

# THROUGH HOLE CURRENT SENSE TRANSFORMERS

VDE Approved



- Meets IEC950 insulation requirements
- 3750V<sub>RMS</sub> primary to secondary breakdown voltage
- Frequency range 10kHz to 200kHz

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

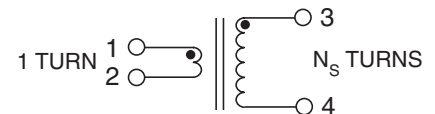
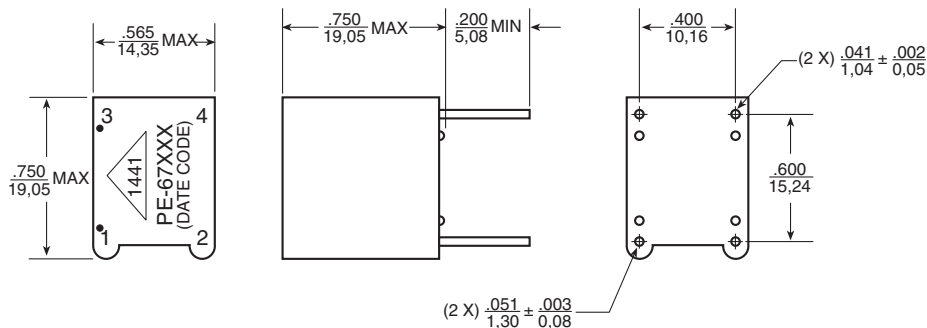
Part Number	I <sub>PK</sub> (Amps)	R <sub>T</sub> (Ω)	Droop (%)	K <sub>VI</sub> (Volt/Amp)	L <sub>s</sub> (mH MIN)	DCR R <sub>s</sub> (Ω MAX)	Turns (N <sub>s</sub> ± 1%)	K <sub>B</sub>	K <sub>CL</sub>	R <sub>EQ</sub> (mΩ)
PE-67050	35	15	2.4	0.30	5.0	0.70	50	.269x10 <sup>6</sup>	51.2x10 <sup>-6</sup>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

### NOTES:

- These current sense transformers have a 1 turn primary winding, secondary turns (N<sub>s</sub>) 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<sub>PK</sub>) 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<sub>OP</sub>) is 2000 gauss to prevent saturation at an operating temperature of 105°C.
- The core loss factor (K<sub>CL</sub>) is valid from 10kHz to 200kHz at 105°C.
- The terminating resistor (R<sub>T</sub>) may be varied to adjust operating flux (B<sub>OP</sub>), droop, or scale factor (K<sub>VI</sub>).
- The scale factor (K<sub>VI</sub>) is proportional to the terminating resistor (R<sub>T</sub>) and is equal to 1 volt/amp when R<sub>T</sub>=N<sub>s</sub>.
- The secondary inductance (L<sub>s</sub>) 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).

## Mechanical

## Schematic



Parts per package .....80

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

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

## For More Information:

### Pulse Worldwide Headquarters

12220 World Trade Dr.  
San Diego, CA 92128  
U.S.A.  
[www.pulseeng.com](http://www.pulseeng.com)

Tel: 858 674 8100

Fax: 858 674 8262

### Pulse Europe

Einsteinstrasse 1  
D-71083 Herrenberg  
Germany

Tel: 49 7032 7806 0

Fax: 49 7032 7806 12

### Pulse China Headquarters

B402, Shenzhen  
Tech-Innovation International  
Tenth Kejinan Rd.  
High-Tech Industrial Park  
Nanshan District, Shenzhen  
China

Tel: 86 755 33966678

Fax: 86 755 33966700

### Pulse North China

Room 1503  
XinYin Building  
No. 888 YiShan Rd.  
Shanghai 200233  
China

Tel: 86 21 54643211/2

Fax: 86 21 54643210

### Pulse South Asia

150 Kampong Ampat  
#07-01/02  
KA Centre  
Singapore 368324

Tel: 65 6287 8998

Fax: 65 6280 0080

### Pulse North Asia

No. 26  
Kao Ching Rd.  
Yang Mei Chen  
Tao Yuan Hsien  
Taiwan, R. O. C.

Tel: 886 3 4641811

Fax: 886 3 4641911

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