AVTECH ELECTROSYSTEMS LTD.
NANOSECOND WAVEFORM ELECTRONICS
SINCE 1975

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BOX 5120, LCD MERIVALE
OTTAWA, ONTARIO
CANADA K2C 3H4

PERFORMANCE CHECKSHEET

Model: AVO-9A3-B-P1C-T1C-W4-N
Type: Ultra-High-Speed Laser Diode Driver
S.N.: 12555
Date: December 1, 2010

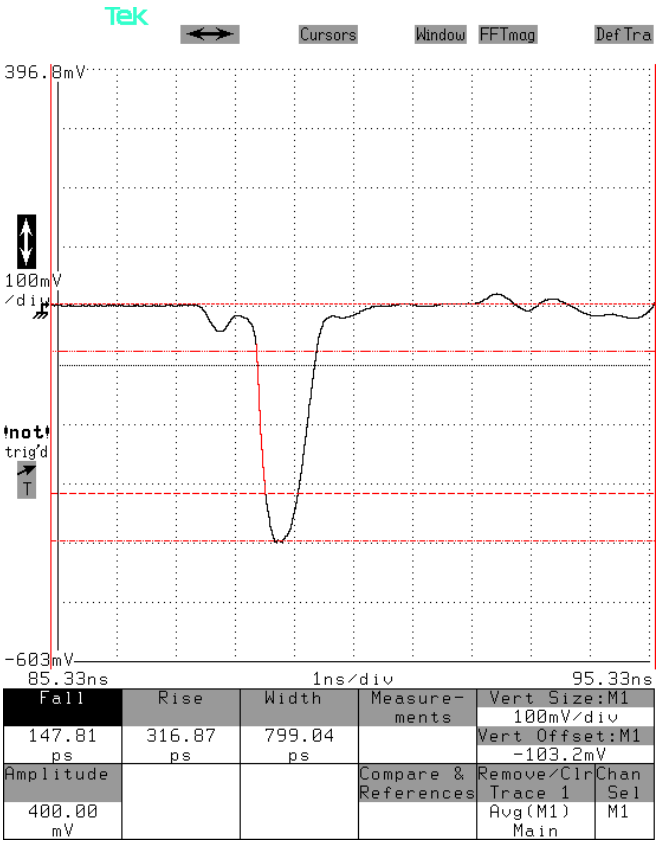
Basic specifications: →

Output Amplitude:	0 to -43V, to 50Ω
Pulse Width (FWHM):	0.4 – 4 ns
Rise Time (20%-80%):	≤ 200 ps
Fall Time (80%-20%):	≤ 450 ps
PRF:	1 Hz – 1 MHz
Jitter, Stability:	OK
Prime Power:	100-240V AC, 50-60 Hz.

Test Waveforms

Pulse into 50 Ohm load at 10 kHz, 0.8 ns, -40V,

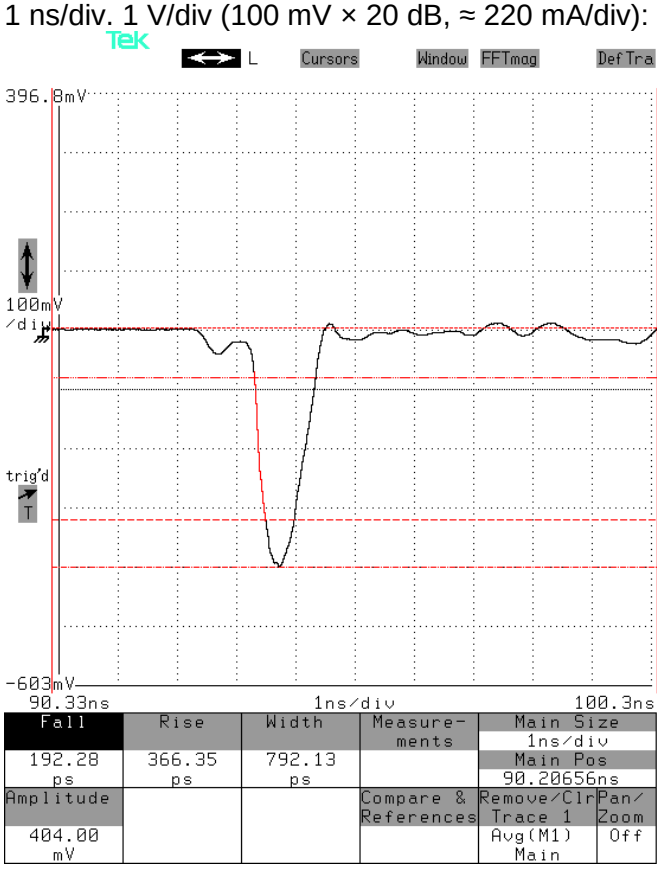
1 ns/div. 10 V/div (100 mV × 40 dB):



Fall	Rise	Width	Measure-ments	Vert Size:M1
147.81 ps	316.87 ps	799.04 ps		100mV/div
				Vert Offset:M1
				-103.2mV
Amplitude			Compare & References	Remove/Clr Trace 1	Chan Sel
400.00 mV				Avg(M1) Main	M1

"MI" output of AVX-S1-P1C-T1C into 50 Ohms, for -40V, 10 kHz, 0.8 ns pulse width, with a 1N459A test diode in series with 27 Ohms, installed in the output sockets:

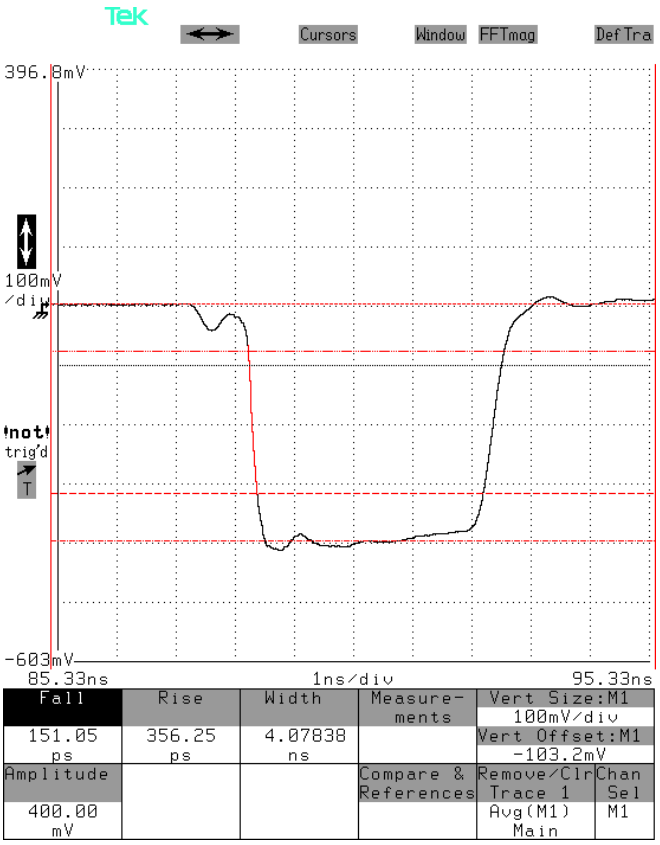
1 ns/div. 1 V/div (100 mV × 20 dB, ≈ 220 mA/div):



Fall	Rise	Width	Measure-ments	Main Size
192.28 ps	366.35 ps	792.13 ps		1ns/div
				Main Pos
				90.20656ns
Amplitude			Compare & References	Remove/Clr Trace 1	Pan/ Zoom
404.00 mV				Avg(M1) Main	Off

Pulse into 50 Ohm load at 10 kHz, > 4 ns, -40V,

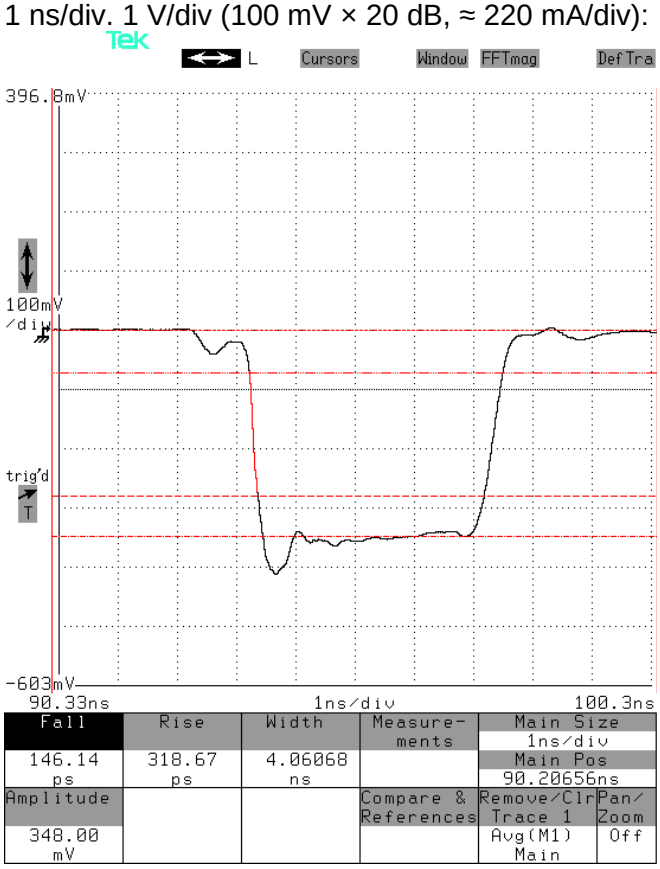
1 ns/div. 10 V/div (100 mV × 40 dB):



Fall	Rise	Width	Measure-ments	Vert Size:M1
				100mV/div
151.05 ps	356.25 ps	4.07838 ns		Vert Offset:M1
				-103.2mV
Amplitude			Compare & References	Remove/Clr Trace 1 / Chan Sel
400.00 mV				Avg(M1) Main / M1

"MI" output of AVX-S1-P1C-T1C into 50 Ohms, for -40V, 10 kHz, > 4 ns pulse width, with a 1N459A test diode in series with 27 Ohms, installed in the output sockets:

1 ns/div. 1 V/div (100 mV × 20 dB, ≈ 220 mA/div):



Fall	Rise	Width	Measure-ments	Main Size
				1ns/div
146.14 ps	318.67 ps	4.06068 ns		Main Pos
				90.20656ns
Amplitude			Compare & References	Remove/Clr Trace 1 / Pan/Zoom
348.00 mV				Avg(M1) Main / Off

The spike on the leading edge is caused by the turn-on transient of the diode.