

PG301 A02

Comanche 192b GDDR5, <150W, 2-way SLI
Tall DVI-I + DP + DP + DP/HDMI + DP

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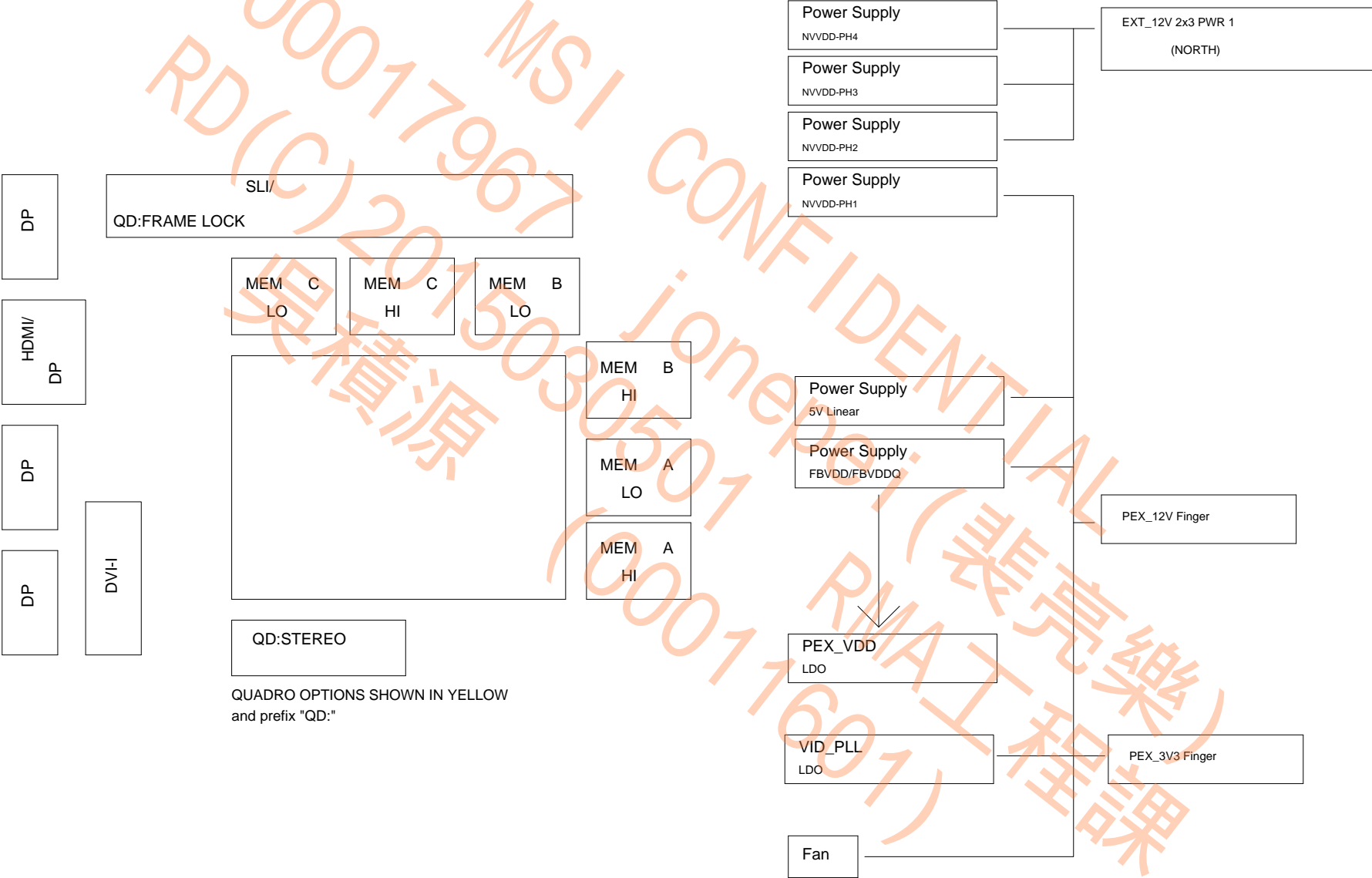
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V320-2.0 change item:

- Page15:DVI add esd
- Page18:remove DP colay
- Page20:HDMI add esd
- Page21:4pin housing colay 6pin housing
- Page25:NVVDD enable phase4
- Page27:Add phase4
- Page29:remove colay NVVDD power solution
- Page30: 12V input bead change to choke
6pin power con colay 8pin con
remove 0603 MLCC colay
- Page32:stuff logo LED

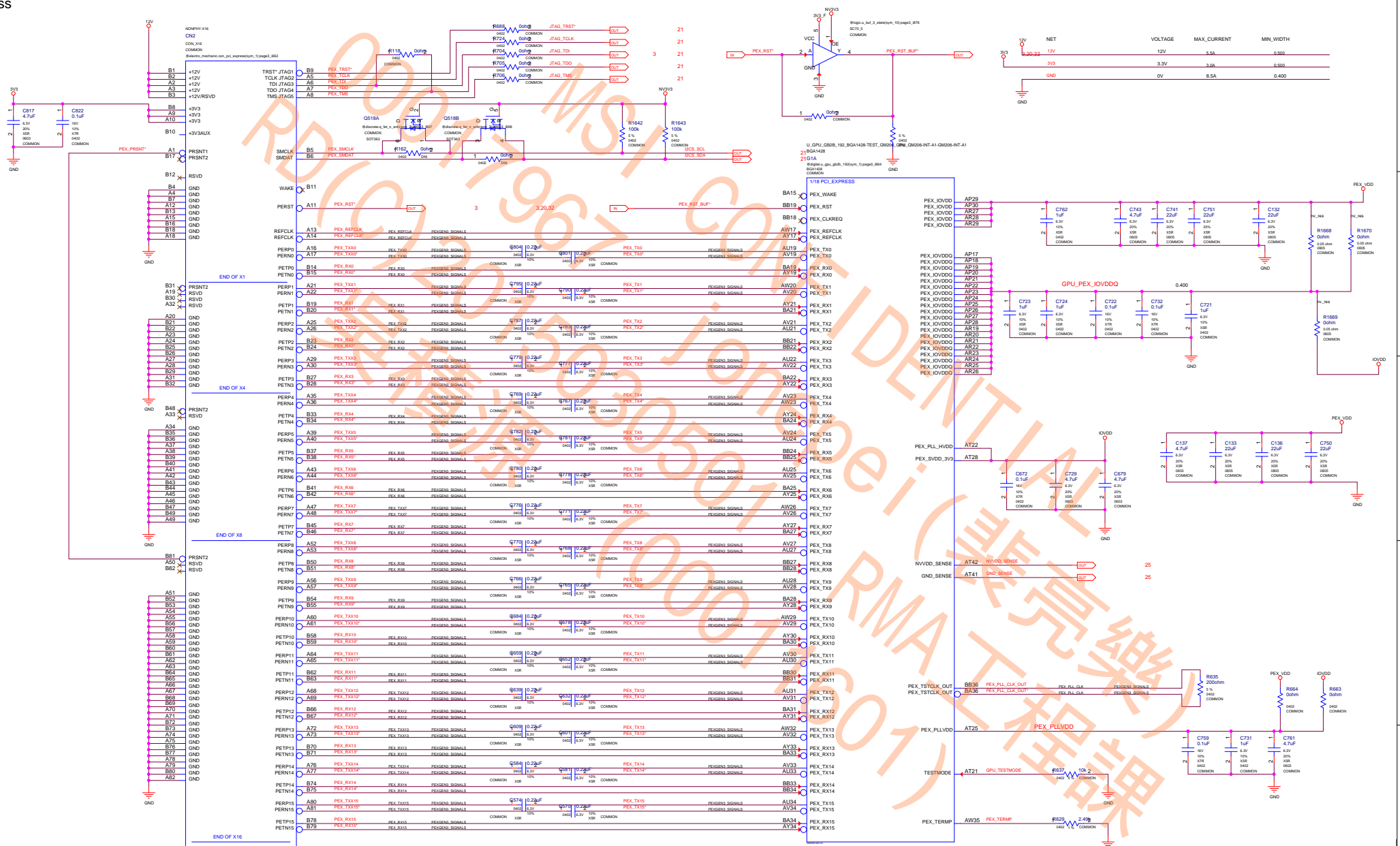
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Block Diagram

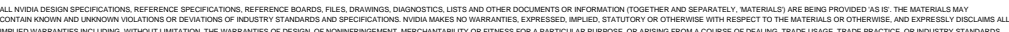


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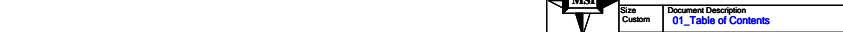
PCI Express



