

# PG410 A01


GP106 8GB/4GB GDDR5, 256b, 256Mx32/128MX32  
Tall DVI-D + DP + DP + HDMI/DP + DP

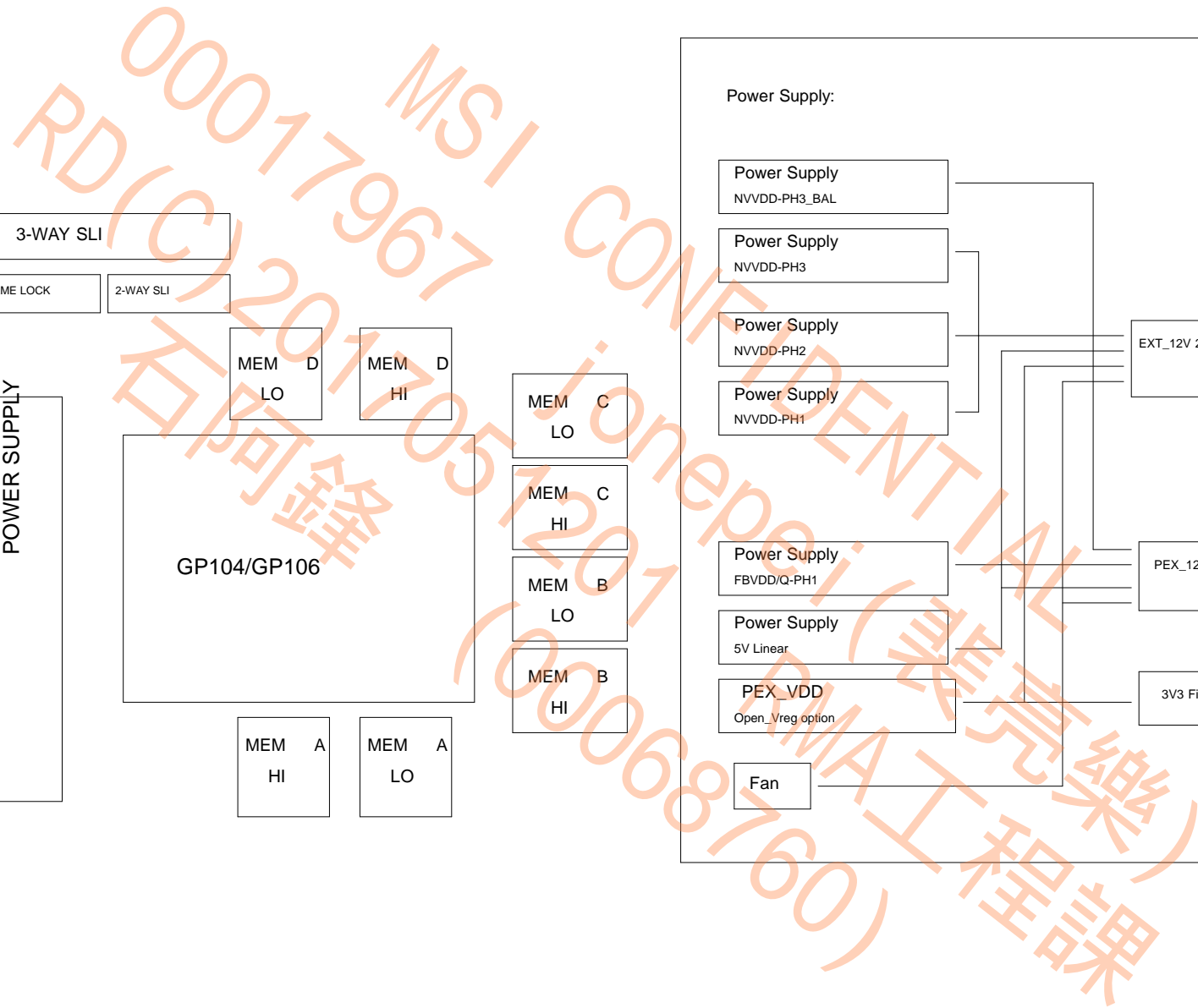
## TABLE OF CONTENTS

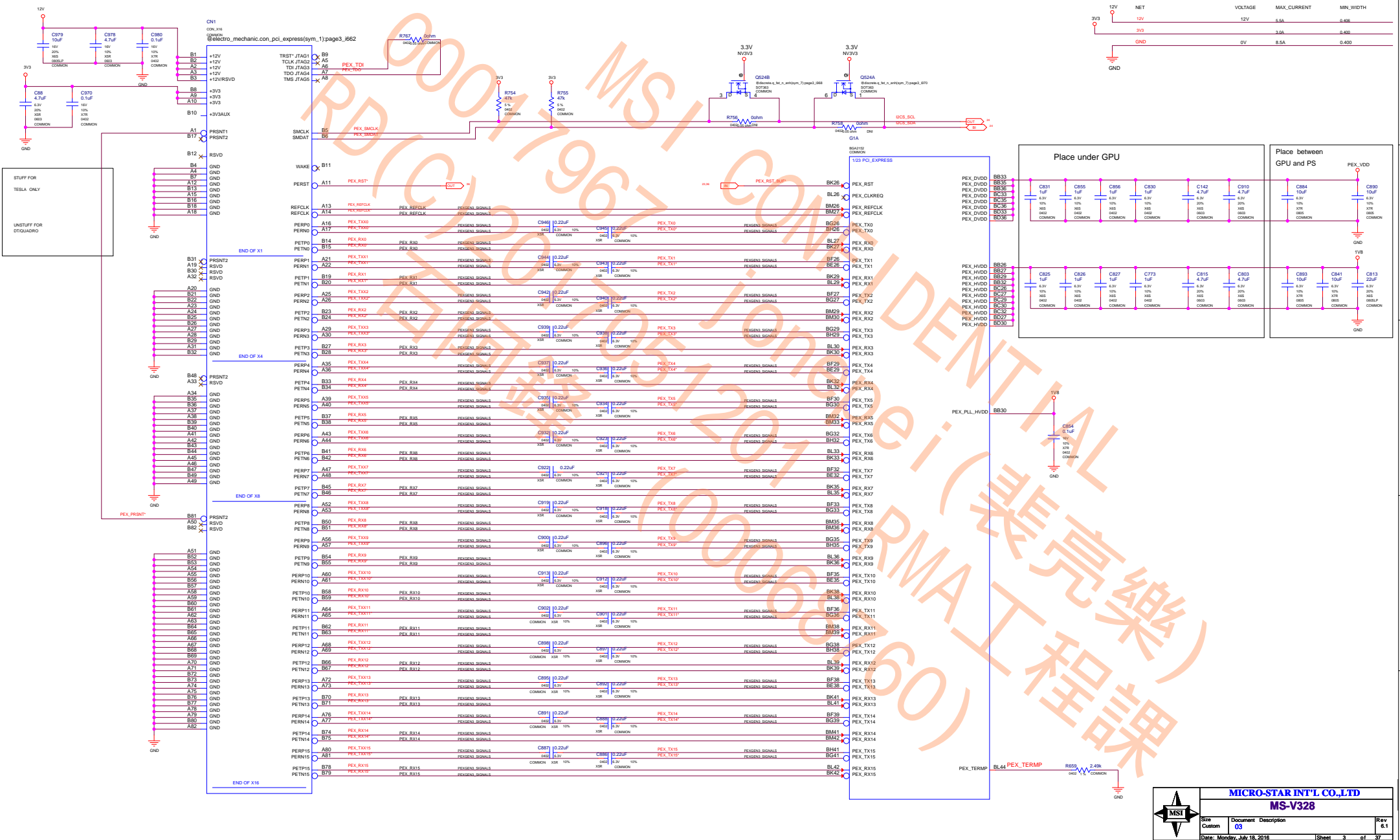
Page	Description
1	Table of Contents
2	Block Diagram
3	PCI Express
4	GPU FB_AB
5	MEMORY: FBA[31:0]
6	MEMORY: FBA[63:32]
7	MEMORY: FBB[31:0]
8	MEMORY: FBB[63:32]
9	MEM FB_AB PWR
10	GPU FB_CD
11	MEMORY: FBC[31:0]
12	MEMORY: FBC[63:32]
13	MEMORY: FBD[31:0]
14	MEMORY: FBD[63:32]
15	MEM FB_CD PWR
16	GPU PWR & GND
17	GPU Decoupling
18	IFPAB DVI-D-DL
19	IFPE DP
20	IFPF DP
21	IFPC HDMI/DP
22	IFPD DP
23	MIOA/B Interface and Frame Lock
24	MISC1: Fan, Thermal, JTAG, GPIO,STEREO
25	MISC2: ROM, XTAL,STRAPS

Page	Description
26	PS: 1V8_PLL, 1V8_AON
27	PS: 5V, PEX_VDD
28	PS: NV3V3, NV12V
29	PS: FBVDD
30	PS: NVVDD Controller
31	PS: NVVDD Phase 1,2 & 3
32	PS: NVVDD Rail Balance Login & Dynamic Phase
33	PS: Input, Filtering, and Monitoring
34	PS: 12V Power Steering,PSI Control & LED
35	PS: Shut Down and Sequencing
36	PS: GC6 MISC
37	MECH

6.1  
1. NVVDD\_VREG - RS  
2. NVVDD\_VREG - RS  
3. NVVDD\_VREG - RS  
4. HDMI\_DP\_DELAY

				<b>MICRO-STAR INT'L CO.,LTD</b> <b>MS-V328</b>	
Size	Document	Description	Rev		
Custom	01		6.1		
Date: Monday, July 18, 2016			Sheet	1	of 37





GDDR5 CMD Mapping

CMD	8-31	32-63
CMD0	CAS*	
CMD1	CSE*	
CMD2	RST*	
CMD3	RAS*	
CMD4	AI_A0	
CMD5	AI_A10	
CMD6	AI2_RFU	
CMD7	AB*	
CMD8	AE_A11	
CMD9	AE_A8	
CMD10	WE*	
CMD11	AE_BA1	
CMD12	AE_BA2	
CMD13	AE_BA3	
CMD14	AE_BA4	
CMD15	CS*	
CMD16	CAS*	
CMD17	RST*	
CMD18	AI_A0	
CMD19	AI2_RFU	
CMD20	AB*	
CMD21	AE_A11	
CMD22	AE_A8	
CMD23	AE_BA1	
CMD24	AE_BA2	
CMD25	AE_BA3	
CMD26	AE_BA4	
CMD27	CS*	

