

野火 EBF RK3588S LBC4

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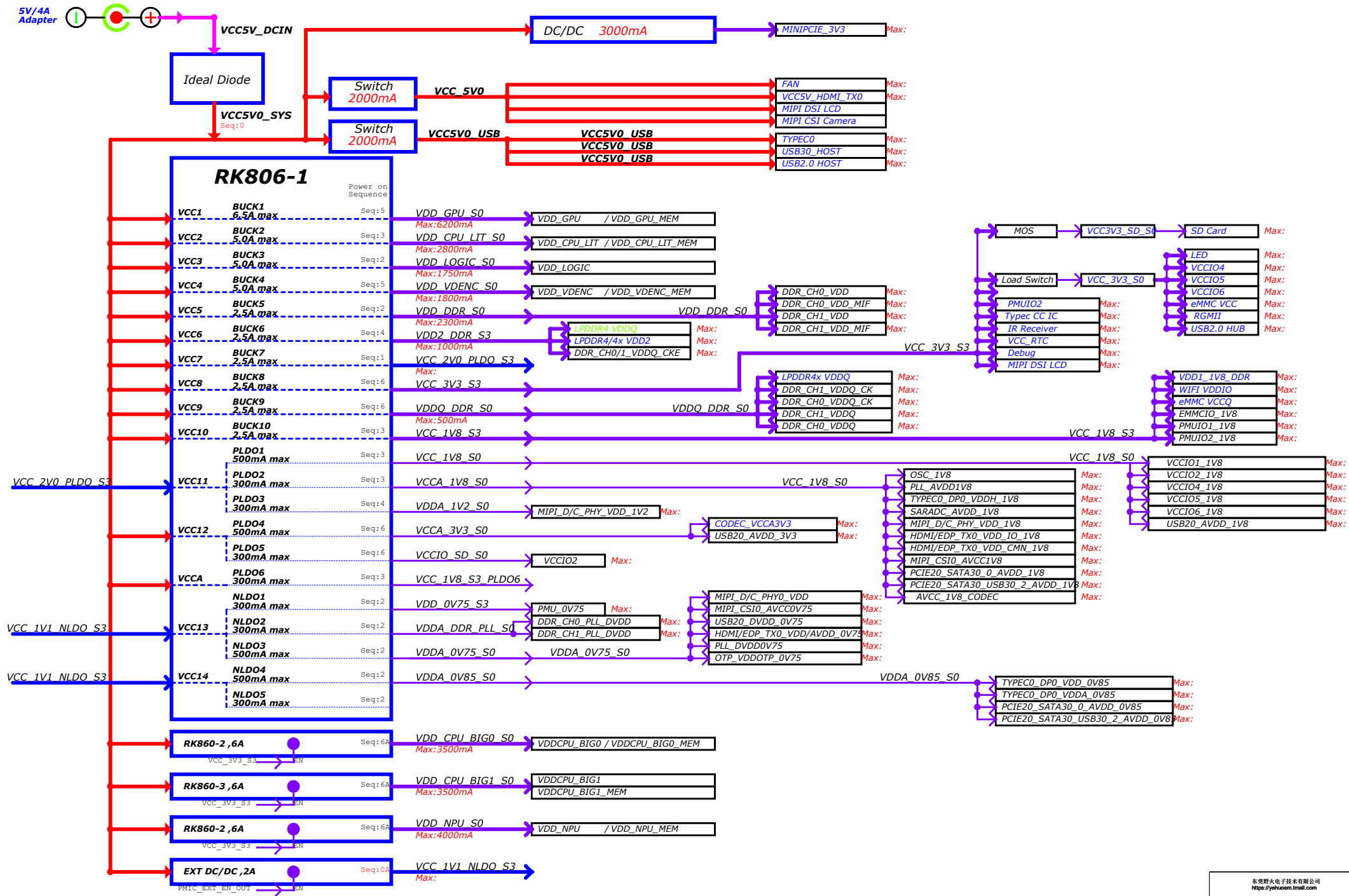
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历史版本

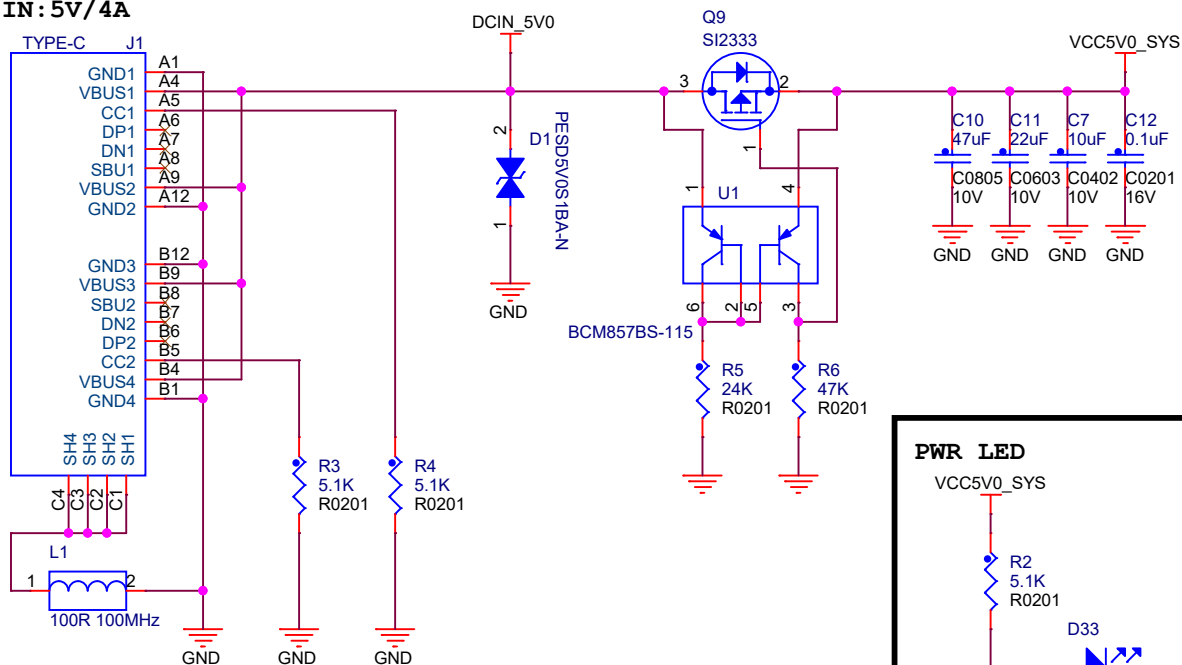
版本号	日期	设计	描述
V1.0	2023-04-10	llm	初始版本

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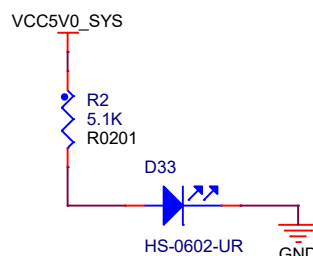
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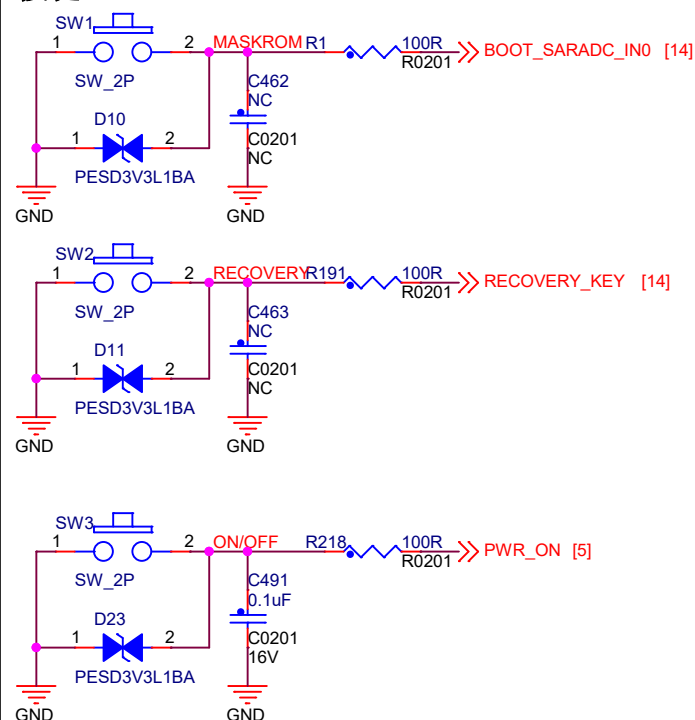
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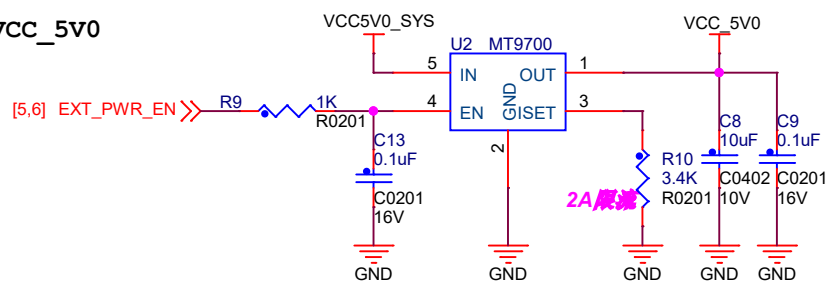
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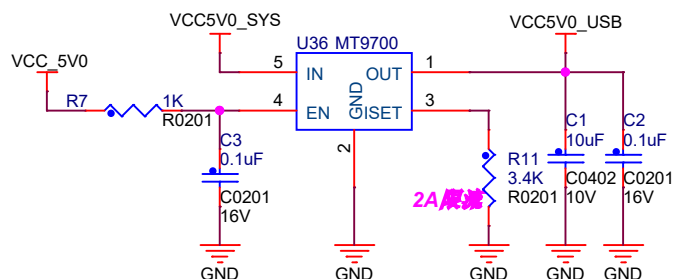
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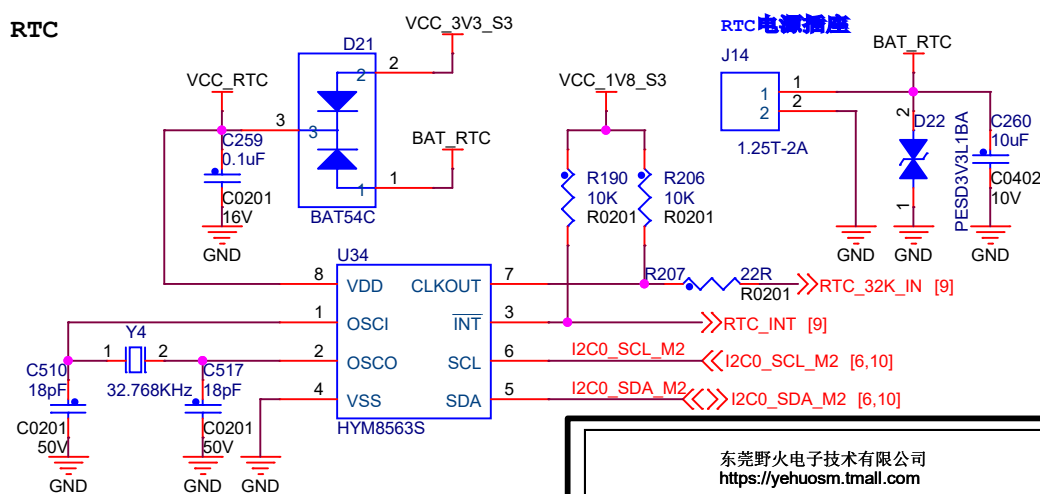
VCC_5V0



VCC5V0_USB



RTC



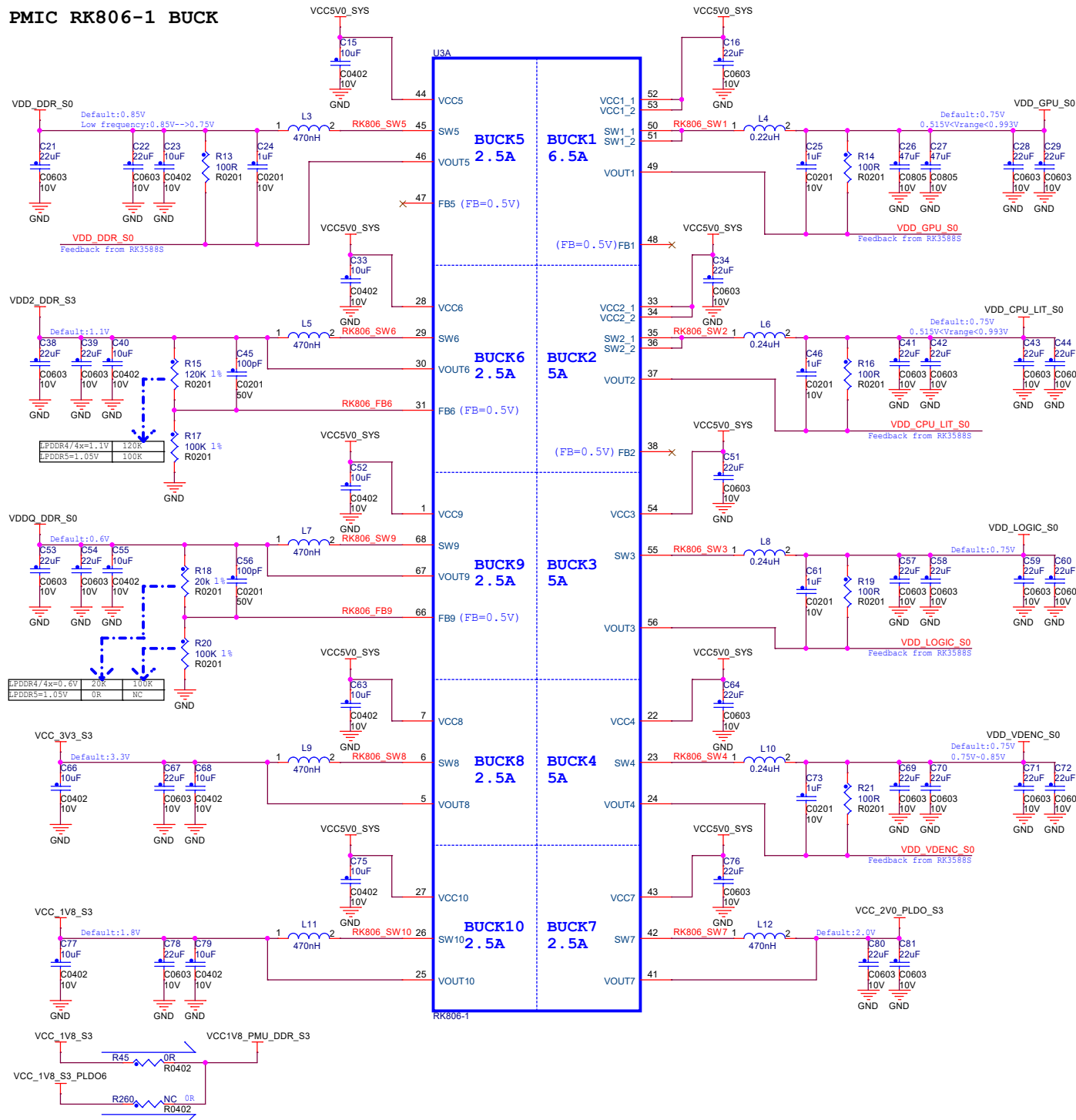
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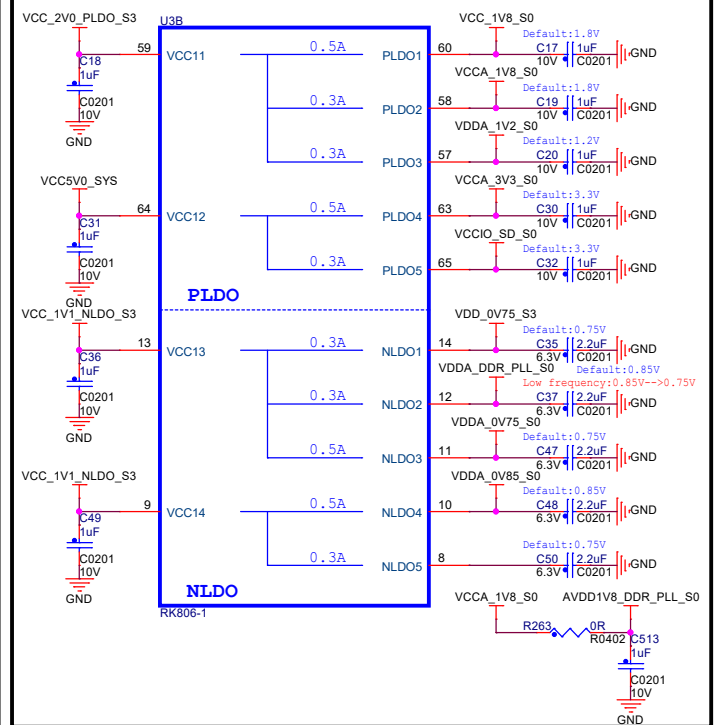
Size A4 Document Number 电源 Rev V1.0

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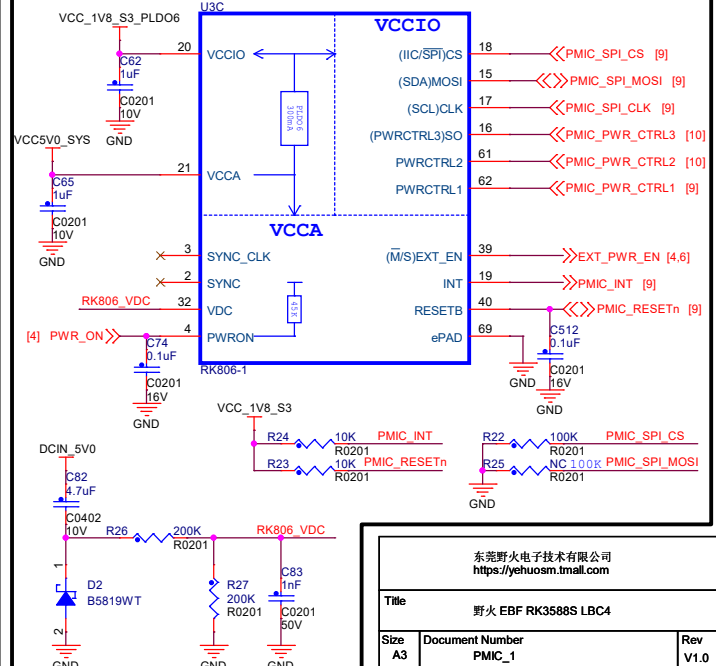
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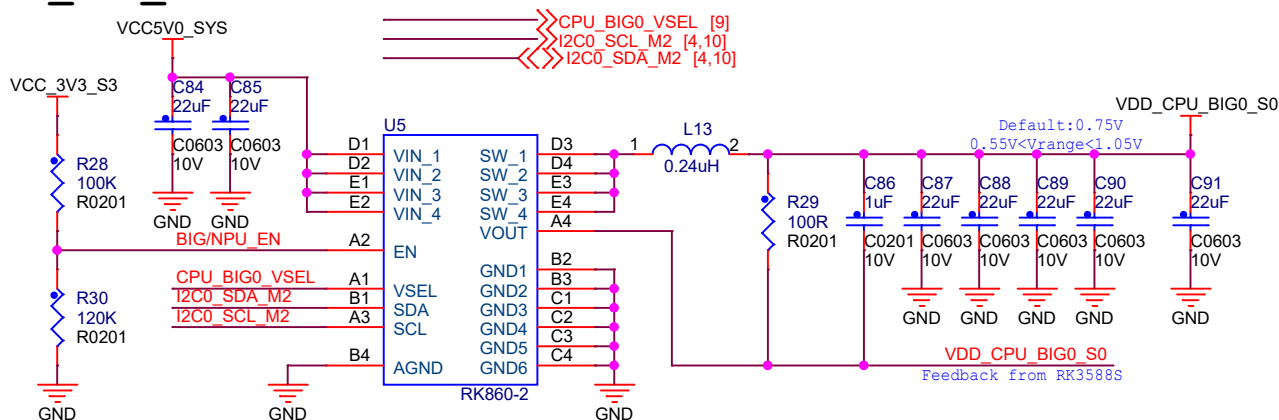
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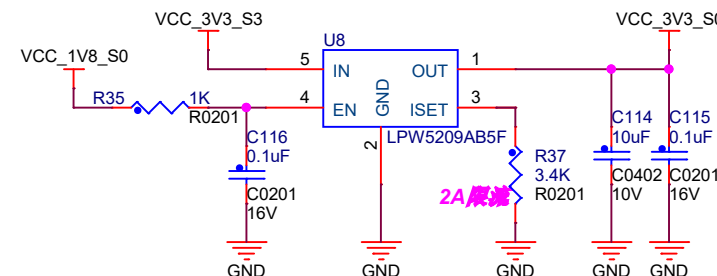
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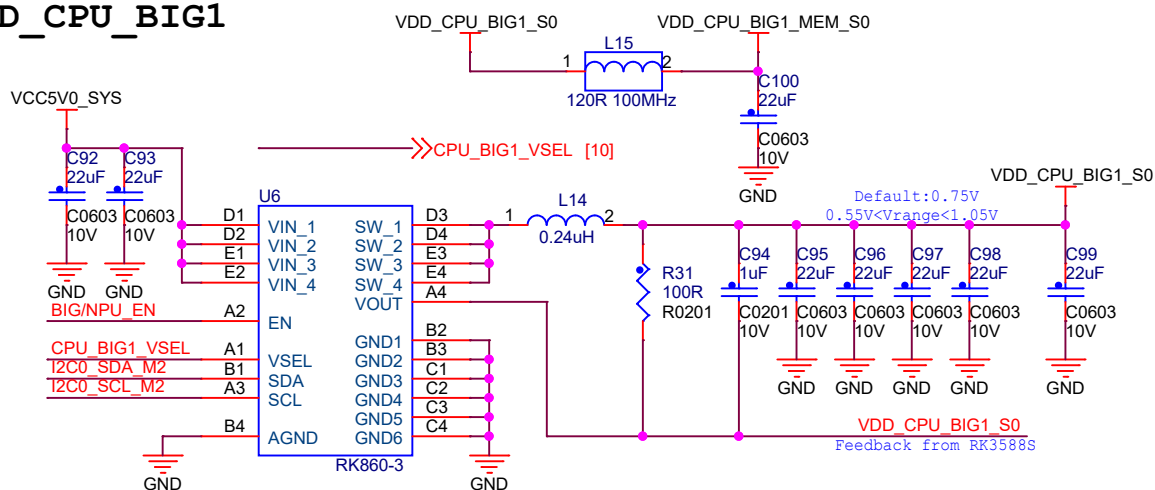
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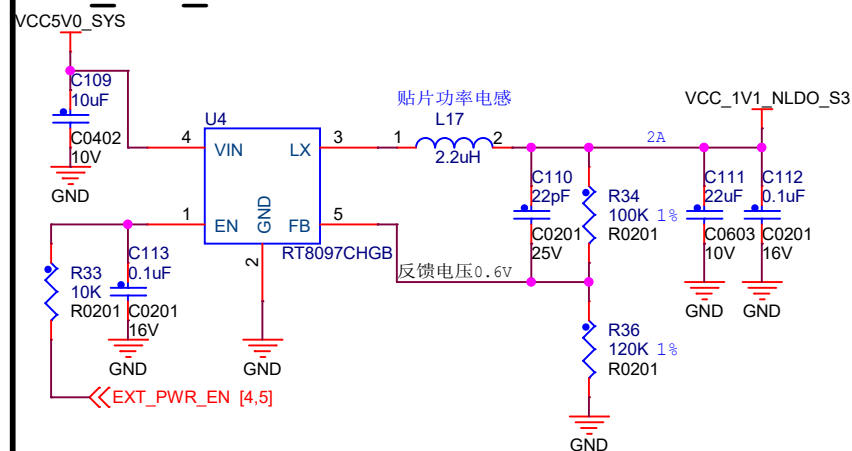
VCC_3V3_S0



