

E2904

4GB GDDR5, 128b, 256Mx32
modular displays

TABLE OF CONTENTS

Page Description

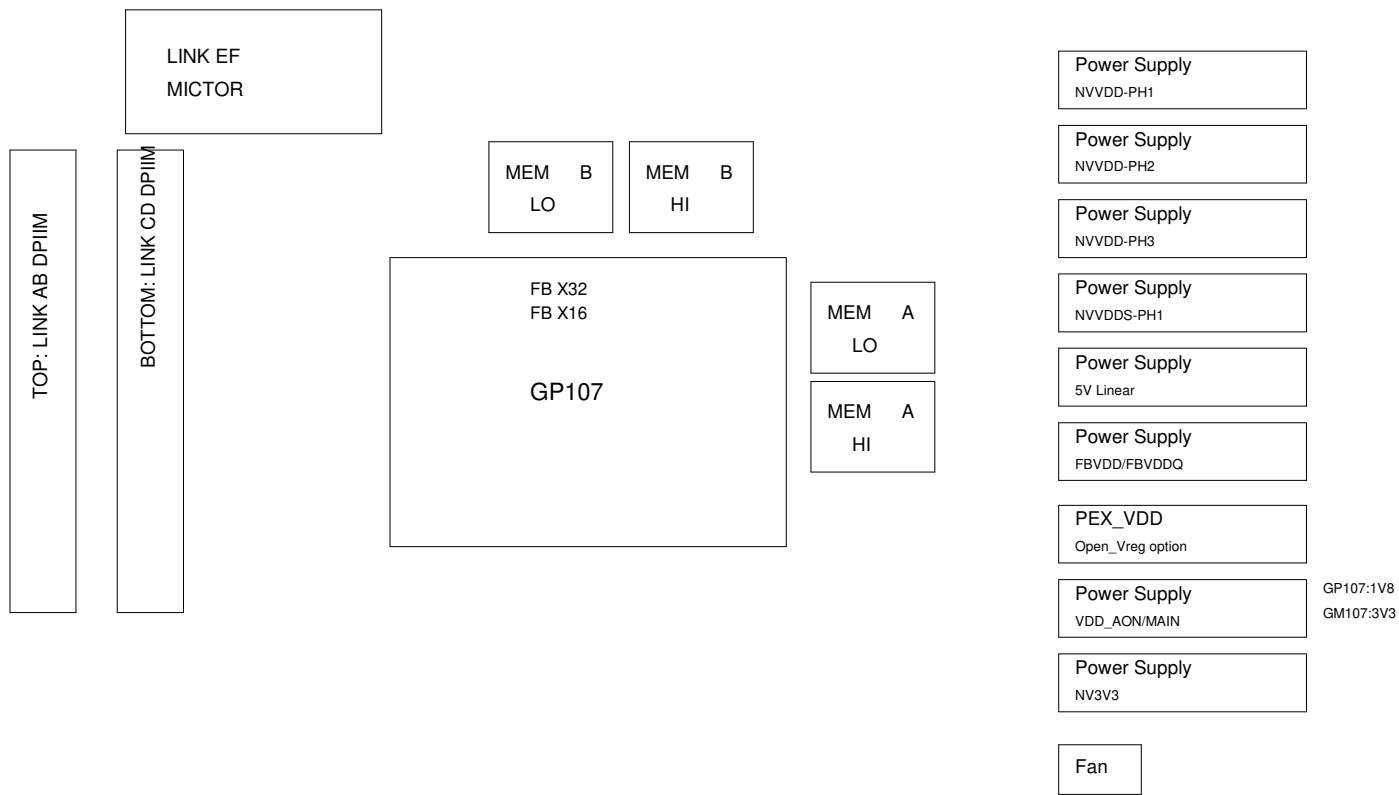
1	Table of Contents
2	BLOCK DIAGRAM
3	PCI Express
4	GPU FB_AB
5	MEM: FBA[31:0]
6	MEM: FBA[63:32]
7	MEM: FBB[31:0]
8	MEM: FBB[63:32]
9	GPU PWR
10	GPU GND FBVDDQ
11	IFPAB
12	IFPEF
13	IFPCD
14	GPIO, THERMAL, MISC
15	Straps,ROM, XTAL,
16	Power Sequence Control
17	1V8_AON
18	PEXVDD
19	FBVDD CONTROLLER
20	NVVDD CONTROLLER
21	MXM Connector
22	GPIO Pin Define



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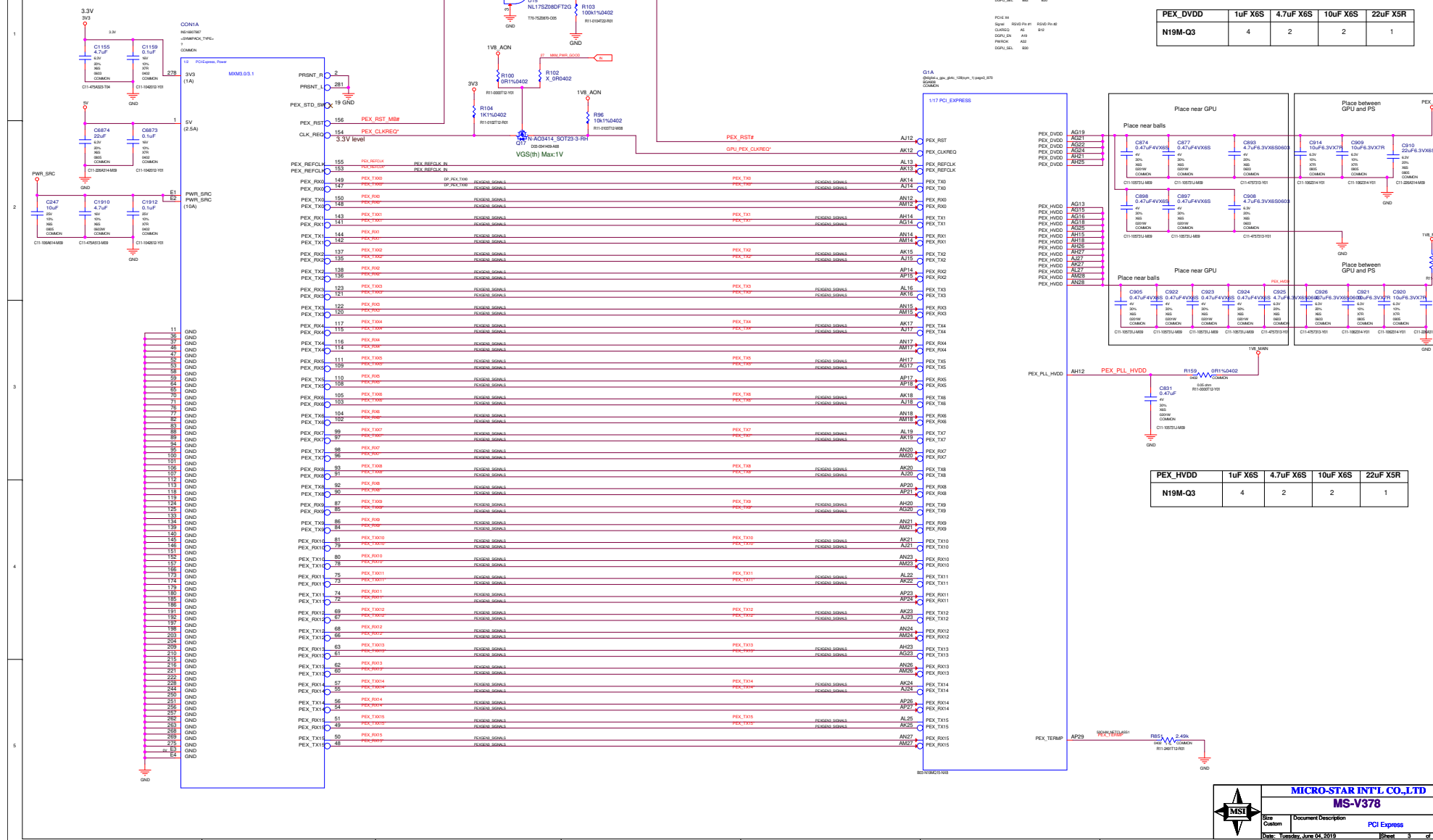
Size	Document Description	Rev
Custom	Table of Contents	2.0
Date:	Tuesday, June 04, 2019	Sheet 1 of 22



