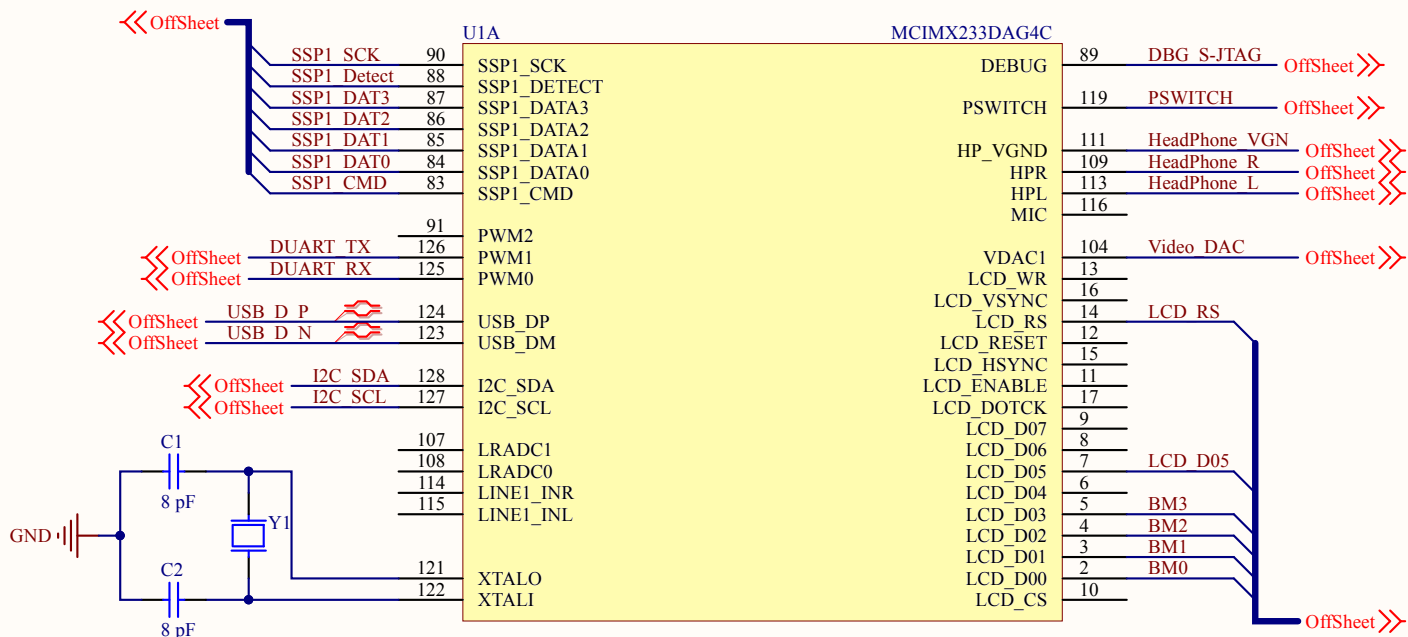
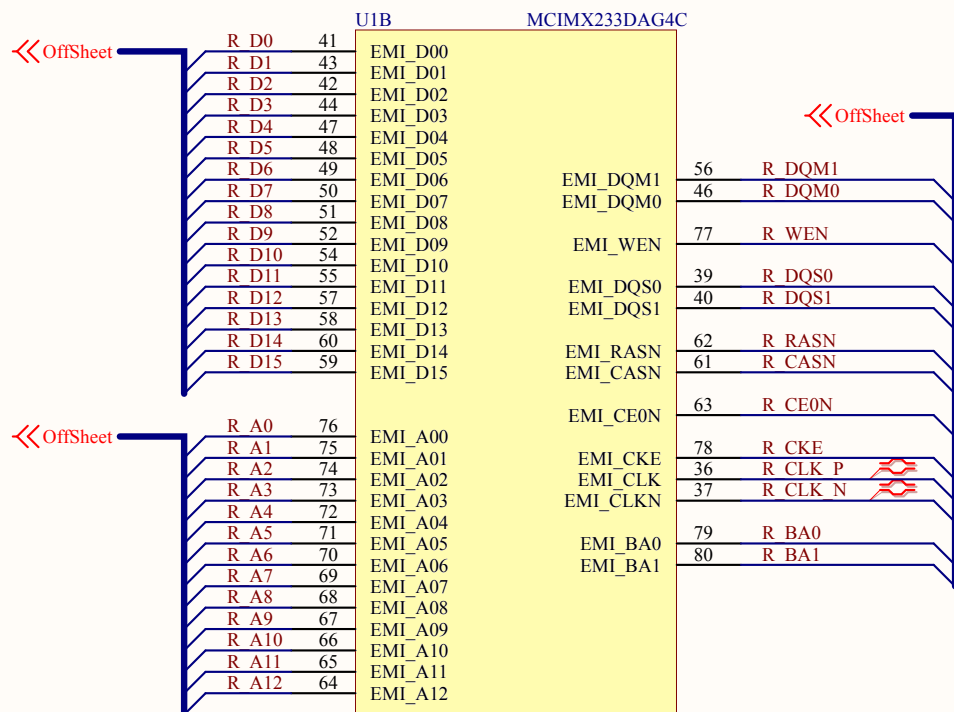


