

PG161-A00

TU106 6GB GDDR6, 192b, X16 DVI-D/DP + DP + HDMI

TABLE OF CONTENTS

Page Description


1	Table of Contents
2	Block Diagram
3	PCI Express
4	PCIe RC TERM
5	MEMORY: GPU FB_AB
6	MEMORY: FBA[31:0]
7	MEMORY: FBA[63:32]
8	MEMORY: FBB[31:0]
9	MEMORY: FBB[63:32]
10	MEMORY: GPU FB_CD
11	MEMORY: FBC[31:0]
12	MEMORY: FBC[63:32]
13	MEMORY: FBD[31:0]
14	MEMORY: FBD[63:32]
15	GPU PWR & GND
16	GPU Decoupling
17	GPU Decoupling2
18	IO: IFPAB DVI-D-DL
19	IO: IFPA DP
20	IO: IFPB DP
21	IO: IFPE & IFPF USBC NC
22	IO: IFPC HDMI
23	IO: IFPD DP
24	IO: NVHS Interface and Frame Lock
25	MISC1: Thermal, JTAG, GPIO,STEREO

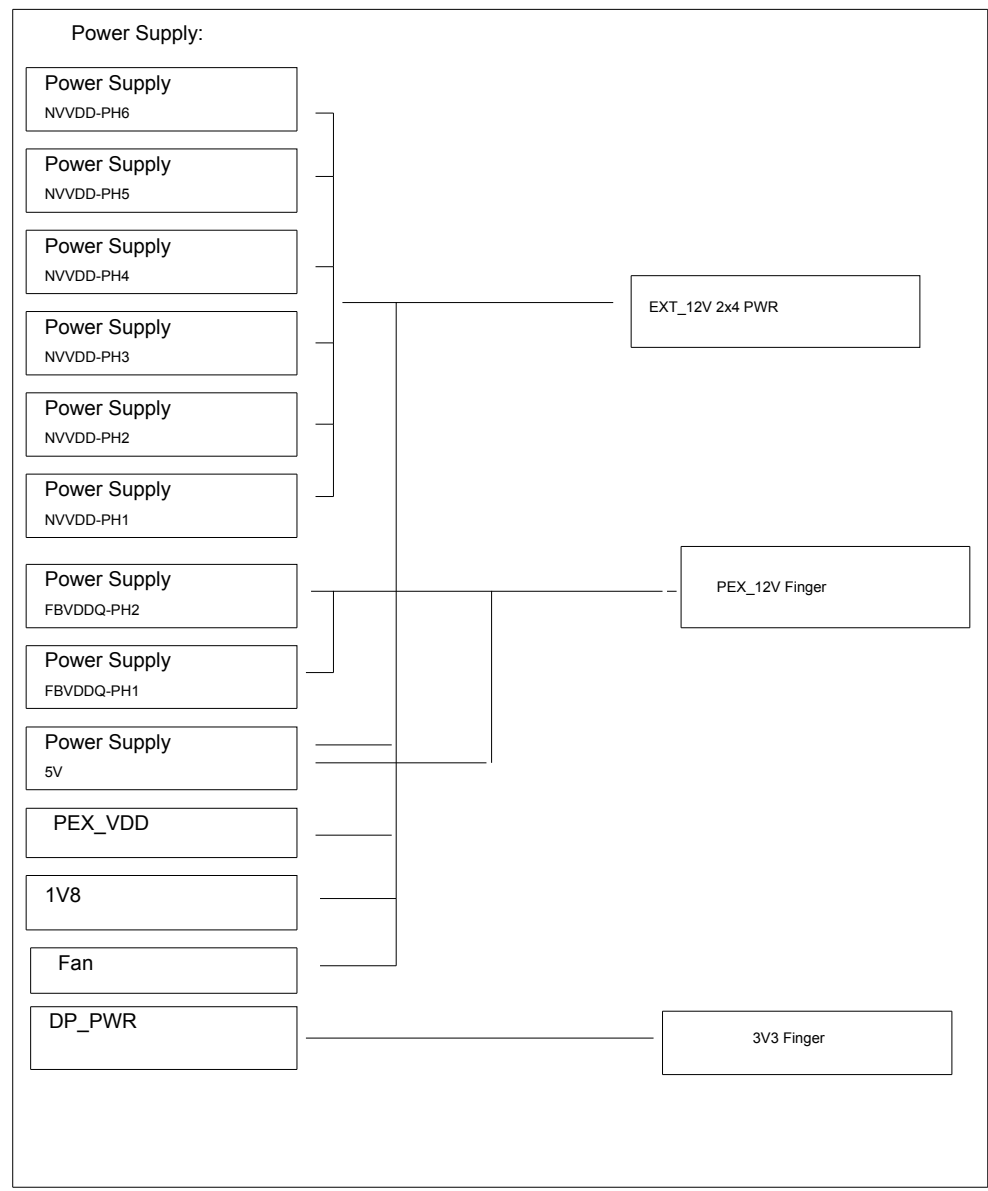
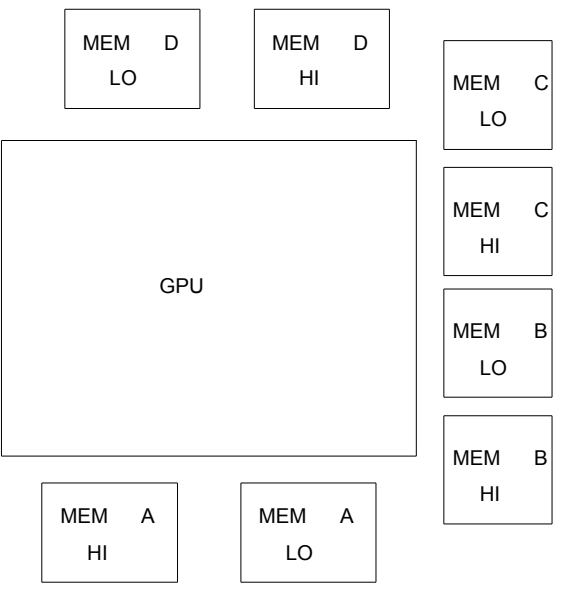
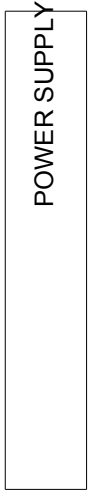
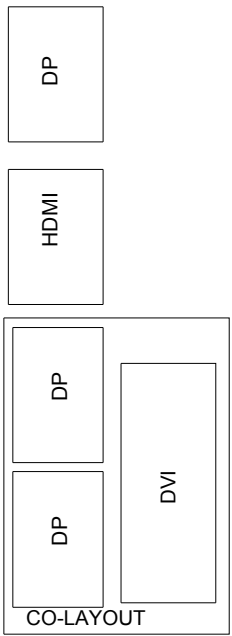
Page Description

26	MISC2: ROM, XTAL,STRAPS
27	PS: 1V8_AON
28	PS: 5V
29	PS: PEXVDD
30	PS: FBVDDQ
31	PS: FBVDDQ PH2
32	PS: NVVDD Controller
33	PS: NVVDD Controller OVR3i
34	PS: NVVDD Phase 6,4
35	PS: NVVDD Phase 3,5
36	PS: NVVDD Phase 2,1
37	PS: Input Power Balancing Switcher
38	PS: Input, Filtering, and Monitoring
39	PS: STEERING, UPB & HOT-UNPLUG
40	PS: Type-C BuckBoost
41	PD PPC
42	PS: 12V & 3V3_A SWITCHER
43	SEQ: 5V, 1V8, NV3V3 ENABLE
44	SEQ: NV, PEX, FB ENABLE
45	SEQ: VOLTAGE MONITOR
46	SEQ: DISCHARGE
47	SEQ: MISC
48	LOGO LED
49	LED DRIVER & BOOST
50	FAN

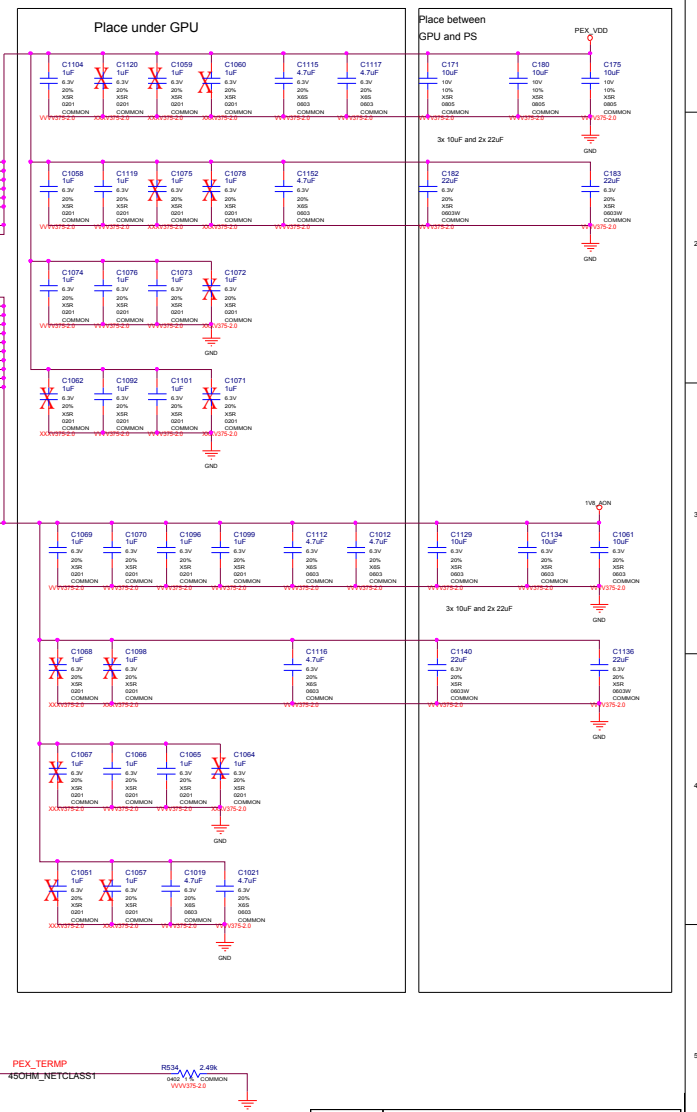
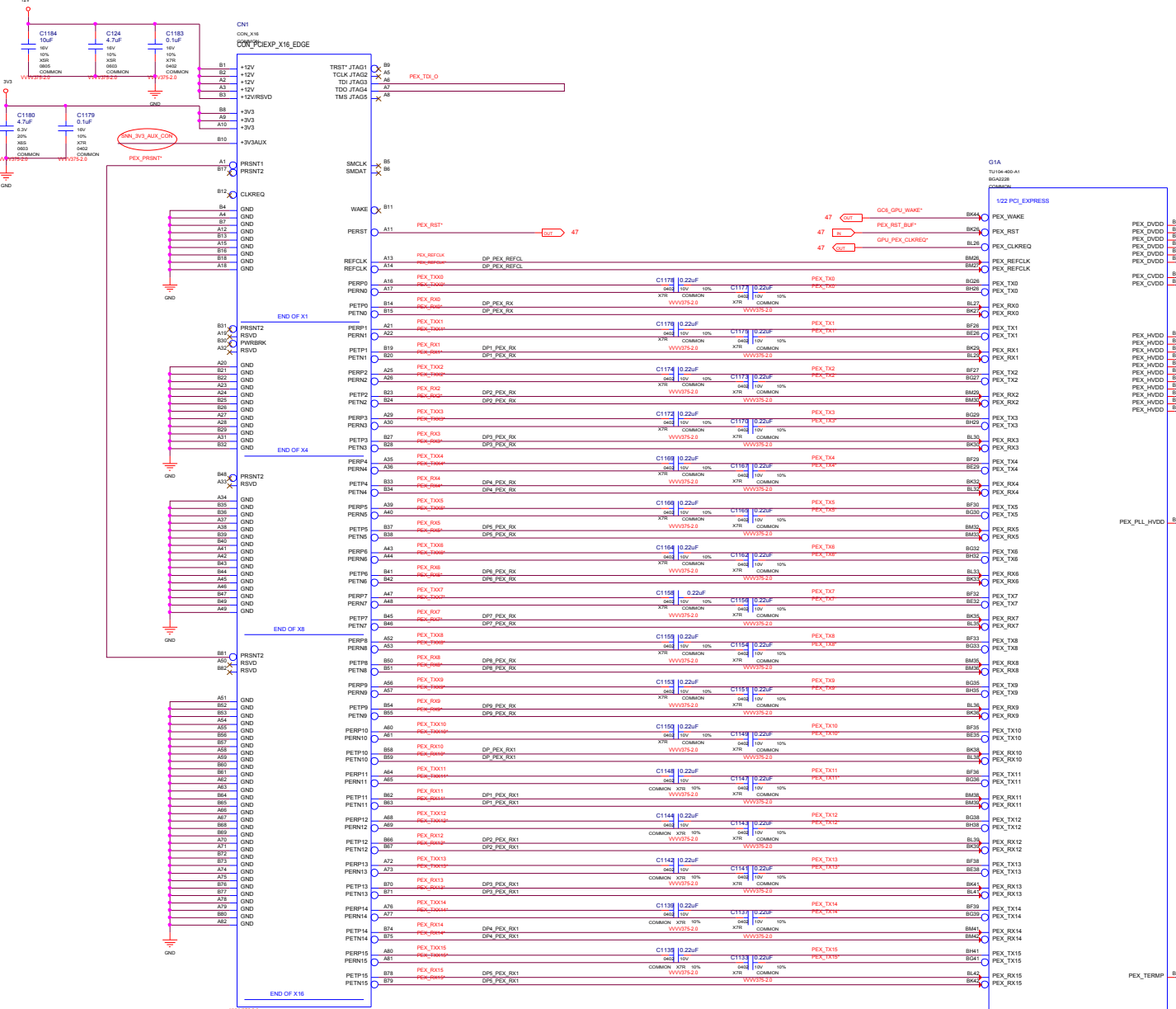
Page Description

51	PS: Pre-filter
52	MECH
53	PTC

	MICRO-STAR INT'L CO.,LTD	
	MS-V375	
	Size Custom	Document Description TABLE
Date: Tuesday, November 13, 2018		Sheet 1 of 53




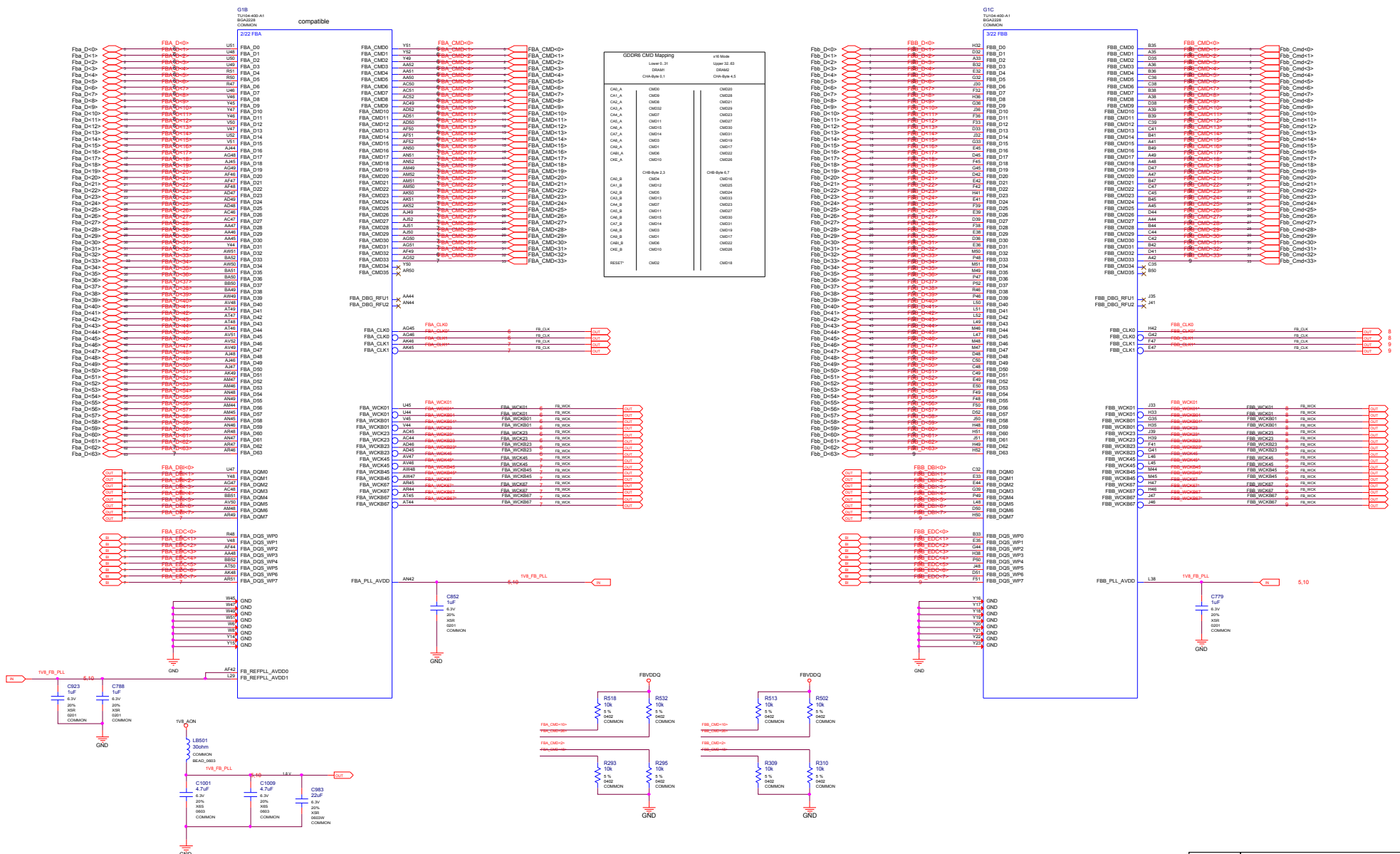
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3.3V	3.0A	0.400
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			MICRO-STAR INT'L CO.,LTD		
			MS-V375		
Size	Document Description	Rev			
Custom	PCI Express	2.0			
Date: Tuesday, November 14, 2011.			Sheet	3 of 53	

