

Unmatched
productivity
and accuracy
for advanced
CV analysis of
deep submicron
semiconductors
to 110 MHz

Cascade Microtech probe stations fully support today's high-resolution, high-frequency, on-wafer capacitance measurement requirements. This complete solution includes: precision off-wafer, thermally isolated calibration standards and reference capacitors, high-frequency cabling and accessories, along with Cascade's patented AttoGuard® and MicroChamber® technology. This solution assures unsurpassed on-wafer impedance measurements.



Innovating Test
Technologies®

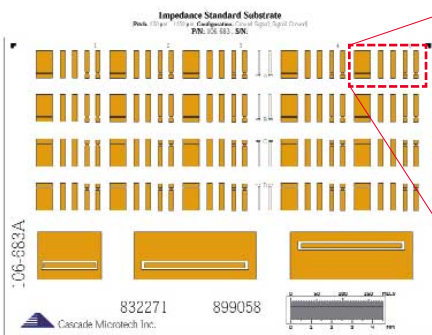
Precision CV Solution

With today's new ultra-thin gate dielectrics, high-k materials, and short channel lengths, achieving needed resolution and accuracy for new semiconductor technologies increasingly depends on higher frequency capacitance measurements. Achieving accurate capacitance measurements above 5 MHz requires new approaches with new accessories.

In addition to Open and Short calibration, Load calibration is essential. Load standards values must be accurate and repeatable. The device measurement path must be properly designed to address high-frequency operation without phase, inductance or ground-related errors.

High-Frequency CV from the on-wafer RF leader

Cascade Microtech, the innovator and leader in high-frequency on-wafer probing systems, has complete probing systems to meet the needs of high-frequency capacitance measurements. Cascade provides off-wafer calibration standards with 50 Ω loads accurate to ±0.3%. Reference capacitors provide a quick and convenient way to confirm and verify system operation. Essential high-frequency accessories and cables are also provided.



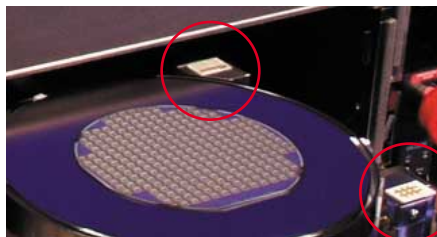
Off-wafer Impedance Standards assure fast and true instrument CV calibrations.

Features

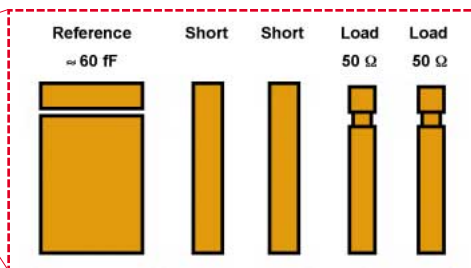
- Thermally isolated, off-wafer impedance analyzer SOL calibrations
- 50 Ω Load Standards accurate to ±0.3%
- Convenient off-wafer 60 fF reference capacitors
- SW saves SOL and reference capacitor locations
- MicroChamber shielded and dark measurement enclosure
- AttoGuard integrated guard shield

Benefits

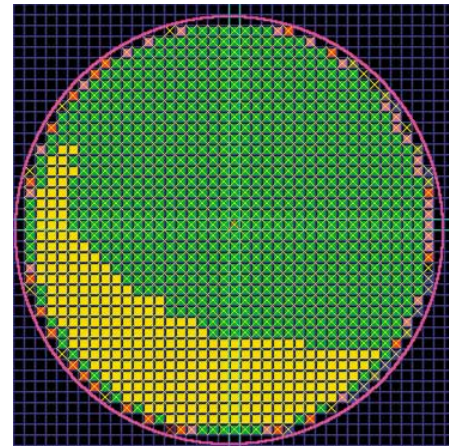
- Fast and accurate calibrations for precision CV capability
- Up to 110 MHz for thin oxide characterization
- Reduced capacitance uncertainty - < 1% at pF levels
- Reduced probe move-related capacitance variation
- CV Capability for 0.13 μm, 0.09 μm geometries and beyond



Thermally isolated, off-wafer auxiliary chucks with independent vacuum control



Calibration standards with precision 50 Ω loads ±0.3%, shorts, and 60 fF reference capacitors



AttoGuard technology reduces capacitance variation with probe moves to <2 fF

Ordering Information

200mm semi-automatic, thermal probe station with MicroChamber, AttoGuard Summit 12861

300mm semi-automatic, thermal probe station with MicroChamber, AttoGuard S300-861

Recommended High Frequency CV Accessories

Probe-to-probe guard connection strap (order 2) 123-625

Wide-pitch GS Impedance Standard Substrate 106-683

1 meter BNC-to-SSMC coaxial cable (order 4 each) 105-540

Coaxial cable, BNC connector, 55 inch (order 4 each) . . . 104-365

Triax to BNC adapter, guard thru, shield open (order 4) 106-837

2 meter BNC-to-SSMC coaxial cable (order 4 each) SQ-105-540-02



Innovating Test Technologies® for better measurements faster

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