

4:1 Step-down Flux Coupled Transformer 5 - 200 MHz

Rev. V2

Features

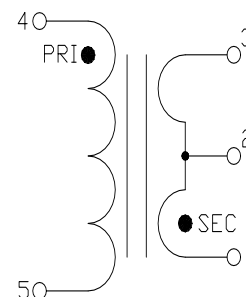
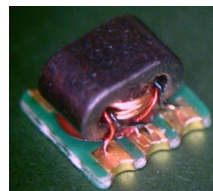
- 4:1 Step-down Flux Coupled
- Surface Mount Package
- All Wires are Welded to the PCB Carrier
- 260°C Reflow Compatible
- RoHS v Compliant

Description

The MABA-008354-CF4A40 is a 4:1 flux coupled step down transformer in a surface mount package.

Ideally suited for high volume CATV/Broadband applications. Suitable for use in 50 Ω and 75 Ω systems.

Schematic



Pin Configuration

Pin #	Function
1	Secondary Dot (output 1)
2	Centre Tap
3	Secondary (output 2)
4	Primary Dot (input)
5	Primary (ground)

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

Parameter	Frequency	Units	Min.	Typ.	Max.
Insertion Loss	5 - 35 MHz	dB	—	0.8	1.1
	35 - 85 MHz			1.1	1.6
	85 - 200 MHz			2.2	3.6
Amplitude Balance	5 - 85 MHz	dB	—	±0.01	±0.4
	5 - 200 MHz			±0.09	±0.8
Phase Balance	5 - 85 MHz	°	—	±0.2	±4
	85 - 200 MHz			±0.4	±5
Input Return Loss	5 - 35 MHz	dB	15	19	—
	35 - 85 MHz		10	13	
	85 - 200 MHz		5	8	

Ordering Information

Part #	Description
MABA-008354-CF4A40	2000 piece reel
MABA-008354-CF4ATB	customer test board

Reference Application Note **M513** for reel size information.

Absolute Maximum Ratings

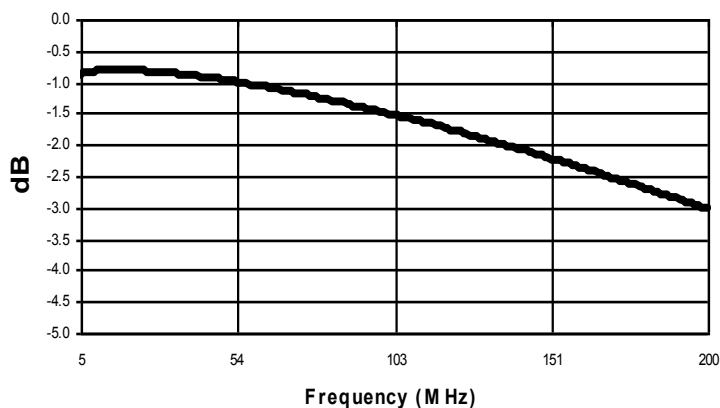
Parameter	Absolute Maximum
RF Power	1 W
DC current	250 mA per arm
Operating Temperature	-40°C to +60°C
Storage Temperature	-40°C to +85°C

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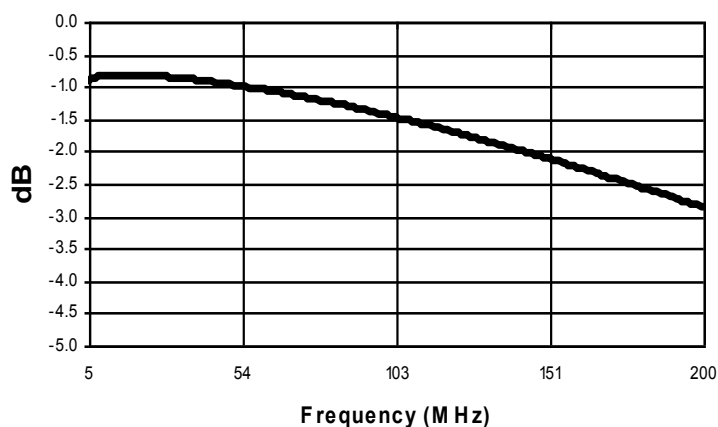
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Typical Performance Curves: $T_A = 25^\circ\text{C}$, $Z_0 = 75\ \Omega$, $P_{IN} = 0\ \text{dBm}$