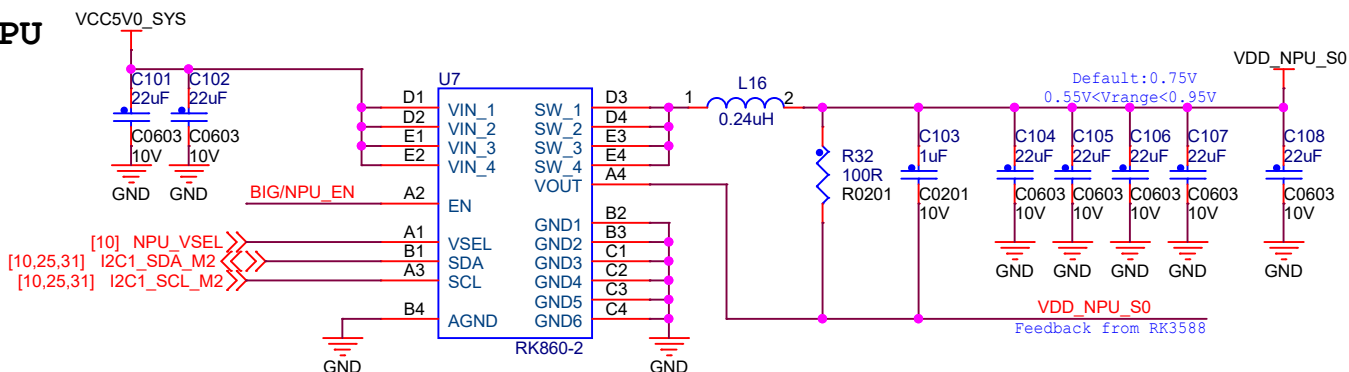
VDD_CPU_BIG1



VCC_1V1_NLDO



VDD_NPU



定位孔



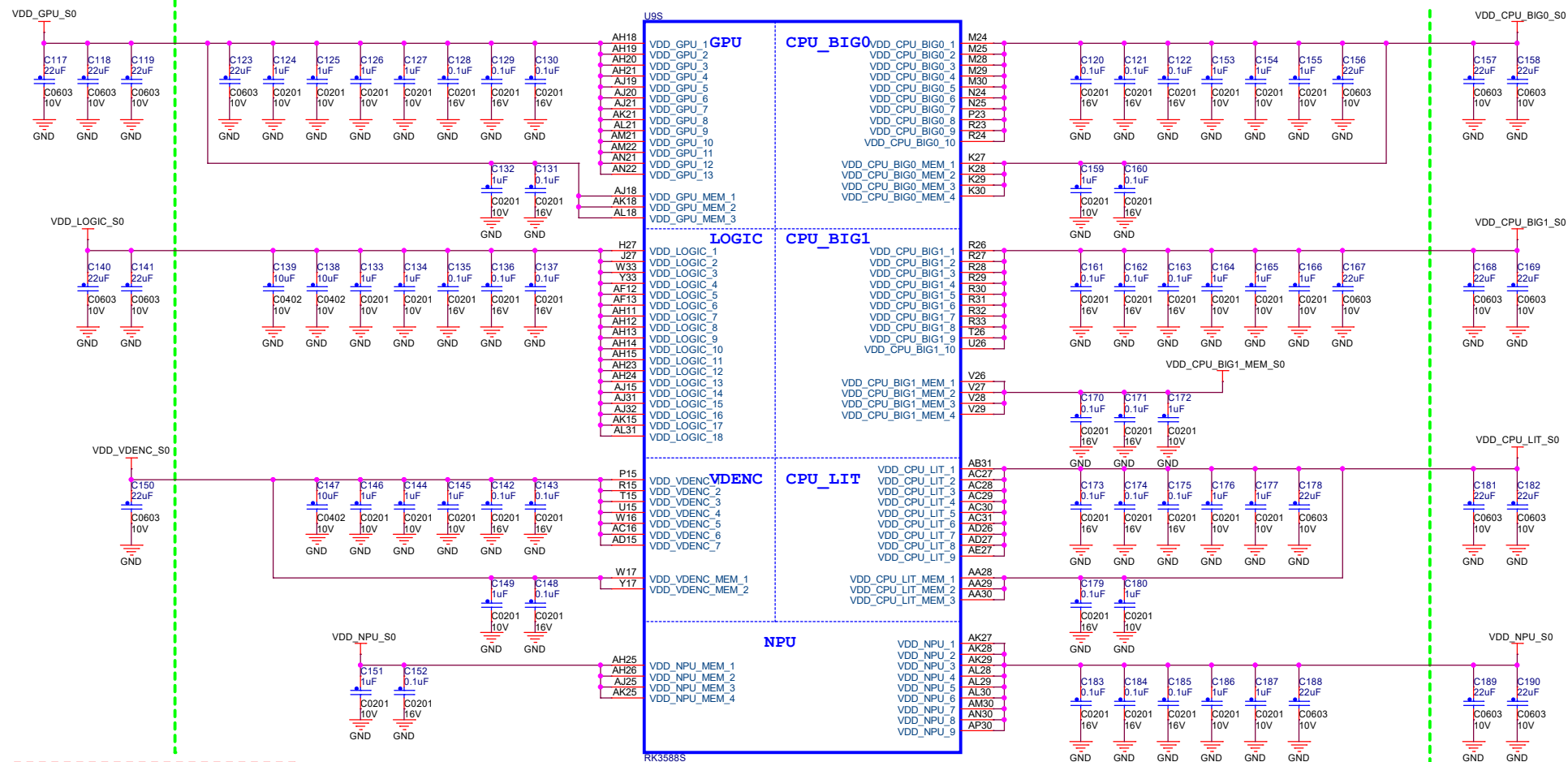
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RK3588S POWER



Notes:
The Caps between green line and U9 should be placed under the U9 package. Other caps should be placed close to the U9 package

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RK3588S GND

U8T		
A1	VSS_1	VSS_51
A2	VSS_2	D26
A42	VSS_3	D30
B3	VSS_4	D31
B5	VSS_5	D32
B8	VSS_6	VSS_55
B10	VSS_6	VSS_56
B11	VSS_7	VSS_57
B14	VSS_8	VSS_58
B17	VSS_9	VSS_59
B19	VSS_10	VSS_60
B21	VSS_11	VSS_61
B23	VSS_12	VSS_62
B26	VSS_13	VSS_63
B27	VSS_14	VSS_64
B29	VSS_15	VSS_65
B31	VSS_16	VSS_66
B34	VSS_17	VSS_67
B35	VSS_18	VSS_68
B36	VSS_19	VSS_69
B38	VSS_20	VSS_70
B40	VSS_21	VSS_71
B42	VSS_22	VSS_72
C1	VSS_23	VSS_73
C2	VSS_24	VSS_74
C6	VSS_25	VSS_75
C7	VSS_26	VSS_76
C9	VSS_27	VSS_77
C11	VSS_28	VSS_78
C12	VSS_29	VSS_79
C14	VSS_30	VSS_80
C15	VSS_31	VSS_81
C18	VSS_32	VSS_82
C19	VSS_33	VSS_83
C20	VSS_34	VSS_84
C22	VSS_35	VSS_85
C24	VSS_36	VSS_86
C26	VSS_37	VSS_87
C28	VSS_38	VSS_88
C30	VSS_39	VSS_89
C35	VSS_40	VSS_90
C37	VSS_41	VSS_91
C39	VSS_42	VSS_92
D3	VSS_43	VSS_93
D4	VSS_44	VSS_94
D7	VSS_45	VSS_95
D11	VSS_46	VSS_96
D14	VSS_47	VSS_97
D15	VSS_48	VSS_98
D18	VSS_49	VSS_99
D19	VSS_50	VSS_100

GND

RK3588S

GND

U8U		
G9	VSS_101	VSS_151
G10	VSS_102	VSS_152
G12	VSS_103	VSS_153
G20	VSS_104	VSS_154
G21	VSS_105	VSS_155
G22	VSS_106	VSS_156
G25	VSS_107	VSS_157
G26	VSS_108	VSS_158
G29	VSS_109	VSS_159
H3	VSS_110	VSS_160
H4	VSS_111	VSS_161
H5	VSS_112	VSS_162
H6	VSS_113	VSS_163
H11	VSS_114	VSS_164
H12	VSS_115	VSS_165
H22	VSS_116	VSS_166
H25	VSS_117	VSS_167
H29	VSS_118	VSS_168
J2	VSS_119	VSS_169
J6	VSS_120	VSS_170
J7	VSS_121	VSS_171
J8	VSS_122	VSS_172
J9	VSS_123	VSS_173
J10	VSS_124	VSS_174
J12	VSS_125	VSS_175
J14	VSS_126	VSS_176
J15	VSS_127	VSS_177
J16	VSS_128	VSS_178
J22	VSS_129	VSS_179
J24	VSS_130	VSS_180
J26	VSS_131	VSS_181
J29	VSS_132	VSS_182
J30	VSS_133	VSS_183
J31	VSS_134	VSS_184
K3	VSS_135	VSS_185
K6	VSS_136	VSS_186
K7	VSS_137	VSS_187
K10	VSS_138	VSS_188
K11	VSS_139	VSS_189
K12	VSS_140	VSS_190
K14	VSS_141	VSS_191
K17	VSS_142	VSS_192
K22	VSS_143	VSS_193
K23	VSS_144	VSS_194
K25	VSS_145	VSS_195
K26	VSS_146	VSS_196
K31	VSS_147	VSS_197
K32	VSS_148	VSS_198
K33	VSS_149	VSS_199
L2	VSS_150	VSS_200

GND

RK3588S

GND

U8V		
P19	VSS_201	VSS_251
P25	VSS_202	VSS_252
P26	VSS_203	VSS_253
P27	VSS_204	VSS_254
P28	VSS_205	VSS_255
P29	VSS_206	VSS_256
P30	VSS_207	VSS_257
P31	VSS_208	VSS_258
P32	VSS_209	VSS_259
P33	VSS_210	VSS_260
P34	VSS_211	VSS_261
R3	VSS_212	VSS_262
R4	VSS_213	VSS_263
R8	VSS_214	VSS_264
R16	VSS_215	VSS_265
R20	VSS_216	VSS_266
R21	VSS_217	VSS_267
R25	VSS_218	VSS_268
R35	VSS_219	VSS_269
T2	VSS_220	VSS_270
T3	VSS_221	VSS_271
T4	VSS_222	VSS_272
T7	VSS_223	VSS_273
T16	VSS_224	VSS_274
T17	VSS_225	VSS_275
T18	VSS_226	VSS_276
T20	VSS_227	VSS_277
T21	VSS_228	VSS_278
T24	VSS_229	VSS_279
T25	VSS_230	VSS_280
T35	VSS_231	VSS_281
T36	VSS_232	VSS_282
T37	VSS_233	VSS_283
T38	VSS_234	VSS_284
T39	VSS_235	VSS_285
T40	VSS_236	VSS_286
U6	VSS_237	VSS_287
U7	VSS_238	VSS_288
U8	VSS_239	VSS_289
U16	VSS_240	VSS_290
U17	VSS_241	VSS_291
U18	VSS_242	VSS_292
U20	VSS_243	VSS_293
U21	VSS_244	VSS_294
U22	VSS_245	VSS_295
U23	VSS_246	VSS_296
U24	VSS_247	VSS_297
U25	VSS_248	VSS_298
U39	VSS_249	VSS_299
U40	VSS_250	VSS_300

GND

RK3588S

GND

U8W		
AA10	VSS_301	VSS_351
AA11	VSS_302	VSS_352
AA12	VSS_303	VSS_353
AA19	VSS_304	VSS_354
AA22	VSS_305	VSS_355
AA23	VSS_306	VSS_356
AA31	VSS_307	VSS_357
AA37	VSS_308	VSS_358
AA38	VSS_309	VSS_359
AA39	VSS_310	VSS_360
AA40	VSS_311	VSS_361
AB2	VSS_312	VSS_362
AB6	VSS_313	VSS_363
AB9	VSS_314	VSS_364
AB10	VSS_315	VSS_365
AB11	VSS_316	VSS_366
AB12	VSS_317	VSS_367
AB19	VSS_318	VSS_368
AB20	VSS_319	VSS_369
AB21	VSS_320	VSS_370
AB22	VSS_321	VSS_371
AB23	VSS_322	VSS_372
AB24	VSS_323	VSS_373
AB32	VSS_324	VSS_374
AB33	VSS_325	VSS_375
AB34	VSS_326	VSS_376
AB36	VSS_327	VSS_377
AB37	VSS_328	VSS_378
AB38	VSS_329	VSS_379
AB39	VSS_330	VSS_380
AB40	VSS_331	VSS_381
AC3	VSS_332	VSS_382
AC4	VSS_333	VSS_383
AC5	VSS_334	VSS_384
AC6	VSS_335	VSS_385
AC17	VSS_336	VSS_386
AC18	VSS_337	VSS_387
AC22	VSS_338	VSS_388
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AC24	VSS_340	VSS_390
AC25	VSS_341	VSS_391
AC26	VSS_342	VSS_392
AC41	VSS_343	VSS_393
AD2	VSS_344	VSS_394
AD3	VSS_345	VSS_395
AD5	VSS_346	VSS_396
AD6	VSS_347	VSS_397
AD8	VSS_348	VSS_398
AD9	VSS_349	VSS_399
AD10	VSS_350	VSS_400

GND

RK3588S

GND

U9X		
AF34	VSS_401	VSS_451
AF37	VSS_402	VSS_452
AF38	VSS_403	VSS_453
AF39	VSS_404	VSS_454
AF40	VSS_405	VSS_455
AG3	VSS_406	VSS_456
AG3	VSS_407	VSS_457
AG4	VSS_408	VSS_458
AG5	VSS_409	VSS_459
AG6	VSS_410	VSS_460
AG7	VSS_411	VSS_461
AG8	VSS_412	VSS_462
AG15	VSS_413	VSS_463
AG16	VSS_414	VSS_464
AG17	VSS_415	VSS_465
AG18	VSS_416	VSS_466
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AG29	VSS_425	VSS_475
AG31	VSS_426	VSS_476
AG32	VSS_427	VSS_477
AG33	VSS_428	VSS_478
AG34	VSS_429	VSS_479
AG35	VSS_430	VSS_480
AG40	VSS_431	VSS_481
AH2	VSS_432	VSS_482
AH3	VSS_433	VSS_483
AH4	VSS_434	VSS_484
AH5	VSS_435	VSS_485
AH7	VSS_436	VSS_486
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AH9	VSS_438	VSS_488
AH10	VSS_439	VSS_489
AH16	VSS_440	VSS_490
AH17	VSS_441	VSS_491
AH28	VSS_442	VSS_492
AH29	VSS_443	VSS_493
AH36	VSS_444	VSS_494
AJ5	VSS_445	VSS_495
AJ7	VSS_446	VSS_496
AJ8	VSS_447	VSS_497
AJ9	VSS_448	VSS_498
AJ10	VSS_449	VSS_499
AJ11	VSS_450	VSS_500

GND

RK3588S

GND

U9Y		
AN40	VSS_501	AVSS_11
AP2	VSS_502	AVSS_12
AP5	VSS_503	AVSS_13
AP6	VSS_504	AVSS_14
AP25	VSS_505	AVSS_15
AP27	VSS_506	AVSS_16
AP33	VSS_507	AVSS_17
AP34	VSS_508	AVSS_18
AP35	VSS_509	AVSS_19
AP37	VSS_510	AVSS_20
AP38	VSS_511	AVSS_21
AP39	VSS_512	AVSS_22
AP40	VSS_513	AVSS_23
AR3	VSS_514	AVSS_24
AR4	VSS_515	AVSS_25
AR40	VSS_516	AVSS_26
AR41	VSS_517	AVSS_27
AT2	VSS_518	AVSS_28
AT5	VSS_519	AVSS_29
AT6	VSS_520	AVSS_30
AT36	VSS_521	AVSS_31
AU2	VSS_522	AVSS_32
AU3	VSS_523	AVSS_33
AU4	VSS_524	AVSS_34
AU35	VSS_525	AVSS_35
AU38	VSS_526	AVSS_36
AU39	VSS_527	AVSS_37
AU40	VSS_528	AVSS_38
AV5	VSS_529	AVSS_39
AV36	VSS_530	AVSS_40
AV41	VSS_531	AVSS_41
AW3	VSS_532	AVSS_42
AW4	VSS_533	AVSS_43
E41	AVSS_1	AVSS_44
E40	AVSS_2	AVSS_45
F40	AVSS_3	AVSS_46
G36	AVSS_4	AVSS_47
G41	AVSS_5	AVSS_48
H37	AVSS_6	AVSS_49
H40	AVSS_7	AVSS_50
J38	AVSS_8	AVSS_51
J39	AVSS_9	AVSS_52
J40	AVSS_10	AVSS_53

GND

RK3588S

GND

U8Z		
AT22	AVSS_54	AVSS_94
AT23	AVSS_55	AVSS_95
AT29	AVSS_56	AVSS_96
AU8	AVSS_57	AVSS_97
AU16	AVSS_58	AVSS_98
AU18	AVSS_59	AVSS_99
AU19	AVSS_60	AVSS_100
AU21	AVSS_61	AVSS_101
AU24	AVSS_62	AVSS_102
AU25	AVSS_63	AVSS_103
AU27	AVSS_64	AVSS_104
AU28	AVSS_65	AVSS_105
AU29	AVSS_66	AVSS_106
AU31	AVSS_67	AVSS_107
AV8	AVSS_68	AVSS_108
AV9	AVSS_69	AVSS_109
AV12	AVSS_70	AVSS_110
AV14	AVSS_71	AVSS_111
AV15	AVSS_72	AVSS_112
AV16	AVSS_73	AVSS_113
AV21	AVSS_74	AVSS_114
AV25	AVSS_75	AVSS_115
AV29	AVSS_76	AVSS_116
AV32	AVSS_77	AVSS_117
AV33	AVSS_78	AVSS_118
AW8	AVSS_79	AVSS_119
AW9	AVSS_80	AVSS_120
AW12	AVSS_81	AVSS_121
AW14	AVSS_82	AVSS_122
AW16	AVSS_83	AVSS_123
AW17	AVSS_84	AVSS_124
AW21	AVSS_85	AVSS_125
AW25	AVSS_86	AVSS_126
AW28	AVSS_87	AVSS_127
AW29	AVSS_88	AVSS_128
AW32	AVSS_89	AVSS_129
AW33	AVSS_90	
AW36	AVSS_91	
AW40	AVSS_92	
AY2	AVSS_93	

