

Transmission Line Transformer(4.5-3000MHz)

Features

- Surface mount
- Impedance ratio: 1:1
- RoHS compliant and Pb free
- Available on tape and reel
- 260°C reflow compatible

Description

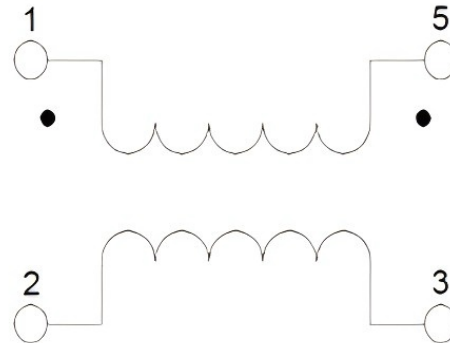
SCOPE

- MCTLT1-1-199 is a 1:1 Transmission Line transformer in a SMT package.

APPLICATION

- Ideally suited for high volume cellular and wireless applications.

Functional Schematic



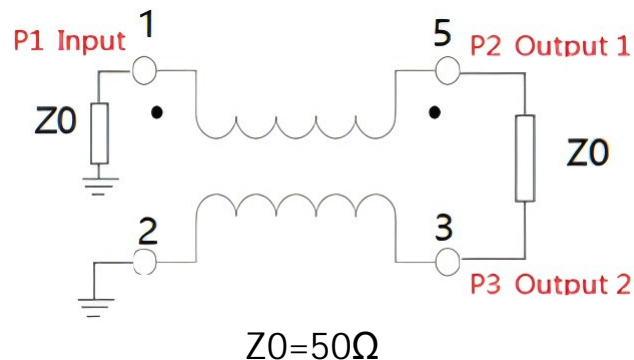
Pin Configuration

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

ELECTRICAL SPECIFICATIONS@25°C

Parameters (P#: ENA PORT)	frequency band	Min.	Typ.	Max.	Unit
Port Impedance, Z ₀ (P1 / P2 / P3)			50/25/25		Ohm
Insertion Loss	4.5-1000MHz		0.6	1.0	dB
	1000-2000MHz		1.7	2.0	dB
	2000-3000MHz		2.3	3.5	dB
Amplitude Balance	-		-	±1.0	dB
Phase Balance (Nominal 180 °)	-		-	±20	°

Application & Test Circuit



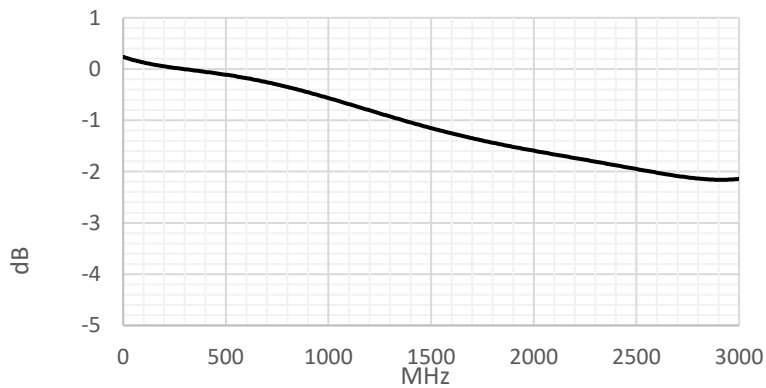
Absolute Maximum Ratings

Parameter	Value
RF Power	250mW Max
DC Current	30mA Max
Operating Temperature Range	-55 to 85°C

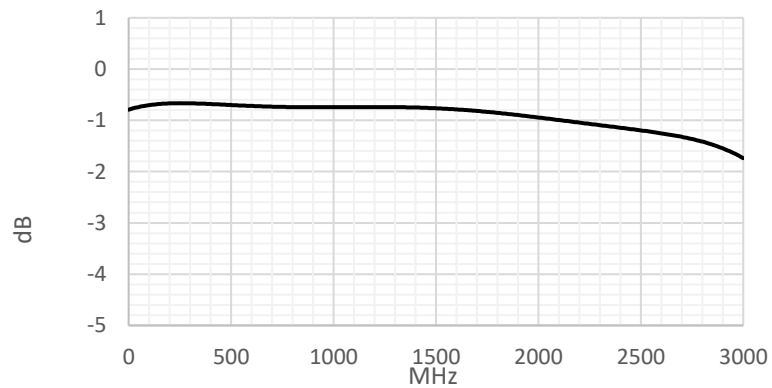
Transmission Line Transformer(4.5-3000MHz)

