LCD Driver Circuit Analysis Sample Report

Product: LCD Driver
Part No.: **XXXXX**
Manufacturer: **XXXXX**
ID: **XXXXX**
Size: 19.49mm × 2.83mm =
=55.16mm^2 , 3Metal-1Poly
Objective: P

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Introduction

Tab.1 Product Overview

Description	LCD Driver
Part No.	XXXXX
Manufacturer	XXXXX
Chip Marking	XXXXX
Chip size	19.49mm X 2.83mm = 55.16mm^2
Process	3Metal－1Poly
Process Type	CMOS
Minimum Gate Length	0.2[um]

Photo.1 Package (Top View)

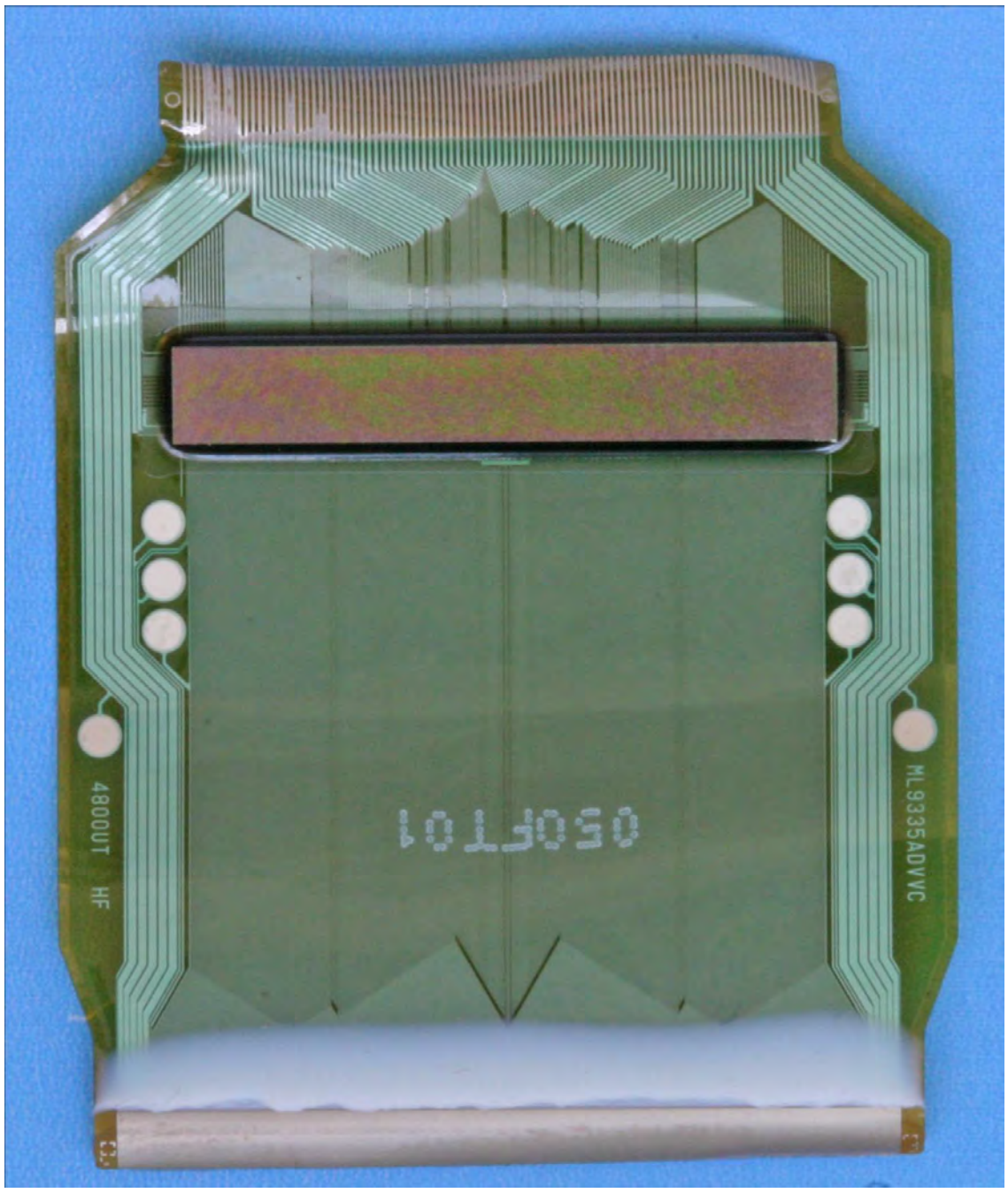


Photo.**2** Package (**Bottom** View)

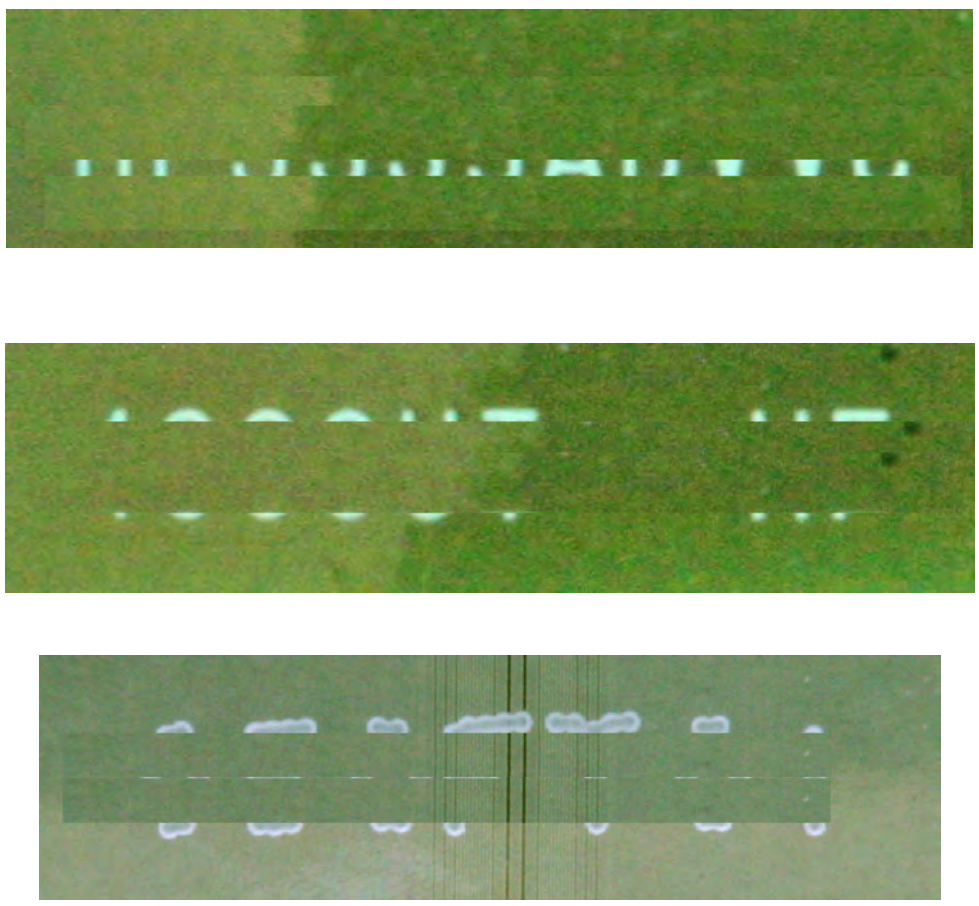


Photo.3 Package Marking (Bottom View)

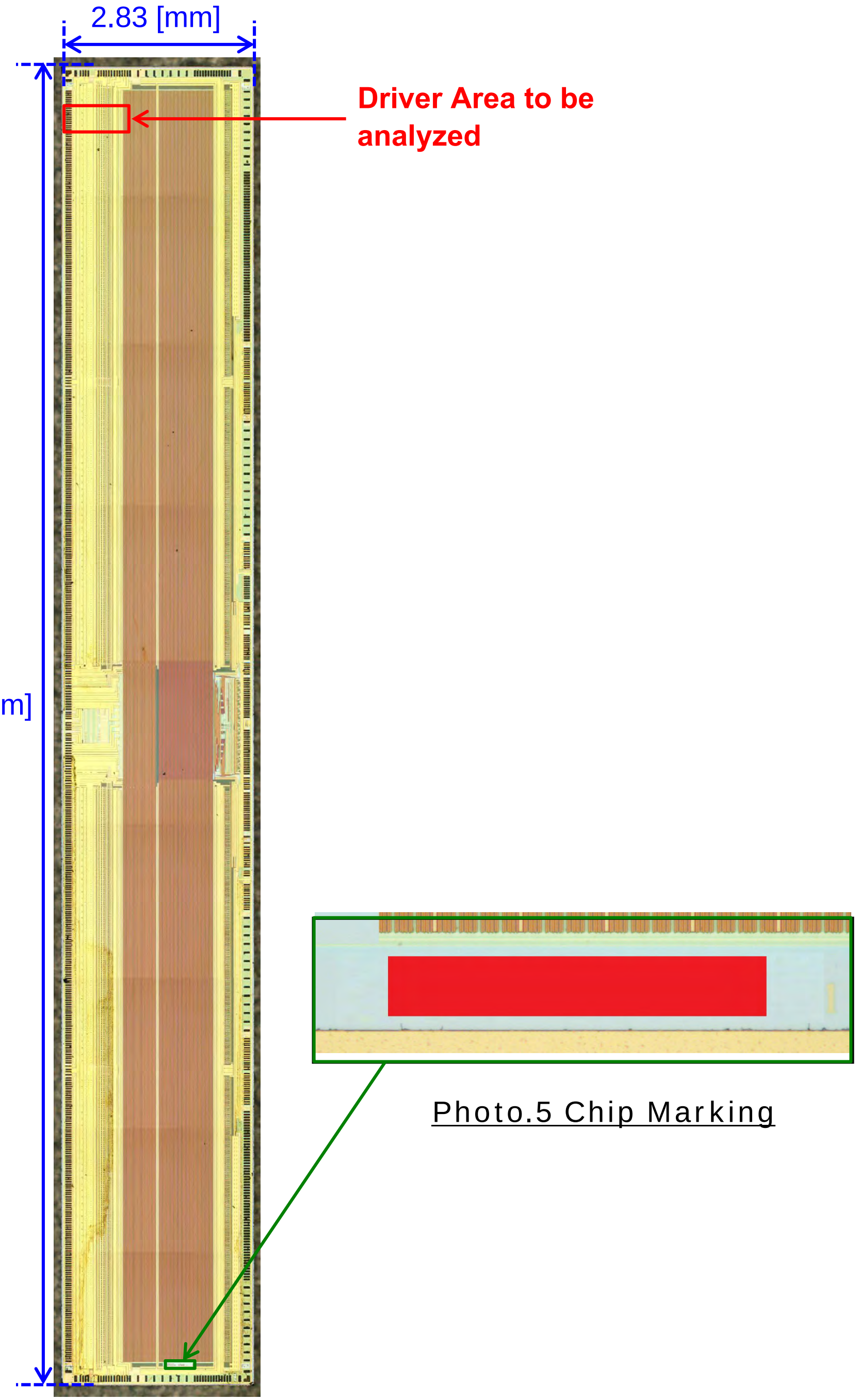


Photo.5 Chip Marking

Photo.4 Chip Overview (3Metal Layer)

