

HISTORY INFORMATION FOR THE FOLLOWING MANUAL:

SERVICE MANUAL

RX1 CHASSIS

<u>MODEL NAME</u>	<u>REMOTE COMMANDER</u>	<u>DESTINATION</u>
KDL-19M4000	RM-YD025	US
KDL-19M4000	RM-YD025W	US
KDL-19M4000	RM-YD025	CANADA
KDL-19M4000	RM-YD025W	CANADA
KDL-19M4000	RM-YD025	MEXICO
KDL-19M4000	RM-YD025W	MEXICO

ORIGINAL MANUAL ISSUE DATE: 3/2008

 :UPDATED ITEM

<u>REVISION DATE</u>	<u>SUBJECT</u>
3/2008	No revisions or updates are applicable at this time.
4/2008	Reissue entire manual to include PWBs for G Board (Power Supply) Added Line Art illustration for Wire Dressing Added PNs for Colored Bezels to Exploded View section.
5/2008	Corrected instructions for 2-1. Resetting to Factory Defaults After Board Replacement. Replaced page 17.
5/2008	Corrected PNs for White and Black Front Bezel Assemblies. Replaced page 43.
10/2008	Removed Self Diagnosis logo from Front Cover and Self Diagnostic Function page. Replaced pages 2 and 10.
12/2008	Corrected H2 Board and H3 Board information. Replaced pages 13, 15, 16, 18, 21, & 38-39.

LCD DIGITAL COLOR TELEVISION

SONY[®]

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KDL-19M4000



RM-YD025

LCD DIGITAL COLOR TELEVISION

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SPECIFICATIONS

Power Requirements

120V - 240V AC, 50/60Hz

VIDEO (IN) 1/2

S Video (4-Pin Mini DIN) (Video 2 only)

Y: 1.0 Vp-p, 75 ohms unbalanced, sync negative

C: 0.286 Vp-p (Burst signal), 75 ohms

Video

1.0 Vp-p, 75 ohms unbalanced, sync negative

Audio

500 mVrms (100% modulation)

Impedance: 47 kilohms

COMPONENT IN:

Y_BP_R (Component Video)

Y: 1.0 Vp-p, 75 ohms unbalanced, sync negative

P_B: 0.7 Vp-p, 75 ohms

P_R: 0.7 Vp-p, 75 ohms

Signal format: 480i, 480p, 720p, 1080i, 1080p

Audio

500 mVrms (100% modulation)

Impedance: 47 kilohms

HDMI IN:

HDMI

Video: 480i, 480p, 720p, 1080i

Audio: Two channel linear PCM 32, 44.1 and 48 kHz, 16 bits

Audio

500 mVrms (100% modulation)

Impedance: 47 kilohms

AUDIO OUT:

500 mVrms (100% modulation)

PC IN:

D-sub 15-pin, analog RGB, 0.7 Vp-p, 75 ohms, positive

PC AUDIO IN:

Stereo mini jack, 500mVrms, 47 kilohms

HEADPHONES:

Stereo mini jack

Impedance: 16 ohms


Trademark Information

Macintosh is a trademark of Apple Inc., registered in the U.S. and other countries.

HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.

Blu-ray Disc is a trademark.

"BRAVIA", BRAVIA and  are trademarks of Sony Corporation.



HDMI



	KDL-19M4000
Power Consumption	in use 53W
	in standby Less than 1.0 W
Speaker Output (W)	3W + 3W
	mm 40 x 100 mm
	in 1 ^{5/8} x 4 in
Dimensions (W x H x D) with stand and handle	mm 485 x 165 x 400 mm
	in 19 ^{1/8} x 6 ^{1/2} x 15 ^{3/4} in
Dimensions (W x H x D) without stand and handle	mm 485 x 85 x 401 mm
	in 19 ^{1/8} x 3 ^{3/8} x 15 ^{7/8} in
Mass with stand and handle	kg 7.8 kg
	lbs 17 lbs 2 oz
without stand and handle	kg 6.9 kg
	lbs 15 lbs 2 oz

All measurements are approximations.

Television system

NTSC	American TV Standard
ATSC (8VSB terrestrial)	ATSC Compliant 8VSB
QAM on cable	ANSI/SCTE 07 2000

Channel coverage

	Analog	Digital
Terrestrial	2-69	2-69
Cable	1-135	1-135

Antenna

75-ohm external terminal for VHF/UHF

Panel System

LCD (Liquid Crystal Display) Panel

Display Resolution (horizontal x vertical):

1440 dots x 900 lines

Screen Size (measured diagonally)

approx. 19 inches

Supplied Accessories

Remote Commander RM-YD025 or RM-YD025W
 Size AA Batteries (2)
 AC Power Cord
 Cable Band
 Operating Instructions
 Quick Setup Guide
 Warranty Card
 Online Registration Card (USA only)

Optional Accessories

Headphones Plug Adapter
 Connecting Cables
 Wall-Mount Bracket
 SU-WL100

WARNINGS AND CAUTIONS

CAUTION

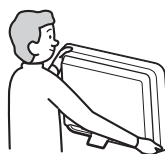
These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

CARRYING THE TV

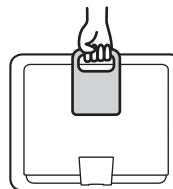
Carry the TV in the specified manner

To avoid dropping the TV and causing serious injury, be sure to follow these guidelines:

- ❑ Before carrying the TV, disconnect all cables.
- ❑ When you carry the TV without handle, place your hand as illustrated and hold it securely. Do not put stress on the LCD panel.
- ❑ When carrying the TV, do not subject it to shocks or vibration, or excessive force.



Without handle




With handle

WARNING!!

An isolation transformer should be used during any service to avoid possible shock hazard, because of live chassis. The chassis of this receiver is directly connected to the ac power line.



SAFETY-RELATED COMPONENT WARNING!!

Components identified by shading and  mark on the schematic diagrams, exploded views, and in the parts list are critical for safe operation. Replace these components with Sony parts whose part numbers appear as shown in this manual or in supplements published by Sony. Circuit adjustments that are critical for safe operation are identified in this manual. Follow these procedures whenever critical components are replaced or improper operation is suspected.

ATTENTION!!

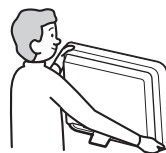
Ces instructions de service sont à l'usage du personnel de service qualifié seulement. Pour prévenir le risque de choc électrique, ne pas faire l'entretien autre que celui contenu dans le Mode d'emploi à moins que vous soyez qualifié faire ainsi.

POUR TRANSPORTER LE TÉLÉVISEUR

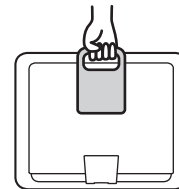
Transport du téléviseur de la manière précisée

Assurez-vous de suivre ces consignes pour éviter de laisser tomber le téléviseur et de provoquer des blessures graves :

- ❑ Débranchez tous les câbles avant de transporter le téléviseur.
- ❑ Transportez le téléviseur en plaçant les mains tel qu'illustré et le tenir solidement. N'appliquez pas de pression sur l'écran ACL.
- ❑ Lorsque vous transportez le téléviseur, ne le soumettez pas à des chocs ou vibrations, ni à une force excessive.



Sans poignée de transport




Avec poignée de transport

Afin d'éviter tout risque d'électrocution provenant d'un châssis sous tension, un transformateur d'isolement doit être utilisé lors de tout dépannage. Le châssis de ce récepteur est directement raccordé à l'alimentation du secteur.



ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

Les composants identifiés par une trame et par une marque  sur les schémas de principe, les vues explosées et les listes de pièces sont d'une importance critique pour la sécurité du fonctionnement. Ne les remplacer que par des composants Sony dont le numéro de pièce est indiqué dans le présent manuel ou dans des suppléments publiés par Sony. Les réglages de circuit dont l'importance est critique pour la sécurité du fonctionnement sont identifiés dans le présent manuel. Suivre ces procédures lors de chaque remplacement de composants critiques, ou lorsqu'un mauvais fonctionnement suspecte.

SAFETY-RELATED COMPONENT WARNING

There are critical components used in LCD color TVs that are important for safety. These components are identified with shading and \triangle mark on the schematic diagrams and the electrical parts list. It is essential that these critical parts be replaced only with the part number specified in the electrical parts list to prevent electric shock, fire, or other hazard.

NOTE: Do not modify the original design without obtaining written permission from the manufacturer or you will void the original parts and labor guarantee.

USE CAUTION WHEN HANDLING THE LCD PANEL

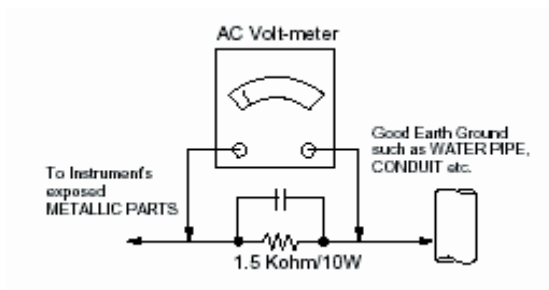
When repairing the LCD panel, be sure you are grounded by using a wrist band.

When installing the LCD panel on a wall, the LCD panel must be secured using the 4 mounting holes on the rear cover.

To avoid damaging the LCD panel:

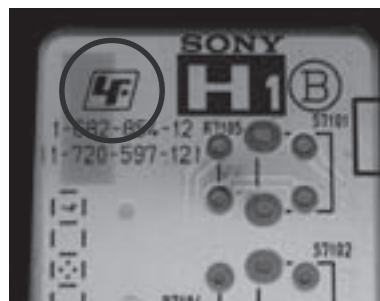
- do not press on the panel or frame edge to avoid the risk of electric shock.
- do not scratch or press on the panel with any sharp objects.
- do not leave the module in high temperatures or in areas of high humidity for an extended period of time.
- do not expose the LCD panel to direct sunlight.
- avoid contact with water. It may cause a short circuit within the module.
- disconnect the AC adapter when replacing the backlight (CCFL) or inverter circuit.
(High voltage occurs at the inverter circuit at 650Vrms.)
- always clean the LCD panel with a soft cloth material.
- use care when handling the wires or connectors of the inverter circuit. Damaging the wires may cause a short.
- protect the panel from ESD to avoid damaging the electronic circuit (C-MOS).

LEAKAGE CURRENT HOT CHECK CIRCUIT



example 1

The circuit boards used in these models have been processed using Lead Free Solder. The boards are identified by the LF logo located close to the board designation e.g. H1 etc [see example]. The servicing of these boards requires special precautions to be taken as outlined below.



It is strongly recommended to use Lead Free Solder material in order to guarantee optimal quality of new solder joints. Lead Free Solder is available under the following part numbers :

Part number	Diameter	Remarks
7-640-005-19	0.3mm	0.25Kg
7-640-005-20	0.4mm	0.50Kg
7-640-005-21	0.5mm	0.50Kg
7-640-005-22	0.6mm	0.25Kg
7-640-005-23	0.8mm	1.00Kg
7-640-005-24	1.0mm	1.00Kg
7-640-005-25	1.2mm	1.00Kg
7-640-005-26	1.6mm	1.00Kg

Due to the higher melting point of Lead Free Solder the soldering iron tip temperature needs to be set to 370 degrees centigrade. This requires soldering equipment capable of accurate temperature control coupled with a good heat recovery characteristics.

For more information on the use of Lead Free Solder, please refer to <http://www.sony-training.com>

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or touching high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instructions.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low voltage scale. The Simpson's 250 and Sanwa SH-63TRD are examples of passive VOMs that are suitable. Nearly all battery-operated digital multimeters that have a 2 VAC range are suitable (see Figure A).

How to Find a Good Earth Ground

A cold-water pipe is a guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms.

If a cold-water pipe is not accessible, connect a 60- to 100-watt trouble-light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side on the line; the lamp should light at normal brilliance if the screw is at ground potential (see Figure B).

Leakage Test

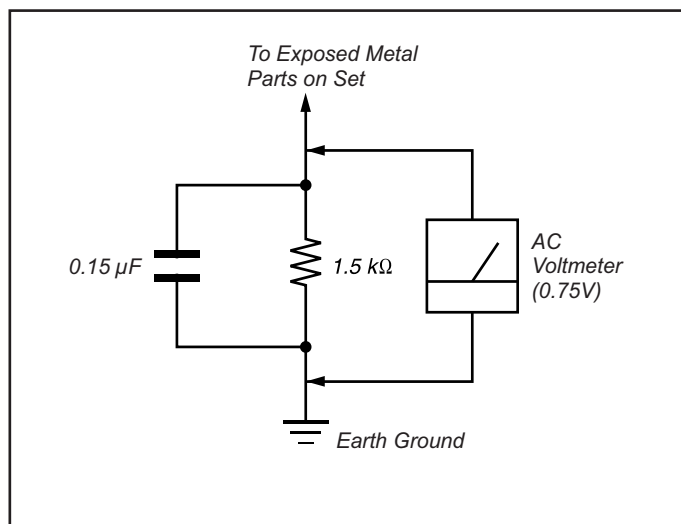


Figure A. Using an AC voltmeter to check AC leakage.

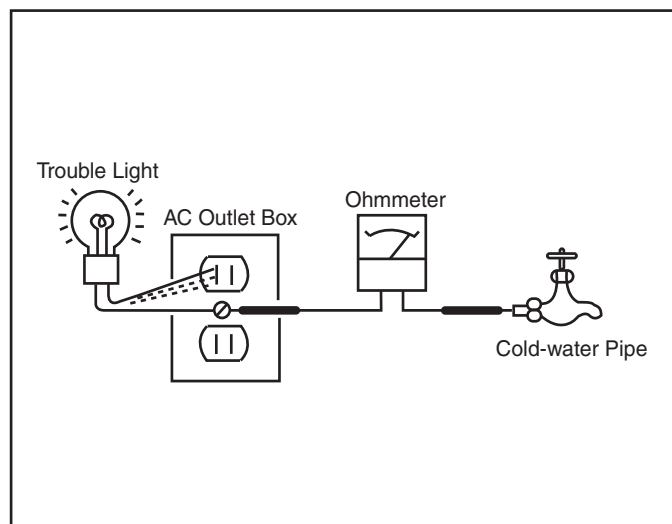


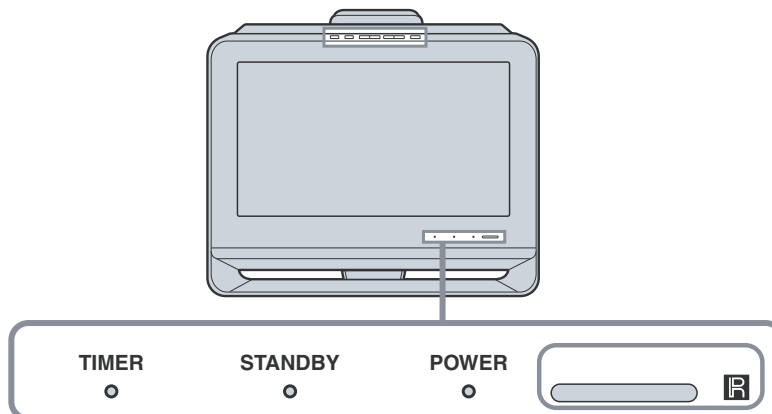
Figure B. Checking for earth ground.

SELF-DIAGNOSTIC FUNCTION

IMPORTANT:

The unit in this manual DOES NOT contain a self-diagnostic function. If an error occurs, the TV will not stay on. It is our recommendation that if a repair is required for this set, the technician should bring both the A Board and the G Board to the customer location.

Control Buttons



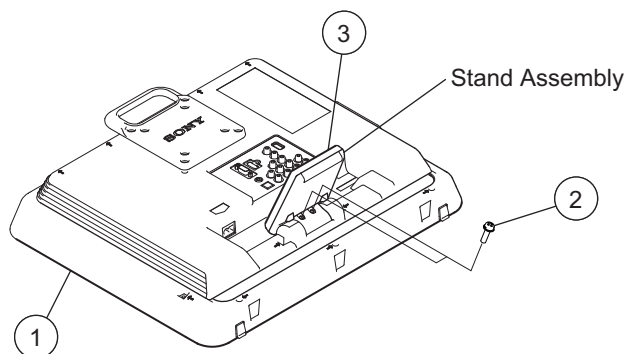
Description of LED Indicators

The unit in this manual DOES NOT contain a self-diagnostic function.