ROE M1
Signal: R050.PW#1
CURRENT: A1 80V
GSPU_SEL: A11
PERST: R10 A0
GSPU_SEL: B00 A00

ROE M4
Signal: R050.PW#4
CURRENT: A1 80V
GSPU_SEL: A11
PERST: A02 A0
GSPU_SEL: B00

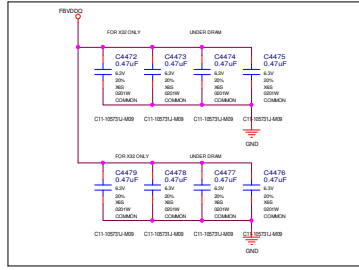
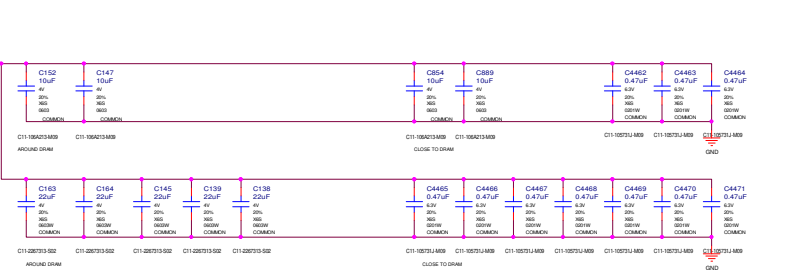
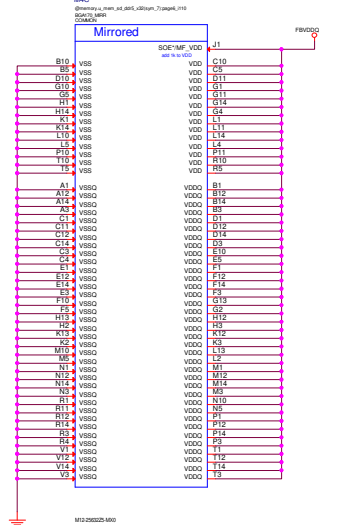
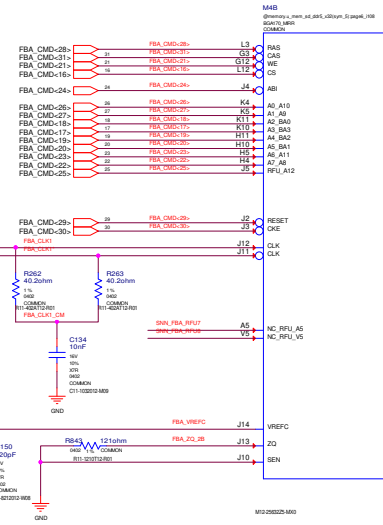
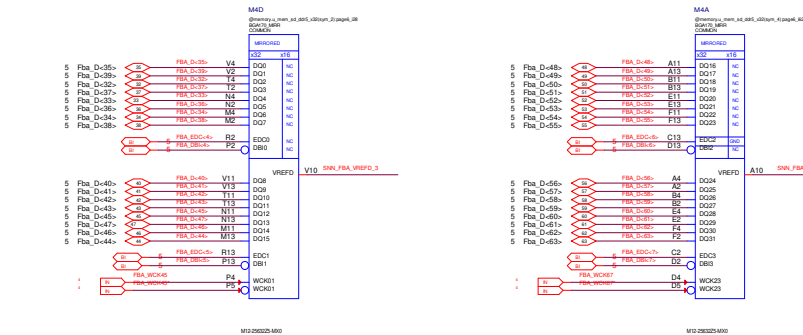
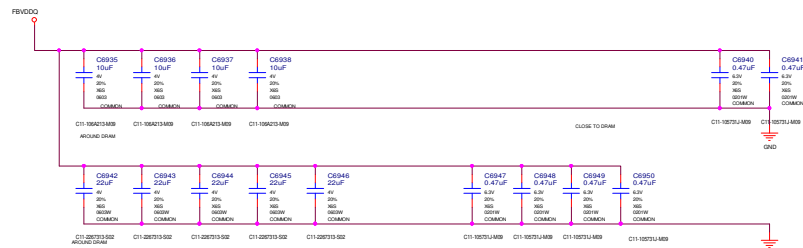
PEX_DVDD	1uF X6S	4.7uF X6S	10uF X6S	22uF X5R
N19M-Q3	4	2	2	1

