

P2132-A01

NVG GK208 DDR3 64BIT

DVI-I/DVI-D + HDMI + VGA

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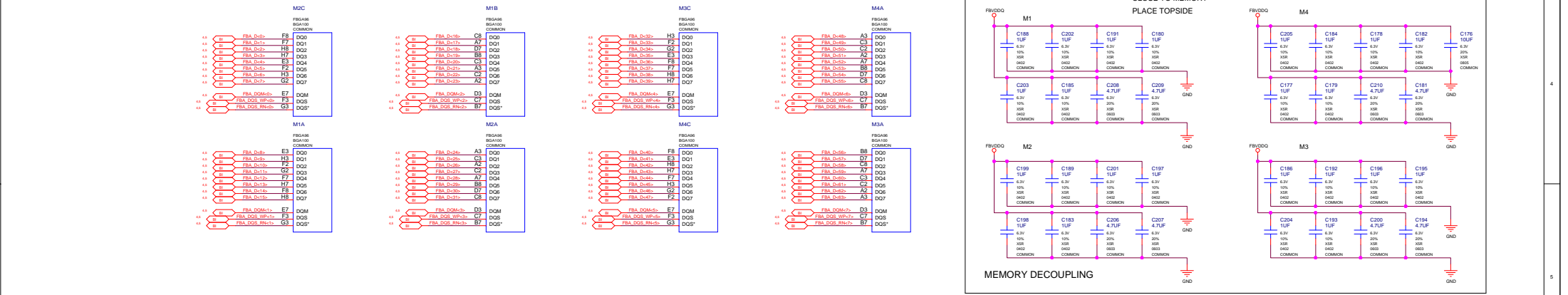
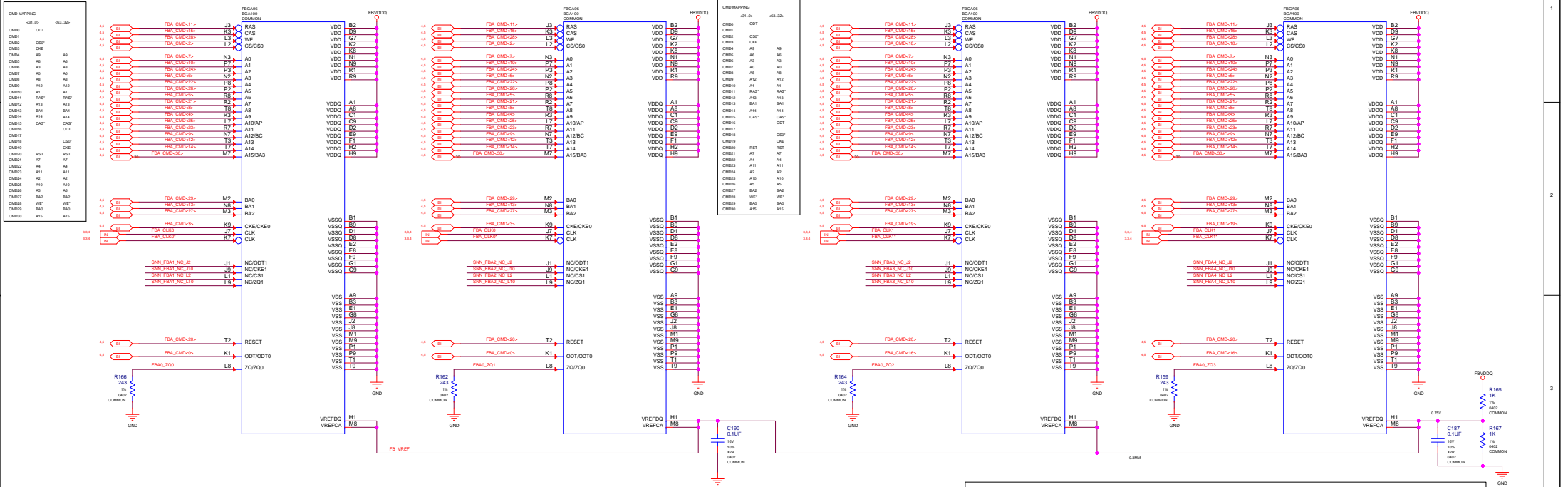


