
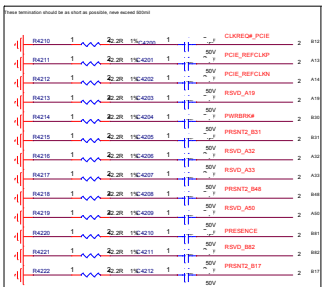
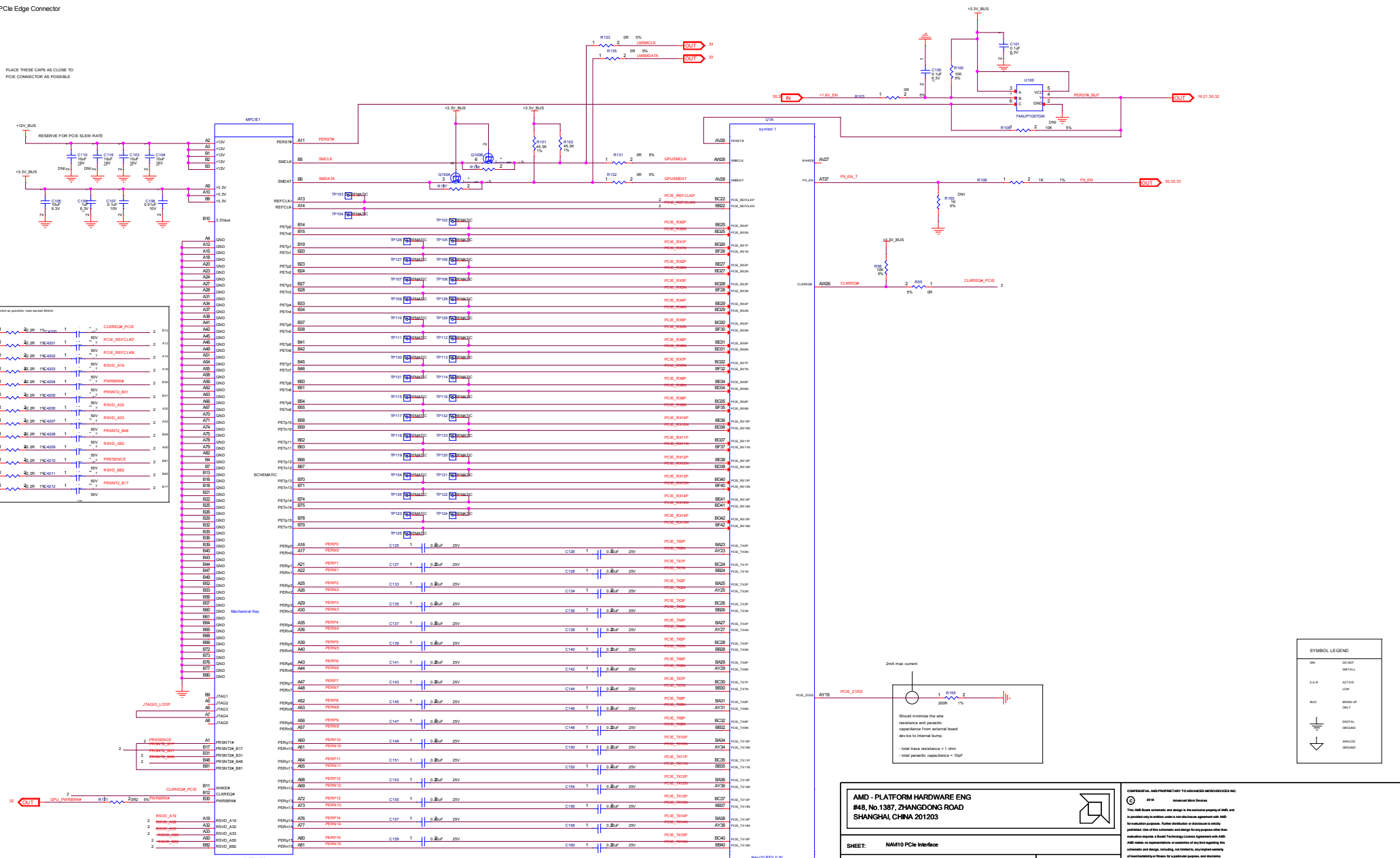


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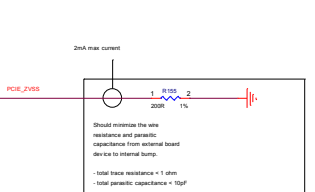
<p><b>AMD - PLATFORM HARDWARE ENG</b>                  #48, No.1387, ZHANGDONG ROAD                  SHANGHAI, CHINA 201203</p>		
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<p><b>SHEET:</b> TOC</p>	<p><b>DATE:</b> Mon Apr 15 05:57:55 2019</p>	<p><b>REV:</b> 1.00</p>
<p><b>SHEET NUMBER:</b> 1 OF 35</p>		<p><b>DOCUMENT NUMBER:</b> 105_D199w_00A</p>
<p><b>NOTES:</b> NOTE</p>		

PLACE THESE CAPS AS CLOSE TO PCIe CONNECTOR AS POSSIBLE



Mechanical Key

B0	JTAG0_1
A6	JTAG2
A7	JTAG3
A8	JTAG4
A8	JTAG5
A1	PRESNCE
B17	PRESENCE_B17
B33	PRESNCE_B33
B34	PRESNCE_B34
B35	PRESNCE_B35
B36	PRESNCE_B36
B37	PRESNCE_B37
B38	PRESNCE_B38
B39	PRESNCE_B39
B40	PRESNCE_B40
B41	PRESNCE_B41
B42	PRESNCE_B42
B43	PRESNCE_B43
B44	PRESNCE_B44
B45	PRESNCE_B45
B46	PRESNCE_B46
B47	PRESNCE_B47
B48	PRESNCE_B48
B49	PRESNCE_B49
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B93	PRESNCE_B93
B94	PRESNCE_B94
B95	PRESNCE_B95
B96	PRESNCE_B96
B97	PRESNCE_B97
B98	PRESNCE_B98
B99	PRESNCE_B99
B100	PRESNCE_B100



SYMBOL LEGEND

DNV	DO NOT INSTALL
ACT	ACTIVE
LOW	LOW
BUD	BROWN UP ONLY
DIG	DIGITAL SIGNAL
ANALOG	ANALOG SIGNAL

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SHEET: NAV10 PCIe Interface

DATE: Mon Apr 15 05:57:55 2019

SHEET NUMBER: 2 OF 35

DOCUMENT NUMBER: 105\_D199w\_00A

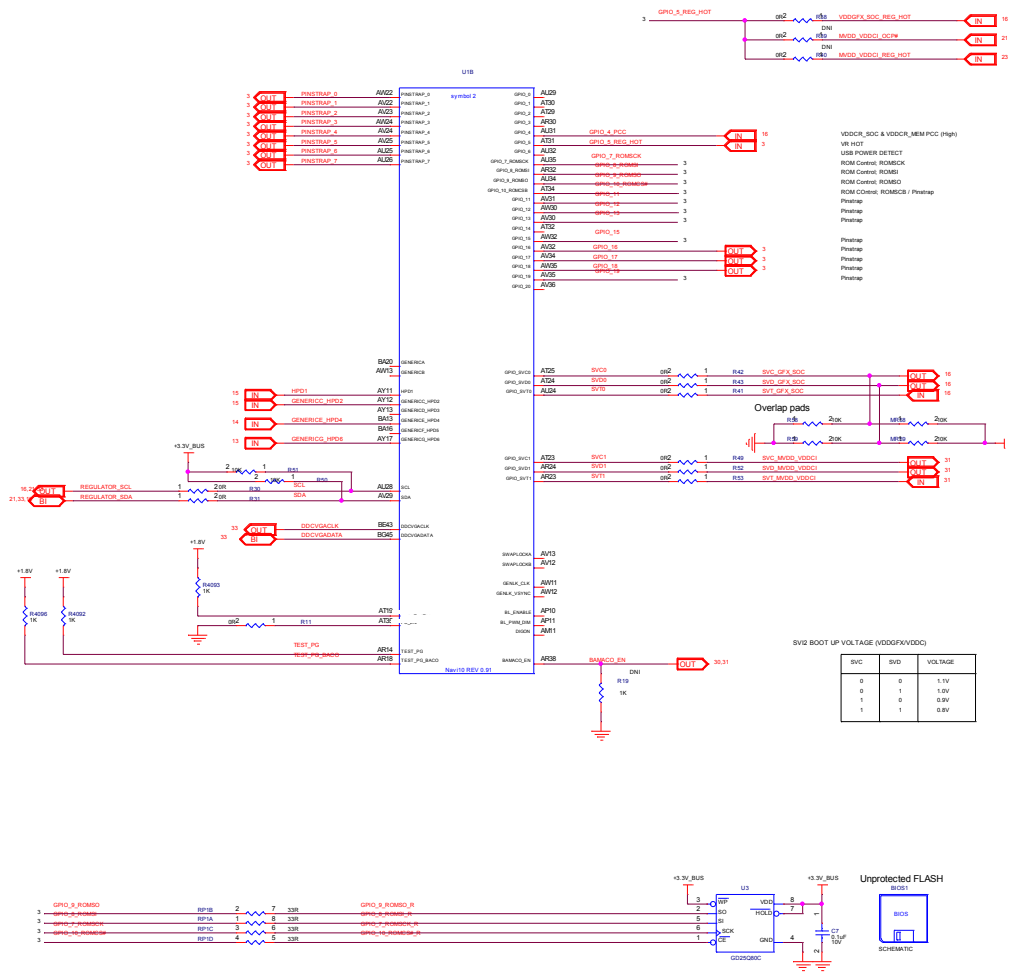
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TITLE: NAV10 G8x16Mode DP HDMI DP

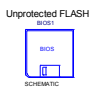


Note: Internal PUPD at GPIO pad is ~40k strength in 14nm design spec

User	Internal Default Value	Definition
BIF	0	STRAP_BIF_GEM_DIS_A 0: PCIe GEN 4 supported 1: PCIe GEN 4 not supported
	0	PINSTRAP_BIF_CLK_PM_EN 0: CLKREQ power management capability is disabled 1: CLKREQ power management capability is enabled
	0	PINSTRAP_BIF_LC_TX_SWING 0: VGA controller capacity enabled 1: The device won't be recognized as the system's VGA controller
DCE	0	PINSTRAP_BIF_VGA_DIS 0: VGA controller capacity enabled 1: The device won't be recognized as the system's VGA controller
	0	PINSTRAP_AUD_PORT_CONN[2:0] Number of audio-capable display outputs 4: 2 endpoints connected 5: 3 endpoints connected 6: 1 endpoint connected 7: 0 endpoints connected
	0	PINSTRAP_AUD[1:0] 1: Audio for DisplayPort only 2: Audio for DisplayPort and HDMI if dargle is detected 3: Audio for DisplayPort and native HDMI
	0	
Platform	0	
	0	
	0	
SMU	1	
	1	PINSTRAP_BIOS_ROM_EN 0: Disable the external BIOS ROM device 1: Enable the external BIOS ROM device

SV12 BOOT UP VOLTAGE (VDDQFXVDDO)

SV12	SV12	VOLTAGE
0	0	1.1V
0	1	1.0V
1	0	0.9V
1	1	0.8V



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SHEET: NAV10 GPCs

DATE: Mon Apr 15 05:57:56 2019 REV: 1.00

SHEET NUMBER: 3 OF 35

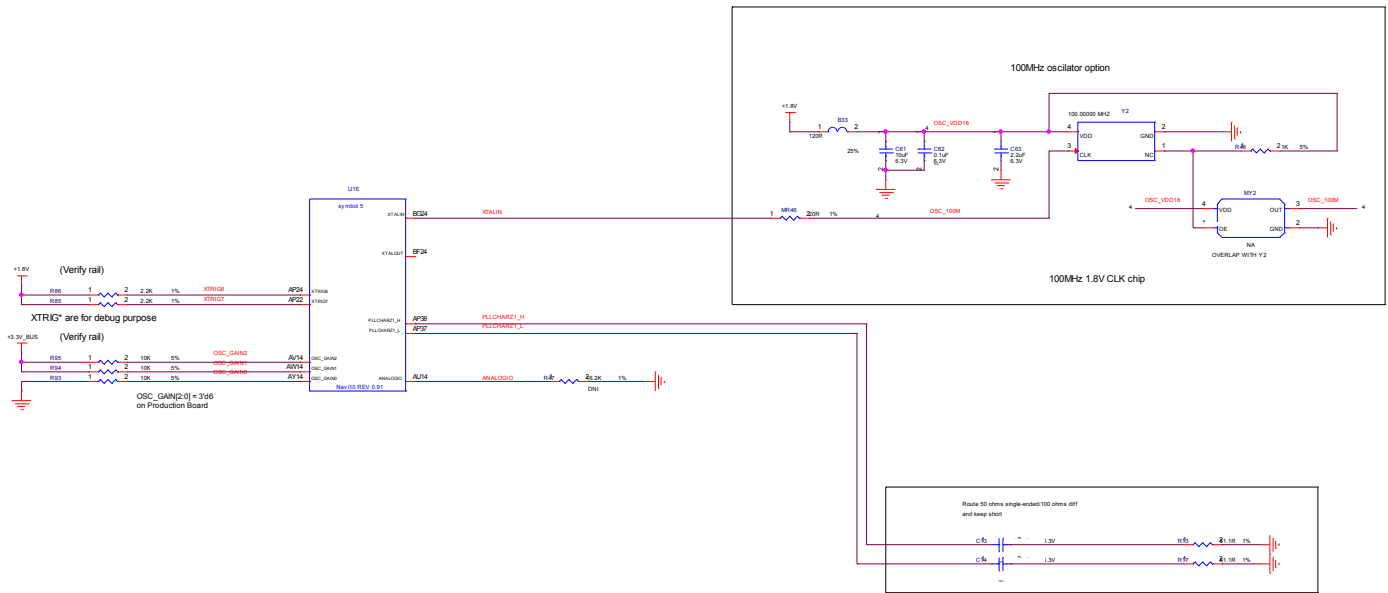
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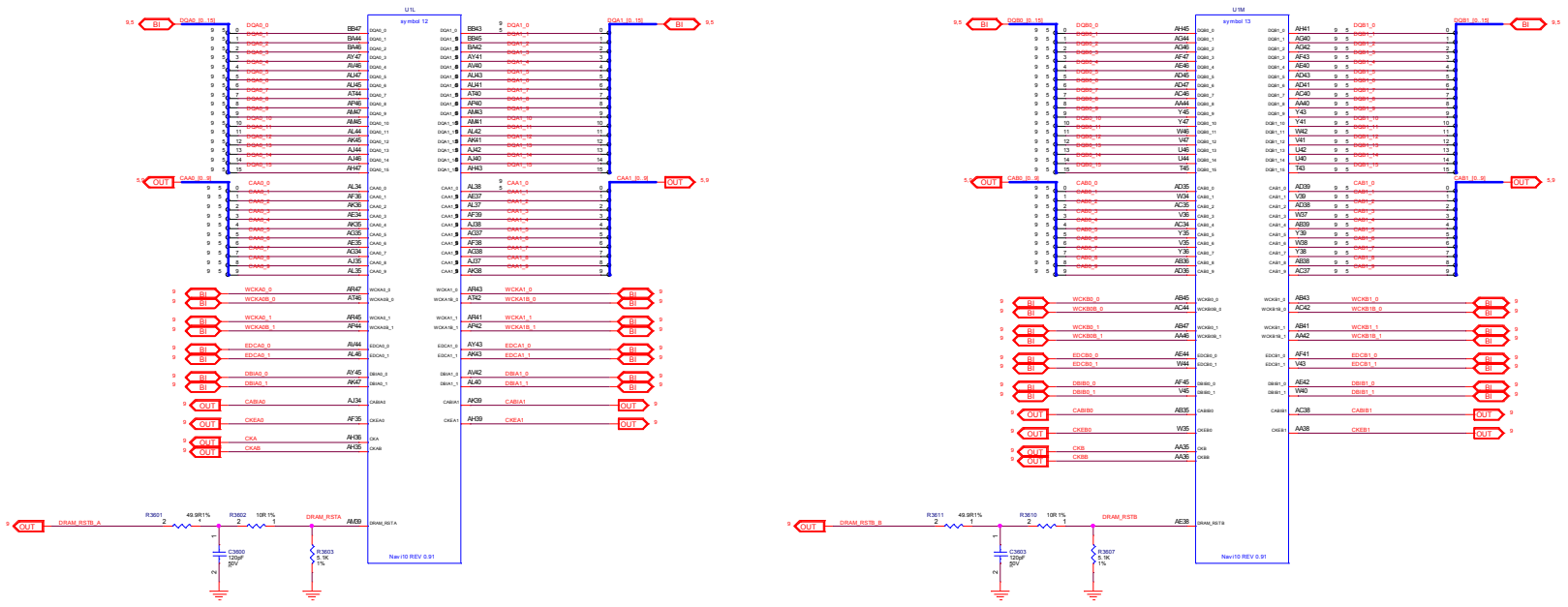
TITLE: NAV10 G8x16Mode DP DP HDMI DP



