

isc N-Channel MOSFET Transistor

2SK2291

DESCRIPTION

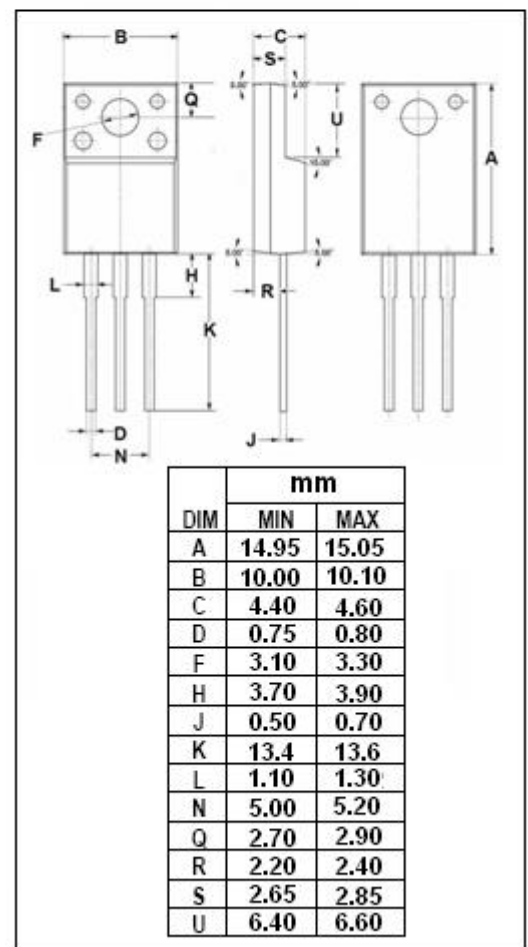
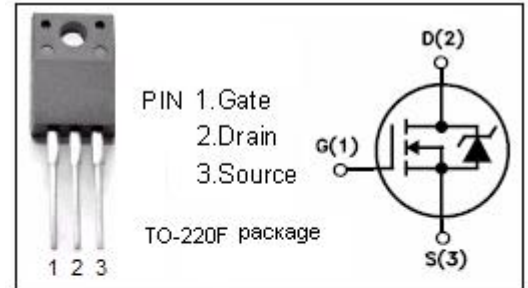
- Drain Current $I_D = 45A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 60V(\text{Min})$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

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	$^\circ C$



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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 = 10mA	60			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = 10V; I _D =1mA	1.0		2.0	V
V _{SD}	Diode Forward On-Voltage	I _S =22.5A; V _{GS} = 0			1.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 22.5A		0.018	0.02	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±20V; V _{DS} = 0			±10	μA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 60V; V _{GS} = 0			100	μA
C _{iss}	Input Capacitance	V _{DS} =10V; V _{GS} =0V; f _T =1MHz		3800		pF
C _{rss}	Reverse Transfer Capacitance			700		
C _{oss}	Output Capacitance			1530		
t _{on}	Turn-on Time	V _{GS} =10V; I _D =22.5A; R _L =1.33 Ω		240	490	ns
t _{off}	Turn-off Time			985	2000	

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