

# isc N-Channel MOSFET Transistor

## 2SK1357

### DESCRIPTION

- Drain Current  $-I_D = 5A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS} = 900V(\text{Min})$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

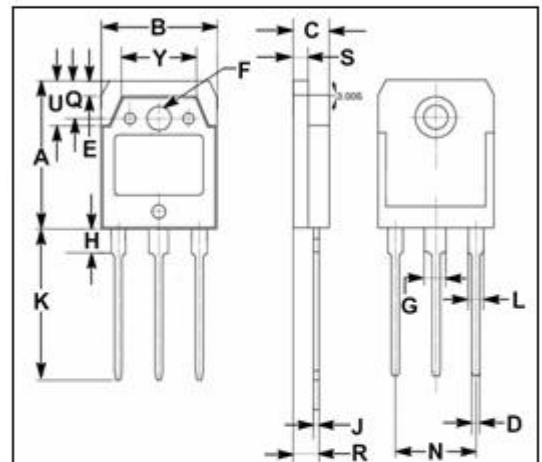
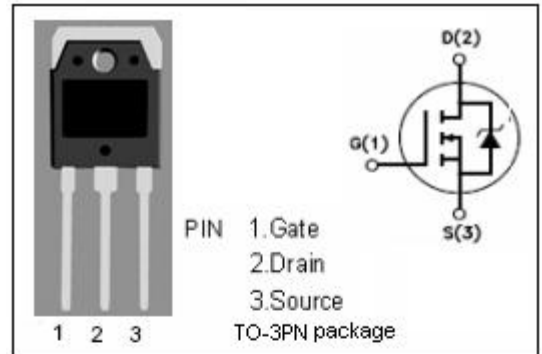
- high voltage, high speed power switching

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage ( $V_{GS} = 0$ )	900	V
$V_{GS}$	Gate-Source Voltage	$\pm 30$	V
$I_D$	Drain Current-continuous@ $T_C = 25^\circ C$	5	A
$P_{tot}$	Total Dissipation@ $T_C = 25^\circ C$	125	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	1.0	$^\circ C/W$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	50	$^\circ C/W$



DIM	mm	
	MIN	MAX
A	19.60	20.10
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	20.00	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.10
Y	9.90	10.10

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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	900			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =10 V <sub>GS</sub> ; I <sub>D</sub> =1mA	1.5		3.5	V
R <sub>DS(on)</sub>	Drain-Source On-stage Resistance	V <sub>GS</sub> =10V; I <sub>D</sub> =2A		2.5	2.8	Ω
I <sub>GSS</sub>	Gate Source Leakage Current	V <sub>GS</sub> = ±25V; V <sub>DS</sub> = 0			± 100	nA
I <sub>DSS</sub>	Zero Gate Voltage Drain Current	V <sub>DS</sub> =720V; V <sub>GS</sub> = 0			300	uA
V <sub>SD</sub>	Diode Forward Voltage	I <sub>F</sub> =5A; V <sub>GS</sub> =0			1.9	V
t <sub>r</sub>	Rise time	V <sub>GS</sub> =10V; I <sub>D</sub> =2A; R <sub>L</sub> =200 Ω		18	35	ns
t <sub>on</sub>	Turn-on time			30	60	ns
t <sub>f</sub>	Fall time			12	25	ns
t <sub>off</sub>	Turn-off time			70	140	ns

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