

XG0039

N-Channel Enhancement Mode SGT MOSFET

100V(VDS) / ± 20 V(VGS) / 120A(ID)

Rev0.6

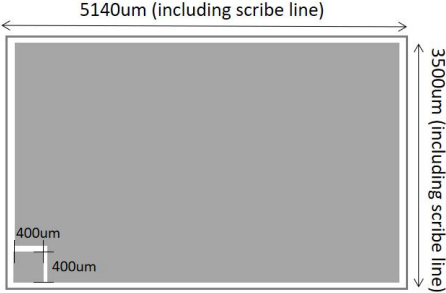
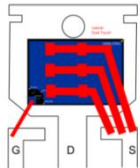


Wafer Specification

1. Order Information

Part No.	Description	Gross die / per 8" wafer
XG0039	100V(V_{DS}) / $\pm 20V(V_{GS})$/ 120A(I_D) N-Channel Enhancement Mode SGT MOSFET	1,557

2. Physical Characteristics

	Die Size: 5140 μ m $\times$ 3500 μ m (including scribe line)
	Gate: 400 μ m $\times$ 400 μ m
	For TO-263-3L package Suggest Bonding wire: Gate: 1 $\times$ 5 mil AL Source: 3 $\times$ 20 mil 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	200 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	100			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		3.0	3.5	mΩ	V _{GS} =10V, I _D =20A
V _{GS(th)}	Gate Threshold Voltage	2.0	3.0	4.0	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
EAS	Single Pulsed Avalanche Energy			780	mJ	L=0.5mH, I _{AS} =56A
R _g	Gate Poly Resistance	1	2.9	4	Ω	V _{DS} =0V, V _{GS} =0,f=1MHZ
C _{iss}	Input Capacitance		7100		pF	V _{DS} =50V, V _{GS} =0, f=1MHZ
C _{oss}	Output Capacitance		3600		pF	
C _{rss}	Reverse Transfer Capacitance		200		pF	
T _J , T _{STG}	Operating and Storage Temperature	-55°C to 150°C Max				