

**isc N-Channel MOSFET Transistor**

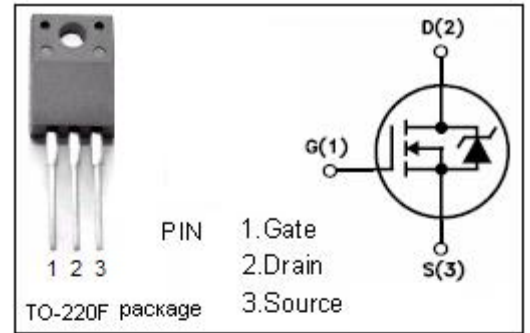
**2SK1602**

**DESCRIPTION**

- Drain Current  $-I_D = 2.8A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS} = 800V(\text{Min})$

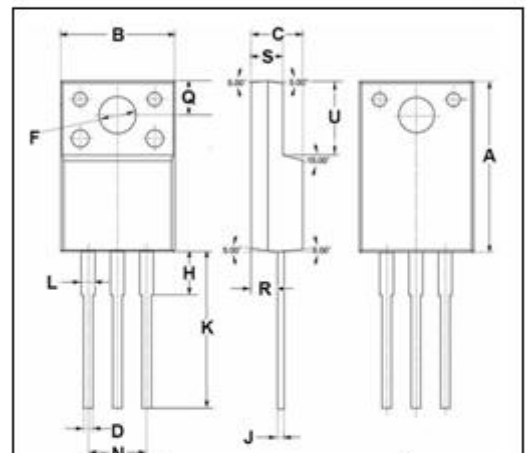
**APPLICATIONS**

- 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 ( $V_{GS} = 0$ )	800	V
$V_{GS}$	Gate-Source Voltage	$\pm 30$	V
$I_D$	Drain Current-continuous@ $T_C = 25^\circ C$	2.8	A
$P_{tot}$	Total Dissipation@ $T_C = 25^\circ C$	40	W
$T_j$	Max. Operating Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ C$



DIM	mm	
	MIN	MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.80
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.85
U	6.40	6.60

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	3.125	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ C/W$

## isc N-Channel Mosfet Transistor

2SK1602

• ELECTRICAL CHARACTERISTICS ( $T_C=25^\circ\text{C}$ )

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=10\text{mA}$	800			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=10\text{V}; I_D=1\text{mA}$	1.5		3.5	V
$R_{DS(on)}$	Drain-Source On-stage Resistance	$V_{GS}=10\text{V}; I_D=1.5\text{A}$		4.3	5.0	$\Omega$
$I_{GSS}$	Gate Source Leakage Current	$V_{GS}=\pm 25\text{V}; V_{DS}=0$			$\pm 100$	nA
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS}=640\text{V}; V_{GS}=0$			100	$\mu\text{A}$
$V_{SD}$	Diode Forward Voltage	$I_F=2.8\text{A}; V_{GS}=0$			2.0	V
$t_r$	Rise time	$V_{GS}=10\text{V}; I_D=1.5\text{A}; R_L=267\ \Omega$		25	50	ns
$t_{on}$	Turn-on time			40	60	ns
$t_f$	Fall time			40	80	ns
$t_{off}$	Turn-off time			150	300	ns