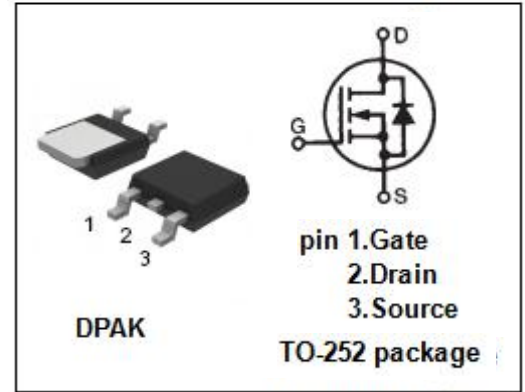


**isc N-Channel MOSFET Transistor**
**STD12NM50ND**
**FEATURES**

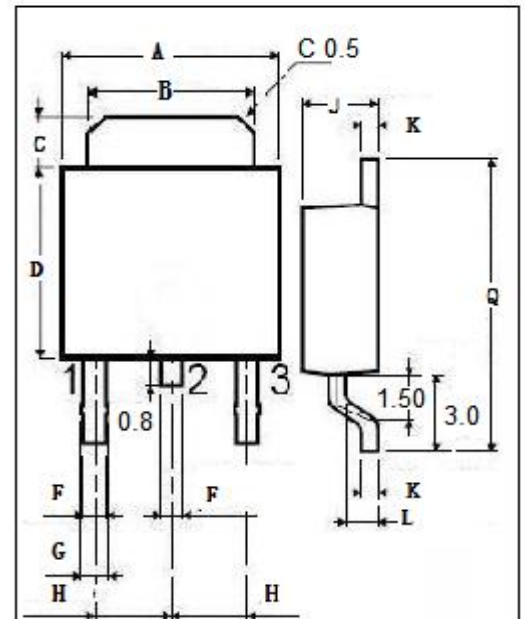
- Drain Current  $-I_D = 11A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS} = 500V(\text{Min})$
- Static Drain-Source On-Resistance  
:  $R_{DS(on)} = 380m\ \Omega (\text{Max})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation


**APPLICATIONS**

- Switching application

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	500	V
$V_{GS}$	Gate-Source Voltage-Continuous	$\pm 25$	V
$I_D$	Drain Current-Continuous	11	A
$I_{DM}$	Drain Current-Single Pluse	44	A
$P_D$	Total Dissipation @ $T_C = 25^\circ C$	100	W
$T_J$	Max. Operating Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature	-55~150	$^\circ C$



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

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.25	$^\circ C/W$

## isc N-Channel MOSFET Transistor

## STD12NM50ND

## ELECTRICAL CHARACTERISTICS

T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> = 0; I <sub>D</sub> = 1mA	500		V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> = 0.25mA	3	5	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> = 5.5A		380	mΩ
I <sub>GSS</sub>	Gate-Body Leakage Current	V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0		±100	nA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> = 500V; V <sub>GS</sub> = 0 V <sub>DS</sub> = 500V; V <sub>GS</sub> = 0; T <sub>j</sub> = 125°C		1 100	μA
V <sub>SD</sub>	Forward On-Voltage	I <sub>S</sub> = 11A; V <sub>GS</sub> =0		1.6	V

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