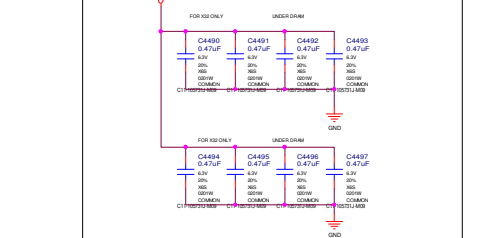
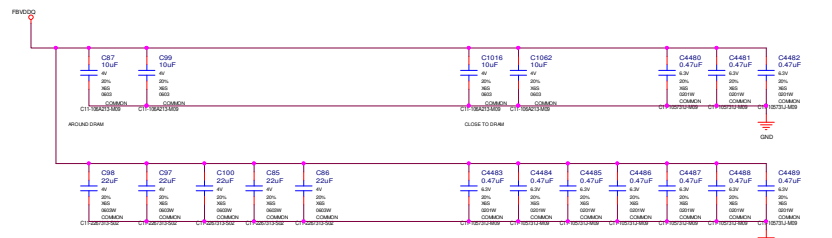
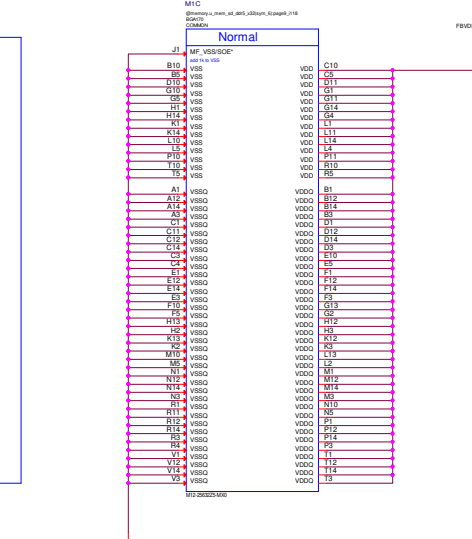
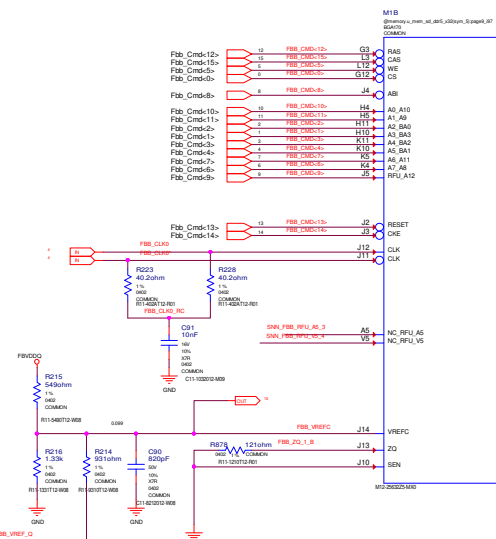
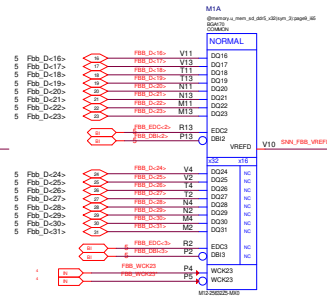
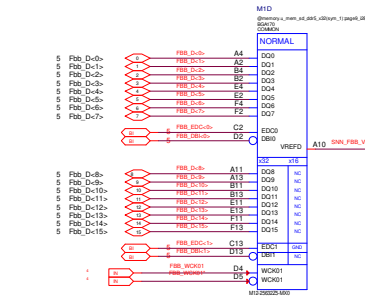
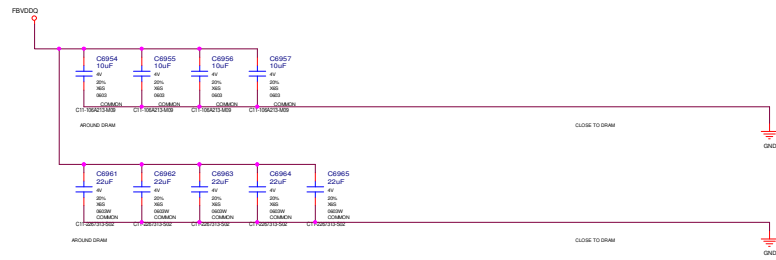


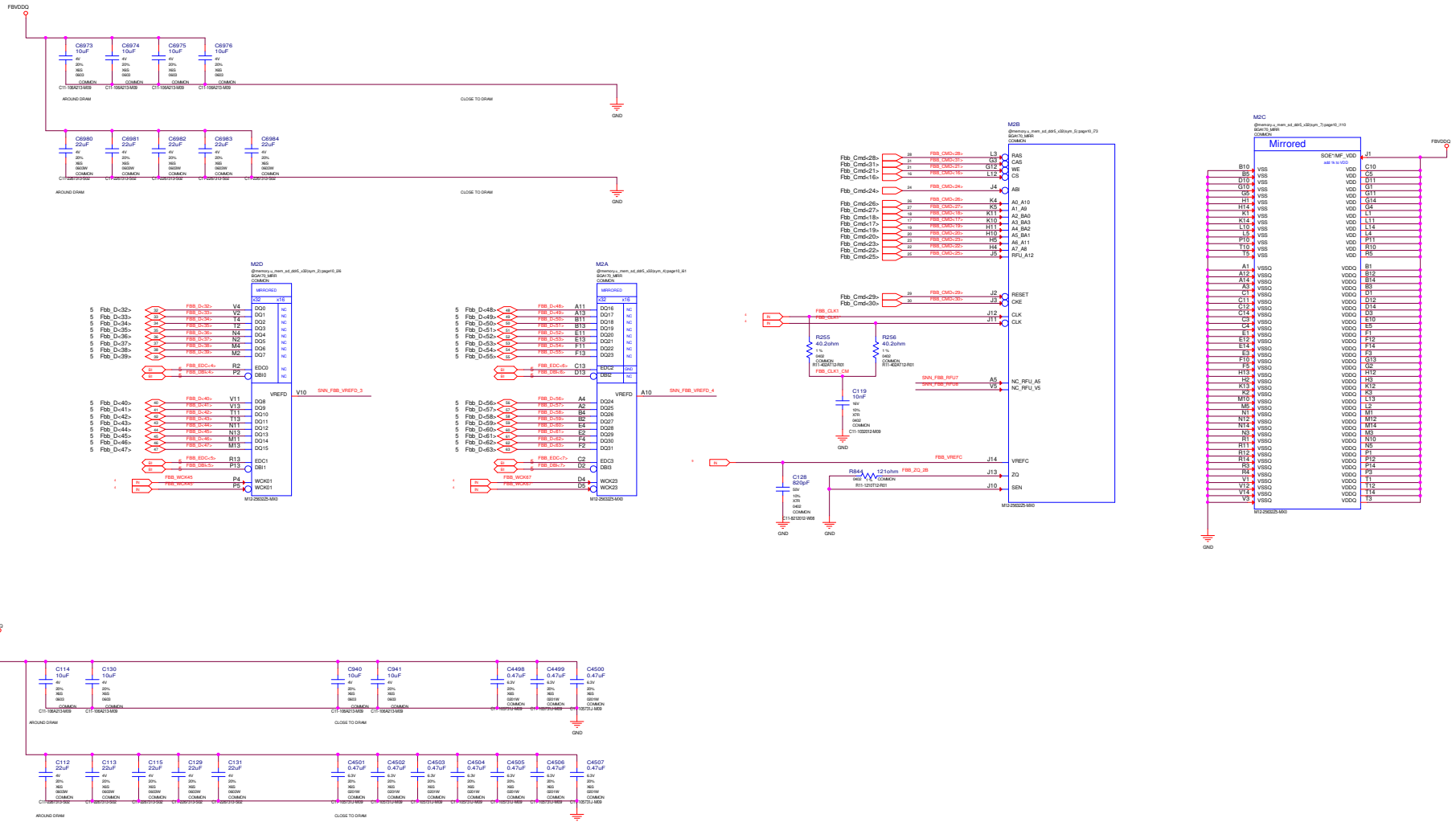
PEX_HVDD	1uF X6S	4.7uF X6S	10uF X6S	22uF X5R
N19M-Q3	4	2	2	1

