

1:1 Transmission Line Transformer 50 - 1200 MHz

Rev. V4

Features

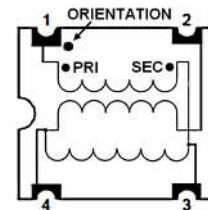
- Surface Mount Technology
- 1:1 Impedance
- Excellent Temperature Stability
- Available on Tape & Reel

Description

MABA-008483-CT1760 is a welded surface mount technology 1:1 transmission line transformer designed for high volume CATV Broadband applications.

Suitable for use in 50 Ω and 75 Ω systems.

Functional Schematic



Pin Configuration³

Pin #	Function	Pin #	Function
1	Primary Dot	3	Secondary Dot
2	Secondary	4	Primary

Electrical Specifications: Freq. = 50 - 1200 MHz, T_A = +25°C, Z₀ = 75 Ω

Parameter	Frequency Test Conditions (MHz)	Units	Min.	Typ.	Max.
Insertion Loss 1 (Through) pin 3 to pin 1	50	dB	—	0.13	0.33
	870			0.53	0.93
	1002			0.63	1.18
	1200			0.83	1.93
Insertion Loss 2 (Coupled) pin 2 to pin 1	50	dB	—	0.43	0.47
	870			0.33	0.63
	1002			0.43	0.78
	1200			0.63	1.33
Amplitude Balance	50	dB	—	0.3	-0.6
	870			-0.1	+0.7
	1002			-0.2	+0.7
	1200			-0.2	+0.8
Phase Balance	50 - 1002	°	—	1.2	± 4.0
	1002 - 1200			3.2	± 8.0
Input Return Loss	50 - 500	dB	18.0	23.0	—
	500 - 1002		17.5	19.0	
	1002 - 1200		11.0	18.0	

Ordering Information

Part Number	Package
MABA-008483-CT1760	900 piece reel
MABA-008483-CT17TB	Customer Test Board

Recommended Maximum Ratings^{1,2}

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

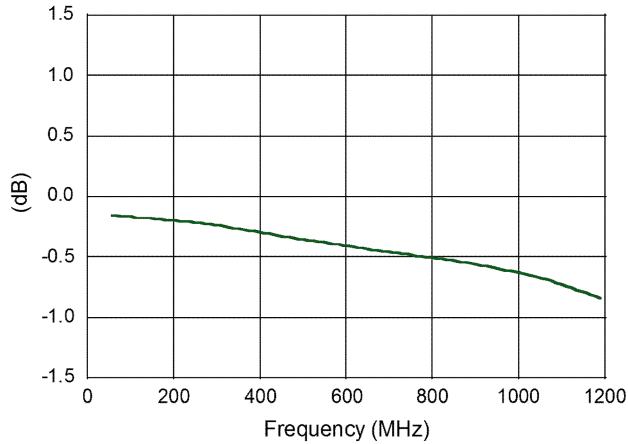
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.

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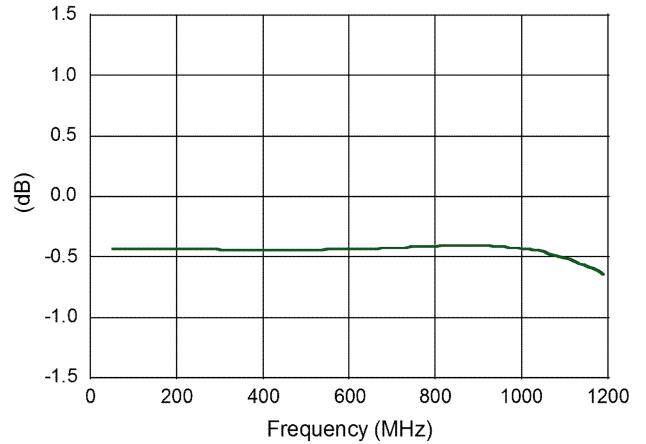
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Typical Performance Curves

