

SHARP



Service manual

models:

LC-40UG7242K
LC-40UG7252E
LC-40UG7252K
LC-40UI7352E
LC-40UI7352K

LC-40UI7552E
LC-43UI7252E
LC-43UI7352E
LC-43UI7552E

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1. SAFETY PRECAUTION

IMPORTANT NOTICE

WARNING:

You are requested that you shall not modify or alter the information or data provided herein without prior written consent by SHARP. SHARP shall not be liable to anybody for any damages, losses, expenses or costs, if any, incurred in connection with or as a result of such modification or alteration.

THE INFORMATION OR DATA HEREIN SHALL BE PROVIDED "AS IS" WITHOUT ANY WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

SHARP shall not be liable for any damages, losses, expenses or costs, if any, incurred in connection with or as a result of use of any information or data provided herein.

IMPORTANT SERVICE SAFETY PRECAUTION

Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines which follow:

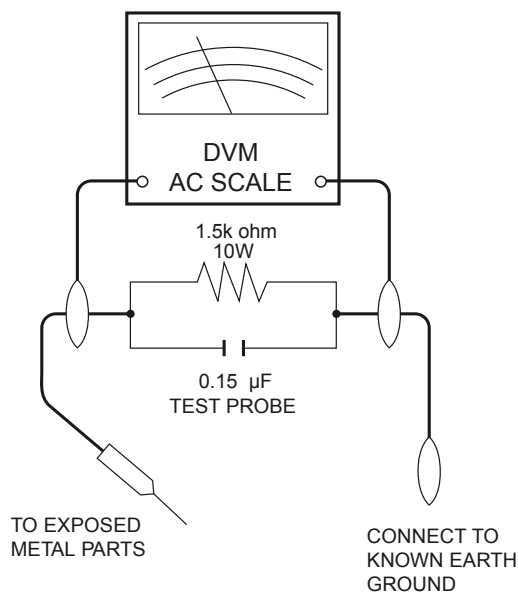
WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.

BEFORE RETURNING THE RECEIVER (Fire & Shock Hazard)

Before returning the receiver to the user, perform the following safety checks:

3. Inspect all lead dress to make certain that leads are not pinched, and check that hardware is not lodged between the chassis and other metal parts in the receiver.
4. Inspect all protective devices such as non-metallic control knobs, insulation materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
5. To be sure that no shock hazard exists, check for leakage current in the following manner.
 - Plug the AC cord directly into a 110-240 volt AC outlet.
 - Using two clip leads, connect a 1.5k ohm, 10 watt resistor parallel-ed by a 0.15 μ F capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to an earth ground.
 - Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity or measure the AC voltage drop across the resistor.
 - Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor. All checks must be repeated with the AC cord plug connection reversed. (If necessary, a nonpolarized adaptor plug must be used only for the purpose of completing these checks.) Any reading of 0.74 Vrms (this corresponds to 0.5 mA rms AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the monitor to the owner.



SAFETY NOTICE

Many electrical and mechanical parts in LCD colour television have special safety-related characteristics.

These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.

Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "⚠" and shaded areas in the Replacement Parts List and Schematic Diagrams.

For continued protection, replacement parts must be identical to those used in the original circuit.

The use of a substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire or other hazards.

Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines.

PRECAUTIONS FOR USING LEAD-FREE SOLDER

Employing lead-free solder

- “PWBs” of this model employs lead-free solder. The LF symbol indicates lead-free solder, and is attached on the PWBs and service manuals. The alphabetical character following LF shows the type of lead-free solder.

Example:

LFa

Sn-Ag-Cu

Indicates lead-free solder of tin, silver and copper.

LFn

Sn-Ag-Ni

Indicates lead-free solder of tin, silver and nickel.

Using lead-free wire solder

- When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Re-pairing with conventional lead wire solder may cause damage or accident due to cracks. As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40 °C, we recommend you to use a dedicated soldering bit, if you are not familiar with how to obtain lead-free wire solder or soldering bit, contact our service station or service branch in your area.

Soldering

- As the melting point of lead-free solder (Sn-Ag-Cu) is about 220 °C which is higher than the conventional lead solder by 40 °C, and as it has poor solder wettability, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, Since the land may be peeled off or the maximum heat-resistance temperature of parts may be exceeded, remove the bit from the PWB as soon as you confirm the steady soldering condition.

Lead-free solder contains more tin, and the end of the soldering bit may be easily corroded.

Make sure to turn on and off the power of the bit as required.

If a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder.

Clean the bit after every use of it.

When the tip of the soldering bit is blackened during use, file it with steel wool or fine sandpaper.

END OF LIFE DISPOSAL



Attention: Your product is marked with this symbol. It means that used electrical and electronic products should not be mixed with general household.

A. Information on Disposal for Users (private households)

1. In the European Union

Attention: If you want to dispose of this equipment, please do not use the ordinary dust bin!

Used electrical and electronic equipment must be treated separately and in accordance with legislation that requires proper treatment, recovery and recycling of used electrical and electronic equipment.

Following the implementation by member states, private households within the EU states may return their used electrical and electronic equipment to designated collection facilities free of charge*. In some countries* your local retailer may also take back your old product free of charge if you purchase a similar new one.

*** Please contact your local authority for further details.**

If your used electrical or electronic equipment has batteries or accumulators, please dispose of these separately beforehand according to local requirements. By disposing of this product correctly you will help ensure that the waste undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health which could otherwise arise due to inappropriate waste handling.

2. In other Countries outside the EU

If you wish to discard this product, please contact your local authorities and ask for the correct method of disposal.

For Switzerland: Used electrical or electronic equipment can be returned free of charge to the dealer, even if you don't purchase a new product. Further collection facilities are listed on the homepage of www.swico.ch or www.sens.ch.

B. Information on Disposal for Business Users

1. In the European Union

If the product is used for business purposes and you want to discard it:

Please contact your SHARP dealer who will inform you about the take-back of the product. You might be charged for the costs arising from take-back and recycling. Small products (and small amounts) might be taken back by your local collection facilities.

For Spain: Please contact the established collection system or your local authority for take-back of your used products.

2. In other Countries outside the EU

If you wish to discard of this product, please contact your local authorities and ask for the correct method of disposal.



The battery supplied with this product contains traces of Lead.

For EU: The crossed-out wheeled bin implies that used batteries should not be put to the general household waste! There is a separate collection system for used batteries, to allow proper treatment and recycling in accordance with legislation. Please contact your local authority for

details on the collection and recycling schemes.

For Switzerland: The used battery is to be returned to the selling point.

For other non-EU countries: Please contact your local authority for correct method of disposal of the used battery.

2. SPECIFICATIONS

LC-40UG7242K



DISPLAY

Diagonal screen size cm / inch	102/40
Panel resolution	3840x2160
HDR support	YES
Active motion	400
Backlight	LED
Dynamic contrast	1 000 000:1

AUDIO SYSTEM

Speaker	Full-range + silk tweeter
Speaker Power	2x10W (8 ohm)
Sound Technology	Harman-Kardon
Sound System	B/G, D/K, I, L, NICAM/A2
Sound Settings	Sound Equalizer
Audio decoder	Dolby Digital/Digital+
Audio enhancement solution	DTS Studio Sound™

TUNER

TV system	ATV	PAL, SECAM
	DTV	DVB-T/T2/C/S/S2 (MPEG4 + H.265/HEVC)

FUNCTION

SHARP AQUOS NET+ Apps store	YES
Pre-install Apps	YouTube, Deezer, Netflix Web browser and many more
BBC iPlayer	YES
DLNA media player for Video / Photo / Music	YES / YES / YES
Miracast	YES
WiFi	YES
Video system	HEVC/H.265, MPEG4/H.264, VP9
USB Video	AVI/MKV/WMV/ASF/MP4/M4v/RM/ RMVB/VOB/TS/M2TS/MPG/FLV/SWF
USB Music	MP3, M4a, WMA, AAC, AC3, EAC3, LPCM, OGG
USB Photo	JPG, JPEG, BMP, PNG
PVR Ready with timeshift	YES (FAT32 only)
USB Software Update	YES
USB file system	FAT16/FAT32/NTFS
HDMI-CEC	YES
HDMI-ARC	YES (HDMI2)
OAD	YES
Digital Programme List	YES
Hotel Mode	YES

CONNECTORS

HDMI-in 2.0	YES (3x)
USB 3.0	YES
USB 2.0	YES (2x)
SD Card slot	YES
Common interface / CI+	YES
Antenna In (RF)	YES
Sat In	YES
Mini Component/YPbPr	YES
Mini AV Composite input + Audio In	YES
Audio out / Headphone Jack	YES
Digital Optical Audio Output	YES
RJ 45 (LAN)	YES

HOTEL MODE

Source Lock	YES
Default source	YES
Default Program	YES
Default Volume	YES
Max Volume	YES
Import USB	YES
Export USB	YES

OTHERS

Power Requirements	AC 220-240V ~ 50Hz
Safety Logo Certification	CE (EMC), CB (Safety), ErP (Energy) etc A Class
ErP Compliant	
Power Consumption (ecomode/standard/max)	62/90/110W
Power Consumption (Standby Mode)	<0.50 W
VESA standard (mm)	200 x 300
EAN	4974019965598
Net size with stand (W x H x D in mm):	920,7 x 576,3 x 199,0
Net size without stand (W x H x D in mm):	920,7 x 541,6 x 83,5
Dimension between stand feet (in mm):	777,8
Box size (W x H x D in mm):	1020 x 635 x 153
Net weight (kg)	8,0
Gross weight (kg)	10,6

PRODUCT FICHE

Supplier trademark Sharp	LC-40UG7252K
Energy class	A
Screen size	102 cm / 40 inches
Power consumption	62,0 W

Annual energy consumption*	91 kWh
Standby power consumption	<0.50 W
Off mode power consumption	Not applicable
Screen resolution	3840 (H) x 2160 (V)

LC-40UG7252E



DISPLAY

Diagonal screen size cm / inch	102/40
Panel resolution	3840x2160
HDR support	YES
Active motion	400
Backlight	LED
Dynamic contrast	1 000 000:1

AUDIO SYSTEM

Speaker	Full-range + silk tweeter
Speaker Power	2x10W (8 ohm)
Sound Technology	Harman-Kardon
Sound System	B/G, D/K, I, L, NICAM/A2
Sound Settings	Sound Equalizer
Audio decoder	Dolby Digital/Digital+
Audio enhancement solution	DTS Studio Sound™

TUNER

TV system	ATV	PAL, SECAM
	DTV	DVB-T/T2/C/S/S2 (MPEG4 + H.265/HEVC)

FUNCTION

SHARP AQUOS NET+ Apps store	YES
Pre-install Apps	YouTube, Deezer, Netflix Web browser and many more
BBC iPlayer	YES
DLNA media player	
for Video / Photo / Music	YES / YES / YES
Miracast	YES
WiFi	YES
Video system	HEVC/H.265, MPEG4/H.264, VP9
USB Video	AVI/MKV/WMV/ASF/MP4/M4v/RM/ RMVB/VOB/TS/M2TS/MPG/FLV/SWF
USB Music	MP3, M4a, WMA, AAC, AC3, EAC3, LPCM, OGG
USB Photo	JPG, JPEG, BMP, PNG
PVR Ready with timeshift	YES (FAT32 only)
USB Software Update	YES
USB file system	FAT16/FAT32/NTFS
HDMI-CEC	YES
HDMI-ARC	YES (HDMI2)
OAD	YES
Digital Programme List	YES
Hotel Mode	YES

CONNECTORS

HDMI-in 2.0	YES (3x)
USB 3.0	YES
USB 2.0	YES (2x)
SD Card slot	YES
Common interface / CI+	YES
Antenna In (RF)	YES
Sat In	YES
Mini Component/YPbPr	YES
Mini AV Composite input + Audio In	YES
Audio out / Headphone Jack	YES
Digital Optical Audio Output	YES
RJ 45 (LAN)	YES

HOTEL MODE

Source Lock	YES
Default source	YES
Default Program	YES
Default Volume	YES
Max Volume	YES
Import USB	YES
Export USB	YES

OTHERS

Power Requirements	AC 220-240V ~ 50Hz
Safety Logo Certification	CE (EMC), CB (Safety), ErP (Energy) etc A Class
ErP Compliant	
Power Consumption	
(ecomode/standard/max)	62/90/110W
Power Consumption (Standby Mode)	<0.50 W
VESA standard (mm)	200 x 300
EAN	4974019965598
Net size with stand (W x H x D in mm):	920,7 x 576,3 x 199,0
Net size without stand (W x H x D in mm):	920,7 x 541,6 x 83,5
Dimension between stand feet (in mm):	777,8
Box size (W x H x D in mm):	1020 x 635 x 153
Net weight (kg)	8,0
Gross weight (kg)	10,6

PRODUCT FICHE

Supplier trademark Sharp	LC-40UG7252K
Energy class	A
Screen size	102 cm / 40 inches
Power consumption	62,0 W

Annual energy consumption*	91 kWh
Standby power consumption	<0.50 W
Off mode power consumption	Not applicable
Screen resolution	3840 (H) x 2160 (V)

LC-40UG7252K



DISPLAY

Diagonal screen size cm / inch	102/40
Panel resolution	3840x2160
HDR support	YES
Active motion	400
Backlight	LED
Dynamic contrast	1 000 000:1

AUDIO SYSTEM

Speaker	Full-range + silk tweeter
Speaker Power	2x10W (8 ohm)
Sound Technology	Harman-Kardon
Sound System	B/G, D/K, I, L, NICAM/A2
Sound Settings	Sound Equalizer
Audio decoder	Dolby Digital/Digital+
Audio enhancement solution	DTS Studio Sound™

TUNER

TV system	ATV	PAL, SECAM
	DTV	DVB-T/T2/C/S/S2 (MPEG4 + H.265/HEVC)

FUNCTION

SHARP AQUOS NET+ Apps store	YES
Pre-install Apps	YouTube, Deezer, Netflix Web browser and many more
BBC iPlayer	YES
DLNA media player	
for Video / Photo / Music	YES / YES / YES
Miracast	YES
WiFi	YES
Video system	HEVC/H.265, MPEG4/H.264, VP9
USB Video	AVI/MKV/WMV/ASF/MP4/M4v/RM/ RMVB/VOB/TS/M2TS/MPG/FLV/SWF
USB Music	MP3, M4a, WMA, AAC, AC3, EAC3, LPCM, OGG
USB Photo	JPG, JPEG, BMP, PNG
PVR Ready with timeshift	YES (FAT32 only)
USB Software Update	YES
USB file system	FAT16/FAT32/NTFS
HDMI-CEC	YES
HDMI-ARC	YES (HDMI2)
OAD	YES
Digital Programme List	YES
Hotel Mode	YES

CONNECTORS

HDMI-in 2.0	YES (3x)
USB 3.0	YES
USB 2.0	YES (2x)
SD Card slot	YES
Common interface / CI+	YES
Antenna In (RF)	YES
Sat In	YES
Mini Component/YPbPr	YES
Mini AV Composite input + Audio In	YES
Audio out / Headphone Jack	YES
Digital Optical Audio Output	YES
RJ 45 (LAN)	YES

HOTEL MODE

Source Lock	YES
Default source	YES
Default Program	YES
Default Volume	YES
Max Volume	YES
Import USB	YES
Export USB	YES

OTHERS

Power Requirements	AC 220-240V ~ 50Hz
Safety Logo Certification	CE (EMC), CB (Safety), ErP (Energy) etc A Class
ErP Compliant	
Power Consumption	
(ecomode/standard/max)	62/90/110W
Power Consumption (Standby Mode)	<0.50 W
VESA standard (mm)	200 x 300
EAN	4974019965598
Net size with stand (W x H x D in mm):	920,7 x 576,3 x 199,0
Net size without stand (W x H x D in mm):	920,7 x 541,6 x 83,5
Dimension between stand feet (in mm):	777,8
Box size (W x H x D in mm):	1020 x 635 x 153
Net weight (kg)	8,0
Gross weight (kg)	10,6

PRODUCT FICHE

Supplier trademark Sharp	LC-40UG7252K
Energy class	A
Screen size	102 cm / 40 inches
Power consumption	62,0 W

Annual energy consumption*	91 kWh
Standby power consumption	<0.50 W
Off mode power consumption	Not applicable
Screen resolution	3840 (H) x 2160 (V)

LC-40UI7352E



DISPLAY

Diagonal screen size cm / inch	102/40
Panel resolution	3840x2160
HDR support	YES
Active motion	400
Backlight	LED
Dynamic contrast	1 000 000:1

AUDIO SYSTEM

Speaker	Full-range + silk tweeter
Speaker Power	2x10W (8 ohm)
Sound Technology	Harman-Kardon
Sound System	B/G, D/K, I, L, NICAM/A2
Sound Settings	Sound Equalizer
Audio decoder	Dolby Digital/Digital+
Audio enhancement solution	DTS Studio Sound™

TUNER

TV system	ATV	PAL, SECAM
	DTV	DVB-T/T2/C/S/S2 (MPEG4 + H.265/HEVC)

FUNCTION

SHARP AQUOS NET+ Apps store	YES
Pre-install Apps	YouTube, Deezer, Netflix Web browser and many more
Hbb TV	YES
DLNA media player	
for Video / Photo / Music	YES / YES / YES
Miracast	YES
WiFi	YES
Video system	HEVC/H.265, MPEG4/H.264, VP9
USB Video	AVI/MKV/WMV/ASF/MP4/M4v/RM/ RMVB/VOB/TS/M2TS/MPG/FLV/SWF
USB Music	MP3, M4a, WMA, AAC, AC3, EAC3, LPCM, OGG
USB Photo	JPG, JPEG, BMP, PNG
PVR Ready with timeshift	YES (FAT32 only)
USB Software Update	YES
USB file system	FAT16/FAT32/NTFS
HDMI-CEC	YES
HDMI-ARC	YES (HDMI2)
OAD	YES
Digital Programme List	YES
Hotel Mode	YES

CONNECTORS

HDMI-in 2.0	YES (3x)
USB 3.0	YES
USB 2.0	YES (2x)
Mini SCART	YES
SD Card slot	YES
Common interface / CI+	YES
Antenna In (RF)	YES
Sat In	YES
Mini Component/YPbPr	YES
Mini AV Composite input + Audio In	YES
Audio out / Headphone Jack	YES
Digital Optical Audio Output	YES
RJ 45 (LAN)	YES

HOTEL MODE

Source Lock	YES
Default source	YES
Default Program	YES
Default Volume	YES
Max Volume	YES
Import USB	YES
Export USB	YES

OTHERS

Power Requirements	AC 220-240V ~ 50Hz
Safety Logo Certification	CE (EMC), CB (Safety), ErP (Energy) etc A Class
ErP Compliant	
Power Consumption (ecomode/standard/max)	62/90/110W
Power Consumption (Standby Mode)	<0.50 W
VESA standard (mm)	200 x 300
EAN	4974019962184
Net size with stand (W x H x D in mm):	920,7 x 572,0 x 184,4
Net size without stand (W x H x D in mm):	920,7 x 542,5 x 83,5
Dimension between stand feet (in mm):	815,5
Box size (W x H x D in mm):	TBD
Net weight (kg)	TBD
Gross weight (kg)	TBD

PRODUCT FICHE

Supplier trademark Sharp	LC-40UI7352E
Energy class	A
Screen size	102 cm / 40 inches
Power consumption	62,0 W

Annual energy consumption*	91 kWh
Standby power consumption	<0.50 W
Off mode power consumption	Not applicable
Screen resolution	3840 (H) x 2160 (V)

LC-40UI7352K



DISPLAY

Diagonal screen size cm / inch	102/40
Panel resolution	3840x2160
HDR support	YES
Active motion	400
Backlight	LED
Dynamic contrast	1 000 000:1

AUDIO SYSTEM

Speaker	Full-range + silk tweeter
Speaker Power	2x10W (8 ohm)
Sound Technology	Harman-Kardon
Sound System	B/G, D/K, I, L, NICAM/A2
Sound Settings	Sound Equalizer
Audio decoder	Dolby Digital/Digital+
Audio enhancement solution	DTS Studio Sound™

TUNER

TV system	ATV	PAL, SECAM
	DTV	DVB-T/T2/C/S/S2 (MPEG4 + H.265/HEVC)

FUNCTION

SHARP AQUOS NET+ Apps store	YES
Pre-install Apps	YouTube, Deezer, Netflix Web browser and many more
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DLNA media player for Video / Photo / Music	YES / YES / YES
Miracast	YES
WiFi	YES
Video system	HEVC/H.265, MPEG4/H.264, VP9
USB Video	AVI/MKV/WMV/ASF/MP4/M4v/RM/ RMVB/VOB/TS/M2TS/MPG/FLV/SWF
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USB file system	FAT16/FAT32/NTFS
HDMI-CEC	YES
HDMI-ARC	YES (HDMI2)
OAD	YES
Digital Programme List	YES
Hotel Mode	YES

CONNECTORS

HDMI-in 2.0	YES (3x)
USB 3.0	YES
USB 2.0	YES (2x)
Mini SCART	YES
SD Card slot	YES
Common interface / CI+	YES
Antenna In (RF)	YES
Sat In	YES
Mini Component/YPbPr	YES
Mini AV Composite input + Audio In	YES
Audio out / Headphone Jack	YES
Digital Optical Audio Output	YES
RJ 45 (LAN)	YES

HOTEL MODE

Source Lock	YES
Default source	YES
Default Program	YES
Default Volume	YES
Max Volume	YES
Import USB	YES
Export USB	YES

OTHERS

Power Requirements	AC 220-240V ~ 50/60Hz
Safety Logo Certification	CE (EMC), CB (Safety), ErP (Energy) etc A Class
ErP Compliant	
Power Consumption (ecomode/standard/max)	62/90/110W
Power Consumption (Standby Mode)	<0.50 W
VESA standard (mm)	200 x 300
EAN	4974019962276
Net size with stand (W x H x D in mm):	920,7 x 572,0 x 184,4
Net size without stand (W x H x D in mm):	920,7 x 542,5 x 83,5
Dimension between stand feet (in mm):	815,5
Box size (W x H x D in mm):	1020,0 x 635,0 x 153,0
Net weight (kg)	8,0
Gross weight (kg)	10,6

