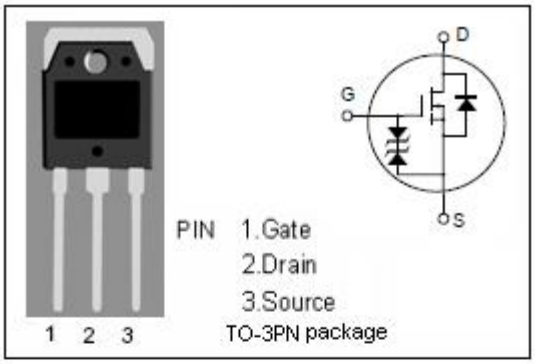
isc N-Channel MOSFET Transistor 2SK2078

DESCRIPTION

- Drain Current I_D= 9A@ T_C=25℃
- Drain Source Voltage-
  : V_{DSS}= 800V(Min)
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

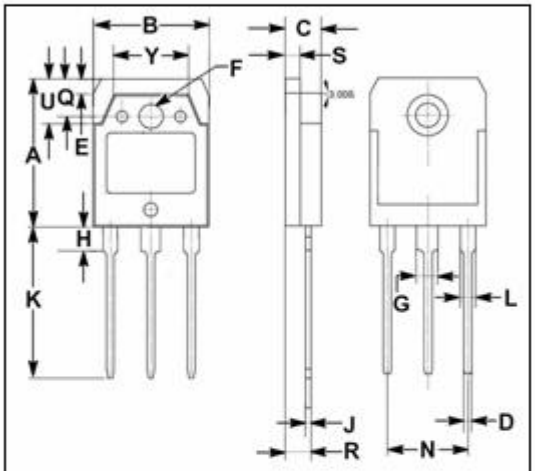
- Switching regulators
- General purpose power amplifier

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	ARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage (V_{GS}=0)	800	V
V_{GS}	Gate-Source Voltage	±30	V
I_D	Drain Current-continuous@ TC=25℃	9	A
$I_{D(puls)}$	Pulsed Drain Current	27	A
P_{tot}	Total Dissipation@T_C=25℃	150	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	0.833	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance, Junction to Ambient	50	℃/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

isc N-Channel Mosfet Transistor 2SK2078

• ELECTRICAL CHARACTERISTICS (T_C=25℃)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	V_{GS}= 0; I_D= 10mA	800			V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}=10V; I_D=1mA	1.5		3.5	V
V_{DSF}	Diode Forward Voltage	I_{DR}=9A ;V_{GS}= 0			2.0	V
$R_{DS(on)}$	Drain-Source On-Resistance	V_{GS}= 10V; I_D= 4A		1.0	1.2	Ω
I_{GSS}	Gate-Body Leakage Current	V_{GS}= ±30V;V_{DS}= 0			±100	nA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}= 800V; V_{GS}= 0			100	μA
Ciss	Input Capacitance	V_{DS}=25V; V_{GS}=0V; f_T=1MHz		1500		pF
Crss	Reverse Transfer Capacitance			135		
Coss	Output Capacitance			210		
tr	Rise Time	V_{GS}=10V; I_D=4A; V_{DD}=400V; R_L=100Ω		35		ns
ton	Turn-on Time			55		
tf	Fall Time			25		
toff	Turn-off Time			100		

NOTICE：

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.