SECTION 1: DISASSEMBLY

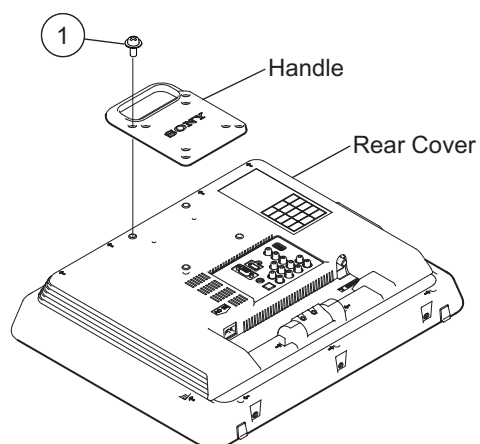
1-1. STAND REMOVAL

- ① Place the TV set face down onto the soft cloth
- ② Remove 2 screws, +PSW M4X16
- ③ Hold both sides of the stand firmly, and pull out the stand from hinge housing



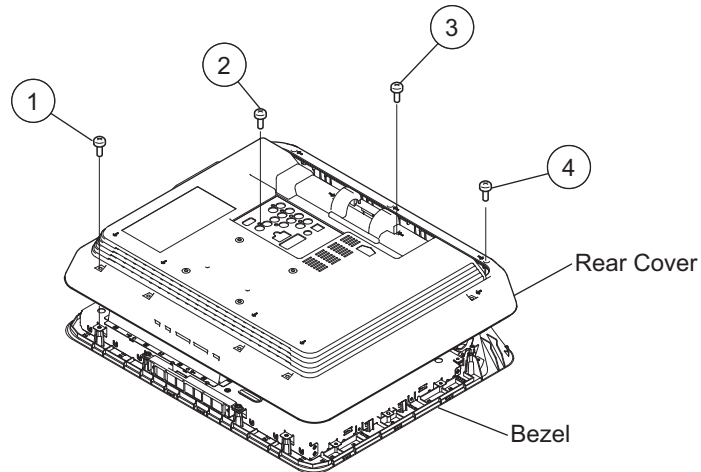
1-2. HANDLE REMOVAL

- ① Remove 4 screws Handle and Rear Cover, +PSW M4X12



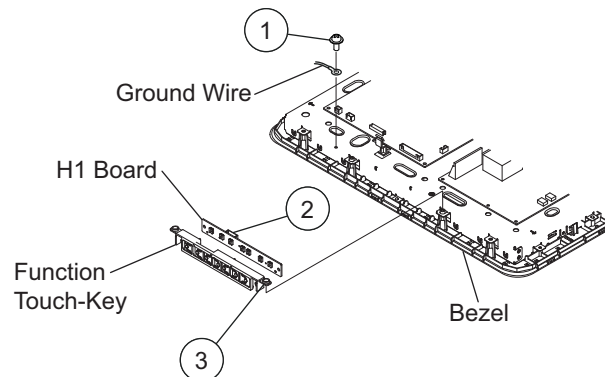
1-3. REAR COVER REMOVAL

- ① Remove 6 screws, +BVTP 4X25
- ② Remove 3 screws from Terminal positions, +BVTP 3X10
- ③ Remove 2 screws from both sides of Hinge positions, +BVTP 4X12
- ④ Remove 3 screws from bottom of Rear Cover, +BVTP 3X10



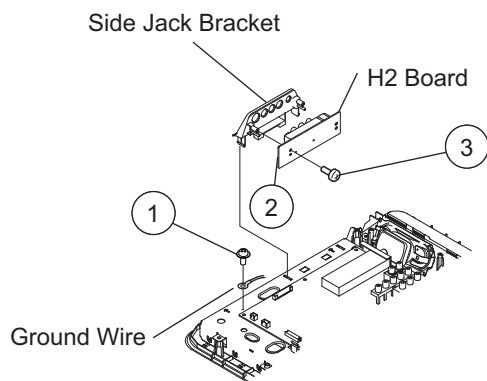
1-4. FUNCTION KEY REMOVAL

- ① Remove 1 screw and release ground wire, +PSW M3X6
- ② Disconnect one connector from H1 Board
- ③ Release hooks



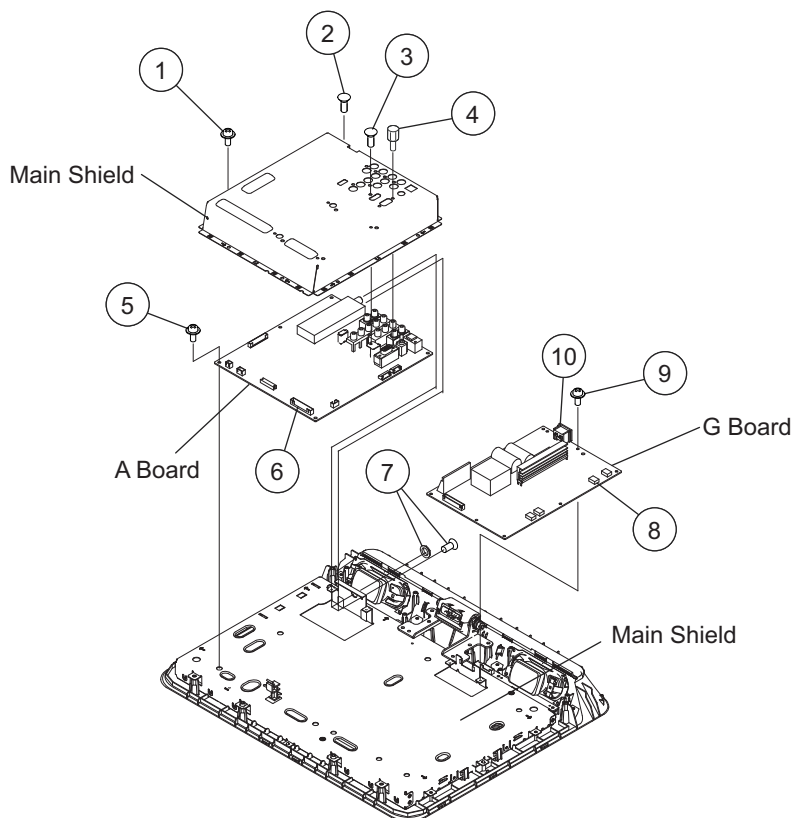
1-5. H2 BOARD REMOVAL

- ① Remove 1 screw and release ground wire, +PSW M3X6
- ② Disconnect one connector from H3 Board
- ③ Remove 2 screws, +BVTP 3X10



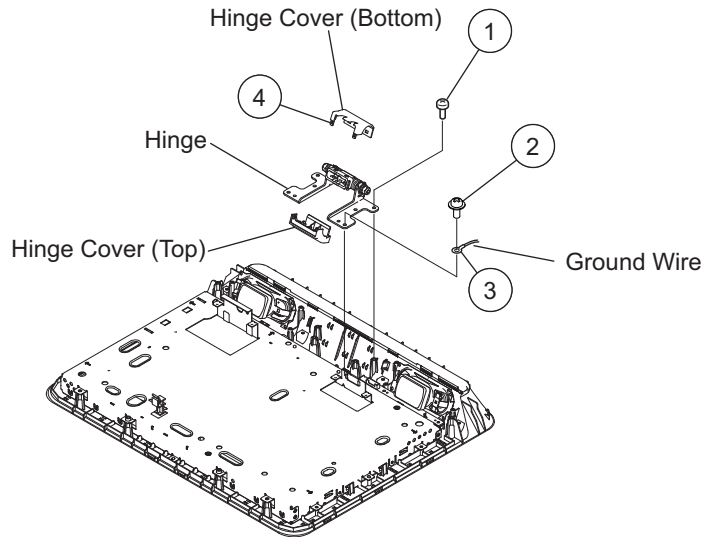
1-6. A BOARD AND G BOARD REMOVAL

- ① Remove 8 screws and release ground wire, +PSW M3X6
- ② Remove 4 screws from bottom of Main Shield, +FH 4X5
- ③ Remove 1 screw, +FH 3X4
- ④ Remove 2 screws, UNC (HEX)
- ⑤ Remove 5 screws, +PSW M3X6
- ⑥ Disconnect 8 connectors
- ⑦ Remove 1 Nut and 1 screw (+FH3X4) from Tuner
- ⑧ Disconnect 5 connectors
- ⑨ Remove 6 screws, +PSW M3X6
- ⑩ Slide out AC inlet with G Board from Main Bracket



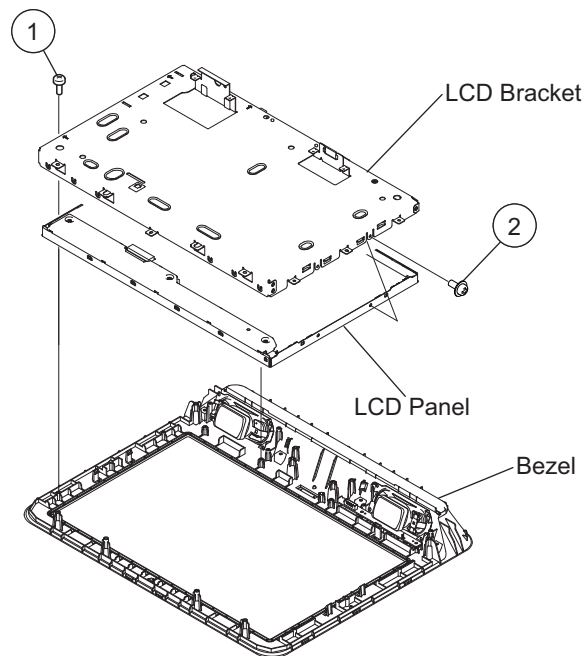
1-7. HINGE REMOVAL

- ① Remove 2 screws, +BVTP 4X21
- ② Remove 2 screws, +PSW M4X16
- ③ Release Ground Wire
- ④ Unhook Bottom and Top Hinge Covers



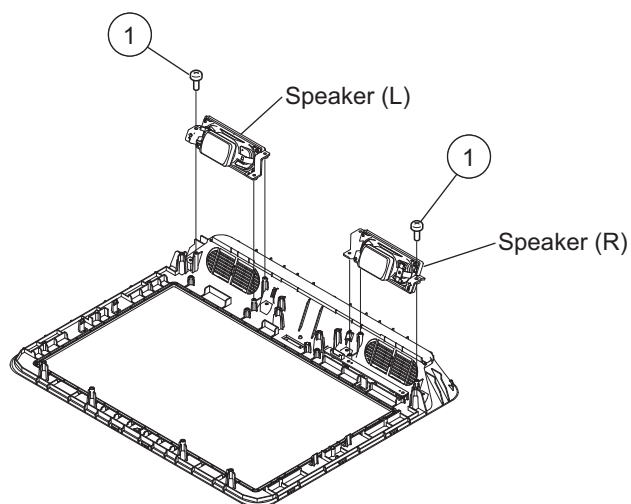
1-8. LCD PANEL AND MAIN BRACKET REMOVAL

- ① Remove 7 screws, +BVTP 3X10
- ② Remove 4 screws, +PSW M3X6



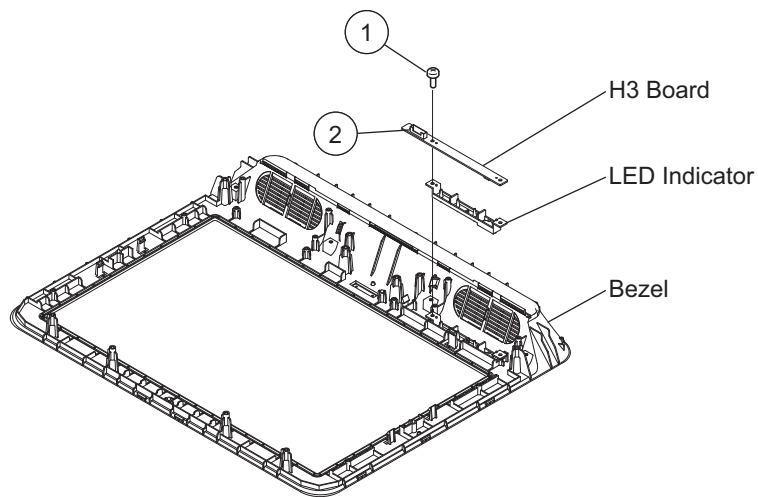
1-9. SPEAKERS REMOVAL

- ① Remove 6 screws from Speakers, +BVTP 3X10



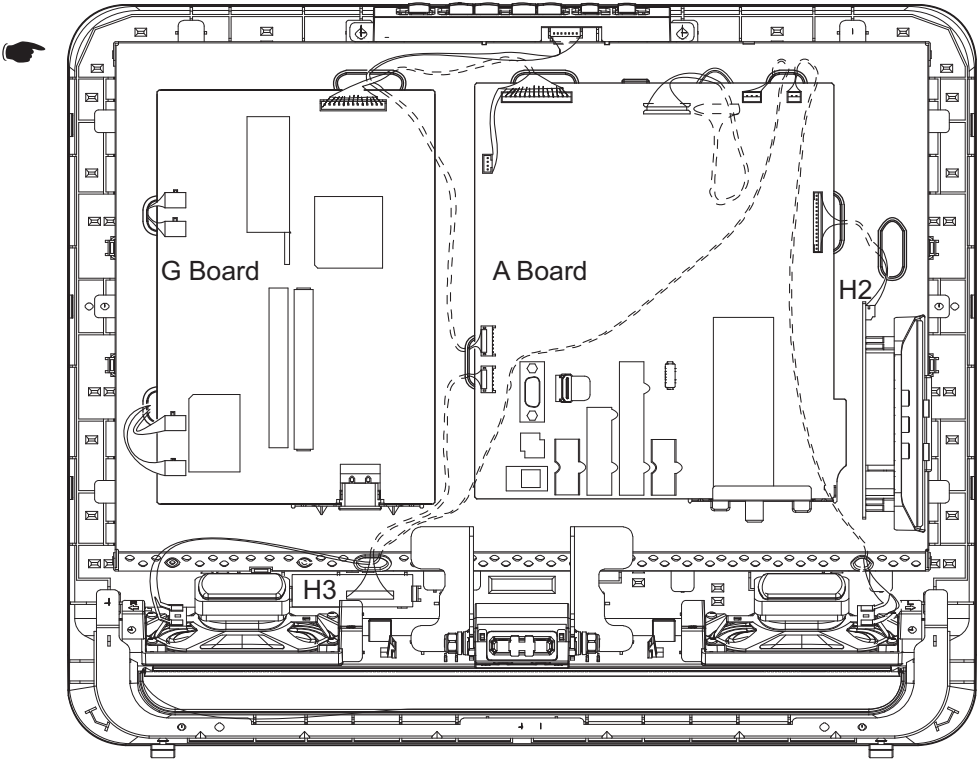
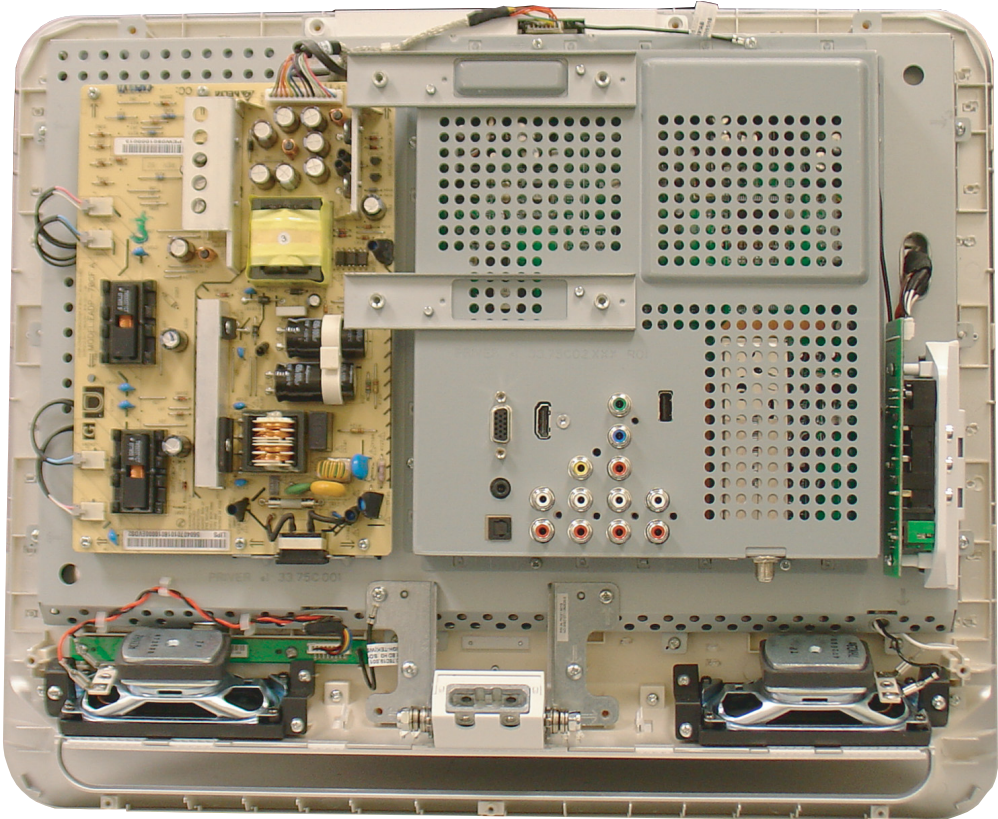
👉 1-10. H3 BOARD AND LED LENS REMOVAL

- ① Remove 2 screws, +BVTP 3X10
- ② Disconnect 1 connector



WIRE DRESSING

OVERALL VIEW



SECTION 2: SERVICE ADJUSTMENTS

2-1. RESETTING TO FACTORY DEFAULTS AFTER BOARD REPLACEMENT

Traditional Service Mode is not available in this chassis. The only option for service technicians is to reset all of the settings to the Factory Default from the Self Diagnostic screen.

CAUTION: Resetting the TV to the Factory Defaults will *over-write all customer settings* including Parental Lock setting. Before performing this reset, contact the customer to determine what adjustments they have made.

