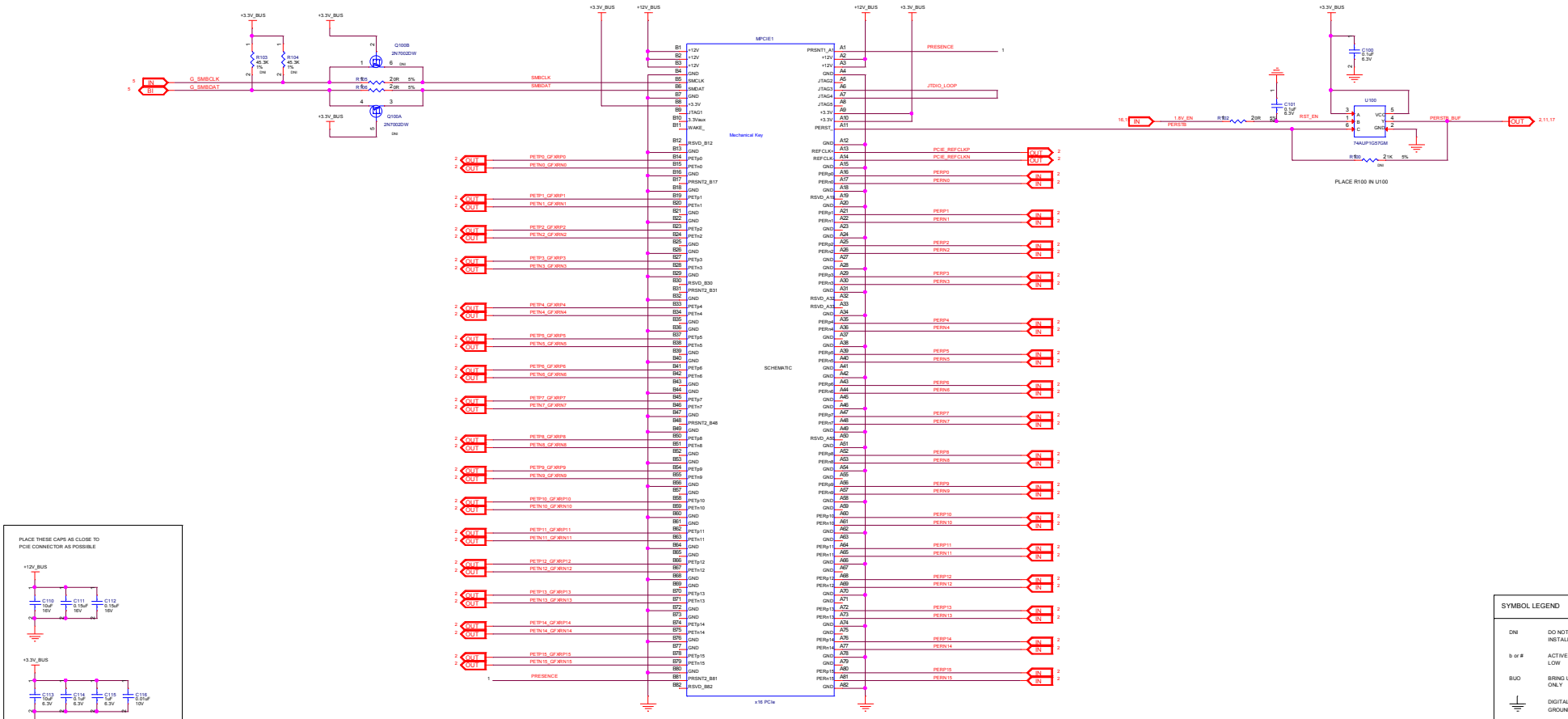

AMD - PLATFORM HARDWARE ENG #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203	
SHEET: PCI-E EDGE CONNECTOR	
DATE: Mon Mar 30 03:01:31 2015	REV: 1.0
SHEET NUMBER: 1 OF 20	
DOCUMENT NUMBER: 105_C936xx_00A	
NOTES: NOTE	

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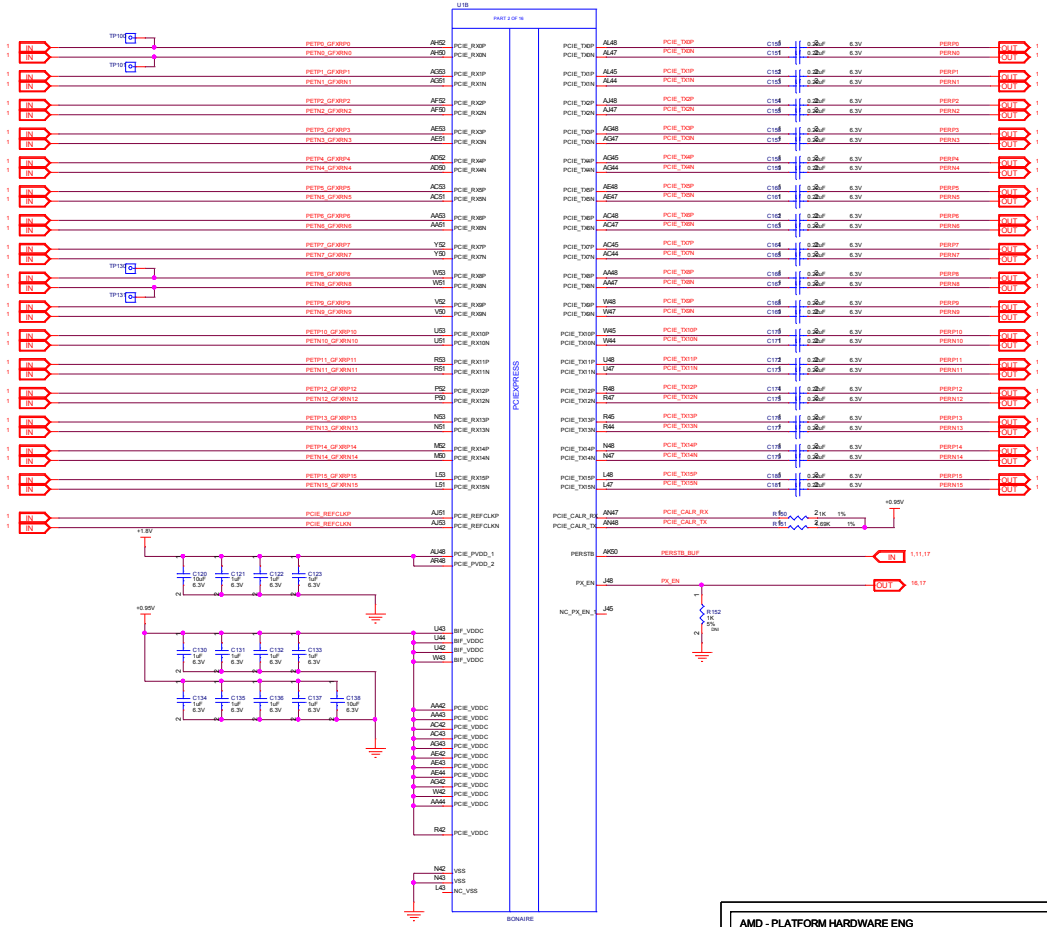
TITLE: TOBAGO G5 4X32bit



AMD - PLATFORM HARDWARE ENG #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203	
SHEET:	TOBAGO PCIE INTERFACE
DATE:	Mon Mar 30 02:42:02 2015
REV:	1.0
SHEET NUMBER:	2 OF 20
DOCUMENT NUMBER:	105_C936xx_00A
NOTES:	NOTE

