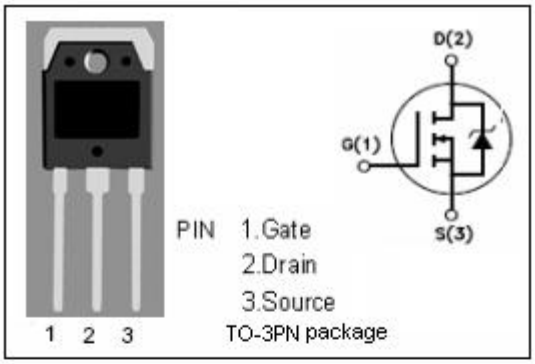
isc N-Channel MOSFET Transistor 2SK1940-01

DESCRIPTION

- Drain Current –I_D= 12A@ T_C=25℃
- Drain Source Voltage-
  : V_{DSS}= 600V(Min)
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

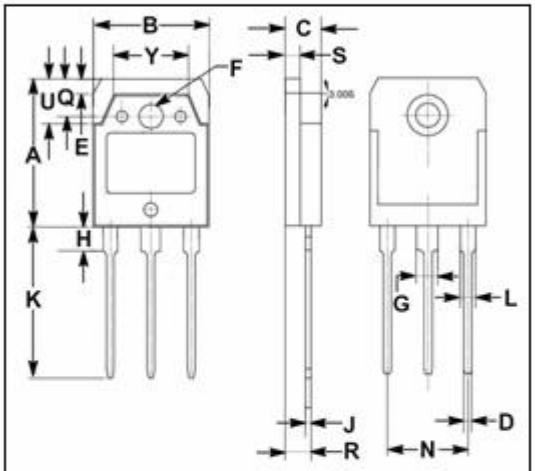
- Switching regulator
- UPS
- DC-DC converters
- General purpose power amplifier

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	ARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage (V_{GS}=0)	600	V
V_{GS}	Gate-Source Voltage	±30	V
I_D	Drain Current-continuous@ TC=25℃	12	A
I_{DM}	Drain Current-Single Plused	48	A
P_{tot}	Total Dissipation@TC=25℃	125	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	1.25	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance, Junction to Ambient	35	℃/W



DIM	mm MIN	mm 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_C=25℃)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	V_{GS}= 0; I_D= 1mA	600			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= 6A			0.75	Ω
I_{GSS}	Gate-Body Leakage Current	V_{GS}= ±30V;V_{DS}= 0			±100	nA
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}= 600V; V_{GS}= 0		10	500	μA
V_{SD}	Forward On-Voltage	I_S=24A; V_{GS}=0			1.58	V
Gfs	Forward Transconductance	V_{DS}= 25V； I_D=6A	6.0			S
tr	Rise time	V_{GS}=10V;I_D=6A; V_{DD}=300V; R_L=10Ω		60	90	ns
ton	Turn-on time			30	45	
tf	Fall time			80	120	
toff	Turn-off time			140	210	

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