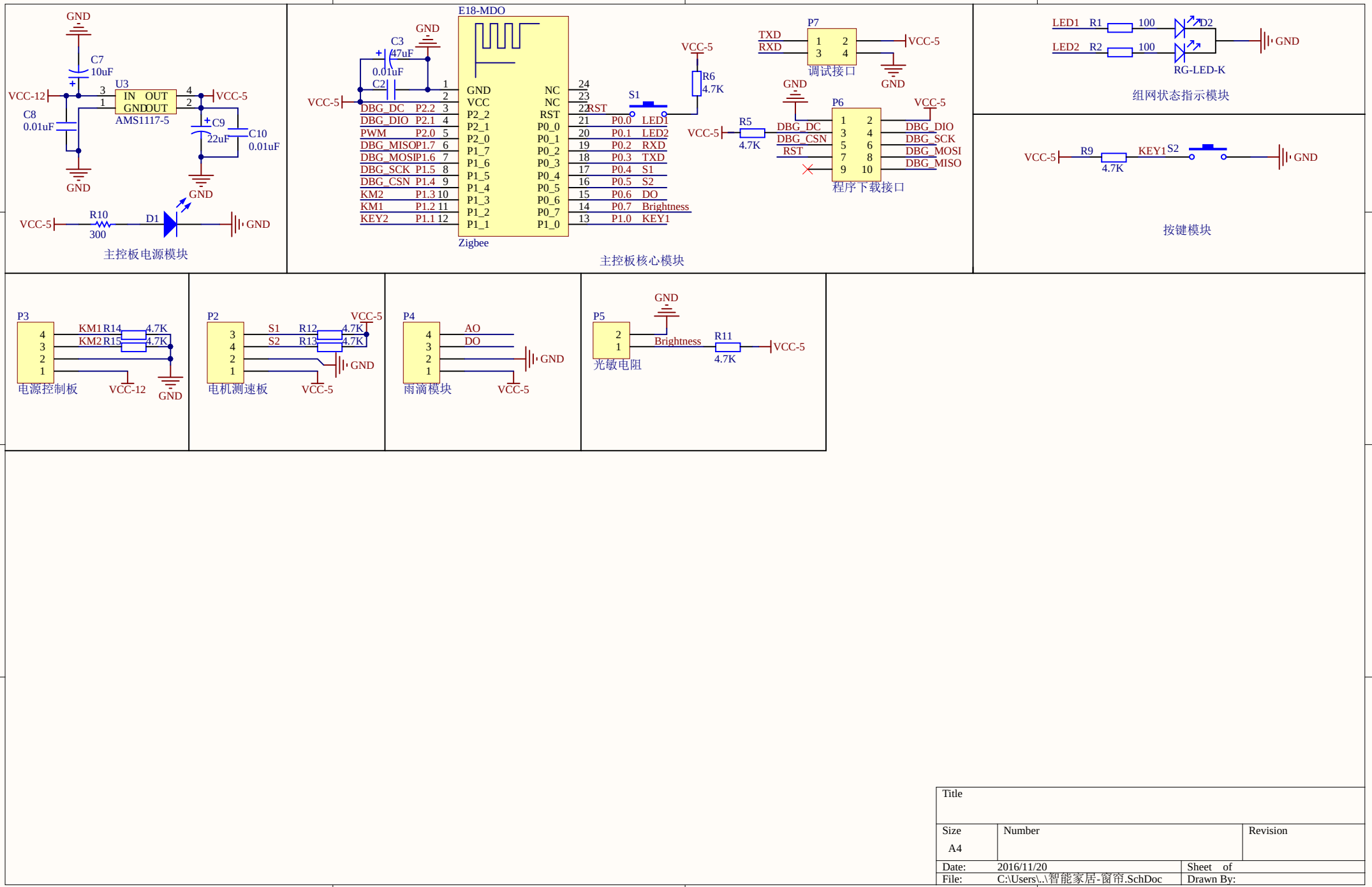
1
2
3
4
A
B
C
D
GND
C7
10uF
U3
VCC-12
IN OUT
GND OUT
AMS1117-5
VCC-5
C8
0.01uF
C9
22uF
C10
0.01uF
R10
300
D1
主控板电源模块
E18-MDO
C3
47uF
0.01uF
C2
GND
VCC
P2_2
P2_1
P2_0
P1_7
P1_6
P1_5
P1_4
P1_3
P1_2
P1_1
NC
RST
P0_0
P0_1
P0_2
P0_3
P0_4
P0_5
P0_6
P0_7
P1_0
DBG_DC P2.2
DBG_DIO P2.1
PWM P2.0
DBG_MISO P1.7
DBG_MOSI P1.6
DBG_SCK P1.5
DBG_CSN P1.4
KM2 P1.3
KM1 P1.2
KEY2 P1.1
P0.0 LED1
P0.1 LED2
P0.2 RXD
P0.3 TXD
P0.4 S1
P0.5 S2
P0.6 DO
P0.7 Brightness
P1.0 KEY1
Zigbee
S1
R6
4.7K
R5
4.7K
P7
TXD
RXD
调试接口
P6
DBG_DC
