

XG0051(XG3002)

N-Channel Enhancement Mode SGT MOSFET

30V(VDS) / $\pm 20\text{V}$ (VGS) / 320A(ID)

Rev0.6

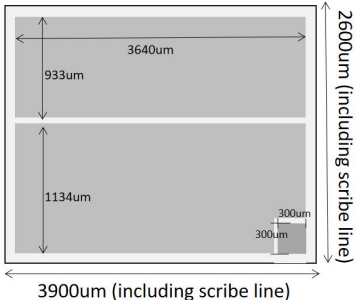
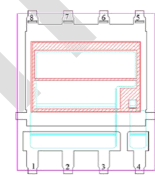


Wafer Specification

1. Order Information

Part No.	Description	Gross die / per 8" wafer
XG0051(XG0032)	30V(V_{DS}) / + 20/-16V(V_{GS})/ 320A(I_D) N-Channel Enhancement Mode SGT MOSFET	2,700

2. Physical Characteristics

	Die Size: 3900 μ m $\times$ 2600 μ m (including scribe line)
	Gate: 300 μ m $\times$ 300 μ m
	For PDFN5X6-8L package Suggest Bonding wire: Gate: Cu Clip Source: 0.203 mm Cu Clip 

3. Mechanical Data

Nominal Back Metal Composition, Thickness	Ti-Ni-Ag (1kA°-3kA°-10kA°)
Nominal Front Metal Composition, Thickness	NiAu (3.05 μ m)
Wafer Diameter	200mm, with 010 notch
Wafer Thickness	125 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	30	-	-	V	V _{GS} =0V, I _D =250μA
I _D (Device Ref)	Continuous Drain Current	-	-	320	A	T _J =25°C
R _{DS(on)} (FT)	Static Drain-to-Source On-Resistance	-	1.0	1.3	mΩ	V _{GS} =10V, I _D =20A
V _{GS(th)}	Gate Threshold Voltage	1.3	1.8	2.4	V	V _{DS} =V _{GS} , I _D =250μA
I _{DSS}	Drain-to-Source Leakage Current	-	-	1	μA	V _{DS} =30V, V _{GS} =0V
I _{GSS}	Gate-to-Source Leakage Current	-	-	±100	nA	V _{GS} =±20V, V _{DS} =0V
E _{AS}	Single Pulsed Avalanche Energy	-	-	300	mJ	L=0.5mH, V _{DD} =15V
R _g	Gate Poly Resistance	-	2.4	-	Ω	V _{DS} =0V, V _{GS} =0, f=1MHZ
C _{iss}	Input Capacitance	-	7500	-	pF	V _{DS} =15V, V _{GS} =0, f=1MHZ
C _{oss}	Output Capacitance	-	5800	-	pF	
C _{rss}	Reverse Transfer Capacitance	-	420	-	pF	
T _J , T _{STG}	Operating and Storage Temperature	-55°C to 150°C Max				