

Common Mode Transient (CMT) Generator Model 731 Pulse Generator + 5081-P Ramp Module

3.12 To 1600 kV/ μ s Into 50 Ω Loads

Features:

- ⊗ Interactive control allows the user to gradually increase, or decrease the dV/dt rate applied to a DUT
- ⊗ Stepped mode features user adjustable constant voltage and 14 stepped dV/dt selections
- ⊗ Variable dV/dt mode features a more continuously variable dV/dt selectable by the user.
- ⊗ 3.12 to 1600kV/ μ s can be delivered into 50 ohm loads
- ⊗ 6.25 to 3200kV/ μ s can be realized into high impedance loads.
- ⊗ Touch screen interface allows quick interactive and intuitive control.
- ⊗ Internal rate and external triggering capability
- ⊗ Designed for Common-Mode Transient Immunity (CMTI) testing
- ⊗ Optional Exponential decay Pulse shape module with 50 ohm termination
- ⊗ Provision for external switch Interlock
- ⊗ One year warranty on the entire system



How It Works

The Barth Model 731 3kV High Voltage Pulse Generator produces a fast rise time high voltage rectangular pulse. This pulse is then passed through the Barth 5081-P Multi Ramp generator module to create a linear ramp.

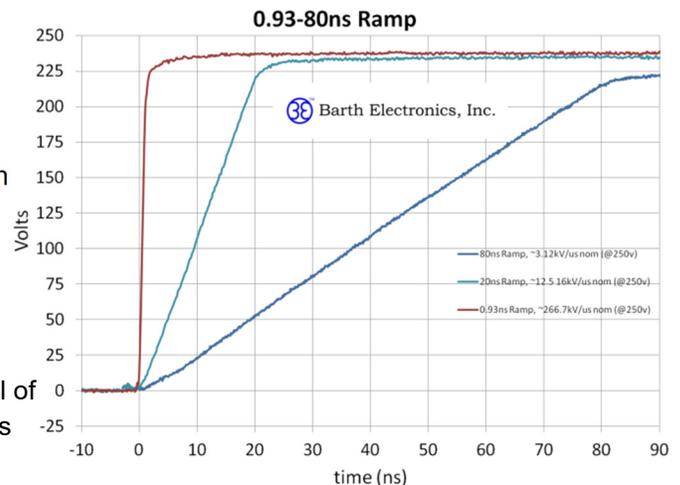
Operation

Quick interactive and intuitive control of the generator operational parameters is provided via a touch screen interface. The test system provides interactive control of the two variables that define the dV/dt rate, the pulse voltage and ramp rate, to achieve specific kV/us rate pulses. The control also allows the user to interactively increase, or decrease the dV/dt rate which is applied to the DUT.

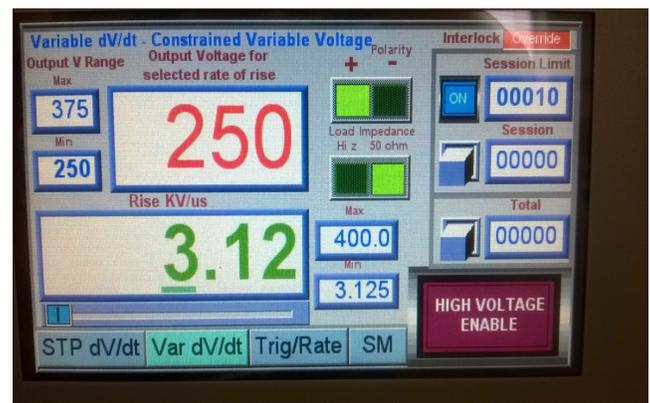
The 2 basic operational modes are: The "STP" stepped mode which features user adjustable voltage and 14 stepped dV/dt selections based on the 14 fixed ramp rates, and the "VAR" variable dV/dt mode which features a more continuously variable dV/dt selectable by the user. This mode is accomplished by varying the output voltage within an output voltage range and jumping to the next ramp selection as required automatically.

Description:

The Barth Common Mode Transient (CMT) Generator was developed for CMTI (CMT Immunity) characterization testing. The test system combines our Model 731 3kV Pulse Generator + 5081-P Ramp Generator Module, our high voltage fast rise time pulse generator with a multi ramp module to produce a selectable fixed rate linear rise ramp pulse.



