

SONY®

HD ELECTRONIC VIEWFINDER

HDVF-200

MAINTENANCE MANUAL
1st Edition (Revised 1)

警告

このマニュアルは、サービス専用です。

お客様が、このマニュアルに記載された設置や保守、点検、修理などを行うと感電や火災、人身事故につながる可能性があります。

危険をさけるため、サービストレーニングを受けた技術者のみご使用ください。

WARNING

This manual is intended for qualified service personnel only.

To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.

Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegebenen Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

AVERTISSEMENT

Ce manuel est destiné uniquement aux personnes compétentes en charge de l'entretien. Afin de réduire les risques de décharge électrique, d'incendie ou de blessure n'effectuer que les réparations indiquées dans le mode d'emploi à moins d'être qualifié pour en effectuer d'autres. Pour toute réparation faire appel à une personne compétente uniquement.

X-RAY RADIATION WARNING

Be sure that parts replacement in the high voltage block and adjustments made to the high voltage circuits are carried out precisely in accordance with the procedures given in this manual.

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Manual Structure

Purpose of this manual

This manual is the maintenance manual for HD Electronic Viewfinder HDVF-200. This manual describes the information items necessary when the unit is supplied and installed, items that premise the service based on the components parts such as alignment, schematic diagrams, board layouts and spare parts lists, assuming use of system and service engineers.

Relative manual

Besides this maintenance manual the following manual is available for this unit.

- **Operation Manual (Supplied with this unit)**

This manual is necessary for application and operation of this unit.

Part number:  3-875-453-0X

- **“Semiconductor Pin Assignments” CD-ROM (Available on request)**

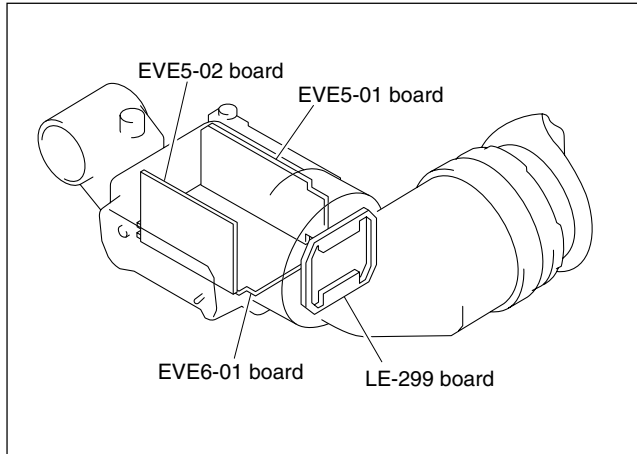
This “Semiconductor Pin Assignments” CD-ROM allows you to search for semiconductors used in Broadcast and Professional equipment.

Part number: 9-968-546-06

Section 1

Service Overview

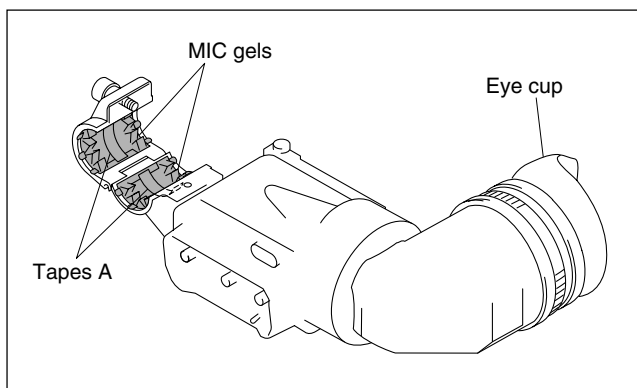
1-1. Board Location



1-2. Recommended Replacement Parts

Parts listed below are recommended replacement parts. They are subject to cracks with the lapse of time. Check sometimes by visual, and replace as necessary.

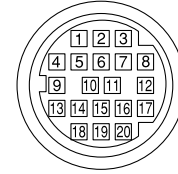
Name	Sony Part No.
Tape (A)	3-941-343-01 *1
MIC gel	3-854-288-01 *1
Eye cup	3-209-288-01



*1 It is recommended that the MIC gels are replaced in pairs. In this case, please order two pieces.

1-3. Connector Input/Output Signals

VF (20P MALE)



(EXTERNAL VIEW)

Pin No.	Signal	I/O	Specifications
1	S-DATA	IN/OUT	TTL level
2	3rd TALLY	—	—
3	POWER OFF CTL	IN	ON: OPEN OFF: GND
4	SCK	IN	TTL level
5	COLOR/BW	OUT	B/W: GND COLOR: OPEN
6	NC		
7	NC		
8	G TALLY	IN	ON: 5 V OFF: GND
9	PEAKING CTL	OUT	VF to CAM ($R_o = 1\text{ k}\Omega$) 0 V to 5 V 0 V: PEAKING OFF 5 V: PEAKING MAX
10	NC		
11	NC		
12	Y VIDEO	IN	1.0 V p-p ($R_o = 75\text{ k}\Omega$)
13	VIDEO GND		
14	NC		
15	NC		
16	REC (L)	—	—
17	R TALLY	IN	ON: 5 V OFF: GND
18	NC		
19	UNREG GND		
20	UNREG		+10.5 V to 17 V

1-4. Cleaning

1-4-1. Cleaning of Viewfinder

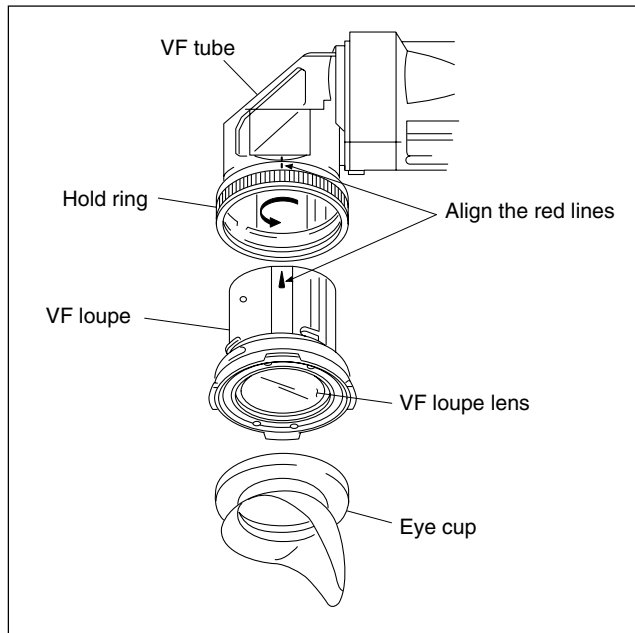
By extracting VF loupe, lens can be easily cleaned. And also dust on the CRT surface or mirror can be easily cleaned off.

Procedure

1. Turn the fixed ring to the left and extract the VF loupe.
2. Detach the eyecup.
3. Clean the VF loupe lens with a commercially available camera lens cleaner.
4. After the cleaning is completed, install by reversing the preceding steps. Align red lines of the VF tube and VF loupe when inserting, and turn the hold ring to the right until it locks.

Notes

- Do not use any type of solvent, such as alcohol, benzine or thinner to remove stains.
- Be sure to attach the eyecup to the VF for drip-proof.



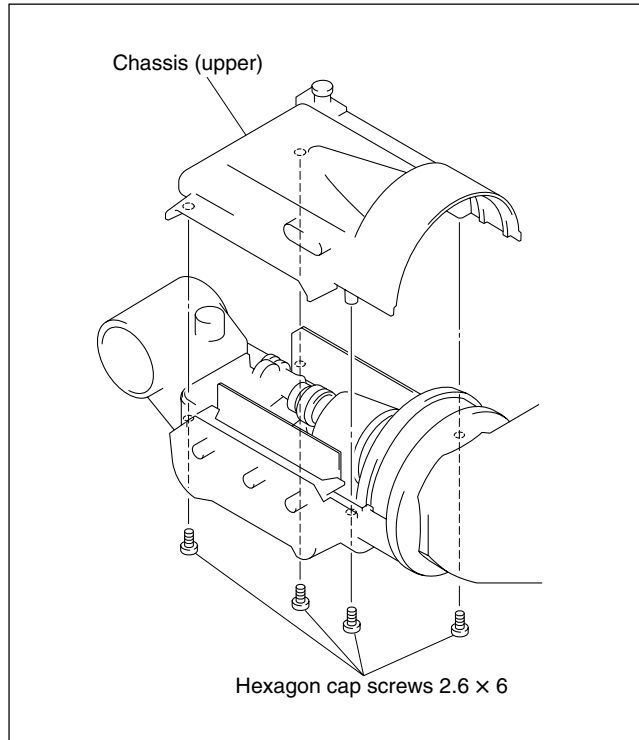
1-4-2. Care After Using at Special Environment

It is recommended to check the following items after gathering the news at seaside, dust area or spa.

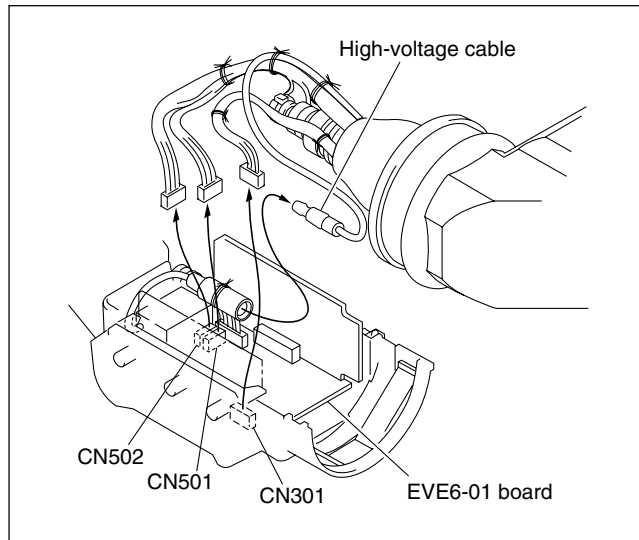
1. Clean off sand and other dust in the unit carefully using a airbrush.
2. Do not allow salt in seawater or sulfur in spa to contact a not-painted surface of the cabinet. They may cause to corrode. Clean with alcohol immediately if contacted.
3. Clean the connection surface of connectors.
4. Carry out the common operation check.

1-5. Replacing the CRT/DY Assembly

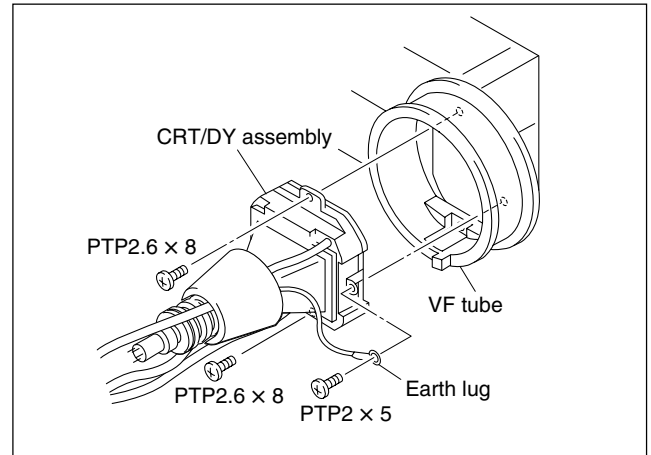
1. Remove the four hexagon cap screws (2.6 × 6), then remove the chassis (upper).



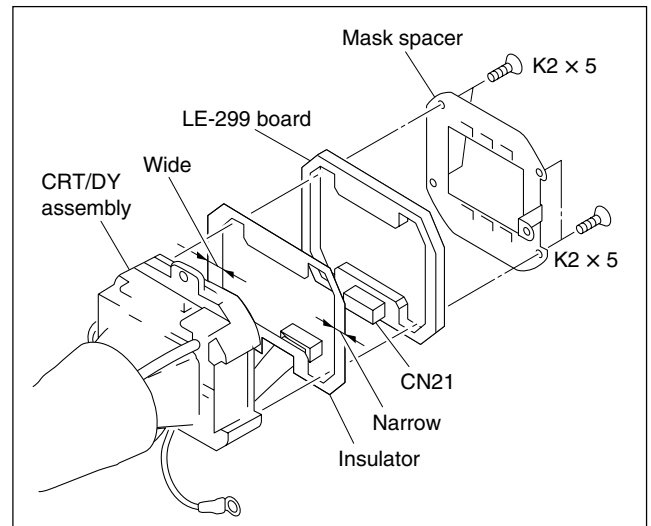
2. Disconnect the high-voltage cable.
3. Disconnect the three harnesses from the connectors (CN301, CN501, and CN502) on the EVE6-01 board.



4. Remove the screw (PTP2 × 5), then remove the earth lug.
5. Remove the two screws (PTP2.6 × 8), then remove the CRT/DY assembly.



6. Remove the four screws, then remove the mask spacer.
7. Disconnect the connector (CN21) on the LE-299 board.



8. Attach the CRT/DY assembly in the reverse order of steps 2 to 7.
9. Arrange the harnesses. (Refer to Section 1-6.)
10. Perform electrical alignment. (Refer to Section 2)
11. Reattach the chassis (upper).

Note

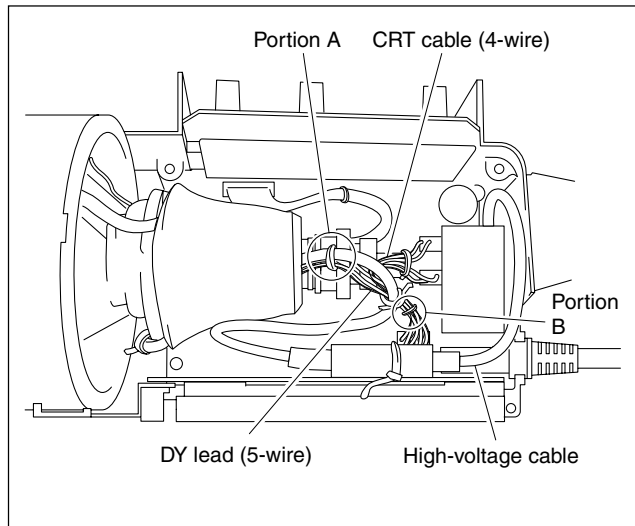
Be careful so that the harnesses are not caught by the chassis (upper).

1-6. Arranging Harness

When repairing the unit, arrange and clamp the harness as described in the following steps.

Improper arrangement of the harness may result in a disconnection or awkward turn of the VF tube.

