

isc N-Channel MOSFET Transistor

IPW90R1K2C3

IIPW90R1K2C3

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 1.2\Omega$
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

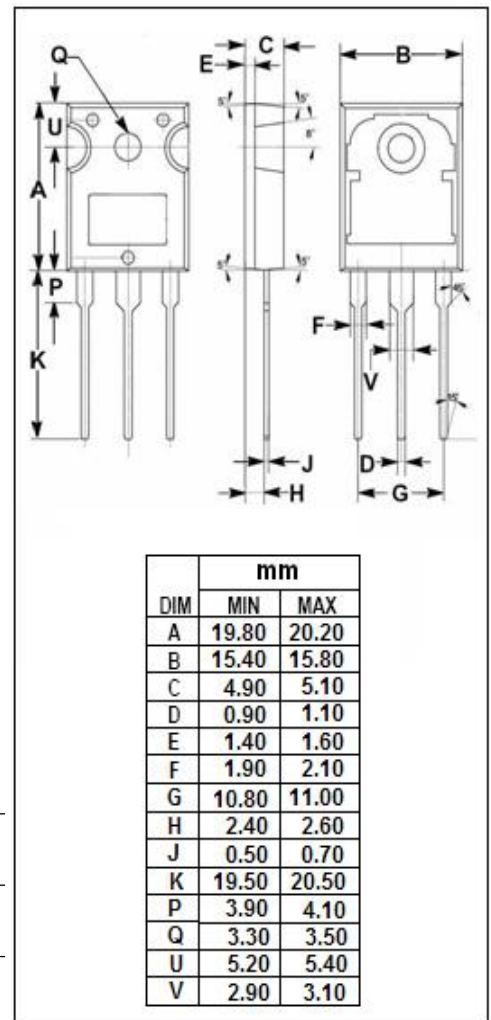
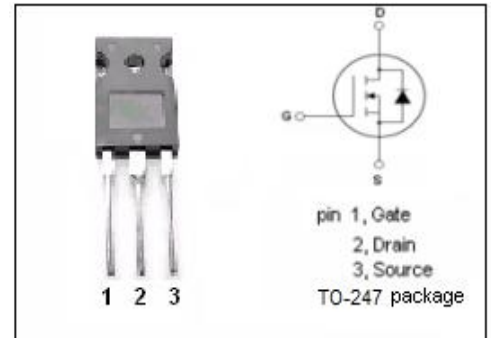
- High peak current capability

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	900	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous	5.1	A
I_{DM}	Drain Current-Single Pulsed	10	A
P_D	Total Dissipation @ $T_c=25^\circ\text{C}$	83	W
T_j	Max. Operating Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Channel-to-case thermal resistance	1.5	$^\circ\text{C/W}$
$R_{th(j-a)}$	Channel-to-ambient thermal resistance	62	$^\circ\text{C/W}$



isc N-Channel MOSFET Transistor**IPW90R1K2C3****IIPW90R1K2C3****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	900			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} ; I _D =0.31mA	2.5		3.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D =2.8A			1.2	Ω
I _{GSS}	Gate-Source Leakage Current	V _{GS} = 20V; V _{DS} =0V			0.1	mA
I _{DSS}	Drain-Source Leakage Current	V _{DS} =900V; V _{GS} = 0V			1	μA
V _{SD}	Diode forward voltage	I _F =2.8A, V _{GS} = 0V			1.2	V

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