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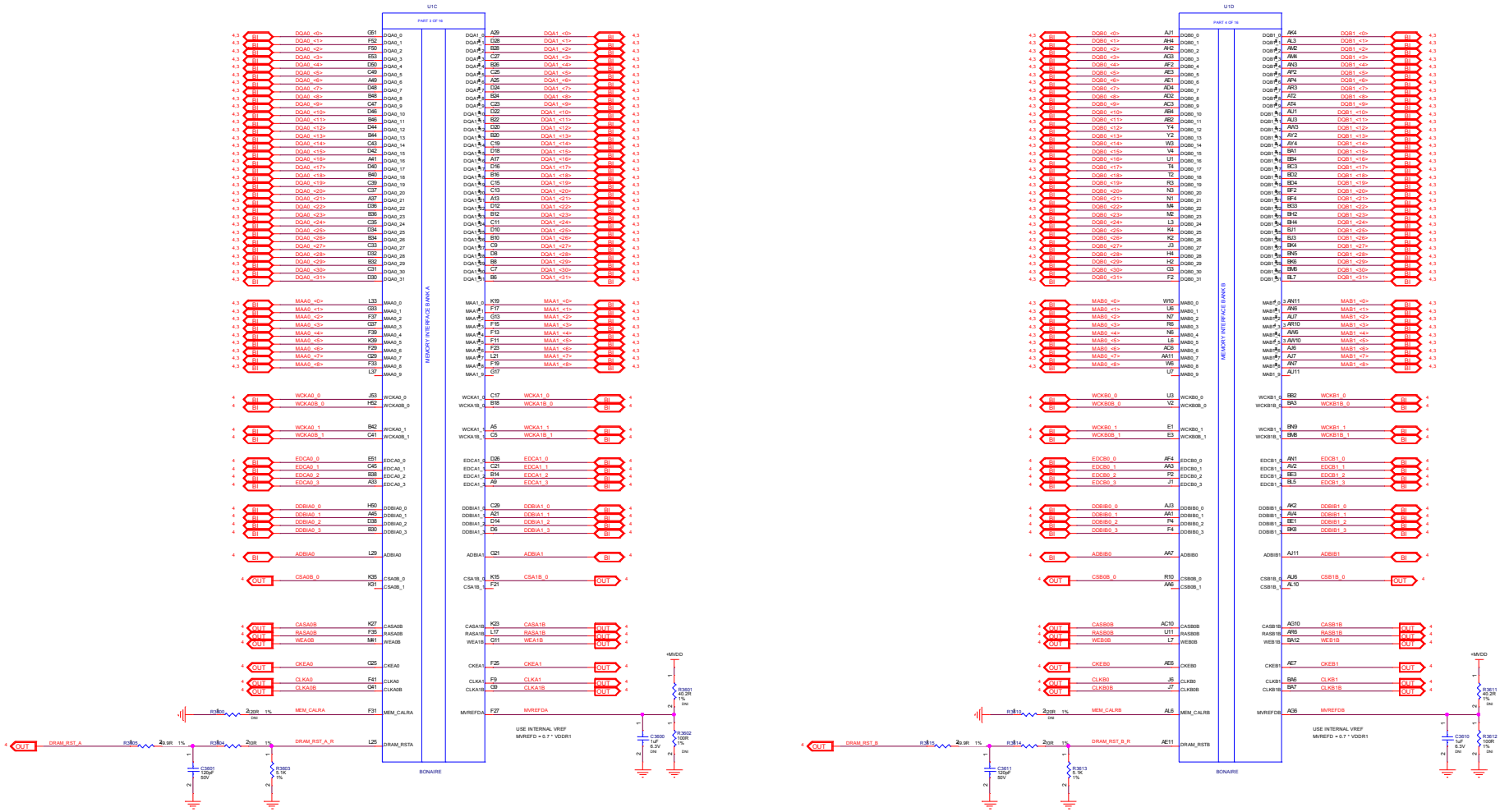
TITLE: TOBAGO G5 4X32bit



AMD - PLATFORM HARDWARE ENG #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203	
SHEET: TOBAGO MEMORY	
DATE: Mon Mar 30 02:42:02 2015	REV: 1.0
SHEET NUMBER: 3 OF 20	
DOCUMENT NUMBER: 105_C936xx_00A	
NOTES: NOTE	

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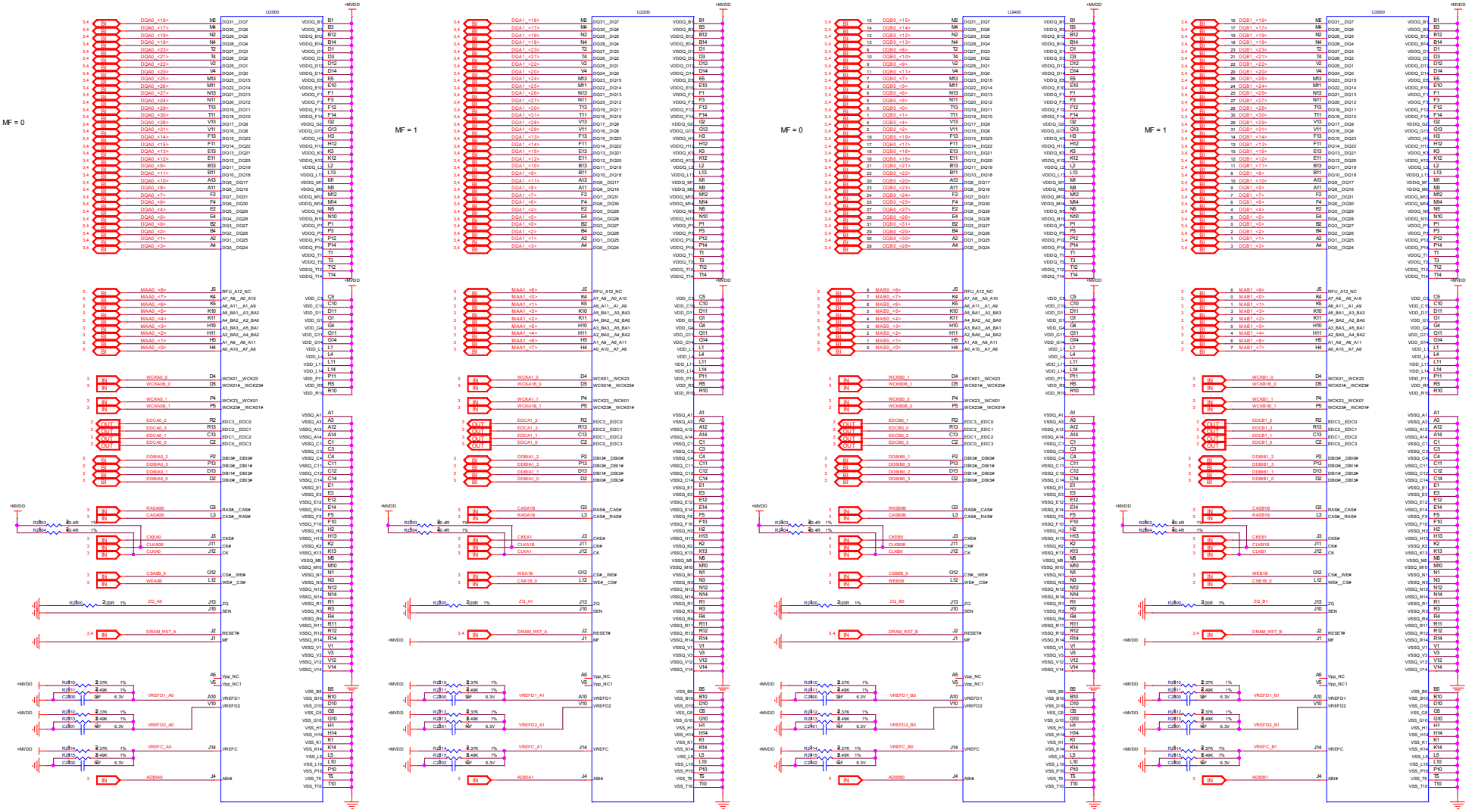
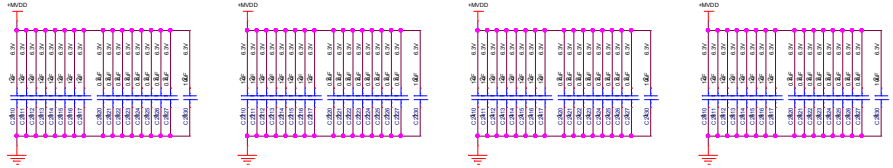
TITLE: TOBAGO G5 4X32bit





AMD - PLATFORM HARDWARE ENG #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203	
SHEET:	GDDR5 x32 CHAB
DATE: Mon Mar 30 02:42:03 2015	REV: 1.0
SHEET NUMBER: 4 OF 20	
DOCUMENT NUMBER:	105_C936x_00A
NOTES: NOTE	

