

isc N-Channel MOSFET Transistor

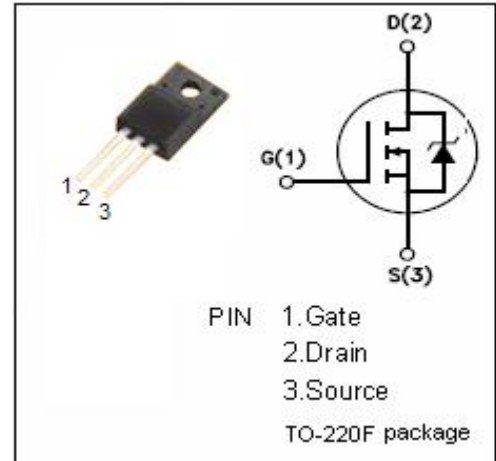
2SK1819

DESCRIPTION

- Drain Current $I_D = 5A @ T_C = 25^\circ C$
- Drain Source Voltage : $V_{DSS} = 450V(\text{Min})$
- Fast Switching Speed

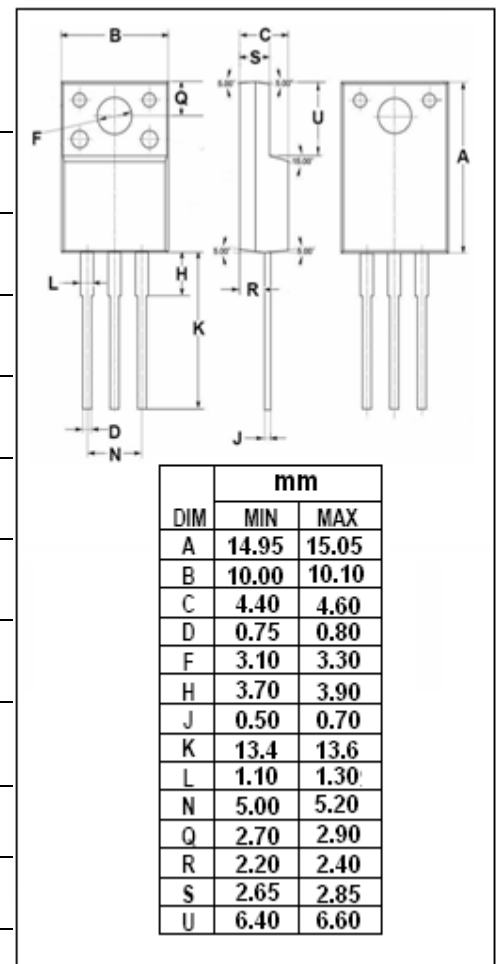
APPLICATIONS

- Chopper regulator
- Motor drive
- Inverters



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS} = 0$)	450	V
V_{GS}	Gate-Source Voltage	± 25	V
I_D	Drain Current-continuous@ $T_C = 25^\circ C$	5	A
P_{tot}	Total Dissipation@ $T_C = 25^\circ C$	35	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	3.57	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ C/W$

isc N-Channel MOSFET Transistor

2SK1819

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=1\text{mA}$	450			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=10\text{mA}$	2.1		4.0	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}; I_D=2.5\text{A}$		0.78	2.5	Ω
I_{GSS}	Gate-Body Leakage Current	$V_{GS}= \pm 25\text{V}; V_{DS}=0$			± 100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=450\text{V}; V_{GS}=0$			500	μA
C_{iss}	Input capacitance	$V_{DS}=25\text{V};$ $V_{GS}=0\text{V};$ $f_T=1\text{MHz}$		500	750	μF
C_{rss}	Reverse transfer capacitance			40	60	
C_{oss}	Output capacitance			80	120	
t_r	Rise time	$V_{GS}=10\text{V};$ $I_D=5\text{A};$ $V_{DD}=300\text{V};$ $R_L=25\ \Omega$		30	45	ns
t_{on}	Turn-on time			25	40	
t_f	Fall time			50	75	
t_{off}	Turn-off time			110	170	