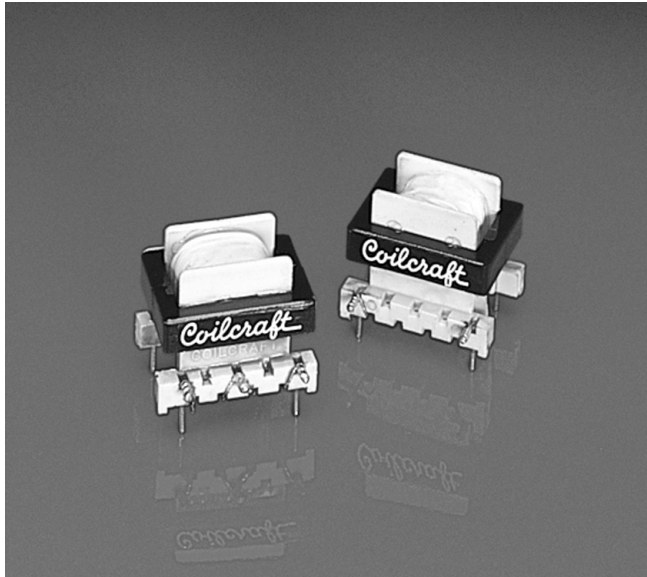


# Base/Gate Driver Transformers

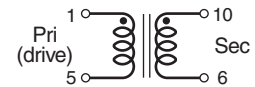


- Lower cost than toroidal equivalents
- Frequency range of 10 – 250 kHz and up
- Industry standard pin centers
- 3750 Vrms, one minute isolation (hipot) between primary and secondary windings; 1500 Vrms, one minute between secondaries
- UL1446 Class B (130°C) Insulation System (UL File E83628)

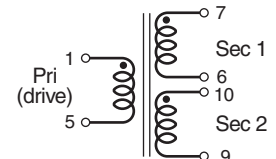
Coilcraft **Designer's Kit No. P404** contains samples of four standard driver transformers. To order, contact Coilcraft or visit <http://order.coilcraft.com> to purchase on-line.

	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
<b>Primary winding</b>				
Inductance (min) <sup>1</sup>	1.5 mH	1.5 mH	1.5 mH	1.5 mH
Leakage inductance (max) <sup>1</sup>	4.0 $\mu$ H	4.0 $\mu$ H	4.0 $\mu$ H	4.0 $\mu$ H
DCR	0.4 $\Omega$	0.4 $\Omega$	0.4 $\Omega$	0.4 $\Omega$
Volt-time product	375 V- $\mu$ sec	375 V- $\mu$ sec	375 V- $\mu$ sec	375 V- $\mu$ sec
<b>Secondary winding(s)</b>				
Capacitance, pri to sec (max)	50 pF	50 pF	50 pF	50 pF
DCR, each section (max)	0.75 $\Omega$	2.5 $\Omega$	0.75 $\Omega$	2.5 $\Omega$

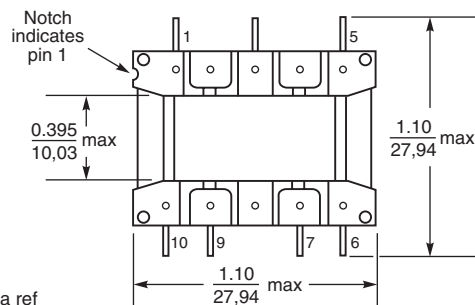
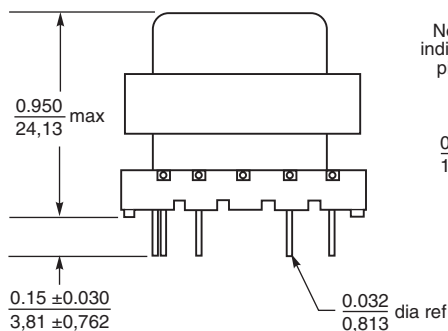
SD250-1 and 250-2



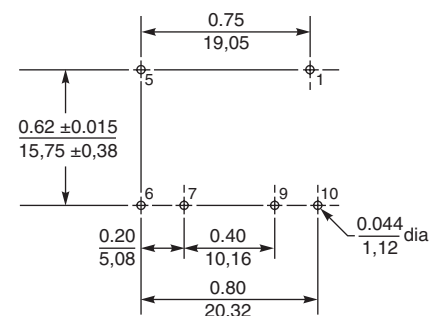
SD250-3 and 250-4



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



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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This product may not be used in medical or high risk applications without prior Coilcraft approval. Specification subject to change without notice. Please check web site for latest information.

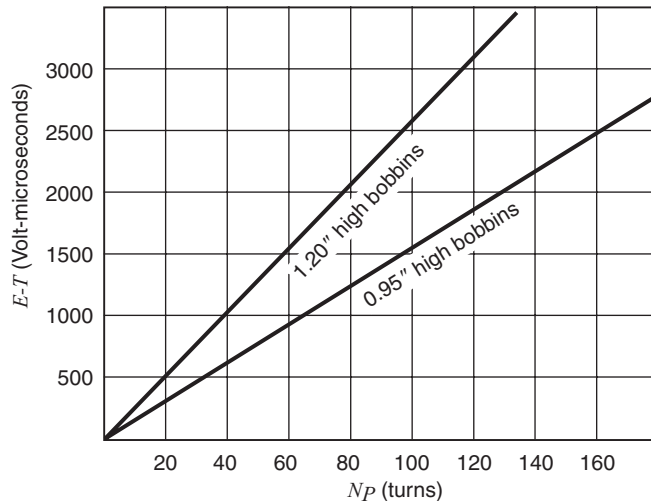


# Custom Version Specifications

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

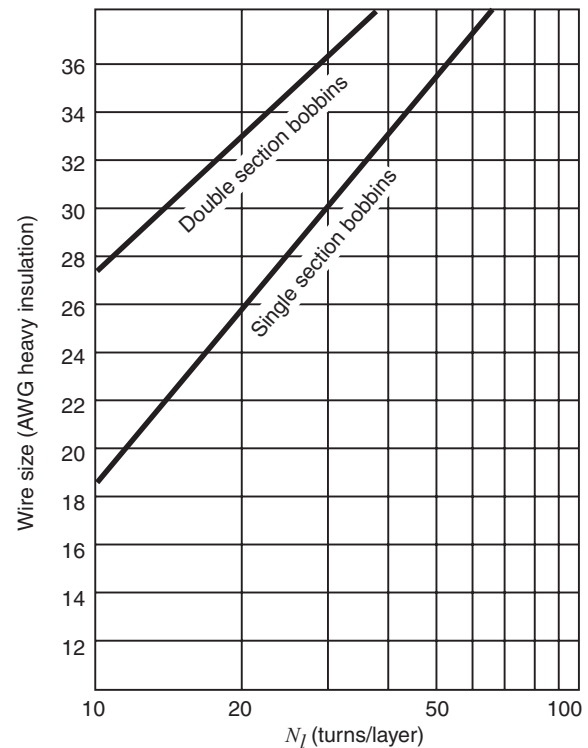
Our two basic structures are the 0.95" high part shown and a 1.20" high version. Both are available with either single or double sections.

**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 $\mu$	2000 $\mu$
$A_e$ (core cross-sectional area)	0.40 cm <sup>2</sup>	0.80 cm <sup>2</sup>
$l_e$ (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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