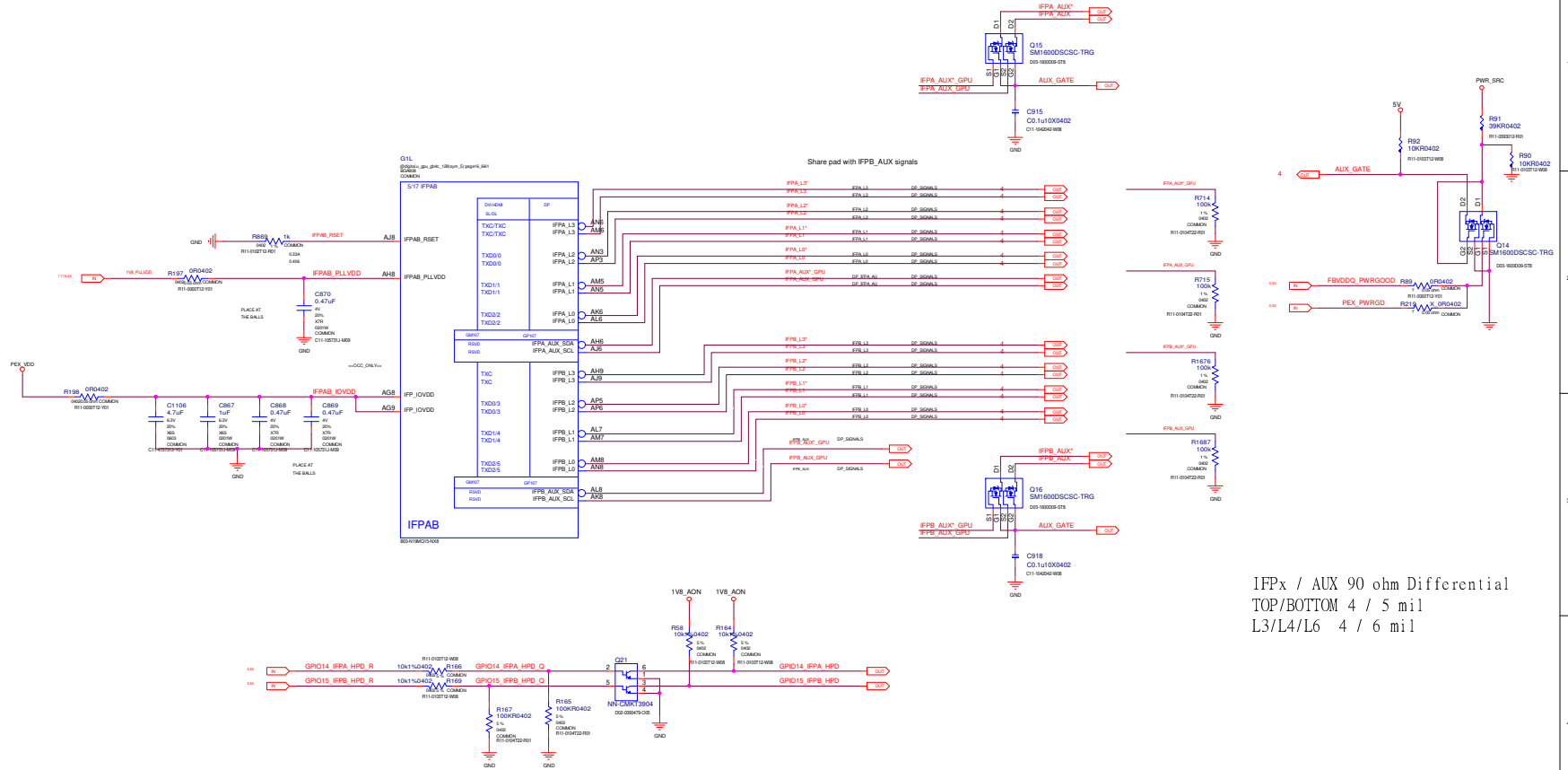
MICRO-STAR INT'L CO.,LTD
MS-V378

Rev: 2.0
 Date: Tuesday, June 04, 2019
 Sheet: 3 of 22

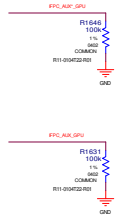
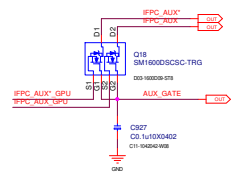
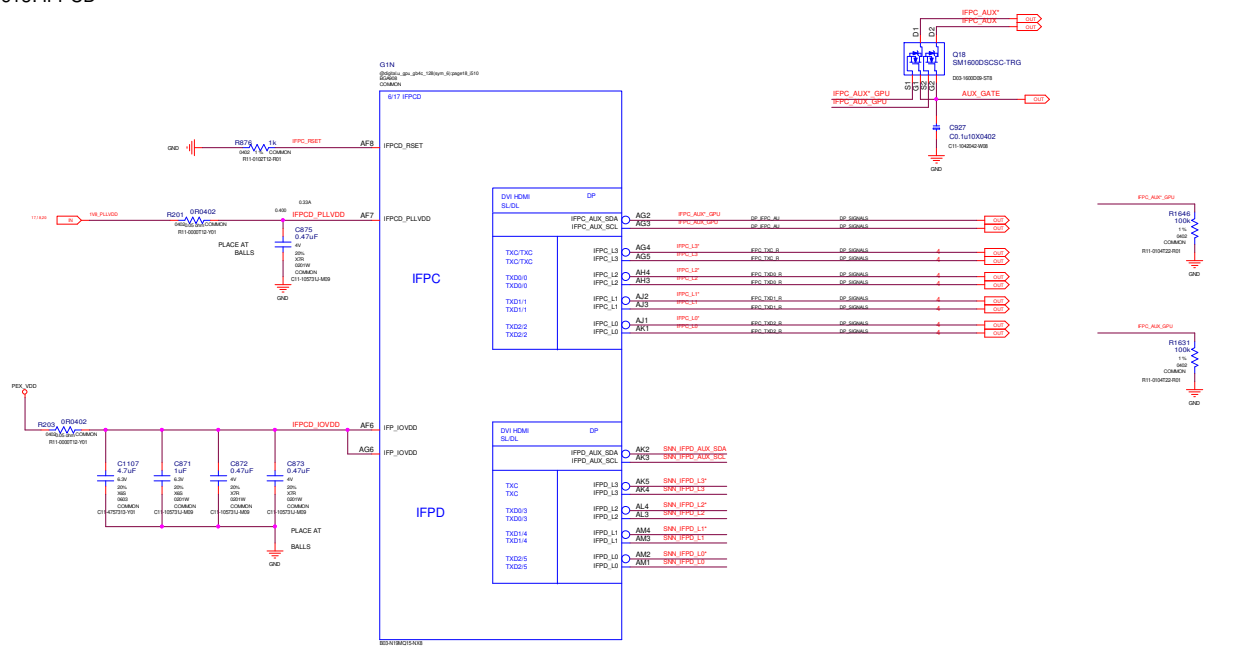




