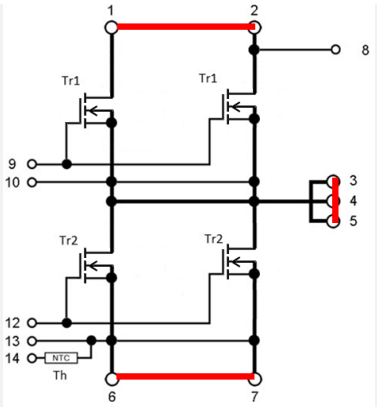
MITSUBISHI ELECTRIC

The Next Generation Standard SiC Module for High Power:
LV100 optimized for Renewable and Industrial Applications

High-power applications in renewable energy and industrial sectors demand reliable, scalable, and standardized power module solutions. To address these needs, Mitsubishi Electric is expanding its standardized LV100 package portfolio by introducing SiC MOSFET technology with 2500V blocking voltage, based on advanced G2B planar technology, delivering optimized performance and enhanced system reliability.

Product Advantages

- New standardized package for high power applications
- High power density
- Operation up to $T_{vj,op}$ = 175°C
- Low power loss enabled by latest planar SiC MOSFET (G2B) technology ($r_{ds(on)}$ = 1.75 mΩ @150 °C, Improved Q_{rr} by proton irradiation)
- No SBD required (negligible defect expansion due to body diode current)
- Stable long-term characteristics ensured by improved gate oxide quality
- Low cosmic ray FIT rate (<100 FIT at 1500 V_{DC})
- 2500 V classproviding ample margin for 1500 VDC system applications
- High thermal cycle capability with AlSiC baseplate

I_S [A]	Circuit Diagram	V_{DSX} [V]
		2500
1600		**FMF1600DC-50CW***

$r_{ds(on)}$ = 0.99 mΩ @25 °C
= 1.75 mΩ @150 °C
= 1.96 mΩ @175 °C

* Under development

Wind Solar Industrial Power Transmission