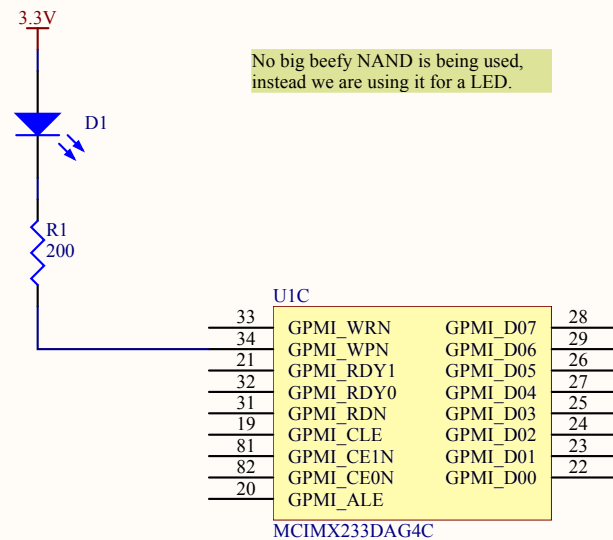
## MPU Misc



## MPU External Memory Interface



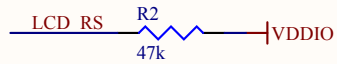
## NAND Interface



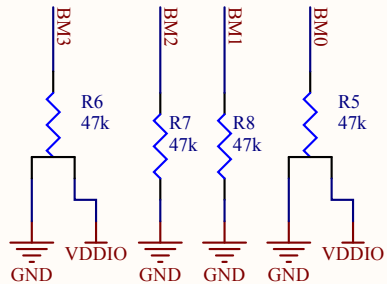
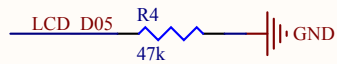
Title		
Size	Number	Revision
A		
Date:	3/27/2015	Sheet of
File:	C:\Users\...\Main.SchDoc	Drawn By:

## Boot Selection

LCD\_RS pulled up to ignore OPT boot bits and use boot resistors instead.



LCD\_D05 pulled down to disable ETM mode.



Only Populate the resistors we need.  
!!!DNP both!!!

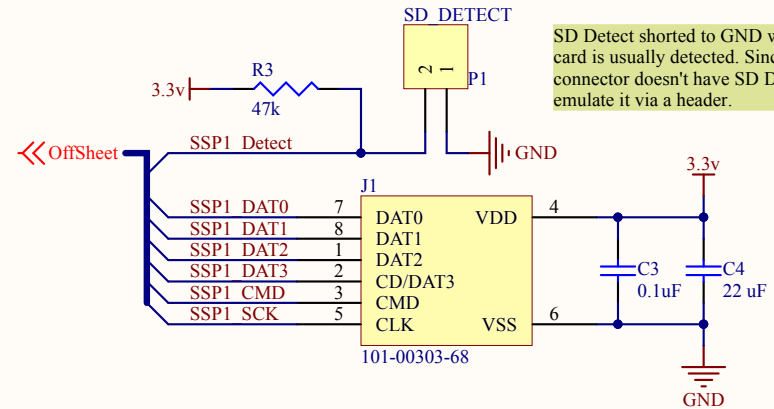
### Boot Config:

LCD\_DATA[5] ETM Enable TBM1  
LCD\_DATA[3] Boot Mode Bit 3 BM3  
LCD\_DATA[2] Boot Mode Bit 2 BM2  
LCD\_DATA[1] Boot Mode Bit 1 BM1  
LCD\_DATA[0] Boot Mode Bit 0 BM0

BM3 .. BM0  
0 0 0 0 USB USB (en/unencrypted is under OTP control)  
0 0 0 1 I2C I2C master  
0 0 1 0 SPI SPI master SSP1 boot from flash  
0 0 1 1 SPI SPI master SSP2 boot from flash  
0 1 0 0 GPMI NAND  
1 0 0 0 SPI SPI master SSP2 boot from EEPROM  
1 0 0 1 SSP1 SD/MMC master on SSP1  
1 0 1 0 SSP2 SD/MMC master on SSP2

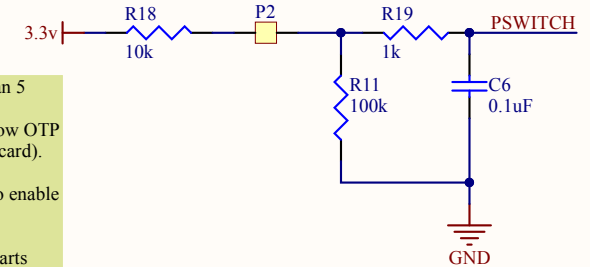
This Board  
0000 USB  
0001 I2C Master  
1001 SD/MMC on SSP1

## SD Card



SD Detect shorted to GND when a SD card is usually detected. Since this connector doesn't have SD Detect, we emulate it via a header.

## Power Switch

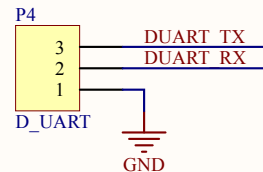
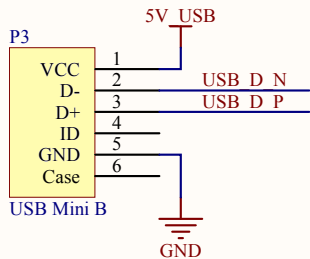


Pswitch pulled up to 3v3 for less than 5 seconds, startup DC-DC and boot, otherwise enters USB-Recovery (blow OTP fuses to enable MBR boot from SD card).

