



Semiconductor Test Data Analytics and Report Tool

An Augmented Analytics Platform for Semiconductor Test Data Analytics and Reporting

Product: Semiconductor Test Data Analytics SaaS/PaaS

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NCSV58.00C
smartscale04 93000-SOC. EN3210_ST8/src/common/EN3210_PRO0_REVA5p6.prog37SmartTest(SmartTest : s/w rev. 8.7.3.0 (T), Tue, 18 Mar 2025 07:28:23 +0100; Recipe: 8.7.3.0, 28250318FT25ITEST smartscale04
MY04602792 (PHANDLERS)VIA81L82-22510VDD1P0PAVDD1P0PA-22502VDD1P0PAVDD1P0PA-42504VDD1P0PAU01P0PA-42512 VDD1P0PAVDD1P0PA-102K1K1-103K1K1-104K1K1-105K1K1- 2251RREFRREF<
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A modern analytics platform combined a traditional BI dashboard with AI-driven analytics features in a single tool platform.

Features:

End-to-end Workflow - From Data input to Report generation

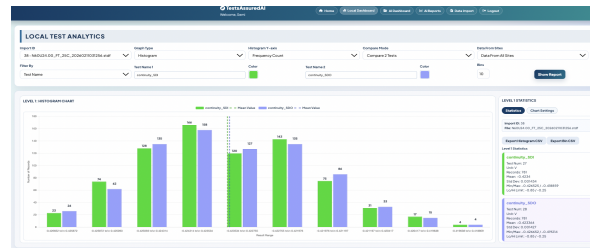
- Upload or auto-upload input data
- Data Analytics
- Report generation

Traditional Data Analytics Dashboard - Drop-down selection workflow and Report

- Filters, charts and drill-downs
- Structured and predefined data
- Manual interpretation

AI-driven (ML-algorithm) Dashboard - Query/AI-assistant, Analytics to Report

- Generate insights, predictions, prescriptive and recommendations
- Predictive + prescriptive analytics
- Rule-Based Optimized Query Processing System for Scalable Multi-Tenant Conversational Analytics with Token-Efficient Hallucination-Reduced Language Model Orchestration - innovation ideas"



SPEC WINDOW VIEW

Tight Clustering Observed: All 781 records fall within a single spec window bin (-0.420 to -0.370 V) out of 10 equal bins spanning the full specification range (-0.426 V to -0.20 V). The data occupies only 1.00% of the total spec range (0.00250 V out of 0.00250 V), confirming extremely tight clustering well within the specification limits.

Spec Window Bin	Range (V)	Records Contained	% of Dataset	Status
Bin 5 of 10	-0.420 to -0.370	781	100.00%	All Records Contained

KEY INSIGHTS

- All 781 records are tightly clustered between -0.426 V and -0.4193 V, representing only 1.00% of the total spec range (0.00250 V), confirming an exceptionally stable manufacturing process.
- The mean (-0.422754 V) is offset +0.127246 V from the spec midpoint (-0.5000 V), positioning results closer to the H Limit side while remaining well within specification.
- Only 1 failure out of 781 records (0.13%) fail rate demonstrates excellent yield performance for this test.
- The extremely low standard deviation (0.001601 V) relative to the spec range (0.00250 V) indicates a process capability far exceeding typical manufacturing targets, reflecting a highly consistent and stable process.
- The histogram shows a decreasing trend from left to right in the upper bins (bins 7-10), suggesting a slight right-side tail and possible process drift toward higher voltages.
- Bins 1, 4, and 7 each contain the peak count of 84 records (12.04%), showing a regular oscillating pattern across the distribution that may reflect batch or lot characteristics in the dataset.

HISTOGRAM DISTRIBUTION DATA (10 BINS)

Bin	Range (V)	Records	% of Total	Distribution
1	-0.4256 to -0.4250	94	12.04%	
2	-0.4250 to -0.4244	86	11.01%	
3	-0.4244 to -0.4237	78	9.99%	
4	-0.4237 to -0.4231	94	12.04%	
5	-0.4231 to -0.4225	86	11.01%	
6	-0.4225 to -0.4218	78	9.99%	
7	-0.4218 to -0.4212	94	12.04%	
8	-0.4212 to -0.4206	78	9.99%	
9	-0.4206 to -0.4199	62	7.94%	
10	-0.4199 to -0.4193	31	3.97%	