1. Arrange the high-voltage cable as shown in the figure.
2. Bundle the high-voltage cable and 5-wire DY lead at A.
3. Bundle the 5-wire DY lead and 4-wire CRT cable at B.

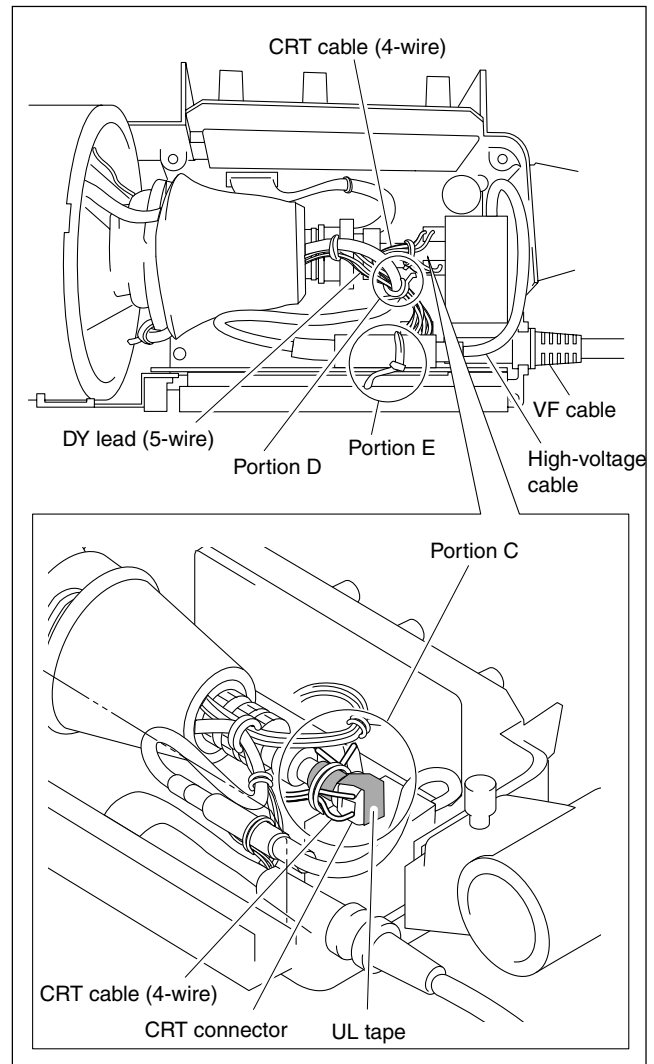


4. Fix the CRT connector with UL tape, and then bundle the 4-wire CRT cable at C.

Note

Ensure that the CRT connector is coupled firmly.

5. Bundle the high-voltage cable, 5-wire DY lead, and 4-wire CRT cable at D.
6. Bundle the high-voltage cable and the VF cable at E.



7. Check that the VF tube assembly turns smoothly.
8. Perform electrical alignment referring to Section 2.

1-7. Circuit Description

EVE6-01

The EVE6-01 board consists of a power supply block, H deflection drive circuit and serial interface circuit for various controls.

A switching regulator consists of IC401, Q401 to Q403, and Q405 where +9.5 V and about +7.5 V for H driving are generated from UNREG (10.5 to 17 V) input at pin B10 of CN001. And H size adjustment is performed by controlling the reference dc voltage for IC401 with RV110 (H SIZE) on the EVE5-01 board.

The H deflection circuit IC501 and Q501 are also used to drive a flyback transformer. The flyback transformer outputs HV (6 kV), G2 (500 V), 60 V and heater pulse voltage. The heater pulse voltage is smoothed by C513.

The resultant is applied to the heater through IC503.

The voltage for feedback circuit is output at pin 1 of the flyback transformer and is sent to a feedback circuit consisting of IC501, IC502, Q502 and Q503 to stabilize a high-voltage portion. When the voltage goes higher than the reference, the power is turned off as pin 8 of IC502 goes high and a protection circuit operates.

IC301 and IC302 are serial interface ICs, which are used to control indicators and to grab switch data and so on.

IC304 is a timer IC. It is used to set the time period during which the zebra pattern is displayed in MOMENTARY mode, and during which the brightness increases momentarily as the internal tally signal is turned on.

EVE5-01 board

The EVE5-01 board provides an external sync circuit, V deflection drive circuit and blanking pulse generation circuit.

IC104 is a sync separator, which separates sync signals from the video signal input to the EVE5-01 board and outputs the HD signal from pin 7 and VD signal from pin 3. The HD signal is compared in phase with a flyback pulse at IC101 and then enters AFC circuit.

The VD signal is input to pin 21 of IC101, and is then sent to the V deflection drive circuit consisting of Q104 to Q107 as a trigger pulse.

IC106 generates a video clamp pulse, and IC108 to IC118 generate a beam blanking pulse. These pulses are output to the EVE6-01 board.

EVE5-02 board

The EVE5-02 board consists of a video amplifier circuit and bright control circuit.

The video signal input at pin 14 of CN201 is adjusted in level with RV201 (CONTRAST), and is sent through the peaking circuit to zener diode D261 for DC shift.

And then the video signal is amplified by Q261 and Q262, and is output to G1 through a drive circuit of Q263 to Q266. Q267 clamps the blanking portion to stabilize the black level.

DC voltage is adjusted with RV205 and RV206 (BRIGHT) and is sent to the EVE6-01 board as a bright control voltage.

1-8. Disconnecting/Connecting Flexible Card Wire

The flexible card wire is used between the EVE6-01 board and EVE5-02 board. Take care not to break this flexible card wire. This shortens the wire life.

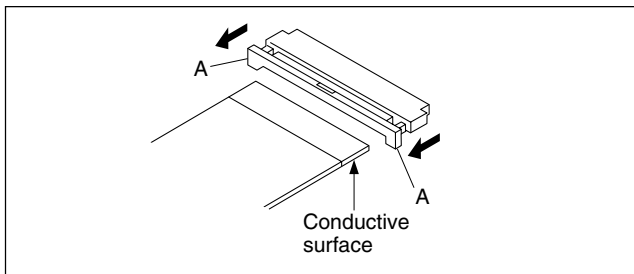
Disconnecting

1. Turn off the power.
2. Slide portions A in the direction of the arrow to unlock and pull out the flexible card wire.

Connecting

Notes

- Be careful not to insert the flexible card wire obliquely.
 - Check that the conductive surface of the flexible card wire is not soiled with dust.
1. Slide portions A in the direction of the arrow and insert the flexible card wire as far as it will go with the conductive surface down.
 2. Slide portions A in the reverse direction to lock.



1-9. Notes on Repair Parts

1. Safety Related Components Warning

WARNING

Components marked $\triangle$ are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.

Parts list has the present standardized repair parts.

3. Stock of Parts

Parts marked with “o” at SP (Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

4. Harness

Harnesses with no part number are not registered as spare parts.

In need of repair, get components shown in the list and repair using them.

1-10. Lead-free Solder

Boards requiring use of lead-free solder are printed with a lead free mark (LF) indicating the solder contains no lead.

(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)



: LEAD FREE MARK

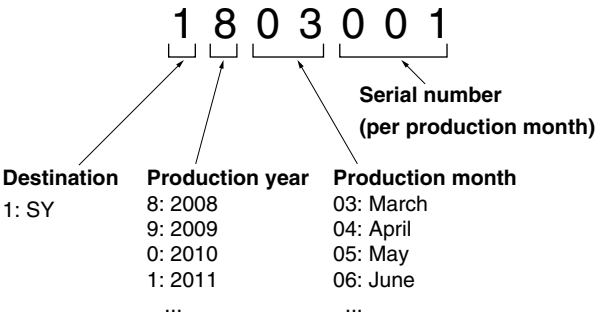
Notes

- Be sure to use the lead-free solder for the printed circuit board printed with the lead free mark.
- The lead-free solder melts at a temperature about 40 °C higher than the ordinary solder, therefore, it is recommended to use the soldering iron having a temperature regulator.
- The ordinary soldering iron can be used but the iron tip has to be applied to the solder joint for a slightly longer time. The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful.

1-11. Serial Number Display

The serial number of this unit is displayed as described below.

Example:



Section 2

Electrical Adjustment

2-1. General Information for Electrical Adjustment

2-1-1. Notes on Adjustment

WARNING

There is a danger of an electric shock around the CRT due to its high voltage. Great care should be taken in servicing. Never touch a live CRT by bare hands.

Before performing adjustment, read throughly the following comments.

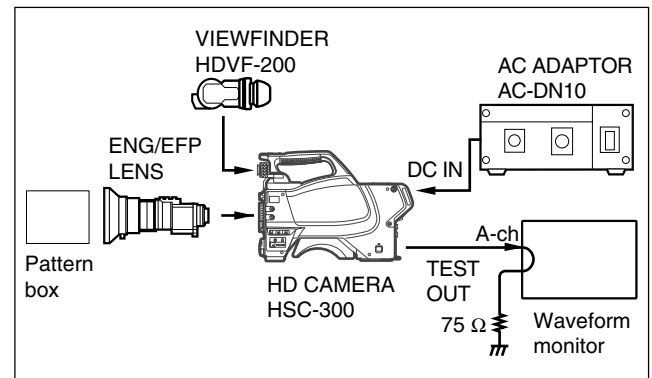
- Calibration for all measuring equipment should be completed.
- Alignment of peripheral equipment such as camera should be completed.

2-1-2. Required Equipment

- HDVS camera system
HSC-300
- AC adaptor
AC-DN10 or equivalent
- Oscilloscope
(Input capacitance of probe: 12 pF or below)
Tektronix 2465B or equivalent
- HDTV waveform monitor
Tektronix 1735HD/1730HD or equivalent
- HDTV B/W monitor
HDM-145 or equivalent
- Digital voltmeter
- Frequency counter

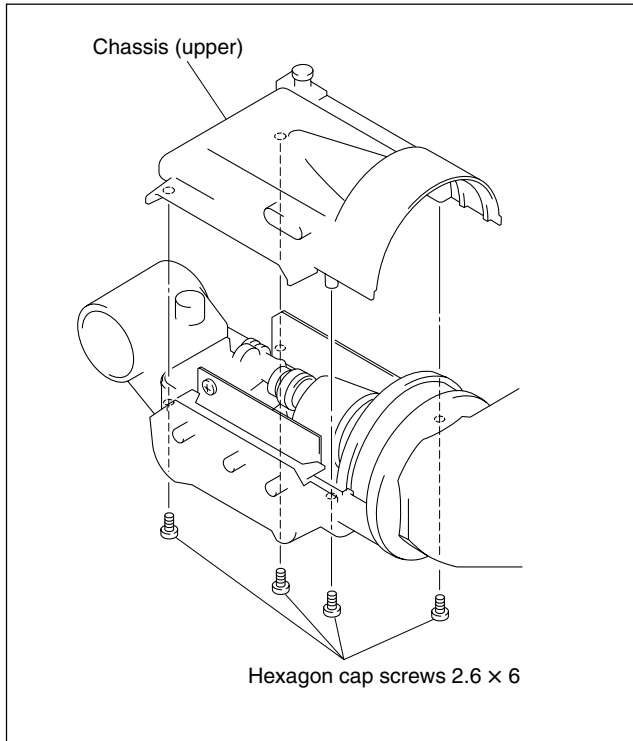
Fixtures	Sony P/N
Pattern box PTB-500	J-6029-140-B
Resolution chart (16:9)	J-6395-320-A
VF extension harness	J-6395-050-A

2-1-3. Connection



2-1-4. Extending Viewfinder

1. Turn off the main power switch before performing adjustment.
2. Remove the viewfinder from the camera.
3. Remove the chassis (upper). (Refer to Section 1-5 “Replacing CRT/DY Assembly” for details.)



4. Connect the viewfinder to the camera via the VF extension harness (J-6395-050-A).
5. Turn on the main power switch.

2-1-5. Initial Setting

Set switches and each item through the setup menu as follows before adjustment.

Whenever you press DISPLAY/ASPECT switch on the viewfinder to ASPECT, the picture frame mode toggles between 16:9 and 4:3. Perform the adjustment in 16:9 mode unless otherwise specified.

Setup menu:

(Refer to the Operation Manual to operate the setup menu of the camera.)

1. Execute the Scene File Standard.
 - MENU: PAINT
 - PAGE: SCENE FILE
 - ITEM: STANDARD
2. Press the menu control knob on the front panel to execute the Scene File Standard.
3. Set each item through the setup menu as follows.
 - MENU: OPERATION
 - PAGE: SWITCH ASSIGN 1
 - ITEM: GAIN [L] → 0 dB
 - ITEM: GAIN [M] → 6 dB
 - ITEM: GAIN [H] → 12 dB

Side Panel:

- GAIN switch → L (0 dB)
- AUTO KNEE switch → CAM/OFF
- WHITE BAL switch → PRST

Front Panel:

- SHUTTER switch → OFF

Filter Position:

- ND filter → CLEAR
- CC filter → 3200K

2-1-6. Setting of the Format

There are some items which need adjusting by switching among the each formats of 60i, 50i and 48i.

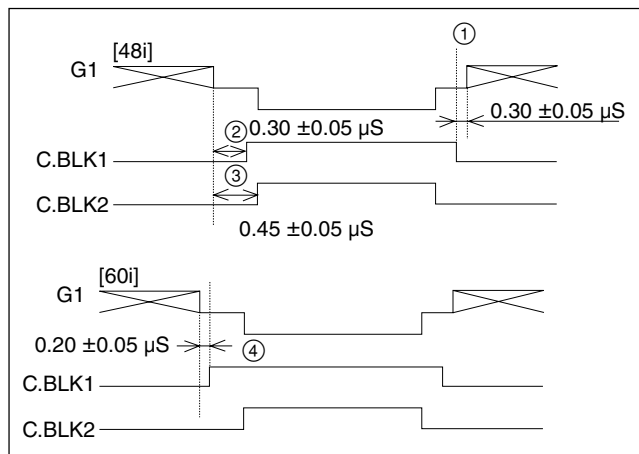
As for the switching method of the format, refer to the Operation manual of the camera. Adjust in the 60i mode unless any specification exists.

