

isc N-Channel MOSFET Transistor

2SK2146

DESCRIPTION

- Drain Current $-I_D = 2A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DS} = 250V(\text{Min})$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

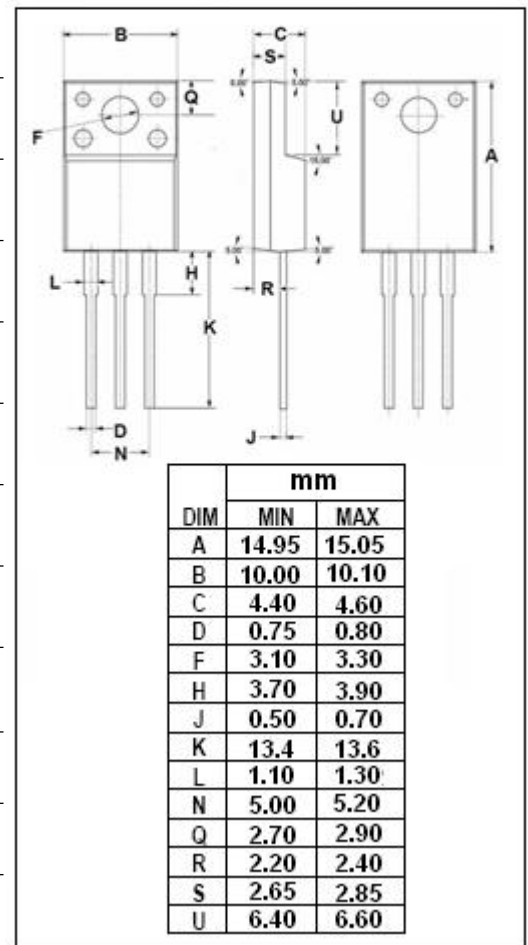
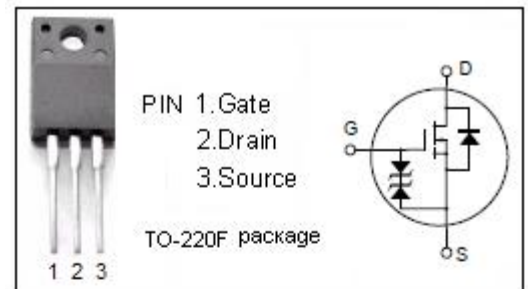
- Switching regulators ,DC-DC converter, Motor Control

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

SYMBOL	ARAMETER	VALUE	UNIT
V_{DS}	Drain-Source Voltage ($V_{GS}=0$)	250	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-continuous@ $T_C = 25^\circ C$	2	A
$I_{D(\text{puls})}$	Pulsed Drain Current	5	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	$^\circ C$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{\text{th j-c}}$	Thermal Resistance, Junction to Case	5.0	$^\circ C/W$
$R_{\text{th j-a}}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ C/W$



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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	250			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = 10V; I _D =1mA	2.0		4.0	V
V _{SD}	Diode Forward On-voltage	I _S = 2.0A; V _{GS} = 0			1.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 1A		1.2	2.0	Ω
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±30V; V _{DS} = 0			±100	μA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 250V; V _{GS} = 0			300	μA
C _{iss}	Input Capacitance	V _{DS} =10V;		220		pF
C _{rss}	Reverse Transfer Capacitance	V _{GS} =0V;		35		
C _{oss}	Output Capacitance	f _T =1MHz		80		
t _r	Rise Time	R _{GS} =50 Ω ;		25		ns
t _{on}	Turn-on Time	I _D =1A;		40		
t _f	Fall Time	V _{DD} =10V;		30		
t _{off}	Turn-off Time	R _L =150 Ω		90		

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