



LCD TV
Service Manual

MODEL: LCT-32PBSTP

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IMPORTANT SAFETY PRECAUTION

Electricity is used to perform many useful functions, but it can also cause personal injuries and property damage if improperly handled. This product has been engineered and manufactured with the highest priority on safety. However, improper use can result in electric shock and/or fire. In order to prevent potential danger, please observe the following instructions when installing, operating and cleaning the product. To ensure your safety and prolong the service life of your LCD colour TV product, please read the following precautions carefully before using the product.

1. Read instructions—All operating instructions must be read and understood before the product is operated.
2. Keep this manual in a safe place—These safety and operating instructions must be kept in a safe place for future reference.
3. Observe warnings—All warnings on the product and in the instructions must be observed closely.
4. Follow instructions—All operating instructions must be followed.
5. Attachments—Do not use attachments not recommended by the manufacturer. Use of inadequate attachments can result in accidents.
6. Power source—This product must operate on a power source specified on the specification label. If you are not sure of the type of power supply used in your home, consult your dealer or local power company.
7. AC cord protection—The AC cords must be routed properly to prevent people from stepping on them or objects from resting on them. Check the cords at the plugs and product.
8. Overloading—Do not overload AC outlets or extension cords. Overloading can cause fire or electric shock.
9. Entering of objects and liquids—Never insert an object into the product through vents or openings. High voltage flows in the product, and inserting an object can cause electric shock and/or short internal parts. For the same reason, do not spill water or liquid on the product.
10. Servicing—Do not attempt to service the product yourself. Removing covers can expose you to high voltage and other dangerous conditions. Request a qualified service person to perform servicing.
11. Repair—If any of the following conditions occurs, unplug the AC cord from the AC outlet, and request a qualified service person to perform repairs.
 - a. When the AC cord or plug is damaged.
 - b. When a liquid was spilled on the product or when objects have fallen into the product.
 - c. When the product has been exposed to rain or water.
 - d. When the product does not operate properly as described in the operating instructions.
Do not touch the controls other than those described in the operating instructions. Improper adjustment of controls not described in the instructions can cause damage, which often requires extensive adjustment work by a qualified technician.
 - e. When the product has been dropped or damaged.
 - f. When the product displays an abnormal condition. Any noticeable abnormality in the product indicates that the product needs servicing.
12. Replacement parts—In case the product needs replacement parts, make sure that the service person uses replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. Use of unauthorized parts can result in fire, electric shock and/or other danger.
13. Safety checks—Upon completion of service or repair work, request the service technician to perform safety checks to ensure that the product is in proper operating condition.
14. Wall or ceiling mounting—When mounting the product on a wall or ceiling, be sure to install the product according to the method recommended by the manufacturer.

- **Cleaning**—Unplug the AC cord from the AC outlet before cleaning the product. Use a damp cloth to clean the product. Do not use liquid cleaners or aerosol cleaners.



- **Water and moisture**—Do not use the product near water, such as bathtub, washbasin, kitchen sink, laundry tub, swimming pool and in a wet basement.



- **Do not place vases or any other water-filled containers on this product.** The water may spill onto the product causing fire or electric shock.



- **Stand**—Do not place the product on an unstable cart, stand, tripod or table. Doing so can cause the product to fall, resulting in serious personal injuries as well as damage to the product. Use only a cart, stand, tripod, bracket or table recommended by the manufacturer or sold with the product. When mounting the product on a wall, be sure to follow the manufacturer's instructions. Use only the mounting hardware recommended by the manufacturer.



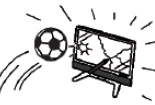
- **When relocating the product** placed on a cart, it must be moved with utmost care. Sudden stops, excessive force and uneven floor surface can cause the product to fall from the cart.



- **Ventilation**—The vents and other openings in the cabinet are designed for ventilation. Do not cover or block these vents and openings since insufficient ventilation can cause overheating and/or shorten the life of the product. Do not place the product on a bed, sofa, rug or other similar surface, since they can block ventilation openings. This product is not designed for built-in installation; do not place the product in an enclosed place such as a bookcase or rack, unless proper ventilation is provided or the manufacturer's instructions are followed.



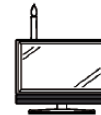
- The LCD panel used in this product is made of glass. Therefore, it can break when the product is struck forcefully or with a sharp object. If the LCD panel is broken, be careful not to be injured by broken glass.



- **Heat sources**—Keep the product away from heat sources such as radiators, heaters, stoves and other heat-generating products (including amplifiers).



- **To prevent fire, never place any type of candle or naked flames on the top or near the TV set.**



- **To prevent fire or shock hazard, do not place the AC power cord under the TV set or other heavy items.**



- **Do not place heavy objects on this product or stand on it.** Doing so could cause injury if the product overturns. Take special care near children and pets.



The LCD panel is a very high technology product with 1,555,200 thin film transistors, giving you fine picture details. Due to the very large number of pixels, occasionally a few non-active pixels may appear on the screen as a fixed point of blue, green or red. This is within product specifications and does not constitute a fault.

Precautions when transporting the TV

When transporting the TV, never carry it by holding onto the speakers. Be sure to always carry the TV by two people holding it with two hands—one hand on each side of the TV.



- **Do not display a still picture for a long time, as this could cause an afterimage to remain.**

SPECIFICATION

General	Screen Size & Type	597 x 336 mm
	Net TV Dimension	820 x 254 x 665 mm
	Gross TV Dimension	950 x 362 x 783 mm
	Net TV Weight	23kg
	Gross TV Weight	32kg
	Power Consumption (Normal Operation)	200 Watts (MAX)
	Power Consumption (Standby Operation)	3 Watts (MAX)
	Front Cabinet Colour	Silver + Black
	Back Cabinet Colour	grey 05
	Stand Type / Colour	Swivel / Black + Silver
Power Adapter	Power Adapter Input Voltage	No adaptor
	Power Adapter Output Voltage	
	Power Adapter Output Voltage	
	Power Plug Type	
Built-In Power Supply	Mains Voltage	100-240V
	Mains Frequency	50/60Hz
	Power Plug Type	2.5-Amp round pin(VDE standard)
Operating Spec	Operating Temperature	0 - 40 Deg C
	Storage Temperature	-25 - -55degC
	Relative Humidity Level	90% RH Max(Ta<=40 Deg C & web-bulb temperature
		should be 39degC Max(Ta>40degC
Reception & Playback System	RF PAL	I , B/G , D/K
	RF SECAM	B/G , D/K , L/L'
	RF NTSC	N/A
	VIDEO PAL	yes
	VIDEO SECAM	yes
	VIDEO NTSC	NTSC PLAYBACK 3.58 / 4.43
Panel	Brand & Model	CMO ,V320B1-L01
	Resolution	1366 x 768
	Displayable Colour	16.7M
	Surface Treatment	Hardness:3H,Haze:40% Anti-reflective coating<2% Reflection

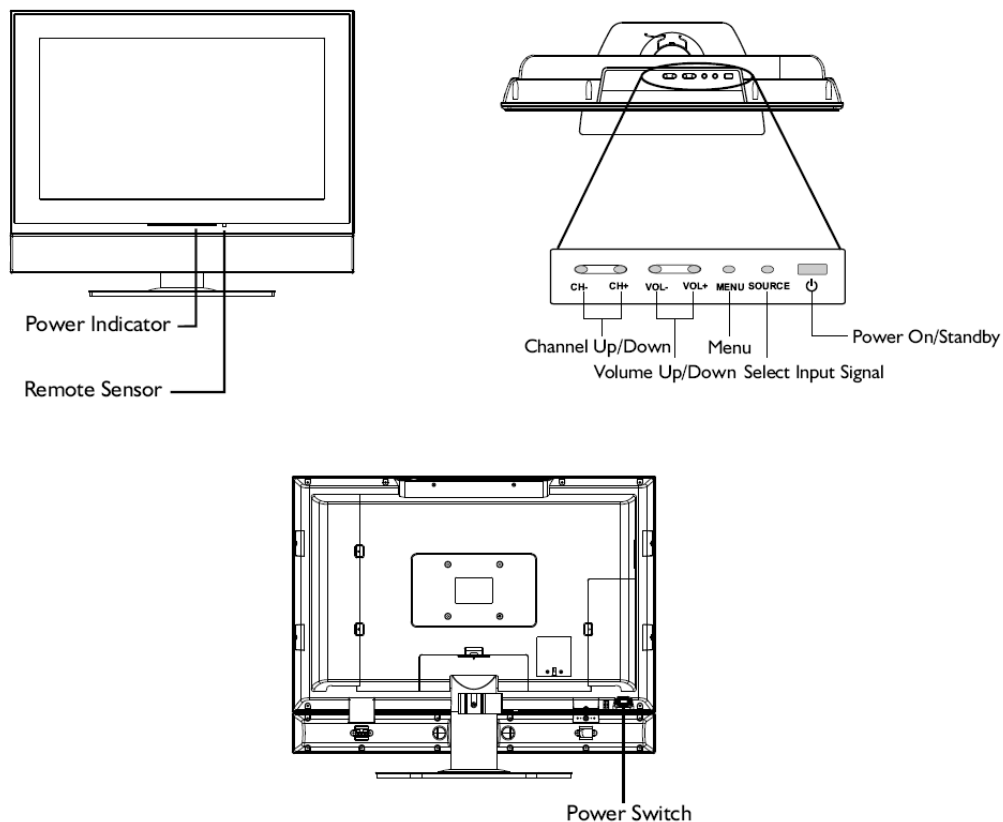
	Viewing Angle (H/V)	170/170
	Display Response Time	12ms
	Contrast Ratio	800 : 1
	Brightness	550cd/m ²
	Aspect	16:9
	Lamp Life	>=50,000
	Bad pixels warranty (Bright / Dark / Total)	Bright<2, dark<5, total no more then 5 dot
Tuner	Channel Coverage	40 - 870Mhz
	Preset Channels	1 to 200
	S + Hyper Band CATV	yes
	Aerial Input	n/a
	Detachable	n/a
Picture	Comb Filter	yes 3D
	Velocity Modulation	n/a
	Noise Reduction	Weak / Medium / Strong
	Film Theater	n/a
	Detail Enhancer	yes
	Super Contrast	n/a
	Colour Transient Improvement	yes
	Picture Mode Option	4 , Vivid / Standard / Mild / Customer
	Brightness Control	Range 0 to 100
	Contrast Control	Range 0 to 100
	Colour Control	Range 0 to 100
	Sharpness Control	Range 0 to 100
	Hue Control	-50 to 50
	Colour Temp Selection	3, Normal / Warm / Cool
	Black Stretch	yes
Audio	Audio Output	8 Watts x 2
	NICAM Stereo	yes
	German A2 Stereo	yes
	Surround	no
	Dual Sound Decoding	yes
	Audio Mode Option	4 , Live / Pop / Rock / Customer
	Volume Control	0 to 100
	Treble Control	-50 to 50

	Bass Control	-50 to 50
	Balance Control	-50 to 50
	Auto Volume Level	n/a
Terminals	CVBS Input	yes/1
	S Video Input	yes/1
	Component YCbCr Input	yes/1
	Component YCbCr Displayable Modes	480i , 576i , 1080i
	Progressive YPbPr Input	yes , 1
	Component YPbPr Displayable Modes	480p , 576p, 720p
	VGA D-15 Input	yes , 1
	PC Audio L/R Input	yes , No, earphone
	SCART Input	yes , 2
	SCART Output	n/a
	CVBS Output	n/a
	Optical Input	n/a
	Coaxial Input	n/a
	DVI Input	n/a
	Earphones Input	yes , 1
	HDMI Input	yes , 1
Other Features	Tele-text	1000 pages
	Tele-text Language	all , (West Europe, East Europe, Turkish / Greek, Cyrillic, Arabic)
	P in P Type	PIP / POP / PBP(4 wins) on all terminal and 9 picture browse on TV
	Number of Tuner	2
	Channel Scan	Auto / Manual
	Display Aspect Ratio Control	Auto / 16:9/14:9/4:3/zoom/
	OSD Language	OSD with Chinese, English, Russian, Turkish
	Other Menu Feature	OSD background
	Screensaver	No
	Timer On	yes
	Timer Off	yes
	Sleep Timer	yes 15,30,45,60,90,120
	Auto Shutdown When No Signal	5 min
	Picture Freeze	yes

	Child Lock	yes
	Local Keys	Prog + , Prog - , Vol + , Vol - , Menu , TV/AV , Main Switch
	Instruction Manual Lang	English, Russian
Installation	Auto Tuning	Yes
	Manual Tuning	Yes
	Manual Fine Tuning	Yes
	Manual/Auto Colour System	both
	Manual/Auto Sound System	both
	Program Naming	Yes
	Skip Channel	Yes
	Exchange Channel	Yes
	Copy Channel	Manual sort program
Accessories	Remote Control	Yes
	Batteries for RC	Yes
	Euro 2 Pin Power Plug	No
	3 Pin Power Plug	No
	Instruction Manual	Yes
	Warrantee Card	Yes , Russian
	RF Cable	Yes
	S-Video Cable	No
	CVBS Cable	No
	VGA Cable	No
	SCART Cable	No
	DVI Cable	No
	HDMI Cable	No
	Optical Cable	no
	Coaxial Cable	no
	Wall Mounting Bracket	yes

Specification are subject to changes without prior notice.

APPEARANCE & CONTROL FUNCTION



1. POWER

Press this button to turn the unit ON from STANDBY mode. Press it again to turn the set back to STANDBY.

2. SOURCE

To access signal source select menu

3. MENU

Press this button to access the Menu main page

4. VOL +/-

Press the **VOL+** or **VOL-** button to directly increase or decrease the sound volume level;

5. CH +/-

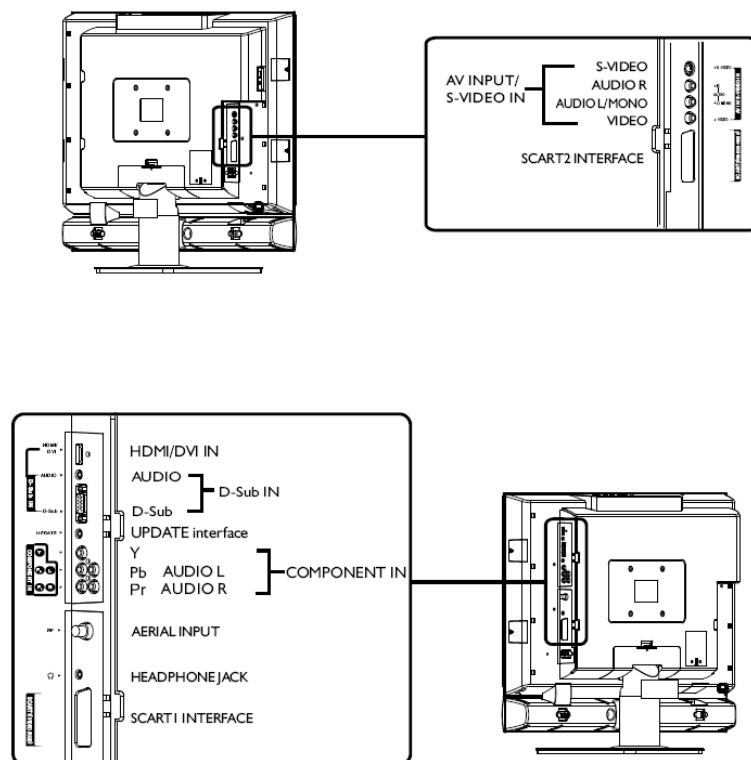
Press these two buttons to directly change the TV channel;

Note:

Functions of **VOL +/-**, **CH +/-**, **MENU**, **SOURCE** and **POWER**  are also provided to the remote control. This operation manual provides a description based on operating functions with the remote control.

OSD means On Screen Display.

MAIN UNIT



1. AV inputs (Video, Audio L/MONO, R) / S-Video input

Receive video/audio signals from external sources such as VCR or DVD player.

Receive a S-Video signal from external source such as VCR or DVD player.

2. 21-pin Euro-SCART2 (VIDEO/S-VIDEO) interface

3. HDMI/DVI interface

4. D-Sub input/Audio in

Connect to the D-Sub /audio output sockets on your PC.

5. UPDATE interface

For service use only. The user cannot operate the unit through the **UPDATE** interface.

6. Component inputs (Y, Pb, Pr, Audio L, R)

Connect to the component and audio output sockets of a DVD player or Set-Top Box.

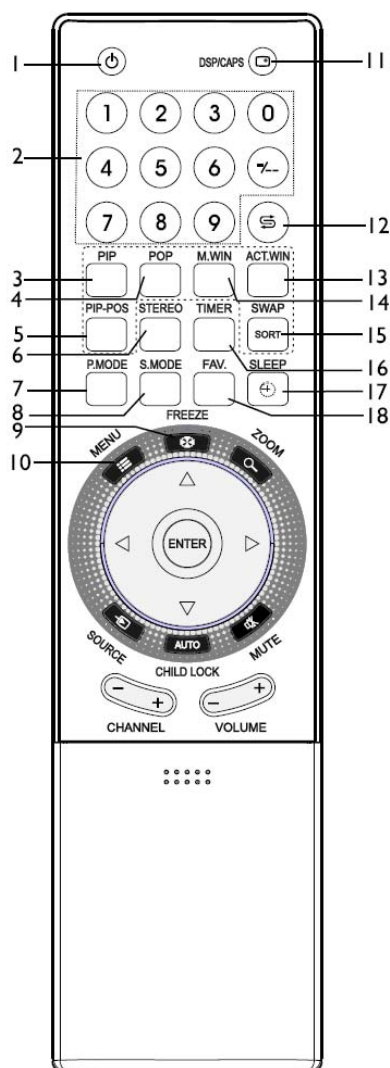
7. Aerial input

Allows you to connect cable or outdoor aerial

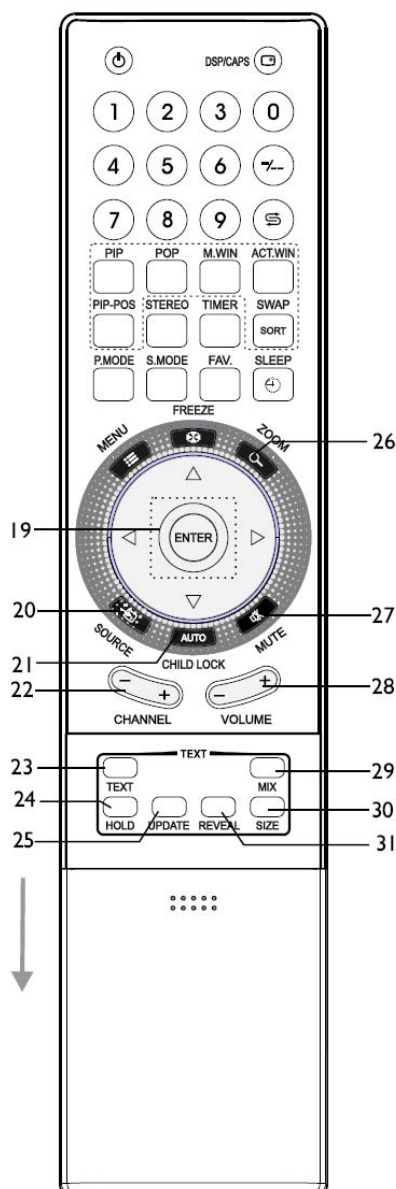
8. Headphone jack

9. 21-pin Euro-SCART1 (VIDEO/RGB) interface

REMOTE CONTROL



1. POWER
 - Turn the unit on or standby
2. 0~9 digit buttons, +/- button
 - 0~9: direct channel select;
 - To input characters when editing channel label
 - +/- button: two digit/three digit channel number selector
3. PIP
 - To activate picture-in-picture
4. POP
 - To activate picture-out-picture
5. PIP-POS
 - To select PIP frame position
6. STEREO
 - To select stereo, mono or bilingual
7. P.MODE
 - To quickly select picture mode
 - Red button (teletext)
8. S.MODE
 - To quickly select sound mode
 - Green button (teletext)
9. FREEZE
 - To freeze current picture
10. MENU
 - To access the MENU main page
 - In Menu operation, press this button to return to a higher level menu
11. DSP/CAPS
 - To display current channel status
 - To switch between uppercase and lowercase input mode when editing channel label.
12. RETURN
 - To quickly jump between current channel and last selected channel.
 - To switch to previous source
13. ACT.WIN
 - To select main picture frame or PIP frame when viewing picture-in-picture
14. M.WIN
 - To select to view multi-window mode
15. SWAP/SORT
 - In full screen of TV program, press this button to access channel editing mode
 - When viewing PIP TV program, press this button to exchange the Contents of the PIP Image and Main Image
16. TIMER
 - To set current time, turn-off timer or turn-on timer
17. SLEEP
 - To set sleep timer
 - Blue button (teletext)
18. FAV.
 - To cycle among all favourite channels
 - Yellow button (teletext)



19. ENTER, ENTER(Up/Down), ENTER(Left/Right)
 ENTER: To confirm your operation or setting or access submenu;
 ENTER(Up/Down): To move upward or downward in menu operation;
 ENTER(Left/Right): To move left or right in menu operation;
 To adjust selected menu item in menu operation
20. SOURCE 
 To access source select menu
21. AUTO/CHILD LOCK
 To rectify the picture automatically in VGA mode/ lock or unlock channels in TV mode
22. CHANNEL +/-
 Use to switch channels;
23. TEXT
 To enter/exit teletext mode (Teletext)
24. HOLD
 To hold the current teletext page temporarily (Teletext)
25. UPDATE
 To view update teletext page (Teletext)
26. ZOOM
 To select Screen Aspect Ratio
 This button doesn't work under [POP 4:3], [POP Full], [4 Windows], [9 Windows]
27. MUTE 
 Sound mute
28. VOLUME +/-
 Use to adjust volume
29. MIX
 To superimpose text on a TV picture (Teletext)
30. SIZE
 To expand top half or bottom half page of current screen (Teletext)
31. REVEAL
 To display hidden information such as solutions to riddles and puzzles. (Teletext)

Alignment Instructions

1. Test equipment

PM5515 (Video signal generator)
PM54200(SCART signal generator)
VG-848(YUV, VGA and DVI signal generator)
K-7253 (VGA signal generator)
CA210 (White balancer)

2. The alignment flow chart (see below figure)

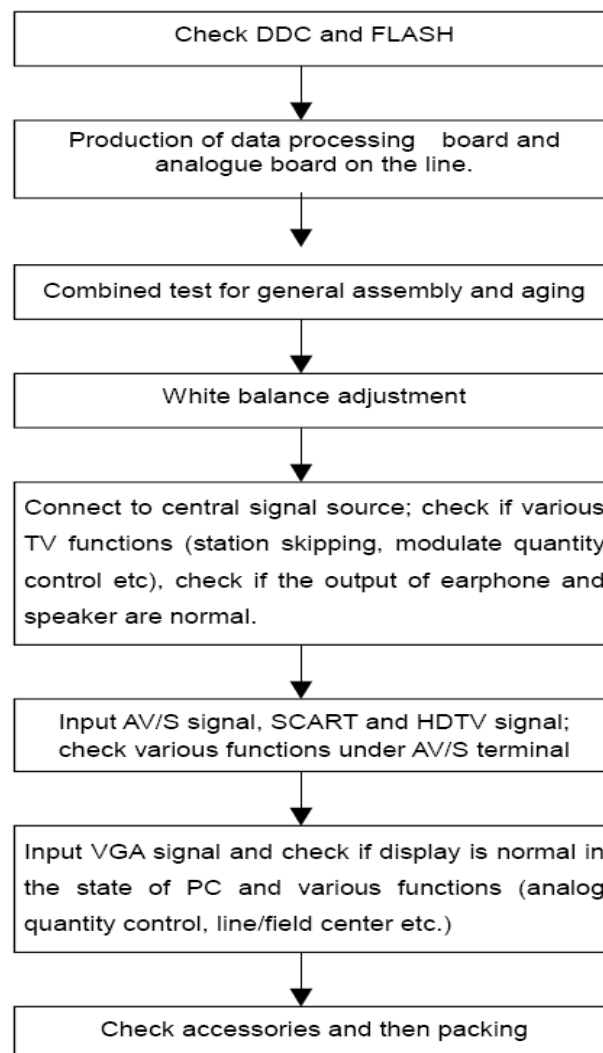


Fig.1 Flow process of alignment

3 Unit adjustments

Method for entering factory menu: Press MENU → -/---→9→1→8 one by one, then enter factory menu, press the SLEEP button to select adjustment page, exit factory menu to press the MENU button.

4 EEPROM initialization

Enter the first page of factory menu, select “EEPROM INITIALIZE” to be “on”, after turn off the unit, repeating turn on the unit is over.

