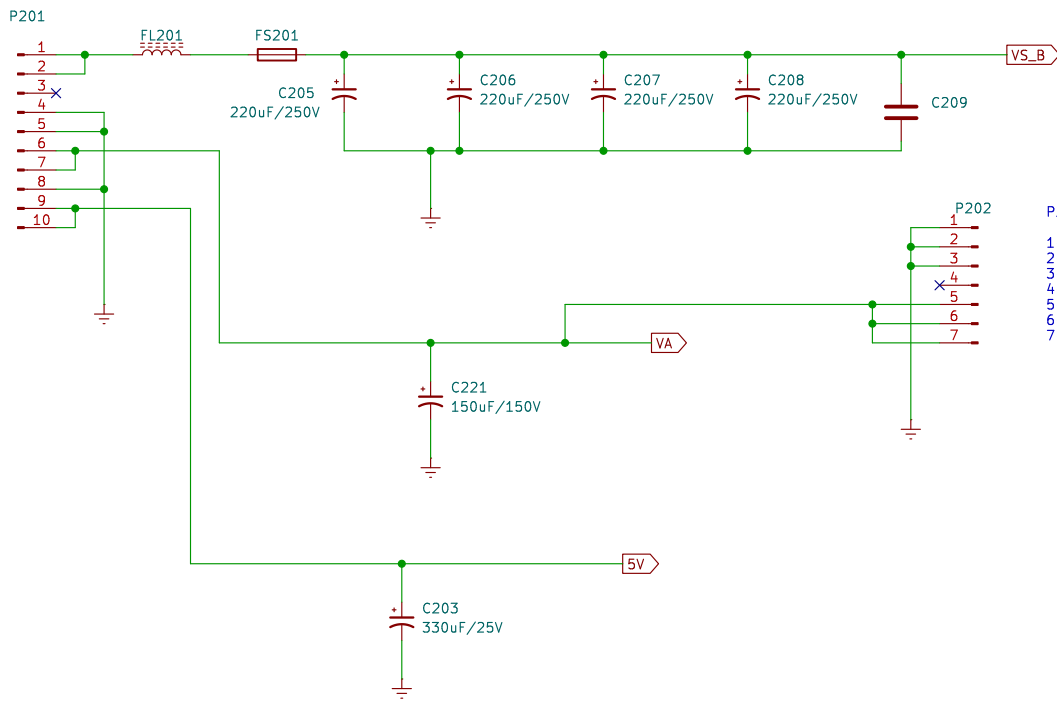


# VOLTAGES SUPPLY

P201 (Input Power Supply)

- 1- +VS
- 2- +VS
- 3- NC
- 4- GND
- 5- GND
- 6- +VA
- 7- +VA
- 8- GND
- 9- +5V
- 10- +5V



P202 (Output VA Supply)

- 1- GND
- 2- GND
- 3- GND
- 4- NC
- 5- +VA
- 6- +VA
- 7- +VA

VS Voltage supply  
Author: Fábio Pereira da Silva

Sheet: /  
File: y\_board.kicad\_sch

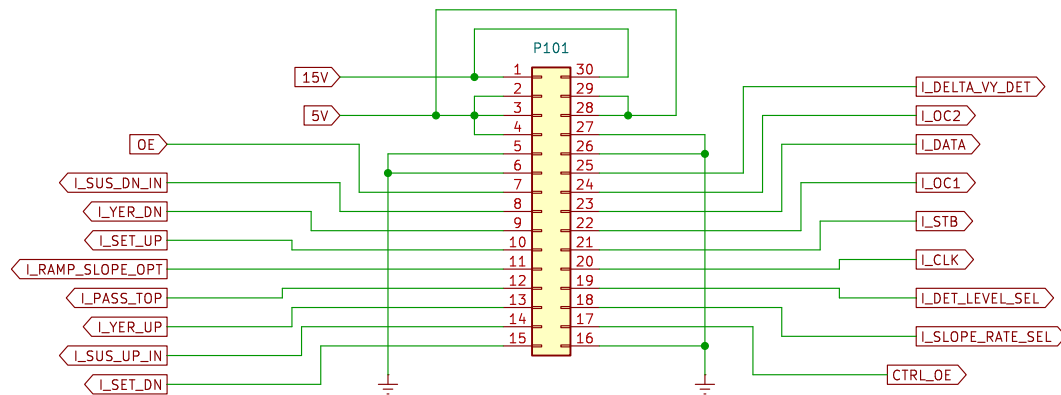
**Title: Y BOARD LG PLASMA TV PANEL**

Size: A4	Date: 2025-03-24	Rev: 1.0
KiCad E.D.A. 8.0.9		Id: 1/23

# Input Control (Part 1 of 3)

P101

1- 15V	30- 15V
2- 5V	29- 5V
3- 5V	28- 5V
4- 5V	27- GND
5- GND	26- GND
6- GND	25- (1- L_DELTA_VY_DET)
7- (2- OE)	24- (3- L_OC2)
8- (4- L_SUS_DN_IN)	23- (5- L_DATA)
9- (6- L_YER_DN)	22- (7- L_OC1)
10- (8- L_SET_UP)	21- (9- L_STB)
11- (10- L_RAMP_SLOPE_OPT)	20- (11- L_CLK)
12- (12- L_PASS_TOP)	19- (13- L_DET_LEVEL_SEL)
13- (14- L_YER_UP)	18- (15- L_SLOPE_RATE_SEL)
14- (16- L_SUS_UP_IN)	17- (17- L_CTRL_OE)
15- (18- L_SET_DN)	16- GND