DBG_CSN
RST
DBG_DIO
DBG_SCK
DBG_MOSI
DBG_MISO
程序下载接口
主控板核心模块
LED1
LED2
R1
R2
100
D2
RG-LED-K
组网状态指示模块
R9
4.7K
KEY1
S2
按键模块
P3
KM1 R14
KM2 R15
4.7K
电源控制板
P2
S1
S2
R12
R13
电机测速板
P4
AO
DO
雨滴模块
P5
Brightness
R11
光敏电阻
Title
Size
A4
Number
Revision
Date: 2016/11/20
Sheet of
File: C:\Users\..\智能家居-窗帘.SchDoc
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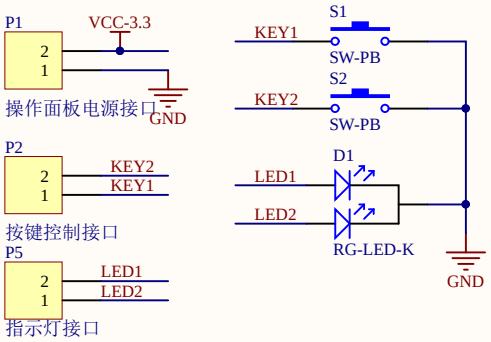





| | | |
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| Title | | |
| Size: A4 | Number | Revision |
| Date: 2016/11/20 | | Sheet of |
