TOSHIBA

Leading Innovation

FILE NO. 050-2015019

SERVICE MANUAL

LCD Color Television

32E2533D

32E2543D

(System Information)

CONTENTS

IMPORTANT NOTICE

WARNING:

You are requested that you shall not modify or alter the information or data provided herein without prior written consent by Toshiba. Toshiba 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.

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GREEN PRODUCT PROCUREMENT

The EC is actively promoting the WEEE & RoHS Directives that define standards for recycling and reuse of Waste Electrical and Electronic Equipment and for the Restriction of the use of certain Hazardous Substances. From July 1, 2006, the RoHS Directive will prohibit any marketing of new products containing the restricted substances.

Increasing attention is given to issues related to the global environmental. Toshiba Corporation recognizes environmental protection as a key management tasks, and is doing its utmost to enhance and improve the quality and scope of its environmental activities. In line with this, Toshiba proactively promotes Green Procurement, and seeks to purchase and use products, parts and materials that have low environmental impacts.

Green procurement of parts is not only confined to manufacture. The same green parts used in manufacture must also be used as replacement parts.

LEAD-FREE SOLDER

This product is manufactured using lead-free solder as a part of a movement within the consumer products industry at large to be environmentally responsible. Lead-free solder must be used in the servicing and repair of this product.

WARNING: This product is manufactured using lead free solder.
DO NOT USE LEAD BASED SOLDER TO REPAIR THIS PRODUCT!

The melting temperature of lead-free solder is higher than that of leaded solder by 30ºC to 40ºC (54ºF to 72ºF). Use of a soldering iron designed for lead-based solders to repair product made with lead-free solder may result in damage to the component and or PCB being soldered. Great care should be made to ensure high-quality soldering when servicing this product especially when soldering large components, through-hole pins, and on PCBs as the level of heat required to melt lead-free solder is high.

SAFETY INSTRUCTION

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.

Safety Precaution

WARNING: SERVICING SHOULD NOT BE ATTEMPTED BY ANYONE UNFAMILIAR WITH THE NECESSARY PRECAUTIONS ON THIS RECEIVER. THE FOLLOWING ARE THE NECESSARY PRECAUTIONS TO BE OBSERVED BEFORE SERVICING THIS CHASSIS.

1. An isolation transformer should be connected in the power line between the receiver and the AC line before any service is performed on the receiver.

2. Always disconnect the power plug before any disassembling of the product. It may result in electrical shock.

3. When replacing a chassis in the cabinet, always be certain that all the protective devices are put back in place, such as nonmetallic control knobs, insulating covers, shields, isolation resistor-capacitor network, etc.

4. Always keep tools, components of the product, etc away from the children, These items may cause injury to children.

5. Depending on the model, use an isolation transformer or wear suitable gloves when servicing with the power on, and disconnect the power plug to avoid electrical shock when replacing parts. In some cases, alternating current is also impressed in the chassis, so electrical shock is possible if the chassis is contacted with the power on.

6. Always use the replacement parts specified for the particular model when making repairs. The parts used in products require special safety characteristics such as inflammability, voltage resistance, etc. therefore, use only replacement parts that have these same characteristics. Use only the specified parts when the ⚠ mark is indicated in the circuit diagram or parts list.

7. Parts mounting and routing dressing of wirings should be the same as that used originally. For safety purposes, insulating materials such as isolation tube or tape are sometimes used and printed circuit boards are sometimes mounted floating. Also make sure that wirings is routed and clamped to avoid parts that generate heat and which use high voltage. Always follow the manufactured wiring routes / dressings.

8. Always ensure that all internal wirings are in accordance before re-assembling the external casing after a repairing completed. Do not allow internal wiring to be pinched by cabinets, panels, etc. Any error in reassembly or wiring can result in electrical leakage, flame, etc., and may be hazardous.

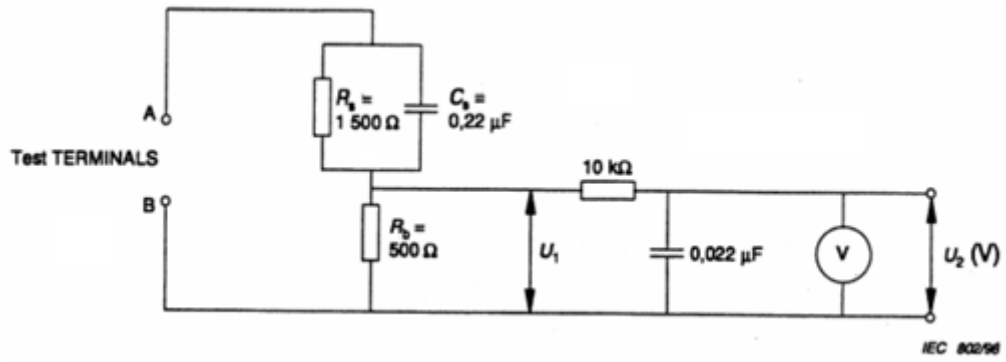
9. NEVER remodel the product in any way. Remodeling can result in improper operation, malfunction, or electrical leakage and flame, which may be hazardous.

10. Touch current check. (After completing the work, measure touch current to prevent an electric shock.)

- Plug the AC cord directly into the AC outlet. Do NOT use an isolation transformer for this check.
- Connect a measuring network for touch currents between each exposed metallic part on the set and a good earth ground such as a water pipe.

Annex D
(normative)

Measuring network for TOUCH CURRENTS



Resistance values in orms (Ω).

V: Voltmeter or oscilloscope
(r.m.s. or peak reading)

Input resistance : ≧ 1 MΩ
Input capacitance : ≦ 200 pF
Frequency range : 15 Hz to 1 MHz and d.c. respectively

Note: Appropriate measures should be taken to obtain the correct value in case of non sinusoidal waveforms.

The measuring instrument is calibrated by comparing the frequency factor of U_2 with the solid line in figure F.2 of IEC 60990 at various frequencies. A calibration curve is constructed showing the deviation of U_2 from the ideal curve as a function of frequency.

TOUCH CURRENT = U_2 / 500 (peak value).

- The potential at any point (TOUCH CURRENT) expressed as voltage U_1 and U_2 does not exceed the following value:

The part or contact of a TERMINAL is not HAZARDOUS LIVE if:

a) The open-circuit voltage should not exceed 35 V (peak) a.c. or 60 V d.c. or, if a) is not met.

b) The measurement of the TOUCH CURRENT shall be carried out in accordance with IEC 60990, with the measuring network described in **Annex D** of this standard.

The TOUCH CURRENT expressed as voltages U_1 and U_2, does not exceed the following values:
- for a.c. : U_1 = 35 V (peak) and U_2 = 0.35 V (peak);
- for d.c. : U_1 = 1.0 V

Note: The limit values of U_2 = 0.35 V (peak) for a.c. and U_1 = 1.0 V for d.c. correspond to the values 0.7 mA (peak) a.c. and 2.0 mA d.c.

Product Safety Notice

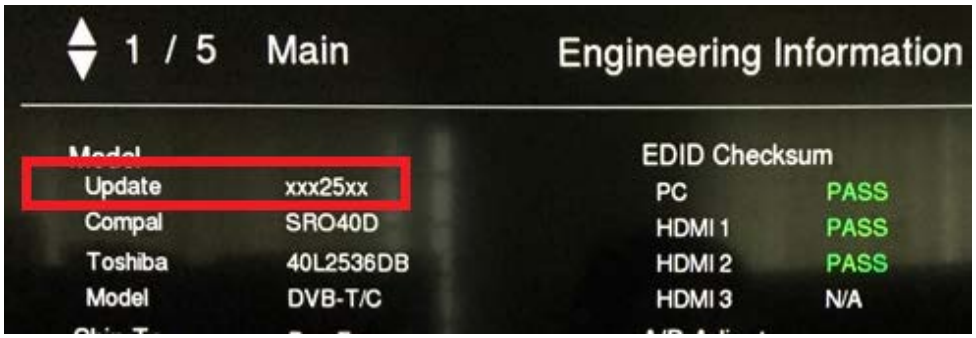
Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the international hazard symbols on the schematic diagram and the parts list.

Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create electrical shock, fire, or other hazards.

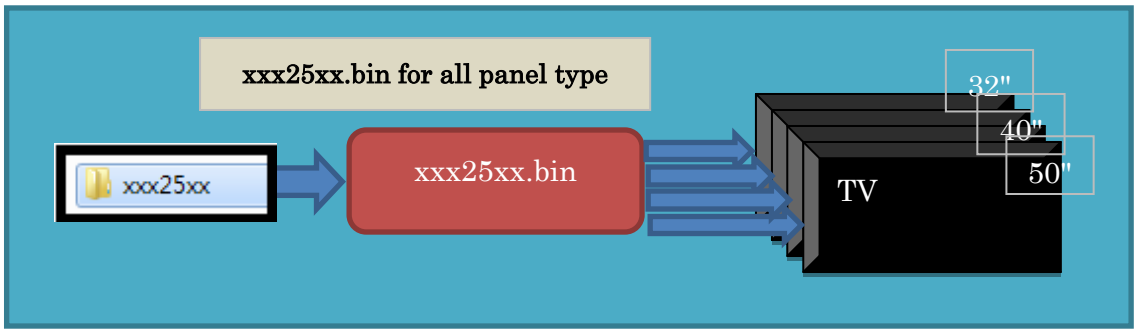
FIRMWARE UPDATING

How to upgrade F/W by a USB mass-storage device

Press right-exit-ok key into Engineering Information to confirm the Update xx25xx on the screen.

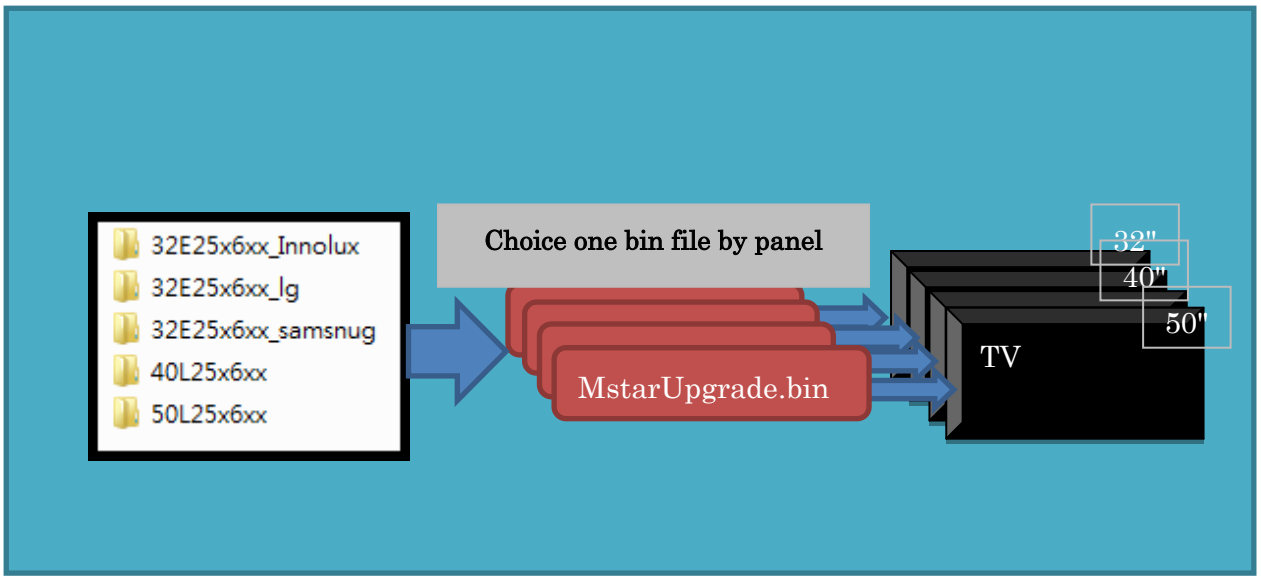


If update xx25xx display on the screen.



⇨ **From UI upgrade**

If update xx25xx not display on the screen.



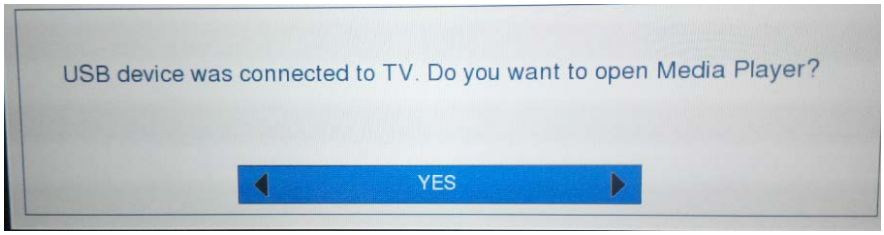
⇨ **From out side Input keypad upgrade.**

From UI upgrade

1. Copy xxx25xx.bin to the USB storage device.

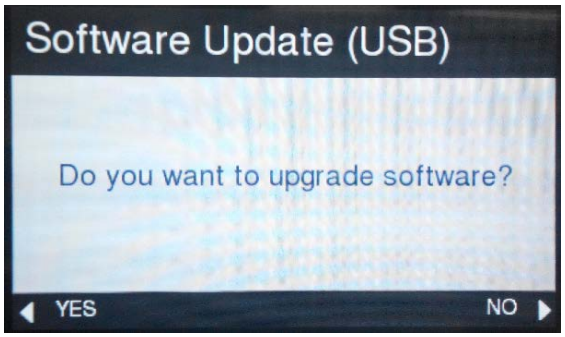
   USB storage device support FAT32 format only

2. Insert your USB storage device to the USB slot of the TV set.
3. Insert USB then TV will show **“USB Devise was connected to TV. Do you want to open Media Player?”**
4. Change icon from **“Yes”** to **“No”**.

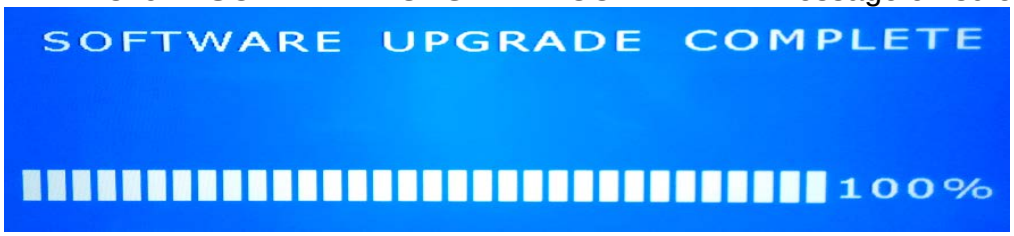


5. Press remote control “**Menu**” key and select **“Installation”** page.
6. Control remote down key to find **“Software Update (USB)”** icon and Press “**OK**” key.

