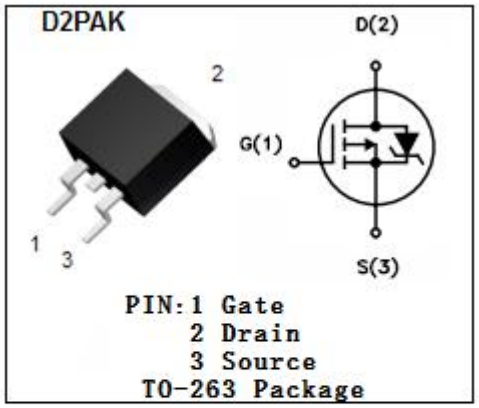
isc P-Channel Mosfet Transistor IRF9530S

FEATURES

- -12A，-100V
- Single pulse avalanche energy rated
- Static Drain-Source On-Resistance: $R_{DS(on)}$ =0.3Ω(Max)
- SOA is power dissipation limited
- Nanosecond switching speeds
- Linear transfer characteristics
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



DESCRITION

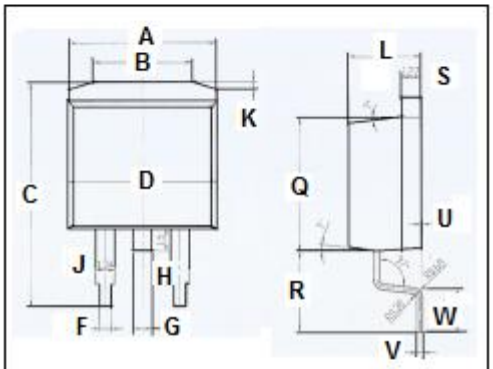
- The power MOSFET is designed for applications such as switching regulators,switching convertors,motor drivers,relay drivers and drivers for high power bipolar switching transistors requiring high speed and low gate drive power

• ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	ARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage (V_{GS}=0)	-100	V
V_{GS}	Gate-Source Voltage	±20	V
I_D	Drain Current-continuous@ TC=25℃	-12	A
I_{DM}	Drain Current-Single Plused	-48	A
P_{tot}	Total Dissipation@TC=25℃	75	W
T_j	Max. Operating Junction Temperature	-55~150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.67	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	62.5	℃/W



DIM	mm MIN	MAX
A	10	
B	6.6	6.8
C	15.23	15.25
D	10.15	10.17
F	0.76	0.78
G	1.26	1.28
H	1.4	1.6
J	1.33	1.35
K	0.4	0.6
L	4.6	4.8
Q	8.69	8.71
R	5.28	5.30
S	1.26	1.28
U	0.0	0.2
V	0.37	0.39
W	2.80	2.82

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	V_{GS}= 0; 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
V_{SD}	Diode Forward On-voltage	I_S= -12A ;V_{GS}= 0			-1.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}= -10V; I_D= -6.5A			0.3	Ω
I_{GSS}	Gate-Body Leakage Current	V_{GS}= ±20V;V_{DS}= 0			±100	nA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}=-100V; V_{GS}= 0			-25	μA
Gfs	Forward Transconductance	I_D=-6.5A	2			S
$t_{d(on)}$	Turn-on Delay Time	I_D=-12A; V_{DD}=50V; R_G=50Ω; V_{GS}=10V			60	ns
t_r	Rise Time				140	
$t_{d(off)}$	Turn-off Delay Time				140	
t_f	Fall Time				140	

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