

THE 3.3 kV HIGH-CURRENT MOSFETs

RUGGED · RELIABLE · CUSTOMIZABLE

Two new large-die additions to the 3.3 kV family — **25 mΩ and 50 mΩ** — for maximum power density in MV drives, utility renewables, HVDC / SST main conversion, MW-scale AI data centers and high-current pulsed power. Robust blocking. Threshold voltage > 3 V.

Datasheets & samples: 50 mΩ — Oct / Nov 2026 · 25 mΩ — Dec 2026

BARE DIE · PACKAGED DISCRETE

Typical values at $T_C = 25^\circ\text{C}$ unless stated

3.3 kV · HIGH-CURRENT MOSFET

TO-247-4L-HC-EXT

25 mΩ **105 A**

$R_{(ON)}$

DRAIN CURRENT

SYMBOL	CONDITIONS	VALUE	UNIT
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$V_{(BR)DSS}$ $V_{GS} = 0\text{ V}$, $I_D = 100\text{ }\mu\text{A}$ **3300 min.** V

$R_{DS(on)}$ $V_{GS} = 20\text{ V}$, $I_D = 50\text{ A}$ **25 typ.** mΩ

I_D $V_{GS} = 20\text{ V}$, $T_C = 25^\circ\text{C}$ **105 max.** A

$V_{GS(th)}$ $V_{GS} = V_{DS}$, $I_D = 25\text{ mA}$ **3.2 typ.** V

$V_{GS(max)}$ — **-10 / +25** V

I_{DSS} $V_{DS} = 3300\text{ V}$, $V_{GS} = 0\text{ V}$ **100 max.** μA

V_{SD} $V_{GS} = -5\text{ V}$, $I_{SD} = 50\text{ A}$ **4.7 typ.** V

- State-of-the-art SiC MOSFET technology
- Large current capability — 105 A continuous
- Robust blocking, 3300 V minimum
- Threshold voltage > 3 V

APPLICATIONS

MV drives · utility renewables · HVDC / SST main · MW-scale AI data centers · Marx stages

3.3 kV · HIGH-CURRENT MOSFET

TO-247-4L-HC

50 mΩ **65 A**

$R_{(ON)}$

DRAIN CURRENT

SYMBOL	CONDITIONS	VALUE	UNIT
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$V_{(BR)DSS}$ $V_{GS} = 0\text{ V}$, $I_D = 100\text{ }\mu\text{A}$ **3300 min.** V

$R_{DS(on)}$ $V_{GS} = 20\text{ V}$, $I_D = 25\text{ A}$ **47 typ.** mΩ

I_D $V_{GS} = 20\text{ V}$, $T_C = 25^\circ\text{C}$ **65 max.** A

$V_{GS(th)}$ $V_{GS} = V_{DS}$, $I_D = 12.5\text{ mA}$ **3.17 typ.** V

$V_{GS(max)}$ — **-10 / +25** V

I_{DSS} $V_{DS} = 3300\text{ V}$, $V_{GS} = 0\text{ V}$ **100 max.** μA

V_{SD} $V_{GS} = -5\text{ V}$, $I_{SD} = 25\text{ A}$ **4.5 typ.** V

- State-of-the-art SiC MOSFET technology
- Large current capability — 65 A continuous
- Robust blocking, 3300 V minimum
- Threshold voltage > 3 V

APPLICATIONS

MV drives · utility renewables · HVDC / SST main · AI data centers · high-current radar