Photo.6 Chip Overview (2Metal Layer)

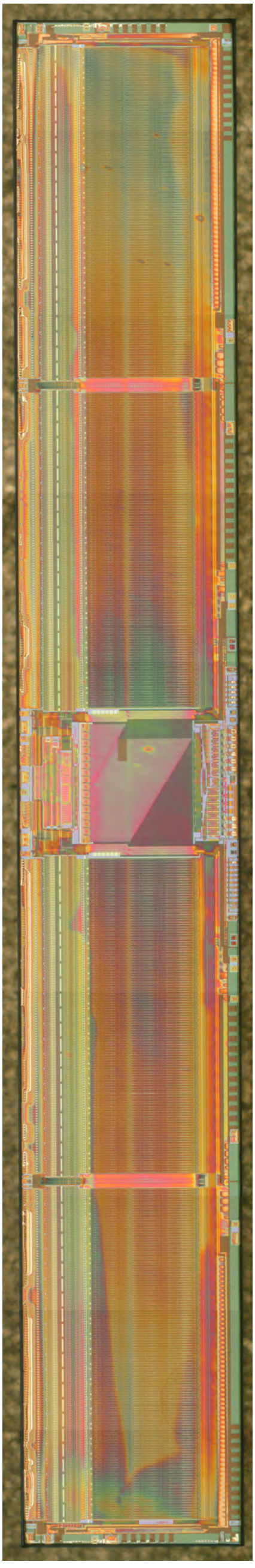


Photo.7 Chip Overview (1Metal Layer)

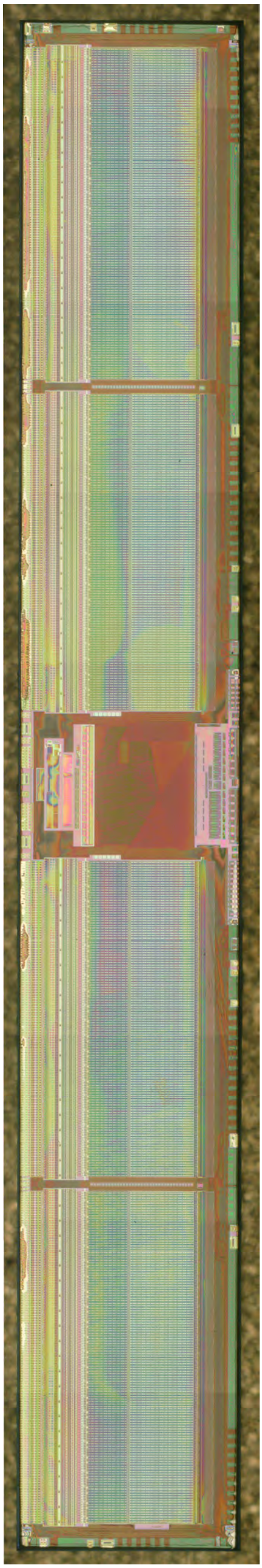


Photo.8 Chip Overview (Poly-Si Layer)

Analysis Result 1

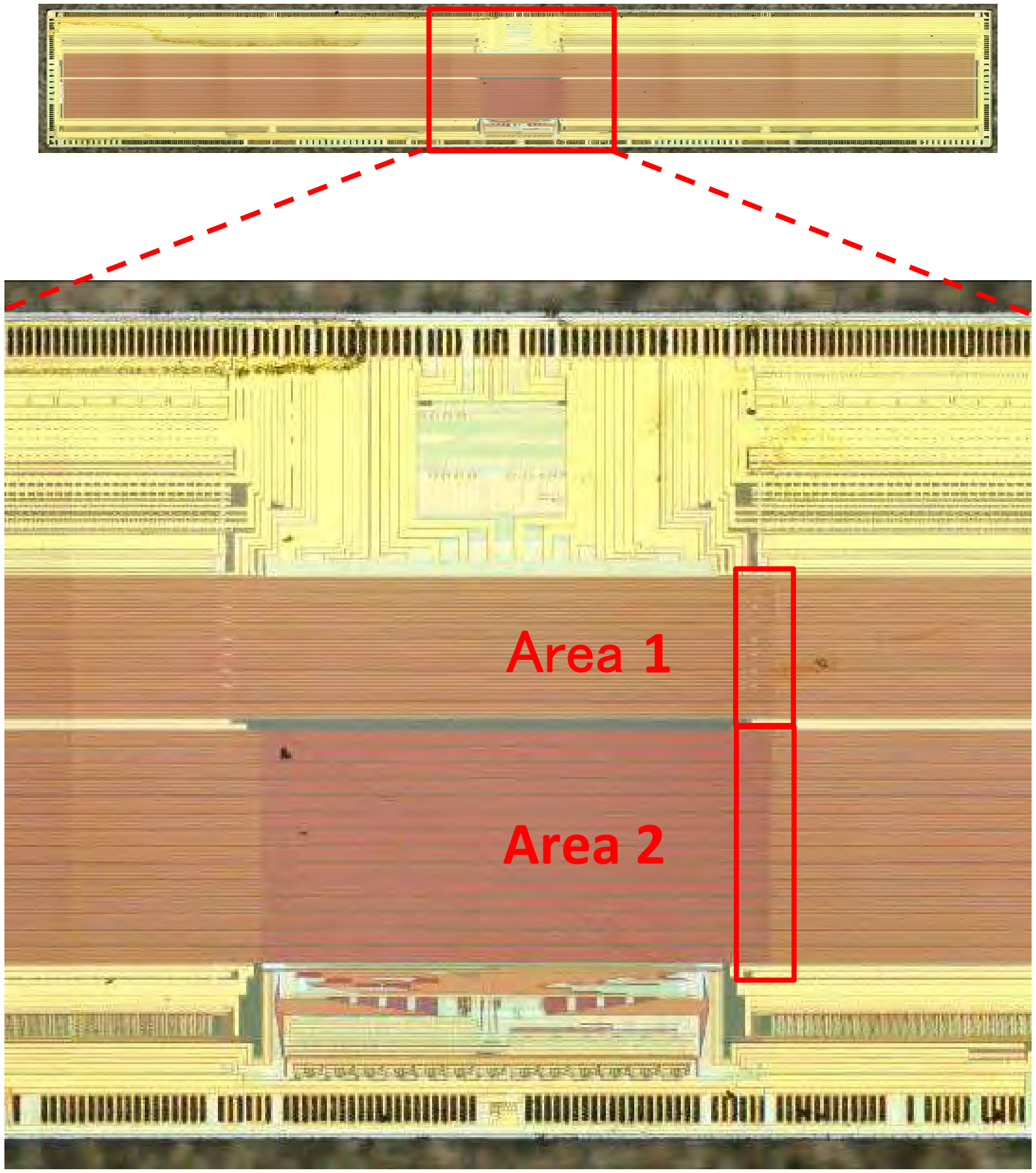


Photo 9. Chip Overview (3 Metal Layer)

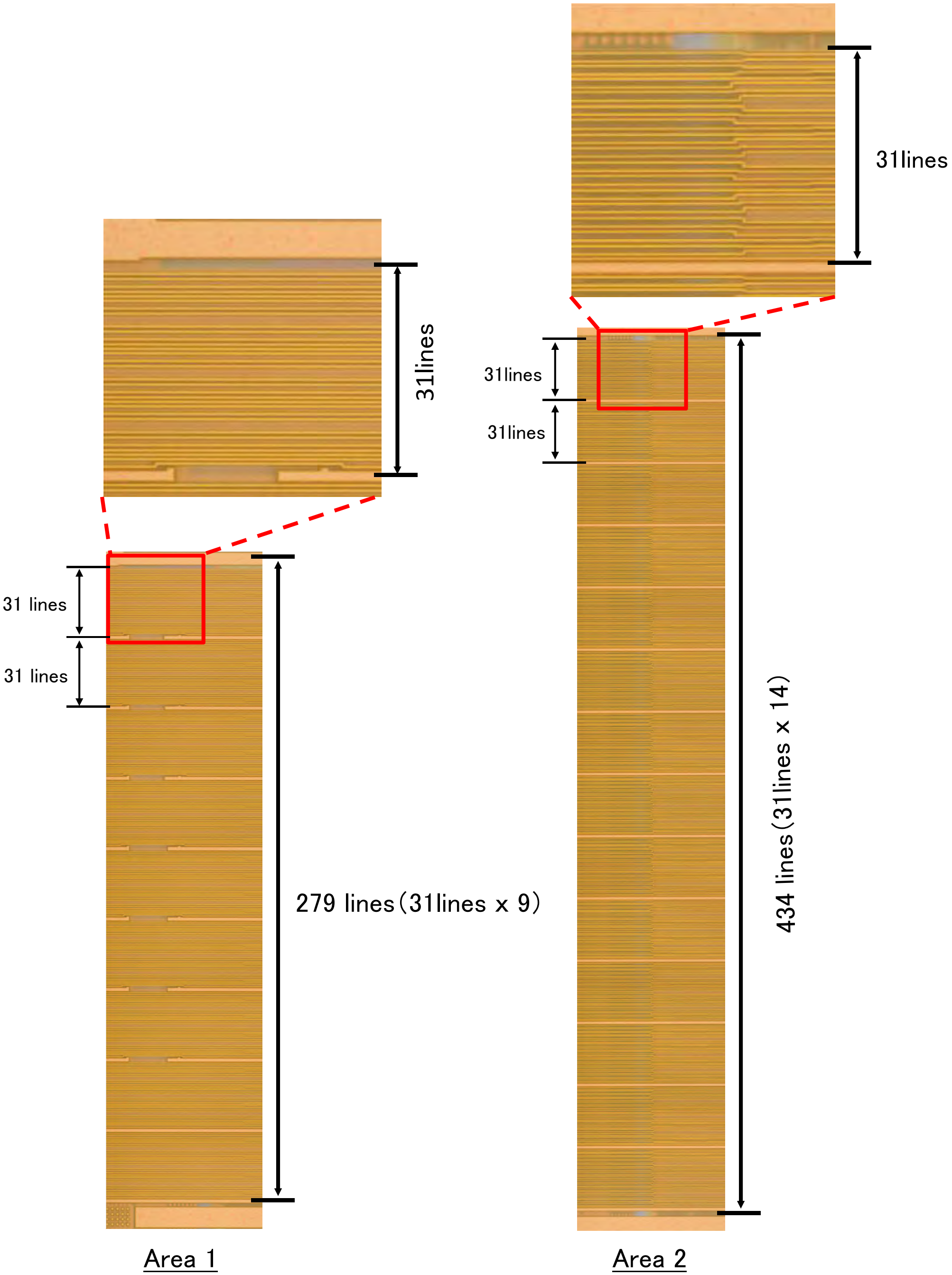


Photo.10 **Area 1 and Area 2 enlarged (**3Metal Layer)

