AVTECH ELECTROSYSTEMS LTD.
NANOSECOND WAVEFORM ELECTRONICS
SINCE 1975

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

PERFORMANCE CHECKSHEET

Model: AVO-9F2-C-AK1-QTKC-N-AC22
Type: Ultra-High-Speed Laser Diode Driver
S.N.: 12935 (modified)
Date: June 7, 2013

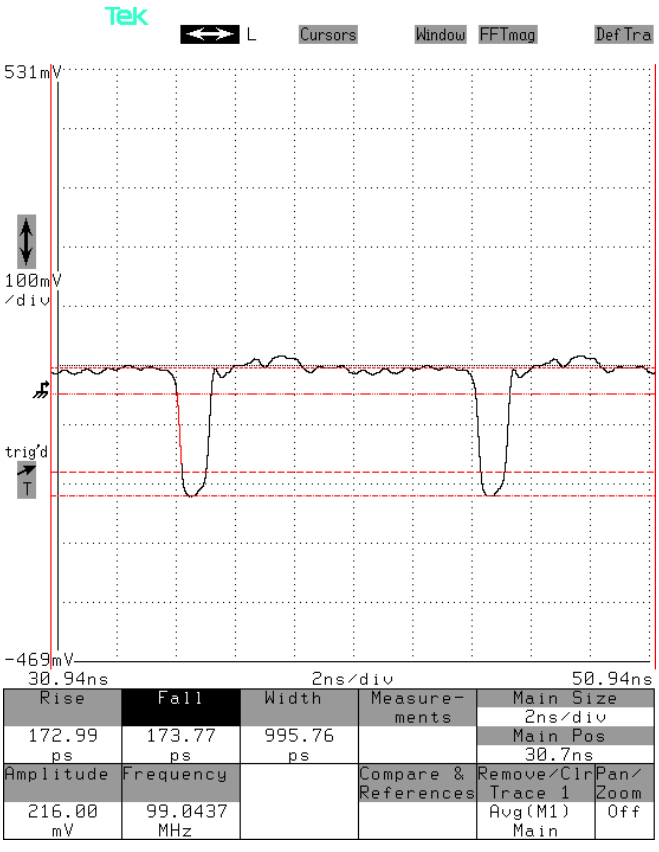
Basic specifications: →

Max. Output Amplitude: -340 mA
Pulse Width (FWHM): 0.4 - 1 ns
Rise Time (20%-80%): ≤ 200 ps
Fall Time (80%-20%): ≤ 200 ps
PRF: 25 - 100 MHz
Jitter, Stability: OK
Prime Power: 100-240V AC, 50-60 Hz.

Test Waveforms

100 MHz, 1 ns, maximum amplitude, mainframe output into 50 Ohms.

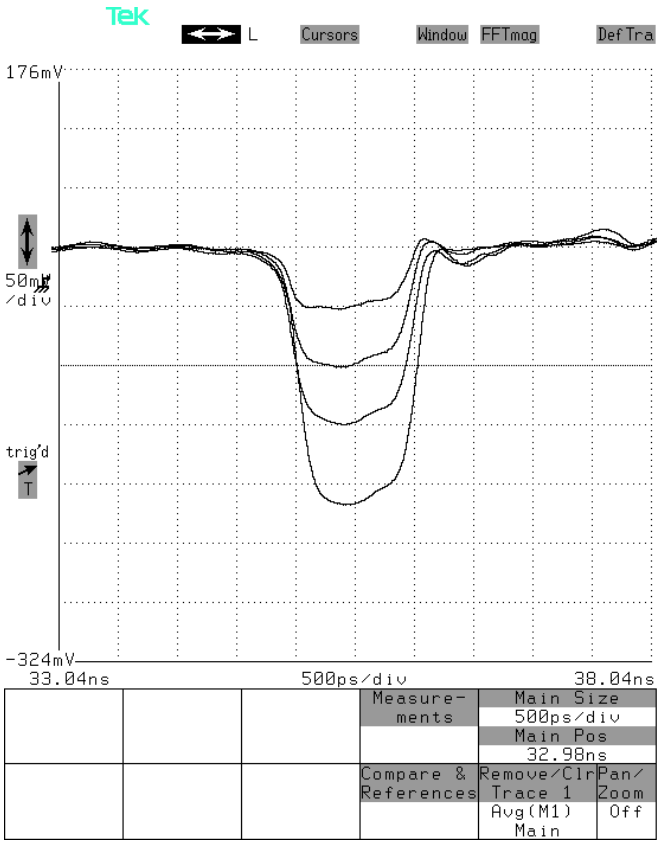
2 ns/div. 10 V/div (100 mV/div × 40 dB):



Rise	Fall	Width	Measure-ments	Main Size
172.99 ps	173.77 ps	995.76 ps		2ns/div
				Main Pos
				30.7ns
Amplitude	Frequency		Compare & References	Remove/Clr Trace 1	Pan/ Zoom
216.00 mV	99.0437 MHz			Avg(M1) Main	Off

