



SCHEMATIC DIAGRAM

MODEL : 32HL84

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON THE MANUAL FOR THIS MODEL.

CAUTION: The international hazard symbols " \triangle " in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on the MANUAL for this model. Do not degrade the safety of the receiver through improper servicing.

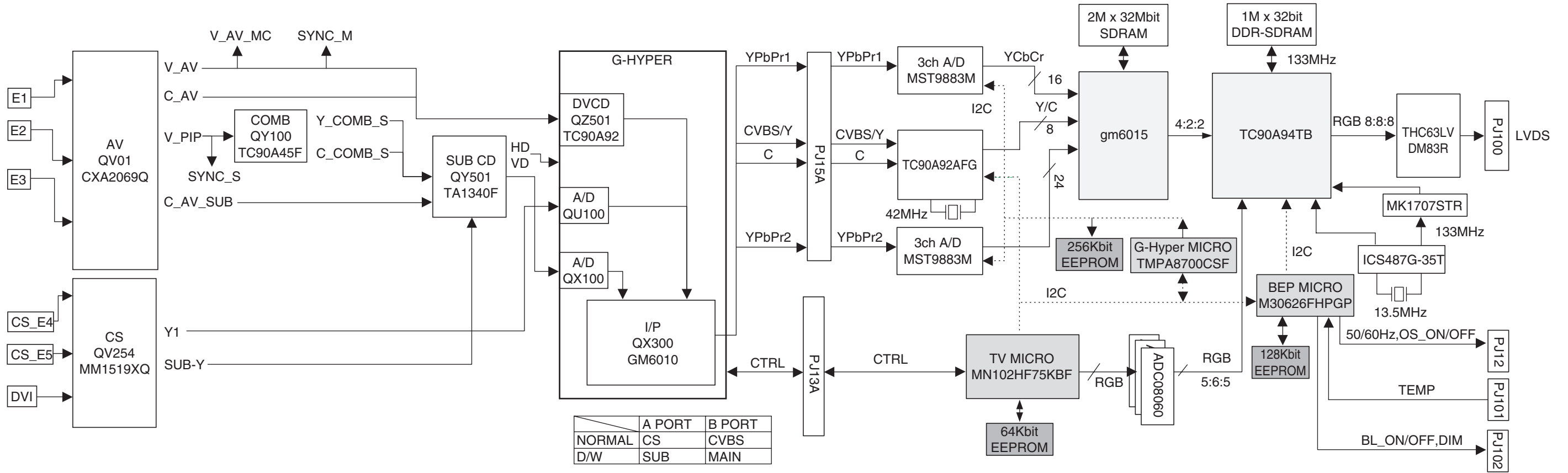
NOTE:

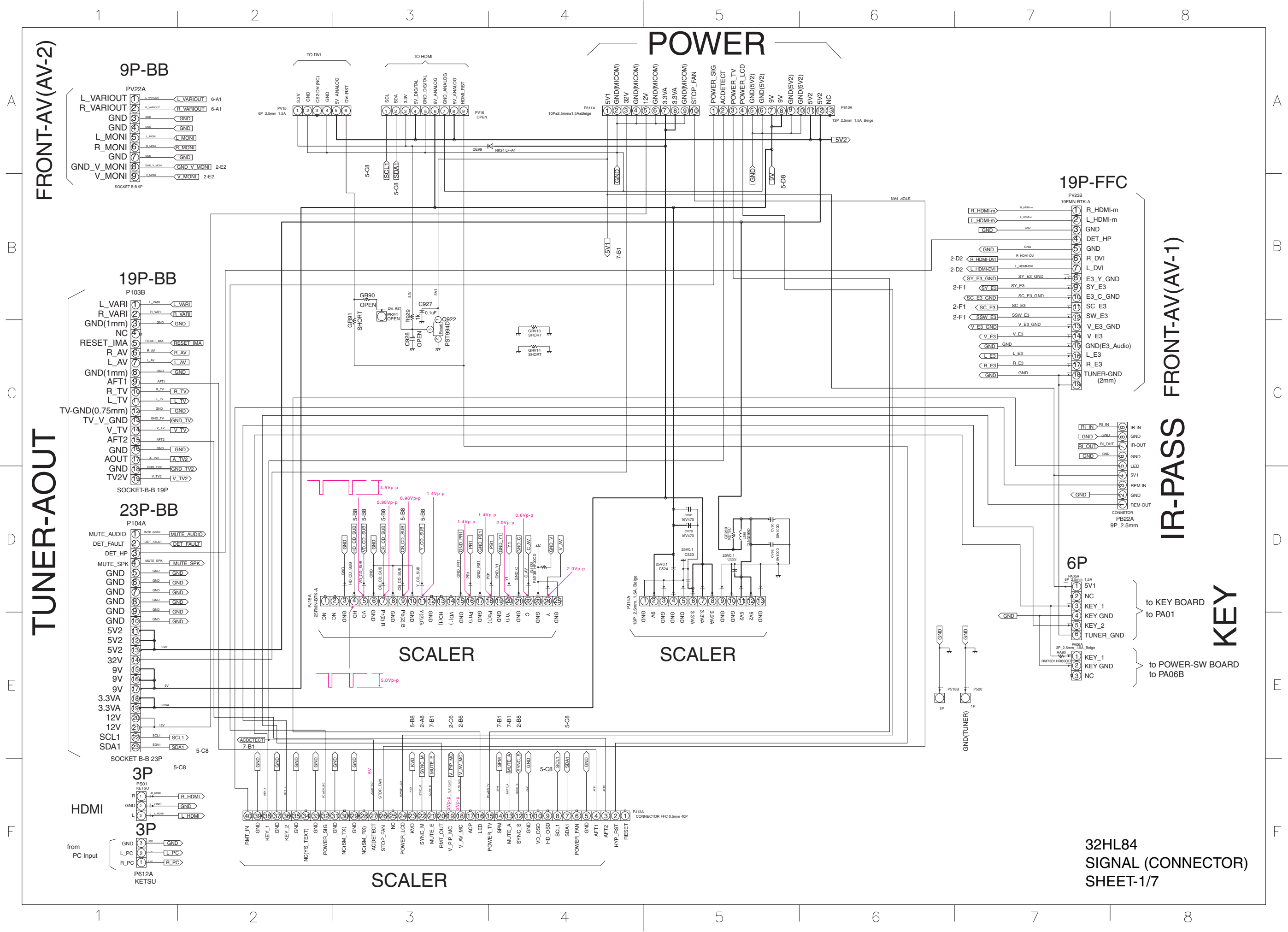
1. RESISTOR Resistance is shown in ohm [K = 1.000, M = 1.000.000]. All resistors are 1/6W and 5% tolerance carbon resistor, unless otherwise noted as the following marks.
1/2R = Metal or Metal oxide of 1/2 watt 1/2S = Carbon composition of 1/2 watt
1RF = Fuse resistor of 1 watt 10W = Cement of 10 watt
K = $\pm 10\%$ G = $\pm 2\%$ F = $\pm 1\%$
2. CAPACITOR Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF , and the values more than 1 in pF.
All capacitors are ceramic 50V, unless otherwise noted as the following marks.
 Electrolytic capacitor  Mylar capacitor
3. The parts indicated with " \triangle " have special characteristics, and should be replaced with identical parts only.
4. Voltages read with DIGITAL MULTI-METER from point indicated to chassing ground, using a color bar signal with all controls at normal, line voltage at 220 volts.
5. Waveforms are taken receiving color bar signal with enough sensitivity.
6. Voltage reading shown are nominal values and may vary $\pm 20\%$ except H.V.

■ **SCHEMATIC DIAGRAM STRUCTURE:**

| | | | | |
|-------------------------|--------------------------------|------------------|-------|-------|
| SIGNAL Circuit | CONNECTOR | [SHEET- 1/7 ] | ..... | 1/57 |
| | AV | [SHEET- 2/7 ] | ..... | 2/57 |
| | TERMINAL | [SHEET- 3/7 ] | ..... | 3/57 |
| | COLOR DIFFERENCE SWITCHING | [SHEET- 4/7 ] | ..... | 4/57 |
| | V/C | [SHEET- 5/7 ] | ..... | 5/57 |
| | HDMI_VARI | [SHEET- 6/7 ] | ..... | 6/57 |
| | Audio-MUTE | [SHEET- 7/7 ] | ..... | 7/57 |
| TN-AOUT Circuit | CONNECTOR | [SHEET- 1/8 ] | ..... | 8/57 |
| | TIF & MA | [SHEET- 2/8 ] | ..... | 9/57 |
| | IMA MOPULE | [SHEET- 3/8 ] | ..... | 10/57 |
| | A-OUT | [SHEET- 4/8 ] | ..... | 11/57 |
| | HP-AMP | [SHEET- 5/8 ] | ..... | 12/57 |
| | TEMP SENSOR | [SHEET- 6/8 ] | ..... | 13/57 |
| | LipSync DIGITAL PART | [SHEET- 7/8 ] | ..... | 14/57 |
| | LipSync ANALOG PART | [SHEET- 8/8 ] | ..... | 15/57 |
| CONT Circuit | KEY | [SHEET- 1/2 ] | ..... | 16/57 |
| | POWER SW | [SHEET- 2/2 ] | ..... | 17/57 |
| DATA_REWRITE Circuit |  |  | ..... | 18/57 |
| FRONT-AV Circuit | AV-1 | [SHEET- 1/2 ] | ..... | 19/57 |
| | AV-2 | [SHEET- 2/2 ] | ..... | 20/57 |
| IR-PASS/RMT/LED Circuit |  |  | ..... | 21/57 |
| SCALER Circuit | DIGITAL INPUT | [SHEET- 1/36 ] | ..... | 22/57 |
| | CAPTURE INPUT | [SHEET- 2/36 ] | ..... | 23/57 |
| | MEMORY CONNECTION | [SHEET- 3/36 ] | ..... | 24/57 |
| | PLL | [SHEET- 4/36 ] | ..... | 25/57 |
| | OSD FOR NORTH AMERICA | [SHEET- 5/36 ] | ..... | 26/57 |
| | IIC | [SHEET- 6/36 ] | ..... | 27/57 |
| | US OSD SYNC GENERATOR | [SHEET- 7/36 ] | ..... | 28/57 |
| | POWER | [SHEET- 8/36 ] | ..... | 29/57 |
| | SUB MICOM (1) | [SHEET- 9/36 ] | ..... | 30/57 |
| | SUB MICOM (2) | [SHEET- 10/36 ] | ..... | 31/57 |
| | SUB MICOM (3) | [SHEET- 11/36 ] | ..... | 32/57 |
| | LVDS OUT | [SHEET- 12/36 ] | ..... | 33/57 |
| | POWER CONNECTOR AND DIMMING | [SHEET- 13/36 ] | ..... | 34/57 |
| | CONNECTOR BETWEEN SIGNAL BOARD | [SHEET- 14/36 ] | ..... | 35/57 |
| | EMI FIL 2 | [SHEET- 15/36 ] | ..... | 36/57 |
| | LVDS POWER AND OTHERS | [SHEET- 16/36 ] | ..... | 37/57 |
| | LVDS OUT (SHARP LCD) | [SHEET- 17/36 ] | ..... | 38/57 |
| | CONNECTOR | [SHEET- 18/36 ] | ..... | 39/57 |
| | 3CHADC1_LPF | [SHEET- 19/36 ] | ..... | 40/57 |
| | 3CHADC2_LPF | [SHEET- 20/36 ] | ..... | 41/57 |
| | DVCD_LPF | [SHEET- 21/36 ] | ..... | 42/57 |
| | 3CHADC HD/VD | [SHEET- 22/36 ] | ..... | 43/57 |
| | 3CHADC1 | [SHEET- 23/36 ] | ..... | 44/57 |
| | 3CHADC2 | [SHEET- 24/36 ] | ..... | 45/57 |
| | DVCD TC90A92AFG | [SHEET- 25/36 ] | ..... | 46/57 |
| | DVCD_POWER | [SHEET- 26/36 ] | ..... | 47/57 |
| | GENESIS-1 | [SHEET- 27/36 ] | ..... | 48/57 |
| | GENESIS-2 | [SHEET- 28/36 ] | ..... | 49/57 |
| | SDRAM | [SHEET- 29/36 ] | ..... | 50/57 |
| | GENESIS_POWER | [SHEET- 30/36 ] | ..... | 51/57 |
| | GENESIS_CPU | [SHEET- 31/36 ] | ..... | 52/57 |
| | OSD MICON 1/4 | [SHEET- 32/36 ] | ..... | 53/57 |
| | OSD MICON 2/4 | [SHEET- 33/36 ] | ..... | 54/57 |
| | OSD MICON 3/4 | [SHEET- 34/36 ] | ..... | 55/57 |
| | OSD MICON 4/4 | [SHEET- 35/36 ] | ..... | 56/57 |
| | DC/DC CONVERTER | [SHEET- 36/36 ] | ..... | 57/57 |

CIRCUIT BLOCK DIAGRAM





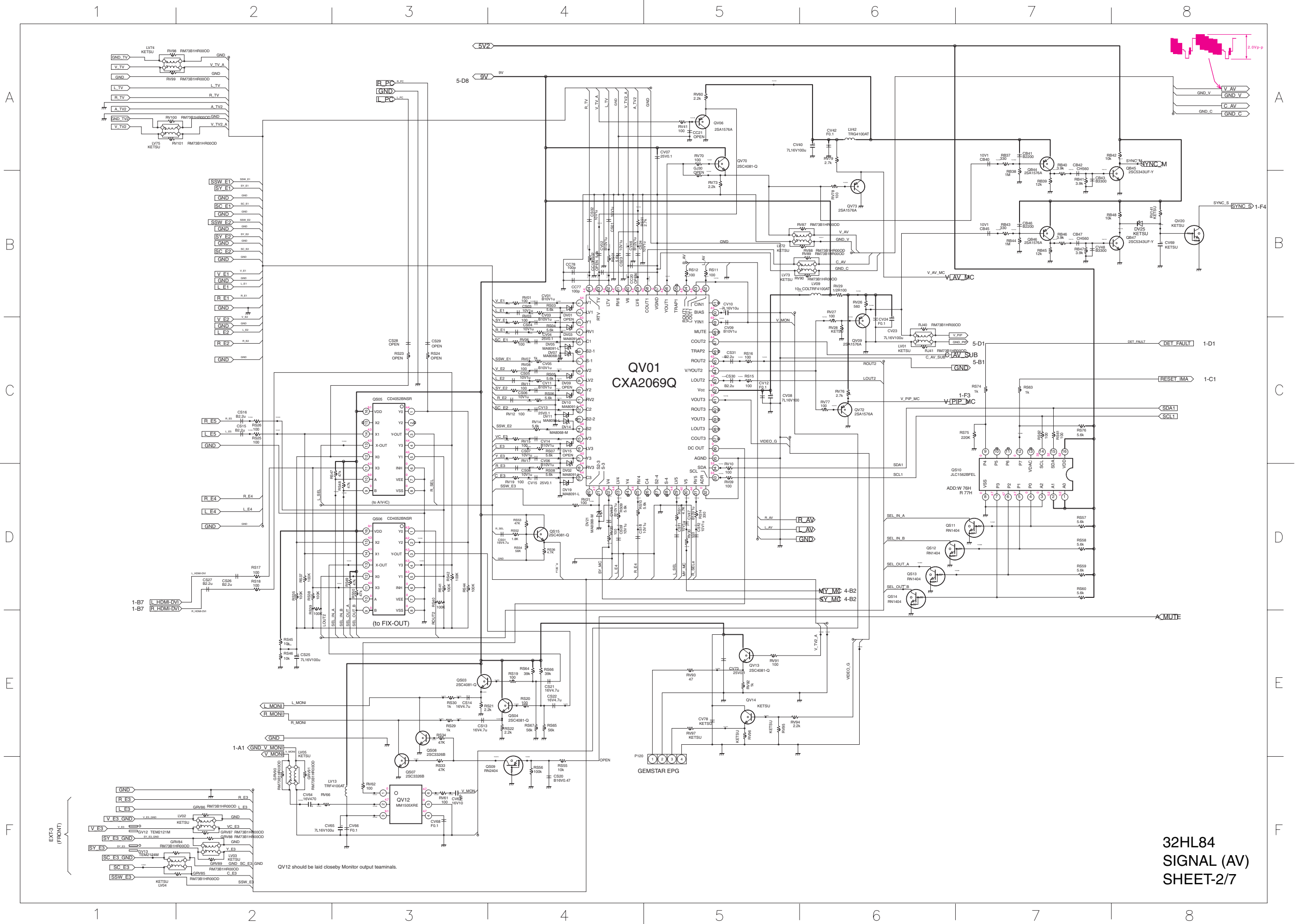
FRONT-AV(AV-2)

TUNER-AOUT

FRONT-AV(AV-1)

KEY

32HL84
SIGNAL (CONNECTOR)
SHEET-1/7

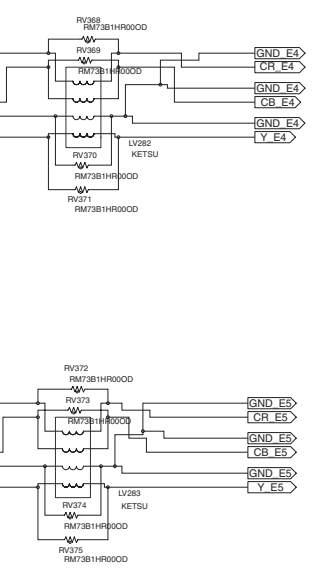
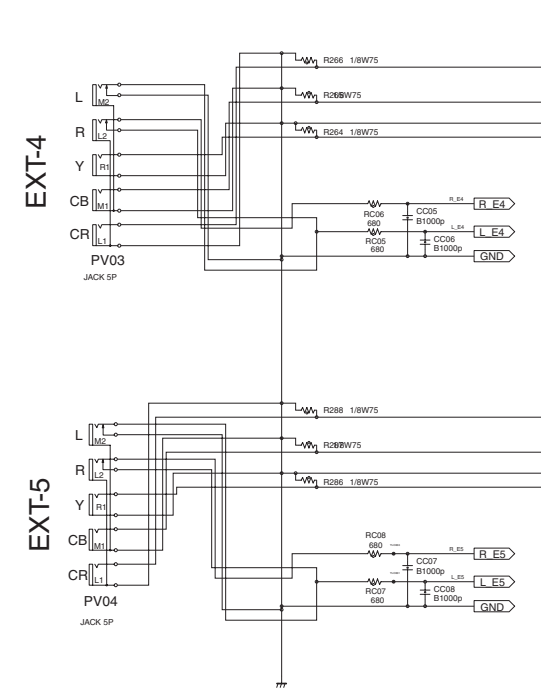
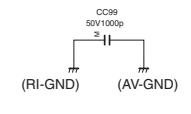
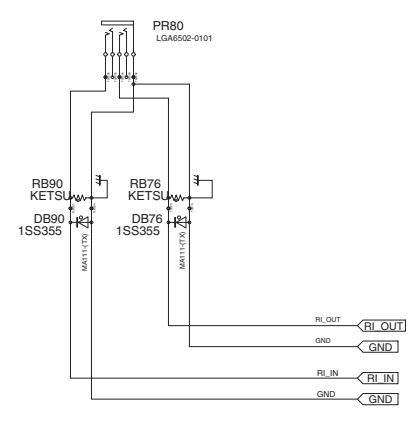
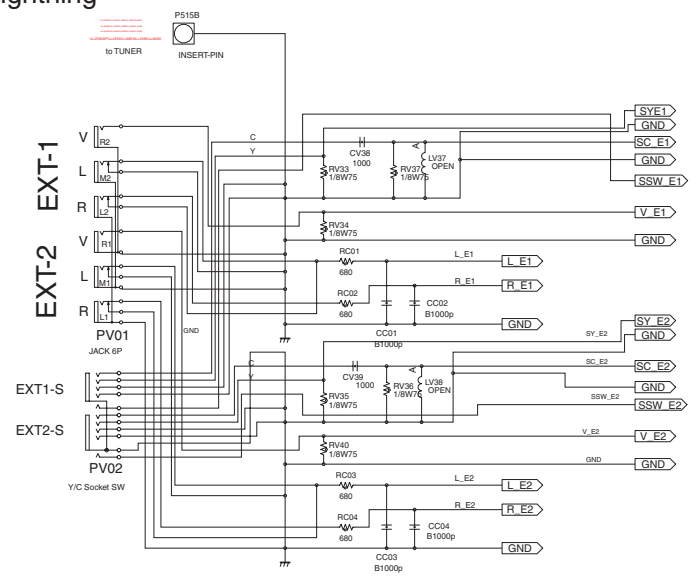


