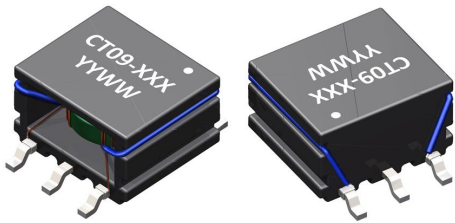


# CT09 Series

## SMT Current Sense Transformers



- Height: 6.35mm (Max)
- Footprint: 11.0mm (Max) x 12.5mm (Max)
- Current Rating: Up to 6A
- Creepage: 9.2 mm; Clearance: 8.0 mm
- Full Selections of Turns Ratios
- Suitable for Pick & Place Applications

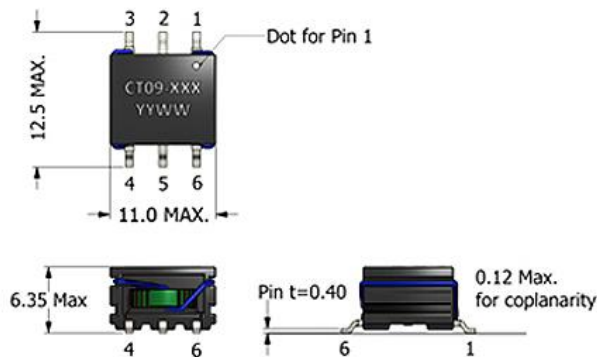
### APPLICATIONS

DC/DC Converters  
AC/DC Converters

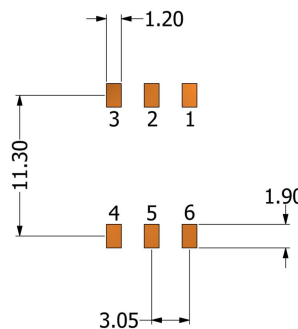
### PACKAGING

Reel Diameter: 13"  
Reel Width: 24 mm  
Pieces/Reel: 500

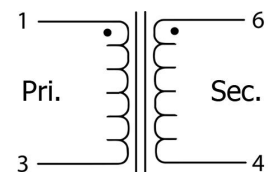
### Mechanical Drawing



### Recommended PCB Layout



### Schematic



All dimensions are in mm

### Electrical Specifications @ 25°C - Operating Temperature Range<sup>1</sup>: -40°C to +130°C

Part Number	Turns Ratio (TR)	Secondary Inductance <sup>2</sup> (μH, Min)	Secondary DCR (mΩ, Max)	Current Rating <sup>4</sup> (A, Max)	SRF <sup>5</sup> (6-4) (MHz, Typ)	ET Product <sup>8</sup> (V-μs, Max)	Hi-Pot (V <sub>AC</sub> )
CT09-020	1:20	160	120	6	9.0	31	3750
CT09-040	1:40	640	430	6	5.3	63	3750
CT09-060	1:60	1400	1300	6	1.5	95	3750
CT09-080	1:80	2500	1700	6	1.1	127	3750

- Operating Temp. Range:** The combination of ambient temperature and temperature rise.
- Secondary Inductance:** Tested at 10kHz, 0.1 V<sub>RMS</sub>.
- Primary DCR (1-3):** 4.6 mΩ (Ref.)
- Current Rating:** Peak current (50% duty cycle) through primary (1-3) to cause 40°C temperature rise at 25°C ambient.
- SRF values are for reference only.
- Flammability Standard:** Meets UL 94V-0.
- Terminating Resistor (R<sub>B</sub>):** To calculate the value use the formula,  $R_B = E_0 TR / I_P$

- ET Product:** The maximum ET is based upon a flux density of 3700 Gauss at 25°C. Suitable for bipolar applications only.

$$ET = E_0 / 2f$$

$$E_0 = I_P R_B / TR$$

where as,

$$E_0 = \text{Output voltage (V)} \quad TR = \text{Turns Ratio}$$

$$R_B = \text{Term. Resistor (}\Omega\text{)} \quad f = \text{Frequency (Hz)}$$

$$I_P = \text{Primary Current}$$



Specifications subject to change without prior notice.

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www.icecomponents.com

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