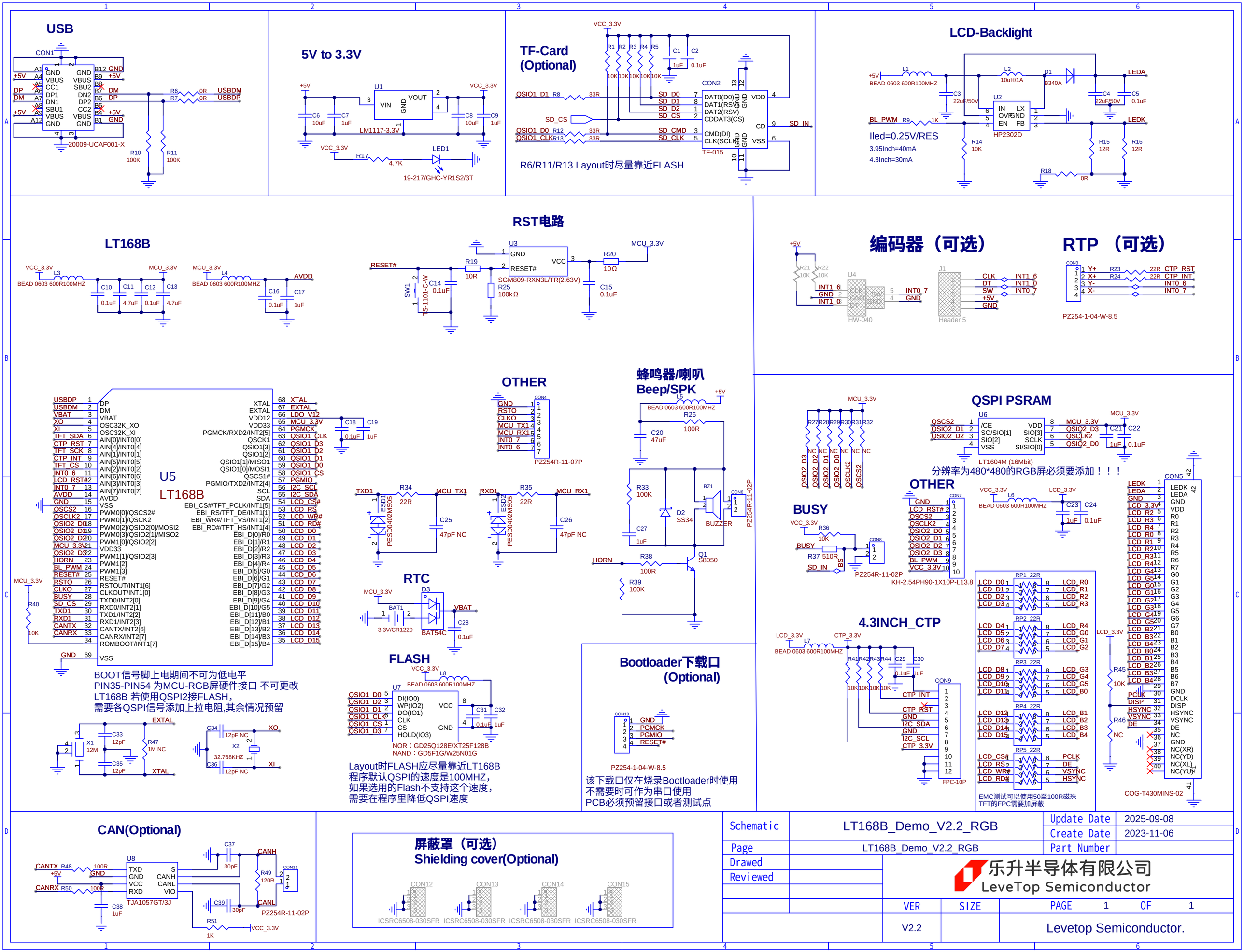
USB
CON1
20009-UCAF001-X
R6 0R USBDM
R7 0R USBDP
R10 100K
R11 100K
5V to 3.3V
U1
VIN
VOUT
GND
LM1117-3.3V
C6 10uF
C7 1uF
C8 10uF
C9 1uF
VCC_3.3V
R17 4.7K
LED1
19-217/GHC-YR1S2/3T
TF-Card (Optional)
CON2
TF-015
SD_D0
SD_D1
SD_D2
SD_CS
SD_CMD
SD_CLK
SD_IN
QSIO1_D1 R8 33R
QSIO1_D0 R12 33R
QSIO1_CLK R13 33R
R1 R2 R3 R4 R5 10K
C1 1uF
C2 0.1uF
R6/R11/R13 Layout时尽量靠近FLASH
LCD-Backlight
L1
BEAD 0603 600R100MHZ
L2 10uH/1A
D1 B340A
LEDA
LEDK
U2
HP2302D
C3 22uF/50V
C4 22uF/50V
C5 0.1uF
BL_PWM R9 1K
Iled=0.25V/RES
3.95Inch=40mA
4.3Inch=30mA
R14 10K
R15 12R
R16 12R
R18 0R
LT168B
VCC_3.3V
L3
BEAD 0603 600R100MHZ
MCU_3.3V
C10 0.1uF
C11 4.7uF
C12 0.1uF
C13 4.7uF
L4
AVDD
C16 0.1uF
C17 1uF
RST电路
U3
SGM809-RXN3L/TR(2.63V)
RESET#
R19 10R
C14 0.1uF
SW1 TS-1101-C-W
R25 100kΩ
R20 10Ω
C15 0.1uF
编码器（可选）
U4
HW-040
J1
Header 5
CLK
DT
SW
+5V
GND
INT1_6
INT1_0
INT0_7
RTP （可选）
CON3
PZ254-1-04-W-8.5
U5
LT168B
USBDP
USBDM
VBAT
XO
XI
TFT_SDA
CTP_RST
TFT_SCK
CTP_INT
TFT_CS
LCD_RST#
AVDD
VSS
QSCS2
QSCLK2
QSIO2_D0
QSIO2_D1
QSIO2_D2
MCU_3.3V
HORN
BL_PWM
RESET#
RSTO
CLKO
BUSY
SD_CS
TXD1
RXD1
CANTX
CANRX
GND
R40 10K
XTAL
EXTAL
VDD12
VDD33
MCU_3.3V
PGMCK
QSIO1_CLK
QSIO1_D3
QSIO1_D2
QSIO1_D1
QSIO1_D0
QSIO1_CS
PGMIO
I2C_SCL
I2C_SDA
LCD_CS#
LCD_RS
LCD_WR#
LCD_RD#
LCD_D0
LCD_D1
LCD_D2
LCD_D3
LCD_D4
LCD_D5
LCD_D6
LCD_D7
LCD_D8
LCD_D9
LCD_D10
LCD_D11
LCD_D12
LCD_D13
LCD_D14
LCD_D15
C18 0.1uF
C19 1uF
BOOT信号脚上电期间不可为低电平
PIN35-PIN54 为MCU-RGB屏硬件接口 不可更改
LT168B 若使用QSPI2接FLASH，
需要各QSPI信号添加上拉电阻,其余情况预留
X1 12M
C33 12pF
C35 12pF
R47 1M NC
C34 12pF NC
X2 32.768KHZ
C36 12pF NC
OTHER
CON4
PZ254R-11-07P
TXD1
RXD1
ESD1 PESD0402M05
ESD2 PESD0402M05
R34 22R
R35 22R
