MLX90640 Schematic

Power Supply (U1 - ME6211-3.3)

VDD5V
C1 1uF
U1
VIN VOUT 5
VSS
CE NC 4
GND
ME6211-3.3
VDD3V3
C2 1uF
C3 100nF
GND

MLX90640 Sensor (U2)

VDD3V3
R1 1K R2 1K
U2
1 VDD SDA 4 — I2C0_SDA
2 GND SCL 3 — I2C0_SCL
GND
MLX90640

Oscillator (Y1)

Y1
1 XIN GND 4
2 GND XOUT 3
8MHz
C5 20pF
GND
GND
C4 20pF
R3 1M
OSC_IN
OSC_OUT

Reset / Boot

VDD3V3
R6 10K
NRST

BOOT
R7 10K
GND
BOOT0

TX
USART0_TX

RX
USART0_RX

GND
GND

Microcontroller (U3 - GD32F350G8U6TR)

U3
14 PB0   PA0 6
15 PB1   PA1 7
                PA2 8
24 PB3   PA3 9
25 PB4   PA4 10
26 PB5   PA5 11
27 PB6   PA6 12
28 PB7   PA7 13
I2C0_SCL
I2C0_SDA
OSC_IN 2 OSC_IN/PF0
OSC_OUT 3 OSC_OUT/PF1   PA9 17 USART0_TX
                        PA10 18 USART0_RX
                        PA11 19 — R4 22R — USB_D-
                        PA12 20 — R5 22R — USB_D+
BOOT0 1 BOOT0   PA13/SWDIO 21
NRST 4 NRST   PA14/SWCLK 22
                        PA15 23
16 VDD   VSS/VSSA 0
5 VDDA   GND
VDD3V3
GD32F350G8U6TR

USB Type-C Connector (J6)

J6
GND   A1 GND   GND   B1 GND
      A2 TX1+   TX2+ B2
      A3 TX1-   TX2- B3
VDD5V A4 VBUS   VBUS B4 VDD5V
      A5 CC1   CC2   B5
USB_D+ A6 D+   D+   B6
USB_D- A7 D-   D-   B7
      A8 SBU1   SBU2 B8
VDD5V A9 VBUS   VBUS B9 VDD5V
      A10 RX2-   RX1- B10
      A11 RX2+   RX1+ B11
GND   A12 GND   GND   B12 GND
Type_C-24P