Input Control (Part 1 of 3)  
Author: Fábio Pereira da Silva

Sheet: /Input control (Part 1 of 3)/  
File: input\_control.kicad\_sch

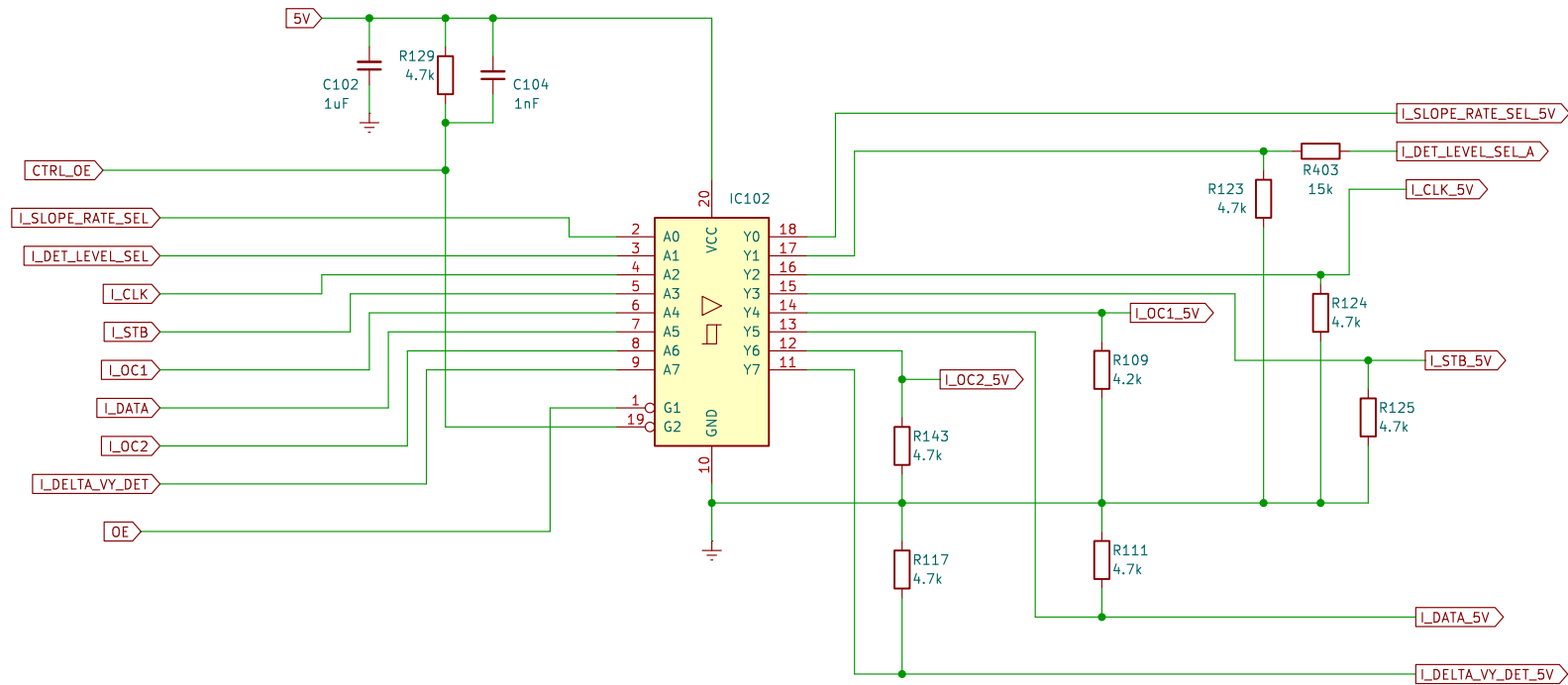
**Title: Y BOARD LG PLASMA TV PANEL**

Size: A4  
KiCad E.D.A. 8.0.9

Date: 2025-03-24

Rev: 1.0  
Id: 2/23

## Input Control (Part 2 of 3)



Input Control (Part 2 of 3)  
Author: Fábio Pereira da Silva

Sheet: /Input control (Part 2 of 3)/  
File: input\_control2.kicad\_sch

**Title: Y BOARD LG PLASMA TV PANEL**

Size: A4

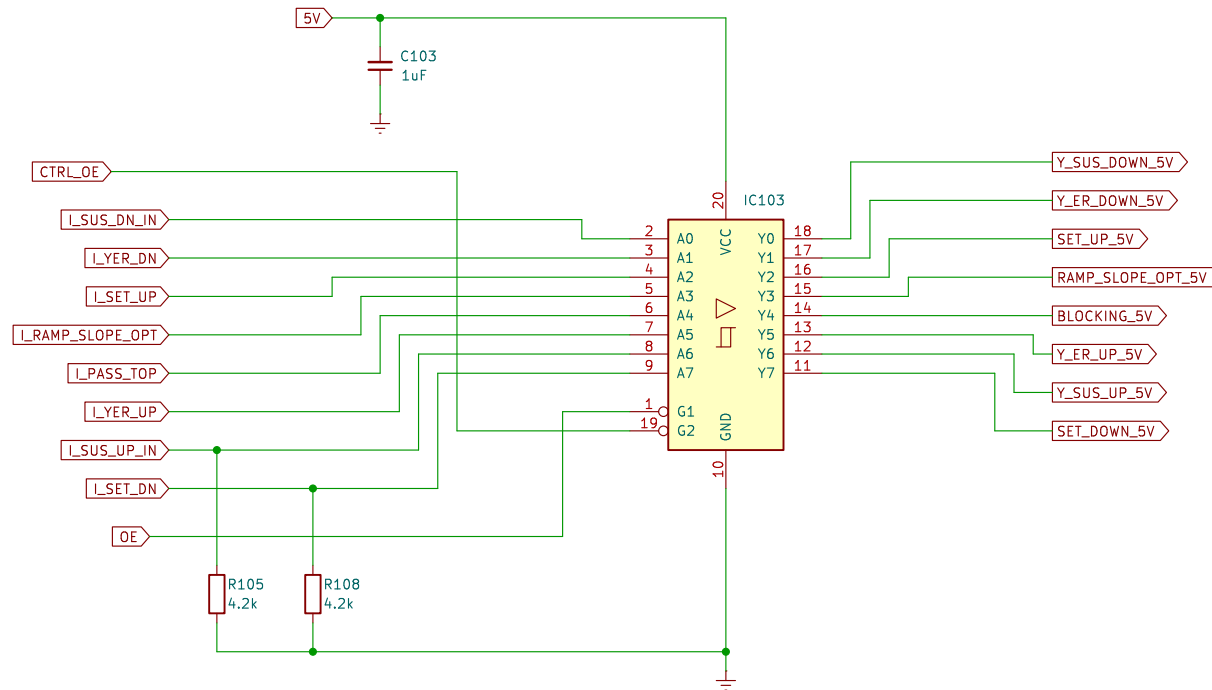
Date: 2025-03-24

Rev: 1.0

KiCad E.D.A. 8.0.9

Id: 3/23

# Input Control (Part 3 of 3)



Input Control (Part 3 of 3)  
Author: Fábio Pereira da Silva

Sheet: /Input control (Part 3 of 3)/  
File: input\_control3.kicad\_sch

**Title: Y BOARD LG PLASMA TV PANEL**

Size: A4

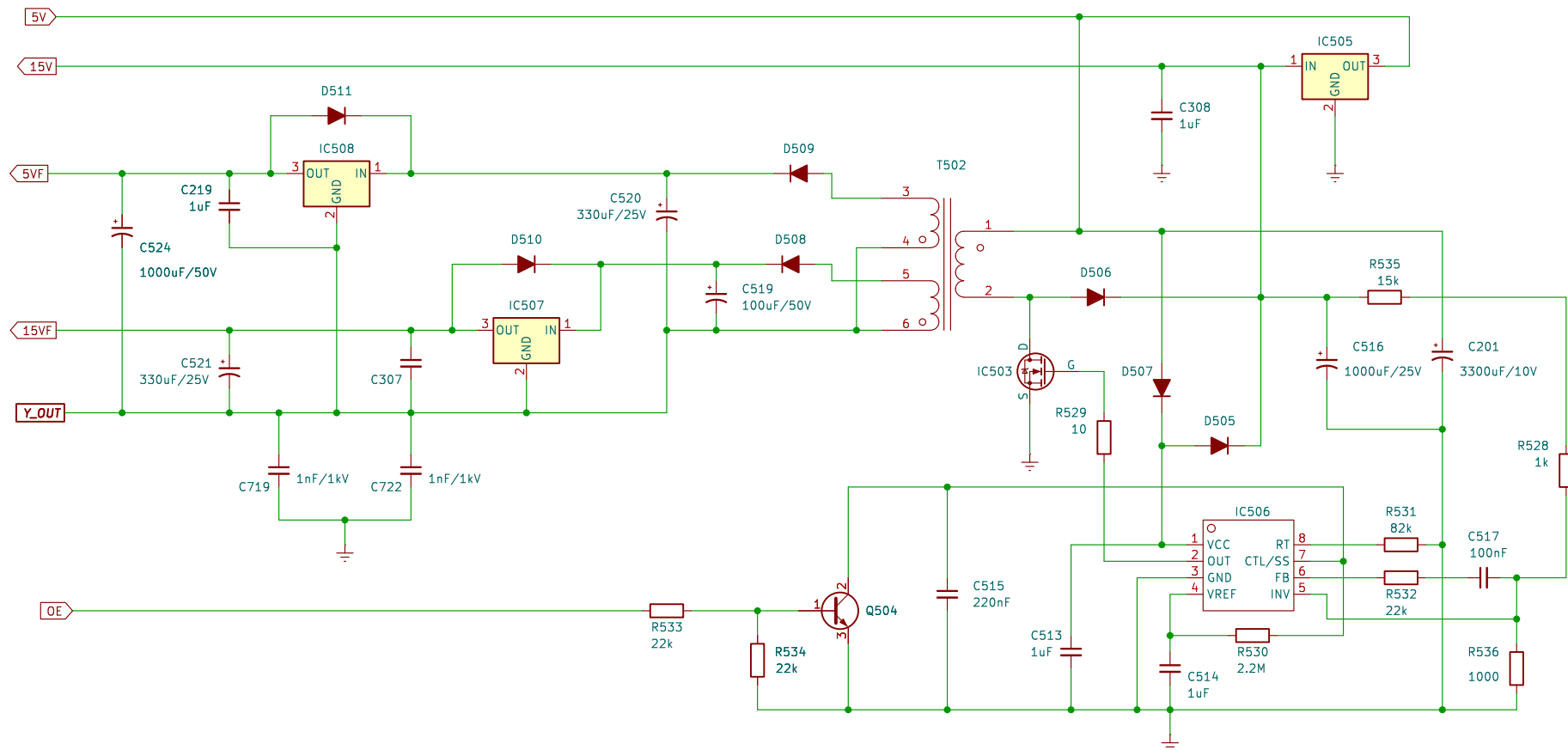
Date: 2025-03-24

Rev: 1.0

KiCad E.D.A. 8.0.9

Id: 4/23

# 5VF, 15VF and 15V Supply



5VF, 15VF and 15V Supply  
 Author: Fábio Pereira da Silva

Sheet: /5VF, 15VF 15v/  
 File: 5VF\_15VF\_15V.kicad\_sch

**Title: Y BOARD LG PLASMA TV PANEL**

Size: A4 Date: 2025-03-24

KiCad E.D.A. 8.0.9

**Rev: 1.0**

Id: 5/23

# VSC and VY (Part 1 of 3)

This schematic diagram illustrates the VSC and VY sections of a Y BOARD LG PLASMA TV PANEL. The circuit includes several input signals (VSC\_A, VY\_A, VY, Y\_OUT, 15VYF, 15V) and a 15V power supply. Key components include:

