

## FC-SCT1010-Series-40A.Current Sense Transformers

Height: 14.0mm Max

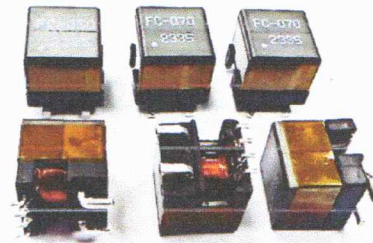
Current Rating: up to 40A

Insulation: Reinforced, 6.5mm creepage , Isolation AC3750Vrms UL

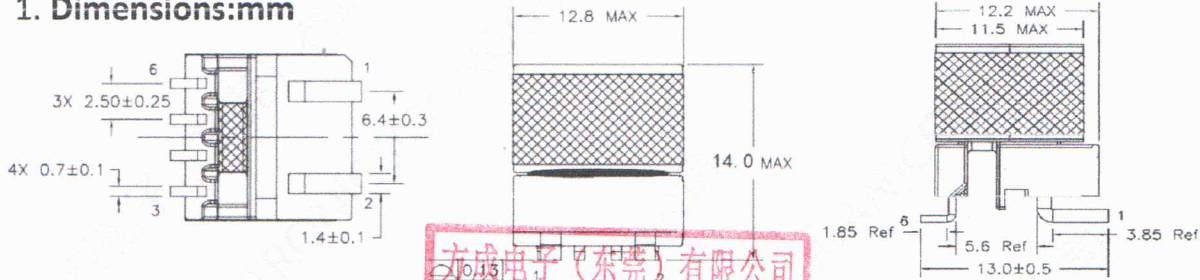
Ambient temperature -40°C to +85°C

Storage temperature Component: -40°C to +125°C

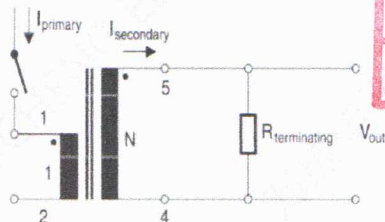
Applied to high-frequency current transformers



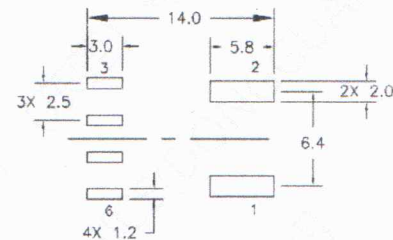
### 1. Dimensions:mm



### 2.Schematic:



### 3.PCB,LAYOUT RECOMMENDATION



### 4.Electrical Characteristics :

| Part Number           | Turns Ration | Current Rating<br>NP1-2,(A) | Secondary Inductance<br>(PIN5-4-mH min) | DCR MAX)            |                      | Hipot<br>(ACV <sub>RMS</sub> ) |
|-----------------------|--------------|-----------------------------|-----------------------------------------|---------------------|----------------------|--------------------------------|
|                       |              |                             |                                         | Primary<br>(1-2(mΩ) | Secondary<br>(5-4(Ω) | Np-Ns                          |
| FC-SCT1010-1:50T-40A  | 1:50         | 40                          | 1.8                                     | 0.5                 | 1.5                  | 3750V                          |
| FC-SCT1010-1:70T-40A  | 1:70         | 40                          | 3.5                                     | 0.5                 | 2.0                  | 3750V                          |
| FC-SCT1010-1:100T-40A | 1:100        | 40                          | 7.0                                     | 0.5                 | 2.5                  | 3750V                          |
| FC-SCT1010-1:125T-40A | 1:125        | 40                          | 11.0                                    | 0.5                 | 3.0                  | 3750V                          |
| FC-SCT1010-1:150T-40A | 1:150        | 40                          | 15.0                                    | 0.5                 | 3.5                  | 3750V                          |
| FC-SCT1010-1:180T-40A | 1:180        | 40                          | 25.0                                    | 0.5                 | 9.0                  | 3750V                          |
| FC-SCT1010-1:200T-40A | 1:200        | 40                          | 30.0                                    | 0.5                 | 9.5                  | 3750V                          |

Inductance: 10KHZ/0.25V, To calculate value of terminating resistor (Rt) use the following formula:  $R_t (W) = V_{ref} * N / (I_{peak\_primary})$

The peak flux density of the device must remain below 2200 Gauss. To calculate the peak flux density for uni-polar current use following formula:  $B_{pk} = 8.85 * V_{ref} * (Duty\_Cycle\_Max) * 105 / (N * Freq\_kHz)$