Y1
ECS-TXO-2520-33-240-AN-TR

3.3V

	OE	VDD		4
1				
2	GND	OUT		3

3.3V

GND

C2
100nF

GND

C3
100nF

3.3V

GND

VBUS

U1
PIC32MM0256GPM028-I/ML

Debug — 1 — PGED1/AN2/C1IND/C2INB/C3INC/RP6/OCM2C/RB0
2 — PGEC1/AN3/C1INC/C2INA/RP7/OCM2D/RB1
SDA — 3 — AN4/C1INB/RP8/SDA2/OCM2E/RB2
SCL — 4 — TDI/AN11/C1INA/RP9/SCL2/OCM2F/RB3
5 — VSS
CLKI — 6 — OSC1/CLKI/AN5/RP3/OCM1C/RA2
7 — OSC2/CLKO/AN6/C3IND/RP4/OCM1D/RA3
8 — SOSCI/AN7/RP10/OCM3C/RB4
9 — SOSCO/SCLKI/RP5/PWRLCLK/OCM3D/RA4
10 — VDD
11 — PGED3/RP11/ASDA1/USBID/SS3/FSYNC3/OCM3E/RB5
12 — VBUS/RB6
13 — RP12/SDA3/SDI3/OCM3F/RB7
14 — TCK/RP13/SCL1/U1CTS/SCK1/OCM1A/RB8

PGED2/VREF-/AN1/RP2/OCM1F/RA1 — 28 — PGED
PGEC2/VREF+/CVREF+/AN0/RP1/OCM1E/INT3/RA0 — 27 — PGEC
MCLR — 26 — MCLR
AVDD/VDD — 25
AVSS/VSS — 24
AN10/C3INA/REFCLKO/RP17/U1RX/SS1/FSYNC1/OCM2B/INT0/RB15 — 23
CVREF/AN9/C3INB/RP16/RTCC/U1TX/VBUSON/SDI1/OCM3B/INT1/RB14 — 22
AN8/LVDIN/RP15/SCL3/SCK3/OCM3A/RB13 — 21
VUSB3V3 — 20
D+/RB11 — 19 — D_P
D-/RB10 — 18 — D_N
VCAP — 17 — VCAP
PGEC3/TDO/RP18/ASCL1/T3CK/T3G/USBOEN/SDO3/OCM2A/RC9 — 16 — LED
TMS/REFCLKI/RP14/SDA1/T1CK/T1G/T2CK/T2G/U1RTS/U1BCLK/SDO1/OCM1B/INT2/RB9 — 15

GND

3.3V

R1
5.1kR

3.3V

C1
100nF

GND

3.3V

D_P
D_N

VCAP

C4
10uF

GND

LED

R2
470R

D1
APT1608VRCXF/A-5MAV

GND

R3
470R

Debug

J1
Tag Connect No Legs

3.3V

Debug R — 6 — LVP
PGEC — 5 — PGC
PGED — 4 — PGD
3 — Ground
2 — VDD
MCLR — 1 — MCLR/VPP

GND

3.3V   3.3V

R4   R5
5.1kR   5.1kR

SDA
SCL

SDA — Thermometer[3B]
SCL — Thermometer[2B]

D_P
D_N

D_P — USB-C[1B]
D_N — USB-C[1B]

RX
TX

RX — RX
TX — TX

PIC32MM[7C] D_P

PIC32MM[7C] D_N

D2
SP0402B-ULC-01ETG
GND

D3
SP0402B-ULC-01ETG
GND

D4
SP0402B-ULC-01ETG
GND

R6
5.1kR
GND

R7
5.1kR
GND

VBUS

CC2

CC1

GND

J2
Molex 217179-0001

B1 A12	GND
B4 A9	VBUS
B5	CC2
A8	SBU1
B6	D+
A7	D-
A6	D+
B7	D-
A5	CC1
B8	SBU2
A4 B9	VBUS
A1 B12	GND

Shell

TITLE
USB-C.SchDoc

SIZE
A4

PROJECT
x-IMU3 Thermometer

VERSION
v1.0

VARIANT [No Variations]