PRODUCT FICHE

Supplier trademark Sharp	LC-40UI7352K
Energy class	A
Screen size	102 cm / 40 inches
Power consumption	62,0 W

Annual energy consumption*	91 kWh
Standby power consumption	<0.50 W
Off mode power consumption	Not applicable
Screen resolution	3840 (H) x 2160 (V)

LC-40UI7552E



DISPLAY

Diagonal screen size cm / inch	102/40
Panel resolution	3840x2160
HDR support	YES
Active motion	400
Backlight	LED
Dynamic contrast	1 000 000:1

AUDIO SYSTEM

Speaker	Full-range + silk tweeter
Speaker Power	2x10W (8 ohm)
Sound Technology	Harman-Kardon
Sound System	B/G, D/K, I, L, NICAM/A2
Sound Settings	Sound Equalizer
Audio decoder	Dolby Digital/Digital+
Audio enhancement solution	DTS Studio Sound™

TUNER

TV system	ATV	PAL, SECAM
	DTV	DVB-T/T2/C/S/S2 (MPEG4 + H.265/HEVC)

FUNCTION

SHARP AQUOS NET+ Apps store	YES
Pre-install Apps	YouTube, Deezer, Netflix Web browser and many more
Hbb TV	YES
DLNA media player	
for Video / Photo / Music	YES / YES / YES
Miracast	YES
WiFi	YES
Video system	HEVC/H.265, MPEG4/H.264, VP9
USB Video	AVI/MKV/WMV/ASF/MP4/M4v/RM/ RMVB/VOB/TS/M2TS/MPG/FLV/SWF
USB Music	MP3, M4a, WMA, AAC, AC3, EAC3, LPCM, OGG
USB Photo	JPG, JPEG, BMP, PNG
PVR Ready with timeshift	YES (FAT32 only)
USB Software Update	YES
USB file system	FAT16/FAT32/NTFS
HDMI-CEC	YES
HDMI-ARC	YES (HDMI2)
OAD	YES
Digital Programme List	YES
Hotel Mode	YES

CONNECTORS

HDMI-in 2.0	YES (3x)
USB 3.0	YES
USB 2.0	YES (2x)
Mini SCART	YES
SD Card slot	YES
Common interface / CI+	YES
Antenna In (RF)	YES
Sat In	YES
Mini Component/YPbPr	YES
Mini AV Composite input + Audio In	YES
Audio out / Headphone Jack	YES
Digital Optical Audio Output	YES
RJ 45 (LAN)	YES

HOTEL MODE

Source Lock	YES
Default source	YES
Default Program	YES
Default Volume	YES
Max Volume	YES
Import USB	YES
Export USB	YES

OTHERS

Power Requirements	AC 220-240V ~ 50Hz
Safety Logo Certification	CE (EMC), CB (Safety), ErP (Energy) etc A Class
ErP Compliant	
Power Consumption (ecomode/standard/max)	62/90/110W
Power Consumption (Standby Mode)	<0.50 W
VESA standard (mm)	200 x 300
EAN	4974019962306
Net size with stand (W x H x D in mm):	920,7 x 572,0 x 184,4
Net size without stand (W x H x D in mm):	920,7 x 541,4 x 83,5
Dimension between stand feet (in mm):	815,5
Box size (W x H x D in mm):	TBD
Net weight (kg)	TBD
Gross weight (kg)	TBD

PRODUCT FICHE

Supplier trademark Sharp	LC-40UI7552E
Energy class	A
Screen size	102 cm / 40 inches
Power consumption	62,0 W

Annual energy consumption*	91 kWh
Standby power consumption	<0.50 W
Off mode power consumption	Not applicable
Screen resolution	3840 (H) x 2160 (V)

LC-43UI7252E



DISPLAY

Diagonal screen size cm / inch	109/43
Panel resolution	3840x2160
HDR support	YES
Active motion	400
Backlight	LED
Dynamic contrast	1 000 000:1

AUDIO SYSTEM

Speaker	Full-range + silk tweeter
Speaker Power	2x10W (8 ohm)
Sound Technology	Harman-Kardon
Sound System	B/G, D/K, I, L, NICAM/A2
Sound Settings	Sound Equalizer
Audio decoder	Dolby Digital/Digital+
Audio enhancement solution	DTS Studio Sound™

TUNER

TV system	ATV	PAL, SECAM
	DTV	DVB-T/T2/C/S/S2 (MPEG4 + H.265/HEVC)

FUNCTION

SHARP AQUOS NET+ Apps store	YES
Pre-install Apps	YouTube, Deezer, Netflix Web browser and many more
Hbb TV	YES
DLNA media player	
for Video / Photo / Music	YES / YES / YES
Miracast	YES
WiFi	YES
Video system	HEVC/H.265, MPEG4/H.264, VP9
USB Video	AVI/MKV/WMV/ASF/MP4/M4v/RM/ RMVB/VOB/TS/M2TS/MPG/FLV/SWF
USB Music	MP3, M4a, WMA, AAC, AC3, EAC3, LPCM, OGG
USB Photo	JPG, JPEG, BMP, PNG
PVR Ready with timeshift	YES (FAT32 only)
USB Software Update	YES
USB file system	FAT16/FAT32/NTFS
HDMI-CEC	YES
HDMI-ARC	YES (HDMI2)
OAD	YES
Digital Programme List	YES
Hotel Mode	YES

CONNECTORS

HDMI-in 2.0	YES (3x)
USB 3.0	YES
USB 2.0	YES (2x)
Mini SCART	YES
SD Card slot	YES
Common interface / CI+	YES
Antenna In (RF)	YES
Sat In	YES
Mini Component/YPbPr	YES
Mini AV Composite input + Audio In	YES
Audio out / Headphone Jack	YES
Digital Optical Audio Output	YES
RJ 45 (LAN)	YES

HOTEL MODE

Source Lock	YES
Default source	YES
Default Program	YES
Default Volume	YES
Max Volume	YES
Import USB	YES
Export USB	YES

OTHERS

Power Requirements	AC 220-240V ~ 50/60Hz
Safety Logo Certification	CE (EMC), CB (Safety), ErP (Energy) etc A Class
ErP Compliant	
Power Consumption (ecomode/standard/max)	69/95/115W
Power Consumption (Standby Mode)	<0.50 W
VESA standard (mm)	200 x 300
EAN	4974019962351
Net size with stand (W x H x D in mm):	968,8 x 598,4 x 184,3
Net size without stand (W x H x D in mm):	968,8 x 561,4 x 83,5
Dimension between stand feet (mm):	863,5
Box size (W x H x D in mm):	1070,0 x 697,0 x 157,0
Net weight (kg)	8,7
Gross weight (kg)	10,7

PRODUCT FICHE

Supplier trademark Sharp	LC-43UI7252E
Energy class	A
Screen size	109 cm / 43 inches
Power consumption	69,0 W

Annual energy consumption*	101 kWh
Standby power consumption	<0.50 W
Off mode power consumption	Not applicable
Screen resolution	3840 (H) × 2160 (V)

LC-43UI7352E



DISPLAY

Diagonal screen size cm / inch	109/43
Panel resolution	3840x2160
HDR support	YES
Active motion	400
Backlight	LED
Dynamic contrast	1 000 000:1

AUDIO SYSTEM

Speaker	Full-range + silk tweeter
Speaker Power	2x10W (8 ohm)
Sound Technology	Harman-Kardon
Sound System	B/G, D/K, I, L, NICAM/A2
Sound Settings	Sound Equalizer
Audio decoder	Dolby Digital/Digital+
Audio enhancement solution	DTS Studio Sound™

TUNER

TV system	ATV	PAL, SECAM
	DTV	DVB-T/T2/C/S/S2 (MPEG4 + H.265/HEVC)

FUNCTION

SHARP AQUOS NET+ Apps store	YES
Pre-install Apps	YouTube, Deezer, Netflix Web browser and many more
Hbb TV	YES
DLNA media player	
for Video / Photo / Music	YES / YES / YES
Miracast	YES
WiFi	YES
Video system	HEVC/H.265, MPEG4/H.264, VP9
USB Video	AVI/MKV/WMV/ASF/MP4/M4v/RM/ RMVB/VOB/TS/M2TS/MPG/FLV/SWF
USB Music	MP3, M4a, WMA, AAC, AC3, EAC3, LPCM, OGG
USB Photo	JPG, JPEG, BMP, PNG
PVR Ready with timeshift	YES (FAT32 only)
USB Software Update	YES
USB file system	FAT16/FAT32/NTFS
HDMI-CEC	YES
HDMI-ARC	YES (HDMI2)
OAD	YES
Digital Programme List	YES
Hotel Mode	YES

CONNECTORS

HDMI-in 2.0	YES (3x)
USB 3.0	YES
USB 2.0	YES (2x)
Mini SCART	YES
SD Card slot	YES
Common interface / CI+	YES
Antenna In (RF)	YES
Sat In	YES
Mini Component/YPbPr	YES
Mini AV Composite input + Audio In	YES
Audio out / Headphone Jack	YES
Digital Optical Audio Output	YES
RJ 45 (LAN)	YES

HOTEL MODE

Source Lock	YES
Default source	YES
Default Program	YES
Default Volume	YES
Max Volume	YES
Import USB	YES
Export USB	YES

OTHERS

Power Requirements	AC 220-240V ~ 50/60Hz
Safety Logo Certification	CE (EMC), CB (Safety), ErP (Energy) etc A Class
ErP Compliant	
Power Consumption (ecomode/standard/max)	69/95/115W
Power Consumption (Standby Mode)	<0.50 W
VESA standard (mm)	200 x 300
EAN	4974019962375
Net size with stand (W x H x D in mm):	968,8 x 598,4 x 184,3
Net size without stand (W x H x D in mm):	968,8 x 568,1 x 83,5
Dimension between stand feet (mm):	863,5
Box size (W x H x D in mm):	1070,0 x 697,0 x 157,0
Net weight (kg)	8,7
Gross weight (kg)	10,7

PRODUCT FICHE

Supplier trademark Sharp	LC-43UI7352E
Energy class	A
Screen size	109 cm / 43 inches
Power consumption	69,0 W

Annual energy consumption*	101 kWh
Standby power consumption	<0.50 W
Off mode power consumption	Not applicable
Screen resolution	3840 (H) × 2160 (V)

LC-43UI7552E



DISPLAY

Diagonal screen size cm / inch	109/43
Panel resolution	3840x2160
HDR support	YES
Active motion	400
Backlight	LED
Dynamic contrast	1 000 000:1

AUDIO SYSTEM

Speaker	Full-range + silk tweeter
Speaker Power	2x10W (8 ohm)
Sound Technology	Harman-Kardon
Sound System	B/G, D/K, I, L, NICAM/A2
Sound Settings	Sound Equalizer
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TV system	ATV	PAL, SECAM
	DTV	DVB-T/T2/C/S/S2 (MPEG4 + H.265/HEVC)

FUNCTION

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Pre-install Apps	YouTube, Deezer, Netflix Web browser and many more
Hbb TV	YES
DLNA media player	
for Video / Photo / Music	YES / YES / YES
Miracast	YES
WiFi	YES
Video system	HEVC/H.265, MPEG4/H.264, VP9
USB Video	AVI/MKV/WMV/ASF/MP4/M4v/RM/ RMVB/VOB/TS/M2TS/MPG/FLV/SWF
USB Music	MP3, M4a, WMA, AAC, AC3, EAC3, LPCM, OGG
USB Photo	JPG, JPEG, BMP, PNG
PVR Ready with timeshift	YES (FAT32 only)
USB Software Update	YES
USB file system	FAT16/FAT32/NTFS
HDMI-CEC	YES
HDMI-ARC	YES (HDMI2)
OAD	YES
Digital Programme List	YES
Hotel Mode	YES

CONNECTORS

HDMI-in 2.0	YES (3x)
USB 3.0	YES
USB 2.0	YES (2x)
Mini SCART	YES
SD Card slot	YES
Common interface / CI+	YES
Antenna In (RF)	YES
Sat In	YES
Mini Component/YPbPr	YES
Mini AV Composite input + Audio In	YES
Audio out / Headphone Jack	YES
Digital Optical Audio Output	YES
RJ 45 (LAN)	YES

HOTEL MODE

Source Lock	YES
Default source	YES
Default Program	YES
Default Volume	YES
Max Volume	YES
Import USB	YES
Export USB	YES

OTHERS

Power Requirements	AC 220-240V ~ 50/60Hz
Safety Logo Certification	CE (EMC), CB (Safety), ErP (Energy) etc A Class
ErP Compliant	
Power Consumption (ecomode/standard/max)	69/95/115W
Power Consumption (Standby Mode)	<0.50 W
VESA standard (mm)	200 x 300
EAN	4974019962399
Net size with stand (W x H x D in mm):	968,8 x 598,4 x 184,3
Net size without stand (W x H x D in mm):	968,8 x 566,8 x 83,5
Dimension between stand feet (mm):	863,5
Box size (W x H x D in mm):	1070,0 x 697,0 x 157,0
Net weight (kg)	8,7
Gross weight (kg)	10,7

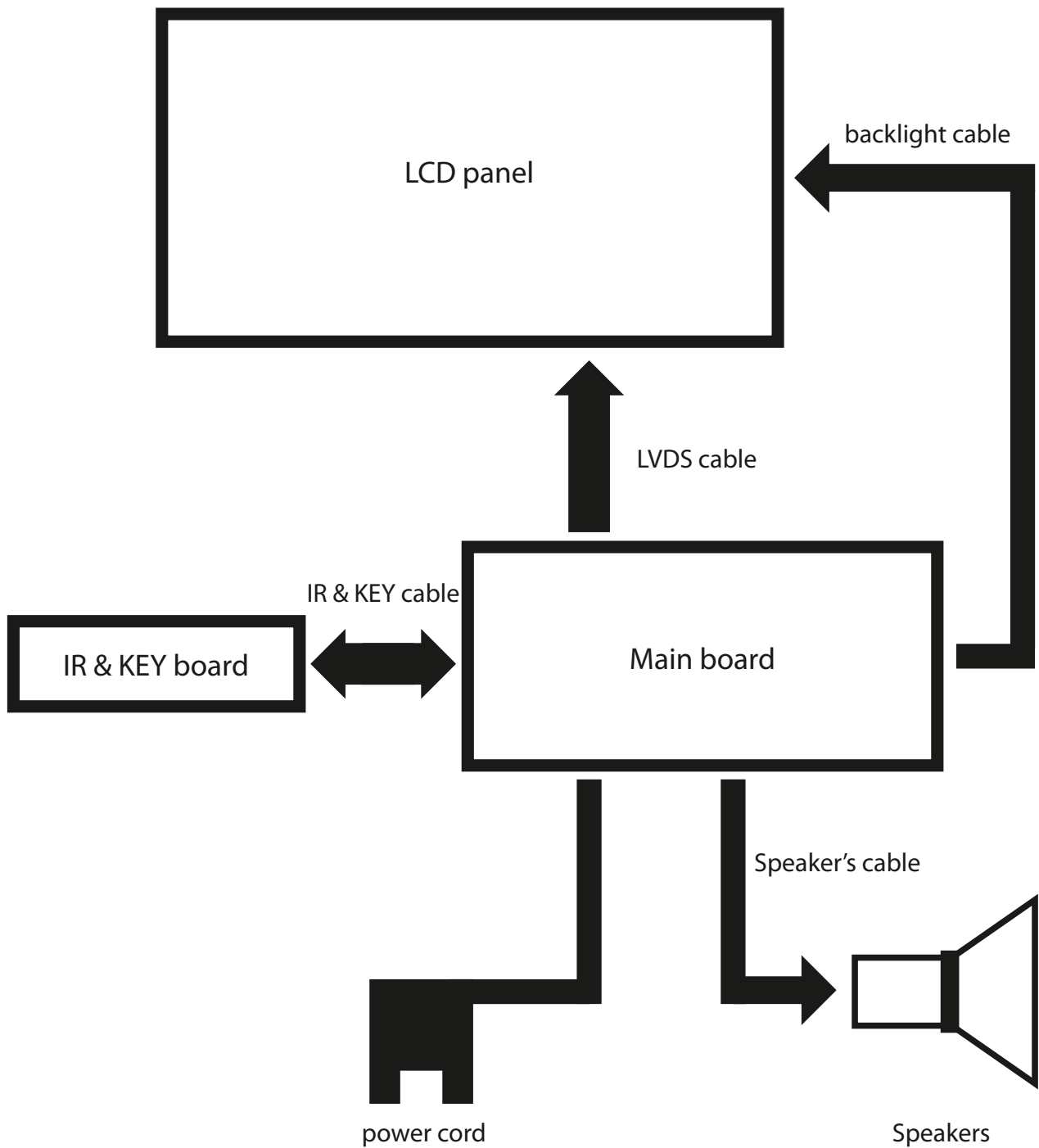
PRODUCT FICHE

Supplier trademark Sharp	LC-43UI7552E
Energy class	A
Screen size	109 cm / 43 inches
Power consumption	69,0 W

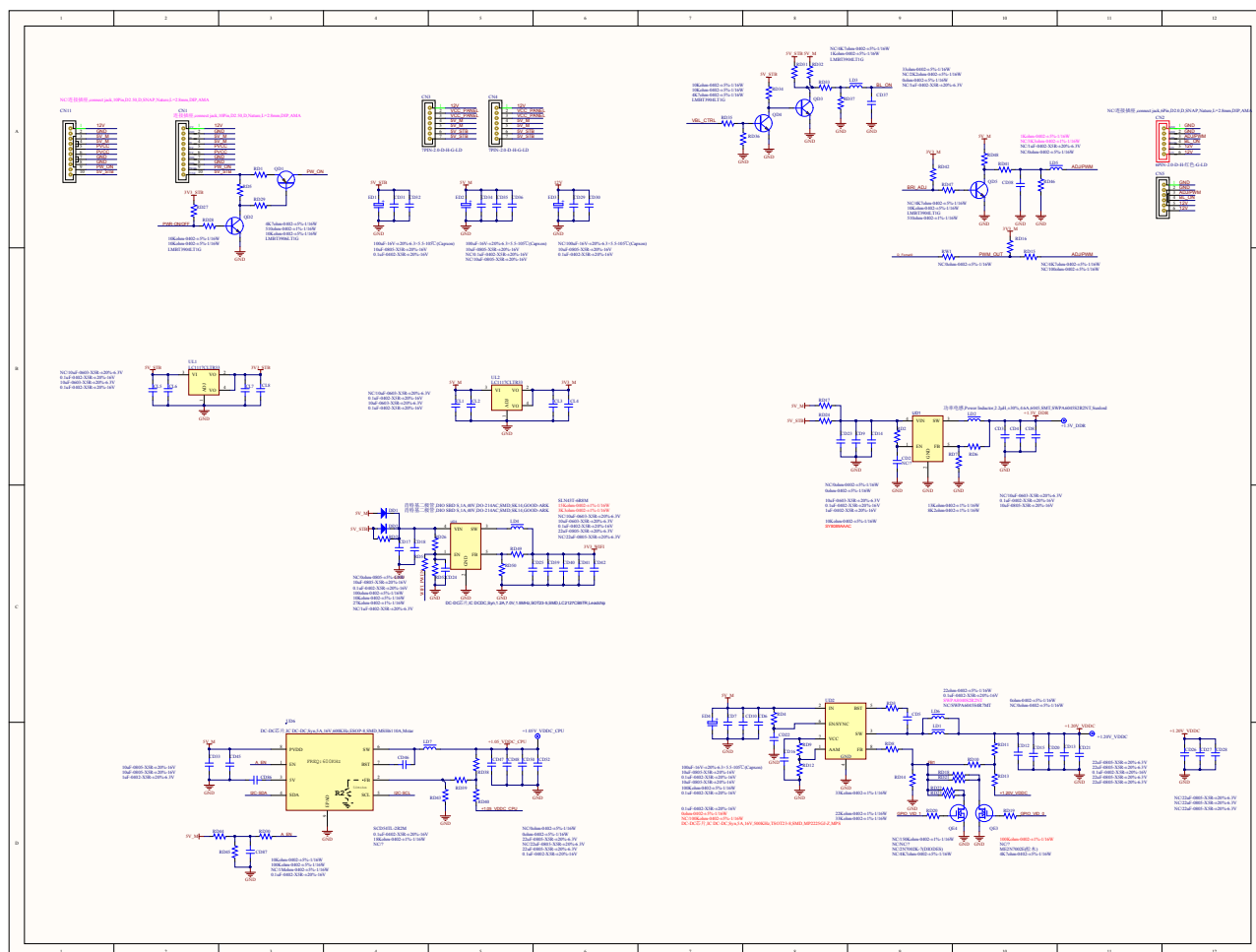
Annual energy consumption*	101 kWh
Standby power consumption	<0.50 W
Off mode power consumption	Not applicable
Screen resolution	3840 (H) x 2160 (V)

