
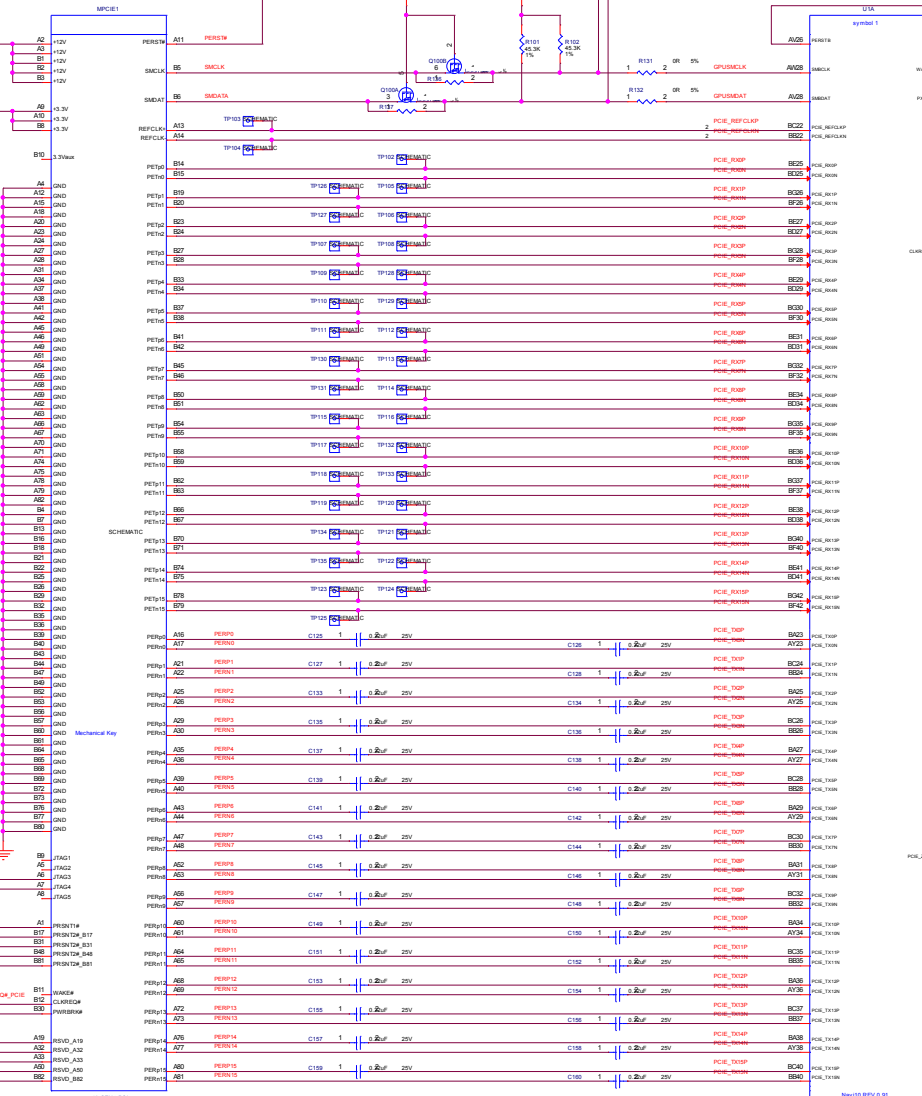
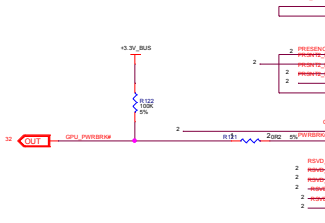
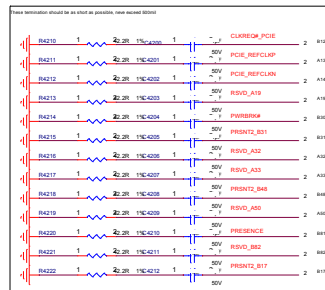
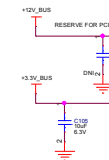


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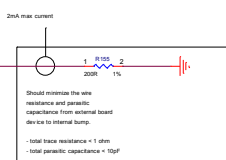
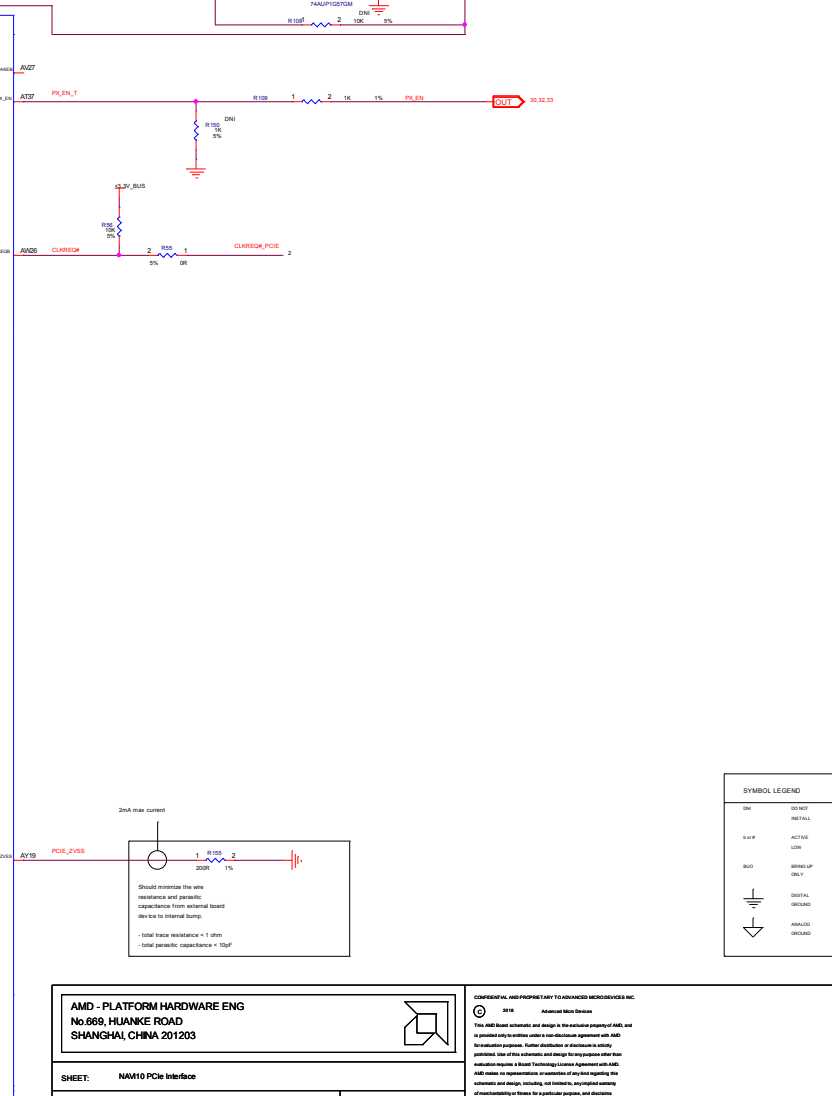
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<p>SHEET: TOC</p>	<p>REV: 1.00</p>
<p>DATE: Fri Jun 21 05:25:22 2019</p>	<p>DOCUMENT NUMBER: 105_D199w_008</p>
<p>SHEET NUMBER: 1 OF 35</p>	<p>NOTES: NOTE</p>

PLACE THESE CAPS AS CLOSE TO PCIe CONNECTOR AS POSSIBLE



Mechanical Key

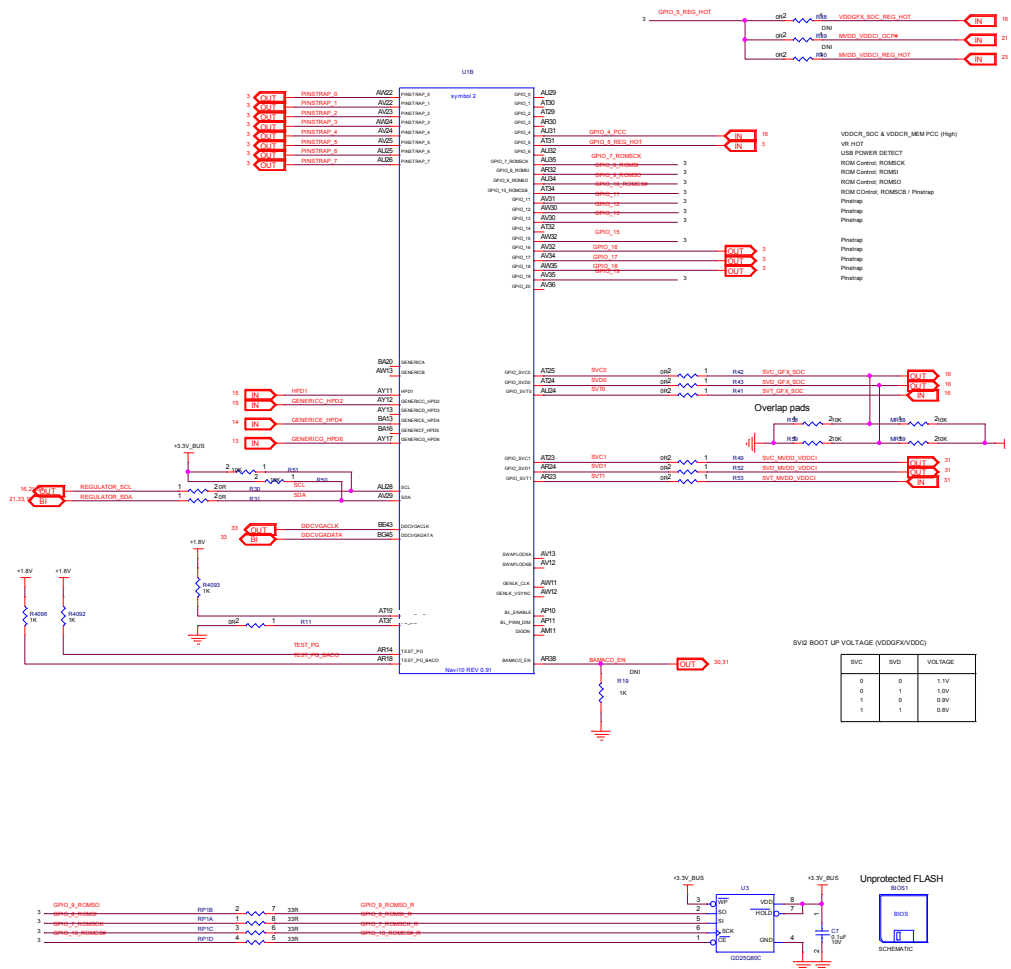
*16 GEN4 PCH



SYMBOL LEGEND table with symbols for SW, SWP, SWD, GND, and ANALOG GROUND.

AMD - PLATFORM HARDWARE ENG No.669, HUANKE ROAD SHANGHAI, CHINA 201203 SHEET: NAV10 PCIe Interface DATE: Fri Jun 21 05:25:22 2019 REV: 1.00 SHEET NUMBER: 2 OF 35 DOCUMENT NUMBER: 105_D199w_008 NOTES: NOTE

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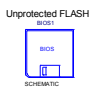


Note: Internal PUPD at GPIO pad is ~40k strength in 14nm design spec

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 0: All endpoints connected 1: 1 endpoint connected 2: 2 endpoints connected 3: 4 endpoints connected 4: 3 endpoints connected 5: 2 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 dangle is detected 3: Audio for DisplayPort and native HDMI
	0	
Platform	0	
	0	
	0	
SMU	1	
	0	
	1	PINSTRAP_SMBUS_ADDR 0: 0x4th 1: 0x6th
		PINSTRAP_BIOS_ROM_EN 0: Disable the external BIOS ROM device 1: Enable the external BIOS ROM device

SV12 BOOT UP VOLTAGE (VDDGX/VDDO)

SV1	SV2	VOLTAGE
0	0	1.1V
0	1	1.0V
1	0	0.9V
1	1	0.8V



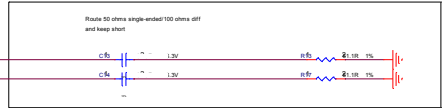
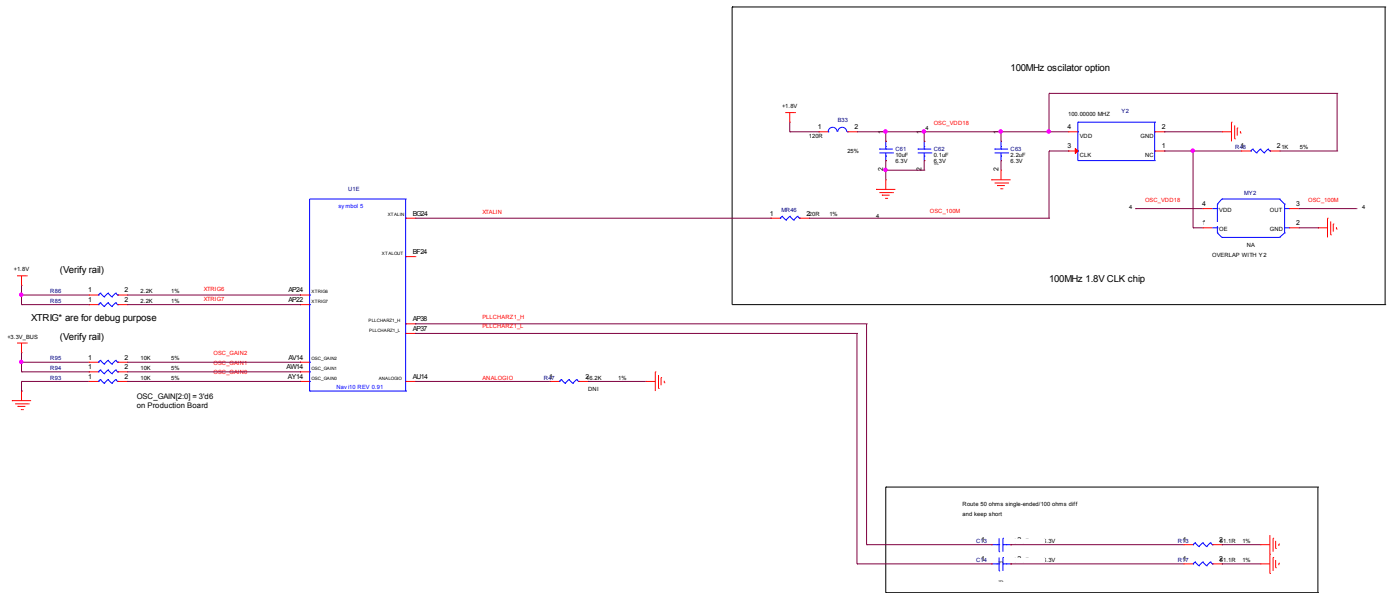
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SHEET: NAV10 GPOs		REV: 1.00	
DATE: Fri Jun 21 05:25:23 2019			
SHEET NUMBER: 3	OF	35	
DOCUMENT NUMBER: 105_D199w_008			
NOTES: NOTE			