G1B

G1C

G1D

G1E

G1F

G1G

G1H

G1I

G1J

G1K

G1L

G1M

G1N

G1O

G1P

G1Q

G1R

G1S

G1T

G1U

G1V

G1W

G1X

G1Y

G1Z

G1AA

G1AB

G1AC

G1AD

G1AE

G1AF

G1AG

G1AH

G1AI

G1AJ

G1AK

G1AL

G1AM

G1AN

G1AO

G1AP

G1AQ

G1AR

G1AS

G1AT

G1AU

G1AV

G1AW

G1AX

G1AY

G1AZ

G1BA

G1BB

G1BC

G1BD

G1BE

G1BF

G1BG

G1BH

G1BI

G1BJ

G1BK

G1BL

G1BM

G1BN

G1BO

G1BP

G1BQ

G1BR

G1BS

G1BT

G1BU

G1BV

G1BW

G1BX

G1BY

G1BZ

G1CA

G1CB

G1CC

G1CD

G1CE

G1CF

G1CG

G1CH

G1CI

G1CJ

G1CK

G1CL

G1CM

G1CN

G1CO

G1CP

G1CQ

G1CR

G1CS

G1CT

G1CU

G1CV

G1CW

G1CX

G1CY

G1CZ

G1DA

G1DB

G1DC

G1DD

G1DE

G1DF

G1DG

G1DH

G1DI

G1DJ

G1DK

G1DL

G1DM

G1DN

G1DO

G1DP

G1DQ

G1DR

G1DS

G1DT

G1DU

G1DV

G1DW

G1DX

G1DY

G1DZ

G1EA

G1EB

G1EC

G1ED

G1EE

G1EF

G1EG

G1EH

G1EI

G1EJ

G1EK

G1EL

G1EM

G1EN

G1EO

G1EP

G1EQ

G1ER

G1ES

G1ET

G1EU

G1EV

G1EW

G1EX

G1EY

G1EZ

G1FA

G1FB

G1FC

G1FD

G1FE

G1FF

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G1FJ

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G1GD

G1GE

G1GF

G1GG

G1GH

G1GI

G1GJ

G1GK

G1GL

G1GM

G1GN

G1GO

G1GP

G1GQ

G1GR

G1GS

G1GT

G1GU

G1GV

G1GW

G1GX

G1GY

G1GZ

G1HA

G1HB

G1HC

G1HD

G1HE

G1HF

G1HG

G1HH

G1HI

G1HJ

G1HK

G1HL

G1HM

G1HN

G1HO

G1HP

G1HQ

G1HR

G1HS

G1HT

G1HU

G1HV

G1HW

G1HX

G1HY

G1HZ

G1IA

G1IB

G1IC

G1ID

G1IE

G1IF

G1IG

G1IH

G1II

G1IJ

G1IK

G1IL

G1IM

G1IN

G1IO

G1IP

G1IQ

G1IR

G1IS

G1IT

G1IU

G1IV

G1IW

G1IX

G1IY

G1IZ

G1JA

G1JB

G1JC

G1JD

G1JE

G1JF

G1JG

G1JH

G1JI

G1JJ

G1JK

G1JL

G1JM

G1JN

G1JO

G1JP

G1JQ

G1JR

G1JS

G1JT

G1JU

G1JV

G1JW

G1JX

G1JY

G1JZ

G1KA

G1KB

G1KC

G1KD

G1KE

G1KF

G1KG

G1KH

G1KI

G1KJ

G1KK

G1KL

G1KM

G1KN

G1KO

G1KP

G1KQ

G1KR

G1KS

G1KT

G1KU

G1KV

G1KW

G1KX

G1KY

G1KZ

G1LA

G1LB

G1LC

G1LD

G1LE

G1LF

G1LG

G1LH

G1LI

G1LJ

G1LK

G1LL

G1LM

G1LN

G1LO

G1LP

G1LQ

G1LR

G1LS

G1LT

G1LU

G1LV

G1LW

G1LX

G1LY

G1LZ

G1MA

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G1MC

G1MD

G1ME

G1MF

G1MG

G1MH

G1MI

G1MJ

G1MK

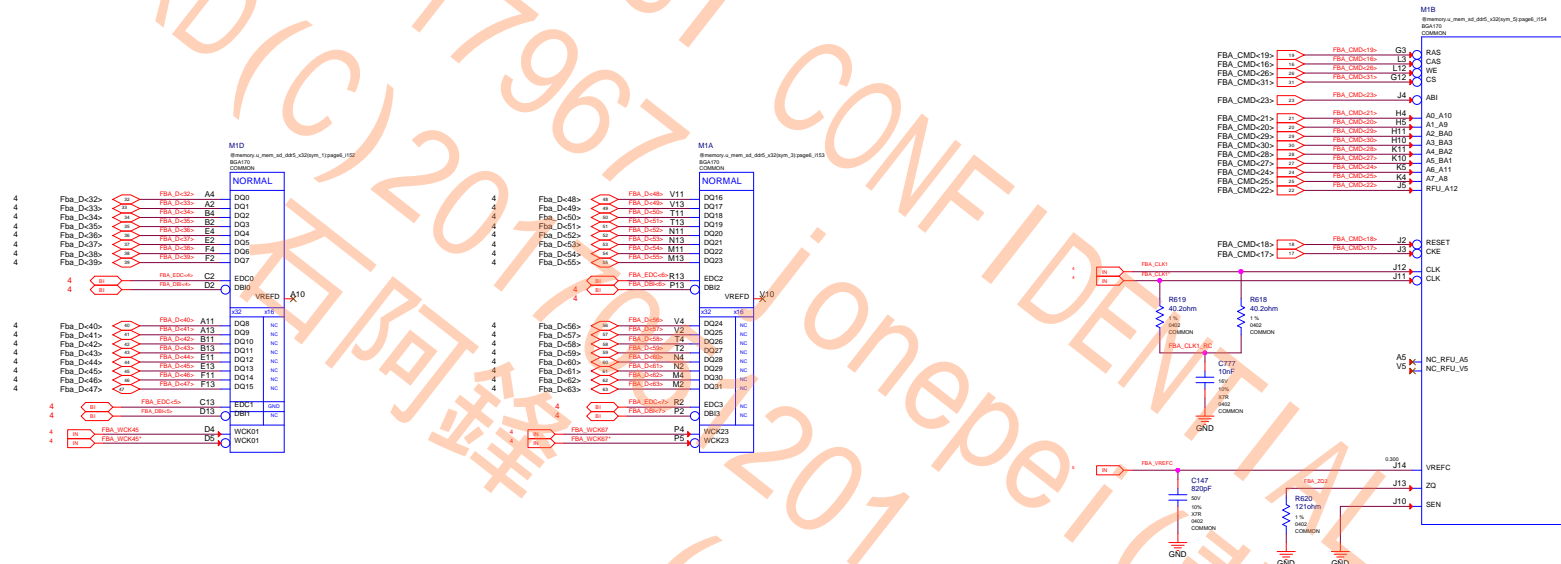
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G1MM

