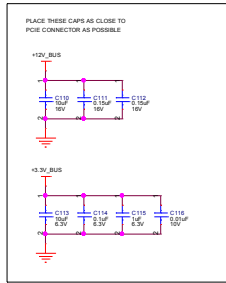




(1) PCI-EXPRESS EDGE CONNECTOR



SYMBOL LEGEND	
DNI	DO NOT INSTALL
b or #	ACTIVE LOW
BUO	BRING UP ONLY
	DIGITAL GROUND
	ANALOG GROUND



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REV: 1.0

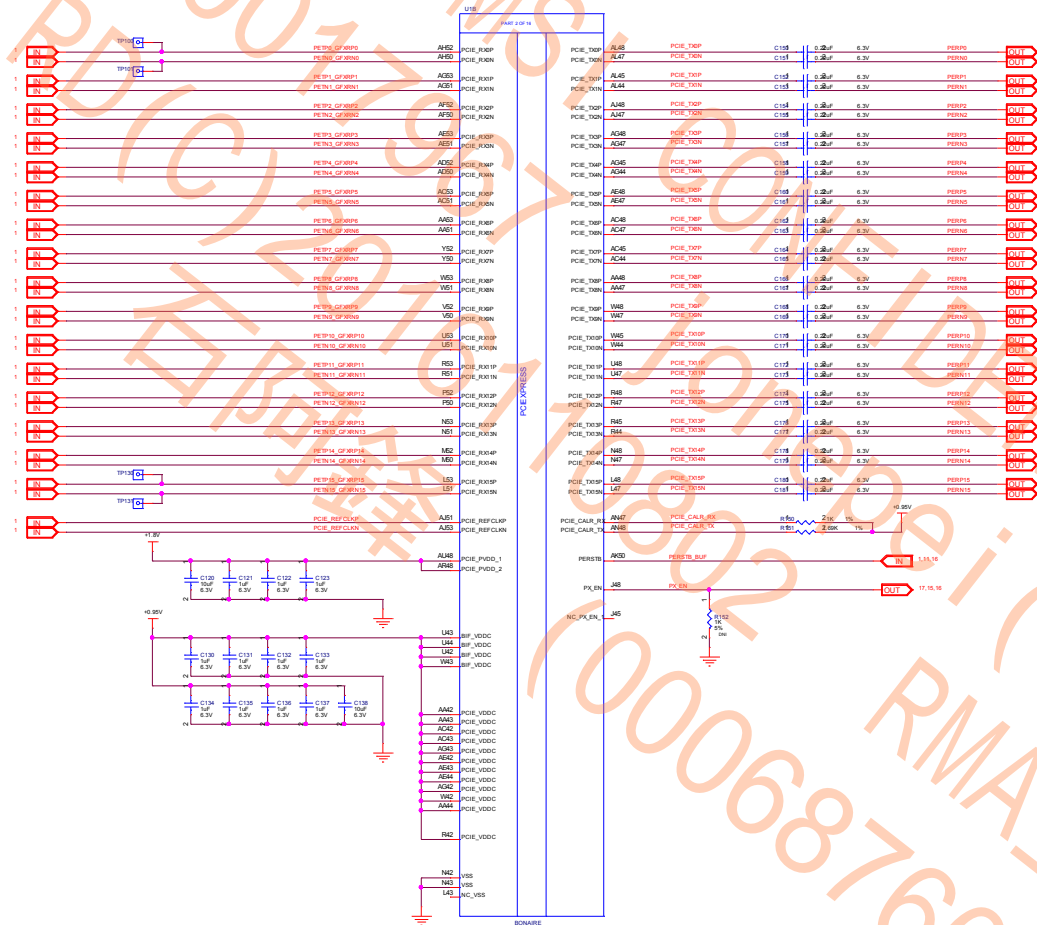
OF 1

105_C913xx_00

NOTES:	NOTE
--------	------

TOBAGO GDDR5 X32

(2) TOBAGO PCIE INTERFACE



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

SHEET: TOBAGO PCN

DATE: Thu Apr 23 05:54:17 2015

SHEET NUMBER: 2 OF 11

DOCUMENT NUMBER: 105_C913xx_00

NOTES:	NOTE
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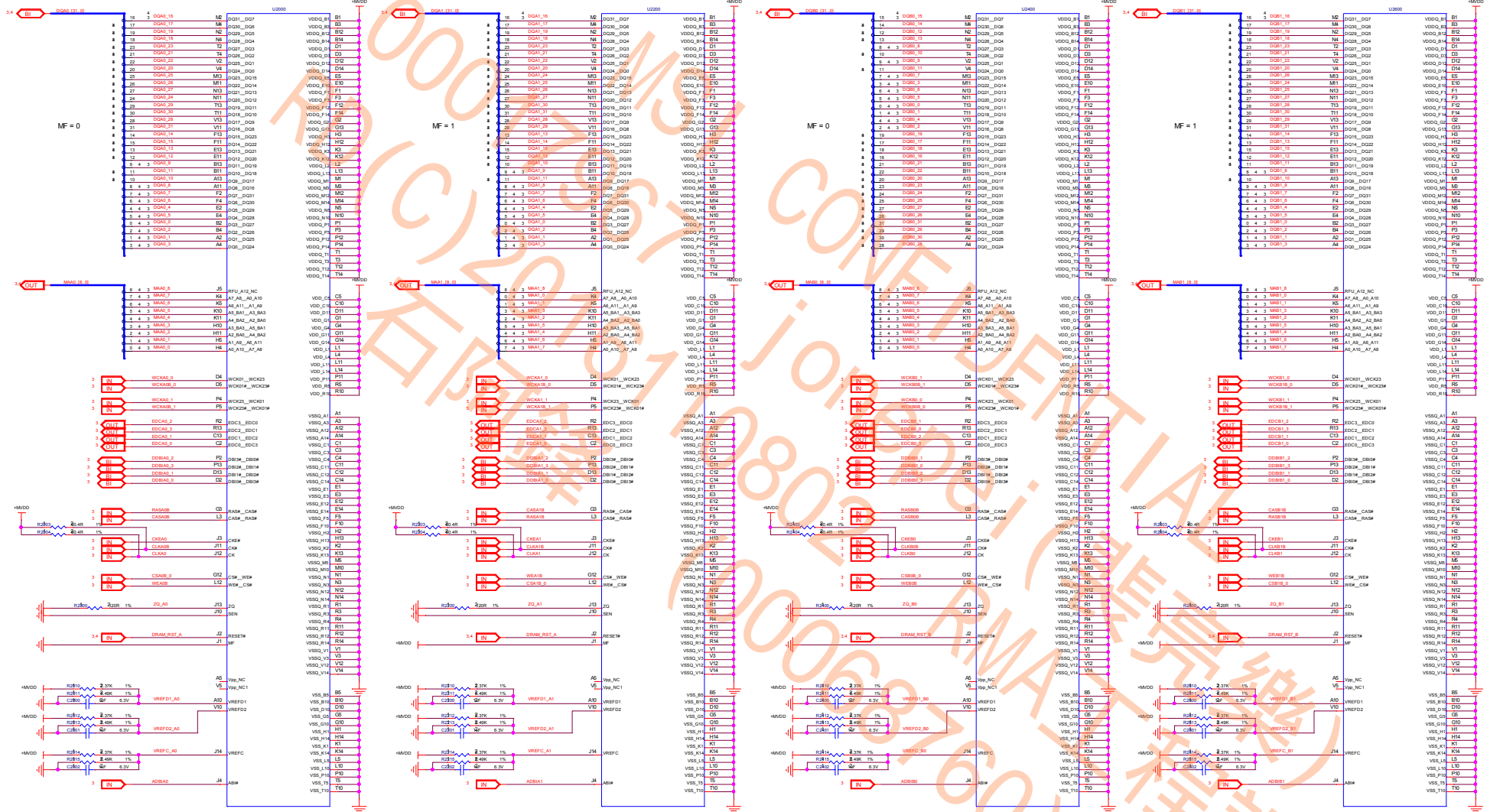
TITLE: TOBAGO GDDR5 X32

