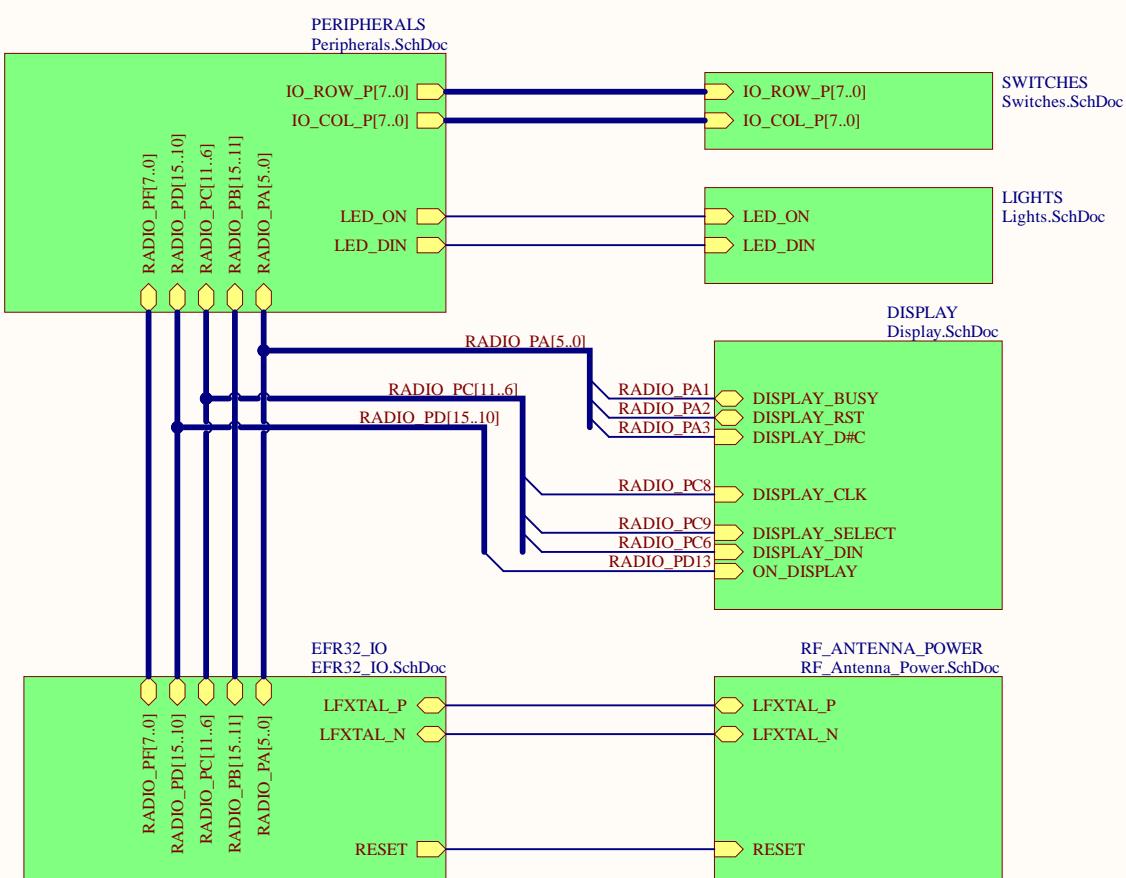
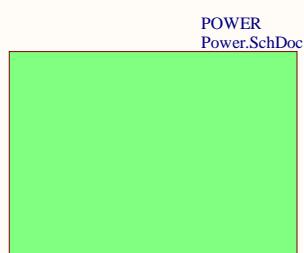


