




# SMT Gate Drive Transformers

>1500V<sub>DC</sub> Basic and Functional Insulation



-  >1500V<sub>DC</sub> isolation between Gate and Drive
-  Basic insulation (1.4mm creepage/clearance) and functional available
-  Operating frequency: 50kHz and up

## Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C<sup>5</sup>

Part <sup>3,4</sup> Number	Turns Ratio	Pri-Sec Insulation (V <sub>DC</sub> )	MAX <sup>1</sup> V*μsec	Primary Inductance (μH MIN)	Leakage <sup>2</sup> Inductance (μH MAX)	DCR Primary (Ω MAX)	DCR Secondary (Ω MAX)	Package Size (L x W x H) (mm MAX)
<b>Functional Insulation</b>								
PE-68386NL	1:1	1500 Vrms	9.7	785	0.46	0.60	0.60	8.6 x 6.7 x 2.5
P0926NL	1:1:1	1500 Vrms	23.8	300	0.50	2.00	2.00	8.0 x 6.6 x 5.3
P0544NL	1:1:1	1500 Vrms	45.1	3300	0.70	1.60	1.60	9.0 x 8.6 x 7.6
PA0264NL	1:1:1	1500 Vrms	12.7	1140	0.65	0.75	0.75	8.6 x 6.7 x 3.6
PA1323NL	1:1	1500 Vrms	21.7	600	2.0	1.25	1.25	9.5 x 7.0 x 5.3
<b>Basic Insulation (1.4mm creepage and clearance between Primary and Secondary)</b>								
PA0173NL	1:1:1	1500 Vrms	17.2	980	0.75	0.62	0.88	11.8 x 8.8 x 4.0
PA0185NL	1:1	1500 Vrms	17.2	980	0.75	0.88	0.62	11.8 x 8.8 x 4.0
PA0184NL	1:1	1500 Vrms	27.2	1200	0.50	0.91	0.91	9.0 x 8.6 x 7.6
PA2777NL	1:1	1500 Vrms	9.3	335.2	0.36	0.70	0.70	7.1 x 6.1 x 5.5
PA0510NL	2.5:1:1	1500 Vrms	27.2	1200	0.68	0.91	0.380	9.0 x 8.6 x 7.6
PA3493NL	1.25:1	1650 Vdc	23	656	1.3	1.03	0.85	10.9 x 9.7 x 2.7

### Notes:

1. The Maximum volt-μsec rating limits the peak flux density to 2200 Gauss when used in a unipolar drive application. For bi-polar drive applications, a maximum volt-sec of two times this rating is acceptable (ie: 2\* (volt\*μsec rating) = (voltage applied to the primary) \* dutycycle / Frequency = V \* alpha / Freq\_Hz = V \* μsec)
2. Leakage inductance is measured at primary terminals with all secondaries shorted.
3. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. P0544NL becomes P0544NLT). Pulse complies to industry standard tape and reel specification EIA481.
4. The "NL" suffix indicates an RoHS-compliant part number. Non-NL suffixed parts are not necessarily RoHS compliant, but are electrically and mechanically equivalent to NL versions. If a part number does not have the "NL" suffix, but an RoHS compliant version is required, please contact Pulse for availability.
5. The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.

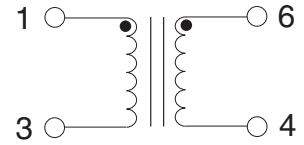
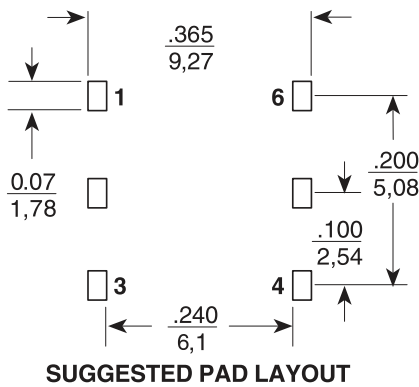
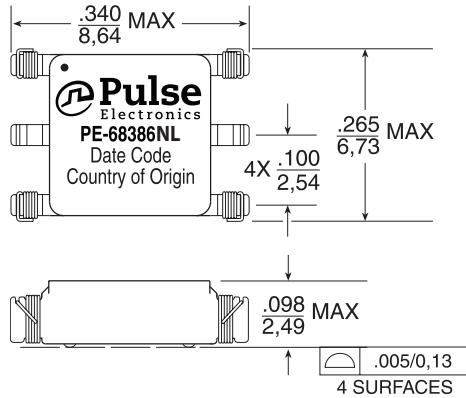
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## Mechanicals

