

isc N-Channel MOSFET Transistor

IRFZ44N, IIRFZ44N

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 17.5m\Omega$
- Enhancement mode
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

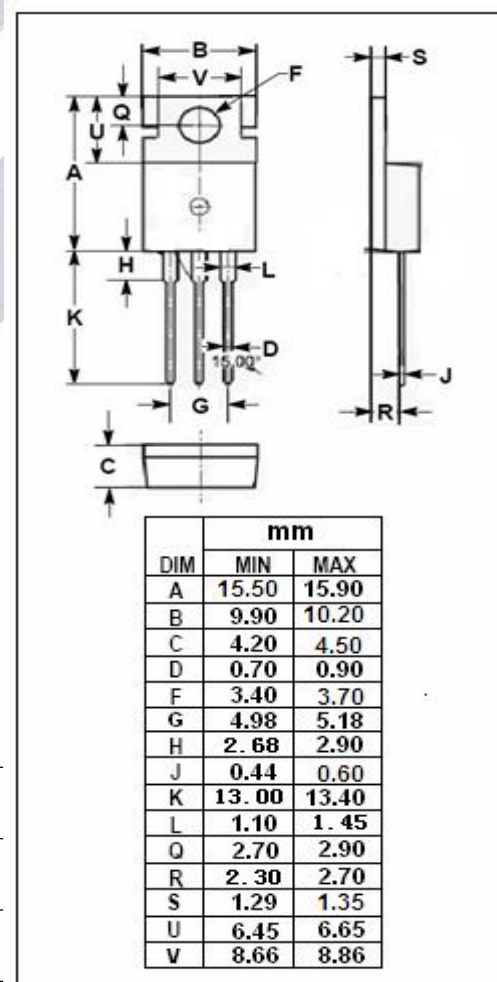
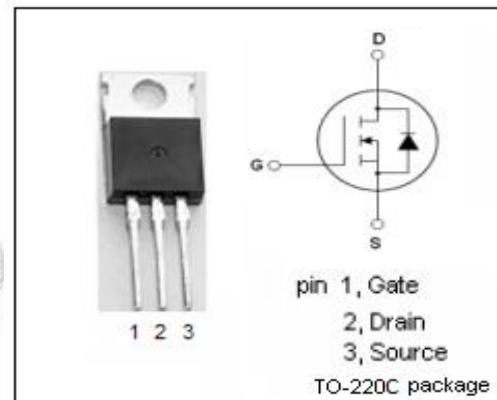
- reliable device for use in a wide variety of applications

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--------------------------------------|----------|------------|
| V_{DS} | Drain-Source Voltage | 55 | V |
| V_{GS} | Gate-Source Voltage | ± 20 | V |
| I_D | Drain Current-Continuous | 49 | A |
| I_{DM} | Drain Current-Single Pulsed | 160 | A |
| P_D | Total Dissipation @ $T_c=25^\circ C$ | 94 | W |
| T_j | Max. Operating Junction Temperature | 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 | 1.5 | $^\circ C/W$ |
| $R_{th(ch-a)}$ | Channel-to-ambient thermal resistance | 62 | $^\circ C/W$ |



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ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|--------------|--------------------------------|----------------------------------|-----|-----|-----------|-----------|
| BV_{DS} | Drain-Source Breakdown Voltage | $V_{GS}=0V$; $I_D=250\mu A$ | 55 | | | V |
| $V_{GS(th)}$ | Gate Threshold Voltage | $V_{DS}=V_{GS}$; $I_D=250\mu A$ | 2.0 | | 4.0 | V |
| $R_{DS(on)}$ | Drain-Source On-Resistance | $V_{GS}=10V$; $I_D=25A$ | | | 17.5 | $m\Omega$ |
| I_{GSS} | Gate-Source Leakage Current | $V_{GS}=\pm 20V$ | | | ± 0.1 | μA |
| I_{DSS} | Drain-Source Leakage Current | $V_{DS}=55V$; $V_{GS}=0V$ | | | 25 | μA |
| V_{SD} | Diode forward voltage | $I_S=25A$, $V_{GS}=0V$ | | | 1.3 | V |