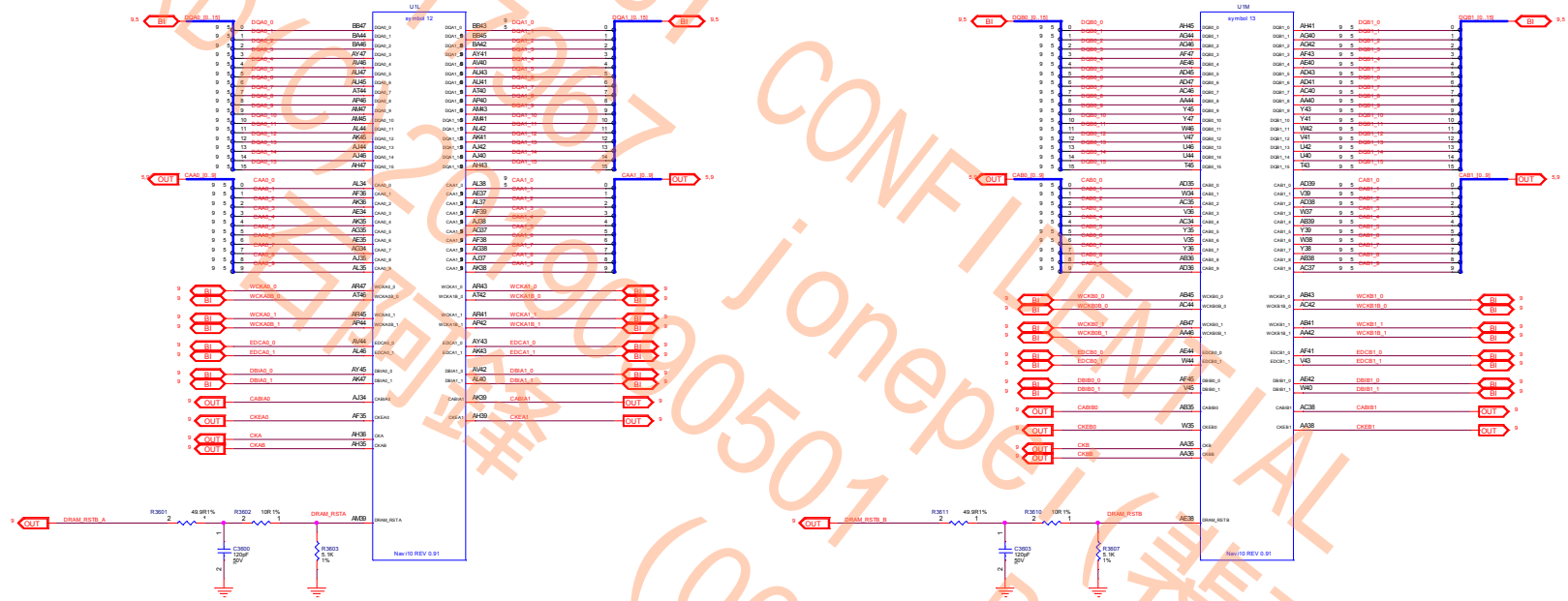
TITLE: NAV10 G8X16mode DP HDMI DP



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SHEET: NAV10 XTAL	REV: 1.00	
DATE: Fri Jun 21 05:25:23 2019	DOCUMENT NUMBER: 105_D199w_008	
SHEET NUMBER: 4 OF 35	NOTES: NOTE	

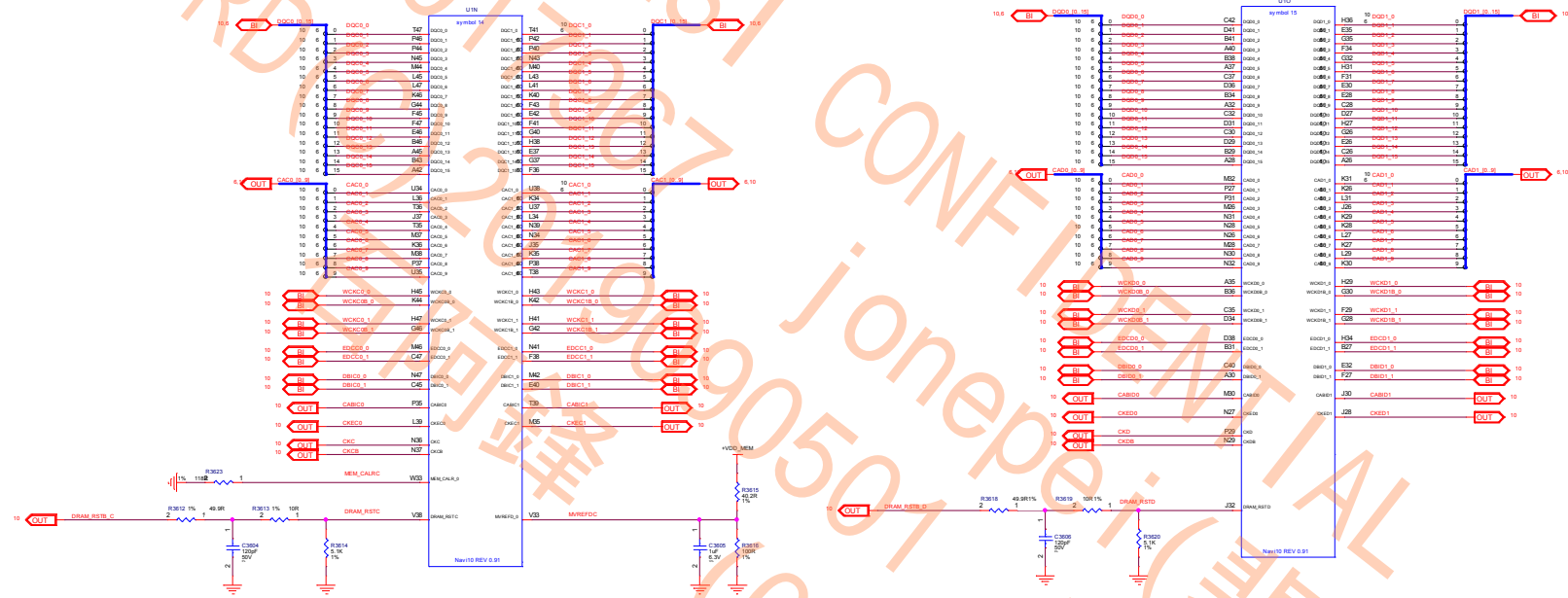
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NAVI 10 MEM INTERFACE CH A/B



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SHEET: NAVI10 MEM CHAB	DATE: Fri Jun 21 05:25:24 2019	REV: 1.00	TITLE: NAVI10 G8X16mode DP DP HDMI DP
SHEET NUMBER: 5 OF 35	DOCUMENT NUMBER: 105_D190w_008	NOTES: NOTE	

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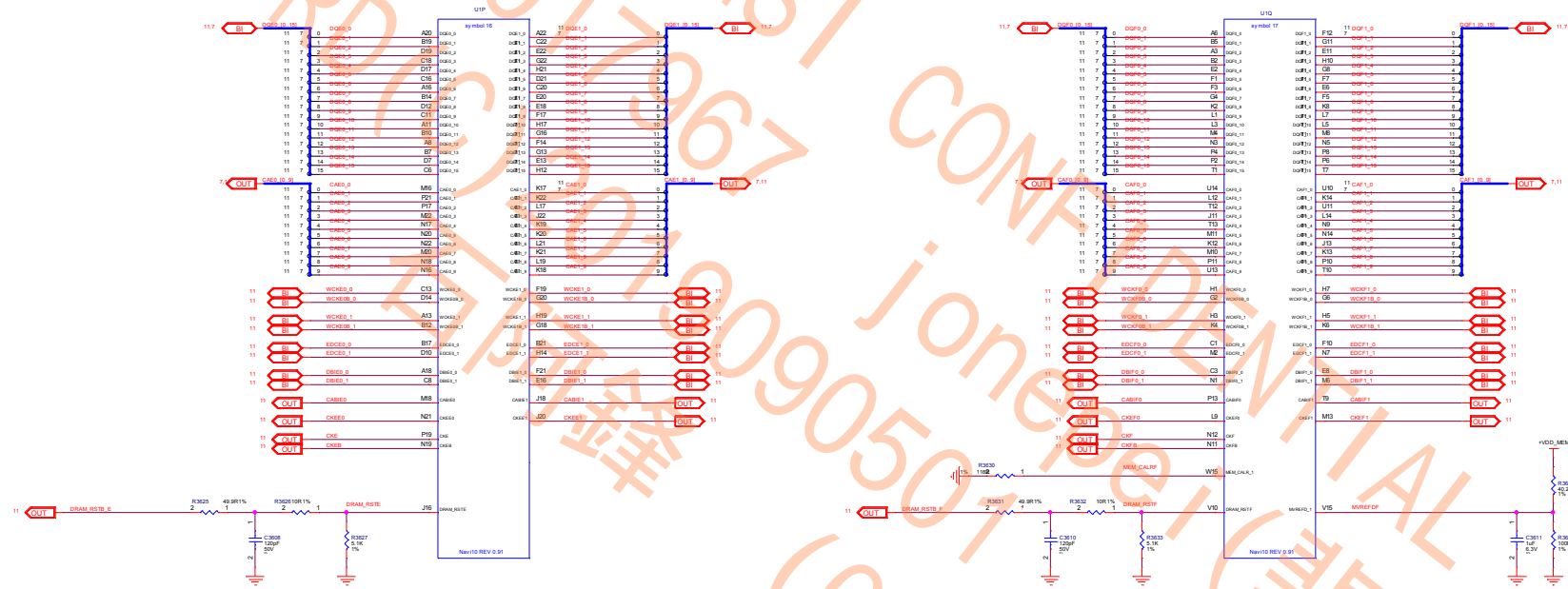


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SHEET: NAVI10 MEMCHCD
 DATE: Fri Jun 21 05:25:24 2019
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TITLE: NAVI10 G8X16mode DP DP HDMI DP

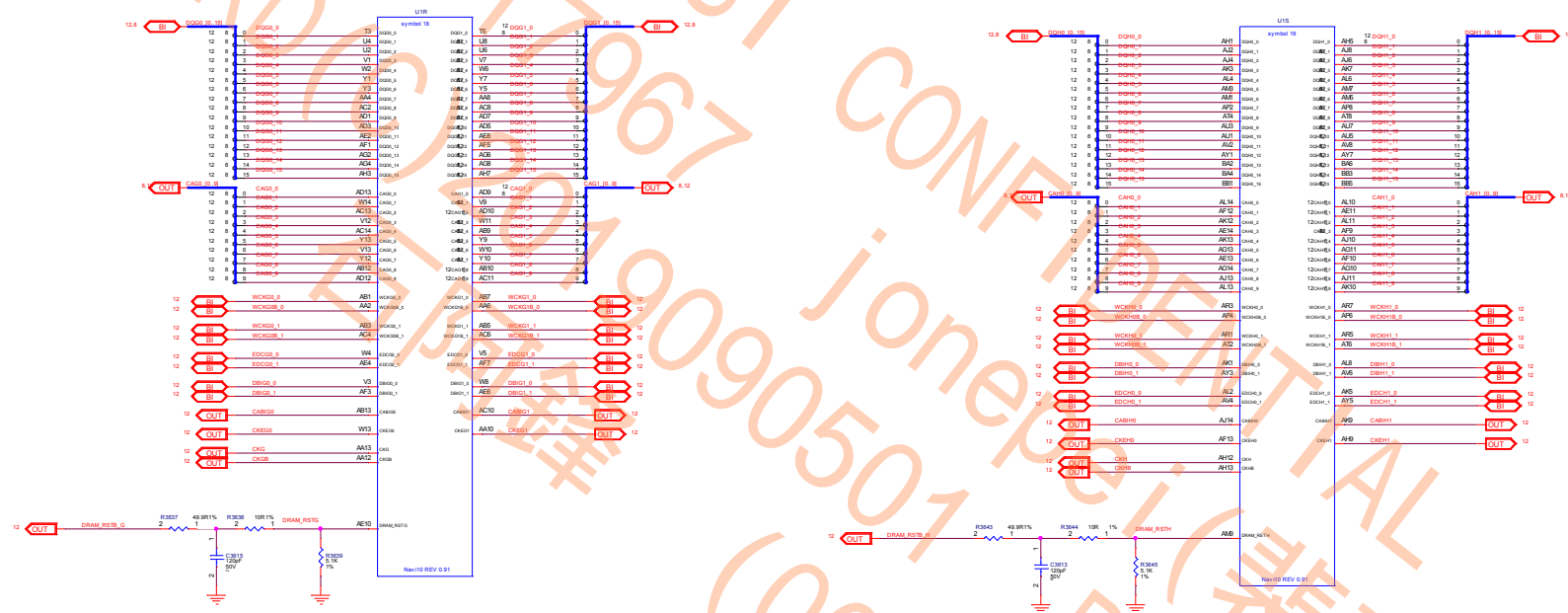


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SHEET: NAVI10 MEM CHEF
 DATE: Fri Jun 21 05:25:25 2019
 SHEET NUMBER: 7 OF 35
 DOCUMENT NUMBER: 105_D190w_008
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TITLE: NAVI10 G8X16mode DP DP HDMI DP

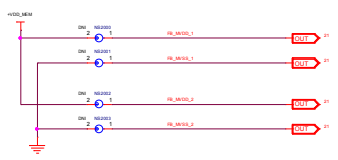
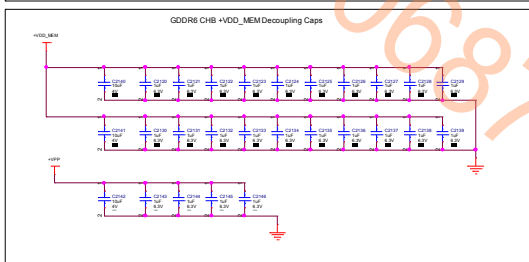
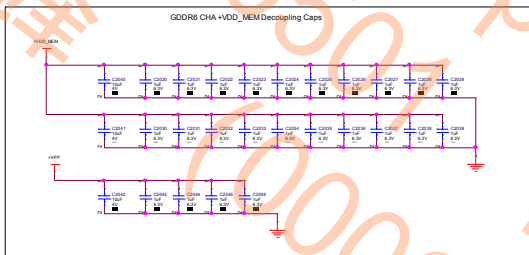
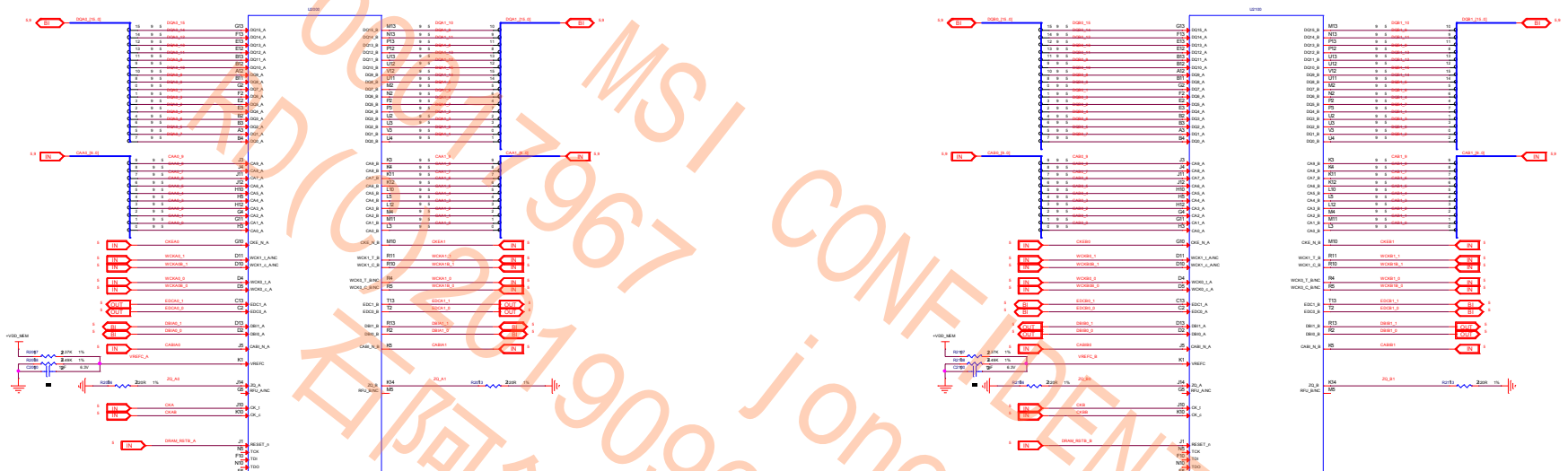


