MABA-009210-CT1760

1:1 Transmission Line Balun Transformer 50 - 1200 MHz



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

Features

- Surface Mount
- 1:1 Impedance
- Excellent temperature stability
- RoHS Compliant
- 260°C Reflow compatible

Description

M/A-COM's MABA-009210-CT1760 is a 1:1 RF transmission line Transformer in a low cost surface mount package. Ideally suited for high volume CATV/Broadband application. Suitable for use in 50 Ohm and 75 Ohm systems



Pin Configuration

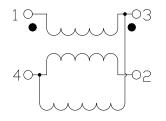
Pin Number	Function			
1	Primary Dot (input)			
2	Secondary (o/p coupled)			
3	Secondary Dot (o/p through)			
4	Primary (ground)			

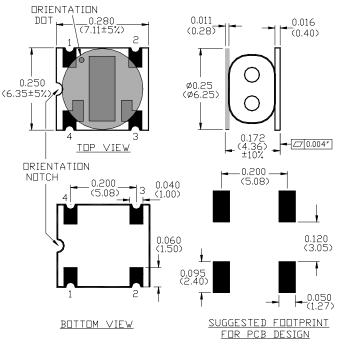
Ordering Information

1

Part Number	Package		
MABA-009210-CT1760	900		
MABA-009210-CT17TB	Customer Test Board		

Schematic





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

Note: Reference Application Note M513 for reel size information.

* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

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- North America Tel: 800.366.2266
 Europe Tel: +353.21.244.6400
 India Tel: +91.80.4155721
 China Tel: +86.21.2407.1588
- Visit www.macomtech.com for additional data sheets and product information.

M/A-COM Technology Solutions Inc. and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.

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Case Style SM-118A

MABA-009210-CT1760

Technology Solutions

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

Parameter	Test Conditions	Units	Min.	Тур.	Max.
Frequency Range: 50-1200 MHz					
Insertion Loss 1 (Through) Pin 3 to pin 1	50 MHz 870 MHz 1002 MHz 1200 MHz	dB dB dB dB	 	0.13 0.53 0.63 0.83	0.33 0.93 1.18 1.93
Insertion Loss 2 (Coupled) Pin 2 to pin 1	50 MHz 870 MHz 1002 MHz 1200 MHz	dB dB dB dB		0.43 0.33 0.43 0.63	0.62 0.63 0.78 1.33
Amplitude Balance	50 MHz 870 MHz 1002 MHz 1200 MHz	dB dB dB dB		0.3 -0.1 -0.2 -0.2	-0.6 +0.7 +0.7 +0.8
Phase Balance	50 - 1002 MHz 1002 - 1200 MHz	0 0	_	1.2 3.2	± 4.0 ± 8.0
Input Return Loss	50 - 500 MHz 500 - 1002 MHz 1002 - 1200 MHz	dB dB dB	18.0 17.5 11.0	23.0 19.0 18.0	

Absolute Maximum Ratings ^{1,2}

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

1. Exceeding any one or combination of these limits may cause permanent damage to this device.

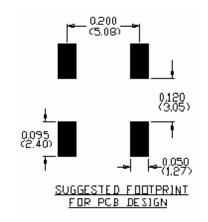
- M/A-COM does not recommend sustained operation near these survivability limits.
- 2

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BD

Recommended PCB Configuration



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C. com/MA

MABA-009210-CT1760

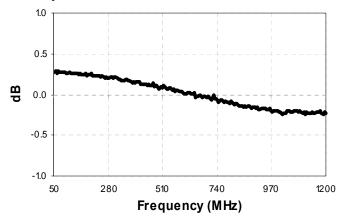
1:1 Transmission Line Balun Transformer 50 - 1200 MHz

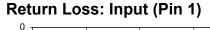
M/A-COM Products Part Status: Released Rev V1

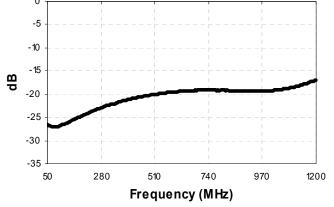
Typical Performance: $T_A = 25^{\circ}C$, 0dBm, $Z_0 = 75\Omega$

Insertion Loss 1: (through Pin 3-1)

Amplitude Balance



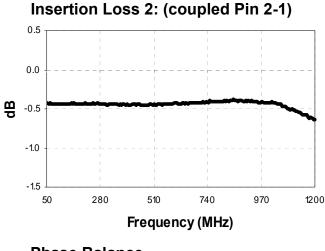




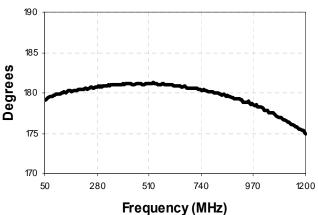
3

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Phase Balance



<u>Note:</u> The insertion loss graphs have minimum loss pad loss value subtracted from data. Loss value = -10.67dB.

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