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SHEET: NAV10 XTAL	DATE: Mon Apr 15 05:57:56 2019	
SHEET NUMBER: 4 OF 35		TITLE: NAV10 G8X16Mode DP DP HDMI DP
DOCUMENT NUMBER: 105_D199w_00A		
NOTES: NOTE		

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NAVI 10 MEM INTERFACE CH A/B

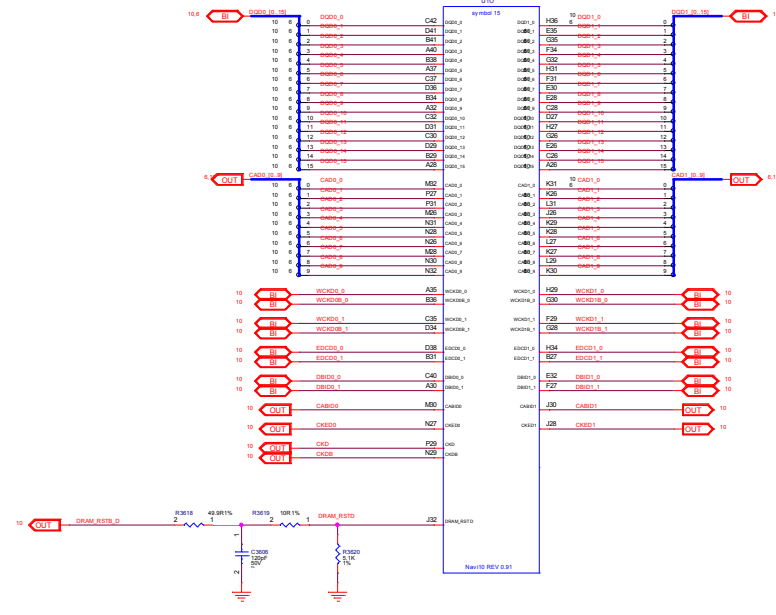
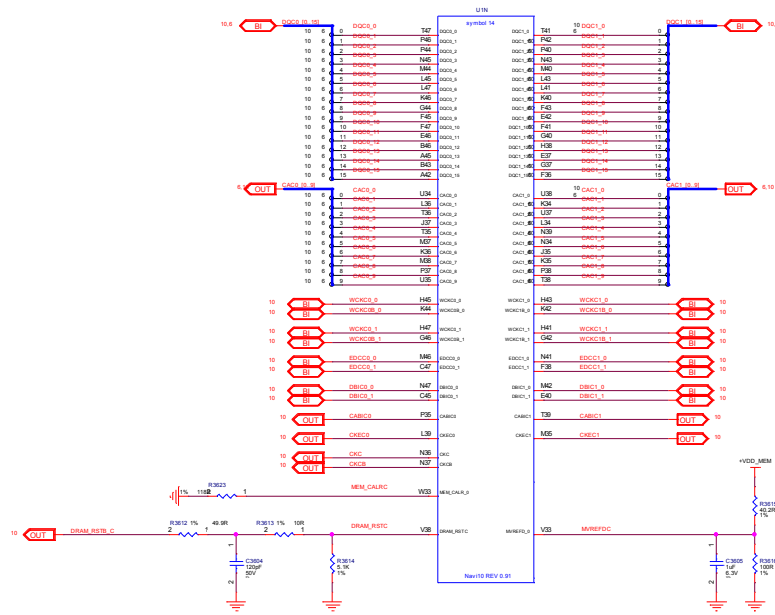


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SHEET: NAVI10 MEM CHAB  
 DATE: Mon Apr 15 05:57:57 2019  
 SHEET NUMBER: 5 OF 35  
 DOCUMENT NUMBER: 105\_D199w\_00A  
 NOTES: NOTE

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TITLE: NAVI10 G8X16Mode DP DP HDMI DP



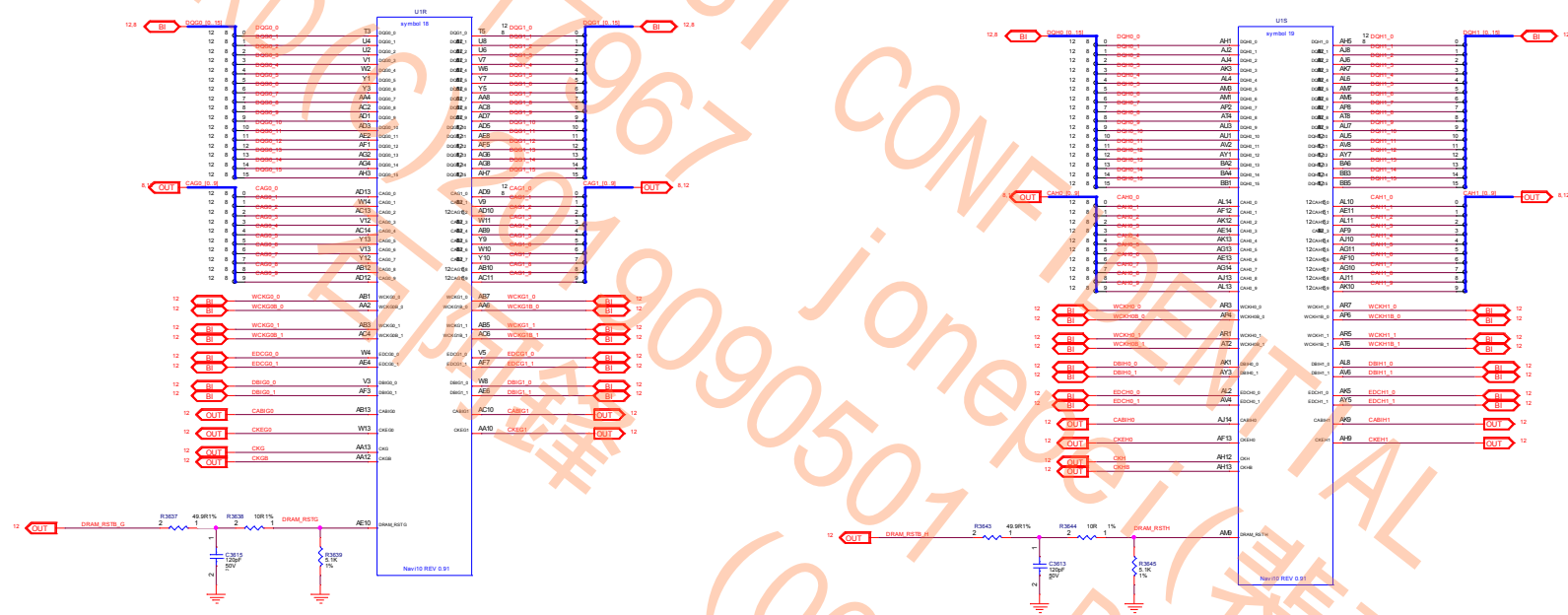
AMD - PLATFORM HARDWARE ENG  
 #48, No.1387, ZHANGDONG ROAD  
 SHANGHAI, CHINA 201203

SHEET: NAV10 MEM CHCD  
 DATE: Mon Apr 15 05:57:57 2019 REV: 1.00  
 SHEET NUMBER: 6 OF 35  
 DOCUMENT NUMBER: 105\_D190w\_00A  
 NOTES: NOTE

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TITLE: NAVI10 G8X16Mode DP DP HDMI DP





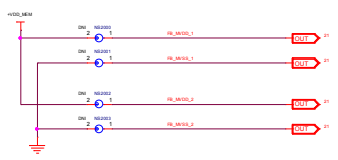
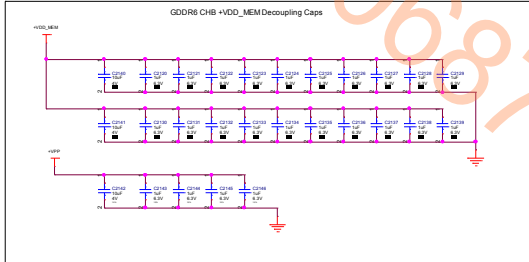
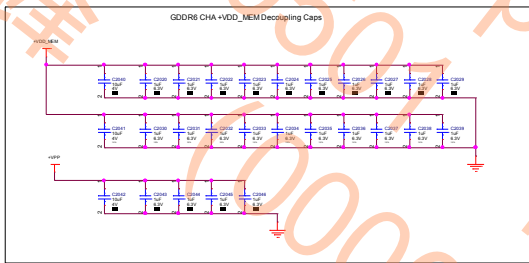
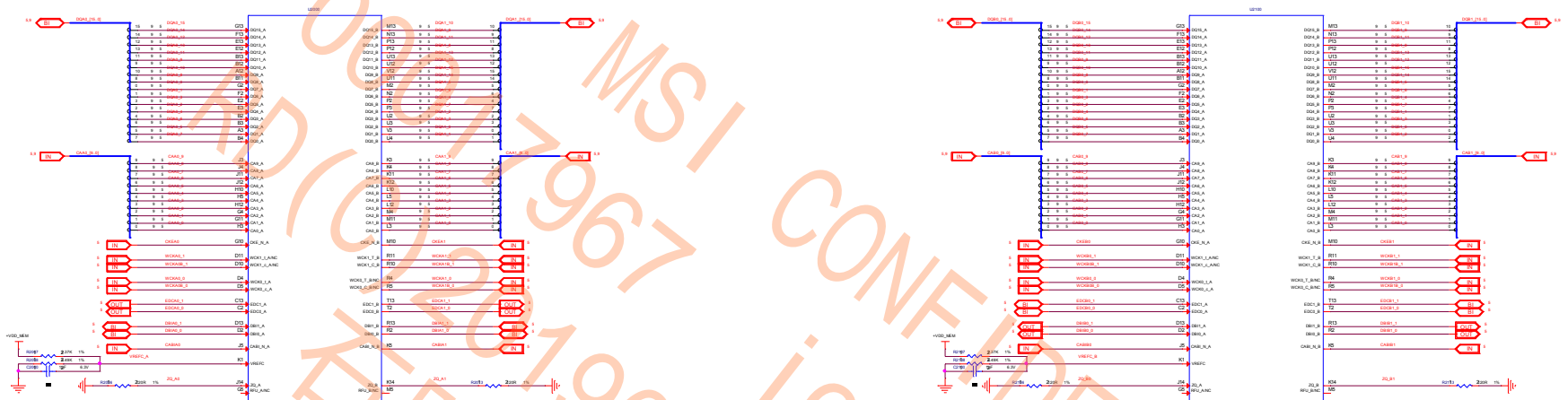
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**SHANGHAI, CHINA 201203**

**SHEET:** NAVI10 MEMCHG  
**DATE:** Mon Apr 15 05:57:58 2019 **REV:** 1.00  
**SHEET NUMBER:** 8 **OF** 35  
**DOCUMENT NUMBER:** 105\_D199w\_00A  
**NOTES:** NONE

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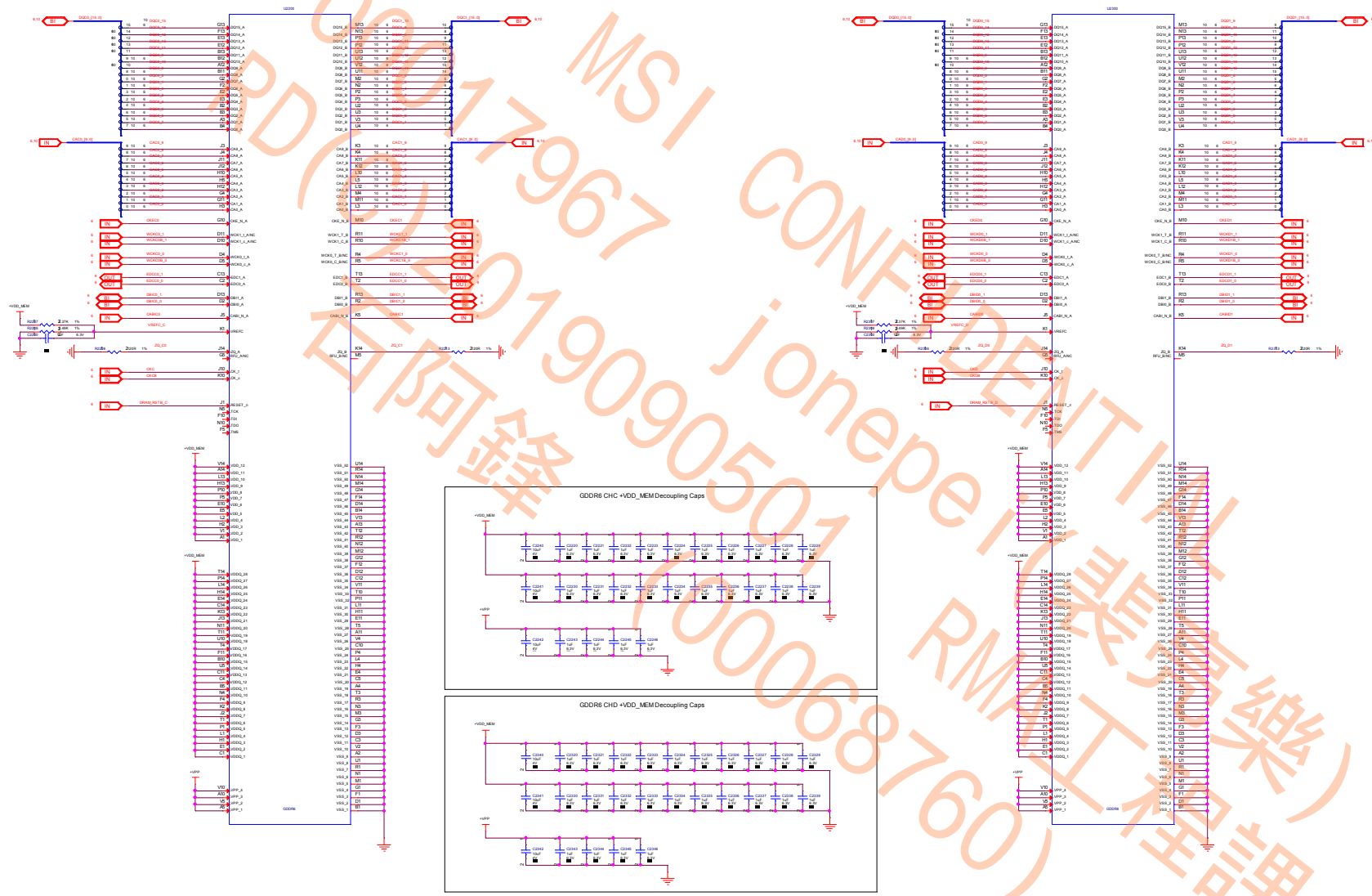
**TITLE:** NAVI10 G8X16Mode DP DP HDMI DP



