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BOX 5120, LCD MERIVALE  
OTTAWA, CANADA K2C3H5

PERFORMANCE CHECKSHEET

Model: AVO-9H-B-P-P1B-T1B  
Type: Ultra-High-Speed Laser Diode Driver  
S.N.: 13894  
Date: July 9, 2019

Output Amplitude: up to +103V, to 50Ω  
Pulse Width (FWHM): 10 – 200 ns  
Rise Time (20%-80%): ≤ 0.7 ns  
Fall Time (80%-20%): ≤ 1 ns  
PRF: 1 Hz - 50 kHz  
Jitter, Stability: OK  
Prime Power: 100-240V AC, 50-60 Hz.

Basic specifications: →

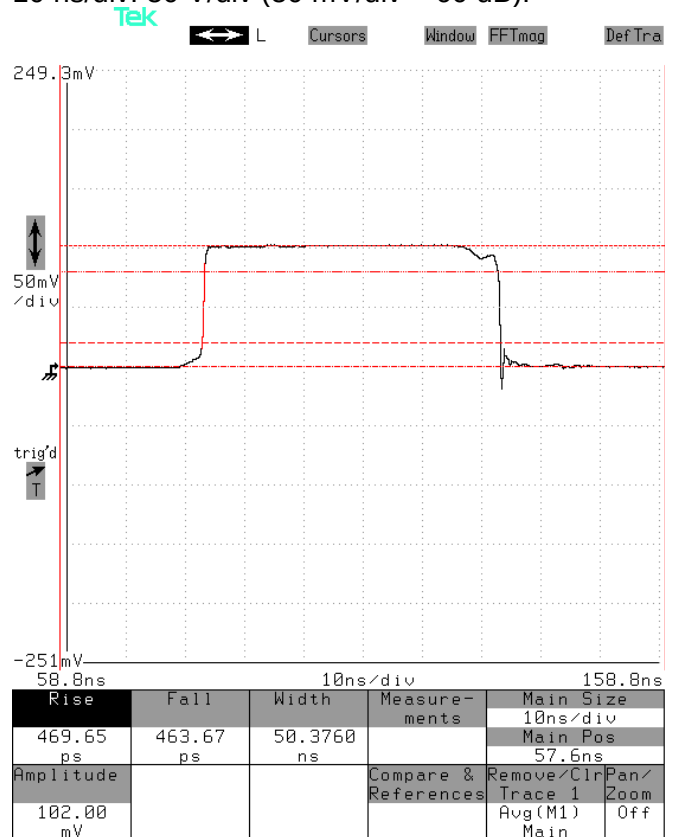
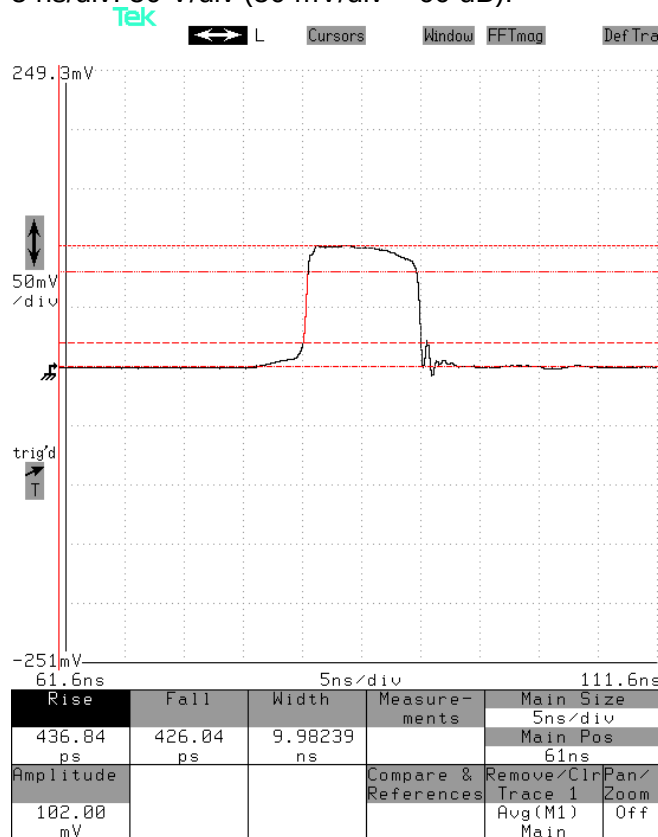
Test Waveforms

Mainframe output, > +100V into 50 Ohms, 50 kHz, 10 ns pulse width:

Mainframe output, > +100V into 50 Ohms, 50 kHz, 50 ns pulse width:

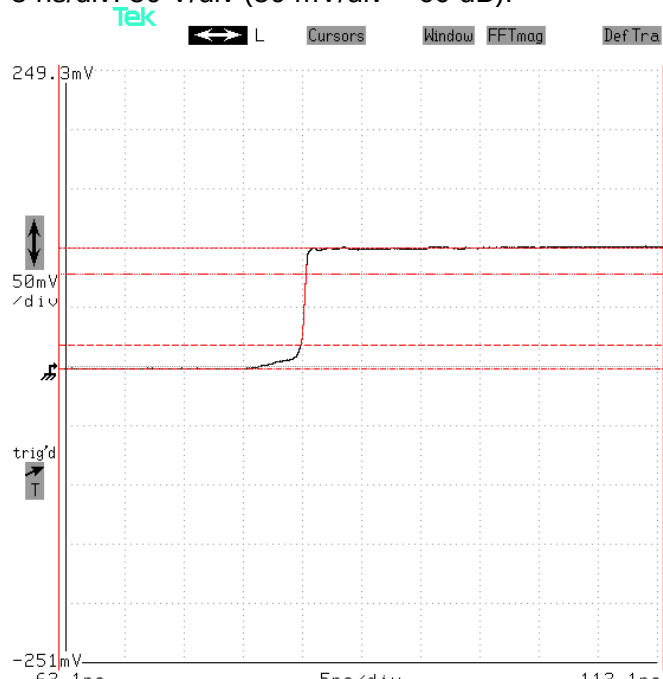
5 ns/div. 50 V/div (50 mV/div × 60 dB):