5 white balance adjustment

Input PAL signal of 16-level gray-scale (TIMING969 PATTAN921) from VG848 to AV channel, enter user menu, set color to 0, APL to “off”, enter factory menu white balance adjustment page, select color temperature, fixed the GGAIN to 50H, adjust BGAIN and RGAIN to 400nits, then the color coordinate to 284, 299. Fixed the BOFFSET to 50H, adjust GOFFSET and ROFFSET to 5nits, then the color coordinate to 284, 299. Select cool tint, adjust color coordinate to 270, 283. Select warm tint, adjust color coordinate to 313, 329.

6. Performance Inspections

6.1 TV function

Enter the search menu → auto search, connect RF-TV terminal to the central signal source, check if there is station skipping.

6.2 AV/S input terminal

Input AV/S signal, check the picture and sound is normal

6.3 SCART terminal (note: check the SCART terminal, set display mode to AUTO)

6.3.1 Check SCART INPUT special function

6.3.1.1 SCART1 terminal function

a. After turn on the unit, connect the SCART1 to PM54200 signal generator, then the unit auto select to SCART1 mode.

b. SCART signal generator sends CVBS signal to the unit, check if the image and sound is normal. It sends image format (16:9 and 4:3) to the unit, check if the unit auto identify is normal. Change SCART signal to RGB signal, check if the image and sound is normal, It sends image format (16:9 and 4:3) to the unit, check the unit auto identify is normal. Select the PIP mode, connect earphone cable, and check if the sound is normal.

6.3.1.2 SCART2 terminal function

a. After turn on the unit, connect the SCART2 to PM54200 signal generator, then the unit auto select to SCART2 AV mode.

b. SCART signal generator sends CVBS signal to the unit, check if the image and sound is normal. It sends image format (16:9 and 4:3) to the unit, check if the unit auto identify is normal, and display the SCART2 AV. Change SCART signal to Y/C signal, select the SCART2 Y/C channel mode, check if the image and sound is normal, It sends image format (16:9 and 4:3) to the unit, check if the unit auto identify is normal. Select the PIP mode, connect earphone cable, and check if the sound is normal.

6.3.2 Check SCART OUTPUT special function

6.3.2.1 SCART1 terminal function

Input signal in the TV states, connect the SCART1 terminal to the TV. Change the TV program, check if output signal of SCART1 is TV signal, and the image and sound is normal, change the unit channel, the CART1 output TV signal, it can not other signal.

6.3.2.2 SCART2 terminal function

Input signal in the TV/AV/S states, connect the SCART2 terminal to the TV. Change the unit channel, check if output signal of SCART2 is current signal, and the image and sound is normal.

6.4 YPbPr/YPbPr terminal Input the YUV signal (VG-848 signal generator), separate input YUV format signal of table 1, check if the image and sound is normal. If the image is deflection of the H-field, select auto sync correction of the SCREEN menu. If the image is slight disturb, adjust the FINE TUNE correction of the SCREEN menu. Open the PIP mode, connect the earphone, and check if the image and sound is normal.

Table 1 YUV Signal Format

	H-frequency(kHz)	V-frenquency(Hz)	Signal
1	15.734	59.94	SDTV 480i
2	31.469	59.94	HDTV 480p
4	44.955	59.94	HDTV 720p
6	33.716	59.94	HDTV 1080i
7	15.625	50	SDTV 576i
8	31.25	50	HDTV 576p
9	33.75	50	HDTV 1080i
10	37.50	50	HDTV 720p

6.5 VGA terminal Input the VGA signal (VG-848 signal generator), separate input VGA format signal of table 1, check if the image and sound is normal. If the image is deflection of the H-field, select auto sync correction of the SCREEN menu. If the image is slight disturb, adjust the FINE TUNE correction of the SCREEN menu. Open the PIP mode, connect the earphone, and check if the image and sound is normal.

6.6 HDMI terminal HDMI signal format receive the three high definition signal: 480P, 576P, 720P/50/60 Hz, 1080I/50/60 Hz, except for the table 2 signal. Check if the image (contain HDCP ON and OFF) and sound is normal. If the image is deflection of the H-field, select auto sync correction of the SCREEN menu. Open the PIP mode, connect the earphone, and check if the image and sound is normal.

TABLE2 VGA Signal Format

	Resolution	H-Frequency(kHz)	V-Frenquency(Hz)	Point clock pulse Frenquency(MHz)	Remark
1	720 X 400	31.469	70.086	28.322	IBM
2	640 X 480	31.469	59.94	25.175	IBM
3	640 X 480	37.861	72.809	31.5	VESA
4	640 X 480	37.5	75	31.5	VESA
5	640 X 480	43.269	85.008	36	VESA
6	800 X 600	35.156	56.25	36	VESA
7	800 X 600	37.879	60.317	40	VESA
8	800 X 600	48.077	72.188	50	VESA
9	800 X 600	46.875	75	49.5	VESA
10	800 X 600	53.674	85.061	56.25	VESA
11	1024 X 768	48.363	60.004	65	VESA
12	1024 X 768	56.476	70.069	75	VESA
13	1024 X 768	60.023	75.029	78.75	VESA
14	1280 X 1024	63.98	60.02	108.00	VESA
15	1024 X 768	68.667	84.98	94.486	VESA

6.7 Ex-Factory setting see to TABLE 3 -TABLE 9 TABLE 3 Factory Option Menus

Items	Ex-Factory setting
IIC Bus-off	Off
EEPROM Erase	Off
Backlight Adjustable	Off
Back Light	100
Menu Timeout	5
Blank switch enable	On
ShowLogo	On
Auto Program Sort	On
TT Char Group	West Europe / East Europe / Cyrillic / Turkish /Greek/Arabic/Hebrew
Dynamic Scart	Off
Note: the latter 6 items should set according to clients' require.	

TABLE 4 Factory Audio Setting TABLE 5 Factory Video Limit Setting

Items	Ex-Factory setting			
	LCT-27PBSTP	LCT-32PBSTP	LCT-37PBSTP	LCT-42PBSTP
Volume 1	2CH	2CH	2CH	2CH
Volume 25	55H	57H	5AH	5AH
Volume 50	5CH	5EH	61H	61H
Volume 75	64H	65H	69H	69H
Volume 100	6BH	6DH	72H	72H
HP VOLUME SETTING				
Volume 1	64H			
Volume 25	96H			
Volume 50	A1H			
Volume 75	AEH			
Volume 100	BEH			
MSP Scart1 Volume	72H			
Prescale Scart	4CH			
Prescale FM/AM	27H			
Prescale Nicam	64H			
Scart TV Volume	20H			
Scart AV Volume	72H			
D/K select HDEV3	Off			
AVC	Off			
Equalizer Bands Max	60H			
Spatial Mode	0			
Spatial Strength	00H			

Items	CVBS	SC-RGB	YPBPR	D-SUB	HDMI
Bright Min	D5H	CFH	C7H	CFH	D2H
Bright Middle	00H	00H	03H	05H	07H
Bright Max	38H	3DH	34H	3DH	31H
Contrast Min	09H	09H	09H	09H	08H
Contrast Middle	20	25H	20H	25H	23H
Contrast Max	2AH	31H	29H	31H	2CH
Sharpness Min	00H	00H	00H	00H	00H
Sharpness Middle	10H	10H	10H	10H	10H
Sharpness Max	1FH	1FH	1FH	1FH	1FH
Color Min	00H	00H	00H	00H	00H
Color Middle	1DH	1DH	1DH	1DH	1DH
Color Max	2DH	2DH	2DH	2DH	2DH
Hue Min	80H	80H	80H	80H	80H
Hue Middle	20H	20H	20H	20H	20H
Hue Max	7FH	7FH	7FH	7FH	7FH

**TABLE 6 White Balance Adjust TABLE 7 Image analog setting TABLE9 SOUND
equilibrium value setting**

ITEMS	LCT-27PBSTP	LCT-32PBSTP	LCT-37PBSTP	LCT-42PBSTP
R Offset	55	55	54	53
G Offset	51	53	57	49
B Offset	50	50	50	50
R Gain	42	36	36	37
G Gain	50	50	50	50
B Gain	21	40	51	38
Brightness	51	51	51	51
Contrast	100	100	100	100
Color Temperature	Standard			
R Offset	60	59	58	55
G Offset	55	55	58	52
B Offset	50	50	50	50
R Gain	35	25	24	32
G Gain	50	50	50	50
B Gain	28	48	61	48
Brightness	51	51	51	51
Contrast	100	100	100	100
Color Temperature	Cold			
R Offset	55	49	49	44
G Offset	53	51	53	47
B Offset	50	50	50	50
R Gain	62	51	58	66
G Gain	50	50	50	50
B Gain	8	23	33	22
Brightness	51	51	51	51
Contrast	100	100	100	100
Color Temperature	Warm			

CVBS	Vivid	Standard	Mild	Custom
Contrast	90	80	50	80
Brightness	40	35	35	35
Color	70	60	40	60
Hue	00	00	00	00
Sharpness	60	50	30	50
SC-RGB	Vivid	Standard	Mild	Custom
Contrast	90	85	50	85
Brightness	60	50	35	50
Color	80	65	40	65
Hue	00	00	00	00
Sharpness	60	50	30	50
YPBPR	Vivid	Standard	Mild	Custom
Contrast	90	85	50	85
Brightness	50	40	35	50
Color	80	65	40	65
Hue	00	00	00	00
Sharpness	60	50	30	50
D-SUB	Vivid	Standard	Mild	Custom
Contrast	90	80	50	80
Brightness	50	40	35	40
Color	80	65	40	65
Hue	00	00	00	00
Sharpness	60	50	30	50
HDMI	Vivid	Standard	Mild	Custom
Contrast	90	80	50	80
Brightness	50	35	35	35
Color	80	70	40	70
Hue	00	00	00	00
Sharpness	60	50	30	50
Note: in factory menu states, it can change the factory mode to value of the image and sound, else select the image and sound balanced value in the other states.				

	Live	Pop	Rock	Custom
120 Hz	50	50	65	50
500 Hz	50	50	55	50
1.5 kHz	50	60	55	50
5 kHz	80	70	55	50
10 kHz	85	70	55	50

6.8 Ex-factory setting of user menu

6.8.1 select TV channel

6.8.2 video menu, Mode: Standard, NR: Medium, APL:ON

6.8.3 sound menu, Volume: 20, Balance: 00, Equalizer: Custom, HP Volume: 20;

6.8.4 edit menu, Color System: Auto, Sound System: DK;

6.8.5 option menu, Default Zoom: Auto, Child Lock: Off, Menu Language: English, Country: UK, WSS: OFF, Blue Screen: On.

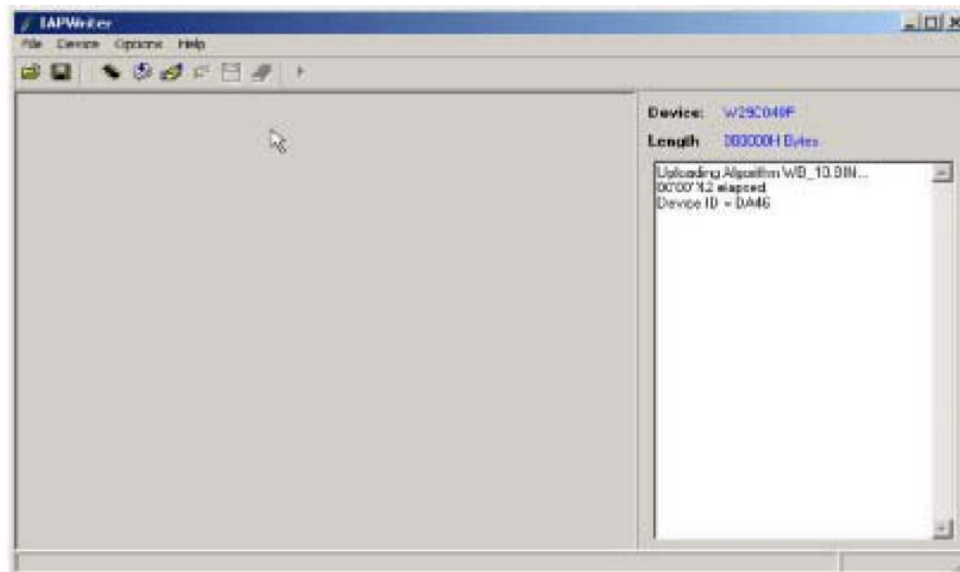
Note: the 6.8.4 and 6.8.5 items should set according to clients require.

Software Upgrading

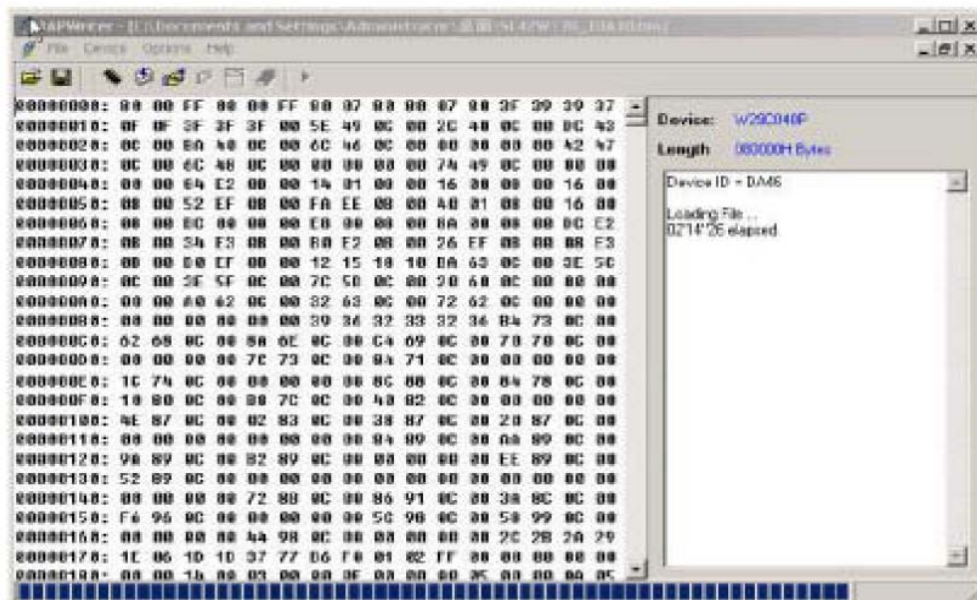
1. Enter the software upgrading state of the TV Method 1: press the VOL- button in the unit, turn on the main power switch, then the screen display black screen, but the indicator to blue.
Method 2: Enter factory menu, select the IIC-BUS OFF item.

2. Connection upgrading tools with upgrading port.

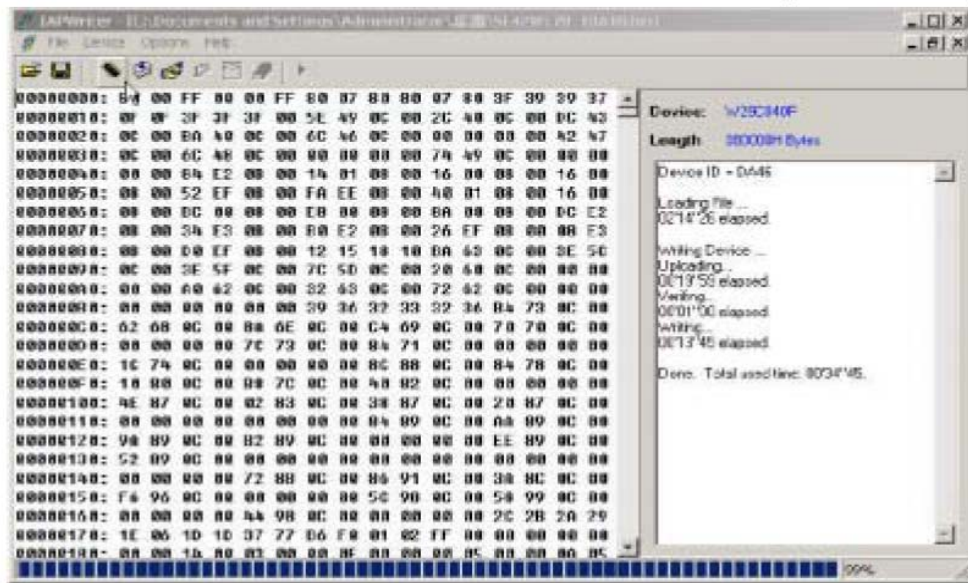
3. Dual- click IAPWriter logo, enter the upgrading states (if the PC and the IIC communication trouble, it can prompt).



4. Select the file menu load the software follow as:

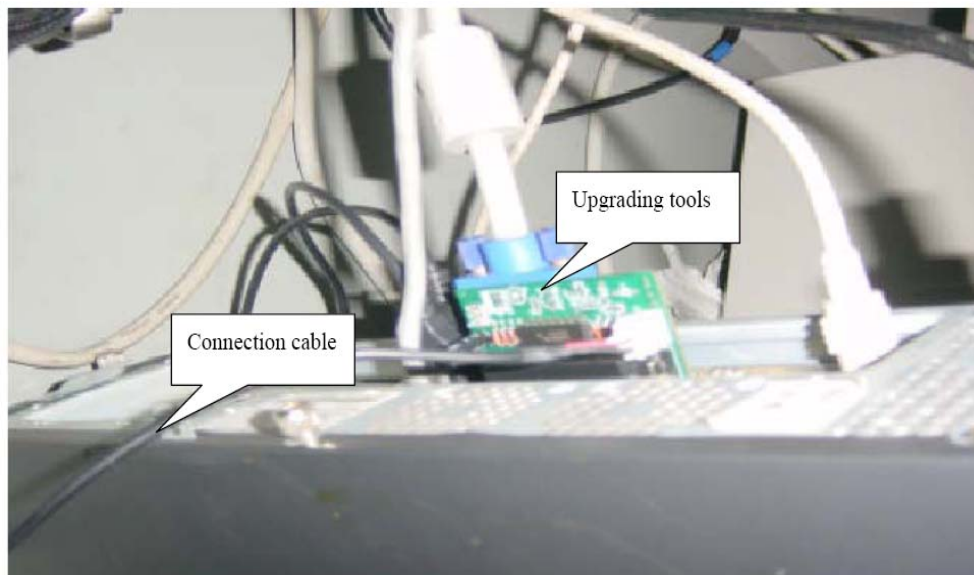


5. Select WRITE DEVICE item of the device menu, till the right screen display “DONE”.



6. Turn off the power , restart the unit.

Note: because of the software, it may be no-stabilization, the software can auto download and write.





NOTE: Do not shut the power off or turn the TV set on during the FLASH write.
Otherwise it may lead to no way for flash to rewrite.

Working Principle Analysis

1. Analog signal flow

Antenna reception signal send to integrative tuner (contain HF and IF amplifier circuit), the tuner is controlled the command (SDA and SCL) of the MCU N301 (M16C), select appropriate channel to system switch, via HF amplifier and IF amplifier decode, output video signal of 2VPP and sound signal of 1VPP.

Sound signal (SCART1, 2 sound, AV sound, YPbPr, HDMI and D-SUB) via N581 HEF4052BT (sound diverter switch) to output signal, it send to N801(MPS3410 sound processing and volume control) switch of audio. Select right/left sound channel, their send to digital sound amplifier N803 (TPA3008) amplify, then send to speaker.

After output video signal of tuner, SCART1 video signal and RGB signal via matched resistance, the signal thought alone channel send to main decode IC(N101 SVP-EX52) video switch, A/D transition, digital decode, image scale and OSD superposition, then send to LVDS level drive for LCD screen.

AV, S-Video, SCART2 video and Y/C signal thought matched resistance, the signal send to the N506 video switch (SN74CBT3257CDR), via switching to selected signal (EX52_Y and EX52_C) to main decode IC (N101 SVP-EX52) video switch, A/D transition, digital decode, image scale and OSD superposition, then send to LVDS level drive for LCD screen.

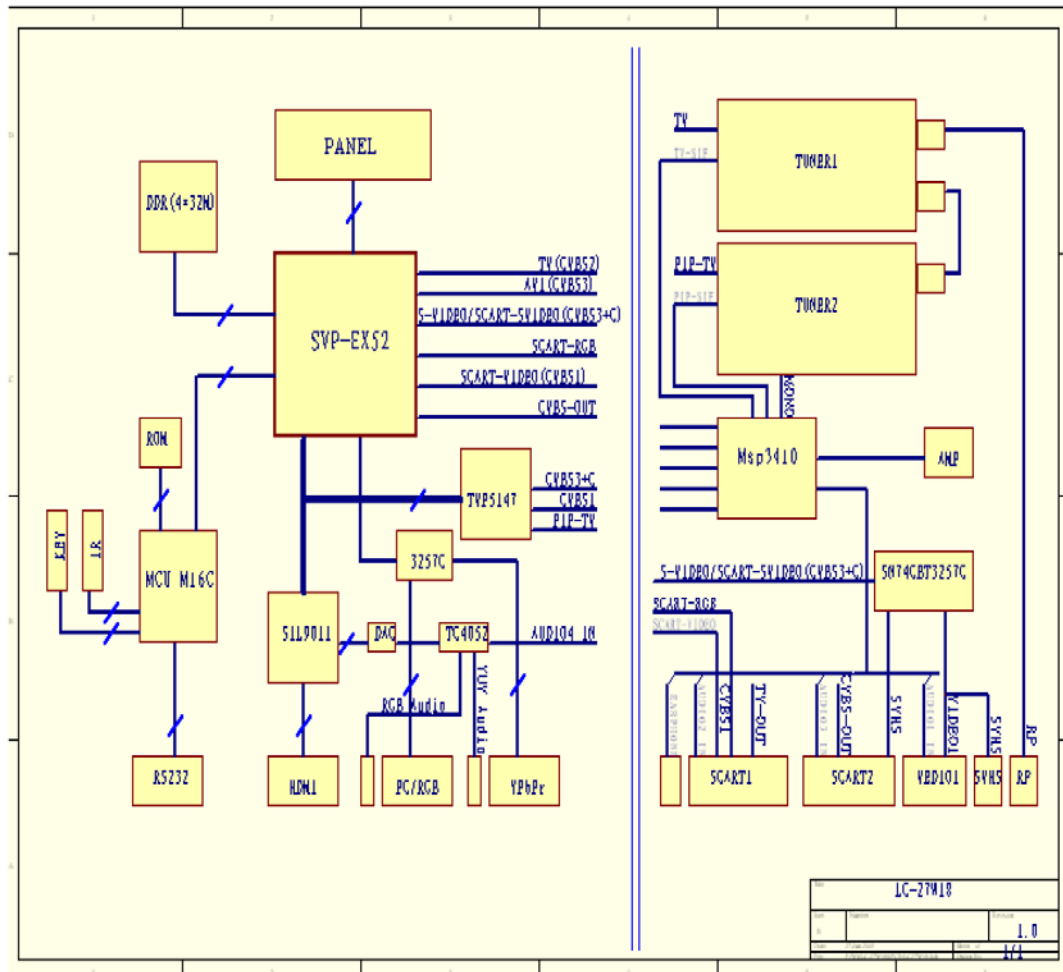
D-sub and YPbPr signal thought matched resistance, the signal send to the N507 video switch (SN74CBT3257CDR), via switching to selected signal (EX52_YUV) to main decode IC (N101 SVP-EX52) video switch, A/D transition, digital decode, image scale and OSD superposition, then send to LVDS level drive for LCD screen.

2. Digital signal flow:HDMI signal thought HDMI reception chip N405 (Sil9011HDMI with HDCP function), after receive, output digital format signal send to SVP-EX52 PIP channel thought image scale and OSD superposition, then send to LVDS level drive for LCD screen. The HDMI chip output audio digital format signal change to analog sound signal from N403 (CS4344 audio DA transfer chip), then N581 switched to N801 (MPS3410 sound processing and volume control).

3. TELETEXT function

This unit adopt main decode IC N101(SVP-EX52) of Trident company, it has TELETEXT decode function, after decoded, the teletext information in OSD display.