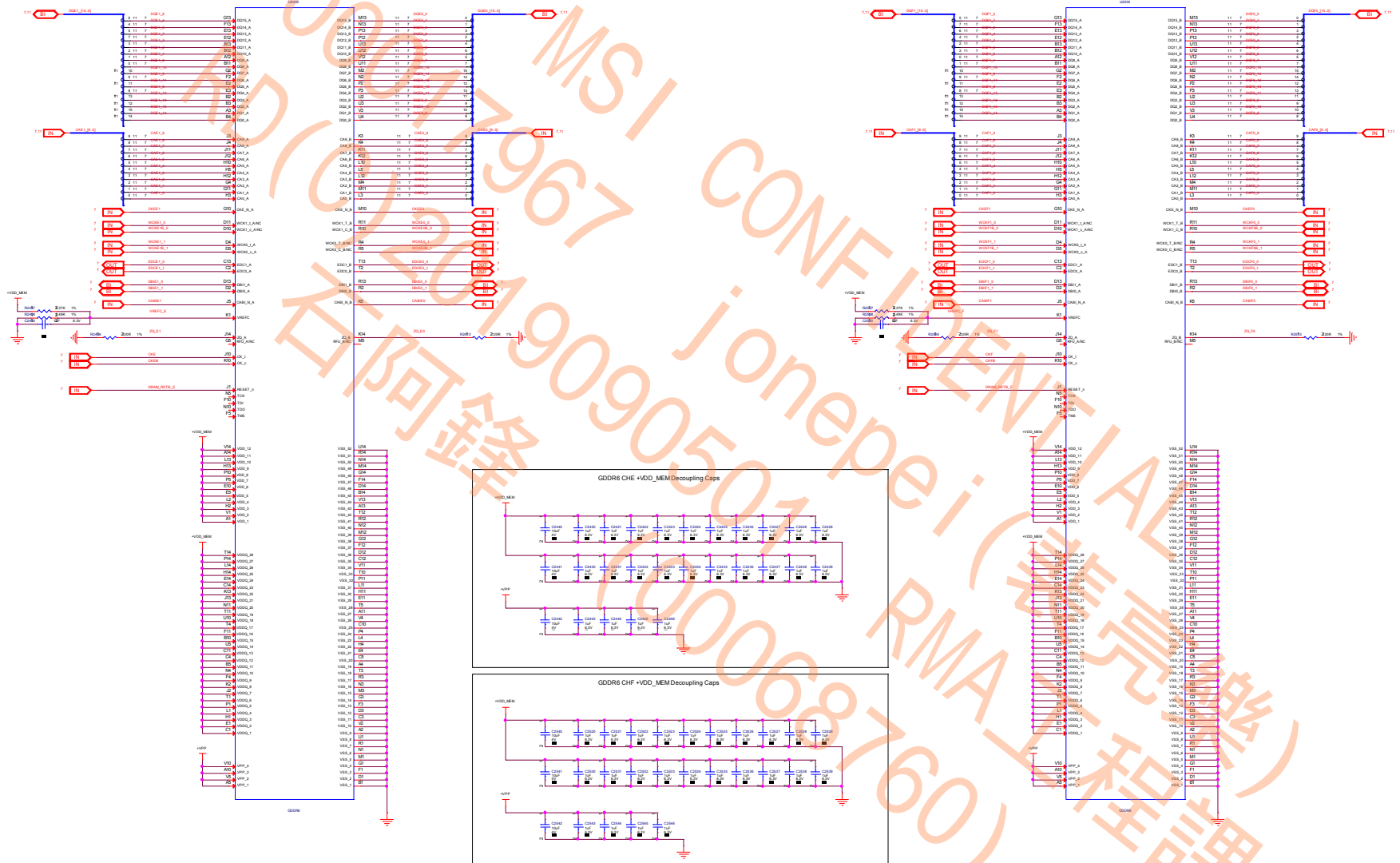


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SHEET: GDDR6 MEM CHB		TITLE: NAV10 G6X16Mode DP DP/HDMI DP
DATE: Mon Mar 11 06:38:32 2019	REV: 1.00	
SHEET NUMBER: 9	OF 35	
DOCUMENT NUMBER: 105_0198x_05A		
NOTES: NOTE		

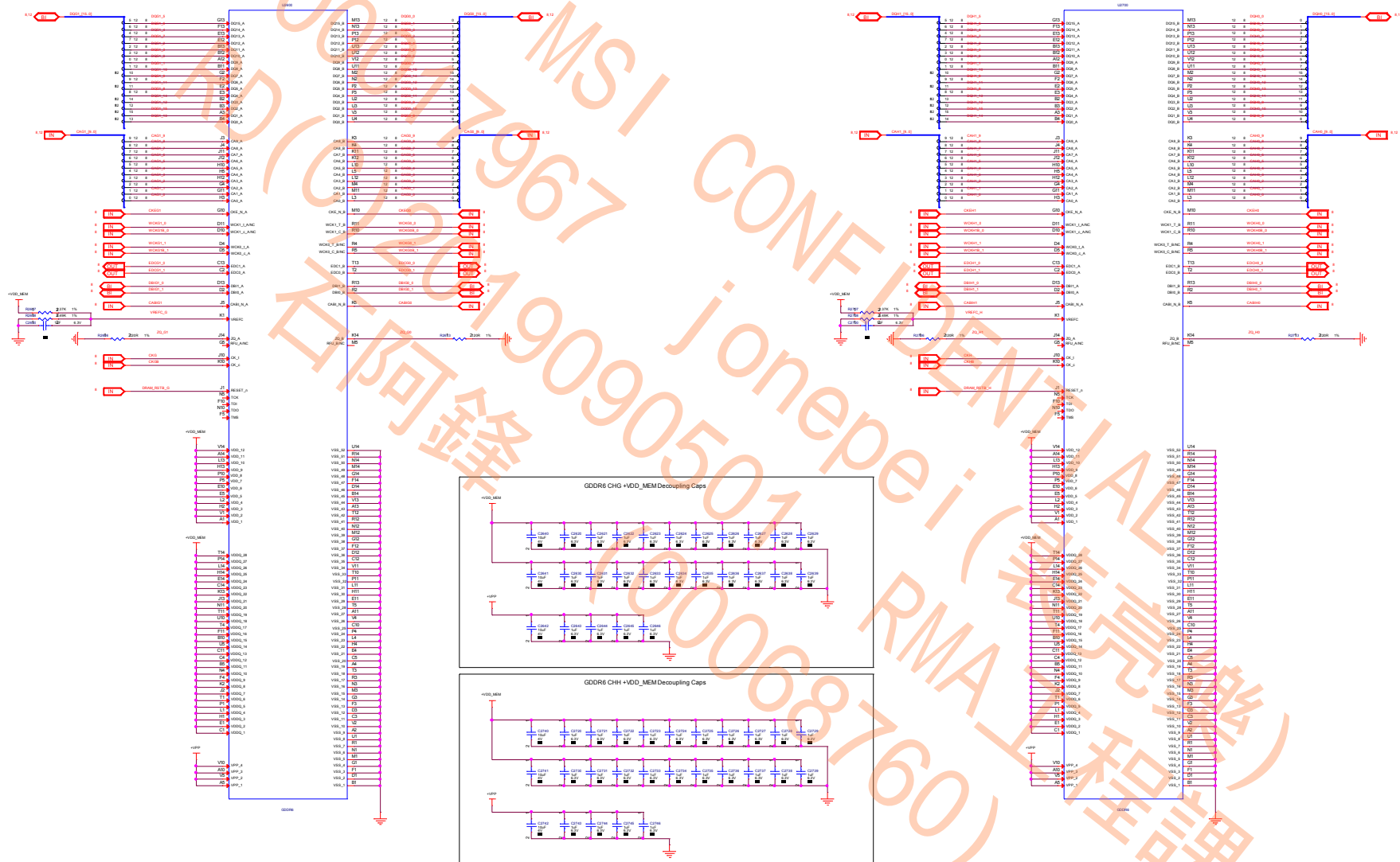
GDDR6x16 CHCD Memory



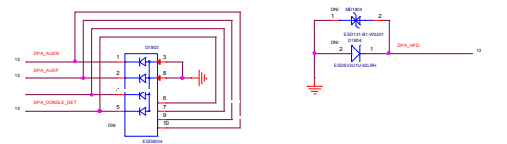
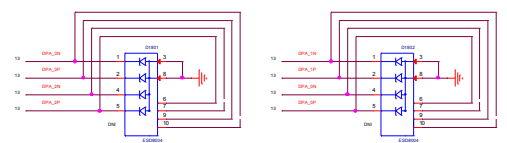
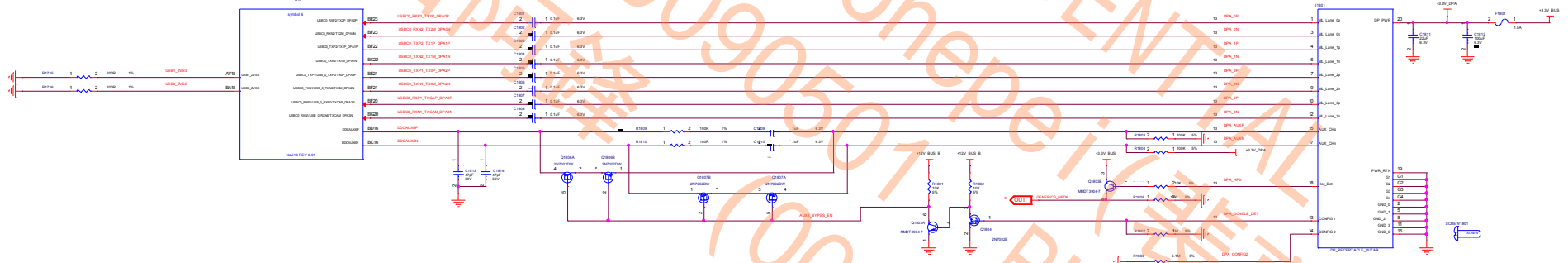
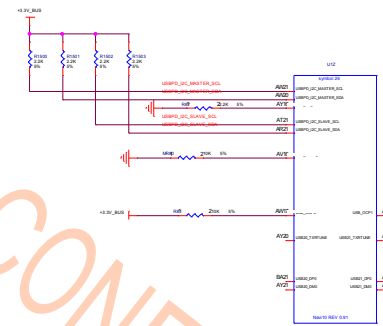
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<p>SHEET: GDDR6 MEM CHCD</p>		<p>REV: 1.00</p>	
<p>DATE: Mon Mar 11 06:38:33 2019</p>		<p>TITLE: NAV10 G6X16Mode DP DP/HDMI DP</p>	
<p>SHEET NUMBER: 10 OF 35</p>		<p>DOCUMENT NUMBER: 105_0198xk_05A</p>	
<p>NOTES: NOTE</p>		<p></p>	



<b>AMD - PLATFORM HARDWARE ENG</b> #46, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201205		
SHEET: GDDR6 MEM CHEF		
DATE: Mon Mar 11 06:38:33 2019	REV: 1.00	
SHEET NUMBER: 11	OF 35	TITLE: NAV10 G6X16Mode DP DP/HDMI DP
DOCUMENT NUMBER: 105_0198x6_05A		
NOTES: NOTE		

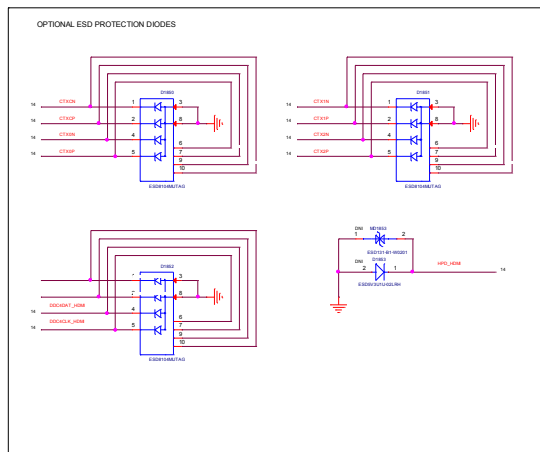
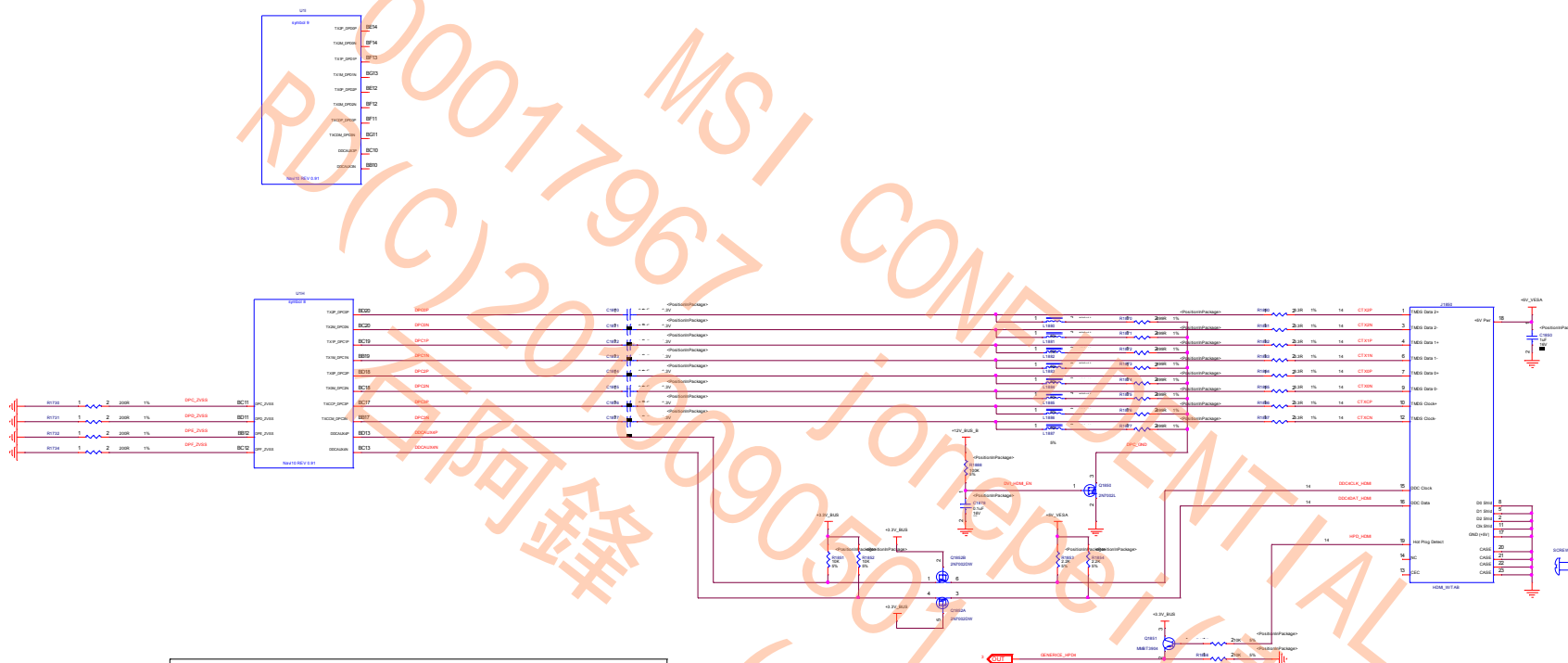


<b>AMD - PLATFORM HARDWARE ENG</b> #46, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203		SHEET: GDDR6 MEM CHGH DATE: Mon Mar 11 06:38:34 2019 SHEET NUMBER: 12 OF 35 DOCUMENT NUMBER: 105_D198K_05A NOTES: NOTE	REV: 1.00 TITLE: NAV10 G6X16Mode DP DP HDMI DP
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<b>AMD - PLATFORM HARDWARE ENG</b> #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203			SHEET: NAVI10 TMDPA - DP DATE: Mon Mar 11 06:38:28 2019 SHEET NUMBER: 13 OF 35 DOCUMENT NUMBER: 105_D198x_GSA NOTES: NOTE	REV: 1.00 TITLE: NAVI10 G6X16Mode DP DP/HDMI DP
AMD #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203			SHEET: NAVI10 TMDPA - DP DATE: Mon Mar 11 06:38:28 2019 SHEET NUMBER: 13 OF 35 DOCUMENT NUMBER: 105_D198x_GSA NOTES: NOTE	REV: 1.00 TITLE: NAVI10 G6X16Mode DP DP/HDMI DP

