

isc N-Channel MOSFET Transistor

2SK414

DESCRIPTION

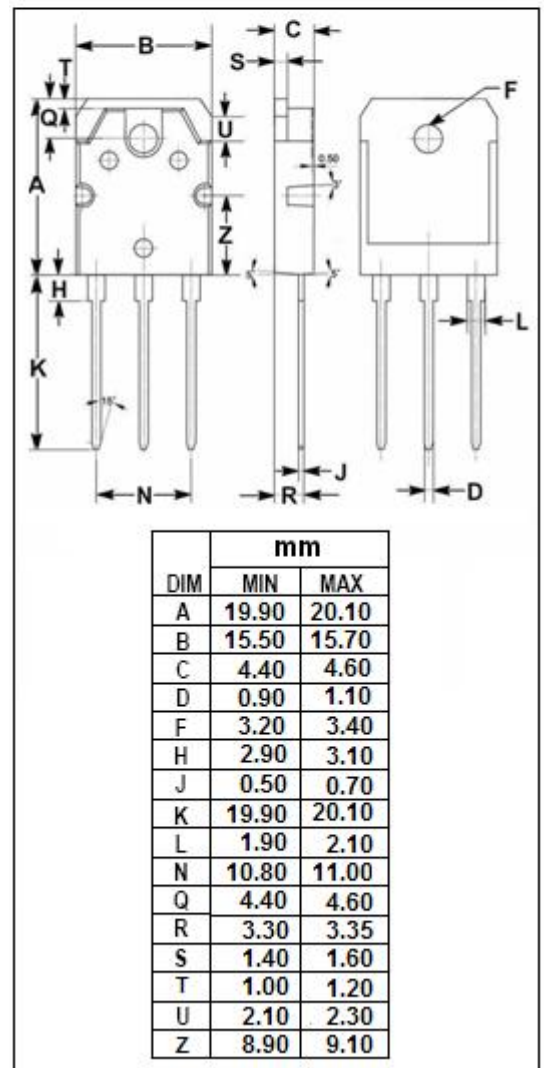
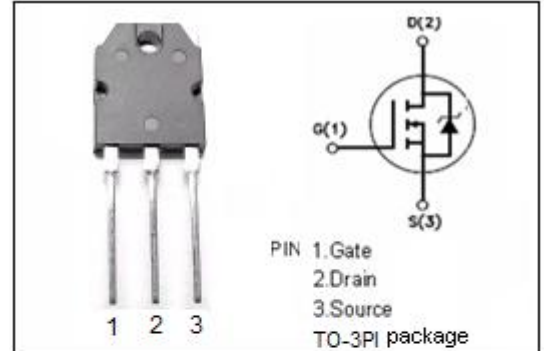
- Drain Current $-I_D = 8A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 140V(\text{Min})$
- Fast Switching Speed

APPLICATIONS

- High speed switching.
- High Cutoff frequency.
- No secondary breakdown.
- Suitable for switching regulator, DC-DC converter, PWM amplifiers, and ultrasonic power oscillators.

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

SYMBOL	ARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS} = 0$)	160	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current-continuous@ $T_C = 25^\circ C$	8	A
P_{tot}	Total Dissipation@ $T_C = 25^\circ C$	100	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	TYP	MAX	UNIT
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0; I _D = 10mA	160			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =10 V _{GS} ; I _D =1mA	2.0		5.0	V
R _{DS(on)}	Drain-Source On-stage Resistance	V _{GS} =15V; I _D = 4A		0.4	0.5	Ω
I _{GSS}	Gate Source Leakage Current	V _{GS} = ±20V; V _{DS} = 0			±1	uA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 140V; V _{GS} = 0			1	mA
V _{SD}	Diode Forward Voltage	I _F = 4A; V _{GS} =0		0.9		V
t _r	Rise time	V _{GS} =15V; I _D =2A; R _L =15 Ω		35		ns
t _{on}	Turn-on time			50		ns
t _f	Fall time			50		ns
t _{off}	Turn-off time			110		ns