## Schematics

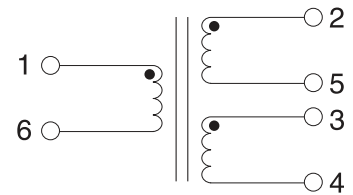
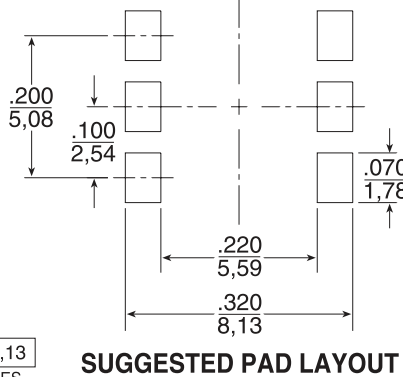
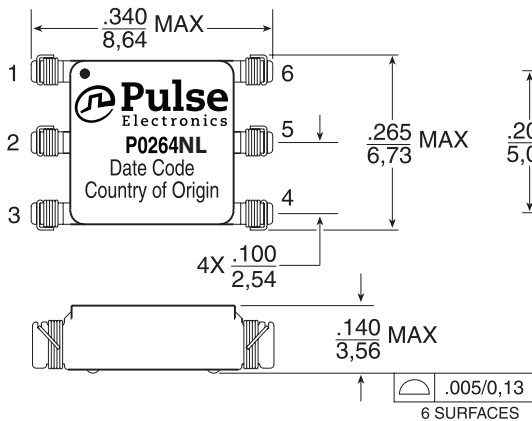
### PE-68386NL



Weight .....0.28 grams  
 Tape & Reel .....1500/reel  
 Tube .....60/tube

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

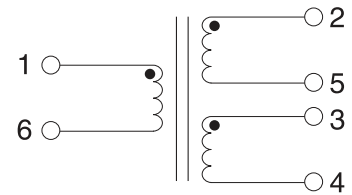
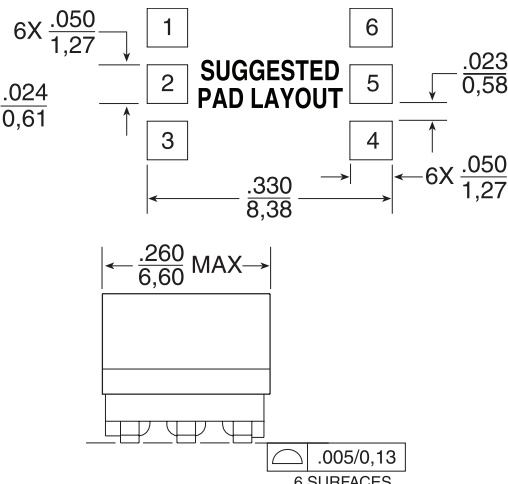
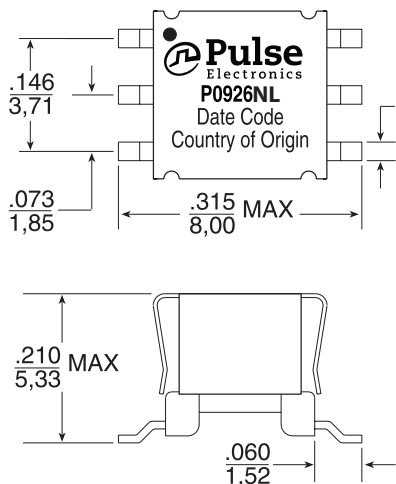
### PA0264NL



Weight .....0.28 grams  
 Tape & Reel .....1500/reel  
 Tube .....60/tube

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

### P0926NL



Weight .....0.48 grams  
 Tape & Reel .....1000/reel  
 Tube .....80/tube

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

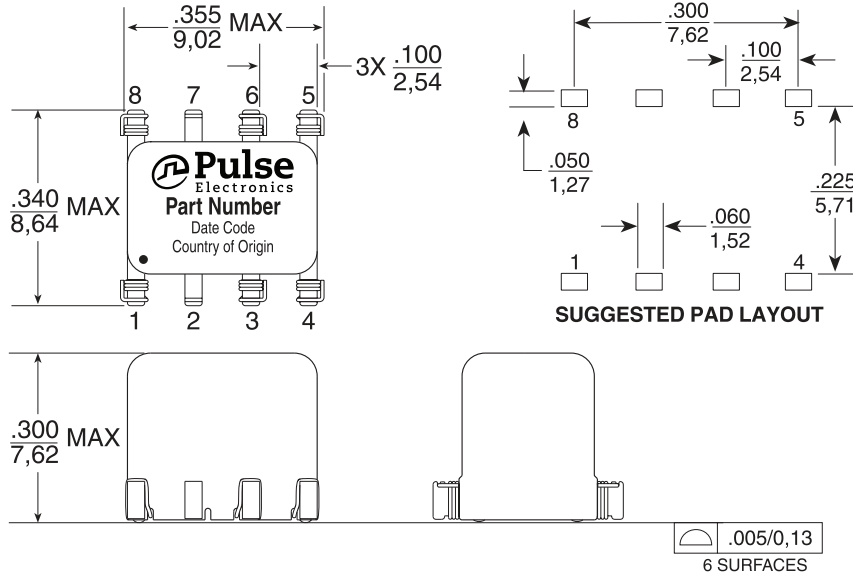
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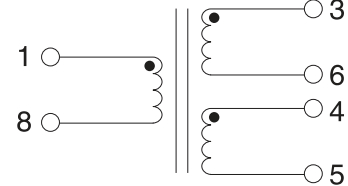
## Mechanicals (continued)