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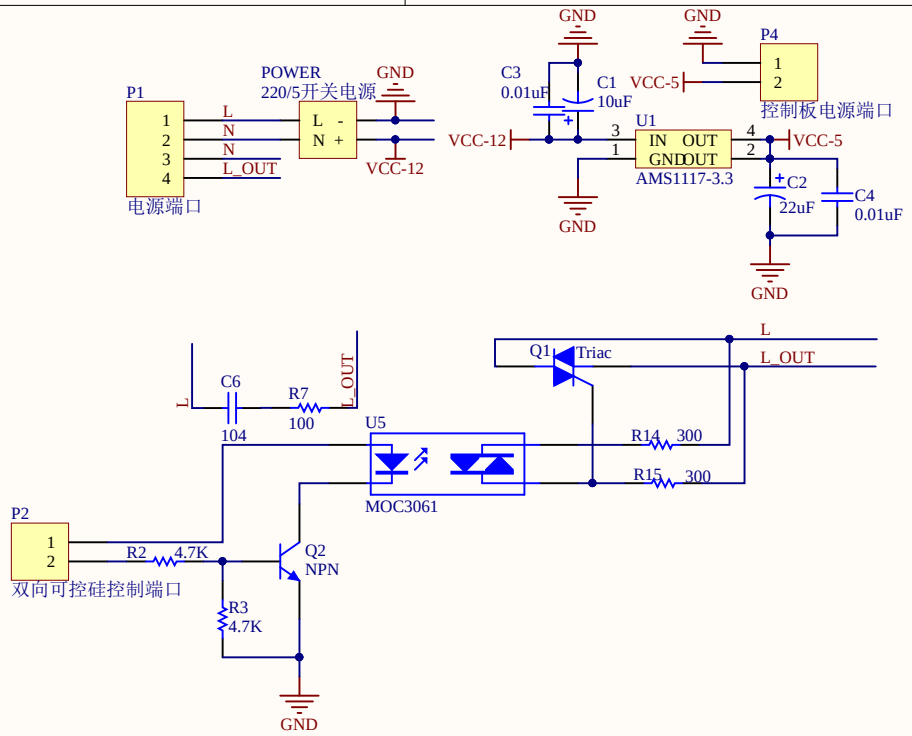


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| Size A4 | Number | Revision |
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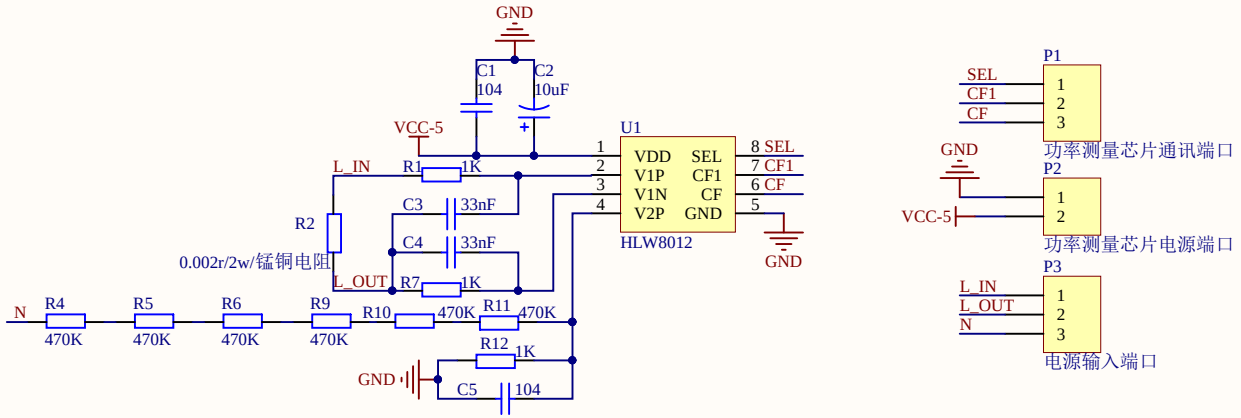





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| Size A4 | Number | Revision |
| Date: 2016/11/20 | | Sheet of |
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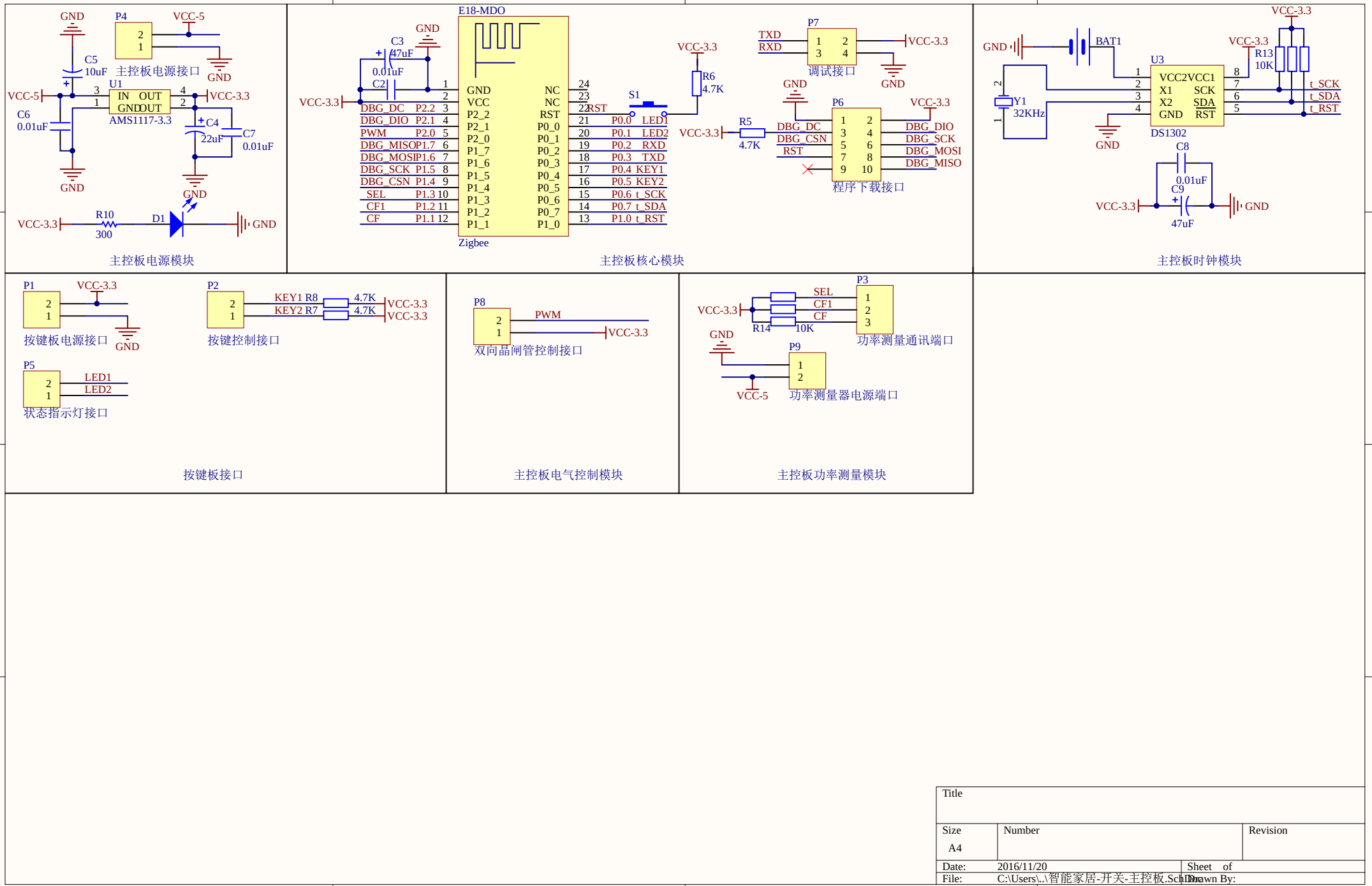
主控板电源模块
主控板核心模块
主控板时钟模块
按键板接口
主控板电气控制模块
主控板功率测量模块
主控板电源接口
