

# Cascade Tesla

## 200 mm On-wafer Power Device Characterization System

000111100010

### ➤ Overview

Designed specifically for accurate power device measurements at the wafer level, the Tesla on-wafer power device characterization system is engineered to provide probing levels of up to 3,000 V (triaxial), 10,000 V (coaxial) and 200 A standard or 600 A high current. It supports a measurement temperature range of -55°C to 300°C. In combination with FormFactor's patented MicroChamber®, the Tesla features a high-power, gold-plated chuck to ensure low-contact resistance, thin-wafer handling and power dissipation; all while providing a low-noise, fully guarded and shielded test environment. To ensure the utmost safety during a high-voltage measurement, the Tesla 200 mm power device characterization system (T200) employs a certified safety interlock system integrated with an ergonomic clear enclosure or infrared laser light curtain.



### ➤ Features / Benefits

<b>High-voltage/current probes</b>	<ul style="list-style-type: none"><li>• On-wafer power device characterization up to 10,000 V, 600 A</li><li>• Reduced probe and device destruction at high currents up to 20 A DC and 300 A pulse (600 A when two probes are used in parallel)</li><li>• Increased isolation resistance and dielectric strength to provide full triaxial capability at high voltage (3,000 V) for low-leakage measurement</li></ul>
<b>Gold-plated high-power chuck technology</b>	<ul style="list-style-type: none"><li>• Prevent thin wafers from curling and breaking</li><li>• Advanced MicroVac™ chuck surface for minimum contact resistance between wafer and chuck</li><li>• Accurate Rds(on) measurement at high current</li></ul>
<b>Safety for operator and device</b>	<ul style="list-style-type: none"><li>• Safety interlock system with clear enclosure or light curtain for operator safety during measurements</li><li>• Roll-out stage for full wafer access and easy wafer loading/unloading</li></ul>
<b>Seamless integration</b>	<ul style="list-style-type: none"><li>• Convenient connection kits for easy and safe system integration with Keysight and Keithley power device analyzers</li><li>• Seamless integration between Velox and analyzers/measurement software</li></ul>

Note: For physical dimensions and facility requirements, refer to the Tesla Facility Planning Guide.

## Power Handling

Tesla Chucks	Coax	Standard	High Current
Max voltage	10 kV (coaxial)*	3,000 V (triaxial), 10 kV (coaxial)*	3,000 V (triaxial), 10 kV (coaxial)*
Max current	200 A (pulsed), 10 A (DC)	200 A (pulsed), 10 A (DC)	600 A (pulsed), 20 A (DC)
Power dissipation			100 W generated in 1 cm <sup>2</sup> area at -40°C

\* Maximum 6,000 V (coaxial) with T200-STA-AP model

## Measurement Performance

### Typical Chuck Noise (Triaxial)\*

		PN T200-STA-AP		PN T200-STA-M		Settling Time**
		Standard	High Current	Standard	High Current	
10 V	-55°C/-50°C	20 fA	180 fA	40 fA	180 fA	< 200 fA @ 1.0 sec
	25°C	20 fA	40 fA	40 fA	40 fA	< 200 fA @ 0.5 sec
	200°C	20 fA	120 fA	40 fA	120 fA	< 200 fA @ 1.0 sec
	300°C	30 fA	240 fA	60 fA	240 fA	< 200 fA @ 2.0 sec
3 kV	-55°C/-50°C	2 pA	4 pA	4 pA	4 pA	< 15 pA @ 1.5 sec
	25°C	2 pA	4 pA	4 pA	4 pA	< 15 pA @ 1.5 sec
	200°C	3 pA	4 pA	6 pA	4 pA	< 15 pA @ 1.5 sec
	300°C	6 pA	12 pA	10 pA	12 pA	< 15 pA @ 4.5 sec

### Typical Chuck Leakage (Coaxial)

		PN T200-STA-AP		PN T200-STA-M	
		Coax / Standard	High Current	Coax / Standard	High Current
3 kV	-55°C/-50°C	2 nA	4 nA	2 nA	4 nA
	25°C	2 nA	4 nA	2 nA	4 nA
	200°C	2 nA	4 nA	2 nA	4 nA
	300°C	4 nA	10 nA	4 nA	10 nA
6 kV	-55°C/-50°C	4 nA	6 nA	4 nA	6 nA
	25°C	4 nA	6 nA	4 nA	6 nA
	200°C	4 nA	8 nA	4 nA	8 nA
	300°C	8 nA	20 nA	8 nA	20 nA
10 kV	-55°C/-50°C	-	-	7 nA	10 nA
	25°C	-	-	7 nA	10 nA
	200°C	-	-	7 nA	12 nA
	300°C	-	-	14 nA	34 nA

\* Overall leakage current is comprised of two separate components: 1) offset, and 2) noise. Offset is the DC value of current due to instrument voltage offset driving through isolation resistance and instrument offset current itself. Noise is low-frequency ripple superimposed on top of offset and is due to disturbances in the probe station environment. Noise and leakage are measured with a B1505A- B1510A (HPSMU) and or B1513A/B/C with FormFactor setups or equivalent; 1s sample interval, auto or 1 nA range, 1 μA compliance, 40 PLC integration. Typical noise values are defined using the standard deviation. The maximum peak noise value may be 2-3 times higher than typical noise values depending on environmental factors such as humidity, vibration, temperature fluctuation, condition of the cable and connectors etc.