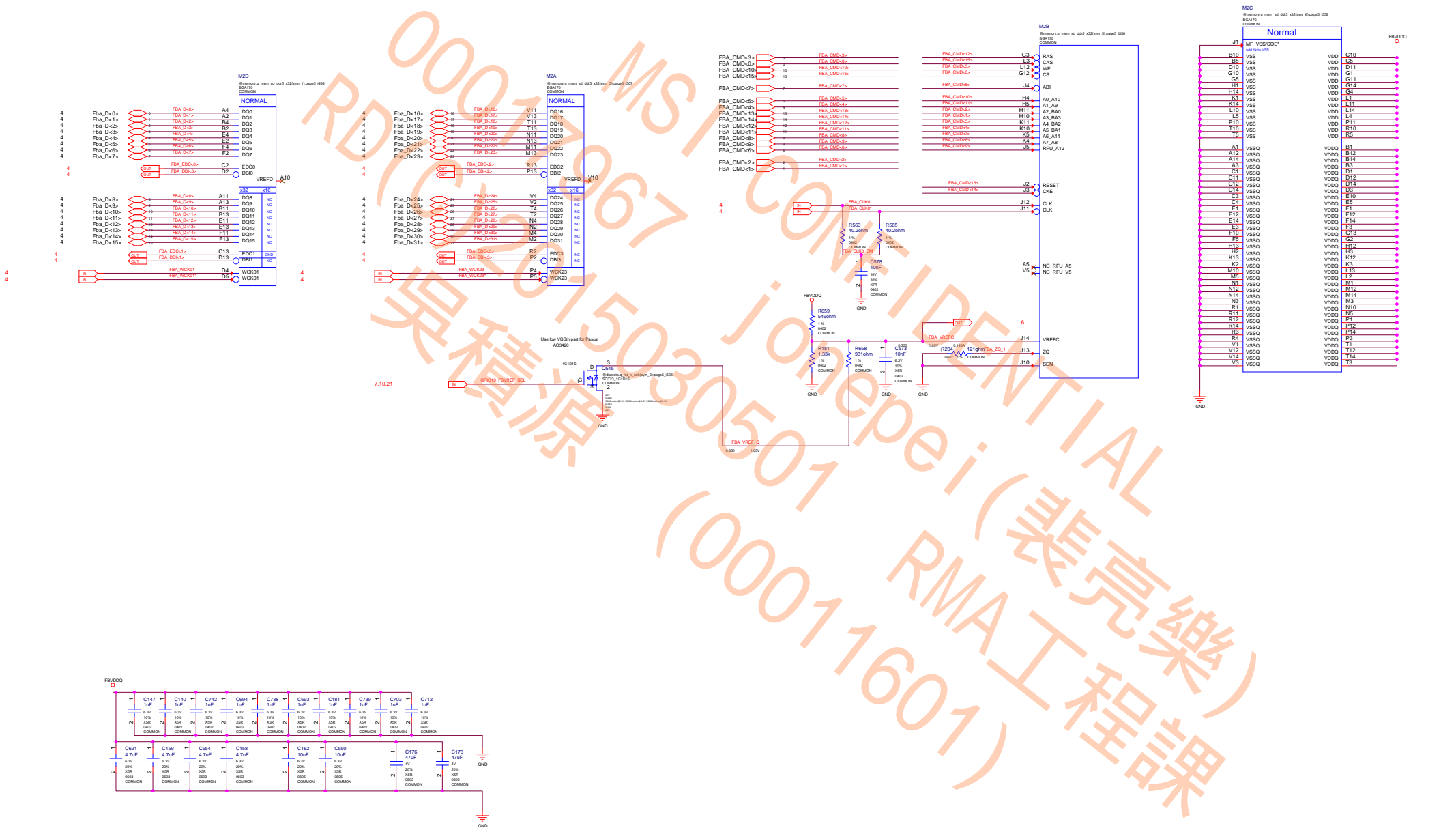
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0.31 32.63
CND6 C81

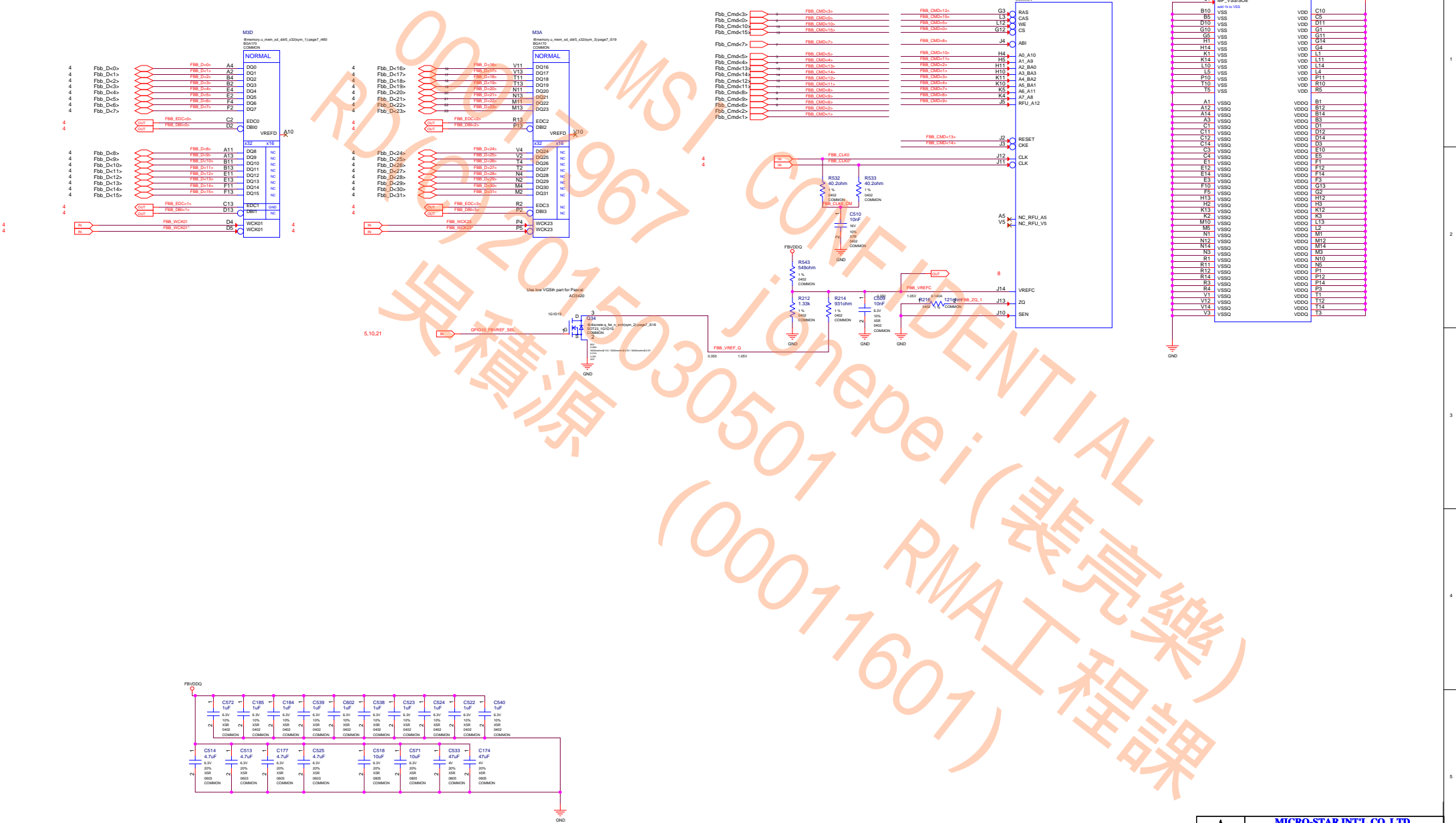


MEMORY: FBA Partition 31..0

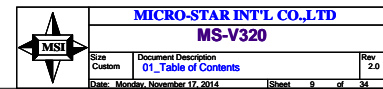


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MEMORY: FBB Partition 31..0



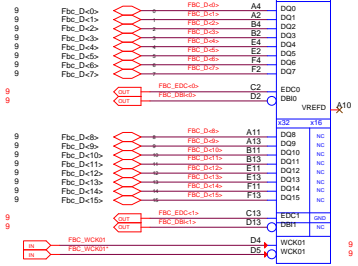
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MEMORY: FBC Partition 31..0

M1D
@memory_v.mem_vd_485_v320pin_01page10_082

Normal



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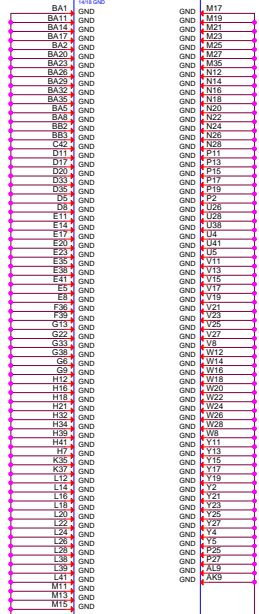
GPU PWR and GND

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G11

BGA1428

COMMON

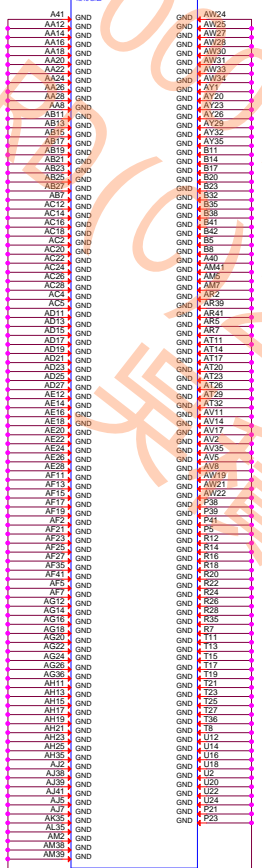


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G11

BGA1428

COMMON

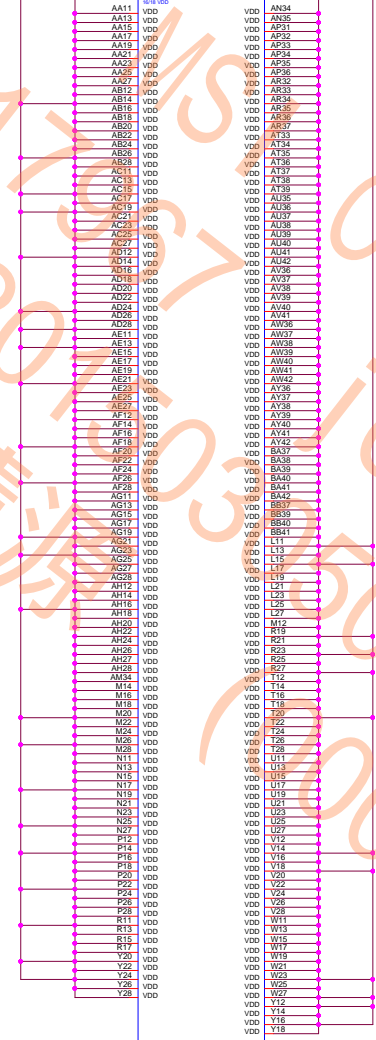


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G11

BGA1428

COMMON

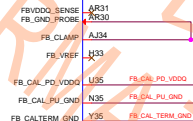
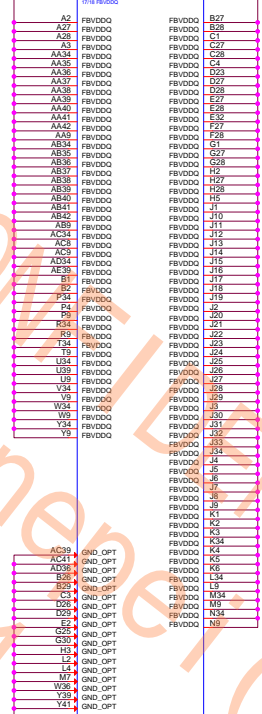