3. WIRING DIAGRAM

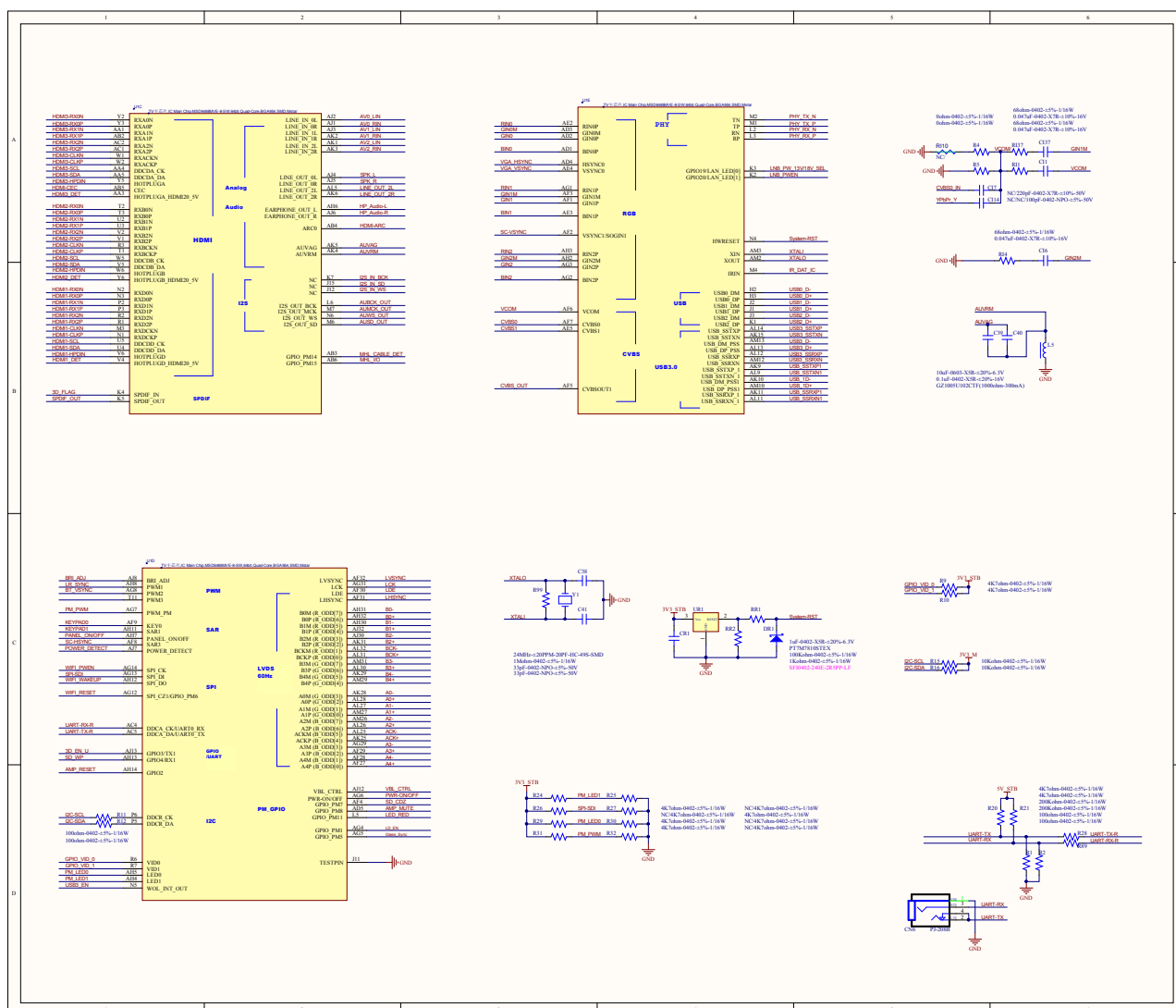
TV schematic diagram



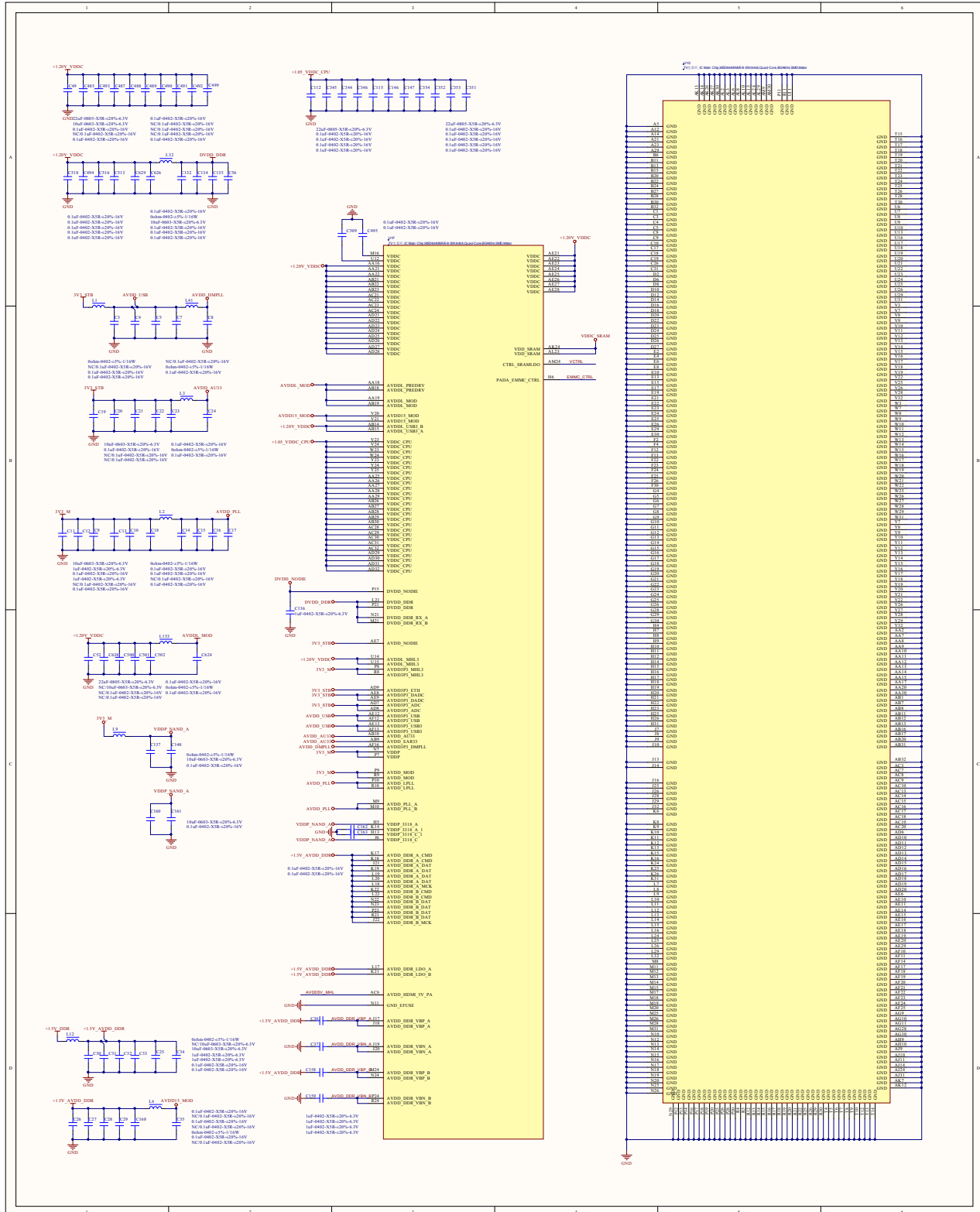
3.1 Wiring diagram of system power



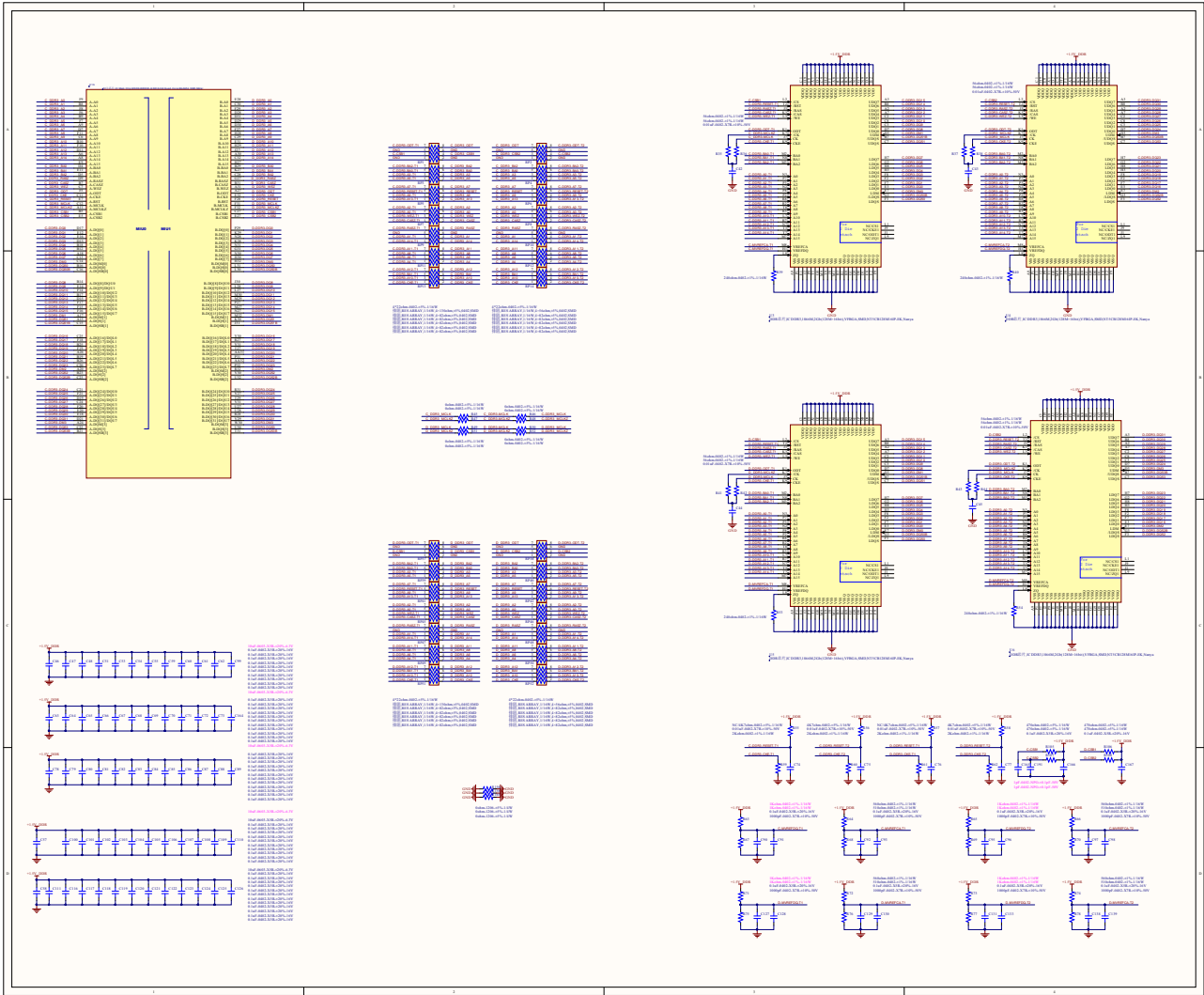
3.2 Wiring diagram of Main chip unit peripherals



