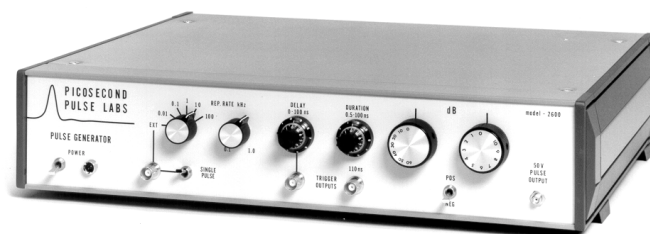
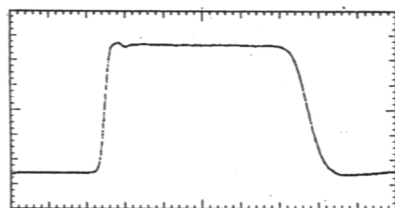


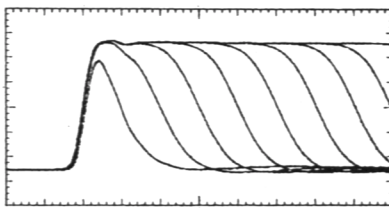
- Turbo Option
- 50 V
- 250 ps Risetime
- 1 - 100 ns Duration



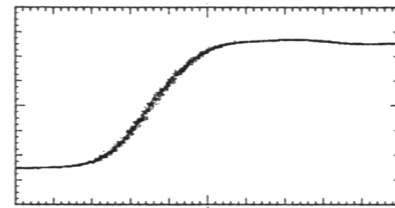
The Model 2600C Pulse Generator produces high amplitude 45 V, fast < 500 ps risetime pulses. With the "Turbo" option, 50 V, 250 ps risetime pulses are available. The pulse duration can be adjusted with a front panel, ten-turn control from < 1 ns to 100 ns. Either a positive or negative polarity pulse is selectable by a front panel switch. The amplitude may be adjusted over a 70 dB range in 1 dB steps. Applications for the 2600C include testing the switching time of semiconductors and driving high current laser diodes to obtain fast risetime optical pulses. A programmable GPIB version of the 2600C is also available; see the specifications for the PSPL Model 10,300B.



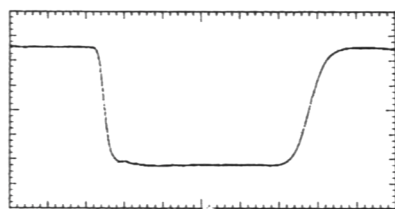
10 V/div and 1 ns/div
Positive Pulse



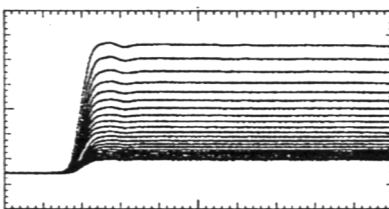
10 V/div and 500 ps/div
Adjustable Duration 1 ns to 100 ns



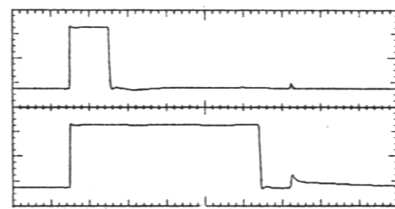
10 V/div and 100 ps/div
Positive Pulse Leading Edge



10 V/div and 1 ns/div
Negative Pulse



10 V/div and 500 ps/div
Adjustable Amplitude in 1 dB steps



20 V/div and 20 ns/div
20 ns and 100 ns Duration Pulses

Waveforms were measured using an HP-54121A, 20 GHz digital sampling oscilloscope.