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DDR3 Memories



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DDR3 Memories

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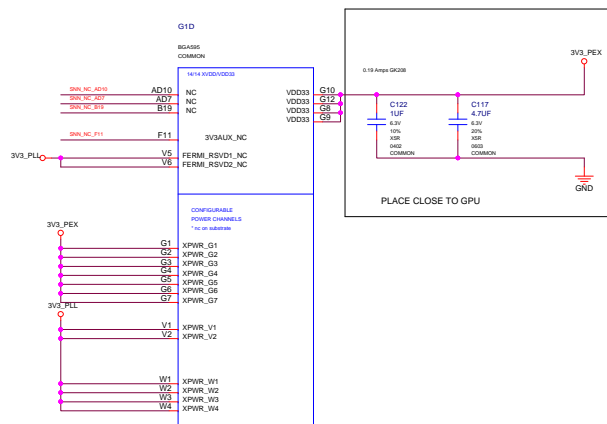
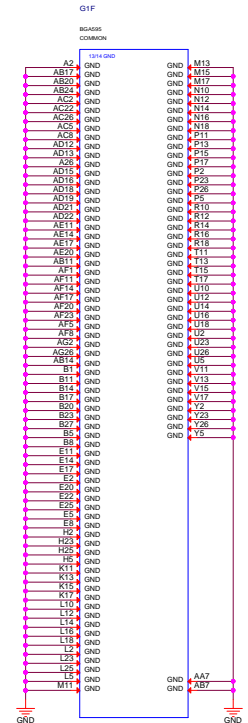
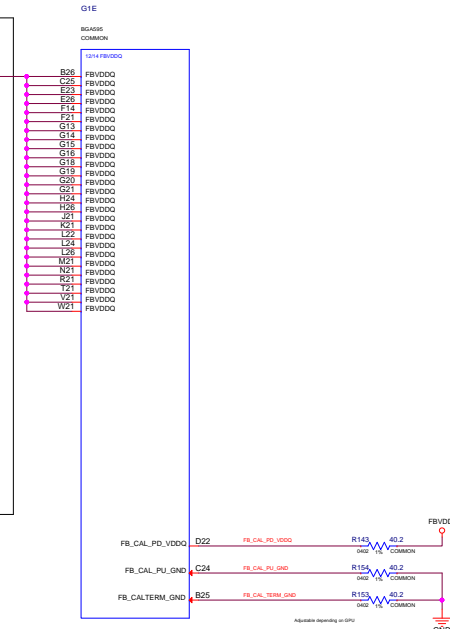
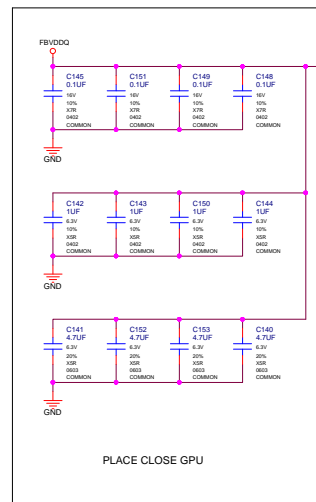
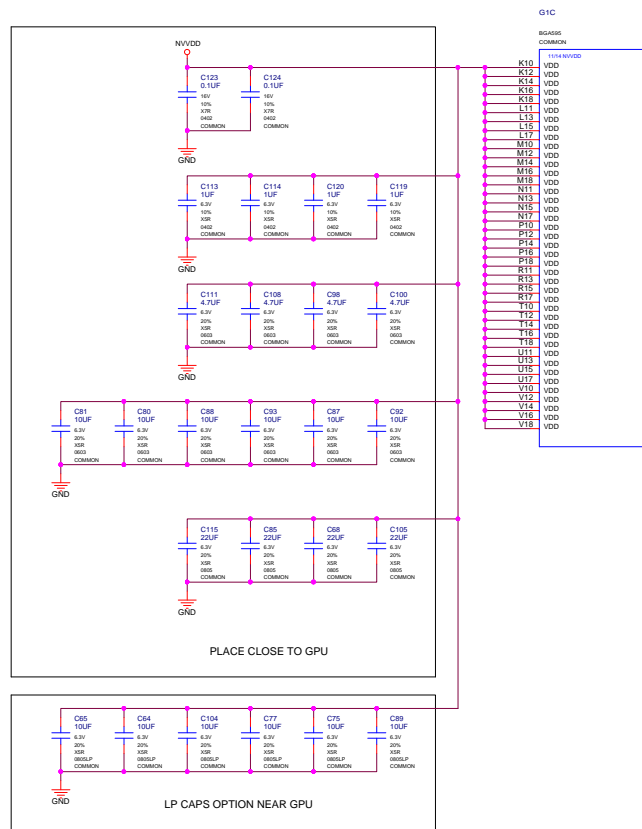
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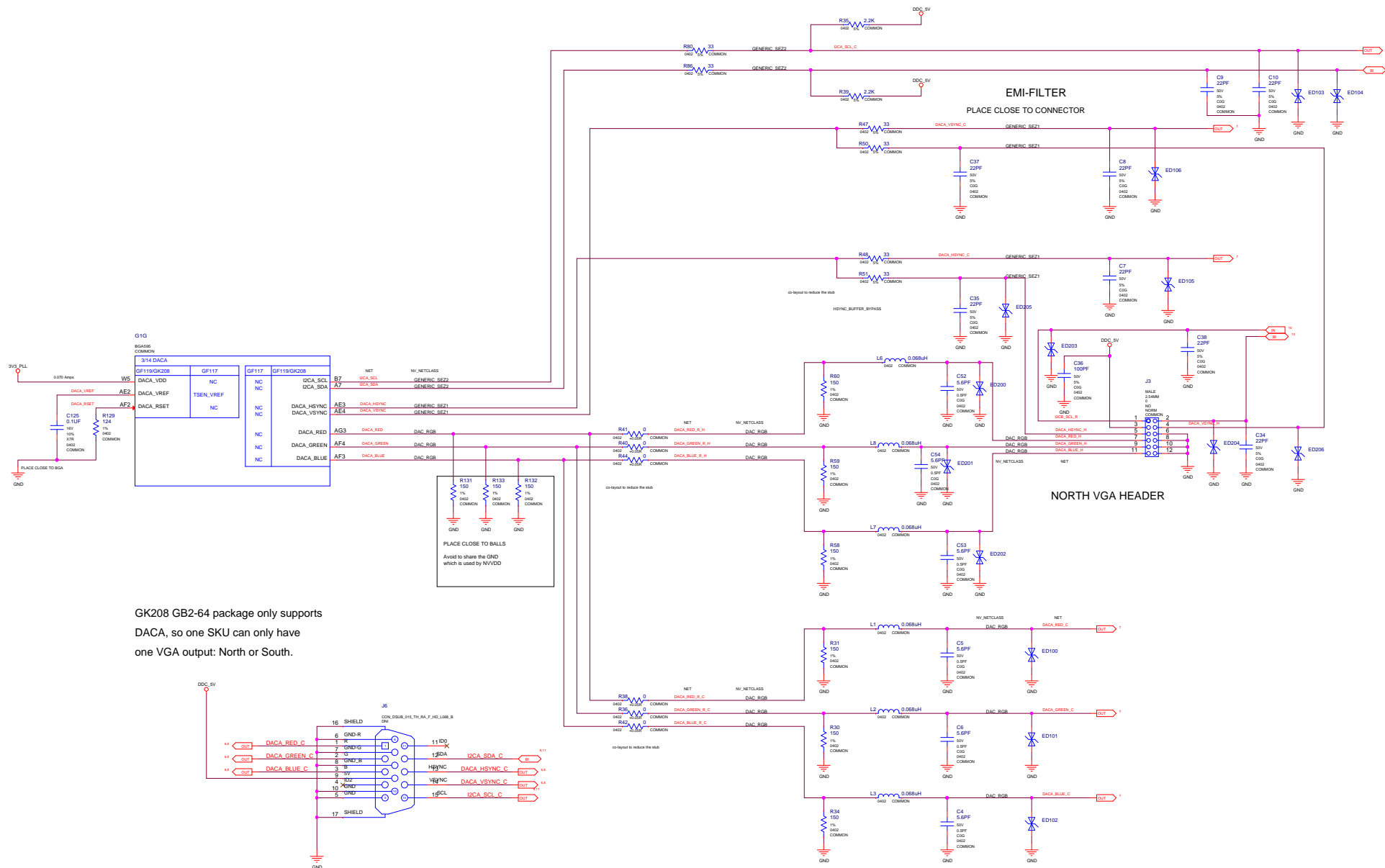
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## DECOUPLING FOR CORE POWER\_TOP