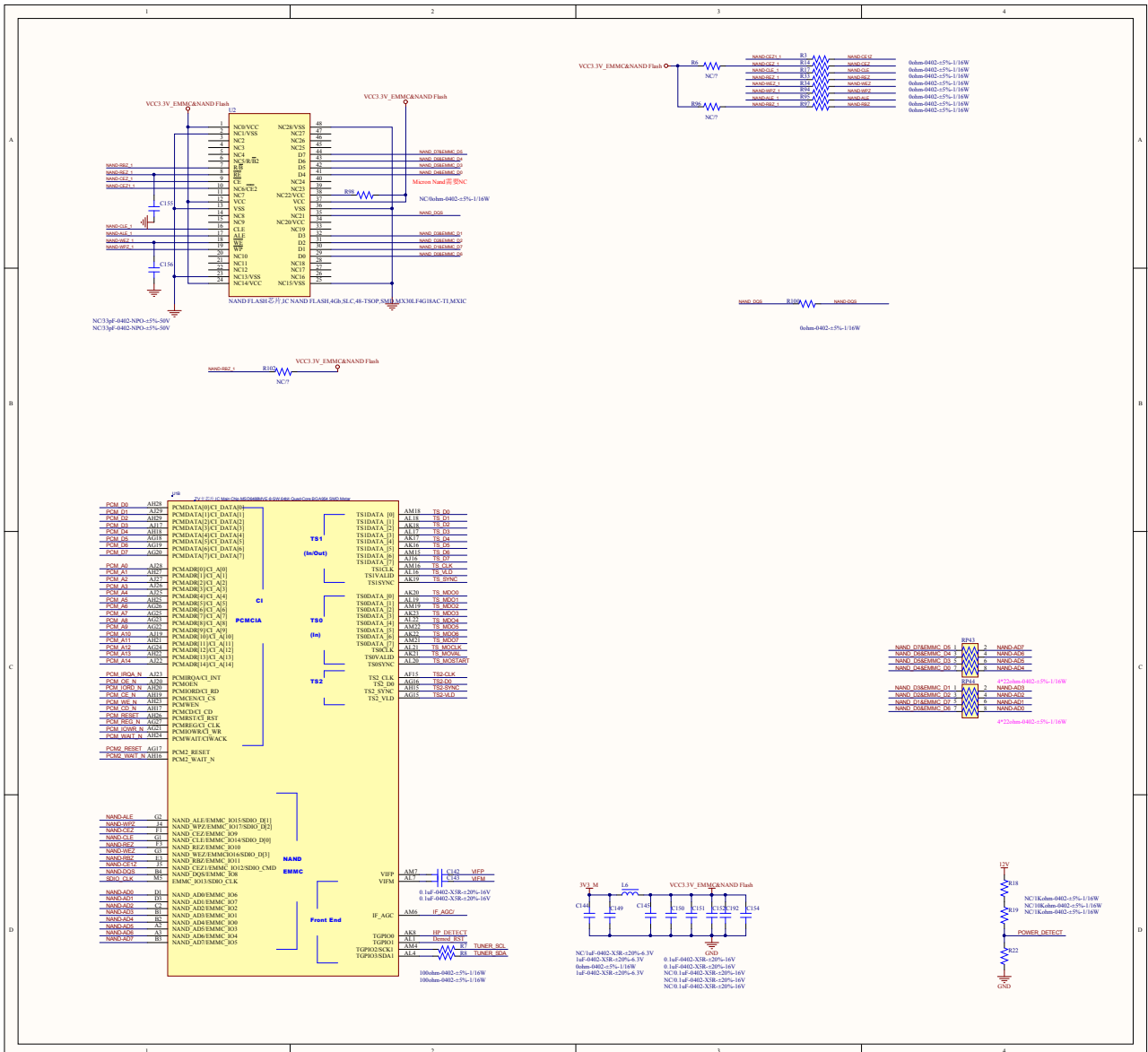
3.3 Wiring diagram of power supply



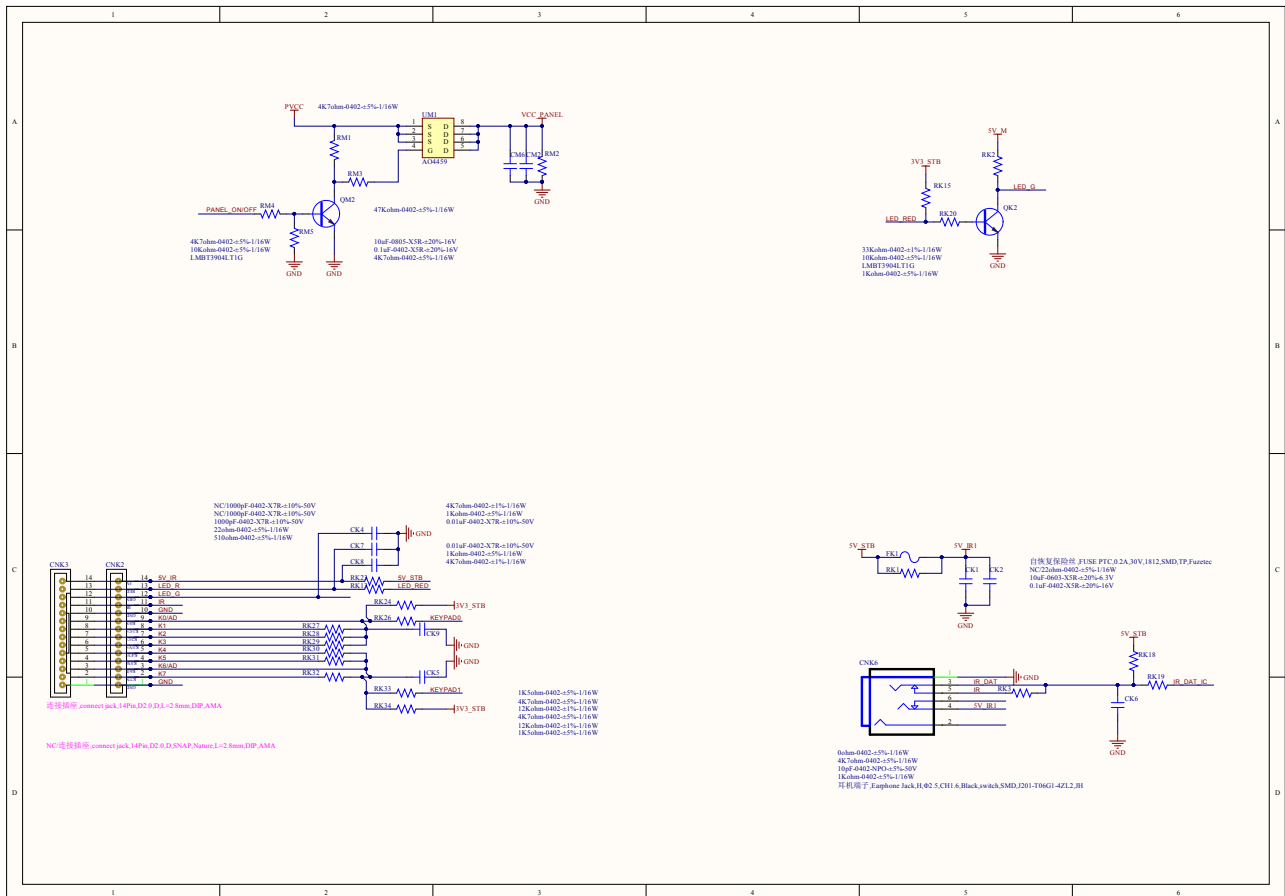
3.4 Wiring diagram of memory



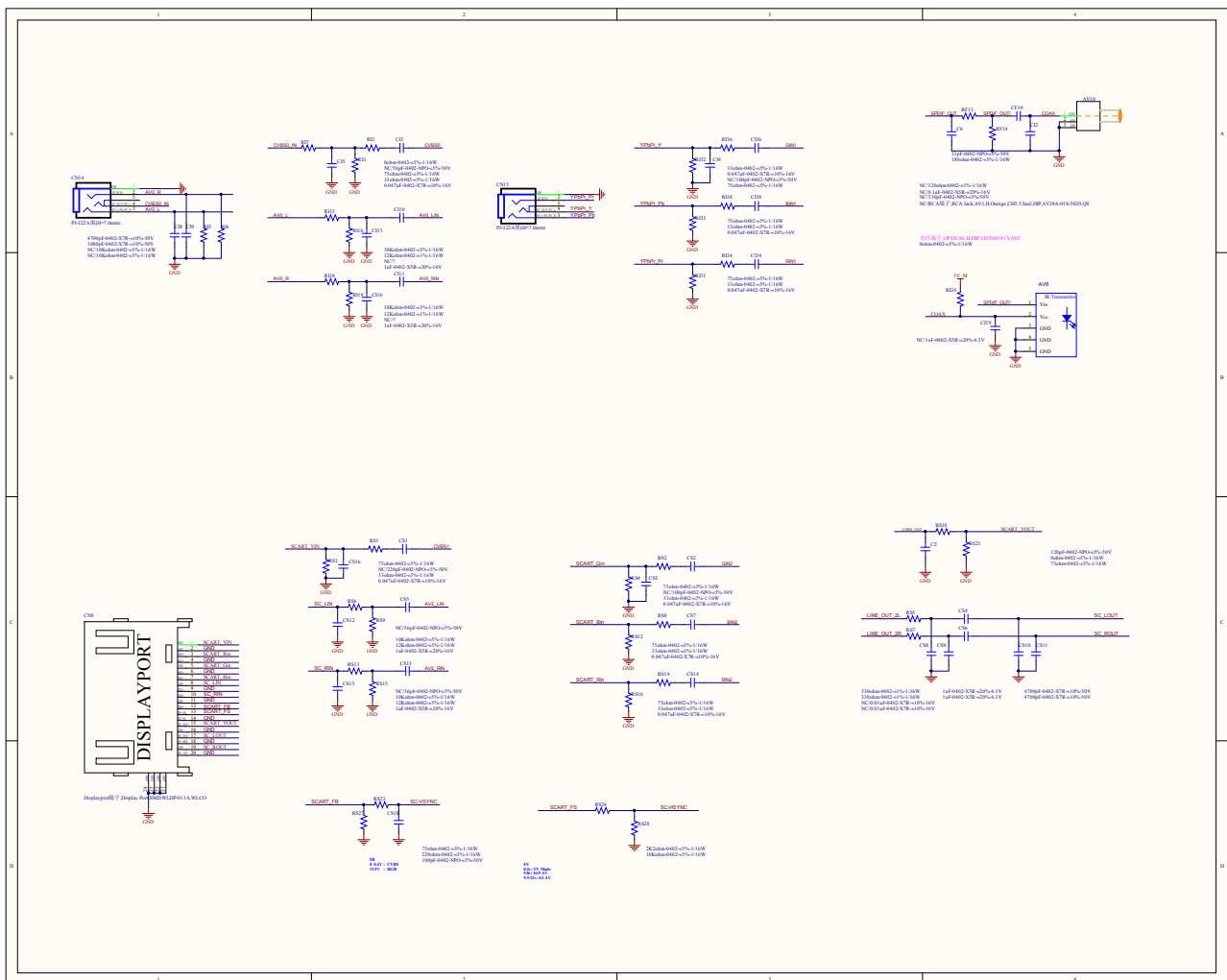
3.5 Wiring diagram of flash



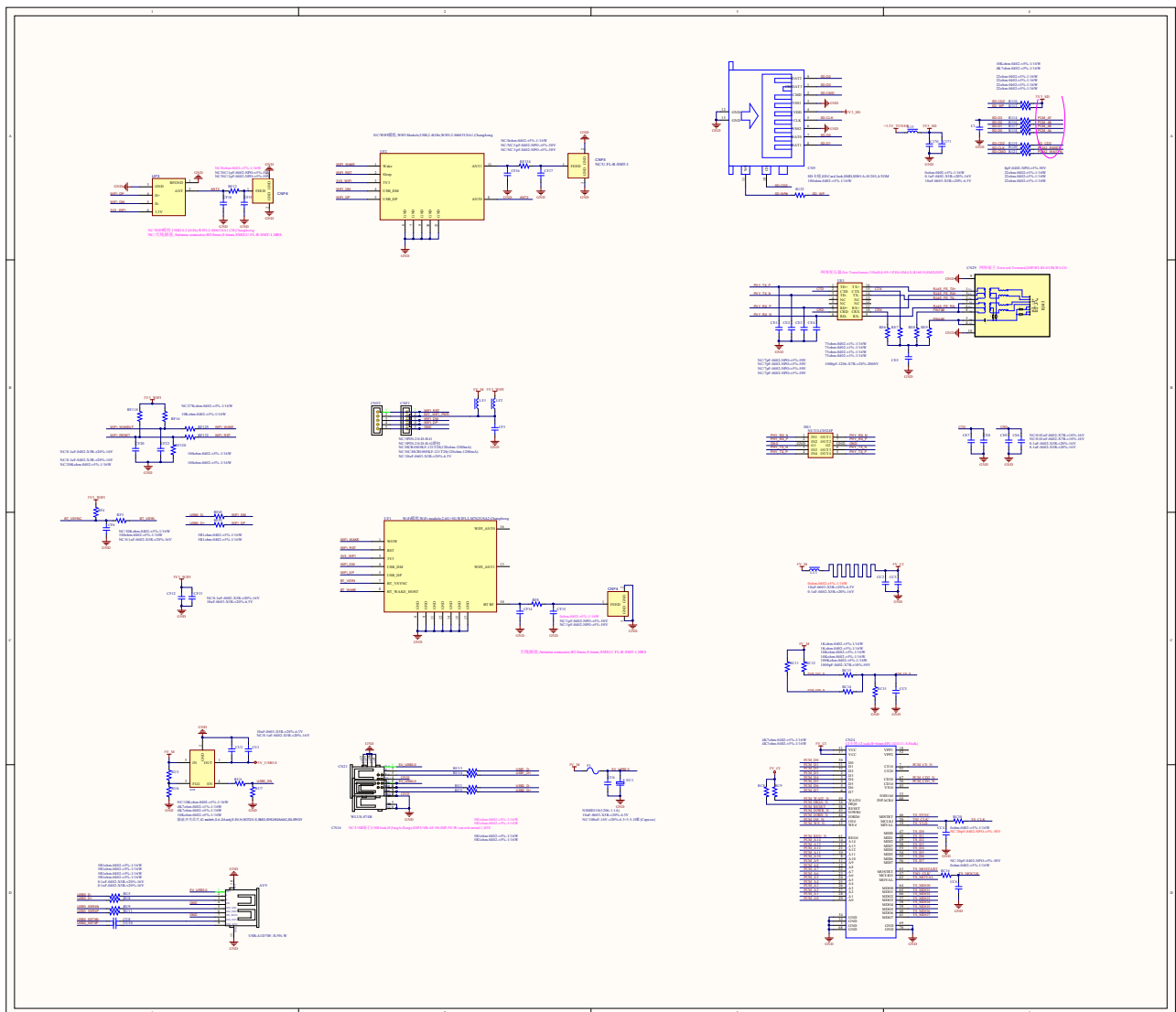
3.6 Wiring diagram of LVDS, Keyboard & IR



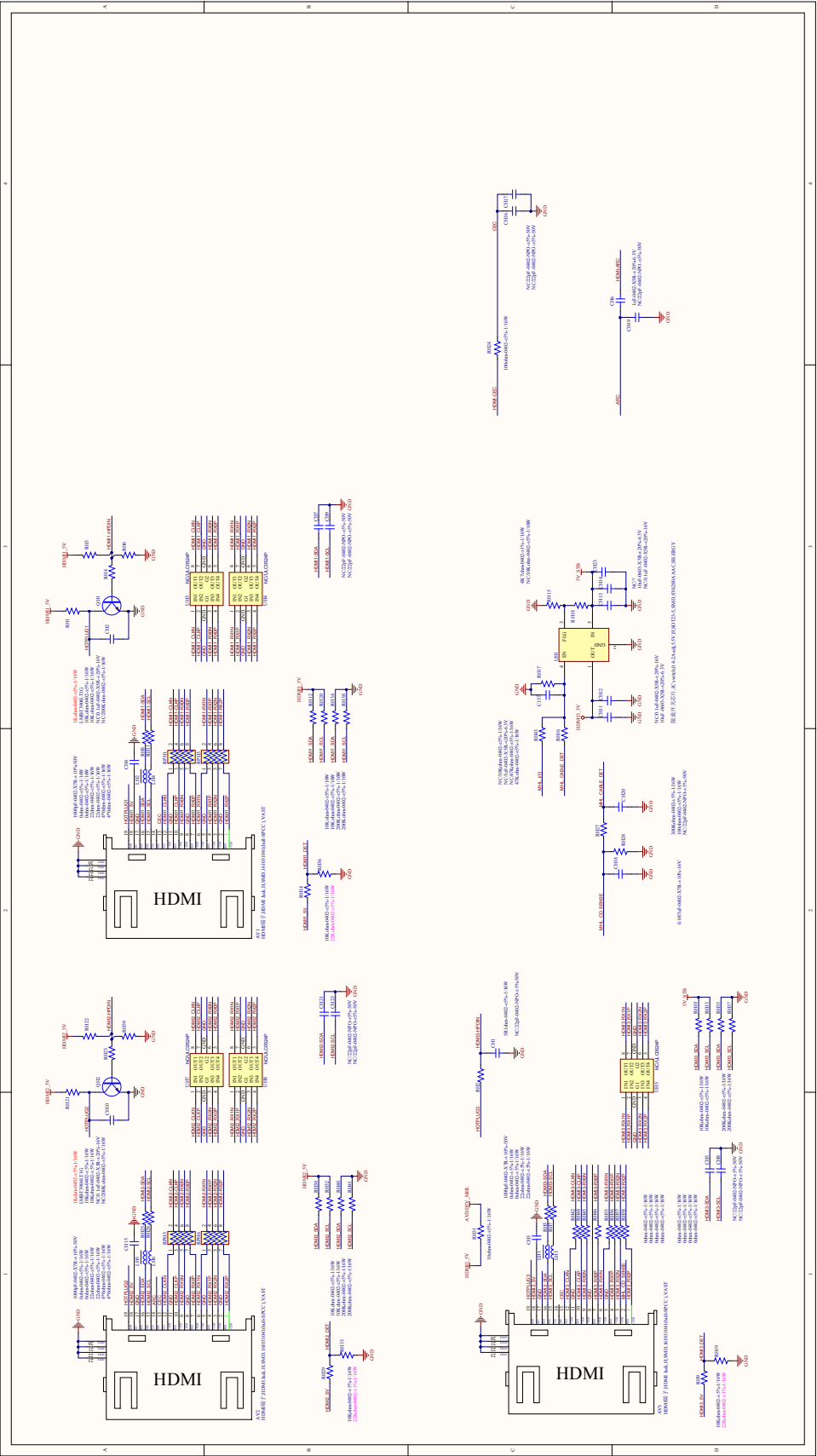
3.7 Wiring diagram of AV & YPBPR & SCART



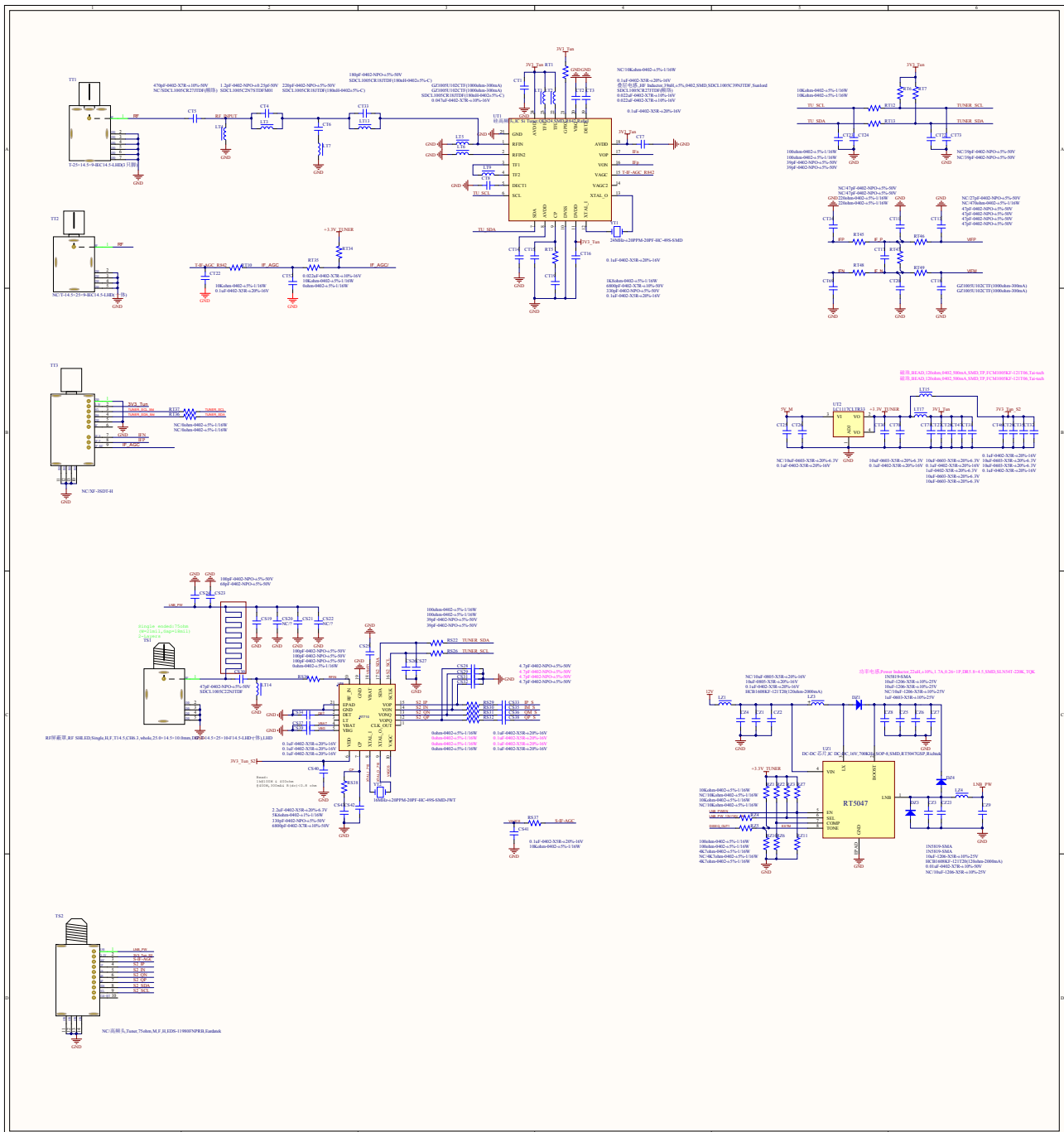
3.8 Wiring diagram of Network & USB & PCMCIA



