MABA-009210-CT1760

1:1 Transmission Line Balun Transformer
50 - 1200 MHz

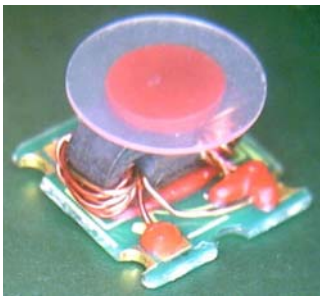
M/A-COM Products
Part Status: Released Rev V1

Features

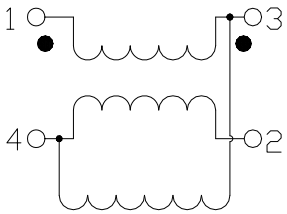
- Surface Mount
- 1:1 Impedance
- Excellent temperature stability
- RoHS Compliant
- 260ºC Reflow compatible

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



Schematic



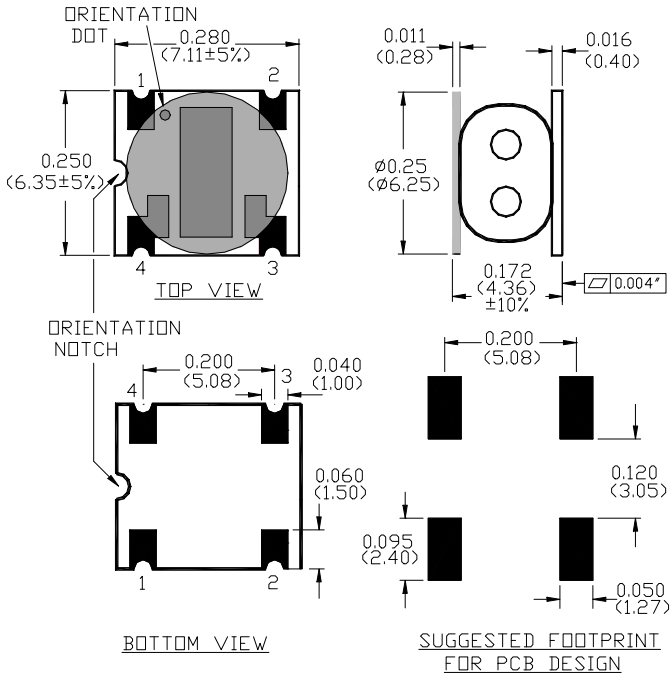
Pin Configuration

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

Ordering Information

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

Case Style SM-118A



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.

• **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.

Electrical Specifications: T_A = 25°C, 0dBm, Z_0 = 75Ω

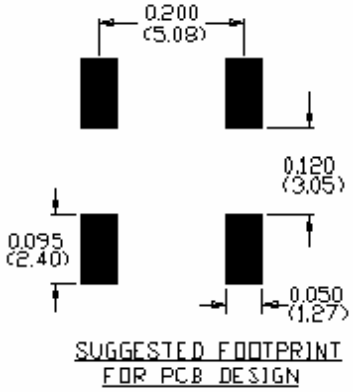
Parameter	Test Conditions	Units	Min.	Typ.	Max.
Frequency Range: 50-1200 MHz					
Insertion Loss 1 (Through) Pin 3 to pin 1	50 MHz 870 MHz 1002 MHz 1200 MHz	dB dB dB dB	— — — —	0.13 0.53 0.63 0.83	0.33 0.93 1.18 1.93
Insertion Loss 2 (Coupled) Pin 2 to pin 1	50 MHz 870 MHz 1002 MHz 1200 MHz	dB dB dB dB	— — — —	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	° °	— —	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.
2. M/A-COM does not recommend sustained operation near these survivability limits.

