

OFFLINE GATE DRIVE TRANSFORMERS



- UL and C-UL recognized, TÜV approved components
- 3000Vrms gate to drive winding test
- Useful operating frequency from 50kHz to 500kHz
- Most popular winding configurations

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

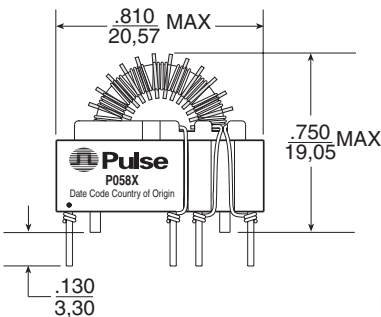
Part ⁴ Number	Turns Ratio	Reference Data		Primary Inductance (1-10) (μH MIN)	Leakage Inductance Gate to Drive (μH MAX)	DCR Drive (1-10) (mΩ ±20%)	DCR Gates (mΩ ±20%)	Drive Pri-Sec (Vrms)
		ET (V * μsec MAX)	Maximum Flux Density					
P0584	1:1:1	95.0	2100	450	0.5	80	72	3000
P0585	1:1:1:1:1	95.0	2100	450	3.0	330	180	3000

NOTES:

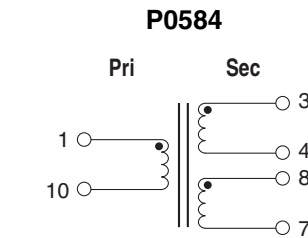
- These gate drive transformers are meant to operate between 50 and 300kHz with a 12V, 45% bipolar waveform.
- The peak flux density should remain below 2100 Gauss to ensure that the core does not saturate. Use the following procedure to calculate the peak flux density:
 - Calculate the Volt-μsec product (ET):
 $ET = 10^3 * (\text{Drive Voltage}) * (\text{Don}) / (\text{Frequency in kHz})$
 - Calculate the operating flux density (B): Bpk (Gauss) = $40.32 * ET / Ff$ where:
 $Ff = 1$ for unipolar drive applications and 2 for bipolar drive applications
- The temperature rise of the component is calculated based on the total core loss and copper loss:
 - To calculate total copper loss (W), use the following formula:
 $\text{Copper Loss (W)} = I_{rms}^2 * (\text{DCR_Drive} + (\# \text{ of Gates}) * \text{DCR_Gates})$
 - To calculate total core loss (W), use the following formula:
 $\text{Core Loss (W)} = 7.5E-5 * (\text{Frequency in kHz})^{1.67} * (20.16 * ET / 1000)^{2.532}$
 - To calculate temperature rise, use the following formula:
 $\text{Temperature Rise (C)} = 60.18 * (\text{Core Loss (W)} + \text{Copper Loss (W)})^{.833}$
- To order RoHS compliant part, add the suffix "NL" to the part number (i.e. P0584 becomes P0584NL).

Mechanical

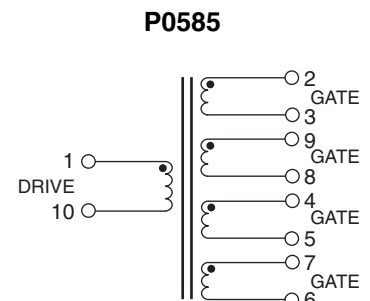
Schematics



P0584 (6 pins)

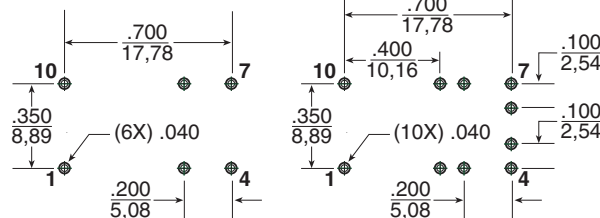


P0585 (10 pins)



Weight5 grams
Tray20/tray

Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are ± .010
0,25



SUGGESTED PCB HOLE PATTERN

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