

# **Isc N-Channel MOSFET Transistor**

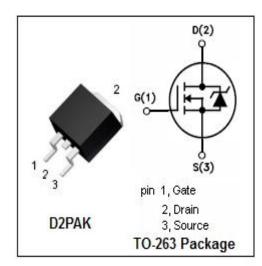
## **SPB20N60C3**

#### • 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

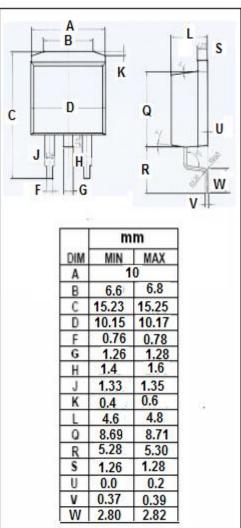


• ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

| SYMBOL            | PARAMETER                                 | VALUE        | UNIT         |
|-------------------|---|--------------|--------------|
| $V_{	extsf{DSS}}$ | Drain-Source Voltage                      | 600          | V            |
| V <sub>GSS</sub>  | Gate-Source Voltage                       | ±30          | V            |
| I <sub>D</sub>    | Drain Current-ContinuousTc=25℃<br>Tc=100℃ | 20.7<br>13.1 | А            |
| I <sub>DM</sub>   | Drain Current-Single Pulsed               | 62.1         | А            |
| P <sub>D</sub>    | Total Dissipation @Tc=25℃                 | 208          | W            |
| T <sub>ch</sub>   | Max. Operating Junction Temperature       | 150          | $^{\circ}$ C |
| T <sub>stg</sub>  | Storage Temperature                       | -55~150      | $^{\circ}$   |

### • THERMAL CHARACTERISTICS

| SYMBOL    | PARAMETER                                  |     | UNIT |  |
|-----------|--|-----|------|--|
| Rth(ch-c) | Channel-to-case thermal resistance         | 0.6 | °C/W |  |
| Rth(ch-a) | n-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 | ТҮР | MAX      | UNIT |
|---------------------|--------------------------------|---|-----|-----|----------|------|
| BV <sub>DSS</sub>   | Drain-Source Breakdown Voltage | V <sub>GS</sub> =0V; I <sub>D</sub> =0.25mA   | 600 |     |          | V    |
| V <sub>GS(th)</sub> | Gate Threshold Voltage         | V <sub>DS</sub> =V <sub>GS</sub> ; I <sub>D</sub> =1.0mA  | 2.1 |     | 3.9      | V    |
| R <sub>DS(on)</sub> | Drain-Source On-Resistance     | V <sub>GS</sub> = 10V; I <sub>D</sub> =13.1A  |     | 160 | 190      | mΩ   |
| I <sub>GSS</sub>    | Gate-Source Leakage Current    | V <sub>GS</sub> = ±30V;V <sub>DS</sub> =0V  |     |     | ±0.1     | μА   |
| I <sub>DSS</sub>    | Drain-Source Leakage Current   | V <sub>DS</sub> =600V; V <sub>GS</sub> = 0V;Tj=25°C<br>V <sub>DS</sub> =600V; V <sub>GS</sub> = 0V;Tj=150°C |     |     | 1<br>100 | μА   |
| V <sub>SDF</sub>    | Diode forward voltage          | I <sub>SD</sub> =20.7A, V <sub>GS</sub> = 0 V   |     | 1.0 | 1.2      | V    |

### **NOTICE:**

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