7. Screen will show message **“Do you want to upgrade software?”**
8. Please Press "◄" Key and start to upgrade.



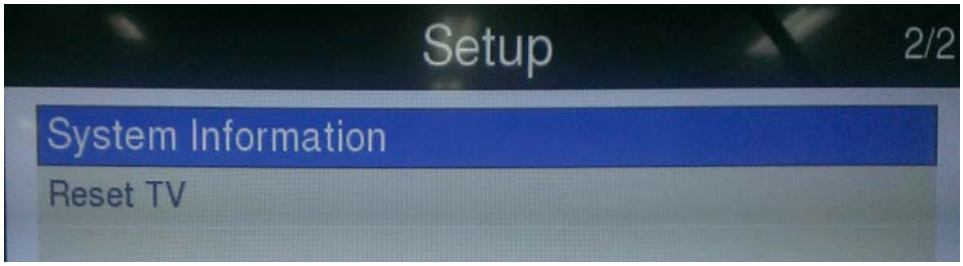
9. TV will show **“SOFTWARE UPGRADE COMPLETE”** message on screen.



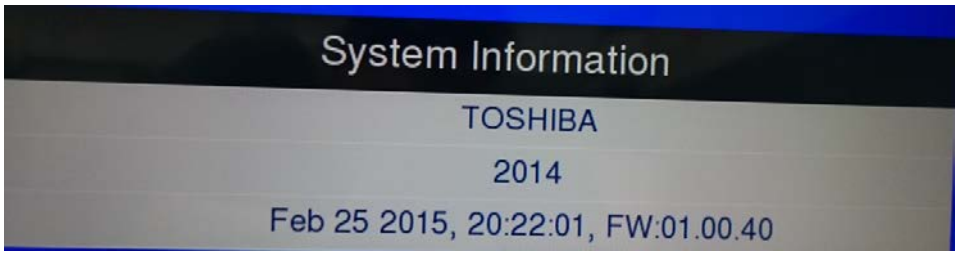
10. TV is restarted when the update process finished.
11. After restarted, press "◄" and "EXIT" then "OK" key. Entry to Factory Mode.
12. Confirm Model ID / FW version /M-boot version and date.

(To Check New FW version)

13. Press "MENU" key then using “◄” or “►” key until “Setup” page shows on the screen.
14. Press "▲ or ▼" key until you find "System Information" with focused blue bar.



15. To show the information, click "OK".



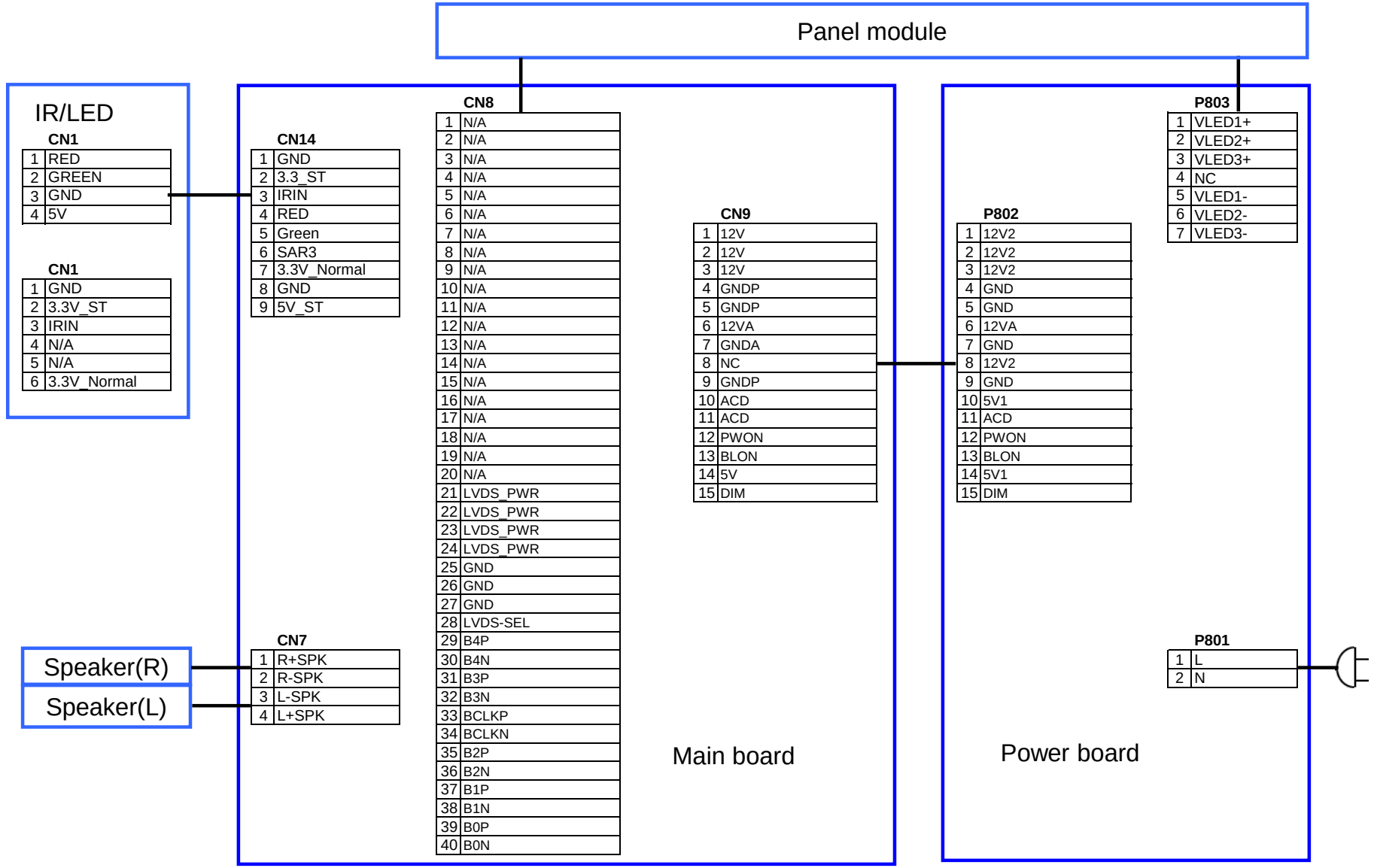
From out side Input keypad upgrade.

If don't care the model name mechanism whether exist .

- The .bin name should be ”MstarUpgrade.bin” on USB disc

1. Copy MstarUpgrade.bin to the USB storage device.
   USB storage device support FAT32 format only
2. Insert your USB storage device to the USB slot of the TV set.
3. Press and hold Input of TV side key.
4. AC on, until LED green light flash then release input key.
5. TV will reboot after upgrade finish.

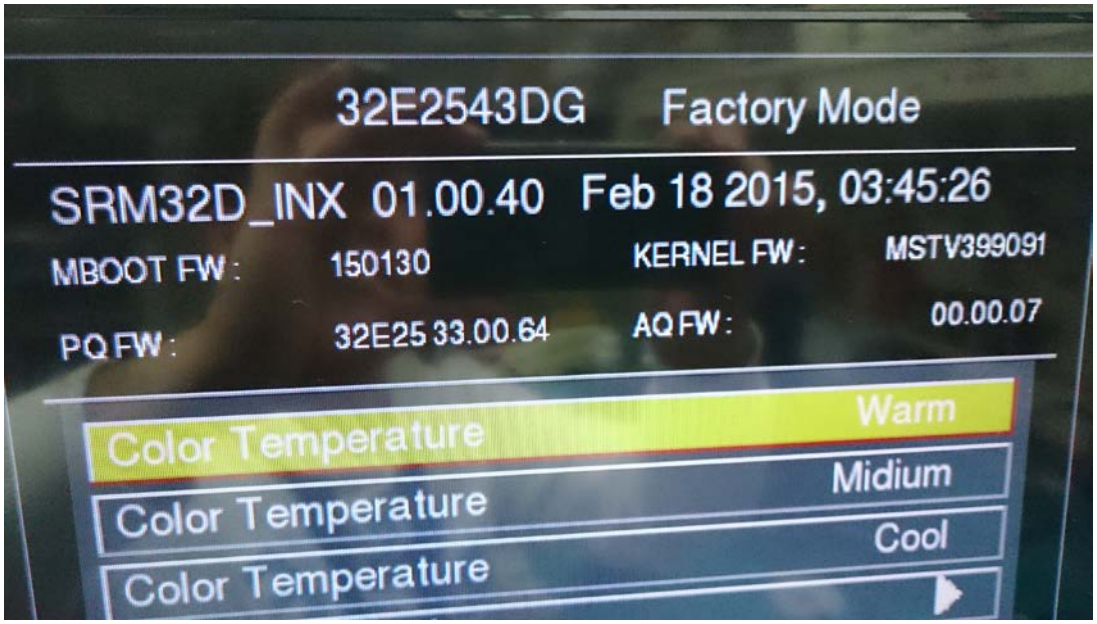
32E2533D/2543D Wiring Diagram



FACTORY MODE

Entering into factory Mode:

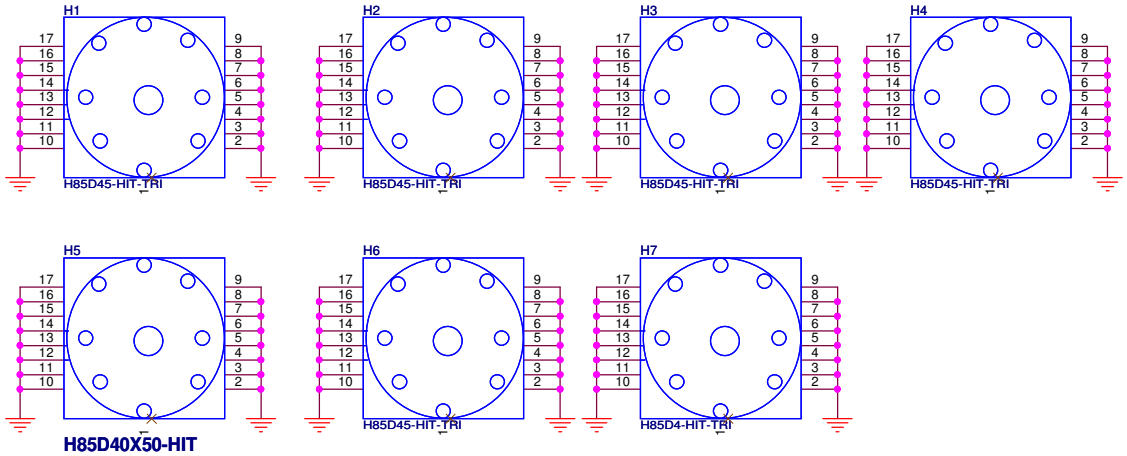
Press “◀” key, next press “EXIT” key, last press “ENTER” key in remote control to enter into factory mode.

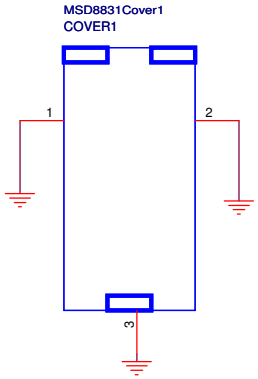


SRM32D_INX: COMPAL Model name and panel name
01.00.40 : F/W version.
Feb 18 2015 03:45:26:F/W release time.
PQ FW: Picture Quality FW version
AQ FW: Audio FW version.

Timer Clear:

Reset the timer which records hours of LCD panel burn in.





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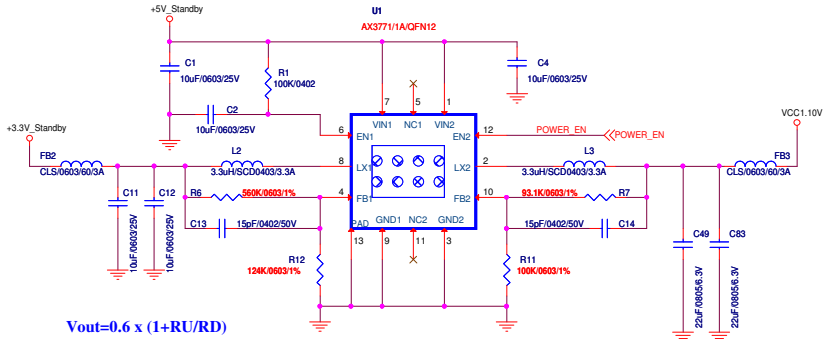
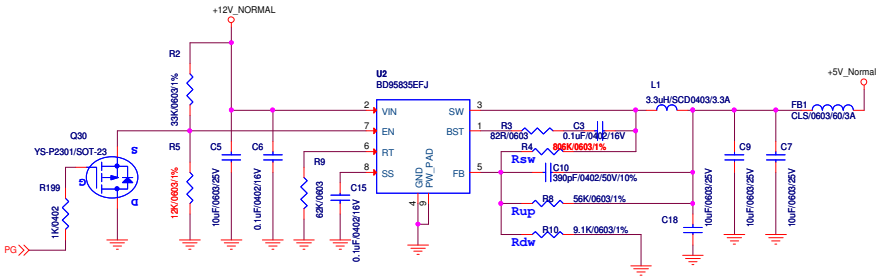
5V Standby Power to 3.3V Standby /1.15V Core Power



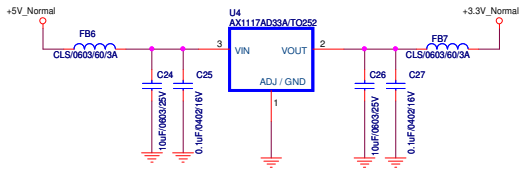
Vout=0.6 x (1+RU/RD)
LX1=0.6 x (1+560/124) =3.309
LX2=0.6 x (1+93.1/100) =1.1586

+12V_Normal power to +5V_Normal power

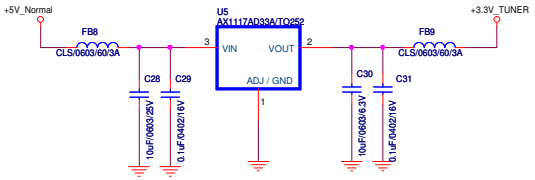


Vout=0.77V x {1+[(Rup*Rsw)/(Rup+Rsw)]/Rdw}

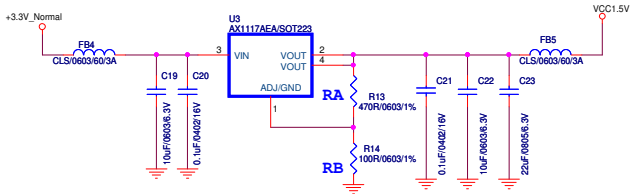
+5V_Normal power to +3.3V_Normal power



+5V_Normal power to +3.3V_TUNER

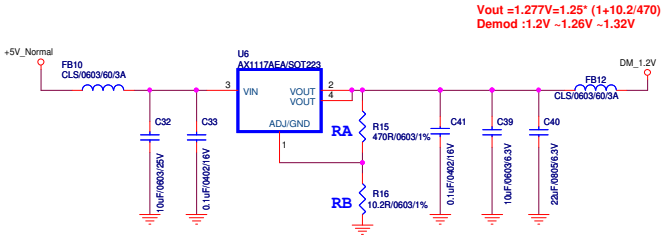


+3.3V_Normal power to DDR_Power (DDR3-1.5V)



