



AVTECH ELECTROSYSTEMS LTD.

NANOSECOND WAVEFORM ELECTRONICS
SINCE 1975

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PERFORMANCE CHECKSHEET

Model: AVO-9A5-B-P-P1B-T1B
Type: Ultra-High-Speed Laser Diode Driver
S.N.: 13682
Date: February 22, 2018

Output Amplitude: up to +53V, to 50Ω
Pulse Width (FWHM): 1 - 10 ns
Rise Time (20%-80%): ≤ 500 ps
Fall Time (80%-20%): ≤ 1 ns
PRF: 1 Hz – 1 MHz
Jitter, Stability: OK
Prime Power: 100-240V AC, 50-60 Hz.

Basic specifications: →

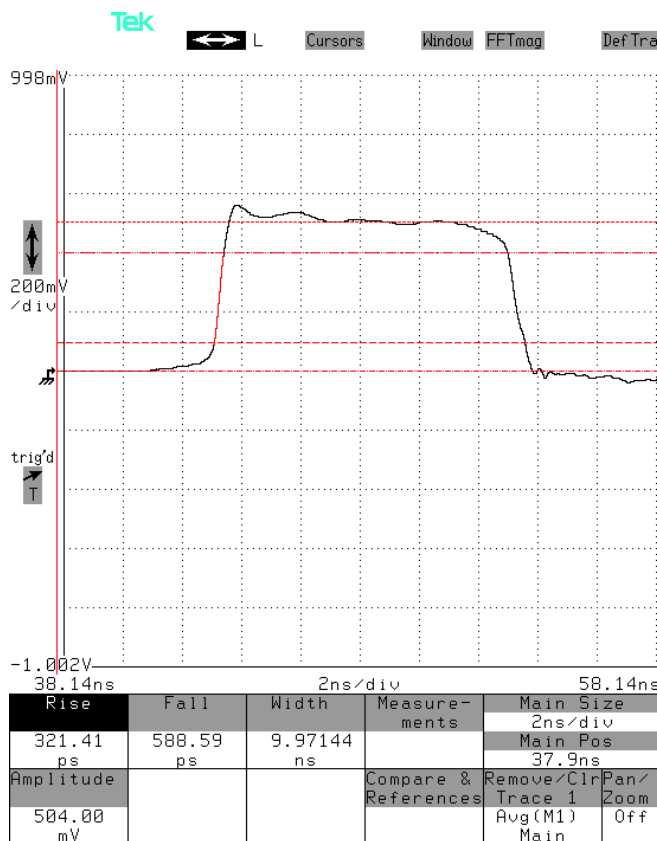
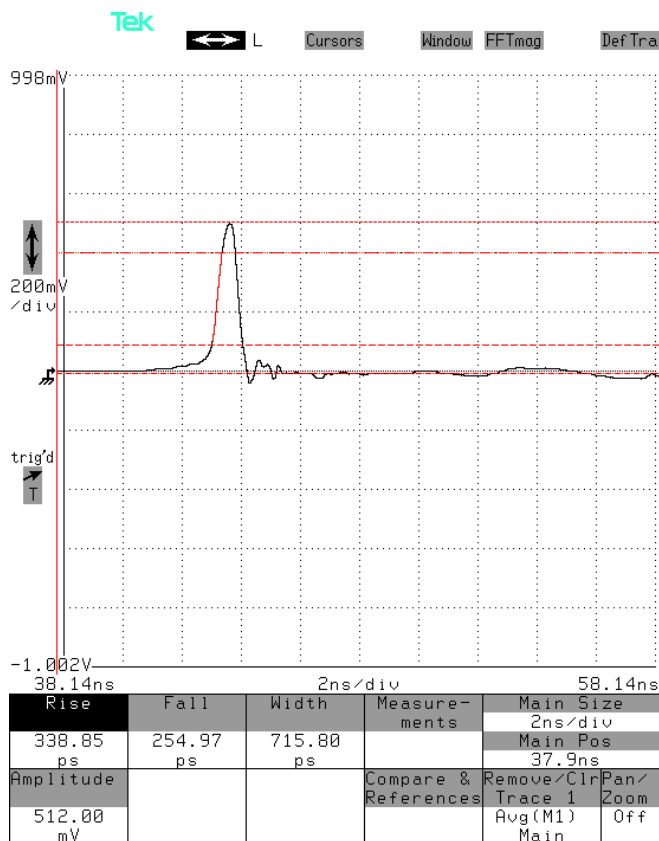
Test Waveforms