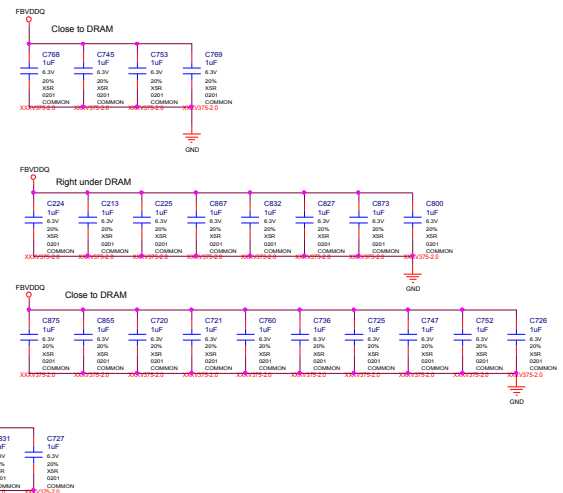
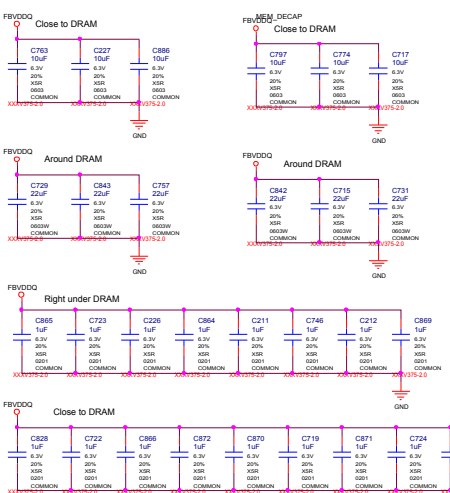
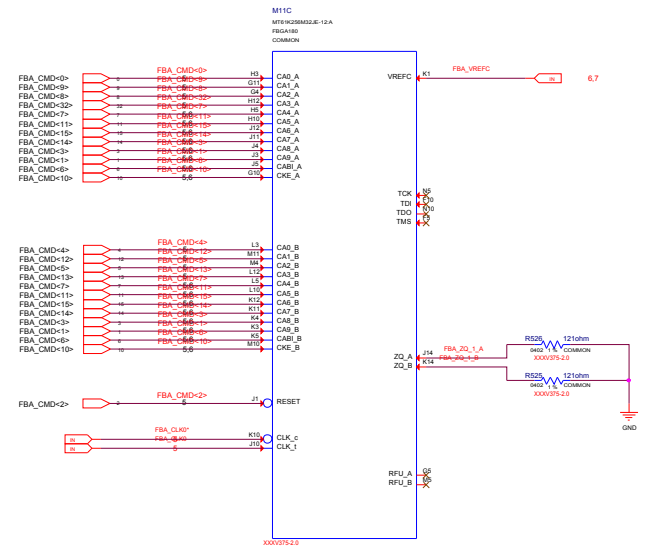
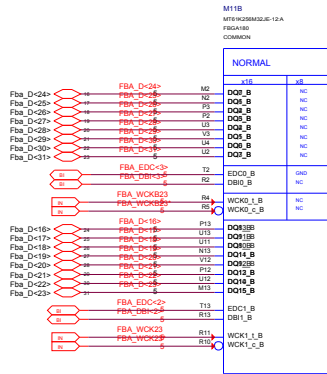
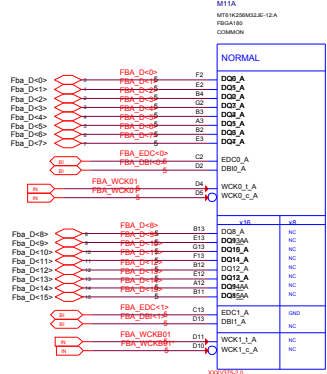
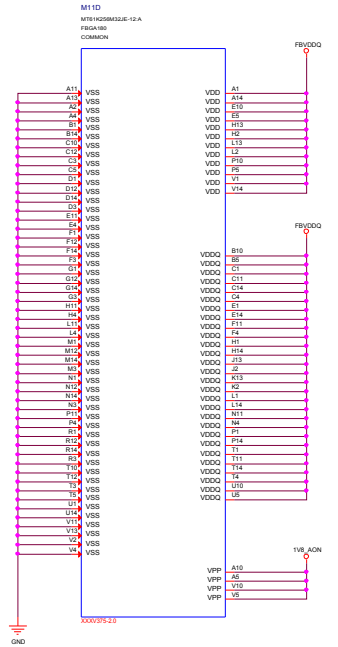
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	Size Custom	Document Description PCIE RC TERM
Date: Tuesday, November 13, 2018		Sheet 4 of 53

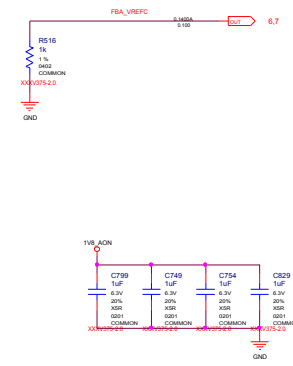


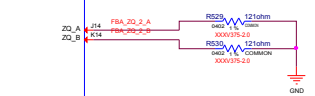
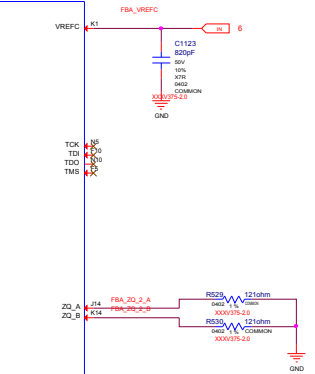
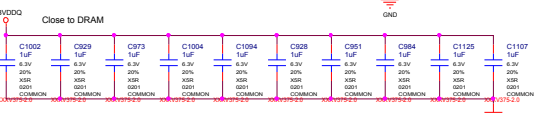
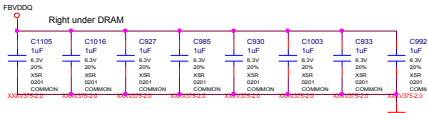
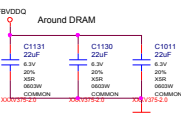
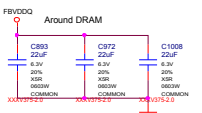
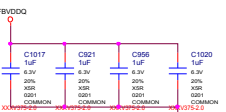
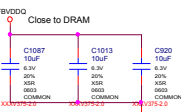
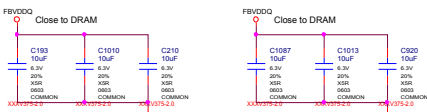
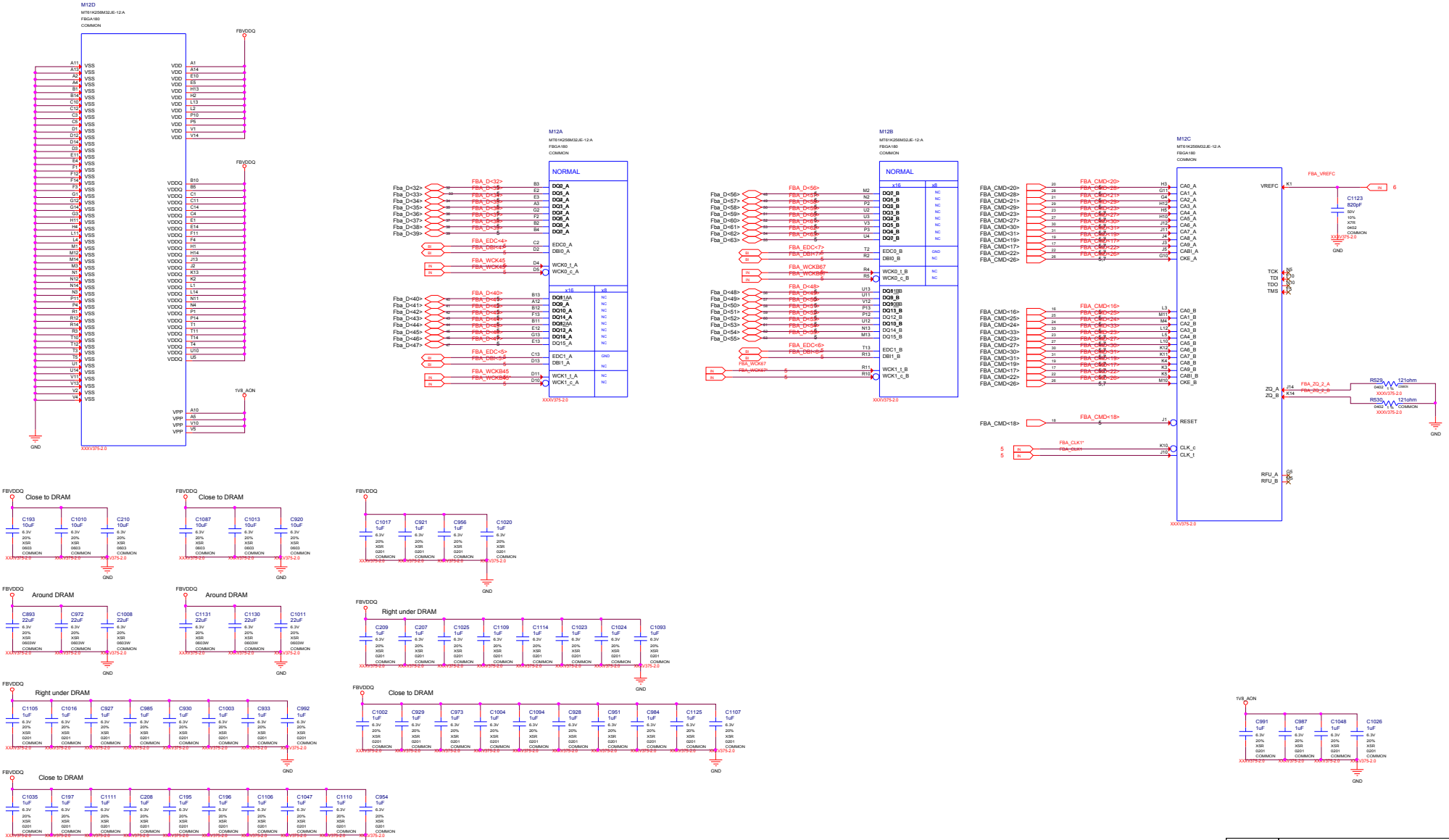
MICRO-STAR INT'L CO.,LTD
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Size Custom	Document Description MEMORY: GPU Partition A/B	Rev 2.0
Date: Tuesday, November 13, 2018		Sheet 5 of 53

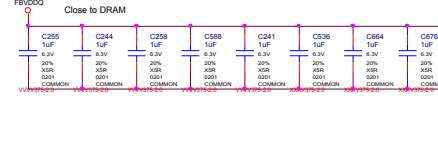
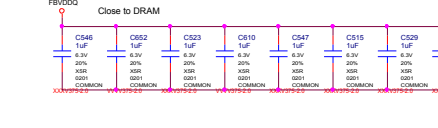
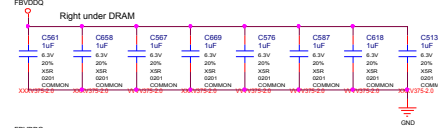
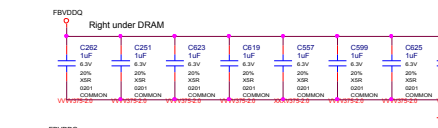
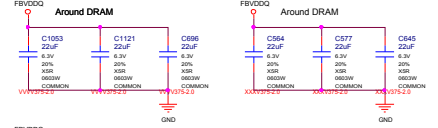
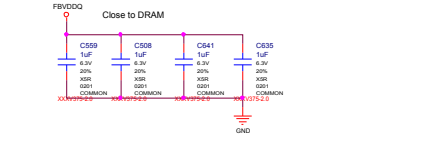
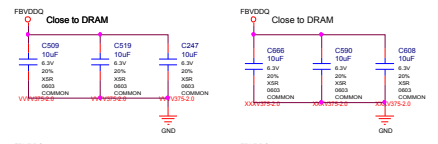
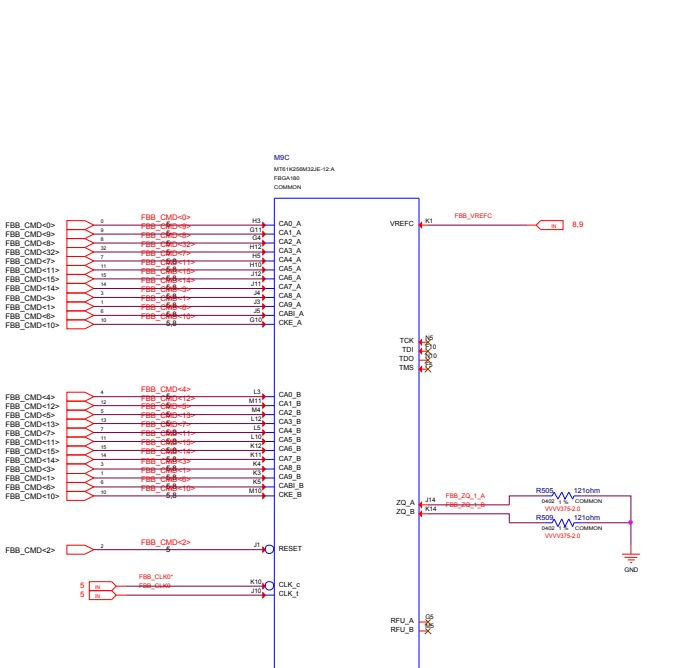
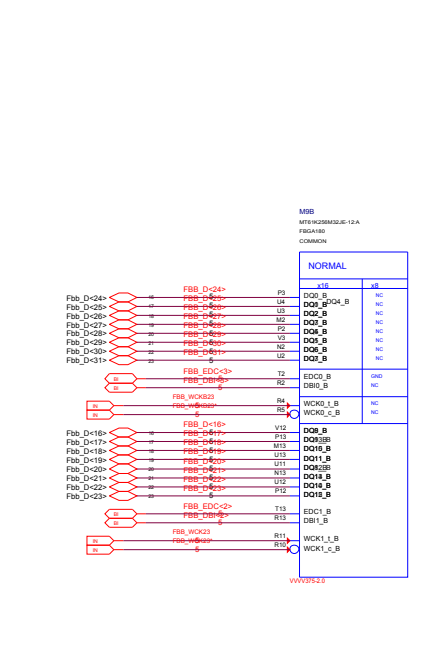
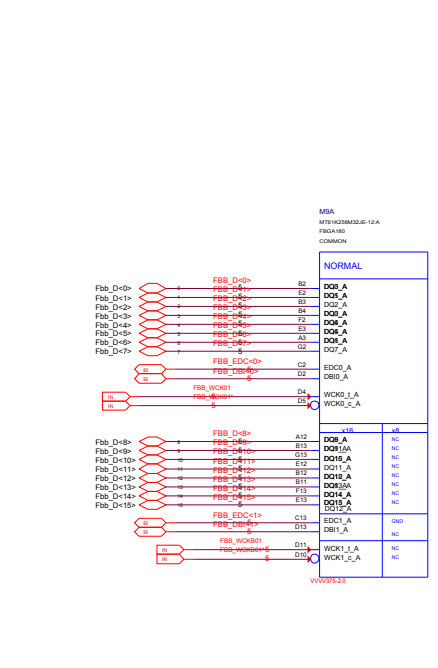
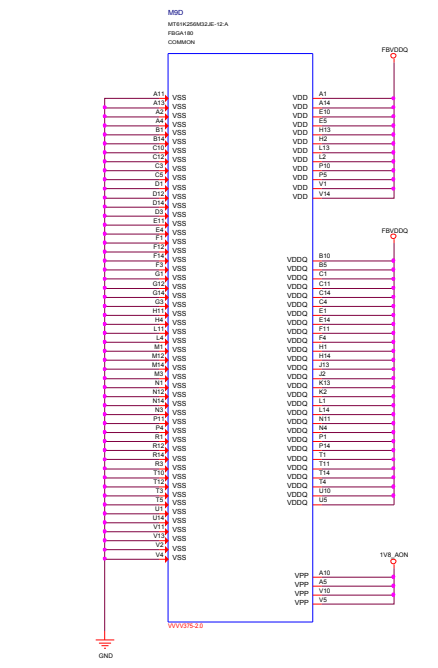


VREFC IS NOT USED IN x16 CONFIGURATION
1K OHM PULL-DOWN IS IN PLACE OF THE 1.33K FOR R106

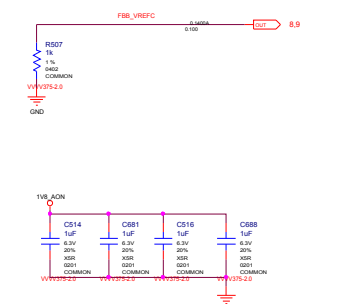




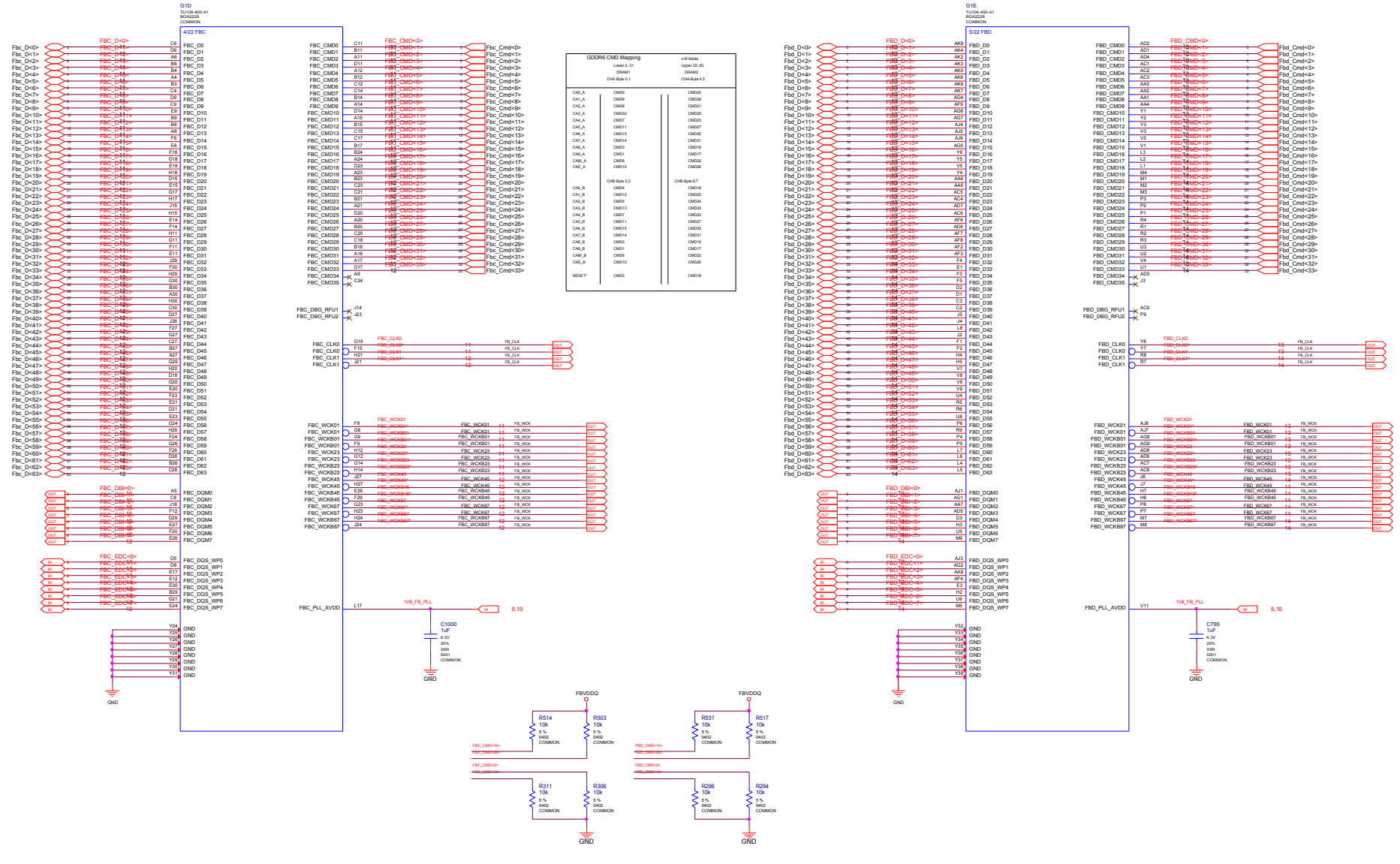
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	Size Custom	Document Description MEMORY: FBA Partition 63..32	Rev 2.0
Date: Tuesday, November 13, 2018		Sheet 7 of 53	