D



TITLE: TOBAGO GDDR5 X32

(4) GDDR5 CHAB x32



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#48, No.1387, ZHANGDONG ROAD
SHANGHAI, CHINA 201203

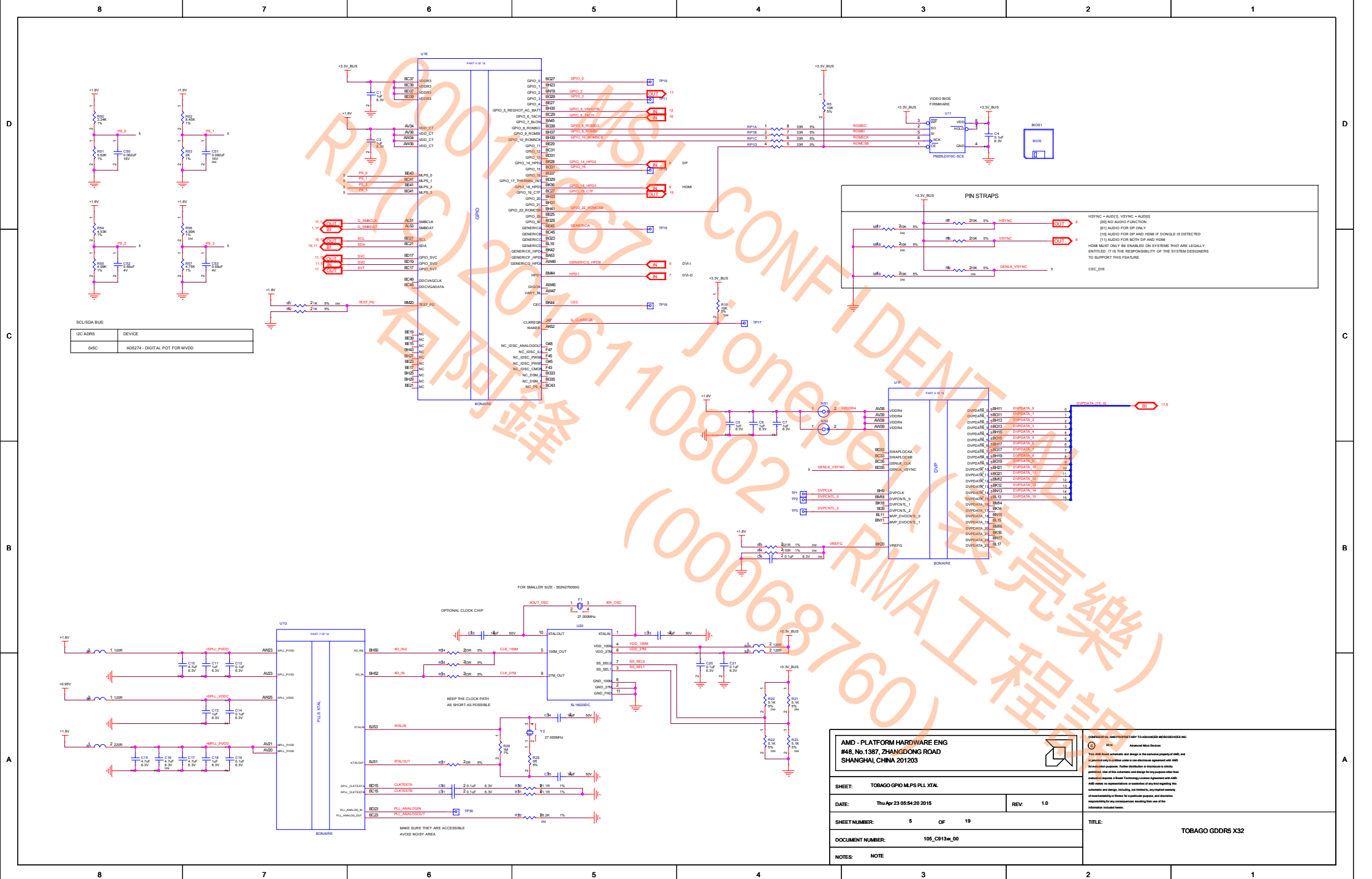
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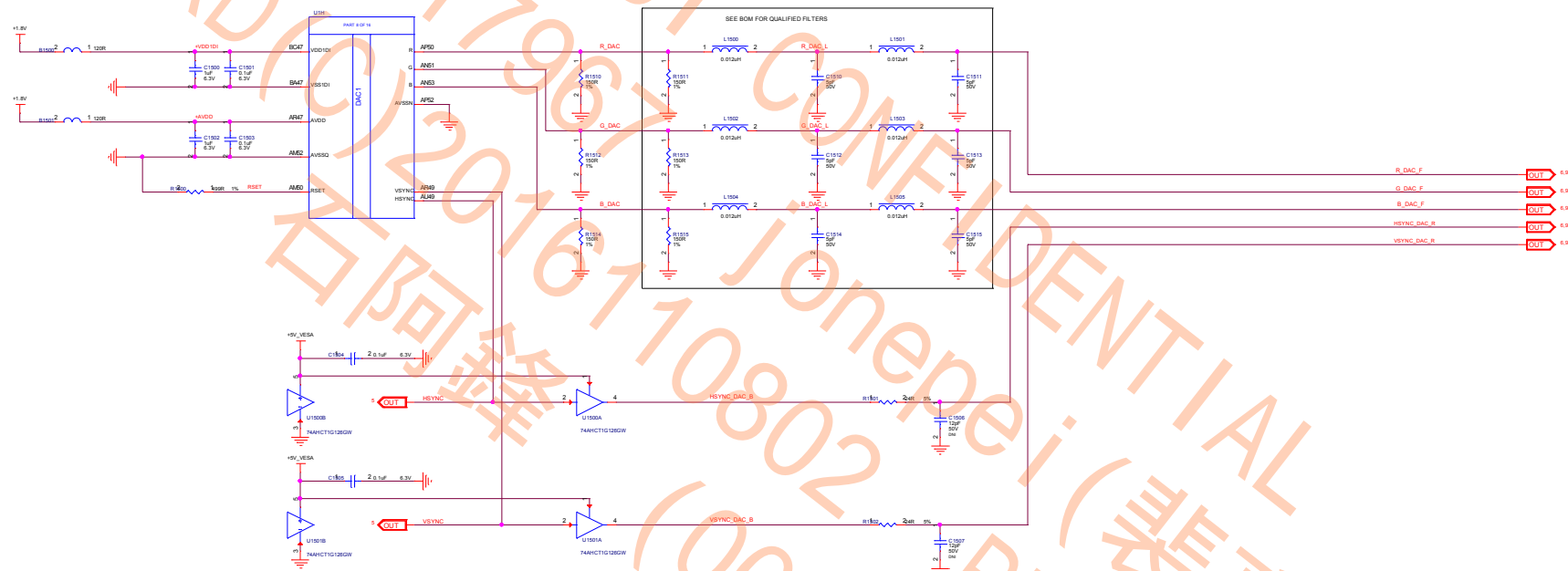
SHEET:	GDDR5 x32 CHAB	
DATE:	Thu Apr 23 05:54:10 2015	REV: 1.0
SHEET NUMBER:	4	OF 19
DOCUMENT NUMBER:	105_C913w_00	
NOTES:	NOTE	

