



MST方案维修原理说明

TLM3288H/TLM3266/TLM3201

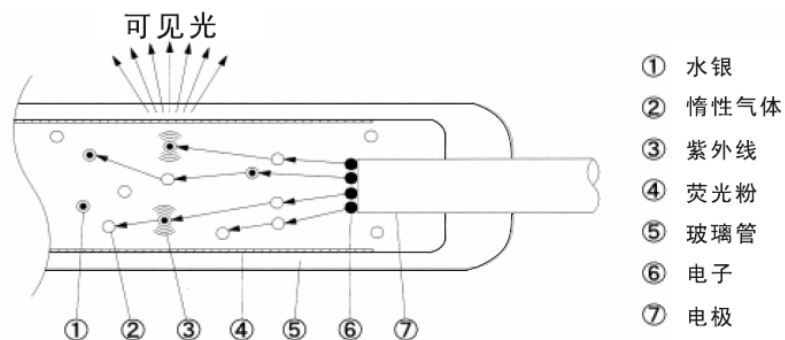


液晶屏简介

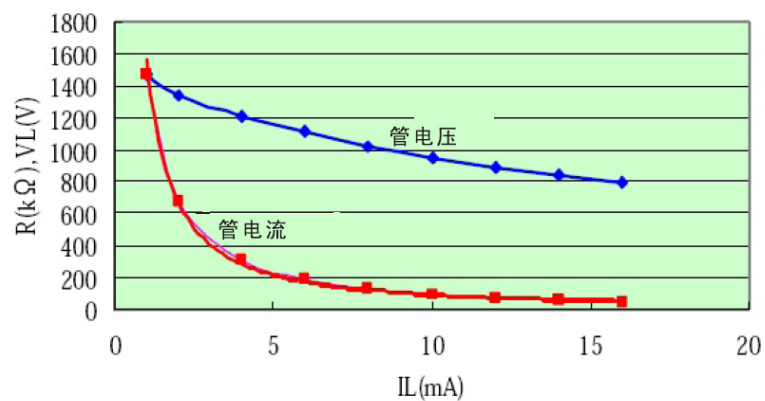
- 接口一般有两个,LVDS信号接口和INVERTER电压接口.
- LVDS信号接口中有LVDS信号和TCON板的电源(5V或者12V).
- INVERTER电压接口有24V电压输入,ON/OFF信号及背光亮度调整信号.
- 目前INVERTER根据灯管来分有CCFL和EEFL.
区别:
 - CCFL为内电极,驱动电流上升时电压下降,效率低点.
 - EEFL为外电极,驱动电流上升时电压上升,效率较高.

液晶屏简介

■ CCFL灯管示意:



■ CCFL VA曲线

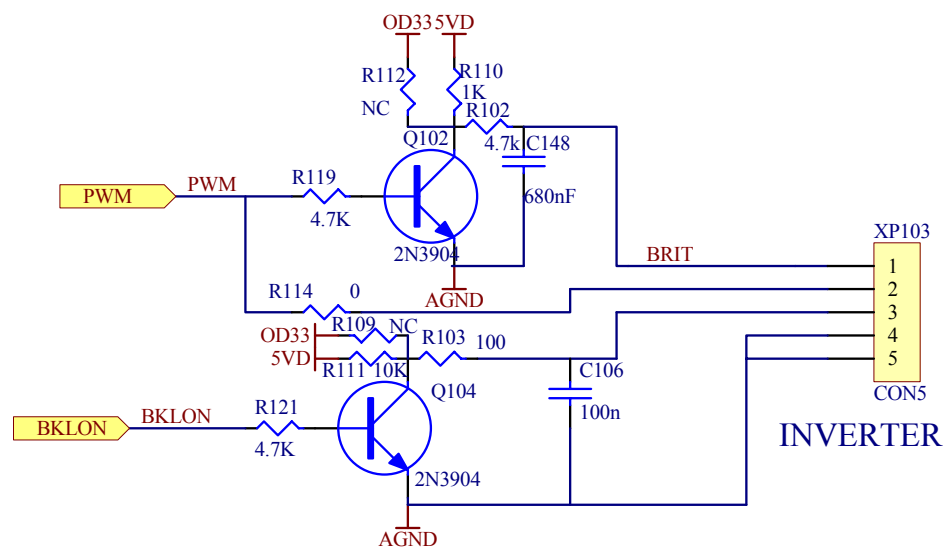


从VA曲线看出,CCFL灯管呈现阻容特性. 灯管的亮度取决于电流的大小,但电流上升到一定程度,亮度不再上升,为4mA~6mA.

液晶屏简介

■ 调光方式(节能模式)

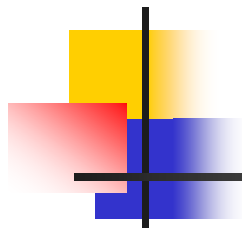
据屏的特性,有**PWM**调光和直流调光两种方式.



方案介绍



机型有TLM3288H，
LM3266，TLM3201。
电路上看TLM3288H与
TLM3266差别在于按
键板不同（轻触和感
应），TLM3201没有
读卡器功能，为轻触
按键。



方案介绍

差别功能:

支持HDMI接口（HDMI 1.0, HDCP 1.1），重低音输出，基色调整（色域增强）

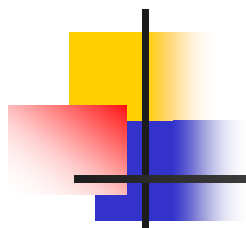
一般功能:

VGA、YPbPr、VIDEO、S-VIDEO



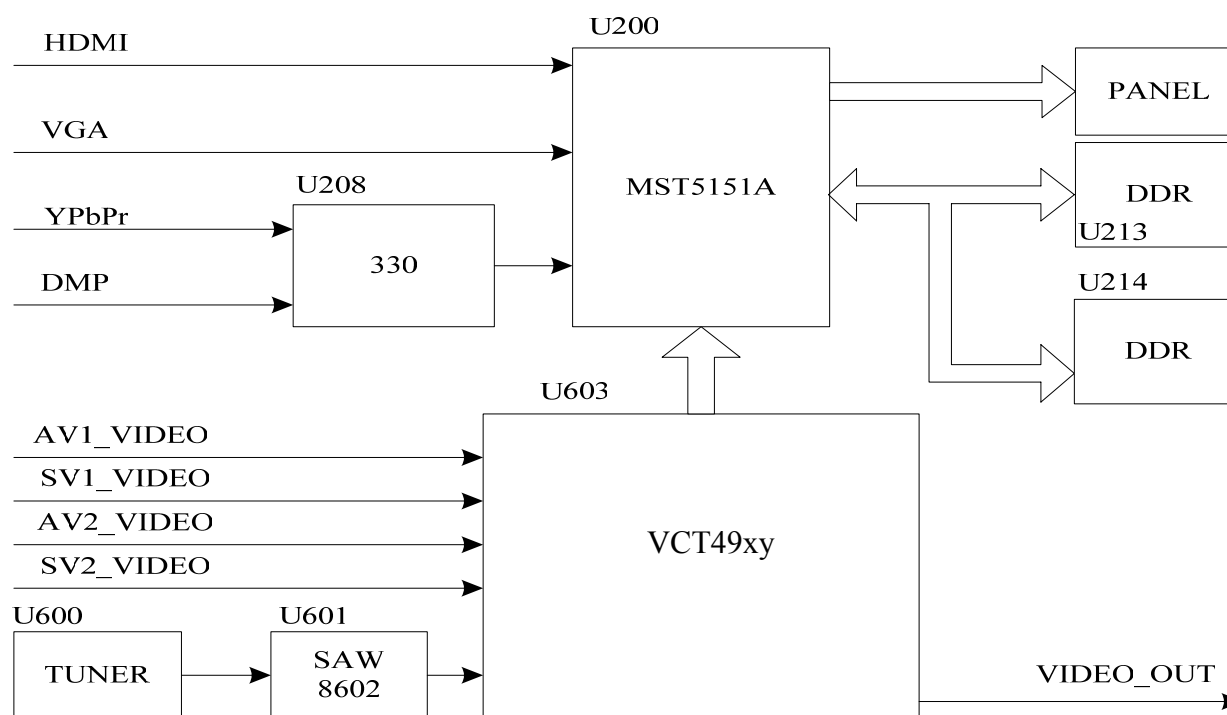
方案介绍

- MST5151A+VCT49xy
- MST5151数字接口有模拟RGB, YPbPr, HDMI (HDCP), Digital Video Input, OSD发生器等, VOG(PIP), Digital Audio Interface
- VCT49xy内嵌CPU, 集成了图象解码(LTI、CTI、BLE)和伴音解码(声效控制如重低音环绕声等), 。



