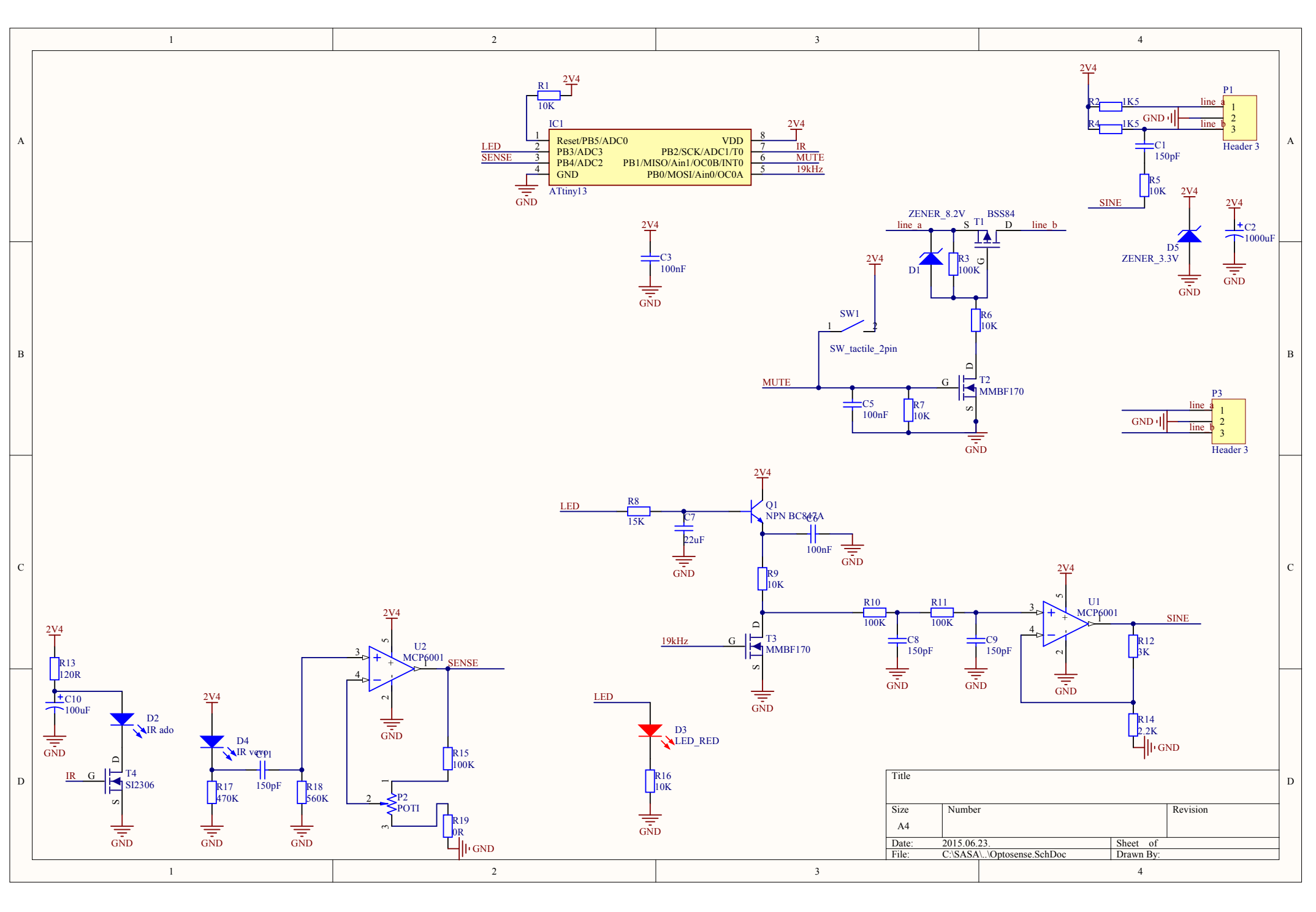
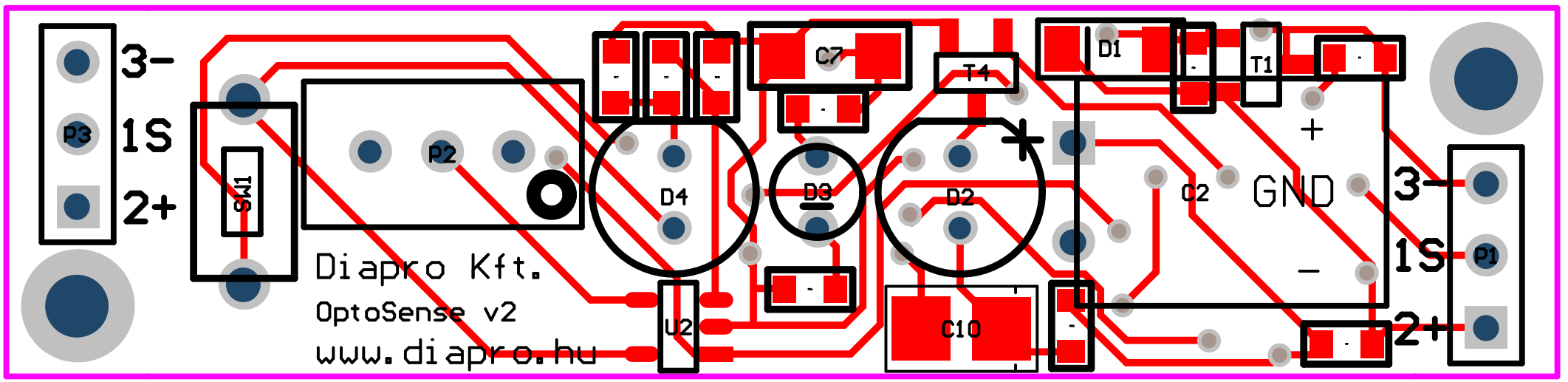
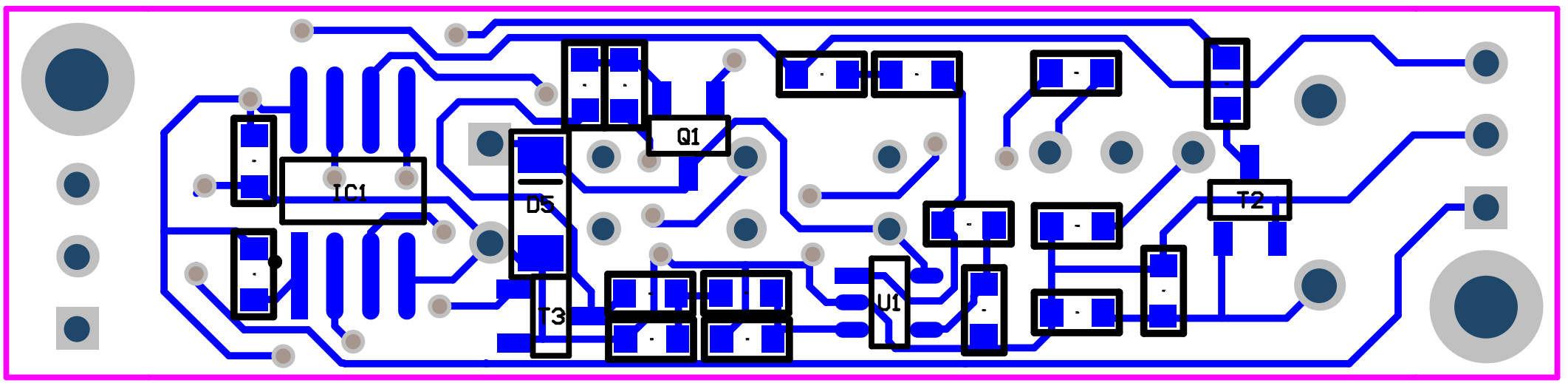