Test Curve

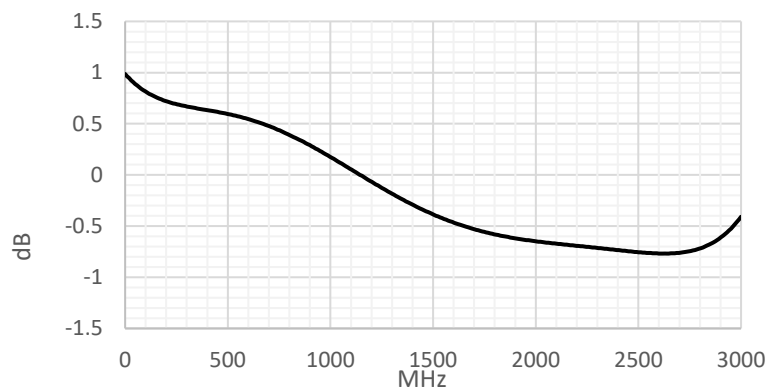
Insertion Loss: Pin 1 to Pin 3



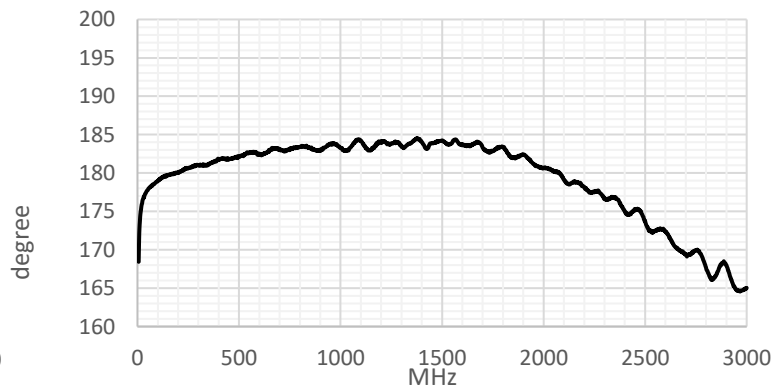
Insertion Loss: Pin 1 to Pin 5



Amplitude Balance



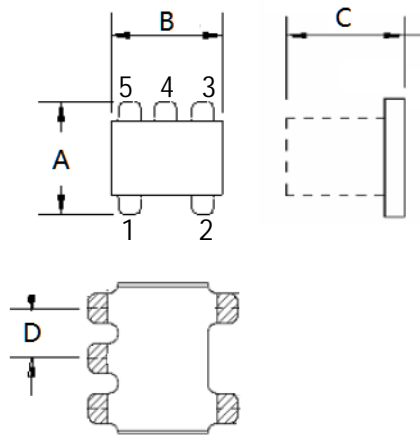
Phase Balance



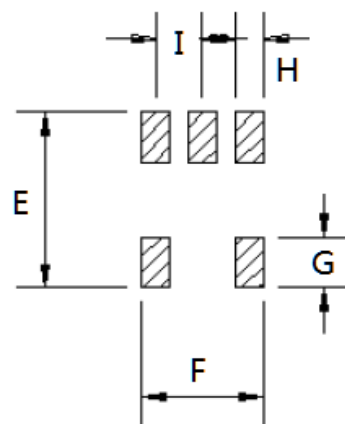
MCTLT1-1-199

Transmission Line Transformer(4.5-3000MHz)

Dimensions



Land Pattern



A	B	C
3.81	3.81	2.75
D		
1.27		

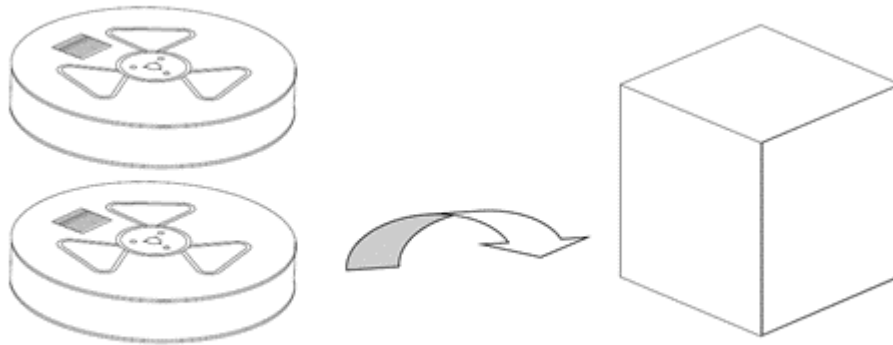
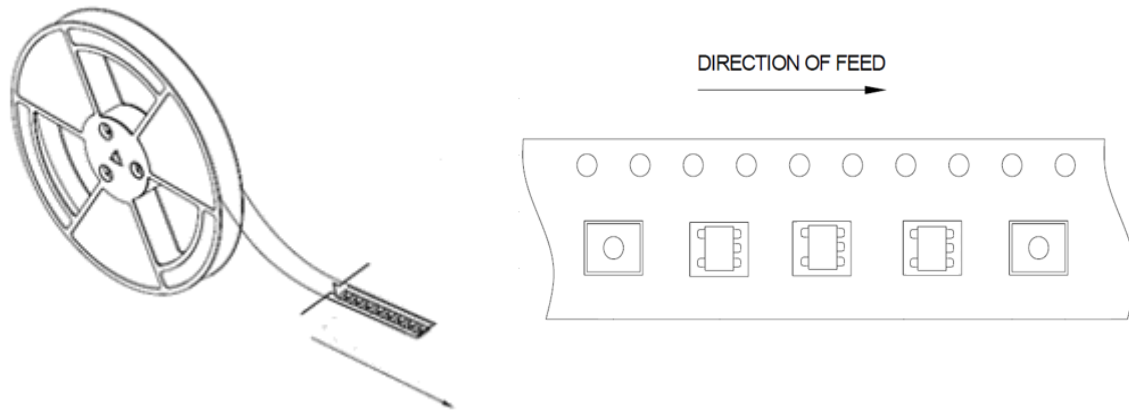
E	F	G
4.83	3.30	1.40
H	J	
0.76	1.27	

Unless otherwise stated dimensions are in mm

Tolerance: .xx ± 0.25, .xxx ± 0.05

Transmission Line Transformer(4.5-3000MHz)

Packing



Ten Reel

Export Carton

Quantity per reel: 2000 pcs

Quantity per export carton: 20000 pcs