GND

RK3588S

GND

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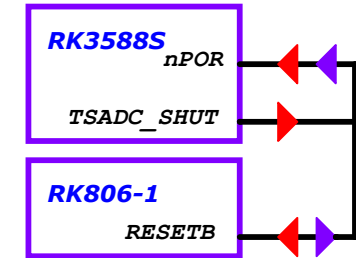
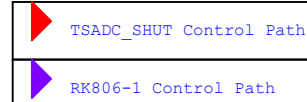
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RK3588S OSC/PLL/PMUIO1

Note:



Note:

The Caps between green line and U9 should be placed under the U9 package. Other caps should be placed close to the U9 package

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RK3588S PMUIO2

U9F

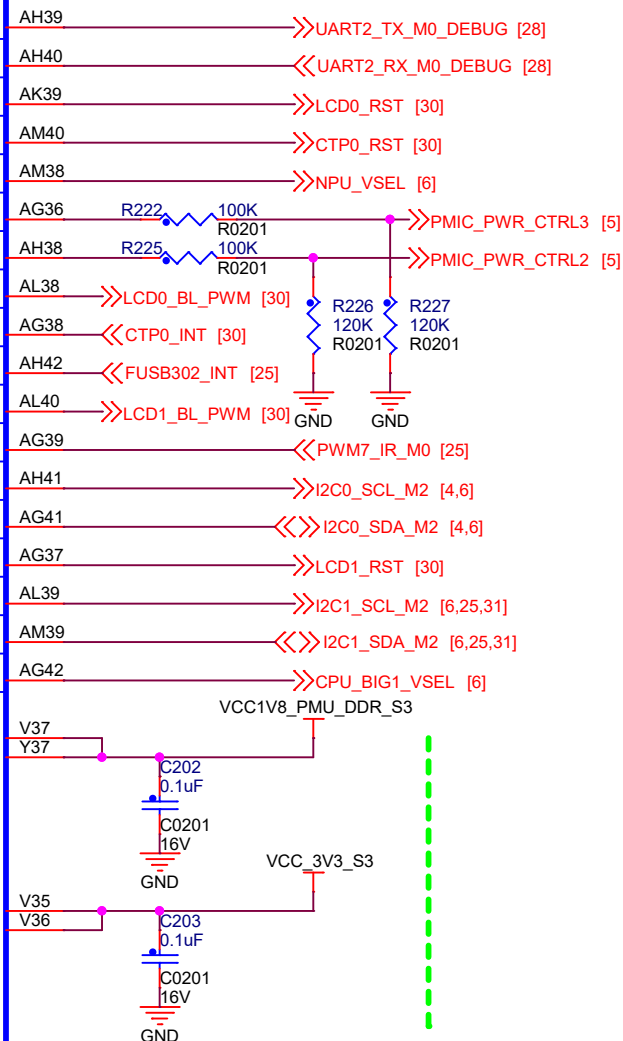
PMUIO2 Domain

Operating Voltage=1.8V/3.3V

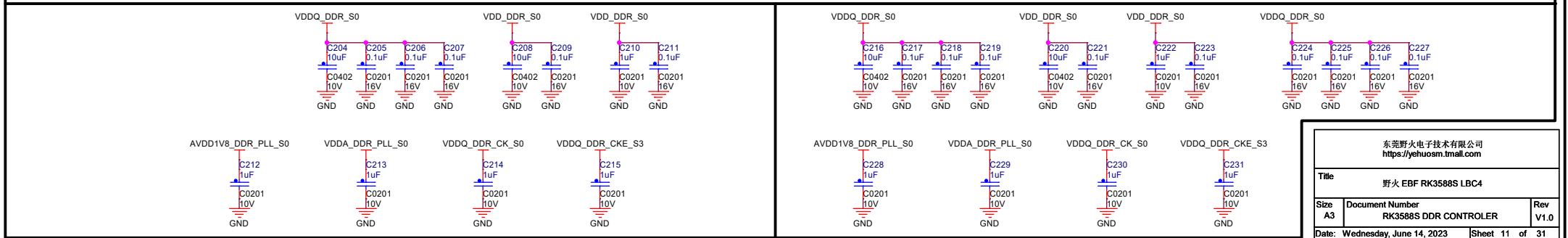
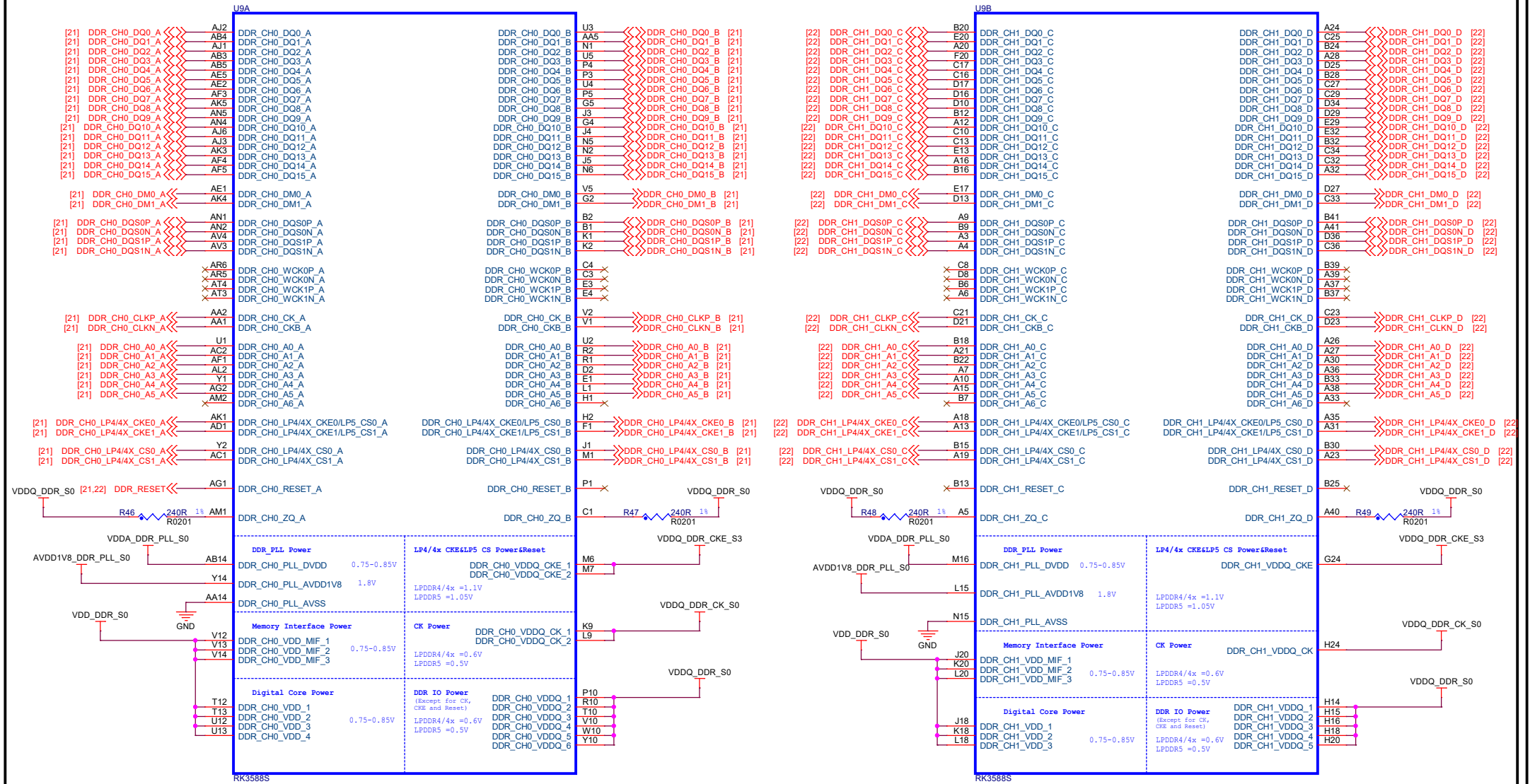
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/ PCIE20X1 1 PERSTN M0/	SPI0 CS1 M0/	I2S1 LRCK M1	/ I2C2 SCL M0	/	CAN0 TX M0	/ PWM0 M0
/	/ SPI0 MOSI M0/	/	I2C2 SDA M0	/ PDM0 CLK0 M1	CAN0 RX M0	/ PWM1 M0
/	/	/	/	/	/	PMIC SLEEP3
/	/	/	/	/	/	PMIC SLEEP4
/	/	/	/	/	/	PMIC SLEEP5
DP0_HPDIN_M1	/	/	I2C4 SDA M2	PDM0 CLK1 M1	UART0 RX M0	/ PWM2 M0
/	/	/ I2S1 SDI0 M1	I2C4 SCL M2	/ PWM4 M0	UART0 TX M0	/ GPU AVS
SATA_CP_POD	/	SPI0 CLK M0/	I2S1 SDI1 M1	/	/ PWM5 M1	UART0 RTSN
/	/ SPI0 MISO M0/	I2S1 SDI2 M1	/ I2C6 SDA M0	PDM0 SDI0 M1	UART1 RTSN M2	/ PWM6 M0
/	/ SPI3 MISO M2/	I2S1 SDI3 M1	/ I2C6 SCL M0	PDM0 SDI1 M1	UART1 CTSN M2	/ PWM7 IR M0
/ HDMI TX0 CEC M1	/ SPI0 CS0 M0/	I2S1 SDO0 M1	/ I2C0 SCL M2	UART0 CTSN	UART1 TX M2	/ CPU BIG0 AVS
/	/ SPI3 MOSI M2/	I2S1 SDO1 M1	/ I2C0 SDA M2	/	/	/
/	/ SPI3 CLK M2/	/	/	/	/	LITCPU AVS
SATA_CPDET	/ HDMI TX0 SDA M1	/ SPI3 CS0 M2/	I2S1 SDO2 M1	/ I2C1 SCL M2	PDM0 SDI2 M1	CAN2 RX M1
SATA_MP_SWITCH/	HDMI TX0 SCL M1	/ SPI3 CS1 M2/	I2S1 SDO3 M1	/ I2C1 SDA M2	/	CAN2 TX M1
/	/	/	/	/	PDM0 SDI3 M1	/
/	/	/	/	/	/	PMIC SLEEP6

PMUIO2_1V8_1
PMUIO2_1V8_2

PMUIO2_1
PMUIO2_2



RK3588S DDR CONTROLLER



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Size: A3 | Document Number: RK3588S DDR CONTROLLER | Rev: V1.0

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RK3588S EMMCIO

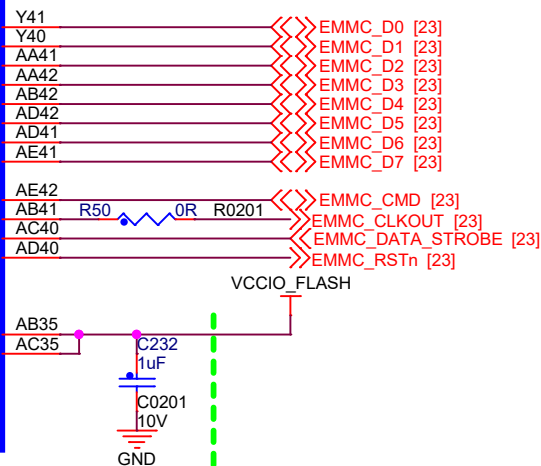
U9C

EMMCIO Domain

Operating Voltage=1.8V Only

FSPI D0 M0	/ EMMC D0	/ GPIO2 D0 u
FSPI D1 M0	/ EMMC D1	/ GPIO2 D1 u
FSPI D2 M0	/ EMMC D2	/ GPIO2 D2 u
FSPI D3 M0	/ EMMC D3	/ GPIO2 D3 u
UART5 RX M2	/ I2C1 SCL M3	/ EMMC D4
UART5 TX M2	/ I2C1 SDA M3	/ EMMC D5
FSPI CS0N M0	/ EMMC D6	/ GPIO2 D6 u
FSPI CS1N M0	/ EMMC D7	/ GPIO2 D7 u
FSPI CLK M0	/ EMMC CMD	/ GPIO2 A0 u
UART5 CTSN M1	/ I2C2 SDA M2	/ EMMC CLKOUT
UART5 RTSN M1	/ I2C2 SCL M2	/ EMMC DATA STROBE
UART5 RTSN M1	/ I2C2 SCL M2	/ EMMC RSTN

EMMCIO_1V8_1
EMMCIO_1V8_2



RK3588S

RK3588S VCCIO2

U9D

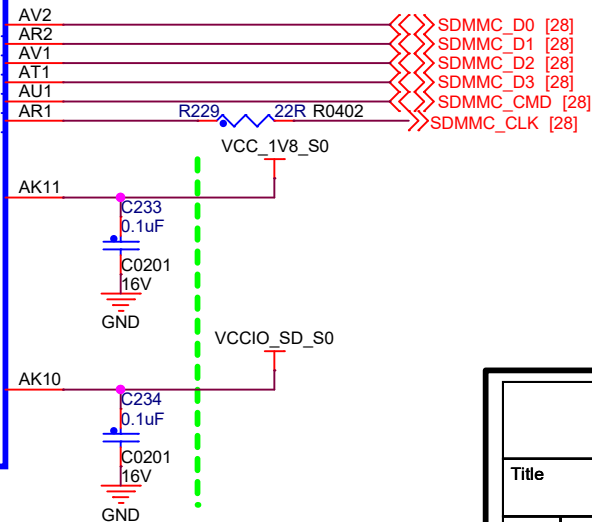
VCCIO2 Domain

Operating Voltage=1.8V/3.3V

PWM8 M1	/ I2C3 SCL M4	/ PDM1 SDI3 M0	/ JTAG TCK M1	/ UART2 TX M1	/ SDMMC D0	/ GPIO4 D0 u
PWM9 M1	/ I2C3 SDA M4	/ PDM1 SDI2 M0	/ JTAG TMS M1	/ UART2 RX M1	/ SDMMC D1	/ GPIO4 D1 u
	/ I2C8 SCL M0	/ PDM1 SDI1 M0	/ JTAG TCK M0	/ UART5 CTSN M0	/ SDMMC D2	/ GPIO4 D2 u
PWM10 M1	/ I2C8 SDA M0	/ PDM1 SDI0 M0	/ JTAG TMS M0	/ UART5 RTSN M0	/ SDMMC D3	/ GPIO4 D3 u
PWM7 IR M1	/ CAN0 TX M1	/ PDM1 CLK1 M0	/ MCU JTAG TCK M0	/ UART5 RX M0	/ SDMMC CMD	/ GPIO4 D4 u
TEST CLKOUT M0	/ CAN0 RX M1	/ PDM1 CLK0 M0	/ MCU JTAG TMS M0	/ UART5 TX M0	/ SDMMC CLK	/ GPIO4 D5 d

VCCIO2_1V8

VCCIO2



RK3588S

Note:

The Caps between green line and U9 should be placed under the U9 package. Other caps should be placed close to the U9 package

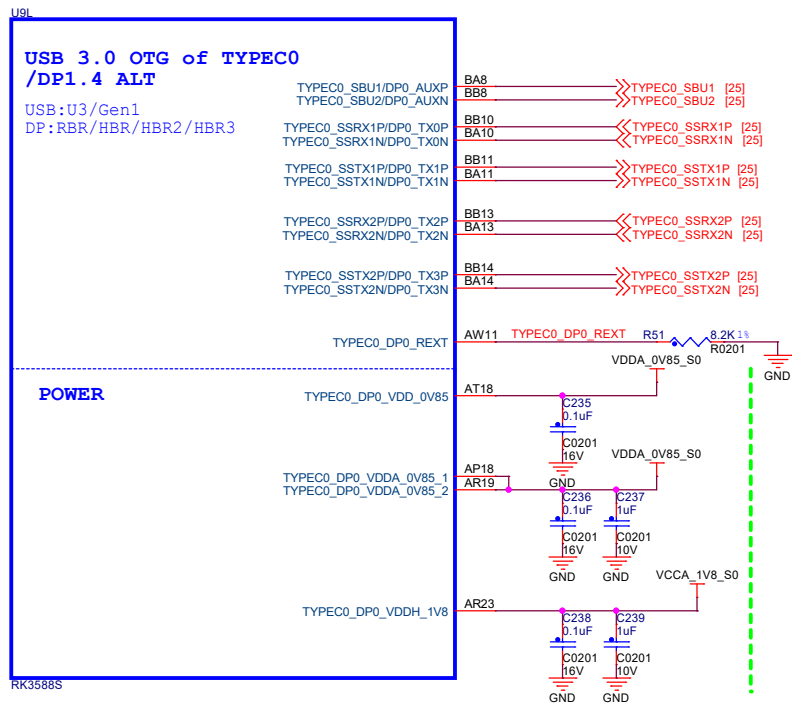
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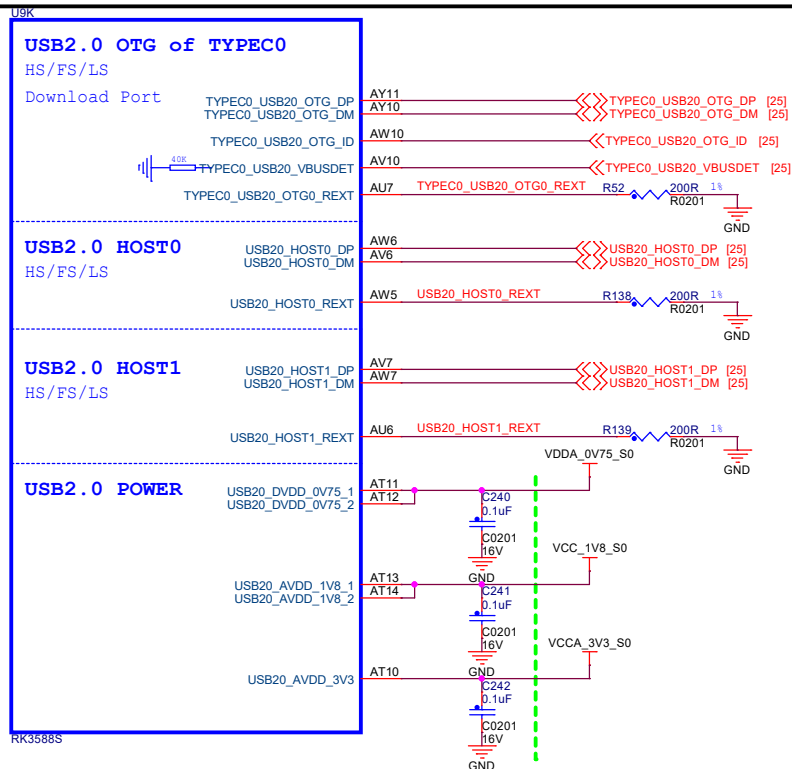
Size A4	Document Number RK3588S EMMCIO/VCCIO2	Rev V1.0
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RK3588S USB CONTROLLER



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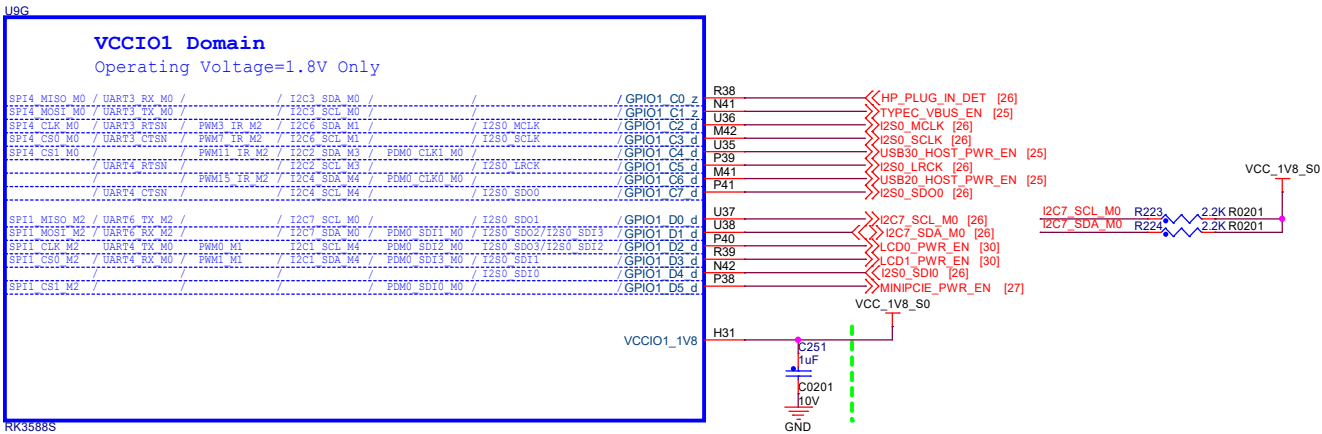


