



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

Contd.

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

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| Transformer TA060/12 (TI-69102) Issue 2 | | Date 07/10/02 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; text-align: center;">PRIMARY</td> <td style="width: 50%; text-align: center;">SECONDARY</td> </tr> </table> | | | PRIMARY | SECONDARY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PRIMARY | SECONDARY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <p>Primary leads from double insulated cable type UL1015</p> <p>Secondary leads from UL1015 cable</p> <p>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: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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