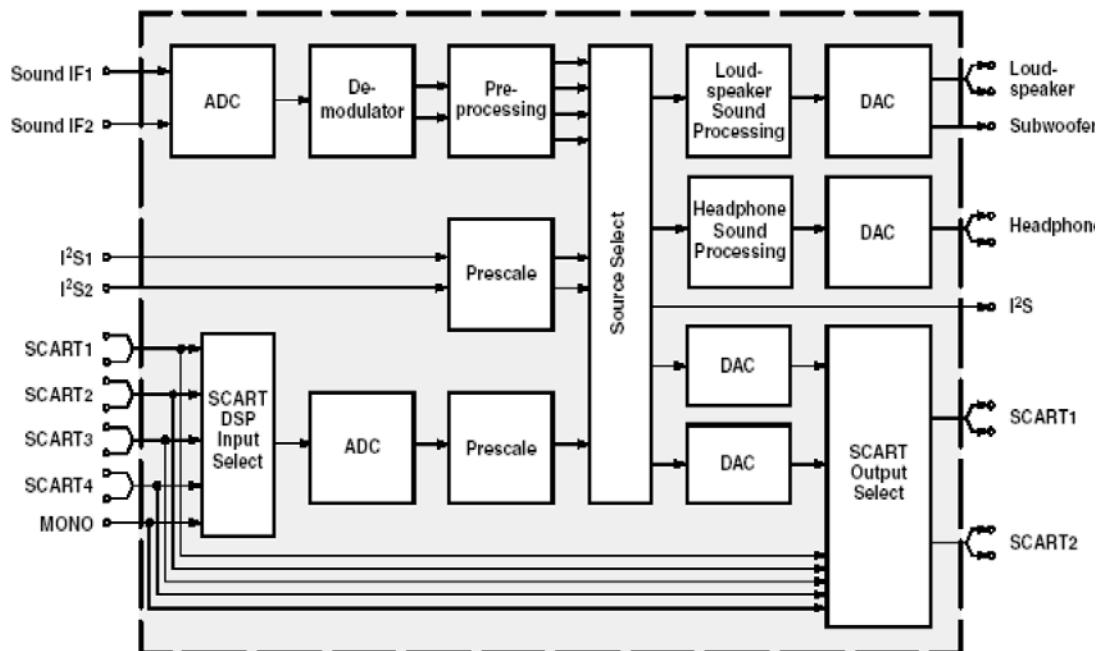
BLOCK DIAGRAM



IC Block Diagram

1. Sound processing IC (MSP3410)

Sound signal send to sound processing N801 MSP3410, and dual-circuit tuner has second SIF, it sends to N801 (stereo decode and auto volume control), N801 has audio channel switch, after switching in N581 (HEF4052BT), the audio input of VGA/HDMI/YPbPr will be sent to N801 together with the audio signal of TV and AV to do the switching process. A way signal thought volume and high-low sound controlled, output the left and right audio send to digital audio amplifier N803 (TPA3008) amplify, then it send to speaker, other way signal output left-right audio send to earphone amplifier N805 (NJW1109), after audio control and power amplifier, it output to earphone socket. Other two ways signal output audio of TV out and AV out by SCART terminal of video board. MSP3410 internal block diagram as follow:



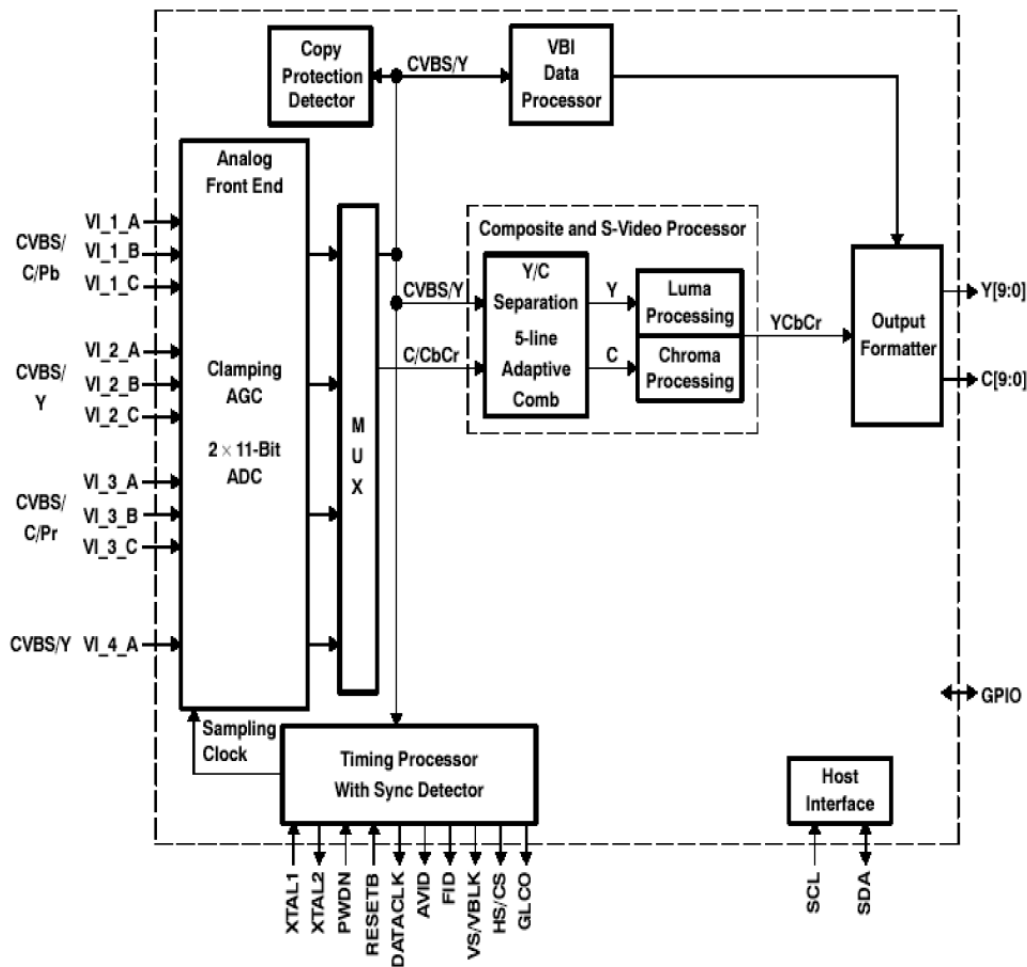
Main pins instructions:

2, 3: SCL, SDA 27, 28: left-right audio of audio power amplification 36, 37: left-right audio of earphone 24, 25: left-right audio of AV OUT 33, 34: left-right audio of TV OUT 47, 48: left-right audio from main board 50, 51: left-right audio of SCART2 53, 54: left-right audio of SCART1 56, 57: left-right audio of AV IN 67, 69: SIF input of sub-channel and main-channel TV 59: MONO input of sub-channel TV

2. Sub-channel and SCART video signal decode IC (TVP5147)

Sub-tuner TUNER202 decode video, AV, S-VIDEO, SCART1 video, SCART2 video and Y/C signal, after matching impedance, enter decoding IC N601 (TVP5147), so the PIP image of sub-channel can selecting arbitrary video signal.

MSP3410 internal block diagram as follow:



TVP5147 main pins instructions:

28, 29: SCL, SDA

22: Video input for SCART1 7, 80: Y/C signal input for SCART2

16: video signal input of sub-tuner

8: Y signal input of AV or S-Video

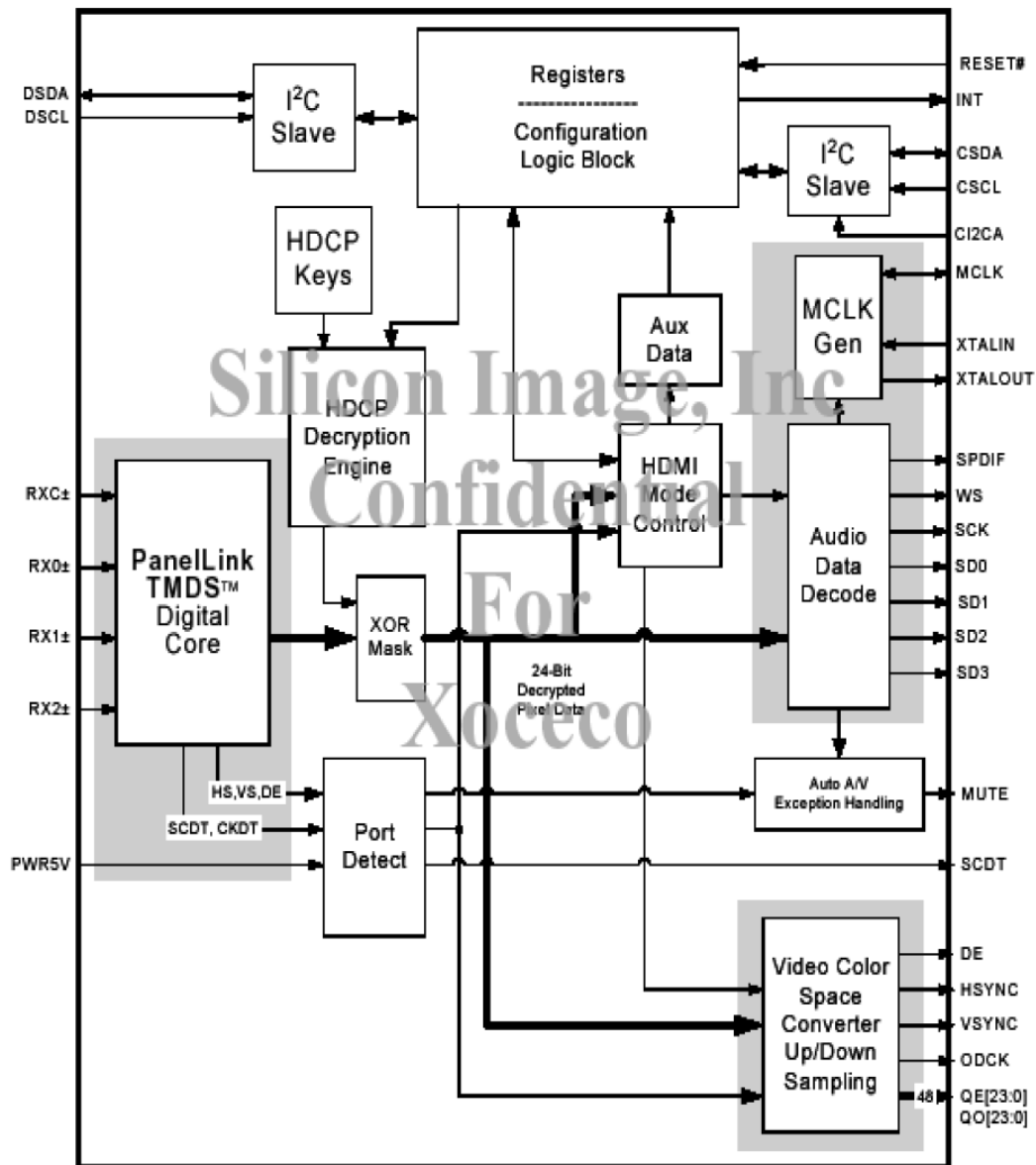
1: C signal input of S-Video

9, 2, 18: YUV signal input of compatible DTV

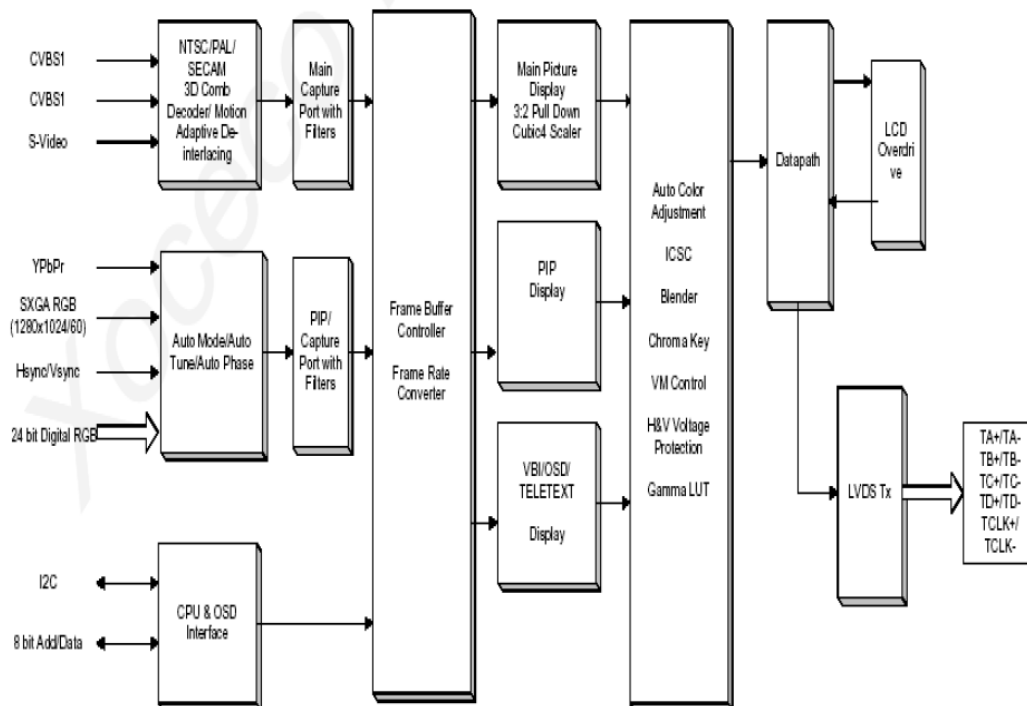
3. Reception HDMI signal (Sil9011)

After differential signal of HDMI send to N405 (Sil9011), then it transform 24bit for video digital signal, and sent to IC N101 (SVP-EX52) processing.

Sil9011 internal block diagram as follow:



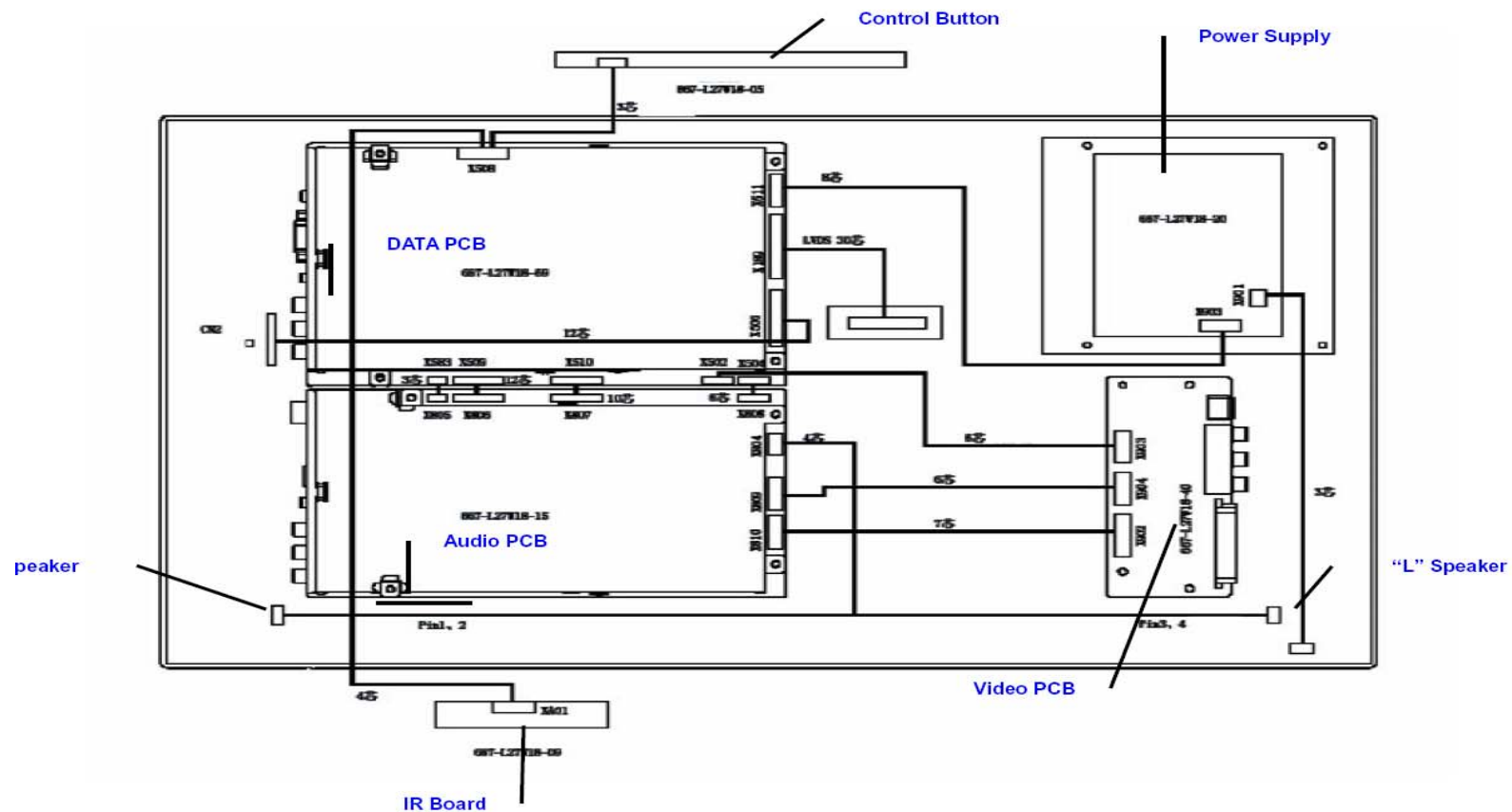
4. Main decode and processing IC(DPTV-SVP-EX52) SVP-EX52 internal block diagram as follow:



SVP-EX52 main pins instructions:

- 14, 16: SCL, SDA
- 10, 11: VGAHS, VGAVS input,
- 244, 231: EX52_Y and EX52_C input
- 243: main tuner video signal input
- 242: video signal input for Scart1
- 226, 248, 233: Scart1 RGB input
- 246, 232, 225: EX52_YUV input
- 236, 237: video output for SCART2

Wiring Diagram



Assembly List

Name	Part no.	Main IC and no.
Data processing board	667-L32W25-69	N101 DPTV-SVP-EX52 (353-DPTV0-20) N201 K4D2632838F (353-26323-10) N302 W29C040P-90B (353-29040-30) N301 M30620SPGP (353-30620-20) N601 TVP5147PFP (353-51470-10) N405 SiI9011CLU (353-90110-10) N403 CS4344CZZ (353-43440-10)
Audio processing board	667-L32W25-15	TUNER201 JS-6B2/122A2-A2 (590-40512-00) TUNER202 JS-6B2/121A2 (590-40511-00) N801 MSP3410G (353-34100-80) N803 TPA3008D2 (353-30080-10) N805 NJW1109M (353-11092-20)
Video processing board	667-L27W18-40	
IR reception board	667-L32W18-09 (LC-32W18S)	
Button board	667-L27W18-05 (LC-32W18S) 667-L32W25-05 (LC-32W25S)	

Identification criteria for the bright spot and dark spot of the LCD screen

Category	criteria	quantity allowed					Distance between two spots					
		15"	20"	22"	30"	40"	15"	20"	22"	30"	40"	
Bright spot	One single spot	≤5	≤2	≤5	≤2	≤3	≥15mm	≥15mm				
	Two neighboring spots	≤2	≤1	≤2	≤1	≤1						
	Total No.	≤5	≤2	≤5	≤2	≤3						
Dark spots	One single spot	≤6	≤7	≤5	≤4	≤10	≥15mm	≥10mm	≥5mm			
	Two neighboring spots	≤2	≤2	≤2	≤1	≤5						
	Total No.	≤6	≤7	≤5	≤4	≤10						
Total defected point		≤8	≤7	≤5	≤4	/						

Notes:

- 1 Definition of defected point (bright spot, dark spot): It is identified as a defected point if its area exceeds 1/2 of a single picture element (R, G, B).
- 2 Definition of bright spot: It is identified as a bright spot if it is bright in the state of dark field and its bright size remains unchanged
- 3 Definition of dark spot: It is identified as a dark spot if it is dark in the state of white field and its dark size remains unchanged
- 4 Definition of two neighboring points: Defects of a group of picture elements (RB, RG, GB).

TROUBLE SHOOTING

1. Fault clearance

Before servicing please check to find the possible causes of the troubles according to the table below:

1.1 Antenna (signal):

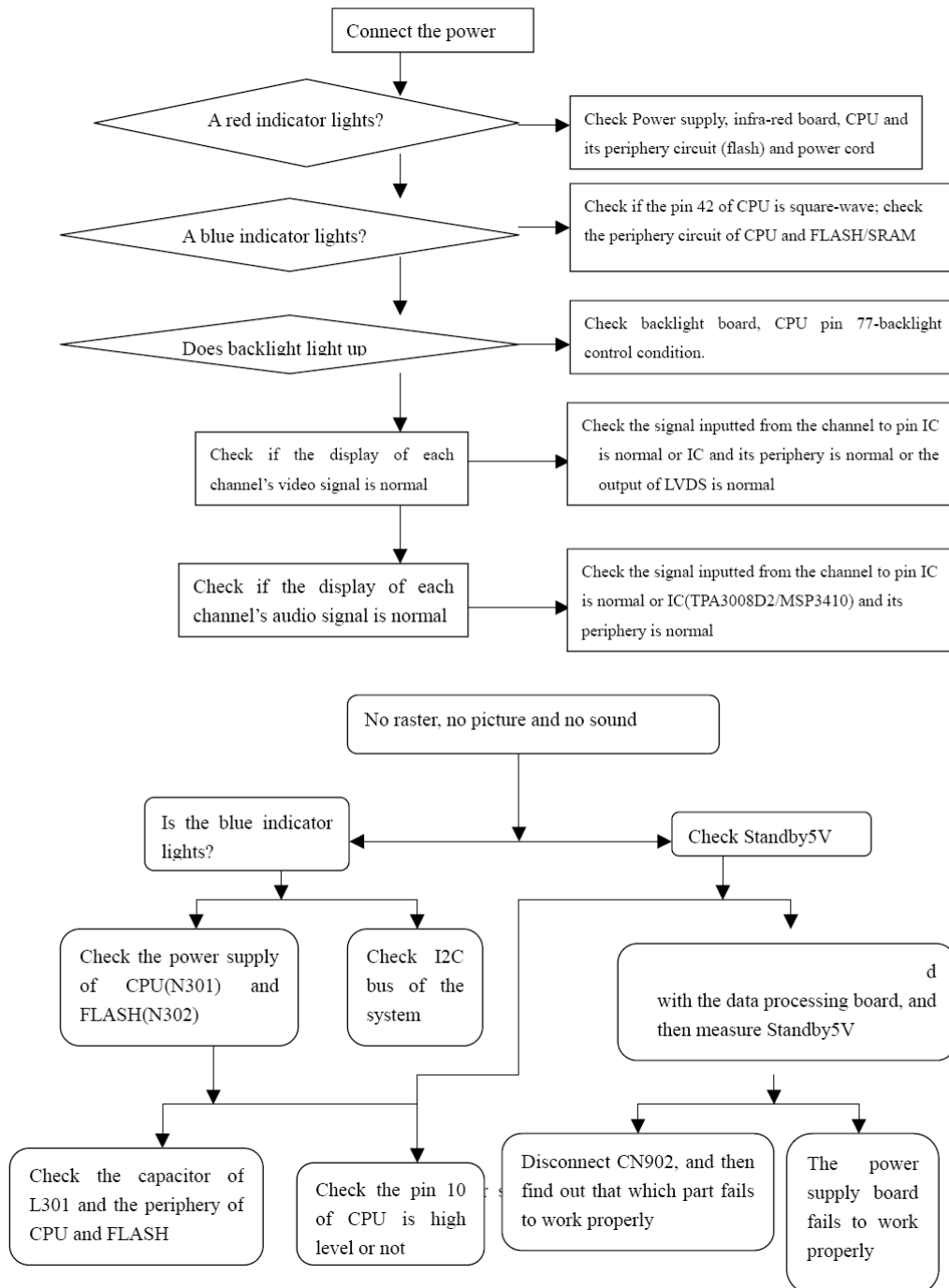
Picture is out of focus or jumping	Bad status in signal receiving Poor signal Check if there are failures with the electrical connector or the antenna. Check if the antenna is properly connected.
Fringe in picture	Check if the antenna is correctly oriented. Maybe there is electric wave reflected from hilltop or building.
Picture is interfered by stripe shaped bright spots	Possibly due to interference from automobile, train, high voltage transmission line, neon lamp etc. Maybe there is interference between antenna and power supply line. Please try to separate them in a longer distance. Maybe the shielded-layer of signal wire is not connected properly to the connector.
There appear streaks or light color on the screen	Check if interfered by other equipment and if interfered possibly by the equipment like transmitting antenna, non-professional radio station and cellular phone.

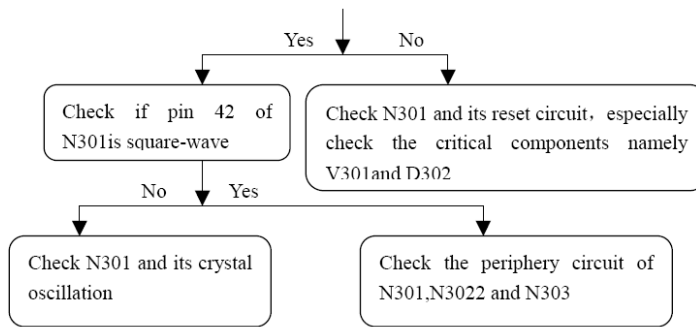
1.2 TV set:

Symptoms	Possible cause
Unable to switch the power on	Check to see if the power plug has been inserted properly into the socket.
No picture and sound	Check to see if the power supply of liquid crystal TV has been switched on. (As can be indicated by the red LED at the front of the TV set) See if it's receiving the signal that is transmitted from other source than the station Check if it's connected to the wrong terminal or if the input mode is correct. Check if the signal cable connection between video frequency source and the liquid crystal TV set is correct.
Deterioration of color phase or color tone	Check if all the picture setups have been corrected.
Screen position or size is not proper	Check is the screen position and size is correctly set up.
Picture is twisted and deformed	Check to see if the picture-frame ratio is properly set up.
Picture color changed or colorless	Check the "Component" or "RGB" settings of the liquid Crystal TV set and make proper adjustment according to signal types
Picture too bright and there is distortion in the brightest area	Check if the contrast setting is too high. Possibly the output quality of DVD broadcaster is set too high. It maybe also due to improper terminal connection of the video frequency signal in a certain position of the system.
Picture is whitish or too bright in the darkest area of the picture	Check if the setting for the brightness is too high Possibly the brightness grade of DVD player (broadcaster) is set too high.
No picture or signal produced from the displayer if "XXX in search" appears.	Check if the cable is disconnected. Check if it's connected to the proper terminal or if the input mode is correct.
There appears an indication – "outside the receivable scope)	Check if the TV set can receive input signal. The signal is not correctly identified and VGA format is beyond the specified scope.

