

# isc P-Channel MOSFET Transistor

# IRF5210SPBF

### • FEATURES

- P-channel
- With TO-263(D2PAK) packaging
- Uninterruptible power supply
- High speed switching
- Ultra low on-resistance
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operationz

### • APPLICATIONS

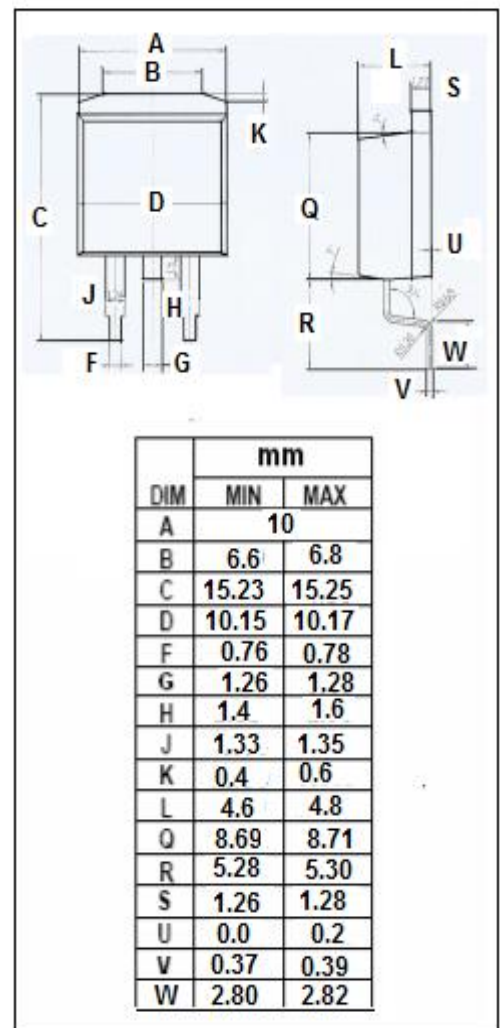
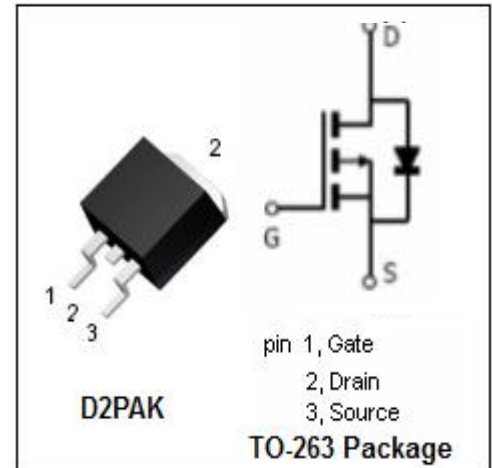
- Switching applications

### • 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	$\pm 20$	V
$I_D$	Drain Current-Continuous@ $T_c=25^{\circ}\text{C}$ $T_c=100^{\circ}\text{C}$	-38 -24	A
$I_{DM}$	Drain Current-Single Pulsed	-140	A
$P_D$	Total Dissipation	170	W
$T_j$	Operating Junction Temperature	-55~150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^{\circ}\text{C}$

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	0.75	$^{\circ}\text{C}/\text{W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	40	$^{\circ}\text{C}/\text{W}$



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## ELECTRICAL CHARACTERISTICS

T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V; I <sub>D</sub> =-0.25mA	-100			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =±20V; I <sub>D</sub> =-0.25mA	-2		-4	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = -10V; I <sub>D</sub> =-38A			60	mΩ
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0V			±0.1	μA
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> = -100V; V <sub>GS</sub> = 0V; T <sub>j</sub> =25°C V <sub>DS</sub> = -80V; V <sub>GS</sub> = 0V; T <sub>j</sub> =125°C			25 250	μA
V <sub>SDF</sub>	Diode forward voltage	I <sub>SD</sub> =-23A, V <sub>GS</sub> = 0 V			-1.6	V

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