

Isc N-Channel MOSFET Transistor

IPA60R280P6

• FEATURES

- With TO-220F package
- Low input capacitance and gate charge
- Low gate input resistance
- Reduced switching and conduction losses
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

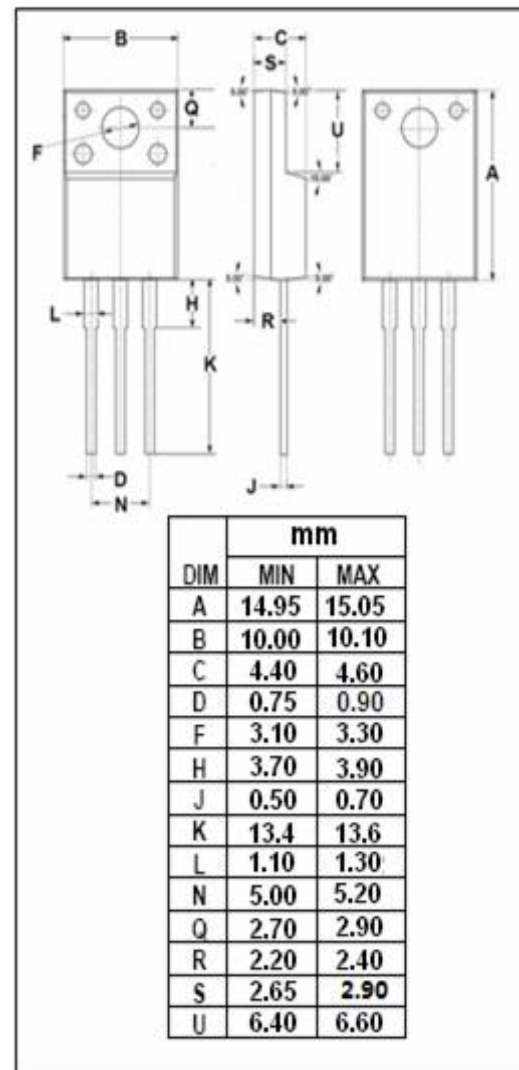
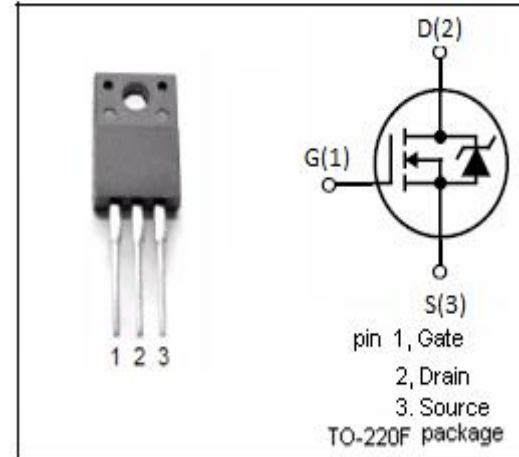
- Switching applications

• ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

| SYMBOL | PARAMETER | VALUE | UNIT |
|------------------|--|-------------|------|
| V _{DSS} | Drain-Source Voltage | 600 | V |
| V _{GSS} | Gate-Source Voltage | ±20 | V |
| I _D | Drain Current-Continuous @T _c =25°C (V _{GS} at 10V) T _c =100°C | 13.8 8.8 | A |
| I _{DM} | Drain Current-Single Pulsed | 39 | A |
| P _D | Total Dissipation @T _c =25°C | 32 | W |
| T _j | Max. Operating Junction Temperature | -55~150 | °C |
| T _{stg} | Storage Temperature | -55~150 | °C |

• THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|-----------------------|---------------------------------------|-----|------|
| R _{th(ch-c)} | Channel-to-case thermal resistance | 3.9 | °C/W |
| R _{th(ch-a)} | Channel-to-ambient thermal resistance | 80 | °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 =1mA | 600 | | | V |
| V _{GS(th)} | Gate Threshold Voltage | V _{DS} = V _{GS} ; I _D =0.43mA | 3.5 | 4 | 4.5 | V |
| R _{DS(on)} | Drain-Source On-Resistance | V _{GS} = 10V; I _D =5.2A; T _j =25°C V _{GS} = 10V; I _D =5.2A; T _j =150°C | | 0.252 0.655 | 0.28 | Ω |
| I _{GSS} | Gate-Source Leakage Current | V _{GS} = ±20V; V _{DS} = 0V | | ±100 | | nA |
| I _{DSS} | Drain-Source Leakage Current | V _{DS} = 600V; V _{GS} = 0V; T _j =25°C V _{DS} = 600V; V _{GS} = 0V; T _j =150°C | | 10 | 1 | μA |
| V _{SDF} | Diode forward voltage | I _{SD} =6.5A, V _{GS} = 0 V | | 0.9 | | V |

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