HEMT用GaN on Si基板

GaN Epitaxial Films on Si Substrates for HEMT Devices

2012年前半にサンプル供給を開始します
Covalent Materials will start supply samples within the year 2012.

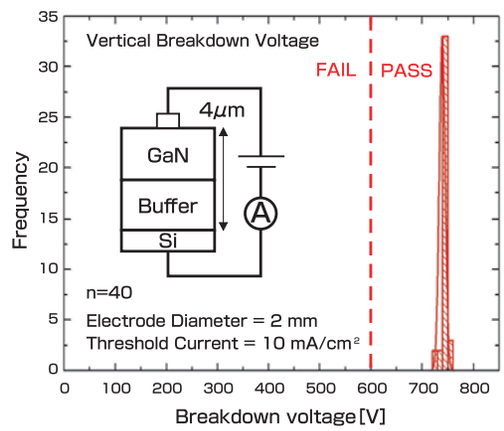
特長　Features

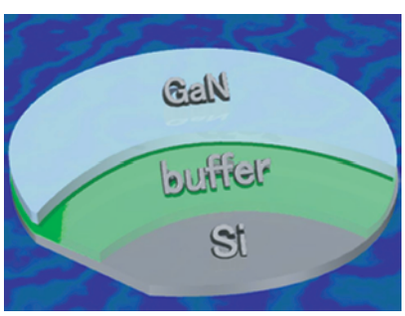
- **高い縦耐圧**
  High Vertical Breakdown Voltage (180V/μm).
- **エピタキシャル総膜厚6μmでも反り制御可能**
  Warpage Control : at 6μm Epitaxial Layers.
- **Si基板はCZ法に加え、MCZ法が対応可能**
  Si Substrate Type : CZ and MCZ.

基板仕様　Characteristics

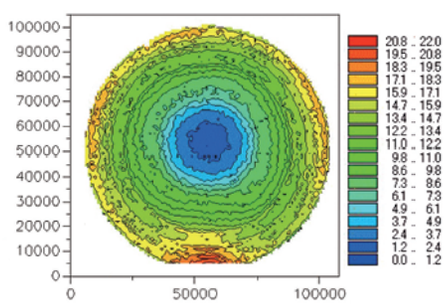
Typical Data	
Heteroepitaxial layer	GaN
Intermediate buffer layer	proprietary
Si Substrate compatibility with	CZ & MCZ~φ3,4,(6)inch
Dislocation density	≦5x10⁹cm⁻²
Crystallinity(XRD-FWHM)	≦1000arc secs
AlGaN/GaN-HEMT structure	on demand
-Mobility of 2DEG	>1200cm²/Vs
-Al conc. uniformity(σ/mean)	≦2%
Frontsurface	as grown
Backsurface	Si etched

※Edge Exclusion 10mm

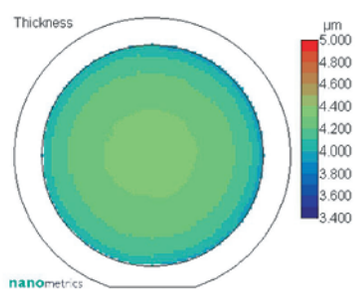




Heteroepitaxial growth using buffer layers



Warpage ≦ 40μm



Thickness Uniformity σ/mean ≦ 3%

COVALENT

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