## DACA VGA



GK208 GB2-64 package only supports  
DACA, so one SKU can only have  
one VGA output: North or South.

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PAGE DETAIL	DACA VGA

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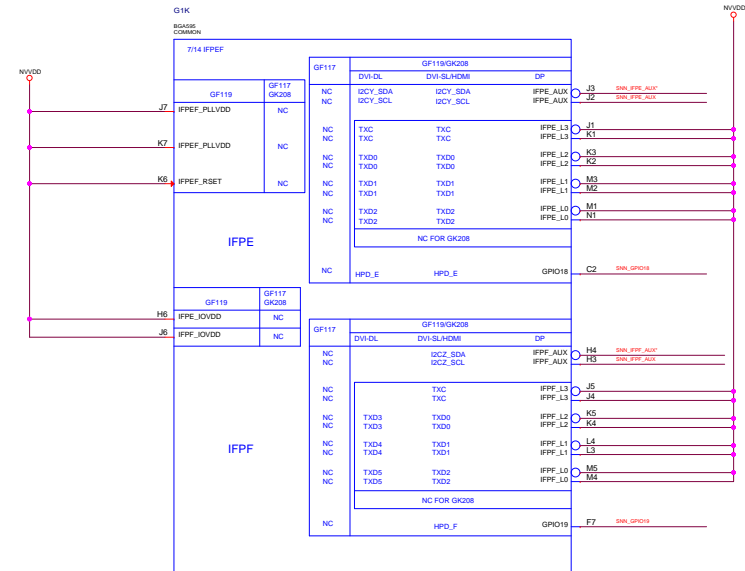
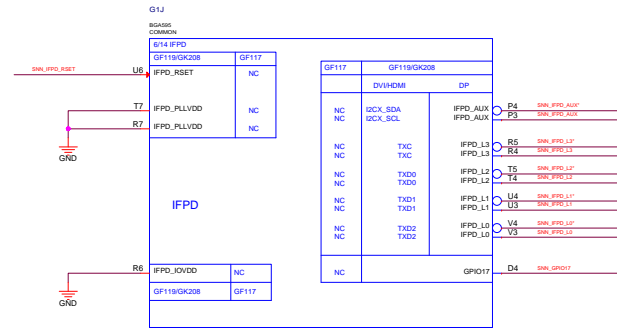
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UNUSED IFPD, IFPE & IFPF



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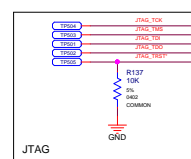
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Age Group	Percentage
18-24	10%
25-34	20%
35-44	30%
45-54	25%
55-64	15%
65-74	10%
75-84	5%
85+	5%

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SMART FAN STRAP			Inverted PWM%
XTAL_SSIN	XTAL_OUTBUFF		
0 0	0 (100% HIGH)		
0 1	33 (67% HIGH)		
1 0	50 (50% HIGH)		
1 1	67 (33% HIGH)		

