

## 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

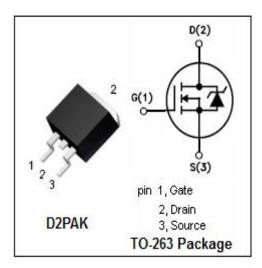
Switching applications

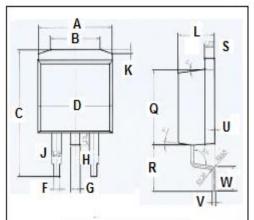
• ABSOLUTE MAXIMUM RATINGS(Ta=25°C)								
SYMBOL	PARAMETER	VALUE	UNIT					
V <sub>DSS</sub>	Drain-Source Voltage	55	V					
V <sub>GSS</sub>	Gate-Source Voltage	±20	∧v					
ID	Drain Current-ContinuousTc=25℃ Tc=100℃	51 36	A					
I <sub>DM</sub>	Drain Current-Single Pulsed	200	А					
PD	Total Dissipation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

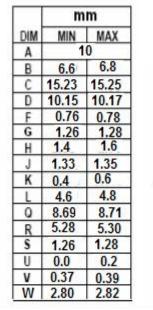
#### • THERMAL CHARACTERISTICS

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

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#### isc website: www.iscsemi.cn

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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 <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V; I <sub>D</sub> =0.25mA	55			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> =31A		10.9	13.6	mΩ
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = ±20V;V <sub>DS</sub> =0V			±0.2	μA
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> =55V; V <sub>GS</sub> = 0V;Tj=25℃ V <sub>DS</sub> =55V; V <sub>GS</sub> = 0V;Tj=125℃			20 250	μA
V <sub>SDF</sub>	Diode forward voltage	I <sub>SD</sub> =31A, V <sub>GS</sub> = 0 V			1.3	V



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