

N-Channel SGT Power MOSFET

Features

- N-channel
- $V_{DS} = 100V, I_D = 70A$
 $R_{DS(ON)} < 11m\Omega @ V_{GS} = 10V$ (Typ:9.4m Ω)
- 100% avalanche tested
- Pb-free lead plating; RoHS compliant

Application

- High performance SMPS, e.g. sync. rec.
- Hard Switching and High Speed Circuit
- Motor Control

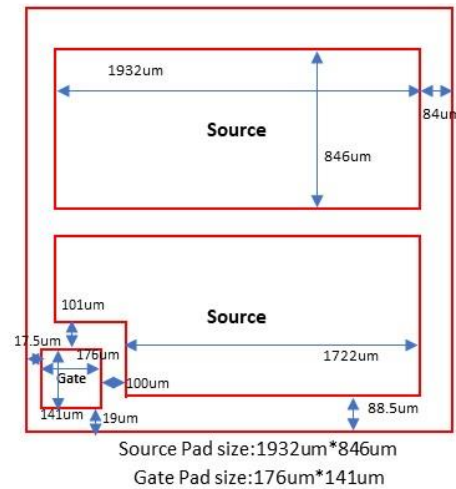
Wafer Size (inch)	8
Chip Size without scribe (mm)	2.1x2.0
Wafer Thickness (mil)	8
Top Metal	AlCu
Top Metal Thickness (μm)	4
Back Metal	Ti/Ni/Ag
Scribe Line (μm)	60
Gate Wire recommended	1*1.5mil Cu Wire
Source Wires recommended	15x 2mil Al Ribbon
Gross Die	6384

100V N-Ch Power MOSFET

Parameter	Value	Unit	
V_{DS}	100	V	
$R_{DS(on),typ}$	$V_{GS} = 10V$	9.4	m Ω
I_D	70	A	

Unit: μm

Die Size Without 60 μm scribe line



Electrical Characteristics at T_j=25°C (unless otherwise specified)
Static Characteristics

Parameter	Symbol	Test Condition	Value			Unit
			Min.	Typ.	Max.	
Drain to Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =250μA	100	111		V
Gate Threshold Voltage	V _{GS(th)}	V _{GS} =V _{DS} , I _D =250μA	2.0	2.7	3.4	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{GS} =0V, V _{DS} =100V, T _j =25°C	-	0.01	1	μA
		V _{GS} =0V, V _{DS} =100V, T _j =100°C		-	100	
Gate to Source Leakage Current	I _{GSS}	V _{GS} =±20V, V _{DS} =0V	-	7.4	±100	nA
Drain to Source on Resistance	R _{DS(on)}	V _{GS} =10V, I _D =2A	-	9.4	11	mΩ
		V _{GS} =4.5V, I _D =2A	-	-	-	
Gate Resistance	R _G	V _{GS} =0V, V _{DS} =0V, f=1MHz	-	-	-	Ω