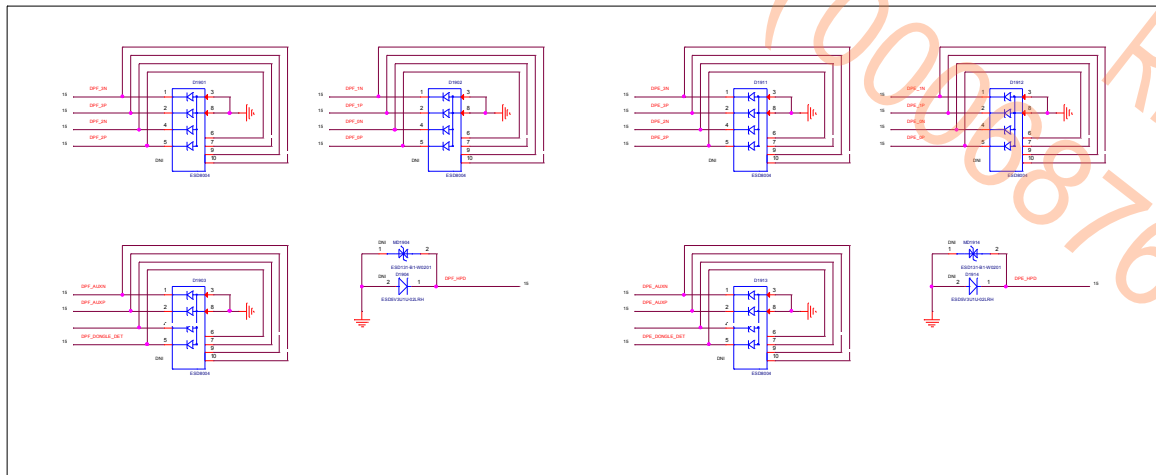
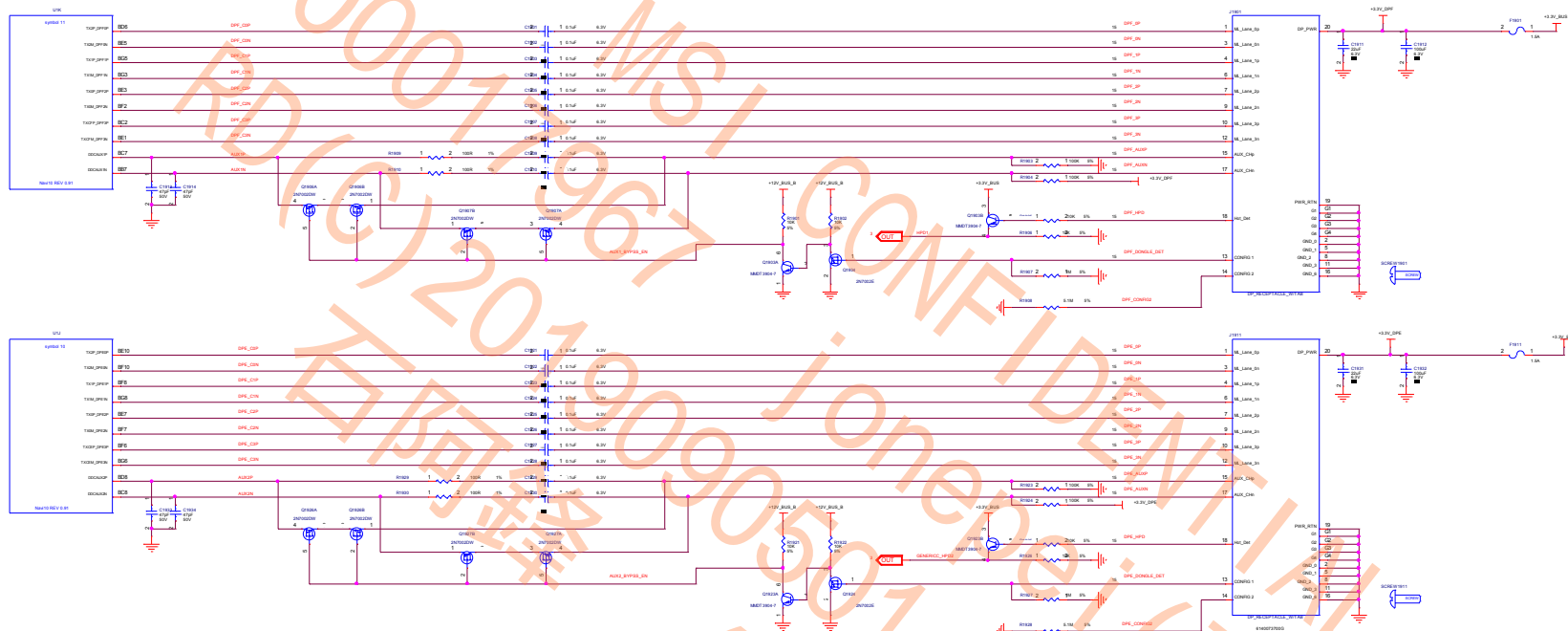
NAVI10 TMDP C/D



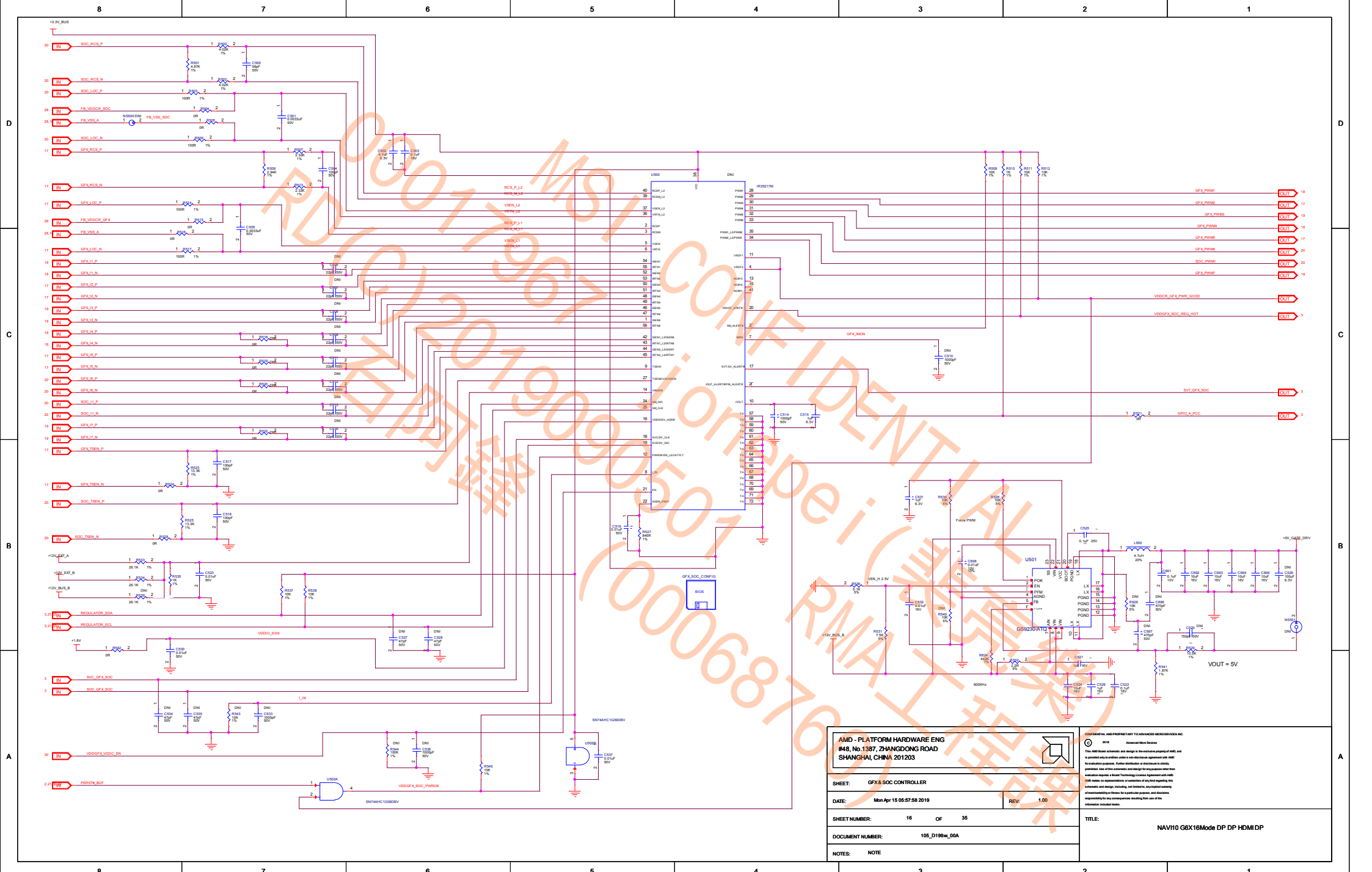
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SHEET: NAVI10 TMDPC-HDMI	
DATE: Mon Mar 11 06:38:28 2019	REV: 1.00
SHEET NUMBER: 14 OF 35	TITLE: NAVI10 G6X16Mode DP DP/HDMI DP
DOCUMENT NUMBER: 105_D198Xc_05A	
NOTES: NOTE	

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(9) NAVI10 TMDP E/F

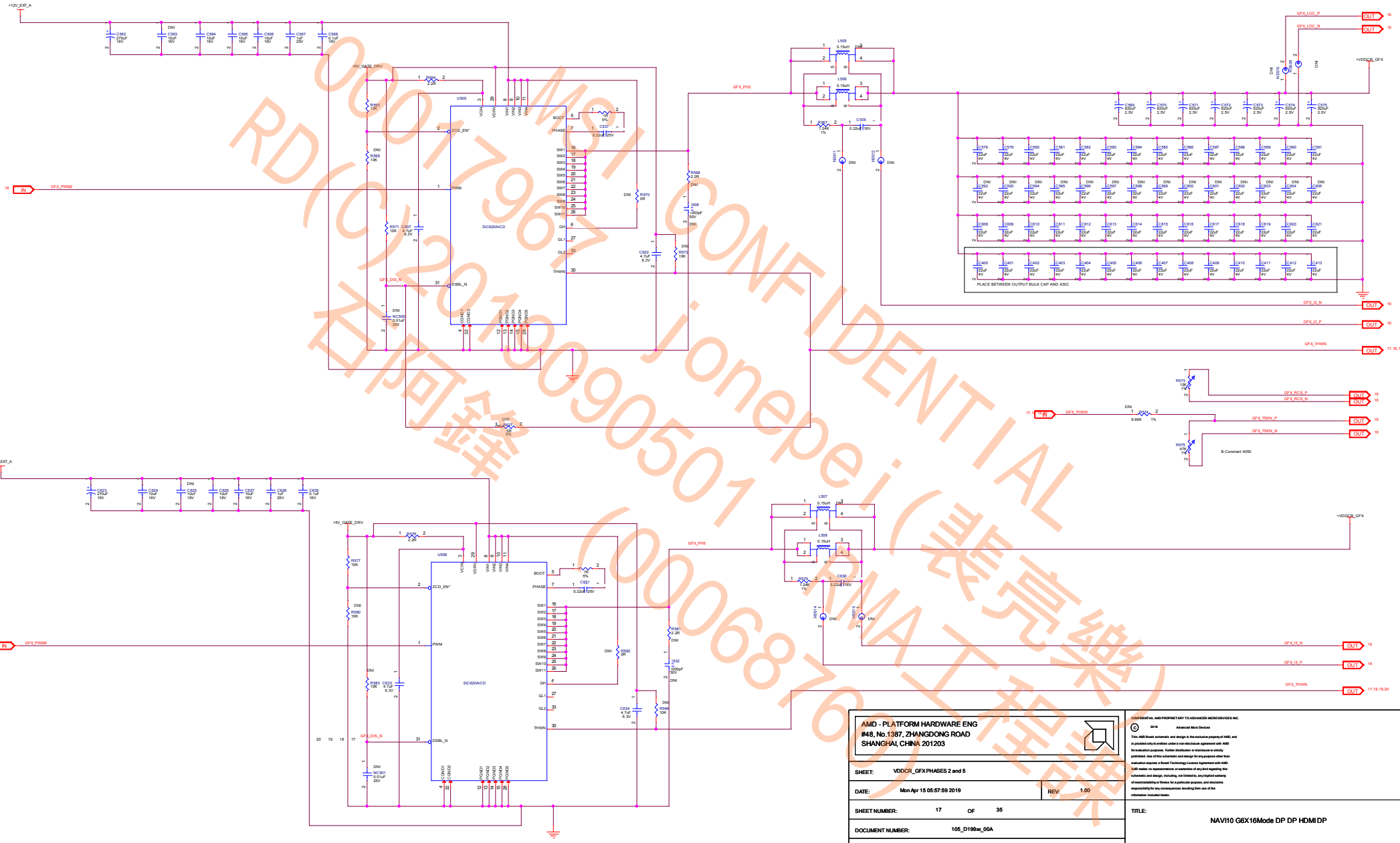


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SHEET: GFX SOC CONTROLLER	DATE: Mon Apr 15 05:57:58 2019		
SHEET NUMBER: 16 OF 35	TITLE: NAV10 G8x16Mode DP DP HDMI DP		
DOCUMENT NUMBER: 105_D199w_00A	NOTES: NOTE		





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

SHEET: VDDCR\_GFXPHASES 2 and 5

DATE: Mon Apr 15 05:57:59 2019

SHEET NUMBER: 17 OF 35

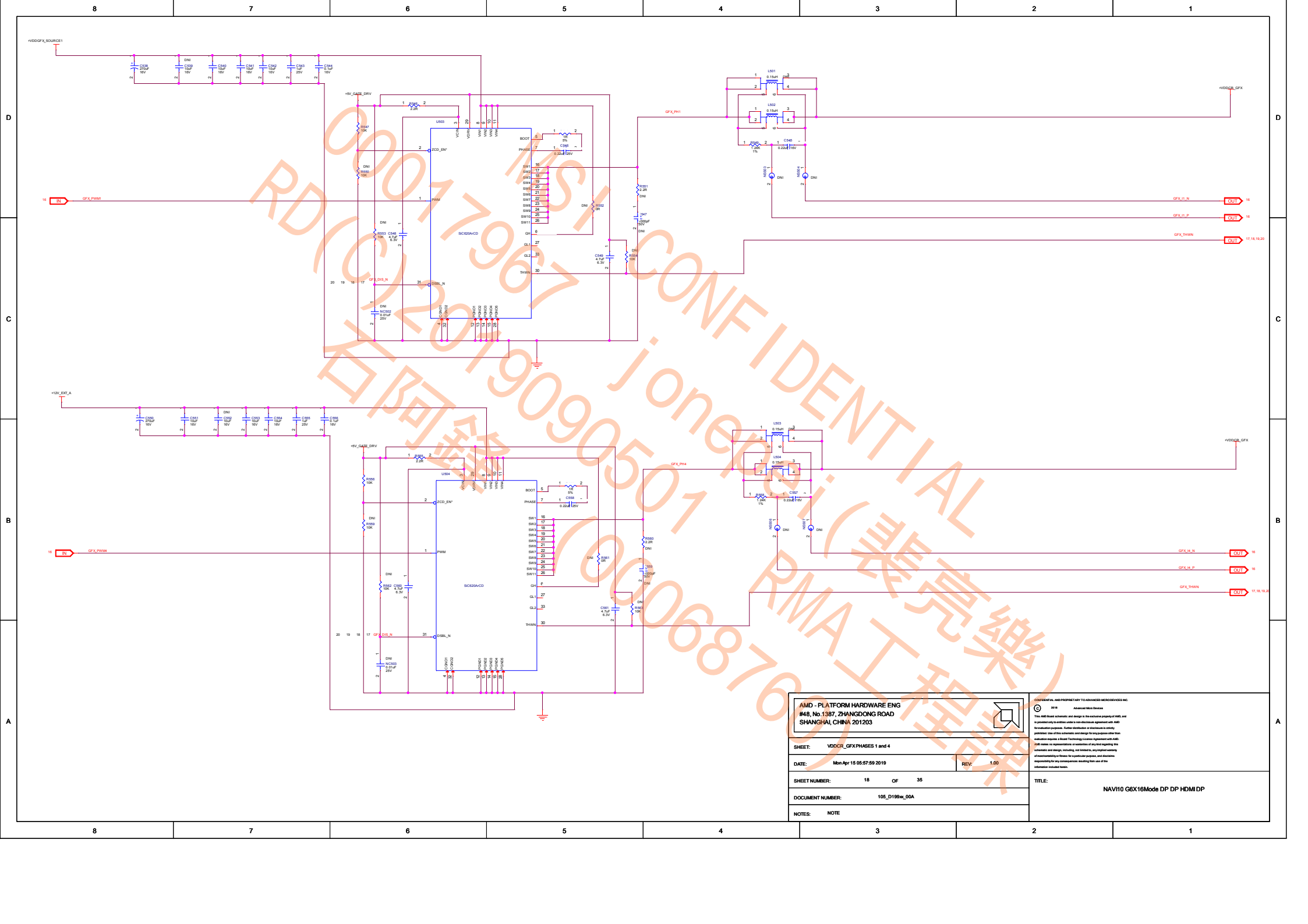
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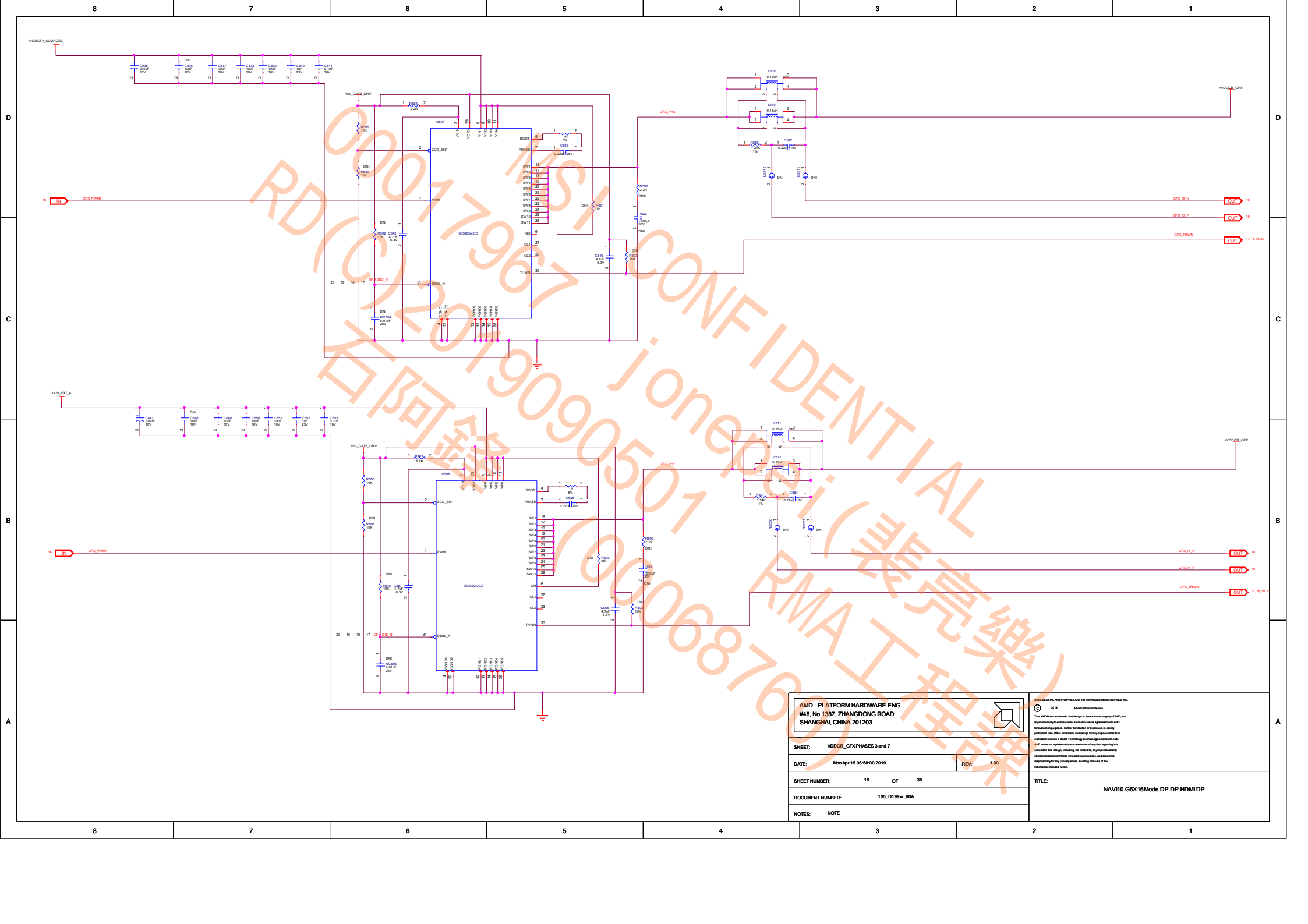
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<b>AMD - PLATFORM HARDWARE ENG</b> #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203	
SHEET:	VDDCR_GFXPHASES 1 and 4
DATE:	Mon Apr 15 05:57:59 2019
REV:	1.00
SHEET NUMBER:	18 OF 35
DOCUMENT NUMBER:	105_D199w_00A
NOTES:	NOTE

