

#### **INCHANGE SEMICONDUCTOR**

# **Isc N-Channel MOSFET Transistor**

## IRF2807L

#### FEATURES With To-262 package D(2) · Low input capacitance and gate charge · Low gate input resistance 100% avalanche tested · Minimum Lot-to-Lot variations for robust device performance and reliable operation pin 1, Gate APPLICATIONS 2, Drain 3 · Switching applications 3, Source 2 TO-262 package ABSOLUTE MAXIMUM RATINGS(Ta=25°C) SYMBOL VALUE UNIT PARAMETER Drain-Source Voltage 75 V $V_{\text{DSS}}$ VGSS Gate-Source Voltage $\pm 20$ V Drain Current-ContinuousTc=25℃ 82 $I_{D}$ А Tc=100°C 58 mm Drain Current-Single Pulsed 280 **I**DM А MIN MAX DIM 4.37 4.77 A 1.42 A1 22 Total Dissipation @T<sub>c</sub>=25℃ $P_{D}$ 230 W A2 2.47 2.87 0.97 0.70 ь Ъ2 1.17 1.42 Tch Max. Operating Junction Temperature 175 °C 0.53 0.28 24.02 23.20 D D1 8.90 8.38 D2 6.00 Storage Temperature -55~175 °C Tstg Ε 9.90 10.39 E4 7.30 2.54BSC e 1.25 1.50 G THERMAL CHARACTERISTICS H2 1.31 13.34 14.10 L L1 3.30 4.06 SYMBOL PARAMETER MAX UNIT L3 0.95 1.15

0.65

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°C/W

Channel-to-case thermal resistance

Rth(ch-c)



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#### ELECTRICAL CHARACTERISTICS

T<sub>c</sub>=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	ТҮР	МАХ	UNIT
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V; I <sub>D</sub> = 0.25mA	75			V
V <sub>GS</sub> (th)	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> ; I <sub>D</sub> =0.25mA	2.0		4.0	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =43A			13	mΩ
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = ±20V;V <sub>DS</sub> = 0V			±0.1	μA
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> =75V; V <sub>GS</sub> = 0V;Tj=25℃ V <sub>DS</sub> =60V; V <sub>GS</sub> = 0V;Tj=125℃			20 250	μA
V <sub>SDF</sub>	Diode forward voltage	$I_{SD}$ =43A, $V_{GS}$ = 0 Vs			1.2	V

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