## Schematics

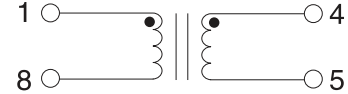
**P0544NL, PA0297, PA0510, PA0184NL**



**P0544 / PA0297 / PA0510**



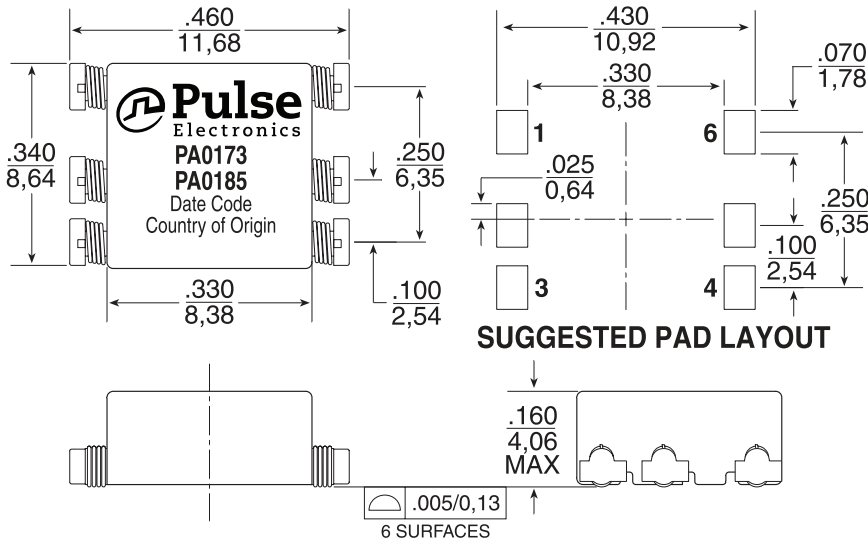
**PA0184**



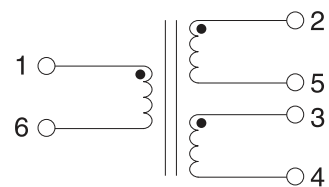
**Weight** .....0.60 grams  
**Tape & Reel** .....40/reel  
**Tube** .....50/tube

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

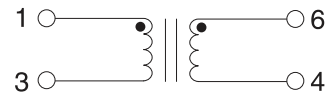
**PA0173, PA0185**



**PA0173**



**PA0185**



**Weight** .....0.48 grams  
**Tape & Reel** .....900/reel  
**Tube** .....60/tube

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

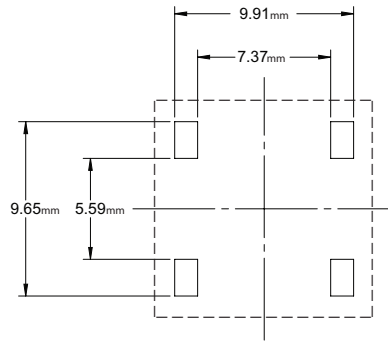
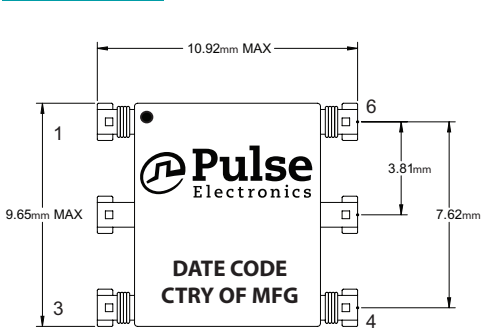
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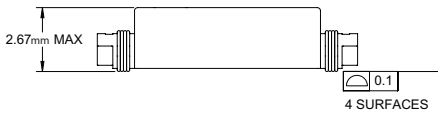
## Mechanicals (continued)

