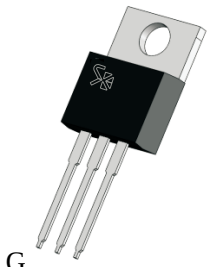
SKG100N12-T

120V,100A N-Channel MOSFET

DESCRIPTION

- Surface-mounted package
- Extremely low threshold voltage
- Advanced trench cell design

BV_{DSS}	$R_{DS(ON),typ.}$	I_D
120V	5.6mΩ	100A



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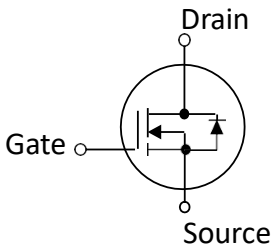

Package No to Scale

FEATURES

- BV_{DSS} ≧ 120V
- I_D =100A
- $R_{DS(ON)}$ ≦ 5.6mΩ@VGS=10V
- $R_{DS(ON)}$ ≦8mΩ@VGS=4.5V

Application

- Portable appliances
- Battery management
- High speed switch
- Low power DC to DC converter

Ordering Information

Part Number	Package
SKG100N12-T	TO-220

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

Parameter	Symbol	Maximum Ratings	Unit
Drain-Source Voltage	V_{DS}	120	V
Gate-Source Voltage	V_{GS}	±20	V
Drain Current - Continues	I_D	100	A

- **Electrical Characteristics (Ta = 25 °C Unless Otherwise Noted)**

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
Static Characteristics						
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS} = 0 V, I_{DS} = 250 μA	120	-	-	V
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS} = V_{GS}, I_{DS} = 250 μA	2	-	4	V
I_{DSS}	Drain Leakage Current	V_{DS} = 96 V, V_{GS} = 0 V	-	-	1	μA
		T_J = 85 ℃	-	-	30	μA
I_{GSS}	Gate Leakage Current	V_{GS} = ±20 V, V_{DS} = 0 V	-	-	± 100	nA
$R_{DS(ON)}$[a]	On-State Resistance	V_{GS} = 10 V, I_{DS} = 2A	-	4.5	5.6	mΩ
		V_{GS} = 6 V, I_{DS} = 2 A	-	6	8	
Diode Characteristics						
V_{SD}	Diode Forward Voltage	I_{SD} = 0.5 A, V_{GS} = 0 V	-	0.7	1.3	V

PACKAGE OUTLINE

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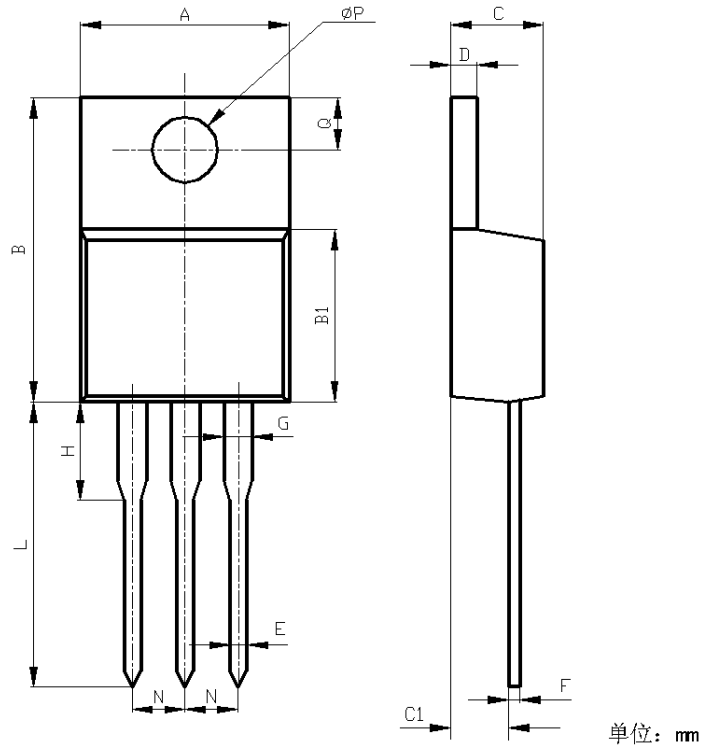

	Unit (mm)	
	MIN	MAX
A	10.1	10.5
B	15.2	15.6
B1	9.00	9.40
C	4.40	4.60
C1	2.40	3.00
D	1.20	1.40
E	0.70	0.90
F	0.40	0.60
G	1.17	1.37
H	3.30	3.80
L	13.1	13.7
N	2.34	2.74
Q	2.40	3.00
ΦP	3.70	3.90