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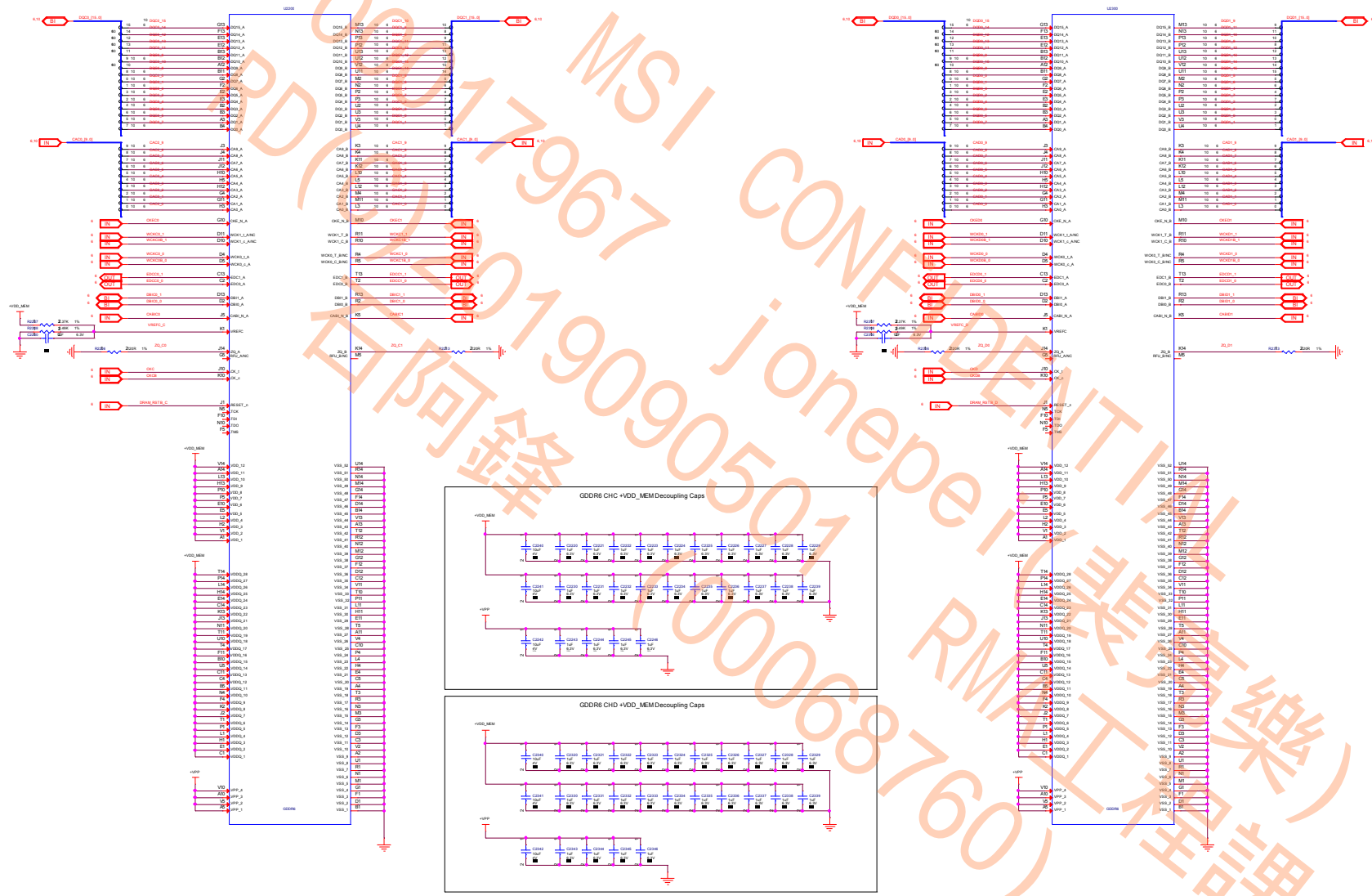
SHEET: NAVI10 MEMCHG
 DATE: Fri Jun 21 05:25:26 2019
 SHEET NUMBER: 8 OF 35
 DOCUMENT NUMBER: 105_D199w_008
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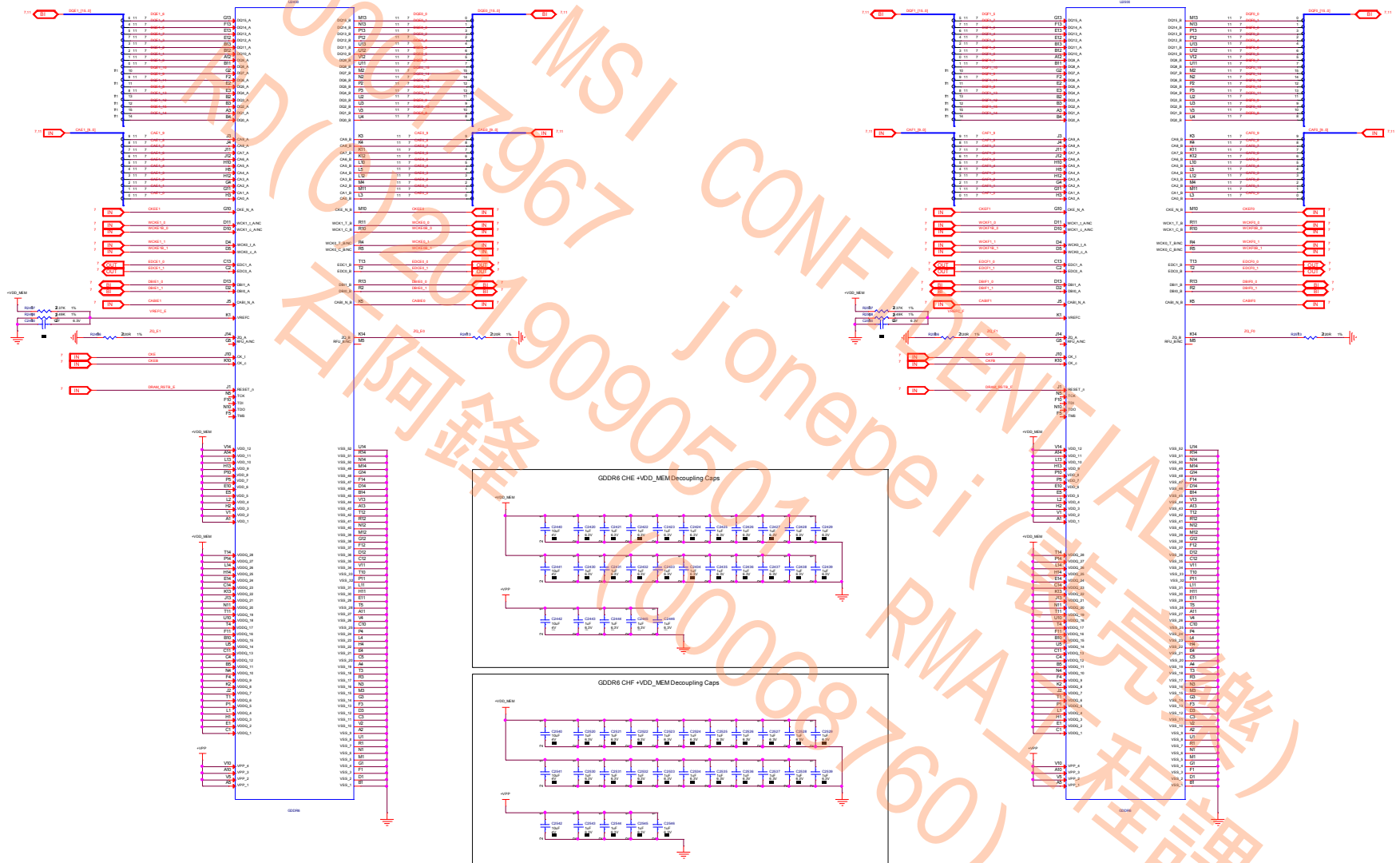
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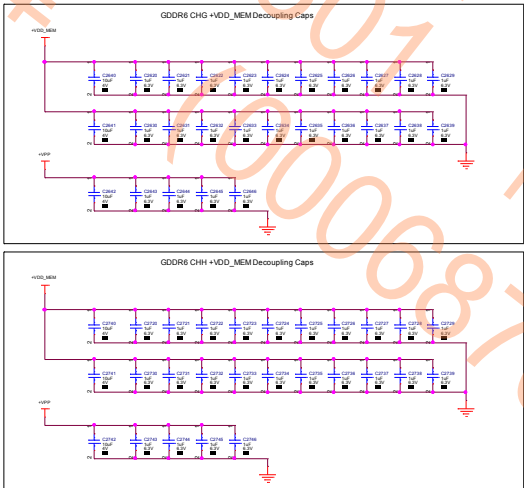
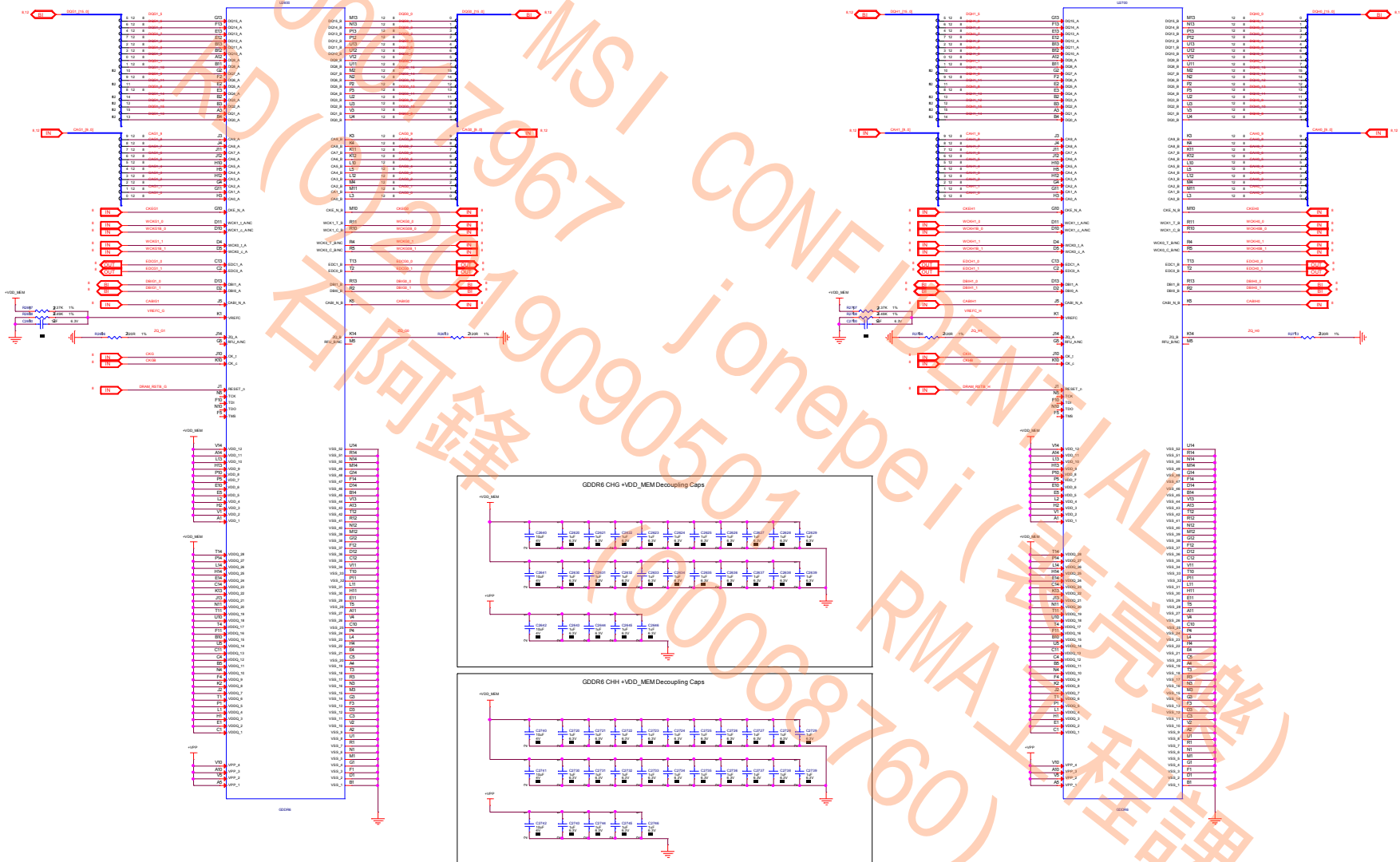
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SHEET NUMBER: 9 OF 35		TITLE: NAV10 G6X16mode DP DP/HDMI DP
DOCUMENT NUMBER: 105_0198x_098		
NOTES: NOTE		



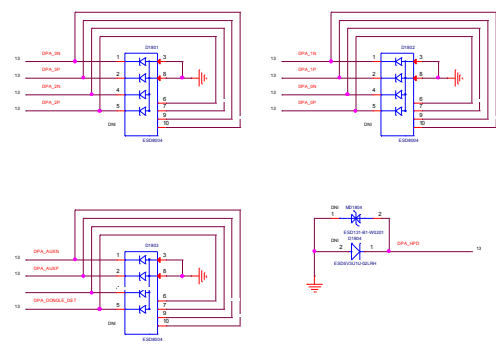
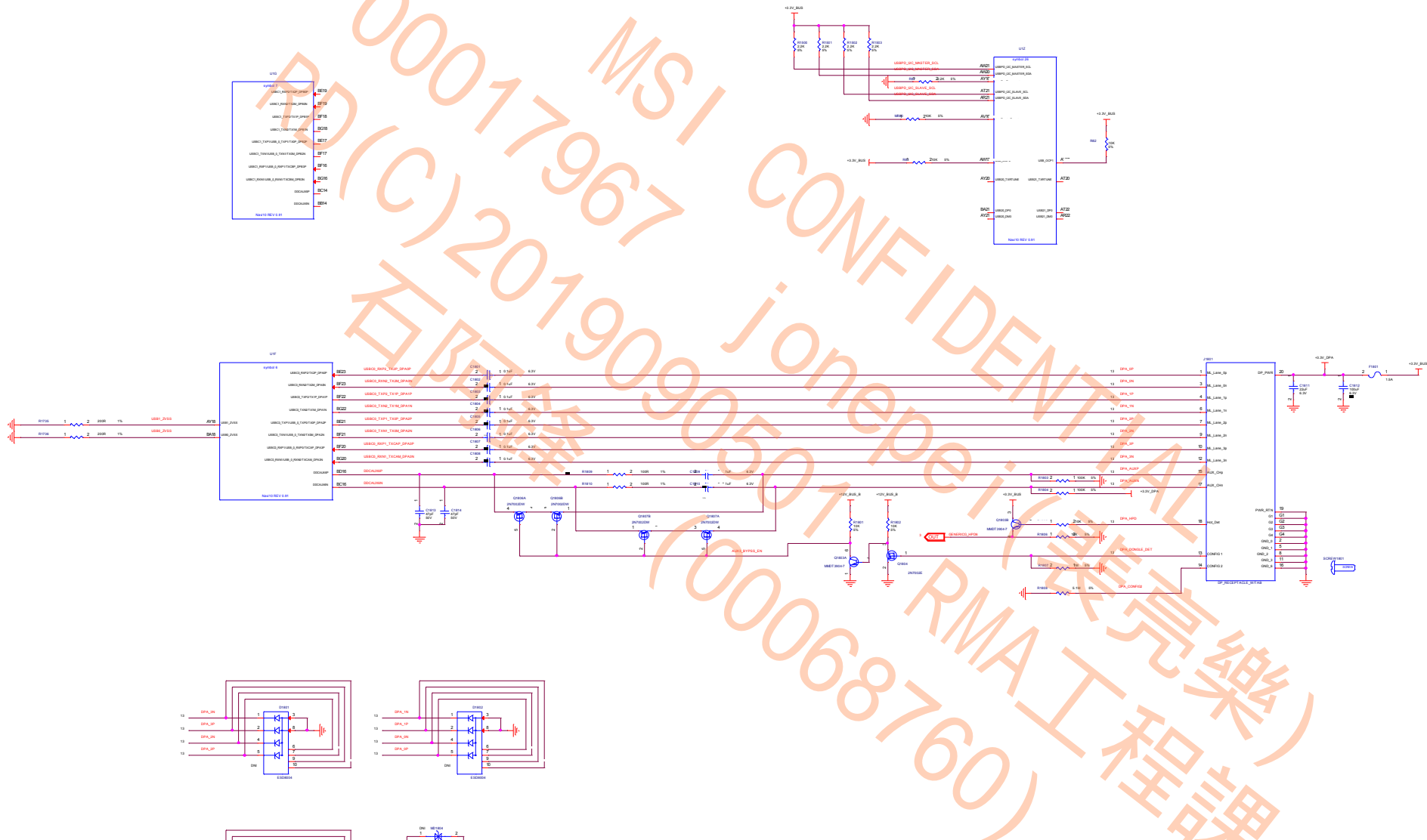
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DATE: Fri Jun 21 03:45:57 2019		REV: 1.00	
SHEET NUMBER: 11 OF 35		DOCUMENT NUMBER: 105_0199x_098	
NOTES: NOTE			

