The revolutionary instrument for VLSI process improvement.

Stress Station



New measurement trend in wafer bending:

According to ITRS and Intel's CMOS process technology, stress technology has become one of the key technologies in advanced nano-meter CMOS process including 90nm and beyond. This stress station is capable of stress measurement in CMOS component and measurement of Piezo-resistance simultaneously. Similarly, this stress station is applicable to many research fields such as nano-wire, nano-tube, FinFET, GaAs component, SiGe channel component, Ge channel component, MEMS, LED, OLED, and PV.

Features :

- Direct measurement of sample's strain.
- Intuitive mechanism design in wafer bending jig for easy operation.
- Measurement results used in published international SCI journal paper.
- Adjustable single axial-direction stress provided by designed bending

jig. (Including tension and compression)

• Augmentable to include I-V measurement and low frequency noise

Specifications :

	uvo	File Name 20140307	Save Time(s). 0.0
Load(N)	Axial Stress(MPa)	Axial Strain(ue)	Young's Modulus(GPa)
43.64	20.9	303	39.9
Width(nm)	100-		-540
ji 20 Thickness(mm)	\$0-		-520
2	85-		-500
Load Span(mm)	10-		-490
Support Span(mm)	70-		-460
355	65-		-440
Young's Modulus(ePa)	(0- (5)		-420
z	50-		-400
	45		-390
	55-		-360
	30-		-340
	25-		-320
	15-	Antonio and provident and provident	-300
	10-		-280
	0		-360
CHIPP OF	0 0.25 0.5 0.75 1 1.25 1.5 1	75 2 2,25 2,5 2,75 8 8,25 8,5 Time(s)	3.75 4 4.25 4.5 4.75 5
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Interface	USB 2.0	Max. sample size	80×100 mm
Measurement range	300 MPa ^{*1}	adjustable span range in applied	95 mm
		force	
Stress resolution	0.05 MPa	Pitch in span adjustment	continuous adjustable
Stress type	tension or compression	Dimension (length×width×height)	240×210×195 mm
Young's modulus measure	Supported	Weight	5 Kg
Real-time stress calculation	Supported	Operating temperature	$-20 \sim +60^{\circ}\text{C}$
Real-time displacement analysis	Supported (Optional)	Standard Accessory	Calibration sample, Software CD, USB cable,
Stress and applied force measure	Supported	Language	English
Max. applied force	100 N	PC Requirements	CPU:P4, HD:1GB, USB 2.0
Max. stroke of applied force	3 mm	Monitor Requirements	1280*800 resolution
Adjustment of applied force	simultaneously	O.S. Supported	Windows XP, WIN 7

*1: This range is calculated based on the Young's modulus of silicon wafer.



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