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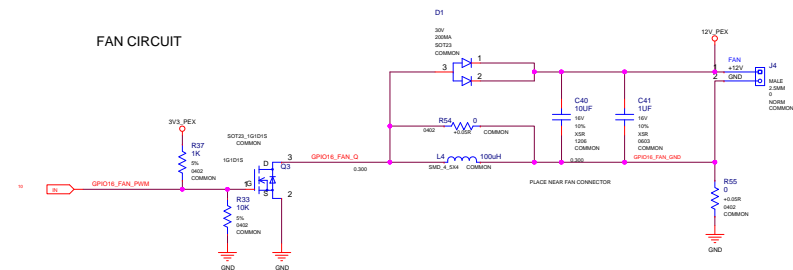
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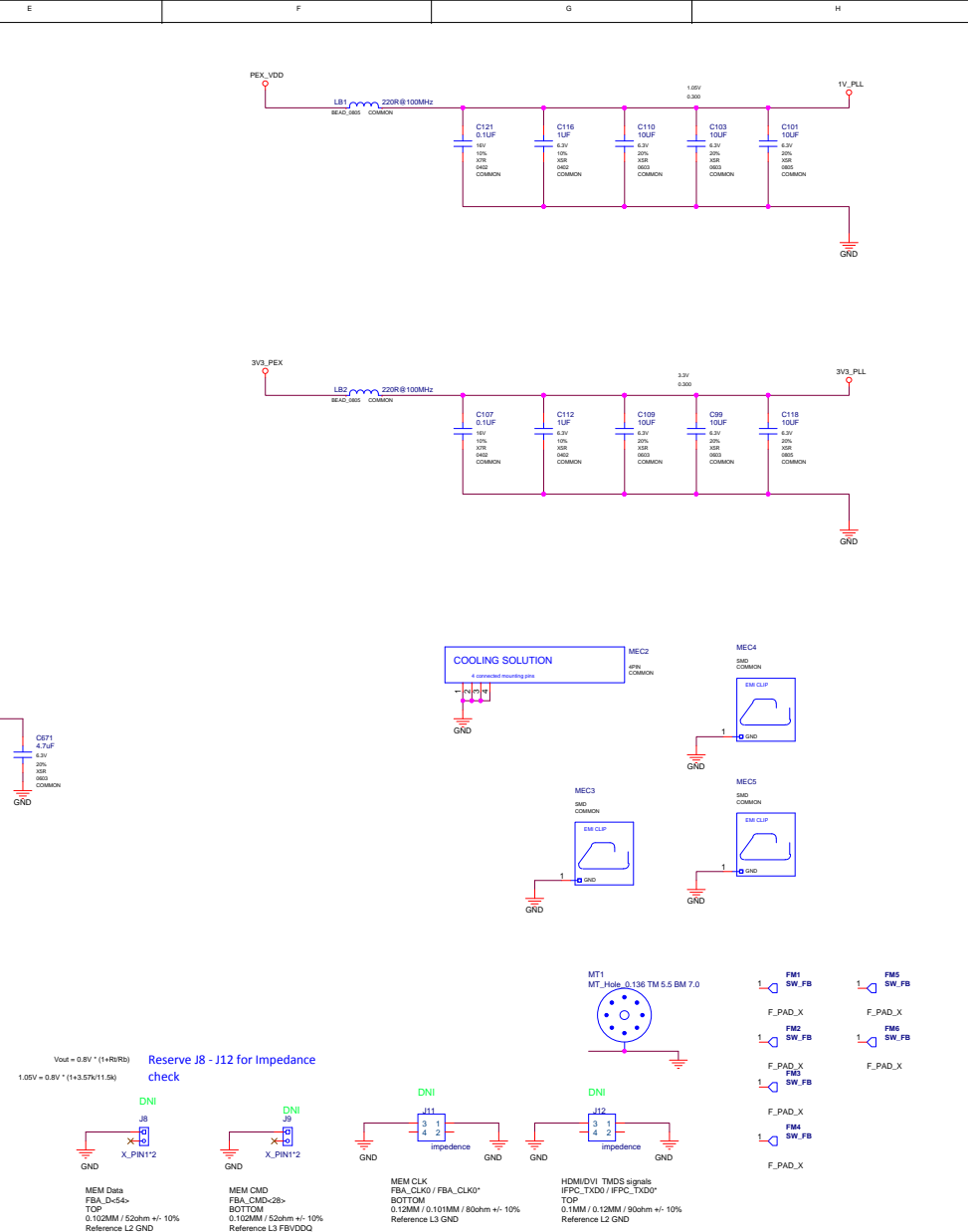
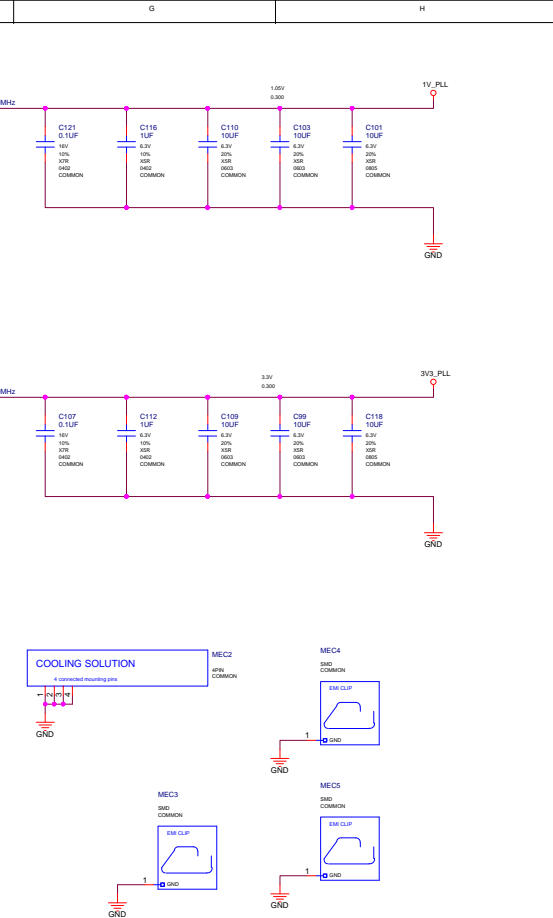
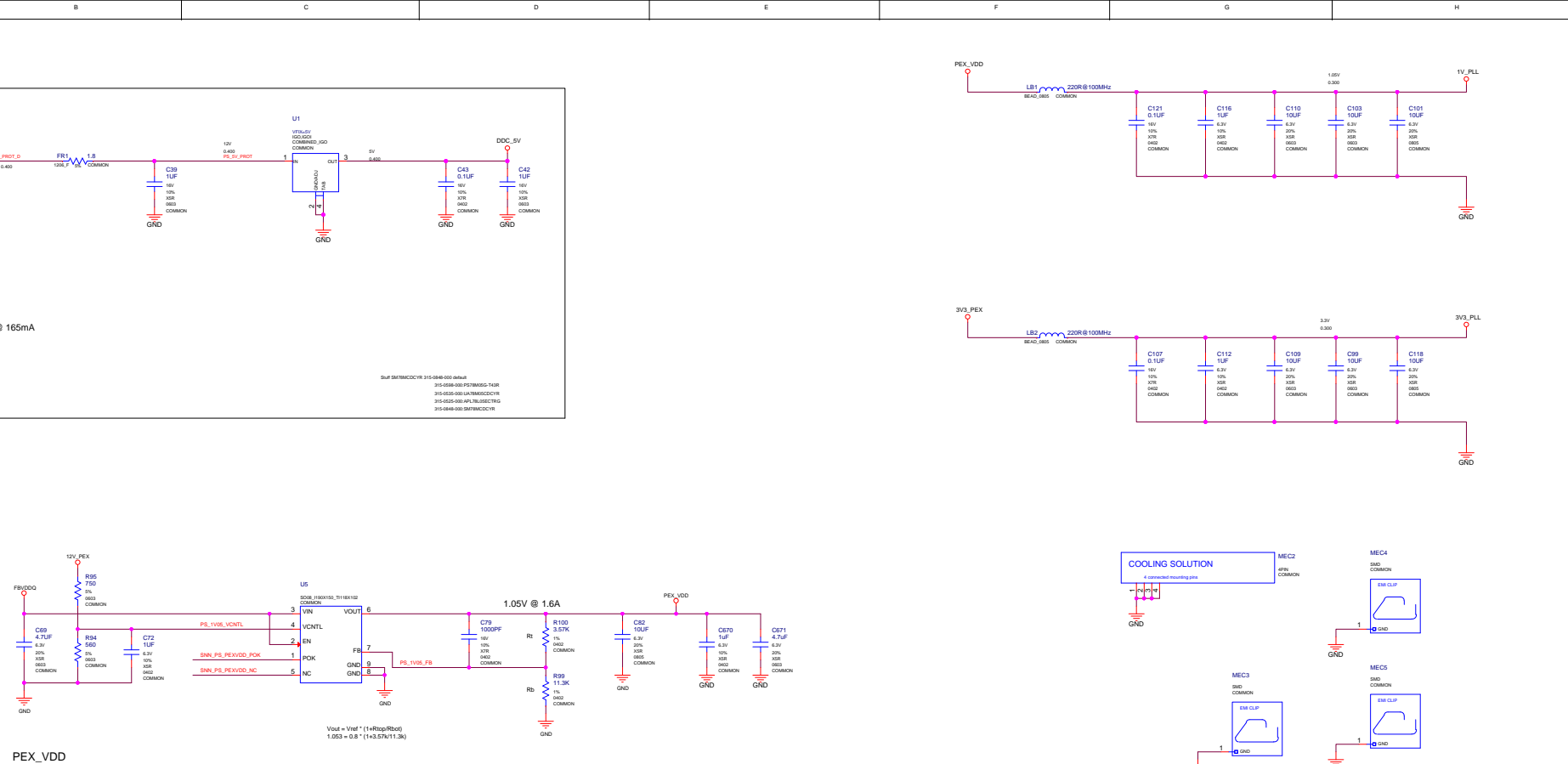
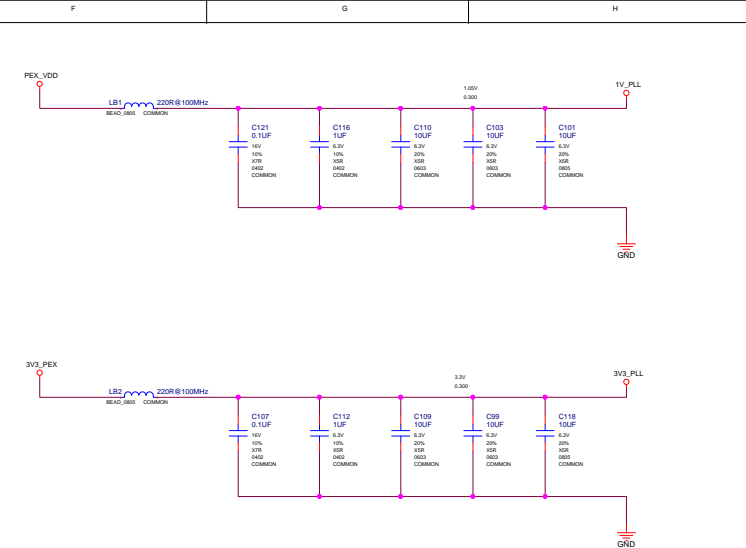