\*\* Settling time is measured with a B1505A/HPSMU FormFactor setup or equivalent; 2 ms sampling interval, Fixed range: 1 nA, 1 μA compliance, 1 NPLC integration.

### System Residual Capacitance

	PN T200-STA-AP	PN T200-STA-M
Capacitance	4.0 pF	40 pF

## ➤ High Power Probes for T200

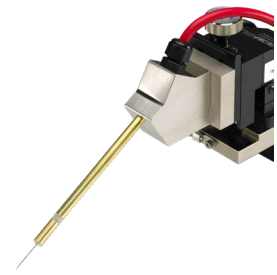
**Ultra High Power Probe**



**High-Current Probe**



**High-Voltage Probe**



Probe	UHP	HCP-XX	HVP-XX
Current	Up to 300 A	Up to 100 A	Up to 5 A
Voltage	Up to 10,000 V	Up to 500 V	Up to 3,000 V

\* See High-Power Probe data sheet for more information.

## ➤ Mechanical Performance

<b>X-Y Stage</b>	<b>Semi-automated</b>	<b>Manual</b>
Travel	203 mm x 203 mm (8 in. x 8 in.)	203 mm x 203 mm (8 in. x 8 in.)
Motion control	5 phase stepper motors and manual controls	Manual controls (X-Y direct rotary knobs)
Resolution	1 $\mu\text{m}$ (0.04 mils)	5 mm / turn
Repeatability	$\leq 2 \mu\text{m}$ (0.08 mils)	
Accuracy	$\leq 2.5 \mu\text{m}$ (0.1 mils)	
Speed	$> 50 \text{ mm/sec}$ (2 in./sec)	
Feedback system	1 $\mu\text{m}$ resolution closed loop optical linear encoder	

<b>Z Stage</b>	<b>Semi-automated</b>	<b>Manual</b>
Travel	5 mm (0.19 in.)	Fixed Z mount
Resolution	1 $\mu\text{m}$ (0.04 mils)	
Repeatability	$\leq 1 \mu\text{m}$ (0.04 mils)	
Accuracy	$\leq 2 \mu\text{m}$ (0.08 mils)	

<b>Theta Stage</b>	<b>Semi-automated</b>	<b>Manual</b>
Travel	$\pm 5.5^\circ$	$\pm 5.7^\circ$
Resolution	0.65 $\mu\text{m}$ (0.03 mils)*	0.8° / turn
Repeatability	$\pm 2 \mu\text{m}$ (0.08 mils)*	
Accuracy	$\pm 2 \mu\text{m}$ (0.08 mils)* standard moves $\pm 3 \mu\text{m}$ (0.12 mils)* large moves	

\* Measured at edge of 200 mm chuck

## ➤ Mechanical Performance (continued)

<b>System</b>	
Move time (semi-automated)	≤ 750 ms (200 μm Z down – 1000 μm XY – 200 μm Z up)
Probe-force capability	20 kg (44 lb.) maximum
Probe-force deflection	≤ 0.0015 μm/μm slope per 10 kg load
System planarity	≤ 35 μm (1.3 mils) @ 25°C
	≤ 35 μm (1.3 mils) @ -60°C (typical)
	≤ 35 μm (1.3 mils) @ 200°C (typical)
	≤ 50 μm (2.0 mils) @ 300°C (typical)

## ➤ Microchamber

<b>Electrical</b>	<b>PN T200-STA-AP</b>	<b>PN T200-STA-M</b>
EMI shielding	≥ 20 dB 1 kHz - 100 MHz (typical)	≥ 20 dB 1 kHz - 100 MHz (typical)

### **Light Shielding**

Type	Complete dark enclosure around chuck
Wafer access	Front access door with rollout stage for easy wafer loading
Probe compatibility	Standard MicroChamber TopHat™ allows access for up to eight probes
Light attenuation	≥ 120 dB

### **Purge and Condensation Control**

Test environment	Low volume for fast purge, external positioning and cable access to maintain sealed environment
Dew point capability	> -70°C for frost-free measurements and high-voltage measurements*
Purge gas	Clean dry air or oil-free nitrogen (See facilities planning guide for detailed purge gas requirements.)
Purge flow rate	Standard purge - manual controls, variable 0 to 110 l/min (4 CFM) at SATP**
	Quick purge - manual controls, standard purge rate or maximum > 110 l/min (4 CFM) at SATP**
Purge time	15 min for measurements @ -55°C (typical)
External condensation control	Integrated laminar-flow air distribution on external MicroChamber surfaces to eliminate condensation
	Controls for ON/OFF and flow rate for both top and bottom surfaces

\* Please see the facilities guide for air requirements to enable optimum dew point for low-temperature measurements using a thermal chuck inside the MicroChamber.

