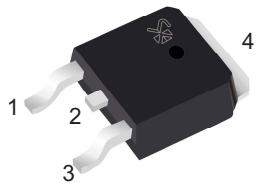
SK80N03

30V, 80A N-Channel MOSFET

DESCRIPTION

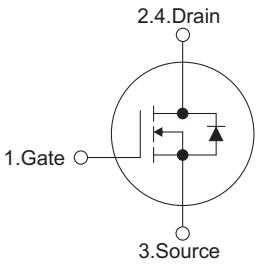
- Advanced Trench Device Design and Processes
- High Reliability Capability
- Sampled CP Probing and Inking

BV_{DSS}	$R_{DS(ON),typ.}$	I_D
30V	5.1mΩ	80A



TO-252

Package No to Scale



FEATURES

- BV_{DSS} ≧ 30V
- I_D = 80A
- $R_{DS(ON)}$ ≦ 5.1mΩ@VGS=10V
- $R_{DS(ON)}$ ≦ 11.1mΩ@VGS=4.5V

Application

- Power switching application
- Hard Switched and High Frequency Circuits
- Uninterruptible Power Supply

Ordering Information

Part Number	Package
SK80N03	TO-252

Absolute Maximum Ratings (Tc=25℃ Unless Otherwise Noted)

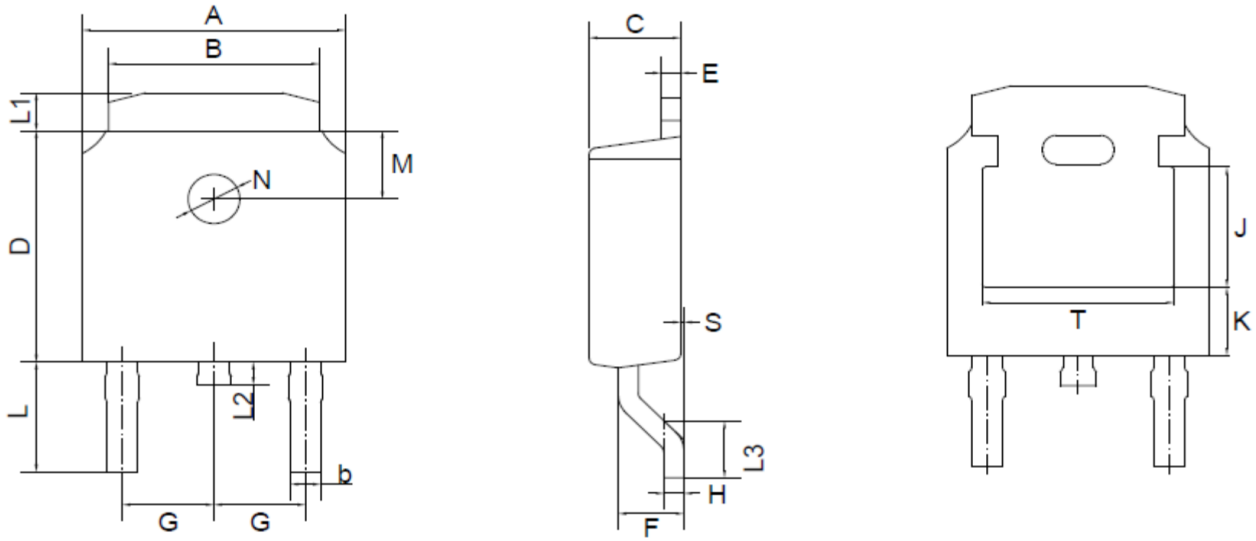
Parameter	Symbol	Maximum Ratings	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	±20	V
Drain Current - Continues	I_D	80	A

Electrical Characteristics (T_J at 25 ℃)

Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Condition
I_{DSS}	Drain-to-Source Leakage Current	—	—	0.9	μA	V_{DS} =24V, V_{GS} =0V
I_{GSSF}	Gate-Body Leakage Current	—	—	90	nA	V_{DS} =0V, V_{GS} =+20V
I_{GSSR}	Gate-Body Leakage Current	—	—	-90	nA	V_{DS} =0V, V_{GS} =-20V
BV_{DSS}	Drain-Source Breakdown Voltage	30	—	—	V	V_{GS} =0V, I_D =250μA
$R_{DS(ON)}$	Static Drain-Source On-Resistance	—	—	5.1	mΩ	V_{GS} =10V, I_D =1A
$R_{DS(ON)}$	Static Drain-Source On-Resistance	—	—	11.1	mΩ	V_{GS} =4.5V, I_D =1A
$V_{GS\ (th)}$	Gate Threshold Voltage	1.0	—	2.5	V	V_{DS} =V_{GS}, I_D =250μA
V_{SD}	Drain-Source Diode Forward Voltage			1.1	V	V_{GS}=0V, I_{SD} = 1A
I_{DSS}	Drain-to-Source Leakage Current	—	—	1	μA	V_{DS} =24V, V_{GS} =0V
I_{GSS}	Gate-Body Leakage Current	—	—	100	nA	V_{DS} =0V, V_{GS} =20V
T_J, T_{STG}	Operating and Storage Temperature	-55℃ to 150℃ Max.				

PACKAGE OUTLINE

TO-252(D-PAK)



TO-252(D-PAK) mechanical data

UNIT		A	B	b	C	D	E	F	G	H	L	L1	L2	L3	S	M	N	J	K	T
mm	max	6.7	5.5	0.8	2.5	6.3	0.6	1.8	2.29 TYPICAL	0.55	3.1	1.2	1.0	1.75	0.1	1.8 TYPICAL	1.3 TYPICAL	3.16 ref.	1.80 ref.	4.83 ref.
	min	6.3	5.1	0.3	2.1	5.9	0.4	1.3		0.45	2.7	0.8	0.6	1.40	0.0					
mil	max	264	217	31	98	248	24	71	90 TYPICAL	22	122	47	39	69	4	71 TYPICAL	51 TYPICAL	124 ref.	71 ref.	190 ref.
	min	248	201	12	83	232	16	51		18	106	31	24	55	0					