

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

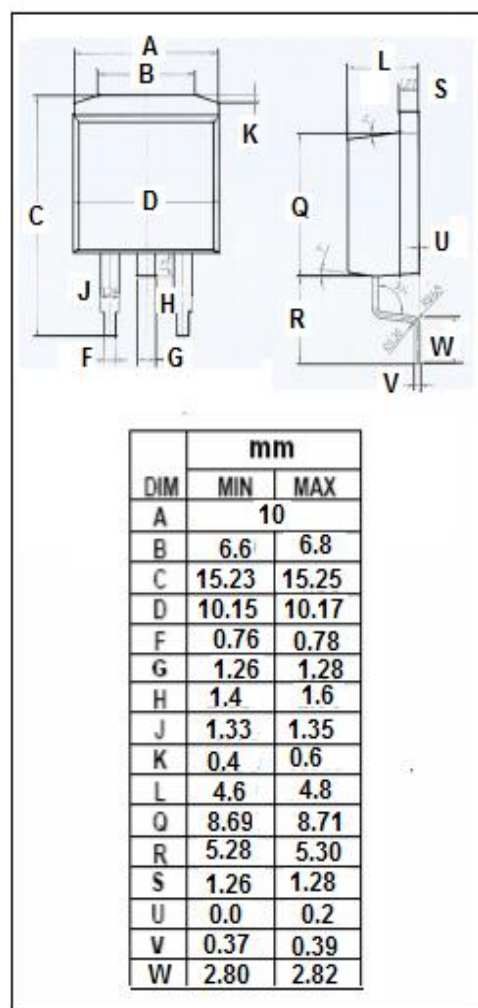
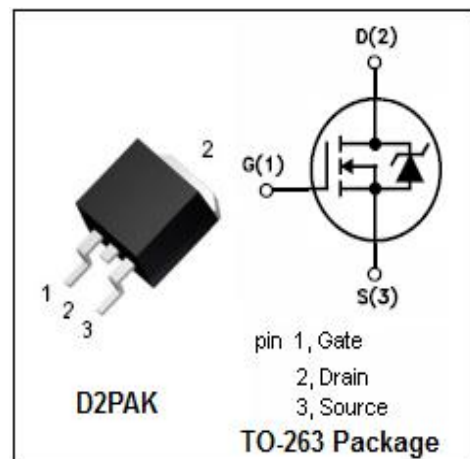
- High frequency isolated DC-DC converters with synchronous rectification for telecom and industrial use

• 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°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} =±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	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±30V; V _{DS} = 0V			±0.1	μA
I _{DSS}	Drain-Source Leakage Current	V _{DS} = 24V; V _{GS} = 0V; @T _C =25°C T _C =125°C			20 100	μA
V _{SDF}	Diode forward voltage	I _{SD} =30A, V _{GS} = 0 V			1.3	V

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