

isc N-Channel MOSFET Transistor

50N06FI

DESCRIPTION

- Drain Current $I_D=27A@ T_C=25^\circ C$
- Drain Source Voltage-
: $V_{DSS}=60V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 28m\Omega (\text{Max})$
- Fast Switching Speed
- Low Drive Requirement
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

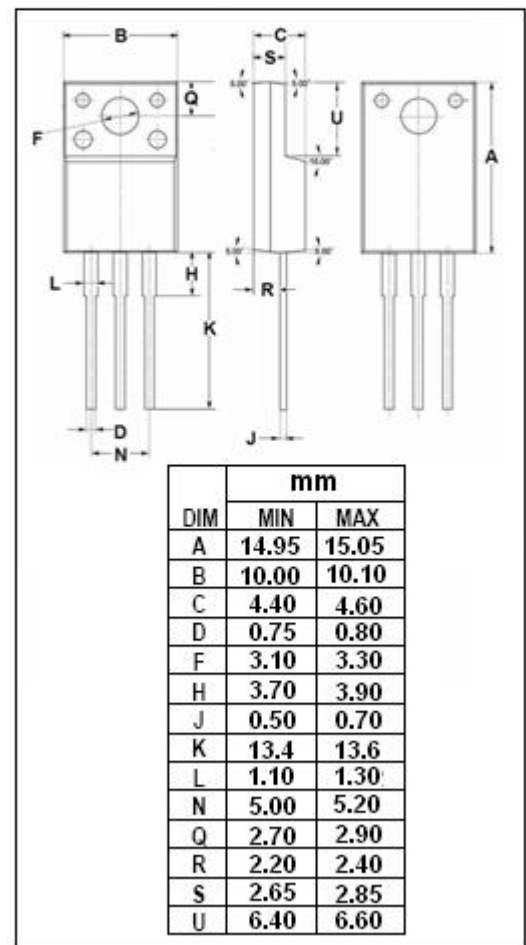
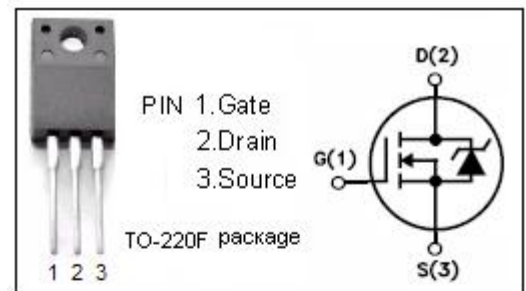
- High current , high speed switching
- Switch mode power supplies
- DC-DC converters for telecom, industrial, and lighting equipment ideal for monitor's B+ function

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--|----------|------------|
| V_{DSS} | Drain-Source Voltage ($V_{GS}=0$) | 60 | V |
| V_{GS} | Gate-Source Voltage | ± 20 | V |
| I_D | Drain Current-continuous@ $TC=25^\circ C$ | 27 | A |
| | Drain Current-continuous@ $TC=100^\circ C$ | 19 | |
| P_{tot} | Total Dissipation@ $TC=25^\circ C$ | 45 | W |
| T_j | Max. Operating Junction Temperature | -55~150 | $^\circ C$ |
| T_{stg} | Storage Temperature Range | -55~150 | $^\circ C$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|--------------|---|------|--------------|
| $R_{th j-a}$ | Thermal Resistance, Junction to Ambient | 62.5 | $^\circ C/W$ |



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• ELECTRICAL CHARACTERISTICS (T_c=25°C)

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|----------------------|----------------------------------|---|-----|-------|------|
| V _{(BR)DSS} | Drain-Source Breakdown Voltage | V _{GS} = 0; I _D = 0.25mA | 60 | | V |
| V _{GS(TH)} | Gate Threshold Voltage | V _{DS} = V _{GS} ; I _D = 0.25mA | 2 | 4 | V |
| R _{DS(ON)} | Drain-Source On-stage Resistance | V _{GS} = 10V; I _D = 25A | | 0.028 | Ω |
| I _{GSS} | Gate Source Leakage Current | V _{GS} = ±20V; V _{DS} = 0 | | ±100 | nA |
| I _{DSS} | Zero Gate Voltage Drain Current | V _{DS} = 60V; V _{GS} = 0 | | 250 | uA |
| V _{SD} | Diode Forward Voltage | I _F = 50A; V _{GS} = 0 | | 2.0 | V |

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