

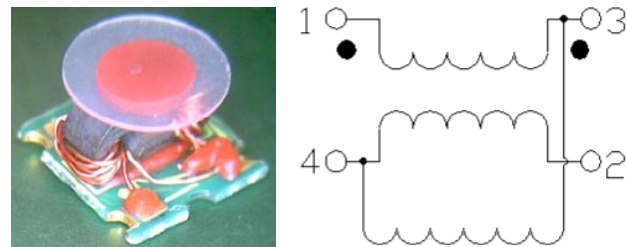
Features

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

Description

The 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.

Functional Schematic



Ordering Information

Part Number	Package
MABA-009210-CT1760	900 piece reel
MABA-009210-CT17TB	Sample Board

Pin Configuration

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

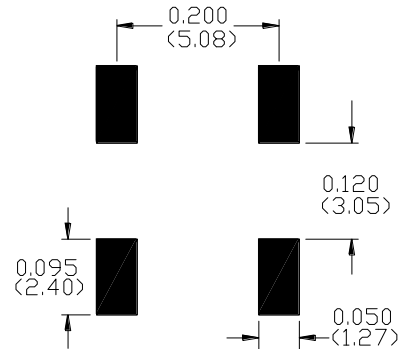
Electrical Specifications: Freq. = 50 - 1200 MHz, T_A = +25°C, Z₀ = 75 Ω

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

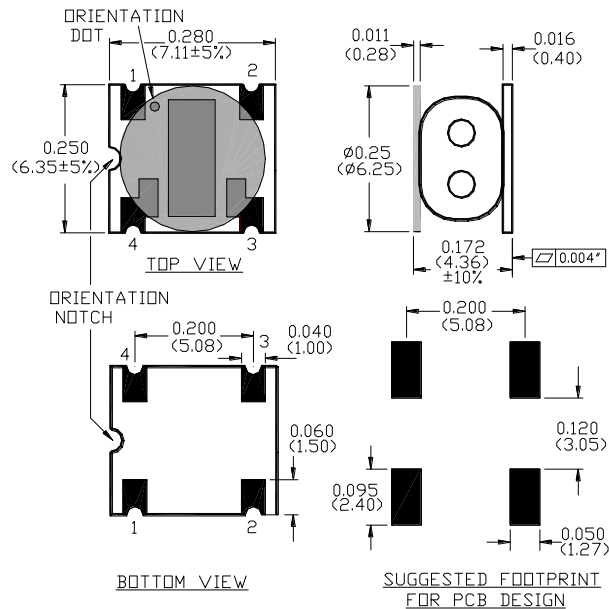
Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Power	500 mW
DC Current	500 mA
Operating/Storage Temperature	-40°C to +85°C

Recommended Footprint



Outline Drawing



Tape & Reel Information

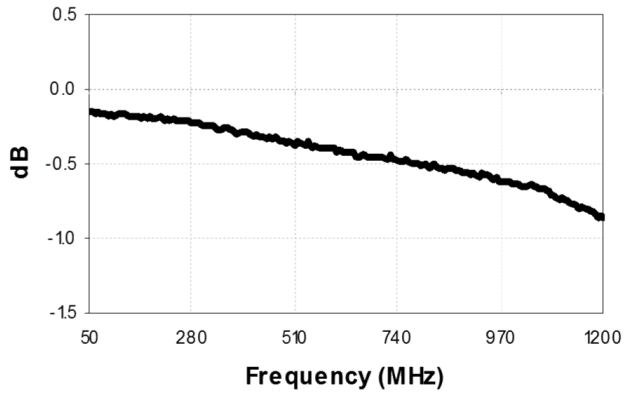
Parameter	Units	Value
Qty per reel	-	900
Reel Size	mm	330
Tape Width	mm	16.00
Pitch	mm	12.00
Ao	mm	6.80
Bo	mm	7.60
Ko	mm	5.30
Orientation	-	F24