RK3588S

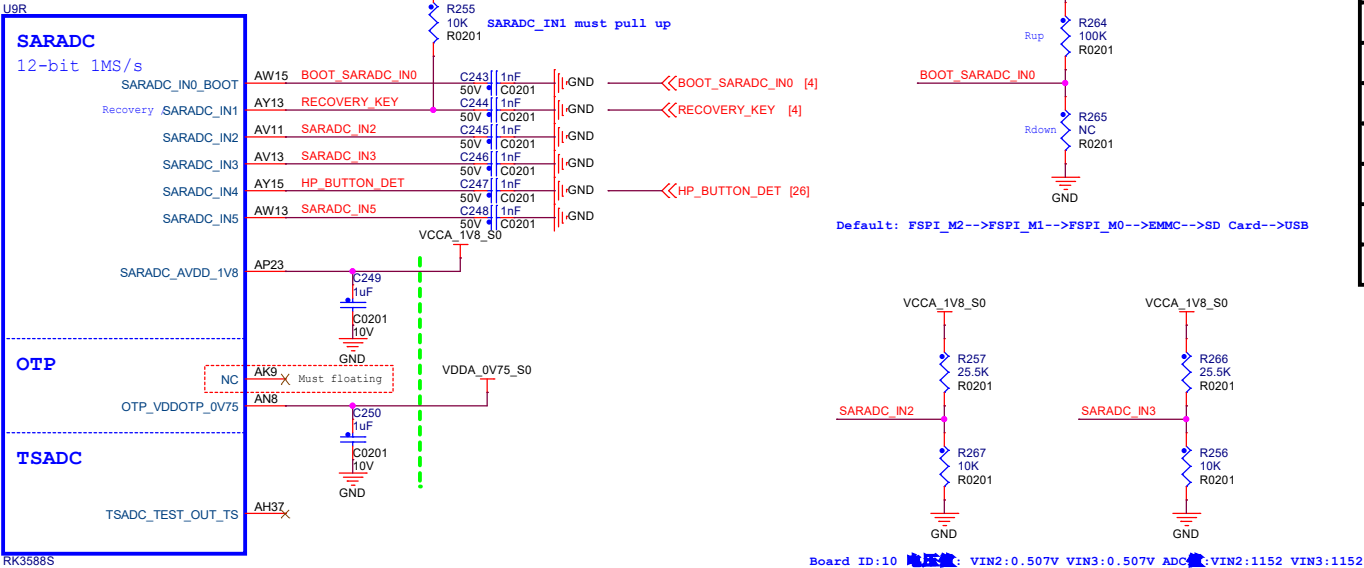
Note:
The Caps between green line and U9 should be placed under the U9 package. Other caps should be placed close to the U9 package

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RK3588S VCCIO1



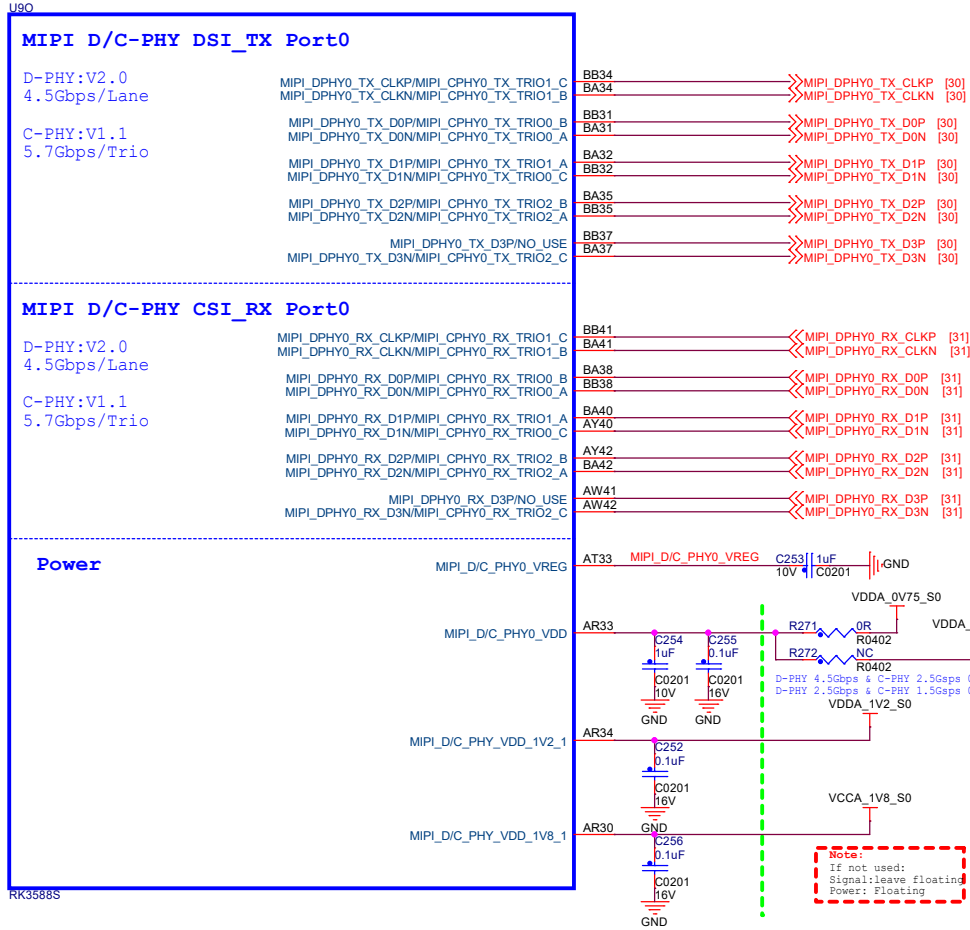
RK3588S SARADC



BOOT MODE CONFIG

Item	Rup	Rdown	ADC	VOL	BOOT MODE
LEVEL1	DNP	100K	0	0V	USB (Maskrom mode)
LEVEL2	100K	20K	682	0.3V	SD Card-USB
LEVEL3	100K	51K	1365	0.6V	EMMC-USB
LEVEL4	100K	100K	2047	0.9V	FSPI M0-USB
LEVEL5	100K	200K	2730	1.2V	FSPI M1-USB
LEVEL6	100K	499K	3412	1.5V	FSPI M2-USB
LEVEL7	100K	DNP	4095	1.8V	FSPI_M2-FSPI_M1-FSPI_M0-EMMC-SD Card-USB

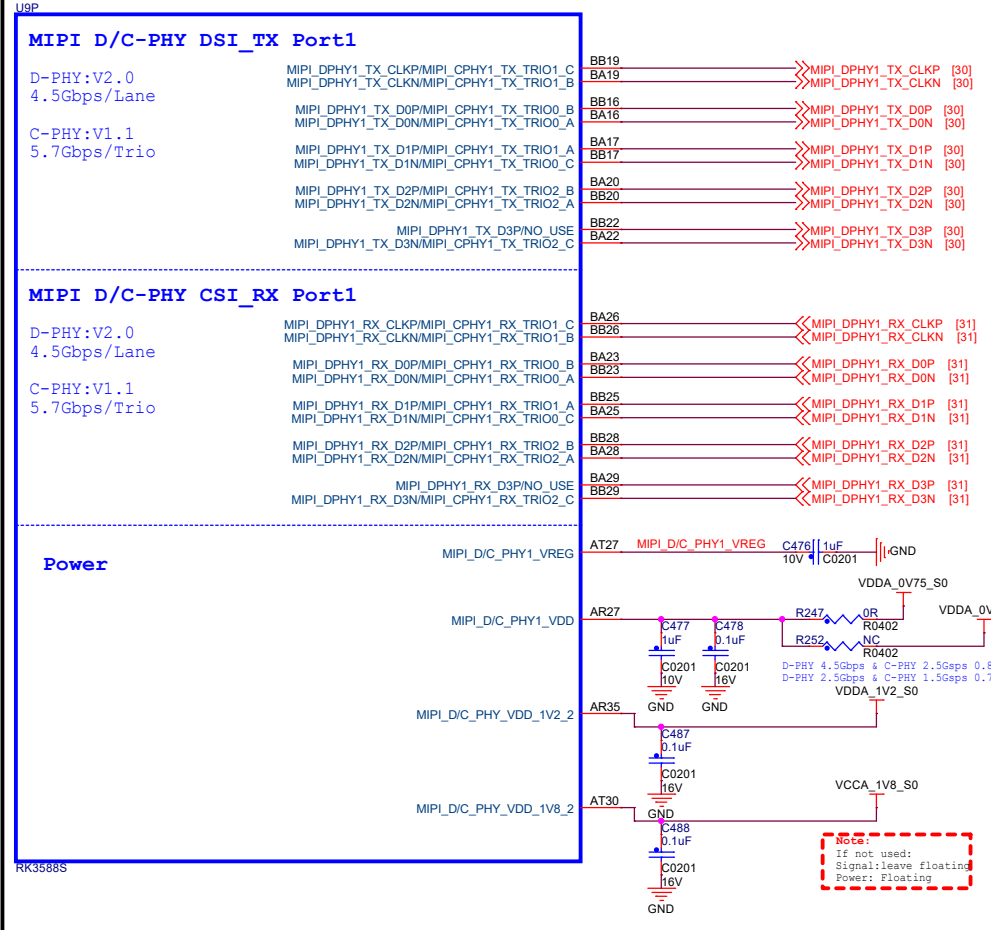
RK3588S MIPI_D/C PHY0



RK3588S

Note:
The Caps between green line and U9 should be placed under the U9 package. Other caps should be placed close to the U9 package

RK3588S MIPI_D/C PHY1



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Note:
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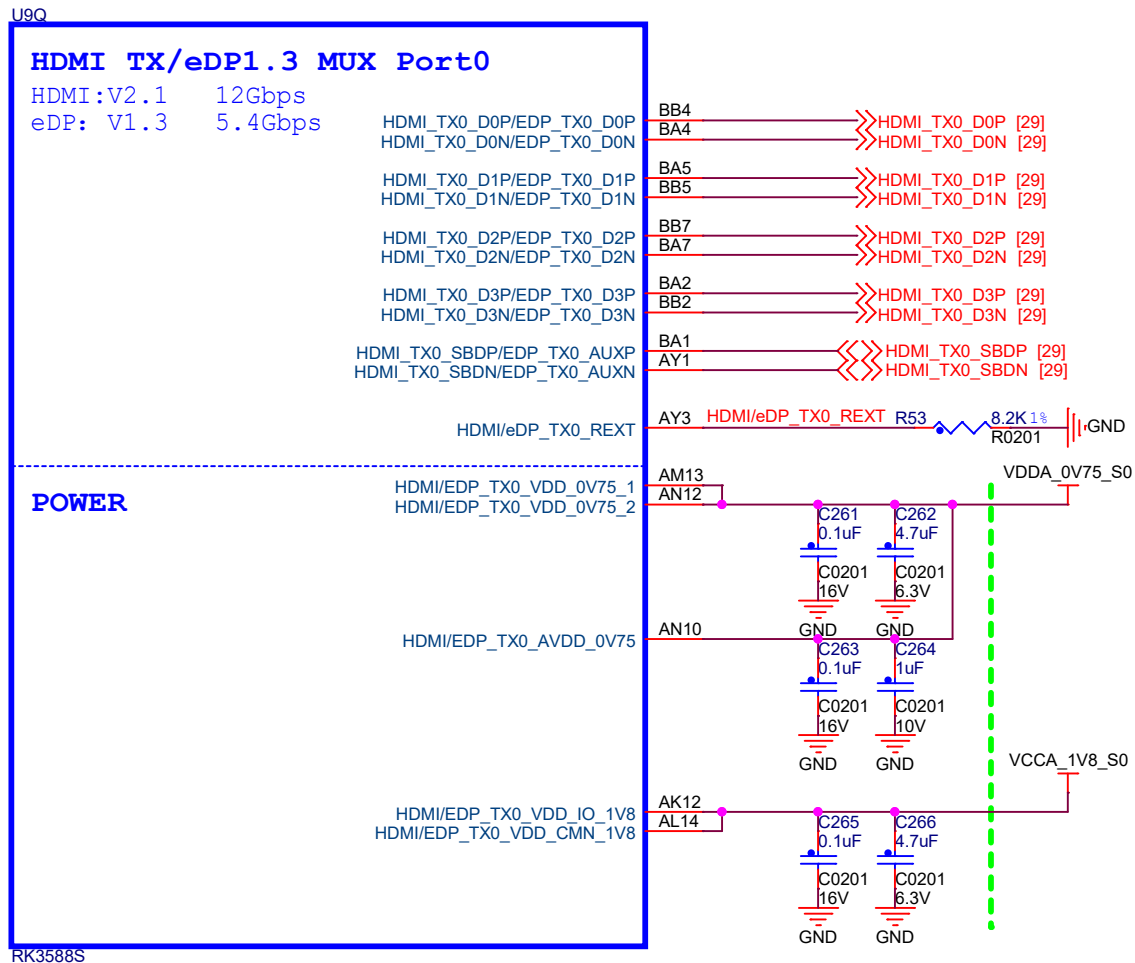
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Title 野火 EBF RK3588S LBC4

Size A3	Document Number RK3588S MIPI_D/C_PHY0/1	Rev V1.0
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RK3588S HDMI2.1 TX/eDP1.3 TX

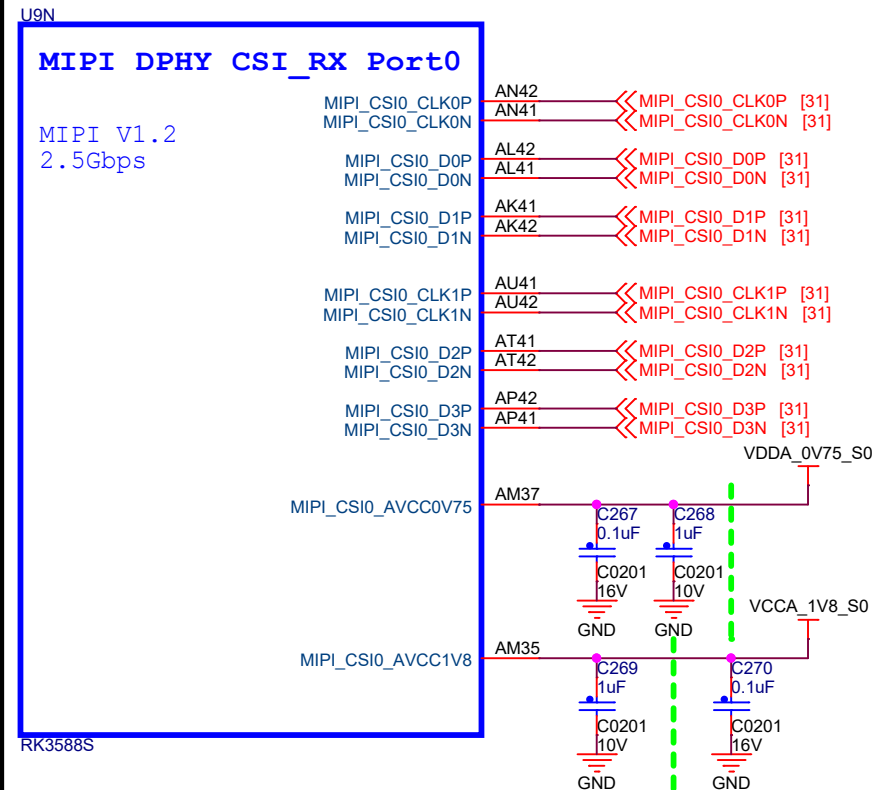


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Note:

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RK3588S MIPI_DPHY CSI0 RX



RK3588S

MIPI CSI RX Configuration

Option1	Sensor1 x4Lane	MIPI_CSI_RX_D0-3 MIPI_CSI_RX_CLK0
Option2	Sensor1 x2Lane + Sensor2 x2Lane	MIPI_CSI_RX_D0-1 MIPI_CSI_RX_CLK0
		MIPI_CSI_RX_D2-3 MIPI_CSI_RX_CLK1

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Title 野火 EBF RK3588S LBC4

Size A4 Document Number RK3588S MIPI CSI/HDMI2.1 TX Rev V1.0

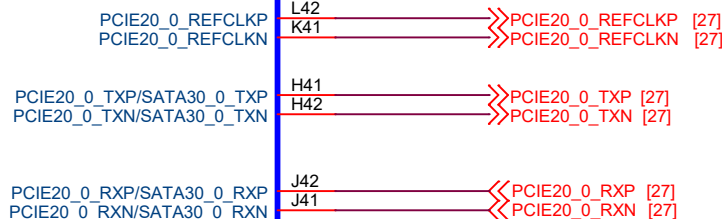
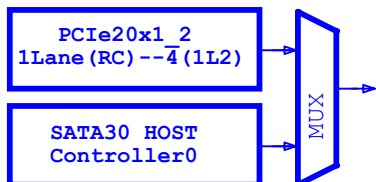
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RK3588S PCIe20/SATA30/USB30

U9M

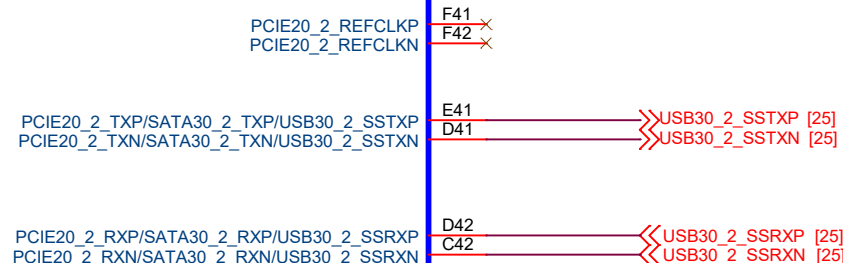
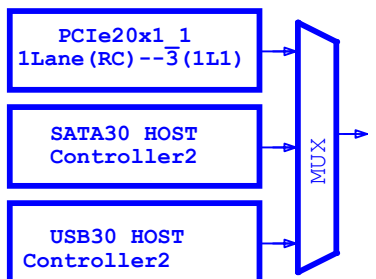
PCIe20/SATA30 Mux0

PCIe20:Gen1/Gen2
SATA30:Gen1/Gen2/Gen3

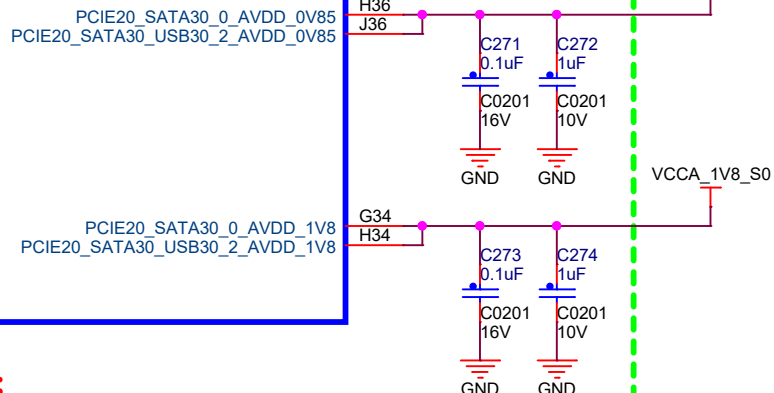


PCIe20/SATA30/USB30 HOST Mux2

PCIe20:Gen1/Gen2
SATA30:Gen1/Gen2/Gen3
USB 30:Gen1



Power



RK3588S

Note:
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RK3588S VCCIO4

U9H

VCCIO4 Domain

Operating Voltage=1.8V/3.3V

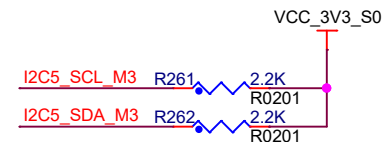
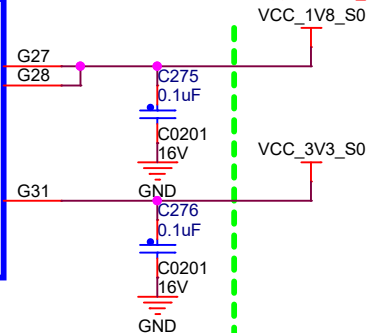
/ PCIE20X1 1 CLKREQN M2 / DP0 HPDIN M2	/ UART6 RX M1	/ SPI4 MISO M2 / I2C2 SDA M4	/ GPIO1 A0 d
/ PCIE20X1 1 WAKEN M2	/	/ UART6 TX M1	/ SPI4 MOSI M2 / I2C2 SCL M4
PWM0 M2	/	/ VOP POST EMPTY	/ UART6 RTSN M1 / SPI4 CLK M2 / I2C4 SDA M3
PWM1 M2	/	/	/ UART6 CTSN M1 / SPI4 CS0 M2 / I2C4 SCL M3
/	/	/	/ SPI2 MISO M0
/	/	/	/ SPI2 MOSI M0
/	/	/	/ SPI2 CLK M0
PWM3 IR M3 / PCIE20X1 1 PERSTN M2	/	/	/ SPI2 CS0 M0 / PDM1 SDI0 M1
/	/	/	/ SPI2 CS1 M0 / PDM1 SDI1 M1
/	/	/	/ SPI0 MISO M2 / PDM1 SDI2 M1
/	/	/	/ UART4 RX M2 / SPI0 MOSI M2 / PDM1 SDI3 M1
/	/	/	/ SATA0 ACT LED M1 / UART4 TX M2 / SPI0 CLK M2 / PDM1 CLK1 M1
/	/	/	/ UART7 RX M2 / SPI0 CS0 M2 / PDM1 CLK0 M1
/	/	/	/ UART7 TX M2 / SPI0 CS1 M2
/	/	/	/ MIPI CAMERA1 CLK M0 / UART1 TX M1 / SPDIF0 TX M0 / I2C5 SCL M3
PWM13 M2 / SATA2 ACT LED M1	/	/	/ MIPI CAMERA2 CLK M0 / UART1 RX M1 / SPDIF1 TX M0 / I2C5 SDA M3
PWM14 M2	/	/	/ MIPI CAMERA3 CLK M0 / UART1 RTSN M1
PWM15 IR M3	/	/	/ MIPI CAMERA4 CLK M0 / UART1 CTSN M1