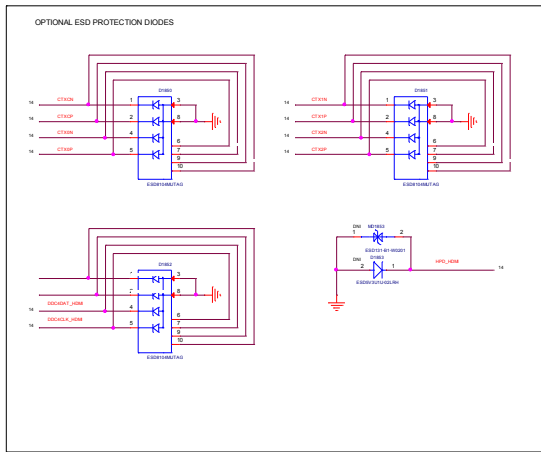
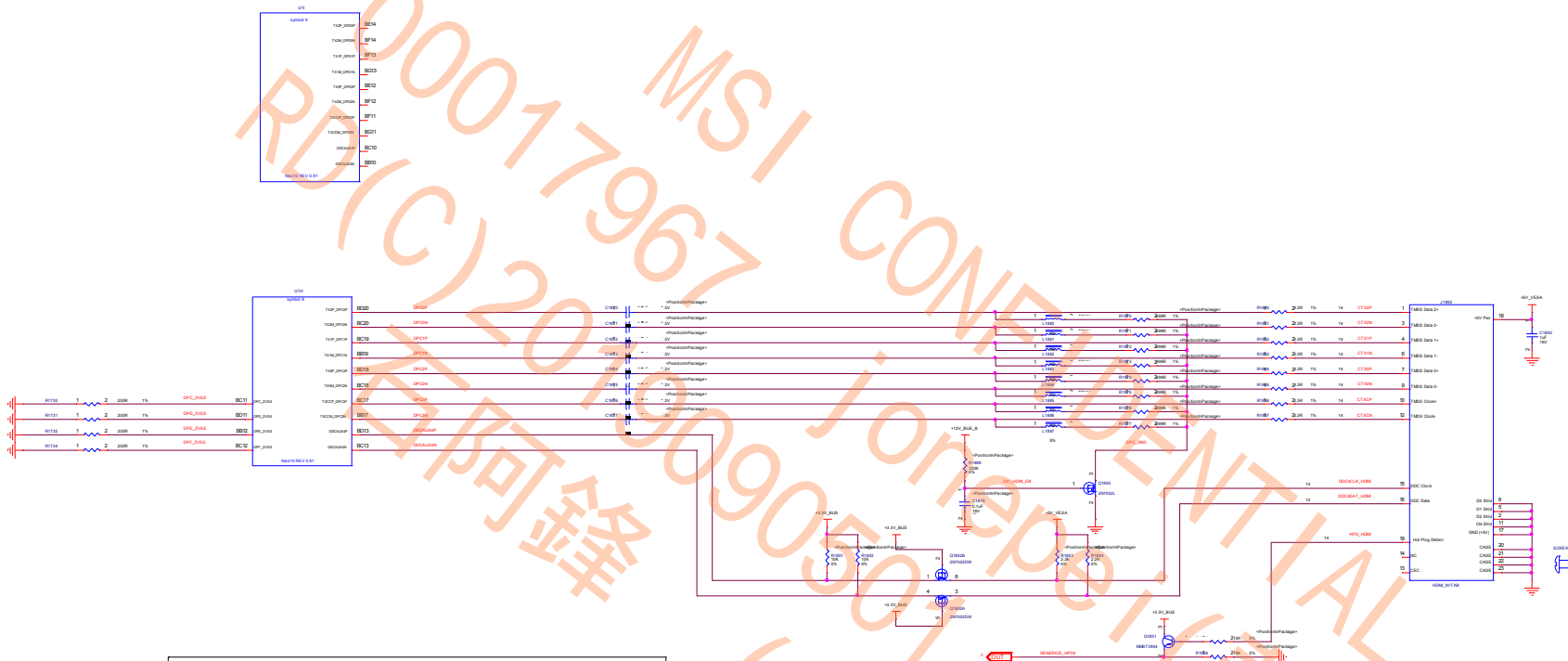


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<p>DATE: Fri Jun 21 03:45:58 2019</p>		<p>TITLE: NAV10 G6X16mode DP DP/HDMI DP</p>	
<p>SHEET NUMBER: 12 OF 35</p>		<p>DOCUMENT NUMBER: 105_0198x_098</p>	
<p>NOTES: NOTE</p>		<p></p>	



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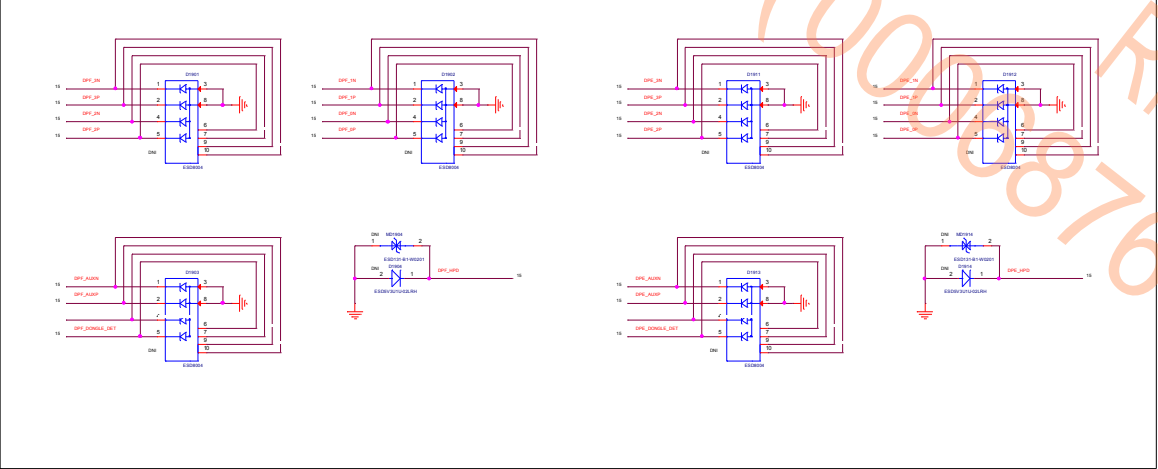
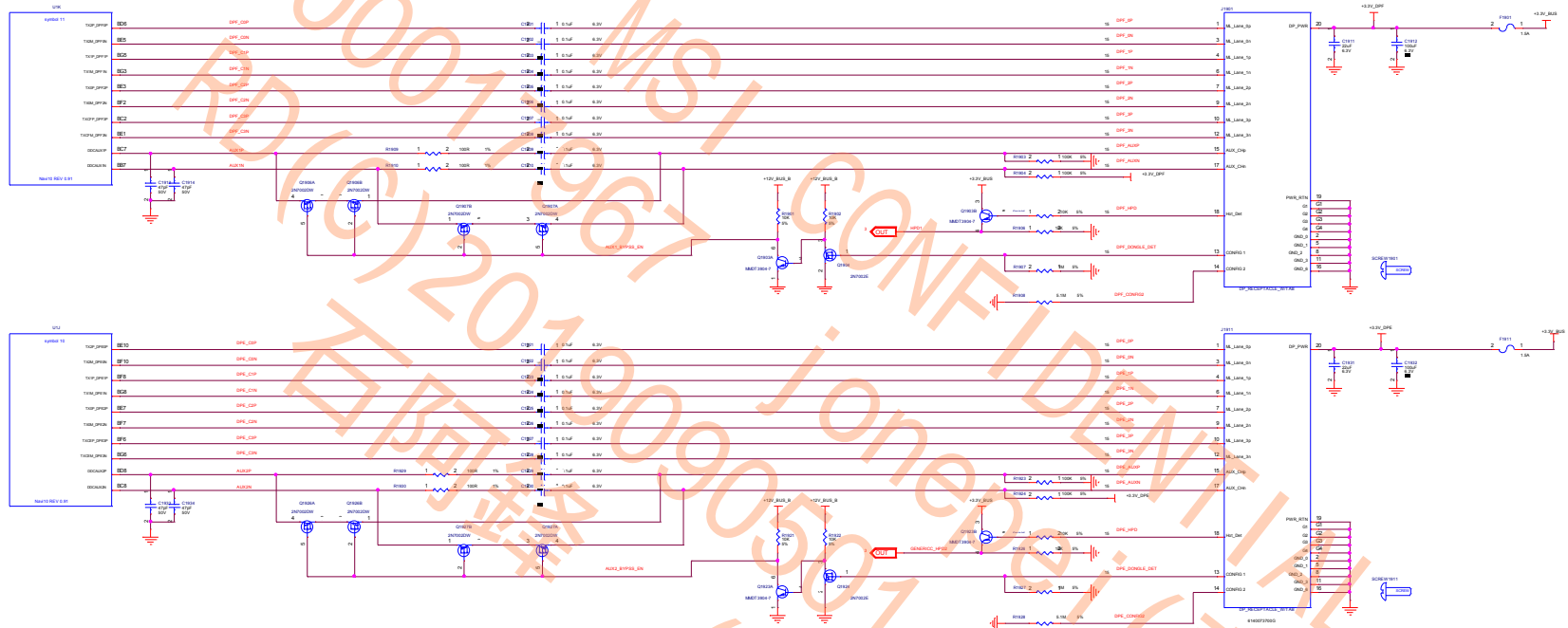
NAVI10 TMDP C/D



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DATE: Fri Jun 21 03:45:48 2019			REV: 1.00
SHEET NUMBER: 14 OF 35			TITLE: NAVI10 G6X16mode DP DP HDMI DP
DOCUMENT NUMBER: 105_0199Kc_098			TITLE: NAVI10 G6X16mode DP DP HDMI DP
NOTES: NOTE			TITLE: NAVI10 G6X16mode DP DP HDMI DP

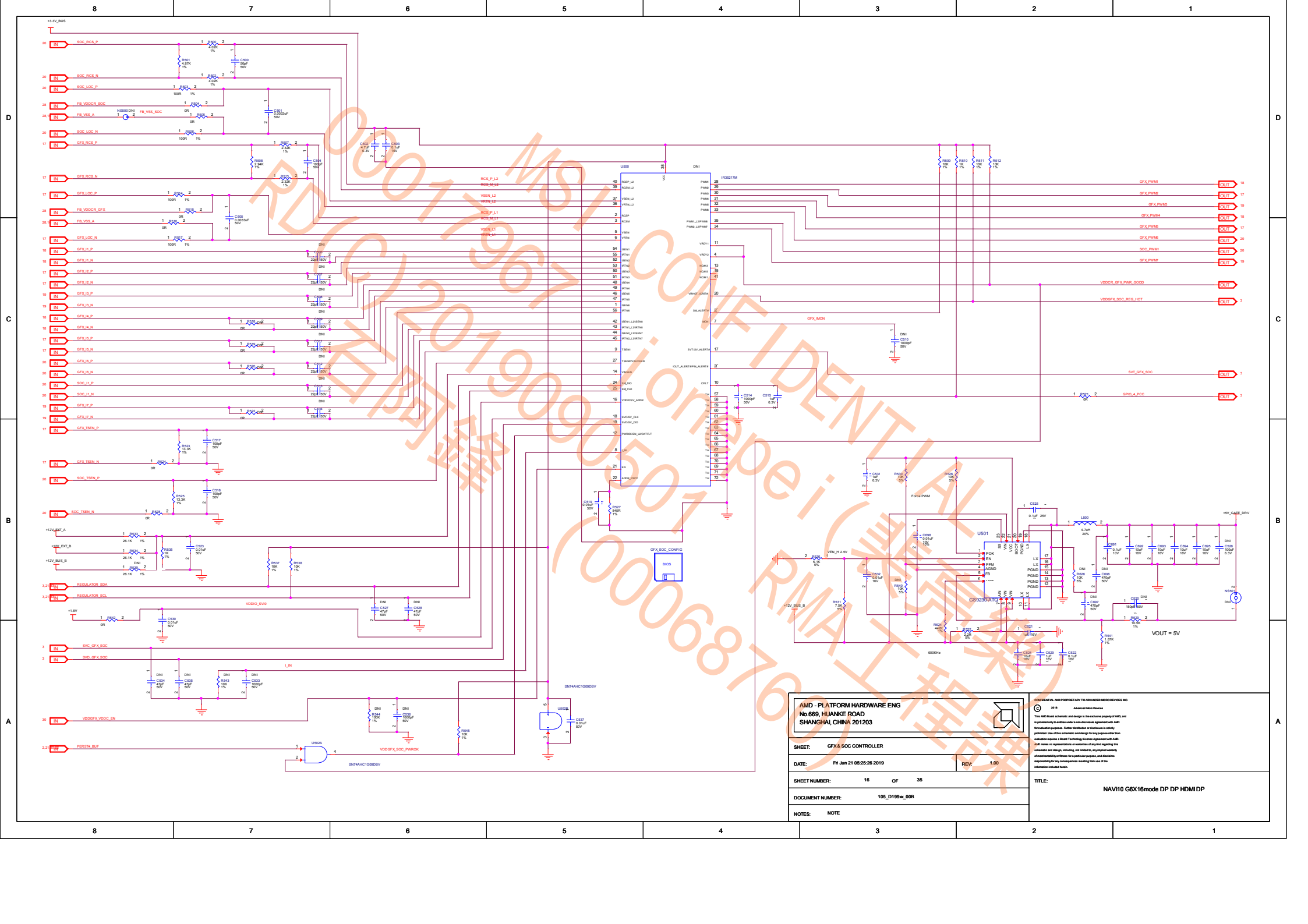
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(9) NAVI10 TMDP E/F



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SHEET: NAVI10 TMDPEF - DP DP	
DATE: Fri Jun 21 03:45:49 2019	REV: 1.00
SHEET NUMBER: 15 OF 35	TITLE: NAVI10 G6X16mode DP DP HDMI DP
DOCUMENT NUMBER: 105_0199x_098	
NOTES: NOTE	