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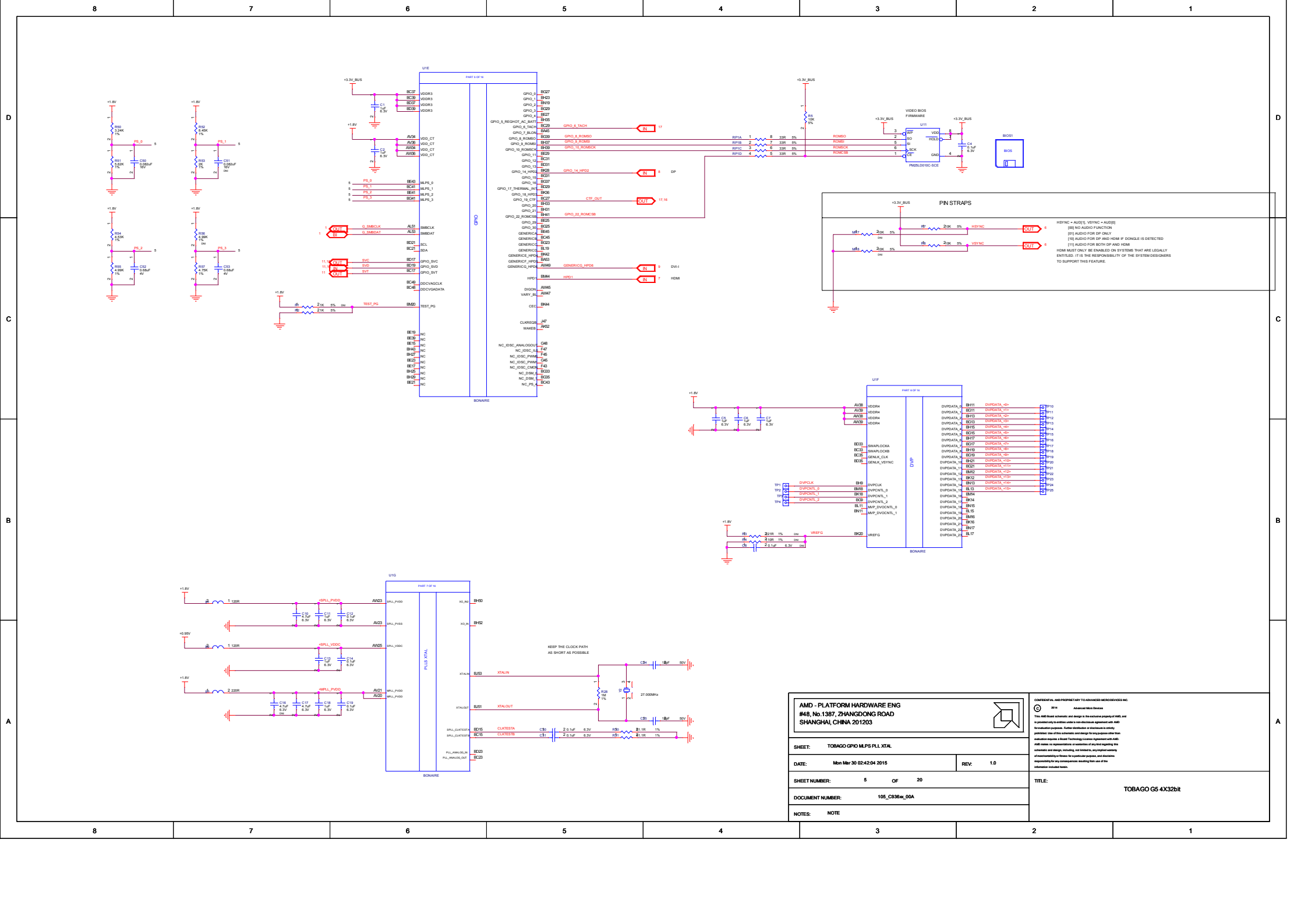
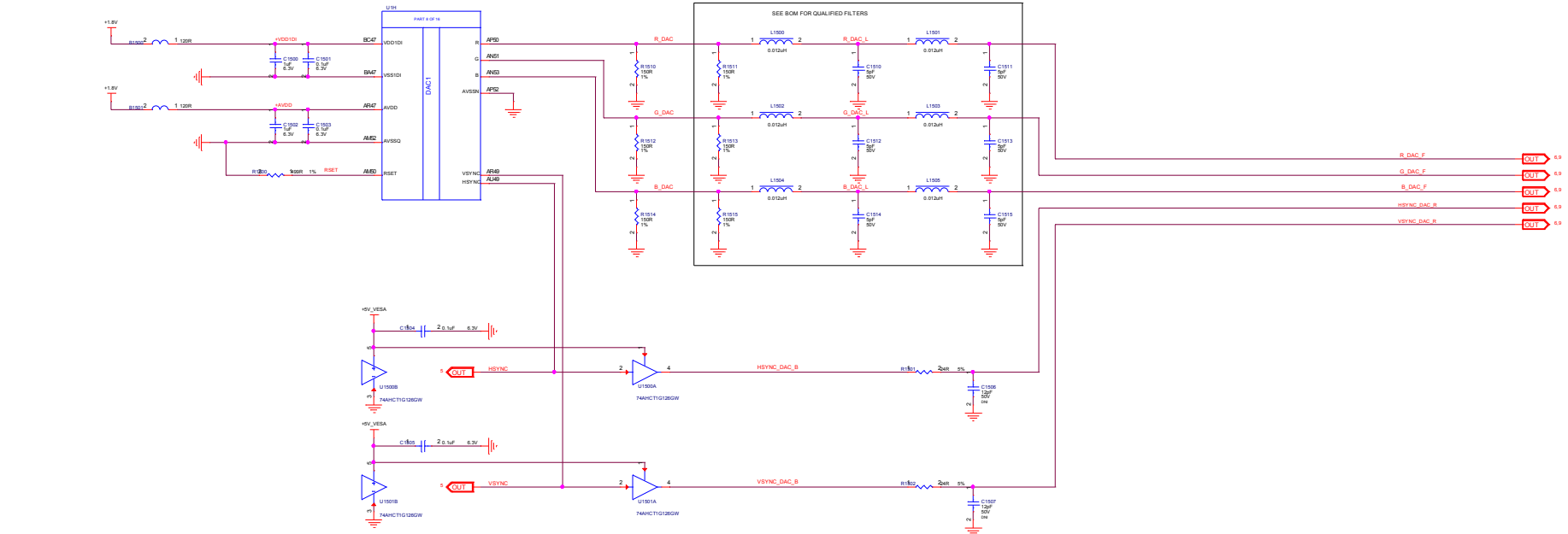
TITLE: TOBAGO G5 4X32bit


U1E
PART 5 OF 16
GPIO
BONAIRE
PIN STRAPS
HSYNC = AUD[1], VSYNC = AUD[0]
[00] NO AUDIO FUNCTION
[01] AUDIO FOR DP ONLY
[10] AUDIO FOR DP AND HDMI IF DONGLE IS DETECTED
[11] AUDIO FOR BOTH DP AND HDMI
HDMI MUST ONLY BE ENABLED ON SYSTEMS THAT ARE LEGALLY ENTITLED. IT IS THE RESPONSIBILITY OF THE SYSTEM DESIGNERS TO SUPPORT THIS FEATURE.
VIDEO BIOS FIRMWARE
PM25LD010C-SCE
U1F
PART 6 OF 16
DVP
U1G
PART 7 OF 16
PLLS XTAL
KEEP THE CLOCK PATH AS SHORT AS POSSIBLE
27.000MHz
AMD - PLATFORM HARDWARE ENG
#48, No.1387, ZHANGDONG ROAD
SHANGHAI, CHINA 201203
SHEET: TOBAGO GPIO MLPS PLL XTAL
DATE: Mon Mar 30 02:42:04 2015
REV: 1.0
SHEET NUMBER: 5 OF 20
DOCUMENT NUMBER: 105_C936xx_00A
NOTES: NOTE
TITLE: TOBAGO G5 4X32bit



OPTIONAL ESD PROTECTION DIODES

AMD - PLATFORM HARDWARE ENG #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203	
SHEET: TOBAGO DAC	
DATE: Mon Mar 30 02:42:05 2015	REV: 1.0
SHEET NUMBER: 6 OF 20	
DOCUMENT NUMBER: 105_C936xx_00A	
NOTES: NOTE	

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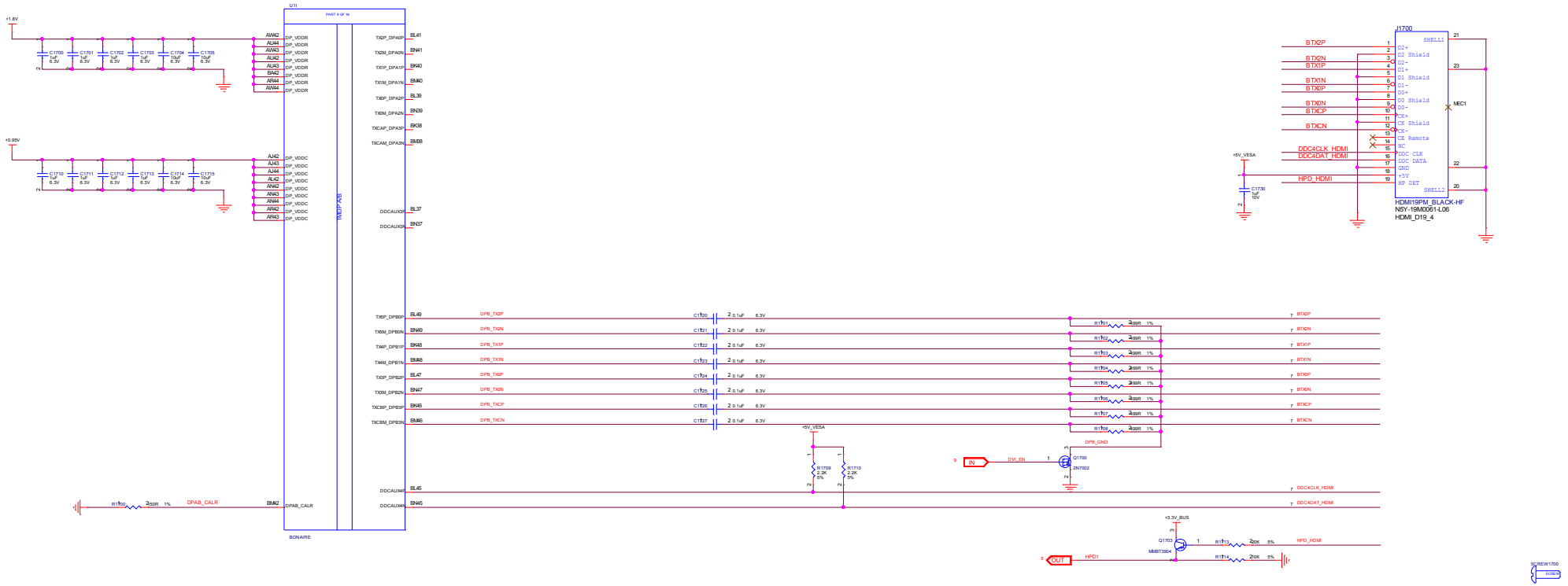
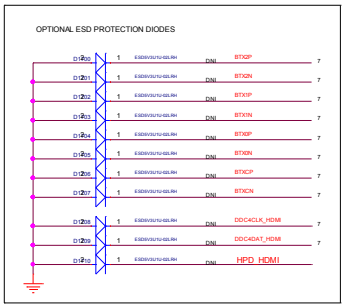
TITLE: TOBAGO G5 4X32bit





