

Wafer datasheet  
Chiba3060IC-RGHI30  
(900V/30A)(650V/30A)  
GaN FET/IC-Hiside  
Optional Driver IC Integration  
Feb. 2025

## Features

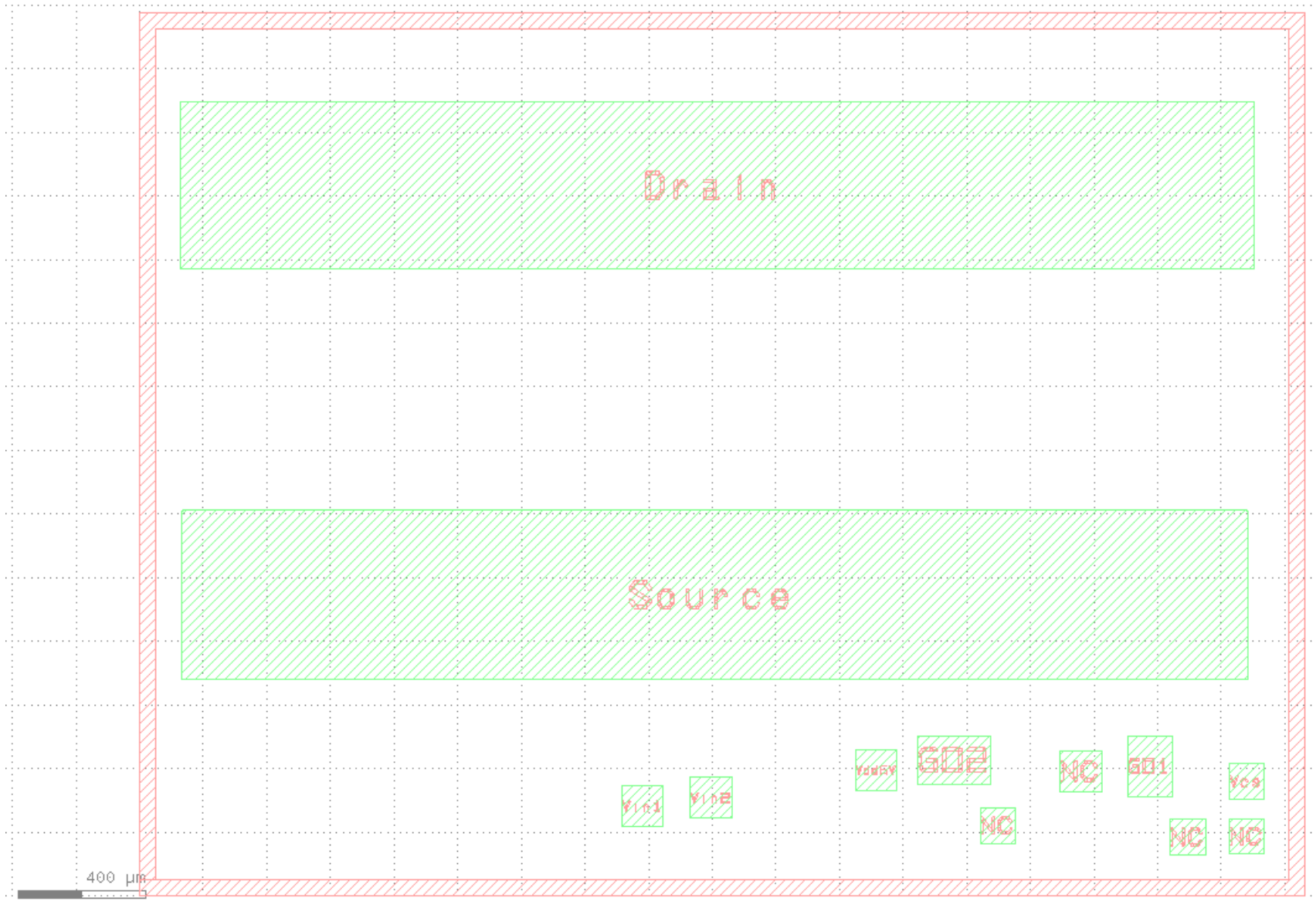
**Highside magnetic isolated power  
Switching IC**