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SHEET: GFX SOC CONTROLLER

DATE: Fri Jun 21 05:25:26 2019

SHEET NUMBER: 16 OF 35

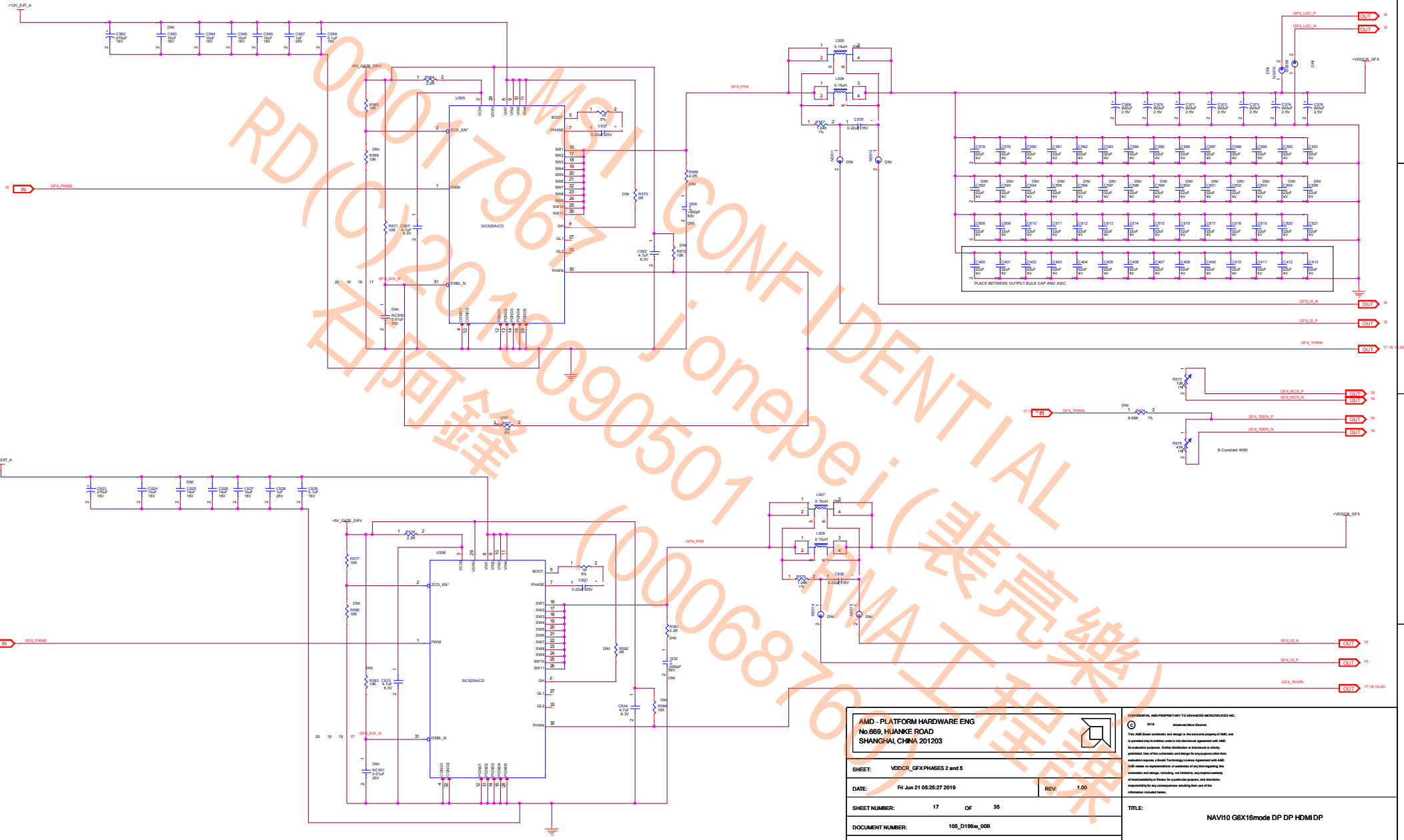
DOCUMENT NUMBER: 105_D199w_008

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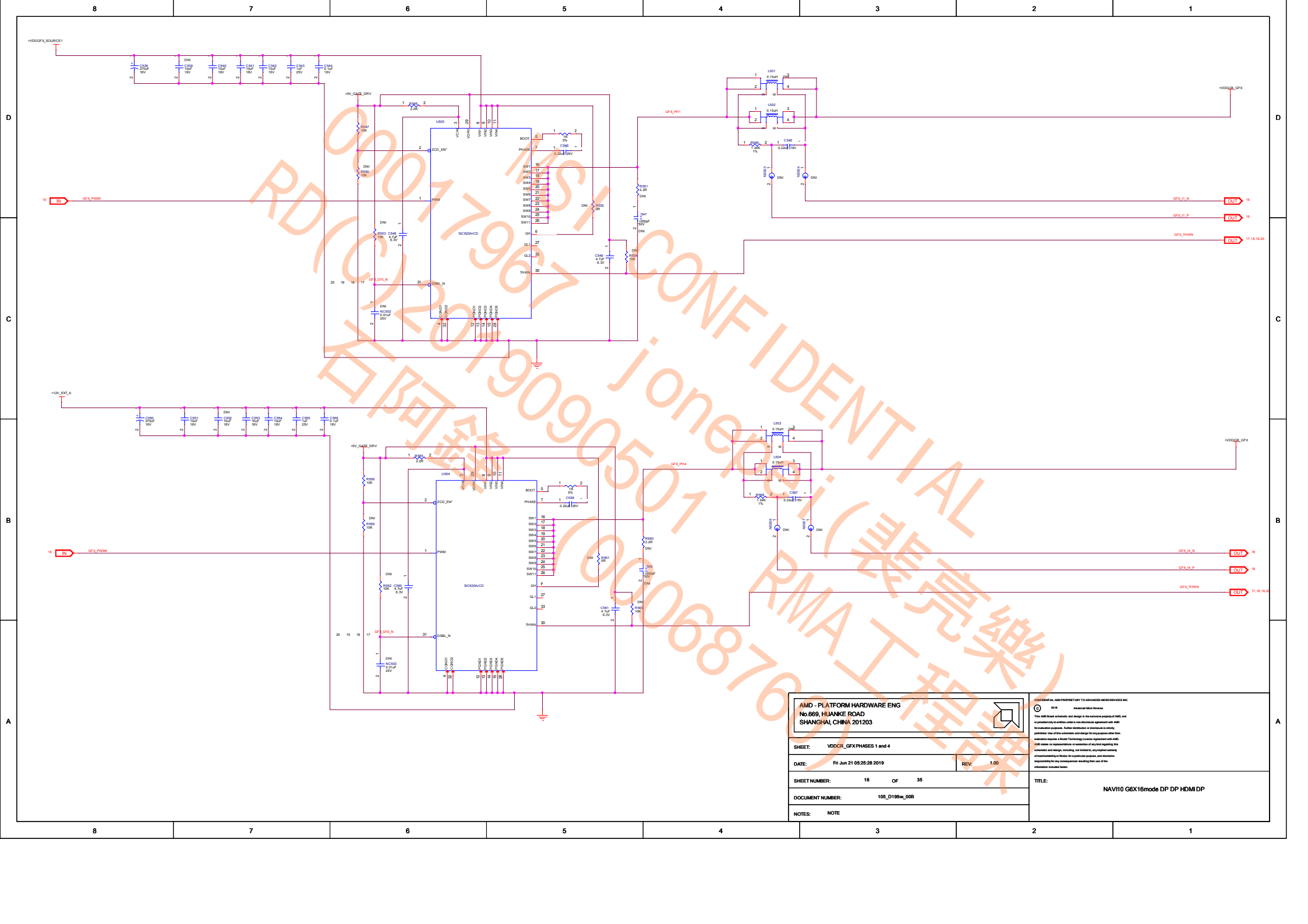
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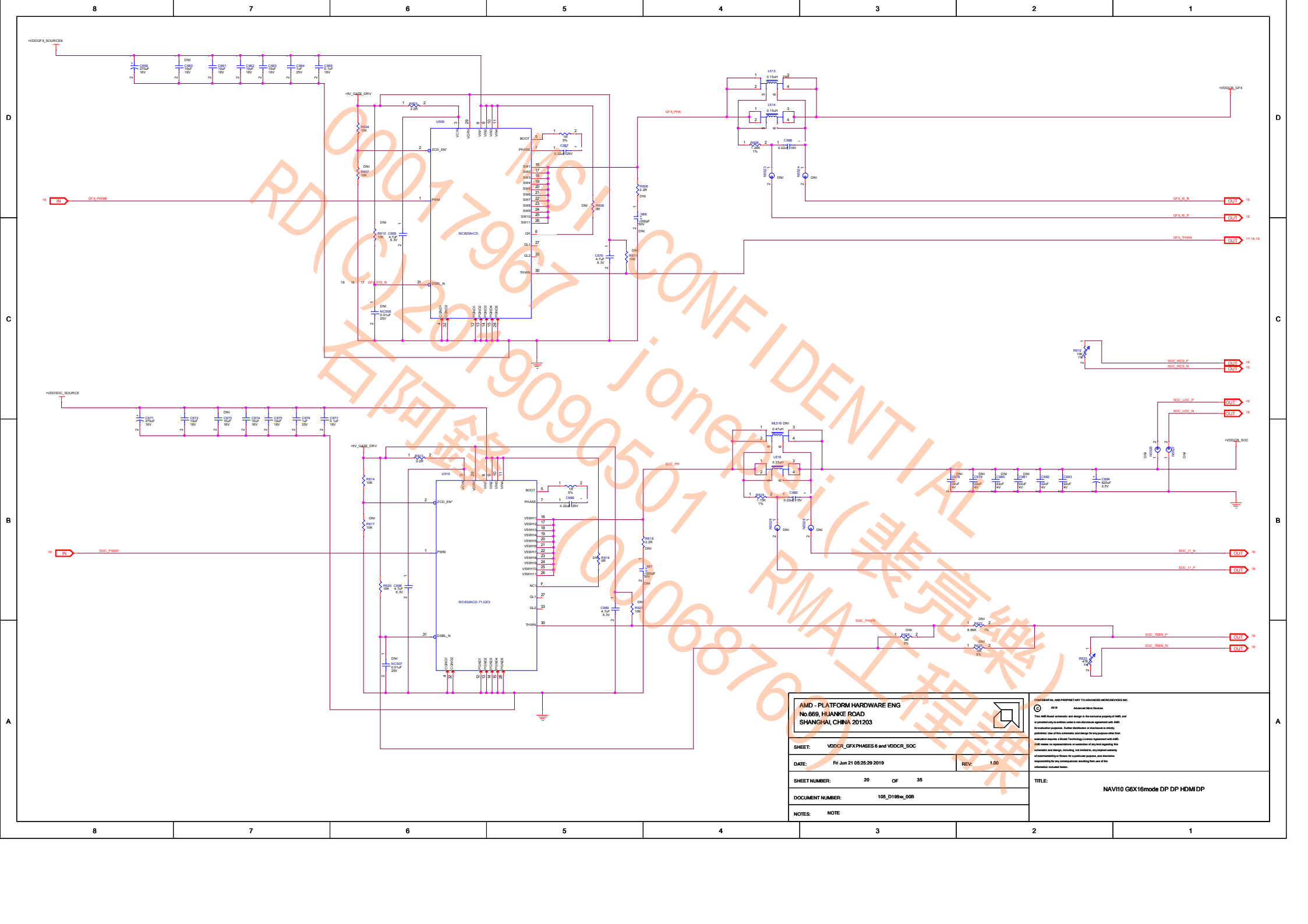


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SHEET: VDDCR_GFXPHASES 2 and 5		
DATE: Fri Jun 21 05:25:27 2019	REV: 1.00	
SHEET NUMBER: 17	OF 35	TITLE: NAVI10 G8X16mode DP DP HDMI DP
DOCUMENT NUMBER: 105_D199w_008		
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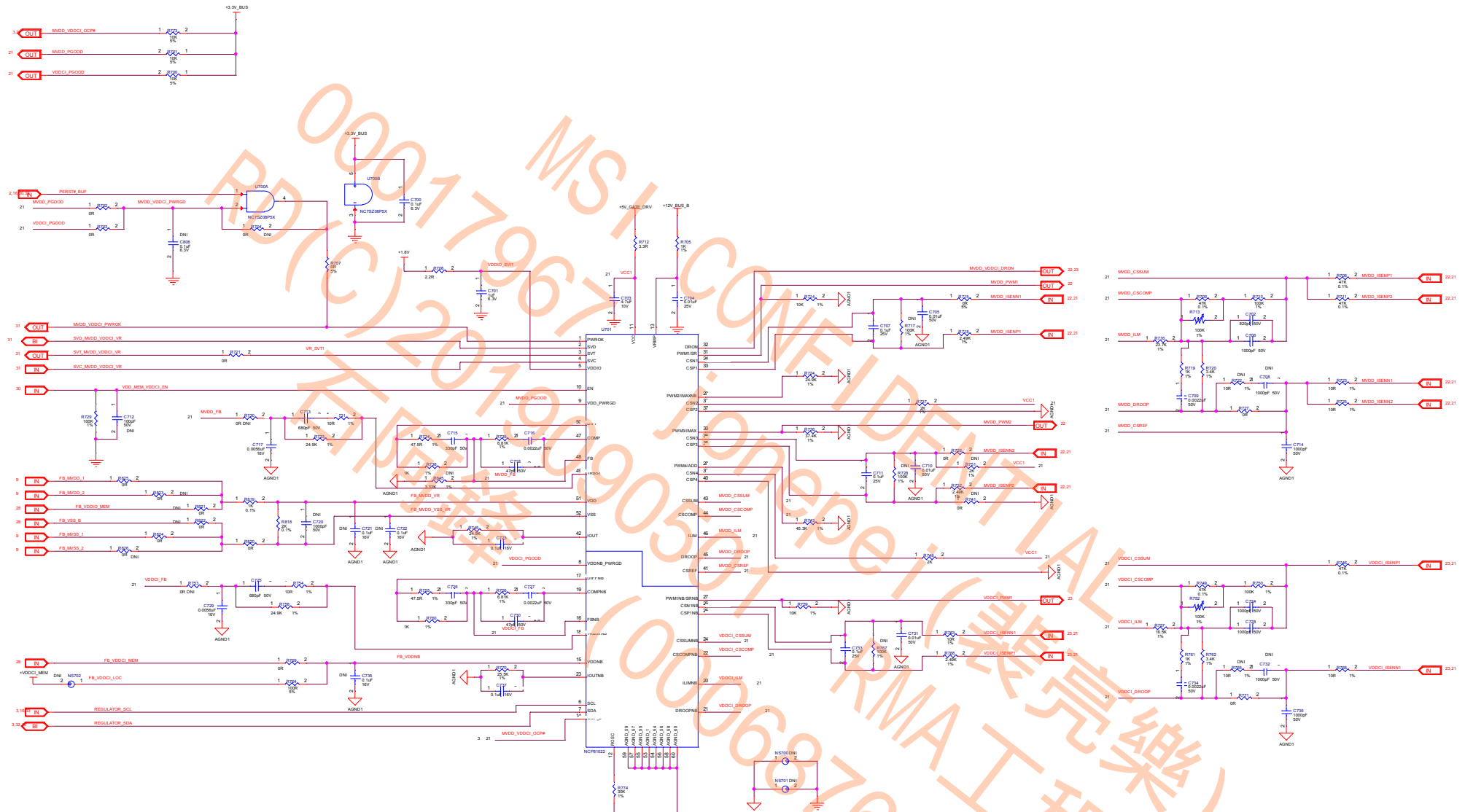
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SHEET: VDDCR_GFXPHASES 1 and 4	DATE: Fri Jun 21 05:25:28 2019		
SHEET NUMBER: 18 OF 35		TITLE: NAV10 G8X16mode DP HDMI DP	
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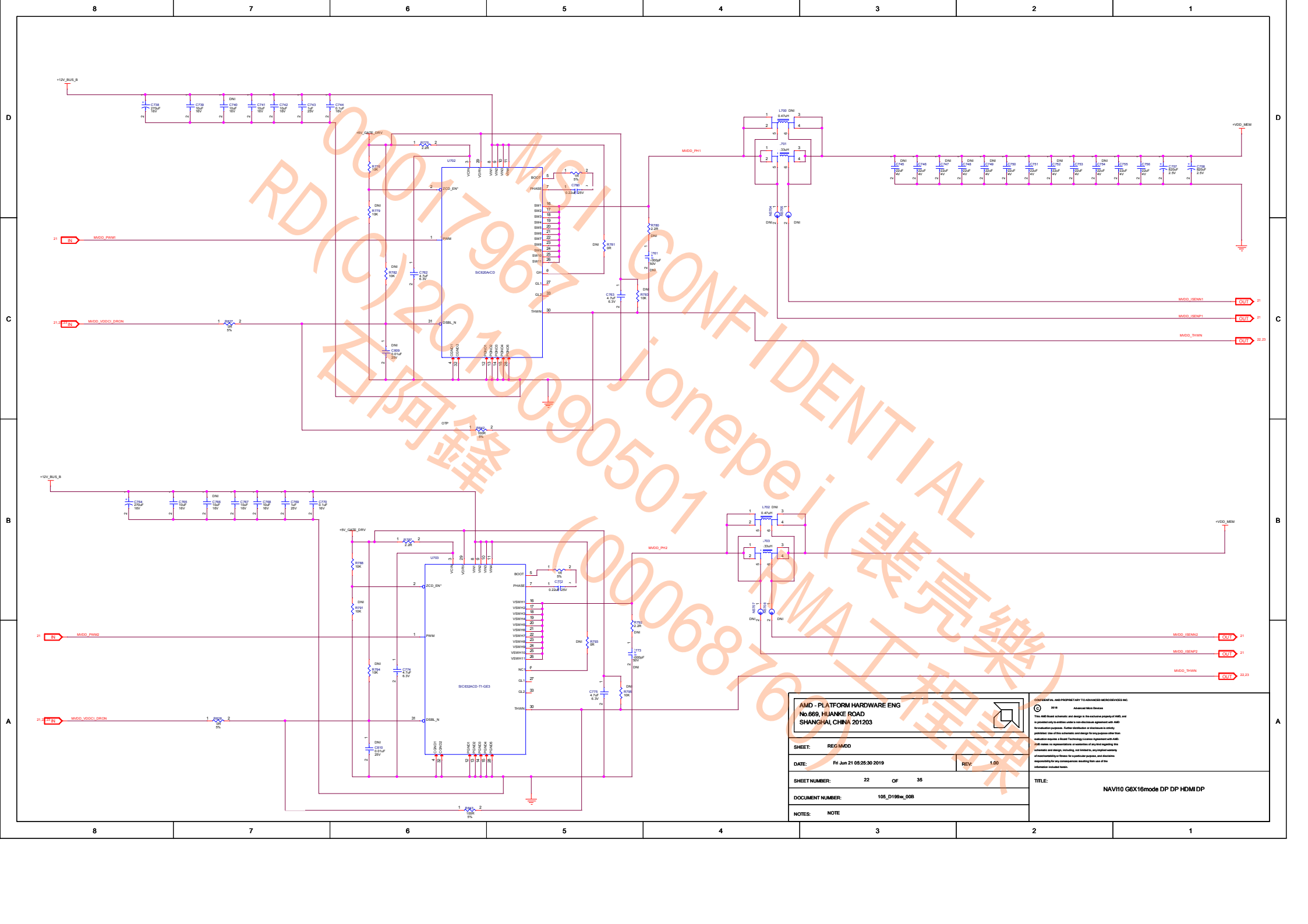
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SHEET: VDDCR_GFXPHASES 6 and VDDCR_SOC	
DATE: Fri Jun 21 05:25:29 2019	REV: 1.00
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DOCUMENT NUMBER: 105_D199w_008	
NOTES: NOTE	

