

Isc N-Channel MOSFET Transistor

2SK3681

FEATURES

- Drain Current $-I_D = 43A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 600V(\text{Min})$
- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.16 \Omega (\text{Max}) @ V_{GS} = 10V$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

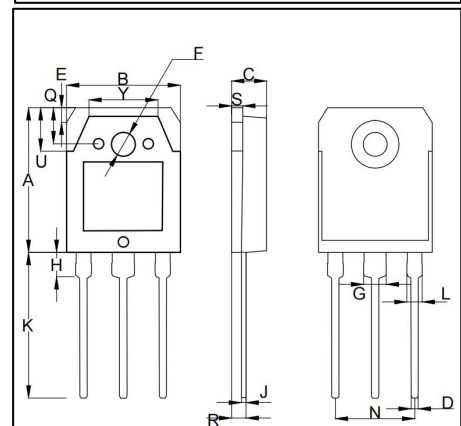
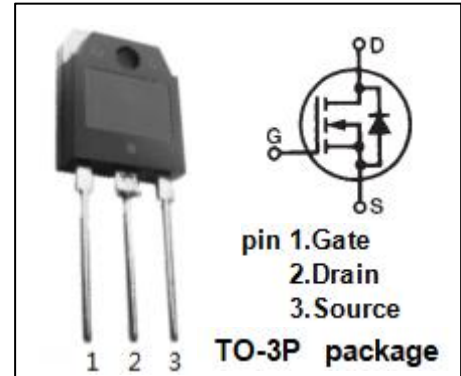
- motor drive, DC-DC converter, power switch and solenoid drive.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	600	V
V_{GSS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-Continuous $T_C = 25^\circ C$	43	A
I_{DM}	Drain Current-Single Pulsed	172	A
P_D	Total Dissipation @ $T_C = 25^\circ C$	600	W
T_j	Max. Operating Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature	-55~150	$^\circ C$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	0.208	$^\circ C/W$



DIM	mm	
	MIN	MAX
A	19.70	20.20
B	15.45	15.75
C	4.70	4.90
D	0.90	1.10
E	1.80	2.20
F	3.40	3.60
G	2.95	3.25
H	3.10	3.40
J	0.500	0.700
K	19.80	20.20
L	2.00	2.20
M	13.30	13.90
N	10.80	11.00
Q	4.25	5.10
R	1.75	2.30
S	1.40	1.60
U	5.90	6.20
Y	9.45	9.75

Isc N-Channel MOSFET Transistor**2SK3681****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D = 0.25mA	600	--	V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} ; I _D = 0.25mA	3.0	5.0	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 26 A	--	0.16	Ω
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±30V; V _{DS} = 0V	--	±100	nA
I _{DSS}	Drain-Source Leakage Current	V _{DS} =600V; V _{GS} = 0V; T _C =25°C	--	25	μA
V _{SD}	Diode forward voltage	I _{SD} = 43A, V _{GS} = 0 V	--	1.5	V

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