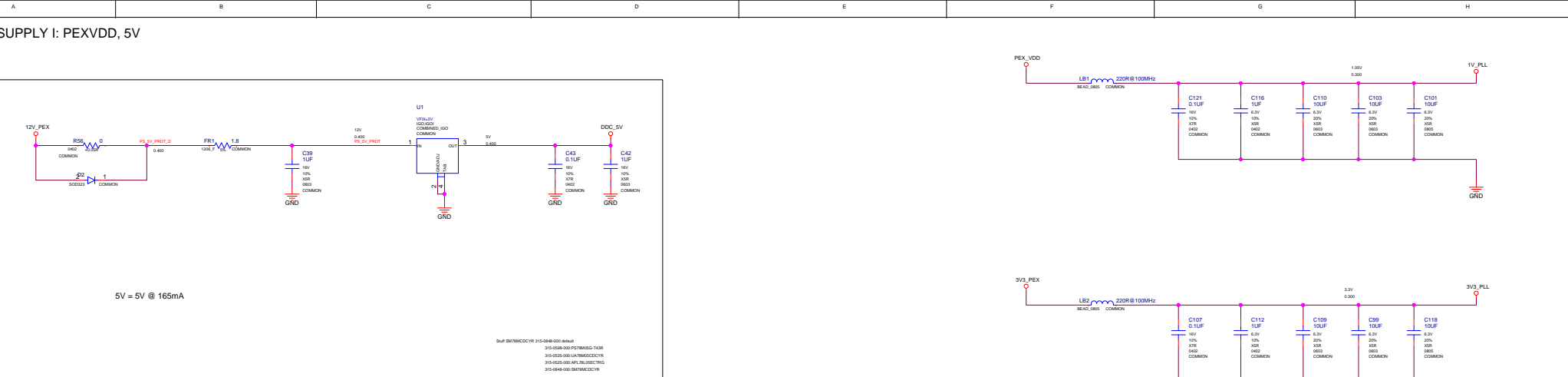
0000	5.1K to GND	1000	5.1K to VCC
0001	10K to GND	1001	10K to VCC
0010	15K to GND	1010	15K to VCC
0011	20K to GND	1011	20K to VCC
0100	24.9K to GND	1100	24.9K to VCC
0101	30.1K to GND	1101	30.1K to VCC
0110	34.8K to GND	1110	34.8K to VCC
0111	45.3K to GND	1111	45.3K to VCC