SHEETS

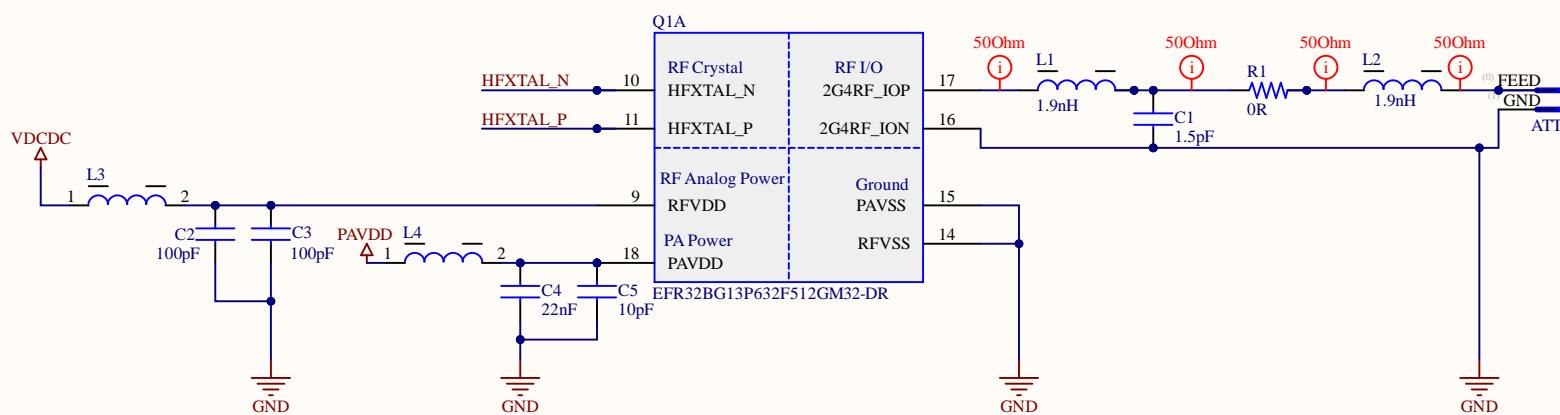
NAME	SHEET
RF_ANTENNA_POWER	2
EFR_GPIO	3
PERIPHERALS	4
POWER	5
SWITCHES	6
LIGHTS	8
DISPLAY	7

Voltage ranges	Min	Typ	Max	Units
BlueGecko	1.8		3.8	V
PMIC	0.1		5.1	V
eInk Display	2.2		3.7	V
Load Switch	1.6		5.5	V
Temperature sensor	1.9		3.6	V
IO Expander	1.65		5.5	V

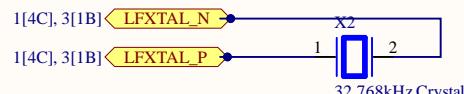
Test points		
Modules	Designators	Signal
Interrupts	TP1	IO_ROW_INT
	TP2	IO_COL_INT
Temperature sensor	TP3	TEMP_LOAD_SW
Mini SWD connector	TP4	RESET
	TP5	SWDIO
	TP6	PTI_FRAME
	TP7	VCOM_RX
	TP8	VCOM_TX
	TP9	SWCLK
	TP10	PTI_DATA
	TP11	SWO
eInk display	TP12	DISPLAY_D#C
	TP13	DISPLAY_DIN
	TP14	DISPLAY_CLK
	TP15	DISPLAY_SELECT
I2C communication	TP16	SCL
	TP17	SDA
Power supply	TP18	VBAT
	TP19	Solar Pannel output
	TP21	VSTOR
	TP22	+3.3V
	TP23	VMCU
	TP25	VMCU
Crystals	TP26	HXTAL_N
	TP27	HXTAL_P
	TP28	LXTAL_P
	TP29	LXTAL_N



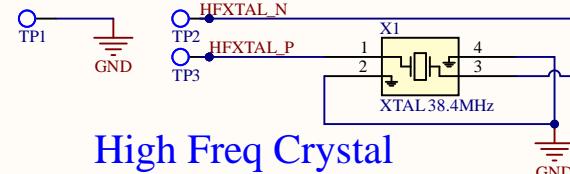
Title		
Insane Keyboard		
Size	Number	Revision
Letter	1	v1.0
Date:	11/04/2024	Sheet of
File:	C:\Parth\Keyboard-Left.SchDoc	Low Self Esteem Drawn By: Parth Thakkar



