

Thermo Scientific nProber IV Delivers Faster, Easier Failure Analysis Process for Semiconductor Labs

New platform provides faster identification of defects that impact device performance

HILLSBORO, Ore., July 30, 2020 /PRNewswire/ -- Thermo Fisher Scientific today released the Thermo Scientific nProber IV nanoprobe platform, a fault isolation system used by semiconductor fabs to precisely locate and characterize the nanometer-scale electrical faults that impact device performance and reliability. The most advanced of Thermo Scientific's leading nProber systems, the nProber IV provides greater levels of automation and precision for semiconductor yield engineers as they perform leading-edge and mid-range logic and memory failure analysis. The new nProber IV platform is Thermo Scientific's easiest-to-use SEM-based nanoprobe solution to date, extending nanoprobe to more users while giving them the data required for a fast and efficient fault analysis process.

"As an established leader in failure analysis, we know companies investing in nanoprobe dramatically improve their fault analysis workflows, and the nProber IV platform offers our highest technical performance to date," said Glyn Davies, vice president and general manager of semiconductor at Thermo Fisher.

"Semiconductor manufacturers will save time and money by more quickly identifying defects that impact device performance, allowing them to bring better products to market even faster."

Failure analysis lab managers who need to improve the efficiency of their TEM workflows can take advantage of the automation and guided operation built into the nProber IV. It enables production-oriented precise fault localization at the leading edge while reducing the need for expert users.

The nProber IV provides specific localization and accurate electrical characterization of parametric faults in advanced FinFET transistors by combining an ultra-stable, temperature control probe platform and low energy electrostatic nanoprobe LEEN2 SEM column that enables probe at 100eV to support today's advanced technologies. Transistor characterization at less than 1 nanosecond pulsing improves the detection of resistive gate faults.

nProber IV introduces the second-generation EBIRCH2 detection system for enhanced sensitivity and the precise localization of low impedance faults. EBIRCH2 fault localization is combined with the LEEN2 SEM column that can operate at up to 100nA, allowing the nProber IV system to localize faults in 3D NAND and interconnect structures.

Finally, nProber IV efficiency is enhanced with the easyProbe automation system that automates much of the nanoprobe workflow and allows for extended periods of unattended operation, allowing users to spend time on other tasks in the FA lab while the nProber IV system operates.

To learn more, please visit <https://ter.li/nPIV>.

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