

## Applicable Country & Regions:

All Regions

# Product Service Manual – Level 3

Service Manual for BenQ:

Projector/MX818ST, MX819ST, MW820ST

<9H.J9A77.15x, 9H.J7477.15x, 9H.J9277.15x>



Version: 00a

Date:2013/03/26

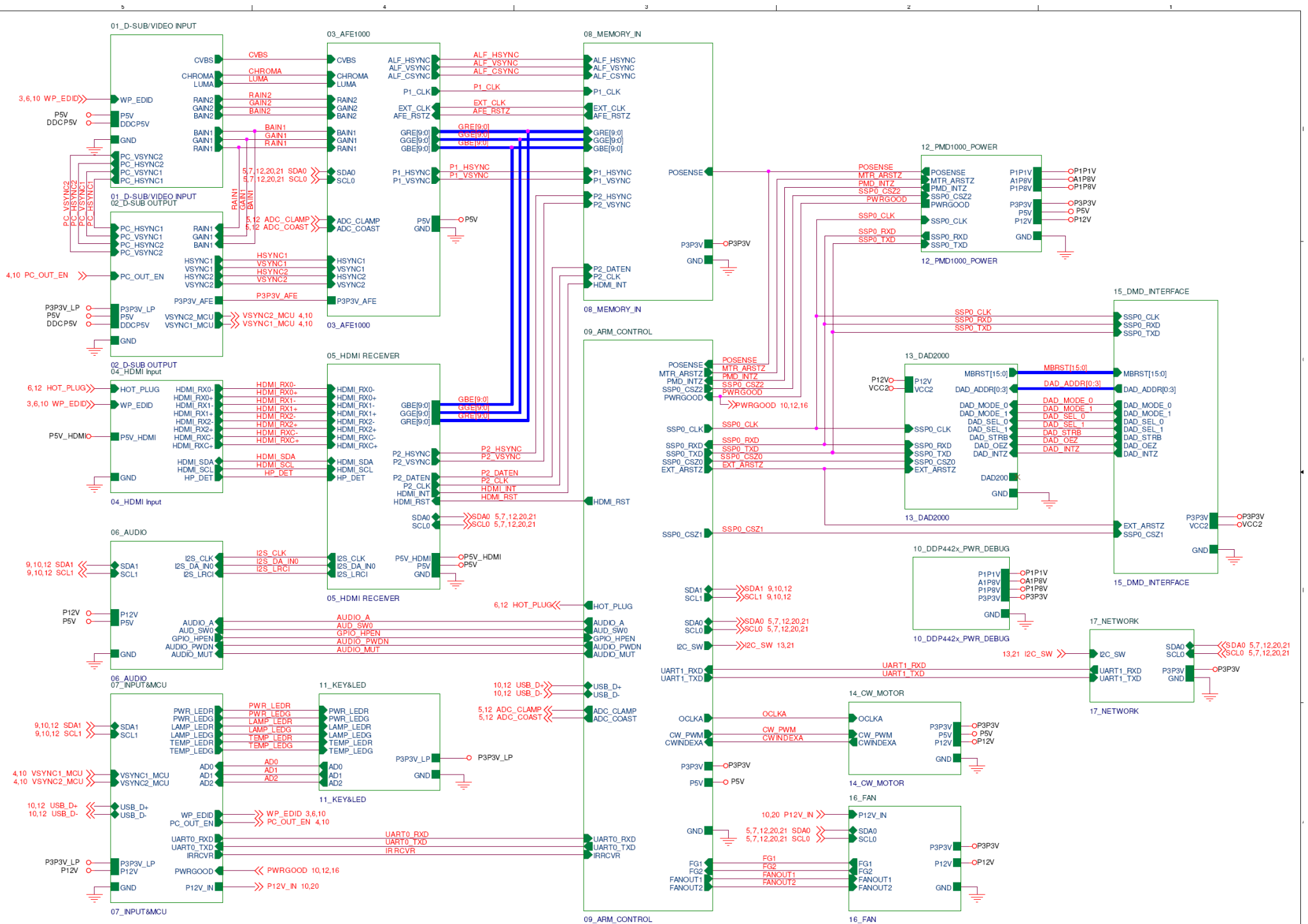
### Notice:

For RO to input specific “Legal Requirement” in specific NS regarding to responsibility and liability statements. **Please check BenQ’s eSupport web site, <http://esupport.benq.com>, to ensure that you have the most recent version of this manual.**

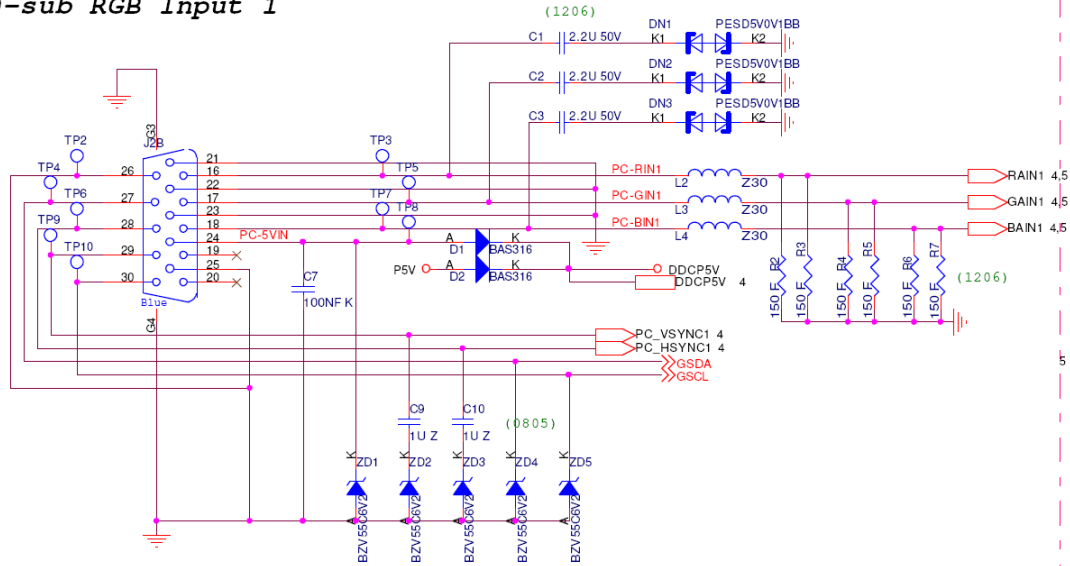
First Edition (March, 2013)

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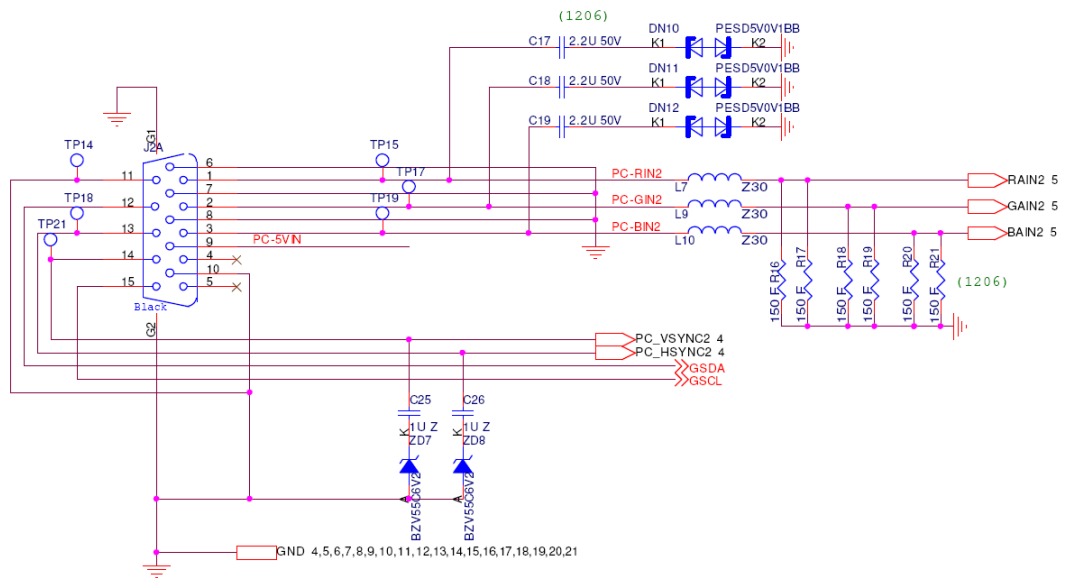
# Schematics—Main board:



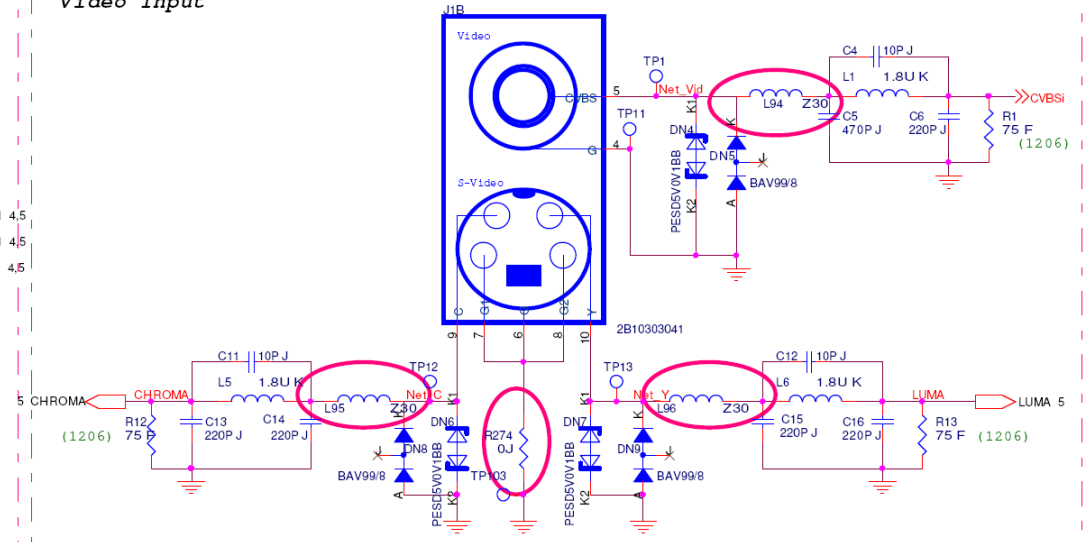
### D-sub RGB Input 1



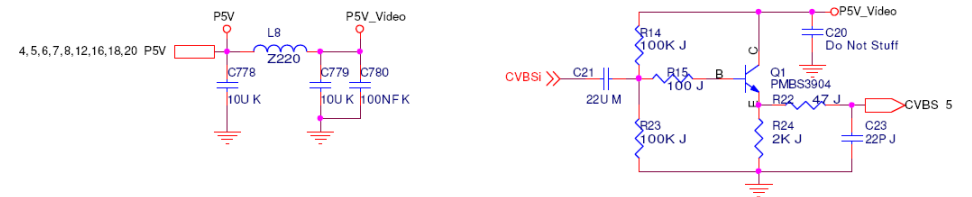
### D-sub RGB Input 2



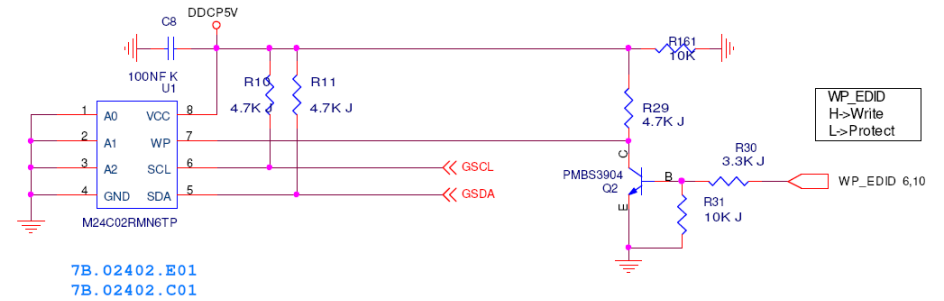
### Video Input



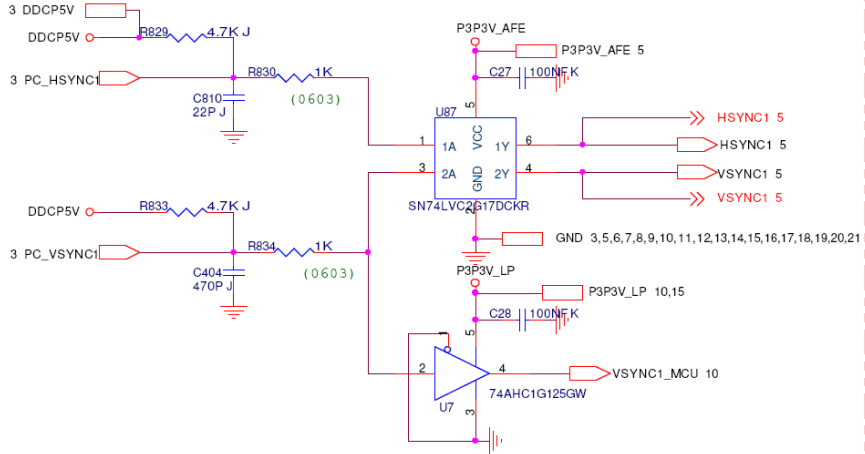
### Video Signal Driver



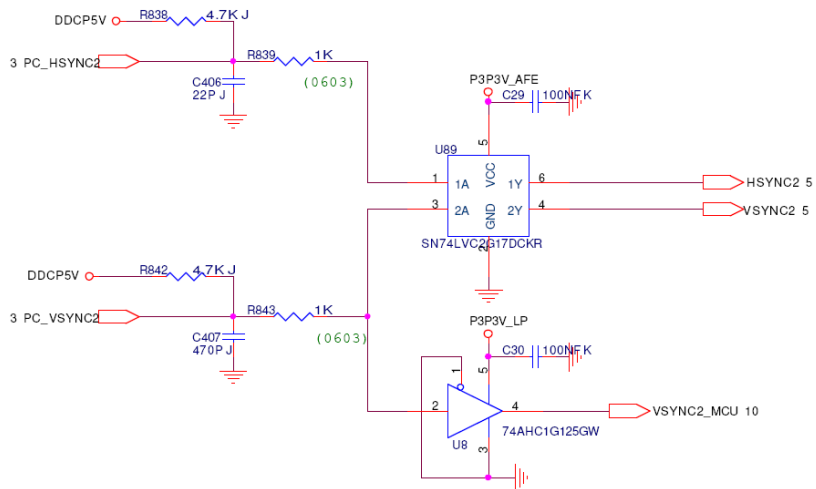
### EEPROM



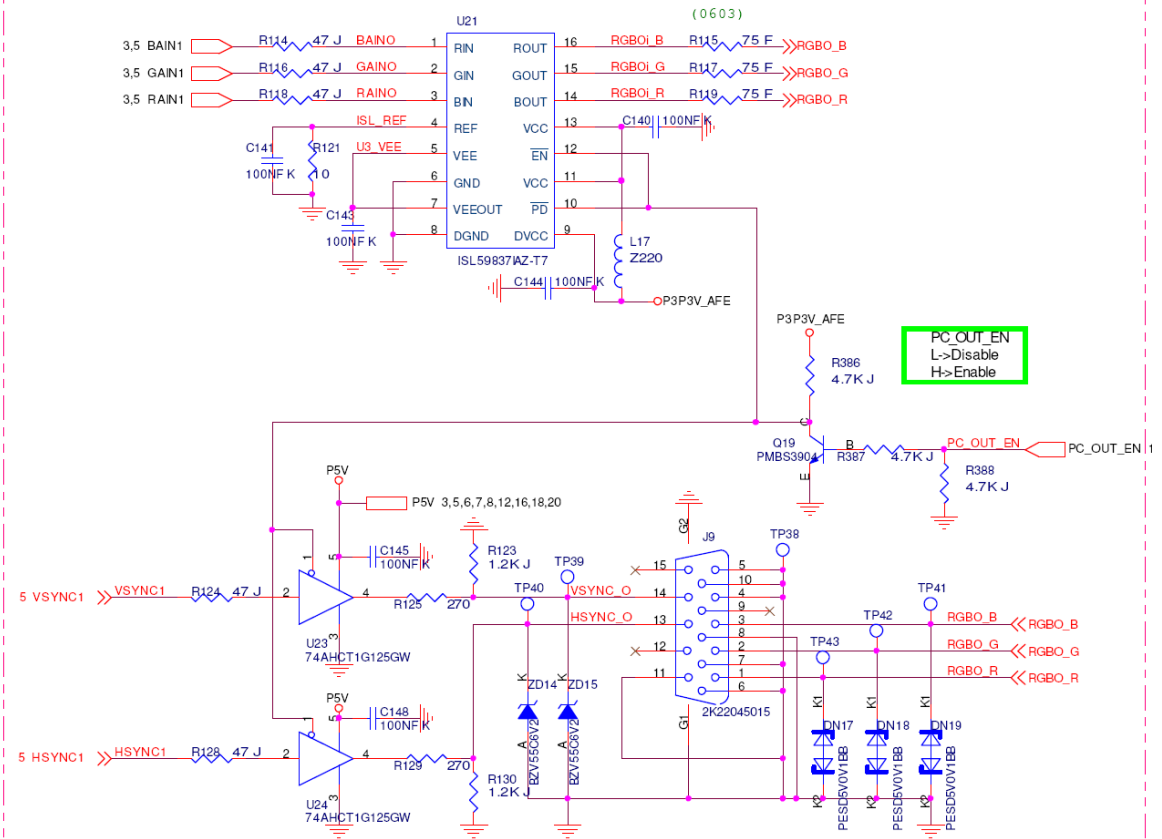
### H1,V1 Buffer



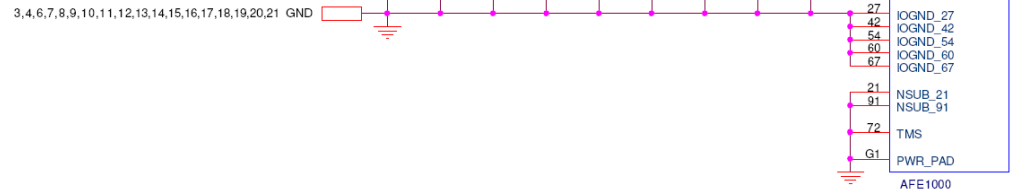
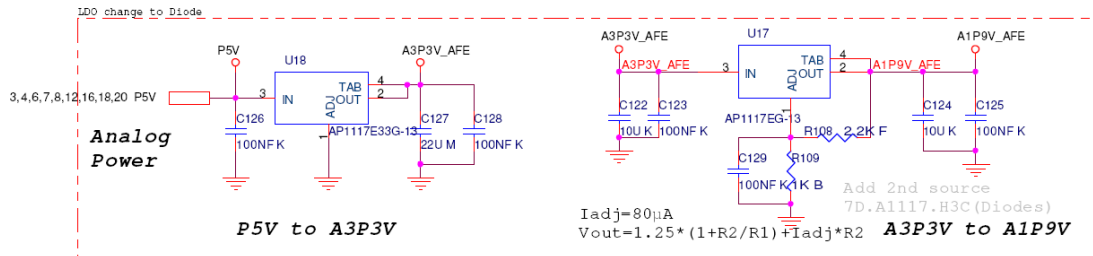
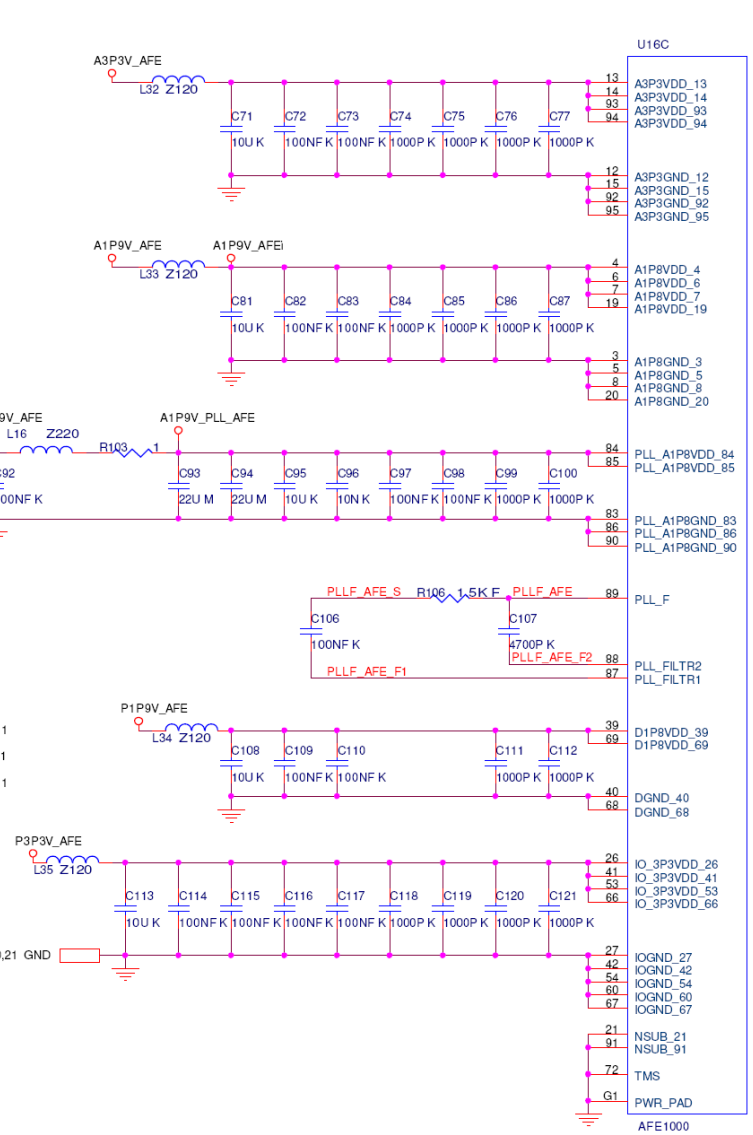
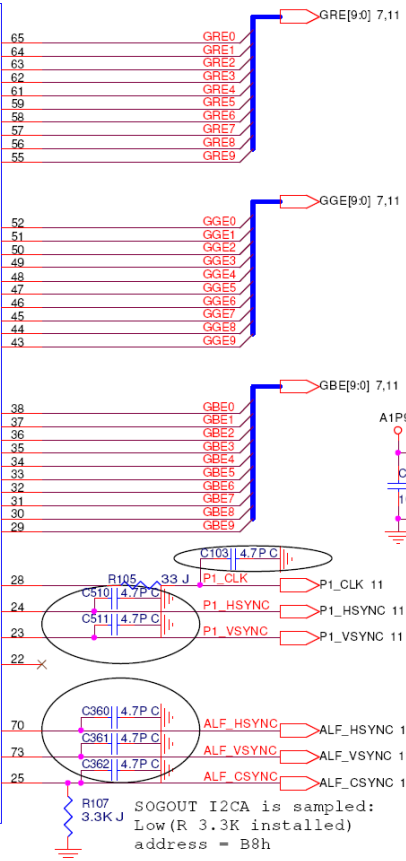
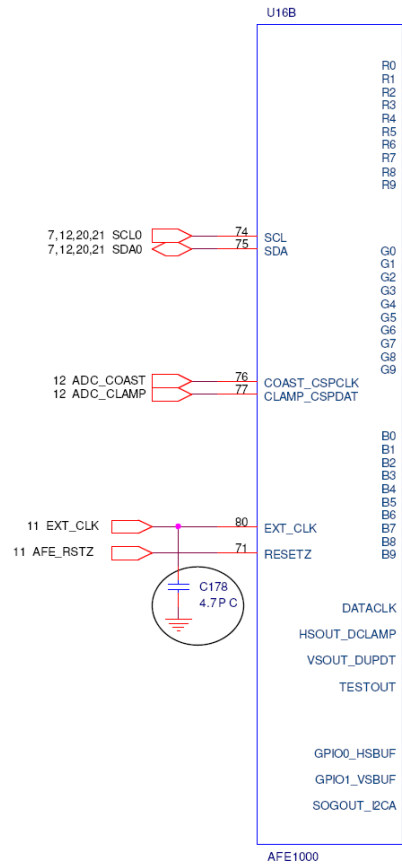
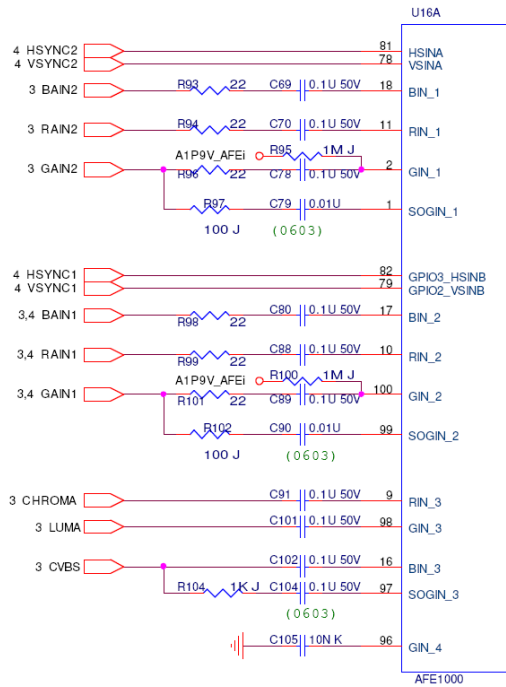
### H2,V2 Buffer



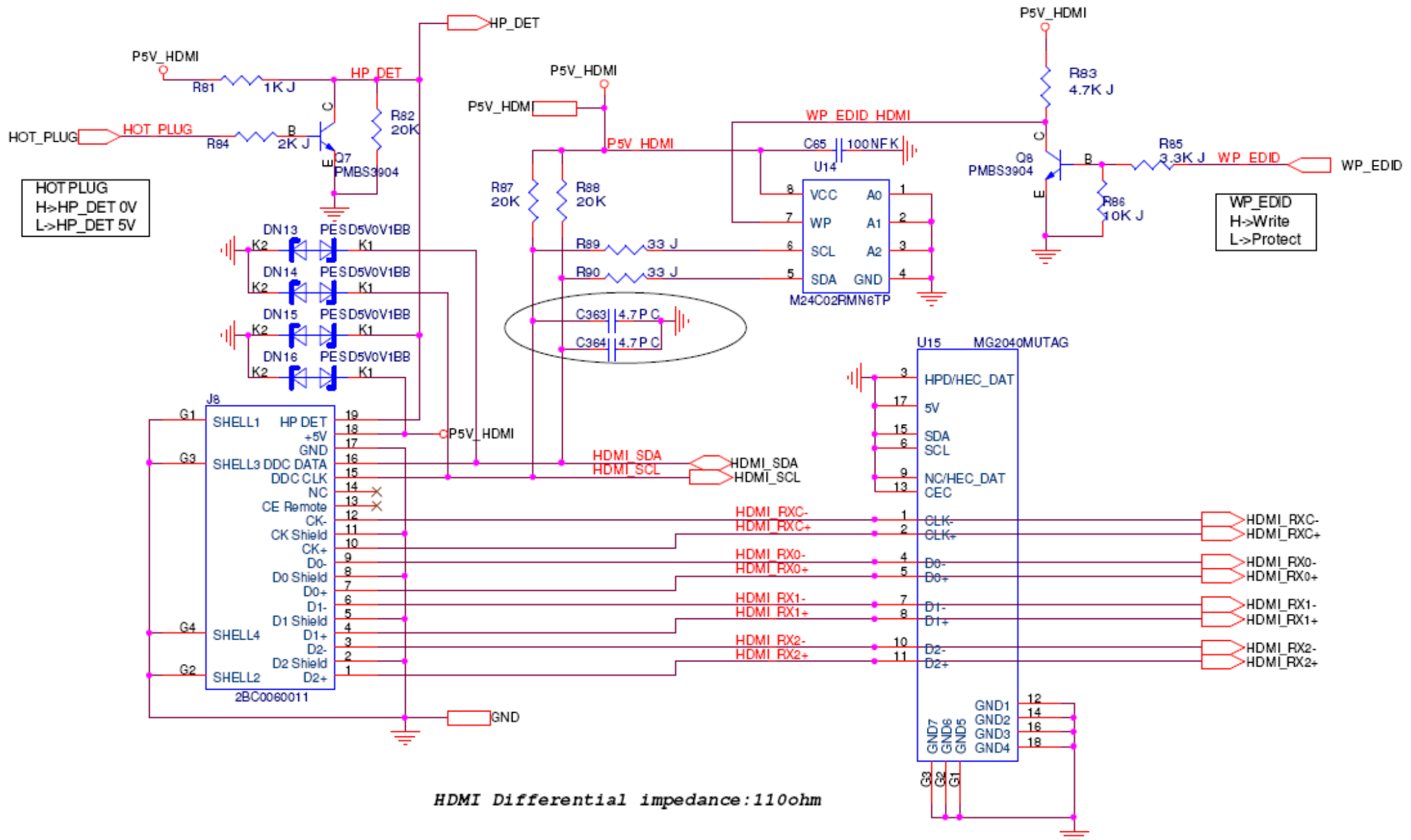
### D-sub RGB Output

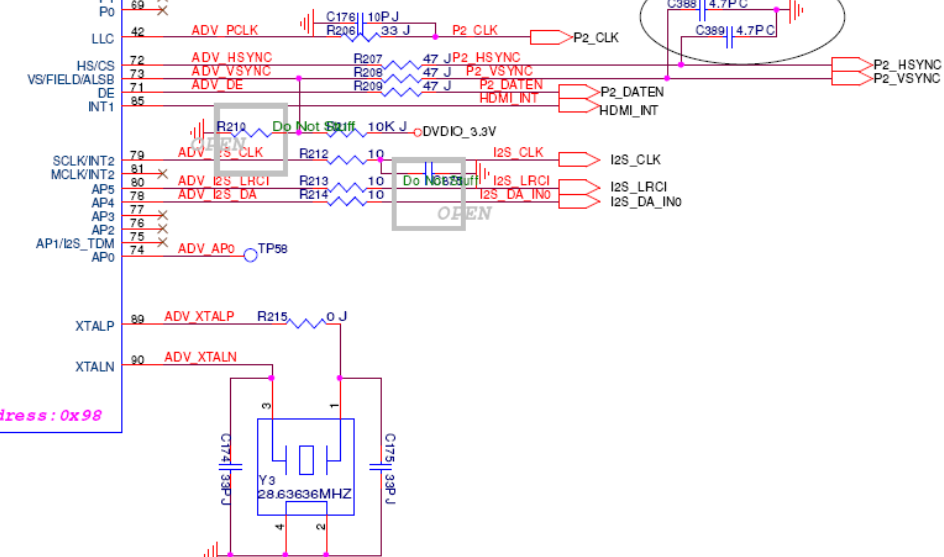
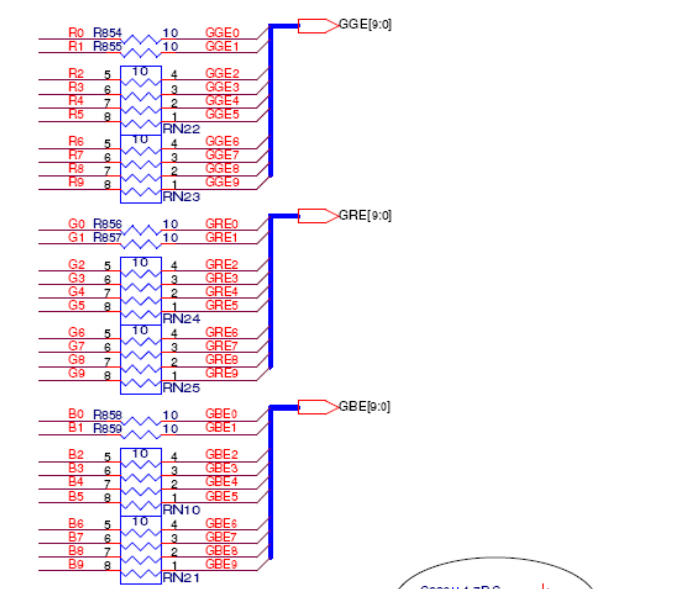
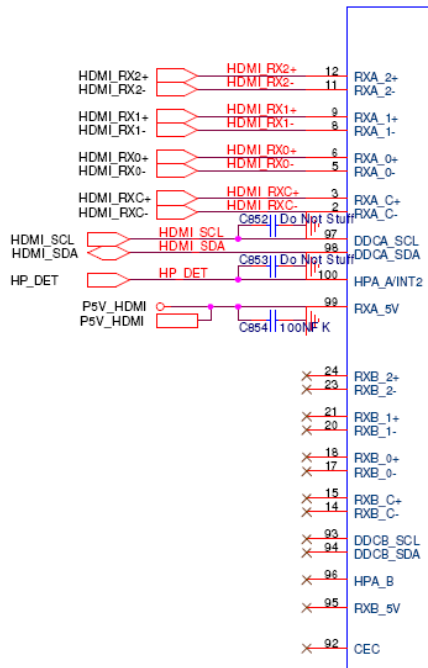
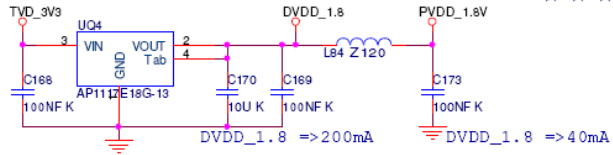
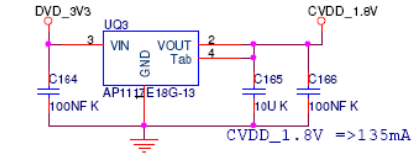
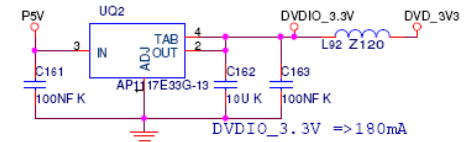
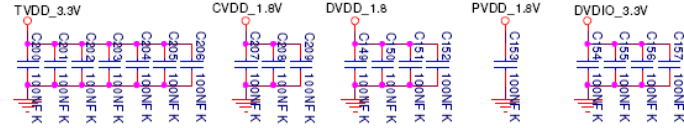
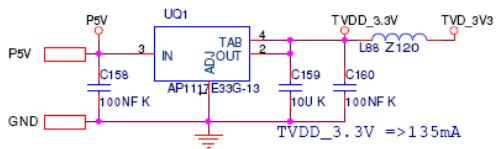