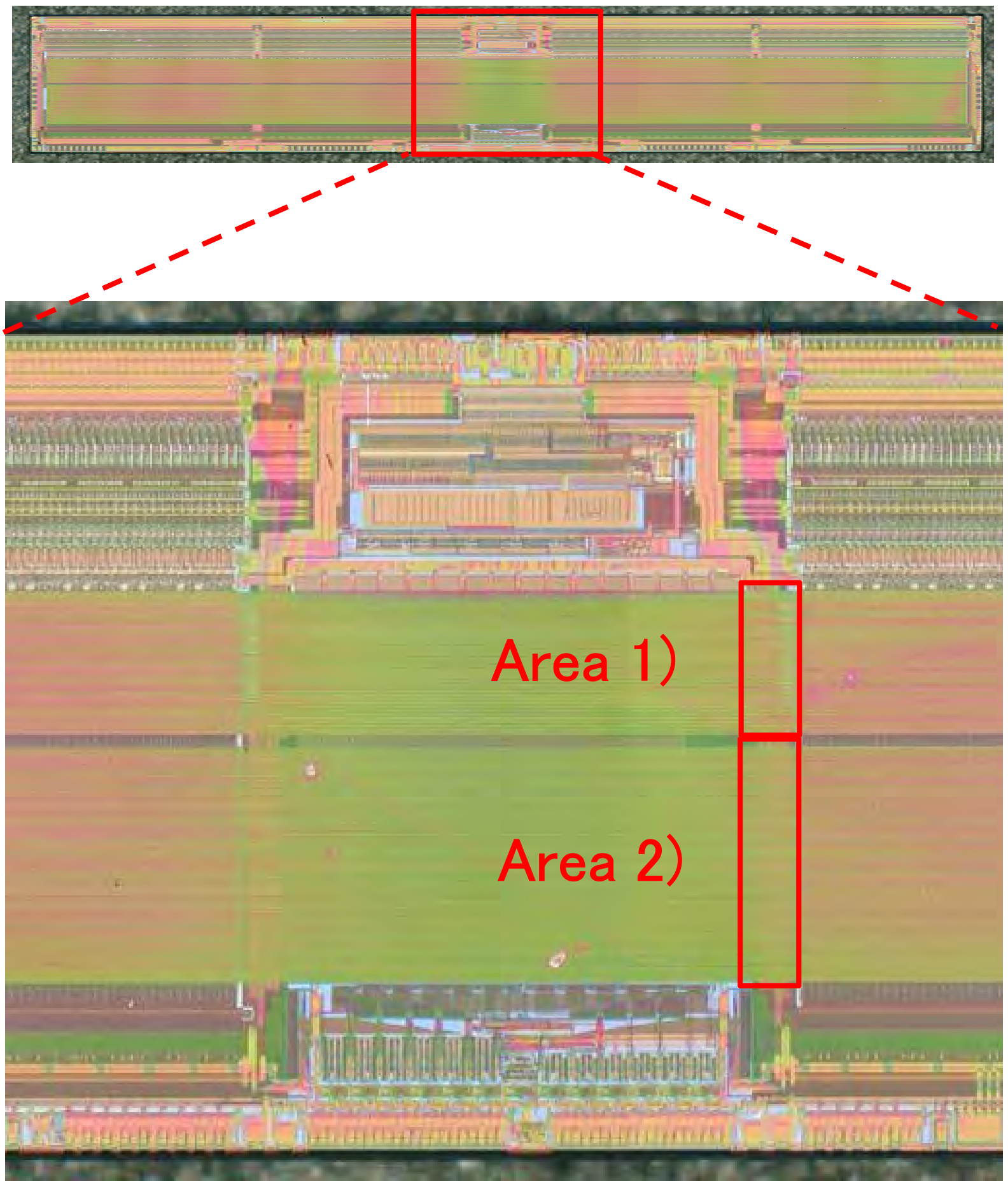


Photo.11 Chip Overview (2 Metal Layer)

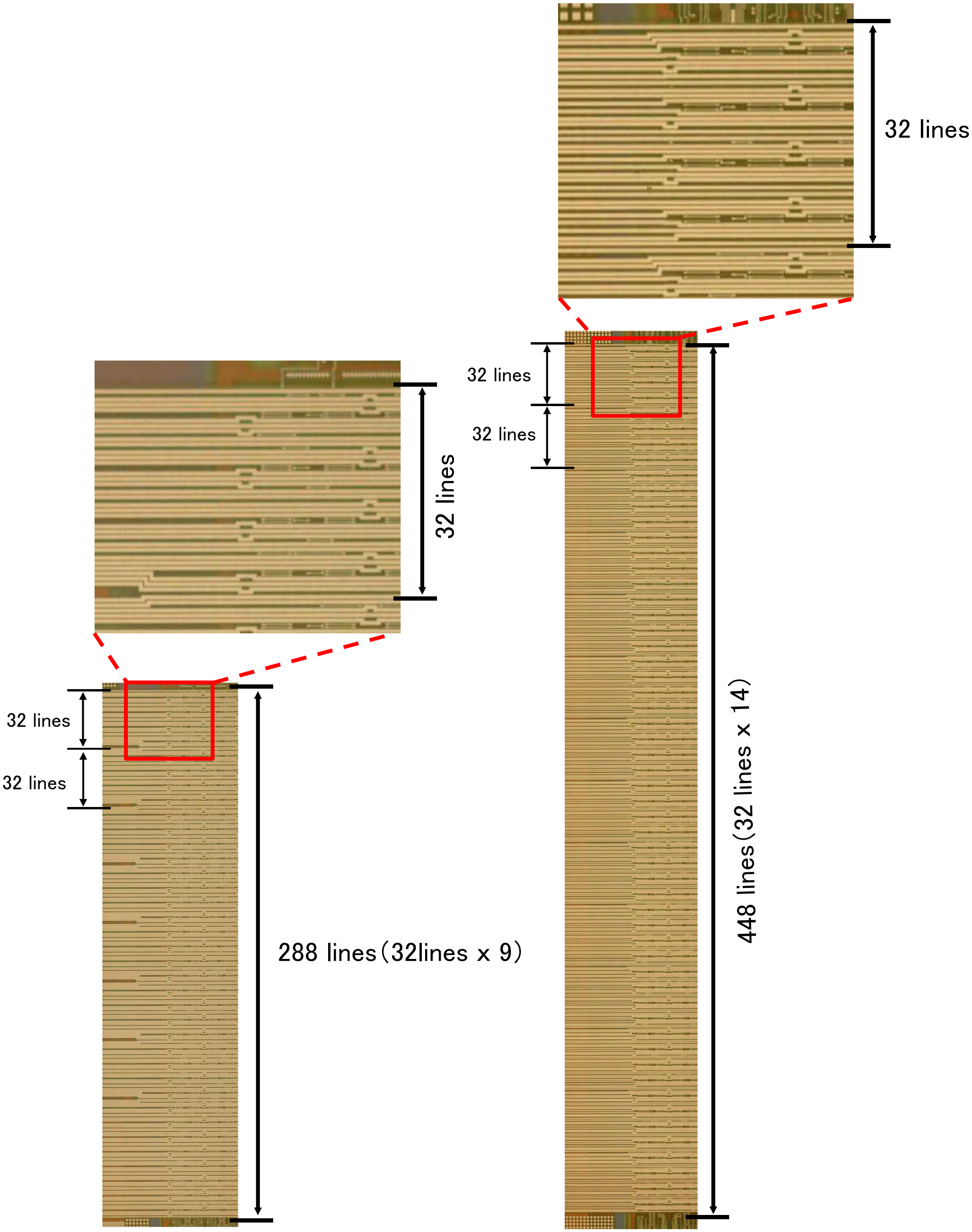


Photo.12 Are 1 and Area enlarged (2 Metal Layer)