Recommended PCB Configuration



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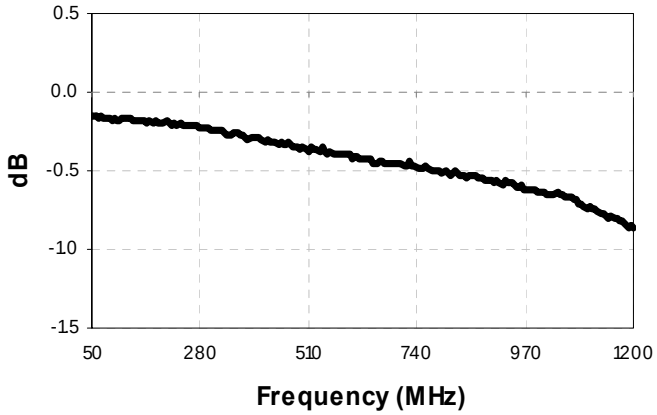
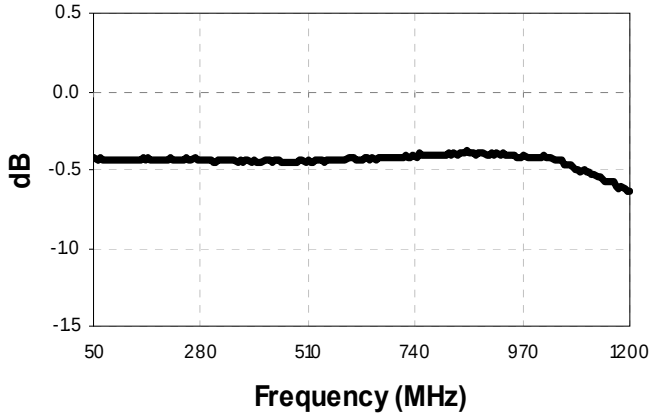
Typical Performance: T_A = 25°C, 0dBm, Z_0 = 75Ω

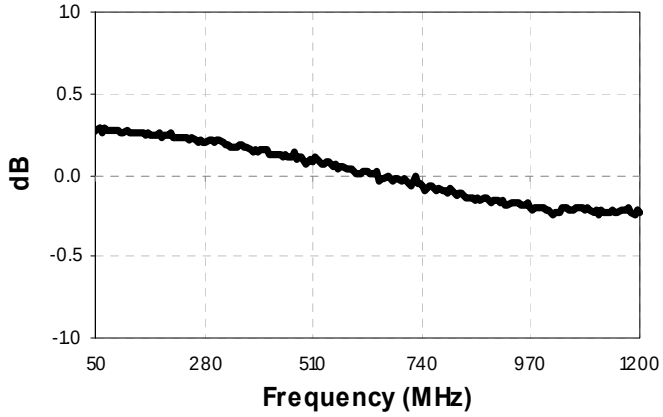
Insertion Loss 1: (through Pin 3-1)



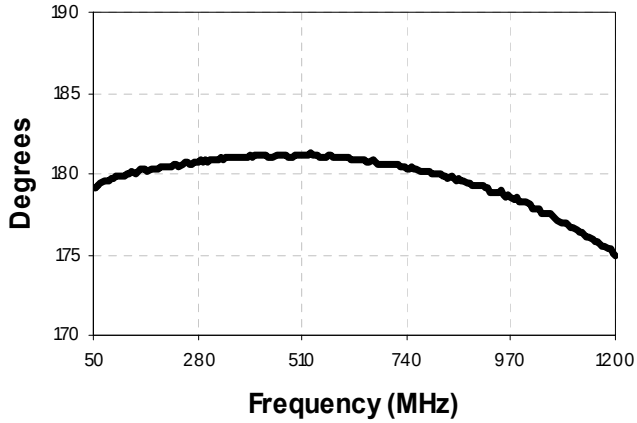
Insertion Loss 2: (coupled Pin 2-1)



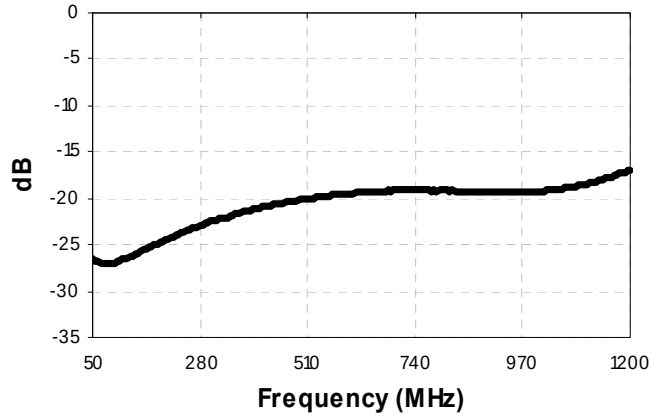
Amplitude Balance



Phase Balance



Return Loss: Input (Pin 1)



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

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