SUNY Polytechnic Institute Academic member

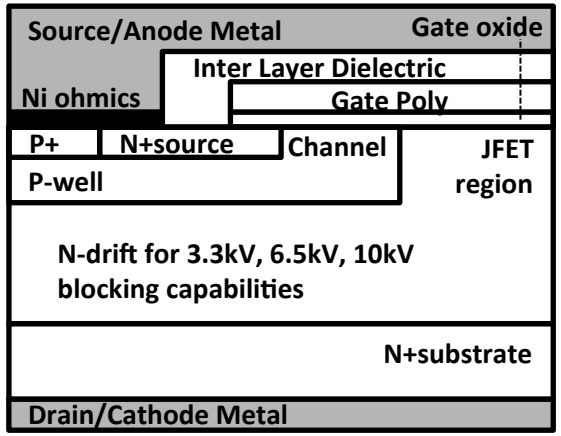
Project Title: Development of 3.3kV/6.5kV/ 10kV SiC MOSFETs, JBS diodes, and JBS diode integrated MOSFETs

Objectives: to deliver MV, HV SiC devices

Major Milestones: High voltage edge termination technique, Rugged MOSFETs, JBSFET designs

Significant Equipment Acquisition: none

Deliverables: device design, process flow, and working devices fabricated at Xfab



PI: Prof. Woongje Sung
Email: wsung@sunypoly.edu
Phone: 518-956-7197

WBG Technology Impact

1. Supply MV, HV SiC devices to PA members/ 40% reduction in wafer area by adopting one chip integration concept of JBSFET
2. Market segments impacted. Application Spaces: MV drives, Grid application, etc
3. Timeframe for commercialization: BP-3
4. This project will supply MV, HV SiC devices to PA members that are otherwise difficult to attain from commercial vendors.

More WBG Impact and Additional impacts

1. Successful demonstration of this project will improve efficiency of MV, HV power converter systems. The proposed JBSFET will reduce the size of a power module and increase the frequency capability.
2. This project will involve two undergrad students, educate one graduate student, one post-doc.
3. Specify TRL level

   At project start: TRL7

   Expected at project completion: TRL8