\*\* Standard Ambient Temperature And Pressure (SATP).

## ➤ Platen System

<b>Platen</b>	
Material	Steel for magnetic positioners
Dimensions	74.5 cm (W) x 59.5 cm (D) x 20 mm (T) (29.3 in. x 23.4 in. x 0.78 in.)
Platen to chuck height	14 ± 0.5 mm (0.55 ± 0.02 in.)
Accessory compatibility	Minimum of 8 DC or 4 RF positioners allowed, compatible simultaneous probe card holder use
Thermal management	Integrated laminar-flow air-cooling for thermal expansion control

## ➤ Platen System (continued)

### Platen Ring Insert

Material	Steel for magnetic positioners
Weight	4.5 kg (9.9 lb.)
Standard interface	For MicroChamber, TopHat, probe card holders and custom adapters

### Platen Lift

Type	Precision 4-point linear lift
Range	5.0 mm (0.20 in.)
Repeatability	≤ 3 μm (0.12 mils)
Lift control	Ergonomic handle with 90° stroke. Optional micrometer control for fine adjustment of probe card contact.

## ➤ Wafer and Chuck Design

Wafer Chuck	Coax	Standard	High Current
Type	HV Coaxial	HV FemtoGuard Triaxial	HV FemtoGuard Triaxial
Diameter			
200 mm (8in.) - Thermal	●	●	●
200 mm (8in.) - Non Thermal	●	●	●
Material	Gold (Au) plated aluminum		
Electrical connection	Dual HV triax cables with integrated chuck port		
Supported measurement modes			
Coaxial	●	●	●
Triaxial		●	●
AUX chucks (integrated)	Optional	2	2
Vacuum uniformity	Patented MicroVac technology using 495 micro-hole pattern for uniform vacuum hold down of thin, warped and partial wafers, and uniform temperature conductivity.		
Vacuum zones	5 selectable zones, with hole patterns arranged in approximately 9, 70, 93, 143 and 178 mm diameters (0.4, 2.8, 3.8, 5.6 and 7 in.)		
Vacuum actuation	Easy access multi-zone manual vacuum controls, and software control (semi-automated)		
Thin wafer support	Thin wafers down to 50 μm and optional support for Taiko wafers		

### Auxiliary Chuck

Quantity	0, 1, or 2, integrated with chuck assembly (see Wafer Chuck table above)
Substrate size (maximum)	15.2 mm x 22.1 mm (0.59 in. x 0.87 in.) ISS substrate 19 mm x 19 mm (0.75 in. x 0.75 in.) substrate
Material	Standard current: Two RF absorbing Eccosorb (magnetically loaded) aux chucks High Current: One RF absorbing Eccosorb (magnetically loaded) and one steel aux chuck
Thermal isolation	For probe tip-cleaning substrates
Flatness	≤ 8 μm (0.3 mils)
Vacuum actuation	Independently controlled apart from wafer vacuum zones

## ➤ General System Specifications

Note: For physical dimensions and facility requirements, refer to the Tesla Facility Planning Guide.

### Velox Probe Station Control Software

The Tesla 200 mm power device characterization system is equipped with Velox probe station control software. The Velox software provides all features and benefits required for semi-automated operation of the probe system, such as:

- WaferMap with Z-profiling, sub-die stepping, binning and other useful features
- Integrated thermal control
- CellView using stitched image of the full device to enable on-screen navigation within the die layout when using eVue
- Configurable user interface and programmable buttons

### Communication Ports

Type	Qty	Location	Note
USB 2.0	6	Station Controller - Rear	For security keys and USB instrument control
USB 2.0	2	Station Controller - Front	
USB 3.0	4	Station Controller - Rear	
LAN GbE	2	Station Controller - Rear	
RS-232	1	Station Controller - Rear	For instrument control (thermal, LASER, microscope, etc). Additional RS-232 ports supplied with USB adapter for test instrument control.
GPIB IEEE 488.2	As Needed	Station Controller - Rear	Supplied with USB adapter for test instrument control

### Accessory Interface Ports

Type	Qty	Location	Note
Edge-sense	1	Station interconnect panel	Probe card contact sense
VNA-CAL	1	Station interconnect panel	Control for switched GPIB (remote/local software control)
INKER	1	Station interconnect panel	Control for die inker