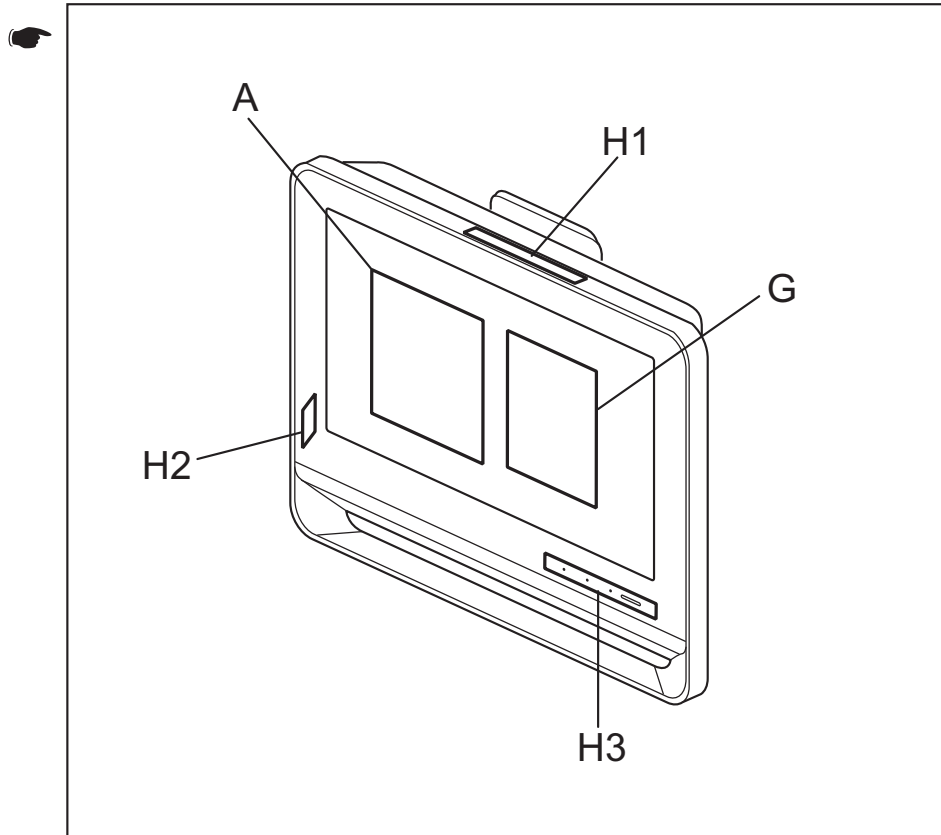
1. Turn on the TV.
2. While holding down the **▲** button on the remote control, on the TV press and hold the **MENU** button until "reset" displays at the bottom left corner of the screen.
The TV turns itself off, then turns back on again.
The Initial Setup screen displays.
3. Use the Initial Setup screen options to reset the TV to the factory settings.



RM-YD025

SECTION 3: DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION



3-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS INFORMATION

All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.

All electrolytics are in 50V unless otherwise specified.

All resistors are in ohms. $\text{k}\Omega=1000\Omega$, $\text{M}\Omega=1000\text{k}\Omega$

Indication of resistance, which does not have one for rating electrical power, is as follows: Pitch : 5mm

Rating electrical power : $\frac{1}{4}\text{W}$

$\frac{1}{4}\text{W}$ in resistance, $\frac{1}{10}\text{W}$ and $\frac{1}{16}\text{W}$ in chip resistance.

: nonflammable resistor

: fusible resistor

: internal component

: panel designation and adjustment for repair

: earth ground

: earth-chassis

All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

Readings are taken with a color-bar signal input.

Readings are taken with a $10\text{M}\Omega$ digital multimeter.

Voltages are DC with respect to ground unless otherwise noted.

Voltage variations may be noted due to normal production tolerances.

All voltages are in V.

S : Measurement impossibility.

: B+line.

: B-line. (Actual measured value may be different).

: signal path. (RF)

Circled numbers are waveform references.

The components identified by shading and are critical for safety. Replace only with part number specified.

The symbol indicates a fast operating fuse and is displayed on the component side of the board. Replace only with fuse of the same rating as marked.

Les composants identifiés par un trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Le symbole indique une fusible à action rapide. Doit être remplacé par une fusible de même valeur, comme marqué.

NOTE: The components identified by a red outline and a mark contain confidential information. Specific instructions must be adhered to whenever these components are repaired and/or replaced.
See Appendix A: Encryption Key Components in the back of this manual.

REFERENCE INFORMATION

RESISTOR

: RN METAL FILM
 : RC SOLID
 : FPRD NONFLAMMABLE CARBON
 : FUSE NONFLAMMABLE FUSIBLE
 : RW NONFLAMMABLE WIREWOUND
 : RS NONFLAMMABLE METAL OXIDE
 : RB NONFLAMMABLE CEMENT
 : ※ ADJUSTMENT RESISTOR

CAPACITOR

: TA TANTALUM
 : PS STYROL
 : PP POLYPROPYLENE
 : PT MYLAR
 : MPS METALIZED POLYESTER
 : MPP METALIZED POLYPROPYLENE
 : ALB BIPOLAR
 : ALT HIGH TEMPERATURE
 : ALR HIGH RIPPLE

COIL

: LF-8L MICRO INDUCTOR

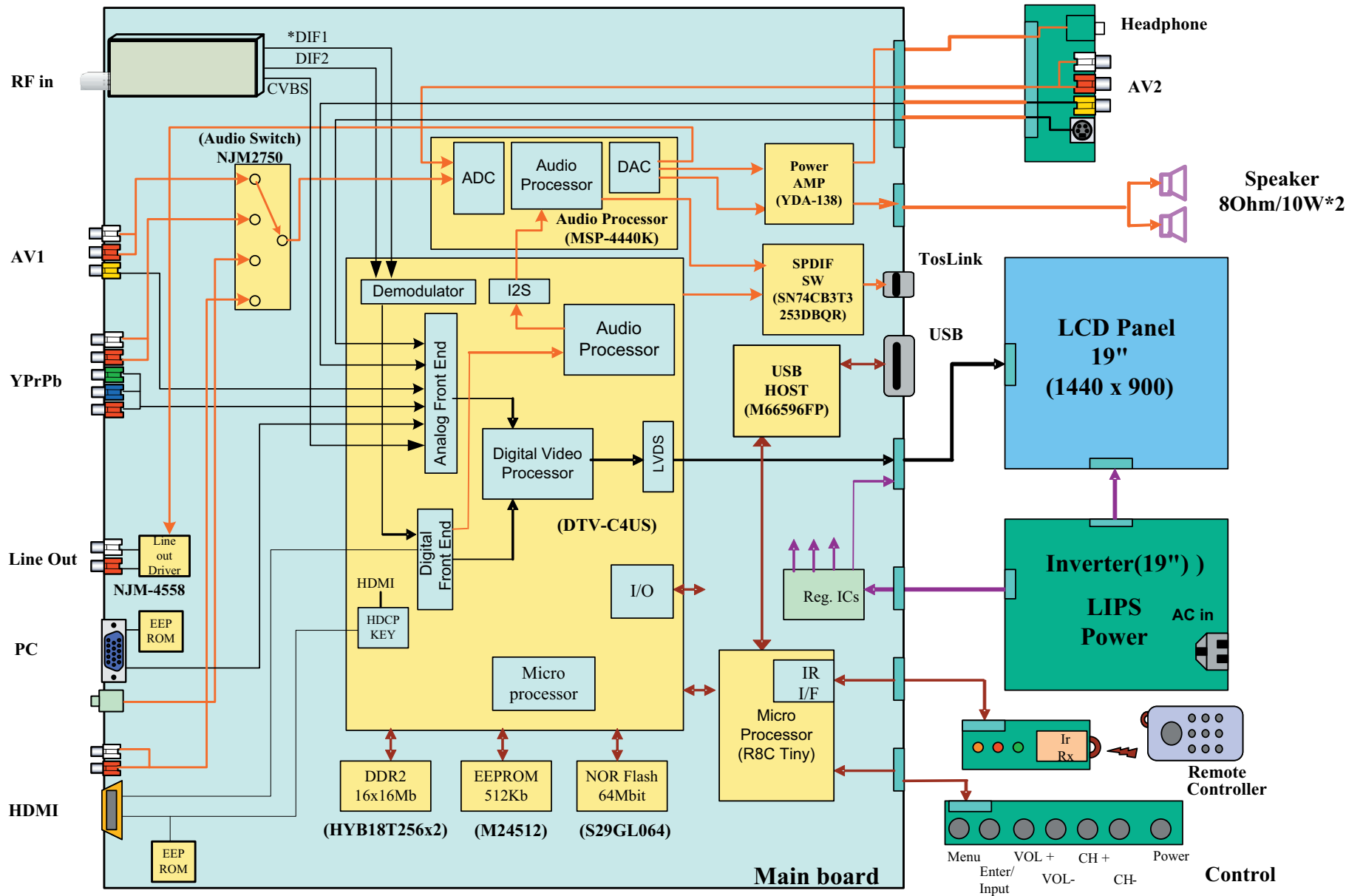
Terminal name of semiconductors in silk screen printed circuit (※)

	Device	Printed symbol	Terminal name	Circuit
1	Transistor		Collector Base Emitter	
2	Transistor		Collector Base Emitter	
3	Diode		Cathode Anode	
4	Diode		Cathode Anode (NC)	
5	Diode		Cathode Anode (NC)	
6	Diode		Common Anode Cathode	
7	Diode		Common Anode Cathode	
8	Diode		Common Anode Anode	
9	Diode		Common Anode Anode	
0	Diode		Common Cathode Cathode	
!j	Diode		Common Cathode Cathode	
!TM	Diode		Anode Anode Cathode Cathode	
!£	Transistor (FET)		Drain Source Gate	
!Ç	Transistor (FET)		Drain Source Gate	
!?	Transistor (FET)		Source Drain Gate	
!§	Transistor		Emitter Collector Base	
!¶	Transistor		C2 B1 E1 E2 B2 C1	
!•	Transistor		C1 B2 E2 E1 B1 C2	
!a	Transistor		C1 B2 E2 E1 B1 C2	
@°	Transistor		C1 B2 E2 E1 B1 C2	
@₁	Transistor		E2 B1 E1 C2 C1(B2)	
@TM	Transistor		(B2) B1 E1 E2 C1 C2	
@£	Transistor		(B2) E2 E1 B1 C2 C1	
—	Discrete semiconductot			

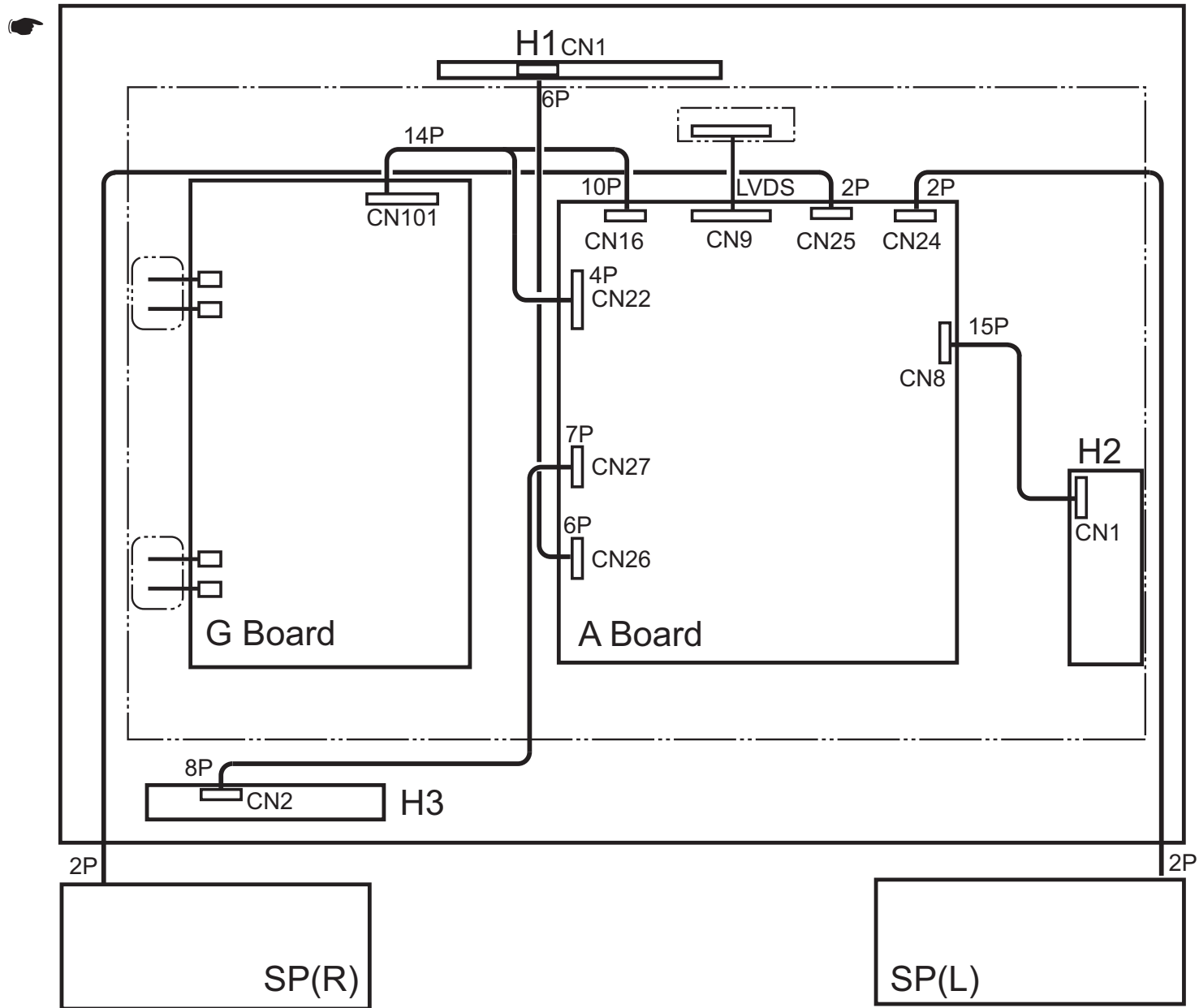
(Chip semiconductors that are not actually used are included.)

Ver.1.6

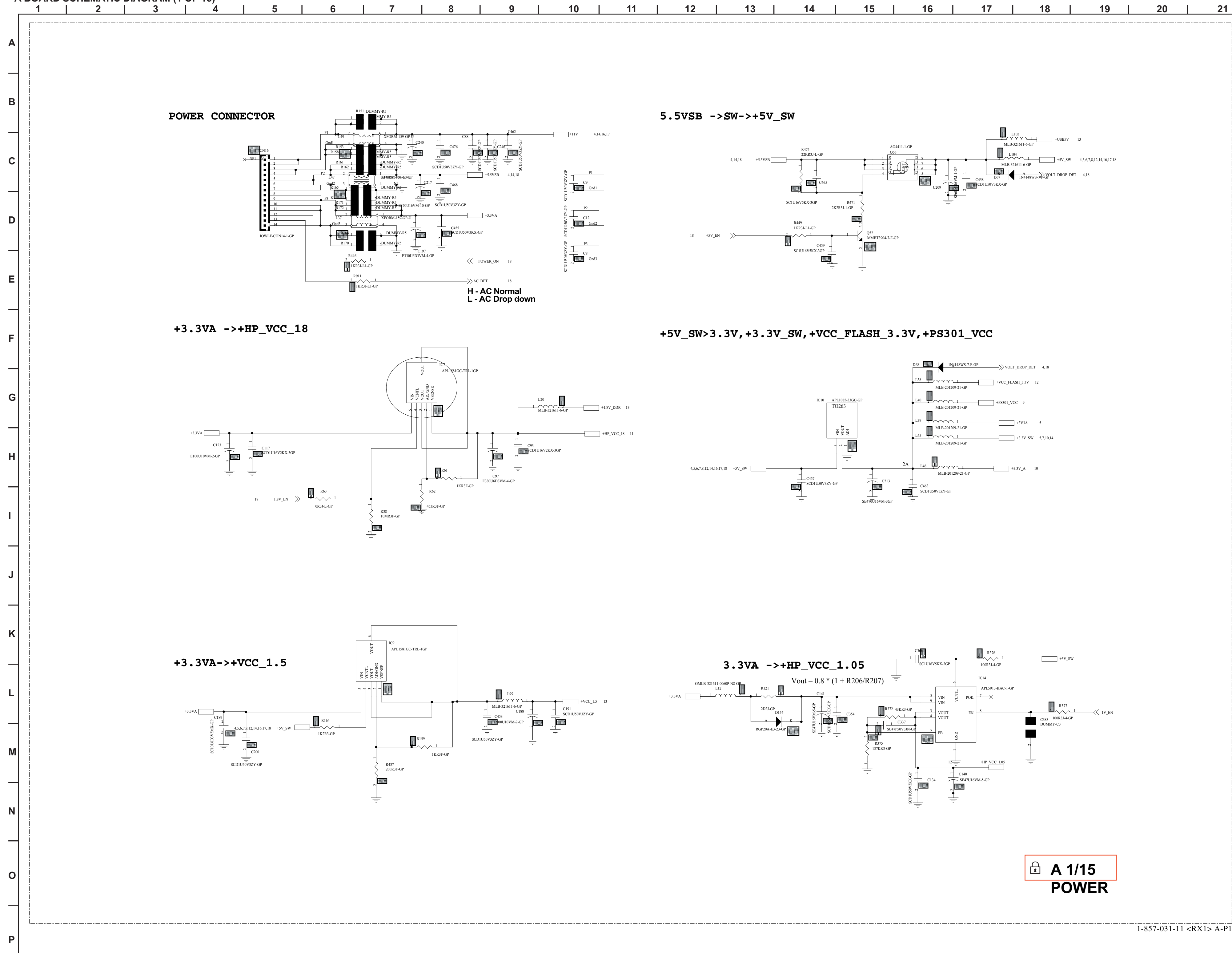
3-3. BLOCK DIAGRAM



3-4. CONNECTOR DIAGRAM



3-5. SCHEMATICS AND SUPPORTING INFORMATION
A BOARD SCHEMATIC DIAGRAM (1 OF 15)



