

isc N-Channel MOSFET Transistor

2SK1600

DESCRIPTION

- Drain Current $-I_D = 3A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 800V(\text{Min})$

APPLICATIONS

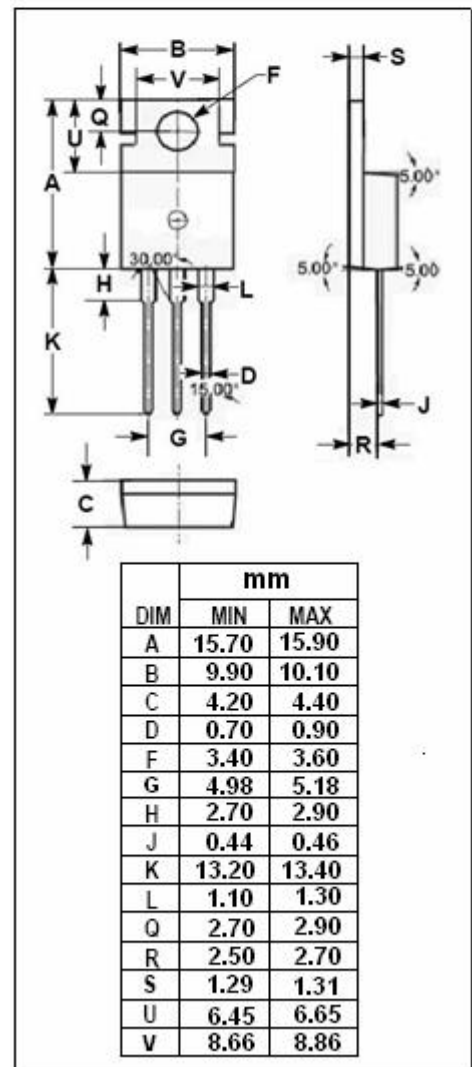
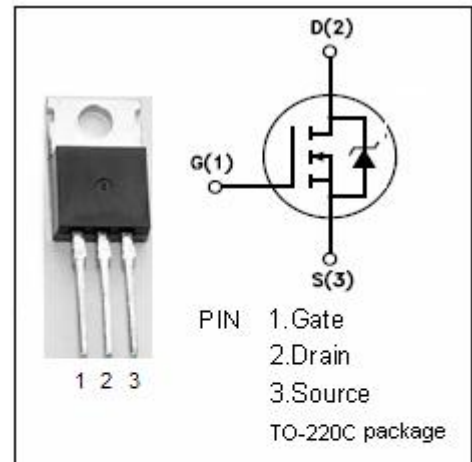
- Designed for high voltage, high speed power switching applications such as switching regulators, converters, solenoid and relay drivers.

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	± 30	V
I_D	Drain Current-continuous @ $T_C = 25^\circ C$	3	A
P_{tot}	Total Dissipation @ $T_C = 25^\circ C$	75	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	1.67	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	83.3	$^\circ C/W$



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• ELECTRICAL CHARACTERISTICS (T_C=25°C)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0; I _D = 10mA	800			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =10 V _{GS} ; I _D =1mA	1.5		3.5	V
R _{DS(on)}	Drain-Source On-stage Resistance	V _{GS} =10V; I _D =1.5A		4.3	5.0	Ω
I _{GSS}	Gate Source Leakage Current	V _{GS} = ±25V; V _{DS} = 0			± 100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =640V; V _{GS} = 0			100	uA
V _{SD}	Diode Forward Voltage	I _F =3A; V _{GS} =0			2.0	V
t _r	Rise time	V _{GS} =10V; I _D =1.5A; R _L =267 Ω		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