调试接口
程序下载接口
按键板电源接口
按键控制接口
状态指示灯接口
双向晶闸管控制接口
功率测量通讯端口
功率测量器电源端口
AMS1117-3.3
E18-MDO
Zigbee
DS1302
Title
Size
A4
Number
Revision
Date: 2016/11/20
Sheet of
File: C:\Users\..\智能家居-开关-主控板.SchDoc
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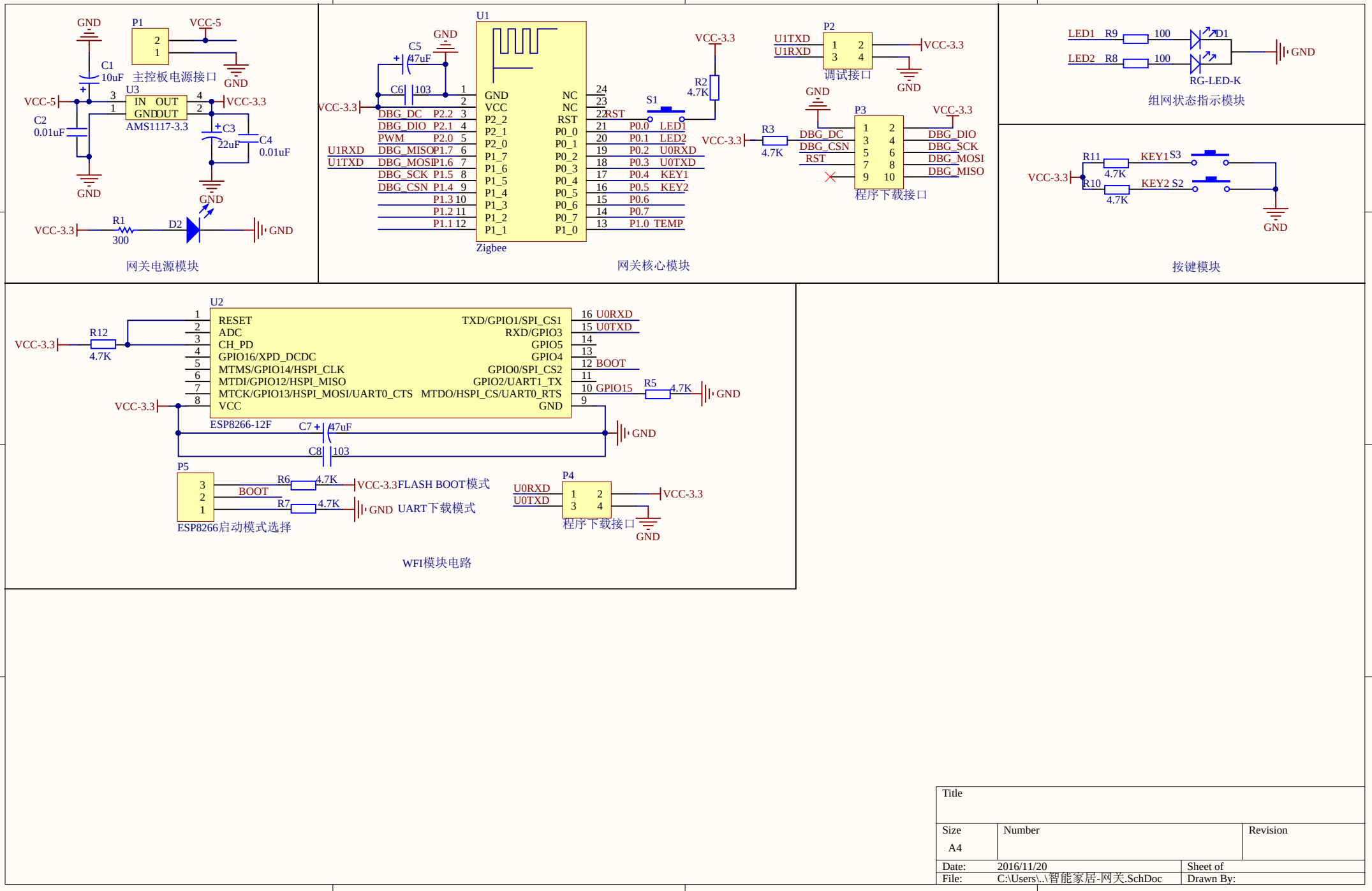
GND
P1
VCC-5
C1
10uF
主控板电源接口
U3
VCC-5
IN OUT
GND OUT
VCC-3.3
AMS1117-3.3
C2
0.01uF
C3
22uF
C4
0.01uF
R1
300
D2
网关电源模块
U1
C5
47uF
C6
103
Zigbee
U1RXD
U1TXD
PWM
R2
4.7K
S1
RST
LED1
LED2
U0RXD
U0TXD
KEY1
KEY2
TEMP
网关核心模块
P2
调试接口
P3
DBG_DC
DBG_CSN
DBG_DIO
DBG_SCK
