

MS-V091 -- G84, 256/512 MB 16x32 DDR3-136pin, DVI-I,SD/HDTV,VIVO,

SUMMARY:

1. Base on V069-100 to Modify HDMI change to internal support
2. BGA-136 DDRIII
3. RT-8805 Two Phase PWM for NVVDD
4. MS-11 for FBVDD

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Page 22: NVVDD with MS-11 MS-V1
Page 23: FBVDD with MS-11 MS-V1

Rev History

OA

Page 3 Enable G23pin H_PLLVDD 1V2 for G84 only
Page 11 reserve G84 SLI circuit
Page 12,13,14 reserve DAC_Vref power for G84 DACA,B,C
Page 16 reserve 1V8 for G84 IFPAB_PLLVDD
Page 17 reserve 1V8 for G84 IFPCD_PLLVDD
Page 18 reserve 1V2 for G84 PLLVDD and VID_PLLVDD
Page 20 reserve MIOB_CTL3 new strap for G84 PCI_DEVID_4
Page 20 reserve ROM_SI pull-down resister required if MIOA VDDQ=2.5V for G84
Page 21 add 1V8 power for G84
Page 22,23 Reserve MS-V1co-lay circuit

100

Page 3 H_PLLVDD 1V2 use 0ohm connect to PEX1V2
Page 3 Reserve G84 Dual Rank(Stacked Die) circuit FBA_CMD7----CS1 FBA_CMD27---BA2
Page 7 Reserve G84 Dual Rank(Stacked Die) circuit FBC_CMD7----CS1 FBC_CMD27---BA2
Page 7 Reserve I2CS circuit for G84
Page 6,10 Enable FBAA2 and FBCC2 BA2 Pin this is for Stacked Die Function
Page 13 Modify RGB circuit
Page 15 Modify SAA7115 RESET circuit
Page 18 Modify Spidf circuit
Page 21 Modify Linear Power circuit
Page 22 NVVDD PWM Change to RT-8805 Two Phase
Page 22,23 Remove MS-V1co-lay circuit

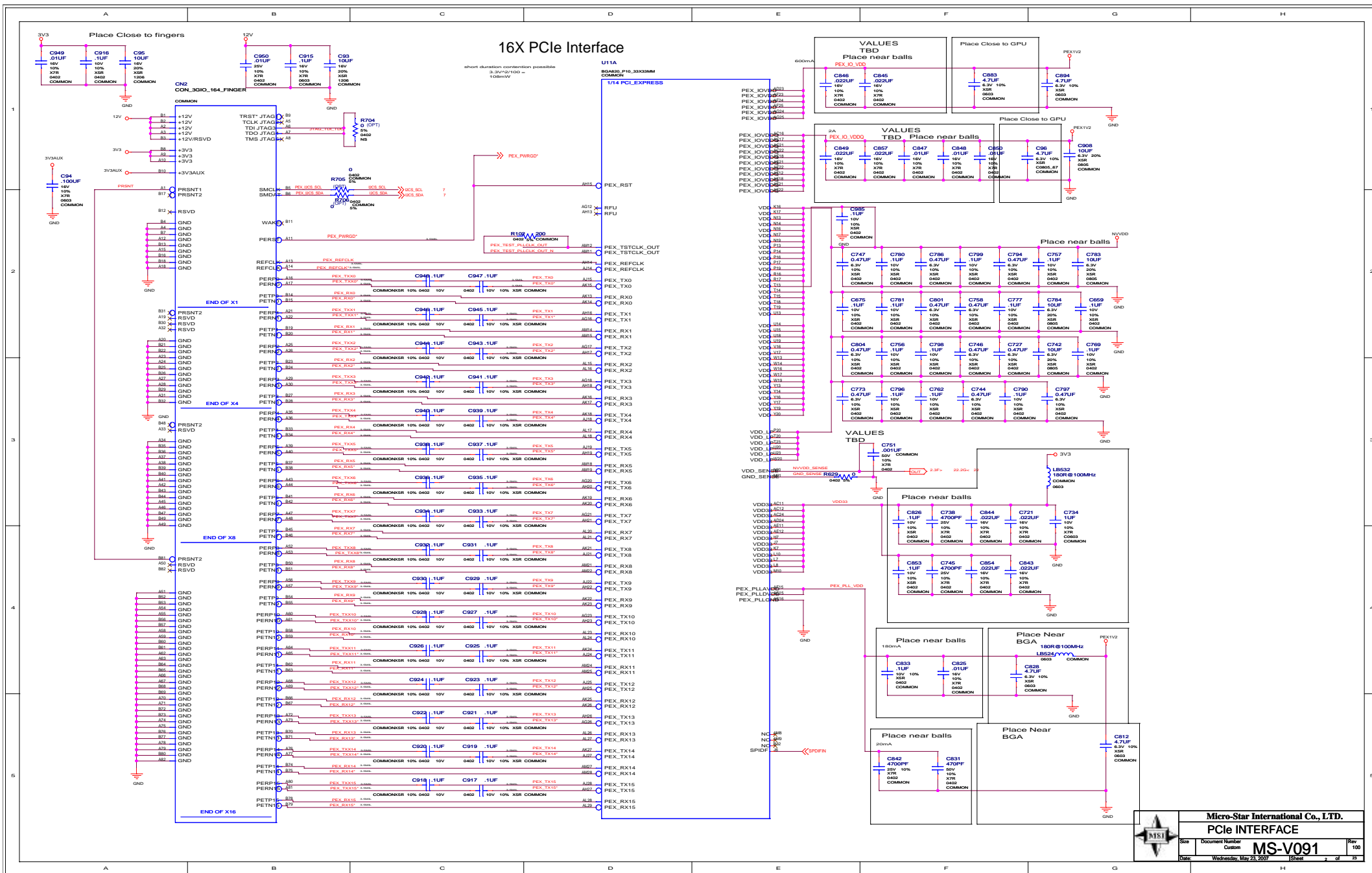
110

Page 3 Connect FBVDD for G84
Page 18 Reverse other Spidf circuit
Page 22 Co-lay small chock for NVVDD

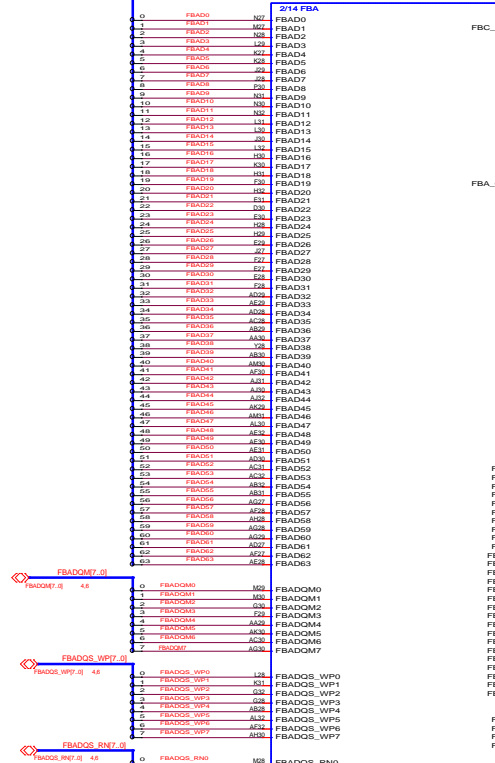
V091-Base on V089-110 to Modify

- 1.Modify to power NVVDD and FBVDDQ circuit
- 2.Remove HDMI Circuit Add DIV Circuit
- 3.Rem SPDIF Circuit
- 4.Add Dual VBIOS Circuit
- 5.Add Thermal Protection Circuit

