

GA102 DT SKU P-BOARD

350W, FH Std PCB, 384b, GDDR6X x8
DP + DP + DP + HDMI/DP

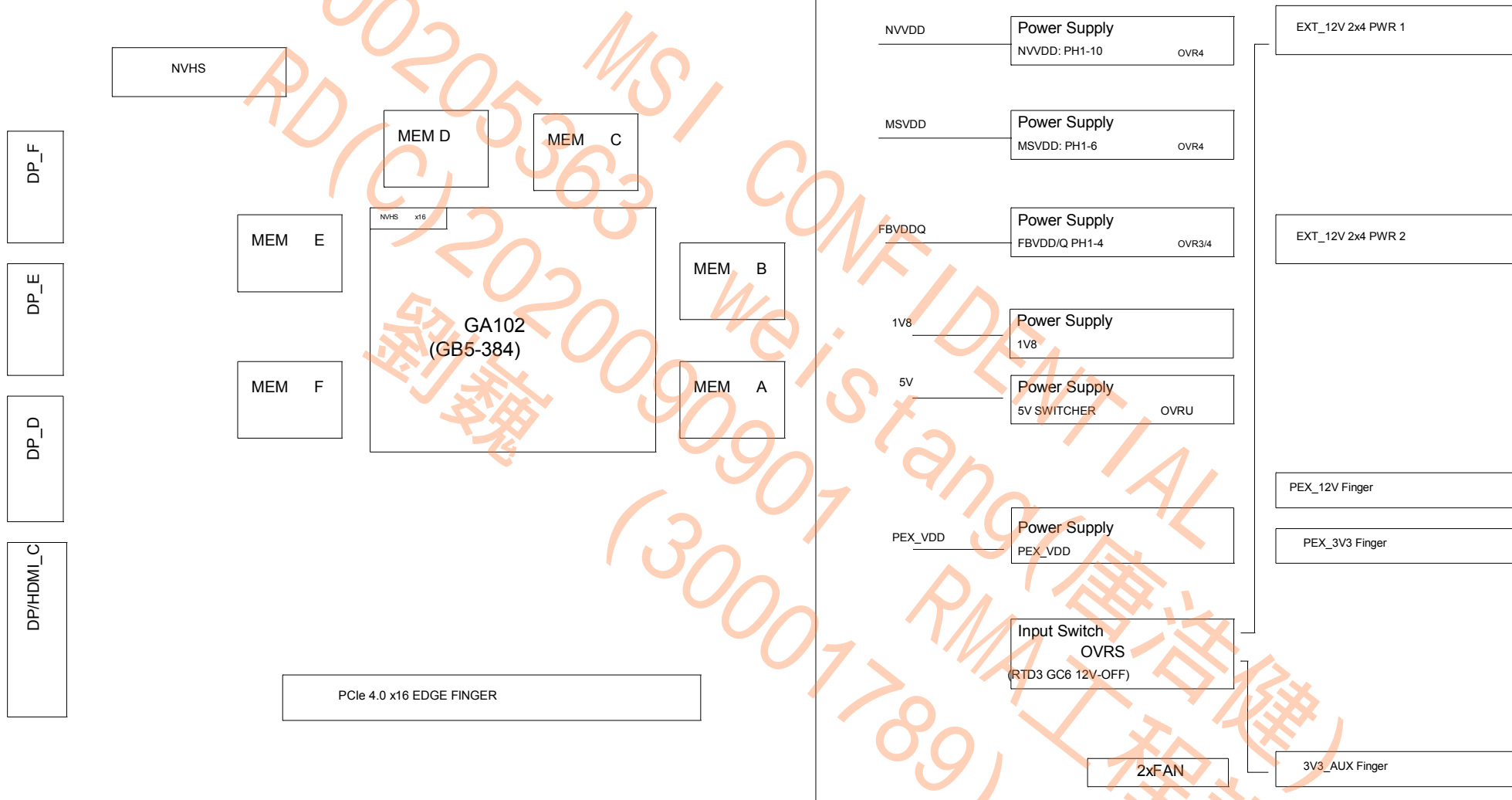
TABLE OF CONTENTS

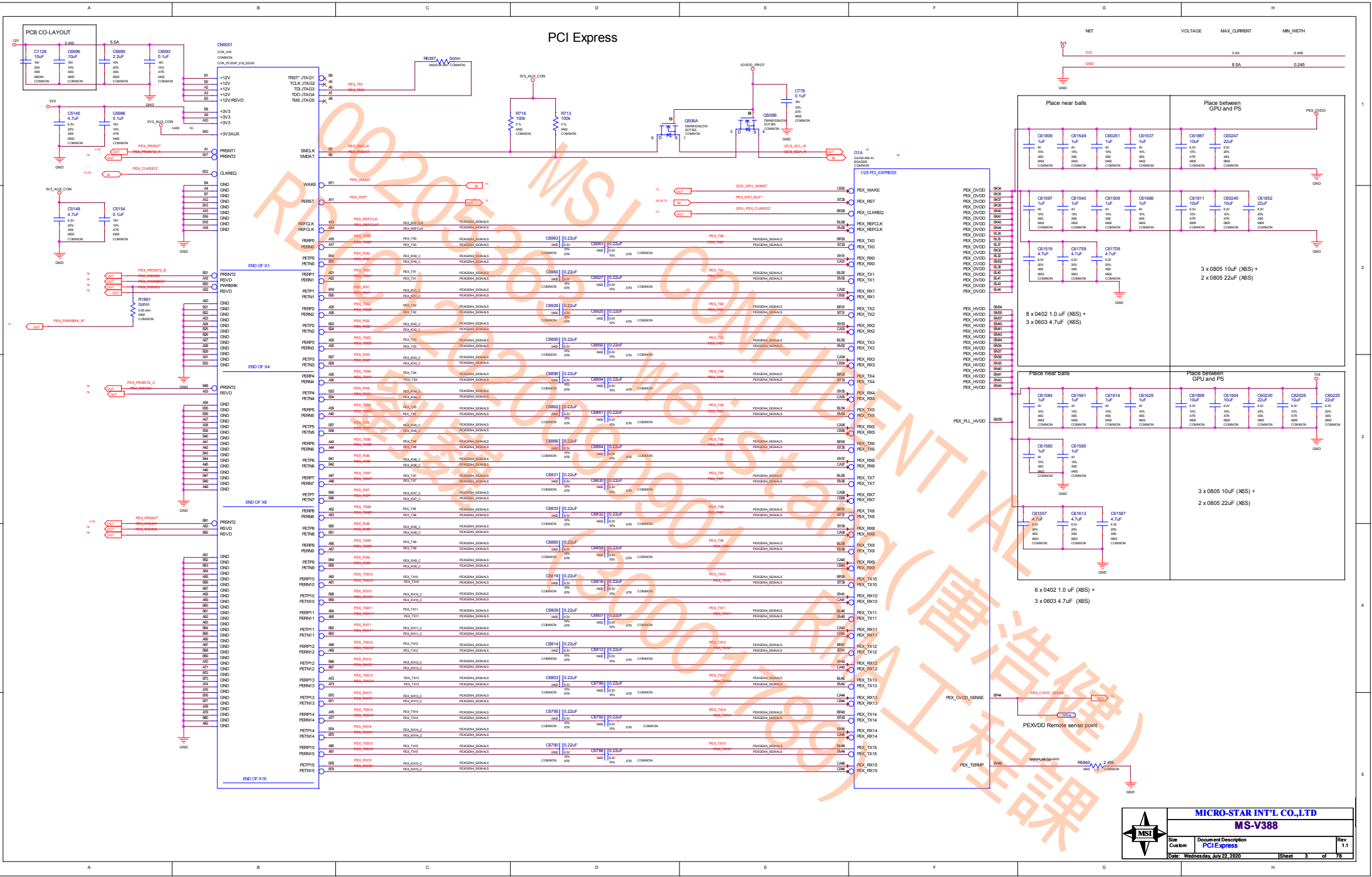
Page	Description
1	Table of Contents
2	BLOCK DIAGRAM
3	PCI EXPRESS
4	MEMORY: GPU PARTITION A/B
5	MEMORY: FBA PARTITION[31:0]
6	MEMORY: FBA PARTITION[63:32]
7	MEMORY: FBB PARTITION[31:0]
8	MEMORY: FBB PARTITION[63:31]
9	MEMORY: GPU PARTITION C/D
10	MEMORY: FBC PARTITION[31:0]
11	MEMORY: FBC PARTITION[63:32]
12	MEMORY: FBD PARTITION[31:0]
13	MEMORY: FBD PARTITION[63:32]
14	MEMORY: GPU PARTITION E/F
15	MEMORY: FBE PARTITION[31:0]
16	MEMORY: FBE PARTITION[63:32]
17	MEMORY: FBF PARTITION[31:0]
18	MEMORY: FBF PARTITION[63:32]
19	GPU GND, RFUs & RSVD
20	GPU POWERS
21	GPU: NVVDD DECOUPLING
22	GPU: FBVDD DECOUPLING
23	GPU: MSVDD DECOUPLING
24	BLANK
25	NVHS x16

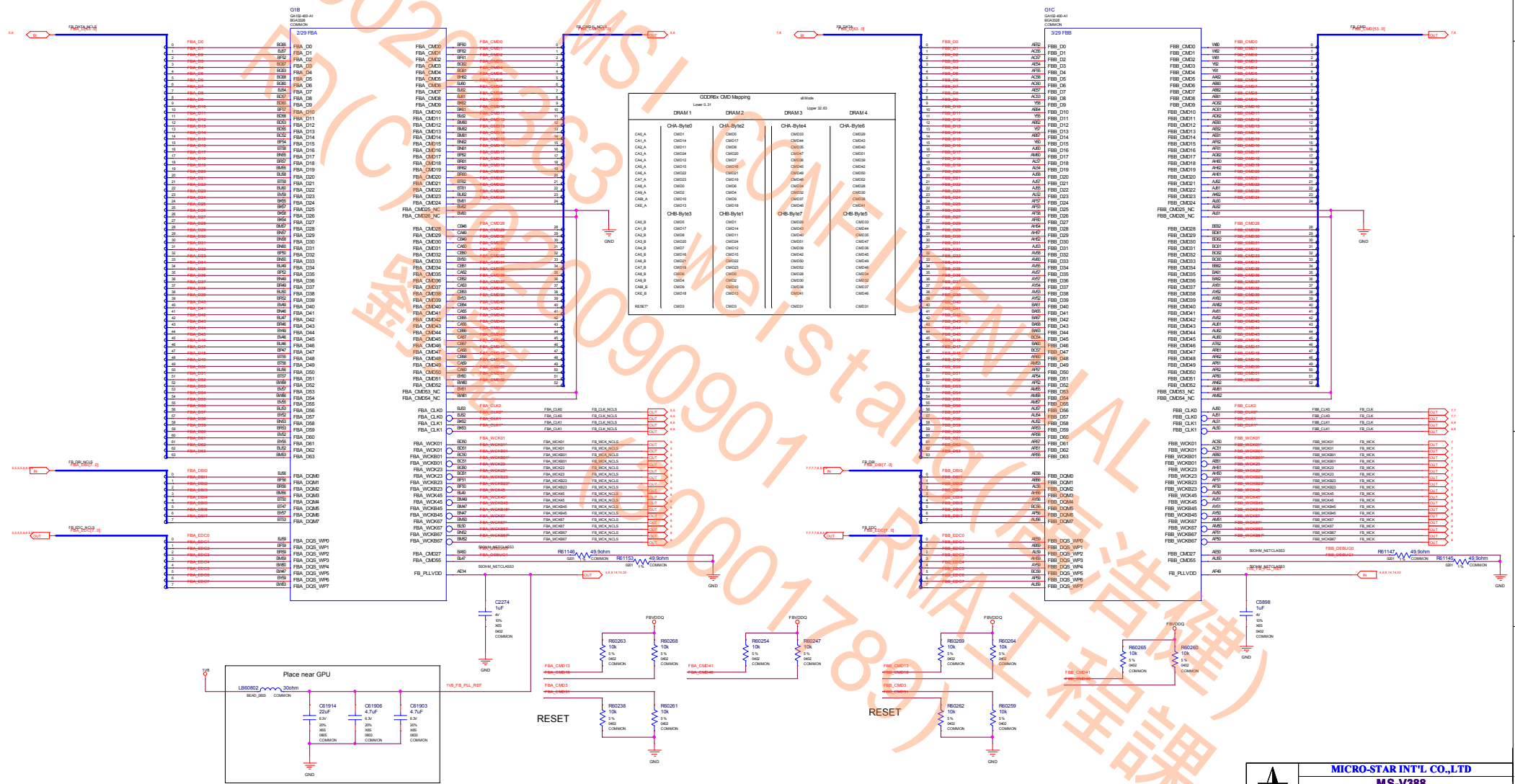
Page	Description
26	MISC: THERMAL, JTAG, GPIO
27	IFPA UNUSED, IFPB UNUSED
28	IFPE DP
29	IFPD DP
30	IFPC HDMI/DP
31	IFPF DP
32	MISC. ROM, STRAPS
33	MISC. XTAL, PLL
34	PS: 5V
35	PS: PEX_DVDD and 1V8
36	BLANK
37	PS: FBVDD Controller OVR3
38	PS: FBVDDQ OVR4
39	PS: FBVDD PH1
40	PS: FBVDD PH3
41	PS: FBVDD PH2
42	PS: FBVDD PH4
43	PS: FBVDD OUTPUT CAP
44	PS: MSVDD CONTROLLER
45	PS: MSVDD PH1
46	PS: MSVDD PH2
47	PS: MSVDD PH3 and PH5
48	PS: MSVDD PH4 and PH6
49	PS: MSVDD OUTPUT CAP(TOP)
50	BLANK

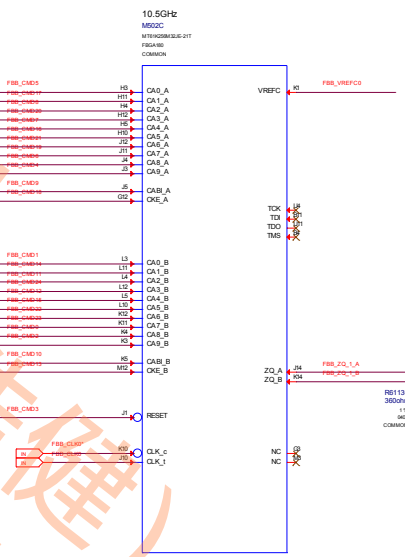
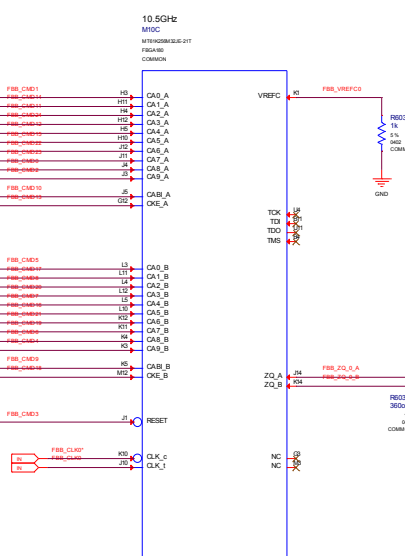
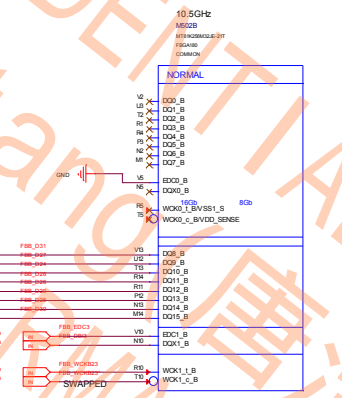
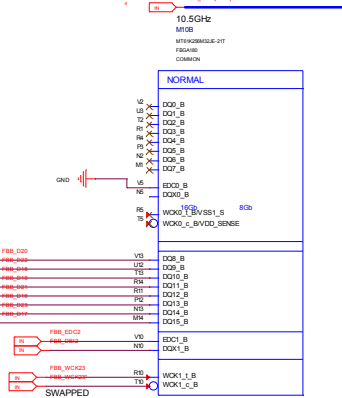
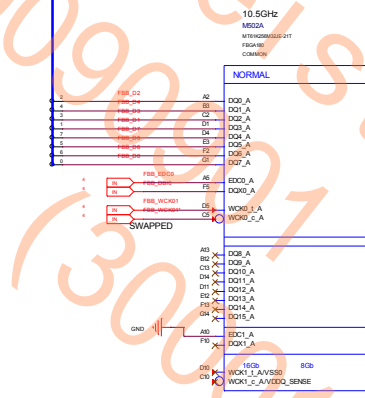
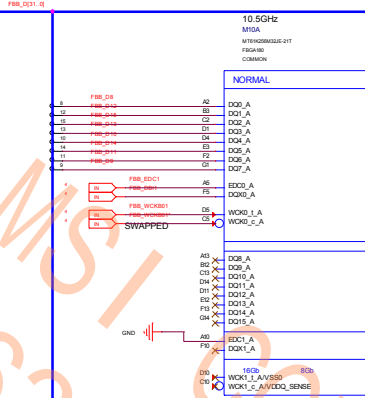
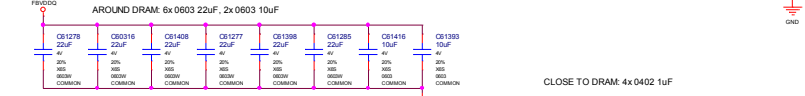
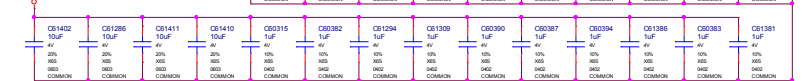
Page	Description
51	PS: NVVDD Controller_OVR8
52	PS: NVVDD PH1 (PWM1)
53	PS: NVVDD PH2 (PWM6)
54	PS: NVVDD PH3 (PWM3) and PH4 (PWM3)
55	PS: NVVDD PH5 (PWM7) and PH7 (PWM8)
56	PS: NVVDD PH6 (PWM7)
57	PS: NVVDD PH8(PWM5) and PH9(PWM2)
58	PS: NVVDD PH10 (PWM4)
59	Colayout Notes
60	BLANK
61	PS: NVVDD OUTPUT CAP(TOP)
62	BLANK
63	PS: INPUT SWITCH RTD3
64	BLANK
65	PS: INPUTS, FILTERING, and, MONITORING
66	PS: HOT UNPLUG
67	PS: Discrete Power Steering
68	PS: PREFILTER
69	PS: PREFILTER B
70	Sequence: 5V, 1V8, 3V3_SEQ
71	Sequence: NV, PEX, FB EN
72	Sequence: 3V3 MONITOR
73	Sequence: MISC
74	MISC: LED & FAN
75	RGBW LED REF

Block Diagram









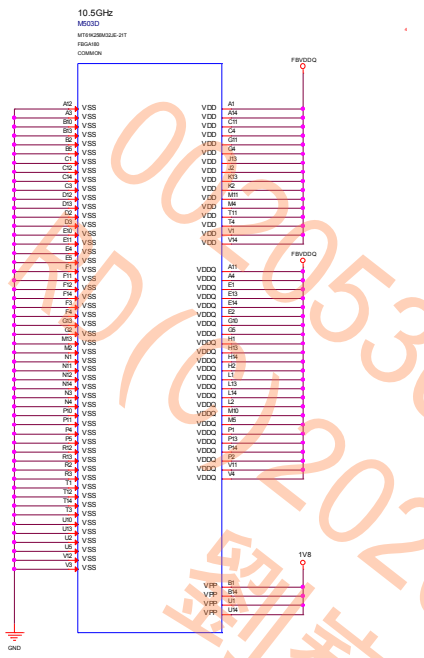
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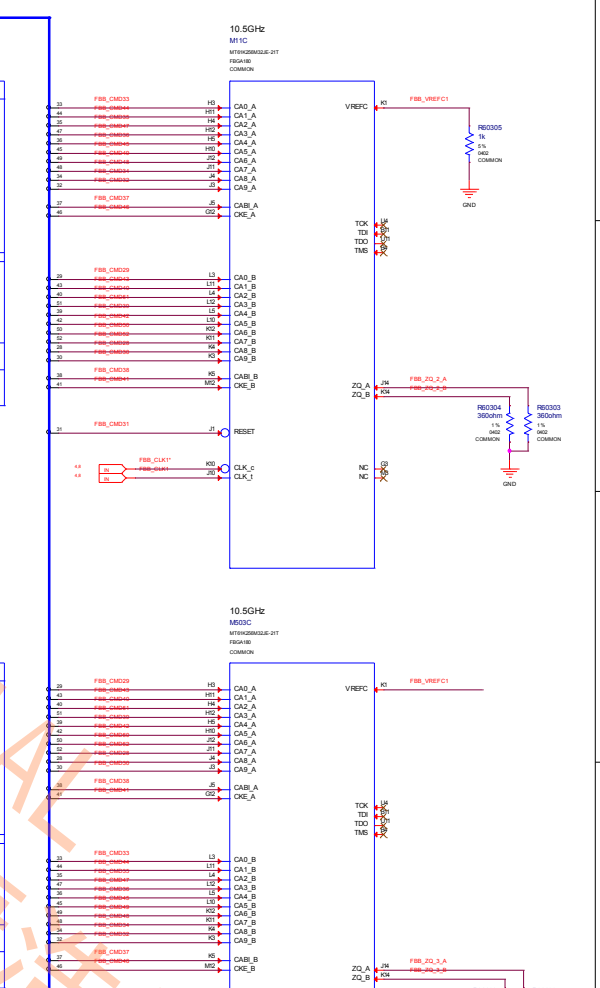
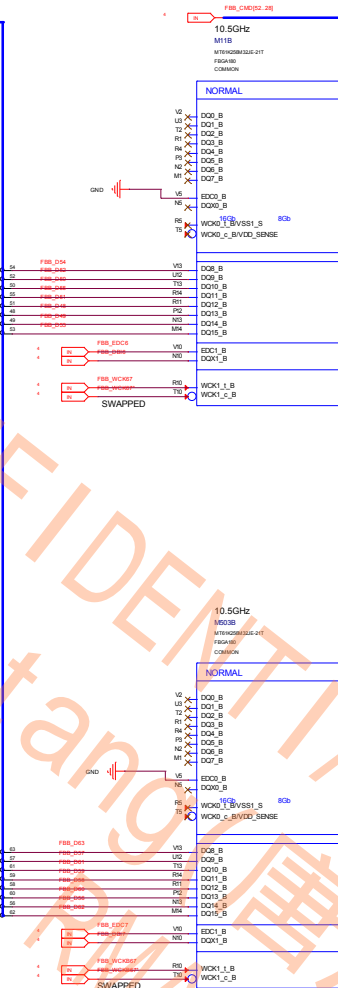
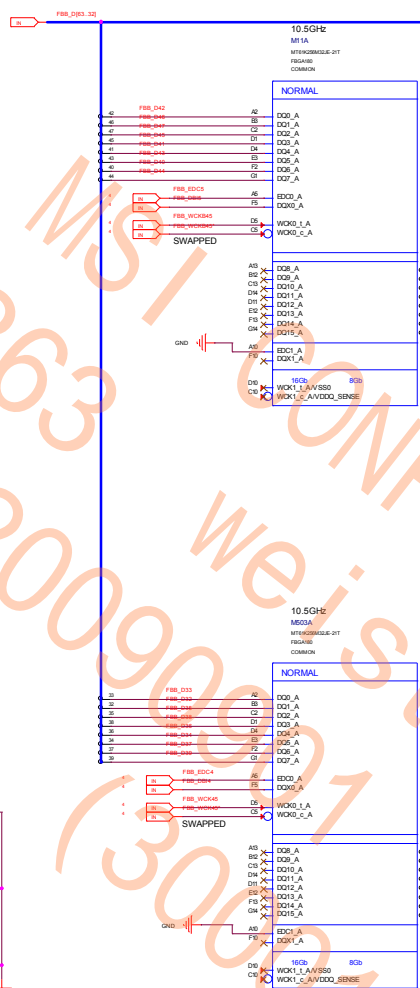
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Date: Wednesday, July 22, 2020	Sheet 7 of 78
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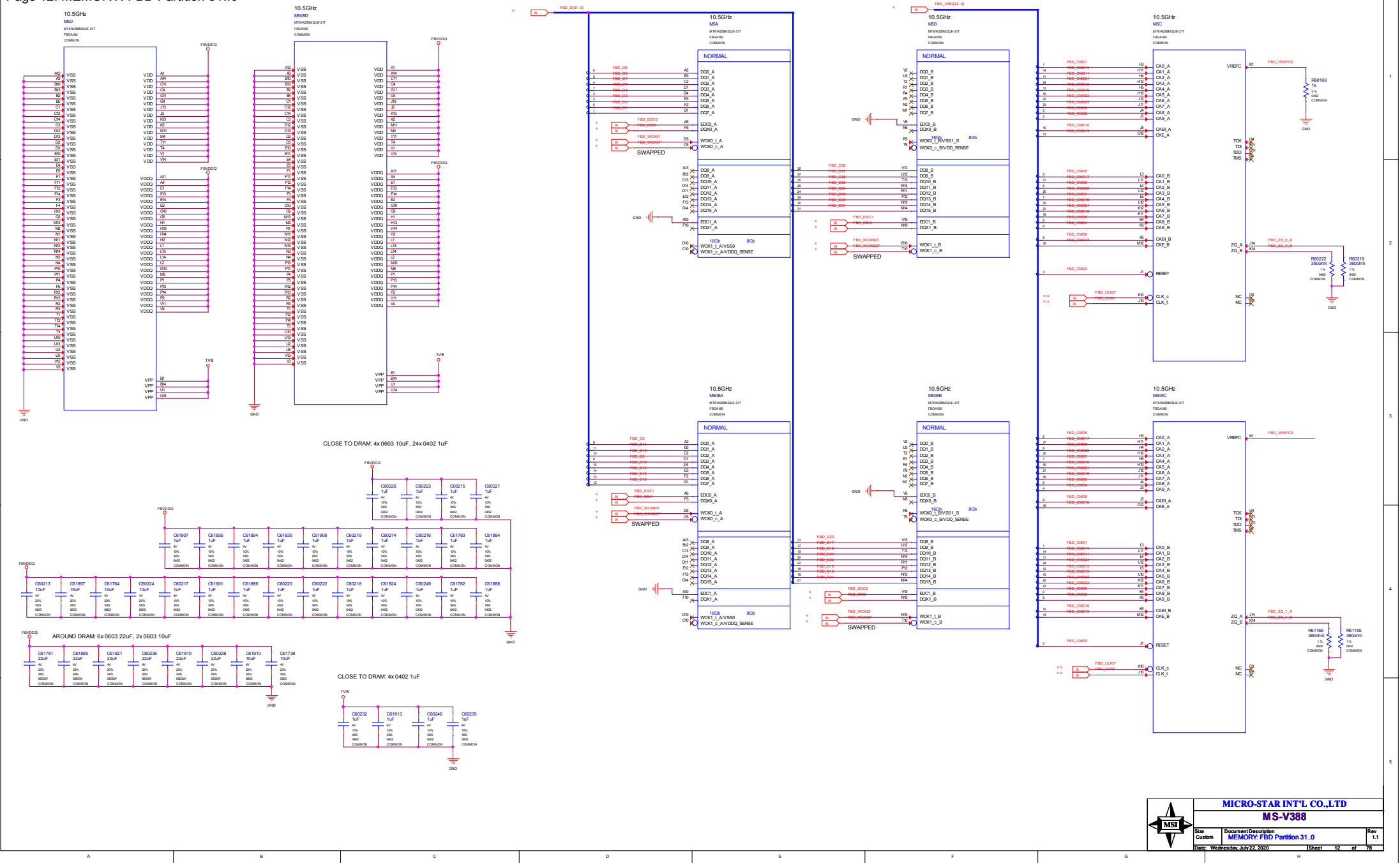


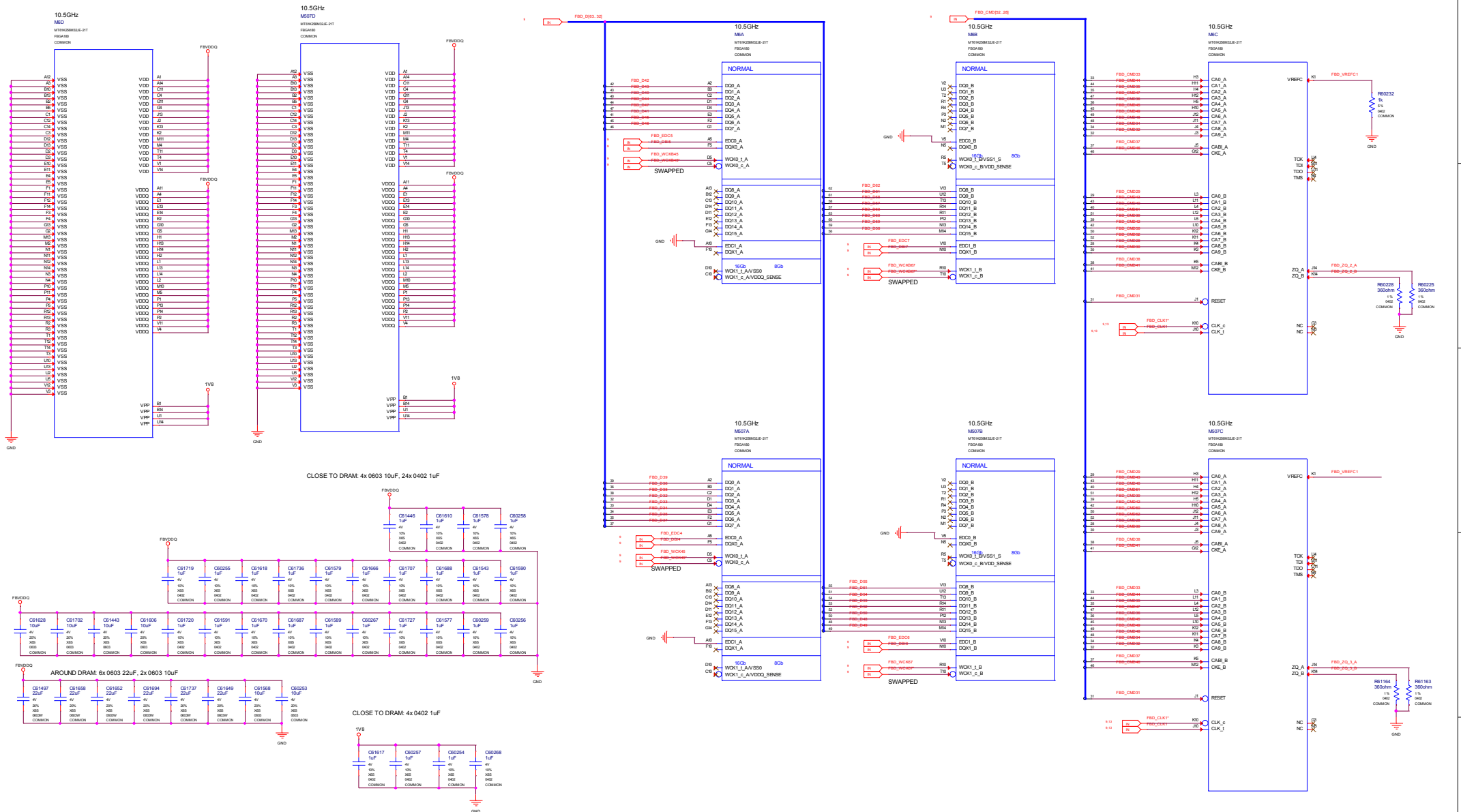
The schematic diagram illustrates the 100MHz PLL circuit. It begins with a 100MHz input signal connected to the input of a divider (C81288). The output of the divider is connected to the input of a VCO (C81395). The output of the VCO is connected to the input of a frequency divider (C81287). The output of C81287 is connected to the input of another frequency divider (C81304). The output of C81304 is connected to the input of a frequency divider (C81404). The output of C81404 is connected to the input of a frequency divider (C81303). The output of C81303 is connected to the input of a frequency divider (C81301). The output of C81301 is connected to the input of a frequency divider (C81300). The output of C81300 is connected to the input of a frequency divider (C80395). The output of C80395 is connected to the input of a frequency divider (C80399). The output of C80399 is connected to the input of a frequency divider (C81306). The output of C81306 is connected to the input of a frequency divider (C80402). The output of C80402 is connected to the input of a frequency divider (C80400). The output of C80400 is connected to the input of a frequency divider (C80406). The output of C80406 is connected to the 100MHz output pin. The circuit is powered by FBDIG and FBDIG0.

