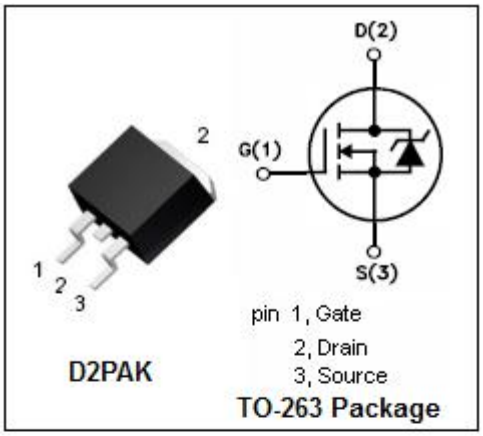
isc N-Channel MOSFET Transistor IPB048N15N5LF

• DESCRIPTION

- Drain Current I_D= 120A@ T_C=25℃
- Drain Source Voltage
  : V_{DSS}= 150V(Min)
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

- Designed for high current, high speed switching applications

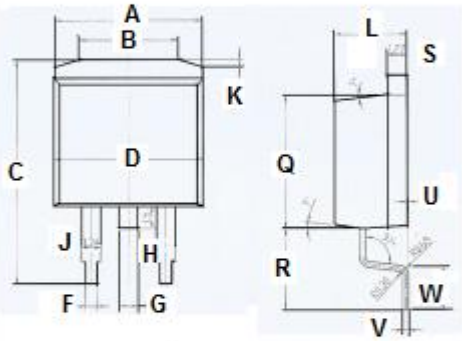


ABSOLUTE MAXIMUM RATINGS(T_C=25℃)

SYMBOL	ARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage (V_{GS}=0)	150	V
V_{GS}	Gate-Source Voltage	±20	V
I_D	Drain Current-continuous@ T_C=25℃	120	A
$I_{D(puls)}$	Pulse Drain Current	480	A
P_{tot}	Total Dissipation@T_C=25℃	313	W
T_j	Max. Operating Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	0.40	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance, Junction to Ambient	62	℃/W



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

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• **ELECTRICAL CHARACTERISTICS (T_C=25℃)**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	V_{GS}= 0; I_D= 1mA	150			V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}= V_{GS}; I_D=250μA	3.3		4.9	V
V_{SD}	Diode Forward On-Voltage	I_F=100A ;V_{GS}= 0			1.2	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}= 10V; I_D=100A			4.8	mΩ
I_{GSS}	Gate-Body Leakage Current	V_{GS}= ±20V;V_{DS}= 0			±5	μA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}= 120V; V_{GS}= 0			2	μA
		V_{DS}= 120V; V_{GS}= 0;T_j =125℃			100	
Qg	Gate Charge Total	V_{DS}=75V, I_D=70A, V_{GS}=10V		80		nC
Ciss	Input Capacitance	V_{DS}=75V;V_{GS}=0V; f=1.0MHz		5900		pF
Coss	Output Capacitance			690		
Crss	Reverse Transfer Capacitance			7		

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