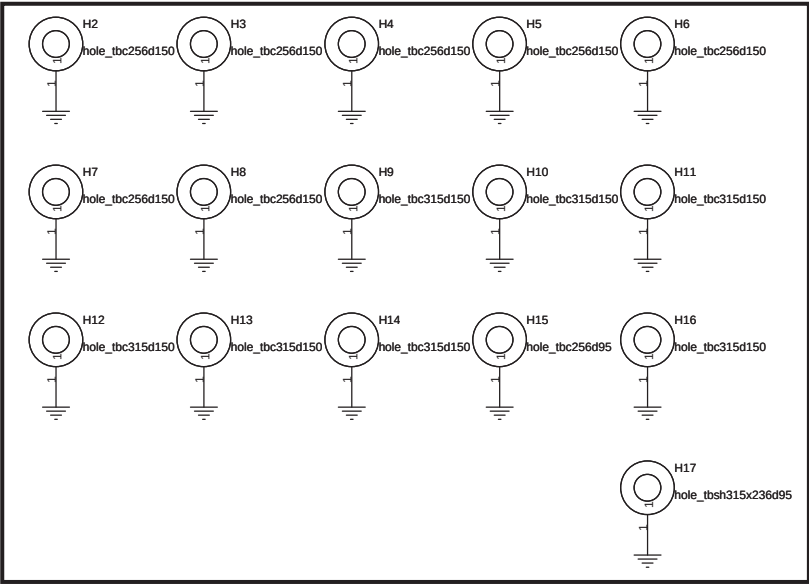


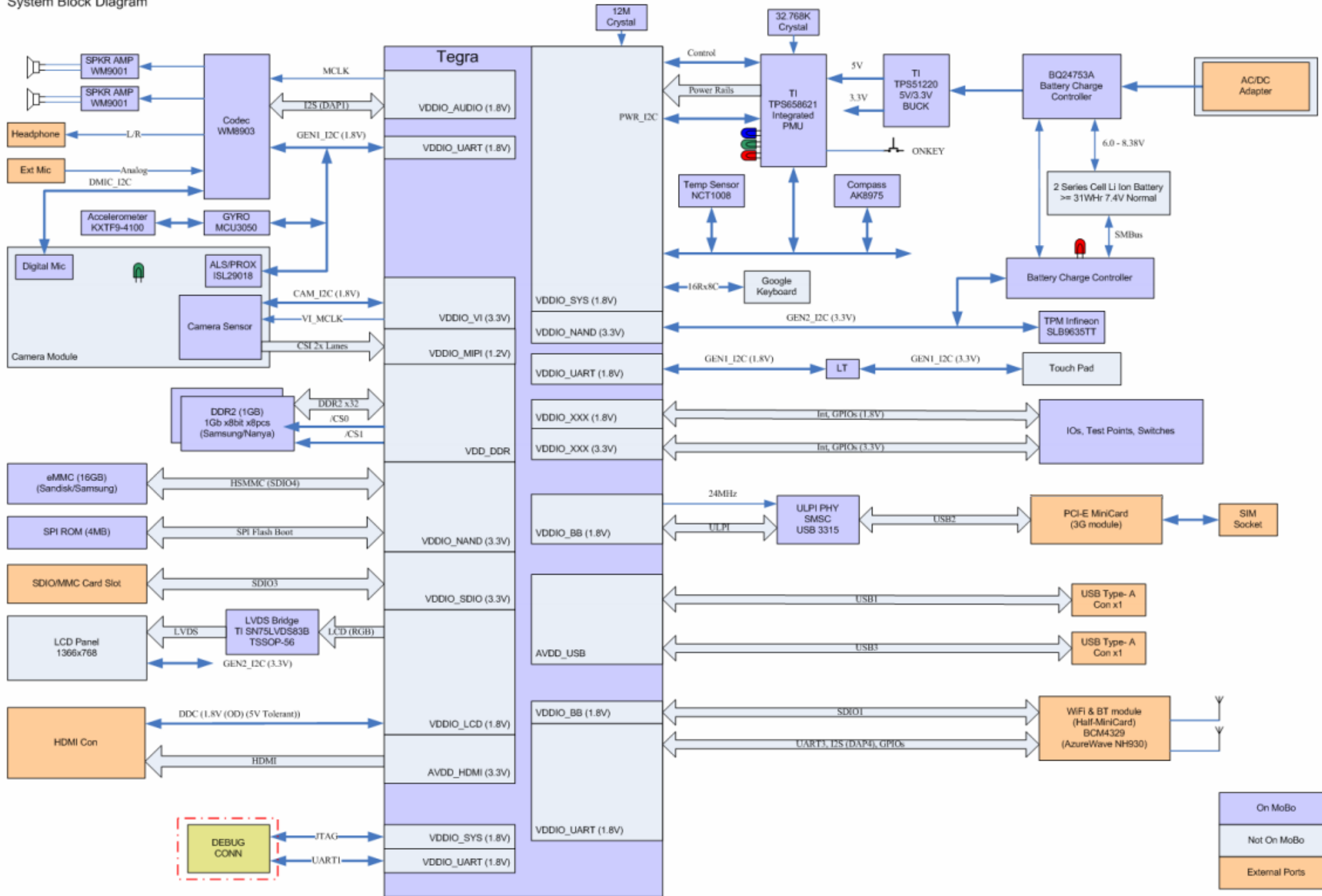
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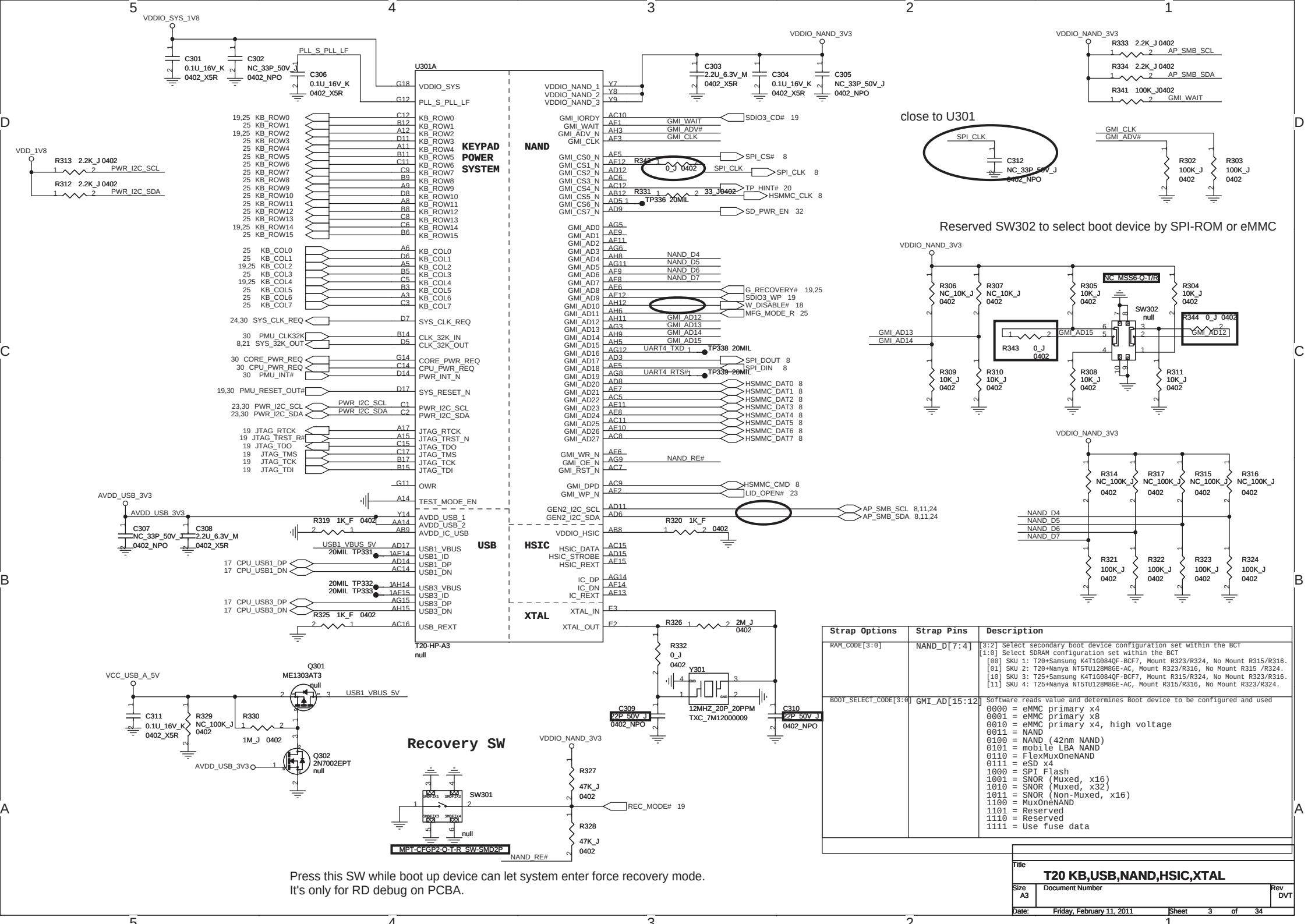
- 01 List of Schematic
- 02 System Block Diagram
- 03 T20 Keyboard, USB, NAND, HSIC and X'tal
- 04 T20 UART, BB, Audio, SDIO and VDAC
- 05 T20 DDR and PCIE
- 06 T20 LCD, VI, MIPI and HDMI
- 07 T20 Power and Ground
- 08 SPI ROM, eMMC and TPM
- 09 DDR2 Rank0
- 10 DDR2 Rank1
- 11 LCD Connector
- 12 Audio Codec
- 13 Headphone Jack and Mute Circuit
- 14 External Microphone Jack
- 15 HDMI Connector
- 16 Speaker Connectors
- 17 USB Connector
- 18 WWAN Connector
- 19 SD/MMC Slot and Debug Connector
- 20 Touch Pad and Touch Screen
- 21 WLAN+BT Module
- 22 Camera Module Connector
- 23 Sensors
- 24 Battery Charge Controller
- 25 Keyboard and Switches
- 26 Power Block Diagram
- 27 DCIN and Battery Connector
- 28 Battery Charger
- 29 System 5V, 3.3V Power Source
- 30 PMIC for CPU
- 31 System 1.8V Power Source
- 32 Power Switch
- 33 Low Battery Detector & System OVP
- 34 Change Notice

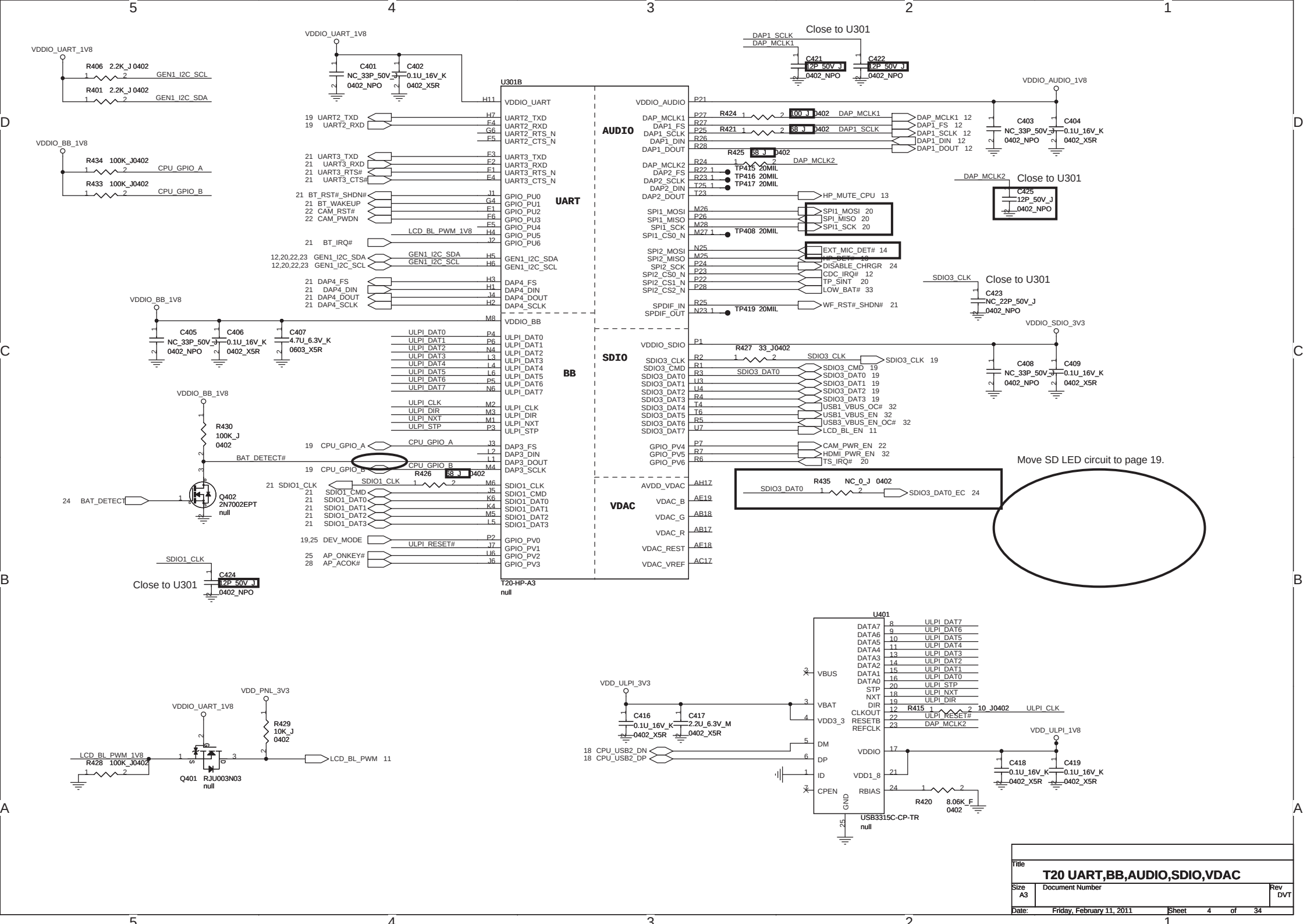


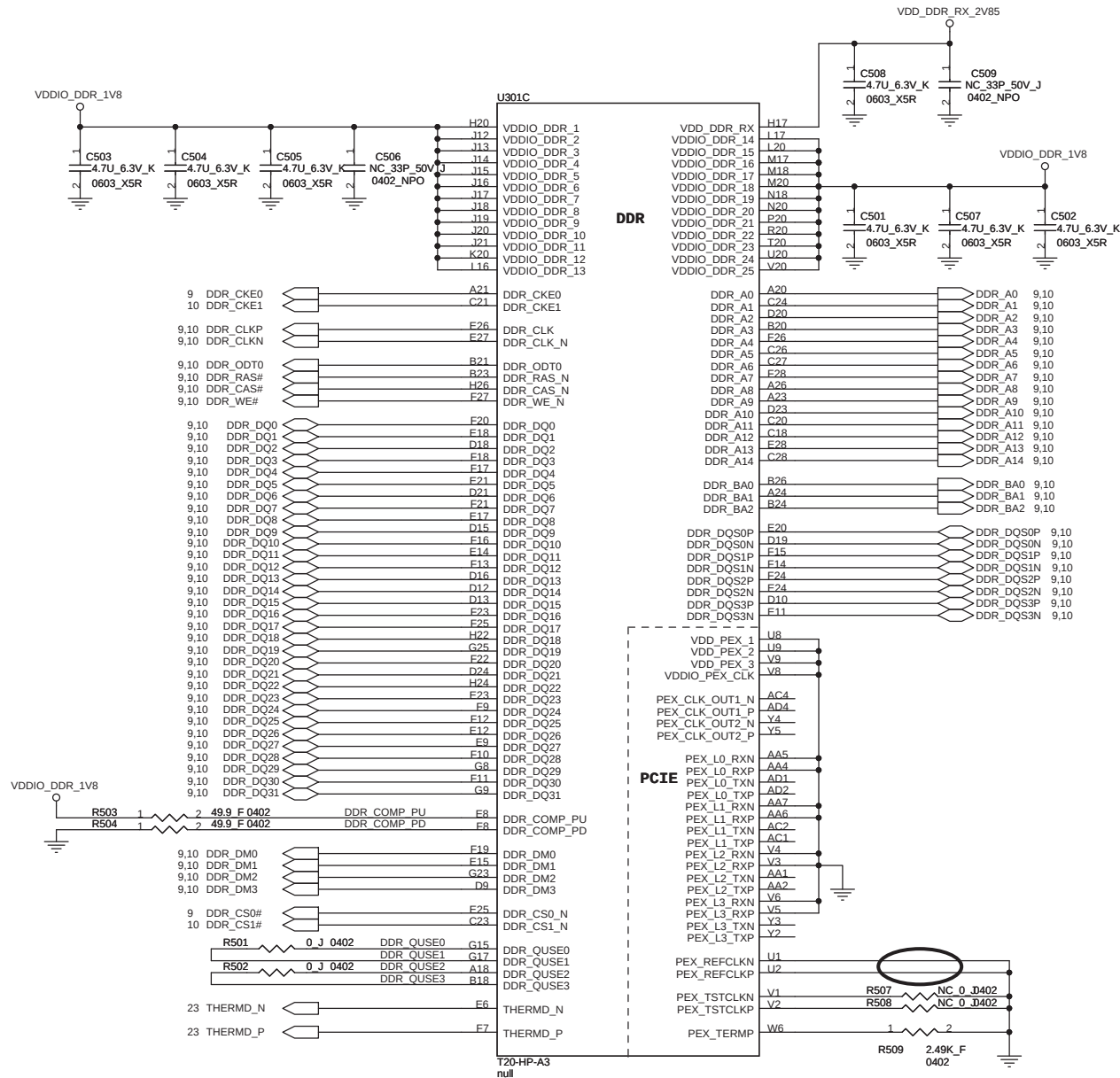
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Size A3	Document Number	
Date:	Friday, February 11, 2011	Rev EVT
Sheet		1 of 34

