



AVTECH ELECTROSYSTEMS LTD.

NANOSECOND WAVEFORM ELECTRONICS
SINCE 1975

P.O. BOX 265
OGDENSBURG, NY
U.S.A. 13669-0265

TEL: 888-670-8729 (USA & Canada) or +1-613-686-6675 (Intl)
FAX: 800-561-1970 (USA & Canada) or +1-613-686-6679 (Intl)

BOX 5120, LCD MERIVALE
OTTAWA, ONTARIO
CANADA K2C 3H5

info@avtechpulse.com - http://www.avtechpulse.com/

PERFORMANCE CHECKSHEET

Model: AVO-9H-B-P-P1B-T1B-W1
Type: Ultra-High-Speed Laser Diode Driver
S.N.: 13105
Date: December 17, 2013

Output Amplitude: up to +103V, to 50Ω
Pulse Width (FWHM): 1 – 200 ns
Rise Time (20%-80%): ≤ 700 ps
Fall Time (80%-20%): ≤ 700 ps
PRF: 1 Hz - 50 kHz
Jitter, Stability: OK
Prime Power: 100-240V AC, 50-60 Hz.

Basic specifications: →

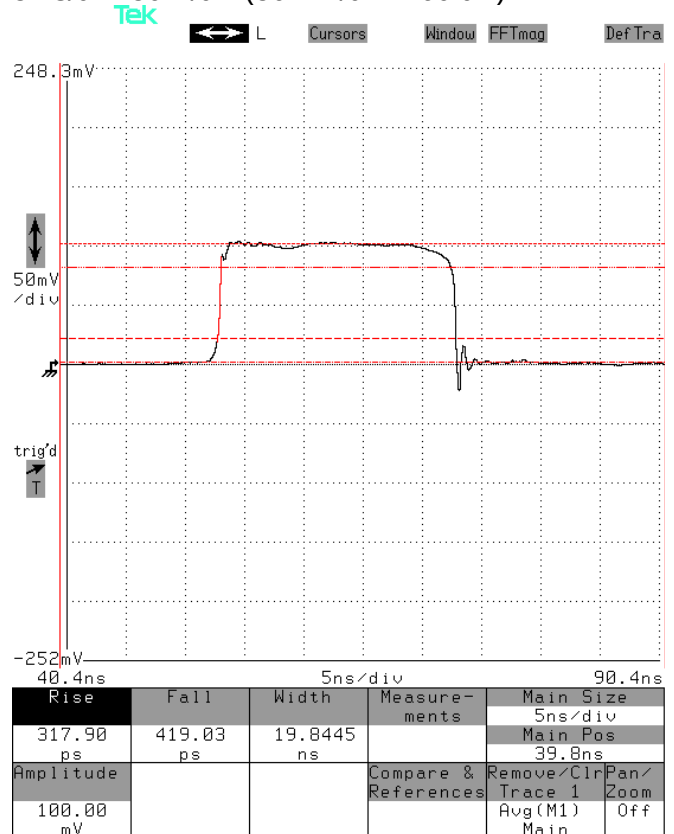
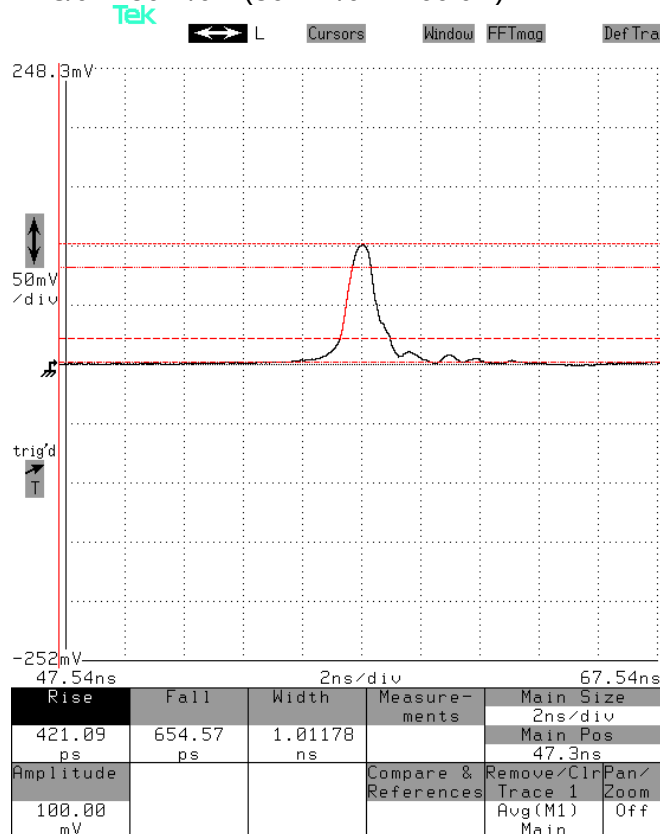
Test Waveforms

Mainframe output, +100V into 50 Ohms, 50 kHz,
1 ns pulse width:

