

XG0049

N-Channel Enhancement Mode SGT MOSFET

90V(VDS) / $\pm 20\text{V}$ (VGS) / 120A(ID)

Rev0.5

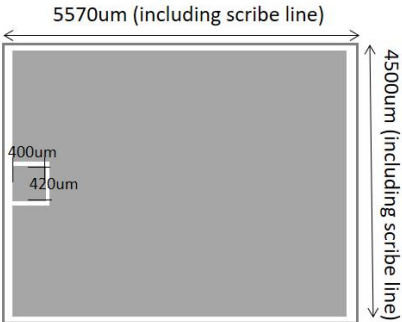


Wafer Specification

1. Order Information

Part No.	Description	Gross die / per 8" wafer
XG0049	90V(V_{DS}) / $\pm 20V(V_{GS})$/ 120A(I_D) N-Channel Enhancement Mode SGT MOSFET	1,096

2. Physical Characteristics

	Die Size: 5570 μ m $\times$ 4500 μ m (including scribe line)
	Gate: 400 μ m $\times$ 420 μ m
	For TO-263 package Suggest Bonding wire: Gate: 1*5mil AL Source: 3*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 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)S

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		1.3	2.4	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			1.0	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			225	mJ	L=0.5mH, VDD=45V
R _g	Gate Poly Resistance		0.6		Ω	V _{DS} =0V, V _{GS} =0,f=1MHZ
C _{iss}	Input Capacitance		8000		pF	V _{DS} =45V, V _{GS} =0, f=1MHZ
C _{oss}	Output Capacitance		1500		pF	
C _{rss}	Reverse Transfer Capacitance		30		pF	
T _J , T _{STG}	Operating and Storage Temperature	-55°C to 150°C Max				