

INCHANGE SEMICONDUCTOR

isc N-Channel MOSFET Transistor

IRFU120N

• 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

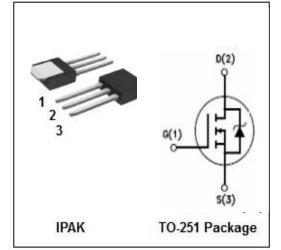
- Power supply
- DC-DC converters
- Motor control
- Switching applications

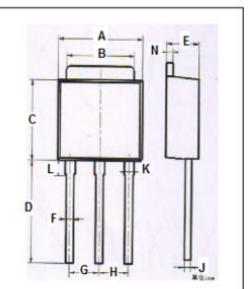
• ABSOL				
SYMBOL	PARAMETER	VALUE	UNIT	
V _{DSS}	Drain-Source Voltage	100	V	
V _{GSS}	Gate-Source Voltage	±20	∧v	
ID	Drain Current-Continuous	9.4	A	
I _{DM}	Drain Current-Single Pulsed	38	А	
PD	Total Dissipation	48	W	
Tj	Operating Junction Temperature	-55~175	°C	
T _{stg}	Storage Temperature	-55~175	°C	

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER		UNIT	
Rth(ch-c)	Channel-to-case thermal resistance	3.1	°C /W	
Rth(ch-a)	Channel-to-ambient thermal resistance	50	°C /W	

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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

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

SYMBOL	PARAMETER	CONDITIONS	MIN	ТҮР	МАХ	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D = 0.25mA	100			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 =5.6A			210	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V;V _{DS} = 0V			±0.1	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 100V; V _{GS} = 0V;Tj=25℃ V _{DS} = 80V; V _{GS} = 0V;Tj=150℃			20 250	μA
V _{SDF}	Diode forward voltage	I _{SD} =5.5A, V _{GS} =0V			1.3	V

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