Metal Organic Chemical Vapor Deposition, MOCVD

Epitaxy Process Information

Epitaxy Process Capability

□ Reaction Precursor :

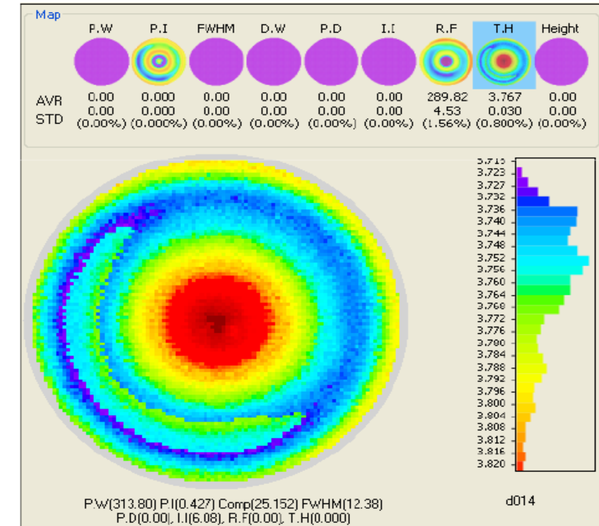
- TMGa、TMAl 、CP2Mg

□ Epitaxy Materials：

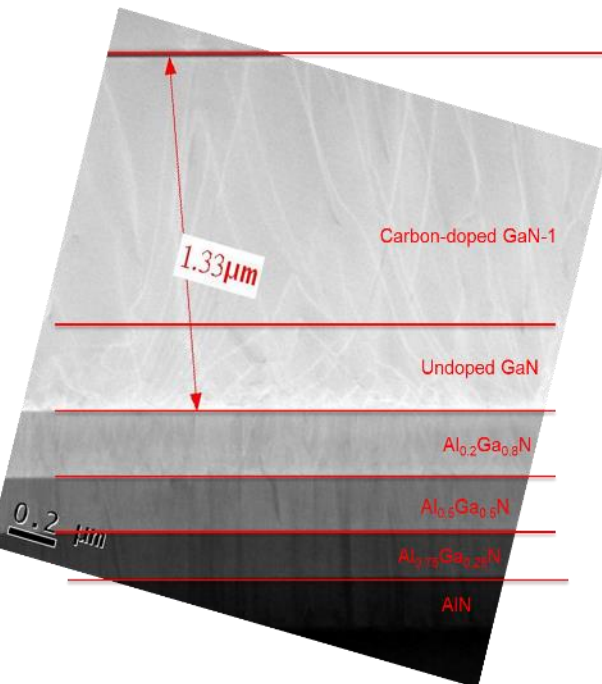
- RF/Power HEMT Structure
- AlGaN 、GaN 、AlN…,etc.

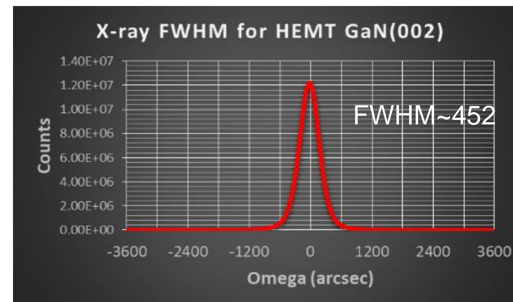
□ Wafer Size/Spec :

