

# isc N-Channel MOSFET Transistor

## 2SK2184

### FEATURES

- Drain Current –I\_D= 5A@ T\_C=25 $^\circ\!\!\mathrm{C}$
- Drain Source Voltage-: V<sub>DSS</sub>=500V(Min)
- Static Drain-Source On-Resistance
- : R<sub>DS(on)</sub> = 1.5 Ω (Max)
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

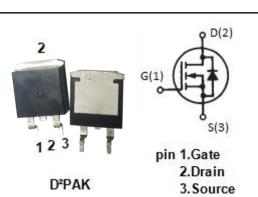
### DESCRIPTION

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

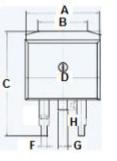
| SYMBOL           | PARAMETER                           | VALUE                         | UNIT |
|------------------|-------------------------------------|-------------------------------|------|
| V <sub>DSS</sub> | Drain-Source Voltage                | 500                           | V    |
| V <sub>GS</sub>  | Gate-Source Voltage-Continuous      | ±30                           | V    |
| ID               | Drain Current-Continuous            | 5                             | А    |
| I <sub>DM</sub>  | Drain Current-Single Pluse          | 15                            | A    |
| P <sub>D</sub>   | Total Dissipation @TC=25°C 50       |                               | W    |
| TJ               | Max. Operating Junction Temperature | ting Junction Temperature 150 |      |
| T <sub>stg</sub> | Storage Temperature                 | -55~150                       | °C   |
|                  |                                     |                               |      |

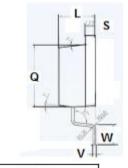
#### THERMAL CHARACTERISTICS

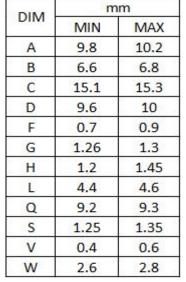
| SYMBOL              | PARAMETER                            | МАХ | UNIT         |
|---------------------|--------------------------------------|-----|--------------|
| R <sub>th j-c</sub> | Thermal Resistance, Junction to Case | 5   | °C <b>/W</b> |



TO-263 package







isc website: www.iscsemi.com

### <sup>1</sup> *isc & iscsemi* is registered trademark



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### **ELECTRICAL CHARACTERISTICS**

#### $T_c=25^{\circ}C$ unless otherwise specified

| SYMBOL               | PARAMETER                       | CONDITIONS                                  | MIN | МАХ  | UNIT |
|----------------------|---------------------------------|---|-----|------|------|
| V <sub>(BR)DSS</sub> | Drain-Source Breakdown Voltage  | V <sub>GS</sub> = 0; I <sub>D</sub> = 1mA   | 500 |      | V    |
| V <sub>GS</sub> (th) | Gate Threshold Voltage          | V <sub>DS</sub> = 10V; I <sub>D</sub> = 1mA | 2.5 | 3.5  | V    |
| R <sub>DS(on)</sub>  | Drain-Source On-Resistance      | V <sub>GS</sub> = 10V; I <sub>D</sub> =2.5A |     | 1.5  | Ω    |
| 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> =500V; V <sub>GS</sub> = 0  |     | 250  | uA   |
| Vsd                  | Forward On-Voltage              | I <sub>S</sub> =2.5A; V <sub>GS</sub> = 0   |     | 1.5  | V    |

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