AVTECH ELECTROSYSTEMS LTD.
NANOSECOND WAVEFORM ELECTRONICS
SINCE 1975

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# PERFORMANCE CHECKSHEET

Model: AVO-9A4-B-P0-N-DRXA-VXI-R5
Type: Ultra-High-Speed Laser Diode Driver
S.N.: 13608
Date: September 26, 2017

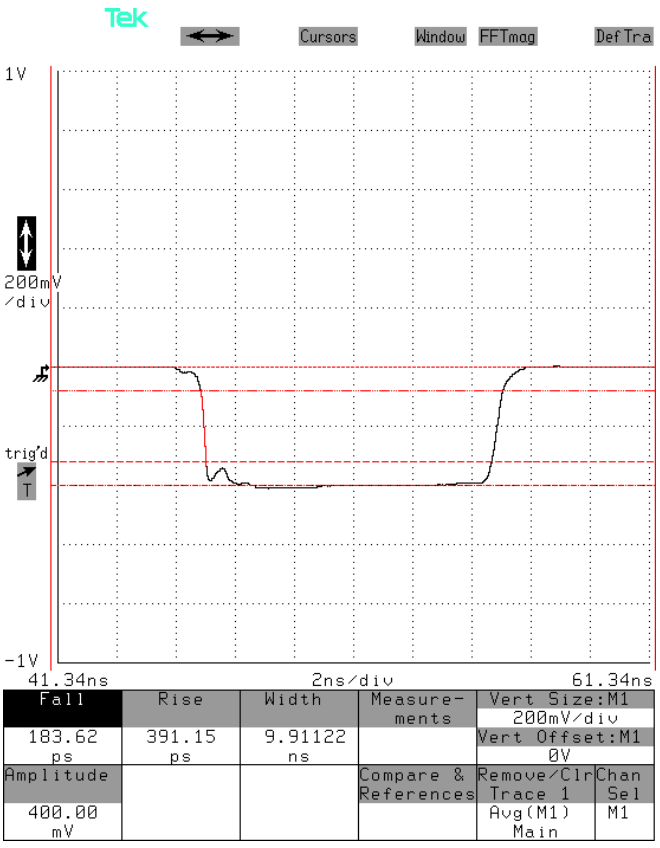
Basic specifications: →

| | |
|---|---|
| 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

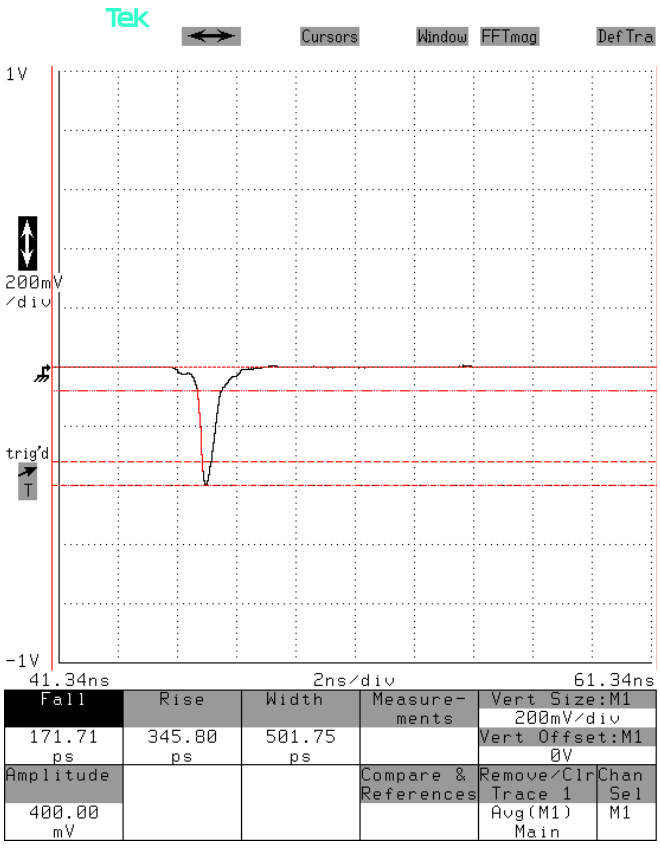
Mainframe output into 50 Ohm load at 10 kHz, 10 ns, -40V,