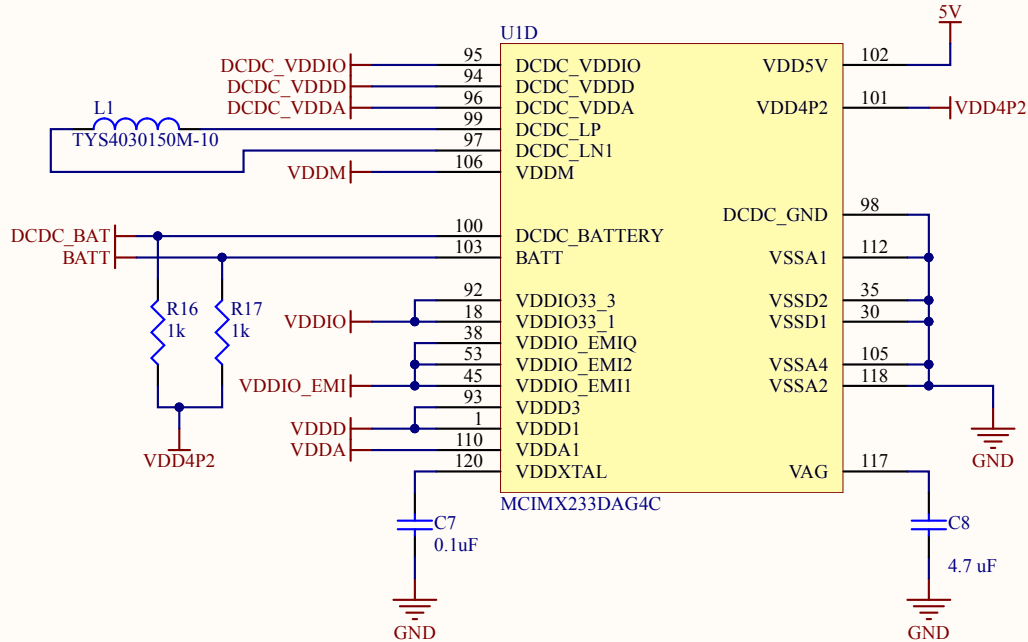
Short cut point to connect pswitch to enable USB-Recovery.

Fall time to VSS faster than 15 ns starts shutdown. RC to prevent this.

## Various Connectors

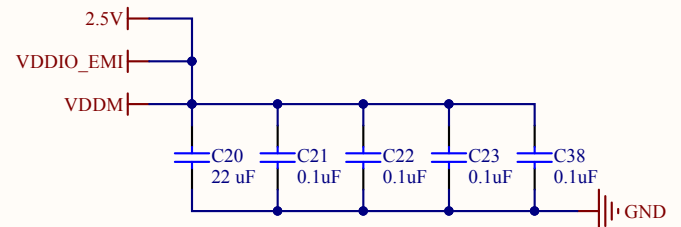
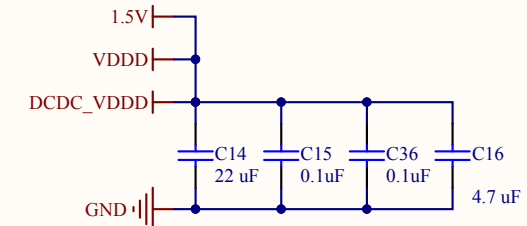
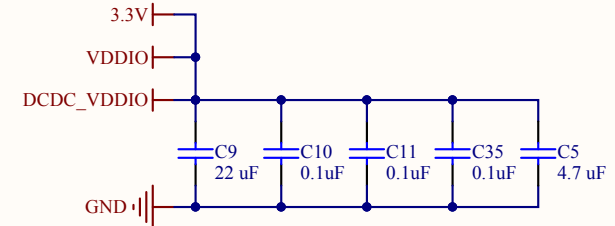


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Size	Number	Revision
A		
Date:	3/27/2015	Sheet of
File:	C:\Users\...\Misc.SchDoc	Drawn By:

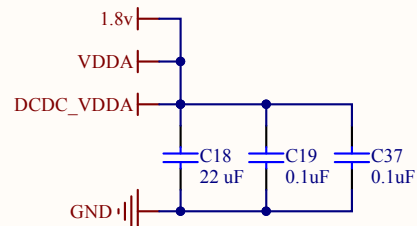
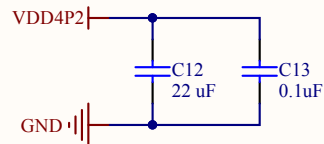


DRAM	2.5V ± 0.2V	480 mA max
SD Card	3.3V	100 mA max

CL05A105KQ5NNNC	CAP CER 1UF 6.3V 10% X5R 0402 10	0.03500	0.35
GRM155R60J475ME47D	CAP CER 4.7UF 6.3V 20% X5R 0402 10	0.10000	1.00



A point on the pcb which can be cut or soldered to using the included via's.