Analysis Result2

Analysis Area

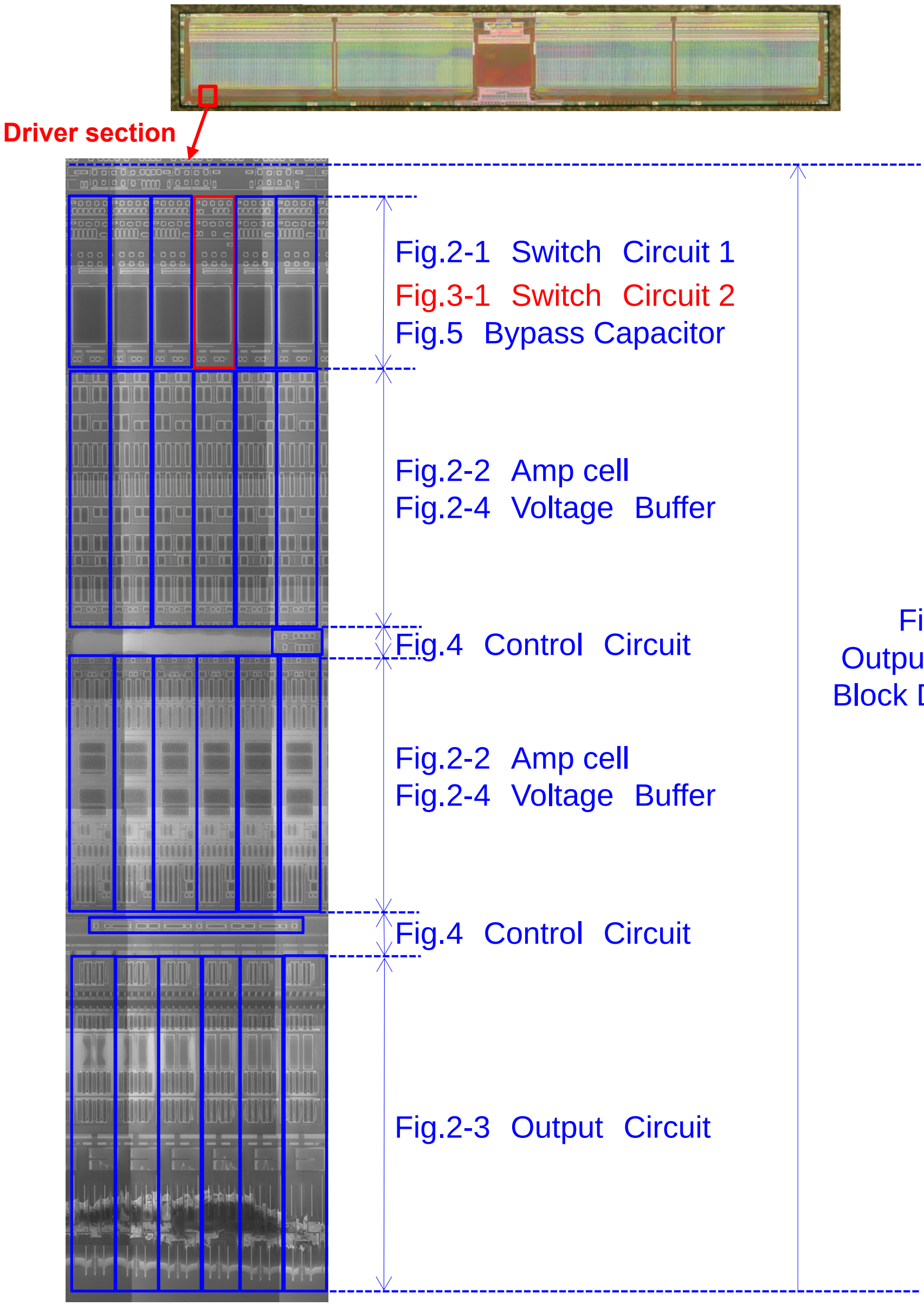
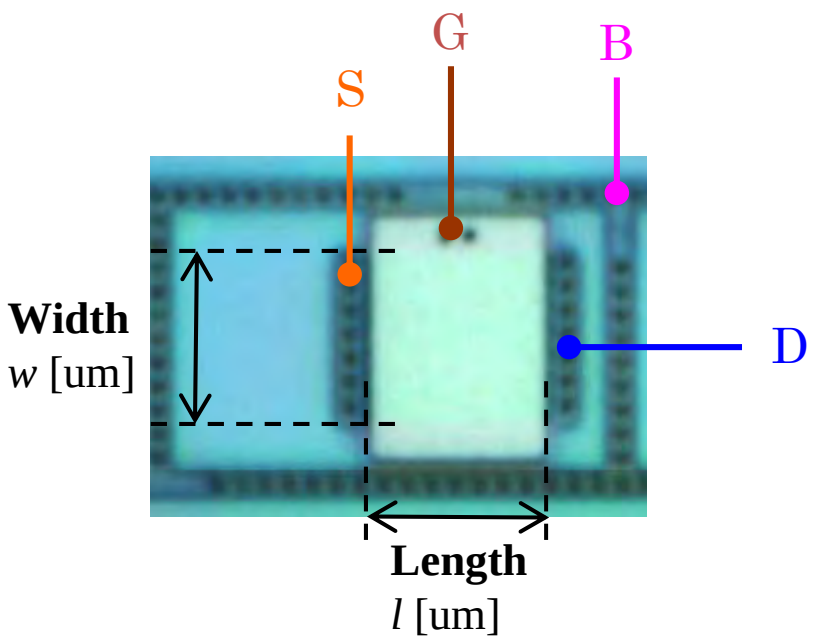


Fig.1
Output Driver
Block Diagram

Photo.13 Analysis Area (Poly-Si Layer)

Elements

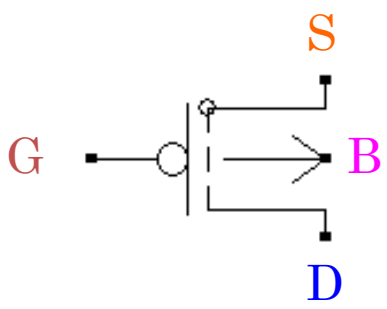
Layout



Cell Name (4 terminals)	Symbol	Cell Name (3terminals)	Symbol (Back-gate not shown)

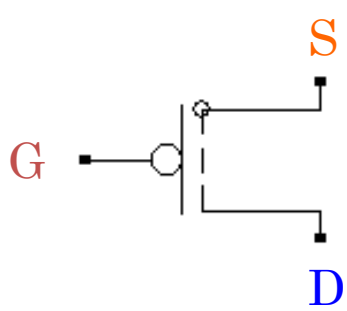
[PMOS]

mfetp4-1



M*n*
W=*w* u
L=*l* u
M=*m*
mfetp4-1

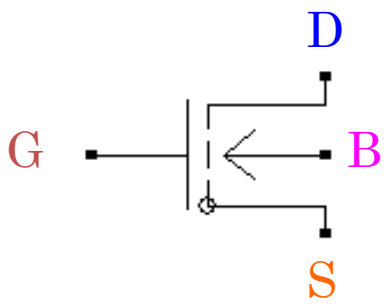
mfetp3-1



M*n*
W=*w* u
L=*l* u
M=*m*
B=*b*
mfetp3-1

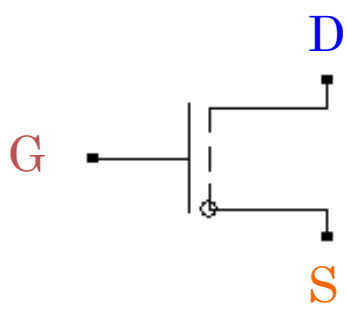
[NMOS]

mfetn4-1



M*n*
W=*w* u
L=*l* u
M=*m*
mfetn4-1

mfetn3-1

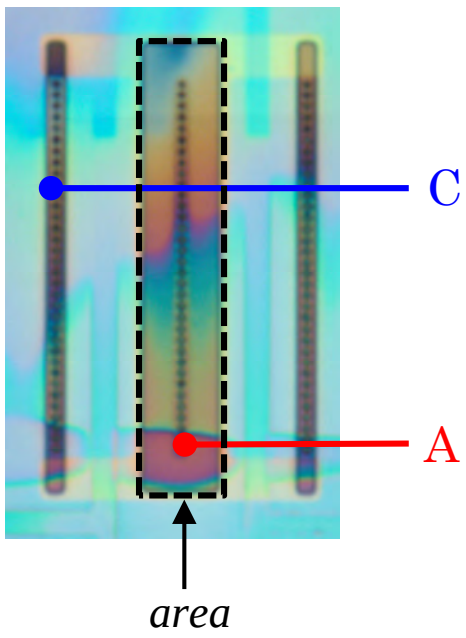


M*n*
W=*w* u
L=*l* u
M=*m*
B=*b*
mfetn3-1

n : Unit device
m : No. of devices parallel
b : Back-gate

Photo.14 MOSFET

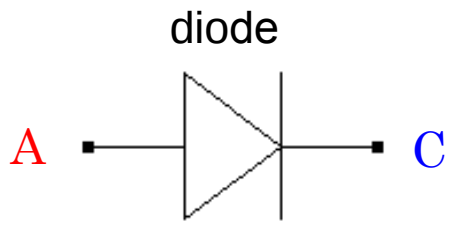
Layout



Cell Name

diode

Symbol

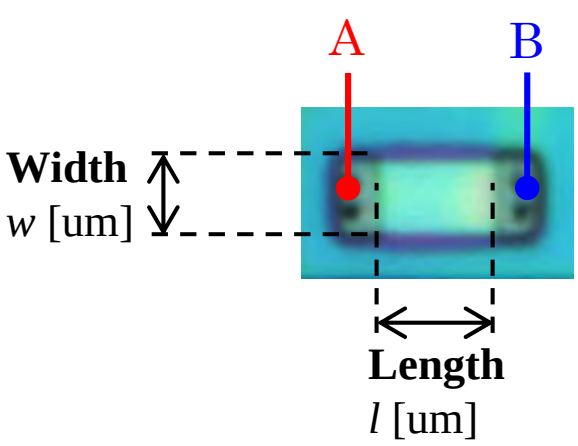


D*n*
AREA=*area*
M=*m*

area : Anode area
n : Unit device
m : No of devices parallel

Photo.15 Diode

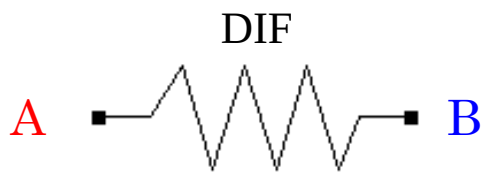
Layout



Cell Name

res

Symbol



R*n*
W=*w* u
L=*l* u
M=*m*

n : Unit device
m : No. of devices parallel

Photo.16 Resistor (Diffusion-**type**)