Bit Signal		Values				
00	RAMCFG[0]	0000	Reserved	ROM_SI		
01	RAMCFG[1]	0001	256Mx16 DDR3 X16 64Mx Micron			
02	RAMCFG[2]	0010	256Mx16 DDR3 X16 64Mx Hynix			
03	RAMCFG[3]	0011	256Mx16 DDR3 X16 64Mx Samsung			
04	RAMCFG[4]	0101	128Mx16 DDR3 X16 64Mx Micron	ROM_SO		
05	RAMCFG[5]	0110	128Mx16 DDR3 X16 64Mx Hynix			
06	RAMCFG[6]	0111	128Mx16 DDR3 X16 64Mx Samsung			
07	FRQ[1]	01	120MHz			
08	FRQ[2]	10	250MHz	ROM_SCLK		
01	SMBALT_ADDR	0	DISABLED		1	ENABLED
02	VGA_DEVICE	0	DISABLED		1	ENABLED
03	PCI_DEV0_EXT	SRIO0	0		SRIO1	TRD
04	SUB_VENDOR	0	NO_BIOS	1	BIOS	ROM_SCLK
01	PCI_DEV0_EXT_BITS	SRIO0	0	SRIO1	TRD	
00	PEX_PLL_EN_TERM100	0	DISABLED	1	ENABLED	
01	USER0	0000	BIT			
02	USER0					Strap0
03	USER0					
00	SSIO_ANDCFG_LUT_ADDR0	0000	DSKTOP_DEFAULT	1000	DSKTOP_ITHWIS	Strap1
01	SSIO_ANDCFG_LUT_ADDR0	0001	MOBILE_DEFAULT	1001	MOBILE_ITHWIS_WAMP	
02	SSIO_ANDCFG_LUT_ADDR0	0010	MOBILE_ITHWIS_LAMP	0100	MOBILE_ITHWIS_LAMP	
03	SSIO_ANDCFG_LUT_ADDR0	0011	MOBILE_ITHWIS_LAMP	0011	MOBILE_ITHWIS_LAMP	
04	SSIO_ANDCFG_LUT_ADDR0	0100	MOBILE_ITHWIS_WAMP	1100	MOBILE_ITHWIS_WAMP	
05	SSIO_ANDCFG_LUT_ADDR0	0101	MOBILE_ITHWIS_WAMP	1101	MOBILE_ITHWIS_WAMP	
06	SSIO_ANDCFG_LUT_ADDR0	0110	MOBILE_ITHWIS_WAMP	1110	MOBILE_ITHWIS_WAMP	Strap2
07	SSIO_ANDCFG_LUT_ADDR0	0111	MOBILE_ITHWIS_WAMP	1111	MOBILE_ITHWIS_WAMP	
00	PCI_DEV0[0]	SRIO0	0000			Strap3
01	PCI_DEV0[1]					
02	PCI_DEV0[2]					
03	PCI_DEV0[3]					
00	SC0K1_EXPOSED	0	DISABLED	1	ENABLED	Strap4
01	SC0K2_EXPOSED	0	DISABLED	1	ENABLED	
02	SC0K1_EXPOSED	0	DISABLED	1	ENABLED	
03	SC0K3_EXPOSED	0	DISABLED	1	ENABLED	
02	PCIE_SPEED_CHANGE_GEN0	0	DISABLED	1	ENABLED	Strap4
01	PCIE_MAX_SPEED	0	GEN1		GEN3	
00	DP_PLL_VCO_310	0	USETVB	1	USETVG	