TITLE:

T0BAGO GDDR5 X32



(6) TOBAGO DAC



OPTIONAL ESD PROTECTION DIODES



AMD - PLATFORM HARDWARE ENG
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SHANGHAI, CHINA 201203

SHEET: TOBAGO DAC

DATE: Thu Apr 23 05:54:20 2015

REV: 1.0

SHEET NUMBER: 6 OF 19

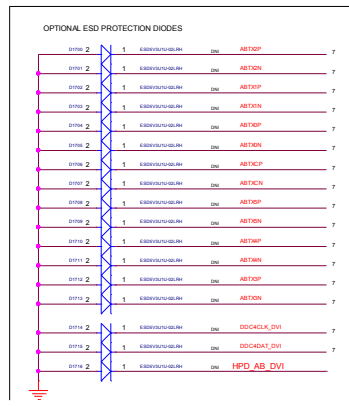
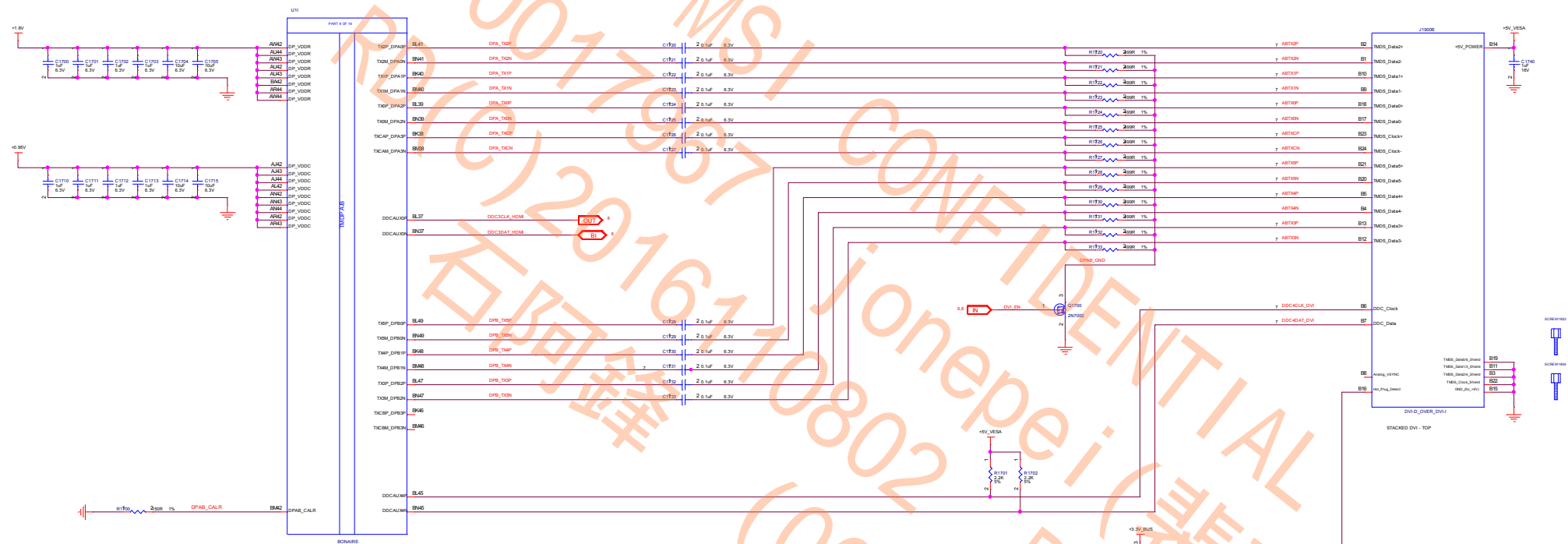
DOCUMENT NUMBER: 105_C813w_00