RK3588S

VCCIO4_1V8_1
VCCIO4_1V8_2

VCCIO4

G40	<<<>>> GPIO1_A0 [28]
L40	<<<>>> GPIO1_A1 [28]
D38	>>> FAN_CTRL [26]
L39	>>> CAM0_PWDN [31]
G37	>>> CAM0_RSTn [31]
M40	<<< HDMI_TX0_HPDM0 [29]
D39	>>> EARPHONE_CTL [26]
H38	<<<>>> GPIO1_A7 [28]
H39	<<<>>> GPIO1_B0 [28]
G39	<<< SPI0_MISO_M2 [28]
M38	>>> SPI0_MOSI_M2 [28]
M37	>>> SPI0_CLK_M2 [28]
M39	>>> SPI0_CS0_M2 [28]
D40	>>> SPI0_CS1_M2 [28]
L38	>>> I2C5_SCL_M3 [28,30,31]
F37	<<<>>> I2C5_SDA_M3 [28,30,31]
L37	>>> PWM14_M2 [28]
G38	>>> PWM15_IR_M3 [28]



Note:

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RK3588S VCCIO5

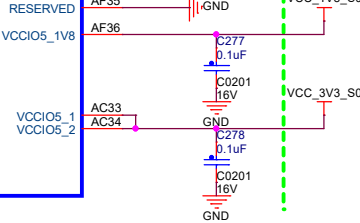
U9I

VCCIO5 Domain
Operating Voltage=1.8V/3.3V

/ PWM10 M0	/ SPI4 MISO M1	/ I2C6 SDA M4	/ GMAC1 TXD2	/ I2S3 MCLK	/ FSPI D0 M2	/ SDIO D0 M1	/ GPIO3_A0 u		
AUDDSM_LN	/ PWM11 IR M0	/ SPI4 MOSI M1	/ I2C6 SCL M4	/ GMAC1 TXD3	/ I2S3 SCLK	/ FSPI D1 M2	/ SDIO D1 M1	/ GPIO3_A1 u	
AUDDSM_LP	/ UART8 TX M1	/ SPI4 CLK M1	/	/ GMAC1 RXD2	/ I2S3 LRCK	/ FSPI D2 M2	/ SDIO D2 M1	/ GPIO3_A2 u	
AUDDSM_RN	/ UART8 RX M1	/ SPI4 CS0 M1	/	/ GMAC1 RXD3	/ I2S3 SDO	/ FSPI D3 M2	/ SDIO D3 M1	/ GPIO3_A3 u	
AUDDSM_RP	/ UART8 RTSN M1	/ SPI4 CS1 M1	/	/ GMAC1 TXCLK	/ I2S3 SDI	/	/ SDIO CMD M1	/ GPIO3_A4 d	
/	/ UART8 CTSN M1	/	/ I2C4 SDA M0	/ GMAC1 RXCLK	/ FSPI CLK M2	/ MIPI_CAMERA0_CLK M1	/ SDIO CLK M1	/ GPIO3_A5 d	
/	/	/	/ I2C4 SCL M0	/ ETH1_REFCLK0_25M	/	/ MIPI_CAMERA1_CLK M1	/	/ GPIO3_A6 d	
/	/	/	/	/ GMAC1 RXD0	/	/ MIPI_CAMERA2_CLK M1	/ PWM8 M0	/ GPIO3_A7 u	
/	/	/	/	/ GMAC1 RXD1	/	/ MIPI_CAMERA3_CLK M1	/ PWM9 M0	/ GPIO3_B0 u	
/	/	/	/	/ GMAC1 RXDV_CRS	/	/ MIPI_CAMERA4_CLK M1	/ PWM2 M1	/ GPIO3_B1 d	
/	/	/	/	/ GMAC1 TXER	/ I2S2 SDI M1	/	/ PWM3 IR M1	/ GPIO3_B2 d	
/	/	/	/	/ GMAC1 TXD0	/ I2S2 SDO M1	/	/	/ GPIO3_B3 u	
/	/	/	/	/ GMAC1 TXD1	/ I2S2 MCLK M1	/	/	/ GPIO3_B4 u	
/	/	/	/	/ GMAC1 TXEN	/ I2S2 SCLK M1	/	/ PWM12 M0	/ GPIO3_B5 u	
/	/	/	/	/ CAN1 TX M0	/ GMAC1_MCLKINOUT	/ I2S2_LRCK M1	/	/ PWM13 M0	/ GPIO3_B6 d
/	/	/	/	/ SPI1 MOSI M1	/ I2C3 SCL M1	/ GMAC1_PTP_REF_CLK	/	/	/ GPIO3_B7 d
/	/	/	/	/	/	/	/	/	/ GPIO3_C0 d
/	/	/	/	/	/	/	/	/	/ GPIO3_C1 d
/	/	/	/	/	/	/	/	/	/ GPIO3_C2 d
/	/	/	/	/	/	/	/	/	/ GPIO3_C3 d
/	/	/	/	/	/	/	/	/	/ GPIO3_C4 u
/	/	/	/	/	/	/	/	/	/ GPIO3_C5 u
/	/	/	/	/	/	/	/	/	/ GPIO3_C6 u
/	/	/	/	/	/	/	/	/	/ GPIO3_C7 u
/	/	/	/	/	/	/	/	/	/ GPIO3_D0 u
/	/	/	/	/	/	/	/	/	/ GPIO3_D1 d
/	/	/	/	/	/	/	/	/	/ GPIO3_D2 d
/	/	/	/	/	/	/	/	/	/ GPIO3_D3 d
/	/	/	/	/	/	/	/	/	/ GPIO3_D4 d
/	/	/	/	/	/	/	/	/	/ GPIO3_D5 d

AR38	MAC1_TXD2	R107	0R	R0201	>>>GMAC1_TXD2 [24]
AR37	MAC1_TXD3	R108	0R	R0201	>>>GMAC1_TXD3 [24]
AT38					>>>GMAC1_RXD2 [24]
AT40					>>>GMAC1_RXD3 [24]
AT39	MAC1_TXCLK	R111	0R	R0201	>>>GMAC1_TXCLK [24]
AV38					>>>GMAC1_RXCLK [24]
AV37					>>>GPIO3_A6 [28]
AT37					>>>GMAC1_RXD0 [24]
AR39					>>>GMAC1_RXD1 [24]
AV39					>>>GMAC1_RXDV_CRS [24]
AW34					>>>GMAC1_RSTn [24]
AW35	MAC1_TXD0	R109	0R	R0201	>>>GMAC1_TXD0 [24]
AV35	MAC1_TXD1	R110	0R	R0201	>>>GMAC1_TXD1 [24]
AY35	MAC1_TXEN	R112	0R	R0201	>>>GMAC1_TXEN [24]
AW37	MAC1_MCLKINOUT	R115	0R	R0201	>>>GMAC1_MCLKINOUT [24]
AY34					>>>GPIO3_B7 [28]
AR36					>>>GPIO3_C0 [28]
AW38					>>>GPIO3_C1 [28]
AV40	MAC1_MDC	R113	0R	R0201	>>>GMAC1_MDC [24]
AW39	MAC1_MDIO	R114	0R	R0201	>>>GMAC1_MDIO [24]
AU34					>>>CTP1_INT [30]
AV34					>>>CTP1_RST [30]
AV30					>>>MINIPCIEN_WDISABLE [27]
AU30					>>>PCIE20X1_2_CLKREQN_M0 [27]
AW31					>>>PCIE20X1_2_WAKEN_M0 [27]
AY27					>>>PCIE20X1_2_PERSTN_M0 [27]
AY30					>>>GPIO3_D2 [28]
AY31					>>>PWM10_M2 [28]
AV31					>>>GPIO3_D4 [28]
AW30					>>>PWM11_IR_M3 [28]

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Note:
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RK3588S VCCIO6

U9J

VCCIO6 Domain
Operating Voltage=1.8V/3.3V

BT1120 D0	/	CIF D0	/	/	I2S1 MCLK M0	/	UART9 RTSN M1	/	SPI0 MISO M1	/	/	PCIE20X1 1 CLKREQN M1	/	GPIO4 A0 d				
BT1120 D1	/	CIF D1	/	/	I2S1 SCLK M0	/	UART9 CTSN M1	/	SPI0 MOSI M1	/	/	PCIE20X1 1 WAKEN M1	/	GPIO4 A1 d				
BT1120 D2	/	CIF D2	/	/	I2S1 LRCK M0	/	/	/	SPI0 CLK M1	/	/	PCIE20X1 1 PERSTN M1	/	GPIO4 A2 d				
BT1120 D3	/	CIF D3	/	/	/	/	UART0 TX M2	/	/	/	/	/	/	GPIO4 A3 d				
BT1120 D4	/	CIF D4	/	/	/	/	UART0 RX M2	/	SPI2 MISO M1	/	I2C3 SCL M2	/	/	GPIO4 A4 d				
BT1120 D5	/	CIF D5	/	/	I2S1 SDI0 M0	/	UART3 TX M2	/	SPI2 MOSI M1	/	I2C3 SDA M2	/	/	GPIO4 A5 d				
BT1120 D6	/	CIF D6	/	/	I2S1 SDI1 M0	/	UART3 RX M2	/	SPI2 CLK M1	/	I2C5 SCL M2	/	/	GPIO4 A6 d				
BT1120 D7	/	CIF D7	/	/	I2S1 SDI2 M0	/	/	/	SPI2 CS0 M1	/	I2C5 SDA M2	/	/	GPIO4 A7 d				
BT1120 CLKOUT	/	CIF CLKIN	/	/	I2S1 SDI3 M0	/	UART8 TX M0	/	SPI2 CS1 M1	/	I2C6 SDA M3	/	/	GPIO4 B0 d				
SPDIF1 TX M1	/	MIPI CAMERA0 CLK M0	/	SATA2 ACT LED M0	/	I2S1 SDO0 M0	/	UART8 RX M0	/	SPI0 CS1 M1	/	I2C6 SCL M3	/	GPIO4 B1 u				
CAN1 RX M1	/	BT1120 D8	/	CIF HREF	/	PWM14 M1	/	I2S1 SDO1 M0	/	UART8 RTSN M0	/	SPI0 CS0 M1	/	I2C7 SCL M3	/	PCIE20X1 1 BUTTON RSTN	/	GPIO4 B2 u
CAN1 TX M1	/	BT1120 D9	/	CIF VSYNC	/	PWM15 IR M1	/	I2S1 SDO2 M0	/	UART8 CTSN M0	/	/	/	I2C7 SDA M3	/	PCIE20X1 2 BUTTON RSTN	/	GPIO4 B3 u
BT1120 D10	/	CIF CLKOUT	/	PWM11 IR M1	/	I2S1 SDO3 M0	/	UART9 TX M1	/	/	/	DP0 HPDIN M0	/	SPDIF0 TX M1	/	/	/	GPIO4 B4 u
BT1120 D11	/	/	/	PWM12 M1	/	/	/	UART9 RX M1	/	SPI3 MISO M1	/	/	/	/	/	/	/	GPIO4 B5 d
BT1120 D12	/	/	/	PWM13 M1	/	/	/	/	/	SPI3 MOSI M1	/	I2C5 SCL M1	/	SATA0 ACT LED M0	/	/	/	GPIO4 B6 d
BT1120 D13	/	/	/	/	/	/	/	HDMI TX0 SCL M0	/	/	/	SPI3 CLK M1	/	I2C5 SDA M1	/	PCIE20X1 2 CLKREQN M1	/	GPIO4 B7 u
BT1120 D14	/	/	/	/	/	/	/	HDMI TX0 SDA M0	/	/	/	SPI3 CS0 M1	/	I2C8 SCL M3	/	PCIE20X1 2 WAKEN M1	/	GPIO4 C0 u
BT1120 D15	/	SPDIF1 TX M2	/	PWM6 M1	/	HDMI TX0 CEC M0	/	/	/	SPI3 CS1 M1	/	I2C8 SDA M3	/	PCIE20X1 2 PERSTN M1	/	/	/	GPIO4 C1 d

Note:
BT1120 Only Support Output

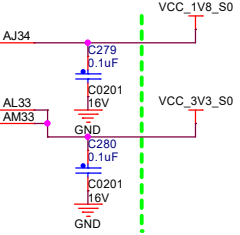
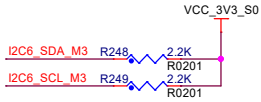
VCCIO6_1V8

VCCIO6_1

VCCIO6_2

RK3588S

AV19	<<<>	GPIO4_A0 [28]
AW18	<<<>	GPIO4_A1 [28,31]
AV26	<<<>	GPIO4_A2 [28,31]
AY19	>>	UART0_TX_M2 [28]
AW19	<<	UART0_RX_M2 [28]
AU15	>>>	CAM1_PWDN [31]
AV18	>>>	CAM1_RSTn [31]
AW26	>>>	CAM2_PWDN [31]
AW27	<<<>	I2C6_SDA_M3 [28,30,31]
AU22	<<<>	I2C6_SCL_M3 [28,30,31]
AT15	>>>	CAM2_RSTn [31]
AV23	>>>	TYPECO_SBU1_DC [25]
AV27	>>>	TYPECO_SBU2_DC [25]
AU23	>>>	SYS_LED [26]
AW22	>>>	HDMI0_TX_ON [29]
AV22	>>>	HDMI_TX0_SCL_M0 [29]
AW23	<<<>	HDMI_TX0_SDA_M0 [29]
AY26	<<<>	HDMI_TX0_CEC_M0 [29]

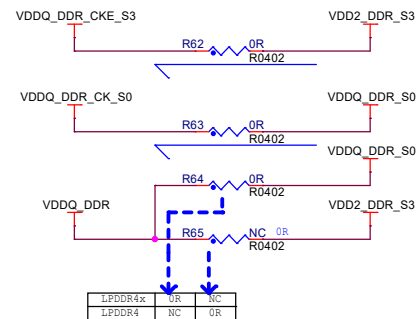
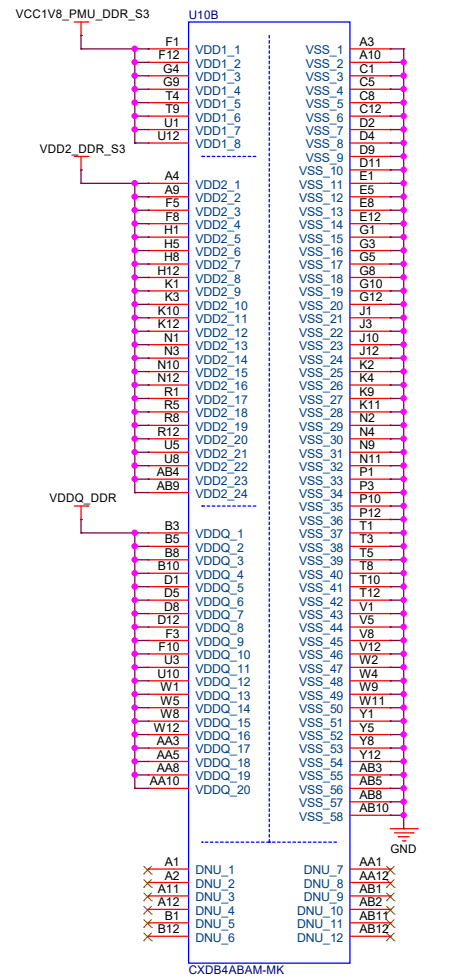
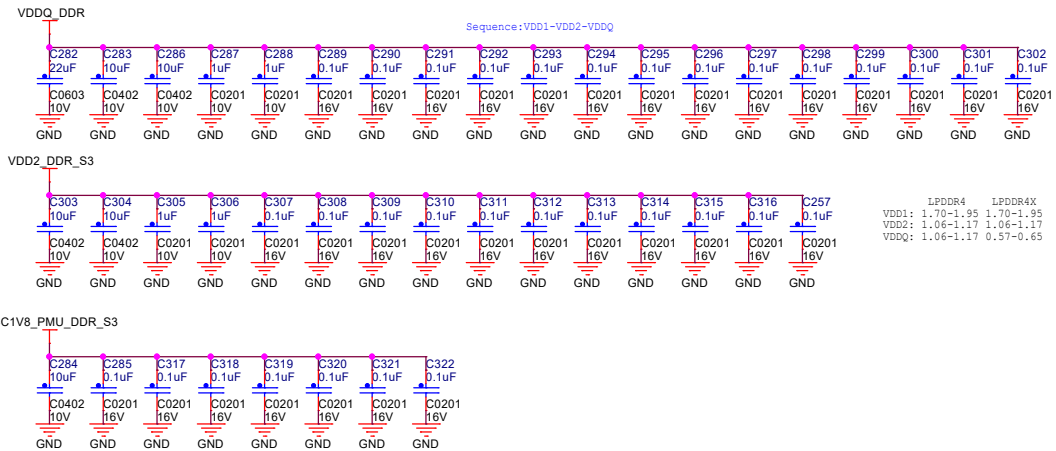
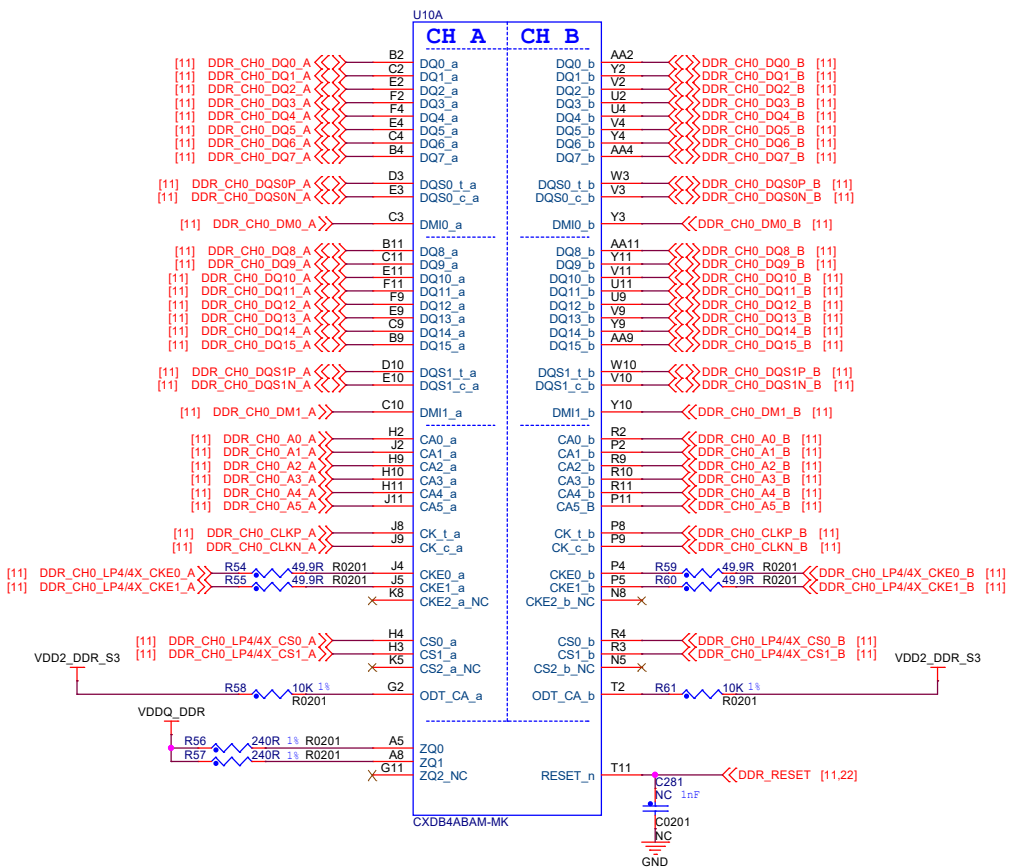