### Switched AC Power

Type	Qty	Location	Note
IEC (f) microscope	1	Station interconnect panel	Software ON/OFF control for microscope light
IEC (f) aux	1	Station interconnect panel	Software ON/OFF control for auxiliary power

## ➤ Thermal System Performance

Thermal System Overview		Coax	Standard	High Current
Temperature ranges	-50°C to 200°C, ATT, liquid cool (200 mm)	●	●	
	-55°C to 300°C, ATT, air cool (200 mm)	●	●	
	+20°C to 300°C, ATT, air cool (200 mm)	●	●	
	+30°C to 300°C, ATT, air cool (200 mm)	●	●	
	-55°C to 300°C, ERS AirCool3 (200 mm)			●
	+20°C to 300°C, ERS AirCool3 (200 mm)			●
	+30°C to 300°C, ERS AirCool3 (200 mm)			●
Wafer temperature accuracy	Standard <sup>1,2</sup>	± 2.5°C at 100°C		
	High Accuracy <sup>3</sup>	± 0.05°C (0 to 250°C)		
Thermal uniformity	Coax, Standard, High Current <sup>4</sup>	≤ ± 0.5°C @ 25°C, ≤ ± 1.5°C @ -60°C, ≤ ± 0.85°C @ 200°C, ≤ ± 1.5°C @ 300°C		

- As measured with an Anritsu WE-11K-TSI-ANP or WE-12K-GW1-ANP type K thermocouple surface temperature measurement probe with offset calibration procedure. Conditions: closed chamber with minimum recommended purge air, probe centered on a blank silicon wafer, chuck at center of travel and standard probe height. Typical type K thermocouple probe tolerances are ±2.2°C or ±0.75% of the measured temperature in °C (whichever is greater).
- The test setup can change the wafer temperature accuracy from the calibration by ±5°C (typical). Test setup attributes include open or closed chamber, probe or probe card construction and number of contacts, purge air flow rate, and lab environmental conditions.
- Special high accuracy calibration using KLA Sense array wafer (Consult factory for pricing and availability)
- As measured at DUT (device under test) probing location.

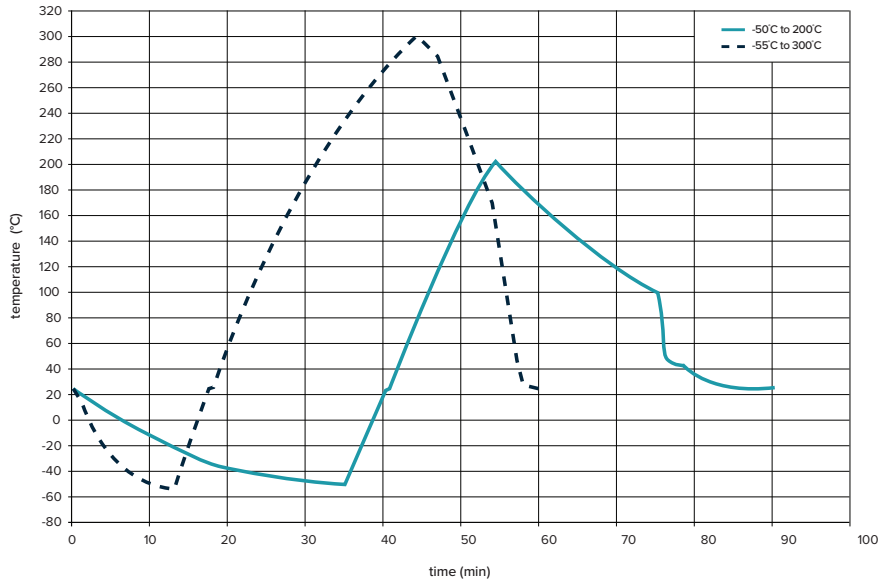
### ATT Thermal System Specifications, 200 mm

	Air Chilled	Liquid Chilled
Temperature range	-55°C to 300°C	-50°C to 200°C
Transition time – Heating	-55°C to 25°C: 5 min (typical)	-50°C to 25°C: 6 min (typical)
	25°C to 300°C: 27 min (typical)	25°C to 200°C: 14 min (typical)
Transition time – Cooling	300°C to 25°C: 15 min (typical)	200°C to 25°C: 34 min (typical)
	25°C to -55°C: 15 min (typical)	25°C to -50°C: 34 min (typical)
Temperature resolution	0.1°C	0.1°C
Audible noise	< 60 dB(A)	< 60 dB(A)

## ➤ Thermal System Performance (continued)

### ATT Thermal Transition Time

Typical times using T200-STA-AP with FemtoGuard® Chuck.



