

## isc N-Channel MOSFET Transistor

## IPW60R165CP

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## • FEATURES

- Static drain-source on-resistance:  
 $R_{DS(on)} \leq 165\text{m}\Omega$
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • DESCRIPTION

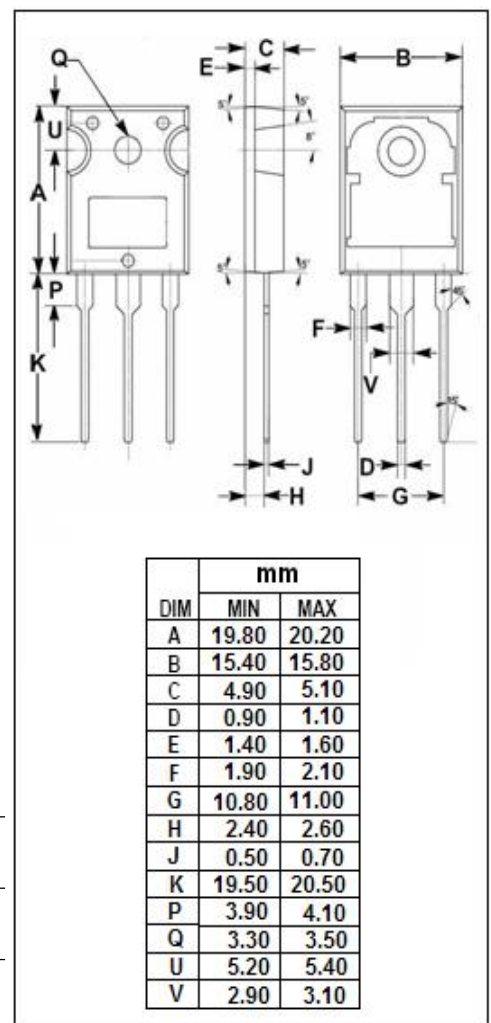
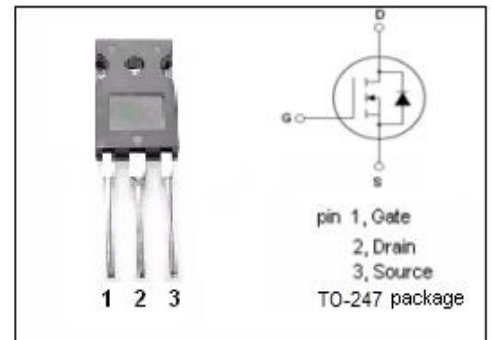
- High peak current capability

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DS}$	Drain-Source Voltage	600	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous	21	A
$I_{DM}$	Drain Current-Single Pulsed	61	A
$P_D$	Total Dissipation @ $T_c=25^\circ\text{C}$	192	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	0.65	$^\circ\text{C/W}$
$R_{th(j-a)}$	Channel-to-ambient thermal resistance	62	$^\circ\text{C/W}$



**isc N-Channel MOSFET Transistor****IPW60R165CP****IIPW60R165CP****ELECTRICAL CHARACTERISTICS** $T_c=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V$ ; $I_D=0.25mA$	600			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}$ ; $I_D=0.79mA$	2.5		3.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V$ ; $I_D=12A$			165	m $\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=20V$ ; $V_{DS}=0V$			0.1	$\mu A$
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=600V$ ; $V_{GS}=0V$			1	$\mu A$
$V_{SD}$	Diode forward voltage	$I_F=12A$ , $V_{GS}=0V$			1.2	V

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