

## 1:1 Flux Coupled Balun Transformer 5 - 120 MHz

Rev. V3

### Features

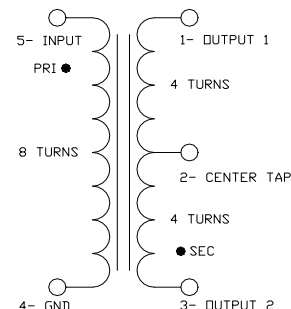
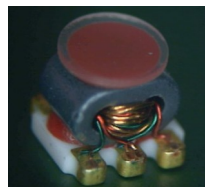
- 1:1 Impedance Ratio
- 75  $\Omega$
- Surface Mount Package
- RoHS\* Compliant

### Description

The MABA-008965-CF1160 is a 1:1 RF flux coupled transformer in a surface mount package.

Ideally suited for high volume CATV application.

### Schematic



### Pin Configuration

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

### Electrical Specifications: Freq. = 5 - 120 MHz, $T_A = 25^\circ\text{C}$ , $Z_0 = 75 \Omega$ , $P_{IN} = 0 \text{ dBm}$

Parameter	Frequency	Units	Min.	Typ.	Max.
Insertion Loss 1 (Pin 5 to Pin 1)	5 - 80 MHz	dB	—	0.1	0.4
	80 - 120 MHz			0.3	0.5
Insertion Loss 2 (Pin 5 to Pin 3)	5 - 80 MHz	dB	—	0.2	0.4
	80 - 120 MHz			0.4	0.6
Amplitude Un-Balance	5 - 80 MHz	dB	—	$\pm 0.06$	$\pm 0.2$
	80 - 120 MHz			$\pm 0.18$	$\pm 0.3$
Phase Un-Balance	5 - 80 MHz	°	—	$\pm 0.05$	$\pm 1.5$
	80 - 120 MHz			$\pm 0.10$	$\pm 2.0$
Input Return Loss (Pin 5)	5 - 80 MHz	dB	19	25	—
	80 - 120 MHz		15	19	

### Ordering Information

Part #	Description
MABA-008965-CF1160	2000 piece reel
MABA-008965-CF11TB	customer test board

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

### Absolute Maximum Ratings

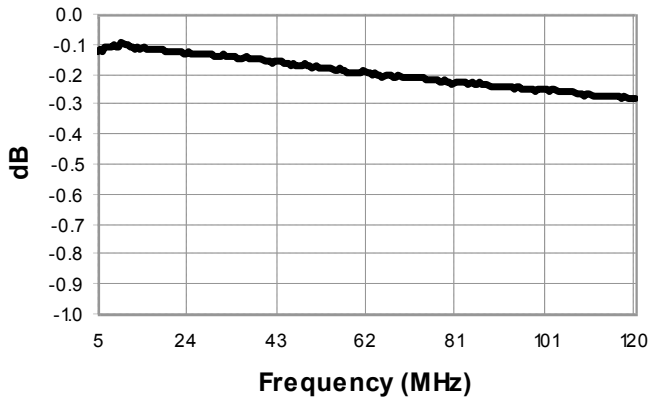
Parameter	Absolute Maximum
RF Power	250 mW
DC Current	30 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C

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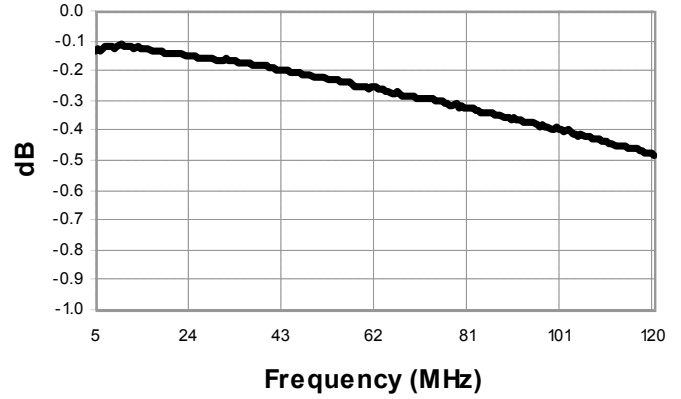
Rev. V3