[illegible]

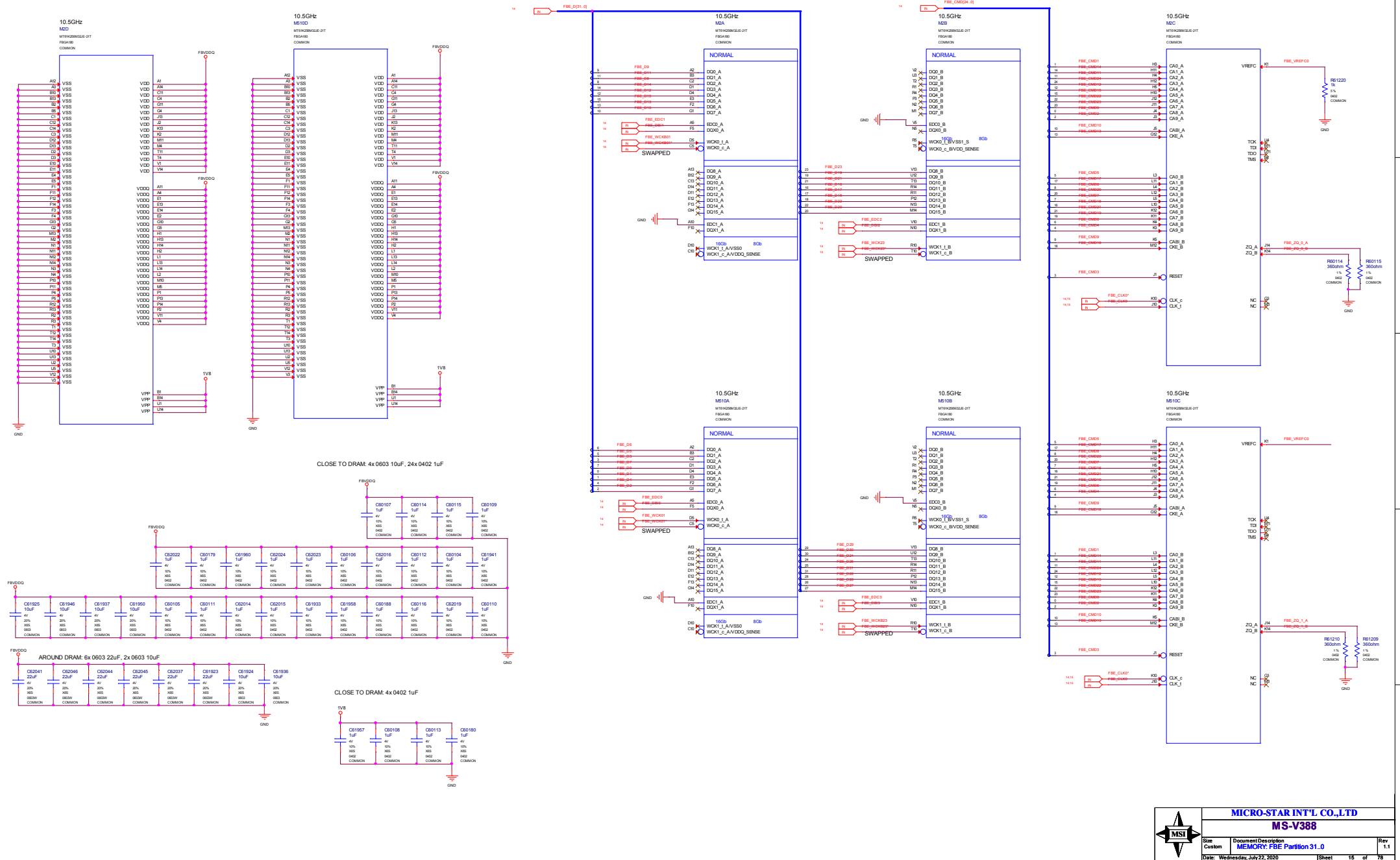
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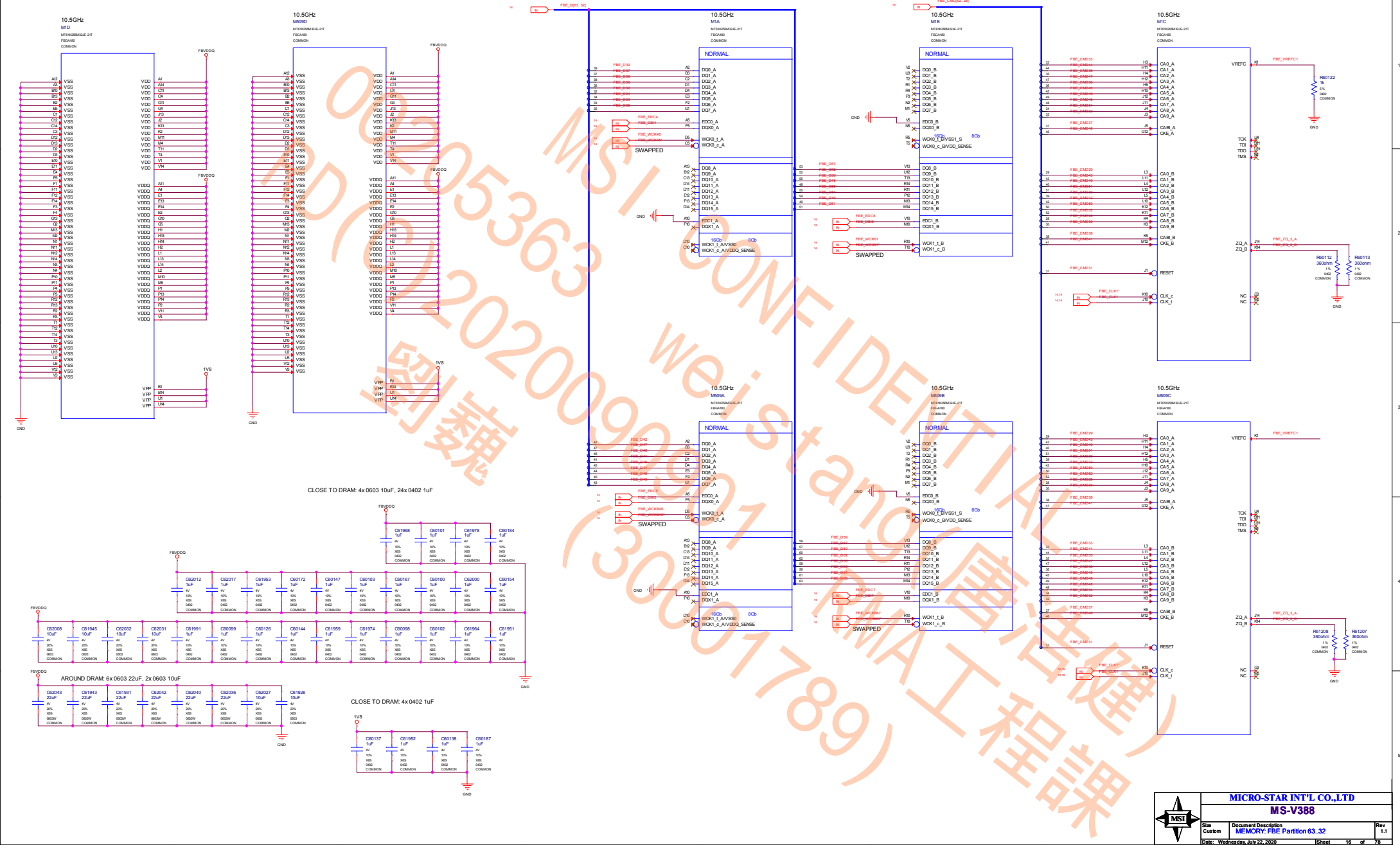


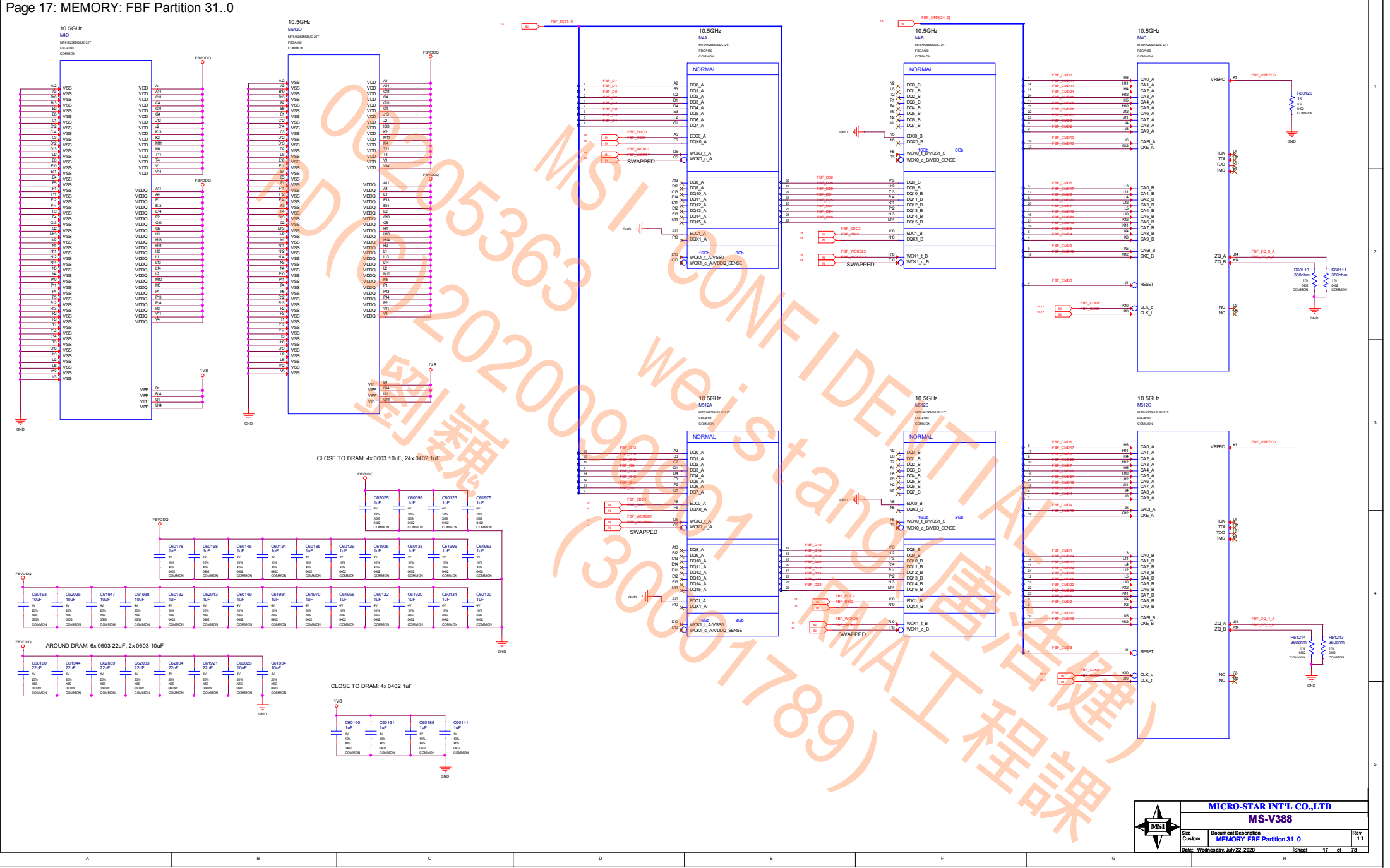


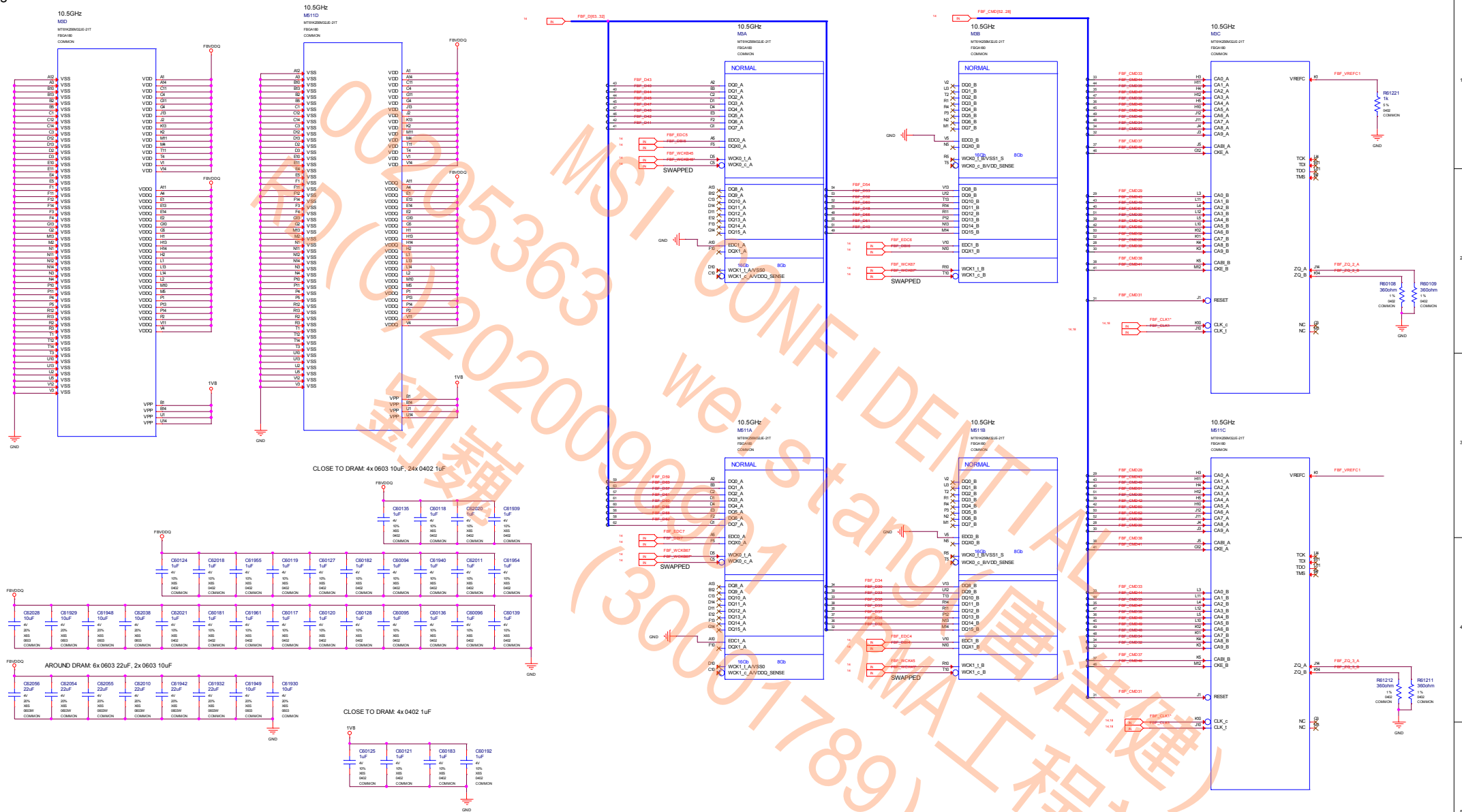












GPU GND, RFUs & RSVD

Diagram illustrating the pin connections for the G11, G12, G13, G14, G15, G16, G17, G18, G19, G20, G21, G22, G23, G24, G25, G26, G27, G28, G29, G30, G31, G32, G33, G34, G35, G36, G37, G38, G39, G40, G41, G42, G43, G44, G45, G46, G47, G48, G49, G50, G51, G52, G53, G54, G55, G56, G57, G58, G59, G60, G61, G62, G63, G64, G65, G66, G67, G68, G69, G70, G71, G72, G73, G74, G75, G76, G77, G78, G79, G80, G81, G82, G83, G84, G85, G86, G87, G88, G89, G90, G91, G92, G93, G94, G95, G96, G97, G98, G99, G100, G101, G102, G103, G104, G105, G106, G107, G108, G109, G110, G111, G112, G113, G114, G115, G116, G117, G118, G119, G120, G121, G122, G123, G124, G125, G126, G127, G128, G129, G130, G131, G132, G133, G134, G135, G136, G137, G138, G139, G140, G141, G142, G143, G144, G145, G146, G147, G148, G149, G150, G151, G152, G153, G154, G155, G156, G157, G158, G159, G160, G161, G162, G163, G164, G165, G166, G167, G168, G169, G170, G171, G172, G173, G174, G175, G176, G177, G178, G179, G180, G181, G182, G183, G184, G185, G186, G187, G188, G189, G190, G191, G192, G193, G194, G195, G196, G197, G198, G199, G200, G201, G202, G203, G204, G205, G206, G207, G208, G209, G210, G211, G212, G213, G214, G215, G216, G217, G218, G219, G220, G221, G222, G223, G224, G225, G226, G227, G228, G229, G230, G231, G232, G233, G234, G235, G236, G237, G238, G239, G240, G241, G242, G243, G244, G245, G246, G247, G248, G249, G250, G251, G252, G253, G254, G255, G256, G257, G258, G259, G260, G261, G262, G263, G264, G265, G266, G267, G268, G269, G270, G271, G272, G273, G274, G275, G276, G277, G278, G279, G280, G281, G282, G283, G284, G285, G286, G287, G288, G289, G290, G291, G292, G293, G294, G295, G296, G297, G298, G299, G300, G301, G302, G303, G304, G305, G306, G307, G308, G309, G310, G311, G312, G313, G314, G315, G316, G317, G318, G319, G320, G321, G322, G323, G324, G325, G326, G327, G328, G329, G330, G331, G332, G333, G334, G335, G336, G337, G338, G339, G340, G341, G342, G343, G344, G345, G346, G347, G348, G349, G350, G351, G352, G353, G354, G355, G356, G357, G358, G359, G360, G361, G362, G363, G364, G365, G366, G367, G368, G369, G370, G371, G372, G373, G374, G375, G376, G377, G378, G379, G380, G381, G382, G383, G384, G385, G386, G387, G388, G389, G390, G391, G392, G393, G394, G395, G396, G397, G398, G399, G400, G401, G402, G403, G404, G405, G406, G407, G408, G409, G410, G411, G412, G413, G414, G415, G416, G417, G418, G419, G420, G421, G422, G423, G424, G425, G426, G427, G428, G429, G430, G431, G432, G433, G434, G435, G436, G437, G438, G439, G440, G441, G442, G443, G444, G445, G446, G447, G448, G449, G450, G451, G452, G453, G454, G455, G456, G457, G458, G459, G460, G461, G462, G463, G464, G465, G466, G467, G468, G469, G470, G471, G472, G473, G474, G475, G476, G477, G478, G479, G480, G481, G482, G483, G484, G485, G486, G487, G488, G489, G490, G491, G492, G493, G494, G495, G496, G497, G498, G499, G500, G501, G502, G503, G504, G505, G506, G507, G508, G509, G510, G511, G512, G513, G514, G515, G516, G517, G518, G519, G520, G521, G522, G523, G524, G525, G526, G527, G528, G529, G530, G531, G532, G533, G534, G535, G536, G537, G538, G539, G540, G541, G542, G543, G544, G545, G546, G547, G548, G549, G550, G551, G552, G553, G554, G555, G556, G557, G558, G559, G560, G561, G562, G563, G564, G565, G566, G567, G568, G569, G570, G571, G572, G573, G574, G575, G576, G577, G578, G579, G580, G581, G582, G583, G584, G585, G586, G587, G588, G589, G590, G591, G592, G593, G594, G595, G596, G597, G598, G599, G600, G601, G602, G603, G604, G605, G606, G607, G608, G609, G610, G611, G612, G613, G614, G615, G616, G617, G618, G619, G620, G621, G622, G623, G624, G625, G626, G627, G628, G629, G630, G631, G632, G633, G634, G635, G636, G637, G638, G639, G640, G641, G642, G643, G644, G645, G646, G647, G648, G649, G650, G651, G652, G653, G654, G655, G656, G657, G658, G659, G660, G661, G662, G663, G664, G665, G666, G667, G668, G669, G670, G671, G672, G673, G674, G675, G676, G677, G678, G679, G680, G681, G682, G683, G684, G685, G686, G687, G688, G689, G690, G691, G692, G693, G694, G695, G696, G697, G698, G699, G700, G701, G702, G703, G704, G705, G706, G707, G708, G709, G710, G711, G712, G713, G714, G715, G716, G717, G718, G719, G720, G721, G722, G723, G724, G725, G726, G727, G728, G729, G730, G731, G732, G733, G734, G735, G736, G737, G738, G739, G740, G741, G742, G743, G744, G745, G746, G747, G748, G749, G750, G751, G752, G753, G754, G755, G756, G757, G758, G759, G760, G761, G762, G763, G764, G765, G766, G767, G768, G769, G770, G771, G772, G773, G774, G775, G776, G777, G778, G779, G780, G781, G782, G783, G784, G785, G786, G787, G788, G789, G790, G791, G792, G793, G794, G795, G796, G797, G798, G799, G800, G801, G802, G803, G804, G805, G806, G807, G808, G809, G810, G811, G812, G813, G814, G815, G816, G817, G818, G819, G820, G821, G822, G823, G824, G825, G826, G827, G828, G829, G830, G831, G832, G833, G834, G835, G836, G837, G838, G839, G840, G8

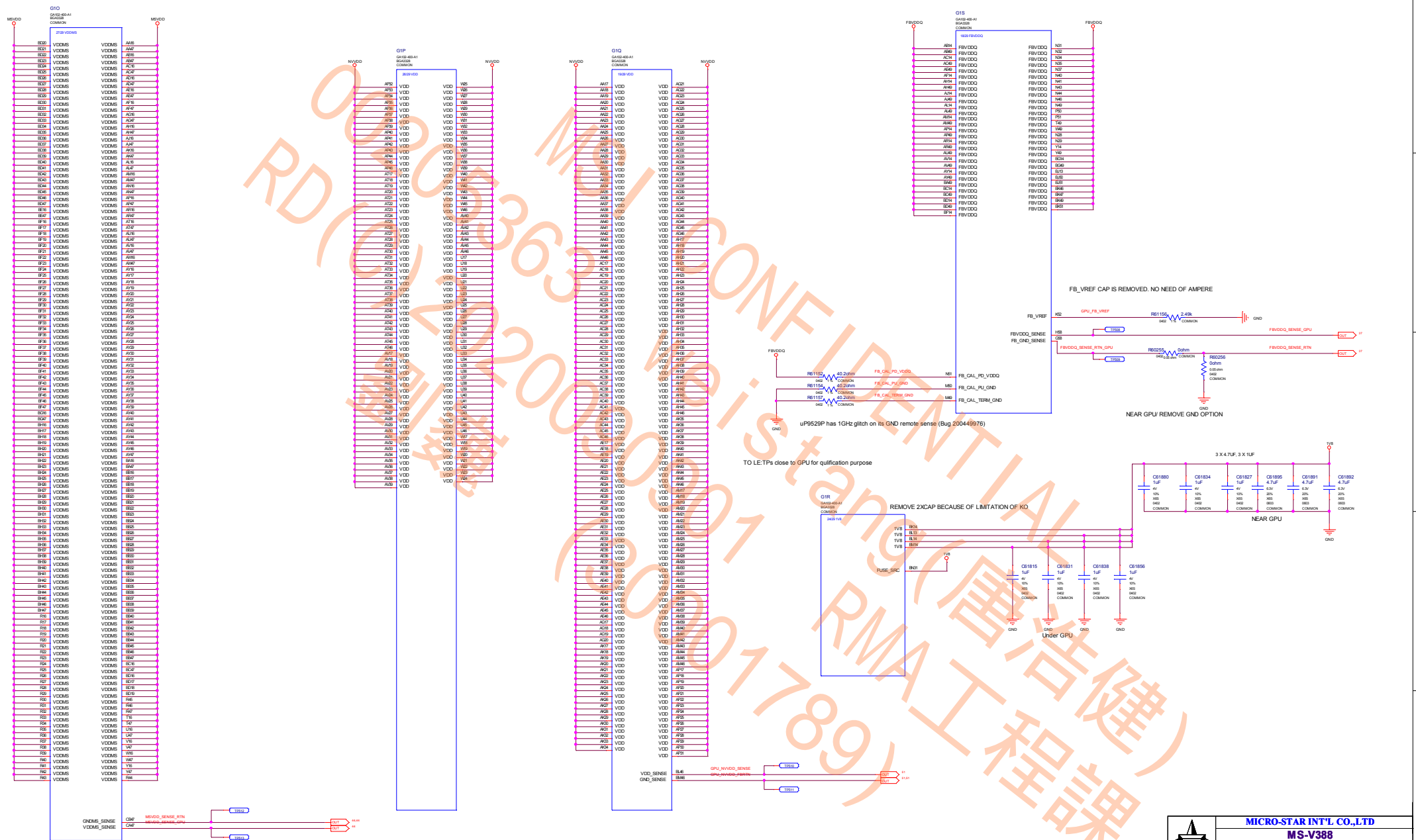


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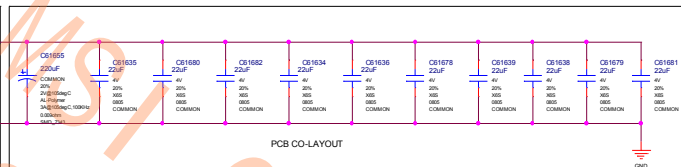
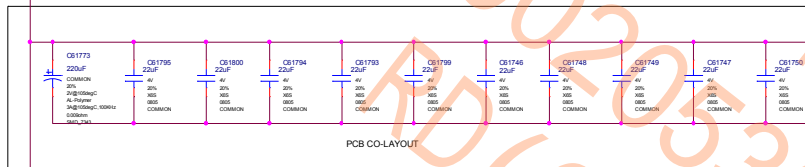
GPU PWR and GND



NVVDD

UNDER GPU

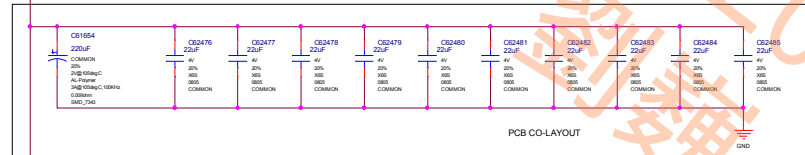
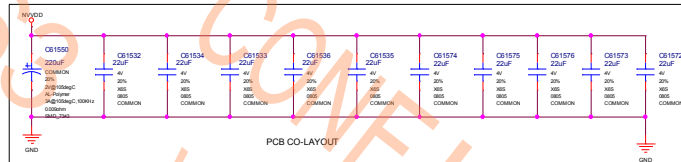
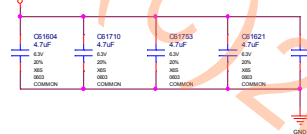
4x SMD7343 220uF (EACH CO-LAYOUT WITH 10x 0805 22uF)