Remote control cannot work properly	Check if the batteries are installed in the reverse order. Check if the battery is effective. Check the distance or angle from the monitor. Check if there is any obstruct between the remote control and the TV set. Check if the remote control signal-receiving window is exposed to strong fluorescence.
No picture and sound, but only hash.	Check if the antenna cable is correctly connected, or if it has received the video signal correctly.
Blur picture	Check if the antenna cable is correctly connected. Of if it has received the right video signal.
No sound	Check if the "mute" audio frequency setting is selected. Check if the sound volume is set to minimum. Make sure the earphone is not connected. Check if the cable connection is loose.
When playing VHS picture search tape, there are lines at the top or bottom of the picture.	When being played or in pause VHS picture search tape sometimes can't provide stable picture, which may lead to incorrect display of the liquid crystal TV, In this case please press "auto" key on the remote control so as to enable the liquid crystal TV set to recheck the signal and then to display correct picture signal

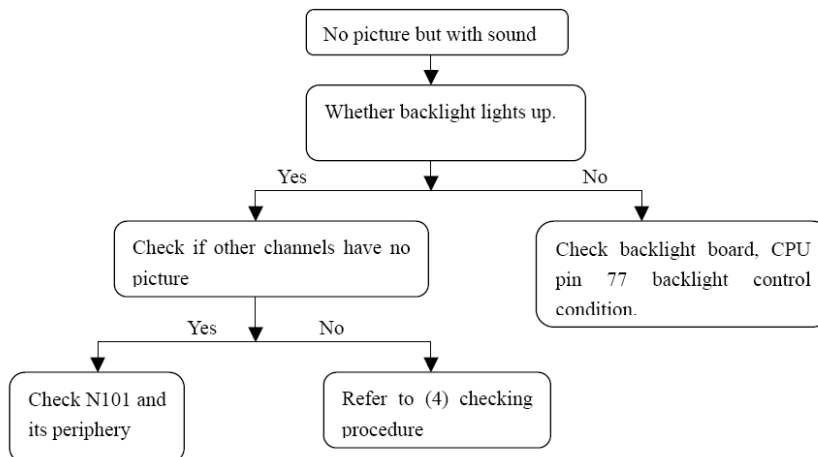
TROUBLE SHOOTING GUIDE





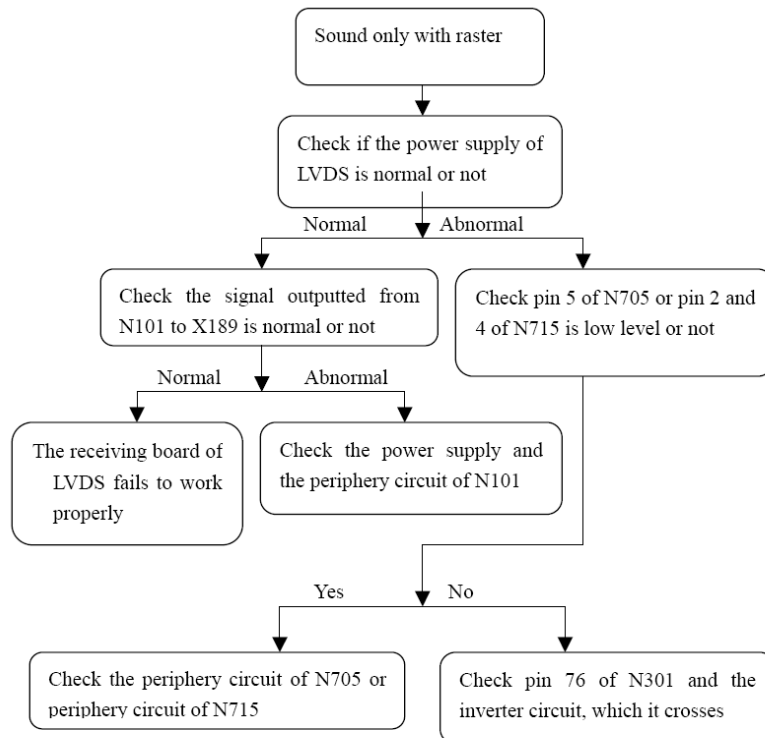
NOTE: When pin 10 of N301 is low level, remove V301 and then check the correspondent pins of N301 are high level or not, the reset circuit fails to work properly if it is high level. If pin 42 of N301 has no square-wave, remove R365, if the square-wave appears, then it is probably the FLASH of N302 fails to work properly. When it comes to check the periphery circuit of N301, N302 and N303, use oscilloscope to check the connecting resistor's pin among N301, N302 and N303 besides checking the connection of correspondent components, if regular square-wave or no signal is found, then it represents that one of N301, N302 or N303 fails to work properly, probably is N302. If R110 and R111 connects N301 with N101 fails to work will also lead to the failure phenomenon.

(2) No picture but with sound(blue screen and OSD appear)



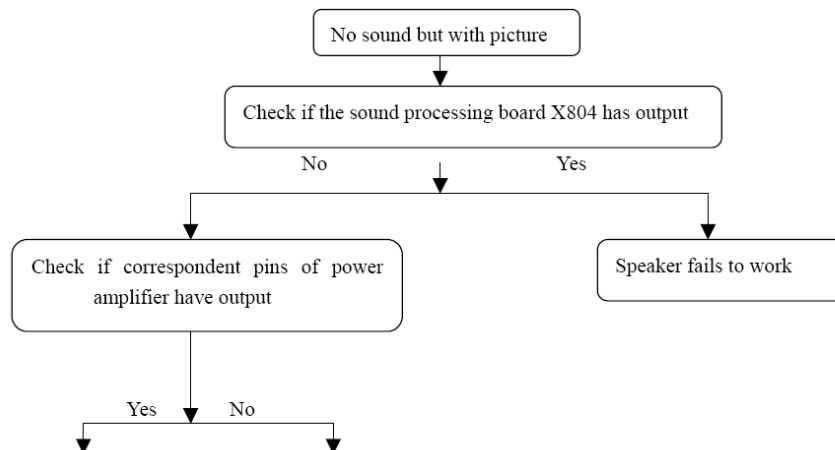
NOTE: Please refer to checking procedure (5) to get the methods for checking the phenomenon of no picture but with sound of HDMI channel

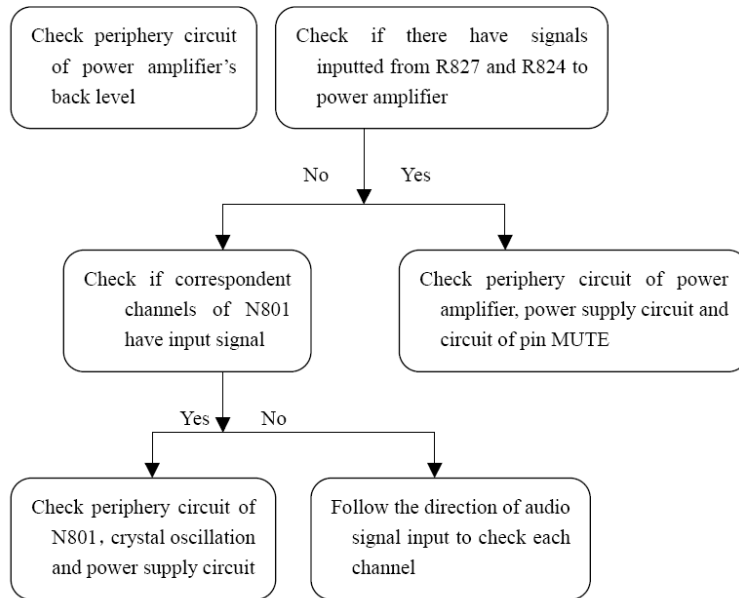
(3) No picture but with sound(only backlight lights up)



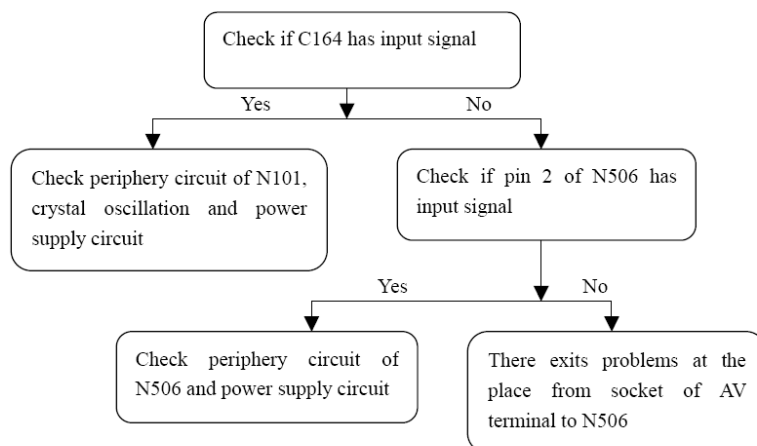
NOTE: Because the power supply for 37" LG LVDS is 12V check N715 for 37" and check N705 for other models

(4), No sound but with picture

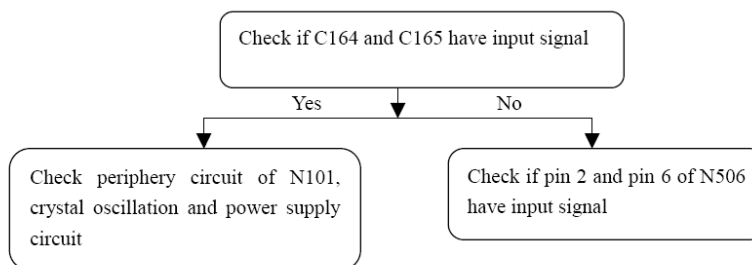


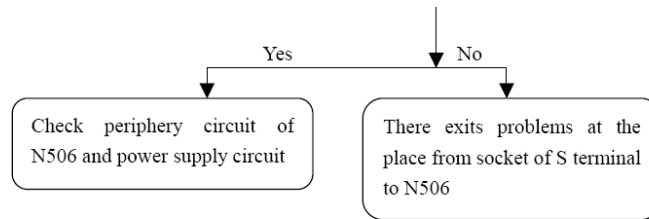


(5) , A certain channel fails to work properly
a), AV with no picture



b), S terminal with no picture

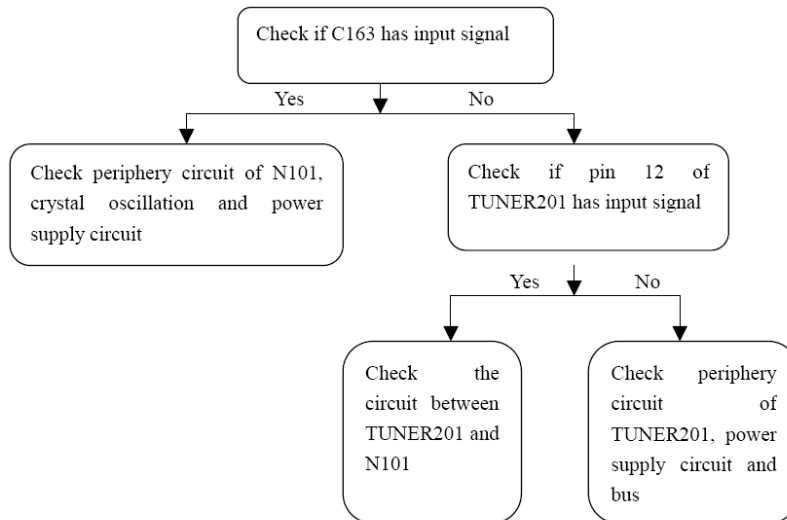




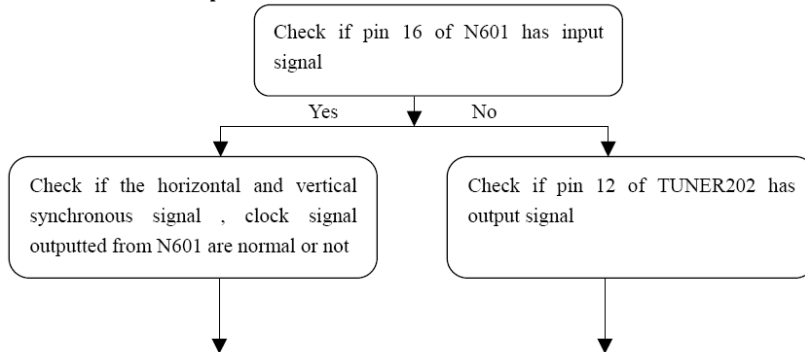
c), TV channel with no picture

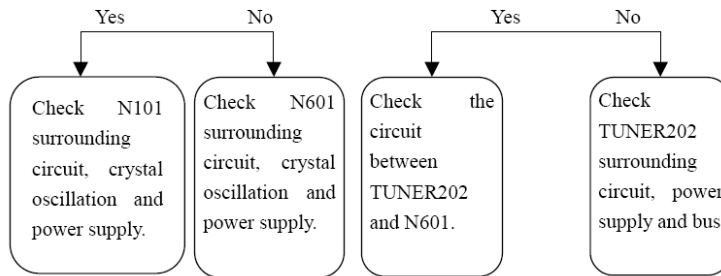
Firstly find out which frame fails to work properly making use of the PIP function, PIP frame or Main frame.

Main frame with no picture:

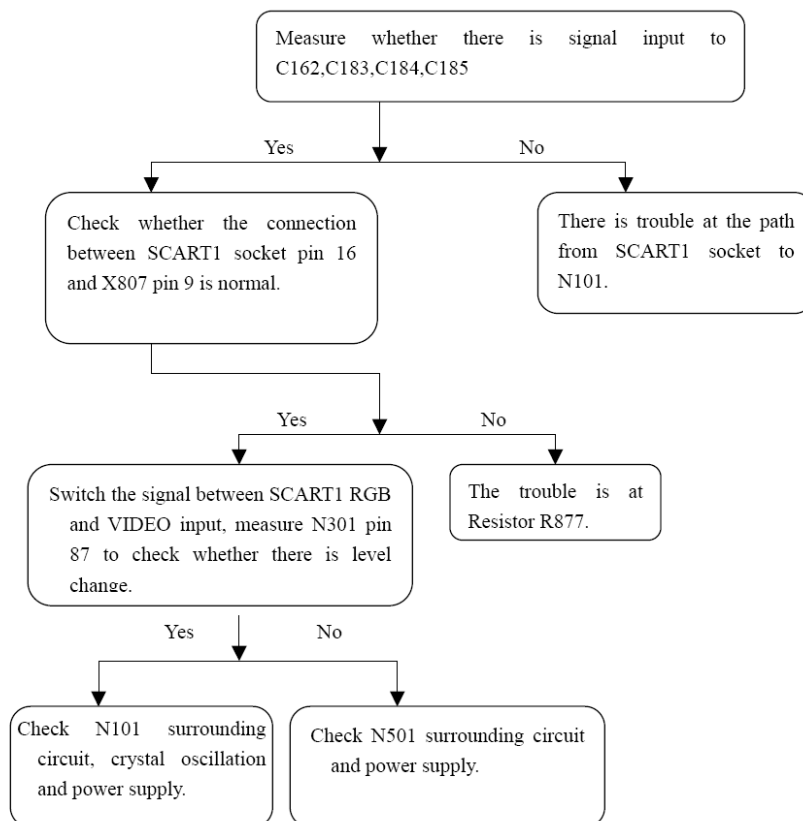


PIP frame with no picture:

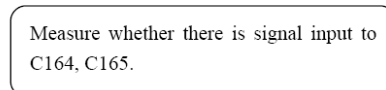


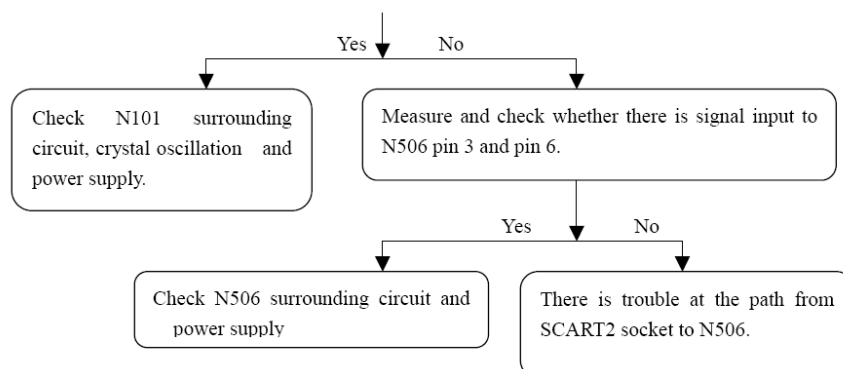


d) No picture in SCART1 mode

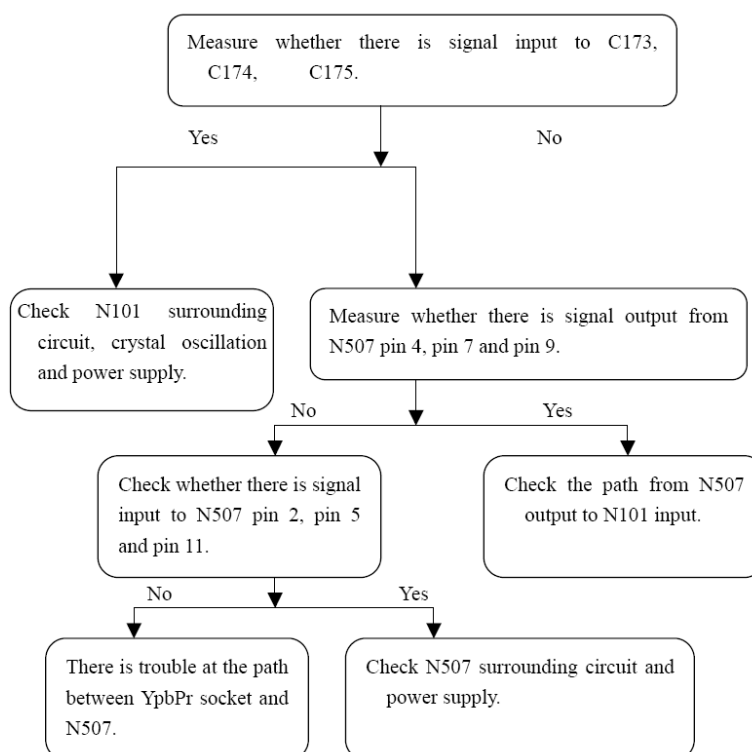


e) No picture at SCART2 mode

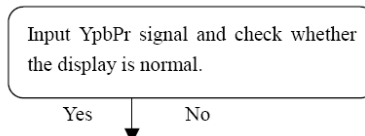


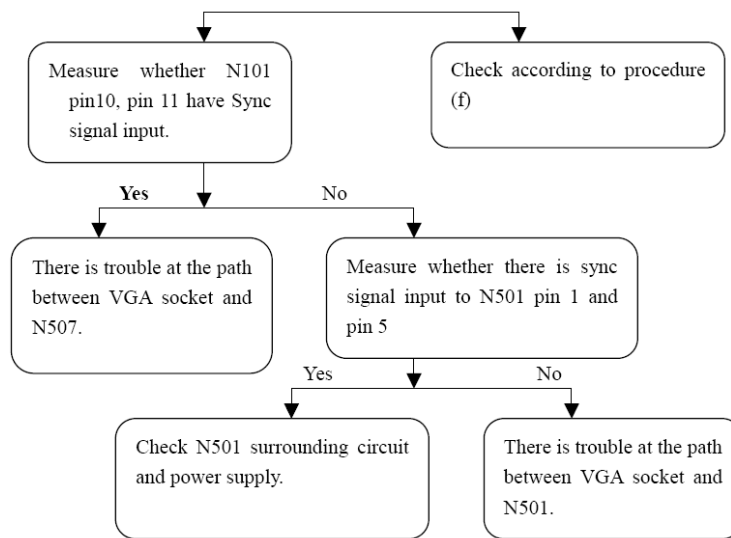


f) No picture at YPbPr or YCbCr mode

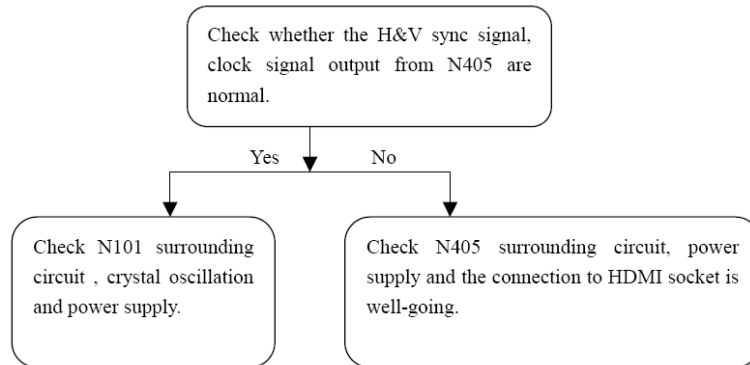


g) No picture in D-Sub mode

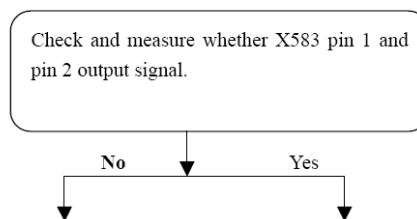


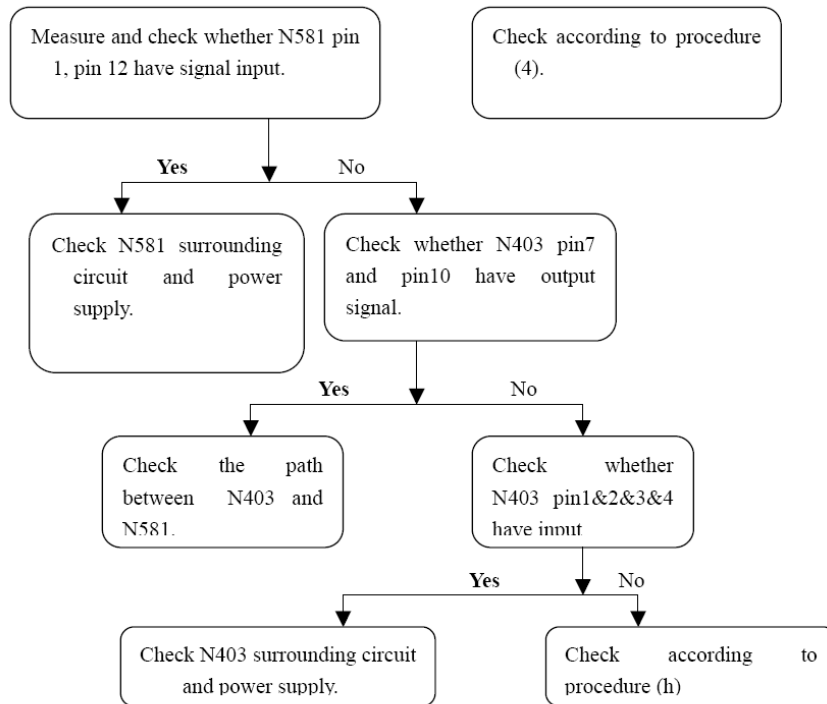


h) No picture in HDMI mode

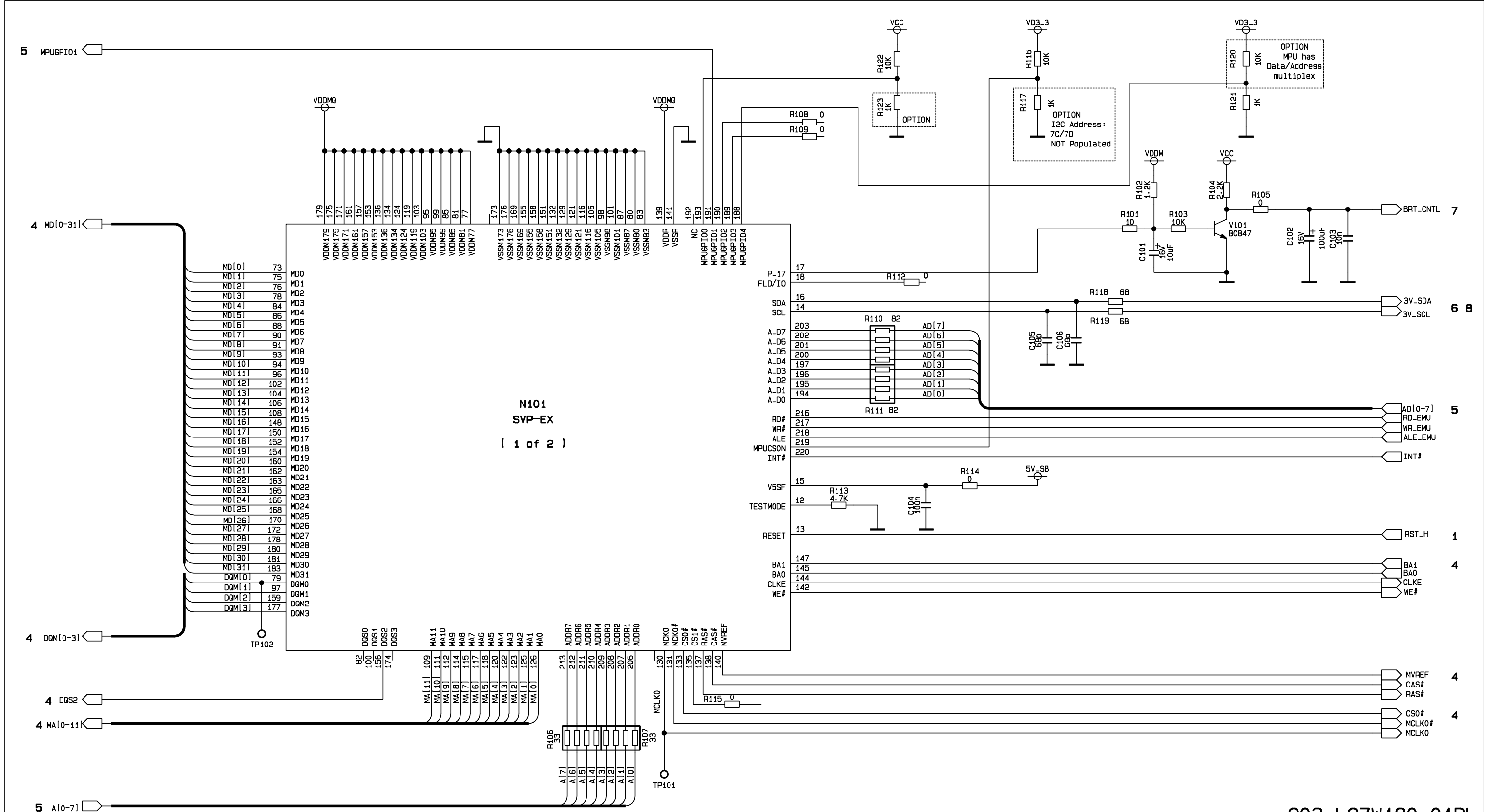


I) No sound in HDMI mode

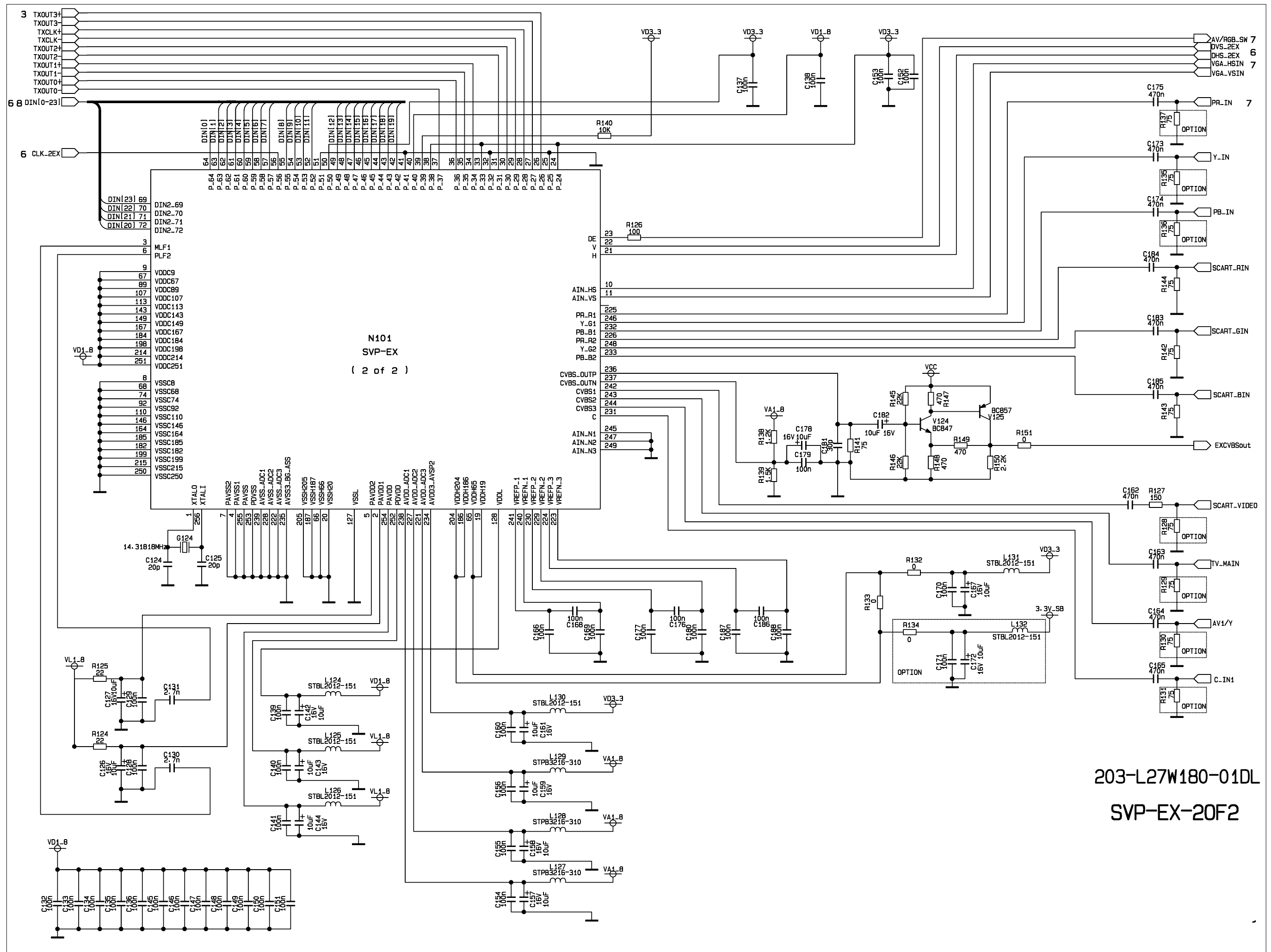


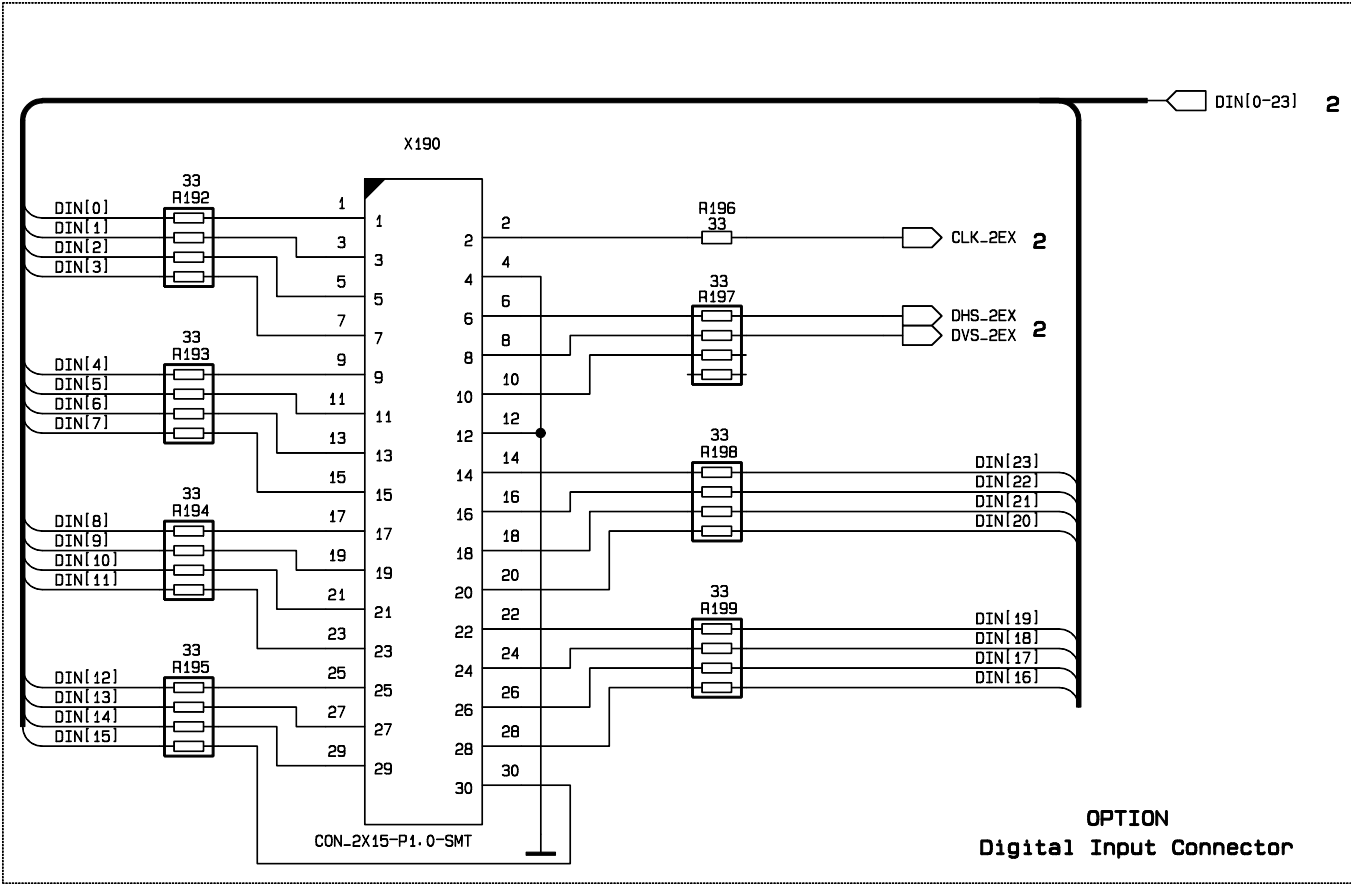
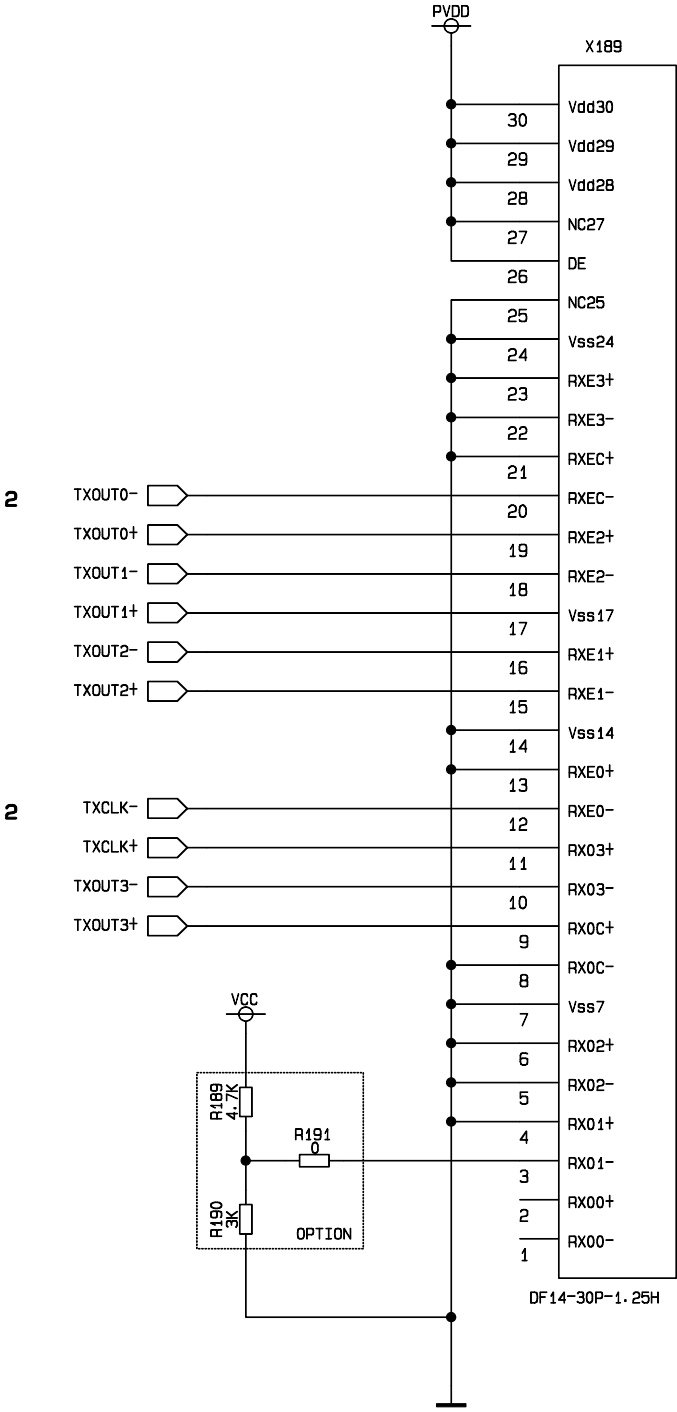


