



AVTECH ELECTROSYSTEMS LTD.

NANOSECOND WAVEFORM ELECTRONICS
SINCE 1975

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PERFORMANCE CHECKSHEET

Model: AVR-D2-B-SOA
Type: MIL-S-19500 Pulse Generator
S.N.: 12461
Date: July 28, 2010

Output Amplitude: 0 to $\pm 40V$, to 50 Ω
Pulse Width (FWHM): 2 ns , 200 ns – 20 us
Rise Time (10%-90%): ≤ 1.5 ns
Fall Time (90%-10%): ≤ 2.5 ns
PRF: 1 Hz – 50 kHz
Jitter, Stability: OK
Prime Power: 100-240V AC, 50-60 Hz.

Basic specifications: →

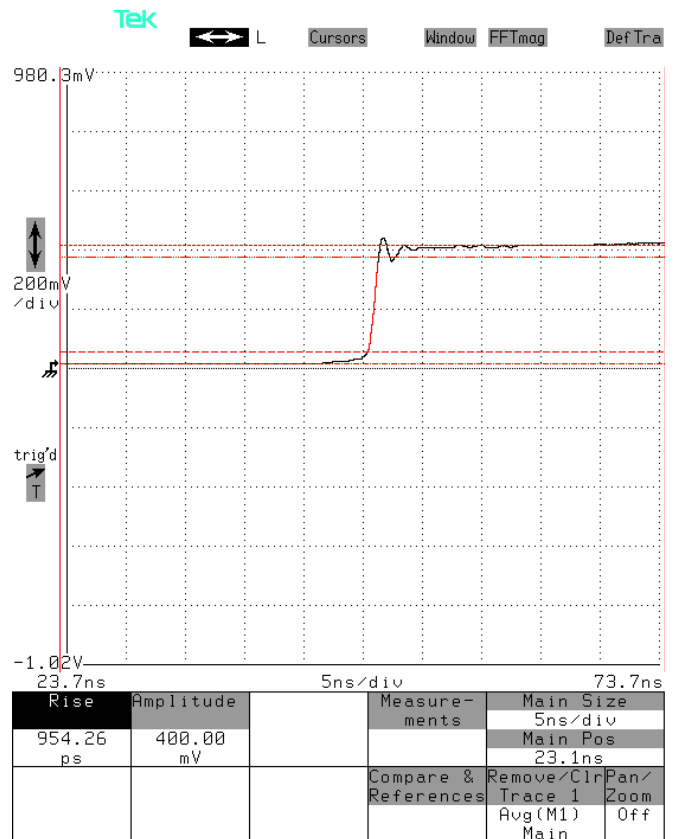
Test Waveforms

Full pulse at 10 kHz, 200 ns, +40V,

50 ns/div. 20 V/div (200 mV \times 40 dB):

