

isc N-Channel MOSFET Transistor

IPD65R380E6,IIPD65R380E6

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 0.38 \Omega$
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

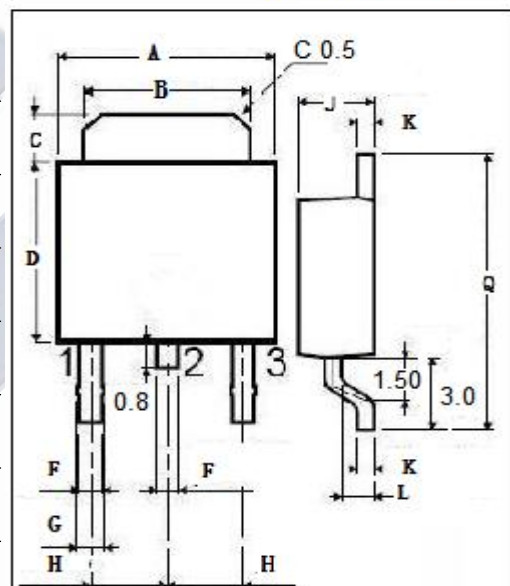
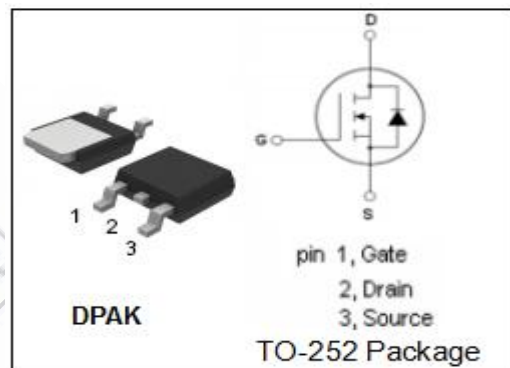
- Very high commutation ruggedness

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage	650	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-Continuous	10.6	A
I_{DM}	Drain Current-Single Pulsed	29	A
P_D	Total Dissipation @ $T_c=25^\circ\text{C}$	83	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	1.5	$^\circ\text{C/W}$
$R_{th(j-a)}$	Channel-to-ambient thermal resistance	62	$^\circ\text{C/W}$



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

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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DS}	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=1mA$	650			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=0.32mA$	2.5		3.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=3.2A$			0.38	Ω
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=20V; V_{DS}=0V$			0.1	μA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=650V; V_{GS}=0V$			1	μA
V_{SD}	Diode forward voltage	$I_F=4.9A, V_{GS}=0V$		0.9		V