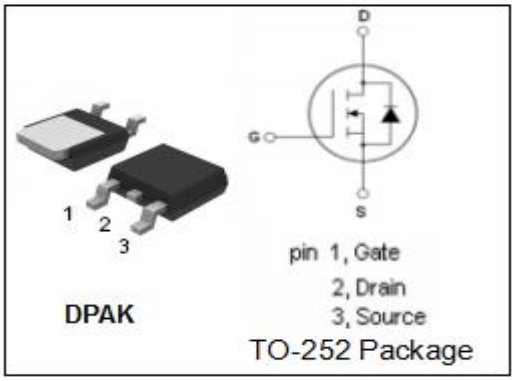
isc N-Channel MOSFET Transistor IPD031N03L, IIPD031N03L

• FEATURES

- Static drain-source on-resistance:
  $R_{DS(on)} \leqslant 3.1m\Omega$
- Enhancement mode:
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



• DESCRITION

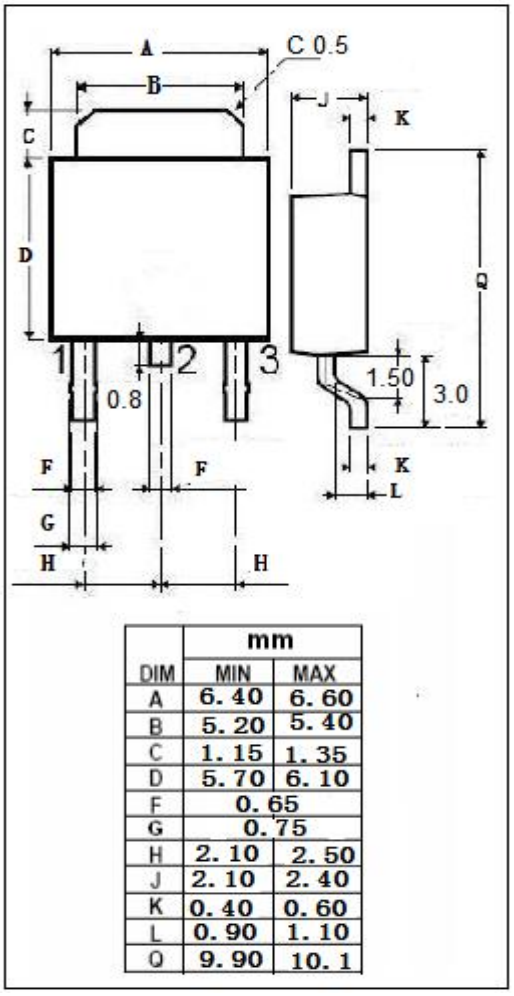
- Fast switching

• ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	30	V
V_{GS}	Gate-Source Voltage	±20	V
I_D	Drain Current-Continuous	90	A
I_{DM}	Drain Current-Single Pulsed	400	A
P_D	Total Dissipation @T_C=25℃	94	W
T_j	Max. Operating Junction Temperature	175	℃
T_{stg}	Storage Temperature	-55~175	℃

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
Rth(j-c)	Channel-to-case thermal resistance	1.6	℃/W
Rth(j-a)	Channel-to-ambient thermal resistance	75	℃/W



DIM	mm MIN	mm 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

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ELECTRICAL CHARACTERISTICS

T_C=25℃ 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 μA	1		2.2	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}=10V; I_D=30A			3.1	mΩ
I_{GSS}	Gate-Source Leakage Current	V_{GS}= 20V; V_{DS}= 0V			0.1	μA
I_{DSS}	Drain-Source Leakage Current	V_{DS}=30V; V_{GS}= 0V			25	μA
V_{SD}	Diode forward voltage	I_F=30A, V_{GS} = 0V			1.1	V