

**isc N-Channel MOSFET Transistor**
**IPW50R280CE**
**IIPW50R280CE**
**• FEATURES**

- Static drain-source on-resistance:  
 $R_{ds(on)} \leq 0.28 \Omega$
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• DESCRIPTION**

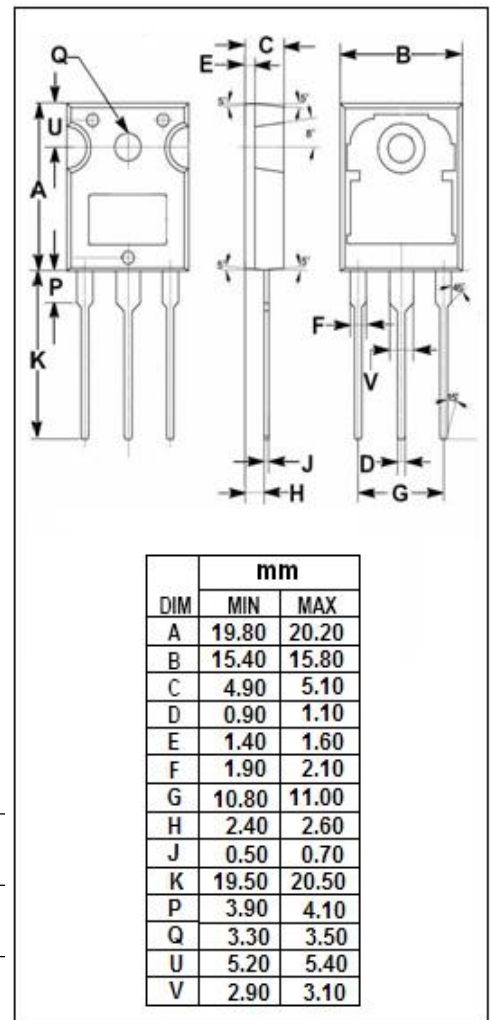
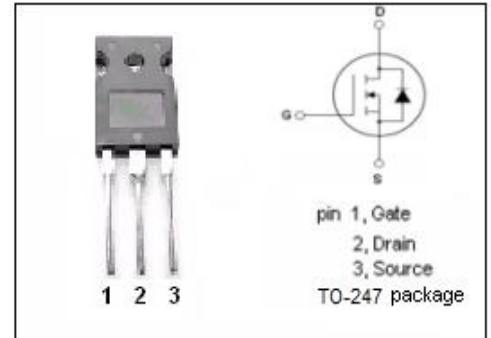
- Fast switching

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	500	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous	18.1	A
$I_{DM}$	Drain Current-Single Pulsed	42.9	A
$P_D$	Total Dissipation @ $T_c=25^\circ\text{C}$	119	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	1.05	$^\circ\text{C/W}$
$R_{th(j-a)}$	Channel-to-ambient thermal resistance	62	$^\circ\text{C/W}$



**isc N-Channel MOSFET Transistor****IPW50R280CE****IIPW50R280CE****ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=1mA$	500			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=350\ \mu A$	2.5		3.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=13V; I_D=4.2A$			0.28	$\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=20V; V_{DS}=0V$			0.1	$\mu A$
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=500V; V_{GS}=0V$			1	$\mu A$
$V_{SD}$	Diode forward voltage	$I_F=5.2A, V_{GS}=0V$				V

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