32HL84
 SIGNAL (AV)
 SHEET-2/7

1 2 3 4 5 6 7 8

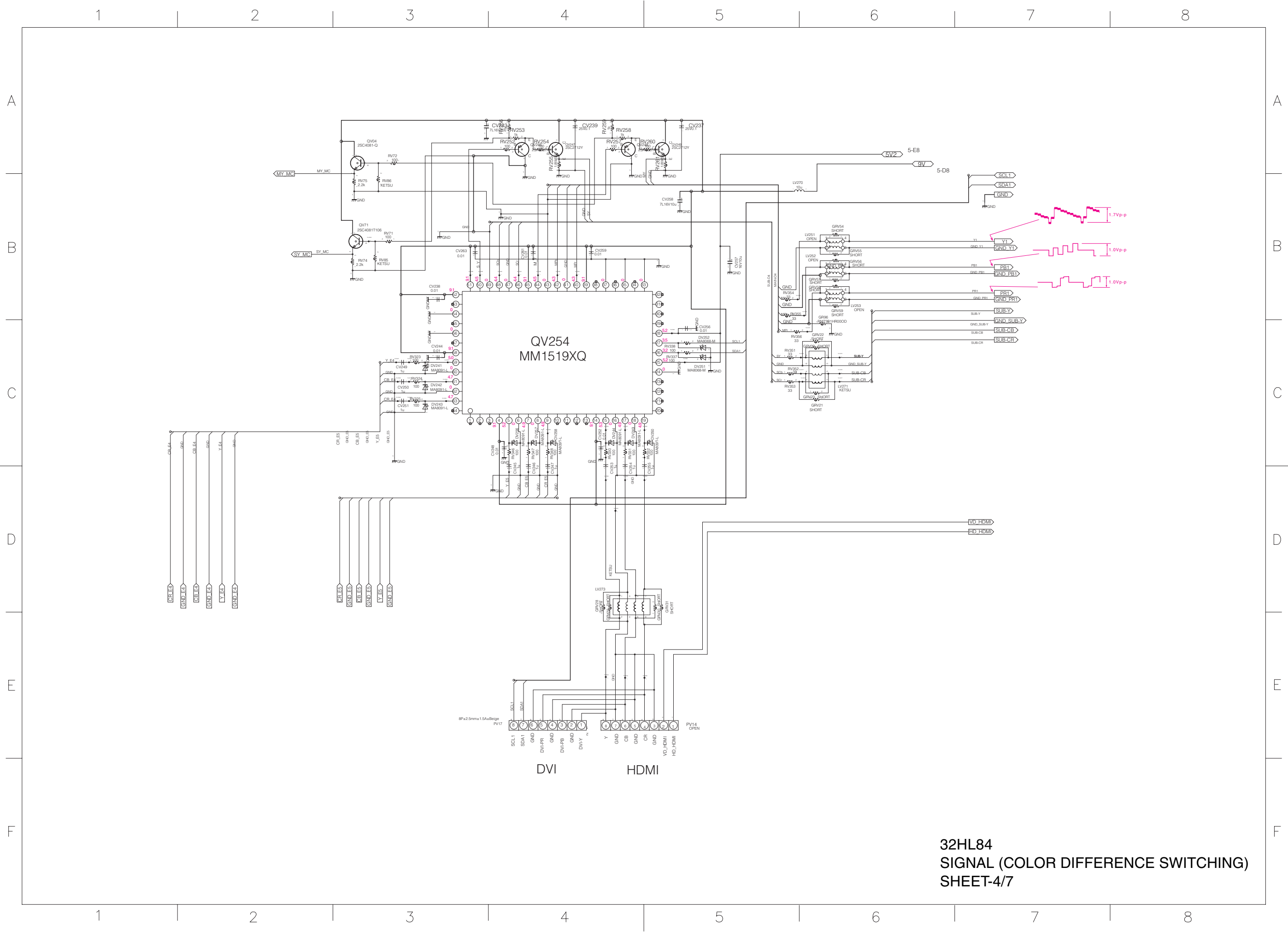
A
B
C
D
E
F

For Lightning

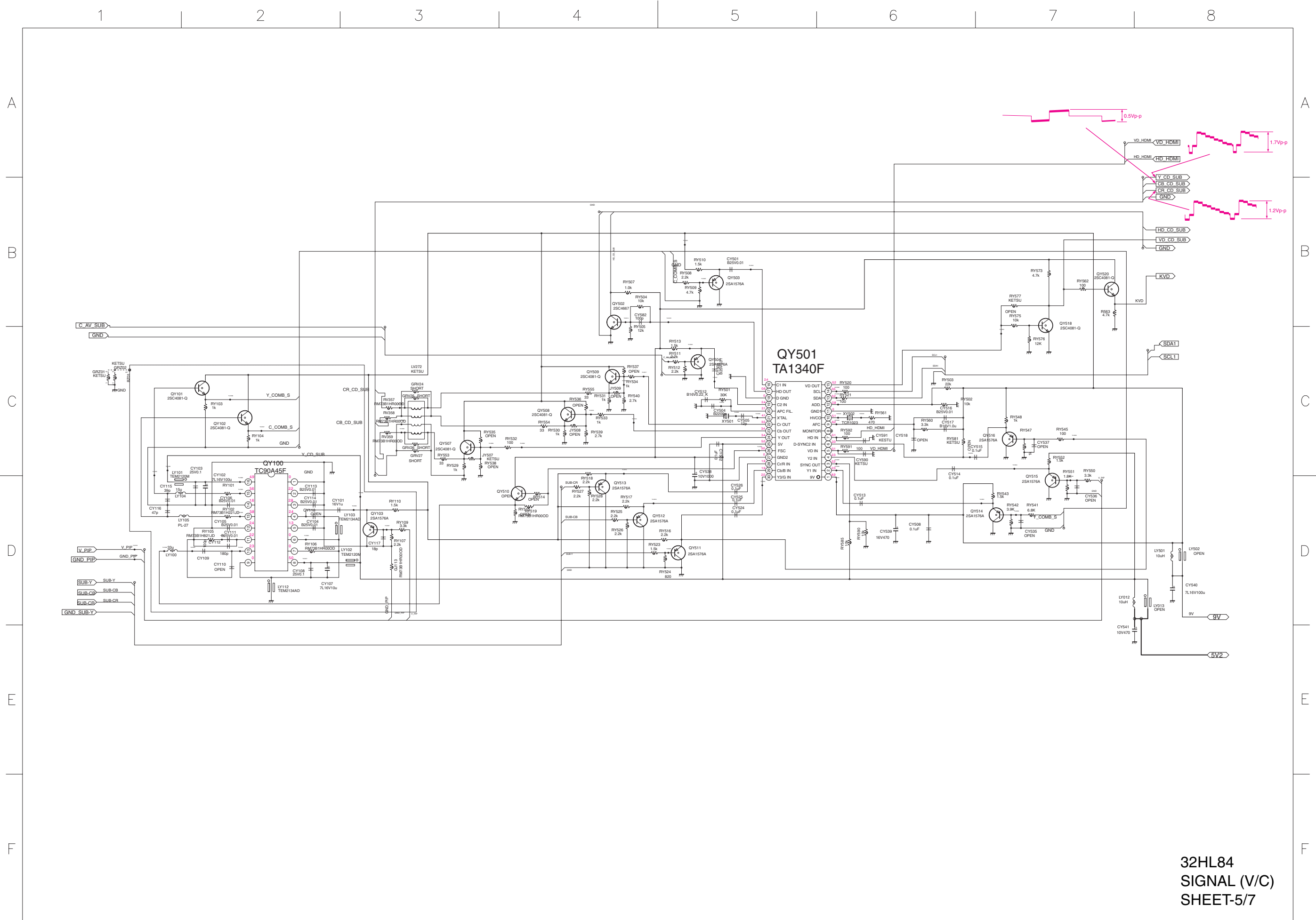


32HL84
SIGNAL (TERMINAL)
SHEET-3/7

1 2 3 4 5 6 7 8



32HL84
 SIGNAL (COLOR DIFFERENCE SWITCHING)
 SHEET-4/7



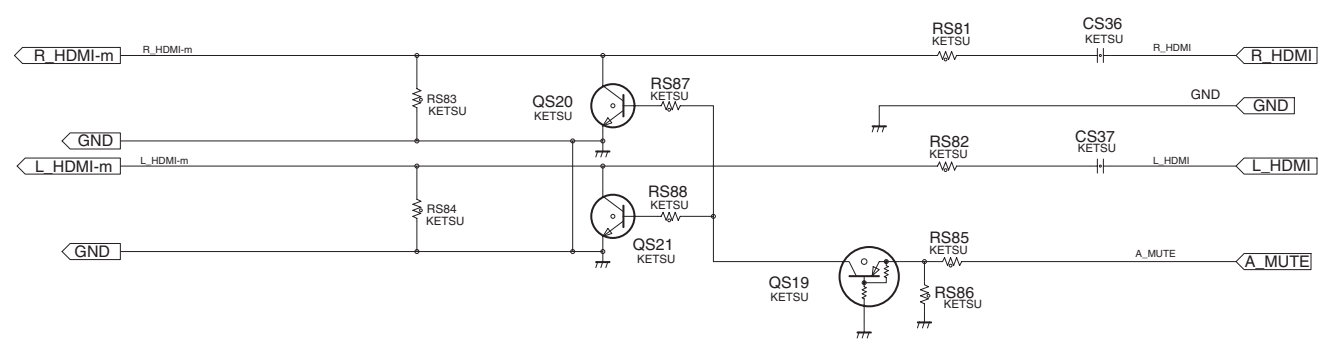
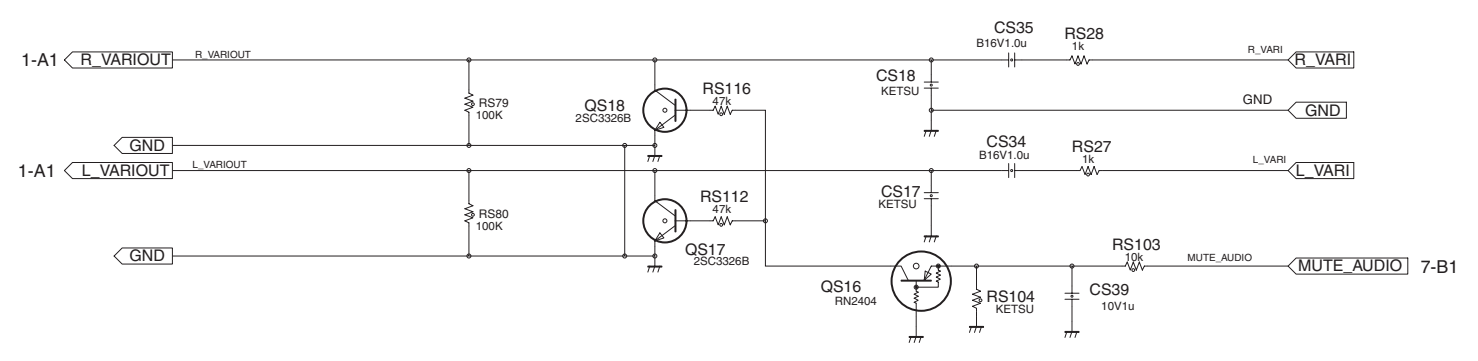
32HL84
 SIGNAL (V/C)
 SHEET-5/7

1

2

A

A



B

B

1

2

32HL84
 SIGNAL (HDMI_VARI)
 SHEET-6/7

1

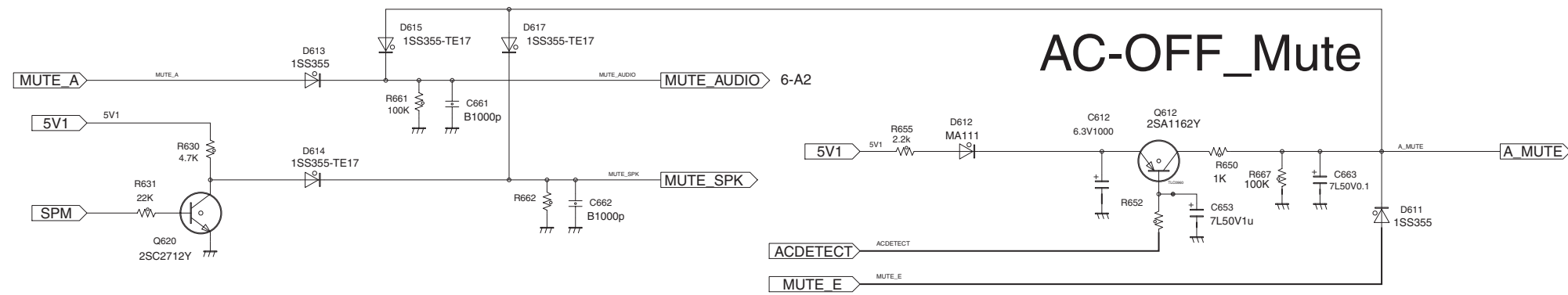
2

A

A

B

B



AC-OFF_Mute

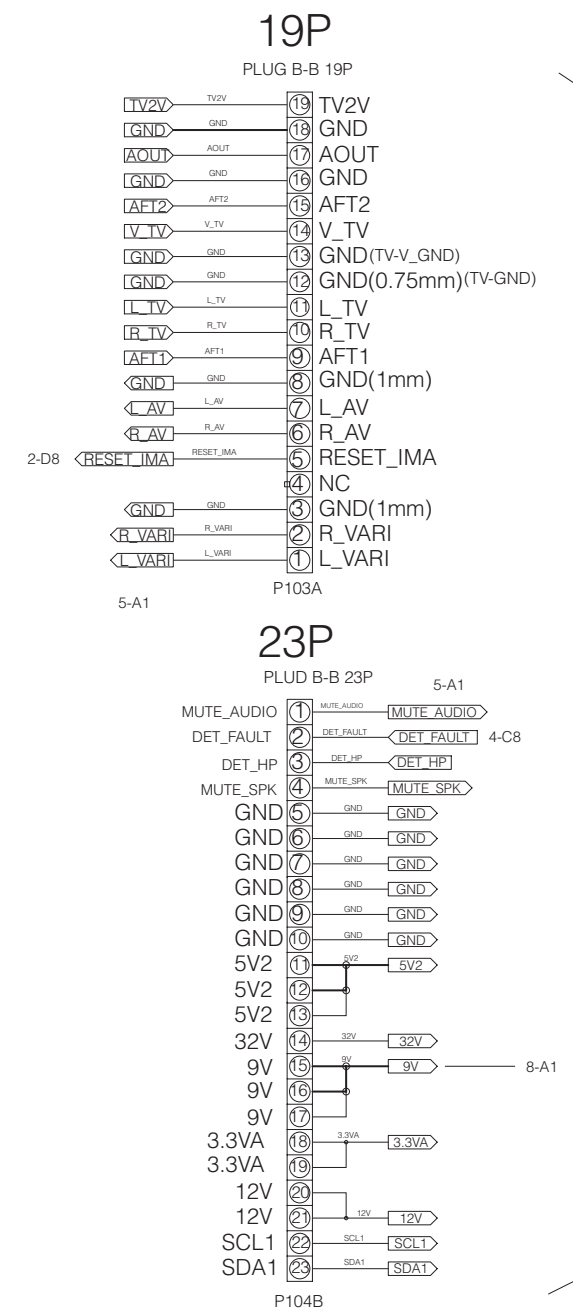
32HL84
 SIGNAL (Audio-MUTE)
 SHEET-7/7

1

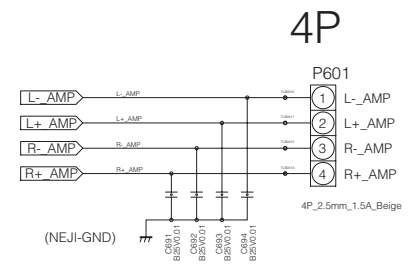
2

1 2 3 4 5 6 7 8

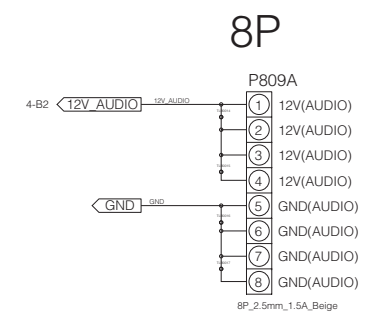
A
B
C
D
E
F



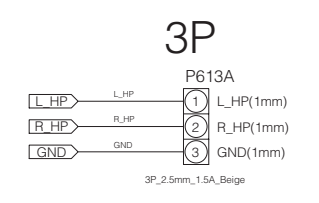
SIGNAL



SPK_R/L
(all:2mm)



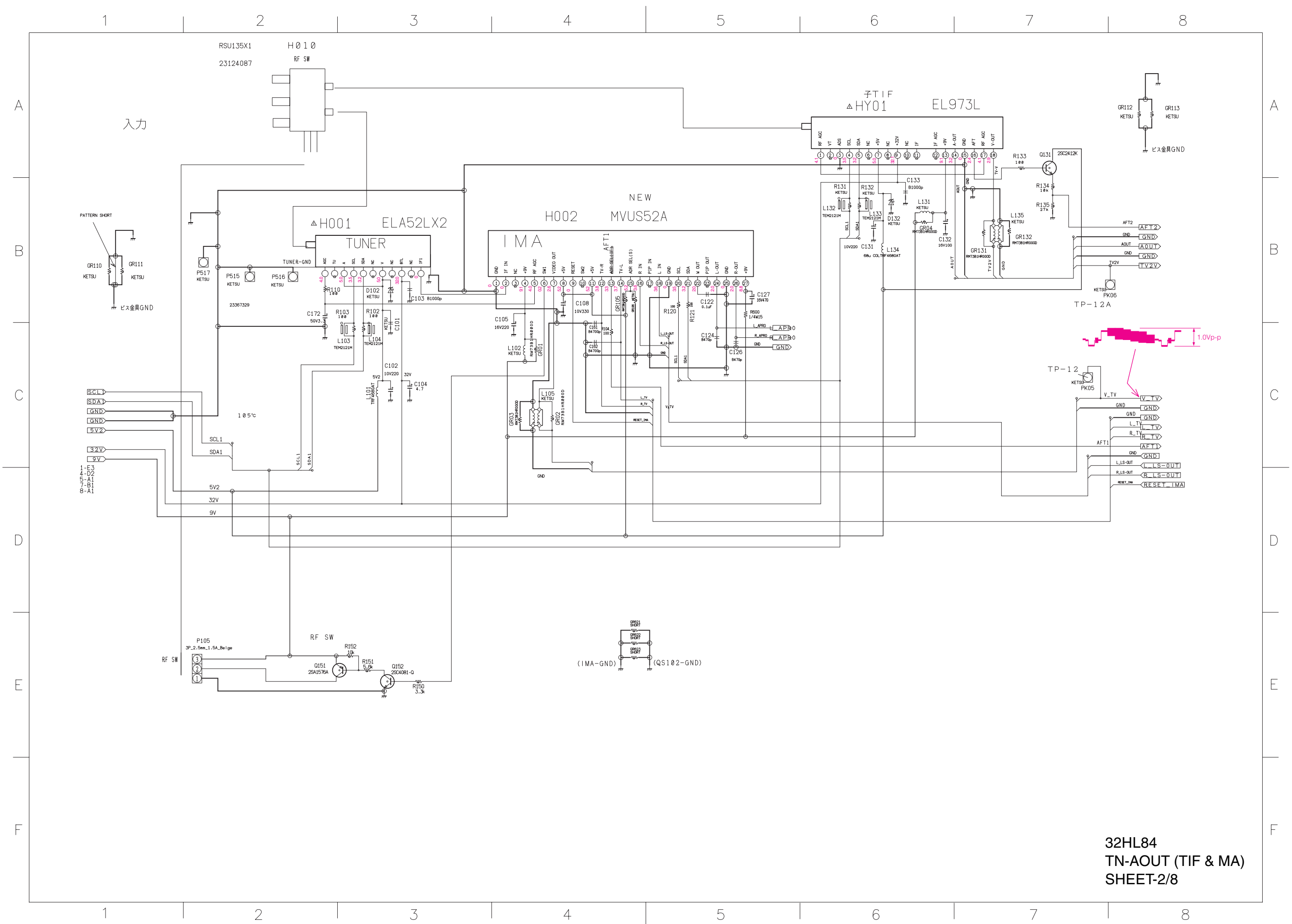
POWER



FRONT-AV

32HL84
TN-AOUT (CONNECTOR)
SHEET-1/8

1 2 3 4 5 6 7 8



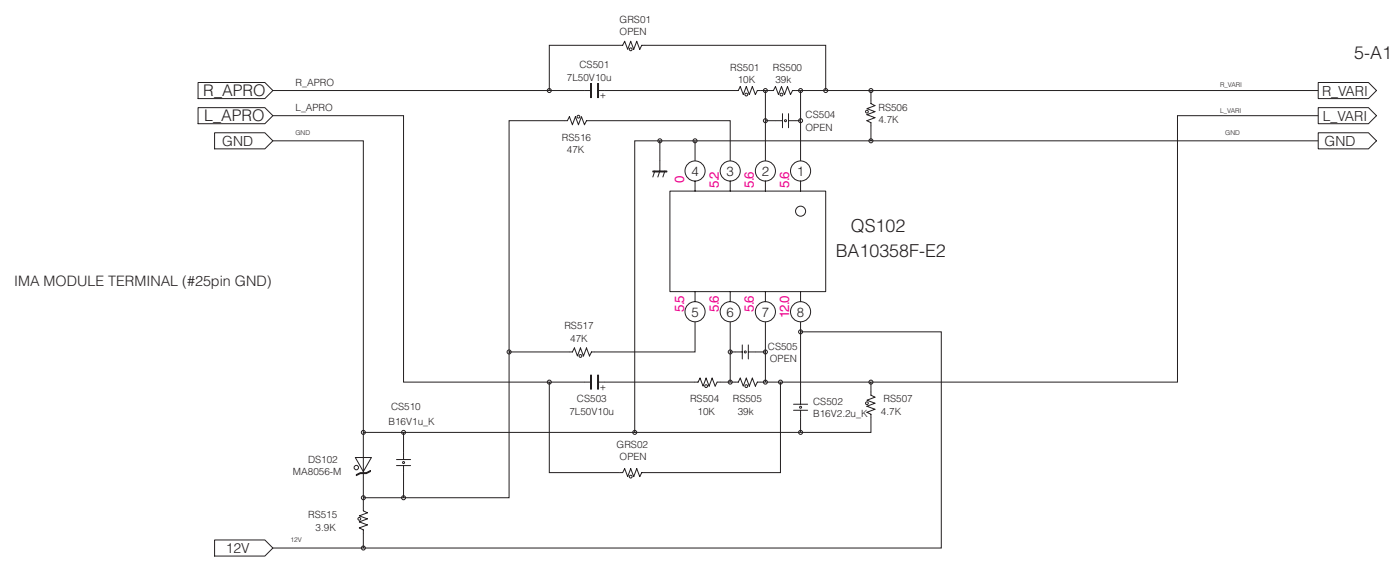
32HL84
 TN-AOUT (TIF & MA)
 SHEET-2/8

1

2

A

A



All parts should be laid close by IMA Module.

B

B

32HL84
TN-AOUT (IMA MOPULE)
SHEET-3/8

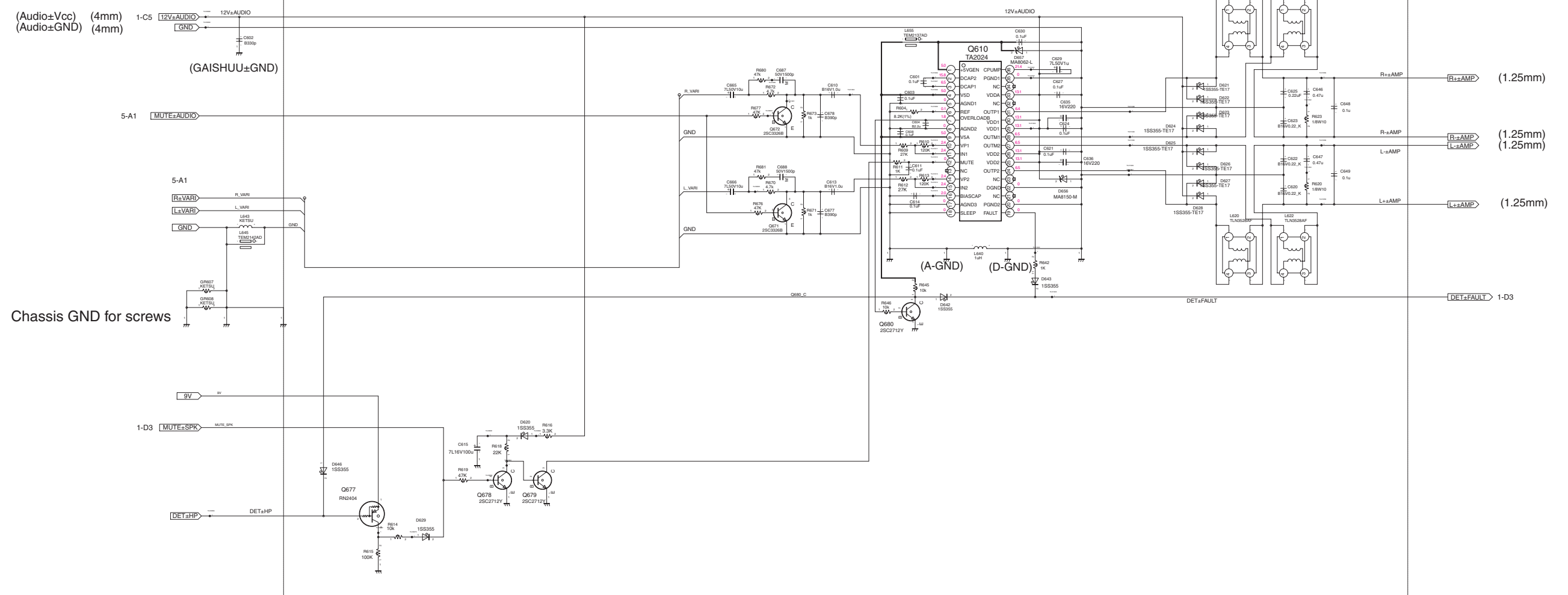
1

2

1 2 3 4 5 6 7 8

A The surface patterns under Q610 should be GND, and make many more through-holes between surface GNDs as much as possible. A

Corresponded to shielding (should be enclosed with GND) AUDIO OUTPUT (R/L)