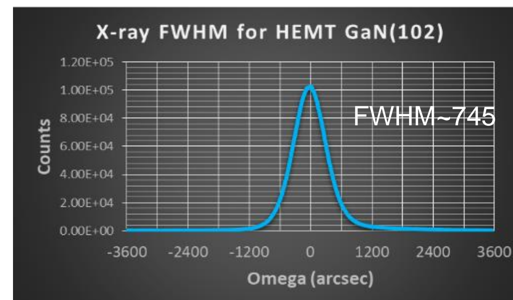
- 8/6 inch Si ; 4 inch SiC

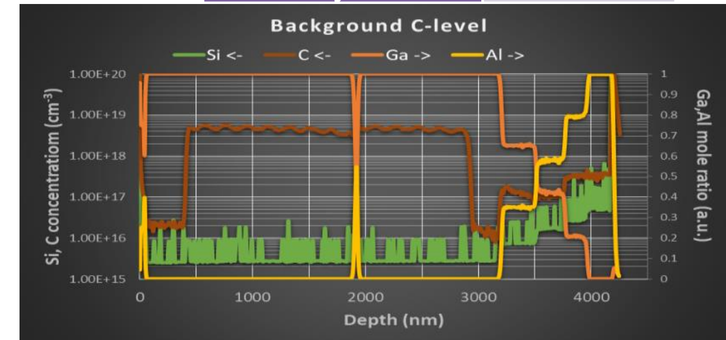


Specification	Uniformity
Within wafer GaN thickness uniformity	0.800%







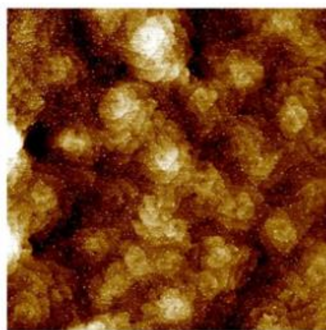


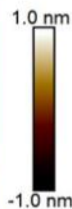
Specification	Data (cm^{-3})
Background C-level	< 1e17
C-doping level	> 5e18

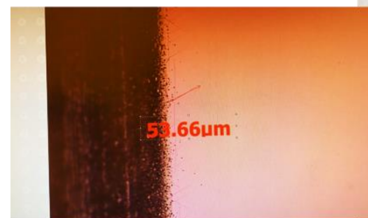
Wafer surface control

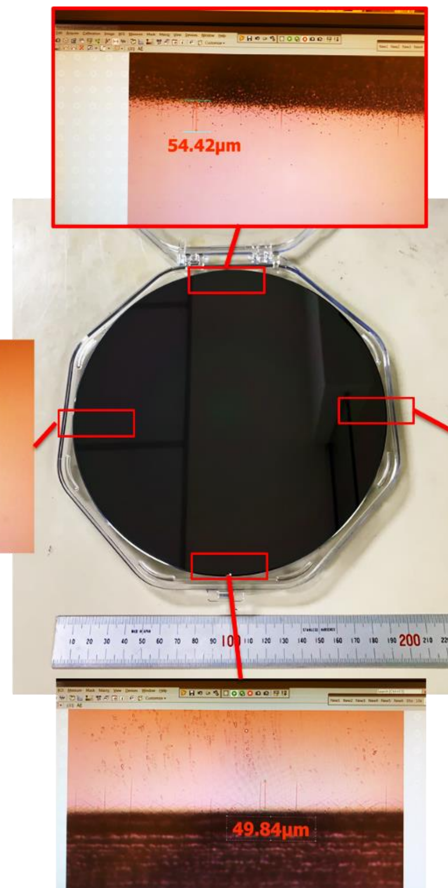
Specification		Sampling	Data
Edge exclusion for crack	≤ 3 mm	Edge across the whole wafer excluding random slip lines and particle-induced cracks on the surface	< 100 µm
Surface roughness	Ra ≤ 1.0 nm	Single point in center location of single wafer	0.2 nm

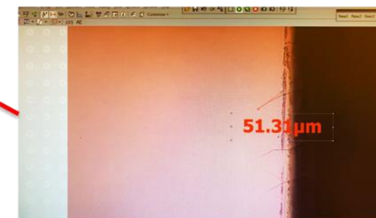
AFM Roughness, Ra: 0.2 nm











In-situ Bow Monitor Control

Specification		Sampling	Data (µm)
Wafer warp at room temperature	≤ 50 µm	Single wafer, warp is abs (Max-Min) of curvature	< 5