APPENDIX



203-L27W180-01DL
SVP-EX-10F2





203-L27W180-01DL
SVP-EX-Pin
Configuration

A

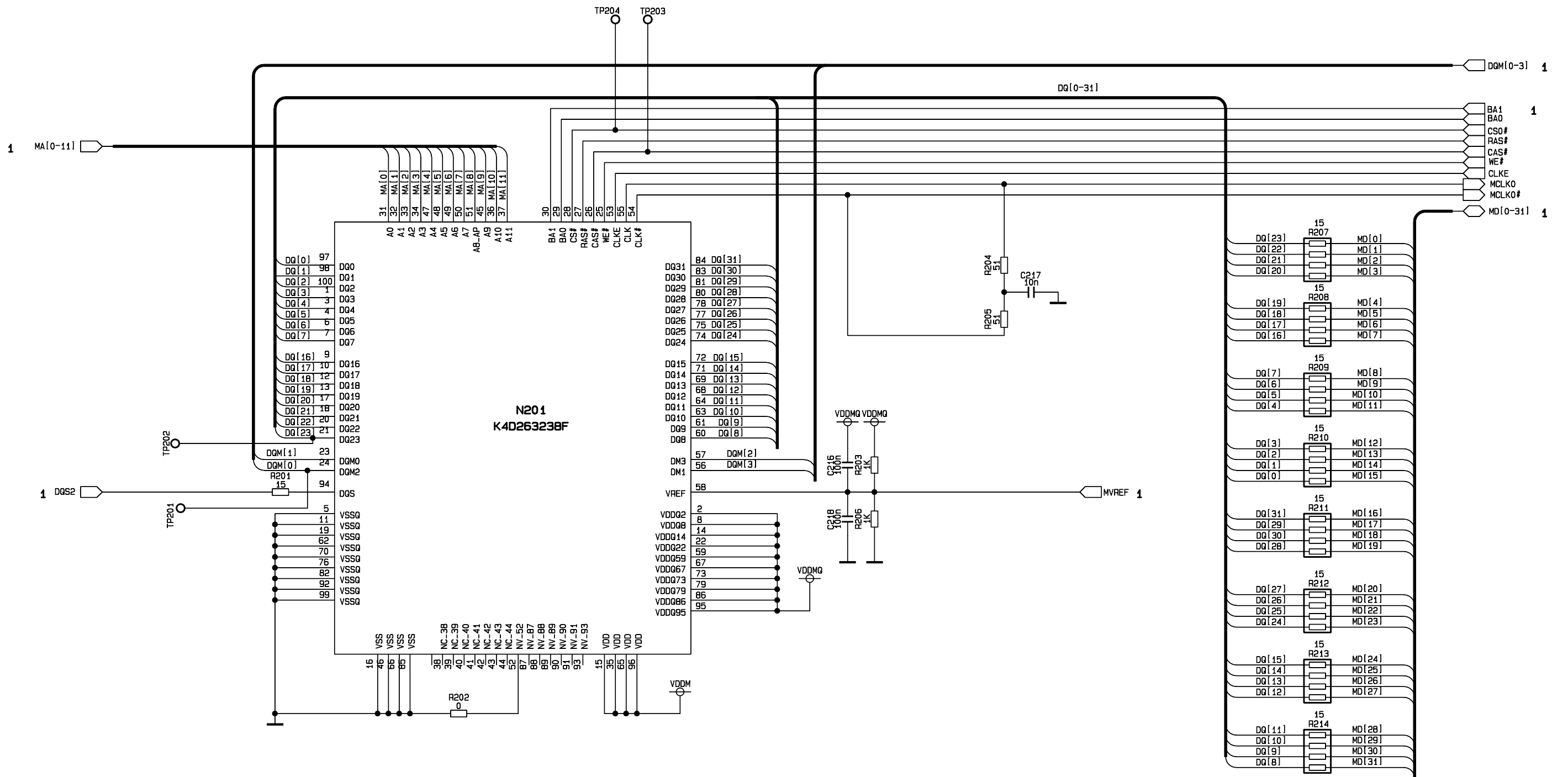
B

C

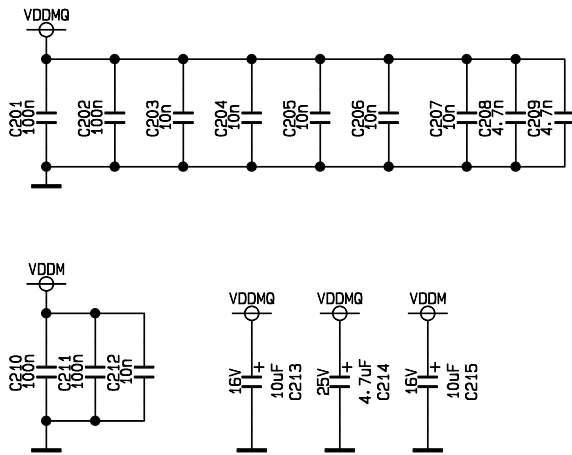
D

E

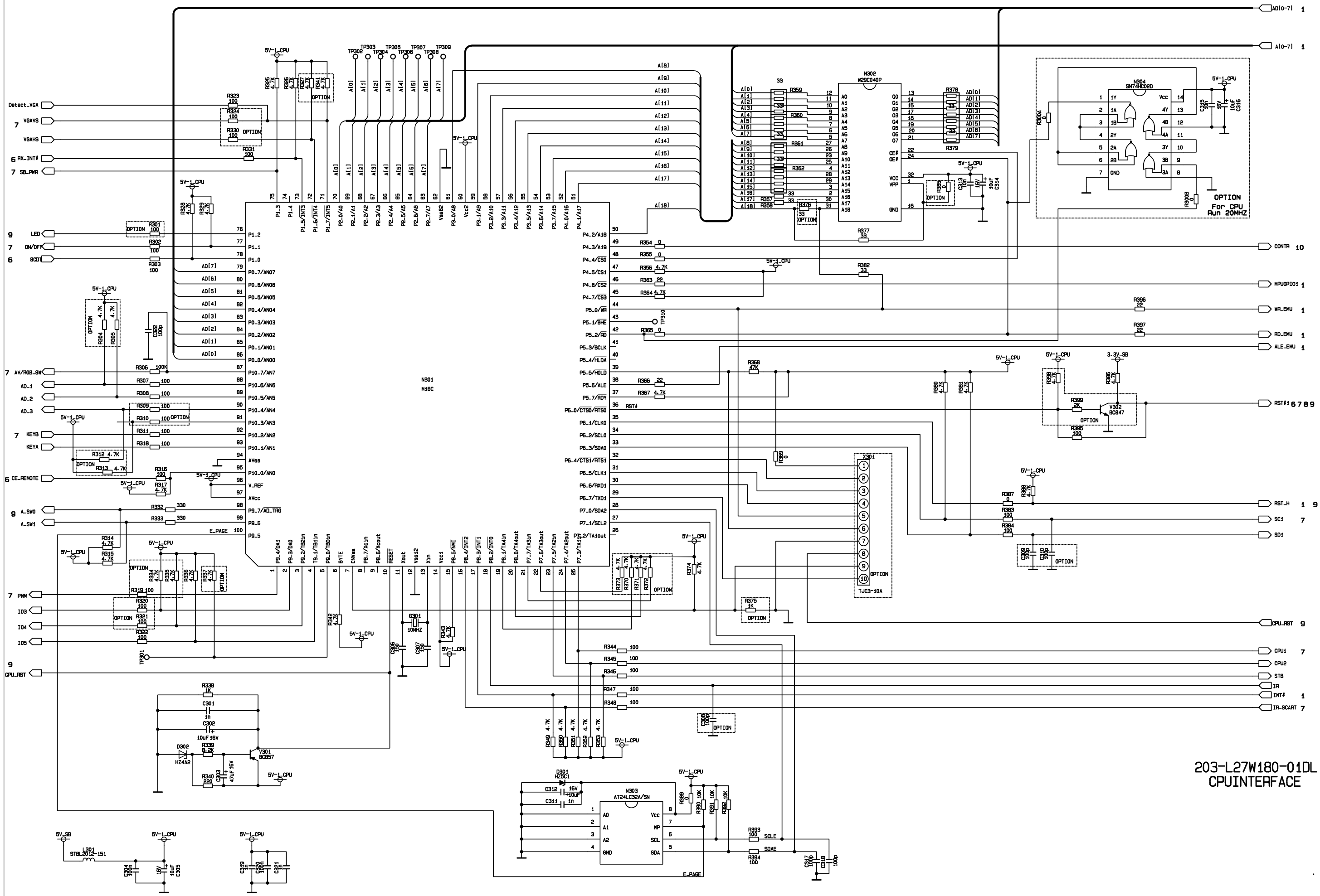
F



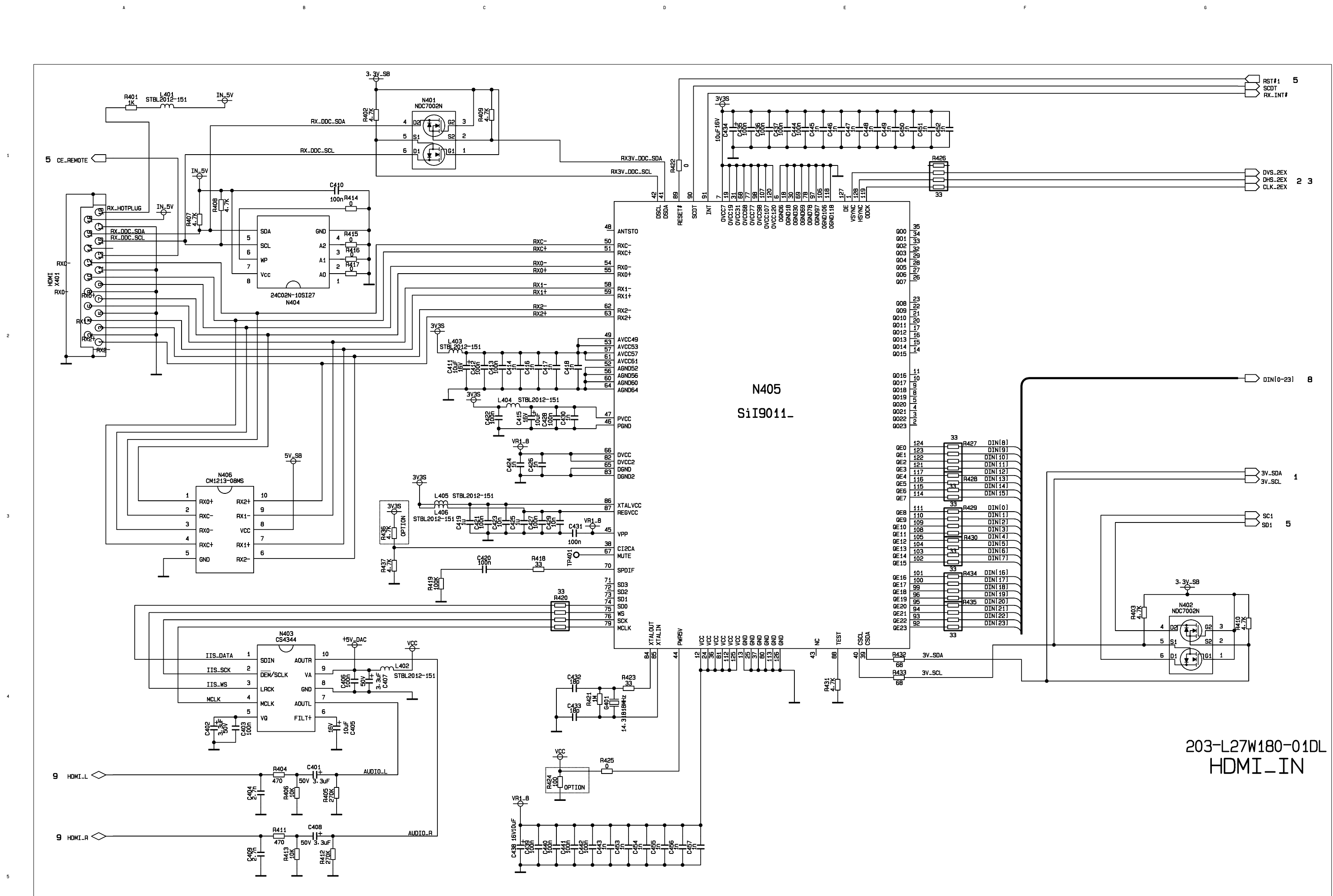
203-L27W180-01DL
DDRAM

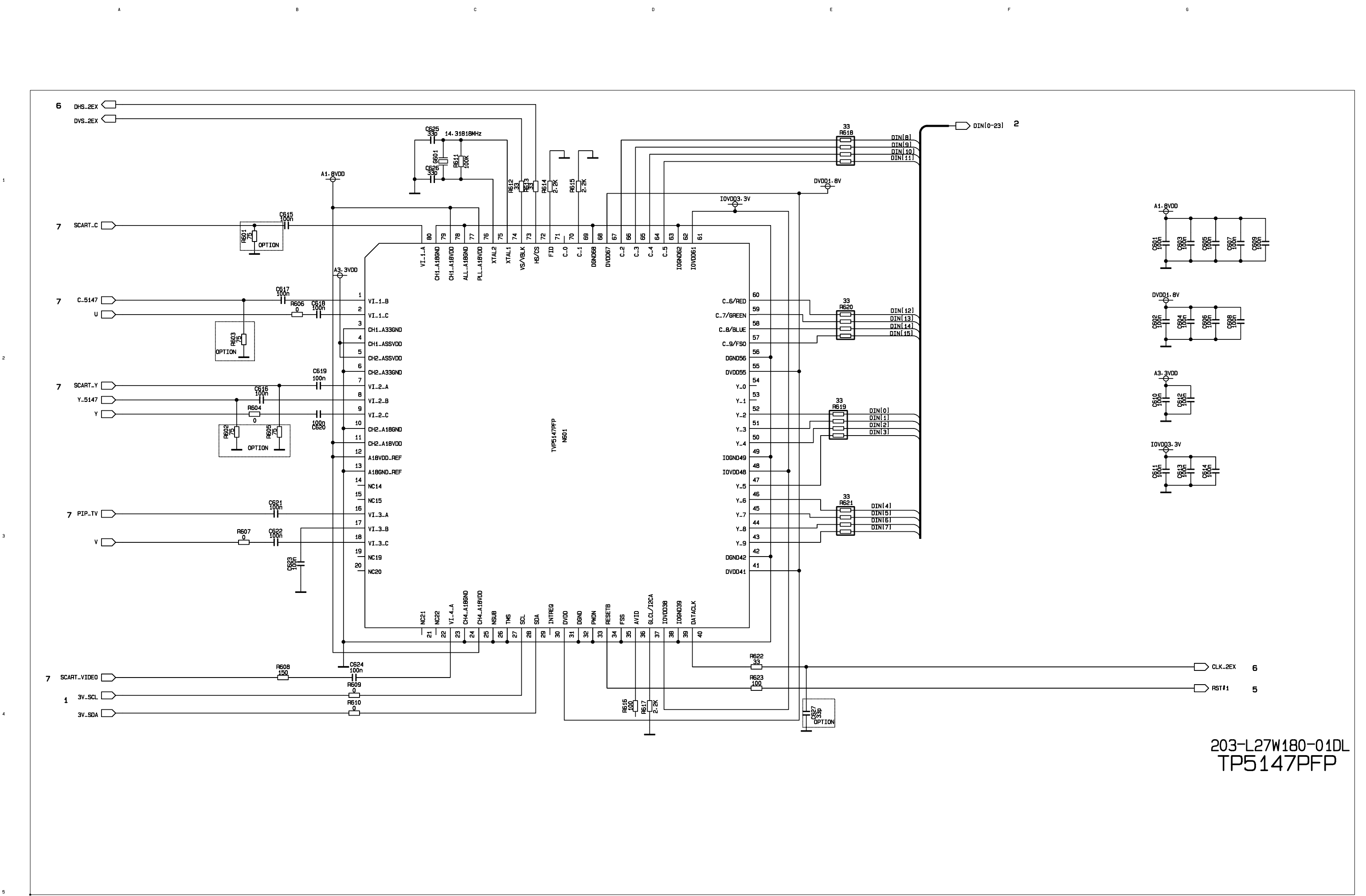


1
2
3
4
5
6

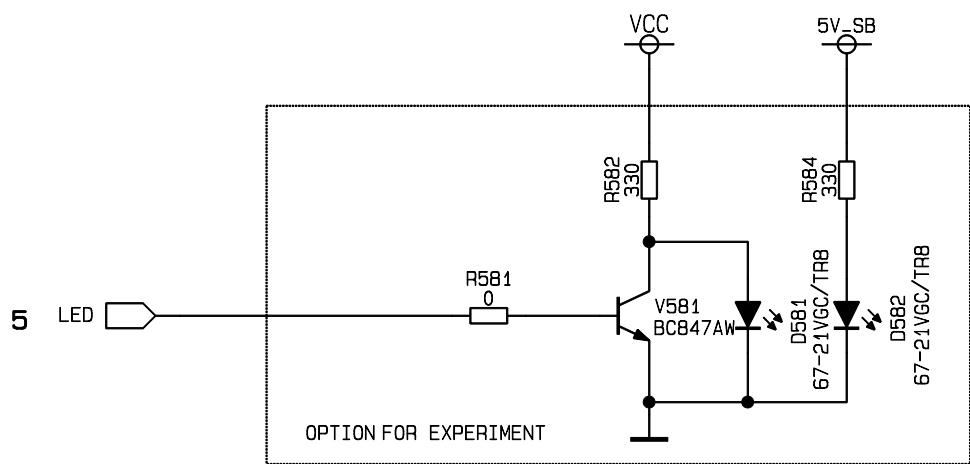
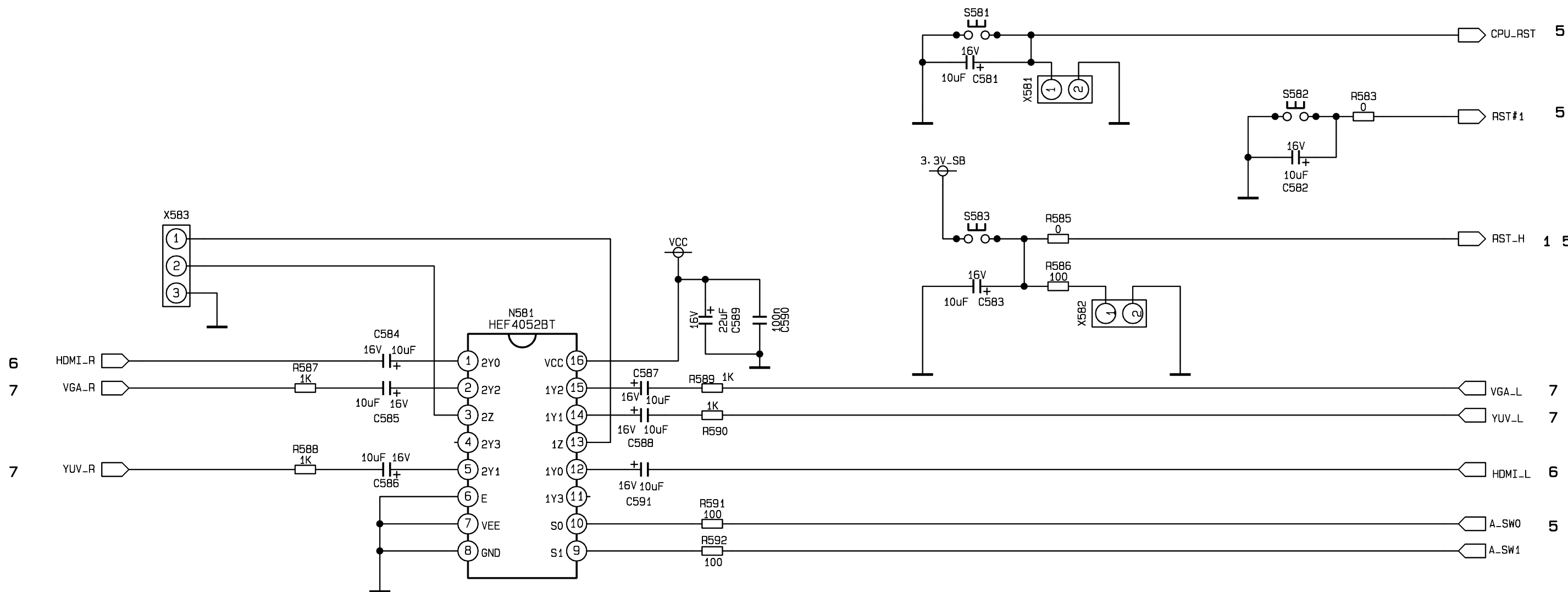