MCU_TX1
MCU_RX1
C25 47pF NC
C26 47pF NC
RTC
D3 BAT54C
BAT1 3.3V/CR1220
VBAT
C28 0.1uF
FLASH
U7
L8
BEAD 0603 600R100MHZ
DI(IO0)
WP(IO2)
DO(IO1)
CLK
CS
HOLD(IO3)
VCC
GND
C31
C32
NOR：GD25Q128E/XT25F128B
NAND：GD5F1G/W25N01G
Layout时FLASH应尽量靠近LT168B
程序默认QSPI的速度是100MHZ，
如果选用的Flash不支持这个速度，
需要在程序里降低QSPI速度
蜂鸣器/喇叭
Beep/SPK
L5
BEAD 0603 600R100MHZ
R26 100R
C20 47uF
R33 100K
C27 1uF
D2 SS34
BZ1 BUZZER
CON6
PZ254R-11-02P
HORN
R38 100R
R39 100K
Q1 S8050
Bootloader下载口
(Optional)
CON10
PZ254-1-04-W-8.5
该下载口仅在烧录Bootloader时使用
不需要时可作为串口使用
PCB必须预留接口或者测试点
QSPI PSRAM
U6
LT1604M (16Mbit)
/CE
SO/SIO[1]
SIO[2]
VSS
VDD
SIO[3]
SCLK
SI/SIO[0]
MCU_3.3V
QSCS2
QSIO2_D1
QSIO2_D2
QSIO2_D3
QSCLK2
QSIO2_D0
C21 1uF
C22 0.1uF
分辨率为480*480的RGB屏必须要添加！！！
OTHER
CON7
PZ254R-11-02P
KH-2.54PH90-1X10P-L13.8
BUSY
R36 10K
R37 510R
SD_IN
CON8
VCC_3.3V
L6
BEAD 0603 600R100MHZ
LCD_3.3V
C23 1uF
C24 0.1uF
4.3INCH_CTP
L7
BEAD 0603 600R100MHZ
CTP_3.3V
R41 R42 R43 R44 10K
C29 0.1uF
C30 1uF
CON9
CTP_INT
CTP_RST
GND
I2C_SDA
I2C_SCL
CTP_3.3V
FPC-10P
RP1 22R
RP2 22R
RP3 22R
RP4 22R
RP5 22R
LCD_R0
LCD_R1
LCD_R2
LCD_R3
LCD_R4
LCD_G0
LCD_G1
LCD_G2
LCD_G3
LCD_G4
LCD_G5
LCD_B0
LCD_B1
LCD_B2
LCD_B3
LCD_B4
PCLK
DE
VSYNC
HSYNC
EMC测试可以使用50至100R磁珠
TFT的FPC需要加屏蔽
CON5
COG-T430MINS-02
R45 10K
R46 NC
CAN(Optional)
U8
TJA1057GT/3J
CANTX R48 100R
CANRX R50 100R
C38 1uF
C37 30pF
C39 30pF
CANH
CANL
R49 120R
CON11
PZ254R-11-02P
R51 1K
VCC_3.3V
屏蔽罩（可选）
Shielding cover(Optional)
CON12
CON13
CON14
CON15
ICSRC6508-030SFR
Schematic
LT168B_Demo_V2.2_RGB
Page
LT168B_Demo_V2.2_RGB
Drawed
Reviewed
Update Date 2025-09-08
Create Date 2023-11-06
Part Number
乐升半导体有限公司
LeveTop Semiconductor
VER
SIZE
PAGE 1 OF 1
V2.2
Levetop Semiconductor.