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G11

BGA1428

COMMON

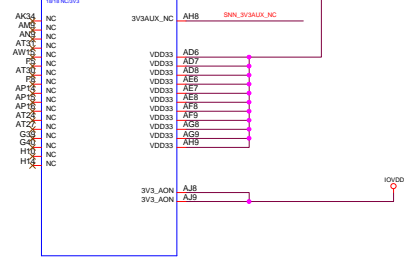


U: GPU_GB2B_192_BGA1428-TEST_GM206_GPU_GM206-INT-A1-GM206-INT-A1

G11

BGA1428

COMMON



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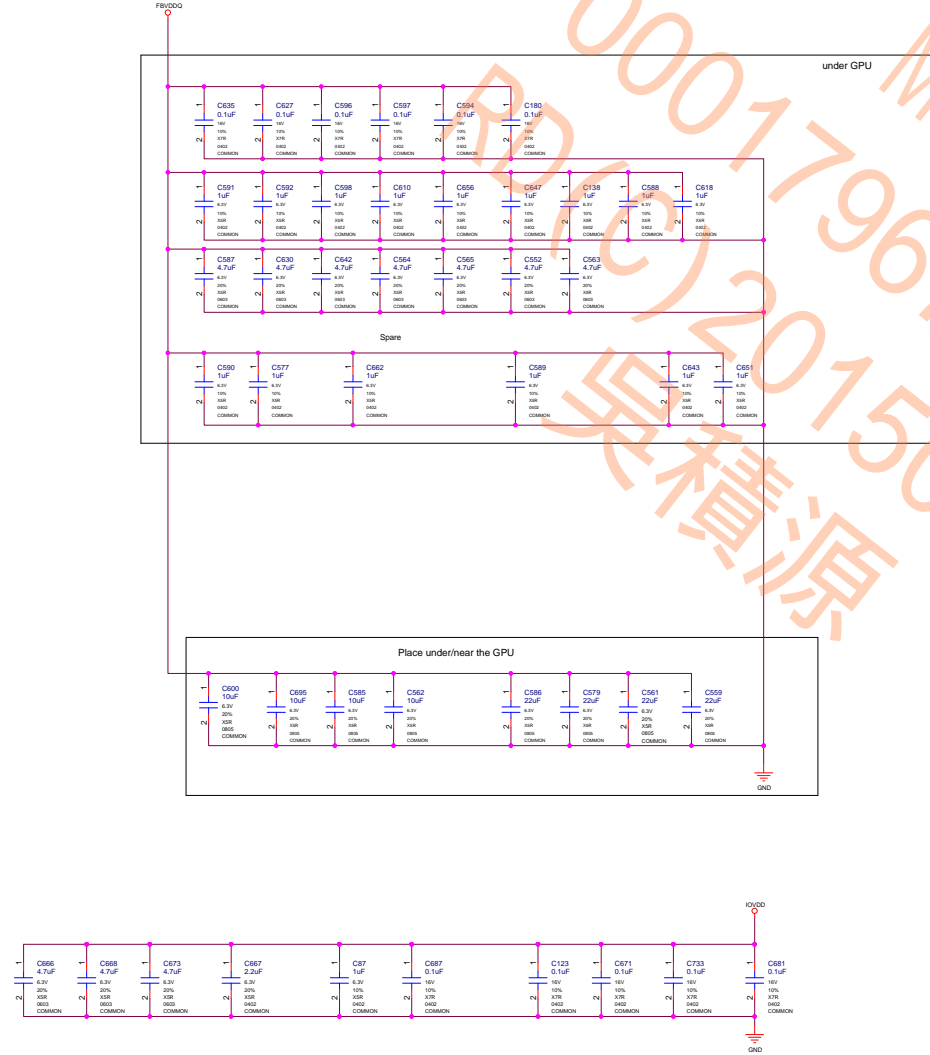


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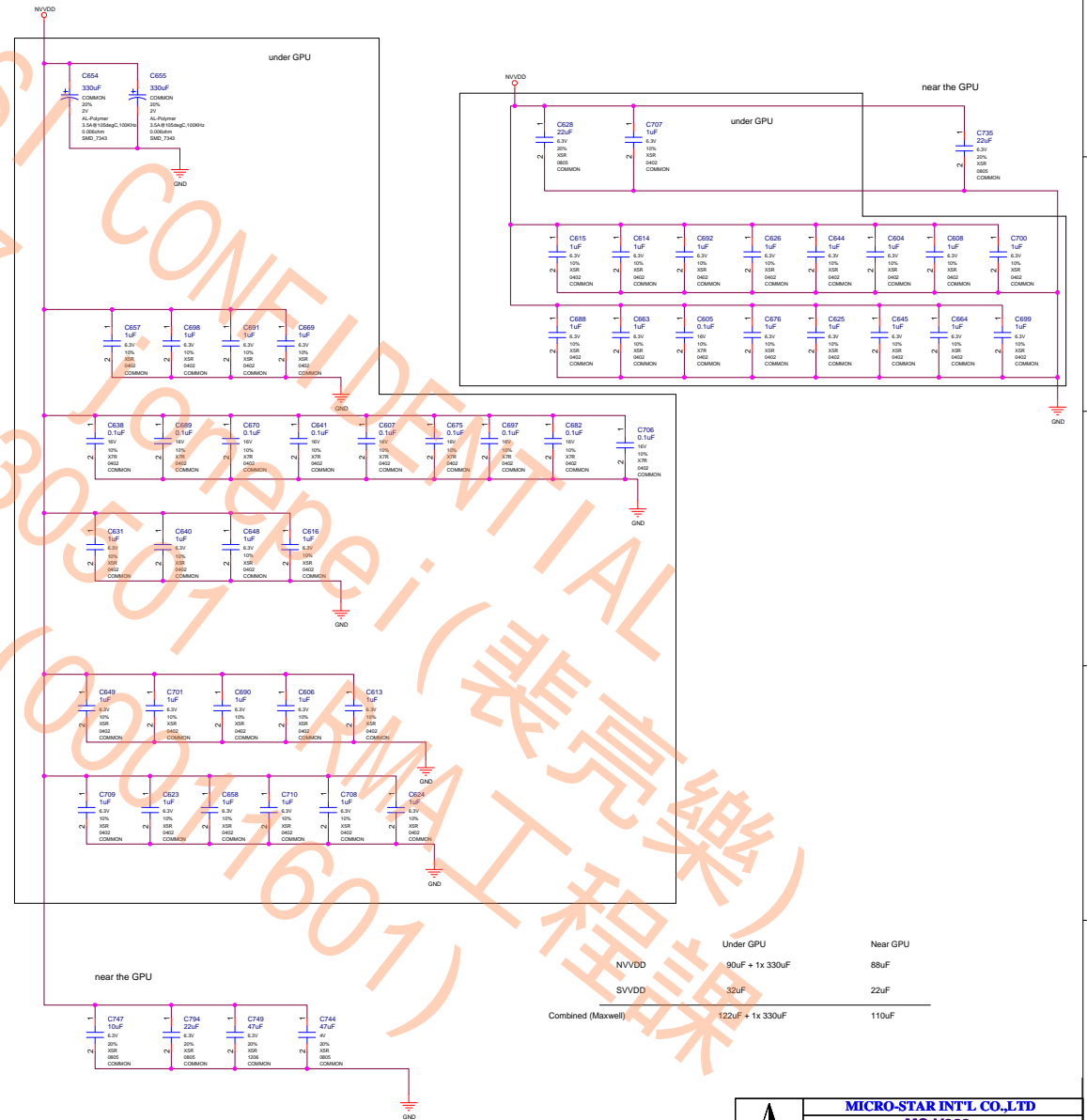
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GPU Decoupling

FBVDDQ



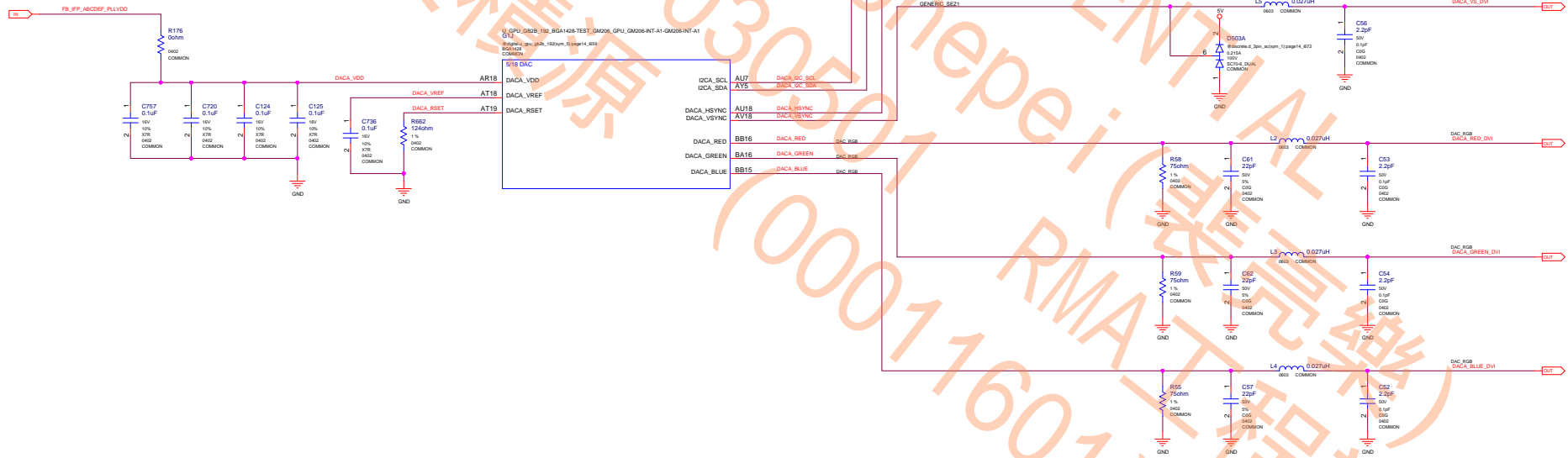
NVVDD



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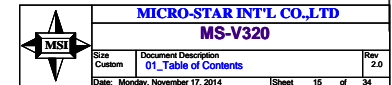
DACA Interface

