

isc N-Channel MOSFET Transistor

2SK1643

DESCRIPTION

- Drain Current $-I_D=5A@ T_C=25^{\circ}C$
- Drain Source Voltage-
: $V_{DSS}=900$ (Min)
- Fast Switching Speed

APPLICATIONS

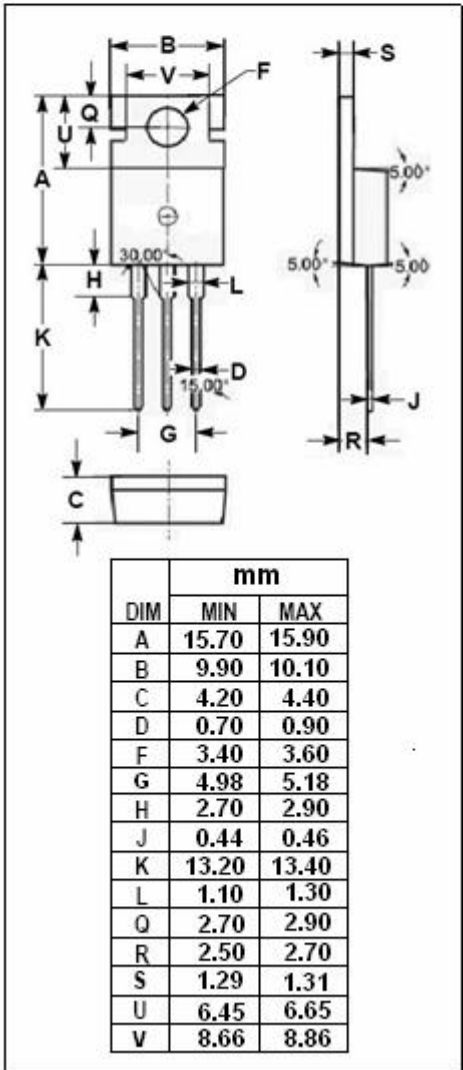
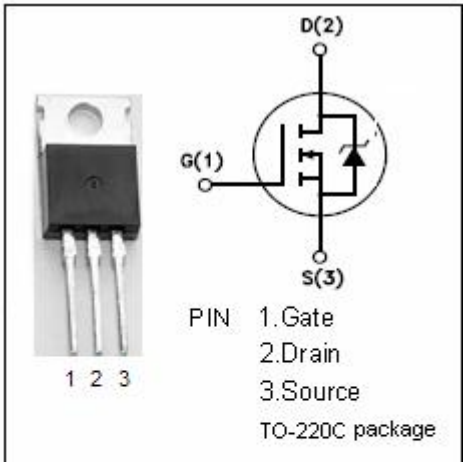
- high speed high current switching applications
- DC-DC converter and motor driver applications

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

SYMBOL	ARAMETER	VALUE	UNI T
V_{DSS}	Drain-Source Voltage ($V_{GS}=0$)	900	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-continuous@ $TC=25^{\circ}C$	5	A
P_{tot}	Total Dissipation@ $TC=25^{\circ}C$	125	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	1.00	$^{\circ}C/W$
$R_{th\ j-a}$	Thermal Resistance,Junction to Ambient	83.3	$^{\circ}C/W$



isc N-Channel Mosfet Transistor**2SK1643****• 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	900			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =10V; I _D =1mA	1.5		3.5	V
R _{DS(on)}	Drain-Source On-stage Resistance	V _{GS} =10V; I _D =2A		2.5	2.8	Ω
I _{GSS}	Gate Source Leakage Current	V _{GS} = ±25V; V _{DS} = 0			±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =720V; V _{GS} = 0			300	uA
V _{SD}	Diode Forward Voltage	I _F =4A; V _{GS} =0			1.9	V
t _r	Rise time	V _{GS} =10V; I _D =2A; R _L =200 Ω		18	35	ns
t _{on}	Turn-on time			30	60	ns
t _f	Fall time			12	25	ns
t _{off}	Turn-off time			70	140	ns