

SMT Gate Drive Transformers

>1500V_{DC} Basic and Functional Insulation



-  >1500V_{DC} isolation (380Vrms continuous)
-  Basic insulation (1.4mm creepage/clearance) and functional available
-  Operating frequency: 50kHz and up

Electrical Specifications @ 25°C - Operating Temperature -40°C to +130°C⁵

Part ^{3,4} Number	Turns Ratio	Pri-Sec Isolation	MAX ¹ V*μsec	Primary Inductance (μH MIN)	Leakage ² Inductance (μH MAX)	DCR Primary (Ω MAX)	DCR Secondary (Ω MAX)	Package Size (L x W x H) (mm MAX)
Functional Insulation								
PE-68386NL	1:1	1500 Vdc	9.7	785	0.46	0.60	0.60	8.6 x 6.7 x 2.5
P0926NL	1:1:1	1500 Vdc	23.8	300	0.50	2.00	2.00	8.0 x 6.6 x 5.3
P0544NL	1:1:1	1500 Vdc	45.1	3300	0.80	1.25	1.25	9.0 x 8.6 x 7.6
PA0264NL	1:1:1	1000 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 7.1 x 5.3
Basic Insulation (1.4mm creepage and clearance between Primary and Secondary)								
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
PA0297NL	2:1:1	1500 Vrms	27.2	1200	0.60	0.91	0.46	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 Vrms	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.
5. The temperature of the component (ambient plus temperature rise) must be within the stated operating temperature range.
6. Continuous isolation voltage confirmed by 125°C/1000hrs accelerated aging with the bias voltage applied between primary and secondary windings

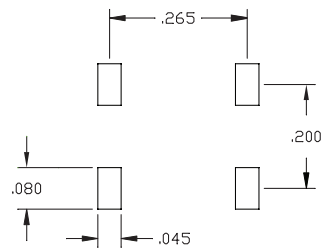
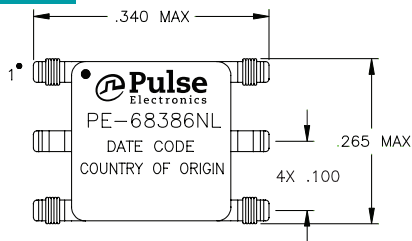
SMT Gate Drive Transformers

>1500V_{DC} Basic and Functional Insulation

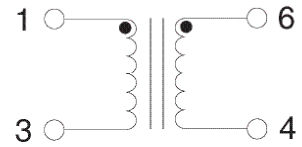
Mechanicals

Schematics

PE-68386NL



SUGGESTED PAD LAYOUT



Weight0.28 grams

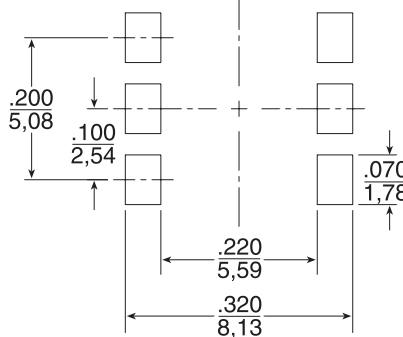
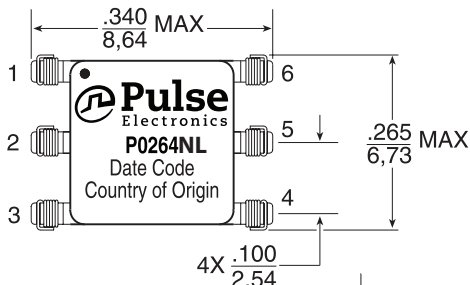
Tape & Reel1500/reel

Tube60/tube

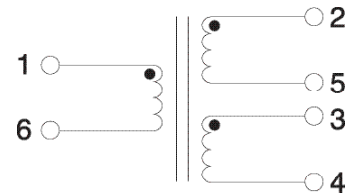
Dimension: $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are $\pm \frac{.010}{0,25}$

