

# VIISa<sup>®</sup> 3000XP



## VIISa<sup>®</sup> 3000XP | High Energy Implanter 10keV - 3.75MeV

### Key Benefits

- Extendibility
- Highest Productivity
- Best CoO

The VIISa 3000XP, Varian Semiconductor's third generation, production-proven single-wafer high energy tool with dual magnet architecture, delivers the low contamination performance and precise angle control required in advanced applications. The VIISa 3000XP features angle precision unattainable with batch systems, and delivers true zero capability needed in advanced device manufacturing. The VIISa 3000 series, optimized for single wafer, is now in production at leading memory, logic and foundry manufacturers.

common with the VIISa 900XP, the Company's flagship medium current ion implanter.

### Extendibility

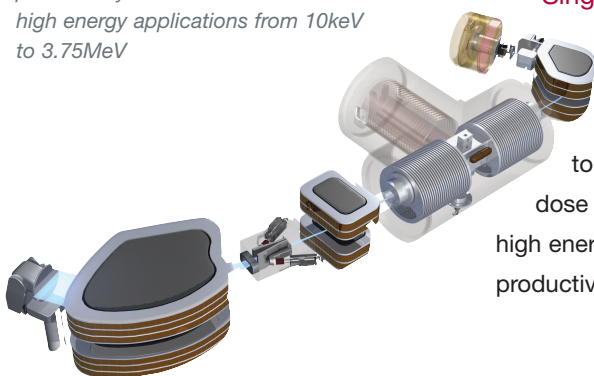
Beyond 65nm, the conventional batch high energy implanter exhibits its limitations to meet the stringent device requirements. The VIISa 3000XP's true zero degree with accurate angle control capability enables higher yield and tighter packing density for the advance device manufacturing.

### Highest Productivity

The VIISa 3000XP provides the highest productivity for MeV applications. It also represents the only single-to-single medium current backup with 400WPH low dose throughput. While delivering the highest productivity, the VIISa 3000XP also offers the lowest cost of ownership by reducing the total number of required low dose systems.

### VIISa 3000XP Beamline

*Delivering the highest precision and productivity for medium current and high energy applications from 10keV to 3.75MeV*



### Extending VSEA's Leadership in Single Wafer High Energy

The VIISa 3000XP is a third generation evolutionary tool, and the latest addition to Varian Semiconductor's low dose platform. This single wafer high energy ion implanter is more productive, more reliable and more in

### True Zero Degree Implant

Single Wafer High Energy

Batch High Energy

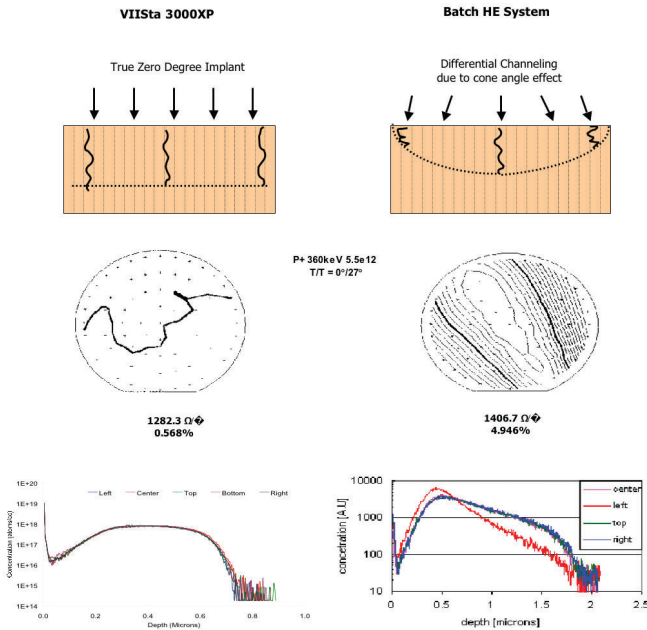


Fig. 4. Implanted Profile Variation Across the Wafer. The different channeling behavior can be easily seen

### Best CoO

Multiple wafer scrap due to inherent and complicated wafer handling architecture on the batch high energy implanter can be a significant cost impact for production. The dummy wafer usage on the batch high energy tool also increases the cost for production. The VIISta 3000XP with industry proven single wafer end station offers best CoO by minimizing wafer scrap and eliminating the need of dummy wafers.

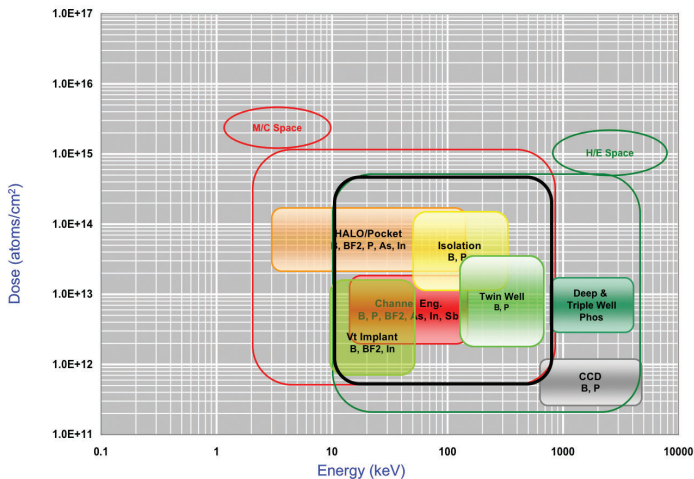
### Single Wafer Replaces Obsolete Batch Tools

In contrast to batch high energy tools that are associated with poor process performance and higher costs due to complex batch endstation architecture, the single wafer high energy VIISta 3000XP offers higher yield, higher low dose productivity and lower cost of ownership. Customers are rapidly moving to single wafer high energy in order to achieve optimum process performance required for next generation devices.

### The Low Dose Platform Advantage

Varian Semiconductor's low dose platform delivers higher yield due to precise angle control and superior contamination performance. The low dose platform achieves the highest productivity for low dose applications and offers the lowest cost of ownership because of the high degree of commonality with the VIISta 900XP.

### Full Medium Current Backup



### VIISta Platform

The VIISta 3000XP is a member of the VIISta single-wafer ion implant platform, which features:

- Dual - magnet architecture
- Varian Control System (VCS™)
- Varian Positioning System (VPS™)
- Varian IHC source
- VIISta single wafer endstation

This high degree of commonality across the VIISta platform provides flexibility in managing capacity, product mix changes, spare parts and training.