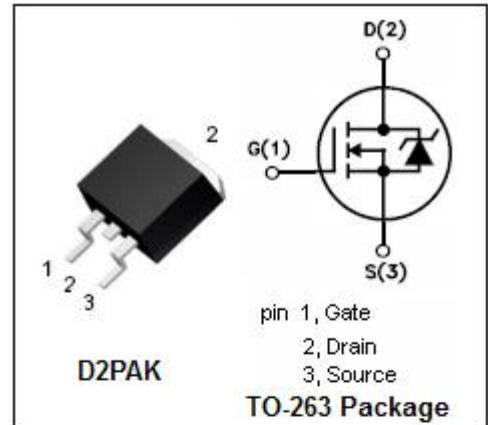


**isc N-Channel MOSFET Transistor**
**IPB048N15N5LF**
**• DESCRIPTION**

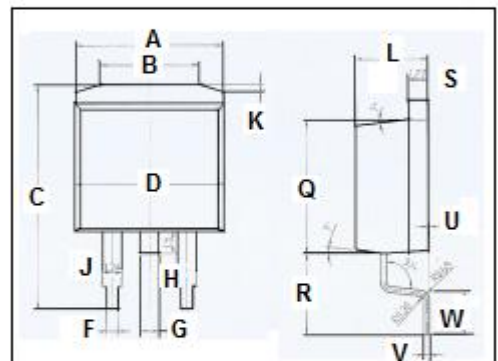
- Drain Current  $I_D = 120A @ T_C = 25^\circ C$
- Drain Source Voltage  
:  $V_{DSS} = 150V(\text{Min})$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• APPLICATIONS**

- Designed for high current, high speed switching applications


**ABSOLUTE MAXIMUM RATINGS( $T_C = 25^\circ C$ )**

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



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
$R_{th j-c}$	Thermal Resistance, Junction to Case	0.40	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62	$^\circ C/W$

## isc N-Channel MOSFET Transistor

## IPB048N15N5LF

• ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> = 0; I <sub>D</sub> = 1mA	150			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> =250μA	3.3		4.9	V
V <sub>SD</sub>	Diode Forward On-Voltage	I <sub>F</sub> =100A; V <sub>GS</sub> = 0			1.2	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =100A			4.8	mΩ
I <sub>GSS</sub>	Gate-Body Leakage Current	V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0			±5	μA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> = 120V; V <sub>GS</sub> = 0			2	μA
		V <sub>DS</sub> = 120V; V <sub>GS</sub> = 0; T <sub>j</sub> =125°C			100	
Q <sub>g</sub>	Gate Charge Total	V <sub>DS</sub> =75V, I <sub>D</sub> =70A, V <sub>GS</sub> =10V		80		nC
C <sub>iss</sub>	Input Capacitance	V <sub>DS</sub> =75V; V <sub>GS</sub> =0V; f=1.0MHz		5900		pF
C <sub>oss</sub>	Output Capacitance			690		
C <sub>rss</sub>	Reverse Transfer Capacitance			7		

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