SHEET 2 OF 4

AUTHOR Seb Madgwick

DATE 29/03/2024

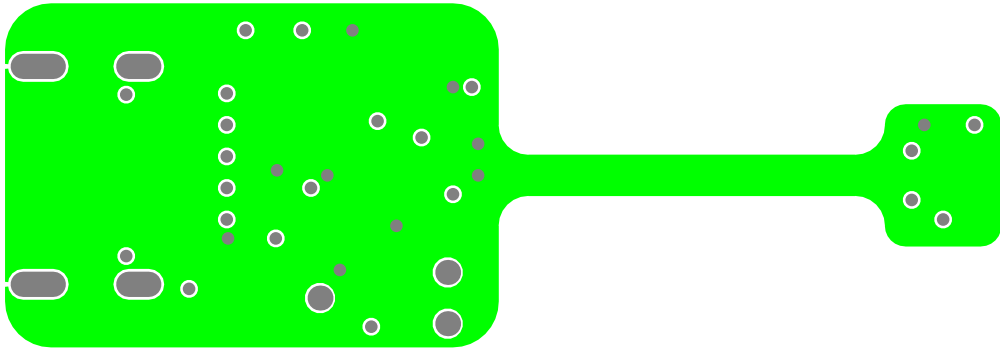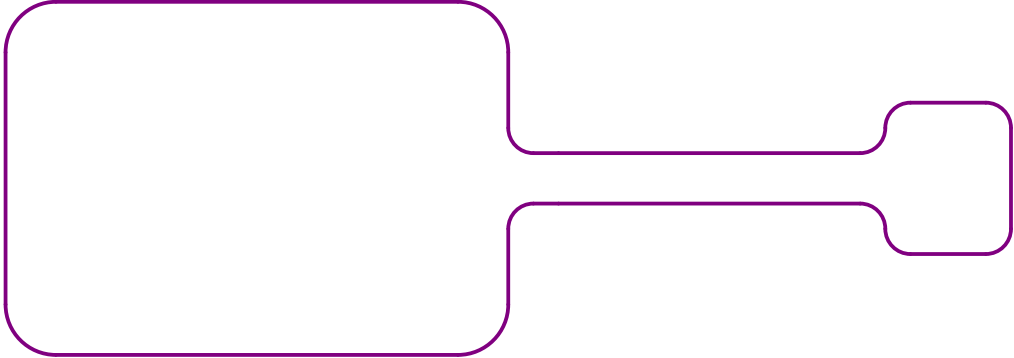X-IO TECHNOLOGIES

U2
TPS7A0533PDBZ

VBUS

3.3V

IN
OUT
GND

3
2
1

C6
10uF

C5
10uF

GND
GND
GND
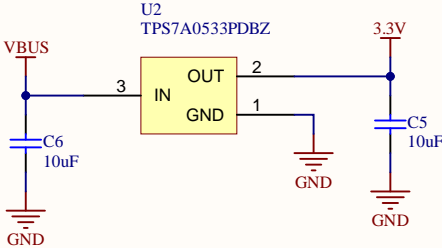
TITLE		
3.3V Regulator.SchDoc		
SIZE A4	PROJECT x-IMU3 Thermometer	VERSION v1.0
VARIANT [No Variations]		SHEET 3 OF 4
AUTHOR Seb Madgwick		DATE 29/03/2024

U3
TMP117AIDRV

PIC32MM[5C] SCL

SCL	SDA
GND	V+
ALERT	ADD0

1 2 3

6 5 4

SDA PIC32MM[5C]