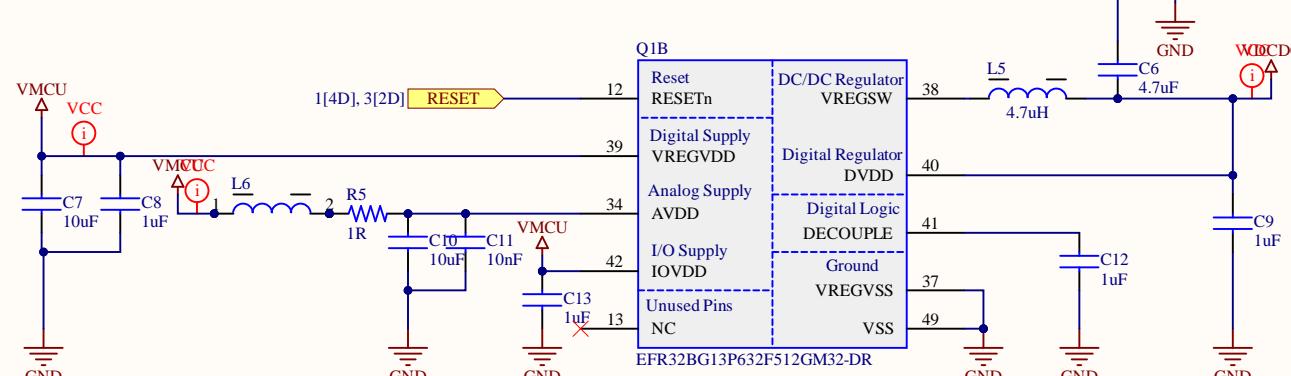
Antenna & Radio Interface



Low Freq Crystal



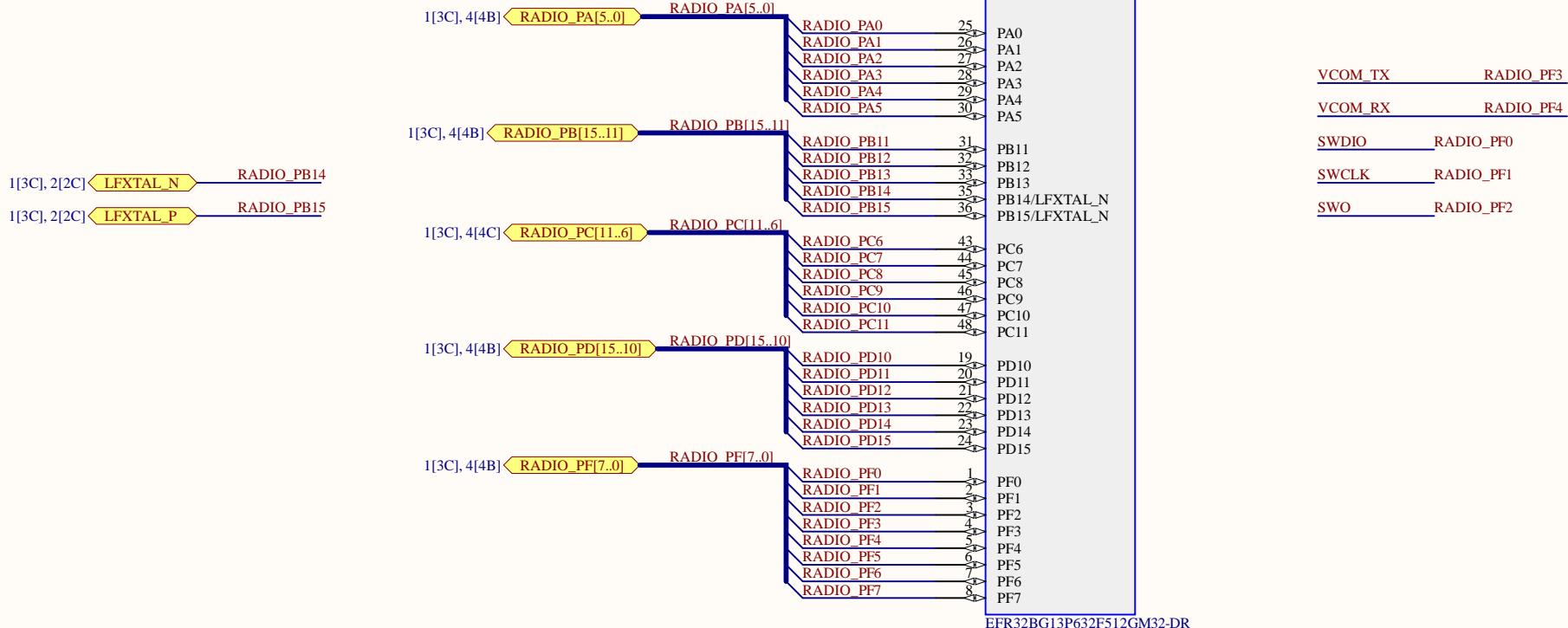
High Freq Crystal



Power & Decoupling

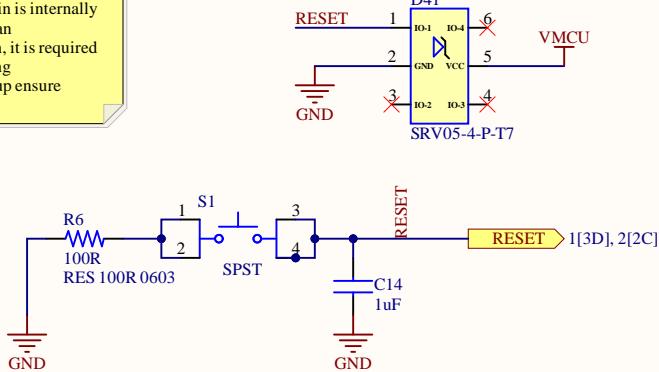
Title		RF and Crystal	
Size Letter	Number	2	Revision v1.0
Date:	11/04/2024	Sheet of	Low Self Esteem
File:	C:\Parth\RF Antenna Power.SchDoc	Drawn By:	Parth Thakkar

EFRBG13 GPIOs



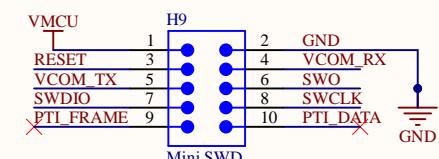
Reset

△ Reset input, active low. This pin is internally pulled up to AVDD. To apply an external reset source to this pin, it is required to only drive this pin low during reset, and let the internal pull-up ensure that reset is released.



Mini Simplicity Connector

△ • Serial Wire Debug (SWD) with SWO
