Wentworth
Laboratories

www.wentworthlabs.com

PEGASUS

ANALYTICAL PROBER

M200FA

MANUAL PROBE STATION

The M200FA Manual Probe Station specifically designed for failure analysis applications, Parametric (DC to Low Level), High Power & ULTRA fast I.V./C.V. probing.

M200FA FEATURES

- ✓ Flexible for a wide range of applications, DC Parametric, Low Current, High Power plus many more.
- ✓ Precision engineering for reliable and repeatable sub-micron probing.
- ✓ Adaptable for industry standard testers.
- ✓ Temperature probing from –65°C to +400°C utilizing Wentworth's GuardMaster™
- ✓ Customizable product enhancing hardware and software options.
- ✓ Easy to use fine/course X/Y controls and Fine Adjust Z/Platen Adjustment.
- ✓ Wide range of product enhancing accessories.
- ✓ Robust mechanical design.
- ✓ Cost effective test solutions.

*Leader In **ProbeAbility***

MEETING YOUR PROBING CHALLENGES

SETTING THE STANDARD

Wentworth's M200FA manual prober enables you to quickly obtain accurate measurements.

At the core of M200FA is a highly stable, feature-laden platform to capture repeatable, precision measurements.

Ultilzing either Wentworth replaceable probes or DC cantilever probe cards the M200FA prober is an ideal platform for a variety of test applications.

DC PARAMETRIC

SPECIFICATION

Features	
Frequency	dc > 100Mhz
Breakdown Voltage	500V
Leakage	+/-10fA *(-65°C > +200°C)* +/-20fA *(+200°C > +400°C)*

Customizable chuck solutions allow handling of full wafers, shards, single chips and packaged parts.

DC Parametric

ULTILZING EITHER WENTWORTH REPLACEABLE PROBES OR DC CANTILEVER PROBE CARDS THE M200FA PROBER IS AN IDEAL PLATFORM FOR A VARIETY OF TEST APPLICATIONS.

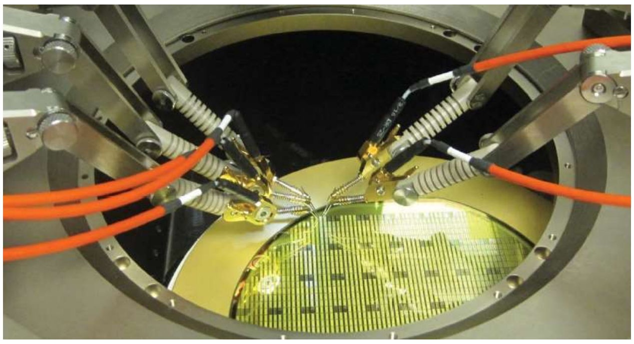
HIGH POWER

The M200FA High Power configuration addresses today's power semiconductor test challenges with Low Contact Resistance Measurements requiring accurate measurements at high voltages. Kelvin Chucks & Backside probing solutions allow Contact Resistance measurements in the milli ohm range.

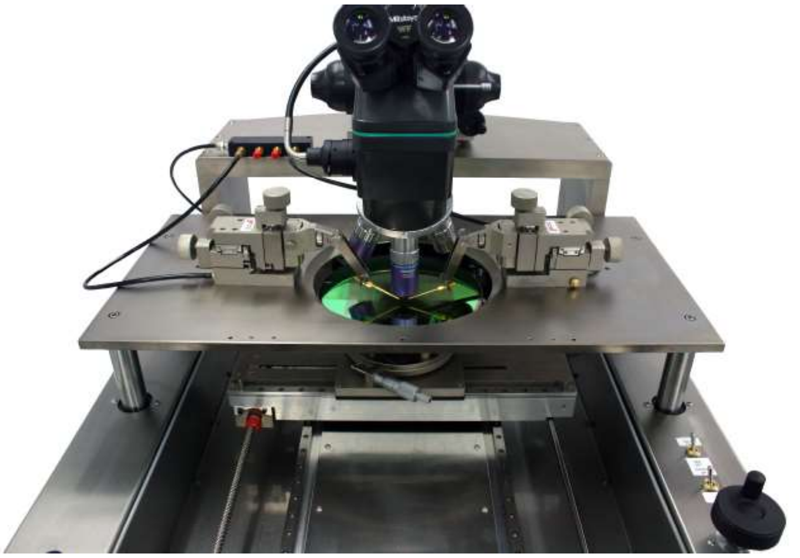
High Current probes & probe cards (up to 100A) handle and distribute excessive current loads. Dedicated HV & HC probes reduce probe and device destruction at high voltages/currents to prevent device heating and arcing at the tip.