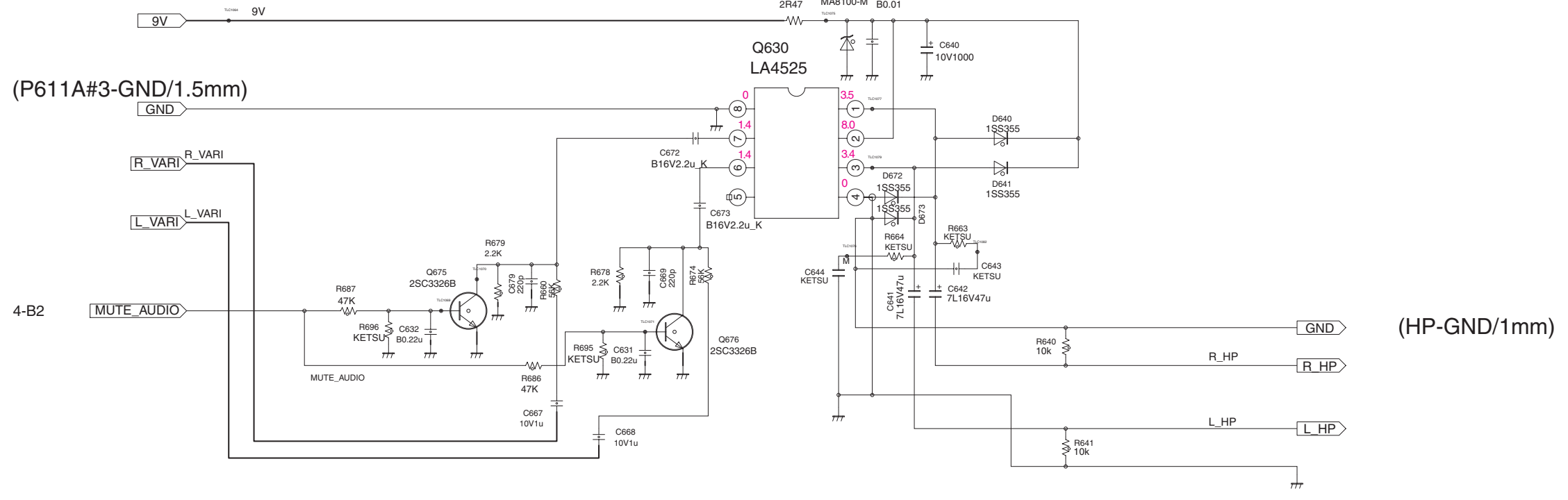


Chassis GND for screws

32HL84
TN-AOUT (A-OUT)
SHEET-4/8

1 2 3 4 5 6 7 8

HP-AMP



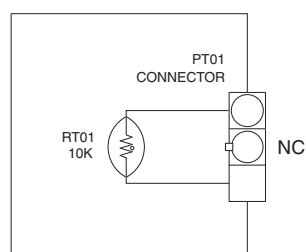
32HL84
TN-AOUT (HP-AMP)
SHEET-5/8

1

2

A

A



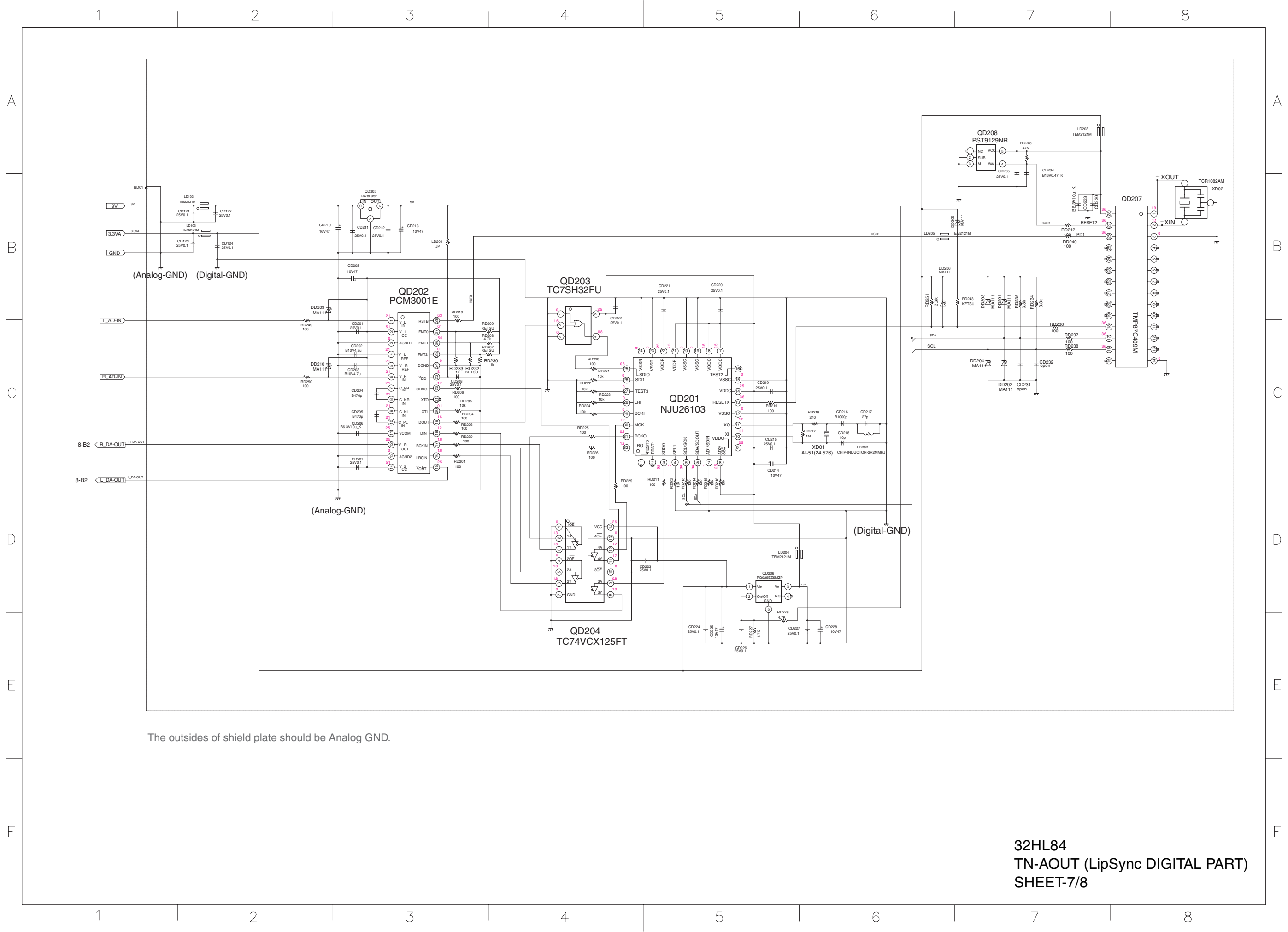
B

B

32HL84
TN-AOUT (TEMP-SENSOR)
SHEET-6/8

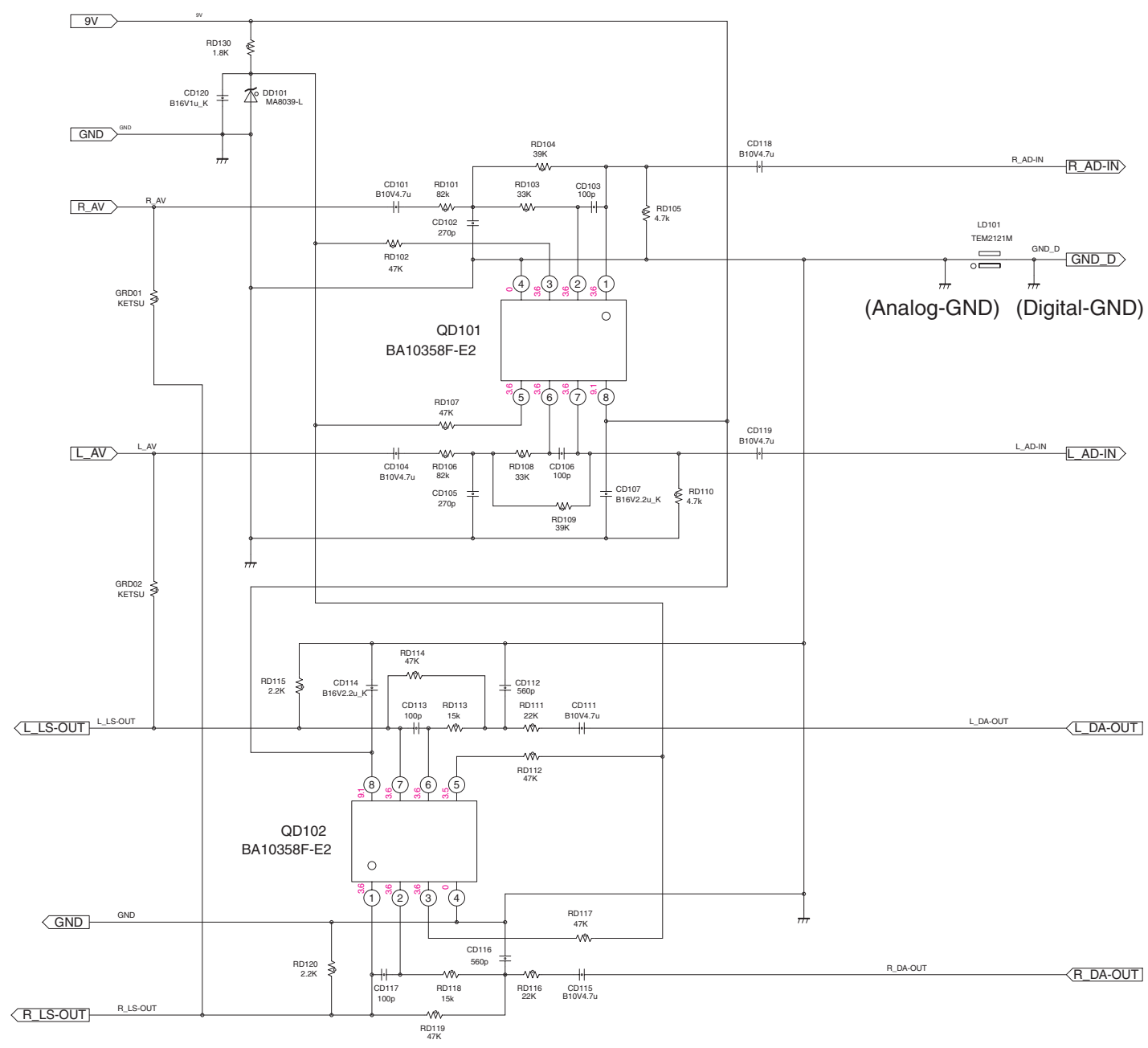
1

2



The outsides of shield plate should be Analog GND.

