

isc N-Channel MOSFET Transistor

IRL3713S

• FEATURES

- With TO-263(D2PAK) packaging
- With low gate drive requirements
- Easy to drive
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

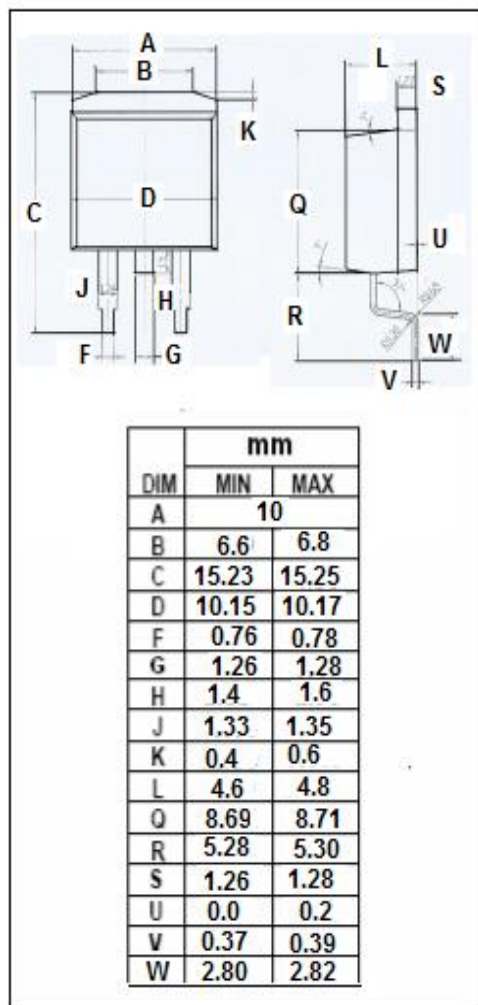
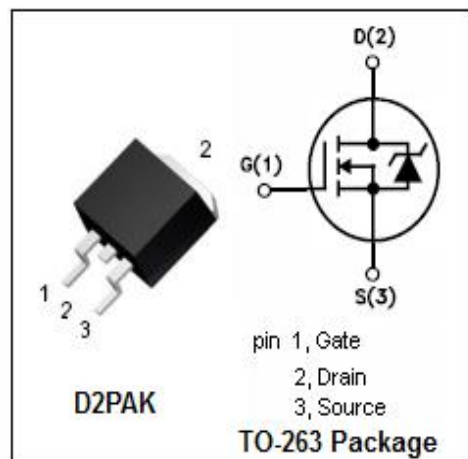
- High frequency isolated DC-DC converters with synchronous rectification for telecom and industrial use

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	30	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous@ $T_c=25^{\circ}\text{C}$ $T_c=100^{\circ}\text{C}$	260 180	A
I_{DM}	Drain Current-Single Pulsed	1040	A
P_D	Total Dissipation @ $T_c=25^{\circ}\text{C}$ $T_c=100^{\circ}\text{C}$	330 170	W
T_j	Operating Junction Temperature	-55~175	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~175	$^{\circ}\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	0.45	$^{\circ}\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	62	$^{\circ}\text{C/W}$



isc N-Channel MOSFET Transistor**IRL3713S****ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V$; $I_D=0.25mA$	30			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=\pm 30V$; $I_D=0.25mA$	1.0		2.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V$; $I_D=38A$ $V_{GS}=4.5V$; $I_D=30A$		2.6 3.3	3.0 4.0	$m\Omega$
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 30V$; $V_{DS}=0V$			± 0.1	μA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=24V$; $V_{GS}=0V$; @ $T_c=25^{\circ}\text{C}$ $T_c=125^{\circ}\text{C}$			20 100	μA
V_{SDF}	Diode forward voltage	$I_{SD}=30A$, $V_{GS}=0V$			1.3	V

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