PA0264NL



SUGGESTED PAD LAYOUT



Weight0.28 grams

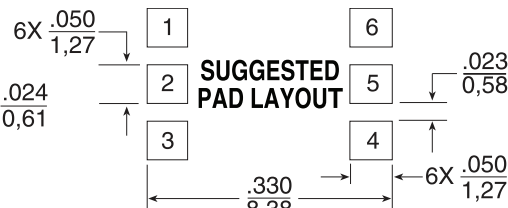
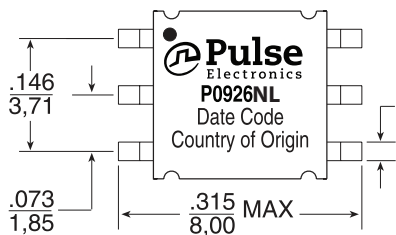
Tape & Reel1500/reel

Tube60/tube

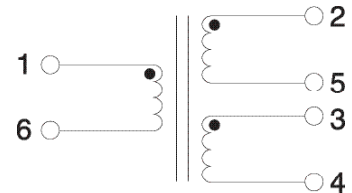
Dimension: $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are $\pm \frac{.010}{0,25}$

P0926NL



SUGGESTED PAD LAYOUT



Weight0.48 grams

Tape & Reel1000/reel

Tube80/tube

Dimension: $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified, all tolerances are $\pm \frac{.010}{0,25}$

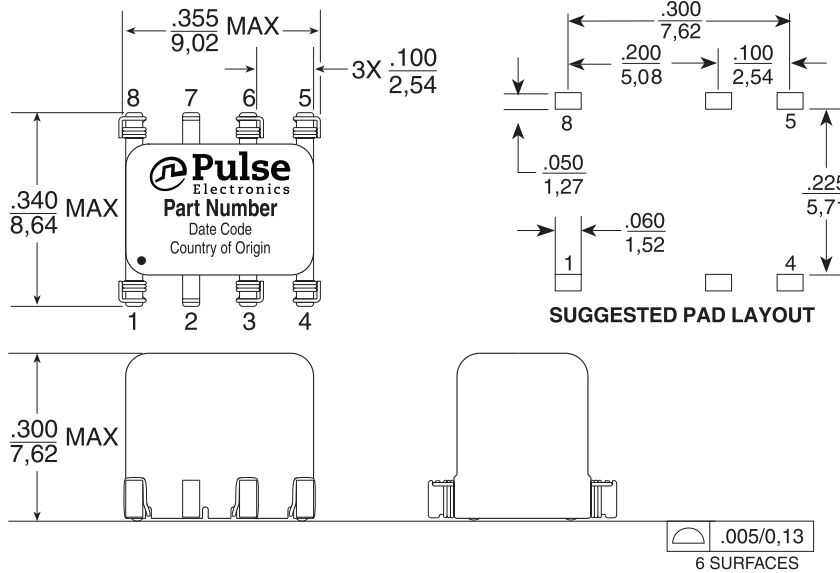
SMT Gate Drive Transformers

>1500V_{DC} Basic and Functional Insulation

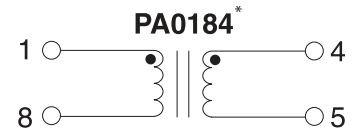
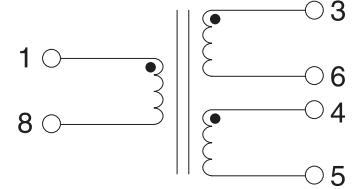
Mechanicals (continued)