2-2. Horizontal Picture Positioning Adjustment

Equipment: Oscilloscope

Subject: Color-bar signal

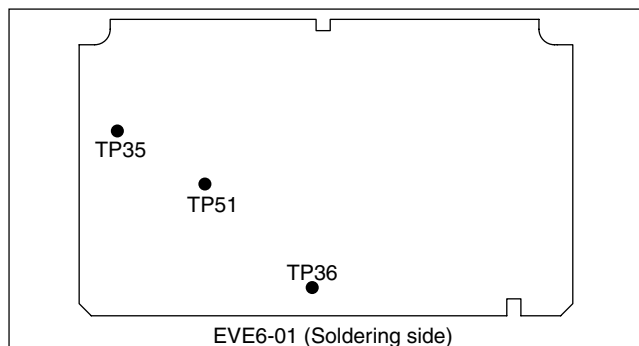
Blanking Pulse Adjustment (EVE6-01 board)



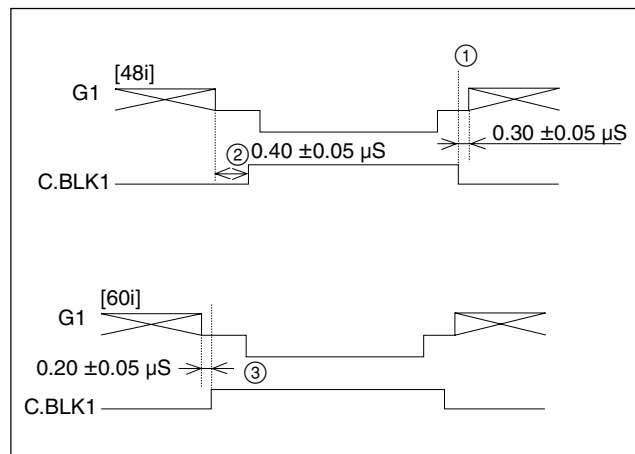
1. Set the format to 48i and adjust the setting of ① using **RV113**.
Specification: 0.30 ± 0.05 μs
2. Set the format to 48i and adjust the setting of ② using **RV114**.
Specification: 0.30 ± 0.05 μs
3. Set the format to 48i and adjust the setting of ③ using **RV123**.
Specification: 0.45 ± 0.05 μs
4. Set the format to 60i and adjust the setting of ④ using **RV123**.
Specification: 0.20 ± 0.05 μs

Adjustment points: **RV113/EVE5-01**
RV114/EVE5-01
RV123/EVE5-01
RV101/EVE5-01

Measuring point: TP51/EVE6-01 (G1)
TP35/EVE6-01 (C.BLK1)
TP36/EVE6-01 (C.BLK2)



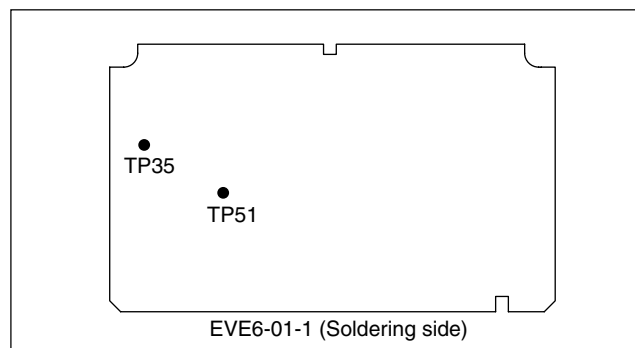
Blanking Pulse Adjustment (EVE6-01-1 board)



1. Set the format to 48i and adjust the setting of ① using **RV113**.
Specification: 0.30 ± 0.05 μs
2. Set the format to 48i and adjust the setting of ② using **RV114**.
Specification: 0.40 ± 0.05 μs
3. Set the format to 60i and adjust the setting of ③ using **RV123**.
Specification: 0.20 ± 0.05 μs

Adjustment points: **RV113/EVE5-01**
RV114/EVE5-01
RV101/EVE5-01

Measuring point: TP51/EVE6-01-1 (G1)
TP35/EVE6-01-1 (C.BLK1)

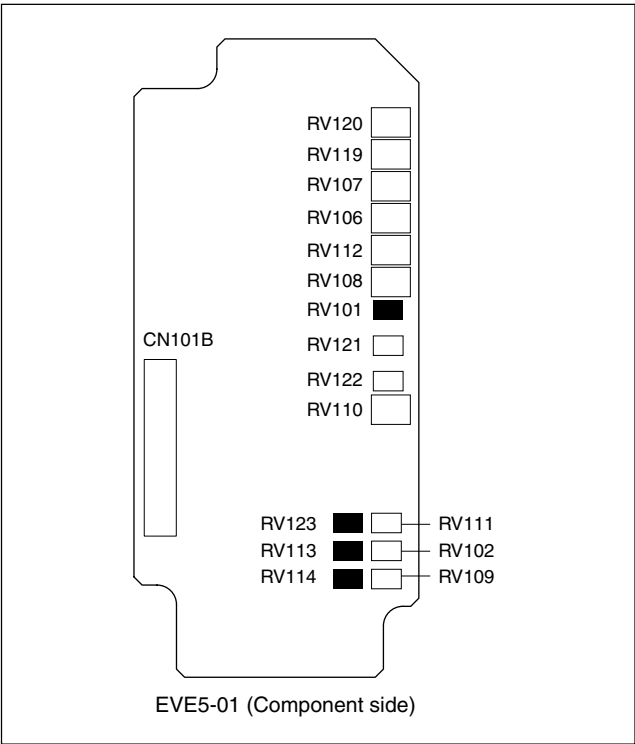
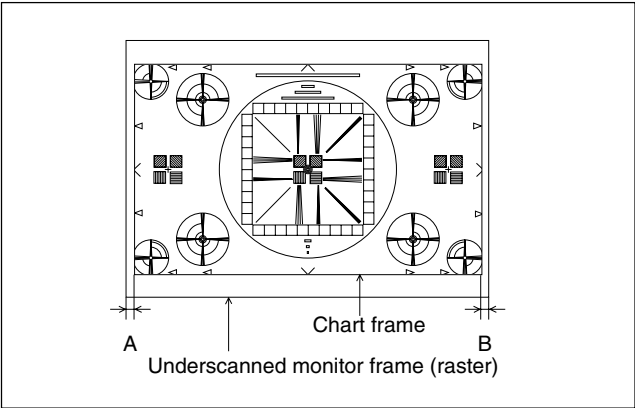


Horizontal Picture Positioning Adjustment

In 60i, 50i, and 48i formats, confirm the horizontal image position.

Adjustment point: ●RV101/EVE5-01 (60i)

Specification: Adjust the position of the resolution chart for A = B



2-3. Focus Adjustment

Note

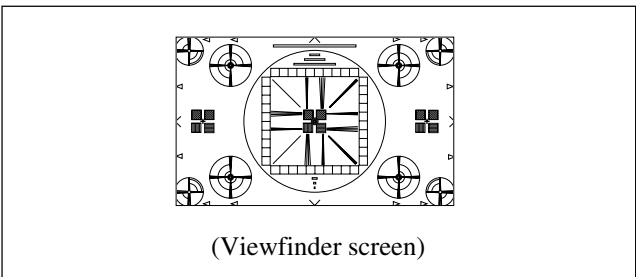
This focus adjustment, “2-4. Picture Frame Adjustment” and “2-5. Bright Extent Adjustment” affect each other. Therefore, repeat these adjustments until all specifications are satisfied.

Equipment: Oscilloscope

Subject: Resolution chart

Preparations

- Shoot the resolution chart so that the chart frame is aligned with the underscanned monitor frame with the zoom control.



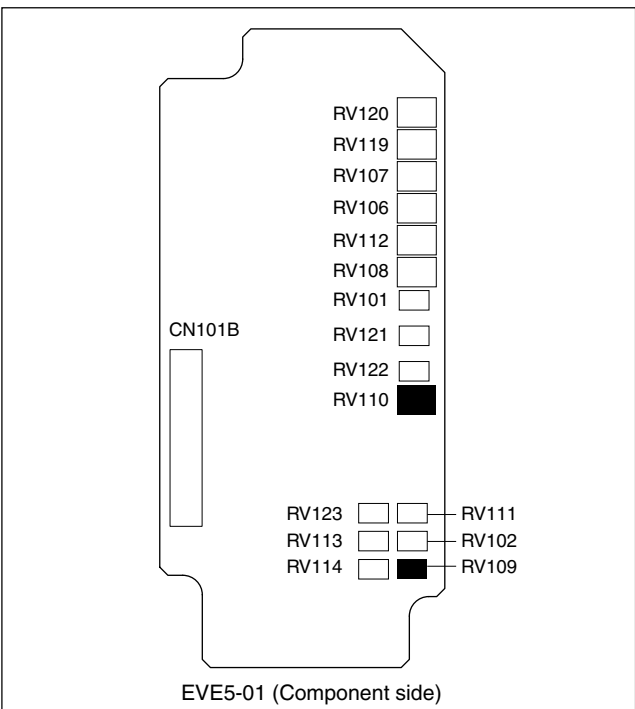
- Adjust the iris of the lens so that the output level (Y level) at TEST OUT connector on the camera is 500 ± 50 mV.
- BRIGHT control: Mechanical center
- CONTRAST control: Mechanical center
- PEAKING control: Fully counterclockwise (⊖)

Adjustment Procedures

- Adjustment point : ●RV109/EVE5-01
Specification : Turn ●RV109 fully counterclockwise, and slowly turn it clockwise until the optimum focus is achieved.
- After the adjustment, confirm that the focus can be achieved at all settings of BRIGHT, CONTRAST and PEAKING controls.

Notes

- If the picture frame adjustment is out of specifications, especially in horizontal size, the focus may not be achieved. In this case, turn ●RV110/EVE5-01 clockwise a little, and perform the focus adjustment.
- The application of too-high voltage may make the high-voltage protection circuit activated. In this case, power off once and turn ●RV109/EVE5-01 fully counterclockwise. After that power on again to perform the adjustment.



2-4. Picture Frame Adjustment

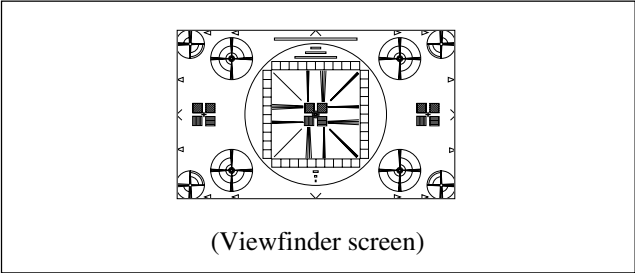
Note

This picture frame adjustment, “2-3. Focus Adjustment” and “2-5. Bright Extent Adjustment” affect each other. Therefore, repeat these adjustments until all specifications are satisfied.

Equipment: Oscilloscope
Subject: Resolution chart

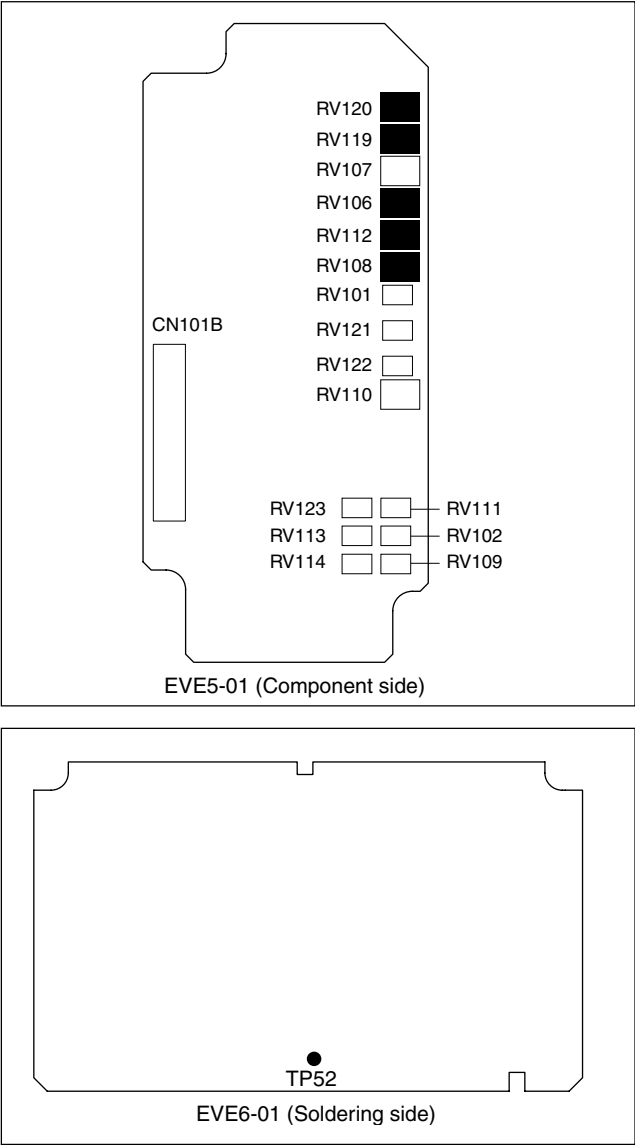
Preparations

- Shoot the resolution chart so that the chart frame is aligned with the underscanned monitor frame with the zoom control.



- Adjust the iris of the lens so that the output level (Y level) at TEST OUT connector on the camera is 500 ± 50 mV.
- BRIGHT control : Mechanical center
- CONTRAST control : Mechanical center
- PEAKING control : Fully counterclockwise (↺)

Parts location

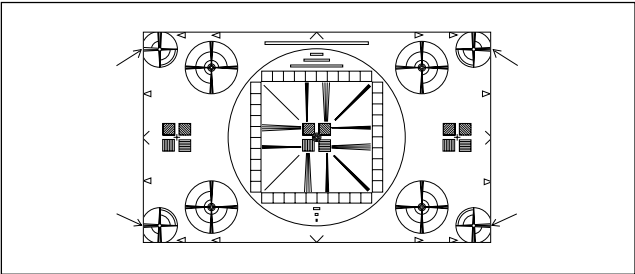


Adjustment Procedures

1. Vertical linearity adjustment

Adjustment point: ●RV108/EVE5-01

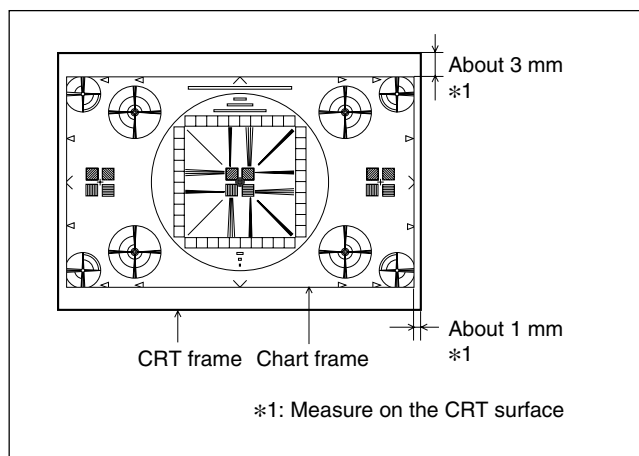
Specification: Minimize the distortion of the four circles at the corners of the resolution chart.