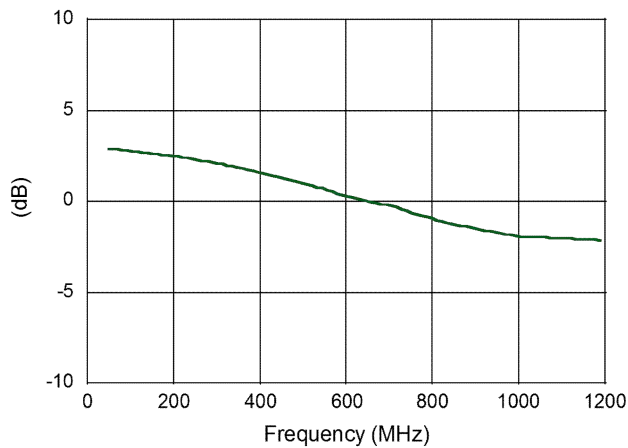
Insertion Loss 1 (thru); pin 3-1



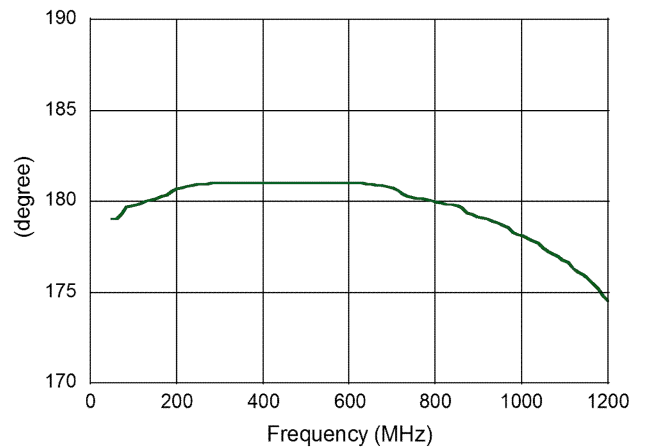
Insertion Loss 2 (coup); pin 2-1



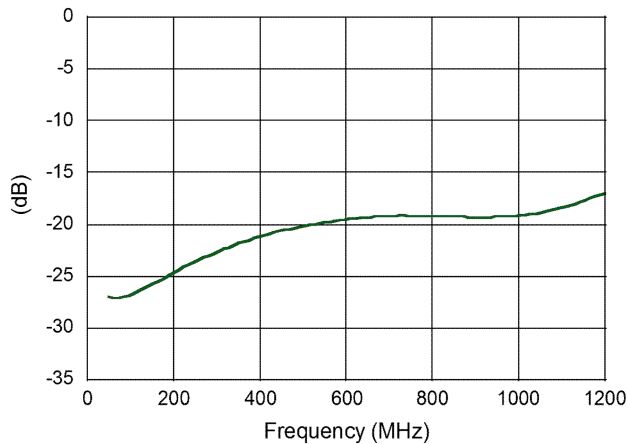
Amplitude Balance



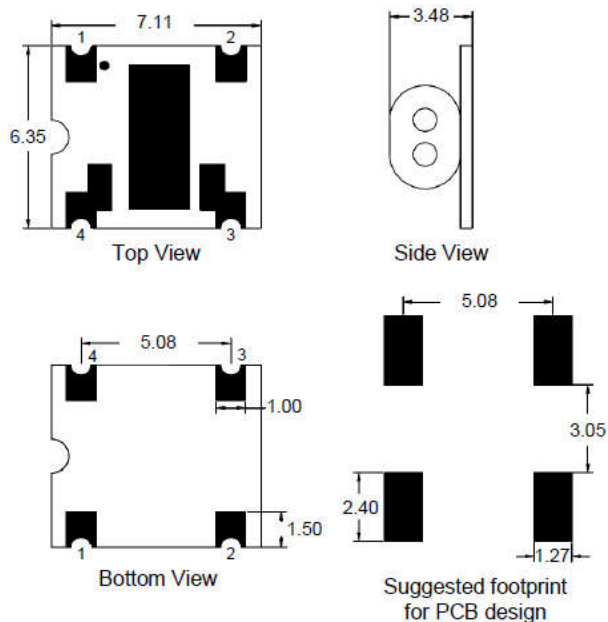
Phase Balance



Return Loss: Input



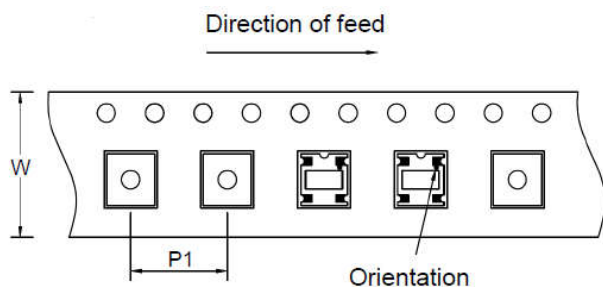
Outline Drawing^{3,4}



3. Dimensions in mm.

4. Tolerance: ± 0.2 mm unless otherwise noted.

Carrier Tape Orientation



Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	900
Reel Size	mm	330
Tape Width	mm	16.0
Pitch	mm	12.0
Orientation	-	F60
Reference Application Note ANI-019 for orientation		

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