

# **Isc N-Channel MOSFET Transistor**

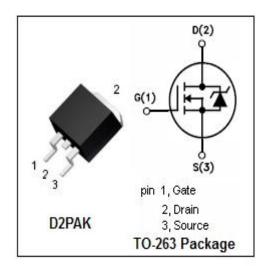
## IPB65R280E6

#### • FEATURES

- · With To-263(D2PAK) package
- · Low input capacitance and gate charge
- · Low gate input resistance
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



Switching applications

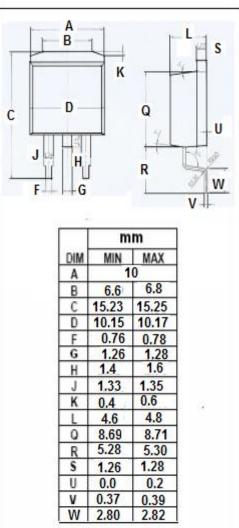


• ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

| SYMBOL            | PARAMETER                                 | VALUE       | UNIT          |  |
|-------------------|---|-------------|---------------|--|
| $V_{	extsf{DSS}}$ | Drain-Source Voltage                      | 650         | V             |  |
| V <sub>GSS</sub>  | Gate-Source Voltage                       | ±30         | V             |  |
| I <sub>D</sub>    | Drain Current-ContinuousTc=25℃<br>Tc=100℃ | 13.8<br>8.7 | А             |  |
| I <sub>DM</sub>   | Drain Current-Single Pulsed               | 39          | А             |  |
| P <sub>D</sub>    | Total Dissipation @Tc=25℃                 | 104         | W             |  |
| $T_ch$            | Max. Operating Junction Temperature       | 150         | ${\mathbb C}$ |  |
| T <sub>stg</sub>  | Storage Temperature                       | -55~150     | $^{\circ}$    |  |

### • THERMAL CHARACTERISTICS

| SYMBOL    | PARAMETER                                       |     | UNIT |  |
|-----------|---|-----|------|--|
| Rth(ch-c) | Channel-to-case thermal resistance              | 1.2 | °C/W |  |
| Rth(ch-a) | Rth(ch-a) Channel-to-ambient thermal resistance |     | °C/W |  |



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#### **ELECTRICAL CHARACTERISTICS**

T<sub>C</sub>=25°C unless otherwise specified

| SYMBOL              | PARAMETER                      | CONDITIONS  | MIN | TYP | MAX      | UNIT |
|---------------------|--------------------------------|---|-----|-----|----------|------|
| BV <sub>DSS</sub>   | Drain-Source Breakdown Voltage | V <sub>GS</sub> =0V; I <sub>D</sub> =1mA  | 650 |     |          | V    |
| V <sub>GS(th)</sub> | Gate Threshold Voltage         | V <sub>DS</sub> =V <sub>GS</sub> ; I <sub>D</sub> =0.44mA   | 2.5 |     | 3.5      | V    |
| R <sub>DS(on)</sub> | Drain-Source On-Resistance     | V <sub>GS</sub> = 10V; I <sub>D</sub> =4.4A   |     | 250 | 280      | mΩ   |
| I <sub>GSS</sub>    | Gate-Source Leakage Current    | V <sub>GS</sub> = ±20V;V <sub>DS</sub> =0V  |     |     | ±0.1     | μА   |
| I <sub>DSS</sub>    | Drain-Source Leakage Current   | V <sub>DS</sub> =650V; V <sub>GS</sub> = 0V;Tj=25°C<br>V <sub>DS</sub> =650V; V <sub>GS</sub> = 0V;Tj=150°C |     |     | 1<br>100 | μА   |
| V <sub>SDF</sub>    | Diode forward voltage          | I <sub>SD</sub> =6.6A, V <sub>GS</sub> = 0 V  |     | 0.9 |          | V    |

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