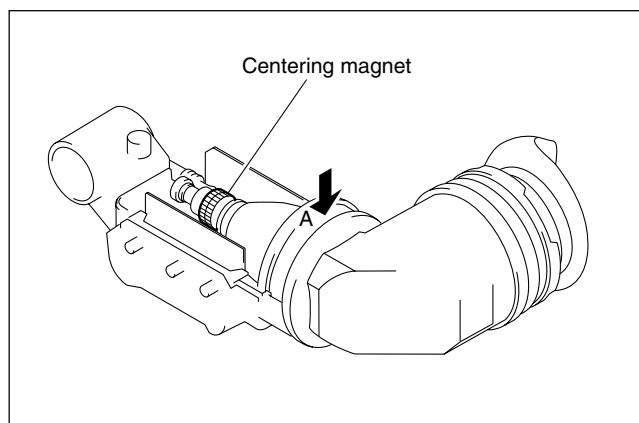
2. Vertical size adjustment

Adjustment points: ●RV106/EVE5-01 (60i)
 ●RV119/EVE5-01 (50i)
 ●RV120/EVE5-01 (48i)
 ●Centering magnet

Specification : Adjust the chart frame as shown in the figure below using each format-based volume control. Move the centering magnet only when the center position cannot be adjusted.

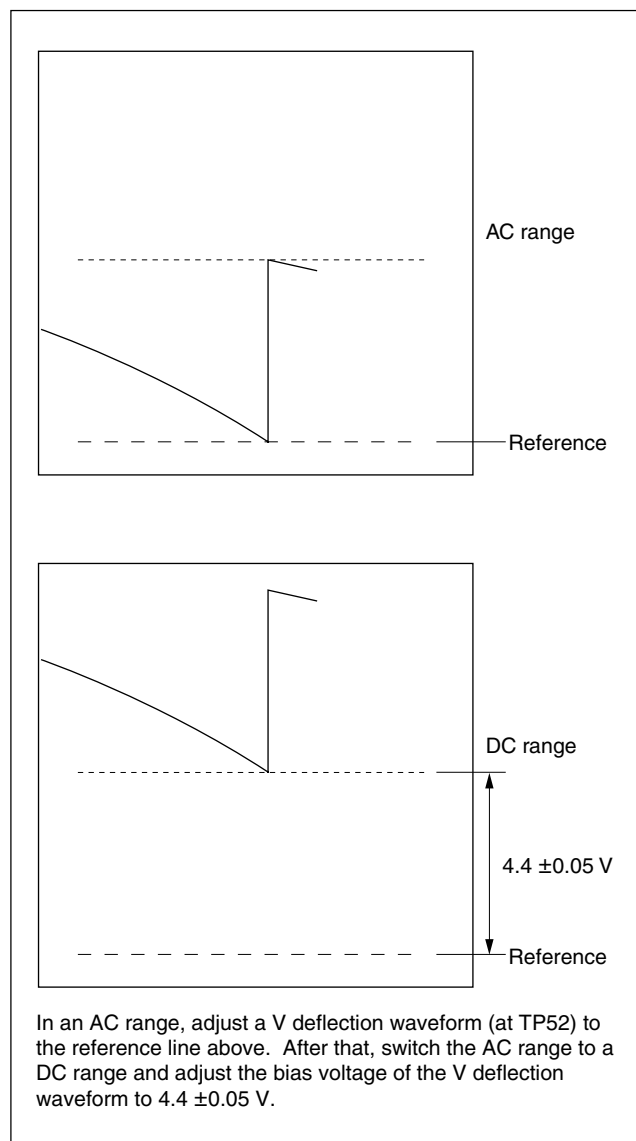


Press the portion A to the lower chassis as shown below to recreate the same situation as when the upper chassis is installed to the viewfinder, and confirm that the picture is positioned in the center of the viewfinder.



3. V center adjustment (Adjusted in a 48i format.)

Adjustment points: ●RV112/EVE5-01
 Specification: TP-52/EVE6-01



2-5. Bright Extent Adjustment

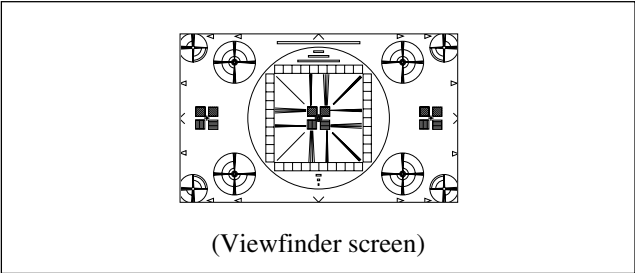
Note

This bright extent adjustment, “2-3. Focus Adjustment” and “2-4. Picture Frame Adjustment” affect each other. Therefore, repeat these adjustments until all specifications are satisfied.

Equipment: Oscilloscope
Subject: Resolution chart

Preparations

- Shoot the resolution chart so that the chart frame is aligned with the underscanned monitor frame with the zoom control.



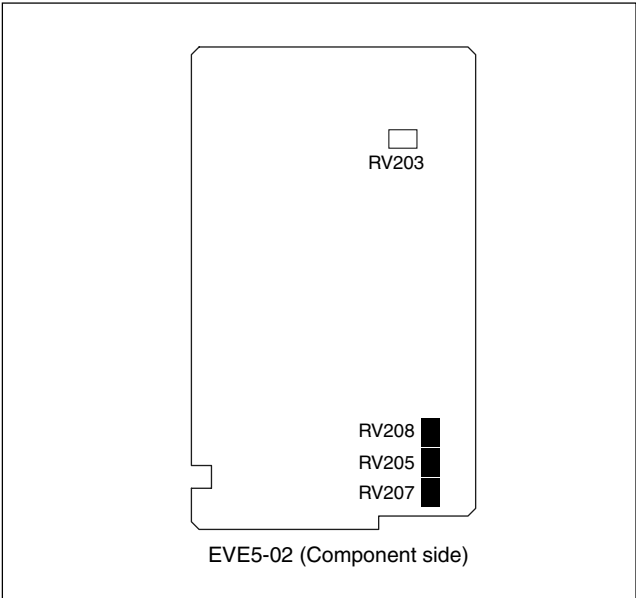
- Adjust the iris of the lens so that the output level (Y level) at TEST OUT connector on the camera is 500 ± 50 mV.
- BRIGHT control: Fully counterclockwise (↺)
- CONTRAST control: Fully counterclockwise (↺)
- PEAKING control: Fully counterclockwise (↺)

Adjustment Procedure

Switch the format to 60i, 50i and 48i by the camera and adjust the following RVs corresponding to each format.

- Adjustment point: ●RV205/EVE5-02 (60i)
●RV207/EVE5-02 (50i)
●RV208/EVE5-02 (48i)

Specification: The central circle of the resolution chart shall be barely discriminated.



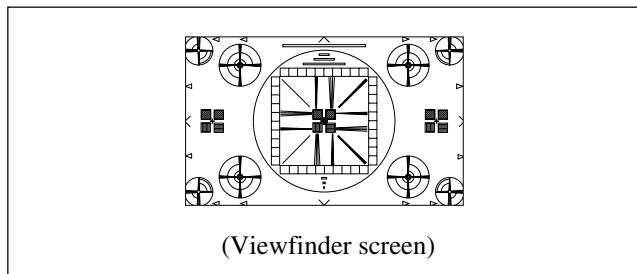
2-6. Peaking Balance Adjustment

Equipment : Oscilloscope

Subject : Resolution chart

Preparations

- Shoot the resolution chart so that the chart frame is aligned with the underscanned monitor frame with the zoom control.



- Adjust the iris of the lens so that the output level (Y level) at TEST OUT connector on the camera is 500 ± 50 mV.
- BRIGHT control: Mechanical center
- CONTRAST control: Mechanical center
- PEAKING control: Fully counterclockwise (○)

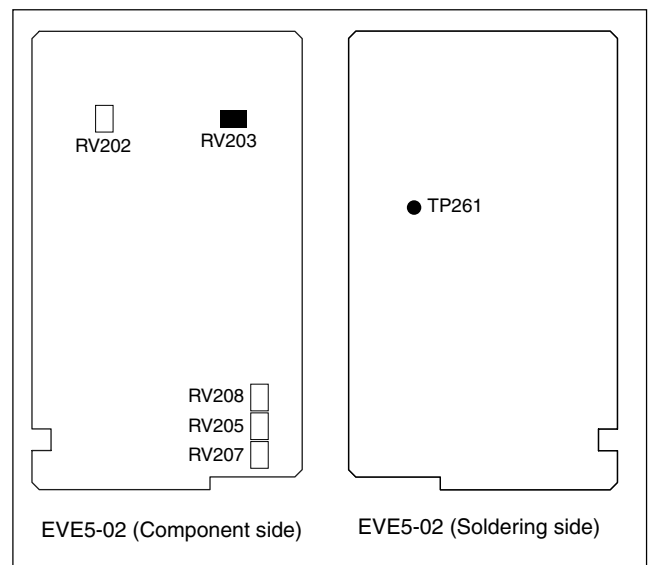
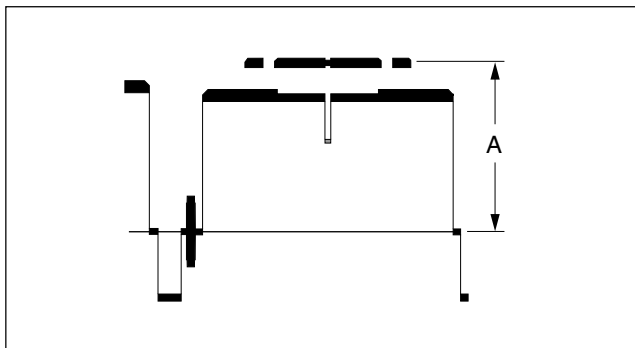
Adjustment Procedure

Test point: TP261/EVE5-02

GND: Viewfinder cabinet

Adjustment point: RV203/EVE5-02

Specification: The waveform level A shall not change at all settings of PEAKING control.

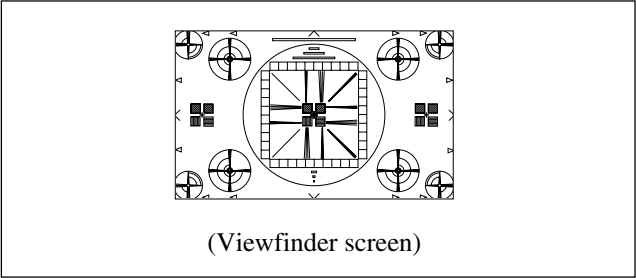


2-7. Clamping Level Adjustment

Equipment: Oscilloscope (DC mode)
(Input capacitance of probe: 12 pF or below)
Subject: Resolution chart

Preparations

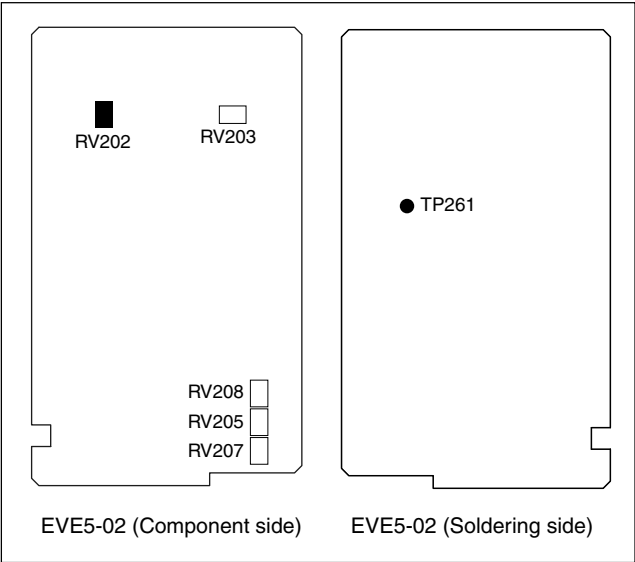
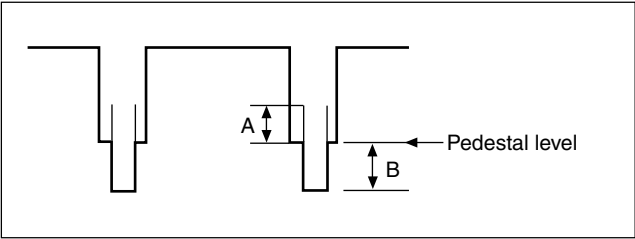
- Shoot the resolution chart so that the chart frame is aligned with the underscanned monitor frame with the zoom control.



- Adjust the iris of the lens so that the output level (Y level) at TEST OUT connector on the camera is 500 ± 50 mV.
- BRIGHT control: Mechanical center
- CONTRAST control: Mechanical center
- PEAKING control: Fully counterclockwise (⌚)

Adjustment Procedure

Test point: TP261/EVE5-02
GND: Viewfinder cabinet
Adjustment point: ⚙RV202/EVE5-02
Specifications: Adjust the overshoot A for 6 ± 1 V.
Check to see that blanking B is from 5 V to 20 V.



