

XG0029

N-Channel Enhancement Mode SGT MOSFET

100V(VDS) / ± 20 V(VGS) / 68A(ID)

Rev0.5

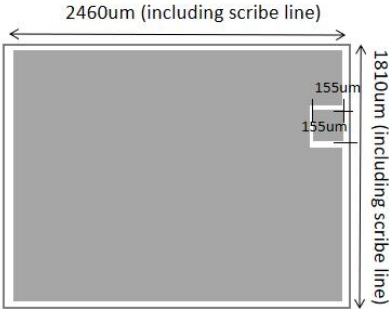
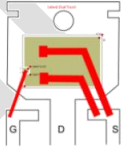


Wafer Specification

1. Order Information

Part No.	Description	Gross die / per 8" wafer
XG0029	100V(V_{DS}) / $\pm 20V(V_{GS})$/ 68A(I_D) N-Channel Enhancement Mode SGT MOSFET	6,300

2. Physical Characteristics

	Die Size: 2460 μ m $\times$ 1810 μ m (including scribe line)
	Gate: 155 μ m $\times$ 155 μ m
	For TO-220C-3L package Suggest Bonding wire: Gate: 1*5mil AL Source: 2*20mil AL 

3. Mechanical Data

Nominal Back Metal Composition, Thickness	Ti-Ni-Ag (13kA°)
Nominal Front Metal Composition, Thickness	AlCu (4 μ m)
Wafer Diameter	200mm, with 010 notch
Wafer Thickness	175 $\pm$ 10 μ m
Scribe Line Width	60 μ m

4. Key Electrical Characteristics of Die (at $T_j = 25^\circ\text{C}$, 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	-	-	68	A	T _J =25°C
R _{DS(on)(FT)}	Static Drain-to-Source On-Resistance	-	8.0	9.0	mΩ	V _{GS} =10V, I _D =20A
V _{GS(th)}	Gate Threshold Voltage	1.2	1.7	2.2	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			49	mJ	L=0.5mH, VDD=50V, VG=10V
R _g	Gate Poly Resistance	1	2.0	3	Ω	V _{DS} =0V, V _{GS} =0,f=1MHZ
C _{iss}	Input Capacitance	-	1870	-	pF	V _{DS} =50V, V _{GS} =0, f=1MHZ
C _{oss}	Output Capacitance	-	730	-	pF	
C _{rss}	Reverse Transfer Capacitance	-	22	-	pF	
T _J , T _{STG}	Operating and Storage Temperature	-55°C to 150°C Max				