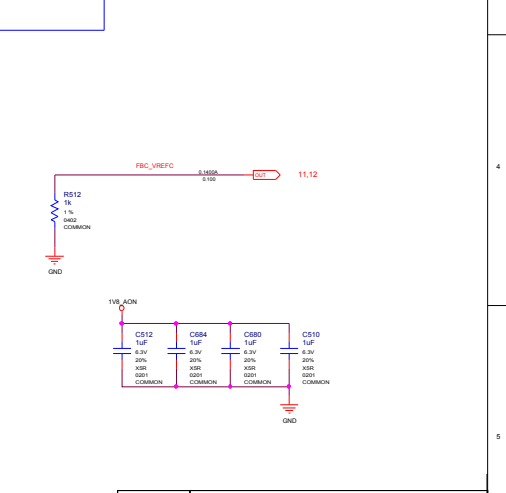
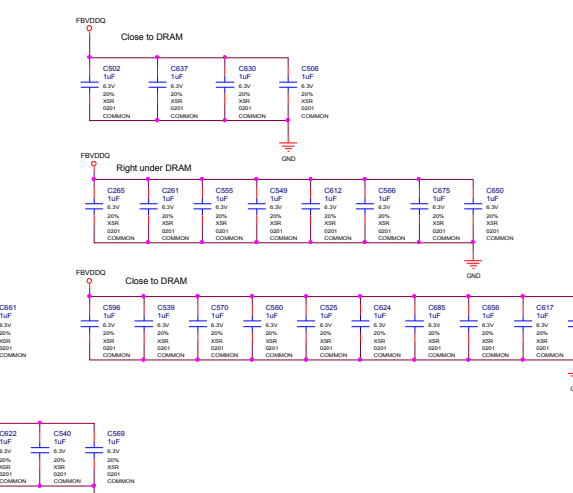
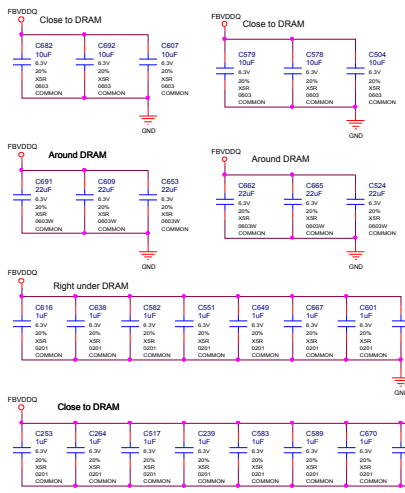
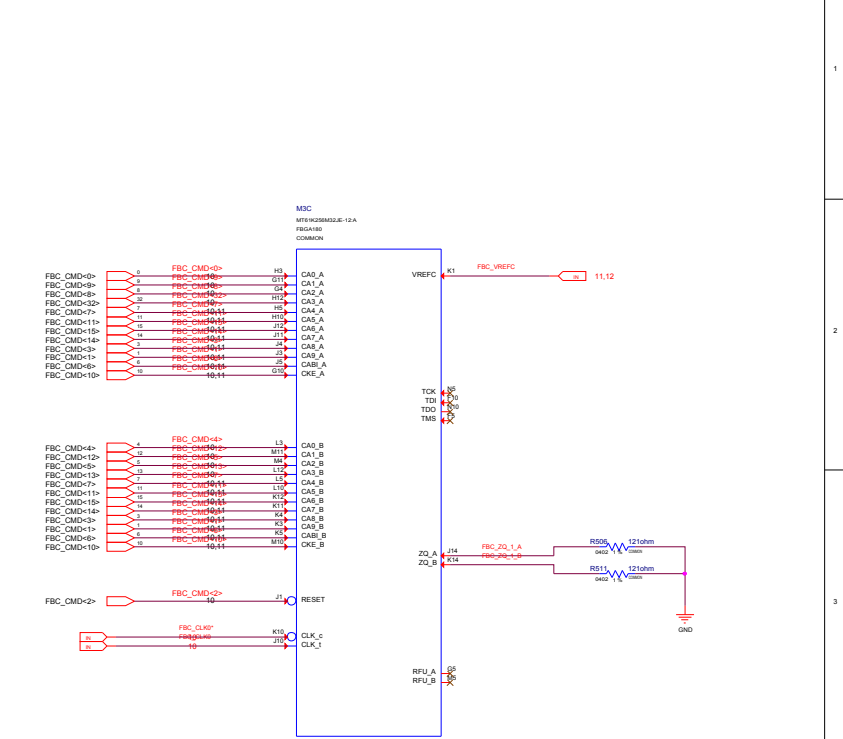
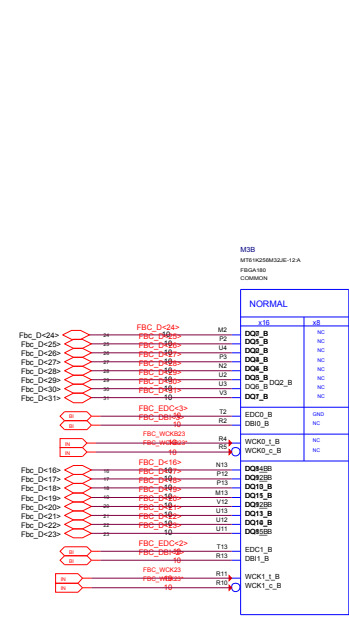
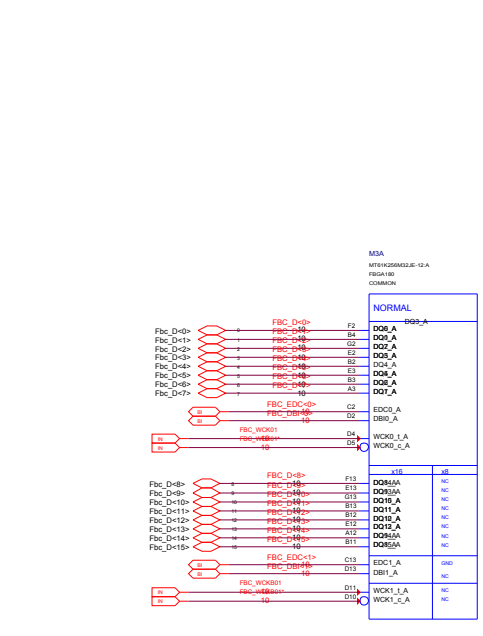
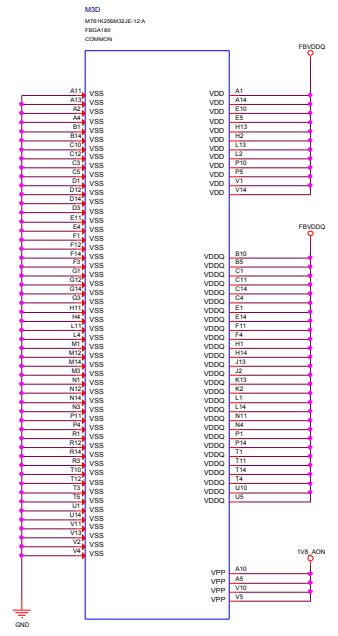
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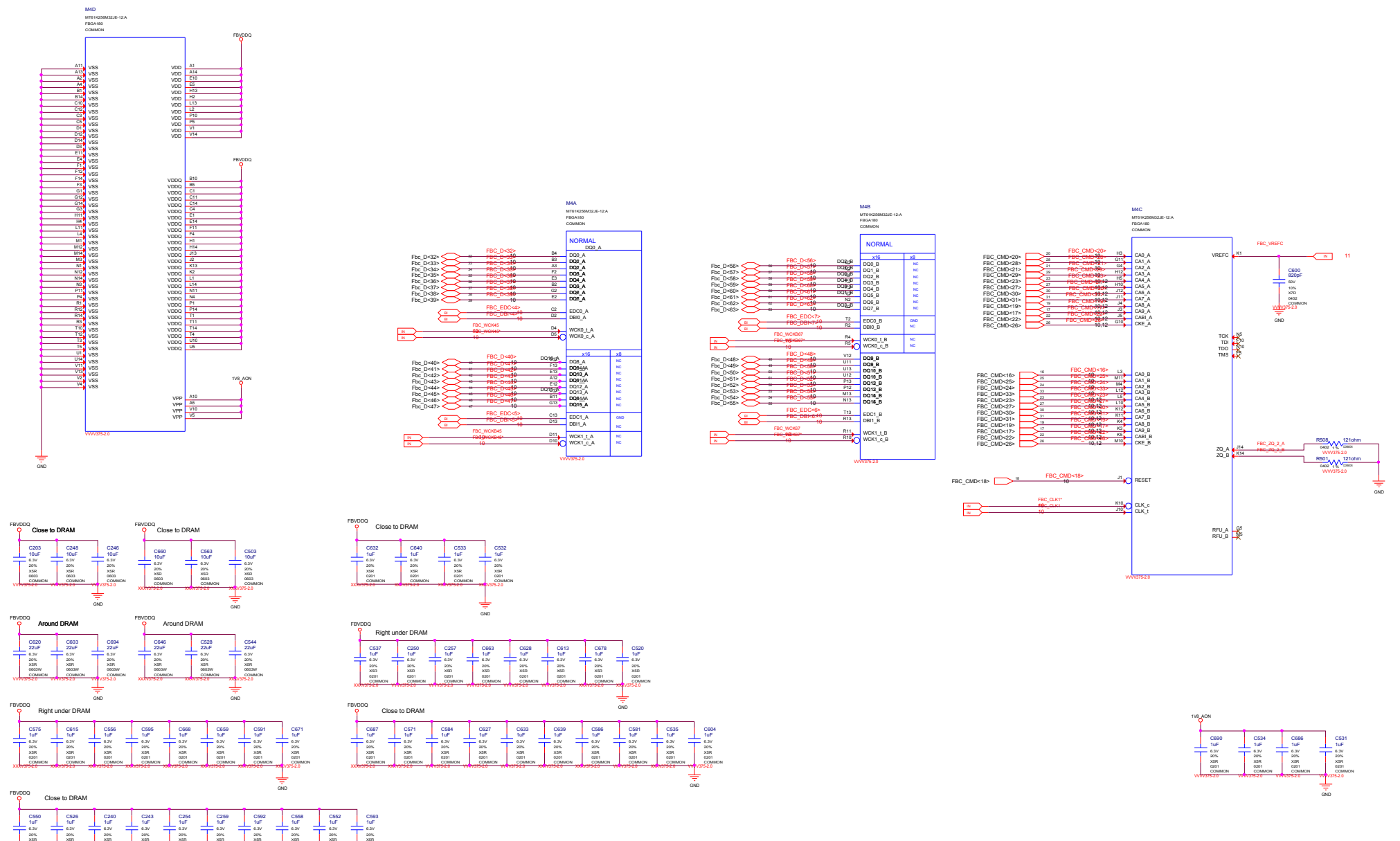
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	MS-V375		
	Size Custom	Document Description MEMORY: FBB Partition 31..0	
	Date: Tuesday, November 13, 2018	Sheet 8 of 53	



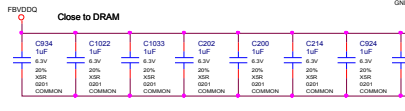
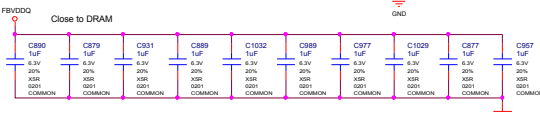
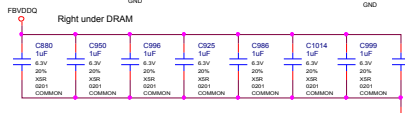
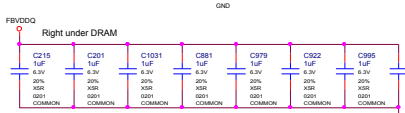
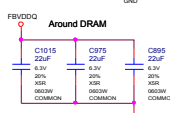
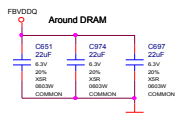
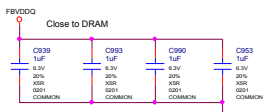
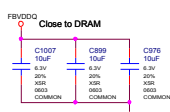
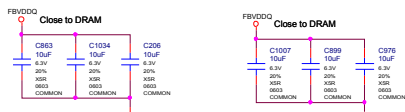
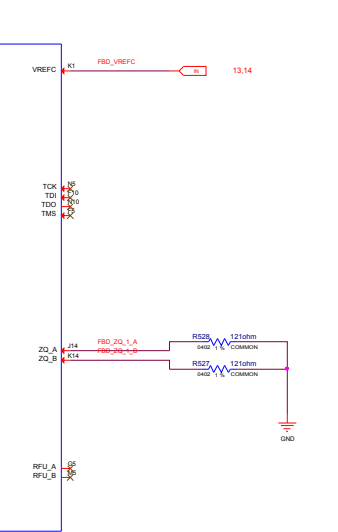
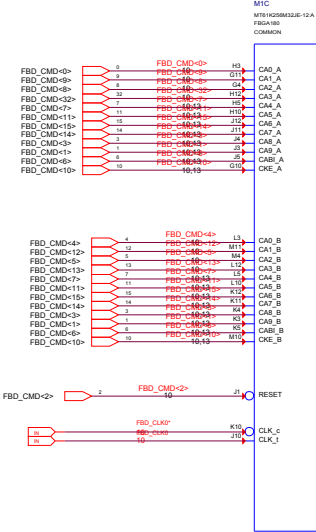
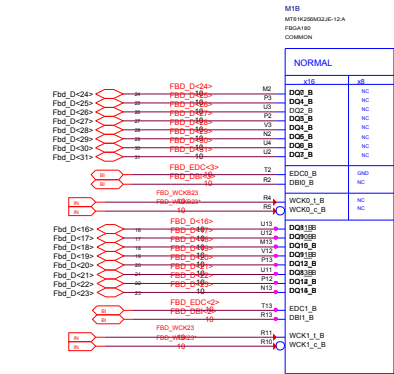
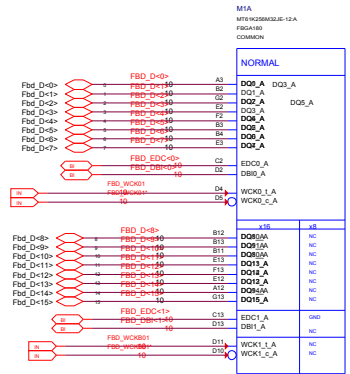
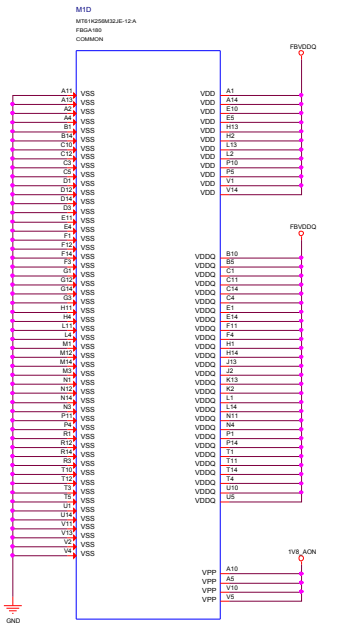
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Date: Tuesday, November 13, 2018	Sheet 10 of 83		



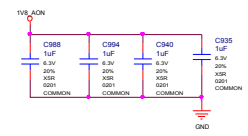
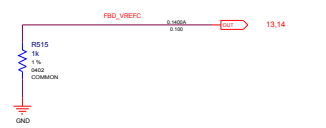
VREFC IS NOT USED IN X16 CONFIGURATION
1K OHM PULL-DOWN IS IN PLACE OF THE 1.33K FOR R75