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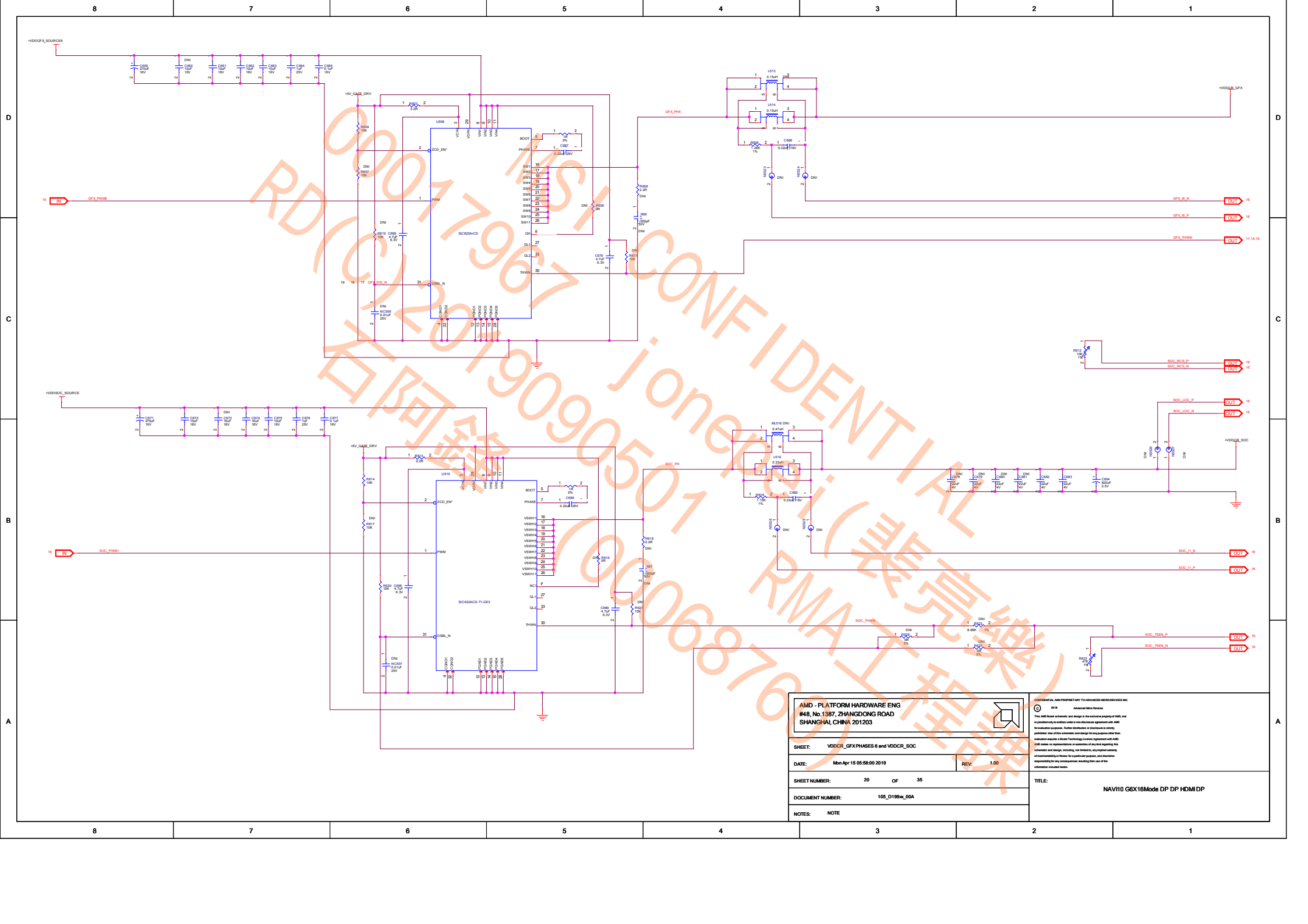
**TITLE:**  
 NAV110 G8X16Mode DP DP HDMI DP



<b>AMD - PLATFORM HARDWARE ENG</b> #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203	
SHEET:	VDDCR_GFX PHASES 3 and 7
DATE:	Mon Apr 15 05:58:00 2019
REV:	1.00
SHEET NUMBER:	19 OF 35
DOCUMENT NUMBER:	105_D199w_00A
NOTES:	NOTE

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TITLE:  
**NAV110 G8X16Mode DP DP HDMI DP**



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

SHEET: VDDCR\_GFXPHASES 6 and VDDCR\_SOC

DATE: Mon Apr 15 05:58:00 2019 REV: 1.00

SHEET NUMBER: 20 OF 35

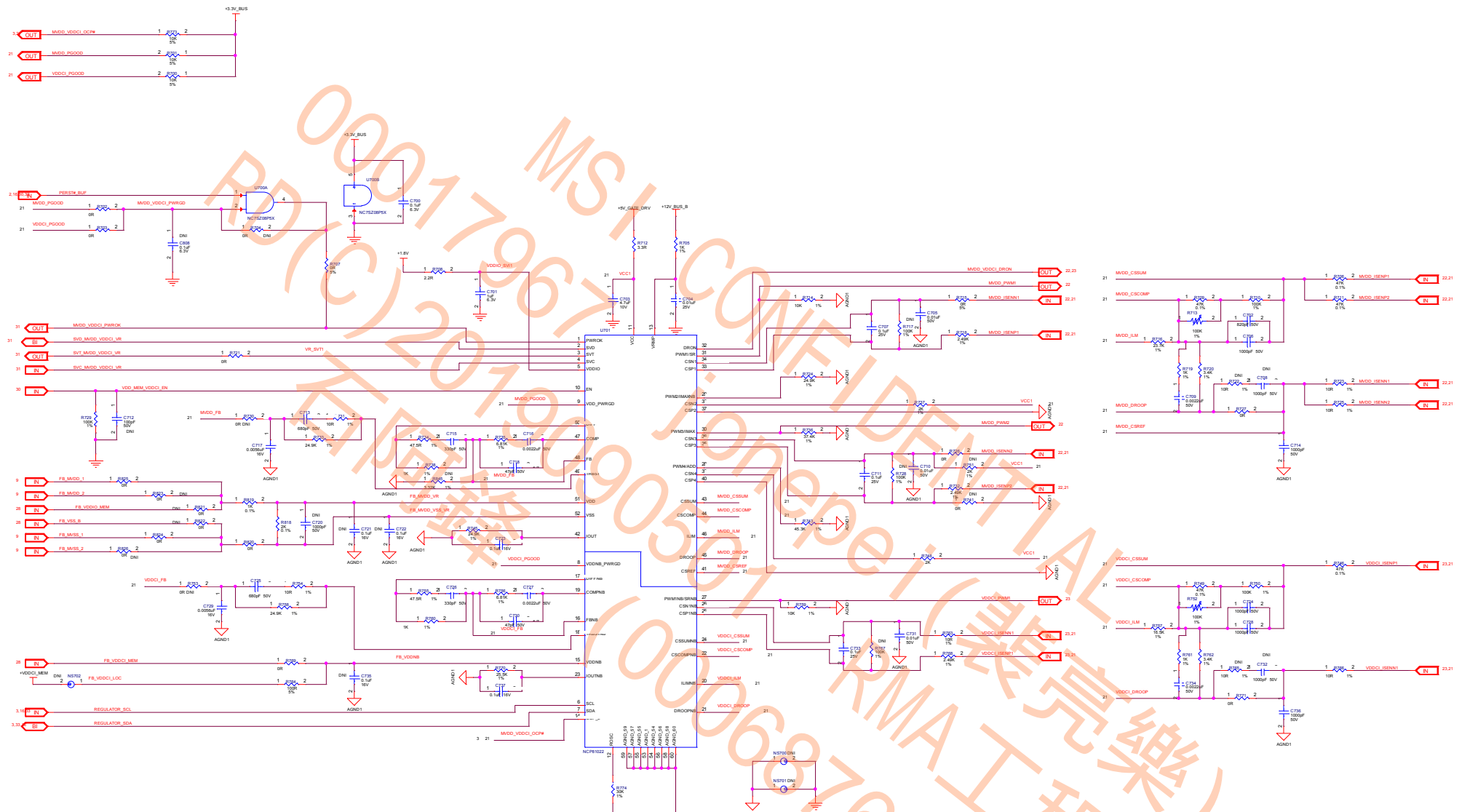
DOCUMENT NUMBER: 105\_D198w\_00A

NOTES: NOTE

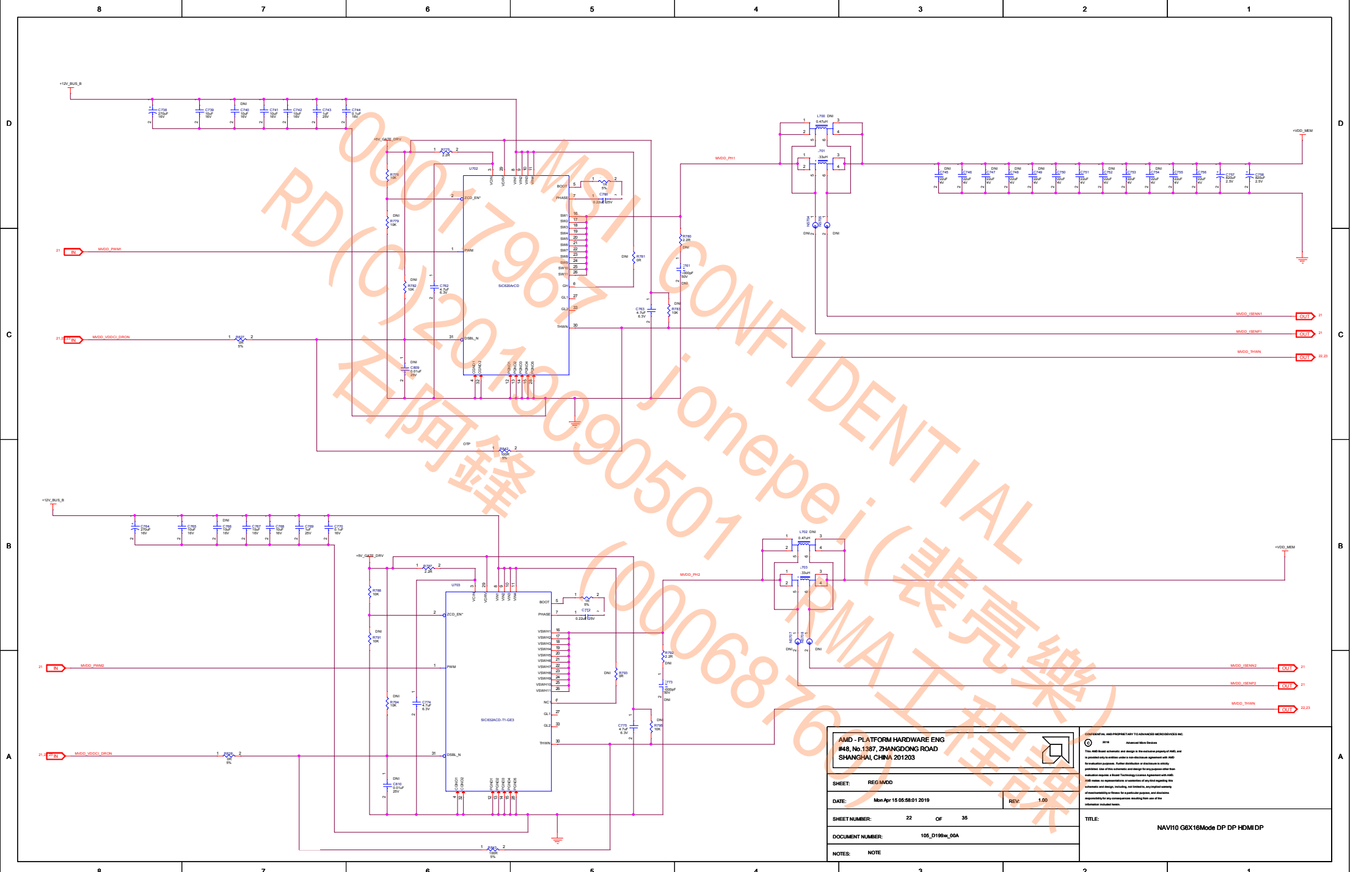
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TITLE: NAV10 G8X16Mode DP DP HDMI DP

