

E-Series RF 1:1 Transmissions Line Transformer 4.5 - 3000 MHz

Rev. V10

Features

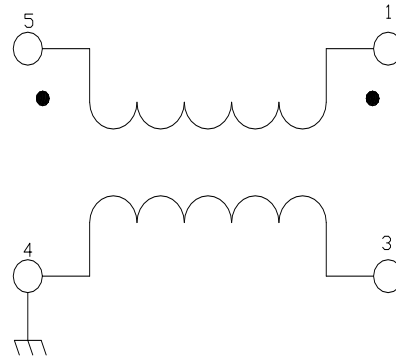
- 1:1 Impedance
- Surface Mount
- RoHS compliant and 260° reflow compatible
- Available on Tape and Reel

Description

The ETC1-1-13TR is a 1:1 RF transmission line transformer in a low cost surface mount package. Ideally suited for high volume cellular and wireless applications.



Functional Schematic



Ordering Information

Part Number	Package
ETC1-1-13TR	2000 piece reel

Pin Configuration

Pin No.	Function
1	Secondary Dot
2	Not Connected
3	Secondary
4	Primary
5	Primary Dot

* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

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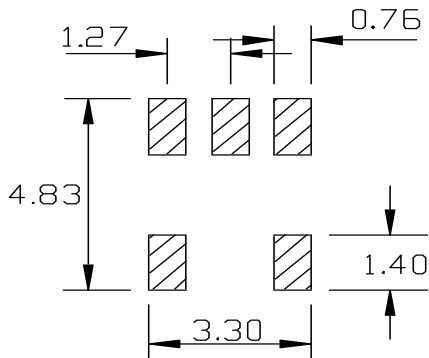
Electrical Specifications: Freq = 4.5 - 3000 MHz, T_A = 25°C, Z₀ = 75 Ω, P_{in} = 0 dBm

Parameter	Conditions	Units	Min.	Typ.	Max.
Impedance	—	Ω	—	50	—
Impedance Ratio	—	ratio	—	1:1	—
Insertion Loss	4.5 - 1000	dB	—	0.32	1.0
	1000 - 2000			—	2.0
	2000 - 3000			—	3.5
Amplitude Balance	—	dB	—	—	1.0
Phase Balance	—	deg.	—	—	20

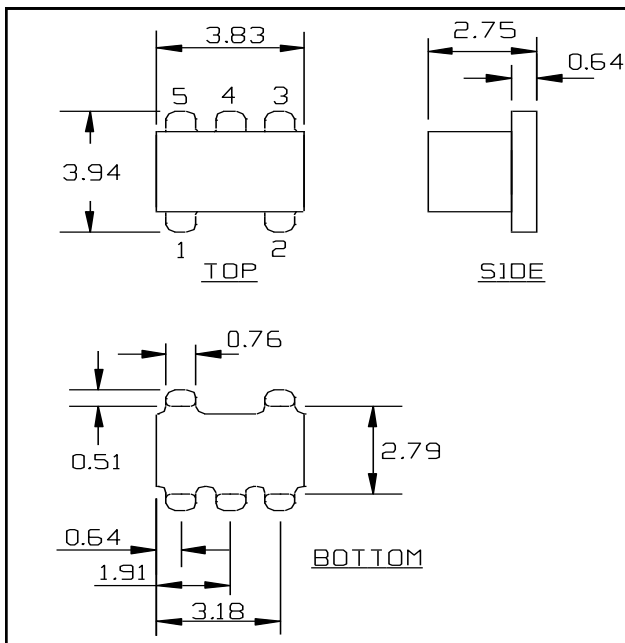
Recommended Maximum Ratings

Parameter	Absolute Maximum
RF Input Power	250 mW
DC Current	30 mA
Operating Temperature	-55°C to +85°C

PCB Layout



Outline Drawing^{1,2,3,4}



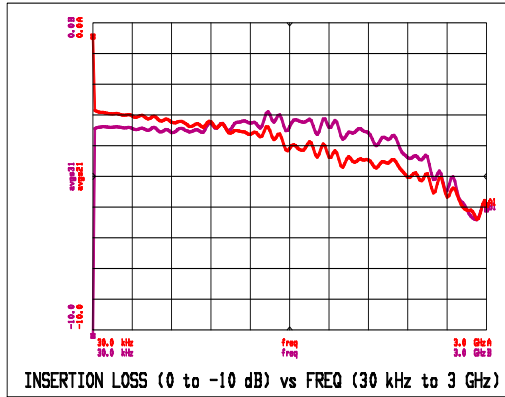
1. Dimensions in mm.
2. Tolerance: ± 0.2 mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Lead plating: Ceramic.

Tape & Reel Information

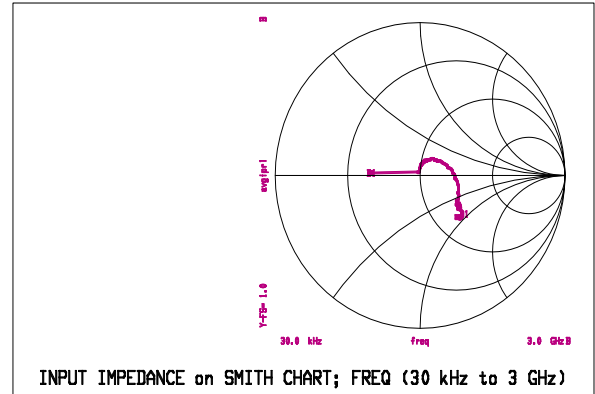
Parameter	Units	Value
Qty per reel	-	2000
Reel Size	mm	330
Tape Width	mm	12.00
Pitch	mm	8.00
Ao	mm	4.00
Bo	mm	4.00
Ko	mm	2.90
Orientation	-	F5
Reference Application Note ANI-019 for orientation		

Typical Performance Curves

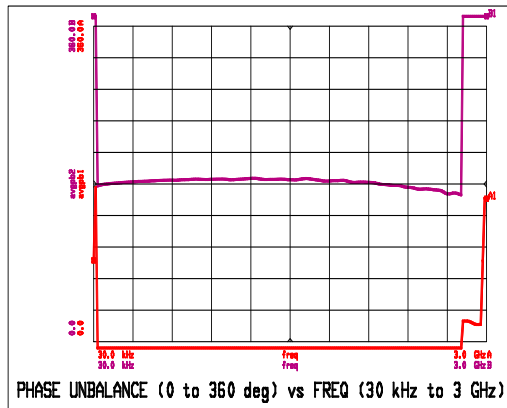
Insertion Loss



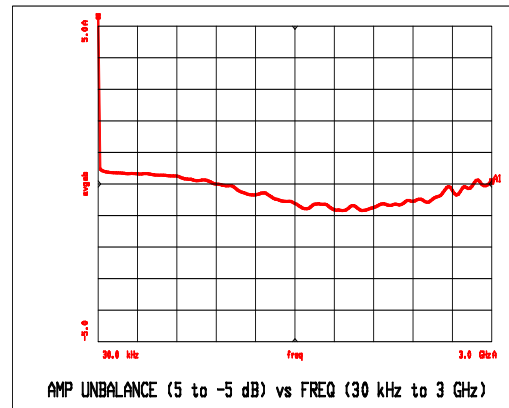
Input Impedance



Phase Unbalance



Amplitude Unbalance



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