100 MHz, 1 ns, mainframe output into 50 Ohms, at four different amplitudes (using the same pulse width settings):

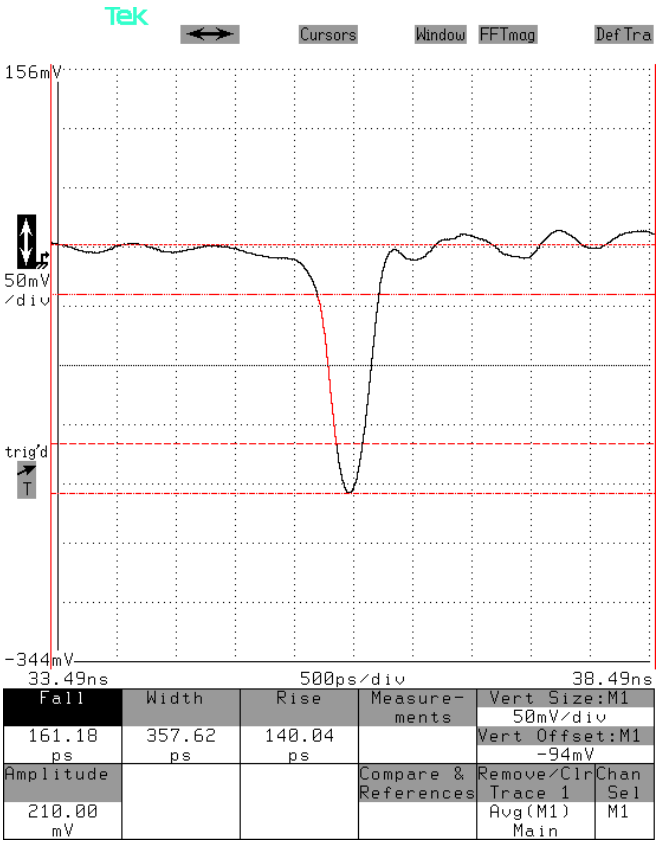
500 ps/div. 5 V/div (50 mV/div × 40 dB):



			Measure-ments	Main Size
				500ps/div
				Main Pos
				32.98ns
			Compare & References	Remove/Clr Trace 1	Pan/ Zoom
				Avg(M1) Main	Off

100 MHz, < 0.4 ns, maximum amplitude, mainframe output into 50 Ohms.

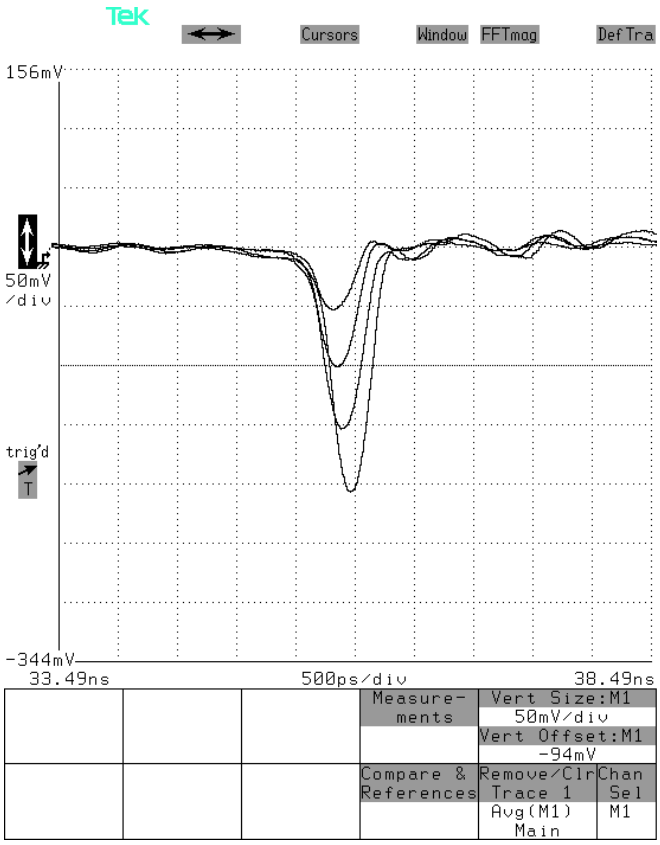
2 ns/div. 10 V/div (100 mV/div × 40 dB):



Fall	Width	Rise	Measure-ments	Vert Size:M1
161.18 ps	357.62 ps	140.04 ps		50mV/div
				Vert Offset:M1
				-94mV
Amplitude			Compare & References	Remove/Clr Trace 1 / Chan Sel
210.00 mV				Avg(M1) Main / M1

100 MHz, < 0.4 ns, mainframe output into 50 Ohms, at four different amplitudes (using the same pulse width settings):

500 ps/div. 5 V/div (50 mV/div × 40 dB):



			Measure-ments	Vert Size:M1
				50mV/div
				Vert Offset:M1
				-94mV
			Compare & References	Remove/Clr Trace 1 / Chan Sel
				Avg(M1) Main / M1

At 100 MHz, -20V, 0.5 ns, with a 50 Ohm load installed in the AVX-S1-P1-QTKC-T1C output module:

Top: AVX-S1-P1-QTKC-T1C MI output (÷11 replica of load voltage), 2 ns/div. 1 V/div (100 mV × 20 dB). (The inductance of the load causes some degradation of the waveform.)

Bottom: Mainframe monitor output (÷11 replica of main output), 2 ns/div. 1 V/div (100 mV × 20 dB).

At 100 MHz, -20V, 1 ns, with a 50 Ohm load installed in the AVX-S1-P2-QTKC output module:

Top: AVX-S1-P2-QTKC MI output (÷11 replica of load voltage), 2 ns/div. 1 V/div (100 mV × 20 dB). (The inductance of the load causes some degradation of the waveform.)

Bottom: Mainframe monitor output (÷11 replica of main output), 2 ns/div. 1 V/div (100 mV × 20 dB).