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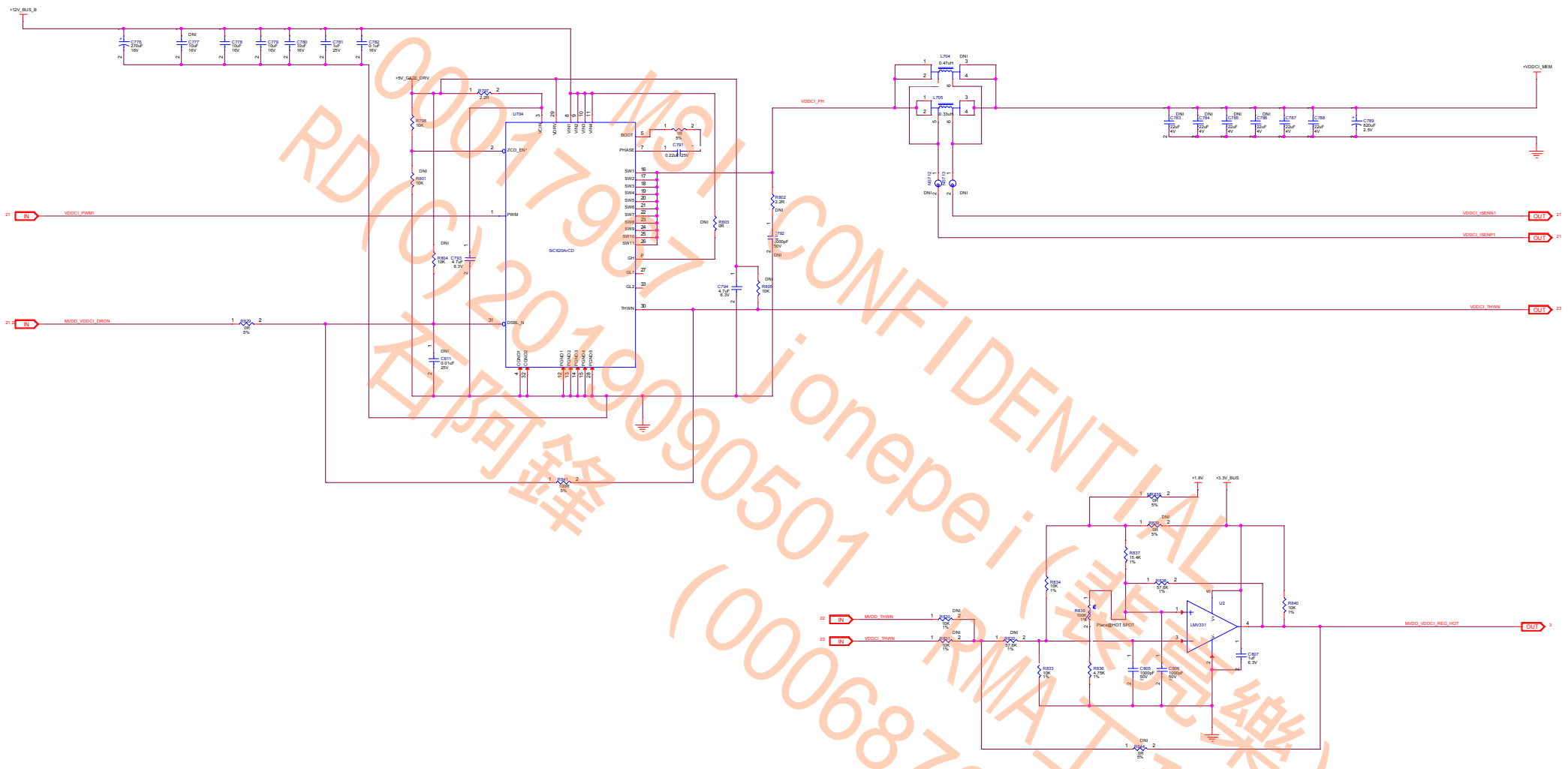
TITLE:
 NAV10 G8X16mode DP DP HDMI DP



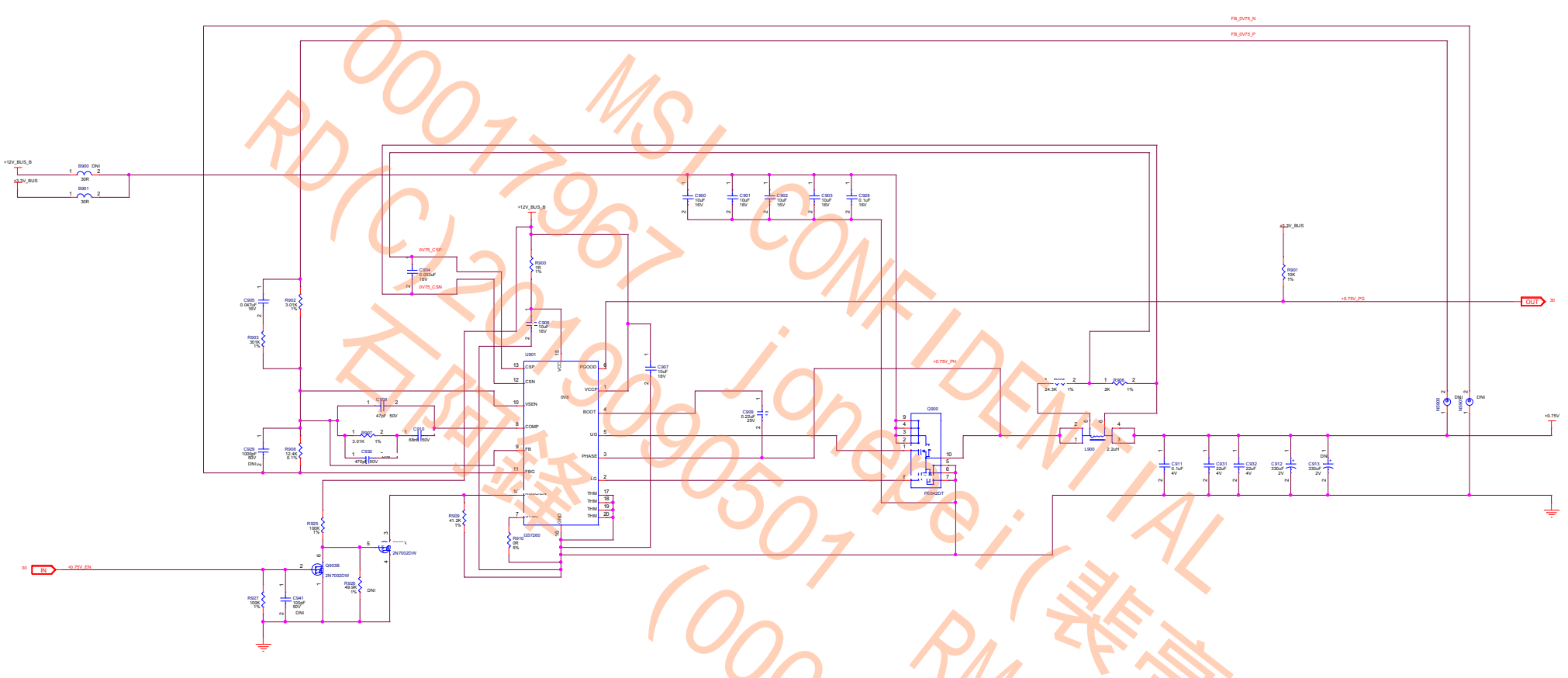
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DATE:	Fri Jun 21 05:25:29 2019	REV:	1.00	TITLE:	NAV110 G8X16mode DP DP HDMI DP
SHEET NUMBER:	21	OF	35		
DOCUMENT NUMBER:	105_D199w_008				
NOTES:	NOTE				



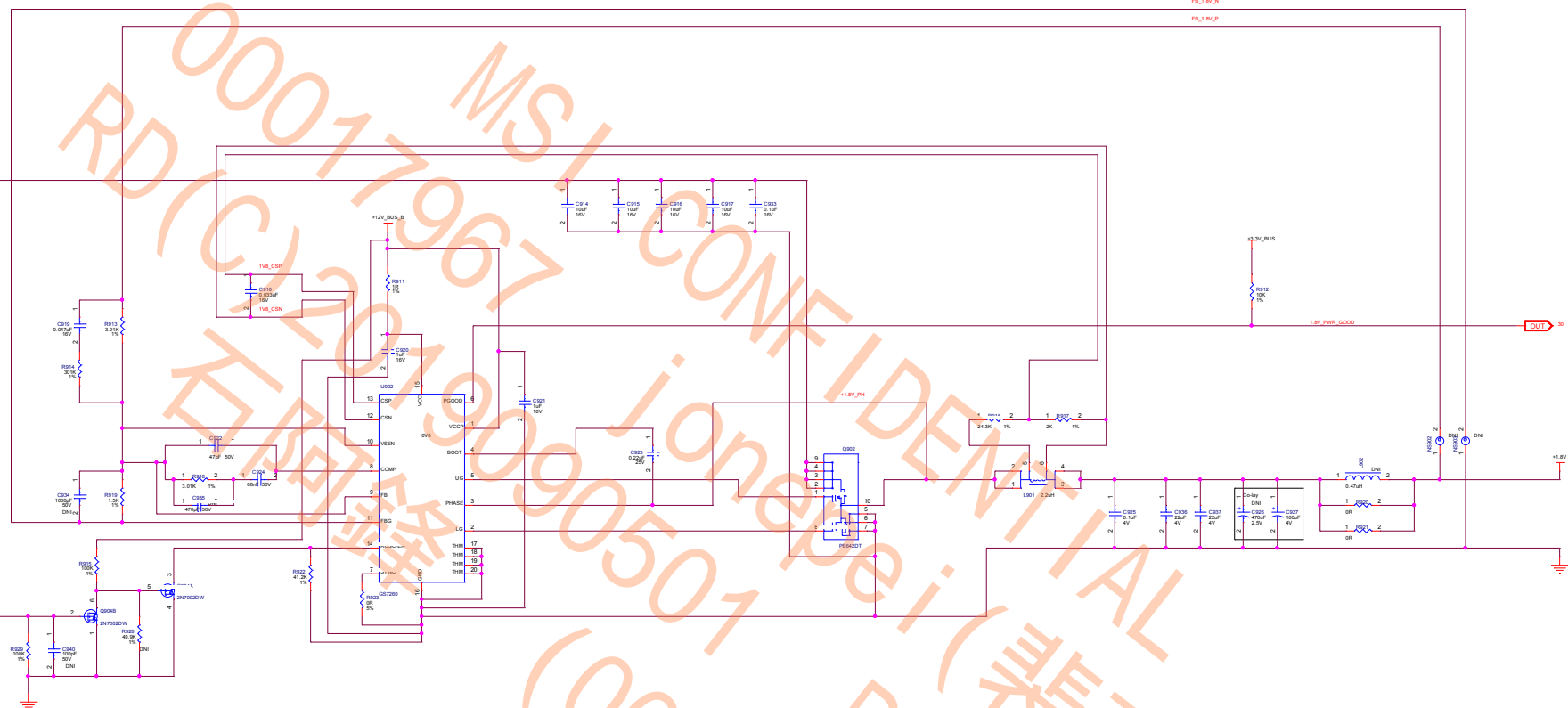
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SHEET: REG MDD0 DATE: Fri Jun 21 05:25:30 2019 SHEET NUMBER: 22 OF 35 DOCUMENT NUMBER: 105_D199w_008 NOTES: NOTE	REV: 1.00 TITLE: NAVI10 G8X16mode DP HDMI DP		



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SHEET: REG_VDDCI	DATE: Fri Jun 21 05:25:30 2019		
SHEET NUMBER: 23 OF 35	TITLE: NAVI10 G8X16mode DP DP HDMI DP		
DOCUMENT NUMBER: 105_D199w_008	NOTES: NOTE		



