Electrical Properties of Detector Schottky Diodes Based on 4H-SiC High Quality Epitaxial Layer

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Abstract. We fabricated and electrically characterized 4H-SiC Schottky diodes based on high quality epitaxial layer. Current-voltage characteristic in forward and reverse direction was measured and calculation of Schottky barrier height, ideality factor and series resistance were performed. From the capacitance-voltage measurement we determined thickness of the space charge region vs. reverse bias and calculated doping concentration profile of 4H-SiC diode.