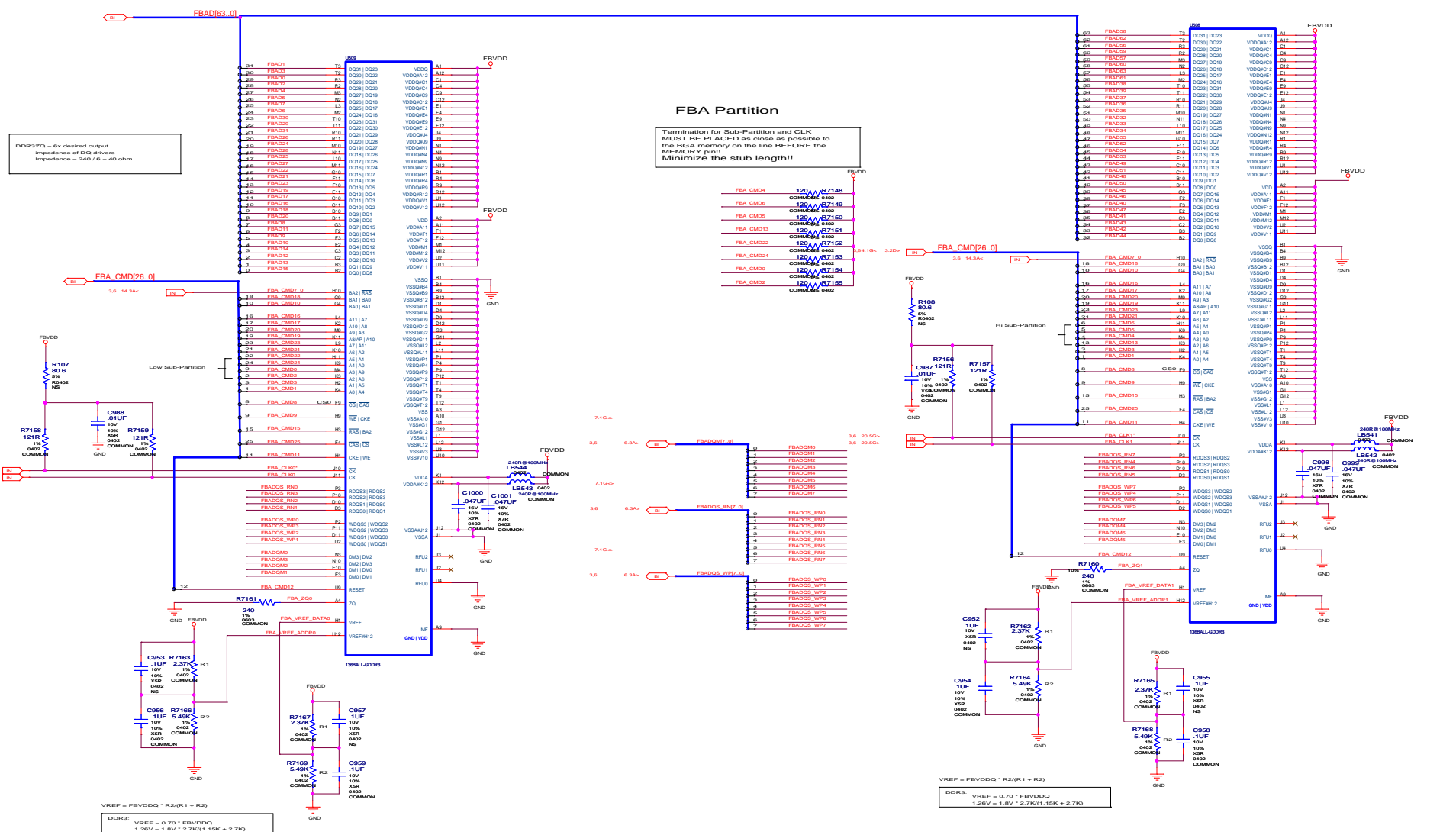
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SUMMARY			
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U118B
BG4400, P10, 3303MM
COMMON



Framebuffer: Partition A
16Mx32 BGA136 DDR3



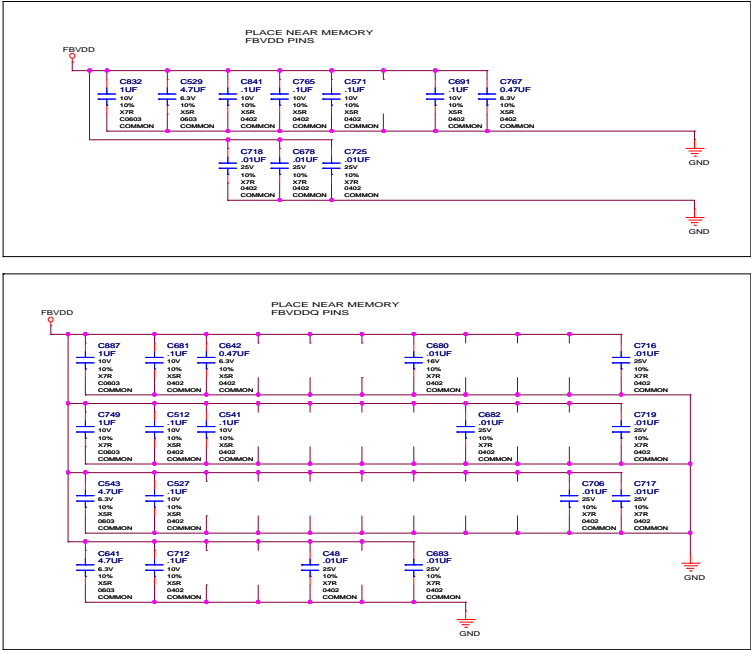
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FB A1

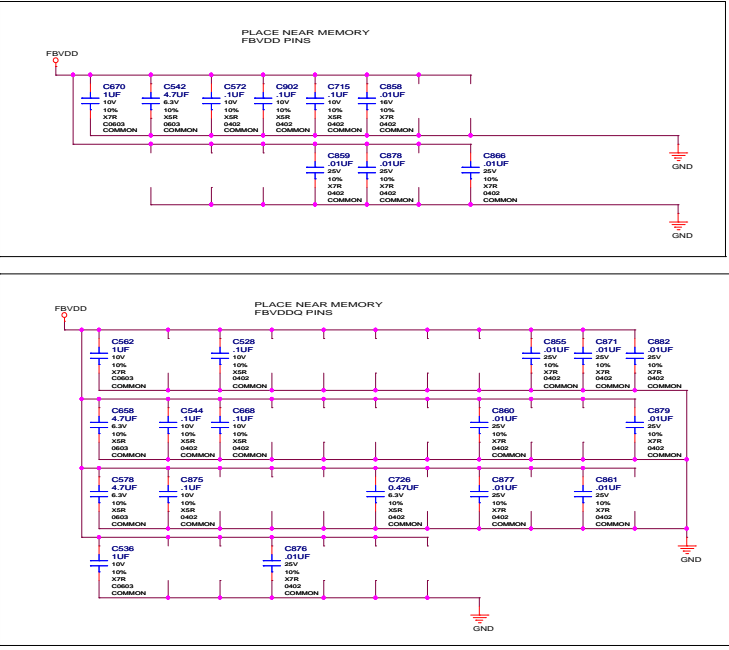
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FRAME BUFFER: PARTITION A DECOUPLING