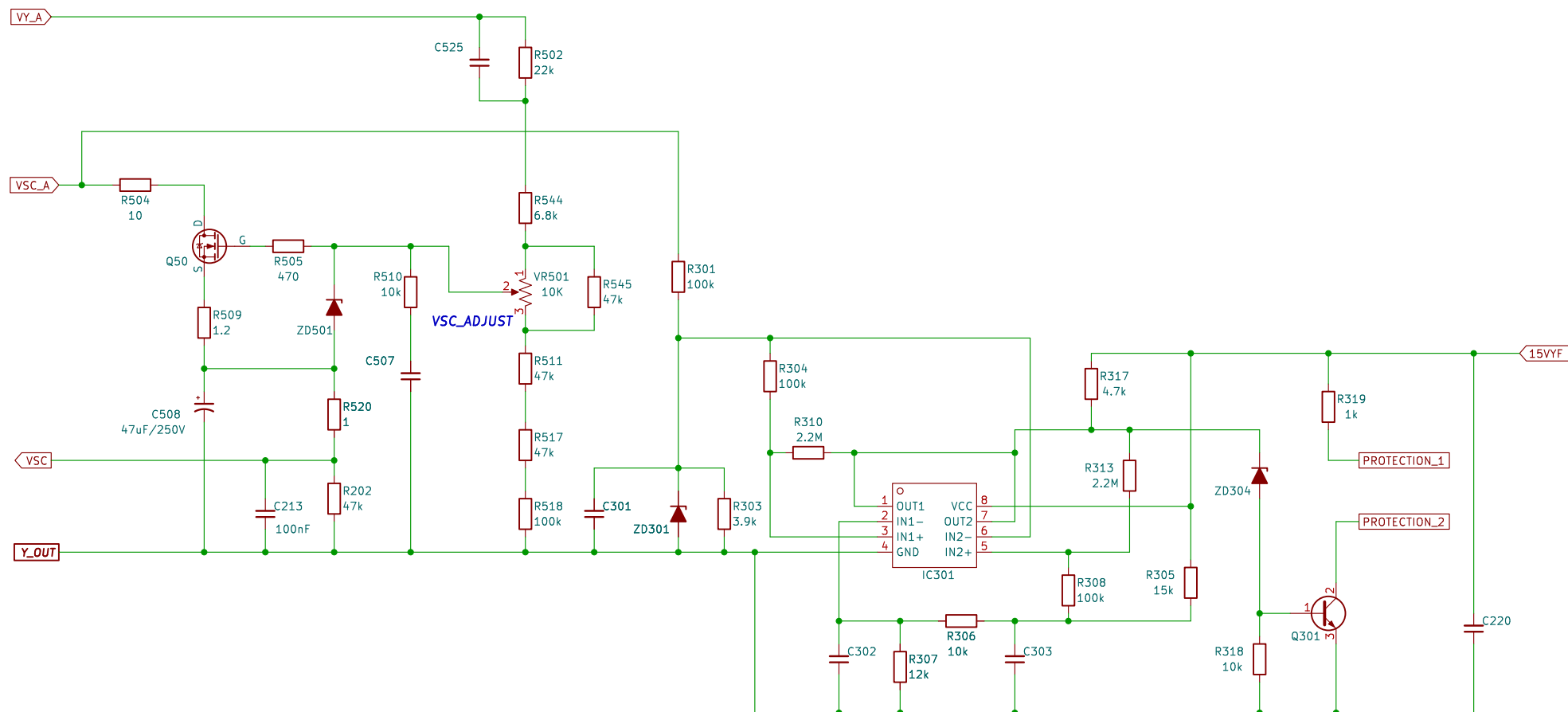
- IC501:** A 6-pin integrated circuit with pins labeled ADJ, VCC, HV, FB, DRV, and CS.
- IC502:** A 4-pin integrated circuit with pins labeled 1, 2, 3, and 4.
- IC504:** A 4-pin integrated circuit with pins labeled 1, 2, 3, and 4.
- Q501, Q502, Q503, Q504, Q505, Q506, Q507:** Various transistors and diodes used for signal processing and power regulation.
- R501, R502, R503, R504, R505, R506, R507, R508, R509, R510, R511, R512, R513, R514, R515, R516, R517, R518, R519, R520, R521, R522, R523, R524, R525, R526, R527, R528, R529, R530, R531, R532, R533, R534, R535, R536, R537, R538, R539, R540, R541, R542, R543, R544, R545, R546, R547, R548, R549, R550, R551, R552, R553, R554, R555, R556, R557, R558, R559, R560, R561, R562, R563, R564, R565, R566, R567, R568, R569, R570, R571, R572, R573, R574, R575, R576, R577, R578, R579, R580, R581, R582, R583, R584, R585, R586, R587, R588, R589, R590, R591, R592, R593, R594, R595, R596, R597, R598, R599, R600, R601, R602, R603, R604, R605, R606, R607, R608, R609, R610, R611, R612, R613, R614, R615, R616, R617, R618, R619, R620, R621, R622, R623, R624, R625, R626, R627, R628, R629, R630, R631, R632, R633, R634, R635, R636, R637, R638, R639, R640, R641, R642, R643, R644, R645, R646, R647, R648, R649, R650, R651, R652, R653, R654, R655, R656, R657, R658, R659, R660, R661, R662, R663, R664, R665, R666, R667, R668, R669, R670, R671, R672, R673, R674, R675, R676, R677, R678, R679, R680, R681, R682, R683, R684, R685, R686, R687, R688, R689, R690, R691, R692, R693, R694, R695, R696, R697, R698, R699, R700, R701, R702, R703, R704, R705, R706, R707, R708, R709, R710, R711, R712, R713, R714, R715, R716, R717, R718, R719, R720, R721, R722, R723, R724, R725, R726, R727, R728, R729, R730, R731, R732, R733, R734, R735, R736, R737, R738, R739, R740, R741, R742, R743, R744, R745, R746, R747, R748, R749, R750, R751, R752, R753, R754, R755, R756, R757, R758, R759, R760, R761, R762, R763, R764, R765, R766, R767, R768, R769, R770, R771, R772, R773, R774, R775, R776, R777, R778, R779, R780, R781, R782, R783, R784, R785, R786, R787, R788, R789, R790, R791, R792, R793, R794, R795, R796, R797, R798, R799, R800, R801, R802, R803, R804, R805, R806, R807, R808, R809, R810, R811, R812, R813, R814, R815, R816, R817, R818, R819, R820, R821, R822, R823, R824, R825, R826, R827, R828, R829, R830, R831, R832, R833, R834, R835, R836, R837, R838, R839, R840, R841, R842, R843, R844, R845, R846, R847, R848, R849, R850, R851, R852, R853, R854, R855, R856, R857, R858, R859, R860, R861, R862, R863, R864, R865, R866, R867, R868, R869, R870, R871, R872, R873, R874, R875, R876, R877, R878, R879, R880, R881, R882, R883, R884, R885, R886, R887, R888, R889, R890, R891, R892, R893, R894, R895, R896, R897, R898, R899, R900, R901, R902, R903, R904, R905, R906, R907, R908, R909, R910, R911, R912, R913, R914, R915, R916, R917, R918, R919, R920, R921, R922, R923, R924, R925, R926, R927, R928, R929, R930, R931, R932, R933, R934, R935, R936, R937, R938, R939, R940, R941, R942, R943, R944, R945, R946, R947, R948, R949, R950, R951, R952, R953, R954, R955, R956, R957, R958, R959, R960, R961, R962, R963, R964, R965, R966, R967, R968, R969, R970, R971, R972, R973, R974, R975, R976, R977, R978, R979, R980, R981, R982, R983, R984, R985, R986, R987, R988, R989, R990, R991, R992, R993, R994, R995, R996, R997, R998, R999, R1000.**

**Metadata:**

- Sheet: /VSC AND VY (Part 1 of 3)/
- File: vsc\_and\_vy.kicad\_sch
- Title: Y BOARD LG PLASMA TV PANEL
- Size: A4
- Date: 2025-03-24
- KiCad E.D.A. 8.0.9
- Rev: 1.0
- Id: 6/23