Ordering Information

Model Number	Description
2600C	Pulse Generator: ± 45 V, < 500 ps risetime, 1 – 100 ns adj. duration
2600C-300NS	Pulse Generator: ± 45 V, < 500 ps risetime, 2 – 300 ns adj. duration
2600C-TURBO	Pulse Generator: ± 50 V, 250 ps risetime, 1 – 100 ns adj. duration
2600C-TURBO300NS	Pulse Generator: ± 50 V, 250 ps risetime, 2 – 300 ns adj. duration



Model 2600C Pulse Generator

Output Pulse Parameters [1]	
Amplitude into 50 Ω [2,3]	50 V typical, 45 V min. (turbo option) 45 V typical, 40 V min. (standard)
Attenuation	0 to 70 dB, 1 dB steps
Polarity	Positive or negative
Baseline	0 V
Duration (50%) [4]	< 1 ns to 100 ns adjustable
Risetime (10% - 90%) (leading edge) [2,3]	250 ps typical, 350 ps max. (turbo option) < 500 ps max. (standard)
Falltime (90% - 10%) (trailing edge)	< 800 ps typical, 1 ns max. (turbo option) 1 ns typical, 1.8 ns max. (standard)
Baseline Precursor	< $\pm 2\%$
Topline Overshoot	< 4% (turbo option), 2% (standard)
Topline Perturbations	$\pm 2\%$
Spurious Pulse @ 115 ns	+6% (dur. < 20 ns) +30% (dur. = 100 ns)
Source Impedance	50 Ω nominal
Reflection Coefficient	-30% during pulse +50% after pulse. Improves with increasing attenuation.

Trigger and Timing	
Trigger Output Pulse	0.8 V into 50 Ω
Adjustable Delay	0 to 100 ns
Adjustable Delay Jitter	35 ps rms typical
Fixed Trigger Delay	115 ns
Fixed Trig. Delay Jitter	12 ps rms typical
Repetition Rate	1 Hz to 100 kHz
Ext. Trigger Input Level	TTL pulse required, level > 1.5 V, + slope, > 10 ns
Ext. Trigger Impedance	430 Ω
Trigger In/Out Delay	200 ns

General Specifications	
Controls	Power, Rep. Rate Range., Rep. Rate Vernier, Delay, Duration, Polarity and Attenuation
Connectors	SMA for 50 V pulse output, BNC for trigger in and trigger output
Power Supply (mains)	100, 115 or 230 V AC, $\pm 10\%$ switch selectable, 50 or 60 Hz,
Power Consumption	42 VA (60 Hz,) 65 VA (50 Hz)
Operating Environment	Indoors, 0 C to 50 C, < 80% rh
Safety Certifications	Conforms to EN-061010-1 (CE mark) UL-1244 and IEC-348. Safety Class I. For lab use only by qualified personnel
EMI Certifications	Conforms to EU Directive 89/336/EEC EN55011 and EN50082-1, CE mark
Calibration	Calibration report with waveforms furnished, NPL/NIST-traceable, valid at +23 C ± 3 C and 100 kHz rep. rate
Warranty	One year. See Terms and Conditions of Sale for details.
Accessories Included	Power cord, front handles, rack mount kit, instruction manual and video.
Dimensions	17" x 13" x 3.25" (43 x 33 x 8.3 cm)
Weight	15 lbs (6.8 kg), 20 lbs (9.1 kg) shipping

Notes

[1] The performance parameters listed here are typical values as measured using an HP-54121A, 20 GHz oscilloscope and 46 dB, PSPL Model 5510, 18 GHz attenuators. Parameters are guaranteed at 23 C when max. and/or min. limits are given.

[2] Parameters listed are for positive polarity pulse. Negative polarity pulse amplitude is typically 1 dB less and the risetimes and falltimes are typically 75 ps slower.

[3] Turbo Option: This extra cost option enhances the generator's performance with premium, rare, selected semiconductors. The positive polarity pulse amplitude is increased from 45 V to 50 V and the risetime is improved from < 500 ps to 250 ps. The negative polarity pulse has an additional 8 ns of delay relative to the positive pulse.

[4] 300 ns Option: This extra cost option increases the maximum pulse duration from 100 ns to 300 ns. The following specifications change for this 300 ns option: maximum pulse duration = 300 ns, minimum pulse duration = 2 ns typical, 3 ns max., positive polarity pulse trailing edge falltime = 2 ns typical, 3 ns max., max. rep. rate = 20 kHz, ext. trigger input to fixed trigger output delay = 270 ns and weight = 17 lbs. Trigger output delay jitter = 35 ps rms typical. Fixed trigger output delay jitter = 15 ps rms typical.

PICOSECOND PULSE LABS P.O. Box 44 BOULDER, CO 80306, USA TEL: 1.303.443.1249 FAX: 1.303.447.2236