

FC-SCT8.3 –30A-Series Current Sense Transformers

Height: 7.0mm Max

Current Rating: up to 30A

Frequency Range: 100 kHz, 0.1 Vrms

Low Primary DCR version

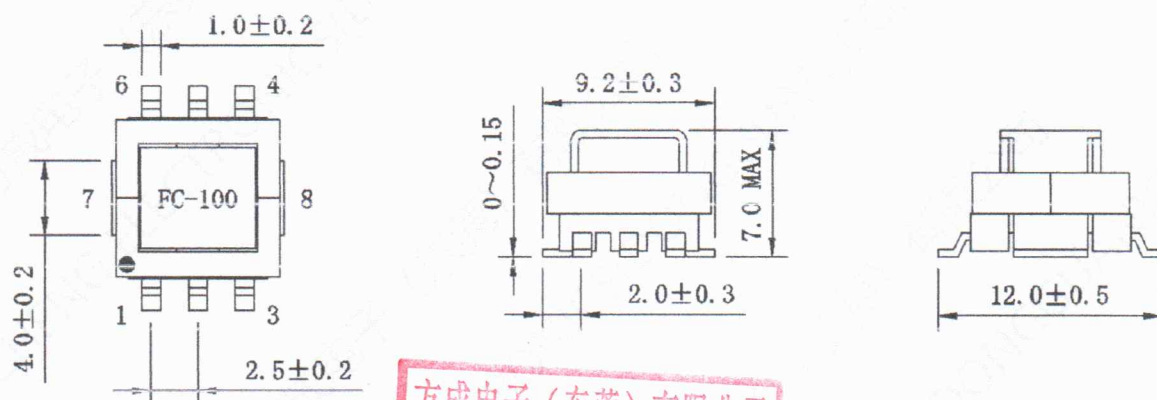
Ambient temperature -40°C to $+85^{\circ}\text{C}$

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

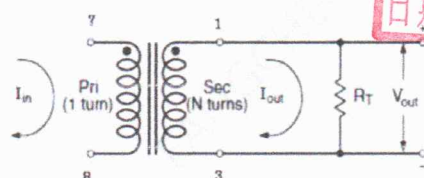
Applied to high-frequency current transformers



1. Dimensions:mm



2. Schematic:

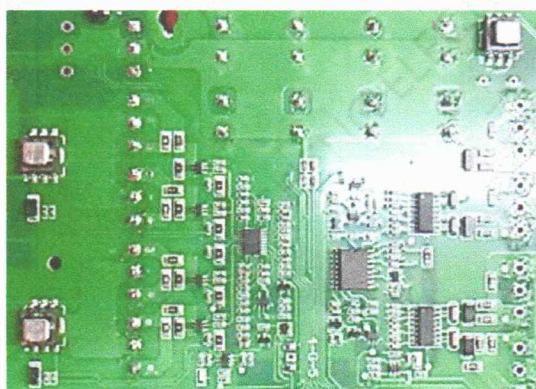
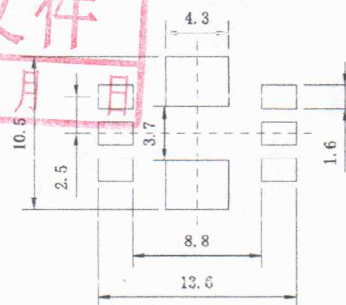


方成电子（东莞）有限公司

受控文件

日期: 年 月 日

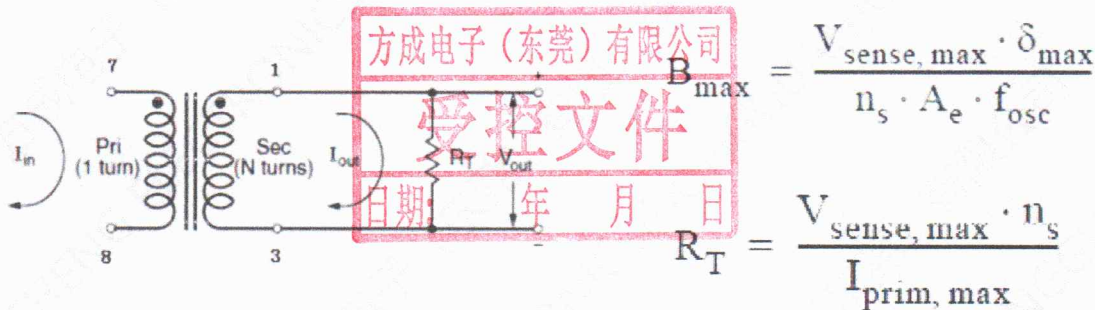
3. LAYOUT RECOMMENDATION



5. ELECTRIC CHARACTERICS)

Part Number	Turns Ration	Current Rating ₂ NP7-8,(A)	Secondary Inductance (PIN1-3-mH min)	DCR (mΩ MAX)		Hipot (DCV _{RMS}) Np-Ns
				Primary (7-8)	Secondary (1-3)	
FC-SCT8.3-1:100-30A	1:100	30	3.0	0.35	3500	1500V
FC-SCT8.3-1:200-30A	1:200	30	10.0	0.35	7500	1500V

6. Application circuit and pinning



With:1

$B_{\max}$ Maximum magnetic flux density in the ferrite core of the current sense transformer
 $V_{\text{sense,max}}$ Maximum output voltage of the measurement signal $\delta_{\max}$ Maximum duty cycle
 n_s Number of turns of the secondary winding of the current sense transformer
 A_e Effective magnetic area of the ferrite core
 f_{osc} Operating frequency of the switching operator IC
 Typical value for A_e : $2.5 \times 10^{-6} \text{ m}^2$
 Typical $B_{\max}$: 200 m

With:2

R_T Resistance of burden resistor
 $V_{\text{sense,max}}$ Maximum output voltage of the measurement signal
 n_s Number of turns on the secondary side of the CT
 $I_{\text{prim,max}}$ Maximum primary current (peak current)