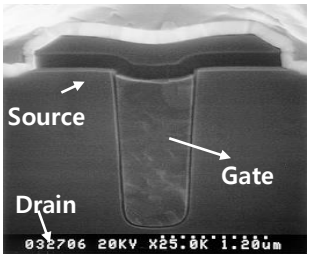
Silicon Power Semiconductor Technology

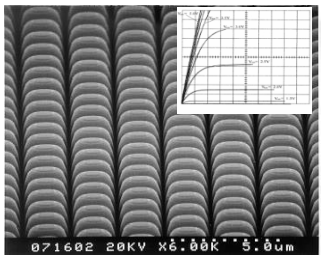
Technology Overview

- High-density Trench Gate DMOS (TDMOS) technology for 40-200V applications
- FRD-integrated 600V Reverse Conducting IGBT (RC-IGBT) and 1200V NPT IGBT technology applying Semi-Trench
- Super Barrier Rectifier (SBR) with low voltage loss, fast reverse recovery time, high temperature stability, and high EAS characteristics
- Power integrated circuit technology incorporating 400V LDMOS, CMOS, BJT, and Diode

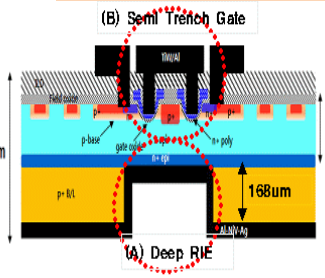
Key Development Cases

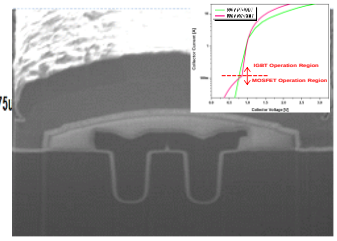
40~200V Trench Gate DMOS (TDMOS)



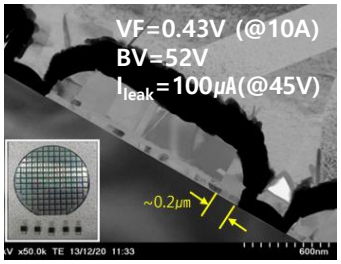


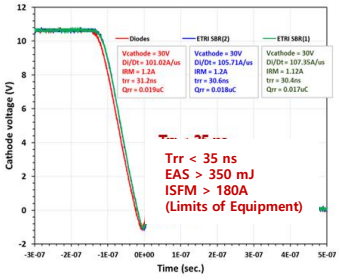
600V RC-IGBT, 1200V NPT IGBT



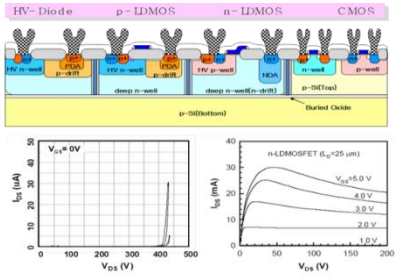


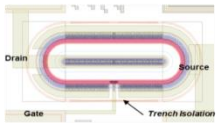
45~100V Super Barrier Rectifier (SBR)





400V high-voltage power integrated circuits





Application Areas

- Various components for power conversion and control, such as automotive relays & switches, DC-DC converters, power management, etc.
- Power components for automotive applications, household/industrial motors, renewable energy, battery charging systems, etc.
- Power regulators for automotive applications, solar panel bypass diodes, mobile charging regulators, PC power SMPS, etc.
- Integrated circuits for voltage stabilizers, driving ICs for displays like PDP, Smart Power ICs, etc.