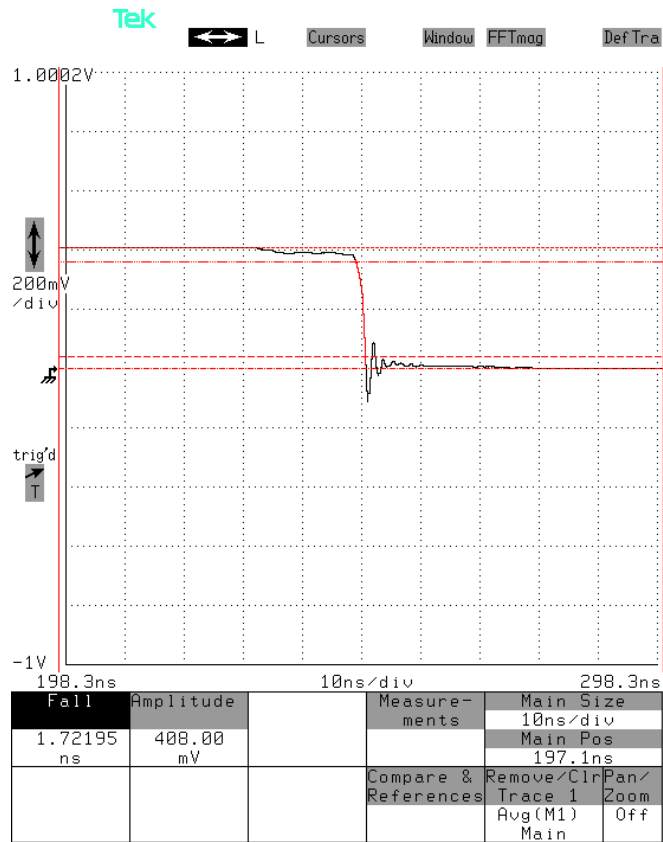
Leading edge at 10 kHz, 200 ns, +40V,

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



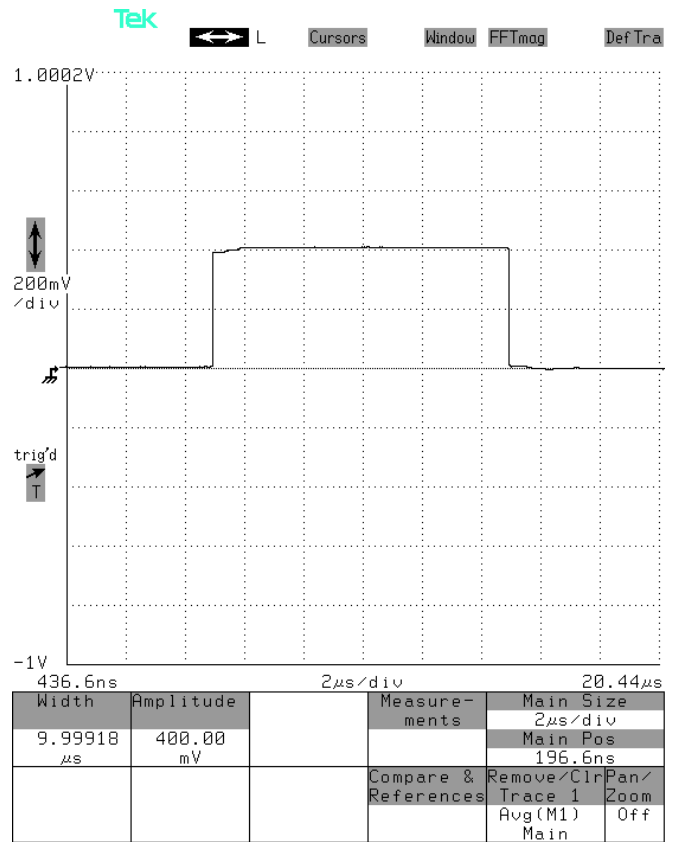
Trailing edge at 10 kHz, 200 ns, +40V,

5 ns/div. 20 V/div (200 mV × 40 dB):

