MABA-008757-CT1160

1:1 Transmission Line Transformer
4.5 - 3000 MHz

Rev. V2

Features

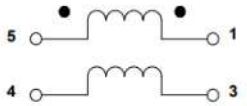
- Surface Mount
- Wide Frequency range
- 1:1 Impedance
- Available on Tape and Reel
- RoHS Compliant and Pb Free
- 260°C Reflow Compatible
- Excellent Temperature Stability

Description

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

Functional Schematic





Pin Configuration

Pin #	Function
1	Secondary Dot (Output 2)
2	Not Connected
3	Secondary (Output 1)
4	Primary (Input)
5	Primary Dot

Electrical Specifications: Freq. = 4.5 - 3000 MHz, T_A = 25°C, Z_0 = 75 Ω, P_{IN} = 0 dBm

Parameter	Conditions	Units	Min.	Typ.	Max.
Impedance Ratio	—	—	—	1:1	—
Insertion Loss 1 (Pin 4 - Pin 3)	4.5 - 1200 MHz 1200 - 2000 MHz 2000 - 3000 MHz	dB	—	0.2 1.0 1.8	0.8 2.0 3.0
Insertion Loss 2 (Pin 4 - Pin 1)	4.5 - 50 MHz 500 - 1200 MHz 1200 - 2000 MHz 2000 - 3000 MHz	dB	—	0.7 0.4 0.5 1.2	0.9 0.5 2.0 3.0
Amplitude Balance	4.5 - 20 MHz 20 - 1000 MHz	dB	—	0.2 0.3	±1.2 ±1.0
Phase Balance (ref value 180°)	4.5 - 1000 MHz	°	—	0.03	±20
Input Return Loss (Pin 4)	4.5 - 1000 MHz	dB	16	26.30	—

Ordering Information[1]

Part Number	Description
MABA-008757-CT1160	2000 piece reel
MABA-008757-CT11TB	sample board

1. All sample boards include 5 loose parts.

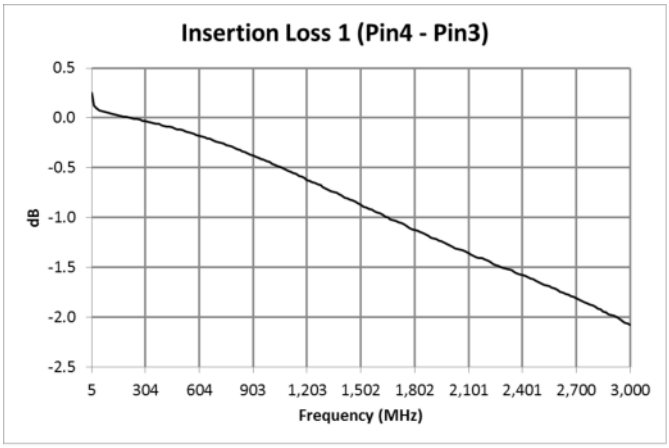
Absolute Maximum Ratings

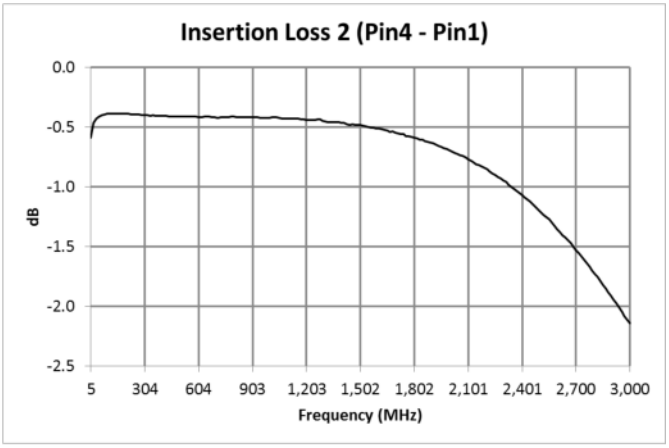
Parameter	Absolute Maximum
Input RF Power	250 mW
DC Current	30 mA
Operating Temperature	-40°C to + 85°C

