HV boost circuit

J2
AFC24-S24FIC-00

L3 10uH +3V3 +3V3
C17 4.7uF
R3 10k
GND

EPD RST Pull-up
EPD_RST

Q1 Si1308
G D S

R7 10K GND
R8 0.47R
GND

24
23 GDR
22 RESE
21 VGL
20 VGH
19
18
17 GND
16 EPD_BUSY
15 EPD_RST
14 EPD_DC
13 EPD_CS
12 EPD_CLK
11 EPD_MOSI
10 VDDIO
9 VCI
8 VSS
7 VDD
6 VPP
5 VSH
4
3
2 PREVGL
1 VCOM

C7 4.7uF GND
C6 4.7uF GND
+3V3
C9 1uF GND
C10 1uF GND
C12 1uF
C11 4.7uF
C13 4.7uF
C8 1uF

TP1 VGH
PREVGH
D2 MBR0530
C14 4.7uF

C16 4.7uF 50V

MBR0530 D1 D3
PREVGH

C15 4.7uF
PREVGL TP3
TP2 VCOM

Open source Mark

open souce hardware

CR2450 and power management

GATE input voltage is LOW then P-channel MOSFET connected in the circuit will be turned ON letting VBAT flow to LDO

+VBAT
P-CH MOSFET

BT1 Battery_Cell +VBAT
GND

VBUS
R10 10K
GND
D5 1N5817
Q2 Si2301CDS
GATE SRC +3V3

IC1
+3V3 ESP32-C3-WROOM-02-H4

1 3V3
2 ESP_RST EN
3 EPD_RST IO4
4 EPD_BUSY IO5
5 IO6
6 IO7
7 IO8
8 IO9
9 GND_1
10 IO10
11 RXD
12 TXD
13 USB_D-
14 USB_D+

15 IO3 EPD_DC
16 IO2 EPD_CS
17 IO1 EPD_MOSI
18 IO0 EPD_CLK
19 GND_2
20 GND_3
21 GND_4
22 GND_5
23 GND_6
24 GND_7
25 GND_8
26 GND_9
27 GND_10
IO18
IO19

SDA
SCL
BOOT
GND
SW10
GND

R15 5.1k R14 5.1k
TP6 IO8
TP4 IO20
TP5 IO21

USB-C JTAG / CDC Serial to MCU

VBUS
A4 VBUS
A5 CC1
B5 CC2
A7 D-
B7 D-
A6 D+
B6 D+
A8 SBU1
B8 SBU2
A1 GND SHIELD S1

USB_C_Receptacle_USB2.0

R1 5.1k GND
R20 5.1k GND
USB_D-
USB_D+

J1
GND GND

Boot / RST / Push switches

+3V3
SW3 R21 10k
ESP_RST
GND

+3V3
R2 10k
SW10
SW2
GND
C1 1uF

+3V3
R4 10k
BOOT
SW1
GND
C2 22pF

QWIIC I2C

+3V3
GND
SDA
SCL
1 2 3 4
5 MT5
6 MT6
J4
SM04B-SRSS-TB_LF_SN_
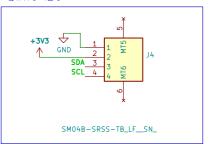
PCF8563T Real time clock via I2C

+3V3
C_Polarized 100uF PWR_FLAG
C19
D8
C20 12 pF
Crystal_Small Y1
C21 12 pF
GND

1 OSCI VDD 8
2 OSCO VSS 4
SCL 6 I2C_SCL
SDA 5 I2C_SDA
CLKO 7
INT 3
PCF8563T
U8
GND

+3V3
R18 10 K
RTC_INT