



T3700 Transformer for Electric-Field Susceptibility Testing

For testing to these Specifications:

- DO 160 Section 19
- Boeing D6-16050-5 Section 7.2

Features

- Up to 3,700 V_{RMS}
- Meets or exceeds voltage requirements of DO 160 Section 19 and Boeing D6-16050-5 Section 7.2
- Robust design, withstand tested to 5,000 VDC
- Durable steel and high-density polyethylene case for impact resistance

The AE Techron **T3700 Electric-Field Susceptibility Transformer** was designed to meet or exceed the voltage requirements of DO 160 Section 19 and Boeing D6-16050-5 Section 7.2 testing.

It may also be used as a 1-to-37 step-up transformer for voltages up to 3700 V_{RMS} .

The T3700 transformer is able to generate up to a 3700 V_{RMS} potential. It is withstand tested to 135% of rated output to ensure a long, trouble-free life. The turns ratio provides a 1-to-37 step up to the secondary winding.

The T3700 provides convenient input connectors via touch-proof, four-way binding posts. Standard 0.75-inch spacing of binding posts allows use of standard plugs.

A 1-amp fuse protects the unit against over-current conditions. A rugged, impact-resistant case and robust design protects the transformer from accidental damage.

The T3700's voltage output meets or exceeds the requirements of DO 160 Section 19 and Boeing D6-16050-5 Section 7.2. It is safe for use by experienced staff.

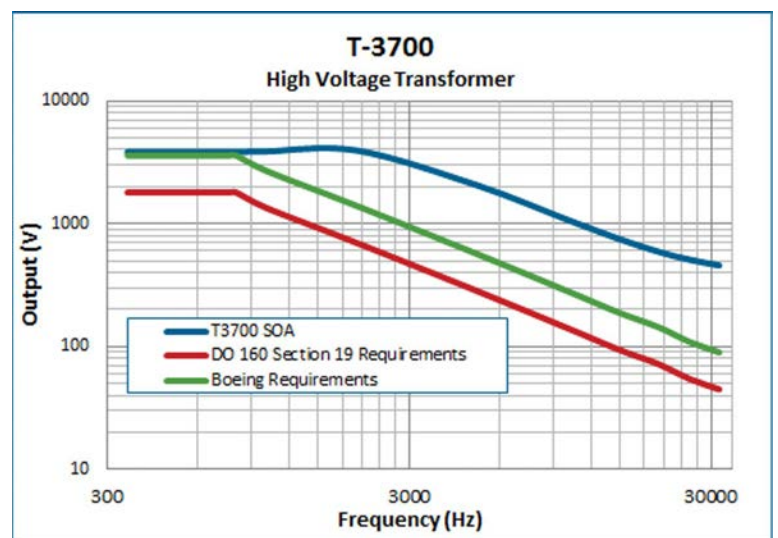


Figure 1 – T3700 Maximum SOA (safe operating area)