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A	B	C	D	E	F	G	H
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[illegible]

The bottom half of the PCB layout includes:

- Power Planes:** 1.65V and 3.3V planes with 0.300mm thickness.
- Decoupling Capacitors:** C102, C103, C104, C109, C099, C118, all 10uF, 0.3V, 20%, 0805, DQ03 COMMON.
- Component Footprints:** MEC2, MEC4, MEC5, FPM1 SW\_FB, FPM2 SW\_FB, FPM3 SW\_FB, FPM4 SW\_FB, FPM5 SW\_FB.
- Other Features:** A circular feature with a hole (Hole: 0.136 TM 5.5 BM 7.0) and a 2mm x 2mm impedance pad.



0.136 TM 5.5 BM 7.0

Impedance

TMSD signals  
0.1 6PC-1200

20M / 50ohm +/- 10%  
L2 GND

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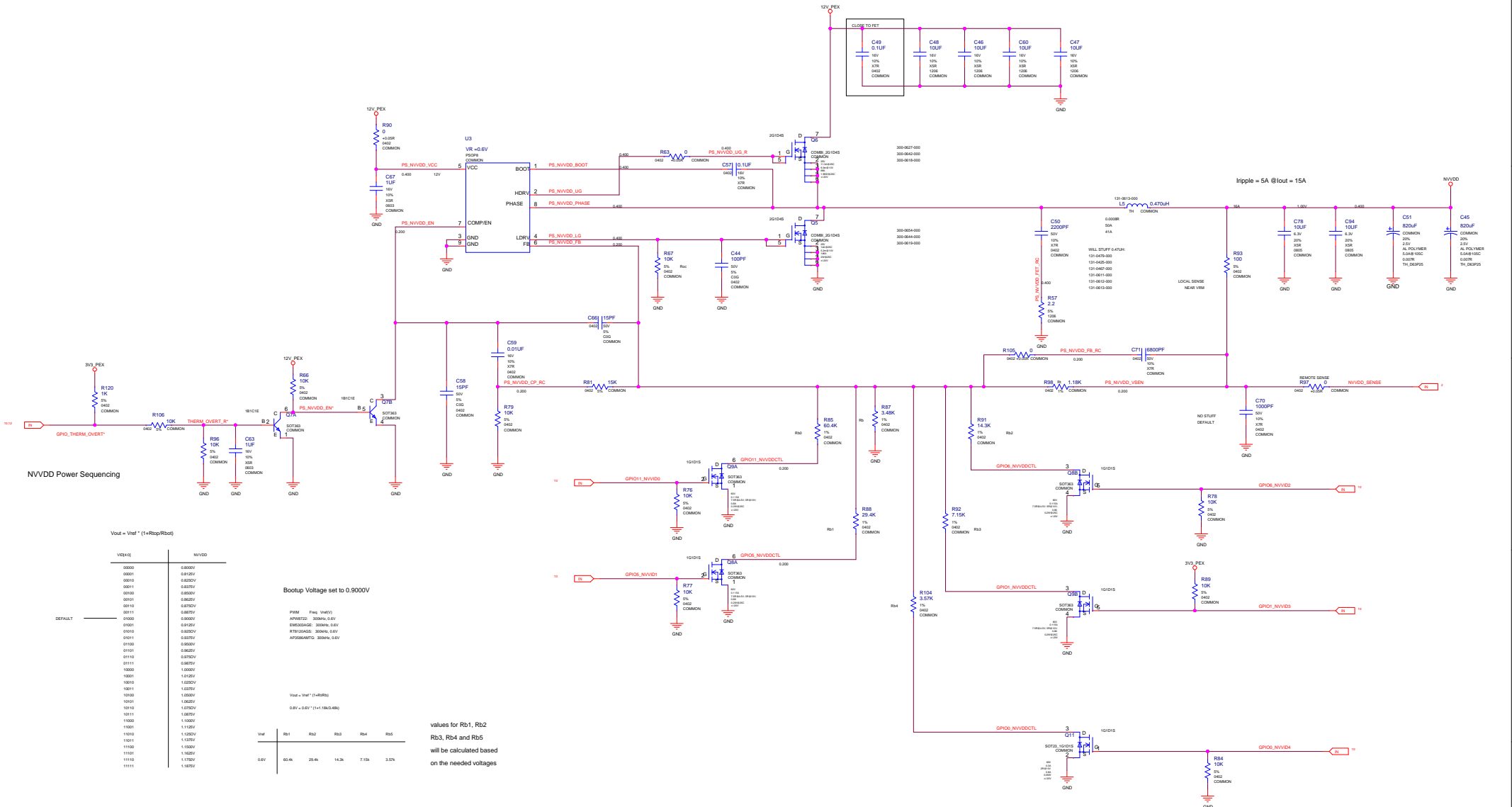
## POWER SUPPLY I: PEXVDD, 5V