G1MN

G1MO

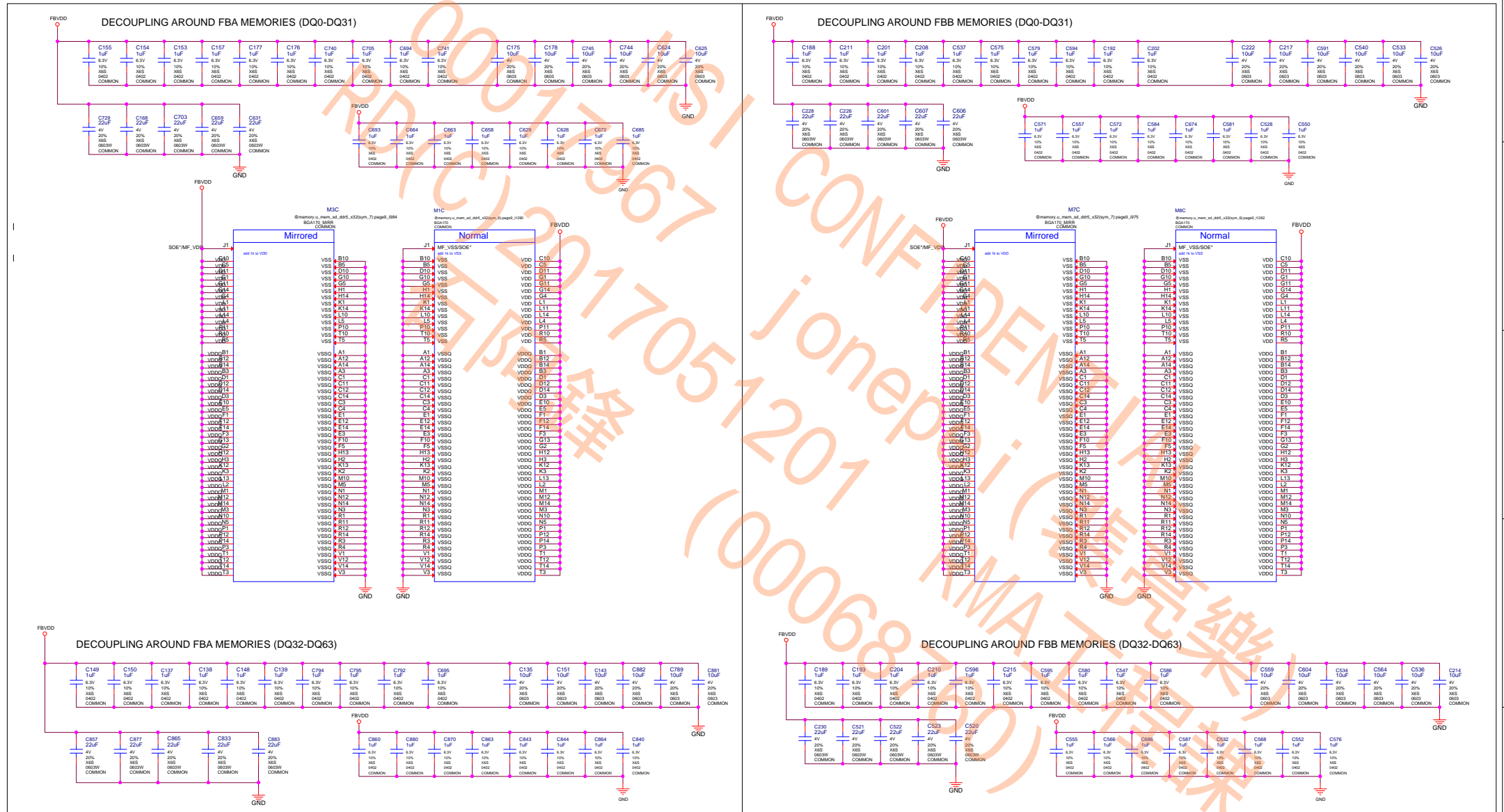






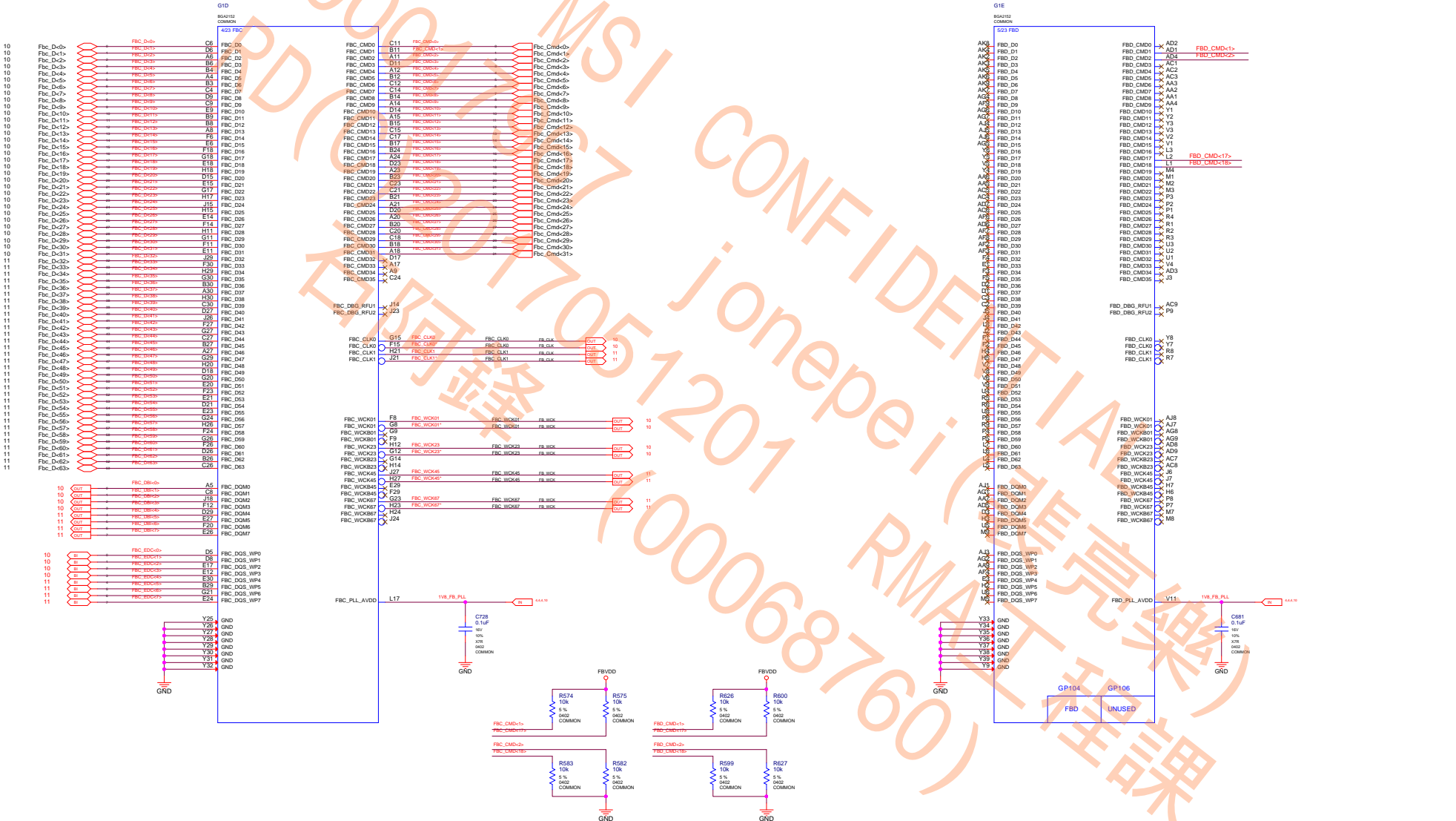






GDDR5 CMD Mapping


CMD	0-31	32-63
CMD0	CAS*	
CMD1	CKE*	
CMD2	RST*	
CMD3	RAS*	
CMD4	A1_A0	
CMD5	A0_A10	
CMD6	A12_RFU	
CMD7	AB*	
CMD8	AB_A11	
CMD9	A2_A0	
CMD10	WE*	
CMD11	A5_BA1	
CMD12	A6_BA2	
CMD13	A2_BA0	
CMD14	A3_BA3	
CMD15	CS*	
CMD16		CAS*
CMD17		CKE*
CMD18		RST*
CMD19		RAS*
CMD20	A1_A0	
CMD21	A0_A10	
CMD22	A12_RFU	
CMD23	AB*	
CMD24	AB_A11	
CMD25	A2_A0	
CMD26	WE*	
CMD27	A5_BA1	
CMD28	A6_BA2	
CMD29	A2_BA0	
CMD30	A3_BA3	
CMD31	CS*	






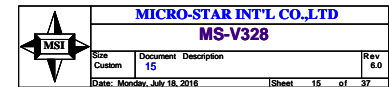
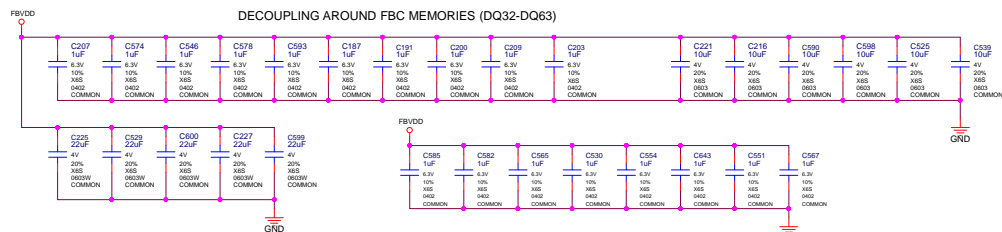
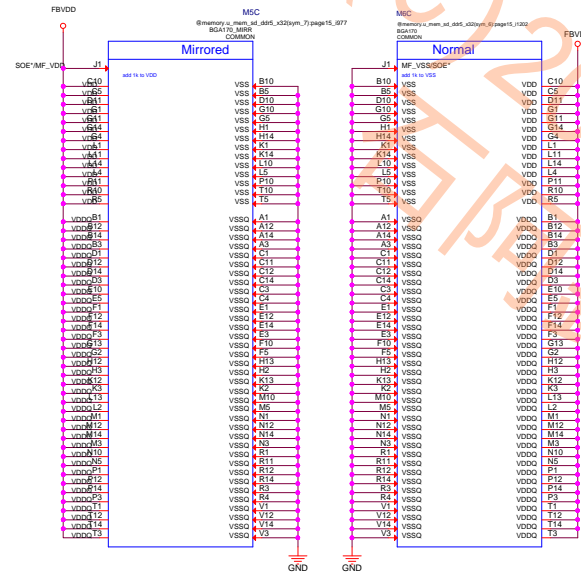
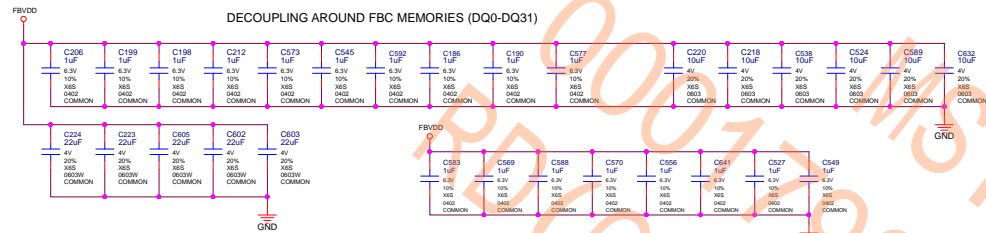


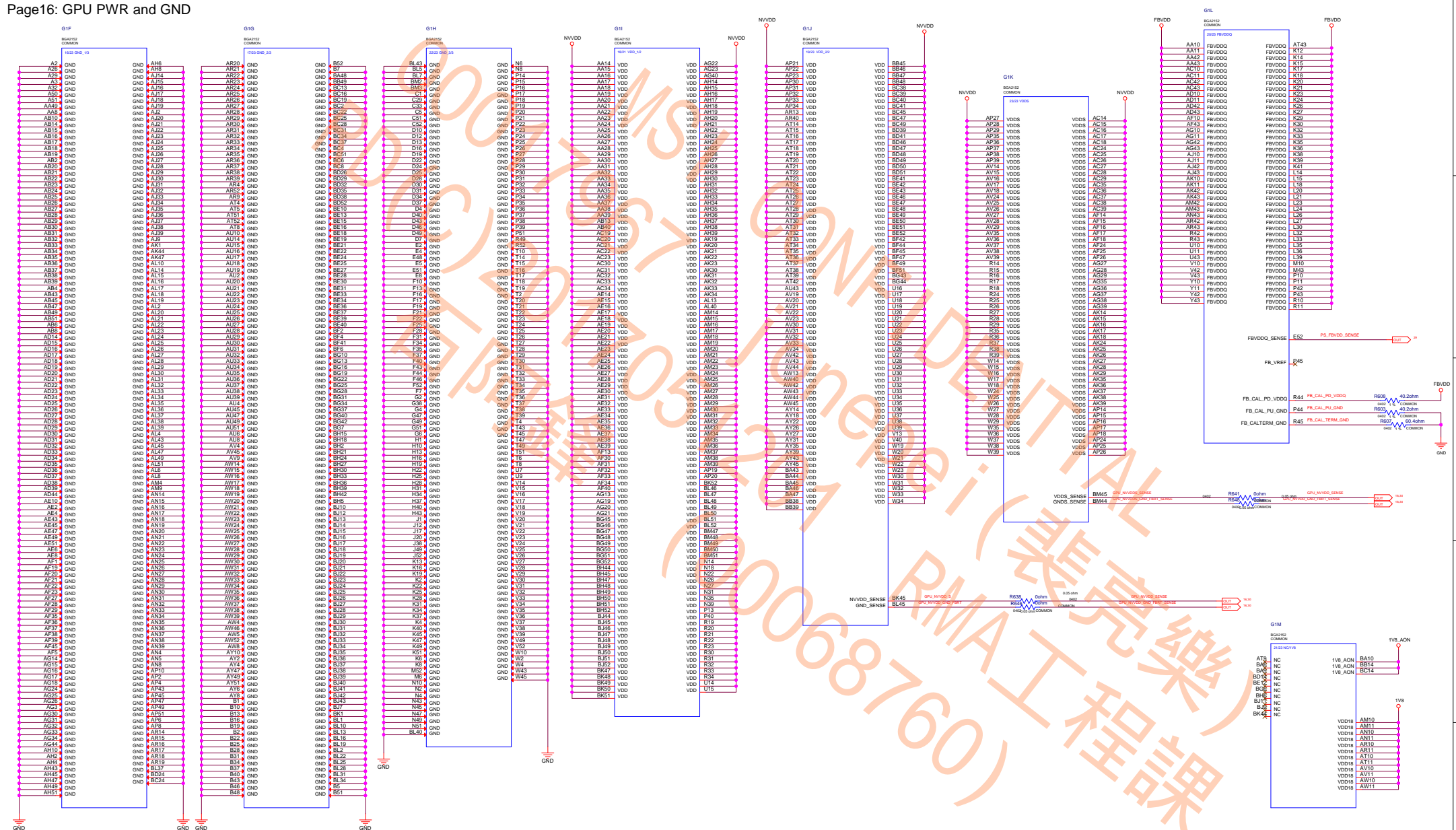
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RD(C)2017051201 RMA工程課  
石阿鋒 (00068760)

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	Size	Document Description	Rev
	Custom	13	6.0
Date: Monday, July 18, 2016		Sheet 13 of 37	

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	MS-V328		
	Size	Document	Description
	Custom	14	
Date: Monday, July 18, 2016		Sheet 14 of 37	Rev 6.0