32HL84
TN-AOUT (LipSync DIGITAL PART)
SHEET-7/8



32HL84
TN-AOUT (LipSync ANALOG PART)
SHEET-8/8

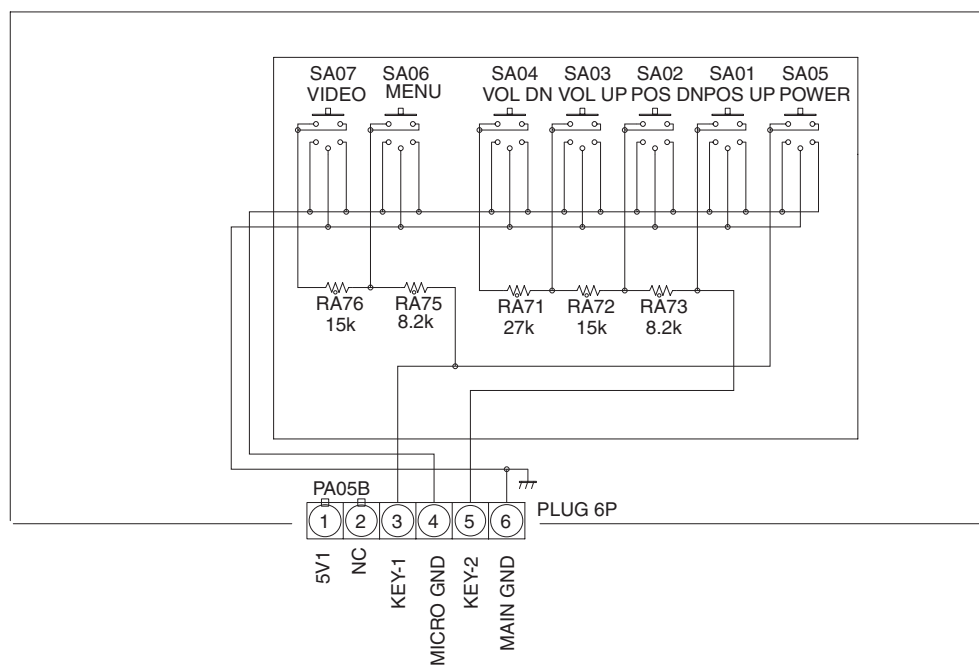
1

2

A

A

KEY



B

B

1

2

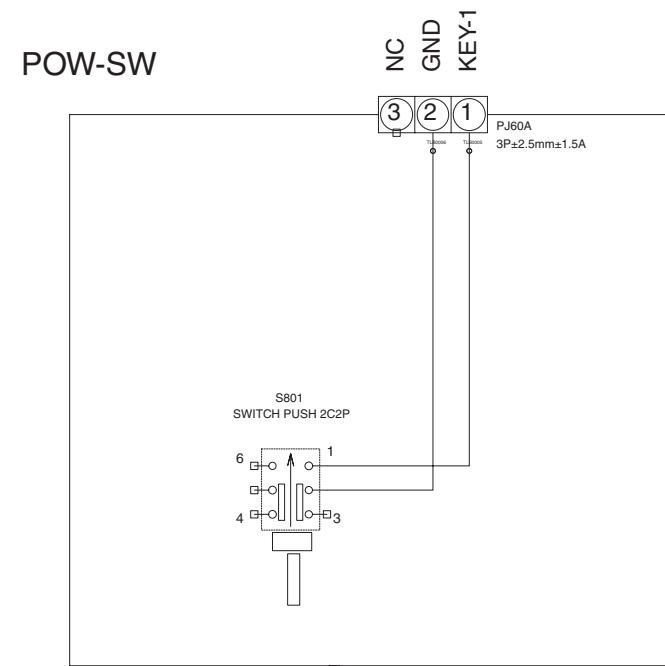
32HL84
 CONT (KEY)
 SHEET-1/2

1

2

A

A



B

B

1

2

32HL84
CONT (POWER SW)
SHEET-2/2

1

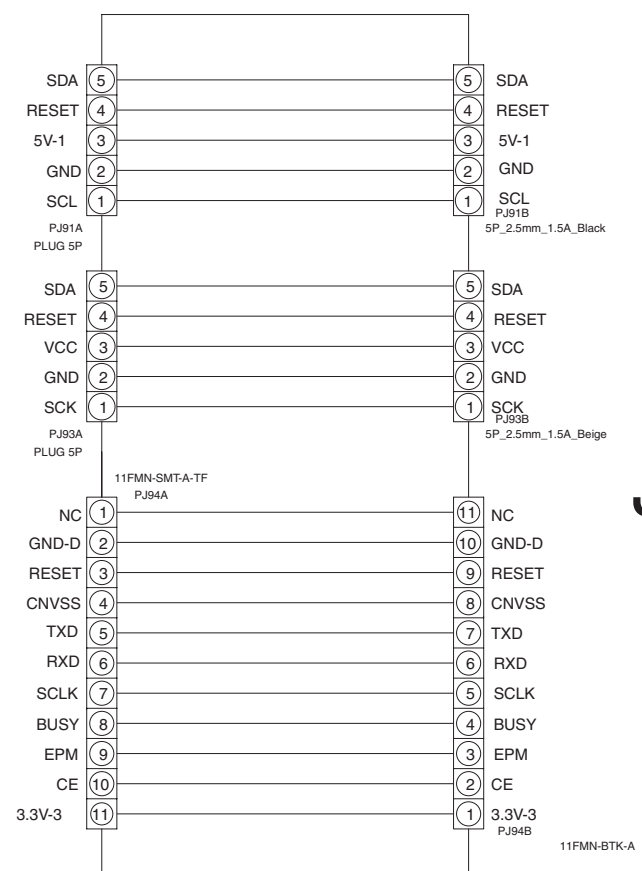
2

A

A

SCALER

JIGU



B

B

1

2

32HL84
DATA_REWRITE

1

2

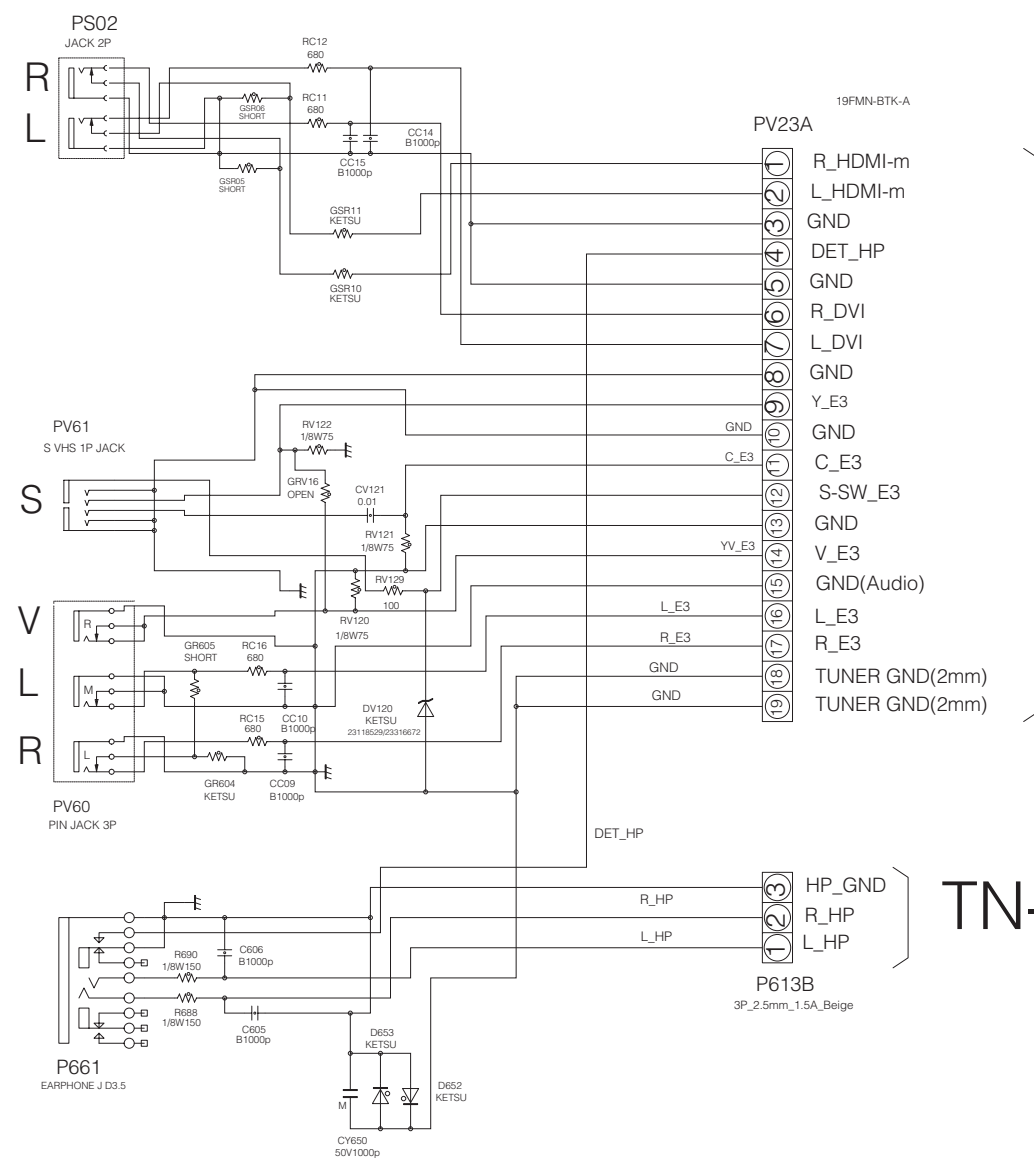
A

A

B

B

E3



SIGNAL

TN-AOUT

32HL84
 FRONT-AV (AV-1)
 SHEET-1/2

1

2

1

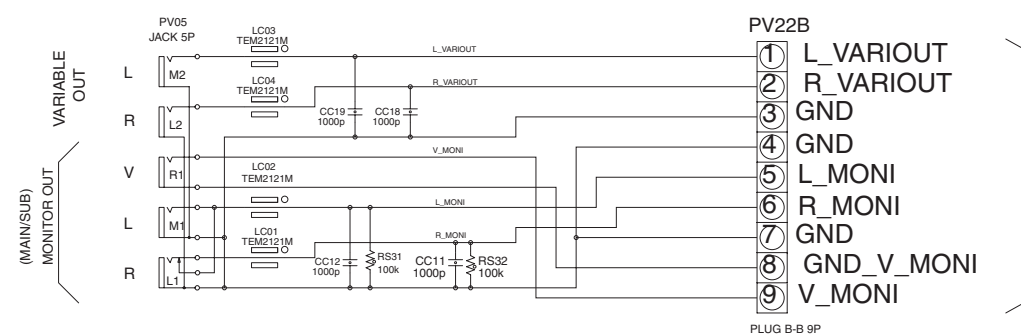
2

A

A

B

B



SIGNAL

32HL84
FRONT-AV (AV-2)
SHEET-2/2

1

2

1

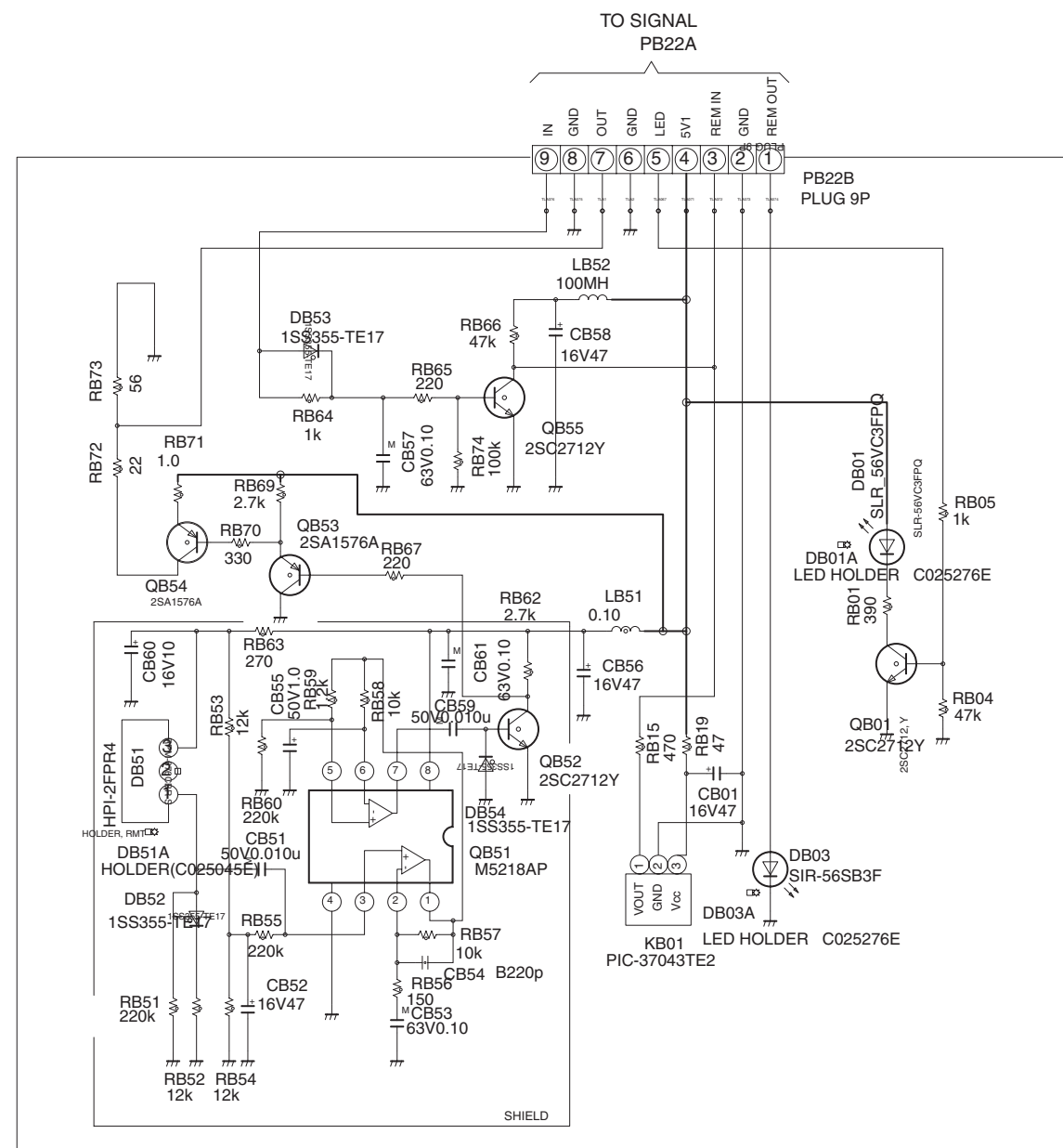
2

A

A

B

B

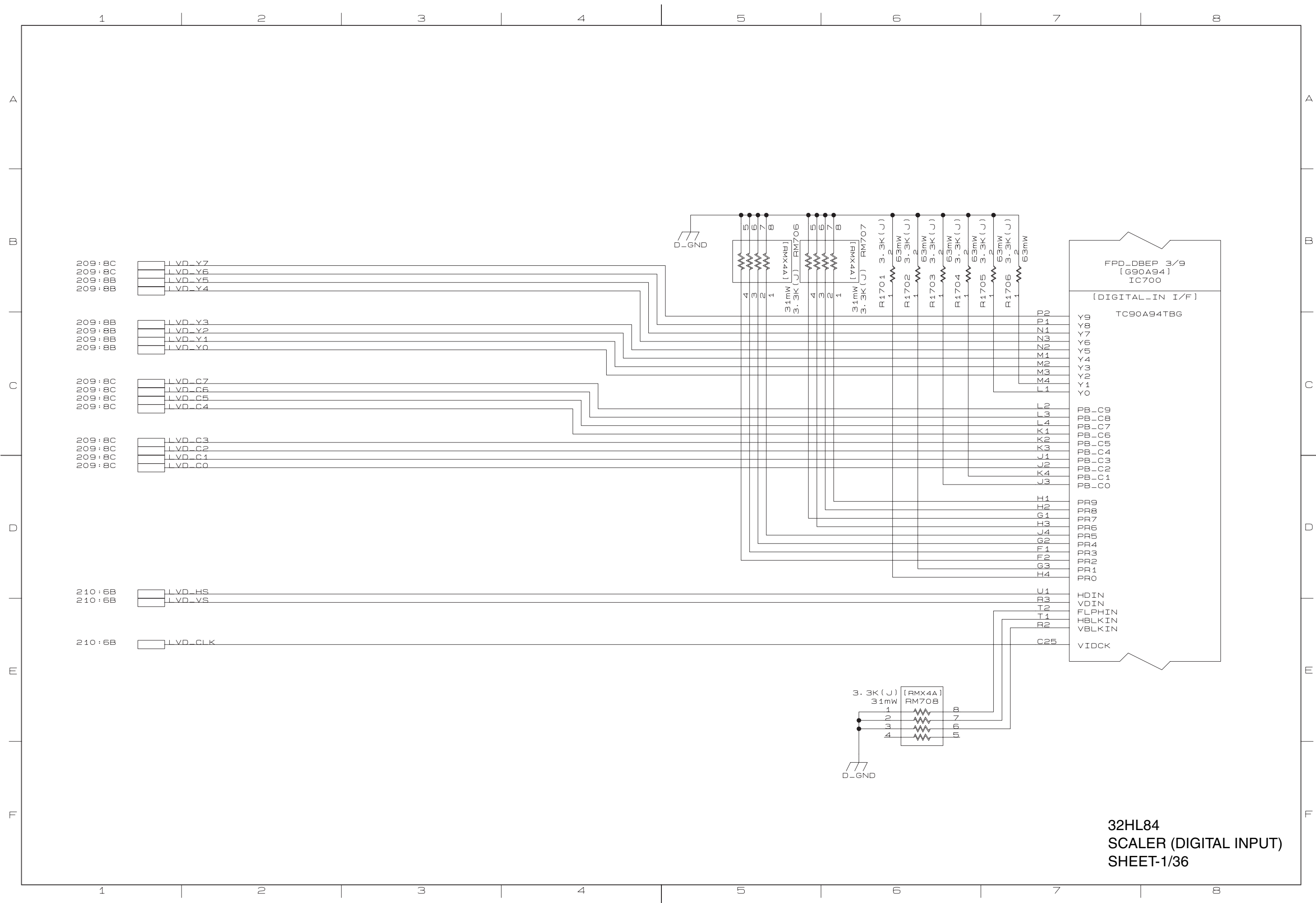


IR-PASS/RMT/LED

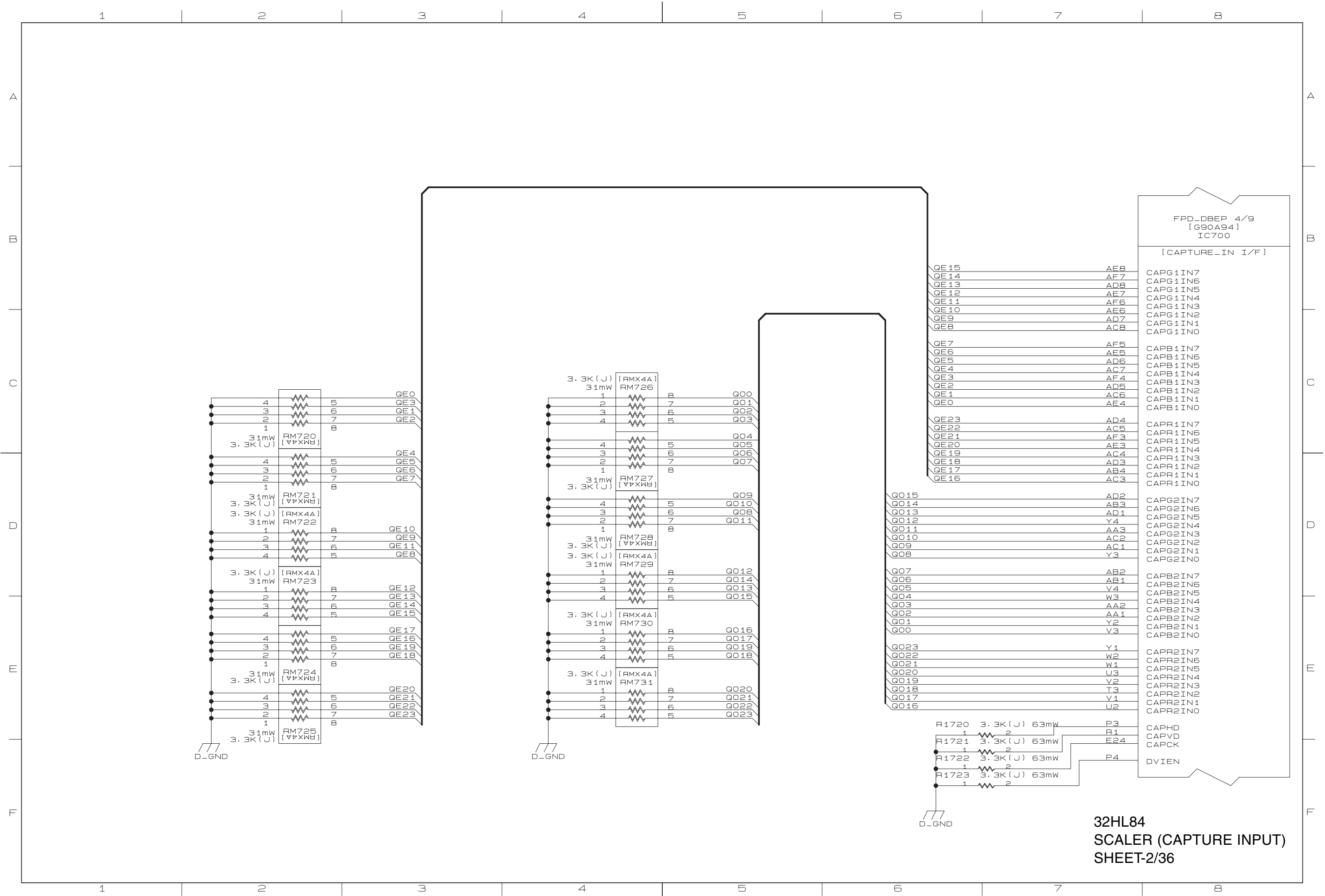
32HL84
IR-PASS/RMT/LED

1

2



32HL84
SCALER (DIGITAL INPUT)
SHEET-1/36

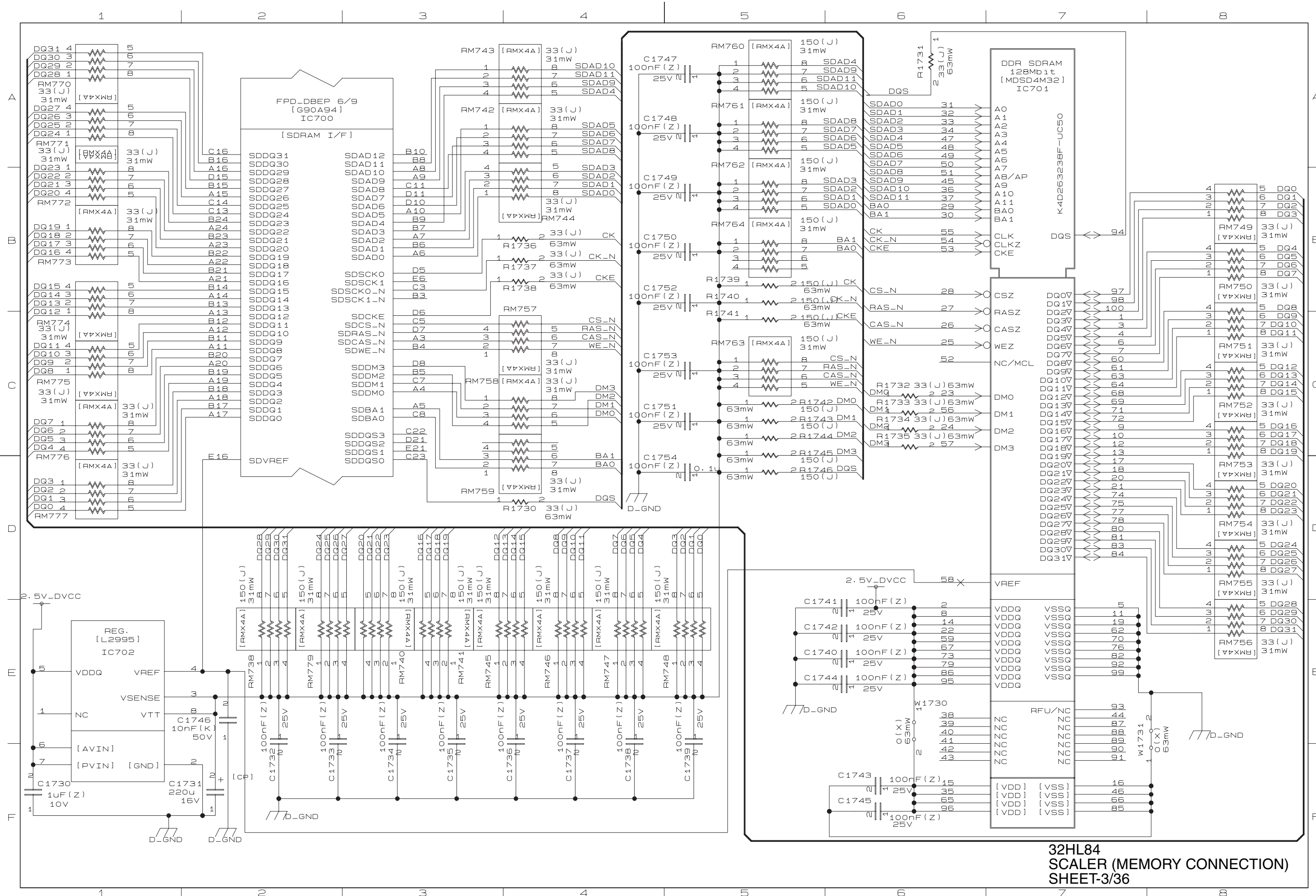


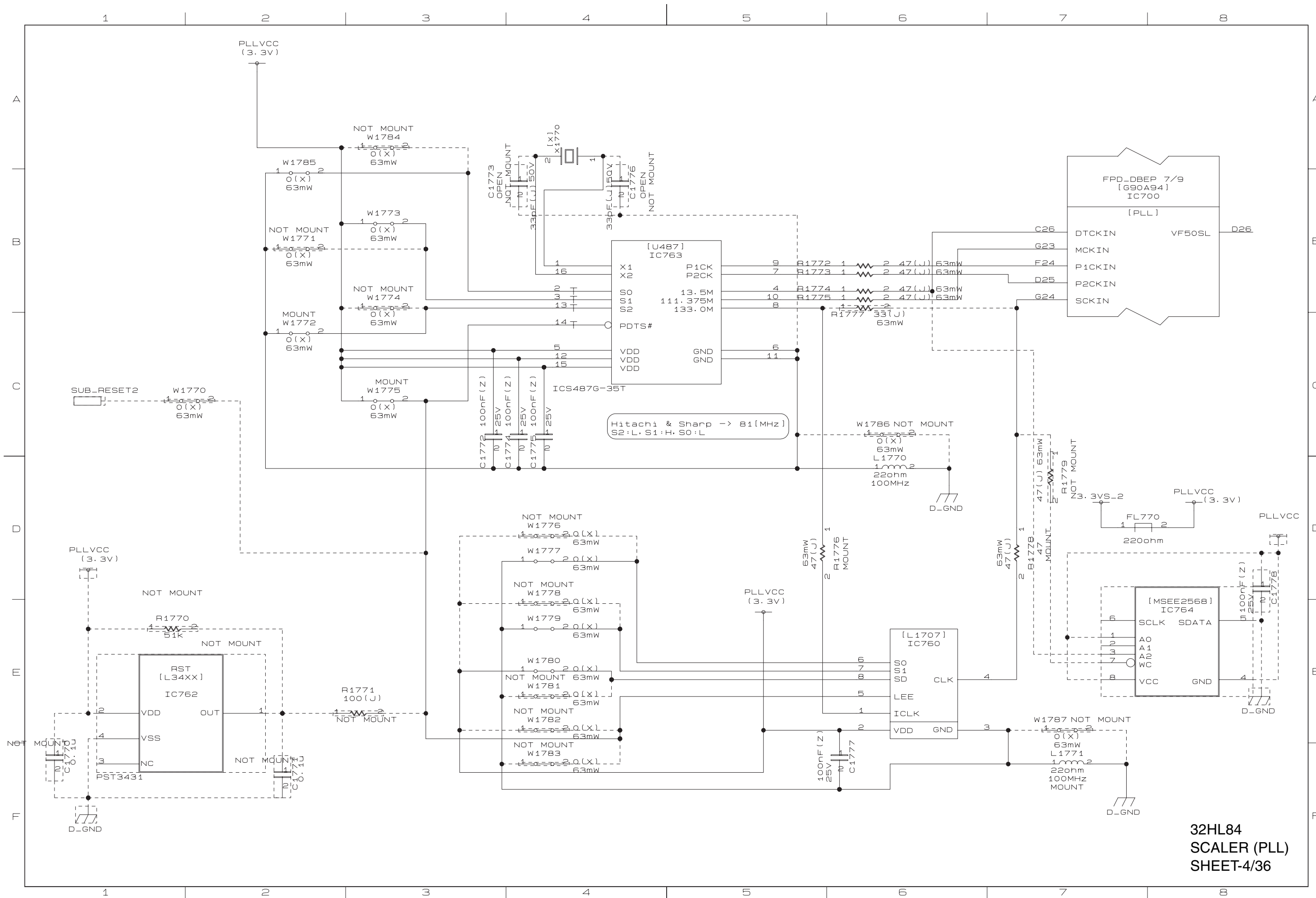
FPD_DBEP 4/9
[G90A94]
IC700

[CAPTURE_IN I/F]

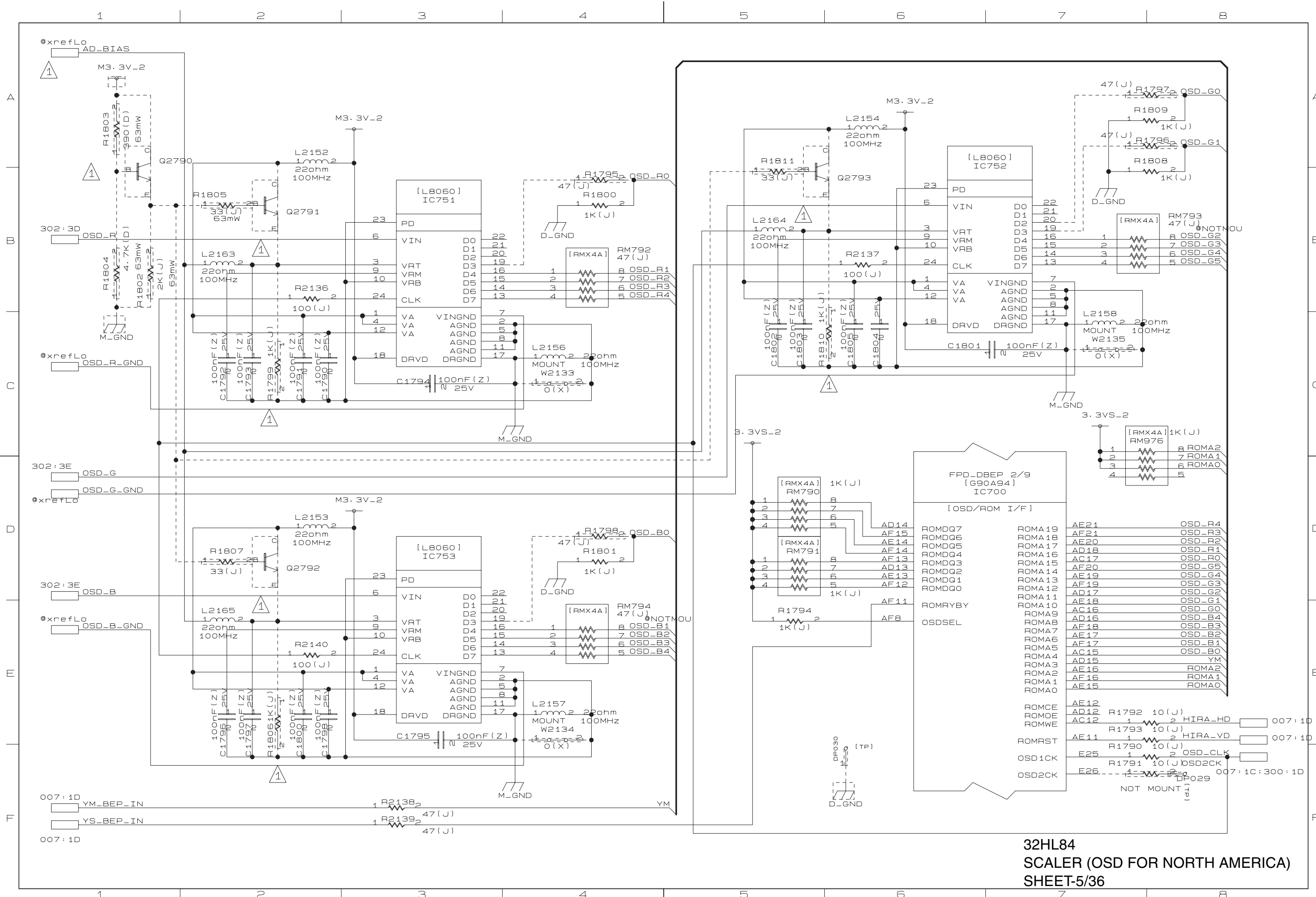
| | | |
|------|-----|----------|
| QE15 | AE8 | CAPG1IN7 |
| QE14 | AF7 | CAPG1IN6 |
| QE13 | AD8 | CAPG1IN5 |
| QE12 | AE7 | CAPG1IN4 |
| QE11 | AF6 | CAPG1IN3 |
| QE10 | AE6 | CAPG1IN2 |
| QE9 | AD7 | CAPG1IN1 |
| QE8 | AC8 | CAPG1INO |
| QE7 | AF5 | CAPB1IN7 |
| QE6 | AE5 | CAPB1IN6 |
| QE5 | AD6 | CAPB1IN5 |
| QE4 | AC7 | CAPB1IN4 |
| QE3 | AF4 | CAPB1IN3 |
| QE2 | AD5 | CAPB1IN2 |
| QE1 | AC6 | CAPB1IN1 |
| QE0 | AE4 | CAPB1INO |
| QE23 | AD4 | CAPR1IN7 |
| QE22 | AC5 | CAPR1IN6 |
| QE21 | AF3 | CAPR1IN5 |
| QE20 | AE3 | CAPR1IN4 |
| QE19 | AC4 | CAPR1IN3 |
| QE18 | AD3 | CAPR1IN2 |
| QE17 | AB4 | CAPR1IN1 |
| QE16 | AC3 | CAPR1INO |
| QO15 | AD2 | CAPG2IN7 |
| QO14 | AB3 | CAPG2IN6 |
| QO13 | AD1 | CAPG2IN5 |
| QO12 | Y4 | CAPG2IN4 |
| QO11 | AA3 | CAPG2IN3 |
| QO10 | AC2 | CAPG2IN2 |
| QO9 | AC1 | CAPG2IN1 |
| QO8 | Y3 | CAPG2INO |
| QO7 | AB2 | CAPB2IN7 |
| QO6 | AB1 | CAPB2IN6 |
| QO5 | V4 | CAPB2IN5 |
| QO4 | V4 | CAPB2IN4 |
| QO3 | W3 | CAPB2IN3 |
| QO2 | AA2 | CAPB2IN2 |
| QO1 | AA1 | CAPB2IN1 |
| QO0 | Y2 | CAPB2INO |
| QO23 | V3 | CAPR2IN7 |
| QO22 | Y1 | CAPR2IN6 |
| QO21 | W2 | CAPR2IN5 |
| QO20 | W1 | CAPR2IN4 |
| QO19 | U3 | CAPR2IN3 |
| QO18 | V2 | CAPR2IN2 |
| QO17 | T3 | CAPR2IN1 |
| QO16 | V1 | CAPR2INO |
| | U2 | |
| | P3 | CAPHD |
| | R1 | CAPVD |
| | E24 | CAPCK |
| | P4 | DVIEN |

**32HL84
SCALER (CAPTURE INPUT)
SHEET-2/36**

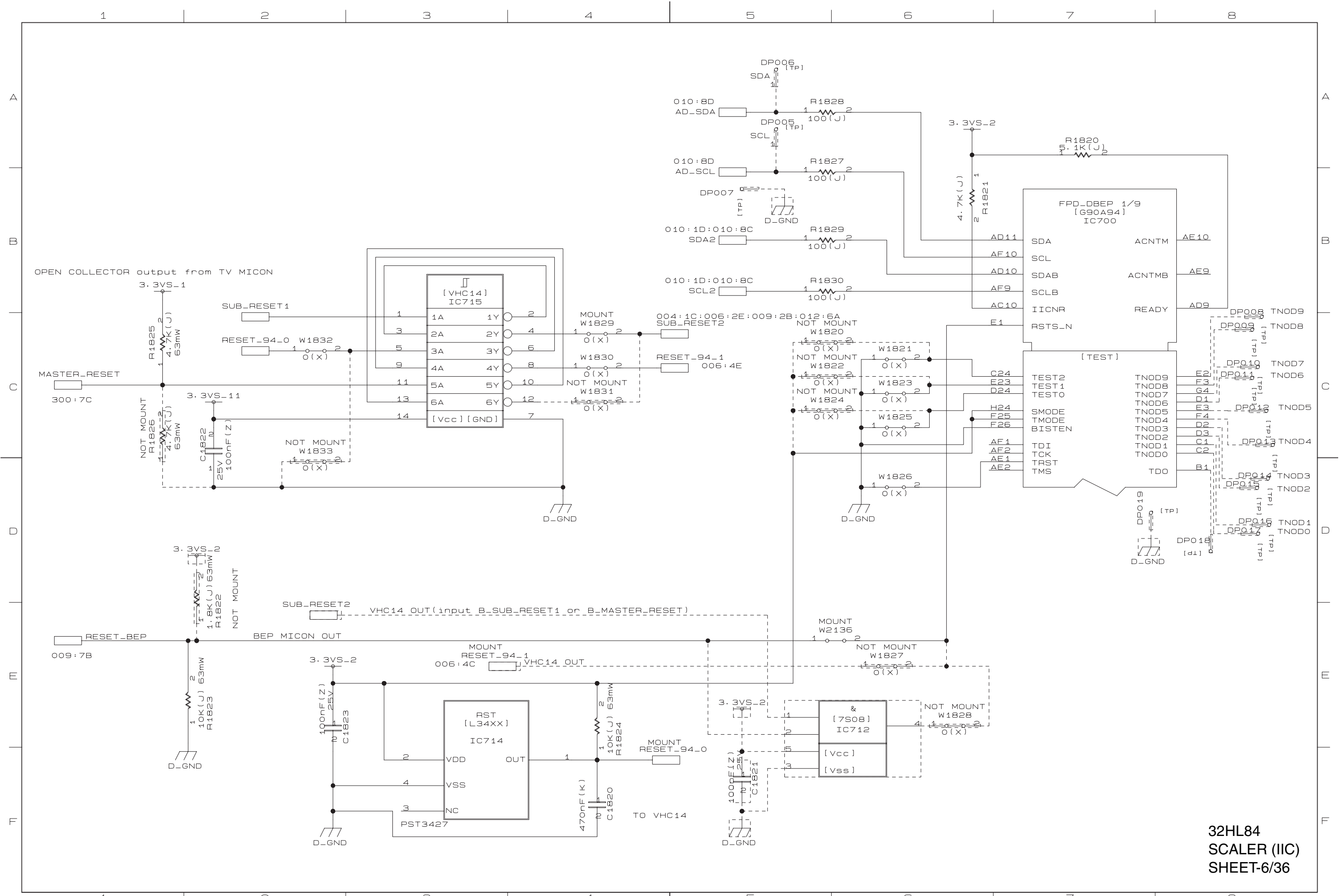




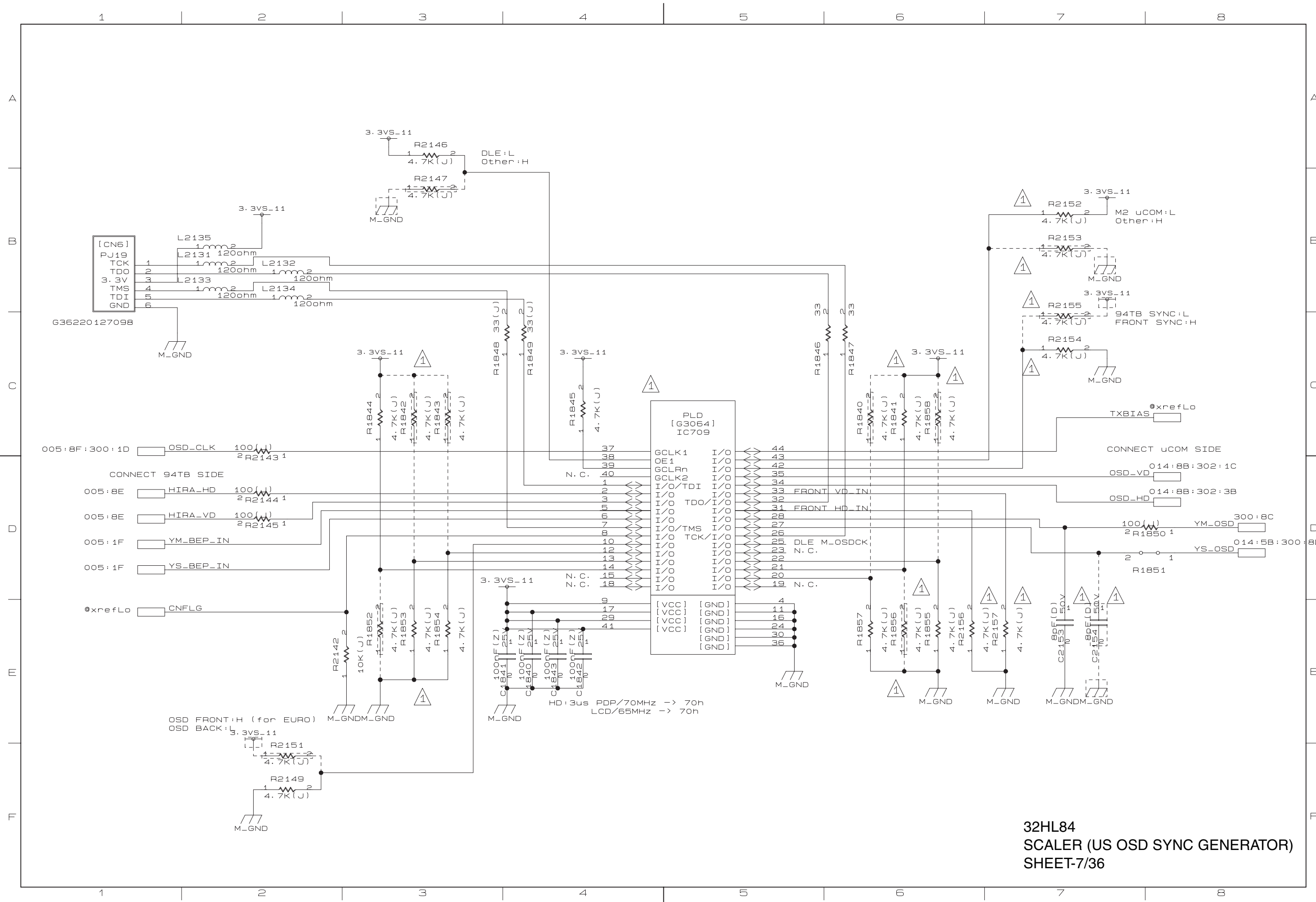
**32HL84
SCALER (PLL)
SHEET-4/36**



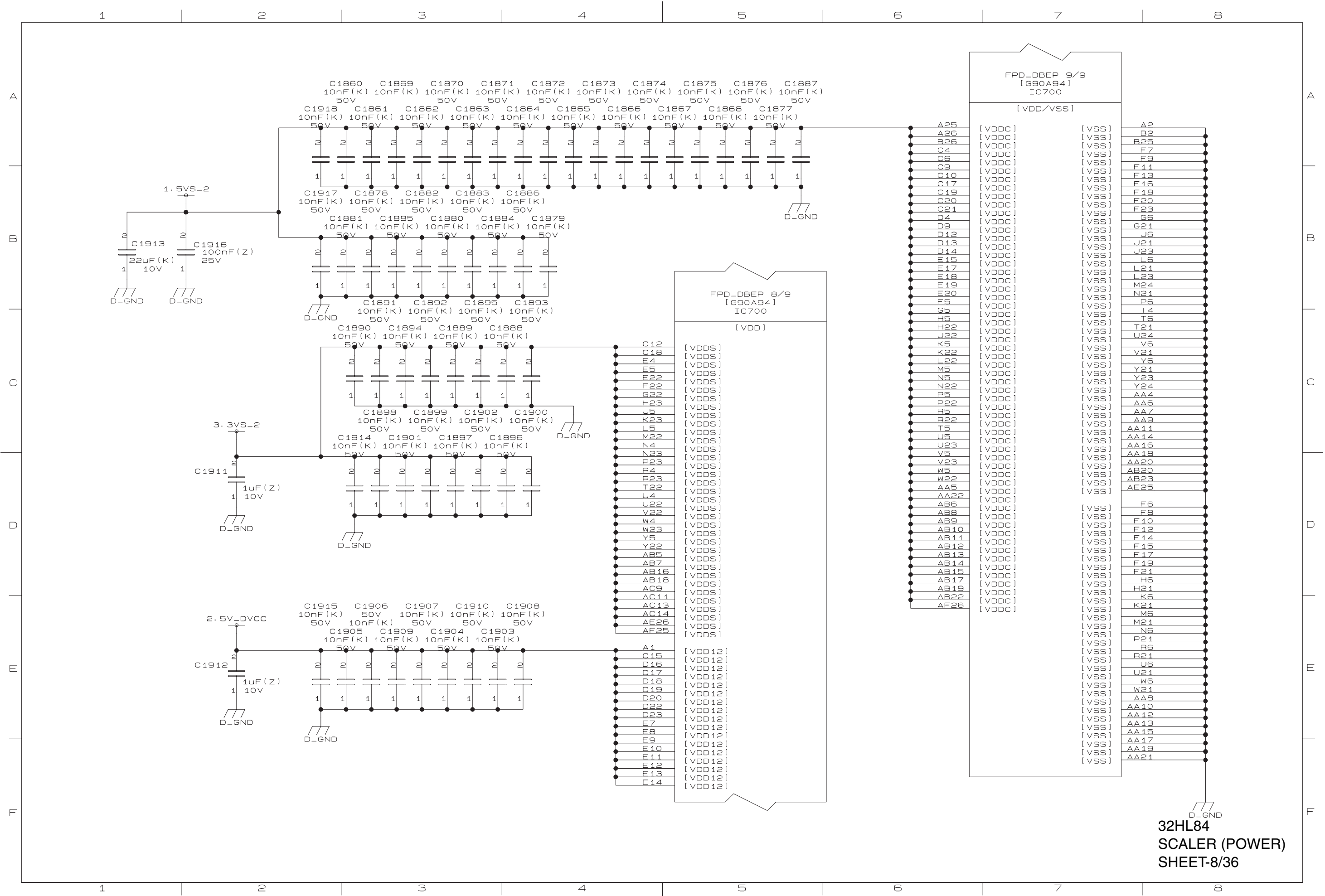
32HL84
SCALER (OSD FOR NORTH AMERICA)
SHEET-5/36