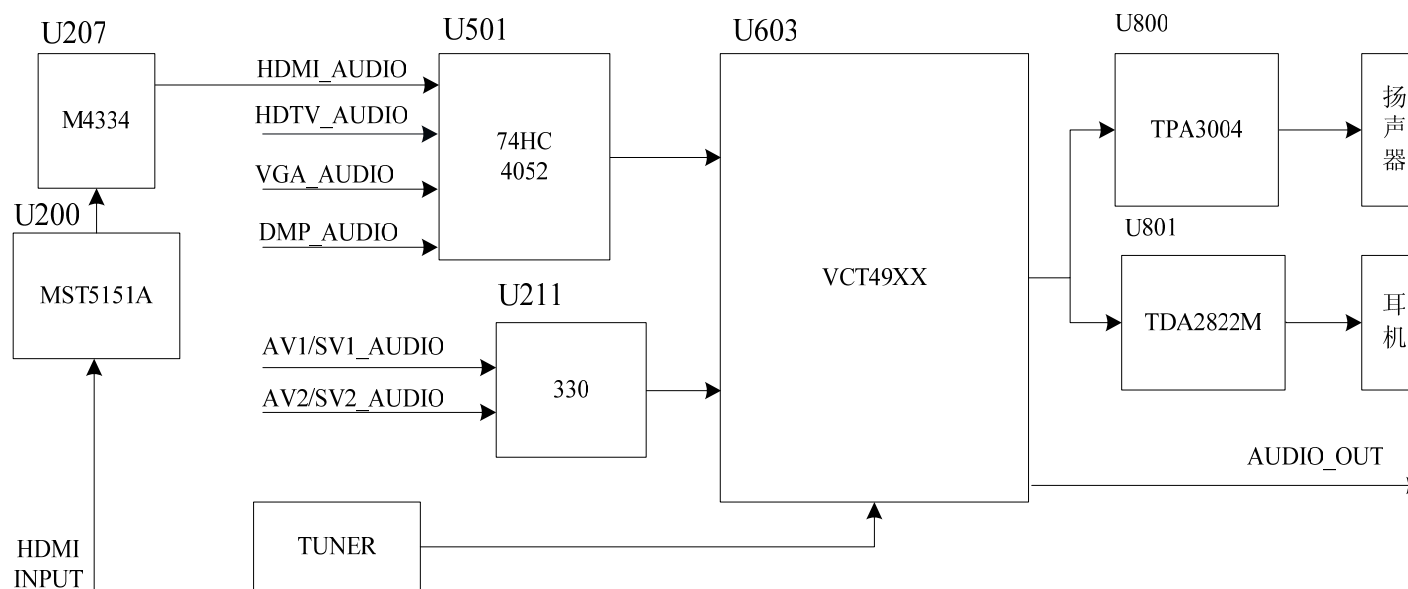
电路流程

图象部分



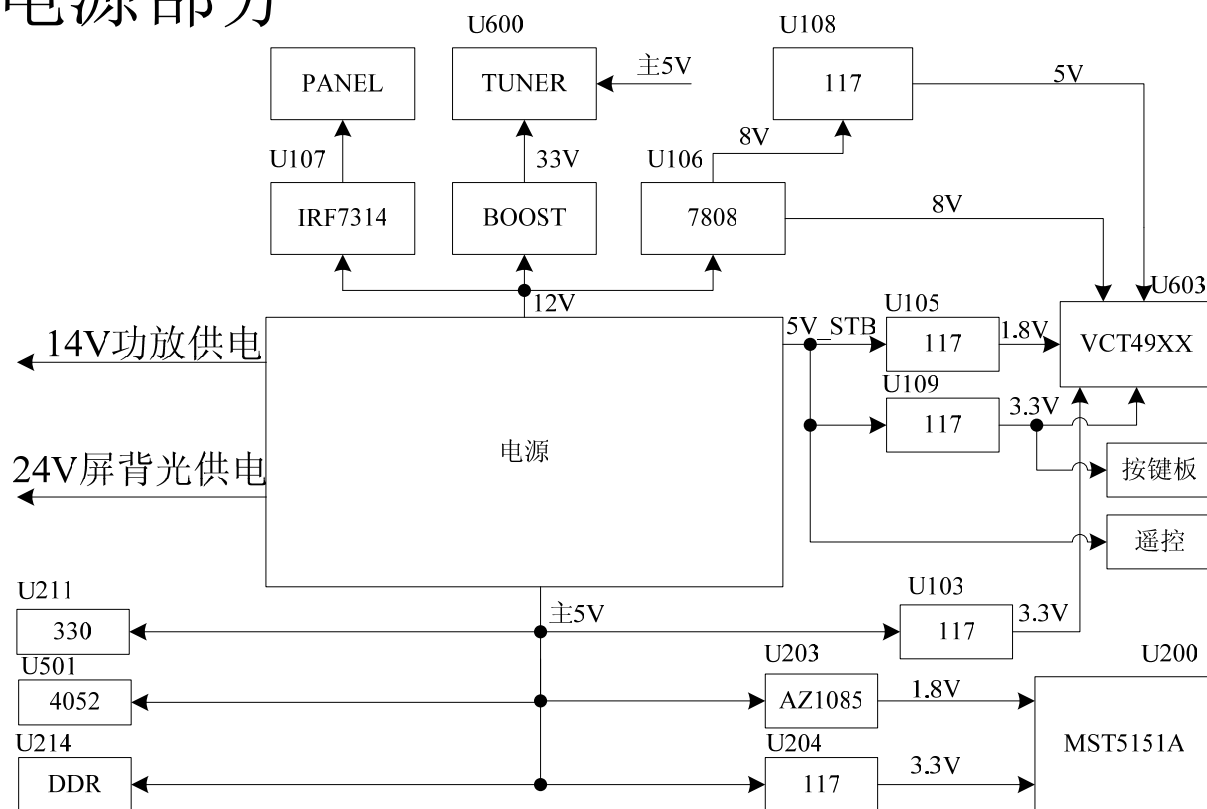
电路流程

■ 声音部分



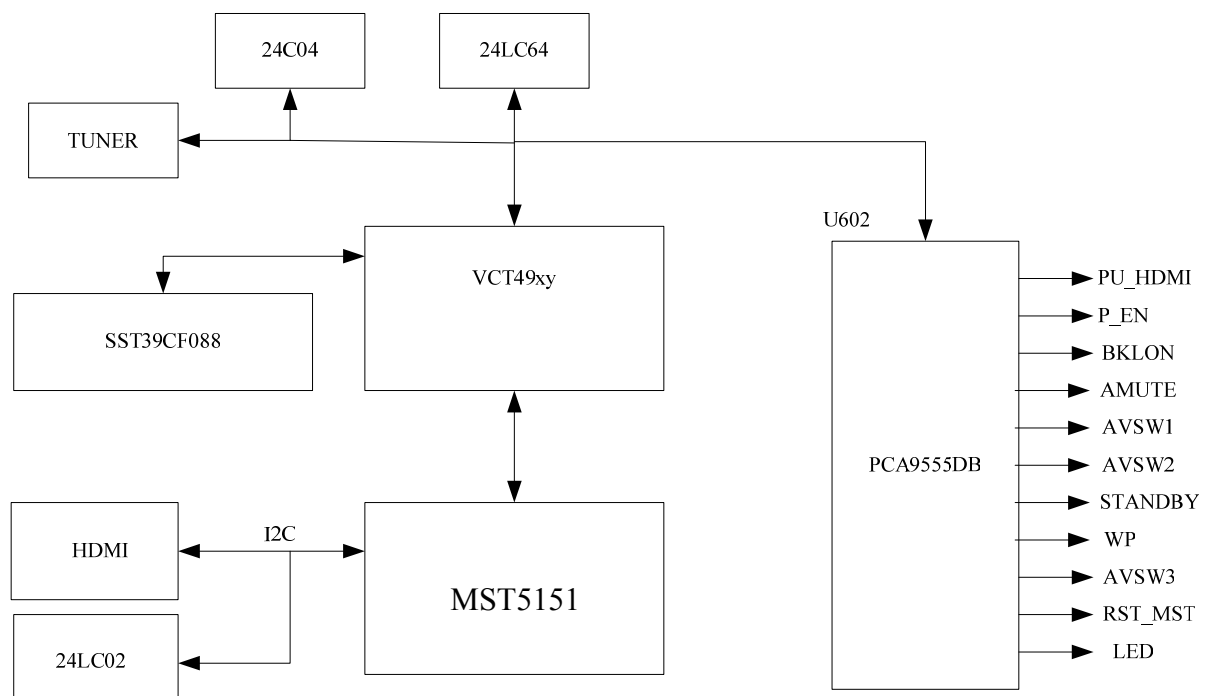
电路流程

■ 电源部分

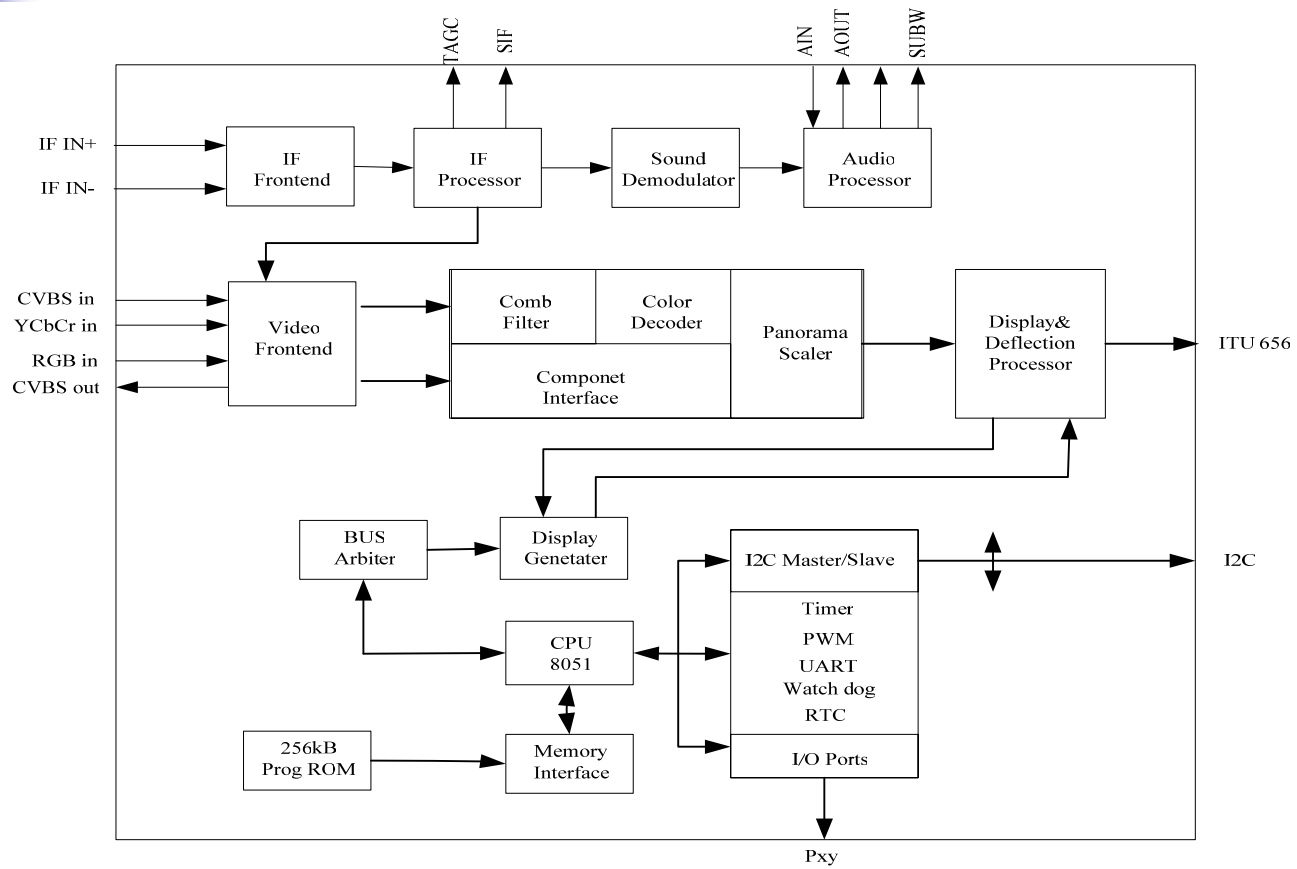


电路流程

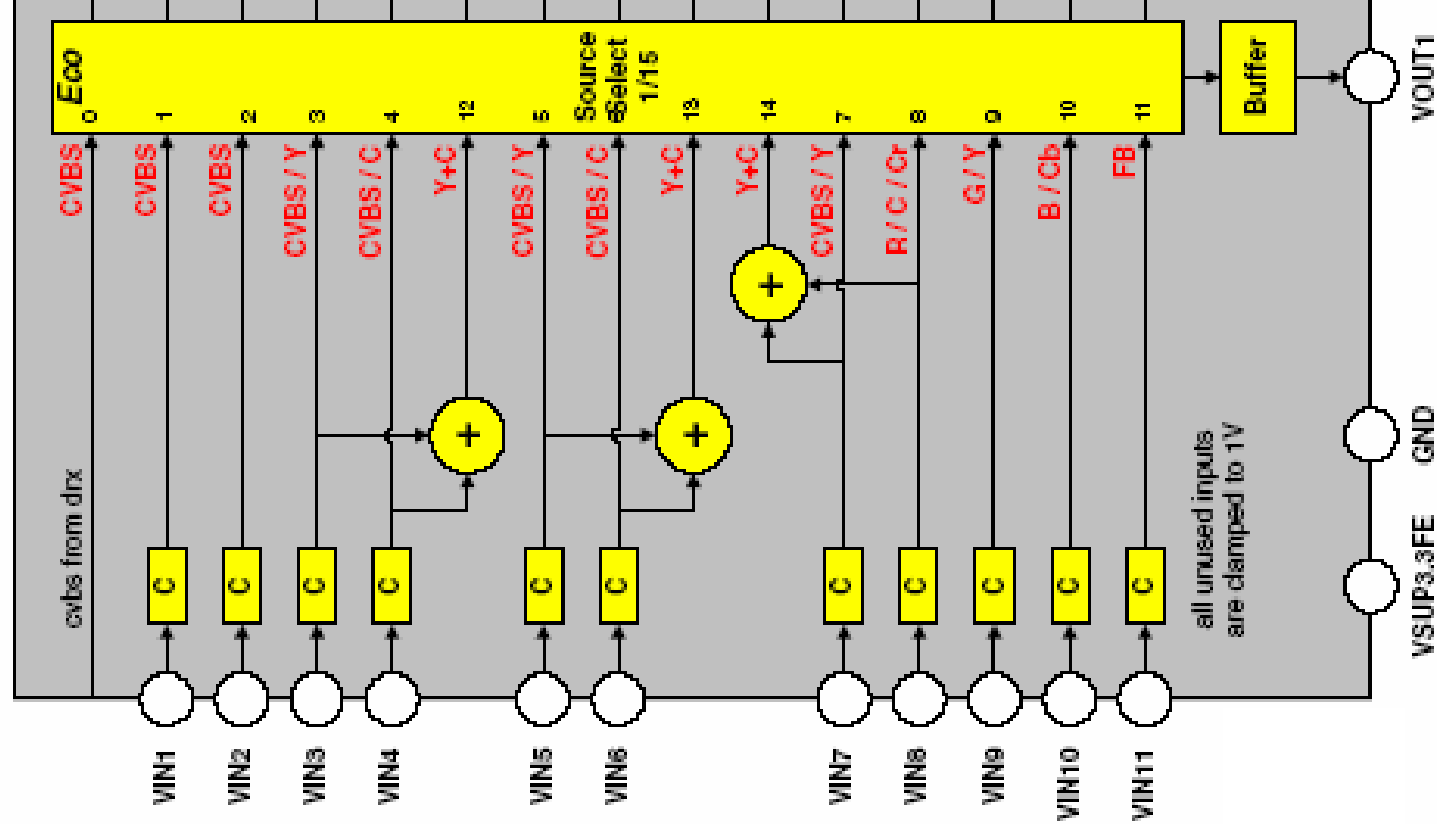
■ 总线及控制



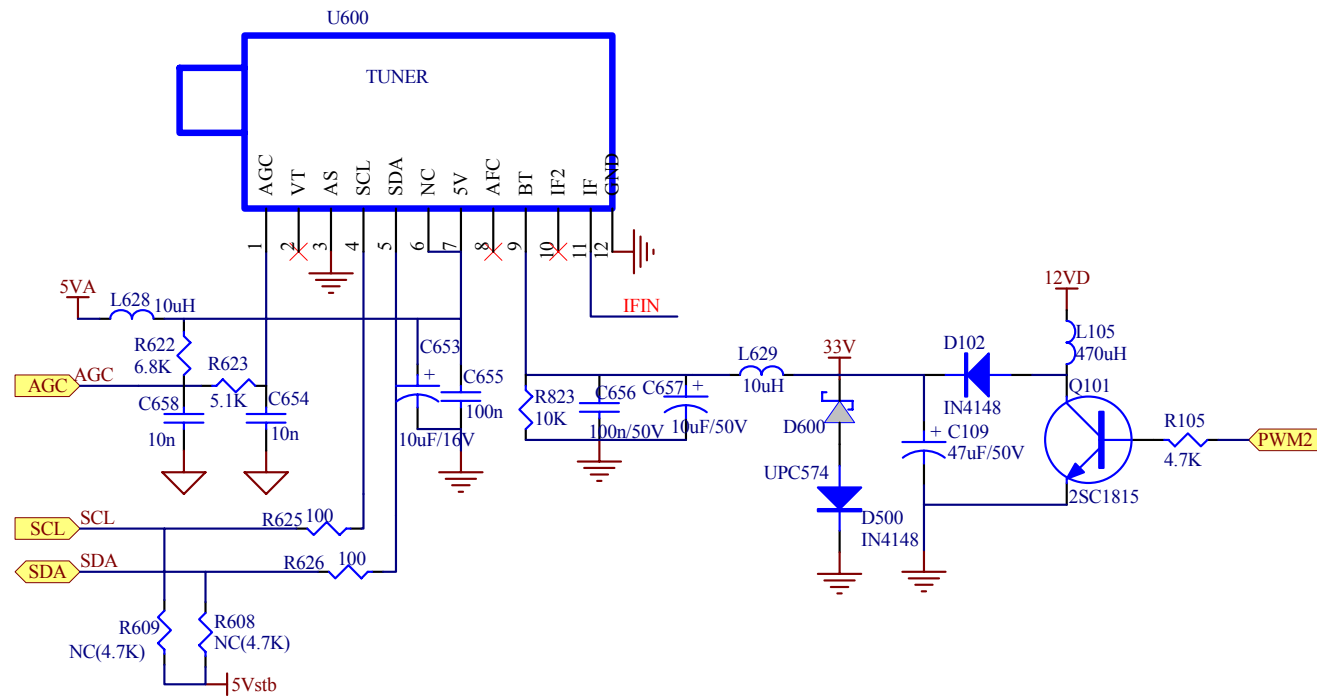
VCT49xy



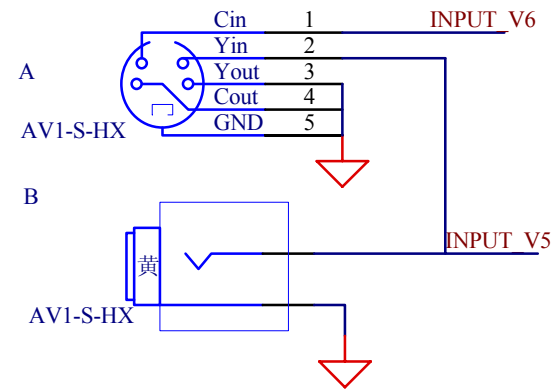
VCT Interface



TUNER



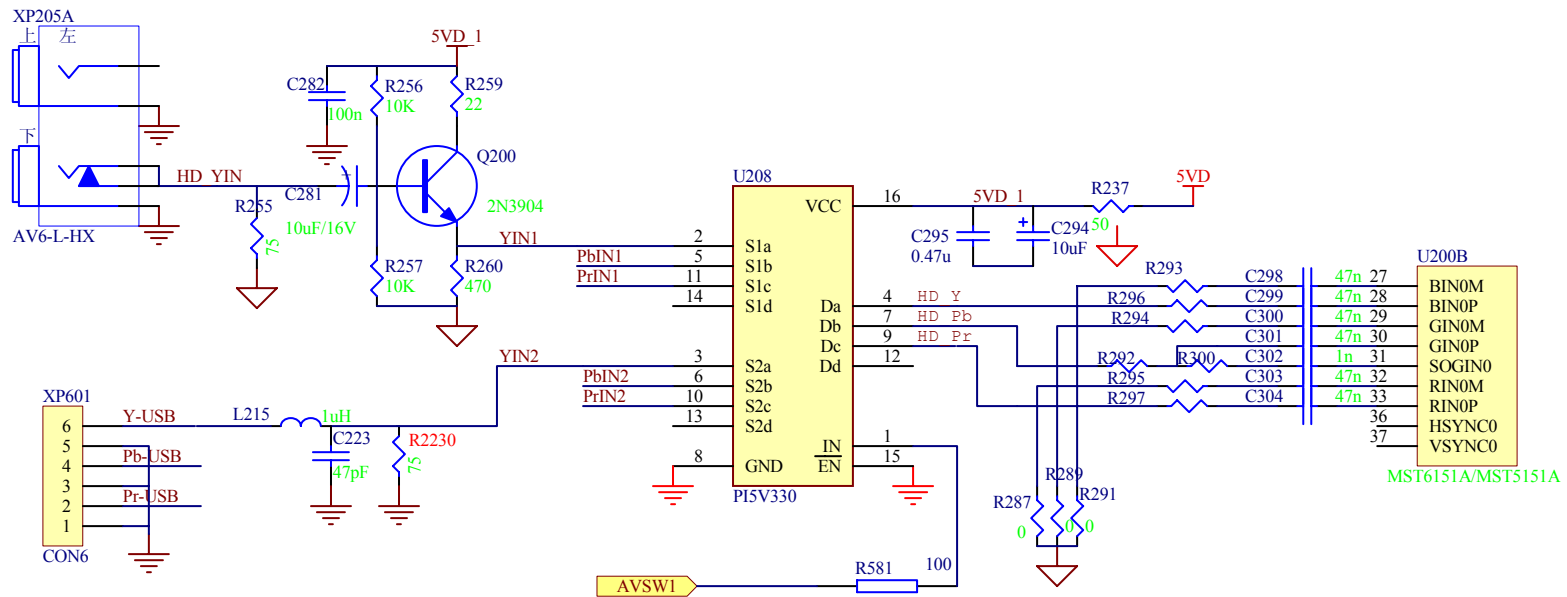
VIDEO&S-VIDEO

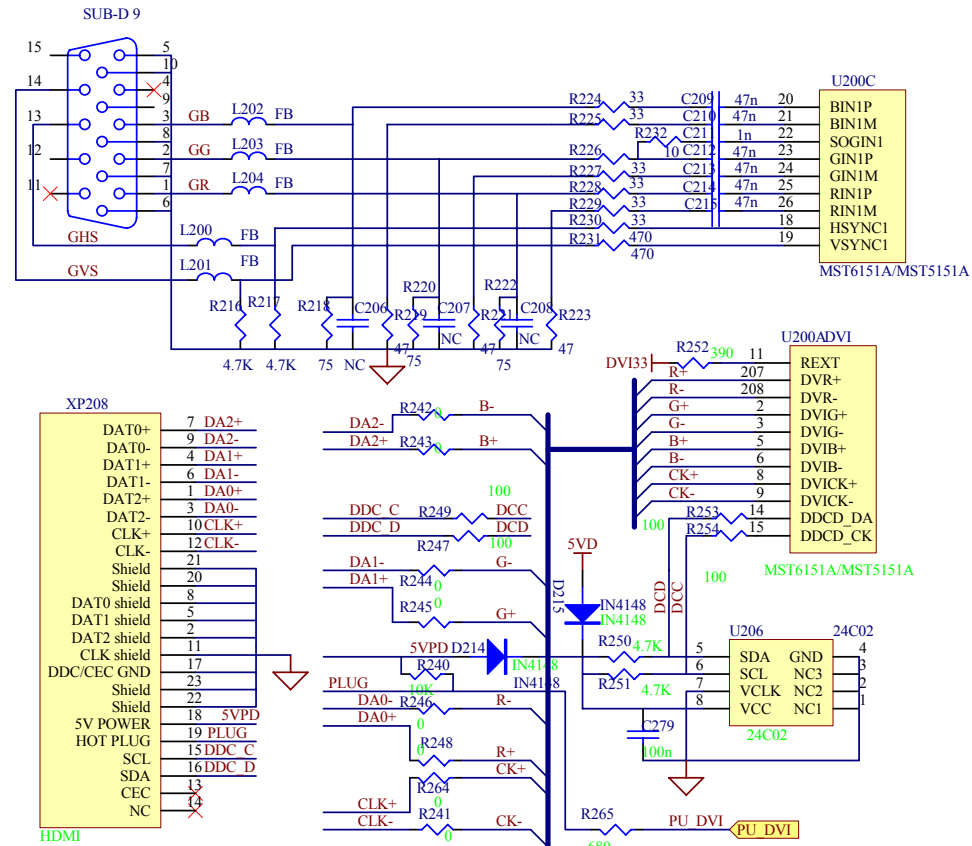


