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

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PERFORMANCE CHECKSHEET

Model: AVO-9G-B-N-P1CR0-T1C  
Type: Ultra-High-Speed Laser Diode Driver  
S.N.: 13249  
Date: January 19, 2015

Output Amplitude: up to +53V, to 50Ω  
Pulse Width (FWHM): 10 – 200 ns  
Rise Time (20%-80%): ≤ 500 ps  
Fall Time (80%-20%): ≤ 1 ns  
PRF: 1 Hz - 100 kHz  
Jitter, Stability: OK  
Prime Power: 100-240V AC, 50-60 Hz.

Basic specifications: →

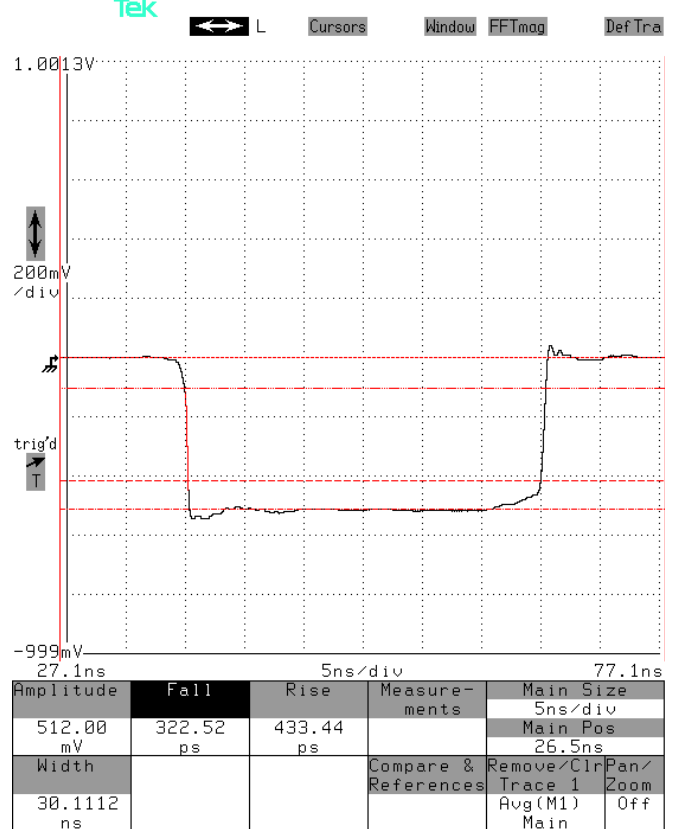
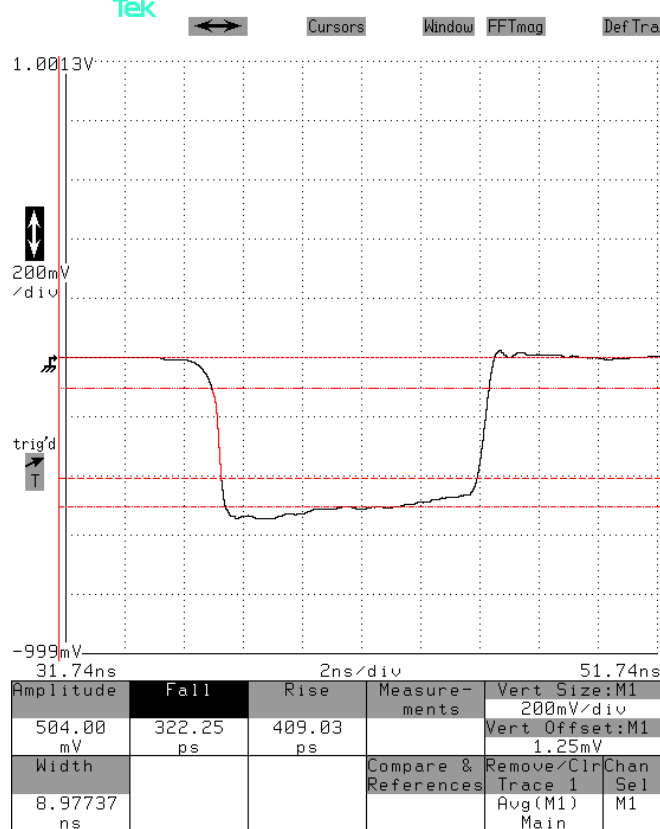
Test Waveforms

Mainframe output, -50V into 50 Ohms, 100 kHz,  
< 10 ns pulse width:

Mainframe output, -50V into 50 Ohms, 100 kHz,  
30 ns pulse width:

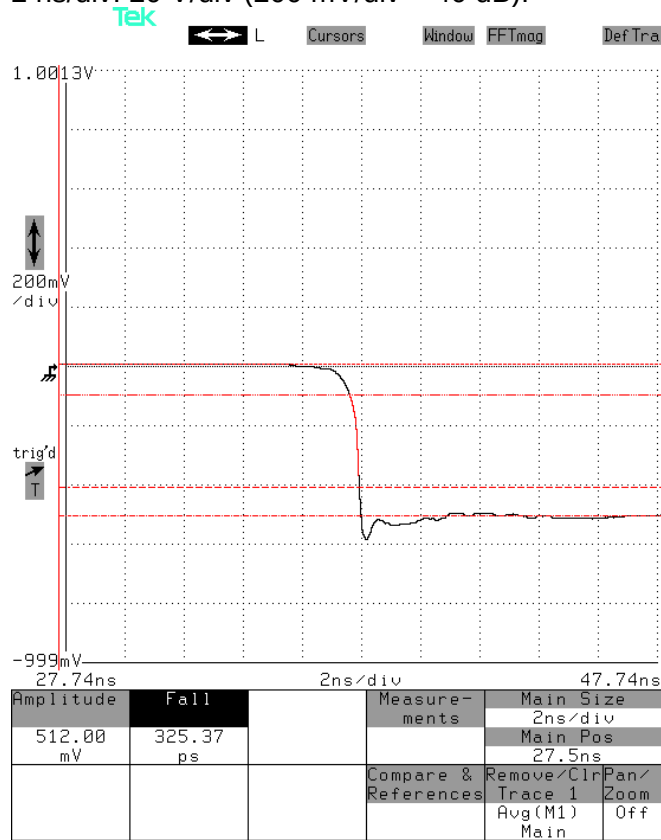
2 ns/div. 20 V/div (200 mV/div × 40 dB):

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



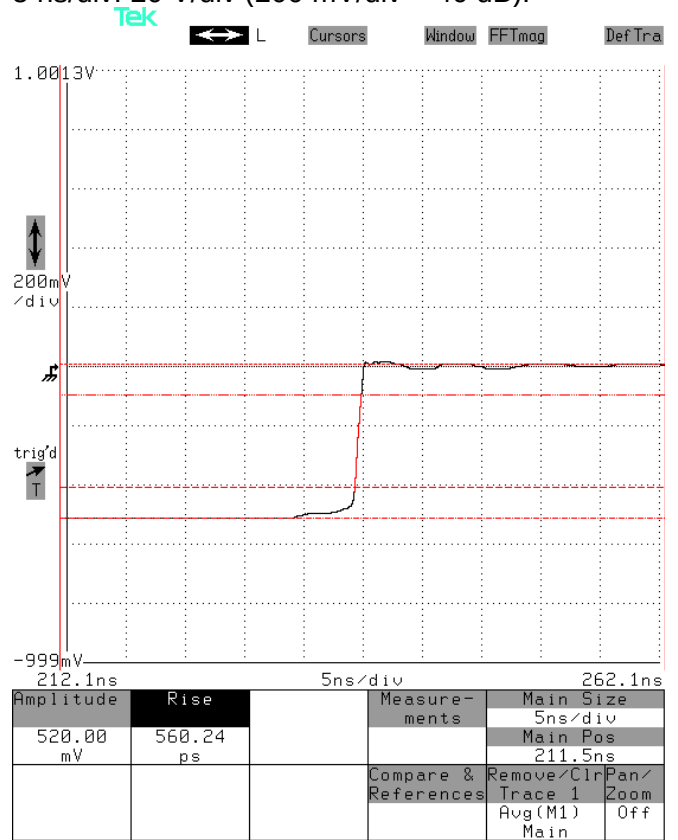
Mainframe output, -50V into 50 Ohms, 100 kHz,  
200 ns pulse width, leading edge:

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

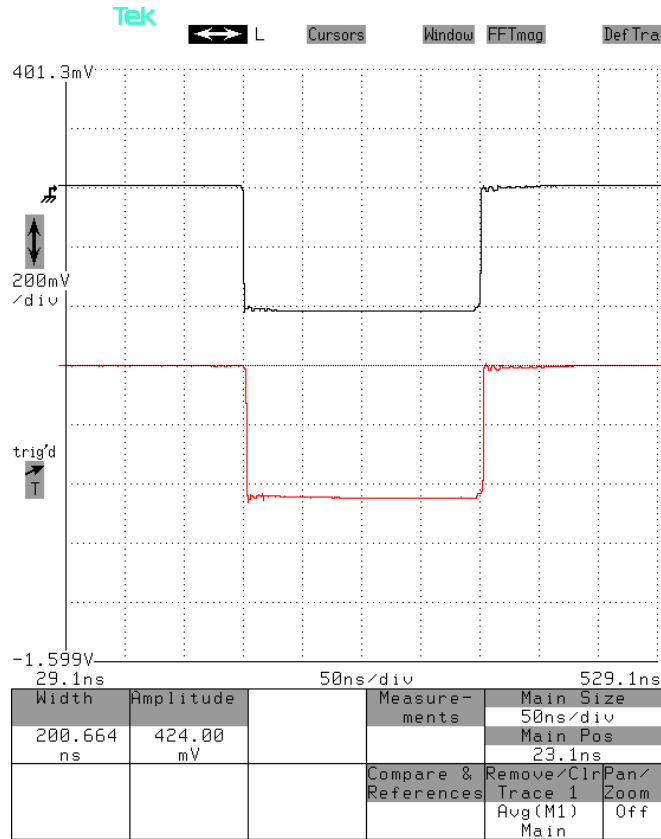


Mainframe output, -50V into 50 Ohms, 100 kHz,  
200 ns pulse width, trailing edge:

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



With mainframe set at -50V, 100 kHz, 200 ns pulse width:



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 effective resistor is 5.1 Ω || 50 Ω (R<sub>SCOPE</sub>) = 4.6 Ω.