## ➤ Thermal Options and Performance

### ATT Ambient Option Specifications, 200 mm

	Forced Ambient	Ambient
Temperature range	+ 20°C to 300°C	+ 30°C to 300°C
Transition time - Heating	27 min (typical)	25 min (typical)
Transition time - Cooling	31 min (typical)	36 min (typical)
Temperature resolution	0.1°C	0.1°C
Audible noise	< 60 dB(A)*	< 60 dB(A)

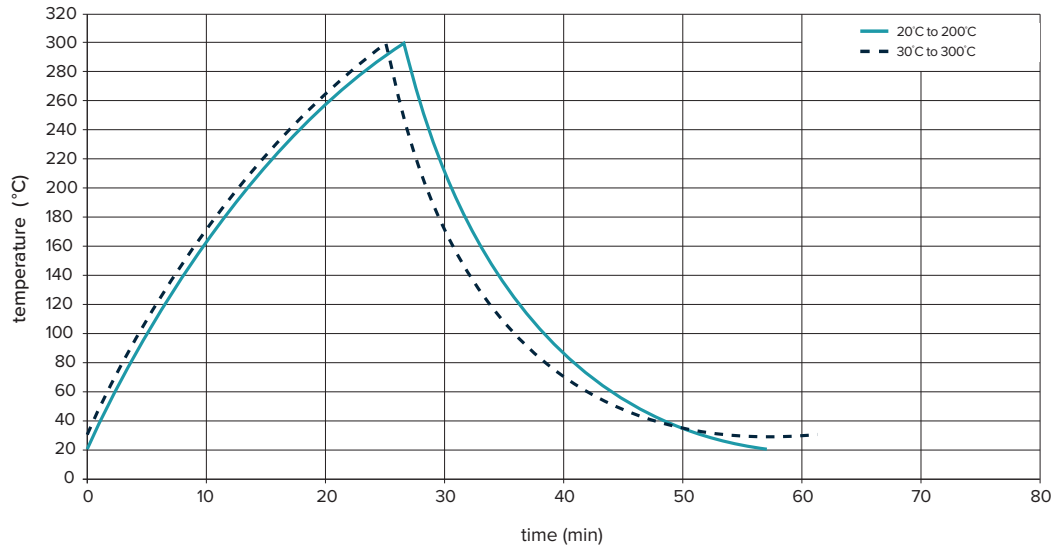
\* Forced Ambient system uses a Booster chiller. Noise measured while cooling (0.4 m from MicroChamber load door).



## ➤ Thermal Options and Performance (continued)

### ATT Thermal Transition Time

Typical times using T200-STA-AP with FemtoGuard Chuck.



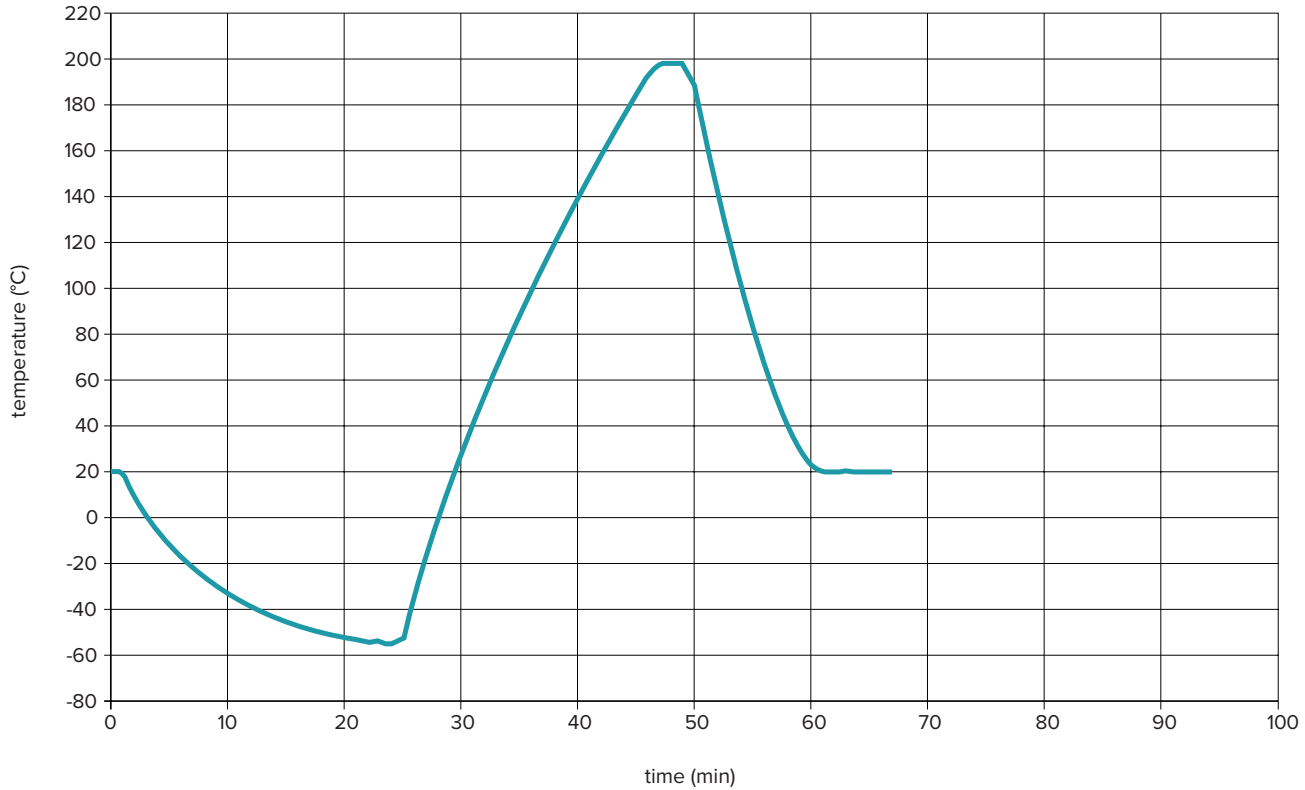
### ERS AirCool3 Thermal System Specifications, 200 mm

