

Isc N-Channel MOSFET Transistor
STF100N10F7
• FEATURES

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

• APPLICATIONS

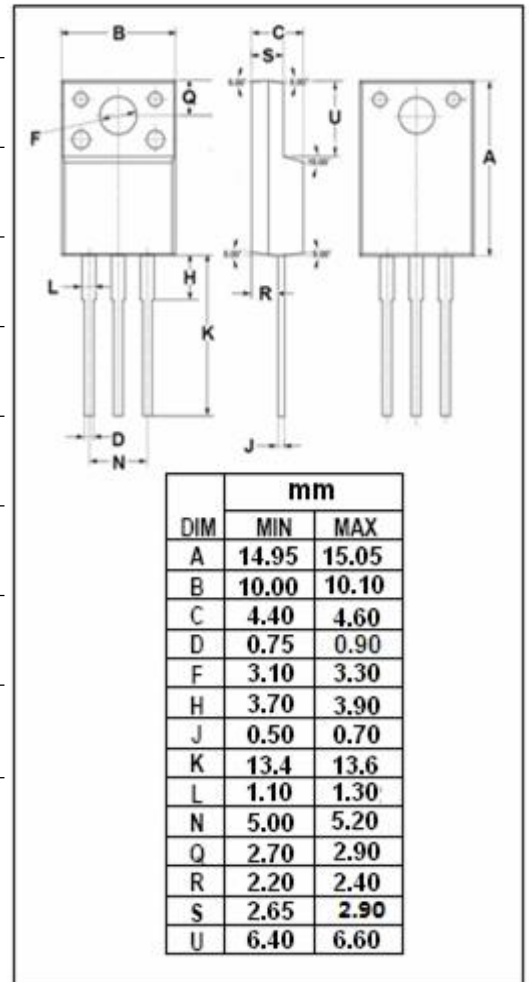
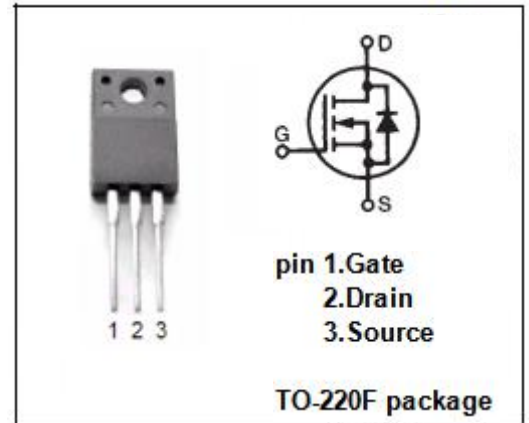
- Switching applications

• ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

| SYMBOL | PARAMETER | VALUE | UNIT |
|------------------|--|----------|------|
| V _{DSS} | Drain-Source Voltage | 100 | V |
| V _{GSS} | Gate-Source Voltage | ±20 | V |
| I _D | Drain Current-Continuous@T _c =25°C T _c =100°C | 45 32 | A |
| I _{DM} | Drain Current-Single Pulsed | 180 | A |
| P _D | Total Dissipation @T _c =25°C | 30 | W |
| T _{ch} | Max. Operating Junction Temperature | -55~175 | °C |
| T _{stg} | Storage Temperature | -55~175 | °C |

• THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|-----------------------|------------------------------------|-----|------|
| R _{th(ch-c)} | Channel-to-case thermal resistance | 5 | °C/W |



Isc N-Channel MOSFET Transistor**STF100N10F7****ELECTRICAL CHARACTERISTICS**T_c=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|---------------------|--------------------------------|---|-----|-----|----------|------|
| B _{VDS} | Drain-Source Breakdown Voltage | V _{GS} =0V; I _D = 0.25mA | 100 | | | V |
| V _{GS(th)} | Gate Threshold Voltage | V _{DS} = ±20V; I _D =0.25mA | 2.5 | | 4.5 | V |
| R _{DS(on)} | Drain-Source On-Resistance | V _{GS} = 10V; I _D =22.5A | | | 8.0 | mΩ |
| I _{GSS} | Gate-Source Leakage Current | V _{GS} = ±20V; V _{DS} = 0V | | | ±0.1 | μA |
| I _{DSS} | Drain-Source Leakage Current | V _{DS} = 100V; V _{GS} = 0V; T _J =25°C T _J =125°C | | | 1 100 | μA |
| V _{SDF} | Diode forward voltage | I _{SD} =80A, V _{GS} = 0 V | | | 1.2 | V |

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