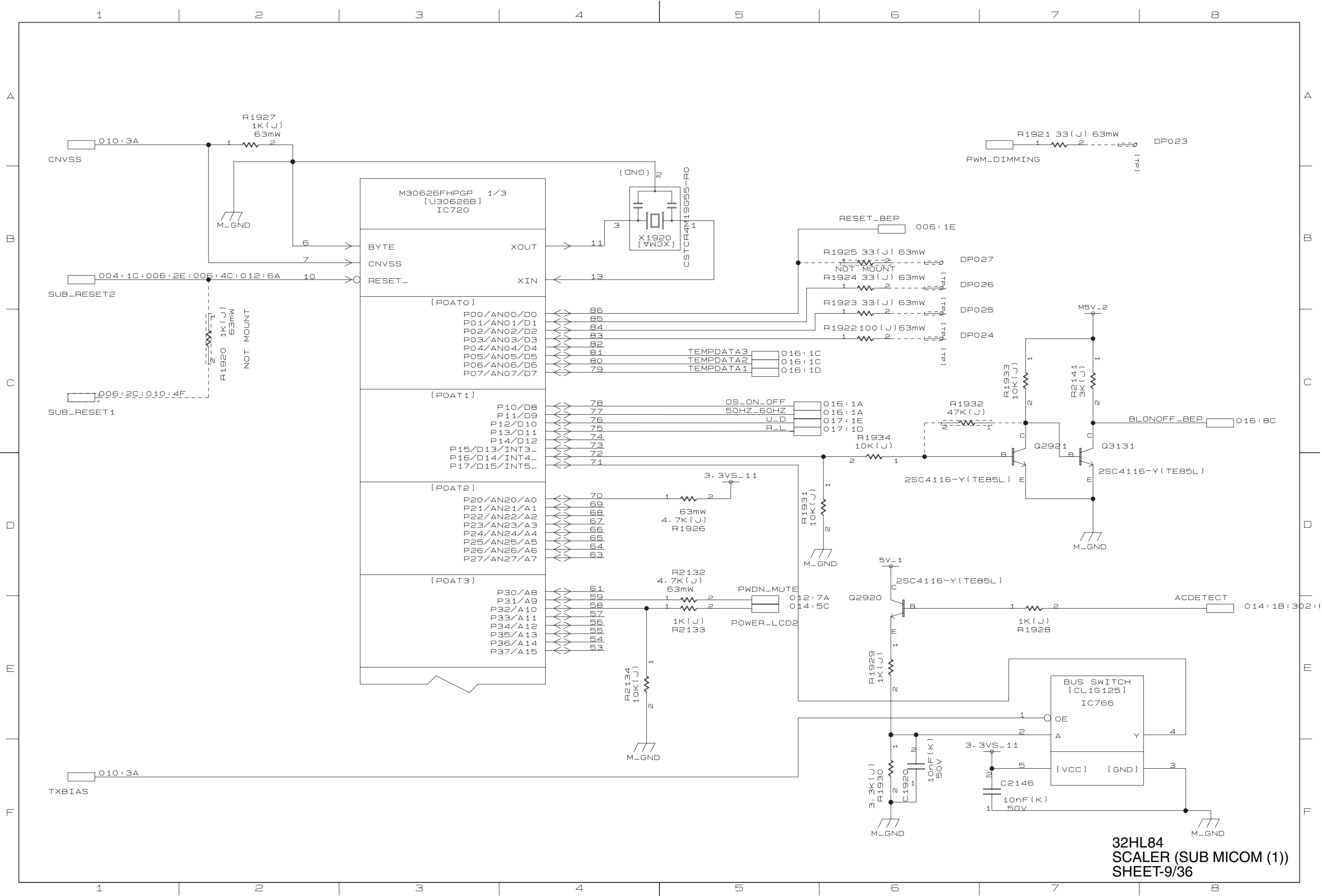
32HL84
SCALER (IIC)
SHEET-6/36



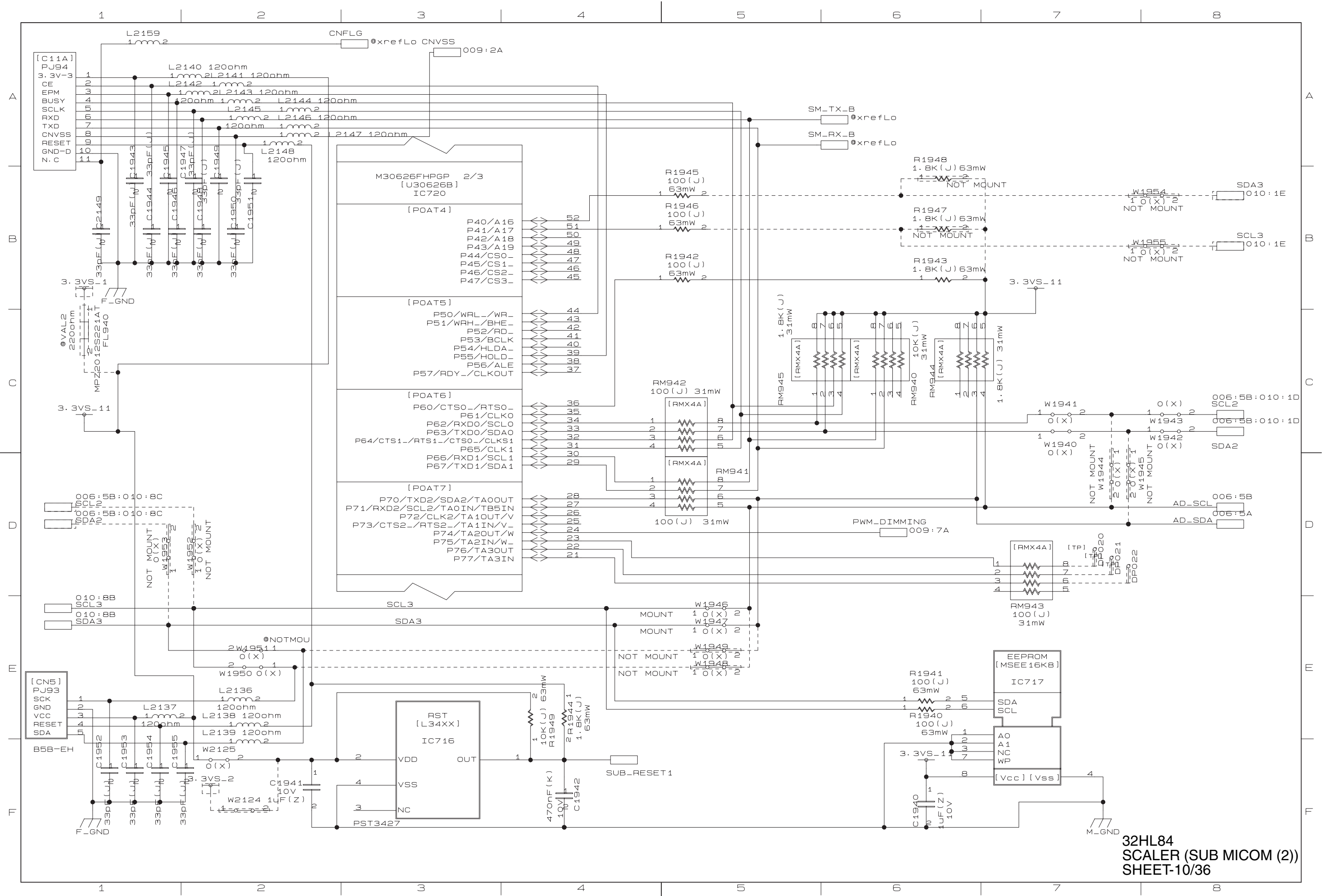
32HL84
SCALER (US OSD SYNC GENERATOR)
SHEET-7/36



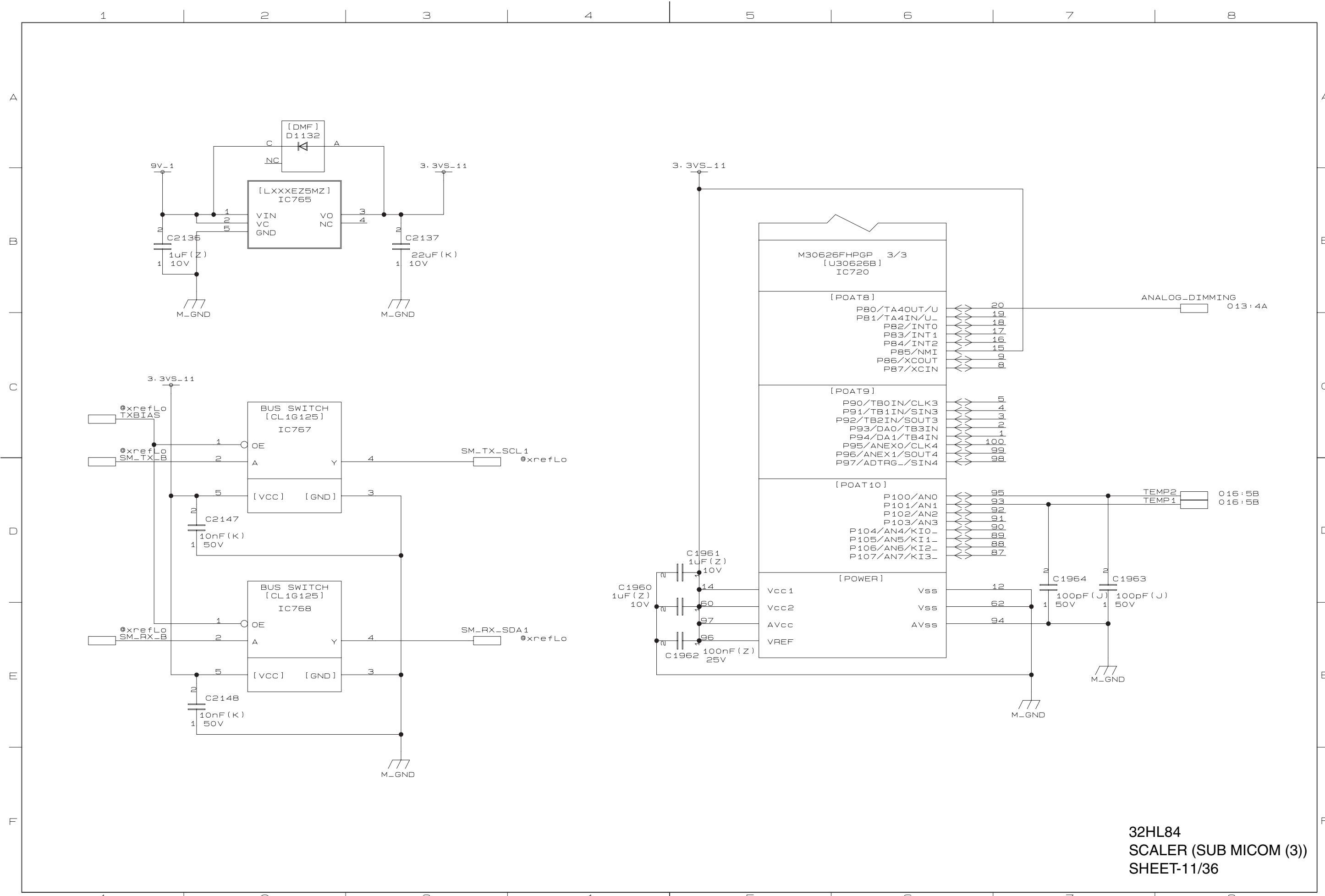
32HL84
SCALER (POWER)
SHEET-8/36



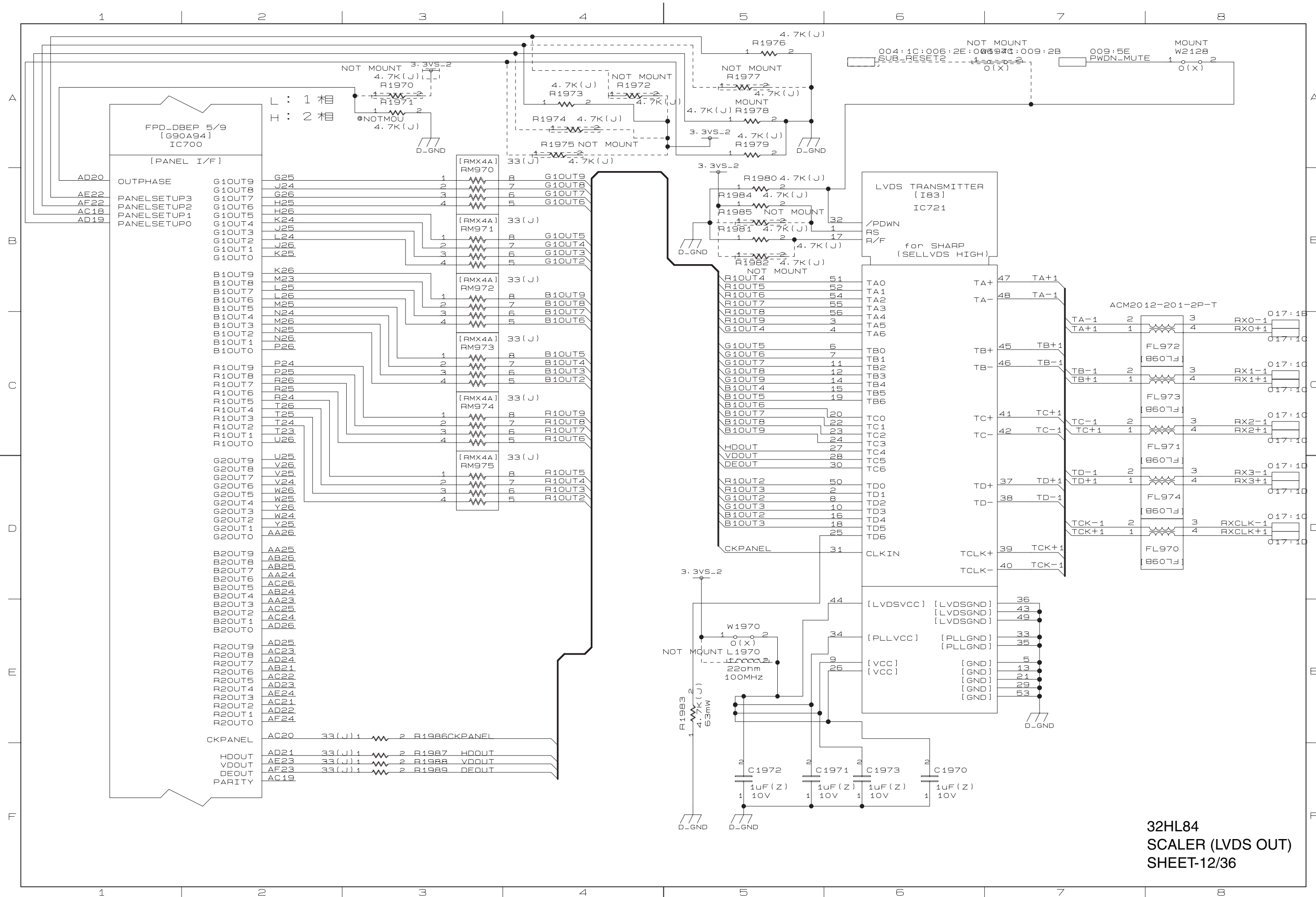
32HL84
SCALER (SUB MICOM (1))
SHEET-9/36



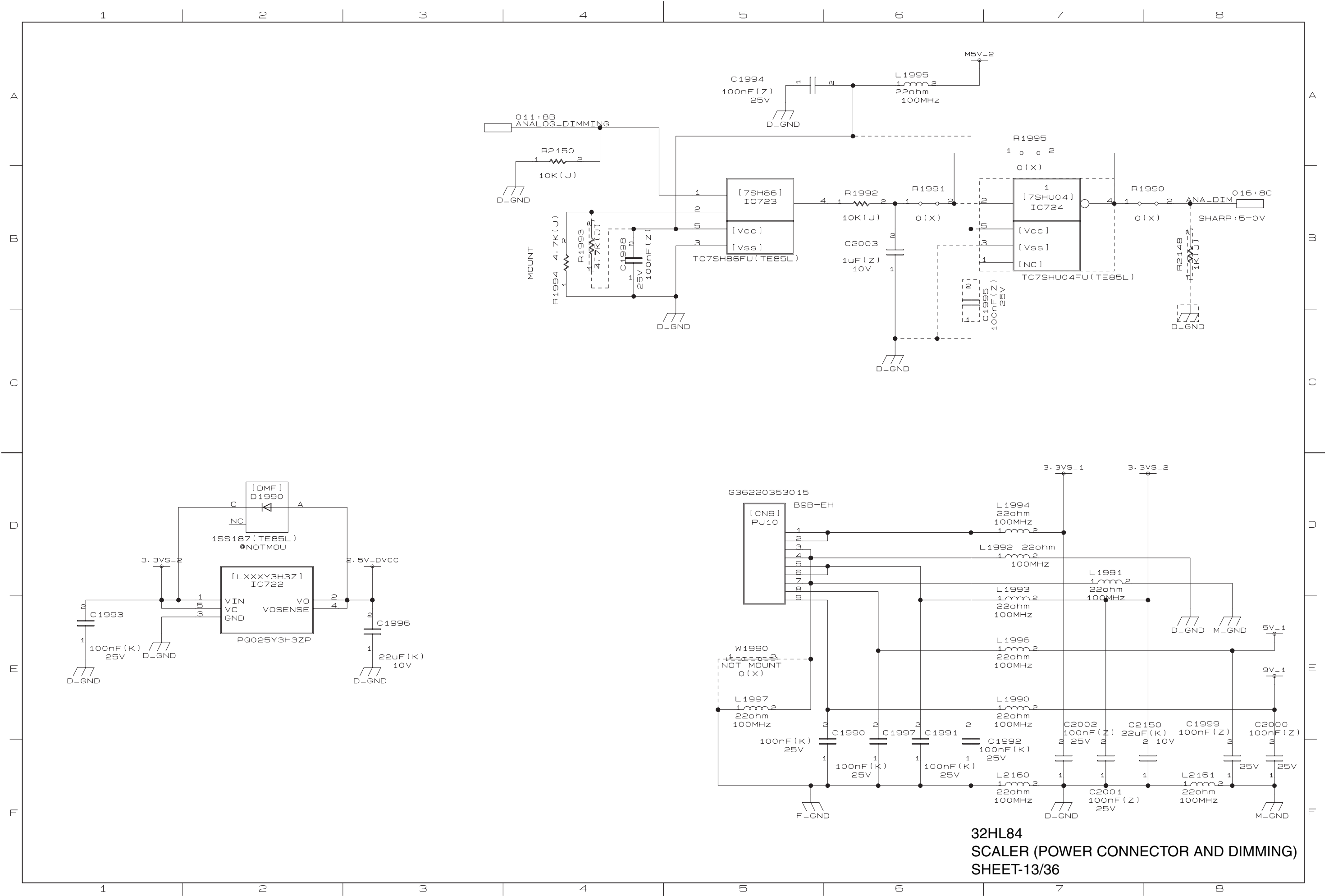
32HL84
SCALER (SUB MICOM (2))
SHEET-10/36



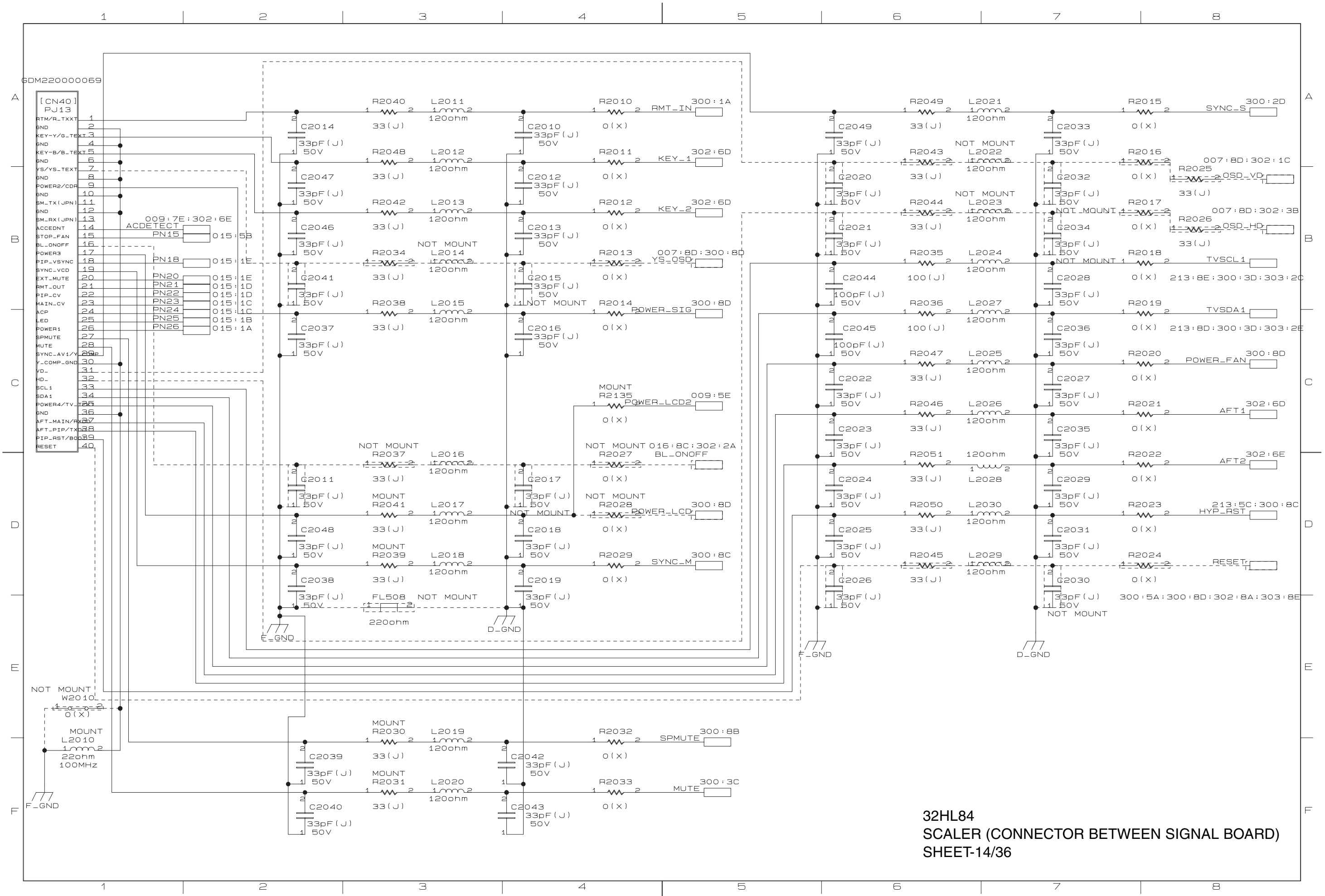
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 SCALER (SUB MICOM (3))
 SHEET-11/36



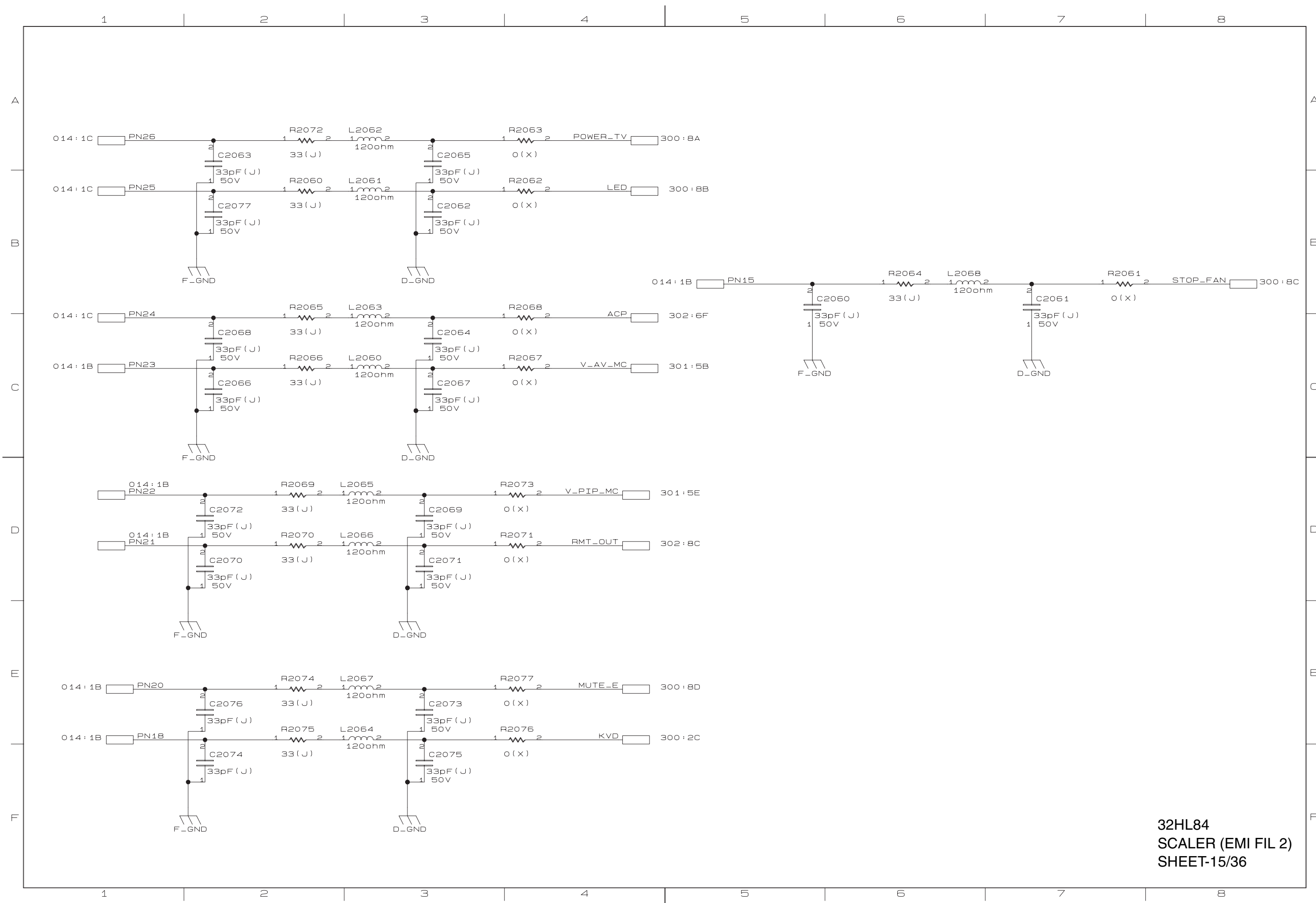
32HL84
SCALER (LVDS OUT)
SHEET-12/36



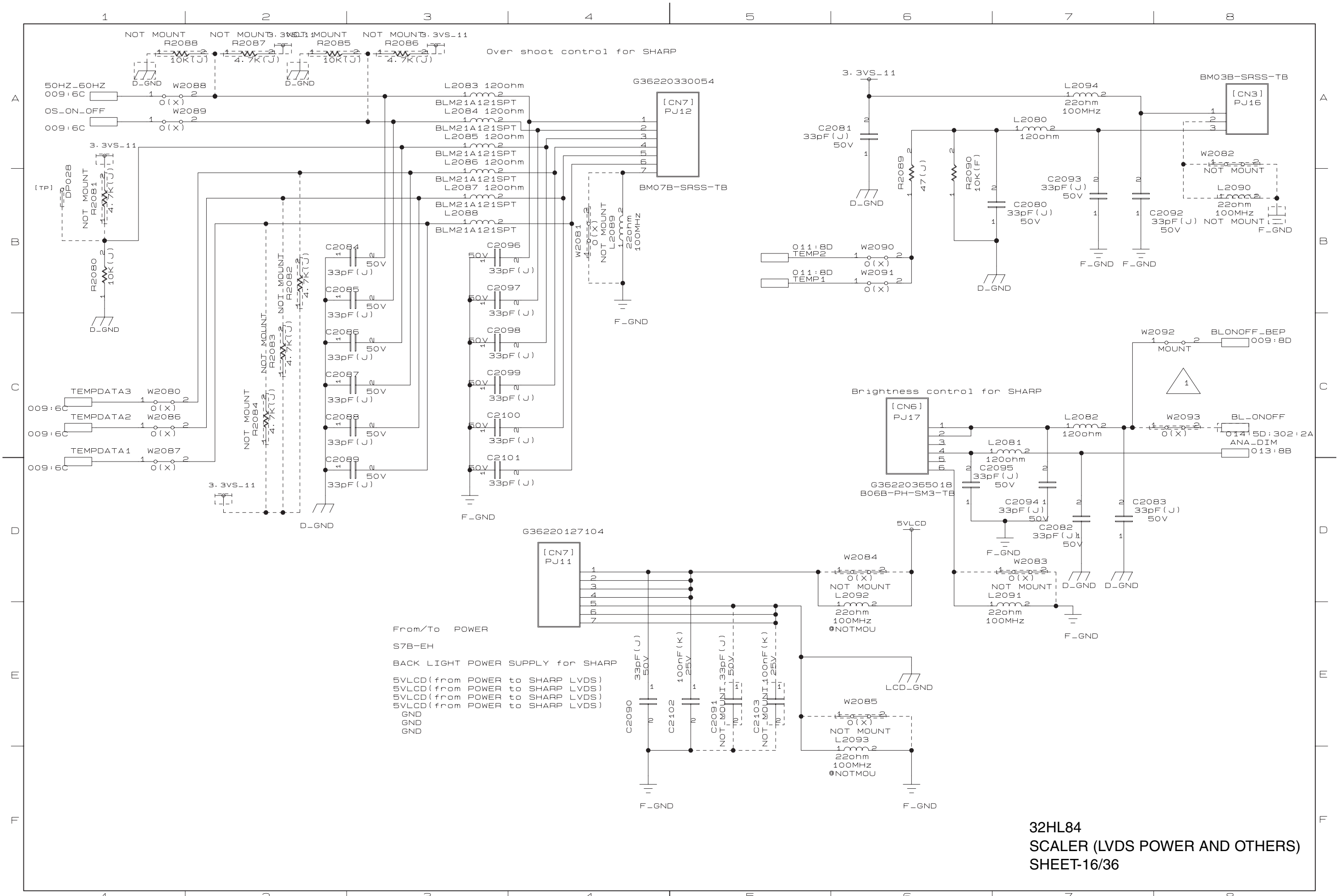
**32HL84
SCALER (POWER CONNECTOR AND DIMMING)
SHEET-13/36**