## FBVDD

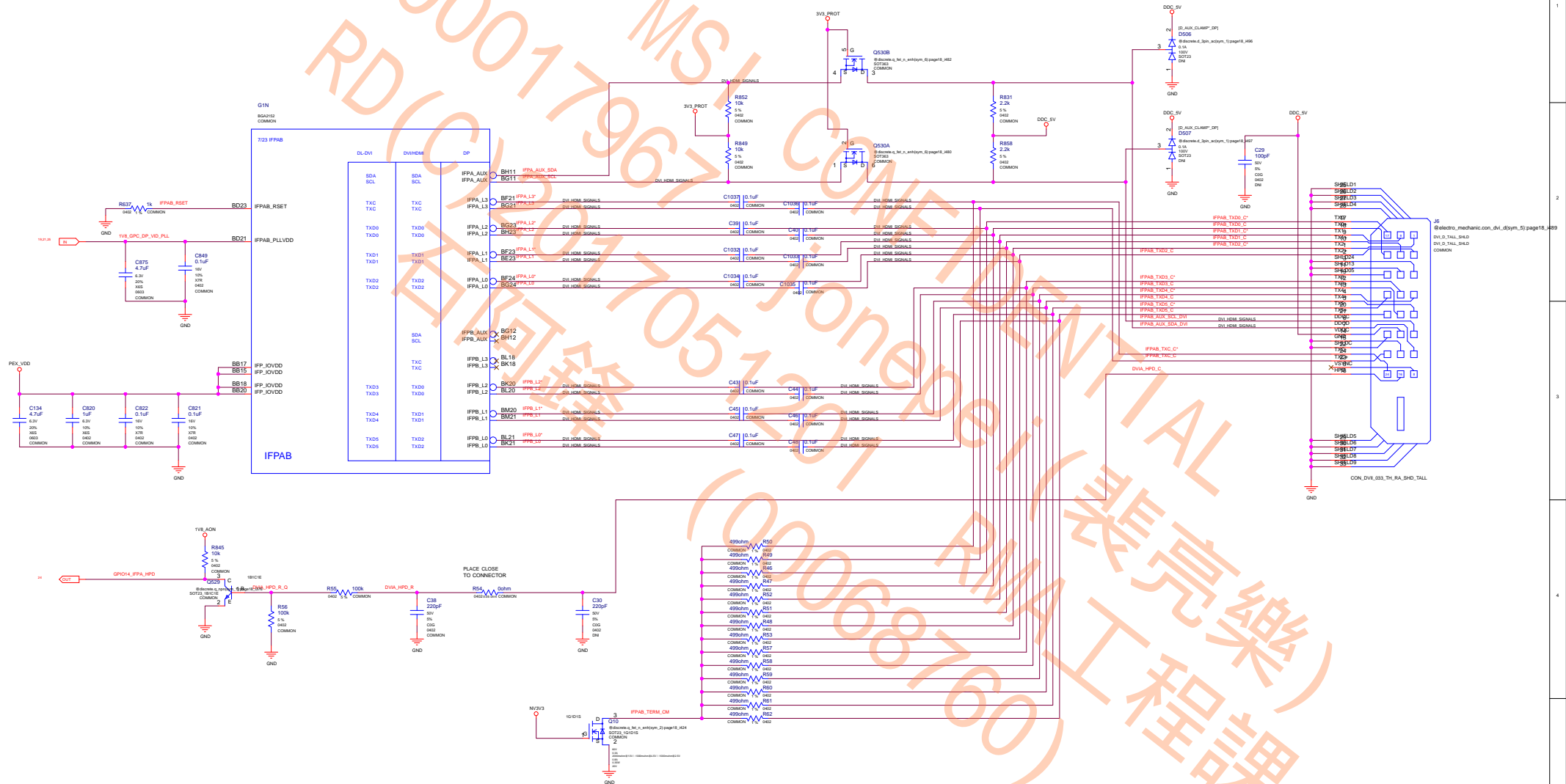
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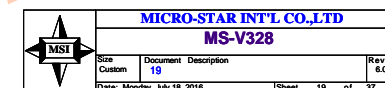
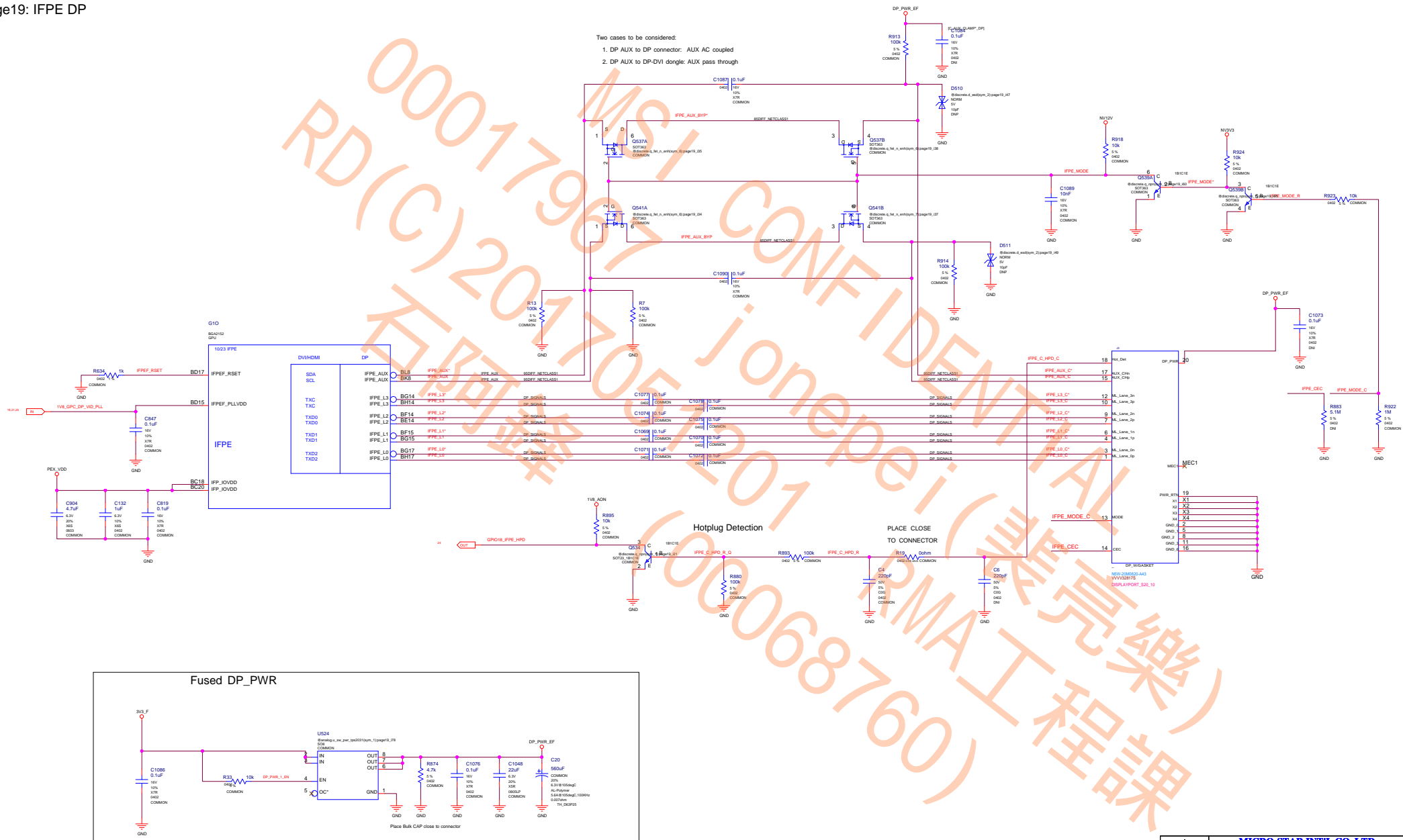
## NVVDD

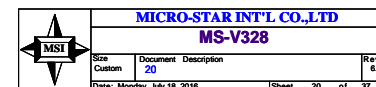
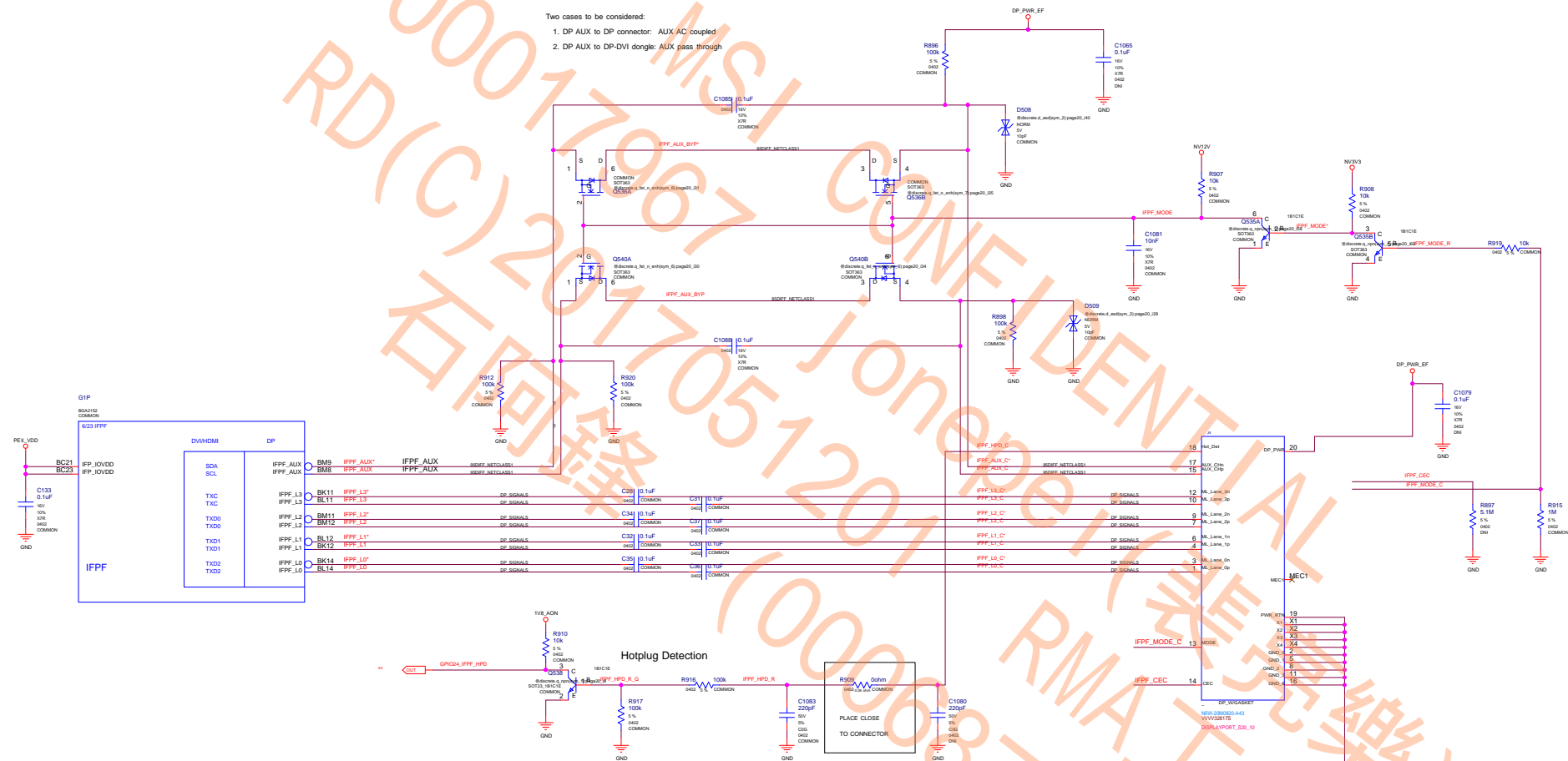
1V8\_AON

