

## E-Series RF 1:4 Flux Coupled Step-up Transformer 2 - 800 MHz

Rev. V7

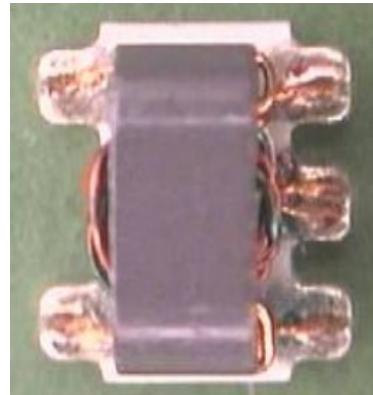
### Features

- 1:4 Impedance Ratio
- CT on Secondary
- Surface Mount
- Tape and reel packaging available
- RoHS\* Compliant, Pb Free
- Termination finish - Sn

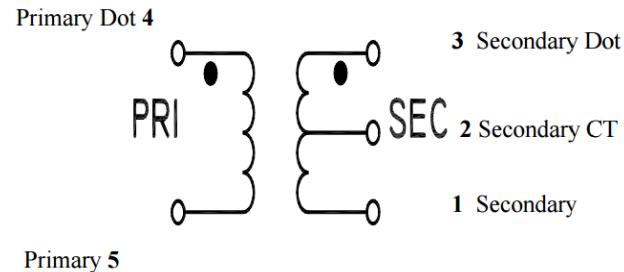
### Description

The ETC4-1-2 is a 1:4 RF flux coupled step-up transformer in a low cost, surface mount package.

Ideally suited for high volume cellular and wireless applications. Typical applications include single to balanced mode conversion and impedance matching. Parts are packaged in tape & reel.



### Functional Schematic



### Ordering Information

Part Number	Package
ETC4-1-2TR	2000 piece reel

### Pin Configuration

Pin No.	Function
1	Secondary
2	Secondary CT
3	Secondary Dot
4	Primary dot
5	Primary

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

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**Electrical Specifications:  $T_A = +25^\circ\text{C}$ ,  $Z_0 = 50 \Omega$**

Parameter	Test Conditions	Frequency (MHz)	Units	Min.	Typ.	Max.
RF Frequency	—	2 - 800	MHz	—	—	—
Insertion Loss	$F_L - F_U$	10 - 100 5 - 600 2 - 800	dB	—	1.21 —	1.0 2.0 3.0
Amplitude Unbalance	—	10 - 100 2 - 800	dB	—	—	0.25 1.0
Phase Unbalance	—	10 - 500 2 - 800	Degrees	—	—	2.0 10.0

## Absolute Maximum Ratings

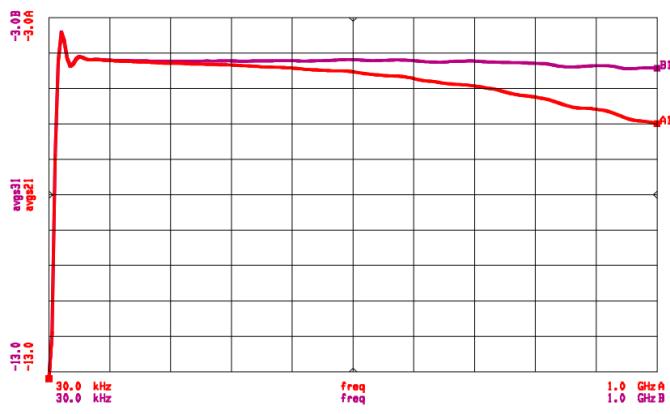
Parameter	Absolute Maximum
DC Power	250 mW
DC Current	30 mA
Operating Temperature	-55°C to +85°C

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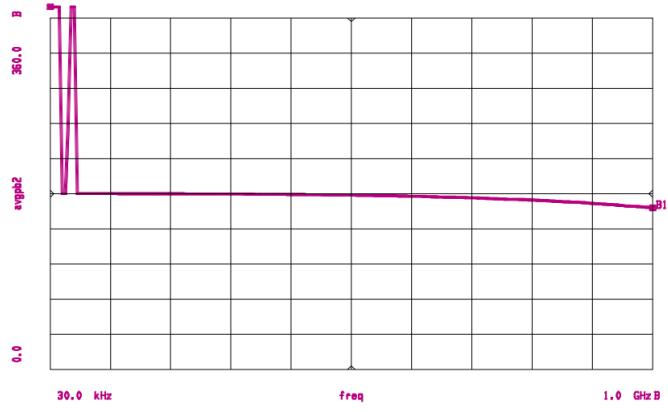
### Typical Performance Curves