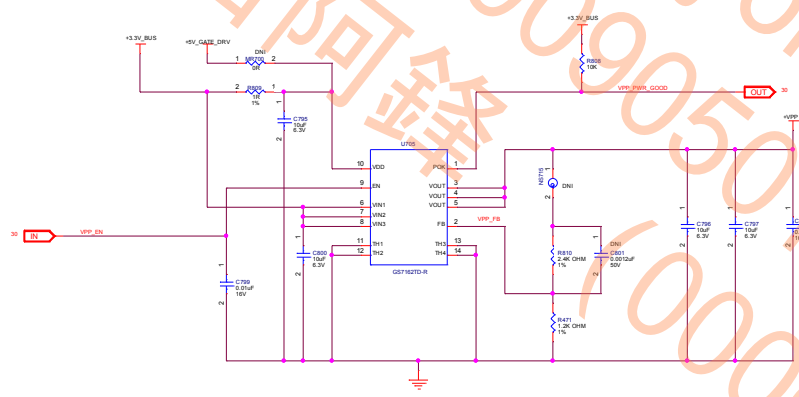
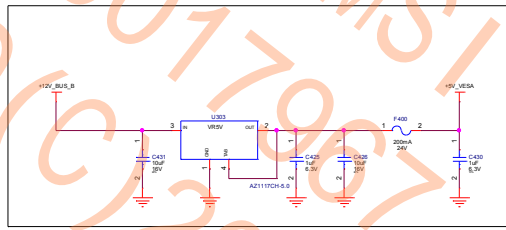
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SHEET: REG 075V	DATE: Fri Jun 21 05:25:31 2019		
SHEET NUMBER: 24 OF 35	DOCUMENT NUMBER: 105_D199w_008		TITLE: NAV110 G8X16mode DP HDMI DP
NOTES: NONE			



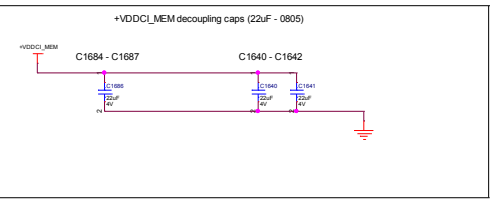
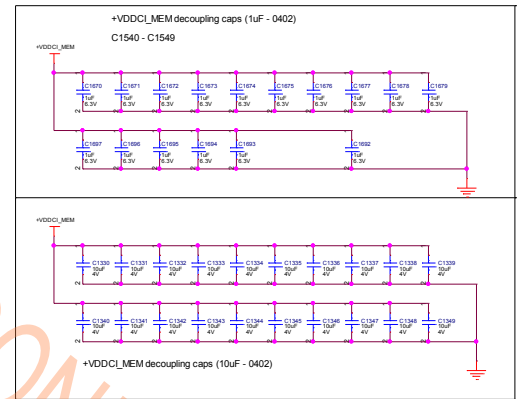
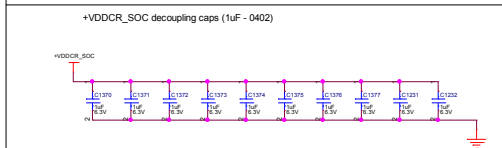
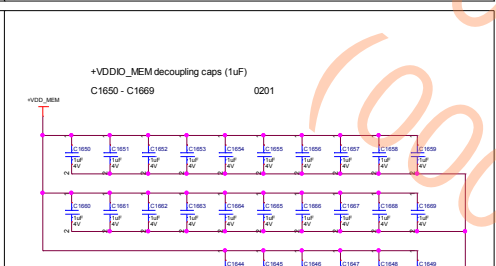
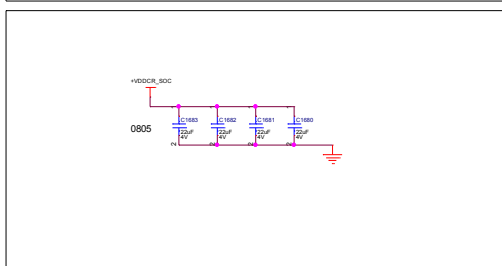
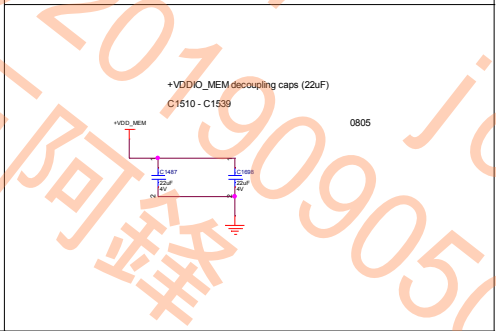
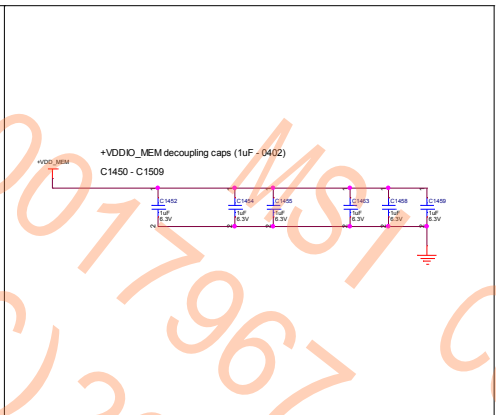
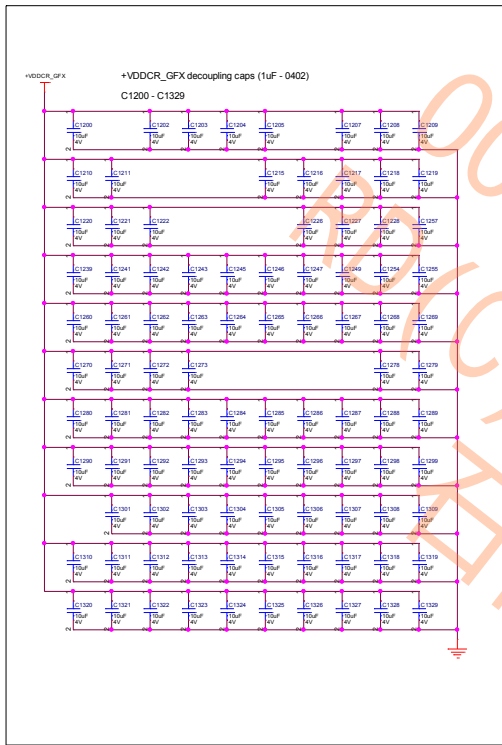
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SHEET: REG 1.0V	DATE: Fri Jun 21 05:25:31 2019	
SHEET NUMBER: 25 OF 35	DOCUMENT NUMBER: 105_D190w_008	TITLE: NAVI10 G8X16mode DP HDMI DP
NOTES: NOTE		

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REGULATOR FOR +5V RAILS
 IOOUT = 50mA



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SHEET: SMALL RAIL REGULATORS	DATE: Fri Jun 21 05:25:32 2019		REV: 1.00
SHEET NUMBER: 26	OF 35	TITLE: NAV110 G8X16mode DP DP HDMI DP	
DOCUMENT NUMBER: 105_D199w_008	NOTES: NOTE		

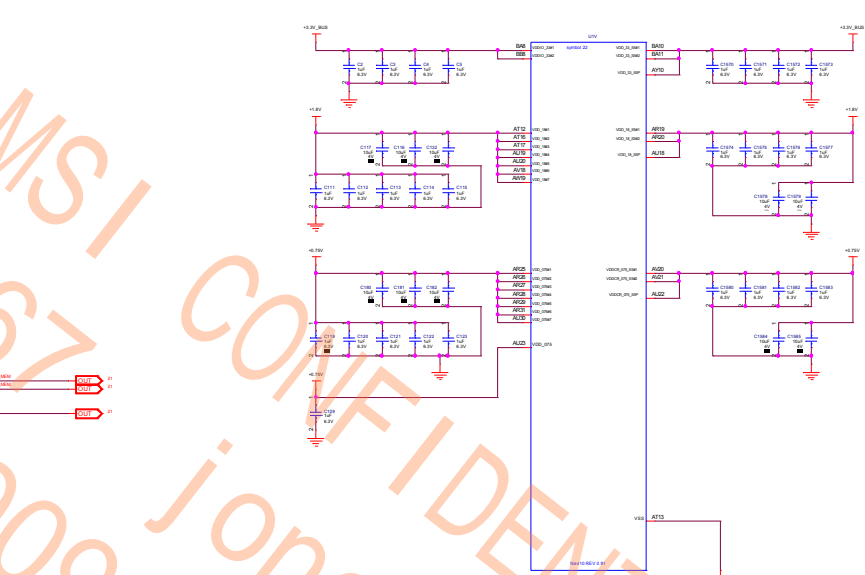
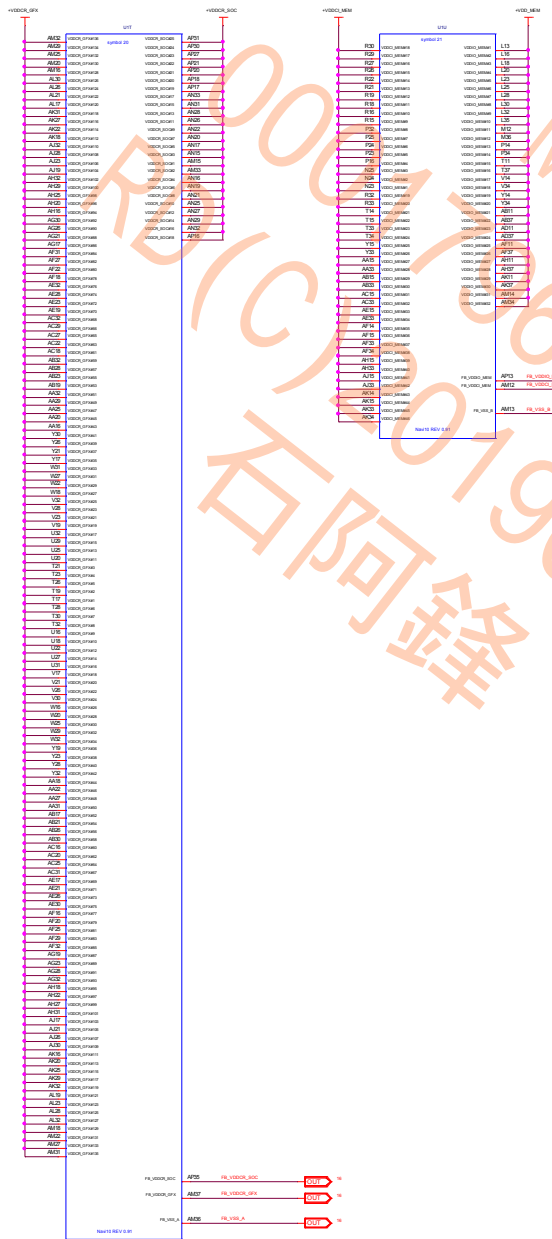


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SHEET: NAV110 DECAPS	DATE: Fri Jun 21 05:25:32 2019	
SHEET NUMBER: 27 OF 35	DOCUMENT NUMBER: 105_D199w_008	
NOTES: NOTE	TITLE: NAV110 G8X16mode DP DP HDMI DP	

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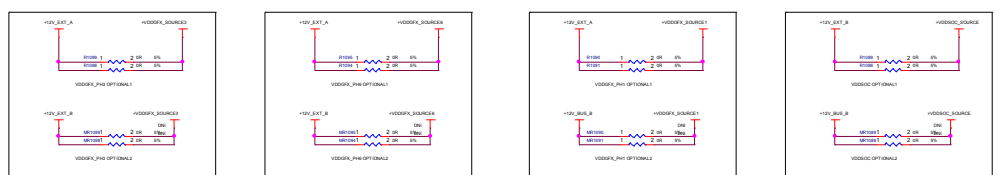
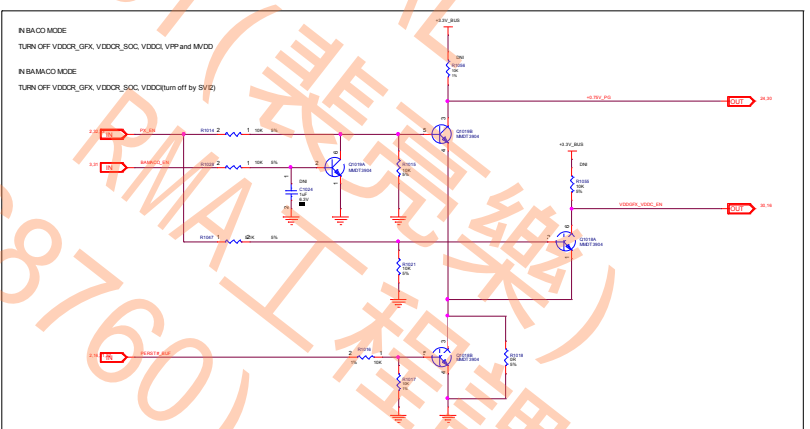
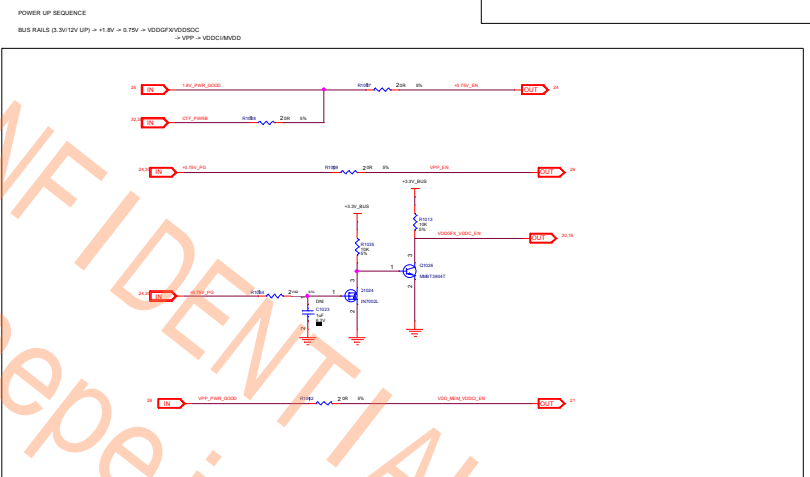
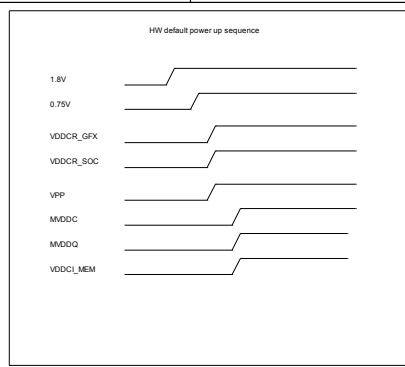
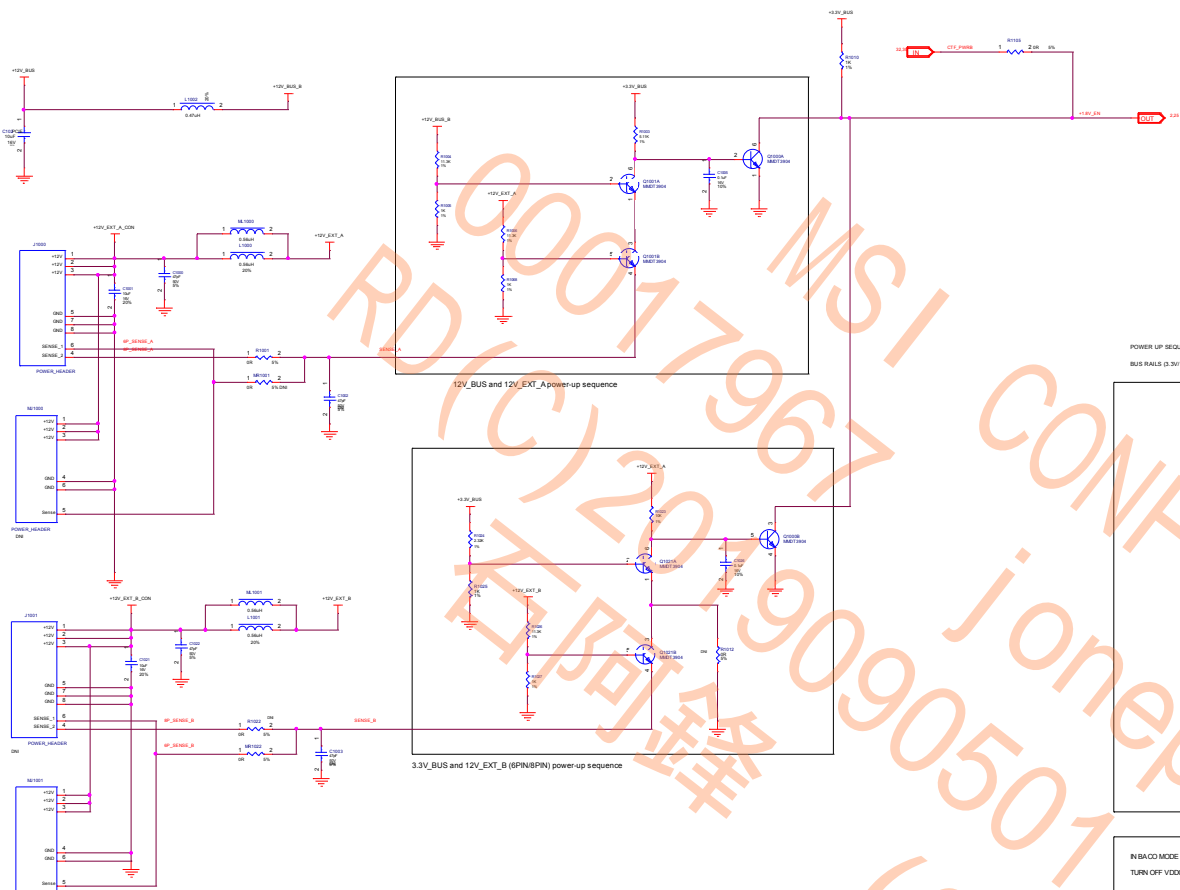
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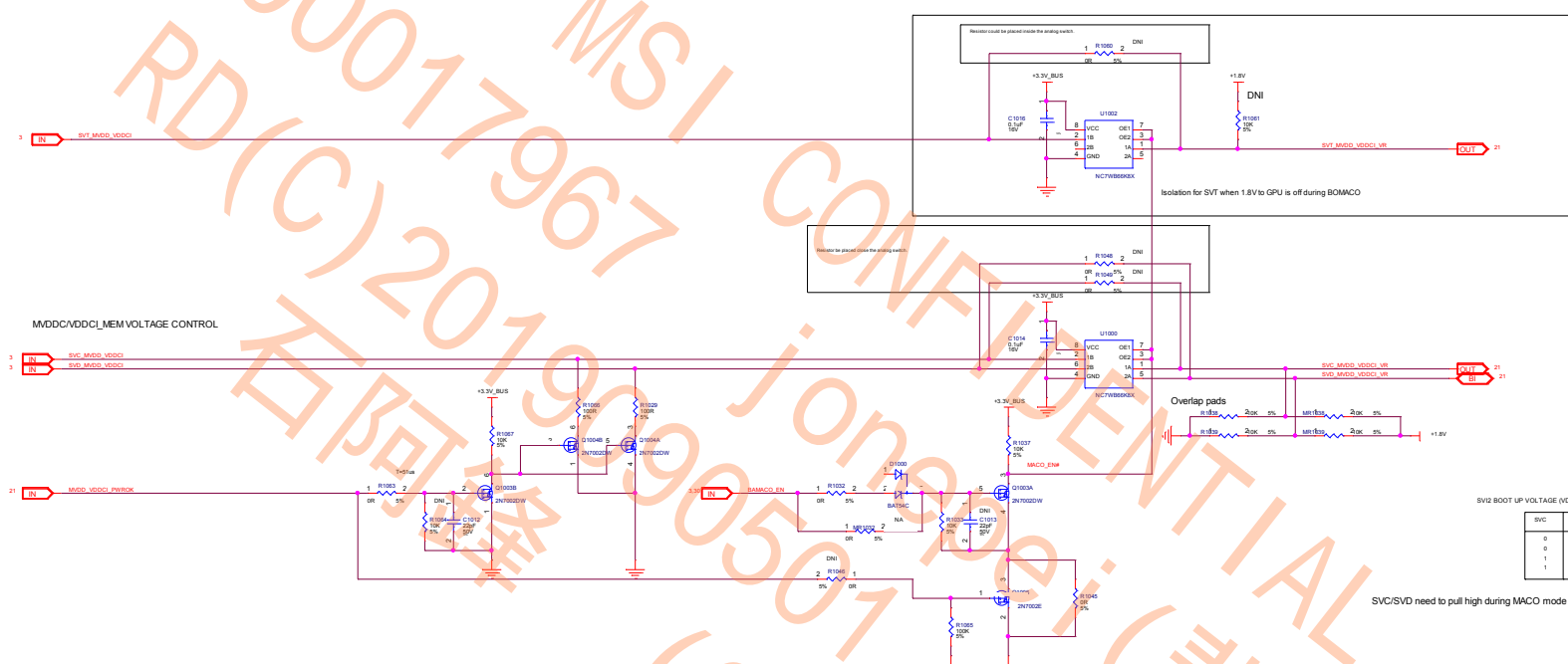
CONFIDENTIAL
 (00068760)
 RMA 工程師
 (00068760)
 019090501
 jonepei
 019090501

