

## 2:1 Flux Coupled Balun Transformer 5 - 100 MHz

Rev. V2

### Features

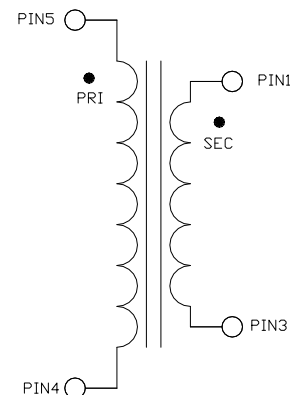
- 2:1 Impedance
- Surface Mount Package
- 75  $\Omega$  Single Ended to 37.5  $\Omega$  Balance
- RoHS Compliant, Lead Free
- Available on Tape and Reel

### Description

The MABA-009776-CF28A0 is a 2:1 RF flux coupled step-down balun transformer with out a center tap, in a surface mount package.

Ideally suited for high volume CATV/Broadband applications.

### Schematic



### Pin Configuration

Pin #	Function
1	Secondary Dot
2	No Connection
3	Secondary
4	Primary
5	Primary Dot

### Electrical Specifications: Freq. = 5 - 100 MHz, $T_A = 25^\circ\text{C}$ , $Z_0 = 75 \Omega$ , $P_{IN} = 0 \text{ dBm}$

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Insertion Loss 1 (Pin 5 to Pin 1)	5 - 100 MHz	dB	—	0.4	0.8
Insertion Loss 2 (Pin 5 to Pin 3)	5 - 100 MHz	dB	—	0.4	0.8
Amplitude Balance	5 - 100 MHz	dB	—	0.1	$\pm 1.0$
Phase Balance	5 - 100 MHz	$^\circ$	—	2.0	$\pm 6.0$
Input Return Loss (Pin 4)	5 - 100 MHz	dB	14	22	—

### Ordering Information

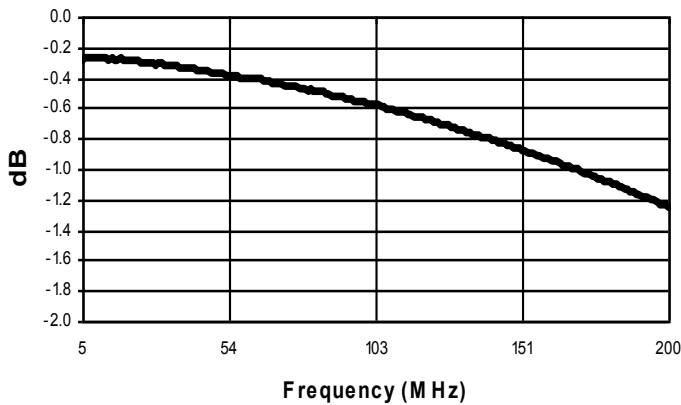
Part #	Package
MABA-009776-CF28A0	2000
MABA-009776-CF28TB	Customer Test Board

### Recommended Maximum Ratings

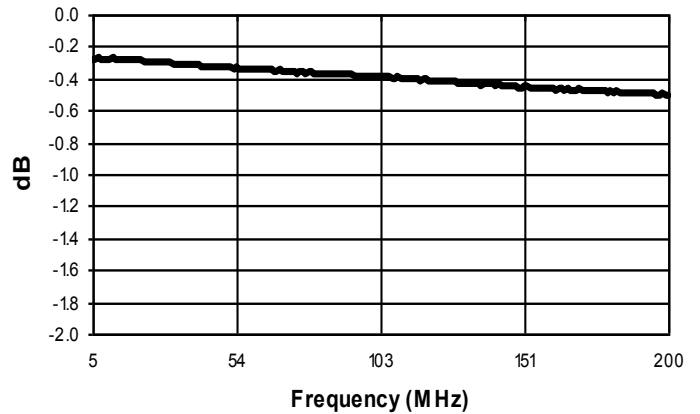
Parameter	Value
RF Power	27 dBm (500 mW)
DC Current	300 mA
Operating Temperature	$-40^\circ\text{C}$ to $+100^\circ\text{C}$
Storage Temperature	$-55^\circ\text{C}$ to $+115^\circ\text{C}$