AMD - PLATFORM HARDWARE ENG #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203	
SHEET: TOBAGO TMDPAB HDMI	
DATE: Mon Mar 30 02:42:05 2015	REV: 1.0
SHEET NUMBER: 7 OF 20	
DOCUMENT NUMBER: 105_C936xx_00A	
NOTES: NOTE	

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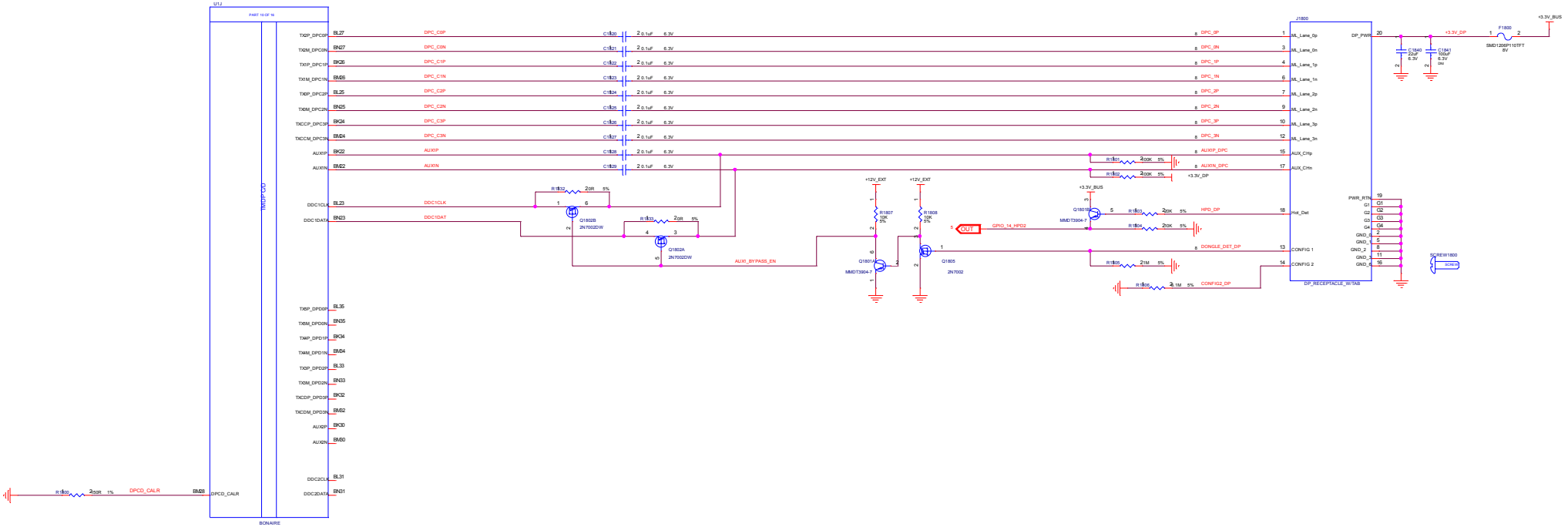
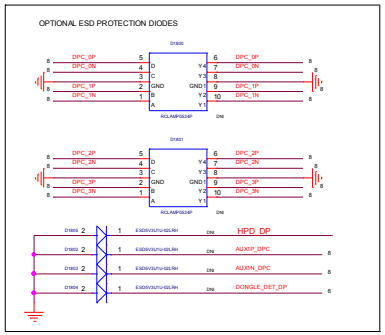
TITLE: TOBAGO G5 4X32bit





AMD - PLATFORM HARDWARE ENG #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203	
SHEET: TOBAGO TMDPCD DP	
DATE: Mon Mar 30 02:42:05 2015	REV: 1.0
SHEET NUMBER: 8 OF 20	
DOCUMENT NUMBER: 105_C936xx_00A	
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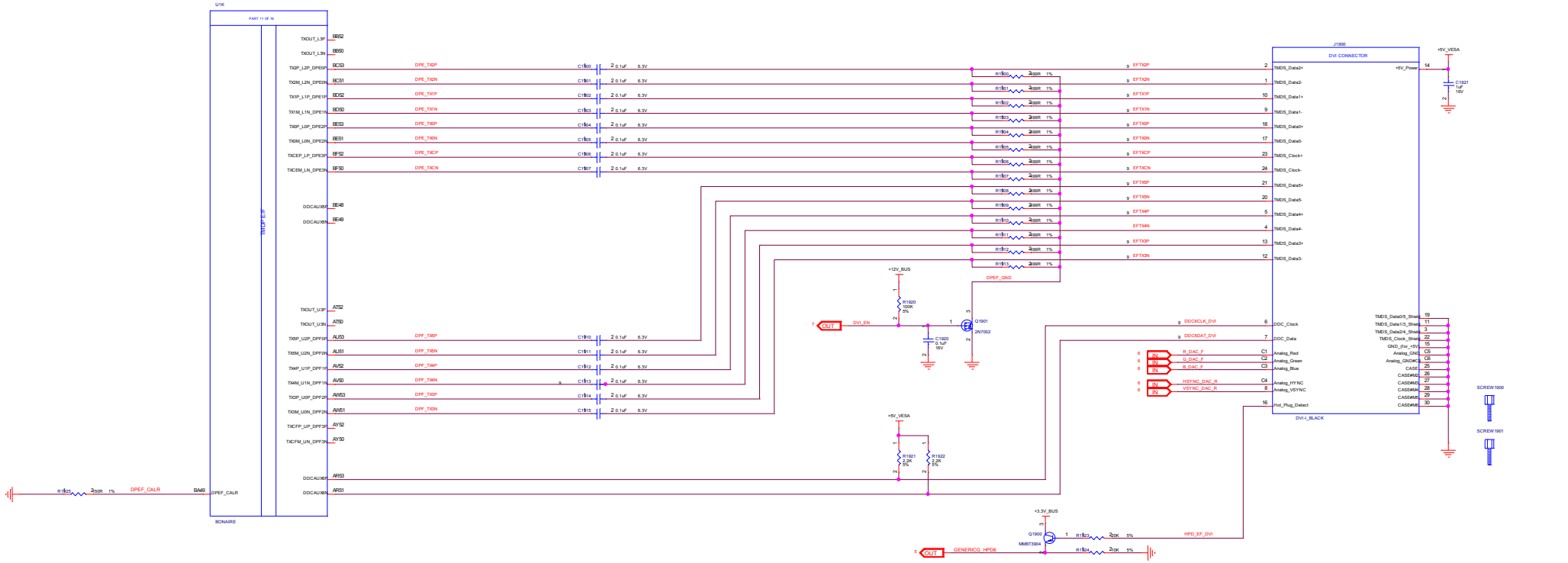
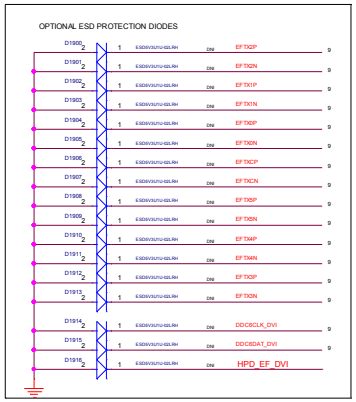
TITLE: TOBAGO G5 4X32bit





