

**E-Series RF 1:1 Transmission Line Transformer**  
4.5 – 3000 MHz

**ETC1-1-13**  
**V4**

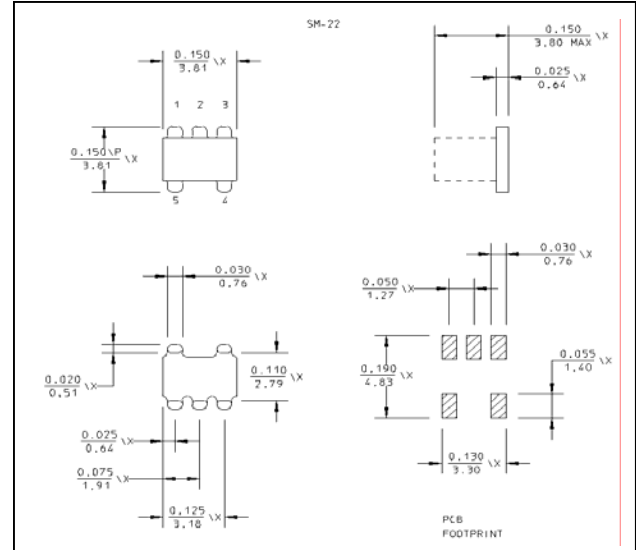
**Features**

- 1:1 Impedance Ratio
- Surface Mount
- Tape and reel packaging available

**Description**

M/A-COM's ETC1-1-13 is a 1:1 RF transmission line transformer in a low cost, surface mount package. Ideally suited for high volume cellular and wireless applications. Parts are packaged in tape & reel.

**SM - 22 Package**



**Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 50\Omega$ <sup>1</sup>**

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
RF Frequency	—	4.5 - 3000	MHz	—	—	—
Insertion Loss	$F_L - f_U$	4.5 - 1000	dB	—	0.32	1.0
		1000 - 2000	dB	—	—	2.0
		2000 - 3000	dB	—	—	3.5
Amplitude Unbalance	—	4.5 - 1000	dB	—	—	1.0
Phase Unbalance	—	4.5 - 1000	Degrees	—	—	20

**Absolute Maximum Ratings<sup>1</sup>**

Parameter	Absolute Maximum
DC Power	250 mW
DC Current	30 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +125°C

**Ordering Information**

Part Number	Package
ETC1-1-13TR	Tape and Reel (2000 piece Reel)

1. Operation of this device above any one of these parameters may cause permanent damage.

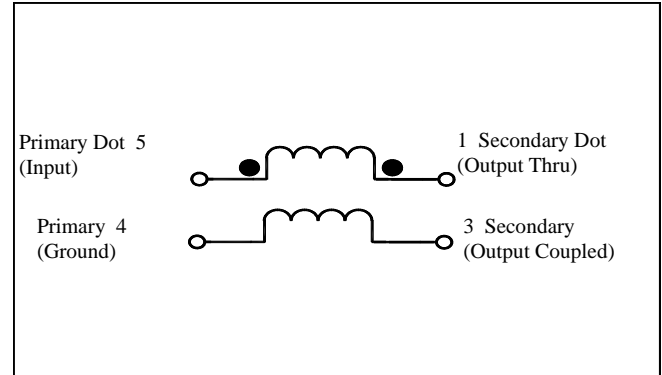
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**Pin Configuration**

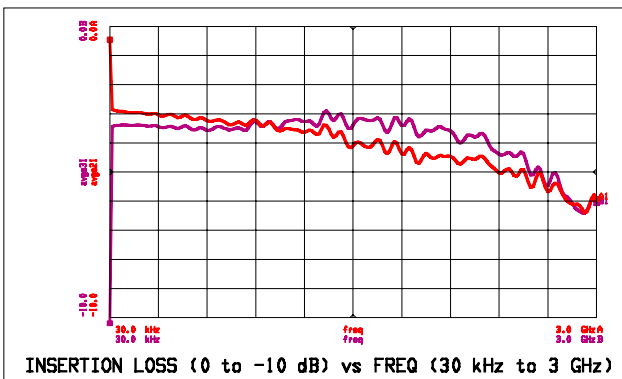
Pin No.	Function
1	Output (thru)
2	Not Connected
3	Output (coupled)
4	Ground
5	Input

**Schematic**

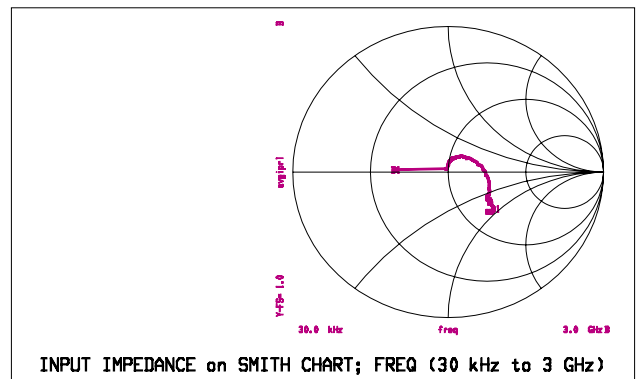


**Typical Performance Curves**

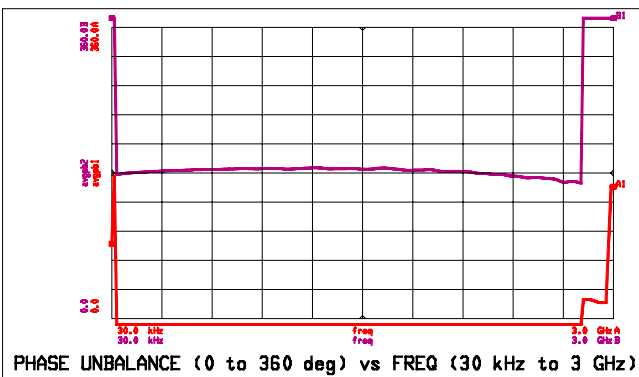
**Insertion Loss**



**Input Impedance**



**Phase Unbalance**



**Amplitude Unbalance**

