

isc N-Channel MOSFET Transistor

2SK2590

DESCRIPTION

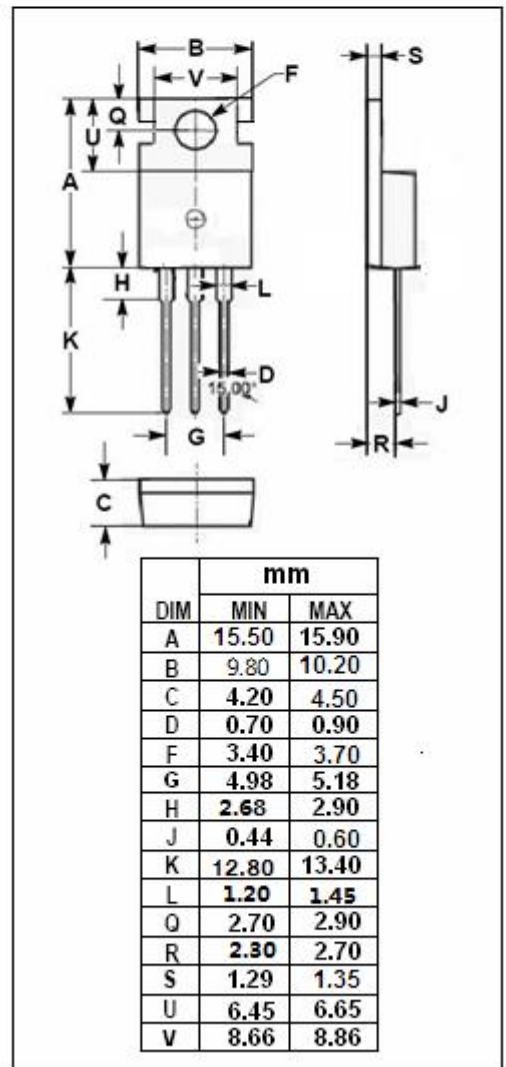
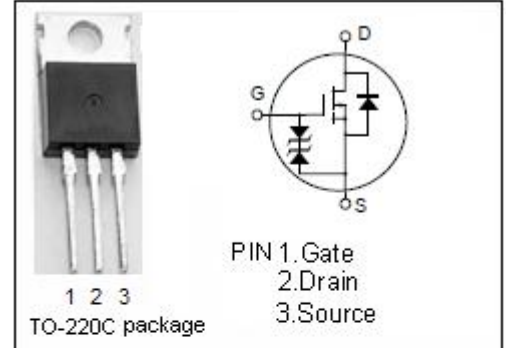
- Drain Current $I_D = 7A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 200V(\text{Min})$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

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

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS} = 0$)	200	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-continuous@ $T_C = 25^\circ C$	7	A
$I_{D(puls)}$	Pulsed Drain Current	28	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	200			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = 10V; I _D =1mA	1.5		3.5	V
V _{SD}	Diode Forward On-Voltage	I _S =7A; V _{GS} = 0		1.1		V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 4A		0.33	0.45	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ± 16V; V _{DS} = 0			± 10	μA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 160V; V _{GS} = 0			250	μA
C _{iss}	Input Capacitance	V _{DS} =10V;		700		pF
C _{rss}	Reverse Transfer Capacitance	V _{GS} =0V;		45		
C _{oss}	Output Capacitance	f _r =1MHz		260		
t _r	Rise Time	V _{GS} =10V; I _D =4A; R _L =7.5 Ω		45		ns
t _{d(on)}	Turn-on Delay Time			20		
t _f	Fall Time			35		
t _{d(off)}	Turn-off Delay Time			50		

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