PC\_OUT\_EN  
L->Disable  
H->Enable



# HDMI INTERFACE

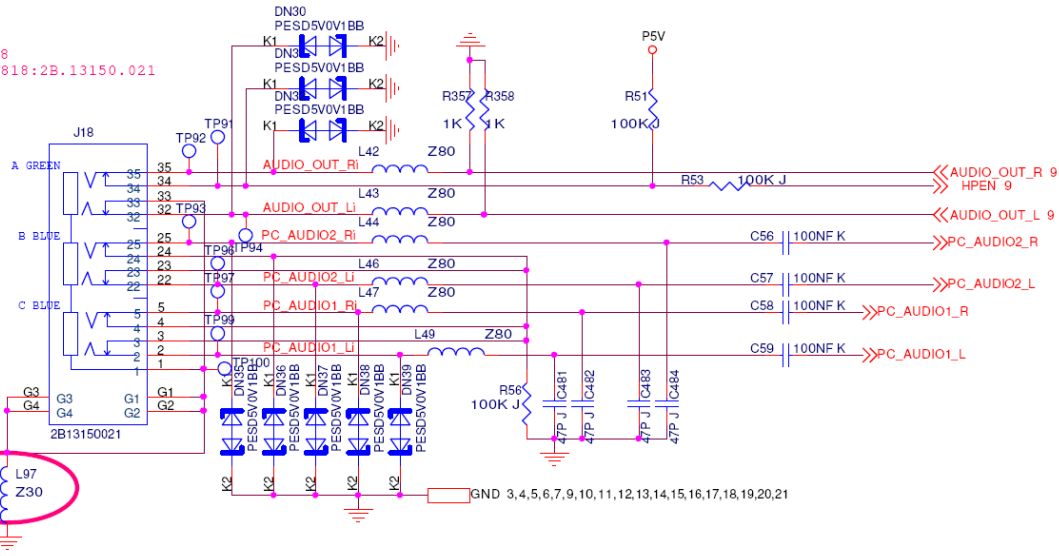




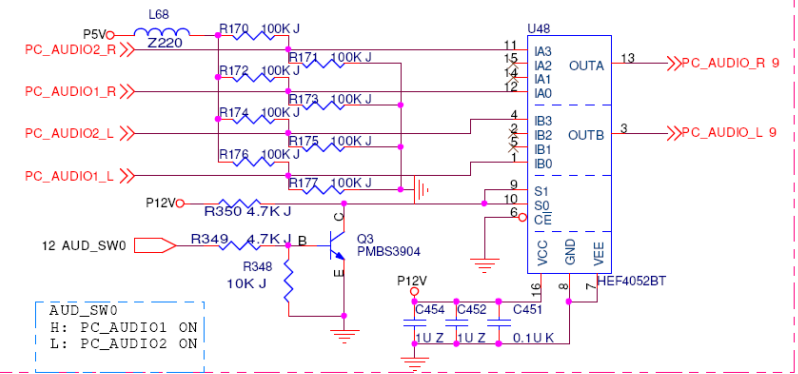
Address: 0x98

### PC AUDIO IN/OUT

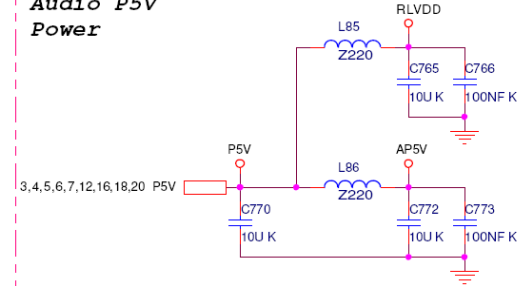
J18  
MX818:2B.13150.021



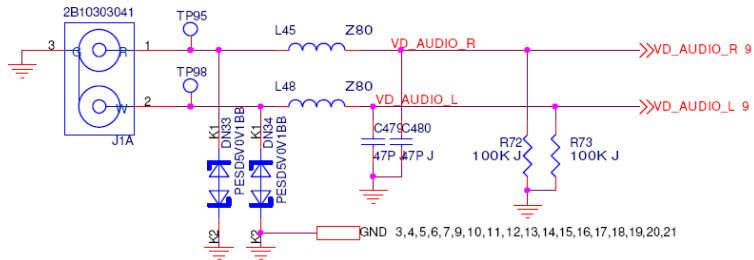
### PC SWITCH



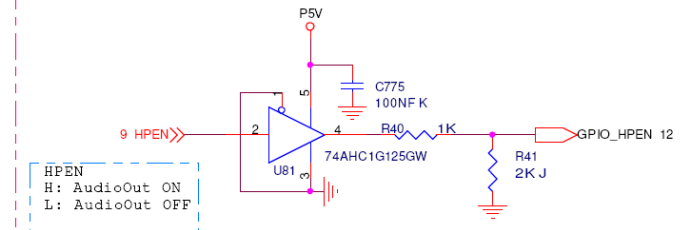
### Audio P5V Power



### Video Audio Input

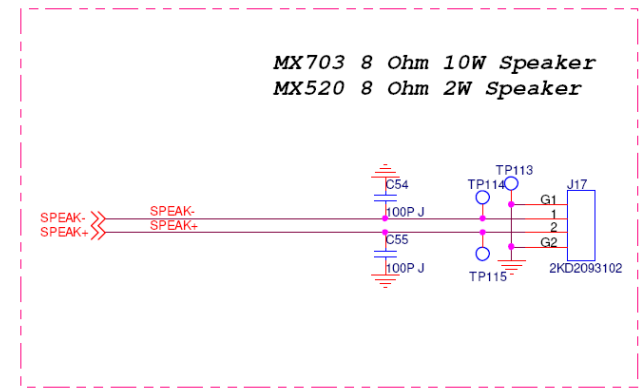
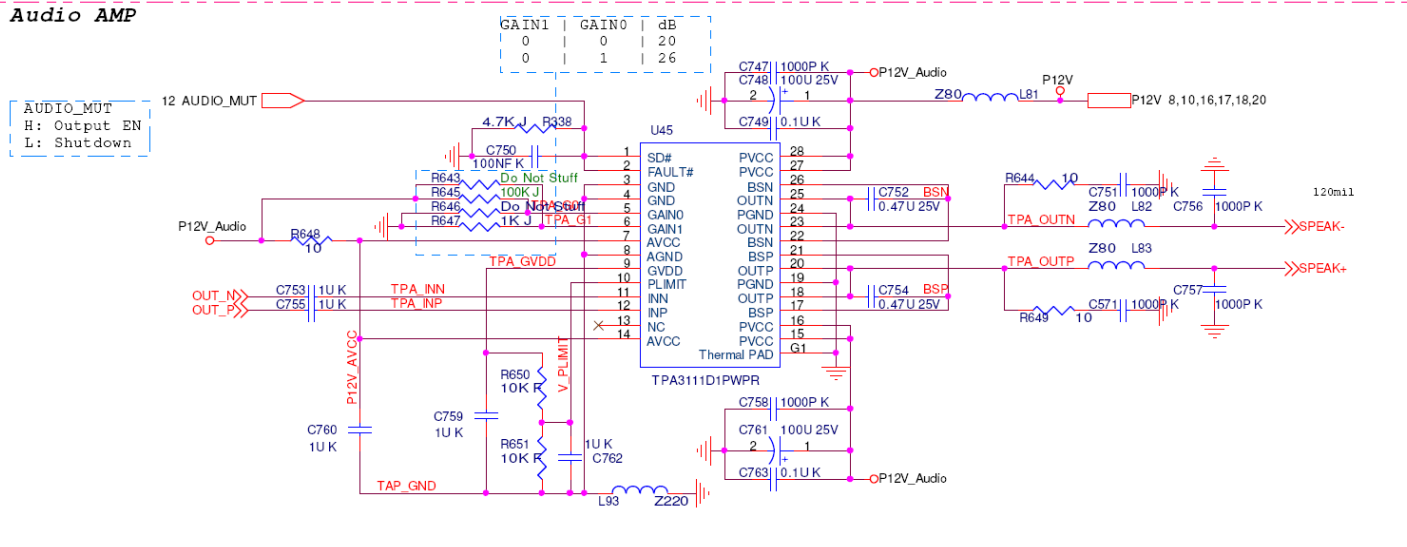


