

# isc N-Channel MOSFET Transistor IPD090N03L, IIPD090N03L

**• FEATURES**

- Static drain-source on-resistance:  
 $R_{DS(on)} \leq 9m\Omega$
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**• DESCRIPTION**

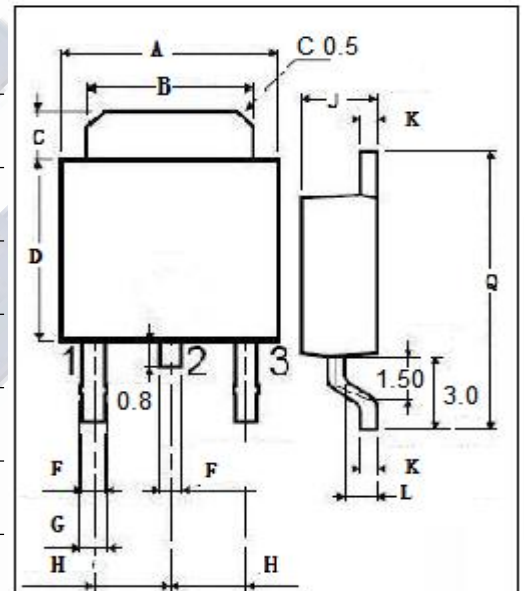
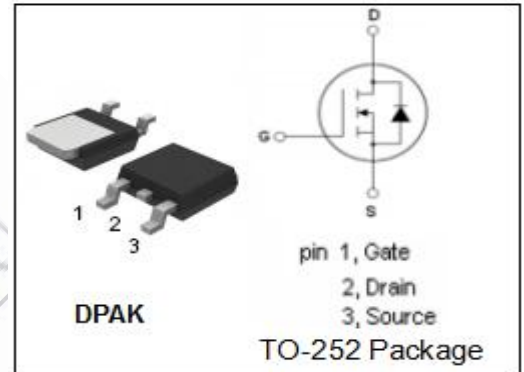
- Fast switching

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

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>DSS</sub>	Drain-Source Voltage	30	V
V <sub>GS</sub>	Gate-Source Voltage	±20	V
I <sub>D</sub>	Drain Current-Continuous	40	A
I <sub>DM</sub>	Drain Current-Single Pulsed	280	A
P <sub>D</sub>	Total Dissipation @T <sub>c</sub> =25°C	42	W
T <sub>j</sub>	Max. Operating Junction Temperature	175	°C
T <sub>stg</sub>	Storage Temperature	-55~175	°C

**• THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th(j-c)</sub>	Channel-to-case thermal resistance	3.6	°C/W
R <sub>th(j-a)</sub>	Channel-to-ambient thermal resistance	75	°C/W



DIM	mm	
	MIN	MAX
A	6.40	6.60
B	5.20	5.40
C	1.15	1.35
D	5.70	6.10
F	0.65	
G	0.75	
H	2.10	2.50
J	2.10	2.40
K	0.40	0.60
L	0.90	1.10
Q	9.90	10.1

## isc N-Channel MOSFET Transistor IPD090N03L, IIPD090N03L

### ELECTRICAL CHARACTERISTICS

$T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=1mA$	30			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=250\ \mu A$	1		2.2	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=30A$			9	$m\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=20V; V_{DS}=0V$			0.1	$\mu A$
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=30V; V_{GS}=0V$			1	$\mu A$
$V_{SD}$	Diode forward voltage	$I_F=30A, V_{GS}=0V$			1.1	V