Vout=1.25V*(1+RB/RA)+80uA*RB

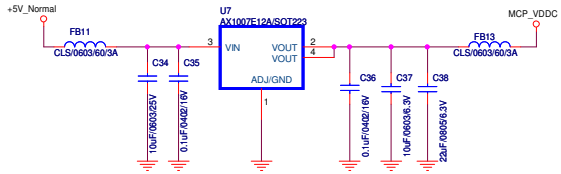
+5V_Normal power to MSB1312 Demod 1.2V



DVB-S require

Vout=1.25V*(1+RB/RA)+80uA*RB

+5V_Normal power to 8831-DVB-T2 Demod 1.2V



DVB-T2 require

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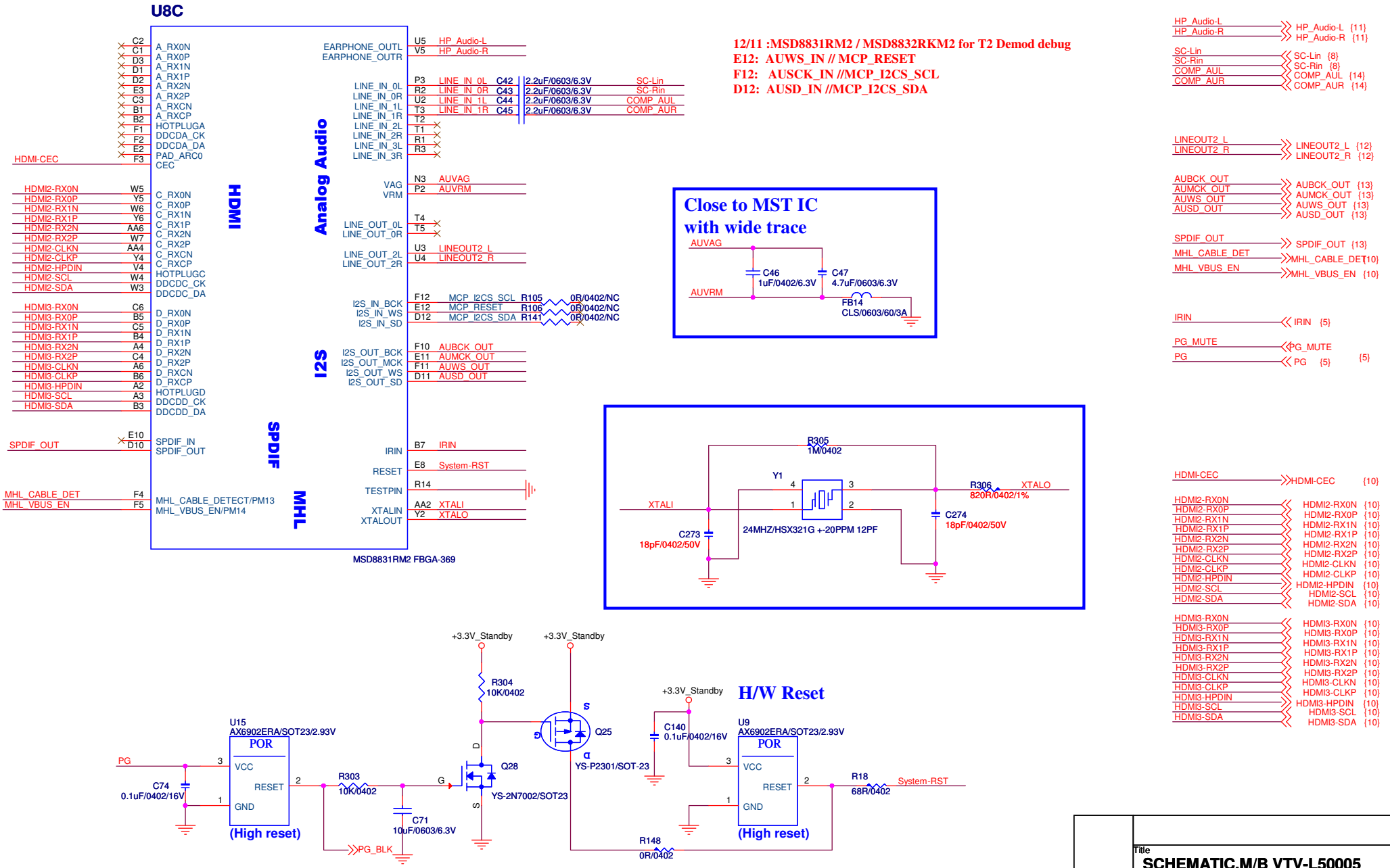

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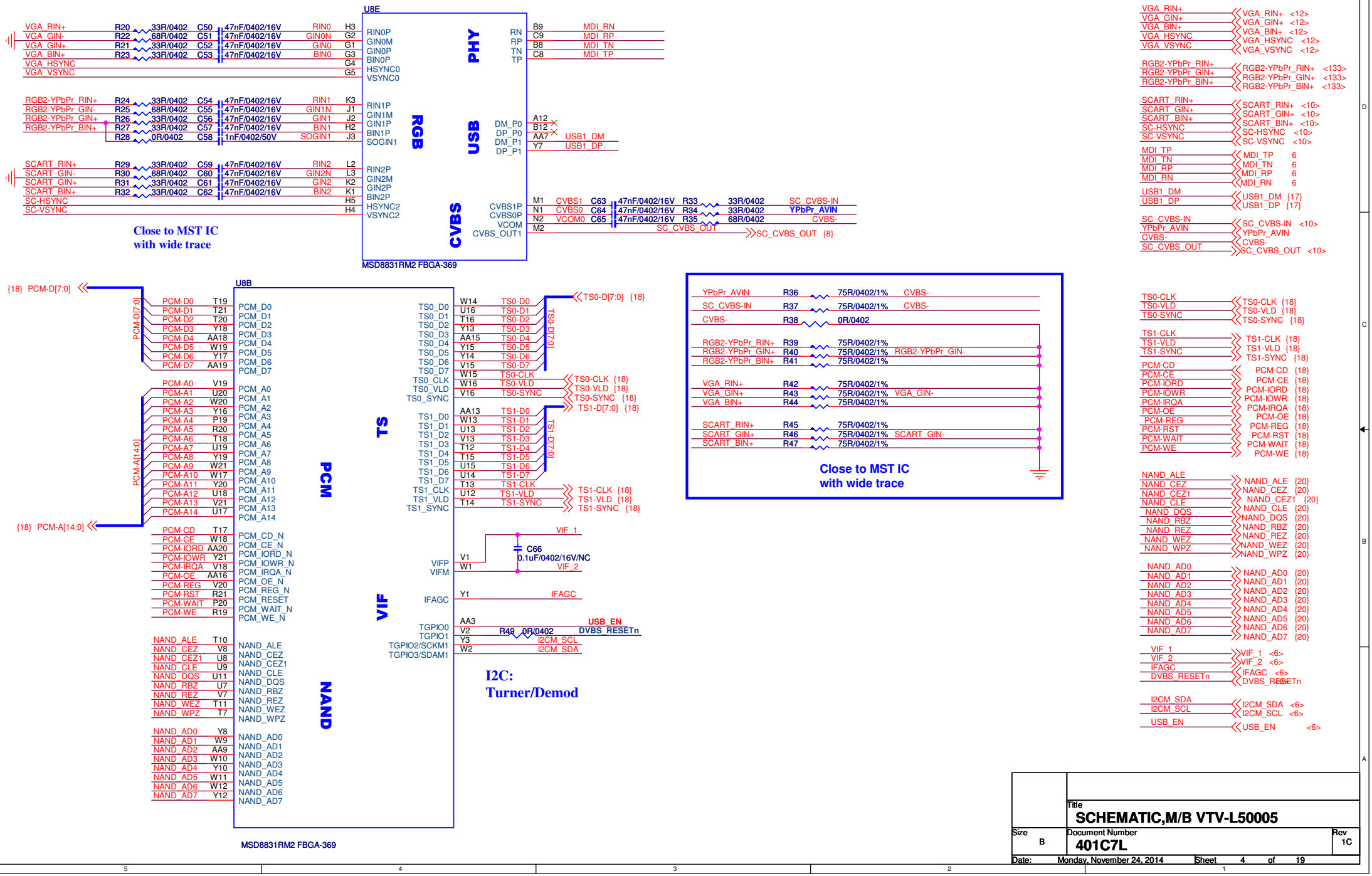
U8E
VGA_RIN+ R20 33R/0402 C50 47nF/0402/16V RIN0 H3
VGA_GIN- R22 68R/0402 C51 47nF/0402/16V GIN0N G2
VGA_GIN+ R21 33R/0402 C52 47nF/0402/16V GIN0 G1
VGA_BIN+ R23 33R/0402 C53 47nF/0402/16V BIN0 G3
VGA_HSYNC G4
VGA_VSYNC G5
RGB2-YPbPr_RIN+ R24 33R/0402 C54 47nF/0402/16V RIN1 K3
RGB2-YPbPr_GIN- R25 68R/0402 C55 47nF/0402/16V GIN1N J1
RGB2-YPbPr_GIN+ R26 33R/0402 C56 47nF/0402/16V GIN1 J2
RGB2-YPbPr_BIN+ R27 33R/0402 C57 47nF/0402/16V BIN1 H2
R28 0R/0402 C58 1nF/0402/50V SOGIN1 J3
SCART_RIN+ R29 33R/0402 C59 47nF/0402/16V RIN2 L2
SCART_GIN- R30 68R/0402 C60 47nF/0402/16V GIN2N L3
SCART_GIN+ R31 33R/0402 C61 47nF/0402/16V GIN2 K2
SCART_BIN+ R32 33R/0402 C62 47nF/0402/16V BIN2 K1
SC-HSYNC H5
SC-VSYNC H4
RIN0P
GIN0M
GIN0P
BIN0P
HSYNC0
VSYNC0
RIN1P
GIN1M
GIN1P
BIN1P
SOGIN1
RIN2P
GIN2M
GIN2P
BIN2P
HSYNC2
VSYNC2
RGB
PHY
RN B9 MDI_RN
RP C9 MDI_RP
TN B8 MDI_TN
TP C8 MDI_TP
USB
DM_P0 A12
DP_P0 B12
DM_P1 AA7 USB1_DM
DP_P1 Y7 USB1_DP
CVBS
CVBS1P M1 CVBS1 C63 47nF/0402/16V R33 33R/0402 SC_CVBS-IN
CVBS0P N1 CVBS0 C64 47nF/0402/16V R34 33R/0402 YPbPr_AVIN
VCOM N2 VCOM0 C65 47nF/0402/16V R35 68R/0402 CVBS-
CVBS_OUT1 M2 SC_CVBS_OUT
SC_CVBS_OUT {8}
MSD8831RM2 FBGA-369
Close to MST IC
with wide trace
VGA_RIN+ VGA_RIN+ <12>
VGA_GIN+ VGA_GIN+ <12>
VGA_BIN+ VGA_BIN+ <12>
VGA_HSYNC VGA_HSYNC <12>
VGA_VSYNC VGA_VSYNC <12>
RGB2-YPbPr_RIN+ RGB2-YPbPr_RIN+ <133>
RGB2-YPbPr_GIN+ RGB2-YPbPr_GIN+ <133>
RGB2-YPbPr_BIN+ RGB2-YPbPr_BIN+ <133>
SCART_RIN+ SCART_RIN+ <10>
SCART_GIN+ SCART_GIN+ <10>
SCART_BIN+ SCART_BIN+ <10>
SC-HSYNC SC-HSYNC <10>
SC-VSYNC SC-VSYNC <10>
MDI_TP MDI_TP 6
MDI_TN MDI_TN 6
MDI_RP MDI_RP 6
MDI_RN MDI_RN 6
USB1_DM USB1_DM {17}
USB1_DP USB1_DP {17}
SC_CVBS-IN SC_CVBS-IN <10>
YPbPr_AVIN YPbPr_AVIN
CVBS- CVBS-
SC_CVBS_OUT SC_CVBS_OUT <10>
U8B
{18} PCM-D[7:0]
PCM-D[7:0]
PCM-D0 T19
PCM-D1 T21
PCM-D2 T20
PCM-D3 Y18
PCM-D4 AA18
PCM-D5 W19
PCM-D6 Y17
PCM-D7 AA19
PCM-A[14:0]
PCM-A0 V19
PCM-A1 U20
PCM-A2 W20
PCM-A3 Y16
PCM-A4 P19
PCM-A5 R20
PCM-A6 T18
PCM-A7 U19
PCM-A8 Y19
PCM-A9 W21
PCM-A10 W17
PCM-A11 Y20
PCM-A12 U18
PCM-A13 V21
PCM-A14 U17
{18} PCM-A[14:0]
PCM-CD T17
PCM-CE W18
PCM-IORD AA20
PCM-IOWR Y21
PCM-IRQA V18
PCM-OE AA16
PCM-REG V20
PCM-RST R21
PCM-WAIT P20
PCM-WE R19
NAND_ALE T10
NAND_CEZ V8
NAND_CEZ1 U8
NAND_CLE U9
NAND_DQS U11
NAND_RBZ U7
NAND_REZ V7
NAND_WEZ T11
NAND_WPZ T7
NAND_AD0 Y8
NAND_AD1 W9
NAND_AD2 AA9
NAND_AD3 W10
NAND_AD4 Y10
NAND_AD5 W11
NAND_AD6 W12
NAND_AD7 Y12
PCM_D0
PCM_D1
PCM_D2
PCM_D3
PCM_D4
PCM_D5
PCM_D6
PCM_D7
PCM_A0
PCM_A1
PCM_A2
PCM_A3
PCM_A4
PCM_A5
PCM_A6
PCM_A7
PCM_A8
PCM_A9
PCM_A10
PCM_A11
PCM_A12
PCM_A13
PCM_A14
PCM_CD_N
PCM_CE_N
PCM_IORD_N
PCM_IOWR_N
PCM_IRQA_N
PCM_OE_N
PCM_REG_N
PCM_RESET
PCM_WAIT_N
PCM_WE_N
NAND_ALE
NAND_CEZ
NAND_CEZ1
NAND_CLE
NAND_DQS
NAND_RBZ
NAND_REZ
NAND_WEZ
NAND_WPZ
NAND_AD0
NAND_AD1
NAND_AD2
NAND_AD3
NAND_AD4
NAND_AD5
NAND_AD6
NAND_AD7
PCM
NAND
TS
TS0_D0 W14 TS0-D0
TS0_D1 U16 TS0-D1
TS0_D2 T16 TS0-D2
TS0_D3 Y13 TS0-D3
TS0_D4 AA15 TS0-D4
TS0_D5 Y15 TS0-D5
TS0_D6 Y14 TS0-D6
TS0_D7 V15 TS0-D7
TS0_CLK W15 TS0-CLK
TS0_VLD W16 TS0-VLD
TS0_SYNC V16 TS0-SYNC
TS0-D[7:0]
TS0-D[7:0] {18}
TS0-CLK {18}
TS0-VLD {18}
TS0-SYNC {18}
TS1_D0 AA13 TS1-D0
TS1_D1 W13 TS1-D1
TS1_D2 U13 TS1-D2
TS1_D3 V13 TS1-D3
TS1_D4 T12 TS1-D4
TS1_D5 T15 TS1-D5
TS1_D6 U15 TS1-D6
TS1_D7 U14 TS1-D7
TS1_CLK T13 TS1-CLK
TS1_VLD U12 TS1-VLD
TS1_SYNC T14 TS1-SYNC
TS1-D[7:0]
TS1-D[7:0] {18}
TS1-CLK {18}
TS1-VLD {18}
TS1-SYNC {18}
VIF
VIF_1
C66
0.1uF/0402/16V/NC
VIFP V1
VIFM W1
VIF_2
IFAGC Y1
IFAGC
TGPIO0 AA3 USB_EN
TGPIO1 V2 R49 0R/0402 DVBS_RESETn
TGPIO2/SCKM1 Y3 I2CM_SCL
TGPIO3/SDAM1 W2 I2CM_SDA
I2C:
Turner/Demod
MSD8831RM2 FBGA-369
YPbPr_AVIN R36 75R/0402/1% CVBS-
SC_CVBS-IN R37 75R/0402/1% CVBS-
CVBS- R38 0R/0402
RGB2-YPbPr_RIN+ R39 75R/0402/1%
RGB2-YPbPr_GIN+ R40 75R/0402/1% RGB2-YPbPr_GIN-
RGB2-YPbPr_BIN+ R41 75R/0402/1%
VGA_RIN+ R42 75R/0402/1%
VGA_GIN+ R43 75R/0402/1% VGA_GIN-
VGA_BIN+ R44 75R/0402/1%
SCART_RIN+ R45 75R/0402/1%
SCART_GIN+ R46 75R/0402/1% SCART_GIN-
SCART_BIN+ R47 75R/0402/1%
Close to MST IC
with wide trace
TS0-CLK TS0-CLK {18}
TS0-VLD TS0-VLD {18}
TS0-SYNC TS0-SYNC {18}
TS1-CLK TS1-CLK {18}
TS1-VLD TS1-VLD {18}
TS1-SYNC TS1-SYNC {18}
PCM-CD PCM-CD {18}
PCM-CE PCM-CE {18}
PCM-IORD PCM-IORD {18}
PCM-IOWR PCM-IOWR {18}
PCM-IRQA PCM-IRQA {18}
PCM-OE PCM-OE {18}
PCM-REG PCM-REG {18}
PCM-RST PCM-RST {18}
PCM-WAIT PCM-WAIT {18}
PCM-WE PCM-WE {18}
NAND_ALE
NAND_CEZ NAND_CEZ {20}
NAND_CEZ1 NAND_CEZ1 {20}
NAND_CLE NAND_CLE {20}
NAND_DQS NAND_DQS {20}
NAND_RBZ NAND_RBZ {20}
NAND_REZ NAND_REZ {20}
NAND_WEZ NAND_WEZ {20}
NAND_WPZ NAND_WPZ {20}
NAND_AD0 NAND_AD0 {20}
NAND_AD1 NAND_AD1 {20}
NAND_AD2 NAND_AD2 {20}
NAND_AD3 NAND_AD3 {20}
NAND_AD4 NAND_AD4 {20}
NAND_AD5 NAND_AD5 {20}
NAND_AD6 NAND_AD6 {20}
NAND_AD7 NAND_AD7 {20}
VIF_1 VIF_1 <6>
VIF_2 VIF_2 <6>
IFAGC IFAGC <6>
DVBS_RESETn DVBS_RESETn
I2CM_SDA I2CM_SDA <6>
I2CM_SCL I2CM_SCL <6>
USB_EN USB_EN <6>
Title
SCHEMATIC,M/B VTV-L50005
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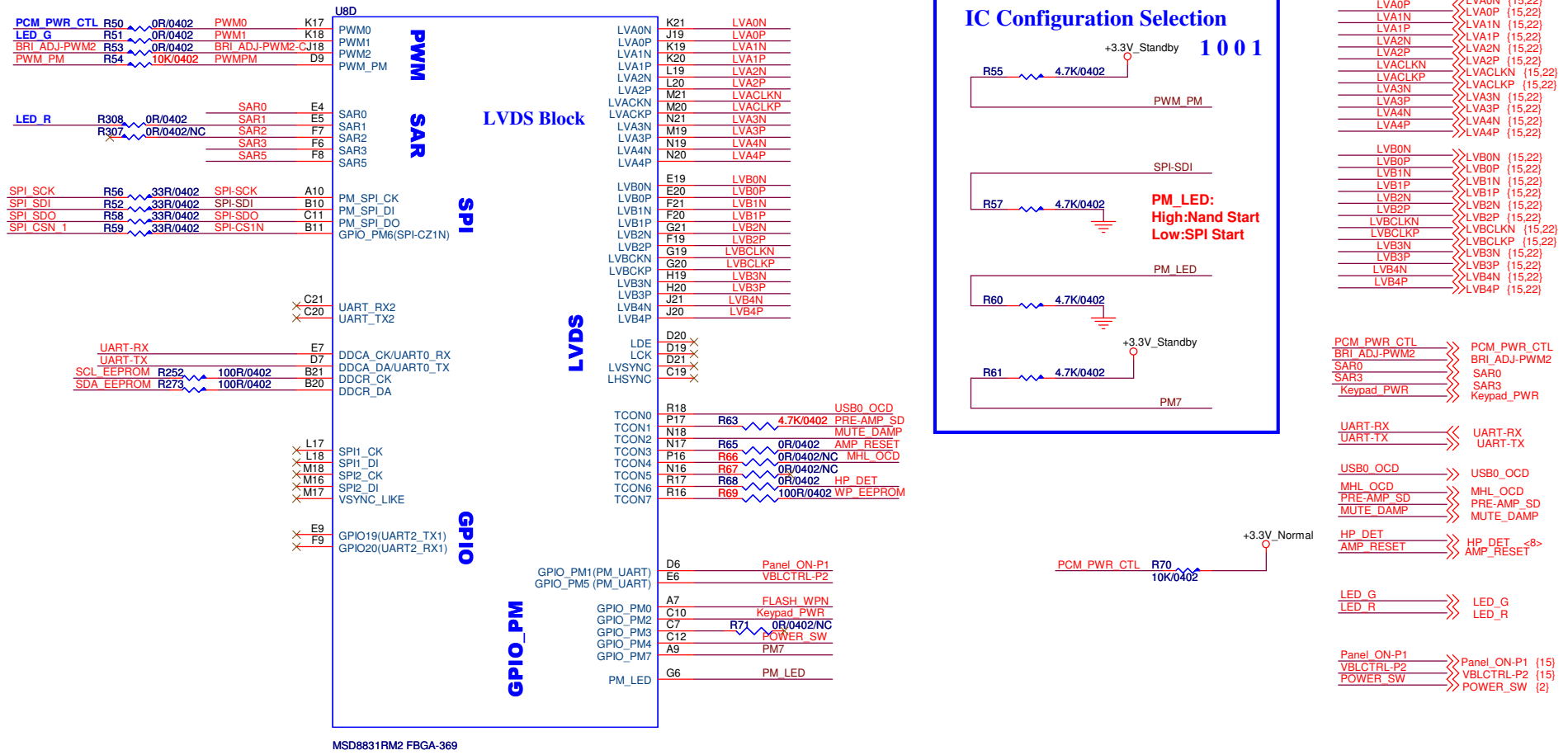


