

## isc N-Channel MOSFET Transistor

## IPW60R199CP

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### • FEATURES

- Static drain-source on-resistance:  
 $R_{DS(on)} \leq 199\text{m}\Omega$
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### • DESCRIPTION

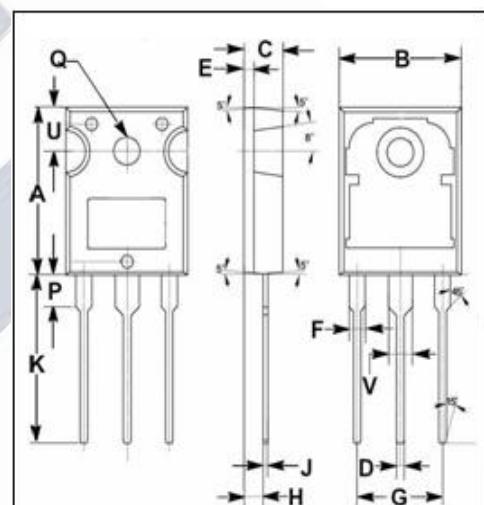
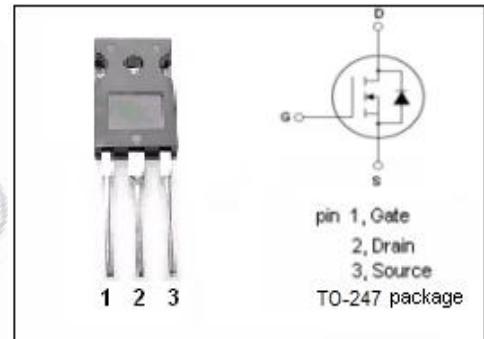
- High peak current capability

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	600	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous	16	A
$I_{DM}$	Drain Current-Single Pulsed	51	A
$P_D$	Total Dissipation @ $T_c=25^\circ\text{C}$	139	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	0.9	$^\circ\text{C}/\text{W}$
$R_{th(j-a)}$	Channel-to-ambient thermal resistance	62	$^\circ\text{C}/\text{W}$



DIM	mm	
	MIN	MAX
A	19.80	20.20
B	15.40	15.80
C	4.90	5.10
D	0.90	1.10
E	1.40	1.60
F	1.90	2.10
G	10.80	11.00
H	2.40	2.60
J	0.50	0.70
K	19.50	20.50
P	3.90	4.10
Q	3.30	3.50
U	5.20	5.40
V	2.90	3.10

**isc N-Channel MOSFET Transistor****IPW60R199CP****IIPW60R199CP****ELECTRICAL CHARACTERISTICS** $T_c=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0\text{V}; I_D=0.25\text{mA}$	600			V
$V_{GS(\text{th})}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=0.66\text{mA}$	2.5		3.5	V
$R_{DS(\text{on})}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}; I_D=9.9\text{A}$			125	$\text{m}\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=20\text{V}; V_{DS}=0\text{V}$			0.1	mA
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=600\text{V}; V_{GS}=0\text{V}$			1	$\mu\text{A}$
$V_{SD}$	Diode forward voltage	$I_F=9.9\text{A}, V_{GS} = 0\text{V}$			1.2	V