

### INCHANGE SEMICONDUCTOR

# isc N-Channel MOSFET Transistor

## IPW60R280P6

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### • FEATURES

- Static drain-source on-resistance:  $R_{DS}(on) \leq 280 m_{\Omega}$
- · Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### DESCRITION

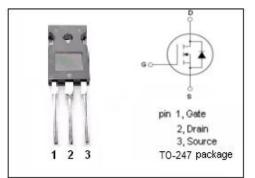
· Fast switching

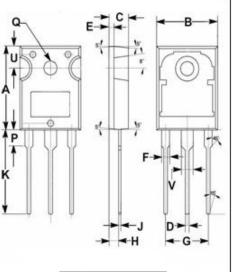
### • ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

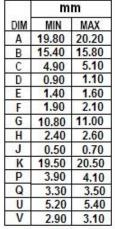
SYMBOL	PARAMETER	VALUE	UNIT
V <sub>DSS</sub>	Drain-Source Voltage	600	V
$V_{GS}$	Gate-Source Voltage	±20	V
ID	Drain Current-Continuous	13.8	A
I <sub>DM</sub>	Drain Current-Single Pulsed	39	A
PD	Total Dissipation @Tc=25°C	104	W
Tj	Max. Operating Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55~150	°C

#### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	МАХ	UNIT
Rth(j-c)	Channel-to-case thermal resistance	1.2	°C/W
Rth(j-a)	Channel-to-ambient thermal resistance	62	°C/W









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### **ELECTRICAL CHARACTERISTICS**

#### $T_{\text{C}}\text{=}25^\circ\!\!\mathbb{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	ТҮР	МАХ	UNIT
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V; I <sub>D</sub> =0.25mA	600			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	VDS=VGS; ID=0.43mA	3.5		4.5	V
$R_{\text{DS(on)}}$	Drain-Source On-Resistance	V <sub>GS</sub> =10V; I <sub>D</sub> =5.2A			280	mΩ
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = 20V			0.1	μA
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> =600V; V <sub>GS</sub> = 0V			1	μA
V <sub>SD</sub>	Diode forward voltage	I <sub>F</sub> =6.5A, V <sub>GS</sub> = 0V				V

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