• Packet Trace Interface (PTI)
• Virtual COM port (VCOM)
• AEM monitored voltage rail

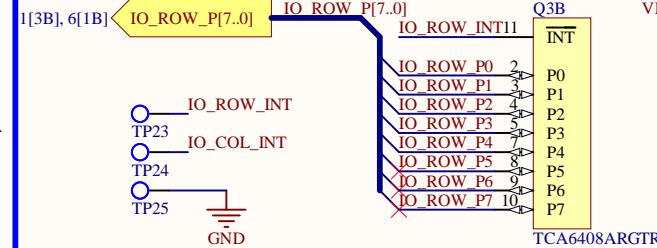


Reset

IO Connections

Size	Number	3	Revision
Letter			v1.0
Date:	11/04/2024		Sheet of Low Self Esteem
File:	C:\Parth\EFR32 IO.SchDoc		Drawn By: Parth Thakkar

1



A

IO_COL_INT
TP24
TP25
GNDIO_ROW_INT
TP23

IO_ROW_P[7..0]

1[3B], 6[1B]

IO_ROW_P[7..0]

IO_ROW_INT11

Q3B

INT

P0

P1

P2

P3

P4

P5

P6

P7

TCA6408ARGTR

VMCU

R27

10kΩ

VMCU

R34

10kΩ

VMCU

R35

10kΩ

VMCU

Address : 0x20

12 EFR_SCL

13 EFR_SDA

SCL

SDA

TCA6408ARGTR

VMCU

GND

11

Q4A

VCCP

VCCI

RESET

ADDR

GND

TCA6408ARGTR

VMCU

R28

10kΩ

VMCU

R38

100R

VMCU

S2

1

SPST

3

EXP_RESET

C27

1uF

GND

11

IO_COL_P[7..0]