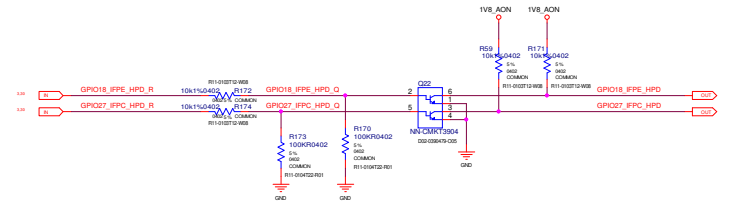


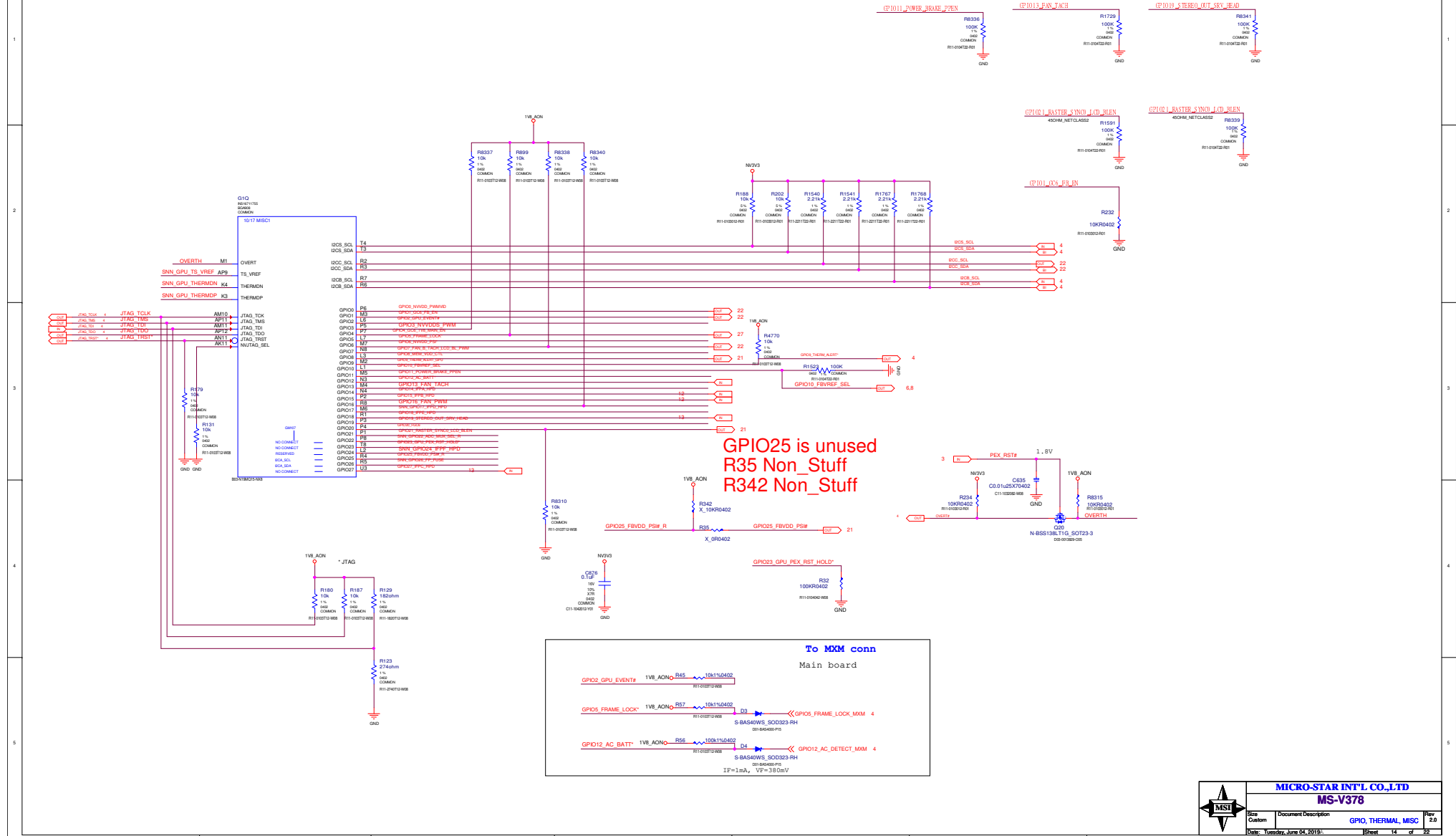


IFPx / AUX 90 ohm Differential
 TOP/BOTTOM 4 / 5 mil
 L3/L4/L6 4 / 6 mil



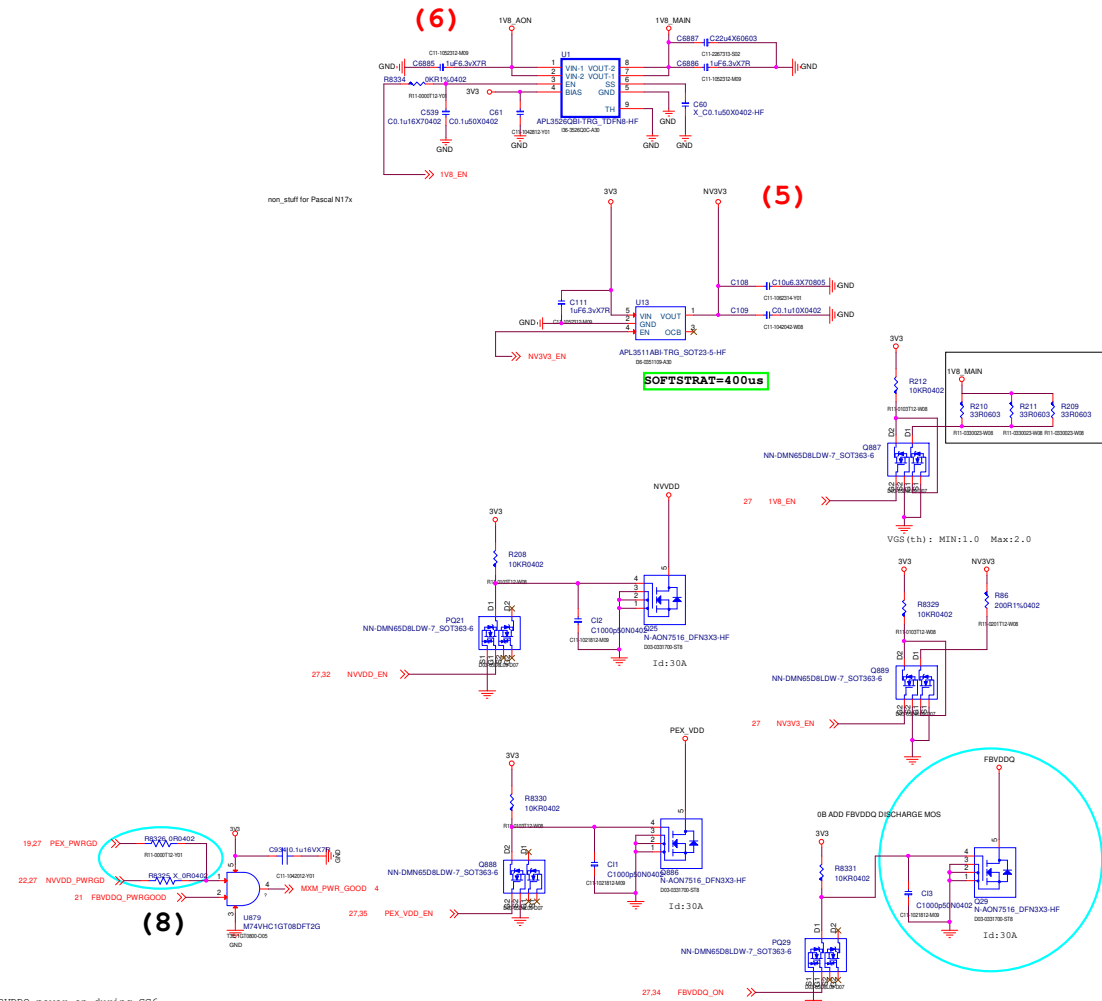
IFPx / AUX 90 ohm Differential
 TOP/BOTTOM 4 / 5 mil
 L3/L4/L6 4 / 6 mil





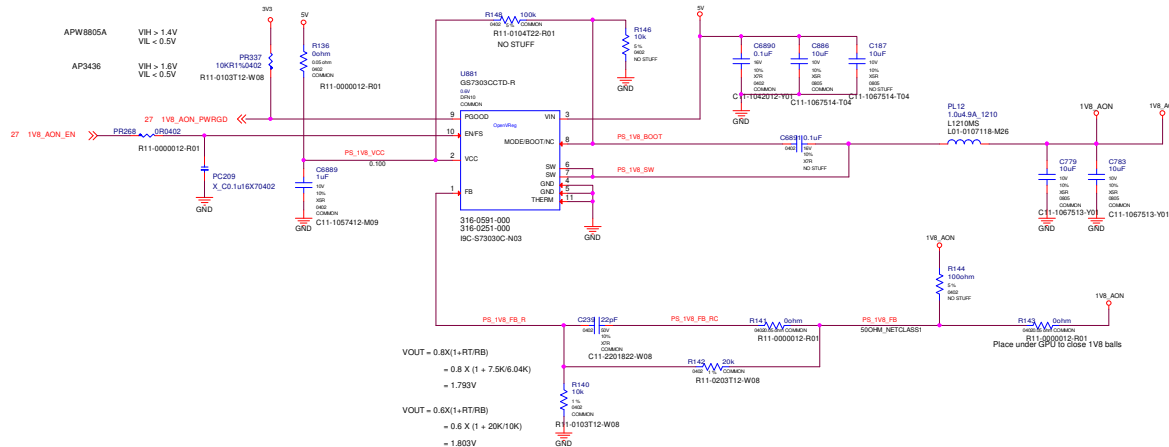
N17x POWER ON= 1V8_AON->1V8_MAIN->NVVDD->PEX_VDD->FBVDDQ->DGPU_PWRGD