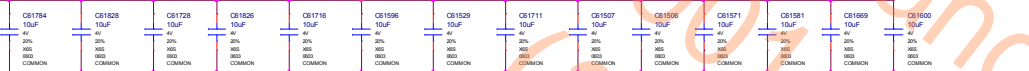
1x 0805 22uF



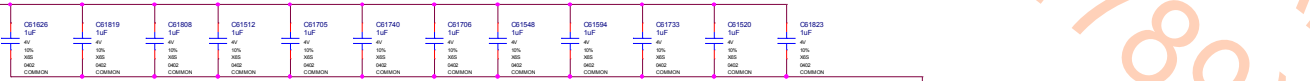
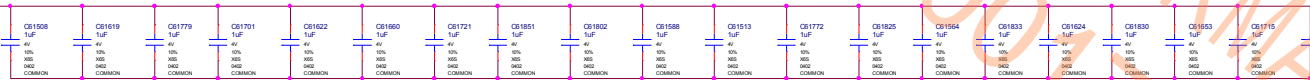
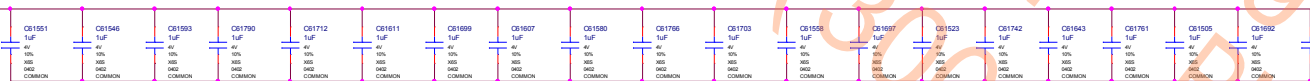
5x 0603 4.7uF



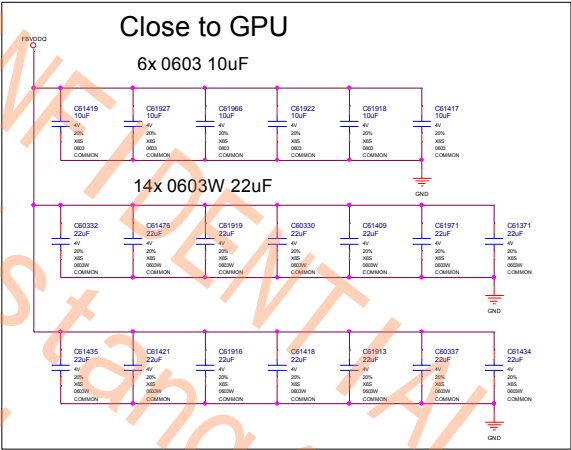
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52 x 0402 1uF



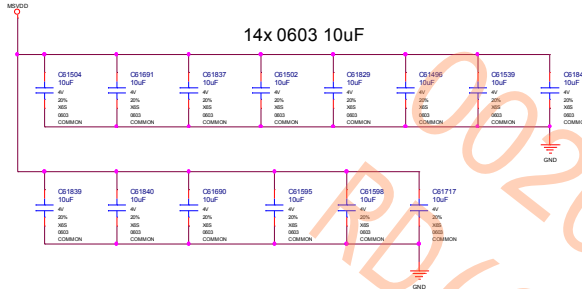
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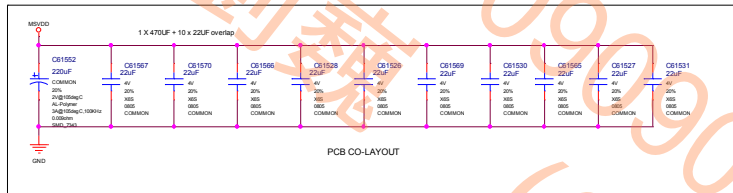
MSVDD

UNDER GPU

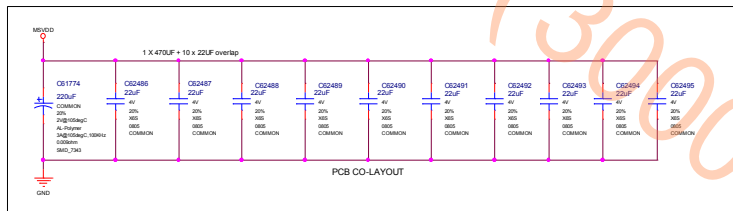
14x 0603 10uF



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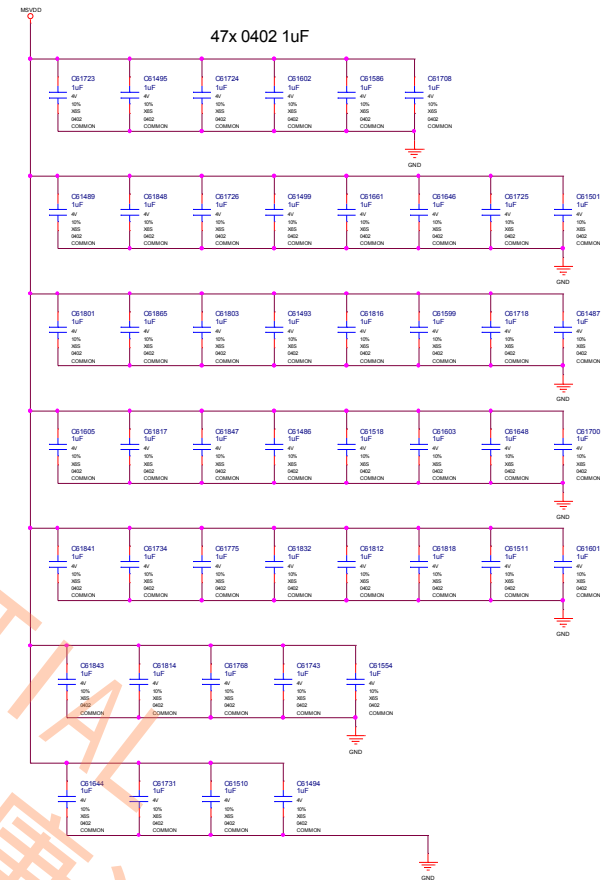


PCB CO-LAYOUT




PCB CO-LAYOUT

47x 0402 1uF

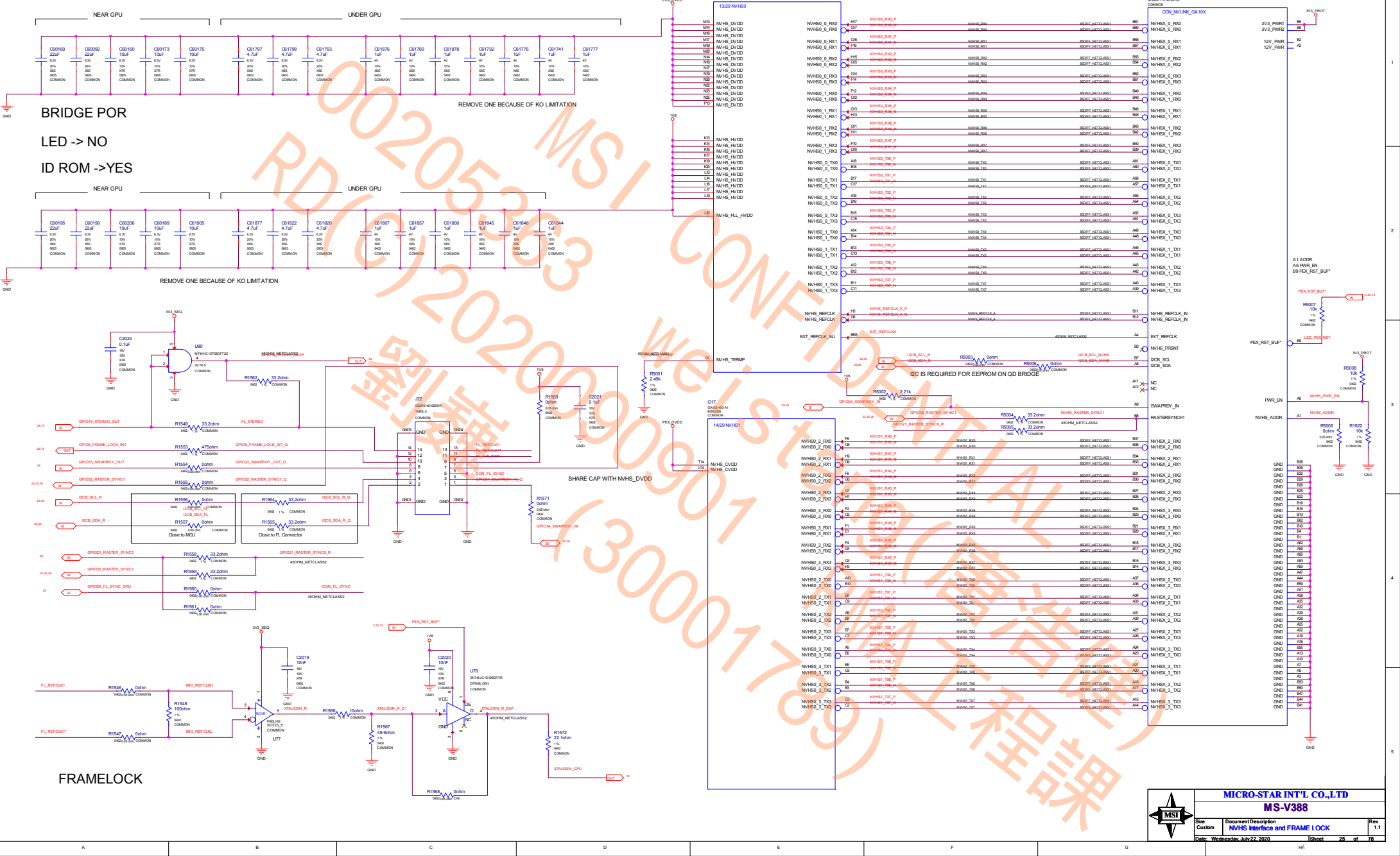


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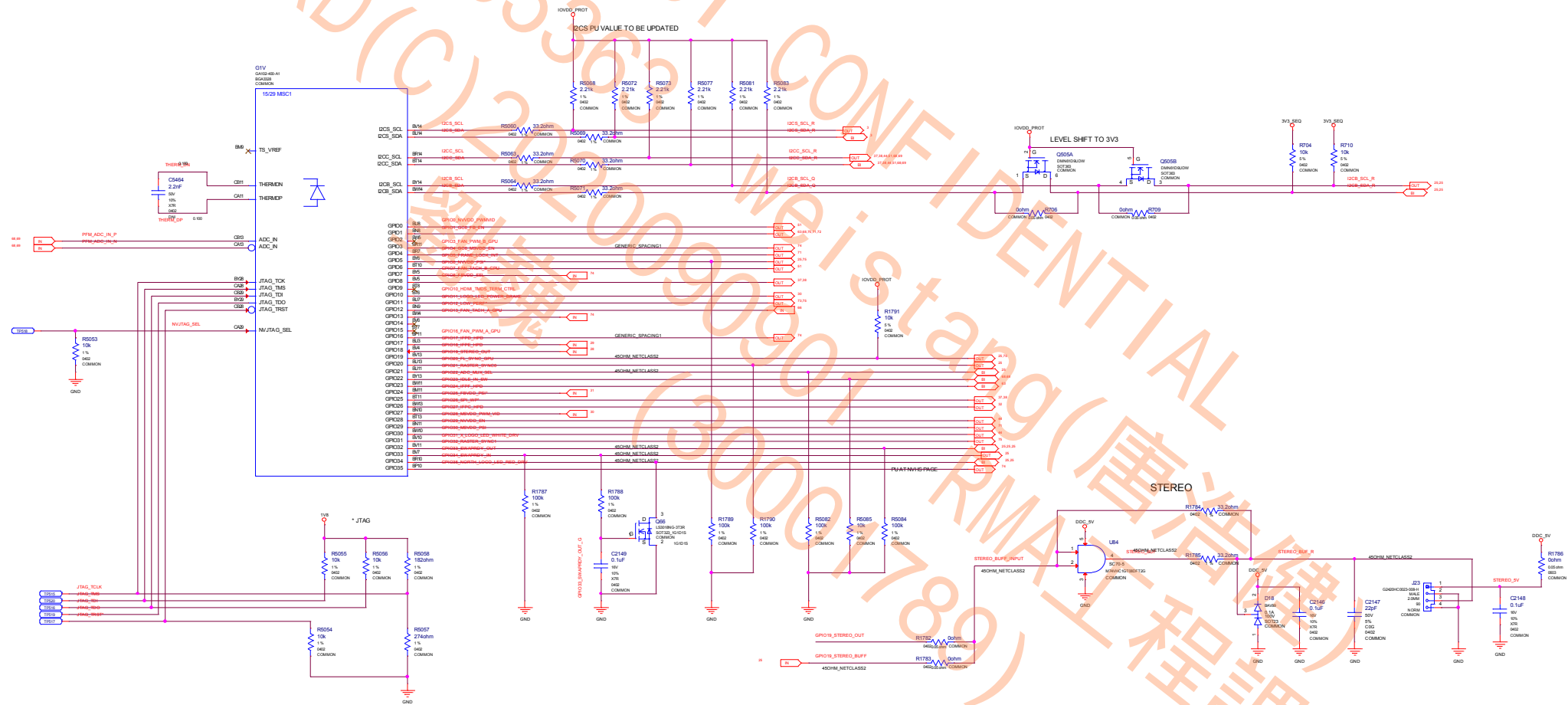
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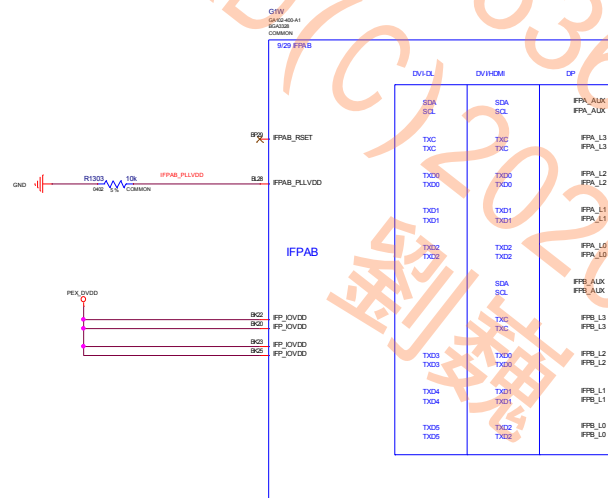
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NVHS Interface and FRAME LOCK

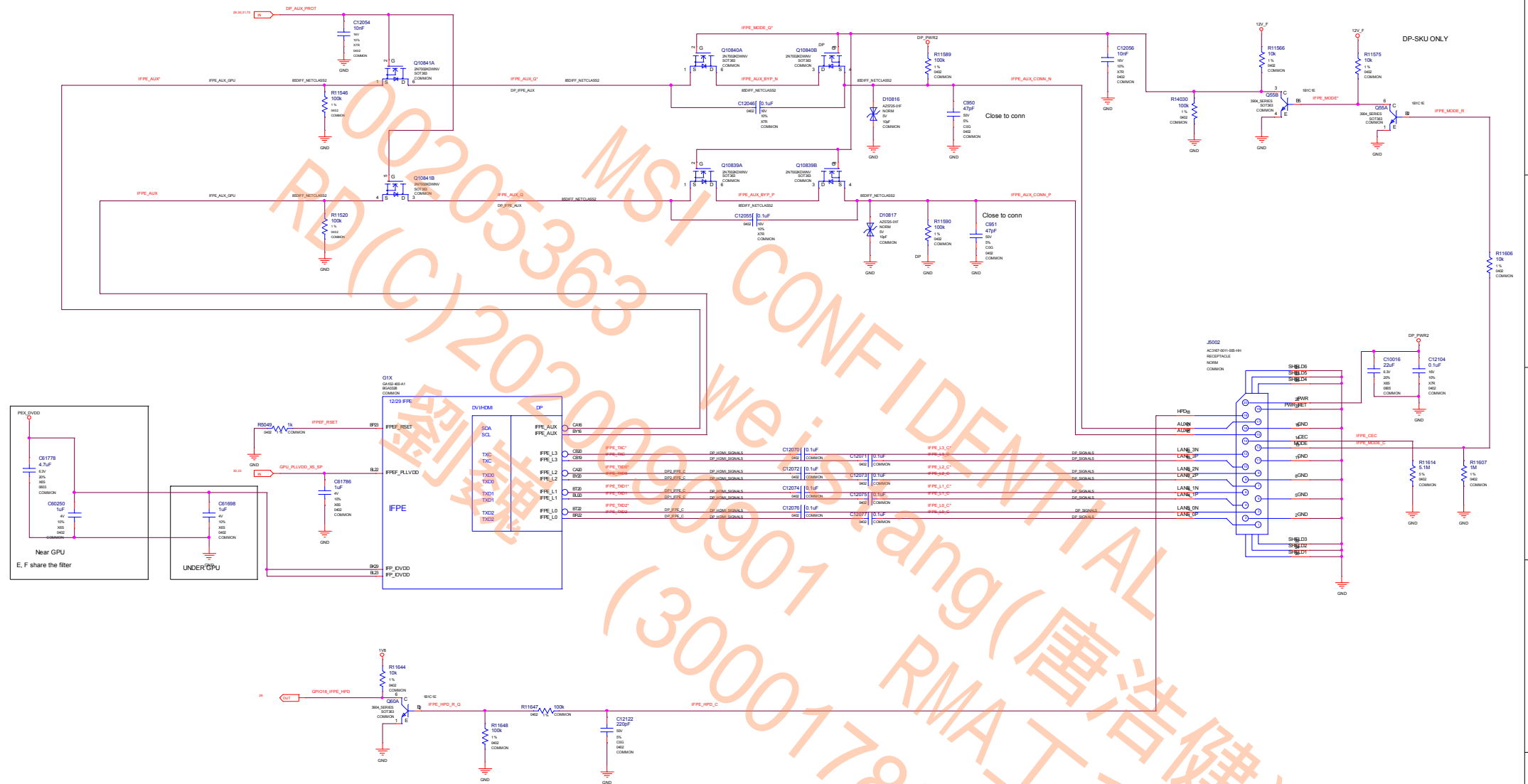


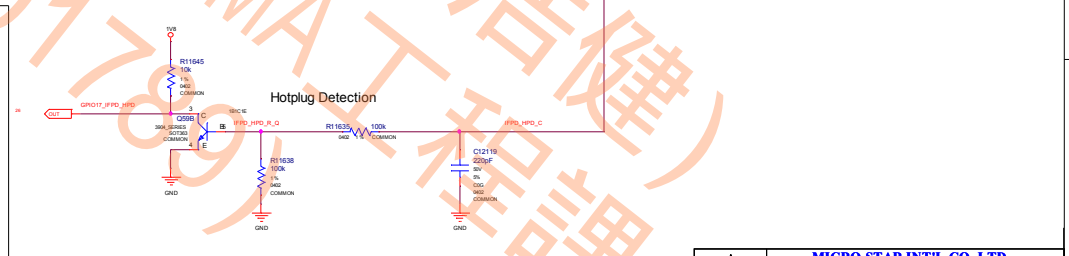
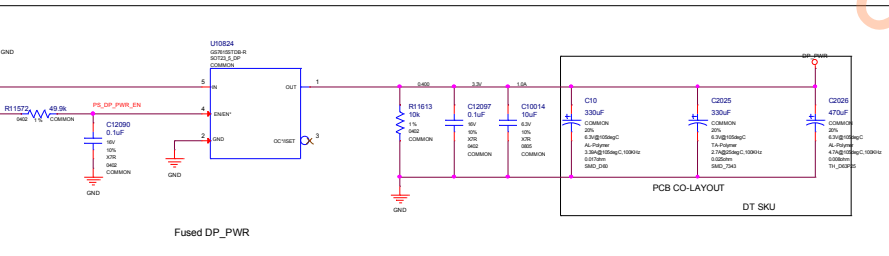
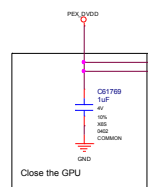
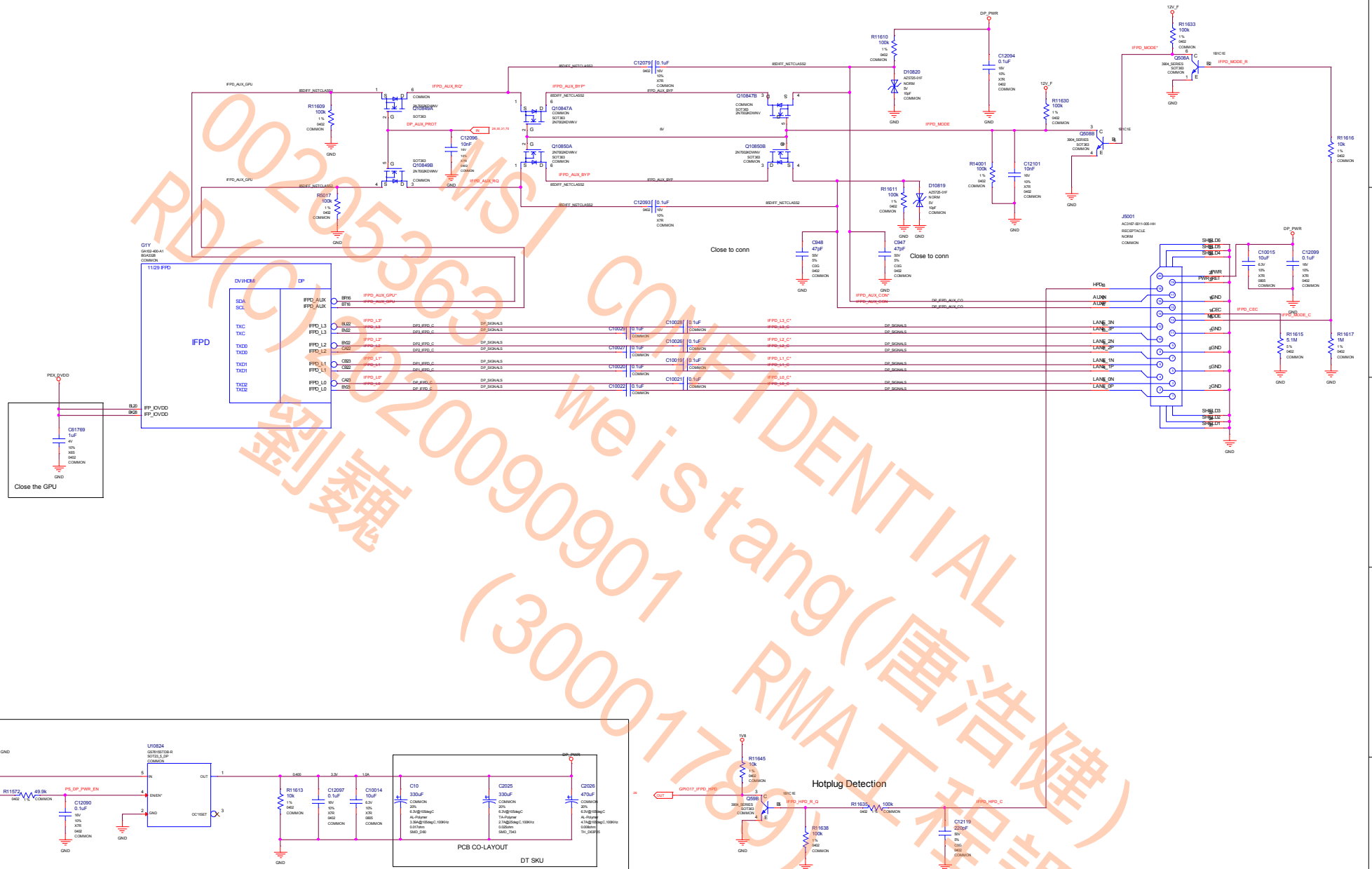
MISC1: Fan, Thermal, JTAG, GPIO, STEREO



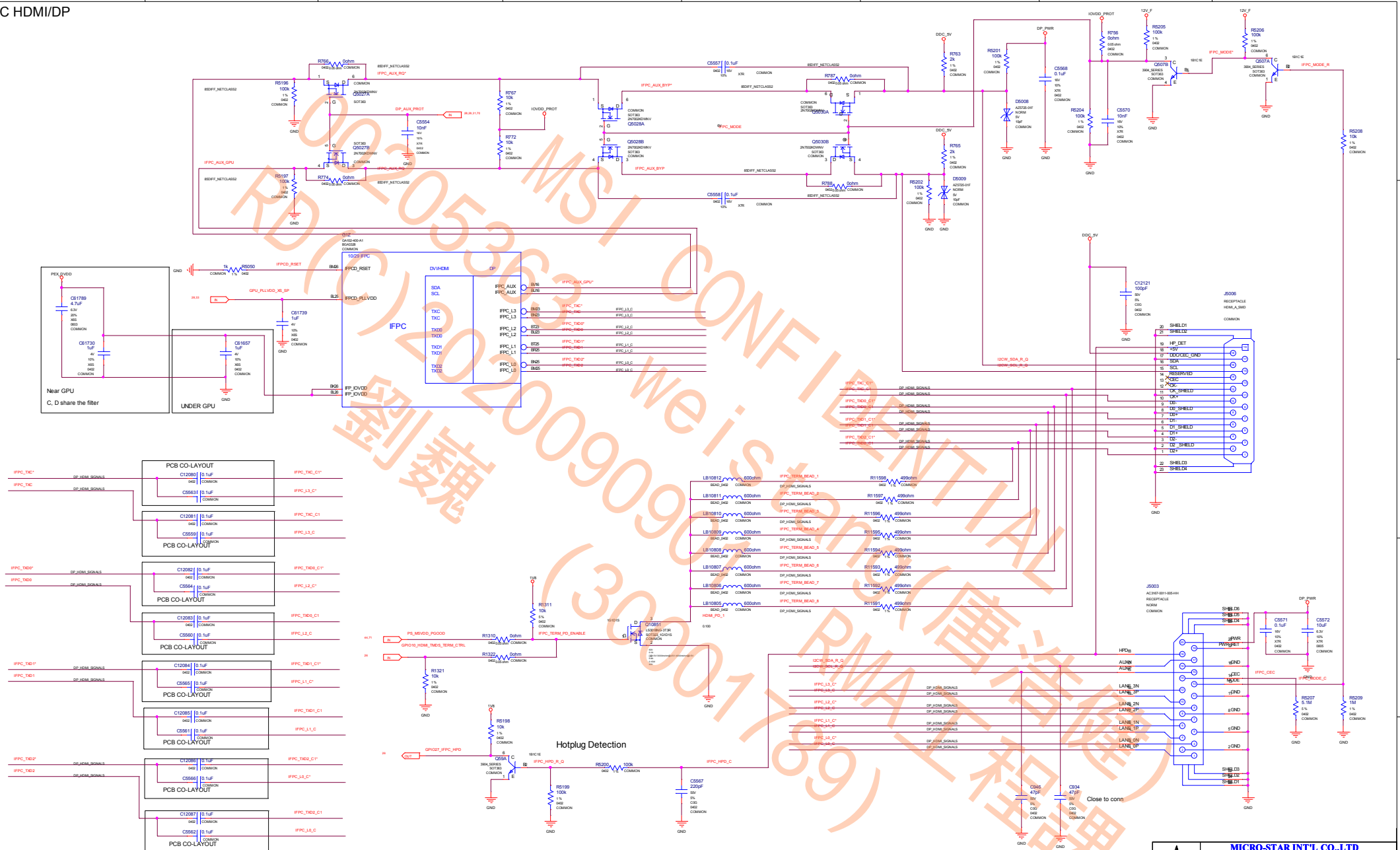


IFPE DP

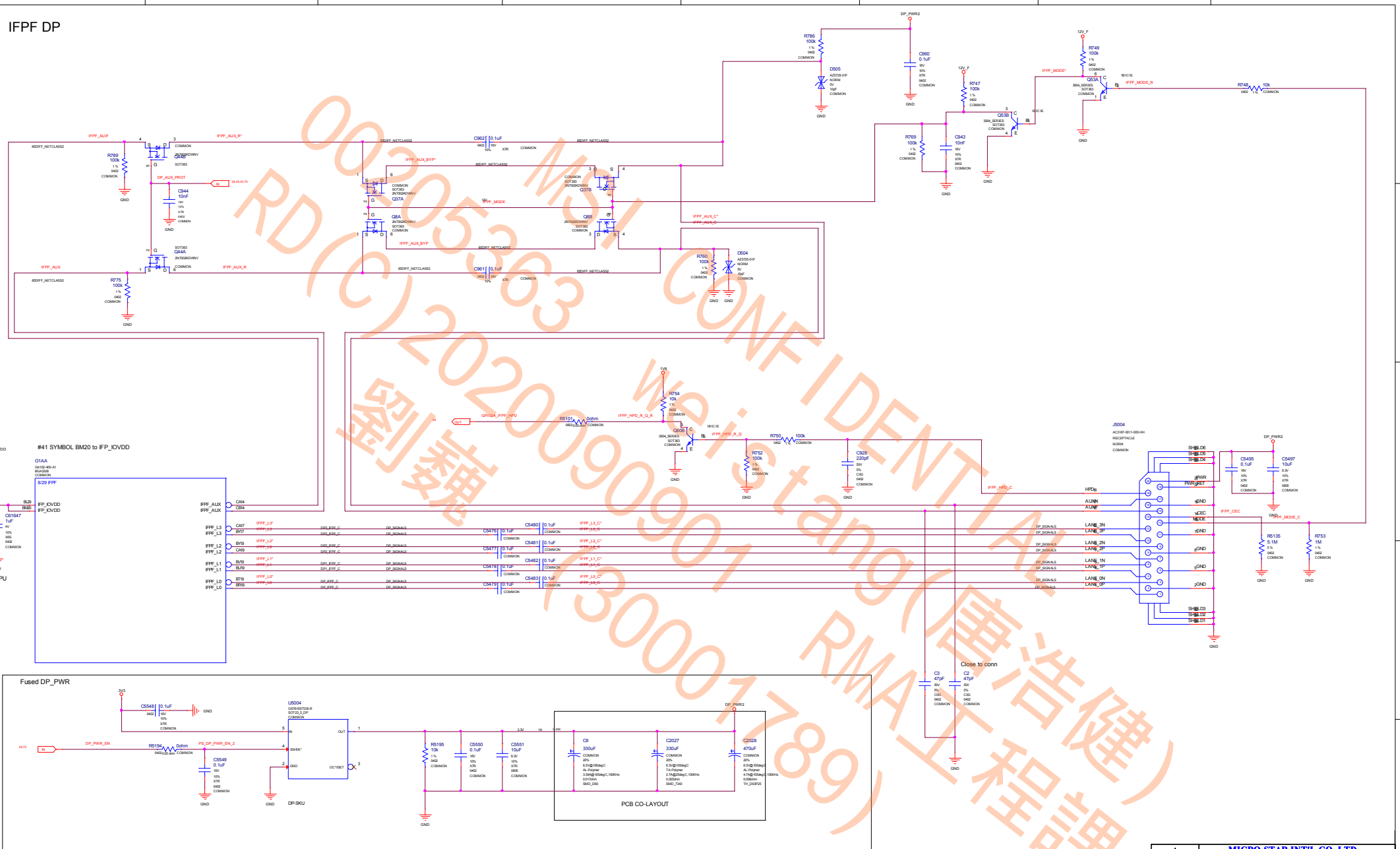




IFPC HDMI/DP



IFPF DP



MICRO-STAR INT'L CO.,LTD

MS-V388

Size Custom	Document Description FPF DP	Rev 1.1
Date: Wednesday, July 22, 2020		Sheet 11 of 78

