

N-Channel SGT Power MOSFET

Features

- N-channel
- $V_{DS} = 60V, I_D = 110A$
 $R_{DS(ON)} < 2m\Omega @ V_{GS} = 10V$ (Typ:1.5m Ω)
- 100% avalanche tested
- Pb-free lead plating; RoHS compliant

Application

- High performance SMPS, e.g. sync. rec.
- Hard Switching and High Speed Circuit
- DC/DC Converter

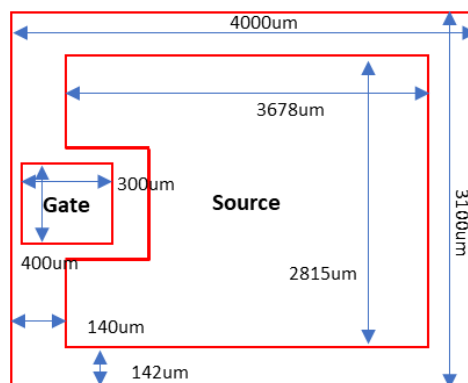
Wafer Size (inch)	12
Chip Size without scribe (mm)	4.0x3.1
Wafer Thickness (mil)	4.3
Top Metal	AlCu
Top Metal Thickness (μm)	4
Back Metal	Ti/Ni/Ag
Scribe Line (μm)	60
Gate Wire recommended	1mil Au/Cu
Source Wires recommended	16x 2mil Au/Cu
Gross Die	5061

60V N-Ch Power MOSFET

Parameter	Value	Unit	
V_{DS}	60	V	
$R_{DS(on),typ}$	$V_{GS} = 10V$	1.5	m Ω
$R_{DS(on),typ}$	$V_{GS} = 4.5V$	2.1	m Ω
I_D	110	A	

Unit: μm

Die Size Without 60 μm scribe line



Source Pad: 3678 μm *2815 μm

Gate Pad:300 μm *400 μm

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	60	66		V
Gate Threshold Voltage	V _{GS(th)}	V _{GS} =V _{DS} , I _D =250μA	1.0	1.52	2.4	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{GS} =0V, V _{DS} =60V, T _j =25°C	-	0.38	1	μA
		V _{GS} =0V, V _{DS} =60V, T _j =100°C		-	100	
Gate to Source Leakage Current	I _{GSS}	V _{GS} =±20V, V _{DS} =0V	-	4.6	±100	nA
Drain to Source on Resistance	R _{DS(on)}	V _{GS} =10V, I _D =2A	-	1.5	2.0	mΩ
		V _{GS} =4.5V, I _D =2A	-	2.1	3.0	
Gate Resistance	R _G	V _{GS} =0V, V _{DS} =0V, f=1MHz	-	-	-	Ω