Information

Parameter	Units	Value		
Qty per reel	-	2000		
Reel Size	mm	330		
Tape Width	mm	12.00		
Pitch	mm	8.00		
Ao	mm	4.40		
Во	mm	4.00		
Ko	mm	3.90		
Orientation	-	F26		
Reference Application Note ANI-019 for orientation				

Reference Application Note ANI-019 for orientation

- 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.

Carrier Tape Orientation



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