VIDEO1&S-VIDEO1用的VIN5+VIN6

VIDEO2&S-VIDEO2用的VIN7+VIN8

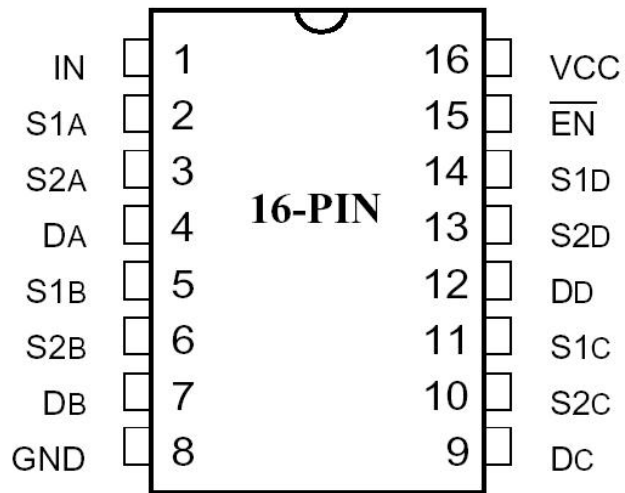
YPbPr/DMP








PI5V330

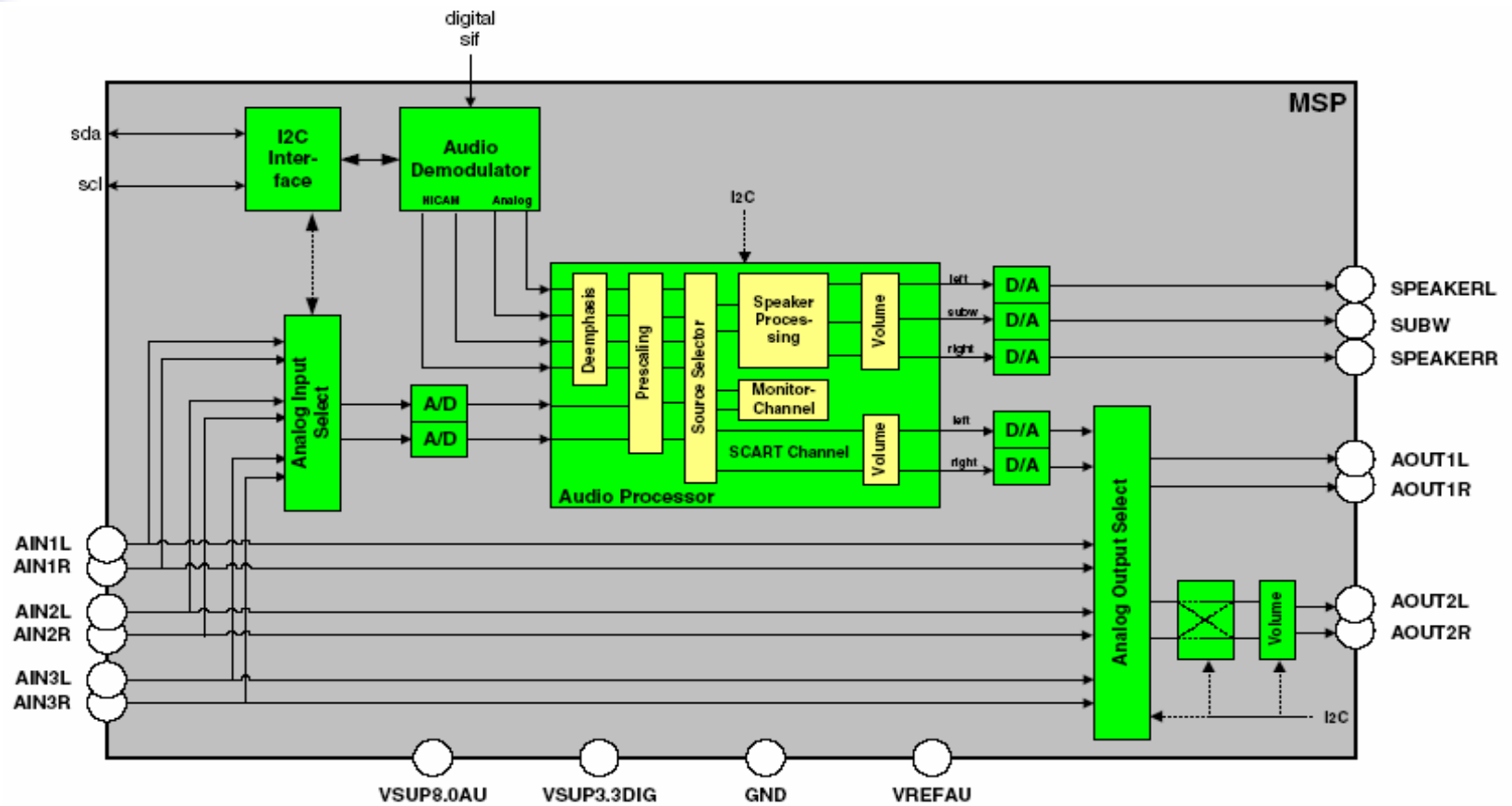


| Pin Name | Description |
|--|------------------|
| S1A, S2A S1B, S2B S1C, S2C S1D, S2D | Analog Video I/O |
| IN | Select Input |
| $\overline{\text{EN}}$ | Enable |
| DA, DB, DC, DD | Analog Video I/O |
| GND | Ground |
| VCC | Power |

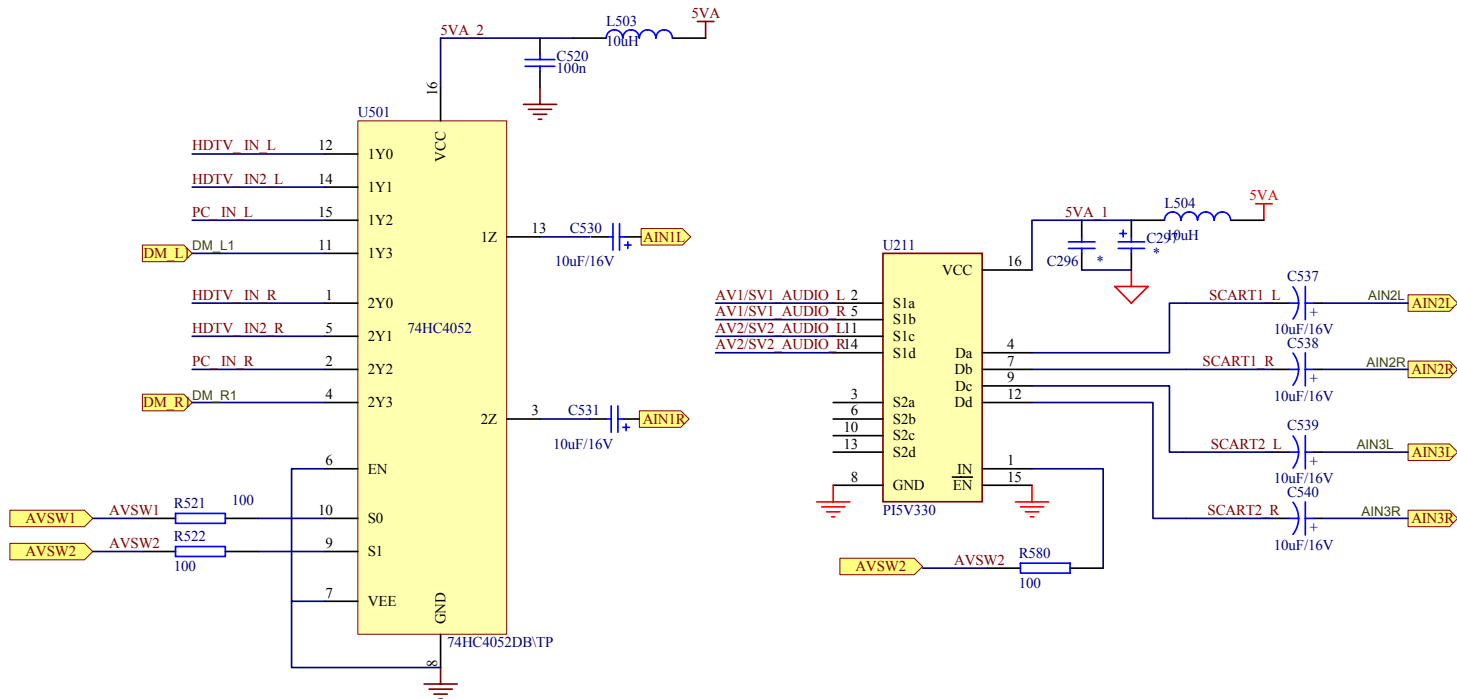
| $\overline{\text{EN}}$ | IN | ON Switch |
