

XG0059

N-Channel Enhancement Mode SGT MOSFET

100V(VDS) / ± 20 V(VGS) / 120A(ID)

Rev0.1

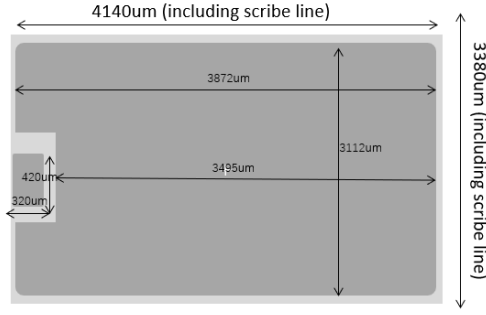
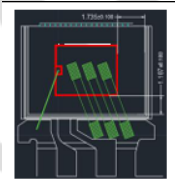


Wafer Specification

1. Order Information

Part No.	Description	Gross die / per 8,, wafer
XG0059	100V(V_{DS}) / $\pm 20V(V_{GS})$ / 120A(I_D) N-Channel Enhancement Mode SGT MOSFET	2,013

2. Physical Characteristics

	Die Size: 4140 μm $\times$ 3380 μm (including scribe line)
	Gate: 320 μm $\times$ 420 μm
	For TO-220C package Suggest Bonding wire: Gate: 1*5mil AL Source: 3*20mil AL 

3. Mechanical Data

Nominal Back Metal Composition, Thickness	Ti-Ni-Ag (1kA°-3kA°-10kA°)
Nominal Front Metal Composition, Thickness	ALCu (4 μm)
Wafer Diameter	200mm, with 010 notch
Wafer Thickness	175 $\mu m \pm 10\mu m$
Scribe Line Width	60 μm

4. Key Electrical Characteristics of Die (at $T_J = 25^\circ C$, unless otherwise specified)

Parameter	Description	Min.	Typ.	Max.	Unit	Test Conditions
V _{(BR)DSS}	Drain-to-Source Breakdown Voltage	100	-	-	V	V _{GS} =0V, I _D =250μA
I _{D(Device Ref)}	Continuous Drain Current	-	-	120	A	T _J =25 °C
R _{DS(on)} (FT)	Static Drain-to-Source On-Resistance	-	3.4	4.3	mΩ	V _{GS} =10V, I _D =20A
V _{GS(th)}	Gate Threshold Voltage	2	3	4	V	V _{DS} =V _{GS} , I _D =250μA
I _{DSS}	Drain-to-Source Leakage Current	-	-	1	μA	V _{DS} =100V, V _{GS} =0V
I _{GSS}	Gate-to-Source Leakage Current	-	-	±100	nA	V _{GS} =±20V, V _{DS} =0V
E _{AS}	Single Pulsed Avalanche Energy	-	-	256	mJ	L=0.5mH, V _{DD} =50V, V _G =10V
R _g	Gate Poly Resistance	-	2.3	-	Ω	V _{DS} =0V, V _{GS} =0, f=1MHZ
C _{iss}	Input Capacitance	-	5800	-	pF	V _{DS} =50V, V _{GS} =0, f=1MHZ
C _{oss}	Output Capacitance	-	2900	-	pF	
C _{rss}	Reverse Transfer Capacitance	-	145	-	pF	
T _J , T _{STG}	Operating and Storage Temperature	-55°C to 175°C Max				