

XG3020

N-Channel Enhancement Mode SGT MOSFET

40V(VDS) / ± 20 V(VGS) / 158A(ID)

Rev0.1

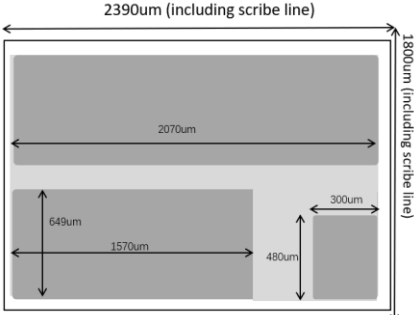
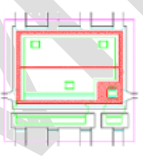


Wafer Specification

1. Order Information

Part No.	Description	Gross die / per 8,, wafer
XG3020	40V(V_{DS}) / $\pm 20V(V_{GS})$ / 158A(I_D) N-Channel Enhancement Mode SGT MOSFET	6,693

2. Physical Characteristics

	Die Size: 2390 μ m $\times$ 1800 μ m (including scribe line)
	Gate: 300 μ m $\times$ 480 μ m
	For PDFN5X6 package Suggest Bonding wire: Gate: 0.203 mm Clip Source: 0.203 mm 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 $\pm$ 10 μ m
Scribe Line Width	80 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	40	-	-	V	V _{GS} =0V, I _D =250μA
I _{D(Device Ref)}	Continuous Drain Current	-	-	158	A	T _J =25 °C
R _{DS(on)} (FT)	Static Drain-to-Source On-Resistance	-	2	2.4	mΩ	V _{GS} =10V, I _D =15A
V _{GS(th)}	Gate Threshold Voltage	1	1.7	2.1	V	V _{DS} =V _{GS} , I _D =250μA
I _{DSS}	Drain-to-Source Leakage Current	-	-	1	μA	V _{DS} =40V, V _{GS} =0V
I _{GSS}	Gate-to-Source Leakage Current	-	-	±100	nA	V _{GS} =±20V, V _{DS} =0V
E _{AS}	Single Pulsed Avalanche Energy	-	-	240	mJ	L=0.5mH, V _{DD} =20V, V _G =10V
R _g	Gate Poly Resistance	-	1.2	-	Ω	V _{DS} =0V, V _{GS} =0, f=1MHZ
C _{iss}	Input Capacitance	-	2500	-	pF	V _{DS} =20V, V _{GS} =0, f=1MHZ
C _{oss}	Output Capacitance	-	900	-	pF	
C _{rss}	Reverse Transfer Capacitance	-	50	-	pF	
T _J , T _{STG}	Operating and Storage Temperature	-55°C to 175°C Max				