

isc N-Channel MOSFET Transistor

IRFB3077, IIRFB3077

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 3.3m\Omega$
- 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 | 75 | V |
| V_{GS} | Gate-Source Voltage | ± 20 | V |
| I_D | Drain Current-Continuous | 120 | A |
| I_{DM} | Drain Current-Single Pulsed | 850 | A |
| P_D | Total Dissipation @ $T_c=25^\circ C$ | 370 | 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 | 0.402 | $^\circ C/W$ |
| $R_{th(ch-a)}$ | Channel-to-ambient thermal resistance | 62 | $^\circ C/W$ |



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ELECTRICAL CHARACTERISTICS

 T_C=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|---------------------|--------------------------------|--|-----|-----|------|------|
| BV _{DSS} | Drain-Source Breakdown Voltage | V _{GS} =0V; I _D =250 μ A | 75 | | | V |
| V _{GS(th)} | Gate Threshold Voltage | V _{DS} =V _{GS} ; I _D =250 μ A | 2.0 | | 4.0 | V |
| R _{DS(on)} | Drain-Source On-Resistance | V _{GS} =10V; I _D =75A | | | 3.3 | mΩ |
| I _{GSS} | Gate-Source Leakage Current | V _{GS} =±20V | | | ±0.1 | μ A |
| I _{DSS} | Drain-Source Leakage Current | V _{DS} =75V; V _{GS} = 0V | | | 20 | μ A |
| V _{SD} | Diode forward voltage | I _S =75A, V _{GS} = 0 V | | | 1.3 | V |