Rev: 1.0  
Id: 6/23

# VSC and VY (Part 2 of 3)



VSC and VY (Part 2 of 3)  
Author: Fábio Pereira da Silva

Sheet: /VSC and VY (Part 2 of 3)/  
File: vcs\_and\_vy\_part2\_of\_3.kicad\_sch

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Size: A4

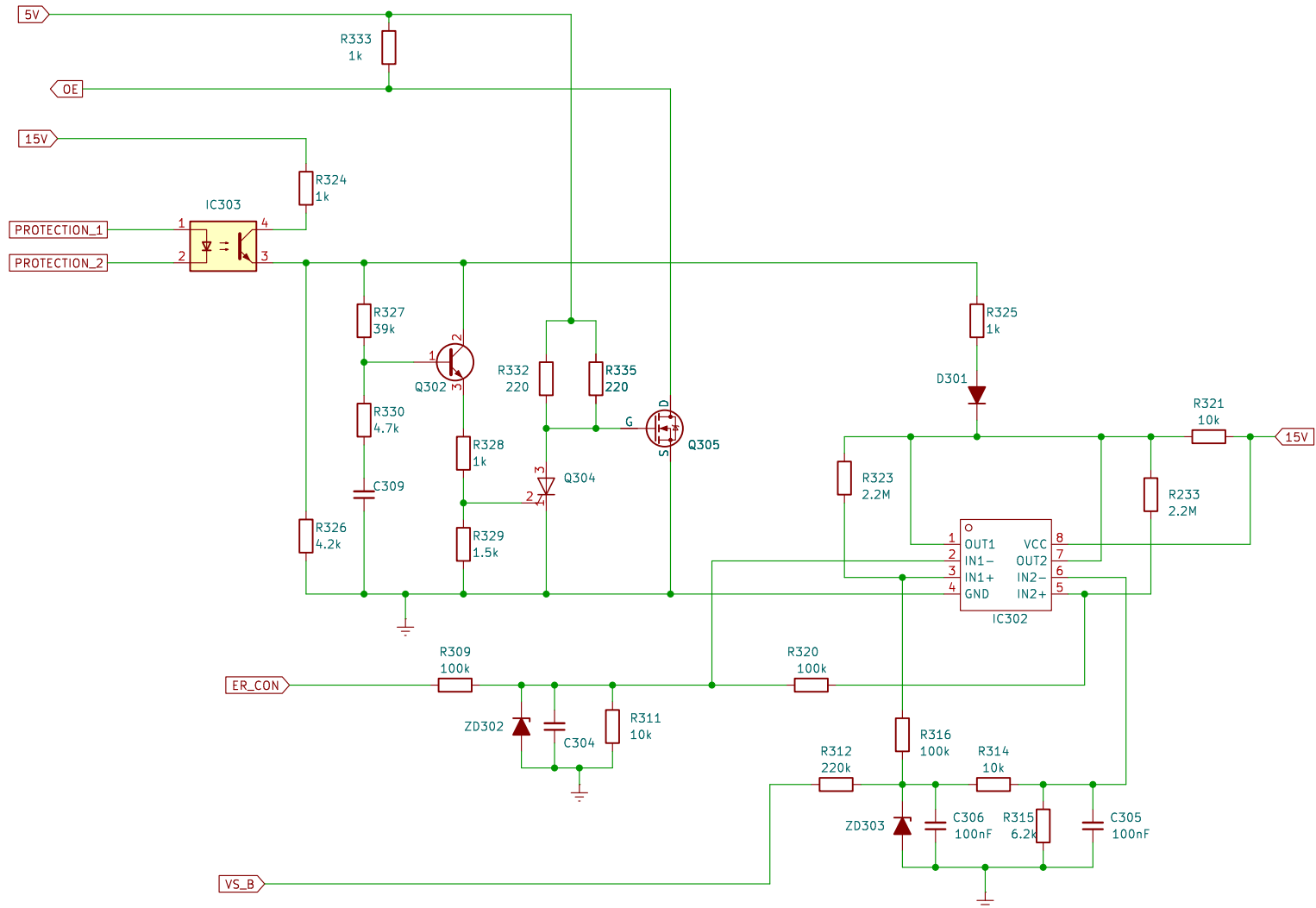
Date: 2025-03-24

KiCad E.D.A. 8.0.9

Rev: 1.0

Id: 7/23

# VSC and VY (Part 3 of 3)



Author: Fábio Pereira da Silva

Sheet: /VSC and VY (Part 3 of 3)/  
File: vsc\_and\_vy\_part3\_of\_3.kicad\_sch

**Title: Y BOARD LG PLASMA TV PANEL**

Size: A4

Date: 2025-03-24

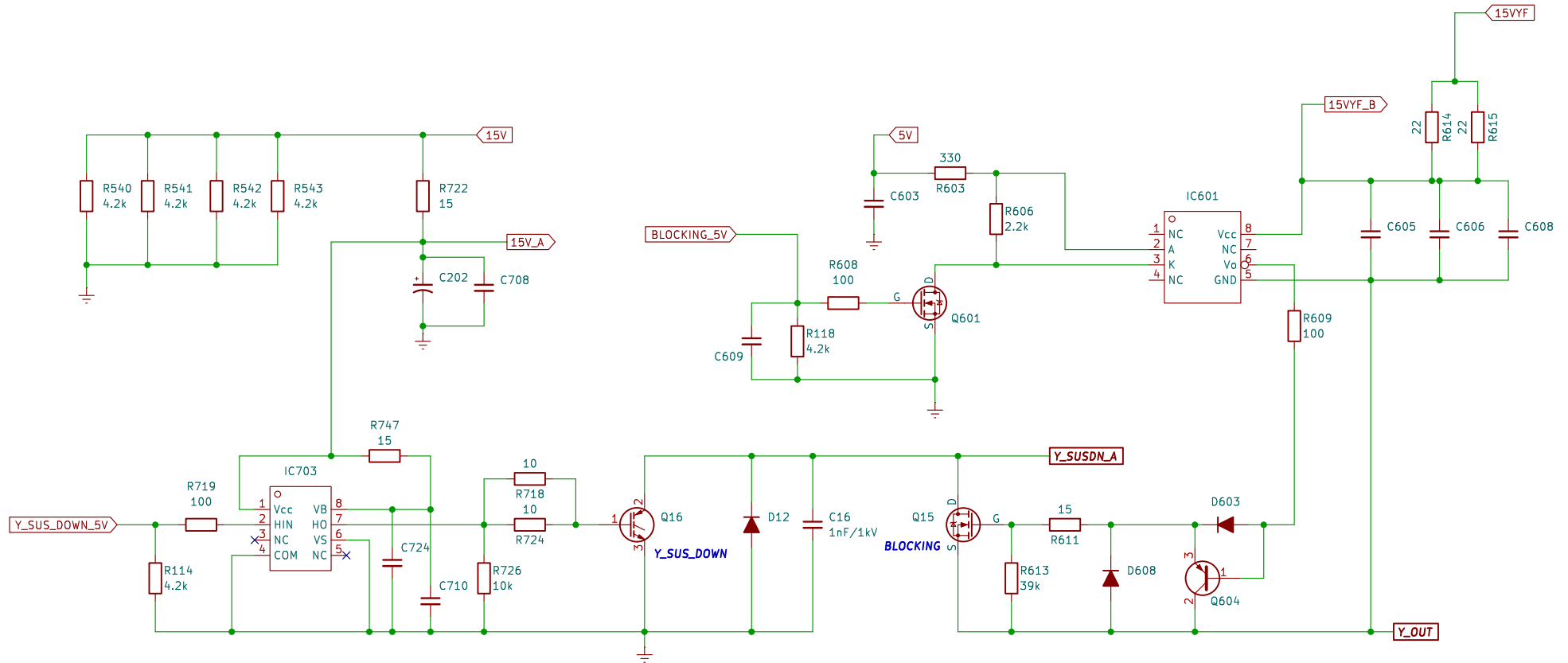
Rev: 1.0

KiCad E.D.A. 8.0.9

Id: 8/23



# Y BLOCKING AND Y SUS DOWN



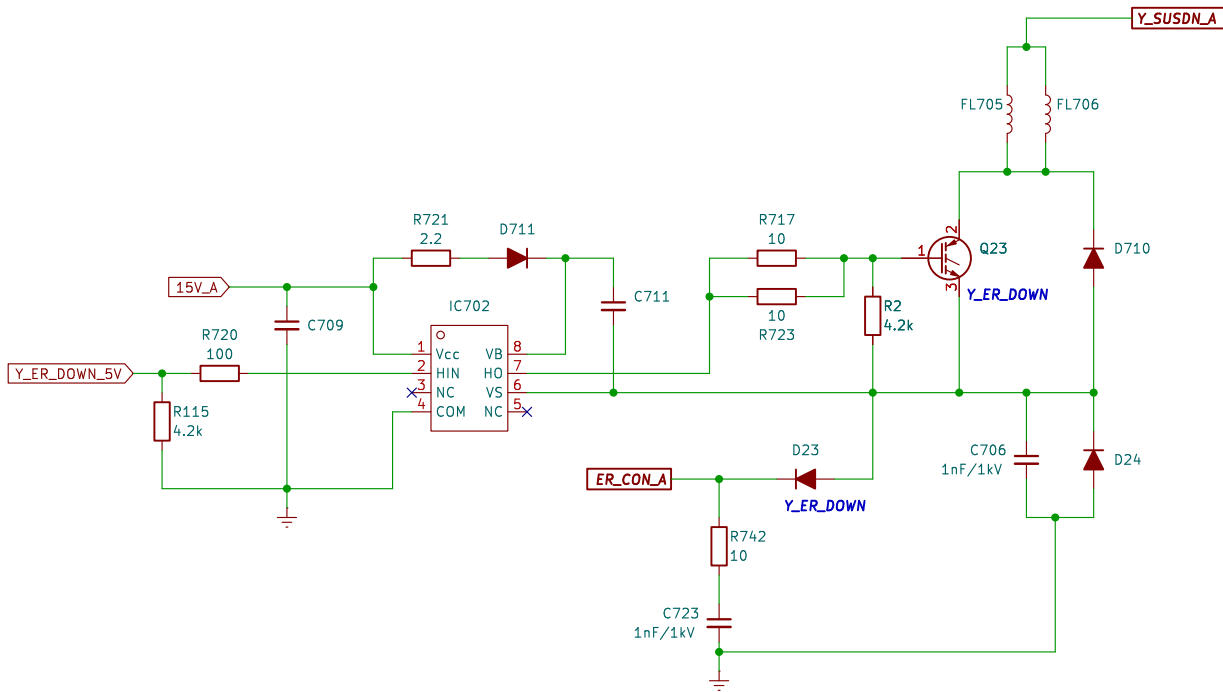
Y\_BLOCKING | Y\_SUS\_DOWN  
 Author: Fábio Pereira da Silva

Sheet: /Y\_SUS\_DOWN\_AND\_Y\_BLOCKING/  
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**Title: Y BOARD LG PLASMA TV PANEL**

