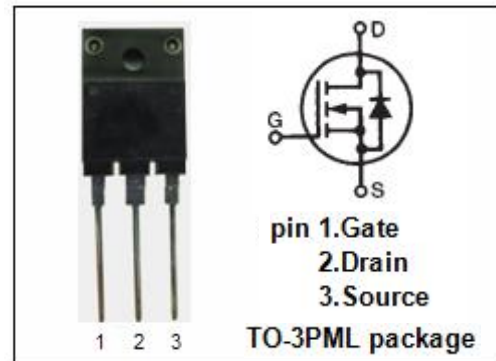


**isc N-Channel MOSFET Transistor**
**2SK1298**
**FEATURES**

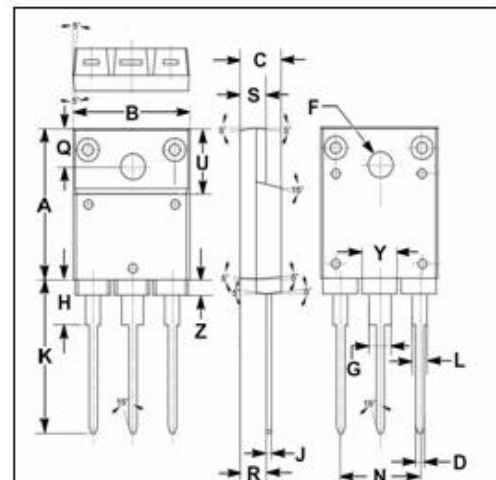
- Drain Current  $-I_D = 40A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS} = 60V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 18m\Omega (\text{Max})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**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                   | 60       | V          |
| $V_{GS}$  | Gate-Source Voltage-Continuous         | $\pm 20$ | V          |
| $I_D$     | Drain Current-Continuous               | 40       | A          |
| $I_{DM}$  | Drain Current-Single Pulse             | 160      | A          |
| $P_D$     | Total Dissipation @ $T_C = 25^\circ C$ | 50       | W          |
| $T_J$     | Max. Operating Junction Temperature    | 150      | $^\circ C$ |
| $T_{stg}$ | Storage Temperature                    | -55~150  | $^\circ C$ |



| DIM | mm    |       |
|-----|-------|-------|
|     | MIN   | MAX   |
| A   | 19.90 | 20.10 |
| B   | 15.75 | 16.10 |
| C   | 5.50  | 5.70  |
| D   | 0.90  | 1.10  |
| F   | 3.30  | 3.50  |
| G   | 2.90  | 3.20  |
| H   | 5.90  | 6.10  |
| J   | 0.595 | 0.70  |
| K   | 21.10 | 22.50 |
| L   | 1.90  | 2.25  |
| N   | 10.80 | 11.00 |
| Q   | 4.90  | 5.10  |
| R   | 3.75  | 3.95  |
| S   | 3.20  | 3.60  |
| U   | 9.90  | 10.10 |
| Y   | 4.20  | 4.90  |
| Z   | 1.90  | 2.10  |

**THERMAL CHARACTERISTICS**

| SYMBOL        | PARAMETER                            | MAX | UNIT         |
|---------------|--------------------------------------|-----|--------------|
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case | 2.5 | $^\circ C/W$ |

## isc N-Channel MOSFET Transistor

2SK1298

## 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> = 10mA  | 60  |      | V    |
| V <sub>GS(th)</sub>  | Gate Threshold Voltage          | V <sub>DS</sub> = 10V; I <sub>D</sub> = 1mA | 1.0 | 2.0  | V    |
| R <sub>DS(on)</sub>  | Drain-Source On-Resistance      | V <sub>GS</sub> = 10V; I <sub>D</sub> = 15A |     | 18   | mΩ   |
| I <sub>GSS</sub>     | Gate-Body Leakage Current       | V <sub>GS</sub> = ±16V; V <sub>DS</sub> = 0 |     | ±10  | uA   |
| I <sub>DSS</sub>     | Zero Gate Voltage Drain Current | V <sub>DS</sub> = 50V; V <sub>GS</sub> = 0  |     | 0.25 | mA   |
| V <sub>SD</sub>      | Forward On-Voltage              | I <sub>S</sub> = 40A; V <sub>GS</sub> = 0   |     | 2.0  | V    |

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