1V8\_AON  
place 1 0.1uF cap near BA10

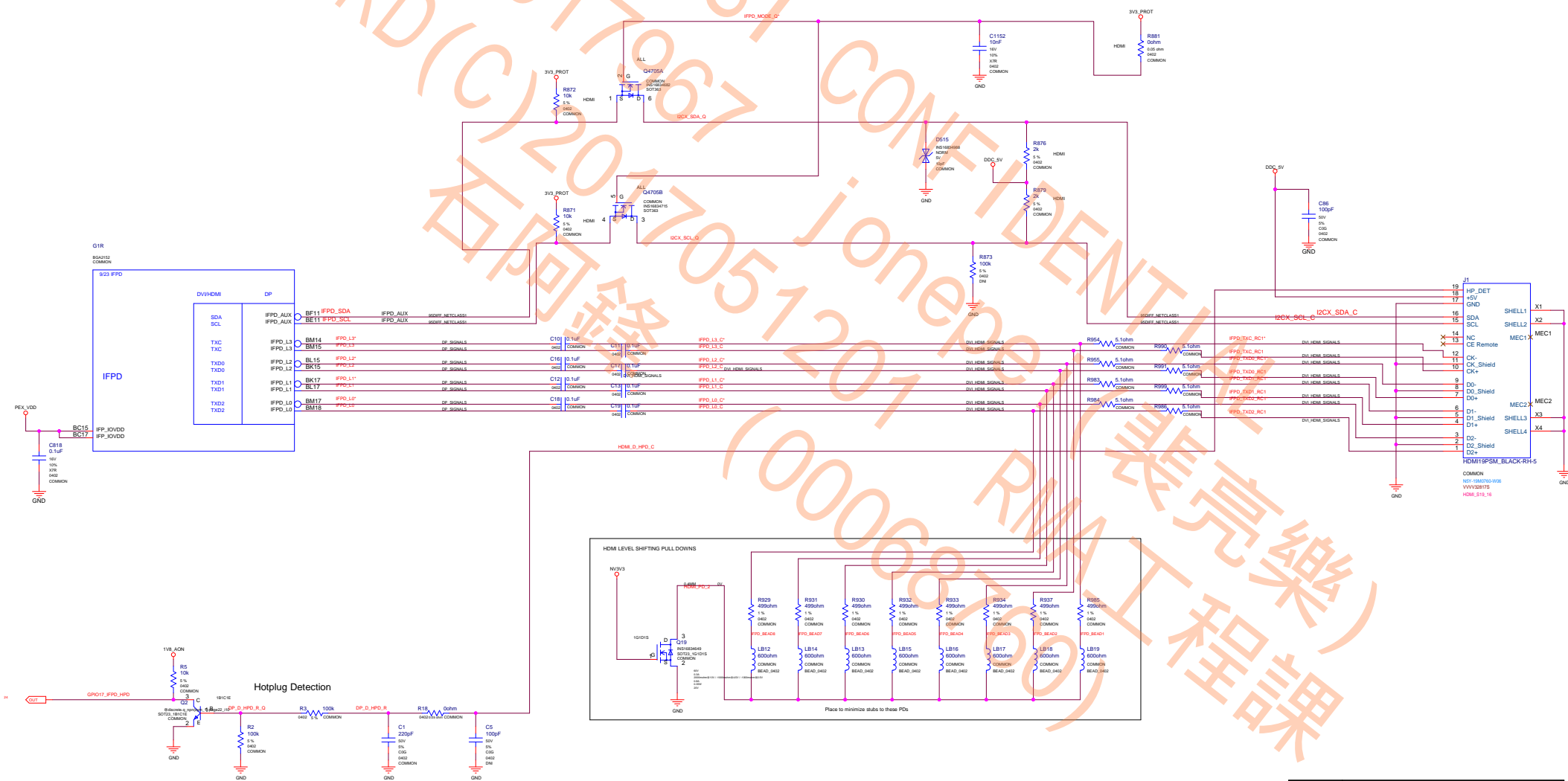
1V8\_MAIN

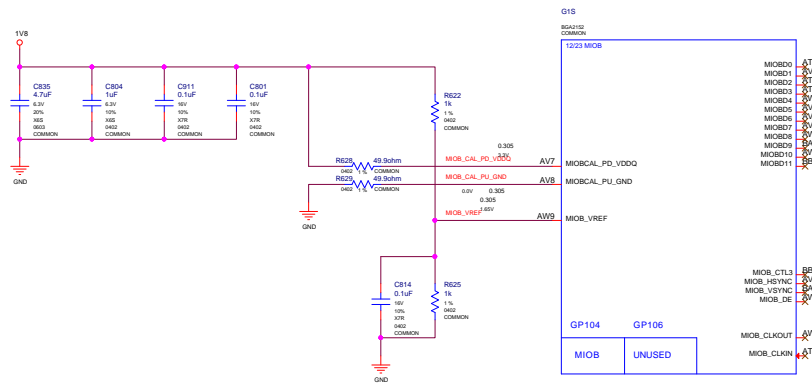
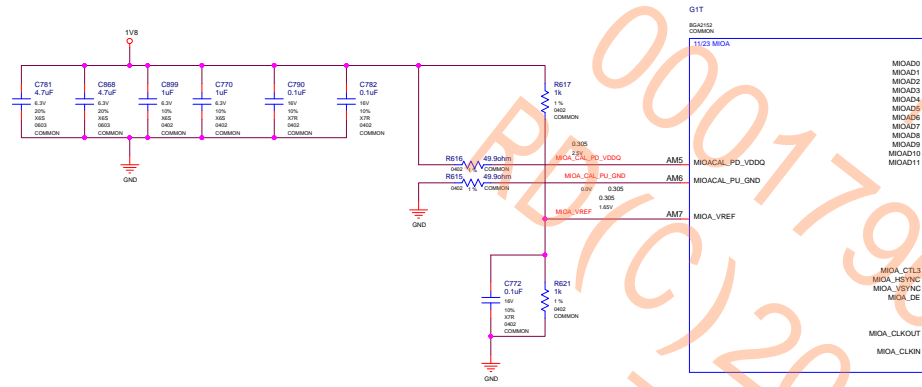


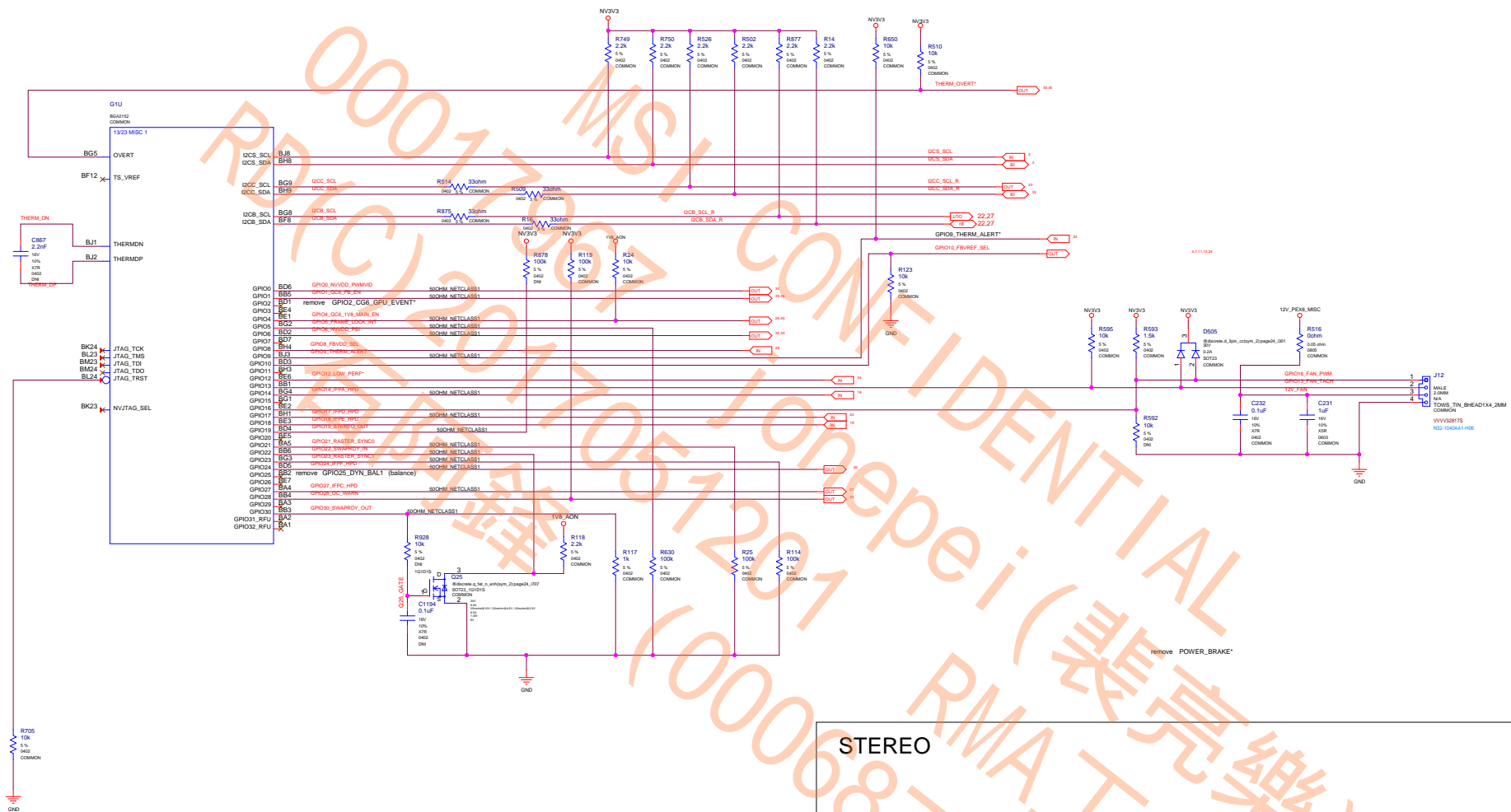




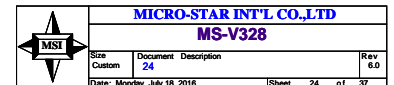








STEREO





STRAP2	STRAP1	STRAP0	RAMCFG[4:0]
L	L	L	00000
L	L	H	00001
L	H	L	00010
L	H	H	00011
H	H	L	00110
H	H	H	00111
L	L	M	01000
ROM_SO	ROM_SI	ROM_SCLK	SOR_EXPOSED[3:0]
L	L	L	1111 DEFAULT
L	L	H	1110
L	H	L	1101
L	H	H	1100
H	L	L	1011
H	L	H	1010
H	H	L	1001
H	H	H	1000
L	L	M	0111
L	M	L	0110
L	M	H	0101
L	H	M	0100
H	L	M	0011
H	M	L	0010
H	M	H	0001
H	H	M	0000

STRAP5	STRAP4	STRAP3	SMB_ALT_ADDR	DEVID_SEL	PCIE_CFG	VGA_DEVICE
M	H	H	1	1	1	1
M	H	L	1	1	1	0
M	L	H	1	1	0	1
M	L	L	1	1	0	0
L	H	M	1	0	1	1
L	M	H	1	0	1	0
L	M	L	1	0	0	1
L	L	M	1	0	0	0
H	H	H	0	1	1	1
H	H	L	0	1	1	0
H	L	H	0	1	0	1
H	L	L	0	1	0	0
L	H	H	0	0	1	1
L	H	L	0	0	1	0
L	L	H	0	0	0	1 DEFAULT
L	L	L	0	0	0	0

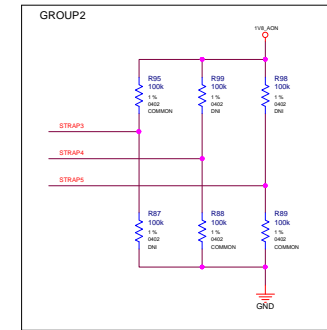
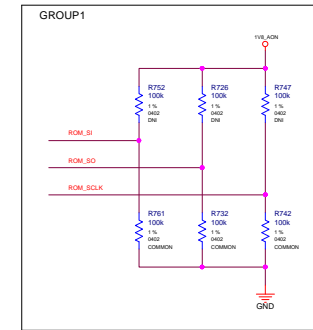
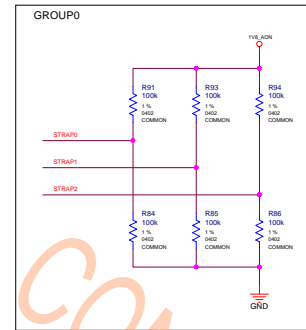
H=High :Tied to 1.8V  
M=Middle:Tied to 0.9V  
L=Low :Tied to 0V

```
1:SMB_ALT_ADDR ENABLE
0:SMB_ALT_ADDR DISABLE

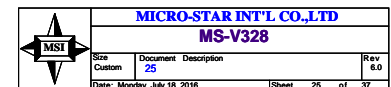
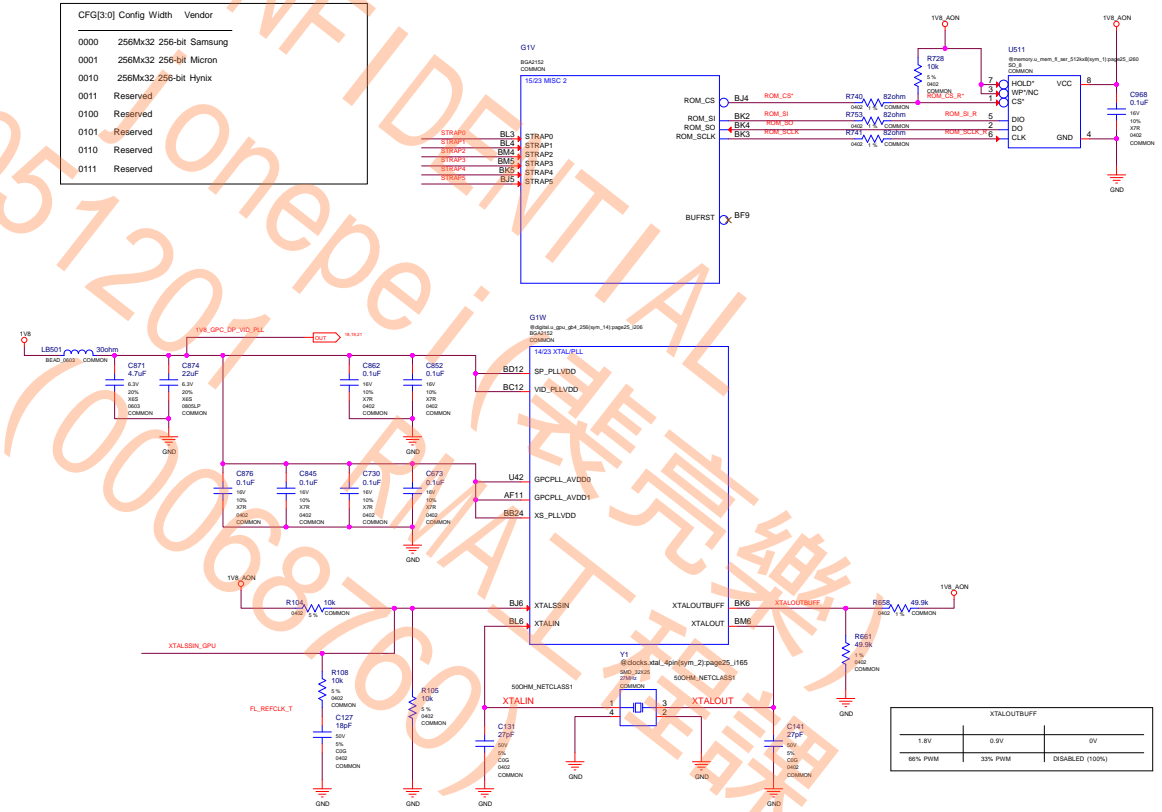
1:DEVID_SEL REBRAND
0:DEVID_SEL ORIGNAL
```

