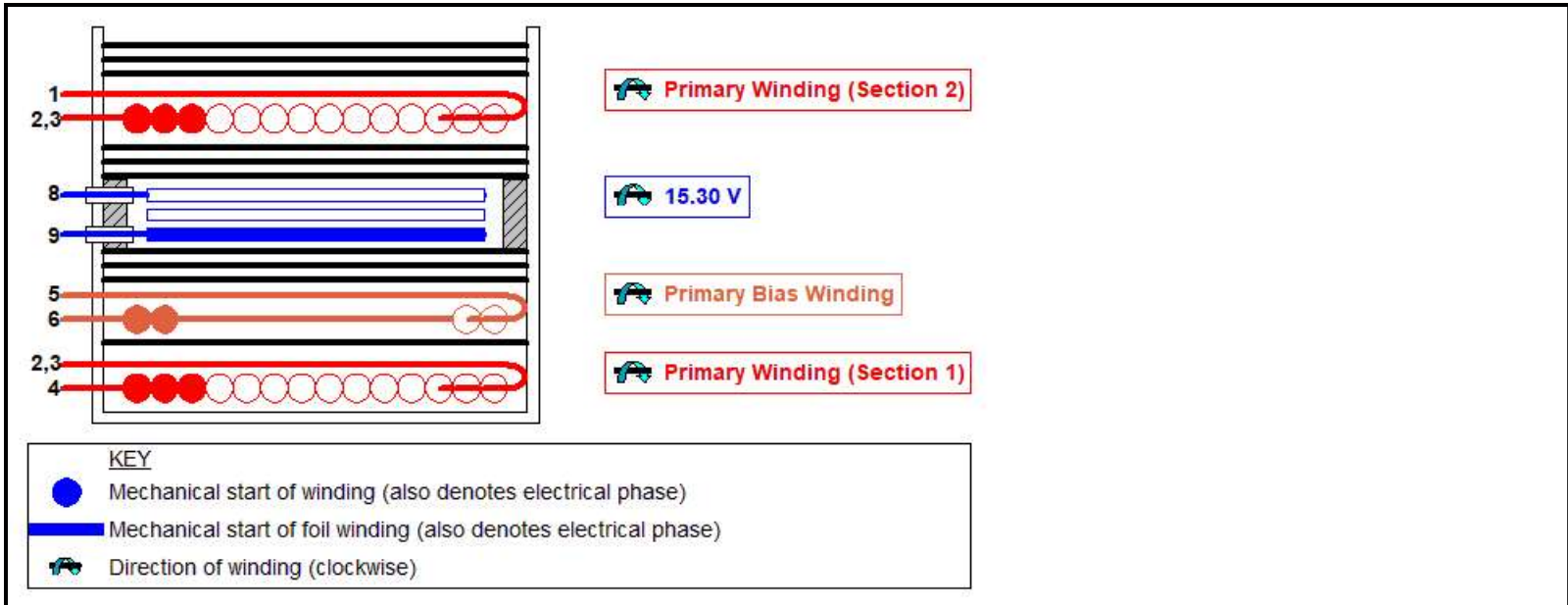


Electrical Diagram



Mechanical Diagram



Winding Instruction

Primary Winding (Section 1)

Start on pin(s) 4 and wind 13 turns (x 3 filar) of item [5]. in 1 layer(s) from left to right. Winding direction is clockwise. On the final layer, spread the winding evenly across entire bobbin. Finish this winding on pin(s) 2,3.

Add 1 layer of tape, item [3], for insulation.

Primary Bias Winding

Start on pin(s) 6 and wind 3 turns (x 2 filar) of item [6]. Winding direction is clockwise. Spread the winding evenly across entire bobbin. Finish this winding on pin(s) 5.

Add 3 layers of tape, item [3], for insulation.

Secondary Winding

Use 3 mm margin (item [8]) on the top and 3 mm margin on the bottom (to meet safety). Start on pin(s) 9 and wind 3 turns of item [7]. Winding direction is clockwise. Finish this winding on pin(s) 8.

Add 3 layers of tape, item [3], for insulation.

Primary Winding (Section 2)

Start on pin(s) 2,3 and wind 13 turns (x 3 filar) of item [5]. in 1 layer(s) from left to right. Winding direction is clockwise. On the final layer, spread the winding evenly across entire bobbin. Finish this winding on pin(s) 1.

Add 3 layers of tape, item [3], for insulation.

Core Assembly

Assemble and secure core halves. Item [1].

Varnish

Dip varnish uniformly in item [4]. Do not vacuum impregnate.

Comments

1. Pins 2 and 3 are electrically shorted to each other on the PCB via a copper trace.
2. Use of a grounded flux-band around the core may improve the EMI performance.
3. For non margin wound transformers use triple insulated wire for all secondary windings.

Materials

| <i>Item</i> | <i>Description</i> |
|-------------|--|
| [1] | Core: EER35, 3F3, gapped for ALG of 227 nH/T ² |
| [2] | Bobbin: Generic, 7 pri. + 7 sec. |
| [3] | Barrier Tape: Polyester film [1 mil (25 µm) base thickness], 26.10 mm wide |
| [4] | Varnish |
| [5] | Magnet Wire: 24 AWG, Solderable Double Coated |
| [6] | Magnet Wire: 25 AWG, Solderable Double Coated |
| [7] | Copper Foil: 5 mil thick, 20.10 mm wide, covered with 1 layer of lapped tape. Terminations to foil: 2 x 23 AWG magnet wire with sleeving |
| [8] | Tape: Polyester web 3 mm wide |

Electrical Test Specifications

| <i>Parameter</i> | <i>Condition</i> | <i>Spec</i> |
|--------------------------------|---|-------------|
| Electrical Strength, VAC | 60 Hz 1 second, from pins 1,2,3,4,5,6 to pins 8,9. | 3000 |
| Nominal Primary Inductance, µH | Measured at 1 V pk-pk, typical switching frequency, between pin 1 to pin 4, with all other Windings open. | 161 |
| Tolerance, ±% | Tolerance of Primary Inductance | 10.0 |
| Maximum Primary Leakage, µH | Measured between Pin 1 to Pin 4, with all other Windings shorted. | 2.41 |

Although the design of the software considered safety guidelines, it is the user's responsibility to ensure that the user's power supply design meets all applicable safety requirements of user's product.

The products and applications illustrated herein (including circuits external to the products and transformer construction) may be covered by one or more U.S. and foreign patents or potentially by pending U.S. and foreign patent applications assigned to Power Integrations. A complete list of Power Integrations' patents may be found at www.power.com.