Time Domain Report

Technician:	Tester 1
Test Date:	2026-01-03 14:29:58
Test Procedure:	Test-1
Project:	Test
Customer:	Test

Overall Result: INCONCLUSIVE

Executive Summary

Overall Result: INCONCLUSIVE

The pulse■width measurement could not be conclusively verified due to insufficient waveform capture and ambiguous baseline stability. The single recorded trace (CH1) shows a large standard deviation (1.76 V) relative to the mean (1.72 V), suggesting significant noise or baseline drift that may mask the true pulse characteristics. Additionally, the time span of ~10 ms and a 10 MS/s sampling rate provide only 100 000 samples, which may not fully resolve the pulse edges or capture the full period required for accurate width determination.

Key Findings:
1. **Baseline Instability:** The high standard deviation indicates that the DC coupling or probe grounding may be compromised, leading to an unreliable baseline.
2. **Edge Resolution:** With the current sample rate, rise/fall times cannot be precisely measured; the trace does not show clearly defined edges.
3. **Incomplete Data:** Only one channel was recorded, and no explicit trigger or pulse■width metrics are reported, preventing verification against the expected tolerance.

Critical Issues & Actions:
- Re■capture the waveform with proper DC■coupled probe calibration and a stable trigger to isolate a single, clean pulse.
- Verify probe attenuation settings and check for any cable or connector issues that could introduce baseline shifts.
- Once a clean trace is obtained, perform a full pulse■width, rise/fall, and amplitude analysis to confirm compliance with specifications.

Summary generated by AI

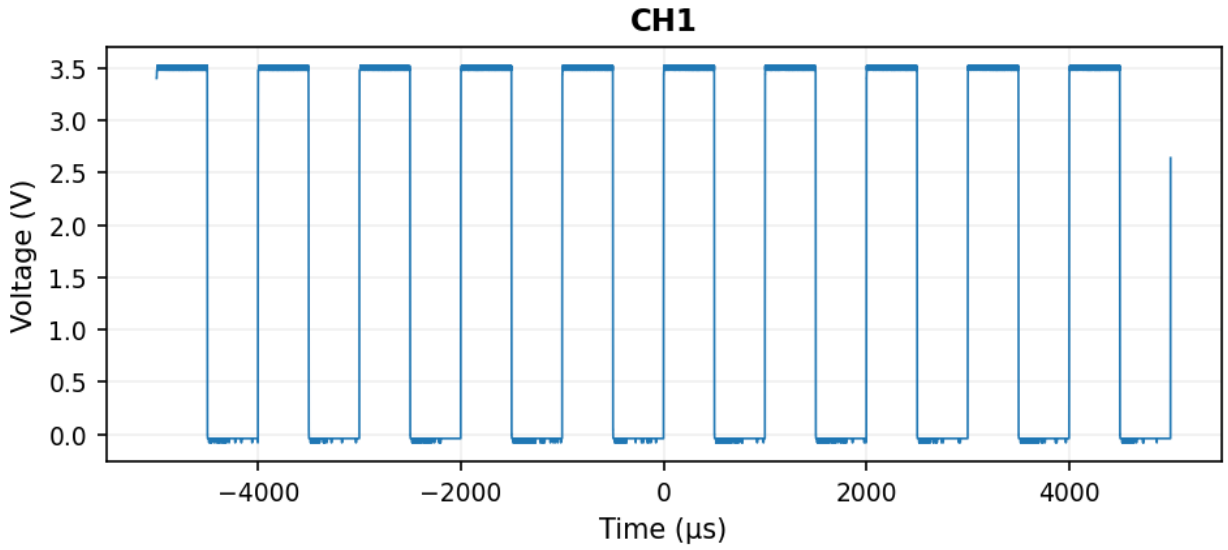
Key Findings

• **Overall result is inconclusive** – the test did not yield a definitive pulse■width or timing measurement, indicating a missing or failed trigger/measurement configuration.
• **Sample rate and record length give a 10 ms capture window** – 10 MS/s × 100 k samples = ~10 ms, which may be too short if the pulse period is longer than this span, potentially truncating the waveform.
• **Signal uses the full vertical range (P■P = 3.6 V)** – the waveform spans from –0.08 V to +3.52 V, filling the 3.6 V range; this leaves little headroom and could cause clipping or distortion if the signal ever exceeds the set limits.
• **High relative standard deviation (σ ≈ 1.76 V vs. mean ≈ 1.72 V)** – the waveform exhibits large amplitude swings relative to its mean, suggesting a highly variable or noisy signal that may affect timing accuracy.
• **No trigger or measurement data are present** – the report lacks trigger settings, rise/fall times, or pulse■width values, making it impossible to assess whether the oscilloscope captured the intended events or to verify measurement accuracy.

Waveform Captures

Captured waveforms and analysis.

Waveforms



Channel:	CH1
Sample Rate:	10.00 MS/s
Record Length:	100000 samples
Peak-to-Peak:	3.6000 V
Min:	-0.0800 V
Max:	3.5200 V

Recommendations

1. Re■trigger the capture on the rising edge of the pulse and set a 50 % slope trigger to lock onto the exact transition; this will reduce jitter and allow accurate pulse■width measurement.
2. Verify probe compensation by measuring a known square■wave generator; adjust the probe’s compensation pot until the rise/fall times are flat, ensuring the 10 MS/s sample rate accurately resolves the pulse edges.
3. Reduce the voltage range to 0–2 V (or tighter) and increase the vertical resolution; this improves the signal■to■noise ratio and will make the pulse’s rise/fall times clearer for width analysis.
4. Extend the record length to at least 200 k samples and enable averaging or a higher■order filter to suppress the 1.76 V RMS noise seen in the Std Dev, thereby clarifying the true pulse shape.
5. Capture the waveform in both time■domain and FFT mode; compare the spectral content to the expected bandwidth to identify any high■frequency ringing or EMI that could be skewing the pulse■width measurement.

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