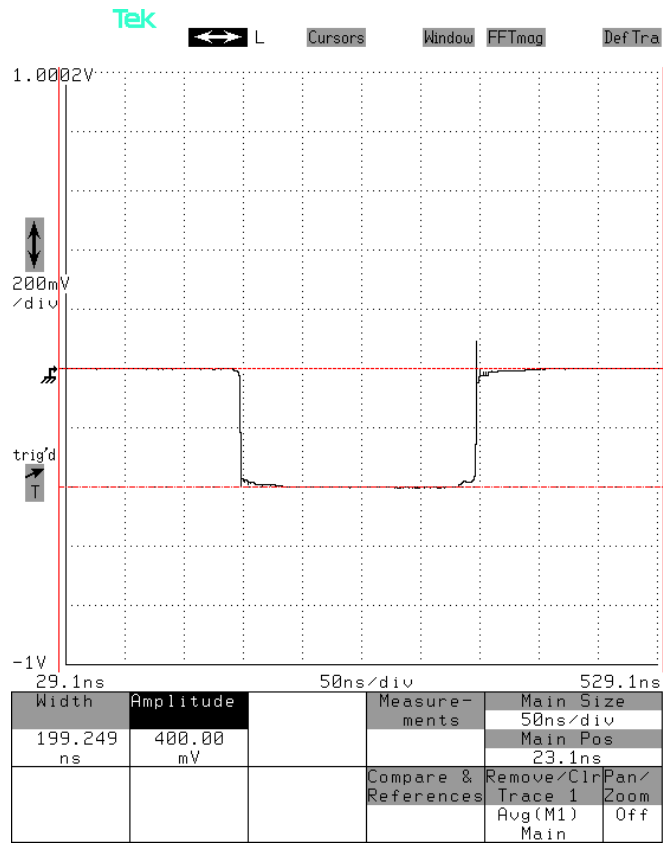


Full pulse at 1 kHz, 10 us, +40V,

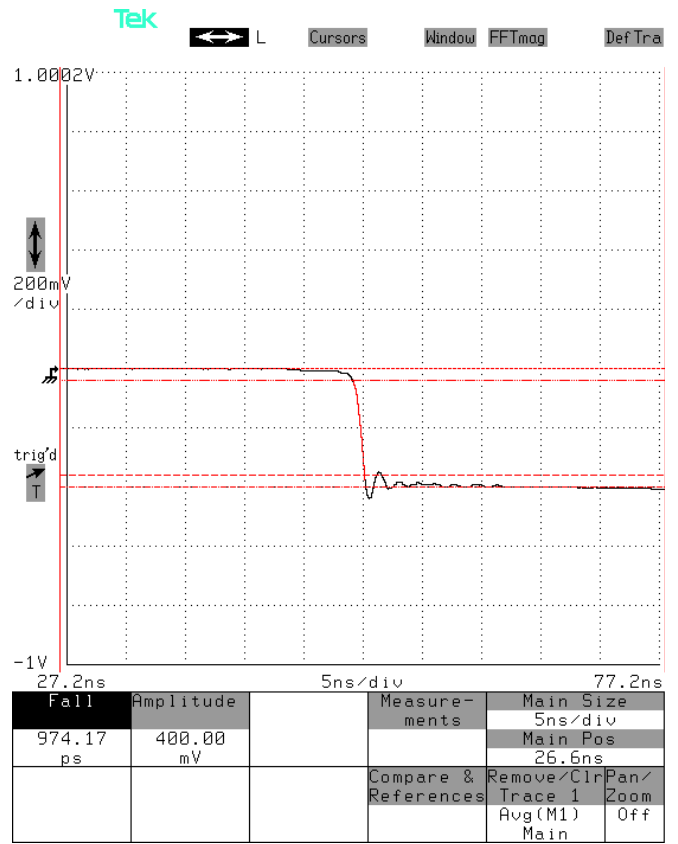
2 us/div. 20 V/div (200 mV × 40 dB):



Full pulse at 10 kHz, 200 ns, -40V,
5 ns/div. 20 V/div (200 mV × 40 dB):

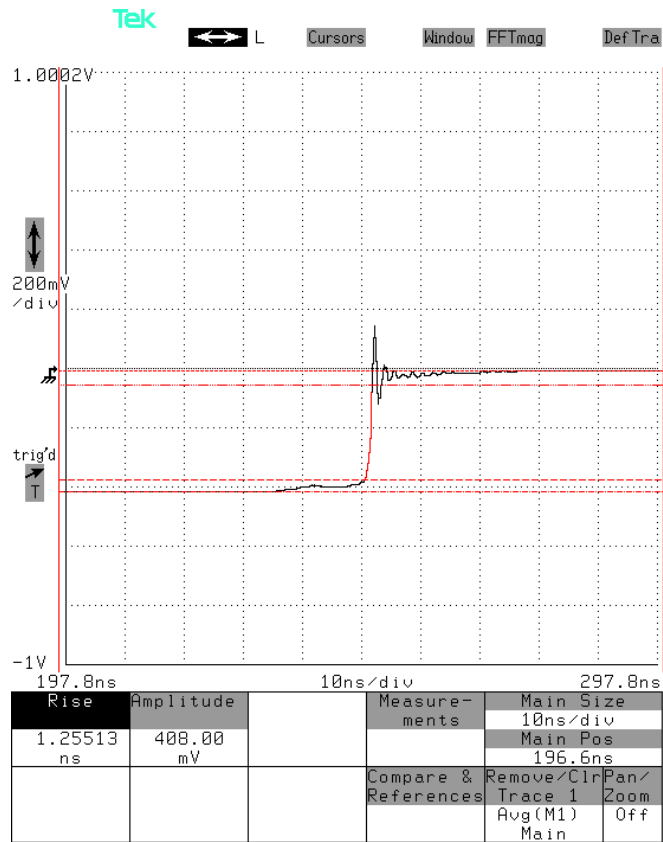


Leading edge at 10 kHz, 200 ns, -40V,
5 ns/div. 20 V/div (200 mV × 40 dB):