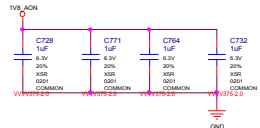
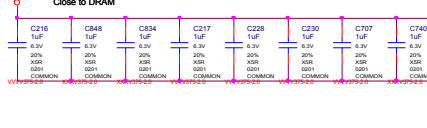
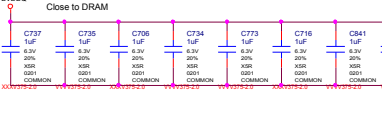
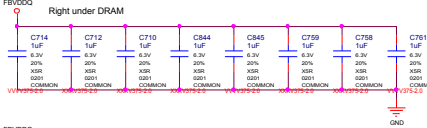
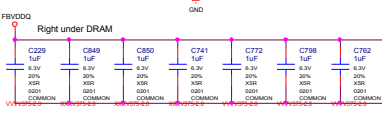
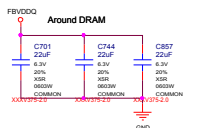
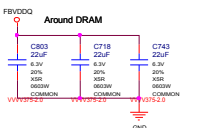
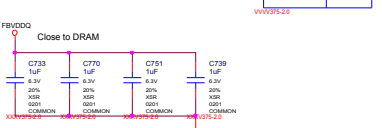
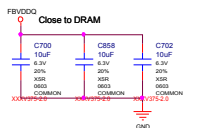
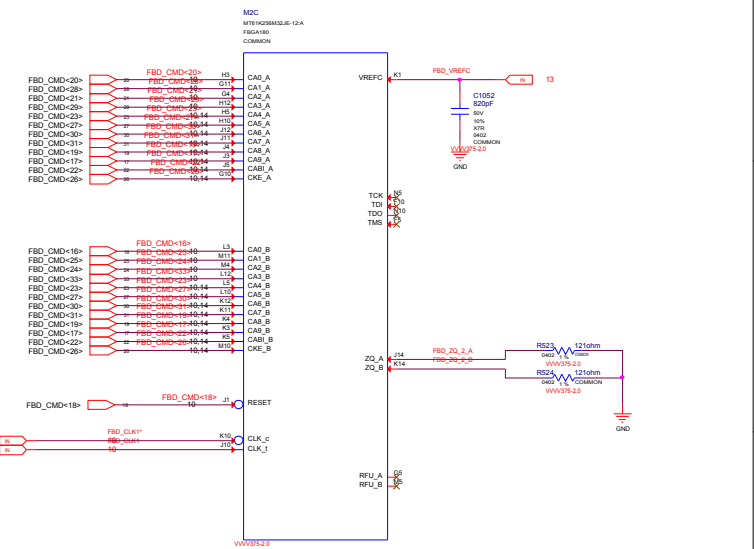
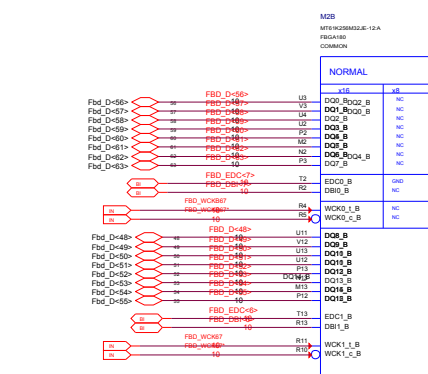
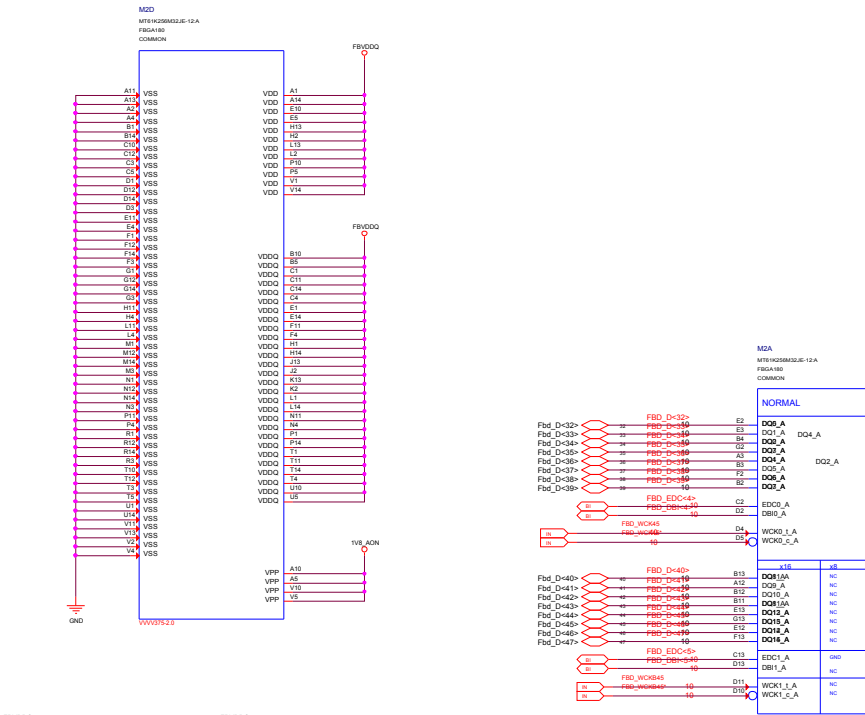
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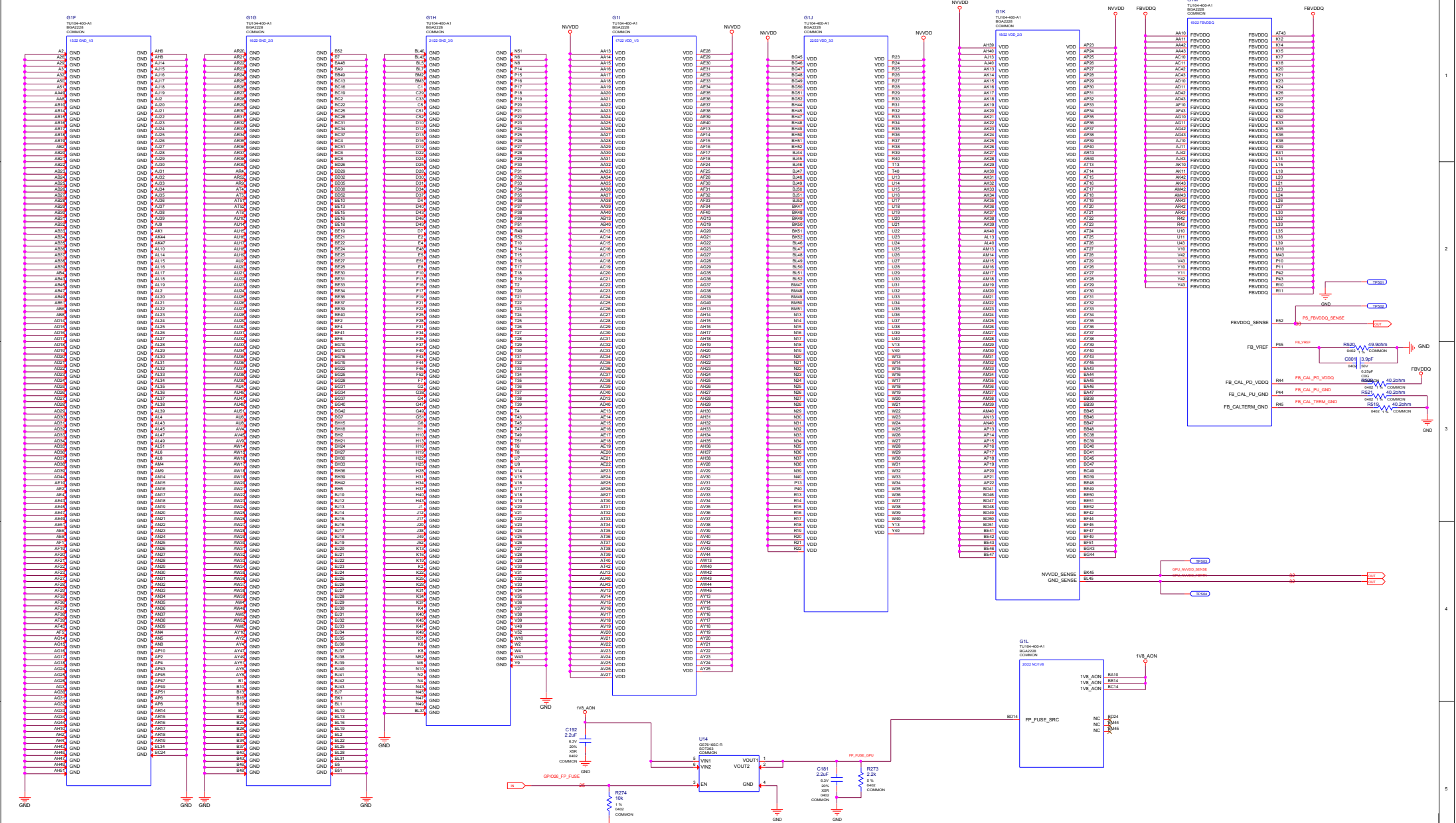
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1K OHM PULL-DOWN IS IN PLACE OF THE 1.33K FOR R62



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Custom	MEMORY: FBD Partition 31..0	2.0		
Date:	Tuesday, November 13, 2018	Sheet	13	of 33



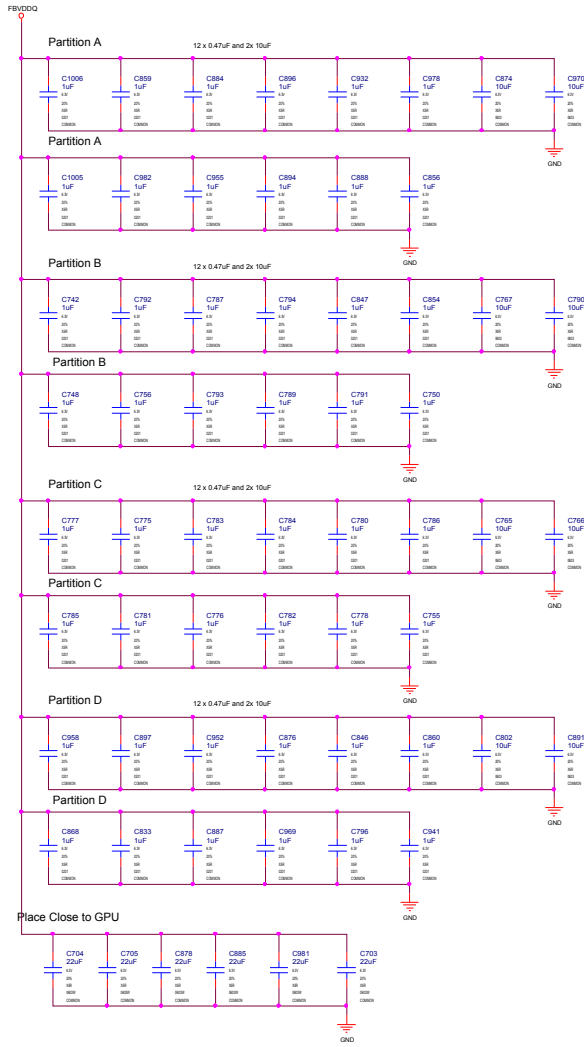
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	Date: Tuesday, November 13, 2018				



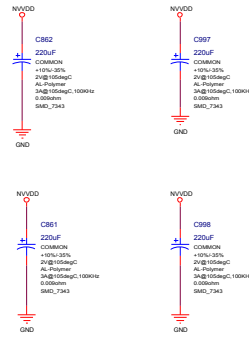
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MS-V375

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Date: Tuesday, November 13, 2018 Sheet: 15 of 63

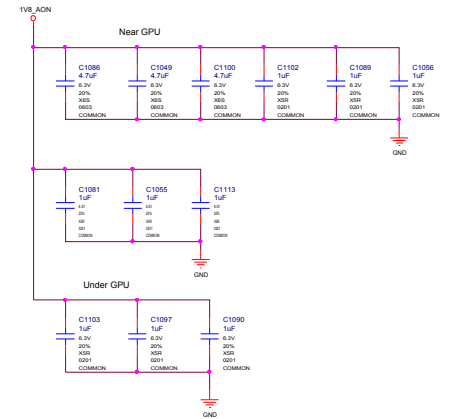
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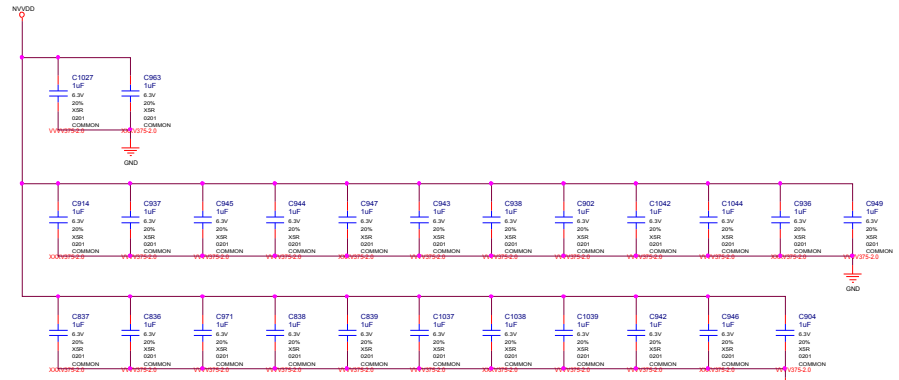
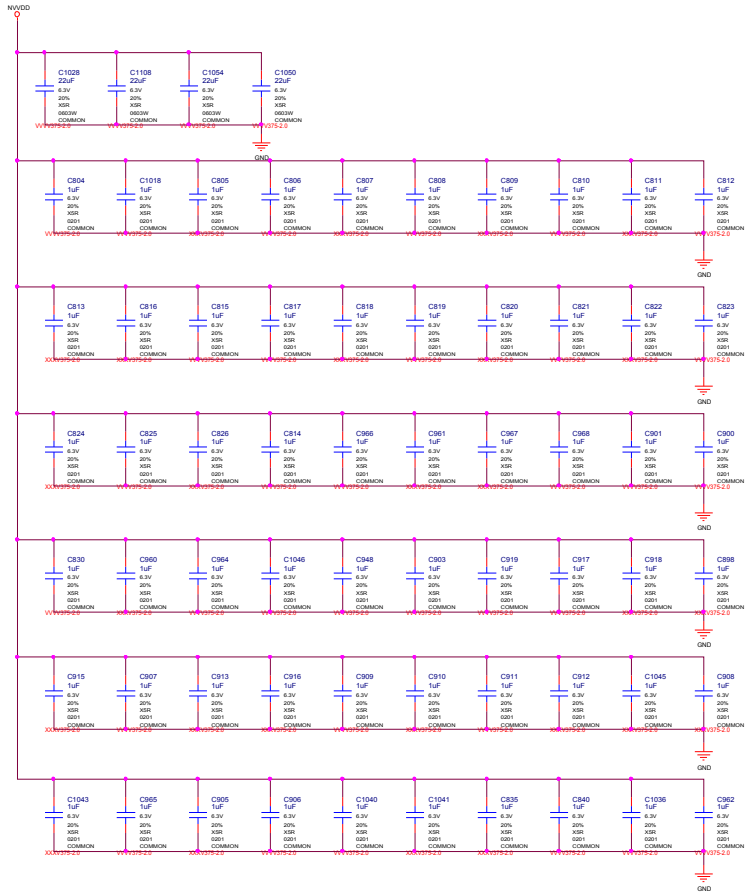


1V8_AON

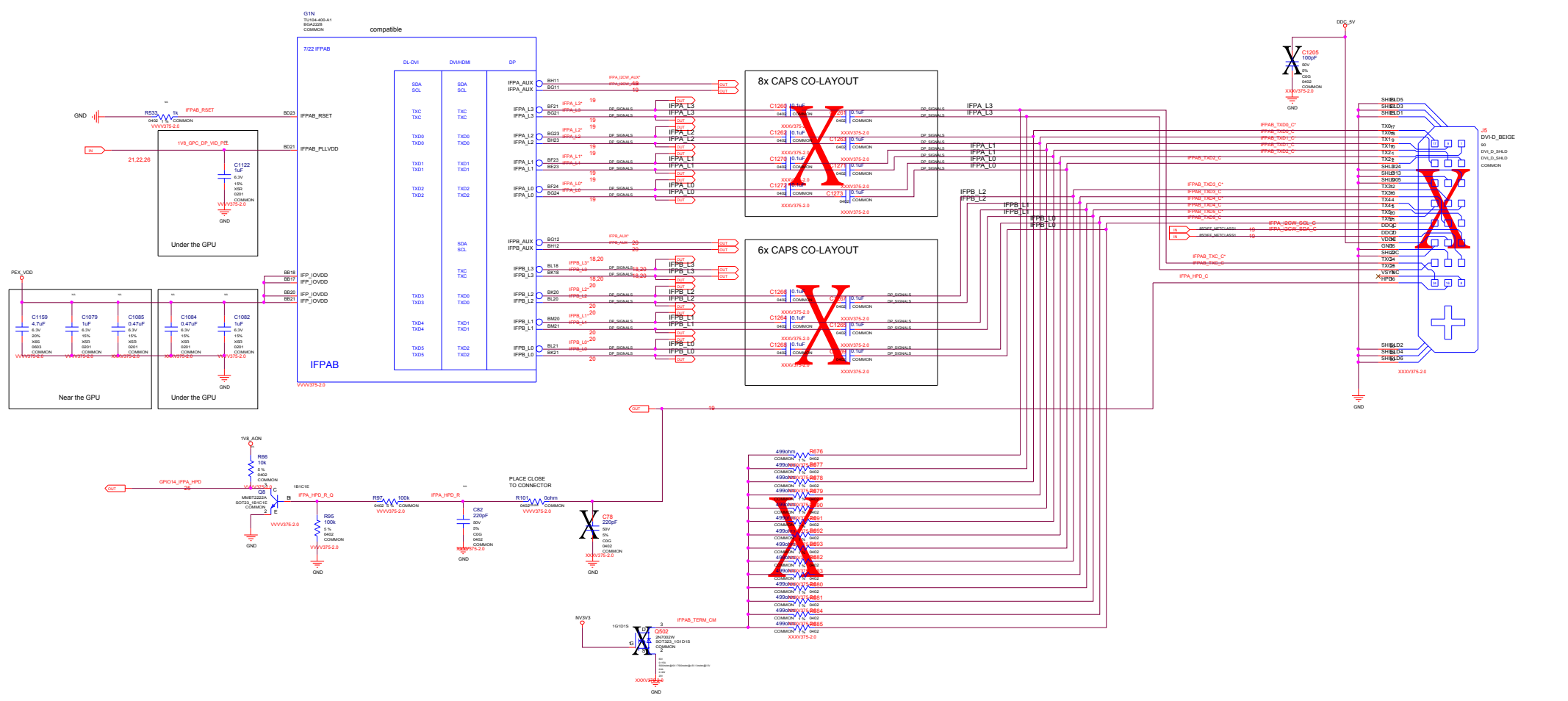


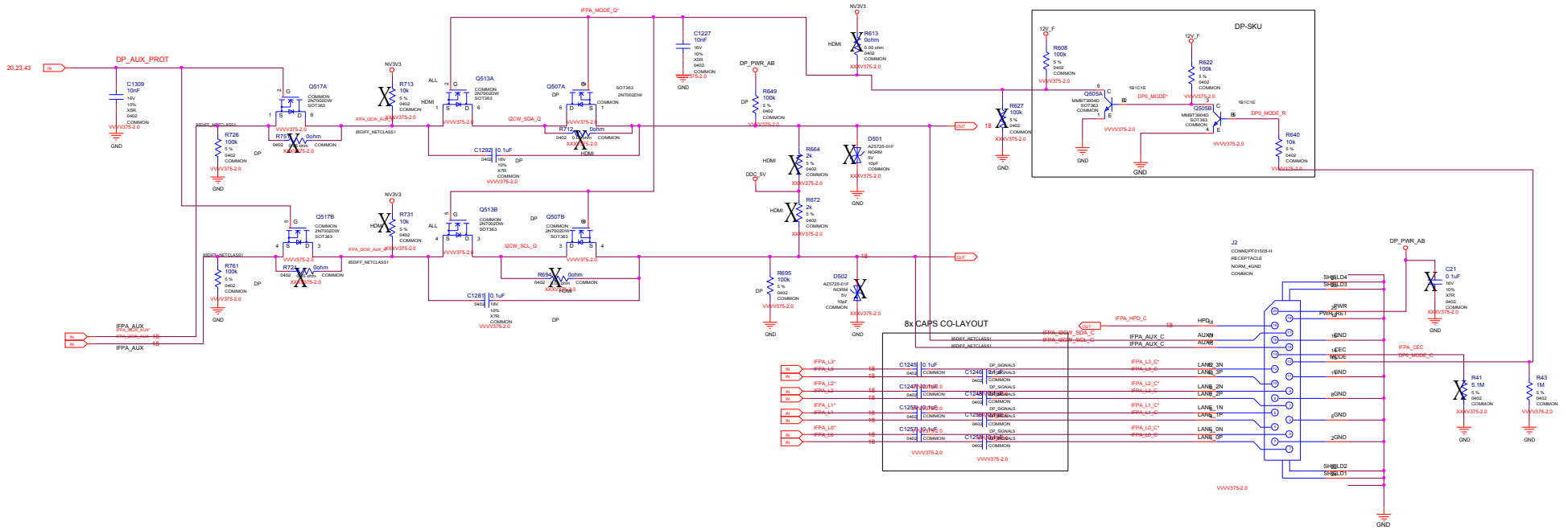
	MICRO-STAR INT'L CO.,LTD		
	MS-V375		
Size Custom	Document Description GPU Decoupling 1	Rev 2.0	
Date: Tuesday, November 13, 2018		Sheet	16 of 53

