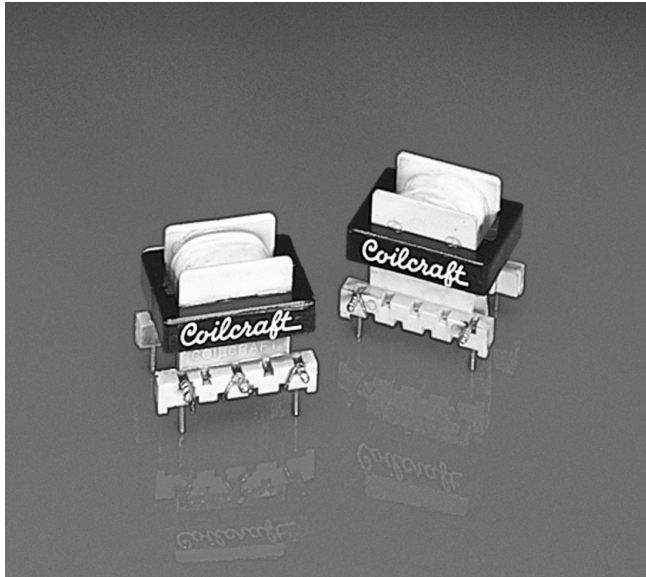


Base/Gate Driver Transformers

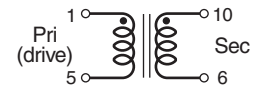


- Lower cost than toroidal equivalents
- Frequency range of 10 – 250 kHz and up
- Industry standard pin centers
- 3750 Vrms, one minute isolation (hipot) between primary and secondary windings; 1500 Vrms, one minute between secondaries
- UL1446 Class B (130°C) Insulation System (UL File E83628)

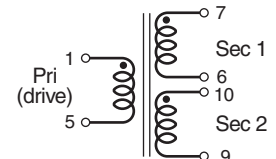
Coilcraft **Designer's Kit No. P404** contains samples of four standard driver transformers. To order, contact Coilcraft or visit <http://order.coilcraft.com> to purchase on-line.

| | SD250-1L | SD250-2L | SD250-3L | SD250-4L |
|---------------------------------------|------------------|------------------|------------------|------------------|
| Turns ratio $\pm 3\%$ (pri:sec) | 1 : 1 | 1 : 1.5 | 1 : 1 : 1 | 1 : 1.5 : 1.5 |
| Primary winding | | | | |
| Inductance (min) ¹ | 1.5 mH | 1.5 mH | 1.5 mH | 1.5 mH |
| Leakage inductance (max) ¹ | 4.0 μ H | 4.0 μ H | 4.0 μ H | 4.0 μ H |
| DCR | 0.4 Ω | 0.4 Ω | 0.4 Ω | 0.4 Ω |
| Volt-time product | 375 V- μ sec | 375 V- μ sec | 375 V- μ sec | 375 V- μ sec |
| Secondary winding(s) | | | | |
| Capacitance, pri to sec (max) | 50 pF | 50 pF | 50 pF | 50 pF |
| DCR, each section (max) | 0.75 Ω | 2.5 Ω | 0.75 Ω | 2.5 Ω |

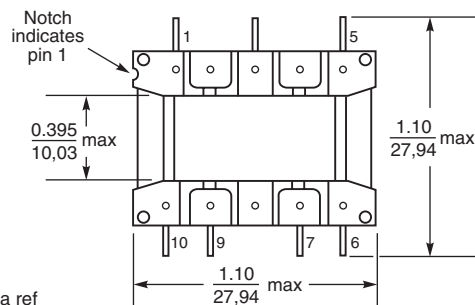
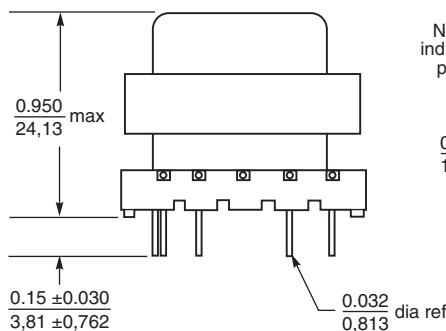
SD250-1 and 250-2



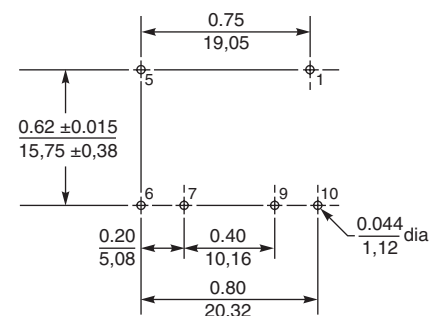
SD250-3 and 250-4



1. Measured at 1 Vrms, 15.75 kHz.
2. Operating temperature range -40°C to $+85^{\circ}\text{C}$.
3. Electrical specifications at 25°C .