### HPEN Level Shift

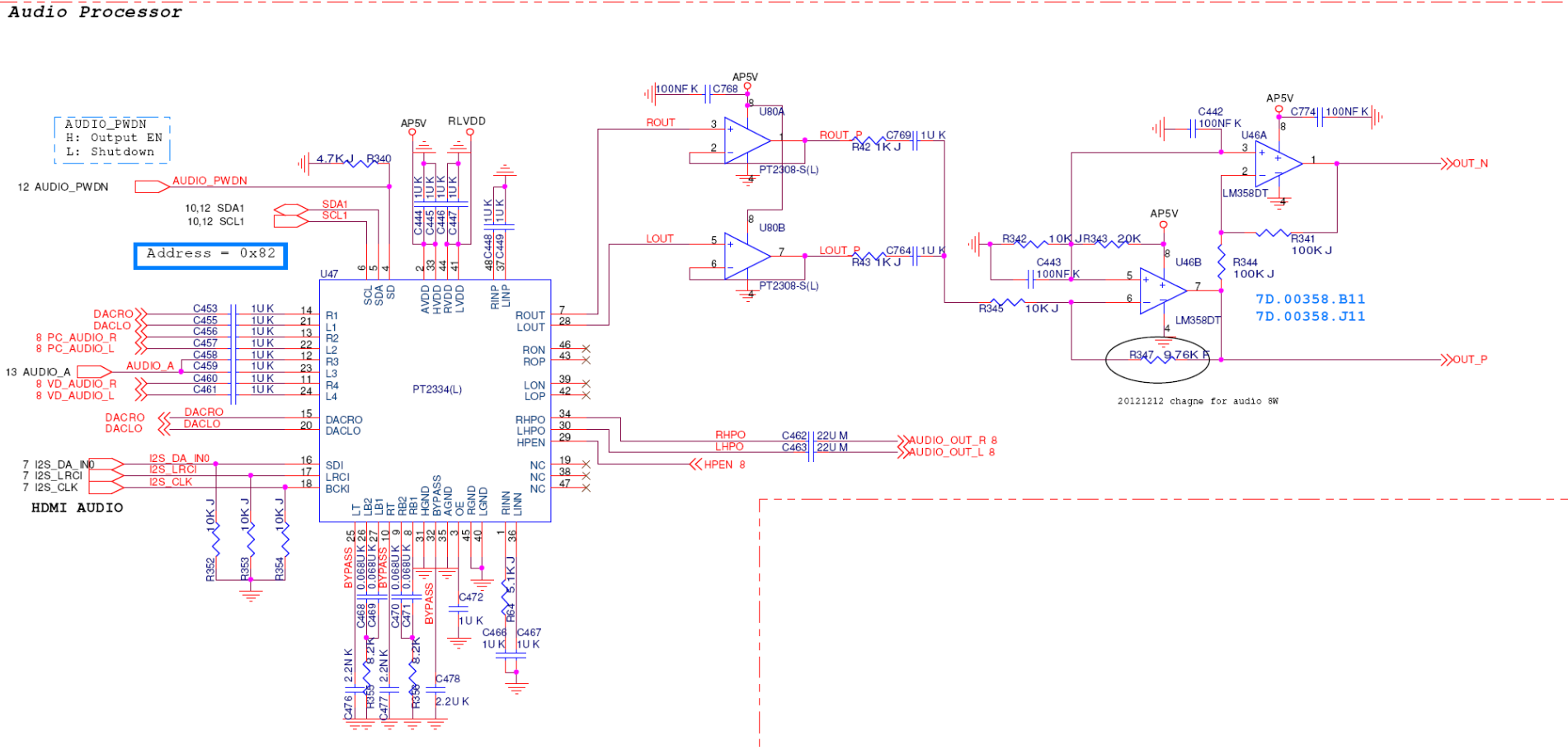


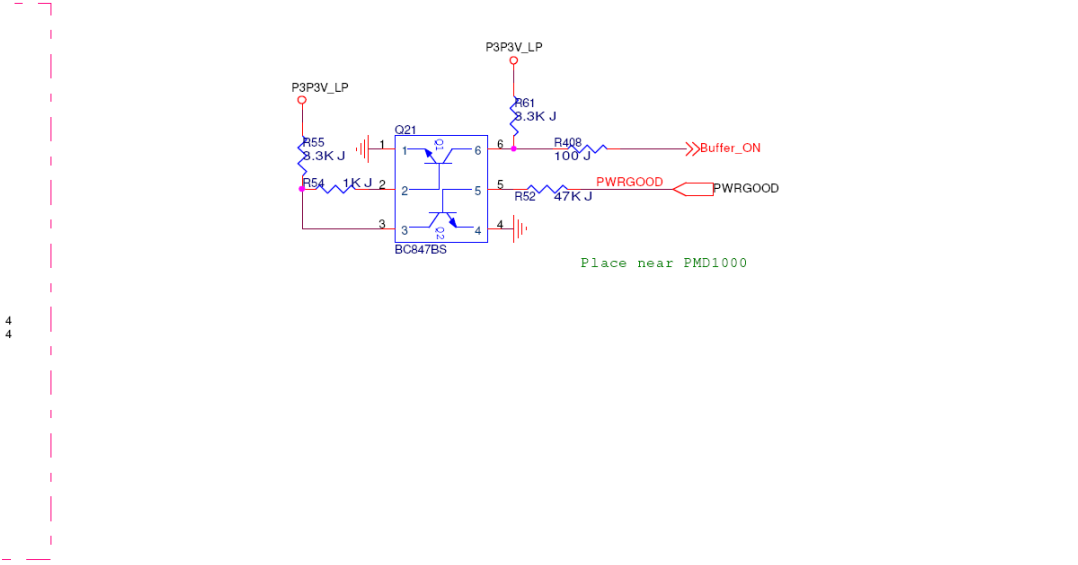
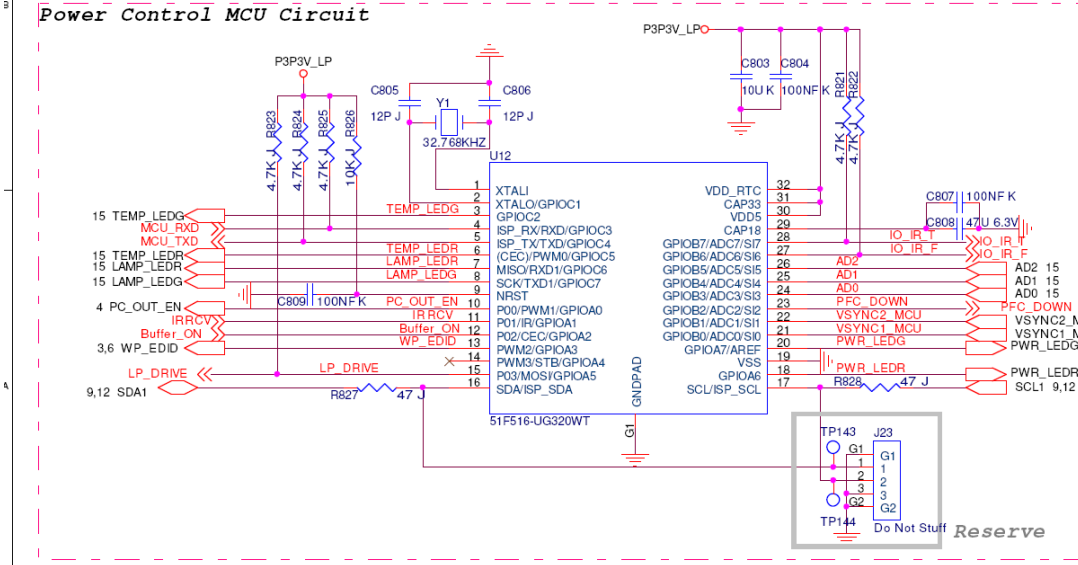
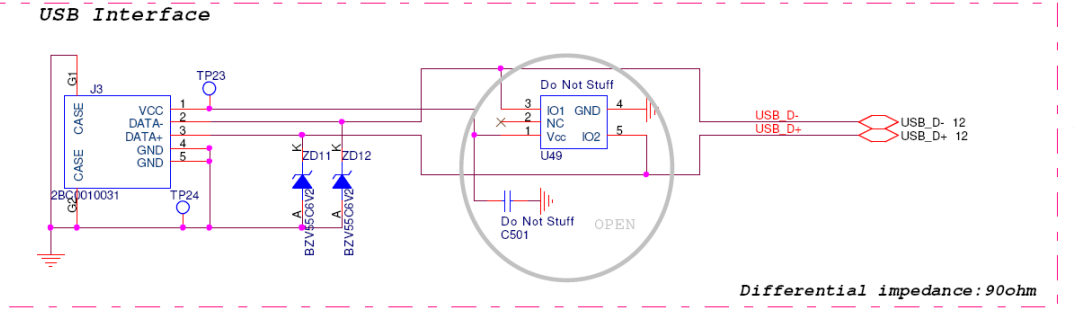
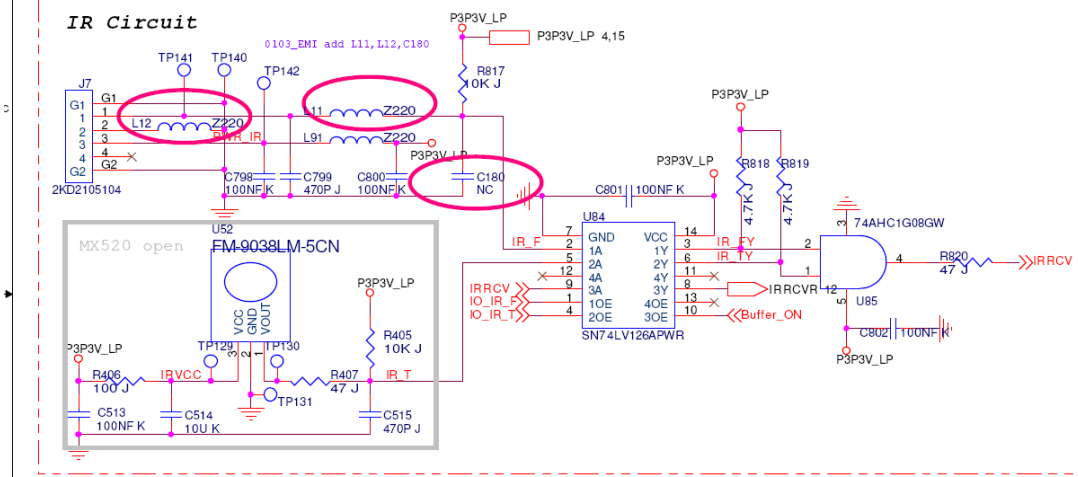
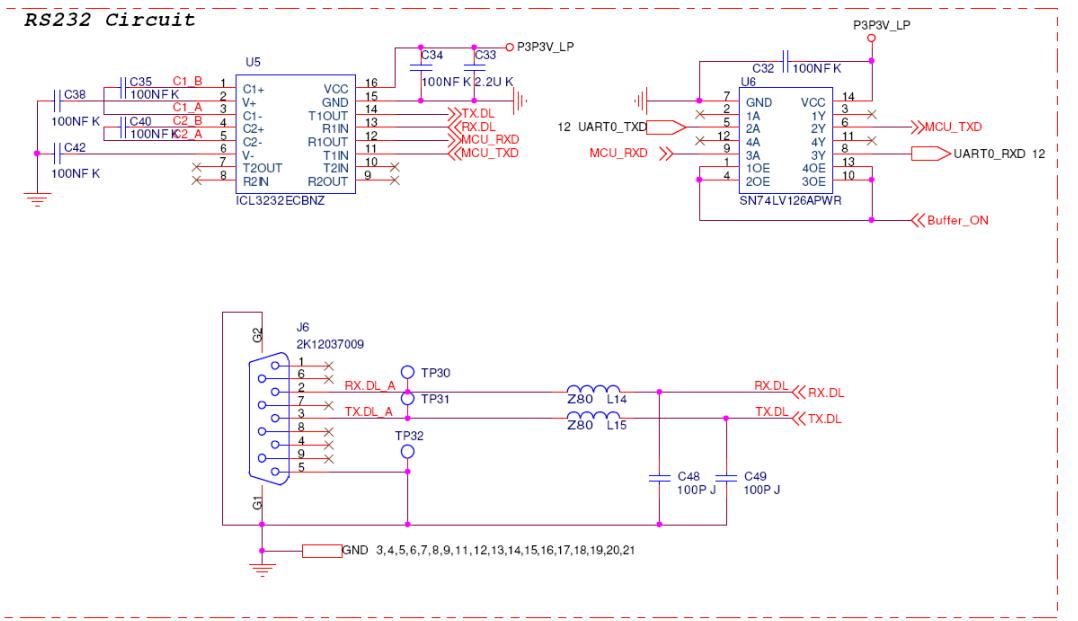
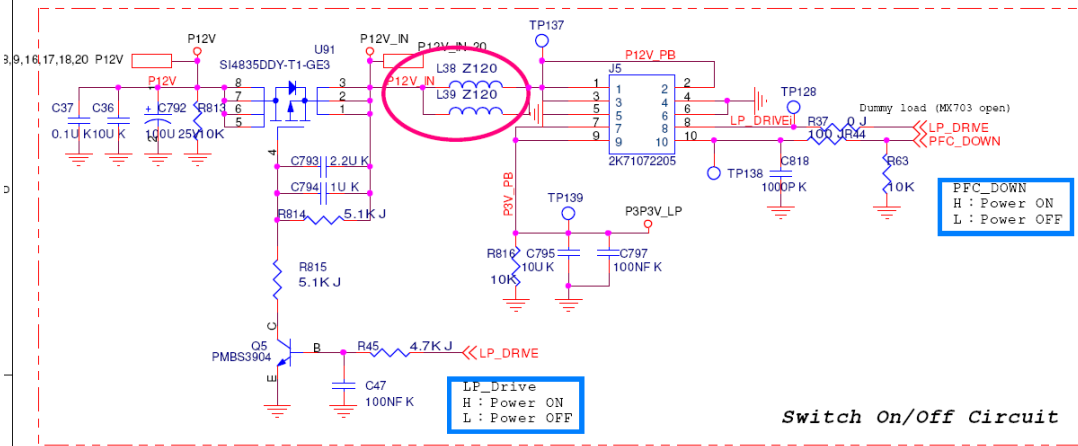


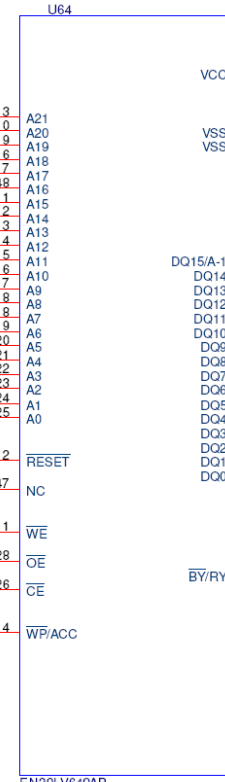
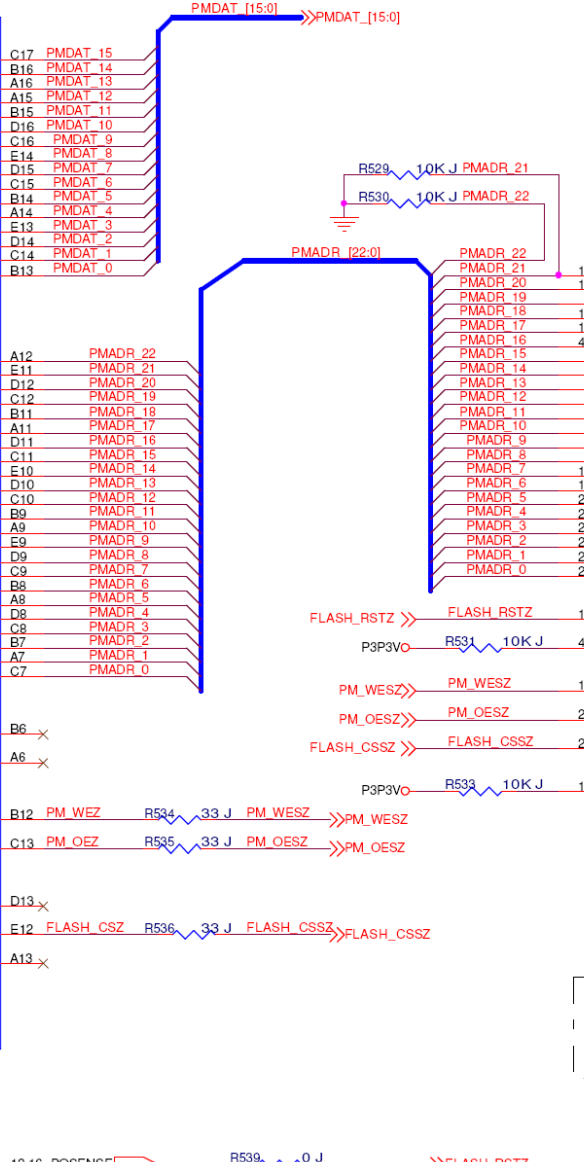
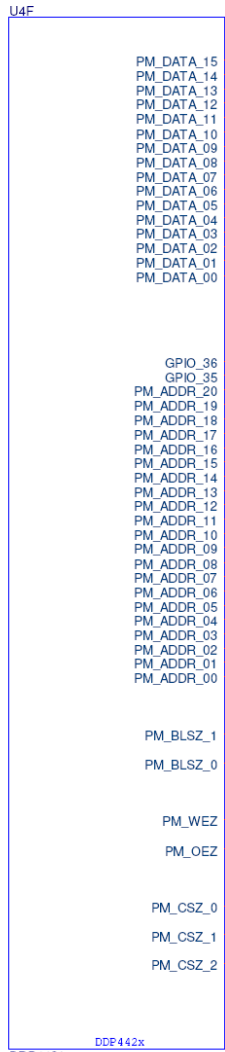
### Audio AMP



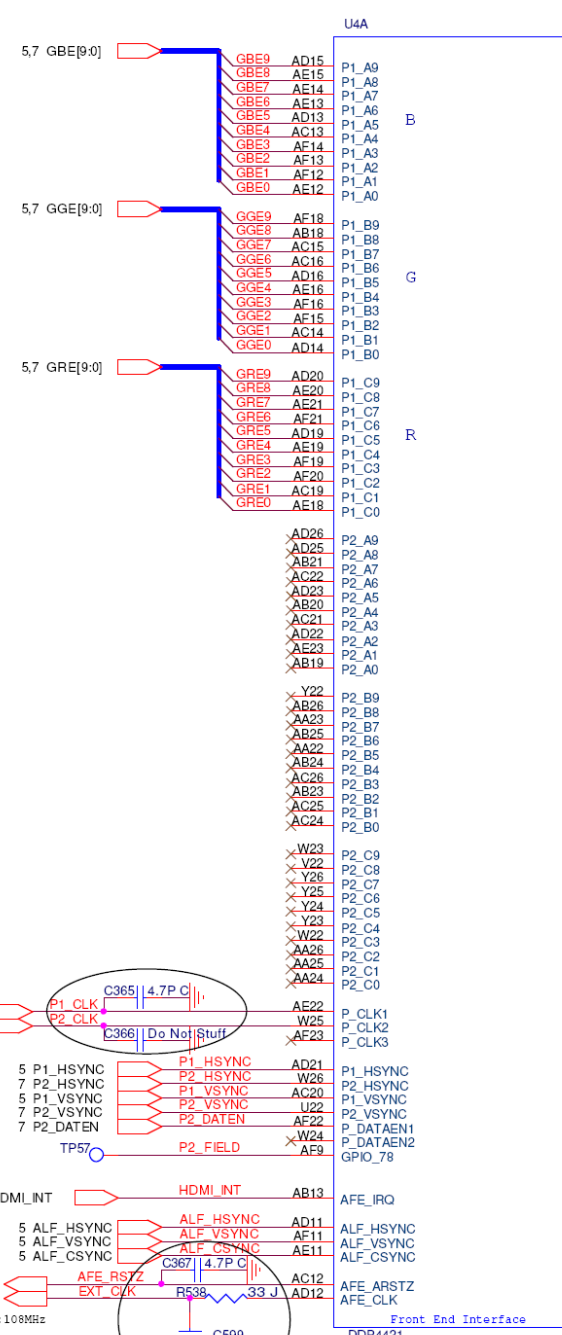
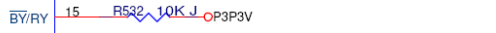
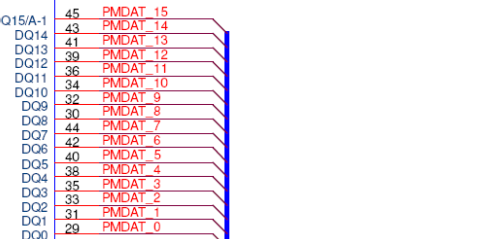
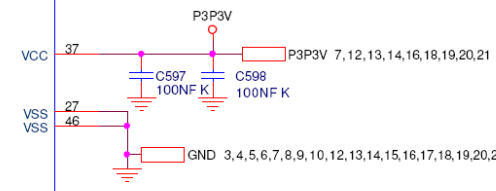
### Audio Processor







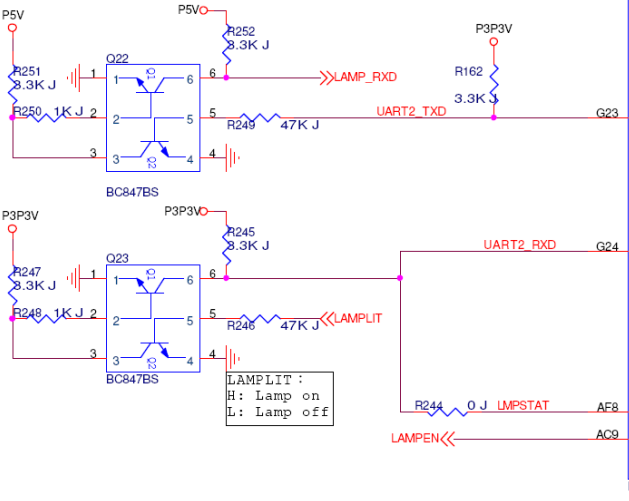
64MB FLASH  
 7B29064B39 for MW8145T  
 7B29640A39 for MARS11-6