2-8. 4:3 Picture Frame Adjustment

Equipment: Oscilloscope

Subject: Full white pattern

Preparations

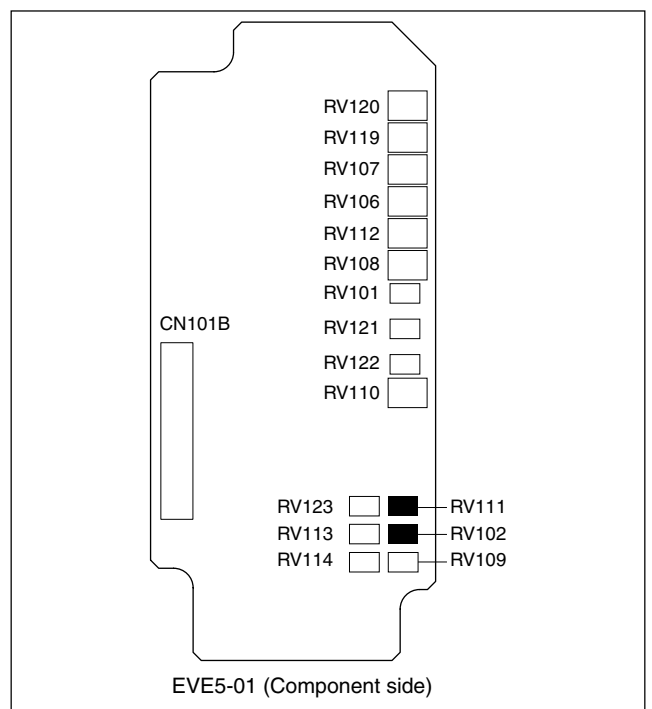
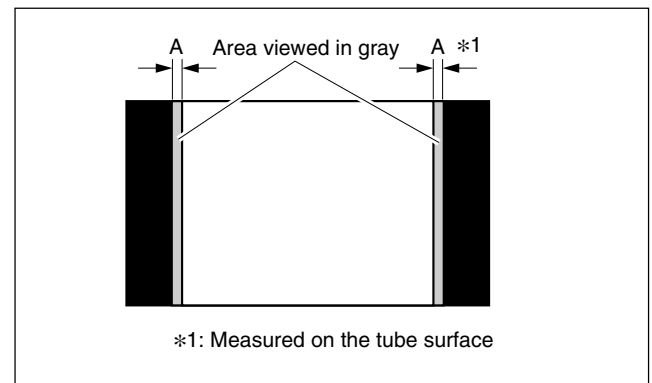
- Shoot the fully occupied white area in the underscanned monitor frame with the zoom control.
- Adjust the iris of the lens so that the output level (Y level) at TEST OUT connector on the camera is 350 ± 35 mV.
- BRIGHT control: Fully clockwise (☉)
- CONTRAST control: Mechanical center
- PEAKING control: Mechanical center
- Press the DISPLAY/ASPECT switch to ASPECT to enter the 4:3 mode.

Adjustment Procedure

Adjustment points : ●RV102 (4:3 PHASE)/EVE5-01

●RV111 (4:3 SIZE)/EVE5-01

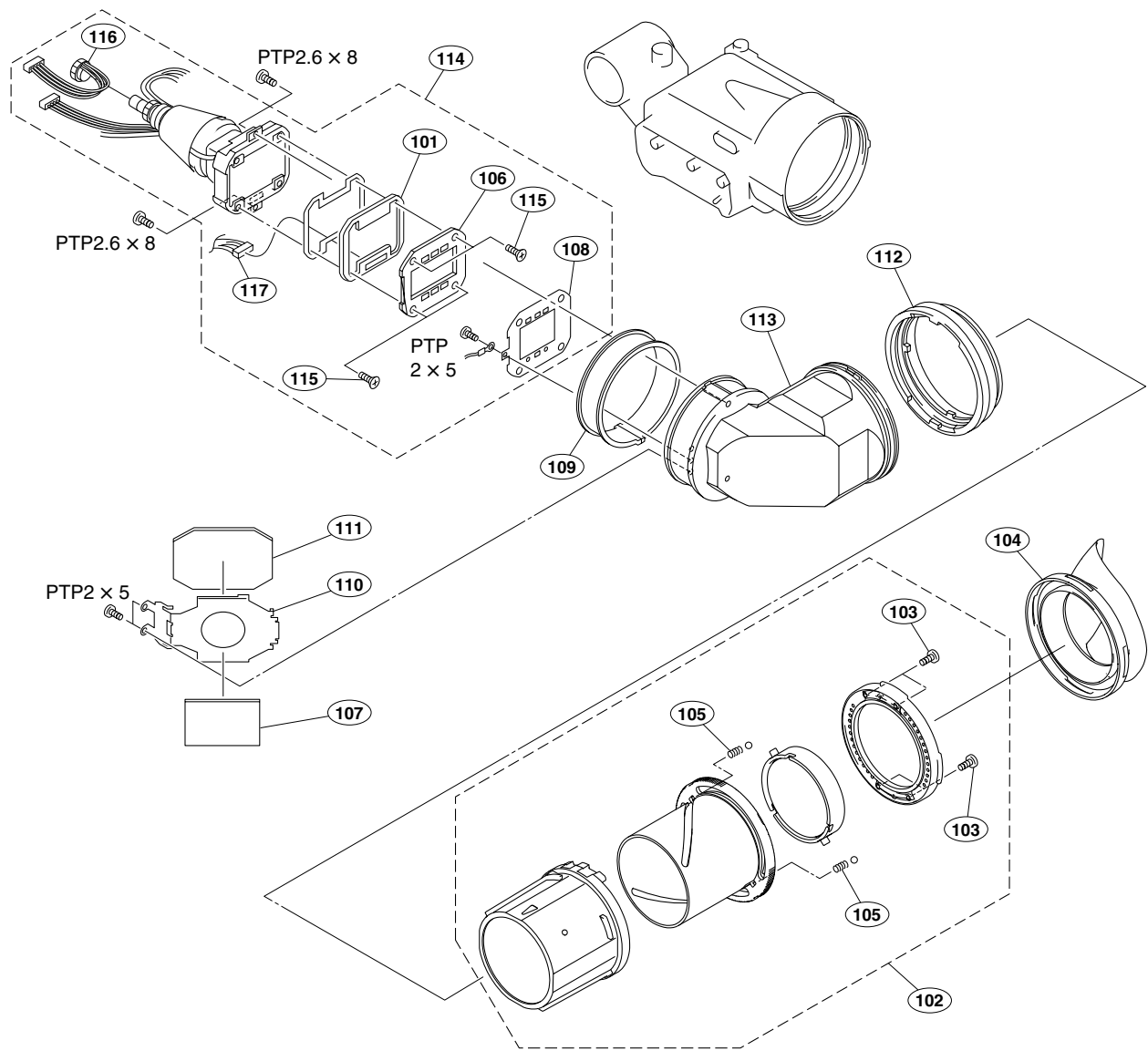
Specifications : Adjust the 4:3 picture frame for $A = 2 \pm 1$ mm with ●RV102 and ●RV111. (Adjust the gray area)



Setting after Adjustment

Press the DISPLAY/ASPECT switch to ASPECT to return the 16:9 mode.

Viewfinder (2)



No.	Part No.	SP Description
101	A-1144-569-A	s MOUNTED CIRCUIT BOARD, LE-299
102	1-788-774-11	s LOUPE, VF
103	3-080-206-41	s SCREW, TAPPING, P2
104	3-209-288-01	s EYE CUP
105	3-573-150-02	s SPRING, COMPRESSION
106	3-603-499-02	s SPACER, MASK (POLYPLASTICS)
107	3-723-073-01	s CUSHION, MIRROR
108	3-876-715-01	s PANEL, DISPLAY
109	3-876-750-01	s VF RING
110	3-876-751-01	s HOLDER, MIRROR
111	3-876-758-01	s MIRROR
112	3-876-759-01	s RING, FIXED
113	3-876-761-01	s TUBE, VF
114	△ 9-885-089-21	s CRT/DY+ CONNECTOR ASSY
115	7-627-452-38	s SCREW,PRECISION +K 2X5

No.	Part No.	SP Description
116	9-885-089-22	s CRT, SOCKET
117	9-885-127-64	s HARNESS, 8 CORE
	7-685-103-19	s SCREW +P 2X5 TYPE2 NON-SLIT
	7-685-134-19	s SCREW +P 2.6X8 TYPE2 NON-SLIT

3-2. Electrical Parts List

SUB (1) BOARD (EVE5-01)

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-885-120-28	s MOUNTED CIRCUIT BOARD, SUB (1) (EVE5-01)
IC101	△ 8-759-394-25	s IC LA7858-E
RV102	9-885-116-82	s RESISTOR, VARIABLE
RV109	9-885-116-82	s RESISTOR, VARIABLE
RV111	9-885-116-82	s RESISTOR, VARIABLE
RV113	9-885-116-82	s RESISTOR, VARIABLE
RV114	9-885-116-82	s RESISTOR, VARIABLE
RV123	9-885-116-82	s RESISTOR, VARIABLE

SUB (2) BOARD (EVE5-02)

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-885-120-29	s MOUNTED CIRCUIT BOARD, SUB (2) (EVE5-02)
DL201	9-885-120-39	s DELAY LINE
LED203	9-885-001-05	s LED
RV201	9-885-120-30	s RESISTOR, VARIABLE
RV202	9-885-116-82	s RESISTOR, VARIABLE
RV203	9-885-116-84	s RESISTOR, VARIABLE
RV204	9-885-120-30	s RESISTOR, VARIABLE
RV205	9-885-116-85	s RESISTOR, VARIABLE
RV206	9-885-083-39	s RESISTOR, VARIABLE
RV207	9-885-116-85	s RESISTOR, VARIABLE
RV208	9-885-116-85	s RESISTOR, VARIABLE
S201	1-571-396-11	s SWITCH, TOGGLE
S202	1-570-986-11	s SWITCH, TOGGLE
S203	1-570-985-11	s SWITCH, TOGGLE
S204	1-572-834-21	s SWITCH, SLIDE

MAIN BOARD (EVE6-01-1)

*1: [EVE6-01]
*2: [EVE6-01-1]

Ref. No. or Q'ty	Part No.	SP Description
1pc	*2 9-885-120-27	s MOUNTED CIRCUIT BOARD, MAIN (EVE6-01-1)
C510	*1 △ 9-885-089-24	s CAPACITOR, PP
	*2 △ 9-885-135-05	s CAPACITOR, PP
C511	△ 9-885-089-25	s CAPACITOR, PP
FBT	*1 △ 9-885-089-26	s FBT
	*2 △ 9-885-135-03	s FBT
HLC	△ 9-885-089-27	s HLC
R509	△ 1-218-293-91	s RES, CHIP 24K (1608)
R510	△ 1-218-890-91	s RES, CHIP 62K (1608)
RV401	9-885-116-82	s RESISTOR, VARIABLE
RV501	9-885-116-83	s RESISTOR, VARIABLE

LE-299 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-1144-569-A	s MOUNTED CIRCUIT BOARD, LE-299
D1	8-719-026-40	s DIODE CL-150UR-CD-T
D2	8-719-026-40	s DIODE CL-150UR-CD-T
D3	8-719-987-44	s DIODE CL-150PG-CD-T
D4	8-719-026-15	s DIODE CL-150D-CD-T
D5	8-719-026-40	s DIODE CL-150UR-CD-T
D6	8-719-026-15	s DIODE CL-150D-CD-T

3-3. Supplied Accessories

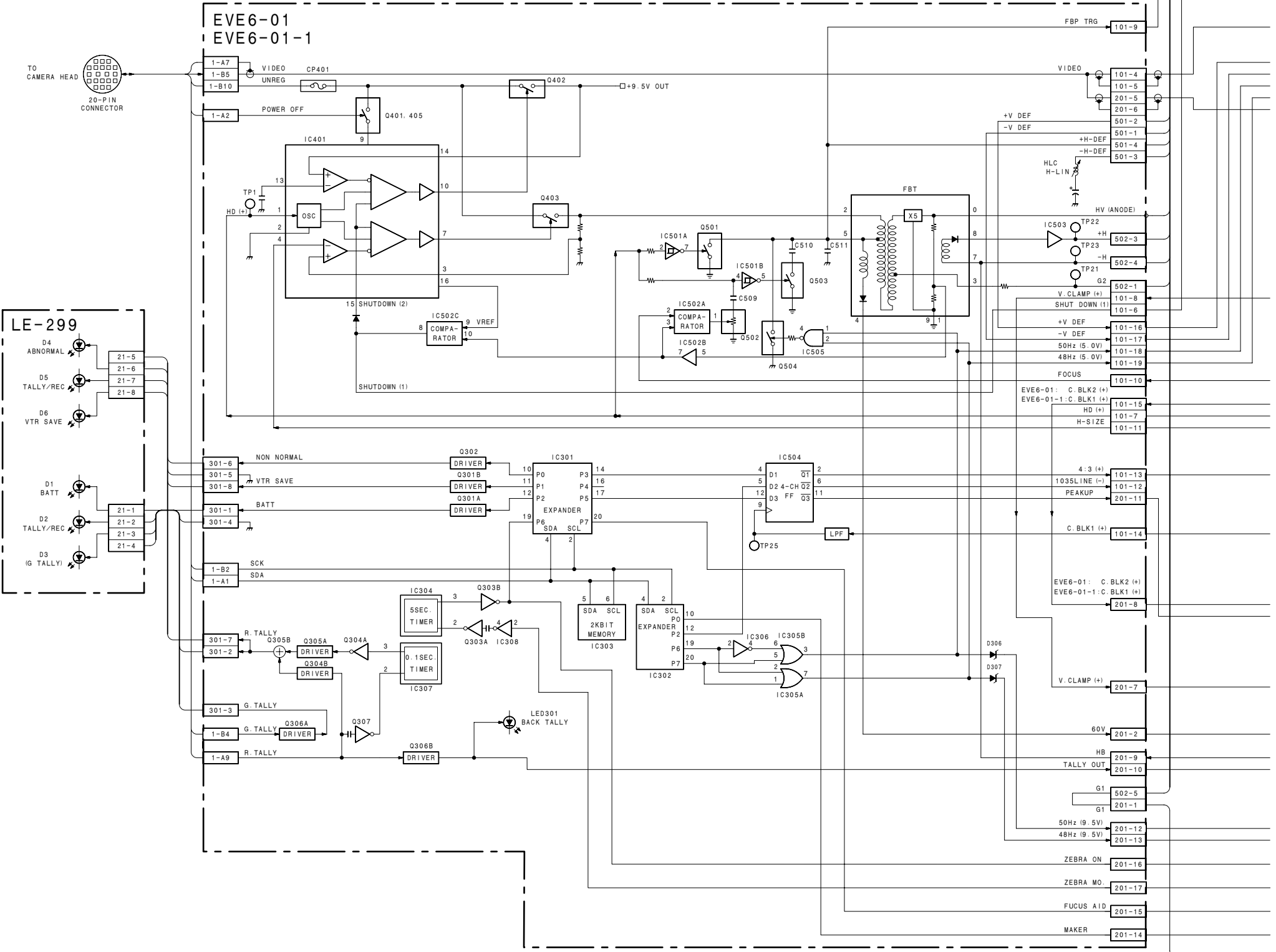
Ref. No. or Q'ty	Part No.	SP Description
1pc	△ 3-875-453-02	s OPERATION MANUAL

