

# GATE DRIVE TRANSFORMER

Ruggedized

**PulseR**  
Ruggedized Solutions



- R** 2700VDC isolation between Gate and Drive
- R** Operating Frequency: 50KHz and up
- R** Footprint Size: 8.25\*6.9\*3.0mm Max
- R** Three Windings (one drive and two gates)
- R** Storage & Operating Temperature: -55°C to +130°C
- R** Solder Dip Finish: Sb5
- R** Moisture Sensitivity Level: 1

## Electrical Specifications @ 25°C

Part Number	Turns Ratio	Pri-Sec Insulation (VDC)	Primary Inductance (μH +/- 35%)	Leakage Inductance (μH Max)	Max Volt-μsec (1-2)	DCR (1-2) (Ω Max)	DCR (3-4) (Ω Max)	DCR (4-5) (Ω Max)
PL3159NL	1:1:1	2700	780	0.4	21.0	0.85	0.85	0.85

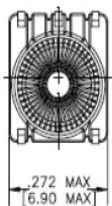
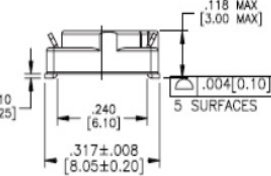
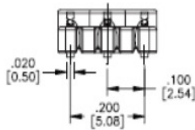
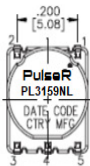
**Notes:** Add suffix "T" to indicate Tape and Reel Packing (i.e. PL3159NL becomes PL3159NLT)

- The maximum volt-μsec rating limits the peak flux density to 2500 Gauss when used in a unipolar drive application. For bi-polar drive applications, a maximum volt-sec of 1.5 times this rating is acceptable (ie: volt\* μsec rating=(voltage applied to the primary)\*duty cycle/Frequency= $V \cdot \alpha / \text{Freq\_Hz} = V \cdot \mu\text{sec}$ ).
- All inductance tests measured at 100kHz, 100mV. Leakage inductance measured from (1-2) with 3,4,5 shorted.
- The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.

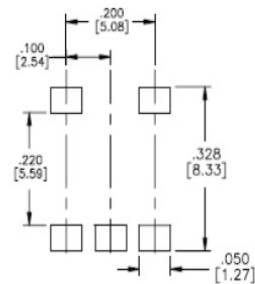
## PL3159NL

## Mechanical

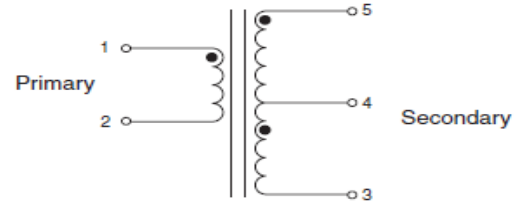
## Schematic



FINAL OUTLINE



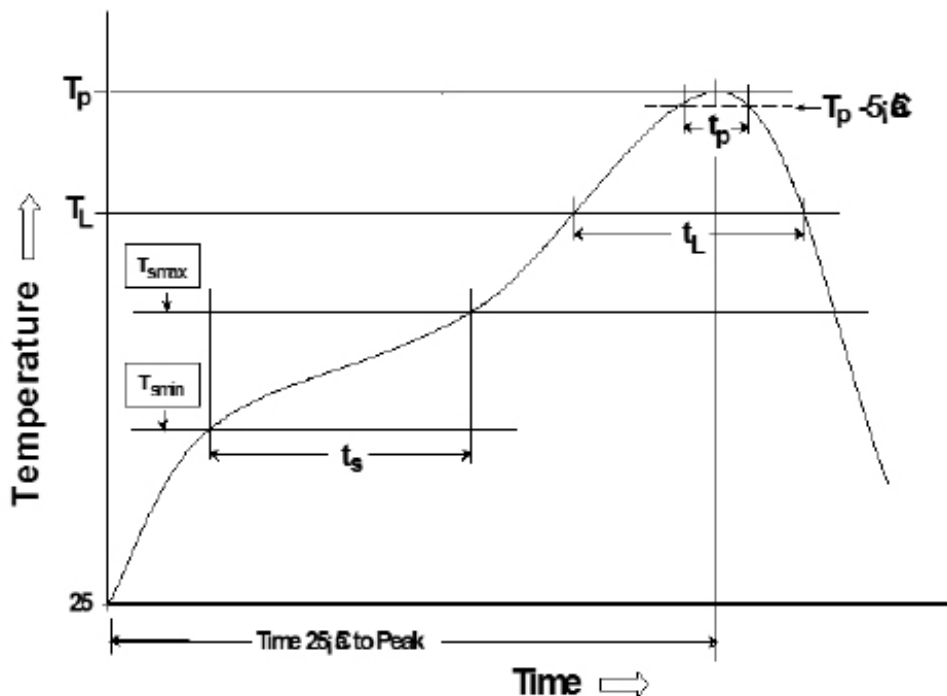
SUGGESTED LAND PATTERN



Weight.....1.2grams  
Tube.....75/tube  
Tape&Reel.....1000/reel

Dimensions: Inches/mm  
Unless otherwise specified,  
all tolerances are ±.005/0.13

## Transceiver Tin/Lead Recommended Reflow Profile (Based on J-STD-020D)



$T_{SMIN}$ (°C)	$T_{SMAX}$ (°C)	$T_L$ (°C)	$T_P$ (°C MAX)	$t_s$ (s)	$t_L$ (s)	$t_p$ (s MAX)	Ramp-up rate ( $T_L$ to $T_P$ )	Ramp-down rate ( $T_P$ to $T_L$ )	Time 25°C to peak temperature (s MAX)
100	150	183	225	60-120	60-150	20	3°C/s MAX	6°C/s MAX	360

### Notes:

1. All temperatures measured on the package leads.
2. Maximum times of reflow cycle: 2.

## For More Information

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