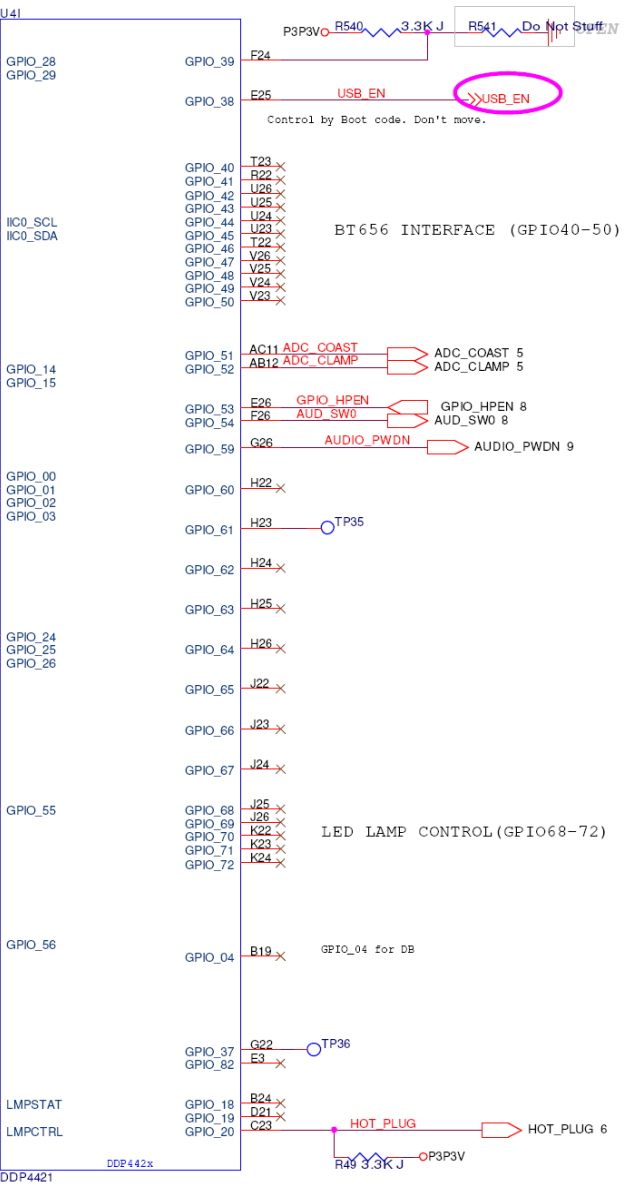
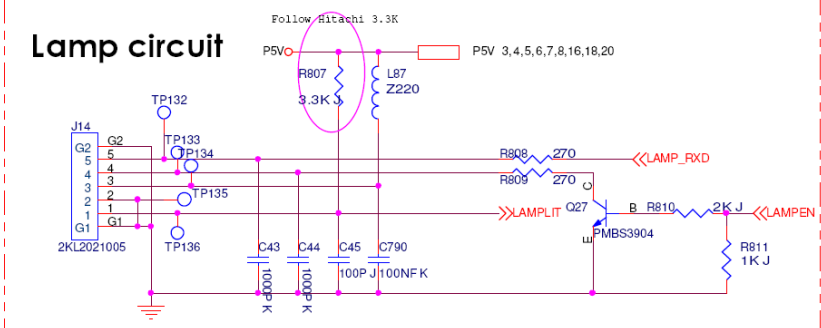
I2C0 to AFE1000, HDMI, EE, Thermal sensor, Network

I2C1 to MCU, AUDIO



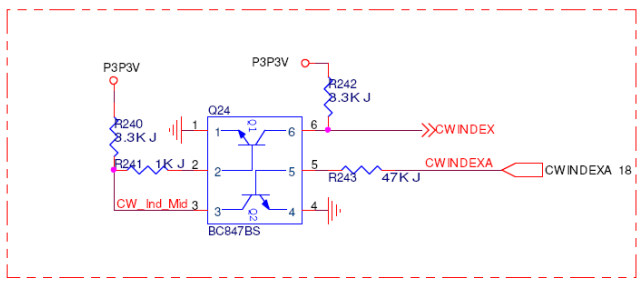
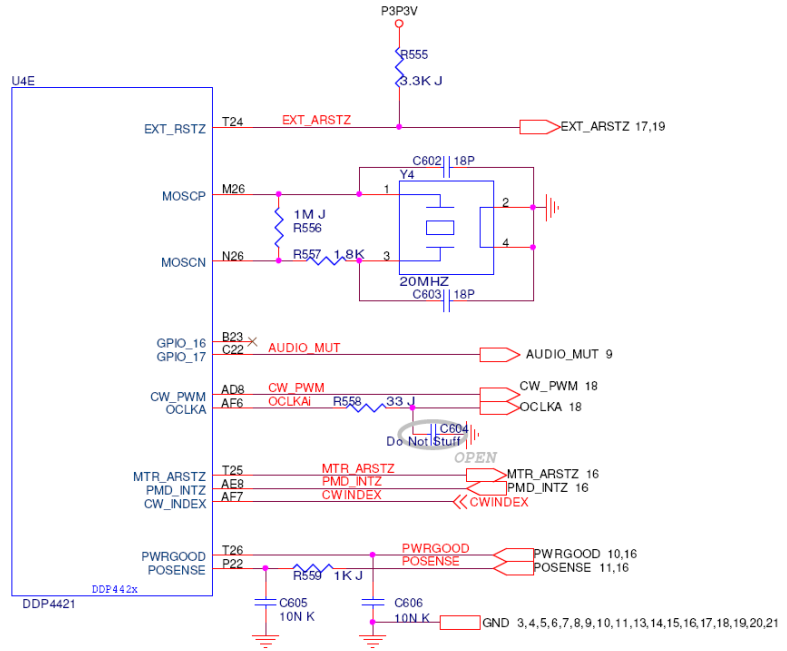
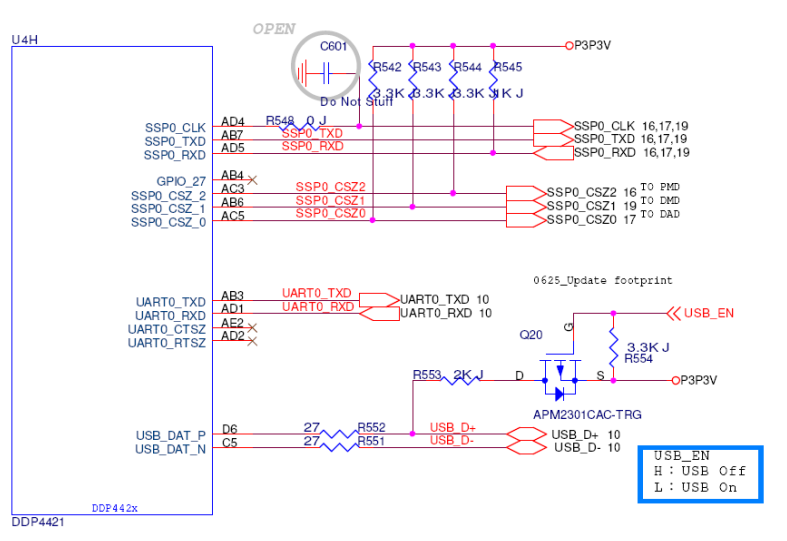
LAMP\_STAT :  
H: Lamp on  
L: Lamp off

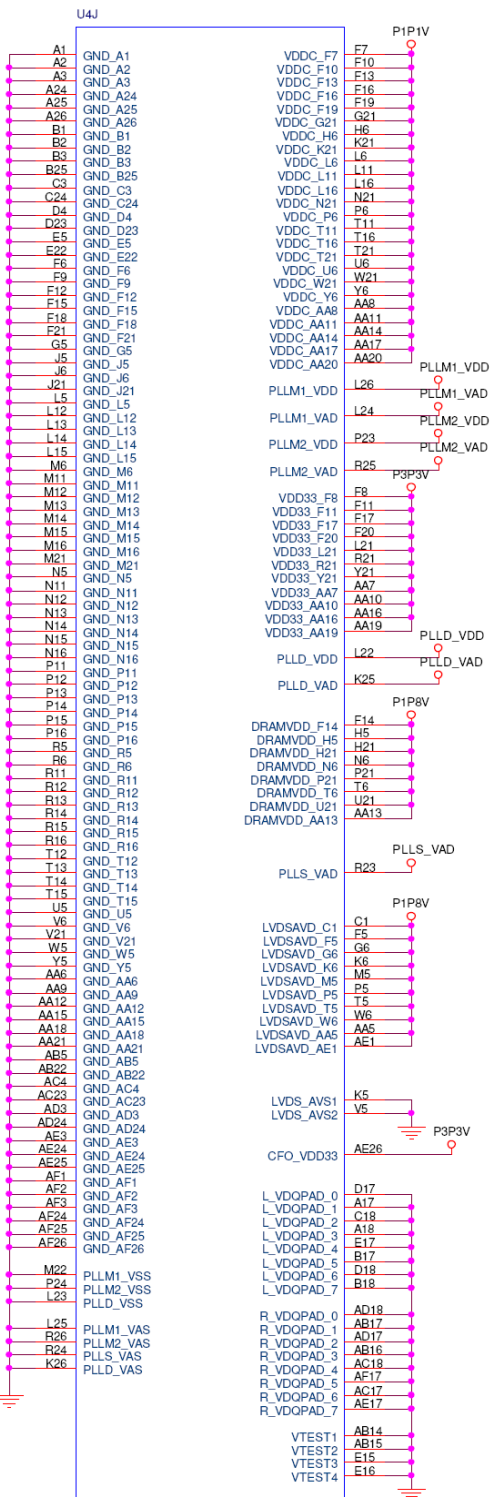
### Lamp circuit



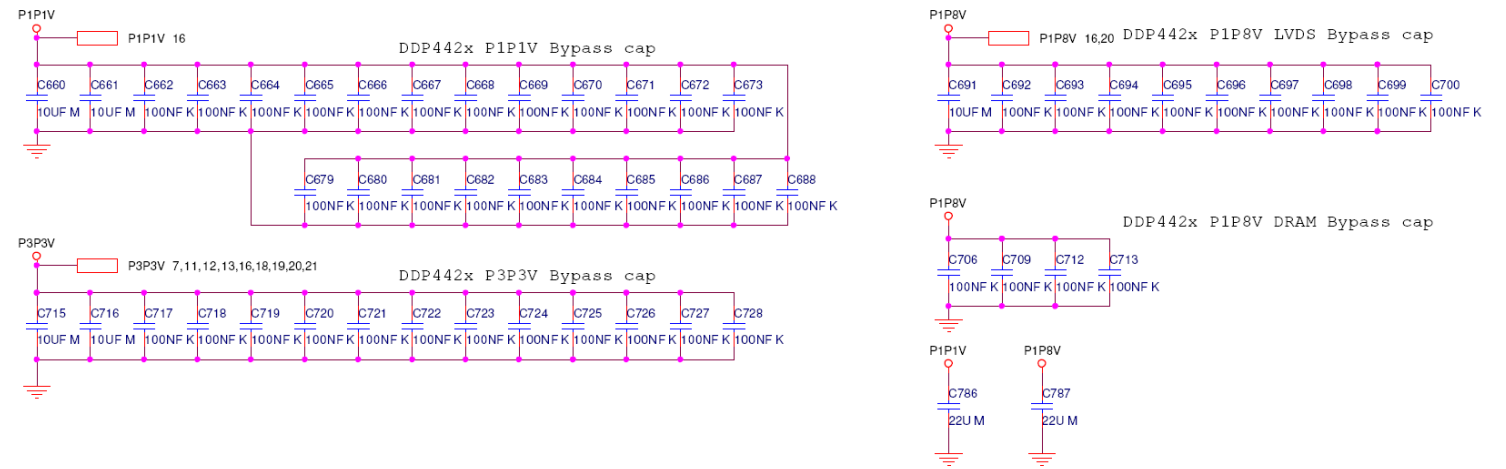
BT 656 INTERFACE (GPIO40-50)

LED LAMP CONTROL (GPIO68-72)