**32HL84
SCALER (CONNECTOR BETWEEN SIGNAL BOARD)
SHEET-14/36**

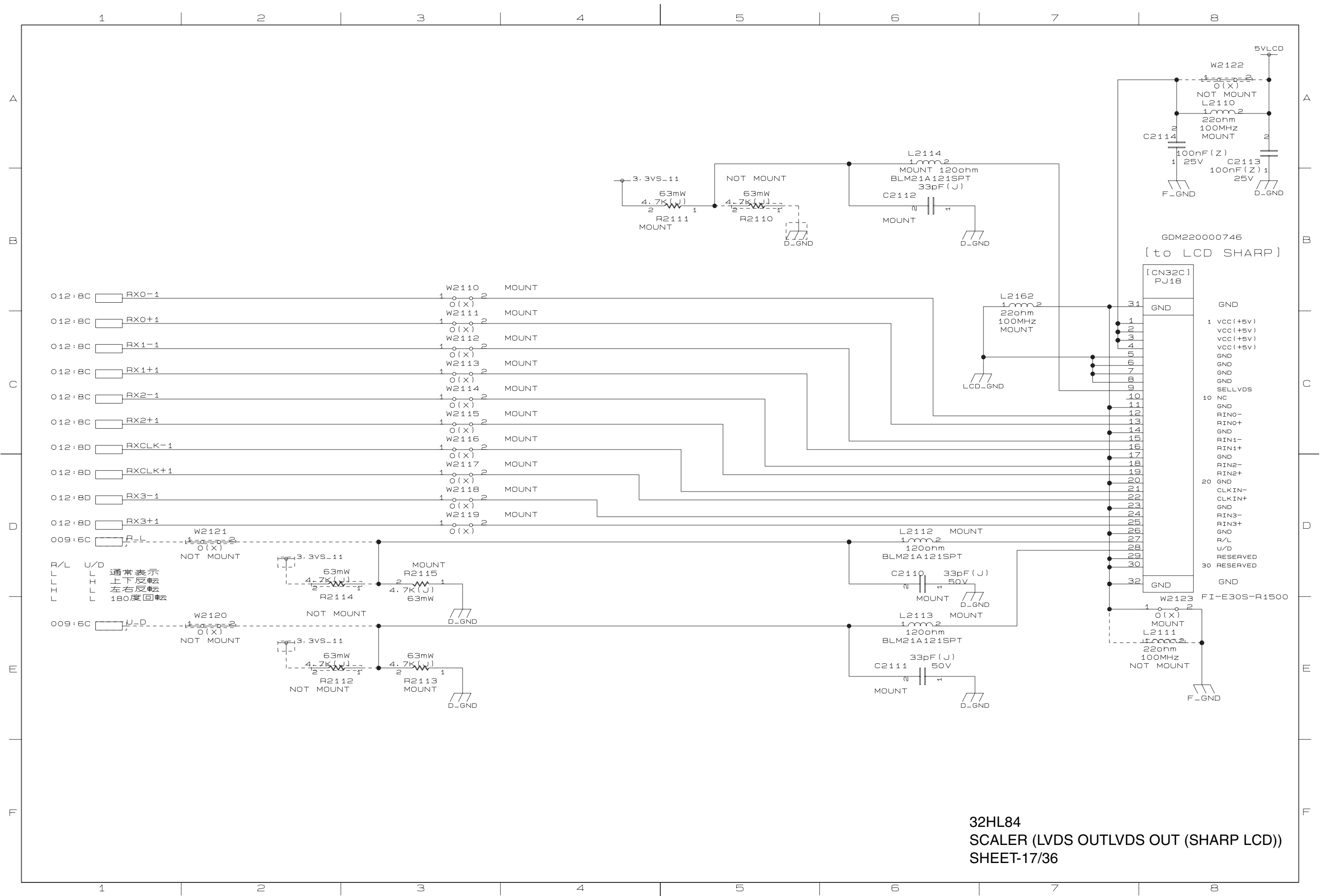


32HL84
 SCALER (EMI FIL 2)
 SHEET-15/36

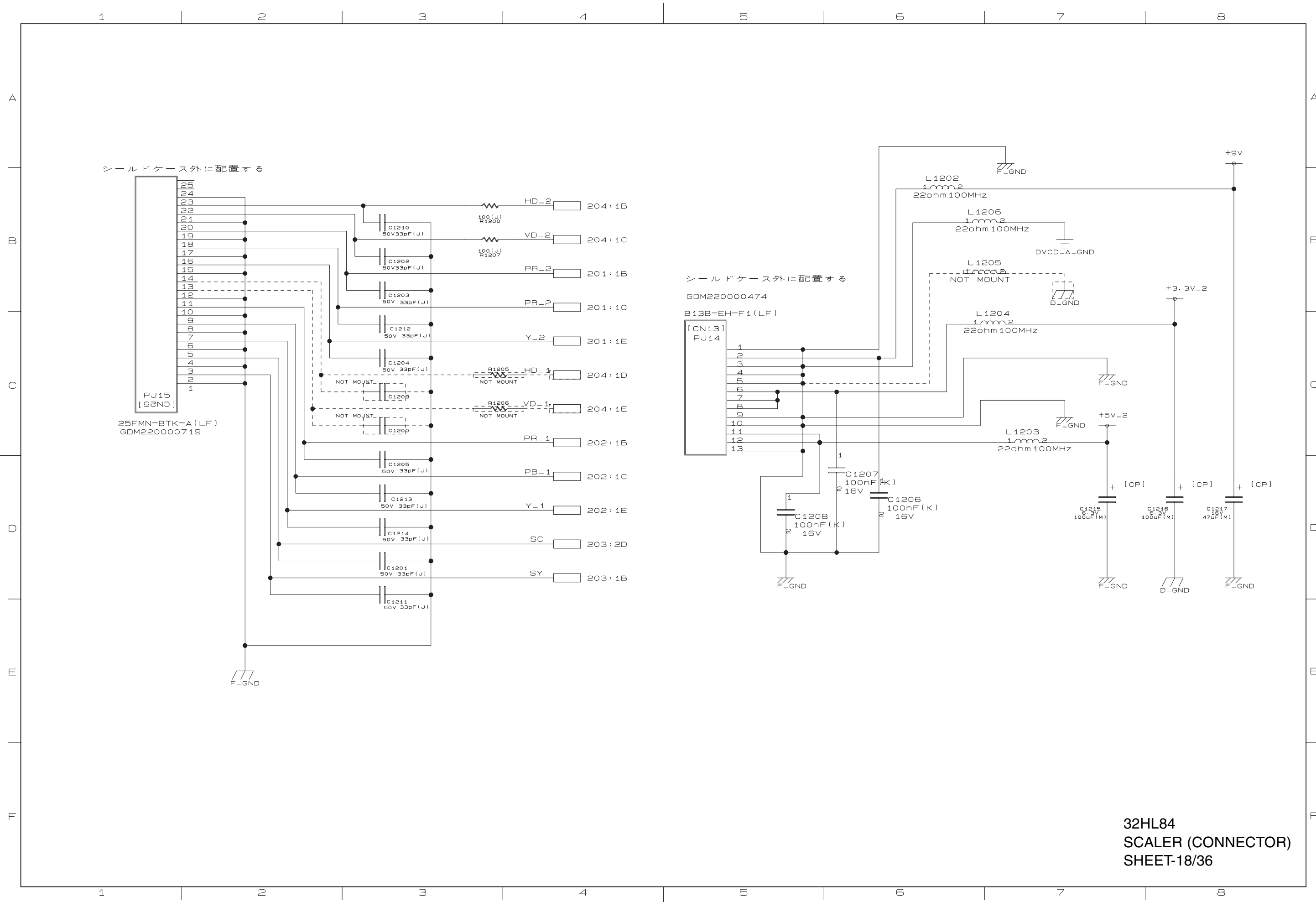


From/To POWER
 S7B-EH
 BACK LIGHT POWER SUPPLY for SHARP
 5V_LCD(from POWER to SHARP LVDS)
 5V_LCD(from POWER to SHARP LVDS)
 5V_LCD(from POWER to SHARP LVDS)
 5V_LCD(from POWER to SHARP LVDS)
 GND
 GND
 GND

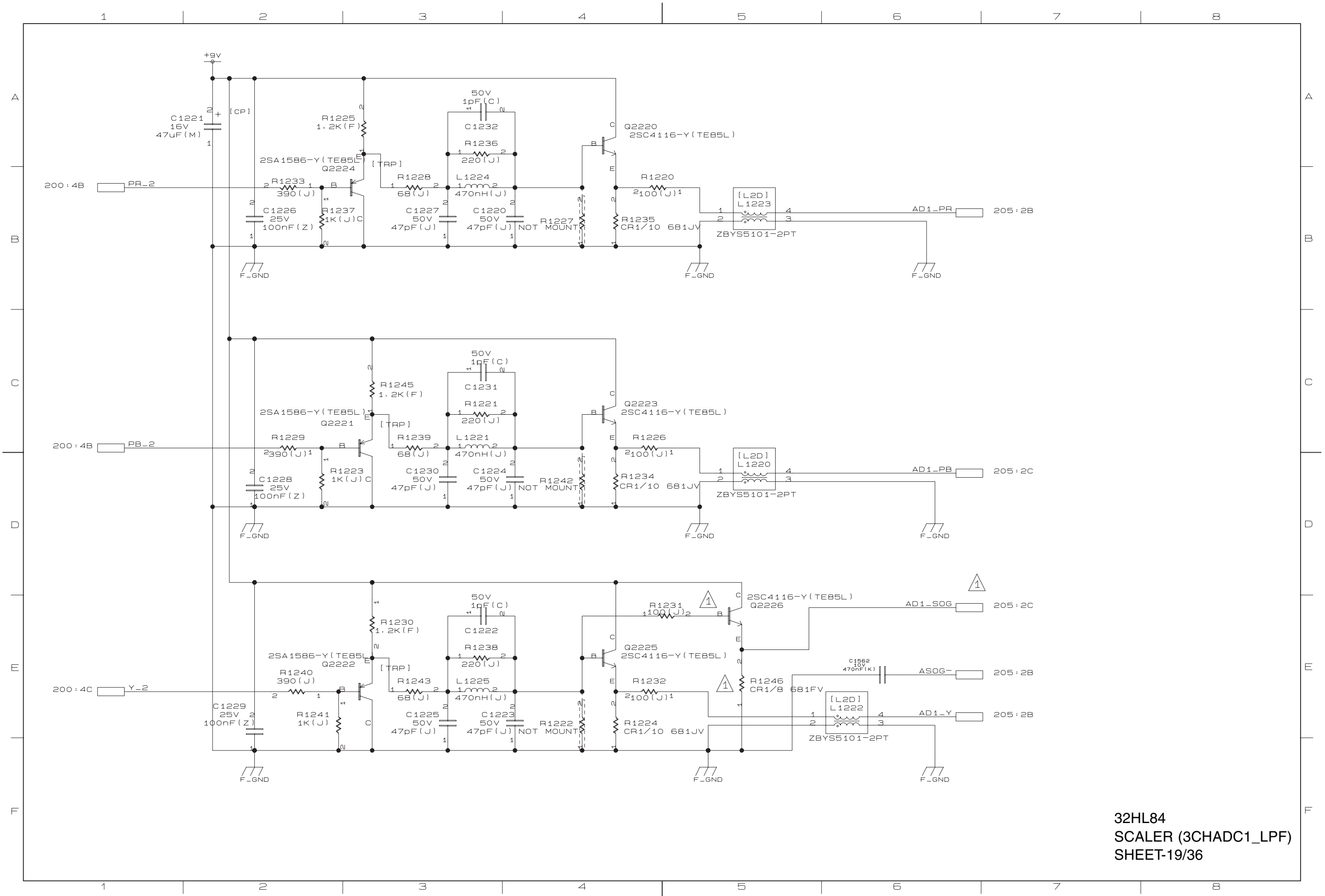
32HL84
 SCALER (LVDS POWER AND OTHERS)
 SHEET-16/36



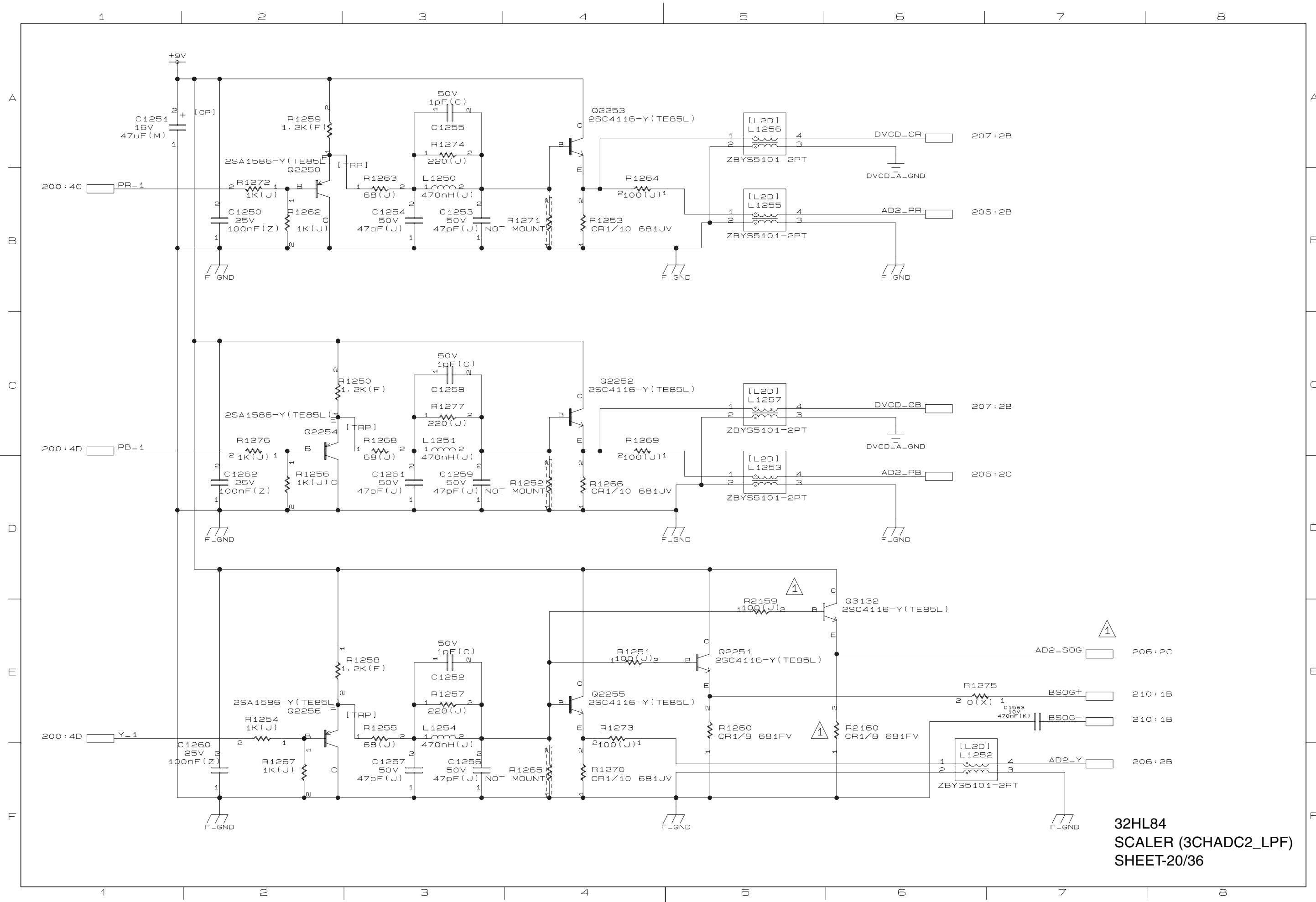
32HL84
 SCALER (LVDS OUTLVDS OUT (SHARP LCD))
 SHEET-17/36



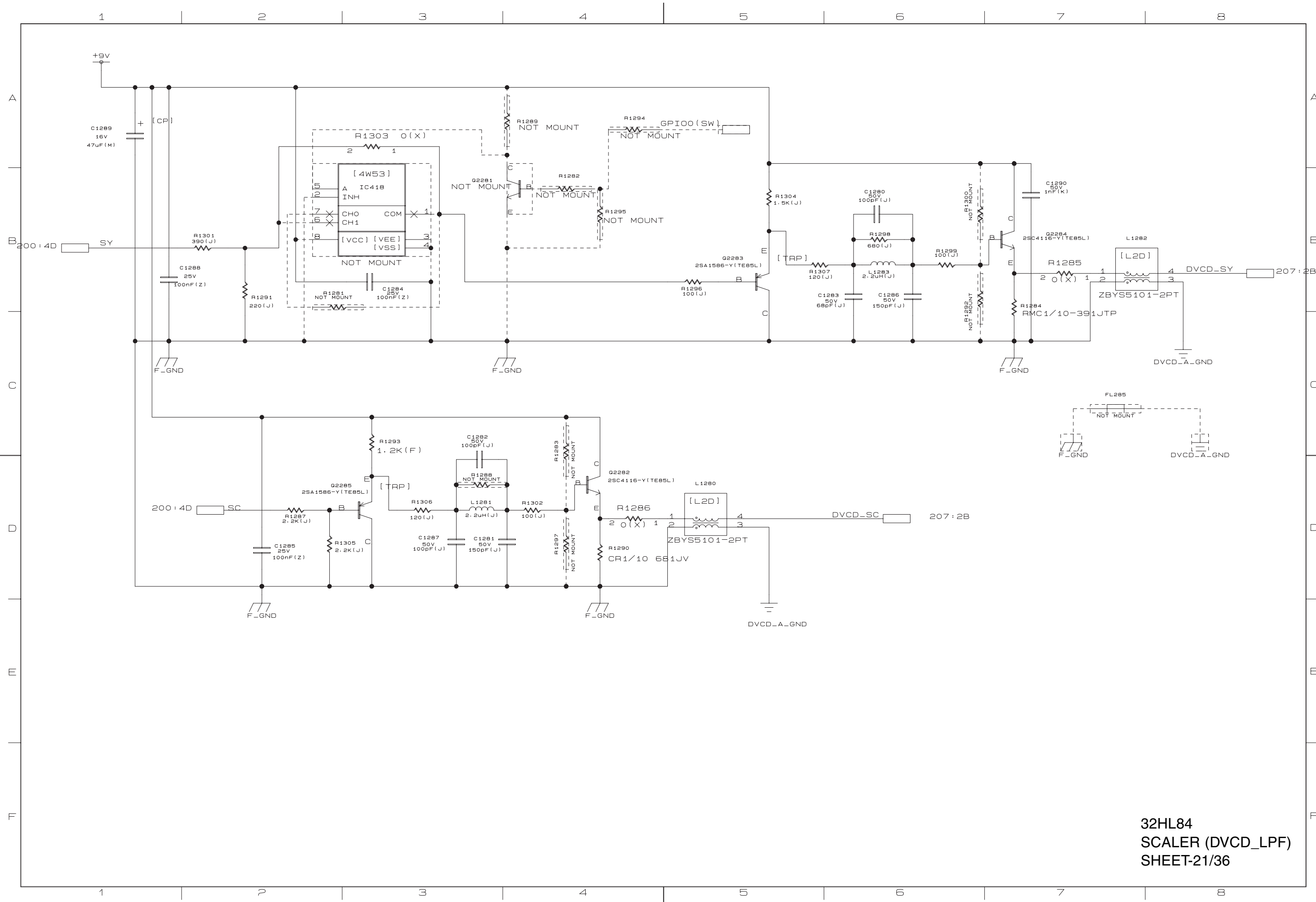
32HL84
SCALER (CONNECTOR)
SHEET-18/36



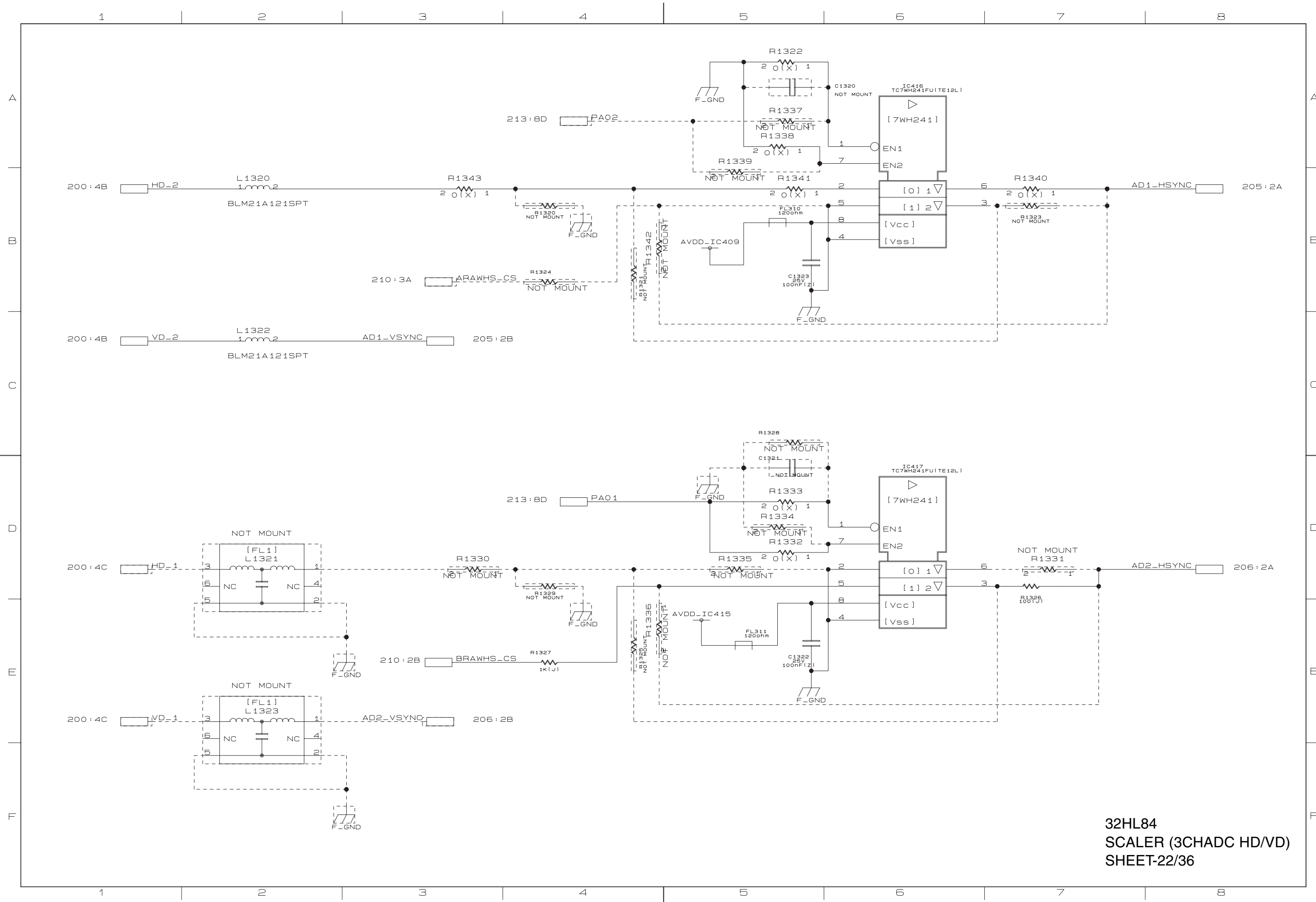
32HL84
 SCALER (3CHADC1_LPF)
 SHEET-19/36