Temperature range	-55°C to 300°C
Transition time – Heating	-55°C to 25°C: 6 min (typical), 25°C to 300°C: 30 min (typical)
Transition time – Cooling	300°C to 25°C: 15 min (typical), 25°C to -55°C: 23 min
Temperature uniformity	≤ 0.5°C @ 25°C, ≤ 2.0°C @ -55°C, ≤ 2.0°C @ 200°C
Temperature resolution	0.1° C
Audible noise	< 58 dB(A)

## ➤ Thermal Options and Performance (continued)

### ERS Thermal Transition Time (-55°C to 300°C)

Typical times using T200-STA-AP with FemtoGuard Chuck.



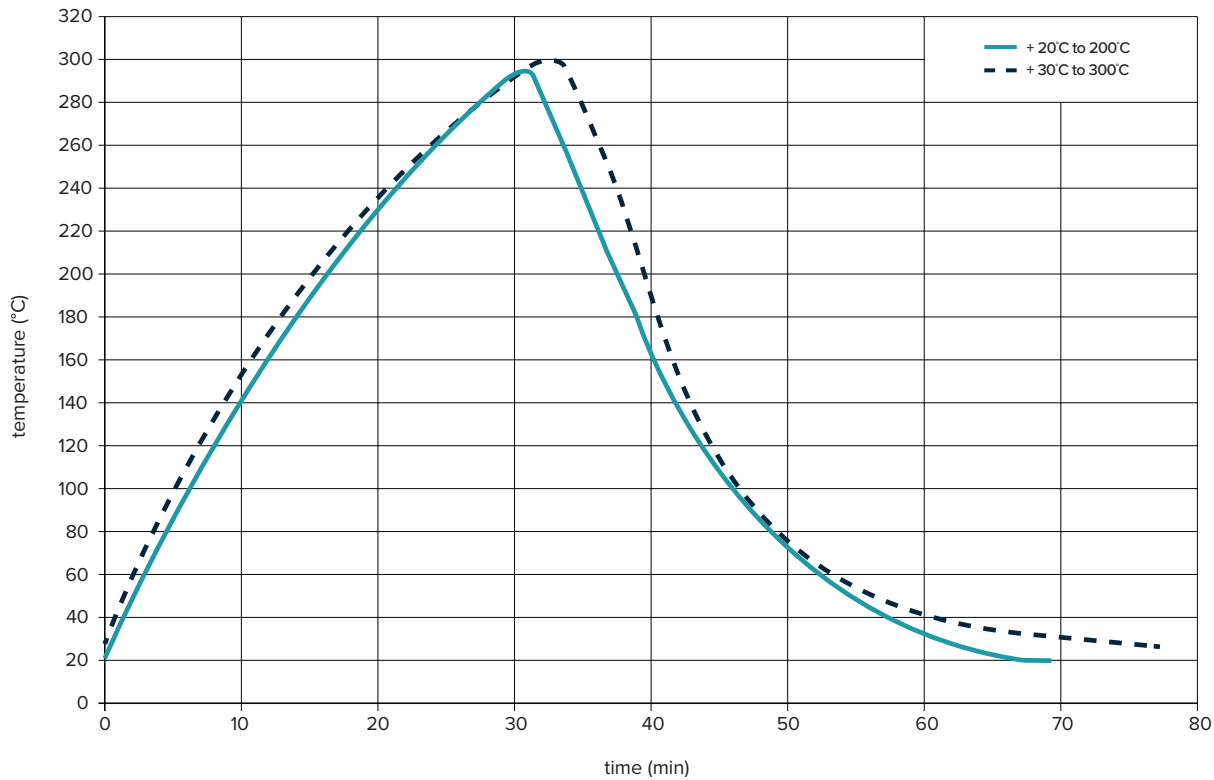
### ERS AirCool3 Ambient Option Specifications, 200 mm

