

iscN-Channel MOSFET Transistor
IRFP140
• FEATURES

- Low drain-source on-resistance:
 $R_{DS(ON)} \leq 77m\Omega @V_{GS}=10V$
- Enhancement mode:
 $V_{th} = 2.0 \text{ to } 4.0V (V_{DS} = 10 V, I_D=0.25mA)$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

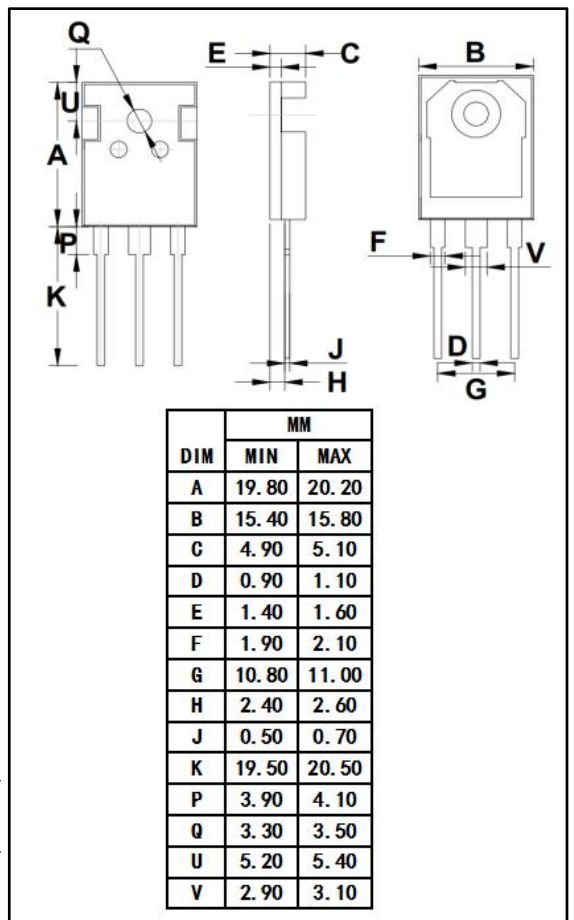
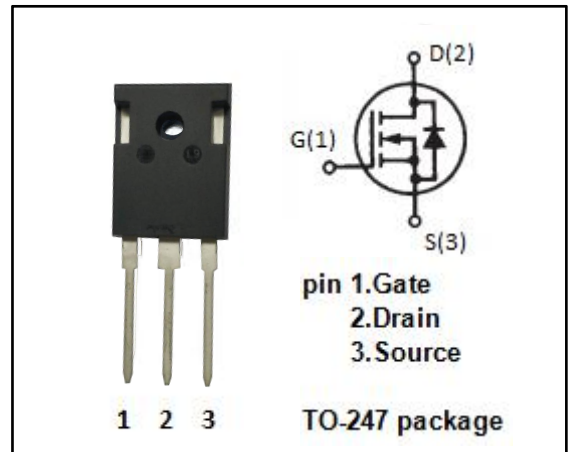
- Switching Voltage Regulators

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	100	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous	31	A
I_{DM}	Drain Current-Single Pulsed	120	A
P_D	Total Dissipation @ $T_c=25^\circ C$	180	W
T_j	Max. Operating Junction Temperature	-55~175	$^\circ C$
T_{stg}	Storage Temperature	-55~175	$^\circ C$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	0.83	$^\circ C/W$



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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} = 10V; I _D =0.25mA	2.0		4.0	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D =19A			77	mΩ
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V; V _{DS} = 0V			± 100	nA
I _{DSS}	Drain-Source Leakage Current	V _{DS} =100V; V _{GS} = 0V V _{DS} =80V; V _{GS} = 0V; T _J =125°C			25 250	uA
V _{SDF}	Diode forward voltage	I _{DR} =31A, V _{GS} = 0 V			2.5	V

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