203-L27W180-01DL
CPUINTERFACE

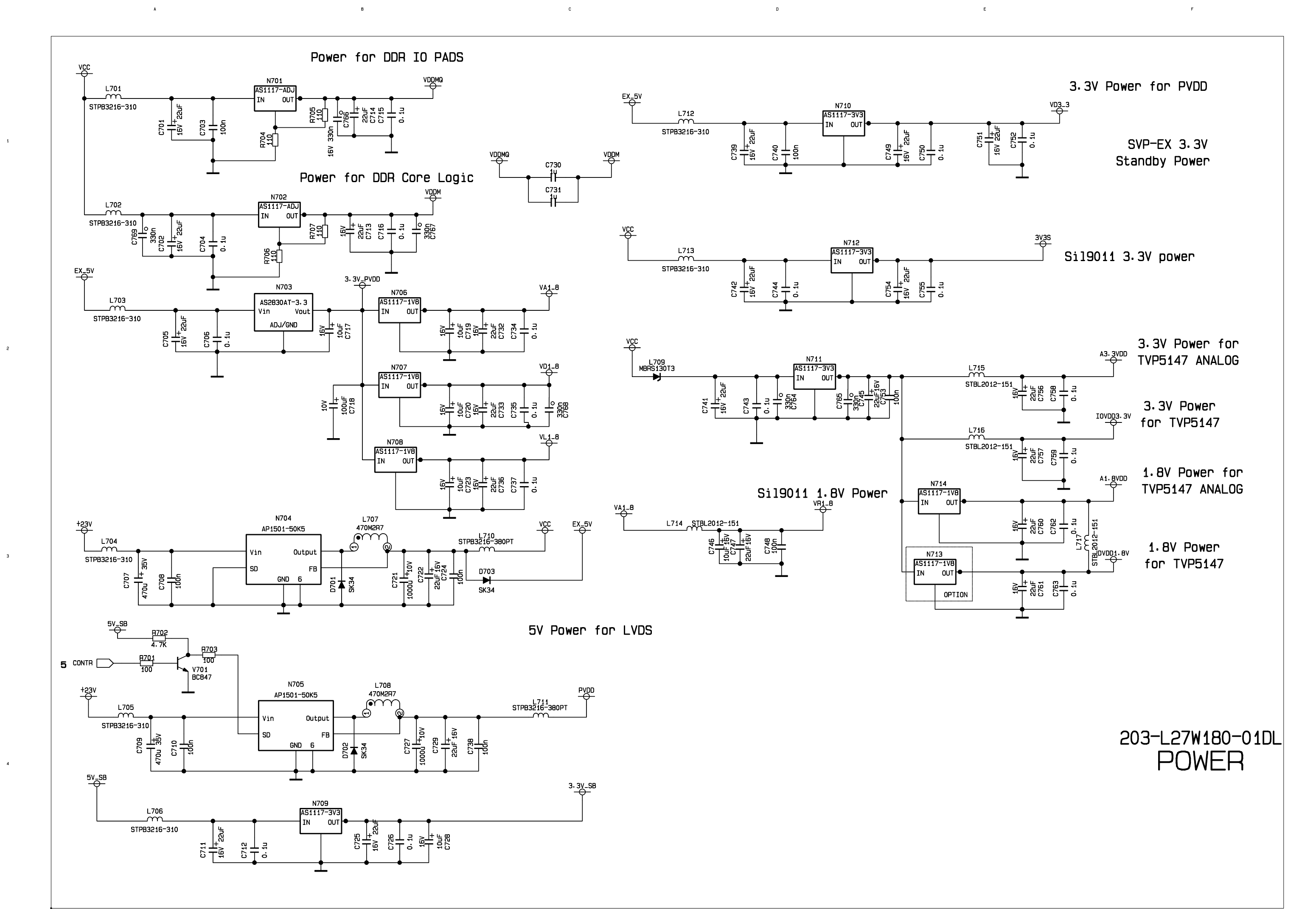




203-L27W180-01DL
TP5147PFP



203-L27W180-01DL
BUTTON&AUDIO



1

2

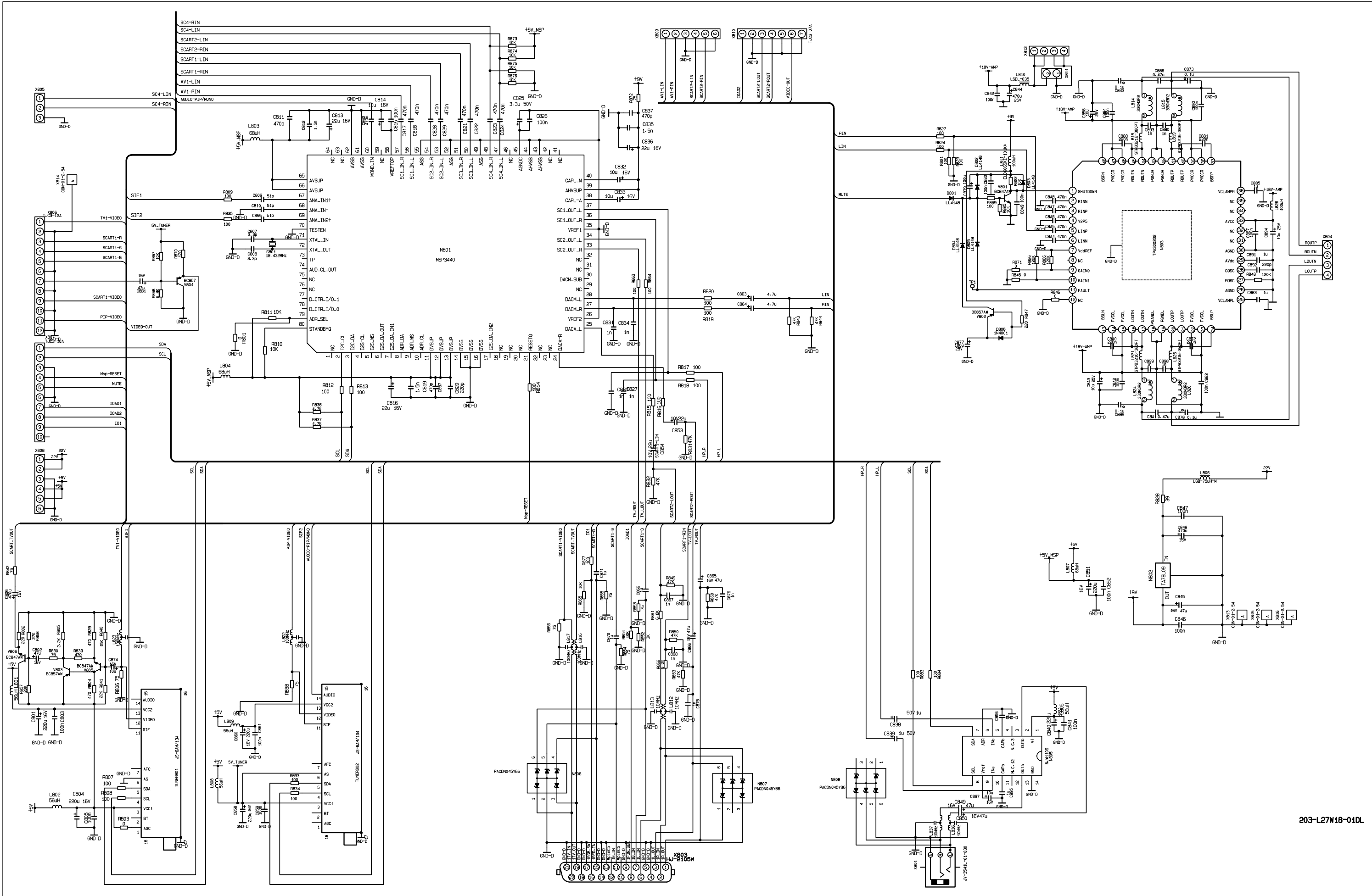
3

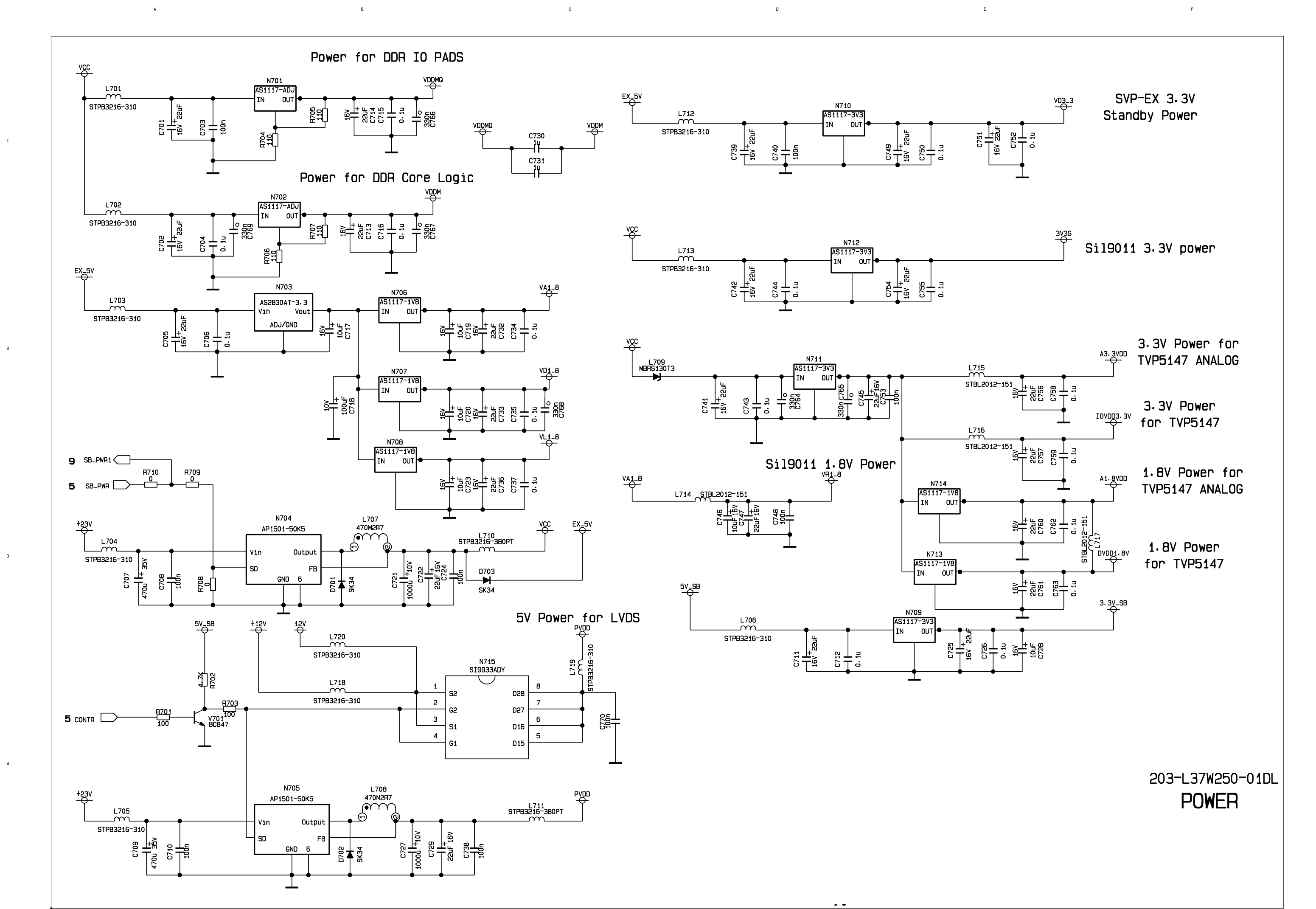
4

5

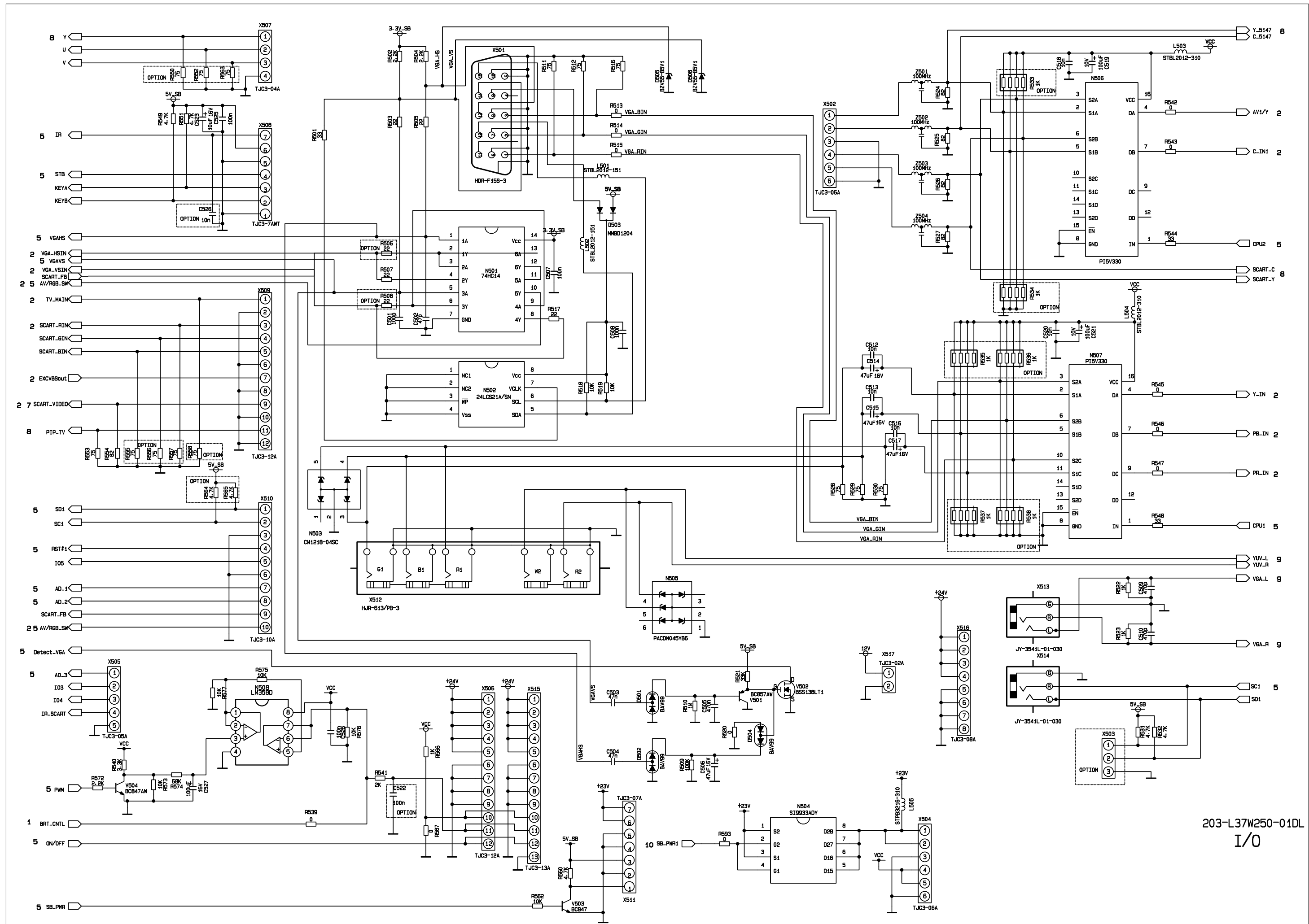
6

7

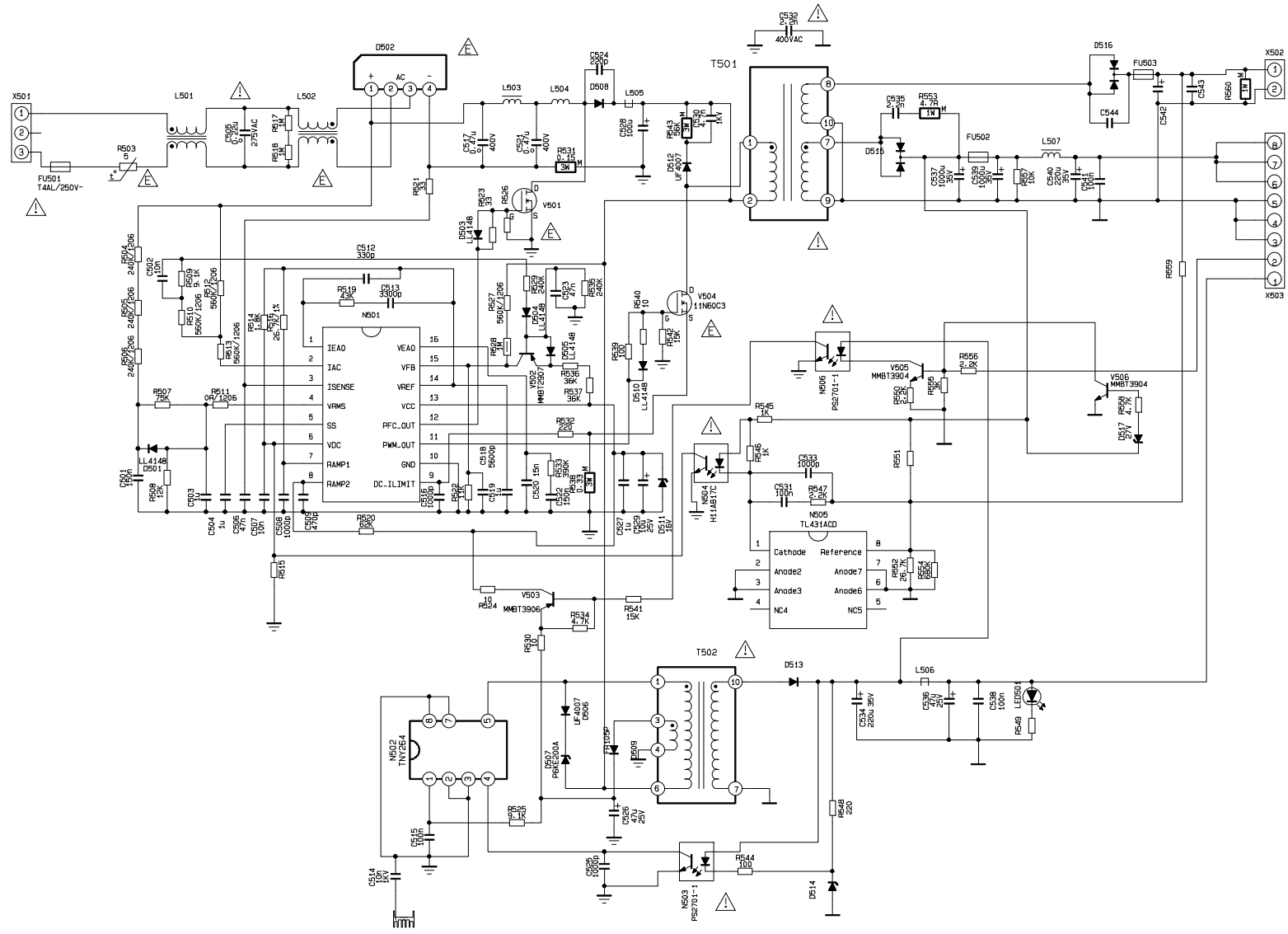




1
2
3
4
5
6



203-L37W250-01DL
I/O



PARTS LIST

Part Code	Description	QTY
128-05001-00	CONDUCTING FOIL 80X130	1
335-32002-00	PANEL V320B1-L01(C2)	1
360-30042-00	POWER SWITCH HF-606	1
364-42201-00	SOCKET WP2-9C	2
485-10183-00	POWER CARD 300 FERRITE BEAD VDE	1
615-10579-00A	PANEL HOLDER ASS'Y (CMO)	1
655-B1202-61	(12-PINS) LEAD WITH HOUSING	1
655-33901-16	(3-PINS) LEAD WITH HOUSING	1
655-4E301-55	(4-PINS) LEAD WITH HOUSING	1
655-41202-315	(4-PINS) LEAD WITH HOUSING	1
655-6E302-70	(6-PINS) LEAD WITH HOUSING	1
655-61202-169	(6-PINS) LEAD WITH HOUSING	1
655-71202-92	(7-PINS) LEAD WITH HOUSING	1
655-71202-92	(7-PINS) LEAD WITH HOUSING	1
655-74302-37	(7)-PINS LEAD WITH HOUSING	1
665-D0002-607	LVDS CALBES 30-PINS250mm	1
666-12301-00	FERRITE BEAD TY23X13.5X6	0.5
666-12301-00	FERRITE BEAD TY23X13.5X6	0.5
700-60255-100	LED-CONDUCTOR	1
700-60256-00	LED-CONDUCTOR	1
770-409B0-79	UL2468 20# 400mm	2
780-G18LHPAF2A	BACK CABINET HIPS	1
785-20023-00	STUD CAP	4
808-1A861-AF0	AV INTERFACE BOARD (RIGHT)	1
808-1B857-AF0B	KEY COVER GRAY 05	1
808-1B858-5D1	KEY COVER SILVERY WHITE	1
808-1C860-AF0B	AV INTERFACE BOARD (LEFT)	1
808-10812-AF0	POWER CARD COVER	1
808-10859-AF0	DECORATION COVER (LEFT RIGHT)	4
808-10863-AF0	SPEAKERS CONNECTING BOARD	2
808-10864-AF0	BACK CABINETCOVER (LEFT)	1
808-10865-AF0	BACK CABINET COVER (RIGHT)	1

Part Code	Description	QTY
808-10866-AF0	BACK CABINET COVER (BOTTOM)	1
808-70322-00	INSULATION SPACER	1
808-70336-00	CUSHION	1
808-80267-01	CONDUCTIVE GASKET (32X32X60)	4
851-23008-11	SCREW SJ2824 ST3X8C-D.Zn	4
851-23010-14	SCREW SJ2824 ST3X10C-Y	4
851-23010-14	SCREW SJ2824 ST3X10C-Y	4
851-23010-31	SCREW SJ2824 ST3X10FT-D.Zn	1
851-34012-57	SCREW B(+)4X12G-D.Zn	14
851-34012-57	SCREW B(+)4X12G-D.Zn	2
851-34012-57	SCREW B(+)4X12G-D.Zn	2
851-34016-57	SCREW B(+)4X16G-D.Zn	18
851-34016-57	SCREW B(+)4X16G-D.Zn	4
851-43010-14	SCREW F(+)T3x10A-Y	2
851-43010-14	SCREW F(+)T3x10A-Y	4
851-53012-31	SCREW SJ2825ST3X12FT-DZn	2
852-23012-84	SCREW SJ2829 M3X12-Y	4
852-33010-81	SCREW B(+) M3X10-D.Zn	5
852-33012-81	SCREW B(+) M3X12-D.Zn	16
852-43012-84	SCREW F(+) M3X12-Y	3
852-44008-84	SCREW F(+) M4X8-Y	8
852-44010-84	SCREW F(+) M4X10-Y	10
852-54012-81	SCREW SJ2830 M4X12-D.Zn	8
852-64008-81	SCREW W(+) M4X8-D.Zn	1
859-11398-00B	BACK-LIGHT STRIPE	1
862-20039-00A	CARTON CLIPS	6
863-81273-00A	POLY FOAM (LEFT TOP EPE)	1
863-81274-00A	POLY FOAM (RIGHT TOP EPE)	1
863-81275-00A	POLY FOAM (LEFT BOTTOM EPE)	1
863-81276-00A	POLY FOAM (RIGHT BOTTOM EPE)	1
868-20037-02	FIBREWASHER φ8Xφ3.2X0.8RED	4
868-20109-00	WASHER	6
870-10288-00	PANEL CONNECTORS (LEFT RIGHT)	2
870-10289-00	POWER BRACKET	1
870-10410-00	WALL BRACKET	1

Part Code	Description	QTY
870-30190-00	LED-CONDUCTOR BRACKET	1
886-31021-00	ACCESSORIES BOX (15L)	1
886-31846-00	CARTON BOX BOTTOM	1
887-20047-01	ACCESSORIES PALSTIC BAG	1
887-20122-00	PALSTIC BAG 120*140*0.04	1
887-21074-00	PALSTIC BAG (100X230)	1
887-21097-P0	PALSTIC BAG 1200X1050	1
887-21167-00	WALL BRACKET ACCESSORIES BAG	1
887-21270-00	PALSTIC BAG (150X900)	1
894-70040-11	WASHER GB862.1-87-4-D.Zn	1
364-93222-00	AV JACK EV-021F-AV3	2
485-10183-00	POWER CARD 300 FERRITE BEAD VDE !	-1
485-10200-00	POWER CARD SW198+LASR-24+FERRITE BEAD !	1
488-10012-00	BATTERY 7#	2
604-L32W18S3-01	I/M	1
605-L27X183-01	SPEAKER INSTALLATION GUIDE	1
605-L32K53-00	WALL BRACKET I/M	1
665-D0002-156	RFΦ9.5(m)-Φ9.5(m)	1
780-G18W0-1C1	FRONT CABINET	1
880-10813-B1	FRONT LOGO	1
881-62875-163	BACK PLATE LABEL (LCT-32PBSTP,AKIRA	1
881-80847-00	WRRANTY CARD	1
886-31845-050W	CARTON BOX (LCT-32PBSTP,SKIRA)	1
301-JL27W18-02G	RC-I02-0GREMOTE CONTROL UNIT ASS'Y (AKIRA)	1
852-34008-81	SCREW B(+) M4X8-D.Zn	8
855-B0016-00	EXPANSION BOLT M8X72	4
855-C4030-00	SCREW 4X30	20
863-80921-00	WALL BRACKET POLY FOAM	1
870-10079-00A	WALL BRACKET CONNECTORS	1
870-10080-00A	WALL BRACKET HOLDER	1
886-31387-00	WALL BRACKET CARTON (455X195X95)	1
887-21167-00	WALL BRACKET ACCESSORIES BAG	2
615-10505-00B	ROTATION AXIS ASS'Y	1
742-30091-00	TIE	1
780-30184-AC0	TV STAND FACE COVER	1

Part Code	Description	QTY
808-10742-0G0	POST COVER (FRONT)	1
808-10830-0G0	POST COVER (BACK)	1
808-10933-8A0	TV STAND FACE COVER	1
820-20054-00A	TV STAND COUNNTERWEIGHT PLATE	1
851-43008-31	SCREW F(+)T3X8BT-D.Zn	1
851-43010-11	SCREW F(+)T3x10A-DZn	1
851-43035-11	SCREW F(+)T3x35A-DZn	1
851-44006-31	SCREW F(+)T4X6BT-D.Zn	8
852-44014-82	SCREW F(+)M4X14 DNl	8
868-20789-00	CUSHION	9
870-4B202-0G0	UPRIGHT POST (SILVERY WHITE 06)	1
364-42201-00	SOCKET WP2-9C	2
384-20507-81	SPEAKER ST50-05	4
384-21912-W0	SPEAKER ST13-Q09	2
644-15002-18	UL1007 22# 150mm RED	2
665-D0002-622	SPEAK WIRES 120mm	2
780-30178-0G0	SPEAKER FRONT COVER	1
780-30179-AF0	SPEAKERBACK COVER	1
804-20440-00	SPEAKER CONNECTORS	2
808-70240-00	EVAGLUE 75X30X1	2
808-70259-00	EVAGLUE (25X15X2)	2
808-70367-00	EVAGLUE (900X4X1)	2
851-23008-31	SCREW SJ2824 ST3X8FT-D.Zn	4
851-23008-31	SCREW SJ2824 ST3X8FT-D.Zn	16
851-23010-14	SCREW SJ2824 ST3X10C-Y	4
851-24012-31	SCREW SJ2824 ST4X12FT-DZn	10
851-24012-31	SCREW SJ2824 ST4X12FT-DZn	4
360-10001-00	TACT SWITCH KFC-A06-4X4.5X5B	1
360-10001-00	TACT SWITCH KFC-A06-4X4.5X5B	1
360-10001-00	TACT SWITCH KFC-A06-4X4.5X5B	1
360-10001-00	TACT SWITCH KFC-A06-4X4.5X5B	1
360-10001-00	TACT SWITCH KFC-A06-4X4.5X5B	1
360-10001-00	TACT SWITCH KFC-A06-4X4.5X5B	1
360-10001-00	TACT SWITCH KFC-A06-4X4.5X5B	1
360-10001-00	TACT SWITCH KFC-A06-4X4.5X5B	1
364-33101-00	3-PINS CONNECTORS TJC3-03A	1

Part Code	Description	QTY
467-1C210-H03	CARBON RESISTOR 1/6W-1K-J	1
467-1C210-H03	CARBON RESISTOR 1/6W-1K-J	1
467-1C220-H03	CARBON RESISTOR 1/6W-2K-J	1
467-1C220-H03	CARBON RESISTOR 1/6W-2K-J	1
467-1C243-H03	CARBON RESISTOR 1/6W-4.3K-J	1
467-1C243-H03	CARBON RESISTOR 1/6W-4.3K-J	1
467-1C330-H03	CARBON RESISTOR 1/6W-30K-J	1
782-L27W18-050A	BUTTON PCB	1
870-30184-020	KEY BRACKET (BLACK)	1
877-50490-0T0	KEY (PLATE SILVERY WHITE)	1
340-10132-20	LIGHT-EMITTING DIODE HFT5038CPBR	2
655-3K301-02	(3-PINS) LEAD WITH HOUSING	1
364-36104-00	6-PINS CONNECTORS TJC3-06AWT	1
364-36104-00	6-PINS CONNECTORS TJC3-06AWT	1
364-37104-00	7-PINS CONNECTORS TJC3-07AWT	1
364-49219-00	SOCKET HJ-2105F	1
364-91202-00	S-VIDEO TERMINAL CKX5-2K-2	1
364-93219-00	AV JACK AV3-14WKD	1
464-6D747-M0	ELECTROLYTIC CAP CD110-16V-470uF-M	1
353-05050-20	SMD IC PESD5V0L5UY	1
353-05050-20	SMD IC PESD5V0L5UY	1
353-05050-20	SMD IC PESD5V0L5UY	1
455-12068-H0	SMD RESISTOR FTR0603680JR	1
455-12268-H0	SMD RESISTOR FTR0603682JR	1
455-12268-H0	SMD RESISTOR FTR0603682JR	1
455-12268-H0	SMD RESISTOR FTR0603682JR	1
455-12268-H0	SMD RESISTOR FTR0603682JR	1
455-12268-H0	SMD RESISTOR FTR0603682JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12347-H0	SMD RESISTOR FTR0603473JR	1
455-12347-H0	SMD RESISTOR FTR0603473JR	1
455-12347-H0	SMD RESISTOR FTR0603473JR	1
455-12347-H0	SMD RESISTOR FTR0603473JR	1
456-2210K-B1	SMD CAPACITOR 06032R102K250BA	1
456-2210K-B1	SMD CAPACITOR 06032R102K250BA	1

Part Code	Description	QTY
456-2410R-C1	SMD CAPACITOR C1608Y5V1E104ZT	1
456-3210H-11	SMD CAPACITOR 0603CG102J500BA	1
456-3210H-11	SMD CAPACITOR 0603CG102J500BA	1
456-3210H-11	SMD CAPACITOR 0603CG102J500BA	1
456-3210H-11	SMD CAPACITOR 0603CG102J500BA	1
477-90003-00	SMD CERAMIC FILTER LFA20-2A1E103M	1
477-90003-00	SMD CERAMIC FILTER LFA20-2A1E103M	1
477-90003-00	SMD CERAMIC FILTER LFA20-2A1E103M	1
477-90003-00	SMD CERAMIC FILTER LFA20-2A1E103M	1
477-90003-00	SMD CERAMIC FILTER LFA20-2A1E103M	1
477-90003-00	SMD CERAMIC FILTER LFA20-2A1E103M	1
477-90004-00	SMD CERAMIC FILTER LFA20-2A1E104M	1
477-90004-00	SMD CERAMIC FILTER LFA20-2A1E104M	1
477-90004-00	SMD CERAMIC FILTER LFA20-2A1E104M	1
477-90004-00	SMD CERAMIC FILTER LFA20-2A1E104M	1
477-90004-00	SMD CERAMIC FILTER LFA20-2A1E104M	1
782-L27W18-4000	VIDEO PROCESSING BOARD PCB	1
667-L32K5-20A	POWER PCB ASS'Y KAS200-5S241812XS	1
343-18150-10	TRANSISTOR 2SC1815-Y	1
352-51170-00	IC HRM538BB5117 (D)	1
364-33104-00	3-PINS CONNECTORS TJC3-03AWT	1
364-34186-00	4-PINS CONNECTORS TJC10-4AWT	1
459-1410M-00	CERAMIC CAPACITOR DD410-SR104M25	1
464-6D622-M0	ELECTROLYTIC CAP CD110-16V-22uF-M	1
467-1C047-H0	CARBON RESISTOR 1/6W-47Ω-J	1
467-1C110-H0	CARBON RESISTOR 1/6W-100Ω-J	1
467-1C151-H0	CARBON RESISTOR 1/6W-510Ω-J	1
467-1C230-H0	CARBON RESISTOR 1/6W-3K-J	1
782-L32U18-0900	IR RECEIVE PCB	1
329-61805-00	CRYSTAL HC-49U 18.432MHZ	1
340-00003-00	DIODE IN4001	1
352-78090-90	IC TA78L09 (D)	1
364-11212-00	EARPHONE JACK ST-112	1
364-3A205-00	21 CONNECTORS HJ-2105W	1
364-3B101-00	+ 2-PINS CONNECTORS TJC3-12A	1

Part Code	Description	QTY
364-3D101-00	+-PINS CONNECTORS TJC3-10A	1
364-33101-00	3-PINS CONNECTORS TJC3-03A	1
364-34101-00	4-PINS CONNECTORS TJC3-04A	1
364-34101-00	4-PINS CONNECTORS TJC3-04A	1
364-36101-00	6-PINS CONNECTORS TJC3-06A	1
364-36101-00	6-PINS CONNECTORS TJC3-06A	1
364-37101-00	7-PINS CONNECTORS TJC3-07A	1
364-41205-00	ANT SOCKET HR-J2	1
462-90410-H0	POLYESTER CAP 63V-0.1uF-J	1
462-90410-H0	POLYESTER CAP 63V-0.1uF-J	1
464-6D747-M0	ELECTROLYTIC CAP CD110-16V-470uF-M	1
464-6E610-M0	ELECTROLYTIC CAP CD110-25V-10uF-M	1
464-6E610-M0	ELECTROLYTIC CAP CD110-25V-10uF-M	1
464-6F747-M1	ELECTROLYTIC CAP CD110-35V-470uF-M	1
467-1D010-H0	CARBON RESISTOR RT14-1/4W-10Ω-J	1
471-1056H-00	PEAKING COIL EL0606SKI-560J	1
471-1056H-00	PEAKING COIL EL0606SKI-560J	1
471-1056H-00	PEAKING COIL EL0606SKI-560J	1
471-1056H-00	PEAKING COIL EL0606SKI-560J	1
471-1110K-00	PEAKING COIL EL0606SKI-101K	1
471-1110K-00	PEAKING COIL EL0606SKI-101K	1
471-2056H-60	PEAKING COIL LGA0307-56uH-J	1
471-2068K-10	PEAKING COIL LGA0410-68uH-K	1
471-2068K-10	PEAKING COIL LGA0410-68uH-K	1
477-40031-00	FIXED COIL LG750	1
477-40230-00	FIXED COIL LH470-1	1
590-40511-00	TUNER JS-6B2/121A2	1
590-40512-00	*TUNER JS-6B2/122A2-A2	1
615-10511-00B	TV BOARD SHUTTER ASS'Y (TOP)	1
615-10512-00A	TV BOARD SHUTTER ASS'Y (BOTTOM)	1
665-N0120-00	COAXIAL CABLE CSYV-2B-120	1
665-N0260-00	*COAXIAL CABLE CSYV-2B-260	1
666-12301-00	FERRITE BEAD TY23X13.5X6	1
666-13501-0G	FERRITE BEAD 3.5X1X6	1
808-70397-00	INSULATION SPACER	4

Part Code	Description	QTY
852-53006-81	SCREW SJ2830 M3X6-D.Zn	2
859-1A1373-00	TVINTERFACE SPACE PLATE	1
870-10290-00	RF BRACKET	1
340-00001-0S	SMD DIODE LL4148	1
340-00001-0S	SMD DIODE LL4148	1
340-00001-0S	SMD DIODE LL4148	1
340-00001-0S	SMD DIODE LL4148	1
342-08470-90	SMD TRANSISTOR BC847AW	1
342-08470-90	SMD TRANSISTOR BC847AW	1
342-08470-90	SMD TRANSISTOR BC847AW	1
342-08570-90	SMD TRANSISTOR BC857 AW	1
342-08570-90	SMD TRANSISTOR BC857 AW	1
342-08570-90	SMD TRANSISTOR BC857 AW	1
353-05050-20	SMD IC PESD5V0L5UY	1
353-05050-20	SMD IC PESD5V0L5UY	1
353-11090-20	SMD ICNJW1109M	1
353-30080-10	SMD ICTPA3008D2	1
353-34100-80	*SMD IC MSP3410G PQFP80(M)	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12075-H0	SMD RESISTOR FTR0603750JR	1
455-12075-H0	SMD RESISTOR FTR0603750JR	1
455-12082-H0	SMD RESISTOR FTR0603820JR	1
455-12110-H0	SMD RESISTOR FTR0603101JR	1
455-12110-H0	SMD RESISTOR FTR0603101JR	1
455-12110-H0	SMD RESISTOR FTR0603101JR	1
455-12110-H0	SMD RESISTOR FTR0603101JR	1
455-12110-H0	SMD RESISTOR FTR0603101JR	1

Part Code	Description	QTY
455-12110-H0	SMD RESISTOR FTR0603101JR	1
455-12110-H0	SMD RESISTOR FTR0603101JR	1
455-12110-H0	SMD RESISTOR FTR0603101JR	1
455-12110-H0	SMD RESISTOR FTR0603101JR	1
455-12110-H0	SMD RESISTOR FTR0603101JR	1
455-12110-H0	SMD RESISTOR FTR0603101JR	1
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455-12110-H0	SMD RESISTOR FTR0603101JR	1
455-12110-H0	SMD RESISTOR FTR0603101JR	1
455-12110-H0	SMD RESISTOR FTR0603101JR	1
455-12110-H0	SMD RESISTOR FTR0603101JR	1
455-12110-H0	SMD RESISTOR FTR0603101JR	1
455-12112-H0	SMD RESISTOR FTR0603121JR	1
455-12122-H0	SMD RESISTOR FTR0603221JR	1
455-12122-H0	SMD RESISTOR FTR0603221JR	1
455-12147-H0	SMD RESISTOR FTR0603471JR	1
455-12147-H0	SMD RESISTOR FTR0603471JR	1
455-12147-H0	SMD RESISTOR FTR0603471JR	1
455-12220-H0	SMD RESISTOR FTR0603202JR	1
455-12222-H0	SMD RESISTOR FTR0603222JR	1
455-12227-H0	SMD RESISTOR FTR0603272JR	1
455-12268-H0	SMD RESISTOR FTR0603682JR	1
455-12268-H0	SMD RESISTOR FTR0603682JR	1
455-12268-H0	SMD RESISTOR FTR0603682JR	1
455-12268-H0	SMD RESISTOR FTR0603682JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1

Part Code	Description	QTY
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12315-H0	SMD RESISTOR FTR0603153JR	1
455-12322-H0	SMD RESISTOR FTR0603223JR	1
455-12347-H0	SMD RESISTOR FTR0603473JR	1
455-12347-H0	SMD RESISTOR FTR0603473JR	1
455-12347-H0	SMD RESISTOR FTR0603473JR	1
455-12347-H0	SMD RESISTOR FTR0603473JR	1
455-12347-H0	SMD RESISTOR FTR0603473JR	1
455-12347-H0	SMD RESISTOR FTR0603473JR	1
455-12347-H0	SMD RESISTOR FTR0603473JR	1
455-12412-H0	SMD RESISTOR FTR0603124JR	1
455-12412-H0	SMD RESISTOR FTR0603124JR	1
455-22000-H0	SMD RESISTOR RC11-1/8W-0-J	1
455-22310-H0	SMD RESISTOR RC11-1/8W-10K-J	1
455-22310-H0	SMD RESISTOR RC11-1/8W-10K-J	1
455-22412-H0	SMD RESISTOR RC11-1/8W-120K-J	1
456-1447R-C3	SMD CAPACITOR C3216Y5V1C474ZT	1
456-1447R-C3	SMD CAPACITOR C3216Y5V1C474ZT	1
456-2215K-B1	SMD CAPACITOR 06032R152K250BA	1
456-2215K-B1	SMD CAPACITOR 06032R152K250BA	1
456-2215K-B1	SMD CAPACITOR 06032R152K250BA	1
456-2410M-C1	SMD CAPACITOR 06032E104M250BA	1
456-2410M-C1	SMD CAPACITOR 06032E104M250BA	1
456-2410M-C1	SMD CAPACITOR 06032E104M250BA	1
456-2410M-C1	SMD CAPACITOR 06032E104M250BA	1
456-2410M-C1	SMD CAPACITOR 06032E104M250BA	1
456-2410M-C1	SMD CAPACITOR 06032E104M250BA	1
456-2410M-C1	SMD CAPACITOR 06032E104M250BA	1
456-2410M-C1	SMD CAPACITOR 06032E104M250BA	1
456-2410M-C1	SMD CAPACITOR 06032E104M250BA	1
456-2410M-C1	SMD CAPACITOR 06032E104M250BA	1
456-2410M-C1	SMD CAPACITOR 06032E104M250BA	1
456-2410M-C1	SMD CAPACITOR 06032E104M250BA	1
456-2410M-C1	SMD CAPACITOR 06032E104M250BA	1

