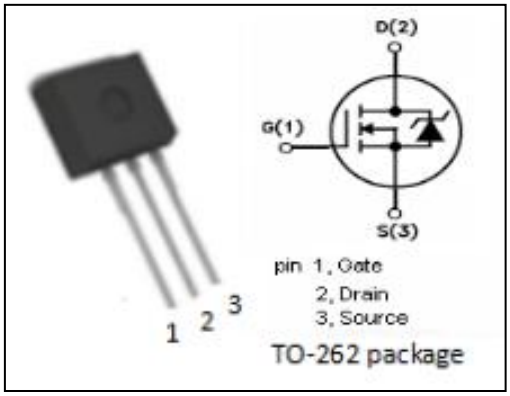
# isc N-Channel MOSFET Transistor IRFSL3107PbF

## • FEATURES

- With TO-262(DPAK) packaging
- Uninterruptible power supply
- High speed switching
- Hard switched and high frequency circuits
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operationz




## • APPLICATIONS

- Switching applications

## • ABSOLUTE MAXIMUM RATINGS($T_a$=25℃)

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{DSS}$ | Drain-Source Voltage | 75 | V |
| $V_{GSS}$ | Gate-Source Voltage | ±20 | V |
| $I_D$ | Drain Current-Continuous@$T_C$=25℃<br>$T_C$=100℃ | 230<br>160 | A |
| $I_{DM}$ | Drain Current-Single Pulsed | 910 | A |
| $P_D$ | Total Dissipation | 370 | W |
| $T_j$ | Operating Junction Temperature | -55~175 | ℃ |
| $T_{stg}$ | Storage Temperature | -55~175 | ℃ |

## • THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---|---|---|---|
| Rth(ch-c) | Channel-to-case thermal resistance | 0.4 | ℃/W |
| Rth(ch-a) | Channel-to-ambient thermal resistance | 40 | ℃/W |

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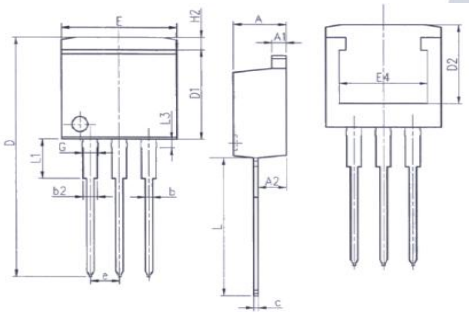
## ELECTRICAL CHARACTERISTICS

**$T_C$=25℃ unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| $BV_{DSS}$ | Drain-Source Breakdown Voltage | $V_{GS}$=0V; $I_D$= 0.25mA | 75 | | | V |
| $V_{GS(th)}$ | Gate Threshold Voltage | $V_{DS}$=±20V; $I_D$=0.25mA | 2 | | 4 | V |
| $R_{DS(on)}$ | Drain-Source On-Resistance | $V_{GS}$= 10V; $I_D$=140A | | 2.3 | 3.0 | mΩ |
| $I_{GSS}$ | Gate-Source Leakage Current | $V_{GS}$= ±20V;$V_{DS}$= 0V | | | ±0.1 | μA |
| $I_{DSS}$ | Drain-Source Leakage Current | $V_{DS}$= 75V; $V_{GS}$= 0V@Tc=25℃<br>Tc=125℃ | | | 20<br>250 | μA |
| $V_{SDF}$ | Diode forward voltage | $I_{SD}$=140A, $V_{GS}$ = 0 V | | | 1.3 | V |

## DIMENSIONAL DRAWING



Unit: mm

| Symbol | Min. | Max. |
|---|---|---|
| A | 4.37 | 4.77 |
| A1 | 1.22 | 1.42 |
| A2 | 2.47 | 2.87 |
| b | 0.70 | 0.97 |
| b2 | 1.17 | 1.42 |
| c | 0.28 | 0.53 |
| D | 23.20 | 24.02 |
| D1 | 8.38 | 8.90 |
| D2 | 6.00 | – |

Unit: mm

| Symbol | Min. | Max. |
|---|---|---|
| E | 9.90 | 10.39 |
| E4 | 7.30 | – |
| e | 2.54BSC | |
| G | 1.25 | 1.50 |
| H2 | – | 1.31 |
| L | 13.34 | 14.10 |
| L1 | 3.30 | 4.06 |
| L3 | 0.95 | 1.15 |

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