Schematics

P0544NL, PA0297, PA0510, PA0184NL



P0544 / PA0297 / PA0510

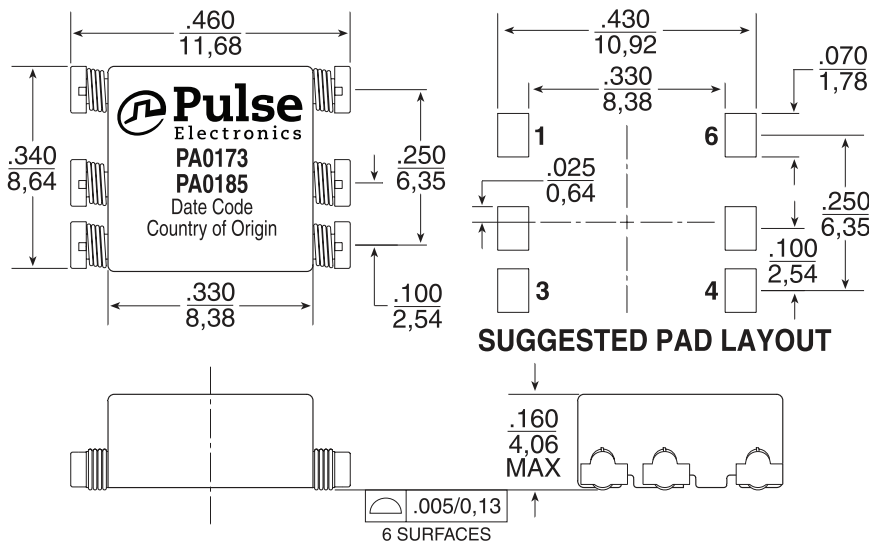


Weight0.60 grams
Tape & Reel40/reel
Tube50/tube

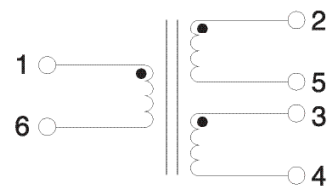
Dimension: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified, all tolerances are $\pm \frac{.010}{0,25}$

* for PA0184 the pads for pins 3 and 6 in the suggested pad layout should not be used in the layout

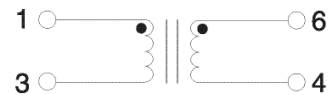
PA0173, PA0185



PA0173



PA0185



Weight0.48 grams
Tape & Reel900/reel
Tube60/tube

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

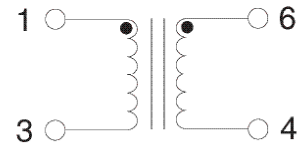
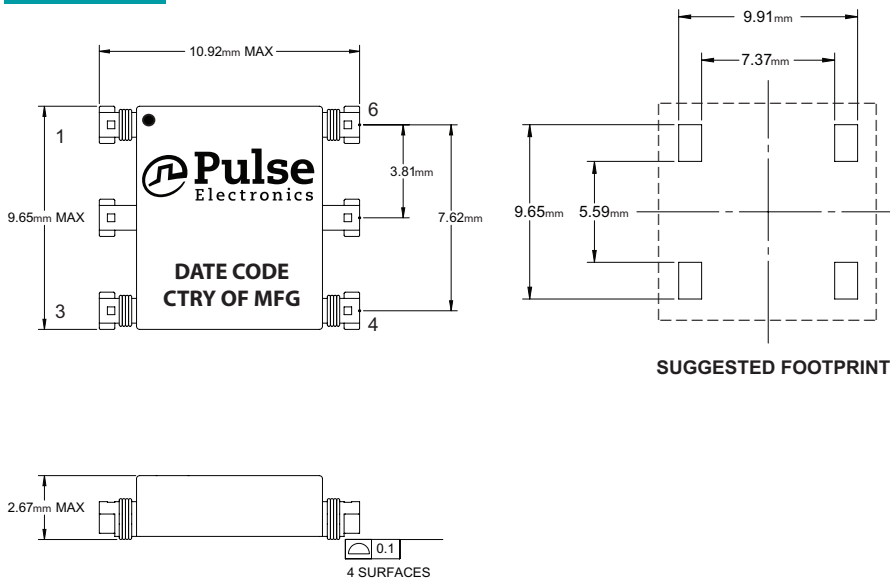
SMT Gate Drive Transformers

>1500V_{DC} Basic and Functional Insulation

Mechanicals (continued)

Schematics

PA3493NL

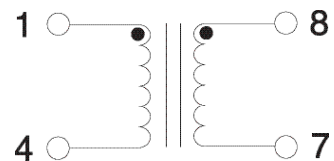
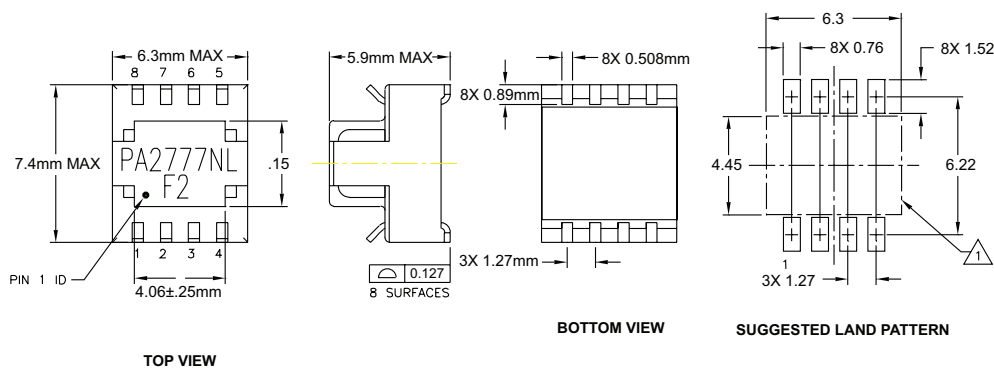