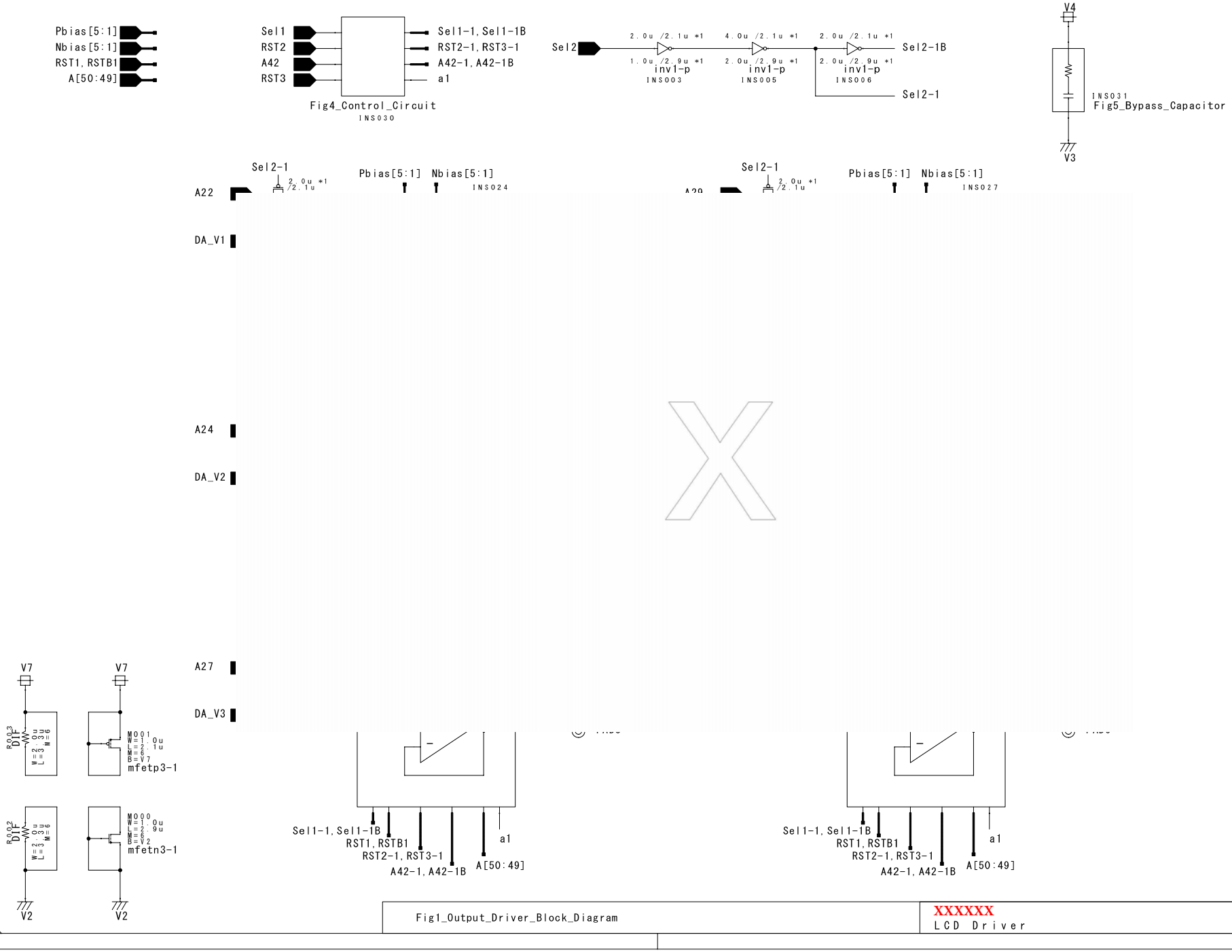


Fig1_Output_Driver_Block_Diagram

XXXXXX
LCD Driver

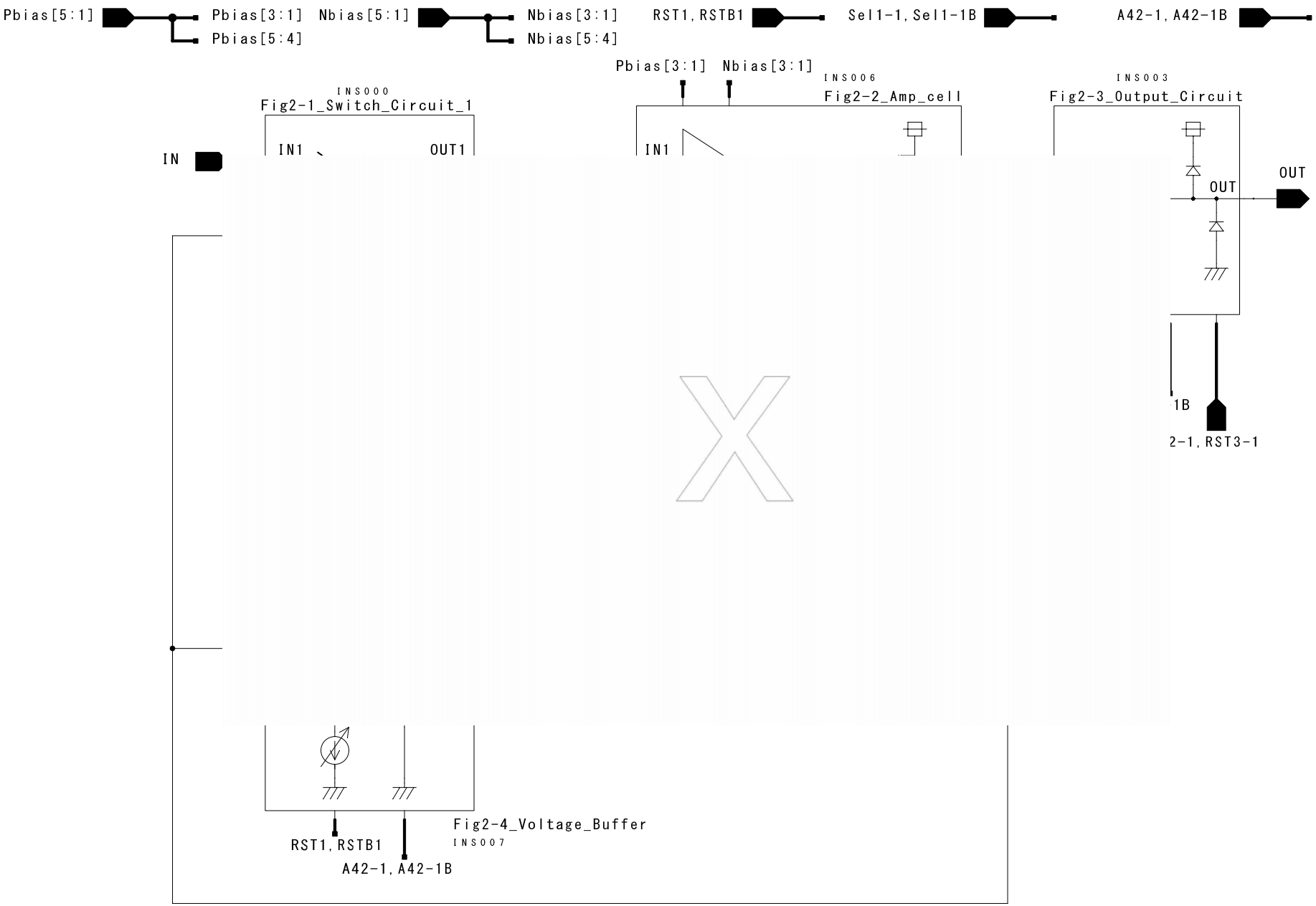


Fig2_Driver_cell_1

XXXXXX
LCD Driver

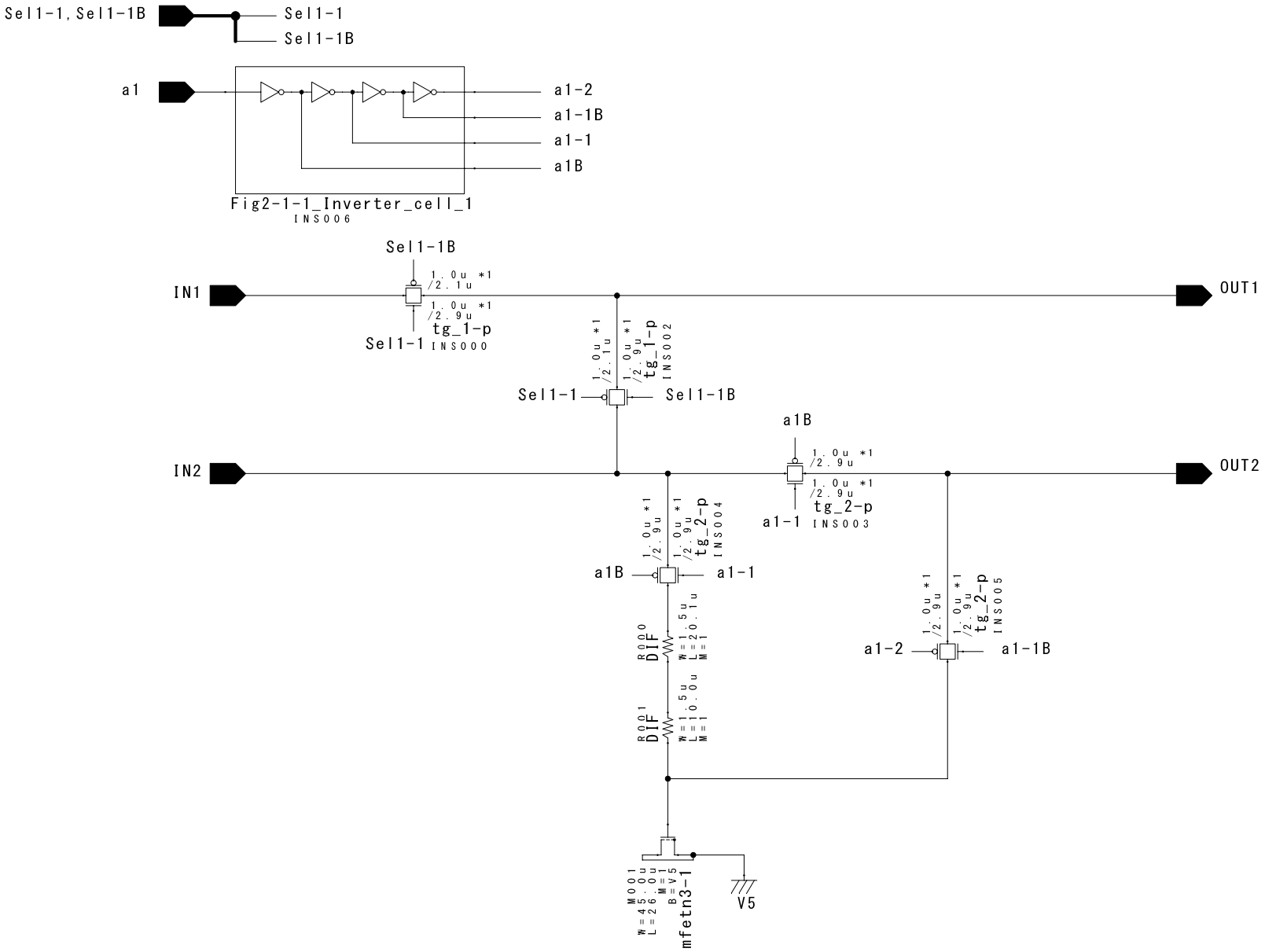


Fig2-1_Switch_Circuit_1

xxxxxx

LCD Driver

