

## isc N-Channel MOSFET Transistor

2SK796

## DESCRIPTION

- Drain Current  $-I_D=3A@ T_C=25^{\circ}C$
- Drain Source Voltage-  
:  $V_{DSS}=800V(\text{Min})$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

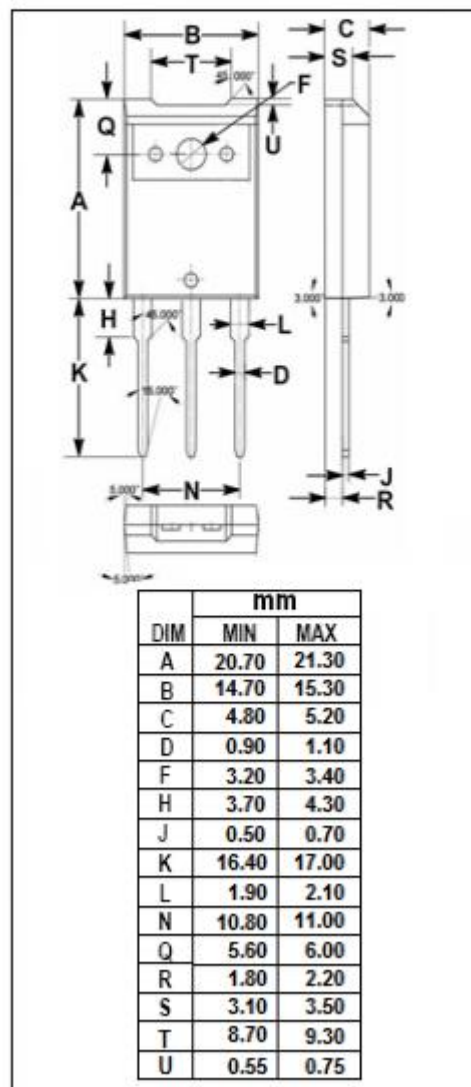
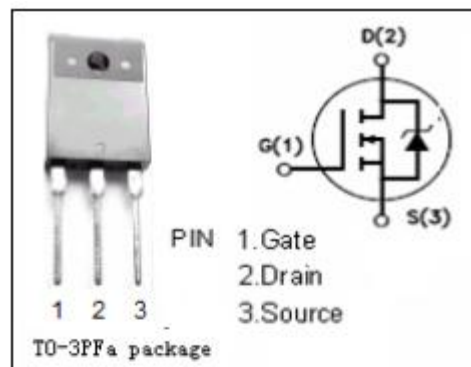
- Designed for high voltage, high speed power switching applications such as switching regulators, converters, solenoid and relay drivers.

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

| SYMBOL    | PARAMETER                                   | VALUE    | UNIT        |
|-----------|---|----------|-------------|
| $V_{DSS}$ | Drain-Source Voltage ( $V_{GS}=0$ )         | 800      | V           |
| $V_{GS}$  | Gate-Source Voltage                         | $\pm 20$ | V           |
| $I_D$     | Drain Current-continuous@ $T_C=25^{\circ}C$ | 5        | 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  | $^{\circ}C$ |

## THERMAL CHARACTERISTICS

| SYMBOL        | PARAMETER                               | MAX  | UNIT          |
|---------------|---|------|---------------|
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case    | 1.0  | $^{\circ}C/W$ |
| $R_{th\ j-a}$ | Thermal Resistance, Junction to Ambient | 62.5 | $^{\circ}C/W$ |



**isc N-Channel Mosfet Transistor****2SK796****• ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C)**

| SYMBOL               | PARAMETER                        | CONDITIONS   | MIN | TYP | MAX | UNIT |
|----------------------|----------------------------------|--|-----|-----|-----|------|
| V <sub>(BR)DSS</sub> | Drain-Source Breakdown Voltage   | V <sub>GS</sub> =0; I <sub>D</sub> = 10mA                          | 800 |     |     | V    |
| V <sub>GS(th)</sub>  | Gate Threshold Voltage           | V <sub>DS</sub> =25 V <sub>GS</sub> ; I <sub>D</sub> =1mA          | 1.0 |     | 5.0 | V    |
| R <sub>DS(on)</sub>  | Drain-Source On-stage Resistance | V <sub>GS</sub> =10V; I <sub>D</sub> = 2A                          |     | 3.5 | 5.0 | Ω    |
| I <sub>GSS</sub>     | Gate Source Leakage Current      | V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0                        |     |     | ±1  | uA   |
| I <sub>DSS</sub>     | Zero Gate Voltage Drain Current  | V <sub>DS</sub> =640V; V <sub>GS</sub> = 0                         |     |     | 0.1 | mA   |
| ton                  | Turn-on time                     | V <sub>GS</sub> =10V; I <sub>D</sub> =2A;<br>R <sub>L</sub> =100 Ω |     | 55  |     | ns   |
| toff                 | Turn-off time                    |  |     | 150 |     | ns   |

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