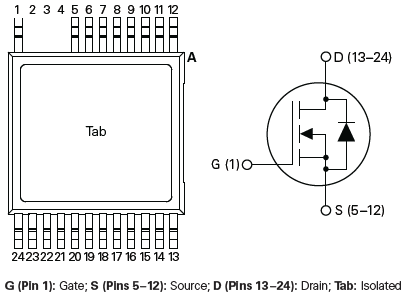
MMIX1T500N20X4 X4-Class Ultra-Junction Power MOSFET
200 V, 480 A in SMPD-X Package

Problem/Solution

Power electronics designers struggle with component complexity, thermal management, and efficiency. Engineers often parallel multiple low-current MOSFETs, increasing board space and cost. Conventional devices also limit thermal performance and power handling. The new 200 V, 480 A N-channel Si Power MOSFET overcomes these issues with high current capability. Its ceramic-based isolated package delivers superior thermal resistance and power handling, while the topside-cooled design simplifies thermal management for compact, efficient systems.

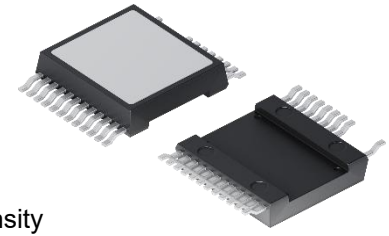
Technical Resources

Series Page | Datasheet | Video



G (Pin 1): Gate; **S (Pins 5–12):** Source; **D (Pins 13–24):** Drain; **Tab:** Isolated

Benefits



- Low conduction losses and reduced heat dissipation
- Reduced paralleling requirements for lower component count
- Low thermal resistance
- Compact design with high power density
- Reduced thermal management effort

Features

- 200 V blocking voltage with low RDS(on) = 1.99 mΩ
- High current capability ID = 480 A
- Maximum junction-case thermal resistance, Rth(j-c) = 0.14 ° C/W
- 1070 W power dissipation
- Advanced top-side cooled packaging

Markets/Applications

- DC load switch
- Battery energy storage systems
- Industrial and process power supplies
- Industrial charging infrastructures
- Drones and VTOL

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