

1:1 Transmission Line Transformer
4.5 to 3000 MHz

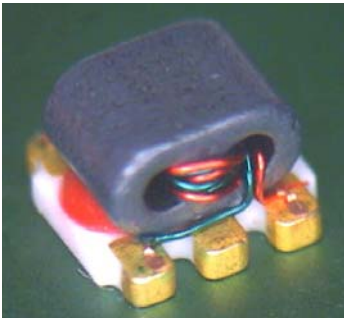
M/A-COM Products
Part Status: ETRR, Rev. V1

Features

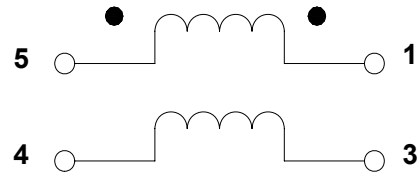
- Surface mount
- Wide frequency range
- 1:1 Impedance
- Lead free
- RoHS Compliant and is 260°C reflow compatible
- Available on tape and reel, reel quantity 2000

Description

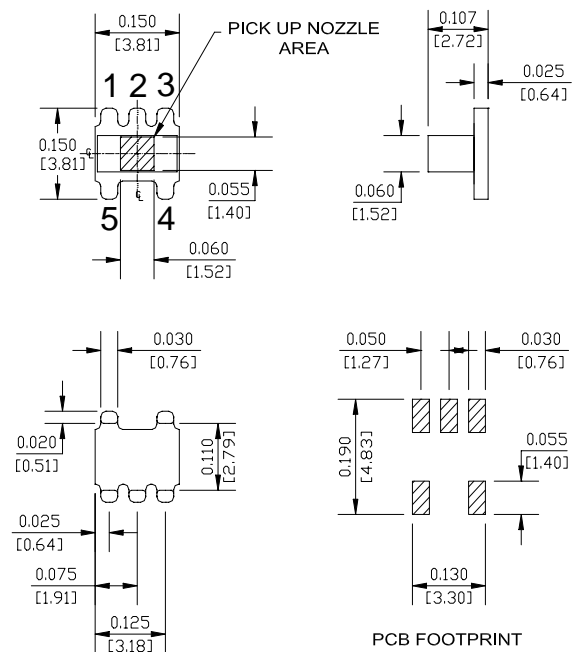
The MABA-008757-CT1160 is a 1:1 Transmission Line Transformer. The windings of the MABA-008757-CT1160 are welded to the package substrate for improved reliability and to eliminate lead content. This Transformer is ideally suited for CATV and Satellite STB/Subscriber applications.



Schematic



Case Style SM-22B



Pin Configuration

Function	Pin Number
Secondary Dot	1
Not Connected	2
Secondary	3
Primary	4
Primary Dot	5

Ordering Information

Part Number	Package
MABA-008757-CT1160	2000 piece reel
MABA-008757-CT11TB	Customer Test Board

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

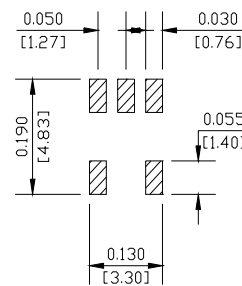
Electrical Specifications: : $T_A = 25^\circ\text{C}$, $Z_0 = 50\Omega$

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Frequency Range	4.5 – 3000 MHz				
Insertion Loss 1 (Pin 4 to Pin 3)	4.5 – 1000 MHz	dB	–	0.07	1.0
	1000 – 2000 MHz	dB		0.63	2.0
	2000 – 2500 MHz	dB		1.93	5.0
	2500 – 3000 MHz	dB		4.20	6.5
Insertion Loss 2 (Pin 4 to Pin 1)	4.5 – 1000 MHz	dB	–	0.29	1.0
	1000 – 2000 MHz	dB		0.08	2.0
	2000 – 2500 MHz	dB		2.00	6.0
	2500 – 3000 MHz	dB		5.30	8.4
Amplitude UnBalance (Nominal 0dB)	4.5 – 20 MHz	dB	–	± 1.0	± 1.2
	20 – 1000 MHz	dB		± 0.3	± 1.0
Phase UnBalance (Nominal 180°)	4.5 – 1000 MHz	°	–	± 0.03	± 20
Input return Loss (Pin 4)	4.5 – 1000 MHz	dB	16	26.30	–