IC Configuration Selection

1 0 0 1

+3.3V_Standby
R55 4.7K/0402
PWM_PM
SPI-SDI
R57 4.7K/0402
PM_LED:
High:Nand Start
Low:SPI Start
PM_LED
R60 4.7K/0402
+3.3V_Standby
R61 4.7K/0402
PM7

LVA0N
LVA0P
LVA1N
LVA1P
LVA2N
LVA2P
LVACLKN
LVACLKP
LVA3N
LVA3P
LVA4N
LVA4P
LVB0N
LVB0P
LVB1N
LVB1P
LVB2N
LVB2P
LVBCLKN
LVBCLKP
LVB3N
LVB3P
LVB4N
LVB4P

PCM_PWR_CTL
BRI_ADJ-PWM2
SAR0
SAR3
Keypad_PWR

UART-RX
UART-TX

USB0_OCD
MHL_OCD
PRE-AMP_SD
MUTE_DAMP

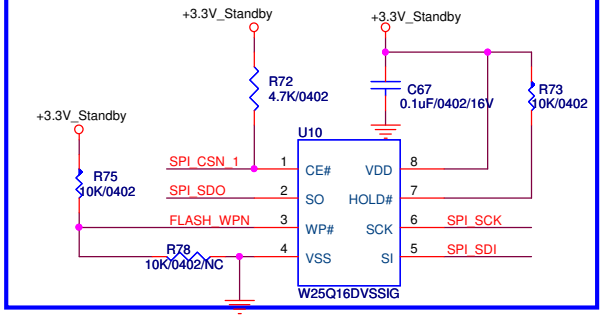
HP_DET
AMP_RESET

+3.3V_Normal
PCM_PWR_CTL R70 10K/0402

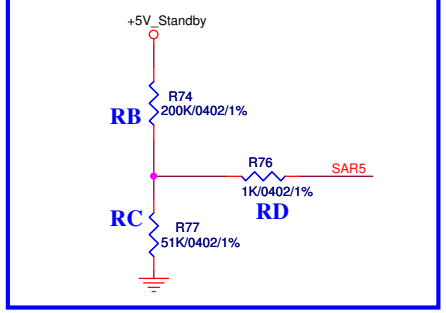
LED_G
LED_R

Panel_ON-P1
VBLCTRL-P2
POWER_SW

Boot Loader SPI Flash

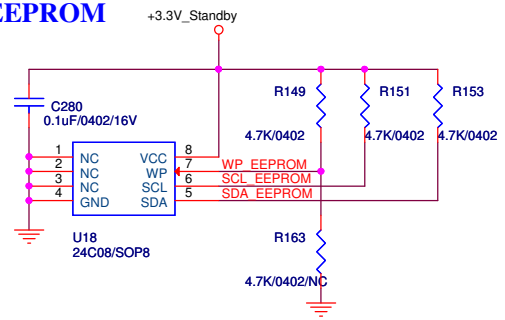


Detect NAND Flash Power



9/29: Add EEPROM

EEPROM



	Title: SCHEMATIC,M/B VTV-L50005	
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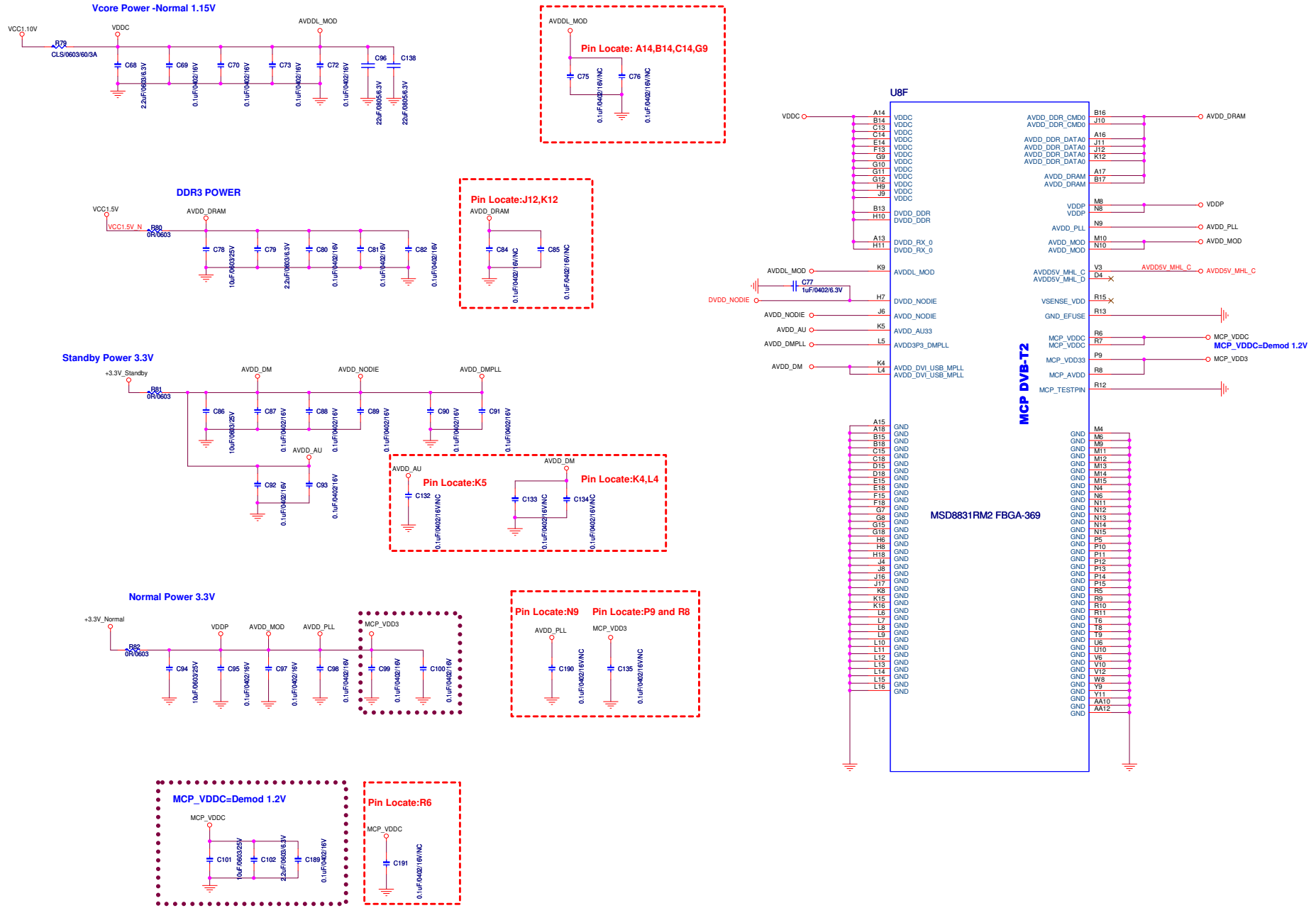
Vcore Power -Normal 1.15V
VCC1.10V
VDDC
AVDDL_MOD
R79
CLS/0603/60/3A
C68
C69
C70
C73
C72
C96
C138
2.2uF/0603/6.3V
0.1uF/0402/16V
22uF/0805/6.3V
AVDDL_MOD
Pin Locate: A14,B14,C14,G9
C75
C76
0.1uF/0402/16V/NC
DDR3 POWER
VCC1.5V
AVDD_DRAM
VCC1.5V_N
R80
0R/0603
C78
C79
C80
C81
C82
10uF/0603/25V
2.2uF/0603/6.3V
Pin Locate:J12,K12
C84
C85
Standby Power 3.3V
+3.3V_Standby
R81
AVDD_DM
AVDD_NODIE
AVDD_DMPLL
AVDD_AU
C86
C87
C88
C89
C90
C91
C92
C93
Pin Locate:K5
Pin Locate:K4,L4
C132
C133
C134
Normal Power 3.3V
+3.3V_Normal
R82
VDDP
AVDD_MOD
AVDD_PLL
MCP_VDD3
C94
C95
C97
C98
C99
C100
Pin Locate:N9
Pin Locate:P9 and R8
C190
C135
MCP_VDDC=Demod 1.2V
MCP_VDDC
C101
C102
C189
Pin Locate:R6
C191
U8F
MSD8831RM2 FBGA-369
MCP DVB-T2
VDDC
DVDD_DDR
DVDD_RX_0
AVDDL_MOD
DVDD_NODIE
AVDD_NODIE
AVDD_AU33
AVDD3P3_DMPLL
AVDD_DVI_USB_MPLL
GND
AVDD_DRAM
VDDP
AVDD_PLL
AVDD_MOD
AVDD5V_MHL_C
VSENSE_VDD
GND_EFUSE
MCP_VDDC
MCP_VDD33
MCP_AVDD
MCP_TESTPIN
MCP_VDDC=Demod 1.2V
C77
1uF/0402/6.3V
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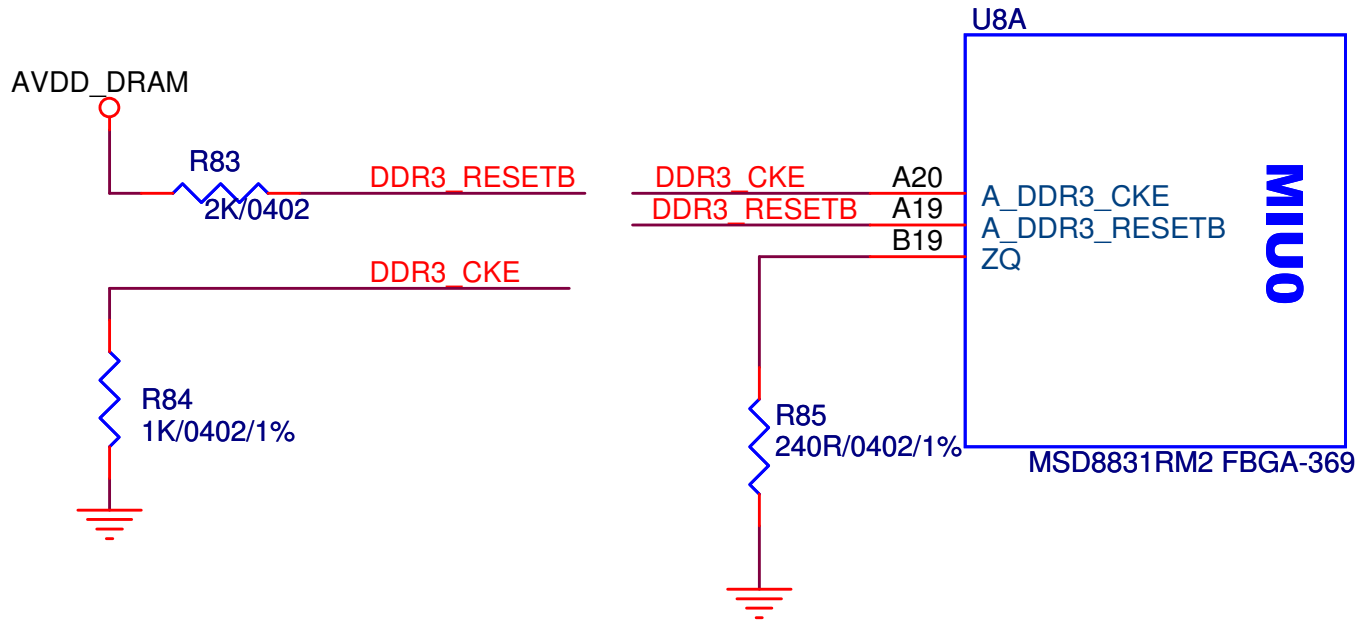