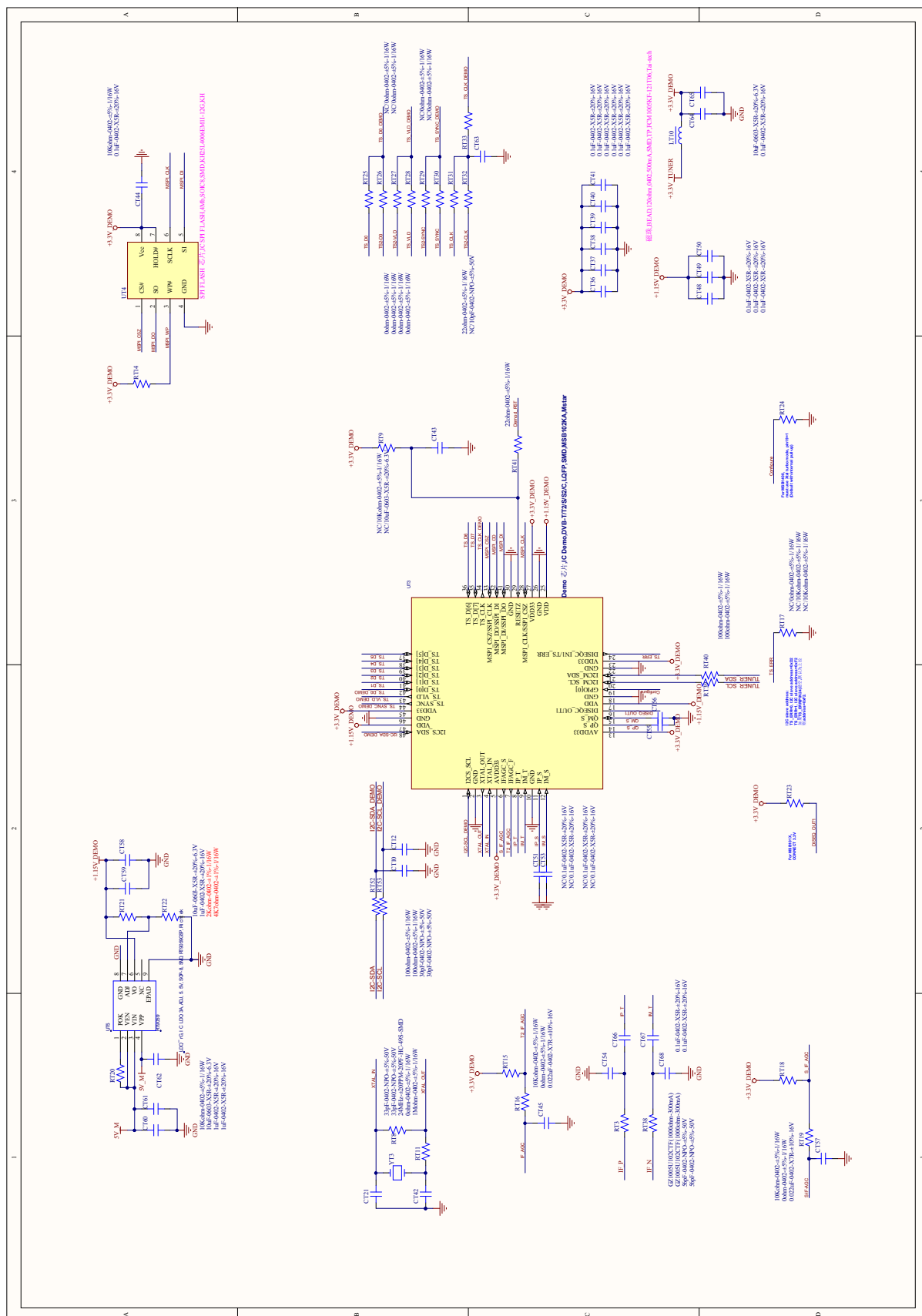
3.9 Wiring diagram of HDMI



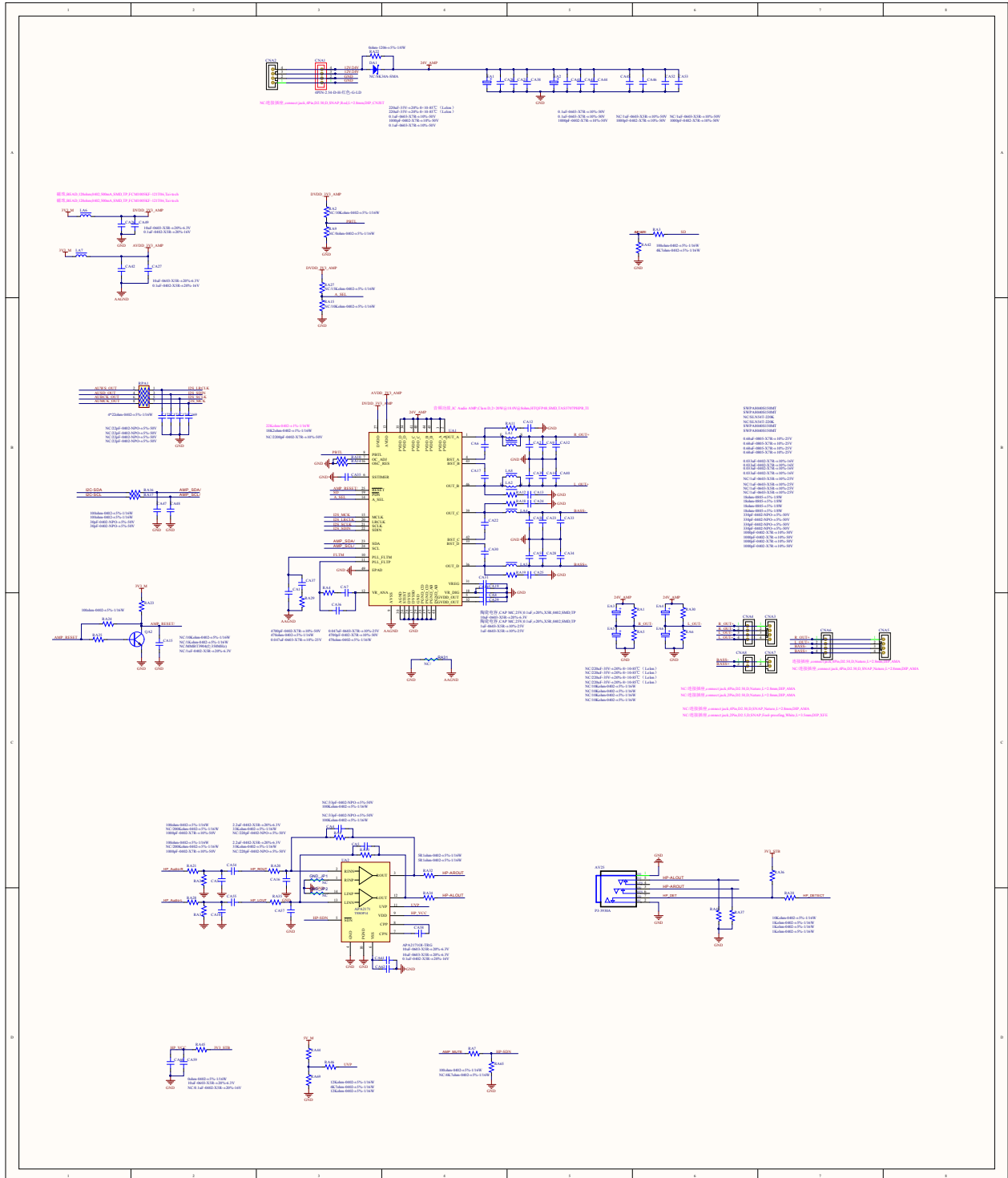
3.10 Wiring diagram of Tuner



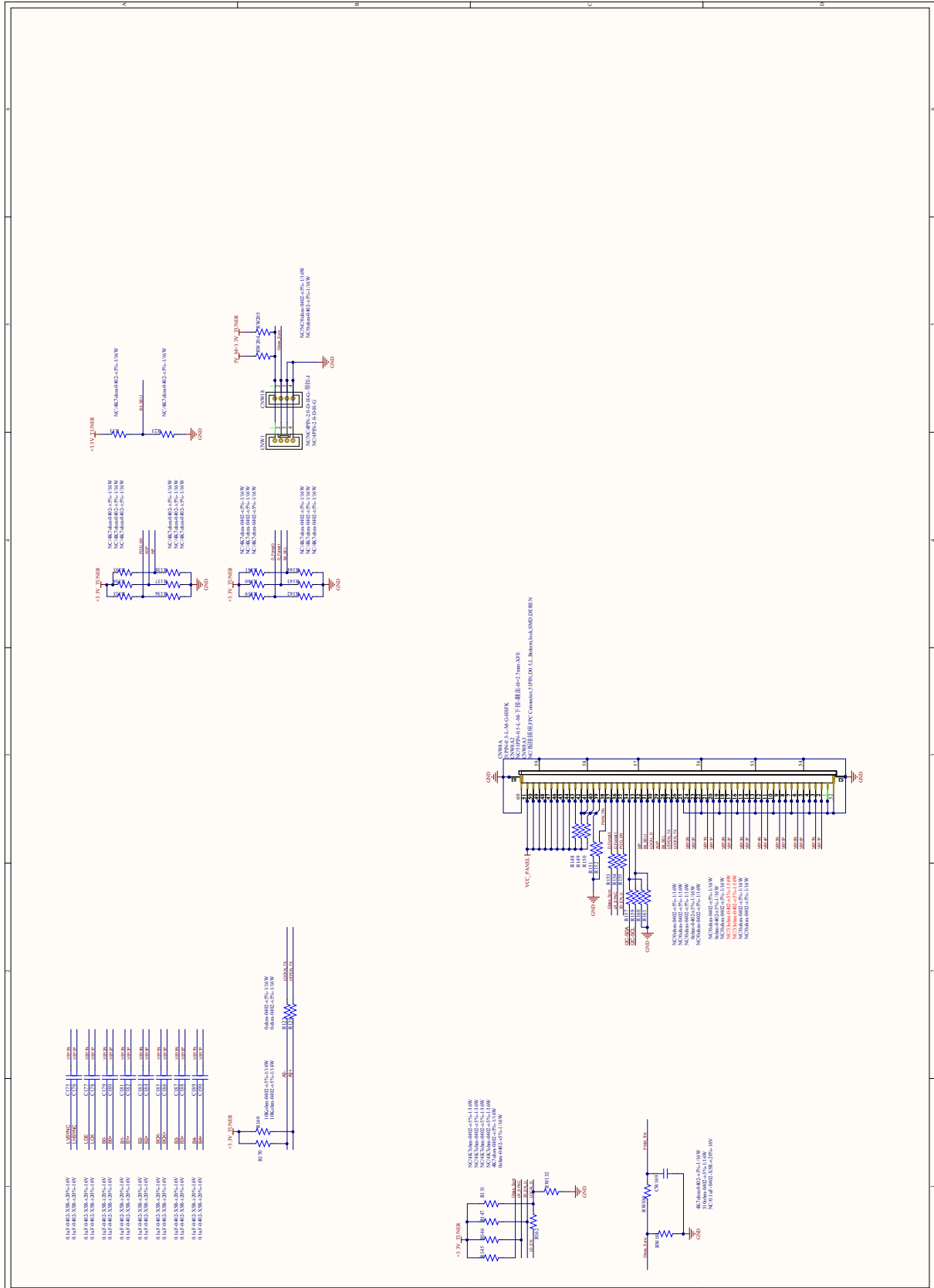
3.11 Wiring diagram of Demodulator



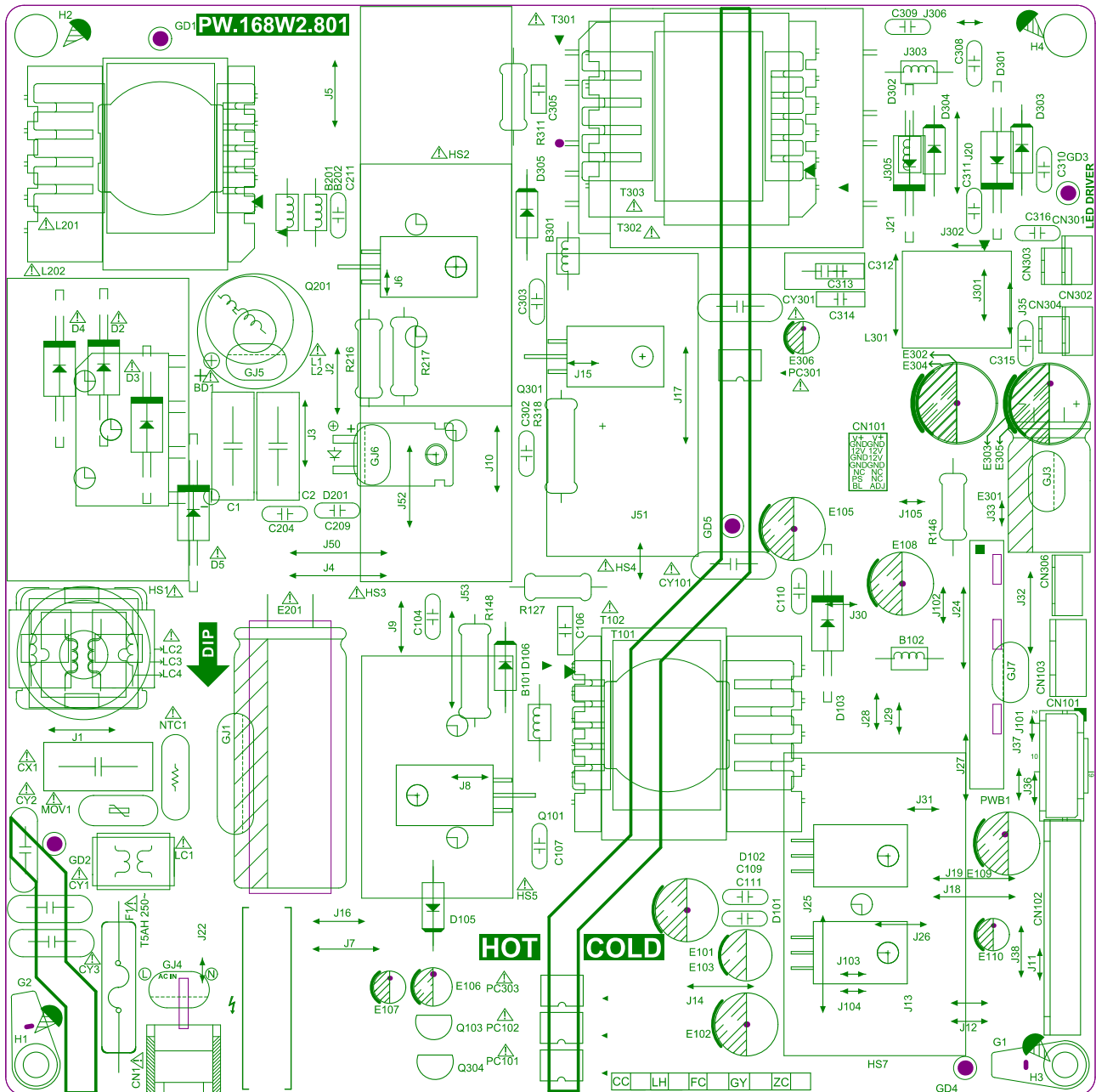
3.12 Wiring diagram of Amplifier 5711 & 5707

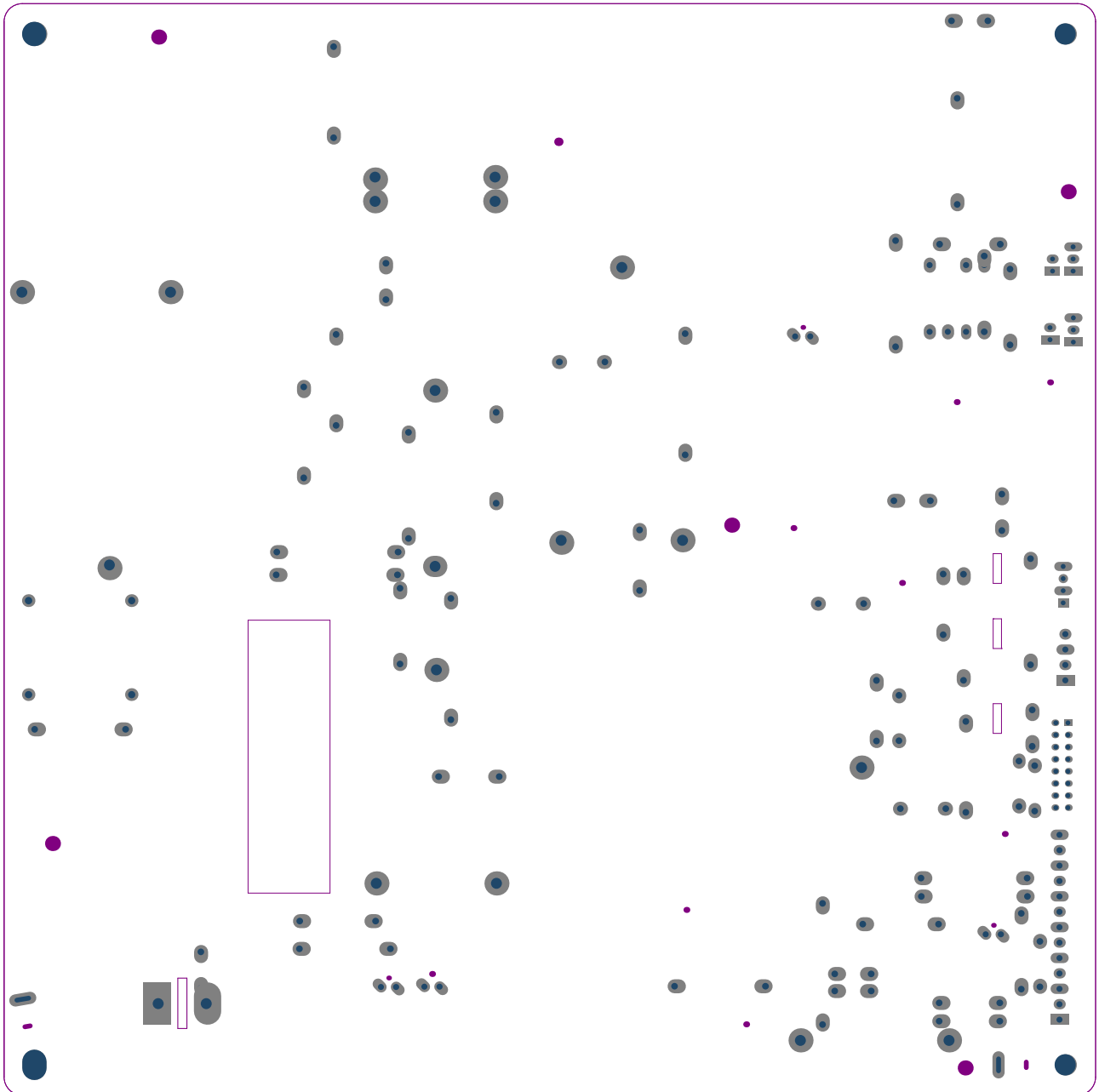


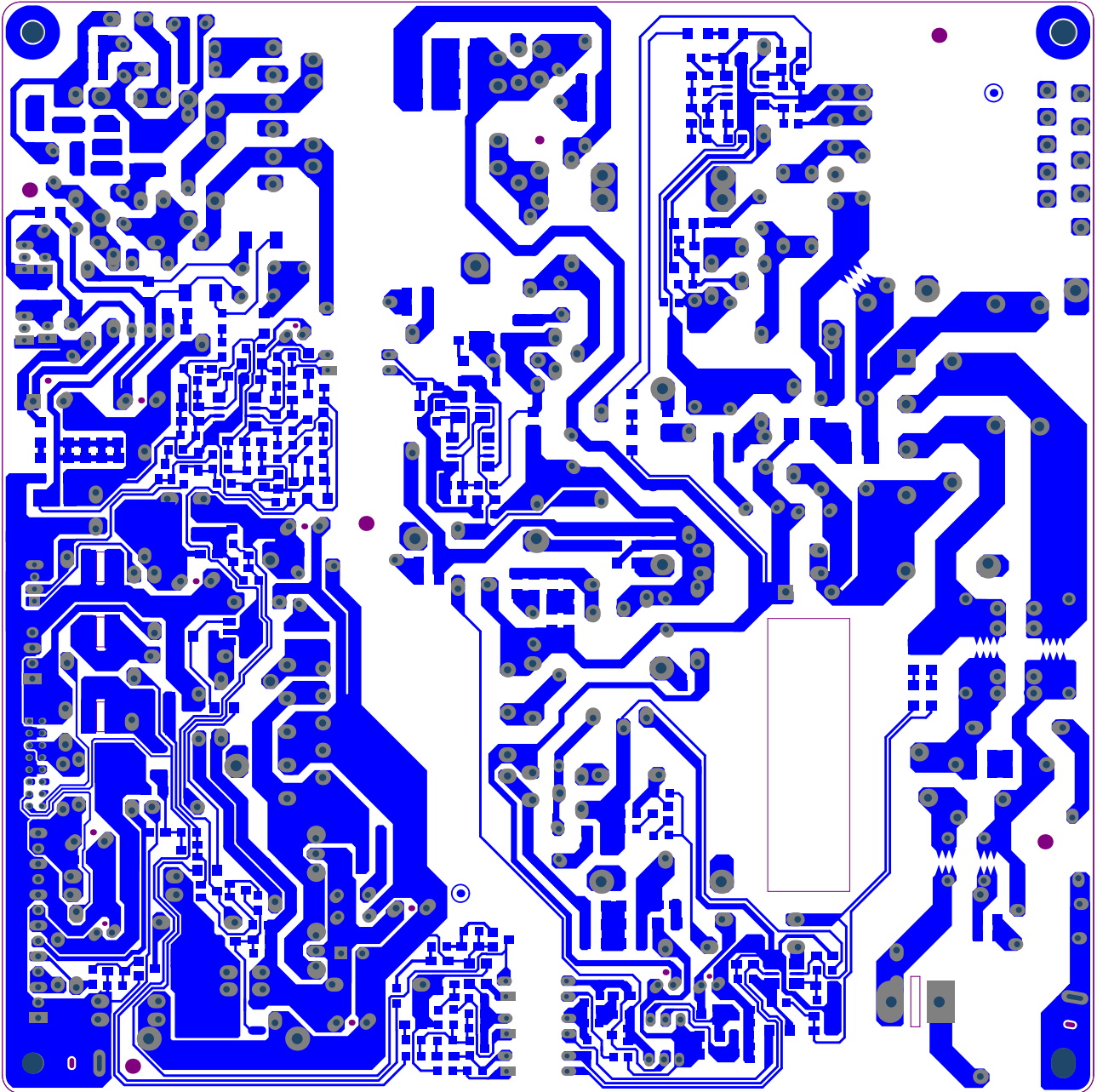
3.13 Wiring diagram of VB1 & LVDS TX Interface