15,16,18,19



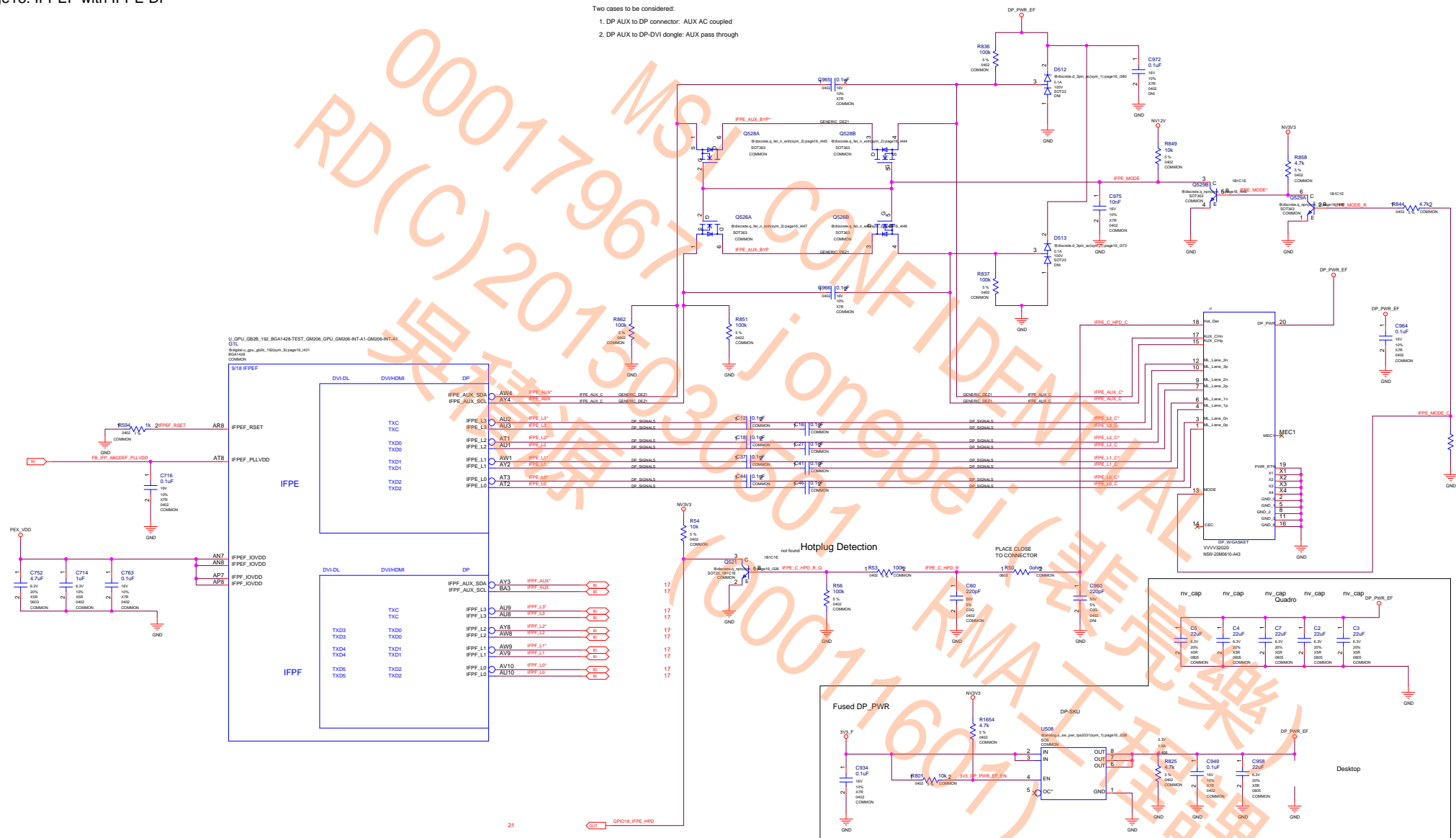
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Two cases to be considered:

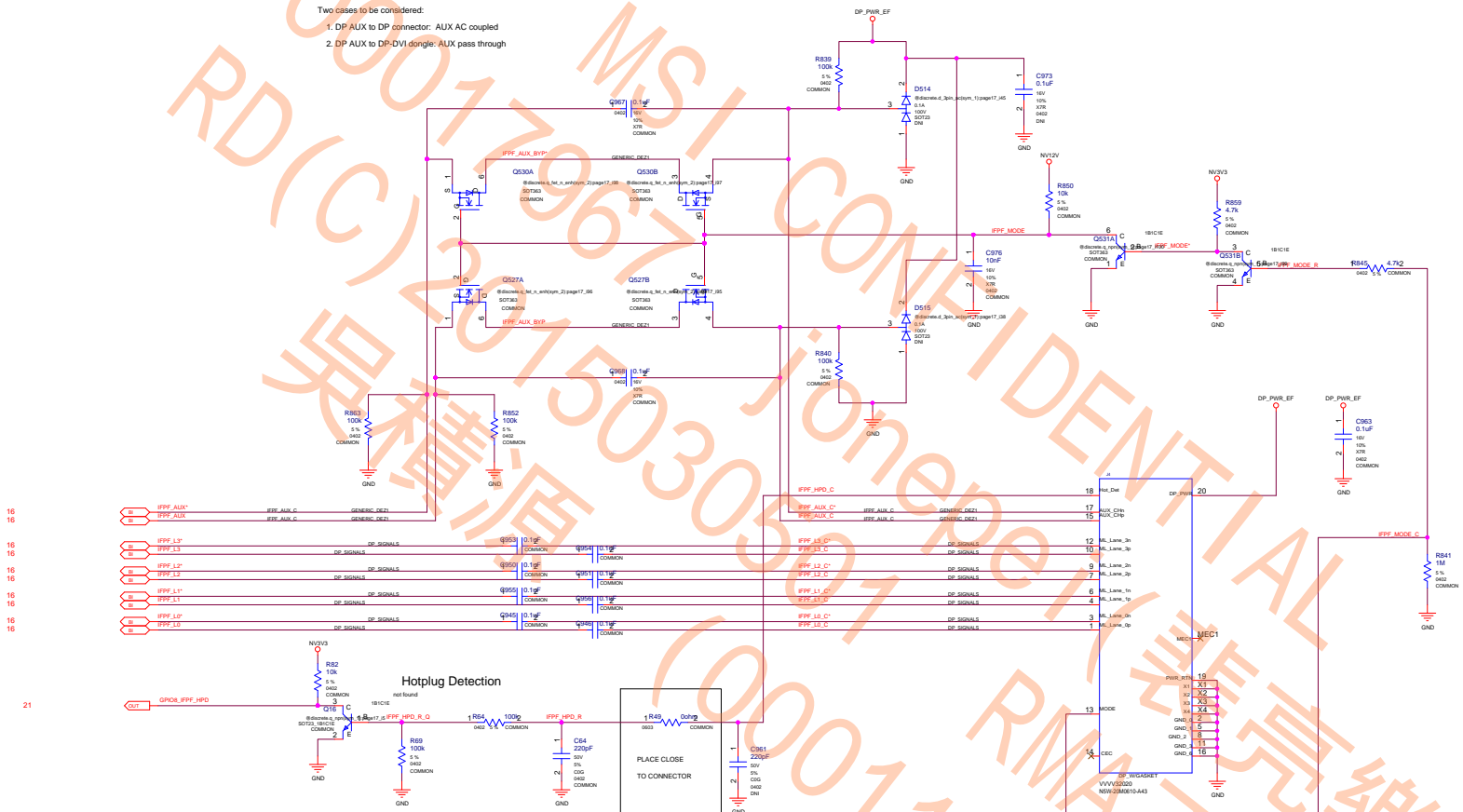
1. DP AUX to DP connector: AUX AC coupled
2. DP AUX to DP-DVI dongle: AUX pass through