	Title: SCHEMATIC,M/B VTV-L50005	
Size: Custom	Document Number: 401C7L	Rev: 1C
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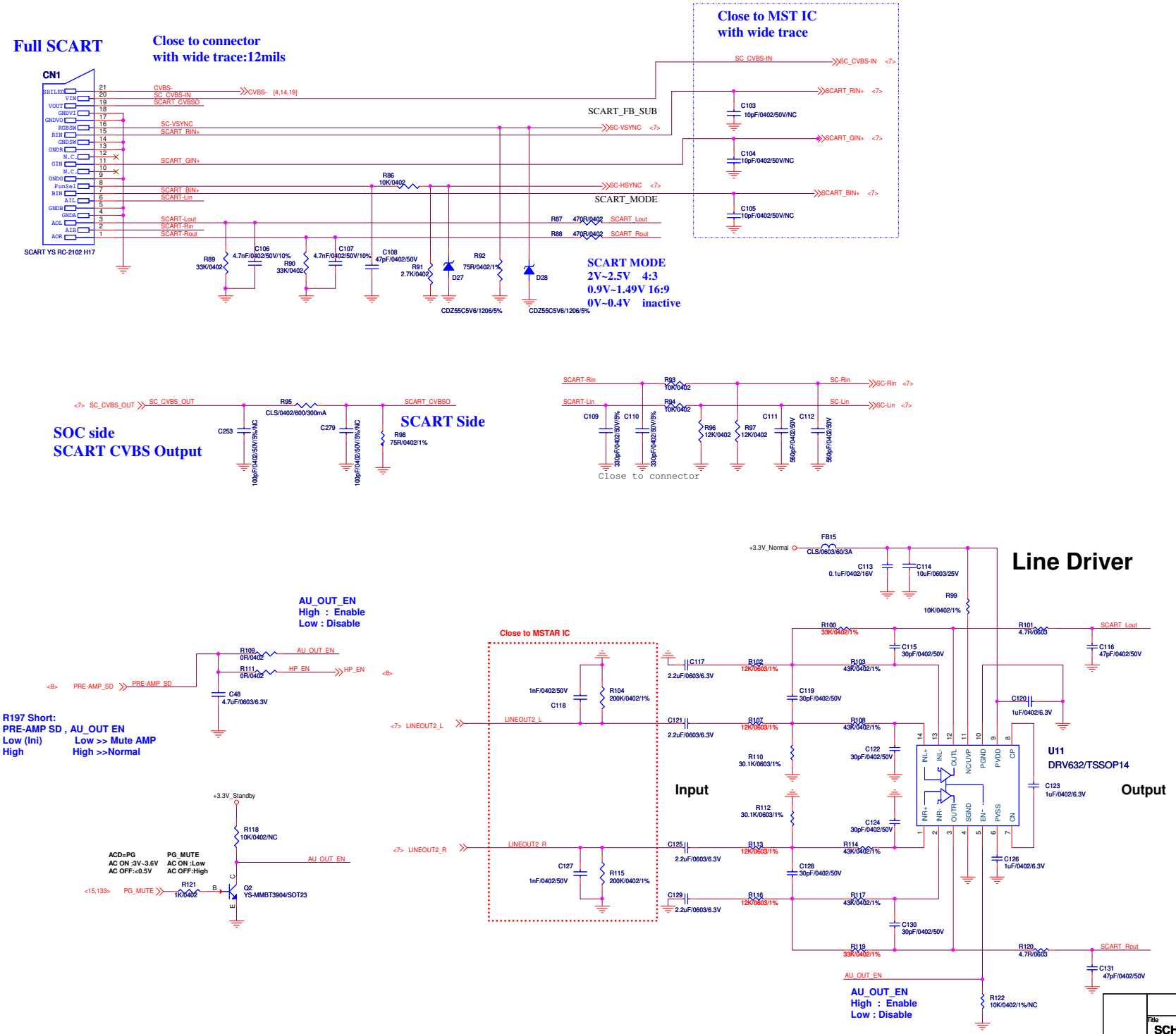

Title	SCHEMATIC,M/B VTV-L50005
Size	C
Document Number	401C7L
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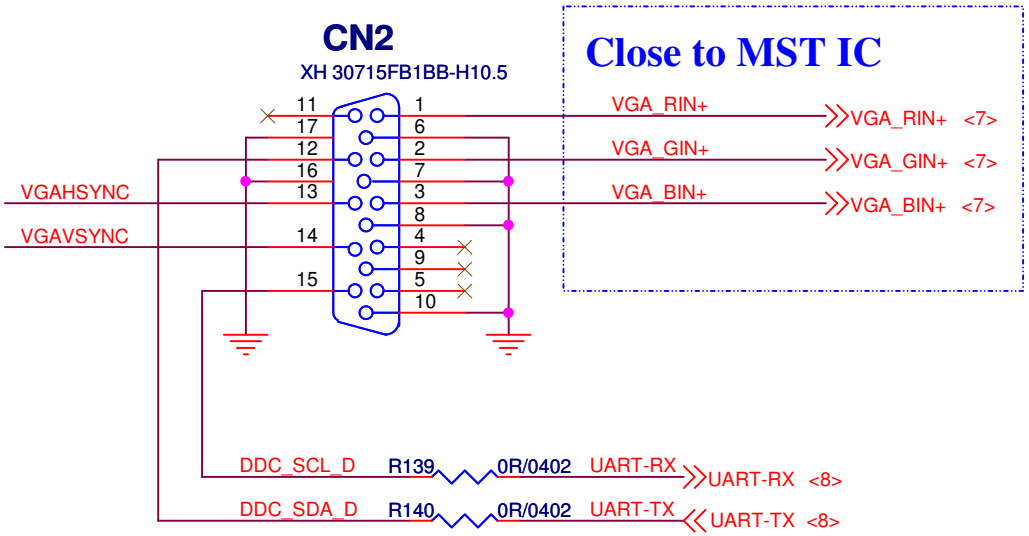

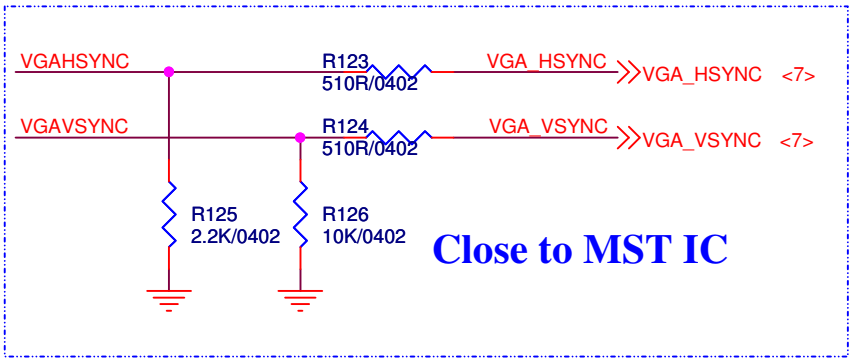

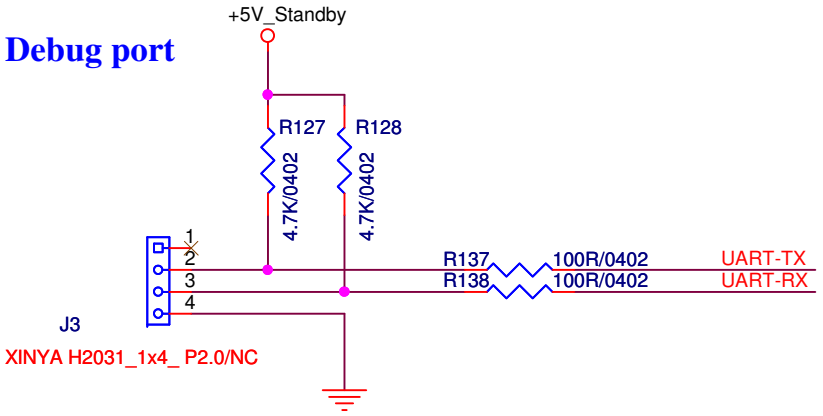

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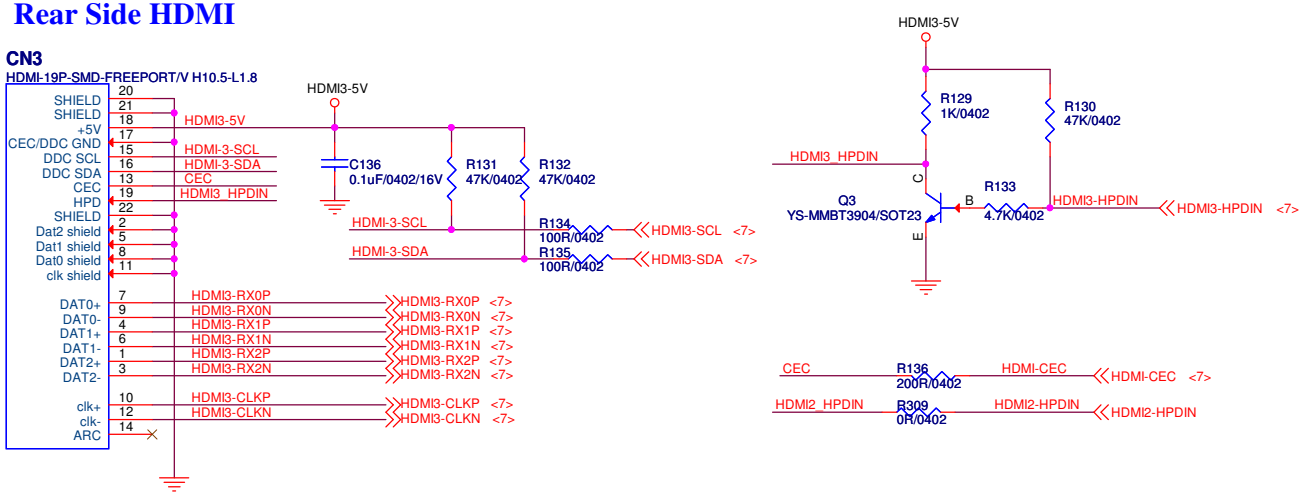
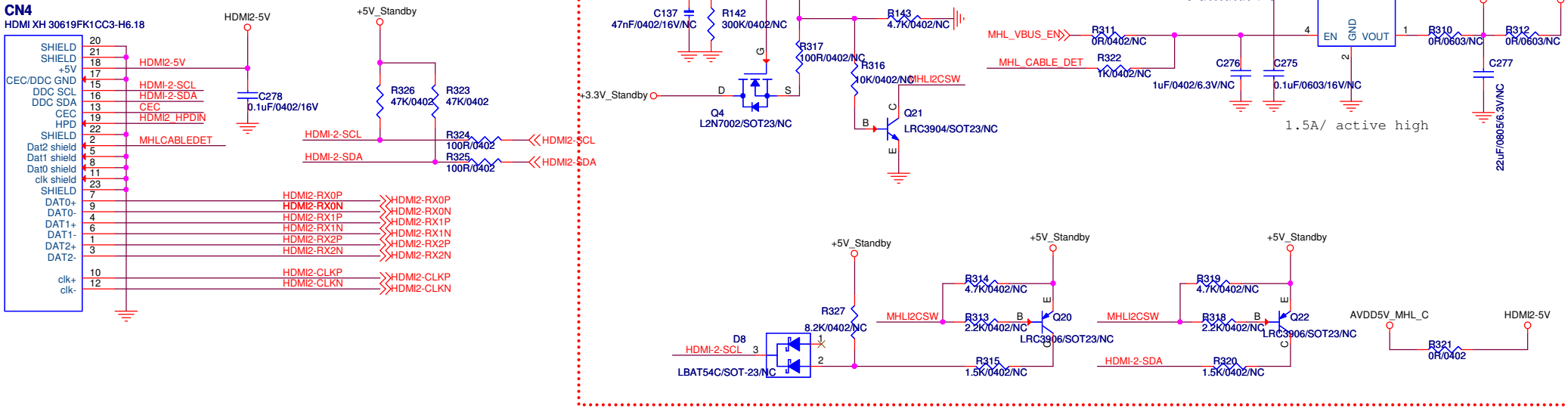
Rear Side HDMI



