

SMT CURRENT SENSE TRANSFORMERS

For DC/DC Converter Applications



- Primary rated for 10 amps
- Full selection of turns ratios
- Pick and place compatible
- Optimal performance @ 100 kHz and above
- Low profile - height is .19" (4,83 mm)

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

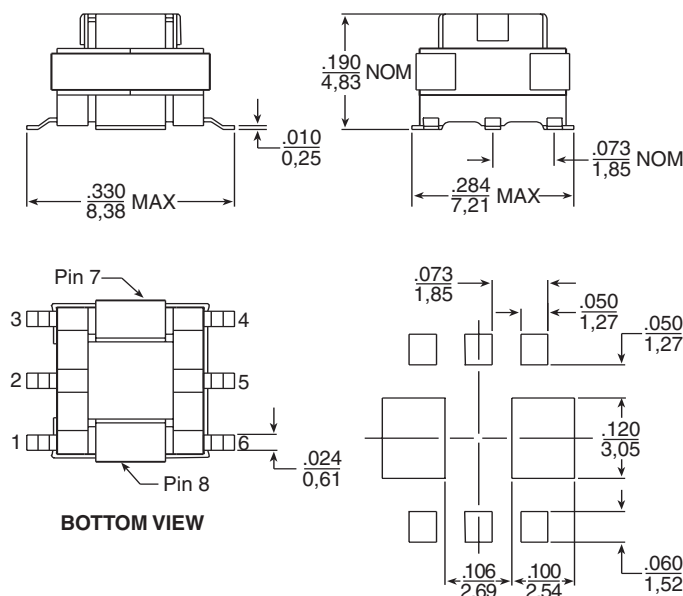
Pulse Number	Turns ratio	Ls ¹ (μH)	Rs (Ω MAX)	Terminating Resistor ² (Ω)	HiPot (Vrms)
P8202T	1:20	80	0.55	2.0	500
P8203T	1:30	180	0.87	3.0	500
P8204T	1:40	320	1.14	4.0	500
P8205T	1:50	500	1.50	5.0	500
P8206T	1:60	720	1.75	6.0	500
P8207T	1:70	980	4.75	7.0	500
P8208T	1:100	2000	5.50	10.0	500
P8209T	1:125	3000	6.50	12.5	500

NOTES:

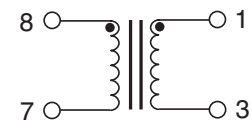
1. Inductance at 0.1 Vac, 10 kHz.
2. Terminating resistor for 1 V out with 10 amps peak in the primary.
3. The operating temperature range includes the ambient temperature and the temperature rise.
4. The temperature rise of the component is calculated based on the total core and copper loss:
Copper loss (W) : $P_{cu} = (I_{pk}/N_s)^2 \cdot (D_{max}/3) \cdot R_s$
Core loss (W) : $P_{fe} = 1.3 \cdot 10^{-17} \cdot f(Hz)^{1.63} \cdot B(Gauss)^{2.45}$
 $B_{max}(Gauss) = 3.75 \cdot 10^9 \cdot (I_{pk} \cdot R_t / N_s + V_d) \cdot D_{max} / (k \cdot N_s \cdot f)$, where f is in Hz, k=1 for unipolar and 2 for bipolar waveform. Keep Bmax below 2000 Gauss.
Temperature rise (°C): $\sim 300 \cdot (P_{cu} + P_{fe})$
5. Reverse polarity parts are available for all turns ratios : P8222T through P8229T.

Mechanical

Schematic



RECOMMENDED PAD LAYOUT



Weight 0.34 grams
Tray 120/tray
Tape & Reel 900/reel
Coplanarity 0.006 inches

Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified, all tolerances are $\pm \frac{.010}{0,25}$