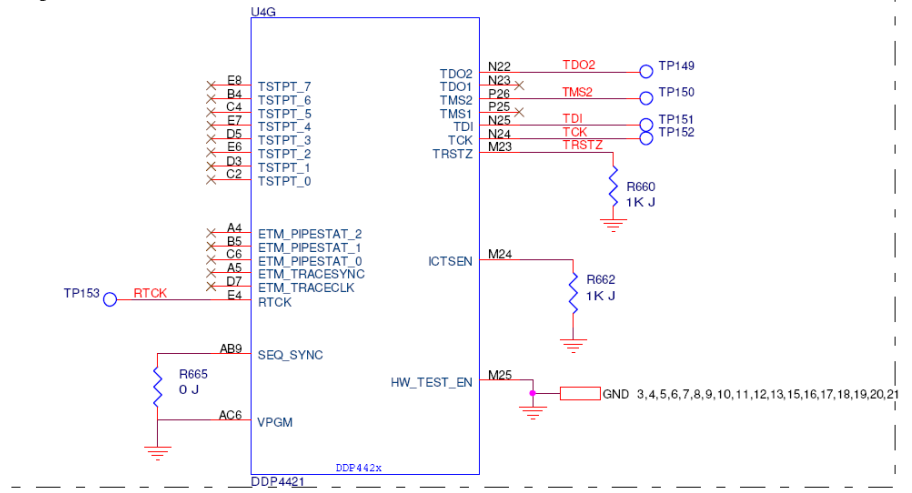




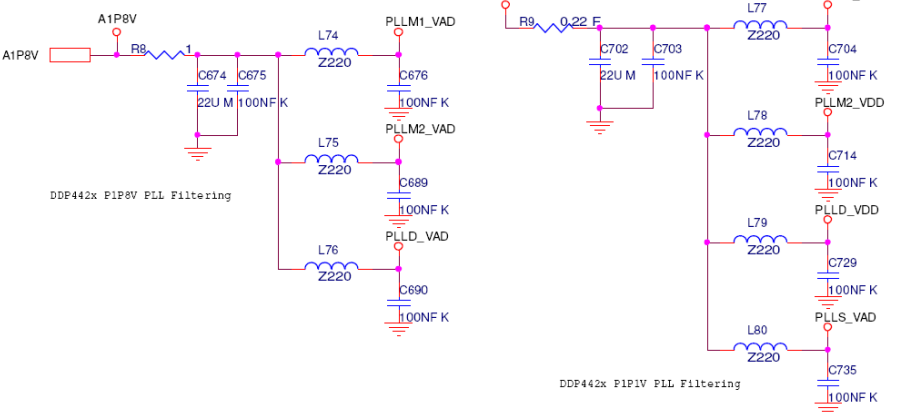
### Bypass Capacitors



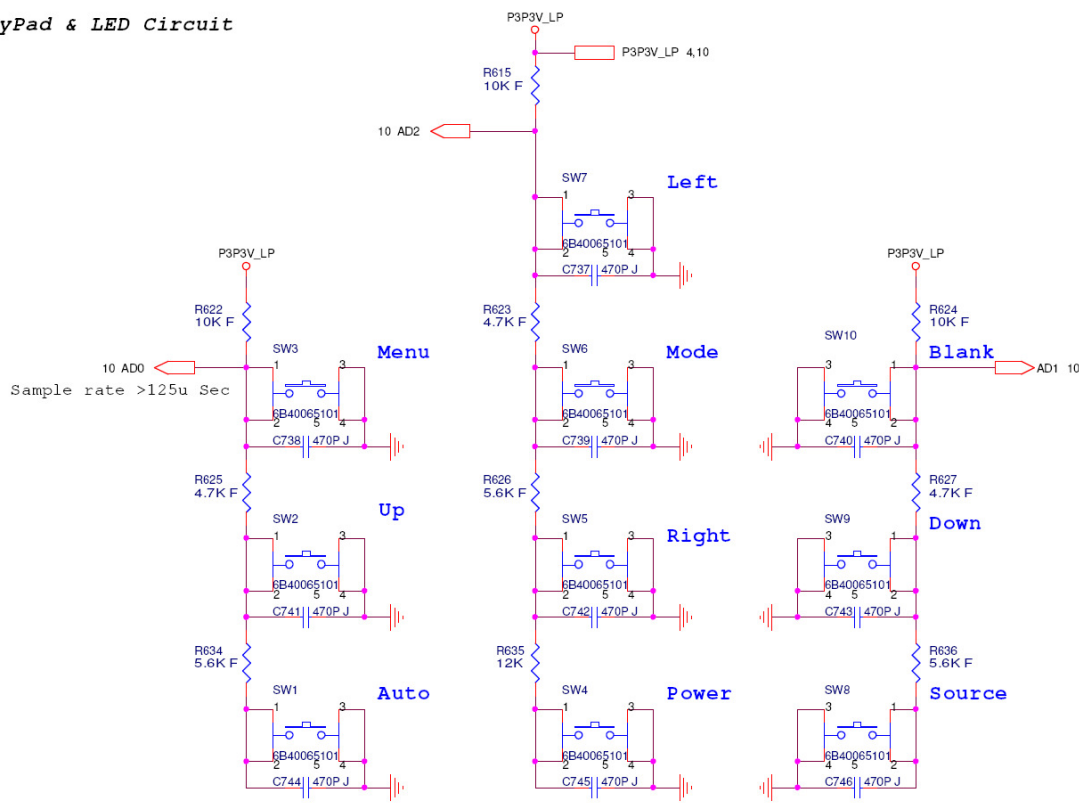
### Debug Port JTAG



### PLL Filtering



# Keypad & LED Circuit

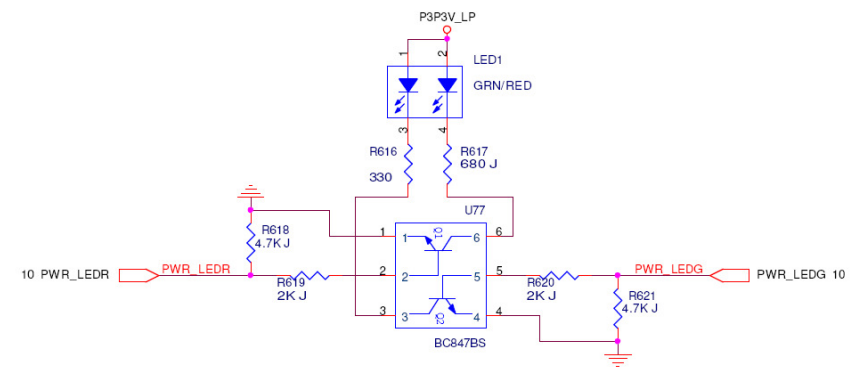


A
0~3F Menu
40~7F Up
80~BF Auto
C0~FF Releas

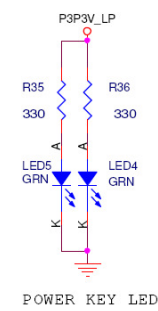
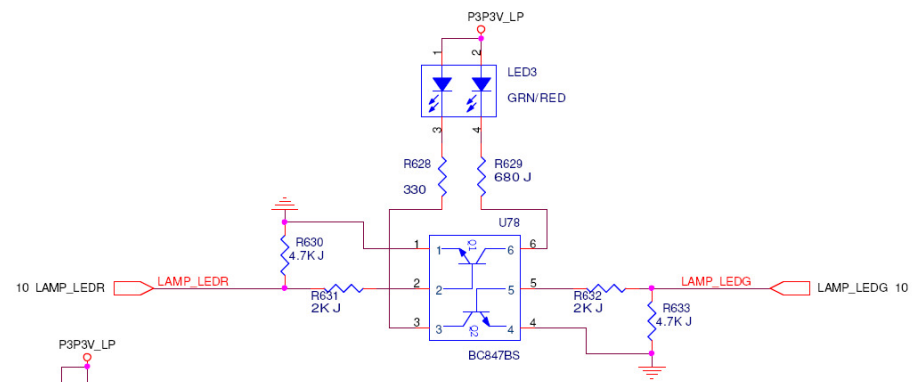
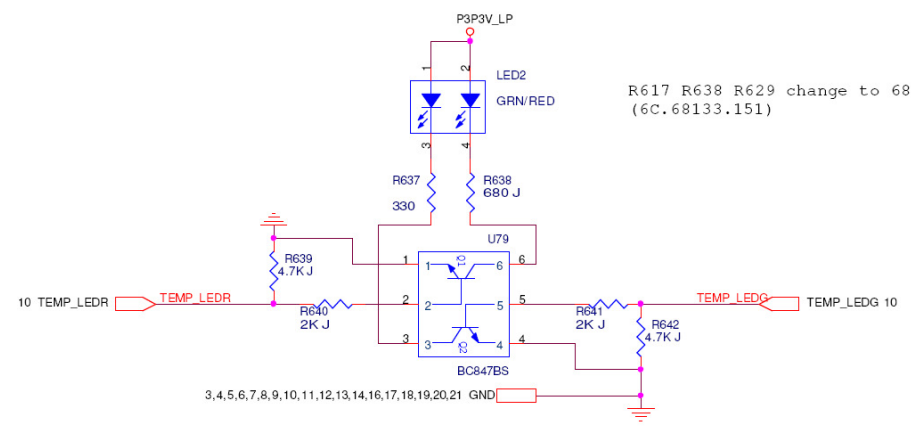
B
0~1F Left
20~5F Mode
60~9F Right
A0~DF Power
E0~FF Releas

C
0~3F Blank
40~7F Down
80~BF Source
C0~FF Releas

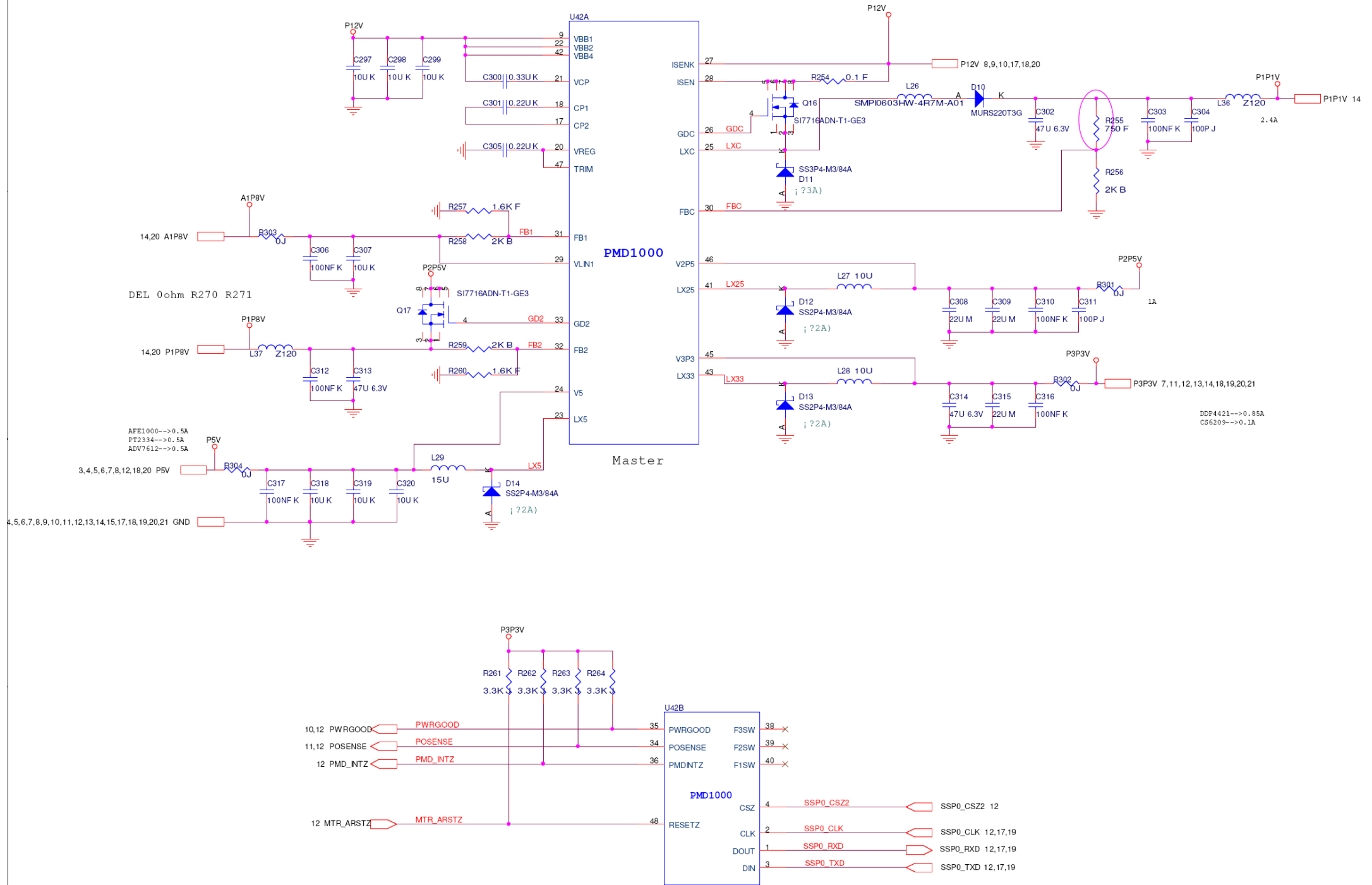
Base on Full Scale is equal to Vcc

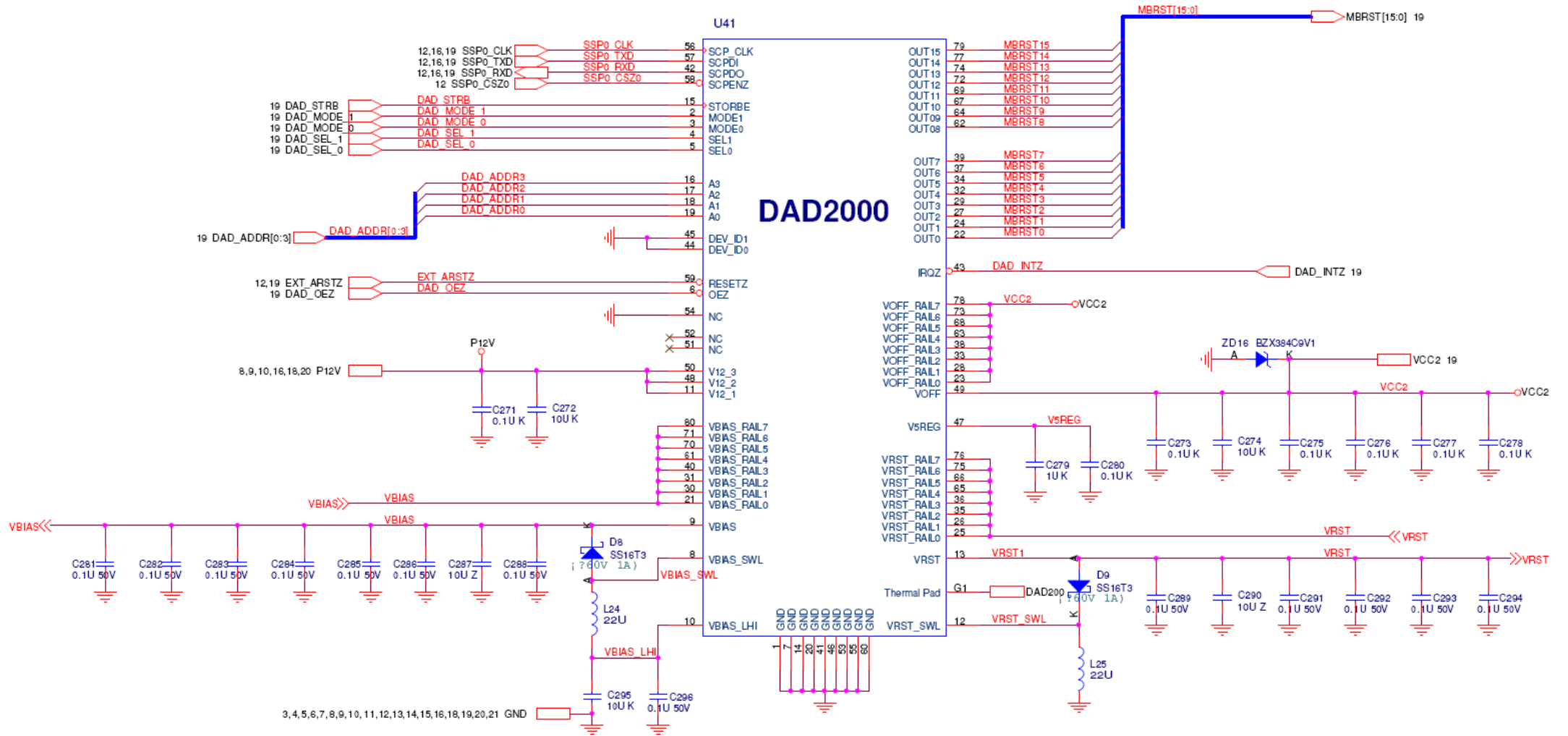


R617 R638 R629 change to 680 ohm (6C.68133.151)

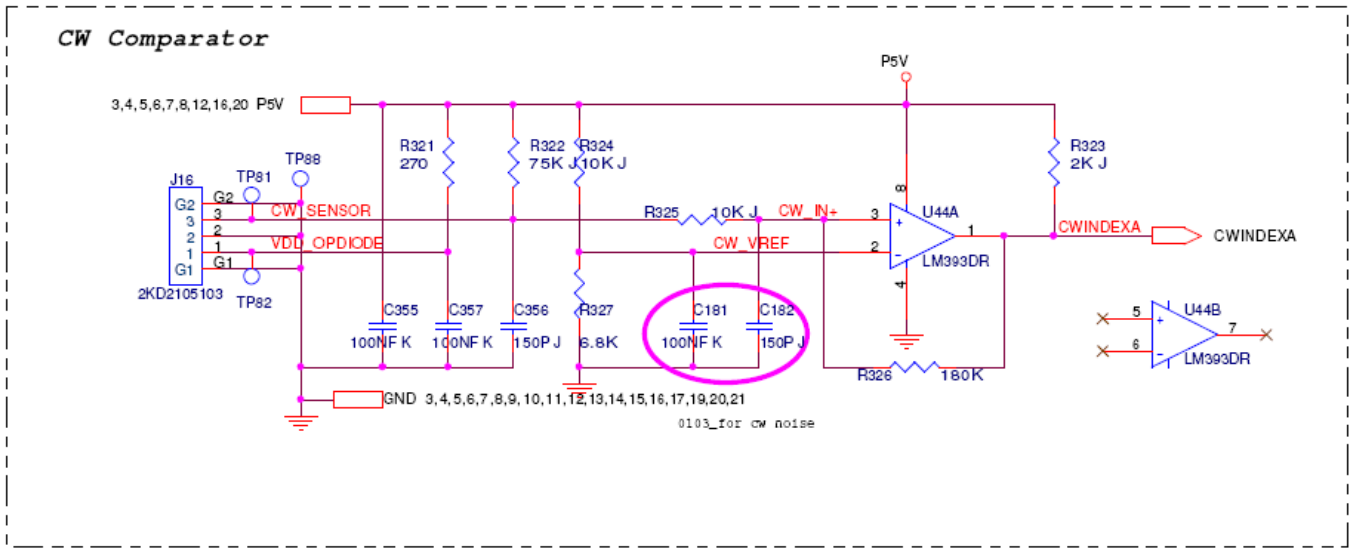
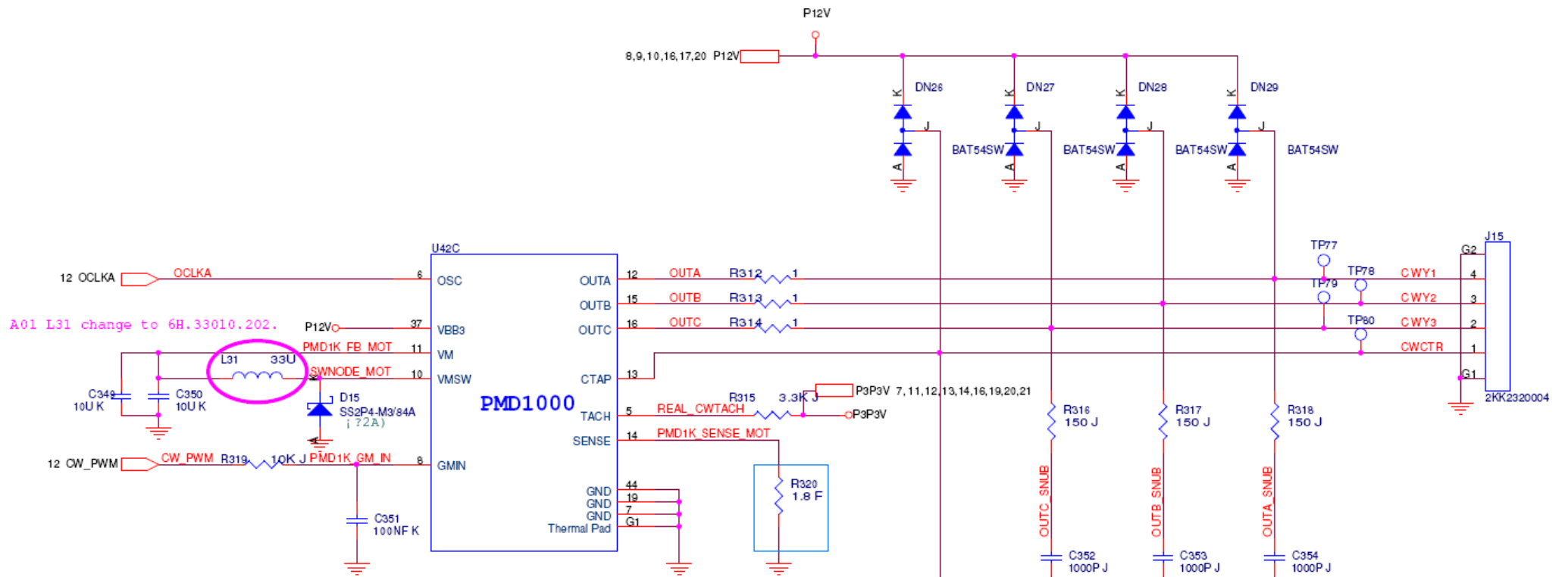