Decoupling for FBA 0..31

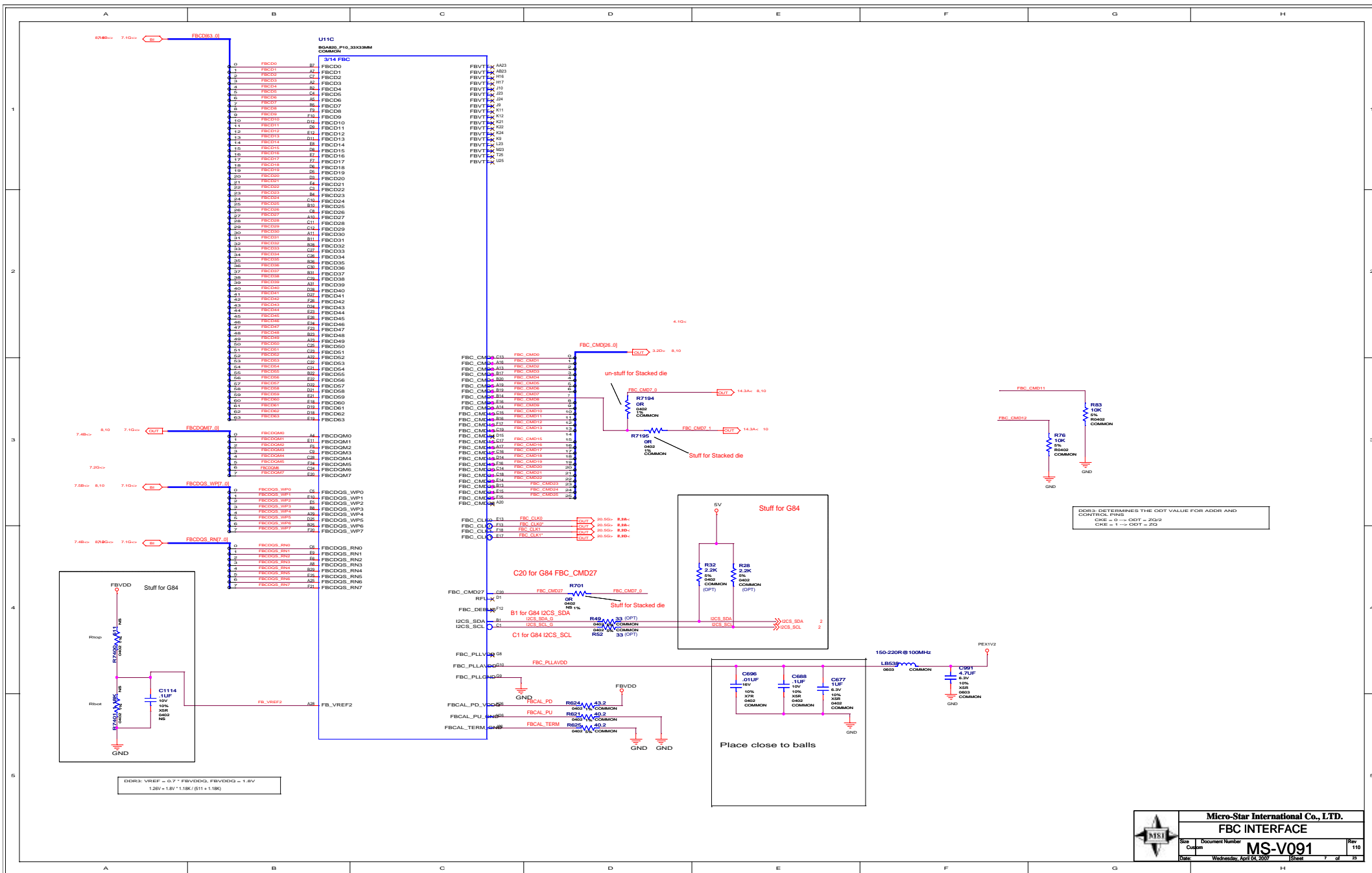


Decoupling for FBA 32..63



1	
2	
3	
4	
5	





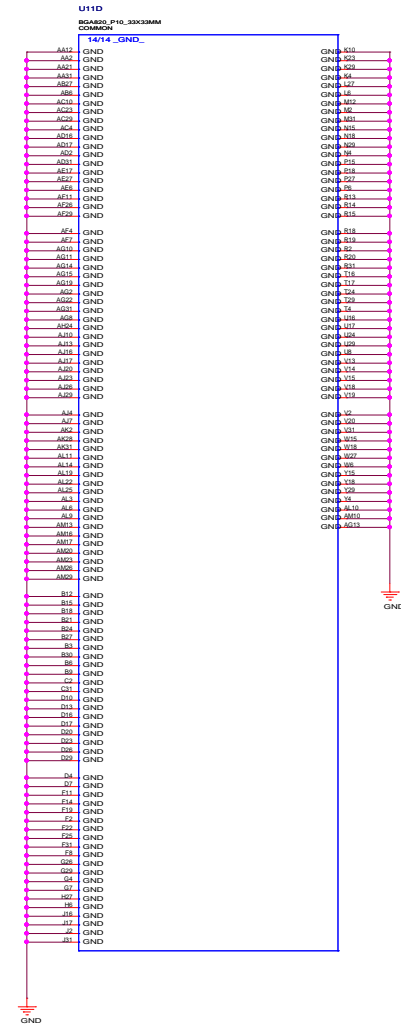
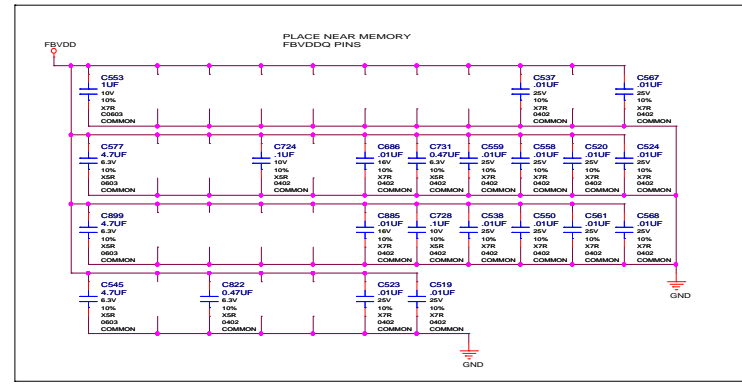
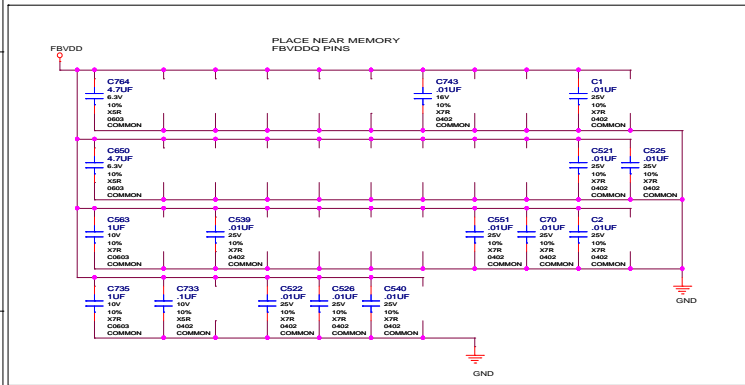
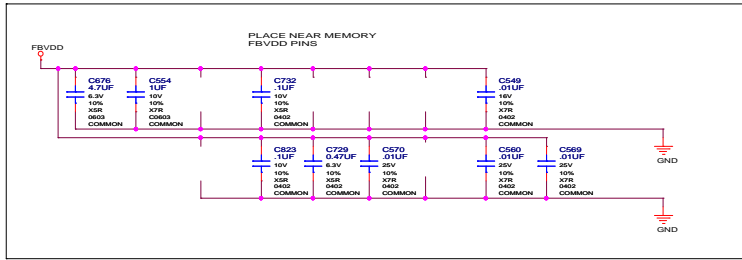
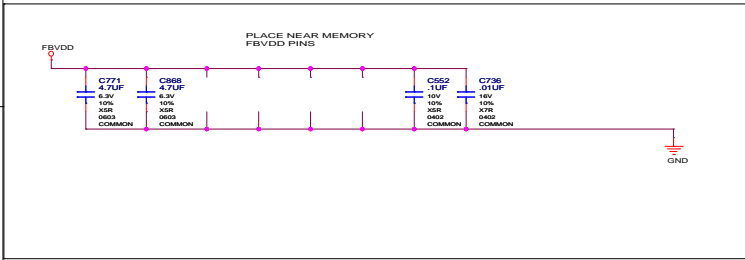
1



