

isc N-Channel MOSFET Transistor

STD5NM50T4

• FEATURES

- Static drain-source on-resistance:
 $R_{ds(on)} \leq 0.8 \Omega$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

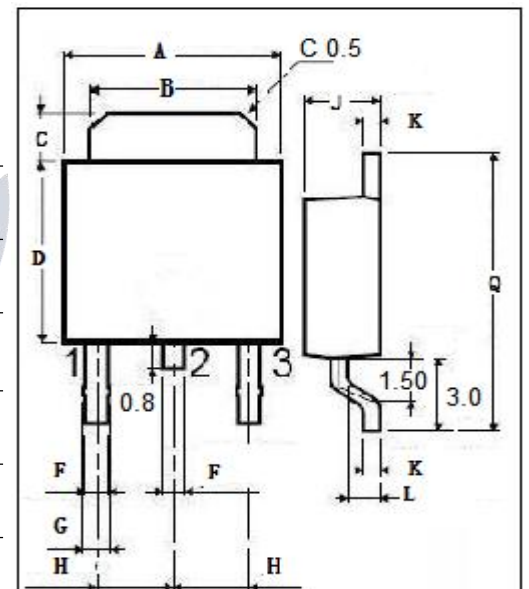
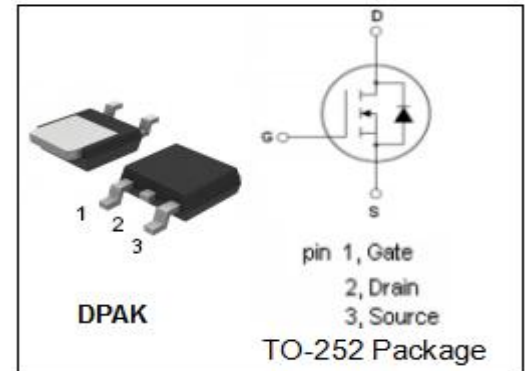
- Switching applications

• ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	500	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-Continuous	7.5	A
I_{DM}	Drain Current-Single Pulsed	30	A
P_D	Total Dissipation @ $T_c=25^\circ\text{C}$	100	W
T_j	Max. Operating Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(j-c)}$	Channel-to-case thermal resistance	1.25	$^\circ\text{C/W}$



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**STD5NM50T4****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=250\ \mu\text{A}$	500			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=250\ \mu\text{A}$	3		5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=2.5A$			0.8	Ω
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 30V$			± 100	nA
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=500V; V_{GS}=0V$			1	μA
		$V_{DS}=500V; V_{GS}=0V; T_C=125^{\circ}\text{C}$			10	μA
V_{SD}	Diode forward voltage	$I_{SD}=7.5A, V_{GS}=0V$			1.5	V

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