

XG0056

N-Channel Enhancement Mode SGT MOSFET

90V(VDS) / ± 20 V(VGS) / 120A(ID)

Rev0.1



Wafer Specification

1. Order Information

Part No.	Description	Gross die / per 8,, wafer
XG0056	90V(V_{DS}) / $\pm 20V(V_{GS})$ / 120A(I_D) N-Channel Enhancement Mode SGT MOSFET	2,450

2. Physical Characteristics

	Die Size: 3800 μ m $\times$ 3050 μ m (including scribe line)
	Gate: 320 μ m $\times$ 420 μ m
	For TO-263 package Suggest Bonding wire: Gate: 1.5 mil AL Source: 3*20 mil AL

3. Mechanical Data

Nominal Back Metal Composition, Thickness	Ti-Ni-Ag (1kA°-3kA°-10kA°)
Nominal Front Metal Composition, Thickness	ALCu (4 μ m)
Wafer Diameter	200mm, with 010 notch
Wafer Thickness	175 μ m $\pm$ 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	90	-	-	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	-	3.1	4.3	mΩ	V _{GS} =10V, I _D =20A
V _{GS(th)}	Gate Threshold Voltage	2.5	3.0	3.5	V	V _{DS} =V _{GS} , I _D =250μA
I _{DSS}	Drain-to-Source Leakage Current	-	-	1	μA	V _{DS} =90V, V _{GS} =0V
I _{GSS}	Gate-to-Source Leakage Current	-	-	±100	nA	V _{GS} =±20V, V _{DS} =0V
E _{AS}	Single Pulsed Avalanche Energy	-	-	245	mJ	L=0.5mH, V _{DD} =50V, V _G =10V
R _g	Gate Poly Resistance	-	1.7	-	Ω	V _{DS} =0V, V _{GS} =0, f=1MHZ
C _{iss}	Input Capacitance	-	6300	-	pF	V _{DS} =50V, V _{GS} =0, f=1MHZ
C _{oss}	Output Capacitance	-	2700	-	pF	
C _{rss}	Reverse Transfer Capacitance	-	200	-	pF	
T _J , T _{STG}	Operating and Storage Temperature	-55°C to 175°C Max				