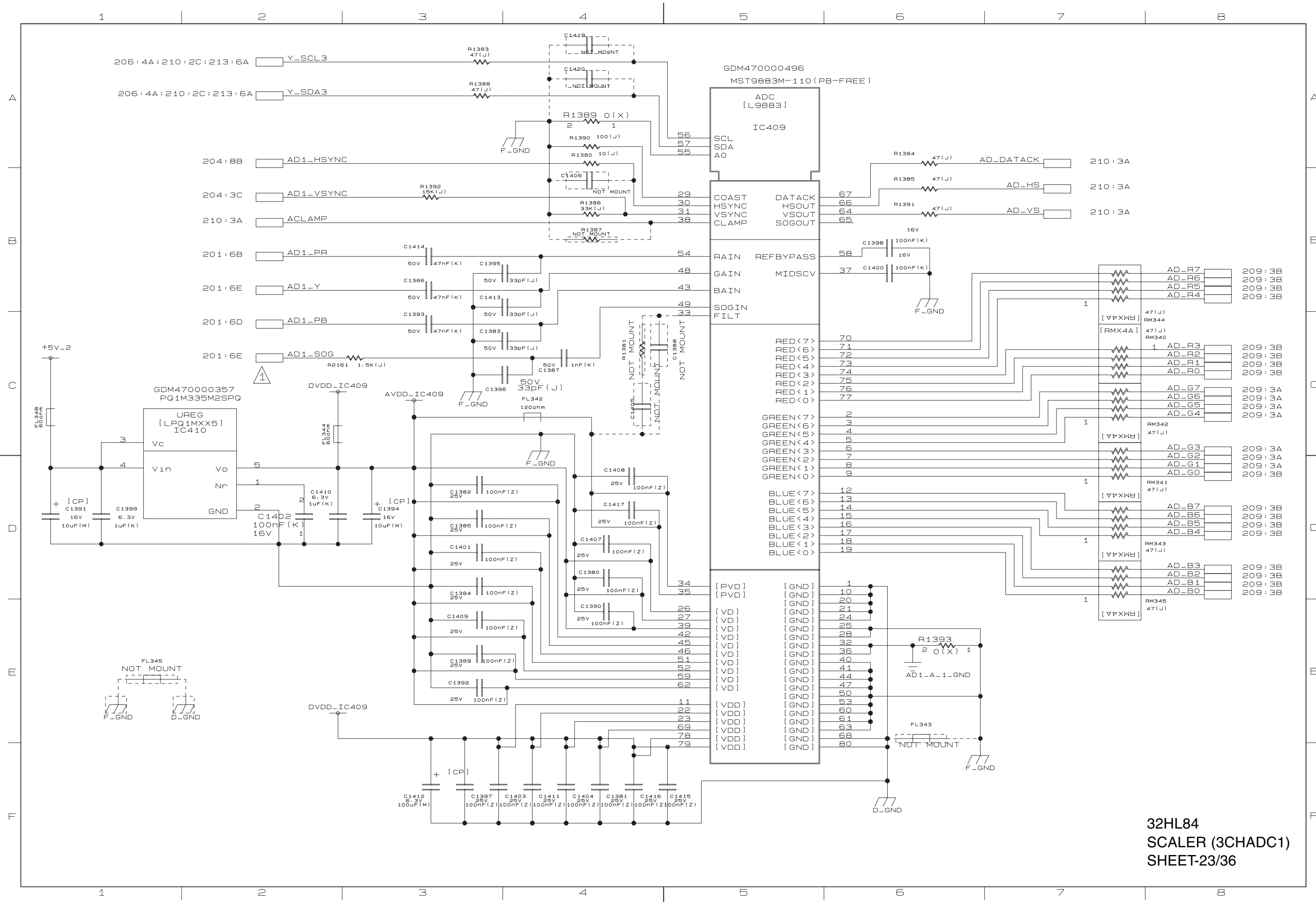
32HL84
SCALER (3CHADC2_LPF)
SHEET-20/36



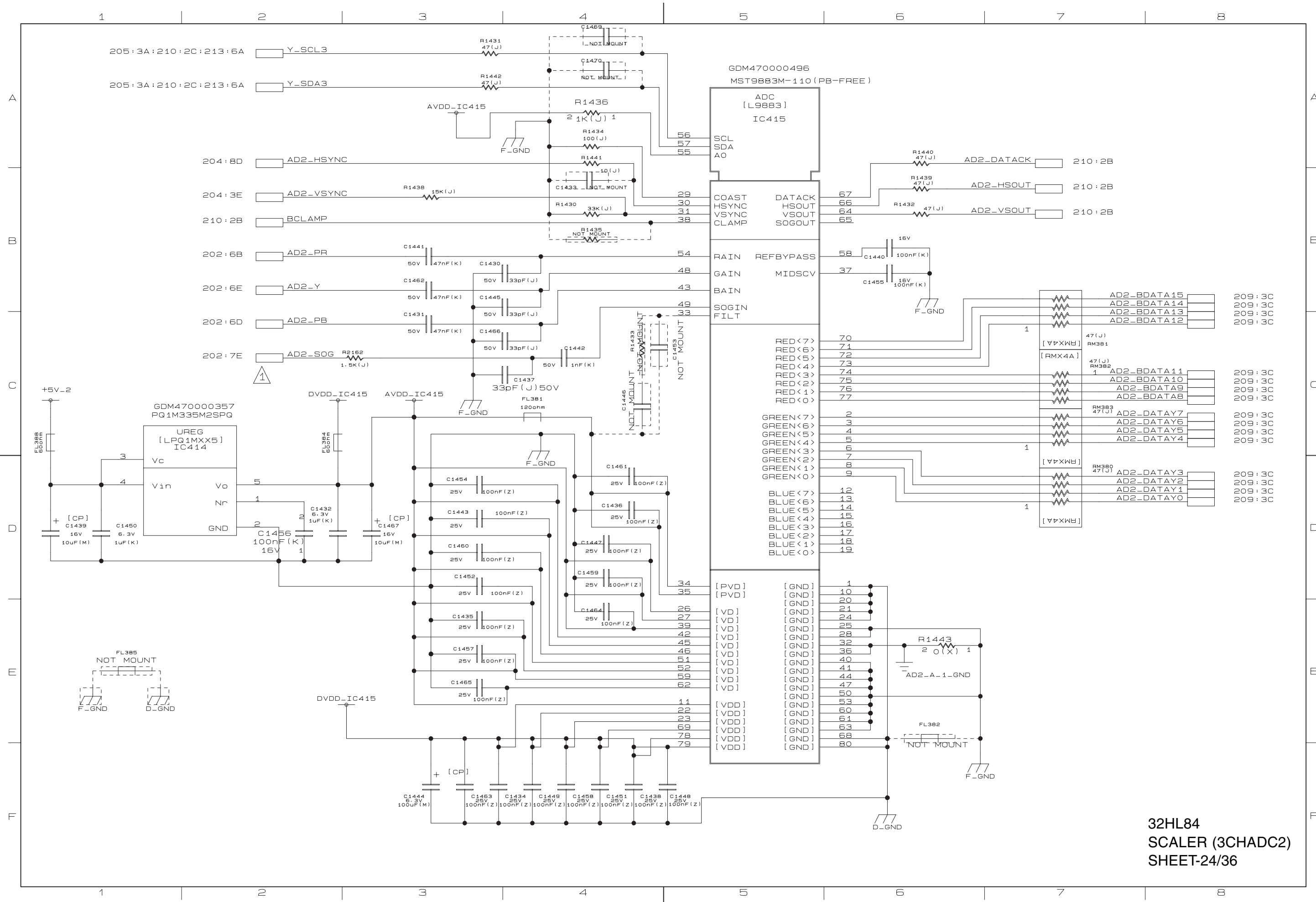
32HL84
 SCALER (DVCD_LPF)
 SHEET-21/36



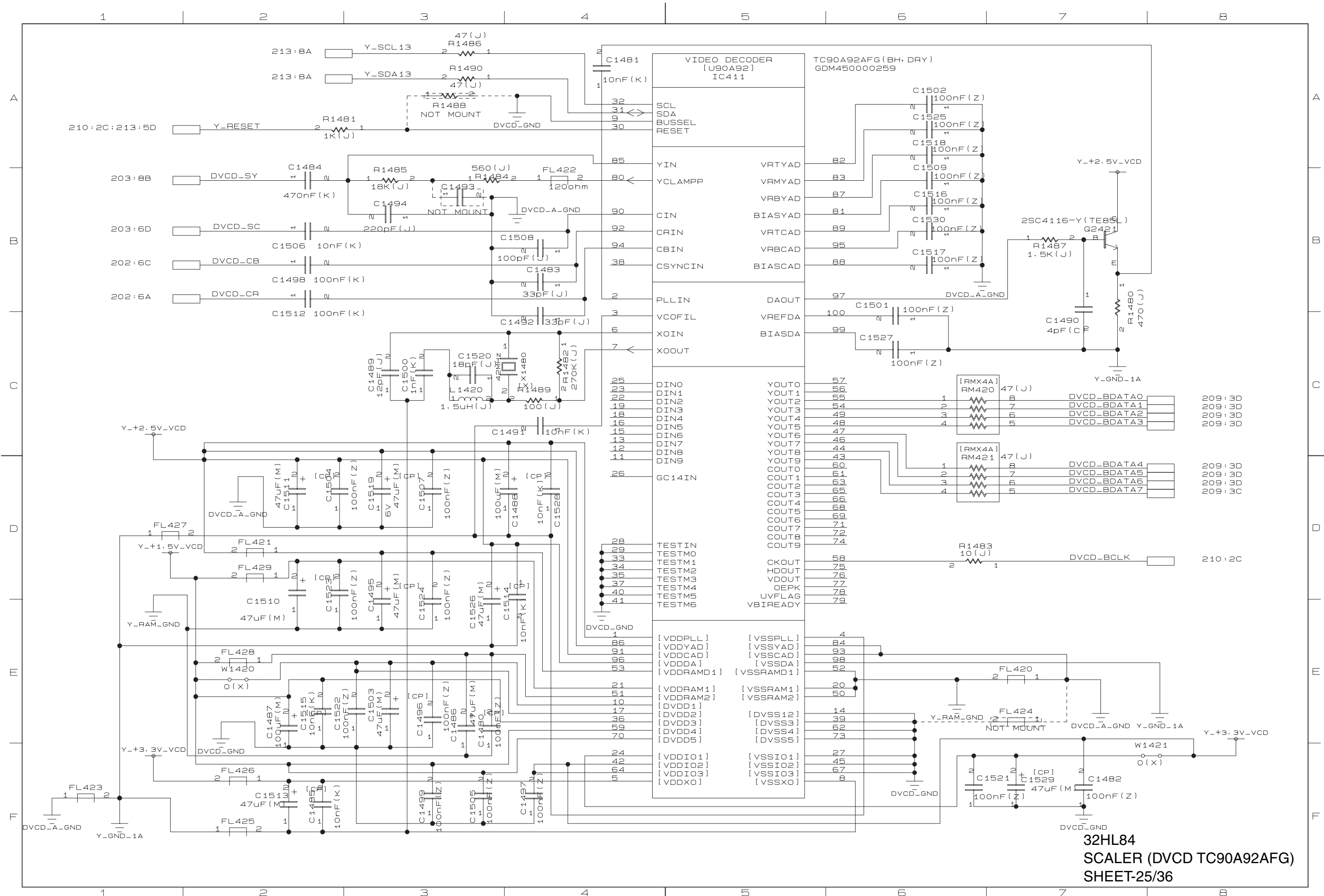
32HL84
 SCALER (3CHADC HD/VD)
 SHEET-22/36



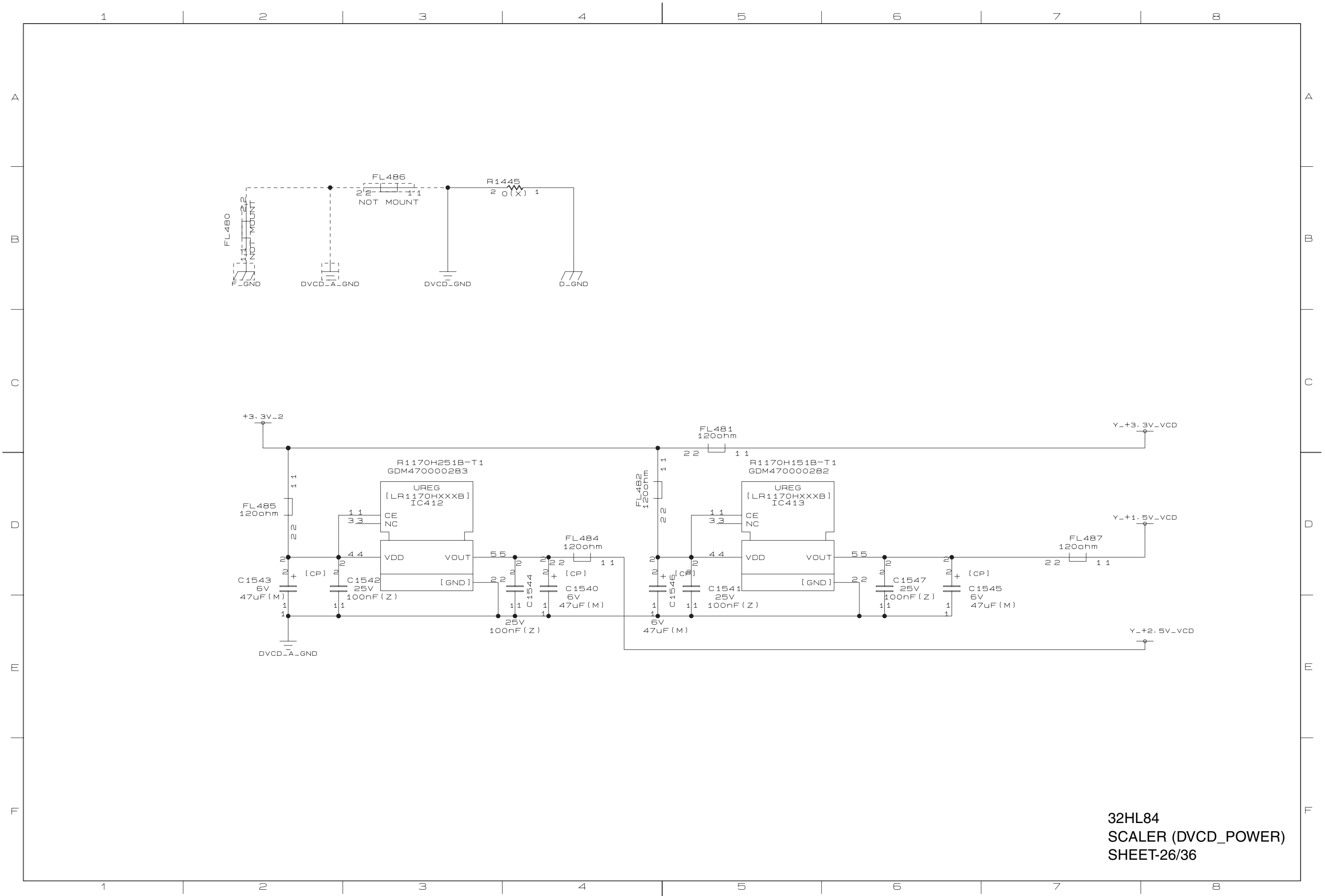
32HL84
SCALER (3CHADC1)
SHEET-23/36



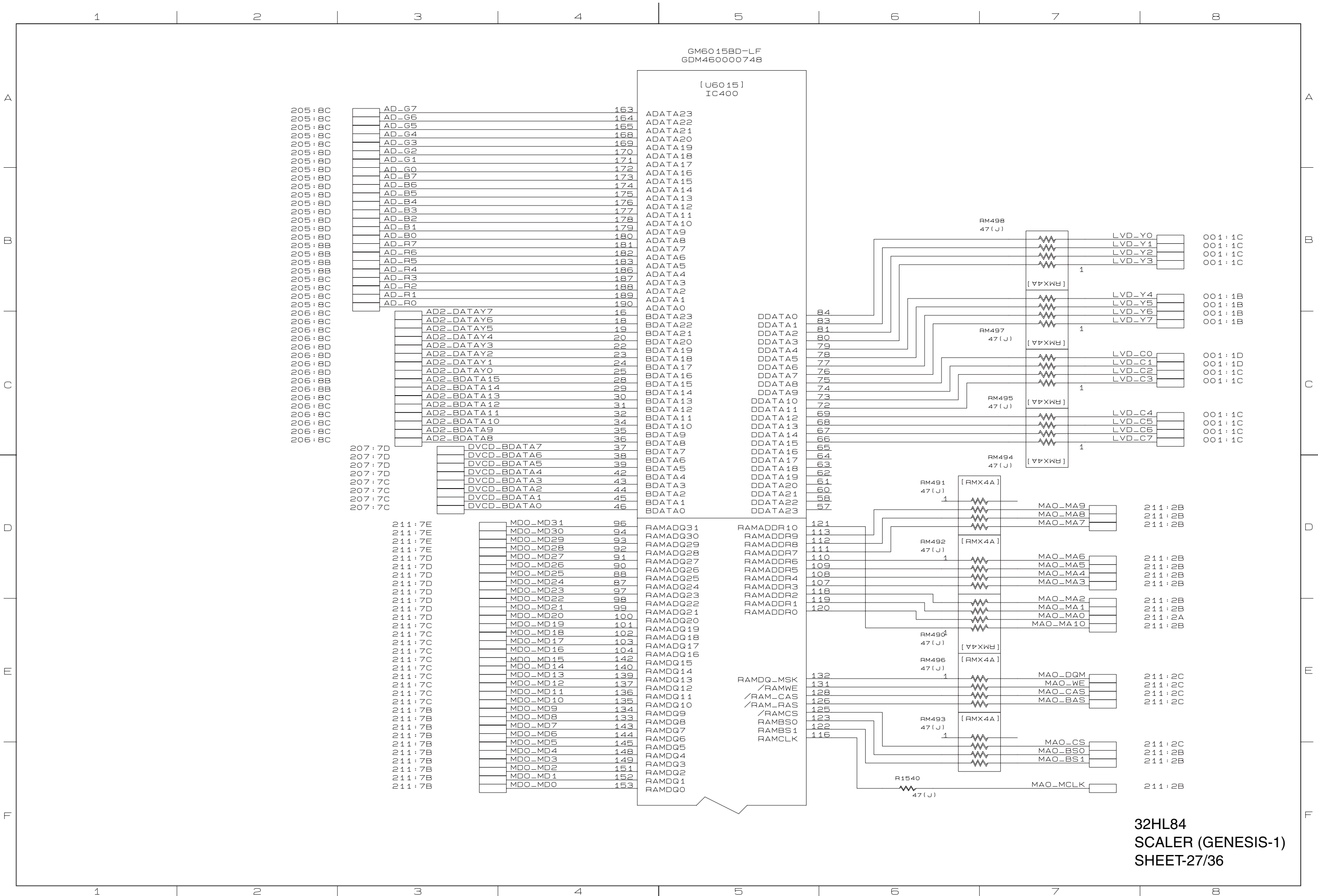
32HL84
SCALER (3CHADC2)
SHEET-24/36



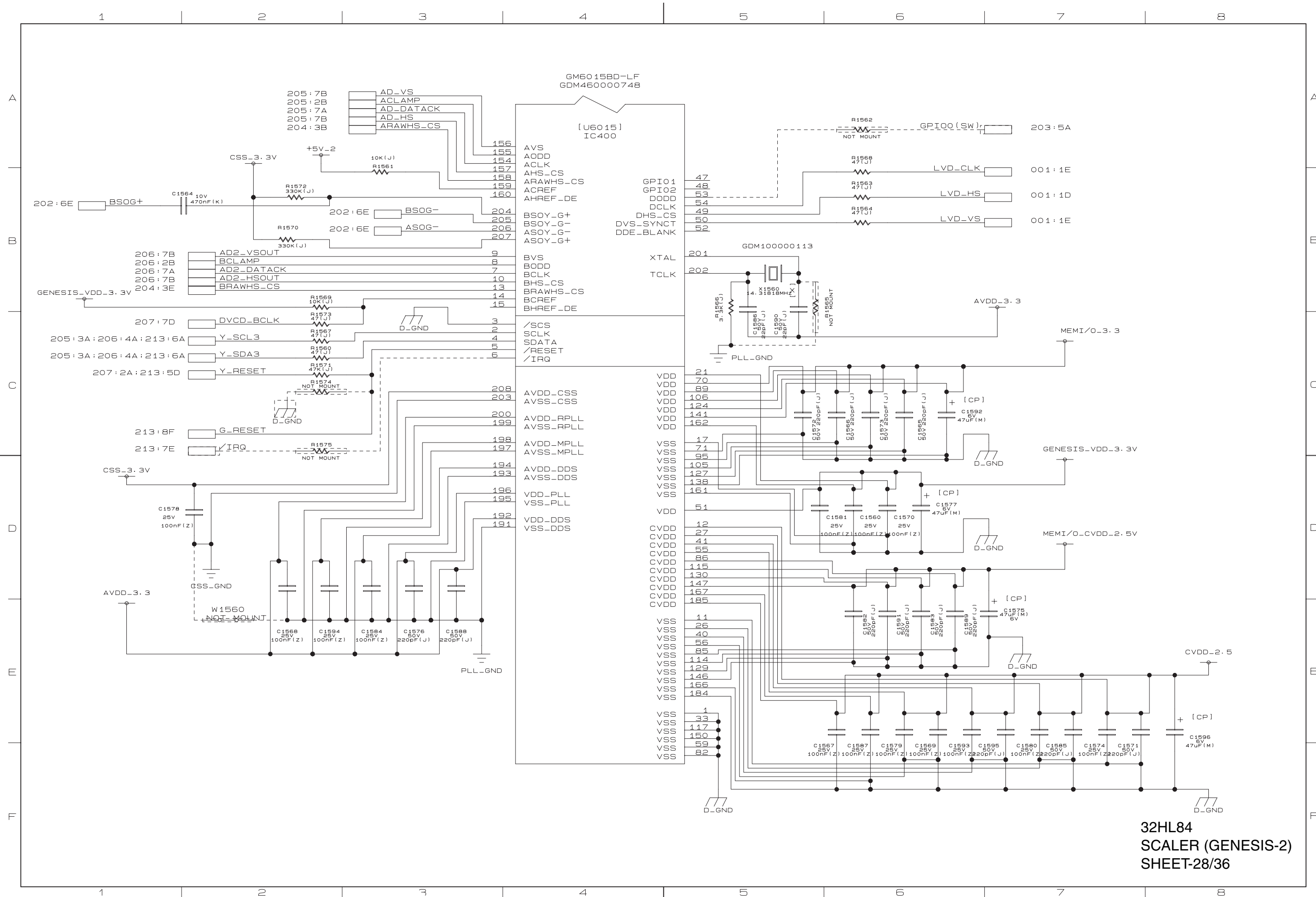
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SCALER (DVCD TC90A92AFG)
SHEET-25/36**