MISC: ROM, Straps

STRAP2	STRAP1	STRAP0	RAMCFG[4:0]	
L	L	L	00000	RAMCFG MICRON 8Gb 19Gbps
L	H	L	00010	RAMCFG TBD
H	L	L	00100	RAMCFG TBD
H	L	H	00101	RAMCFG TBD
H	L	H	00101	RAMCFG MICRON 8Gb 21Gbps

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

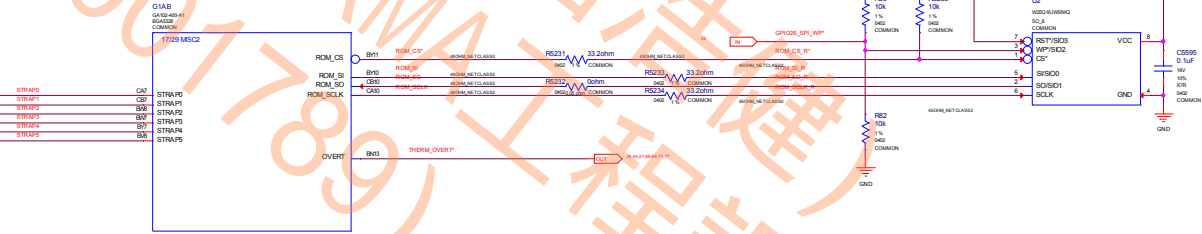
DEFAULT

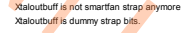
ROM_SO	ROM_SI	ROM_SCLK	SMARTFAN[2:0].FS_OVERT	1:ENABLE 0:DISABLE
H	H	H	0111	FS_OVERT ENABLE
L	L	L	0000	FS_OVERT DISABLE

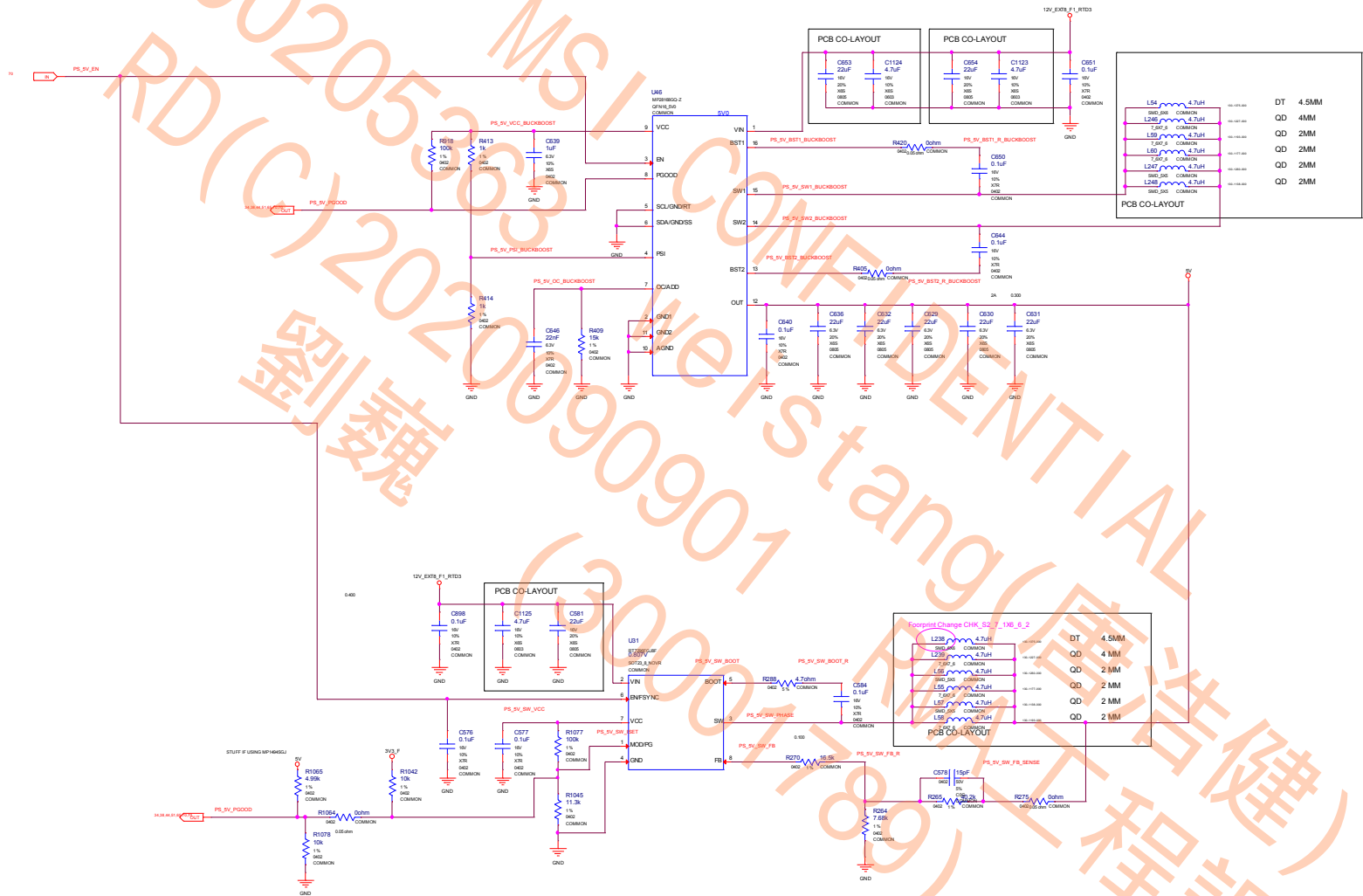
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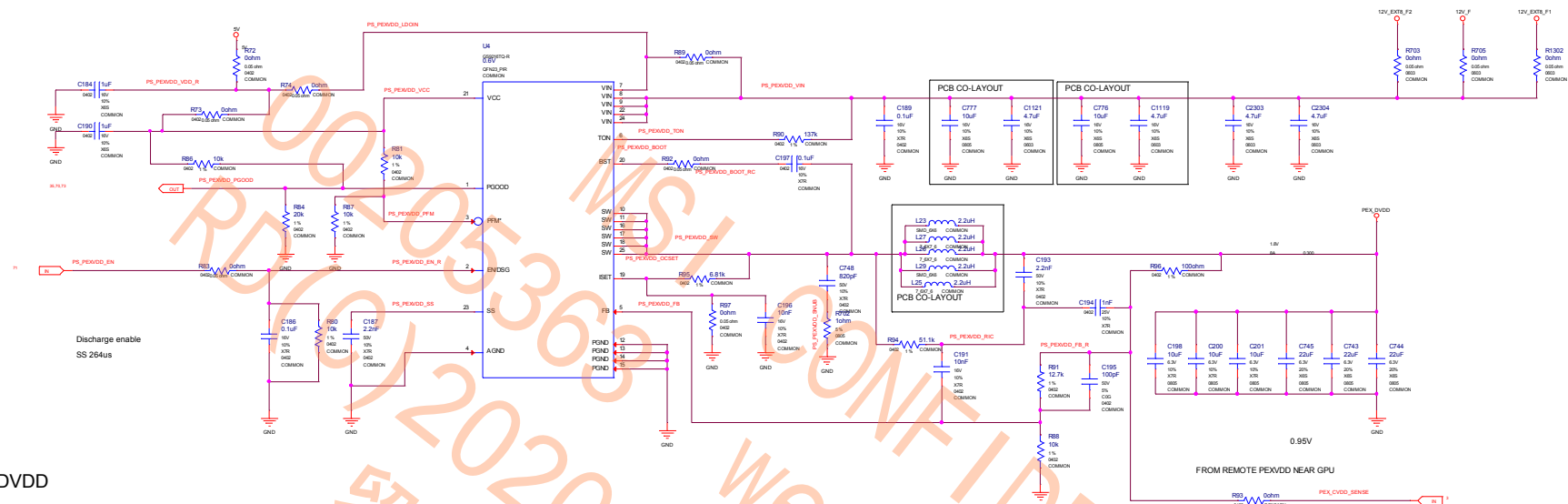
STRAP5	STRAP4	STRAP3	SMB_ALT_ADDR	DEVID_SEL	PCE_CFG	VGA_DEVICE
M	H	H	1	1	1	1
M	H	L	1	H	1	0
M	L	H	1	1	0	1
M	L	L	1	1	0	0
L	H	M	1	0	1	1
L	M	H	1	0	1	0
L	M	L	1	0	0	1
L	L	M	1	0	0	0
H	H	H	0	1	1	1
H	H	L	0	1	1	0
H	L	H	0	1	0	1
H	L	L	0	1	0	0
L	H	H	0	0	1	1
L	H	L	0	0	1	0
L	L	H	0	0	0	1
L	L	L	0	0	0	0

Default

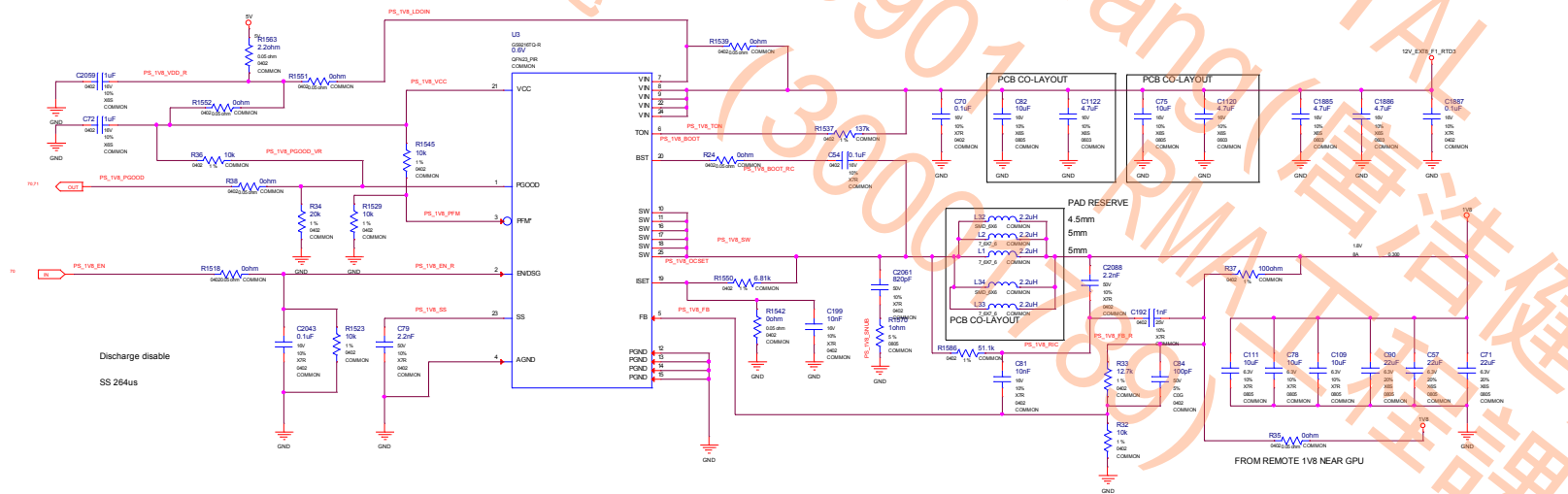








PEX_DVDD




1V8



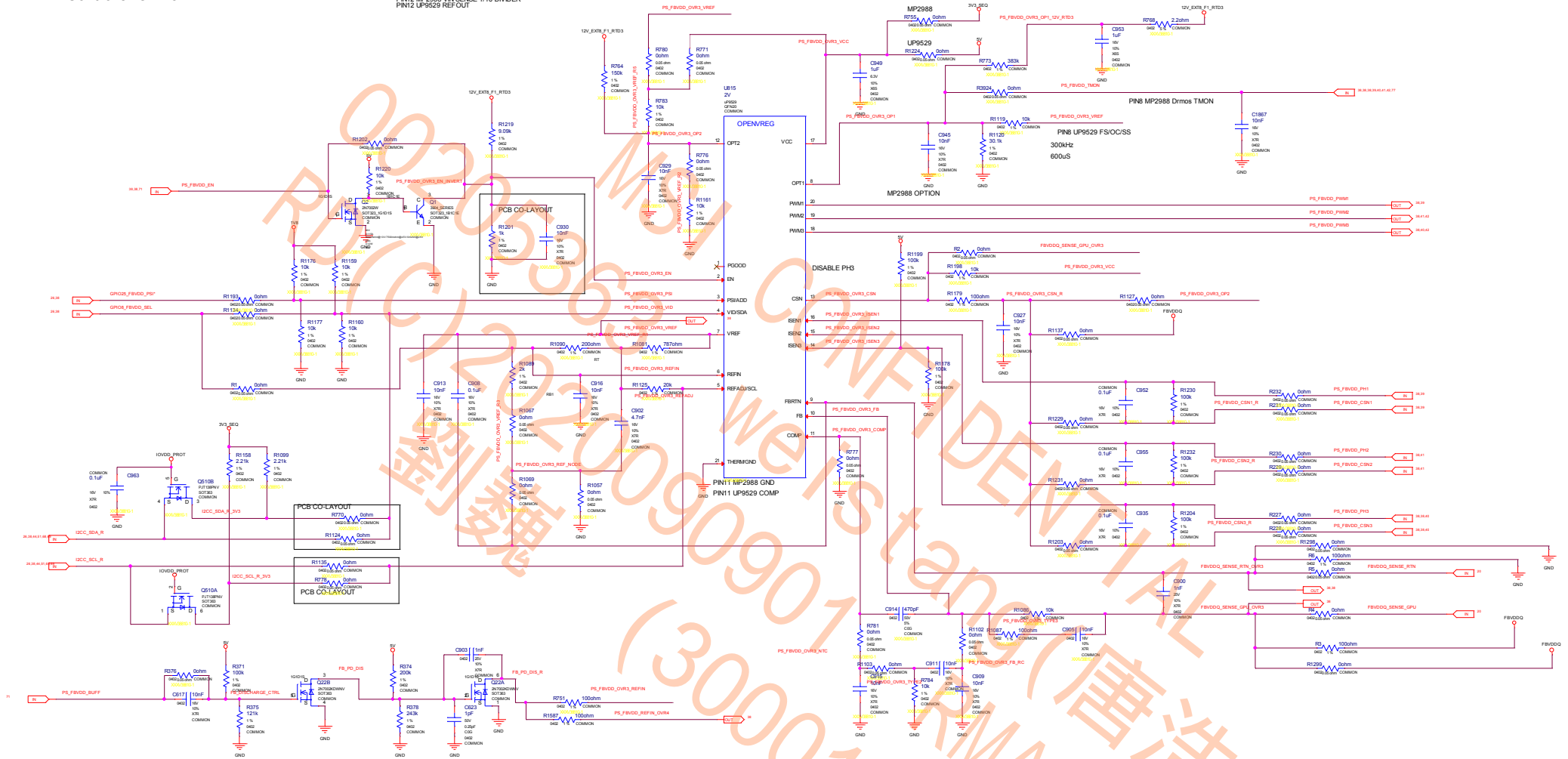
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RD(C) 2020090901
唐浩健 (30001789)
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			MICRO-STAR INT'L CO.,LTD	
			MS-V388	
Size	Document Description			Rev
Custom	BLANK			1.1
Date: Wednesday, July 22, 2020		Sheet 35 of 78		

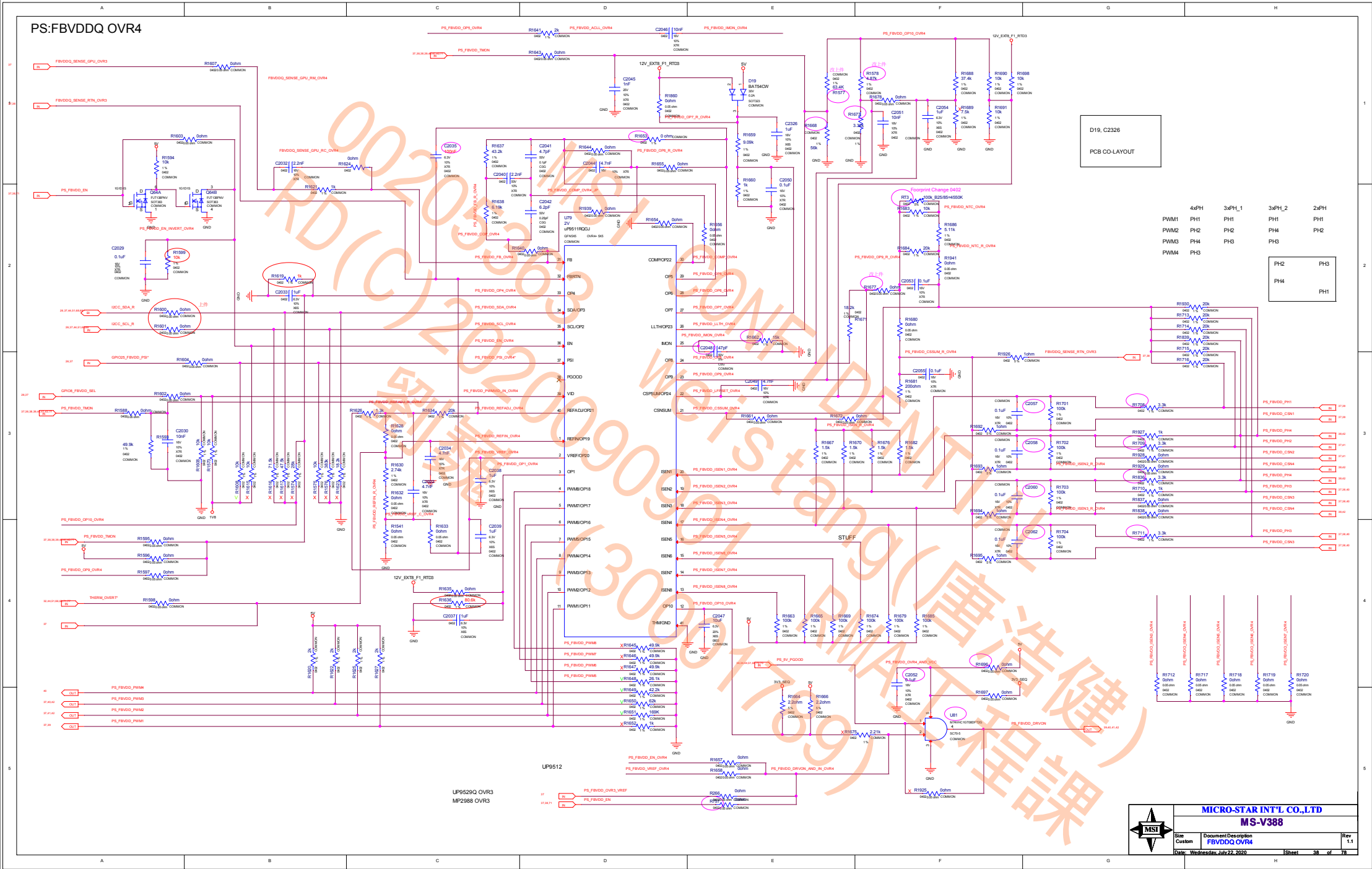
PS: FBVDD Controller OVR3

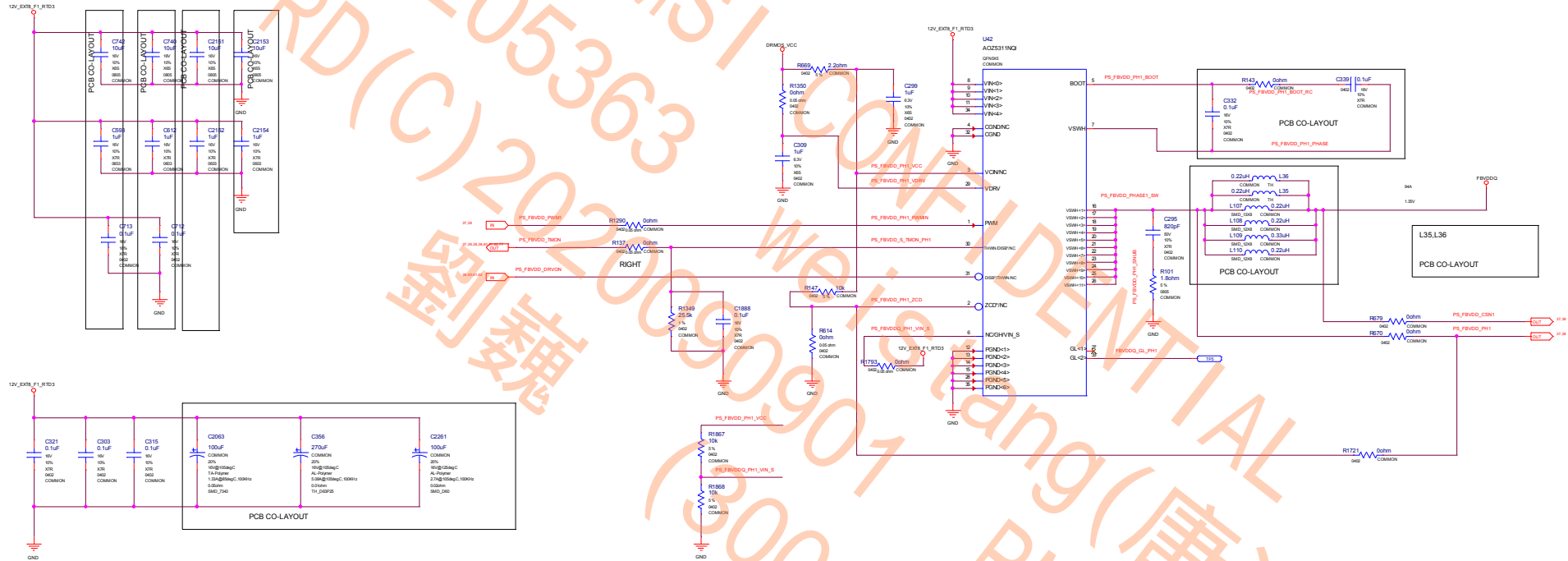
PIN12 MP2988 VIN SENSE 1/16 DIVIDER
PIN12 UP9529 REFOUT



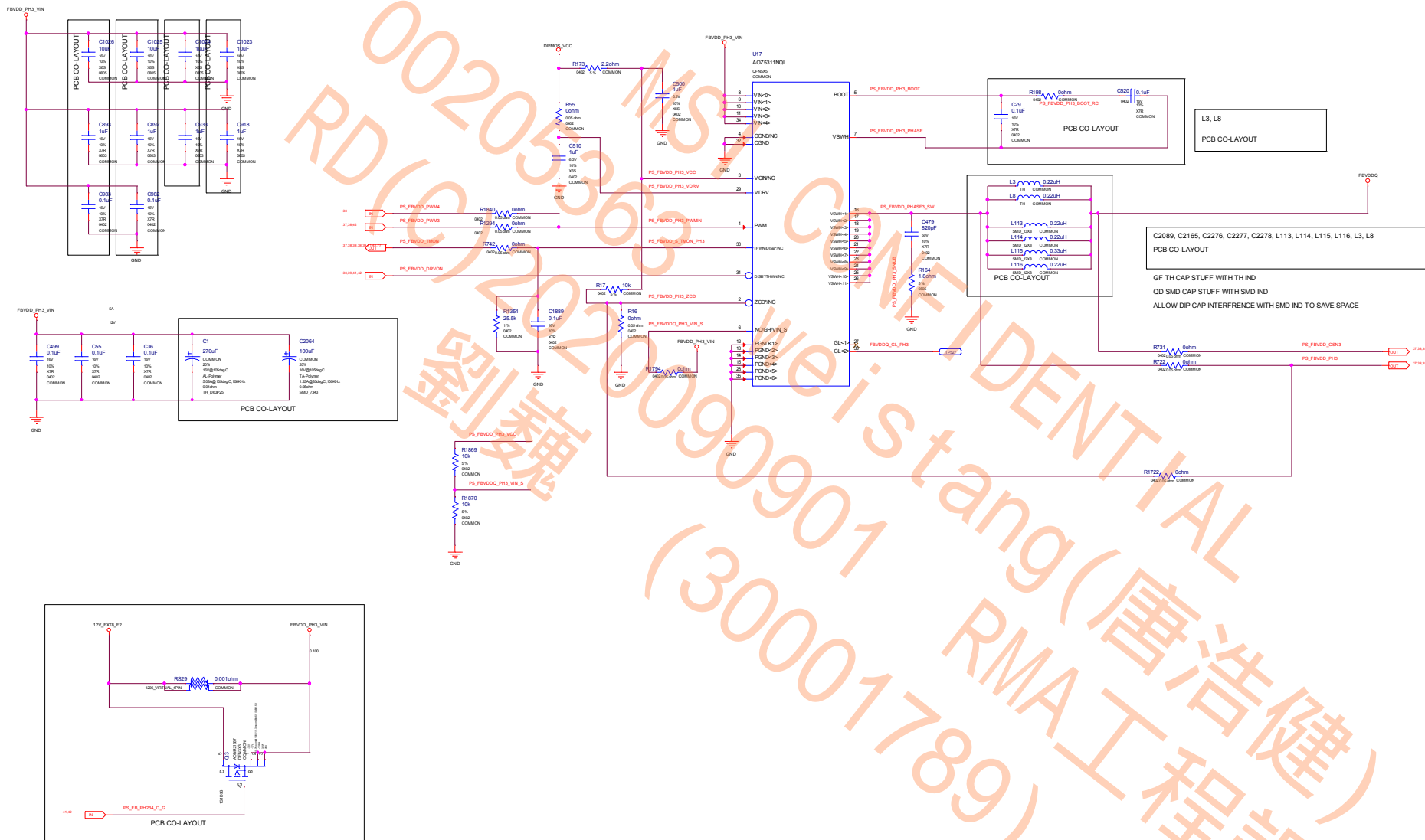
FOR DT SKU

PS:FBVDDQ OVR4





PS: FBVDD PH3



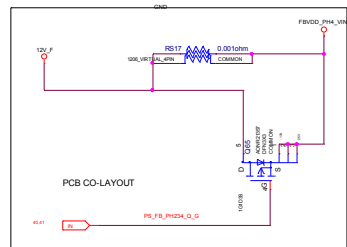
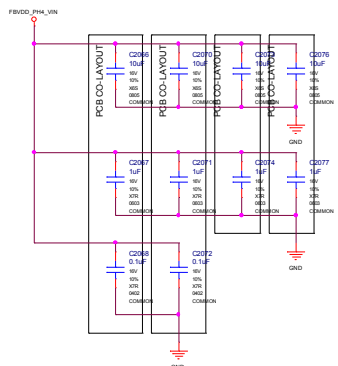
FBVDD PH3 INPUT ANTI-BACKDRIVE



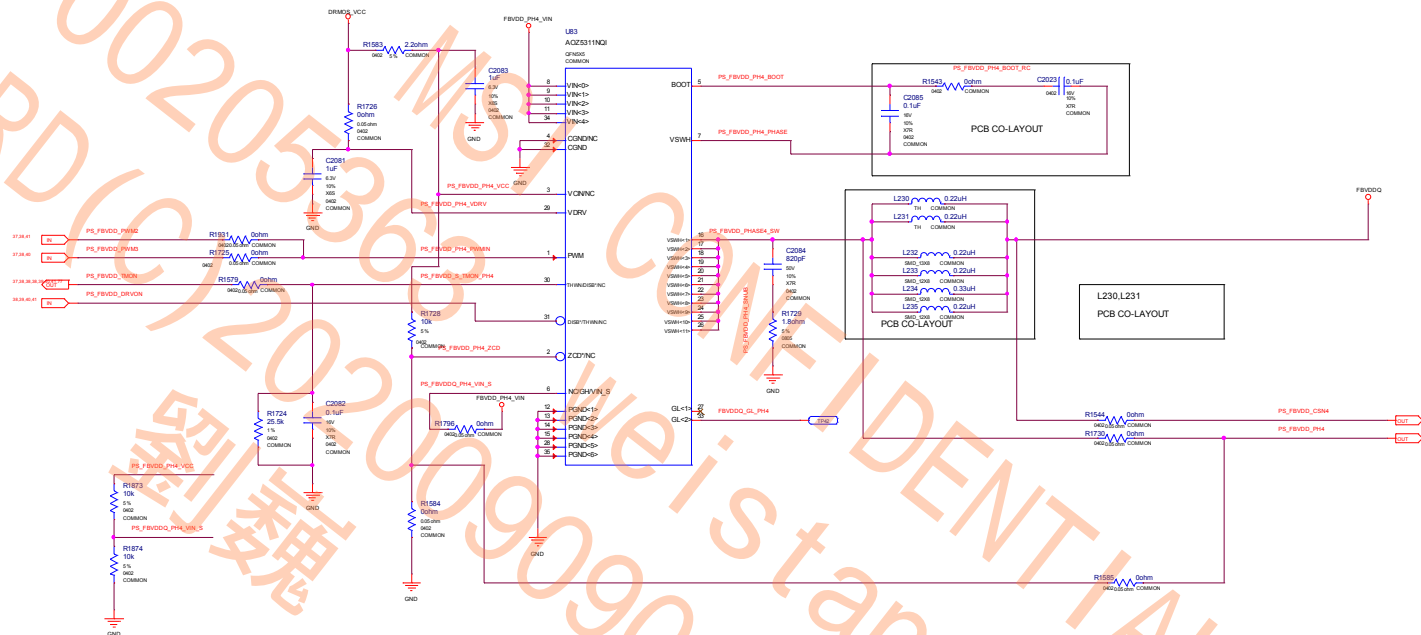
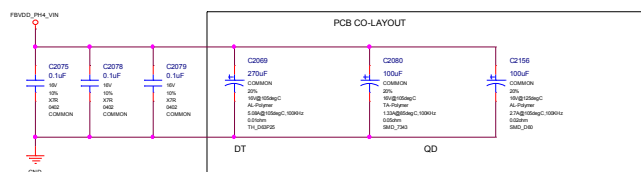
MICRO-STAR INT'L CO.,LTD
MS-V388