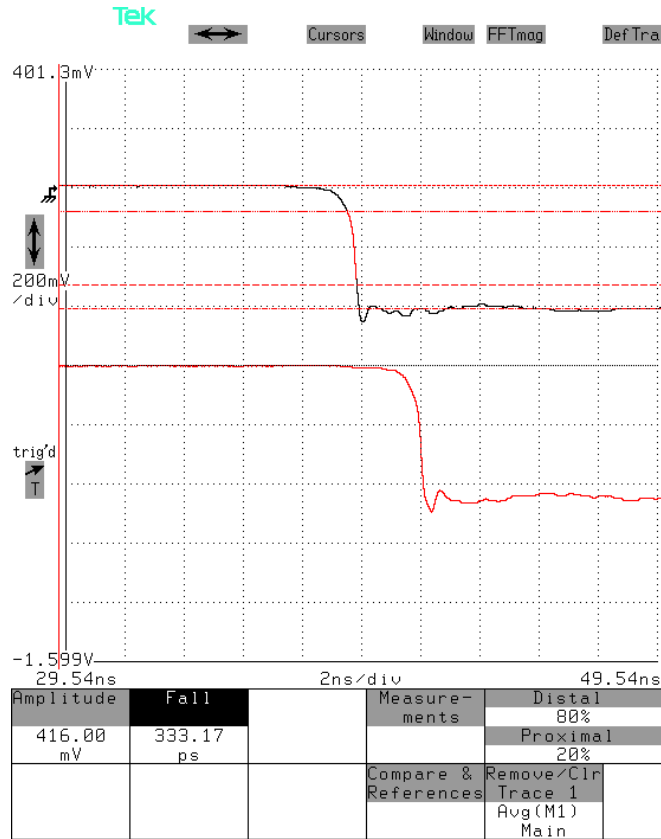


Top waveform: Voltage across the parallel combination of the 4.6 Ω effective resistance. It should be approximately  $(+50V / 54.6\Omega) \times 4.6\Omega = +4.2V$  in amplitude, which agrees with the observed waveform.

Bottom waveform: “MI” output, approximately +50V / 11.

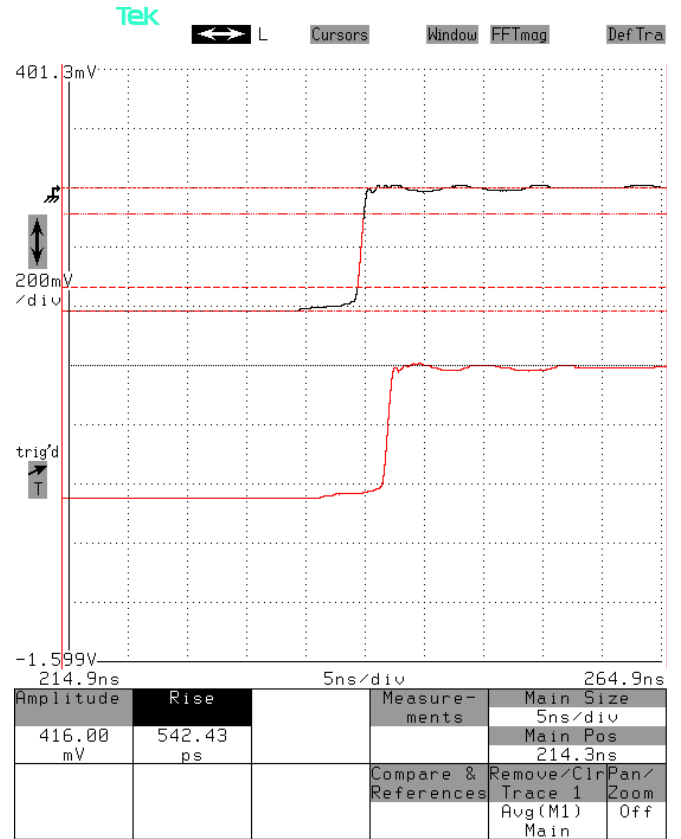
Both: 2 V/div (= 200 mV/div × 20 dB), 50 ns/div.

Same as last page, but scaled to show leading edge:



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

Same as last page, but scaled to show trailing edge:



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