

isc N-Channel MOSFET Transistor

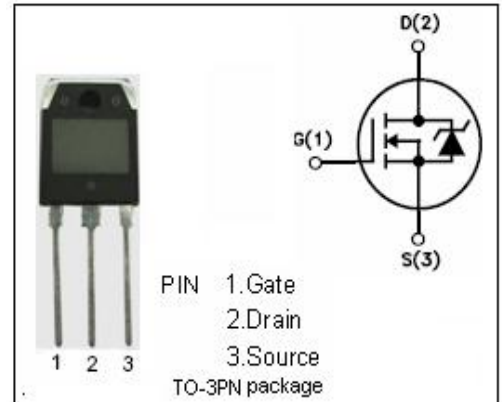
2SK1012

DESCRIPTION

- Drain Current  $-I_D=10A @ T_C=25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS}= 500V(\text{Min})$

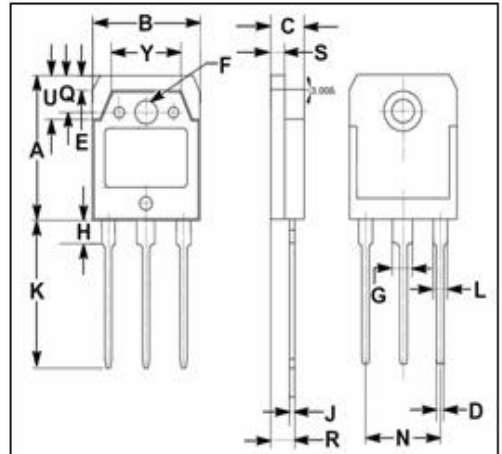
APPLICATIONS

- high voltage, high speed power switching



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	$\pm 30$	V
$I_D$	Drain Current-continuous@ $T_C=25^\circ C$	10	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	19.90	20.10
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	3.10
H	3.20	3.40
J	0.595	0.605
K	20.50	20.70
L	1.90	2.10
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.005
U	5.90	6.10
Y	9.90	10.10

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance,Junction to Case	1.25	$^\circ C/W$
$R_{th\ j-a}$	Thermal Resistance,Junction to Ambient	35	$^\circ C/W$

**isc N-Channel Mosfet Transistor****2SK1012****• 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> = 1mA	500			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> =1mA	2.5	3.5	5.0	V
R <sub>DS(on)</sub>	Drain-Source On-stage Resistance	V <sub>GS</sub> =10V; I <sub>D</sub> = 5A		0.6	0.9	Ω
I <sub>GSS</sub>	Gate Source Leakage Current	V <sub>GS</sub> = ±30V; 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			500	uA
V <sub>SD</sub>	Forward On-Voltage	I <sub>S</sub> =10A; V <sub>GS</sub> =0		1.1	1.5	V
t <sub>r</sub>	Rise time	V <sub>GS</sub> =10V; I <sub>D</sub> =10A; R <sub>L</sub> =25 Ω		80	120	ns
t <sub>on</sub>	Turn-on time			110	165	ns
t <sub>f</sub>	Fall time			80	120	ns
t <sub>off</sub>	Turn-off time			240	360	ns