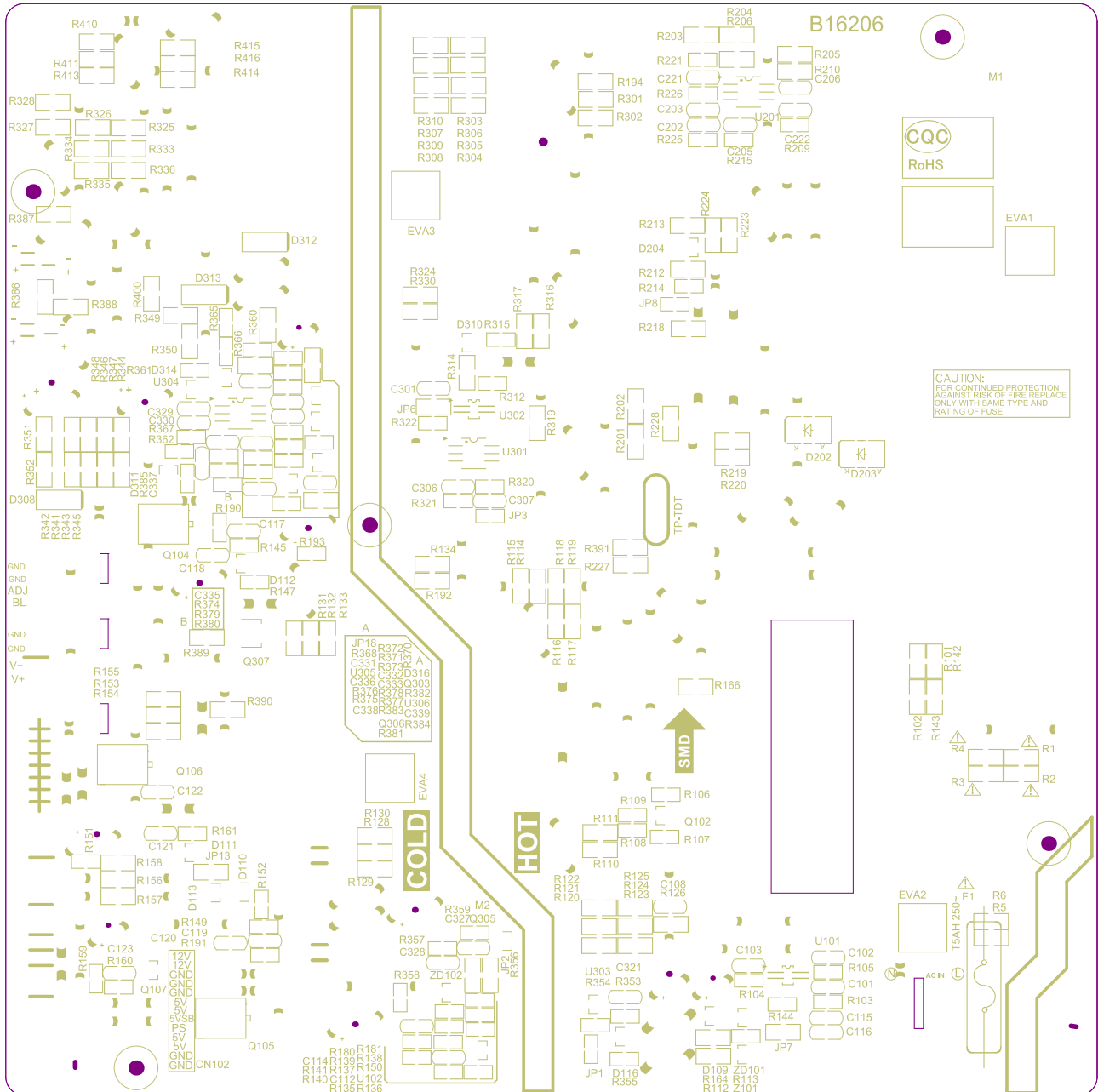


3.14 PCB layout of Power board - PW.168W2.801

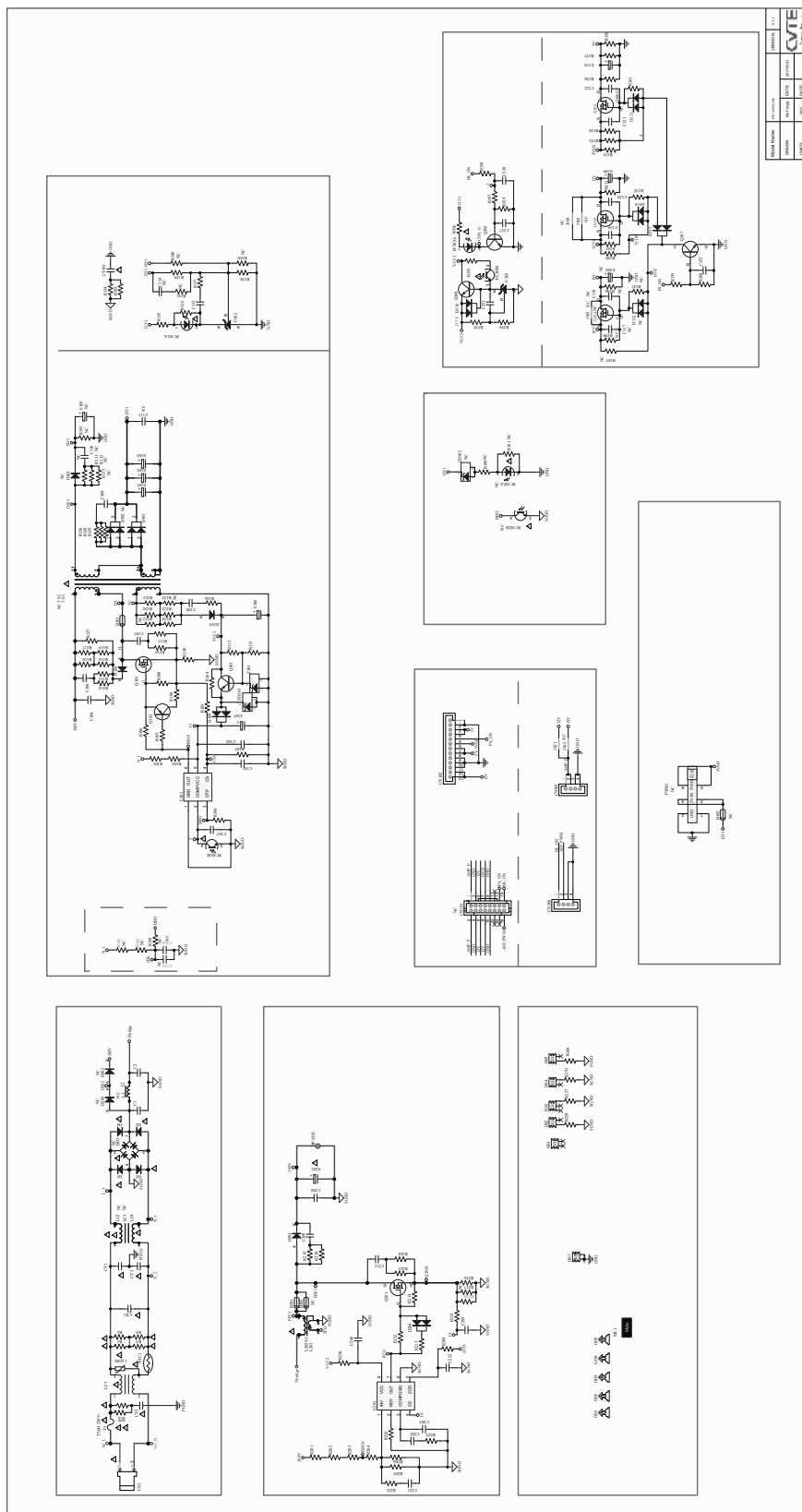


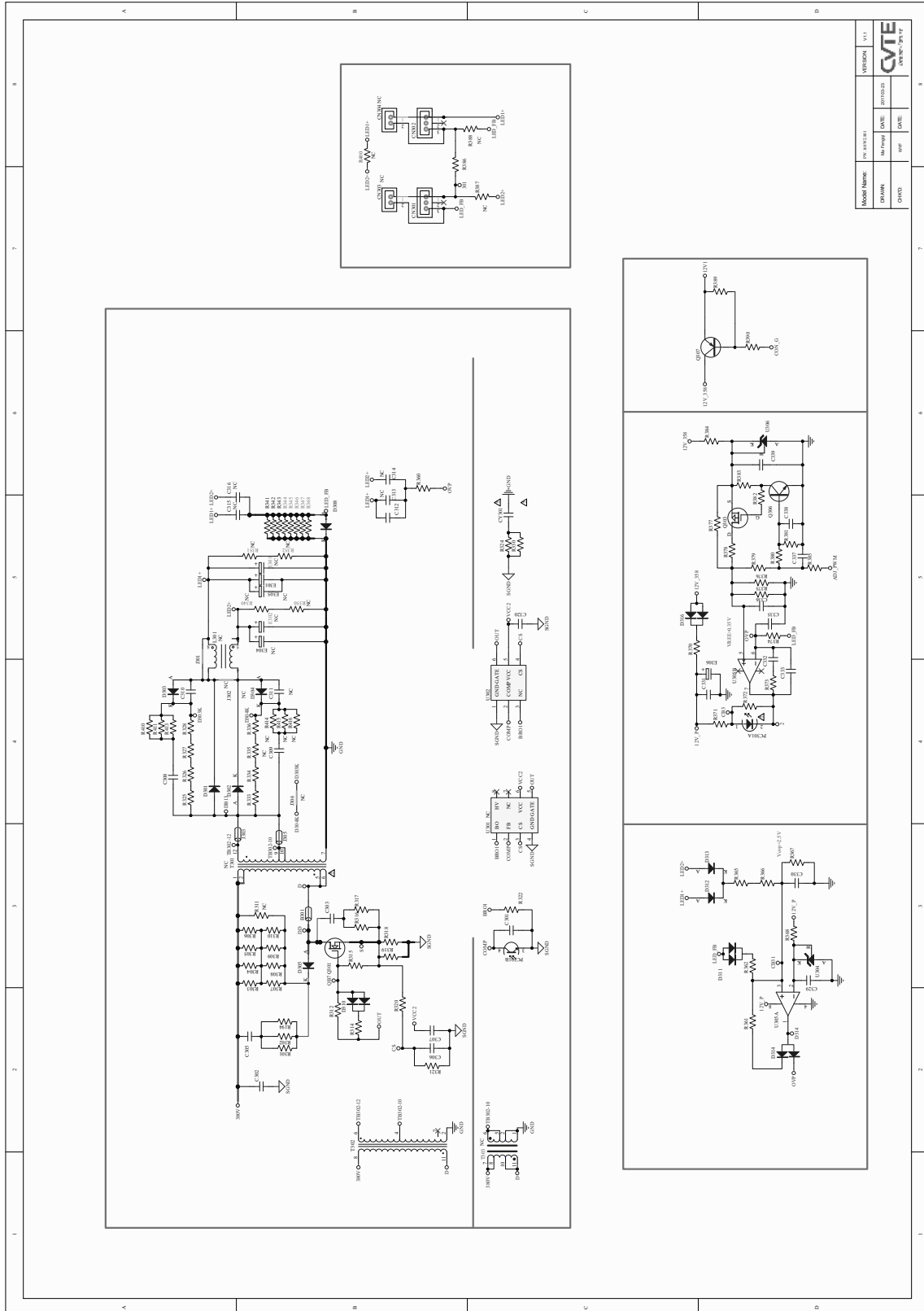




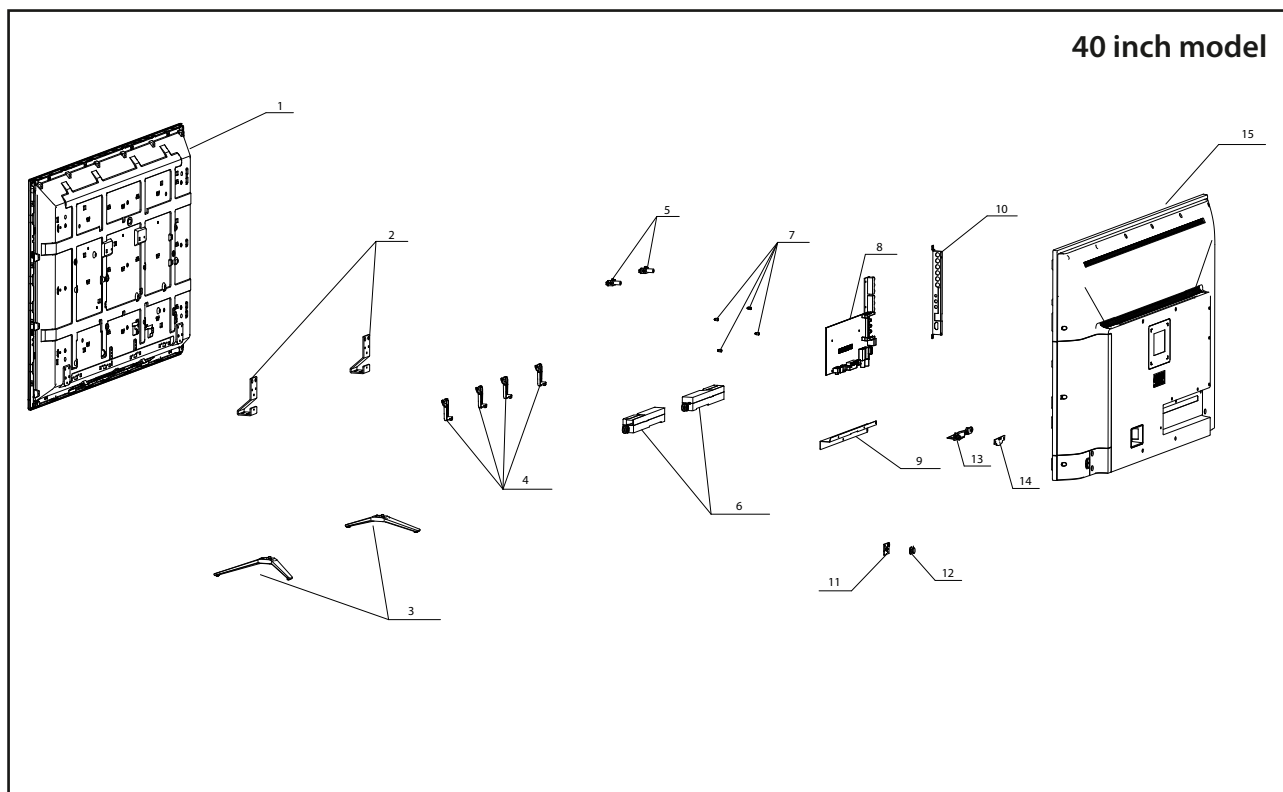
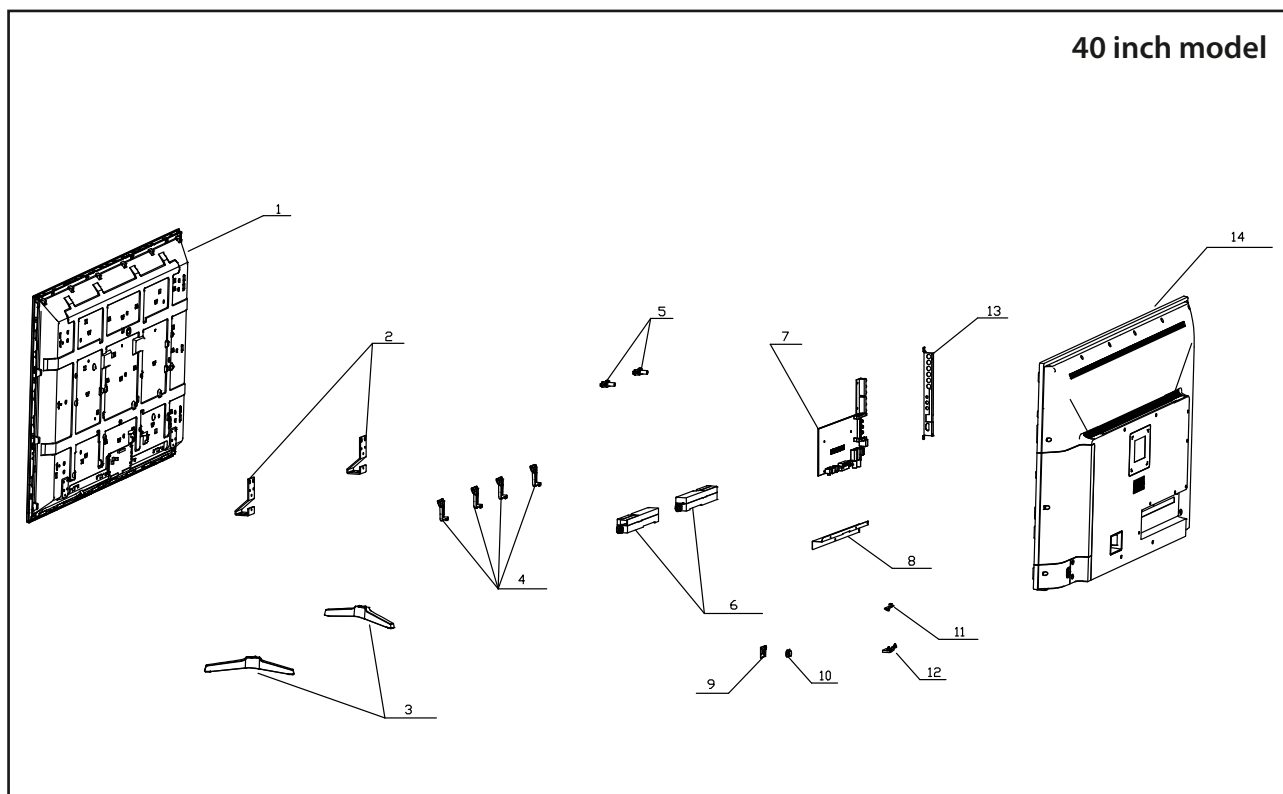


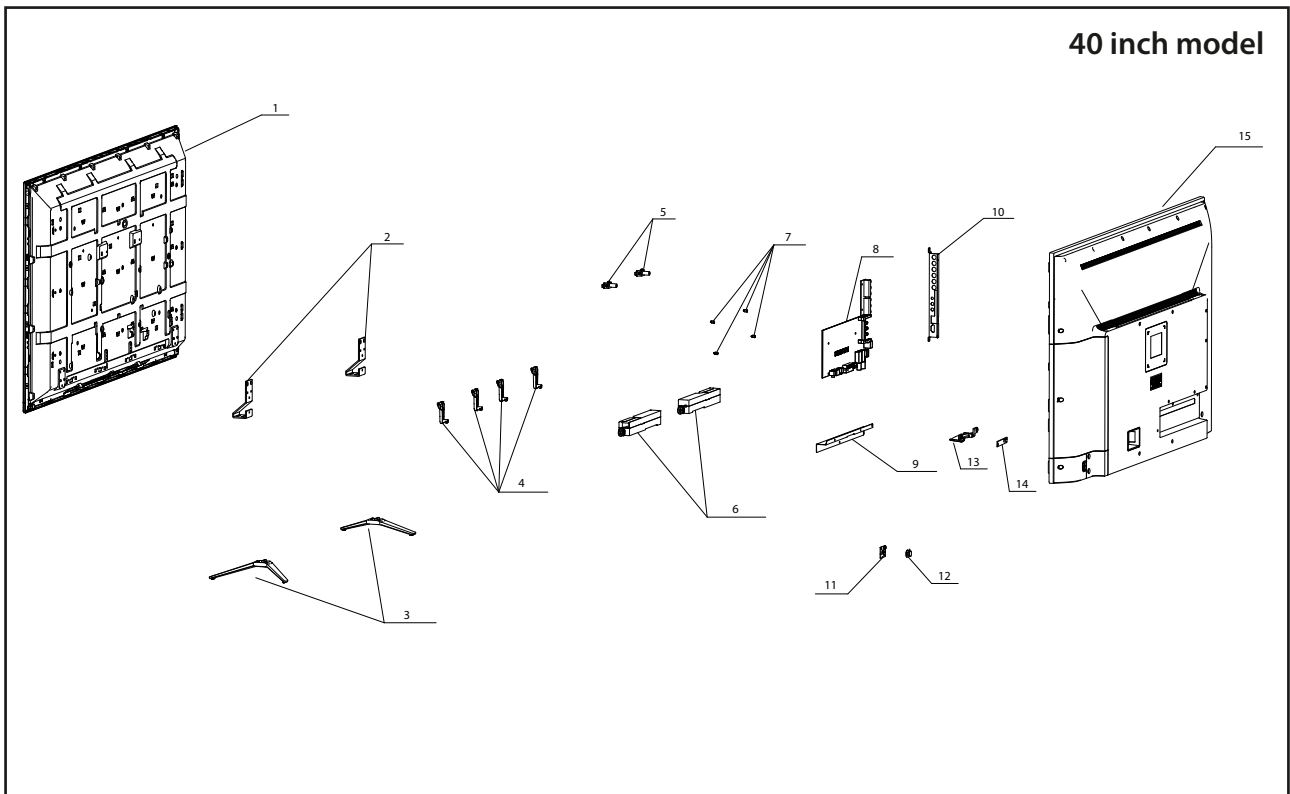
3.15 Wiring diagram of Power board - PW.168W2.801



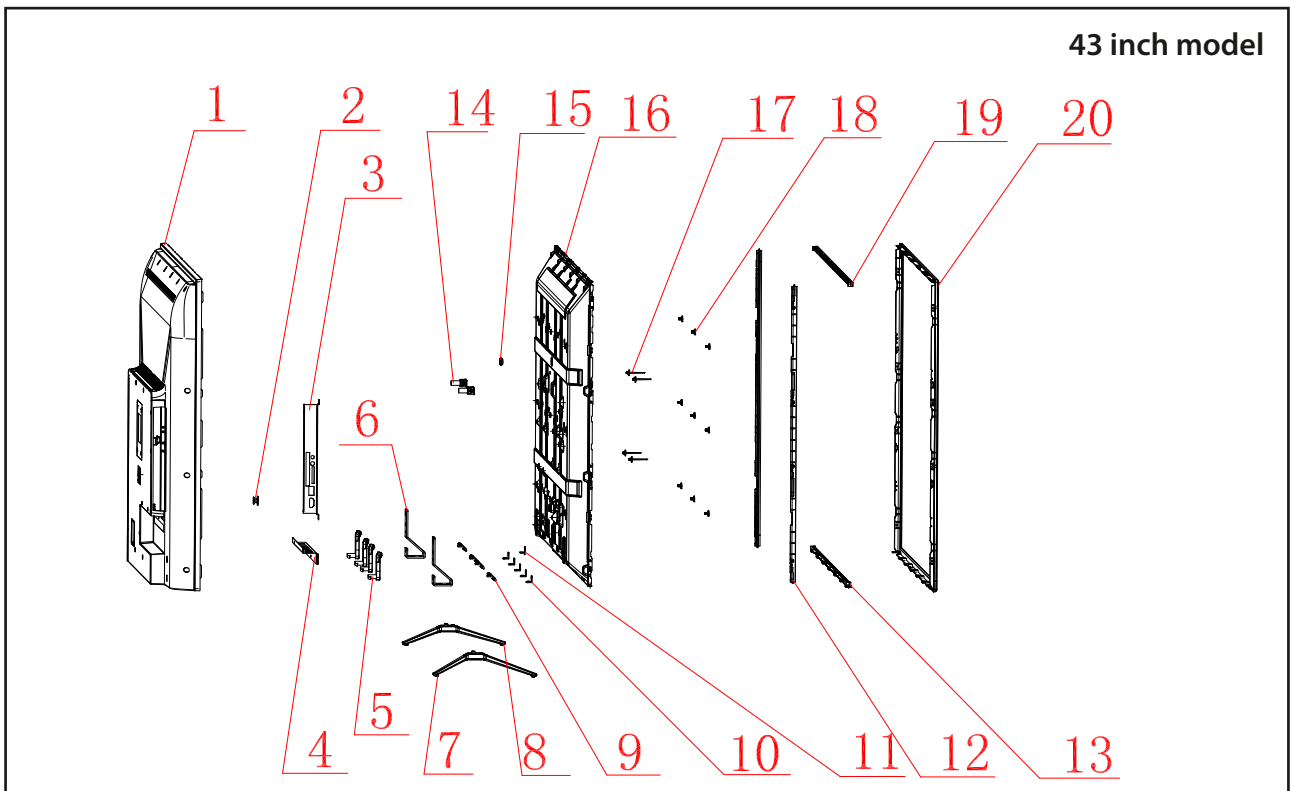


4. EXPLODED VIEW

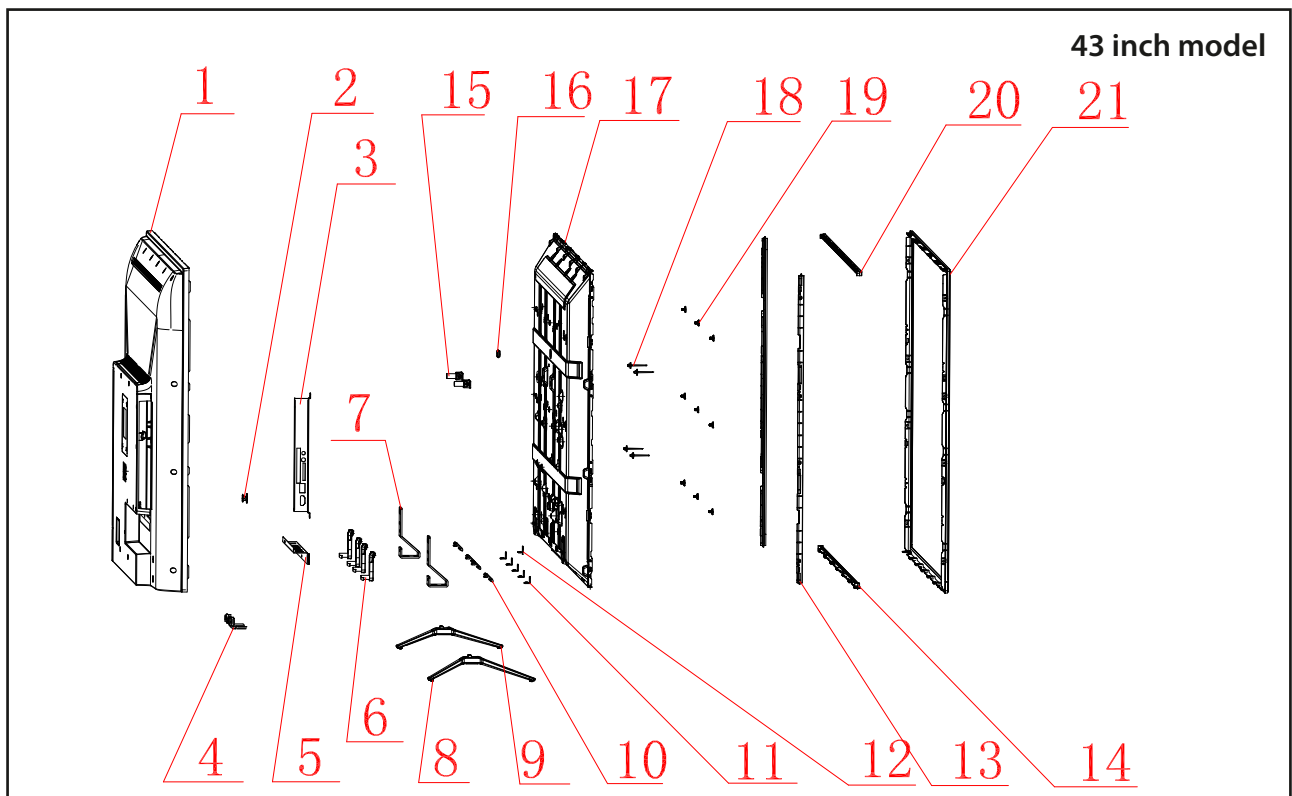




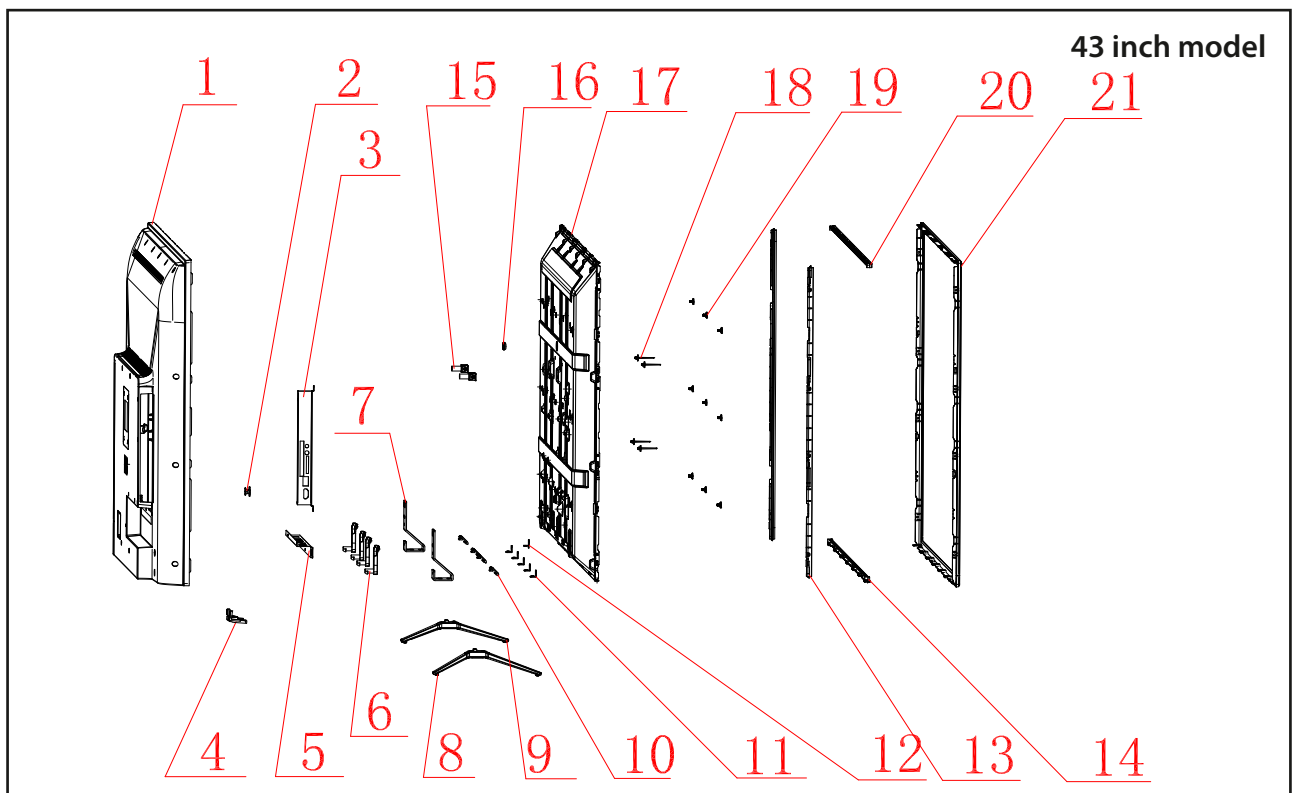
LC-40UI7552E



LC-43UI7252E



LC-43UI7352E



LC-43UI7552E

5. SERVICE MENU

MS6488 Factory Menu Specification

How to Enter Factory Menu?

