

**ANALYSIS ON GEOMETRY AND SURFACE OF 150  $\mu\text{m}$  SILICON WAFER AFTER BACKGRINDING AND WET ETCHING PROCESS**

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**ABSTRACT**

This paper examines the warpage on the backside of silicon wafer after thinning process. The thinning process includes after backgrinding (BG) and after wet etching (WE). The results on wafer warpage were linked to transmission electron microscopy analysis. This is purposely to explain the correlation between warpage and depth of damage. Results showed that deep backside damage would induce high wafer warpage, hence reduced wafer strength and create difficulty during handling. Further study on surface roughness and topography of each surface finish is obtained by atomic force microscopy and scanning electron microscopy techniques. They indicated that low surface roughness is determined by the smooth surface condition, which goes to after wet etching process.

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