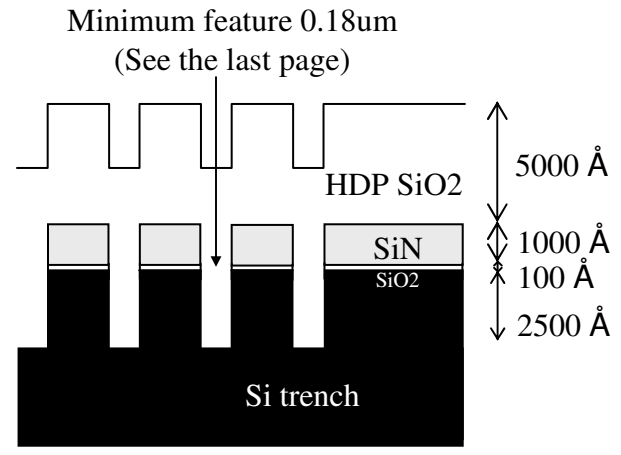
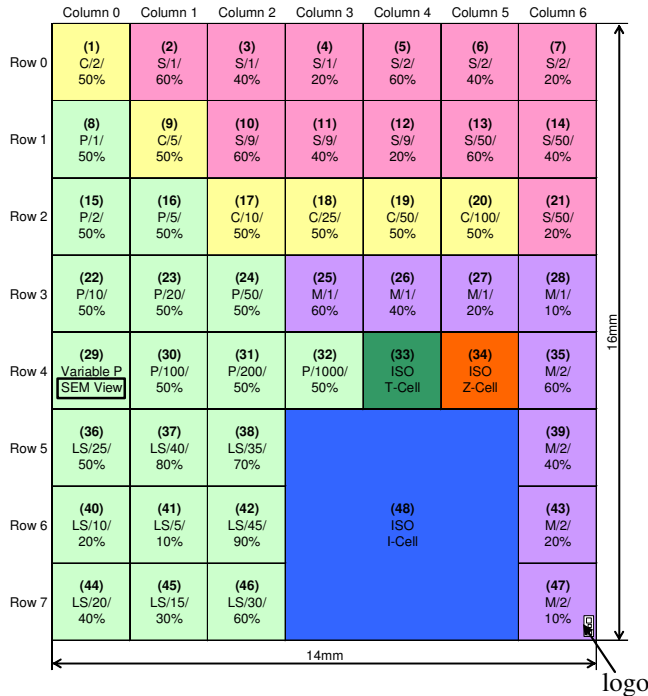


SKW Associates, Inc.

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SKW 3-9 HDP (300mm) Wafer Specifications