NVDD



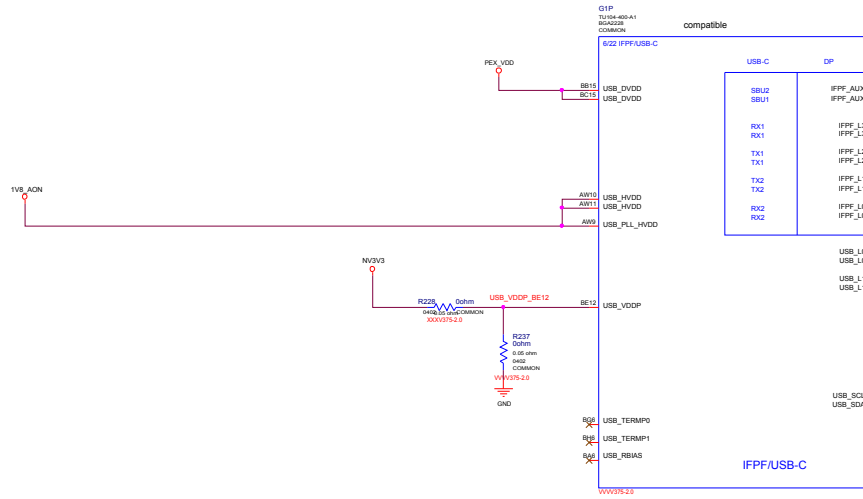
IFPAB DVI-D-DL CO-LAYOUT WITH 2x DP



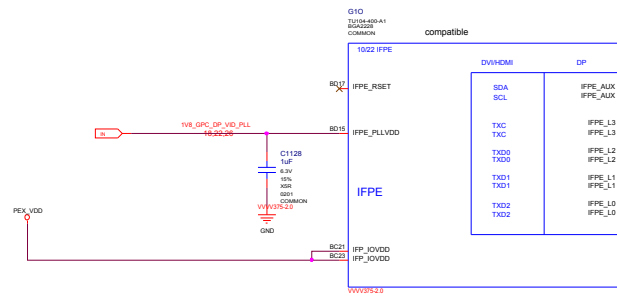


IFPA DP CO-LAYOUT WITH IFPAB DVI-D-DL

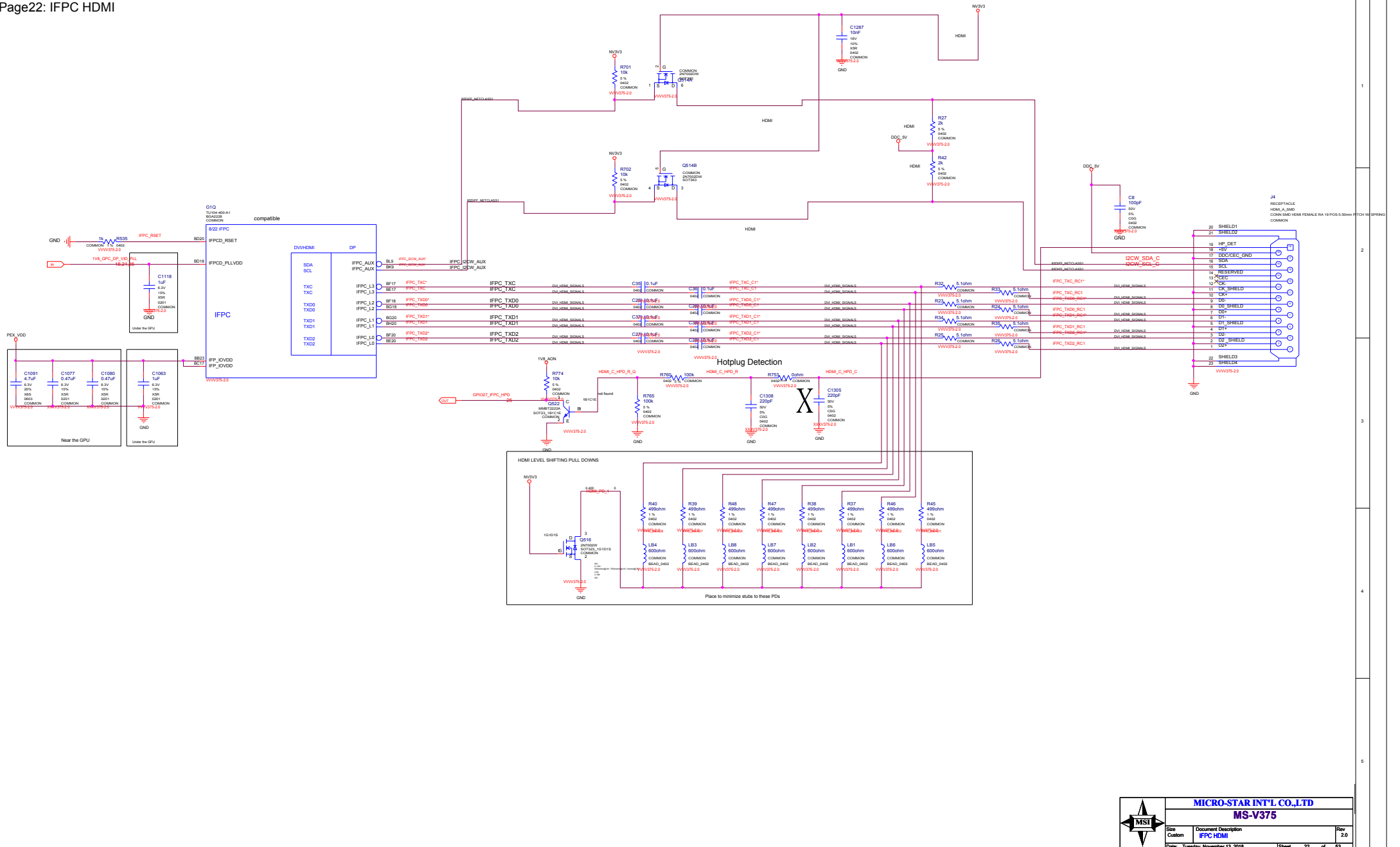
		MICRO-STAR INT'L CO.,LTD MS-V375	
		Size Custom Document Description IFPA DP Date: Tuesday, November 13, 2018	Rev 2.0 Sheet 19 of 33



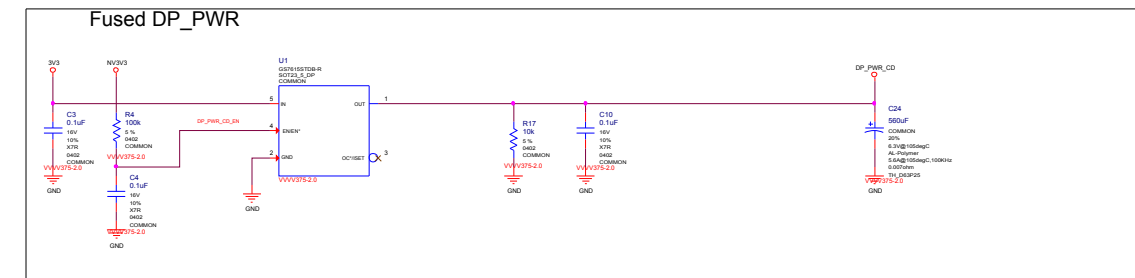
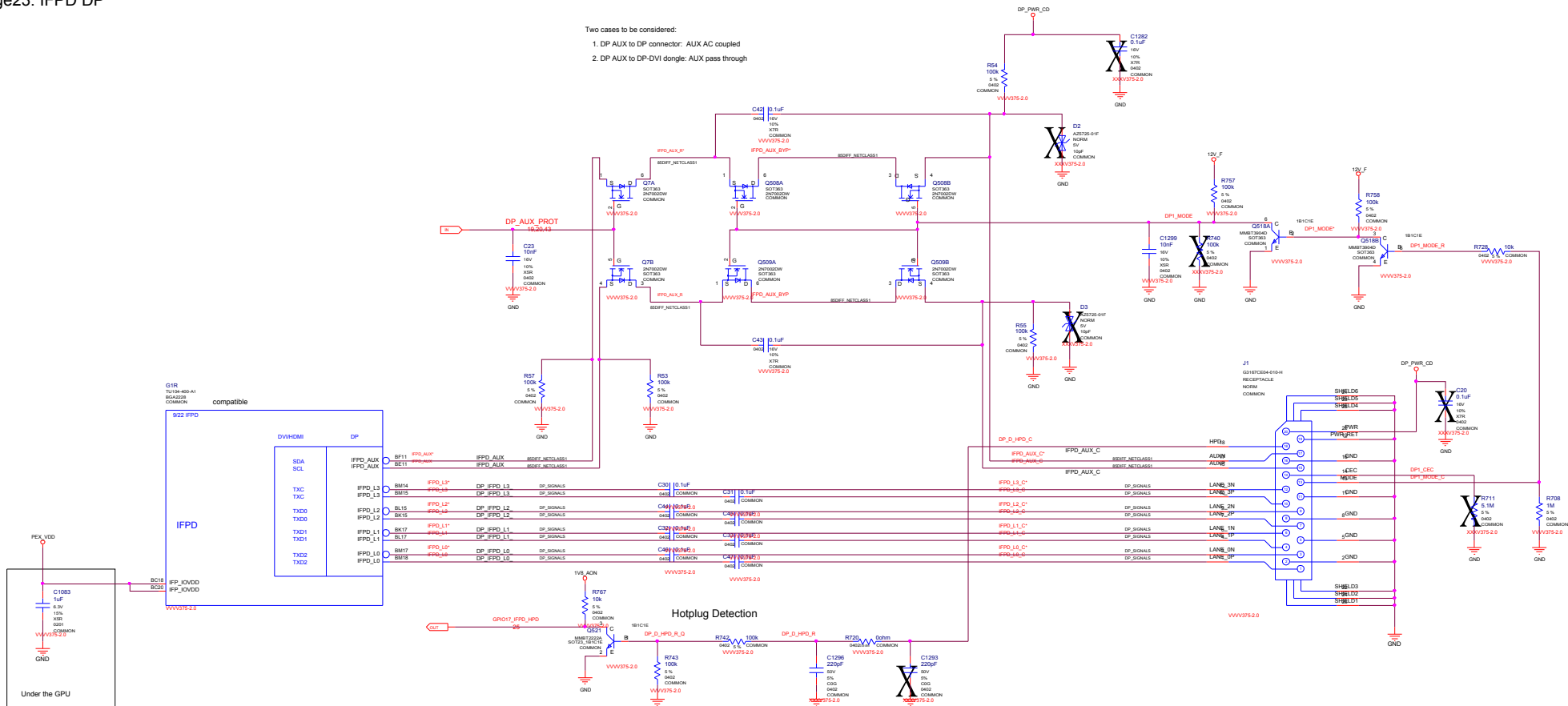
IFPF NC



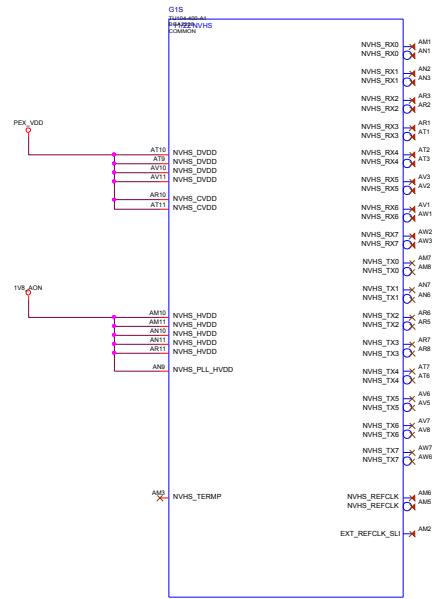
IFPE NC

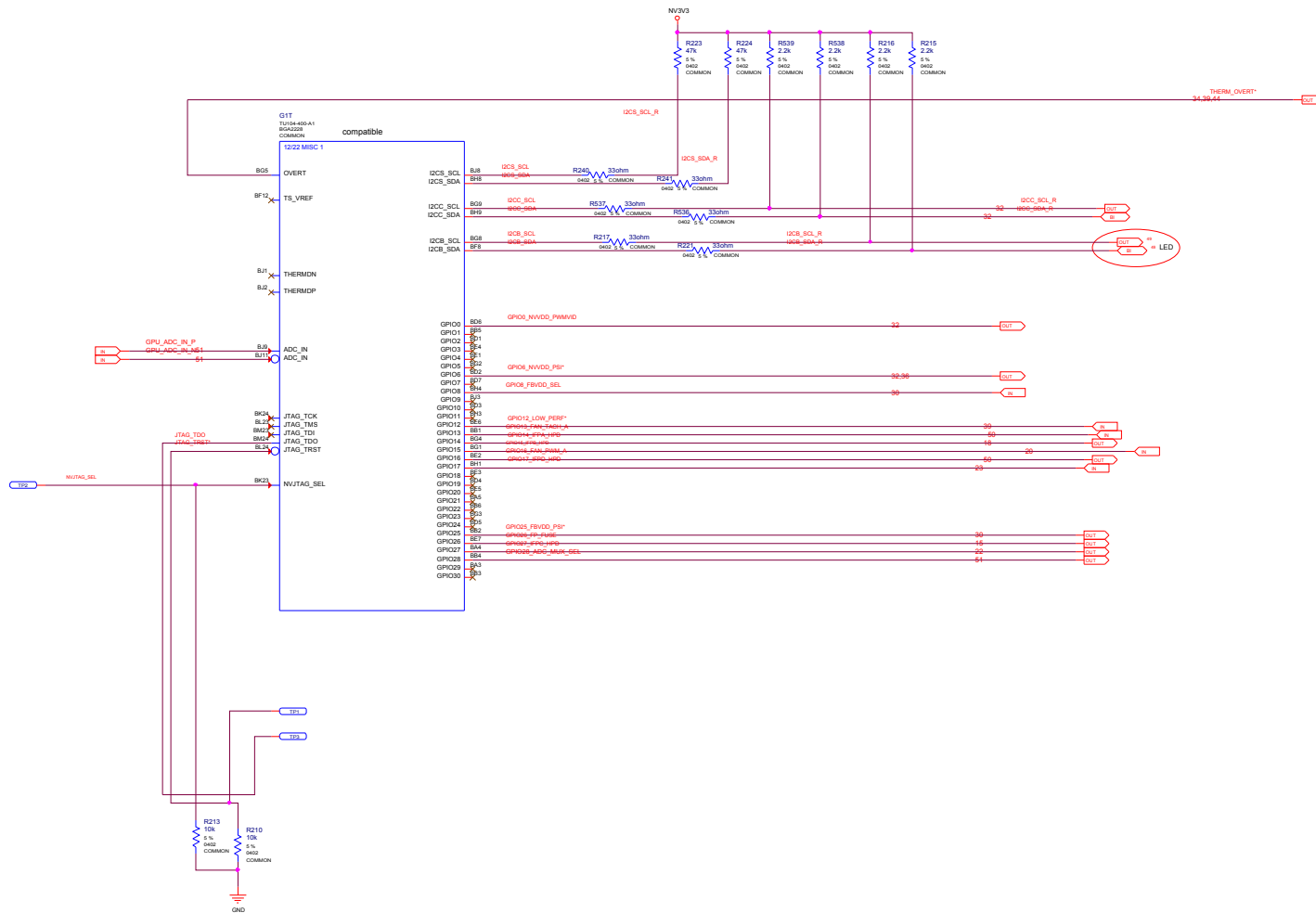


Two cases to be considered:
 1. DP AUX to DP connector: AUX AC coupled
 2. DP AUX to DP-DVI dongle: AUX pass through



		MICRO-STAR INT'L CO.,LTD MS-V375	
		Size: Custom Document Description: IFPD DP Date: Tuesday, November 13, 2018	Rev: 2.0 Sheet: 23 of 53





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

RAMCFG[4:0]	DENSITY	WIDTH	VENDOR	DIE
00000	8Gb	256-bit	Samsung	C
00001	8Gb	256-bit	Micron	A
00010	8Gb	256-bit	Hynix	M
00011	8Gb	256-bit	Samsung	C
00100	8Gb	256-bit	Micron	A
00101	8Gb	256-bit	Hynix	M
00110	16Gb	256-bit	Samsung	M
00111				

ROM_SO	ROM_SI	ROM_SCLK	DUMMY[2:0].FS_OVERT	1.ENABLE 0.DISABLE	DEFAULT
L	L	L	XXX1	FS_OVERT ENABLE	DEFAULT
L	L	M	XXX0	FS_OVERT DISABLE	

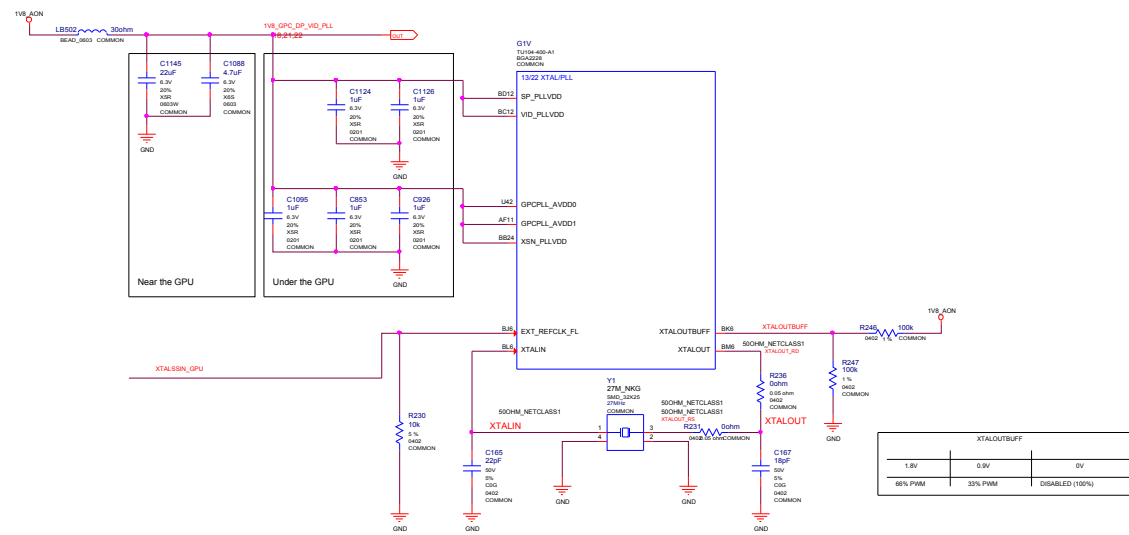
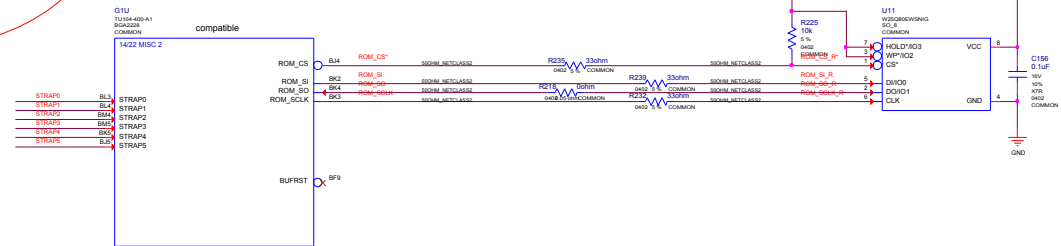
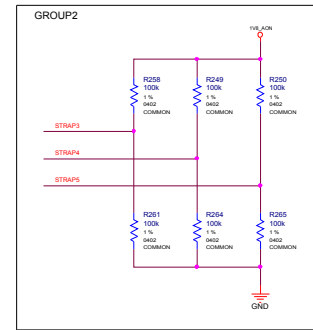
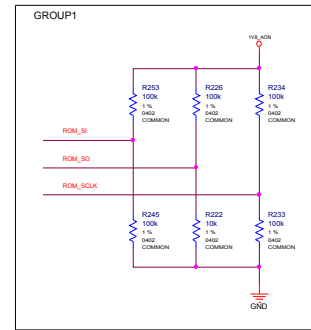
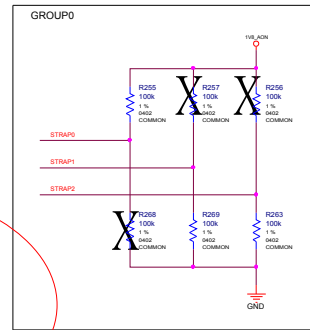
STRAP5	STRAP4	STRAP3	SMB_ALT_ADDR	DEVID_SEL	PCI_E_CFG	VGA_DEVICE
M	H	H	1	1	1	1
M	H	L	1	1	1	0
M	L	H	1	1	0	1
M	L	L	1	1	0	0
L	H	M	1	0	1	1
L	M	H	1	0	1	0
L	M	L	1	0	0	1
L	L	M	1	0	0	0
H	H	H	0	1	1	1
H	H	L	0	1	1	0
H	L	H	0	1	0	1
H	L	L	0	1	0	0
L	H	H	0	0	1	1
L	H	L	0	0	1	0
L	L	H	0	0	0	1 DEFAULT
L	L	L	0	0	0	0