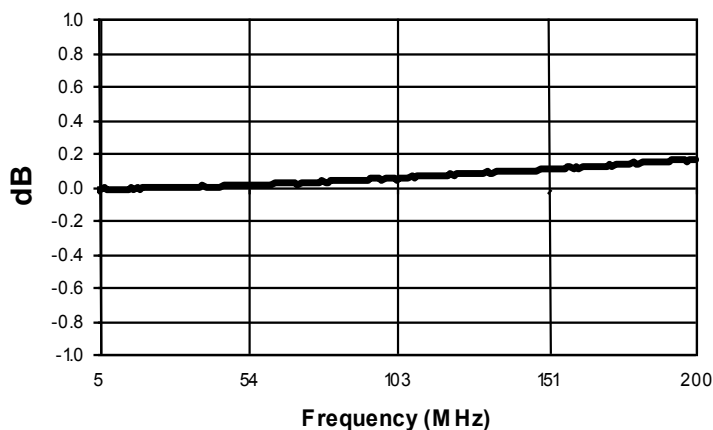
Insertion Loss 1 (pin 4 - pin 1)



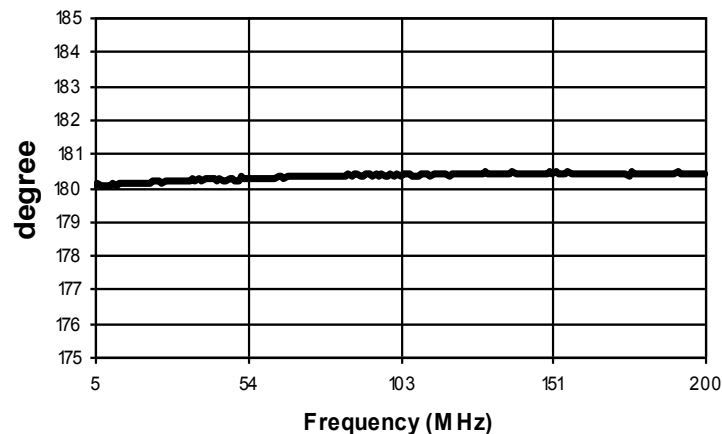
Insertion Loss 2 (pin 4 - pin 3)



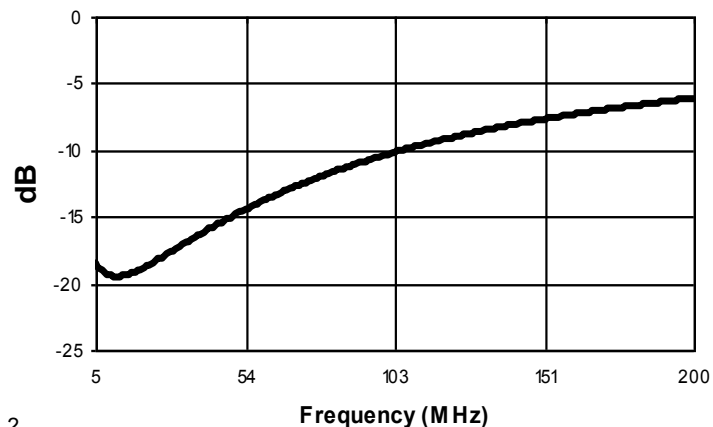
Amplitude Balance



Phase Balance



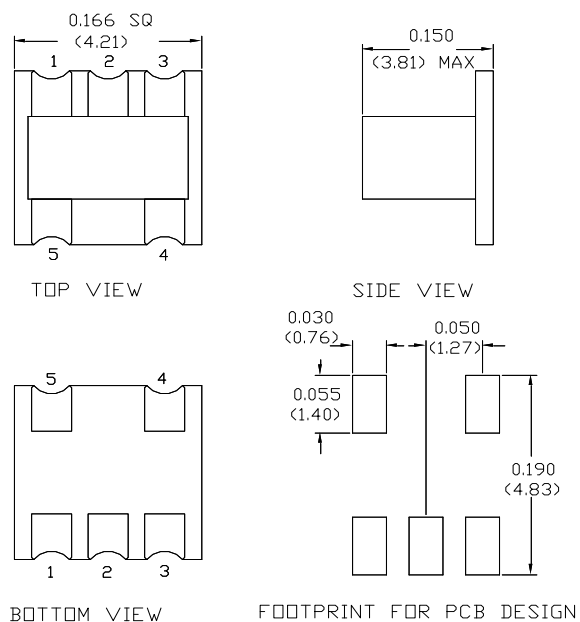
Return Loss: Input



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Outline Drawing (SM-164)



Dimensions in inches [mm] Tolerance: .xx ± .02, .xxx ± .010, unless otherwise stated

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