POWER CONNECTOR

5.5VSB ->SW->+5V_SW

+3.3VA ->+HP_VCC_18

+5V_SW>3.3V,+3.3V_SW,+VCC_FLASH_3.3V,+PS301_VCC

+3.3VA->+VCC_1.5

3.3VA ->+HP_VCC_1.05

$V_{out} = 0.8 * (1 + R206/R207)$

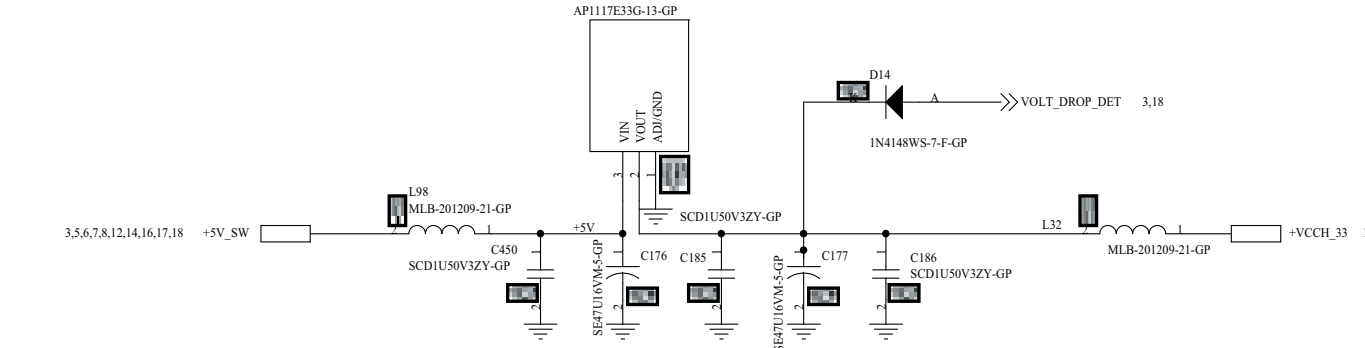
**A 1/15
POWER**

A BOARD SCHEMATIC DIAGRAM (2 OF 15)

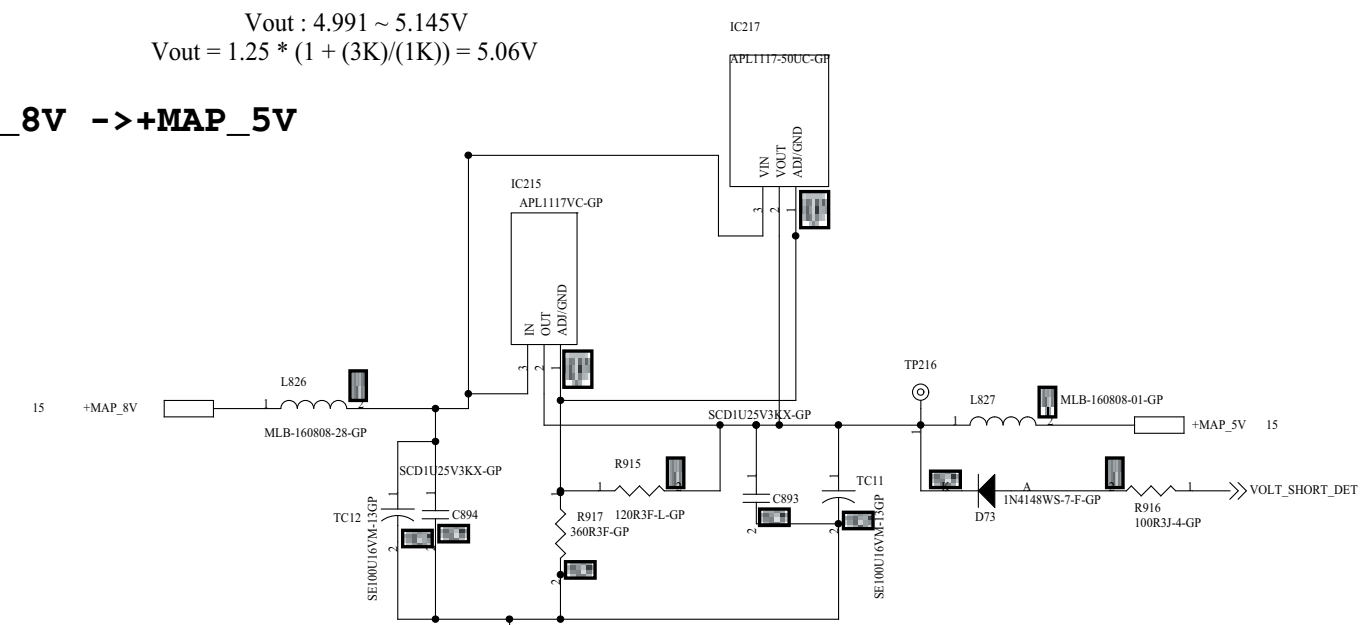
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

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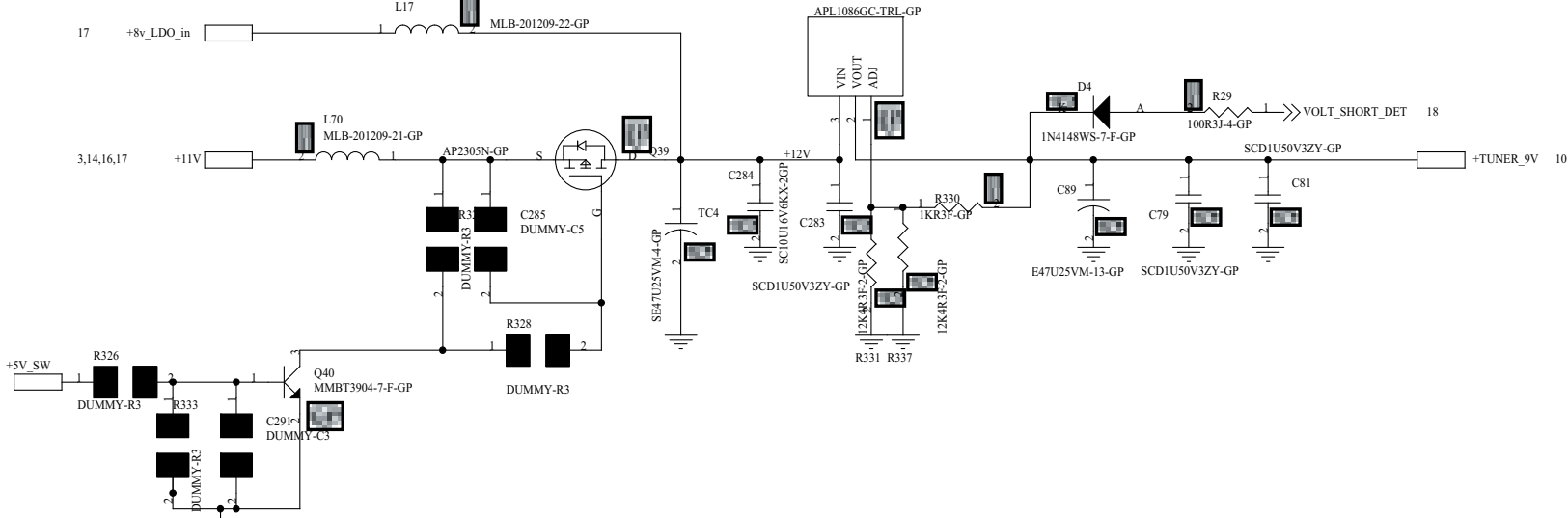
+5V_SW ->+VCC33



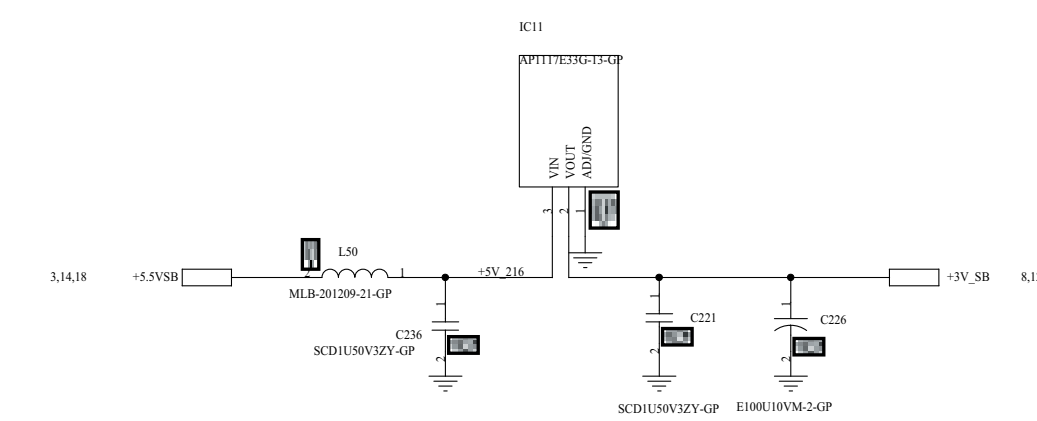
+MAP_8V ->+MAP_5V
Vout : 4.991 ~ 5.145V
Vout = 1.25 * (1 + (3K)/(1K)) = 5.06V



