

isc N-Channel MOSFET Transistor IPD60R170CFD7, IIPD60R170CFD7

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 170m\Omega$
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

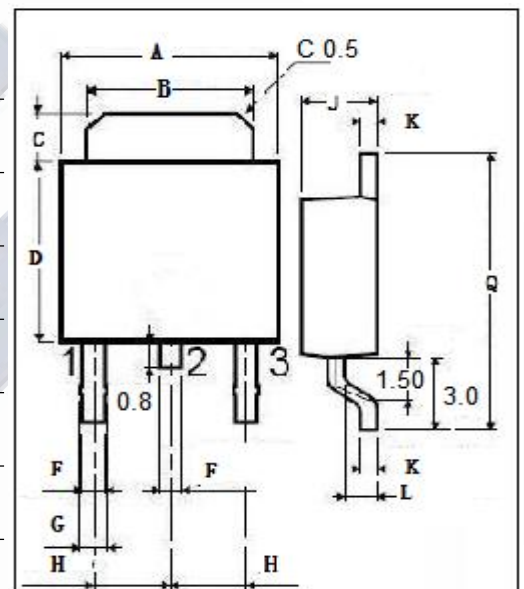
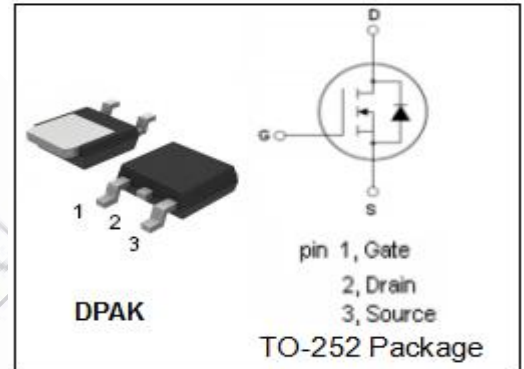
- Improved MOSFET reverse diode dv/dt and diF/dt ruggedness

• ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{DSS}	Drain-Source Voltage	600	V
V _{GS}	Gate-Source Voltage	±20	V
I _D	Drain Current-Continuous	14	A
I _{DM}	Drain Current-Single Pulsed	51	A
P _D	Total Dissipation @T _c =25°C	76	W
T _j	Max. Operating Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~150	°C

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th(j-c)}	Channel-to-case thermal resistance	1.65	°C/W
R _{th(j-a)}	Channel-to-ambient thermal resistance	62	°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 IPD60R170CFD7, IIPD60R170CFD7

ELECTRICAL CHARACTERISTICS
 $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=1mA$	600			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=0.3mA$	3.5		4.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=6A$			0.17	Ω
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=20V; V_{DS}=0V$			0.1	μA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=600V; V_{GS}=0V$			1	μA
V_{SD}	Diode forward voltage	$I_F=6A, V_{GS}=0V$		1		V