10 ns/div. 50 V/div (50 mV/div × 60 dB):



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

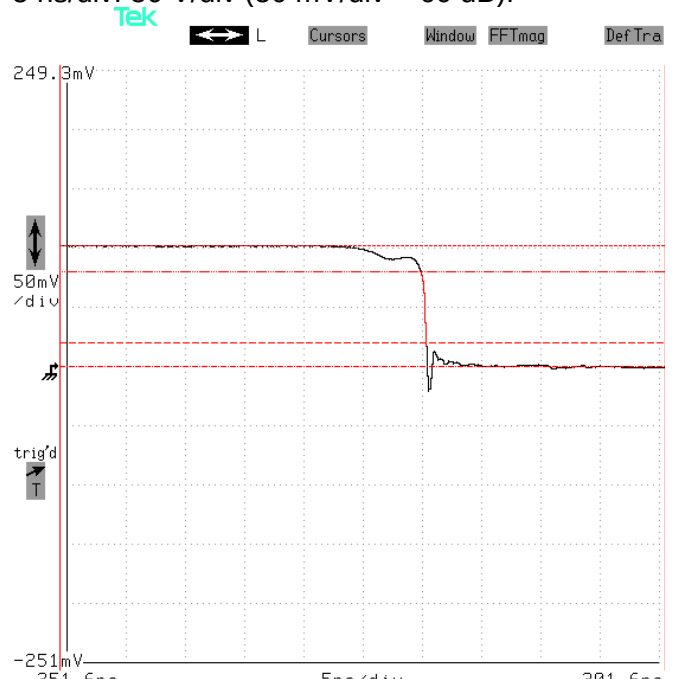
5 ns/div. 50 V/div (50 mV/div × 60 dB):



Rise	Fall	Width	Measurements	Main Size	
450.51 ps	error	error		5ns/div	
				Main Pos	
				61.5ns	
Amplitude			Compare & References	Remove/Clr Trace 1	Pan/Zoom
102.00 mV				Avg(M1)	Off
				Main	

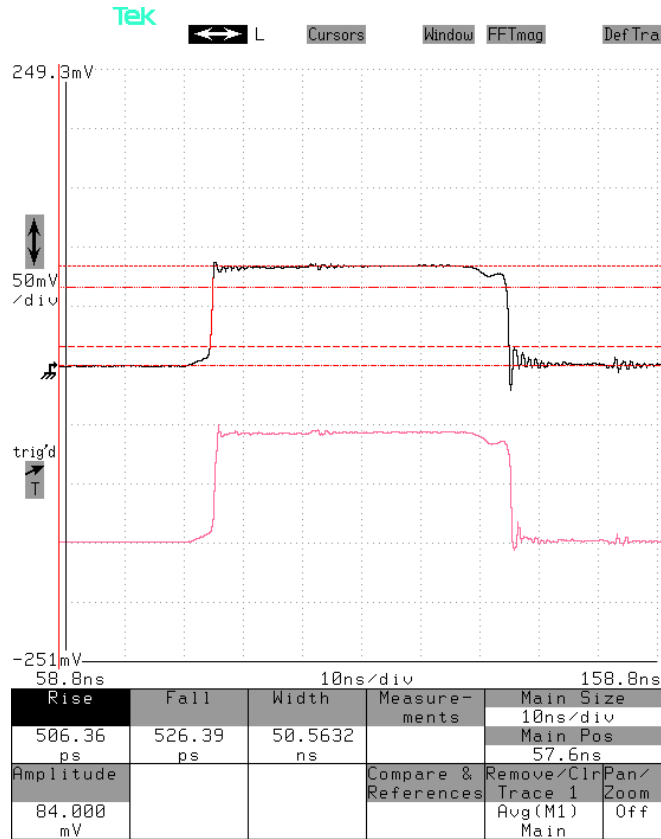
Mainframe output, > +100V into 50 Ohms, 50 kHz, 200 ns pulse width, trailing edge:

5 ns/div. 50 V/div (50 mV/div × 60 dB):



Rise	Fall	Width	Measurements	Main Size	
error	499.65 ps	error		5ns/div	
				Main Pos	
				251ns	
Amplitude			Compare & References	Remove/Clr Trace 1	Pan/Zoom
102.00 mV				Avg(M1)	Off
				Main	

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



Top waveform: Voltage across the parallel combination of the 4.6 Ω effective resistance. It should be approximately  $(+100V / 54.6\Omega) \times 4.6\Omega = +8.4V$  in amplitude, which agrees with the observed waveform.

Bottom waveform: "MI" output, approximately +100V / 11.

Both: 5 V/div (= 50 mV/div × 40 dB), 10 ns/div.

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  $5.1\Omega \parallel 50\Omega (R_{SCOPE}) = 4.6\Omega$ .