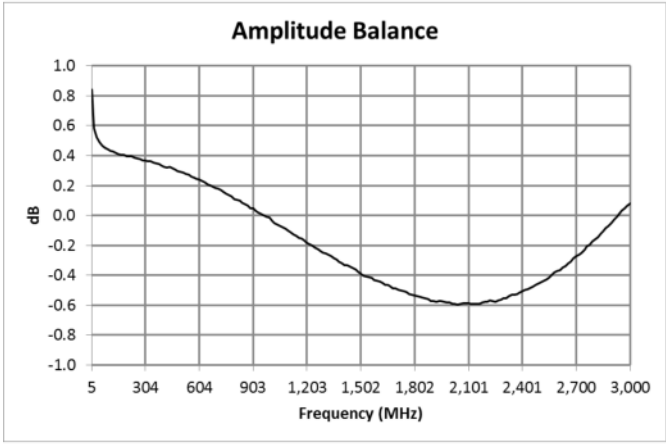
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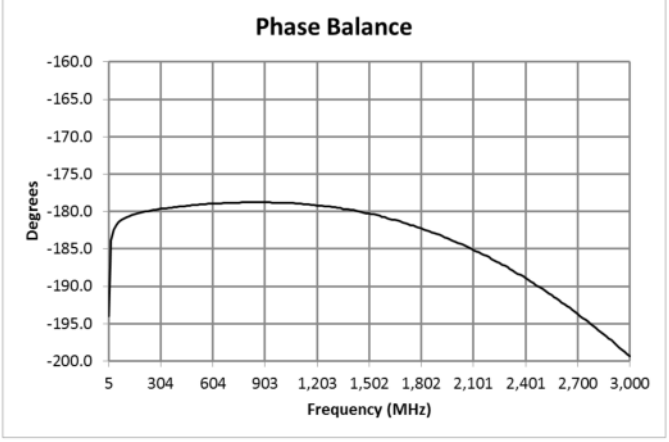
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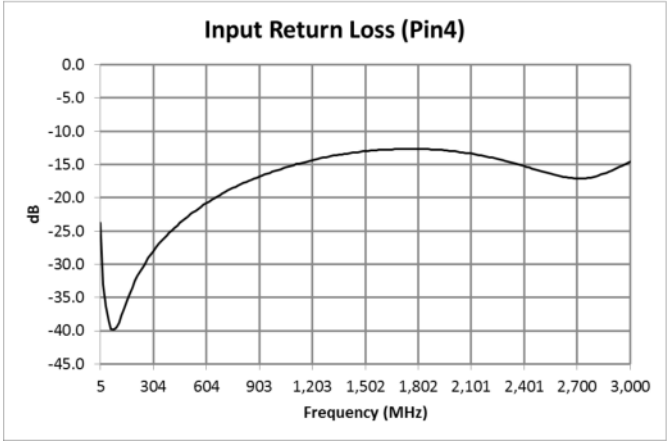
Typical Performance Curves: T_A = 25°C, Z_0 = 75 Ω, P_{IN} = 0 dBm









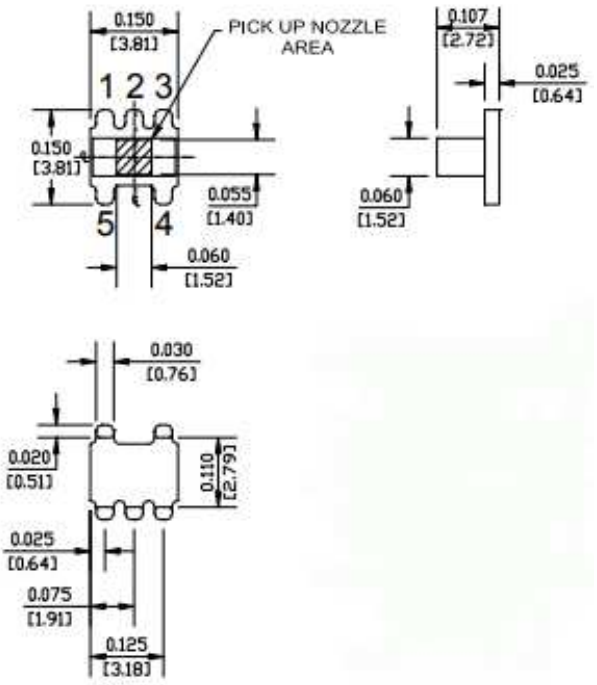


Full temperature plots available on request

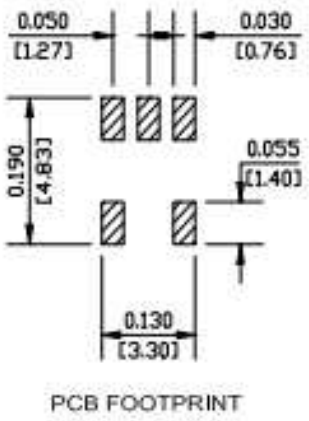
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Part Outline Drawing

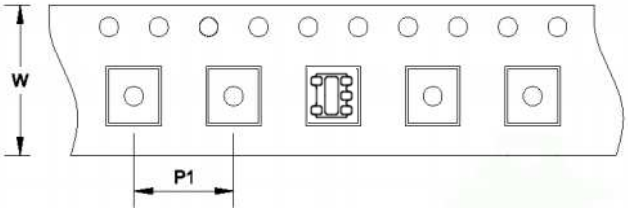


PCB Footprint



1. Dimensions in mm
2. Tolerance: ±0.2 mm unless otherwise noted
3. Model number and lot code are printed on the reel
4. Plating finish: ENIG

Carrier Tape Orientation



Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel Size	mm	330
Tape Width	mm	12.00
Pitch	mm	8.00
Orientation	-	F5
Reference Application Note ANI-019 for orientation		

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