



TO-220F Plastic-Encapsulate MOSFETS

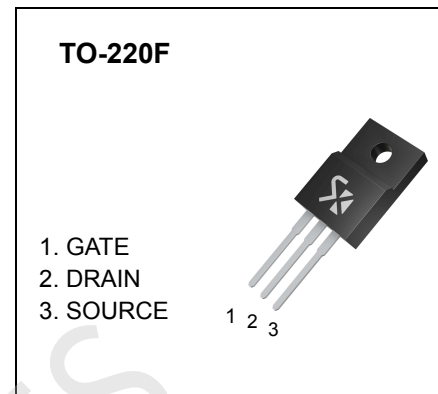
800V N-Channel MOSFET

General Description:

SK08N80B-TF, the silicon N-channel enhanced power MOSFET, is obtained by the self-aligned planar technology which reduce the conduction loss, improve switching performance and enhance the avalanche energy.

Applications:

This power MOSFET is usually in various power switching circuit for system miniaturization and higher efficiency such as SMPS, Adaptor, Charger, PFC, Lighting, UPS, Solar and other applications.



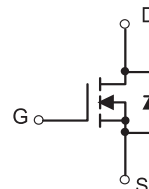
FEATURE

- Low gate charge
- Low C_{rss}
- Fast switching
- 100% avalanche tested
- Improved dv/dt capability
- RoHS product

N-Channel Power MOSFET

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
800V	1.4Ω@10V	8A

EQUIVALENT CIRCUIT



Maximum ratings ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Rating	Units
V_{DSS}	Drain- Source Voltage	800	V
V_{GSS}	Gate-Source Voltage	±30	V
I_D	Continuous Drain Current ($T_C = 25^{\circ}\text{C}$)	8.0	A
P_D	Power Dissipation	56	W
T_J	Operating Junction Temperature Range	-55 to 150	°C
T_{STG}	Storage Temperature Range	-55 to 150	°C

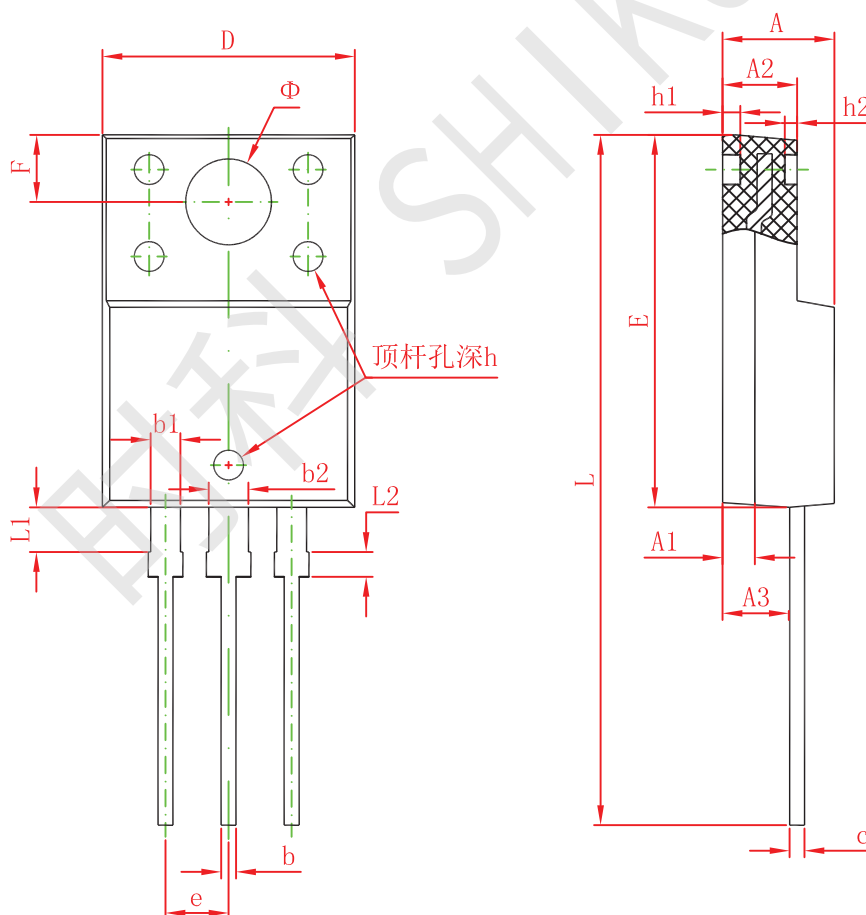


MOSFET ELECTRICAL CHARACTERISTICS

 $T_a=25^{\circ}\text{C}$ unless otherwise specified

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=250\mu A$	805	—	—	V
$R_{DS(on)}$	Static Drain-Source On-Resistance	$V_{GS}=10V, I_D=4A$	—	1.4	1.9	Ω
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_D=250\mu A$	3.0	—	5.0	V
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS}=805V, V_{GS}=0V$	—	—	300	nA
I_{GSS}	Gate-Body Leakage Current	$V_{GS}=\pm 32V, V_{DS}=0V$	—	—	± 90	nA
V_{SD}	Drain-Source Diode Forward Voltage	$V_{GS}=0V, I_{SD}=8A$	—	—	0.9	V

TO-220F Package Outline Dimensions





Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.300	4.700	0.169	0.185
A1	1.300 REF.		0.051 REF.	
A2	2.800	3.200	0.110	0.126
A3	2.500	2.900	0.098	0.114
b	0.500	0.750	0.020	0.030
b1	1.100	1.350	0.043	0.053
b2	1.500	1.750	0.059	0.069
c	0.500	0.750	0.020	0.030
D	9.960	10.360	0.392	0.408
E	14.800	15.200	0.583	0.598
e	2.540 TYP.		0.100 TYP.	
F	2.700 REF.		0.106 REF.	
Φ	3.500 REF.		0.138 REF.	
h	0.000	0.300	0.000	0.012
h1	0.800 REF.		0.031 REF.	
h2	0.500 REF.		0.020 REF.	
L	28.000	28.400	1.102	1.118
L1	1.700	1.900	0.067	0.075
L2	0.900	1.100	0.035	0.043