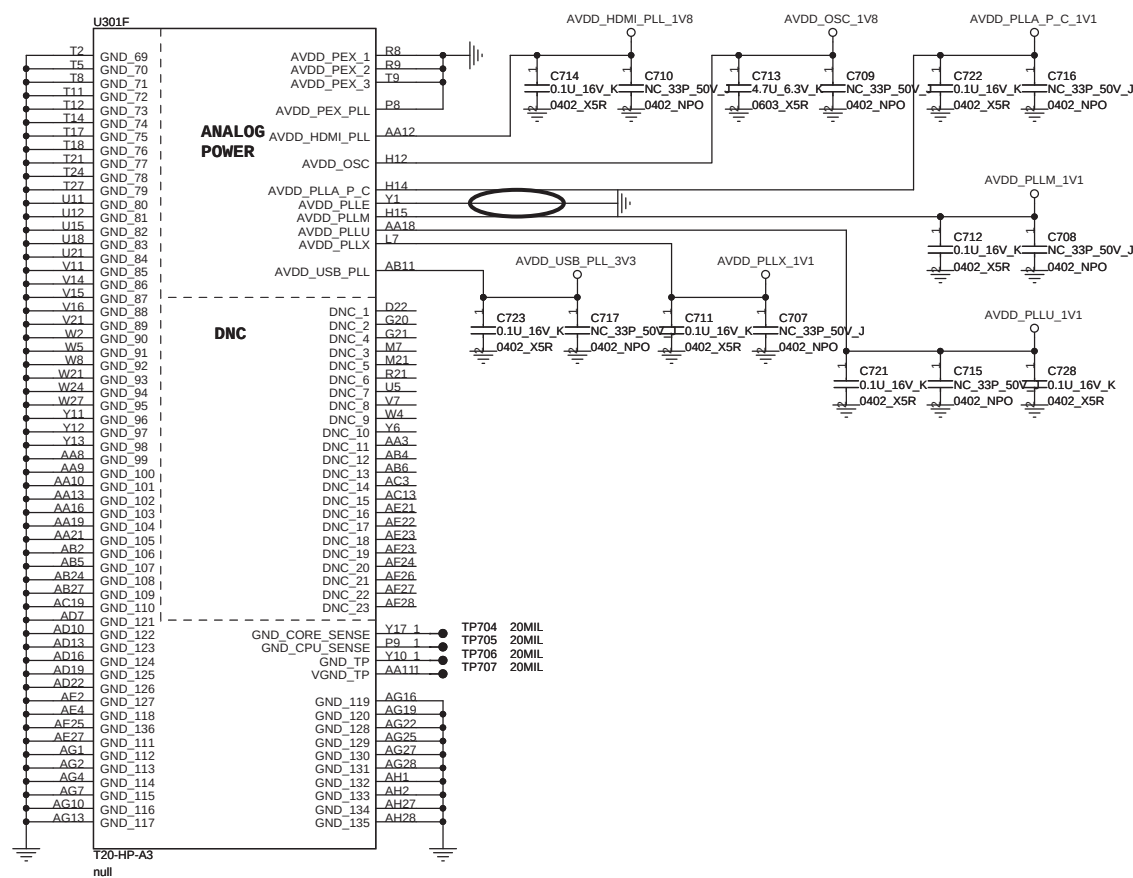
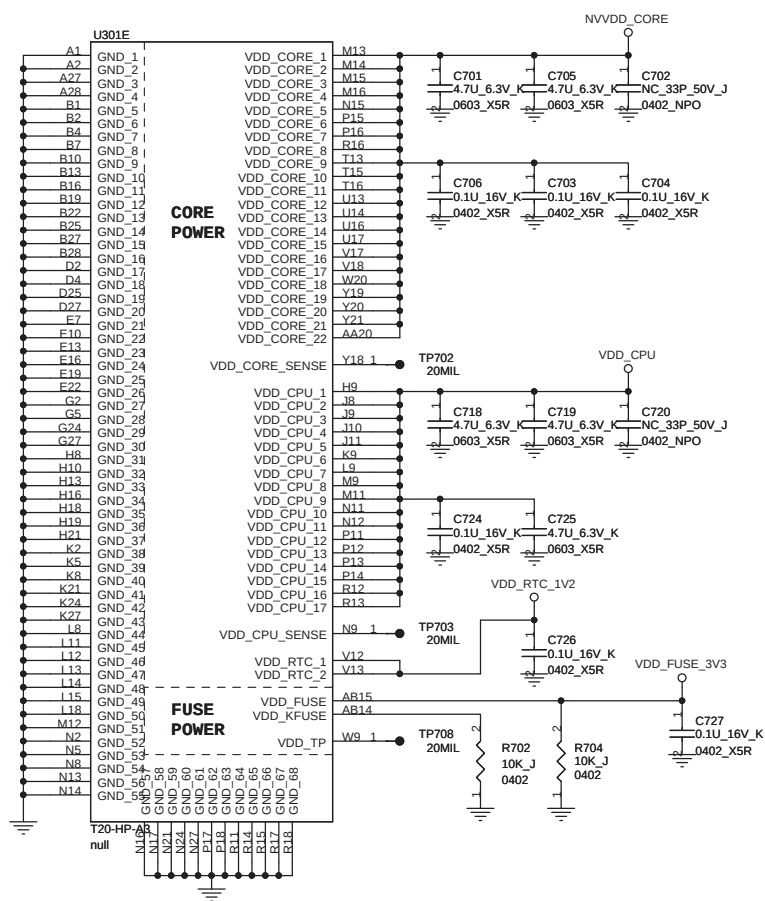
System Block Diagram









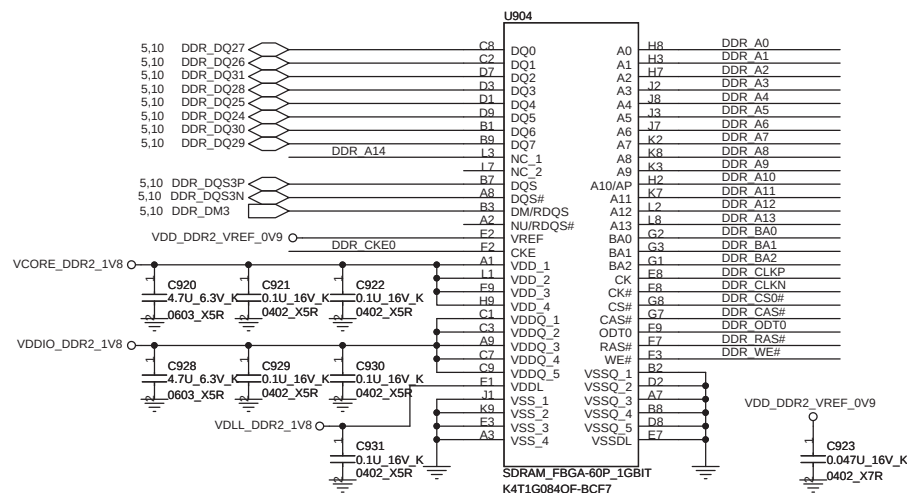
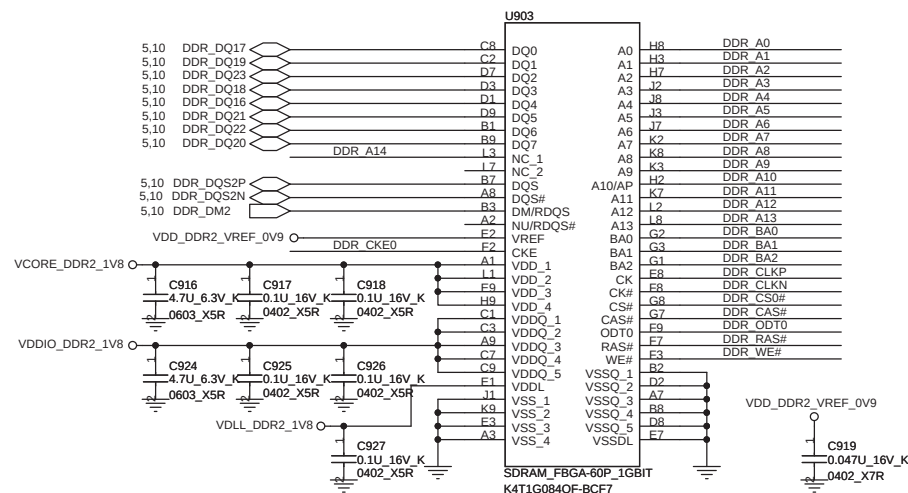
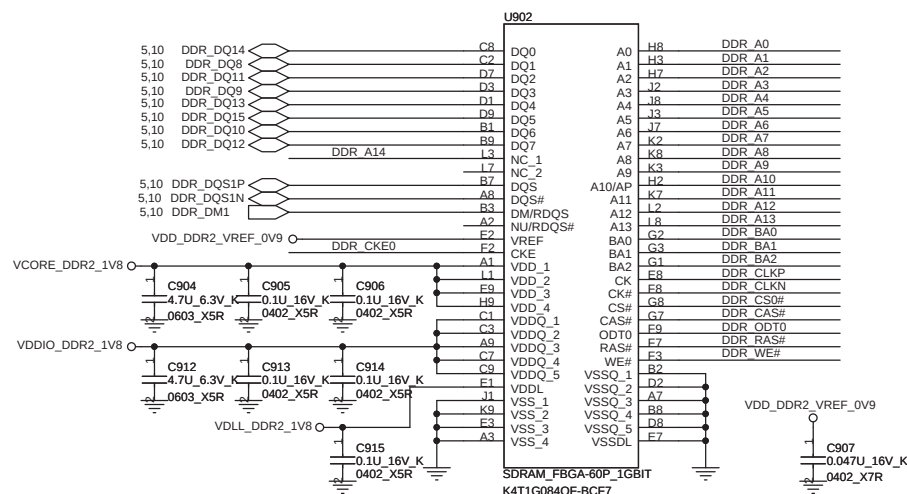
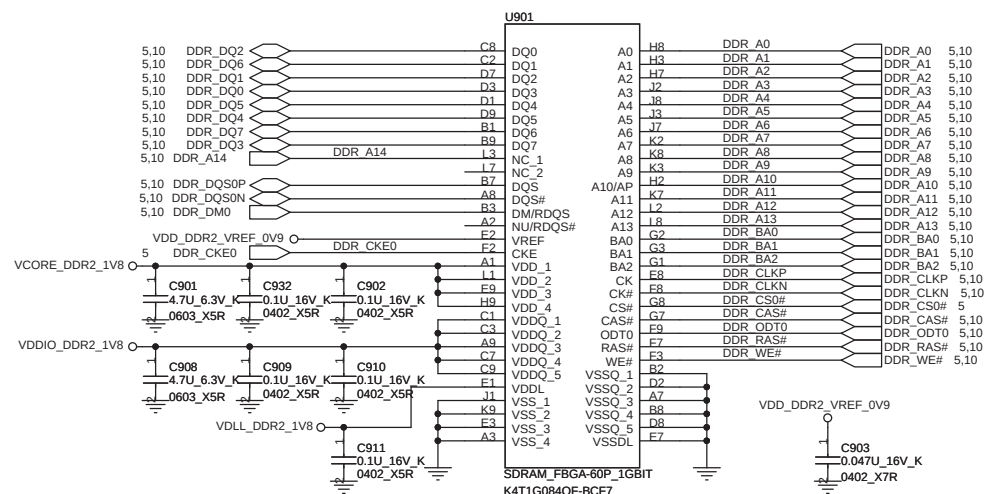


