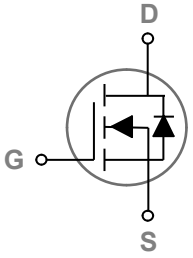
HSMDG059A

Features

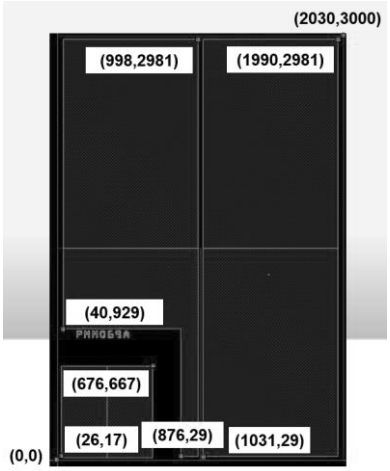
- *Die in 8" Wafer Form*
- *40V , N-Channel , NGD*
- *$R_{DS(ON)}$=2.5mΩ (Max.) @ V_{GS}=10V*

Applications

- *Networking*
- *LED Lighting Applications*
- *Quick Charger Applications*
- *DC-DC Power Management*



Die Description

Parameter	Parameter	Rating	CHIP DRAWING
Die Size (with SL)	2090 X 3060	um^2	
Gate Pad Size	650 X 650		
Source Pad Size	Full Metalized Source Region		
Scribe Line Size	60	um	
Wafer size	200	mm	
Wafer Thickness	4 (±0.4)	mil	
Top Metallization	4um , Al-Cu		
Back Metallization	Ti/Ni/Ag , 1/3/10KÅ		
Gate Bond Wire	5 mil Al x 1		
Source Bond Wire	60 mil Al Ribbon stitch x 1		
Estimated Gross Die	4,550		

Absolute Maximum Ratings Tc=25℃ unless otherwise noted

Symbol	Parameter	Rating	Unit
V_{DSS}	Drain-Source Voltage	40V	V
V_{GSS}	Gate-Source Voltage	+20V / -12V	V
T_J	Operating Junction Temperature Range	-50 to 150℃	℃
T_{STG}	Storage Temperature Range	-50 to 150℃	℃

Electrical Characteristics (T_J=25 ℃, unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS}=0V , I_D=250uA	40	---	---	V
I_{DSS}	Drain-Source Leakage Current	V_{DS}=40V , V_{GS}=0V , T_J=25℃	---	---	1	uA
		V_{DS}=32V , V_{GS}=0V , T_J=85℃	---	---	10	uA
I_{GSS}	Gate-Source Leakage Current	V_{GS}=20V / -12V , V_{DS}=0V	---	---	±100	nA
$R_{DS(ON)}$	Static Drain-Source On-Resistance	V_{GS}=10V , I_D=20A	---	2.05	2.5	mΩ
$V_{GS(th)}$	Gate Threshold Voltage	V_{GS}=V_{DS} , I_D =250uA	2	2.8	4	V

Note：1. The data tested by pulsed , pulse width ≦ 300us , duty cycle ≦ 2%.
2. RDSON calculated by PPAK5X6 Package