Size Custom	Document Description PS: FBVDD PH3	Rev 1.1
Date: Wednesday, July 22, 2020		Sheet 40 of 78

PS: FBVDD PH4



FBVDD PH3 INPUT ANTI-BACKDRIVE

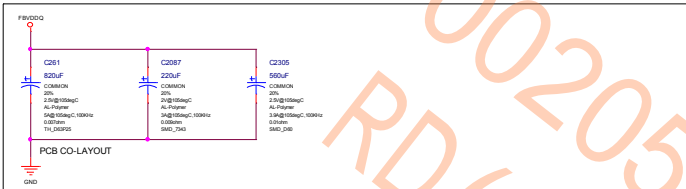


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MS-V388

Size Custom	Document Description PS: FBVDD PH4	Re 1
Date: Wednesday, July 22, 2020	Sheet 42 of 78	

REFER TO PCB FOR BOM STUFFING

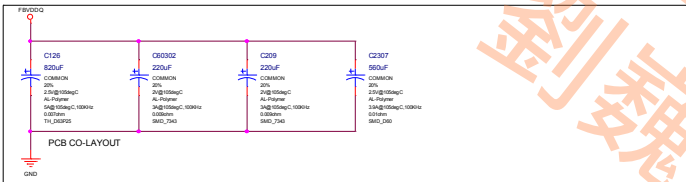
PH1 TOP



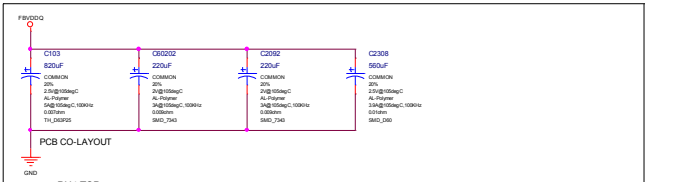
PH3 TOP



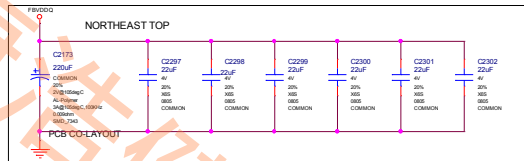
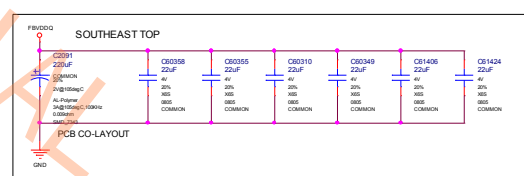
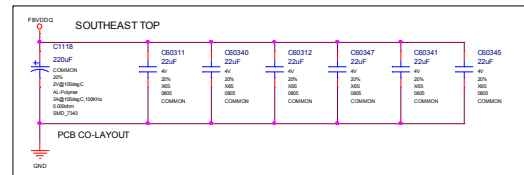
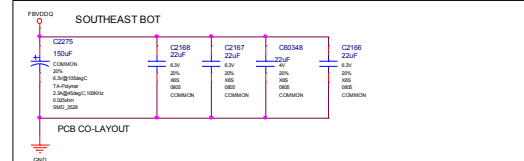
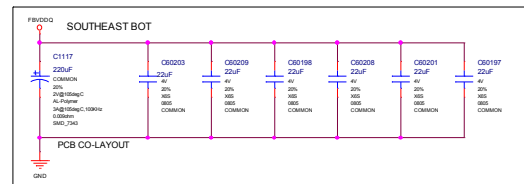
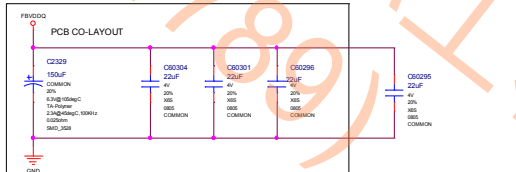
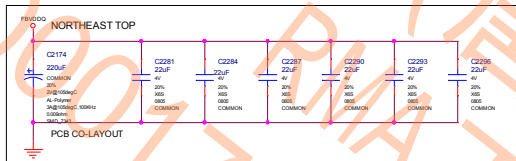
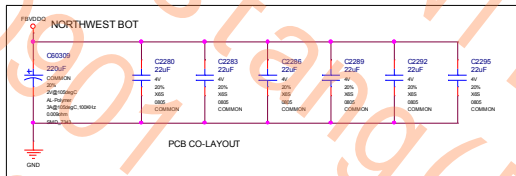
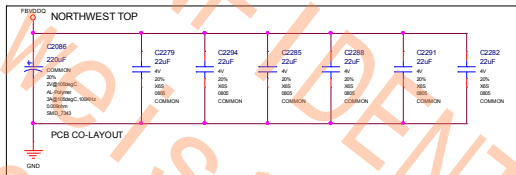
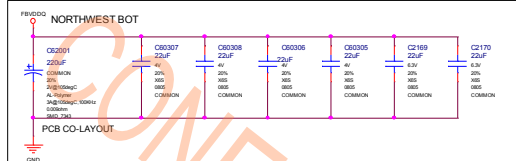
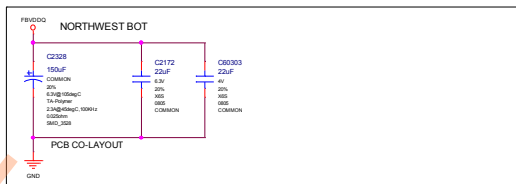
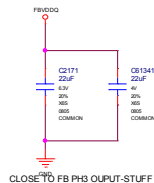
PH2 TOP

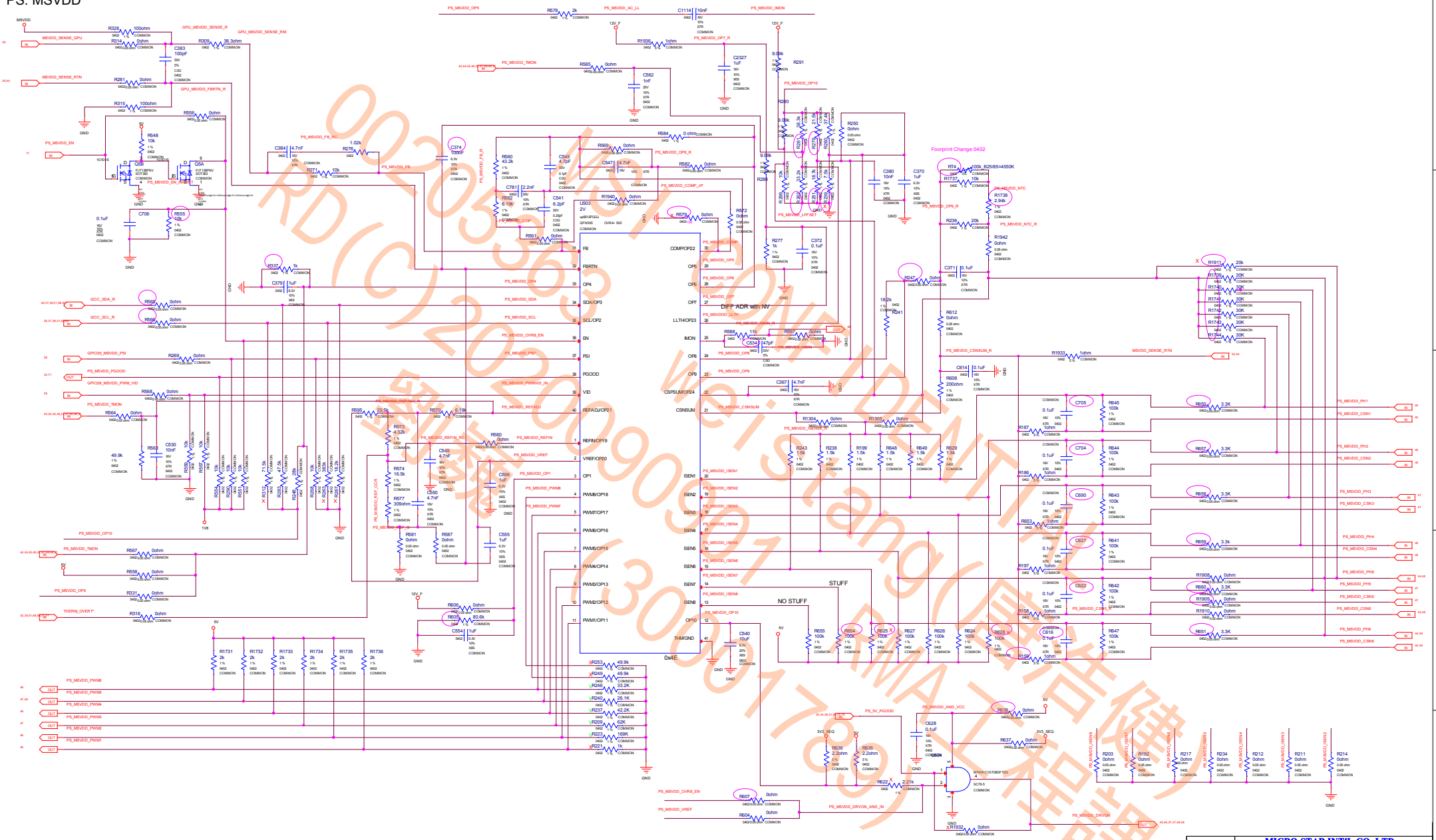


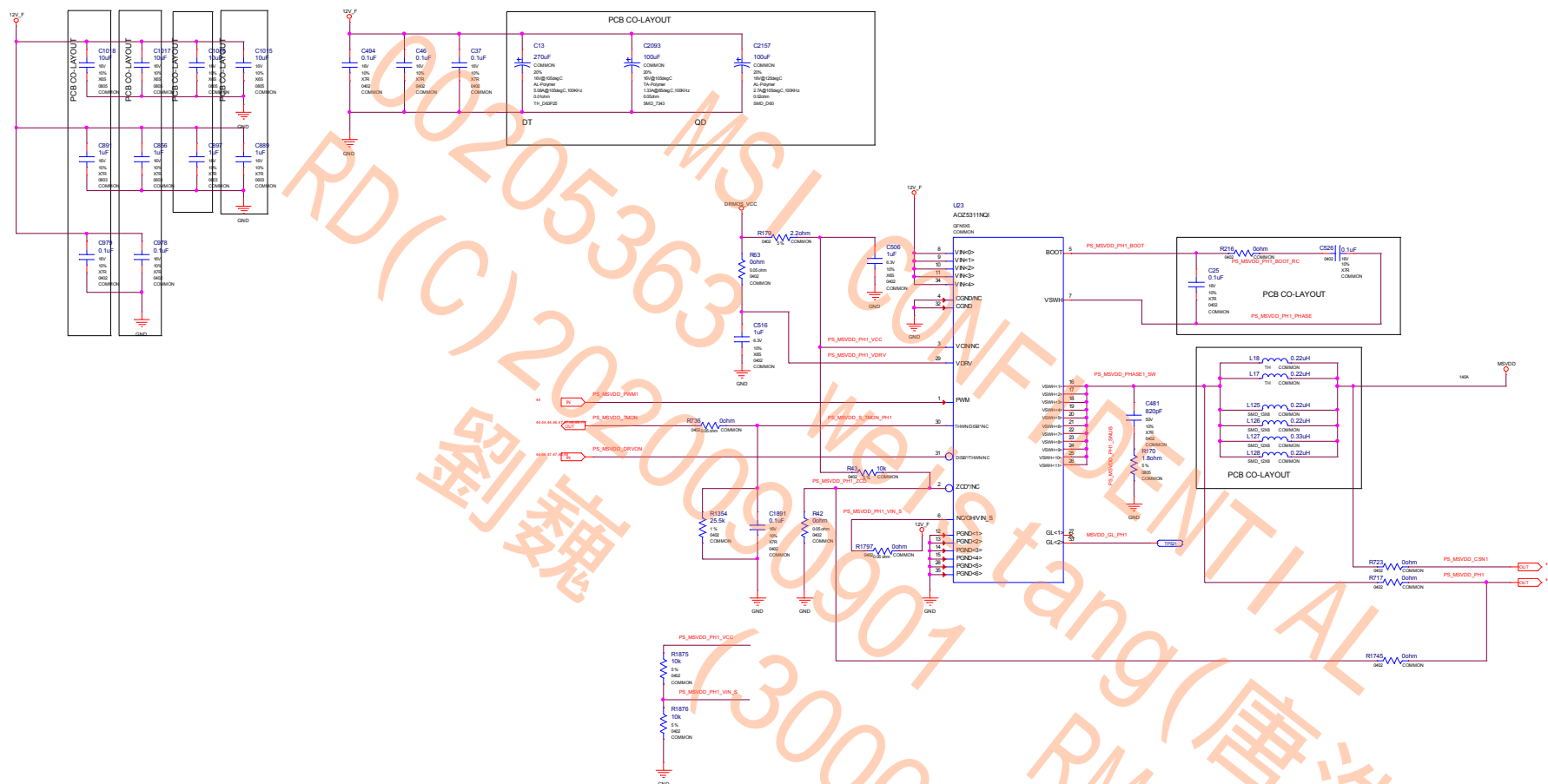
PH4 TOP

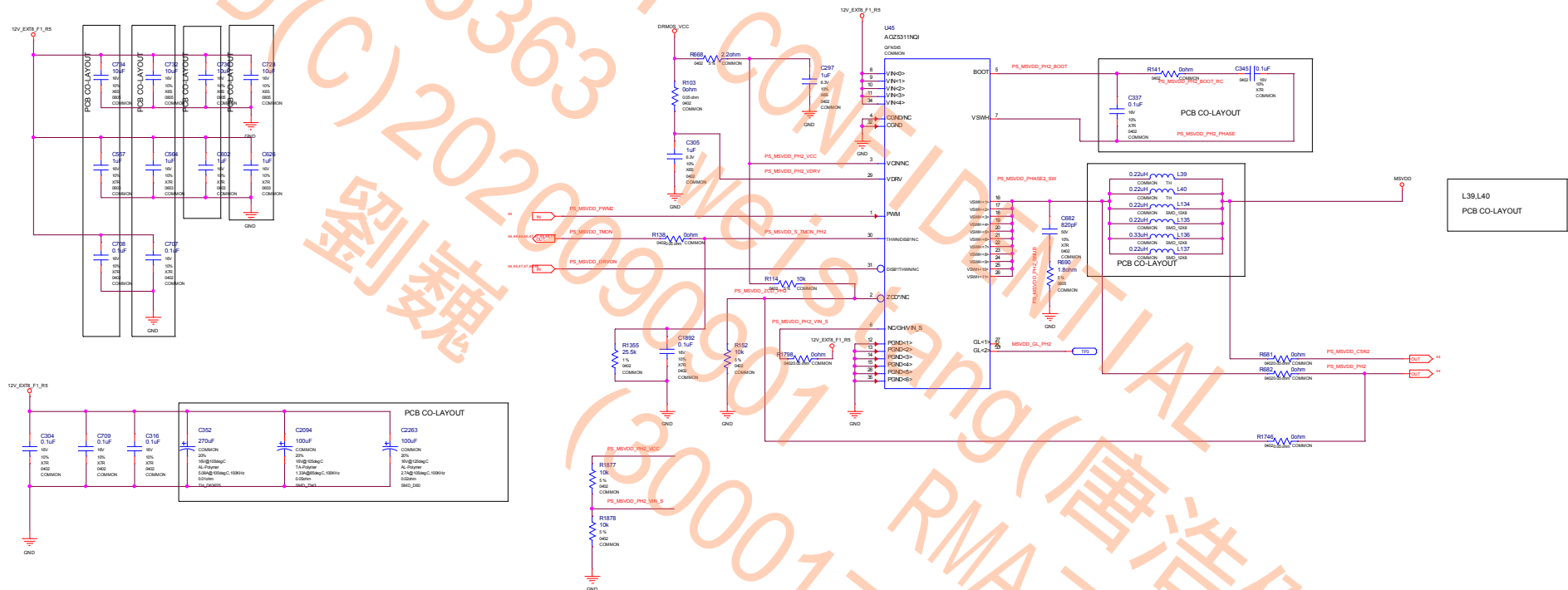


PH4 TOP

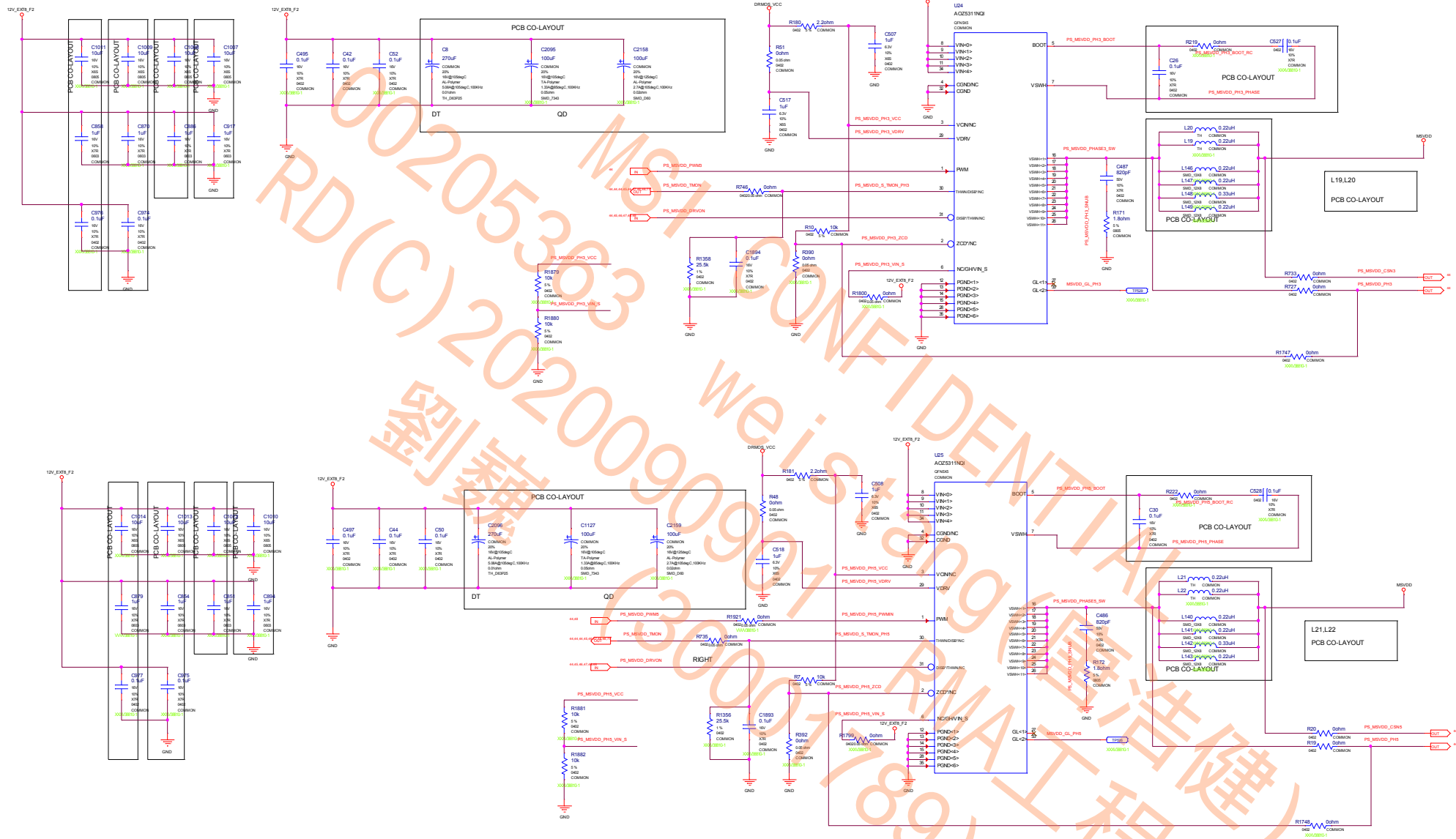


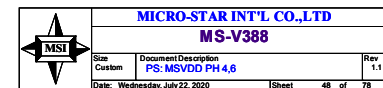
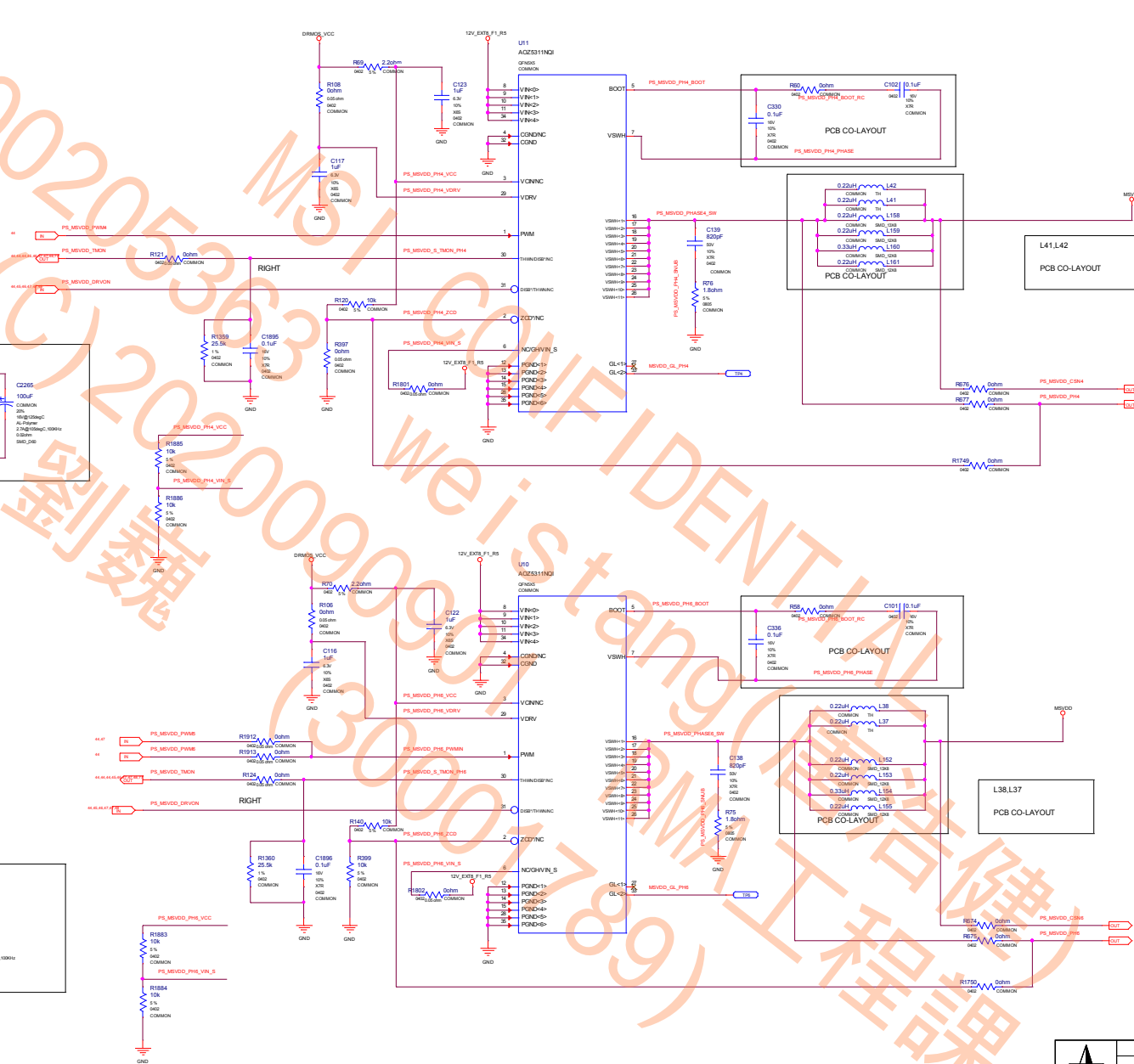
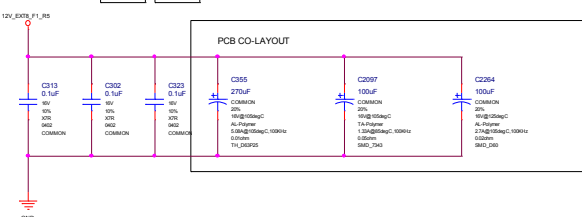
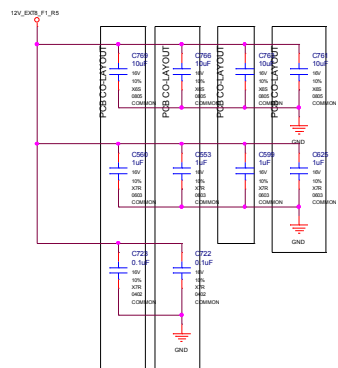
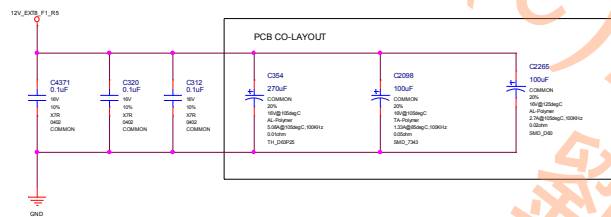
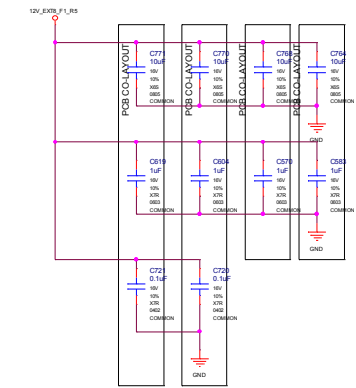