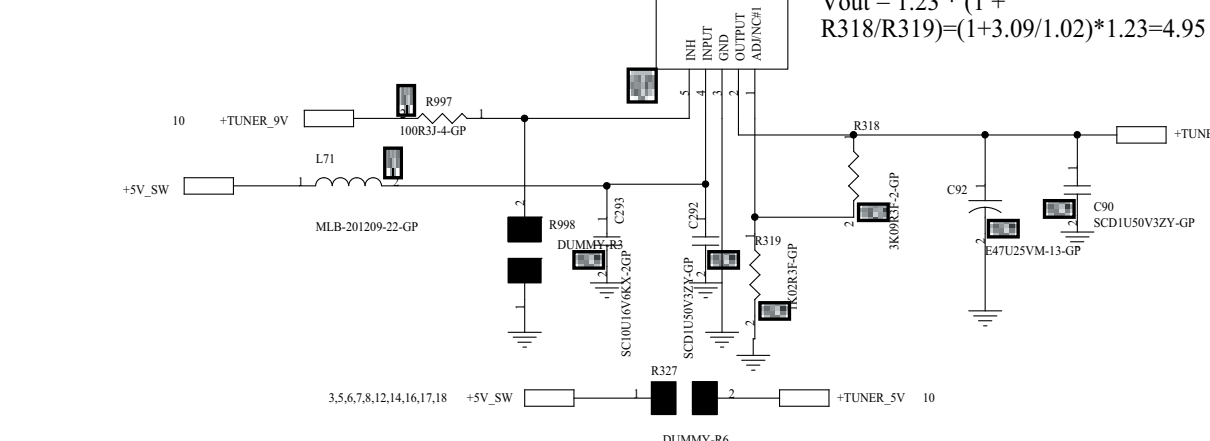
+11V ->+TUNER_9V Q39,L70,Q40 NC



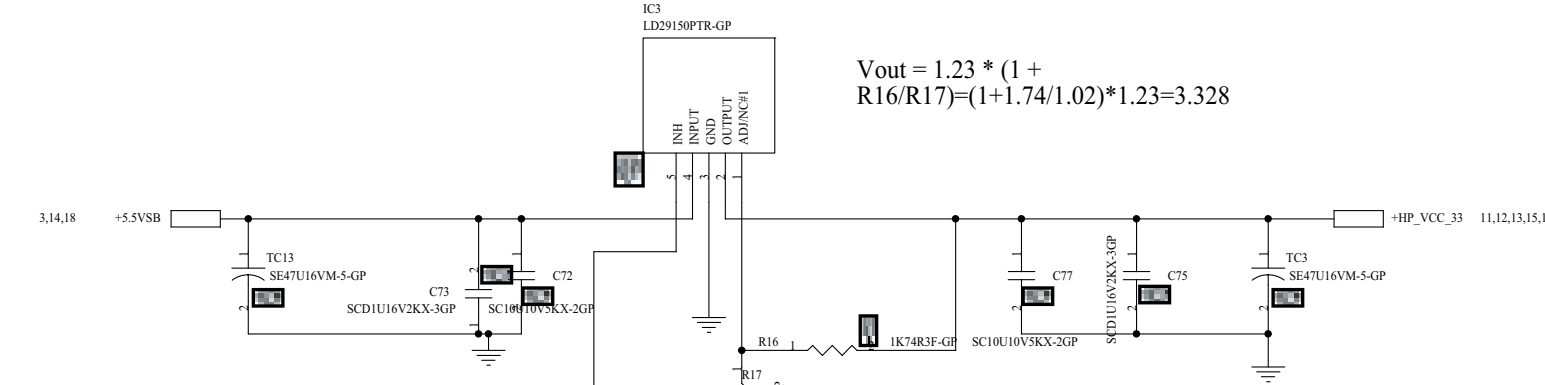
MCU Power +5.5SB -> 3.3_SB



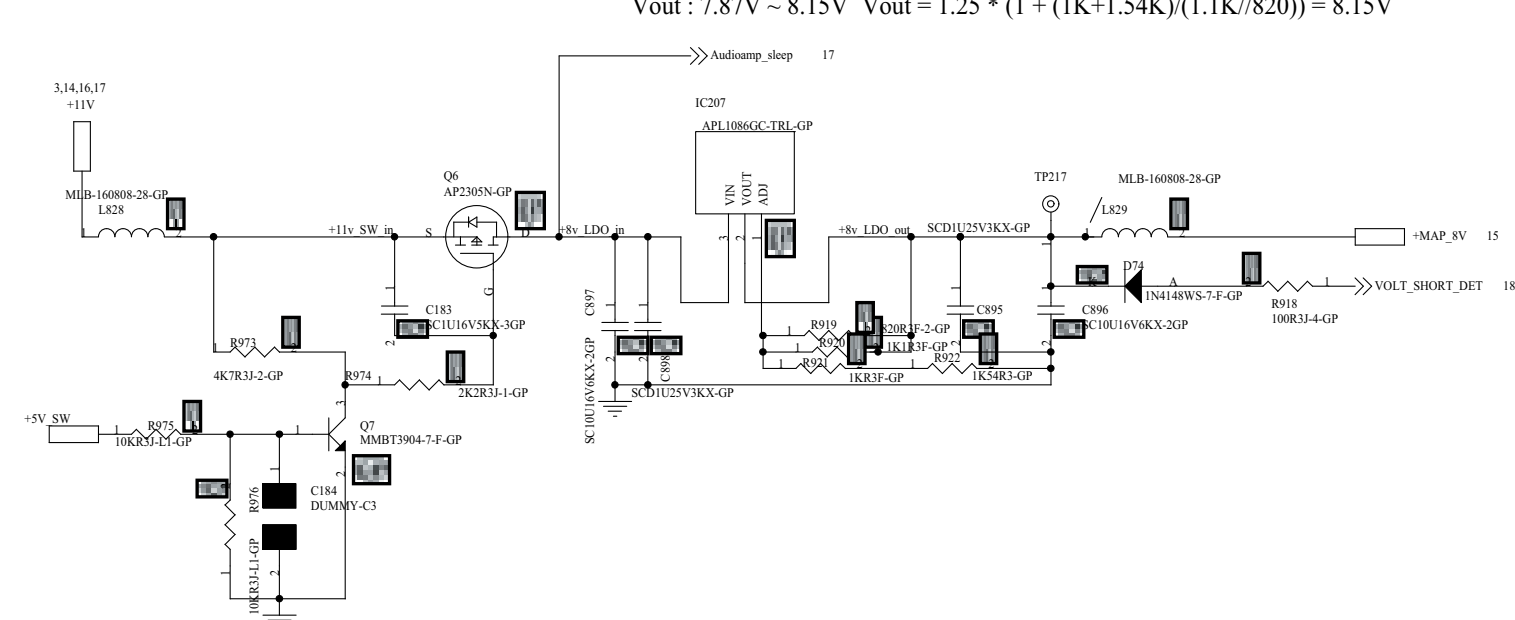
+5V_SW ->+TUNER_5V



+5.5VSB->HP_VCC_33

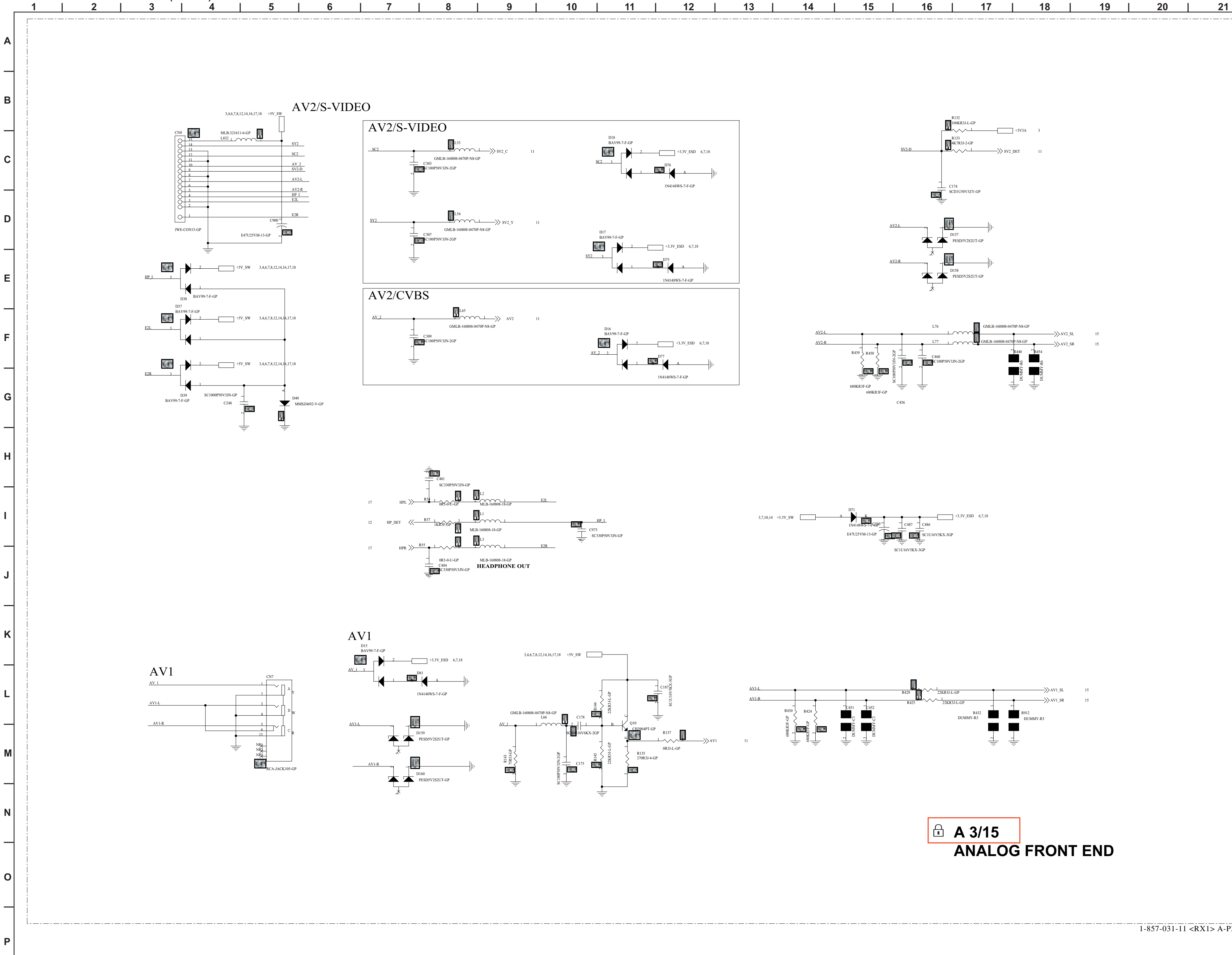


12V ->MSP_8V



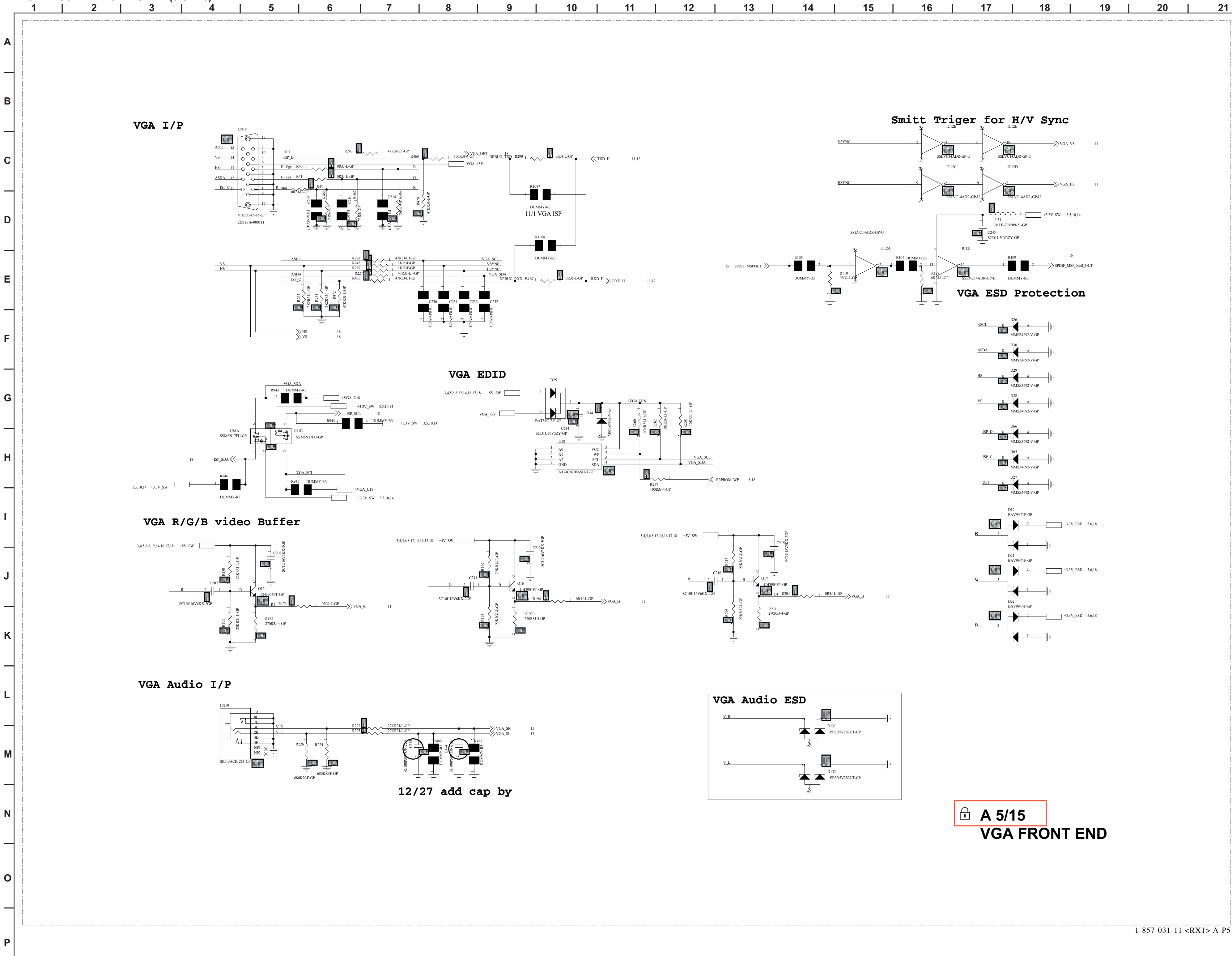
**A 2/15
POWER (CONT.)**

A BOARD SCHEMATIC DIAGRAM (3 OF 15)



A 3/15
ANALOG FRONT END

A BOARD SCHEMATIC DIAGRAM (5 OF 15)



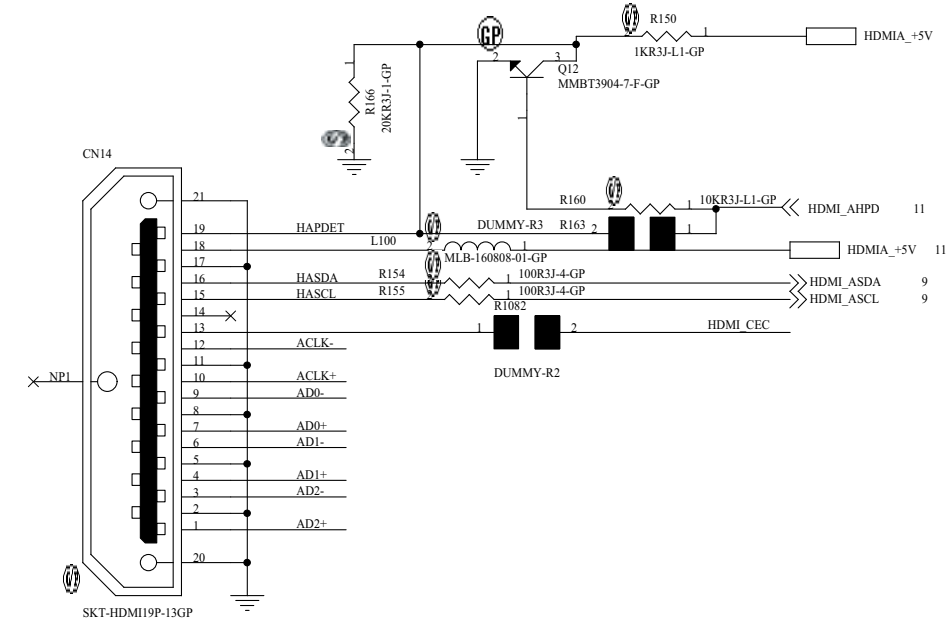
A 5/15
VGA FRONT END

A BOARD SCHEMATIC DIAGRAM (6 OF 15)

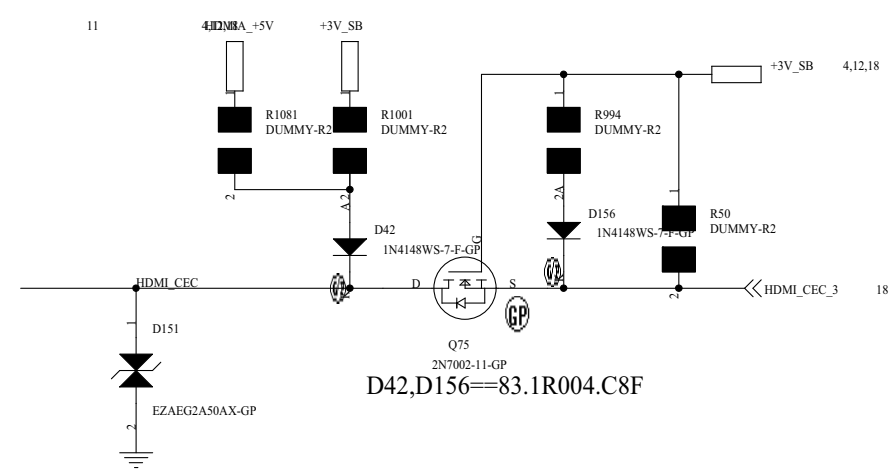
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

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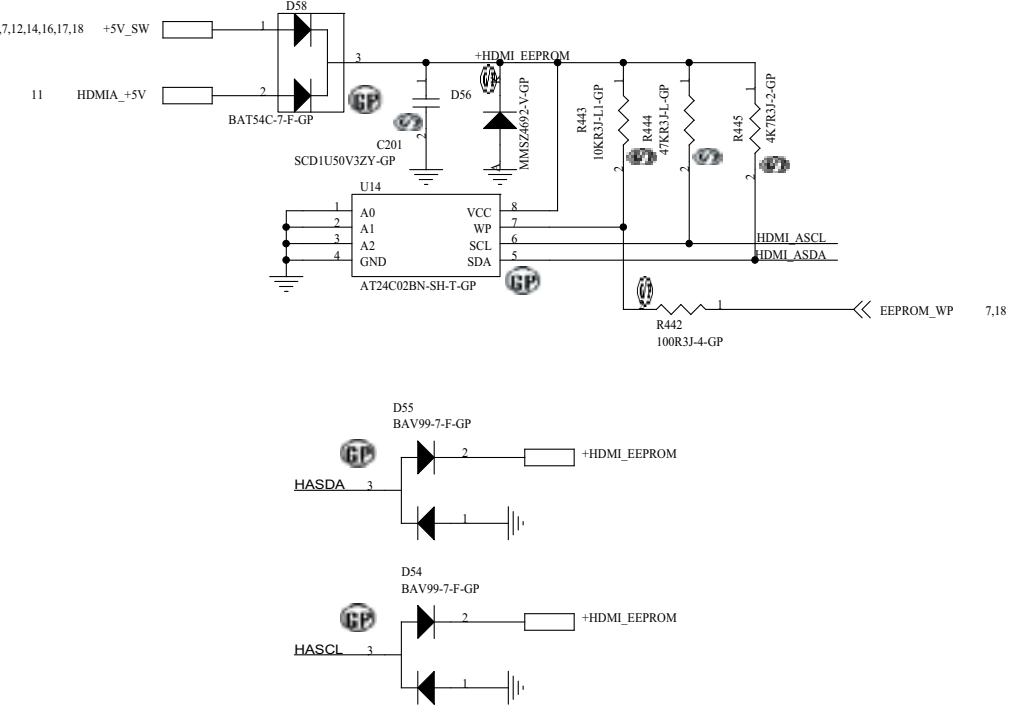
HDMI1 I/P



