

**isc N-Channel MOSFET Transistor IPD65R650CE,IIPD65R650CE**

**• FEATURES**

- Static drain-source on-resistance:  
 $R_{ds(on)} \leq 0.65\Omega$
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• DESCRIPTION**

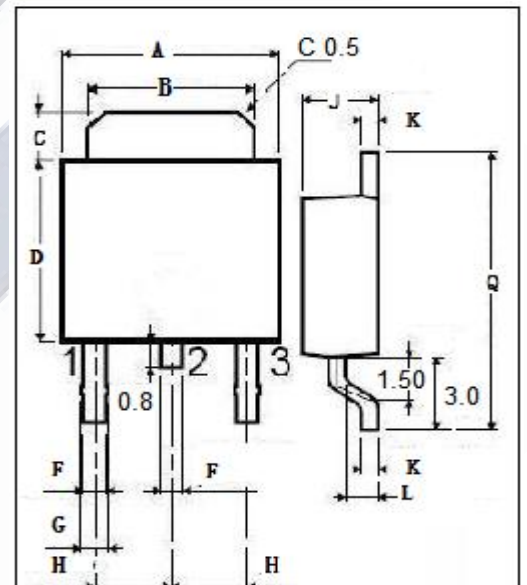
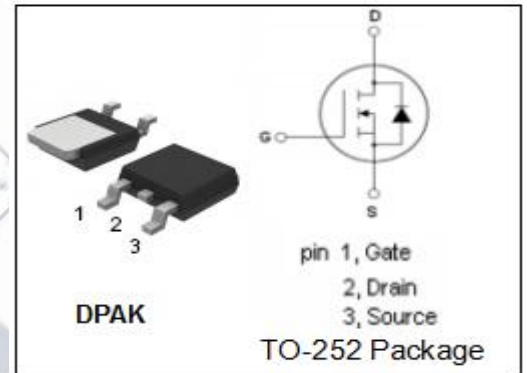
- Fast switching
- Very high commutation ruggedness

**• ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>DSS</sub>	Drain-Source Voltage	650	V
V <sub>GS</sub>	Gate-Source Voltage	±20	V
I <sub>D</sub>	Drain Current-Continuous	10.1	A
I <sub>DM</sub>	Drain Current-Single Pulsed	18	A
P <sub>D</sub>	Total Dissipation @T <sub>c</sub> =25°C	86	W
T <sub>j</sub>	Max. Operating Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-40~150	°C

**• THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th(j-c)</sub>	Channel-to-case thermal resistance	1.45	°C/W
R <sub>th(j-a)</sub>	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 IPD65R650CE, IIPD65R650CE**
**ELECTRICAL CHARACTERISTICS**

 T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V; I <sub>D</sub> =1mA	650			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> ; I <sub>D</sub> =0.21mA	2.5		3.5	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> =10V; I <sub>D</sub> =2.1A			0.65	Ω
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> =20V; V <sub>DS</sub> =0V			0.1	μA
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> =650V; V <sub>GS</sub> =0V			1	μA
V <sub>SD</sub>	Diode forward voltage	I <sub>F</sub> =3.2A, V <sub>GS</sub> =0V		0.9		V