	Forced Ambient	Ambient
Temperature range	+ 20°C to 300°C	+ 30 to 300°C
Transition time - Heating	30 min (typical)	30 min (typical)
Transition time - Cooling	35 min (typical)	40 min (typical)
Temperature resolution	0.1°C	0.1°C
Temperature uniformity	≤ 0.5°C @ 30°C, ≤ 3.0°C @ 300°C	≤ 0.5°C @ 30°C, ≤ 3.0°C @ 300°C
Audible noise	< 58 dB(A)	< 58 dB(A)

## ➤ Thermal Options and Performance (continued)

### ERS Thermal Transition Time

Typical times using T200-STA-AP with FemtoGuard Chuck.



## ➤ Available Station Models

Tesla Semi-automated 200 mm Probe Station	P/N T200-STA-AP	P/N T200-STA-M
MicroChamber for dark, dry and enhanced EMI-shielding enclosure	●	●
PureLine™ technology for premium signal path fidelity	●	N/A
AttoGuard® for enhanced I-V and C-V testing	●	N/A
Roll-out wafer stage for safe and easy wafer loading	●	●
High-stability platen with linear lift	●	●
Four-axis precision motorized stage	●	●
User guides, tools and accessories	●	●
Universal power cord kit	●	●
Velox probe station control software	●	●
Complete automation tools – AutoAlign, AutoDie, AutoXYZT correction	●	●
Thermal control, video window, wafer map, remote access	●	●

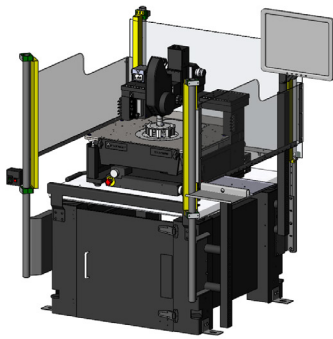
## ➤ Available Station Models (continued)

Tesla Manual 200 mm Probe Station	P/N T200M-STA-AP	P/N T200M-STA-M
MicroChamber for dark, dry and enhanced EMI-shielding enclosure	●	●
PureLine technology for premium signal path fidelity	●	N/A
AttoGuard for enhanced I-V and C-V testing	●	N/A
Roll-out wafer stage for safe and easy wafer loading	●	●
High-stability platen with linear lift	●	●
Precision manual X-Y stage	●	●
User guides, tools and accessories	●	●

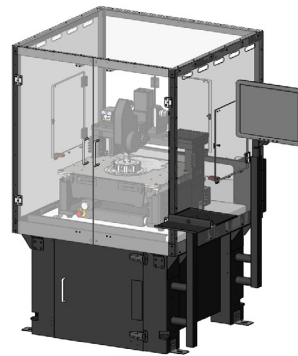
## ➤ Tesla Safety Systems

Select one of the Required safety systems for the station configuration:

Part Number	Description
170-750	Clear safety enclosure package for Tesla 200 mm on-wafer power device characterization system
151-461	Laser infrared safety light curtain package for Tesla 200 mm on-wafer power device characterization system



T200 with a laser infrared safety light curtain option



T200 with a clear safety enclosure option

## Available Chuck Models

To complete the station configuration:

1. Select a modular chuck from the following non-thermal or thermal list.
2. Select a matching thermal system if a thermal chuck is desired.

### Tesla Semi-automated 200 mm Probe Station

Part Number	General Description	Chuck Compatibility	
		AP	M
TC-002-202	FCoaxial Tesla chuck, non-thermal, 200 mm (8"), Au		●
TC-002-402	FemtoGuard triaxial Tesla chuck, non-thermal, 200 mm (8"), Au	●	●

### Tesla Thermal Chucks

Part Number	General Description	Cooling	Chuck Compatibility	
			AP	M
TC-402-202	Coaxial Tesla chuck, thermal, -50°C to 200°C, 200 mm (8"), Au	Liquid		●
TC-412-202	Coaxial Tesla chuck, thermal, -55°C to 300°C, 200 mm (8"), Au	Air		●
TC-402-402	FemtoGuard triaxial Tesla chuck, standard, -50°C to 200°C, 200 mm (8"), Au	Liquid	●	●
TC-412-402	FemtoGuard triaxial Tesla chuck, standard, -55°C to 300°C, 200 mm (8"), Au	Air	●	●
TC-232-502	FemtoGuard triaxial Tesla chuck, high current (600 A), -55°C to 300°C, 200 mm (8"), Au	Air	●	●