FRAMEBUFFER: PARTITION C DECOUPLING

Decoupling for FBC 0..31

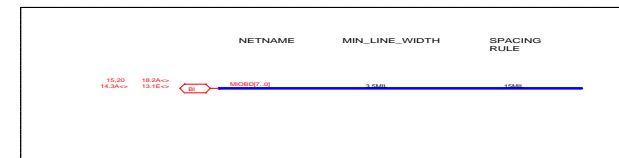
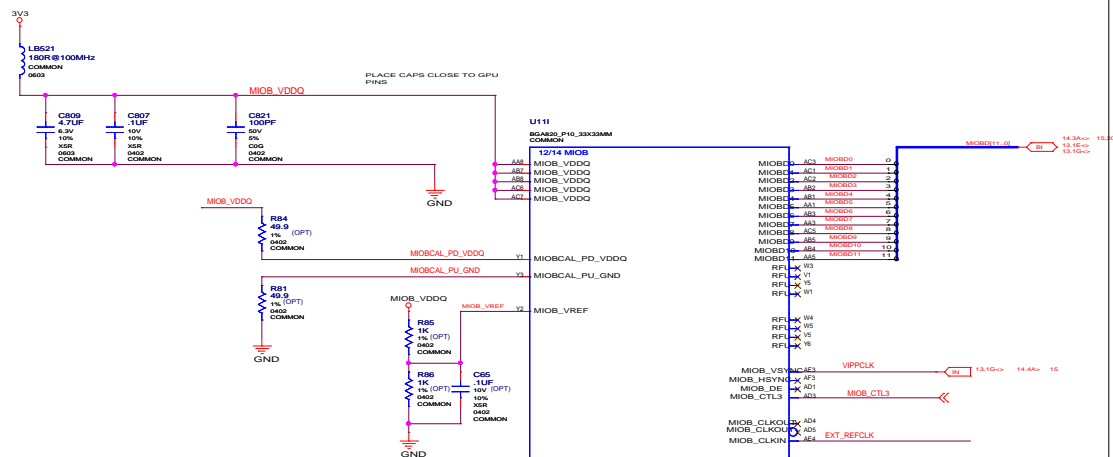
Decoupling for FBC 32..63



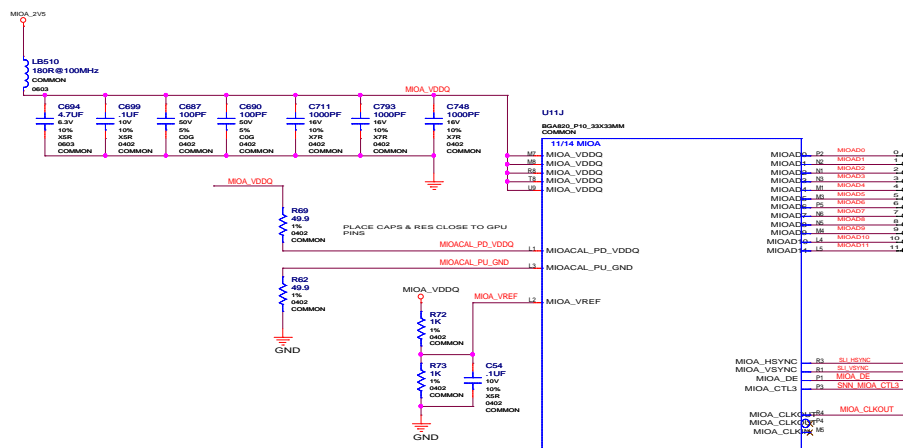
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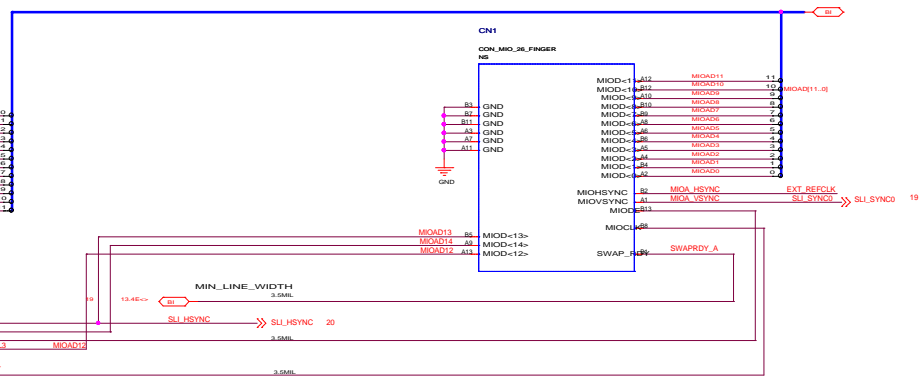
G3 VIP/MIOB



