

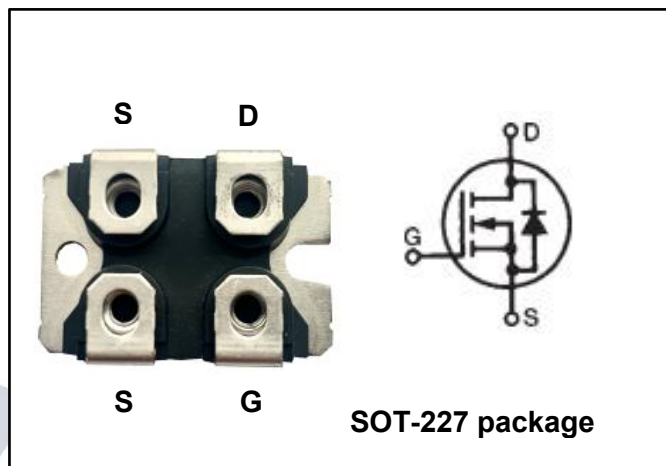
## N-Channel MOSFET Transistor

## FEATURES

- Drain Current  $-I_D = 27A @ T_C = 25^\circ C$
- Drain Source Voltage  $-V_{DSS} = 800V(\text{Min})$
- Static Drain-Source On-Resistance  
 $-R_{DS(on)} = 0.3\Omega(\text{Max}) @ V_{GS} = 10V$

## APPLICATIONS

- DC-DC Converters
- AC and DC Motor Drives
- Power Factor Correction (PFC)

Absolute Maximum Ratings( $T_C = 25^\circ C$ )

| SYMBOL    | PARAMETER                              | VALUE    | UNIT       |
|-----------|----------------------------------------|----------|------------|
| $V_{DSS}$ | Drain-Source Voltage                   | 800      | V          |
| $V_{GS}$  | Gate-Source Voltage-Continuous         | $\pm 30$ | V          |
| $I_D$     | Drain Current-Continuous               | 27       | A          |
| $I_{DM}$  | Drain Current-Single Pulse             | 108      | A          |
| $P_D$     | Total Dissipation @ $T_C = 25^\circ C$ | 520      | W          |
| $T_J$     | Max. Operating Junction Temperature    | 150      | $^\circ C$ |
| $T_{stg}$ | Storage Temperature                    | -55~150  | $^\circ C$ |

## THERMAL CHARACTERISTICS

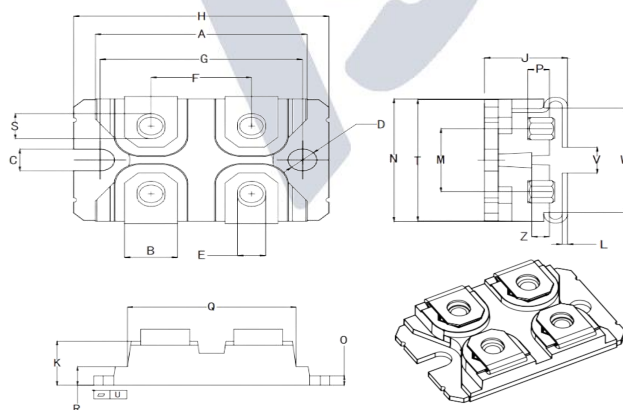
| SYMBOL       | PARAMETER                            | MAX  | UNIT         |
|--------------|--------------------------------------|------|--------------|
| $R_{th j-c}$ | Thermal Resistance, Junction to Case | 0.24 | $^\circ C/W$ |

## N-Channel MOSFET Transistor

### ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C)

| SYMBOL               | PARAMETER                       | CONDITIONS                                                 | MIN | TYP | MAX  | UNIT |
|----------------------|---------------------------------|------------------------------------------------------------|-----|-----|------|------|
| V <sub>(BR)DSS</sub> | Drain-Source Breakdown Voltage  | V <sub>GS</sub> = 0, I <sub>D</sub> = 0.25mA               | 800 | -   | -    | V    |
| I <sub>DSS</sub>     | Zero Gate Voltage Drain Current | V <sub>DS</sub> = 800V, V <sub>GS</sub> = 0                | -   | -   | 250  | uA   |
| I <sub>GSS</sub>     | Gate-Body Leakage Current       | V <sub>GS</sub> = ±30V, V <sub>DS</sub> = 0                | -   | -   | ±100 | nA   |
| V <sub>GS(th)</sub>  | Gate Threshold Voltage          | V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = 2.5mA | 2.0 | -   | 4.0  | V    |
| R <sub>DS(on)</sub>  | Drain-Source On-Resistance      | V <sub>GS</sub> = 10V, I <sub>D</sub> = 13.5A              | -   | -   | 0.3  | Ω    |
| V <sub>SD</sub>      | Diode Forward Voltage           | I <sub>SD</sub> = 27A, V <sub>GS</sub> = 0V                | -   | -   | 1.8  | V    |

### PACKAGE OUTLINE (UNIT: mm):



| DIM | Millimeter |       |
|-----|------------|-------|
|     | min        | max   |
| A   | 31.40      | 31.60 |
| B   | 7.70       | 8.10  |
| C   | 4.20       | 4.40  |
| D   | 4.20       | 4.40  |
| E   | 4.10       | 4.40  |
| F   | 14.90      | 15.10 |
| G   | 30.10      | 30.30 |
| H   | 38.00      | 38.40 |
| J   | 12.00      | 12.60 |
| K   | 9.35       | 9.65  |
| L   | 0.74       | 0.84  |
| M   | 12.30      | 12.70 |
| N   | 24.40      | 25.00 |
| O   | 1.90       | 2.10  |
| P   | 2.92       | 3.32  |
| Q   | 26.60      | 27.00 |
| R   | 3.80       | 4.20  |
| S   | 4.95       | 5.45  |
| T   | 23.70      | 24.30 |
| U   | 0          | 0.10  |
| V   | 3.50       | 5.50  |
| W   | 20.15      | 20.45 |
| Z   | 2.50       | 2.70  |

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## **N-Channel MOSFET Transistor**

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