Right Side HDMI



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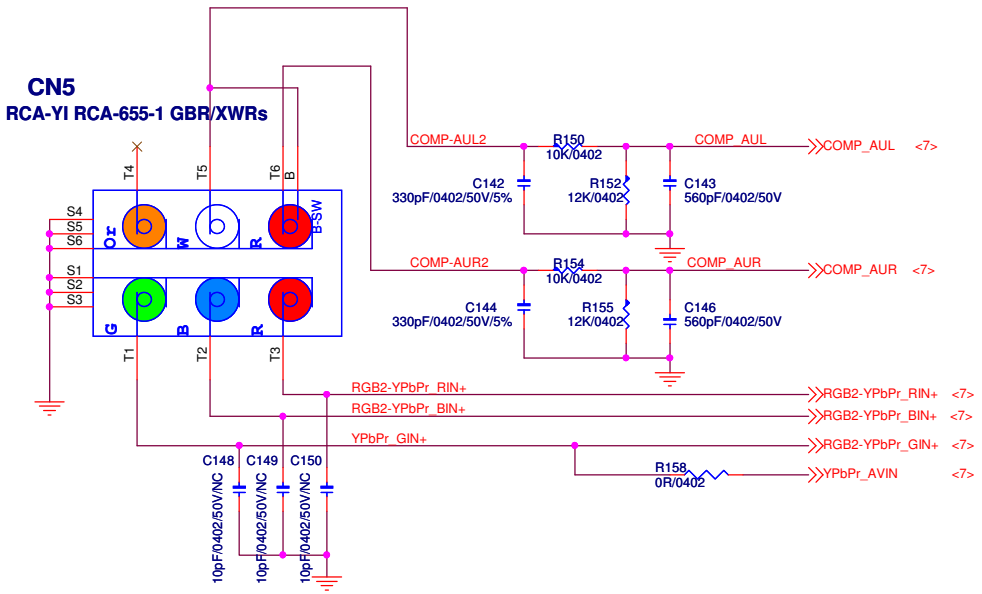
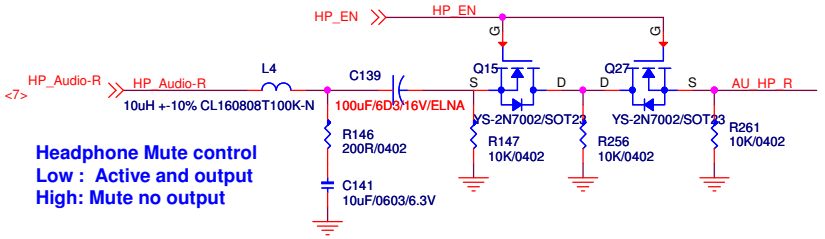
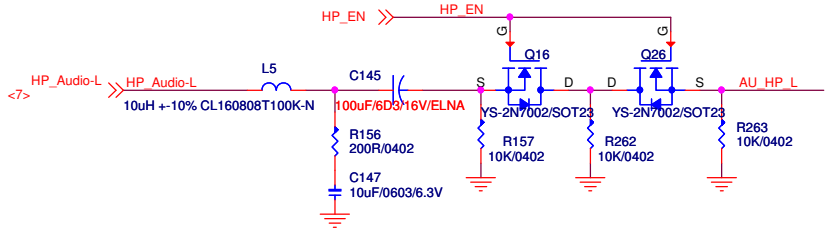
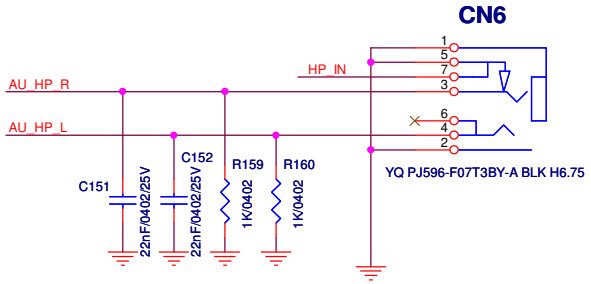
YPBPR,CVBS/Video
Audio Input/Coaxial output

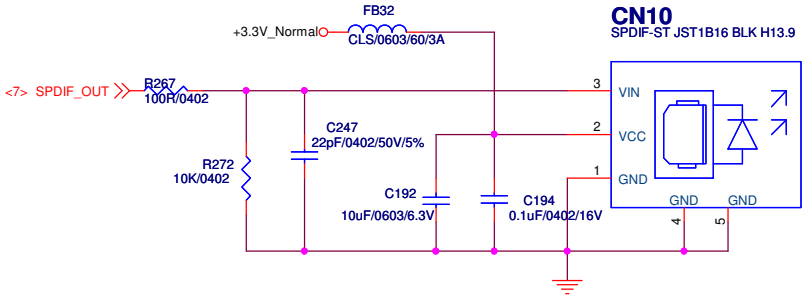


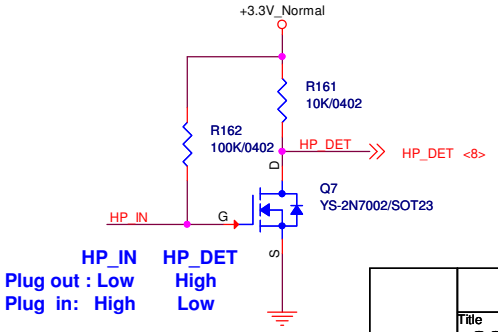
Earphone











HP_IN	HP_DET
Plug out : Low	High
Plug in: High	Low

Headphone Mute control
Low : Active and output
High: Mute no output

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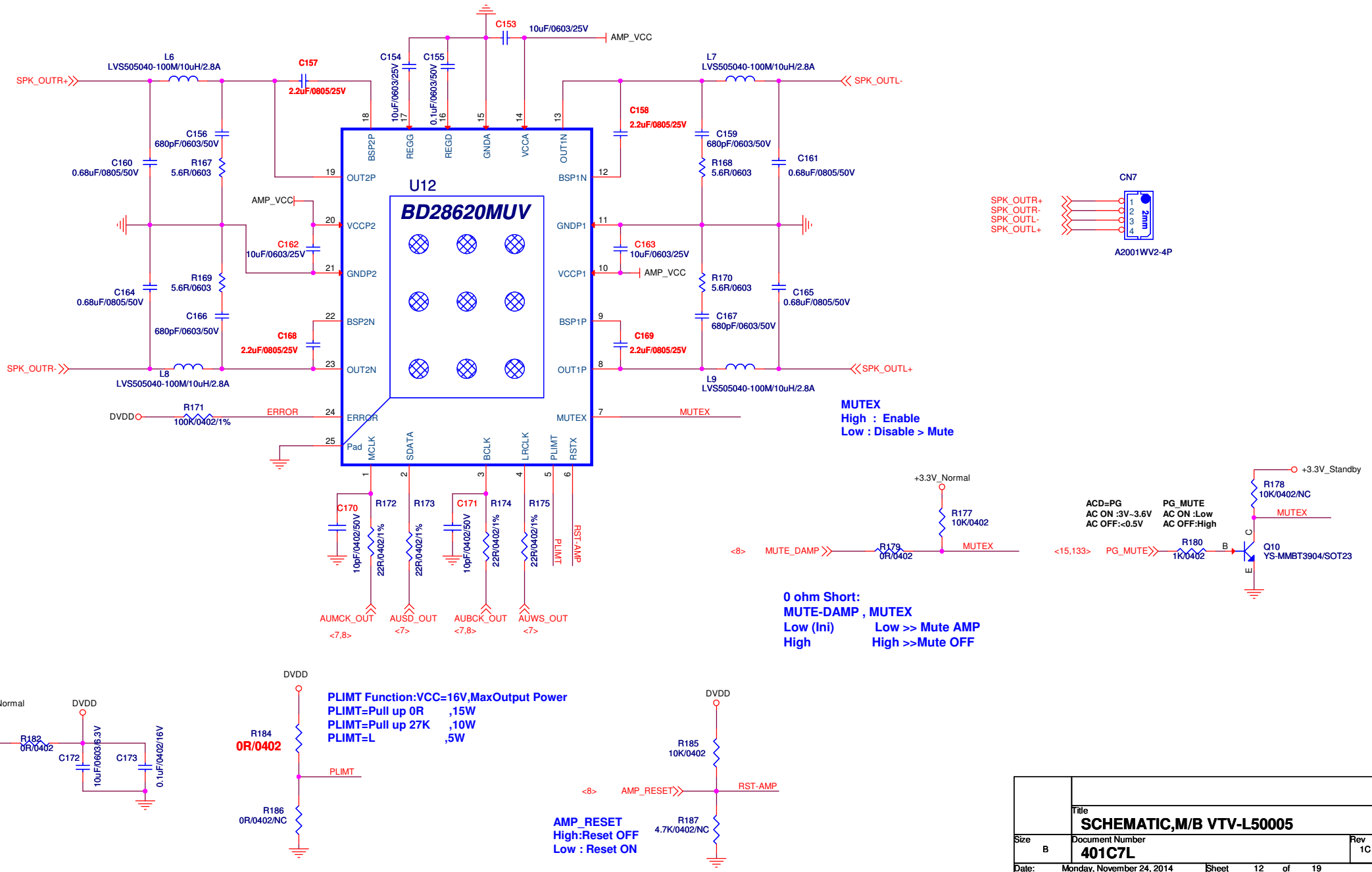

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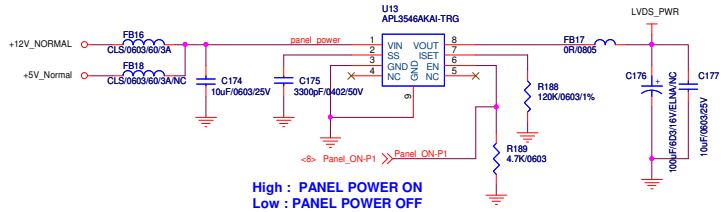
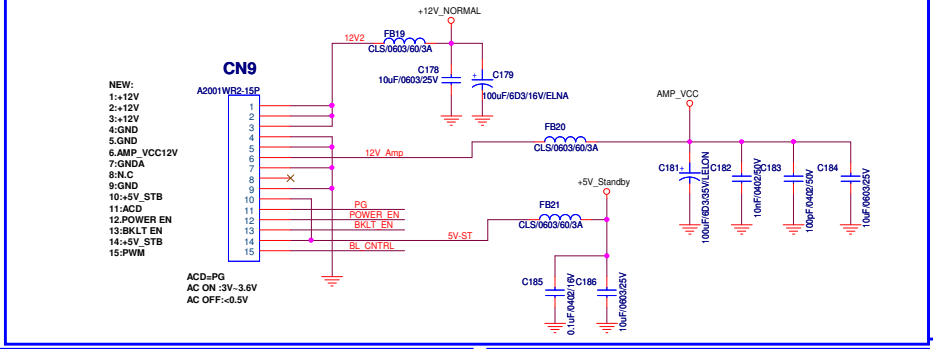
Panel Power



High : PANEL POWER ON
Low : PANEL POWER OFF

CN9

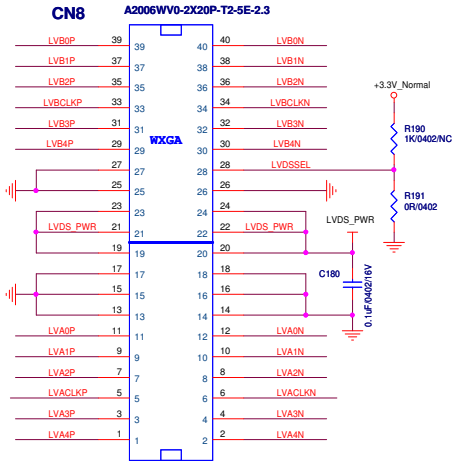


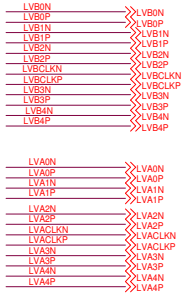
NEW:
1:+12V
2:+12V
3:+12V
4:GND
5.GND
6.AMP_VCC12V
7:GNDA
8:N.C
9:GND
10:+5V_STB
11:ACD
12.POWER EN
13:BKLT EN
14:+5V_STB
15:PWM

ACD=PG
AC ON :3V~3.6V
AC OFF:<0.5V

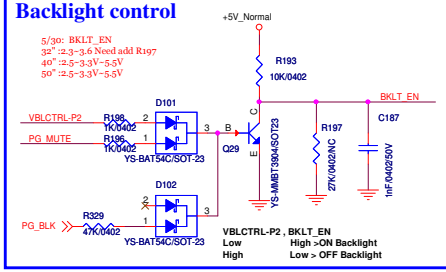
FHD A2006WV0-2X20P-T2-5E-2.3 DC03J01170I(PIN1~PIN40) >>> R191 Mount, R190 NC

WXGA JWT A2006WV0-2X10P-6T2-5E-2.3 - DC03J0117AI (PIN21~PIN40) >>>R191 NC, R190 Mount



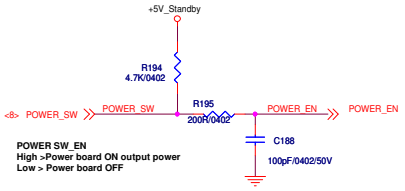


Backlight control



VBLCTRL-P2 , BKLT_EN
Low High >ON Backlight
High Low > OFF Backlight

Power board Enable



POWER SW_EN
High >Power board ON output power
Low > Power board OFF

FRONT PANEL CONNECTOR :