N17x POWER OFF= PEX_VDD->FBVDDQ/NVVDD->1V8_MAIN->1V8_AON

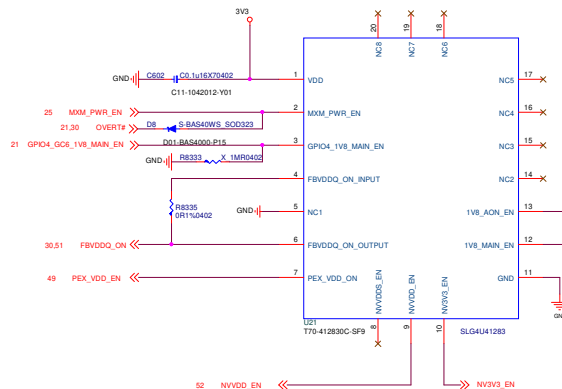


Voltage = 1.8V
Current = ? A
OCP (typi) = ? A

1V8_AON



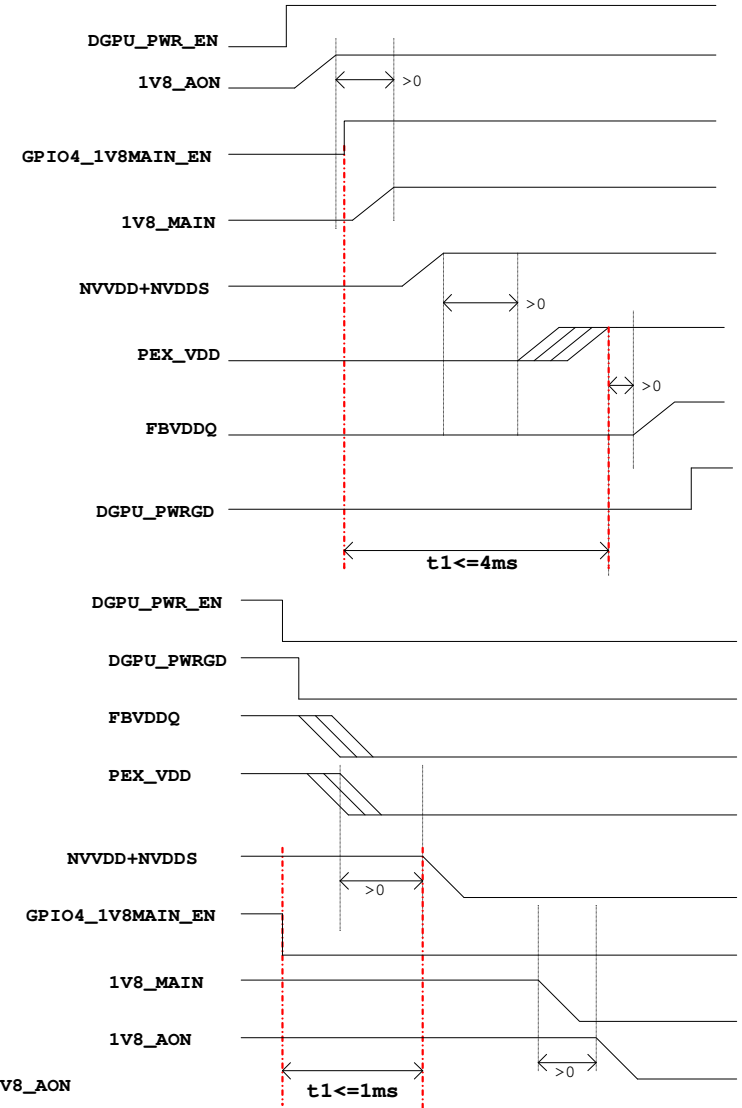
Power Sequence Control



- PIN2: MXM_PWR_EN is 3.3V INPUT
- PIN3: GPIO4_GC6_PWR_EN is 1.8V INPUT
- PIN4: FBVDDQ_ON_INPUT 3.3V INPUT
- PIN6: FBVDDQ_ON_OUTPUT 3.3V OUTPUT
- PIN7: PEX_VDD_EN_IC 3.3V OUTPUT
- PIN9: NVVDD_EN_IC 3.3V OUTPUT
- PIN12: 1V8_MAIN_EN_IC 3.3V OUTPUT
- PIN13: 1V8_AON_EN_IC 3.3V OUTPUT

