

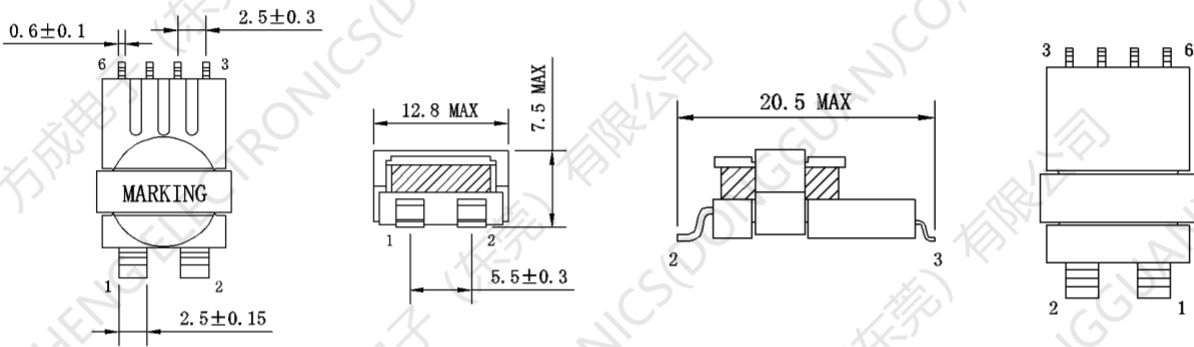
FC-SCT2108-Series Current Sense Transformers

Features:

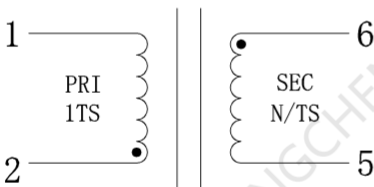
1. Current Rating: up to 50A
2. Footprint: 12.8mm x 20.5mm x 7.5mm Max
3. Frequency Range: 20kHz to 1MHz
4. Insulation: Reinforced, 10mm creepage and clearance
5. Hipot Isolation: 5000 Vdc, 6 sec
6. Voltage Rating: Up to 1000 Vpk
7. Operating temperature: -40°C to +130°C



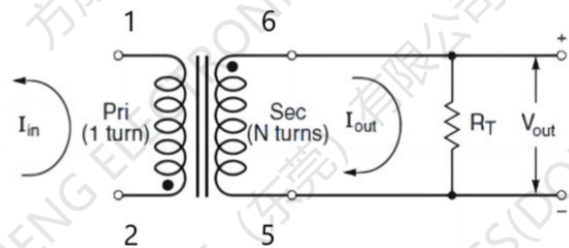
1. Dimensions: [mm]



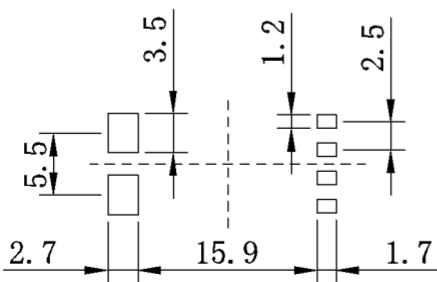
2.Schematic:



3. Typical Circuit(DC Current Sense Transformers)



4. Recommended Land Pattern: mm



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5. ELECTRIC CHARACTERICS

Part Number	Turns Ration	Secondary Inductance min.(mH)	Hipot (Vdc)	DCR (MAX)		Current ² Rating
				Primary mΩ	Secondary Ω	
FC-SCT2108-30T	1:30	0.3	5000	0.5	0.24	50
FC-SCT2108-50T	1:50	1.1	5000	0.5	0.6	50
FC-SCT2108-100T	1:100	4.5	5000	0.5	2.6	50
FC-SCT2108-125T	1:125	7.0	5000	0.5	4.2	50
FC-SCT2108-150T	1:150	10.0	5000	0.5	6.0	50
FC-SCT2108-200T	1:200	17.5	5000	0.5	12.0	50

Remark:

<1>Inductance: 100KHz/0.1V Test condition: Ta= 25°C

Electrical Specifications @ 25°C - Operating Temperature-40°C to +130°C

- The temperature of component (ambient temperature plus temperature rise) must be within the specified operating temperature range.
- 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 with no airflow.
- 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 2000 Gauss. To calculate the peak flux density for uni-polar current use following formula: $B_{pk} = 18.2 * V_{ref} * (Duty_Cycle_Max) * 105 / (N * Freq_kHz)$ for bi-polar current applications divide Bpk (as calculated above) by 2
- Creepage & Clearance is in accordance with IEC 61558-1 for reinforced insulation to a working voltage of 300Vrms (for basic insulation to a working voltage of 1000Vrms) based on material group III, pollution degree 2, OVC II and 5000M altitude.
- Rated voltage is based on a positive partial discharge test (discharge < 10pC) during the design phase (not production tested), in accordance with IEC 60664 for basic insulation. In an application which requires a reinforced insulation barrier, a rated voltage of the equivalent peak voltage of the 300Vrms (sinusoidal) working voltage, 424Vpk, is defined and confirmed by partial discharge testing.