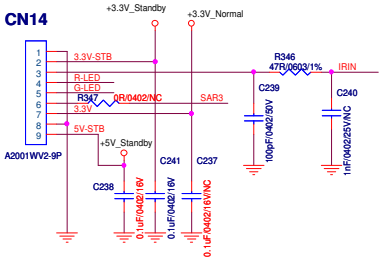
50": CN14 use A2001WV2-5P :DC03J00835I

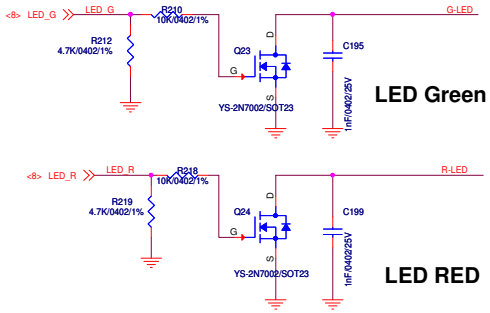
M/B:SRO40D/SRO50D
A2001WV2-5P
==========
IR/LED board :VTV-IR50005/IR40035
JCTC 11251W00-7P-S
1.GND
2:3.3V-STB
3:IRIN
4.RED
5. GREEN

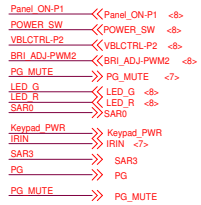
32" : A2001WV2-9P :DC03J00839I (IR_SENSOR)+ (LED_G/R)

M/B:SRM32D
A2001WV2-9P
==========
IR/LED board :VTV-IR320102
AMA-1257-6AW-S
1.GND
2:3.3V-STB
3:IRIN
4.NC
5. SEN
6.3.3V

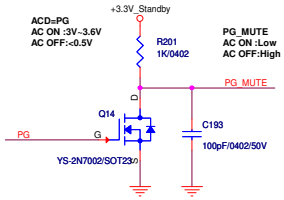
M/B:SRM32D
A2001WV2-9P
==========
LED board :VTV-ED320102
AMA-1257-4AW-S
1.Red
2:Green
3:GND
4.5V-STB



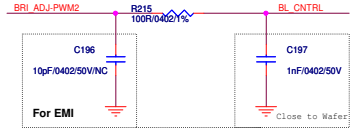




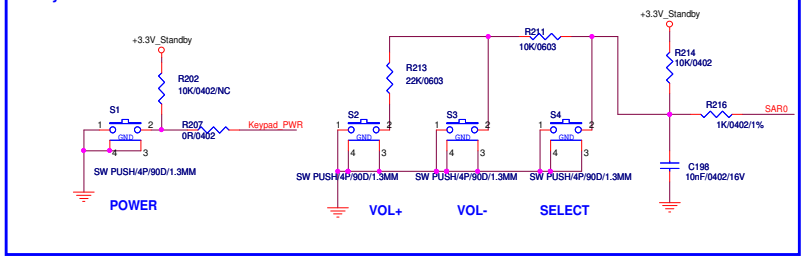
ACD Detect



PWM control



Key Pad in Side



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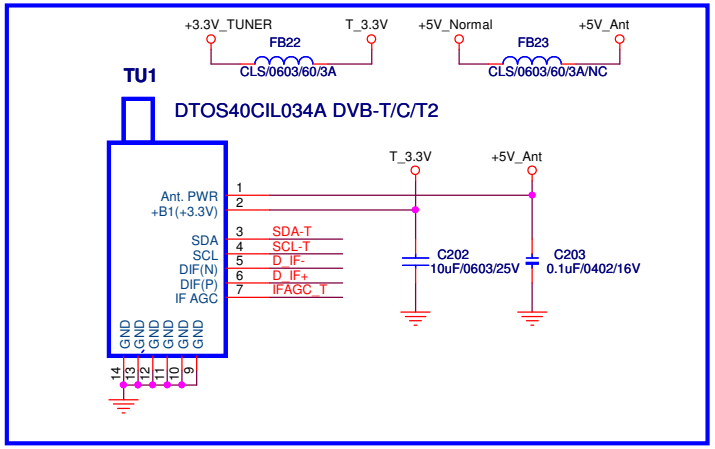
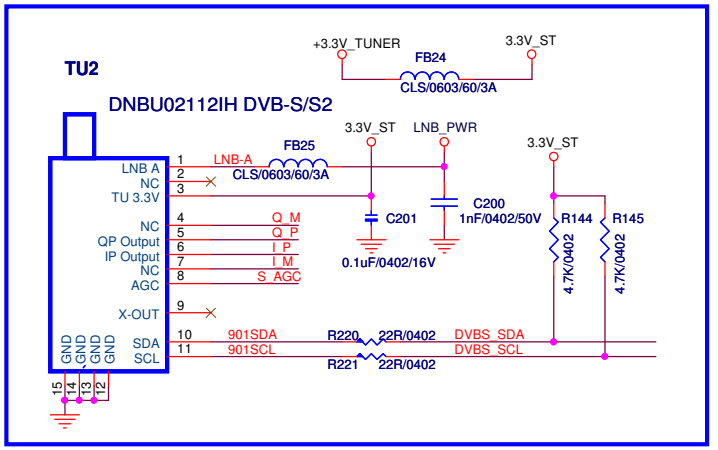
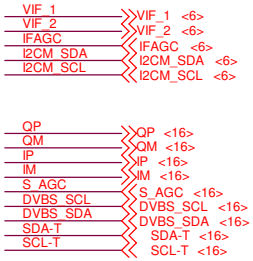
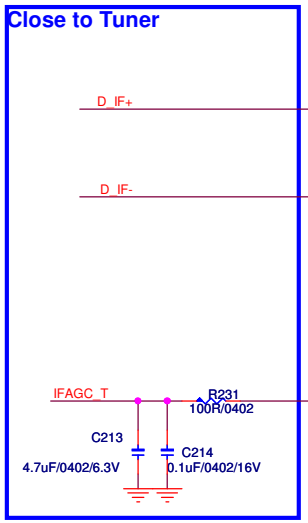
DVB-T/C/T2
LG:TDSY-G330D:PK31001540I
SAMSUNG:DTOS40CIL034A DVB-T/C/T2:PK31001560I

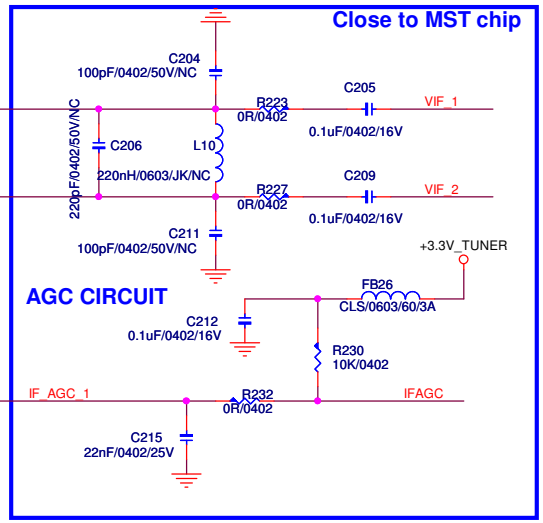


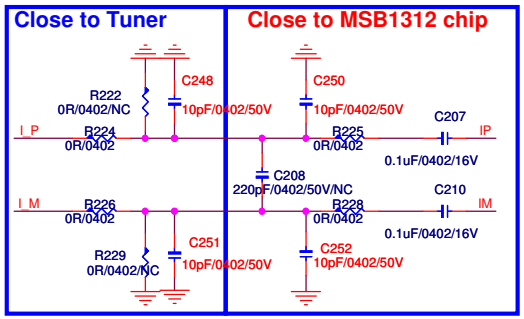
DVB-S2:
LG:TDQS-A901F:PK31001550I
SAMSUNG:DNBU02112IH DVB-S/S2:PK31001570I

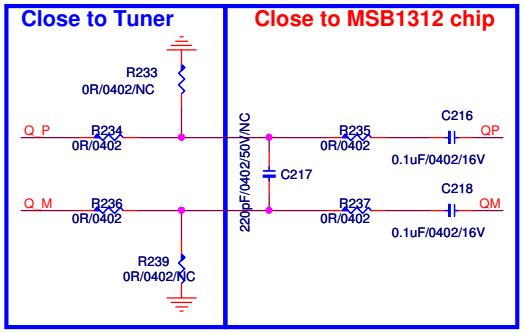


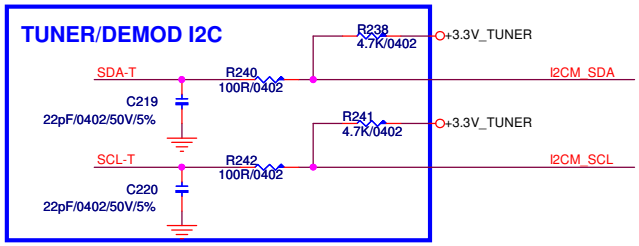












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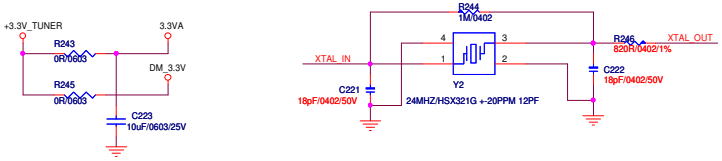
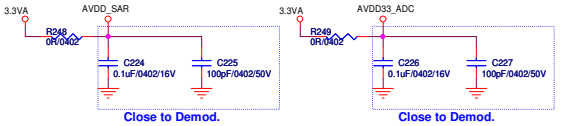
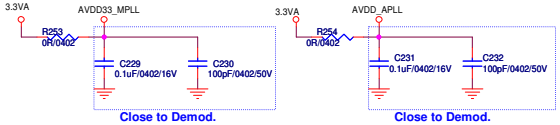
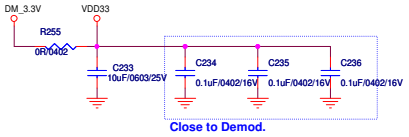
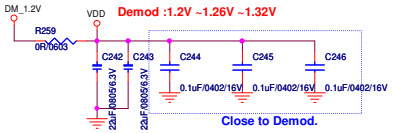
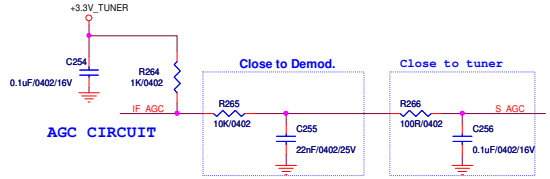






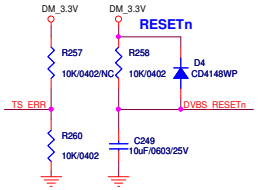


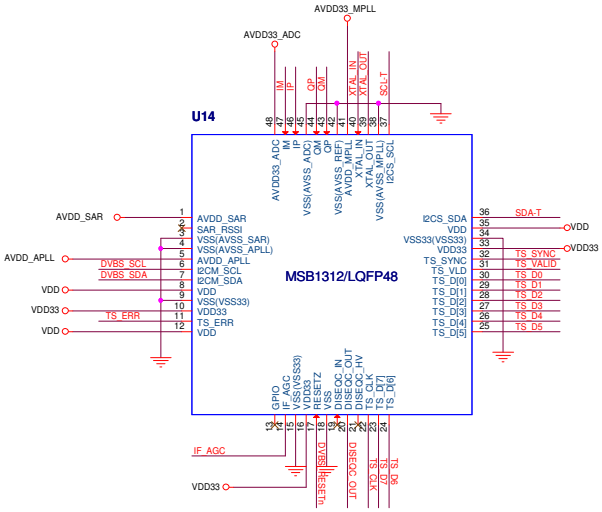


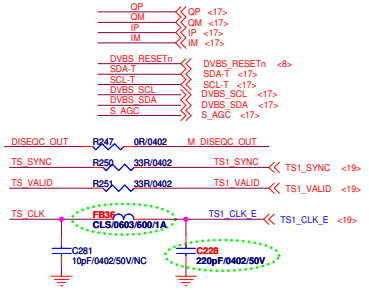


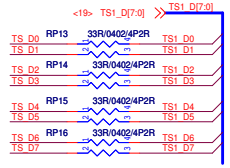
H/W Strap

I2C slave address:
TS_ERR=0, I2C slave address=0xD2 (Default)
TS_ERR=1, I2C slave address=0xF2



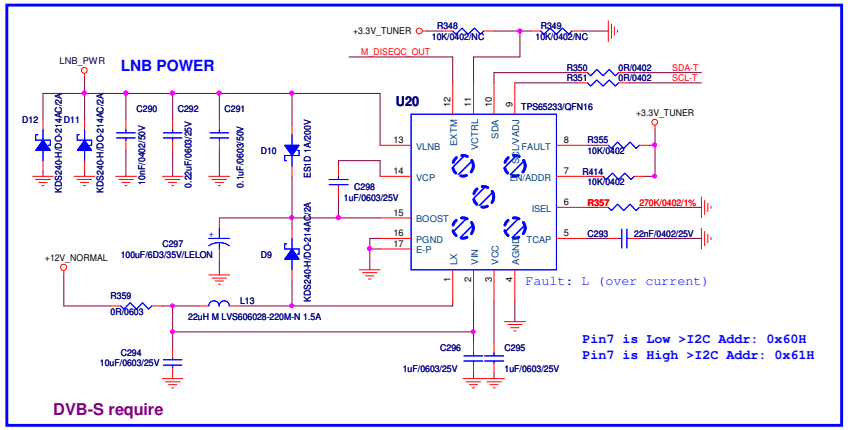






LNB POWER SUPPLY

VCTRL Hi:18V Low:13V



2014/11/24:
Currect limit :500mA.
R357 : 130K to 270K

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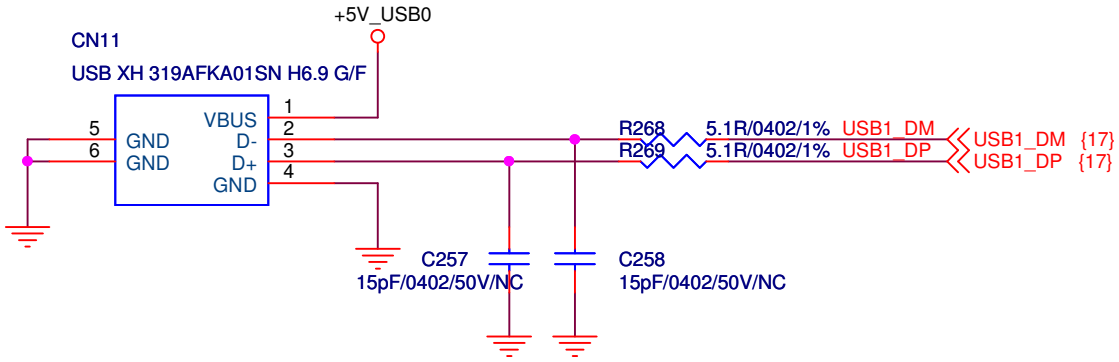
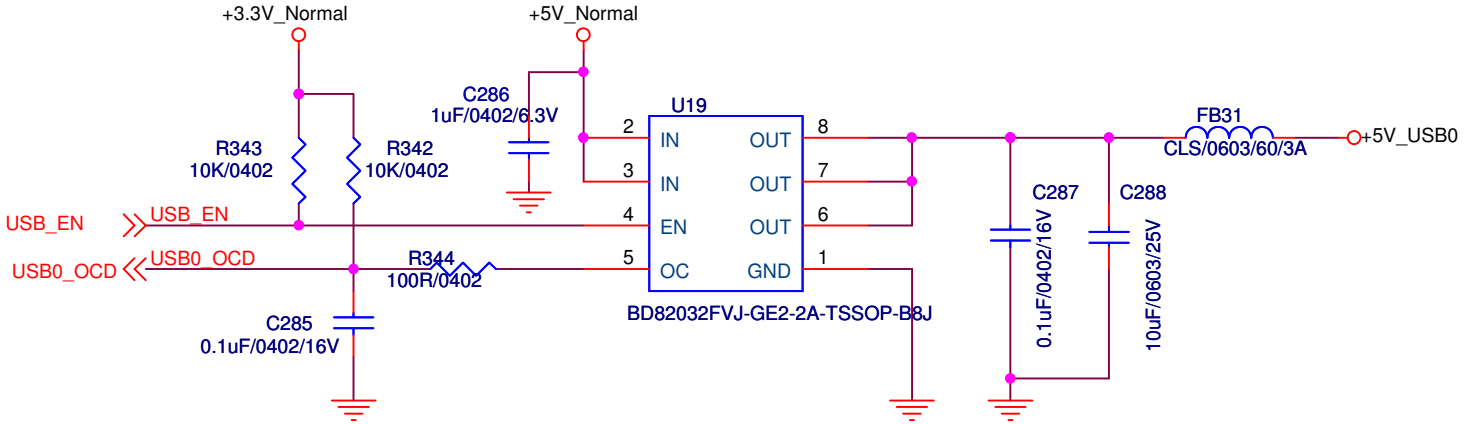
USB1/SIDE





