

# isc N-Channel MOSFET Transistor

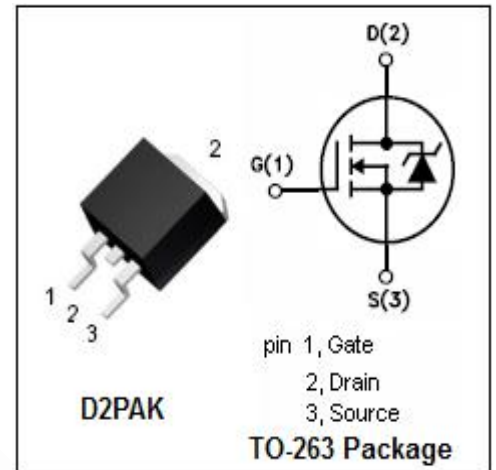
# IPB65R110CFD

**• FEATURES**

- With TO-263(D2PAK) packaging
- Ultra-fast body diode
- High speed switching
- Very high commutation ruggedness
- Easy to use
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operationz

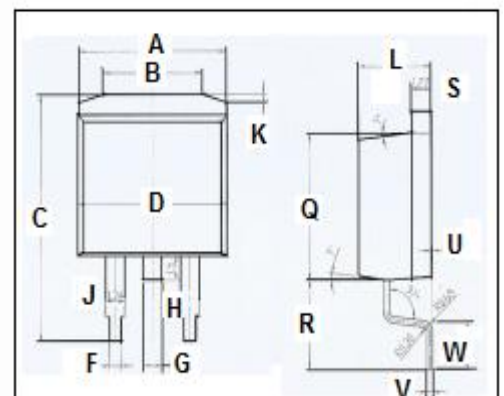
**• APPLICATIONS**

- Switching applications



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

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>DSS</sub>	Drain-Source Voltage	650	V
V <sub>GSS</sub>	Gate-Source Voltage	±20	V
I <sub>D</sub>	Drain Current-Continuous@T <sub>c</sub> =25°C T <sub>c</sub> =100°C	31.2 19.7	A
I <sub>DM</sub>	Drain Current-Single Pulsed	99.6	A
P <sub>D</sub>	Total Dissipation	277.8	W
T <sub>j</sub>	Operating Junction Temperature	-55~150	°C
T <sub>stg</sub>	Storage Temperature	-55~150	°C



DIM	mm	
	MIN	MAX
A	10	
B	6.6	6.8
C	15.23	15.25
D	10.15	10.17
F	0.76	0.78
G	1.26	1.28
H	1.4	1.6
J	1.33	1.35
K	0.4	0.6
L	4.6	4.8
Q	8.69	8.71
R	5.28	5.30
S	1.26	1.28
U	0.0	0.2
V	0.37	0.39
W	2.80	2.82

**• THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th(ch-c)</sub>	Channel-to-case thermal resistance	0.45	°C/W
R <sub>th(ch-a)</sub>	Channel-to-ambient thermal resistance	62	°C/W

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**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> =±20V; I <sub>D</sub> =1.3mA	3.5		4.5	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =12.7A		99	110	mΩ
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@T <sub>C</sub> =25°C T <sub>C</sub> =125°C			1.5 400	μA
V <sub>SDF</sub>	Diode forward voltage	I <sub>SD</sub> =19.1A, V <sub>GS</sub> = 0 V			0.9	V