

isc N-Channel MOSFET Transistor

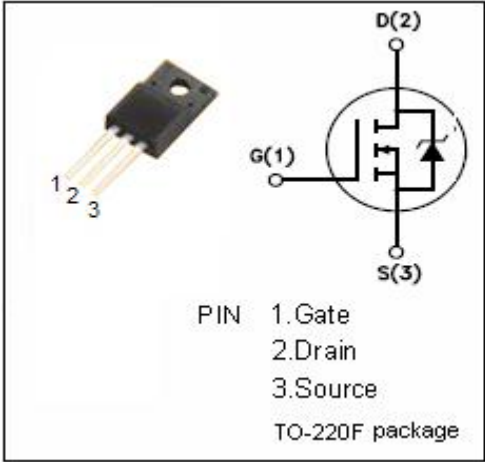
2SK2291

DESCRIPTION

- Drain Current $I_D = 45A @ T_C = 25^{\circ}C$
- Drain Source Voltage-
: $V_{DSS} = 60V (Min)$
- Fast Switching Speed

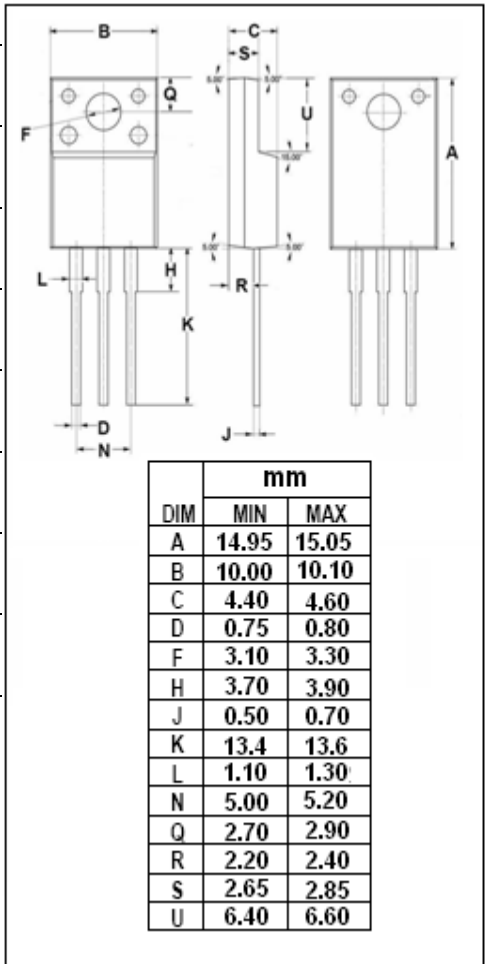
APPLICATIONS

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



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

SYMBOL	ARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS} = 0$)	60	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-continuous@ $T_C = 25^{\circ}C$	45	A
$I_{D(puls)}$	Pulsed Drain Current	180	A
P_{tot}	Total Dissipation@ $T_C = 25^{\circ}C$	50	W
T_j	Max. Operating Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}C$



isc N-Channel Mosfet Transistor**2SK2291**• ELECTRICAL CHARACTERISTICS ($T_C=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=10\text{mA}$	60			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=10\text{V}; I_D=1\text{mA}$	1.0		2.0	V
V_{SD}	Diode Forward On-Voltage	$I_S=22.5\text{A}; V_{GS}=0$			1.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}; I_D=22.5\text{A}$		0.018	0.02	Ω
I_{GSS}	Gate-Body Leakage Current	$V_{GS}=\pm 20\text{V}; V_{DS}=0$			± 10	μA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=60\text{V}; V_{GS}=0$			100	μA
C_{iss}	Input Capacitance	$V_{DS}=10\text{V};$ $V_{GS}=0\text{V};$ $f_T=1\text{MHz}$		3800		pF
C_{rss}	Reverse Transfer Capacitance			700		
C_{oss}	Output Capacitance			1530		
t_{on}	Turn-on Time	$V_{GS}=10\text{V}; I_D=22.5\text{A};$ $R_L=1.33\ \Omega$		240	490	ns
t_{off}	Turn-off Time			985	2000	