

# isc N-Channel MOSFET Transistor

# 2SK683

### DESCRIPTION

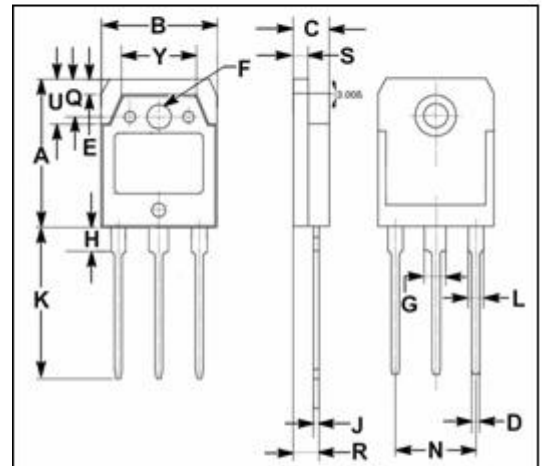
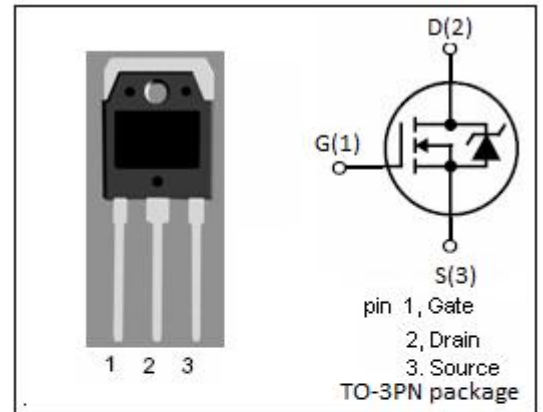
- Drain Current  $-I_D=12A@ T_C=25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS}=500V(\text{Min})$
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- low on-resistance
- High speed switching
- Low drive current
- No secondary breakdown
- Suitable for switching regulator, DC-DC convertor

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage ( $V_{GS}=0$ )	500	V
$V_{GS}$	Gate-Source Voltage	$\pm 20$	V
$I_D$	Drain Current-continuous@ $T_C=25^\circ C$	12	A
$P_{tot}$	Total Dissipation@ $T_C=25^\circ C$	100	W
$T_j$	Max. Operating Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ C$



DIM	mm	
	MIN	MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

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• ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0; I <sub>D</sub> = 10mA	500			V
V <sub>GS(TH)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = 10V; I <sub>D</sub> = 1mA	2.0		4.0	V
R <sub>DS(ON)</sub>	Drain-Source On-stage Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =6A		0.45	0.60	Ω
V <sub>SD</sub>	Diode Forward Voltage	I <sub>F</sub> = 12A; V <sub>GS</sub> =0		1.0		V
I <sub>GSS</sub>	Gate Source Leakage Current	V <sub>GS</sub> = ± 16V; V <sub>DS</sub> = 0			± 10	μA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> =400V; V <sub>GS</sub> = 0			250	μA

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