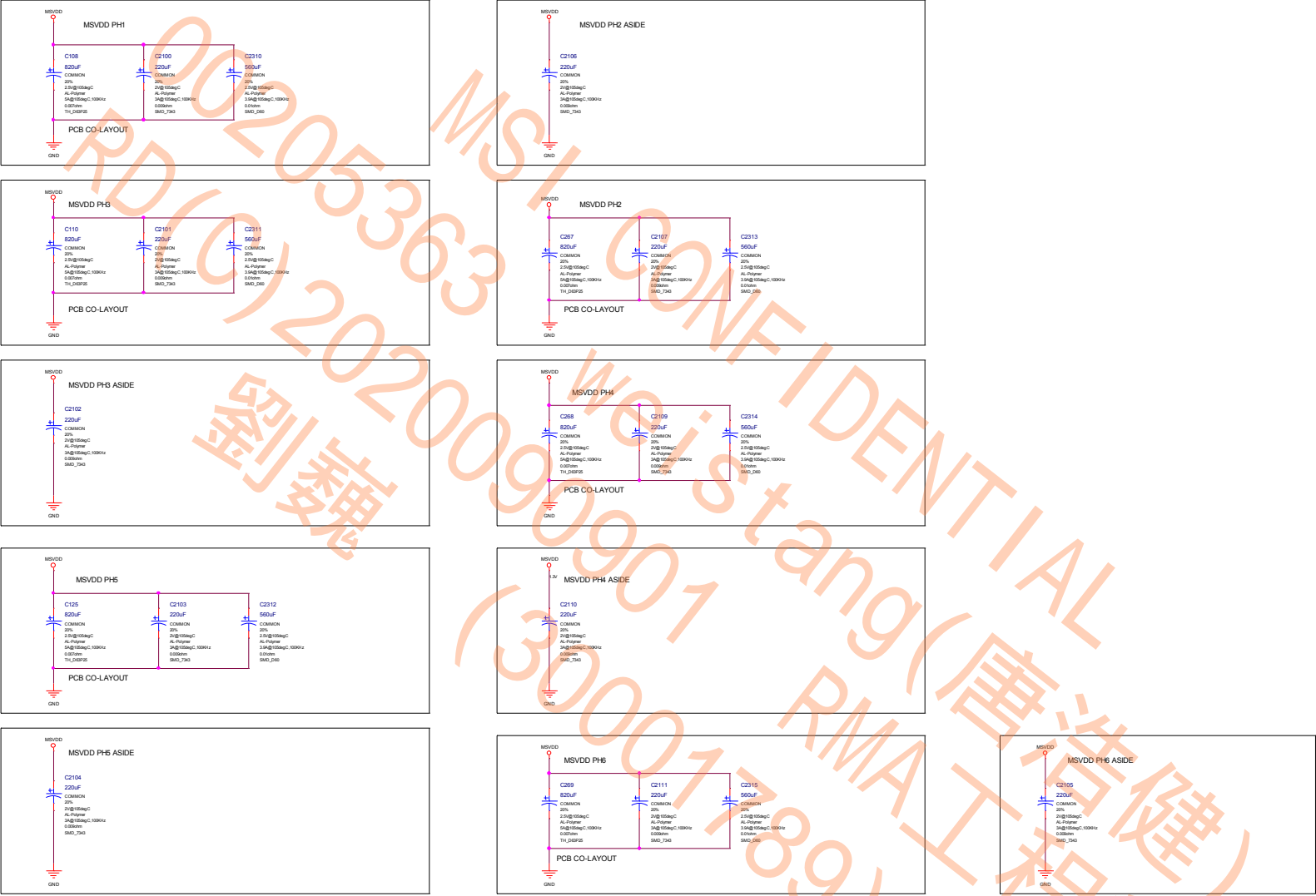


PS:MSVDD Phase 3, 5






REFER TO PCB FOR BOM STUFFING

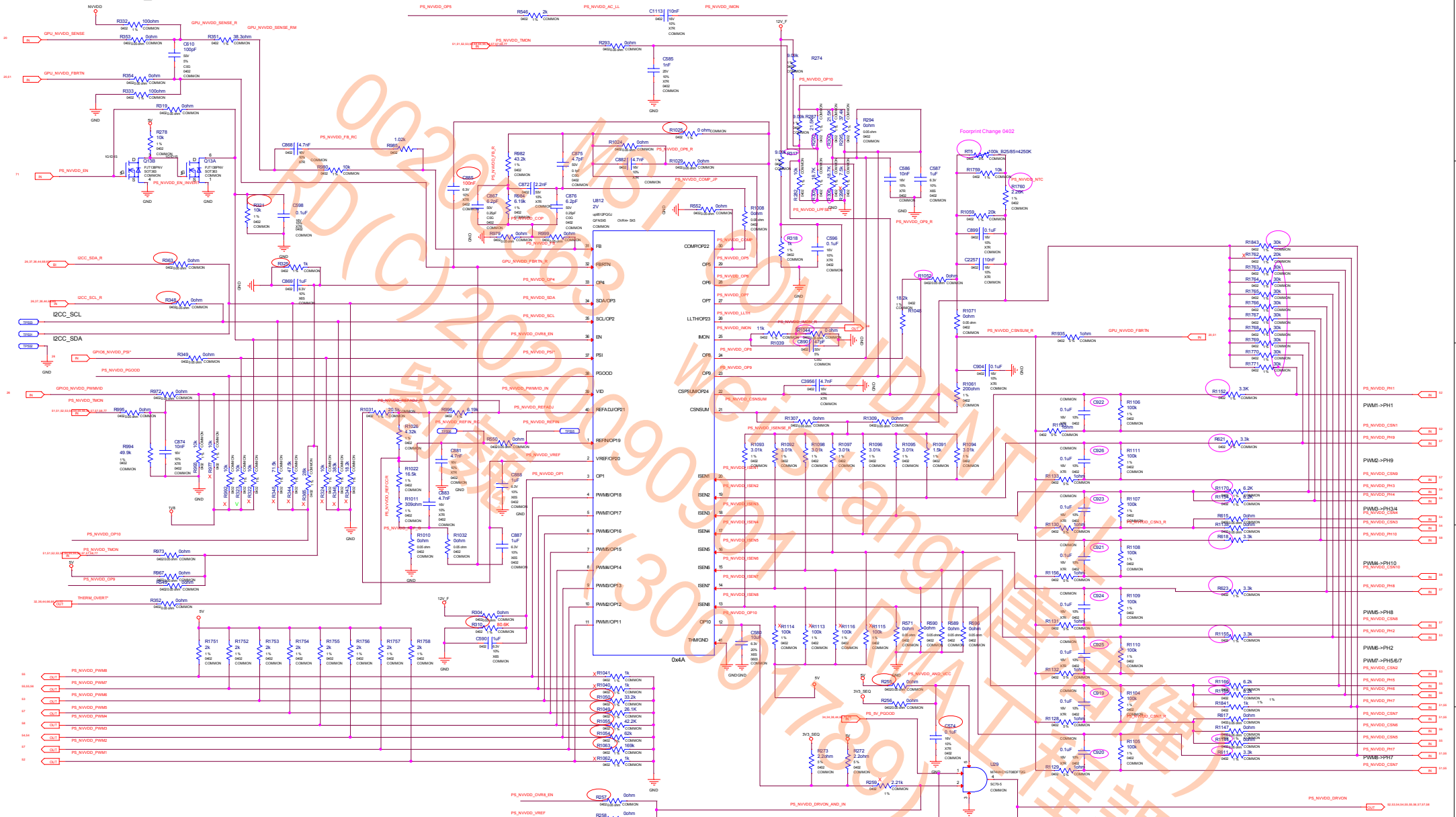


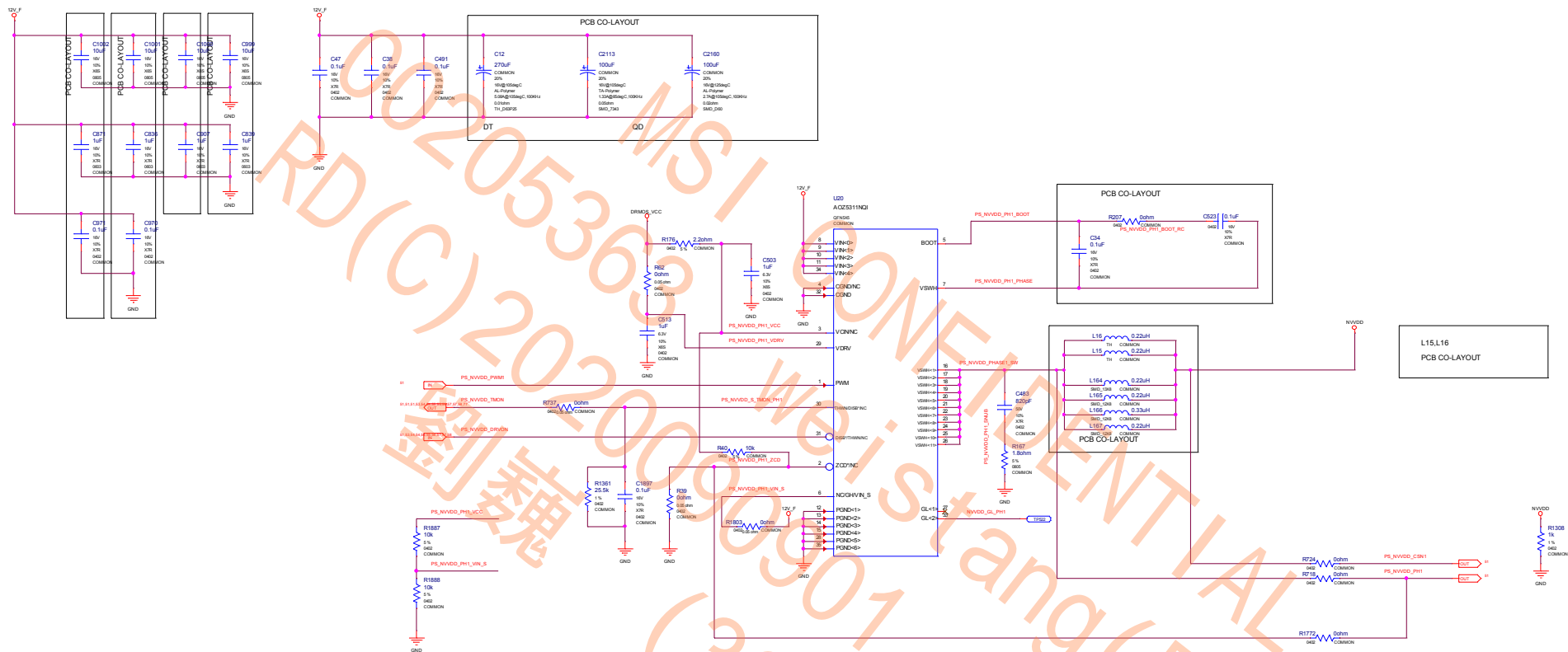
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(30001789)
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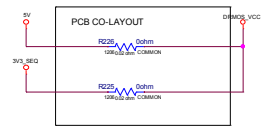
			MICRO-STAR INT'L CO.,LTD	
			MS-V388	
Size	Document Description			Rev
Custom	BLANK			1.1
Date: Wednesday, July 22, 2020		Sheet 60 of 78		

PS: NVVDD Controller_OVR8

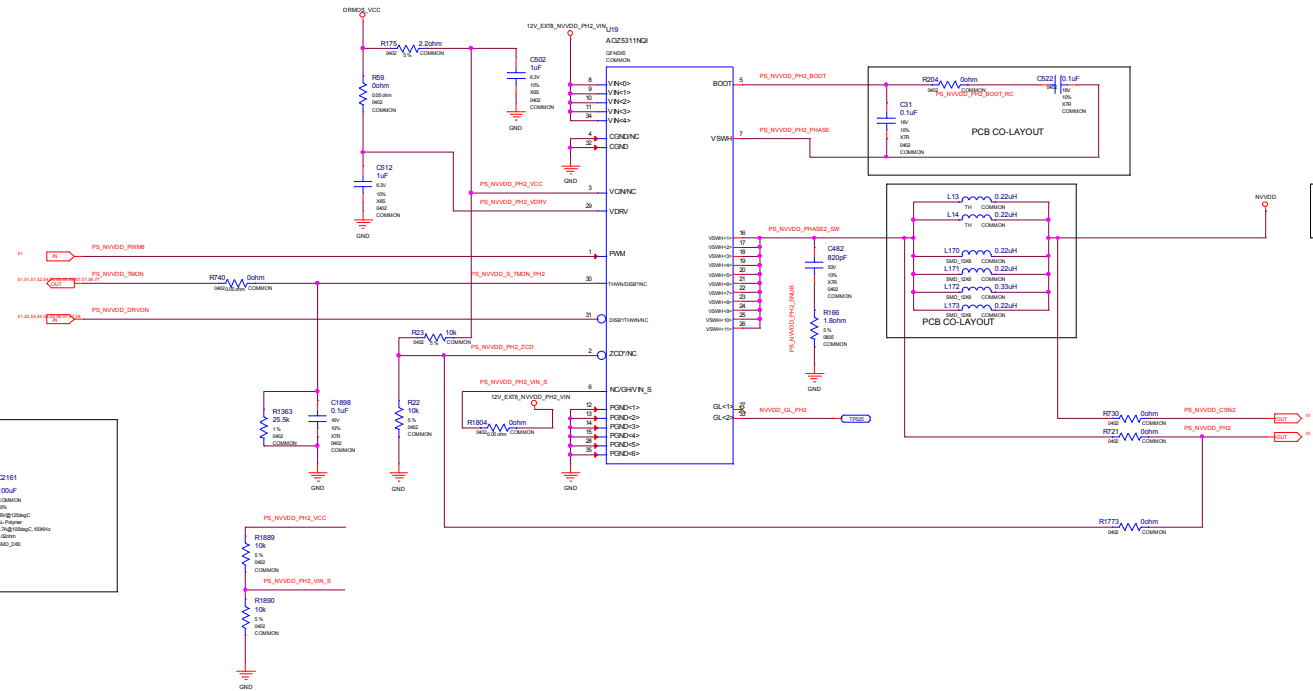
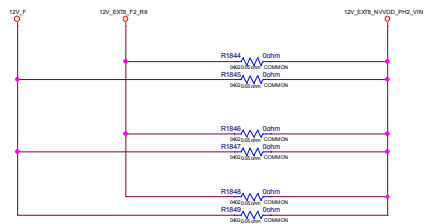
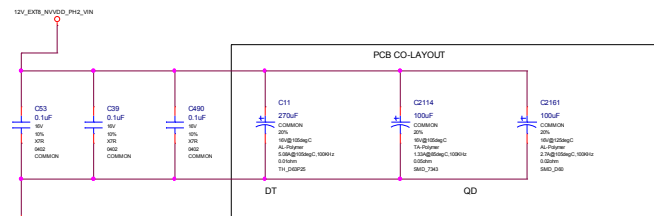
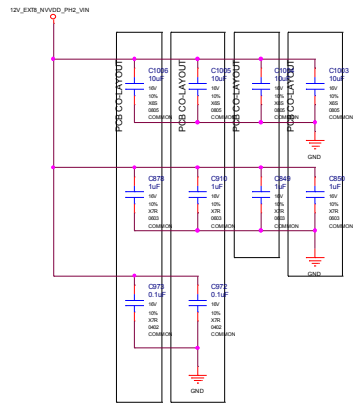




PS: NVVDD Phase 2 (PWM6)



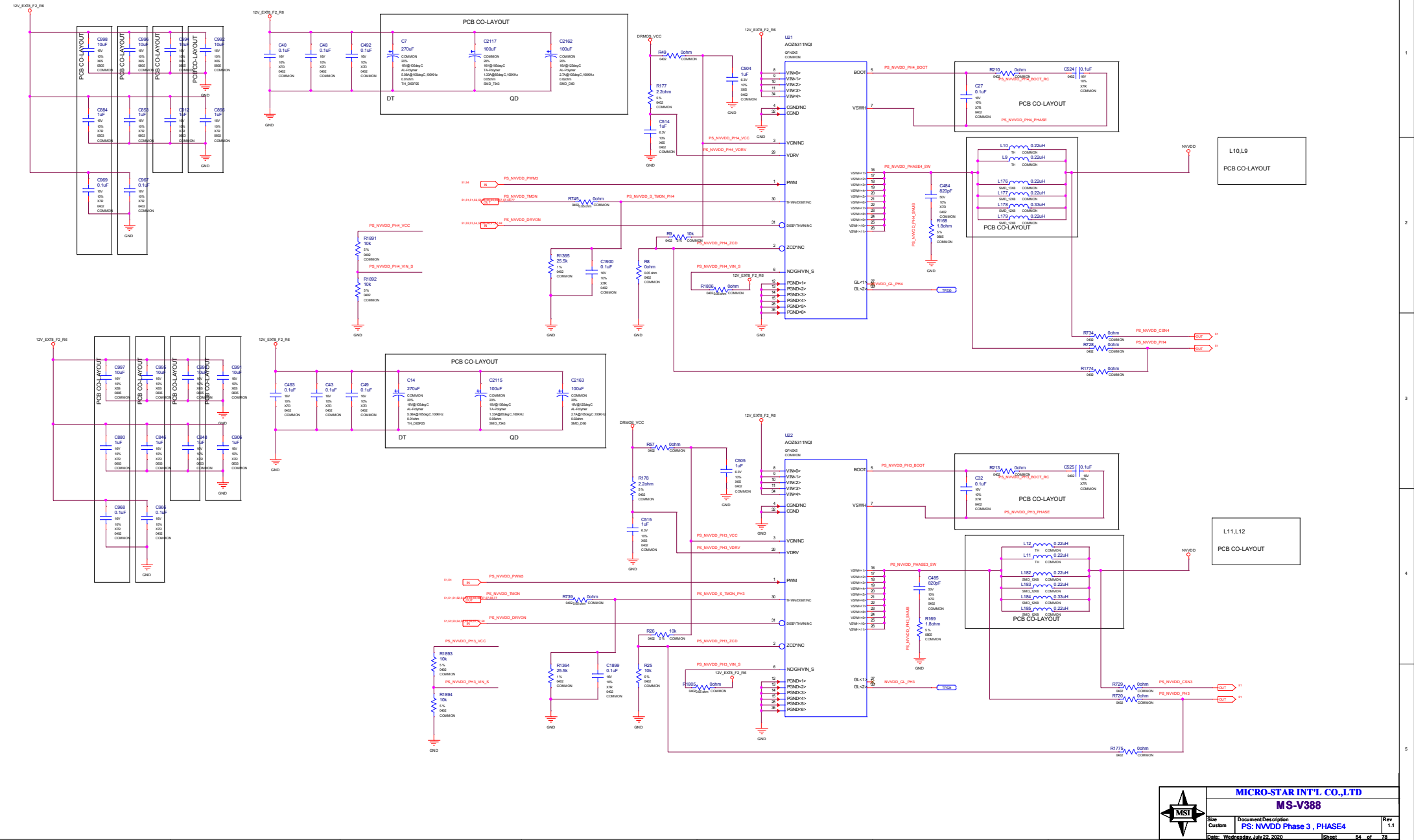
MPS DR MOS WITH 3V3 SUPPLY



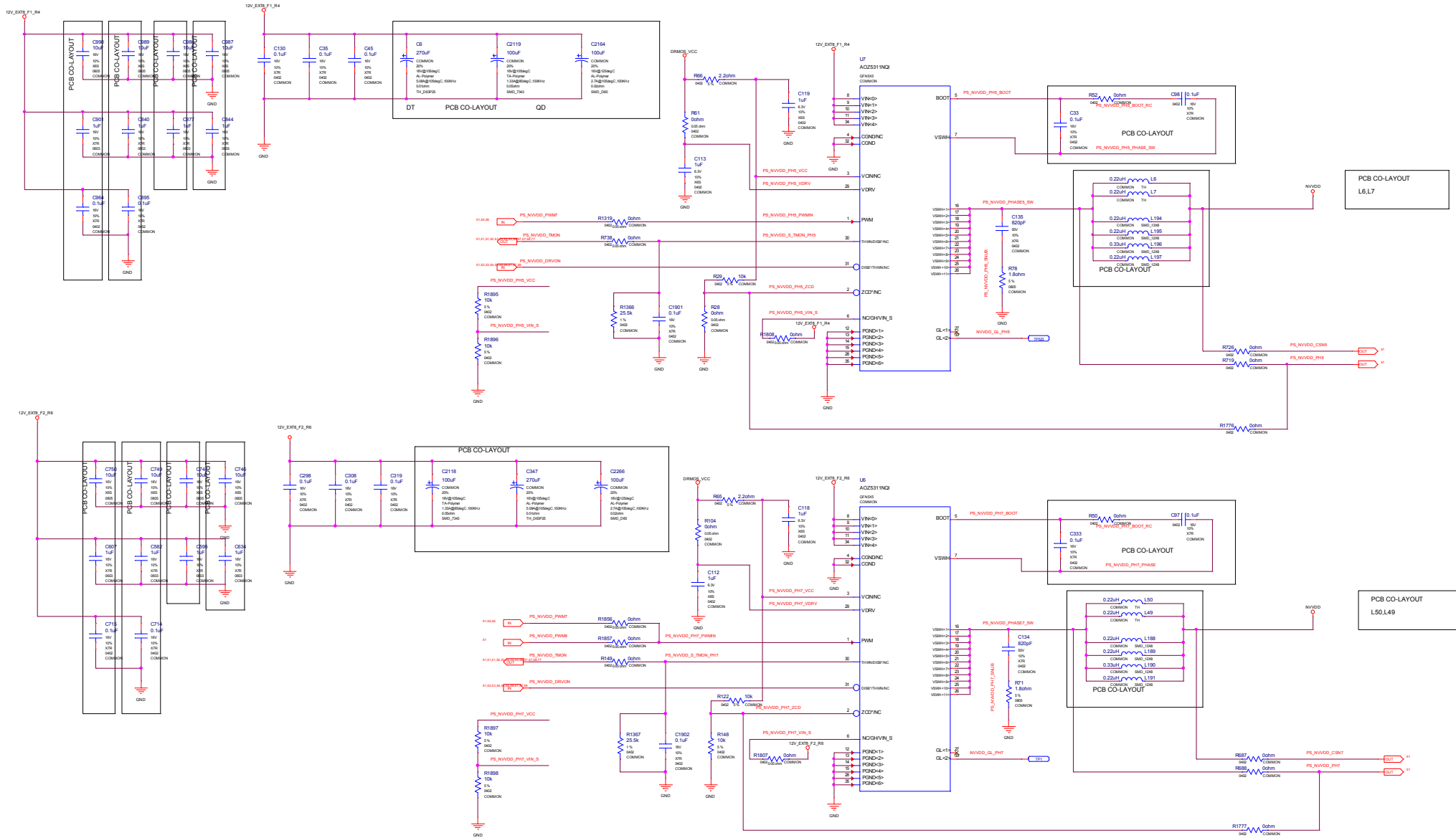
MICRO-STAR INT'L CO.,LTD
MS-V388

Size Custom	Document Description PS: NVDD Phase 2 (PWM6)	Rev 1.1
Date: Wednesday, July 22, 2020		Sheet 53 of 78

PS: NVVDD Phase 3 (PWM3), PHASE4 (PWM3)



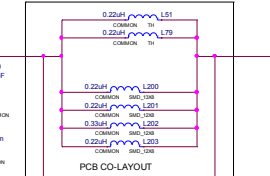
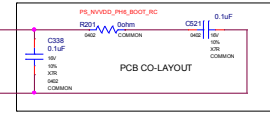
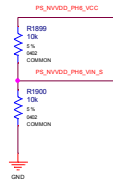
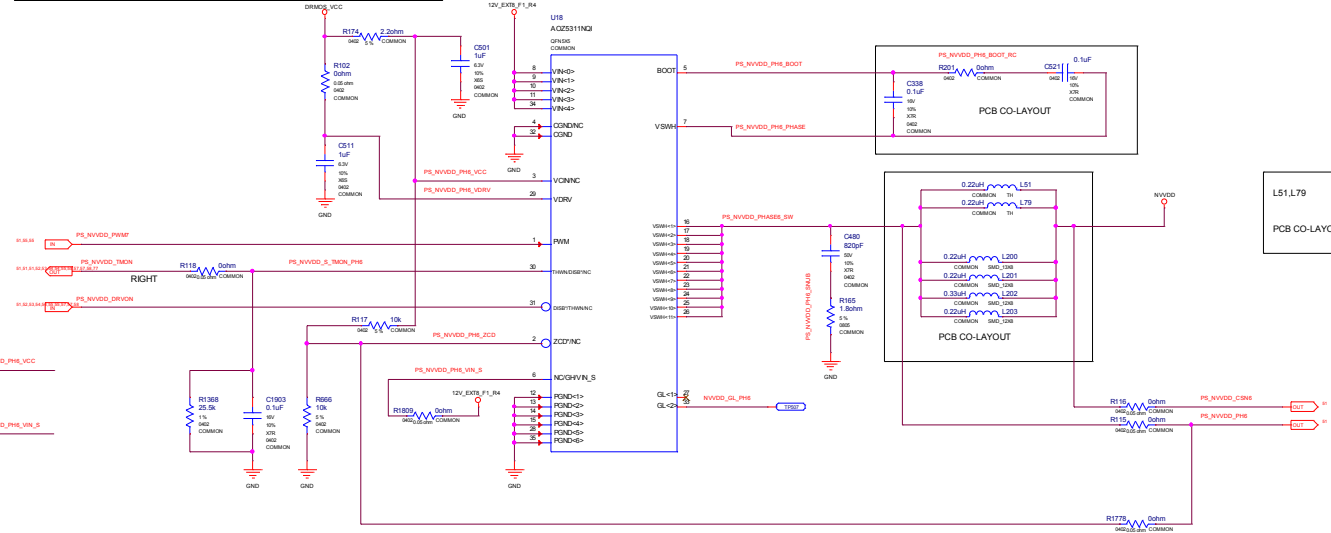
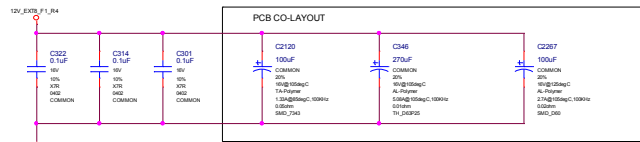
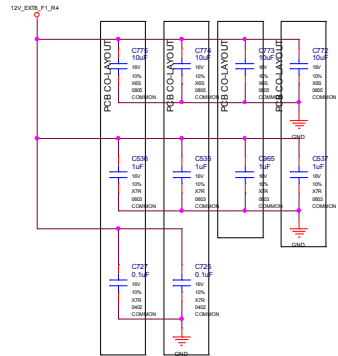
PS: NVVDD PH 5(PWM4), PH7(PWM8/4)



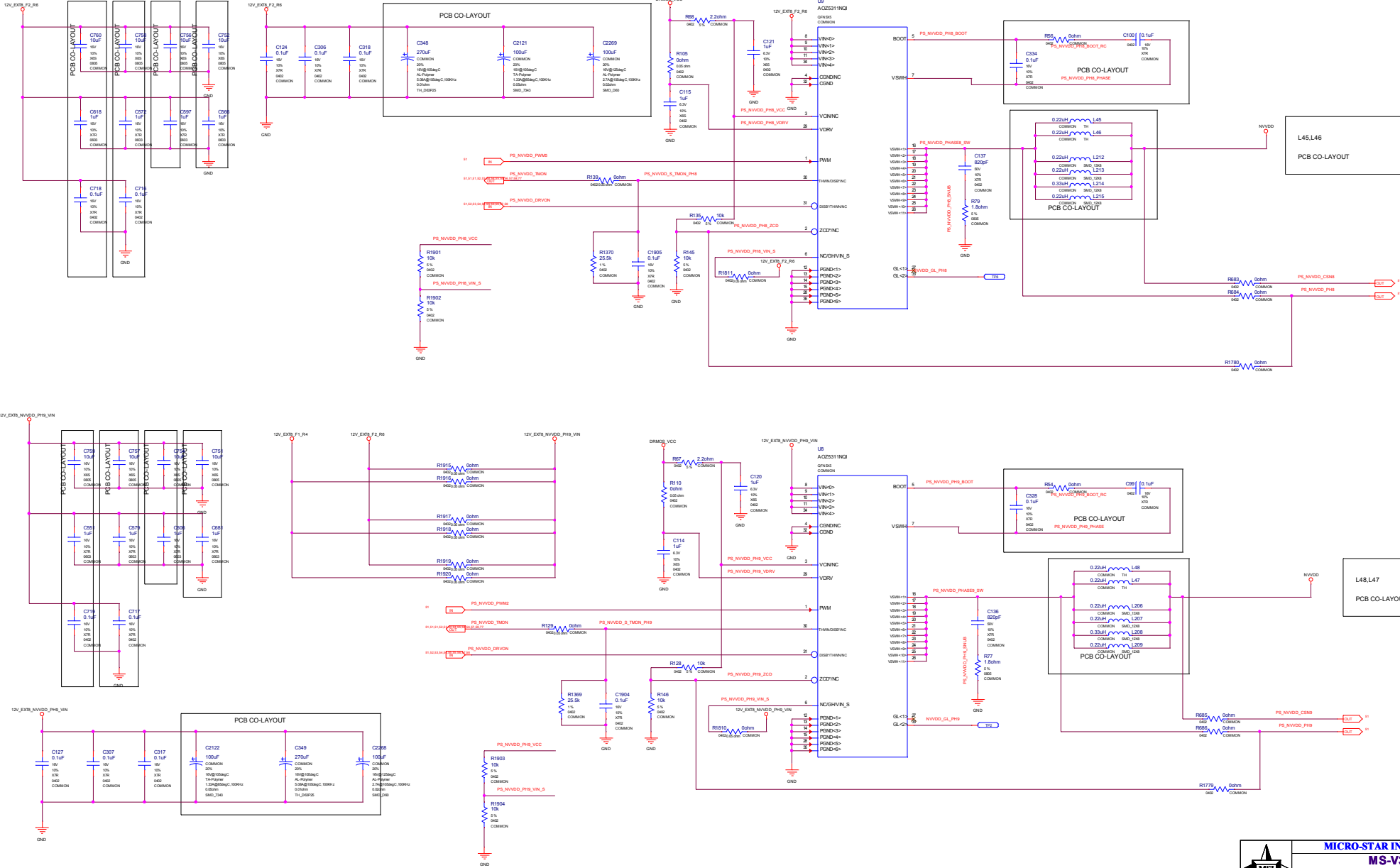
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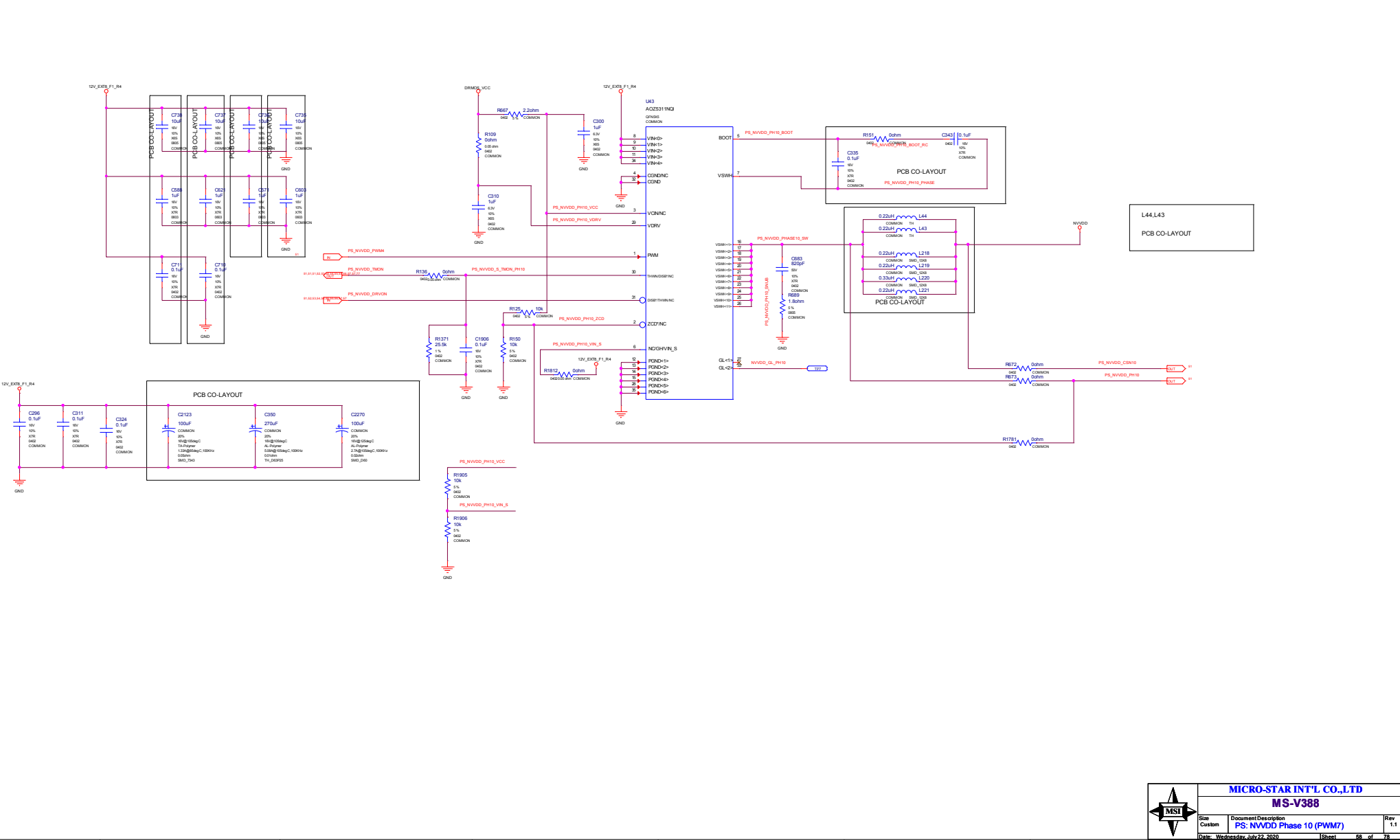
Size Custom	Document Description PS: NWDD PH 5, PH7	Rev 1.1
Date: Wednesday, July 22, 2020		Sheet 55 of 78