Note:
The Caps between green line and U9 should be placed under the U9 package. Other caps should be placed close to the U9 package

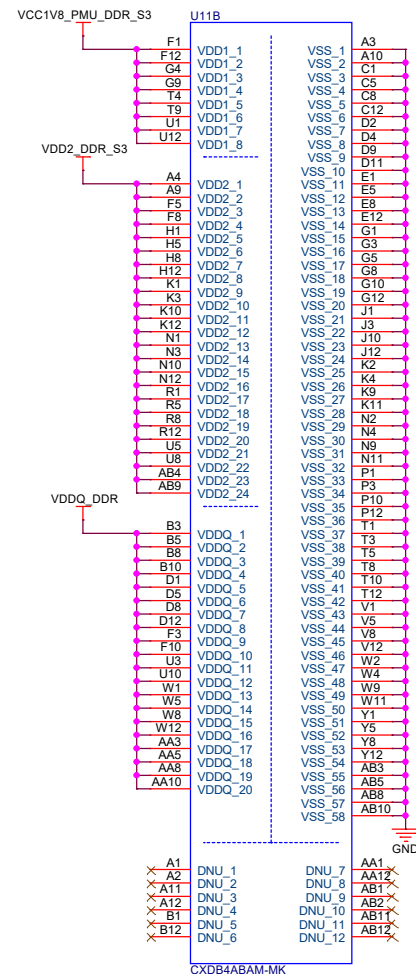
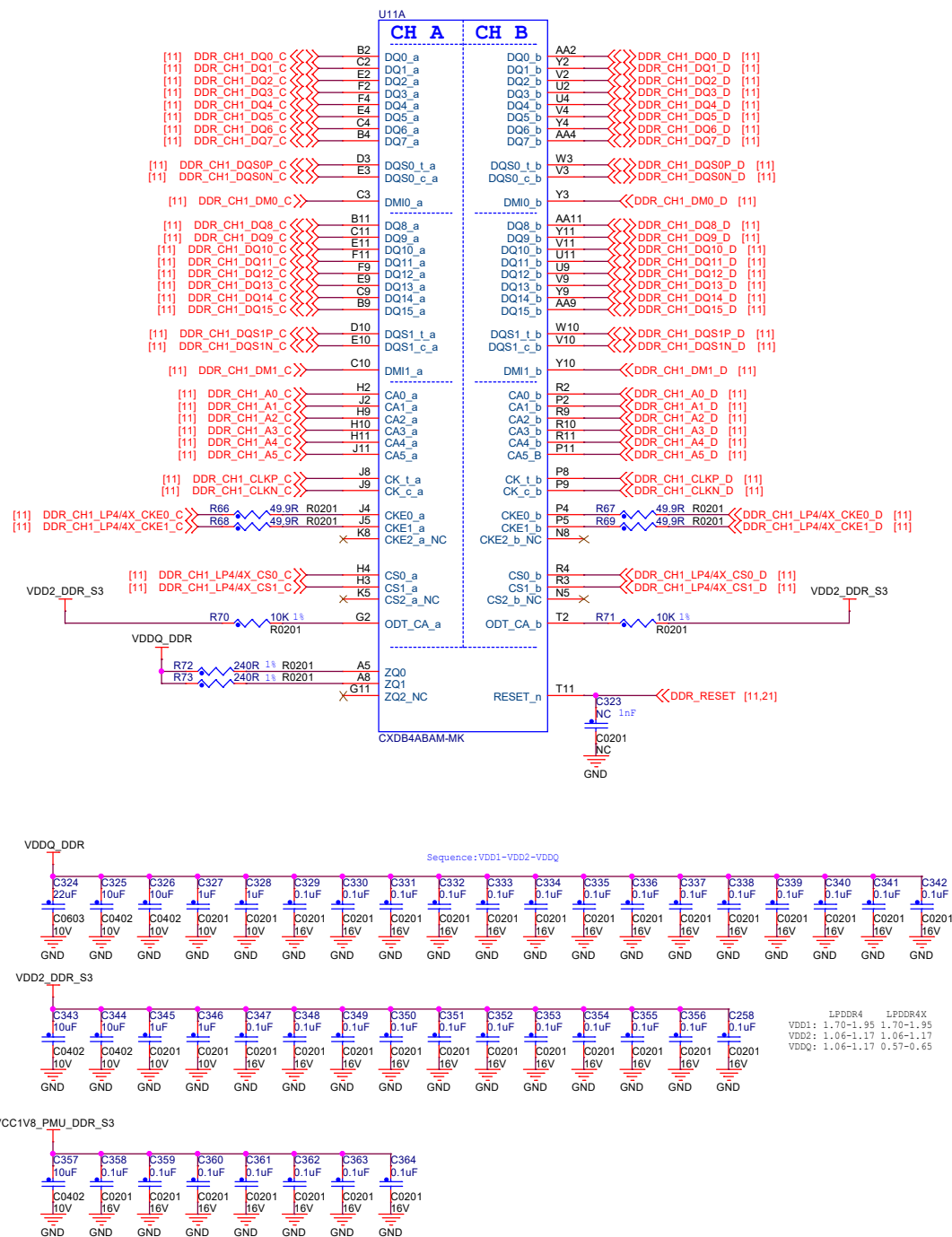
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LPDDR4/LPDDR4x_1

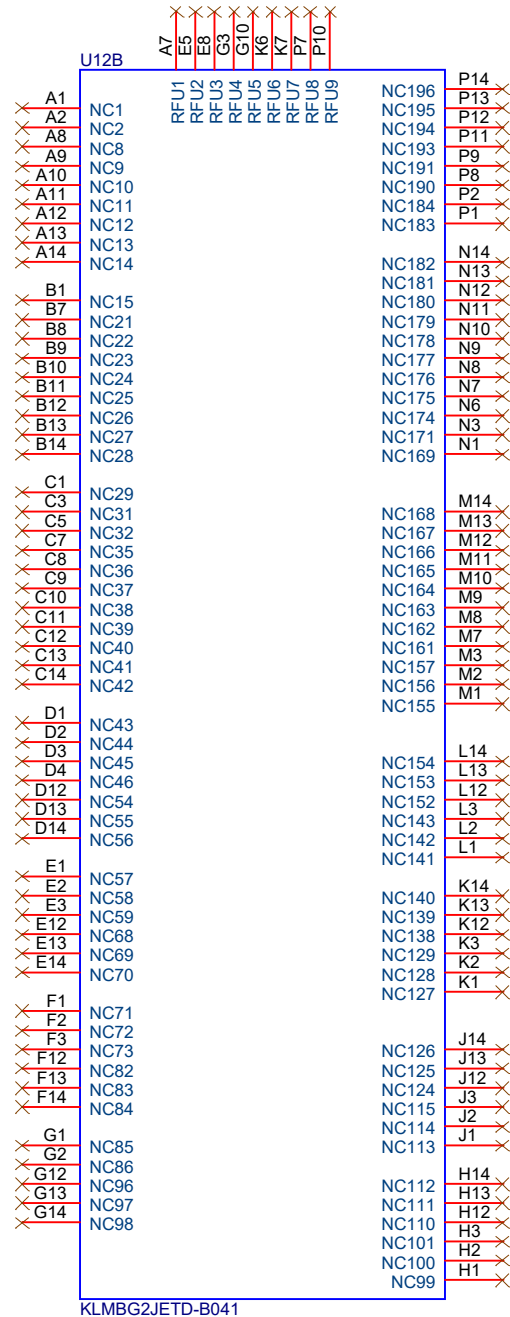


LPDDR4/LPDDR4x_2

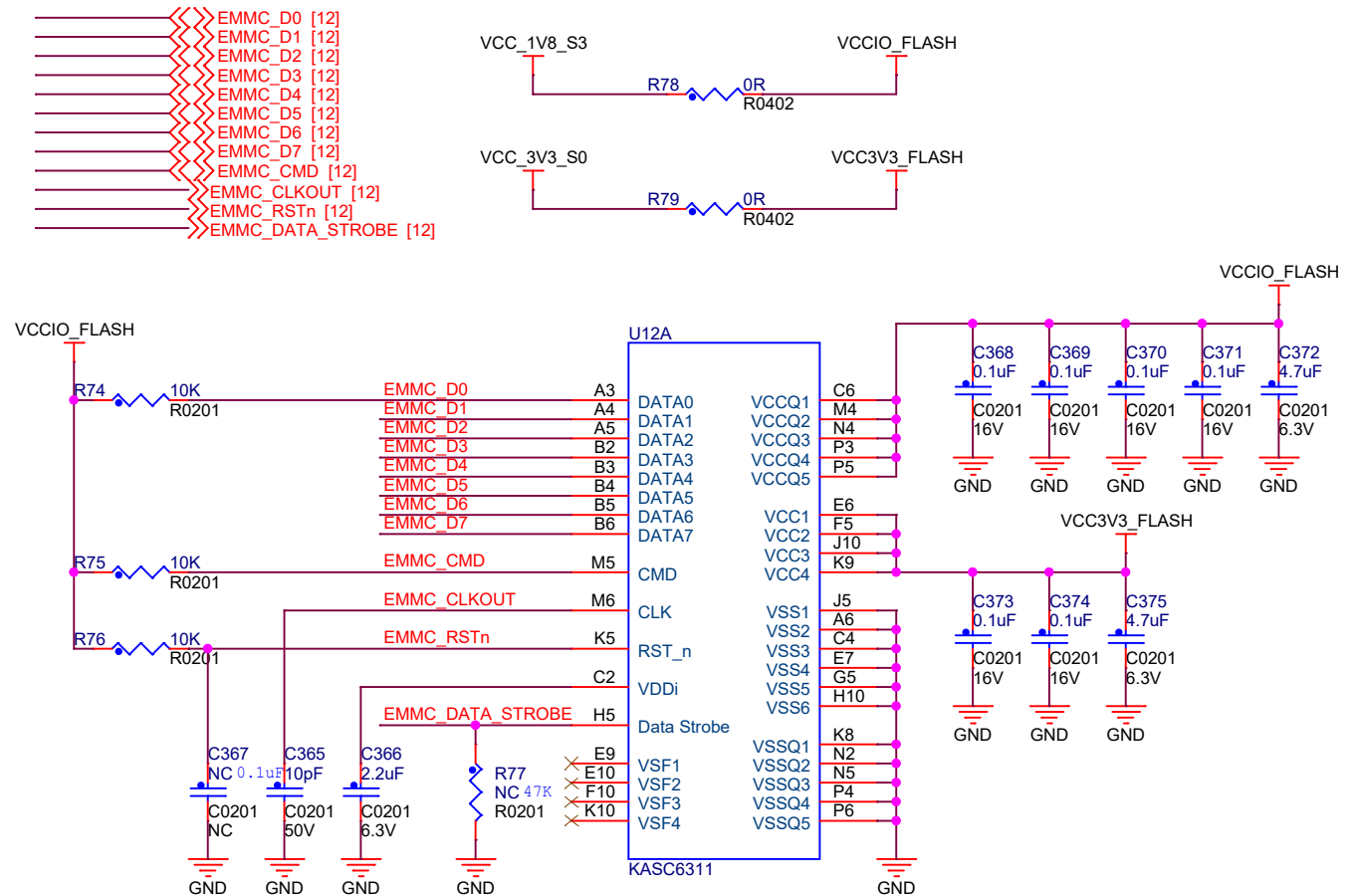


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Title			
野火 EBF RK3588S LBC4			
Size A3	Document Number LPDDR4/LPDDR4_x2		Rev V1.0
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EMMC FLASH



KLMBG2JETD-B041



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以太网

TXC / RXC : delays 2ns
PHY Address : 001

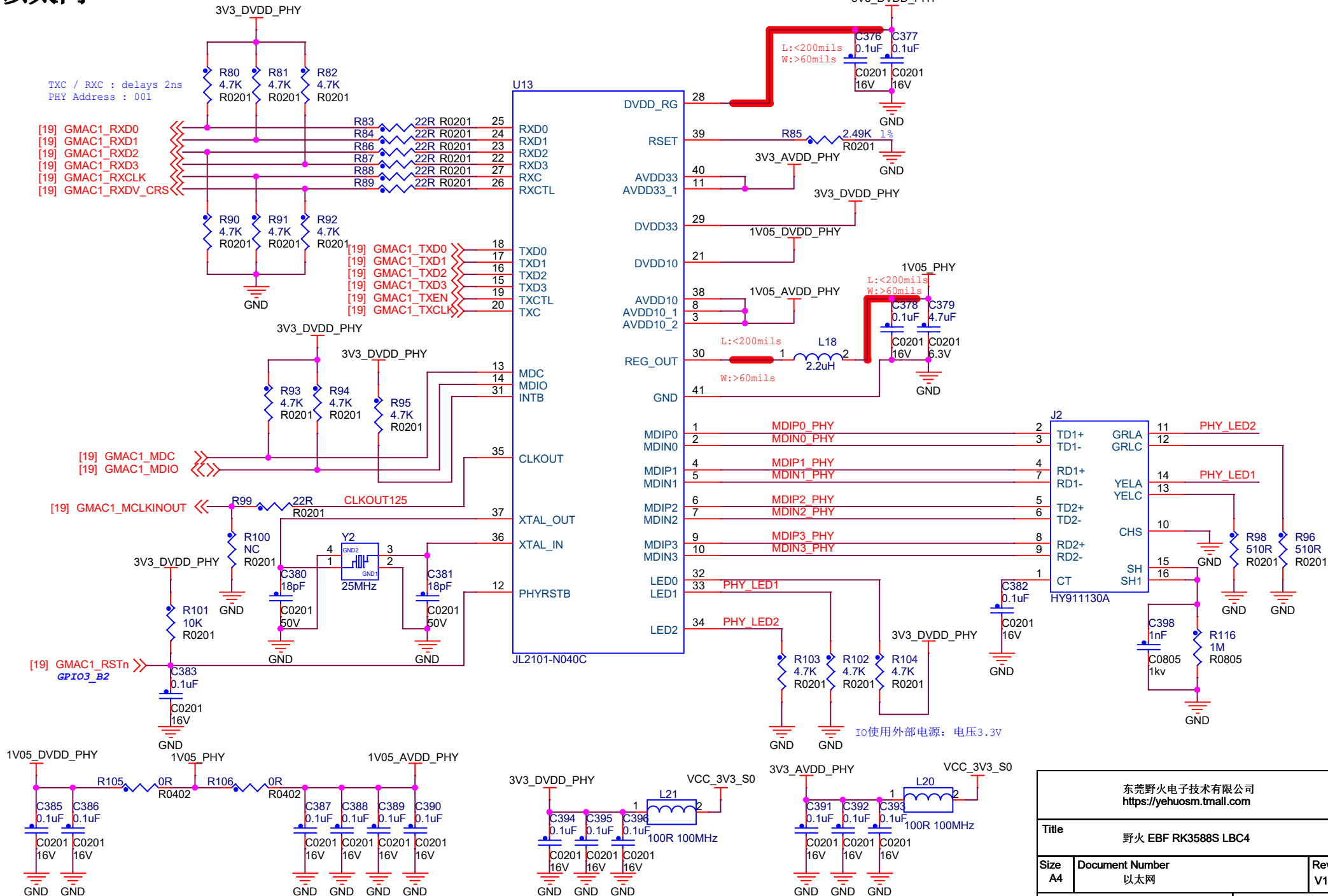
[19] GMAC1_RXD0
[19] GMAC1_RXD1
[19] GMAC1_RXD2
[19] GMAC1_RXD3
[19] GMAC1_RXCLK
[19] GMAC1_RXDV_CRS