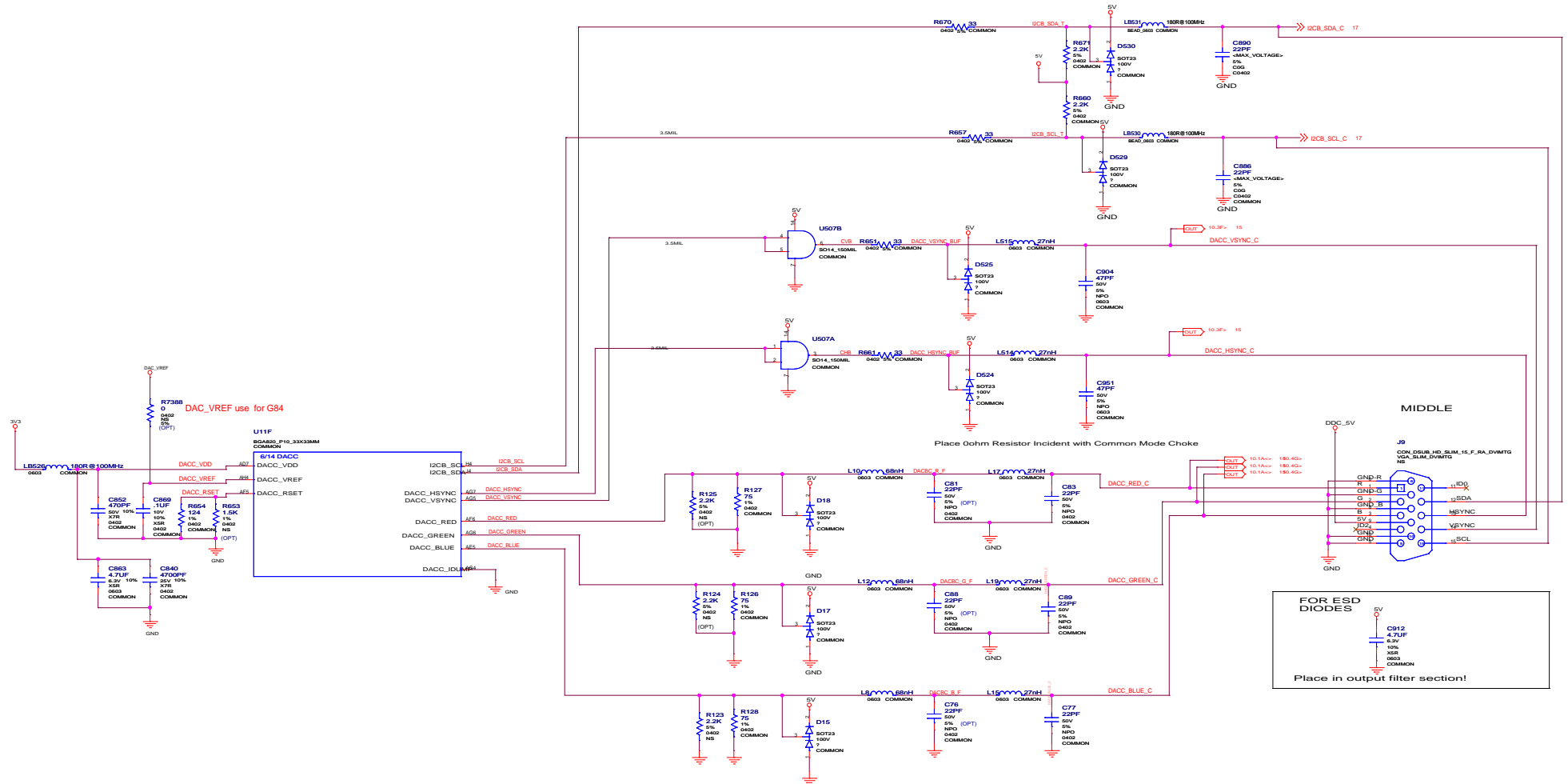
G3 MIOA



Feature Connector



Secondary Display (DACC), Slim DB15

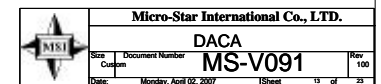


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DACC
MS-V091

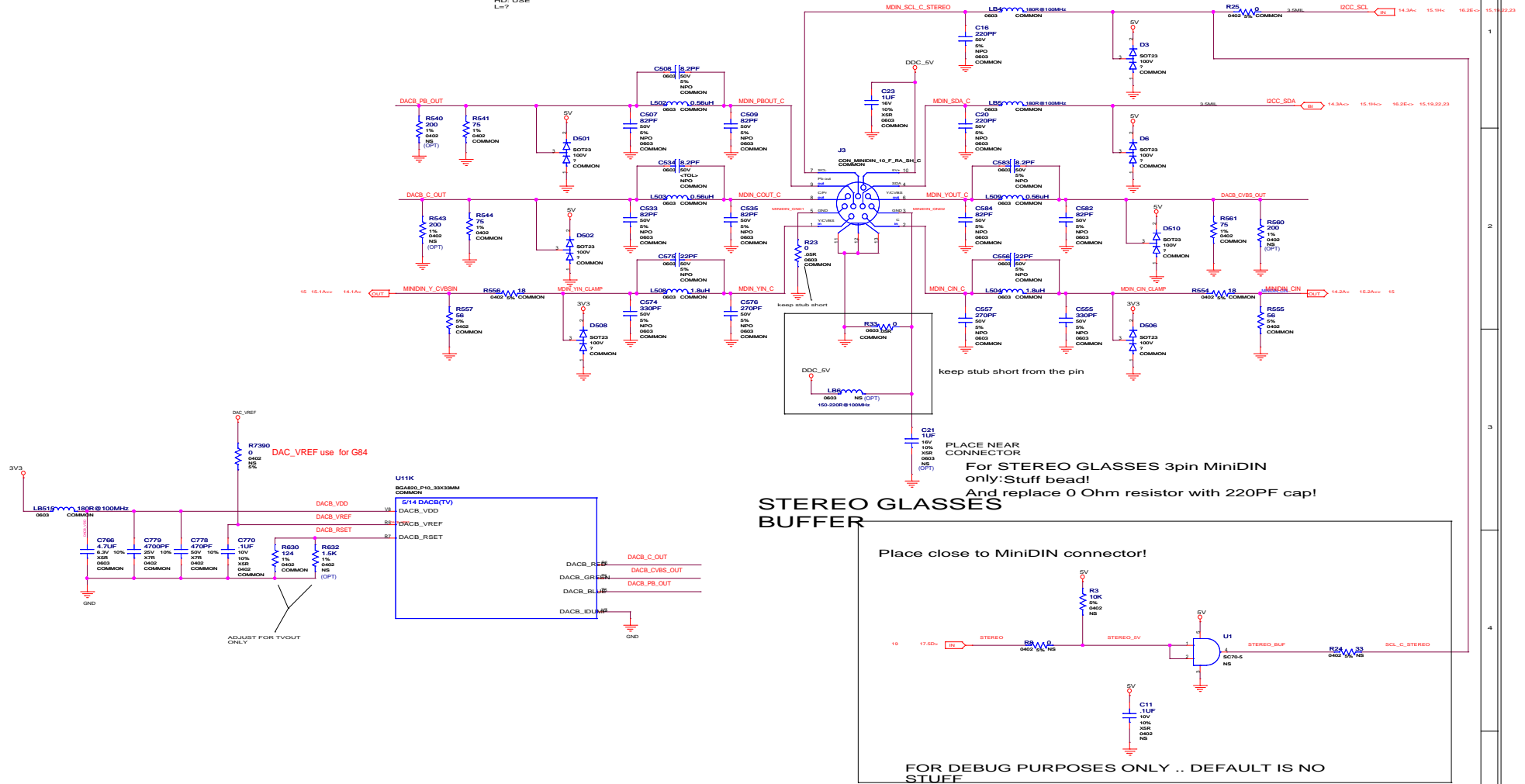
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DACA RGB-FILTER



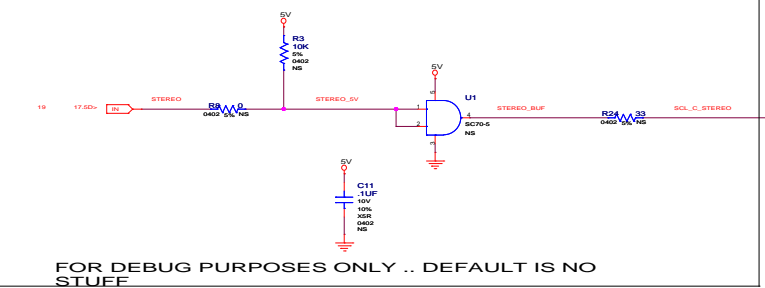
DACB .. MiniDIN VIDEO IN/OUT CONNECTOR /STEREO GLASSES

FILTER
NOTES:
SD: USE
L=1.8uH
HD: USE
L=?



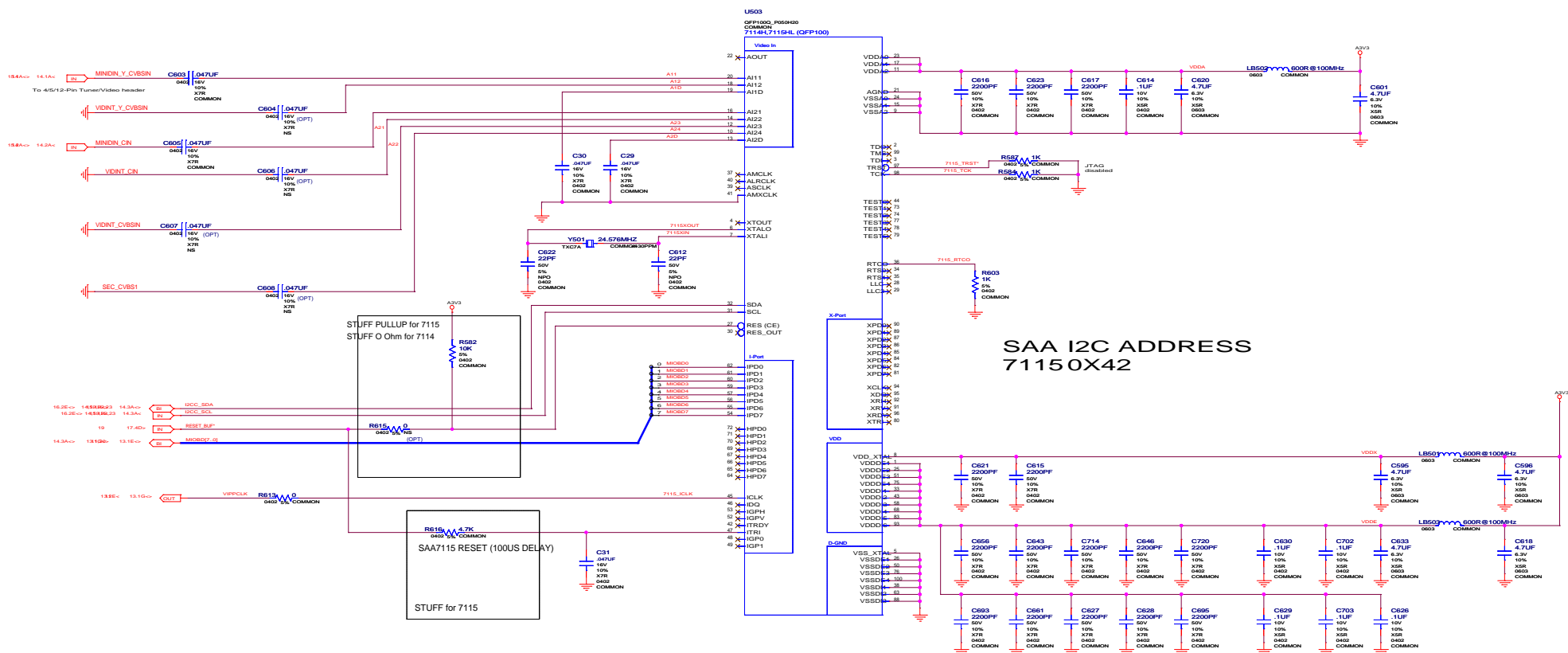
STEREO GLASSES BUFFER

Place close to MiniDIN connector!