NOTE000

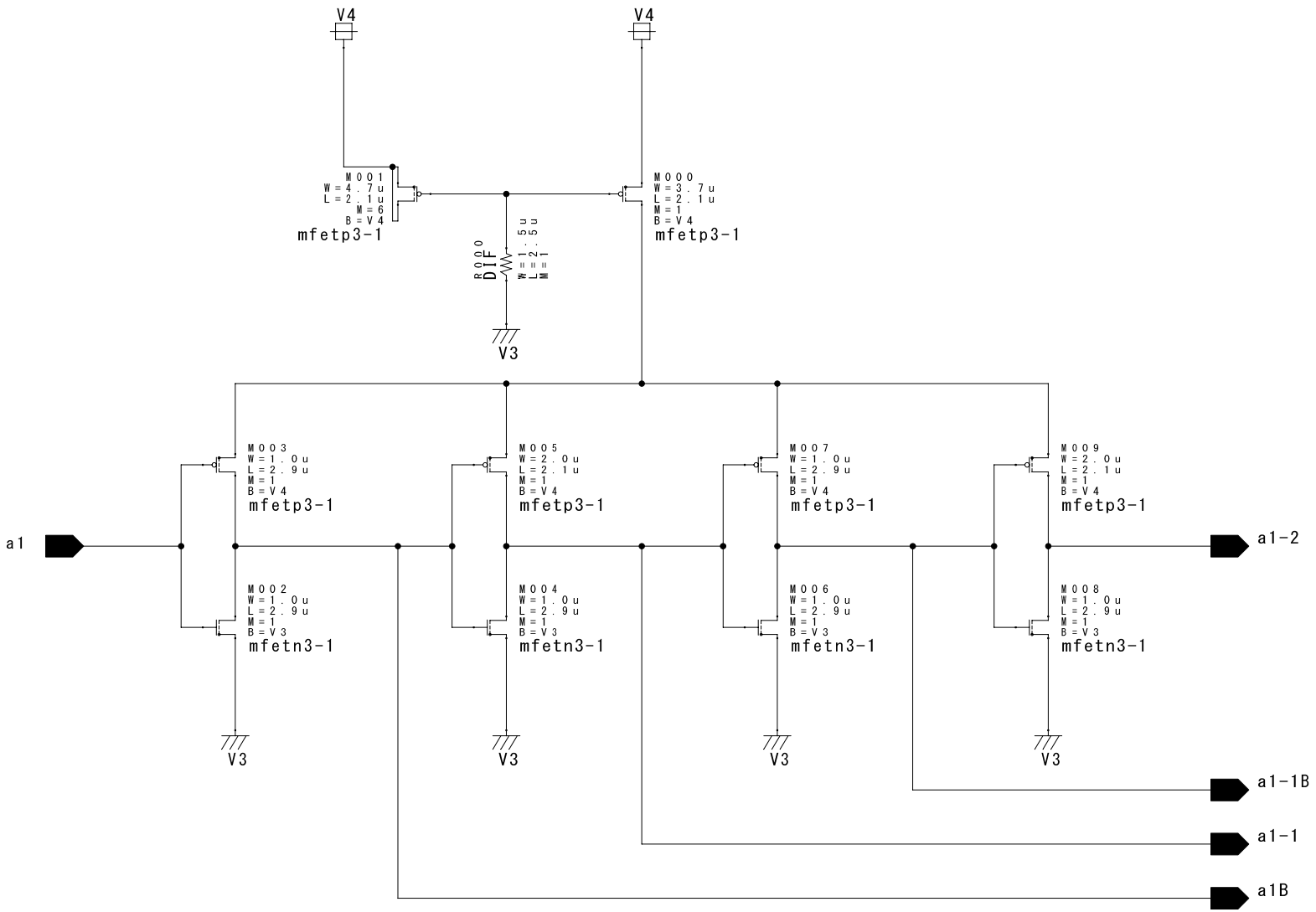


Fig2-1-1_Inverter_cell_1

xxxxxx

LCD Driver

NOTE000

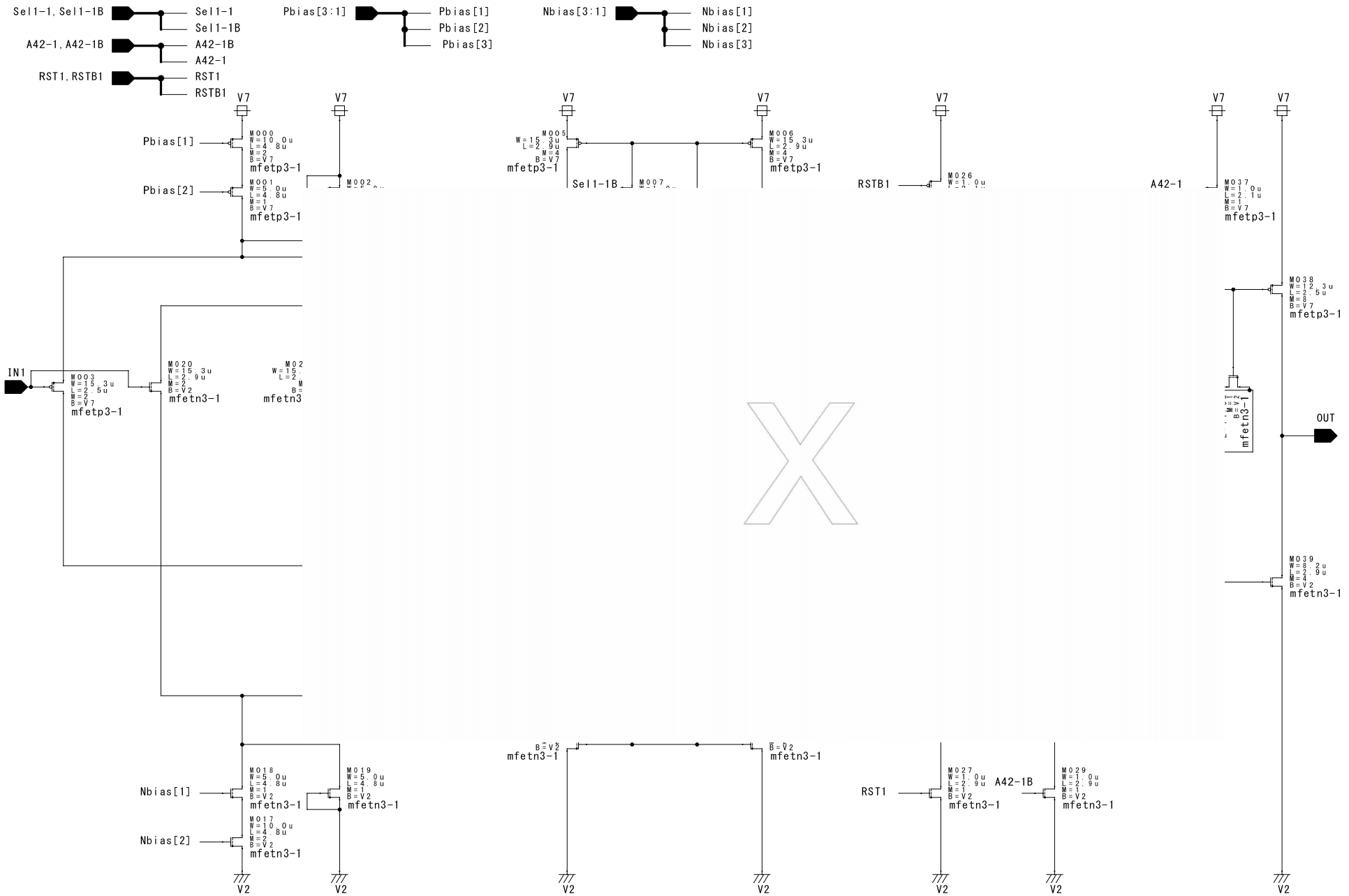


Fig2-2_Amp_cell

XXXXXX
LCD Driver

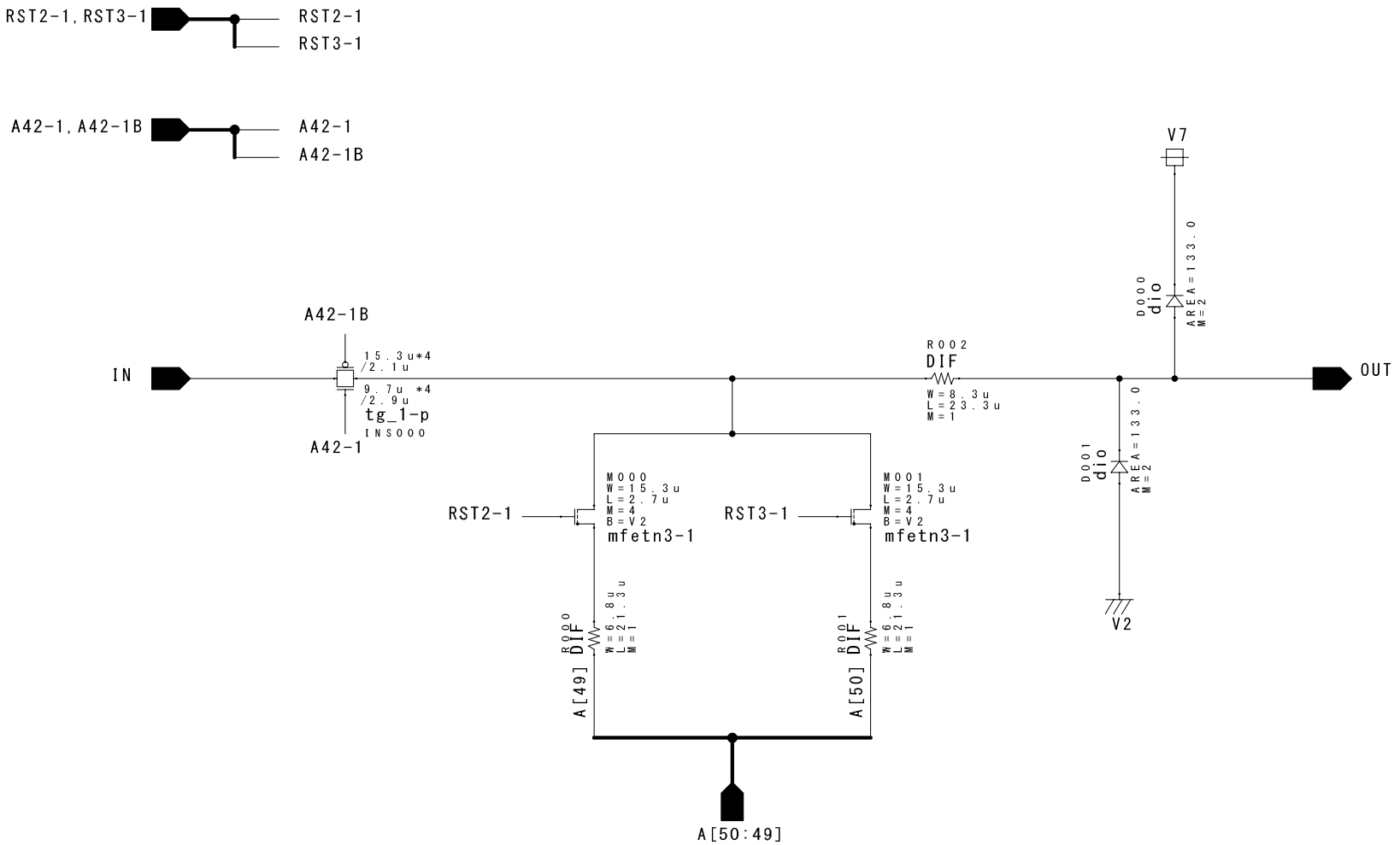


Fig2-3_Output_Circuit

xxxxxx

LCD Driver

