

isc N-Channel MOSFET Transistor

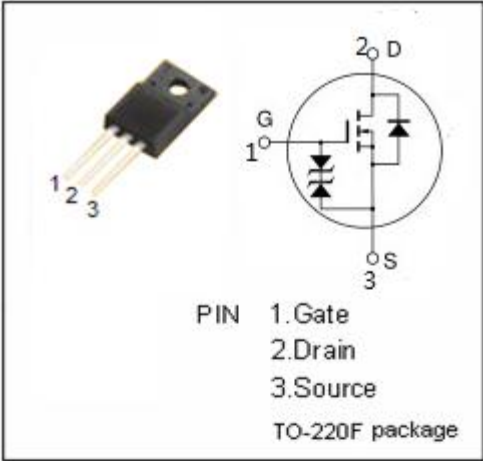
2SK2146

DESCRIPTION

- Drain Current  $-I_D=2A@T_C=25^{\circ}C$
- Drain Source Voltage-  
:  $V_{DSS}=250V(Min)$
- Fast Switching Speed

APPLICATIONS

- Switching regulators ,DC-DC converter, Motor Control

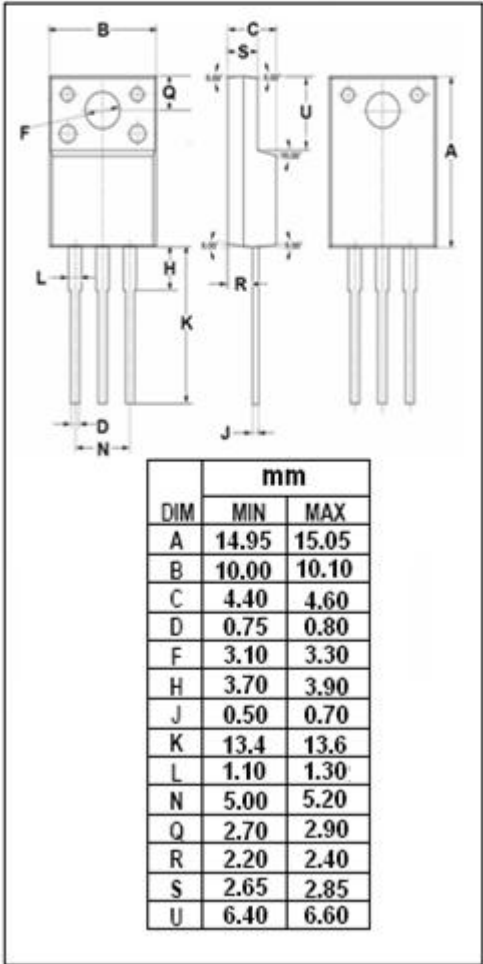


ABSOLUTE MAXIMUM RATINGS( $T_a=25^{\circ}C$ )

SYMBOL	ARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage ( $V_{GS}=0$ )	250	V
$V_{GS}$	Gate-Source Voltage	$\pm 30$	V
$I_D$	Drain Current-continuous@ $T_C=25^{\circ}C$	2	A
$I_{D(puls)}$	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
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	5.0	$^{\circ}C/W$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^{\circ}C/W$



## isc N-Channel Mosfet Transistor

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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	$V_{GS}=0; I_D=10\text{mA}$	250			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=10\text{V}; I_D=1\text{mA}$	2.0		4.0	V
$V_{SD}$	Diode Forward On-voltage	$I_S=2.0\text{A}; V_{GS}=0$			1.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10\text{V}; I_D=1\text{A}$		1.2	2.0	$\Omega$
$I_{GSS}$	Gate-Body Leakage Current	$V_{GS}=\pm 30\text{V}; V_{DS}=0$			$\pm 100$	$\mu\text{A}$
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS}=250\text{V}; V_{GS}=0$			300	$\mu\text{A}$
$C_{iss}$	Input Capacitance	$V_{DS}=10\text{V};$ $V_{GS}=0\text{V};$ $f_T=1\text{MHz}$		220		pF
$C_{rss}$	Reverse Transfer Capacitance			35		
$C_{oss}$	Output Capacitance			80		
$t_r$	Rise Time	$R_{GS}=50\Omega;$ $I_D=1\text{A};$ $V_{DD}=10\text{V};$ $R_L=150\Omega$		25		ns
$t_{on}$	Turn-on Time			40		
$t_f$	Fall Time			30		
$t_{off}$	Turn-off Time			90		