AVTECH ELECTROSYSTEMS LTD.
NANOSECOND WAVEFORM ELECTRONICS
SINCE 1975

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

PERFORMANCE CHECKSHEET

Model: AVO-9A4-B-P1B-T1B-P
Type: Ultra-High-Speed Laser Diode Driver
S.N.: 13091
Date: November 12, 2013

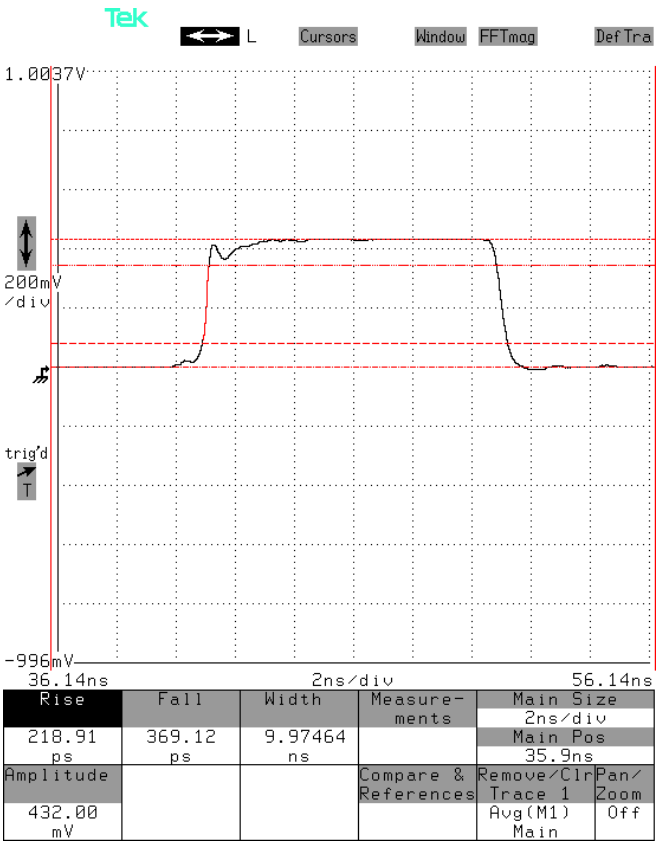
Basic specifications: →

Output Amplitude: up to +43V, to 50Ω
Pulse Width (FWHM): 1 – 10 ns
Rise Time (20%-80%): ≤ 500 ps
Fall Time (80%-20%): ≤ 750 ps
PRF: 1 Hz – 150 kHz
Jitter, Stability: OK
Prime Power: 100-240V AC, 50-60 Hz.

Test Waveforms

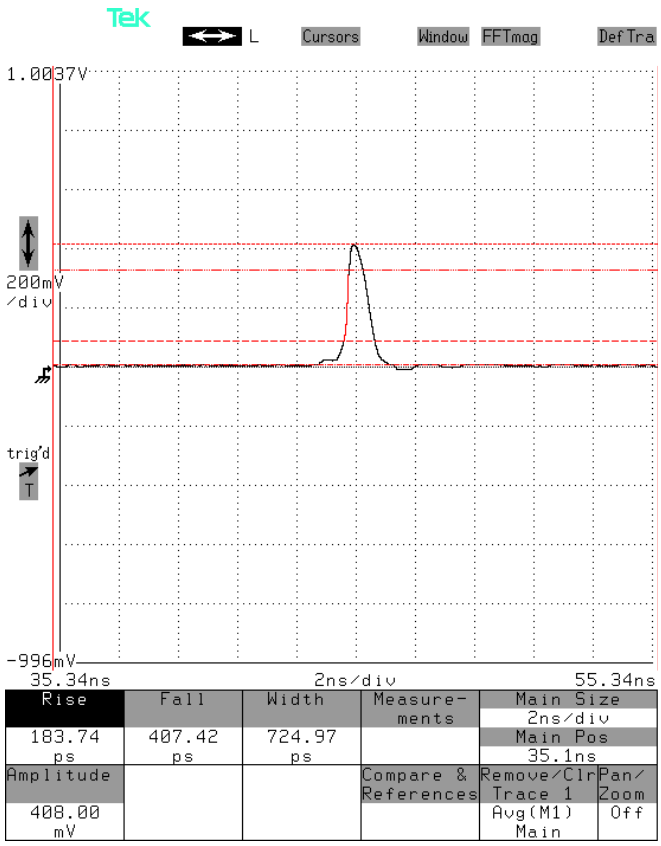
Mainframe output into 50 Ohm load at 150 kHz, 10 ns, +43V,

2 ns/div. 20 V/div (200 mV/div × 40 dB):

