

isc N-Channel MOSFET Transistor
2SK3748
FEATURES

- Drain Current : $I_D = 4.0A @ T_C = 25^\circ C$
- Drain Source Voltage : $V_{DSS} = 1500V(\text{Min})$
- Static Drain-Source On-Resistance : $R_{DS(on)} = 7.0 \Omega (\text{Max}) @ V_{GS} = 10V$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

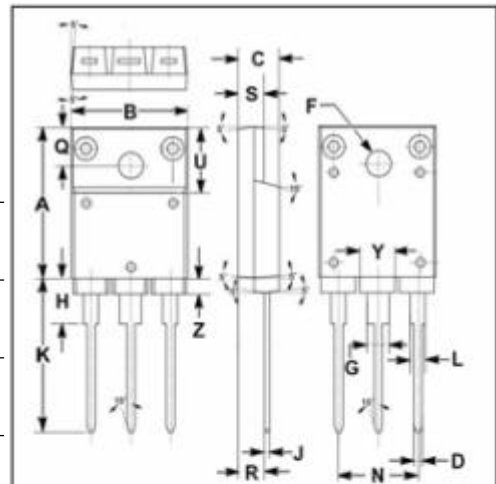
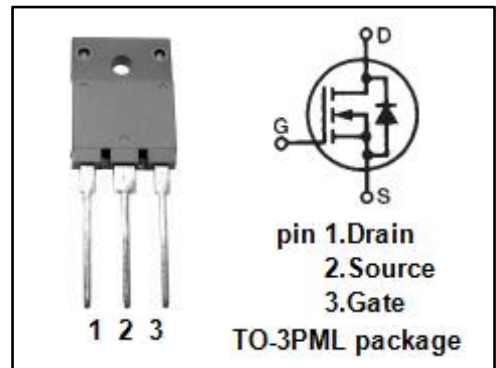
- motor drive, DC-DC converter, power switch and solenoid drive.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	1500	V
V_{GS}	Gate-Source Voltage-Continuous	± 20	V
I_D	Drain Current-Continuous	4.0	A
I_{DM}	Drain Current-Single Pulse	8.0	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	65	W
T_J	Max. Operating Junction Temperature	-55~150	$^\circ C$
T_{stg}	Storage Temperature	-55~150	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1.92	$^\circ C/W$



DIM	mm	
	MIN	MAX
A	19.90	20.10
B	15.75	16.10
C	5.50	5.70
D	0.90	1.10
F	3.30	3.50
G	2.90	3.20
H	5.90	6.10
J	0.595	0.70
K	21.10	22.50
L	1.90	2.25
N	10.80	11.00
O	4.90	5.10
R	3.75	3.95
S	3.20	3.60
U	9.90	10.10
Y	4.20	4.90
Z	1.90	2.10

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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=1.0\text{mA}$	1500	--	V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=10\text{V}; I_D=1.0\text{mA}$	2.5	3.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}; I_D=2.0\text{A}$	--	7.0	Ω
I_{GSS}	Gate-Body Leakage Current	$V_{GS}=\pm 16\text{V}; V_{DS}=0$	--	± 10	μA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=1200\text{V}; V_{GS}=0$	--	100	μA
V_{SD}	Forward On-Voltage	$I_S=4.0\text{A}; V_{GS}=0$	--	1.2	V

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