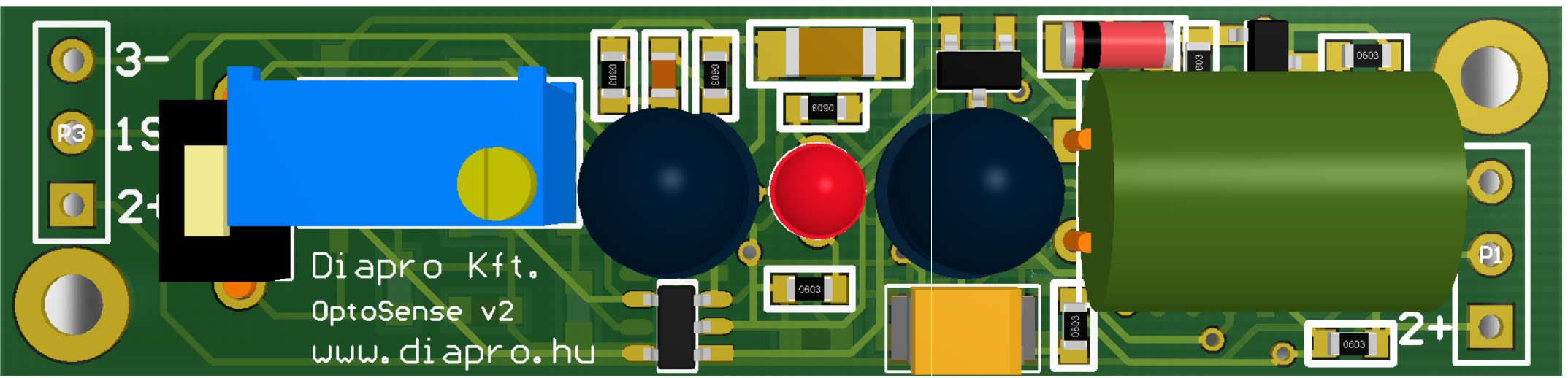
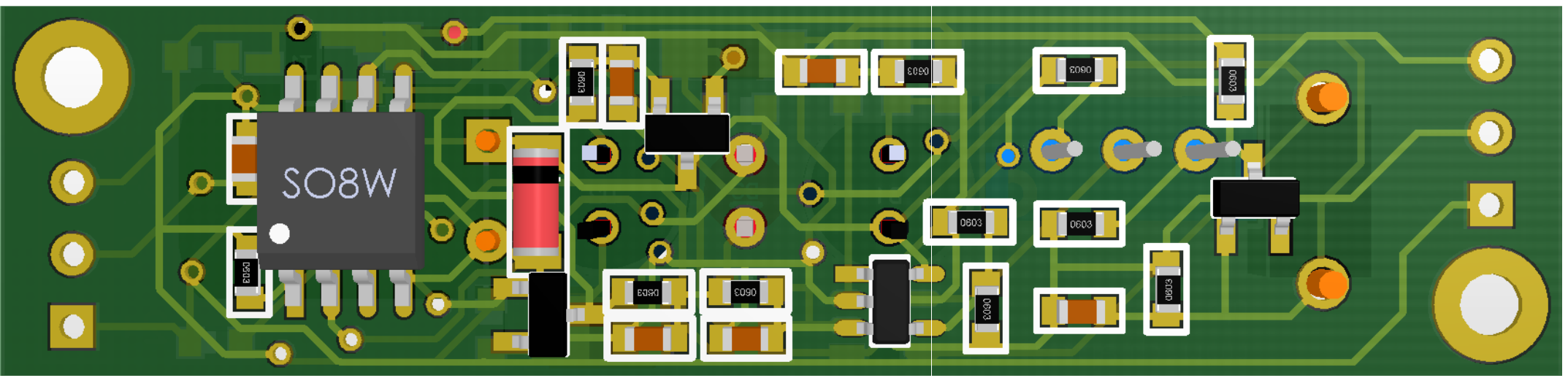
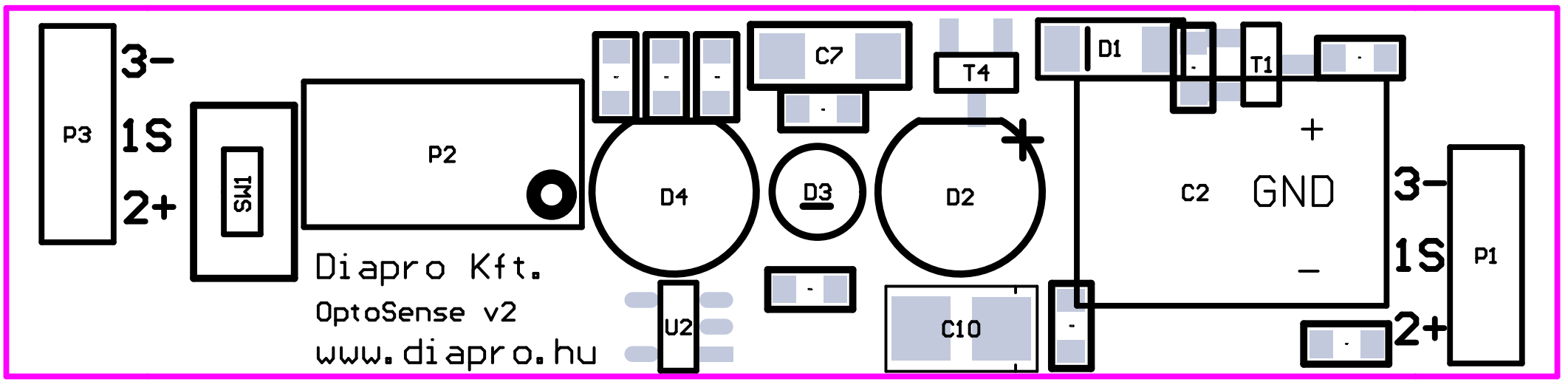