Weight0.31 grams
Tape & Reel1250/reel
Tube50/tube

Dimension: mm

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

PA2777NL



Weight0.32 grams
Tape & Reel850/reel
Tube120/tube

Dimension: mm

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

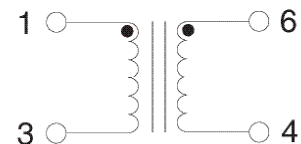
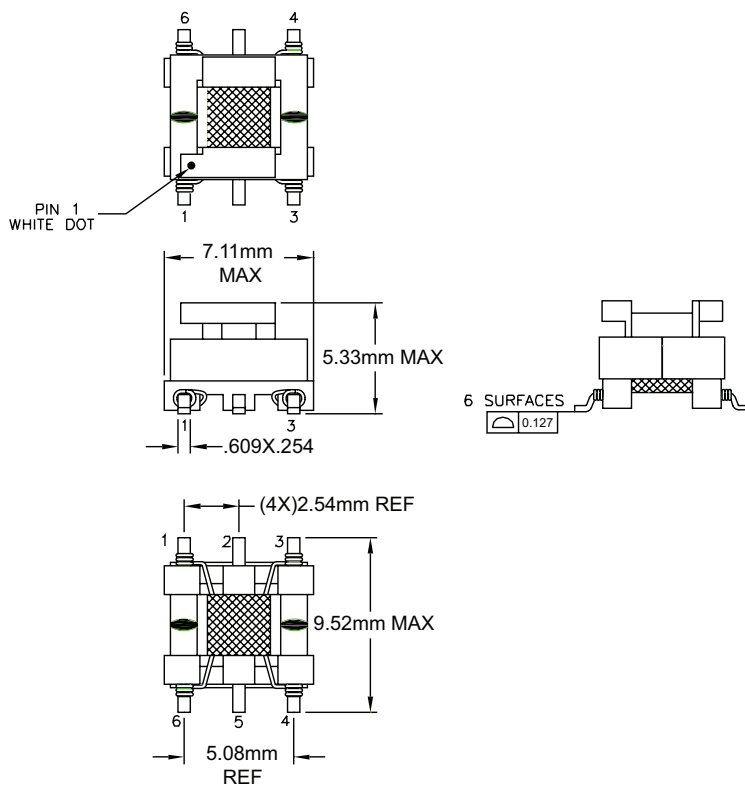
SMT Gate Drive Transformers

>1500V_{DC} Basic and Functional Insulation

Mechanicals *(continued)*

Schematics

PA1323NL



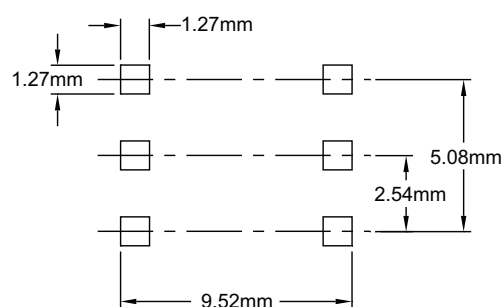
Weight0.4 grams

Tape & Reel700/reel

Tube225/tube

Dimension: mm

Unless otherwise specified, all tolerances are ± 0.25



SUGGESTED PCB LAYOUT

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Pulse:

[PE-68386](#) [PE-68386T](#) [P0544](#) [PA0264T](#) [P0926](#) [PA0297T](#) [PA0297](#) [PA0184T](#) [PA0173T](#) [P0926NLT](#) [PA0184NLT](#)
[PE-68386NLT](#) [PA0173NLT](#) [PA0264NLT](#) [P0926NL](#) [P0544NLT](#) [PE-68386NL](#) [P0544NL](#) [PA0185NLT](#) [P0926T](#)
[PA0297NL](#) [PA0264NL](#) [PA0173NL](#) [PA0297NLT](#) [PA0184NL](#) [PA3493NLT](#)