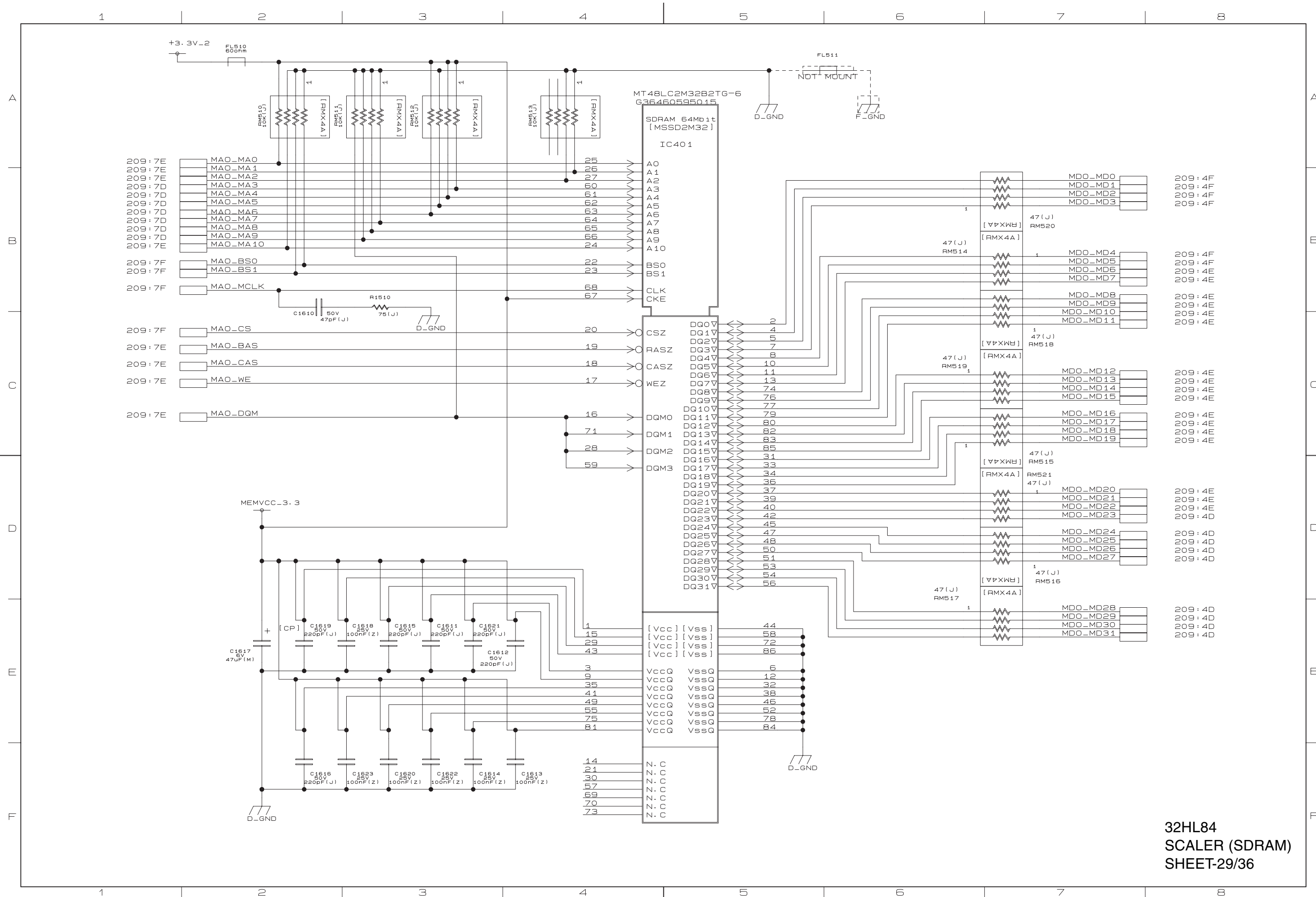


32HL84
 SCALER (DVCD_POWER)
 SHEET-26/36

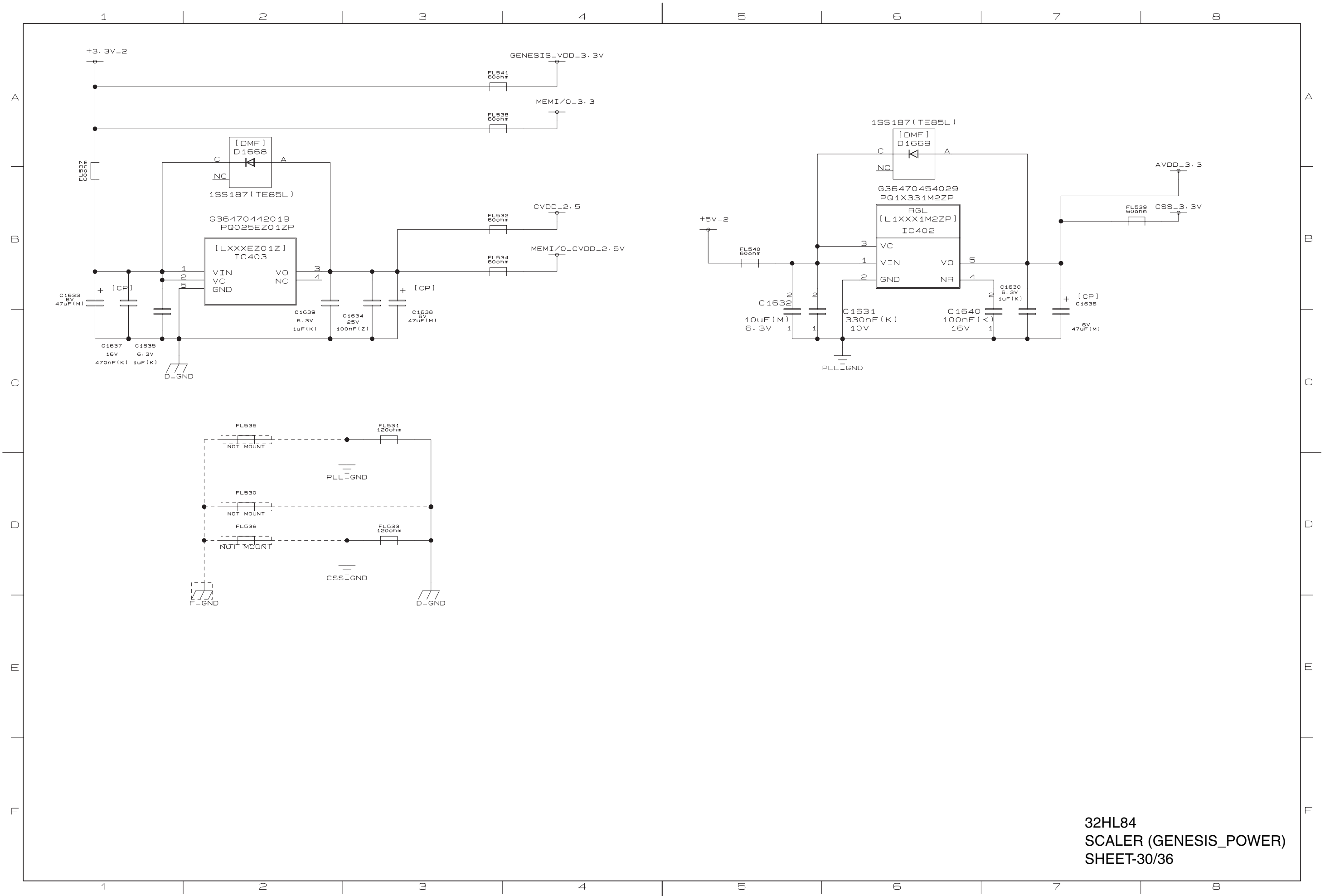


32HL84
SCALER (GENESIS-1)
SHEET-27/36

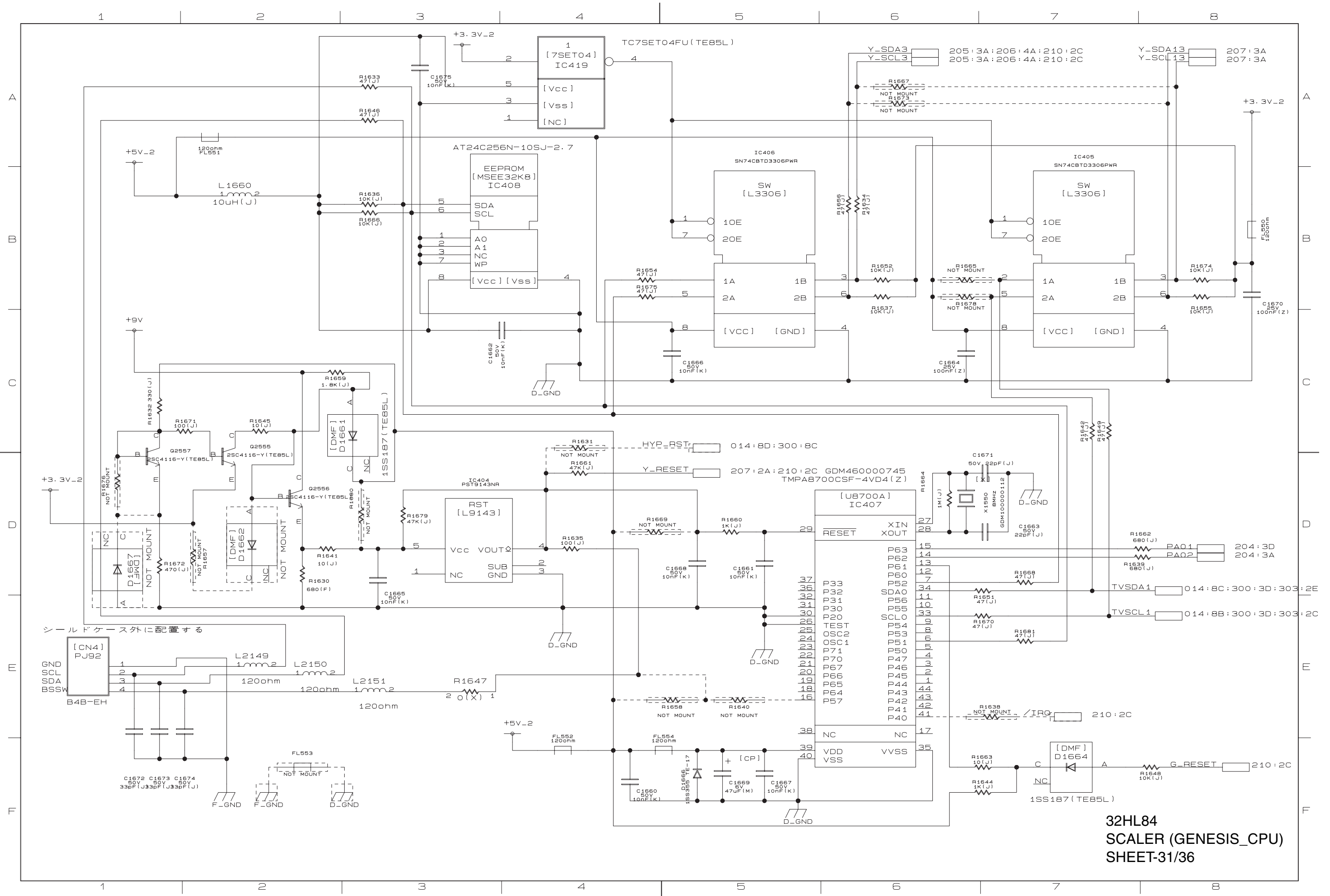




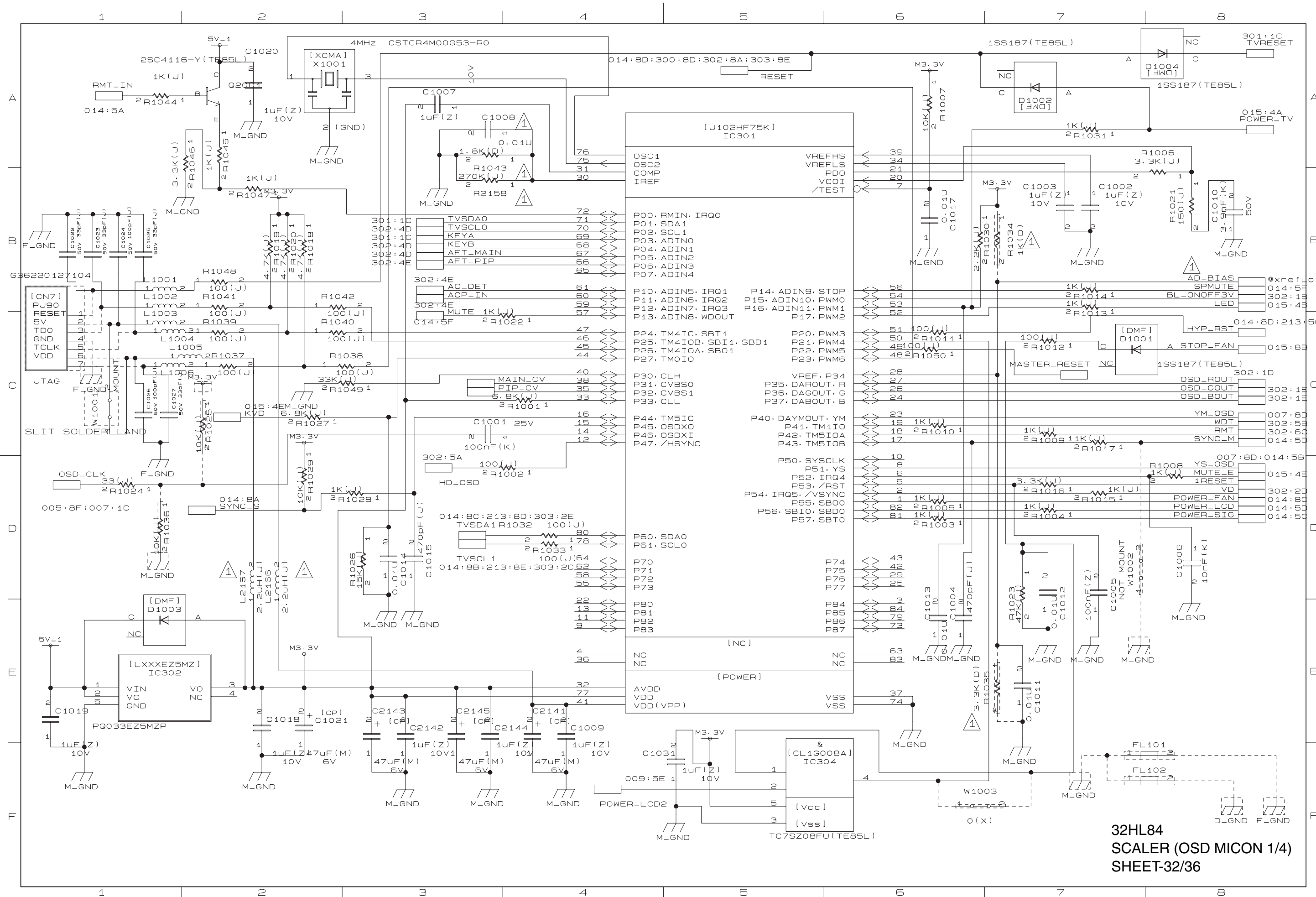
32HL84
 SCALER (SDRAM)
 SHEET-29/36



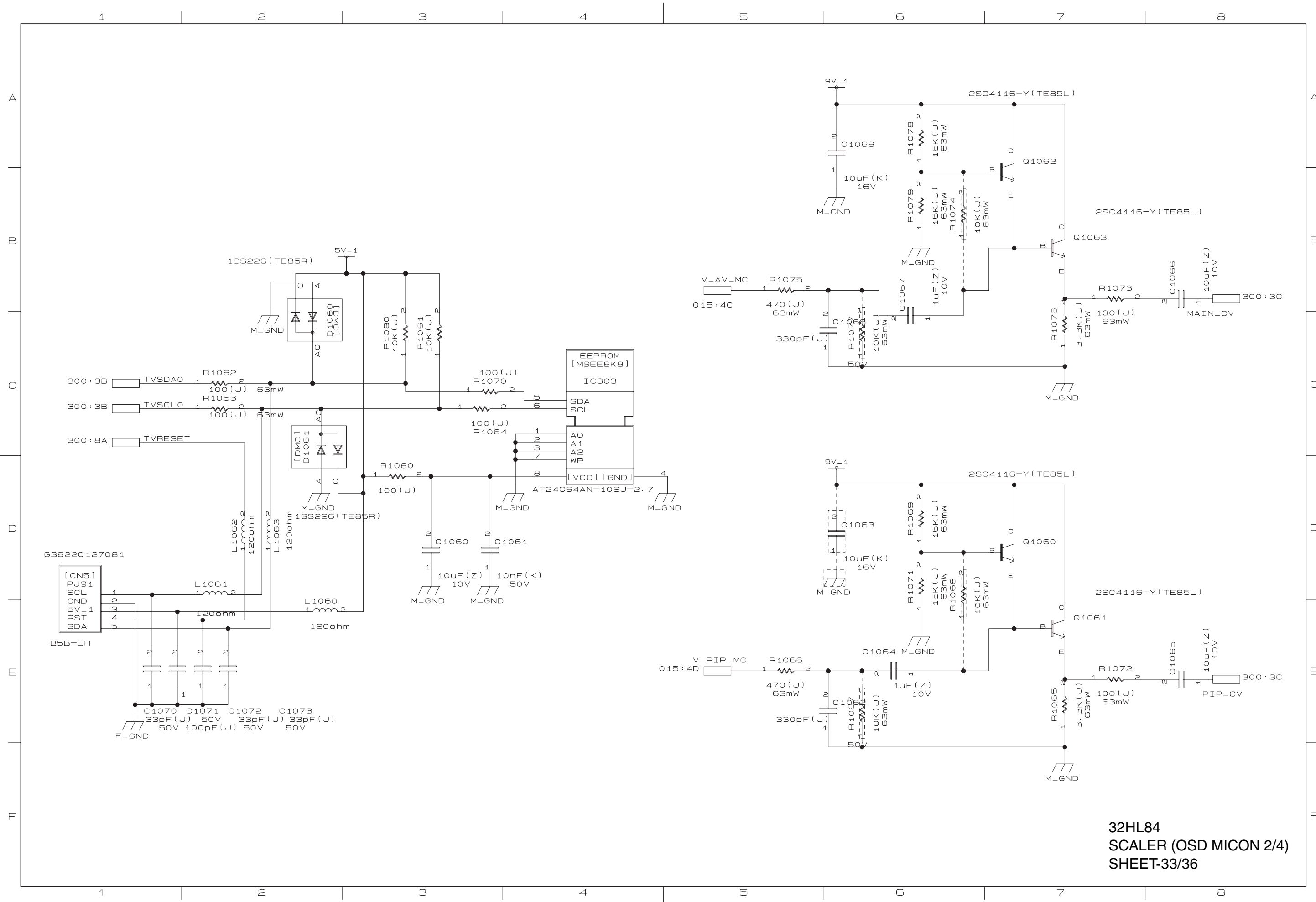
32HL84
SCALER (GENESIS_POWER)
SHEET-30/36



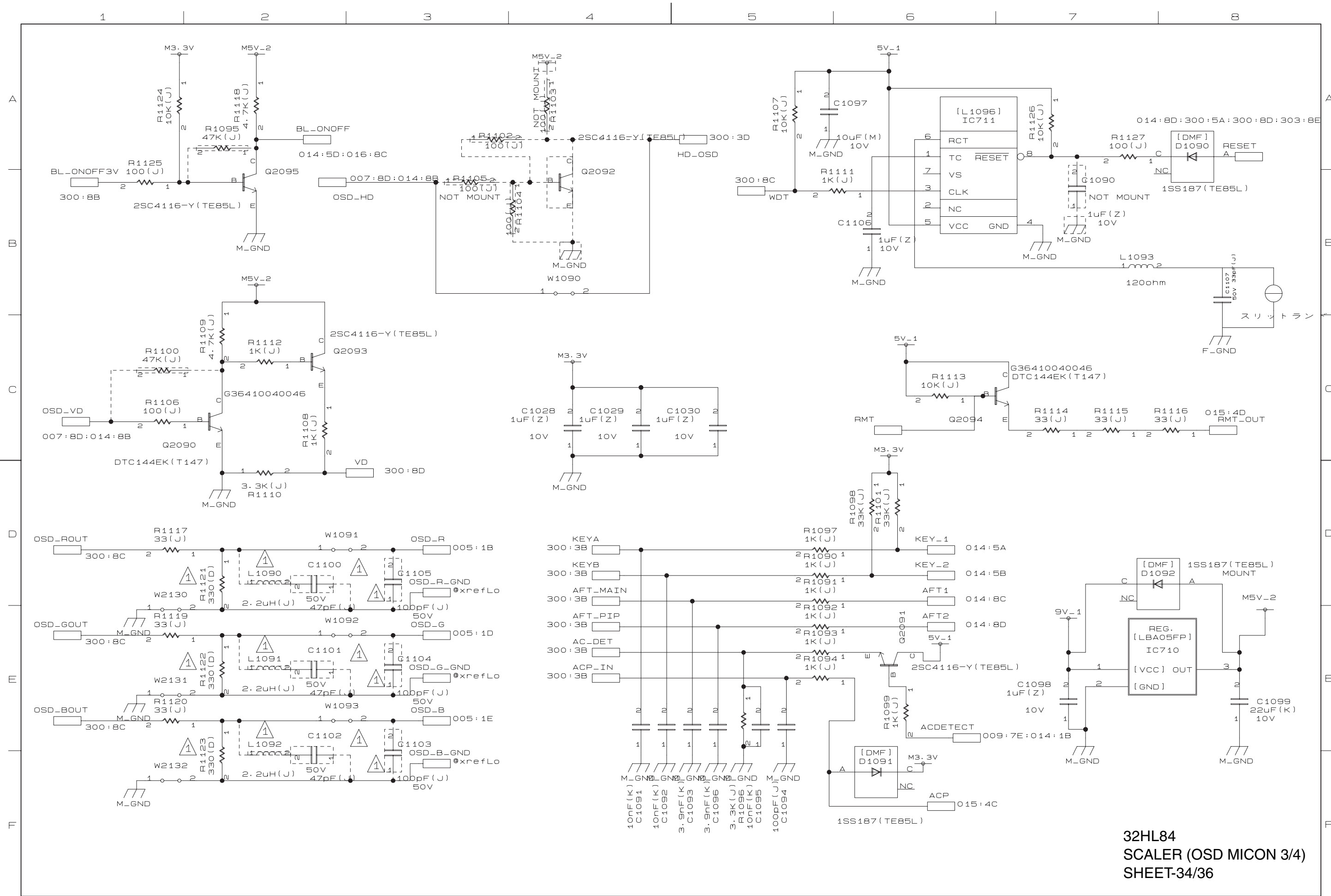
32HL84
SCALER (GENESIS_CPU)
SHEET-31/36



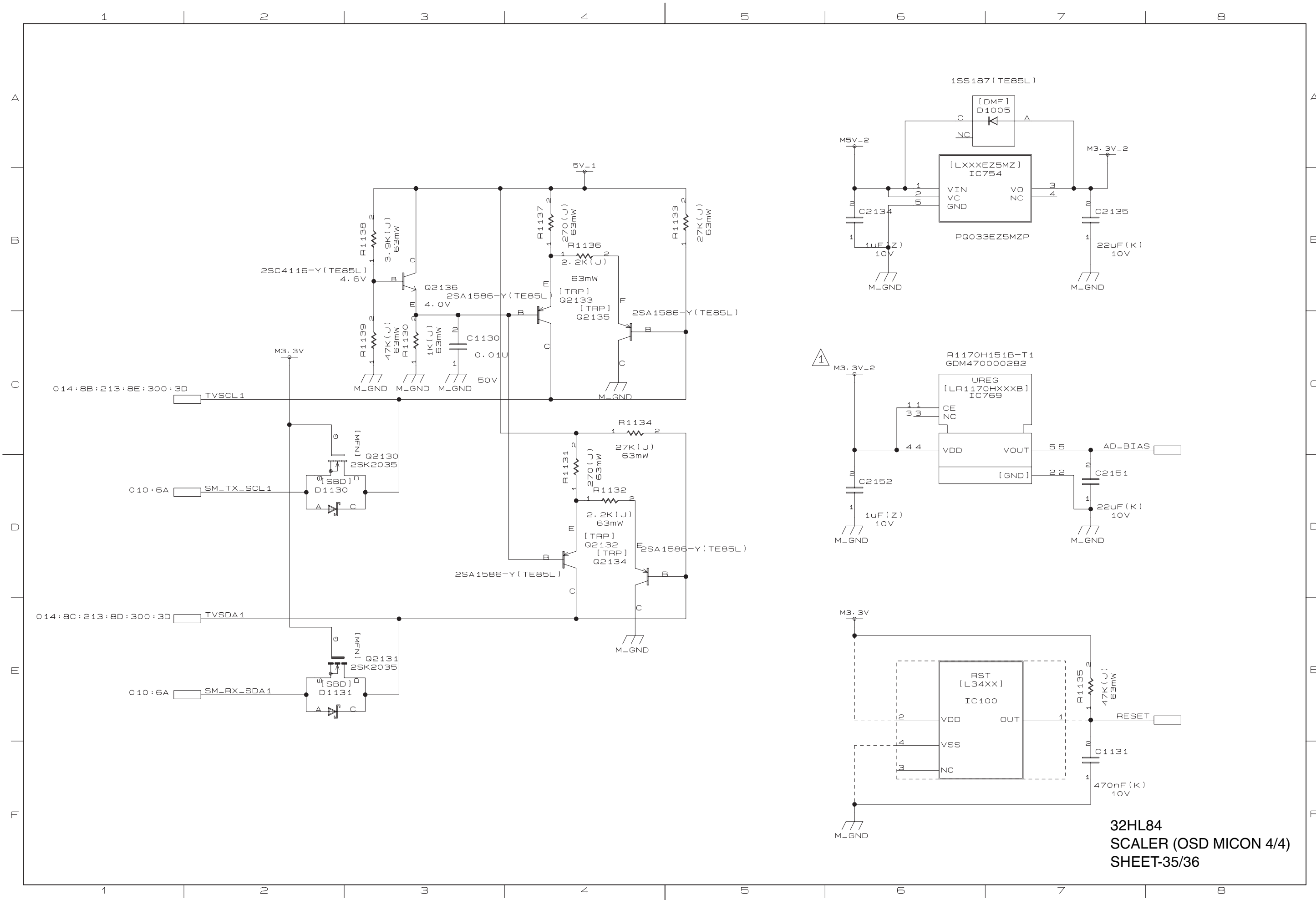
**32HL84
SCALER (OSD MICON 1/4)
SHEET-32/36**



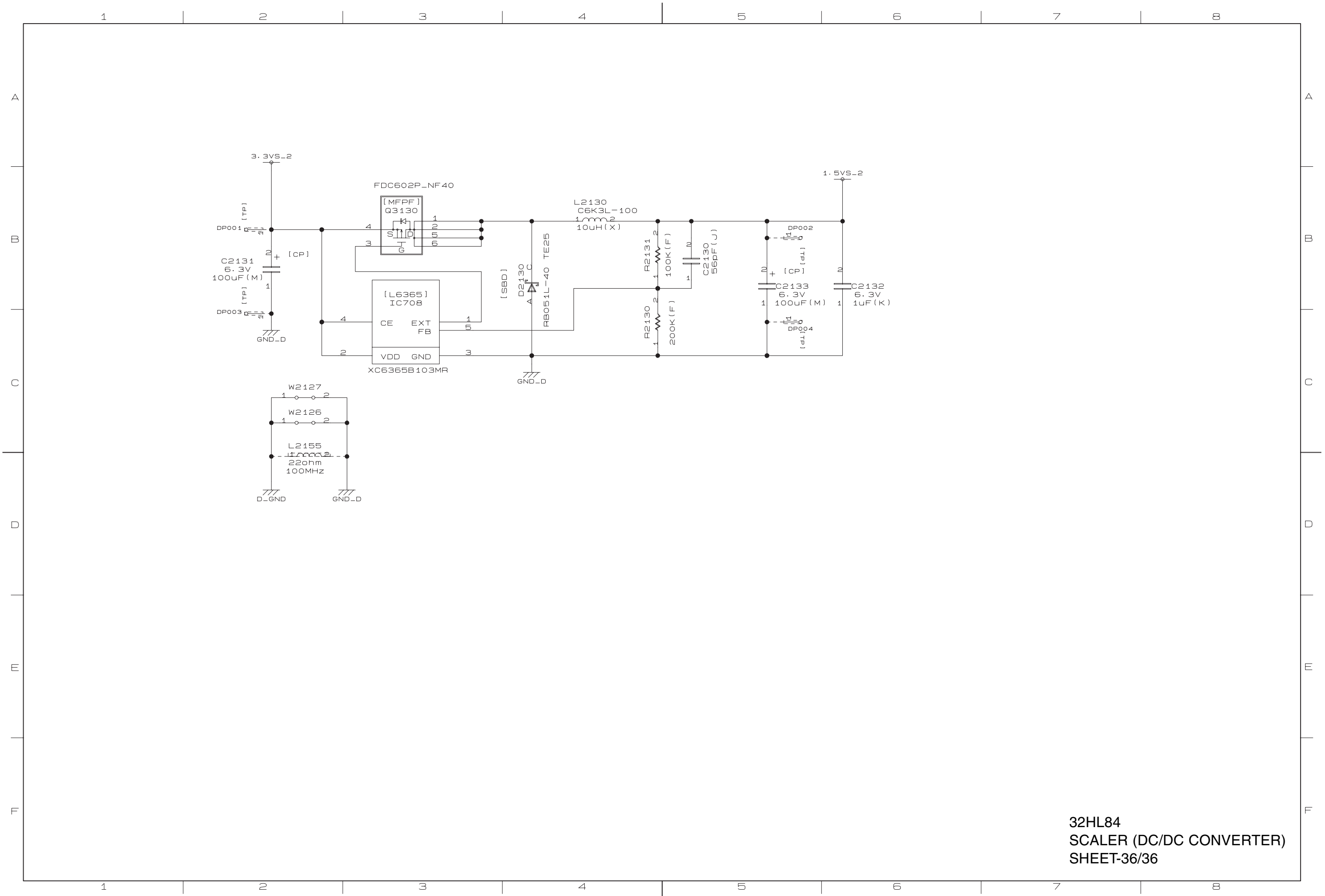
32HL84
SCALER (OSD MICON 2/4)
SHEET-33/36



32HL84
SCALER (OSD MICON 3/4)
SHEET-34/36



32HL84
SCALER (OSD MICON 4/4)
SHEET-35/36



32HL84
 SCALER (DC/DC CONVERTER)
 SHEET-36/36