

isc N-Channel MOSFET Transistor

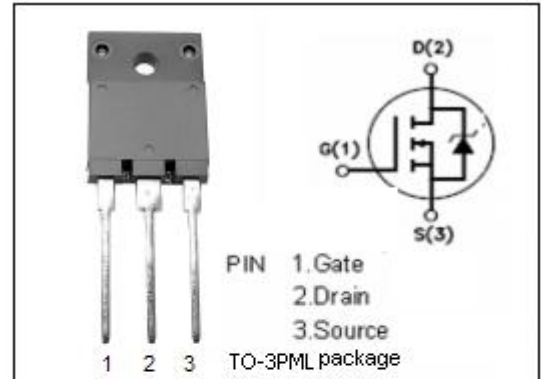
2SK2080-01

DESCRIPTION

- Drain Current $I_D = 15A @ T_C = 25^\circ C$
- Drain Source Voltage-
: $V_{DSS} = 500V(\text{Min})$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

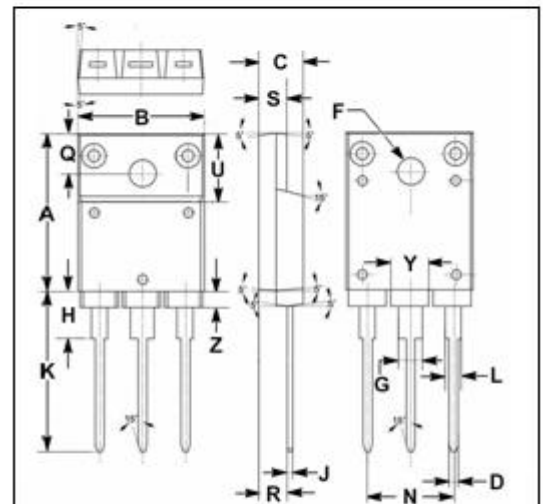
APPLICATIONS

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



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage ($V_{GS}=0$)	500	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-continuous@ $T_C = 25^\circ C$	15	A
$I_{D(puls)}$	Pulsed Drain Current	40	A
P_{tot}	Total Dissipation@ $T_C = 25^\circ C$	80	W
T_j	Max. Operating Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-55~150	$^\circ C$



DIM	mm	
	MIN	MAX
A	19.90	20.10
B	15.90	16.10
C	5.50	5.70
D	0.90	1.10
F	3.30	3.50
G	2.90	3.10
H	5.90	6.10
J	0.595	0.605
K	22.30	22.50
L	1.90	2.10
N	10.80	11.00
Q	4.90	5.10
R	3.75	3.95
S	3.20	3.40
U	9.90	10.10
Y	4.70	4.90
Z	1.90	2.10

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.56	$^\circ C/W$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	30	$^\circ C/W$

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• ELECTRICAL CHARACTERISTICS (T_c=25°C)

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
V _{SD}	Diode Forward on-Voltage	I _F = 8A; V _{GS} = 0		1.0	1.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 10V; I _D = 8A		0.36	0.55	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
C _{iss}	Input Capacitance	V _{DS} =25V;		1800	2700	pF
C _{rss}	Reverse Transfer Capacitance	V _{GS} =0V;		120	185	
C _{oss}	Output Capacitance	f _r =1MHz		270	410	
t _r	Rise Time	V _{GS} =10V;		100	150	ns
t _{d(on)}	Turn-on Delay Time	I _D =15A;		70	110	
t _f	Fall Time	V _{DD} =300V;		80	120	
t _{d(off)}	Turn-off Delay Time	R _L =25 Ω		250	380	

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