|------------------------|----|--------------------|
| 0 | 0 | S1A, S1B, S1C, S1D |
| 0 | 1 | S2A, S2B, S2C, S2D |
| 1 | X | Disabled |



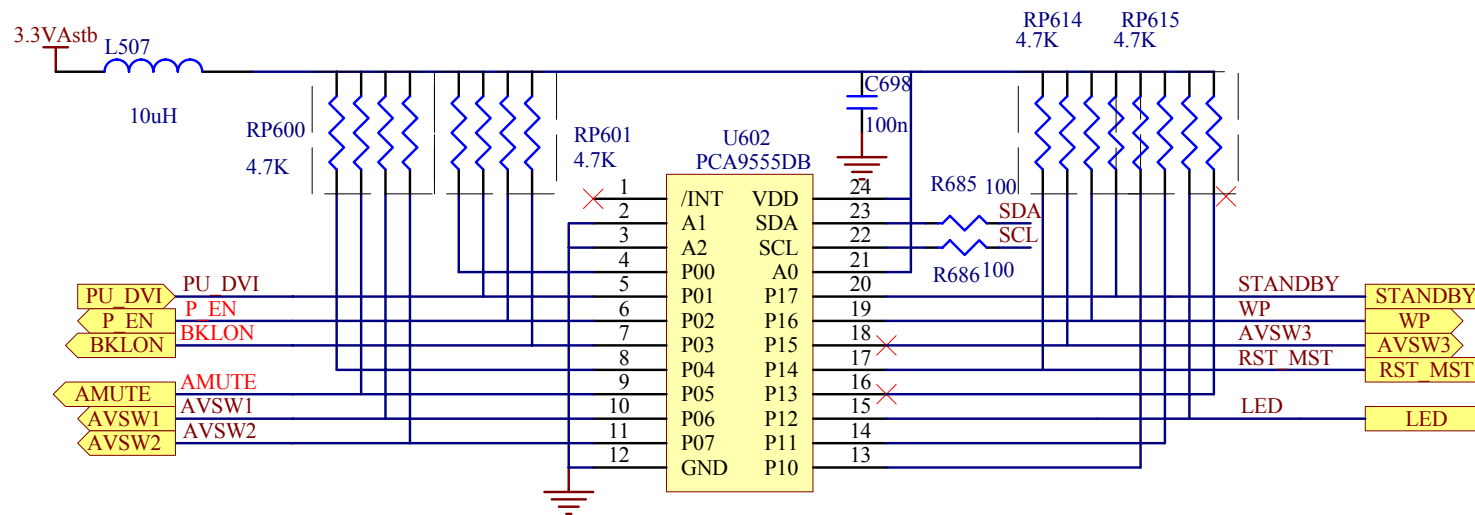
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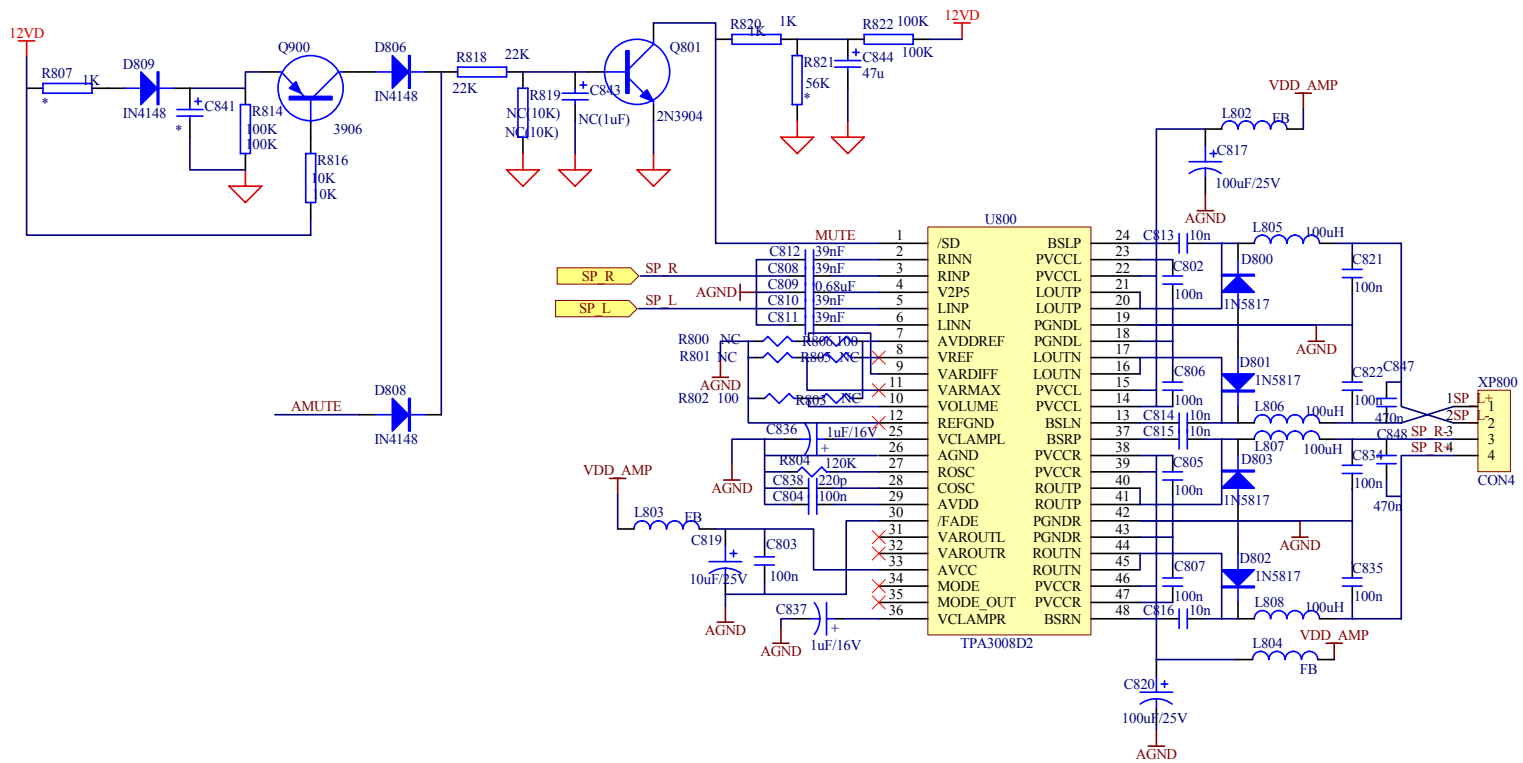
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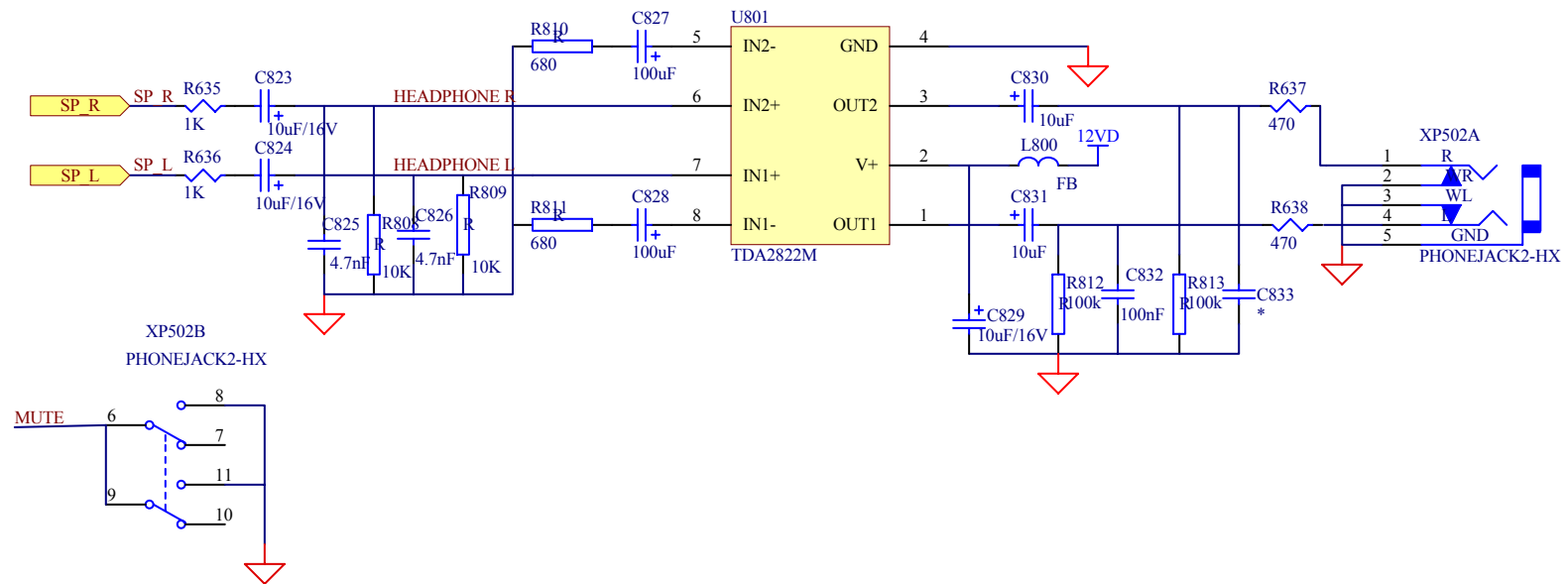
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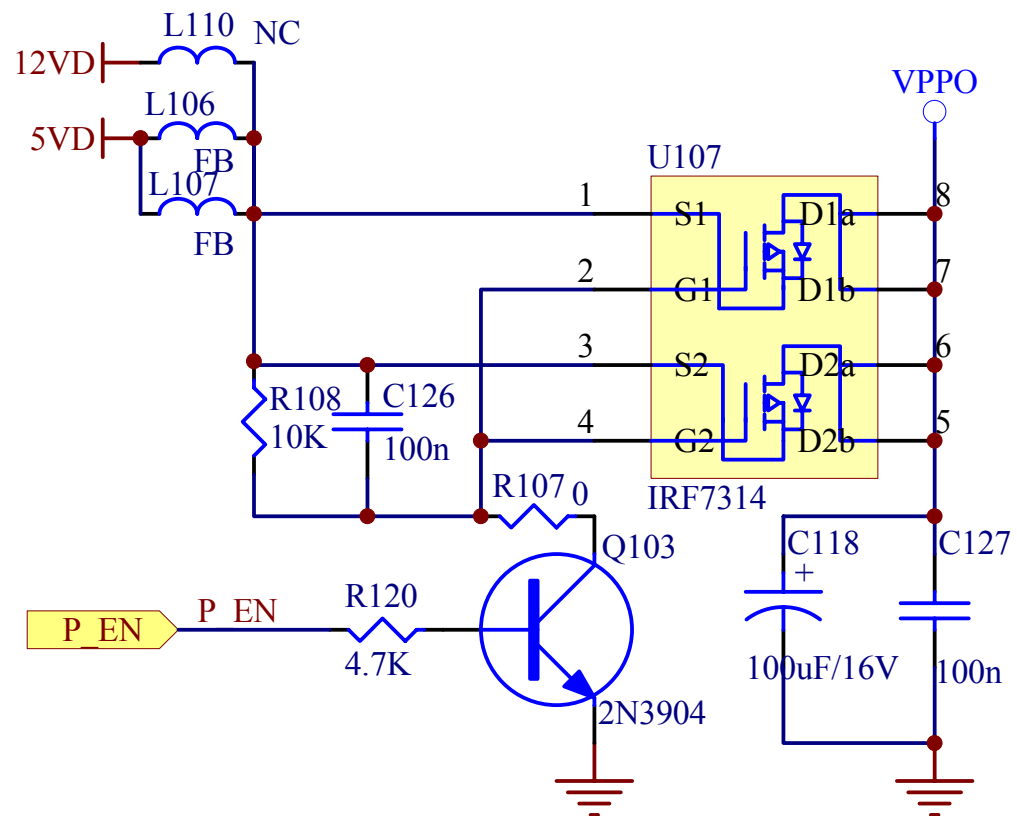
TPA3004