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

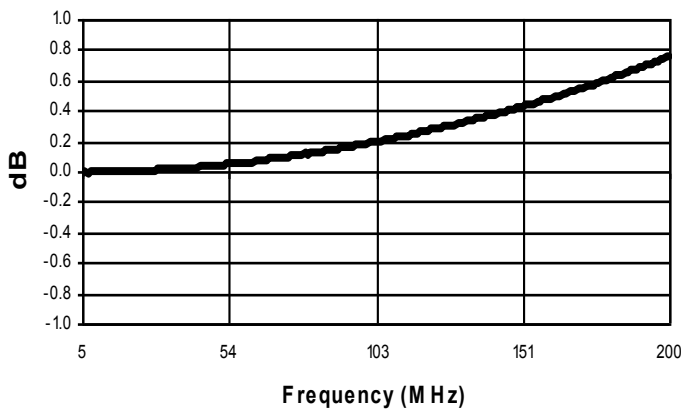
**Insertion Loss 1 (Pin5 - Pin1)**



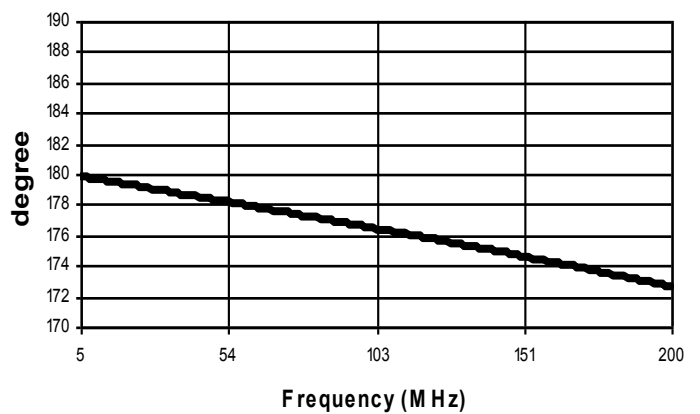
**Insertion Loss 2 (Pin5 - Pin3)**



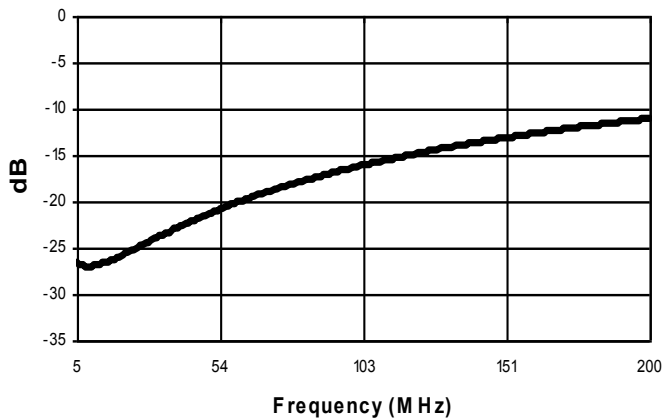
**Amplitude Balance**



**Phase Balance**

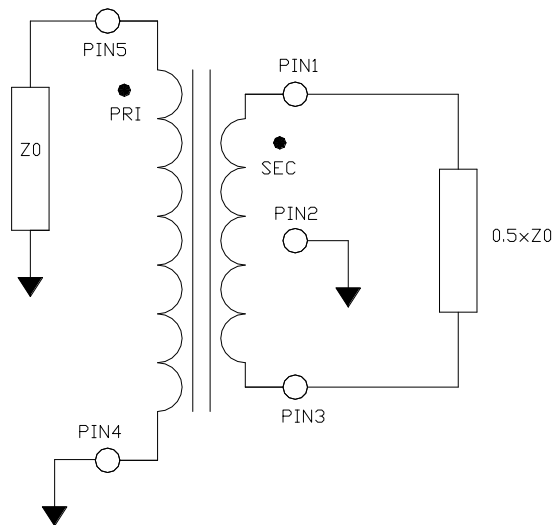


**Return Loss: Input (Pin5)**

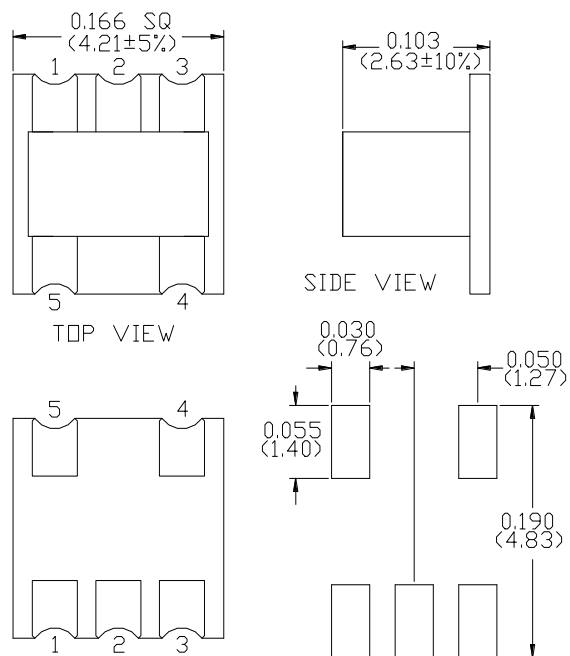


Note:  
 Graphs plotted to 200 MHz for reference only.

## Application Circuit



## Case Style SM-164



Dimensions are inches (millimetres)  $\pm 0.015$  (0.38) unless otherwise specified.

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