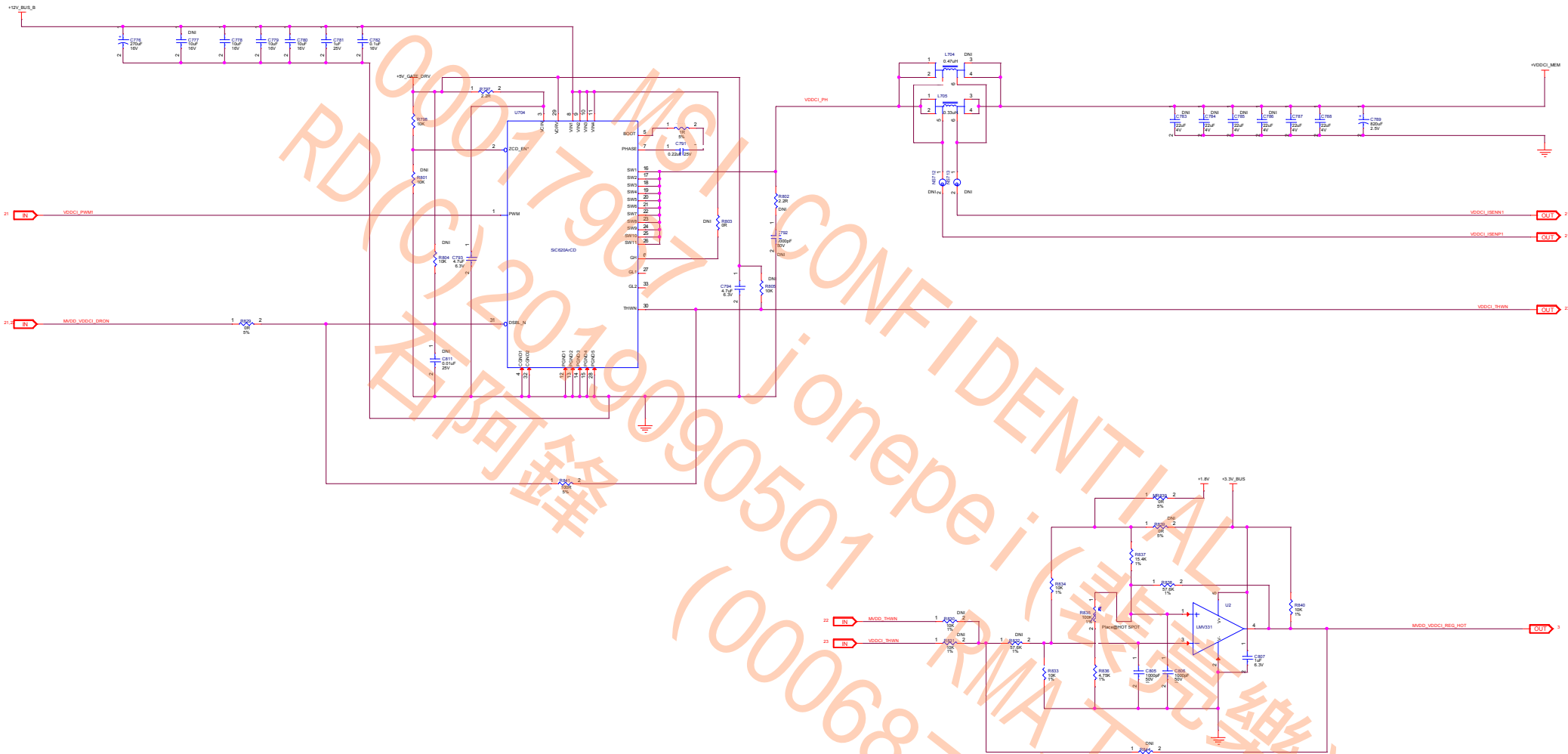



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SHEET:	MDD_VDDCI_CONTROLLER	DATE:	Mon Apr 15 05:58:01 2019	REV:	1.00
SHEET NUMBER:	21 OF 35	TITLE:			
DOCUMENT NUMBER:	105_D199w_00A	NAV10 G8x16Mode DP DP HDMI DP			
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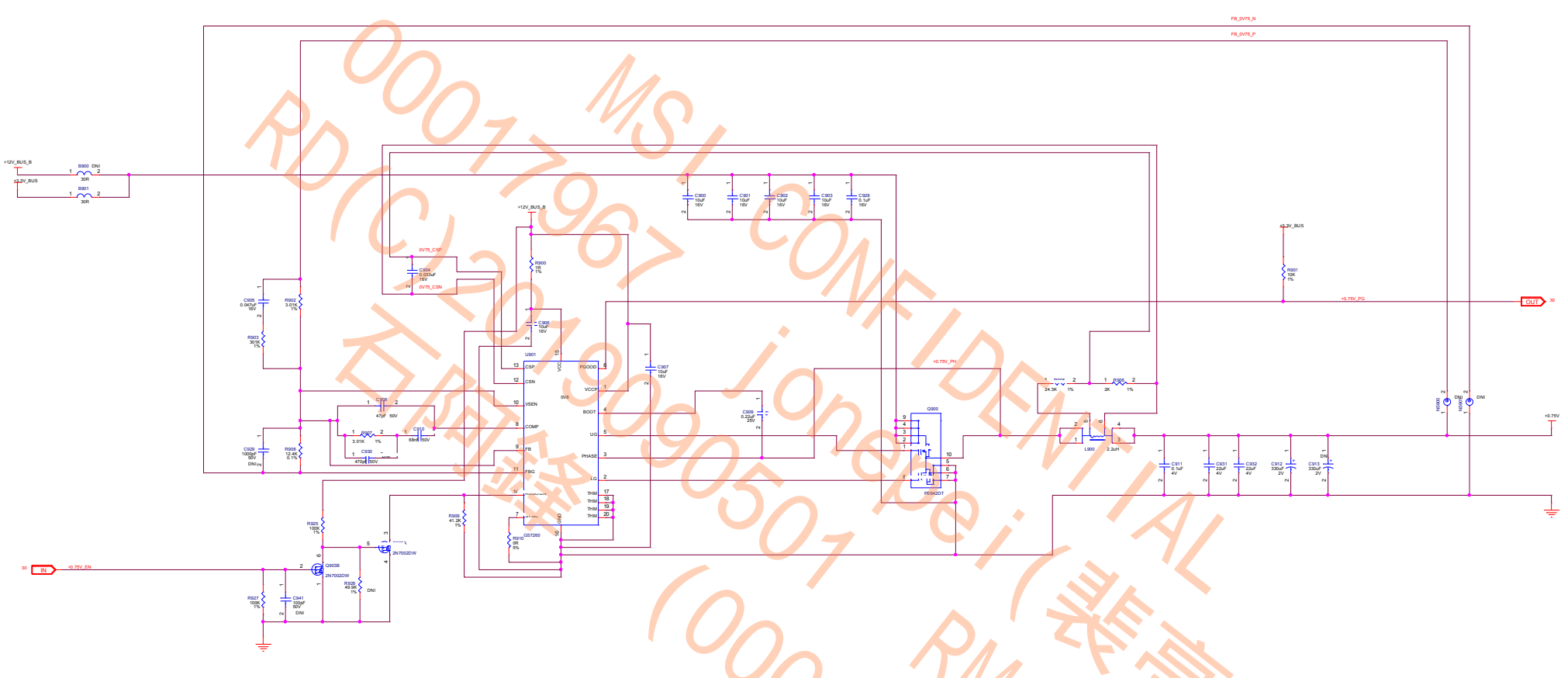


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SHEET: REG MIDD	REV: 1.00	
DATE: Mon Apr 15 05:58:01 2019		
SHEET NUMBER: 22 OF 35		
DOCUMENT NUMBER: 105_D199w_00A		
NOTES: NOTE		

TITLE:	NAV110 G8X16Mode DP DP HDMI DP
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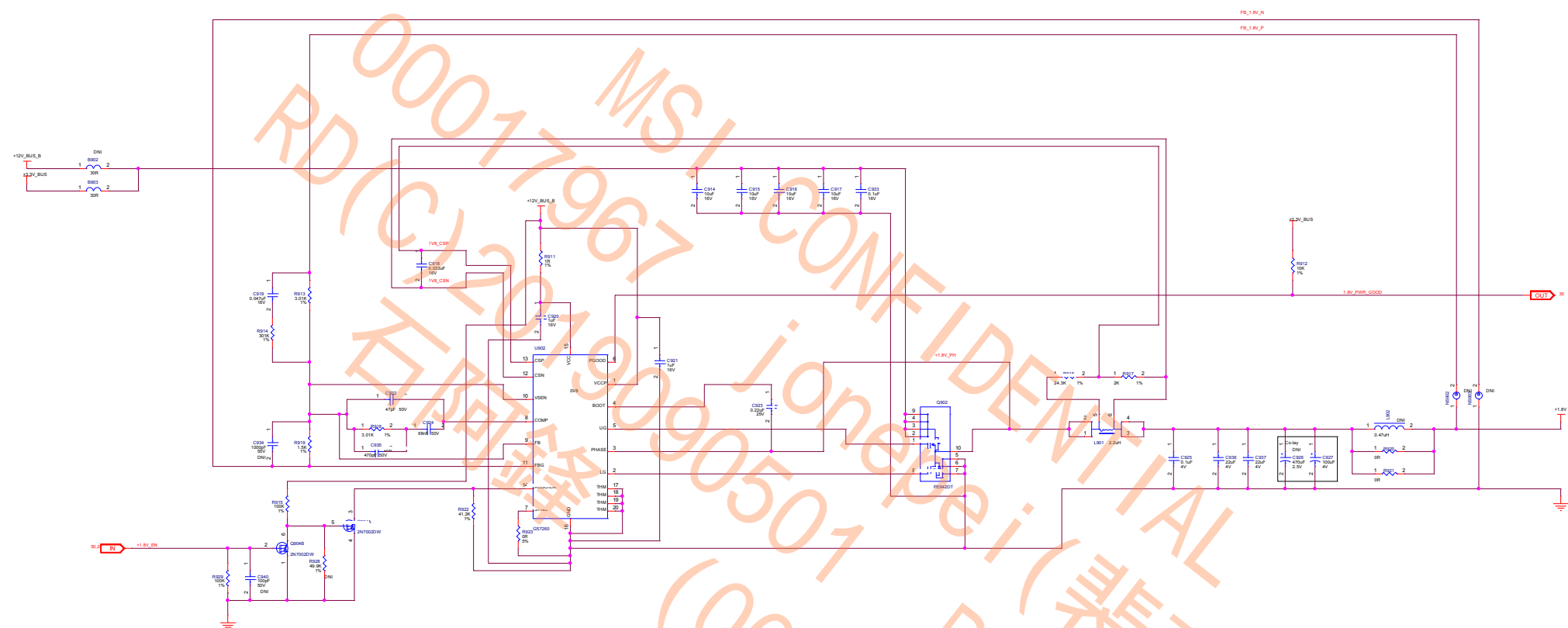
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SHEET: REG VDDCI	DATE: Mon Apr 15 05:58:02 2019	REV: 1.00	
SHEET NUMBER: 23	OF 35	TITLE:	NAVI10 G8X16Mode DP DP HDMI DP
DOCUMENT NUMBER: 105_D199w_00A	NOTES: NOTE		



AMD - PLATFORM HARDWARE ENG		REG 075V	
#48, No.1387, ZHANGDONG ROAD		DATE: Mon Apr 15 05:58:02 2019	
SHANGHAI, CHINA 201203		REV: 1.00	
SHEET NUMBER:	24	OF	35
DOCUMENT NUMBER:	105_D190w_00A		
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TITLE:	NAV110 G8X16Mode DP DP HDMI DP

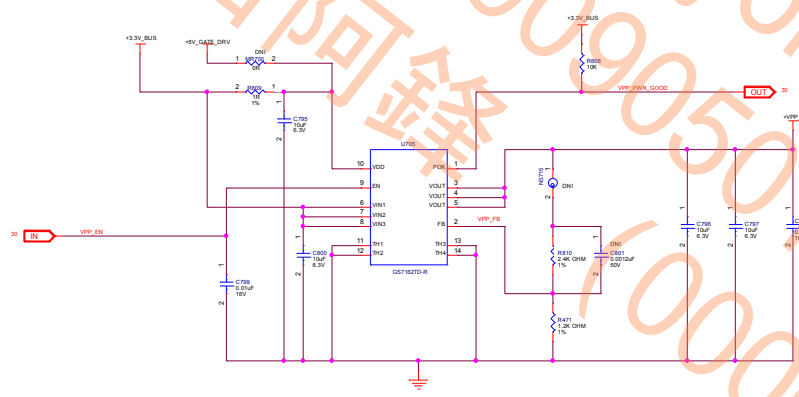
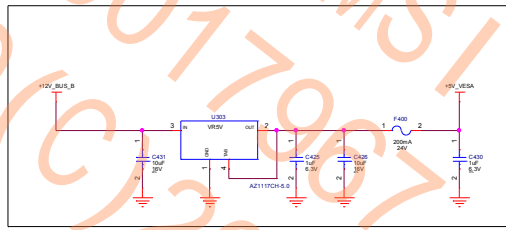





<b>AMD - PLATFORM HARDWARE ENG</b> #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203		
SHEET:	REG 1.8V	
DATE:	Mon Apr 15 05:58:03 2019	REV: 1.00
SHEET NUMBER:	25 OF 35	
DOCUMENT NUMBER:	105_D190w_00A	
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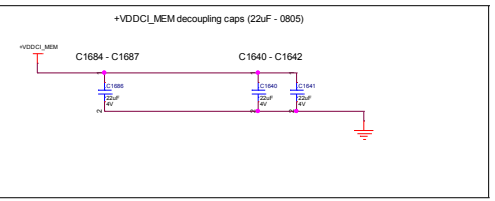
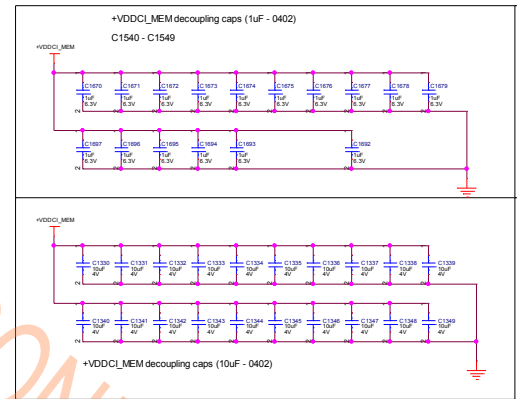
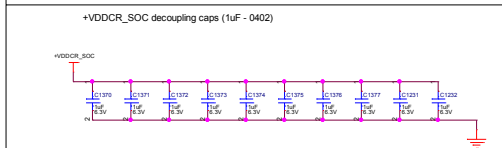
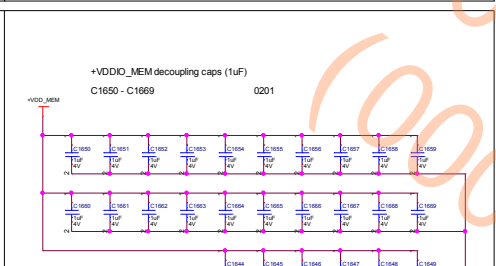
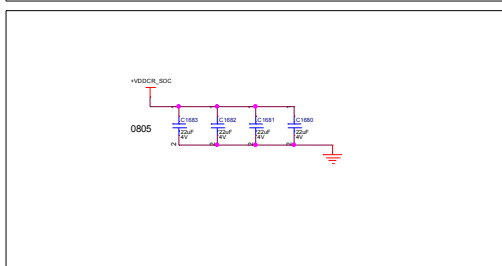
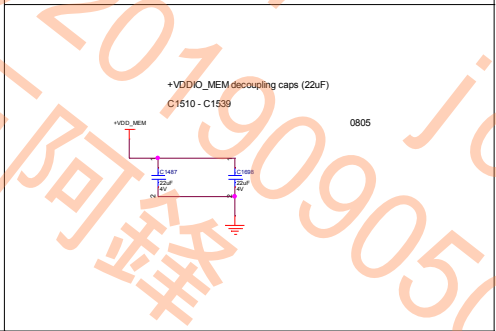
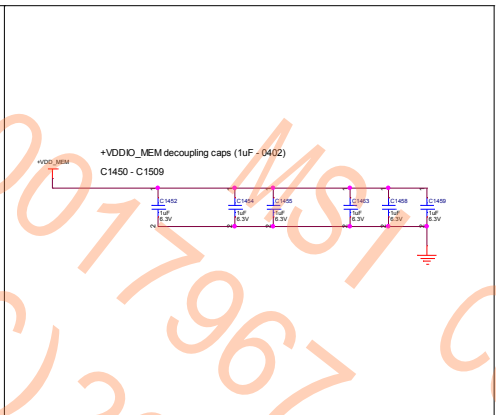
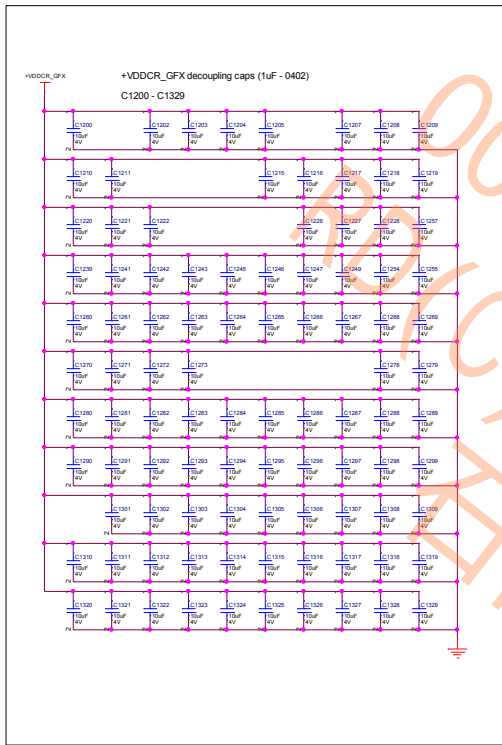
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REGULATOR FOR +5V RAILS  
IOUT = 50mA



