ETRIHigh-Power Semiconductor Technology for Pulse Power

Technology Overview

- 1400V Silicon MOS Controlled Thyristor (MCT) technology for high-voltage switches
 - On/Off control via MOS drive, low forward voltage drop, high pulse current (>1kA), and di/dt (>10kA/µs)
 - Motor drivers, UPS (Uninterruptible Power Supply), Capacitor Discharge Ignition Systems, and electronic safety interlock devices for military use (Export License Items)
- 5000V/2200A Light Triggered Thyristor (LTT) Technology for HVDC (High Voltage Direct Current) and electromagnetic propulsion systems
 - Large-area LTT technology with overvoltage self-protection features (BV>5000V, BVBOD=5000V, ITSM>60kA)
 - Core component for national industrial high-power devices, like HVDC and future electromagnetic propulsion systems and military applications, such as railguns (Export License Items)

Development Prototypes

1400V MOS Controlled Thyristor (MCT)



5000V/2200A, pulse current 60kA Light Triggered Thyristor (LTT)



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