R1
10K
2V4
IC1
Reset/PB5/ADC0
PB3/ADC3
PB4/ADC2
GND
VDD
PB2/SCK/ADC1/T0
PB1/MISO/Ain1/OC0B/INT0
PB0/MOSI/Ain0/OC0A
LED
SENSE
IR
MUTE
19kHz
ATtiny13
P1
Header 3
line_a
line_b
R2 1K5
R4 1K5
C1 150pF
R5 10K
SINE
C2 1000uF
D5 ZENER_3.3V
C3 100nF
ZENER_8.2V
BSS84
T1
D1
R3 100K
R6 10K
SW1
SW_tactile_2pin
MUTE
T2 MMBF170
C5 100nF
R7 10K
P3
R8 15K
C7 22uF
Q1 NPN BC847A
C6 100nF
R9 10K
R10 100K
R11 100K
C8 150pF
C9 150pF
U1 MCP6001
R12 3K
R14 2.2K
19kHz
T3 MMBF170
D3 LED_RED
R16 10K
R13 120R
C10 100uF
D2 IR ado
T4 SI2306
D4 IR vevo1
C11 150pF
R17 470K
R18 560K
U2 MCP6001
R15 100K
P2 POTI
R19 0R
Title
Size A4
Number
Revision
Date: 2015.06.23.
Sheet of
File: C:\SASA\..\Optosense.SchDoc
Drawn By:

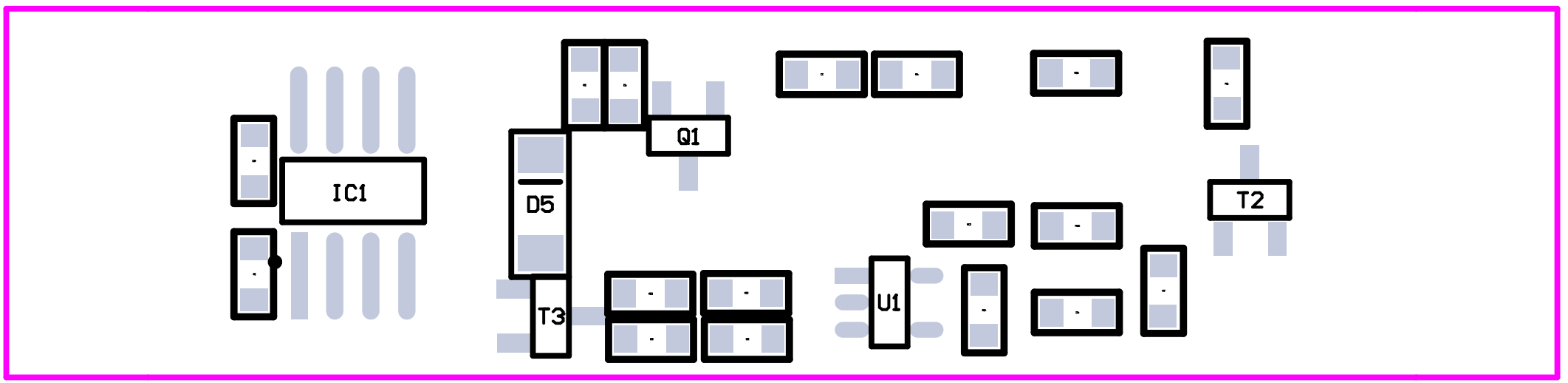

3-
1S
2+
P3
SW1
P2
Diapro Kft.
OptoSense v2
www.diapro.hu
D4
D3
D2
C7
T4
D1
T1
C2
GND
+
-
C10
U2
3-
1S
2+
P1