Recommended board layout



Pins 7 and 9 are not present on SD250-1 and SD250-2

Weight: 15.6 – 16.8 g
Termination: Tin-silver over tin over copper
Packaging: 49 per tray



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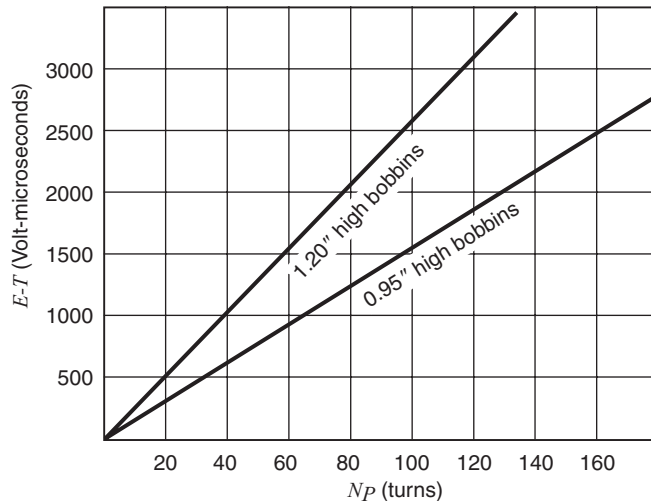


Custom Version Specifications

In addition to the standard base/gate driver transformers shown here, Coilcraft can provide custom versions to meet your specifications.

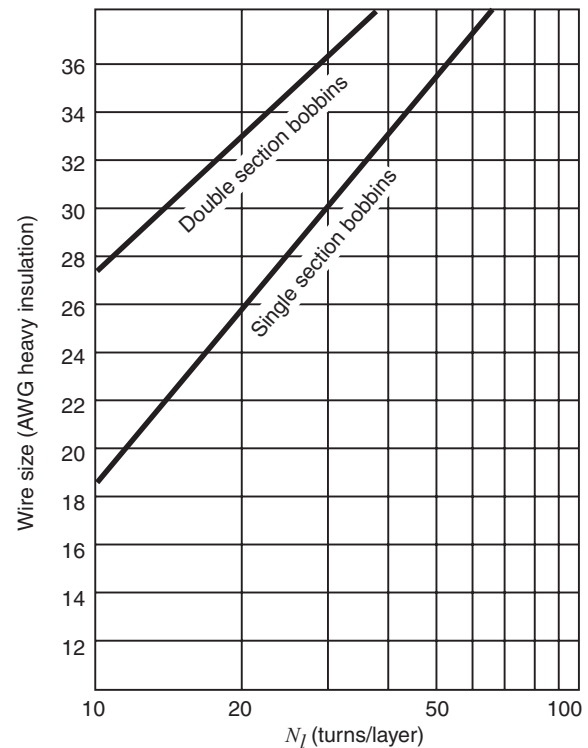
Our two basic structures are the 0.95" high part shown and a 1.20" high version. Both are available with either single or double sections.

Volt-Time vs Primary Turns*



* Applies to both double and single section bobbins.

Turns Per Layer vs Wire Size*



* Applies to both 0.95" and 1.20" high bobbins.

Please use the information below to determine the performance characteristics available.

Core

| | <u>0.95" high bobbins</u> | <u>1.20" high bobbins</u> |
|-----------------------------------|---------------------------|---------------------------|
| Initial permeability | 2000 μ | 2000 μ |
| A_e (core cross-sectional area) | 0.40 cm ² | 0.80 cm ² |
| l_e (mean magnetic path length) | 4.90 cm | 4.80 cm |

Bobbin

| | | |
|-------------------------------------|----------------|--------|
| Material | UL94V-0, 130°C | |
| Number of terminals available | 10 | 10 |
| Number of wiring sections available | 1 or 2 | 1 or 2 |



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