R8 5.1K
GND

U2

Hoozz Play

J6

Top Overlay

TX RX GND

R3

Y1

C5

R1 R2 C3 C2

C4

U3

R5 R4 R8 C1 U1

R6

R7

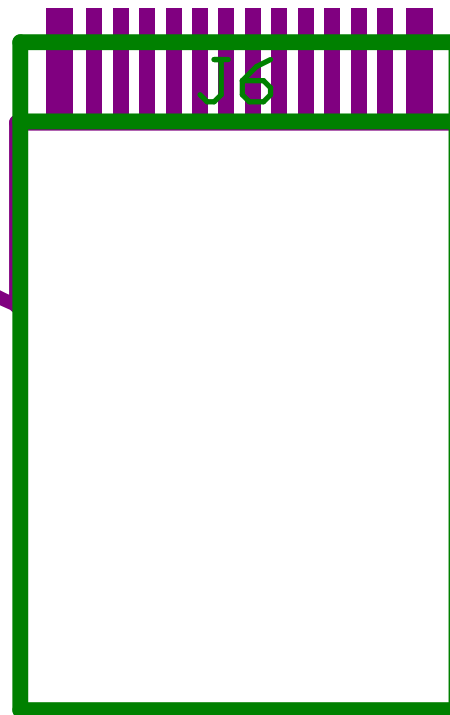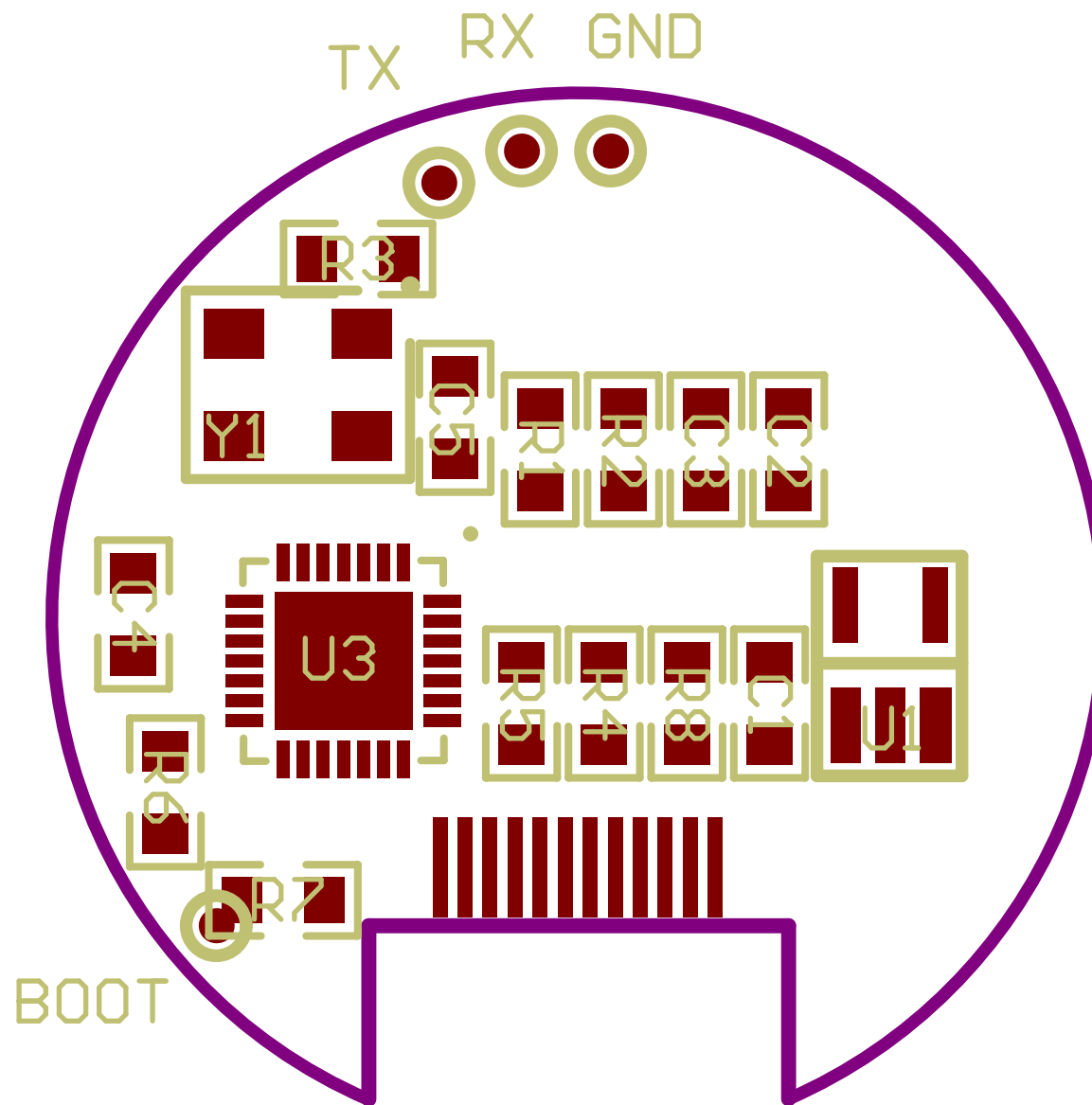BOOT

Bottom Overlay

Component list

Bill of Materials For Project [MLX90640_PCB_Project.PrjPCB] (No PCB Document Selected)

Source Data From: MLX90640_PCB_Project.PrjPCB

Project: MLX90640_PCB_Project.PrjPCB

Variant: None

Hoozz Play

	Report Date:	2024/4/20	21:31:10
	Print Date:	20-Apr-24	9:31:17 PM

#	Designator	Comment	Value	Footprint	Description	Pins	LibRef	Quantity
1	BOOT, GND, RX, TX	TEST-PORT		TEST-PORT		1	TEST-PORT	4
2	C1, C2	Cap	1uF	0603	Capacitor	2	Cap	2
3	C3	Cap	100nF	0603	Capacitor	2	Cap	1
4	C4, C5	Cap	20pF	0603	Capacitor	2	Cap	2
5	J6	Type_C-24P		Type_C-24P-A	USB Type C	24	Type_C-24P	1
6	R1, R2	Res	1K	0603	Resistor	2	Res	2
7	R3	Res	1M	0603	Resistor	2	Res	1
8	R4, R5	Res	22R	0603	Resistor	2	Res	2
9	R6, R7	Res	10K	0603	Resistor	2	Res	2
10	R8	Res	5.1K	0603	Resistor	2	Res	1
11	U1	ME6211-3.3		SOT-23-5	No Description Available	5	ME6211-3.3	1
12	U2	MLX90640		MLX90640		4	MLX90640	1
13	U3	GD32F350G8U6TR		QFN28_4X4X0.8		29	GD32F350GxUx	1
14	Y1	8MHz		3225		4	XTAL2	1

Approved

Notes

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