Part Number Customer

Category		Parameter	Specification	Measurement Method
OverallWafer	1.0	Diameter	150.00 +/- 0.20 mm	
	2.0	Primary Flat Orientation	{110}+/-0.5 degree	Wafer Vendor
	3.0	Primary Flat Length	47.50 +/- 2.50 mm	Wafer Vendor
	4.0	Secondary Flat Orientation	none	
	5.0	Overall Thickness	625.00 +/- 6.00 µm	ADE, 100%
	6.0	Total Thickness Variation (TTV)	<5.00µm	Guaranteed by Process
	6.5	Flatness (SBIR)	<1.00um	20mm x 20mm, no partials, b/side ref, 100% UA
	7.0	Bow	<60.00µm	ADE to ASTM F534
	8.0	Warp	<60.00µm	ADE to ASTM F657
	9.0	Edge Chips	0	Bright Light, 100% (note 2)
	10.0	Edge Exclusion	3mm	
HandleSilicon	11.0	Handle Growth Method	CZ	Wafer Vendor
	11.5	Handle Oxygen Concentration	6.5e17 atcm-3 - 8.5e17 atcm-3 new ASTM	wafer vendor
	11.6	Handle Carbon Concentration	< 2e16 atcm-3 new ASTM	wafer vendor
	12.0	Handle Orientation	{100} +/- 0.5 degree	Wafer Vendor
	13.0	Handle Thickness	573.00 +/- 5.00 µm	ADE, 100%
	14.0	Handle Doping Type	N	Wafer Vendor
	15.0	Handle Dopant	Phosphorous	Wafer Vendor
	16.0	Handle Resistivity	1.5 - 6.5 Ohmcm	Wafer Vendor
	17.0	Backside Finish	Lapped and Etched with 2um oxide and lasermark, scratch free (see lasermark spec below)	Wafer Vendor
BuriedOxide	18.0	Oxide Type	Thermal	
	19.0	Oxide Thickness	20,000.00 +/- 1,000.00 A	Nanospec centre point, 4%
	19.5	Oxide formed on	Handle Wafer	
DeviceSilicon	20.0	Device Growth Method	FZ	Wafer Vendor
	20.5	Oxygen Concentration	< 2e16 atcm-3 new ASTM	wafer vendor
	20.6	Carbon Concentration	< 2e16 atcm-3 new ASTM	wafer vendor
	21.0	Device Orientation	{100} +/- 0.5 degree	Wafer Vendor
	22.0	Nominal Thickness	50.00 +/- 1.00 µm	FTIR, 100% 9-Pt (note3)
	23.0	Distance to device silicon edge from wafer edge	<= 1.2mm	Typical by Process
	24.0	Device Doping Type	N	Wafer Vendor
	25.0	Device Dopant	Phosphorous	Wafer Vendor
	26.0	Device Resistivity	14.4 - 17.6 Ohm-cm	Wafer Vendor
	27.0	Buried Layer Implant	Species = As, Dose = 3e15, Energy = 80keV screen oxide 25nm	Implant Vendor - 24nm screen oxide used

Part Number	Customer

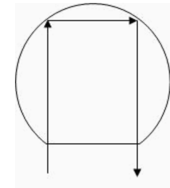
Category		Parameter	Specification	Measurement Method
DeviceSilicon	28.0	Voids	0	Bright Light, 100% (note 2)
	29.0	Scratches	<25mm total length	Bright Light, 100% (note 2)
	30.0	Haze	none	Bright Light, 100% (note 2)
	31.0	Surface	mirror polished	Bright Light, 100% inspection
	32.0	LPD Count	< 20 @ 0.3um	Tencor 6220 Particle counter

Part Number	Customer

Category	Parameter	Specification	Measurement Method
Shipping Details	Wafer per box :	Max 25	
	Packaging :	Taped Polypropylene Wafer Box Empak, Ultrapak, 150.00mm Antistatic Double Bagging	
	Lot Shipment Data	Device Thickness Bow / Warp Data Handle and SOI Thickness	

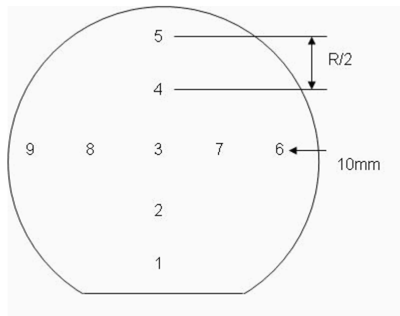
Explanatory Notes

1. Microscope inspection performed using microscope scan as below. 5x objective.



2. All bright light inspections performed exclude all wafer area outside the edge exclusion defined in Overall Wafer, Edge Exclusion. High intensity bright lamp inspection as per ASTM F523.

3. 9 point measurement are as shown in the diagram below:



Additional Information