POWER KEY LED



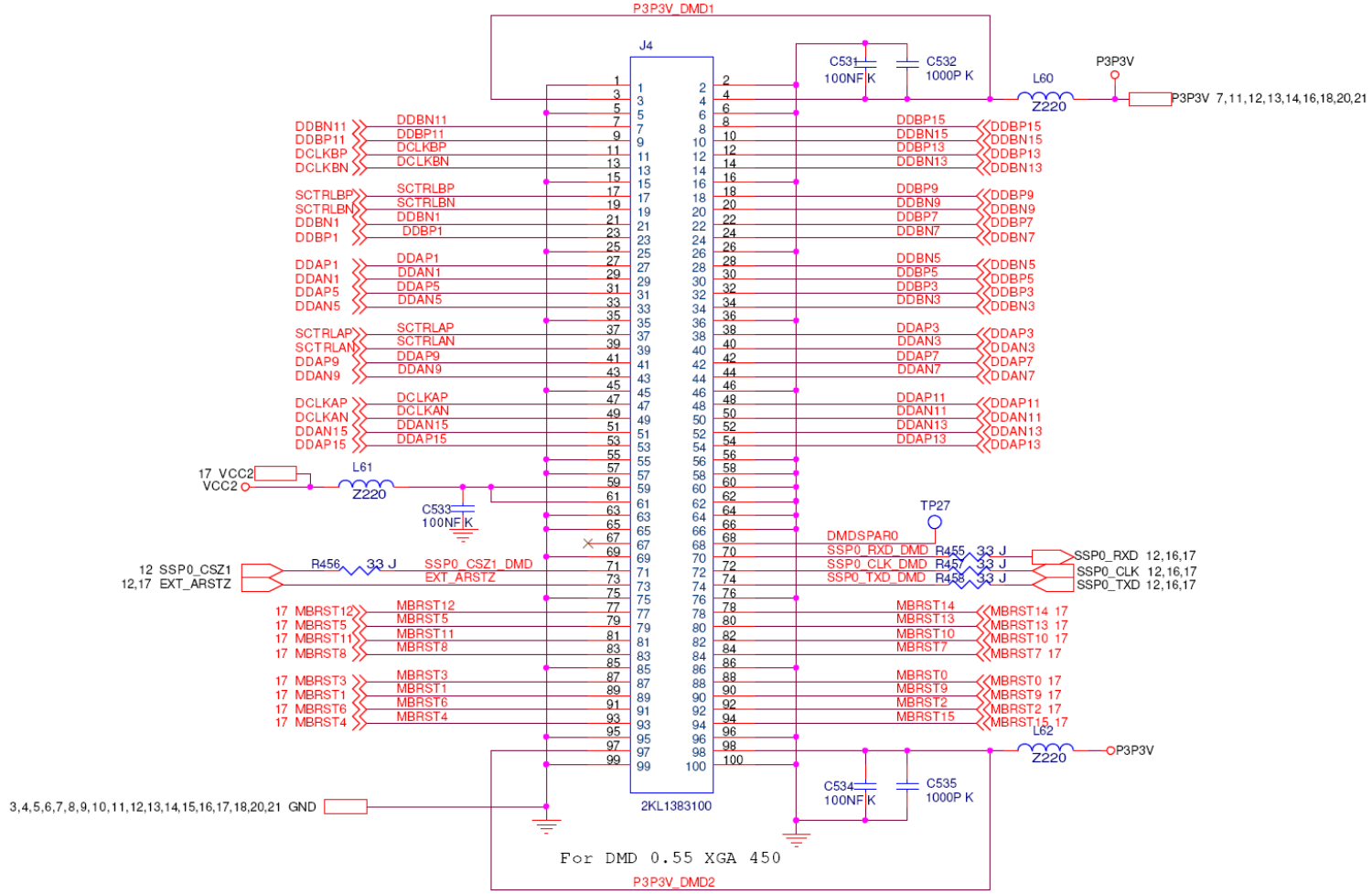
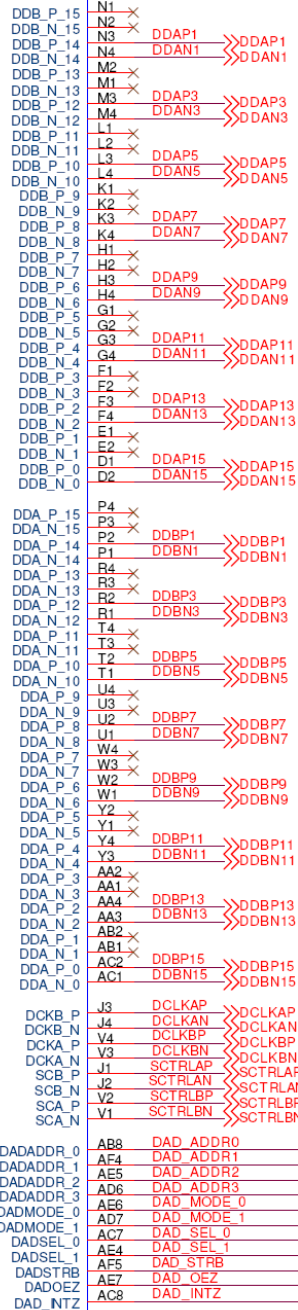






Swap Ch:A with Ch:B  
Half bus port with bus data bit order swap

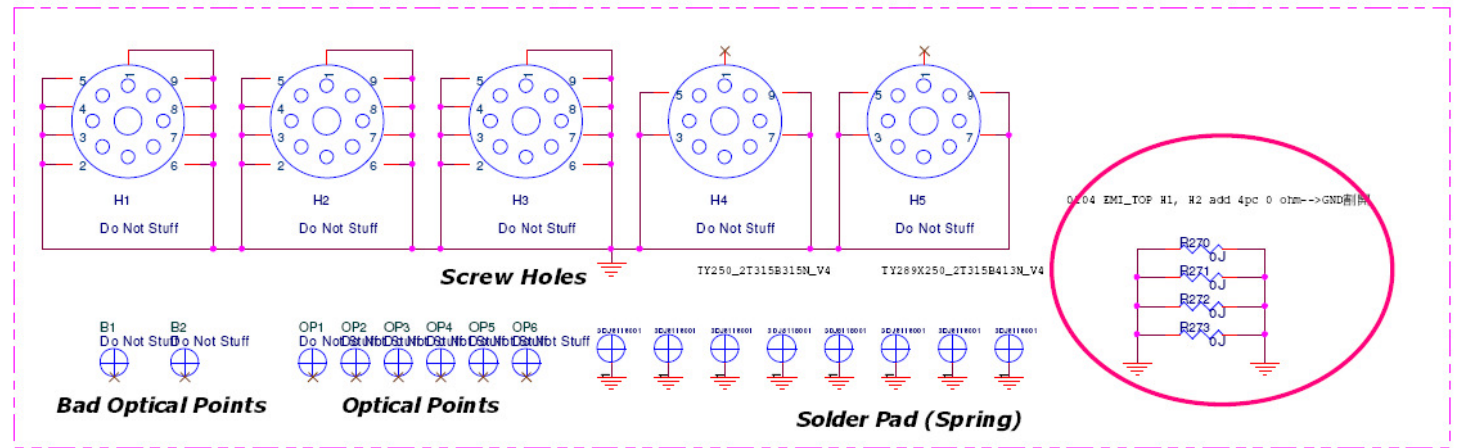
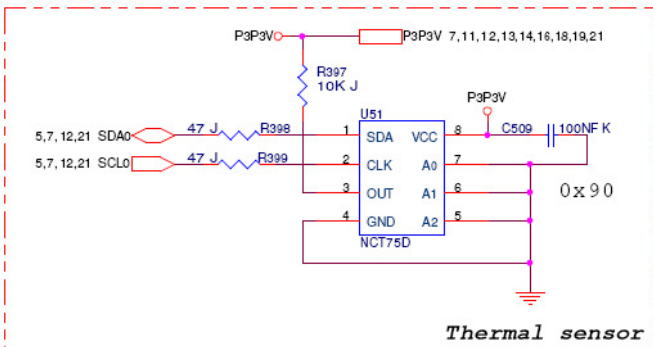
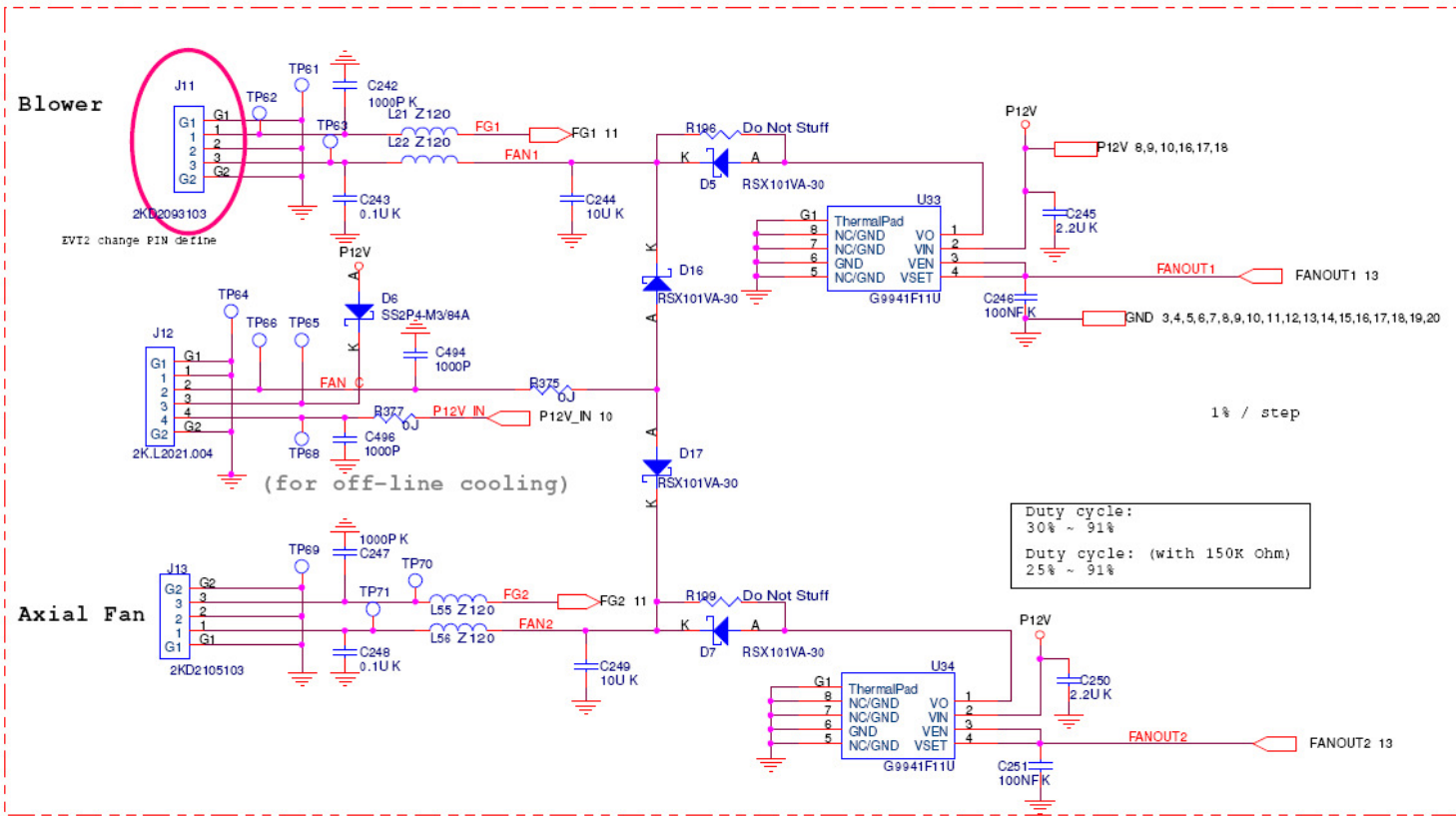
U4B

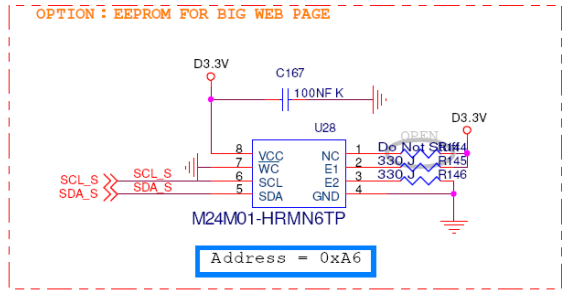
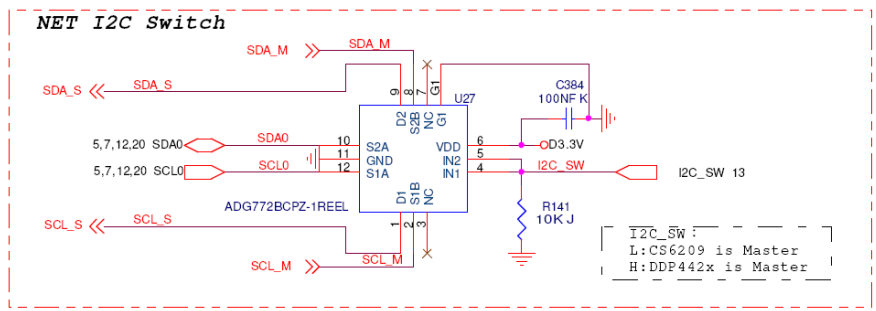
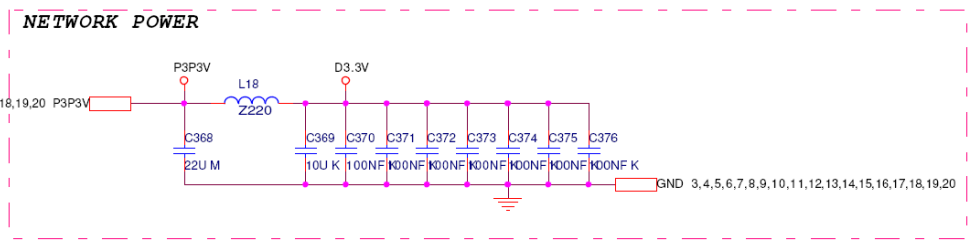
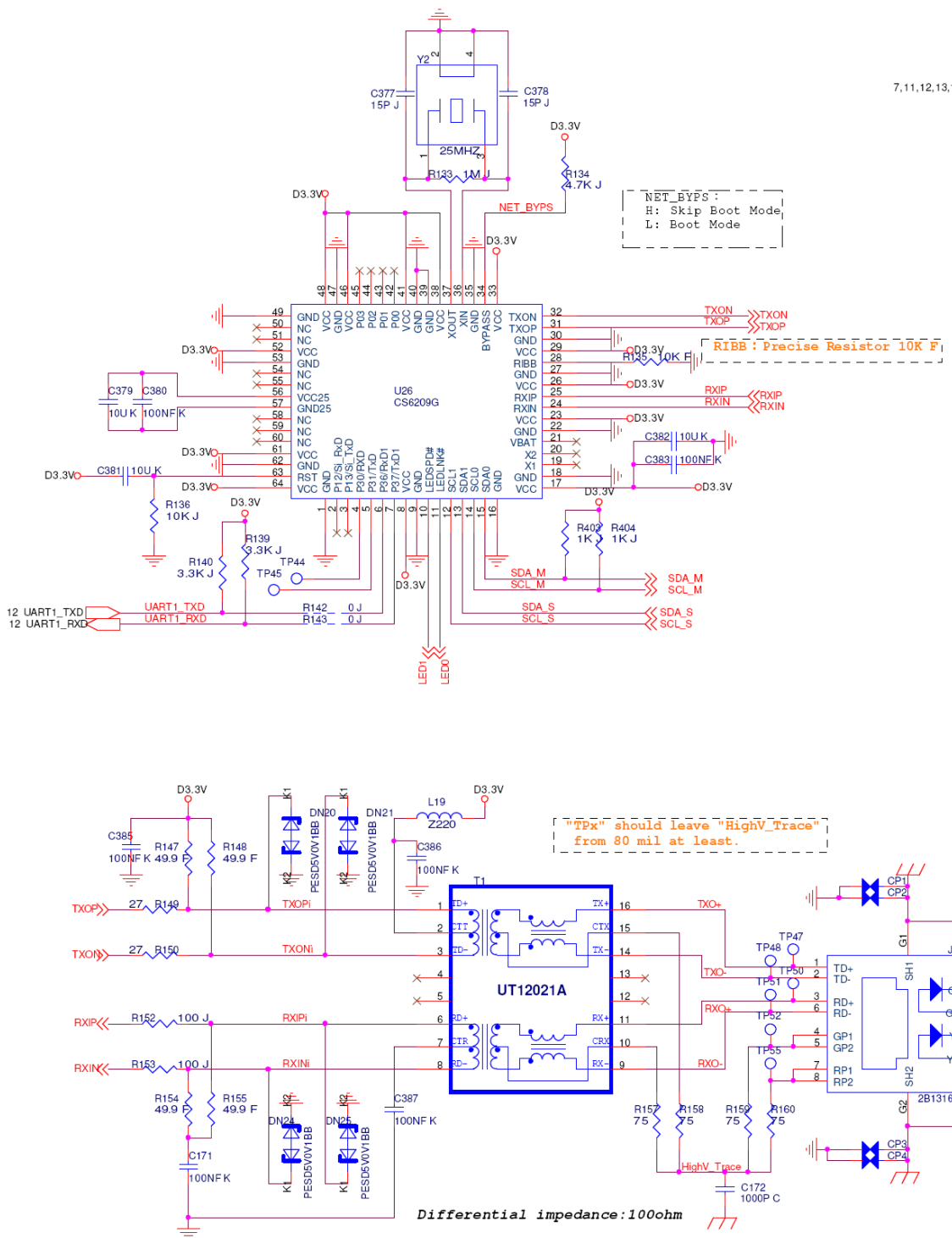