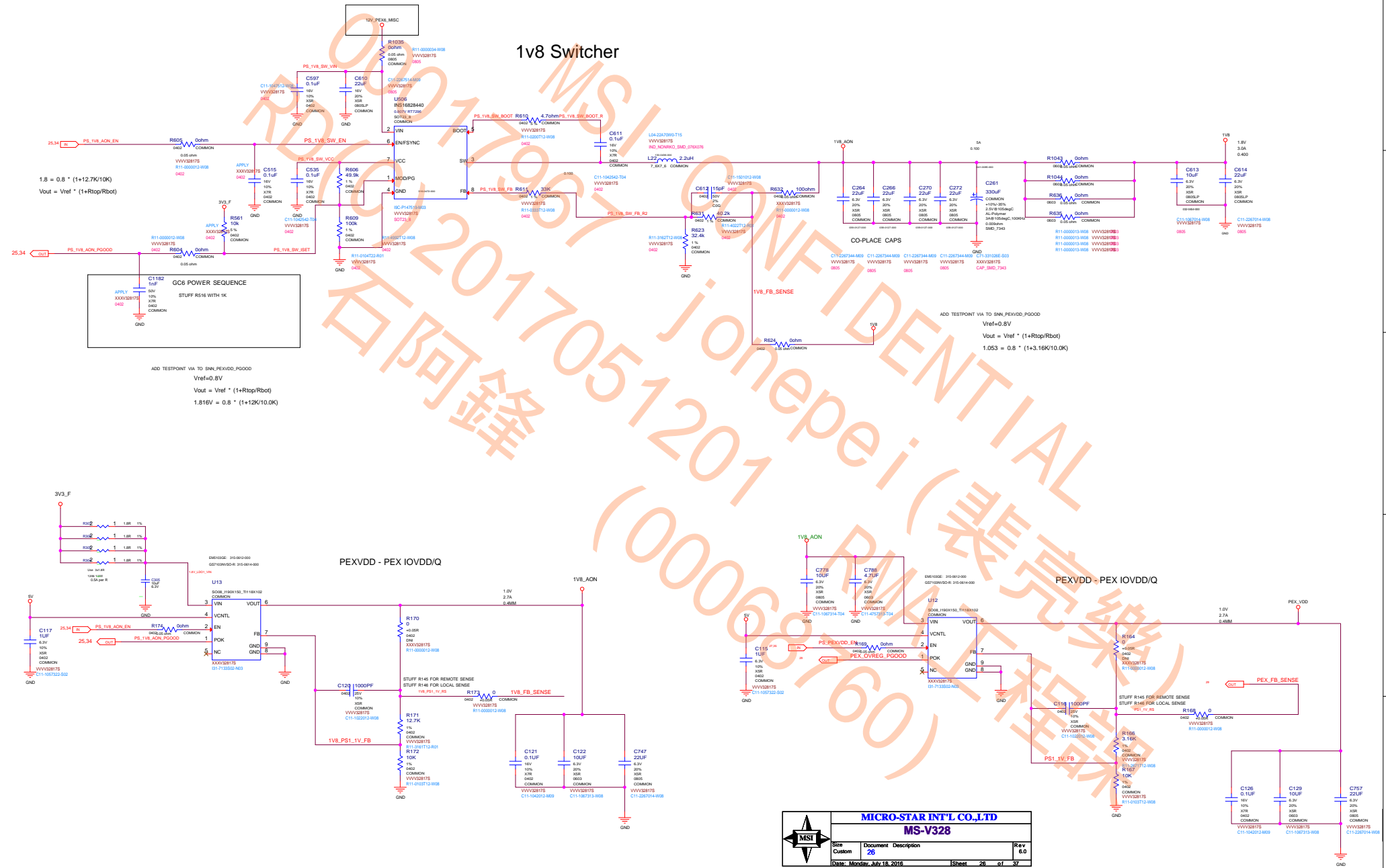
1:PCIE\_CFG LOW POWER  
0:PCIE\_CFG HIGH POWER

1:VGA\_DEVICE ENABLE  
0:VGA\_DEVICE DISABLE

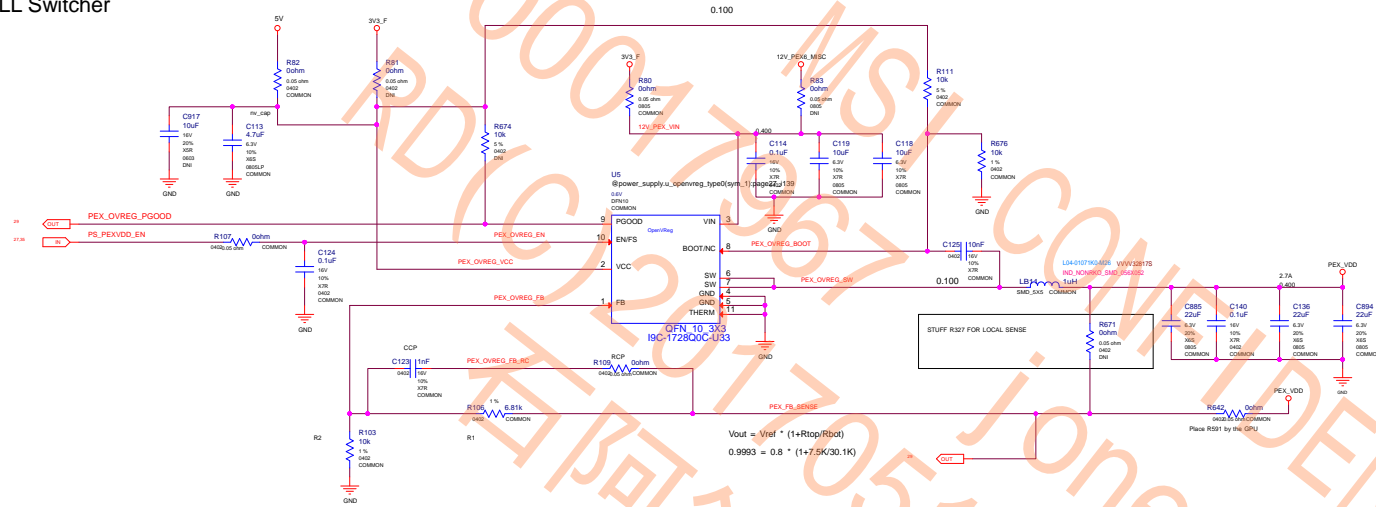


CFG[3:0]	Config	Width	Vendor
0000	256Mx32	256-bit	Samsung
0001	256Mx32	256-bit	Micron
0010	256Mx32	256-bit	Hynix
0011	Reserved		
0100	Reserved		
0101	Reserved		
0110	Reserved		
0111	Reserved		

