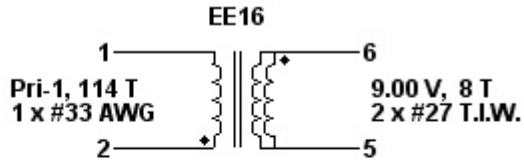
Transformer Construction

Electrical Diagram



KEY
Pri-1 = Primary Winding (Section 1)
Pri-2 = Primary Winding (Section 2)
C Sh = Cancellation Shield Winding
P Sh = Primary Shield
S Sh = Secondary Shield
T.I.W = Triple Insulated Wire

Winding Order

Core Information

Core Type	**EE16**
Core Material	**NC-2H or Equivalent**
Estimated Gap length, mm	**0.284**
Gapped Effective Inductance, nH/t^2	**79**
Primary Inductance, uH	**1021**

Bobbin Information

Bobbin Reference	**Generic, 2 pri. + 2 sec.**
Bobbin Orientation	**Horizontal**
Number of Primary pins	**2**
Number of Secondary pins	**2**
Margin on Left, mm	**0.0**
Margin on Right, mm	**0.0**

Primary Winding

Parameter	*Section 1*
Number of Turns	**114**
Wire Size, AWG	**33**
Filar	**1**
Layers	**2.90**
Start Pin(s)	**2**
Termination Pin(s)	**1**

Secondary Winding

Parameter	*Output 1 (main)*
Spec Voltage, V	**9.00**
Spec Current, A	**1.00**
Actual Voltage, V	**9.00**
Number of Turns	**8**
Wire Size, AWG	**27**
Filar	**2**
Layers	**1.04**
Start Pin(s)	**6**
Termination Pin(s)	**5**

Winding Instruction

Primary Winding

Start on pin(s) 2 and wind 114 turns of item [5] in 3.00 layer(s) from left to right. At the end of 1st layer, continue to wind the next layer from right to left. At the end of 2nd layer, continue to wind the next layer from left to right. On the final layer, spread

the winding evenly across entire bobbin. Finish winding on pin(s) 1.
Add 3 layers of tape, item [3], for insulation.
Secondary Winding
Start on pin(s) 6 and wind 8 turns (x 2 filar) of item [6]. Spread the winding evenly across entire bobbin. Finish on pin(s) 5.
Add 2 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. For non margin wound transformers use triple insulated wire for all secondary windings.

Materials

Item	*Description*
[1]	**Core: EE16, NC-2H or Equivalent, gapped for ALG of 79 nH/t^2**
[2]	**Bobbin: Generic, 2 pri. + 2 sec.**
[3]	**Barrier Tape: Polyester film 8.50 mm wide**
[4]	**Varnish**
[5]	**Magnet Wire: 33 AWG, Solderable Double Coated**
[6]	**Triple Insulated Wire: 27 AWG**

Electrical Test Specifications

Parameter	*Condition*	*Spec*
Electrical Strength, VAC	**60 Hz 1 minute, from pins 1 - 2 to pins 5 - 6.**	**3000**
Nominal Primary Inductance, uH	**Measured at 1 V pk-pk, typical switching frequency, between pin 1 to pin 2, with all other Windings open.**	**1123 +/- 10%**
Primary Leakage, uH	**Measured between Pin 1 to Pin 2, with all other Windings shorted.**	**33.70 Goal**