

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
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

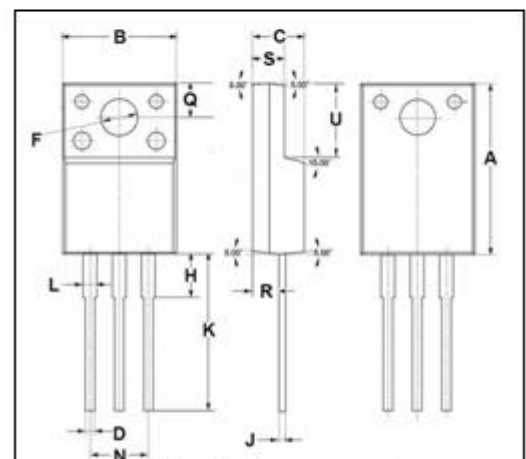
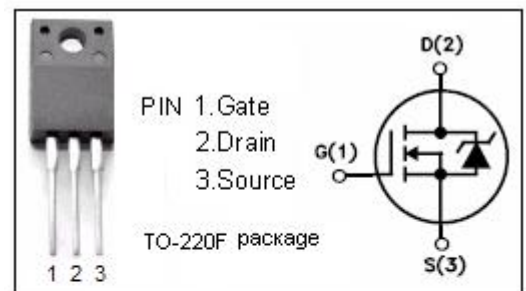
- Chopper regulator
- Motor drive
- Inverters

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	$^\circ C/W$



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

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• ELECTRICAL CHARACTERISTICS (T_c=25°C)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0; I _D = 1mA	450			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} ; I _D =10mA	2.1		4.0	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 2.5A		0.78	2.5	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±25V; V _{DS} = 0			±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 450V; V _{GS} = 0			500	μA
C _{iss}	Input capacitance	V _{DS} =25V;		500	750	pF
C _{rss}	Reverse transfer capacitance	V _{GS} =0V; f _r =1MHz		40	60	
C _{oss}	Output capacitance			80	120	
t _r	Rise time	V _{GS} =10V;		30	45	ns
t _{on}	Turn-on time	I _D =5A;		25	40	
t _f	Fall time	V _{DD} =300V; R _L =25 Ω		50	75	
t _{off}	Turn-off time			110	170	

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