

# Isc N-Channel MOSFET Transistor

# IPB083N10N3

### • 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

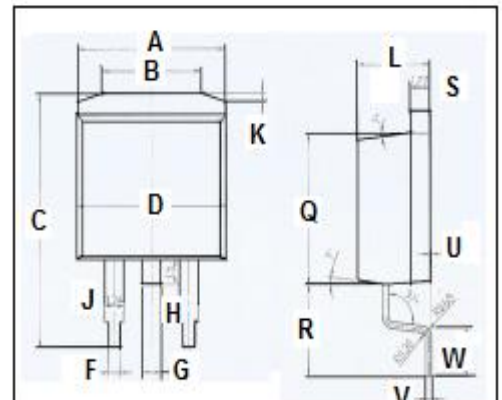
### • APPLICATIONS

- Switching applications



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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	100	V
$V_{GSS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-Continuous $T_c=25^\circ\text{C}$ $T_c=100^\circ\text{C}$	80 58	A
$I_{DM}$	Drain Current-Single Pulsed	320	A
$P_D$	Total Dissipation @ $T_c=25^\circ\text{C}$	125	W
$T_{ch}$	Max. Operating Junction Temperature	175	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~175	$^\circ\text{C}$



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
$R_{th(ch-c)}$	Channel-to-case thermal resistance	1.2	$^\circ\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	50	$^\circ\text{C/W}$

**Isc N-Channel MOSFET Transistor****IPB083N10N3****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=1\text{mA}$	100			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=0.075\text{mA}$	2.0		4.0	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=73A$		7.2	8.3	$\text{m}\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 20V; V_{DS}=0V$			$\pm 0.1$	$\mu\text{A}$
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=100V; V_{GS}=0V; T_j=25^{\circ}\text{C}$ $V_{DS}=100V; V_{GS}=0V; T_j=125^{\circ}\text{C}$			1 100	$\mu\text{A}$
$V_{SDF}$	Diode forward voltage	$I_{SD}=80A, V_{GS}=0\text{Vs}$		1.0	1.2	V

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