

# isc N-Channel MOSFET Transistor

## 2SK1707

### DESCRIPTION

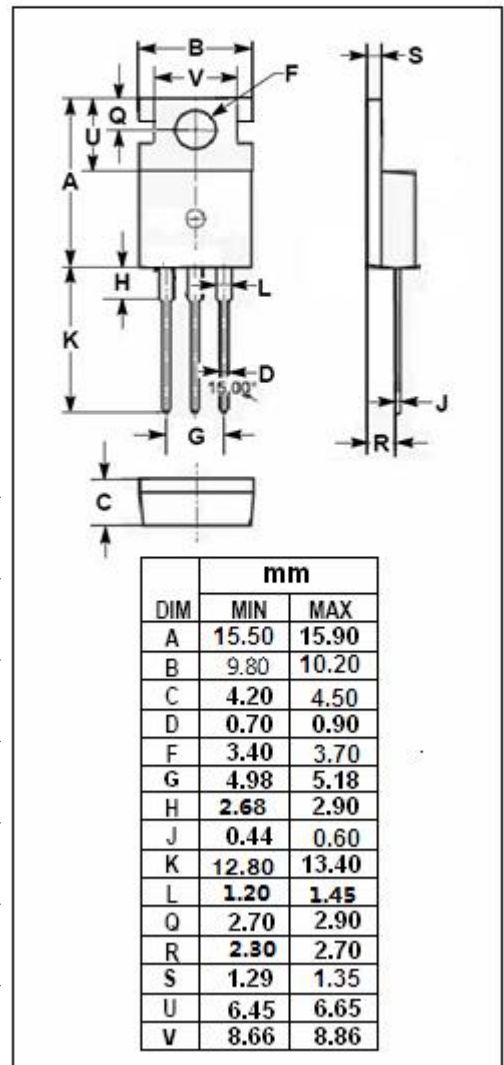
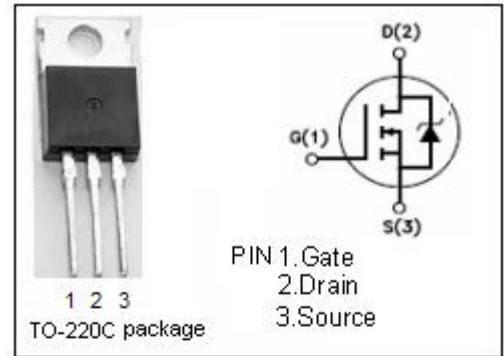
- Drain Current  $-I_D = 4A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS} = 600V(\text{Min})$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Power supplies, converters and power motor controls

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

| SYMBOL    | PARAMETER                                    | VALUE    | UNIT       |
|-----------|--|----------|------------|
| $V_{DSS}$ | Drain-Source Voltage ( $V_{GS} = 0$ )        | 600      | V          |
| $V_{GS}$  | Gate-Source Voltage                          | $\pm 30$ | V          |
| $I_D$     | Drain Current-continuous@ $T_C = 25^\circ C$ | 4        | A          |
| $P_{tot}$ | Total Dissipation@ $T_C = 25^\circ C$        | 90       | W          |
| $T_j$     | Max. Operating Junction Temperature          | 150      | $^\circ C$ |
| $T_{stg}$ | Storage Temperature Range                    | -55~150  | $^\circ C$ |



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• ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C)

| 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               | 600 |      | V    |
| V <sub>GS(th)</sub>  | Gate Threshold Voltage          | V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> =1mA | 2.0 | 4.0  | V    |
| R <sub>DS(on)</sub>  | Drain-Source On-Resistance      | V <sub>GS</sub> = 10V; I <sub>D</sub> = 2A              |     | 2.6  | Ω    |
| I <sub>GSS</sub>     | Gate-Body Leakage Current       | V <sub>GS</sub> = ±30V; V <sub>DS</sub> = 0             |     | ±100 | nA   |
| I <sub>DSS</sub>     | Zero Gate Voltage Drain Current | V <sub>DS</sub> = 600V; V <sub>GS</sub> = 0             |     | 1    | mA   |

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