3.3V

GND

GND

GND

C7
100nF
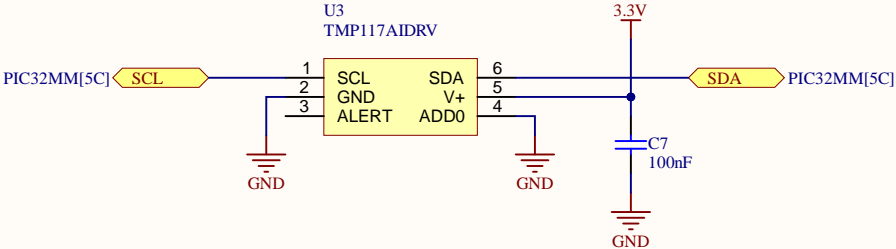
TITLE
Thermometer.SchDoc

SIZE
A4

PROJECT
x-IMU3 Thermometer

VERSION
v1.0

VARIANT   [No Variations]
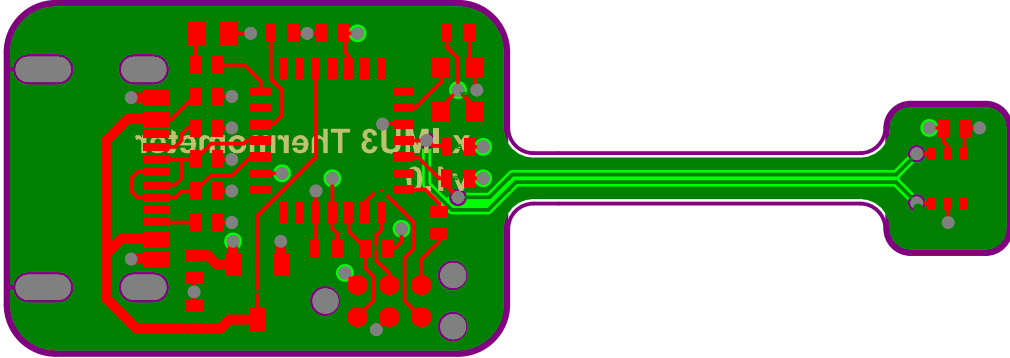
SHEET 4   OF 4
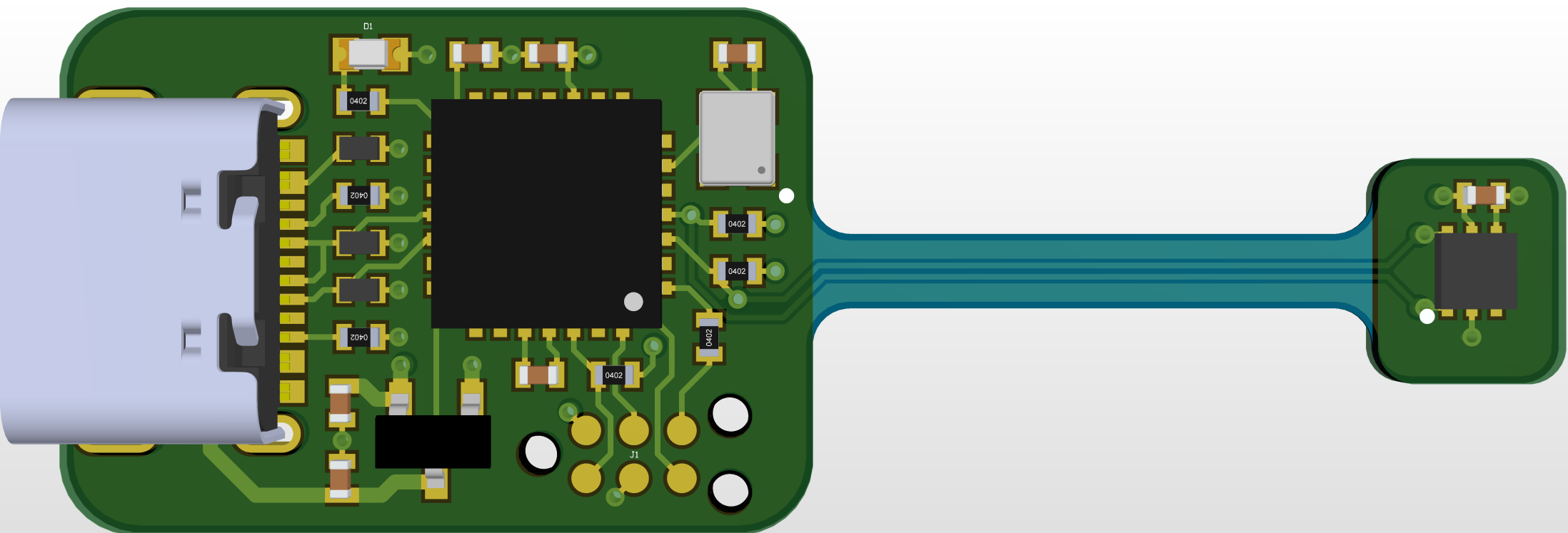
AUTHOR   Seb Madgwick