Size: A4	Date: 2025-03-24	Rev: 1.0
KiCad E.D.A. 8.0.9		Id: 9/23

## Y ENERGY RECOVERY DOWN



Y ER DOWN

Author: Fábio Pereira da Silva

Sheet: /y\_er\_down/

File: y\_er\_down.kicad\_sch

**Title: Y BOARD LG PLASMA TV PANEL**

Size: A4

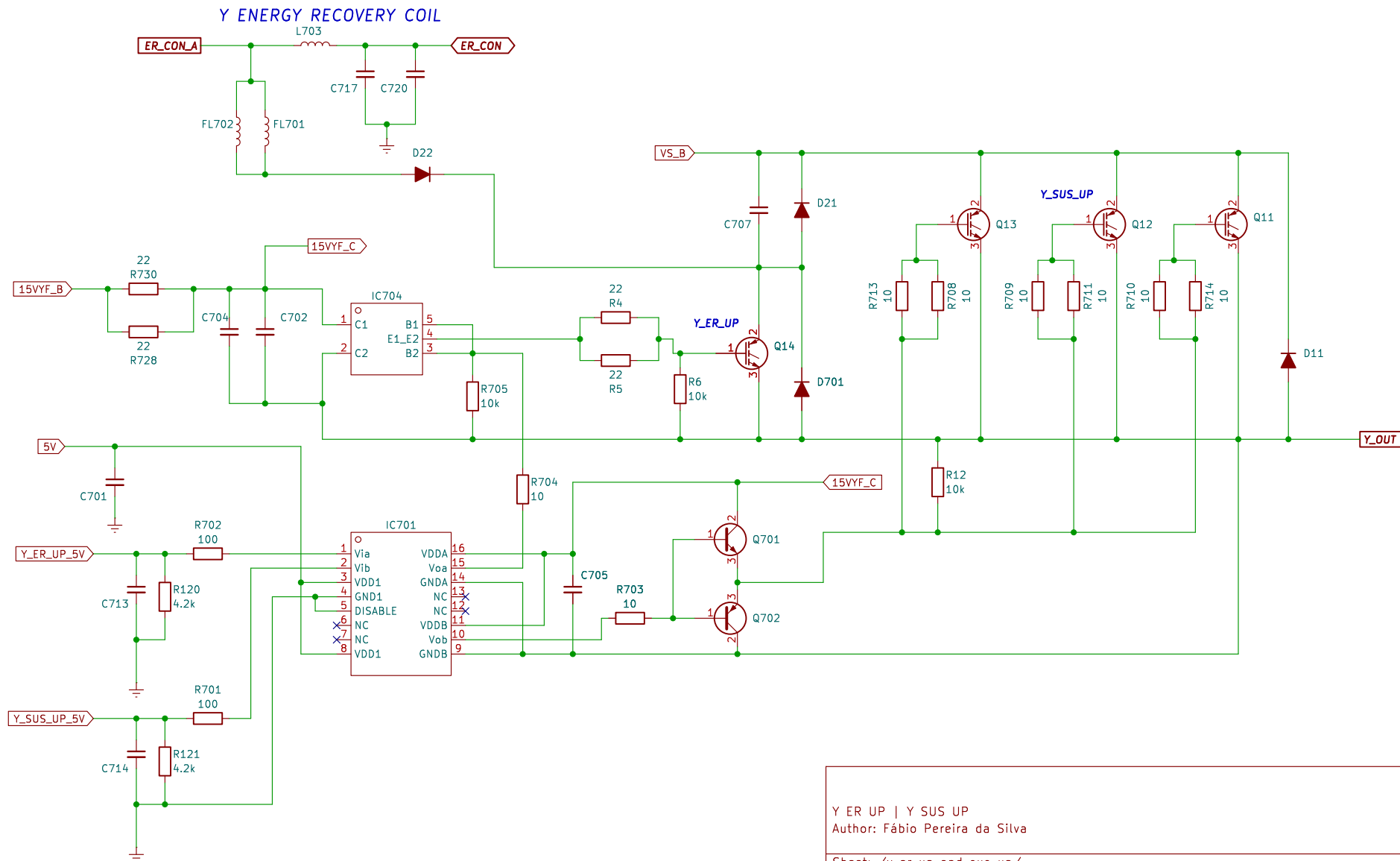
Date: 2025-03-24

KiCad E.D.A. 8.0.9

Rev: 1.0

Id: 10/23

# Y ENERGY RECOVERY UP AND Y SUS UP



Y ER UP | Y SUS UP  
 Author: Fábio Pereira da Silva

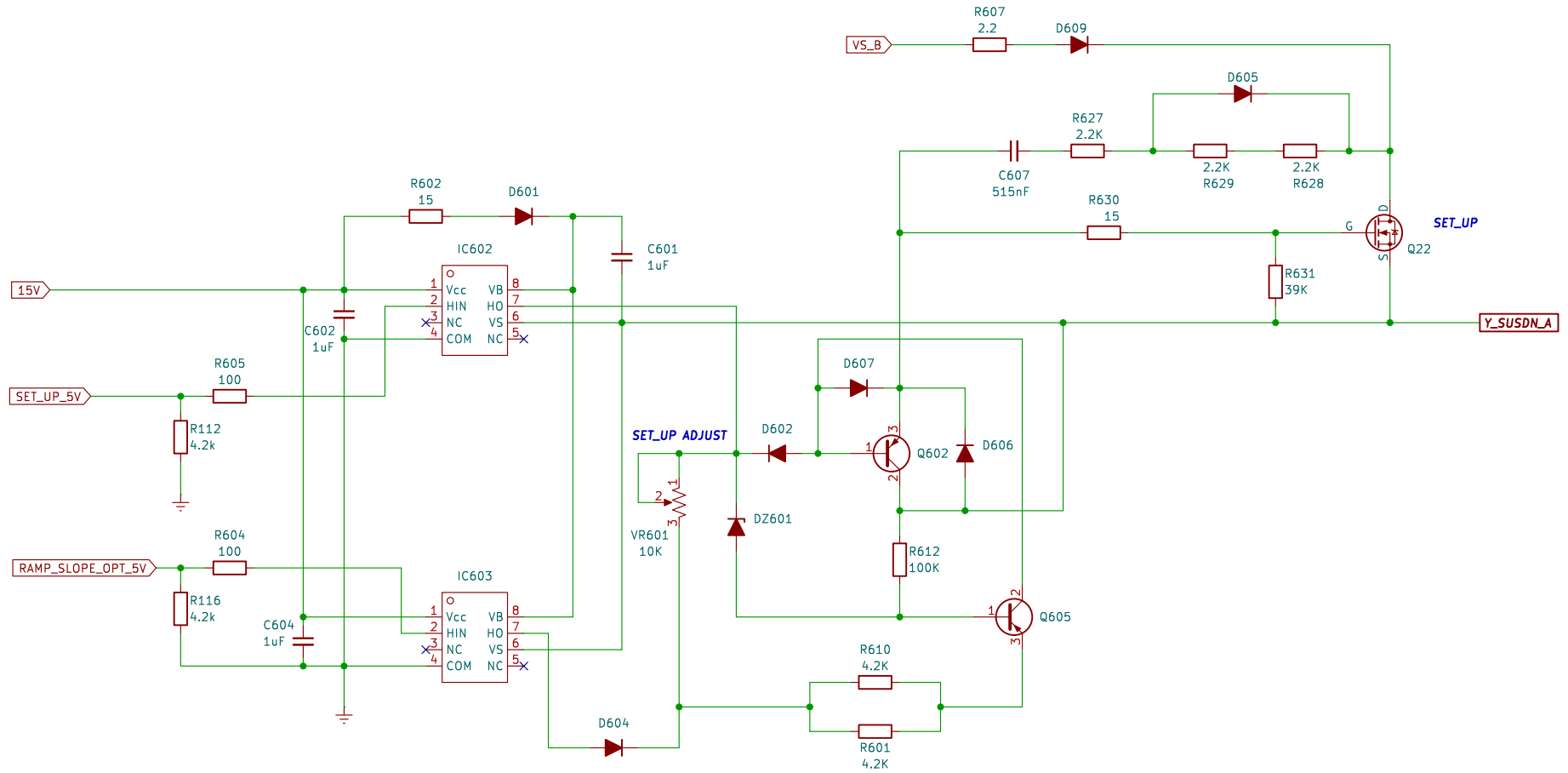
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**Title: Y BOARD LG PLASMA TV PANEL**