Press the RC buttons in this sequence: "Menu 1 1 4 7" to enter the factory menu.

Description:

5.1 INTRODUCTION

5.2 ADC ADJUST & WHITE BALANCE AUTO ADJUST

5.3 PICTURE

5.4 SOUND

5.5 PANEL

5.6 DEBUG

5.7 GENERAL SETTING

5.8 EMC SETTING

5.9 CHANNEL TABLE

5.10 SW UPGRADE

5.11 SW INFORMATION

5.1 INTRODUCTION

SHIPPING INIT: TV Initilization and all parameter to be default. Designed for Shipment.

BURNING MODE: TV aging mode switch.

ADC ADJUST: Change ADC parameters

PICTURE SETTING: Change Picture Setting

SOUND SETTING: Change Sound Setting

PANEL: Change panel parameters like

DEBUG: Debug mode

GENERAL SETTING: Some other settings usually used, and also for Debug.

EMC SETTING: Some settings may affect EMC.

CHANNEL SETTING: channel list

SW UPGRADE: Software update item.

SW INFORMATION: Display some system information.

Board Type: Display board type

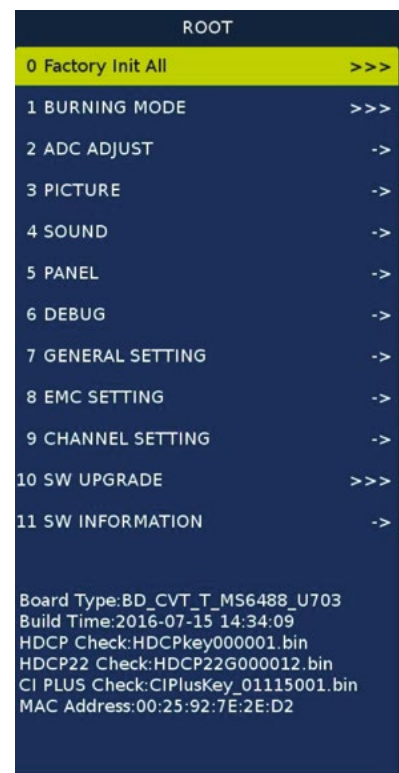
Build Time: Display Firmware build time

HDCP Check: HDCP key status

HDCP22 Check: HDCP22 key status

CI PLUS Check: CI+ key status

MAC Address: MAC Address



Picture 1 Introduction

5.2 ADC ADJUST & WHITE BALANCE AUTO ADJUST

ADC SETTING	
0 ADC Mode	-----
1 ADC Auto Adjust	
2 [ADC]R-Gain	--
3 [ADC]G-Gain	--
4 [ADC]B-Gain	--
5 [ADC]R-Offset	--
6 [ADC]G-Offset	--
7 [ADC]B-Offset	--
Board Type:BD_CVT_T_MS6488_U703 Build Time:2016-07-15 14:34:09 HDCP Check:HDCPkey000001.bin HDCP22 Check:HDCP22G000012.bin CI PLUS Check:CIPlusKey_01115001.bin	

Picture 2 ADC Setting

5.3 PICTURE

Source: Choose source

STANDARD SETTING: normal picture setting

NONLINE CURVE: Advanced properties

W/B Adjust: White Balance parameter setting

Color Setting: Adjust Colors

Luma Setting: Adjust Lumas

Peaking Setting: Adjust peakings

NR Setting: Adjust NR

CTI Setting: Adjust CTI

Gamma: not commonly used, has been set by default.

DLC: not commonly used, has been set by default.

Film Mode:

VIP:

PICTURE SETTING	
0 SOURCE	DTV
1 STANDARD SETTIN...	->
2 NONLINE CURVE	->
3 W/B ADJUST	->
4 Color Setting	->
5 Luma Setting	->
6 Peaking Setting	->
7 NR Setting	->
8 CTI Setting	->
9 Gamma	Default
10 DLC	R5
11 Film Mode	->
12 VIP	C2121
Board Type:BD_CVT_T_MS6488_U703 Build Time:2016-07-15 14:34:09 HDCP Check:HDCPkey000001.bin HDCP22 Check:HDCP22G000012.bin CI PLUS Check:CIPlusKey_01115001.bin MAC Address:00:25:92:7E:2E:D2	

Picture 3 Picture setting

5.3.1 STANDARD SETTINGS

Picture Mode: Select picture mode which is same with main menu.

Contrast: Adjust contrast which is same with main menu.

Brightness: Adjust brightness which is same with main menu.

Colour: Adjust Colour which is same with main menu.

Sharpness: Adjust Sharpness which is same with main menu.

Tint: Adjust tint which is same with main menu.

STANDARD SETTINGS	
0 Picture Mode	Economy
1 Contrast	49
2 Brightness	51
3 Color	41
4 Sharpness	40
5 Tint	50

Picture 4 Standard settings

5.3.2 NONLINEAR CURVE

Brightness: Adjust the real brightness for main menu from osd 0 to osd 100.

Contrast: Adjust the real contrast for main menu from osd 0 to osd 100.

Colour: Adjust the real colour for main menu from osd 0 to osd 100.

Sharpness: Adjust the real sharpness for main menu from osd 0 to osd 100.

Tint: Adjust the real tint for main menu from osd 0 to osd 100.

NONLINEAR CURVE	
0 Brightness	->
1 Contrast	->
2 Color	->
3 Sharpness	->
4 Tint	->

Picture 5 Nonlinear curve

BRIGHTNESS CURVE

Brightness_0: The real value of main menu contrast osd 0

Brightness_25: The real value of main menu contrast osd 25

Brightness_50: The real value of main menu contrast osd 50

Brightness_75: The real value of main menu contrast osd 75

Brightness_100: The real value of main menu contrast osd 100

The Contrast, Colour, Sharpness, Tint are same with the Brightness.

BRIGHTNESS CURVE	
0 Brightness_0	85
1 Brightness_25	107
2 Brightness_50	128
3 Brightness_75	145
4 Brightness_100	170

Picture 6 Brightness curve

5.3.3 WB ADJUST

White Balance Adjustment

This page only for current source White Balance Adjustment. Different source may have different values. There are Warm, Cool, Normal modes and save every separate source. We can change the R-GAIN, G-GAIN, B-GAIN, R-OFFSET, G-OFFSET, B-OFFSET.

WHITE BALANCE	
0 WB Mode	Cool
1 [WB]Gain-Step	8
2 [WB]R-Gain	1068
3 [WB]G-Gain	1024
4 [WB]B-Gain	1076
5 [WB]Offset-Step	1
6 [WB]R-Offset	1024
7 [WB]G-Offset	1024
8 [WB]B-Offset	1024

Picture 7 WB Adjust

5.3.4 COLOR SETTING

This page is for PQ adjust.

COLOR SETTING	
0 ICC	->
1 IBC	->
2 IHC	->

Picture 8 Color Settings

5.3.5 LUMA SETTING

This page is for PQ adjust

LUMA SETTING	
0 Pre Yoffset	0xf0
1 Pre Ygain	0x4a
2 CVBS comb contrast	0x84
3 CVBS comb brightn...	0x80
4 CVBS comb saturati...	0xa8

Picture 9 Luma setting

5.3.6 PEAKING SETTING

This page is for PQ adjust

PEAKING SETTING	
0 Peaking	S1
1 VIP Peaking bank	OFF
2 H_High_BK19_30	0x0
3 H_Mid High_BK19_31	0x0
4 H_Mid BK19_32	0x0
5 H_Low BK19_33	0x0
6 V_BK19_34	0x0
7 V_BK19_37	0x0
8 VIP HLPF	OFF
9 PreFilter	OFF
10 SRAM1	0 OFF
11 SRAM2	0 OFF

Picture 10 Peaking Setting

5.3.7 NR SETTING

This page is for PQ adjust.

NR SETTING	
0 NR	OFF
1 DNR_Y	NR_OFF
2 UCNr	Init
3 SPF_SNR_MR	OFF
4 SPF_SNR	OFF

Picture 11 NR Setting

5.3.8 CTI SETTING

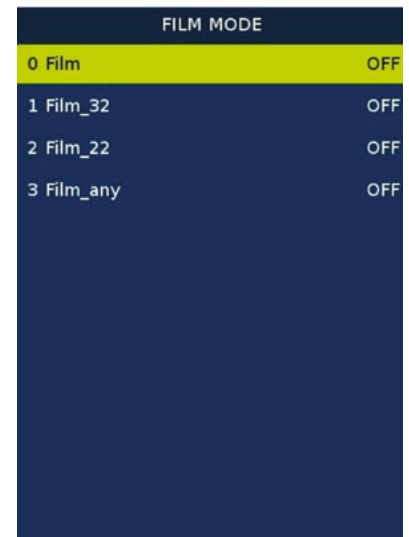
This page is for PQ adjust.

CTI SETTING	
0 VIP Post CTI	OFF
1 VIP Post CTI coef	OFF
2 PreCTI	OFF
3 Ycdelay	OFF

Picture 12 CTI Setting

5.3.9 FILM MODE

This page is for PQ adjust.



FILM MODE	
0 Film	OFF
1 Film_32	OFF
2 Film_22	OFF
3 Film_any	OFF

Picture 13 Film mode

5.4 SOUND

SOURCE: Choose source

SOUND MODE: BASS, TREBLE, EQSettings.

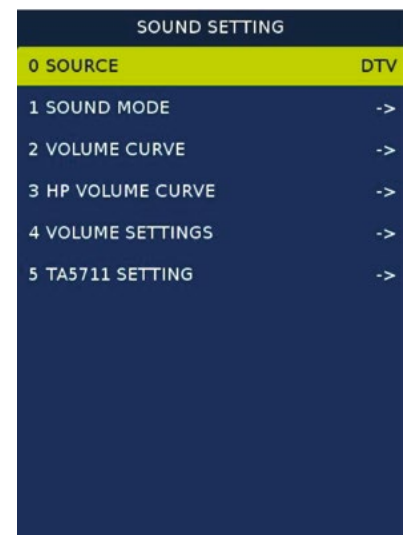
VOLUME CURVE: Adjust volume curve.

HP VOLUME CURVE: Adjust HP volume curve.

VOLUME SETTING: include DRC AVC

Prescale, For Software Desginer Only

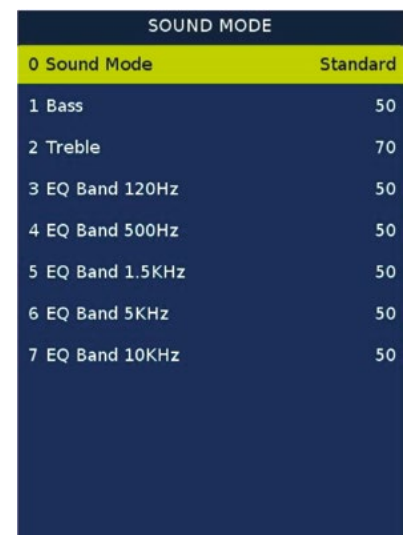
TA5711 STTING: some parameter for Power amplifier chip



SOUND SETTING	
0 SOURCE	DTV
1 SOUND MODE	->
2 VOLUME CURVE	->
3 HP VOLUME CURVE	->
4 VOLUME SETTINGS	->
5 TA5711 SETTING	->

Picture 14 Sound settings

5.4.1 SOUND MODE



SOUND MODE	
0 Sound Mode	Standard
1 Bass	50
2 Treble	70
3 EQ Band 120Hz	50
4 EQ Band 500Hz	50
5 EQ Band 1.5KHz	50
6 EQ Band 5KHz	50
7 EQ Band 10KHz	50

Picture 15 Sound mode

5.4.2 VOLUME CURVE

Volume Offset: User overall volume control, every source has a unique value.

VOL1-VOL100: All sources share a same value,make sure the next value bigger than the before.

VOLUME CURVE	
0 Vol Curve 1	569
1 Vol Curve 2	533
2 Vol Curve 3	493
3 Vol Curve 4	469
4 Vol Curve 5	428
5 Vol Curve 6	396
6 Vol Curve 7	372
7 Vol Curve 8	348
8 Vol Curve 9	324
9 Vol Curve 10	308
10 Vol Curve 20	206
11 Vol Curve 30	166
12 Vol Curve 40	141

Picture 16 Volume curve

5.4.3 HP VOLUME CURVE

Volume curve for headphone.

HP VOLUME CURVE	
0 HP Vol Curve 1	558
1 HP Vol Curve 2	510
2 HP Vol Curve 3	479
3 HP Vol Curve 4	441
4 HP Vol Curve 5	412
5 HP Vol Curve 6	380
6 HP Vol Curve 7	356
7 HP Vol Curve 8	334
8 HP Vol Curve 9	309
9 HP Vol Curve 10	294
10 HP Vol Curve 20	192
11 HP Vol Curve 30	152
12 HP Vol Curve 40	128

Picture 17 HP volume curve

5.4.4 VOLUME SETTINGS

Other settings for Volume.

VOLUME SETTINGS	
0 RealAVC(must be 1)	1
1 AVC SWITCH	0
2 AVC MODE	2
3 AVC ON THERSHOLD	38
4 AVC OFF THERSHO...	33
5 DRC STATUS	1
6 DRC ON THERSHOLD	21
7 HP DRC ON THERS...	21
8 Vol PreScale DTV	120
9 Vol PreScale ATV	170
10 Vol PreScale AV/YP...	92
11 Vol PreScale VGA	120
12 Vol PreScale HDMI	163

Picture 18 Volume settings

5.4.5 TA5711 SETTINGS

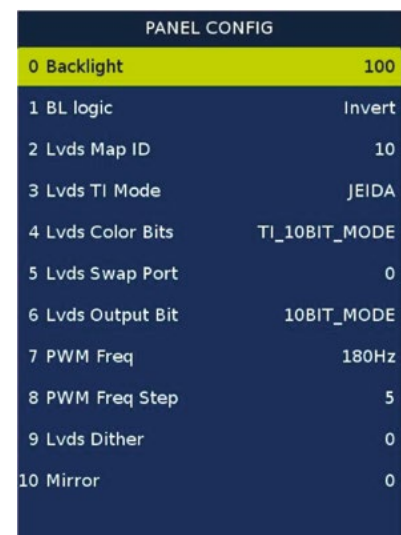
Some parameter for Power amplifier chip (5711 or 5707).

A screenshot of the TA5711 SETTINGS menu. The title 'TA5711 SETTINGS' is at the top. The first item, '0 LEFT CHANNEL', is highlighted in yellow and has a value of '0'. Below it are '1 RIGHT CHANNEL' and '2 LOW CHANNEL', both with a value of '0'.

TA5711 SETTINGS	
0 LEFT CHANNEL	0
1 RIGHT CHANNEL	0
2 LOW CHANNEL	0

Picture 19 TA5711 settings

5.5 PANEL

A screenshot of the PANEL CONFIG menu. The title 'PANEL CONFIG' is at the top. The first item, '0 Backlight', is highlighted in yellow and has a value of '100'. Other items include '1 BL logic' (Invert), '2 Lvds Map ID' (10), '3 Lvds TI Mode' (JEIDA), '4 Lvds Color Bits' (TI_10BIT_MODE), '5 Lvds Swap Port' (0), '6 Lvds Output Bit' (10BIT_MODE), '7 PWM Freq' (180Hz), '8 PWM Freq Step' (5), '9 Lvds Dither' (0), and '10 Mirror' (0).

PANEL CONFIG	
0 Backlight	100
1 BL logic	Invert
2 Lvds Map ID	10
3 Lvds TI Mode	JEIDA
4 Lvds Color Bits	TI_10BIT_MODE
5 Lvds Swap Port	0
6 Lvds Output Bit	10BIT_MODE
7 PWM Freq	180Hz
8 PWM Freq Step	5
9 Lvds Dither	0
10 Mirror	0

Picture 20 Panel config.

5.6 DEBUG

Uart Enable: Uart debug switch. For software designer only

VIF:

Erase MAC: erase mac address

Erase HDCP Key: erase HDCP key

Erase HDCP2.2 Key: erase HDCP2.2 key

Erase Ciplus Key: erase Ciplus key

Erase ADC:

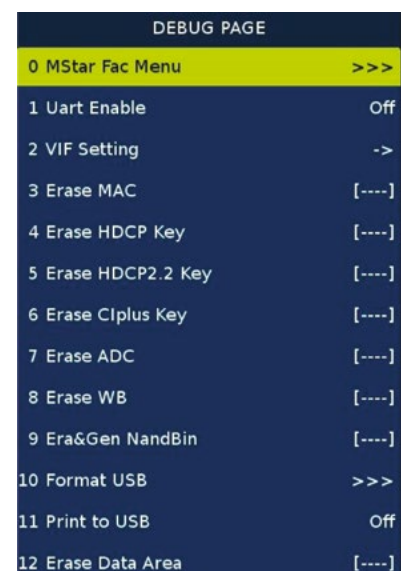
Erase WB:

Era & Gen NandBin: erase all the key

Format USB:

Print to USB: print info to USB switch

Erase Data Area: erase Data Area

A screenshot of the DEBUG PAGE menu. The title 'DEBUG PAGE' is at the top. The first item, '0 MStar Fac Menu', is highlighted in yellow and has a value of '>>>'. Other items include '1 Uart Enable' (Off), '2 VIF Setting' (->), '3 Erase MAC' ([----]), '4 Erase HDCP Key' ([----]), '5 Erase HDCP2.2 Key' ([----]), '6 Erase Ciplus Key' ([----]), '7 Erase ADC' ([----]), '8 Erase WB' ([----]), '9 Era&Gen NandBin' ([----]), '10 Format USB' (>>>), '11 Print to USB' (Off), and '12 Erase Data Area' ([----]).

DEBUG PAGE	
0 MStar Fac Menu	>>>
1 Uart Enable	Off
2 VIF Setting	->
3 Erase MAC	[----]
4 Erase HDCP Key	[----]
5 Erase HDCP2.2 Key	[----]
6 Erase Ciplus Key	[----]
7 Erase ADC	[----]
8 Erase WB	[----]
9 Era&Gen NandBin	[----]
10 Format USB	>>>
11 Print to USB	Off
12 Erase Data Area	[----]

Picture 21 Debug page

5.7 GENERAL SETTING

Test Pattern: Test pictures from IC which can help to judge panel issue or not.

OVERSCAN: Overscan setting

Timer Test: OSD time acceleration test function

WDT: watch dog switch.

Power On Mode: On/Standby/Last boot status.

EN ADC Value: show ADC value on menu switch

ADC Value: show ADC value

Capture Screen: Capture Screen switch

GENERAL SETTING	
0 Test Pattern	OFF
1 OVERSCAN	->
2 Timer Test	->
3 WDT	On
4 Power On Mode	Standby
5 EN ADC Value	OFF
6 ADC Value	CH0=0x0
7 Capture Screen	ON

Picture 22 General setting

5.8 EMC SETTING

EMC SETTING	
0 SSC MIU	On
1 MIU0 Span(0.1KHz)	20
2 MIU0 Step(0.01%)	10
3 MIU1 Span(0.1KHz)	20
4 MIU1 Step(0.01%)	10
5 SSC LVDS	Off
6 LVDS Span	350
7 LVDS Step	0%[0]
8 PANEL Swing	58

Picture 23 EMC Setting

5.9 CHANNEL TABLE

CH table import: Import channel list from USB

CH table export: Export channel list to USB

CHANNEL TABLE	
0 CH Table Import	>>>
1 CH Table Export	>>>
2 CH Table Init	>>>

Picture 24 Channel table

5.10 SW UPGRADE

Upgrade TV: update item
Bin Name: Software bin name

SW UPGRADE	
0 Upgrade TV	>>>
1 Bin name	allupgrade_648...
2 Flash size	--
3 DDR size	--

Picture 25 SW upgrade

5.11 SW INFORMATION

SW INFORMATION	
0 Mantis/OCS	CP145657
1 Main Board	BD_CVT_T_MS6...
2 Panel Name	UD_VB1_8LANE
3 AT Version	2.8.3
4 Build Time	2016-07-15 14:...
5 HDCP Key	HDCPkey000001
6 HDCP22 Key	HDCP22G000012
7 Mac Addr	00:25:92:7E:2E:...
8 CI+ Key	01115001
9 RF RC Version	Detect fail!
10 Sraf Vaild MAC	20160622 (OK)

Picture 26 SW information

6. UPGRADING INSTRUCTIONS

6.1 Introduce for MSD6488 chip

6.1.1 Type of MS6488 chip

Chip type	Demod	DDR	Area	Function
6488EVE	DVBT/C	8Gbit	EU/AU	Hbbtv/ Browser/APP
6488MVE	DVBT/C	8Gbit	EU/AUB	Hbbtv/Browser/APP, inset MEMC

6.1.2 Hardware

Chip type	MS6488
Chip	MS6488EV/MS6488MV
External DDR	1GByte
Flash	512MByte
Tuner	R842/RT710
APM	5707/5711
EXT demod	102KA/102KT
SD Cardexuan	optional
WIFI	7603/8188/7632(support Bluetooth)
CI	optional

Note:

Flash detail:

size	brand	flash type
512MB	MXIC	MX30LF4G18AC-TI

External DDR detail:

size	brand	flash type
1GB	NANYA	NT5CB128M16IP-EK

6.2 Chip alias

Chip	CVTE Name	MSTAR Name
6488EV	Muji	6488
6488MV	Manhattan	6488E

6.3 Upgrading Instruction

6.3.1 The rules of USB upgrade file name

Because the software is not compatible between the chip, so can't rise each other, we use software name distinguish it.