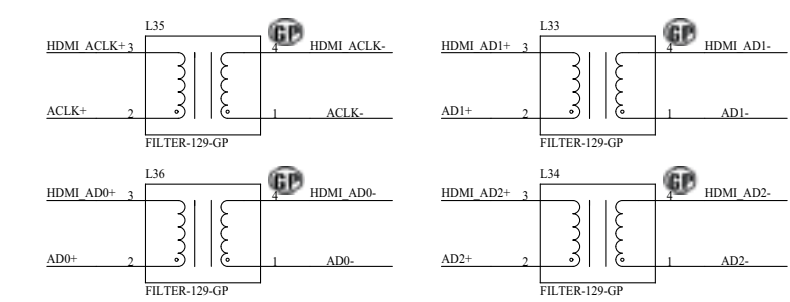
CEC Level Shift to MCU



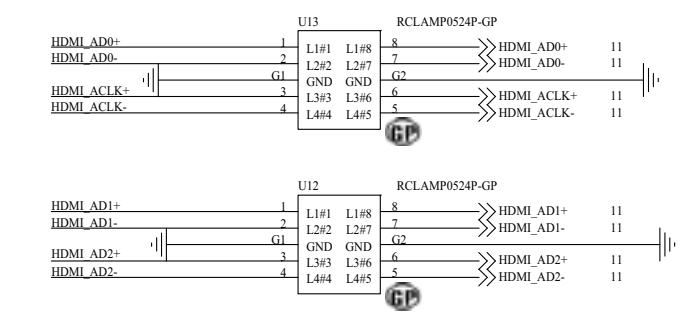
HDMI EDID



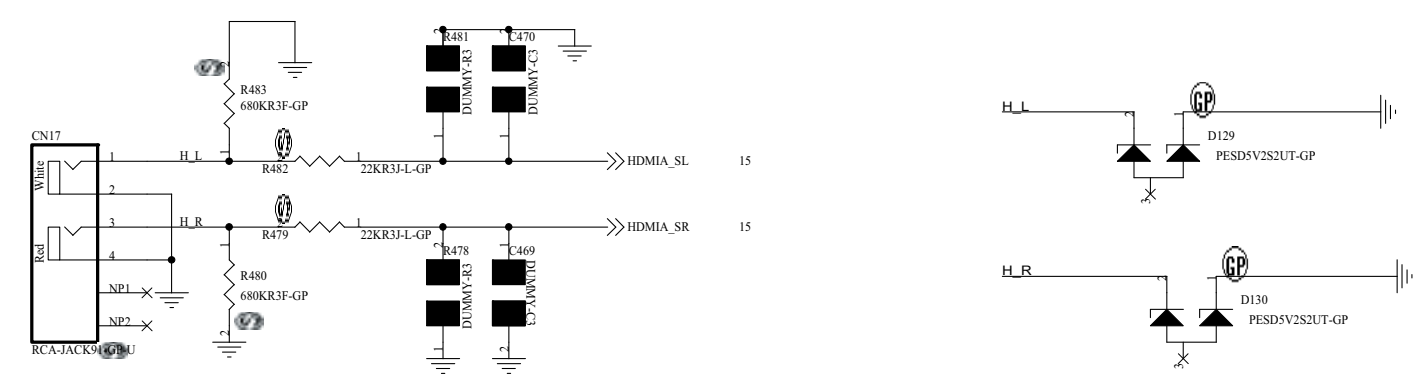
Common Check for EMI



TVS Array for ESD

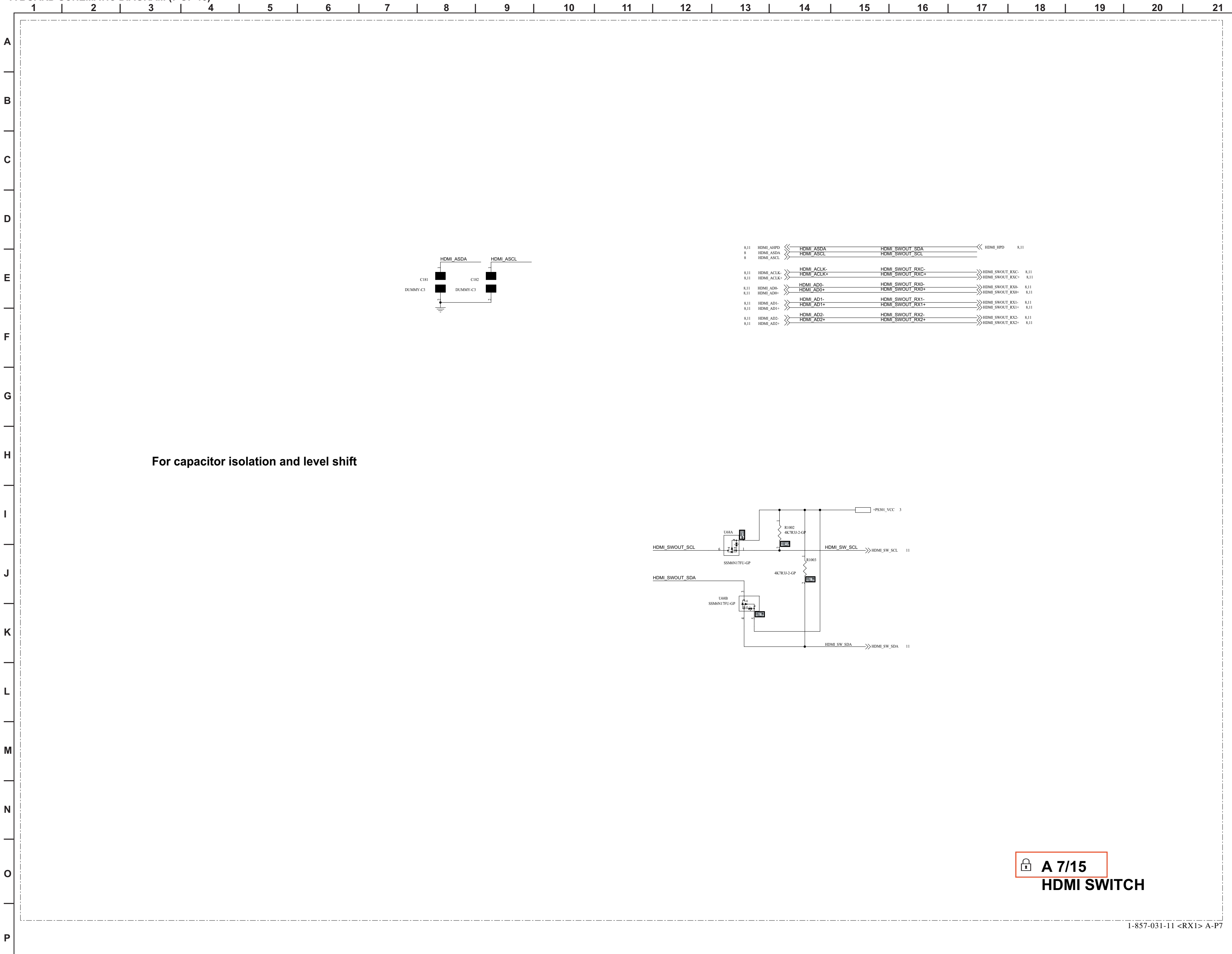


HDMI AUDIO INPUT

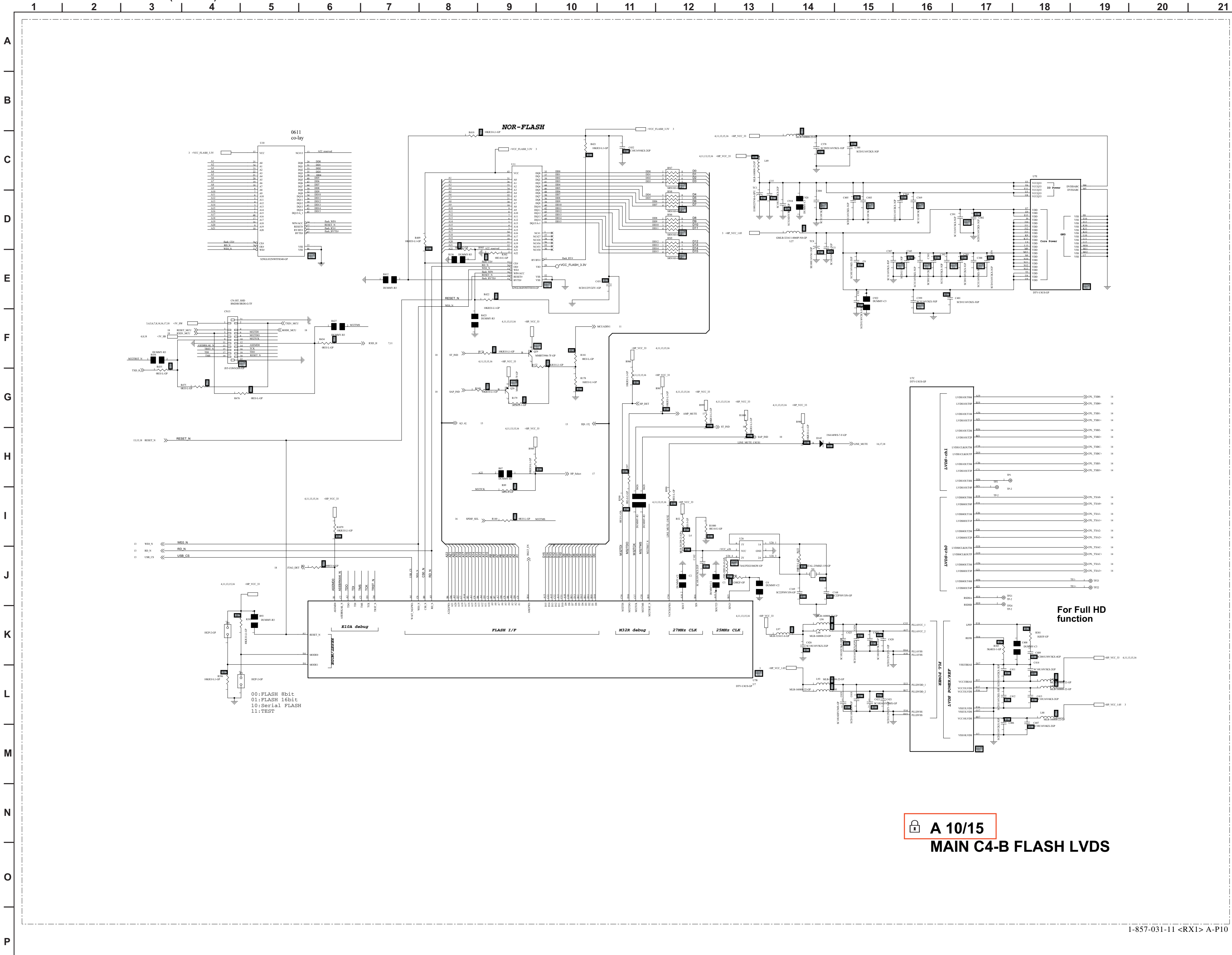


A 6/15
HDMI FRONT END

A BOARD SCHEMATIC DIAGRAM (7 OF 15)

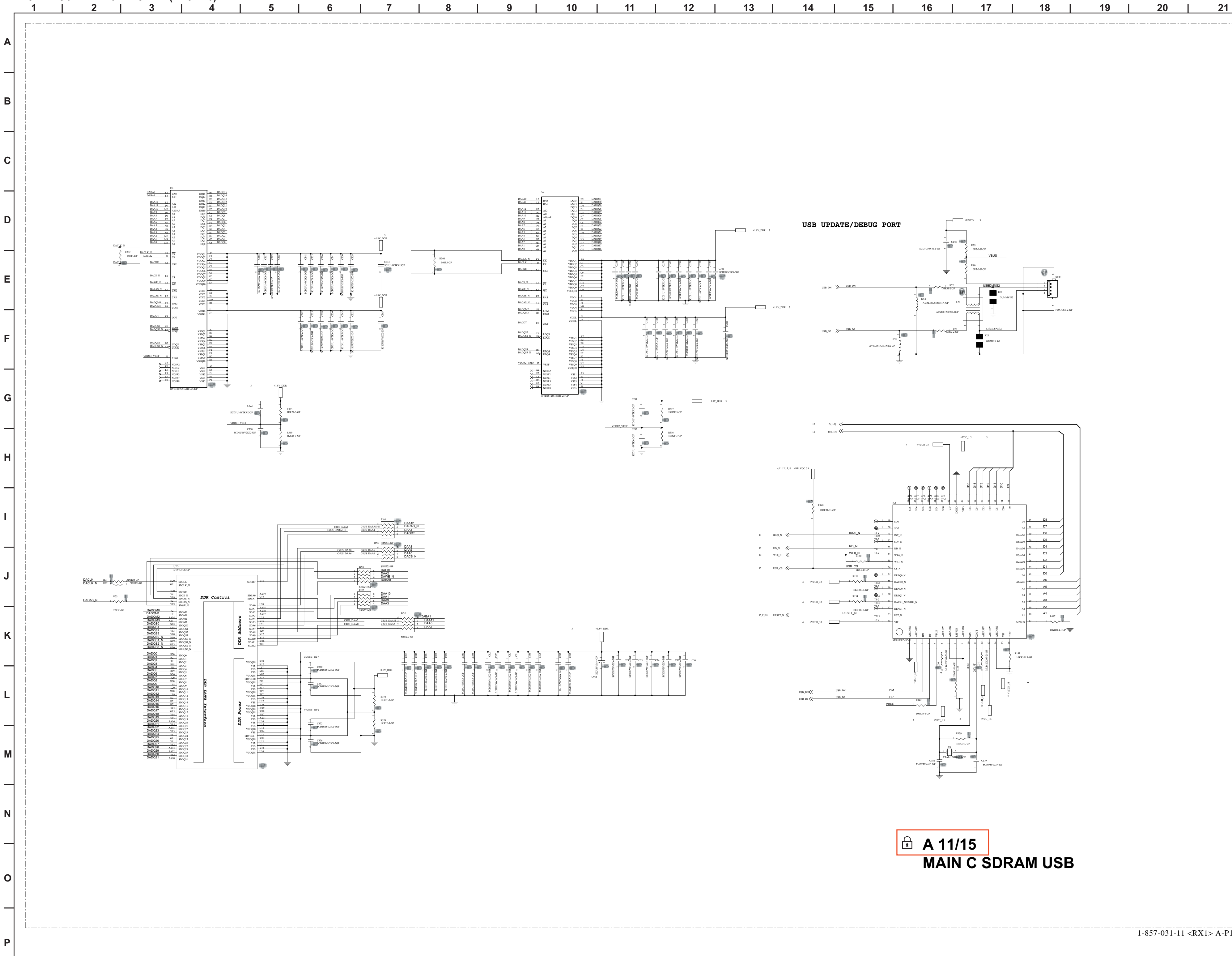


A BOARD SCHEMATIC DIAGRAM (10 OF 15)



A 10/15
MAIN C4-B FLASH LVDS

A BOARD SCHEMATIC DIAGRAM (11 OF 15)



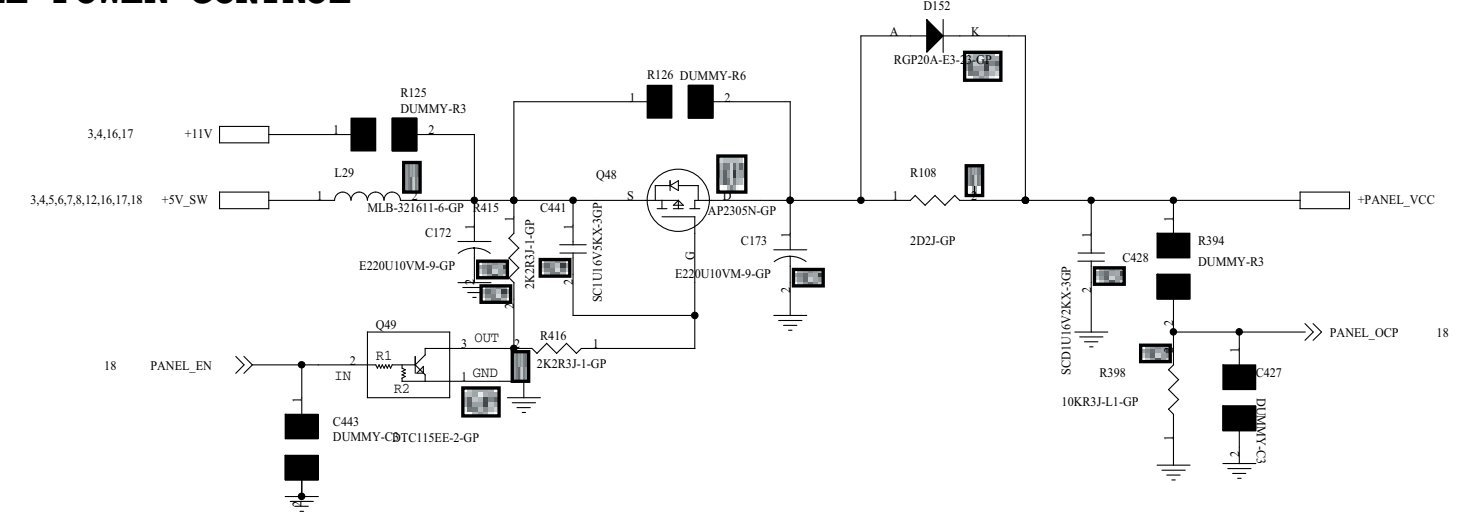
 **A 11/15**
MAIN C SDRAM USB

A BOARD SCHEMATIC DIAGRAM (12 OF 15)

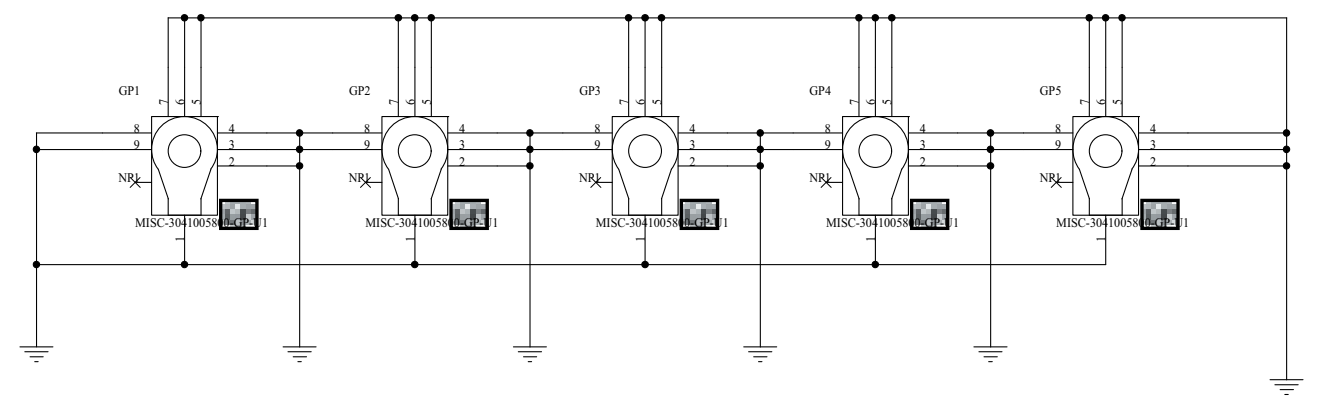
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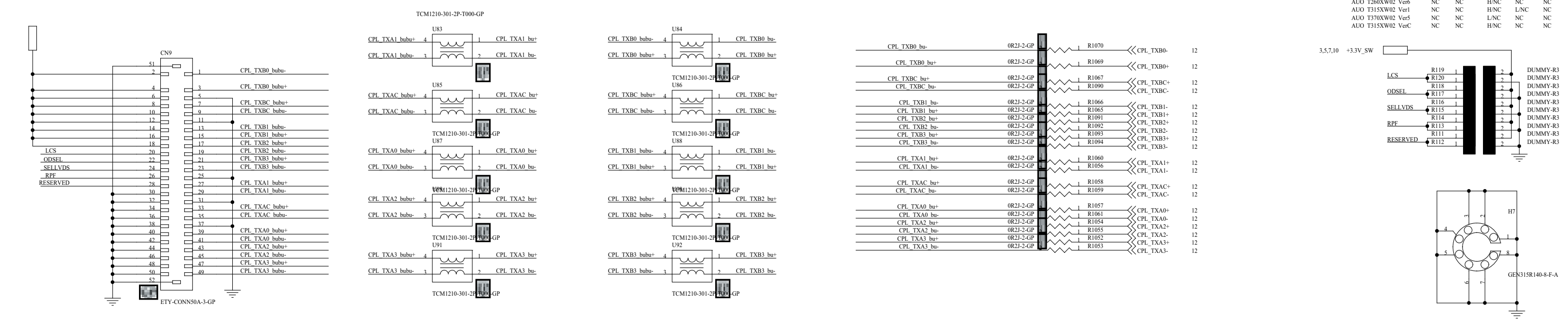
LVDS MODULE POWER CONTROL



