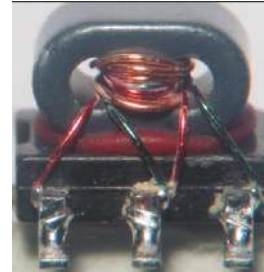


Features

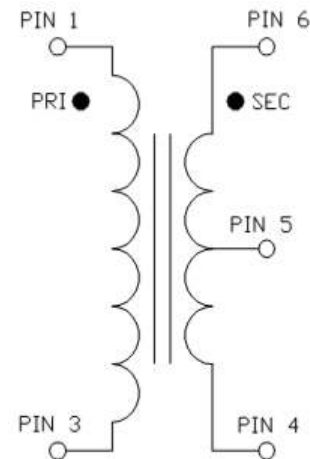
- Surface mount
- 2:1 Impedance ratio
- Centre tap on secondary
- Suitable for DOCSIS 3.1
- RoHS compliant and Pb free
- Available on tape and reel

Description

The MABA-011056 is a 2:1 step down flux coupled balun transformer in a low cost surface mount package. Ideally suited for CATV Broadband applications.



Functional Schematic



Ordering Information

Part Number	Package
MABA-011056	Tape & Reel
MABA-011056-TB	Customer test board

Pin Configuration

Pin No.	Function
1	Primary Dot
3	Primary
4	Secondary
5	Secondary Centre Tap
6	Secondary Dot

Transformer, 2:1 Flux Coupled Transformer 5 - 300 MHz

Rev. V2

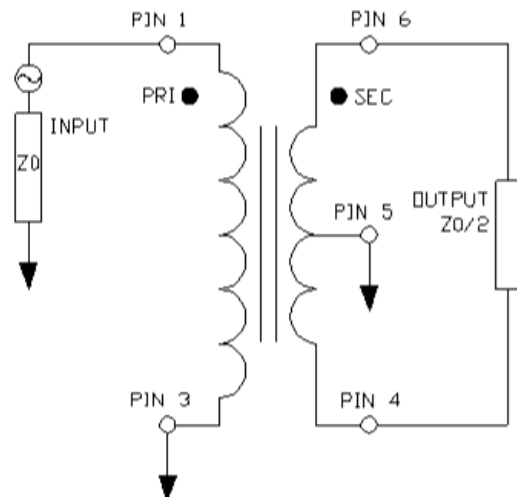
Electrical Specifications: Freq. = 5 - 300 MHz, $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{IN} = 0 \text{ dBm}$

Parameter	Conditions	Units	Min.	Typ.	Max.
Impedance Ratio	—	—	—	2:1	—
Insertion Loss (Pin 1 - Pin 6)	5 - 50 MHz	dB	—	0.4	0.6
	50 - 85 MHz			0.5	0.7
	85 - 205 MHz			0.8	1.5
	205 - 300 MHz			1.3	2.2
Insertion Loss (Pin 1 - Pin 4)	5 - 50 MHz	dB	—	0.4	0.6
	50 - 85 MHz			0.5	0.7
	85 - 205 MHz			0.7	1.4
	205 - 300 MHz			1.2	2.0
Amplitude Balance	5 - 50 MHz	dB	—	0.02	0.2
	50 - 85 MHz			0.04	0.3
	85 - 205 MHz			0.04	0.5
	205 - 300 MHz			0.1	0.7
Phase Balance	5 - 50 MHz	°	—	0.1	2.0
	50 - 85 MHz			0.3	3.0
	85 - 205 MHz			1.1	6.0
	205 - 300 MHz			1.2	7.0
Input Return Loss (Pin 1)	5 - 45 MHz	dB	20	25	—
	45 - 85 MHz		15	19	
	85 - 205 MHz		8	13	
	205 - 300 MHz		6	9	