FOR DEBUG PURPOSES ONLY .. DEFAULT IS NO STUFF

PHILIPS VIDEO CAPTURE



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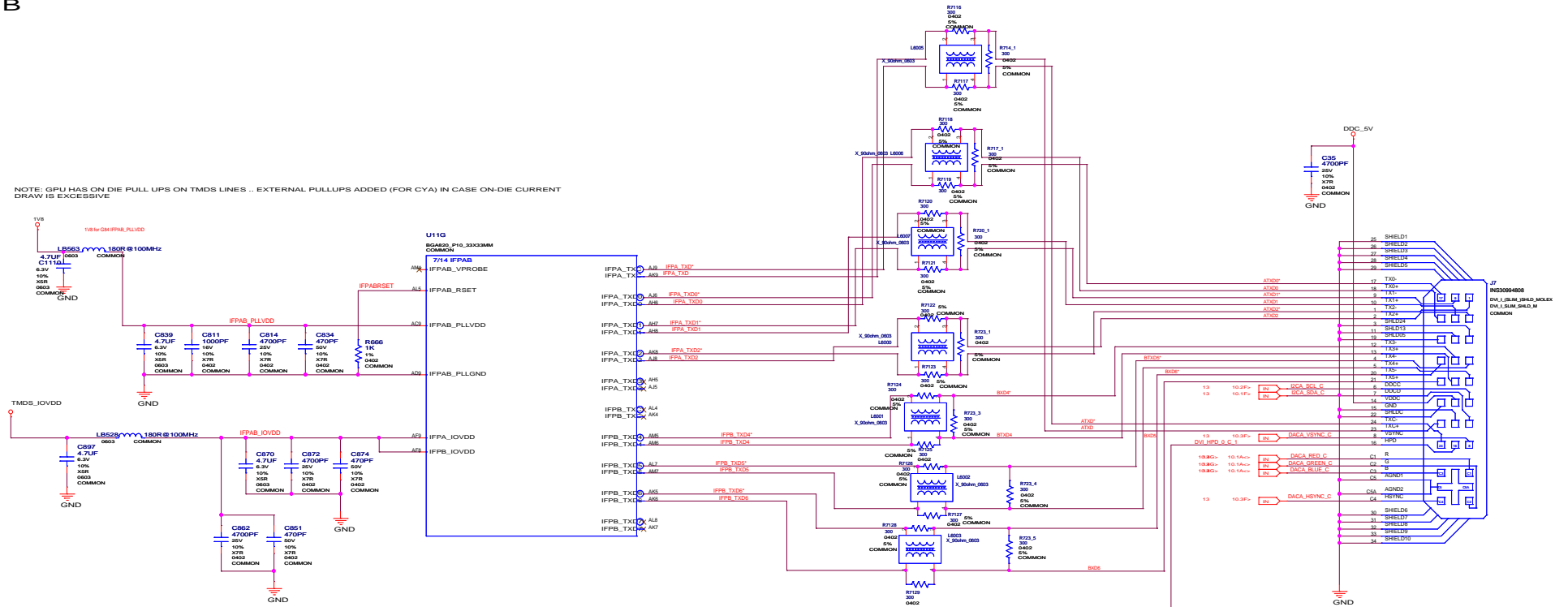
VIDEO CAPTURE

MS-V089

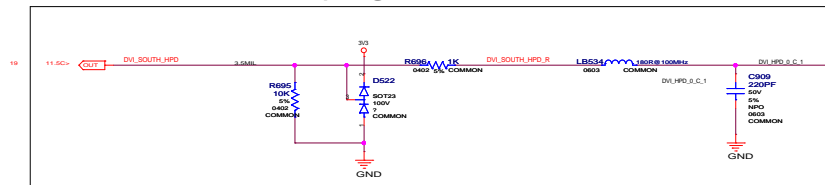
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INTERNAL
TMDS .. LINK A
& B

NOTE: GPU HAS ON DIE PULL UPS ON TMDS LINES .. EXTERNAL PULLUPS ADDED (FOR CYA) IN CASE ON-DIE CURRENT DRAW IS EXCESSIVE



Hotplug Detection



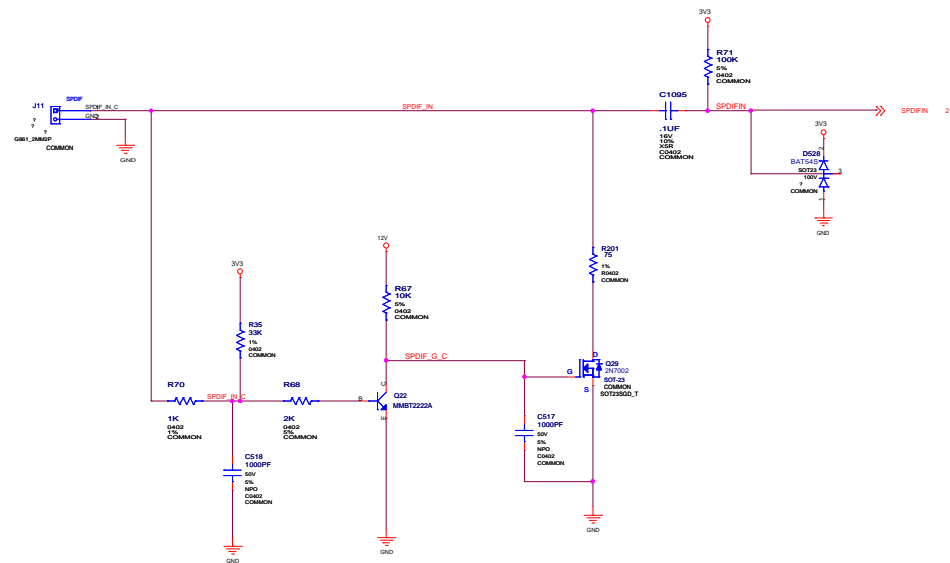
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TMDS LINK A & B