The schematic diagram illustrates the 5V PEXVDD power supply circuit. It begins with a 12V\_PEX input connected to a network of resistors (R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100, R101, R102, R103, R104, R105, R106, R107, R108, R109, R110, R111, R112, R113, R114, R115, R116, R117, R118, R119, R120, R121, R122, R123, R124, R125, R126, R127, R128, R129, R130, R131, R132, R133, R134, R135, R136, R137, R138, R139, R140, R141, R142, R143, R144, R145, R146, R147, R148, R149, R150, R151, R152, R153, R154, R155, R156, R157, R158, R159, R160, R161, R162, R163, R164, R165, R166, R167, R168, R169, R170, R171, R172, R173, R174, R175, R176, R177, R178, R179, R180, R181, R182, R183, R184, R185, R186, R187, R188, R189, R190, R191, R192, R193, R194, R195, R196, R197, R198, R199, R200, R201, R202, R203, R204, R205, R206, R207, R208, R209, R210, R211, R212, R213, R214, R215, R216, R217, R218, R219, R220, R221, R222, R223, R224, R225, R226, R227, R228, R229, R230, R231, R232, R233, R234, R235, R236, R237, R238, R239, R240, R241, R242, R243, R244, R245, R246, R247, R248, R249, R250, R251, R252, R253, R254, R255, R256, R257, R258, R259, R260, R261, R262, R263, R264, R265, R266, R267, R268, R269, R270, R271, R272, R273, R274, R275, R276, R277, R278, R279, R280, R281, R282, R283, R284, R285, R286, R287, R288, R289, R290, R291, R292, R293, R294, R295, R296, R297, R298, R299, R300, R301, R302, R303, R304, R305, R306, R307, R308, R309, R310, R311, R312, R313, R314, R315, R316, R317, R318, R319, R320, R321, R322, R323, R324, R325, R326, R327, R328, R329, R330, R331, R332, R333, R334, R335, R336, R337, R338, R339, R340, R341, R342, R343, R344, R345, R346, R347, R348, R349, R350, R351, R352, R353, R354, R355, R356, R357, R358, R359, R360, R361, R362, R363, R364, R365, R366, R367, R368, R369, R370, R371, R372, R373, R374, R375, R376, R377, R378, R379, R380, R381, R382, R383, R384, R385, R386, R387, R388, R389, R390, R391, R392, R393, R394, R395, R396, R397, R398, R399, R400, R401, R402, R403, R404, R405, R406, R407, R408, R409, R410, R411, R412, R413, R414, R415, R416, R417, R418, R419, R420, R421, R422, R423, R424, R425, R426, R427, R428, R429, R430, R431, R432, R433, R434, R435, R436, R437, R438, R439, R440, R441, R442, R443, R444, R445, R446, R447, R448, R449, R450, R451, R452, R453, R454, R455, R456, R457, R458, R459, R460, R461, R462, R463, R464, R465, R466, R467, R468, R469, R470, R471, R472, R473, R474, R475, R476, R477, R478, R479, R480, R481, R482, R483, R484, R485, R486, R487, R488, R489, R490, R491, R492, R493, R494, R495, R496, R497, R498, R499, R500, R501, R502, R503, R504, R505, R506, R507, R508, R509, R510, R511, R512, R513, R514, R515, R516, R517, R518, R519, R520, R521, R522, R523, R524, R525, R526, R527, R528, R529, R530, R531, R532, R533, R534, R535, R536, R537, R538, R539, R540, R541, R542, R543, R544, R545, R546, R547, R548, R549, R550, R551, R552, R553, R554, R555, R556, R557, R558, R559, R560, R561, R562, R563, R564, R565, R566, R567, R568, R569, R570, R571, R572, R573, R574, R575, R576, R577, R578, R579, R580, R581, R582, R583, R584, R585, R586, R587, R588, R589, R590, R591, R592, R593, R594, R595, R596, R597, R598, R599, R600, R601, R602, R603, R604, R605, R606, R607, R608, R609, R610, R611, R612, R613, R614, R615, R616, R617, R618, R619, R620, R621, R622, R623, R624, R625, R626, R627, R628, R629, R630, R631, R632, R633, R634, R635, R636, R637, R638, R639, R640, R641, R642, R643, R644, R645, R646, R647, R648, R649, R650, R651, R652, R653, R654, R655, R656, R657, R658, R659, R660, R661, R662, R663, R664, R665, R666, R667, R668, R669, R670, R671, R672, R673, R674, R675, R676, R677, R678, R679, R680, R681, R682, R683, R684, R685, R686, R687, R688, R689, R690, R691, R692, R693, R694, R695, R696, R697, R698, R699, R700, R701, R702, R703, R704, R705, R706, R707, R708, R709, R710, R711, R712, R713, R714, R715, R716, R717, R718, R719, R720, R721, R722, R723, R724, R725, R726, R727, R728, R729, R730, R731, R732, R733, R734, R735, R736, R737, R738, R739, R740, R741, R742, R743, R744, R745, R746, R747, R748, R749, R750, R751, R752, R753, R754, R755, R756, R757, R758, R759, R760, R761, R762, R763, R764, R765, R766, R767, R768, R769, R770, R771, R772, R773, R774, R775, R776, R777, R778, R779, R780, R781, R782, R783, R784, R785, R786, R787, R788, R789, R790, R791, R792, R793, R794, R795, R796, R797, R798, R799, R800, R801, R802, R803, R804, R805, R806, R807, R808, R809, R810, R811, R812, R813, R814, R815, R816, R817, R818, R819, R820, R821, R822, R823, R824, R825, R826, R827, R828, R829, R830, R831, R832, R833, R834, R835, R836, R837, R838, R839, R840, R841, R842, R843, R844, R845, R846, R847, R848, R849, R

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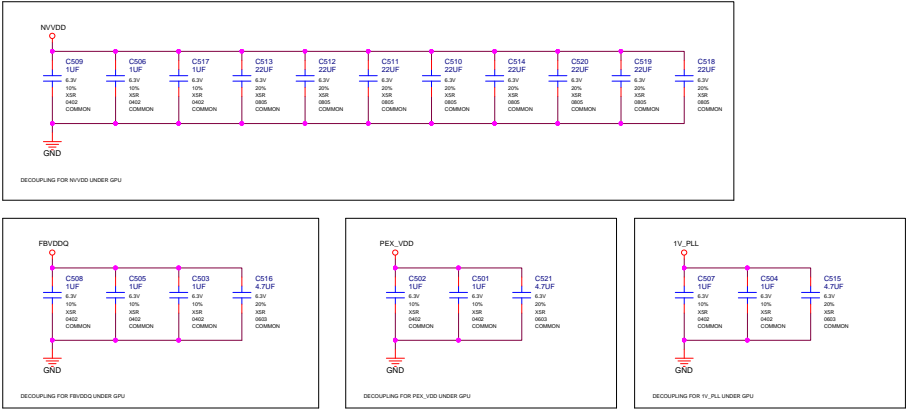
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