The schematic diagram illustrates the internal structure of the U801B component, which is a 16GB NAND flash memory. The diagram shows the component's internal connections, including capacitors (C801, C802, C803, C807, C808, C809, C810, C811, C812, C813, C814, C815, C816, C817, C818, C819, C820, C821, C822, C823, C824, C825, C826, C827, C828, C829, C830, C831, C832, C833, C834, C835, C836, C837, C838, C839, C840, C841, C842, C843, C844, C845, C846, C847, C848, C849, C850, C851, C852, C853, C854, C855, C856, C857, C858, C859, C860, C861, C862, C863, C864, C865, C866, C867, C868, C869, C870, C871, C872, C873, C874, C875, C876, C877, C878, C879, C880, C881, C882, C883, C884, C885, C886, C887, C888, C889, C890, C891, C892, C893, C894, C895, C896, C897, C898, C899, C900, C901, C902, C903, C904, C905, C906, C907, C908, C909, C910, C911, C912, C913, C914, C915, C916, C917, C918, C919, C920, C921, C922, C923, C924, C925, C926, C927, C928, C929, C930, C931, C932, C933, C934, C935, C936, C937, C938, C939, C940, C941, C942, C943, C944, C945, C946, C947, C948, C949, C950, C951, C952, C953, C954, C955, C956, C957, C958, C959, C960, C961, C962, C963, C964, C965, C966, C967, C968, C969, C970, C971, C972, C973, C974, C975, C976, C977, C978, C979, C980, C981, C982, C983, C984, C985, C986, C987, C988, C989, C990, C991, C992, C993, C994, C995, C996, C997, C998, C999, C1000, C1001, C1002, C1003, C1004, C1005, C1006, C1007, C1008, C1009, C1010, C1011, C1012, C1013, C1014, C1015, C1016, C1017, C1018, C1019, C1020, C1021, C1022, C1023, C1024, C1025, C1026, C1027, C1028, C1029, C1030, C1031, C1032, C1033, C1034, C1035, C1036, C1037, C1038, C1039, C1040, C1041, C1042, C1043, C1044, C1045, C1046, C1047, C1048, C1049, C1050, C1051, C1052, C1053, C1054, C1055, C1056, C1057, C1058, C1059, C1060, C1061, C1062, C1063, C1064, C1065, C1066, C1067, C1068, C1069, C1070, C1071, C1072, C1073, C1074, C1075, C1076, C1077, C1078, C1079, C1080, C1081, C1082, C1083, C1084, C1085, C1086, C1087, C1088, C1089, C1090, C1091, C1092, C1093, C1094, C1095, C1096, C1097, C1098, C1099, C1100, C1101, C1102, C1103, C1104, C1105, C1106, C1107, C1108, C1109, C1110, C1111, C1112, C1113, C1114, C1115, C1116, C1117, C1118, C1119, C1120, C1121, C1122, C1123, C1124, C1125, C1126, C1127, C1128, C1129, C1130, C1131, C1132, C1133, C1134, C1135, C1136, C1137, C1138, C1139, C1140, C1141, C1142, C1143, C1144, C1145, C1146, C1147, C1148, C1149, C1150, C1151, C1152, C1153, C1154, C1155, C1156, C1157, C1158, C1159, C1160, C1161, C1162, C1163, C1164, C1165, C1166, C1167, C1168, C1169, C1170, C1171, C1172, C1173, C1174, C1175, C1176, C1177, C1178, C1179, C1180, C1181, C1182, C1183, C1184, C1185, C1186, C1187, C1188, C1189, C1190, C1191, C1192, C1193, C1194, C1195, C1196, C1197, C1198, C1199, C1200, C1201, C1202, C1203, C1204, C1205, C1206, C1207, C1208, C1209, C1210, C1211, C1212, C1213, C1214, C1215, C1216, C1217, C1218, C1219, C1220, C1221, C1222, C1223, C1224, C1225, C1226, C1227, C1228, C1229, C1230, C1231, C1232, C1233, C1234, C1235, C1236, C1237, C1238, C1239, C1240, C1241, C1242, C1243, C1244, C1245, C1246, C1247, C1248, C1249, C1250, C1251, C1252, C1253, C1254, C1255, C1256, C1257, C1258, C1259, C1260, C1261, C1262, C1263, C1264, C1265, C1266, C1267, C1268, C1269, C1270, C1271, C1272, C1273, C1274, C1275, C1276, C1277, C1278, C1279, C1280, C1281, C1282, C1283, C1284, C1285, C1286, C1287, C1288, C1289, C1290, C1291, C1292, C1293, C1294, C1295, C1296, C1297, C1298, C1299, C1300, C1301, C1302, C1303, C1304, C1305, C1306, C1307, C1308, C1309, C1310, C1311, C1312, C1313, C1314, C1315, C1316, C1317, C1318, C1319, C1320, C1321, C1322, C1323, C1324, C1325, C1326, C1327, C1328, C1329, C1330, C1331, C1332, C1333, C1334, C1335, C1336, C1337, C1338, C1339, C1340, C1341, C1342, C1343, C1344, C1345, C1346, C1347, C1348, C1349, C1350, C1351, C1352, C1353, C1354, C1355, C1356, C1357, C1358, C1359, C1360, C1361, C1362, C1363, C1364, C1365, C1366, C1367, C1368, C1369, C1370, C1371, C1372, C1373, C1374, C1375, C1376, C1377, C1378, C1379, C1380, C1381, C1382, C1383, C1384, C1385, C1386, C1387, C1388, C1389, C1390, C1391, C1392, C1393, C1394, C1395, C1396, C1397, C1398, C1399, C1400, C1401, C1402, C1403, C1404, C1405, C1406, C1407, C1408, C1409, C1410, C1411, C1412, C1413, C1414, C1415, C1416, C1417, C1418, C1419, C1420, C1421, C1422, C1423, C1424, C1425, C1426, C1427, C1428, C1429, C1430, C1431, C1432, C1433, C1434, C1435, C1436, C1437, C1438, C1439, C1440, C1441, C1442, C1443, C1444, C1445, C1446, C1447, C1448, C1449, C1450, C1451, C1452, C1453, C1454, C1455, C1456, C1457, C1458, C1459, C1460, C1461, C1462, C1463, C1464, C1465, C1466, C1467, C1468, C1469, C1470, C1471, C1472, C1473, C1474, C1475, C1476, C1477, C1478, C1479, C1480, C1481, C1482, C1483, C1484, C1485, C1486, C1487, C1488, C1489, C1490, C1491, C1492, C1493, C1494, C1495, C1496, C1497, C1498, C1499, C1500, C1501, C1

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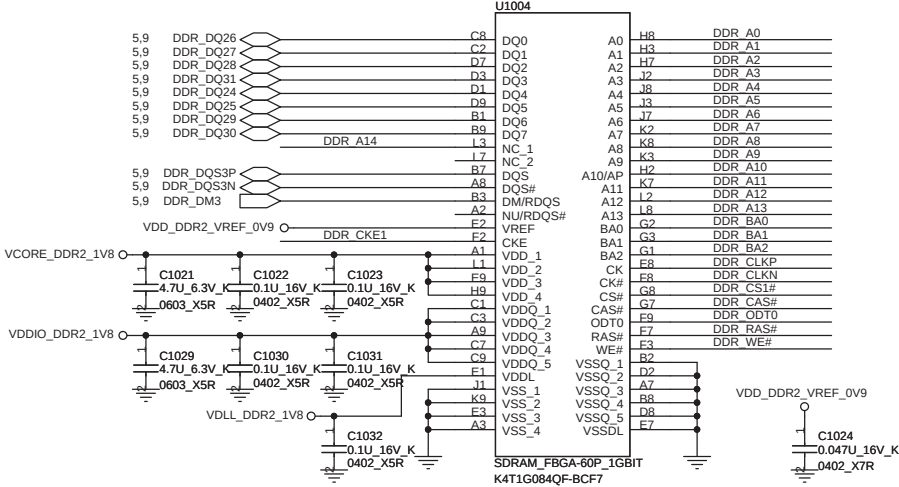
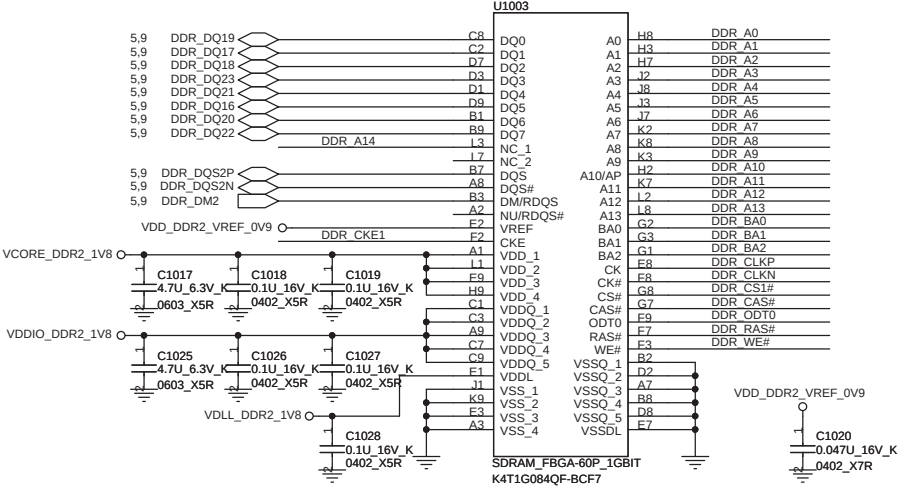
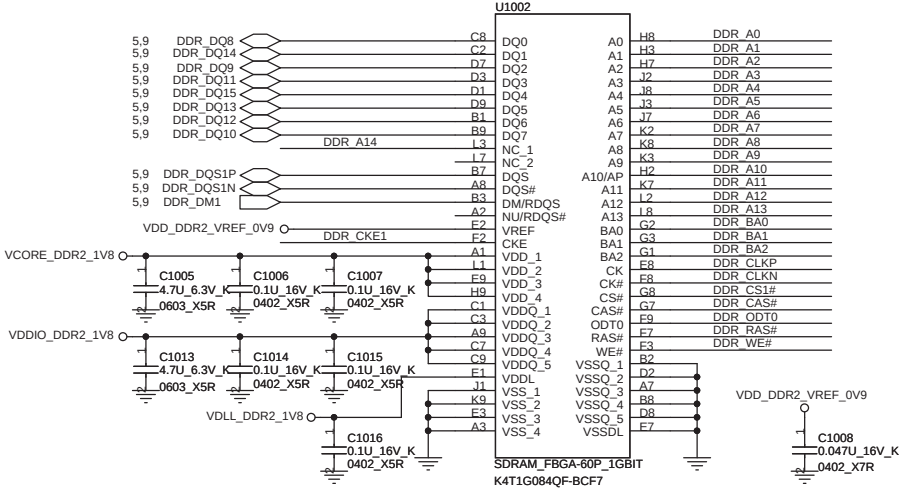
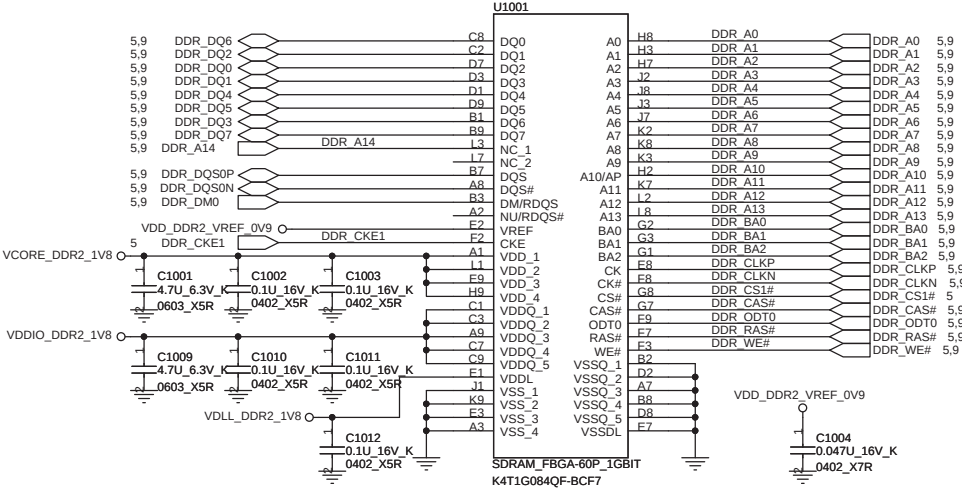
The schematic shows the SPI flash connection to U803. The flash is connected to the SPI_CS# pin (pin 1) of U803. The SPI_DIN pin (pin 2) is connected to the CS# pin (pin 1) of U803. The MFG_MODE pin (pin 3) is connected to the DO#IO1 HOLD#IO3 pin (pin 2) of U803. The SPI_CLK pin (pin 4) is connected to the WP#IO2 pin (pin 3) of U803. The SPI_DOUT pin (pin 5) is connected to the CLK pin (pin 4) of U803. The VCC pin (pin 8) is connected to VDDIO_NAND_3V3. The GND pin (pin 4) is connected to ground. The FLASH_SOIC-8P_32MB W25Q32BVSSiG is the part number of the flash. The schematic also shows a 0.1uF 16V capacitor (C805) connected to VDDIO_NAND_3V3 and a 10K pull-up resistor (R812) connected to VDDIO_NAND_3V3 and the SPI_CLK pin. A note indicates to close to U803.

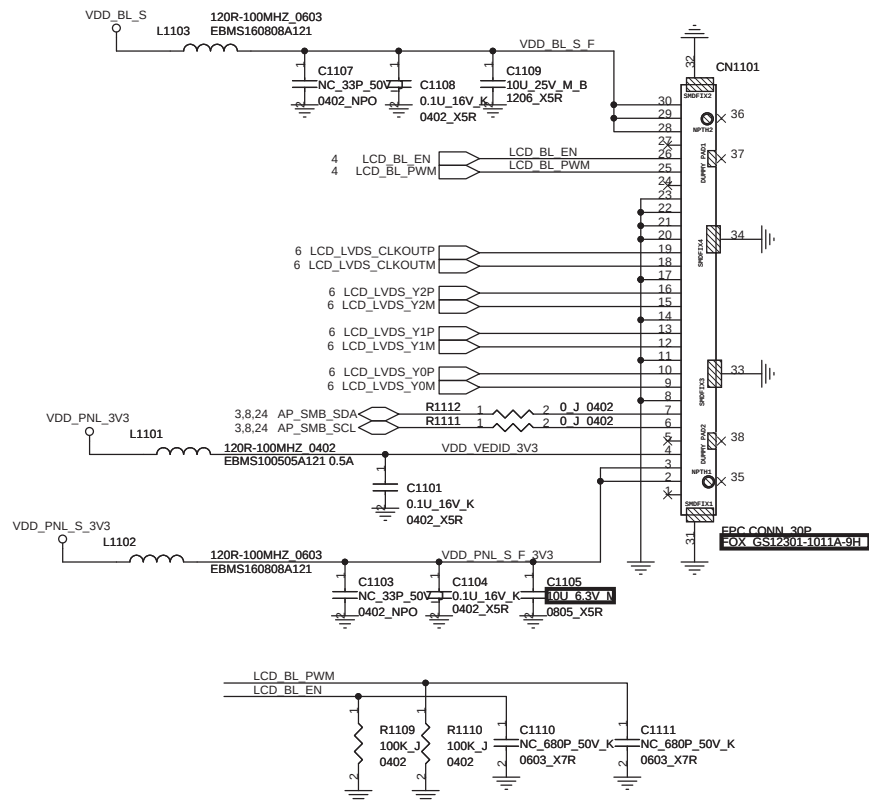
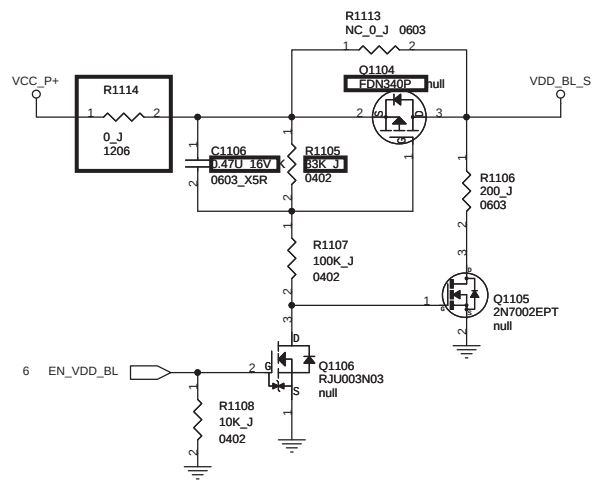
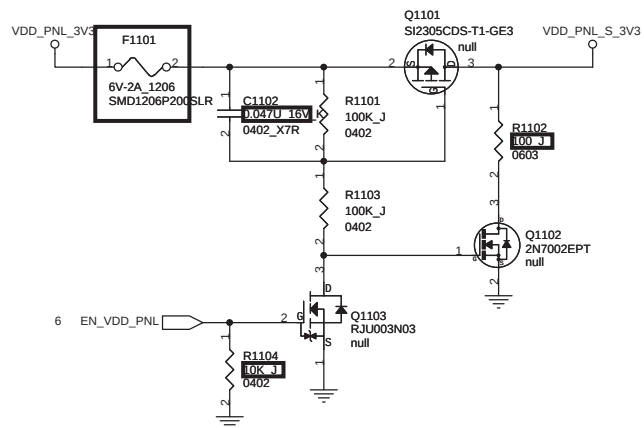
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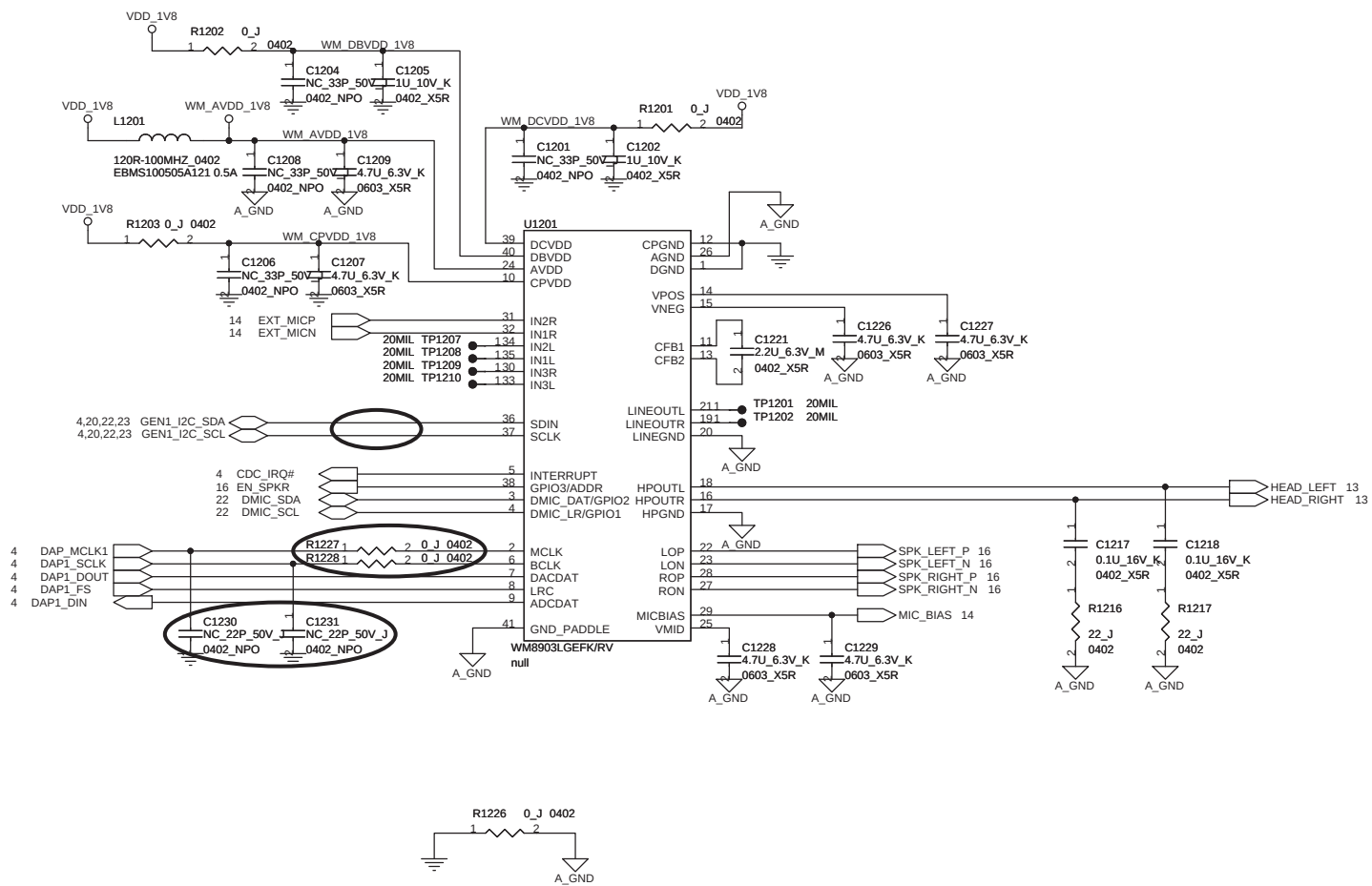