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 ORIGINAL

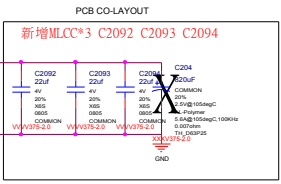
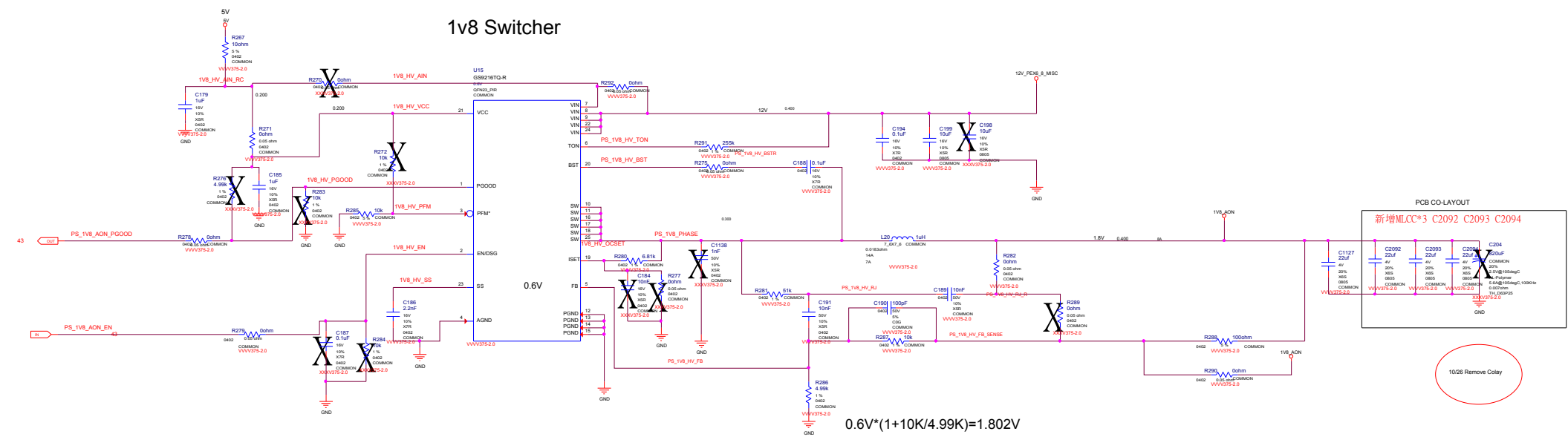
1:PCI_E_CFG LOW POWER
0:PCI_E_CFG HIGH POWER
1:VGA_DEVICE ENABLE
0:VGA_DEVICE DISABLE

注意上件的MEM Straps

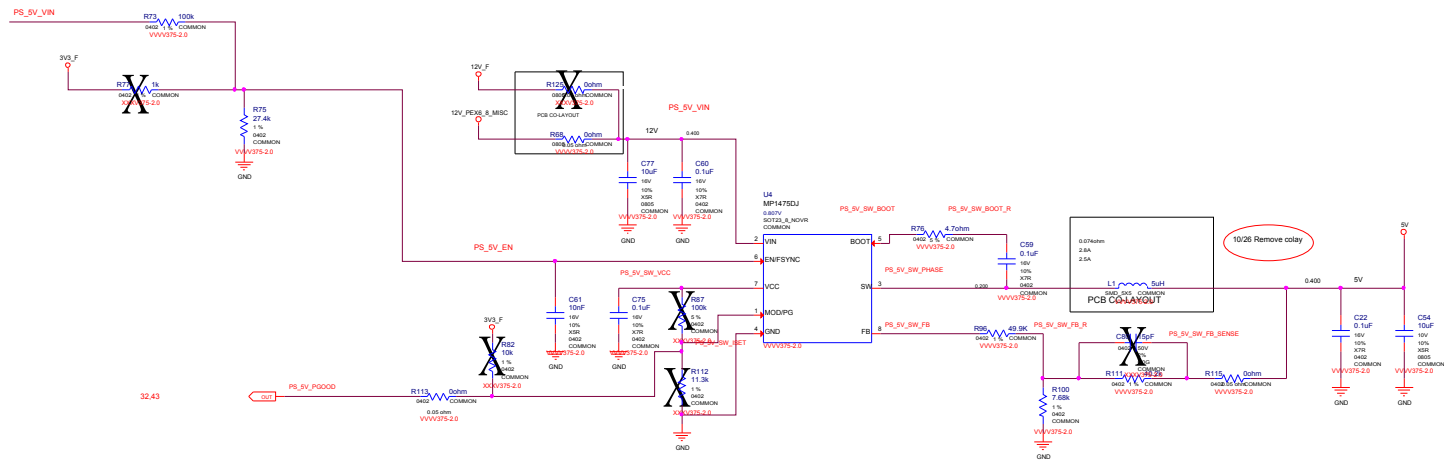


XTALOUTBUFF		
1.8V	0.9V	0V
66% PWM	33% PWM	DISABLED (100%)

1v8 Switcher

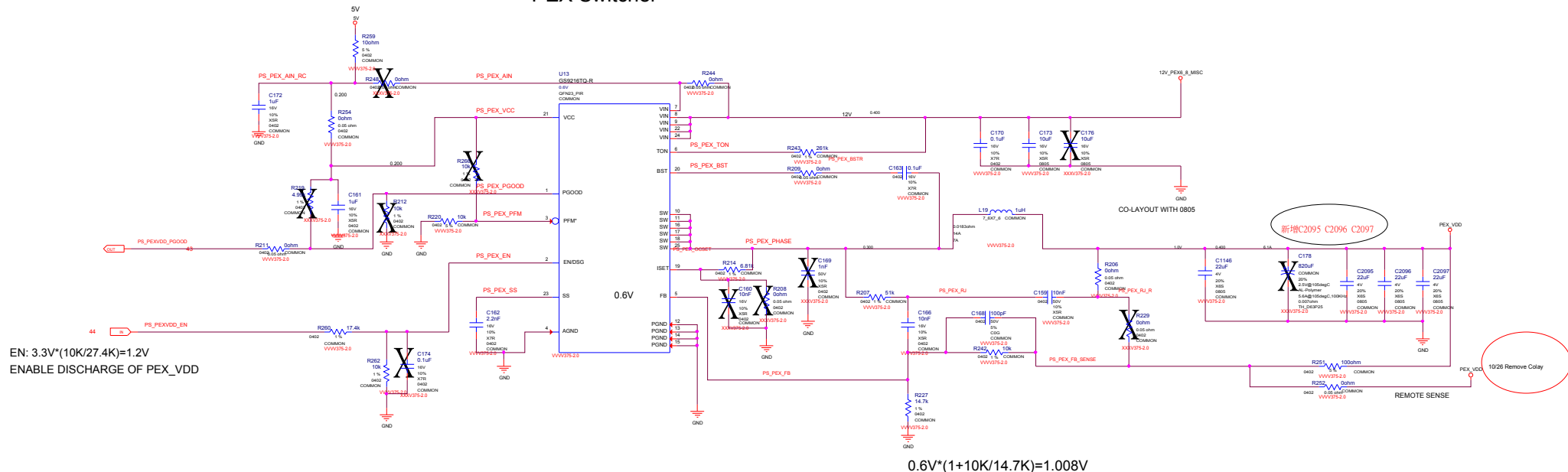


10/26 Remove Copy



$$0.8V * (1 + 40.2K / 7.68K) = 4.9875V$$

PEX Switcher



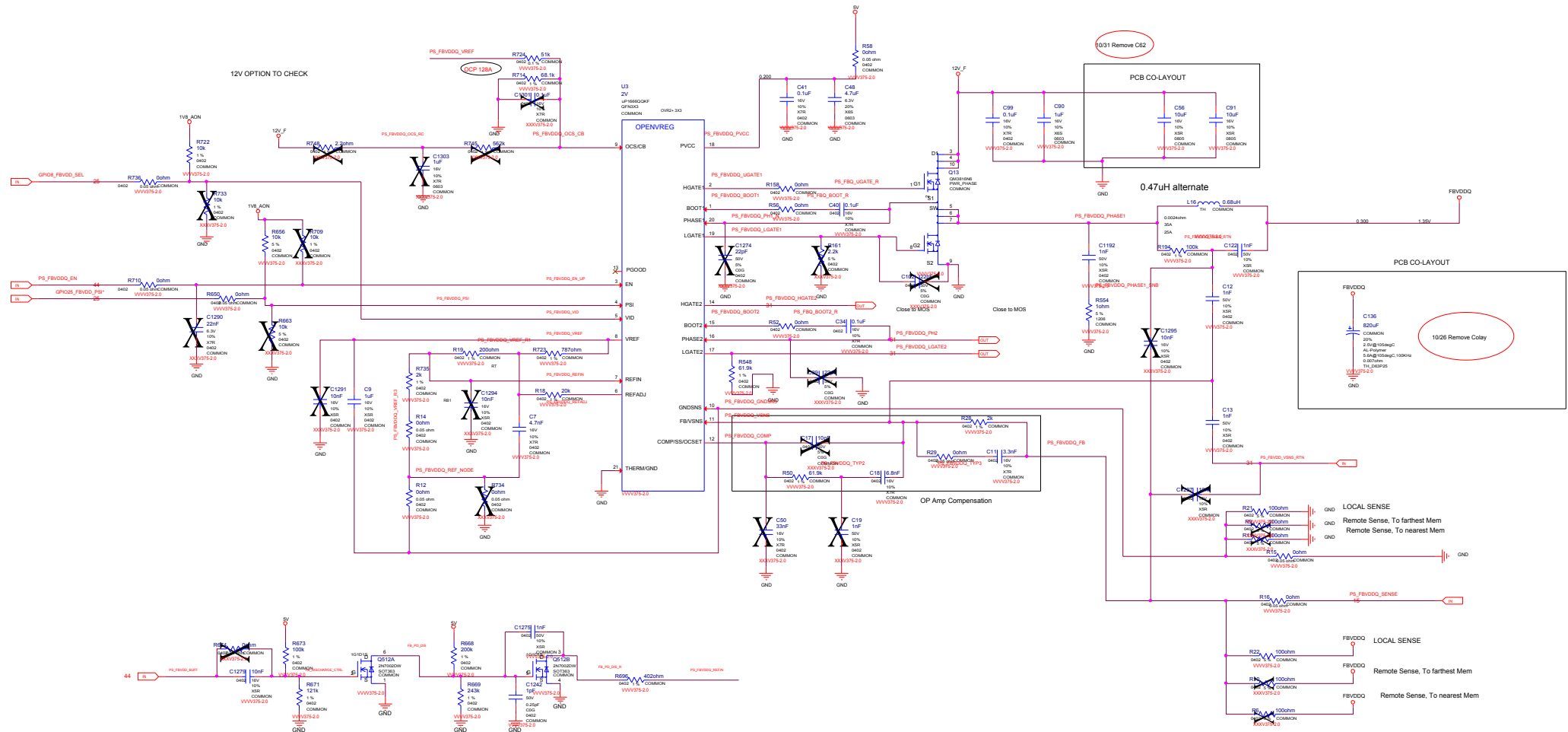
EN: $3.3V * (10K/27.4K) = 1.2V$
 ENABLE DISCHARGE OF PEX_VDD

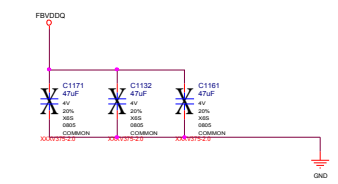
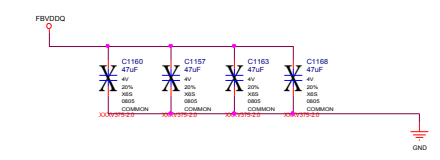
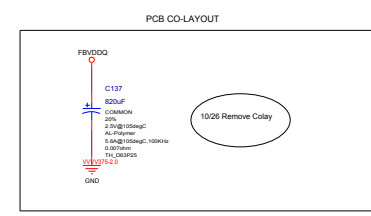
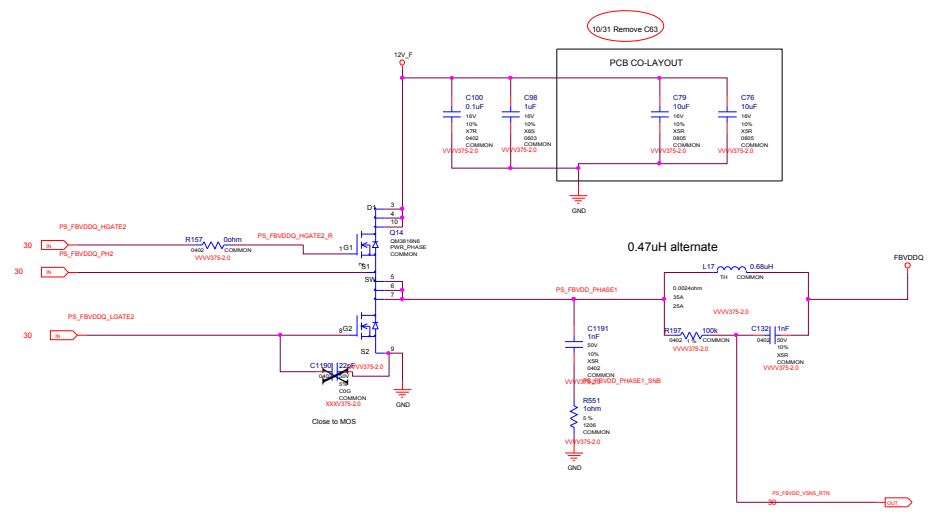
$0.6V * (1 + 10K/14.7K) = 1.008V$

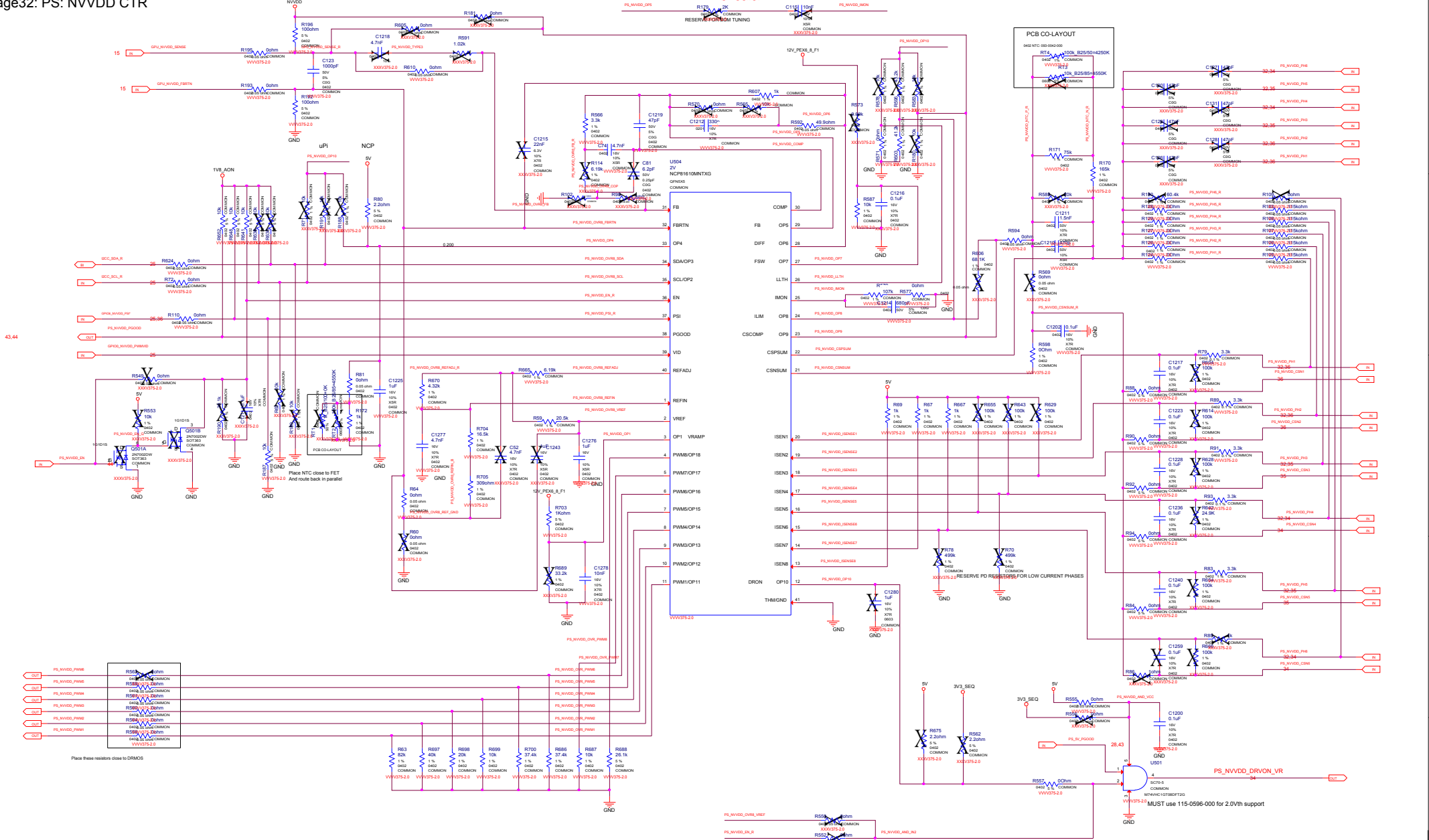
新增C2095 C2096 C2097

1026 Remove Colay

MICRO-STAR INT'L CO., LTD MS-V375		
Size: Custom	Document Description: PEX_VDD	Rev: 2.0
Date: Tuesday, November 13, 2016		
Sheet		29 of 83







43.44

Place these resistors close to DRONs

Place NTC close to FET
And route back in parallel

uPi EN has internal PU to 2.4V

MUST use 115-0598-000 for 2.0Vth support

	MICRO-STAR INT'L CO.,LTD	
	MS-V375	
Size	Document Description	Rev
Custom	PS: NVVDD CTR	2.0
Date:	Tuesday, November 13, 2018	Sheet
		32 of 53