[19] GMAC1_TXD0
[19] GMAC1_TXD1
[19] GMAC1_TXD2
[19] GMAC1_TXD3
[19] GMAC1_TXEN
[19] GMAC1_TXCLK

[19] GMAC1_MDC
[19] GMAC1_MDIO

[19] GMAC1_MCLKINOUT

[19] GMAC1_RSTn
GPIO3_B2

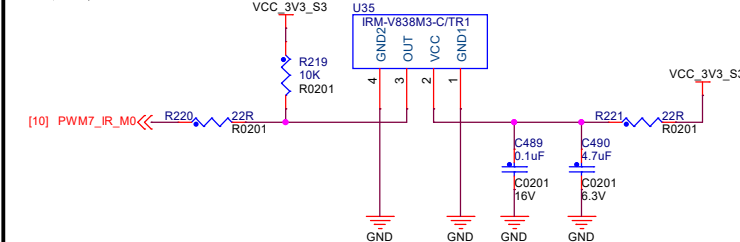
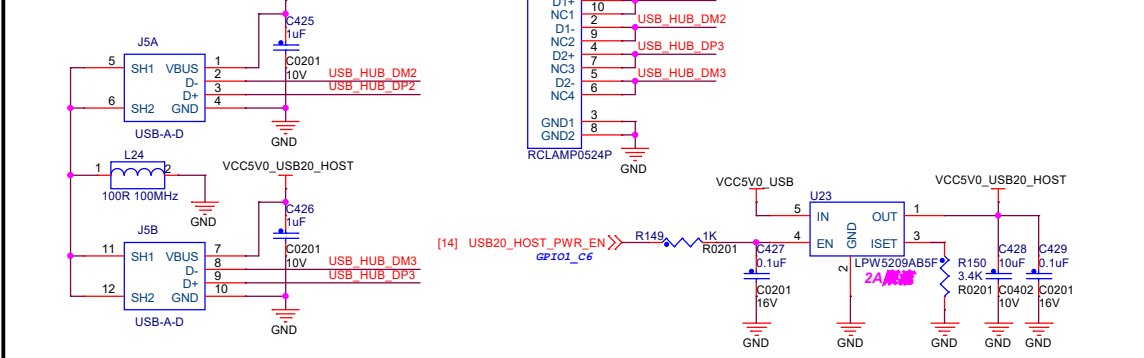
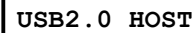
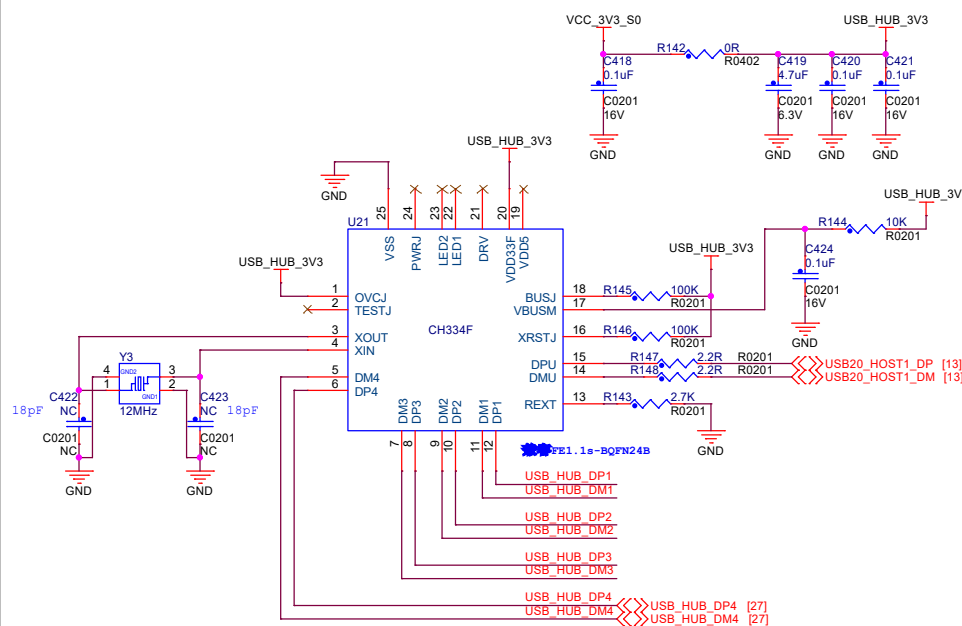
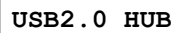
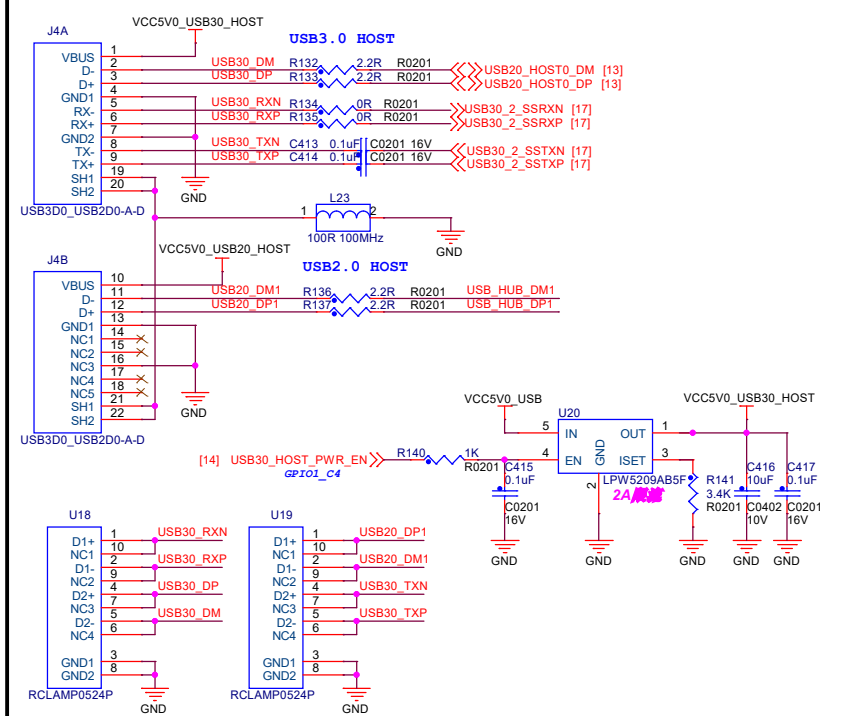
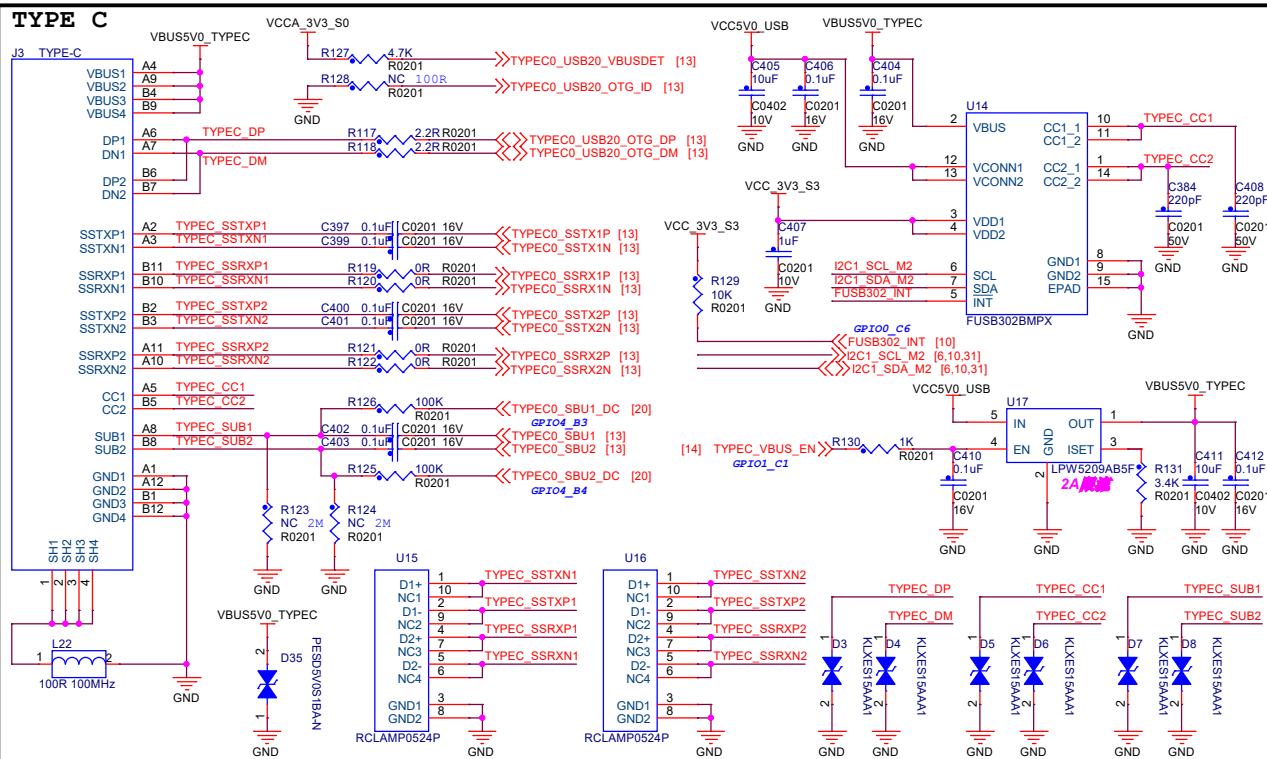


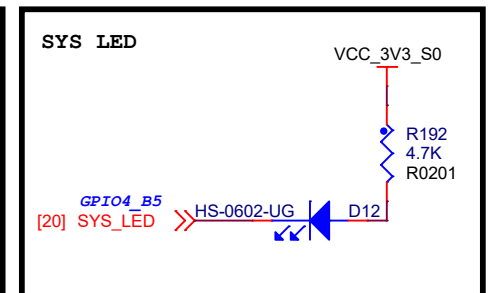
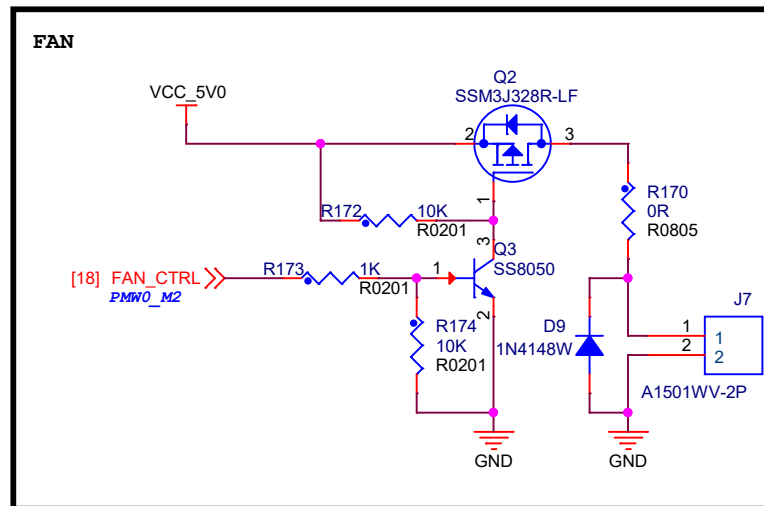
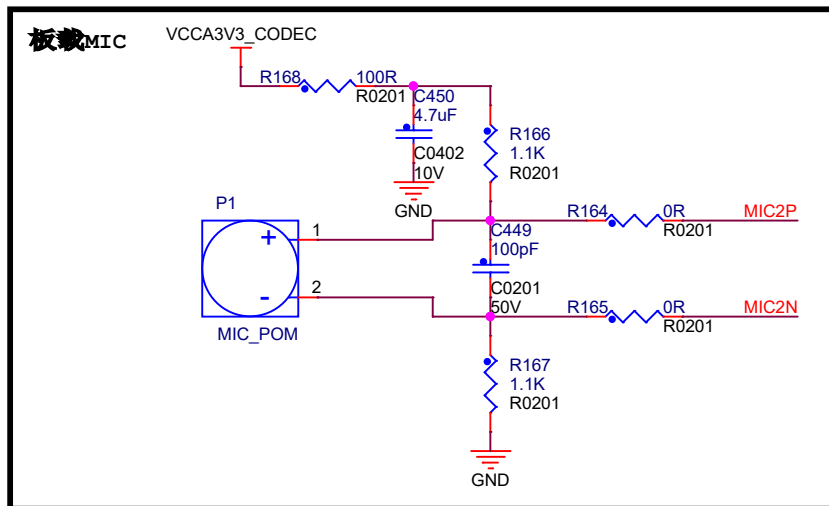
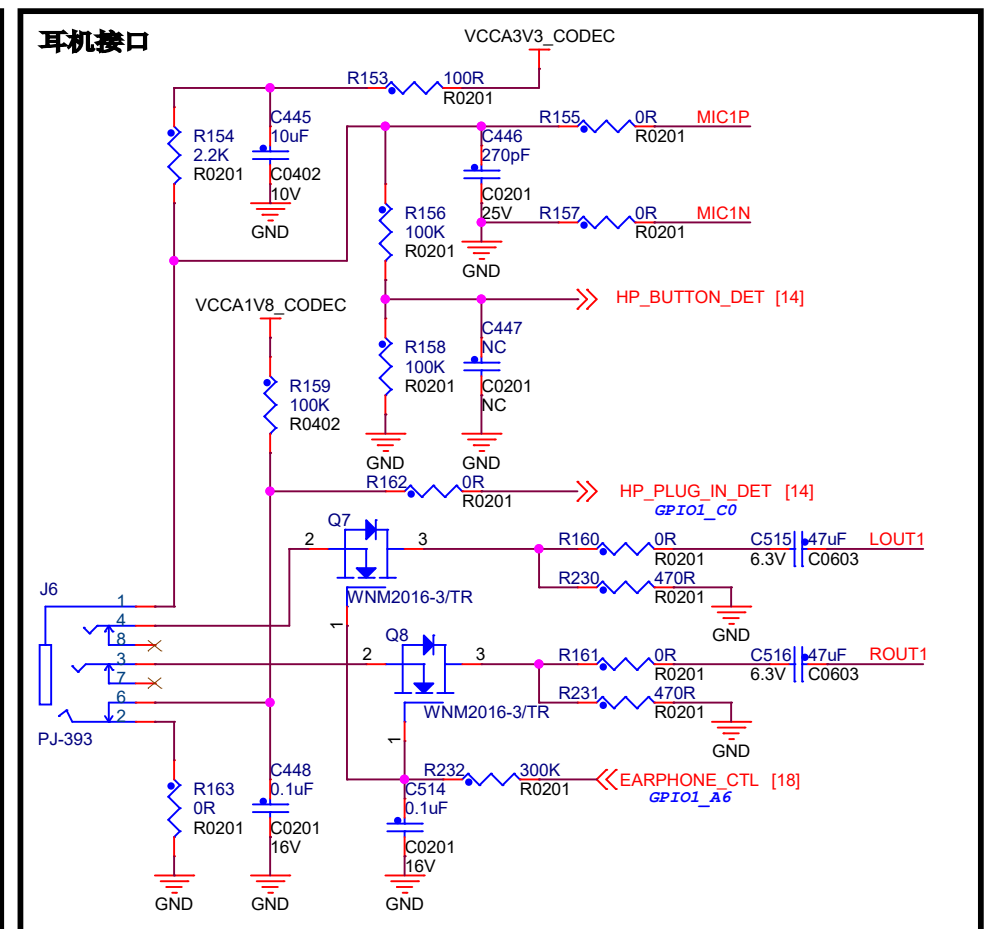
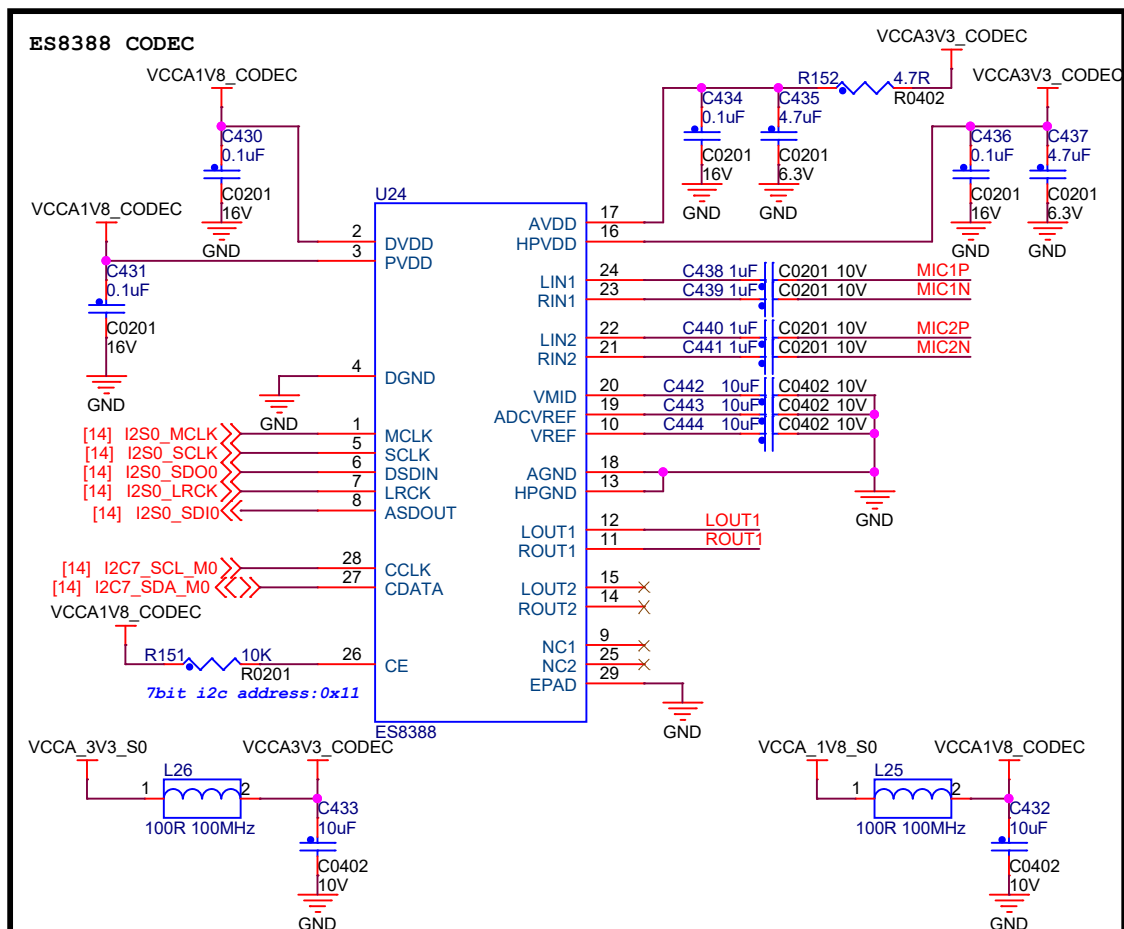
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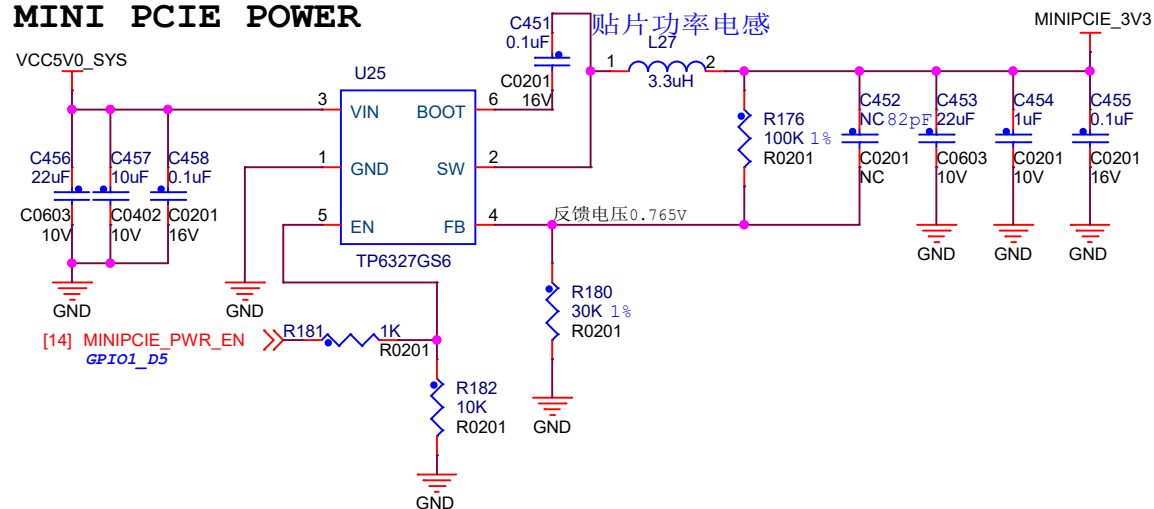
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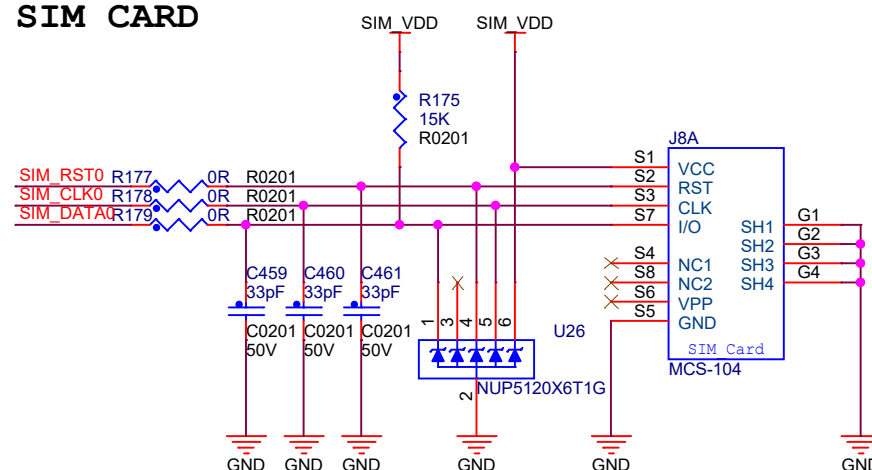
Size A4	Document Number 音频/FAN/LED	Rev V1.0
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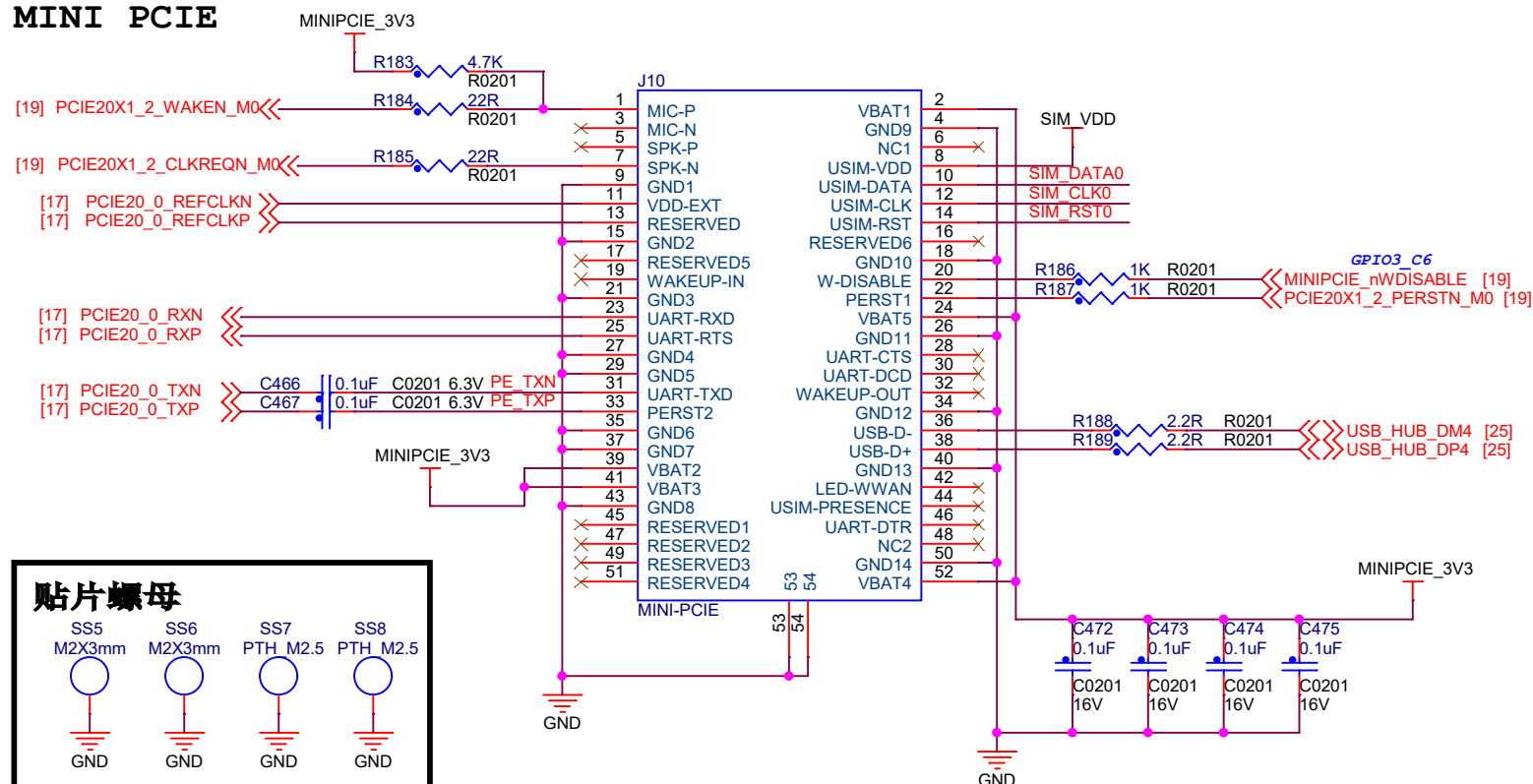
MINI PCIE POWER