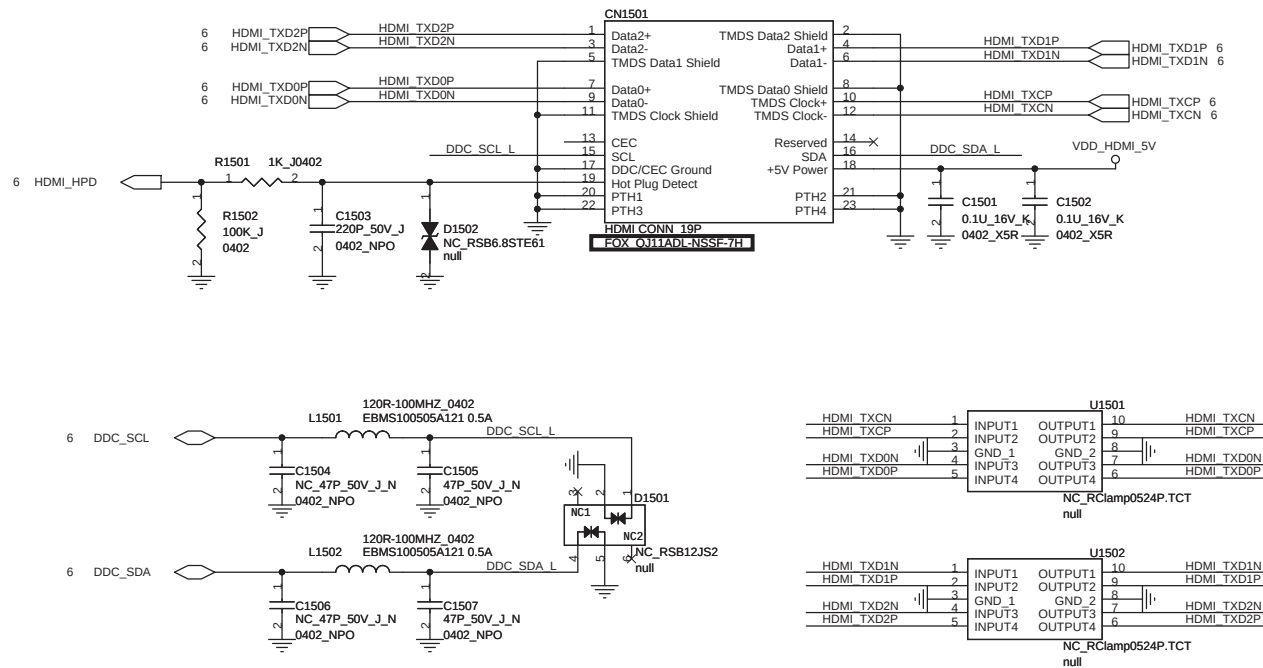
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Size A3	Document Number			Rev DVT
Date:	Friday, February 11, 2011	Sheet	9	of 34

rank1









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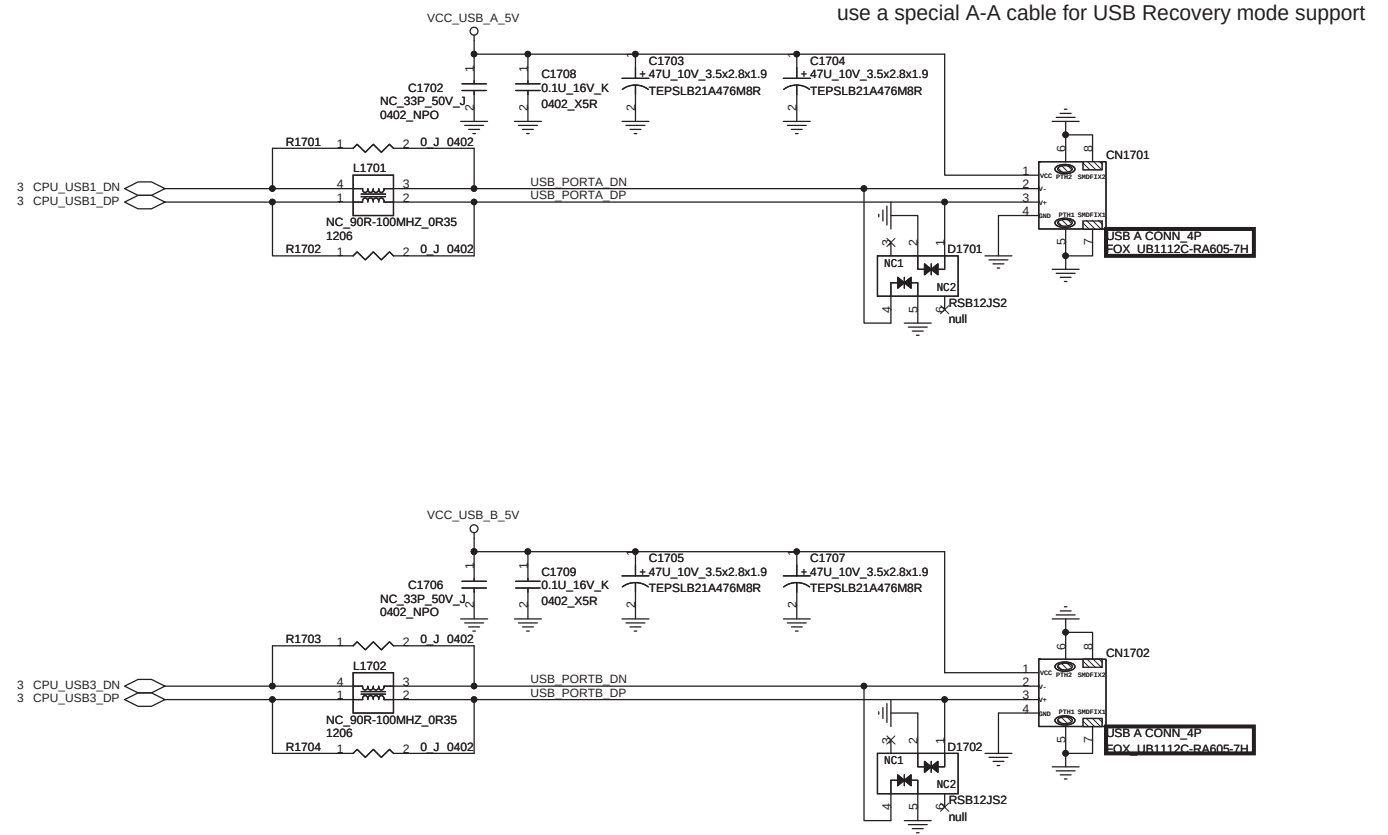


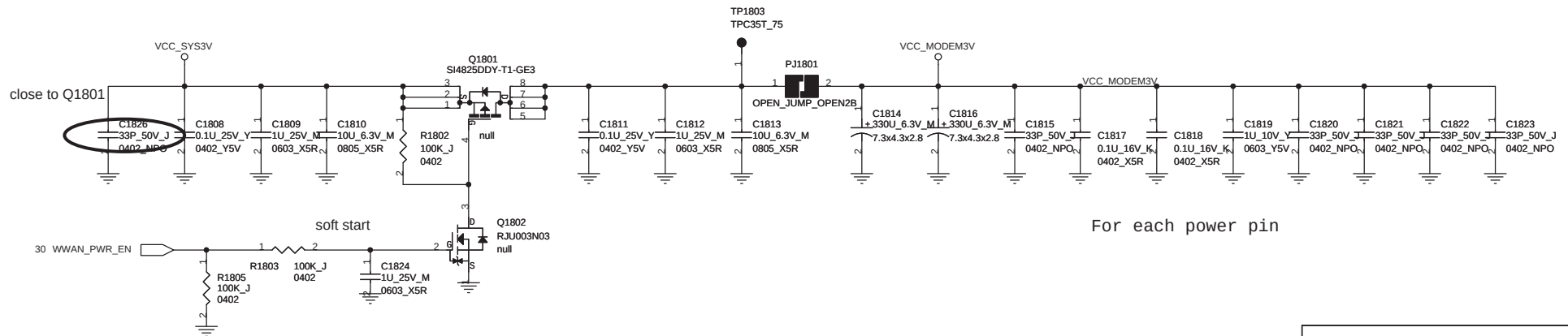
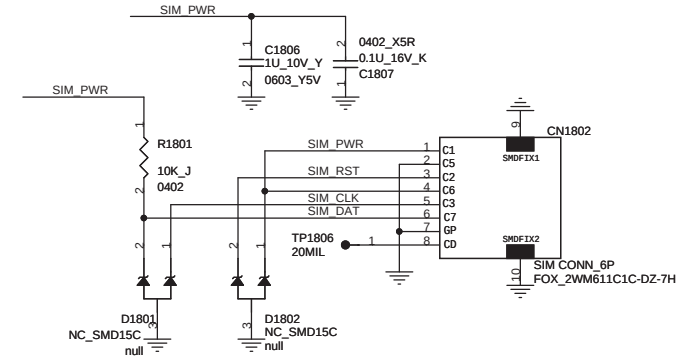
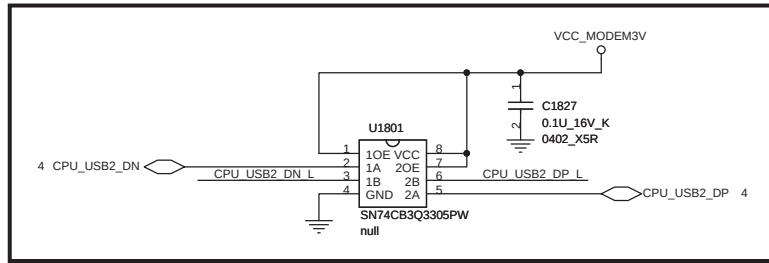
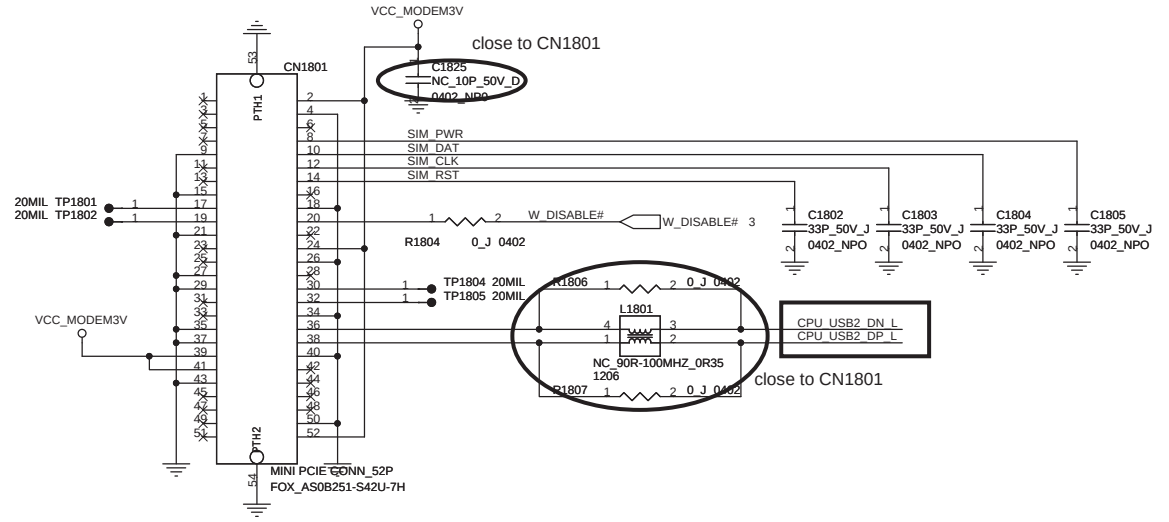
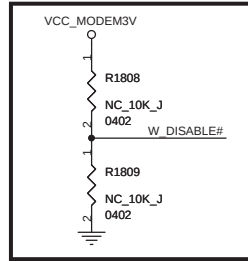
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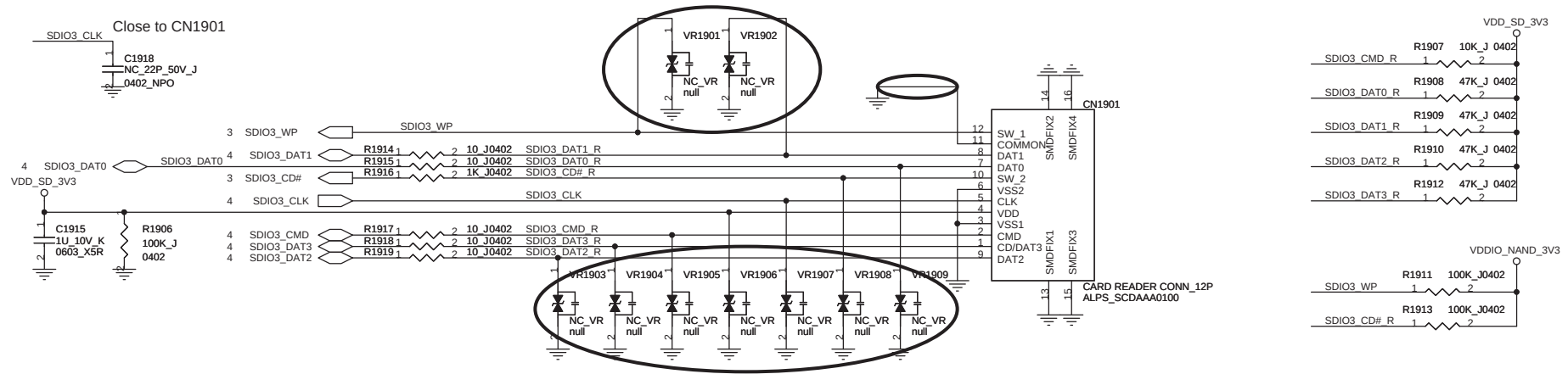
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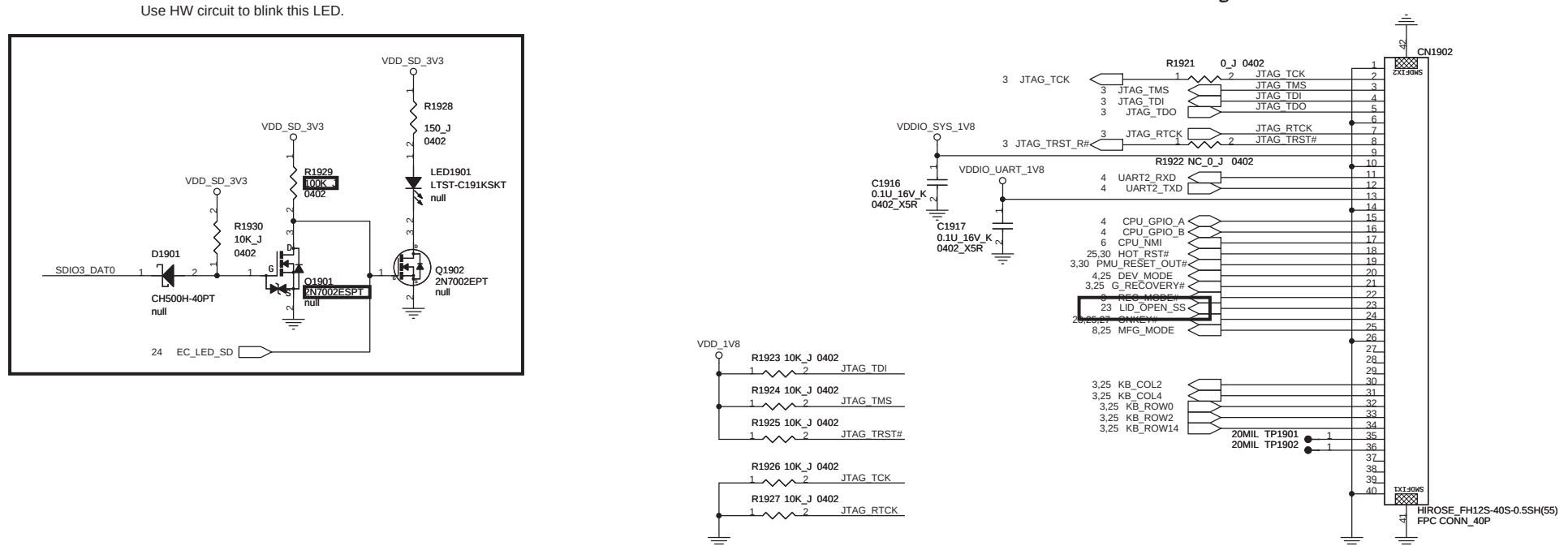