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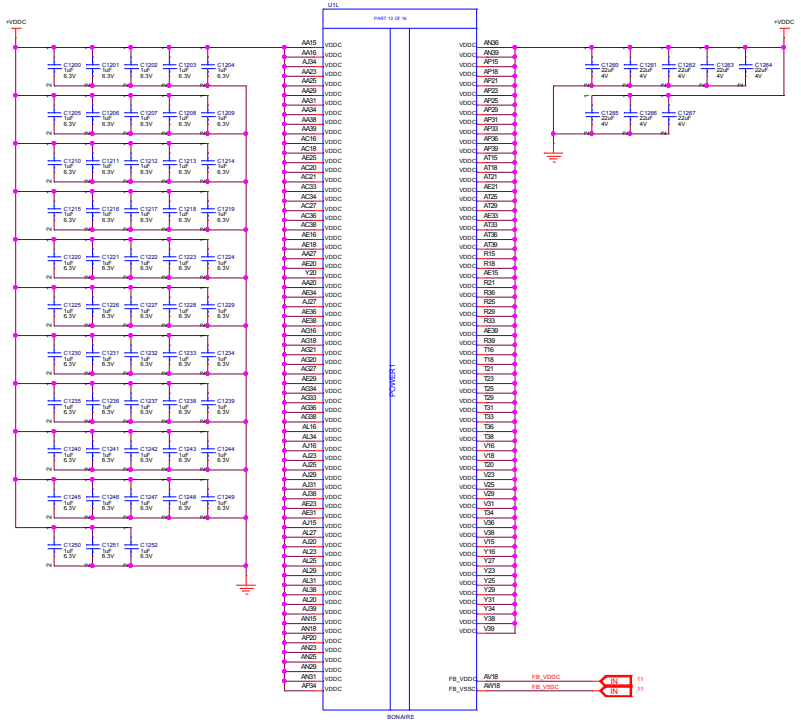
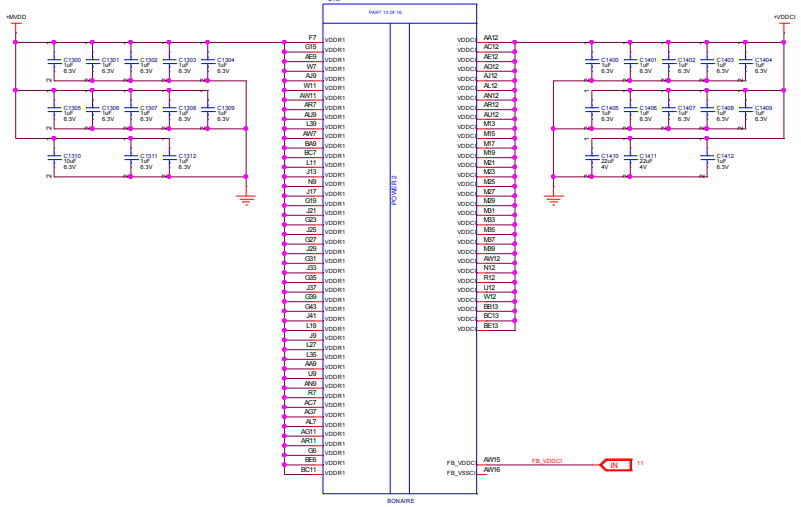
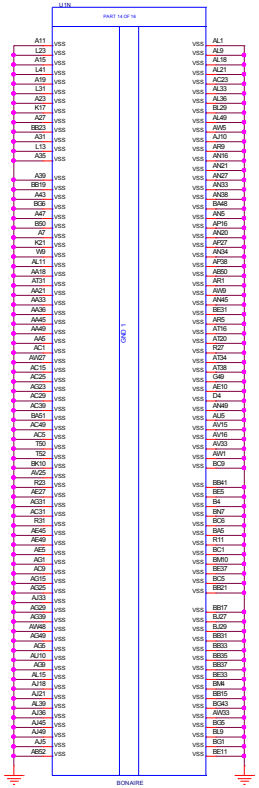
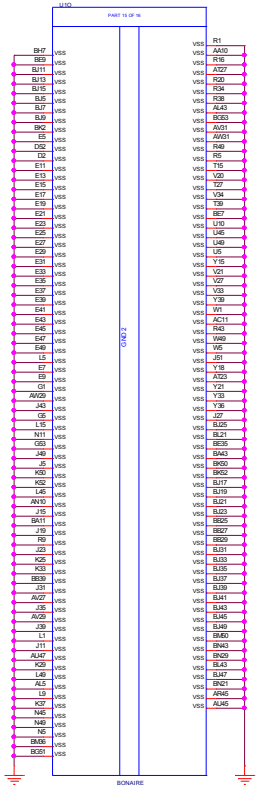
SHEET: TOBAGO TMDPEF	
DATE: Mon Mar 30 02:42:06 2015 REV: 1.0	
SHEET NUMBER: 9 OF 20	TITLE: TOBAGO G5 4X32bit
DOCUMENT NUMBER: 105_C936xx_00A	
NOTES: NOTE	









AMD - PLATFORM HARDWARE ENG #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203	
SHEET: TOBAGO POWER GND	
DATE: Mon Mar 30 02:42:06 2015	REV: 1.0
SHEET NUMBER: 10 OF 20	
DOCUMENT NUMBER: 105_C936x_00A	
NOTES: NOTE	TITLE: TOBAGO G5 4X32bit

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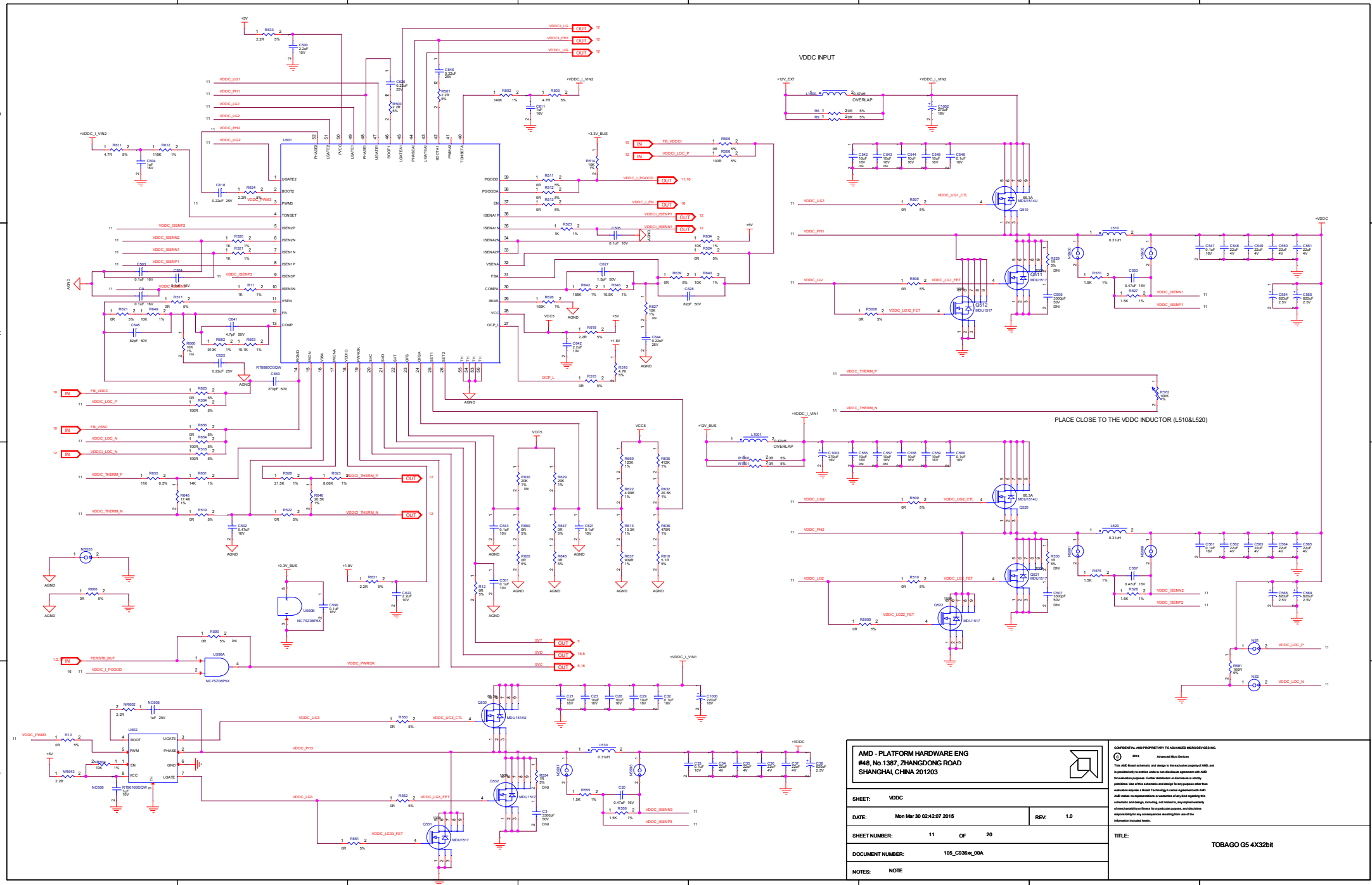
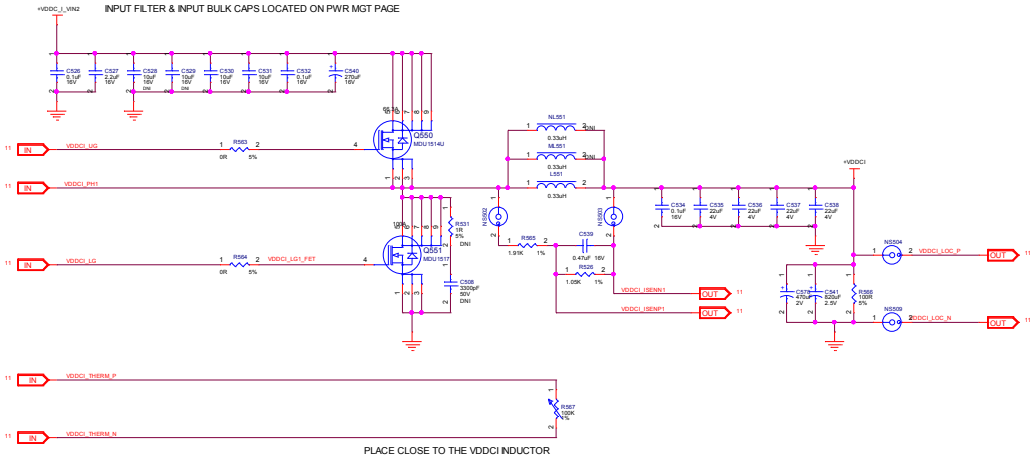

