

# MABA-009412-CF1BC0



1:1 Flux Coupled BalBal Transformer with separated center taps  
5 - 120 MHz

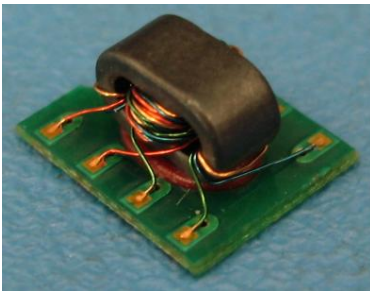
M/A-COM Products  
Part Status: Released Rev V1

## Features

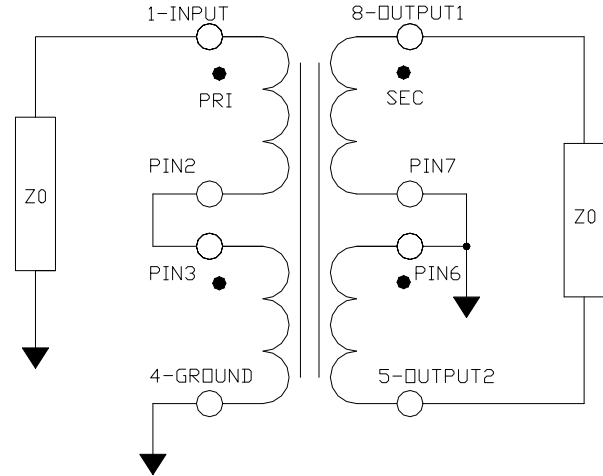
- Surface Mount
- 1:1 Impedance
- 75 Ohm
- RoHS Compliant

## Description

M/A-COM's MABA-009412-CF1BC0 is a 1:1 BalBal flux coupled transformer in a low cost surface mount package. The 4 coils on this core are routed to separate pins on the carrier, so it may be configured for many different circuits. Ideally suited for high volume CATV application.



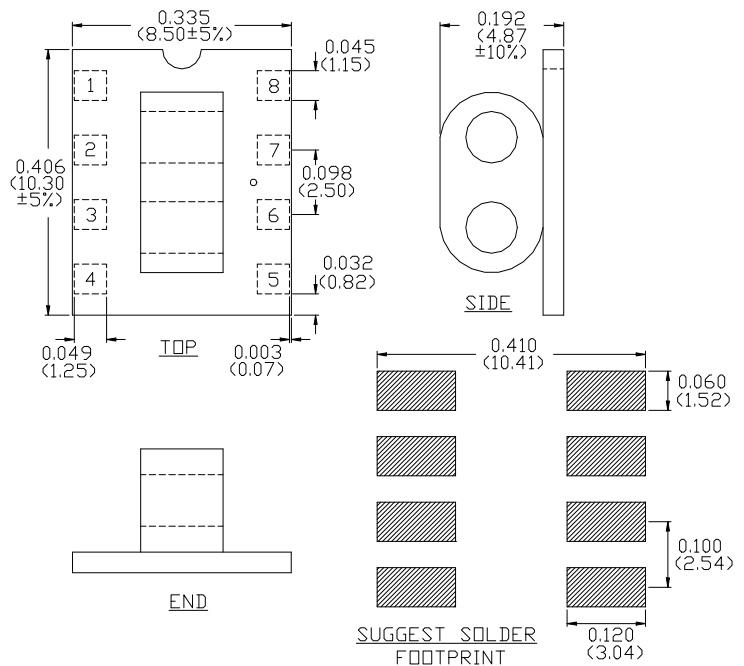
## Schematic



## Pin Configuration

Function	Pin Number
Coil 1 dot (input)	1
Coil 1 (short to 3)	2
Coil 2 dot (short to 2)	3
Coil 2 (ground)	4
Coil 3 (output 2)	5
Coil 3 dot (ground)	6
Coil 4 (ground)	7
Coil 4 dot (output 1)	8

## Case Style SM-193



Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.