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Size	Document Number	Rev
A3		DVT
Date:	Friday, February 11, 2011	Sheet 18 of 34

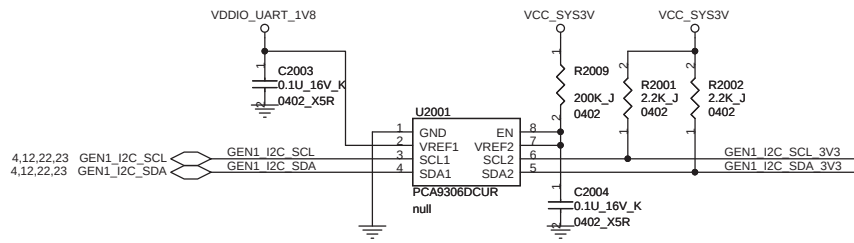
SD/MMC Slot



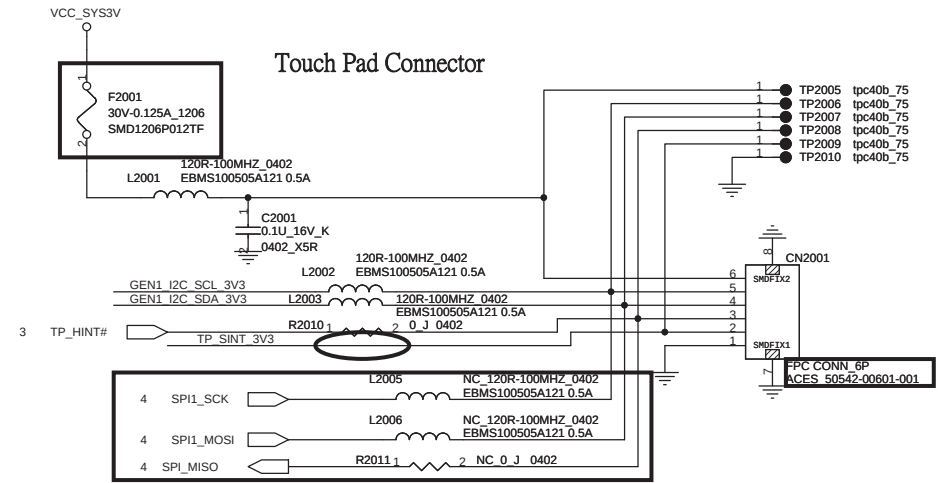
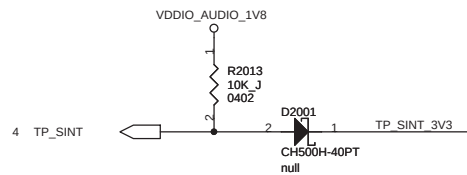
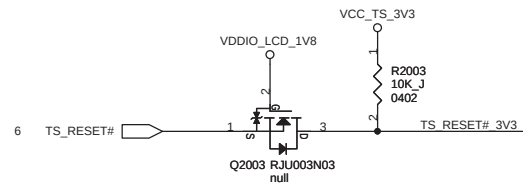
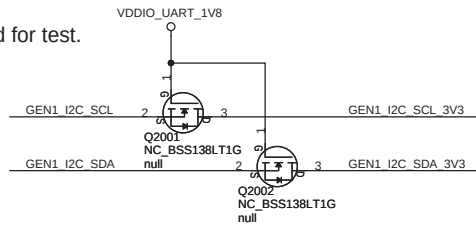
Debug Connector



Title			
SD/MMC Slot and Debug Connector			
Size A3	Document Number		Rev DVT
Date:	Friday, February 11, 2011	Sheet	19 of 34



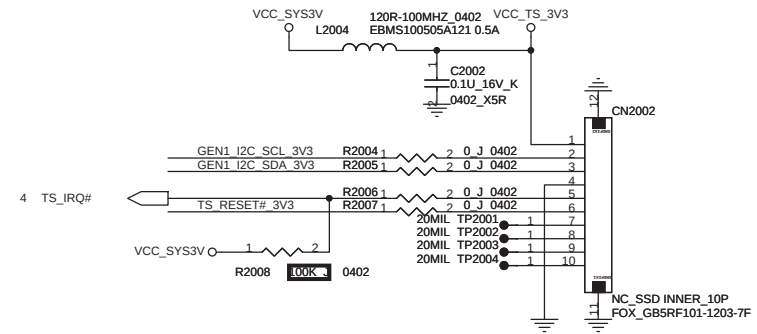
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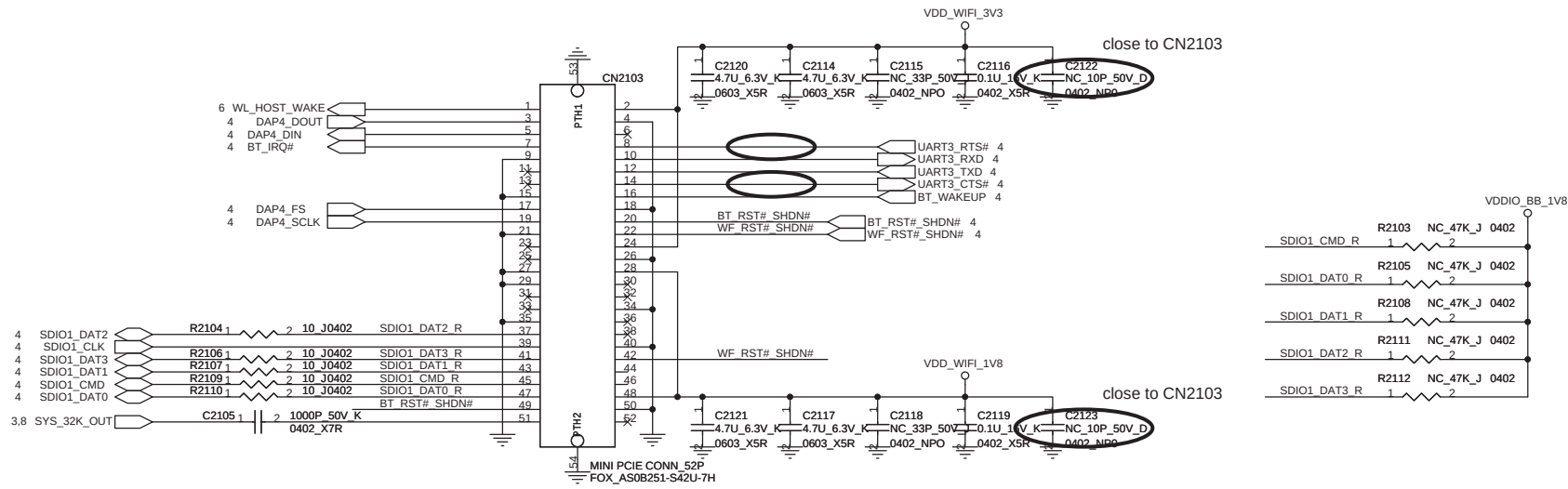
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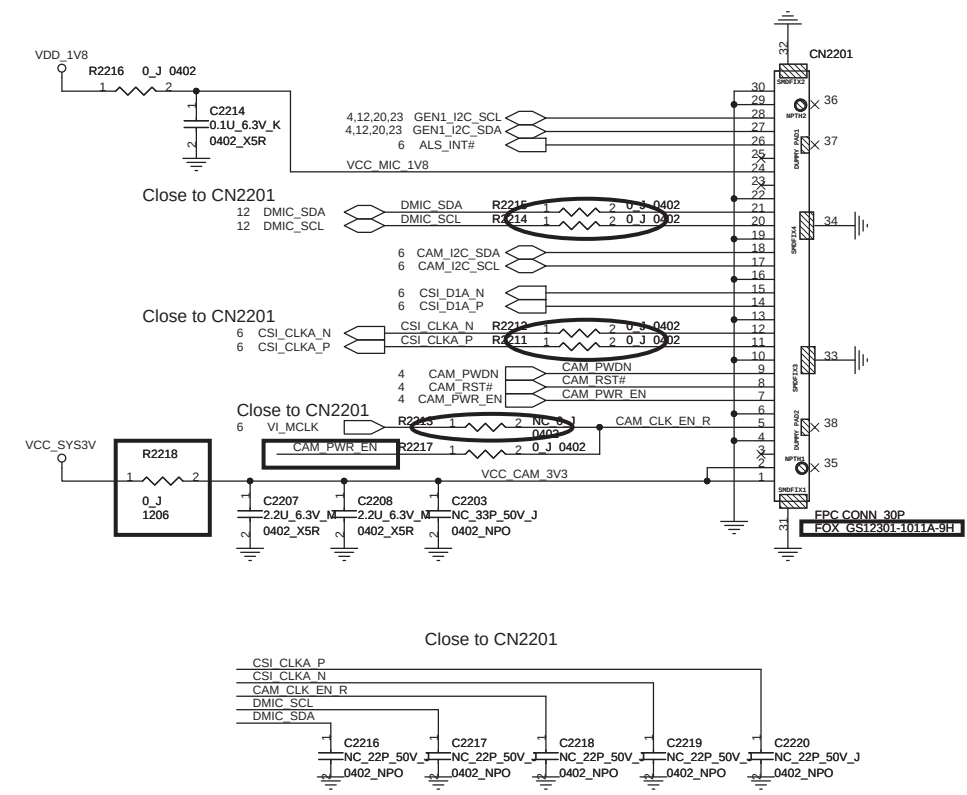
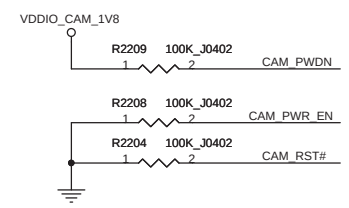
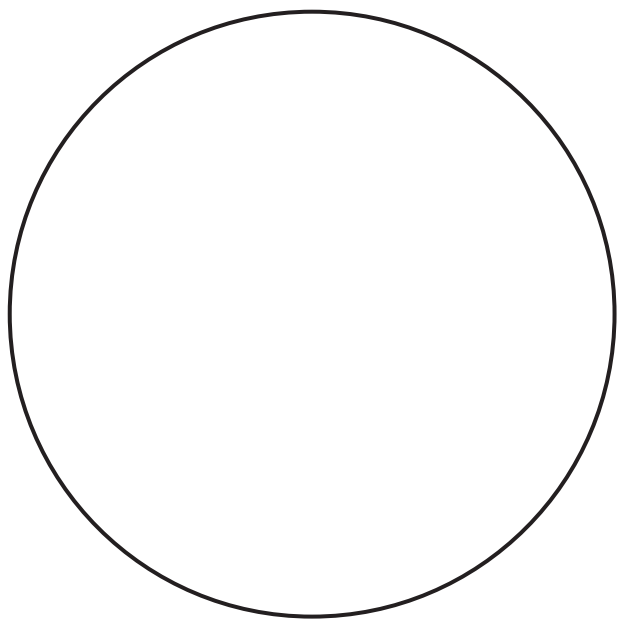
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Touch Screen Connector

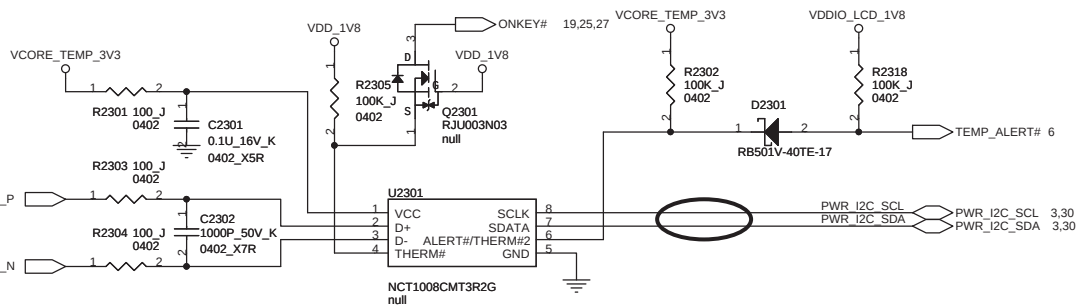


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Size	Document Number	Rev
A3		DVT
Date:	Friday, February 11, 2011	Sheet 20 of 34