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SHEET: SMALL RAIL REGULATORS		REV: 1.00	
DATE: Mon Apr 15 05:58:03 2019			
SHEET NUMBER: 26 OF 35		TITLE: NAV110 G8X16Mode DP DP HDMI DP	
DOCUMENT NUMBER: 105_D199w_00A			
NOTES: NONE			

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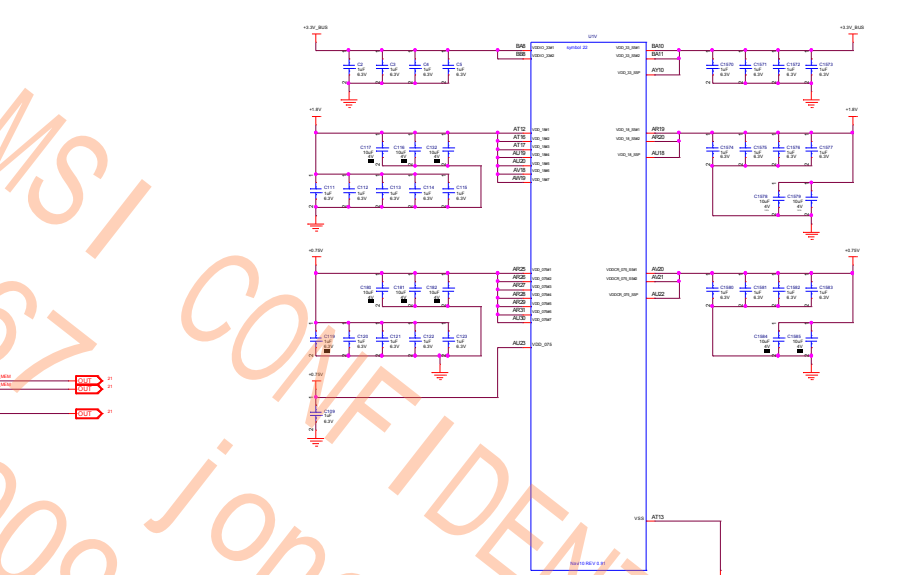
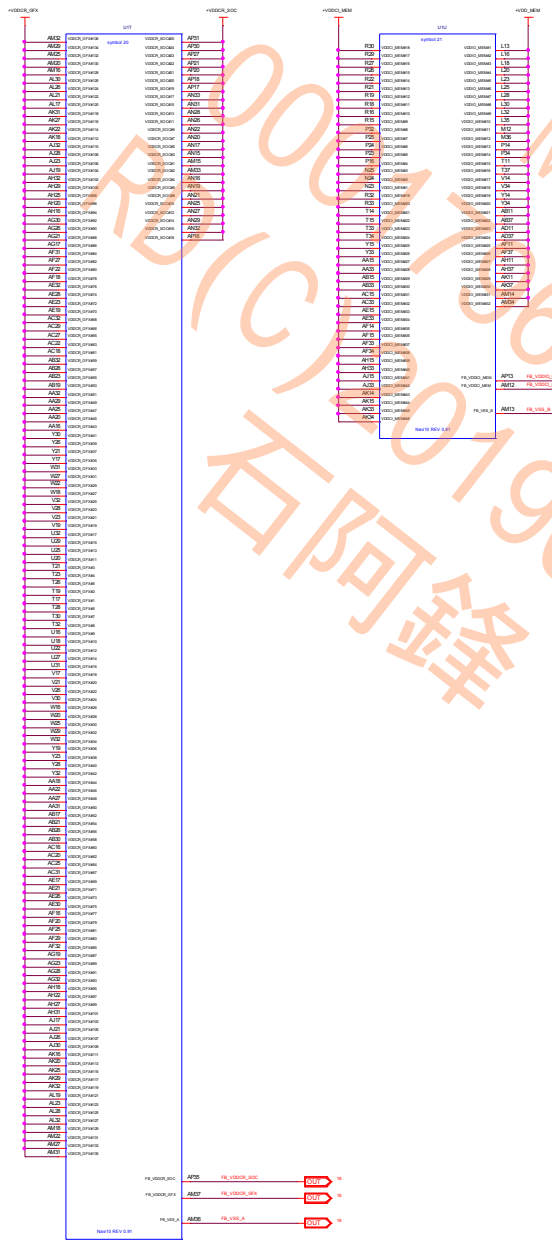


<b>AMD - PLATFORM HARDWARE ENG</b> #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203		
SHEET: NAV110 DECAPS	DATE: Mon Apr 15 05:58:04 2019	
SHEET NUMBER: 27 OF 35	DOCUMENT NUMBER: 105_D199w_00A	TITLE: NAV110 G8X16Mode DP DP HDMI DP
NOTES: NOTE		

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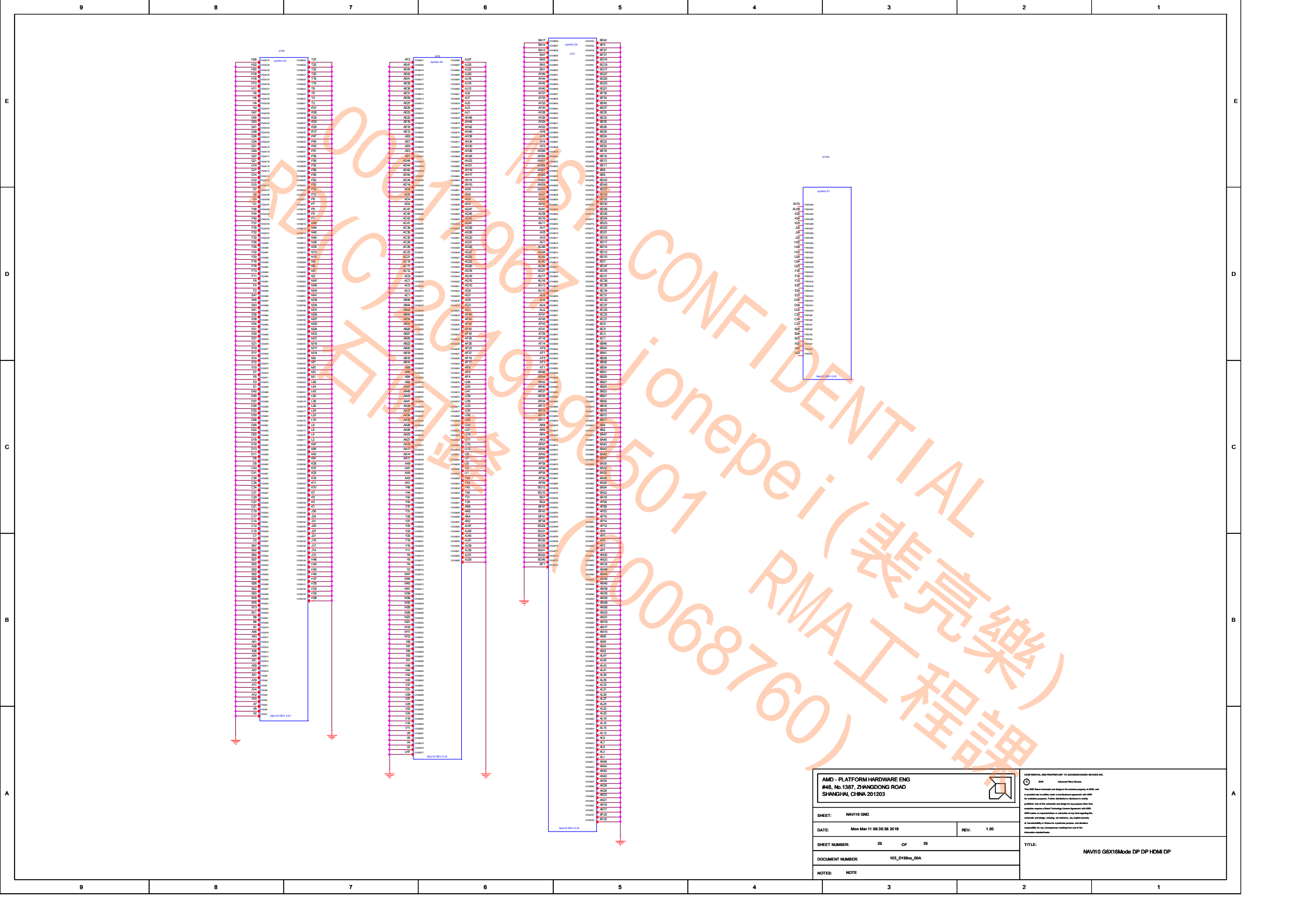
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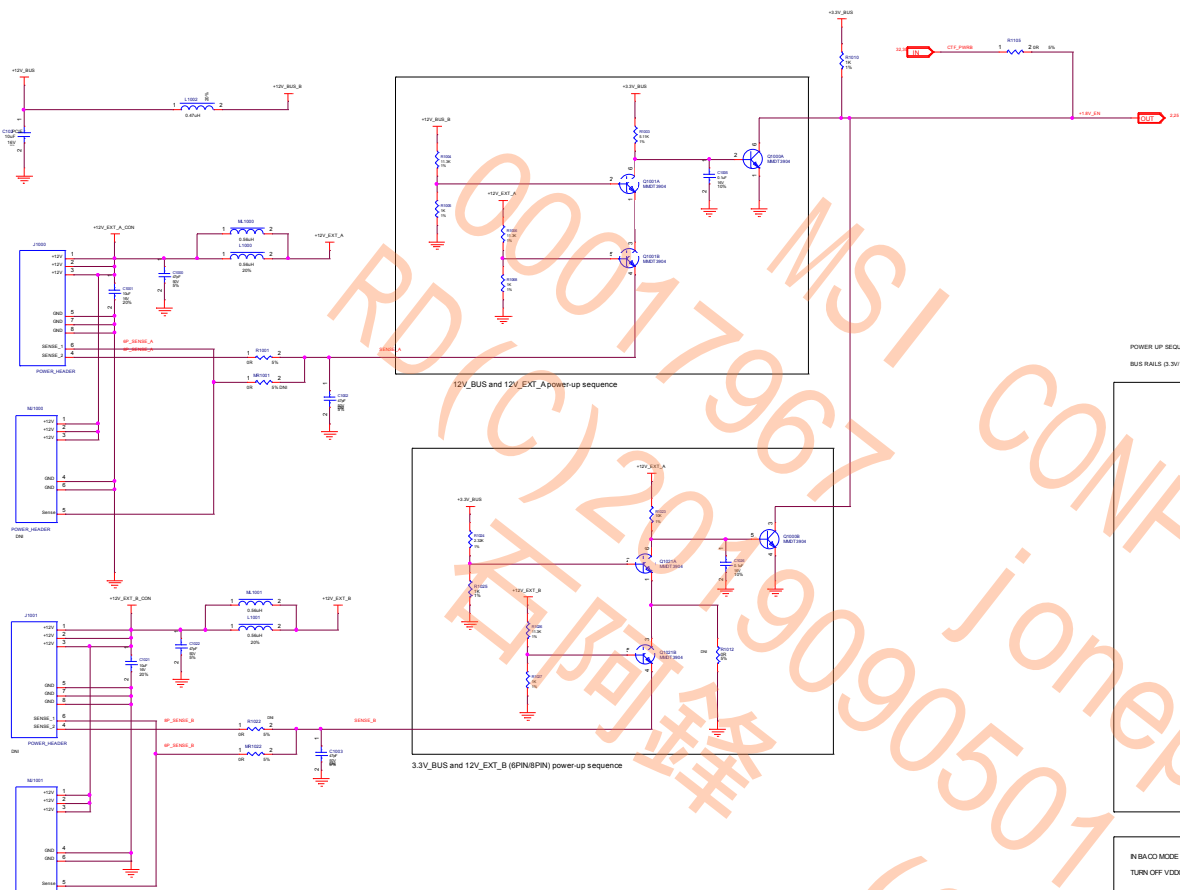
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<b>AMD - PLATFORM HARDWARE ENG</b> #46, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203		SHEET: NAV10 POWER DATE: Mon Apr 15 05:58:04 2019 SHEET NUMBER: 28 OF 35 DOCUMENT NUMBER: 105_0198X_05A NOTES: NOTE	SHEET: NAV10 POWER DATE: Mon Apr 15 05:58:04 2019 SHEET NUMBER: 28 OF 35 DOCUMENT NUMBER: 105_0198X_05A NOTES: NOTE
TITLE: NAV10 G6X16Mode DP DP HDMI DP			SHEET: NAV10 POWER DATE: Mon Apr 15 05:58:04 2019 SHEET NUMBER: 28 OF 35 DOCUMENT NUMBER: 105_0198X_05A NOTES: NOTE

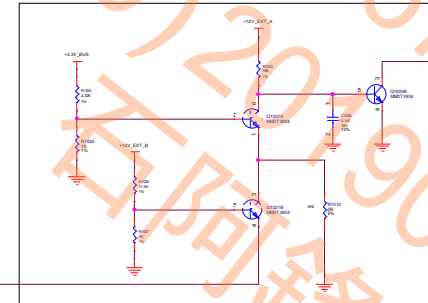
SHEET: NAV10 POWER  
 DATE: Mon Apr 15 05:58:04 2019  
 SHEET NUMBER: 28 OF 35  
 DOCUMENT NUMBER: 105\_0198X\_05A  
 NOTES: NOTE



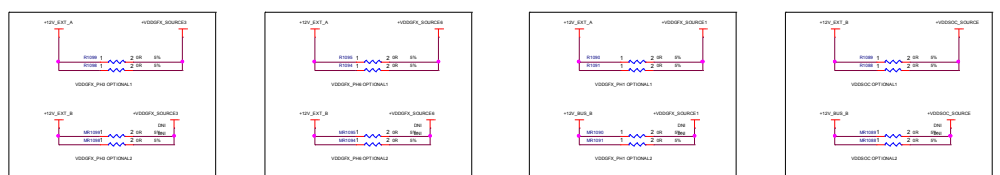
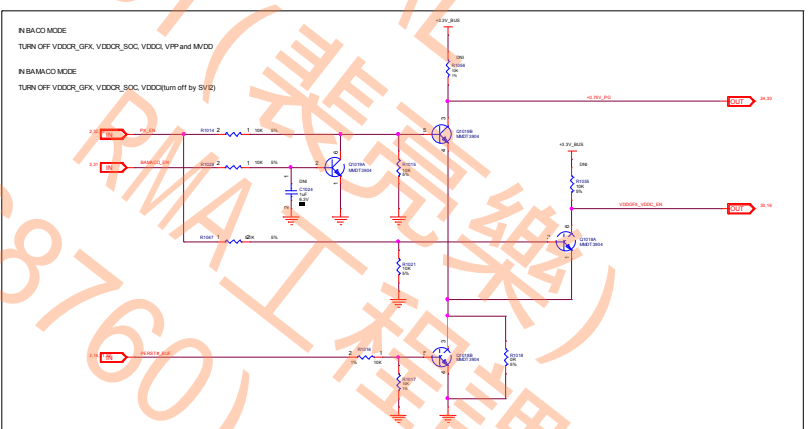
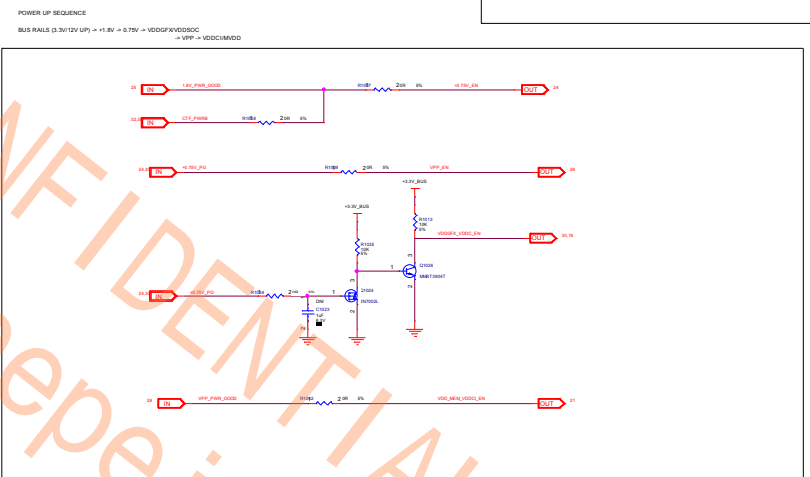
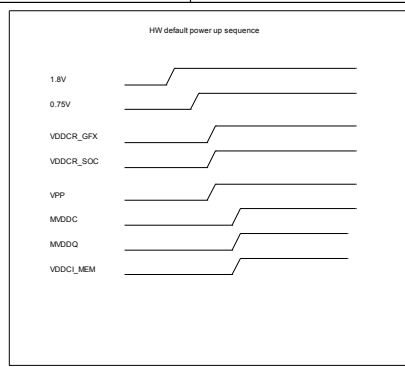
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SHEET:	NAVI10 DMD	
DATE:	Mon Mar 11 06:38:36 2019	REV: 1.00
SHEET NUMBER:	20 OF 35	TITLE:
DOCUMENT NUMBER:	105_0199kx_05A	NAVI10 G6X16Mode DP DP HDMI DP
NOTES:	NOTE	