PS: NVVDD Phase 6(PWM4)




PS: NVVDD PH 8 (PWM5), PH 9(PWM2)





	A	B	C	D	E	F	G	H
1								
2								
3								
4								
5								
	A	B	C	D	E	F	G	H



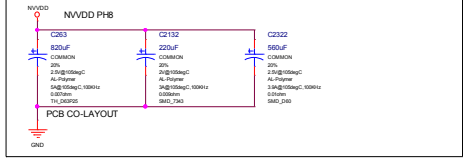
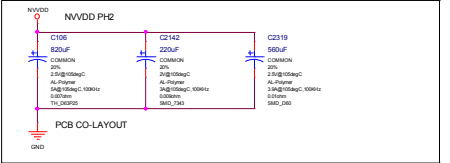
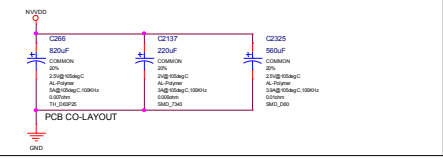
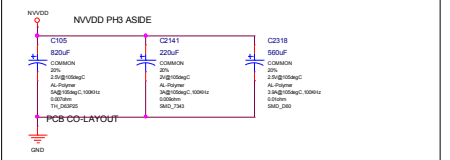
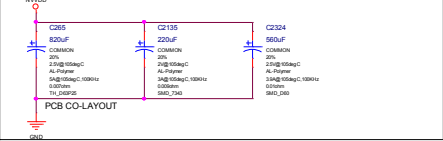
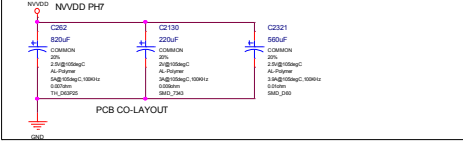
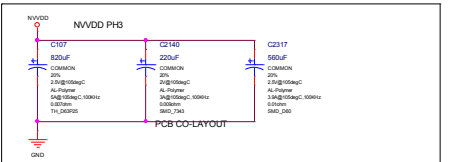
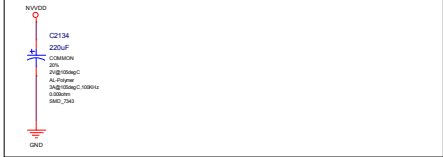
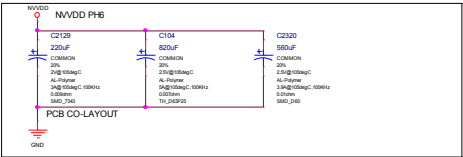
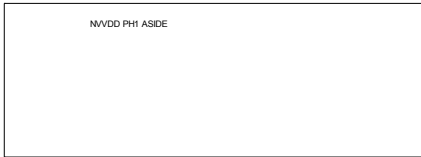
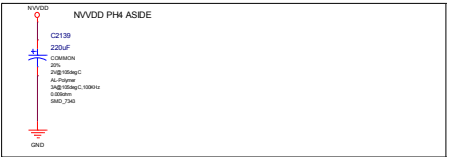
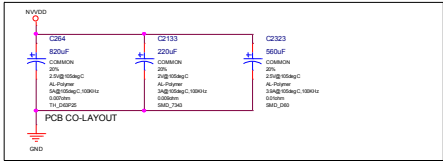
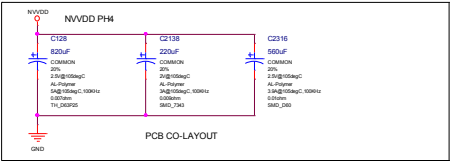
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Size	Document Description	Rev
Custom	Colayout Notes	1.1
Date: Wednesday, July 22, 2020	Sheet	69 of 78

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MICRO-STAR INT'L CO.,LTD		
MS-V388		
Size	Document Description	Rev
Custom	BLANK	1.1
Date: Wednesday, July 22, 2020		Sheet 60 of 78

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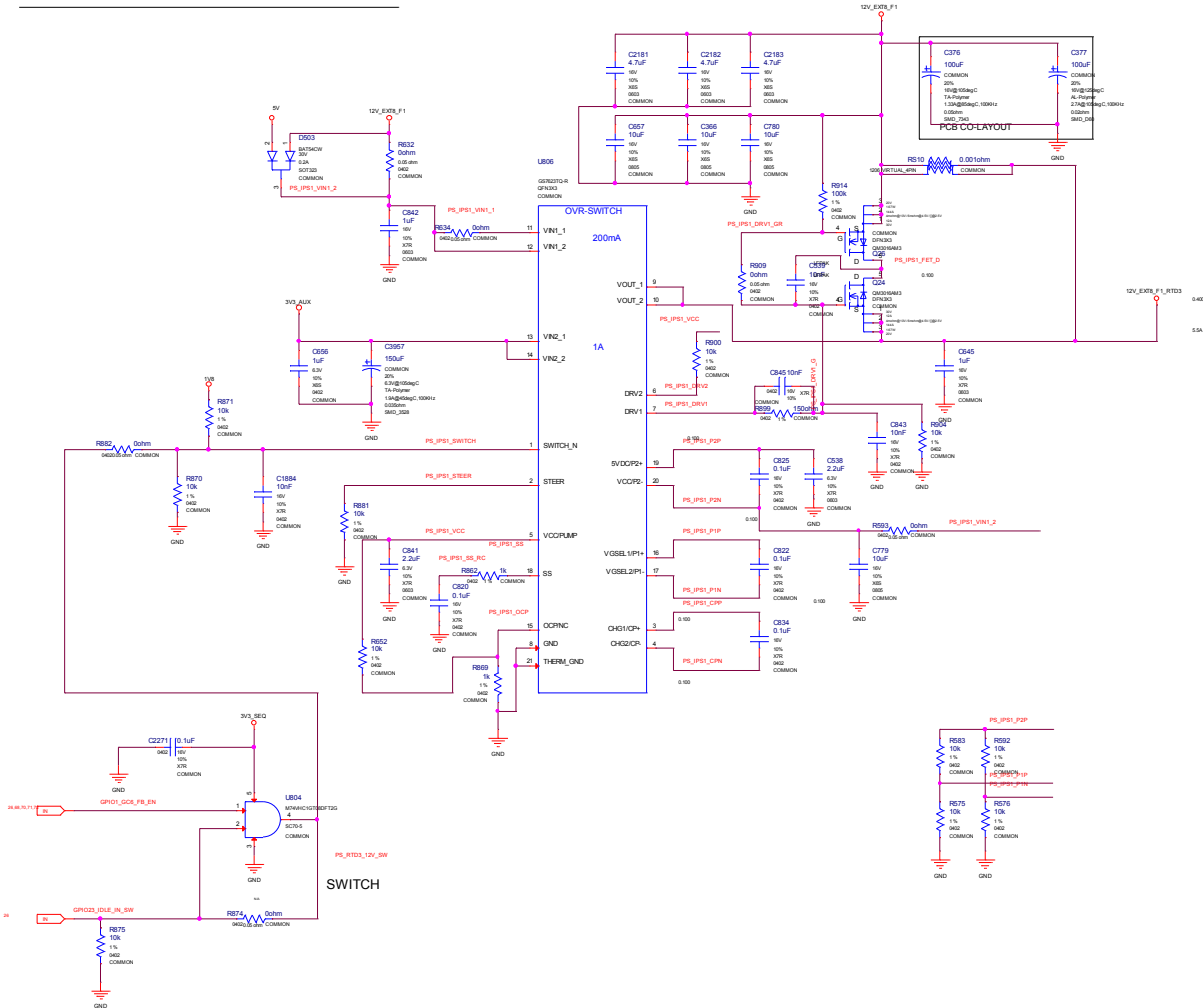
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	MICRO-STAR INT'L CO.,LTD		
	MS-V388		
	Size	Document Description	Rev
	Custom	BLANK	1.1
Date: Wednesday, July 22, 2020		Sheet	62 of 78

PS: INPUT SWITCH RTD3

AND GATE LOGIC FOR P-BOARD

GPI01	GPI023	SWITCH	VOUT
0	0	0	12V_F
0	1	0	12V_F
1	0	0	12V_F
1	1	1	3V3A

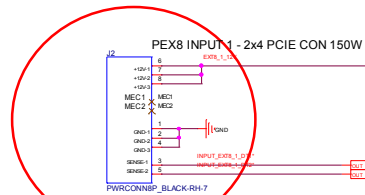
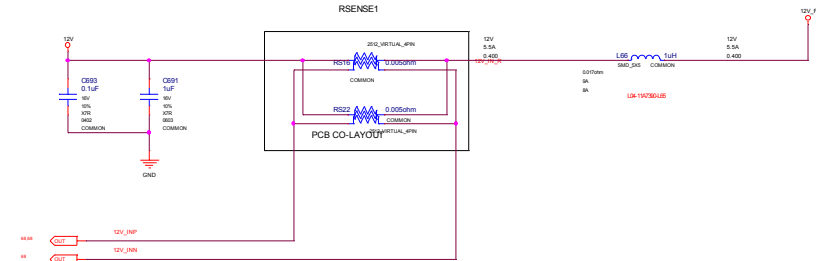
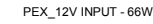
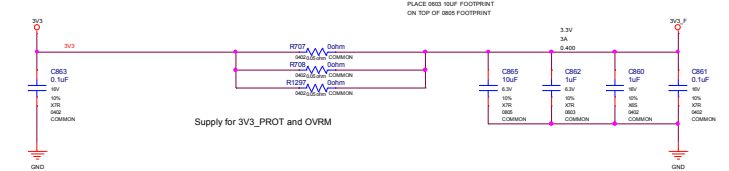
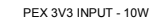
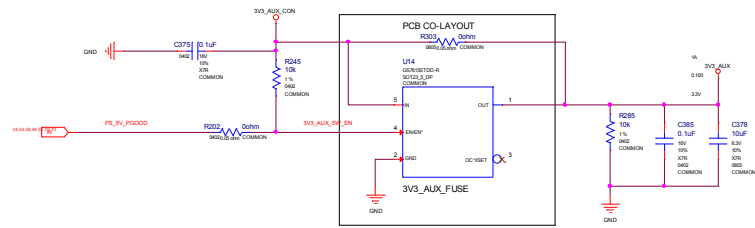


BLANK

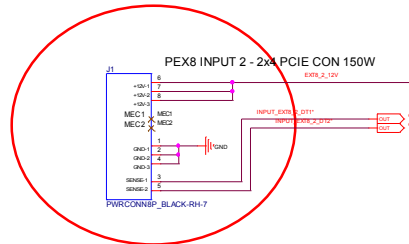


MICRO-STAR INT'L CO.,LTD		
MS-V388		
Size	Document Description	Rev
Custom	BLANK	1.1
Date: Wednesday, July 22, 2020		Sheet 64 of 78

PS: Inputs, Filtering, and Monitoring

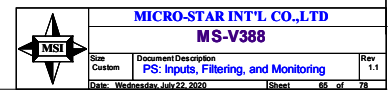
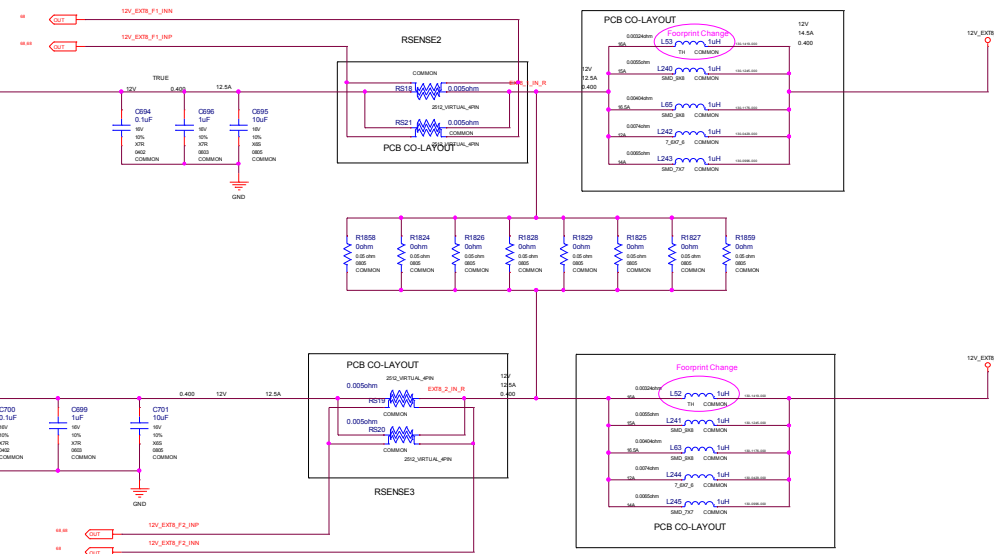


改反向8pin

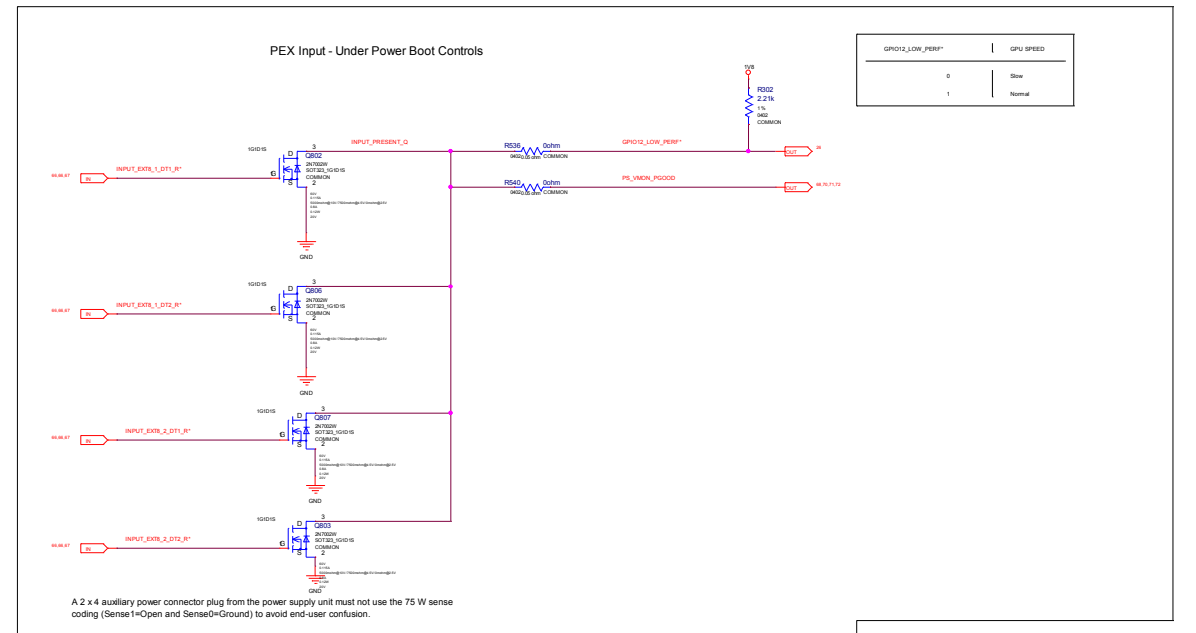
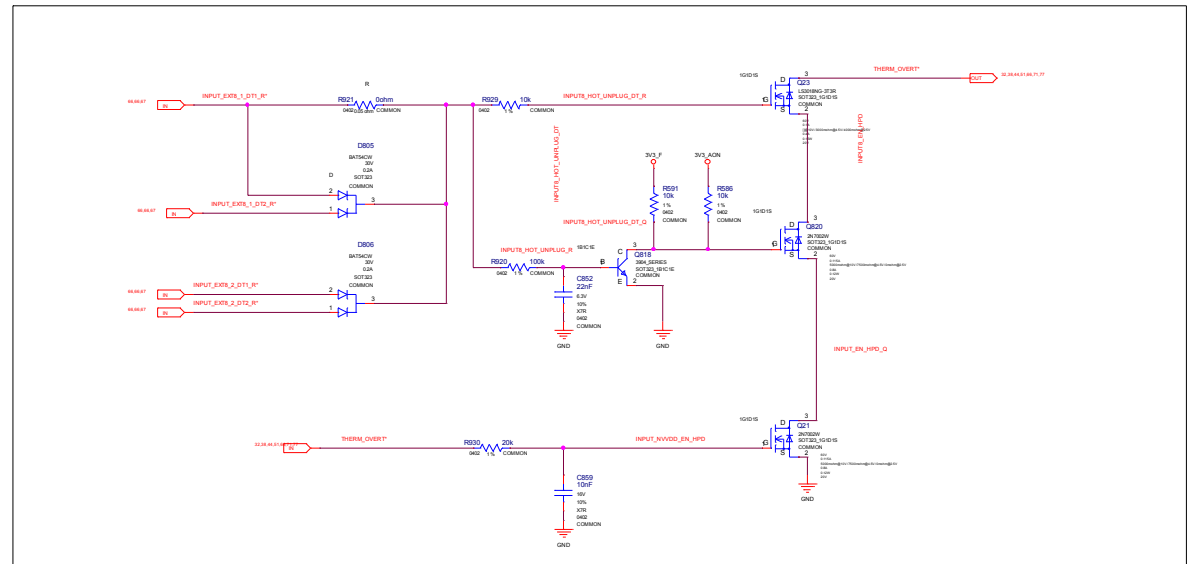
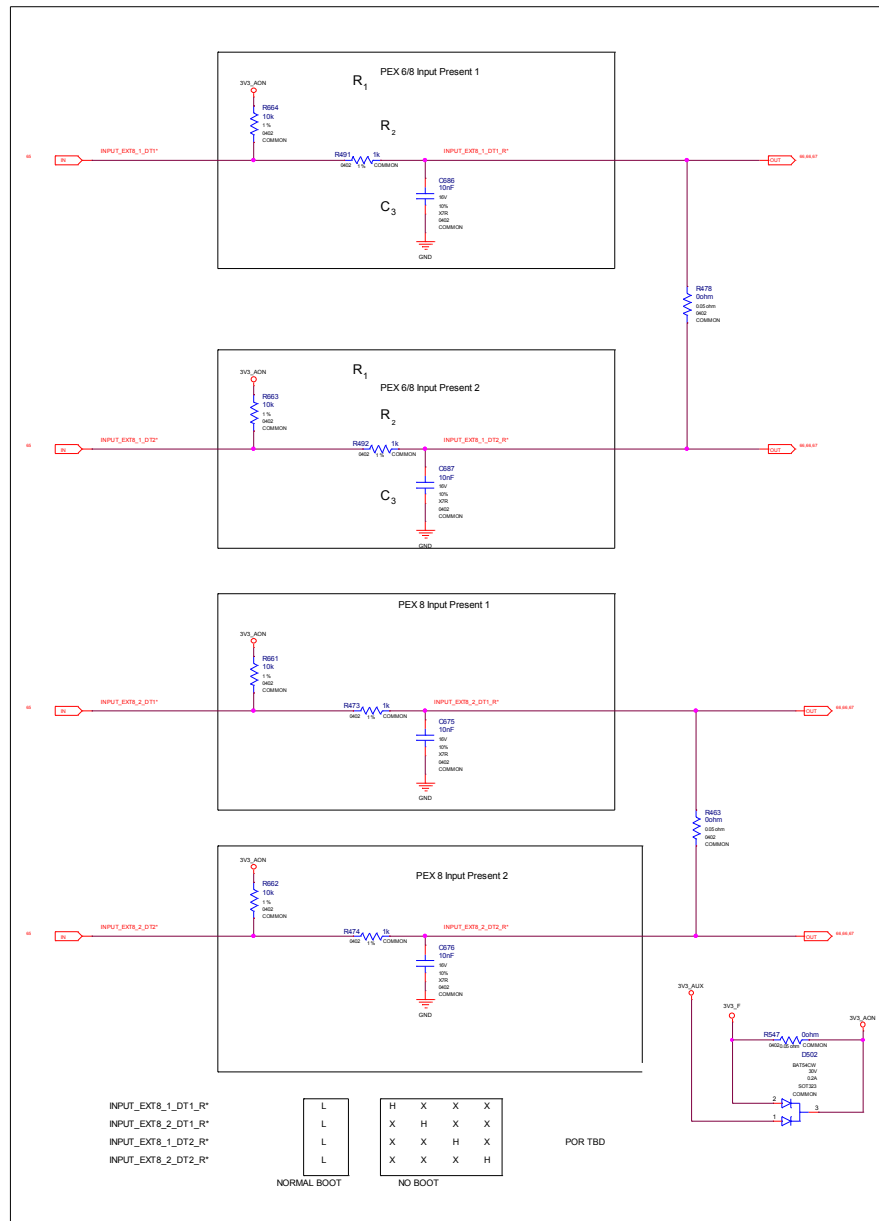


J24,J25,J26,J27 Remove

QD SKU CABLE



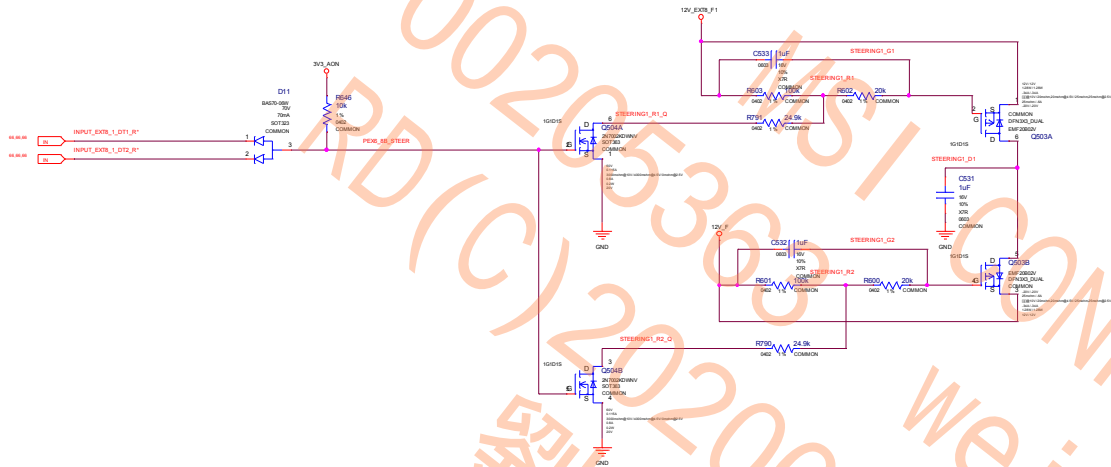
PS: 12V Current Steering & Hot Unplug Detect



PS: Discrete Steering

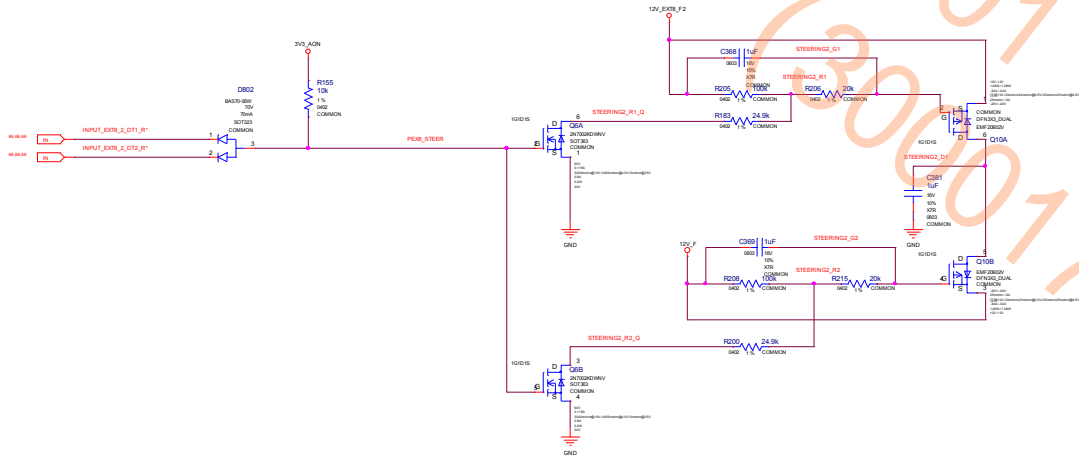
12V CURRENT STEERING (UNDER POWER BOOT):

PEX12V AND 12V_EXT8_F1



NO STUFF BY DEFAULT REF ONLY

PEX12V AND 12V_EXT8_F2



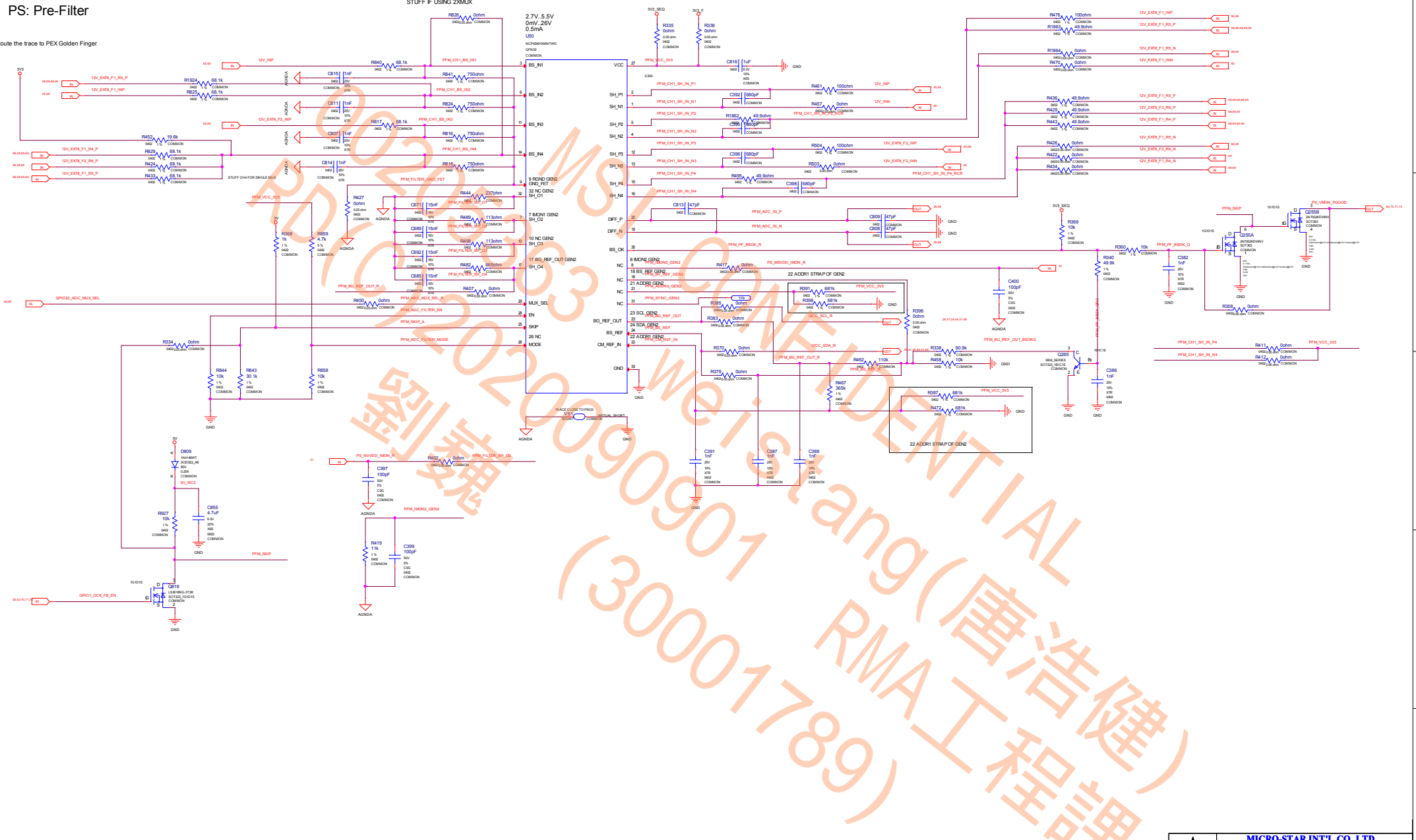
MICRO-STAR INT'L CO.,LTD	
MS-V388	
Size	Document Description
Custom	PS: Discrete Steering
Date: Wednesday, July 22, 2020	Sheet 67 of 78