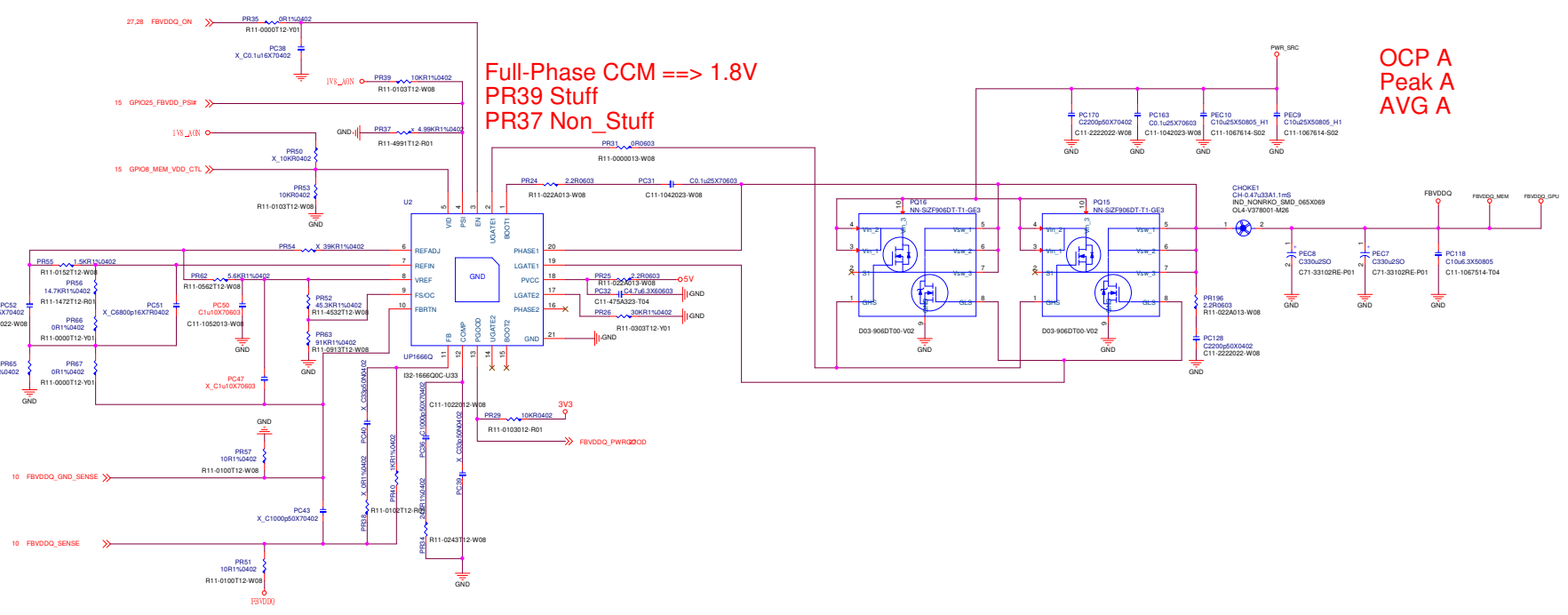
POWER Down Sequence

NVVDDS/PEX_VDD/FBVDDQ ->NVVDD/NV3V3->1V8_MAIN> 1V8_AON



Page 19: FBVDD CONTROLLER

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MS-16R3-1.0



Full-Phase CCM ==> 1.8V
PR39 Stuff
PR37 Non_Stuff

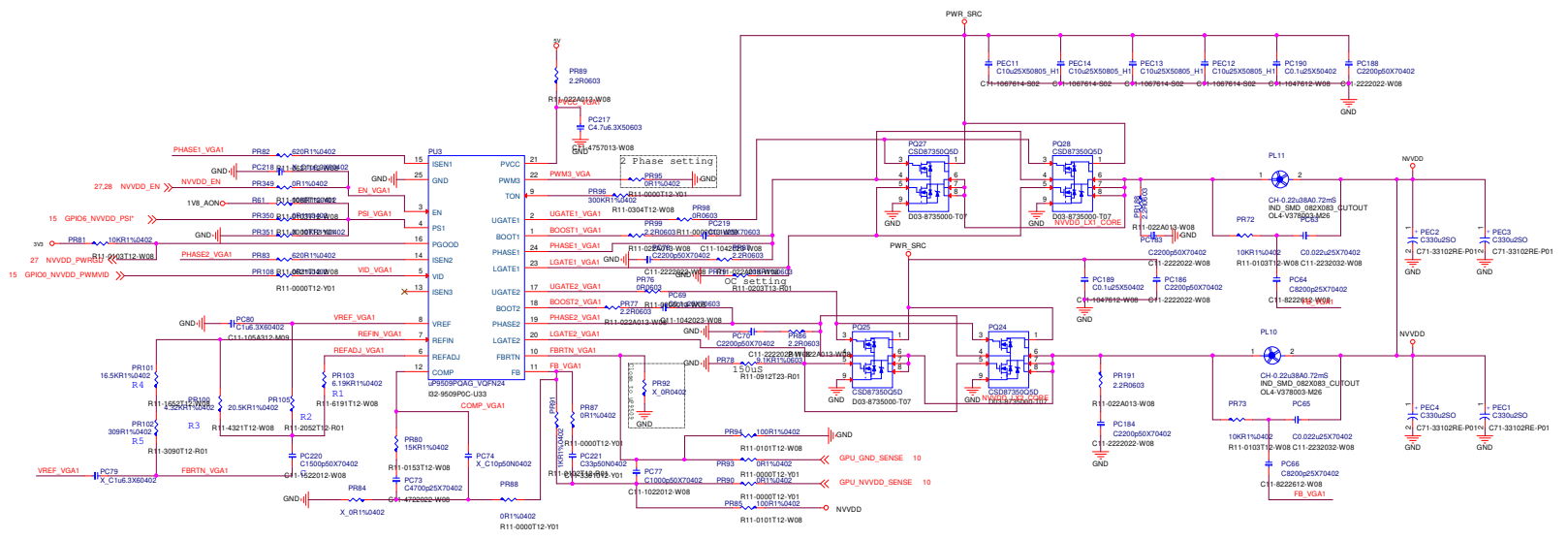
OCP A
Peak A
AVG A

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MS-16R1-1.0

UP9509P

EDP-Peak 90A
EDP-Con 47A

VBoot:0.8V
Vmin:0.5V / Vmax:1.25V



Page23: GPIO Pin Define

Pin Name	N17P	N18P	N17P Functional Description	N17P Recommended Default Pull-up or Pull-down	N18P Recommended Default Pull-up or Pull-down
GPIO0	NVVDD_PWM	NVVDD_PWM_VID	PWM Output to control NVVDD	0 to 1V8 PWM output	
GPIO1	GC6_FB_EN	GC6_FB_EN	FB Enable for GC6 2.1	0Ω, 10K pull-down	0Ω, 10K pull-down
GPIO2	GPU_EVENT#	GPU_EVENT#	GPU wake signal for GC6 2.1	10K pull-up to 1V8_AGN	10K pull-up to 1V8_AGN
GPIO3	NVVDD_PWM	UNUSED	PWM output to control the NVVDD power supply	0 to 1V8 output	
GPIO4	1V8_MAIN_EN	1V8_MAIN_EN	GPU POWER Sequencing for GC6 2.1	0Ω, 10K pull-up to 1V8_AGN	0Ω, 10K pull-up to 1V8_AGN
GPIO5	FRM_LCK#	FRM_LCK#	Active Low Frame Lock	0Ω, 10K pull-up to 1V8_AGN	0Ω, 10K pull-up to 1V8_AGN
GPIO6	NVVDD_PSI	NVVDD_PSI	Phase shedding	10K pull-up to 1V8_AGN	10K pull-up to 1V8_AGN
GPIO7	LCD_BL_PWM	LCD_BL_PWM	Panel Backlight PWM Brightness Control	100K pull-down	100K pull-down
GPIO8	MEM_VDD_CTL	MEM_VDD_CTL	Memory Voltage Control	pull-up/pull-down to set the FBVDD/G power-on voltage	pull-up/pull-down to set the FBVDD/G power-on voltage
