MODEL 9554-( ) VARIABLE FREQUENCY MODULES

for use with Model 9354-1 Universal Transient Generator as required by Method CS-116, MIL-STD-461 Rev. D

APPLICATION

Utilizing the high voltage power source in the **Model 9354-1 Universal Transient Generator,** four individual modules can be connected to provide tuning of damped sine waves from 10 KHz to 50 MHz. A fifth module is available which, when used in conjunction with the **Model 9354-1**, provides 20% frequency steps from 30 MHz to 100 MHz.

DESCRIPTION

Individual modules enable tuning of damped sine waves in accordance with the requirement of Method CS-116, MIL-STD-461 Rev. D. The part number of each module indicates the frequency range of the module. For example, P/N **Type 9554-10K/100K** indicates a range of 10 KHz to 100 KHz. The five modules are identified as:

- **Type 9554-10K/100K** variable frequency module
- **Type 9554-100K/1M** variable frequency module
- **Type 9554-1M/6M** variable frequency module
- **Type 9554-6M/50M** variable frequency module
- **Type 9754-35M/85M** step frequency module

Two cables connect the module to the **Model 9354-1**. One cable is a single insulated wire to carry high voltage d.c. to the module. The other cable delivers low voltage d.c. to the module for operation of relays.

OPERATION

The test setup for calibration of test waveform is indicated in Figure CS116-1, page 79 of MIL-STD-462D. To achieve the required injection current, the digital display on the front panel of the **Model 9354-1** can be recorded during the calibration step for reference and repeated when the actual test setup is in accordance with Figure CS116-3, page 81 of MIL-STD-462D. This calibration must be repeated at each test frequency.

The frequency of the damped sine wave is adjusted by a tuning control on the panel of the module. A graph showing frequency versus turns count on the tuning control is supplied.

With the selected module connected, the charge voltage of the module is adjusted by the AMPLITUDE control on the Model **9354-1 Universal Transient Generator**. The AMPLITUDE knob is marked in percentage of the available charge voltage for the module being used.

The amplitude and frequency of the damped sine wave into the load can be determined by an associated oscilloscope with a 50 ohm input.

After the charge voltage is adjusted to the desired value, the damped sine wave is applied to the load by pushing the button on the module.

USEFUL ACCESSORIES

Type 9125-1 Calibration Jig

Type 9142-1N Injection Probe

Type 9357-1 Calibration Jig

Type 9335-2 Multiple Impedance Coupling Device

Type 9410-1 High Voltage Attenuator (The input to the **Type 9410-1** can be used for a 50 ohm coaxial load as required by MIL-STD-462D Figure CS116-1.)

Type 9841-1 1000 Volt Termination, 50 ohm coaxial 1 W average power. Typical input VSWR in a 50 ohm system under 1.5 from DC to 1 GHz.

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