NOTES: NOTE

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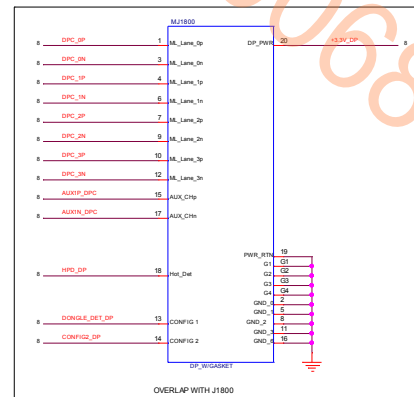
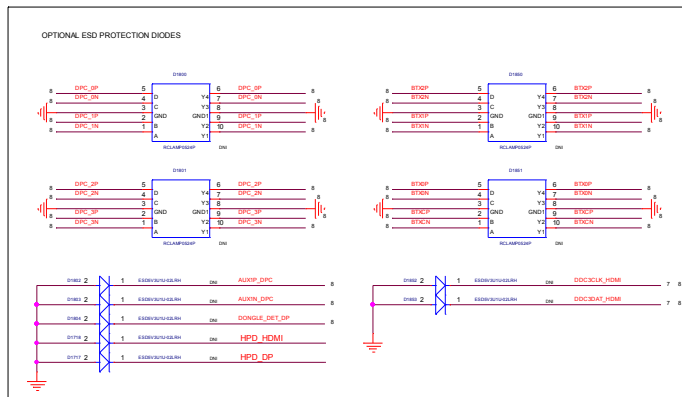
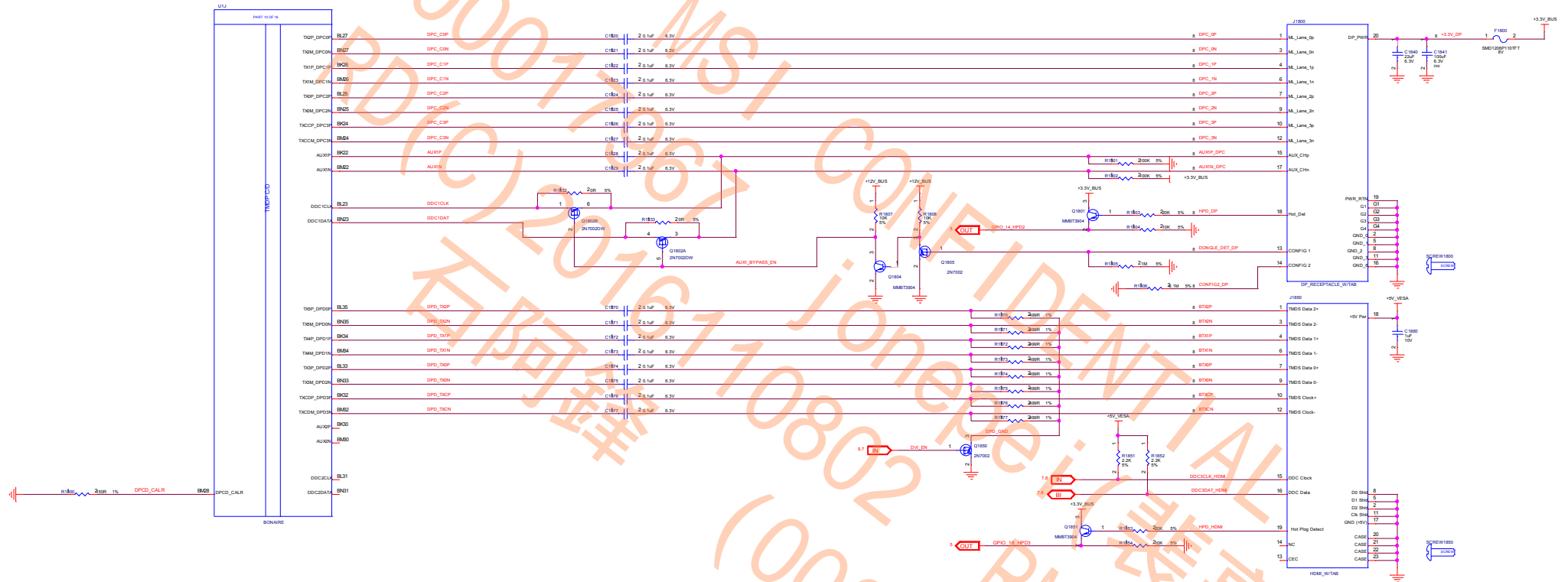
TITLE: TOBAGO GDDR5 X32

