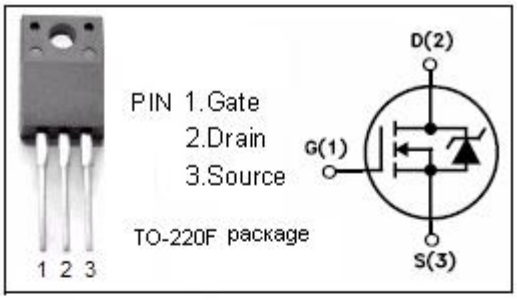
isc N-Channel MOSFET Transistor 2SK2020-01

DESCRIPTION

- Drain Current –I_D= 3.5A@ T_C=25℃
- Drain Source Voltage-
  : V_{DSS}= 500V(Min)
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

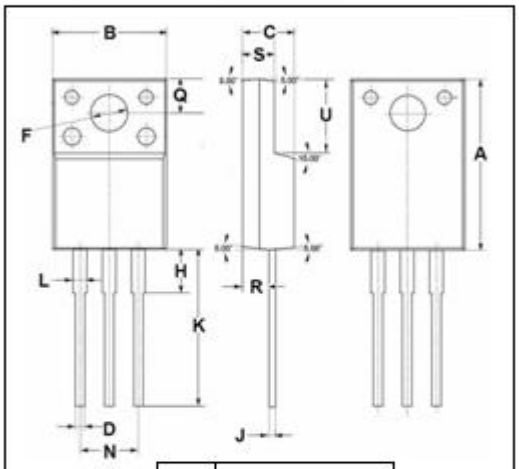
- Switching regulators
- UPS
- DC-DC converters
- General purpose power amplifier

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	ARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage (V_{GS}=0)	500	V
V_{GS}	Gate-Source Voltage	±30	V
I_D	Drain Current-continuous@ TC=25℃	3.5	A
$I_{D(puls)}$	Pulsed drain current	14	A
P_{tot}	Total Dissipation@TC=25℃	30	W
T_j	Max. Operating Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	4.17	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance, Junction to Ambient	62.5	℃/W



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

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• **ELECTRICAL CHARACTERISTICS (T_C=25℃)**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	V_{GS}= 0; I_D= 1mA	500			V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}= V_{GS}; I_D=1mA	2.5	3.0	3.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}= 10V; I_D= 1.5A		2	3	Ω
I_{GSS}	Gate-Body Leakage Current	V_{GS}= ±30V;V_{DS}= 0			±100	nA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}= 500V; V_{GS}= 0			500	μA
Ciss	Input capacitance	V_{DS}=25V; V_{GS}=0V; f_T=1MHz		600	900	pF
Crss	Reverse transfer capacitance			10	15	
Coss	Output capacitance			50	75	
t_r	Rise Time	V_{GS}=10V; I_D=3.5A; V_{DD}=300V; R_L=10Ω		10	15	ns
$t_{d(on)}$	Turn-on Delay Time			15	25	
t_f	Fall Time			15	25	
$t_{d(off)}$	Turn-off Delay Time			40	60	