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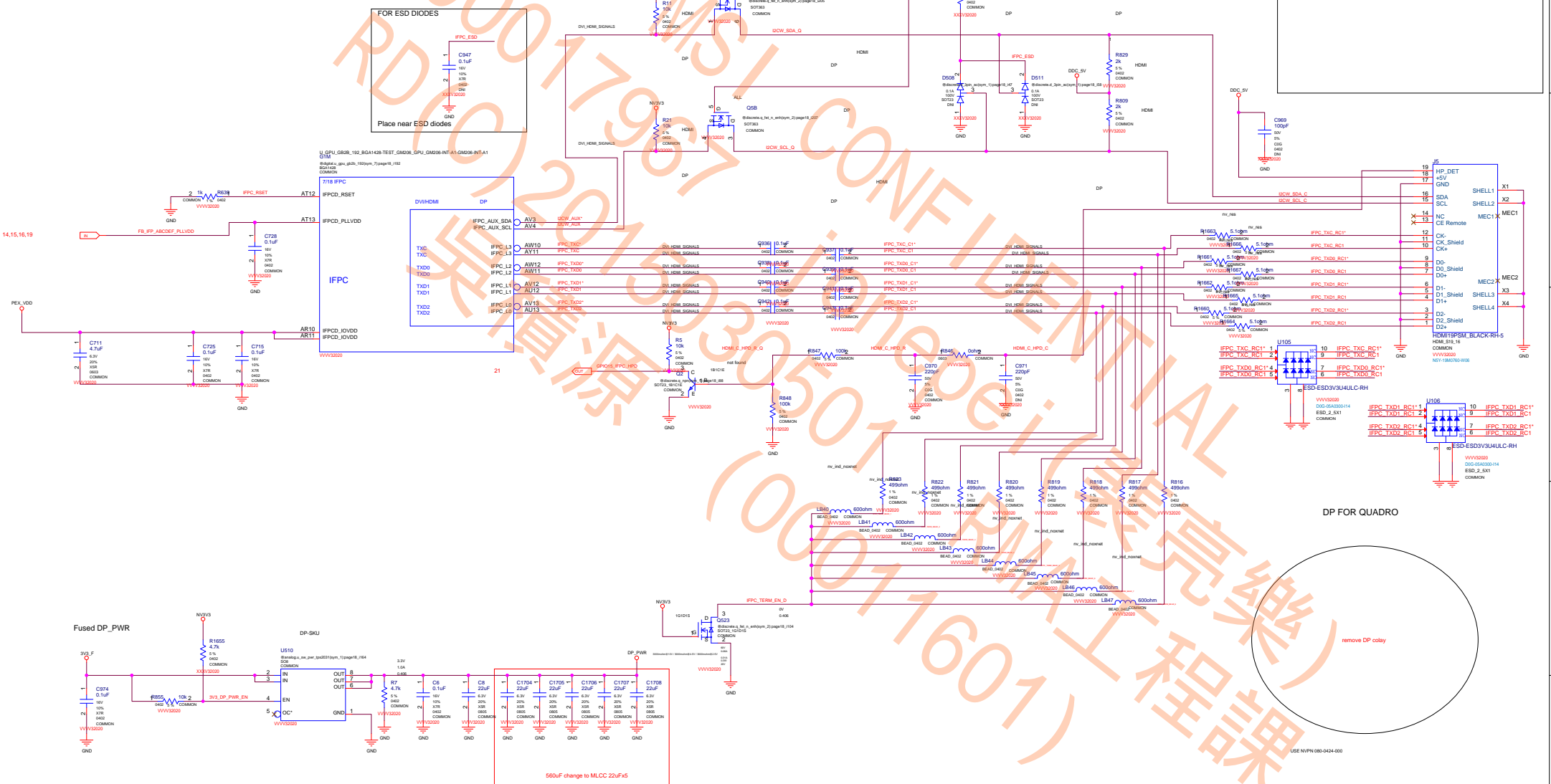
Two cases to be considered:

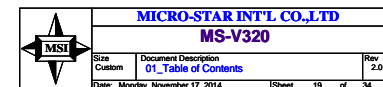
1. DP AUX to DP connector: AUX AC coupled
2. DP AUX to DP-DVI dongle: AUX pass through



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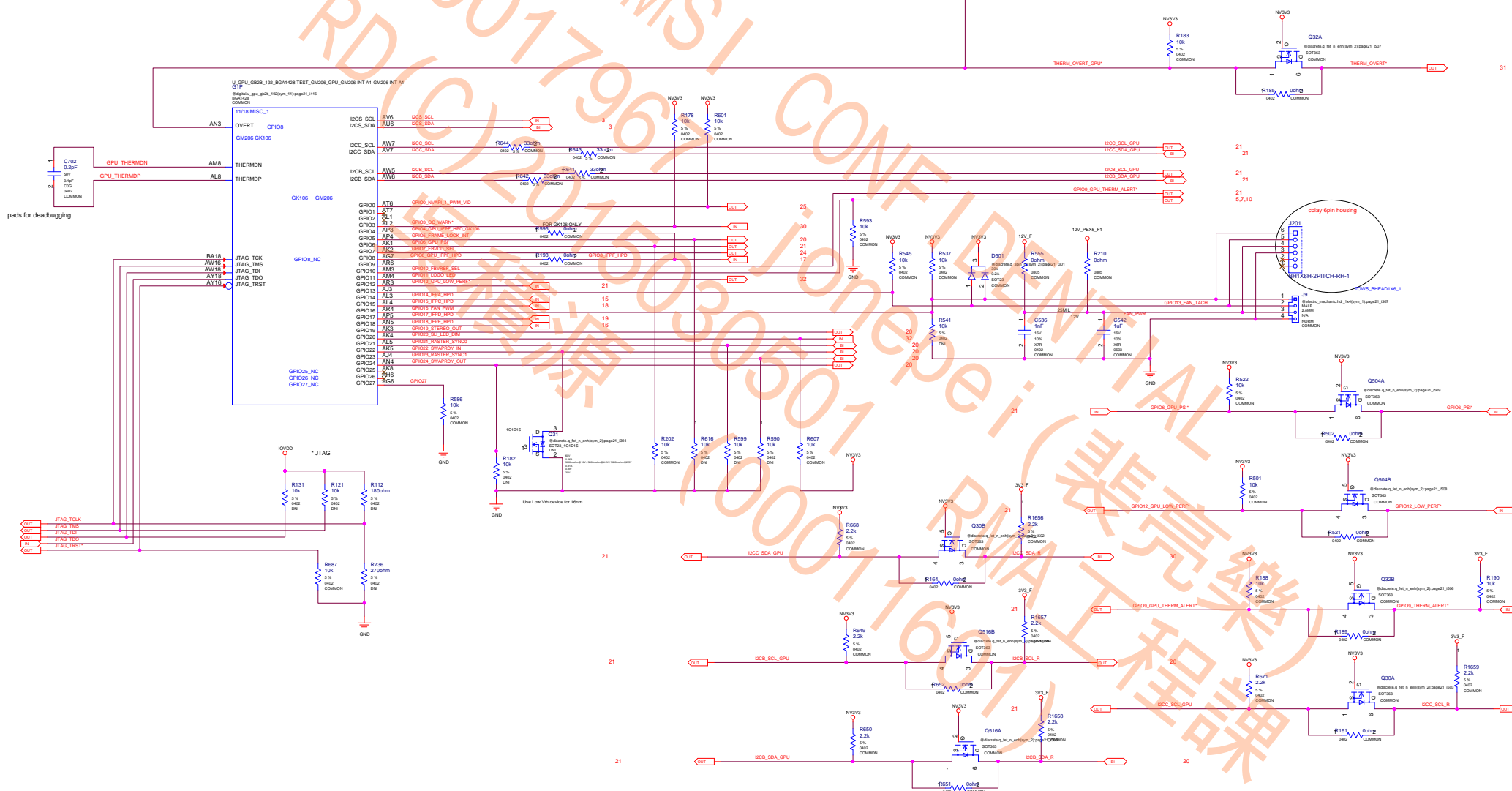
MIOA/SLI Interface

NET	VOLTAGE	MAX_CURRENT	MIN_WIDTH
V3	MIOA_VREF	3.3V	0.305
V4	MIOA_CAL_PD_VDDQ	3.3V	0.305
V5	MIOA_CAL_PU_GND	0.0V	0.305

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MISC1: Fan, Thermal, JTAG, GPIO



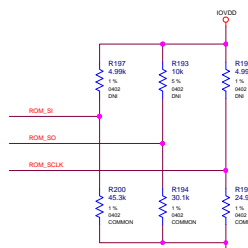
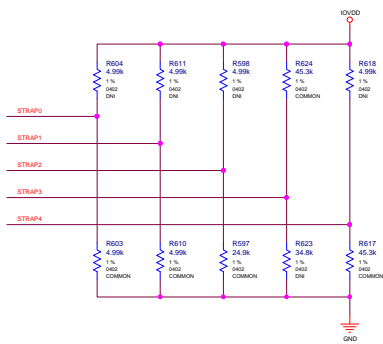
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MISC2: ROM, XTAL, Straps

	KEPLER	MAXWELL
STRAP0	USER_BIT [3:0]*	
STRAP1	3GIO_PADCFG_LUT_ADR*	
STRAP2	PCI_DEVID [3:0]*	
STRAP3	SOR_EXPOSED [3:0]*	
STRAP4	DP_PLL_VDD_33V*	
	PEX_MAX_SPEED*	
	PEX_SPD_CHANGE_GEN3*	
	*	
ROM_SI	RAMCFG[0]*	RAMCFG[0]*
	RAMCFG[1]*	RAMCFG[1]*
	RAMCFG[2]*	RAMCFG[2]*
	RAMCFG[3]*	RAMCFG[3]*
ROM_SO	VGA_DEVICE*	VGA_DEVICE*
	SMB_ALT_ADDR*	SMB_ALT_ADDR*
	FB[0]_APERTURE_SIZE*	PCIE_CFG*
	FB[1]_APERTURE_SIZE*	DEVID_SEL*
ROM_SCLK	PEX_PLL_EN_TERM100*	SOR0_EXPOSED*
	PCI_DEVID_EXT[5]*	SOR1_EXPOSED*
	SUB_VENDOR*	SOR2_EXPOSED*
	PCI_DEVID_EXT[4]*	SOR3_EXPOSED*

