



MODEL 6254-5S RFI TRANSIENT GENERATOR

for conducted transient susceptibility testing up to 250 volts, peak



This generation of our well known RFI Transient Generator incorporates all of the flexibility and technical improvements of the previous models including the ability to shift the transient to any position on the sine wave of a power line. This phase adjustment makes possible the application of interfering transients at selected points in time to determine the susceptibility of systems which depend upon frequency or time for correct operation.

This transient generated can be synchronized with external digital signals over a wide range of repetition rates. Also, it can be remotely triggered by the application of switch controlled 24 volts d.c. at rates up to 20 p.p.s.

APPLICATION

The **Model 6254-5S RFI Transient Generator** was especially designed for screen room use in making conducted transient susceptibility tests as required by military specifications. These specifications include: parts of MIL-STD-461A/462, MSFC-STD-279, Lockheed 422966 (L1011), TRW TOR-1001, Douglas WZZ-7000 (DC-10), and others.

DESCRIPTION

The **Model 6254-5S RFI Transient Generator** provides up to 250 volts peak amplitude. The output transient shape follows the curve given in Figure 19 of MIL-STD-462. Less than 1.0 microsecond rise time, falling to zero in 8 to 14 microseconds, crossing through zero to "ring" in the manner of an inductive transient and returning to zero again as it "rings." The amplitude of the transient is adjustable from less than 10 volts to over 250 volts peak.

Using series injection on 50, 60 or 400 Hz lines, the transient can be applied to the positive or the negative half-cycle. The transient's relation to the sine wave may be adjusted in phase from 0° to 360°. For non-synchronous injection, the repetitive rate of the transient can be adjusted from 0.5 to 500 p.p.s.

For synchronous injection, a square wave input from an external source enables the transient to be triggered in terms of the digital or pulse characteristics of the test sample through the range 0.1 p.p.s. to 800 p.p.s.

A panel mounted push-button allows manual injection of single transients. A rear connector provides for remote triggering of single transients in terms of your system requirements.

Output terminals provide for either series injection on AC. lines or parallel injection on d.c. lines as required by specifications. Output terminals are isolated from chassis and the a.c. line.

FEATURES

- Provides outputs from less than 10 volts to over 250 volts peak amplitude into high impedance loads and more than 35 kw into 0.5 ohm load.
- Wider range of repetition rates allows greater utilization in empirical setups.
- Output terminals for series or parallel injection.
- Single pulse feature enables controlled isolation of transient effects.
- Adjustable pulse position on a.c. lines relates the transient susceptibility to the real time aspects of digital systems.
- Transient may be injected in synchronism with repetitive circuit functions as required by Method CS06 of MIL-STD-462.
- Remote triggering of individual or repetitive pulses in terms of particular system characteristics.



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Repetition Rate: Continuously adjustable from 0.5 to 500 p.p.s.

Rise Time: Less than 1.0 microsecond.

Spike Duration: Output falls to zero in approximately 8 to 14 microseconds.

Spike Shape: Ringing characteristic as shown in Figure 19 of MIL-STD-462.

Phase Adjustment: Spike position adjustable from 0° to 360° on 50, 60 or 400 Hz lines.

Internal Impedance: 0.5 ohm.

Output Power: More than 35 kw peak into 0.5 ohm load.

Power Current in Series Injection Mode: Handles up to 50 amperes at power frequencies.

Power Requirements: 115 volts 60 Hz, 1.8 amperes. (230 volts 50 Hz, 0.9 ampere available.)

Size: 8.125" wide, 9" high, 14.625" deep. (20.64 cm x 22.86 cm x 37.15 cm.)

to 150 amperes through the secondary for high current test samples.

Type 7115-1 High Voltage Transient Transformer. Plugs into SERIES output terminals to provide transient levels up to 15 KV peak, into spark gap for static discharge tests.

Type 7802-1 Transient Pulse Transformer. Plugs into SERIES output terminals to provide up to 450 volts peak, into 12 ohms.