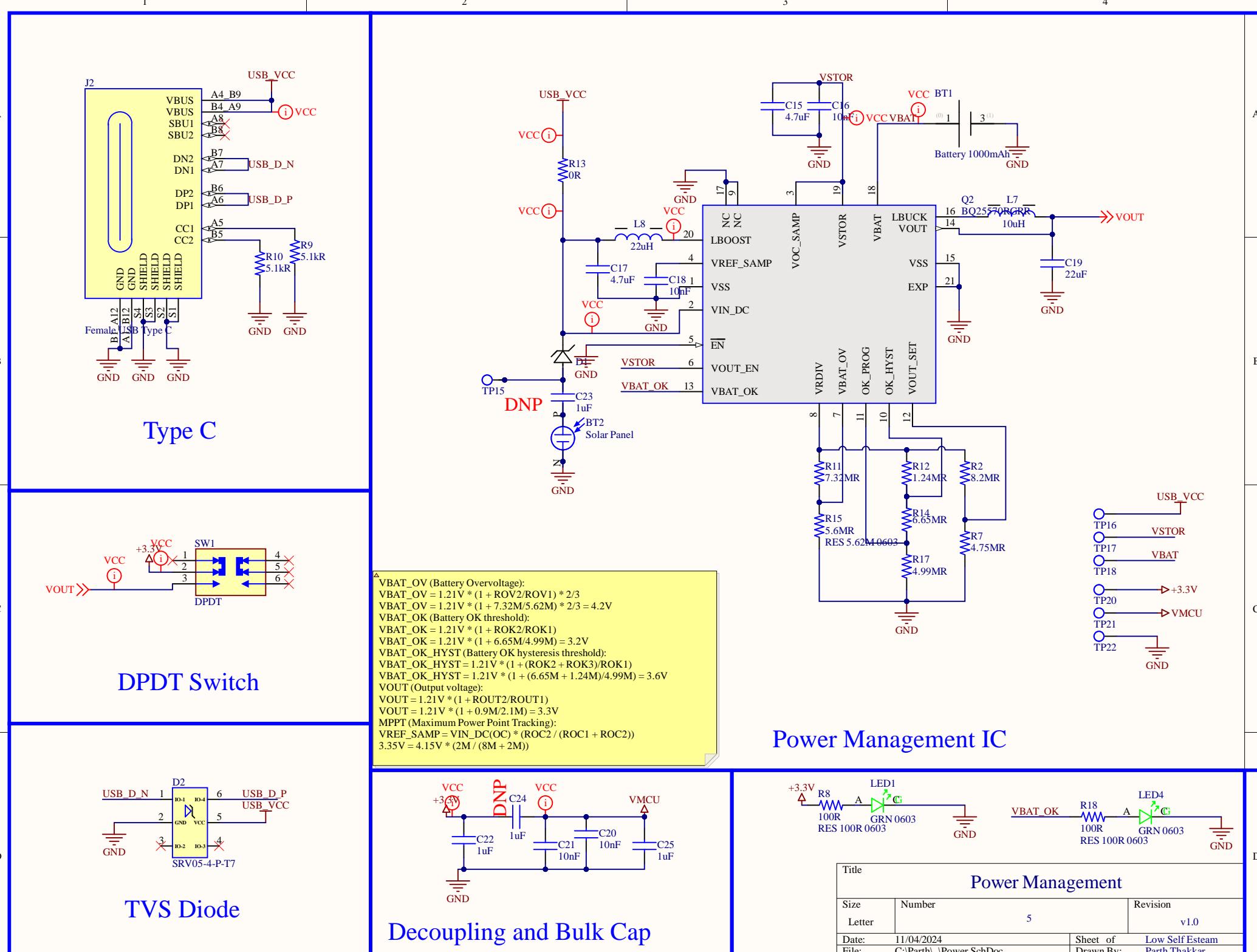
IO_COL_INT

IO_COL_P[7..0]