**Monolithic integrated all-GaN-IC enabling  
fast and efficient switching**

Device-name  
RGHI30

x-size  
3663.31

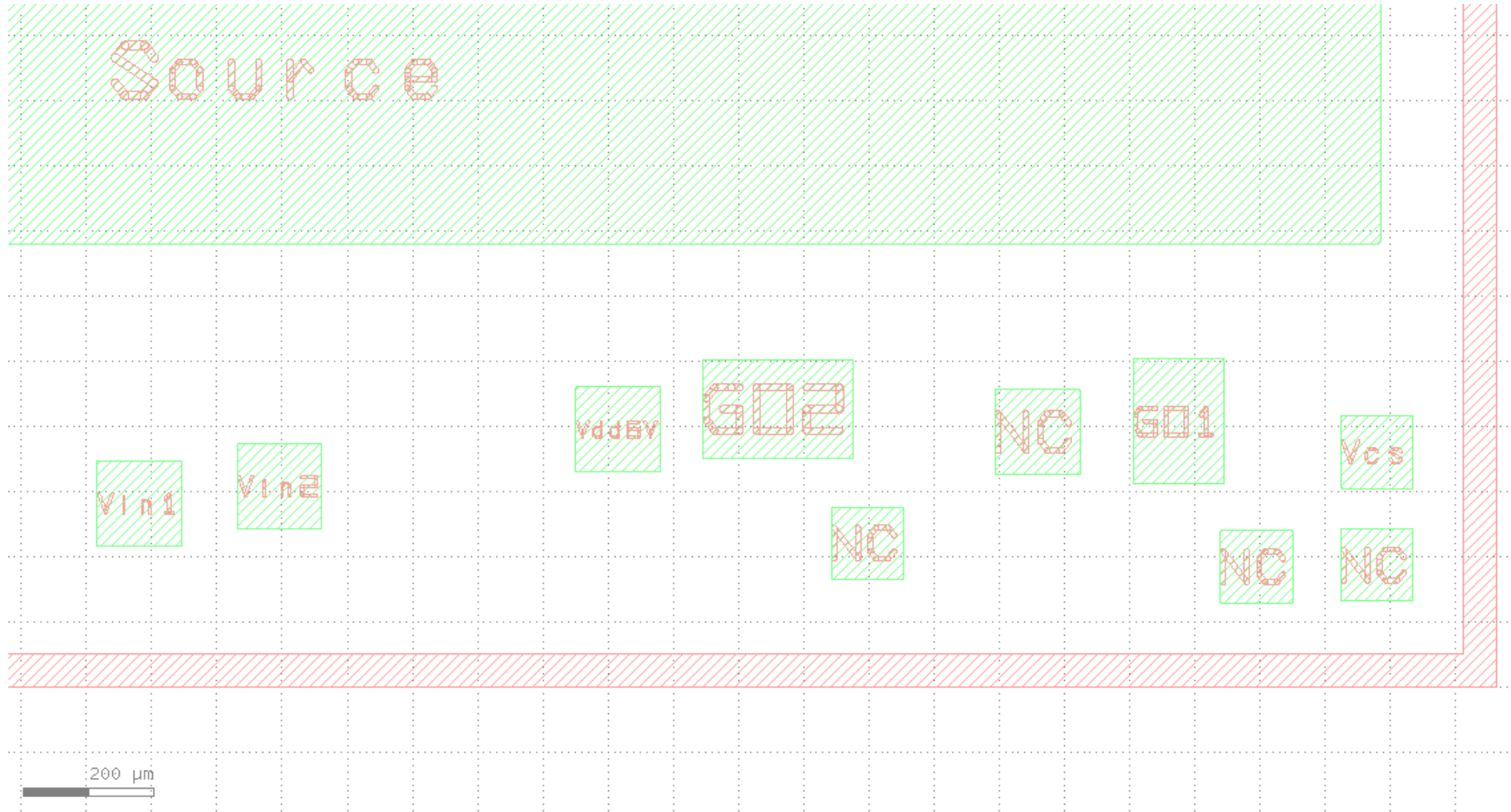
y-size  
2777.14



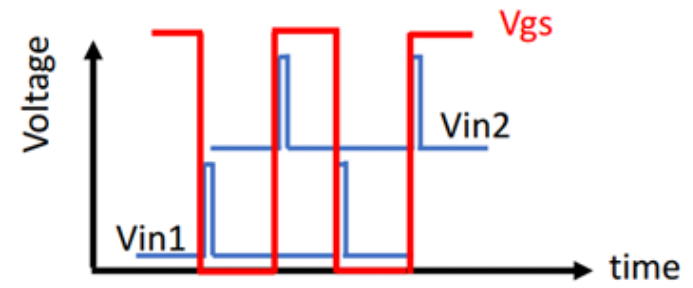
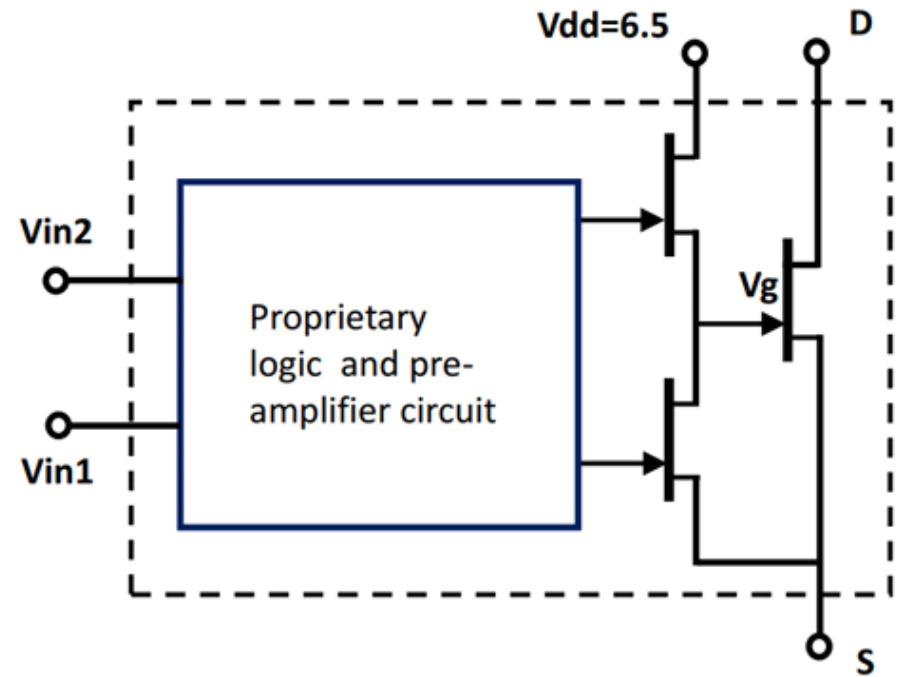
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2777.14



# Block diagram and waveforms



PAD	Dx	Dy	Center_x	Center_y
Vin1	130.00	130.00	1581.05	281.64
Vin2	130.00	130.00	1795.85	308.00
G01	140.00	191.05	3175.80	407.38
G02	230.71	151.77	2561.02	426.22
Vdd6V	130.00	130.00	2315.66	395.33
Source	3354.12	531.44	1807.86	945.62
Drain	3377.12	525.00	1816.36	2233.84
Vcs	111.00	111.00	3480.10	360.30

# Basic specifications

Back metal	None
Front metal	AlCu 4um
Wafer diameter	6 inch
Wafer thickness before dicing	1000 um
Recommended die thickness after dicing	250-300um
Street width	80 um
Recommended storage	N2 environment

# Wire bonding suggestion

Larger pads use 10mil or 12mil Al .

Smaller pads use Cu, PdCu , or Au (1.5 mil – 2 mil)

Backside must be glued to backplate using conductive glue