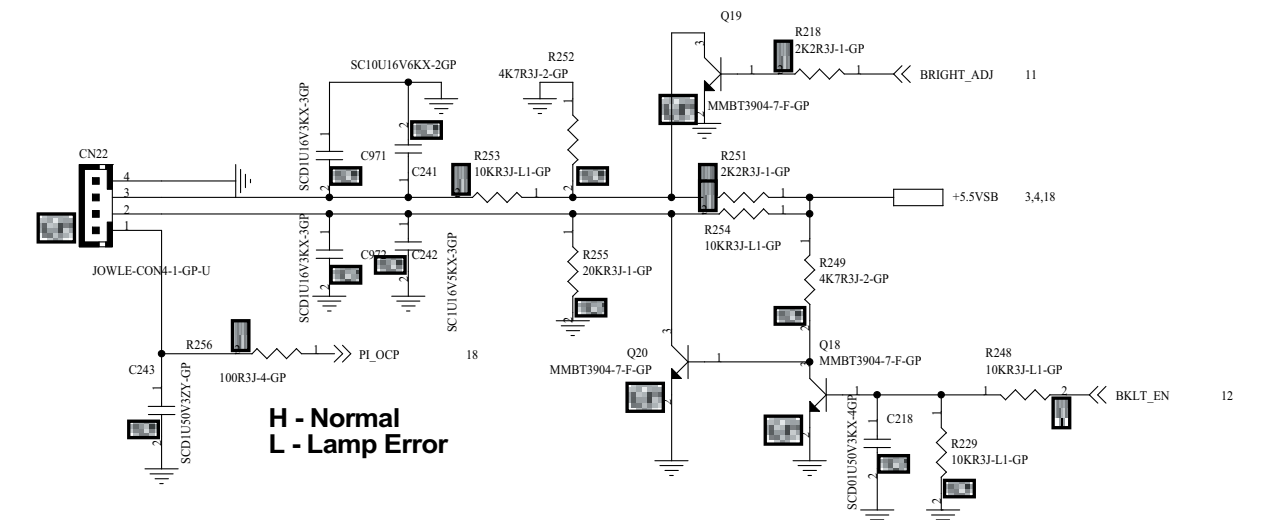
Screw Hole



LVDS INTERFACE



BACKLIGHT CONTROL



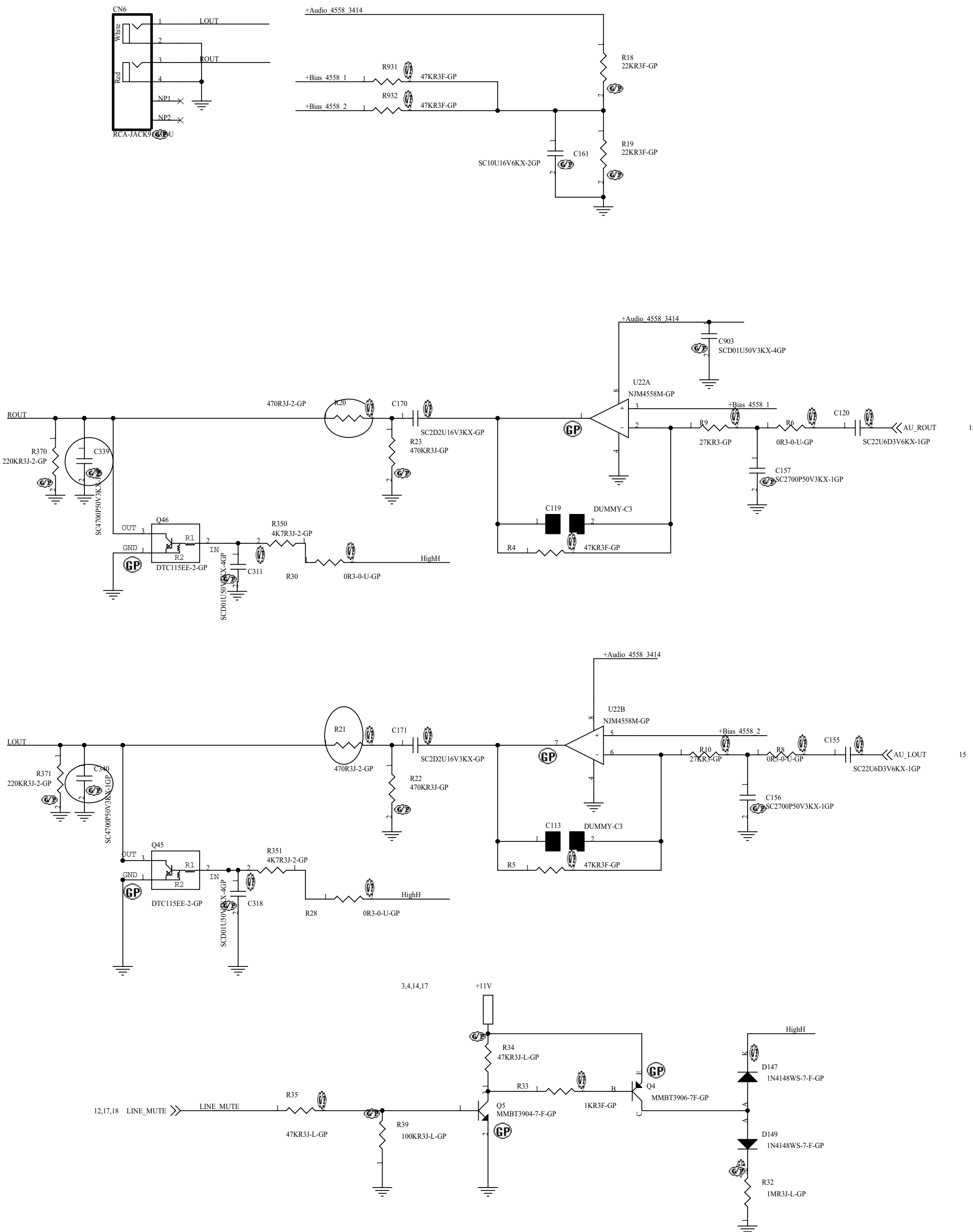
A 12/15
PANEL INTERFACE

A BOARD SCHEMATIC DIAGRAM (14 OF 15)

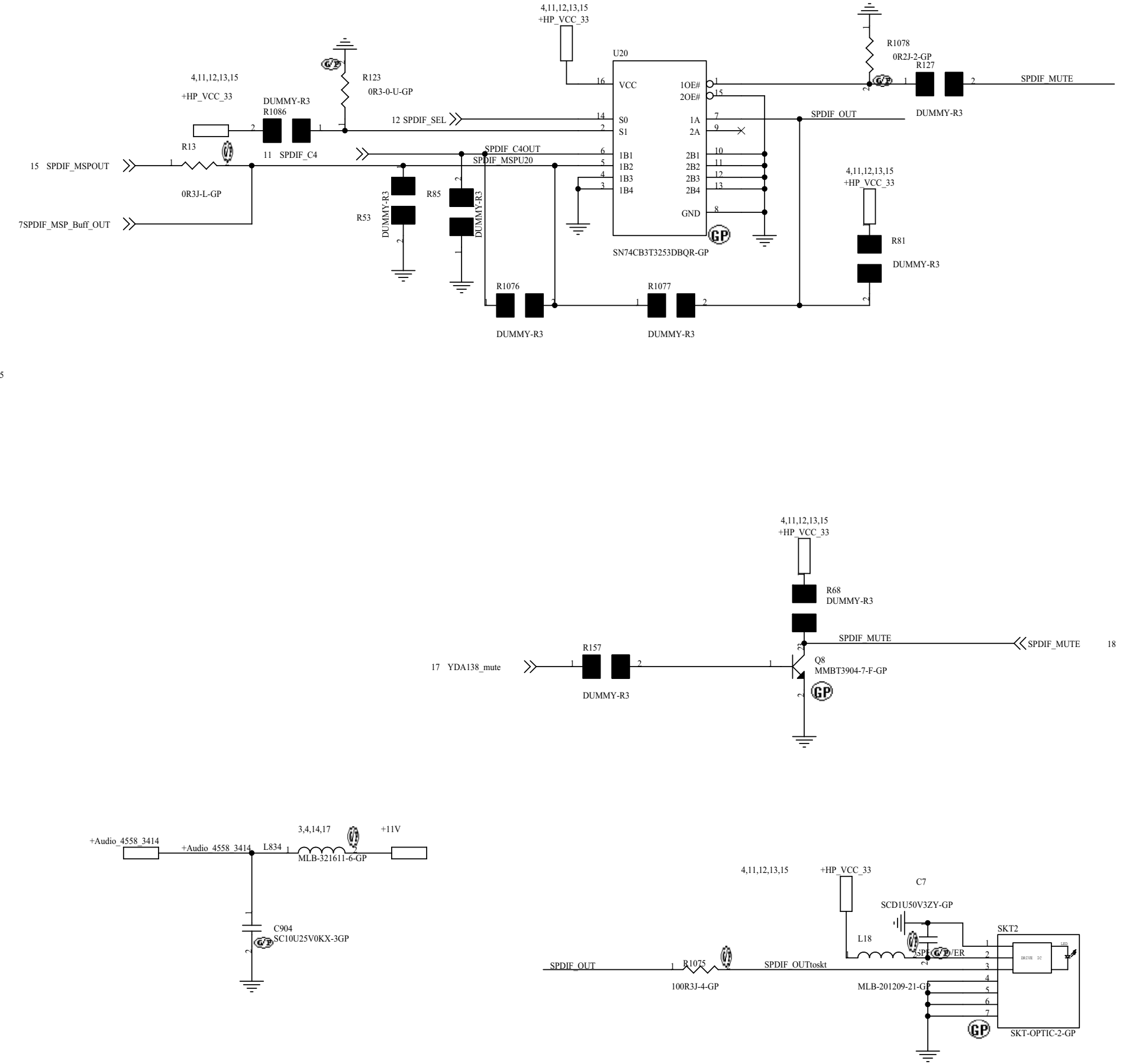
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AUDIO OUTPUT Connector & MUTE CONTROL