Size: A4 Date: 2025-03-24  
 KiCad E.D.A. 8.0.9

**Rev: 1.0**  
 Id: 11/23

# SET UP



Set Up  
Author: Fábio Pereira da Silva

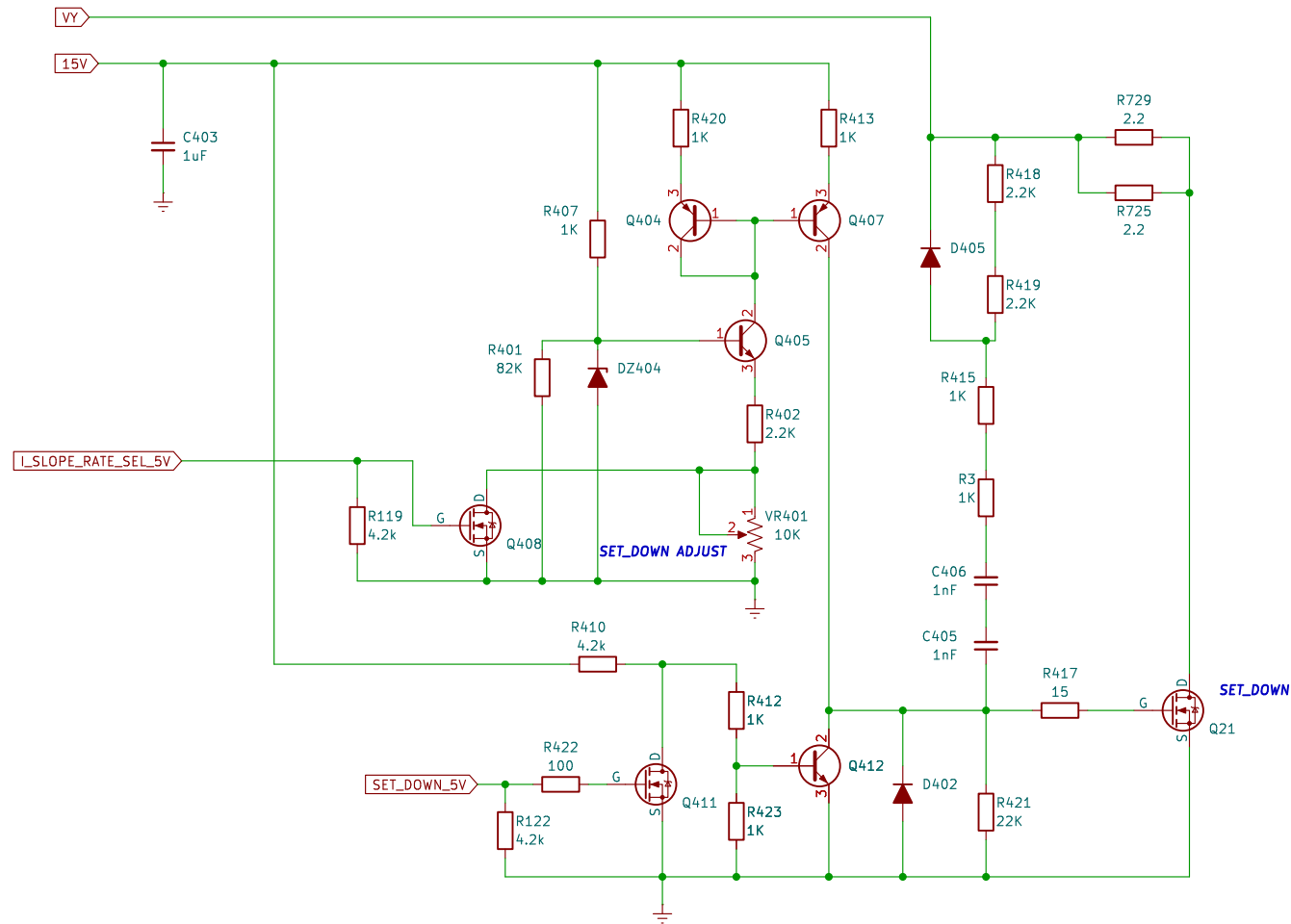
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File: set\_up.kicad\_sch

**Title: Y BOARD LG PLASMA TV PANEL**

Size: A4 Date: 2025-03-24  
KiCad E.D.A. 8.0.9

Rev: 1.0  
Id: 12/23

# SET DOWN



Author: Fábio Pereira da Silva

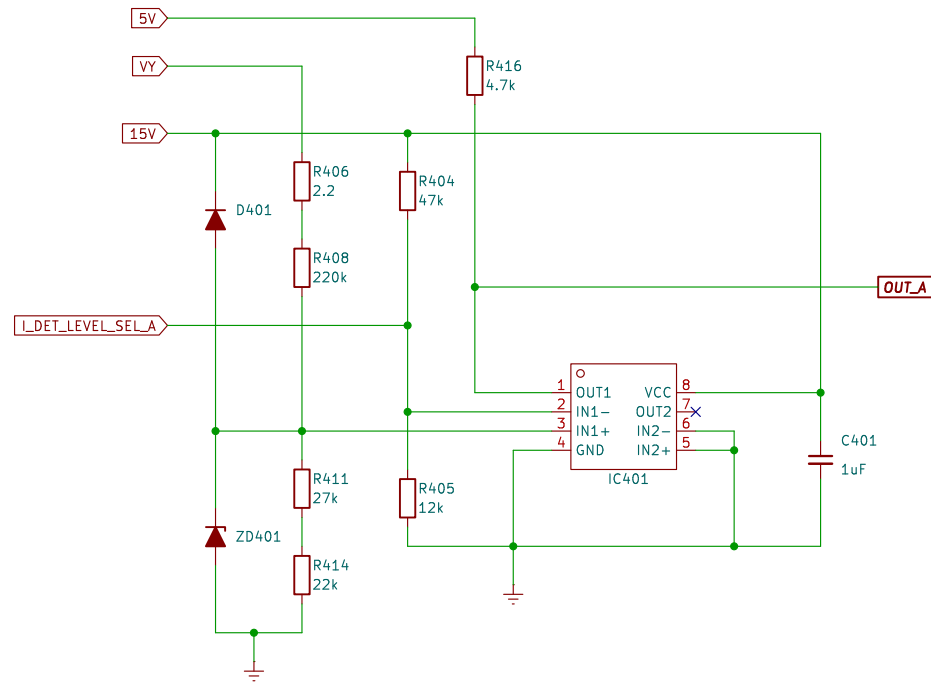
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File: set\_down.kicad\_sch

