

isc N-Channel MOSFET Transistor

IRFP3703, IIRFP3703

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 2.8m\Omega$
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

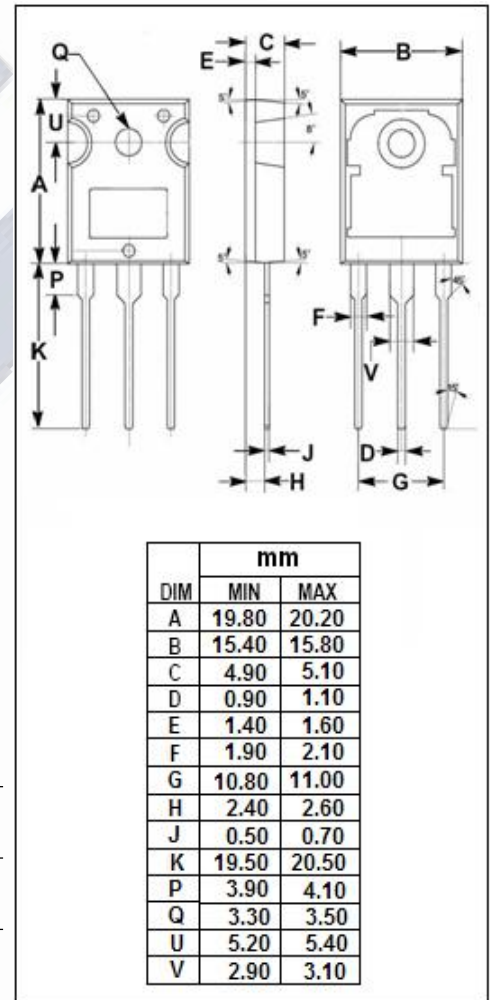
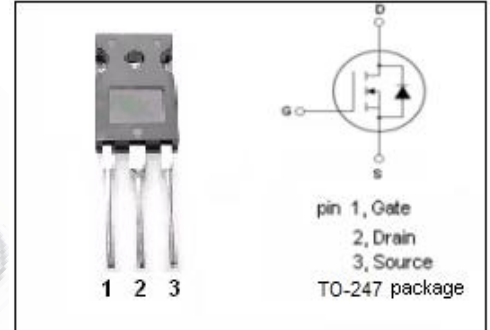
- Synchronous Rectification

• ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

| SYMBOL | PARAMETER | VALUE | UNIT |
|------------------|---|---------|------|
| V _{DSS} | Drain-Source Voltage | 30 | V |
| V _{GS} | Gate-Source Voltage | ±20 | V |
| I _D | Drain Current-Continuous | 210 | A |
| I _{DM} | Drain Current-Single Pulsed | 1000 | A |
| P _D | Total Dissipation @T _c =25°C | 230 | W |
| T _j | Max. Operating Junction Temperature | 150 | °C |
| T _{stg} | Storage Temperature | -55~150 | °C |

• THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|----------------------|---------------------------------------|------|------|
| R _{th(j-c)} | Channel-to-case thermal resistance | 0.65 | °C/W |
| R _{th(j-a)} | Channel-to-ambient thermal resistance | 40 | °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 =250 μA | 30 | | | V |
| V _{GS(th)} | Gate Threshold Voltage | V _{DS} =V _{GS} ; I _D =250 μA | 2.0 | | 4.0 | V |
| R _{DS(on)} | Drain-Source On-Resistance | V _{GS} =10V; I _D =76A | | | 2.8 | mΩ |
| I _{GSS} | Gate-Source Leakage Current | V _{GS} = ±20V | | | ±0.2 | μA |
| I _{DSS} | Drain-Source Leakage Current | V _{DS} =30V; V _{GS} = 0V | | | 20 | μA |
| V _{SD} | Diode forward voltage | I _S =76A, V _{GS} = 0V | | | 1.3 | V |