3-4. Optional Fixtures

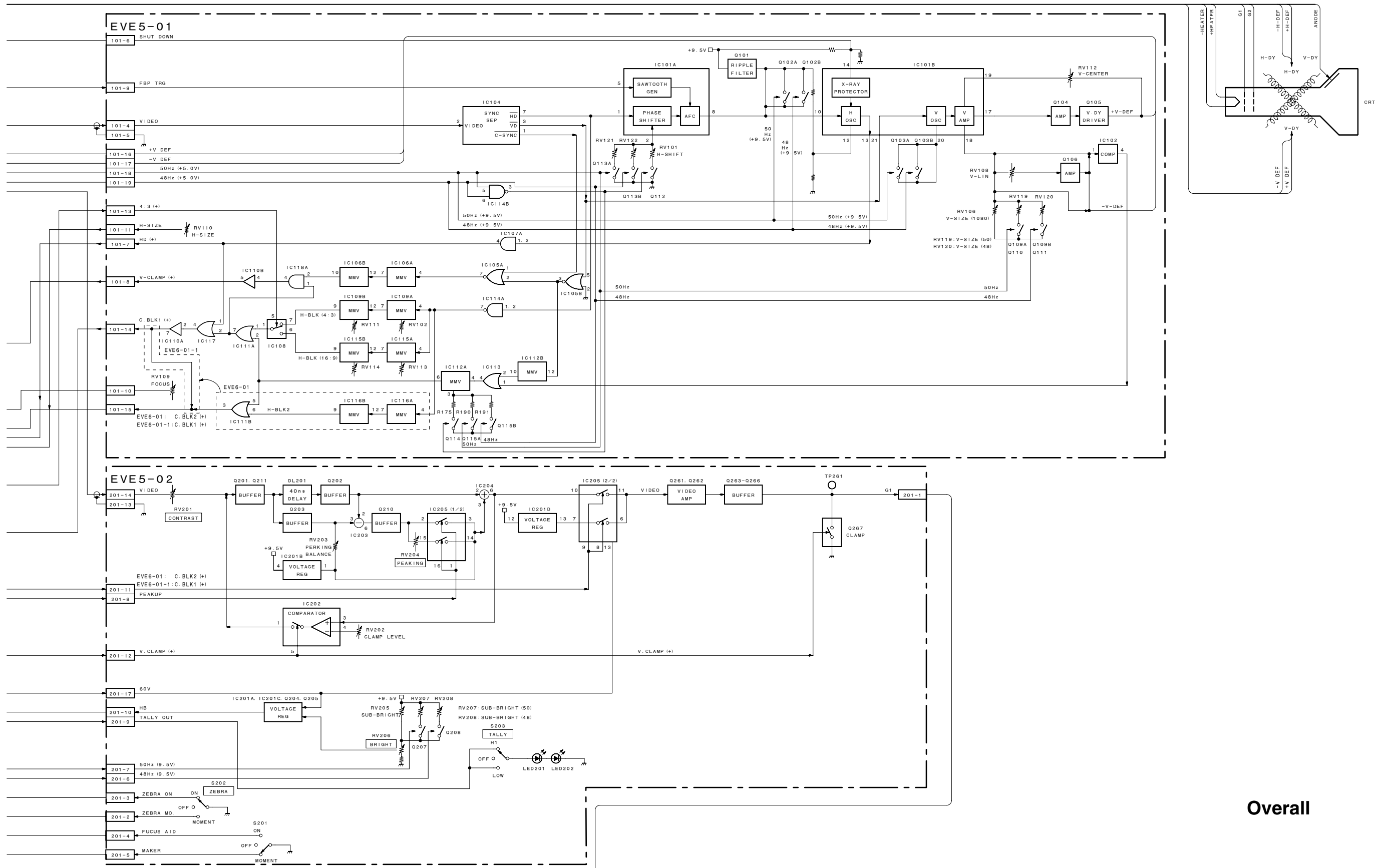
Part No.	SP Description
J-6029-140-B	o PATTERN BOX PTB-500
J-6395-050-A	o VF EXTENSION HARNESS
J-6395-320-A	o RESOLUTION CHART (16:9)

Section 4

Block Diagram



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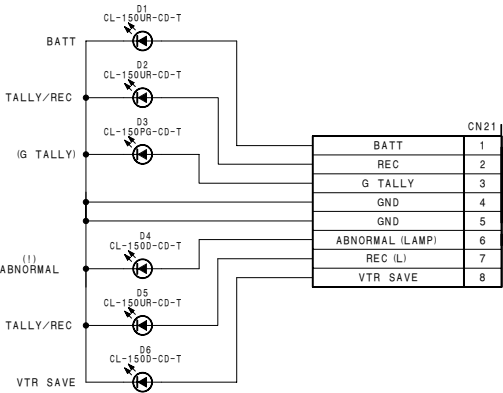
Overall

Section 5
Schematic Diagrams

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EVE6-01	5-4
EVE6-01-1	5-4
LE-299	5-1
Frame Wiring	5-8

LE-299
SUFFIX: -11



LE-299
BOARD NO. 1-863-253-11

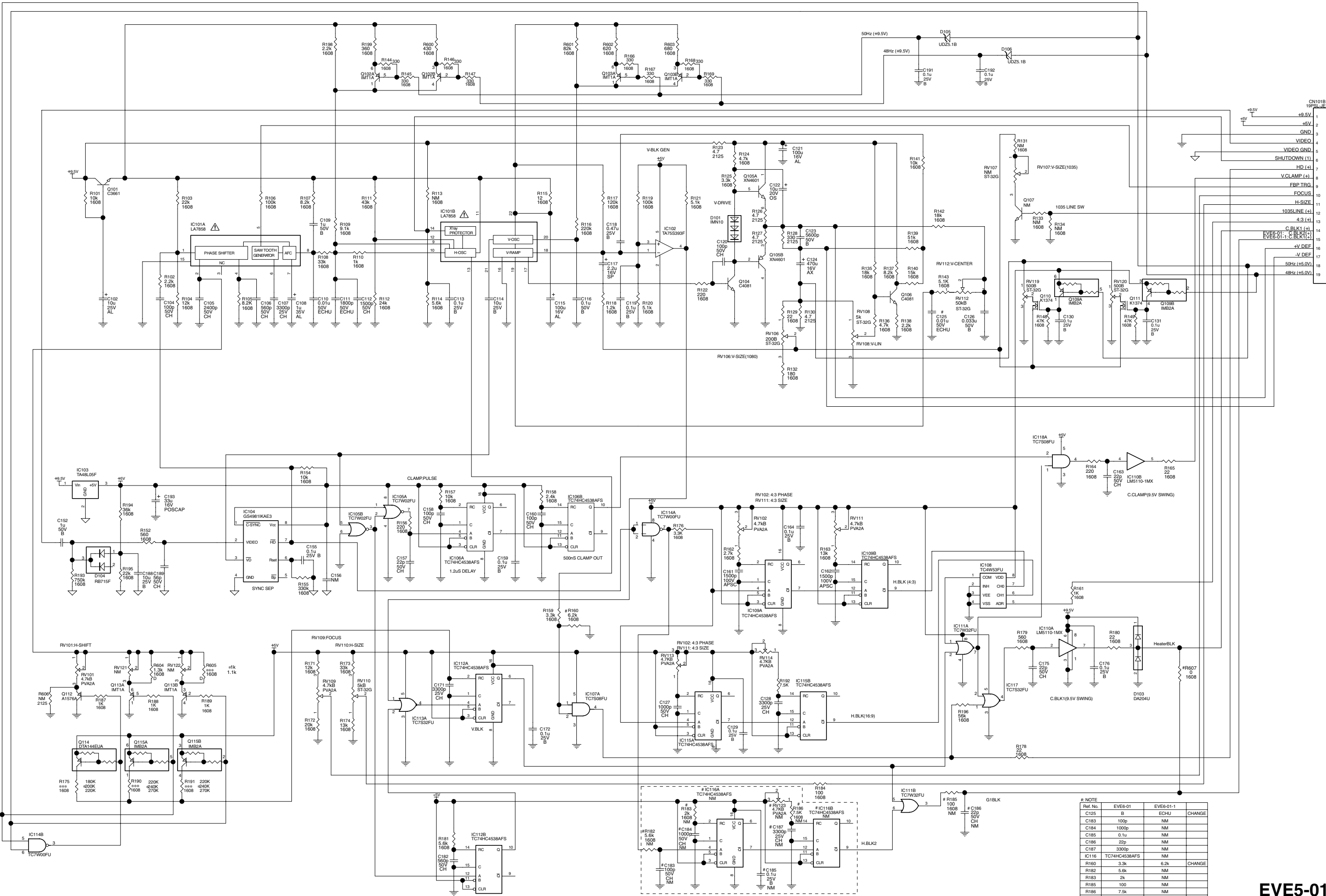
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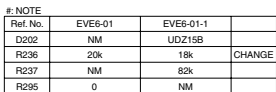
3

4

5



# NOTE			
Ref. No.	EVE6-01	EVE6-01-1	CHANGE
C125	B		
C183	100p	NM	
C184	1000p	NM	
C185	0.1u	NM	
C186	22p	NM	
C187	330p	NM	
IC116	TC74HC4538AFS	NM	
R160	3.3k	6.2k	CHANGE
R182	5.6k	NM	
R183	2k	NM	
R185	100	NM	
R186	7.5k	NM	
R607	-	0	ADD
RV123	4.7KB	NM	



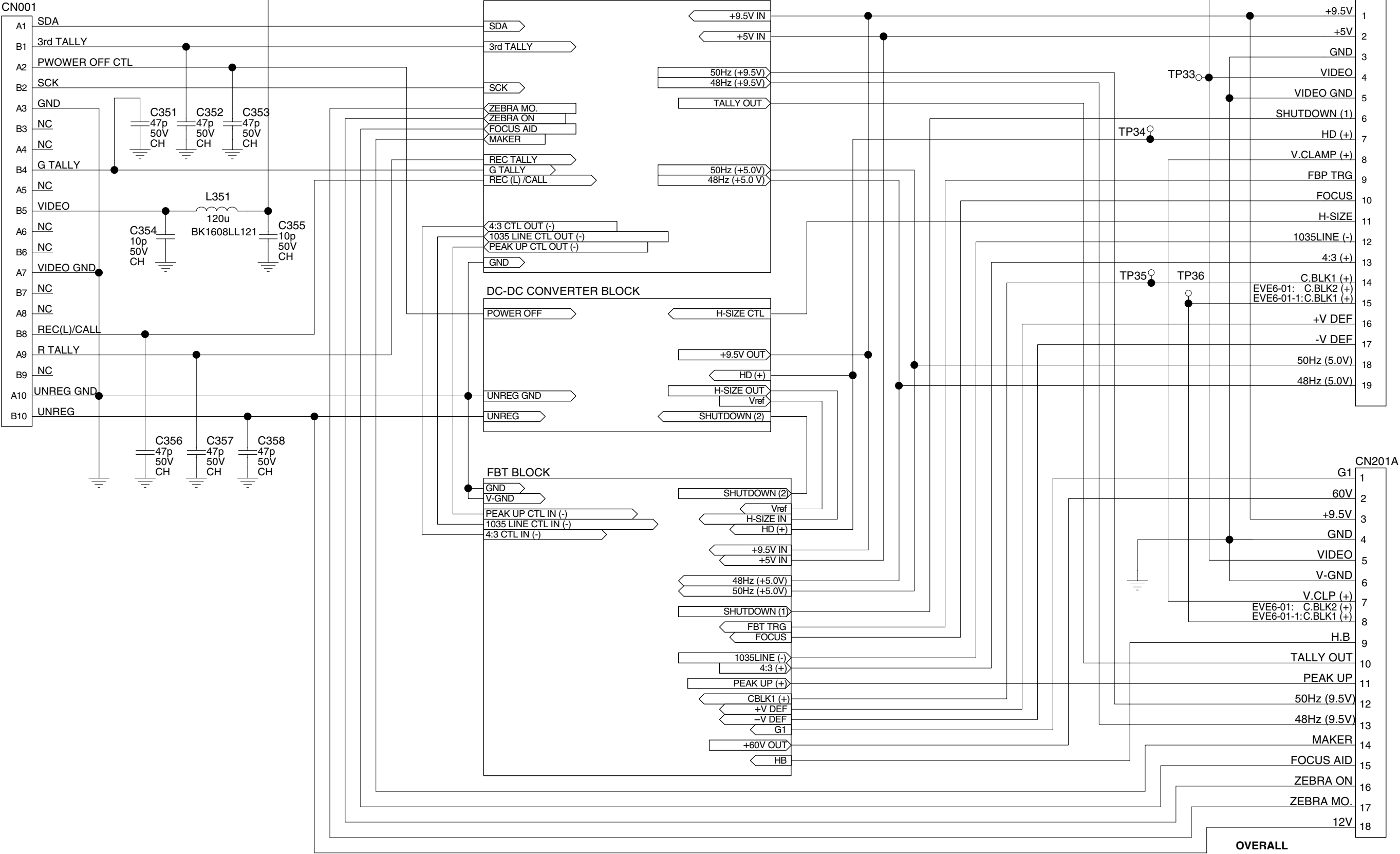
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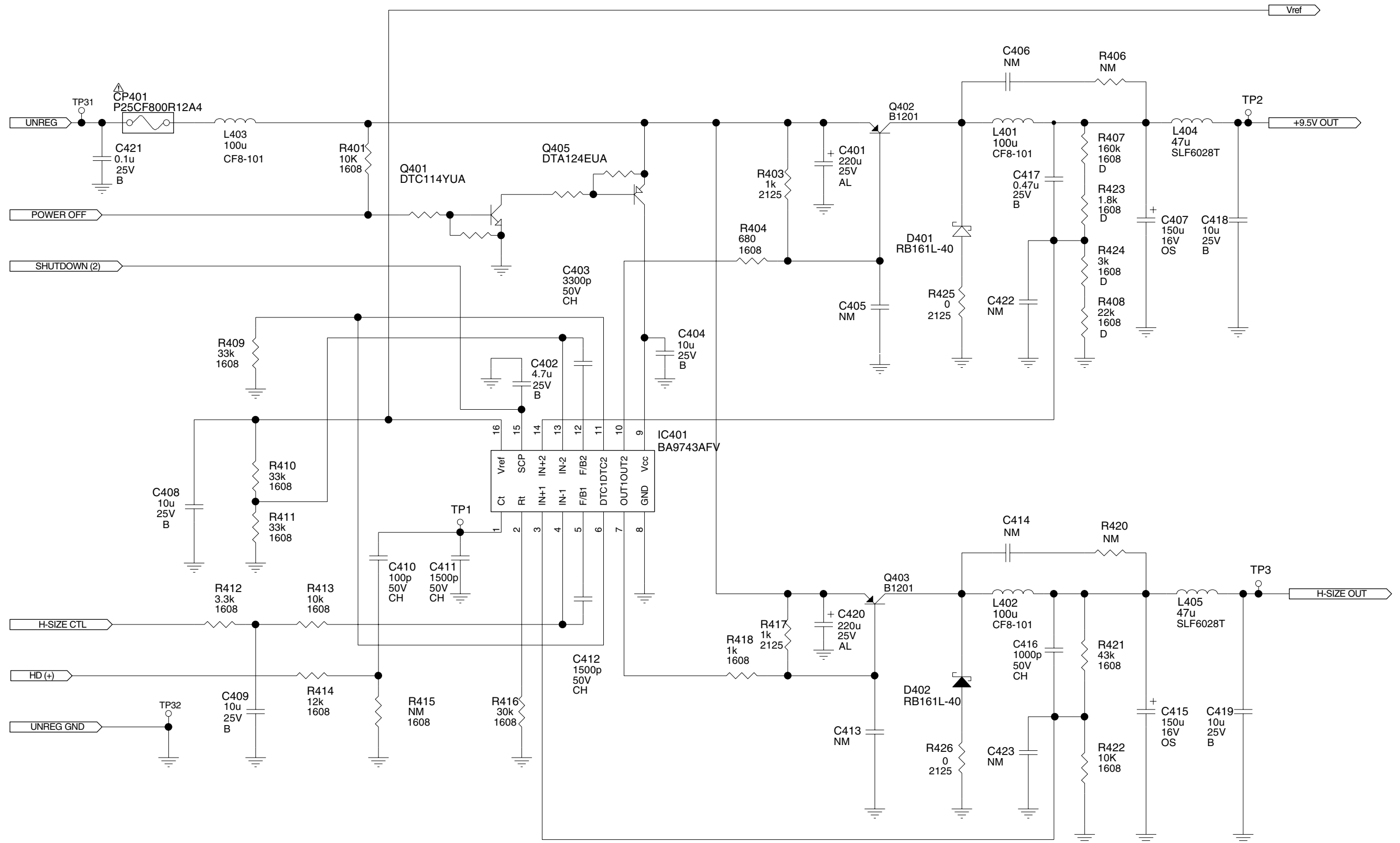
3