SPECIFICATION

Features	
Voltage	3KV (Triax), 10KV (Coax)
Current	200 Amps (Pulsed)
Leakage	<1pA (3KV)



High Power



M200FA with PVX500 Manual Manipulators

CONFIGURABLE DESIGN

Ergonomic design and controls make the M200FA platform extremely user friendly. The M200FA precision X/Y stage features lead screws with linear rails to deliver repeatable accuracy over a wide temperature range using our exclusive calibration process.

Features include:

- Large area platen height adjustment.
- Fine lift chuck mechanism.
- Robust microscope bridge used with Stereo Zoom and High Powered Microscopes.
- Localized Light Tight, EMC & HV safety enclosure (GuardMaster™) with dedicated cable feed through bulkheads.

FAILURE ANALYSIS

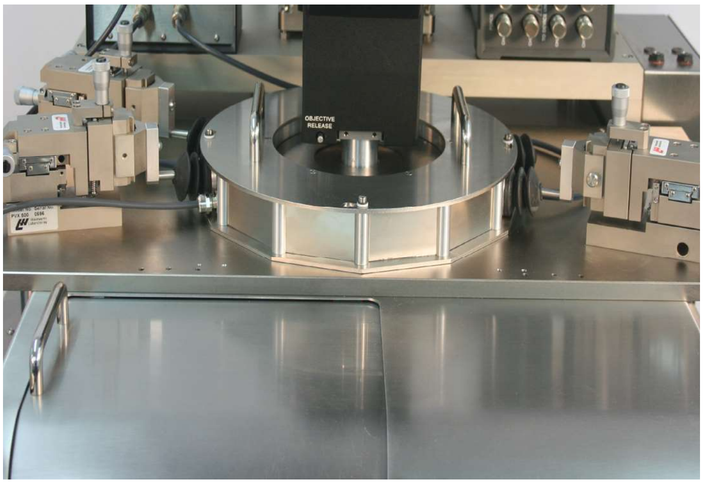
Failure analysis applications require mechanical versatility and ease to make multiple measurements. The M200FA has been designed with these aspects in mind. Offering Multiple FA tools/options Wentworth offer easy upgrade paths for a wide range of manipulator probe heads/needles, laser ready optics and control/monitoring analysis software.

THERMAL CHARACTERIZATION

Wentworth offer performance thermal chuck solutions for device testing from -65oC to +400oC. Wentworth's propriety Heating and Cooling management system is an integral part of GuardMaster™, utilizing CDA or Nitrogen to reduce thermal effects and keeping the probing environment controlled.

OPTIONS

Temperature	Control
- 30°C to +400°C	Active air cooled chuck system
- 60°C to +300°C	Air cooled high end system combining very low and high temperatures within one chuck system
- 65°C to +300°C	Liquid cooled for high power applications



M200FA with GuardMaster™

M200FA SPECIFICATIONS

XY STAGE		PLATEN	
X Travel	210mm (8.25") manual travel	Height Adjustment	Via fine adjustment wheel
Y Travel	310mm (12.21") manual travel	Separation lift	10 mm (0.4")
LINEAR MOTION GUIDES		DIMENSIONS (WxDxH)	
Coarse ratio 1:1	70 microns per degree	Prober (excludes optics)	840x842x610mm 33x32x34"
Fine ration 10:1	7 microns per degree	SHIELDING	
CHUCK		Light	> 120 db
Chuck Flatness	Flat to within 10 µm (0.0004")	EMI	> 20 db 0.05-0.5 Ghz, 30 db 0.5-30 Ghz
Theta	Micrometer drive theta, 15º	Weight	
Fine Lift Movement	Fine lift 250 microns	Prober	131 kg
Fine ratio 10:1	7 microns per degree		

MANIPULATORS

TYPE	TPI / RESOLUTION / TRAVEL
PVX400 (Vacuum or Magnetic)	50 TPI / 1.4 µm/º / X = 5 mm, y= 5 mm, z = 5 mm
PVX500-100 (Vacuum or Magnetic)	100 TPI / 0.7 µm/º / X = 5 mm, y= 5 mm, z = 5 mm
PVX500-200 (Vacuum or Magnetic)	200 TPI / 0.4 µm/º / X = 5 mm, y= 5 mm, z = 5 mm

MICROSCOPES

MICROSCOPE TYPE	MODELS AVAILABLE
Stereo view	GMX , Leica
High magnification	Mitutoyo FS-70 Series, A-Zoom
Without eyepieces	A-Zoom, Mono-Zoom

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