**Title: Y BOARD LG PLASMA TV PANEL**

Size: A4 Date: 2025-03-24  
KiCad E.D.A. 8.0.9

Rev: 1.0  
Id: 13/23

# OUTPUT CONTROL (Part 1 of 4)



Output Control (Part 1 of 4)  
Author: Fábio Pereira da Silva

Sheet: /Output Control (Part 1 of 4)/  
File: output\_control.kicad\_sch

**Title: Y BOARD LG PLASMA TV PANEL**

Size: A4

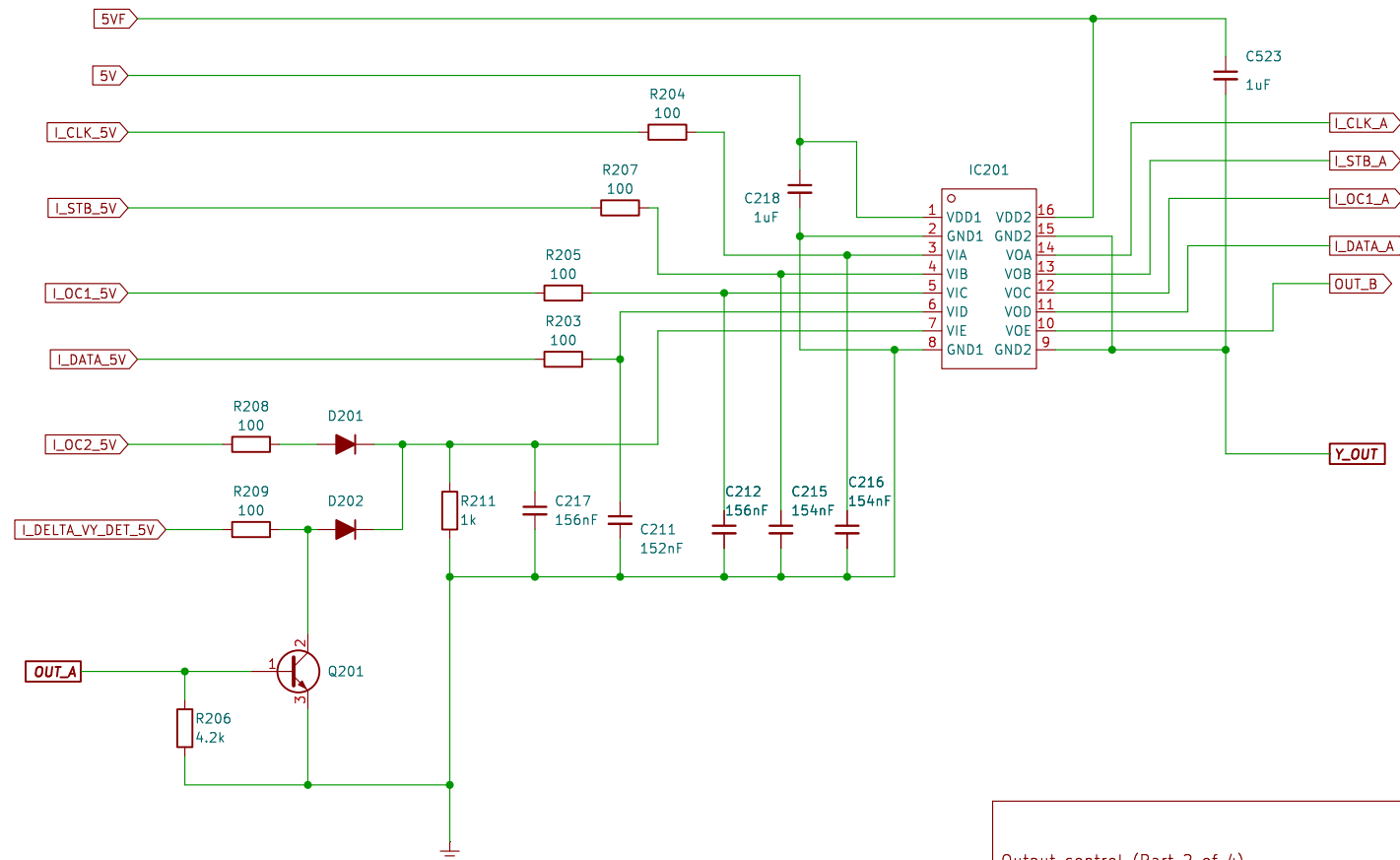
Date: 2025-03-24

Rev: 1.0

KiCad E.D.A. 8.0.9

Id: 14/23

# OUTPUT CONTROL (Part 2 of 4)



Output control (Part 2 of 4)  
Author: Fábio Pereira da Silva

Sheet: /Output Control (Part 2 of 4)/  
File: output\_control2.kicad\_sch

**Title: Y BOARD LG PLASMA TV PANEL**

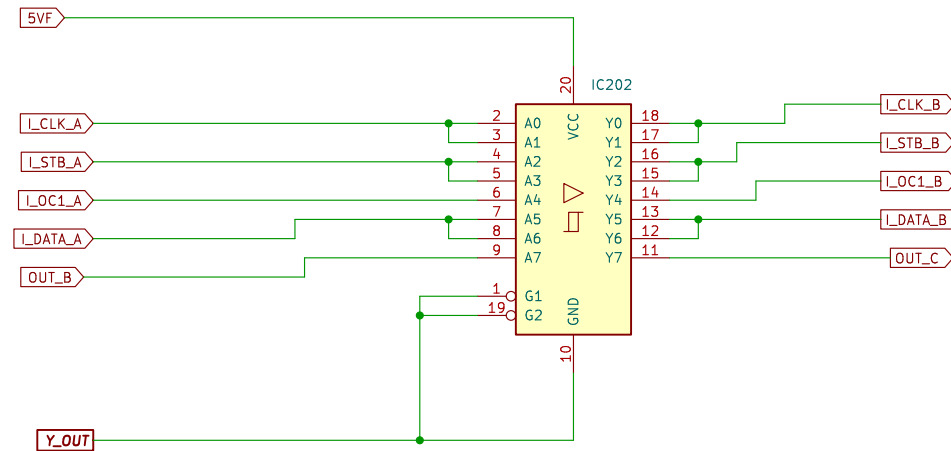
Size: A4 Date: 2025-03-24

KiCad E.D.A. 8.0.9

**Rev: 1.0**

Id: 15/23

## OUTPUT CONTROL (Part 3 of 4)



Output control (Part 3 of 4)  
Author: Fábio Pereira da Silva

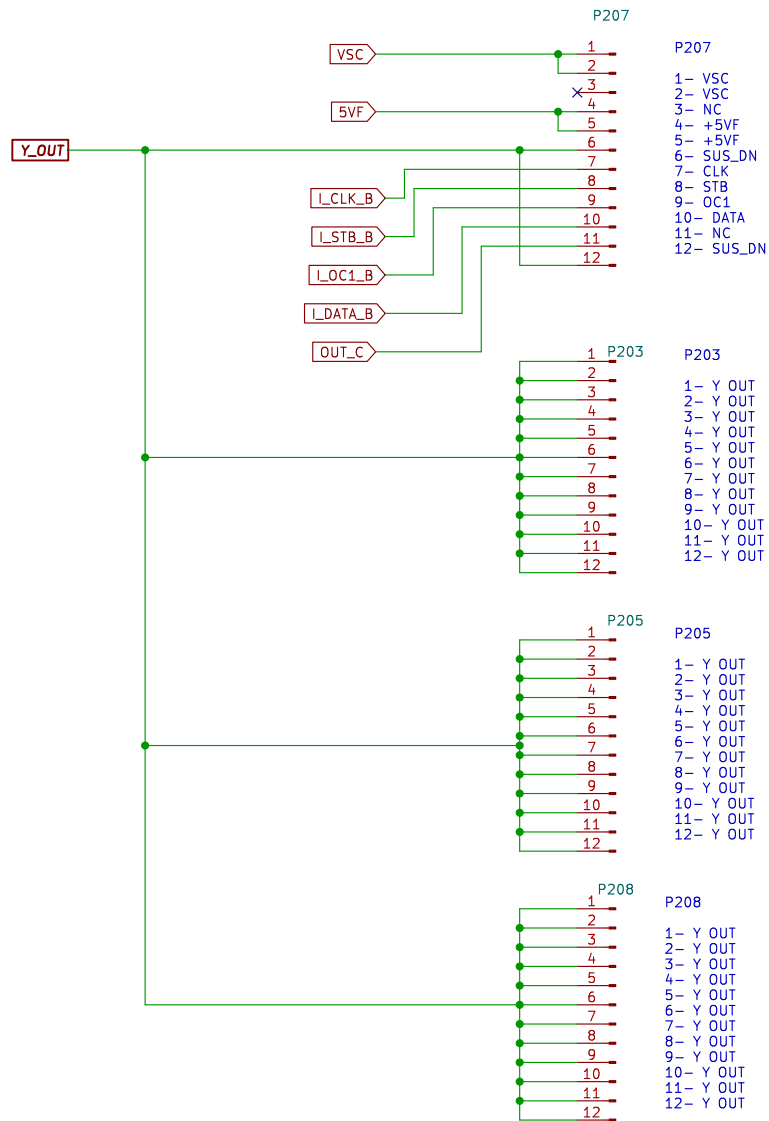
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File: output\_control3.kicad\_sch