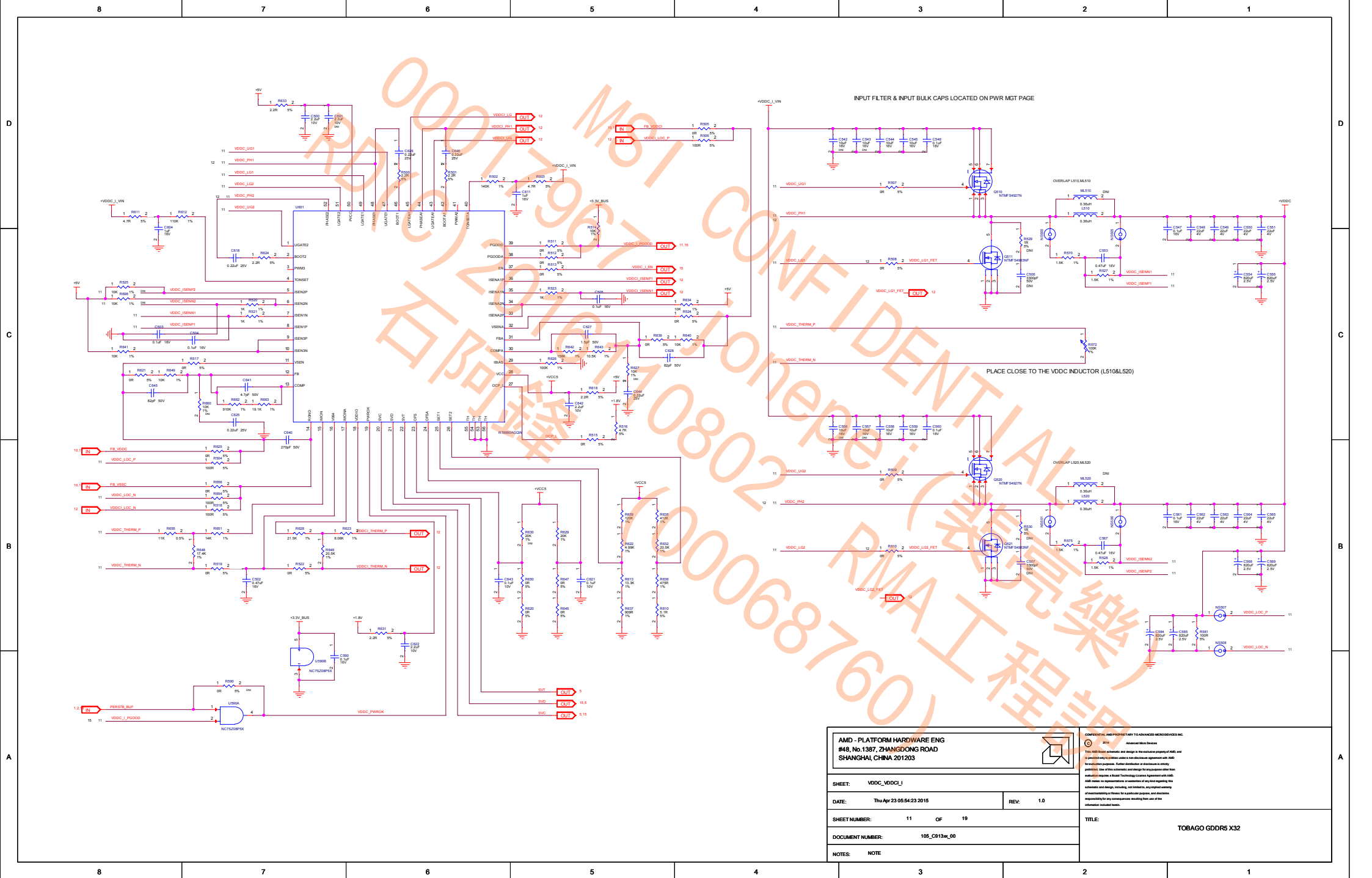
(7) TOBAGO TMDPAB dDVI

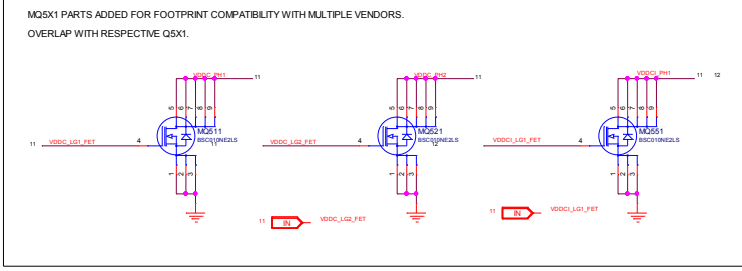
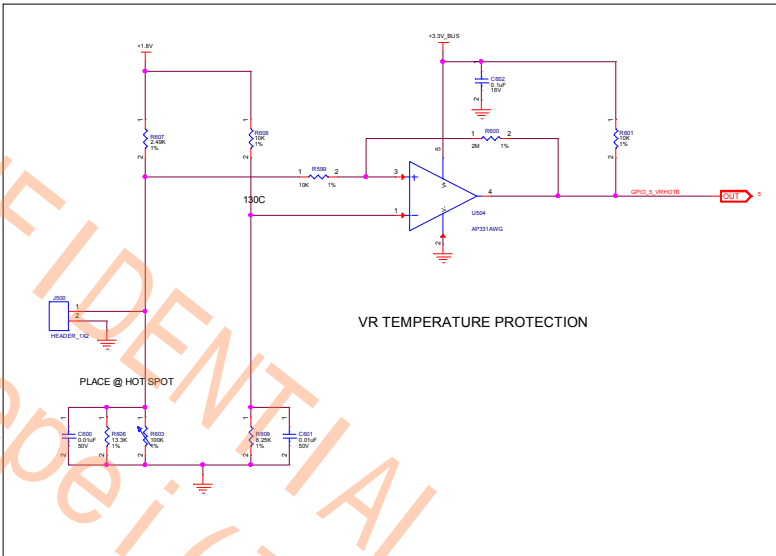
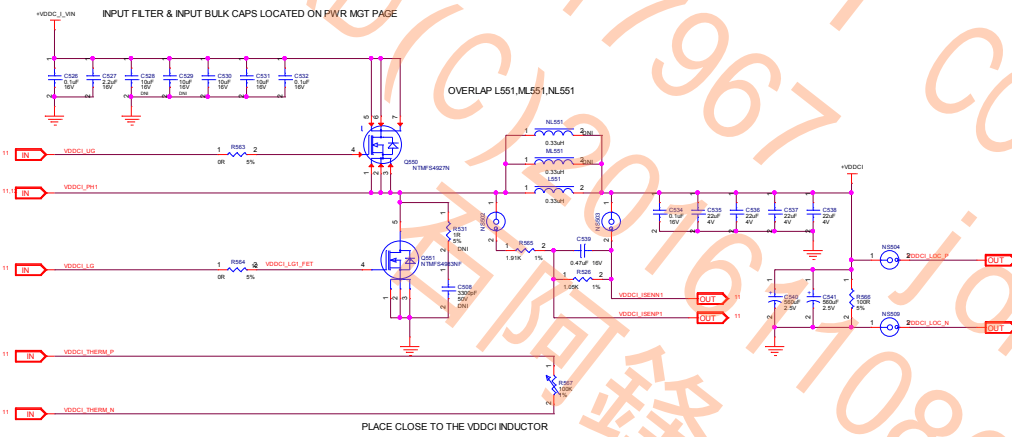



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<p>SHEET: TOBAGO TMP0A8 d0W TOP</p>	<p>DATE: Thu Apr 23 08:54:20 2018</p>	
<p>SHEET NUMBER: 7 OF 19</p>	<p>REV: 1.0</p>	
<p>DOCUMENT NUMBER: 105_C913a_00</p>	<p>TITLE:</p> <p style="text-align: right;">TOBAGO GDDR5 X32</p>	
<p>NOTES: NOTE</p>		

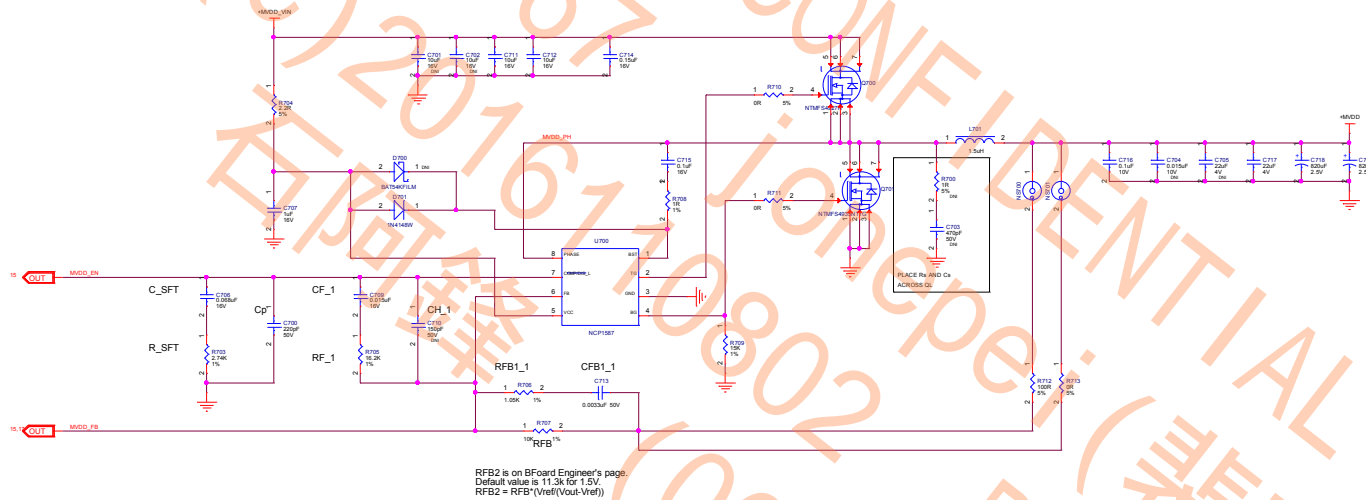
(8) TOBAGO TMDPCD DP HDMI

[illegible]





