

iscN-Channel MOSFET Transistor
IRFU220
• FEATURES

- Low drain-source on-resistance:
 $R_{DS(ON)} \leq 0.8\Omega @V_{GS}=10V$
- Enhancement mode:
 $V_{th} = 2.0 \text{ to } 4.0V (V_{DS} = 10 V, I_D=0.25mA)$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

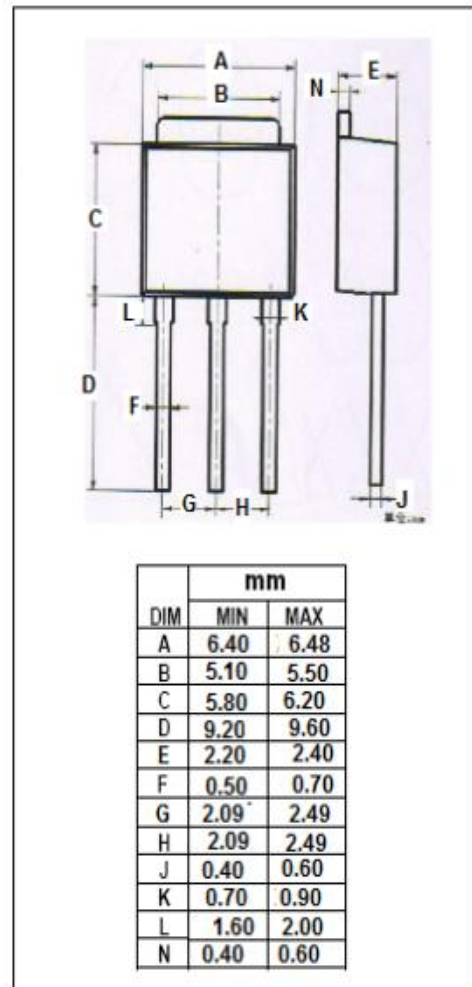
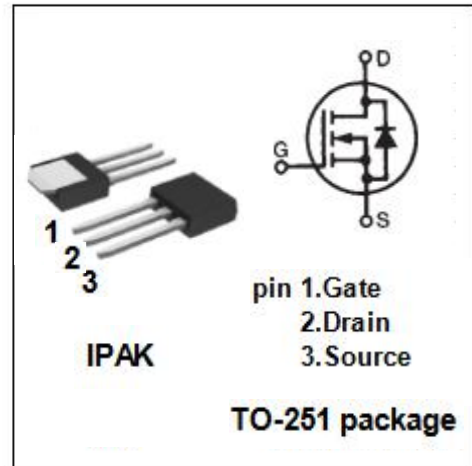
- Switching Voltage Regulators

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--------------------------------------|----------|------------|
| V_{DSS} | Drain-Source Voltage | 200 | V |
| V_{GS} | Gate-Source Voltage | ± 20 | V |
| I_D | Drain Current-Continuous | 4.8 | A |
| I_{DM} | Drain Current-Single Pulsed | 19 | A |
| P_D | Total Dissipation @ $T_c=25^\circ C$ | 42 | W |
| T_j | Max. Operating Junction Temperature | -55~150 | $^\circ C$ |
| T_{stg} | Storage Temperature | -55~150 | $^\circ C$ |

• THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|----------------|------------------------------------|-----|--------------|
| $R_{th(ch-c)}$ | Channel-to-case thermal resistance | 3.0 | $^\circ C/W$ |



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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|---------------------|--------------------------------|---|-----|-----|-----------|------|
| BV _{DSS} | Drain-Source Breakdown Voltage | V _{GS} =0V; I _D = 0.25mA | 200 | | | V |
| V _{GS(th)} | Gate Threshold Voltage | V _{DS} = 10V; I _D =0.25mA | 2.0 | | 4.0 | V |
| R _{DS(on)} | Drain-Source On-Resistance | V _{GS} =10V; I _D =2.9A | | | 0.8 | Ω |
| I _{GSS} | Gate-Source Leakage Current | V _{GS} = ±20V; V _{DS} = 0V | | | ± 100 | nA |
| I _{DSS} | Drain-Source Leakage Current | V _{DS} =200V; V _{GS} = 0V V _{DS} =160V; V _{GS} = 0V; T _J =125°C | | | 25 250 | uA |
| V _{SDF} | Diode forward voltage | I _{DR} =4.8A, V _{GS} = 0 V | | | 1.8 | V |

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