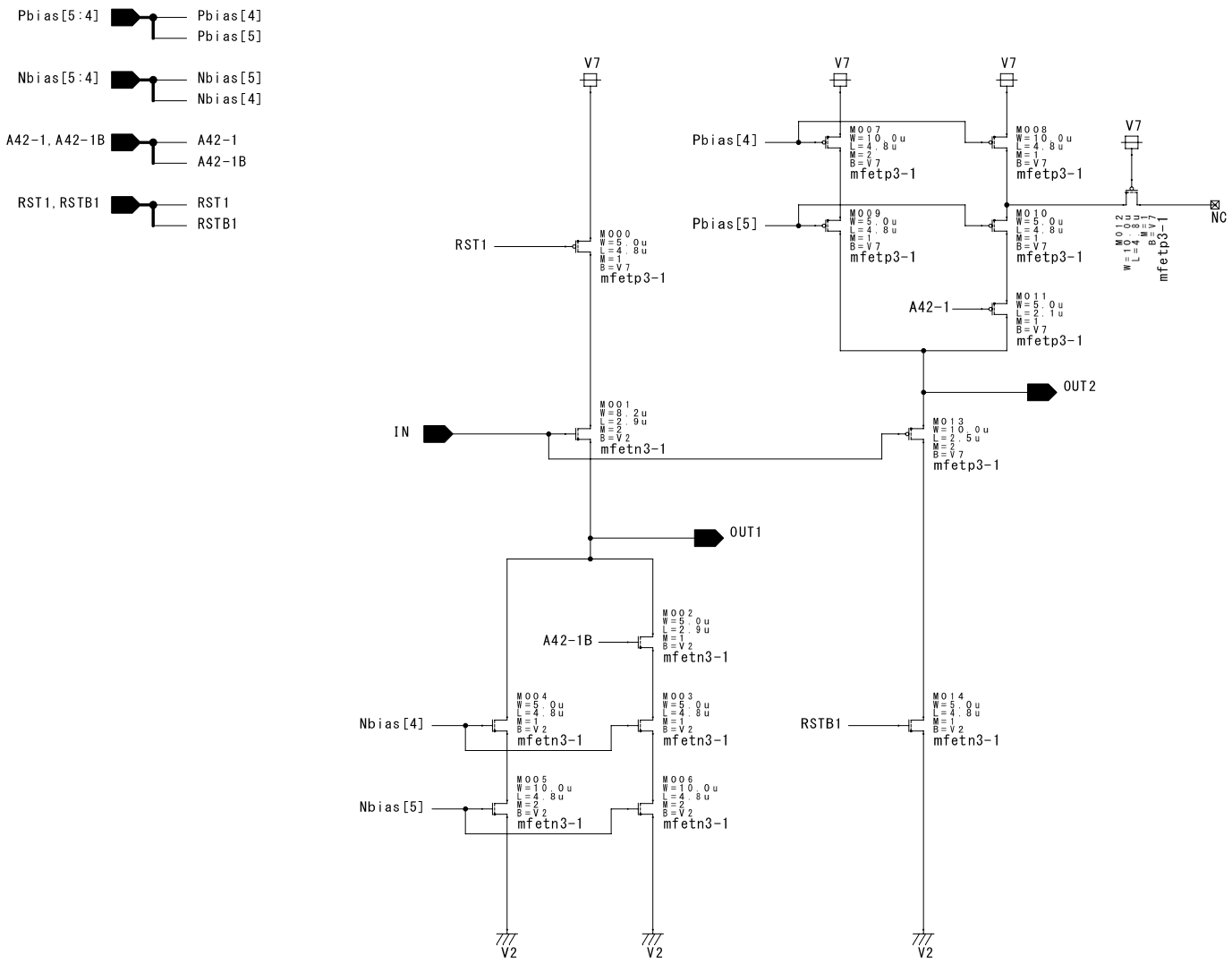


Fig2-4_Voltage_Buffer

XXXXXX

LCD Driver

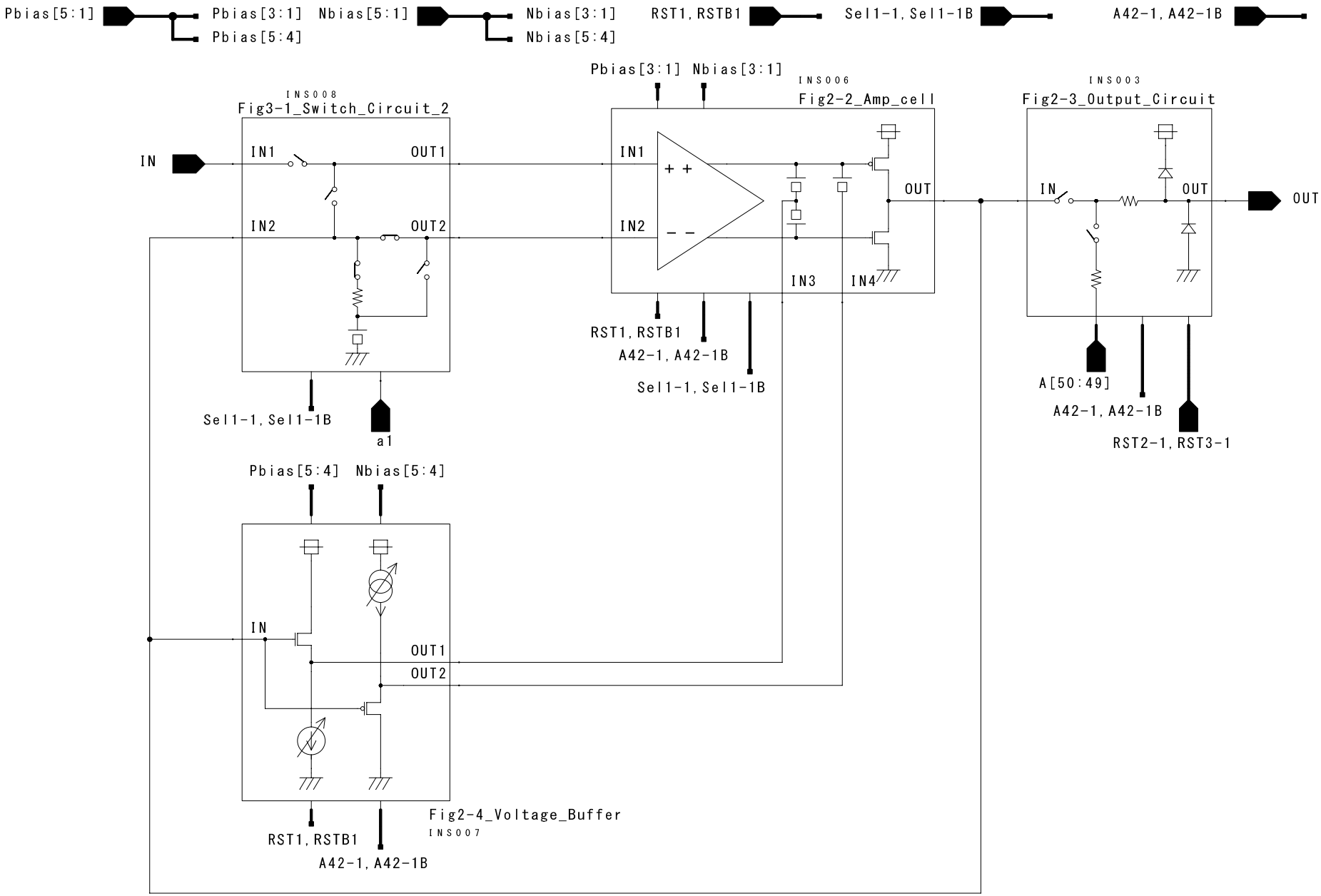


Fig3_Driver_cell_2

XXXXXX

LCD Driver

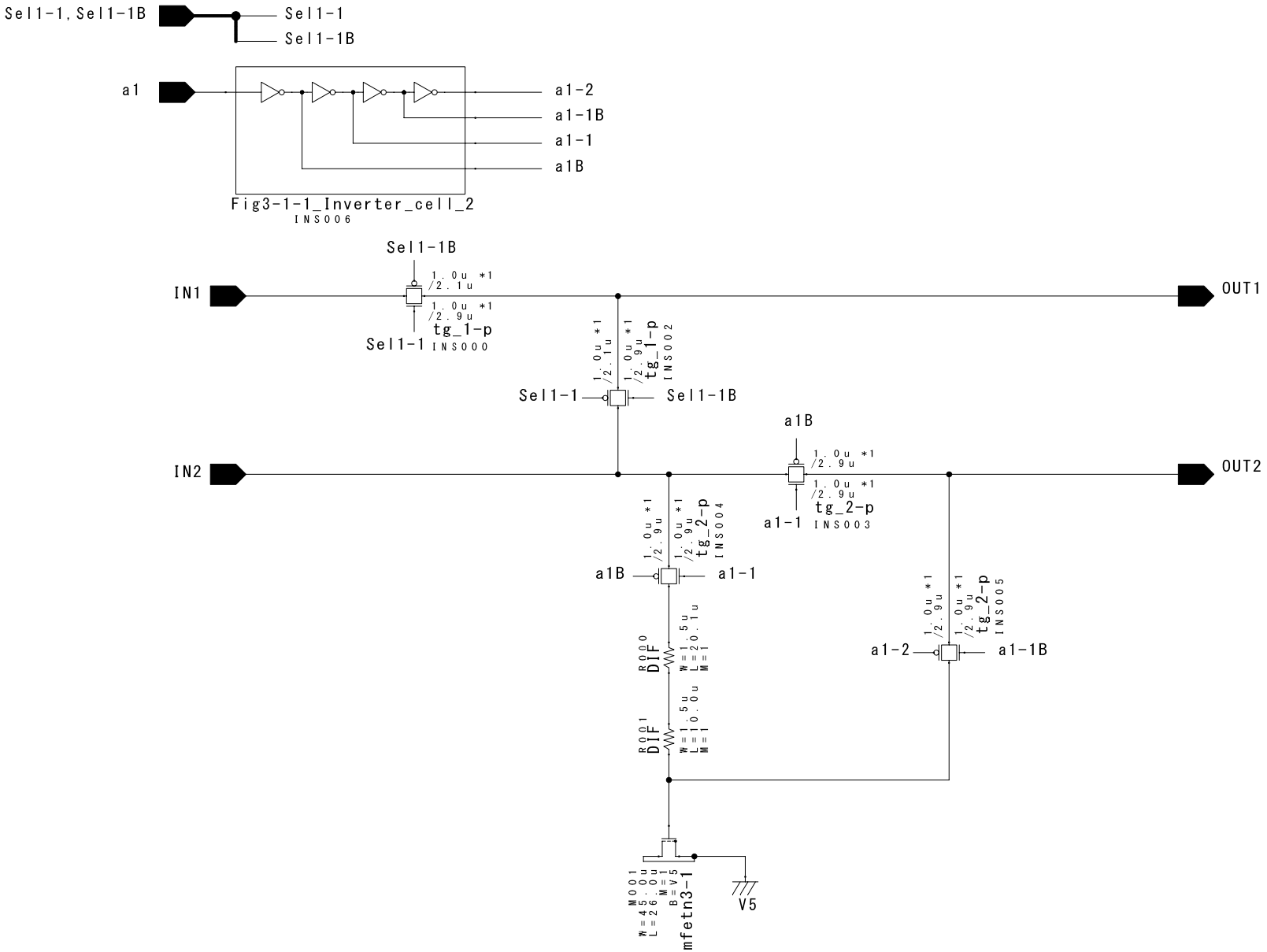


Fig3-1_Switch_Circuit_2

xxxxxx

LCD Driver

NOTE000

