

Ultra low level
measurements
over temperature
-65°C to 300°C

The DCP-HTR probe holder delivers fA-level measurement capability from -65°C to 300°C for state-of-the-art characterization and reliability testing. Its unique design offers superior guarding and shielding over-temperature, overcoming the high-temperature performance limitations of standard coaxial needles.



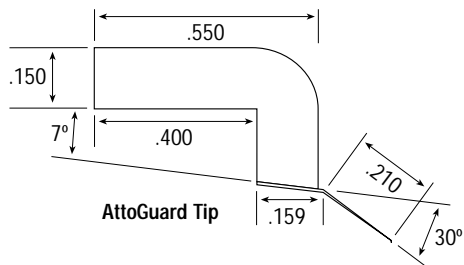
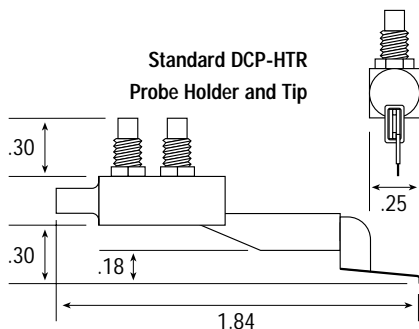
Innovating Test
Technologies

Features

- High-quality construction with low-noise electrical performance
- Precision, industry-standard SSMC 50 Ω connectors
- Optimized for use with Cascade's parametric probing systems
- Replaceable microstrip probe tips — the only system that guarantees fully-guarded measurements to femtoamp and femtofarad levels
- Individual connectors provide force-sense connection for quasi-Kelvin and CV measurements

Benefits

- Ultra-low, fA-level current and fF-level capacitance measurements from -65°C to +300°C
- Full electrical guarding to the probe tip
- Electrically superior to coaxial needle probes, allowing full utilization of semiconductor parametric instrumentation for high-temperature applications
- Integrally designed as part of Cascade's complete measurement solution
- Highly reliable, stable, and repeatable



Dimensions for the Standard DCP-HTR Probe Holder and AttoGuard DCP-HTR Tip (in inches)

Gain Full Test Performance

For full triaxial current/voltage over-temperature measurements using combined signal, guard, and shield cables, the DCP-HTR should be used with Cascade's parametric probing systems that incorporate the MicroChamber™ environment.

When the MicroChamber is combined with low-noise cables and DCP-HTR probes, you gain full access to the measurement potential of your parametric test instruments.

Specifications

Breakdown voltage: >500 V
 Isolation resistance: >1 x 10E13 Ω
 Frequency response (3 dB): 150 MHz
 Mounted temperature range:
 -65°C to +300°C
 (above 250°C: 8 hr. max. operation)
 Typical leakage and noise current:
 -65°C to 200°C ±10 fA
 200°C to 300°C ±20 fA
 Residual capacitance: <100 fF
 (probe tip in air at room temperature)
 Characteristic impedance: 50 Ω
 Body material: gold plated
 Connector type: SSMC

Tip Specifications

Tip material: tungsten
 AttoGuard Version: Round tip, 9 μm (0.35 mil) radius
 Standard: Flat tip, 19 μm (0.7 mil) radius
 Contact force: 3 gram/mil
 Scrub: 3 μm/25 μm

Ordering Information

High Performance DC Probe Holder
 DCP-HTR
 (does not include tips, holder only)
 High Performance DC Probe Points:
 Standard (box of 10) 109-946
 AttoGuard (box of 10) . . . 118-945

(For more detailed information refer to the *DC/CV Parametric Probing Configuration Guide* and the *Summit Station Configuration Guide*)

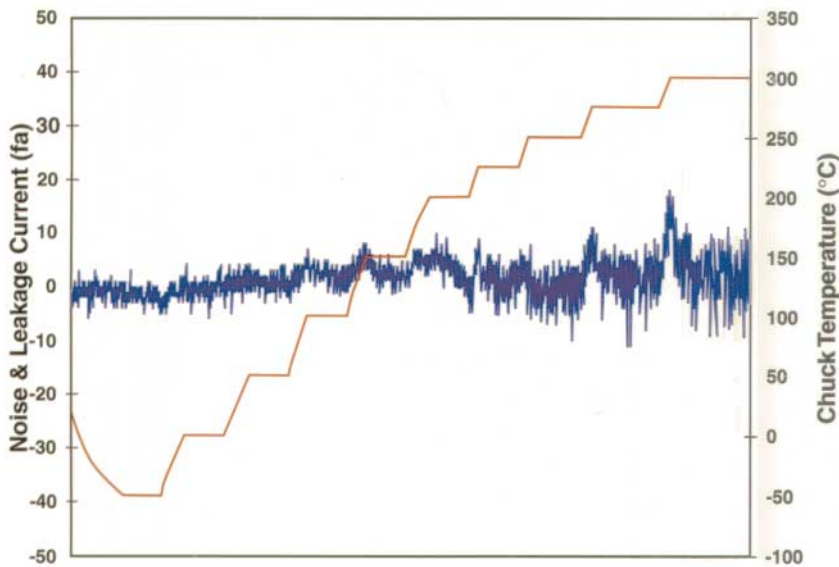


Chart shows leakage and noise of DCP-HTR with replaceable probe tip vs. chuck temperature



Innovating Test Technologies for better measurements faster

Cascade Microtech, Inc., 2430 NW 206th Avenue, Beaverton, Oregon 97006, USA
 Toll Free: 1-800-550-3279
 Phone: 503-601-1000 Fax: 503-601-1002
 Europe: +44 1295-812828 Japan: 03-5478-6100
 Email: sales@cmicro.com www.cascademicrotech.com

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 Data subject to change without notice