For DMD 0.55 XGA 450

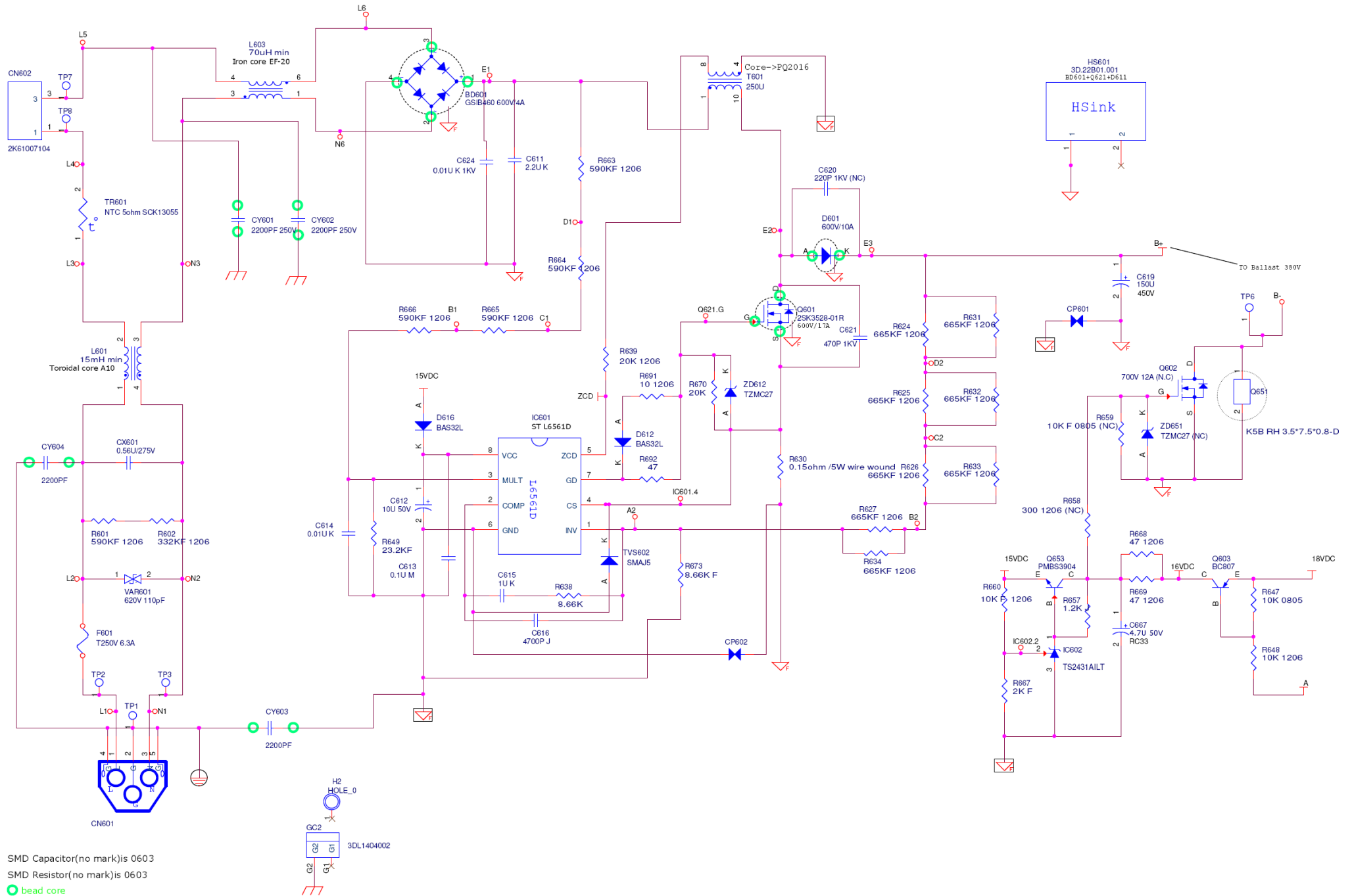
DMD INTERFACE

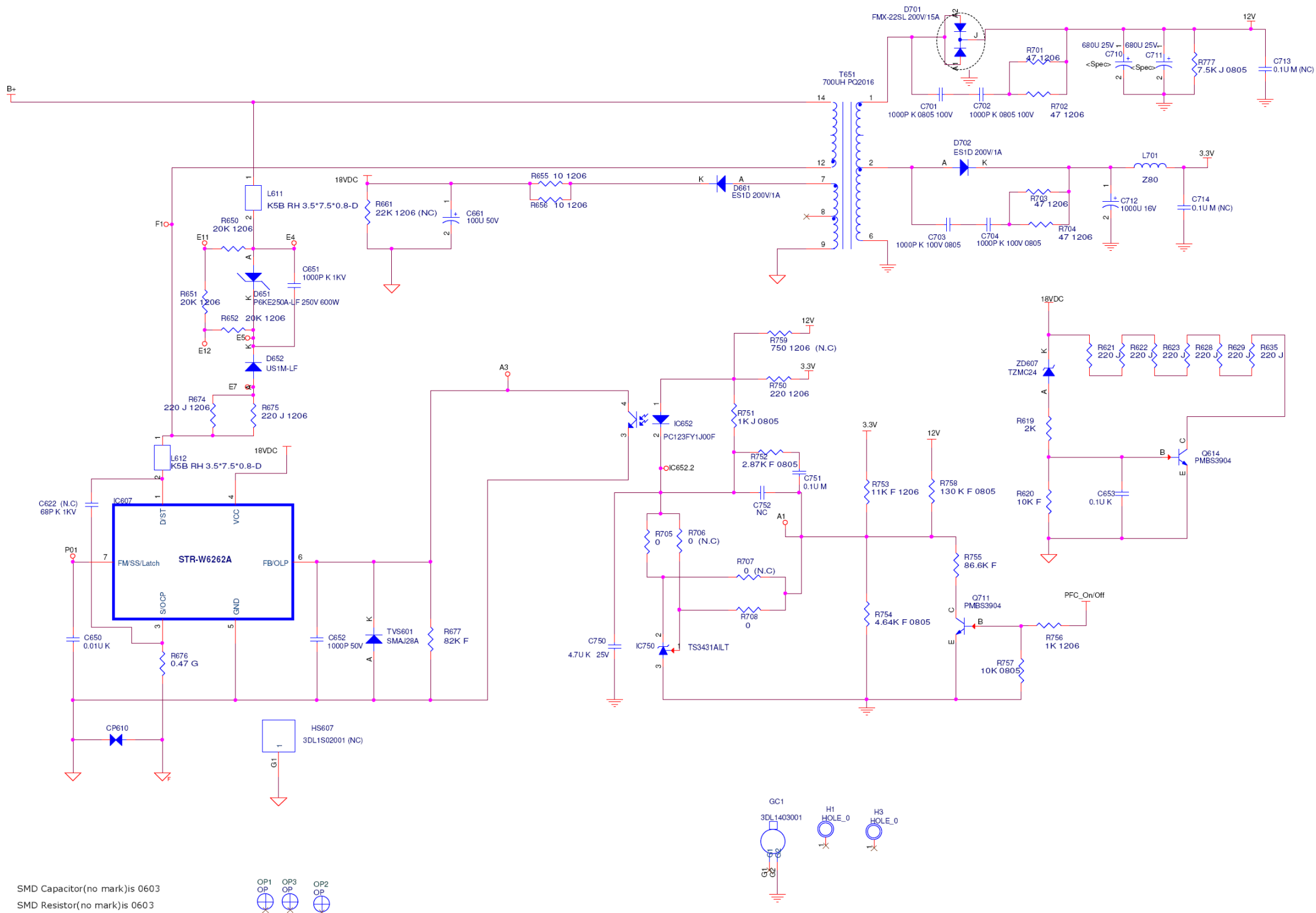
DDP4421



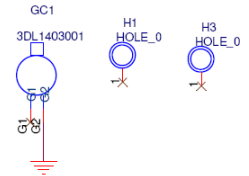


# Power board:

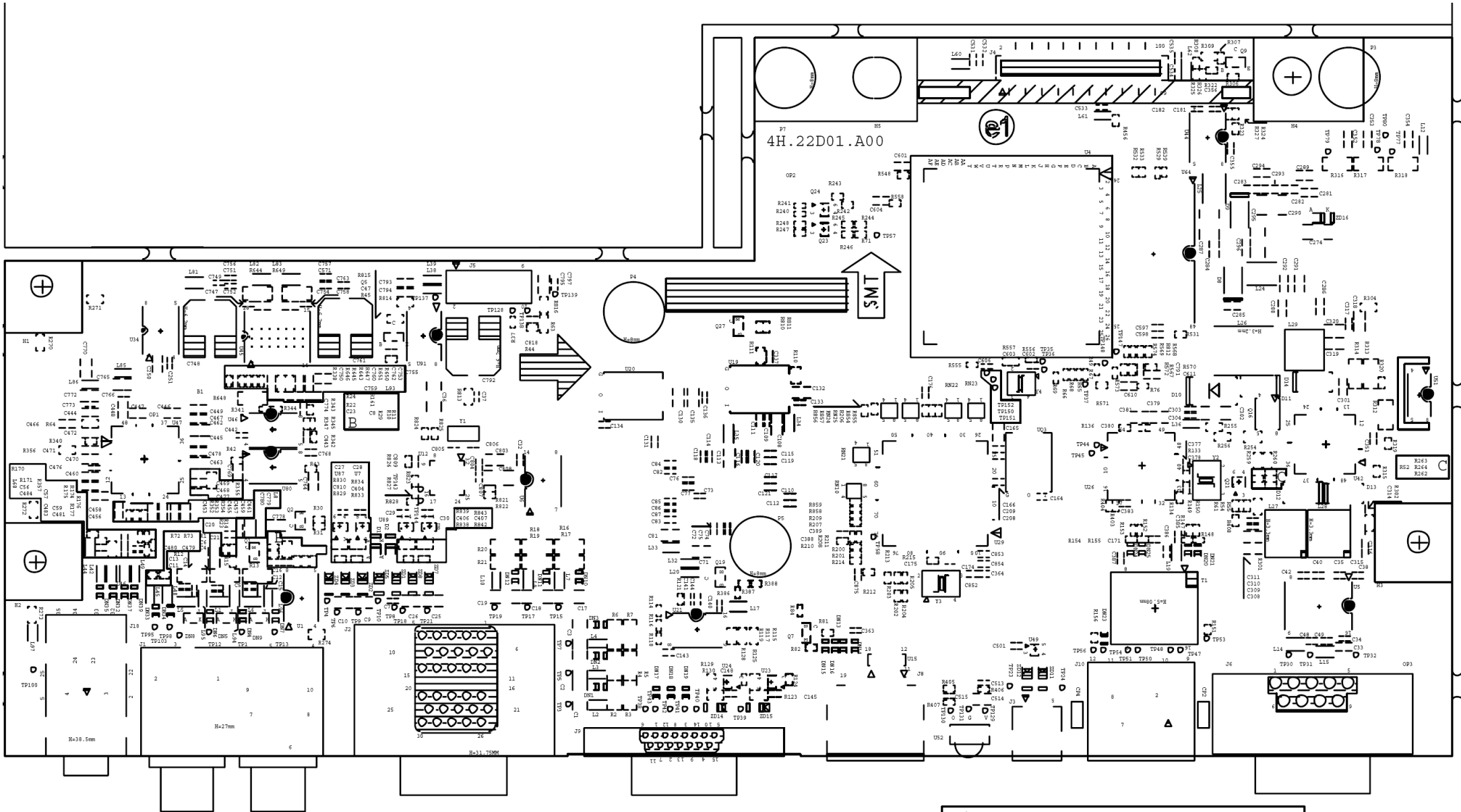


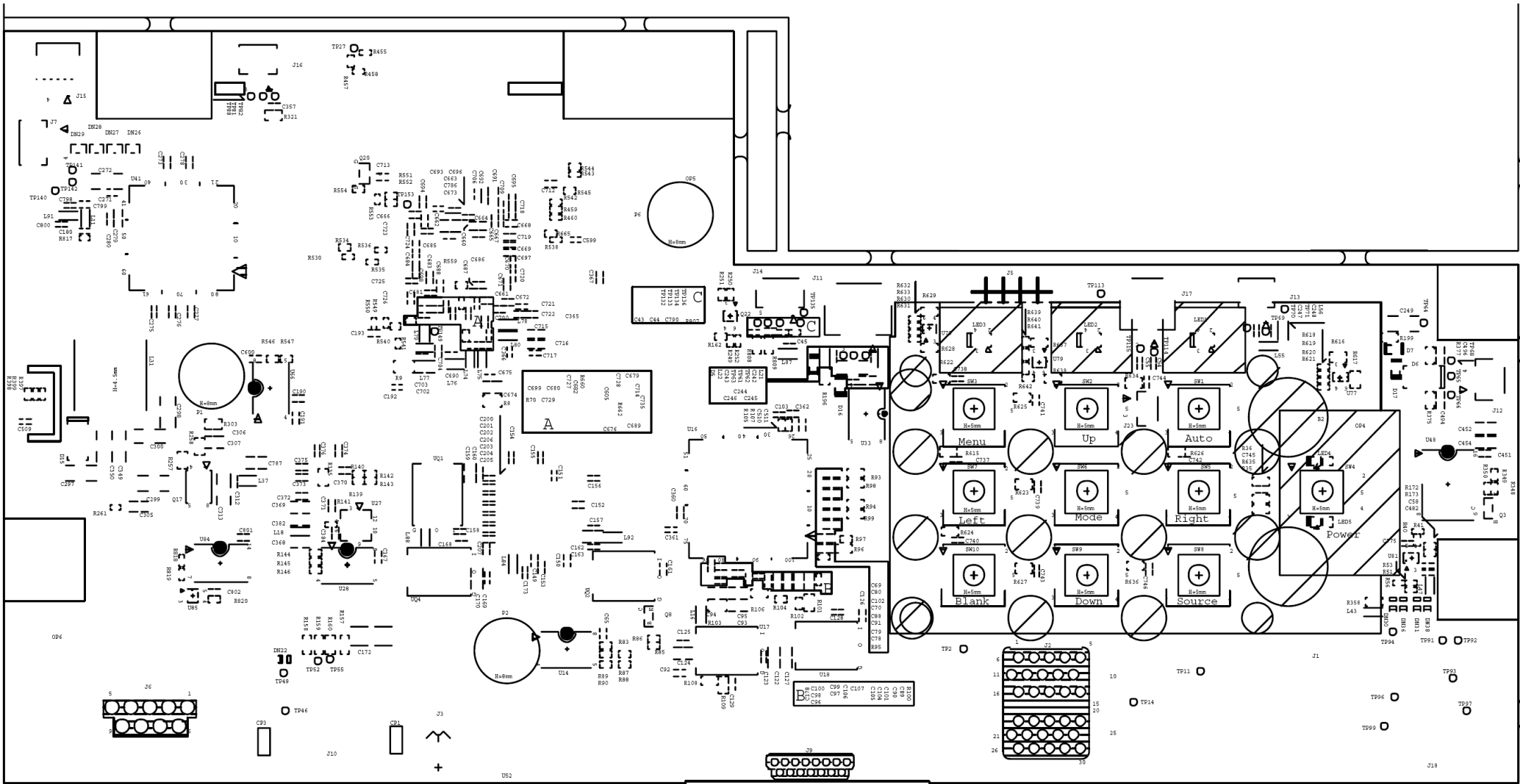


SMD Capacitor(no mark)is 0603  
 SMD Resistor(no mark)is 0603



# PCB Artwork: Main Board







# Power Board