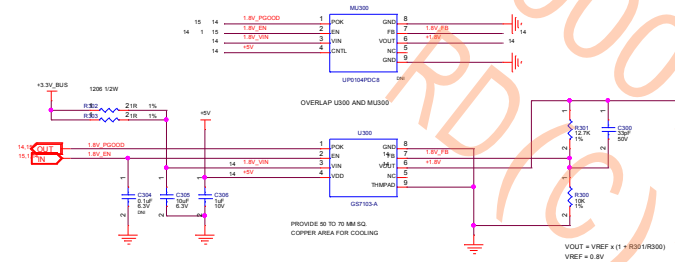
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SHEET: VDDCI_VDDCI_LI			TITLE: TOBAGO GDDR5 X32
DATE: Thu Apr 23 05:54:23 2015	REV: 1.0		
SHEET NUMBER: 12 OF 19			
DOCUMENT NUMBER: 105_C813w_00			
NOTES: NOTE			



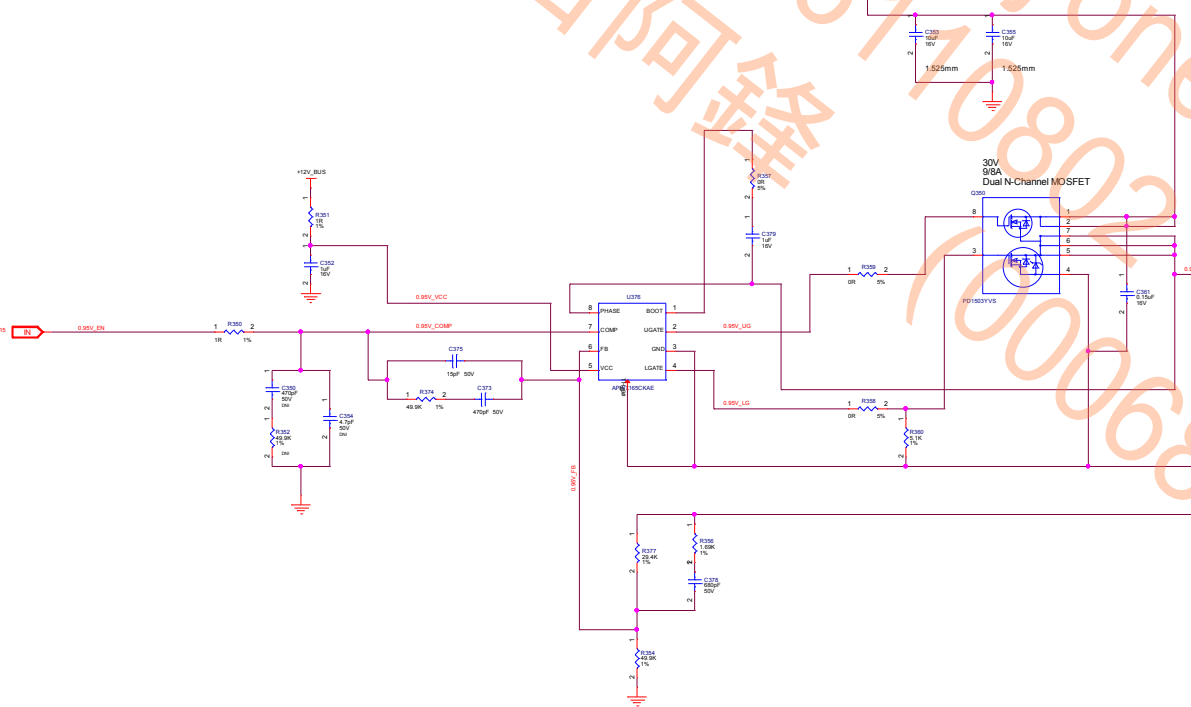
AMD - PLATFORM HARDWARE ENG #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203	
SHEET: MVD0	
DATE: Thu Apr 23 05:54:24 2015	REV: 1.0
SHEET NUMBER: 13 OF 19	
DOCUMENT NUMBER: 105_C813w_00	
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TITLE: TOBAGO GDDR5 X32	

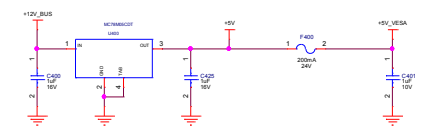
1.8V REGULATOR



0.95V REGULATOR



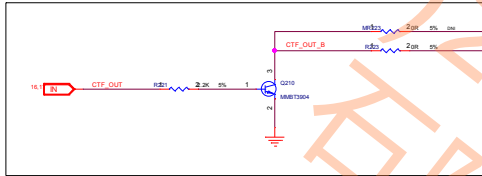
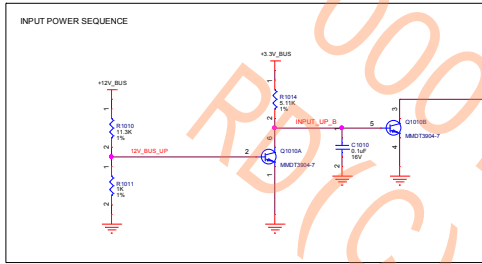
5V REGULATOR



AMD - PLATFORM HARDWARE ENG #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203	
SHEET: SMILL RAIL REGULATORS	
DATE: Thu Apr 23 05:54:24 2015	REV: 1.0
SHEET NUMBER: 14 OF 19	
DOCUMENT NUMBER: 105_C813w_00	
NOTES: NOTE	

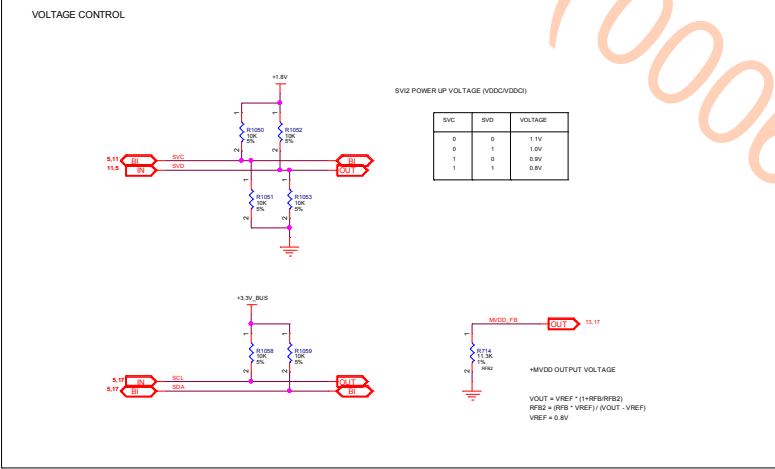
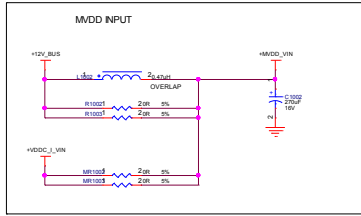
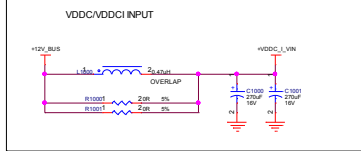
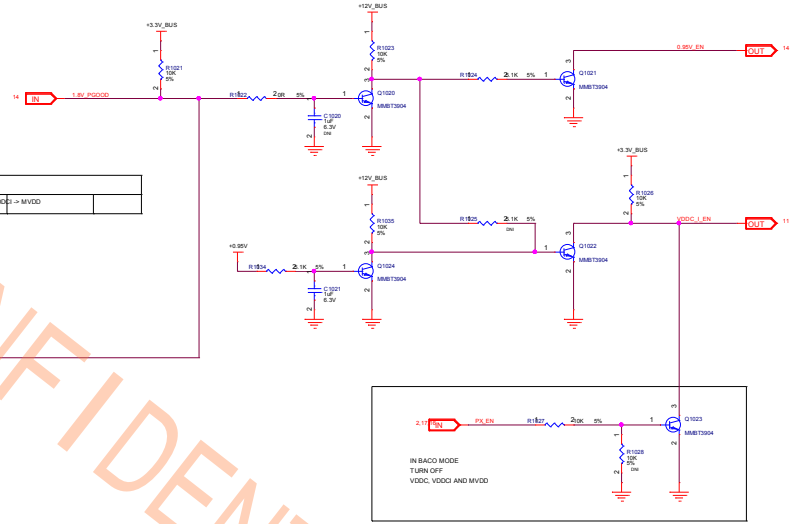
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ENABLE THRESHOLD
+1.8V: +1.4V
+0.95V: FLAT
+VDDC+VDDC: +2.0V
+MVDD: FLAT