Reference Application Note ANI-019 for orientation

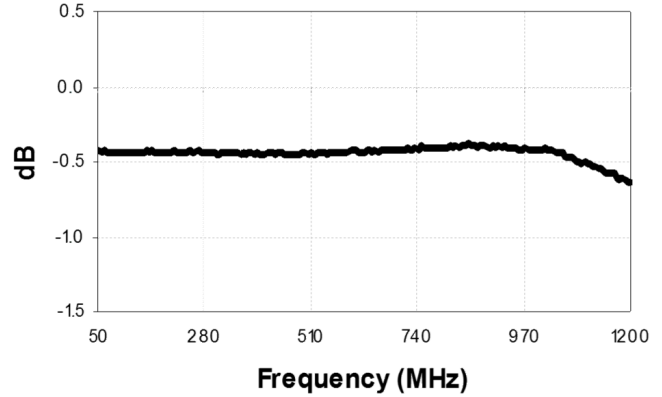
1. Dimensions in inches (mm).
2. Tolerance: .xx ±0.02, .xxx 0.01 unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Plating finish: ENIG on both sides, 0.05 to 0.1 µm gold over 3 to 6 µm nickel

Typical Performance Curves: Electrical Specifications: $Z_0 = 75 \Omega$, $T_A = 25^\circ\text{C}$, $P_{in} = 0 \text{ dBm}$

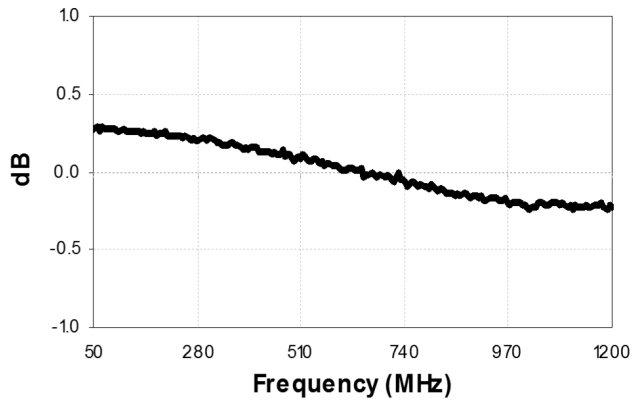
Insertion Loss 1: (through Pin 3-1)



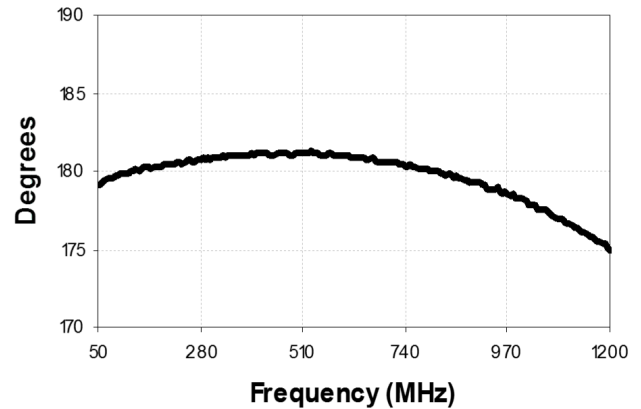
Insertion Loss 2: (coupled Pin 2-1)



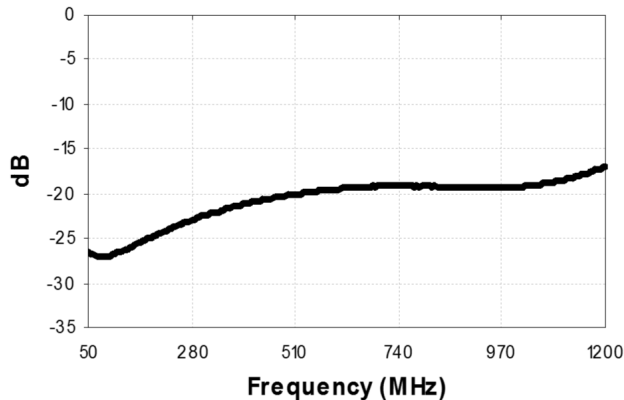
Amplitude Balance



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.

Full temperature plots available on request

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