Title			
Size A	Number		Revision
Date:	3/27/2015	Sheet	of
File:	C:\Users\...\Power.SchDoc	Drawn By:	

## 4



## A

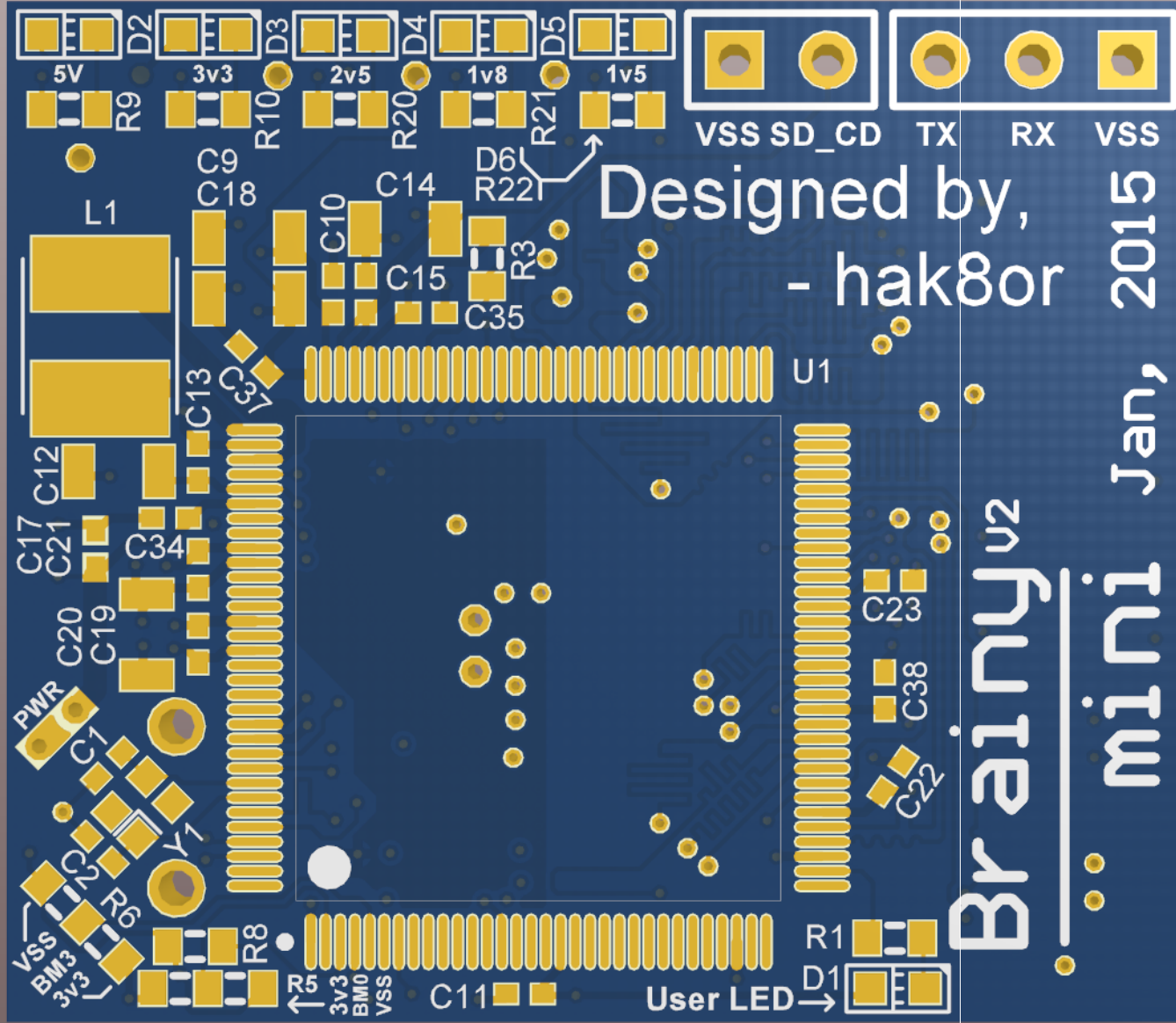


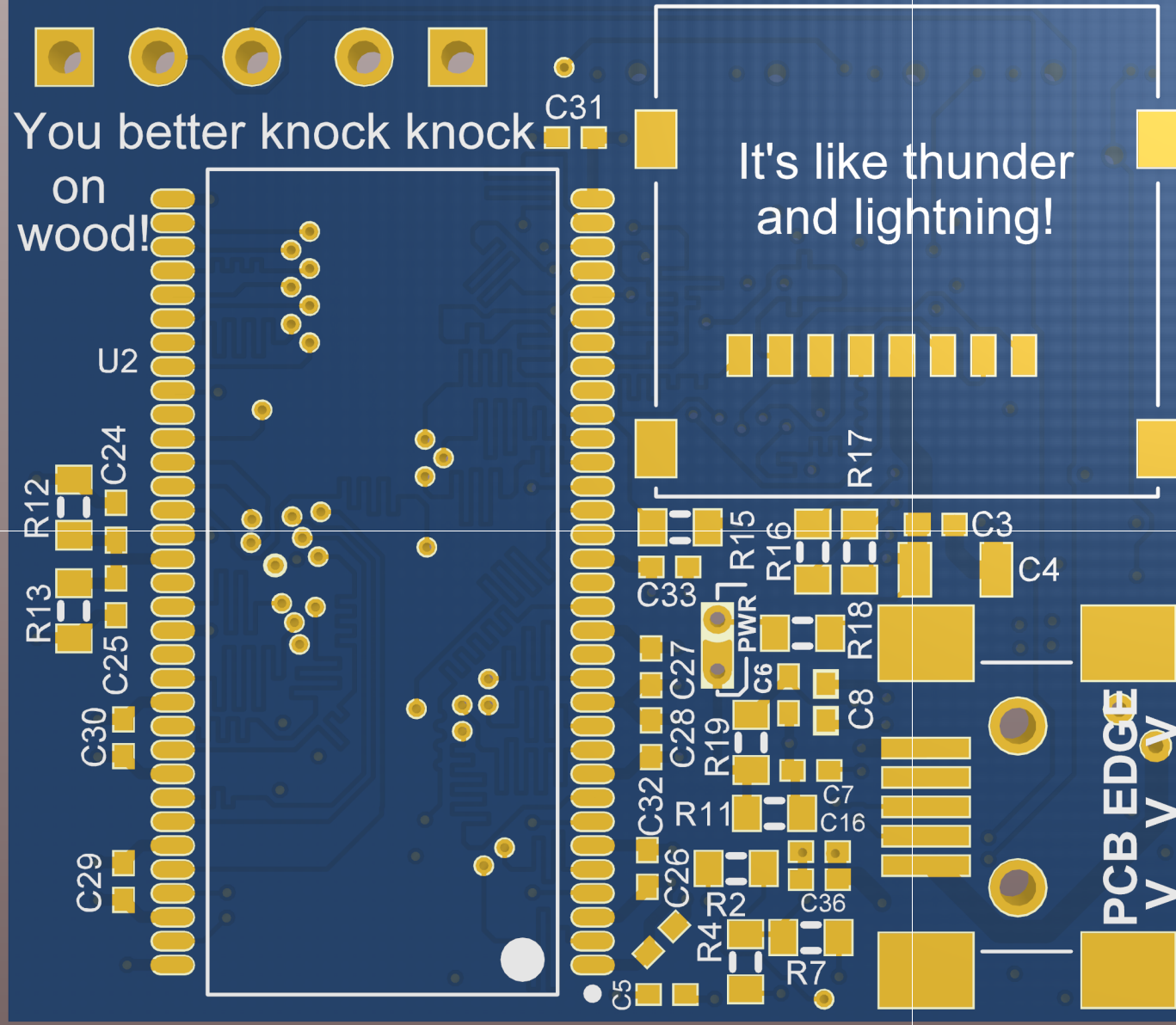
## C

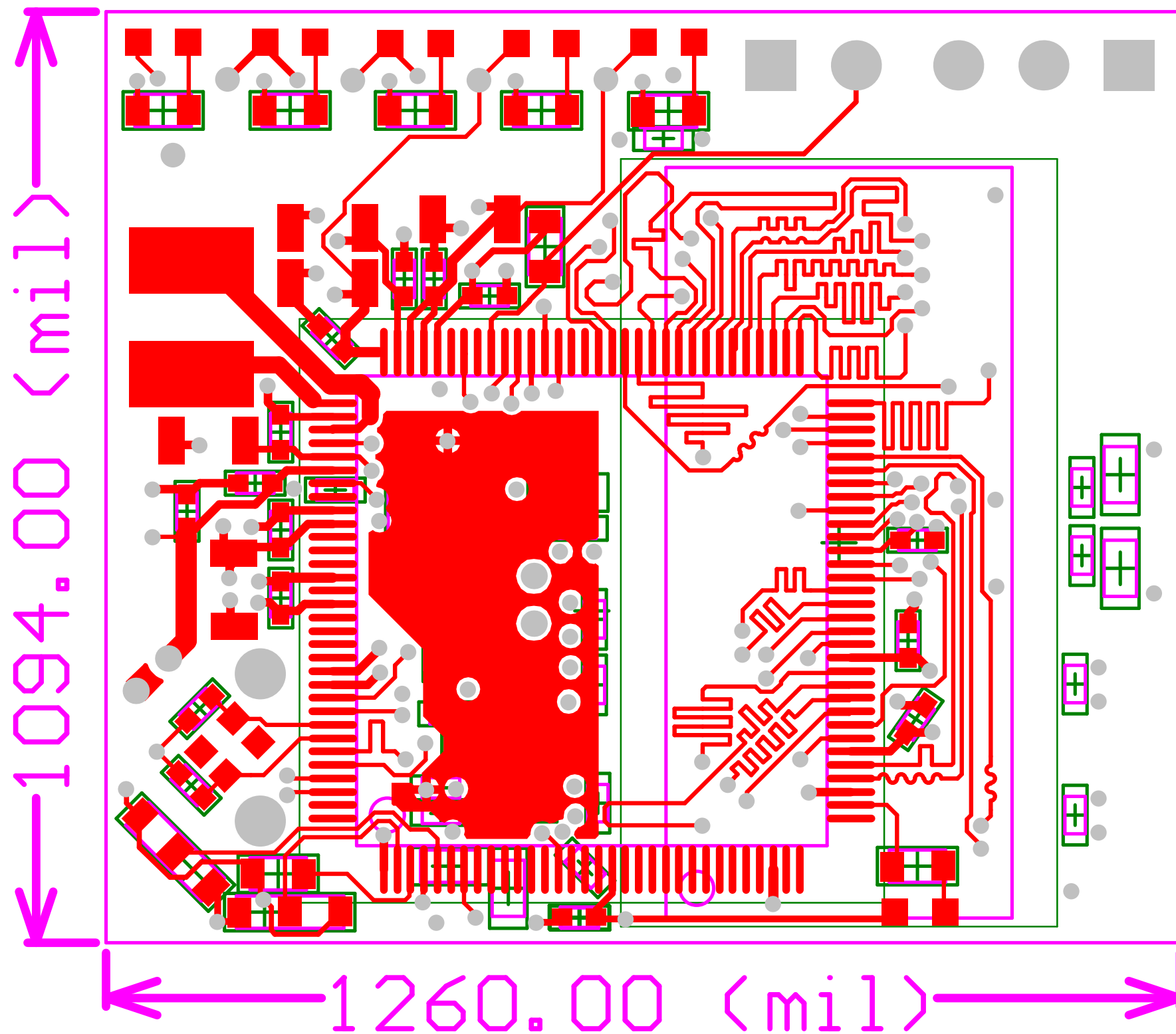


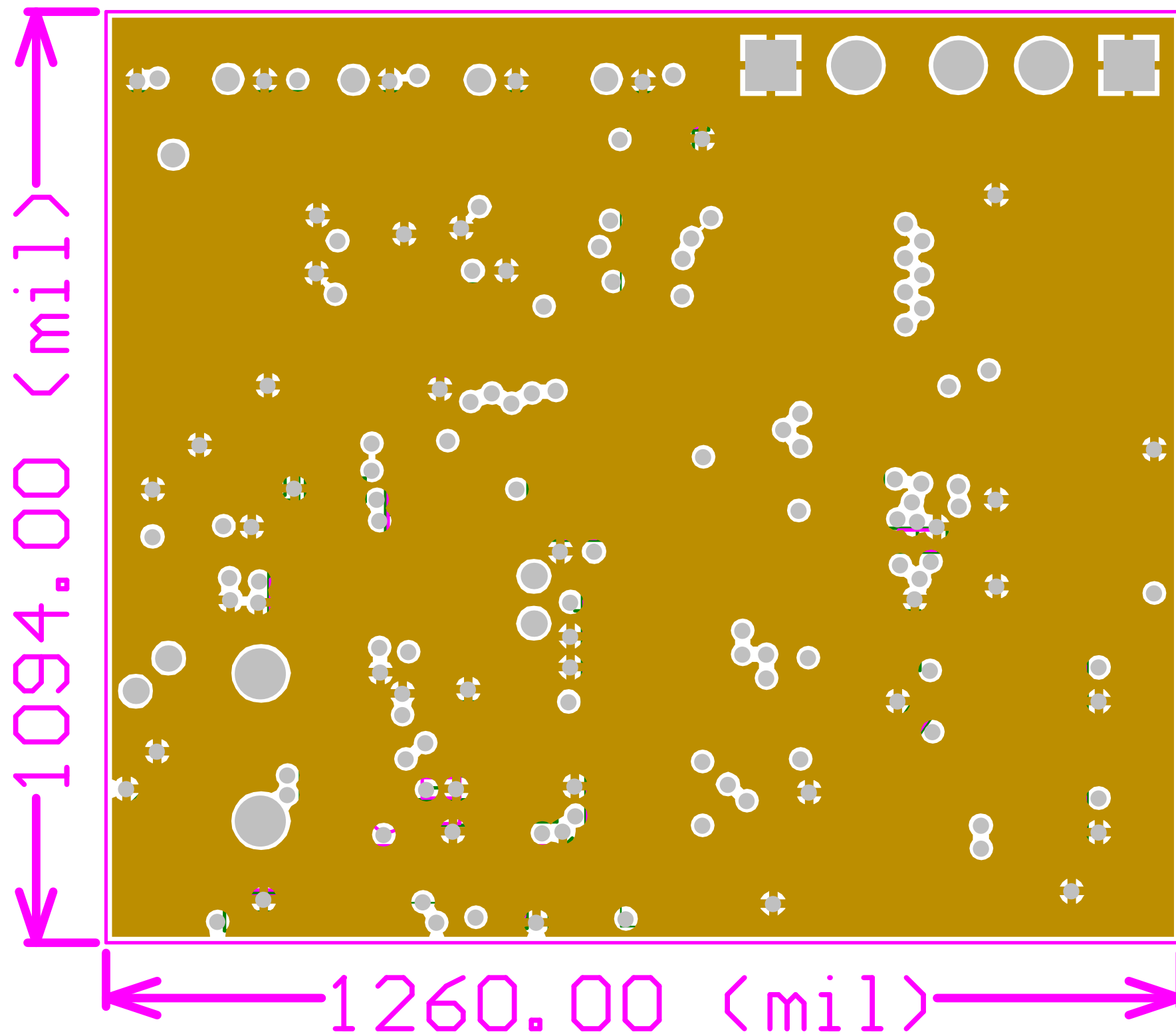
## C

4

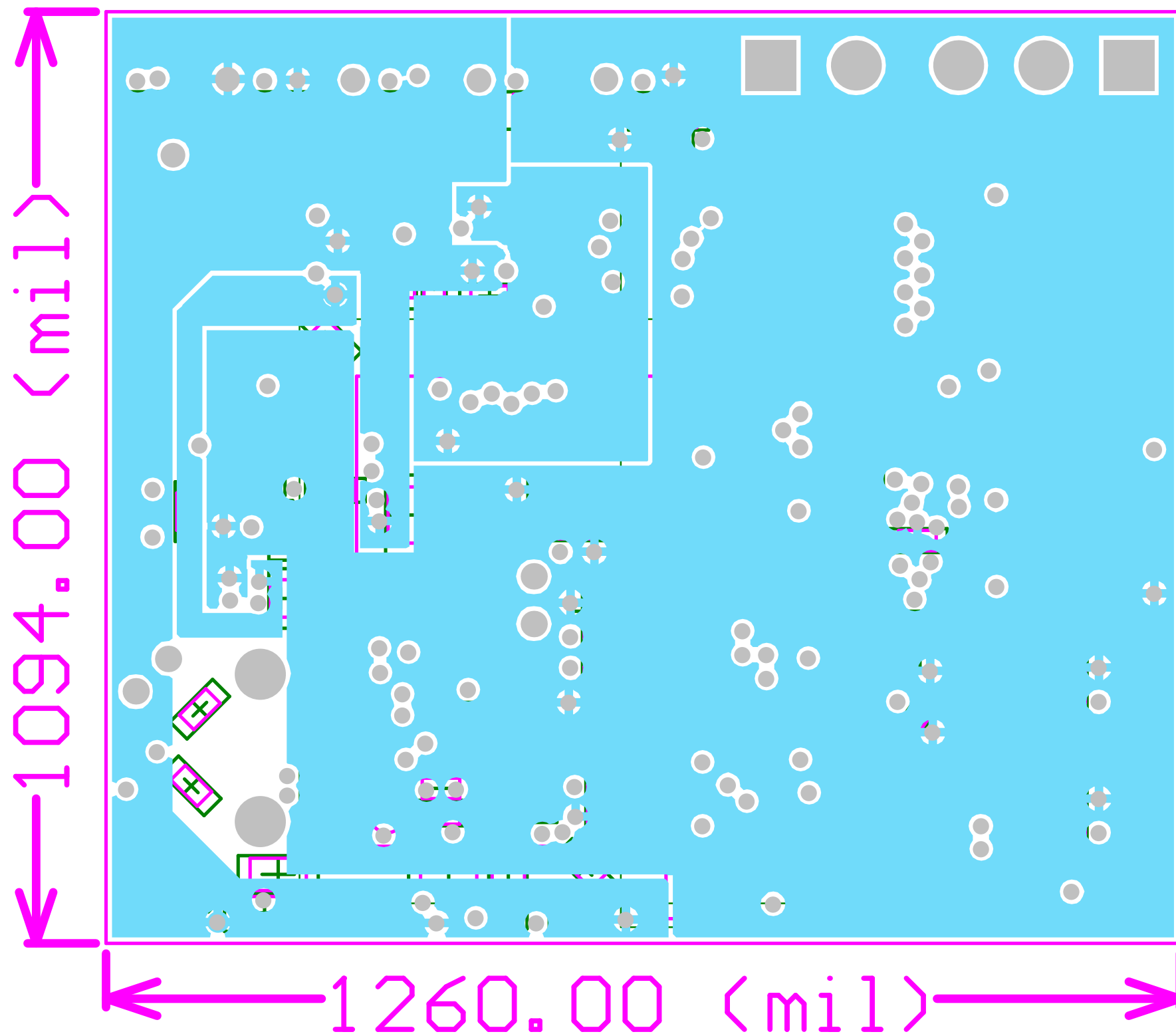


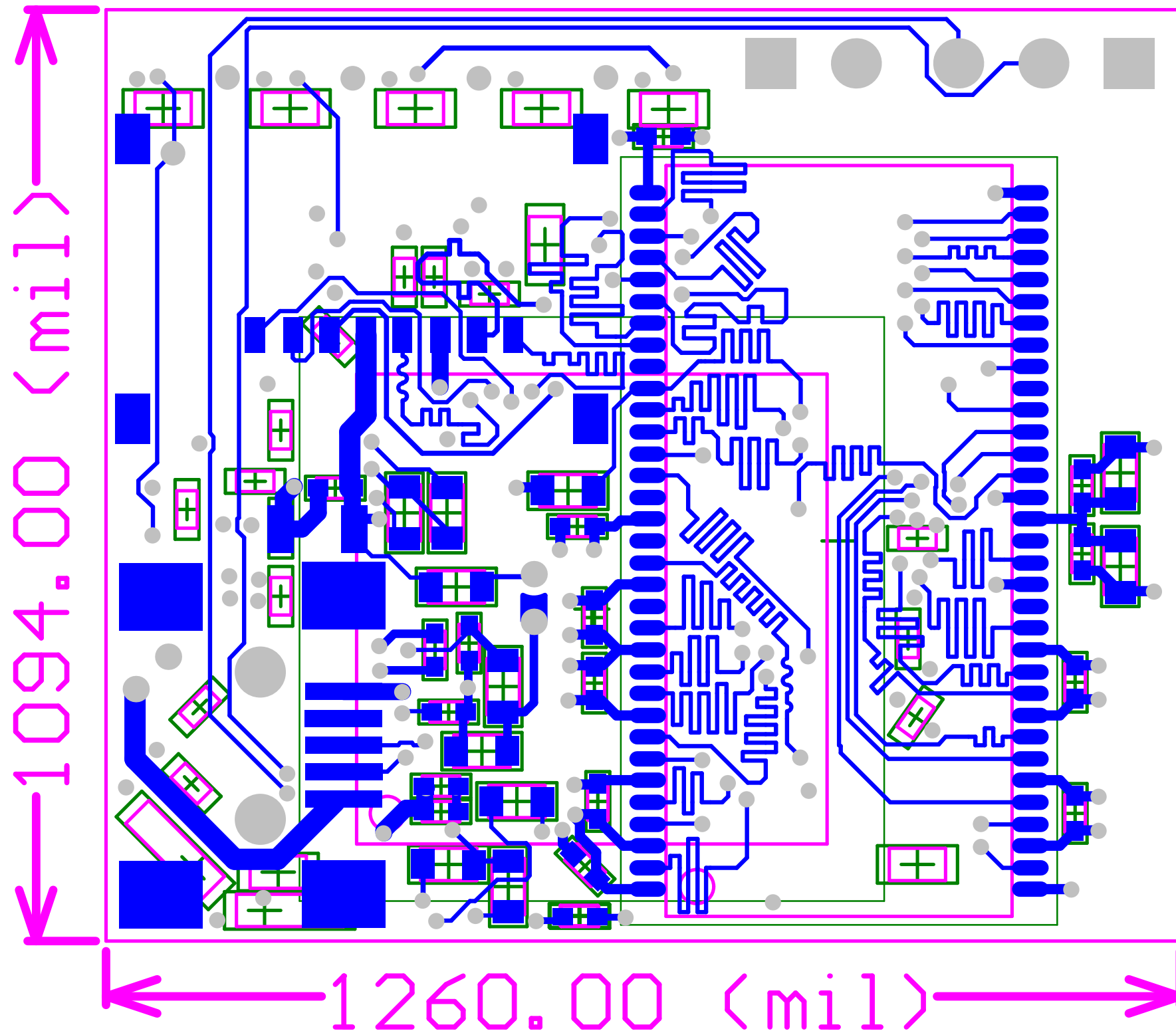