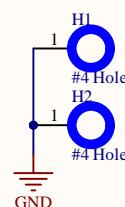
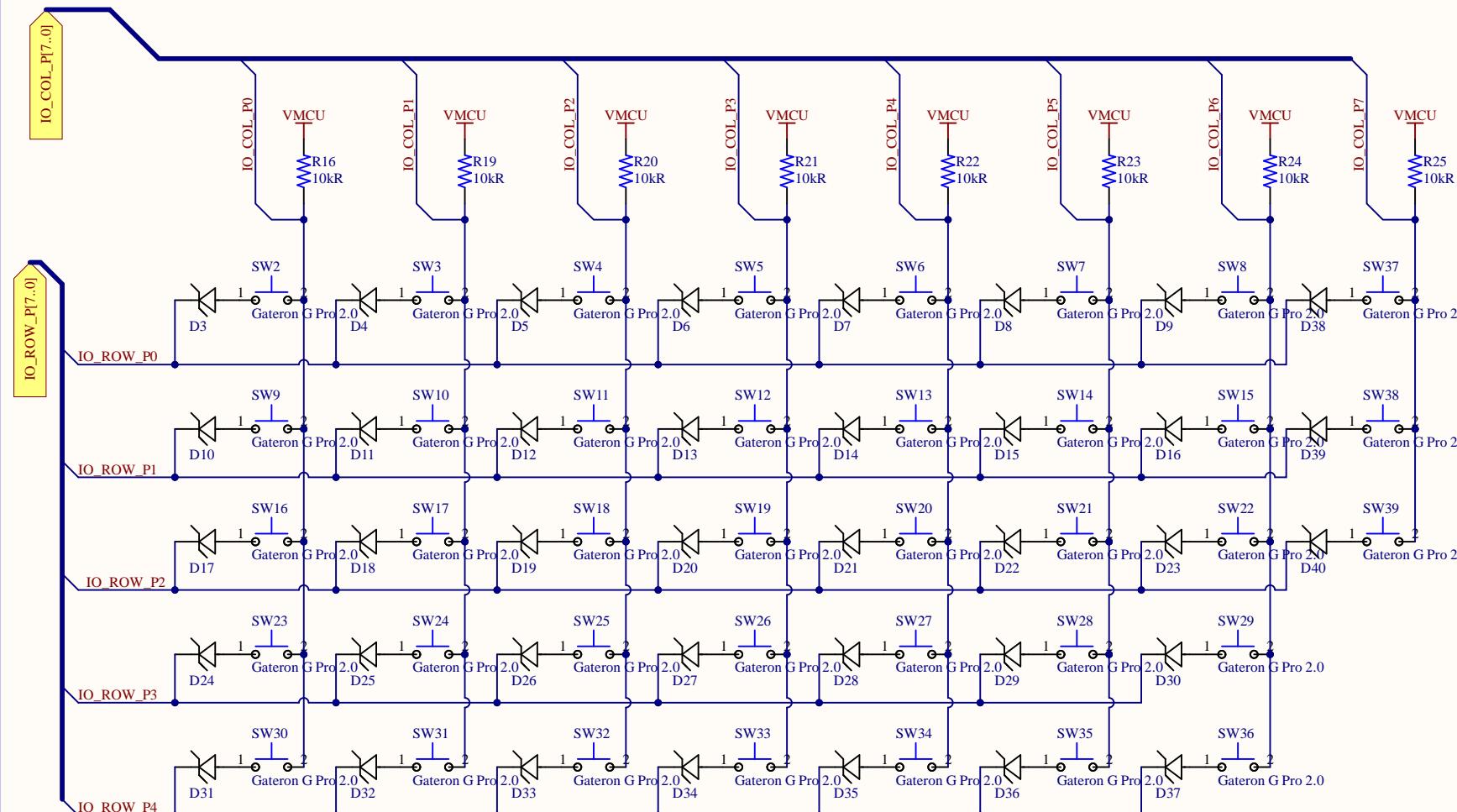
IO_COL_INT

IO_COL_P[7..0]

IO_COL_P[7..0]</



Mechanical Switches



Mechanical Holes

Title

Mechanical Switches

Size

A

Number

6

Revision

v1.0

Date:

11/04/2024

Sheet of

Low Self Esteem

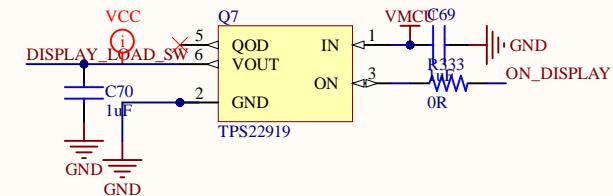
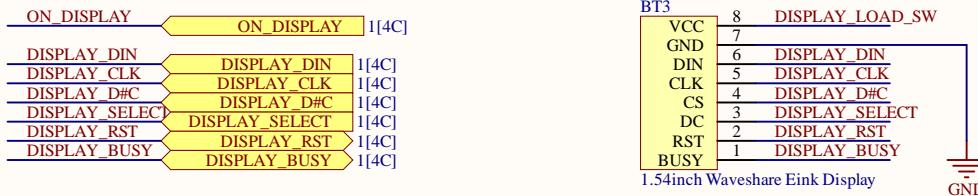
File:

C:\Parth\Switches.SchDoc

Drawn By:

