

Through Hole Current Sense Transformers

VDE Approved



- Meets IEC950 insulation requirements
- 3750Vrms primary to secondary breakdown voltage
- Frequency range 10kHz to 200kHz

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

| Part Number | I _{PK} (Amps) | R _T (Ω) | Droop (%) | K _{VI} (Volt/Amp) | L _S (mH MIN) | DCR R _S (Ω MAX) | Turns (N _S ± 1%) | K _B | K _{CL} | R _{EQ} (mΩ) |
|-------------|---------------------------|-----------------------|--------------|-------------------------------|----------------------------|----------------------------------|--------------------------------|------------------------|-----------------------|-------------------------|
| PE-67050 | 35 | 15 | 2.4 | 0.30 | 5.0 | 0.70 | 50 | .269x10 ⁶ | 51.2x10 ⁻⁶ | .95 |
| PE-67100 | 37 | 56 | 2.2 | 0.56 | 20 | 1.40 | 100 | .0671x10 ⁶ | 1.56x10 ⁻⁶ | .85 |
| PE-67200 | 38 | 200 | 2.0 | 1.00 | 80 | 4.50 | 200 | .0168x10 ⁶ | 47.3x10 ⁻⁹ | .82 |
| PE-67300 | 37 | 510 | 2.2 | 1.70 | 180 | 11.0 | 300 | .00746x10 ⁶ | 6.13x10 ⁻⁹ | .84 |

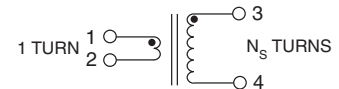
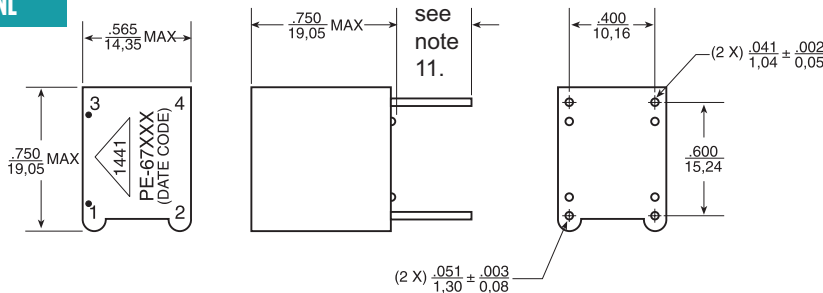
NOTES:

- These current sense transformers have a 1 turn primary winding, secondary turns (N_S) as indicated in the table, and a 130°C insulation system.
- The reference values are for unipolar operation, 50kHz, 40% duty factor, and an estimated 55°C temperature rise.
- The maximum useable peak sense current (I_{PK}) depends on temperature rise or core saturation, which should be evaluated for the operating conditions.
- These Current Sense Transformers are recommended for switch mode power supply applications, unipolar or bipolar, operating at frequencies from 10kHz to 200kHz.
- The maximum recommended operating flux density (B_{OP}) is 2000 gauss to prevent saturation at an operating temperature of 105°C.
- The core loss factor (K_{CL}) is valid from 10kHz to 200kHz at 105°C.
- The terminating resistor (R_T) may be varied to adjust operating flux (B_{OP}), droop, or scale factor (K_{VI}).
- The scale factor (K_{VI}) is proportional to the terminating resistor (R_T) and is equal to 1 volt/amp when R_T=N_S.
- The secondary inductance (L_S) is measured at 15kHz and .5V for PE-67050, 1V for PE-67100, 2V for PE-67200 and 3V for PE-67300.
- To order RoHS compliant part, add the suffix "NL" to the part number (i.e. PE-67050 becomes PE-67050NL).
- Pin Length for PE-67100 and PE-67100NL is equal to 0.146" +/- 0.16" (3.7mm +/- 0.4mm) for all other PNs pin length is equal to 0.200" Min (5.08mm Min).

Mechanicals

Schematics

PE-65612NL



Parts per package80

Dimensions: Inches
mm

Unless otherwise specified, all tolerances are ± $\frac{.005}{0.13}$

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