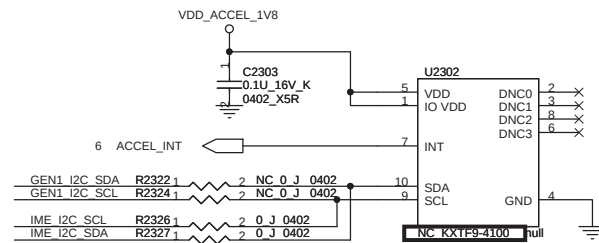




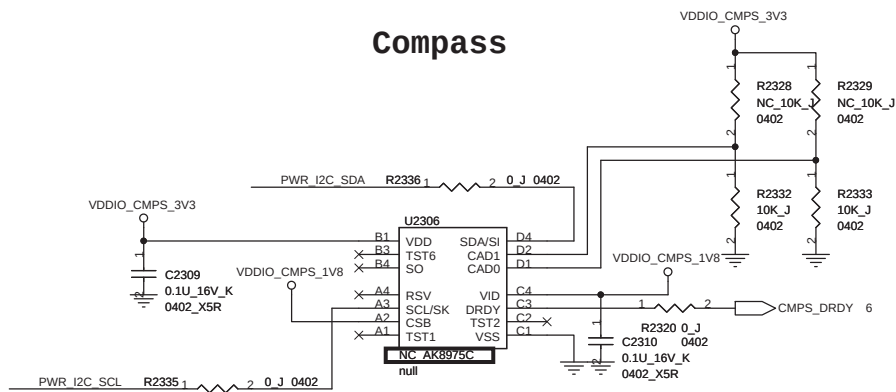
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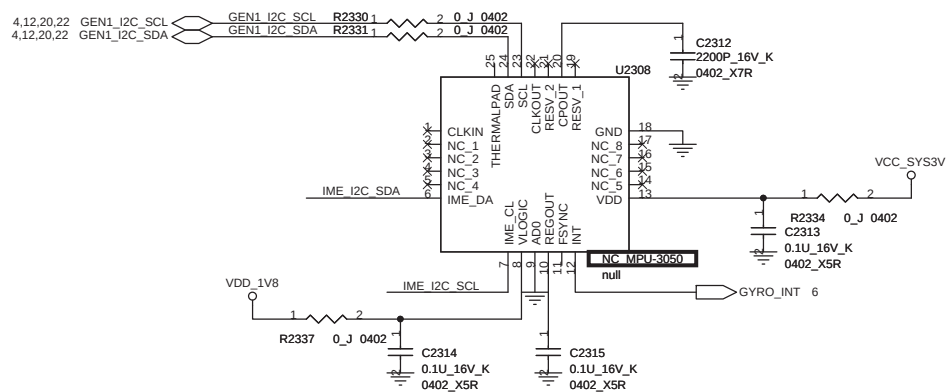
Accelerometer



Compass

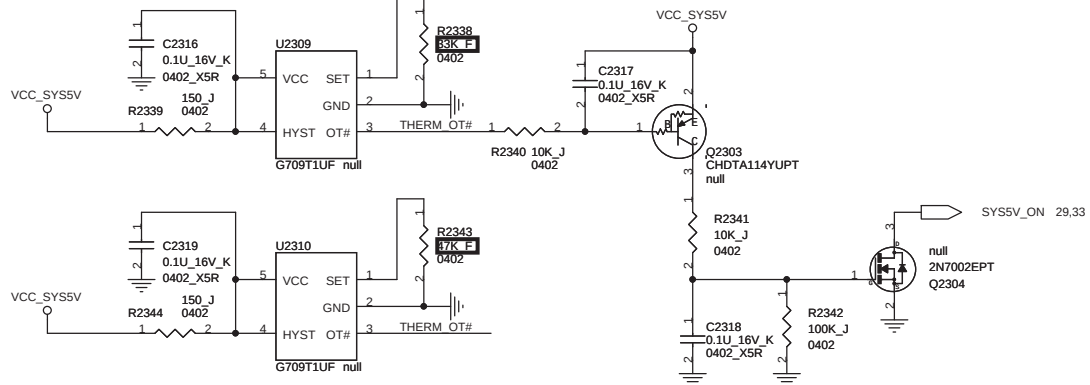


Gyroscope



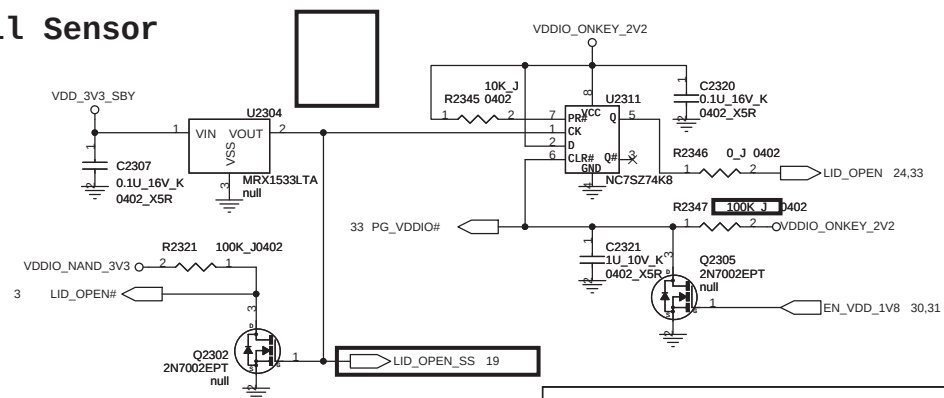
Thermal Switch

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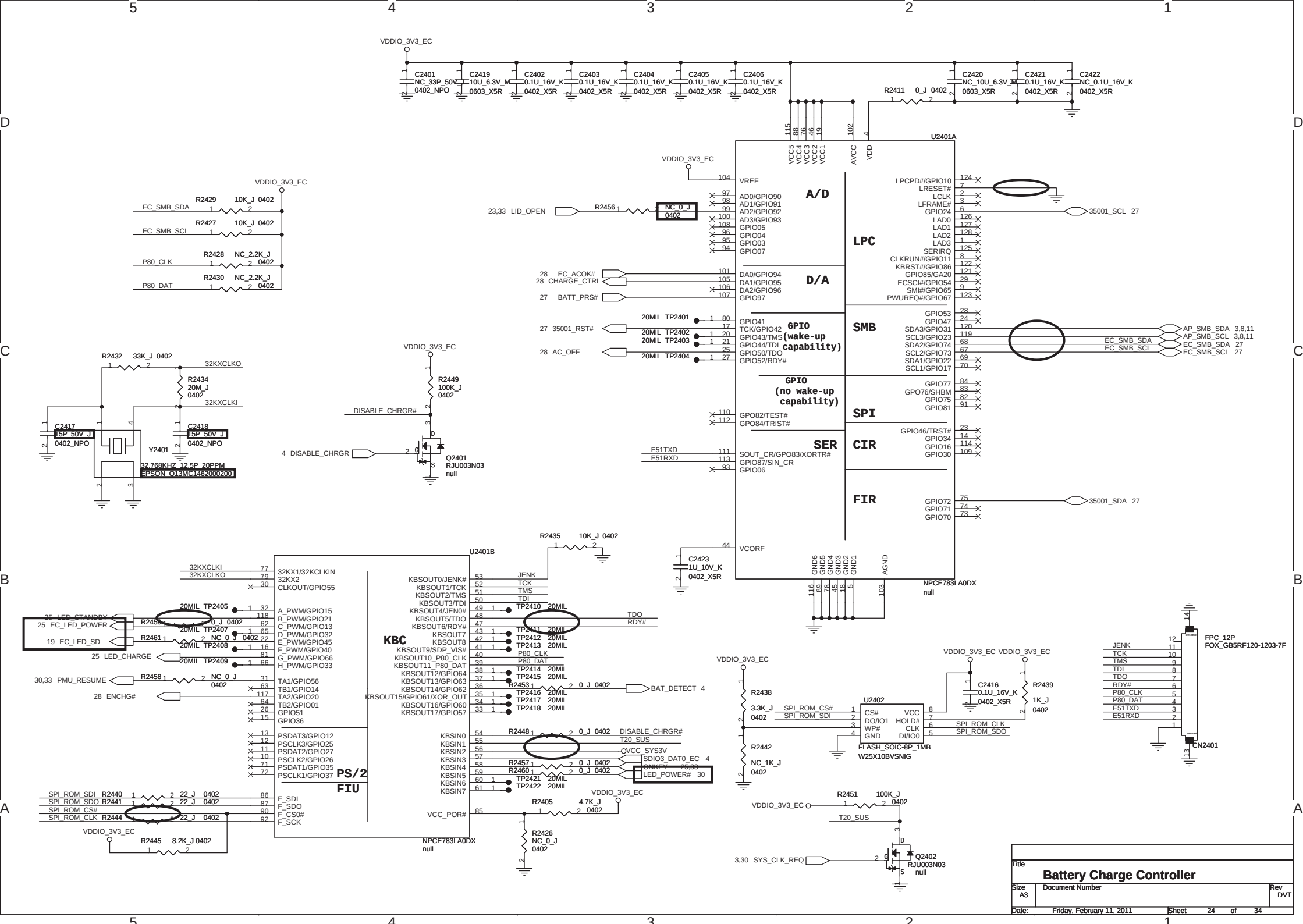


Set 57 degC on PCB edge.

Hall Sensor

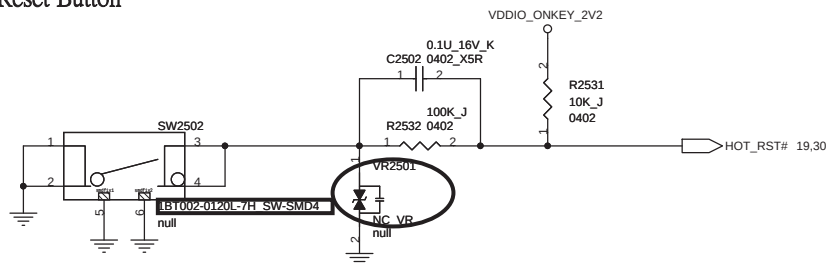


Title			
Sensors			
Size A3	Document Number		Rev DVT
Date:	Friday, February 11, 2011	Sheet	23 of 34

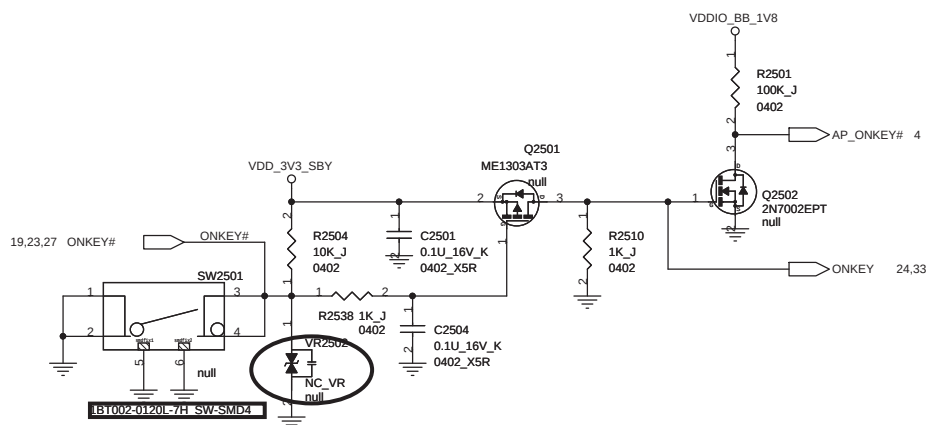


Keyboard Connector

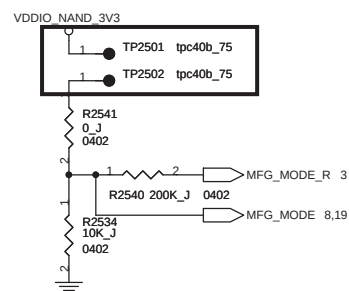
Reset Button



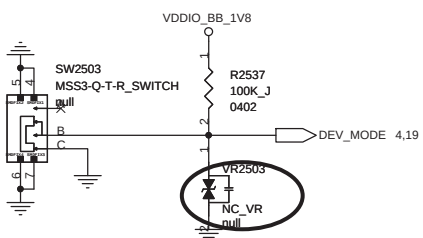
Power Button



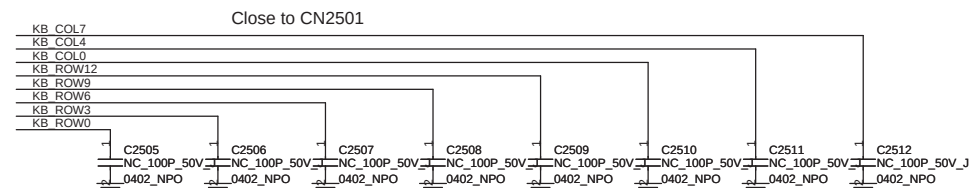
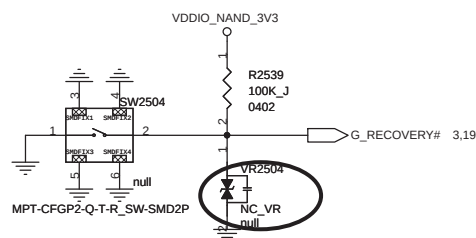
Manufacture Mode



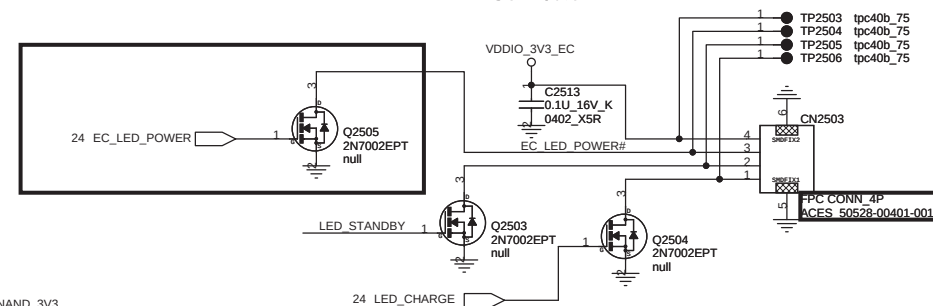
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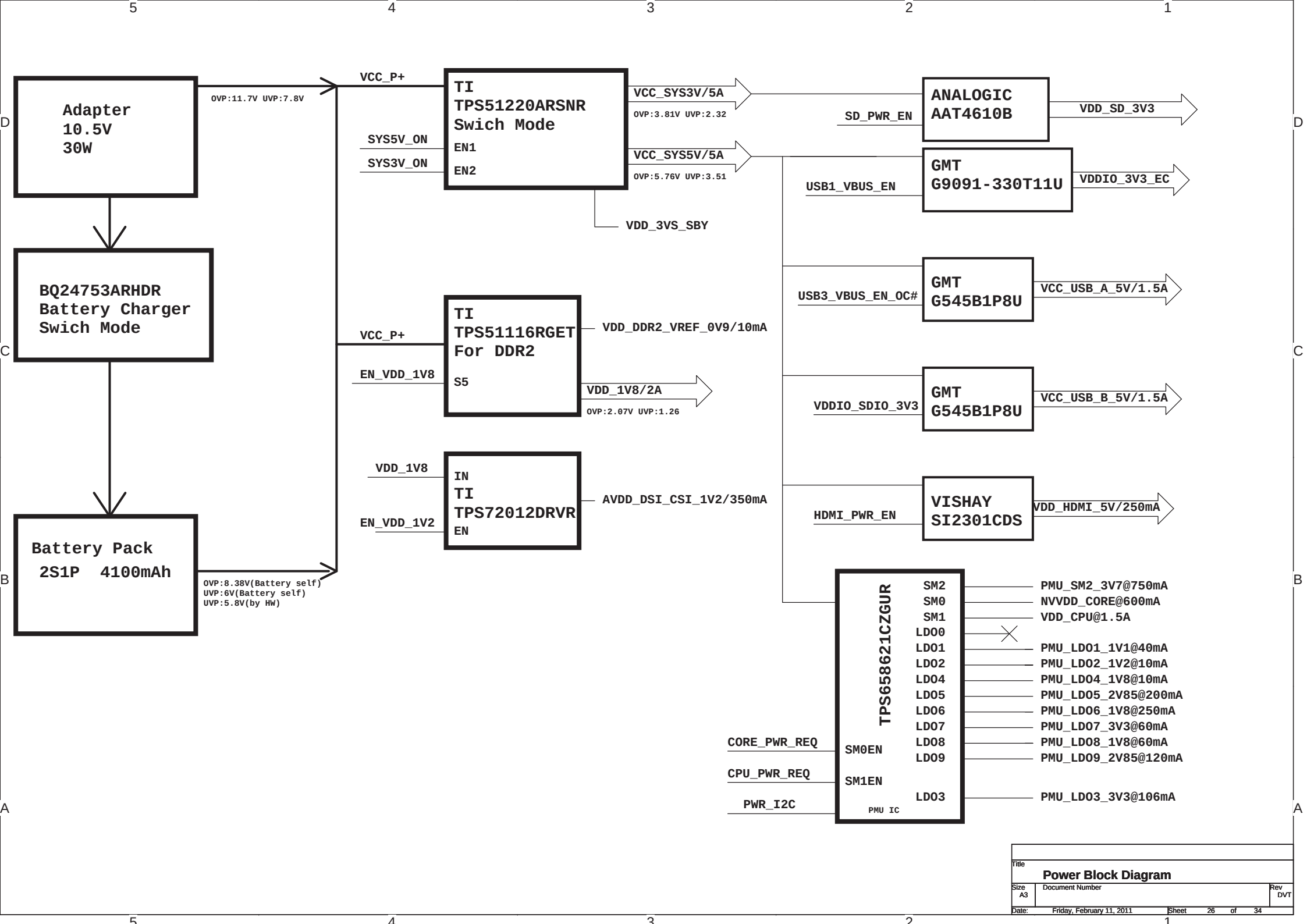
G Recovery SW