VDDC INPUT
PLACE CLOSE TO THE VDDC INDUCTOR (L510&L520)
RT8880CGQW
MDU1514U
MDU1517
NC7SZ08P5X
NC7SZ08P5X
RT9610BGQW
AMD - PLATFORM HARDWARE ENG
#48, No.1387, ZHANGDONG ROAD
SHANGHAI, CHINA 201203
SHEET: VDDC
DATE: Mon Mar 30 02:42:07 2015
REV: 1.0
SHEET NUMBER: 11 OF 20
DOCUMENT NUMBER: 105_C936xx_00A
NOTES: NOTE
TITLE: TOBAGO G5 4X32bit



AMD - PLATFORM HARDWARE ENG #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203	
SHEET: VDDCI	
DATE: Mon Mar 30 02:42:08 2015	REV: 1.0
SHEET NUMBER: 12 OF 20	
DOCUMENT NUMBER: 105_C936xx_00A	
NOTES: NOTE	

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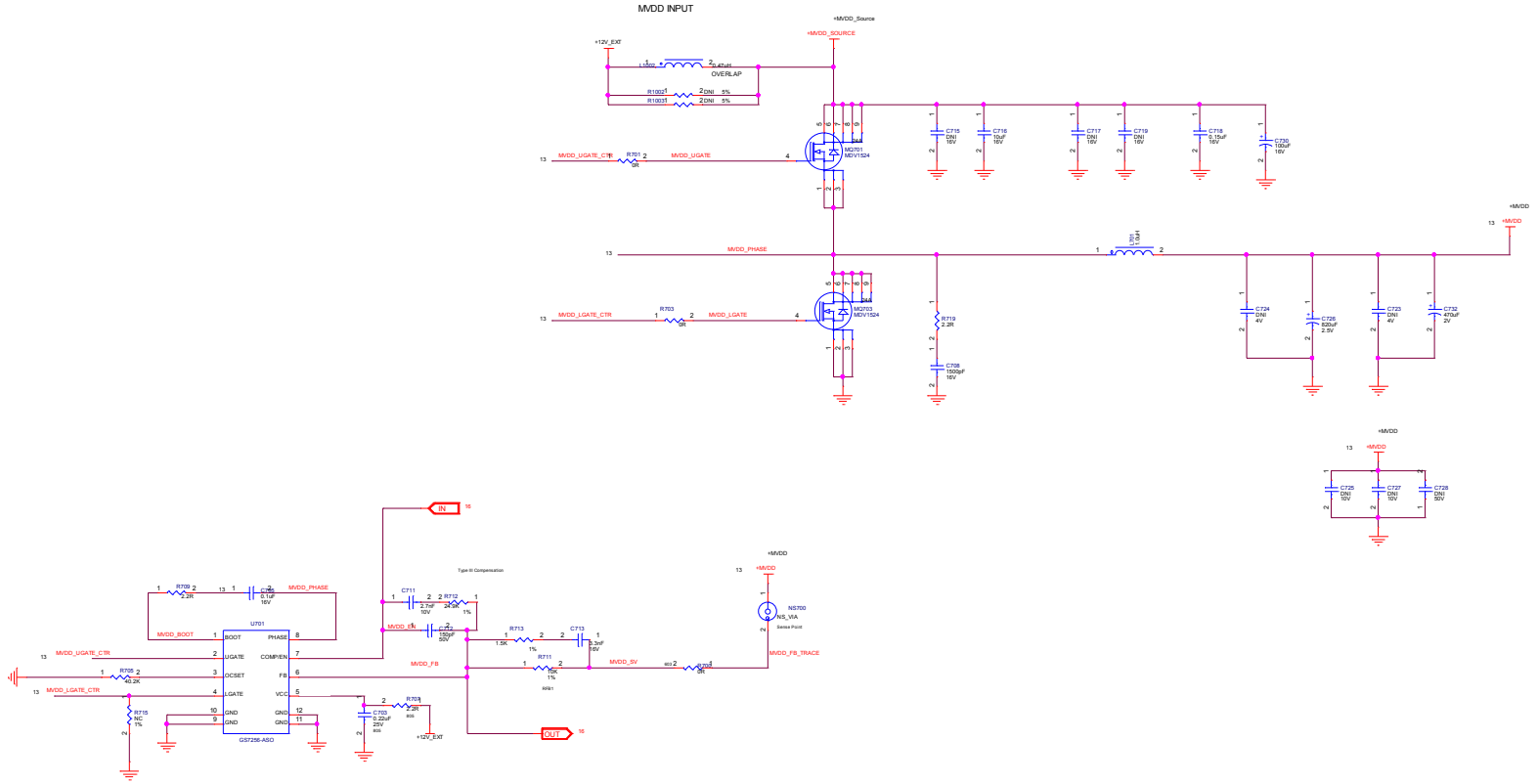
TITLE: TOBAGO G5 4X32bit



AMD - PLATFORM HARDWARE ENG #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203	
SHEET: MVDD	
DATE: Mon Mar 30 02:42:08 2015	REV: 1.0
SHEET NUMBER: 13 OF 20	
DOCUMENT NUMBER: 105_C936xx_00A	
NOTES: NOTE	

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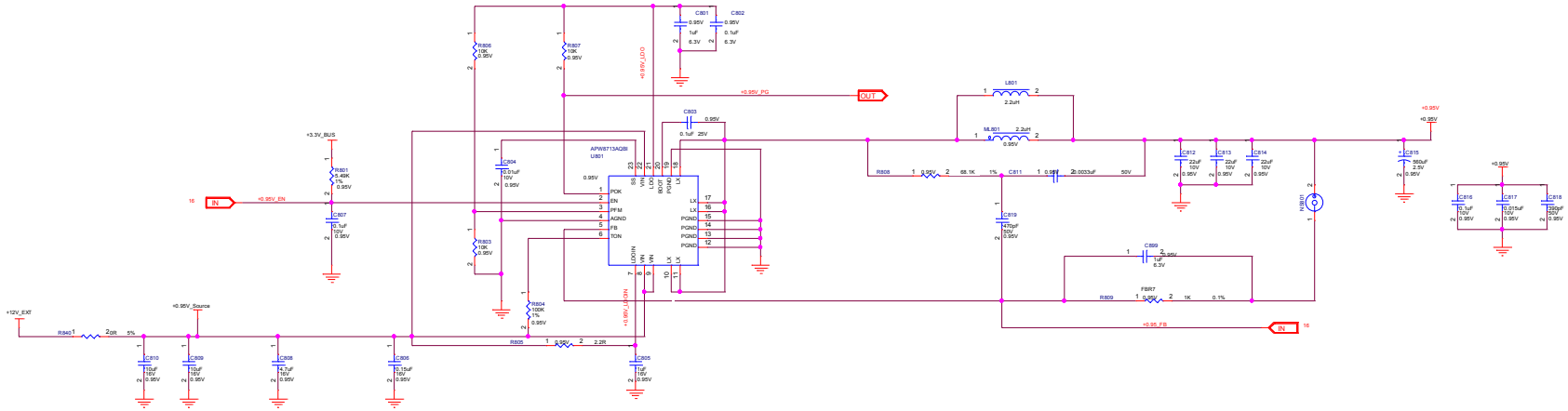
TITLE: TOBAGO G5 4X32bit



AMD - PLATFORM HARDWARE ENG #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203	
SHEET: 0.95VREG	
DATE: Mon Mar 30 02:42:08 2015	REV: 1.0
SHEET NUMBER: 14 OF 20	
DOCUMENT NUMBER: 105_C936xx_00A	
NOTES: NOTE	

