OFFLINE GATE DRIVE TRANSFORMERS

Pulse® A TECHNITROL COMPANY

RoHS COMPLIANT

- 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

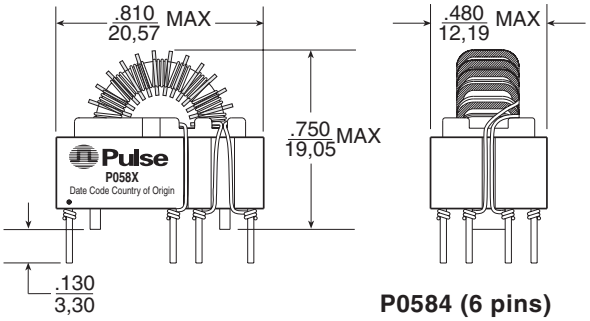
Electrical Specifications @ 25°C — Operating Temperature -40°C to 130°C

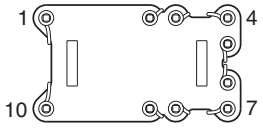
Part [4] Number	Turns Ratio	Reference Data		Primary Inductance (1-10) (µH MIN)	Leakage Inductance Gate to Drive (µH MAX)	DCR Drive (1-10) (mΩ ±20%)	DCR Gates (mΩ ±20%)	Drive Pri-Sec (Vrms)
		ET (V * µsec MAX)	Maximum Flux Density					
P0584	1:1:1	95.0	2100	450	0.5	80	72	3000
P0585	1:1:1:1:1	95.0	2100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

NOTES:

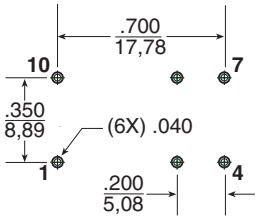
1. These gate drive transformers are meant to operate between 50 and 300kHz with a 12V, 45% bipolar waveform.
2. The peak flux density should remain below 2100 Gauss to ensure that the core does not saturate. Use the following procedure to calculate the peak flux density:
   A. Calculate the Volt-µsec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

Mechanical

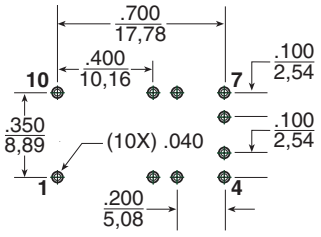




P0584 (6 pins)



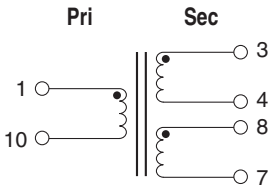
P0585 (10 pins)



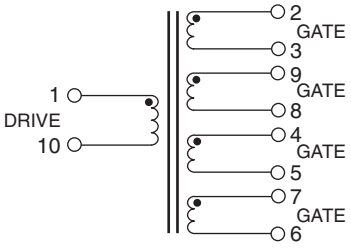
SUGGESTED PCB HOLE PATTERN

Schematics

P0584



P0585



Weight . . . . . .5 grams
Tray 20/tray

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

For More Information:

Pulse Worldwide Headquarters
12220 World Trade Drive
San Diego, CA 92128
U.S.A.
www.pulseeng.com
TEL: 858 674 8100
FAX: 858 674 8262

Pulse Northern Europe
3 Huxley Road
Surrey Research Park
Guildford, Surrey GU2 5RE
United Kingdom
TEL: 44 1483 401700
FAX: 44 1483 401701

Pulse Southern Europe
Zone Industrielle
F-39270
Orgelet
France
TEL: 33 3 84 35 04 04
FAX: 33 3 84 25 46 41

Pulse China Headquarters
No. 1
Industrial District
Changan, Dongguan
China
TEL: 86 769 85538070
FAX: 86 769 85538870

Pulse North China
Room 1503
XinYin Building
No. 888 YiShan Road
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 Road
Yang Mei Chen
Taoyuan Hsien
Taiwan, R. O. C.
TEL: 886 3 4641811
FAX: 886 3 4641911