

FC-SCT8.3-300T-1-30A Current Sense Transformers

Height: 7.0mm Max

Current Rating: up to 30A

Frequency Range: 100 kHz, 0.1 Vrms

Low Primary DCR version

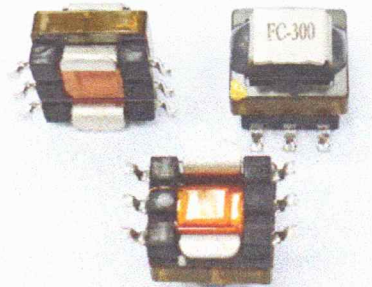
Ambient temperature -40°C to $+85^{\circ}\text{C}$

Storage temperature Component: -40°C to $+125^{\circ}\text{C}$

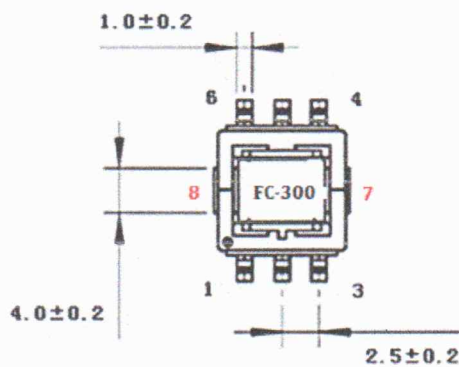
方成电子（东莞）有限公司

受控文件

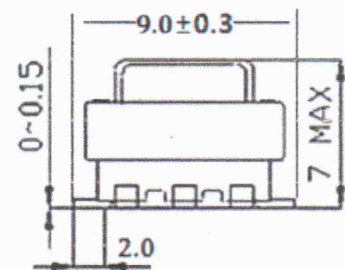
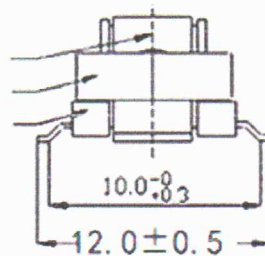
日期: 2015 年 7 月 22 日



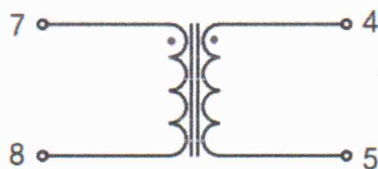
1. Dimensions:mm



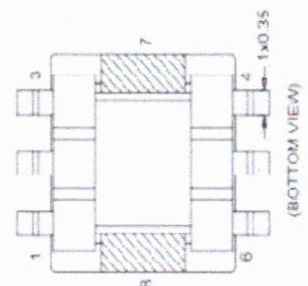
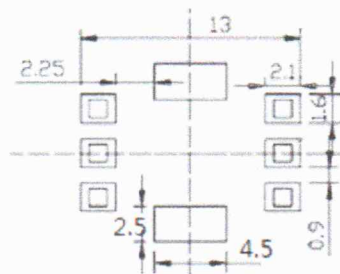
电流环
磁芯
骨架



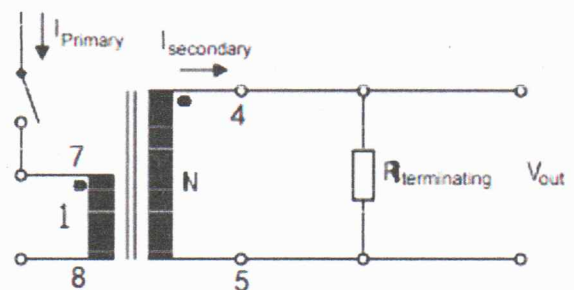
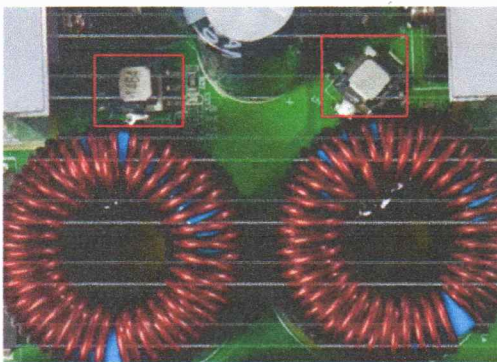
2.Schematic:



3.LAYOUT RECOMMENDATION



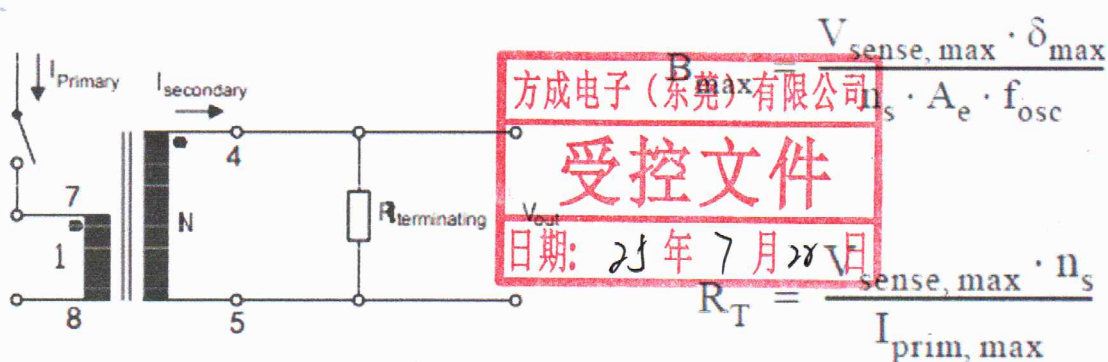
4.Application circuit and pinning



5. ELECTRIC CHARACTERISTICS

Part Number	Turns Ratio	Current Rating ₂ NP7-8,(A)	Secondary Inductance (PIN4-5-mH min) 100KHZ/0.1V	DCR (MAX)		Hipot (DCV _{RMS})
				Primary (7-8) mΩ	Secondary (4-5) Ω	Np-Ns
FC-SCT8.3-300T-1-30A	1:300	30	35	0.35	25	1500V

6. Application circuit and pinning



With:1

1. The temperature of component (ambient temperature plus temperature rise) must be within the specified operating temperature range.
2. The maximum current rating is based upon temperature rise of the component and represents the DC current which will cause a typical temperature rise of 40°C.
3. To calculate value of terminating resistor (R_t) use the following formula:

$$R_t (W) = V_{ref} \cdot N / (I_{peak_primary})$$
4. 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: $B_{pk} = 11.88 \cdot V_{ref} \cdot (Duty_Cycle_Max) \cdot 105 / (N \cdot Freq_kHz)$
 * for bi-polar current applications divide B_{pk} (as calculated above) by 2.