

isc N-Channel MOSFET Transistor

2SK1402A

DESCRIPTION

- Drain Current $-I_D = 4A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 650V(\text{Min})$
- Fast Switching Speed

APPLICATIONS

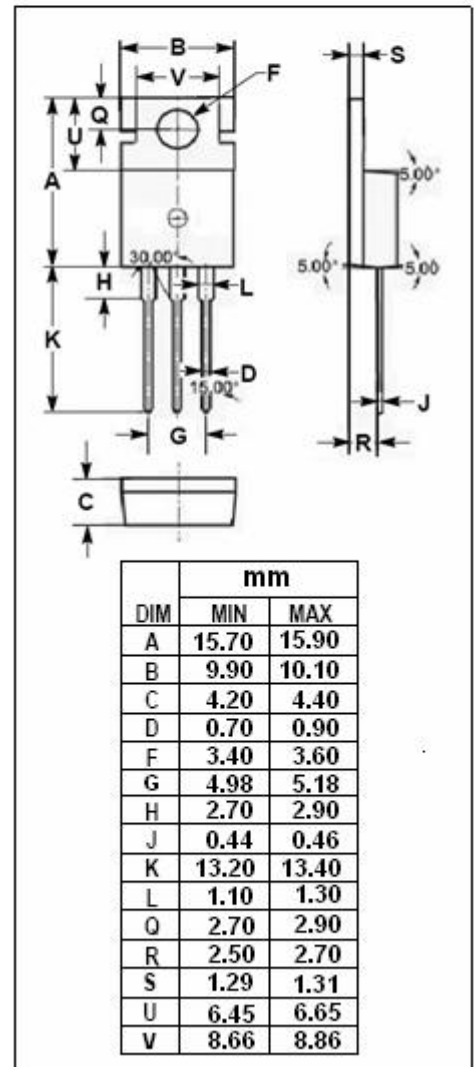
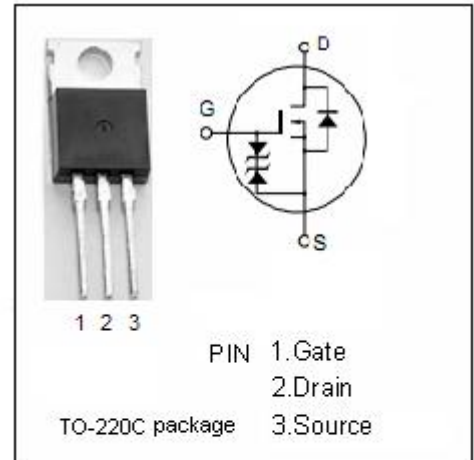
- Designed for high voltage, high speed power switching

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS} = 0$)	650	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-continuous @ $T_C = 25^\circ C$	4	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	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	0.83	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	35	$^\circ C/W$



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• ELECTRICAL CHARACTERISTICS ($T_C=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=10\text{mA}$	650			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=10 V_{GS}; I_D=1\text{mA}$	2.0		3.0	V
$R_{DS(on)}$	Drain-Source On-stage Resistance	$V_{GS}=10\text{V}; I_D=2\text{A}$		2.0	2.6	Ω
I_{GSS}	Gate Source Leakage Current	$V_{GS}= \pm 25\text{V}; V_{DS}= 0$			± 10	μA
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=550\text{V}; V_{GS}= 0$			250	μA
V_{SD}	Diode Forward Voltage	$I_F=4\text{A}; V_{GS}=0$		0.9		V
t_r	Rise time	$V_{GS}=10\text{V}; I_D=2\text{A}; R_L=15 \Omega$		8		ns
t_{on}	Turn-on time			30		ns
t_f	Fall time			35		ns
t_{off}	Turn-off time			60		ns