

## isc N-Channel MOSFET Transistor

2SK3927-01SJ

## FEATURES

- Drain Current :  $I_D = 34A @ T_C = 25^\circ C$
- Drain Source Voltage  
:  $V_{DSS} = 250V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 110m\Omega (\text{Max}) @ V_{GS} = 10V$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## DESCRIPTION

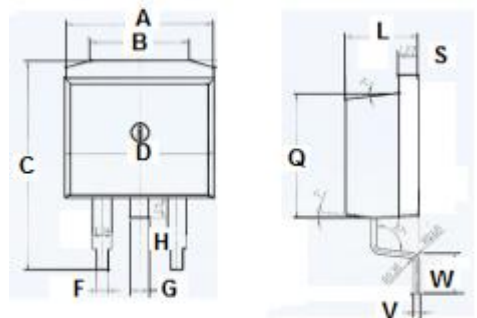
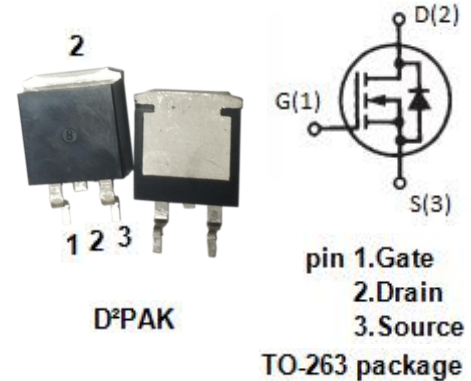
- motor drive, DC-DC converter, power switch and solenoid drive.

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

| SYMBOL    | PARAMETER                              | VALUE    | UNIT       |
|-----------|----------------------------------------|----------|------------|
| $V_{DSS}$ | Drain-Source Voltage                   | 250      | V          |
| $V_{GS}$  | Gate-Source Voltage-Continuous         | $\pm 30$ | V          |
| $I_D$     | Drain Current-Continuous               | 34       | A          |
| $I_{DM}$  | Drain Current-Single Pluse             | 136      | A          |
| $P_D$     | Total Dissipation @ $T_C = 25^\circ C$ | 270      | W          |
| $T_J$     | Max. Operating Junction Temperature    | -55~150  | $^\circ C$ |
| $T_{stg}$ | Storage Temperature                    | -55~150  | $^\circ C$ |

## THERMAL CHARACTERISTICS

| SYMBOL       | PARAMETER                            | MAX   | UNIT         |
|--------------|--------------------------------------|-------|--------------|
| $R_{th j-c}$ | Thermal Resistance, Junction to Case | 0.463 | $^\circ C/W$ |



| 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  |

**isc N-Channel MOSFET Transistor****2SK3927-01SJ****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> = 0.25mA   | 250 | --   | V    |
| V <sub>GS(th)</sub>  | Gate Threshold Voltage          | V <sub>DS</sub> = 10V; I <sub>D</sub> = 0.25mA | 3.0 | 5.0  | V    |
| R <sub>DS(on)</sub>  | Drain-Source On-Resistance      | V <sub>GS</sub> = 10V; I <sub>D</sub> = 17A    | --  | 110  | mΩ   |
| I <sub>GSS</sub>     | Gate-Body Leakage Current       | V <sub>GS</sub> = ±30V; V <sub>DS</sub> = 0    | --  | ±0.1 | uA   |
| I <sub>DSS</sub>     | Zero Gate Voltage Drain Current | V <sub>DS</sub> = 250V; V <sub>GS</sub> = 0    | --  | 25   | uA   |
| V <sub>SD</sub>      | Forward On-Voltage              | I <sub>S</sub> = 34A; V <sub>GS</sub> = 0      | --  | 1.5  | V    |

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