Mainframe output, +100V into 50 Ohms, 50 kHz,
20 ns pulse width:

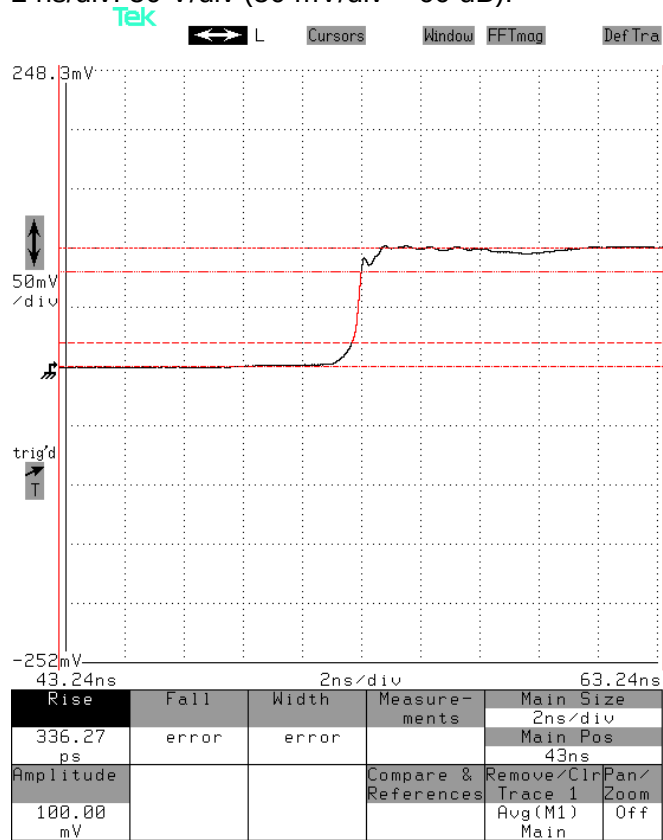
2 ns/div. 50 V/div (50 mV/div × 60 dB):

5 ns/div. 50 V/div (50 mV/div × 60 dB):



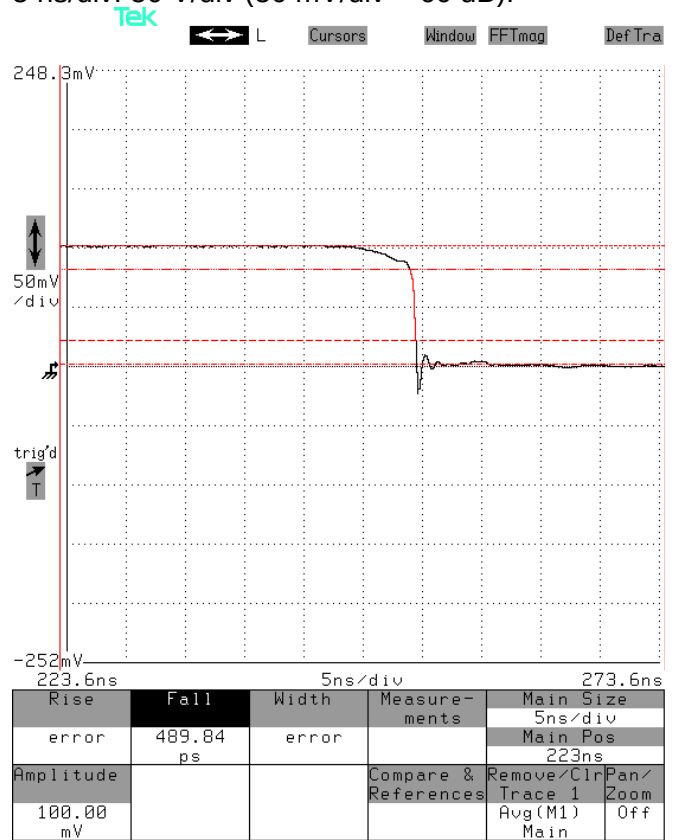
Mainframe output, +100V into 50 Ohms, 50 kHz, 200 ns pulse width, leading edge:

2 ns/div. 50 V/div (50 mV/div × 60 dB):



Mainframe output, +100V into 50 Ohms, 50 kHz, 200 ns pulse width, trailing edge:

5 ns/div. 50 V/div (50 mV/div × 60 dB):



With mainframe set at +100V, 50 kHz, 50 ns pulse width:



Top waveform: Voltage across the parallel combination of the 4.6 Ω effective resistance. It should be approximately $(+100V / 54.6\Omega) \times 4.6\Omega = +8.4V$ in amplitude, which agrees with the observed waveform.

Bottom waveform: "MI" output, approximately +100V / 11.

Both: 5 V/div (= 50 mV/div × 40 dB), 10 ns/div.

Test method: Short leads are soldered to a 5.1Ω chip resistor. A coaxial cable is soldered across the resistor. The signal lead is inserted into the anode pin socket. The grounded lead is inserted into the cathode pin socket. The total effective resistor is $5.1\Omega \parallel 50\Omega (R_{SCOPE}) = 4.6\Omega$.

