

iscN-Channel MOSFET Transistor
IRFP27N60K
• FEATURES

- Low drain-source on-resistance:
 $R_{DS(ON)} = 0.22\Omega$ (MAX)
- Enhancement mode:
 $V_{th} = 3.0$ to $5.0V$ ($V_{DS} = 10V$, $I_D = 0.25mA$)
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

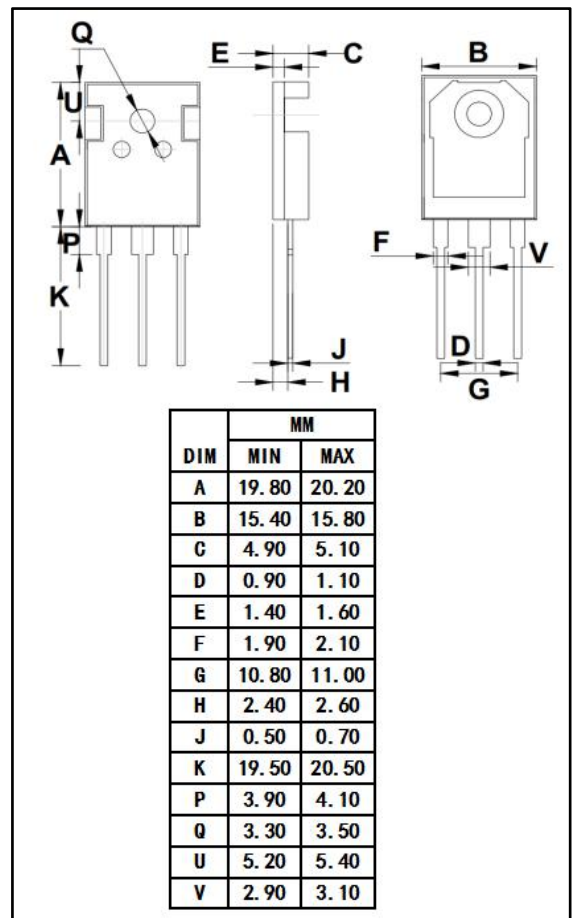
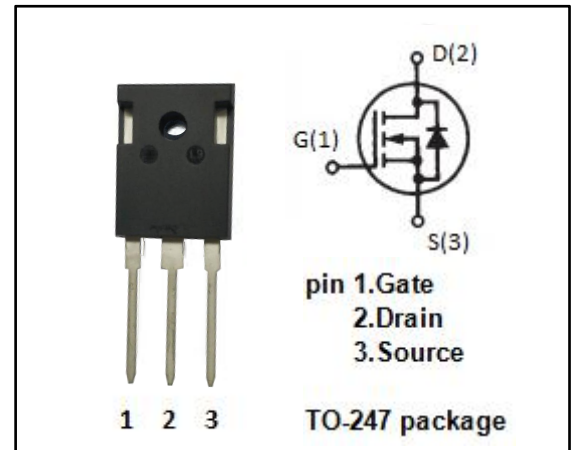
- Switching Voltage Regulators

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--|----------|------------|
| V_{DSS} | Drain-Source Voltage | 600 | V |
| V_{GS} | Gate-Source Voltage | ± 30 | V |
| I_D | Drain Current-Continuous | 27 | A |
| I_{DM} | Drain Current-Single Pulsed | 110 | A |
| P_D | Total Dissipation @ $T_c = 25^\circ C$ | 500 | 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 | 0.29 | $^\circ C/W$ |



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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 | 600 | | | V |
| V _{GS(th)} | Gate Threshold Voltage | V _{DS} = 10V; I _D =0.25mA | 3.0 | | 5.0 | V |
| R _{DS(on)} | Drain-Source On-Resistance | V _{GS} =10V; I _D =16A | | | 0.22 | Ω |
| I _{GSS} | Gate-Source Leakage Current | V _{GS} = ±30V; V _{DS} = 0V | | | ± 100 | nA |
| I _{DSS} | Drain-Source Leakage Current | V _{DS} =600V; V _{GS} = 0V V _{DS} =480V; V _{GS} = 0V; T _J =125°C | | | 50 250 | uA |
| V _{SDF} | Diode forward voltage | I _{DR} =27A, V _{GS} = 0 V | | | 1.5 | V |

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