TDA2822



IRF7314





总线调整

- 进入工厂菜单的方法为：
将音量菜单下平衡调为 0 ，然后顺序按下用户遥控器上的数字键 0 — 5 — 3 — 2 ，即进入工厂菜单.

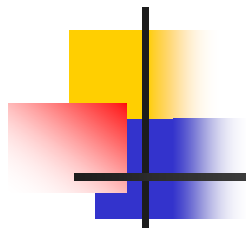


总线调整

Service Mode (TV)

White Balance
Additional Settings
Options 1
Options 2
Audio Options
Deviation Settings
DRX
NVM Edit
NVM Initialize
MinMidMax Init
Scaler
Set channel
ToFAC < U >

TLM26/3288
20051021



总线调整

White Balance

| | |
|---------|----------|
| Rgain | < +128 > |
| Ggain | < +120 > |
| Bgain | < +122 > |
| Roffset | < +128 > |
| Goffset | < +128 > |
| Boffset | < +128 > |

Back:i

Exit:OK



总线调整

Options 1

| | |
|-----------------------|-------------|
| Front AV (Ext3) | < Yes > |
| Front AV Y/C (Ext4) | < NO > |
| Rear Av (Ext5) | < NO > |
| DVB module | < NO > |
| Picture Tube 16:9 | < NO > |
| Blue Screen | < NO > |
| Picture Mute | < NO > |
| UHF only | < NO > |
| Search for BG, DK, I | < Yes > |
| Search for L/L' | < NO > |
| Search for M | < Yes > |
| Pref.Search standard | < BG,DK,I > |
| Station Ident | < Yes > |
| ATS Delay Time (ms) | < 100 > |

Back:i

Exit:OK



总线调整

Audio Options

| | |
|------------------|----------|
| Equalizer | < Yes > |
| Show volume bar | < Yes > |
| Autostone Volume | < NO > |
| BBE | < NO > |
| Voice | < NO > |
| SRS wow | < NO > |
| ACF | < NO > |
| Volume Lim | < +100 > |
| Volume 0 | < -115 > |
| Volume 1 | < -60 > |
| Volume 20 | < -30 > |
| Volume 50 | < -15 > |
| Volume 100 | < +2 > |

Back:i

Exit:OK



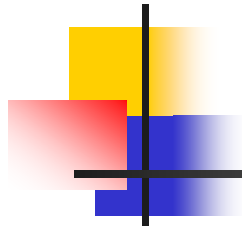
总线调整

DRX

| | |
|-----------------|---------|
| Standard Select | < DRX > |
| TOP Setting | < +7 > |
| Video Peaking | < 0 > |
| SIF Reference | < +2 > |

Back:i

Exit:OK



总线调整

NVM Edit

NVM_edit addr. (hex) _ _ _ _
NVM_edit data (hex) _ _ _ _

Back:i

Exit:OK

NVM Initialize

Initialize NVM from Rom
Continue:LEFT Key exit: M key

Back:i

Exit:OK



总线调整

MinMidMax Init

| | |
|---------------------------|----------|
| SaveEnergy_StandardVal1 | < +220 > |
| SaveEnergy_StandardVal2 | < +88 > |
| SaveEnergy_ModeOneVal1 | < +220 > |
| SaveEnergy_ModeOneVal2 | < +148 > |
| SaveEnergy_ModeTwoVal1 | < +220 > |
| SaveEnergy_ModeTwoVal2 | < +208 > |
| PictureMode_Bright_Bri | < +130 > |
| PictureMode_Bright_Con | < +152 > |
| PictureMode_Standard_Bri | < +130 > |
| PictureMode_Standard_Coni | < +136 > |
| PictureMode_Sofr_Bri | < +130 > |
| PictureMode_Soft_Coni | < +120 > |

Back:i

Exit:OK



总线调整

Scaler

| | |
|-------------|----------|
| ADC Rgain | < +128 > |
| ADC Ggain | < +128 > |
| ADC Bgain | < +128 > |
| ADC Roffset | < +128 > |
| ADC Goffset | < +128 > |
| ADC Boffset | < +128 > |