GPIO9	THERM_ALERT	THERM_ALERT	Active Low Thermal Alert	0Ω, 10K pull-up to 1V8_AGN	0Ω, 10K pull-up to 1V8_AGN
GPIO10	MEM_VREF_CTL	MEM_VREF_CTL	Memory VREF Control	100K pull-down	100K pull-down
GPIO11	LCD_VCC	LCD_VCC	Panel Power Enable	100K pull-down	100K pull-down
GPIO12	FWR_LEVEL	FWR_LEVEL	AC power detect or power supply overdraw input	100K pull-up to 1V8_AGN	10K pull-up to 1V8_AGN
GPIO13	LCD_BLEN	UNUSED	Panel Backlight Enable	100K pull-down	
GPIO14	HPD_A	HPD_A	Hot Plug Detect for IFPA		10K pull-up to 1V8_AGN
GPIO15	HPD_B	HPD_B	Hot Plug Detect for IFPB		10K pull-up to 1V8_AGN
GPIO16	SYS_FEX_RST_MON#	UNUSED	System side PCIe reset monitor	10K pull-up to 1V8_AGN	1V8_AGN
GPIO17	HPD_D	HPD_D	Hot Plug Detect for IFPD		10K pull-up to 1V8_AGN
GPIO18	HPD_E	HPD_E	Hot Plug Detect for IFPE		10K pull-up to 1V8_AGN
GPIO19	3Dvision	UNUSED	3D Vision L/R signal	100K pull-down	1V8_AGN
GPIO20	GC5_MODE	NB_GC6			10K pull-down
GPIO21	UNUSED	LCD_BLEN			100K pull-down
GPIO22	UNUSED	ADC_MUX_SEL			2.2K pull-up See Circuit
GPIO23	GPU_PEX_RST_HOLD#	RESERVED	GPU PCIe self-reset control	0Ω, 10K pull-up to a gated 3V3	100K pull-down
GPIO24	HPD_F	UNUSED	Hot Plug Detect for IFPF		
GPIO25	UNUSED	FBVDD_PSI#			
GPIO26	UNUSED	FP_FUSE			10K pull-down
GPIO27	HPD_C	HPD_C	Hot Plug Detect for IFPC		10K pull-up to 1V8_AGN

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MS-V378			
Size Custom	Document Description GPIO Pin Define	Rev 2.0	
Date: Tuesday, June 04, 2019		Sheet 22 of 22	