DATE   29/03/2024

D1

C4　　C3　　　　　　C2

R2

D4　　　　　　　　　　　YI

R7　　　　　　　　　　R5

U1

D2

J2　　　　D3　　　　　　　R4　　　　　　　　　　　　　　　　　C7

R6　　　　　　　　R3　　　　　　　　　　　　　　　　　U3

C1　　　R1

C5

U2

C6　　　　　　　J1
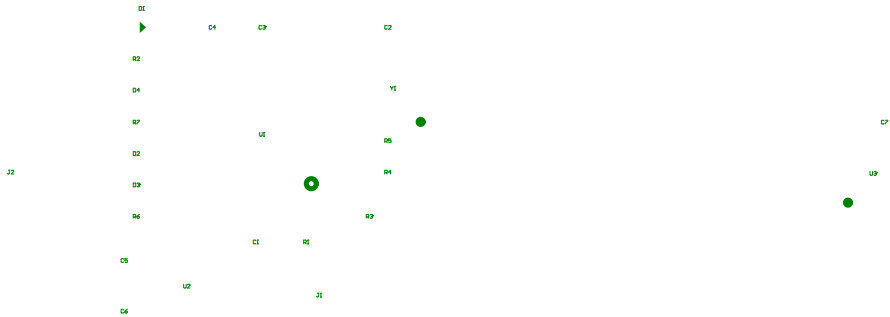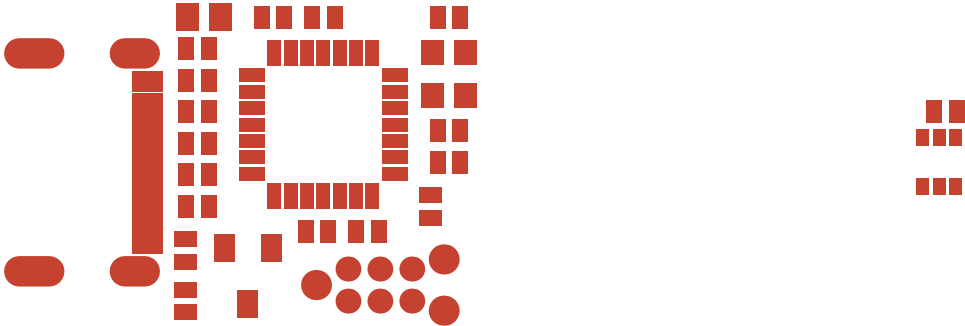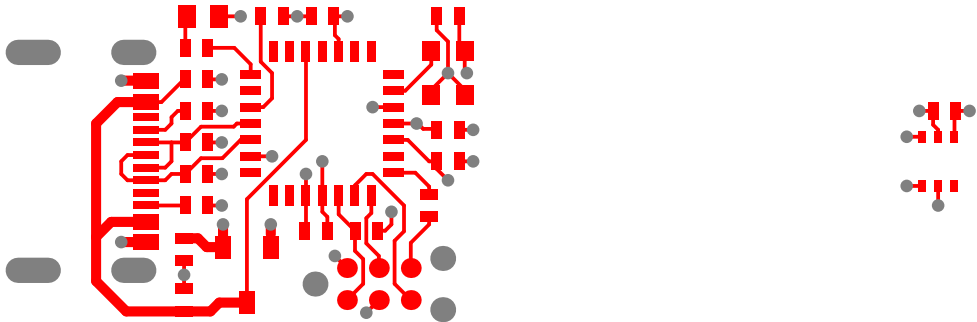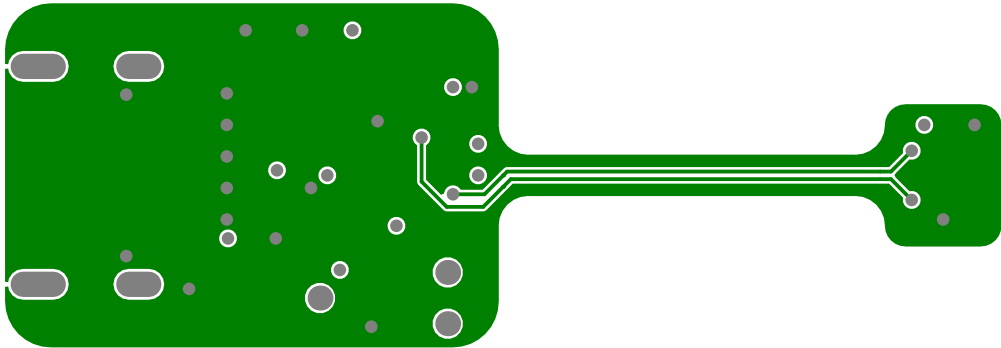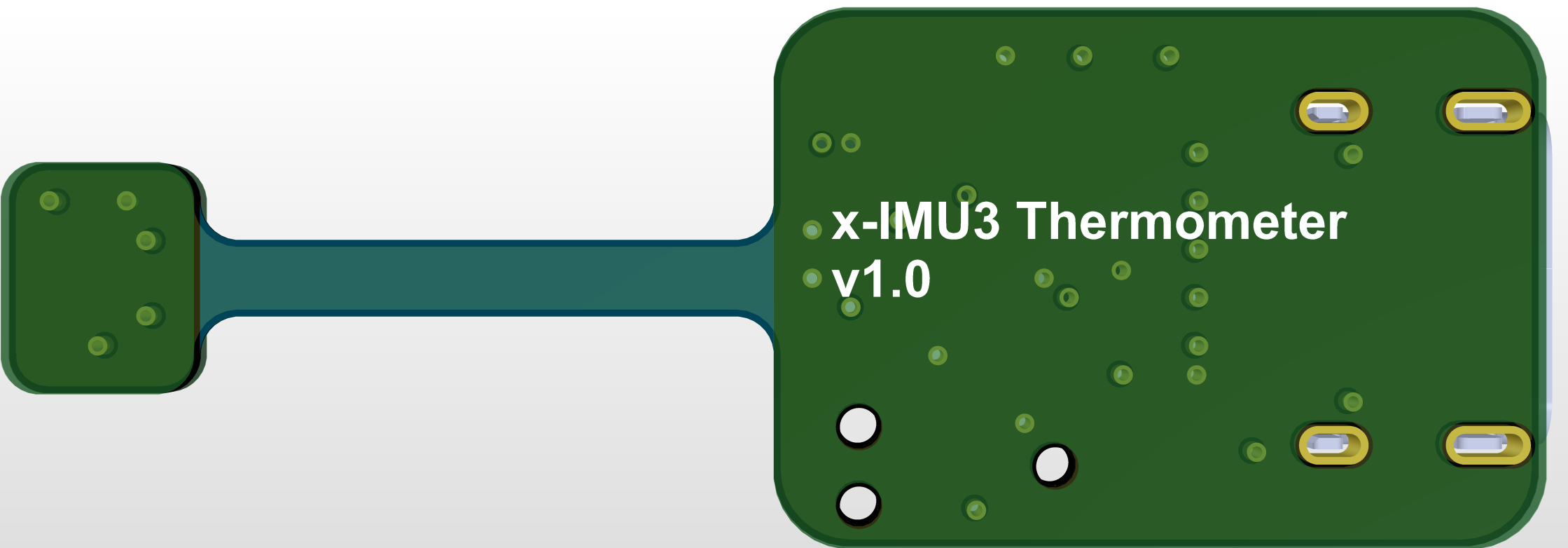
x-IMU3 Thermometer
v1.0