Back:i

Exit:OK

Set Channel

ZhongShiXian
HuangDao
GuiZhou
LiaoNing

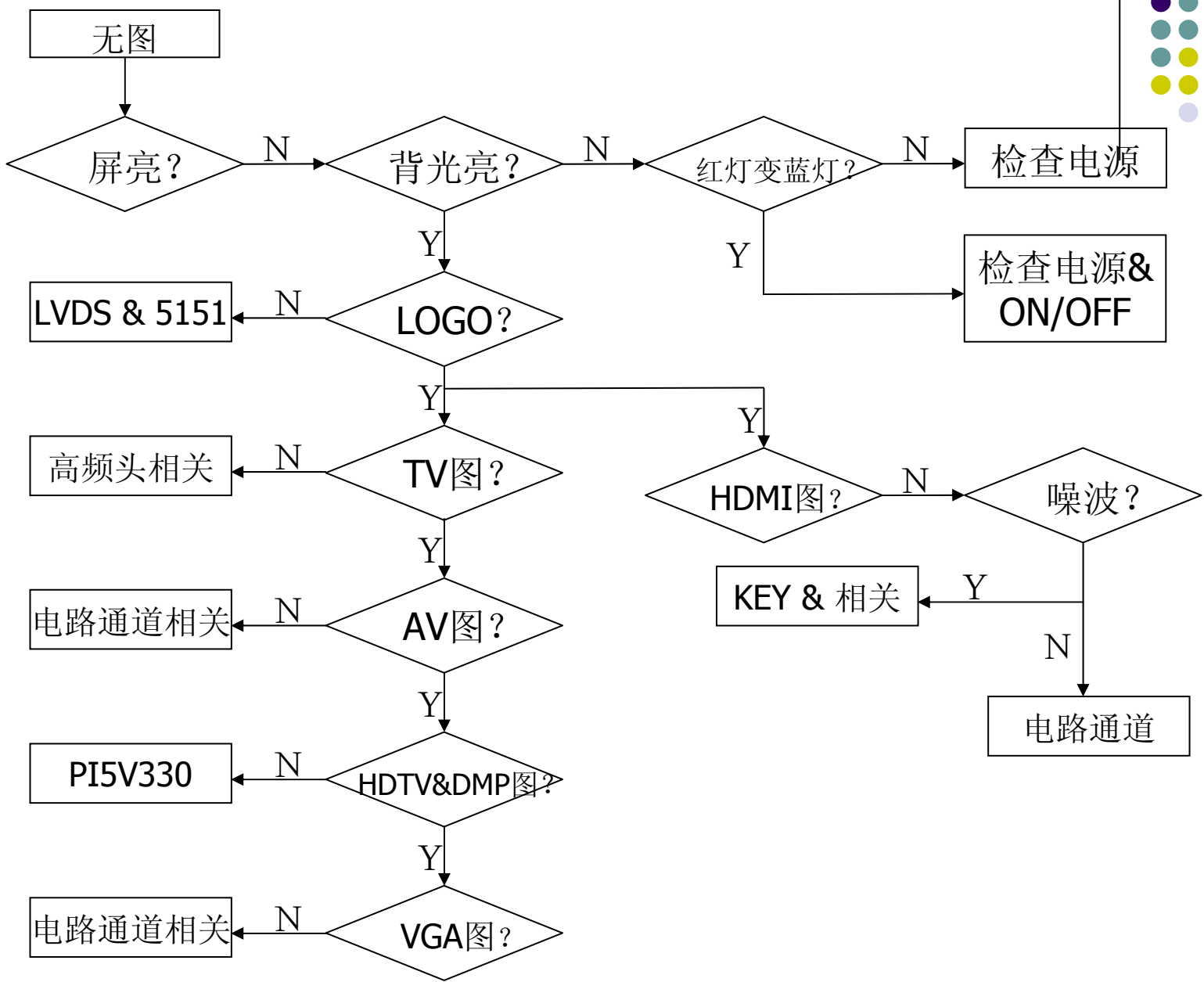
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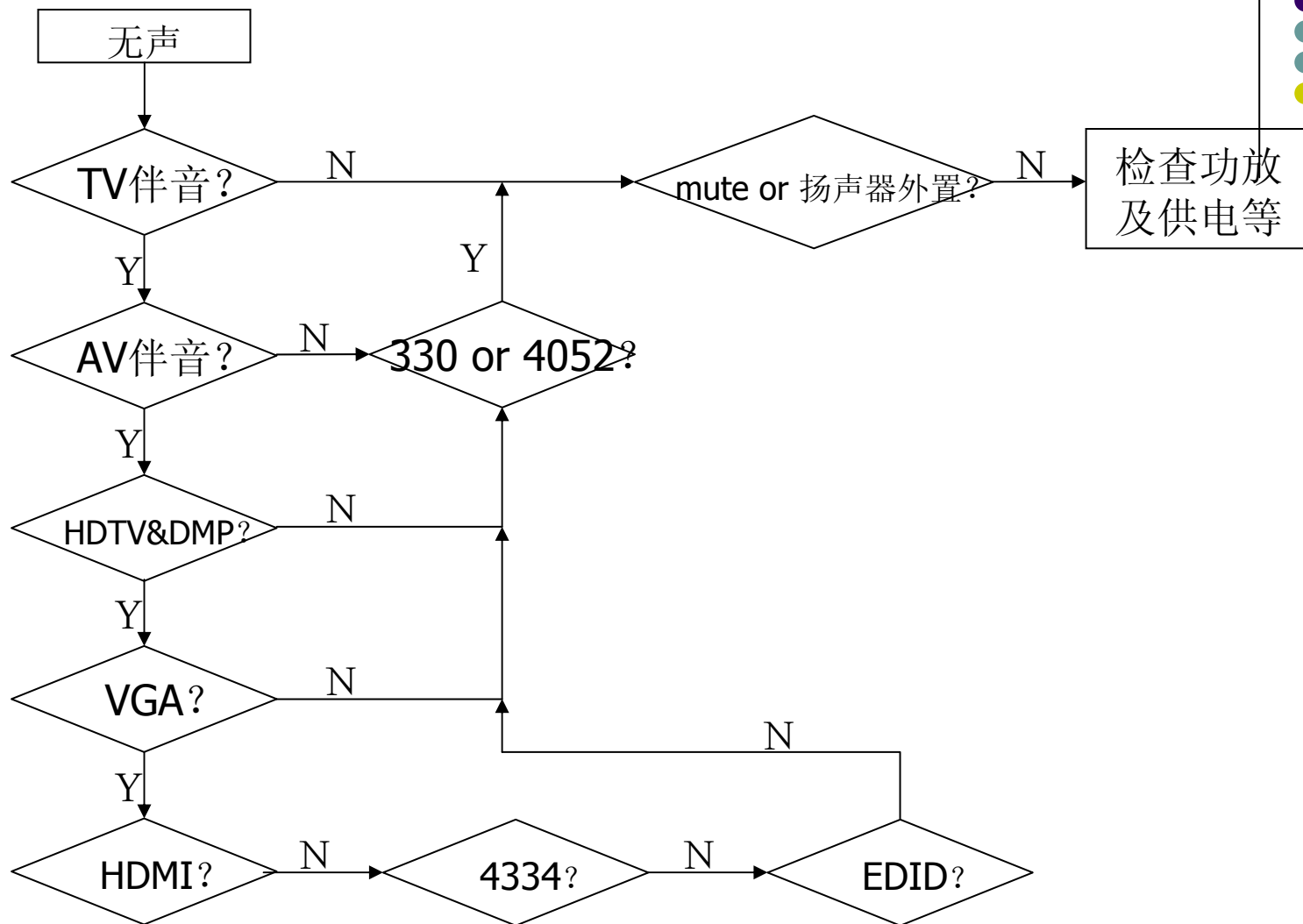
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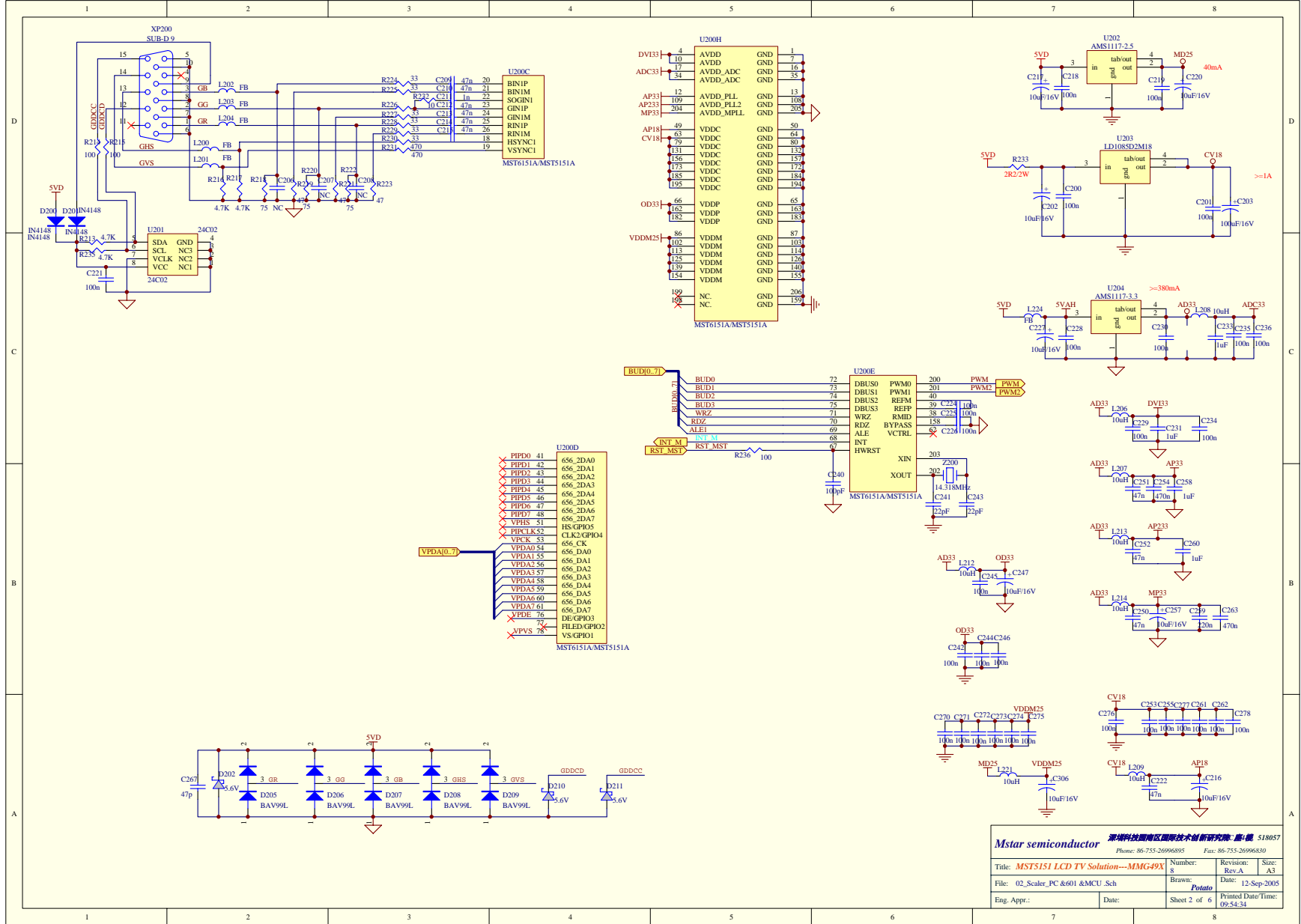


