

INCHANGE SEMICONDUCTOR

Isc N-Channel MOSFET Transistor

IRFZ46ZS

• FEATURES

- With To-263(D2PAK) package
- · Low input capacitance and gate charge

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- · Low gate input resistance
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

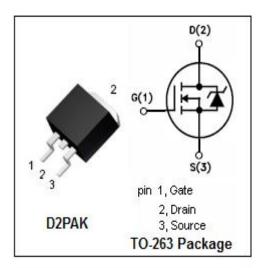
Switching applications

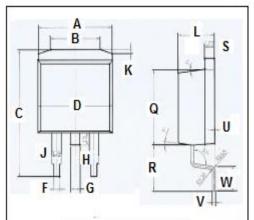
| • ABSOLUTE MAXIMUM RATINGS(Ta=25°C) | | | | | | | | |
|-------------------------------------|---|----------|------|--|--|--|--|--|
| SYMBOL | PARAMETER | VALUE | UNIT | | | | | |
| V _{DSS} | Drain-Source Voltage | 55 | V | | | | | |
| V _{GSS} | Gate-Source Voltage | ±20 | ∧v | | | | | |
| ID | Drain Current-ContinuousTc=25℃ Tc=100℃ | 51 36 | A | | | | | |
| I _{DM} | Drain Current-Single Pulsed | 200 | А | | | | | |
| PD | Total Dissipation @T _C =25°C | 82 | W | | | | | |
| T_{ch} | Max. Operating Junction Temperature | 175 | °C | | | | | |
| T _{stg} | Storage Temperature | -55~175 | °C | | | | | |

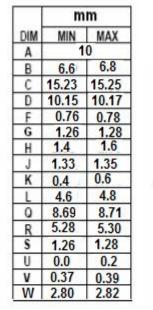
• THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | | UNIT | |
|-----------|--|------|--------------|--|
| Rth(ch-c) | Channel-to-case thermal resistance | 1.84 | °C /W | |
| Rth(ch-a) | (ch-a) Channel-to-ambient thermal resistance | | °C /W | |

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ELECTRICAL CHARACTERISTICS

 $T_{\text{C}}\text{=}25^\circ\!\!\mathbb{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | ТҮР | МАХ | UNIT |
|----------------------|--------------------------------|---|-----|------|-----------|------|
| BV _{DSS} | Drain-Source Breakdown Voltage | V _{GS} =0V; I _D =0.25mA | 55 | | | v |
| V _{GS} (th) | Gate Threshold Voltage | V _{DS} =V _{GS} ; I _D =0.25mA | 2.0 | | 4.0 | v |
| R _{DS(on)} | Drain-Source On-Resistance | V _{GS} = 10V; I _D =31A | | 10.9 | 13.6 | mΩ |
| I _{GSS} | Gate-Source Leakage Current | V _{GS} = ±20V;V _{DS} =0V | | | ±0.2 | μA |
| I _{DSS} | Drain-Source Leakage Current | V _{DS} =55V; V _{GS} = 0V;Tj=25℃ V _{DS} =55V; V _{GS} = 0V;Tj=125℃ | | | 20 250 | μA |
| V _{SDF} | Diode forward voltage | I _{SD} =31A, V _{GS} = 0 V | | | 1.3 | V |



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