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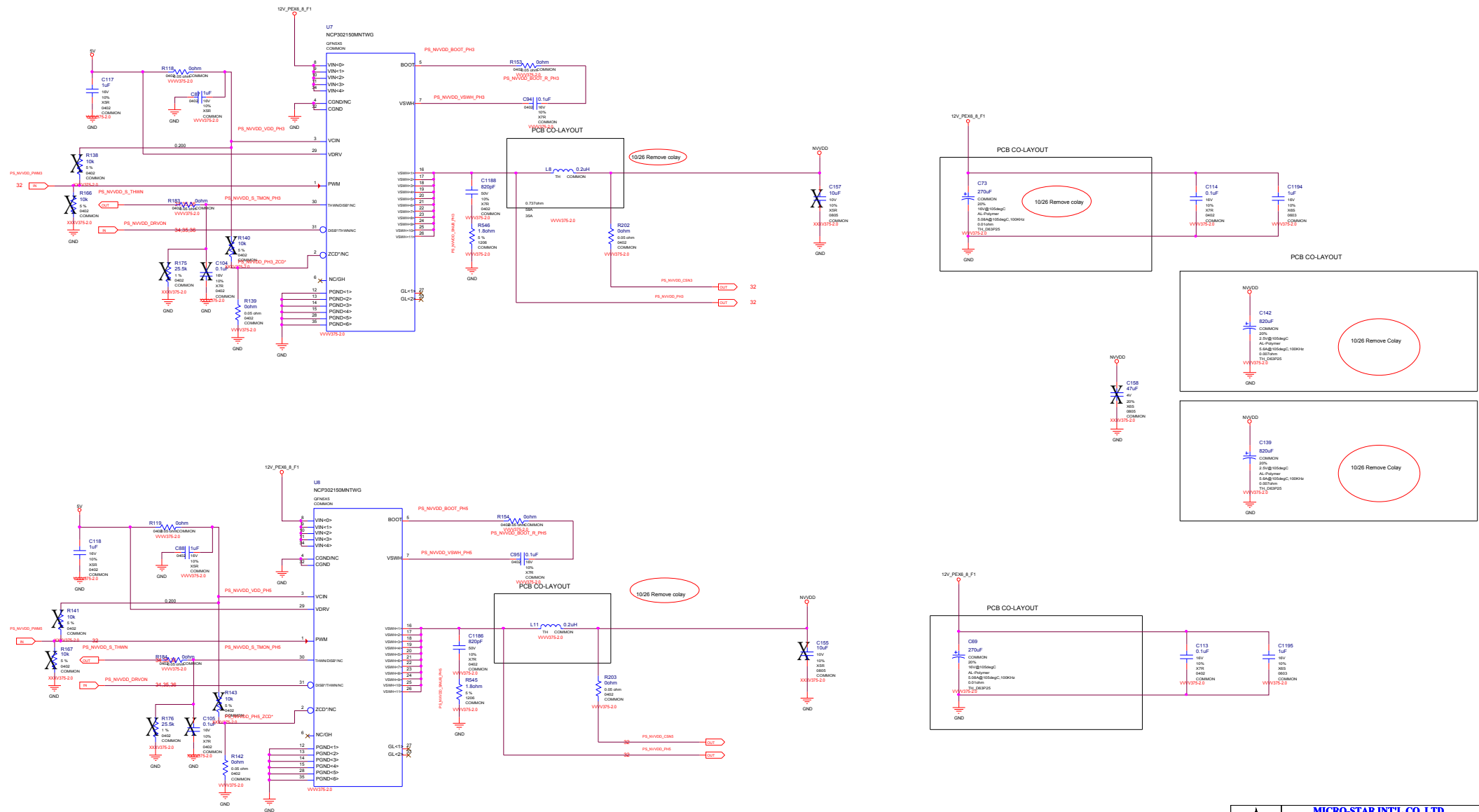
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5

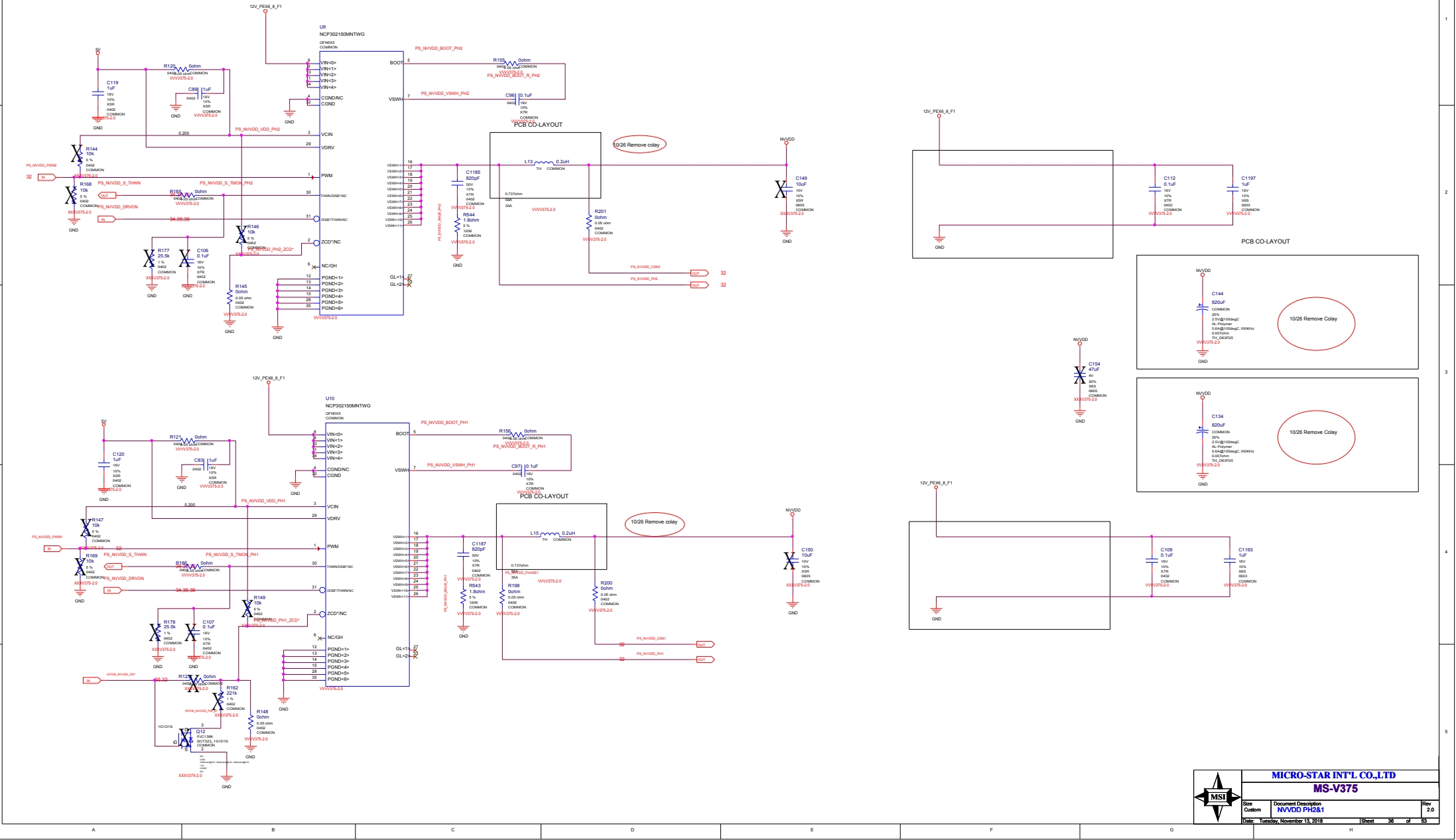
5

DROP OVR3i SOLUTION


	MICRO-STAR INT'L CO.,LTD	
	MS-V375	
	Size Custom	Document Description PS: NVVDD CTR OVR3i
Date: Tuesday, November 13, 2018		Sheet 33 of 53



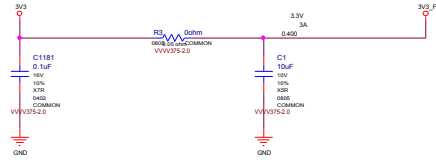
	MICRO-STAR INT'L CO.,LTD	
	MS-V375	
Size: Custom	Document Description: PS: NVVDD PH3&5	Rev: 2.0
Date: Tuesday, November 13, 2018		Sheet: 35 of 63



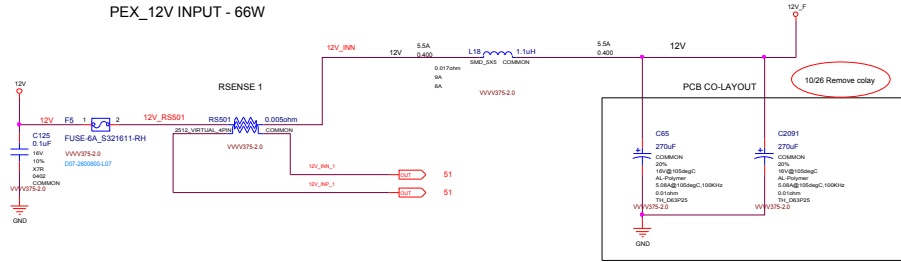
DELETE RAIL BALANCE CIRCUIT

	MICRO-STAR INT'L CO.,LTD	
	MS-V375	
	Size Custom	Document Description Input Power Balancing Switcher
Date: Tuesday, November 13, 2018		Sheet 37 of 53

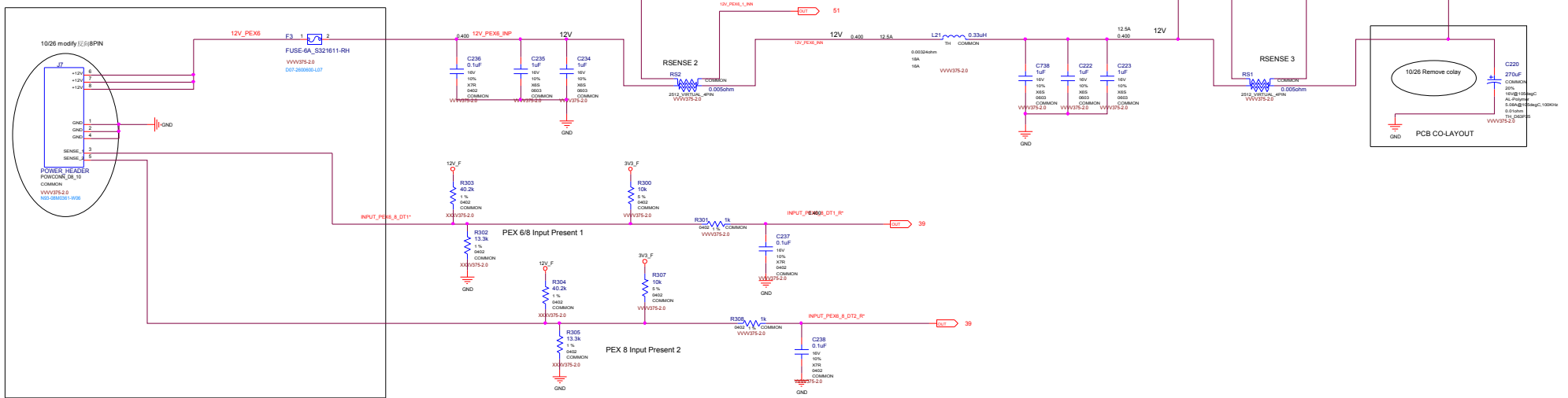
PEX 3V3 INPUT - 10W

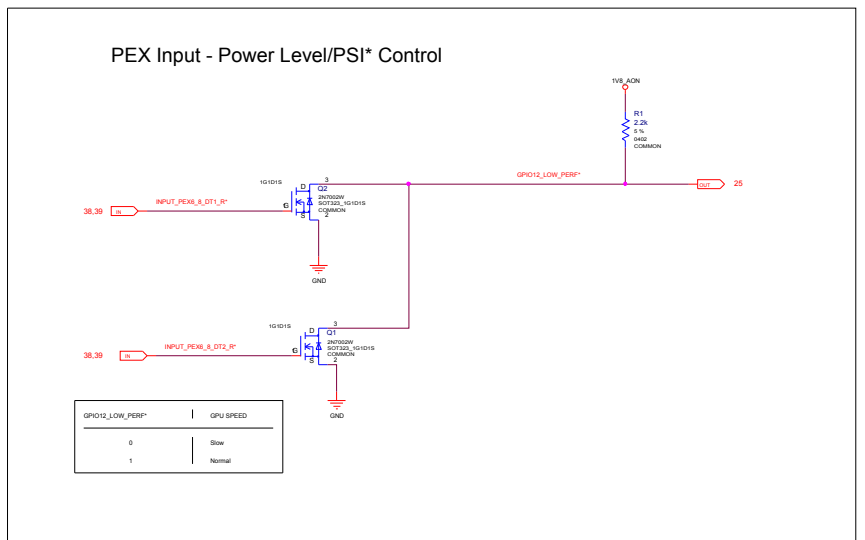
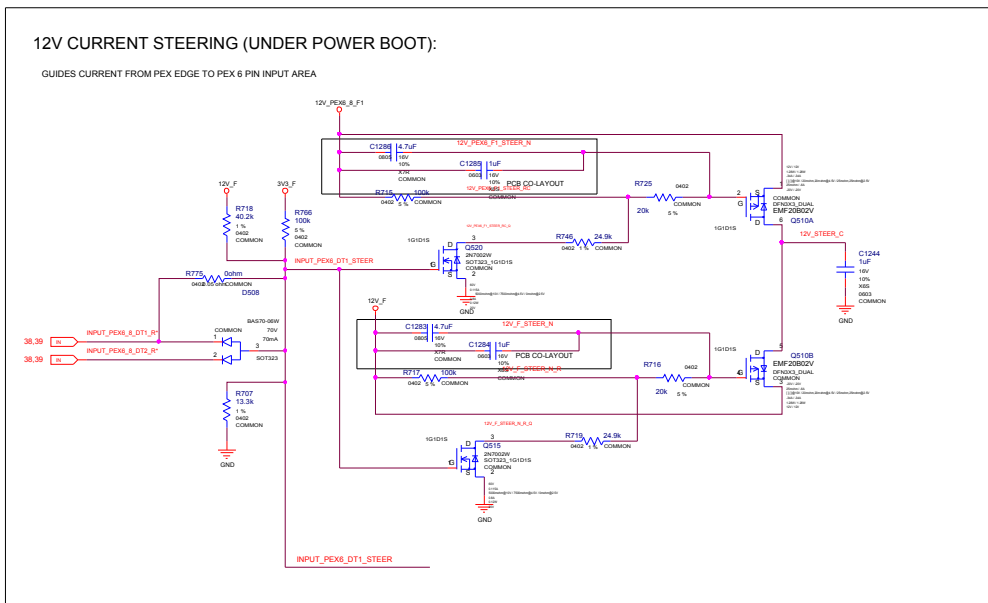
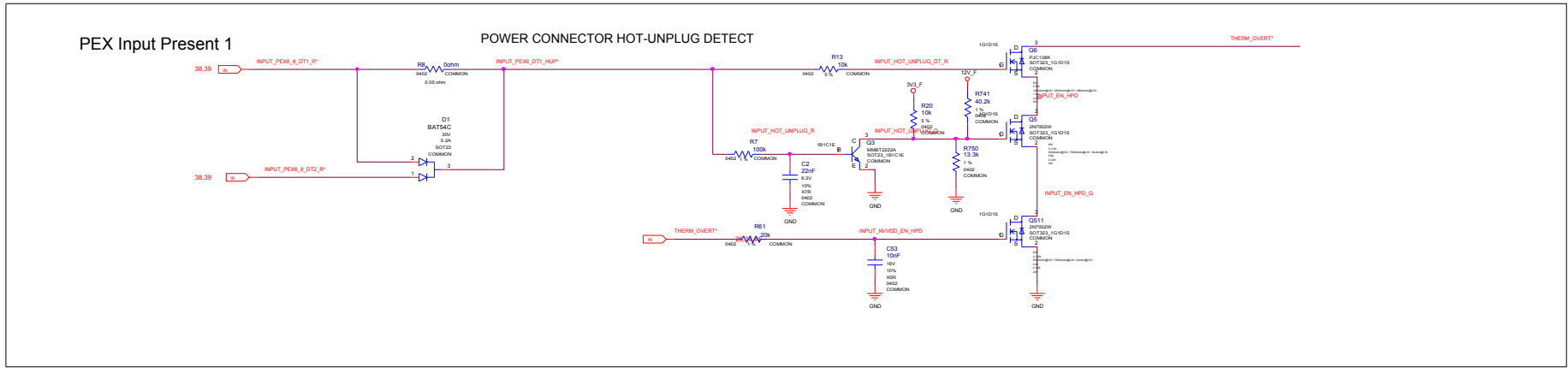


PEX_12V INPUT - 66W



PEX8 INPUT 1 - 2x4 PCIE CON 150W





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	MICRO-STAR INT'L CO.,LTD	
	MS-V375	
	Size Custom	Document Description BUCKBOOST
Date: Tuesday, November 13, 2018		Sheet 40 of 53

