

isc N-Channel MOSFET Transistor

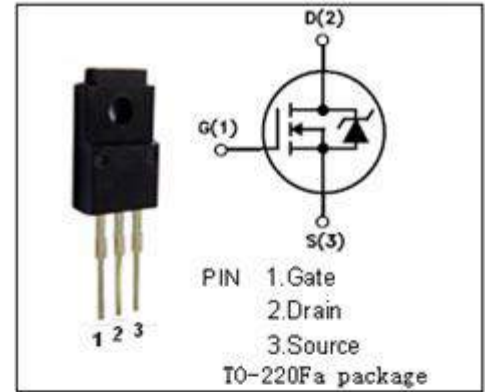
2SK1833

DESCRIPTION

- Drain Current $I_D = 2.5A @ T_C = 25^\circ C$
- Drain Source Voltage:
: $V_{DSS} = 500V(\text{Min})$
- Fast Switching Speed

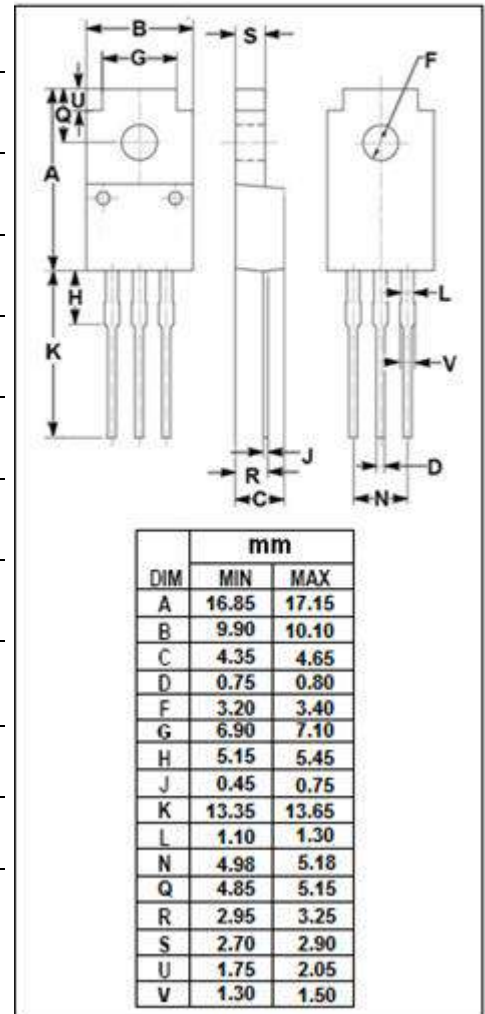
APPLICATIONS

- Diving circuit for a solenoid and motor
- Control equipment
- Switching power supply



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS} = 0$)	500	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-continuous@ $T_C = 25^\circ C$	2.5	A
P_{tot}	Total Dissipation@ $T_C = 25^\circ C$	40	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	3.125	$^\circ C/W$

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=1\text{mA}$	500			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=25\text{V}; I_D=1\text{mA}$	2.0		5.0	V
V_{DF}	Body to drain diode forward voltage	$I_S=2.5\text{A}, V_{GS}=0$			1.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}; I_D=1.5\text{A}$		3.2	4.0	Ω
I_{GSS}	Gate-Body Leakage Current	$V_{GS}= \pm 30\text{V}; V_{DS}=0$			± 100	nA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=400\text{V}; V_{GS}=0$			1	μA
C_{iss}	Input Capacitance	$V_{DS}=20\text{V};$ $V_{GS}=0\text{V};$ $f_T=1\text{MHz}$		300	400	pF
C_{rss}	Reverse Transfer Capacitance			20	23	
C_{oss}	Output Capacitance			55	48	
t_{on}	Turn-on Time	$V_{GS}=10\text{V};$ $I_D=1.5\text{A};$ $V_{DD}=150\text{V};$ $R_L=100\Omega$		40		ns
t_f	Fall Time			30		
t_{off}	Turn-off Time			55		