POWER UP SEQUENCE			
BUS RAILS (3.3V/1.2V UP) → +1.8V → 0.95V			

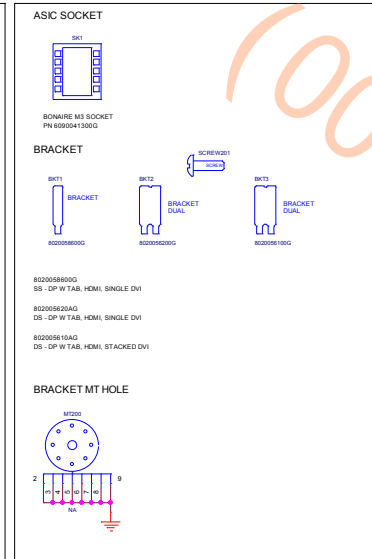
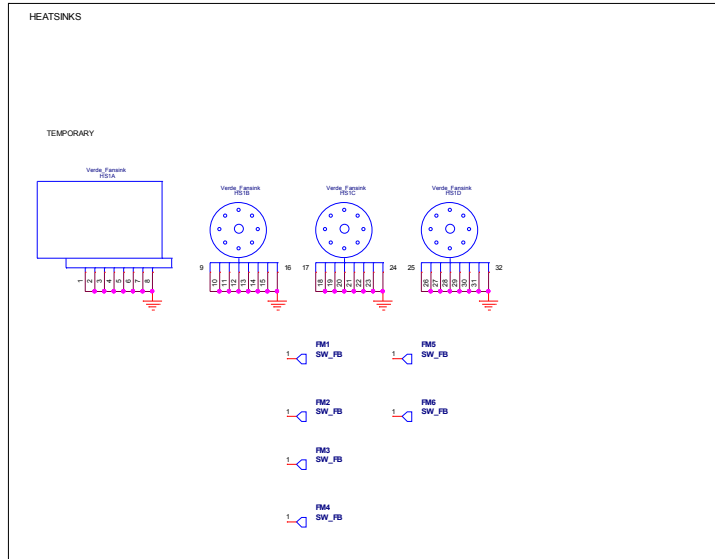
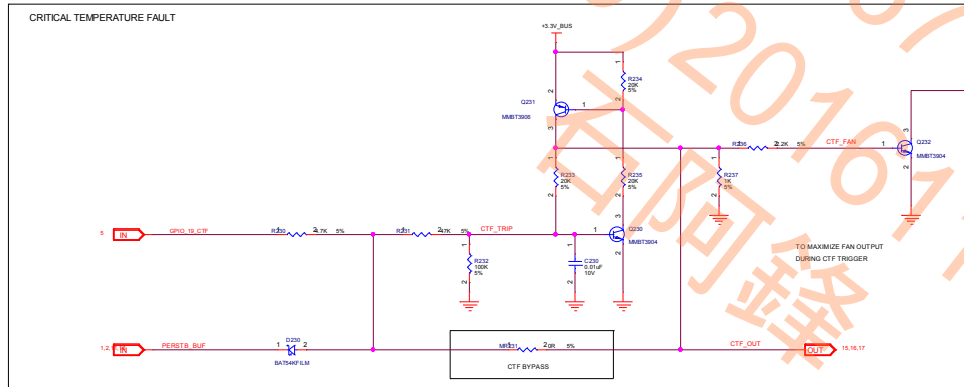


SVC	SVD	VOLTAGE
0	0	1.1V
0	1	1.0V
1	0	0.9V
1	1	0.8V

+MVDD OUTPUT VOLTAGE
 $V_{OUT} = V_{REF} * (1 + R_{FB}/R_{FB2})$
 $R_{FB2} = (V_{REF} - V_{REF}) / (V_{OUT} - V_{REF})$
 $V_{REF} = 0.8V$

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SHEET: POWER MANAGEMENT	
DATE: Thu Apr 23 05:54:25 2015	REV: 1.0
SHEET NUMBER: 15 OF 19	
DOCUMENT NUMBER: 105_C813w_00	
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TITLE: TOBAGO GDDR5 X32	



