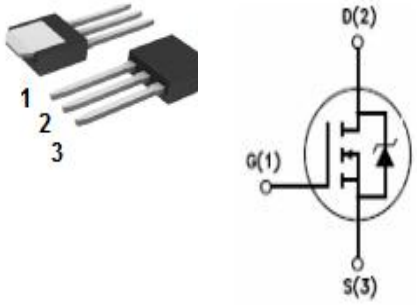
# Isc N-Channel MOSFET Transistor SPU04N60C3

## • FEATURES

- With To-251(IPAK) package
- New revolutionary high voltage technology
- Ultra low gate charge
- High peak current capability
- Improved transconductance
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation




IPAK TO-251 Package

## • APPLICATIONS

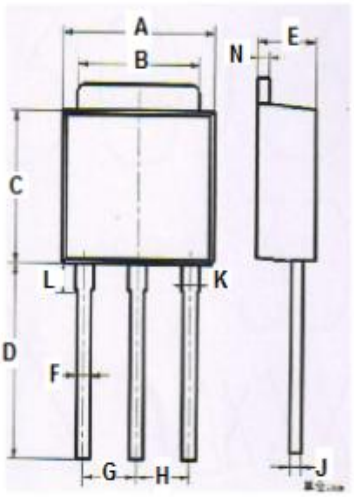
- Switching applications

## • ABSOLUTE MAXIMUM RATINGS($T_a$=25℃)

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{DSS}$ | Drain-Source Voltage | 600 | V |
| $V_{GSS}$ | Gate-Source Voltage | ±30 | V |
| $I_D$ | Drain Current-Continuous@$T_C$=25℃<br>$T_C$=125℃ | 4.5<br>2.8 | A |
| $I_{DM}$ | Drain Current-Single Pulsed | 13.5 | A |
| $P_D$ | Total Dissipation @$T_C$=25℃ | 50 | W |
| $T_{ch}$ | Max. Operating Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature | -55~150 | ℃ |

## • THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---|---|---|---|
| Rth(ch-c) | Channel-to-case thermal resistance | 2.5 | ℃/W |
| Rth(ch-a) | Channel-to-ambient thermal resistance | 75 | ℃/W |




| DIM | mm MIN | MAX |
|---|---|---|
| A | 6.40 | 6.48 |
| B | 5.10 | 5.50 |
| C | 5.80 | 6.20 |
| D | 9.20 | 9.60 |
| E | 2.20 | 2.40 |
| F | 0.50 | 0.70 |
| G | 2.09 | 2.49 |
| H | 2.09 | 2.49 |
| J | 0.40 | 0.60 |
| K | 0.70 | 0.90 |
| L | 1.60 | 2.00 |
| N | 0.40 | 0.60 |

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## ELECTRICAL CHARACTERISTICS

**$T_C$=25℃ unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| $BV_{DSS}$ | Drain-Source Breakdown Voltage | $V_{GS}$=0V; $I_D$= 0.25mA | 600 | | | V |
| $V_{GS(th)}$ | Gate Threshold Voltage | $V_{DS}$= ±30V; $I_D$=0.2mA | 2.1 | | 3.9 | V |
| $R_{DS(on)}$ | Drain-Source On-Resistance | $V_{GS}$= 10V; $I_D$=2.8A | | 890 | 950 | mΩ |
| $I_{GSS}$ | Gate-Source Leakage Current | $V_{GS}$= ±30V;$V_{DS}$= 0V | | | ±0.1 | μA |
| $I_{DSS}$ | Drain-Source Leakage Current | $V_{DS}$= 600V; $V_{GS}$= 0V; $T_J$=25℃<br>$T_J$=125℃ | | | 1<br>50 | μA |
| $V_{SDF}$ | Diode forward voltage | $I_{SD}$=4.5A, $V_{GS}$ = 0 V | | | 1.2 | V |