

Isc N-Channel MOSFET Transistor

IRFS38N20D

• FEATURES

- With To-262 package
- 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

• APPLICATIONS

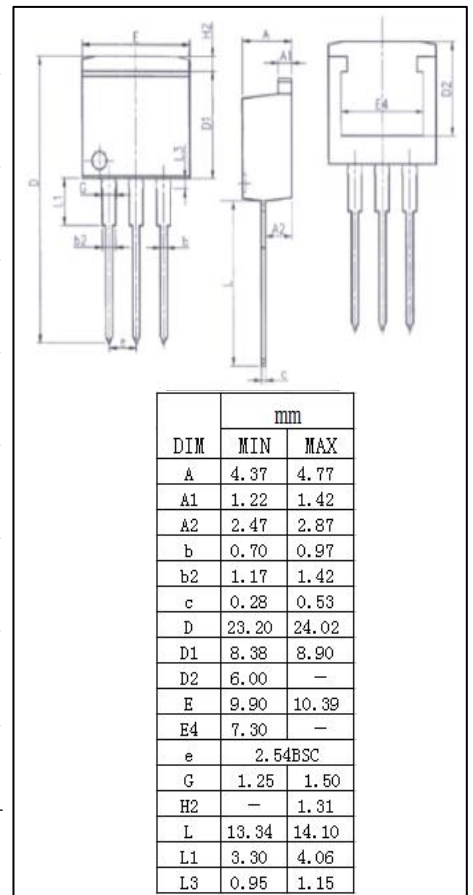
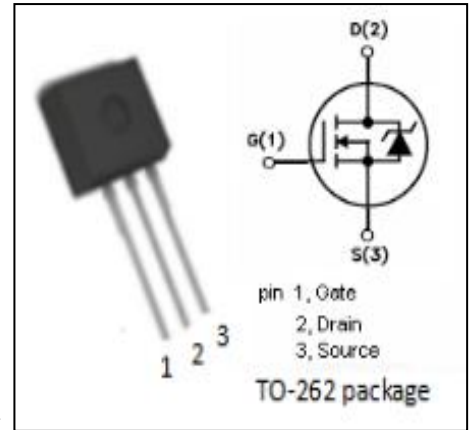
- Switching applications

• ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{DSS}	Drain-Source Voltage	200	V
V _{GSS}	Gate-Source Voltage	±30	V
I _D	Drain Current-Continuous T _c =25°C T _c =100°C	43 30	A
I _{DM}	Drain Current-Single Pulsed	180	A
P _D	Total Dissipation @T _c =25°C	300	W
T _{ch}	Max. Operating Junction Temperature	175	°C
T _{stg}	Storage Temperature	-55~175	°C

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th(ch-c)}	Channel-to-case thermal resistance	0.47	°C/W



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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D =0.25mA	200			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} ; I _D =0.25mA	3.0		5.0	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =26A			54	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±30V; V _{DS} =0V			±0.1	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} =200V; V _{GS} = 0V; T _j =25°C V _{DS} =160V; V _{GS} = 0V; T _j =125°C			25 250	μA
V _{SDF}	Diode forward voltage	I _{SD} =26A, V _{GS} = 0 V			1.5	V

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