DATE: Jan 3, 2007



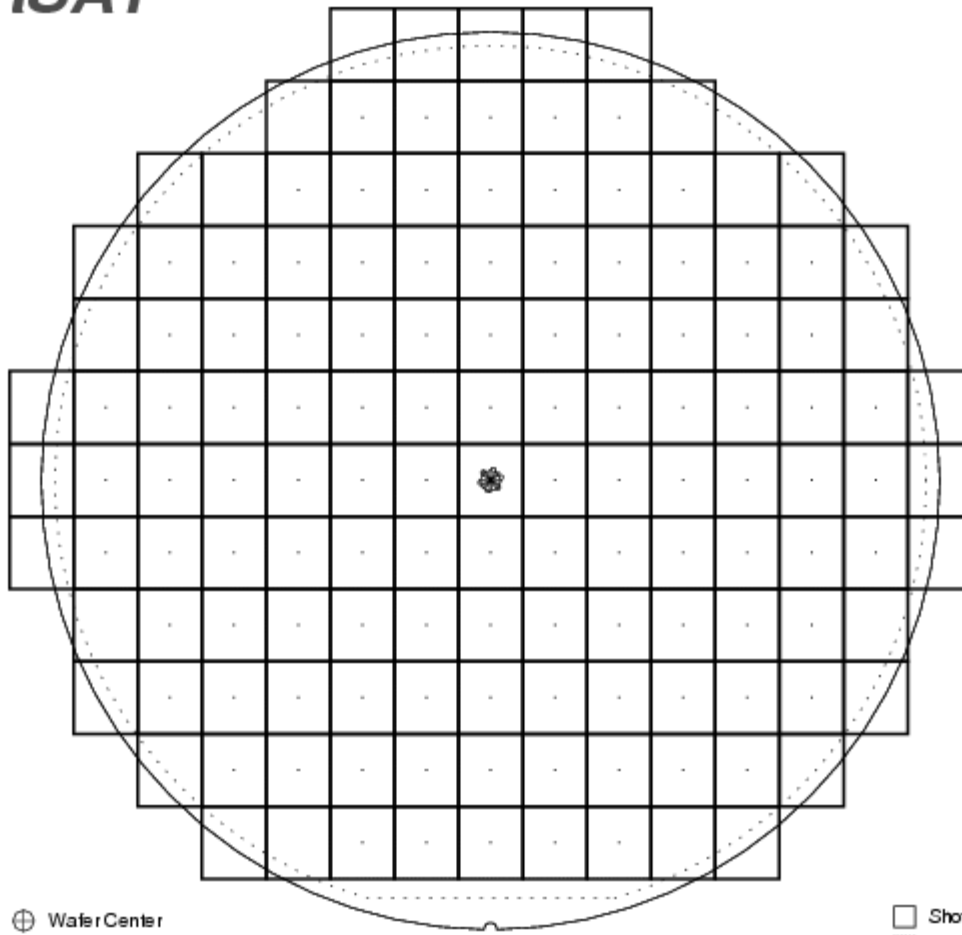
Cross Sectional View

SKW 3-9 Mask Floor Plan

PARAMETER	NOMINAL	TOLERANCE
Patterning		
Center Die X Location	-7.000 mm	+/- 10 μm
Center Die Y Location	-8.000 mm	+/- 10 μm
Die Size: X	14 mm	+/- 10 μm
Die Size: Y	16 mm	+/- 10 μm
Die Stepping (X /Y)	287 / 157 μm	+/- 10 μm
Wafers must be patterned all the way to the edges of the wafer, i.e. no area anywhere on the wafer unpatterned. (Under certain stepper operating conditions, 2 mm edge edge exclusion is allowed.)		

PARAMETER	NOMINAL	TOLERANCE
CD Variation (measured on shallow trenches)		
Lot-to-Lot	180 nm	+/- 10 nm
Within-Lot (Wafer-to-Wafer)		+/- 10 nm
Within-Wafer		+/- 10 nm
Within-Die (measured on 9 trenches)		+/- 14 nm
Raised area thickness (HDP CVD Oxide fill)		
Lot-to-Lot	5000 Å	+/- 5 %
Within-Lot (Wafer-to-Wafer)		+/- 5 %
Within-Wafer		+/- 5 %
Within-Die		+/- 5 %
Raised area thickness (Nitride)		
Lot-to-Lot	1000 Å	+/- 5 %
Within-Lot (Wafer-to-Wafer)		+/- 5 %
Within-Wafer		+/- 5 %
Within-Die		+/- 5 %
Raised area thickness (Pad Oxide)		
Lot-to-Lot	100 Å	+/- 5 %
Within-Lot (Wafer-to-Wafer)		+/- 5 %
Within-Wafer		+/- 5 %
Within-Die		+/- 5 %
Silicon Trench Depth		
Lot-to-Lot	2500 Å	+/- 8 %
Within-Lot (Wafer-to-Wafer)		+/- 8 %
Within-Wafer		+/- 10 %
Within-Die		+/- 10 %

RSAT



⊕ Wafer Center
 × Shot Map Center * SVG Shot Map Center

□ Shot
 ▭ Die

200 mm Wafer Map

Chip Code: RSAT
 Comment: ARO STI Device
 Originator: David Sturtevant
 Date: January 31, 2007

Layout Description

Wafer Diameter: **200** mm
 Usable Diameter: **194** mm
 Title Height: **7** mm
 X Die Size: **14.287** mm
 Y Die Size: **16.157** mm

Stepper Alignment

X Step: 14.287 mm
 Y Step: 16.157 mm
 Shot Columns: 15
 Shot Rows: 13
 Nikon X Offset: 0.0435 mm
 Nikon Y Offset: 0.1785 mm
 SVG X Offset: 0.1785 mm
 SVG Y Offset: -0.0435 mm
 ASML X Offset: 0.0435 mm
 ASML Y Offset: 0.1785 mm

Die Columns: 13
 Die Rows: 11

Die Per Wafer: 109
 Shot Count: 140