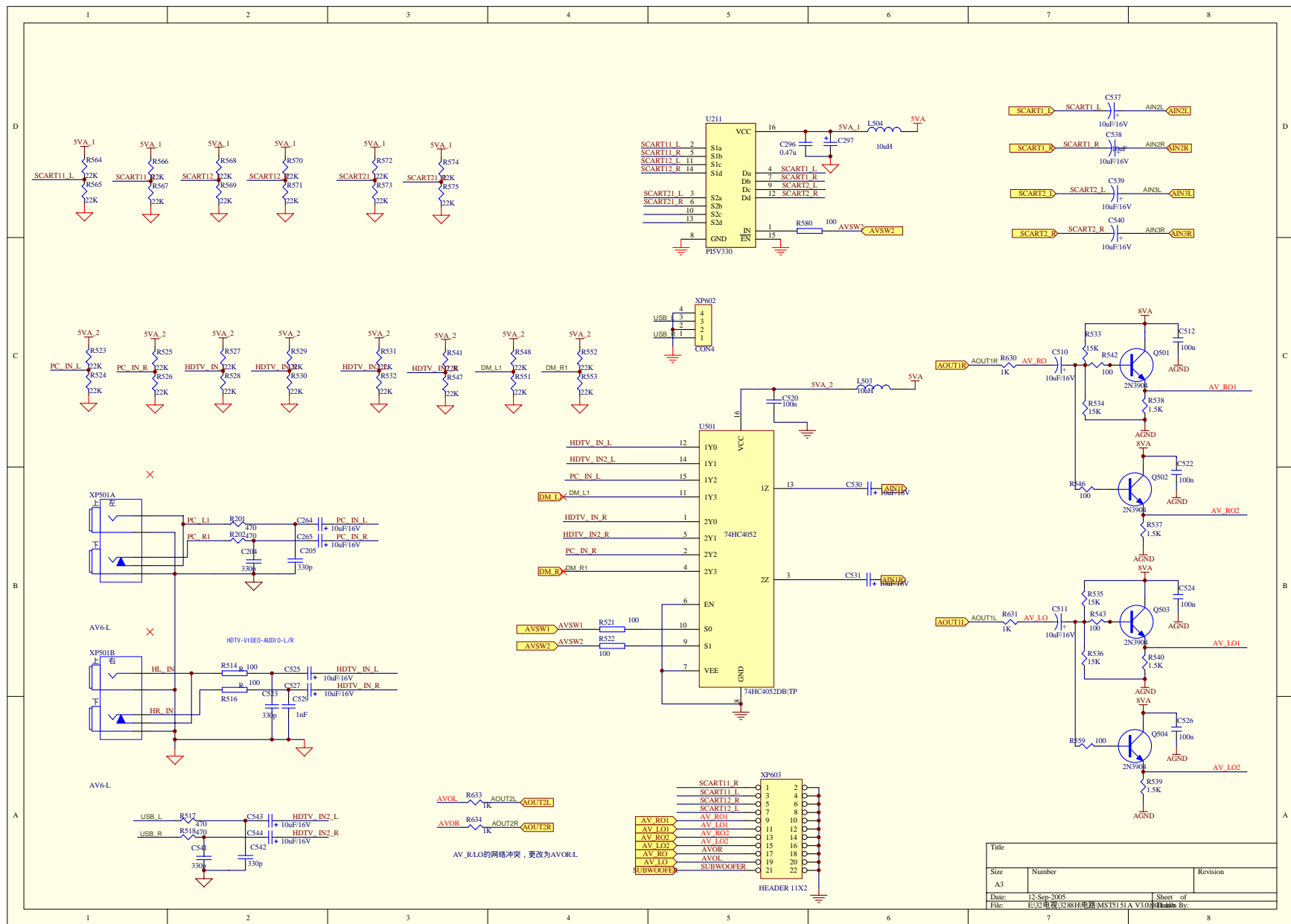
HDMI&HDCP

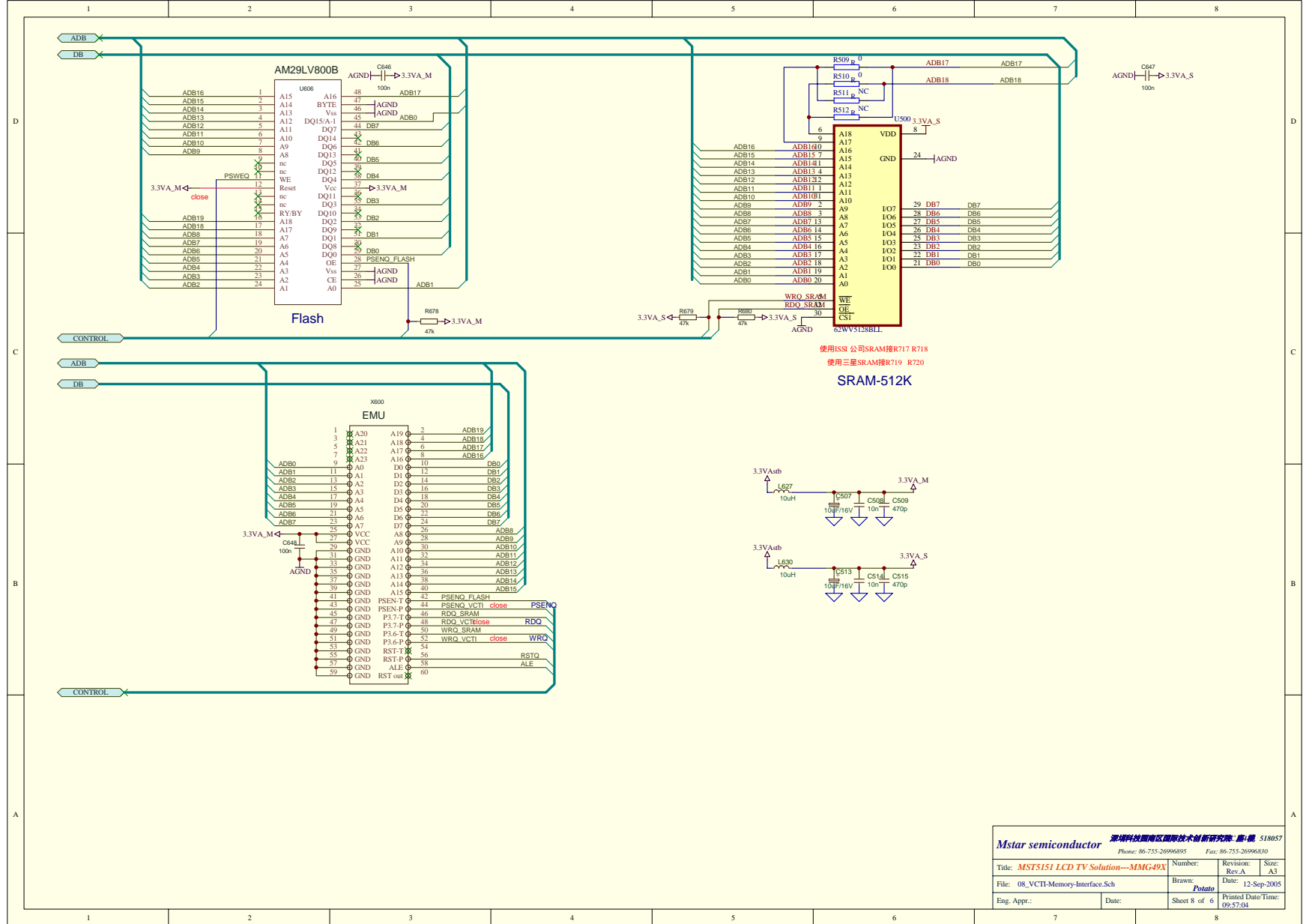
- **HDMI**接口支持压缩和非压缩的视频和音频信号，音频包在每视频行的空白处传送。
- 终端设备必须要有**E-EDID**数据结构，且可以通过显示数据通道**E-DDC**读取。