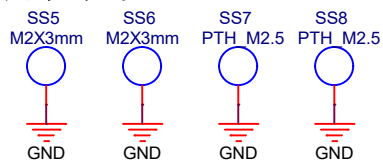
SIM CARD



MINI PCIE



贴片螺母



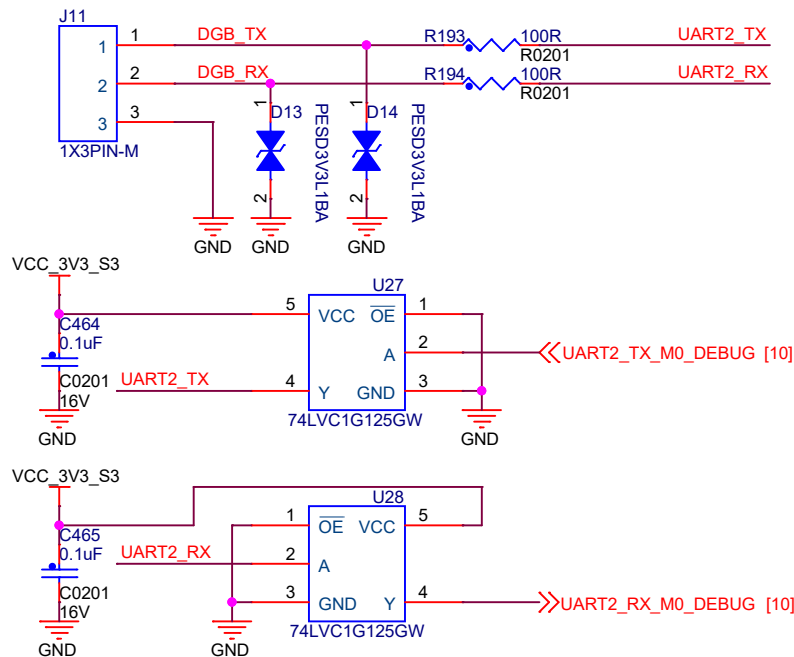
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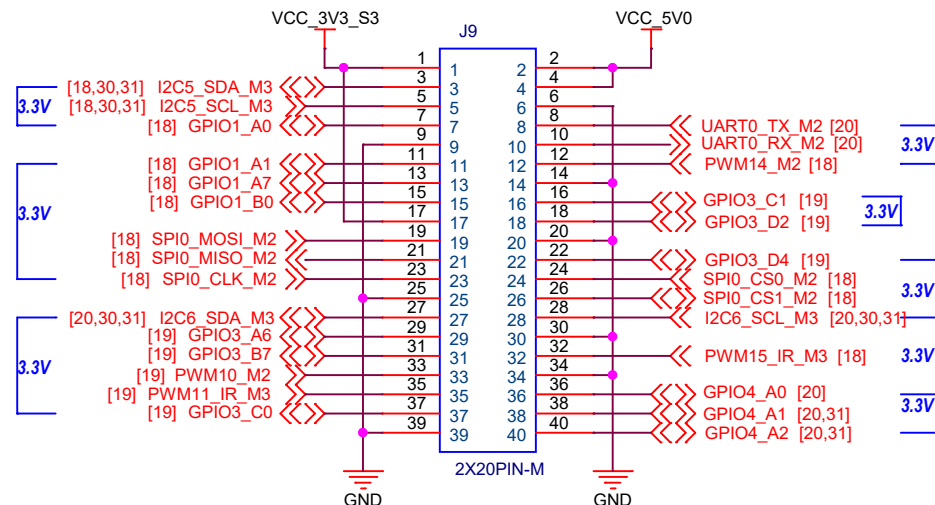
Size A4 Document Number MINI PCIE接口 Rev V1.0

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Debug接口

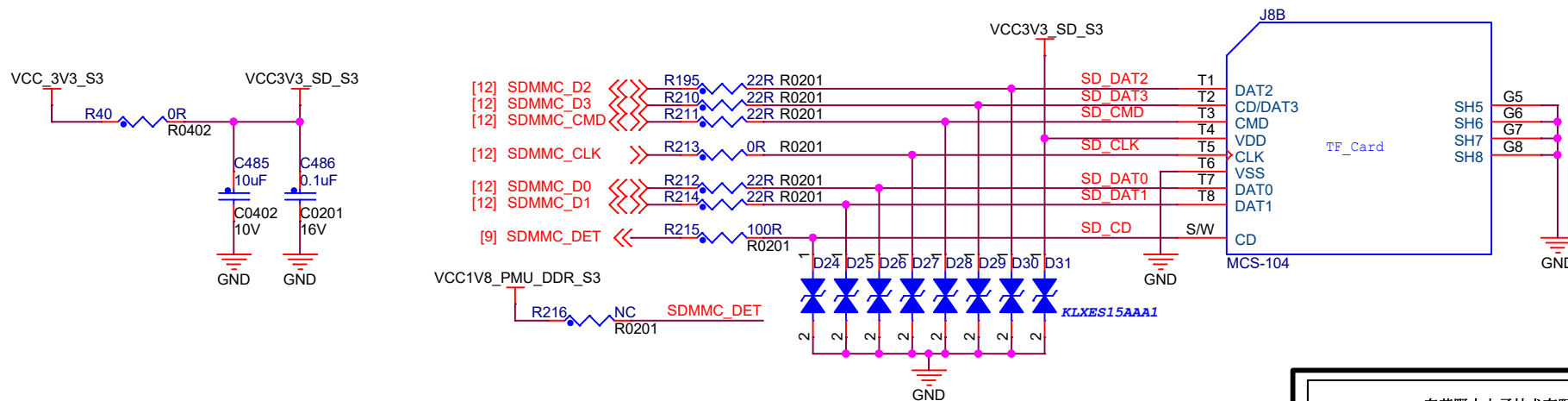


IO 引出



注：所有引出的GPIO只兼容3.3V

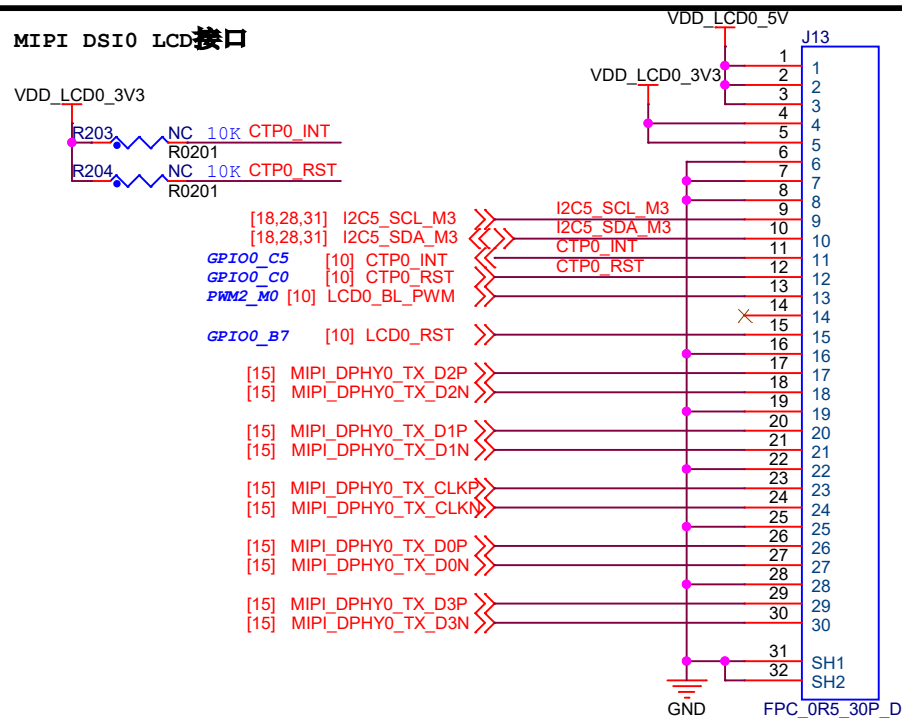
SD Card



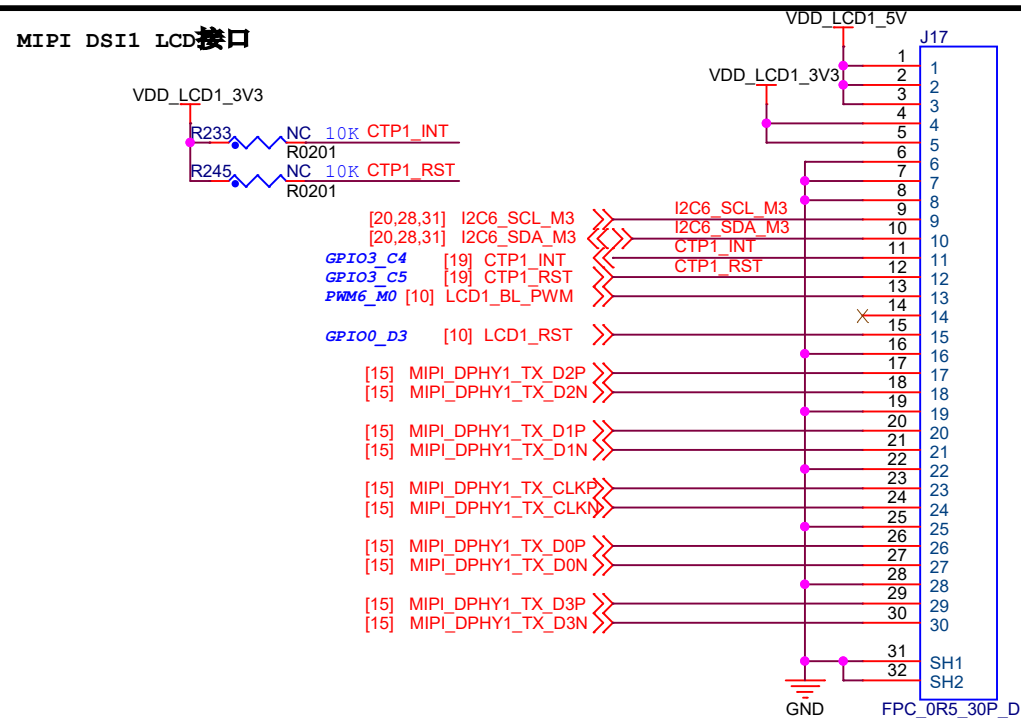
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Size A4	Document Number SD Card/DEBUG/IO引出	Rev V1.0
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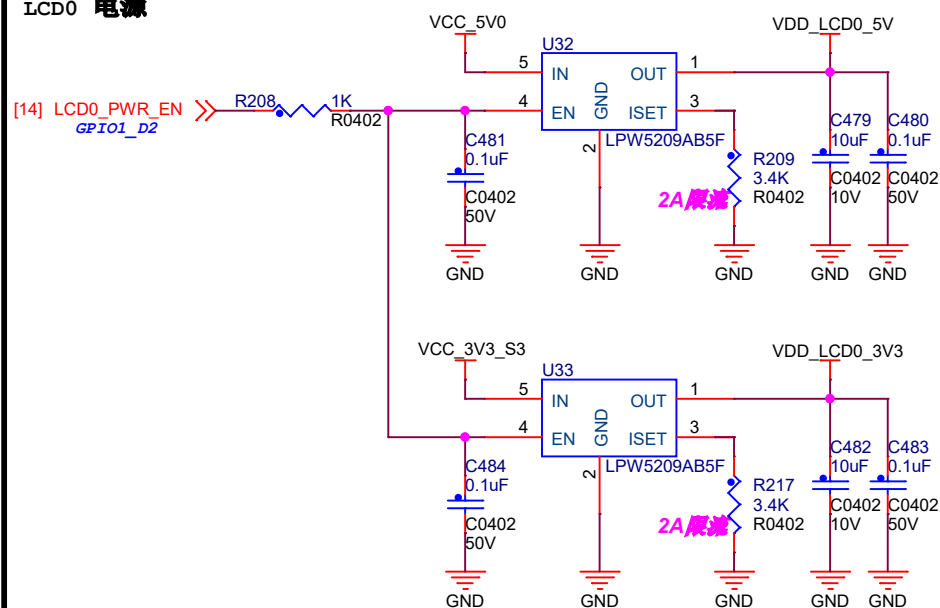
MIPI DSI0 LCD接口



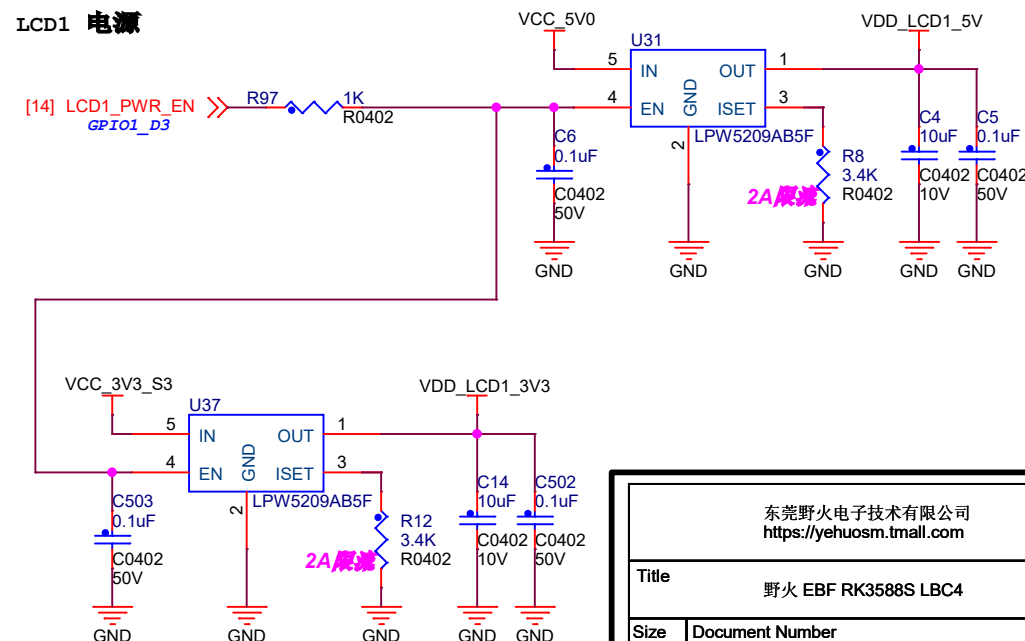
MIPI DSI1 LCD接口



LCD0 电源



LCD1 电源



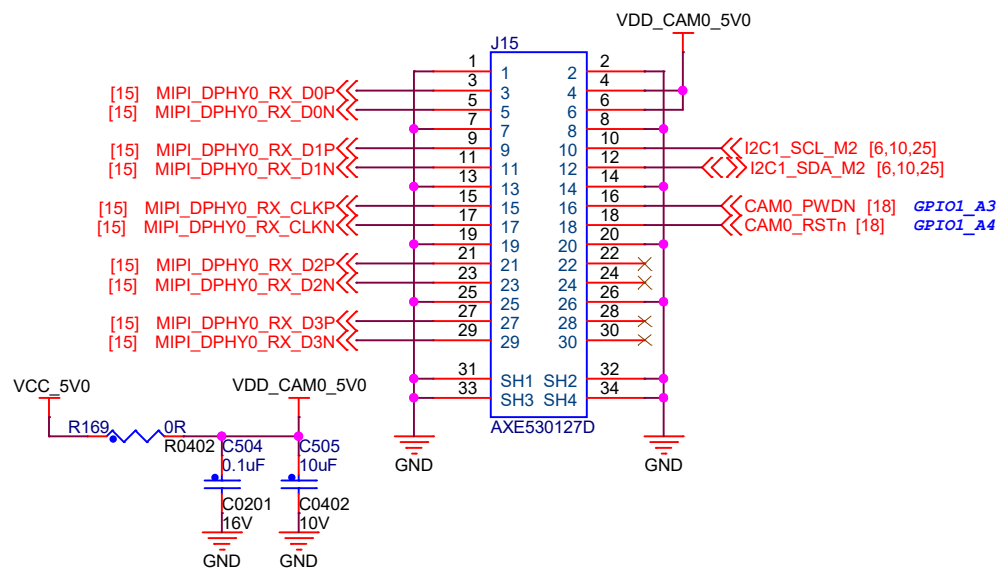
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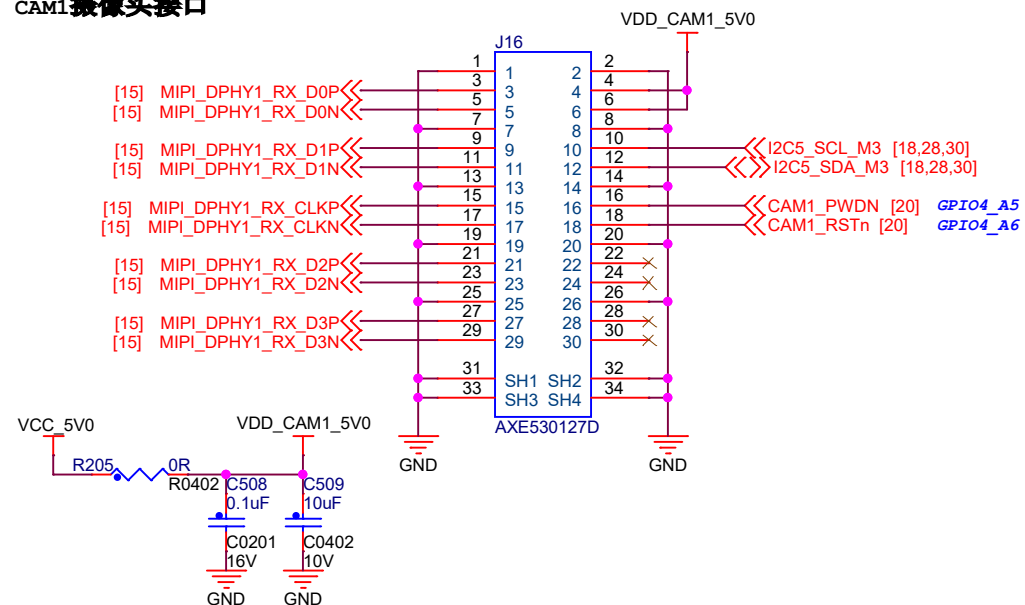
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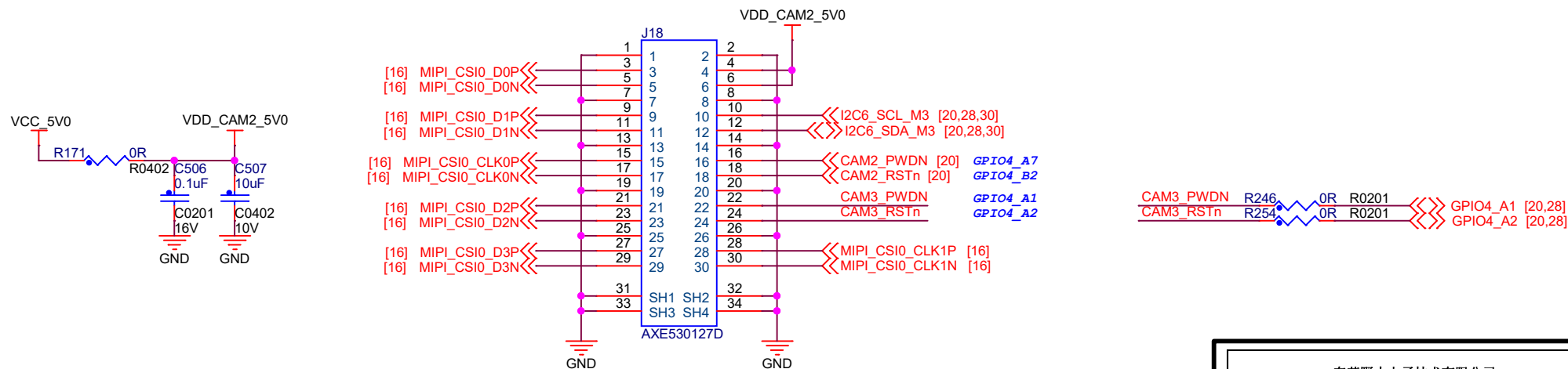
CAM0摄像头接口



CAM1摄像头接口



CAM2摄像头接口



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