

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

Rev. V2

### Features

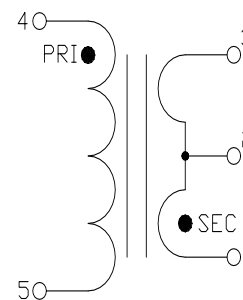
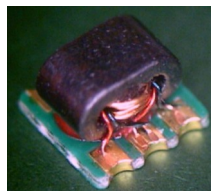
- 4:1 Step-down Flux Coupled
- Surface Mount Package
- All Wires are Welded to the PCB Carrier
- 260°C Reflow Compatible
- RoHS v Compliant

### 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  $\Omega$  and 75  $\Omega$  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	—	$\pm 0.01$	$\pm 0.4$
	5 - 200 MHz			$\pm 0.09$	$\pm 0.8$
Phase Balance	5 - 85 MHz	°	—	$\pm 0.2$	$\pm 4$
	85 - 200 MHz			$\pm 0.4$	$\pm 5$
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

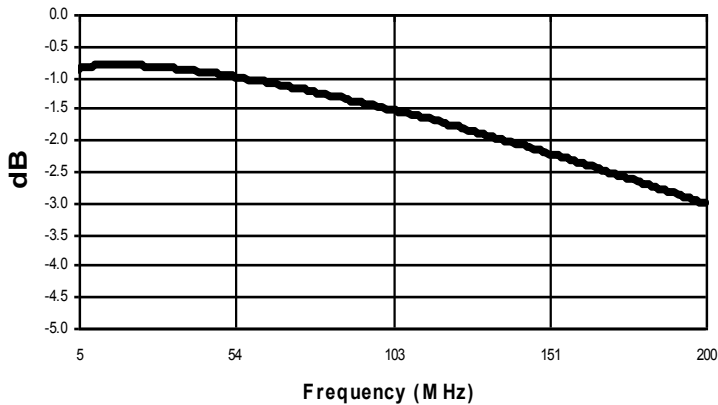
Reference Application Note **M513** for reel size information.

### Absolute Maximum Ratings

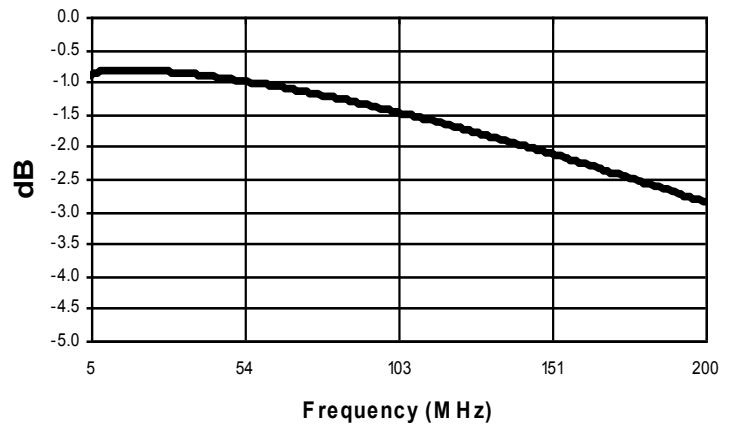
Parameter	Absolute Maximum
RF Power	1 W
DC current	250 mA per arm
Operating Temperature	-40°C to +60°C
Storage Temperature	-40°C to +85°C