12V\_BUS and 12V\_EXT\_A power-up sequence



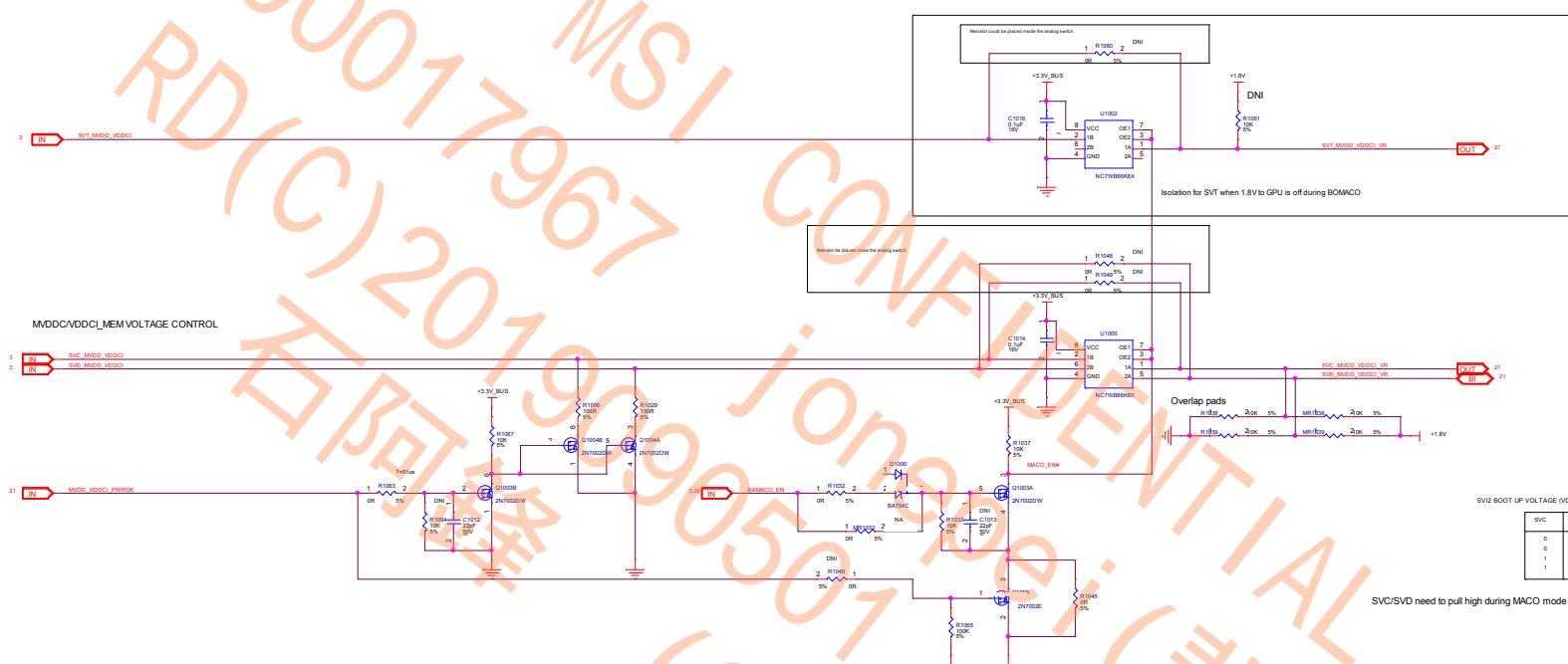
3.3V\_BUS and 12V\_EXT\_B (BPN/BPN) power-up sequence



<b>AMD - PLATFORM HARDWARE ENG</b> #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203	
SHEET: POWER MANAGEMENT	
DATE: Mon Apr 15 05:58:05 2019	REV: 1.00
SHEET NUMBER: 30	OF 35
DOCUMENT NUMBER: 105_0198x_05A	
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TITLE: NAV10 G6X16Mode DP DP HDMI DP



SV1Z BOOT UP VOLTAGE (VDDCI\_MEM/MVDD)

SV1Z	SV2	VOLTAGE
0	0	1.1V
0	1	1.0V
1	0	0.9V
1	1	0.8V

SV1Z:SV2 need to pull high during MACCO mode

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 SHANGHAI, CHINA 201203

SHEET: SV2 & BAMCO

DATE: Mon Apr 15 05:58:05 2019 REV: 1.00

SHEET NUMBER: 31 OF 35

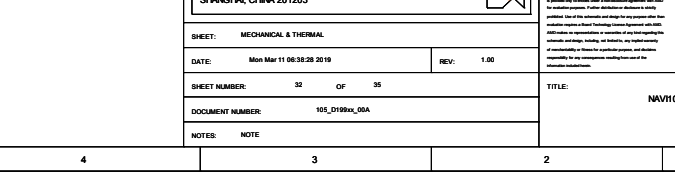
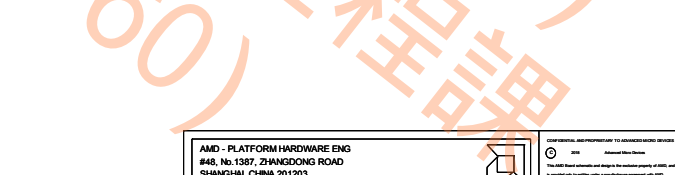
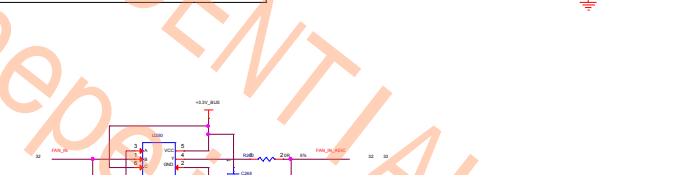
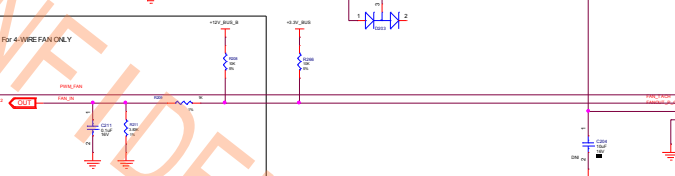
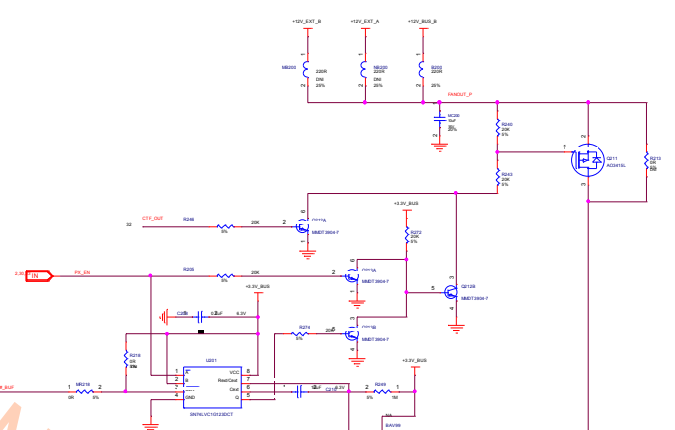
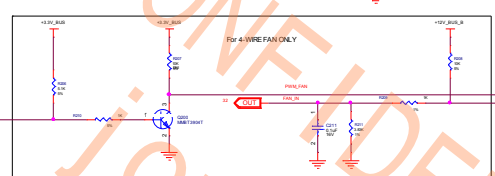
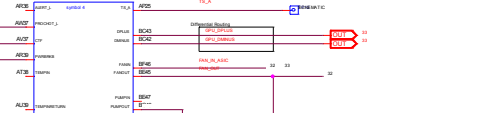
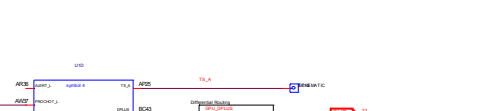
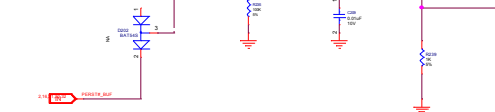
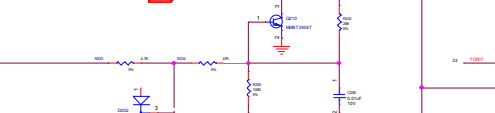
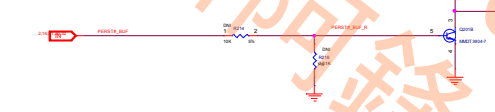
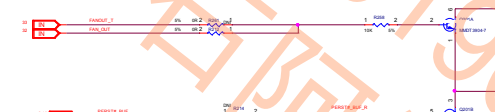
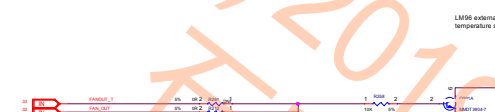
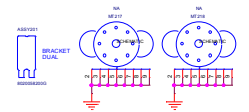
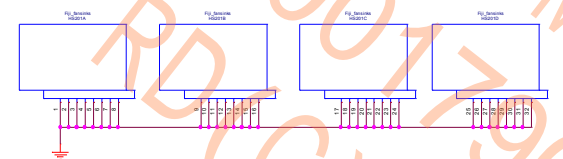
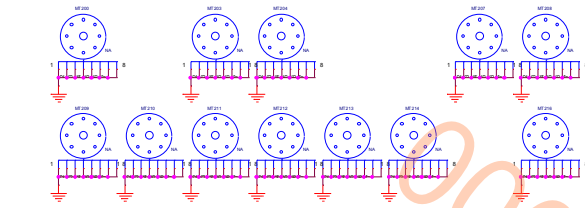
DOCUMENT NUMBER: 105\_D199w\_00A

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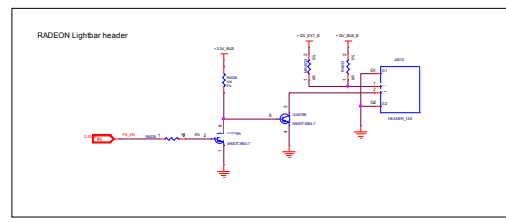
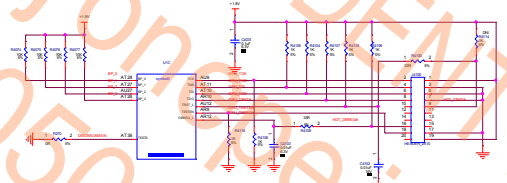
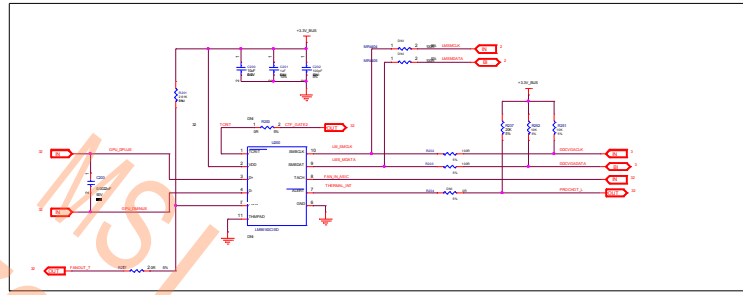
TITLE: NAV110 G8X16Mode DP DP HDMI DP



<b>AMD - PLATFORM HARDWARE ENG</b> #48, No.1387, ZHANGDONG ROAD SHANGHAI, CHINA 201203			SHEET: MECHANICAL & THERMAL
DATE: Mon Mar 11 06:38:28 2019	REV: 1.00		
SHEET NUMBER: 32 OF 35	TITLE: NAV10 G6X16Mode DP DP/HDMI DP		
DOCUMENT NUMBER: 105_D198K_05A	NOTES: NOTE		

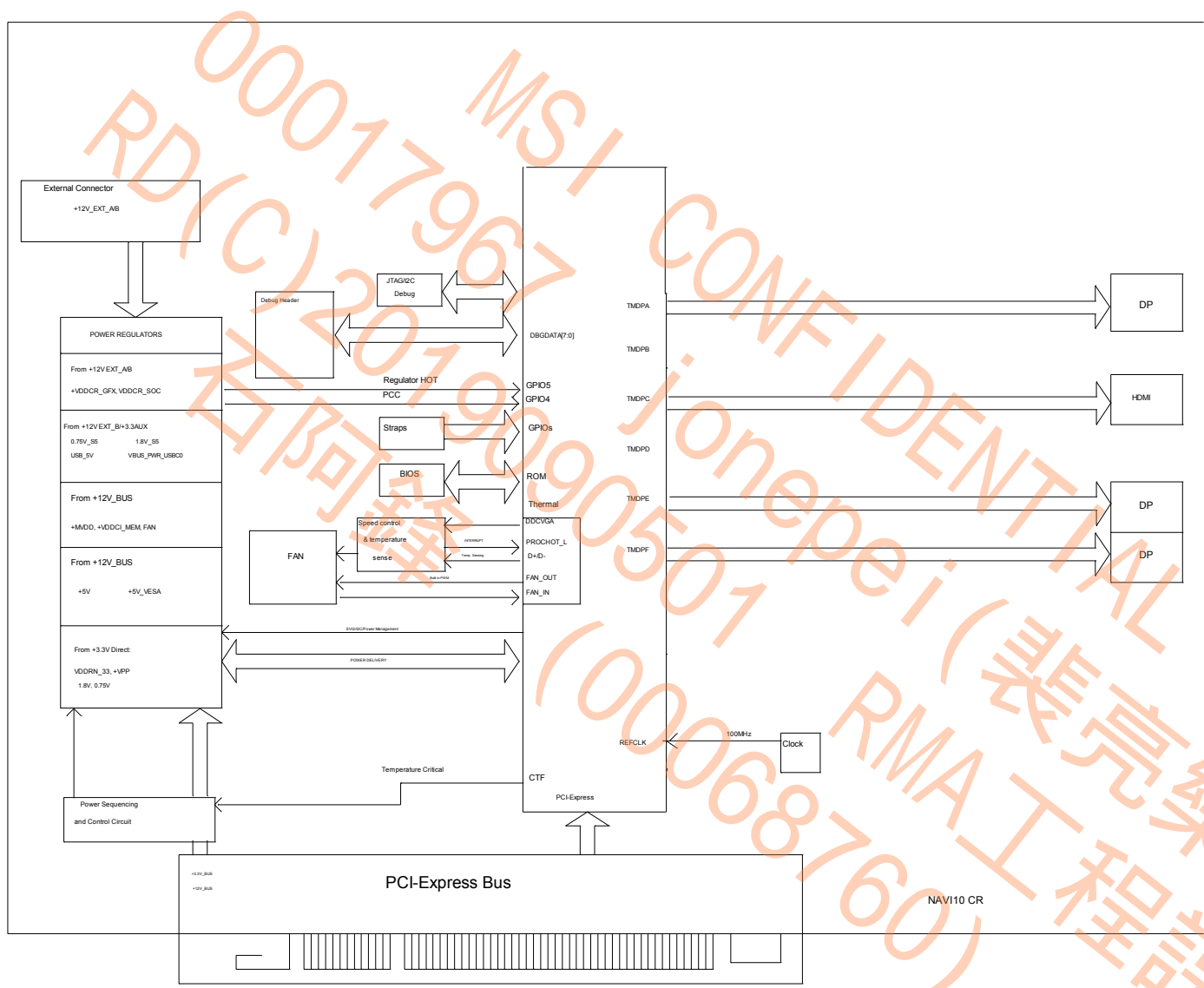
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AAEI - PLATFORM HARDWARE ENG (SHEI, No.1367, ZHANGDONG ROAD SHANGHAI, CHINA 201203)			
SHEET:	DESIGN		
DATE:	Mon May 11 08:38:33 2019	REV:	1.00
SHEET NUMBER:	33	TITLE	
DOCUMENT NUMBER:	MSJPHW_0A	NAV110_GEX16A04c_EFDZPHM_DP	



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SHEET: BLOCK DIAGRAM	REV: 1.00	
DATE: Mon Mar 11 03:18:00 2019		
SHEET NUMBER: 34 OF 35		
DOCUMENT NUMBER: 105_0198xk_05A		
NOTES: NOTE		

TITLE: NAVI10 G6X16Mode DP DP HDMI DP
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### REVISION HISTORY

ENGINEER: PEAK, DONG

NOTES: NOTE

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