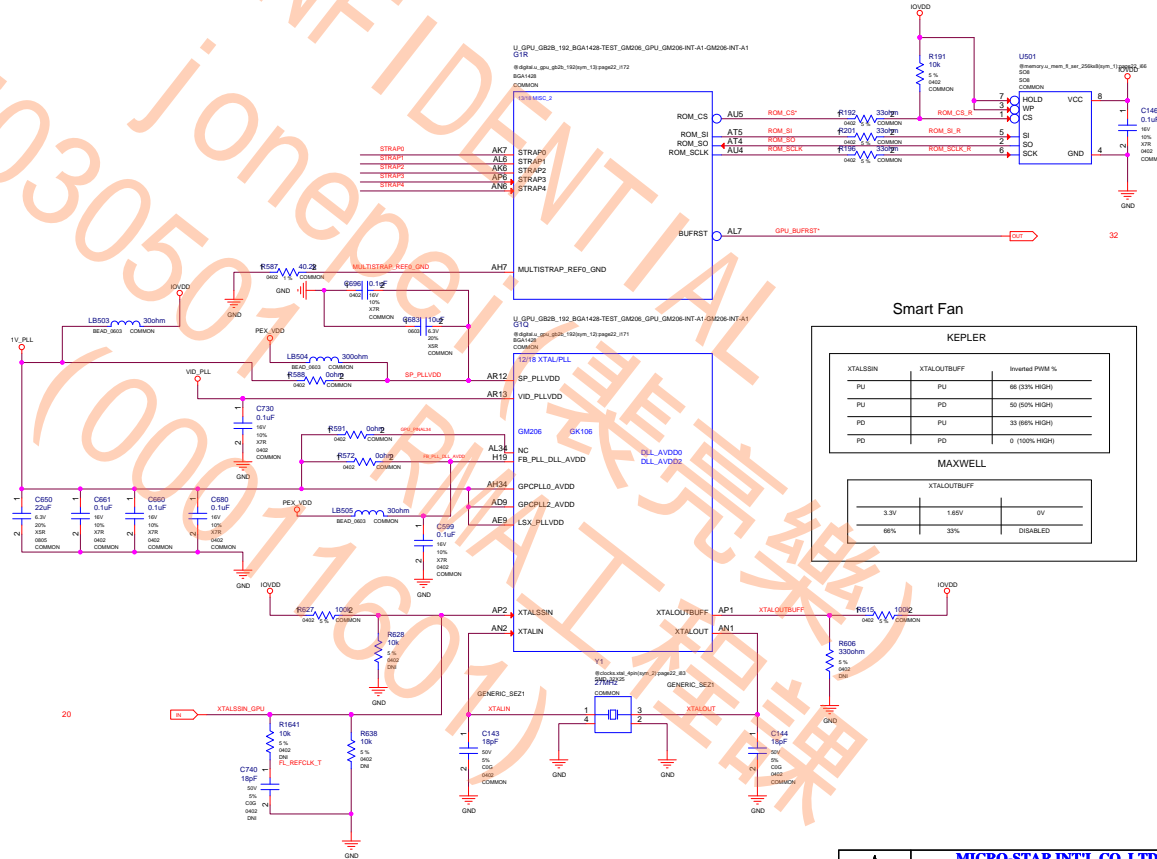
MULTI_STRAP_REF0_GND	
BINARY PRODUCTION	NC
BINARY BRINGUP	NC
MULTI-LEVEL	40.2k 1% to GND

MAXWELL		
3.3V	1.65V	0V
GPU ISLAND ENABLED	GPU ISLAND MODE	GPU ISLAND DISABLED



ROM_SI		
SAMSUNG	HYNIX	ELPIDA
45.3k	34.8k	30.1k

	GND	3V3
5k	0000	1000
10k	0001	1001
15k	0010	1010
20k	0011	1011
25k	0100	1100
30k	0101	1101
35k	0110	1110
45k	0111	1111

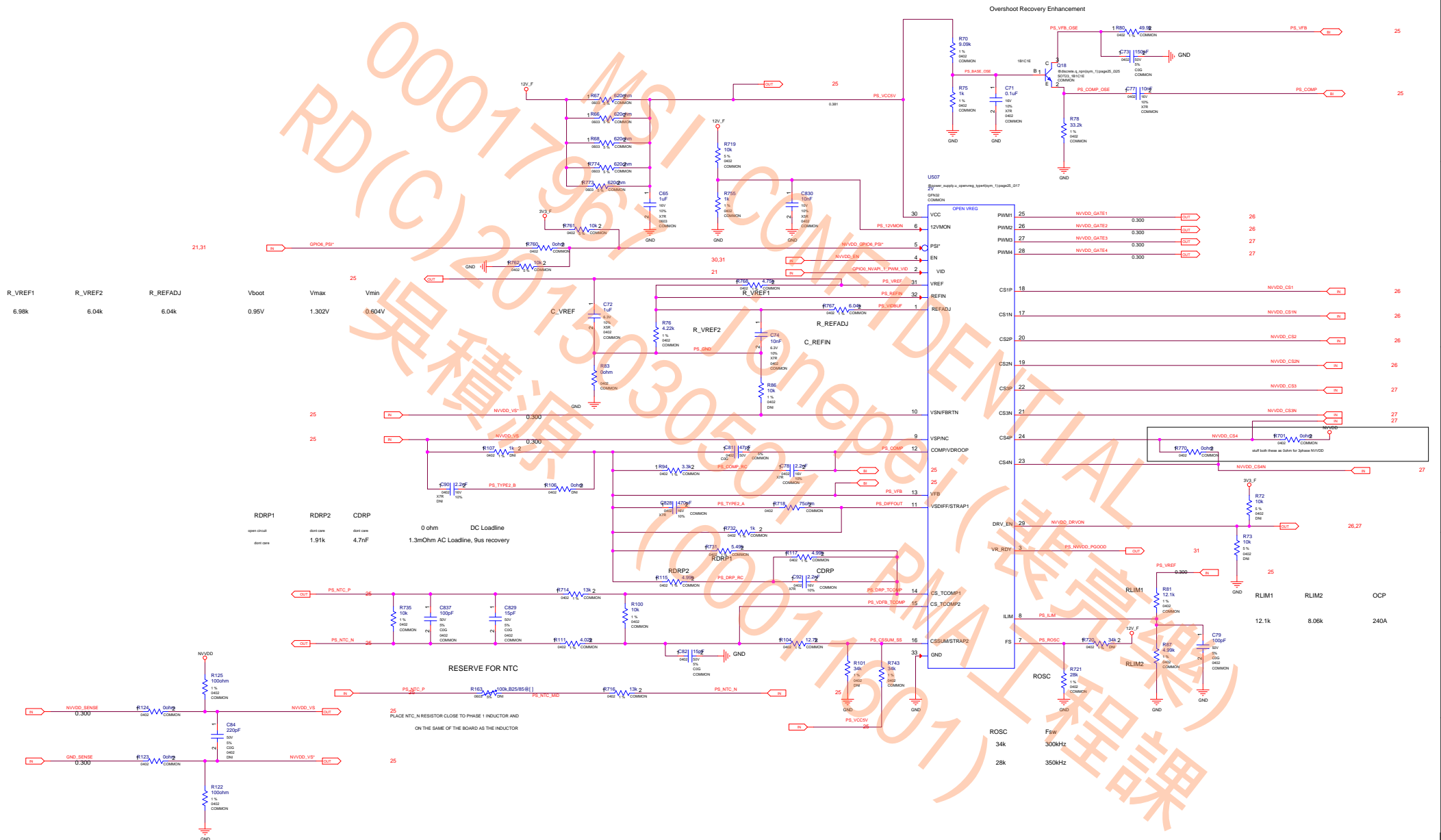


Smart Fan		
KEPLER		
XTALSSIN	XTALOUTBUFF	Inverted PWM %
PU	PU	66 (33% HIGH)
PD	PD	50 (50% HIGH)
PD	PU	33 (66% HIGH)
PD	PD	0 (100% HIGH)
MAXWELL		
XTALOUTBUFF		
3.3V	1.65V	0V
66%	33%	DISABLED

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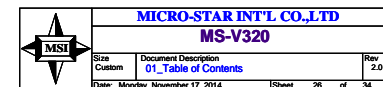
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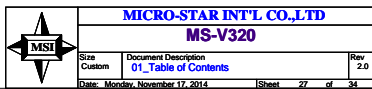
PS: NVVDD Controller