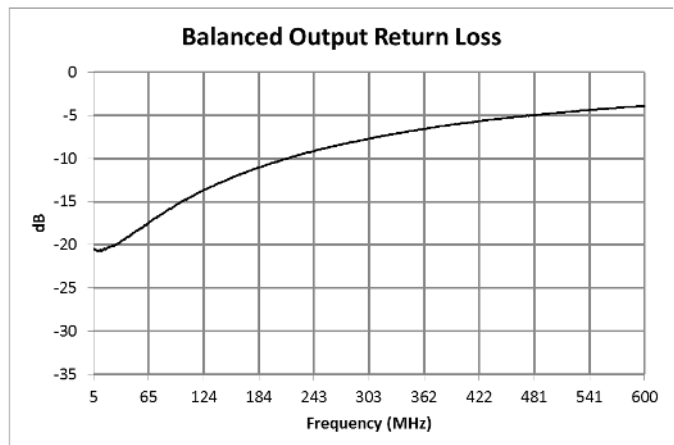
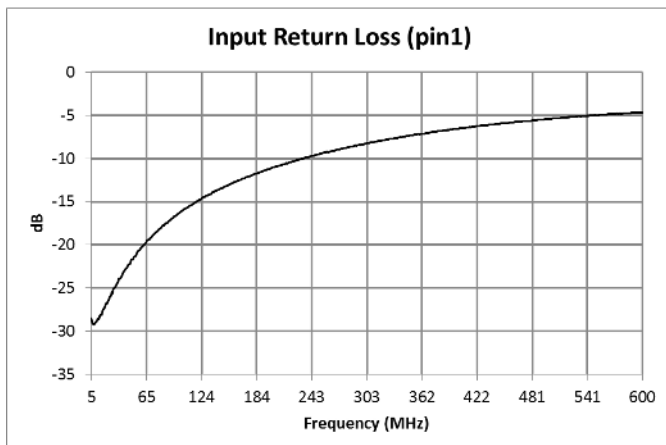
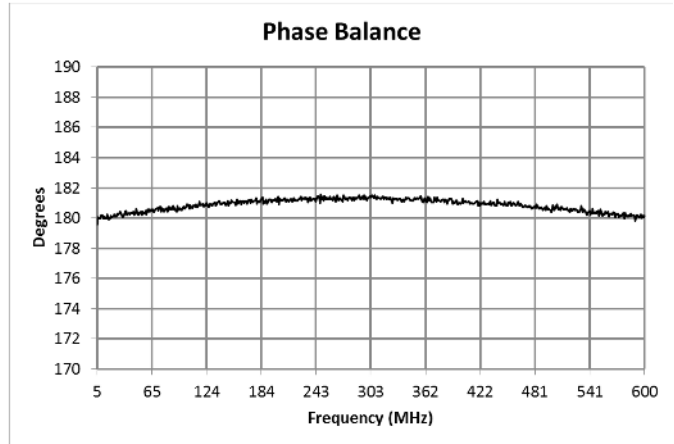
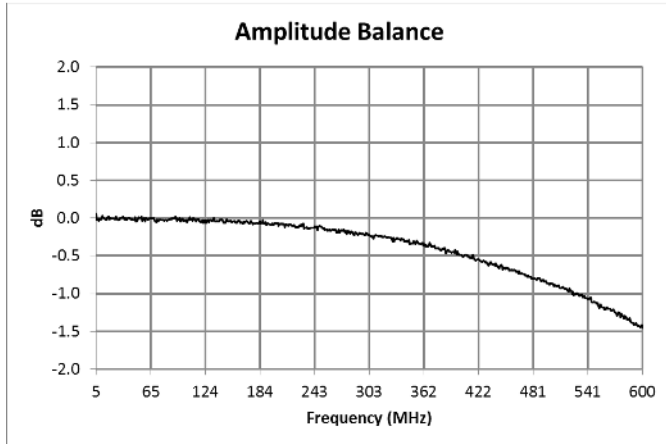
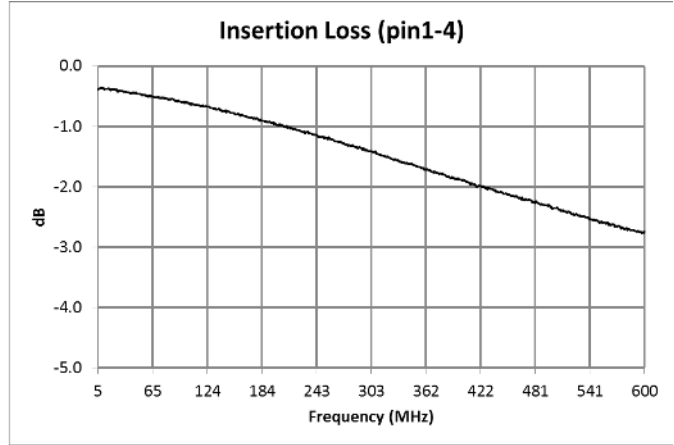
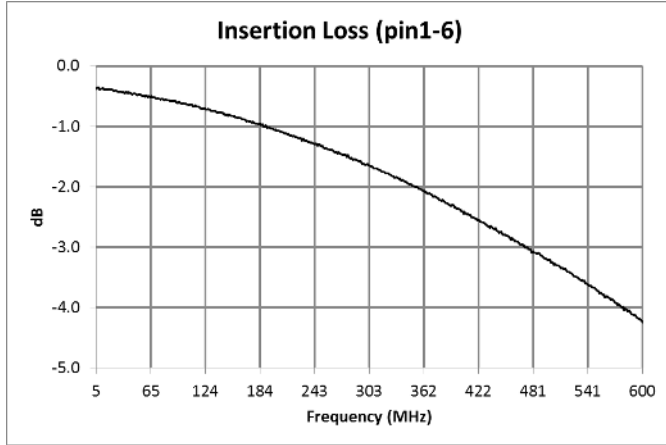
Absolute Maximum Ratings

Parameter	Units
Input RF Power	0.5 W
DC Current	500 mA
Operating Temperature	-40°C to +85°C

Application Circuit

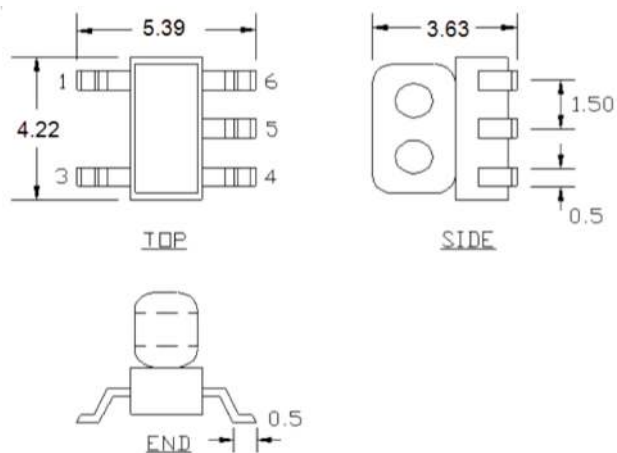


Typical Performance Curves



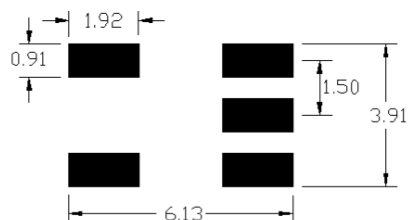
Full temperature plots available on request

Outline Drawing



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

PCB Layout



Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel size	mm	330
Tape width (W)	mm	12.00
Pitch (P1)	mm	8.00
A ₀	mm	5.6
B ₀	mm	4.5
K ₀	mm	4.0
Orientation	-	F26
Reference Application note ANI-019 for orientation		

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