

### INCHANGE SEMICONDUCTOR

# isc N-Channel MOSFET Transistor

# IRLU7807Z

### • FEATURES

- With TO-251(IPAK) packaging
- High speed switching
- · Easy to use
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

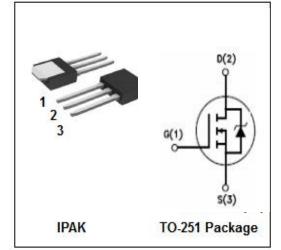
- Power supply
- DC-DC converters
- Motor control
- Switching applications

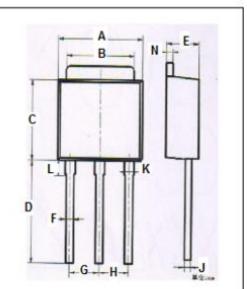
• ABSOL				
SYMBOL	PARAMETER	VALUE	UNIT	
V <sub>DSS</sub>	Drain-Source Voltage	30	V	
V <sub>GSS</sub>	Gate-Source Voltage	±20	∧v	
ID	Drain Current-Continuous	43	A	
I <sub>DM</sub>	Drain Current-Single Pulsed	170	А	
PD	Total Dissipation	40	W	
Tj	Operating Junction Temperature	-55~175	°C	
T <sub>stg</sub>	Storage Temperature	-55~175	°C	

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER		UNIT	
Rth(ch-c)	Channel-to-case thermal resistance	3.75	°C <b>/W</b>	
Rth(ch-a)	Channel-to-ambient thermal resistance	50	°C <b>/W</b>	

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	mm	
DIM	MIN	MAX
Α	6.40	6.48
В	5.10	5.50
С	5.80	6.20
D	9.20	9.60
E	2.20	2.40
F	0.50	0.70
G	2.09	2.49
H	2.09	2.49
J	0.40	0.60
Κ	0.70	0.90
L	1.60	2.00
N	0.40	0.60

### isc website: www.iscsemi.cn

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### ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	ТҮР	MAX	UNIT
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V; I <sub>D</sub> = 0.25mA	30			V
V <sub>GS</sub> (th)	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> ; I <sub>D</sub> =0.25mA	1.35		2.25	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =15A		11	13.8	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> = 24V; V <sub>GS</sub> = 0V;Tj=25℃ V <sub>DS</sub> = 24V; V <sub>GS</sub> = 0V;Tj=125℃			1 150	μA
V <sub>SDF</sub>	Diode forward voltage	I <sub>SD</sub> =12A, V <sub>GS</sub> =0V			1.0	v

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