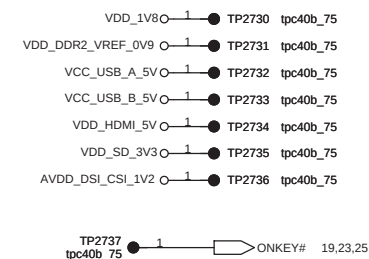
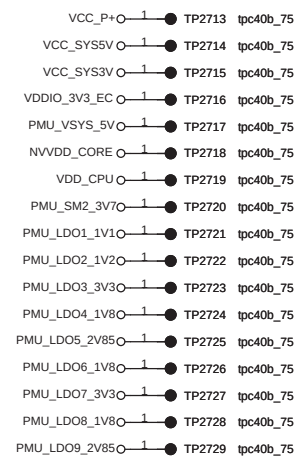
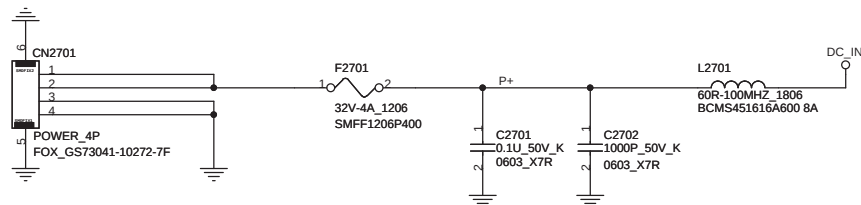
LED DB Connector



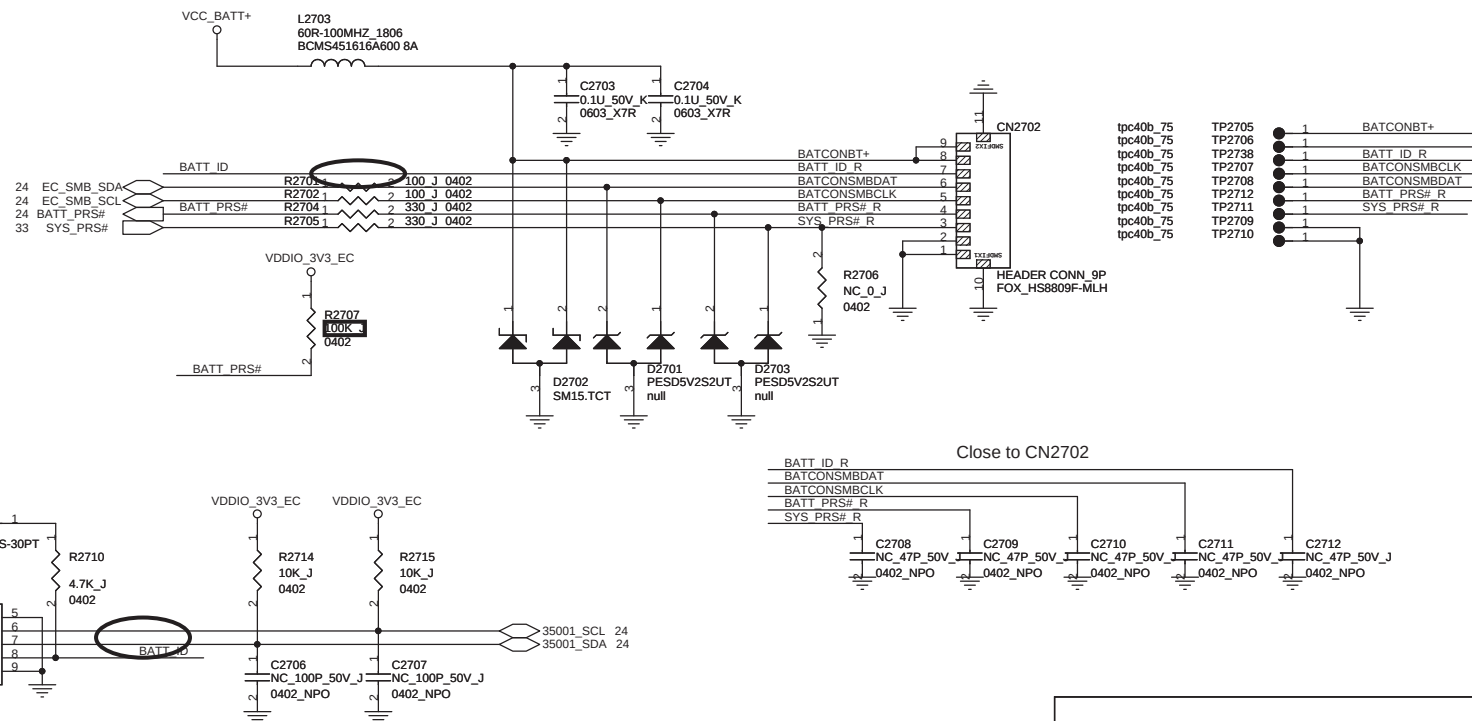
Title		
Keyboard and Switches		
Size	Document Number	Rev
A3		DVT
Date	Friday, February 11, 2011	Sheet 25 of 34



Power Test Point



Battery CONN.

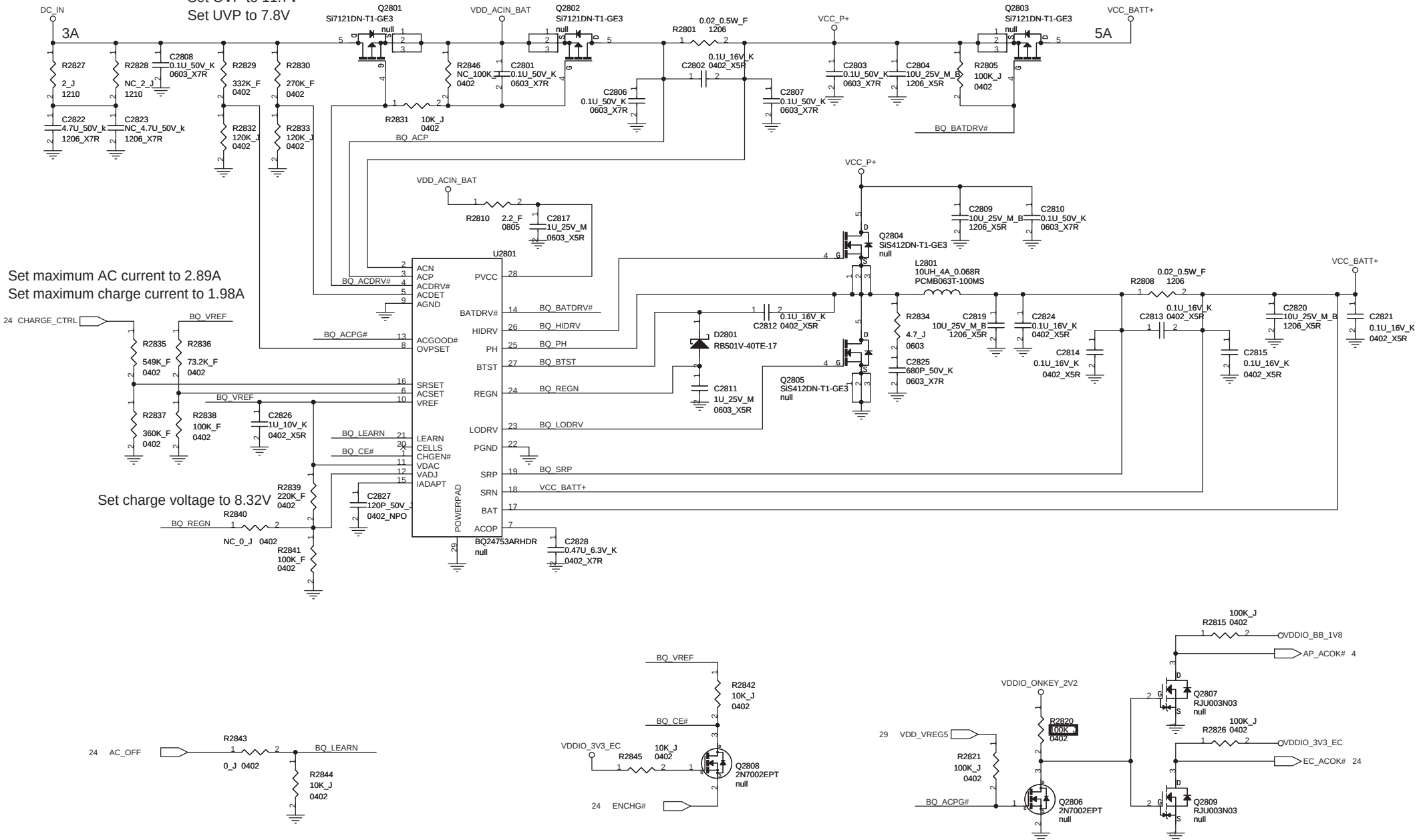


Title				
DCIN & Battery Connector				
Size A3	Document Number			Rev DVI
Date:	Friday, February 11, 2011	Sheet	27	of 34

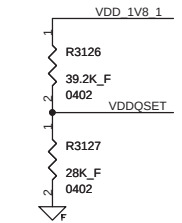
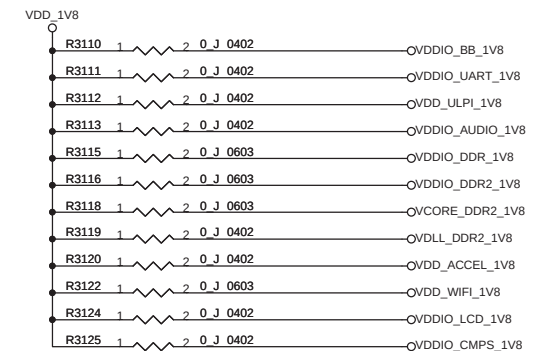
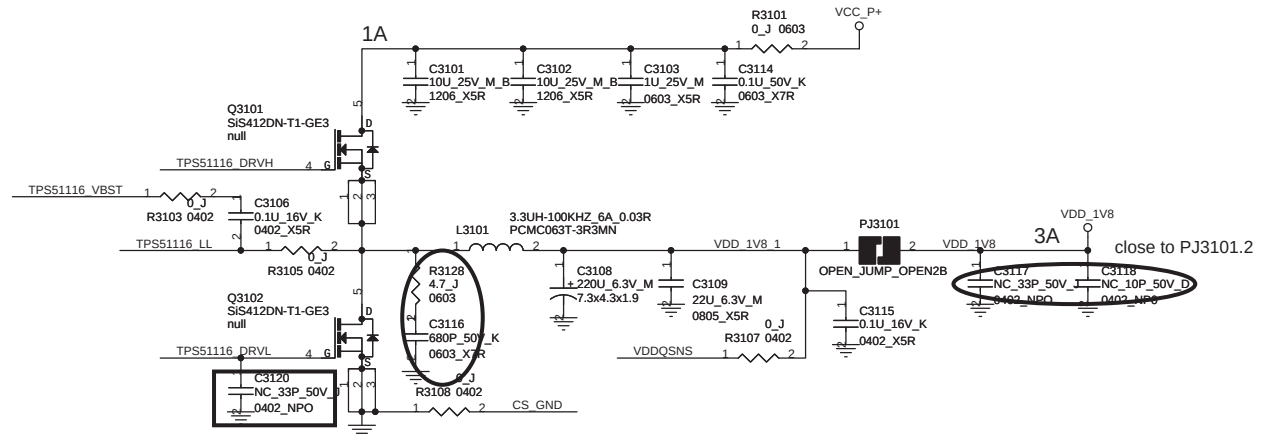
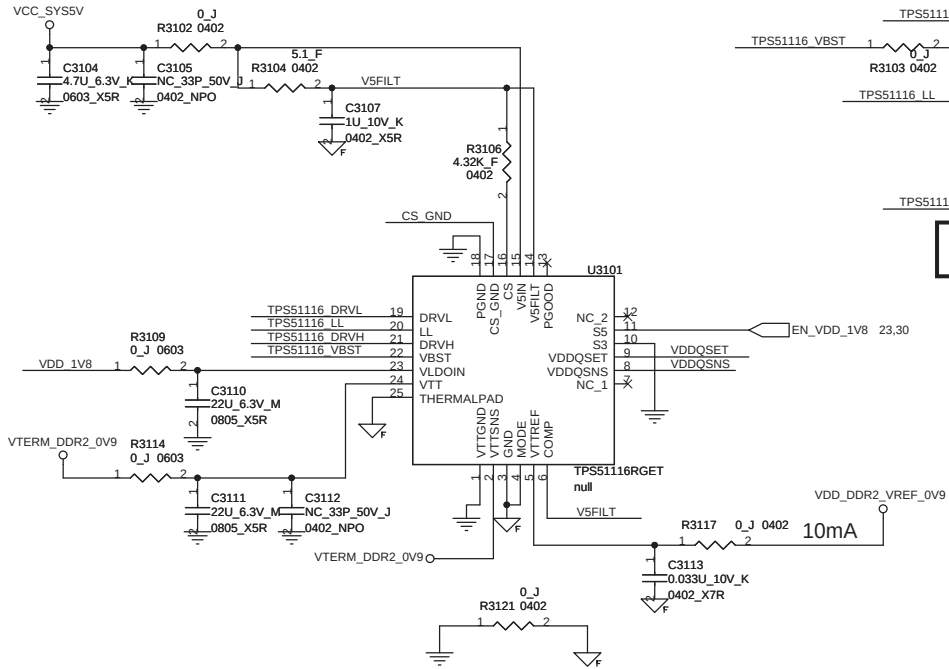
Set OVP to 11.7V
Set UVP to 7.8V

Set maximum AC current to 2.89A
Set maximum charge current to 1.98A

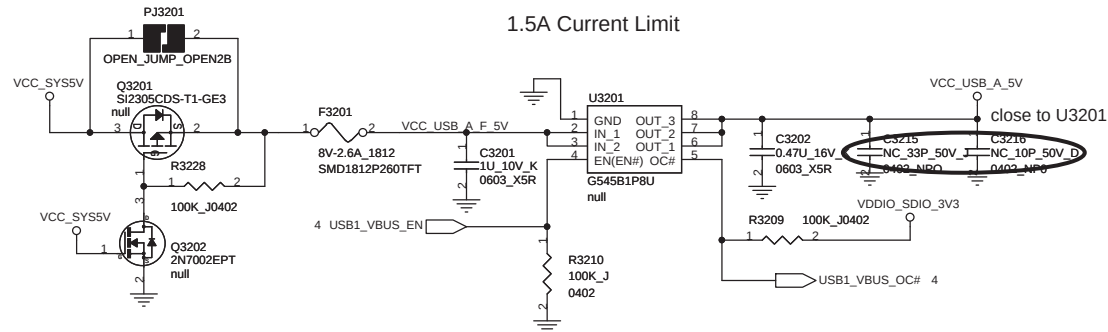
Set charge voltage to 8.32V



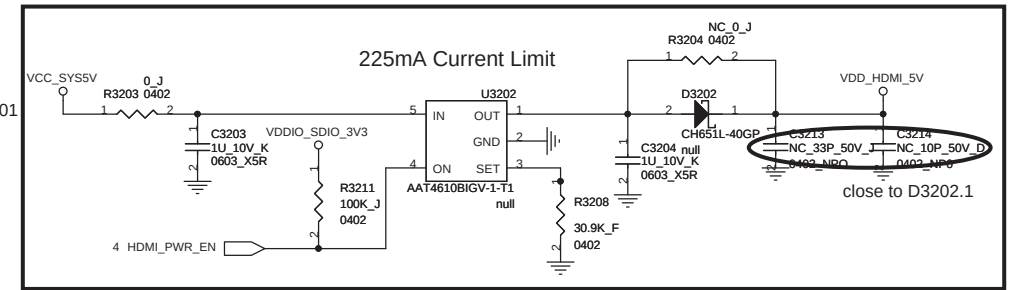
Title		
Battery Charger		
Size	Document Number	Rev
A3		DVT
Date:	Friday, February 11, 2011	Sheet 28 of 34



