
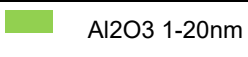


| 6inch 1000nm c-cut SiCOI SPEC   |                            |  |           |                    |
|---|----------------------------|--|-----------|--------------------|
|  |                            | <br><br><br> |           |                    |
| S/N   | Item                       | Specification  | Tolerance | Proposal/Remarks   |
| <b>Device Layer ( Edge exclusion 10mm)</b>  |                            |  |           |                    |
| 1   | Material                   | SiC  |           |                    |
| 2   | Polytype                   | 4H   |           |                    |
| 3   | Type                       | High-purity semi-  |           |                    |
| 4   | Dopant                     | Nominally undoped  |           |                    |
| 5   | Crystal orientation        | (0001)   |           |                    |
| 6   | Off orientation            | On axis  |           |                    |
| 7   | Orientation (center point) | ±0.25 deg  |           |                    |
| 8   | Micropipe density          | ≤5 cm <sup>-2</sup>  |           |                    |
| 9   | Resistivity                | >=10 <sup>7</sup> Ω cm at R.T.   |           |                    |
| 10  | SiC thickness (19 Pts)     | 1000 nm  | ±100 nm   | Edge exclusion 8mm |
| 11  | Si-face (downward)         | CMP epi-ready polished   |           |                    |
| 12  | C-face (upward)            | CMP  |           |                    |
| 13  | Notch orientation          | <1-100>±5°   |           |                    |
| <b>Modified Layer</b>   |                            |  |           |                    |
| 1   | Material                   | Al2O3  |           |                    |
| 2   | Thickness                  | 1-20nm   |           | Process Guarantee  |
| <b>Oxide Layer</b>  |                            |  |           |                    |
| 1   | Oxide thickness (19 Pts)   | 3000nm   | ±5% nm    | Edge exclusion 5mm |
| <b>Si Substrate Layer</b>   |                            |  |           |                    |
| 1   | Material                   | Si   |           |                    |
| 2   | Si substrate thickness     | 675μm  | ±25μm     |                    |
| 3   | Dopant                     | P/B  |           |                    |
| 4   | Resistivity                | 1-100 ohm.cm   |           |                    |
| 5   | Orientation                | <100>  | ±0.1°     |                    |
| 6   | Primary flat               | <110>  | ±0.1°     |                    |
| 7   | Primary flat length        | 47.5±2 mm  |           |                    |
| 8   | Surface                    | Single-side polish   |           |                    |
| <b>Overall</b>  |                            |  |           |                    |
| 1   | Diameter                   | 150 mm   | ±0.2 mm   |                    |
| 2   | Total thickness variation  | ≤ 5.0 μm   |           | Edge exclusion 5mm |
| 4   | SBIR; site 10*10mm         | ≤ 2 μm   |           | Edge exclusion 5mm |
| 5   | Warp                       | ≤ 50 μm  |           | Edge exclusion 5mm |
| 6   | Bow                        | ± 50 μm  |           | Edge exclusion 5mm |
| 7   | Roughness                  | ≤0.3nm   |           | Edge exclusion 5mm |
| 8   | Voids ( φ1-5mm)            | ≤1ea   |           | Edge exclusion 5mm |
| 9   | Voids ( φ0.5-1mm)          | ≤10ea  |           | Edge exclusion 5mm |