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

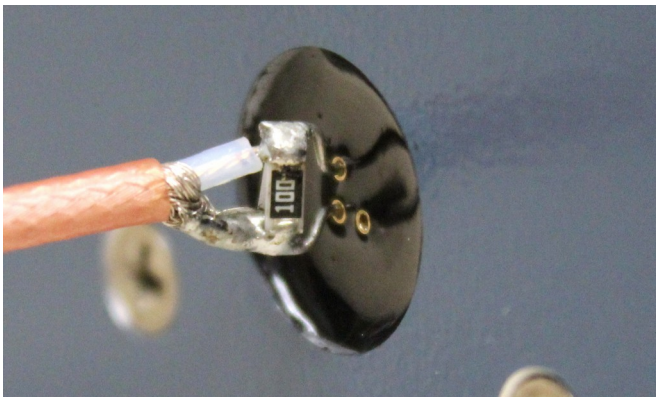


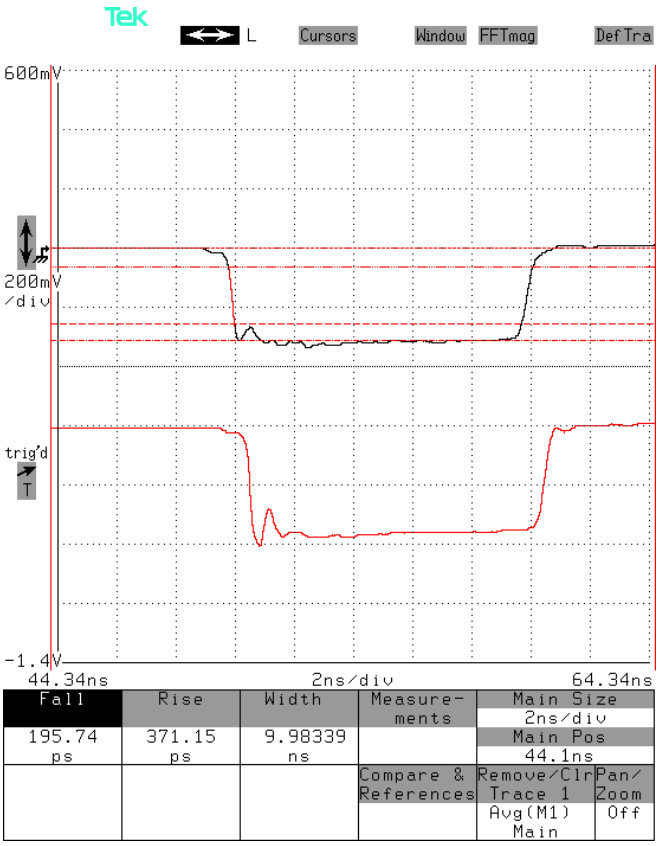

Mainframe output into 50 Ohm load at 10 kHz, < 1 ns, -40V,

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



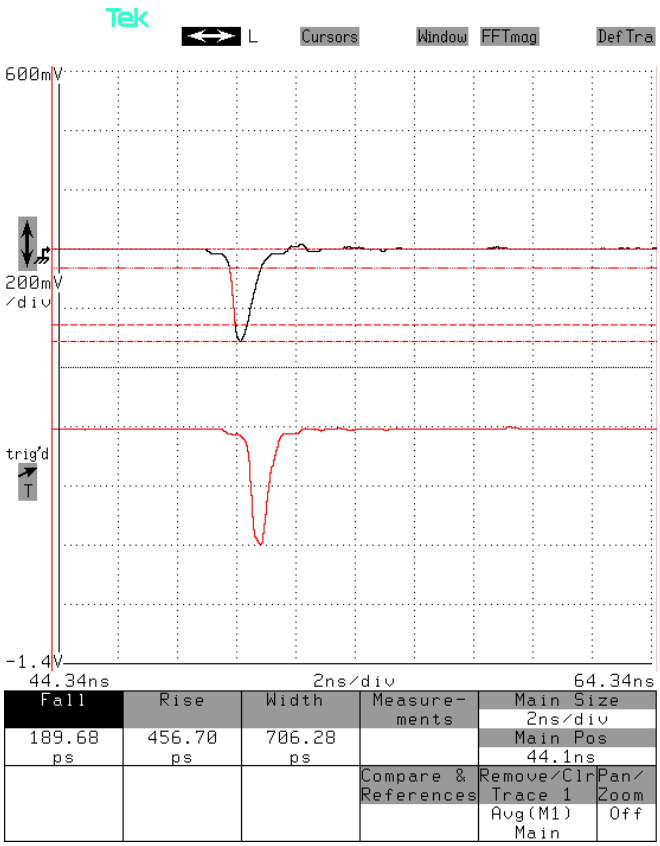
Test method: Short leads are soldered across two 10Ω chip resistors in parallel. A coaxial cable is soldered across the resistor. The signal lead is inserted into the anode pin socket. The ground lead is inserted into one of the other pin sockets (which are grounded). The total effective resistor is 5 Ω || 50 Ω ($R_{SCOPE}$) = 4.5 Ω.




Top: Voltage measured across the resistor in response to a -40V, 10 ns pulse. It should be approximately (-40V / 54.5Ω) × 4.5Ω = +3.3V, which agrees with the observed waveform. 2V/div (= 200 mV/div × 20 dB), 2 ns/div.

Bottom: “MI” output, approximately +40V / 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.