Item #	Quantity	Designator	Description	Footprint	Comment	#Column Name Error:Supplier Subtotal 1	#Column Name Error:Supplier Unit Price 1
1	2	C1, C2	CAP CER 8PF 50V NP0 0402	0402	GRM1555C1H8R0DA01D		
2	26	C3, C6, C7, C10, C11, C13, C15, C19, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32, C33, C34, C35, C36, C37, C38	Cap Ceramic 0.1uF 6.3V X7R 10% SMD 0402	0402	CL05B104KQ5NNNC		
3	6	C4, C9, C12, C14, C18, C20	CAP CER 22UF 6.3V 20% X5R 0805	0805_GRM21	GRM21BR60J226ME39L		
4	4	C5, C8, C16, C17	CAP CER 4.7UF 6.3V 20% X5R 0402	0402	GRM155R60J475ME47D		
5	6	D1, D2, D3, D4, D5, D6	OSRAM - LED, SMD, RED, 180MCD, 633NM	LSQ976-Z	LSQ976-Z		
6	1	J1	CONN MICRO SD CARD HINGED TYPE	Micro_SD_Con	101-00303-68		
7	1	L1	FIXED IND 15UH 1.11A 190 MOHM	TYS4030150M-10	TYS4030150M-10		
8	1	P1	Header, 2-Pin	HDR1X2	SD_DETECT		
9	2	P2, P5	2 net point that can be cut and soldered	CutPoint-VIA-medium	CutPointet 2x		
10	1	P3	USB Mini B connector	USB Mini B	USB Mini B		
