

# isc N-Channel MOSFET Transistor

# 2SK414

## DESCRIPTION

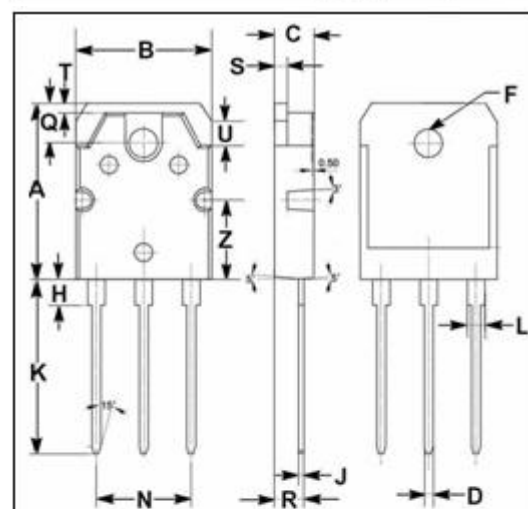
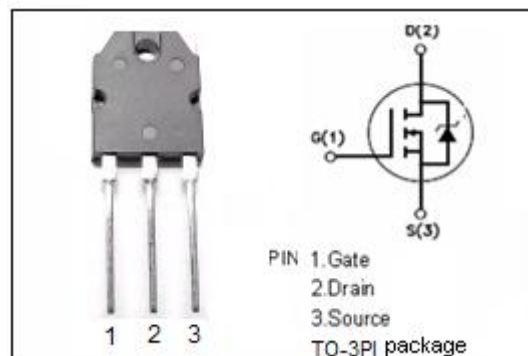
- Drain Current  $-I_D = 8A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS} = 160V(\text{Min})$
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## 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	$\pm 20$	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	$^\circ C$



DIM	mm	
	MIN	MAX
A	19.60	20.10
B	15.30	15.70
C	4.00	4.60
D	0.90	1.10
F	3.20	3.40
H	2.90	3.10
J	0.50	0.70
K	19.90	21.30
L	1.20	2.20
N	10.80	11.00
Q	4.40	4.60
R	3.30	3.35
S	1.40	1.60
T	1.00	1.20
U	2.10	2.30
Z	7.90	9.10

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• ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0; I <sub>D</sub> = 10mA	160			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =10 V; I <sub>D</sub> =1mA	2.0		5.0	V
R <sub>DS(on)</sub>	Drain-Source On-stage Resistance	V <sub>GS</sub> =15V; I <sub>D</sub> = 4A		0.4	0.5	Ω
I <sub>GSS</sub>	Gate Source Leakage Current	V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0			±1	uA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> = 140V; V <sub>GS</sub> = 0			1	mA
V <sub>SD</sub>	Diode Forward Voltage	I <sub>F</sub> = 4A; V <sub>GS</sub> =0		0.9		V

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