TOP
Single end
Memory
48 ohm +/- 5 ohm
4.33 mils

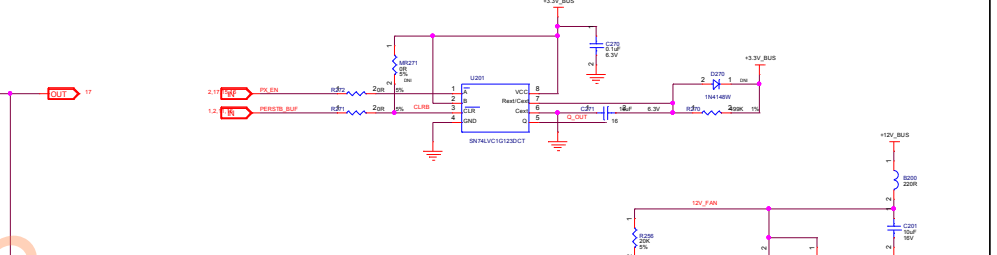
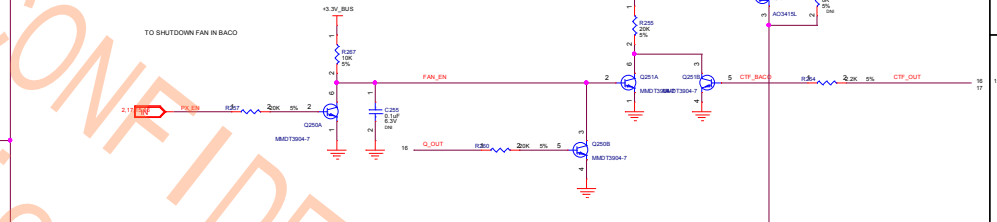
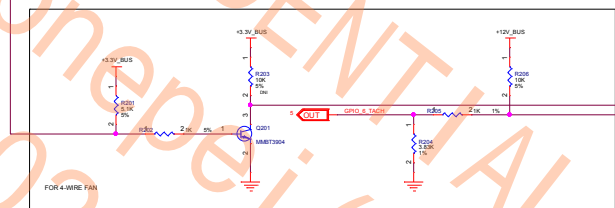
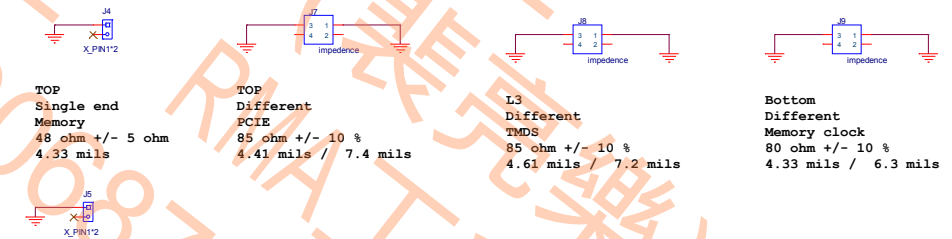
L3
Single end
Memory
48 ohm +/- 5 ohm
4.33 mils

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

TOP
Different
PCIe
85 ohm +/- 10 %
4.41 mils / 7.4 mils

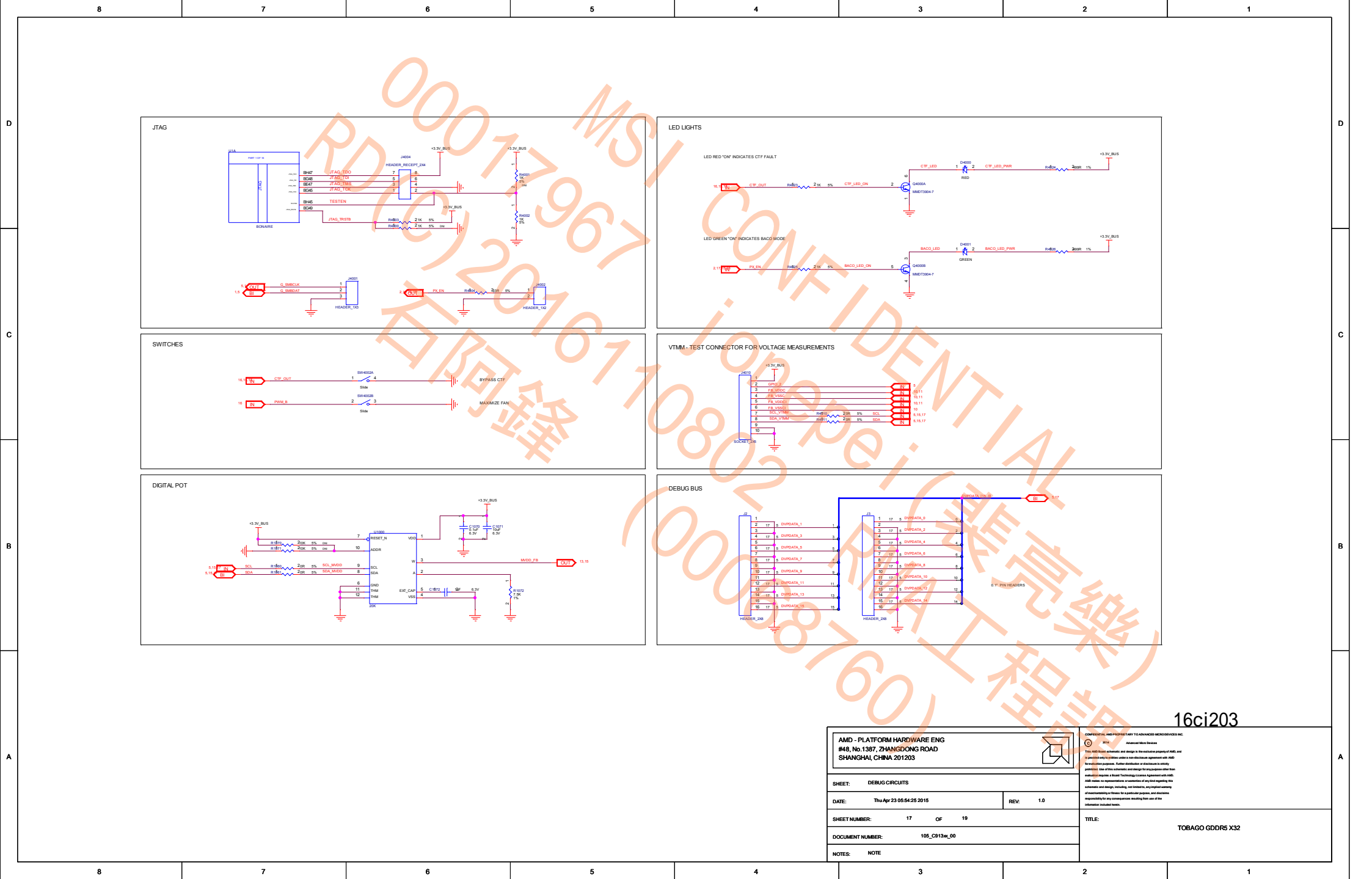
L3
Different
TMDS
85 ohm +/- 10 %
4.61 mils / 7.2 mils

Bottom
Different
Memory clock
80 ohm +/- 10 %
4.33 mils / 6.3 mils



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SHEET: MECH AND THERM MANAGEMENT	REV: 1.0
DATE: Thu Apr 23 05:54:25 2015	REV: 1.0
SHEET NUMBER: 16 OF 19	
DOCUMENT NUMBER: 105_C813w_00	
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TITLE: TOBAGO GDDR5 X32	



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AMD



TITLE: TOBAGO GDDR5 X32

DOCUMENT NUMBER: 105_C913rev_00

DATE: Mon Jan 26 02:32:37 2015

SHEET NUMBER: 19 OF 19

REV: 1.0

REVISION HISTORY

ENGINEER: PEAK DONG

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SHANGHAI, CHINA 201203

SCH Rev	PCB Rev	Date	REVISION DESCRIPTION
0	00A	08/10/2014	INITIAL DESIGN
1	00B	11/05/2014	CORRECTED NOC TO HOC
2	00C	11/05/2014	RELEASED TO M

8

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