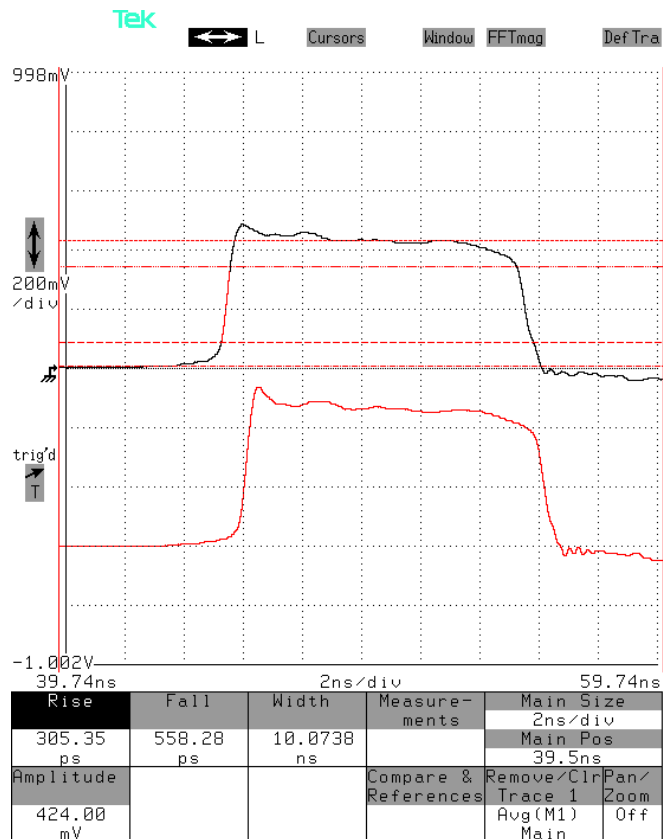
Mainframe output into 50 Ohm load at 10 kHz,
< 1 ns, +53V,

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

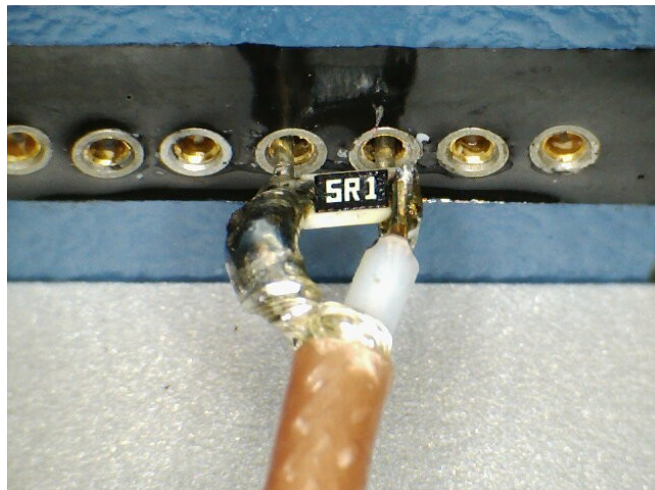
2 ns/div. 20 V/div (200 mV/div × 40 dB):

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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 $5\ \Omega \parallel 50\ \Omega$ (R_{SCOPE}) = 4.5 Ω.



Top waveform: Voltage across the parallel combination of the 4.5 Ω effective resistance. It should be approximately $(+53V / 54.5\Omega) \times 4.5\Omega = +4.4V$ in amplitude, which agrees approximately with the observed waveform.

Bottom waveform: “MI” output, approximately +53V / 11.

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