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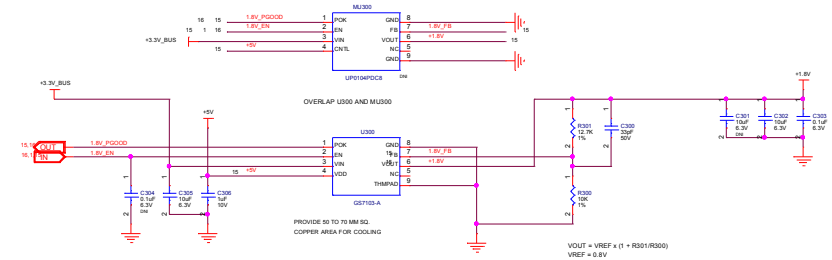
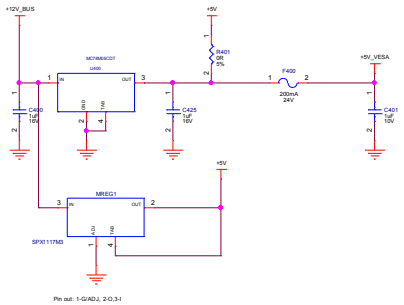
TITLE: TOBAGO G5 4X32bit

1.8V REGULATOR



5V REGULATOR



AMD - PLATFORM HARDWARE ENG #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203	
SHEET: SMALL RAIL REGULATORS	
DATE: Mon Mar 30 02:42:09 2015	REV: 1.0
SHEET NUMBER: 15 OF 20	
DOCUMENT NUMBER: 105_C936xx_00A	
NOTES: NOTE	

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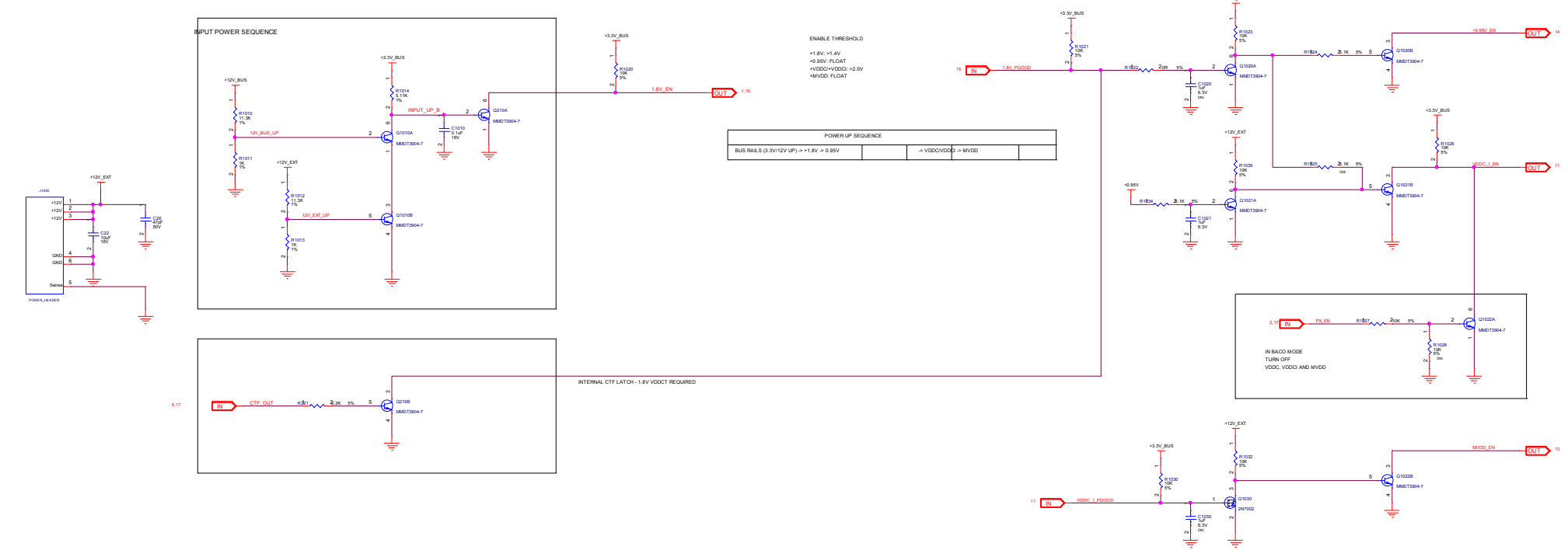
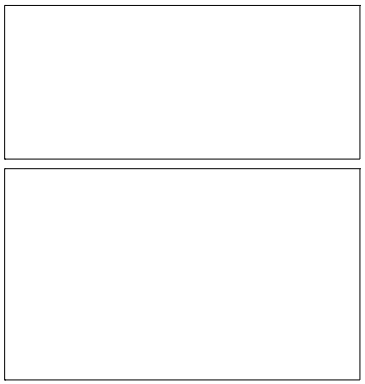
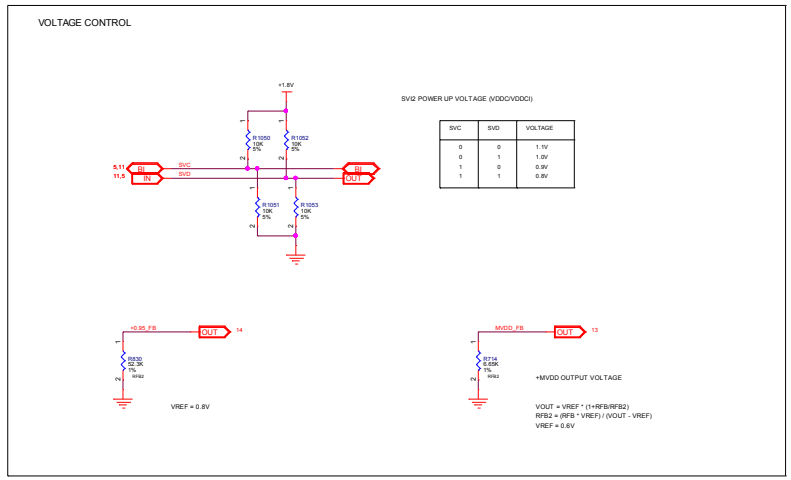
TITLE: TOBAGO G5 4X32bit







SVC	SVD	VOLTAGE
0	0	1.1V
0	1	1.0V
1	0	0.9V
1	1	0.8V

AMD - PLATFORM HARDWARE ENG
#48, No.1387, ZHANGDONG ROAD
SHANGHAI, CHINA 201203

SHEET:	POWER MANAGEMENT
DATE:	Mon Mar 30 02:42:09 2015
REV:	1.0
SHEET NUMBER:	16 OF 20
DOCUMENT NUMBER:	105_C936xx_00A
NOTES:	NOTE

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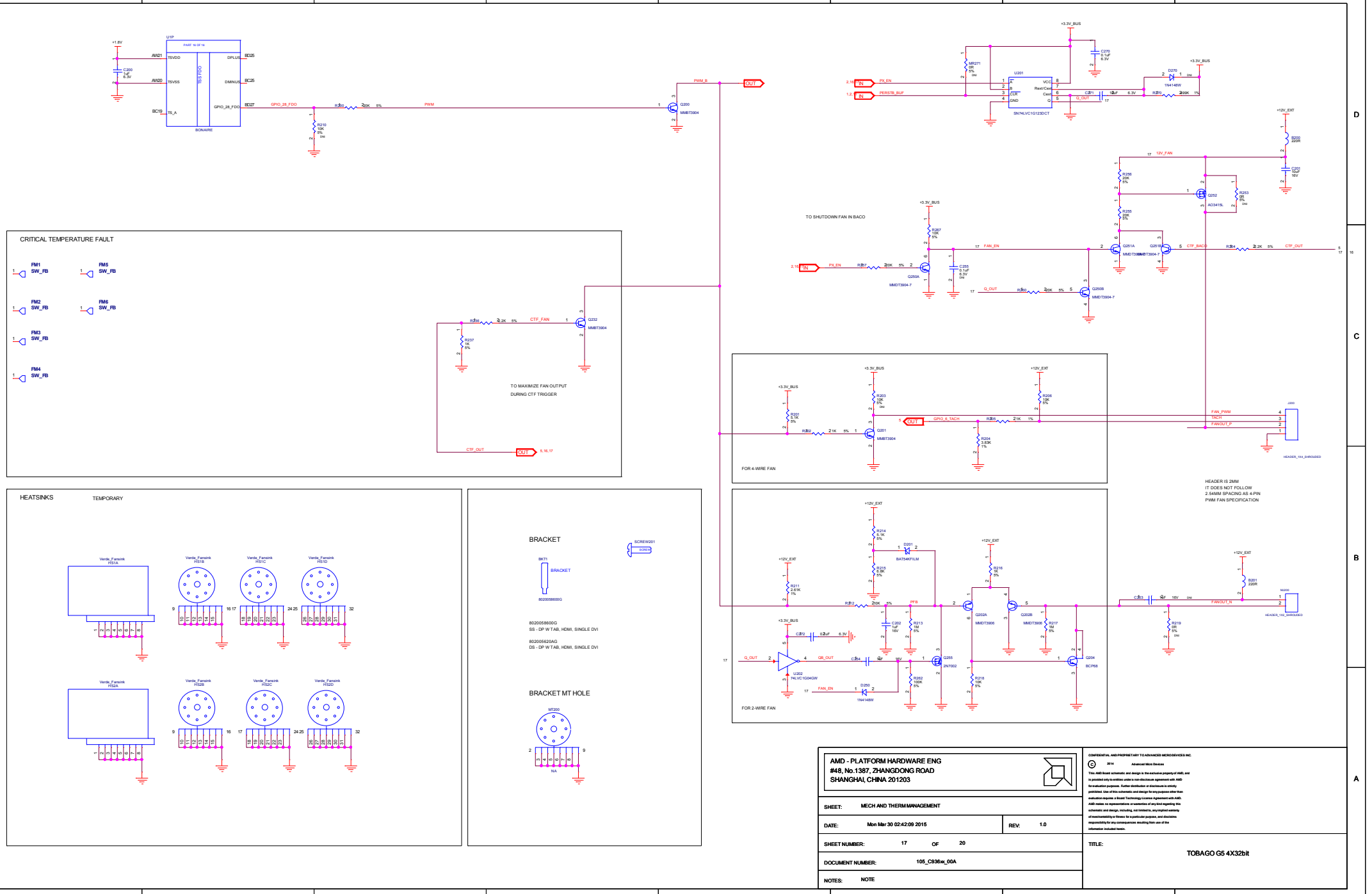
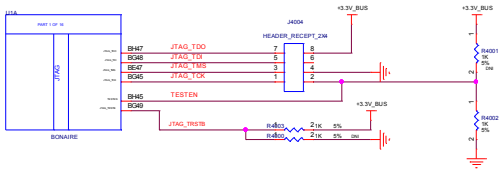
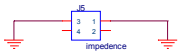
TITLE: TOBAGO G5 4X32bit