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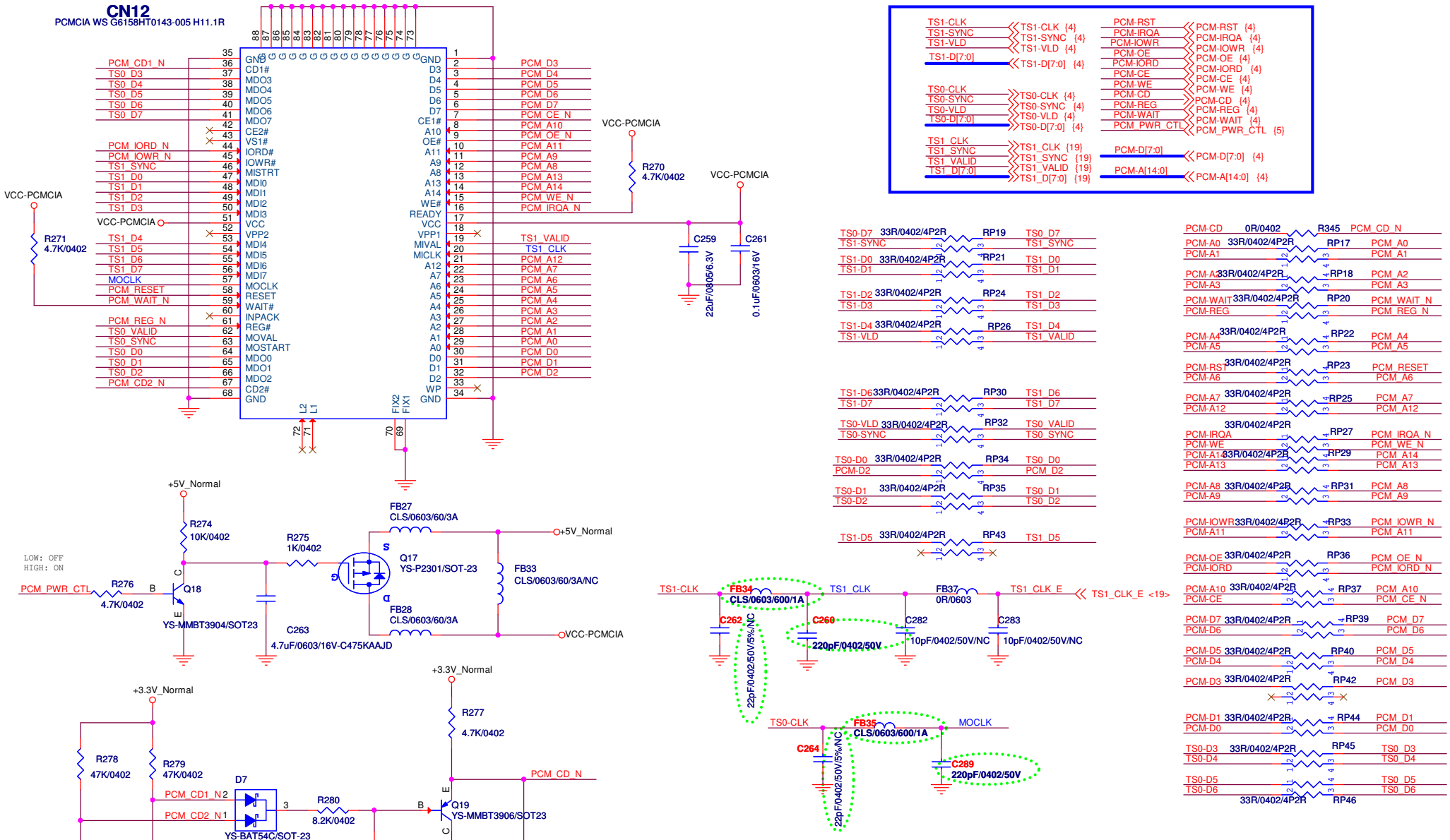

2014/11/03:
EMI Issue modify for L2546 model require. (40/50/32)
1.FB34/FB35/FB36 from SM01V01370I to SM01V01410I
2.C228/C260/C289 from SE071100K0J to SE071221J0J
3.C262/C264 from SE071220J0J to N/C

	CO., LTD
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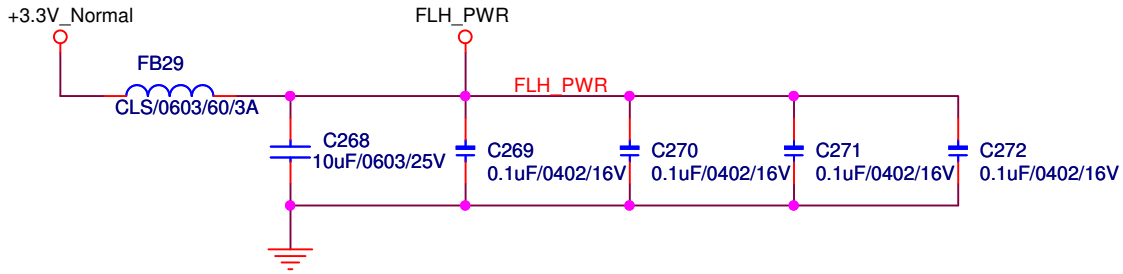

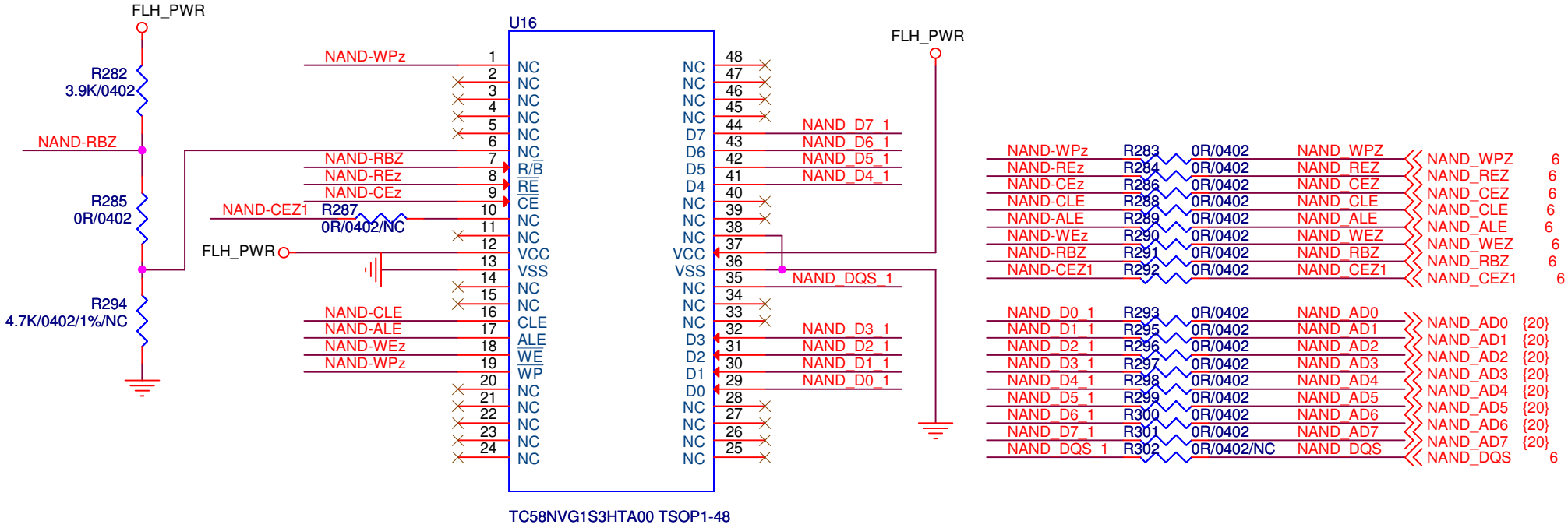

NAND-WPz	R283	0R/0402	NAND_WPZ	NAND_WPZ	6
NAND-REz	R284	0R/0402	NAND_REZ	NAND_REZ	6
NAND-CEz	R286	0R/0402	NAND_CEZ	NAND_CEZ	6
NAND-CLE	R288	0R/0402	NAND_CLE	NAND_CLE	6
NAND-ALE	R289	0R/0402	NAND_ALE	NAND_ALE	6
NAND-WEz	R290	0R/0402	NAND_WEZ	NAND_WEZ	6
NAND-RBZ	R291	0R/0402	NAND_RBZ	NAND_RBZ	6
NAND-CEZ1	R292	0R/0402	NAND_CEZ1	NAND_CEZ1	6

NAND_D0_1	R293	0R/0402	NAND_AD0	NAND_AD0	{20}
NAND_D1_1	R295	0R/0402	NAND_AD1	NAND_AD1	{20}
NAND_D2_1	R296	0R/0402	NAND_AD2	NAND_AD2	{20}
NAND_D3_1	R297	0R/0402	NAND_AD3	NAND_AD3	{20}
NAND_D4_1	R298	0R/0402	NAND_AD4	NAND_AD4	{20}
NAND_D5_1	R299	0R/0402	NAND_AD5	NAND_AD5	{20}
NAND_D6_1	R300	0R/0402	NAND_AD6	NAND_AD6	{20}
NAND_D7_1	R301	0R/0402	NAND_AD7	NAND_AD7	{20}
NAND_DQS_1	R302	0R/0402/NC	NAND_DQS	NAND_DQS	6

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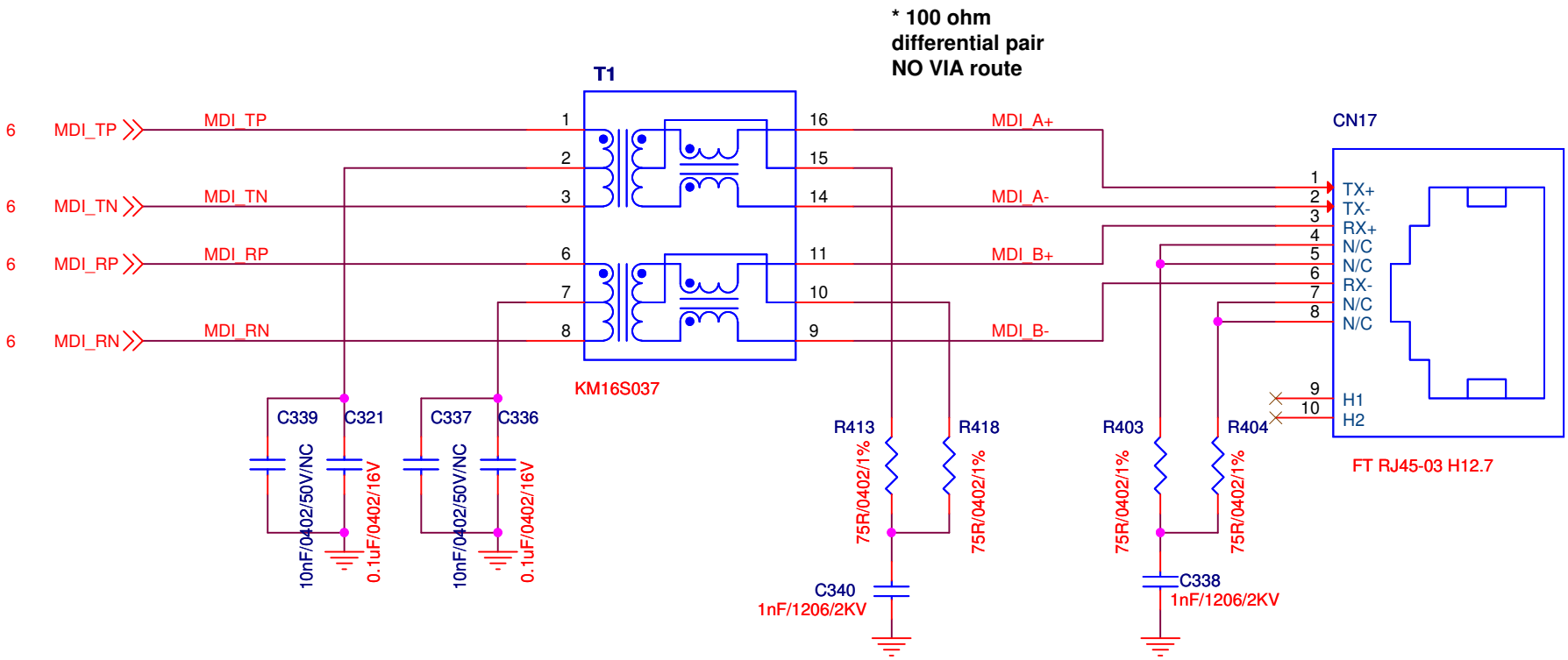

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TOSHIBA LIFESTYLE PRODUCTS & SERVICES CORPORATION
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REV. 00
Apr/1/2015