Parth Thakkar

DISPLAY



Waveshare's e 1.5inch e-Paper V2

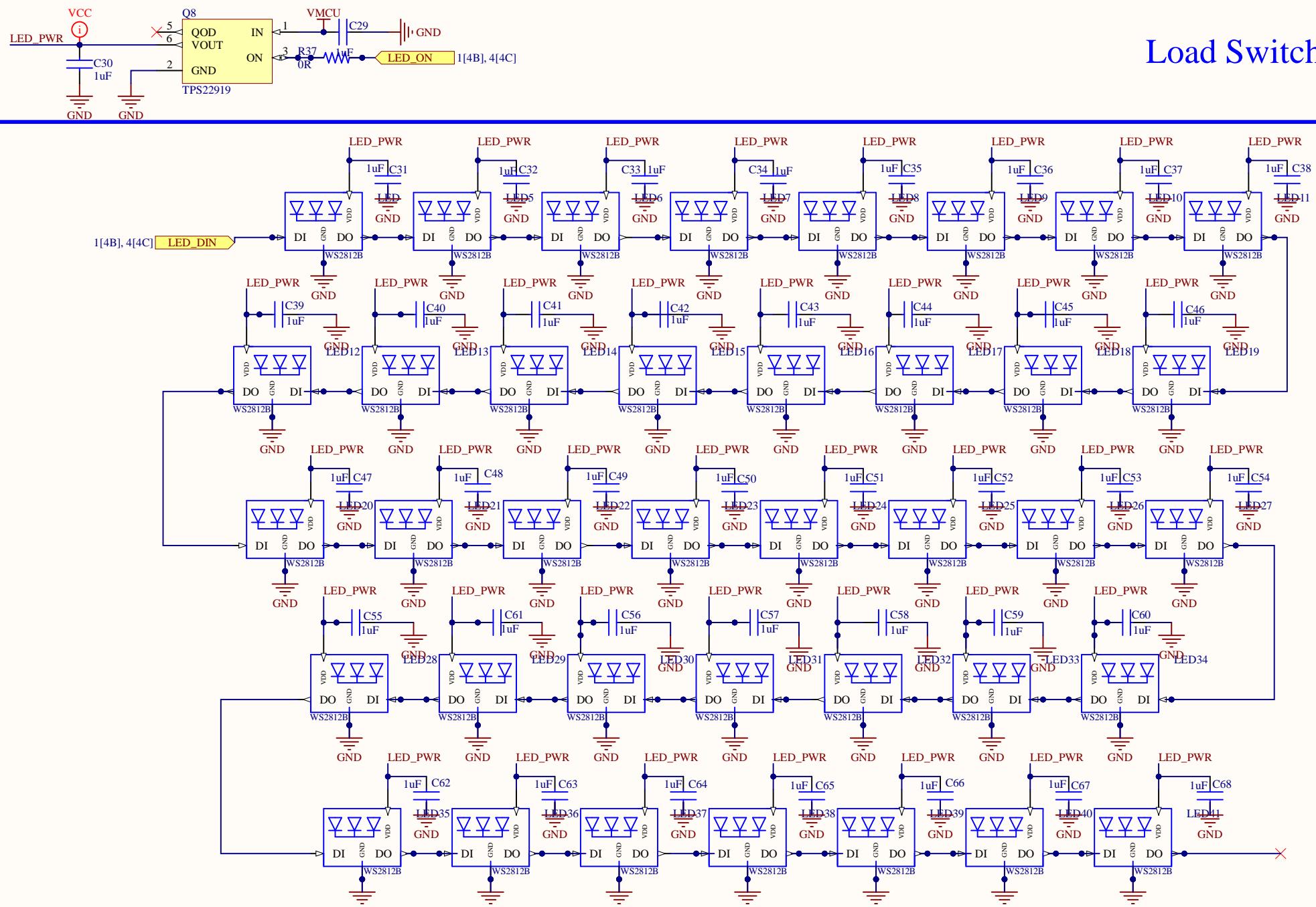
Parameter	Test condition	Min	Typ	Max	Unit
VDD		2.2		3.7	V
Operating temp		-40		105	degC
Current during update		0.0015		0.008	A
Sleep current				0.000002	A
Refresh time				2	s

C

D

Title			
Size	Number	Revision	
Letter	7	v1.0	
Date:	11/04/2024	Sheet of	Low Self Esteem
File:	C:\Parth\Documents\Display.SchDoc	Drawn By:	Parth Thakkar

