

# Isc N-Channel MOSFET Transistor

# IPB033N10N5LF

**• FEATURES**

- With To-263(D2PAK) package
- Low input capacitance and gate charge
- Low gate input resistance
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• APPLICATIONS**

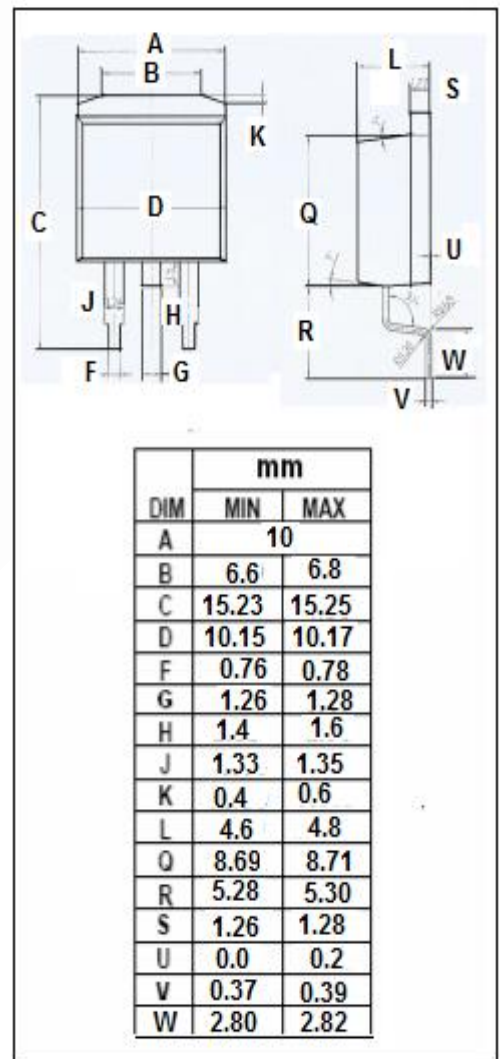
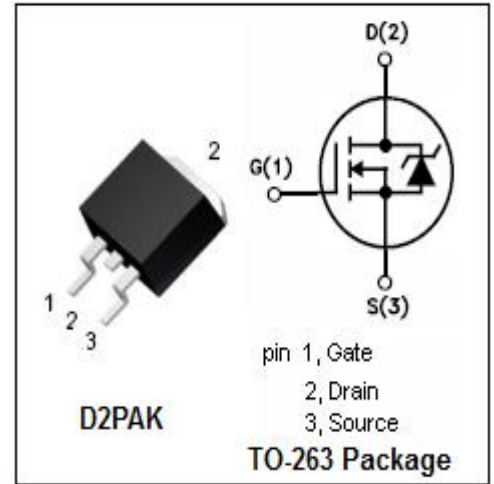
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>DSS</sub>	Drain-Source Voltage	80	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	120 108	A
I <sub>DM</sub>	Drain Current-Single Pulsed	480	A
P <sub>D</sub>	Total Dissipation @T <sub>c</sub> =25°C	179	W
T <sub>ch</sub>	Max. Operating Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55~150	°C

**• THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th(ch-c)</sub>	Channel-to-case thermal resistance	0.7	°C/W
R <sub>th(ch-a)</sub>	Channel-to-ambient thermal resistance	40	°C/W



**Isc N-Channel MOSFET Transistor****IPB033N10N5LF****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	100			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> ; I <sub>D</sub> =0.15mA	2.5		4.1	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =100A		2.7	3.3	mΩ
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0V			±5	μA
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> =100V; V <sub>GS</sub> = 0V; T <sub>j</sub> =25°C V <sub>DS</sub> =100V; V <sub>GS</sub> = 0V; T <sub>j</sub> =125°C			1 100	μA
V <sub>SDF</sub>	Diode forward voltage	I <sub>SD</sub> =100A, V <sub>GS</sub> = 0 V		0.93	1.2	V