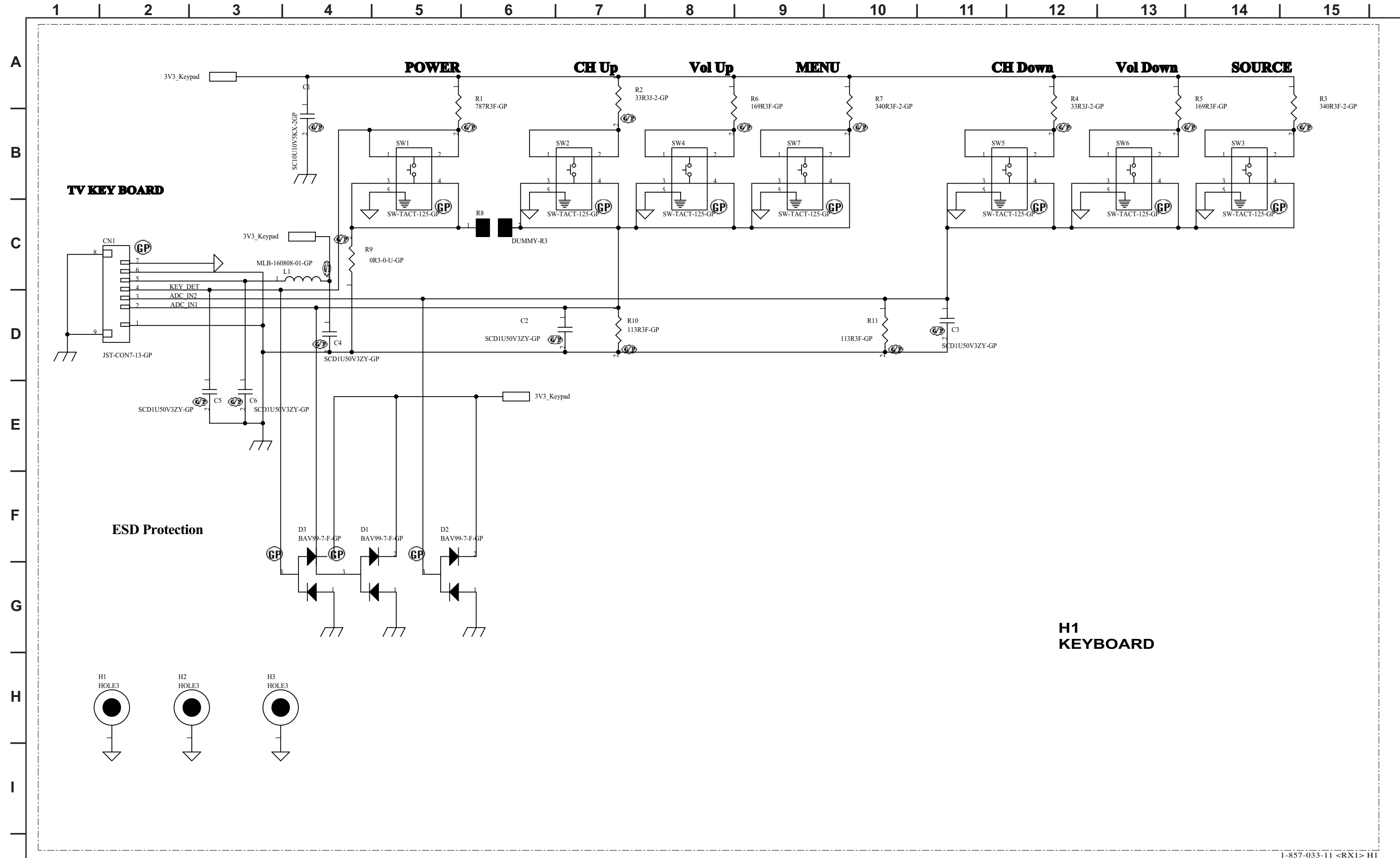


SPDIF/TosLink connector



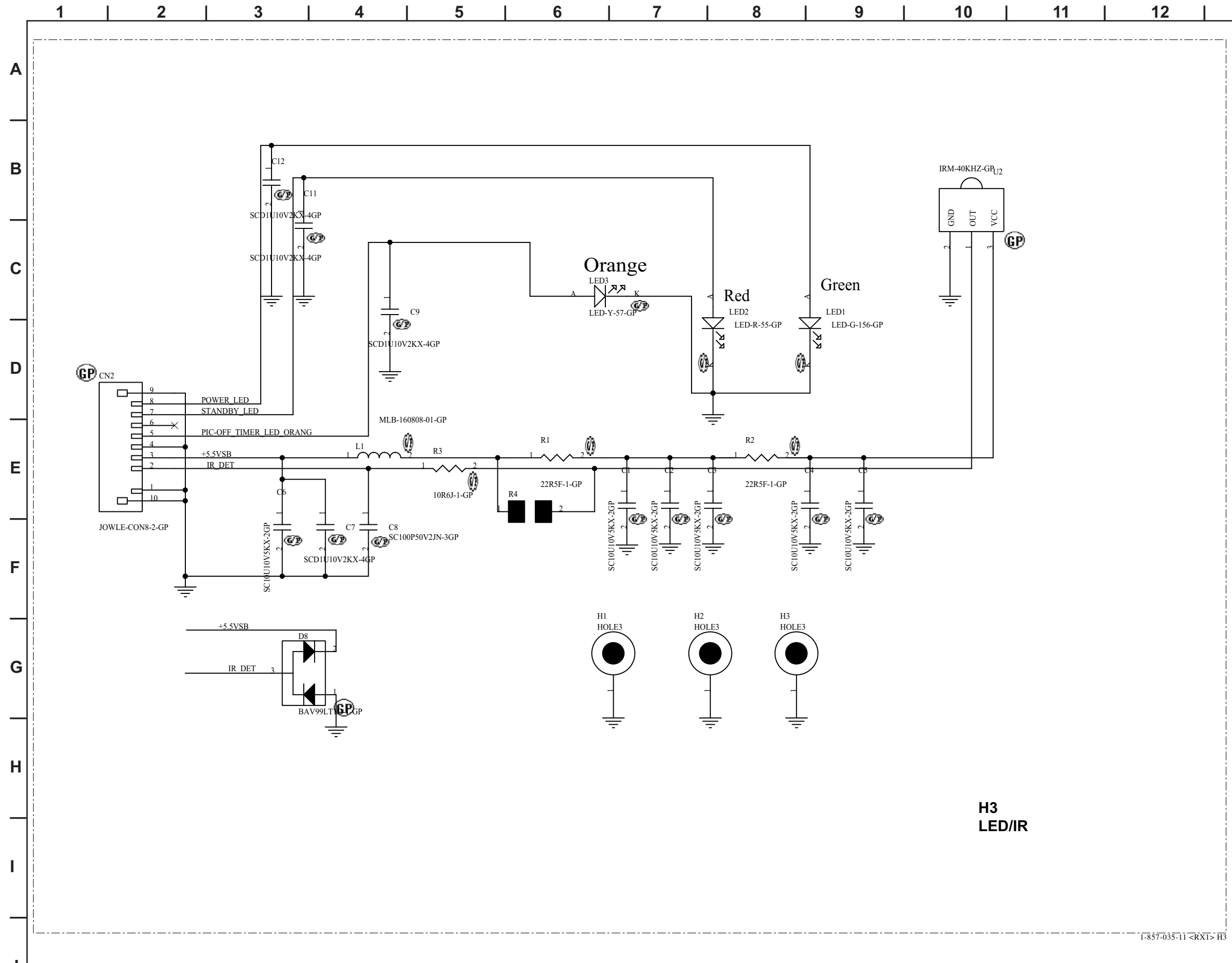
A 14/15
AUDIO EARPHONE/LINE OUT

H1 BOARD SCHEMATIC DIAGRAM



1-857-033-11 <RX1> HI

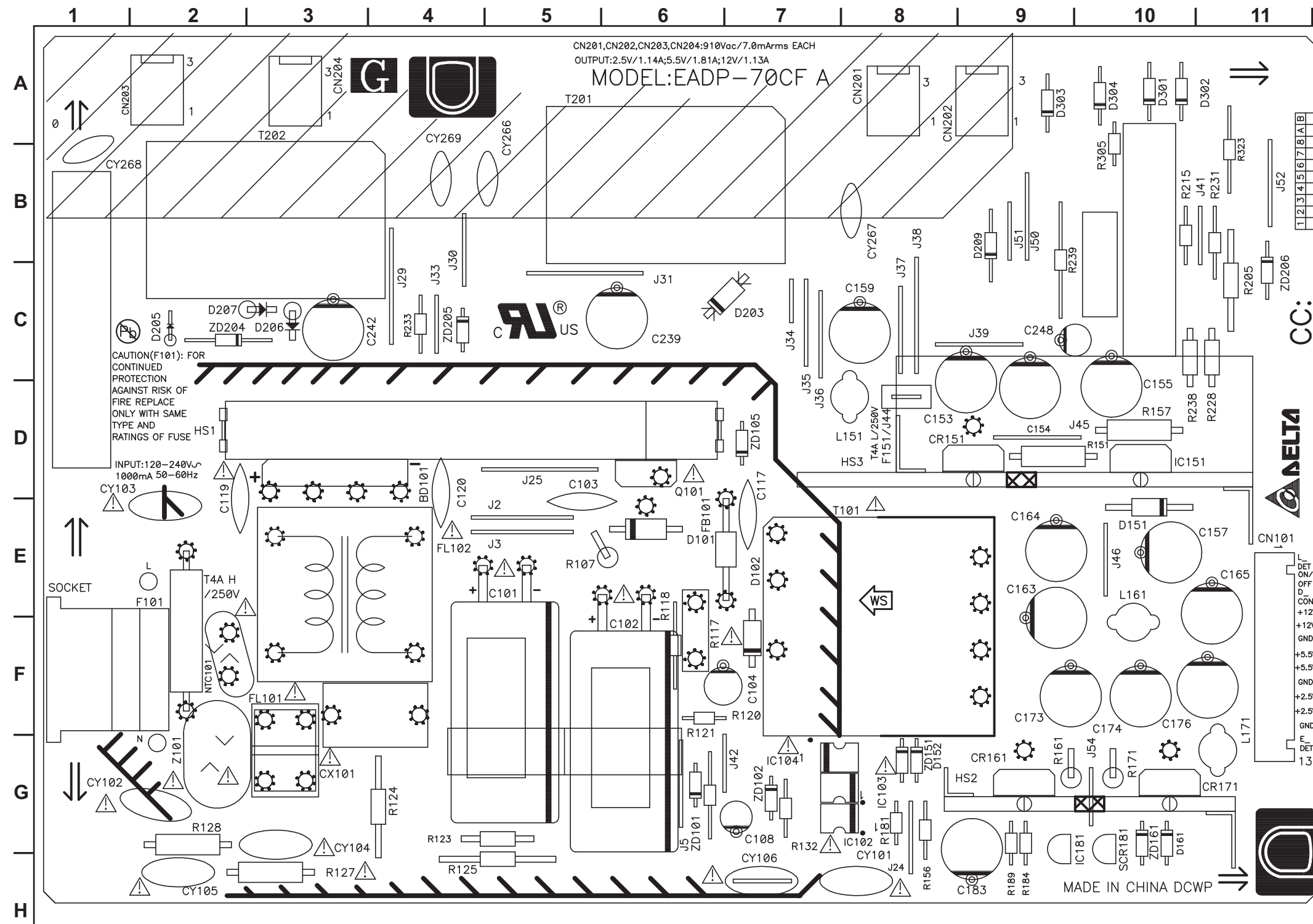
H3 BOARD SCHEMATIC DIAGRAM



1-857-035-11 <RX1> H3

G BOARD SCHEMATIC DIAGRAM (THE SCHEMATIC FOR THIS BOARD IS NOT AVAILABLE)

G [POWER SUPPLY]
COMPONENT SIDE





SECTION 4: EXPLODED VIEWS


Components not identified by a part number or description are not stocked because they are seldom required for routine service.

The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

NOTE: The components identified by shading and  mark are critical for safety. Replace only with part number specified.

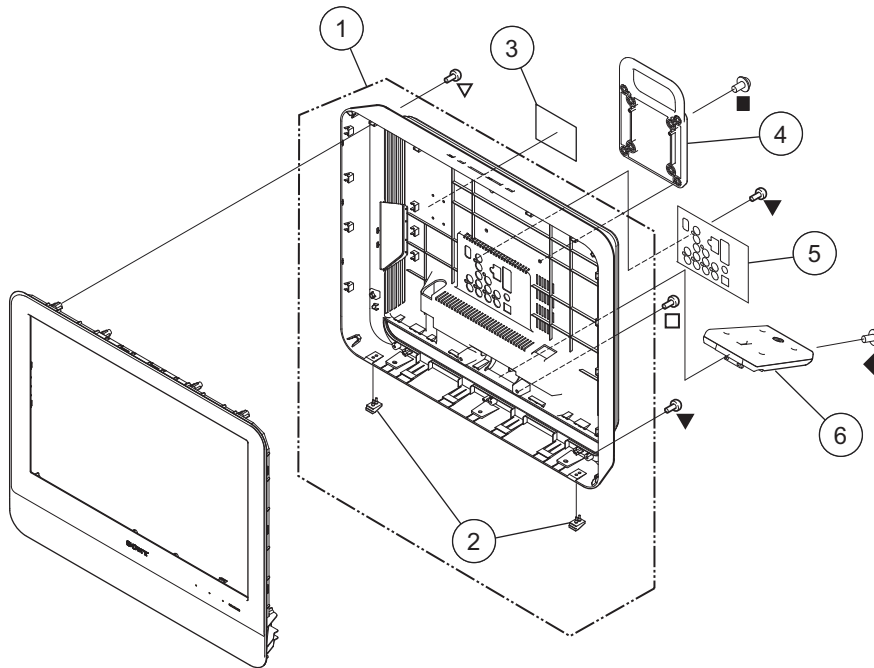
NOTE: Les composants identifiés par un trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

NOTE: The components identified by a red outline and a  mark contain confidential information. Specific instructions must be adhered to whenever these components are repaired and/or replaced. See Appendix A: Encryption Key Components in the back of this manual.

4-1. REAR COVER ASSEMBLY AND STAND ASSEMBLY

(Check the [Sony Electronics Service Information](#) website for any additional service related issues for this model.)

■	2-580-601-01	SCREW +PSW M4X12
□	2-580-639-01	SCREW, +BVTP 4X12
▼	7-685-647-79	SCREW, +BVTP 3X10
▽	7-685-665-14	SCREW, +BVTP 4X25
◆	2-580-603-01	SCREW, +PSW M4X16



REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]
1	X-2189-738-1	COVER, REAR ASSY	[2]
2	3-298-481-01	FOOT, RUBBER	
*	3	3-298-494-01	LABEL, MODEL NUMBER (US, CANADA ONLY)
*	3	3-870-868-01	LABEL, MODEL NUMBER (MEXICO ONLY)
4	3-288-680-01	HANDLE(AB)	
5	3-298-493-01	LABEL, TERMINAL	
6	X-2189-739-1	STAND ASSY	

NOTE: The components identified by shading and \triangle mark are critical for safety. Replace only with part number specified.

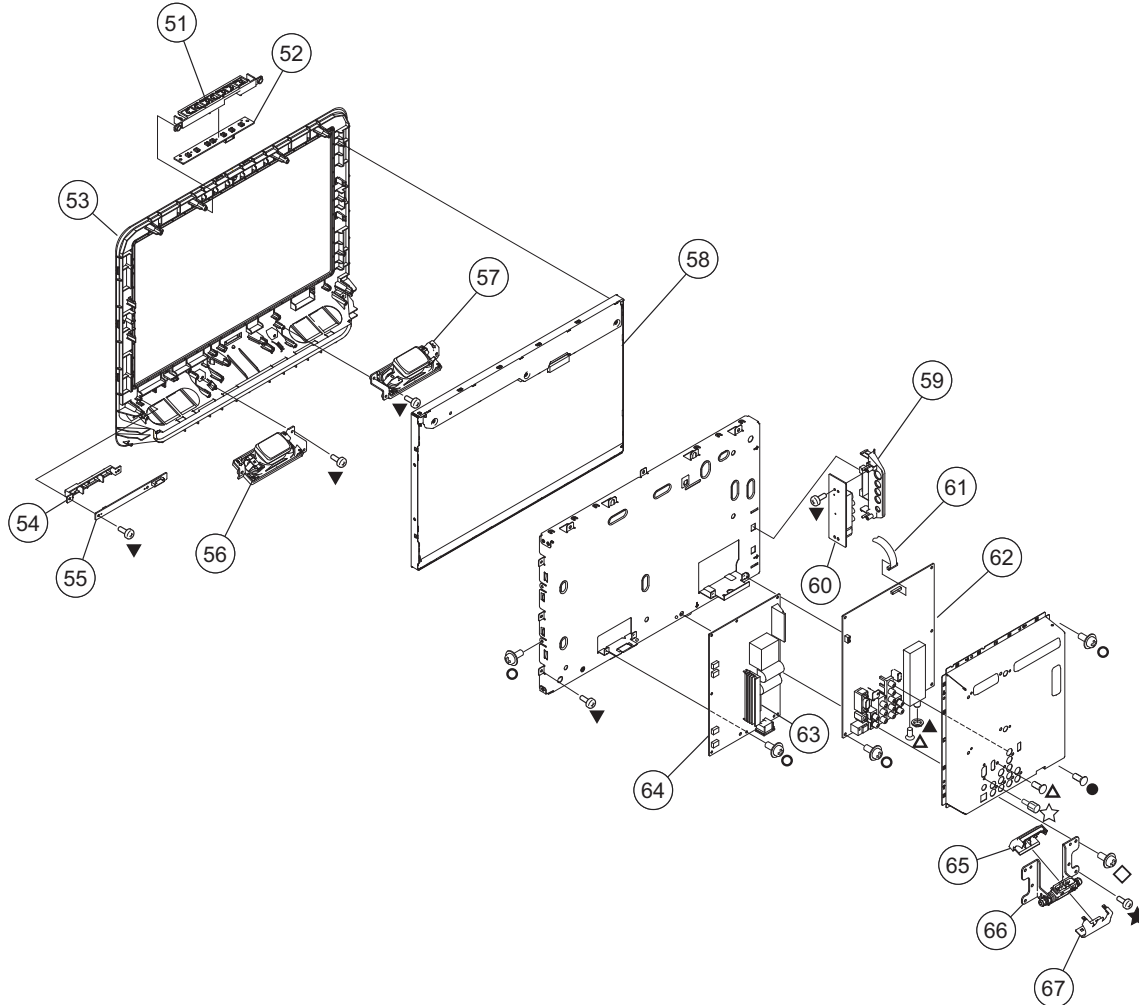
NOTE: Les composants identifiés par un triangle et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

NOTE: The components identified by a red outline and a \mathfrak{L} mark contain confidential information. Specific instructions must be adhered to whenever these components are repaired and/or replaced. See Appendix A: Encryption Key Components in the back of this manual.


4-2. CHASSIS


(Check the [Sony Electronics Service Information](#) website for any additional service related issues for this model.)


▼ 7-685-647-79	SCREW, +BVTP 3X10	● 3-344-561-02	FH, 4X5
○ 4-382-854-51	SCREW, M3X6	△ 4-635-303-01	FH, 3X4
★ 2-580-641-01	SCREW, +BVTP 4X21	▲ 3-682-691-21	NUT(HEX)
☆ 4-635-966-21	SCREW (HEX)	◇ 2-580-603-01	SCREW, M4X16




REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]	REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]
51	3-298-488-01	TOUCH-KEY, FUNCTION		57	1-826-940-11	SPEAKER L (10X4CM)	
52	1-857-033-11	H1 BOARD, MOUNTED		58	1-802-694-11	LCD PANEL (19INCH WXGA TFT)	
53	X-2189-737-1	FRONT BEZEL ASSY (WHITE)		59	3-298-487-01	COVER, SIDE BRACKET	
53	X-2190-522-1	FRONT BEZEL ASSY (BLACK)		60	1-857-034-11	H2 BOARD, MOUNTED	
53	X-2319-147-1	FRONT BEZEL ASSY D (ORANGE)		61	1-910-044-58	CONNECTOR ASSY LVDS 19	
53	X-2319-149-1	FRONT BEZEL ASSY L (BLUE)		\mathfrak{L} 62	1-857-031-11	A BOARD, MOUNTED	
53	X-2319-148-1	FRONT BEZEL ASSY G (GREEN)		63	1-523-010-11	FUSE, TIME-LAG (4A/250V)	
53	X-2319-150-1	FRONT BEZEL ASSY P (PINK)		64	1-857-032-11	G BOARD, MOUNTED	
54	3-298-477-01	INDICATOR, LED		65	3-298-485-01	COVER, HINGE-TOP	
55	1-857-035-11	H3 BOARD, MOUNTED		66	3-298-484-01	HINGE	
56	1-826-940-21	SPEAKER R (10X4CM)		67	3-298-486-01	COVER, HINGE-BOTTOM	

NOTE: The components identified by shading and  mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.




NOTE: The components identified by a red outline and a  mark contain confidential information. Specific instructions must be adhered to whenever these components are repaired and/or replaced. See Appendix A: Encryption Key Components in the back of this manual.

REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
<u>ACCESSORIES AND PACKING</u>							
*	3-213-734-01	BAG PROTECTION					
*	3-298-491-01	CARTON, INDIVIDUAL					
*	3-870-867-01	CUSHION LOWER, 19ABS					
*	3-298-492-01	CUSHION UPPER, 19ABS					
	3-297-702-11	GUIDE, QUICK SETUP (ENGLISH)					
	3-297-702-21	GUIDE, QUICK SETUP (FRENCH)					
	3-297-702-31	GUIDE, QUICK SETUP (SPANISH)					
	3-297-704-11	MANUAL INSTRUCTION (WALL MO)					
	3-297-703-12	MANUAL, INSTRUCTION (ENGLISH)					
	3-297-703-22	MANUAL, INSTRUCTION (FRNECH)					
	3-297-703-32	MANUAL, INSTRUCTION (SPANISH)					
	1-835-077-11	POWER-SUPPLY CORD SET					
<u>REMOTE COMMANDER</u>							
	1-480-722-11	REMOTE COMMANDER (RM-YD025) (BLACK)					
	9-885-110-88	COVER BATTERY (for RM-YD025) (BLACK)					
	1-480-722-21	REMOTE COMMANDER (RM-YD025W) (WHITE)					
	9-885-117-91	COVER BATTERY (WHITE) (for RM-YD025W) (WHITE)					

APPENDIX A: ENCRYPTION KEY COMPONENTS

Encryption key components developed by Sony Corporation contain confidential information, and shall be handled under the non-disclosure obligations provided in the applicable agreement with Sony Corporation (and/or its subsidiary).

As part of this agreement specific instructions must be adhered to whenever a Circuit Board containing encryption key components is repaired and/or replaced pursuant to the following:

- 1) In the service manual the Circuit Board(s) containing encryption key components shall be identified with a **red outline and a **.
- 2) Only repair boards or components listed in the service manual shall be utilized for replacement and/or repair.
- 3) Disassembly, decryption, or reverse-engineering component(s) is strictly prohibited.
- 4) Any board in which the Servicer replaces an encryption key component must be placed back into the set it originally came from and the replaced defective component **MUST BE DESTROYED**. Boards cannot be swapped.
- 5) If a Circuit Board identified with a **red outline and a ** in the service manual is deemed to be defective:
 - a) and if a core charge is imposed and is covered under the product warranty, the defective un-repaired or modified board **MUST BE RETURNED** to Sony.
 - b) and if the core charge is **NOT** covered under the product warranty, the defective un-repaired or modified board **MUST BE DESTROYED**.
- 5) If a unit is destroyed (such as field scrap), the Circuit Board identified with a **red outline and a ** in the service manual **MUST BE DESTROYED**.

In an effort to reduce the size of this pdf file the tiled schematics are not attached to this Service Manual. To receive a complete set of the tiled schematics for this manual please submit a request to the Service Promotion Department at Service_Promotion@am.sony.com.