## Ordering Information

Part Number	Package
MABA-009412-CF1BC0	500 pieces per reel
MABA-009412-CF1BTB	Customer test board

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

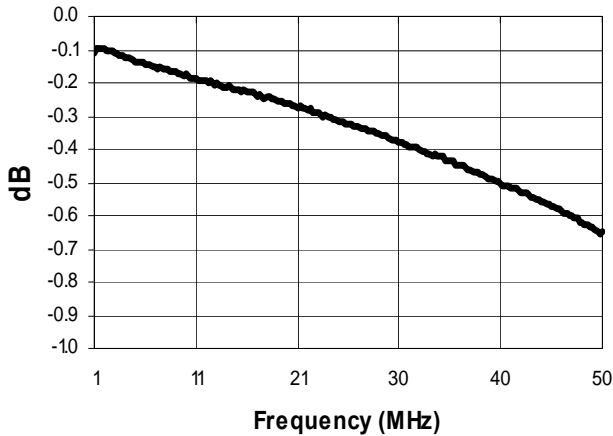
Parameter	Test Conditions	Units	Min.	Typ.	Max.
Frequency Range	1 - 50 MHz				
Insertion Loss 1 (Pin 1 to Pin 8)	1 - 25 MHz	dB	-	0.2	0.4
	25 - 50 MHz	dB	-	0.5	0.8
Insertion Loss 2 (Pin 1 to Pin 5)	1 - 25 MHz	dB	-	0.2	0.4
	25 - 50 MHz	dB	-	0.3	0.6
Amplitude Un-Balance	1 - 25 MHz	dB	-	$\pm 0.04$	$\pm 0.2$
	25 - 50 MHz	dB	-	$\pm 0.23$	$\pm 0.6$
Phase Un-Balance	1 - 50 MHz	$^\circ$	-	$\pm 0.6$	$\pm 3.0$
Input Return Loss (Pin 1)	1 - 10 MHz	dB	20	25	-
	10 - 25 MHz	dB	16	22	-
	25 - 50MHz	dB	12	17	-

## Absolute Maximum Ratings

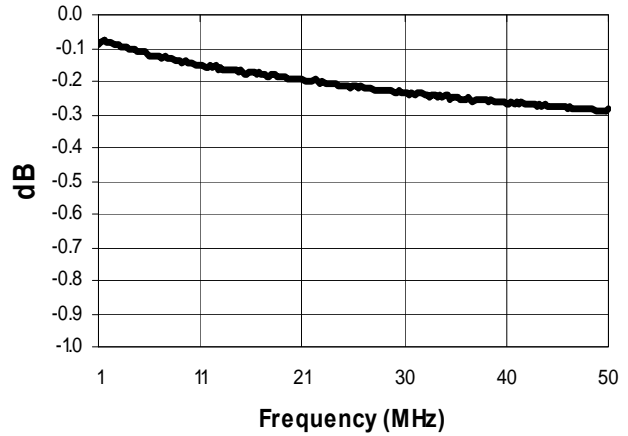
Parameter	Absolute Maximum
RF Power	250mW
DC Current	30mA
Operating Temperature	$-40^\circ\text{C}$ to $+85^\circ\text{C}$
Storage Temperature	$-40^\circ\text{C}$ to $+85^\circ\text{C}$

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

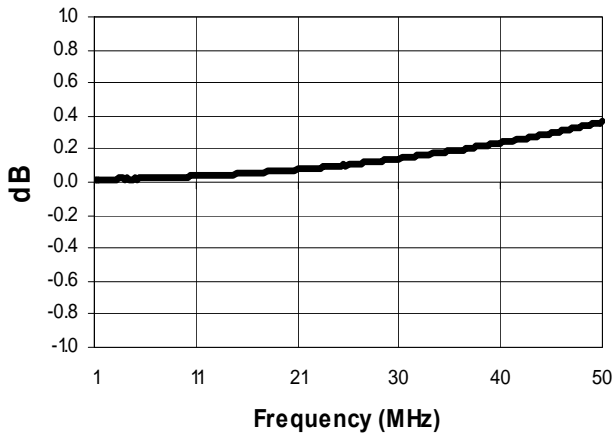
Insertion Loss 1 (Pin 1 - Pin 8)



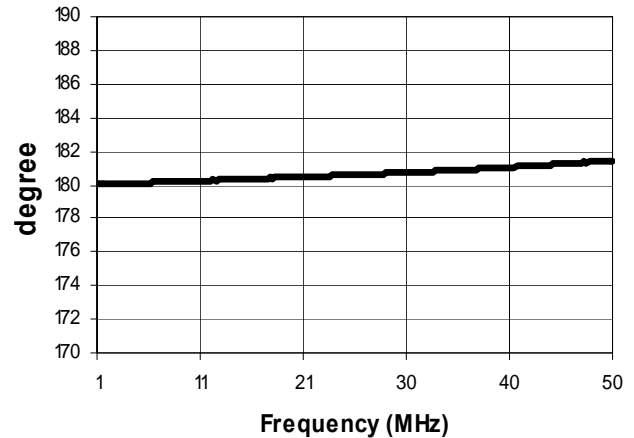
Insertion Loss 2 (Pin 1 - Pin 5)



Amplitude Balance



Phase Balance



Return Loss: Input (Pin 5)