Samples of 0.93ns, 20ns, and 80ns ramp output showing Leading edge of pulse into matched 50 ohm load



"VAR" variable dV/dt mode shown features a continuously variable dV/dt selectable by the user.

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System Components:

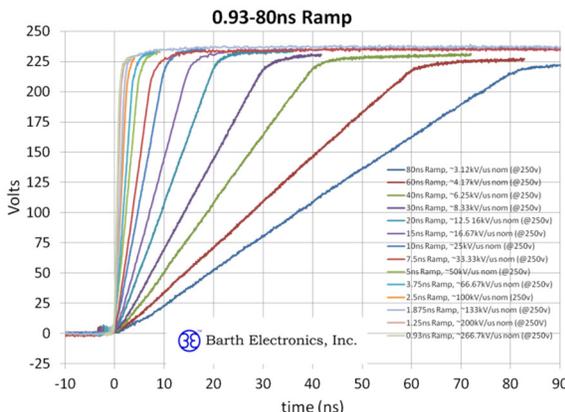
- ⊗ Barth 731 High Voltage Fast Rise Time Pulse Generator
- ⊗ Barth 5081-P Multi-100ns Pulse Charge line
- ⊗ Output cable and control box to ramp module interconnect cables
- ⊗ Optional Exponential decay Pulse shape module with 50 ohm termination

Specifications:

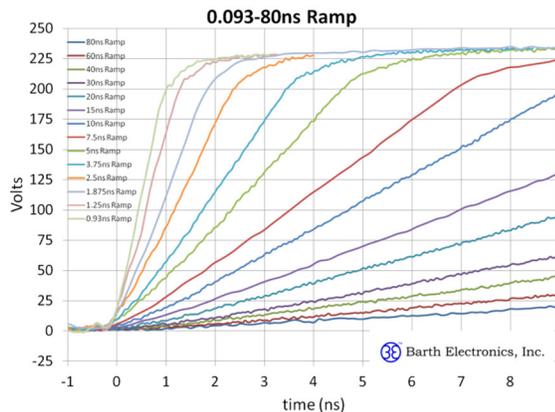
- ⊗ 3.12 to 1600kV/μs can be delivered into 50 ohm loads
- ⊗ 6.25 to 3200kV/μs can be realized into high impedance loads.
- ⊗ 'N' Female output Connector.
- ⊗ 90V-230V, A Input Power.

Size/Weight:

- ⊗ Approximately 19" w x 13" h x 15". Total weight is approximately 55 lbs.
- ⊗ Output compliant with IEC....specifications.



Sample pulse outputs showing Leading edge of pulse into matched 50 ohm load for all 14 ramp selections.

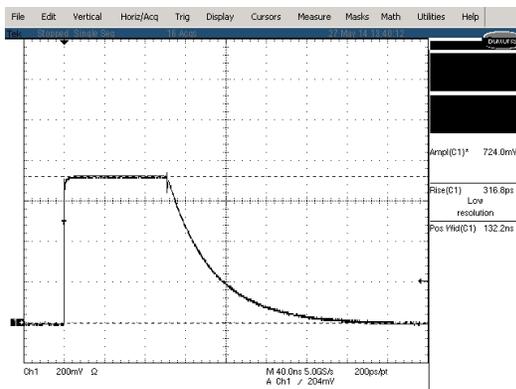


Same Sample Pulse Outputs with expanded time scale.

Operation (cont.)

Specific kV/μs rate pulses between 3.12 and 1600kV/μs can be achieved into 50 ohm loads. Rates between 6.25 and 3200kV/μs can be realized into high impedance loads.

The fall time mirrors the rise time, and with optional pulse shape module a long exponential decay fall time is also available as shown below.



Fast Ramp with Pulse Shape module (adds Exponential decay on falling edge) into matched 50 ohm load.

**This Product Features
Barth Designed ZAPLESS®
High Speed Measurement
Components**

Pulse Rate and Triggering:

The pulse rate and triggering is similar to the 731/733 modes including internal triggering for single shot or repetitive pulsing. Repetition rates to 10Hz are selectable. External triggering capability is also included.

Interlock:

The interlock provision provides a means to prevent pulsing when a test fixture with a lid or other movable safety is employed. This requires a switch on the fixture that will close to indicate the closed lid position.

Stand alone operation:

Stand alone operation of the 731 pulse generator is also supported.