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

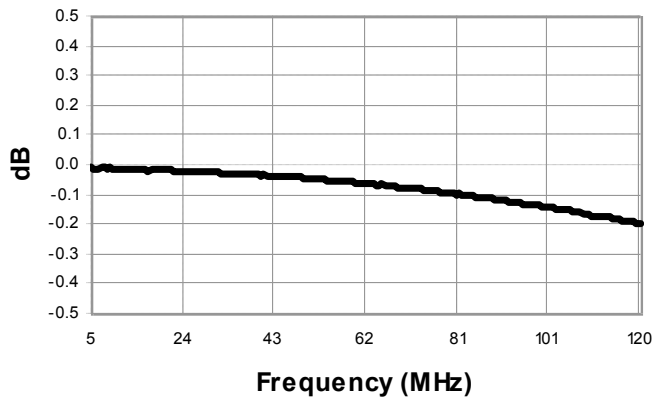
Insertion Loss 1 (Pin5 - Pin1)



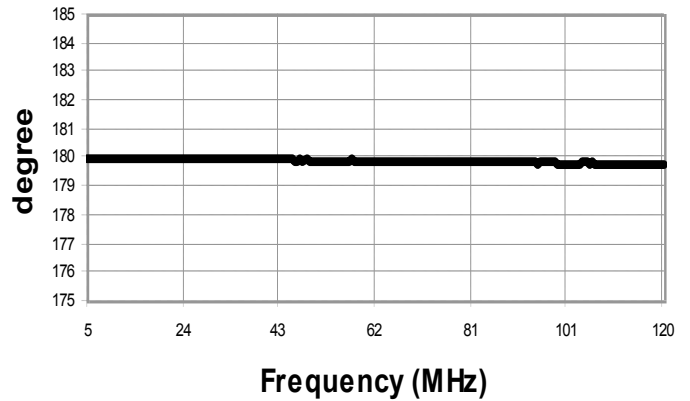
Insertion Loss 2 (Pin5 - Pin3)



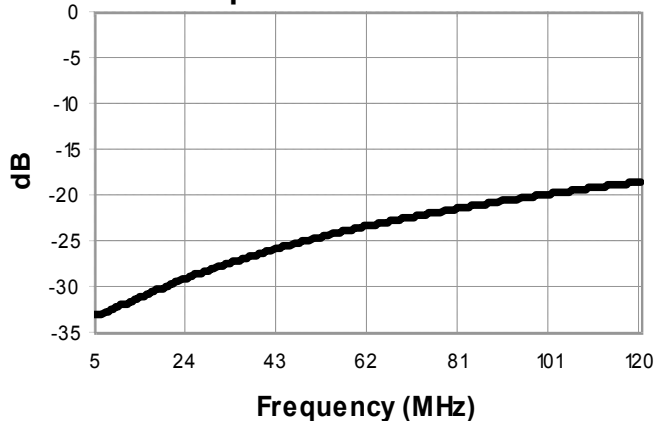
Amplitude Balance



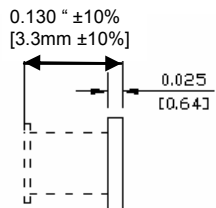
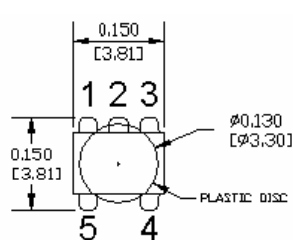
Phase Balance



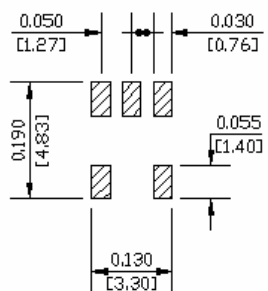
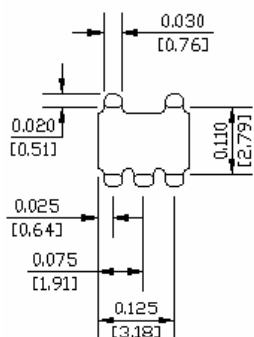
Return Loss: Input



## Case Style SM-22A



### Recommended PCB



Dimensions are inches [millimeters]  $\pm 0.015$  [0.38] unless otherwise specified.

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