Part Code	Description	QTY
456-2410M-C1	SMD CAPACITOR 06032E104M250BA	1
456-2410M-C1	SMD CAPACITOR 06032E104M250BA	1
456-2410M-C1	SMD CAPACITOR 06032E104M250BA	1
456-2410M-C1	SMD CAPACITOR 06032E104M250BA	1
456-2410M-C1	SMD CAPACITOR 06032E104M250BA	1
456-2410M-C1	SMD CAPACITOR 06032E104M250BA	1
456-2422M-C1	SMD CAPACITOR 06032E224M250BA	1
456-2422M-C1	SMD CAPACITOR 06032E224M250BA	1
456-2422M-C1	SMD CAPACITOR 06032E224M250BA	1
456-2422M-C1	SMD CAPACITOR 06032E224M250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2510R-C2	SMD CAPACITOR 08052E105Z250BA	1
456-2510R-C2	SMD CAPACITOR 08052E105Z250BA	1
456-2510R-C2	SMD CAPACITOR 08052E105Z250BA	1
456-2510R-C2	SMD CAPACITOR 08052E105Z250BA	1
456-2510R-C2	SMD CAPACITOR 08052E105Z250BA	1
456-3018H-11	SMD CAPACITOR 0603CG180J500BA	1
456-3018H-11	SMD CAPACITOR 0603CG180J500BA	1
456-3056H-11	SMD CAPACITOR 0603CG560J500BA	1
456-3056H-11	SMD CAPACITOR 0603CG560J500BA	1
456-3056H-11	SMD CAPACITOR 0603CG560J500BA	1
456-3122H-11	SMD CAPACITOR 0603CG221J500BA	1

[illegible]

Part Code	Description	QTY
464-6D647-M02	ELECTROLYTIC CAP CD110-16V-47uF-M	1
464-6D647-M02	ELECTROLYTIC CAP CD110-16V-47uF-M	1
464-6D722-M02	ELECTROLYTIC CAP CD110-16V-220uF-M	1
464-6D722-M02	ELECTROLYTIC CAP CD110-16V-220uF-M	1
464-6D722-M02	ELECTROLYTIC CAP CD110-16V-220uF-M	1
464-6D722-M02	ELECTROLYTIC CAP CD110-16V-220uF-M	1
464-6D722-M02	ELECTROLYTIC CAP CD110-16V-220uF-M	1
464-6D722-M02	ELECTROLYTIC CAP CD110-16V-220uF-M	1
464-6D722-M02	ELECTROLYTIC CAP CD110-16V-220uF-M	1
464-6D747-M02	ELECTROLYTIC CAP CD110-16V-470uF-M	1
464-6E610-M02	*ELECTROLYTIC CAP CD110-25V-10uF-M	1
464-6E747-M02	ELECTROLYTIC CAP CD110-25V-470uF-M	1
464-60510-M02	ELECTROLYTIC CAP CD110-50V-1uF-M	1
464-60510-M02	ELECTROLYTIC CAP CD110-50V-1uF-M	1
464-60533-M02	ELECTROLYTIC CAP CD110-50V-3.3uF-M	1
477-40211-00	SMD INDUCTANCE SLF12575T-330M3R2	1
477-40211-00	SMD INDUCTANCE SLF12575T-330M3R2	1
477-40211-00	SMD INDUCTANCE SLF12575T-330M3R2	1
477-40211-00	SMD INDUCTANCE SLF12575T-330M3R2	1
477-90003-00	SMD CERAMIC FILTER LFA20-2A1E103M	1
477-90003-00	SMD CERAMIC FILTER LFA20-2A1E103M	1
477-90003-00	SMD CERAMIC FILTER LFA20-2A1E103M	1
477-90003-00	SMD CERAMIC FILTER LFA20-2A1E103M	1
477-90004-00	SMD CERAMIC FILTER LFA20-2A1E104M	1
477-90004-00	SMD CERAMIC FILTER LFA20-2A1E104M	1
477-90004-00	SMD CERAMIC FILTER LFA20-2A1E104M	1
477-90004-00	SMD CERAMIC FILTER LFA20-2A1E104M	1
666-13207-00	SMD FERRITE BEAD STPB3216-380PT	1
666-13207-00	SMD FERRITE BEAD STPB3216-380PT	1
666-13207-00	SMD FERRITE BEAD STPB3216-380PT	1
666-13207-00	SMD FERRITE BEAD STPB3216-380PT	1
782-L27W18-150A	MIXING BOARD PCB	1
329-61003-00	CRYSTAL HC-49/US 10.000MHZ	1
329-61402-00	CRYSTAL HC-49/US 14.31818MHZ	1
329-61402-00	CRYSTAL HC-49/US 14.31818MHZ	1
329-62806-00	CRYSTAL HC-49uS 28.322MHz	1

Part Code	Description	QTY
340-50360-00	ZENER DIODE HZ4A2	1
340-50470-00	ZENER DIODE HZ5B1	1
364-11212-00	EARPHONE JACK ST-112	1
364-11212-00	EARPHONE JACK ST-112	1
364-34101-00	4-PINS CONNECTORS TJC3-04A	1
364-36101-00	6-PINS CONNECTORS TJC3-06A	1
364-37101-00	7-PINS CONNECTORS TJC3-07A	1
364-37104-00	7-PINS CONNECTORS TJC3-07AWT	1
364-91204-00	VGA SOCKET B500	1
364-95209-00	AV JACK AV13-05-501	1
462-B0433-H0	POLYESTER CAP CL21X-50V-0.33uF-J	1
462-B0433-H0	POLYESTER CAP CL21X-50V-0.33uF-J	1
462-B0433-H0	POLYESTER CAP CL21X-50V-0.33uF-J	1
462-B0433-H0	POLYESTER CAP CL21X-50V-0.33uF-J	1
462-B0433-H0	POLYESTER CAP CL21X-50V-0.33uF-J	1
462-B0433-H0	POLYESTER CAP CL21X-50V-0.33uF-J	1
462-B0447-H0	POLYESTER CAP CL21X-50V-0.47uF-J	1
462-B0447-H0	POLYESTER CAP CL21X-50V-0.47uF-J	1
464-6C810-M0	ELECTROLYTIC CAP CD110-10V-1000uF-M	1
464-6C810-M0	ELECTROLYTIC CAP CD110-10V-1000uF-M	1
464-6F747-M0	ELECTROLYTIC CAP CD110-35V-470uF-M	1
464-6F747-M0	ELECTROLYTIC CAP CD110-35V-470uF-M	1
615-10509-00A	DIGITAL BOARD SHUTTER ASS'Y (TOP)	1
615-10510-00A	DIGITAL BOARD SHUTTER ASS'Y (BOTTOM)	1
655-B1202-52	(12-PINS) LEAD WITH HOUSING	1
655-T1202-50	(10-PINS) LEAD WITH HOUSING	1
655-31202-121	(3-PINS) LEAD WITH HOUSING	1
655-61202-144	(6-PINS) LEAD WITH HOUSING	1
804-20427-00	DIGITAL INTERFACE SPACE PLATE	1
808-70397-00	ISOLATION SHEET	4
340-00289-00	SMD DIODE BAV99LT1	1
340-00289-00	SMD DIODE BAV99LT1	1
340-00289-00	SMD DIODE BAV99LT1	1
340-00296-00	SMD DIODE SK34	1
340-00296-00	SMD DIODE SK34	1

Part Code	Description	QTY
340-00296-00	SMD DIODE SK34	1
340-00362-00	SMD DIODE MBRST130LT3	1
340-00372-00	SMD DIODE MMBD1204	1
340-50512-00	SMD ZENER DIODE BZV55-B5V1	1
340-50512-00	SMD ZENER DIODE BZV55-B5V1	1
342-01380-00	*SMD TRANSISTOR BSS138LT1	1
342-08470-90	SMD TRANSISTOR BC847AW	1
342-08470-90	SMD TRANSISTOR BC847AW	1
342-08470-90	SMD TRANSISTOR BC847AW	1
342-08470-90	SMD TRANSISTOR BC847AW	1
342-08470-90	SMD TRANSISTOR BC847AW	1
342-08470-90	SMD TRANSISTOR BC847AW	1
342-08470-90	SMD TRANSISTOR BC847AW	1
342-08570-90	SMD TRANSISTOR BC857 AW	1
342-08570-90	SMD TRANSISTOR BC857 AW	1
353-DPTV0-20	SMD IC DPTV-SVP-EX52	1
353-03580-80	SMD IC LM358D (M)	1
353-05040-20	SMD IC PESD5V0L4UG	1
353-05050-20	SMD IC PESD5V0L5UY	1
353-11170-G0	SMD IC AMS1117-1.8 (D)	1
353-11170-G0	SMD IC AMS1117-1.8 (D)	1
353-11170-G0	SMD IC AMS1117-1.8 (D)	1
353-11170-G0	SMD IC AMS1117-1.8 (D)	1
353-11170-10	SMD IC B1117N-2.5 (D)	1
353-11170-10	SMD IC B1117N-2.5 (D)	1
353-11170-20	SMD IC AS1117M-3.3 (M)	1
353-11170-20	SMD IC AS1117M-3.3 (M)	1
353-11170-20	SMD IC AS1117M-3.3 (M)	1
353-11170-20	SMD IC AS1117M-3.3 (M)	1
353-12130-10	SMD ICCM1213-08MS	1
353-15010-50	SMD ICAP1501-50K5	1
353-15010-50	SMD ICAP1501-50K5	1
353-24020-60	SMD IC 24C02N-10SI27	1
353-24210-50	SMD IC 24LC21A/SN	1
353-24320-50	SMD IC24LC32A/SN 焼	1
353-26323-10	SMD IC K4D2632838F-QC50	1

[illegible]

Part Code	Description	QTY
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04610-MA	SMD ELECTROLYTIC CAP CDPS-16V-10uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1

Part Code	Description	QTY
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04622-MA	SMD ELECTROLYTIC CAP CDPS-16V-22uF-M	1
454-04647-MB	SMD ELECTROLYTIC CAP CDPS-16V-47uF-M	1
454-04647-MB	SMD ELECTROLYTIC CAP CDPS-16V-47uF-M	1
454-04647-MB	SMD ELECTROLYTIC CAP CDPS-16V-47uF-M	1
454-04647-MB	SMD ELECTROLYTIC CAP CDPS-16V-47uF-M	1
454-04647-MB	SMD ELECTROLYTIC CAP CDPS-16V-47uF-M	1
454-04647-MB	SMD ELECTROLYTIC CAP CDPS-16V-47uF-M	1
454-04710-MC	SMD ELECTROLYTIC CAP CDPS-16V-100uF-M	1
454-04710-MC	SMD ELECTROLYTIC CAP CDPS-16V-100uF-M	1
454-06547-MA	SMD ELECTROLYTIC CAP CDPS-25V-4.7uF-M	1
454-08533-MA	SMD ELECTROLYTIC CAP CDPS-50V-3.3uF-M	1
454-08533-MA	SMD ELECTROLYTIC CAP CDPS-50V-3.3uF-M	1
454-08533-MA	SMD ELECTROLYTIC CAP CDPS-50V-3.3uF-M	1
454-08533-MA	SMD ELECTROLYTIC CAP CDPS-50V-3.3uF-M	1
455-10015-H9	SMD RESISTOR NCA4R150JR	1
455-10015-H9	SMD RESISTOR NCA4R150JR	1
455-10015-H9	SMD RESISTOR NCA4R150JR	1
455-10015-H9	SMD RESISTOR NCA4R150JR	1
455-10015-H9	SMD RESISTOR NCA4R150JR	1
455-10015-H9	SMD RESISTOR NCA4R150JR	1
455-10015-H9	SMD RESISTOR NCA4R150JR	1
455-10015-H9	SMD RESISTOR NCA4R150JR	1
455-10015-H9	SMD RESISTOR NCA4R150JR	1
455-10033-H9	SMD RESISTOR NCA4R330JR	1
455-10033-H9	SMD RESISTOR NCA4R330JR	1

Part Code	Description	QTY
455-10033-H9	SMD RESISTOR NCA4R330JR	1
455-10033-H9	SMD RESISTOR NCA4R330JR	1
455-10033-H9	SMD RESISTOR NCA4R330JR	1
455-10033-H9	SMD RESISTOR NCA4R330JR	1
455-10033-H9	SMD RESISTOR NCA4R330JR	1
455-10033-H9	SMD RESISTOR NCA4R330JR	1
455-10033-H9	SMD RESISTOR NCA4R330JR	1
455-10033-H9	SMD RESISTOR NCA4R330JR	1
455-10033-H9	SMD RESISTOR NCA4R330JR	1
455-10033-H9	SMD RESISTOR NCA4R330JR	1
455-10033-H9	SMD RESISTOR NCA4R330JR	1
455-10033-H9	SMD RESISTOR NCA4R330JR	1
455-10033-H9	SMD RESISTOR NCA4R330JR	1
455-10033-H9	SMD RESISTOR NCA4R330JR	1
455-10033-H9	SMD RESISTOR NCA4R330JR	1
455-10033-H9	SMD RESISTOR NCA4R330JR	1
455-10033-H9	SMD RESISTOR NCA4R330JR	1
455-10033-H9	SMD RESISTOR NCA4R330JR	1
455-10082-H9	SMD RESISTOR NCA4R820JR	1
455-10082-H9	SMD RESISTOR NCA4R820JR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1
455-12000-H0	SMD RESISTOR FTR0603000XR	1

[illegible]

Part Code	Description	QTY
455-12022-H0	SMD RESISTOR FTR0603220JR	1
455-12022-H0	SMD RESISTOR FTR0603220JR	1
455-12022-H0	SMD RESISTOR FTR0603220JR	1
455-12022-H0	SMD RESISTOR FTR0603220JR	1
455-12022-H0	SMD RESISTOR FTR0603220JR	1
455-12022-H0	SMD RESISTOR FTR0603220JR	1
455-12022-H0	SMD RESISTOR FTR0603220JR	1
455-12022-H0	SMD RESISTOR FTR0603220JR	1
455-12033-H0	SMD RESISTOR FTR0603330JR	1
455-12033-H0	SMD RESISTOR FTR0603330JR	1
455-12033-H0	SMD RESISTOR FTR0603330JR	1
455-12033-H0	SMD RESISTOR FTR0603330JR	1
455-12033-H0	SMD RESISTOR FTR0603330JR	1
455-12033-H0	SMD RESISTOR FTR0603330JR	1
455-12033-H0	SMD RESISTOR FTR0603330JR	1
455-12033-H0	SMD RESISTOR FTR0603330JR	1
455-12033-H0	SMD RESISTOR FTR0603330JR	1
455-12033-H0	SMD RESISTOR FTR0603330JR	1
455-12033-H0	SMD RESISTOR FTR0603330JR	1
455-12033-H0	SMD RESISTOR FTR0603330JR	1
455-12033-H0	SMD RESISTOR FTR0603330JR	1
455-12033-H0	SMD RESISTOR FTR0603330JR	1
455-12047-H0	SMD RESISTOR FTR0603470JR	1
455-12051-H0	SMD RESISTOR FTR0603510JR	1
455-12051-H0	SMD RESISTOR FTR0603510JR	1
455-12068-H0	SMD RESISTOR FTR0603680JR	1
455-12068-H0	SMD RESISTOR FTR0603680JR	1
455-12068-H0	SMD RESISTOR FTR0603680JR	1
455-12068-H0	SMD RESISTOR FTR0603680JR	1
455-12075-H0	SMD RESISTOR FTR0603750JR	1
455-12075-H0	SMD RESISTOR FTR0603750JR	1
455-12075-H0	SMD RESISTOR FTR0603750JR	1
455-12075-H0	SMD RESISTOR FTR0603750JR	1
455-12075-H0	SMD RESISTOR FTR0603750JR	1
455-12075-H0	SMD RESISTOR FTR0603750JR	1
455-12075-H0	SMD RESISTOR FTR0603750JR	1
455-12075-H0	SMD RESISTOR FTR0603750JR	1
455-12075-H0	SMD RESISTOR FTR0603750JR	1

[illegible]

Part Code	Description	QTY
455-12110-H0	SMD RESISTOR FTR0603101JR	1
455-12110-H0	SMD RESISTOR FTR0603101JR	1
455-12122-H0	SMD RESISTOR FTR0603221JR	1
455-12133-H0	SMD RESISTOR FTR0603331JR	1
455-12133-H0	SMD RESISTOR FTR0603331JR	1
455-12147-H0	SMD RESISTOR FTR0603471JR	1
455-12147-H0	SMD RESISTOR FTR0603471JR	1
455-12147-H0	SMD RESISTOR FTR0603471JR	1
455-12147-H0	SMD RESISTOR FTR0603471JR	1
455-12147-H0	SMD RESISTOR FTR0603471JR	1
455-12210-H0	SMD RESISTOR FTR0603102JR	1
455-12210-H0	SMD RESISTOR FTR0603102JR	1
455-12210-H0	SMD RESISTOR FTR0603102JR	1
455-12210-H0	SMD RESISTOR FTR0603102JR	1
455-12210-H0	SMD RESISTOR FTR0603102JR	1
455-12210-H0	SMD RESISTOR FTR0603102JR	1
455-12210-H0	SMD RESISTOR FTR0603102JR	1
455-12210-H0	SMD RESISTOR FTR0603102JR	1
455-12210-H0	SMD RESISTOR FTR0603102JR	1
455-12210-H0	SMD RESISTOR FTR0603102JR	1
455-12212-H0	SMD RESISTOR FTR0603122JR	1
455-12212-H0	SMD RESISTOR FTR0603122JR	1
455-12215-H0	SMD RESISTOR FTR0603152JR	1
455-12222-H0	SMD RESISTOR FTR0603222JR	1
455-12222-H0	SMD RESISTOR FTR0603222JR	1
455-12222-H0	SMD RESISTOR FTR0603222JR	1
455-12222-H0	SMD RESISTOR FTR0603222JR	1
455-12222-H0	SMD RESISTOR FTR0603222JR	1
455-12222-H0	SMD RESISTOR FTR0603222JR	1
455-12222-H0	SMD RESISTOR FTR0603222JR	1
455-12222-H0	SMD RESISTOR FTR0603222JR	1
455-12222-H0	SMD RESISTOR FTR0603222JR	1
455-12233-H0	SMD RESISTOR FTR0603332JR	1
455-12247-H0	SMD RESISTOR FTR0603472JR	1
455-12247-H0	SMD RESISTOR FTR0603472JR	1
455-12247-H0	SMD RESISTOR FTR0603472JR	1
455-12247-H0	SMD RESISTOR FTR0603472JR	1

[illegible]

Part Code	Description	QTY
455-12247-H0	SMD RESISTOR FTR0603472JR	1
455-12282-H0	SMD RESISTOR FTR0603822JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12310-H0	SMD RESISTOR FTR0603103JR	1
455-12322-H0	SMD RESISTOR FTR0603223JR	1
455-12322-H0	SMD RESISTOR FTR0603223JR	1
455-12347-H0	SMD RESISTOR FTR0603473JR	1
455-12368-H0	SMD RESISTOR FTR0603683JR	1
455-12410-H0	SMD RESISTOR FTR0603104JR	1
455-12410-H0	SMD RESISTOR FTR0603104JR	1
455-12410-H0	SMD RESISTOR FTR0603104JR	1
455-12410-H0	SMD RESISTOR FTR0603104JR	1
455-12415-H0	SMD RESISTOR FTR0603154JR	1
455-12427-H0	SMD RESISTOR FTR0603274JR	1
455-12427-H0	SMD RESISTOR FTR0603274JR	1
455-12510-H0	SMD RESISTOR FTR0603105JR	1
455-12510-H0	SMD RESISTOR FTR0603105JR	1
455-22000-H0	SMD RESISTOR RC11-1/8W-0-J	1
455-22000-H0	SMD RESISTOR RC11-1/8W-0-J	1
455-22000-H0	SMD RESISTOR RC11-1/8W-0-J	1
455-22000-H0	SMD RESISTOR RC11-1/8W-0-J	1

[illegible]

[illegible]

[illegible]

Part Code	Description	QTY
456-2410R-C1	SMD CAPACITOR C1608Y5V1E104ZT	1
456-2410R-C1	SMD CAPACITOR C1608Y5V1E104ZT	1
456-2410R-C1	SMD CAPACITOR C1608Y5V1E104ZT	1
456-2410R-C1	SMD CAPACITOR C1608Y5V1E104ZT	1
456-2410R-C1	SMD CAPACITOR C1608Y5V1E104ZT	1
456-2410R-C1	SMD CAPACITOR C1608Y5V1E104ZT	1
456-2410R-C1	SMD CAPACITOR C1608Y5V1E104ZT	1
456-2410R-C1	SMD CAPACITOR C1608Y5V1E104ZT	1
456-2410R-C1	SMD CAPACITOR C1608Y5V1E104ZT	1
456-2410R-C1	SMD CAPACITOR C1608Y5V1E104ZT	1
456-2410R-C1	SMD CAPACITOR C1608Y5V1E104ZT	1
456-2410R-C1	SMD CAPACITOR C1608Y5V1E104ZT	1
456-2410R-C1	SMD CAPACITOR C1608Y5V1E104ZT	1
456-2410R-C1	SMD CAPACITOR C1608Y5V1E104ZT	1
456-2410R-C1	SMD CAPACITOR C1608Y5V1E104ZT	1
456-2410R-C1	SMD CAPACITOR C1608Y5V1E104ZT	1
456-2410R-C1	SMD CAPACITOR C1608Y5V1E104ZT	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2447R-C1	SMD CAPACITOR 06032E474Z250BA	1
456-2510R-C2	SMD CAPACITOR 08052E105Z250BA	1
456-2510R-C2	SMD CAPACITOR 08052E105Z250BA	1
456-3015H-11	SMD CAPACITOR 0603CG150J500BA	1
456-3015H-11	SMD CAPACITOR 0603CG150J500BA	1
456-3018H-11	SMD CAPACITOR 0603CG180J500BA	1
456-3018H-11	SMD CAPACITOR 0603CG180J500BA	1
456-3020H-11	SMD CAPACITOR C1608CH1H200JT	1

[illegible]

[illegible]

Part Code	Description	QTY
666-12010-00	SMD FERRITE BEAD GB2012D151T	1
666-12010-00	SMD FERRITE BEAD GB2012D151T	1
666-12010-00	SMD FERRITE BEAD GB2012D151T	1
666-12010-00	SMD FERRITE BEAD GB2012D151T	1
666-12010-00	SMD FERRITE BEAD GB2012D151T	1
666-12010-00	SMD FERRITE BEAD GB2012D151T	1
666-12010-00	SMD FERRITE BEAD GB2012D151T	1
666-12010-00	SMD FERRITE BEAD GB2012D151T	1
666-12010-00	SMD FERRITE BEAD GB2012D151T	1
666-12010-00	SMD FERRITE BEAD GB2012D151T	1
666-12010-00	SMD FERRITE BEAD GB2012D151T	1
666-12010-00	SMD FERRITE BEAD GB2012D151T	1
666-12010-00	SMD FERRITE BEAD GB2012D151T	1
666-12010-00	SMD FERRITE BEAD GB2012D151T	1
666-13204-00	SMD FERRITE BEAD STBL3216-190PT	1
666-13204-00	SMD FERRITE BEAD STBL3216-190PT	1
666-13204-00	SMD FERRITE BEAD STBL3216-190PT	1
666-13204-00	SMD FERRITE BEAD STBL3216-190PT	1
666-13204-00	SMD FERRITE BEAD STBL3216-190PT	1
666-13204-00	SMD FERRITE BEAD STBL3216-190PT	1
666-13206-00	SMD FERRITE BEAD STPB3216-310PT	1
666-13207-00	SMD FERRITE BEAD STPB3216-380PT	1
666-13207-00	SMD FERRITE BEAD STPB3216-380PT	1
666-13207-00	SMD FERRITE BEAD STPB3216-380PT	1
666-13207-00	SMD FERRITE BEAD STPB3216-380PT	1
782-L37W25-6900	DSP BOARD PCB	1

