



AVTECH ELECTROSYSTEMS LTD.

NANOSECOND WAVEFORM ELECTRONICS
SINCE 1975

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☒ BOX 5120, LCD MERIVALE
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PERFORMANCE CHECKSHEET

Model: AVO-9A3-B-P-P2B-AK1-AC22
Type: Ultra-High-Speed Laser Diode Driver
S.N.: 13108
Date: January 30, 2014

Output Amplitude: up to +43V, to 50Ω
Pulse Width (FWHM): 0.4 – 2 ns
Rise Time (20%-80%): ≤ 200 ps
Fall Time (80%-20%): ≤ 300 ps
PRF: 1 Hz – 1 MHz
Jitter, Stability: OK
Prime Power: 100-240V AC, 50-60 Hz.

Basic specifications: →

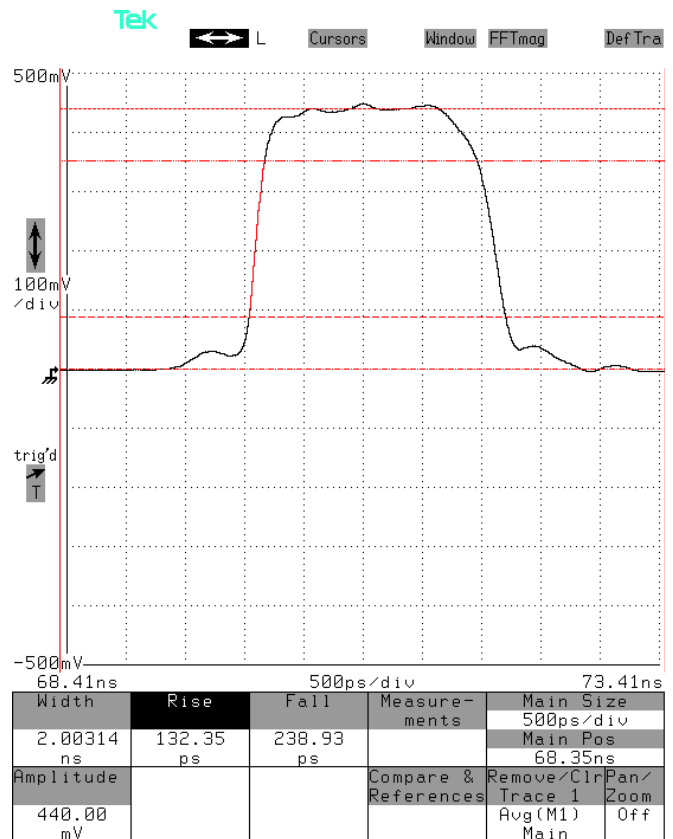
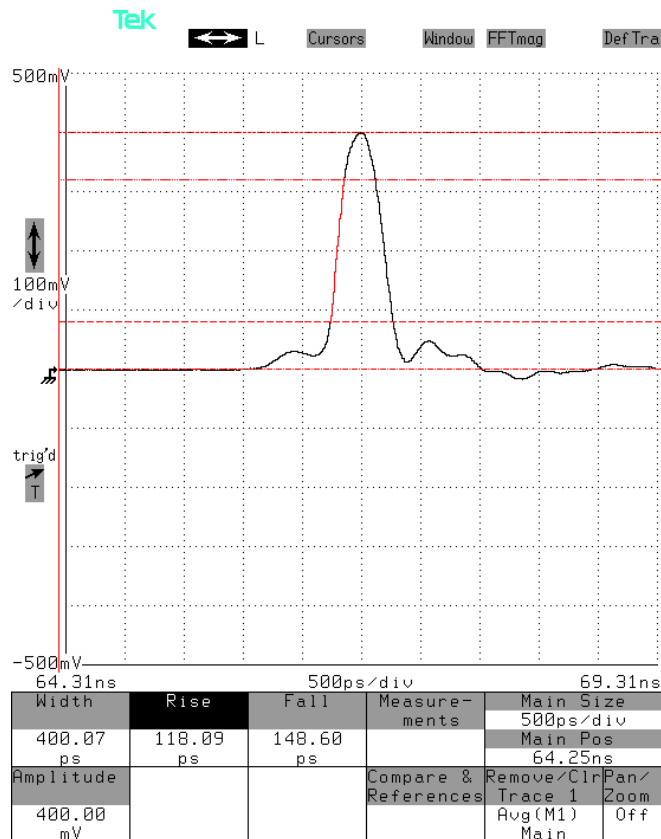
Test Waveforms

Mainframe output into 50 Ohm load at 1 MHz,
0.4 ns, +40V,

Mainframe output into 50 Ohm load at 10 kHz,
2 ns, +43V,

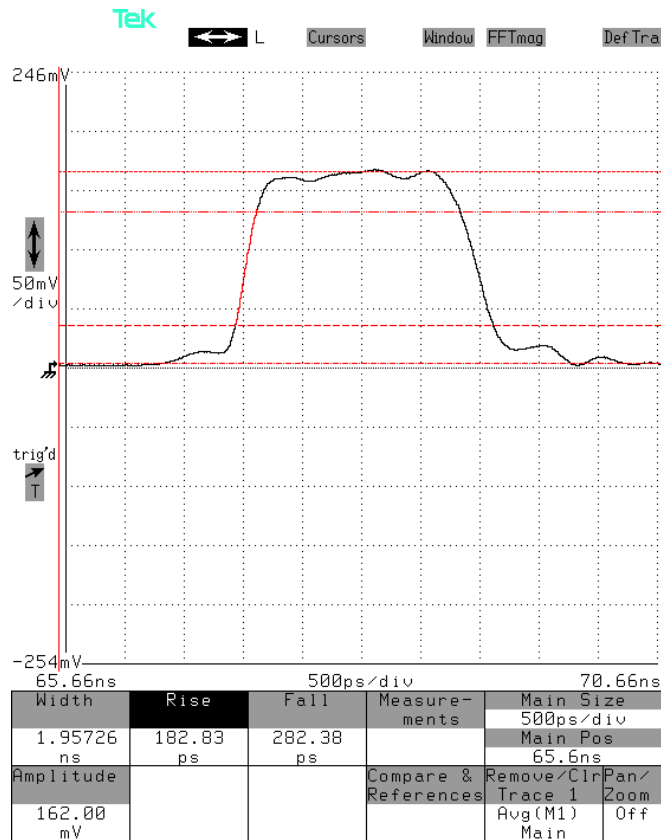
500 ps/div. 10 V/div (100 mV/div × 40 dB):

500 ps/div. 10 V/div (100 mV/div × 40 dB):



With mainframe set at +43V, 10 kHz, 2 ns pulse width:

500 ps/div. 5 V/div (50 mV/div × 40 dB):



Voltage across a 20 Ohm resistance installed between the anode and cathode pin sockets of the output module (simulating a diode DUT with a dV/dI of 20 Ohms at lasing).

The observed output current is:

$$16.2V / 20 \text{ Ohms} = 810 \text{ mA}$$

Test method: Two 68 Ohm 1206-package resistors were soldered in parallel, with extremely short leads soldered on that plugged into the sockets. A coaxial cable was also soldered across the two resistors, leading to the 50 Ohm input of the oscilloscope. The total load impedance is:

$$68 \parallel 68 \parallel 50 = 20 \text{ Ohms.}$$