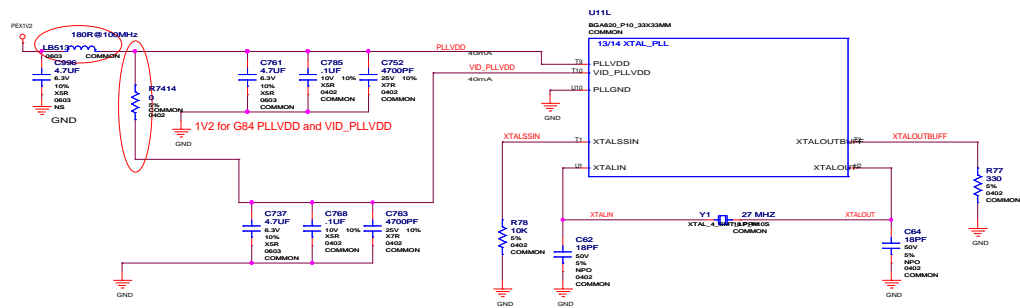
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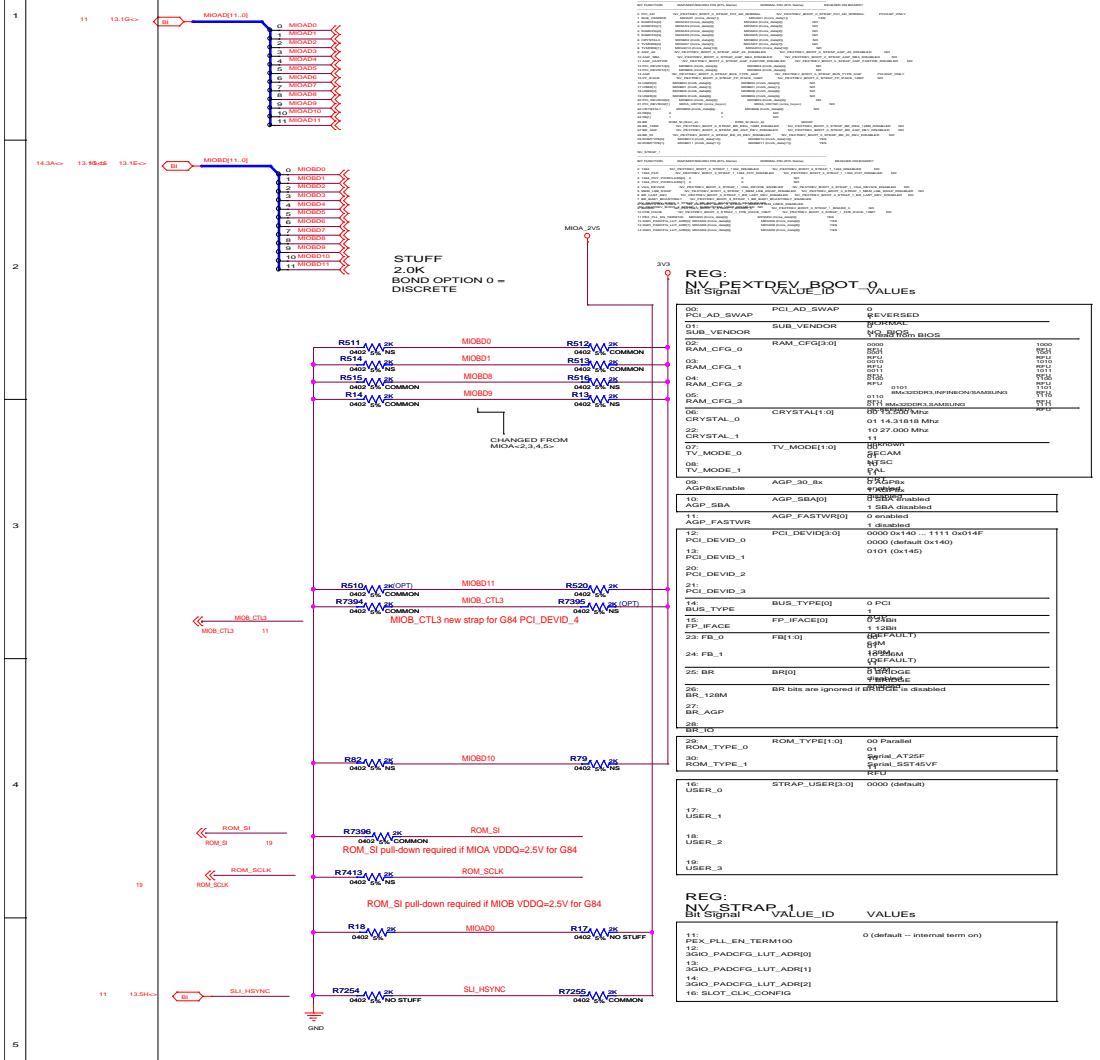
XTAL/PLLVD



BIOS, Straps, Misc

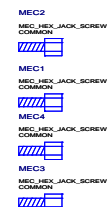
Straps

Assembly:
BIOS

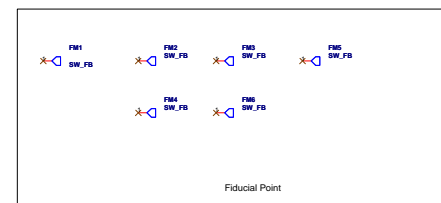
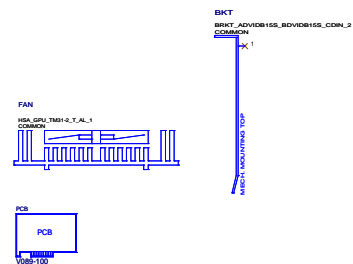


Mechanical parts

NEED FANSINK SYMBOL
FOR P216



155-00002-0000-000 SCREW PHIL PAN HD SS MACH 4-40
3/16

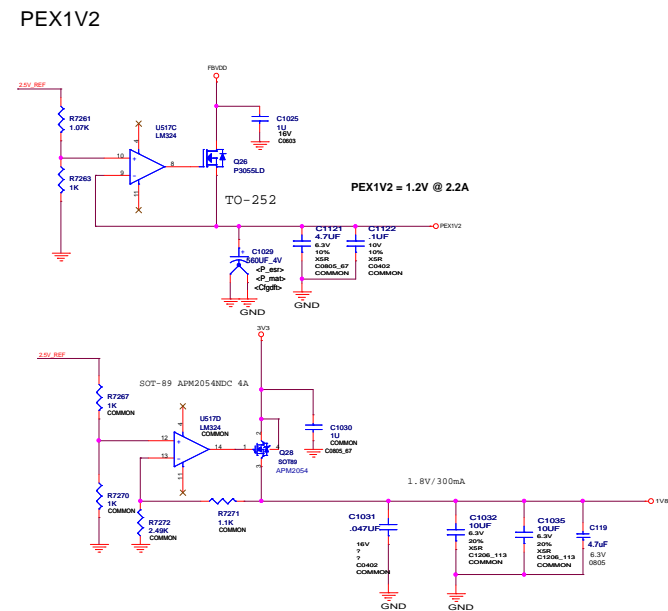
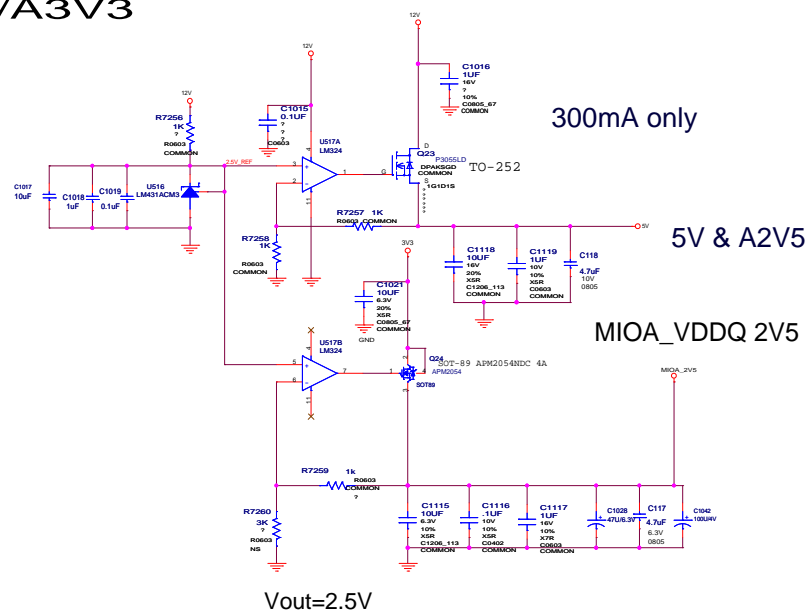
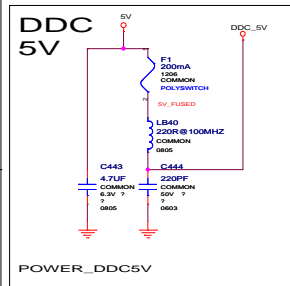


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Straps/Mechanical

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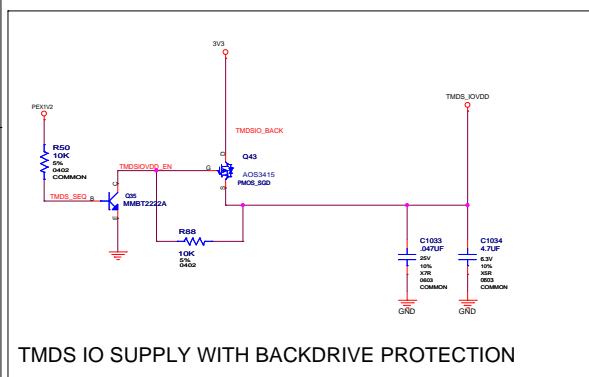
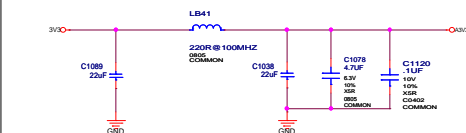
Power Supply TMD5/A3V3



