

Cascade TESLA200

200 mm On-Wafer Power Semiconductor Probing System - Semi-automatic

Up to 10 kV / 600 A with thin-wafer support ($\geq 50 \mu\text{m}$)
Accurate $R_{ds(on)}$ with constant R_c at all temperatures with Contact Intelligence™ Technology
Anti-arcing solutions for wafer, probes and probe cards

TUV-certified probing environment

- Enclosure for operator safety
- Interlock connection for test instruments
- Regulatory-approved high-voltage and high-current cables and connectors

High-stability microscope mount

- Manual or programmable
- Gross z-lift with repeatable focus for easy access to probes

Connection panels

- Coaxial, triaxial, and pin jack feed-troughs available
- Limit cable strain and motion for measurement stability
- Instrument stays connected to back of panel
- Probe connection made at front of panel
- Simple to re-arrange cabling when needed

MicroChamber®

- EMI-shielding for low-noise measurements
- Environmentally sealed for moisture-free, low-temperature measurements
- Low volume for the fastest purge
- Light-tight to eliminate the need for a dark box

TopHat™

- New TopHat covers for easier and higher-accuracy probe setup
- Allows full access to positioners and microscope at any temperature
- Allows probe adjustments without exposing wafer and chamber to external environment

AttoGuard®

- Extends instrument guard to completely surround wafer
- Makes the station invisible to the instrument
- Extremely low capacitance and leakage characteristics
- Fast settling times

PureLine™ technology

- Enhanced EMI-shielding
- Ideal for low-level IV and CV measurements

Platen lift

- Easy and safe contact and separate function for probe cards and positioners
- Available micrometer adjustment to set probe card contact

MicroChamber access door

- Auto-locking door to protect wafers at cold temperatures
- Full width for easy access to wafers and cal substrates
- Hardware interlock to protect user from hazardous chuck bias voltage

Rollout stage

- Full wafer access for safe and easy loading
- Maintains chuck integrity without contaminating layers
- Easy access to calibration substrates on auxiliary chucks
- New Lift pin technology for fast manual load/unload of hot wafers

eVue™ IV Digital Imaging System

- Fast probe set-up with wide field-of-view and single objective in MicroChamber
- Easy navigation with multiple live video views of probes and wafer
- New high-speed focus system for faster and accurate die stepping
- New safety features for probes and usability

Velox™ probe station control software

- Innovative operating software for advanced probe operation; temperature control, z-profiling and stepping
- Wafer mapping, automated wafer alignment, and auto XYZ and theta correction for sub-micron stepping

Probes / Probe cards

- High voltage (3 kV / 10 kV)
- High current (300 A)
- Low leakage
- T.I.P.S.™ Lupo™ High Voltage / High Power Probe Cards

Contact Intelligence™ Technology

- Integrated HTS (High Thermal Stability) reduces probe drift and thermal soak time
- Optional VuelTrack™ reduces thermal soak time (faster time to data)
- Enables unattended test over multiple temperatures

Auxiliary chucks

- High voltage 10 kV compatible multi-purpose mounts for substrates (cleaning, contact)
- Automated probe cleaning capabilities

Manual mode stage control

- Intuitive manual chuck XY stage controls in semi-automatic engineering mode
- Safe mode: automatically disables manual controls in automation mode

Precision 200 mm motorized wafer stage

- New user-selectable performance modes for standard, fast and high accuracy
- Increased test throughput with up to 1000 mm/sec. speed
- High reliability 24/7 operation

Scalable system

- In-field upgradable wafer loading and automation
- Add test accuracy improvements for increased test performance

Patented TESLA chuck technologies

- HV FemtoGuard® 3kV (trial) / 10kV (coax), and low leakage
- Gold-plated MicroVac™ surface for minimal chuck-to-wafer contact resistance
- High current (600 A) option
- Wide range of temperature options from -55°C to 300°C and higher

Compact small footprint

- Integrated vibration isolation for reliable small pad probing
- Integrated system electronics with power loss wafer safety protection

©Copyright 2020, FormFactor, Inc. All rights reserved. FormFactor and the FormFactor logo are trademarks of FormFactor, Inc. All other trademarks are the property of their respective owners. All information is subject to change without notice.