PS: Pre-Filter

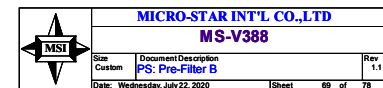
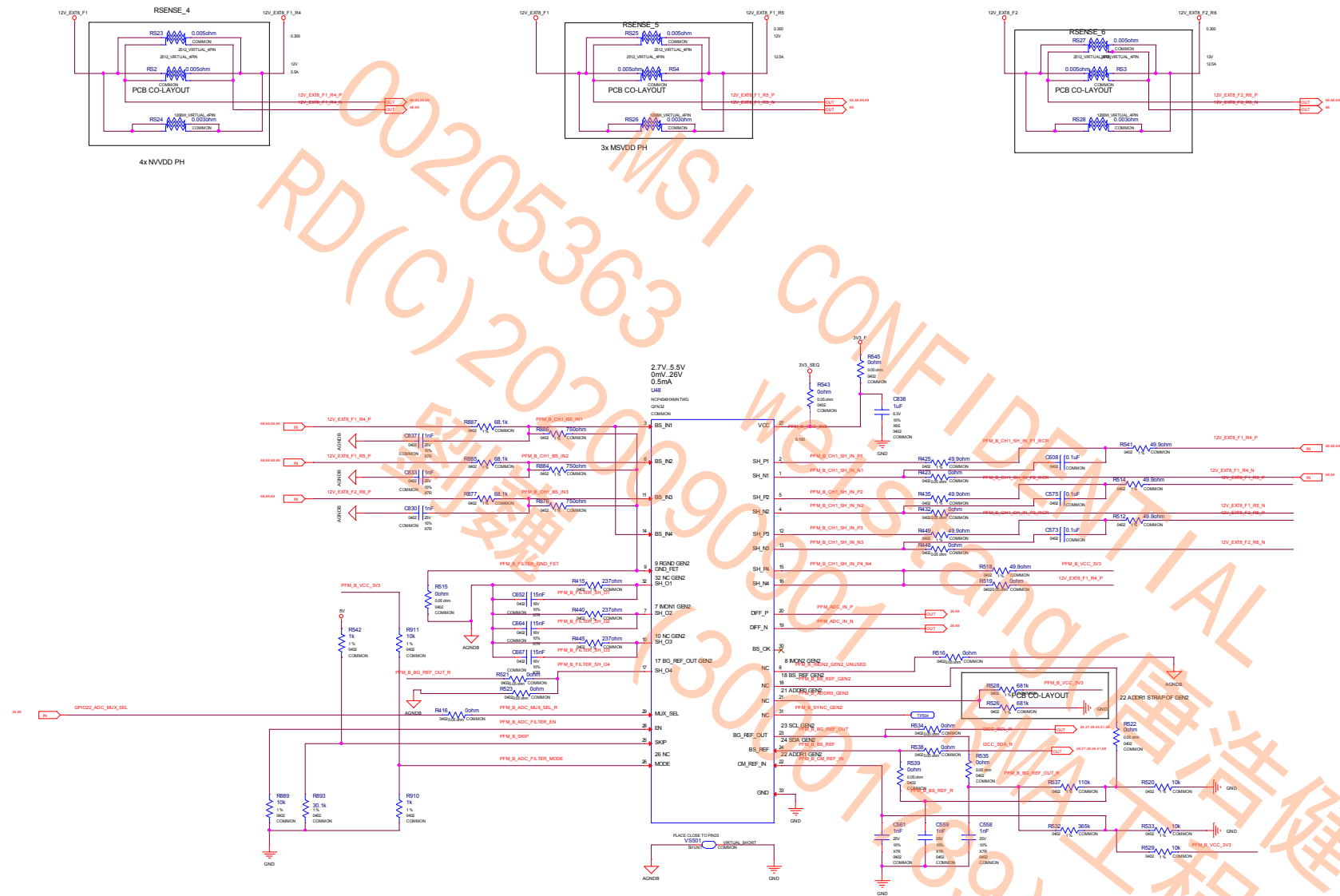
Route the trace to PEX Golden Finger

STUFF F USING 2XMUX

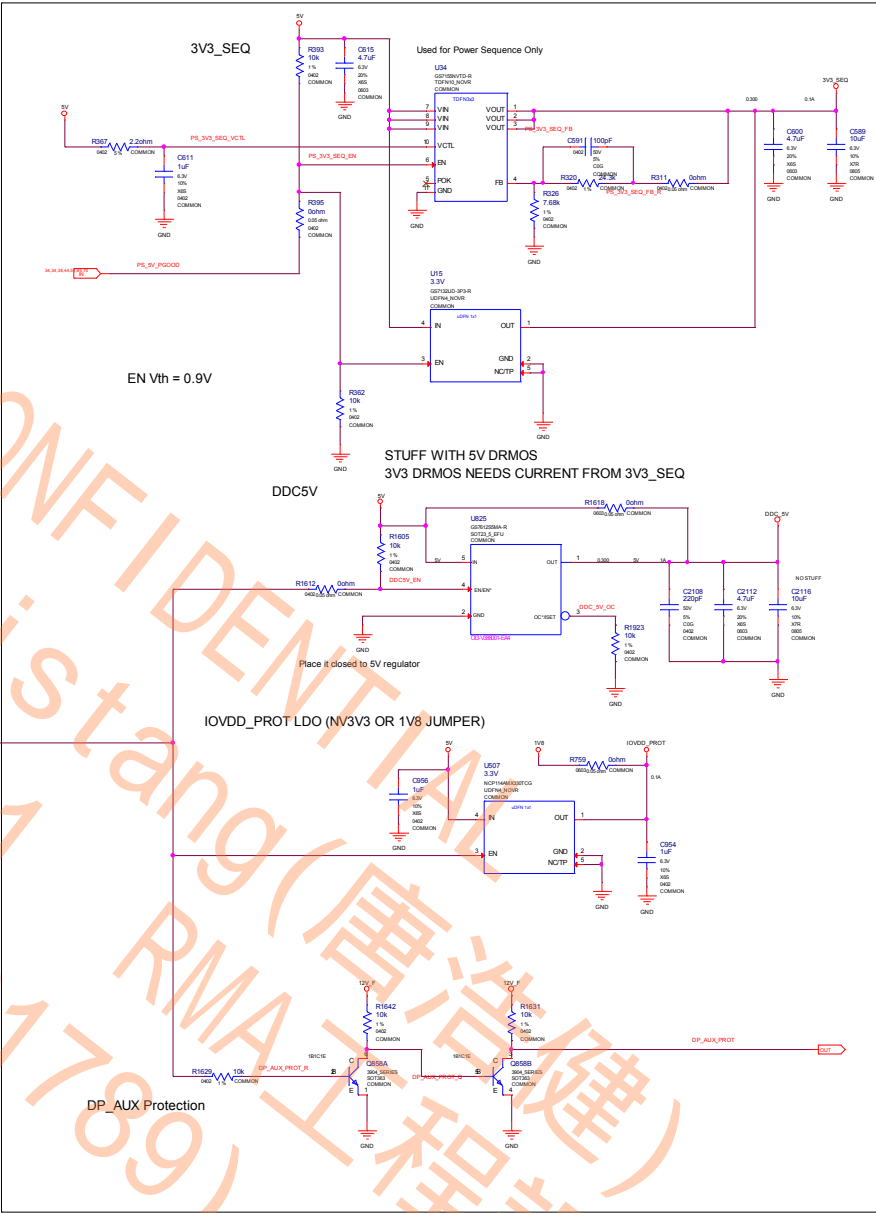
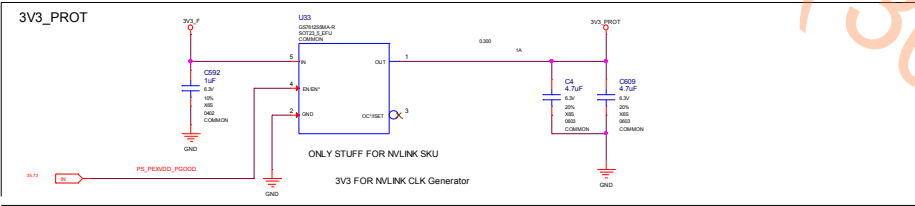
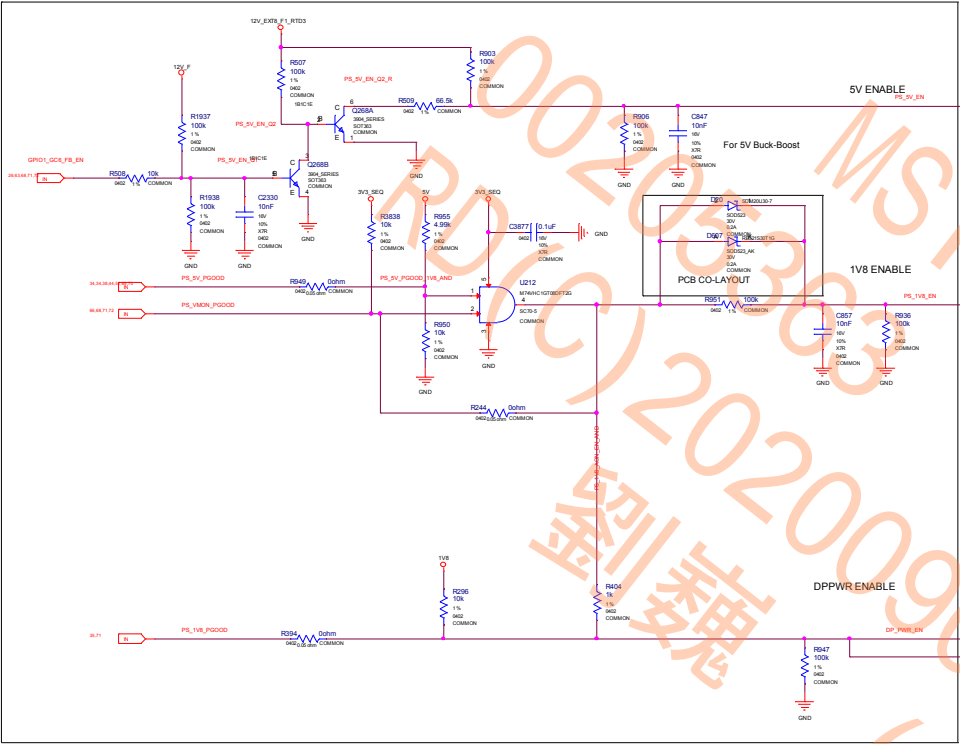
2.7V 5.5V
0mV 26V
0.5mA
NOISE/RESETTING
GND/FET
COMMON



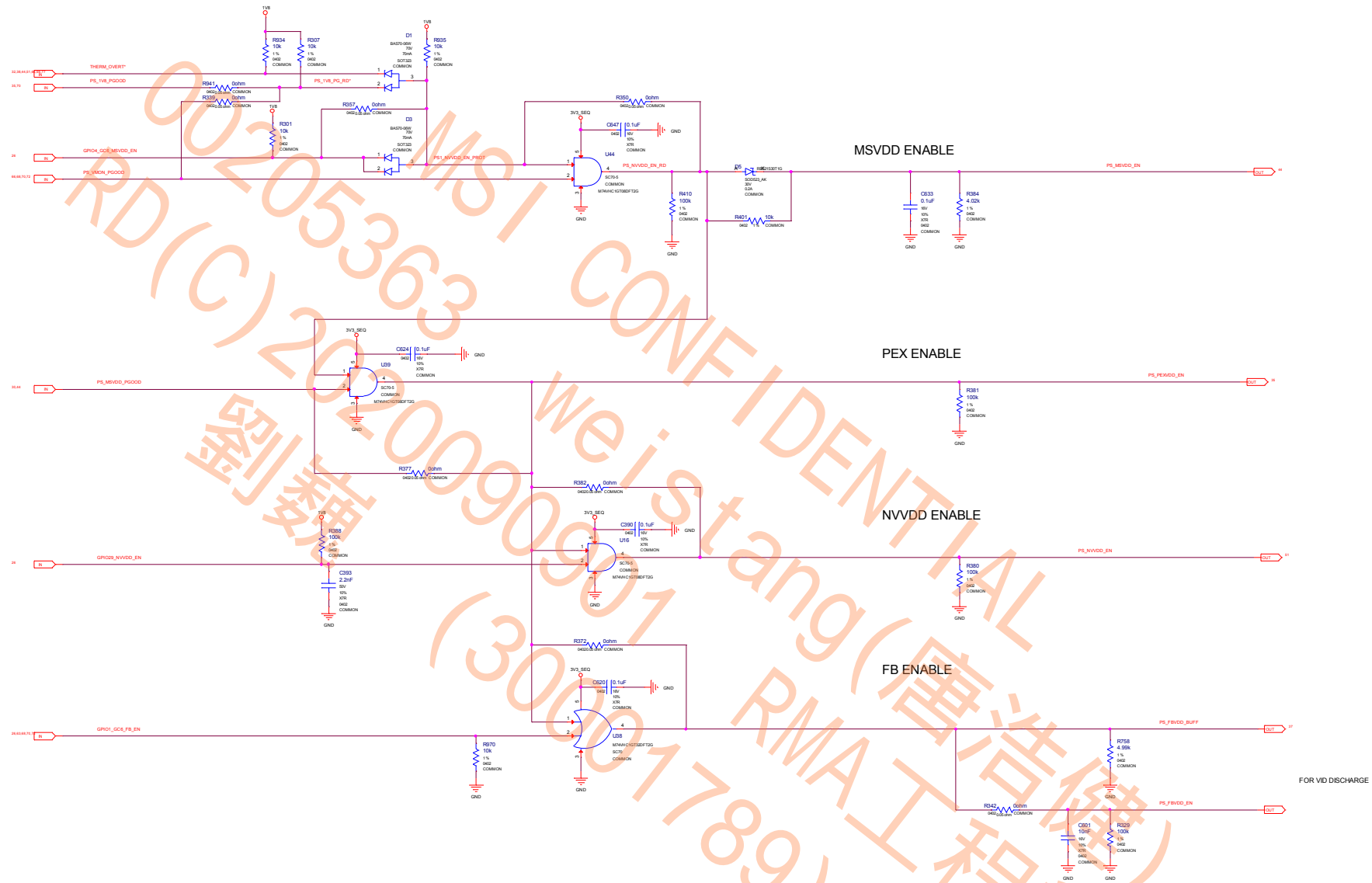
PS: Pre-Filter B



SEQUENCE:5V,1V8,3V3_SEQ ENABLE

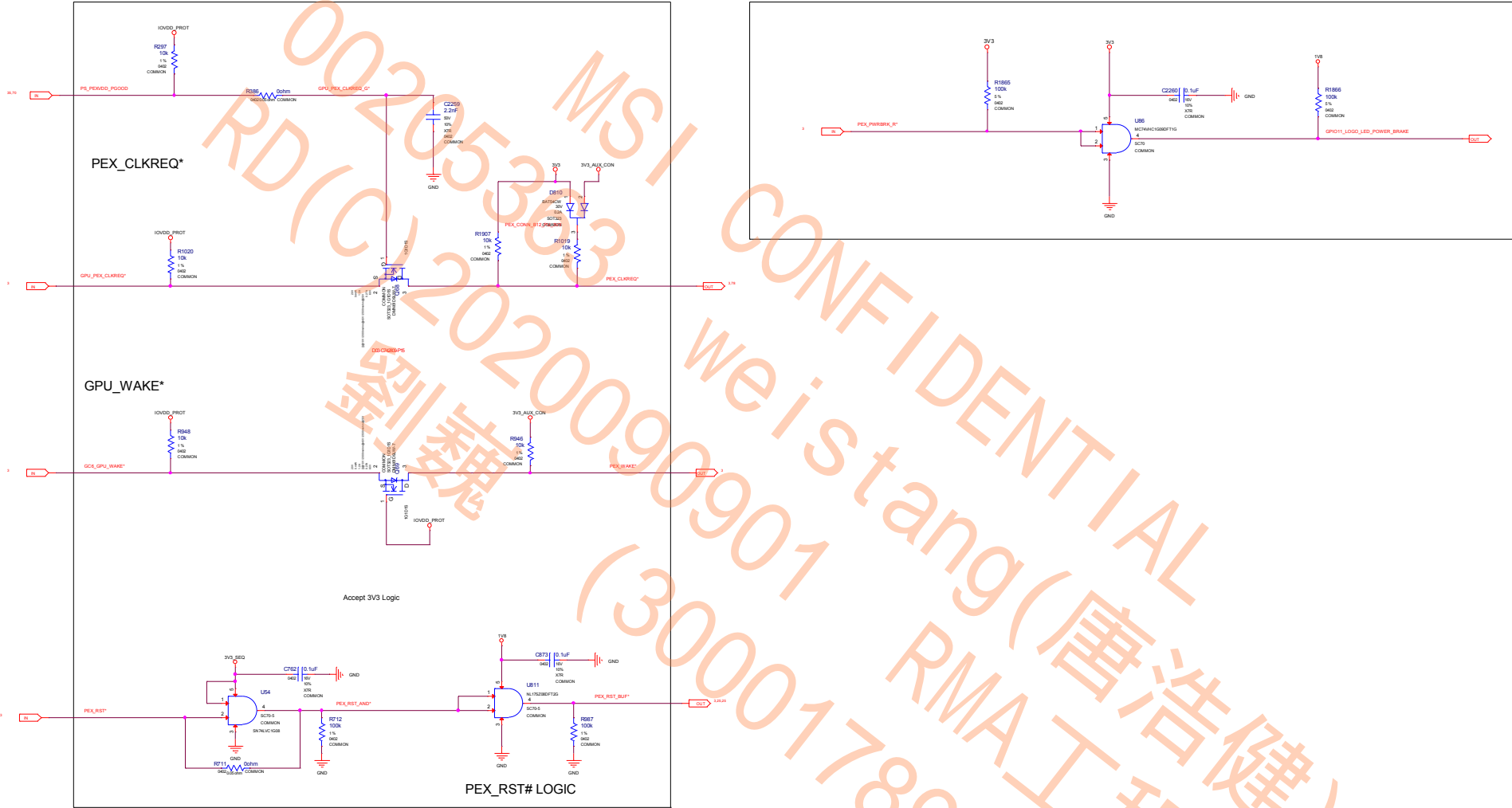


SEQUENCE:NV,PEX,FB ENABLE

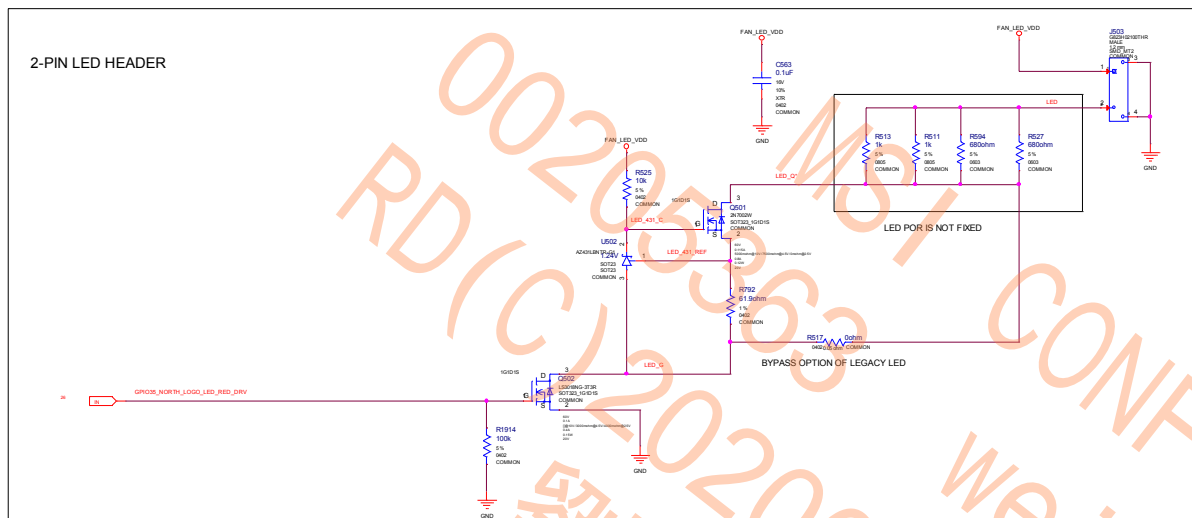


3V3PEX Monitor

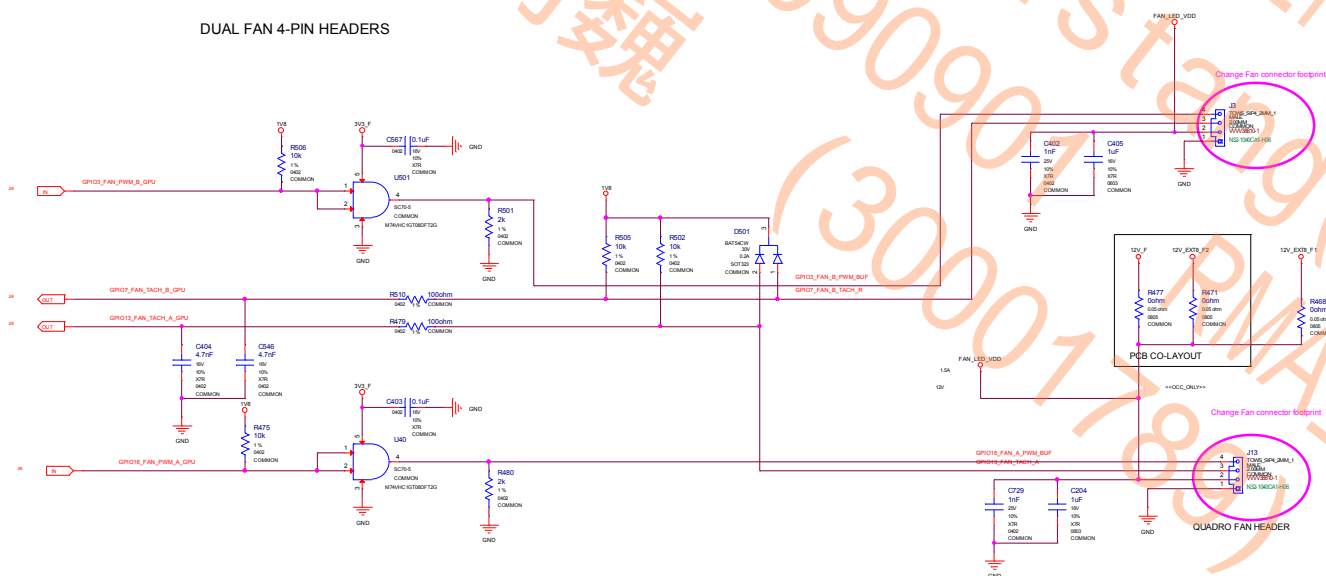




2-PIN LED HEADER

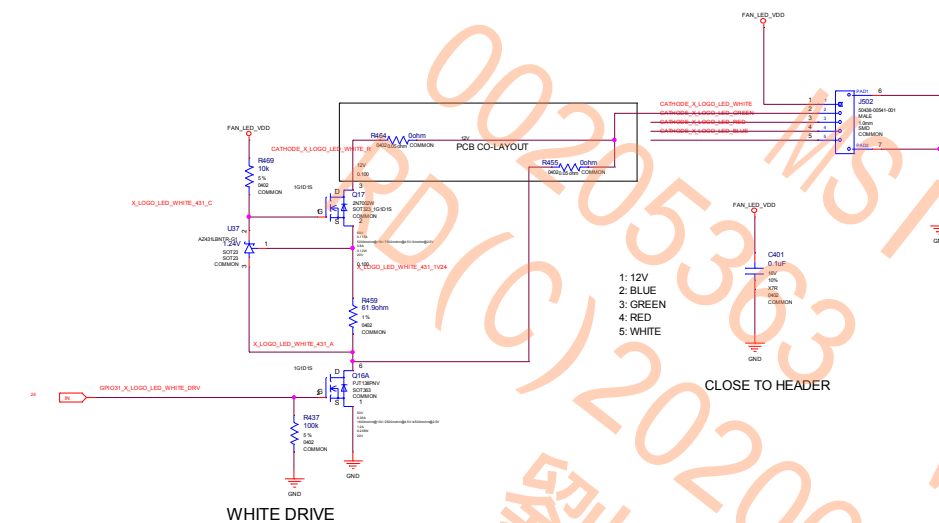


DUAL FAN 4-PIN HEADERS

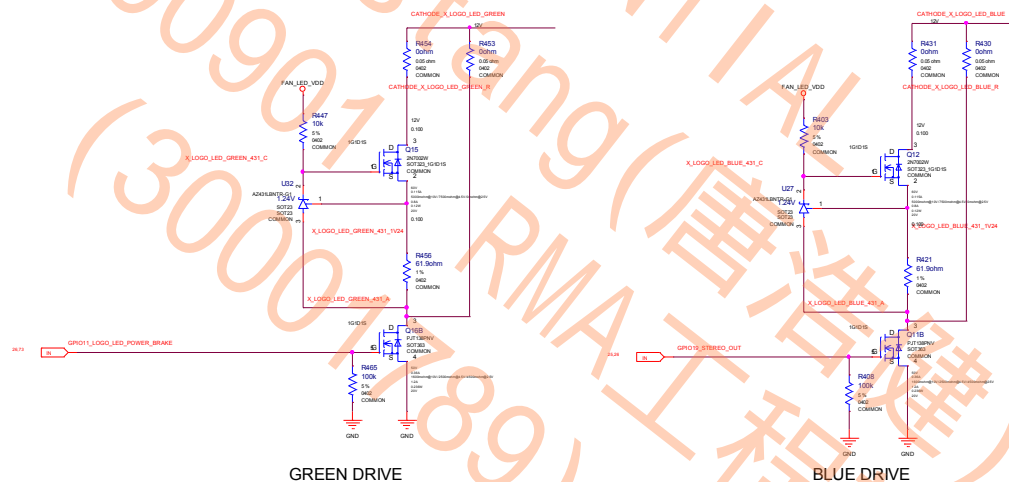
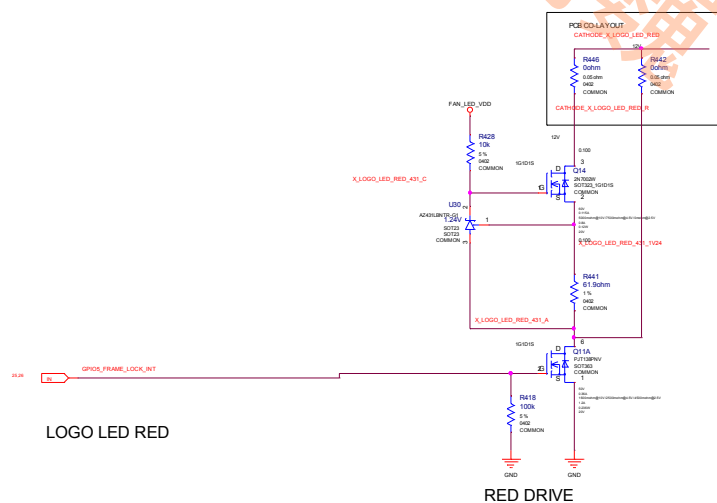


MICRO-STAR INT'L CO.,LTD
MS-V388

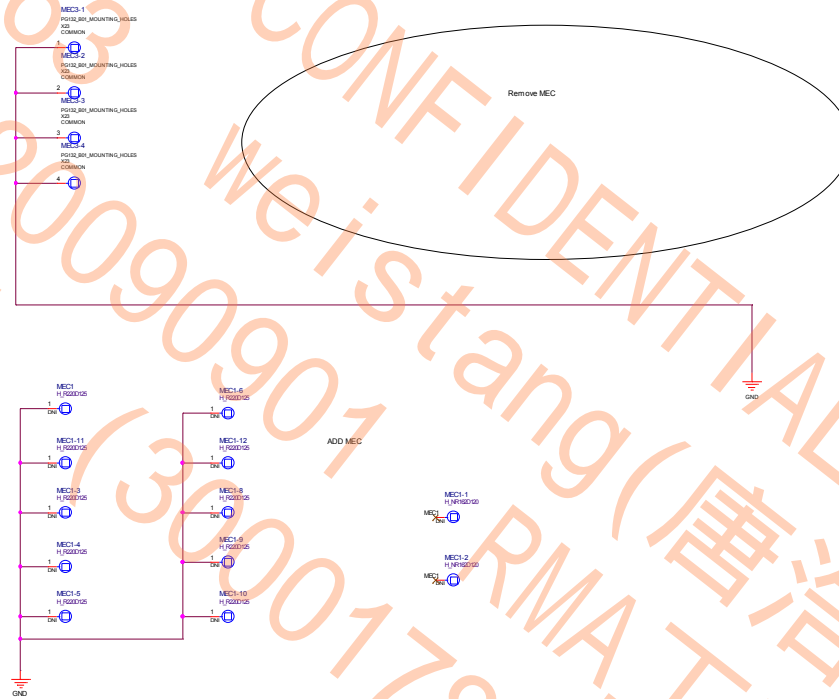
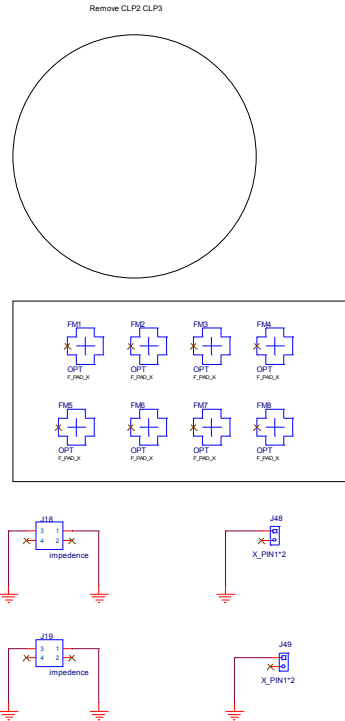
Size Custom	Document Description MISC: LED & FAN	Rev 1.
Date: Wednesday, July 22, 2020		Sheet 74 of 78



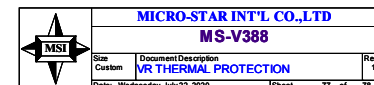
CONNECTOR SIZE TO FIT LAYOUT
ALL CIRCUIT NO STUFF BY DEFAULT
ALINGN WITH PASH
IF ADDITIONAL POWER CONSUPTION R
NEEDED, IT SHOULD BE ON LED MOD.



Mechanical: Mounting holes



VR THERMAL PROTECTION



PCI TERM