CRITICAL TEMPERATURE FAULT
FM1 SW_FB
FM2 SW_FB
FM3 SW_FB
FM4 SW_FB
FM5 SW_FB
FM6 SW_FB
TO MAXIMIZE FAN OUTPUT DURING CTF TRIGGER
HEATSINKS
TEMPORARY
BRACKET
BRACKET MT HOLE
8020058600G
SS - DP W TAB, HDMI, SINGLE DVI
8020056200AG
DS - DP W TAB, HDMI, SINGLE DVI
TO SHUTDOWN FAN IN BACO
FOR 4-WIRE FAN
FOR 2-WIRE FAN
HEADER IS 2MM
IT DOES NOT FOLLOW
2.54MM SPACING AS 4-PIN
PWM FAN SPECIFICATION
AMD - PLATFORM HARDWARE ENG
#48, No.1387, ZHANGDONG ROAD
SHANGHAI, CHINA 201203
SHEET: MECH AND THERM MANAGEMENT
DATE: Mon Mar 30 02:42:09 2015
REV: 1.0
SHEET NUMBER: 17 OF 20
DOCUMENT NUMBER: 105_C936xx_00A
NOTES: NOTE
TITLE: TOBAGO G5 4X32bit

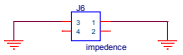
JTAG



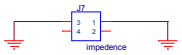
TOP
Single end
RGB
50 ohm +/- 10%
0.102mm
4.02 mils



TOP
Different
TMDS
80 ohm +/- 10 %
0.11 mm / 0.16 mm
4.33 mils / 6.3 mils



L3
Different
Memory clock
80 ohm +/- 10 %
0.11 mm / 0.16 mm
4.33 mils / 6.3 mils



Bottom
Different
PCIE
85 ohm +/- 10 %
0.112 mm / 0.188 mm
4.41 mils / 7.04 mils

L3
Single end
Memory
48 ohm +/- 5 ohm
0.11mm
4.33 mils

Bottom
Single end
Memory
48 ohm +/- 5 ohm
0.11mm
4.33 mils

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SHEET:	DEBUG CIRCUITS
DATE:	Mon Mar 30 02:42:10 2015
REV:	1.0
SHEET NUMBER:	18 OF 20
DOCUMENT NUMBER:	105_C936xx_00A
NOTES:	NOTE

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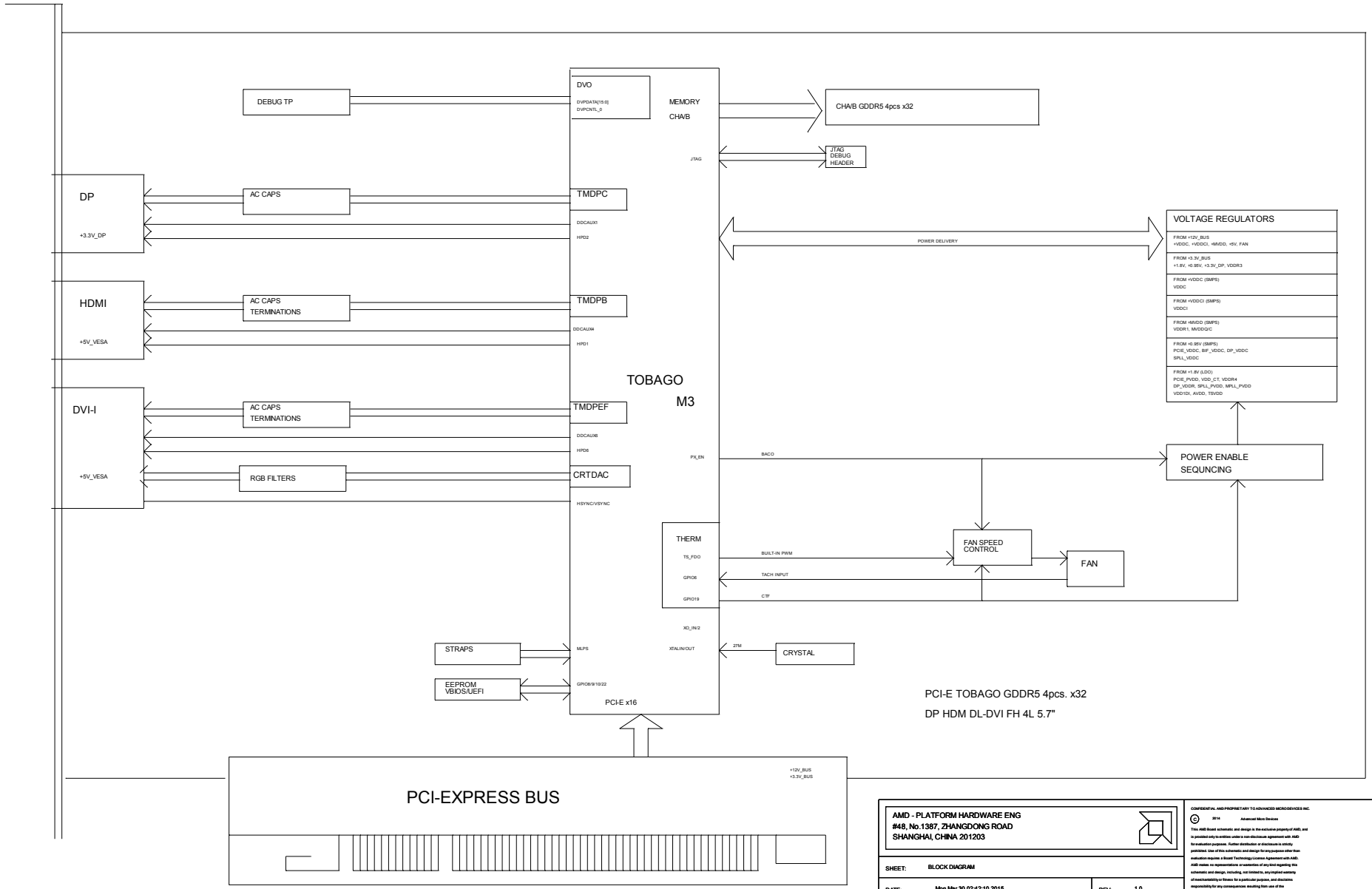
TITLE:
TOBAGO G5 4X32bit



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SHEET:	BLOCK DIAGRAM
DATE:	Mon Mar 30 02:42:10 2015
REV:	1.0
SHEET NUMBER:	19 OF 20
DOCUMENT NUMBER:	105_C936xx_00A
NOTES:	NOTE
TITLE:	TOBAGO G5 4X32bit

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DOCUMENT NUMBER: 105_C936xx_00A

DATE: Wed Feb 11 05:56:21 2015

SHEET NUMBER: 20 OF 20

REV: 1.0

REVISION HISTORY

ENGINEER: PEAK, DONG

NOTES: NOTE

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SCH Rev	PCB Rev	Date	REVISION DESCRIPTON
0	00A	02/10/2015	INITIAL DESIGN