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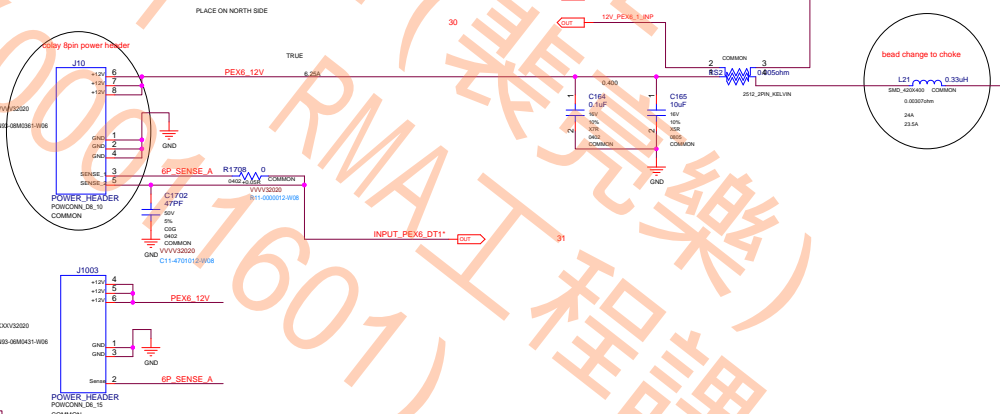
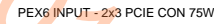
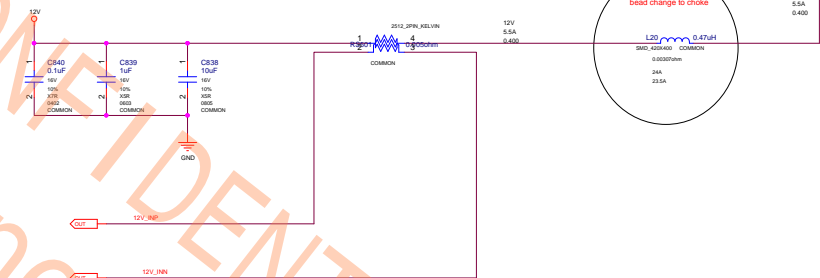
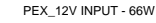
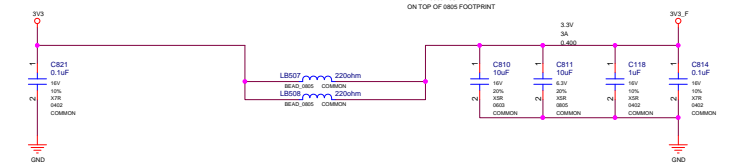
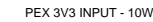
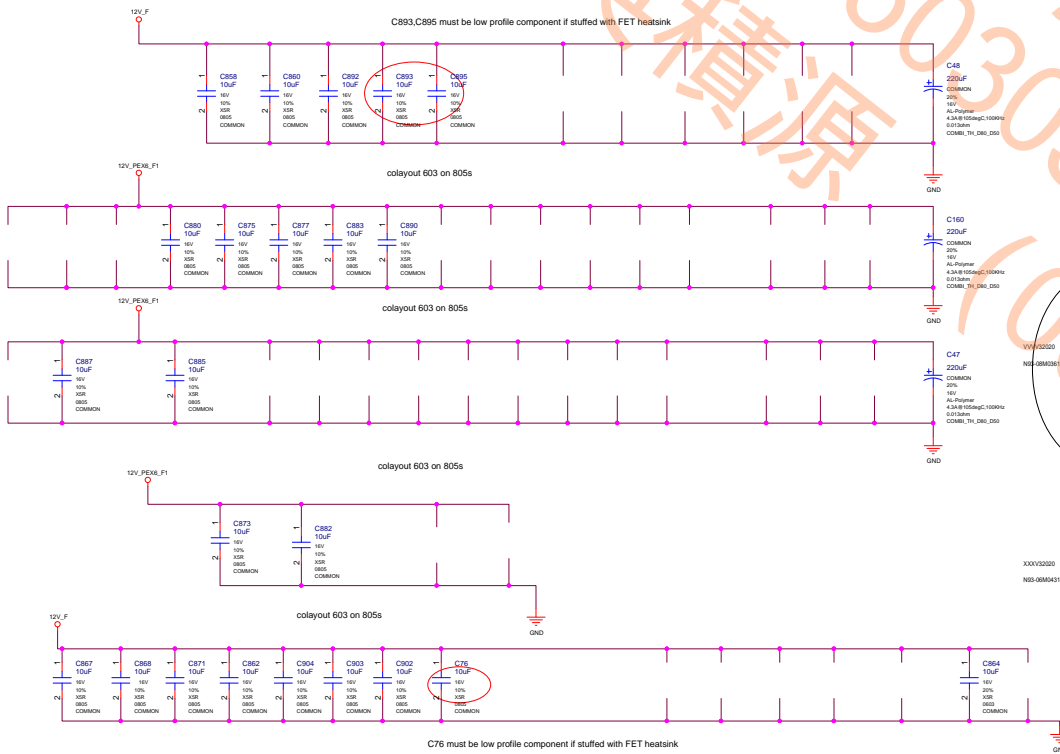
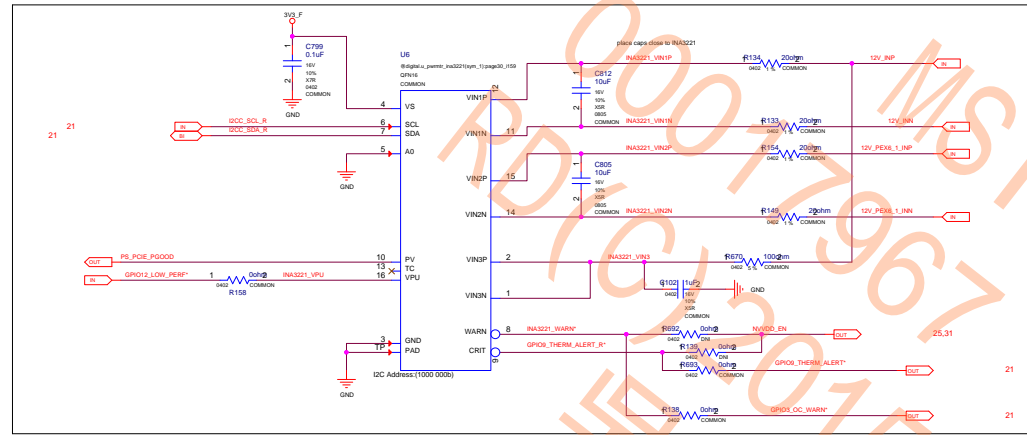
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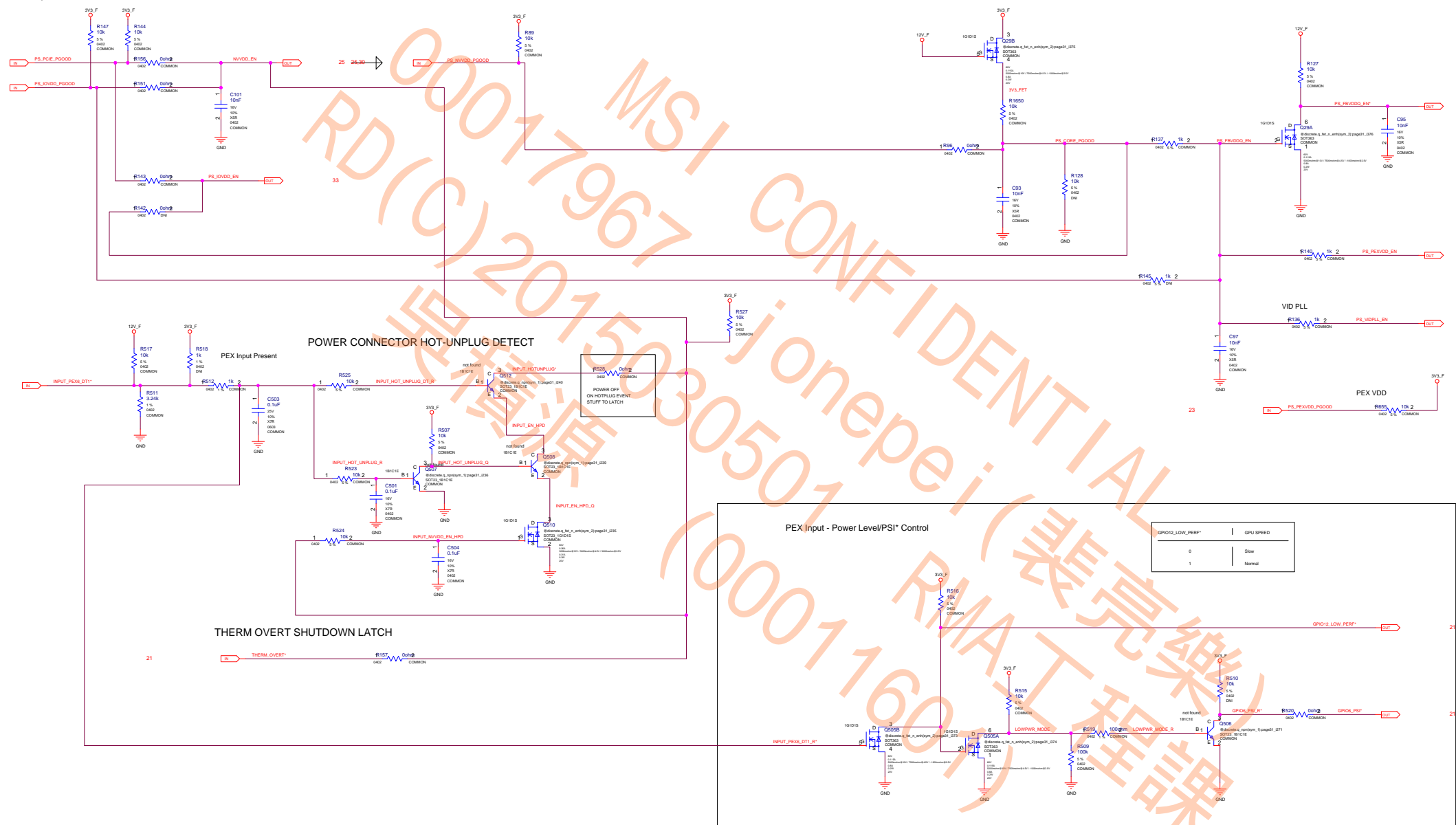
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PS: Inputs, Filtering, and Monitoring



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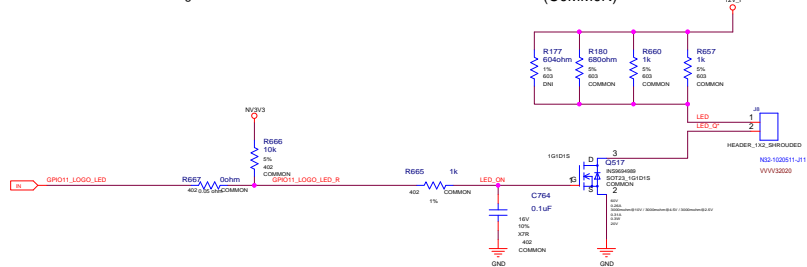
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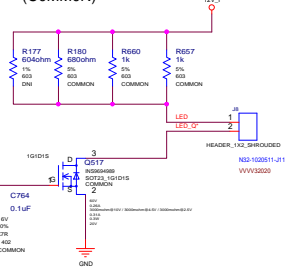
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LEDs

GeForce Logo LED

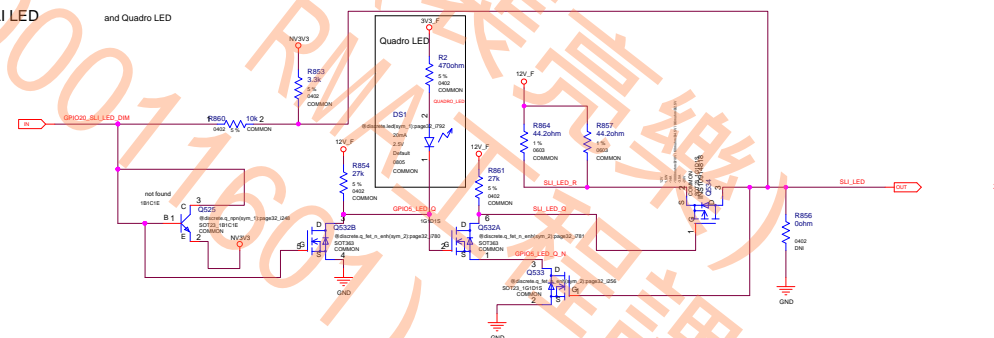


LED HEADER (COMMON)



