

## isc N-Channel MOSFET Transistor IPD60R280CFD7, IIPD60R280CFD7

### • 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

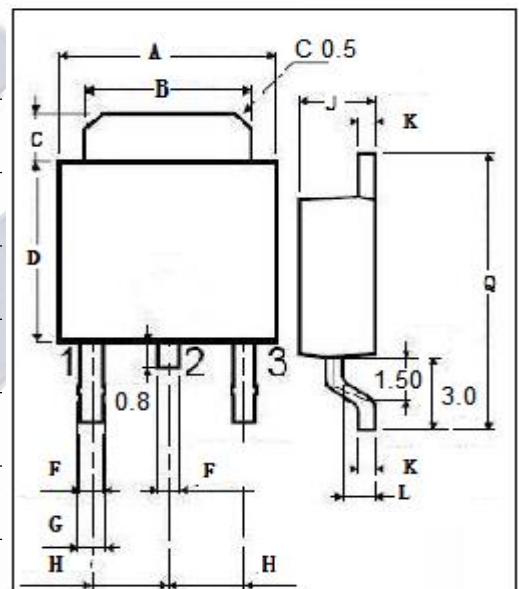
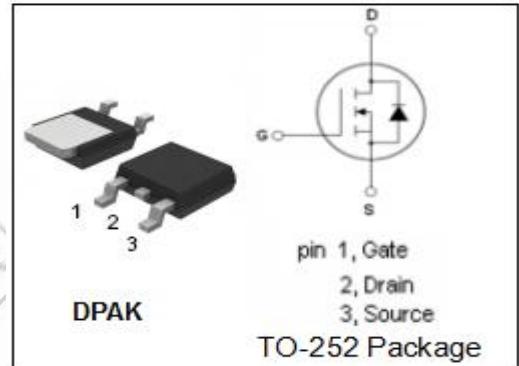
- Improved MOSFET reverse diode dv/dt and diF/dt ruggedness

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	600	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous	9	A
$I_{DM}$	Drain Current-Single Pulsed	31	A
$P_D$	Total Dissipation @ $T_c=25^\circ C$	51	W
$T_j$	Max. Operating Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature	-55~150	$^\circ C$

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Channel-to-case thermal resistance	2.43	$^\circ C/W$
$R_{th(j-a)}$	Channel-to-ambient thermal resistance	62	$^\circ C/W$



DIM	mm	
	MIN	MAX
A	6.40	6.60
B	5.20	5.40
C	1.15	1.35
D	5.70	6.10
F	0.65	
G	0.75	
H	2.10	2.50
J	2.10	2.40
K	0.40	0.60
L	0.90	1.10
Q	9.90	10.1

**isc N-Channel MOSFET Transistor IPD60R280CFD7, IIPD60R280CFD7****ELECTRICAL CHARACTERISTICS** $T_c=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$\text{BV}_{\text{DSS}}$	Drain-Source Breakdown Voltage	$\text{V}_{\text{GS}}=0\text{V}; \text{I}_D=1\text{mA}$	600			V
$\text{V}_{\text{GS(th)}}$	Gate Threshold Voltage	$\text{V}_{\text{DS}}=\text{V}_{\text{GS}}; \text{I}_D=0.18\text{mA}$	3.5		4.5	V
$\text{R}_{\text{DS(on)}}$	Drain-Source On-Resistance	$\text{V}_{\text{GS}}=10\text{V}; \text{I}_D=3.6\text{A}$			0.28	$\Omega$
$\text{I}_{\text{GSS}}$	Gate-Source Leakage Current	$\text{V}_{\text{GS}}=20\text{V}; \text{V}_{\text{DS}}=0\text{V}$			0.1	$\mu\text{A}$
$\text{I}_{\text{DSS}}$	Drain-Source Leakage Current	$\text{V}_{\text{DS}}=600\text{V}; \text{V}_{\text{GS}}=0\text{V}$			1	$\mu\text{A}$
$\text{V}_{\text{SD}}$	Diode forward voltage	$\text{I}_F=3.6\text{A}, \text{V}_{\text{GS}}=0\text{V}$		1.0		V