#### Insertion Loss



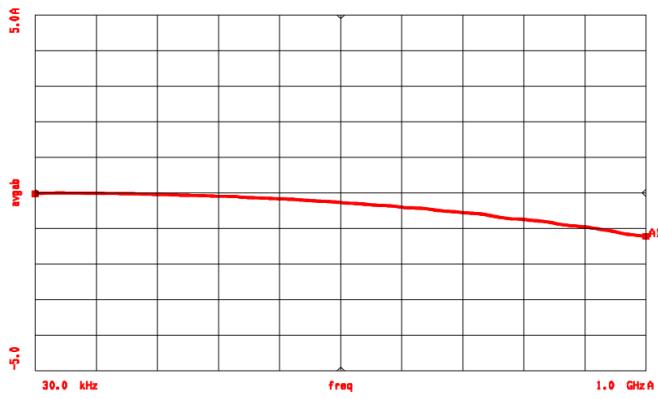
INSERTION LOSS (-3 to -13 dB) vs FREQ (30 kHz to 1 GHz)

#### Phase Unbalance



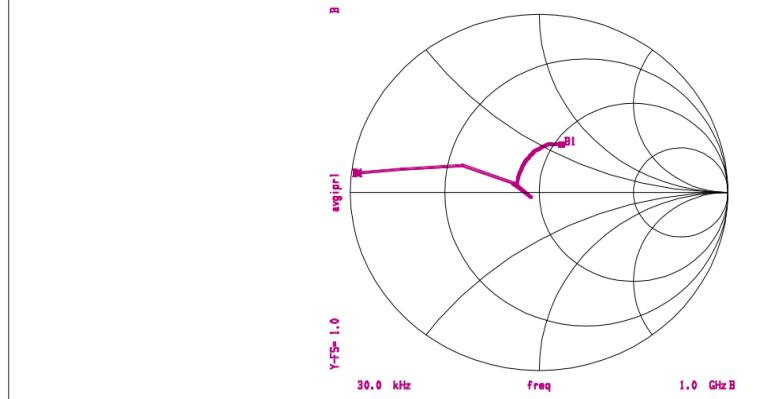
PHASE UNBALANCE (0 to 360 deg) vs FREQ (30 kHz to 1 GHz)

#### Amplitude Unbalance



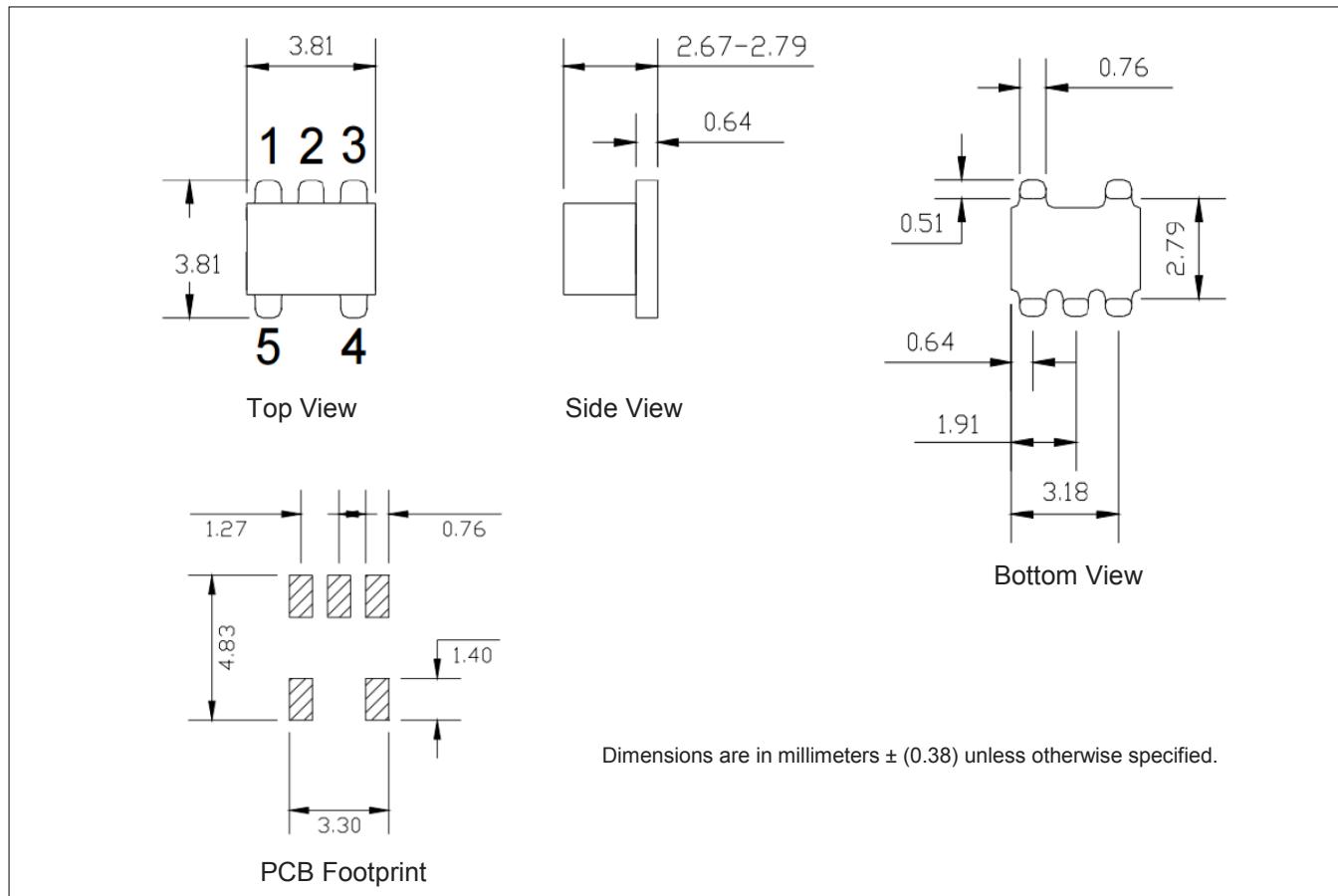
AMP UNBALANCE (5 to -5 dB) vs FREQ (30 kHz to 1 GHz)