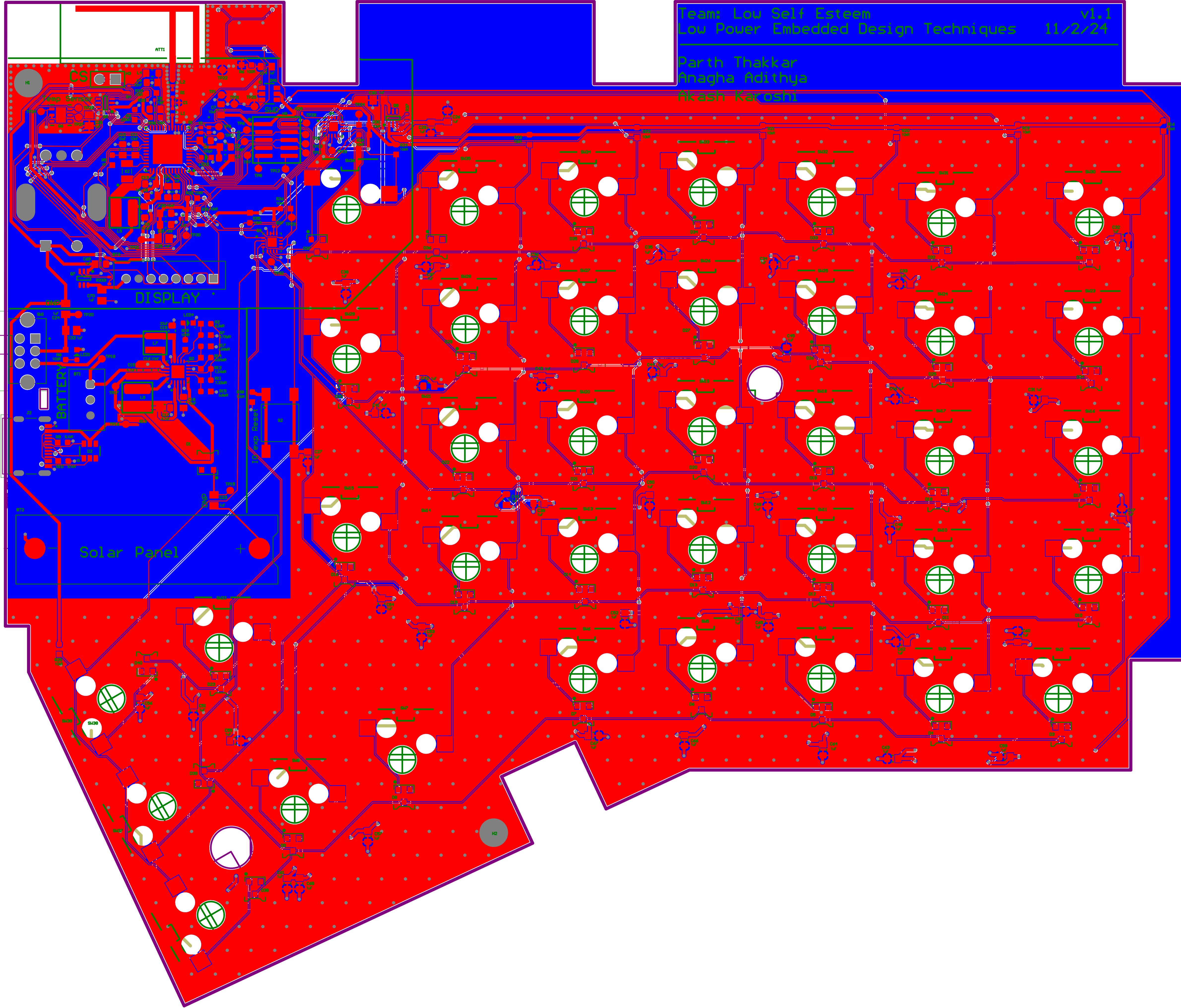
Load Switch



RGB LEDs

Title			
Size	Number	Revision	v1.0
Letter	8		
Date:	11/04/2024	Sheet of	Low Self Esteem
File:	C:\Parth\Lights.SchDoc	Drawn By:	Parth Thakkar

Parth Thakkar
Anagha Adithya
Akash Kekoshi



Parth Thakkar Anagha Adithya Akash Karoshi