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SHEET: POWER MANAGEMENT		
DATE: F4 Jan 21 05:25:34 2019	REV: 1.00	
SHEET NUMBER: 30	OF 35	
DOCUMENT NUMBER: 105_0198x_008		
NOTES: NOTE		

TITLE: NAV10 G6X16mode DP DP/HDMI DP



MDDC/VDDC/MEM VOLTAGE CONTROL

SV1Z BOOT UP VOLTAGE (VDDC1_MEMMVD0)

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

SV1Z:SV1Z need to pull high during MACCO mode

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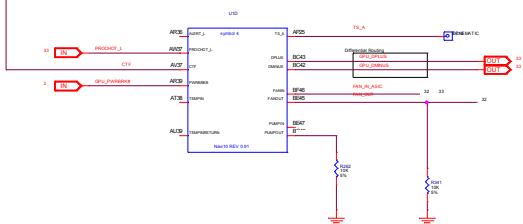
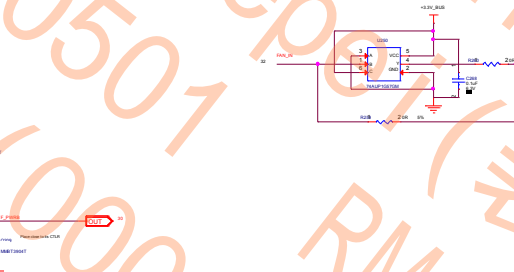
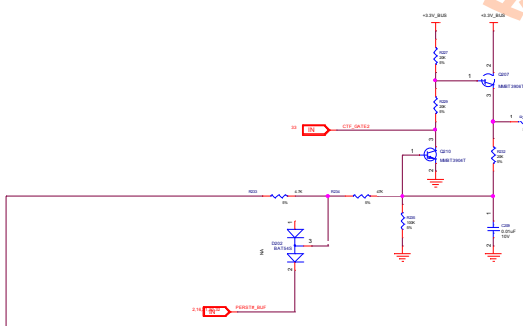
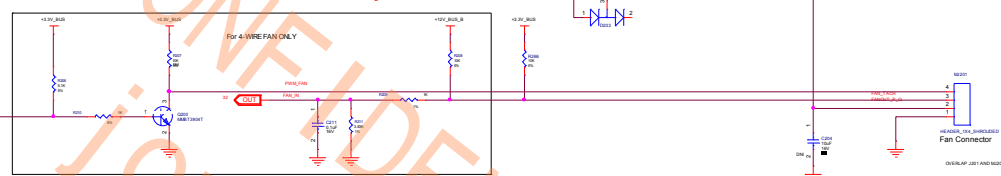
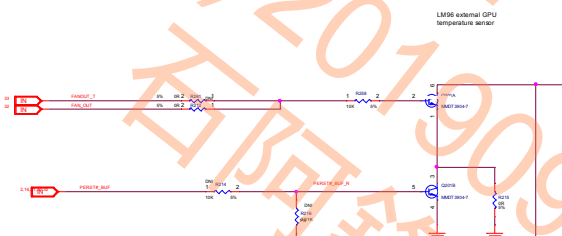
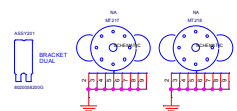
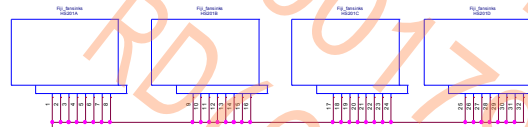
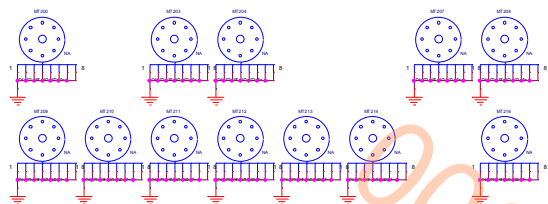
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SHEET: SV1Z & BMMCO
 DATE: Fri Jun 21 05:25:34 2019
 REV: 1.00

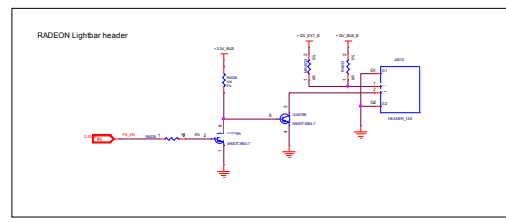
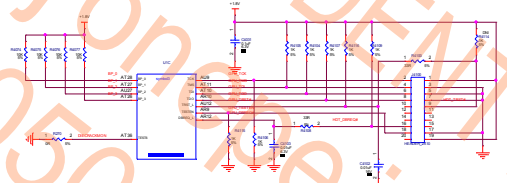
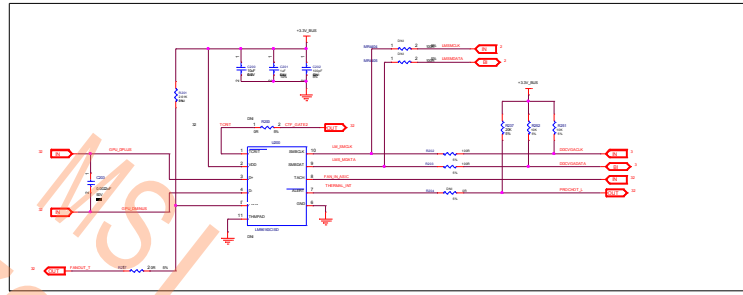
SHEET NUMBER: 31 OF 35
 DOCUMENT NUMBER: 105_D199w_008

NOTES: NOTE

TITLE: NAV110 G8X16mode DP HDMI DP

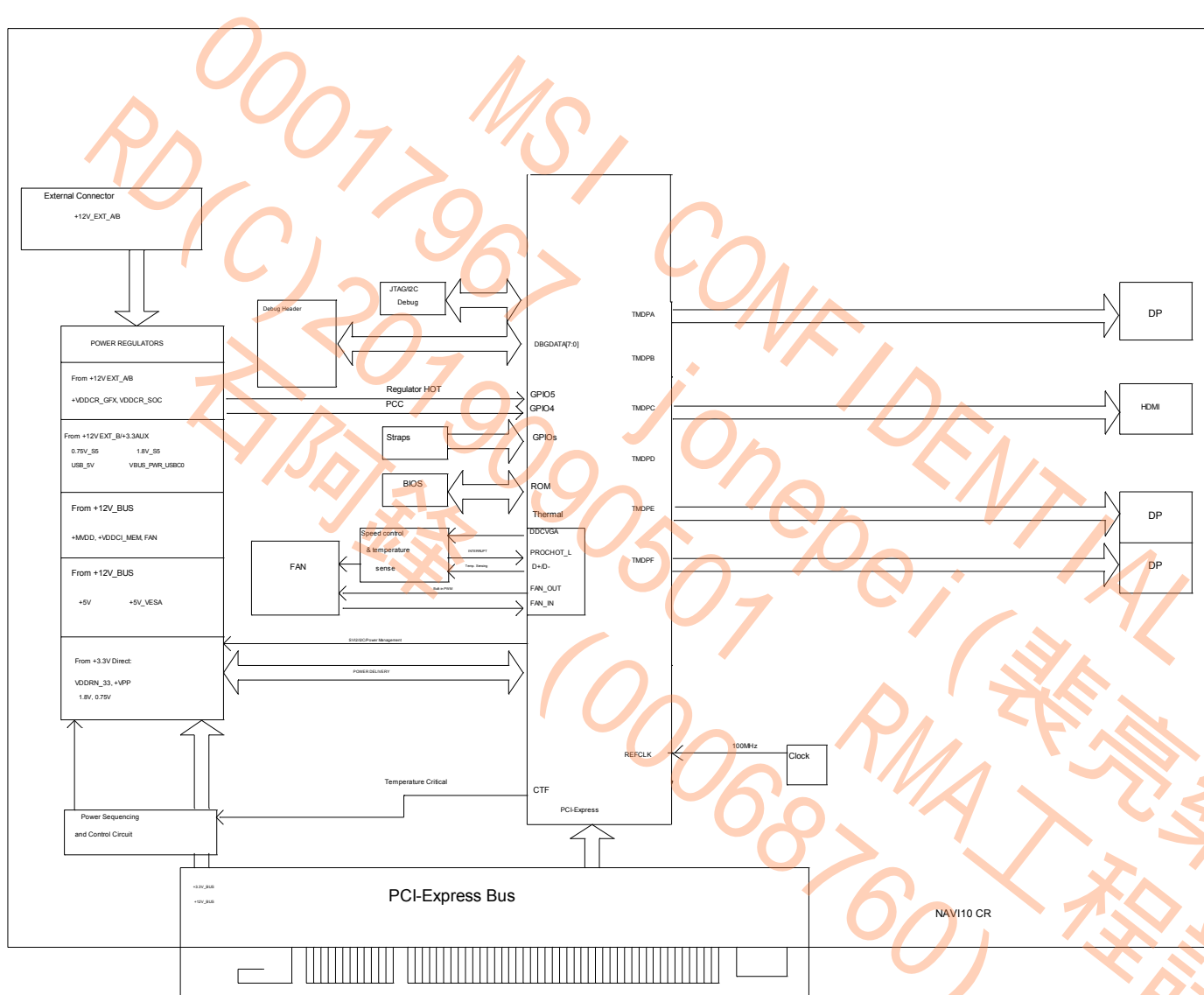


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<p>SHEET: MECHANICAL & THERMAL</p>	<p>REV: 1.00</p>	
<p>DATE: Fri Jun 21 03:45:53 2019</p>	<p>SHEET NUMBER: 32 OF 35</p>	<p>TITLE: NAV10 G6X16mode DP DP/HDMI DP</p>
<p>DOCUMENT NUMBER: 105_0199Kc_098</p>	<p>NOTES: NOTE</p>	



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 RD(C)2019090501 jion@msi.com (裴亮樂)
 石阿鋒 (00068760) RMA工程師

NAME: PLATFORM HARDWARE ENG NUMBER: HANNE FELD BRANCH: CHINA 201203			
SHEET: 02/03	DATE: Fri Jul 21 09:54:2018		
SHEET NUMBER: 33		TITLE: NAVY10 GSK16mode EPDP4EM DP	
DOCUMENT NUMBER: MSJPHW_008			



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SHEET:	BLOCK DIAGRAM		
DATE:	Mon Mar 11 03:18:02 2019	REV:	1.00
SHEET NUMBER:	34	OF	35
DOCUMENT NUMBER:	105_0198x_098		
NOTES:	NOTE		

TITLE:	NAVI10 G6X16mode DP DP HDMI DP
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TITLE: NAVI10 G6X16mode DP DP HDMI DP

DOCUMENT NUMBER: 106_D199rev_00B

DATE: Fri Jun 21 03:44:58 2019

SHEET NUMBER: 35 OF 35

REV: 1.00

REVISION HISTORY

ENGINEER: Peak, Dong

NOTES: NOTE

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SCH Rev	PCB Rev	Date	REVISION DESCRIPTION
1	-00A	FEB 11 2019	-00A schematics
2	-00B	JUN 21 2019	ADD PULL HIGH ON THE PWRBRKB

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 (00068760)