

isc N-Channel MOSFET Transistor
FDP047N10
• FEATURES

- With TO-220 packaging
- Drain Source Voltage-
: $V_{DSS} \geq 100V$
- Static drain-source on-resistance:
 $R_{DS(on)} \leq 4.7m\Omega @ V_{GS}=10V$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

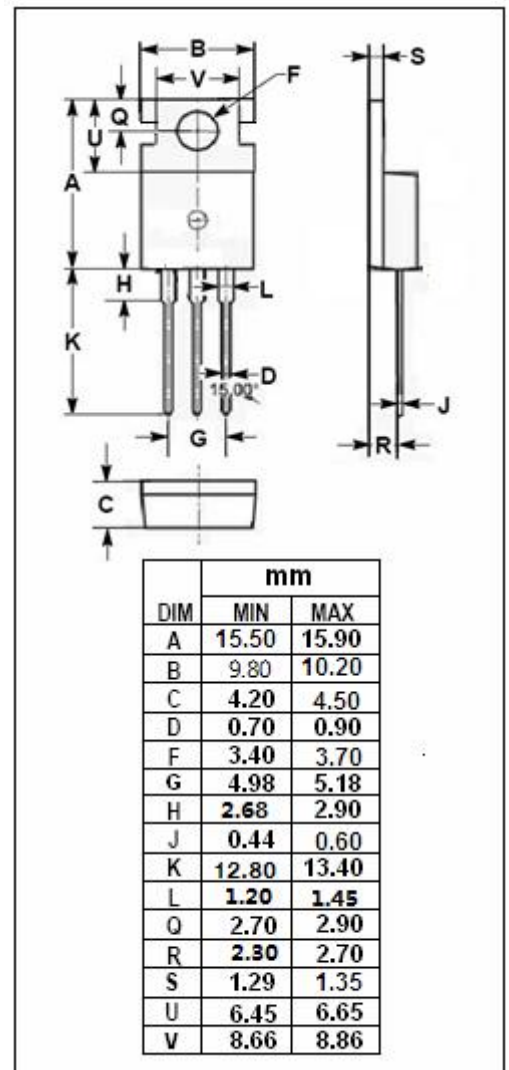
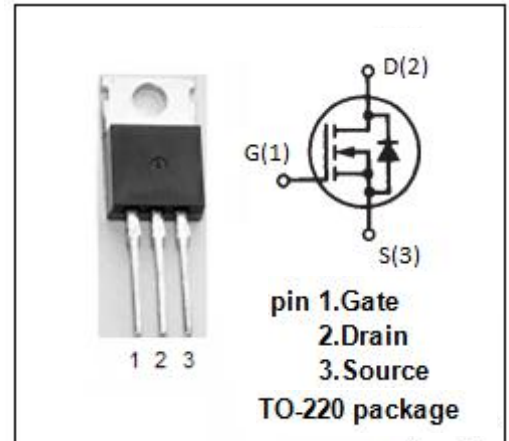
- Power supply
- Switching applications

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|----------|------------|
| V_{DSS} | Drain-Source Voltage | 100 | V |
| V_{GSS} | Gate-Source Voltage | ± 20 | V |
| I_D | Drain Current-Continuous;@ $T_c=25^\circ C$ | 164 | A |
| I_{DM} | Drain Current-Single Pulsed | 656 | A |
| P_D | Total Dissipation | 375 | W |
| T_j | Operating Junction Temperature | -55~175 | $^\circ C$ |
| T_{stg} | Storage Temperature | -55~175 | $^\circ C$ |

• THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|----------------|------------------------------------|-----|--------------|
| $R_{th(ch-c)}$ | Channel-to-case thermal resistance | 0.4 | $^\circ C/W$ |



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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 = 250uA | 100 | | | V |
| V _{GS(th)} | Gate Threshold Voltage | V _{DS} =V _{GS} ; I _D =250uA | 2.5 | | 4.5 | V |
| R _{DS(on)} | Drain-Source On-Resistance | V _{GS} = 10V; I _D = 75A | | | 4.7 | mΩ |
| I _{GSS} | Gate-Source Leakage Current | V _{GS} =±20V;V _{DS} = 0V | | | ±100 | nA |
| I _{DSS} | Drain-Source Leakage Current | V _{DS} = 100V; V _{GS} = 0V V _{DS} = 100V; V _{GS} = 0V;T _J =150°C | | | 1 500 | μA |
| V _{SDF} | Diode forward voltage | I _{SD} = 75A, V _{GS} = 0 V | | | 1.25 | V |

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