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OVERALL
EVE6-01
EVE6-01-1 (1/4)



DC-DC CONVERTER BLOCK
EVE6-01
EVE6-01-1 (2/4)

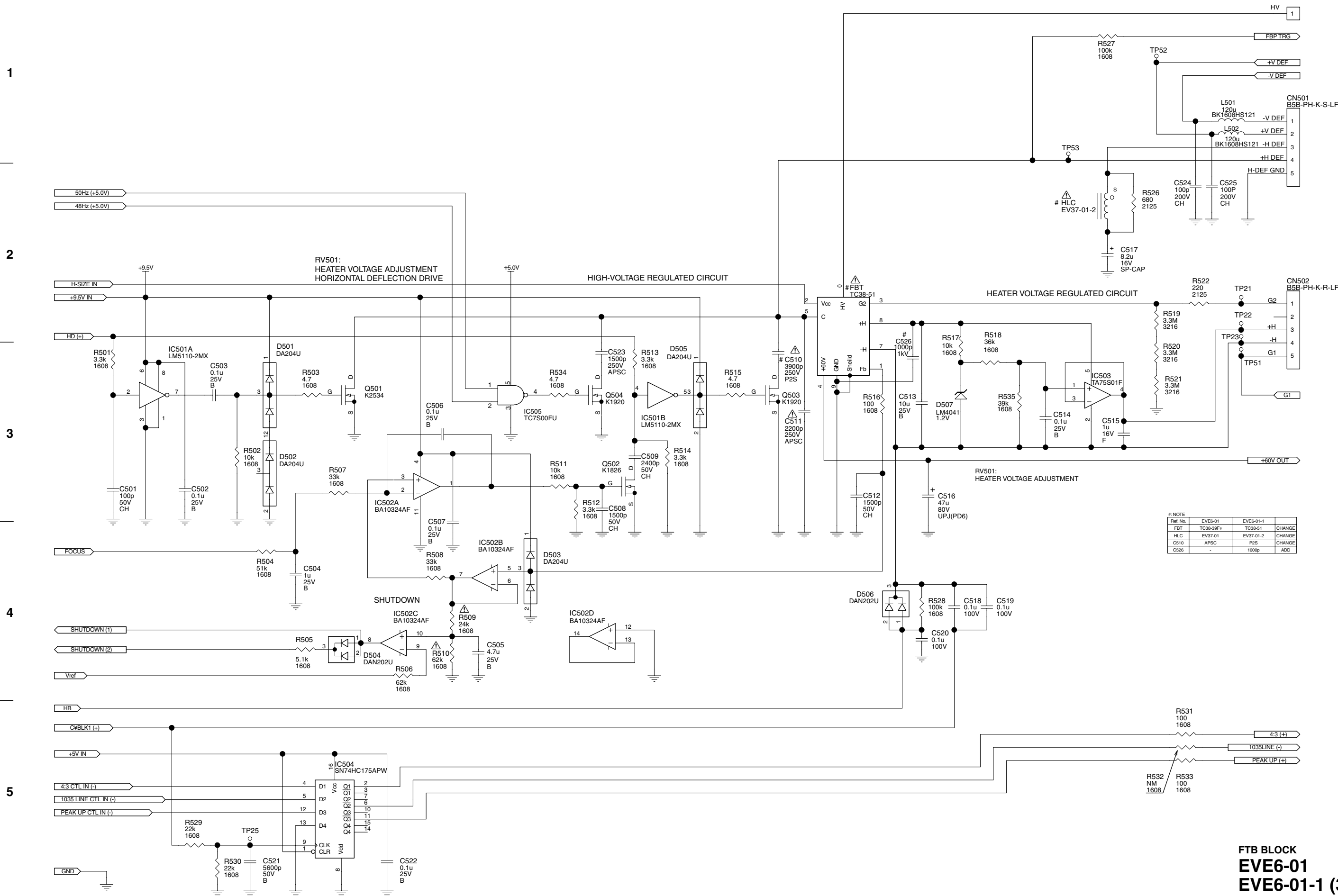
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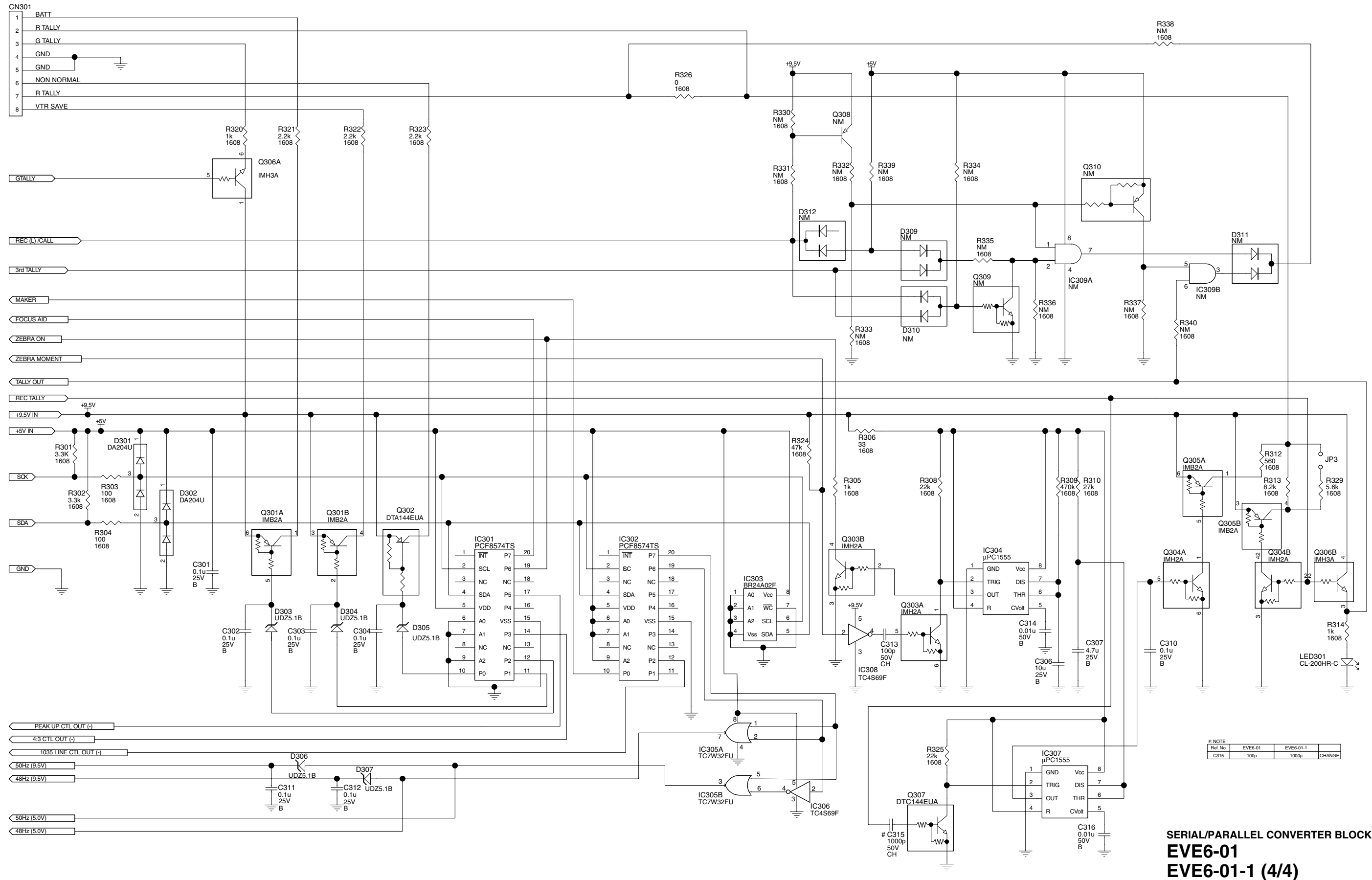
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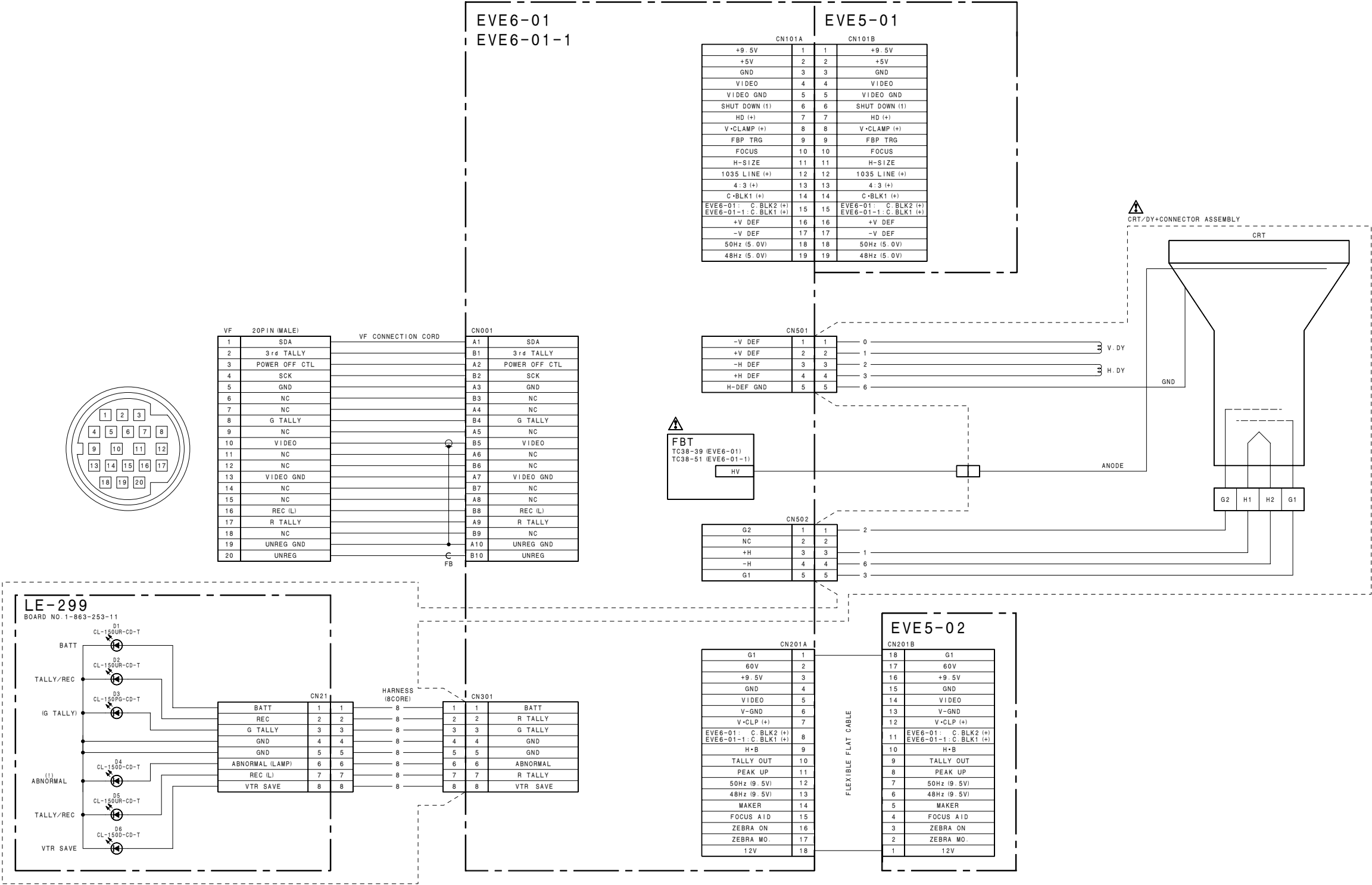
4

5



FTB BLOCK
EVE6-01
EVE6-01-1 (3/4)

