



TA060/12 Specification

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Construction Details for Toroidal Transformer TA060/12

The transformer is designed and constructed to meet requirements in UL1411, EN60742 (old BS3535) and CSA 22.2 No.1-94 and construction requirements in our UL file E115159.

The transformer is constructed in the following order:

- Core with core protection.
- Primary winding
- Primary to Secondary insulation.
- Secondary winding
- Final Insulation

Electrical performance as in enclosed Transformer Specification.

Detailed description of design and materials:

1. **Core** from 0.3 mm thick silicon steel Grade M5 Edges are ground smooth before final annealing.
2. **Core Protection**, from 4 layers (2 layers with 50% overlap) of 0.05 mm thick polyester film (approved by CSA for temperature class B, 130 deg C).
Main supplier: Dupont, UL file E93687(R).
3. **Primary Winding Wire**, Copper wire, polyesterimid enameled Grade 2 (according to IEC 317-8) and temperature class 180 degrees C.
4. **Primary Lead outs**, from type UL1015, 22 AWG (UL approved under Guide AVLV2 for 300V and 105 degrees C). VW-1.
Main supplier: Sumitomo Electric, UL file E41105
5. **Primary to Secondary Insulation** from 6 layers (3 layers with 50% overlap) of 0.05 mm thick polyester film. Material as in 2.
6. **Secondary Winding Wire**, Copper wire, polyesterimid enameled Grade 2 (according to IEC 317-8) and temperature class 180 degrees C.
7. **Secondary Lead outs**, from type UL1015, 22 AWG (UL approved under Guide AVLV2 for 300V and 125 degrees C). VW-1.
Main supplier: Sumitomo Electric, UL file E41105

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8. **Final Insulation**, from 2 layers (1 layers with 50% overlap) of 0.05 mm thick polyester film. Material as in 2.
9. **Transformer mounting**, Supplied with 1x 70mm metal mounting disks (6.5mm hole) and 2x 70mm foam rubber mounting pads (UL94)
10. All lead out flexes soldered to winding wires and covered by minimum 6 layers of 0.05 mm thick sticky polyester tape. (Same tape is used for fixing in other parts of transformer).
Main supplier: Four Pillars-Beirsdorf Mfg Pte Ltd, Singapore, UL file E50292.

Temperature rise approx. 47 degrees Celsius above ambient with nominal input and full load

Electrical testing : all tested 100%

No load voltages: 2x 13.5v at 115v or 230v 50Hz nominal input

No load current: Maximum 6mA at 230V 50Hz

Flash Test 4.0KV rms. Pri-Sec, for 2 seconds
500v inter-filar insulation >100Mohms

TOROID International Ltd

Transformer TA060/12 (TI-69102) Issue 2		Date 07/10/02
PRIMARY	SECONDARY	
115 V ○ Bwn 150mm 22AWG •	• Red 150mm 22AWG ○	13.5V No Load 12.0V 2.50A
0 V ○ Vio 150mm 22AWG	Blk 150mm 22AWG ○	S1 0 V
115 V ○ Gry 150mm 22AWG •	• Yel 150mm 22AWG ○	13.5V No Load 12.0V 2.50A
0 V ○ Blu 150mm 22AWG	Ora 150mm 22AWG ○	S2 0 V
<p>Primary leads from double insulated cable type UL1015 Secondary leads from UL1015 cable All leads tinned to 6 mm.</p>		
Nominal dimensions/weight: (information only)		Mounting method:
diameter	87 mm	Not specified
height	31 mm	
weight	0.75 kg	
mounting excluded		
Pri/Sec leads:	0 °	
Comments:		
Label: (blank)	┌ TA060/12 (TI-69102-ME) LK xxxx └ L	┐ ┌