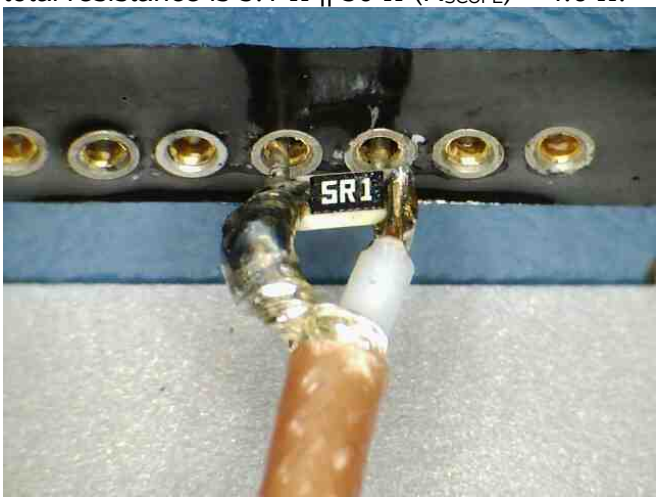


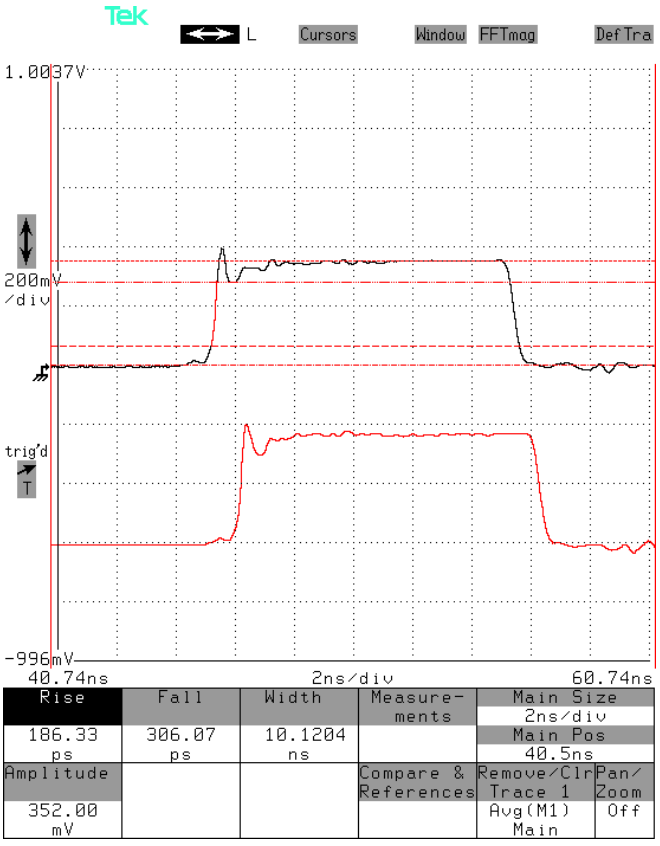
Mainframe output into 50 Ohm load at 150 kHz, < 1 ns, +43V,

2 ns/div. 20 V/div (200 mV/div × 40 dB):



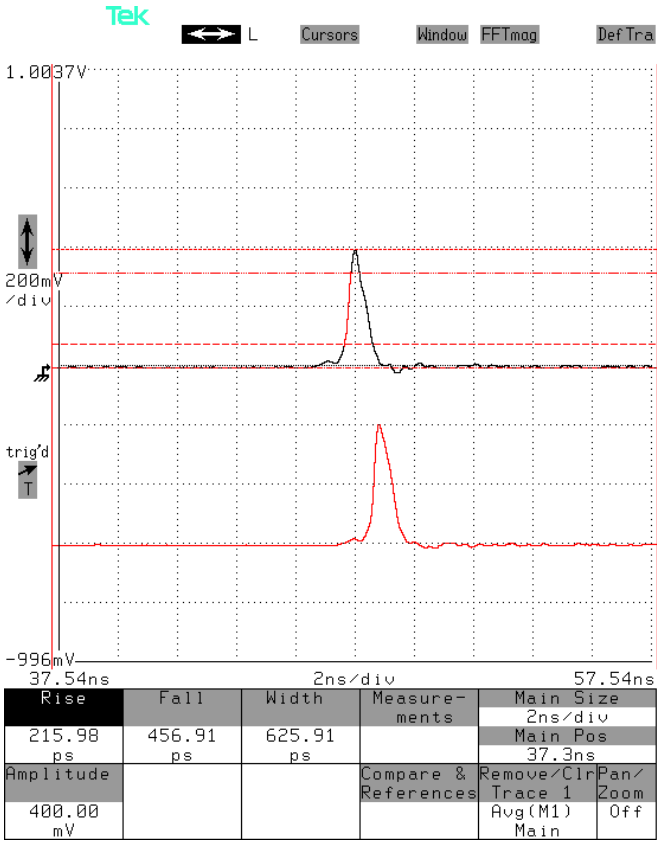
Output module test method: Short leads are soldered to a 5.1Ω chip resistor. A coaxial cable is soldered across the resistor. The signal lead is inserted into the anode pin socket. The grounded lead is inserted into the cathode pin socket. The total resistance is 5.1 Ω || 50 Ω (R_{SCOPE}) = 4.6 Ω.





Top: Voltage measured across the resistor in response to a +43V, 10 ns pulse. It should be approximately (+43V / 54.6Ω) × 4.6Ω = +3.6V, which agrees with the observed waveform. 2V/div (= 200 mV/div × 20 dB), 2 ns/div.

Bottom: "MI" output, approximately +43V / 11. 2V/div (= 200 mV/div × 20 dB), 2 ns/div.



Top: Same as waveform on the left, except with a pulse width of < 1 ns.

Bottom: Corresponding "MI" output.