IC1
D5
Q1
T3
U1
T2


3-
P3
1S
2+
Diapro Kft.
OptoSense v2
www.diapro.hu
P1
2+


SO8W


P3
3-
1S
2+
SW1
P2
Diapro Kft.
OptoSense v2
www.diapro.hu
D4
D3
D2
C7
T4
D1
T1
C2
GND
+
-
3-
1S
2+
P1
U2
C10


IC1
D5
Q1
T3
U1
T2

| Comment | Description | Designator | Footprint | LibRef | Order info | Quantity | T qés |
|---|---|---|---|---|---|---|---|
| 150pF | Capacitor | C1, C8, C9, C11 | FP_0603_CAP_080 | CAP | 82-08-61 | 4 | |
| 1000uF | Polarized Capacitor | C2 | CAP_8x11_fekvo | CAP_ELECT | 12-19-15 | 1 | |
| 100nF | Capacitor | C3, C5, C6 | FP_0603_CAP_080 | CAP | 82-04-85 | 3 | |
| 22uF | Capacitor | C7 | FP_1206_CAP_125 | Cap | 82-08-07 | 1 | 10% |
| 100uF | Polarized Capacitor | C10 | FP_3528 | CAP_ELECT | 92-01-02 | 1 | |
| ZENER_8.2V | Zener Diode | D1 | SOD-80 | ZENER | 85-01-21 | 1 | |
| IR ado | Typical LED | D2 | LED_IR_5mm | LED_B | 38-02-21 | 1 | |
| LED_RED | Typical LED | D3 | led_3mm_standingR | LED_R | 34-06-65 | 1 | |
| IR vevo | Typical LED | D4 | LED_IR_5mm | LED_B | 38-01-91 | 1 | |
| ZENER_3.3V | Zener Diode | D5 | SOD-80 | ZENER | 85-01-11 | 1 | |
| ATtiny13 | | IC1 | WSON_n_SOIC8 | ATtiny13 | http://hu.farnell.com/atmel/attiny13a-ssh/mcu-8bit-attiny-20mhz-soic-8/dp/1715519 | 1 | |
| POTI | | P2 | RES_trimmer_helipot_mini_90 | POTI | 05-05-89 | 1 | |
| NPN BC847A | | Q1 | TR_SOT23 | NPN | 86-03-86 | 1 | |
| 10K | Resistor | R1, R5, R6, R7, R9, R16 | FP_0603_RES | RES | 81-10-38 | 6 | |
| 1K5 | Resistor | R2, R4 | FP_0603_RES | RES | 81-10-28 | 2 | |
| 100K | Resistor | R3, R10, R11, R15 | FP_0603_RES | RES | 81-10-50 | 4 | |
| 15K | Resistor | R8 | FP_0603_RES | RES | 80-12-06 | 1 | |
| 3K | Resistor | R12 | FP_0603_RES | RES | 81-15-24 | 1 | |
| 120R | Resistor | R13 | FP_0603_RES | RES | 81-12-21 | 1 | |
| 2.2K | Resistor | R14 | FP_0603_RES | RES | 81-10-30 | 1 | |
| 470K | Resistor | R17 | FP_0603_RES | RES | 81-10-58 | 1 | |
| 560K | Resistor | R18 | FP_0603_RES | RES | 81-10-59 | 1 | |
| 0R | Resistor | R19 | FP_0603_RES | RES | 81-18-05 | 1 | |
| SW_tactile_2pin | | SW1 | SW_TACT_2PIN | SW_tactile_2pin | 45-07-27 | 1 | |
| BSS84 | | T1 | FET_SOT23 | PMOS | 86-03-04 | 1 | |
| MMBF170 | | T2, T3 | FET_SOT23 | NMOS | 86-01-96 | 2 | |
| SI2306 | | T4 | FET_SOT23 | NMOS | 86-01-57 | 1 | |
| MCP6001 | | U1, U2 | ANALOG_SOT23-5 | MCP6001 | http://hu.farnell.co | 2 | |