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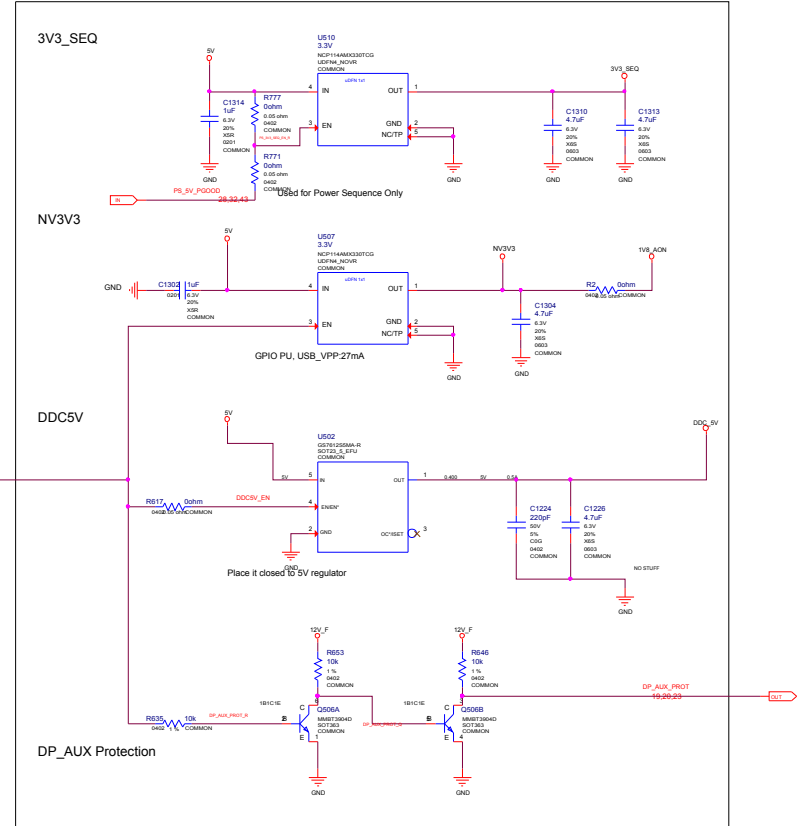
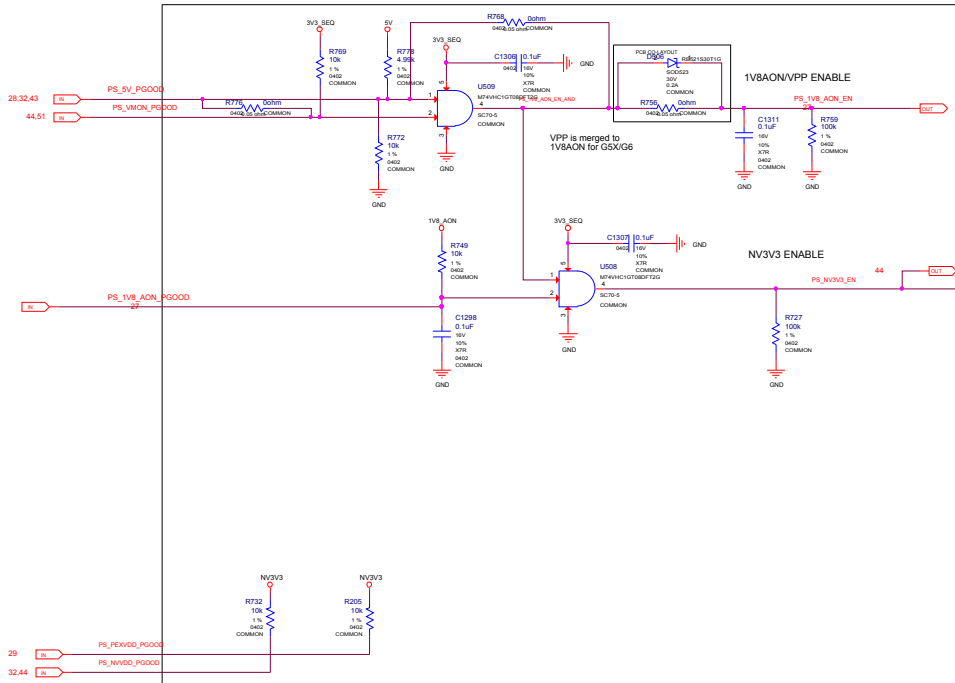
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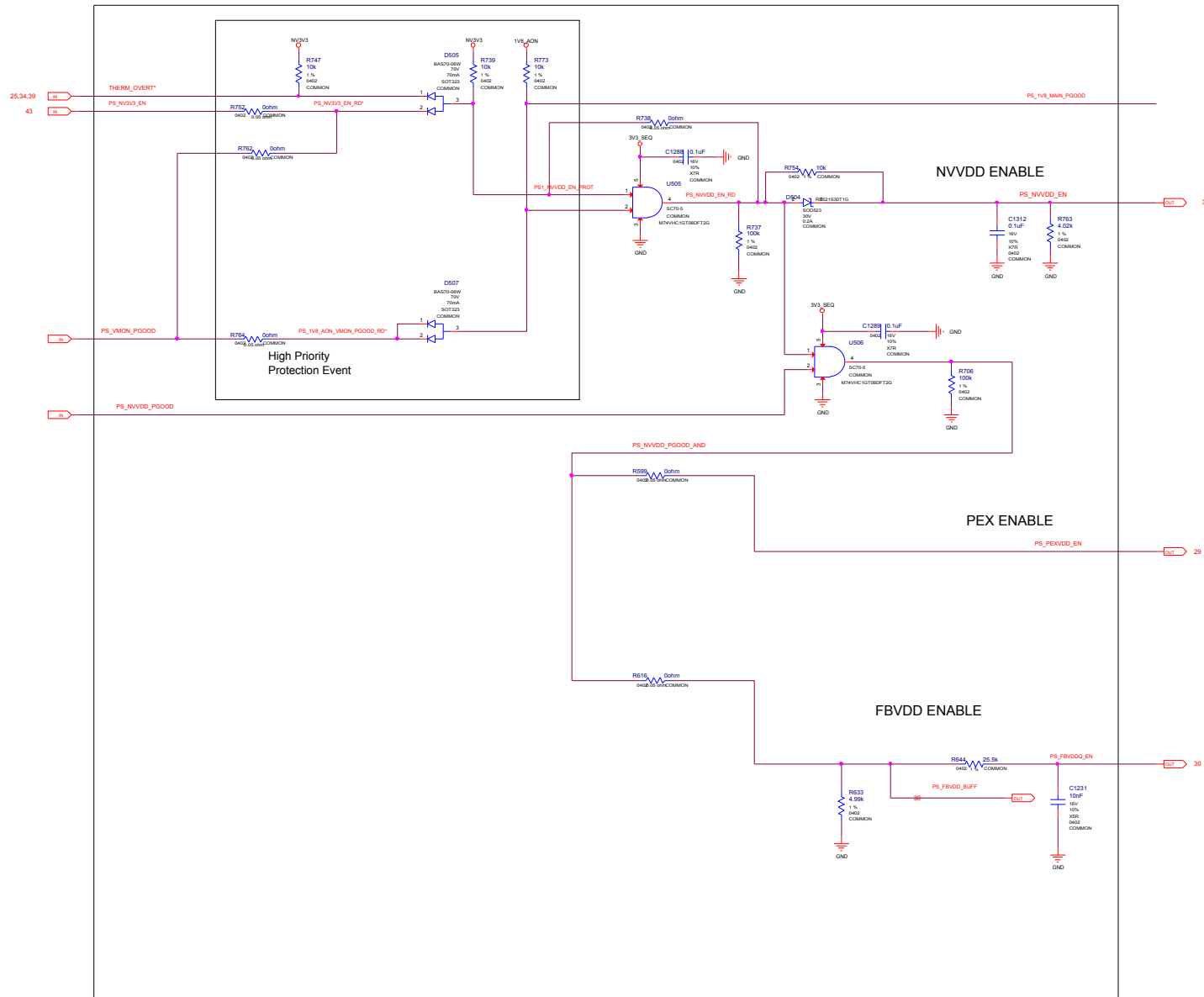
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	MS-V375		
	Size Custom	Document Description PPC	Rev 2.0
Date: Tuesday, November 13, 2018		Sheet 41 of 53	

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	MICRO-STAR INT'L CO.,LTD	
	MS-V375	
	Size Custom	Document Description 12V & 3V3_A SWITCHER
Date: Tuesday, November 13, 2018		Sheet 42 of 53





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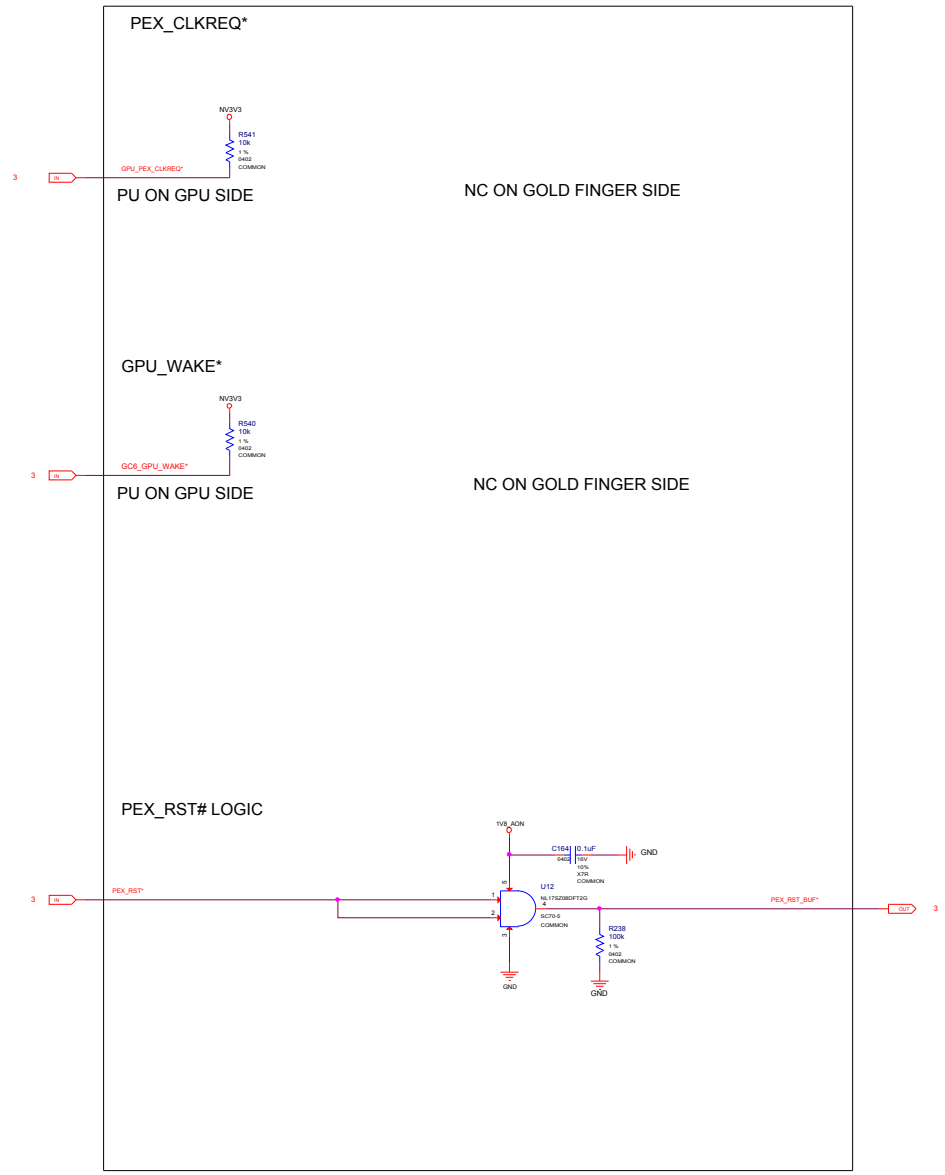
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	MICRO-STAR INT'L CO.,LTD	
	MS-V375	
	Size Custom	Document Description SEQUENCE:Voltage Monitor
Date: Tuesday, November 13, 2018		Sheet 45 of 53

	MICRO-STAR INT'L CO.,LTD	
	MS-V375	
	Size Custom	Document Description SEQUENCE:Discharge
Date: Tuesday, November 13, 2018		Sheet 46 of 53



A B C D E F G H

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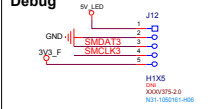
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A B C D E F G H

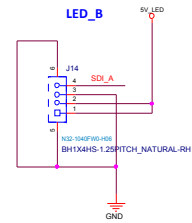
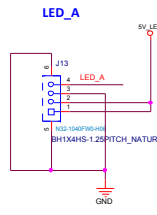
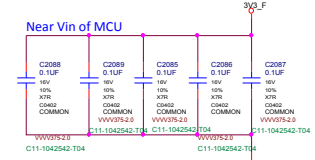
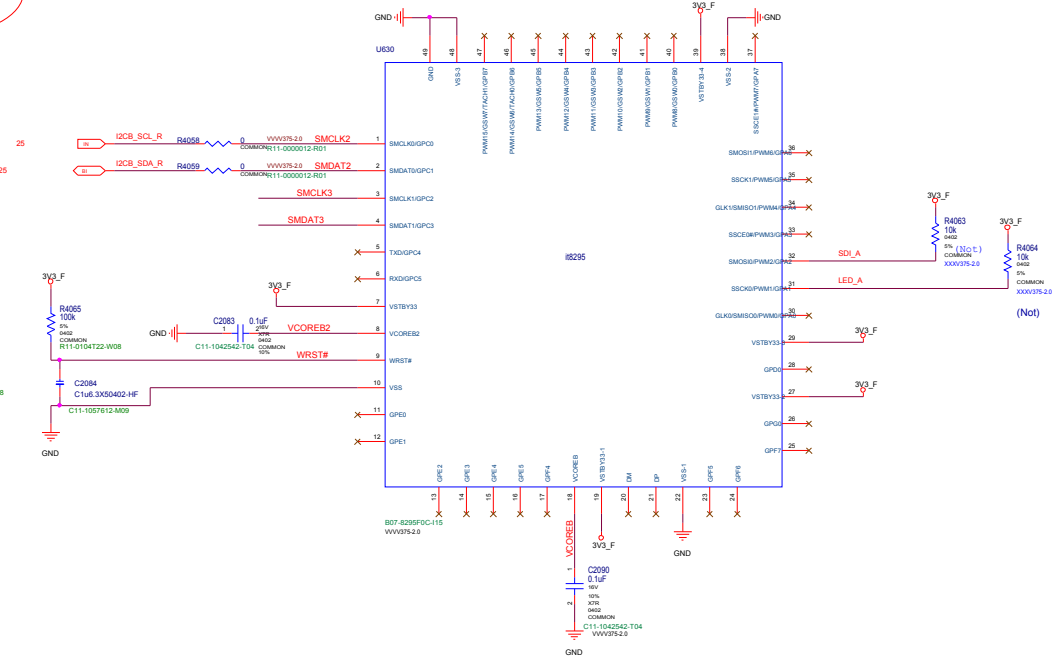
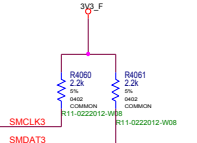
	MICRO-STAR INT'L CO.,LTD	
	MS-V375	
	Size Custom	Document Description LOGO LED
Date: Tuesday, November 13, 2018		Sheet 48 of 53

Firmware Programming

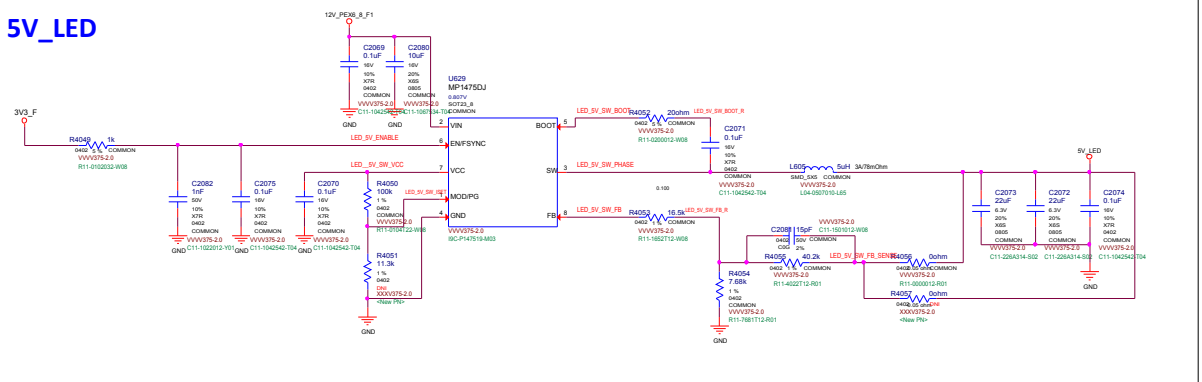
Debug

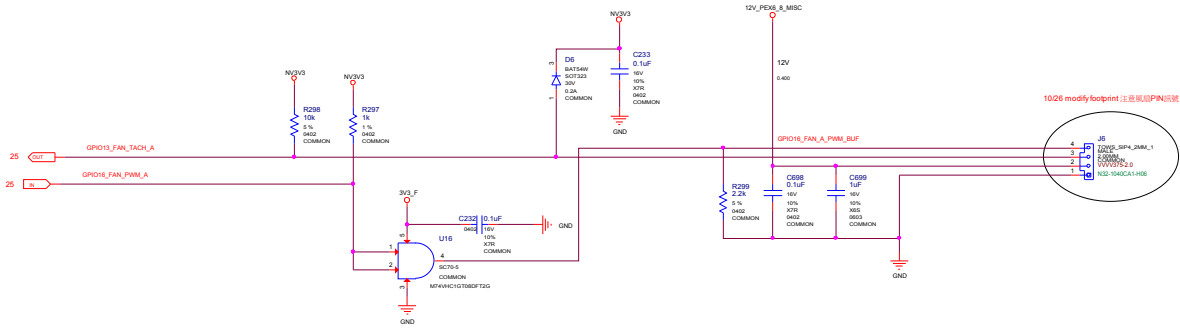


ADD LED



5V_LED

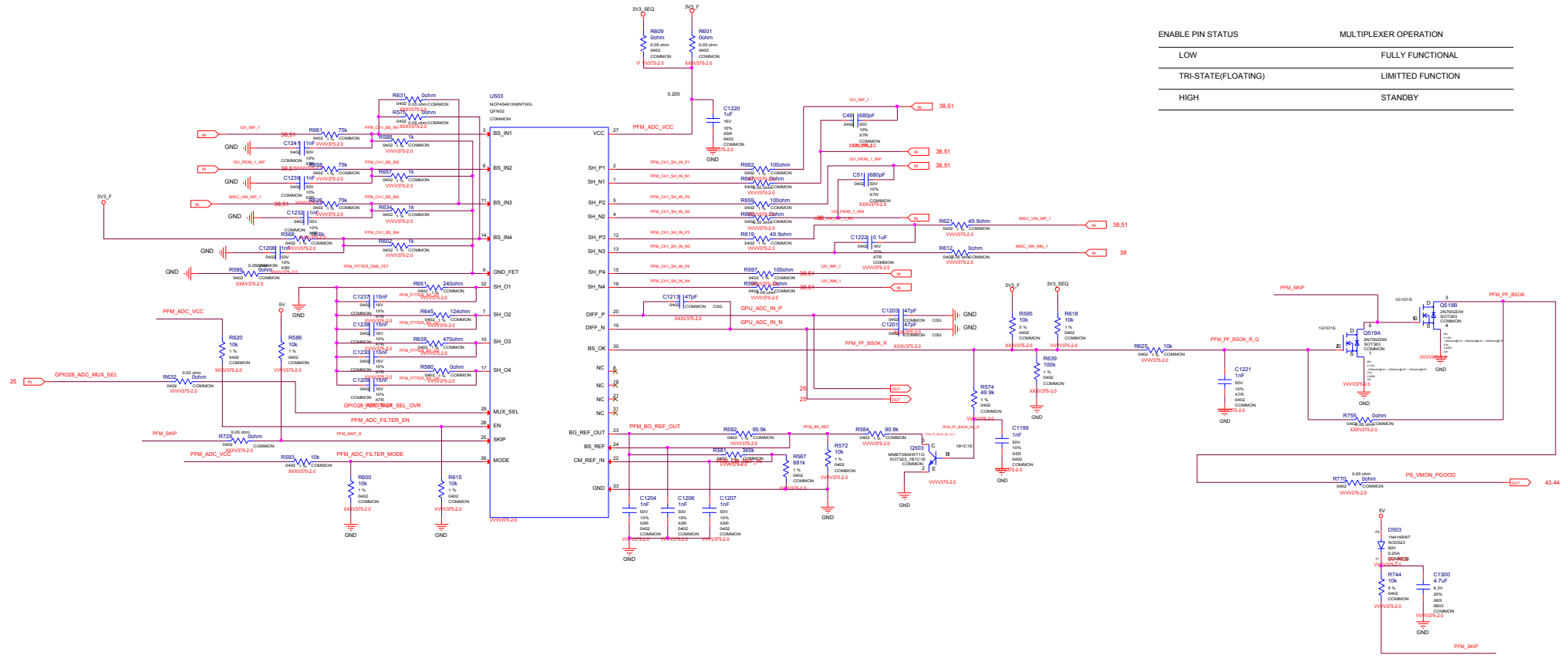




		MICRO-STAR INT'L CO.,LTD	
MS-V375			
Size	Document Description	Rev	
Custom	FAN	2.0	
Date: Tuesday, November 13, 2018		Sheet	50 of 53

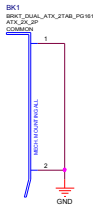
MODE PIN STATUS	MULTIPLEXER OPERATION
LOW	DEVICE A
TRI-STATE(FLOATING)	STAND-ALONE
HIGH	DEVICE B

ENABLE PIN STATUS	MULTIPLEXER OPERATION
LOW	FULLY FUNCTIONAL
TRI-STATE(FLOATING)	LIMITED FUNCTION
HIGH	STANDBY

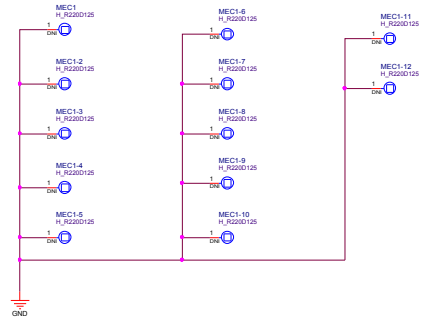


	MICRO-STAR INT'L CO.,LTD	
	MS-V375	
	Size: Custom Document Description: PWR SENSE Date: Tuesday, November 13, 2018	Rev: 2.0 Sheet: 61 of 63

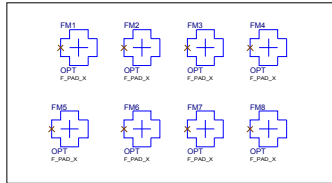
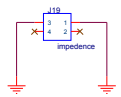
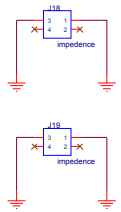
Bracket:



MOUNTING HOLES FOR HS:



BACK STIFFENER:



	MICRO-STAR INT'L CO.,LTD	
	MS-V375	
	Size Custom	Document Description PTC
Date: Tuesday, November 13, 2018		Sheet 53 of 53