x-IMU3 Thermometer
v1.0

D1

C4 C3

C2

R2

D4

D7

J2

D2

D9

R4

Y1

U1

R5

R4

R2

C1 R1

C5

U2

J1

C6

C7

U3
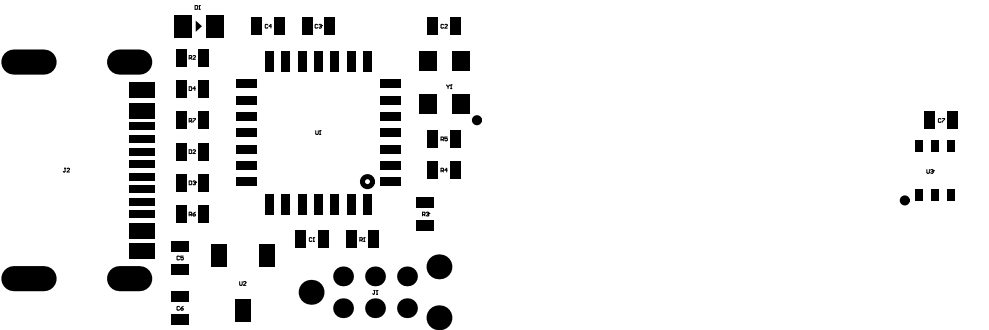
x-IMU3 Thermometer v1.0

Designator	Quantity	Comment	Footprint
C1, C2, C3, C7	4	100nF	Capacitor 0402
C4, C5, C6	3	10uF	Capacitor 0402
D1	1	APT1608VRCXF/A-5MAV	LED 0603
D2, D3, D4	3	SP0402B-ULC-01ETG	Diode TVS 0402
J1	1	Tag Connect No Legs	Tag Connect No Legs
J2	1	Molex 217179-0001	Molex 217179-0001
R1, R4, R5, R6, R7	5	5.1kR	Resistor 0402
R2, R3	2	470R	Resistor 0402
U1	1	PIC32MM0256GPM028-I/ML	QFN-28
U2	1	TPS7A0533PDBZ	SOT-23
U3	1	TMP117AIDRV	WSON-6
Y1	1	ECS-TXO-2520-33-240-AN-TR	ECS 2x2.5mm