Backplate must be connected to the source of the GaNFET using wire bonding



# Characteristics

		Condition	min	typical	max	
Ids-max	Max current at 125C	Vgs=6 125C Or Vdd=6 Vin=6		30		A
Ids-max	Max current at 25C	Vgs=6 25C Or Vdd=6 Vin=6		60		A
Vds-max	D-S breakdown voltage	Vgs=0 25C < 25uA		900		V
Vg0s	Original gate voltage		-3	6	7	V
Vin1/2(6V)	PWM input		-3	6.5	7	V
Vdd(6V)	Aux DC power supply			6		V
Vgth (G0)	Original gate	Vgs=Vds Ids=18 mA		1.3		V
Idss	Drain leakage	Vg1s=0 / Vg0s=0 25C Vds=900			25	uA
Igss	Forward gate leakage	Vgs=6 Vds=0			1	mA
Rdson	On resistance	Vg0s=6/Vg1s=15 Ids=1A 25C		48		mOhm
Rdson	On resistance	Vg0s=6/Vg1s=15 Ids=1A 150C		105		mOhm
Vcs	Current sensing	Ids=+/-30A	-2.5		2.5	V
Qg	Gate charge	Vbus=500V Turn-off from Ids=60A Vgs from 6 to 0 25C		7		nC

# Application note on Vin (6V) driving

Vdd=6V is needed. 50nS or higher pulse width is need to ensure effective control of the power switch.

# Application note on G0 (6V) driving

G0 is unprotected against ESD at this version and can be used as a standard EMODE p-GaN gate.  
Recommended Rgoff=0 Rgon=10-20 Ohm