

Isc N-Channel MOSFET Transistor

IPB031N08N5

• 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

• APPLICATIONS

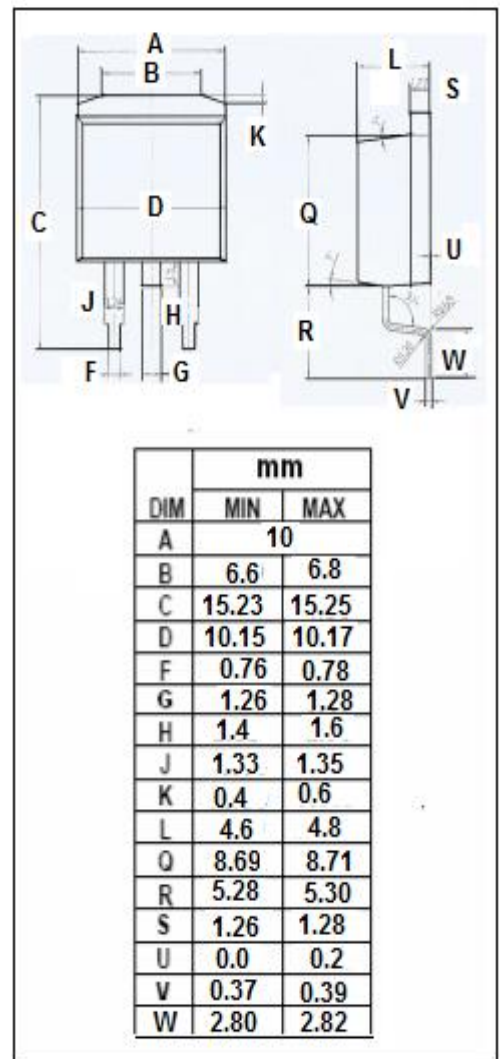
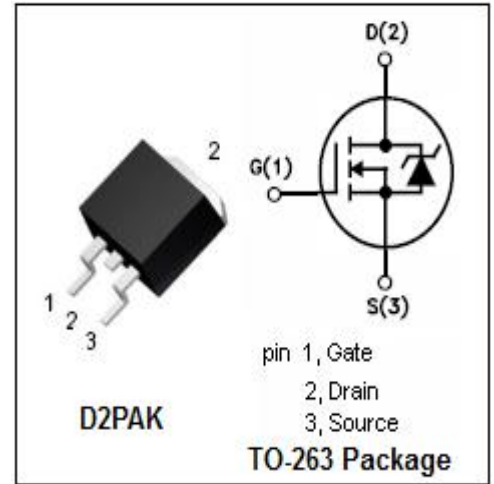
- Switching applications

• ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

| SYMBOL | PARAMETER | VALUE | UNIT |
|------------------|---|------------|------|
| V _{DSS} | Drain-Source Voltage | 80 | V |
| V _{GSS} | Gate-Source Voltage | ±20 | V |
| I _D | Drain Current-Continuous T _c =25°C T _c =100°C | 120 116 | A |
| I _{DM} | Drain Current-Single Pulsed | 480 | A |
| P _D | Total Dissipation @T _c =25°C | 167 | W |
| T _{ch} | Max. Operating Junction Temperature | 175 | °C |
| T _{stg} | Storage Temperature | -55~175 | °C |

• THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|-----------------------|---------------------------------------|-----|------|
| R _{th(ch-c)} | Channel-to-case thermal resistance | 0.9 | °C/W |
| R _{th(ch-a)} | Channel-to-ambient thermal resistance | 40 | °C/W |



Isc N-Channel MOSFET Transistor**IPB031N08N5****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|--------------|--------------------------------|---|-----|------|-----------|-----------|
| BV_{DSS} | Drain-Source Breakdown Voltage | $V_{GS}=0V; I_D=1mA$ | 80 | | | V |
| $V_{GS(th)}$ | Gate Threshold Voltage | $V_{DS}=V_{GS}; I_D=0.108mA$ | 2.2 | | 3.8 | V |
| $R_{DS(on)}$ | Drain-Source On-Resistance | $V_{GS}=10V; I_D=100A$ | | 2.7 | 3.1 | $m\Omega$ |
| I_{GSS} | Gate-Source Leakage Current | $V_{GS}=\pm 20V; V_{DS}=0V$ | | | ± 0.1 | μA |
| I_{DSS} | Drain-Source Leakage Current | $V_{DS}=80V; V_{GS}=0V; T_j=25^{\circ}\text{C}$ $V_{DS}=80V; V_{GS}=0V; T_j=125^{\circ}\text{C}$ | | | 1 100 | μA |
| V_{SDF} | Diode forward voltage | $I_{SD}=100A, V_{GS}=0V$ | | 0.94 | 1.2 | V |

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