

## isc N-Channel MOSFET Transistor

2SK1613

## DESCRIPTION

- Drain Current  $-I_D=5A@ T_C=25^{\circ}C$
- Drain Source Voltage-  
:  $V_{DSS}=900V(\text{Min})$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

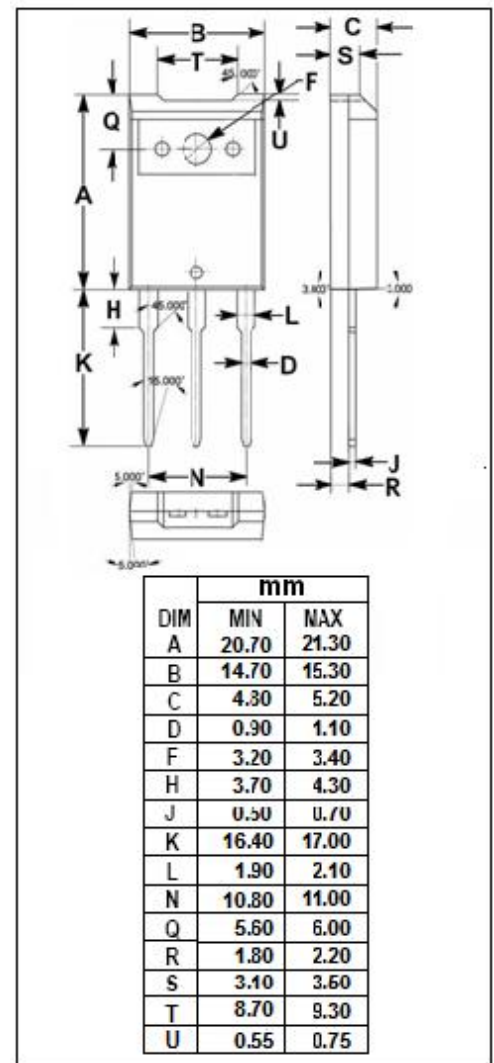
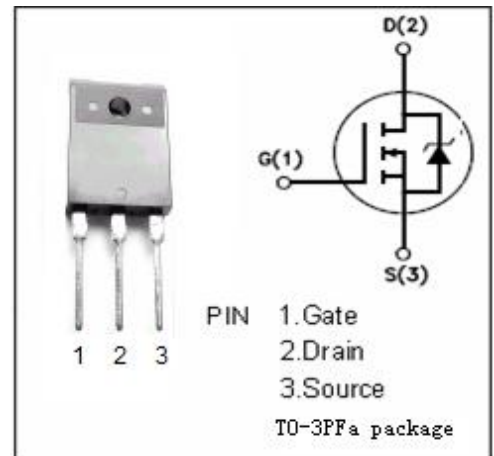
- Designed for high voltage, high speed power switching applications such as switching regulators, converters, solenoid and relay drivers.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage ( $V_{GS}=0$ )	900	V
$V_{GS}$	Gate-Source Voltage	$\pm 30$	V
$I_D$	Drain Current-continuous@ $T_C=25^{\circ}C$	5	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	$^{\circ}C$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	0.83	$^{\circ}C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	35	$^{\circ}C/W$



**isc N-Channel Mosfet Transistor****2SK1613****• 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	900			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =25V; I <sub>D</sub> =1mA	2.0		5.0	V
R <sub>DS(on)</sub>	Drain-Source On-stage Resistance	V <sub>GS</sub> =10V; I <sub>D</sub> =3A		2.0	2.8	Ω
I <sub>GSS</sub>	Gate Source Leakage Current	V <sub>GS</sub> = ±30V; V <sub>DS</sub> = 0			±1	uA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> =720V; V <sub>GS</sub> = 0			0.1	m A
ton	Turn-on time	V <sub>GS</sub> =10V; I <sub>D</sub> =3A; R <sub>L</sub> =66 Ω		90		ns
toff	Turn-off time			250		ns

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