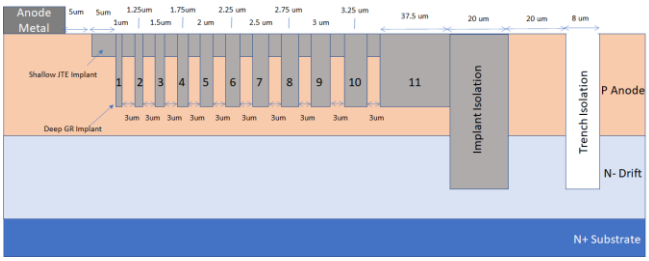

Figure 1. Schematic cross-section of GaN diode with hybrid nitrogen implanted termination.

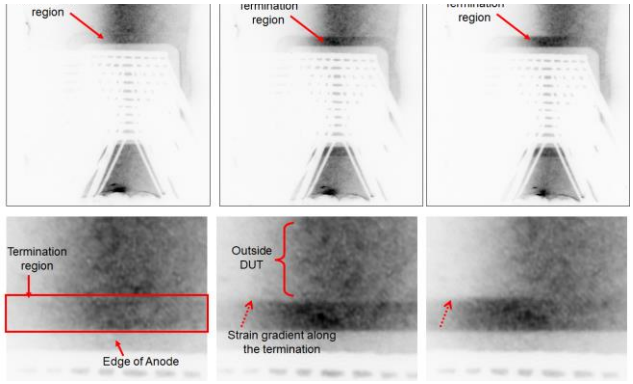

Figure 3. XRT image of diode under no bias,-200 V and-500V (from left to right), showing initial strain from die attach and bias dependent strain in the edge termination region, due to inverse piezoelectric effect. Bottom row shows expanded view.

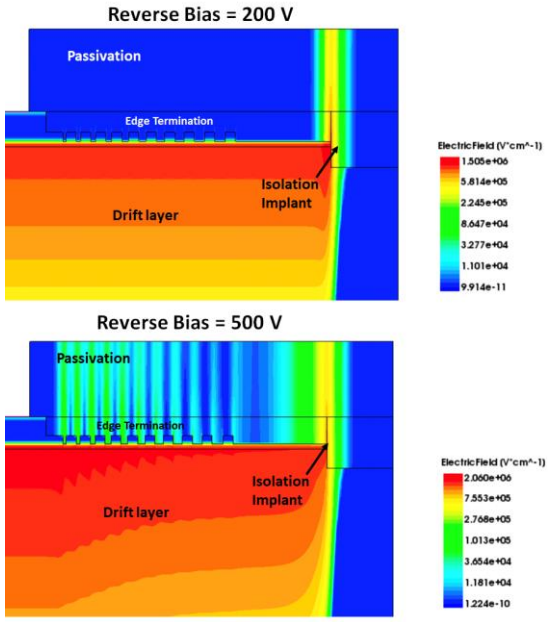

Figure 5. TCAD simulations of GaN diode showing cross-section of electric field at a reverse bias of 200 and 500V.

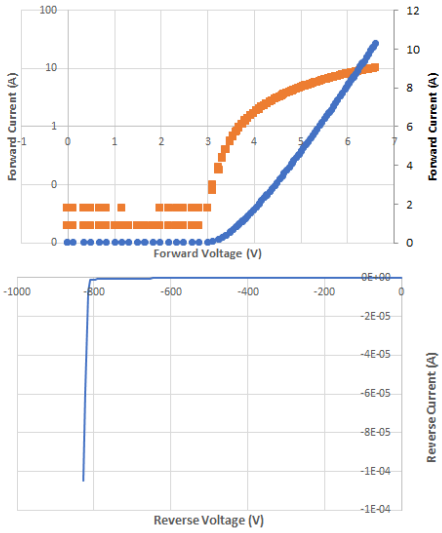

Figure 2. Forward (top) and reverse (bottom) current-voltage measurements of GaN diode

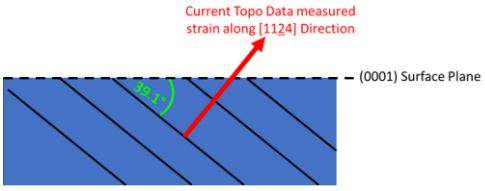

Figure 4. The (11-24) plane used for the topography measurements is at a 39.1° angle to the surface.

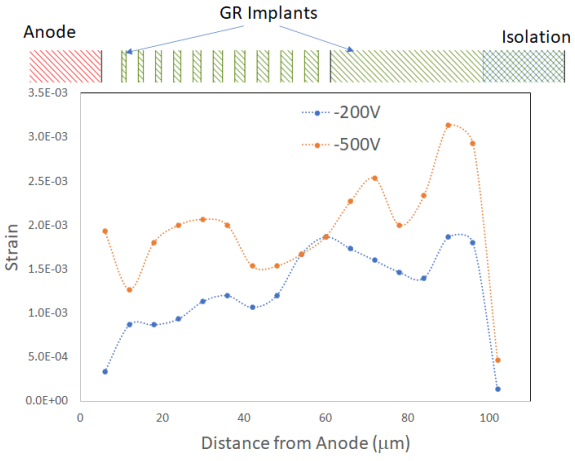

Figure 6. Measured piezoelectric strain in termination region by in-situ biased XRT