



# AVTECH ELECTROSYSTEMS LTD.

NANOSECOND WAVEFORM ELECTRONICS  
SINCE 1975

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## PERFORMANCE CHECKSHEET

Model: AVO-9A3-B-P-P2D-AK1-AK8-VXI  
Type: Ultra-High-Speed Laser Diode Driver  
S.N.: 13784  
Date: October 2, 2018

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: →

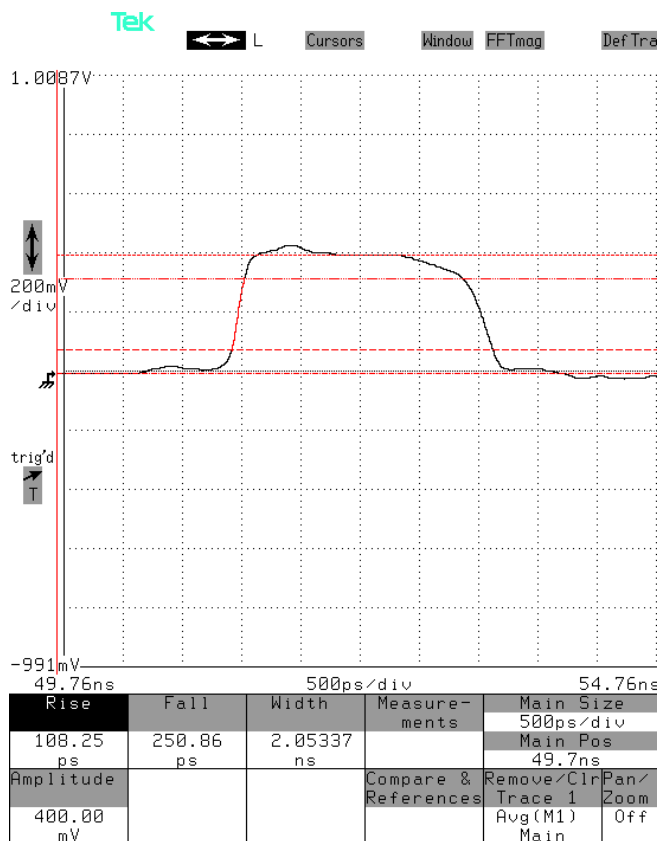
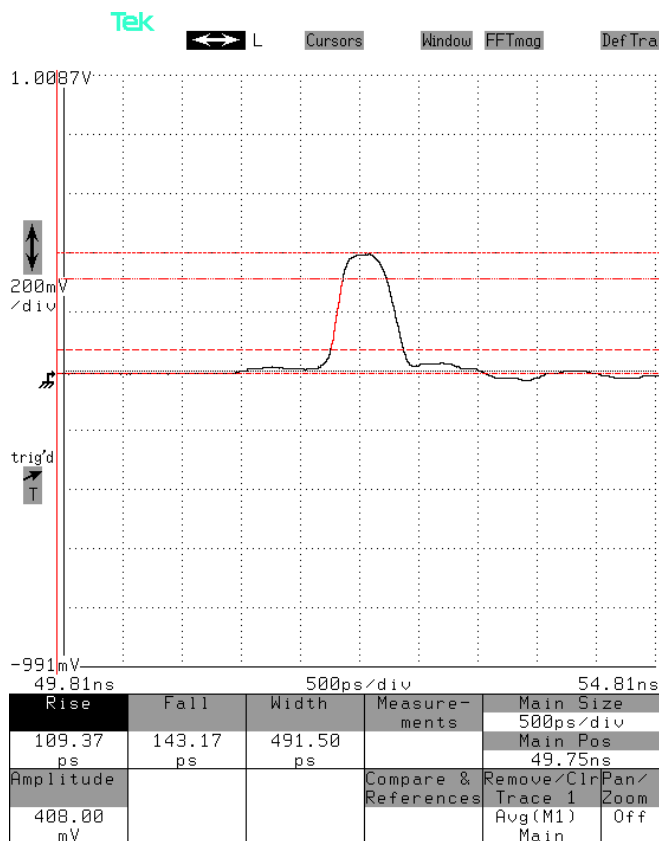
### Test Waveforms

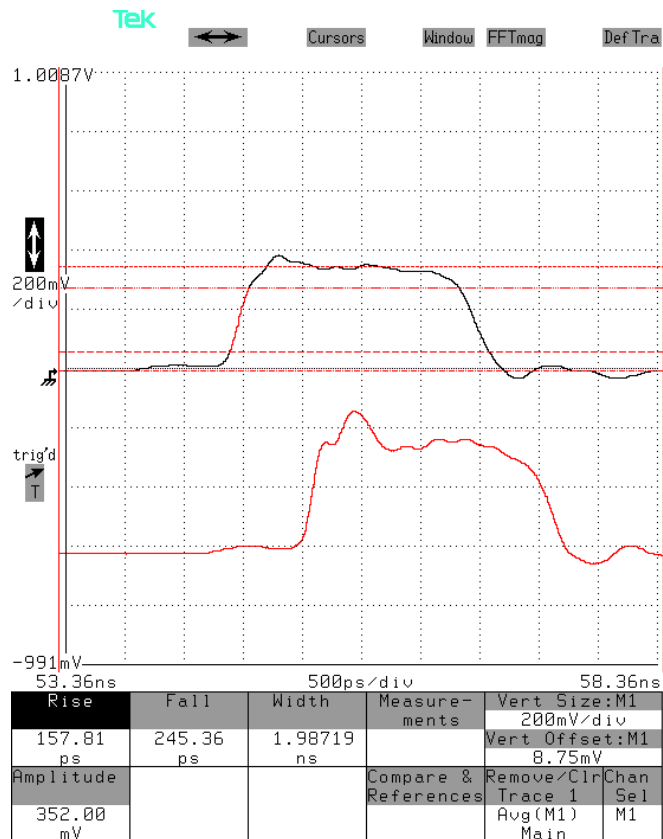
Mainframe output into 50 Ohm load at 10 kHz,  
500 ps, +40V,

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

500 ps/div. 20 V/div (200 mV/div × 40 dB):

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



Top waveform: Voltage across the parallel combination of the 4.5 Ω effective resistance. It should be approximately  $(+40V / 54.5\Omega) \times 4.5\Omega = +3.3V$  in amplitude, which agrees with the observed waveform.

Bottom waveform: “M1” output, approximately  $+40V / 11$ .

Both: 500 ps/div, 2 V/div (200 mV/div × 20 dB).