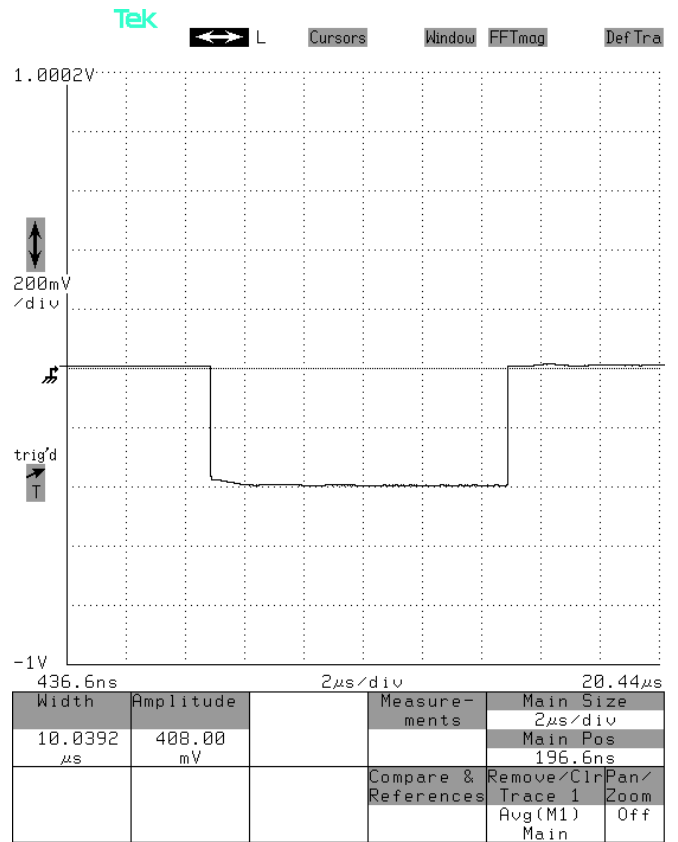
Trailing edge at 10 kHz, 200 ns, -40V,

5 ns/div. 20 V/div (200 mV × 40 dB):



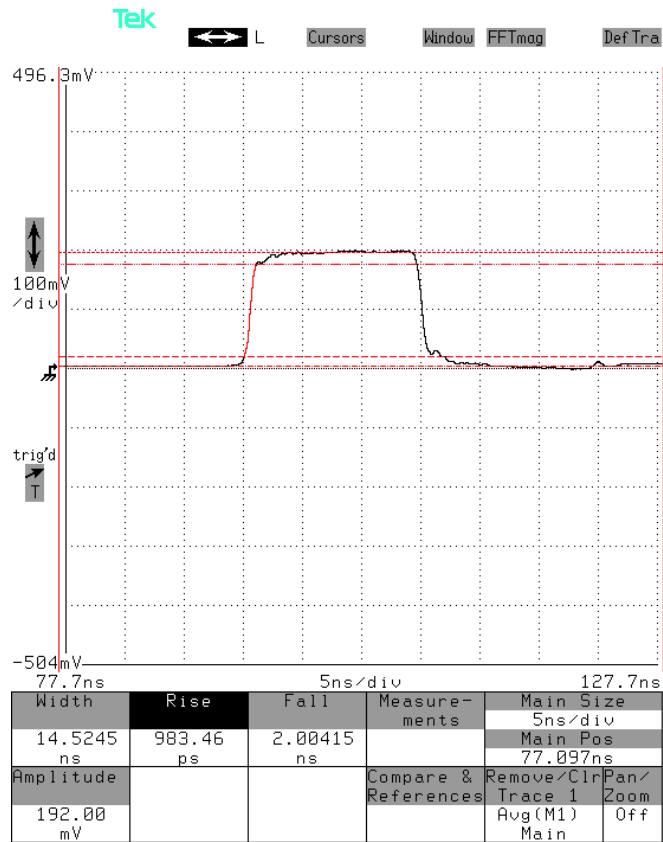
Full pulse at 1 kHz, 10 us, -40V,

2 us/div. 20 V/div (200 mV × 40 dB):