Absolute Maximum Ratings ^{1,2}

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

Suggested Footprint



PCB FOOTPRINT

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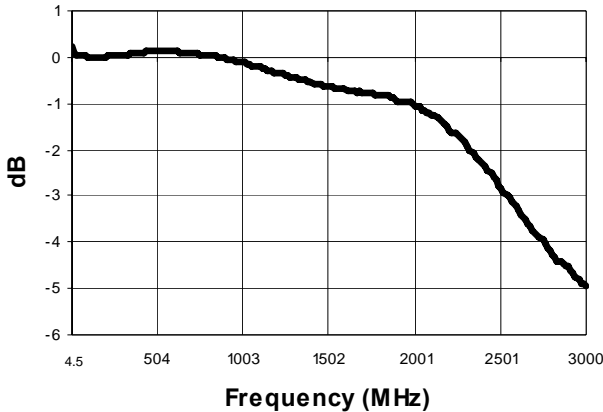
RELEASED: In full production, samples readily available, standard lead times apply.

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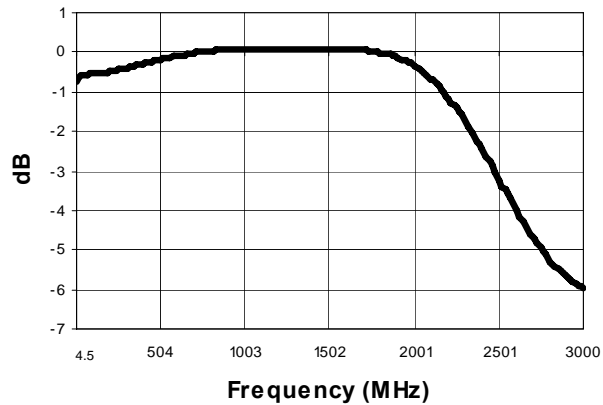
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Typical Performance Curves @ $T_A = 25^\circ\text{C}$, $Z_0 = 50\Omega$

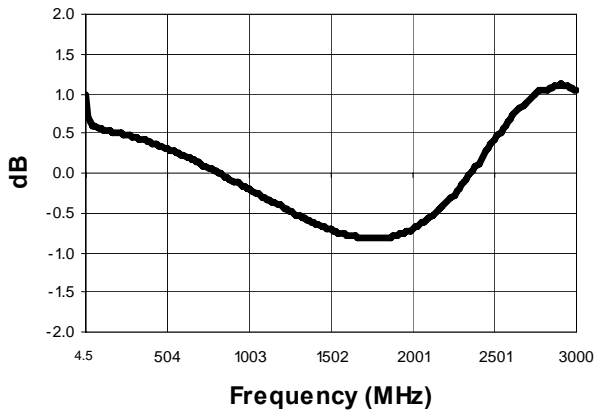
Insertion Loss 1 (Pin4 - Pin3)



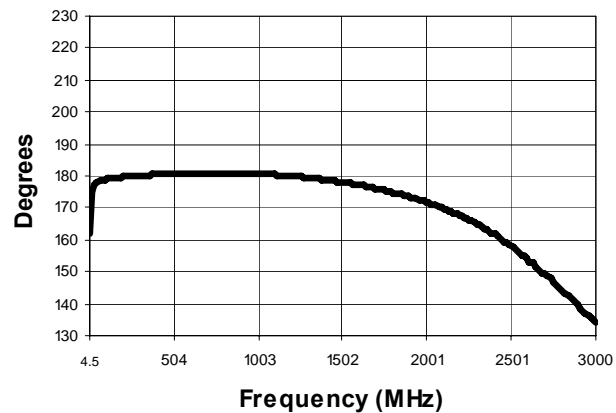
Insertion Loss 2 (Pin4 - Pin1)



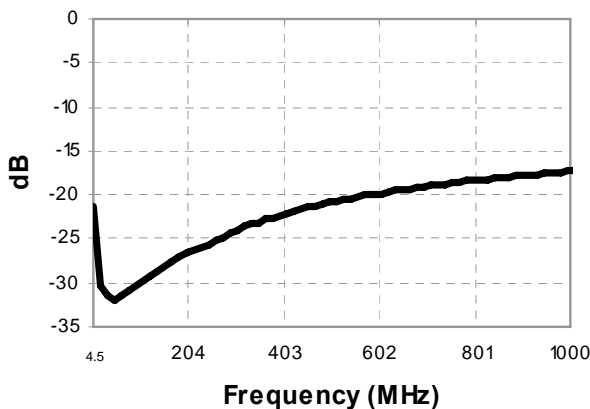
Amplitude Balance



Phase Balance



Return Loss: Input



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