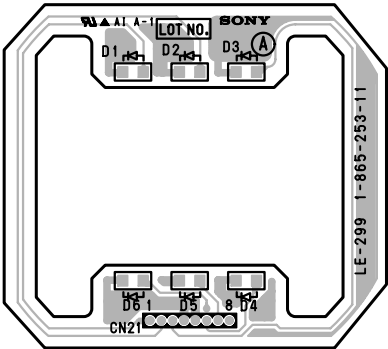




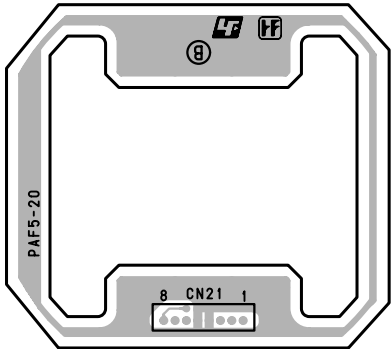
Section 6
Board Layouts

Index

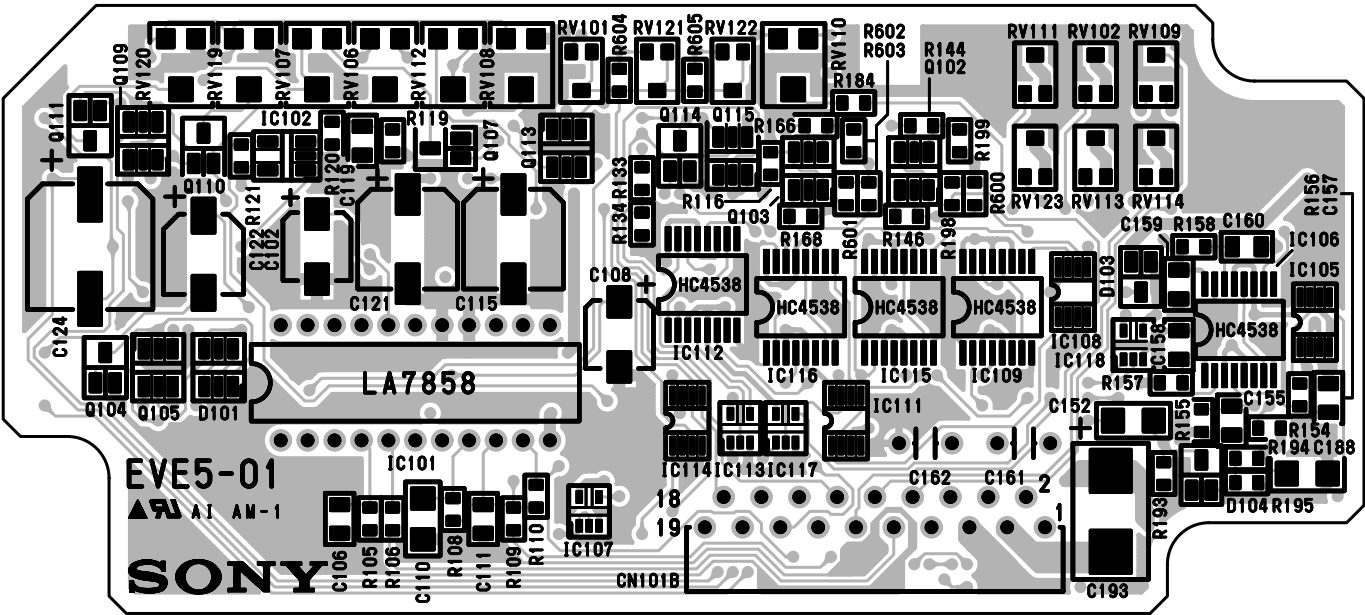
Board name	Page
EVE5-01	6-2
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EVE6-01	6-3
EVE6-01-1	6-3
LE-299	6-1



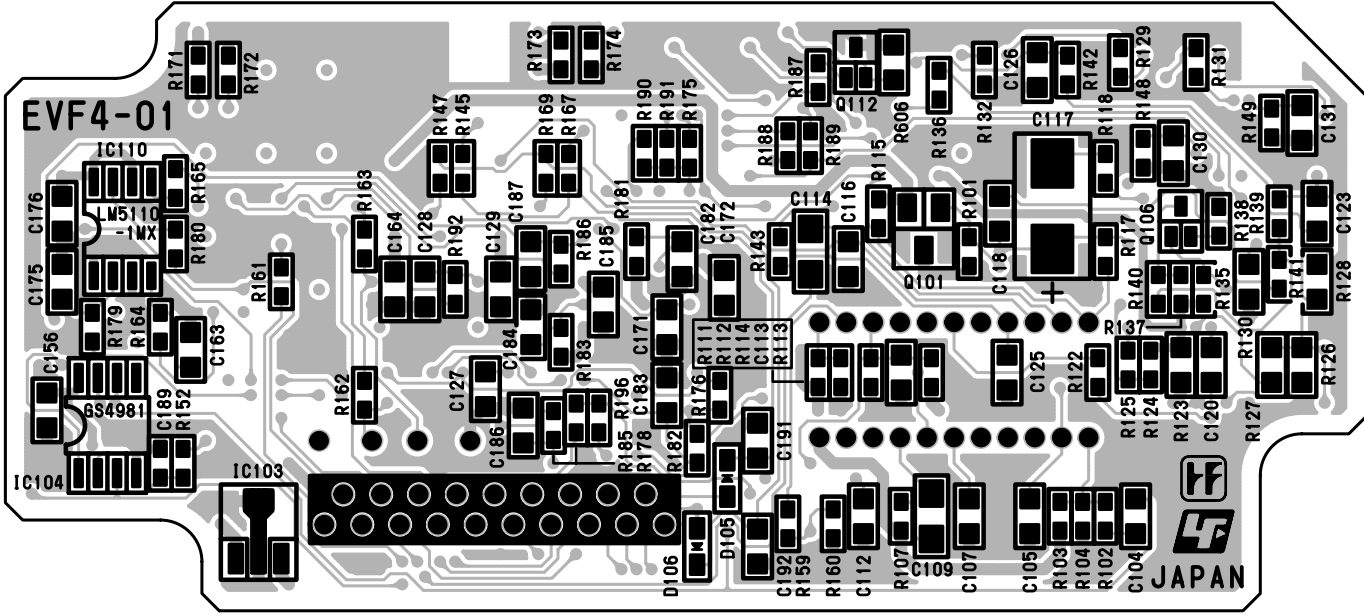
LE-299 -A SIDE-
SUFFIX: -11



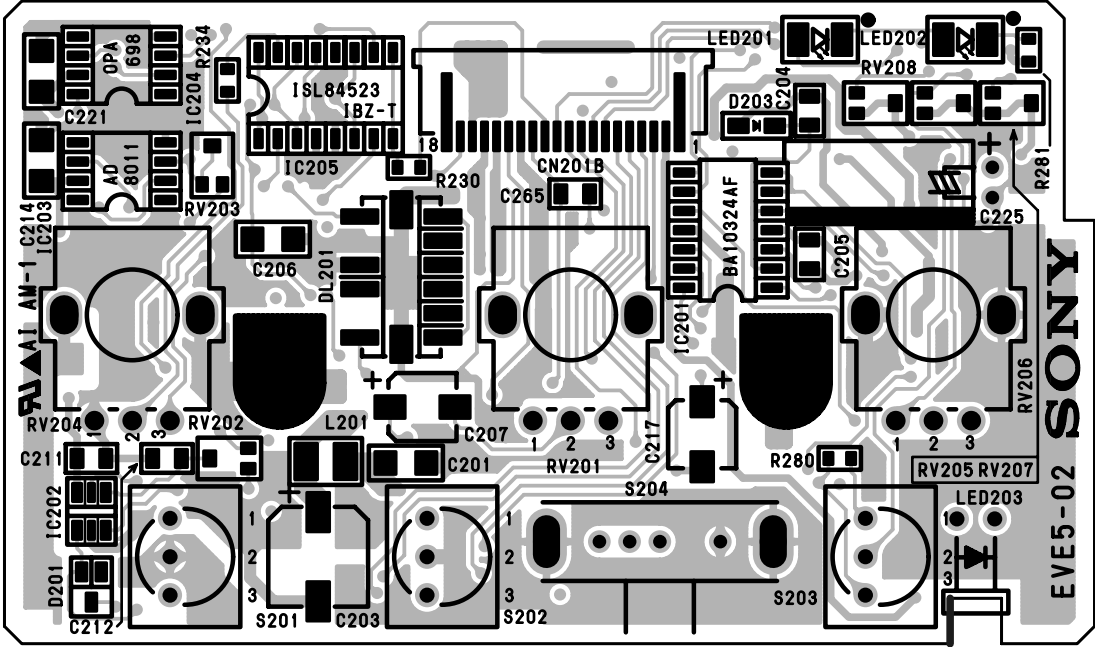
LE-299 -B SIDE-
SUFFIX: -11



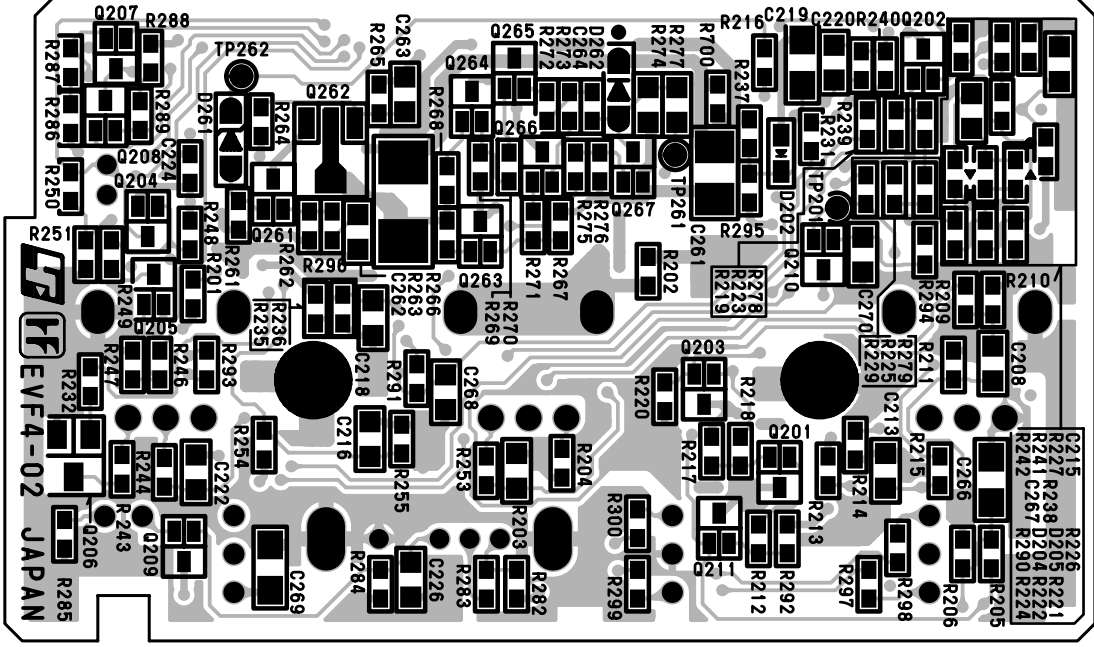
EVE5-01
-SOLDERING SIDE-



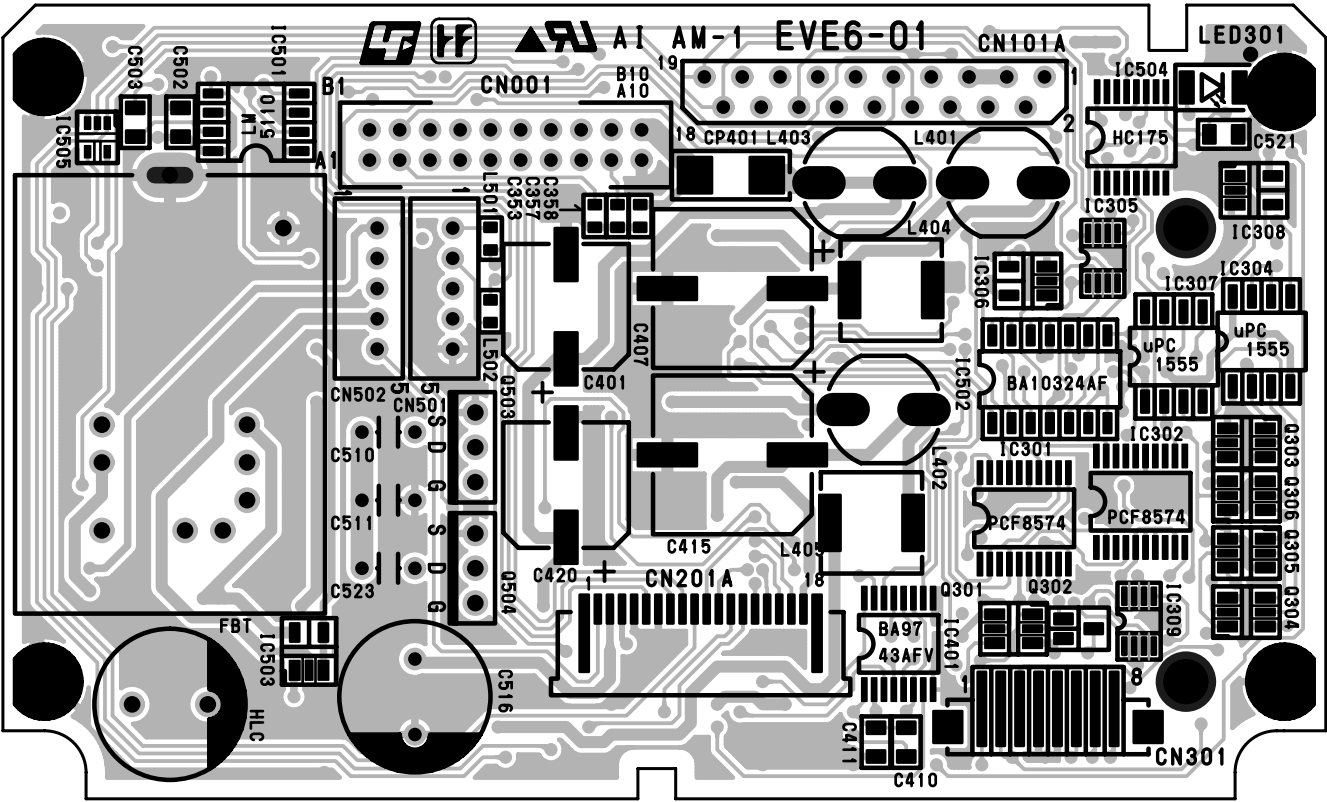
EVE5-01
-COMPONENT SIDE-



EVE5-02
-COMPONENT SIDE-



EVE5-02
-SOLDERING SIDE-



HDVF-200 (SY) J, E
9-968-432-02

Sony Corporation

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