### Tesla Thermal Systems

Part Number	General Description	Cooling
TS-412-05T	Thermal system for Summit™ / Tesla, 20°C to 300°C (100-230 VAC 50/60 Hz)	Air
TS-412-02T	Thermal system for Summit / Tesla, 30°C to 300°C (100-230 VAC 50/60 Hz)	Air
TS-412-14P	Thermal system for Summit / Tesla, -60°C to 300°C (100-230 VAC 50/60 Hz)	Air
TS-402-07R	Thermal system for Summit / Tesla, -55°C to 200°C (208 VAC 60Hz)	Liquid
TS-402-07E	Thermal system for Summit / Tesla, -55°C to 200°C (230 VAC 50Hz)	Liquid
TS-232-05T	Thermal system for Tesla with high current chuck, 20°C to 300°C (100-230 VAC 50/60 Hz)	Air
TS-232-02T	Thermal system for Tesla with high current chuck, 30°C to 300°C (100-230 VAC 50/60 Hz)	Air
TS-232-14P	Thermal system for Tesla with high current chuck, -60°C to 300°C (100-230 VAC 50/60 Hz)	Air

## ➤ Microscope Mount Options

### Tesla 200 mm Station Platform

	P/N 162-165	P/N 162-160
High-stability bridge/transport	Programmable	Manual
Travel X-Y	50 mm x 50 mm (2 inch x 2 inch)	50 mm x 50 mm (2 inch x 2 inch)
Travel X-Y in TopHat™	13 mm x 13 mm (0.5 inch x 0.5 inch)	13 mm x 13 mm (0.5 inch x 0.5 inch)
Type	Stepper motor with closed-loop encoder system	N/A
Resolution X-Y	0.4 μm (0.016 mils)	5 mm (0.2 inch)/turn, coaxial XY control
Repeatability X-Y	≤ 2 μm (0.08 mils)	N/A
Accuracy X-Y	≤ 5 μm (0.2 mils)	N/A
Speed X-Y	5 mm (0.2 inch)/second	N/A
Planarity	10 μm (0.4 mils) over full travel with 5 kg (11 lb.) load	10 μm (0.4 mils) over full travel with 5 kg (11 lb.) load
Z gross lift	4" vertical lift, pneumatic with up/down, for easy probe access	4" vertical lift, pneumatic with up/down, for easy probe access
Z gross repeatability	1 μm (0.04 mils)	1 μm (0.04 mils)
Z focus	Coarse/fine focus uses microscope system, programmable focus available	Coarse/fine focus uses microscope system
LASER compatible	Yes	Yes

## ➤ Station Controller

P/N 125-014	System controller with Nucleus™ / Windows XP
P/N 158-270	System controller with Velox / Windows 7

## ➤ Tesla Station Accessories

Microscope/video system
Vibration isolation table
LCD monitor and stand kit
Key board and mouse tray
Side shelf
Scope mount
Microscope objective lens
High-voltage probes / positioners
High-current probes / positioners
Chuck connectors
Interconnect accessories kit (package) for various power device analyzers
High-voltage /high-current cables and adapters

## > Probing Kit

Probing kit includes necessary accessories, such as high-current/voltage probes, probe holders, positioners and interconnect cables for typical vertical and lateral device measurement setup.

### Probing Kit for Keysight B1505A

Item	Description
High-current probe package	HCP high-current parametric probe holder with BNC connector (quantity of two) Replaceable probe tips (box of five) Probe micropositioner (quantity of two)
High-voltage probe package with Kelvin sense capability	HVP high-voltage parametric probe holders with SHV connectors (quantity of three), or with Keysight triaxial connectors (quantity of two) Replaceable probe tips (box of 25) Probe micropositioner (quantity of five)
System interface panels	Keysight B1505A accessory mounting kit
Cables	Basic cable kit for Keysight B1505A accessory connection, including probe-to-panel, panel-to-chuck and chuck-to-instruments cables

### Probing Kit for Keithley Equipment 236/237

Item	Description
High-current probe package	HCP high-current parametric probe holder with banana jack (quantity of two) Replaceable probe tips (box of five) Probe micropositioner (quantity of two)
High-voltage probe package with Kelvin sense capability	HVP high-voltage parametric probe holders with Amphenol triaxial connectors (quantity of three) Replaceable probe tips (box of 25) Probe micropositioner (quantity of three)
System interface panels	High-voltage interface panel (triaxial) High-current interface panel
Cables	High-voltage triaxial cable package, including probe-to-panel, panel-to-instrument and chuck-to-instruments cables

## > Regulatory Compliance

Certification TÜV certified for US and Canada, CE, SEMI S2 and S8

## > Warranty

Warranty\* Fifteen months from date of delivery or twelve months from date of installation

Service contracts Single and multi-year programs available to suit your needs

\* See FormFactor's Terms and Conditions of Sale for more details.

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