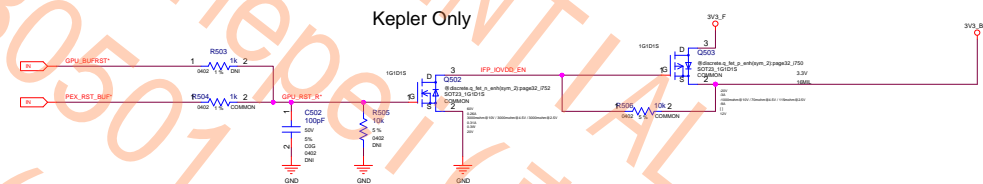
SLI LED

and Quadro LED




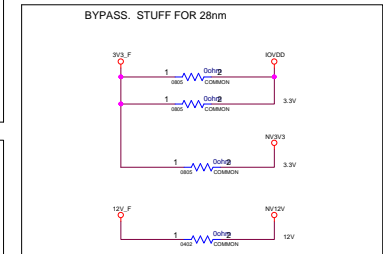
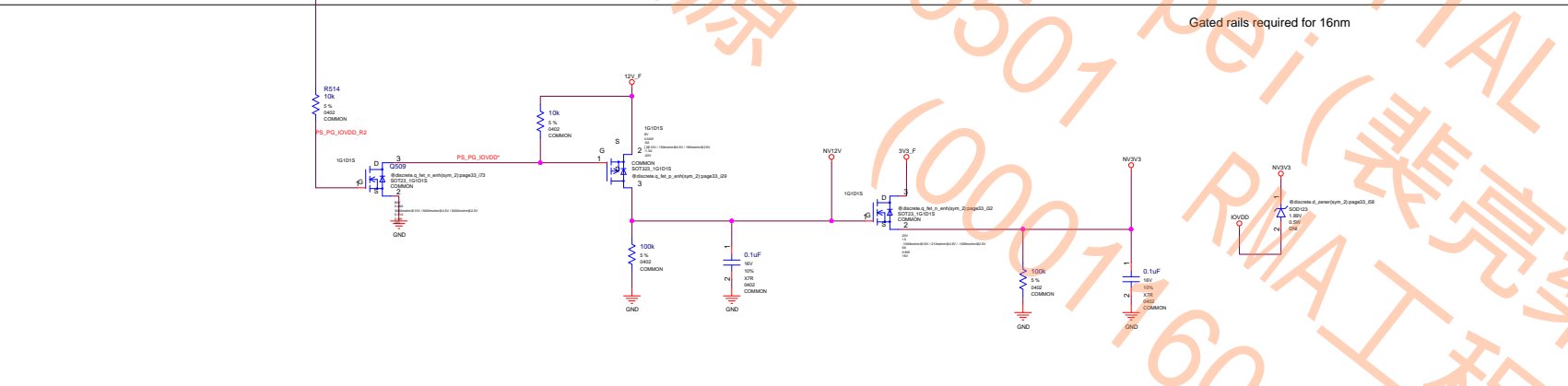
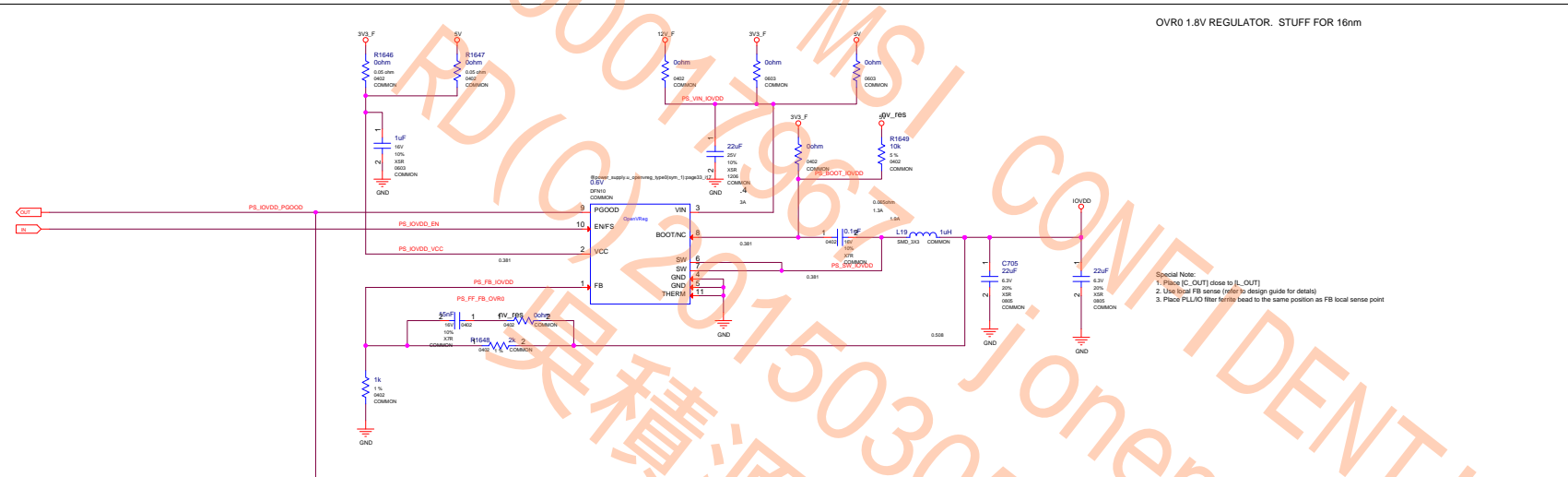
IFP_IOVDD (backdrive prevention)

Kepler Only



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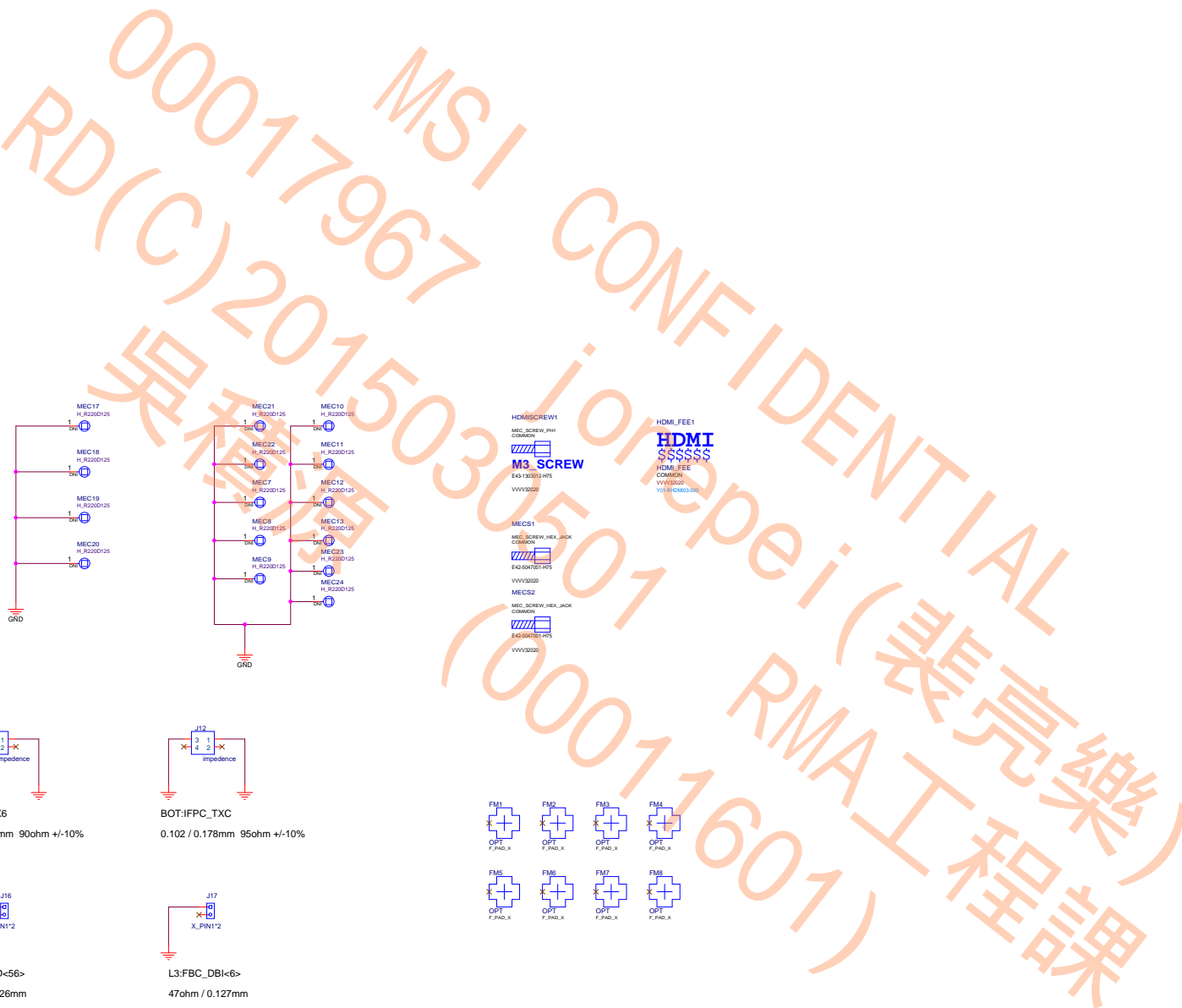
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COMMON


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MECH MOUNTING ALL

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