

Isc N-Channel MOSFET Transistor

IPA60R600P7

• 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

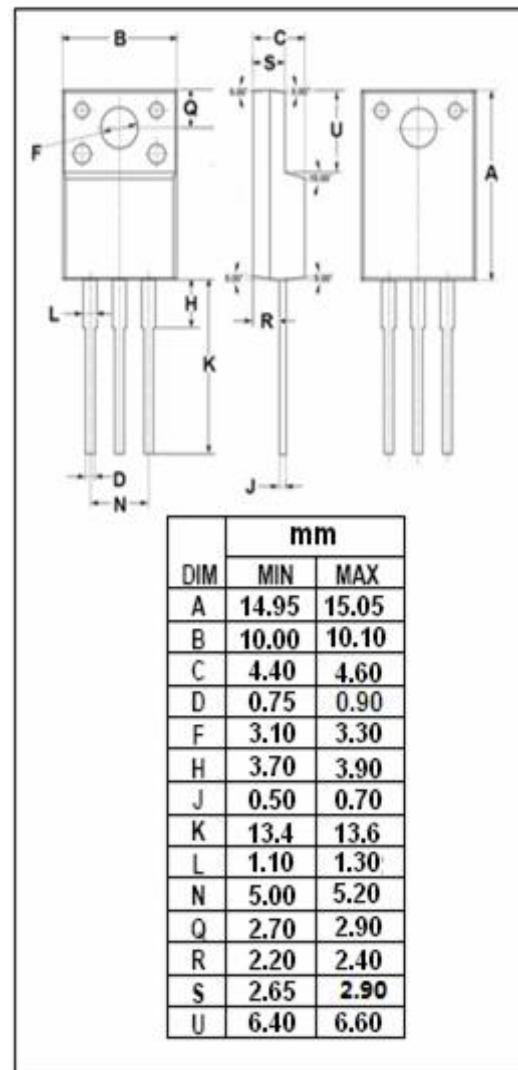
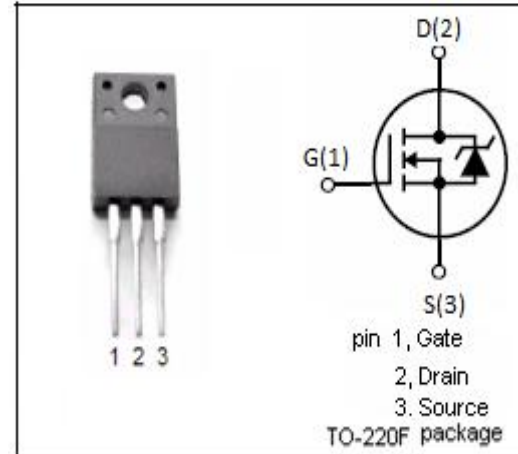
- Switching applications

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|----------|--------------------|
| V_{DS} | Drain-Source Voltage | 600 | V |
| V_{GS} | Gate-Source Voltage | ± 30 | V |
| I_D | Drain Current-Continuous @ $T_c=25^{\circ}\text{C}$ (V_{GS} at 10V) $T_c=100^{\circ}\text{C}$ | 6 4 | A |
| I_{DM} | Drain Current-Single Pulsed | 16 | A |
| P_D | Total Dissipation @ $T_c=25^{\circ}\text{C}$ | 21 | W |
| T_j | Max. Operating Junction Temperature | 150 | $^{\circ}\text{C}$ |
| T_{stg} | Storage Temperature | -55~150 | $^{\circ}\text{C}$ |

• THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|----------------|---------------------------------------|------|----------------------|
| $R_{th(ch-c)}$ | Channel-to-case thermal resistance | 5.98 | $^{\circ}\text{C/W}$ |
| $R_{th(ch-a)}$ | Channel-to-ambient thermal resistance | 62 | $^{\circ}\text{C/W}$ |



Isc N-Channel MOSFET Transistor**IPA60R600P7****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 =0.08mA | 3.0 | | 4.0 | V |
| R _{DS(on)} | Drain-Source On-Resistance | V _{GS} = 10V; I _D =1.7A | | 490 | 600 | mΩ |
| I _{GSS} | Gate-Source Leakage Current | V _{GS} = ±20V; V _{DS} = 0V | | | ±0.1 | μA |
| 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 | | | 1 100 | μA |
| V _{SDF} | Diode forward voltage | I _{SD} =1.7A, V _{GS} = 0 V | | 0.9 | | V |

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