

Isc N-Channel MOSFET Transistor

IRL530NS

• FEATURES

- With To-263(D2PAK) 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

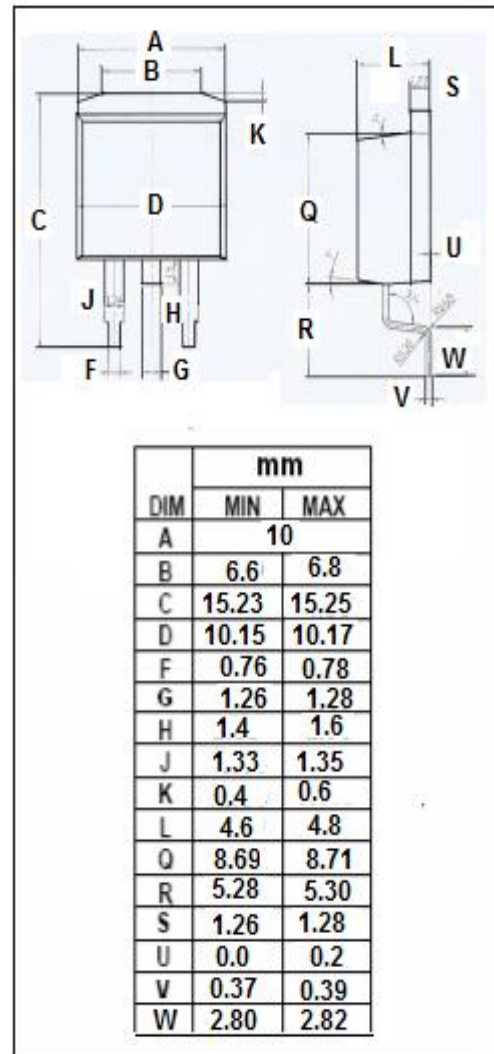
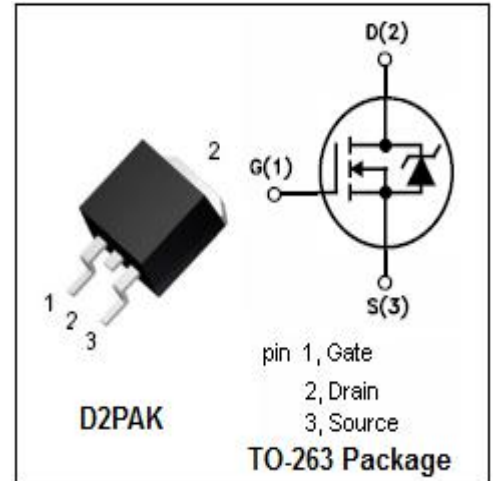
- Switching applications

• ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	100	V
V_{GS}	Gate-Source Voltage	± 16	V
I_D	Drain Current-Continuous $T_c=25^{\circ}\text{C}$ $T_c=100^{\circ}\text{C}$	17 12	A
I_{DM}	Drain Current-Single Pulsed	60	A
P_D	Total Dissipation @ $T_c=25^{\circ}\text{C}$	79	W
T_{ch}	Max. Operating Junction Temperature	175	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~175	$^{\circ}\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	1.9	$^{\circ}\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	40	$^{\circ}\text{C/W}$



Isc N-Channel MOSFET Transistor**IRL530NS****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	100			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} ; I _D =0.25mA	1.0		2.0	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D =9A			100	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±16V; V _{DS} = 0V			±0.1	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} =100V; V _{GS} = 0V; T _j =25°C V _{DS} =80V; V _{GS} = 0V; T _j =125°C			25 250	μA
V _{SDF}	Diode forward voltage	I _{SD} =9.0A, V _{GS} = 0 V			1.3	V

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