

# isc N-Channel MOSFET Transistor

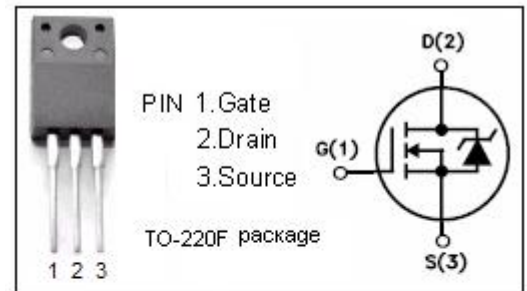
# 2SK1984

### DESCRIPTION

- Drain Current  $-I_D = 3A @ T_C = 25^\circ C$
- Drain Source Voltage-  
:  $V_{DSS} = 900V(\text{Min})$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

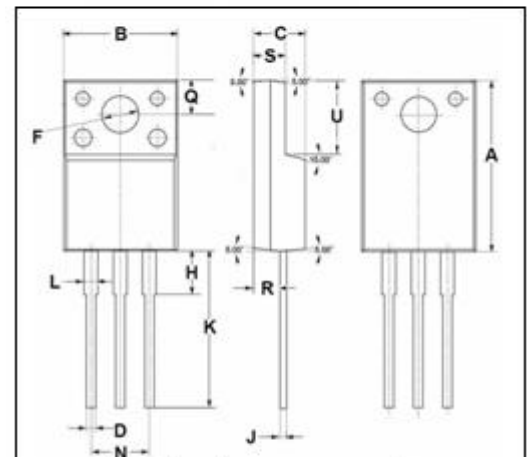
### APPLICATIONS

- Switching regulators
- UPS
- General purpose power amplifier



### 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@ $T_C = 25^\circ C$	3	A
$P_{tot}$	Total Dissipation@ $T_C = 25^\circ C$	40	W
$T_j$	Max. Operating Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ C$



DIM	mm	
	MIN	MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.80
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.85
U	6.40	6.60

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	3.125	$^\circ C/W$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ C/W$

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## • ELECTRICAL CHARACTERISTICS (TC=25°C)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0; I_D=1mA$	900			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}; I_D=1mA$	2.5		3.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=1.5A$			4	$\Omega$
$I_{GSS}$	Gate-Body Leakage Current	$V_{GS}= \pm 30V; V_{DS}=0$			$\pm 100$	nA
$I_{DSS}$	Zero Gate Voltage Drain Current	$V_{DS}=900V; V_{GS}=0$			500	$\mu A$
$C_{iss}$	Input Capacitance	$V_{DS}=25V; V_{GS}=0V; f_r=1MHz$		1000	1500	pF
$C_{rss}$	Reverse Transfer capacitance			25	40	
$C_{oss}$	Output Capacitance			90	130	
$t_r$	Rise Time	$V_{GS}=10V; I_D=3A;$ $V_{DD}=600V;$ $R_L=10\Omega$		10	15	ns
$t_{d(on)}$	Turn-on Delay Time			20	30	
$t_f$	Fall Time			15	25	
$t_{d(off)}$	Turn-off Delay Time				90	

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