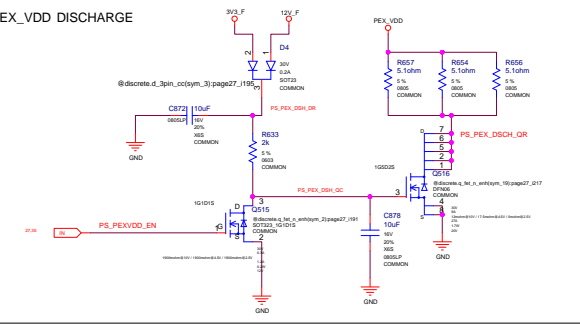




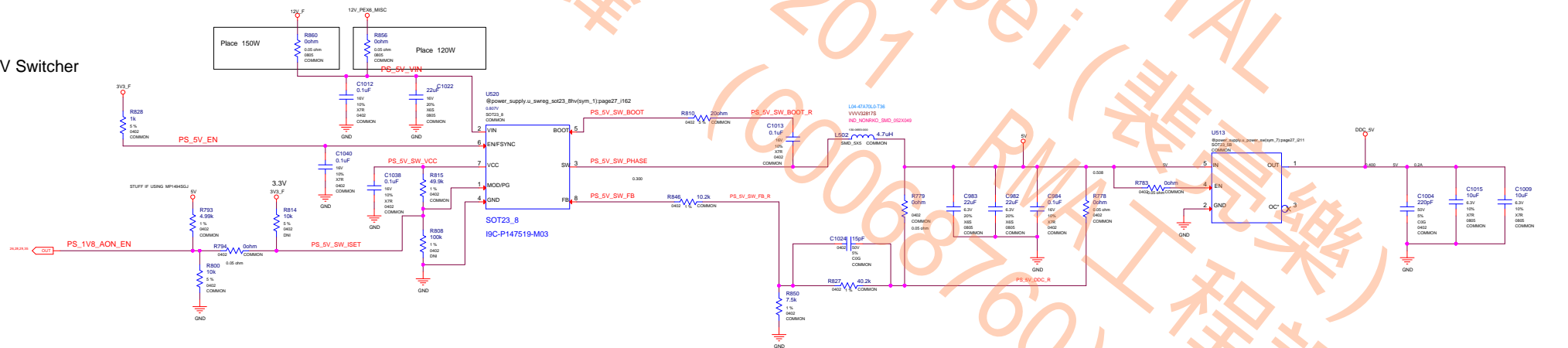
## PEX PLL Switcher

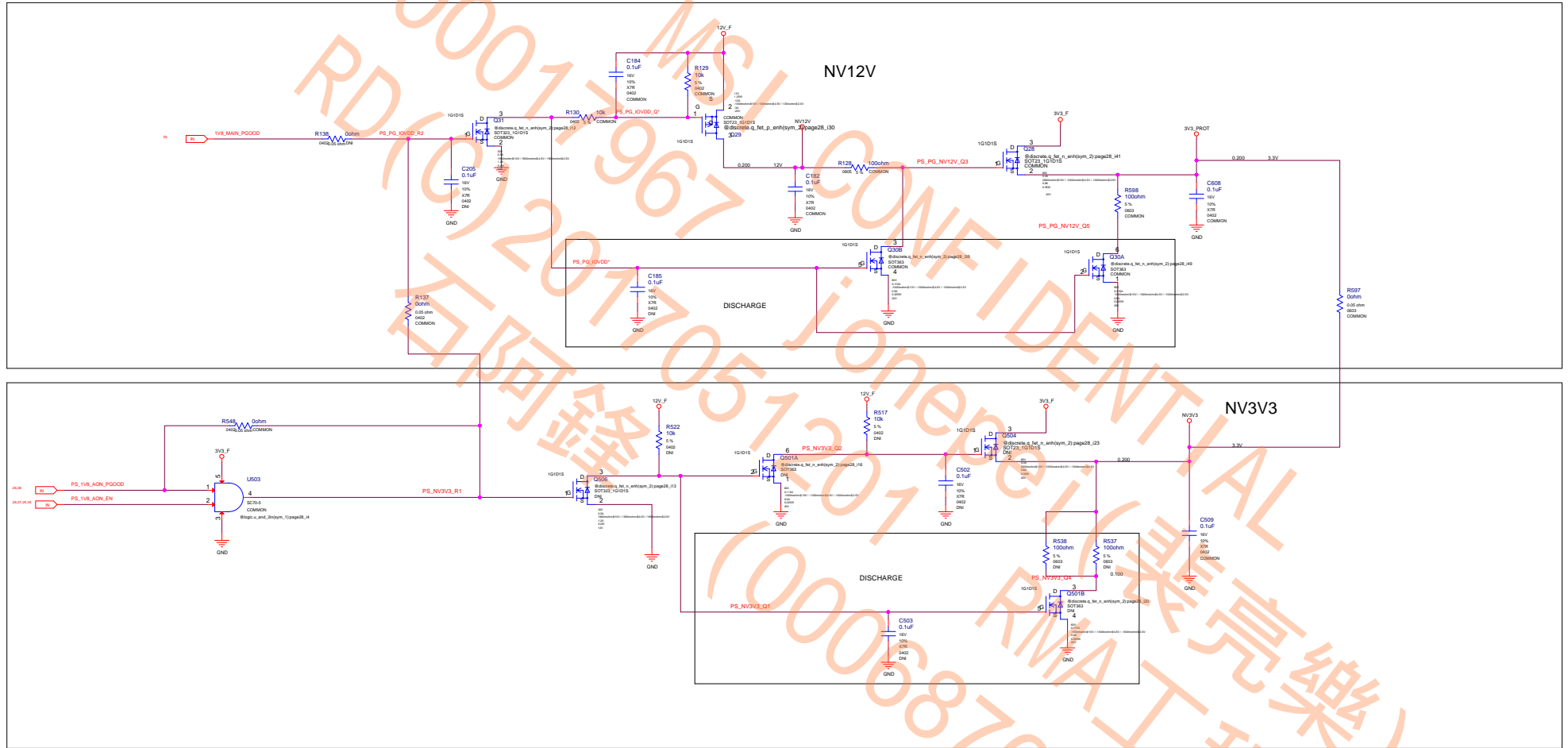


## PEX\_VDD DISCHARGE



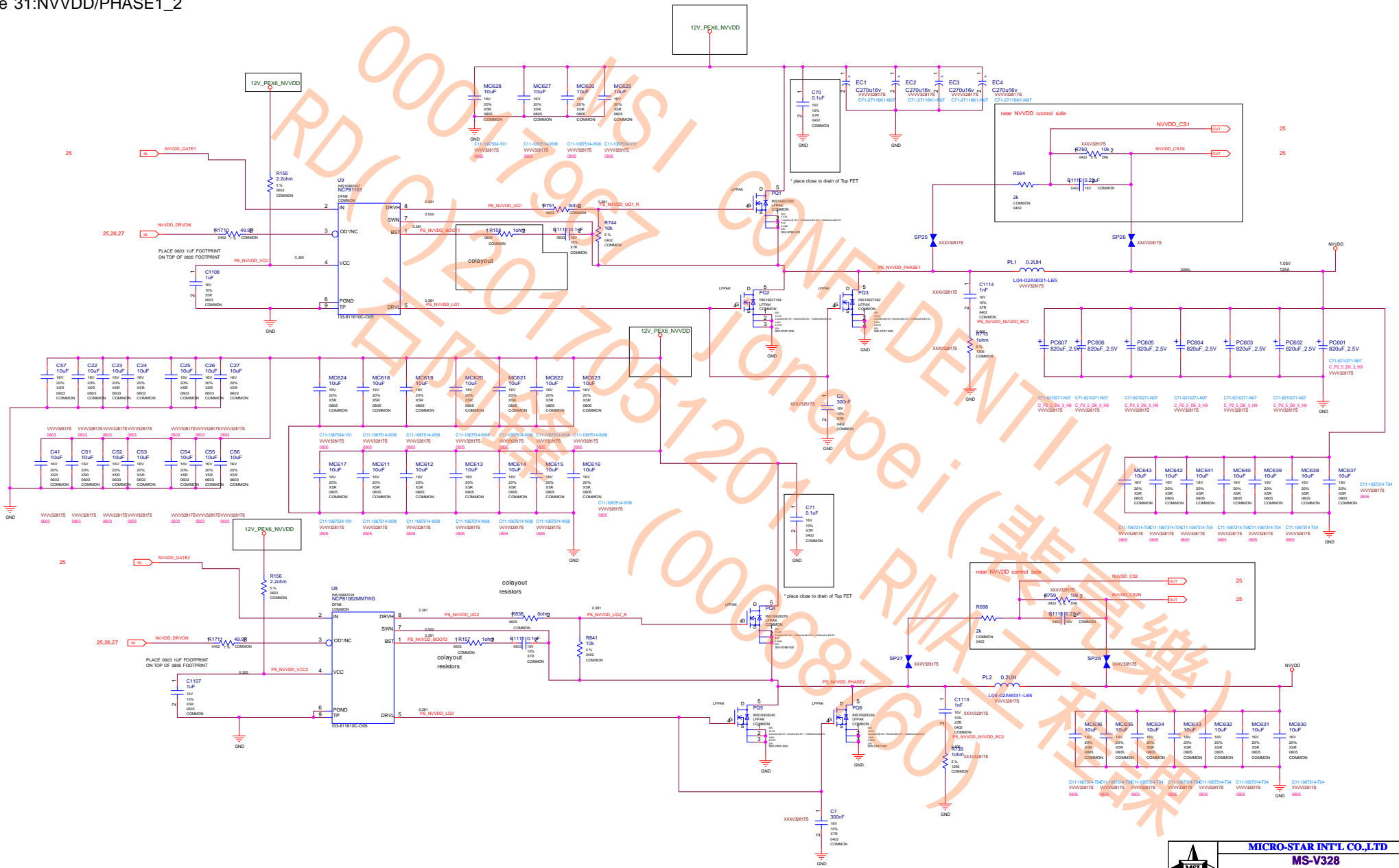
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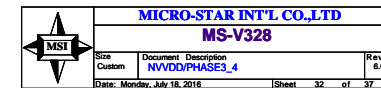
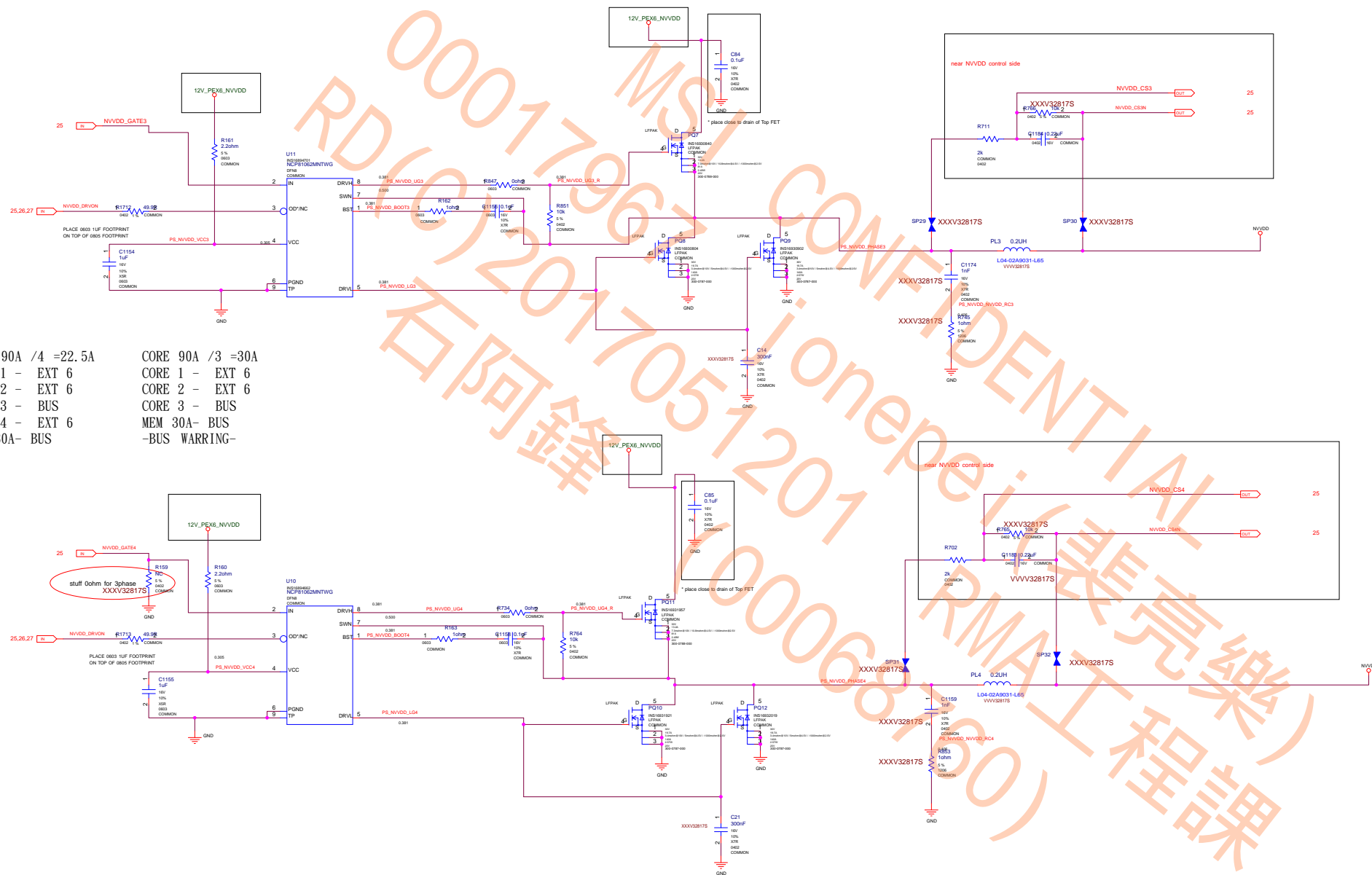




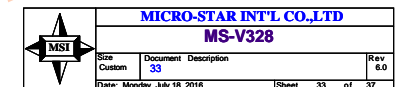
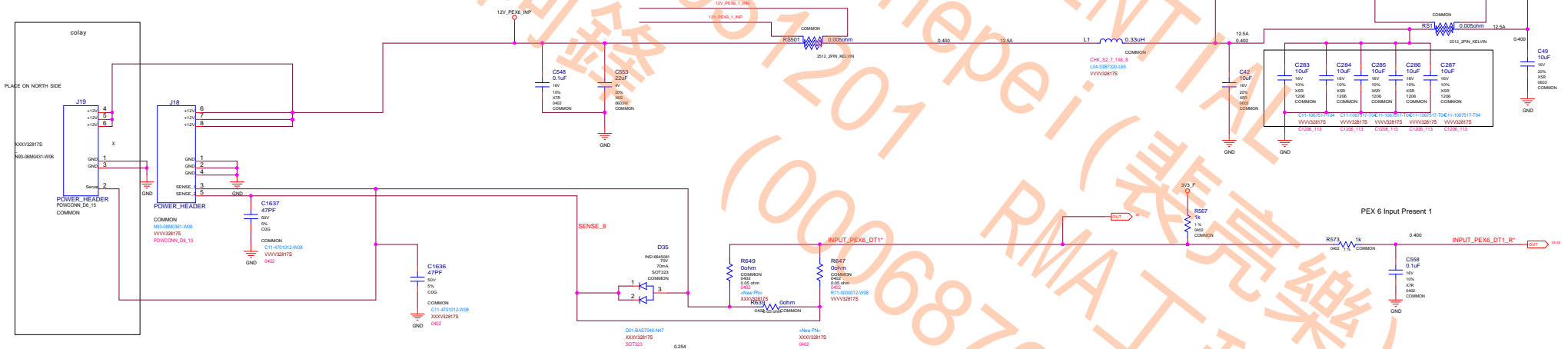
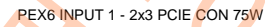
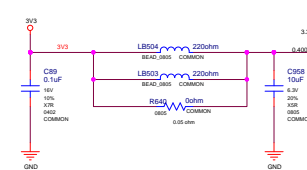
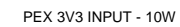
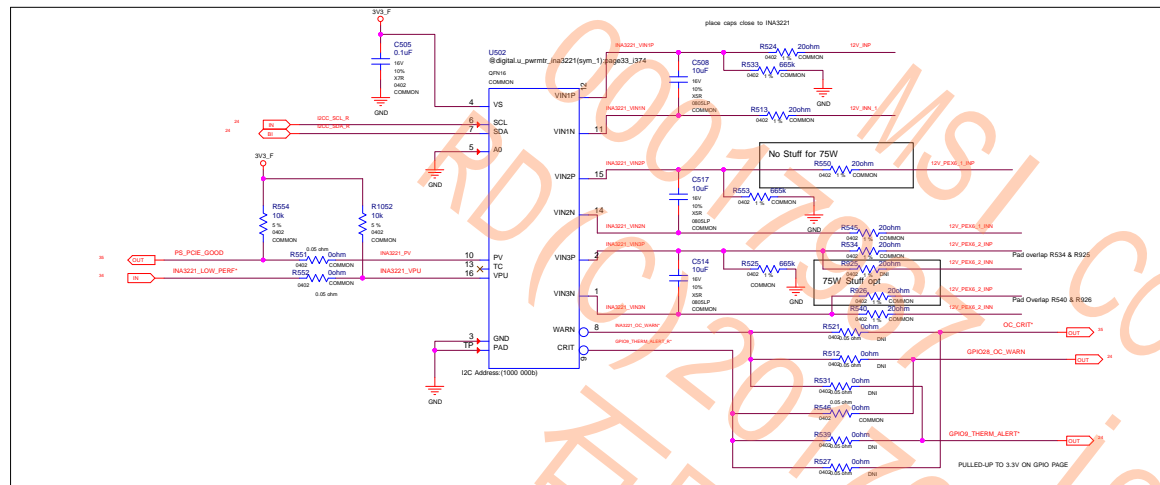