**Title: Y BOARD LG PLASMA TV PANEL**

Size: A4	Date: 2025-03-24	Rev: 1.0
KiCad E.D.A. 8.0.9		Id: 16/23



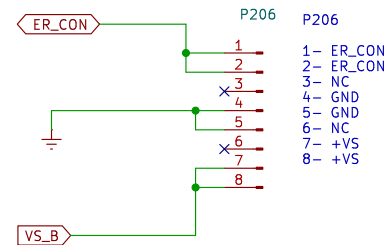
# OUTPUT CONTROL (Part 4 of 4)



## NOTES:

=====

- Serigraphy notation in P207 (Y Out) is called SUS\_DN
- Pin 11 in P207 in Serigraphy is NC but is connected to output pin 11 in IC 202



Output Control (Part 4 of 4)  
Author: Fábio Pereira da Silva

Sheet: /Output Control (Part 4 of 4)/  
File: output\_control4.kicad\_sch

**Title: Y BOARD LG PLASMA TV PANEL**

Size: A4

Date: 2025-03-24

Rev: 1.0

KiCad E.D.A. 8.0.9

Id: 17/23

# Measurements (P201)

P201

Res (OHMS)	Reverse bias (V)	Foward bias (V)
1 >200k	1- 0.551	1- OL
2 >200k	2- 0.551	2- OL
3- -	3- -	3- -
4- 0	4- 0	4- 0
5- 0	5- 0	5- 0
6- >1M	6- OL	6- OL
7- >1M	7- OL	7- OL
8- 0	8- 0	8- 0
9- 2.2k	9- 0.504	9- 1.1
10- 2.2k	10- 0.504	10- 1.1

MEASUREMENTS (P201)  
Author: Fábio Pereira da Silva

Sheet: /Measurements P201/  
File: measurements.kicad\_sch

Title: Y BOARD LG PLASMA TV PANEL

Size: A4	Date: 2025-03-24	Rev: 1.0
KiCad E.D.A. 8.0.9		Id: 18/23

# Measurements (P206)

P206

Res (OHMS)

1- 110k  
2- 110k  
3- OL  
4- 0  
5- 0  
6- OL  
7- OL  
8- OL

Reverse bias (V)

1- 0.769  
2- 0.769  
3- OL  
4- 0  
5- 0  
6- OL  
7- 0.550  
8- 0.550

Foward bias (V)

1- OL  
2- OL  
3- OL  
4- 0  
5- 0  
6- OL  
7- OL  
8- OL

Measurements P206  
Author: Fábio Pereira da Silva

Sheet: /Measurements P206/  
File: measurements\_p206.kicad\_sch

**Title: Y BOARD LG PLASMA TV PANEL**

Size: A4	Date: 2025-03-24	Rev: 1.0
KiCad E.D.A. 8.0.9		Id: 19/23

Measurements (P101)

P101

Res (OHMS)	Reverse bias (V)	Foward bias (V)
1- 917	1- 0.495	1- 0.945
2- 918	2- 0.495	2- 0.944
3- 2.264k	3- 0.503	3- 1.089
4- 2.240k	4- 0.503	4- 1.090
5- 2.220k	5- 0.502	5- 1.089
6- 2.240k	6- 0.503	6- 1.089
7- 2.242k	7- 0.503	7- 1.089
8- 0	8- 0	8- 0
9- 0	9- 0	9- 0
10- 0	10- 0	10- 0
11- 0	11- 0	11- 0
12- 0L	12- 0.658	12- 0L
13- 3.2k	13- 0.614	13- 1.804
14- 0L	14- 0.659	14- 0L
15- 4.699k	15- 0.650	15- 2.723
16- 0L	16- 0.659	16- 0L
17- 4.695k	17- 0.650	17- 2.722
18- 0L	18- 0.660	18- 0L
19- 4.708k	19- 0.651	19- 2.724
20- 0L	20- 0.660	20- 0L
21- 0L	21- 0.657	21- 0L
22- 0L	22- 0.660	22- 0L
23- 4.689k	23- 0.650	23- 2.720
24- 0L	24- 0.660	24- 0L
25- 4.676k	25- 0.650	25- 2.718
26- 0L	26- 0.660	26- 0L
27- 4.699k	27- 0.650	27- 2.723
28- 7.7k	28- 0.617	28- 2.926
29- 4.685k	29- 0.649	29- 2.720
30- 0	30- 0	30- 0

Measurements (P101)  
Author: Fábio Pereira da Silva

Sheet: /Measurements P101/  
File: measurements\_p101.kicad\_sch

Title: Y BOARD LG PLASMA TV PANEL

Size: A4	Date: 2025-03-24	Rev: 1.0
KiCad E.D.A. 8.0.9		Id: 20/23

# Measurements (P202)

P202

Res (OHMS)

1 0  
2 0  
3- 0  
4- 0L  
5- >50M  
6- >50M  
7- >50M

Reverse bias (V)

1- 0  
2- 0  
3- 0  
4- 0L  
5- 0L  
6- 0L  
7- 0L

Foward bias (V)

1- 0  
2- 0  
3- 0  
4- 0L  
5- 0L  
6- 0L  
7- 0L

Measurements (P202)  
Author: Fábio Pereira da Silva

Sheet: /Measurements P202/  
File: measurements\_p202.kicad\_sch

**Title: Y BOARD LG PLASMA TV PANEL**

Size: A4	Date: 2025-03-24	Rev: 1.0
KiCad E.D.A. 8.0.9		Id: 21/23

# Measurements (P207)

NOTES:

=====

Measure is related to floating ground (Y OUT)

P207

Res (OHMS)

1- 29.2k

2- 29.2k

3- 0L

4- 5.97k

5- 5.97k

6- 0

7- 744k

8- 742k

9- 795k

10- 740k

11- 790k

12- 0

Reverse bias (V)

1- 3.209

2- 3.209

3- 0L

4- 0.590

5- 0.590

6- 0

7- 0.609

8- 0.600

9- 0.641

10- 0.601

11- 0.659

12- 0

Foward bias (V)

1- 0L

2- 0L

3- 0L

4- 1.916

5- 1.916

6- 0

7- 1.464

8- 1.466

9- 1.576

10- 1.490

11- 1.561

12- 0

Author: Fábio Pereira da Silva

Sheet: /Measurements P207/

File: measurements\_p207.kicad\_sch

**Title: Y BOARD LG PLASMA TV PANEL**

Size: A4

Date: 2025-03-24

Rev: 1.0

KiCad E.D.A. 8.0.9

Id: 22/23

# Measurements (P203, P208 and P205)

## NOTES:

=====

– All pins are Y Out connection (Floating ground)

1-> Y OUT related to Ground

=====

Res (OHMS)	Reverse bias (V)	Foward bias (V)
210k	OL	OL

2-> Y OUT related to +VS

=====

Res (OHMS)

–

Reverse bias (Black point in VS and Red point in Y Out) (V)  
0.402

Foward bias (Red point in VS and Black point in Y Out) (V)  
OL

Measurements (P203, P208 and P205)  
Author: Fábio Pereira da Silva

Sheet: /Measurements P203, P208 and P205/  
File: measurements\_p203\_p208\_p205.kicad\_sch

**Title: Y BOARD LG PLASMA TV PANEL**

Size: A4

Date: 2025-03-24

Rev: 1.0

KiCad E.D.A. 8.0.9

Id: 23/23