

isc N-Channel MOSFET Transistor

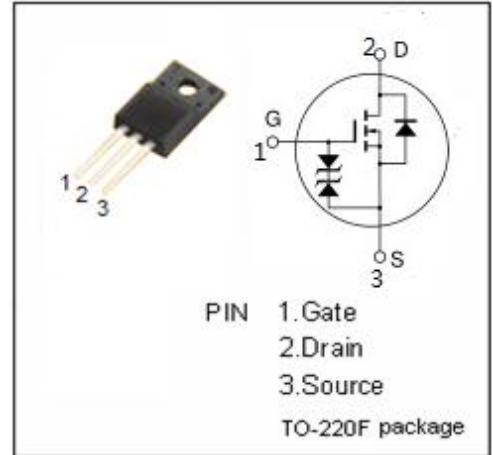
2SK2431

DESCRIPTION

- Drain Current $I_D = 3A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 450V(\text{Min})$
- Fast Switching Speed

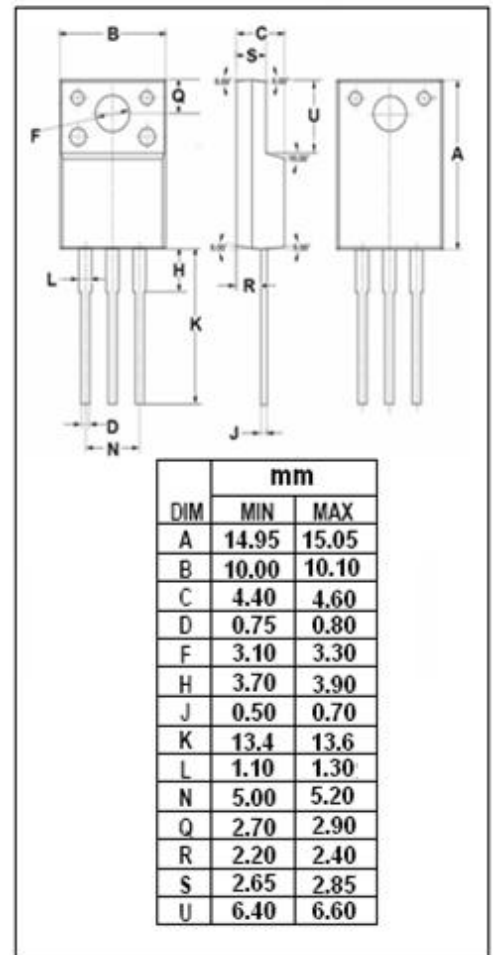
APPLICATIONS

- Switching Regulators
- DC-DC Converter,
- Motor Control



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	± 30	V
I_D	Drain Current-continuous@ $T_C = 25^\circ C$	3	A
$I_{D(puls)}$	Pulsed Drain Current	12	A
P_{tot}	Total Dissipation@ $T_C = 25^\circ C$	25	W
T_j	Max. Operating Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-55~150	$^\circ C$



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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	$V_{GS}=0; I_D=10\text{mA}$	450			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=10\text{V}; I_D=1\text{mA}$	2.0		3.0	V
V_{SD}	Diode Forward On-Voltage	$I_S=3.0\text{A}; V_{GS}=0$		0.9		V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}; I_D=2\text{A}$		2.0	2.8	Ω
I_{GSS}	Gate-Body Leakage Current	$V_{GS}= \pm 25\text{V}; V_{DS}=0$			± 10	μA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=450\text{V}; V_{GS}=0$			250	μA
C_{iss}	Input Capacitance	$V_{DS}=10\text{V};$ $V_{GS}=0\text{V};$ $f_T=1\text{MHz}$		330		pF
C_{rss}	Reverse Transfer Capacitance			15		
C_{oss}	Output Capacitance			90		
t_r	Rise Time	$V_{GS}=10\text{V};$ $I_D=2\text{A};$ $R_L=15\Omega$		20		ns
$t_{d(on)}$	Turn-on Delay Time			7		
t_f	Fall Time			20		
$t_{d(off)}$	Turn-off Delay Time			30		