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

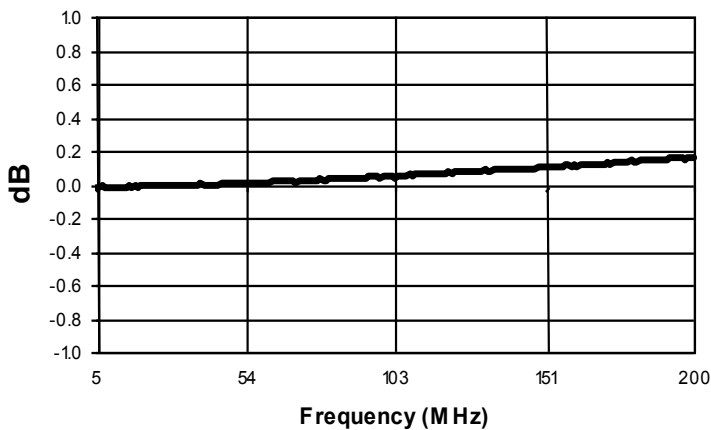
*Insertion Loss 1 (pin 4 - pin 1)*



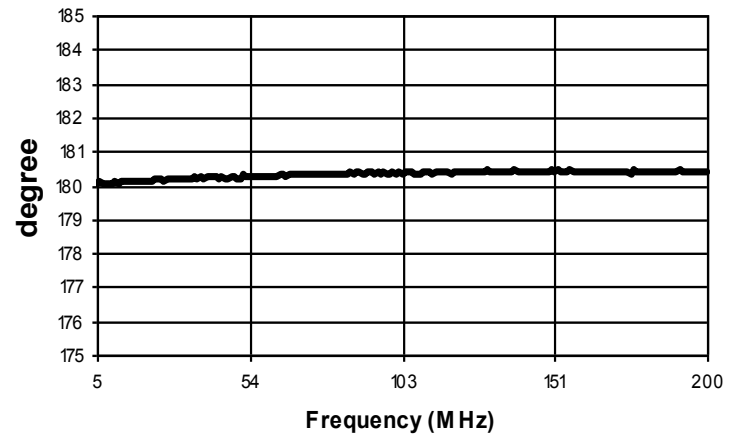
*Insertion Loss 2 (pin 4 - pin 3)*



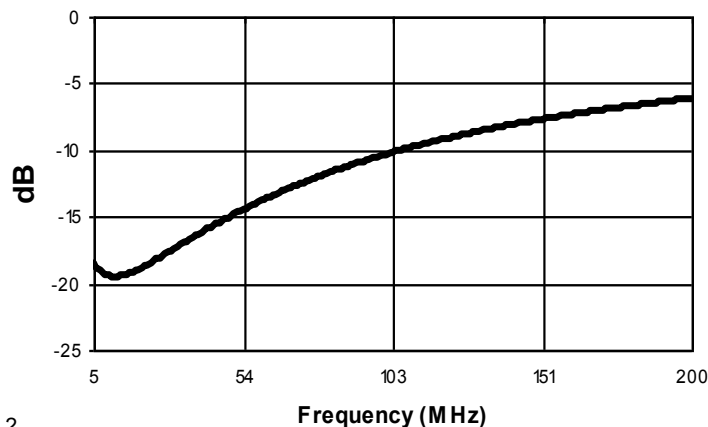
*Amplitude Balance*



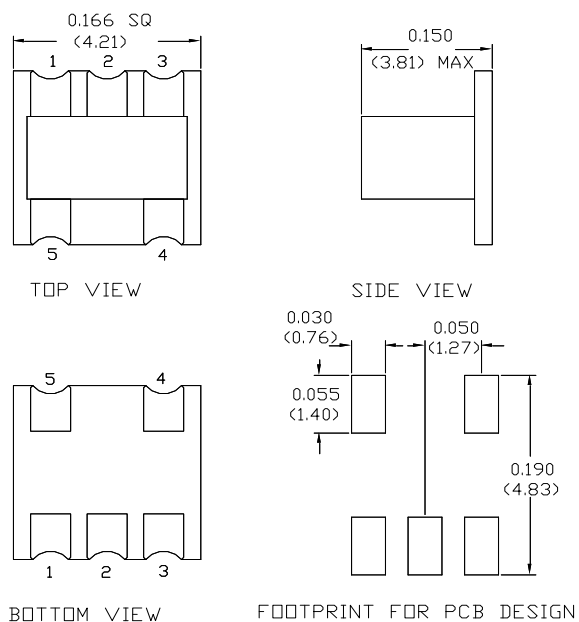
*Phase Balance*



*Return Loss: Input*



## Outline Drawing (SM-164)



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

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