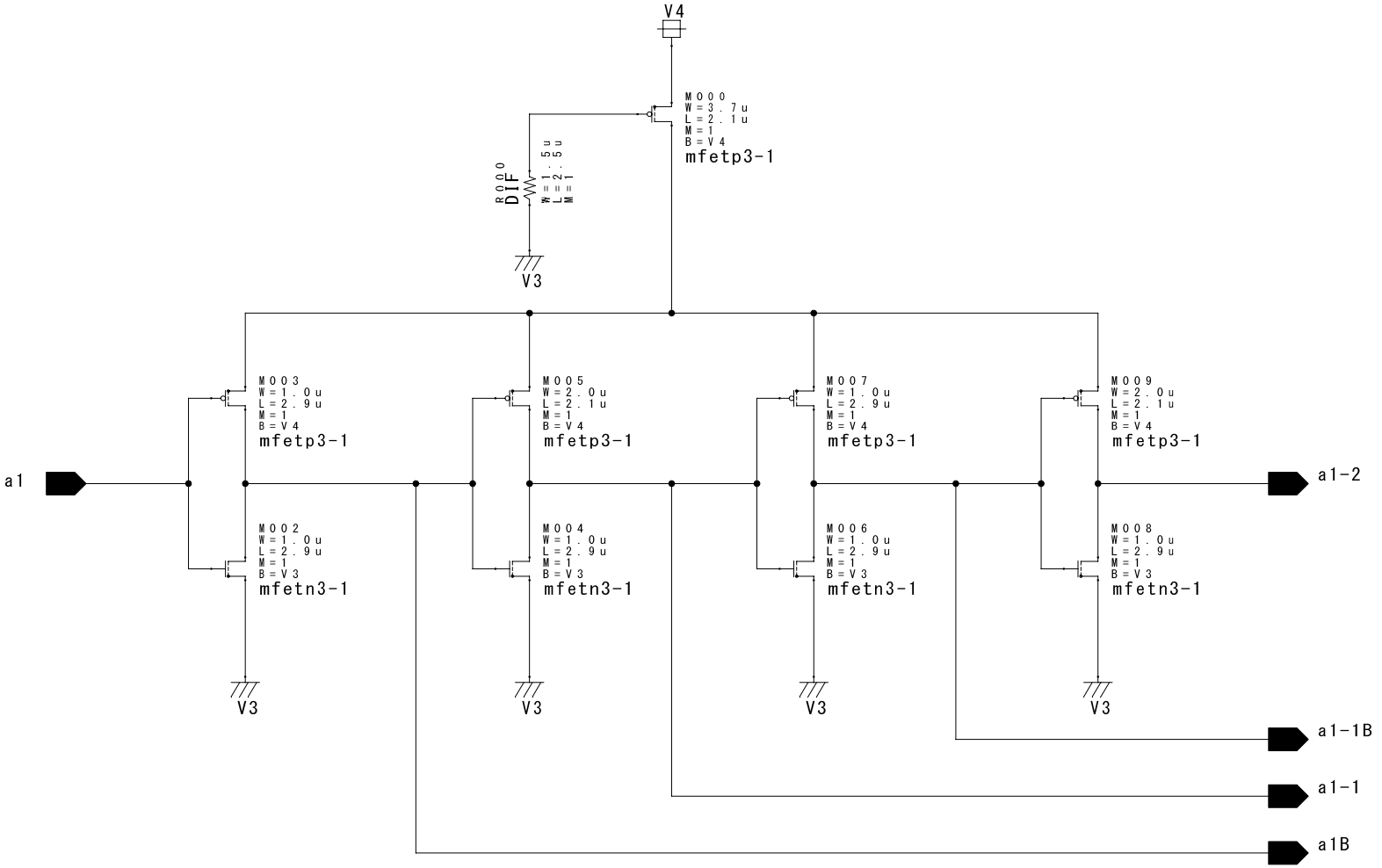


Fig3-1-1_Inverter_cell_2

XXXXXX

LCD Driver

NOTE000

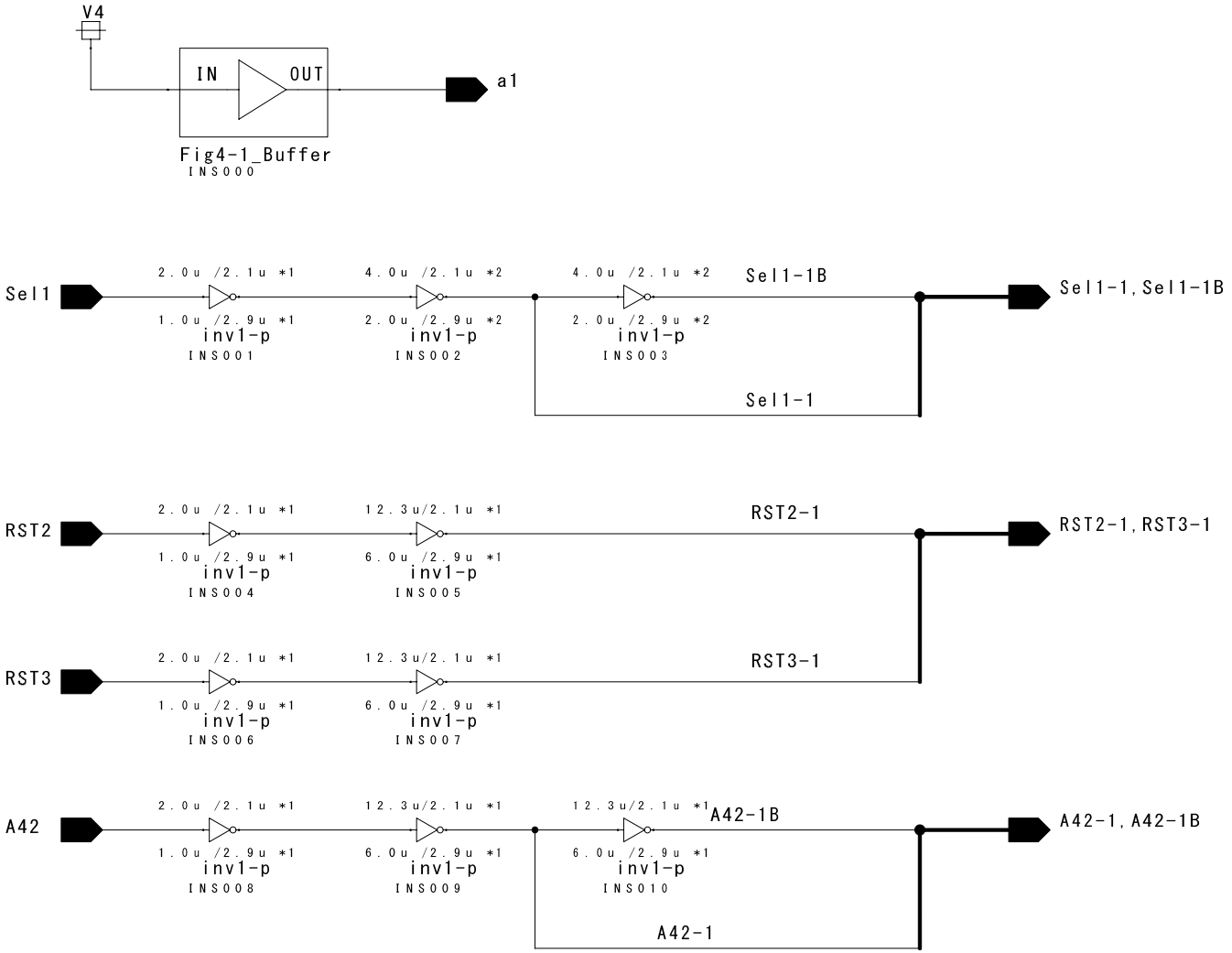


Fig4_Control_Circuit

XXXXXX

LCD Driver

NOTE000

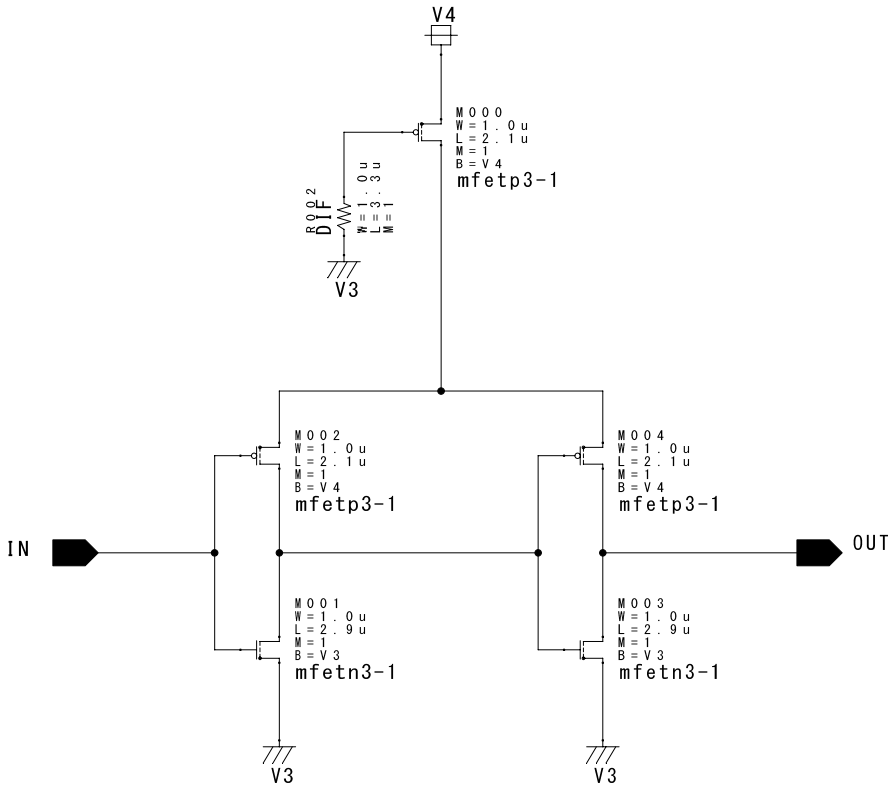


Fig4-1_Buffer

xxxxxx

LCD Driver

NOTE000