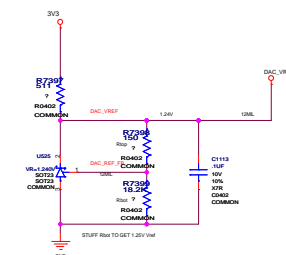
1V8 Supply use for G84 Non-use for G73

$$V_{out} = V_{ref}(1 + R_{top}/R_{bot})$$

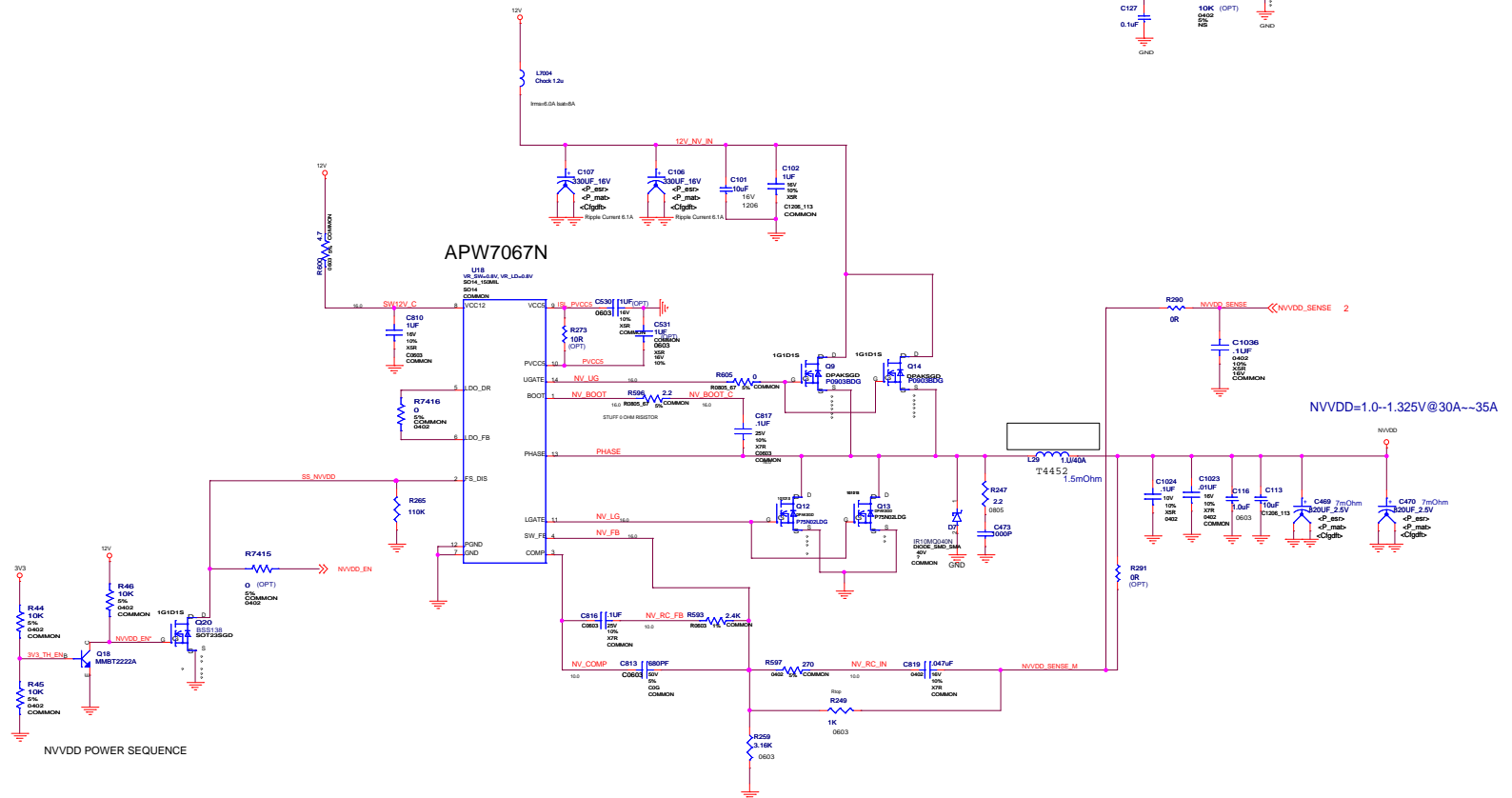
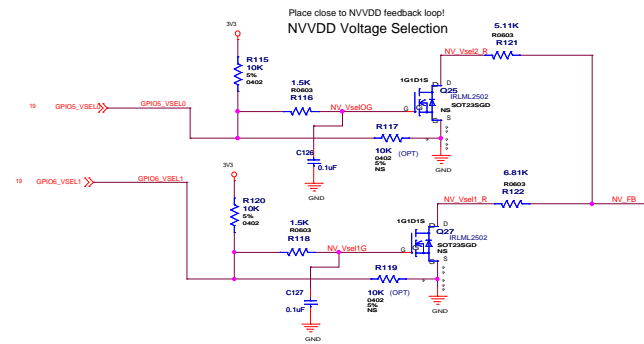
$$V_{out}=1.25(1+1.1K/2.49K)=1.8V$$

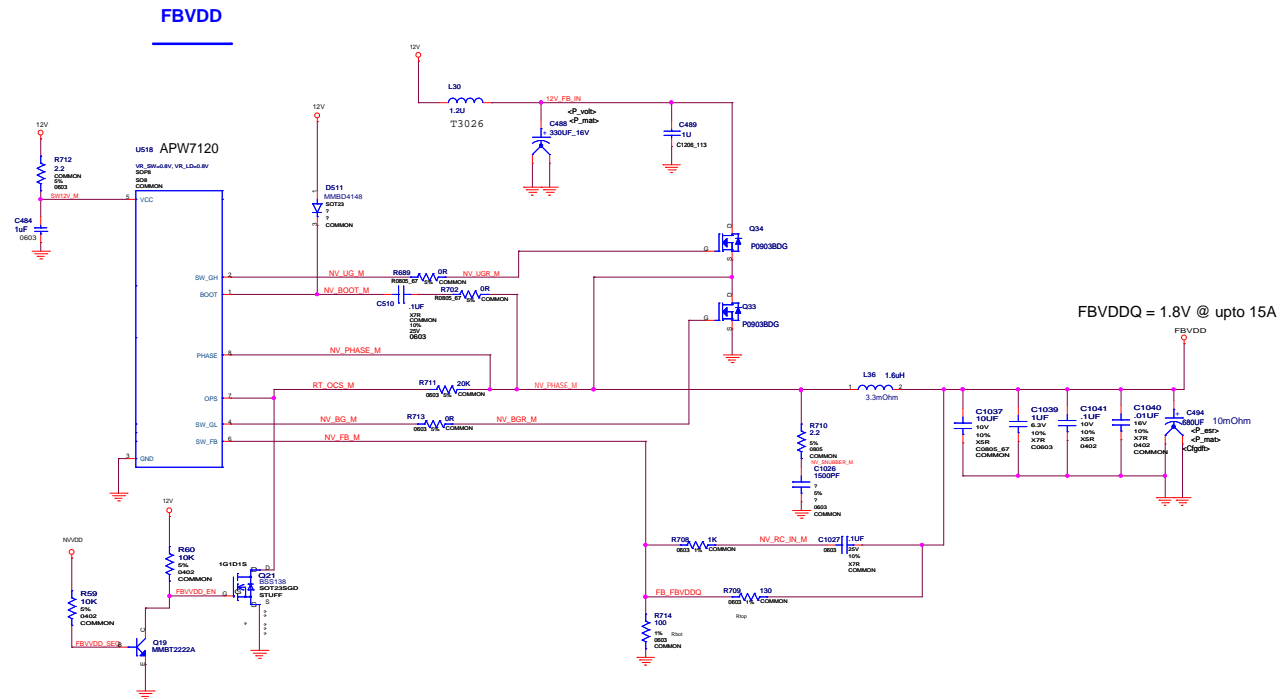


DAC V_REFERENCE SUPPLY for G84



NV_VSEL1	NV_VSEL0	NV_VDD
0	0	1.05V
0	1	1.21V (Default)
1	0	1.17V
1	1	1.329V



FBVDD
$$V_{out} : 1.5K(1+(1.5K/1.15K))=1.84V$$