11	1	P4	Header, 3-Pin	HDR1X3	D_UART		
12	3	R1, R9, R10	RES 200 OHM 1/10W 5% 0603 SMD	J1-0603	MCR03ERTJ201		
13	6	R2, R3, R4, R7, R8, R15	RES SMD 47K OHM 1% 1/10W 0603	J1-0603	MCR03ERTF4702		
14	2	R5, R6	RES SMD 47K OHM 1% 1/10W 0603 selectable SPDT	0603 Resistor Selectable	MCR03ERTF4702_SPDT		
15	1	R11	RES SMD 100K OHM 5% 1/10W 0603	J1-0603	ERJ-3GEYJ104V		
16	2	R12, R13	RES SMD 1.5K OHM 1% 1/8W 0603	J1-0603	MCT06030C1501FP500		
17	3	R16, R17, R19	RES SMD 1K OHM 1% 1/10W 0603	J1-0603	MCR03ERTF1001		
18	1	R18	RES SMD 10K OHM 5% 1/10W 0603	J1-0603	MCR03ERTJ103		
19	3	R20, R21, R22	RES SMD 100 OHM 5% 1/10W 0603	J1-0603	RC0603JR-07100RL		
20	1	U1	IC MPU I.MX23 454MHZ 128LQFP	TSQFP40P1600X1600X160-128N	MCIMX233DAG4C		
21	1	U2	IC DDR SDRAM 512MBIT 66TSOP	TSOP65P1180X120-66N	AS4C32M16D1-5TCN		
22	1	Y1	CRYSTAL 24MHZ 6PF SMD	XRCGB24M000F3M00R0	XRCGB24M000F3M00R0		