A USB Conn. Power Switch

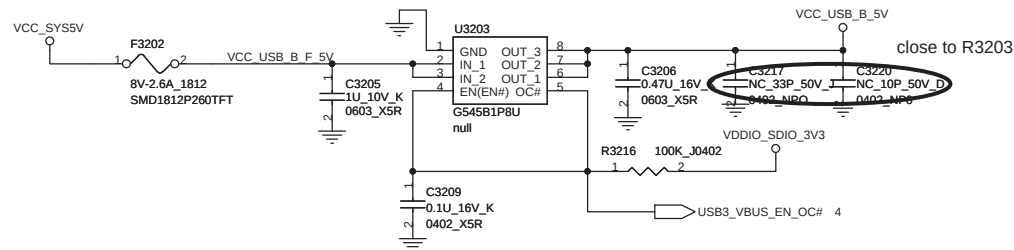


HDMI Port Power Switch



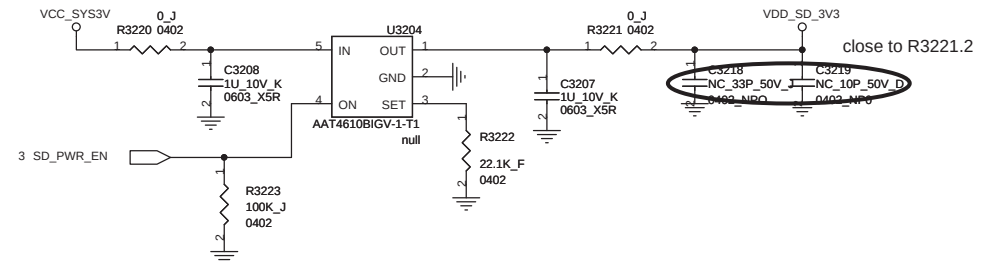
B USB Conn. Power Switch

1.5A Current Limit

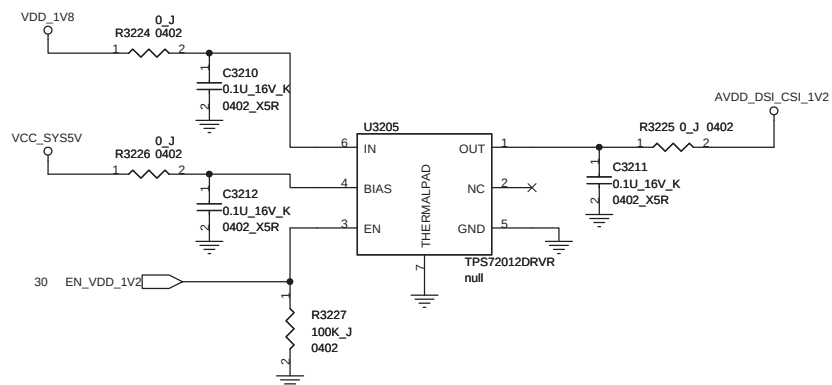


SD Card Power Switch

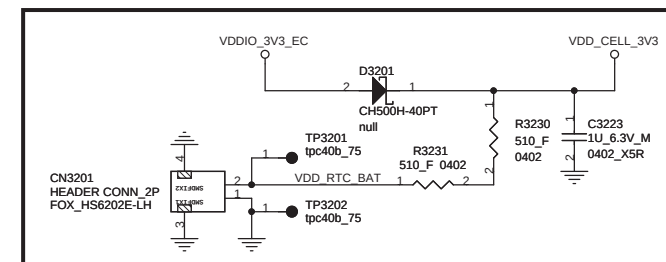
319mA Current Limit



1.2V For MIPI

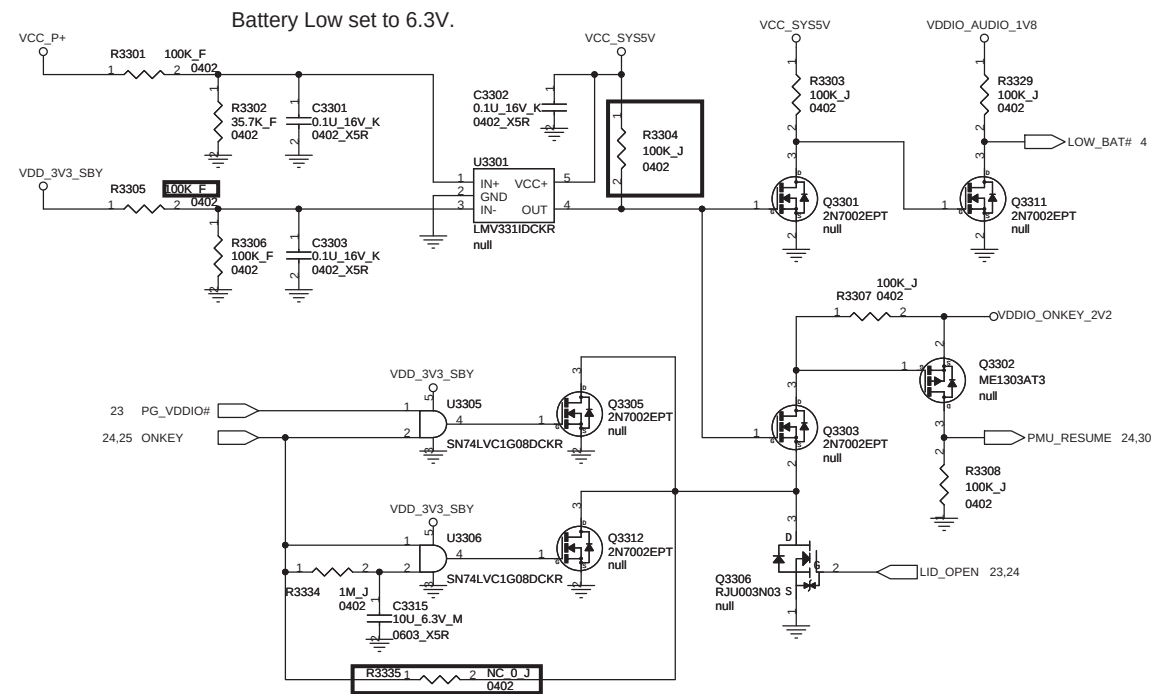
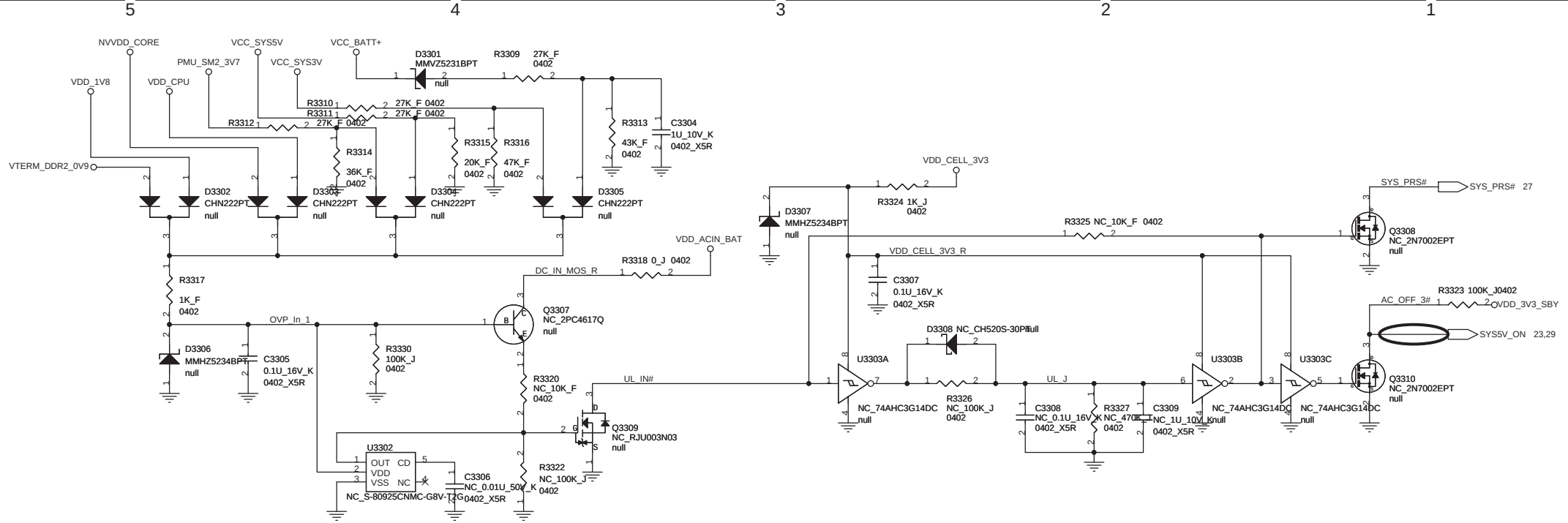


RTC CELL

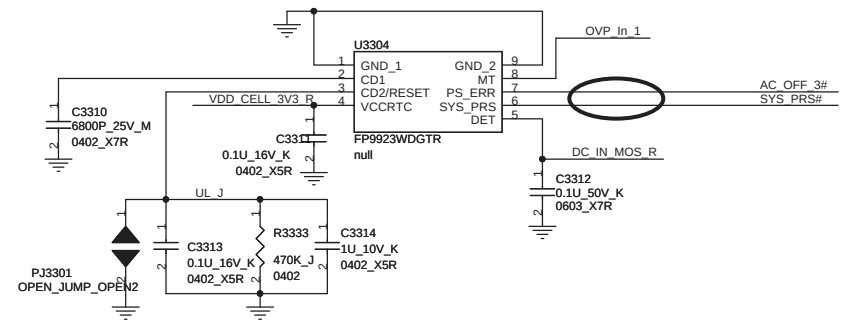


RTC connector has to check it with ME.

Title		Power Switch	
Size	A3	Document Number	Rev DVT
Date:	Friday, February 11, 2011	Sheet	32 of 34



Use FP9923WDGTR to replace OVP circuit (include latch circuit)



Title		
Low Battery Detector and System OVP		
Size	Document Number	Rev
A3		DVT
Date:	Friday, February 11, 2011	Sheet 33 of 34

D	5	4	3	2	1	D
C	5	4	3	2	1	C
B	5	4	3	2	1	B
A	5	4	3	2	1	A
	5	4	3	2	1	

2010/12/20

Page 08: Connect the VSB pin of U802 to Standby 3.3V (VDD_3V3_SBY) instead of VDD_TPM_3V3.

Page 16: Connect pin12 of WM9001(U1602, U1603) to AVDD_AMP_2V85.

Page 23: Remove R2316.
Add a net 'LID_OPEN_SS' from debug connector.
Cahnge R2347 from 10K to 100K.

Page 26: Modify the power block diagram.

Page 32: Modify HDMI power circuit.

Page 33: Add 100K resistor between pin4 and pin5 of U3301.

2010/12/23

Page 16: Combine two speaker connectors to one 4pin connector.

Page 24, 25, 30: change Power_LED controlled path. PMIC >EC >LED.

Page 30: Change PMIC from TPS658621A to TPS658621CZGUR.

Page 32: Exchange pin1 and pin2 of CN3201. (more popular)

Page 08, 24, 30: Becasue current 32.768K X'tal will be EOL.
EPSON hopes we use Q13MC1462000200 to replace it.

2011/1/3

Page 01: Change the size of screw hole.

Page 08: Move TPM circuit to TPM DB.

Page 13: Fix left channel of headphone no audio output.

Page 14: Fix external microphone no function.

Page 17: Change USB connector to FOX_UB1112C-RA605-7H.

Page 20: Change touch pad connector to ACES_50542-00601-001.

Page 25: Add a MOS to reverse control signal of POWER LED.
Change keyboard connector to ACES_50590-03001-001.
Change LED DB connector to ACES_50528-00401-001.

Page 32: Change RTC connector to holder type.
Add two test pad for RTC current measurement.

2011/1/7

Page 03: Change SW301 to NC.
Change SW302 to NC, and set the booting device in SPI-ROM.

Page 23: Change U2302, U2306, and U2308 to NC.

Page 25: Remove SW2505, use two test points to replace it.
Change SW2501, SW2502 to NC.

Page 32: Change RTC to rechargeable type.

2011/1/14

Page 01: Change the size of screw hole (H15).

Page 04,19,30: Modify SD LED circuit. Remove PMIC control SD LED.

Page 11: Modify RC value on LCD power rails.
Add fuse on LCD power rails.
Change CN1101 to GS12301-1011A-9H.

Page 15: Change HDMI con. from QJ1119L-NV25-7H to QJ11ADL-NSSF-7H.

Page 20: Add fuse on touch pad power rail.

Page 22: Modify camera circuit, move some parts to module side.

Page 24,30: Fine tune the capacitors for 32K crystal.

Page 29: Set TPS51220A to current mode, and fine tune some resistors.

Page 33: Battery UVP set to 5.9V.

2010/01/18

Page 27: Add test points for power rails testing.

2010/01/24

Page 23: Change the HW thermal switch setting, CPU: 75 degree C, Environment: 57 degree C.

Page 31: Reserve a cap on "TPS51116_DRVL" to fine tune deadtime.

Page 19: Reserve VR to GND on each SD pin except GND pin for ESD.

Page 25: Reserve VR to GND on each switch for ESD issue.

Page 12: Reserve RC on DAP_MCLK1 & DAP1_SCLK for EMI.

Page 13: Change 100pf*2 to 470pf*2 on C1301&C1302 for Audio EMI.

Page 14: Change 220pf*2 to 470pf*2 on C1404&C1405 for Audio EMI.

Page 29: Mount R2938(4.7ohm), C2922(680pf) on VCC_SYS5V for EMI.
Mount R2939(4.7ohm), C2923(680pf) on VCC_SYS3V for EMI.

Page 04: Change below RC values to improve RF sensitivity.
DAP_MCLK1; R424 -> 100ohm, C421 -> 12pF.
DAP1_SCLK; R421 -> 68ohm, C422 -> 12pF.
SDIO1_CLK; R426 -> 68ohm, C424 -> 12pF.
DAP_MCLK2; add a Cap -> 12pF.

Page 20: Change R2008 to 100K. for less power consumption.

Page 27: Change R2707 to 100K. for less power consumption.

Page 28: Change R2820 to 100K. for less power consumption.

Page 03: Fine tune the capacitors for 12M crystal.

Page 33: Battery UVP set to 6.3V, same as EVT.

2010/01/25

Page 08: Change TPM connector to ACES_50542-01001-001.

2010/01/26

Page 30: Add an series 100ohm resistor on the pin M11 of U3001.

Page 03: Mount SW301 for nVIDIA force recovery mode.

Page 25: Mount SW2501 for power button and SW2502 for reset button.

Page 32: Modify HDMI power circuit. back to EVT circuit.

Page 22: Connects pin1 of R2217 to "CAM_PWR_EN" signal.

Page 04,19,24: Add EC_LED_SD control signal from EC, and refer to SDIO3_DAT0.

2010/01/27

Page 11: Change Q1104 to FDN340P.

Page 19: Change R1929 to 100K and Q1901 to 2N7002ESPT.

Page 20: Reserve CN2003 in top-side for test.

Page 24: Change EC_LED_SD signal to E_PWM (pin22)

All page: remove some non-used 0ohm resistors, and direct connection.

2010/01/28

Page 04,20: Reserved for SPI Touch pad.

2010/02/09

Page 04,14: Reserved Tegra N25 pin for EXT_MIC_DET# signal use.

Page 18: Add bus switch IC in WWAN USB interface.

Title			
Change Notice			
Size	Document Number		Rev
A3			DVT
Date:	Friday, February 11, 2011	Sheet	34 of 34