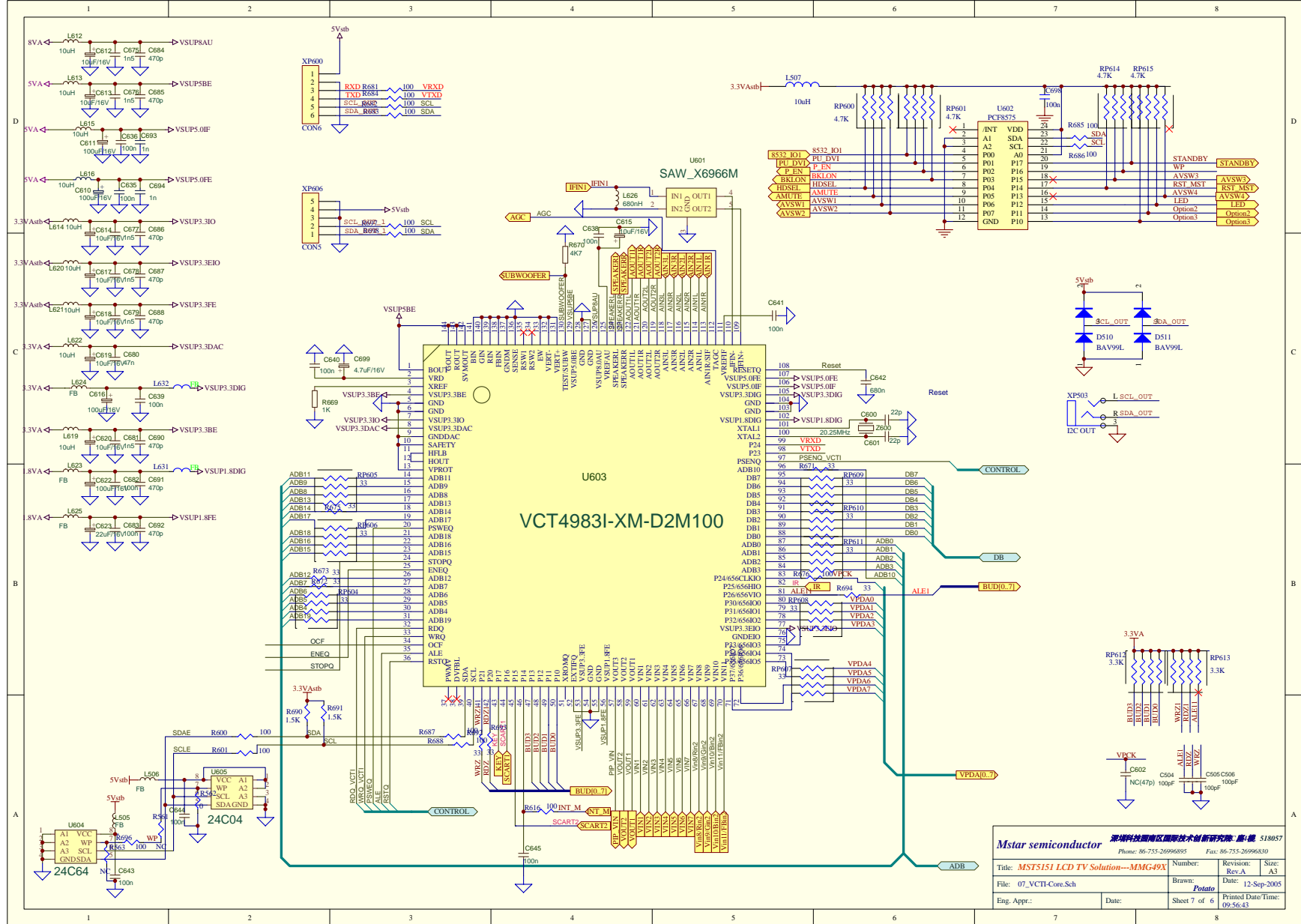


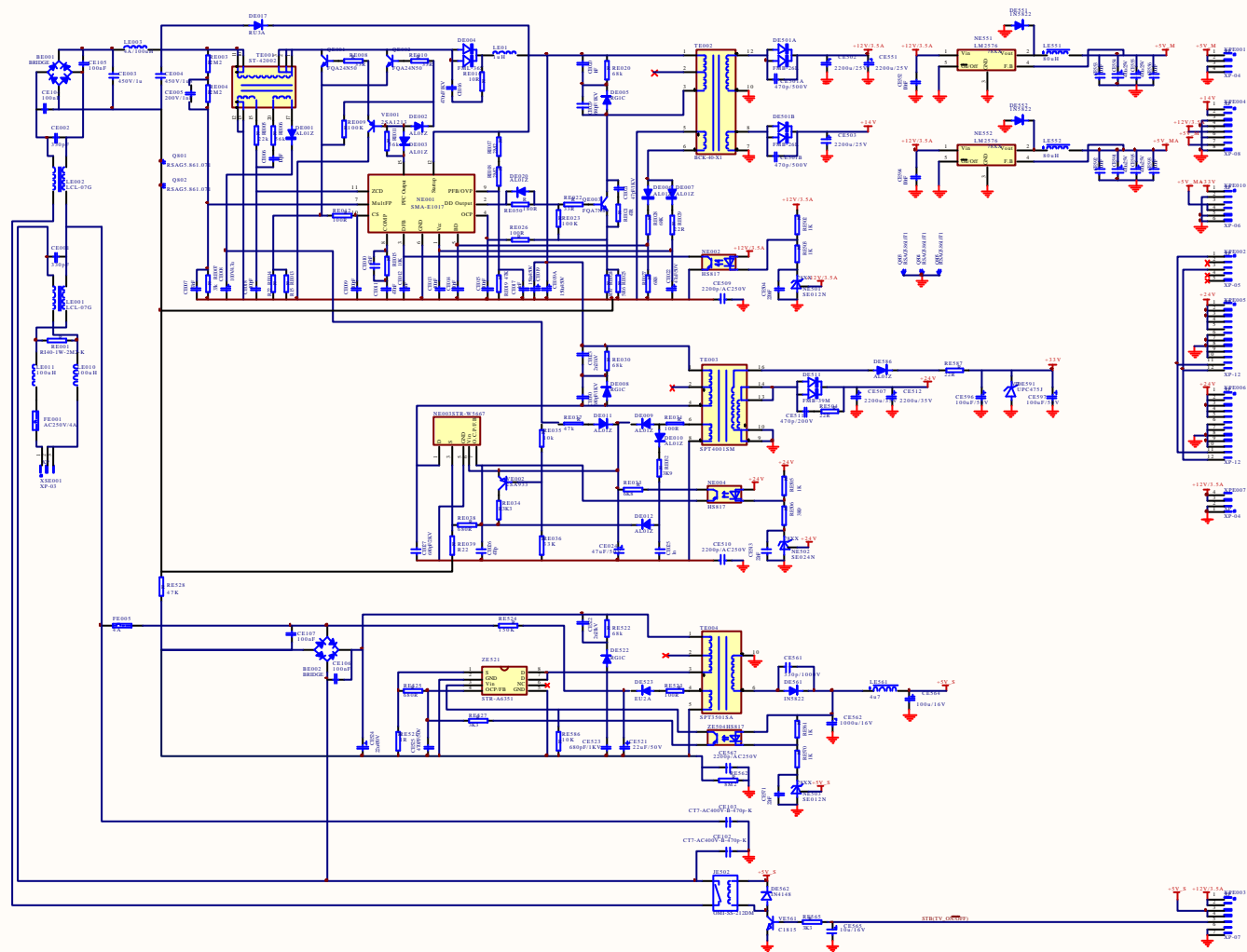












旧版图号

版图号

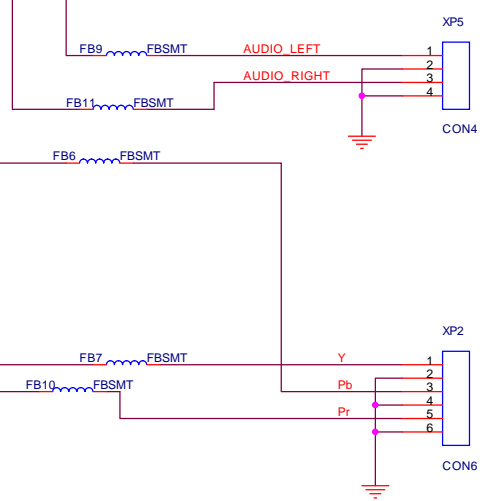
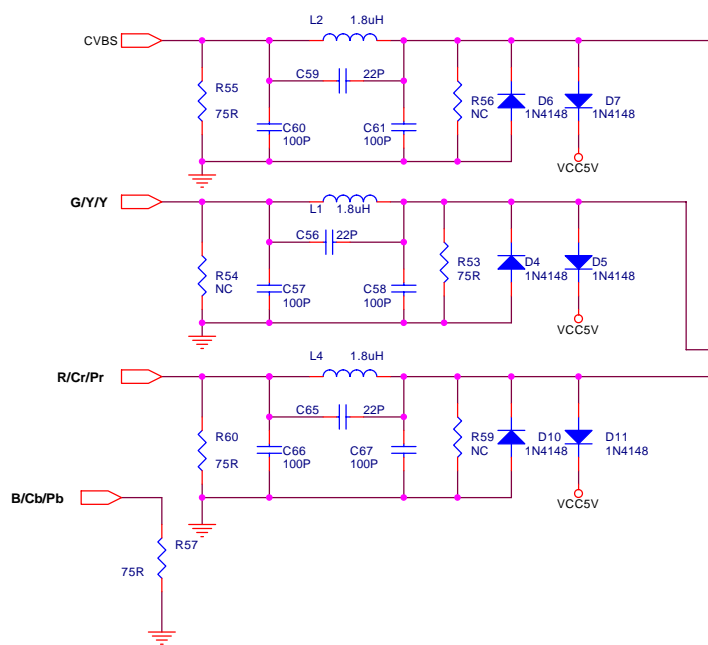
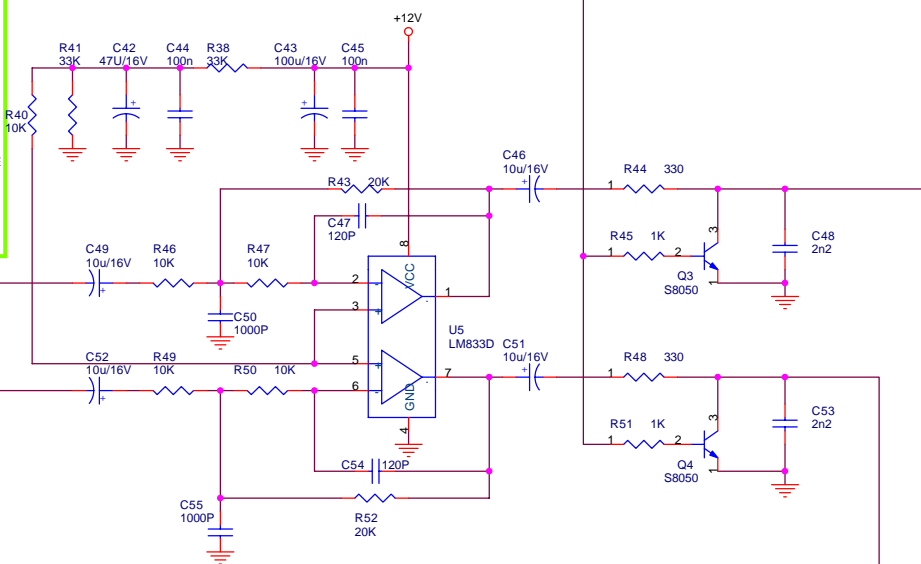
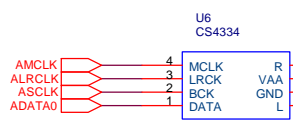
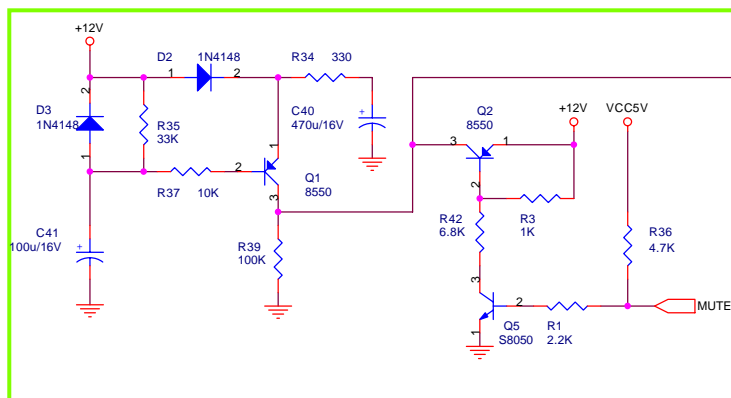
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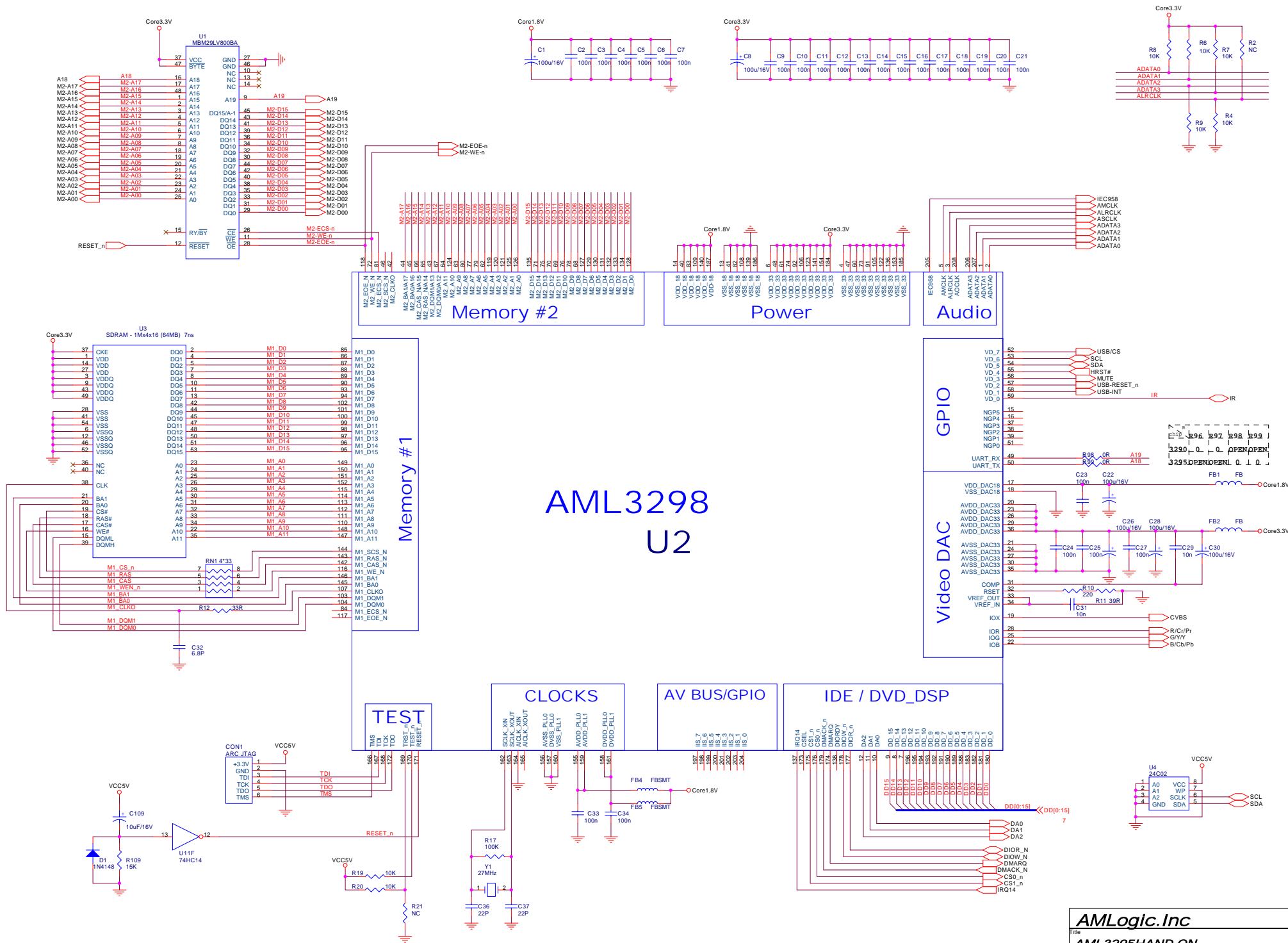
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Rev:V2.0

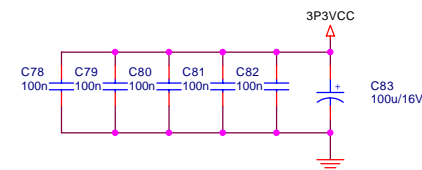
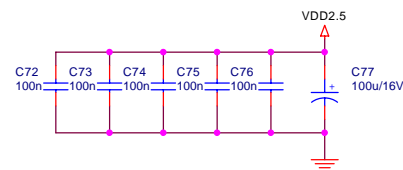
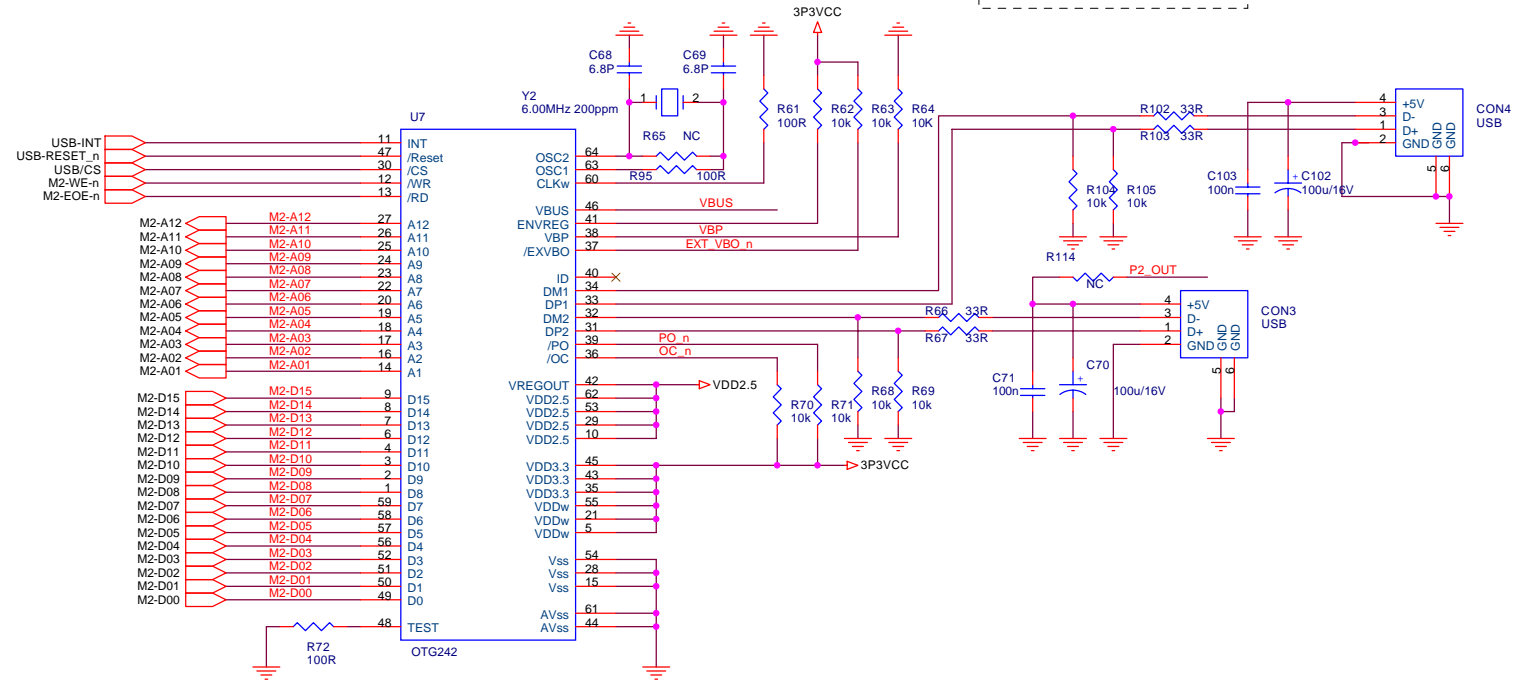
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install for otg

install for host



AMLogic, Inc

AML3295HAND-ON

USB

Date: Thursday, December 09, 2004

Sheet 5 of 6

Rev 2.0