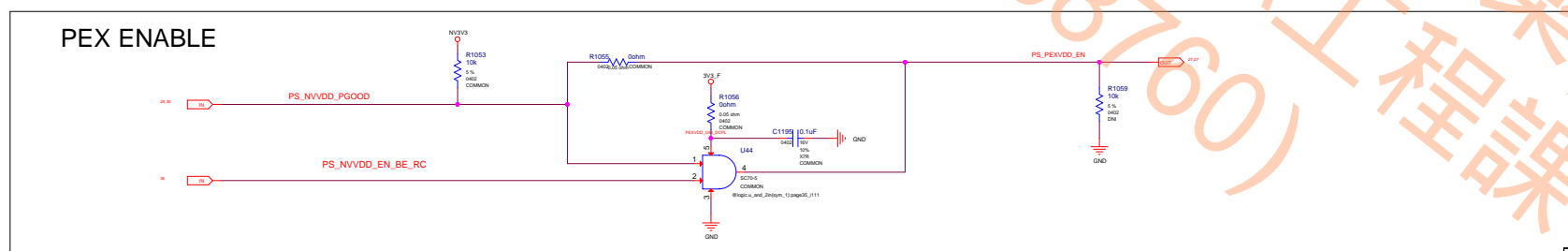
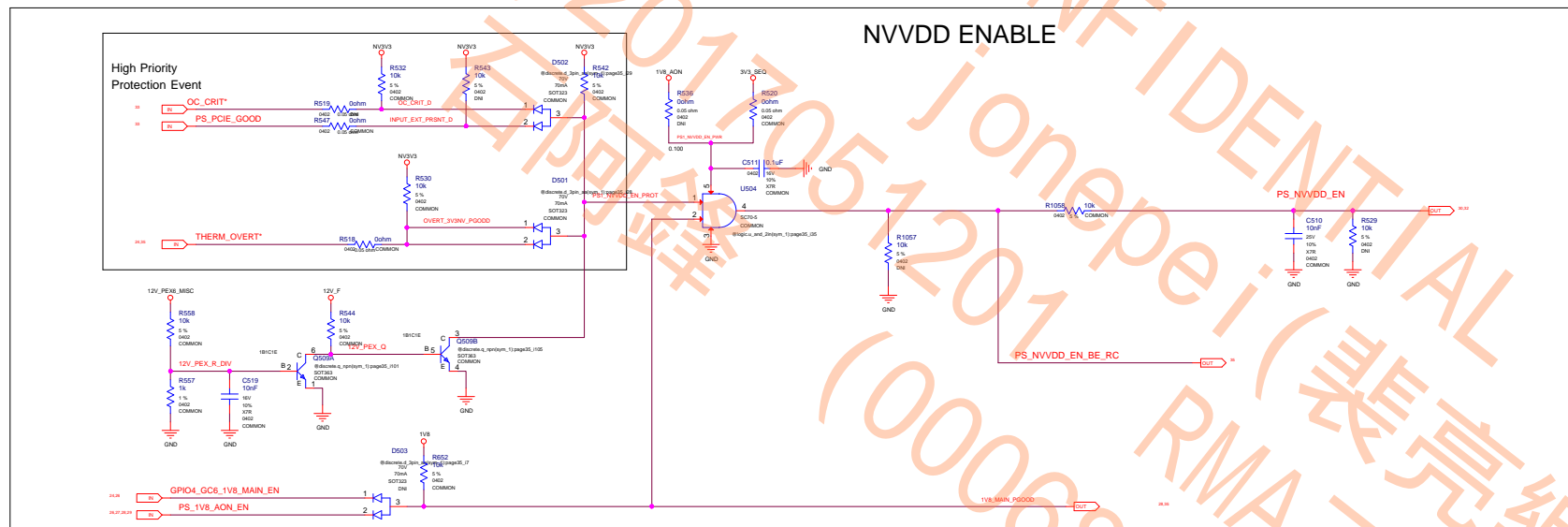
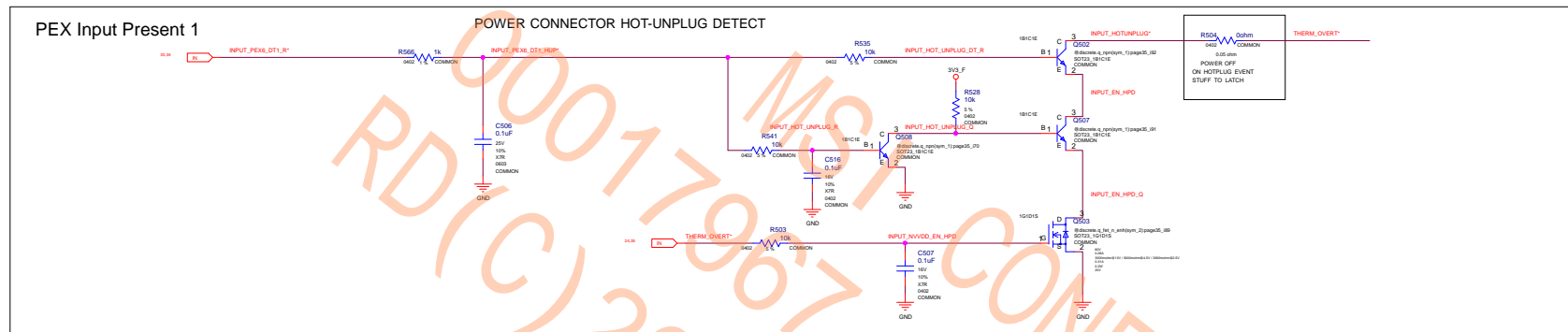




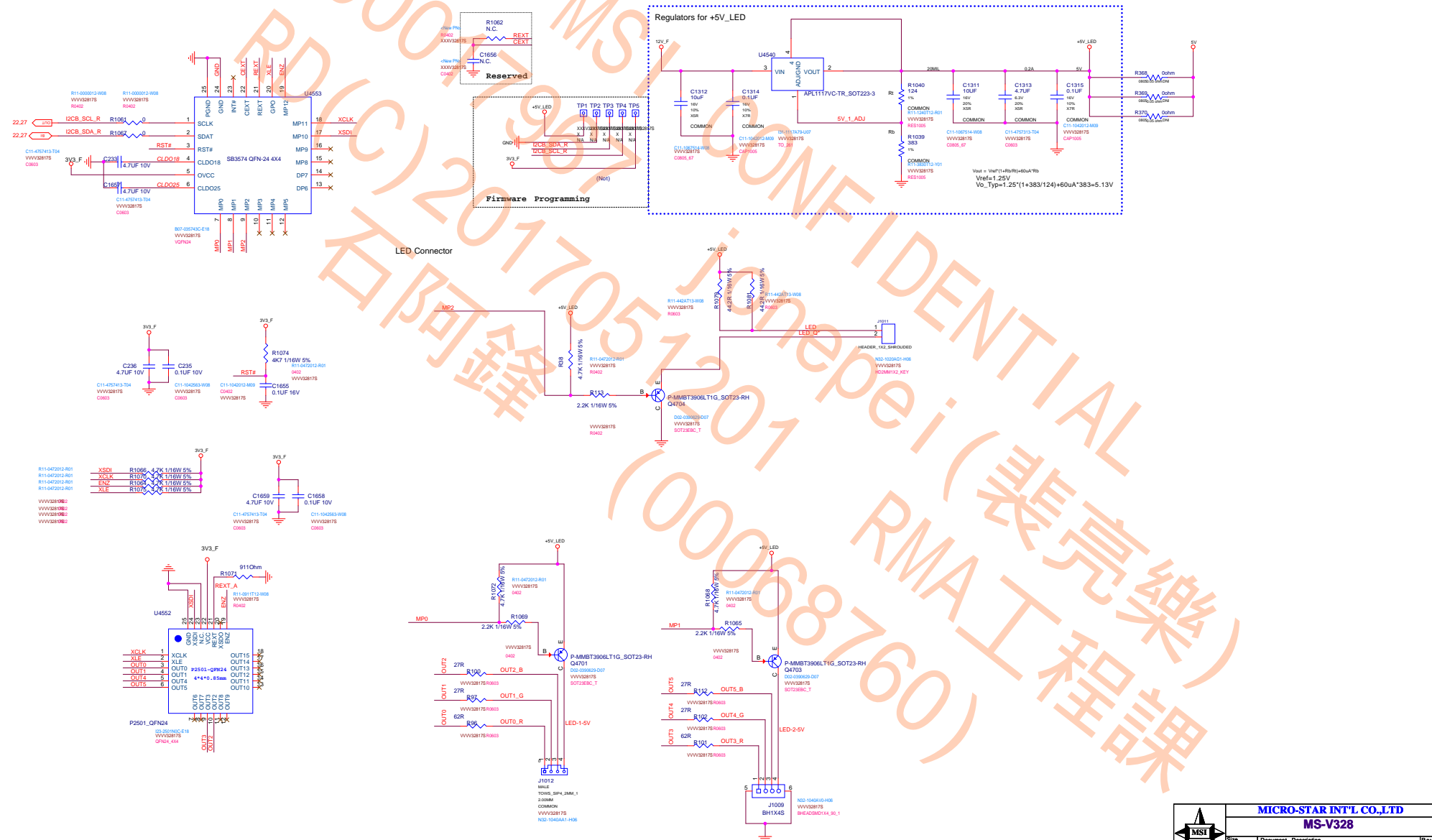




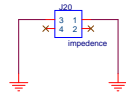
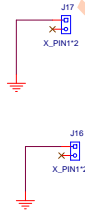
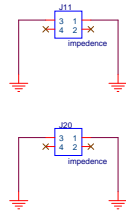
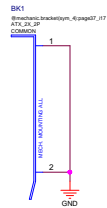




```
remove GC6 FB ENABLE
remove GPU_EVENT*
remove PEX_CLKREQ*
PEX_RST# LOGIC
```



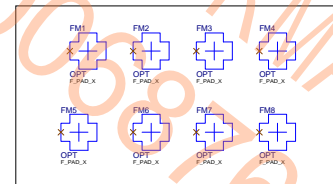
## Brackets:



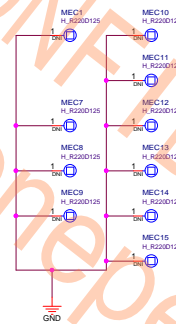
MEC6  
MEC\_SCREEN\_HEX JACK  
COMMON  
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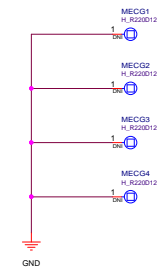
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## Mechanical Holes Symbol



## GPU Stiffner



MICRO-STAR INT'L CO.,LTD			
MS-V328			
Size	Document	Description	Rev
Custom	37		6.0
Date: Monday, July 18, 2016		Sheet	37 of 37