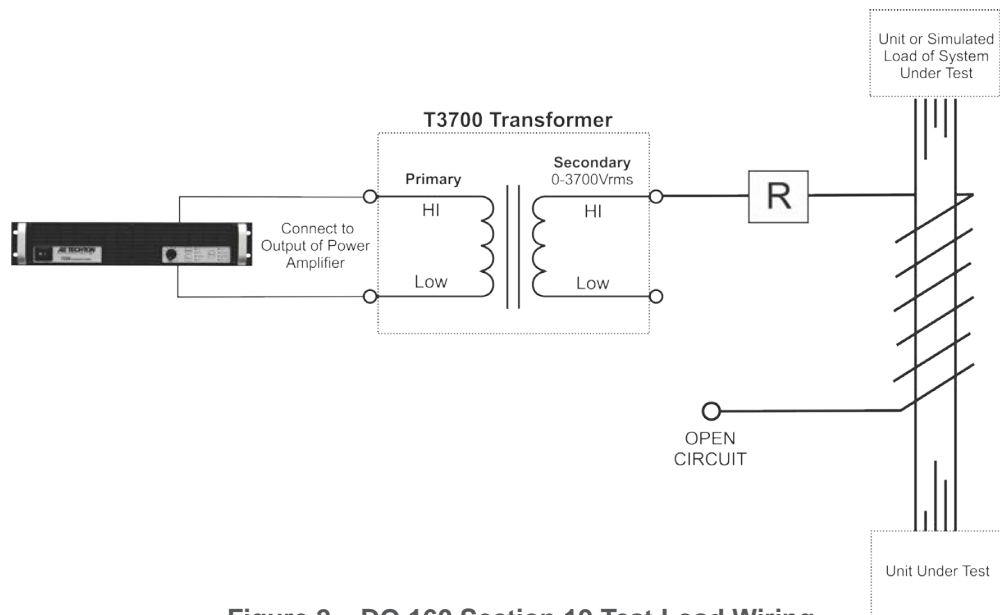


Figure 2 – DO 160 Section 19 Test Load Wiring

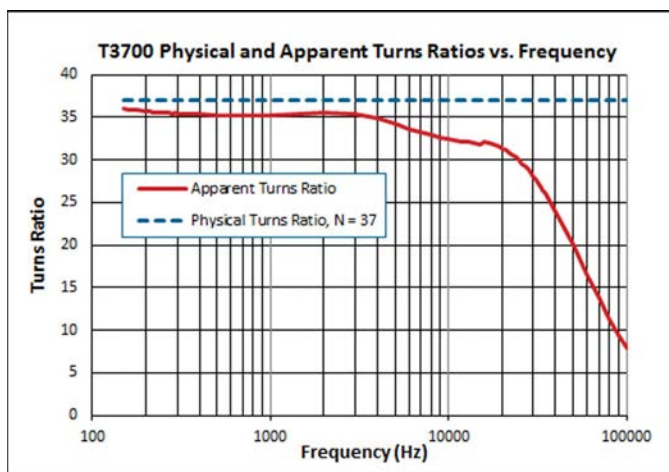


Figure 3 – Physical and Apparent Turns Ratios vs. Frequency

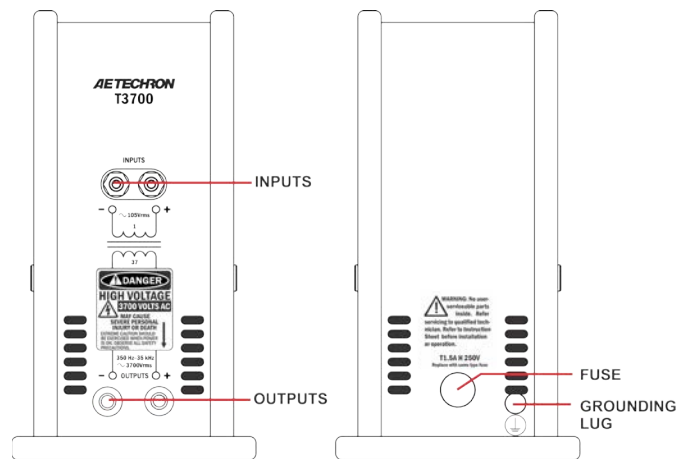


Figure 4 – T3700 Controls and Connectors

Specifications

Performance Specifications

Primary:

100 V_{RMS} maximum or 1 A_{RMS}, maximum

Secondary:

3700 V_{RMS} maximum output

Physical Turns Ratio:

1-to-37 step up

Dielectric Test:

5 kVDC primary to case

5 kVDC secondary to case

Frequency Range:

250 Hz to 35 kHz

Protection:

Current-protected input

Controls and Connectors

(see Figure 4)

Input Terminals:

4-way binding posts

Output Terminals:

LGH high-voltage connector (+)

Banana jack (-)

Over-Current Protection:

Primary input limited via fuse to 1A (T1A H 250V)

Grounding Lug:

Screw terminal grounding connector. Connect to earth ground using appropriate wire and connector.

Physical Characteristics

Case:

Steel interior shell with a durable external shell made from high-density polyethylene for impact resistance.

Operating Conditions,

Temperature: 10°C to 40°C (50°F to 104°F)

Humidity: 70% or less, non-condensing

Recommended Ambient Temperature:

25°C (77°F)

Cooling:

Natural air convection

Weight:

16 lbs. (7.3 kg)

Dimensions (WxDxH):

5.25 in. x 10.375 in. x 9.75 in. (13.3 cm x 26.4 cm x 24.8 cm)