#### Input Impedance



INPUT IMPEDANCE on SMITH CHART; FREQ (30 kHz to 1 GHz)

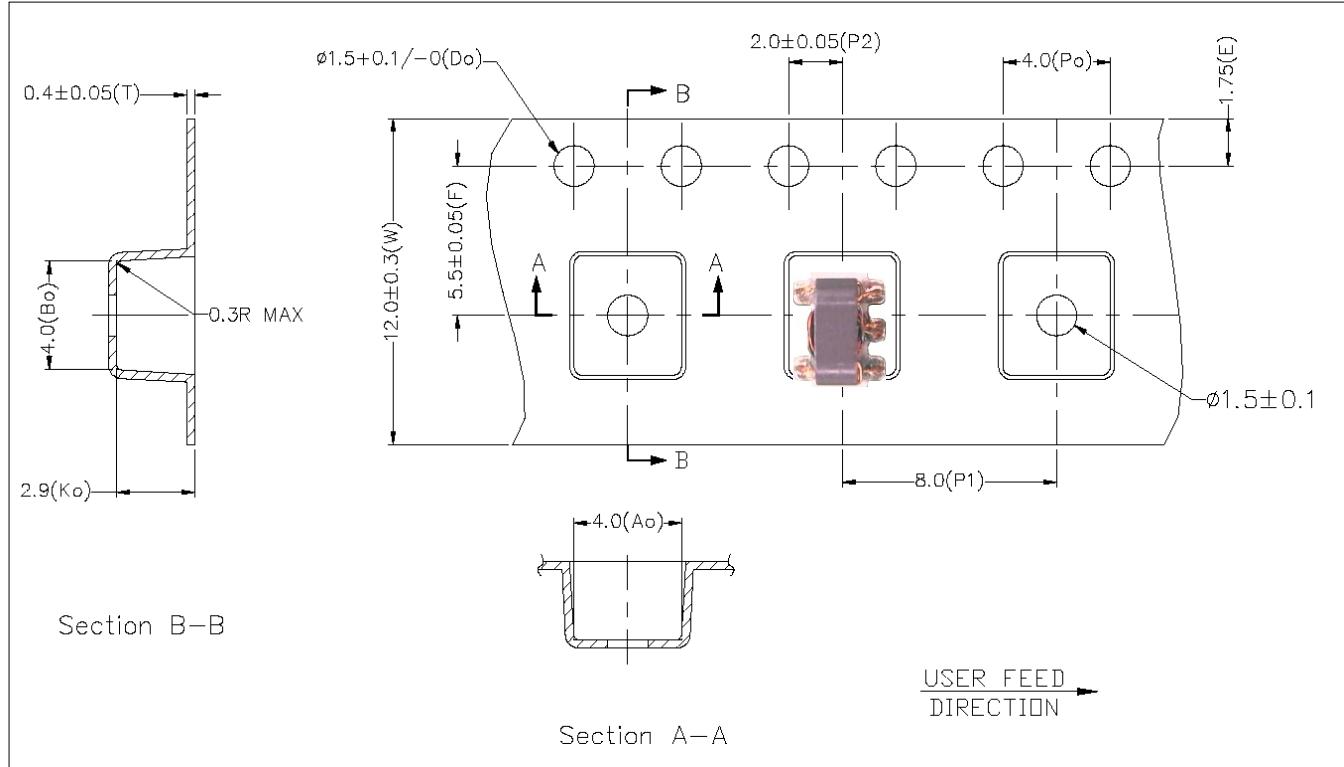
## Outline Drawing & Recommended Footprint



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### Tape & Reel Information



### 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
See Page 5 for orientation in tape.		

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