6488EV: [allupgrade_6488.bin](#)

6488.U701 use 6488EV chip

6488MV: [allupgrade_6488m.bin](#)

6488.U801, 6488.U703, 6488.U731 use 6488MV chip

6.3.2 Preparation

- Prepare (6488 board) for upgrading.



- One panel:



- One USB flash disk



- Earphone Serial port board: B.CNSISP7A



- USB extension cord



6.3.3 Upgrade interface and led flash mode

Upgrade interface

- During upgrade process, screen will display upgrade progress information.



- 100% means the upgrade is complete, then pull out USB storage and restart TV.



- Error means upgrade fail, we should try twice.



Led flash mode

During upgrade, we can know upgrade status by watching LED flash status.

During upgrade

RED 1000ms GREEN 1000ms flashing, until upgrade succeed or fail.

Upgrade succeed

RED 250ms GREEN 250ms flashing, Long time to blink until power off.

Upgrade fail

RED 1750ms GREEN 250ms flashing, Long time to blink until power off.

6.3.4 USB upgrade

User Menu Upgrade with USB

- Turn on the TV set
- Copy the bin file to the root directory of USB device
- Plug the USB device to the USB port
- Select "Software Update(USB)" on the OSD and follow the instructions. TV will switch-off automatically

- after upgrading finished.

Factory Setting Upgrading

Operation Procedure

After Unzip the upgrade package, put the Unzip file "allupgrade_6488.bin" into USB flash disk on root directory, and then insert the USB flash into board.

Press <menu>+1147 to enter the factory menu setting, search for the "SW UPGRADE" item by scrolling up and down, and then elect to enter the SW upgrade mode.

Once enter SW upgrade mode please check whether the upgrade file was exist and the file name was correct, and then select upgrade TV start to upgrade software.

Upgrade Prompt

- Turn off TV
- Copy upgrade file to USB storage Root directory
- Insert USB storage to TV
- Turn on TV, if upgrade file is correct, TV will start upgrade automatically.
- When upgrading, the TV set will light panel according to the panel parameter, and display the progress bar. If the panel parameter of board matches the panel, you will see the following image:



- After upgrade succeed, please put off USB storage
- Restart TV.

6.3.5 Serial Upgrading

Tools prepare

Earphone Serial Port board: B.CNSISP7A

USB extension cord

Serial port tool software

Connect method

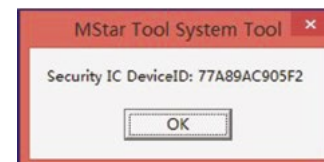
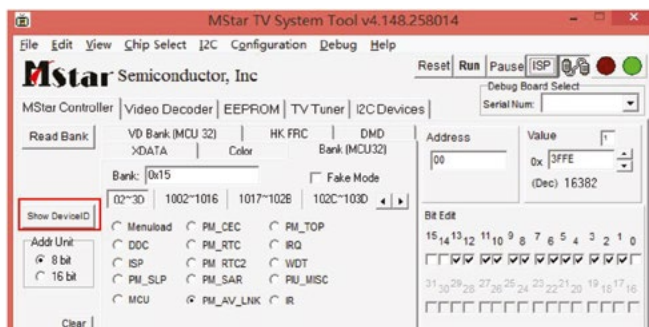
connect method follow next image



Operation Procedure

Use tool and files in 加密芯片_muji.rar or 加密芯片_Manhattan.rar

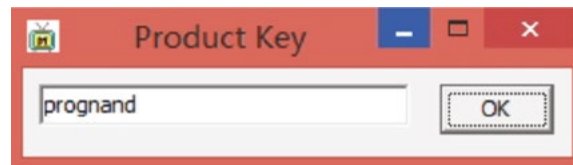
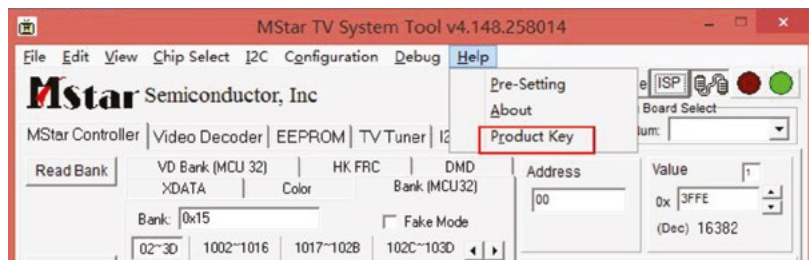
1. Connect the Uart debug tool, Disconnect the tool which you used to get log information.
2. Open the MSTV_Tool.exe.
3. Press the button "Show Device ID" to show the Device ID.
4. Connect the Uart debug tool, Disconnect the tool which you used to get log information.
5. Open the MSTV_Tool.exe.
6. Press the button "Show Device ID" to show the Device ID.



7. please send you device ID to us (xinzhaoliang@cvte.com) ,we will send the key to you.
8. Select View->OpenDebugPort and enter the OpenDebugPort menu, input the key string you get in step4 at the OpenDebugPort menu and press Run button of the OpenDebugPort menu. Check and make sure run successfully.



9. Select "Help-> Product Key" and enter Product Key menu, input "prognand" command in the Product Key menu and press "OK" Button.



10. Select View -> NAND Program (ARM/MIPS) and enter the following Menu. In the Menu, select the files need as bellow, then press "program" button.

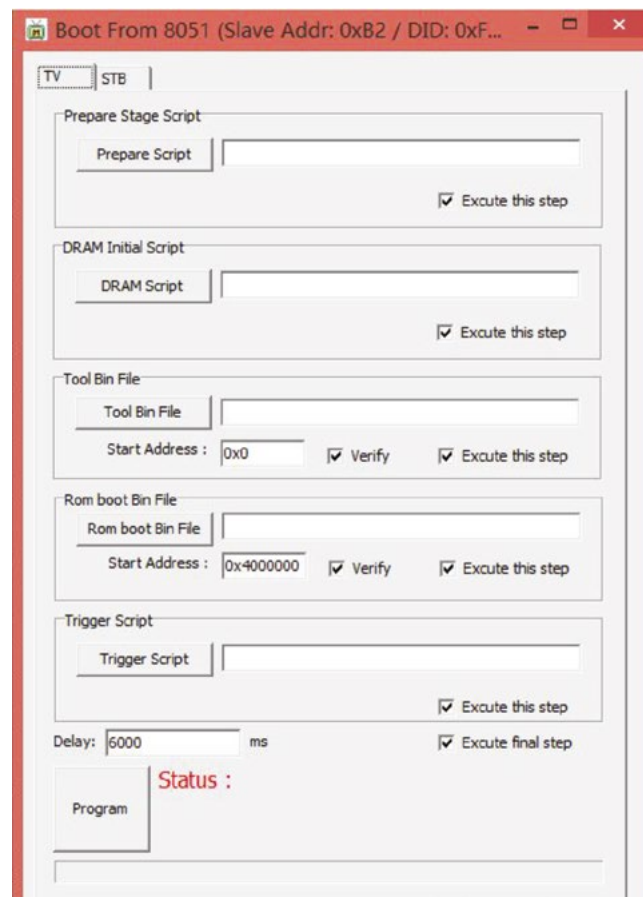
Prepare stage -> 1.Maldives_PM51_Prepare.txt

DRAM script -> 2Munich_DDR3_32_MIU0_1_1600_17x17.txt

Tool bin File -> 3 PM51_Maldives.bin

Rom Boot Bin File -> 4.RomBoot.bin

Trigger stage -> 5.Maldives_PM51_Trigger.txt



11. After program successfully, disconnect the AC plug, put the upgrade file the USB stick and plug the usb stick in the main board, connect the tool(such as SecureCRT) which you used to get the log with the tv by the uart debug tool.



12. Set the PC cursor in the window which can show the log information and press the Enter button of your PC keyboard, do QR-TBSW-014 10 not release the Enter button and connect the AC power, then you will enter the Mboot of the TV(as the following picture). In the Mboot, you can input some command to set the tv system.

```
changelist: 1046836
===== set bootargs =====
Hit any key to stop autoboot: 0
<< MStar >>#
<< MStar >>#
<< MStar >>#
<< MStar >>#
<< MStar >>#
MStar >>#
```

13. Input "cu" command in the Mboot and press Enter, then the TV will start to upgrade.



7. OSD MENU TREE

FIRST TIME INSTALLATION					
Level 1	Level 2	Level 3	Level 4	Value	Comment
Language					
Country					
Network					
	Use Wireless Network				
	Skip Network Setting				
Environment					
	Home Mode				
	Store Mode				
How Is The TV Set Installed?					
	Desktop				
	Wall-mount				
Choose Input Source					

MENU SYSTEM					
NETFLIX					
YouTube					
BBC iPlayer					UK only
MORE APPS					
	AQUOS NET+				
	BBC iPlayer				UK only
	BBC News				UK only
	BBC Sports				UK only
	Weather				
	Browser				
SOURCES					
MEDIA					
	USB				
	SD Card				
	Miracast				
	Media Server				
PICTURE					
	Picture Mode				
		Dynamic			
		Standard			
		Movie			
		Personal			
		Economy			
	Contrast			0 - 100	
	Brightness			0 - 100	
	Colour			0 - 100	
	Tint			0 - 100	
	Sharpness			0 - 100	
	Colour Temp				
		Cold			
		Normal			
		Warm			

	Aspect Ratio				
		Auto			DTV input only
		4:3			
		16:9			
		Zoom1			
		Zoom2			
		PointToPoint			HDMI input only
	Expert Settings				
		Noise Reduction			
			Off		
			Low		
			Middle		
			High		
			Auto		
		Active contrast			
			On		
			Off		
		Gamma			
			Low		
			Medium		
			High		
		Red		0 - 100	
		Green		0 - 100	
		Blue		0 - 100	
		Backlight		0 - 100	
SOUND					
	Sound Mode				
		Standard			
		Music			
		Movie			
		Sports			
		Personal			
	EQ				
	Balance			-50 - +50	
	Auto Volume Level				
		On			
		Off			
	DTS Studio Sound				
		On			
		Off			
	Digital Output				
		PCM			
		Auto			
		Off			
	Audio Description				
	AD Volume			0 - 100	
	Audio Track				
	Audio Delay (ms)			0 - 200	
	SPDIF Delay (ms)			0 - 200	

SETTINGS					
	CHANNEL				
		DVB Antenna			
			Terrestrial		
			Cable		
		Auto Tuning			
		Analogue Manual Tuning			
		Digital Manual Tuning			
		Channel Edit			
		Signal Information			
		CI Information			
		Sorting by LCN			
			On		
			Off		
		Channel list auto update			
			On		
			Off		
		Recorded List			
		Schedule List			
		Satellite Setup			
		OAD			
	NETWORK				
		Network Configuration			
			Cable		
			WiFi		
		IP Config			
			Auto		
			Manual		
		Wifi Config			
			Wifi Auto Search		
		Network Info			
		Network Test			
		Network Wake Up			
		Netflix Setting			
	TIME				
		Auto Sync			
		Clock			
		Off Time			
		On Time			
		Sleep Timer			
		OSD Timer			
		Auto Standby			
		Time Zone			
	LOCK				
		Hotel / System Lock			
		Set Password			
		Channel Lock			
		Parental Guidance			
		Key lock			

		Source Lock			
		Hotel Mode			
	SETUP				
		Language			
		Audio Languages			
		Audio Languages2			
		Subtitle Language			
		Subtitle Language2			
		Hearing Impaired			
		Blue Screen			
		PVR File System			
			Select Disk		
			Timeshift Size		
			Format:		
			Speed:		
		First Time Installation			
		Software Update (USB)			
		Software Update (NET)			
		Reset TV			
		HDMI CEC			
			Device List		
			HDMI CEC		
			Auto Standby		
			HDMI ARC		
		HDMI EDID			
			Standard		
			Enhancement		
		LED Status			
			On		
			Off		
		HbbTV			
			On		
			Off		
		Version info			
		Source Edit			
		Store Mode			

8. PICTURE ADJUSTMENT

8.1 White Balance

- Load 80% White pattern from signal generator
- Enter Factory Menu by pressing MENU + 1147
- Choose **3 PICTURE SETTING**
- Change **0 SOURCE** to **HDMI**
- Choose **3 WB ADJUST**
- In **0 WB MODE** choose Warm/Normal/Cold
- Change **R-GAIN/G-GAIN/B-GAIN** to meet specification

WHITE BALANCE	
0 Source	DTV
1 WB Mode	Normal
2 [WB]R-Gain	1084
3 [WB]G-Gain	1018
4 [WB]B-Gain	1625
5 [WB]R-Offset	1024
6 [WB]G-Offset	1024
7 [WB]B-Offset	1024
8 Reset WB Data	->
9 Copy to all soure	->

Color Temperature specification:

	x	y	°K	Deviation
Cold	0,2718	0,2776	12000	±0.003
Normal	0,2848	0,2932	9300	±0.003
Warm	0,3135	0,3236	6500	±0.003

9. SMART TV TROUBLESHOOTING

1. TV cant connect to wi-fi network

Steps to fix this issue:

- Set on your wi-fi router/access point WPA or WPA2 encryption. WEP is not supported.
- Set on your wi-fi router DNS to **8.8.8.8** (Google DNS server)
- If above does not help, try to upgrade software again

2. Entering AQUOS NET+ is not possible

- Most probable cause may be missing or wrong MAC address

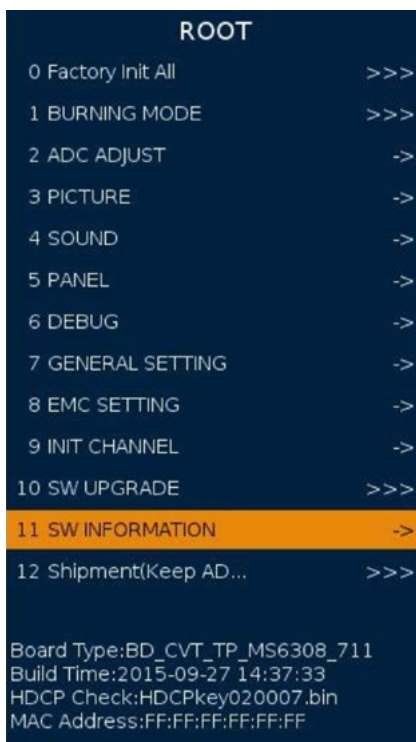
Steps of test validity of MAC address:

1. Press **MENU + 1147** to enter factory menu
2. Go to **11 SW Information** and press OK (Pic.1)
3. Check item **10 Sraf Valid MAC**
4. If there is **(OK)**, it means everything is ok (Pic. 2)
Note: It may take few seconds until "OK" shows after turning TV on.
5. If there is **(NG)**, means either MAC address is missing or is not supported by current SDK (Pic. 3).

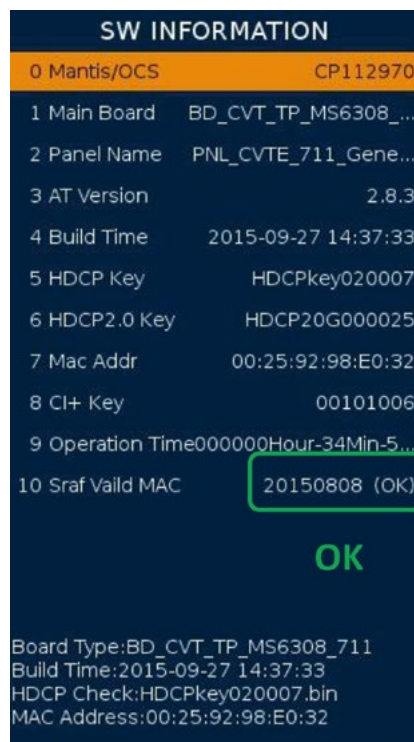
In case of NG test result:

1. Check **7 Mac Addr**
2. If value is **FF:FF:FF:FF:FF:FF** – this means MAC was not added during production of main-board.
Solution to fix this issue: Request new MAC addresses from TV manufacturer.
3. If value is different than **FF:FF:FF:FF:FF:FF** – Means current address is not supported by software.

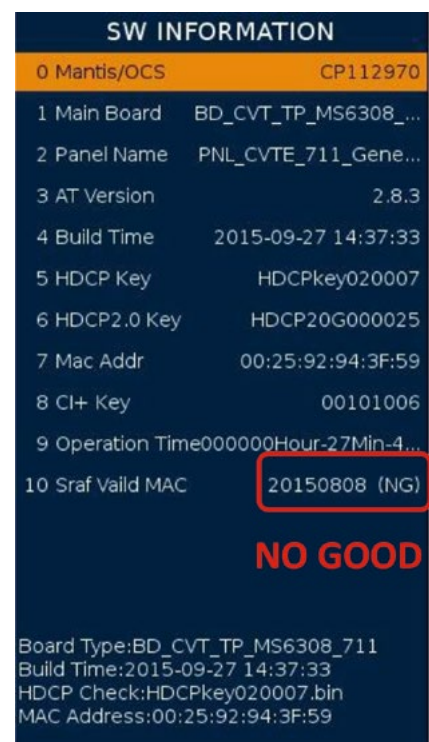
Solution to fix this issue: Upgrade TV software to the latest version.



Picture 1



Picture 2



Picture 3

10. HOTEL MODE

Description:

The Hotel mode and Lock mode share some common functions. Hotel mode can use the Lock mode functions and also other specific functions for Hotels.

How to enter in Hotel mode:

There are 2 ways to enter in Hotel mode:

1. Press **MENU + 7906**
2. Enter in **MENU -> SETTINGS -> LOCK -> Hotel Mode**

Entering using way 1) drives to Hotel mode functions, available by advanced users. These functions should be modified by technical staff.

Entering using way 2) needs to use a password. By default the "Lock" password is "0000" and can be changed later. After allowing the "System Lock", the "Hotel mode" item is available in this menu. Hotel Mode is protected by "7906" password, it cannot be changed.

Lock Mode functions:

It is important to understand that Lock mode functions can be combined with the Hotel Mode functions. Let's start the Lock Mode functions description first:

OPTIONS:

1. System Lock [ON/OFF]
2. Set Password [4 digits entry]
3. Channel lock [Green key to lock/unlock channels in the channel list]
4. Parental Guidance [4 .. 18 years and OFF options]
5. Key lock [Full – Partial – OFF]
6. Source Lock [Satellite, ATV, AV, Scart, YPbPr, VGA/PC, HDMI1...HDMI3]
7. Hotel Mode [Option to enter in Hotel mode from Lock Menu]

System Lock: This option enables or disables the lock options 2 to 7, it must be ON to set any of them.

Set Password: This option allows the change password for Lock mode.

Channel lock: This function allows to lock by password any channel in the channel list. To watch the locked channel, it is necessary to enter the same password set in Lock mode.

Parental Guidance: This function checks the Transport Stream parental control data and allows to watch the film if the age threshold set in the menu is higher than the age threshold sent by the transport stream. If it is OFF, no limitation is set.

Key lock: This function will lock the local keypad totally (all keys disabled) or partially (on/off key working, rest of keys disabled). OFF means all local keypad keys enabled.

Source Lock: This function will lock the selected source(s).

Hotel Mode: This function enters in Hotel mode after entering the password "7906"

Hotel Mode functions:

Once we entered in Hotel Mode we find the following functions:

1. Hotel Mode [ON/OFF]
2. Default Source [DTV, Satellite, ATV, AV, Scart, YPbPr, VGA/PC, HDMI1...HDMI3]
3. DTV Channel Type [Digital TV / Radio]
4. Default Prog [Program number]
5. Default Volume [0..100]
6. Max Volume [0..100]

7. CH Table Import
8. CH Table Export
9. Reset Hotel Mode
10. USB clone to TV
11. TV clone to USB
12. Import Welcome Logo
13. Welcome Logo [ON/OFF]
14. Menu Lock [ON/OFF]

Hotel Mode: This option will enable or disable any of the Hotel Mode options set. To modify or make them effective this option must be ON.

Default Source: This option sets the source that will be shown when TV is powered on. Each time TV is passed to standby and powered on again, the default source selected will be displayed.

DTV Channel Type: If Default Source selected is DTV, this option defines if channel type is TV or Radio.

Default Prog: This option defines the default program number (TV or Radio) when Default Source selected is DTV.

Example:

- Default Source: DTV
- DTV Channel Type: Digital TV
- Default prog: 23

TV will start in DTV TV program number 23 each time the TV set is powered on.

Default Volume: This option will set the volume level that TV will show at each power on. User can change the volume level but it is not memorized.

Max Volume: This option defines the maximum volume level allowed. Once this value is set, the user only can modify the volume level in the range [0 .. MAX VOLUME].

CH Table Import: This function will copy the channel table structure copied in an USB device to the TV.

CH Table Export: This function will copy the channel table structure from one TV to an USB device.

These functions are complementary, and the target is to avoid to do a complete installation in each TV in the hotel. It can be used only one TV, copy channel table structure in one USB and copy the contents in the other TV sets with the option "CH Table Import"

Reset Hotel Mode: Executing this command will provoke the restore of all default values of the Hotel mode.

USB clone to TV: This option will copy all user TV settings stored in a USB device to one TV set

TV clone to USB: This option will copy all user TV settings stored in a TV to one USB device.

These functions are complementary, and the target is to avoid to set in each TV in the hotel all necessary settings (picture / sound / network etc...). It is enough to adjust one TV, copy contents in a USB with "TV clone to USB" function and put them in other TVs with "USB clone to TV".

Import Welcome Logo: This function allows to show a Logo (jpg file) on a TV start up for some seconds. The File name should be called "Welcome.jpg" and the picture will be stored on the TV memory. If the Logo needs to be updated it can be done by overwriting the existing one in the TV memory. When logo is downloaded in the TV, a message must be shown; "Ok".

Welcome Logo: This command enables / disables the Welcome. jpg picture mentioned in the previous function.

Menu Lock: This function blocks the MENU key in the remote control to prevent user can change any undesired parameter that can be accessible from the main menu.

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