## Schematics

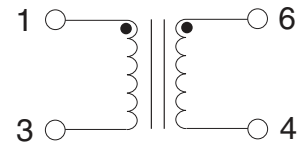
**PA3493NL**



SUGGESTED FOOTPRINT



4 SURFACES

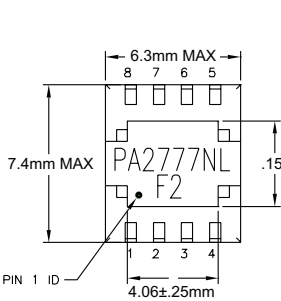


Weight .....0.31 grams  
Tape & Reel .....1250/reel  
Tube .....50/tube

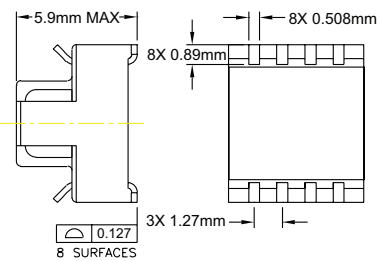
Dimension: mm

Unless otherwise specified, all tolerances are  $\pm 0,25$

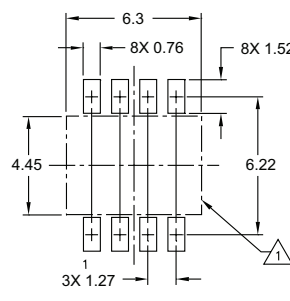
**PA2777NL**



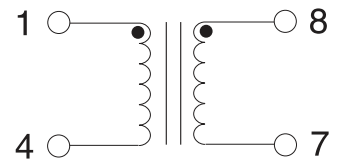
TOP VIEW



BOTTOM VIEW



SUGGESTED LAND PATTERN



Weight .....0.32 grams  
Tape & Reel .....850/reel  
Tube .....120/tube

Dimension: mm

Unless otherwise specified, all tolerances are  $\pm 0,25$

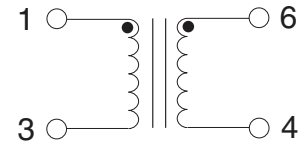
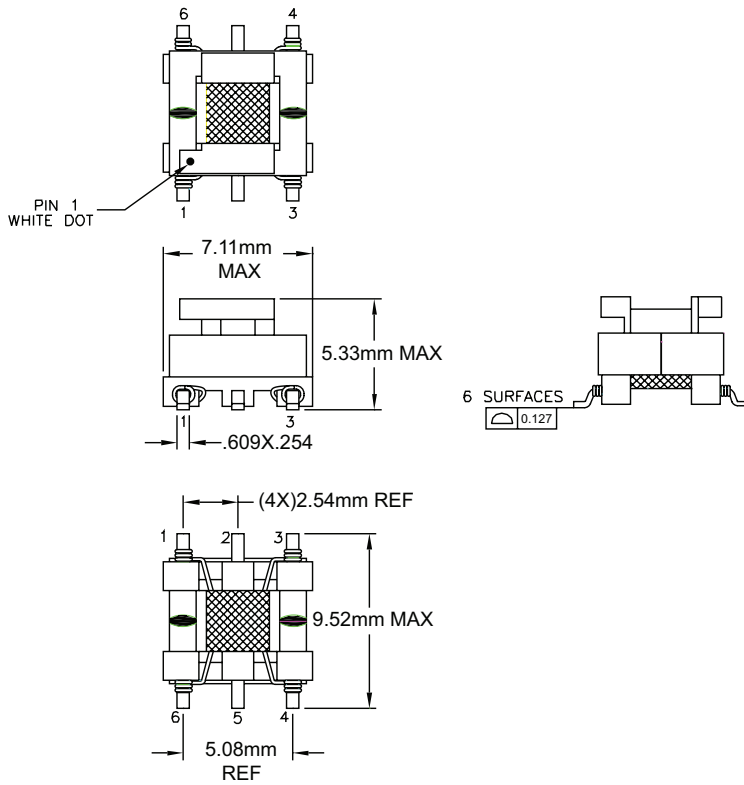
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## Mechanicals (continued)

## Schematics

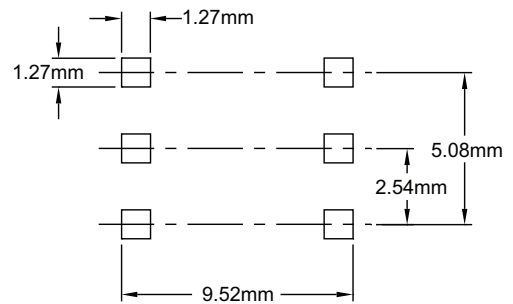
PA1323NL



Weight .....0.4 grams  
 Tape & Reel .....700/reel  
 Tube .....225/tube

Dimension: mm

Unless otherwise specified, all tolerances are  $\pm 0,25$



SUGGESTED PCB LAYOUT