

isc N-Channel MOSFET Transistor

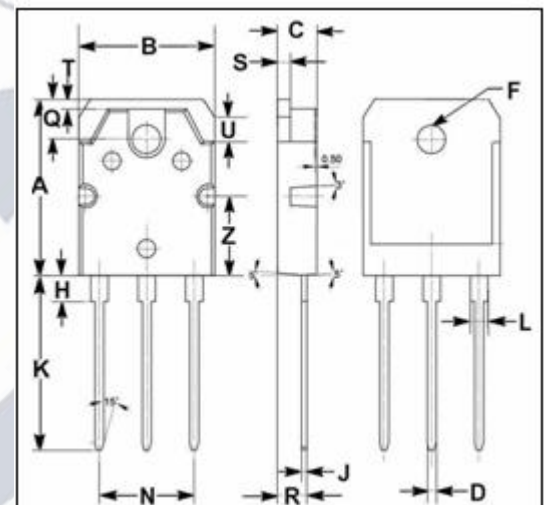
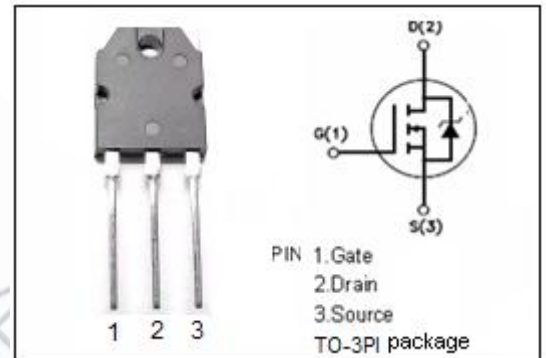
2SK643

DESCRIPTION

- Drain Current $-I_D=10A@ T_C=25^\circ C$
- Drain Source Voltage-
: $V_{DSS}=450V(\text{Min})$
- Fast Switching Speed

APPLICATIONS

- Designed especially for high voltage,high speed applications, such as off-line switching power supplies , UPS,AC and DC motor controls,relay and solenoid drivers.



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

SYMBOL	ARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS}=0$)	450	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-continuous@ $TC=25^\circ C$	10	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	$^\circ C$

DIM	mm	
	MIN	MAX
A	19.60	20.10
B	15.30	15.70
C	4.00	4.60
D	0.90	1.10
F	3.20	3.40
H	2.90	3.10
J	0.50	0.70
K	19.90	21.30
L	1.20	2.20
N	10.80	11.00
Q	4.40	4.60
R	3.30	3.35
S	1.40	1.60
T	1.00	1.20
U	2.10	2.30
Z	7.90	9.10

isc N-Channel Mosfet Transistor

2SK643

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0$; $I_D=10\text{mA}$	450			V
$V_{GS(TH)}$	Gate Threshold Voltage	$V_{DS}=10\text{V}$; $I_D=1\text{mA}$	2.0		4.0	V
$R_{DS(ON)}$	Drain-Source On-stage Resistance	$V_{GS}=10\text{V}$; $I_D=5\text{A}$		0.6	0.8	Ω
V_{SD}	Diode Forward Voltage	$I_F=10\text{A}$; $V_{GS}=0$		2.0		V
I_{GSS}	Gate Source Leakage Current	$V_{GS}=\pm 20\text{V}$; $V_{DS}=0$			± 100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=400\text{V}$; $V_{GS}=0$			300	μA
t_r	Rise time	$V_{GS}=10\text{V}$; $I_D=5\text{A}$; $R_L=40\Omega$		35	70	ns
t_{on}	Turn-on time			50	100	ns
t_f	Fall time			35	70	ns
t_{off}	Turn-off time			200	400	ns