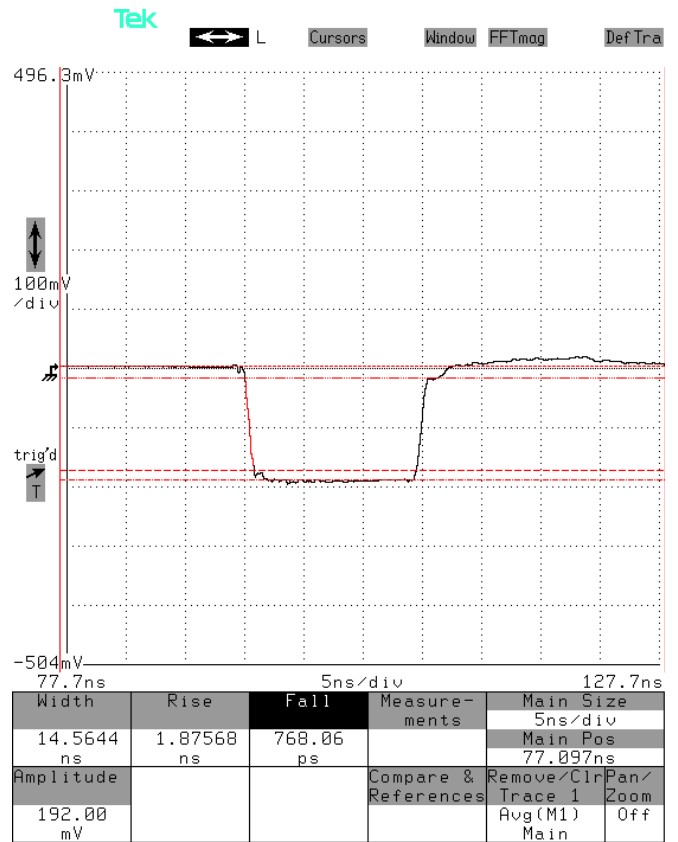
Full pulse at 10 kHz, 15 ns, +2V,

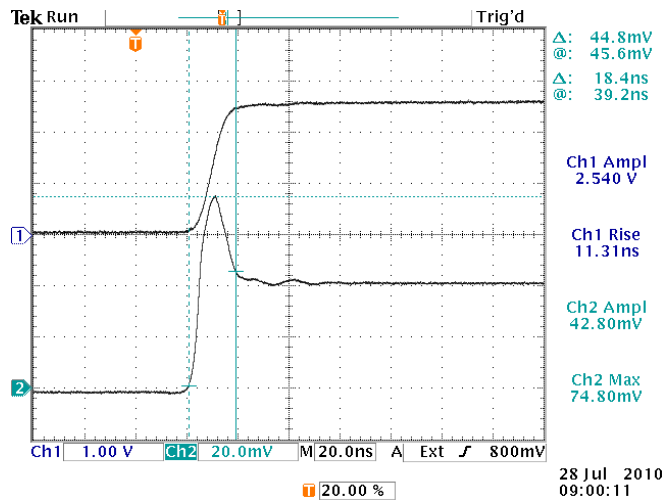
5 ns/div. 1 V/div (100 mV × 20 dB):



Full pulse at 10 kHz, 15 ns, -2V,

5 ns/div. 1 V/div (100 mV × 20 dB):



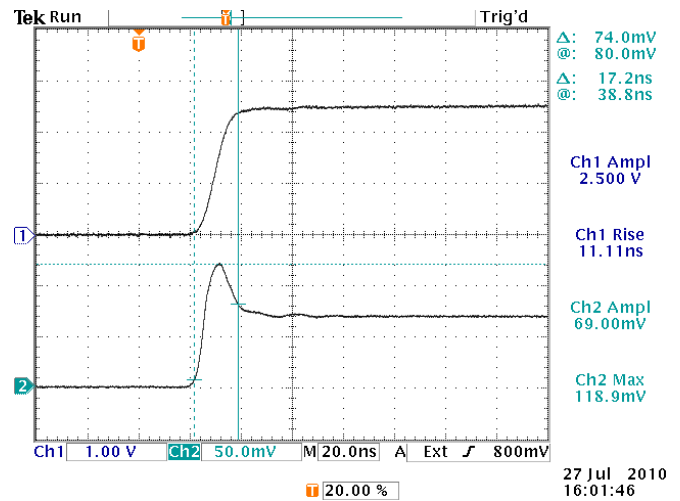


With AVX-FILT-10NS and AVX-TFR-MIX attached to the AVR-D2-B.

Top: AVX-TFR-MIX MON out, showing the +25.5V input pulse. Attenuated by a factor of 10.

Bottom: AVX-TFR-MIX OUT, showing a peak V_{FR} of 0.748V, and a steady-state V_F of 0.428V for a forward current of $25V / 50 \text{ Ohms} = 0.5A$. Attenuated by a factor of 10.

DUT used: 1N5819 (supplied by Avtech)



With AVX-FILT-10NS and AVX-TFR-MIX attached to the AVR-D2-B.

Top: AVX-TFR-MIX MON out, showing the +25.5V input pulse. Attenuated by a factor of 10.

Bottom: AVX-TFR-MIX OUT, showing a peak V_{FR} of 1.189V, and a steady-state V_F of 0.69V for a forward current of $25V / 50 \text{ Ohms} = 0.5A$. Attenuated by a factor of 10.

DUT used: JTX1N5811 (supplied by customer)