

## isc N-Channel MOSFET Transistor

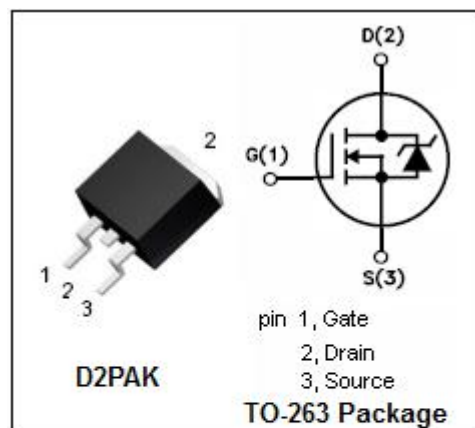
2SK4177

## • DESCRIPTION

- Drain Current  $I_D = 2A @ T_C = 25^\circ C$
- Drain Source Voltage  
:  $V_{DSS} = 1500V(\text{Min})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • APPLICATIONS

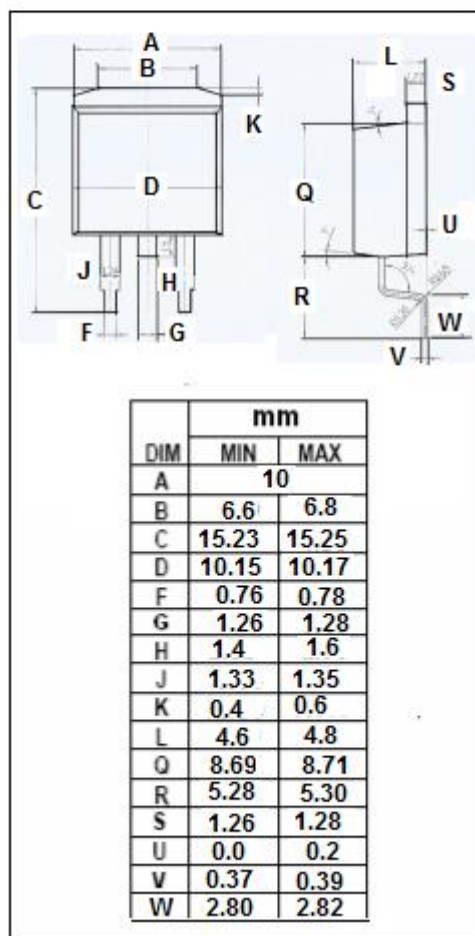
- Designed for high current, high speed switching, switch mode power supplies.

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

| SYMBOL        | PARAMETER                             | VALUE    | UNIT       |
|---------------|---------------------------------------|----------|------------|
| $V_{DSS}$     | Drain-Source Voltage                  | 1500     | V          |
| $V_{GS}$      | Gate-Source Voltage                   | $\pm 20$ | V          |
| $I_D$         | Drain Current-continuous              | 2        | A          |
| $I_{D(puls)}$ | Pulse Drain Current                   | 4        | A          |
| $P_D$         | Power Dissipation@ $T_C = 25^\circ C$ | 80       | W          |
| $T_j$         | Max. Operating Junction Temperature   | 150      | $^\circ C$ |
| $T_{stg}$     | Storage Temperature Range             | -55~150  | $^\circ C$ |

## • THERMAL CHARACTERISTICS

| SYMBOL        | PARAMETER                            | MAX  | UNIT         |
|---------------|--------------------------------------|------|--------------|
| $R_{th(j-c)}$ | Thermal Resistance, Junction to Case | 1.56 | $^\circ C/W$ |



**isc N-Channel MOSFET Transistor****2SK4177****• ELECTRICAL CHARACTERISTICS (T<sub>c</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                | 1500 |     | V    |
| V <sub>GS(th)</sub>  | Gate Threshold Voltage          | V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> = 1mA | 3.0  | 5.0 | V    |
| V <sub>SD</sub>      | Diode Forward On-Voltage        | I <sub>S</sub> = 2A ; V <sub>GS</sub> = 0                |      | 1.2 | V    |
| R <sub>DS(on)</sub>  | Drain-Source On-Resistance      | V <sub>GS</sub> = 10V; I <sub>D</sub> = 1A               |      | 13  | Ω    |
| I <sub>GSS</sub>     | Gate-Body Leakage Current       | V <sub>GS</sub> = ±16V; V <sub>DS</sub> = 0              |      | ±10 | μA   |
| I <sub>DSS</sub>     | Zero Gate Voltage Drain Current | V <sub>DS</sub> = 1200V; V <sub>GS</sub> = 0             |      | 100 | μA   |

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