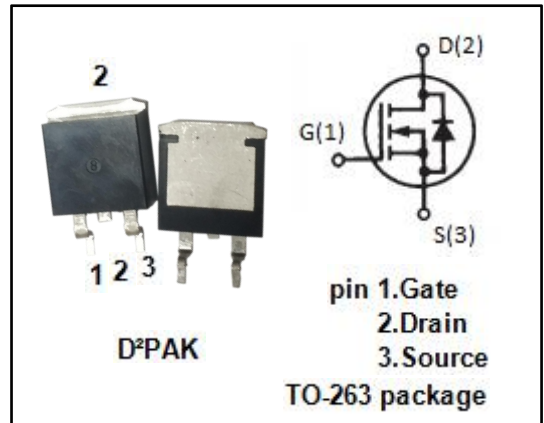


**isc N-Channel MOSFET Transistor**
**2SK3571-ZK**
**FEATURES**

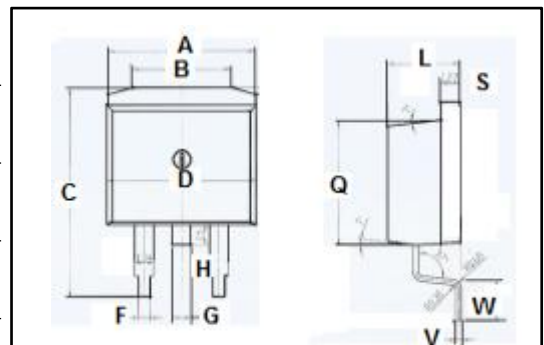
- Drain Current :  $I_D = 48A @ T_C = 25^\circ C$
- Drain Source Voltage  
:  $V_{DSS} = 20V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 9m\Omega (\text{Max}) @ V_{GS} = 10V$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**DESCRIPTION**

- motor drive, DC-DC converter, power switch and solenoid drive.


**ABSOLUTE MAXIMUM RATINGS( $T_a = 25^\circ C$ )**

| SYMBOL    | PARAMETER                              | VALUE    | UNIT       |
|-----------|--|----------|------------|
| $V_{DSS}$ | Drain-Source Voltage                   | 20       | V          |
| $V_{GS}$  | Gate-Source Voltage-Continuous         | $\pm 20$ | V          |
| $I_D$     | Drain Current-Continuous               | 48       | A          |
| $I_{DM}$  | Drain Current-Single Pulse             | 144      | A          |
| $P_D$     | Total Dissipation @ $T_C = 25^\circ C$ | 40       | W          |
| $T_J$     | Max. Operating Junction Temperature    | -55~150  | $^\circ C$ |
| $T_{stg}$ | Storage Temperature                    | -55~150  | $^\circ C$ |



| DIM | mm   |      |
|-----|------|------|
|     | MIN  | MAX  |
| A   | 9.8  | 10.2 |
| B   | 6.6  | 6.8  |
| C   | 15.1 | 15.3 |
| D   | 9.6  | 10   |
| F   | 0.7  | 0.9  |
| G   | 1.26 | 1.3  |
| H   | 1.2  | 1.45 |
| L   | 4.4  | 4.6  |
| Q   | 9.2  | 9.3  |
| S   | 1.25 | 1.35 |
| V   | 0.4  | 0.6  |
| W   | 2.6  | 2.8  |

**THERMAL CHARACTERISTICS**

| SYMBOL        | PARAMETER                            | MAX  | UNIT         |
|---------------|--------------------------------------|------|--------------|
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case | 3.13 | $^\circ C/W$ |

## isc N-Channel MOSFET Transistor

## 2SK3571-ZK

## ELECTRICAL CHARACTERISTICS

T<sub>C</sub>=25°C unless otherwise specified

| SYMBOL               | PARAMETER                       | CONDITIONS                                   | MIN | MAX | UNIT |
|----------------------|---------------------------------|--|-----|-----|------|
| V <sub>(BR)DSS</sub> | Drain-Source Breakdown Voltage  | V <sub>GS</sub> = 0; I <sub>D</sub> = 1mA    | 20  | --  | V    |
| V <sub>GS(th)</sub>  | Gate Threshold Voltage          | V <sub>DS</sub> = 10V; I <sub>D</sub> = 1mA  | 1.5 | 2.5 | V    |
| R <sub>DS(on)1</sub> | Drain-Source On-Resistance      | V <sub>GS</sub> = 10V; I <sub>D</sub> = 24A  | --  | 9   | mΩ   |
| R <sub>DS(on)2</sub> | Drain-Source On-Resistance      | V <sub>GS</sub> = 4.5V; I <sub>D</sub> = 18A | --  | 16  | mΩ   |
| I <sub>GSS</sub>     | Gate-Body Leakage Current       | V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0  | --  | ±10 | uA   |
| I <sub>DSS</sub>     | Zero Gate Voltage Drain Current | V <sub>DS</sub> = 20V; V <sub>GS</sub> = 0   | --  | 10  | uA   |
| V <sub>SD</sub>      | Forward On-Voltage              | I <sub>S</sub> = 48A; V <sub>GS</sub> = 0    | --  | 1.0 | V    |

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