

isc N-Channel MOSFET Transistor

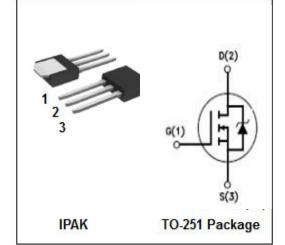
IRFU3806

• 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

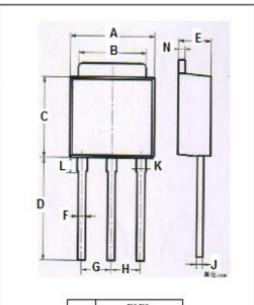
- Power supply
- DC-DC converters
- Motor control
- · Switching applications



SYMBOL	PARAMETER	VALUE	UNIT
V _{DSS}	Drain-Source Voltage	60	V
V _{GSS}	Gate-Source Voltage	±20	V
I _D	Drain Current-Continuous	43	А
I _{DM}	Drain Current-Single Pulsed	170	A
P _D	Total Dissipation	71	W
T _j	Operating Junction Temperature	-55~175	°C
T _{stg}	Storage Temperature	-55~175	$^{\circ}\!\mathbb{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER		UNIT	
Rth(ch-c)	Channel-to-case thermal resistance	2.12	°C/W	
Rth(ch-a)	Channel-to-ambient thermal resistance	62	°C/W	



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

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D = 0.25mA	60			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} ; I _D =0.05mA	2.0		4.0	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =25A		12.6	15.8	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V;V _{DS} = 0V			±0.1	μА
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 60V; V _{GS} = 0V;Tj=25℃ V _{DS} = 48V; V _{GS} = 0V;Tj=125℃			20 250	μА
V _{SDF}	Diode forward voltage	I _{SD} =25A, V _{GS} =0V			1.3	V

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