DBG_MOSI
DBG_MISO
程序下载接口
LED1
LED2
R9
R8
100
D1
RG-LED-K
组网状态指示模块
R11
R10
KEY1 S3
KEY2 S2
按键模块
U2
RESET
ADC
CH_PD
GPIO16/XPD_DCDC
MTMS/GPIO14/HSPI_CLK
MTDI/GPIO12/HSPI_MISO
MTCK/GPIO13/HSPI_MOSI/UART0_CTS
VCC
TXD/GPIO1/SPI_CS1
RXD/GPIO3
GPIO5
GPIO4
GPIO0/SPI_CS2
MTDO/HSPI_CS/UART0_RTS
GND
ESP8266-12F
R12
4.7K
C7
47uF
C8
103
R5
GPIO15
BOOT
P5
R6
R7
FLASH BOOT模式
UART下载模式
ESP8266启动模式选择
P4
程序下载接口
WFI模块电路
Title
Size
A4
Number
Revision
Date:
2016/11/20
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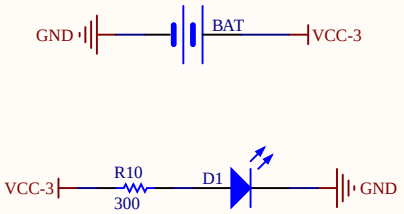
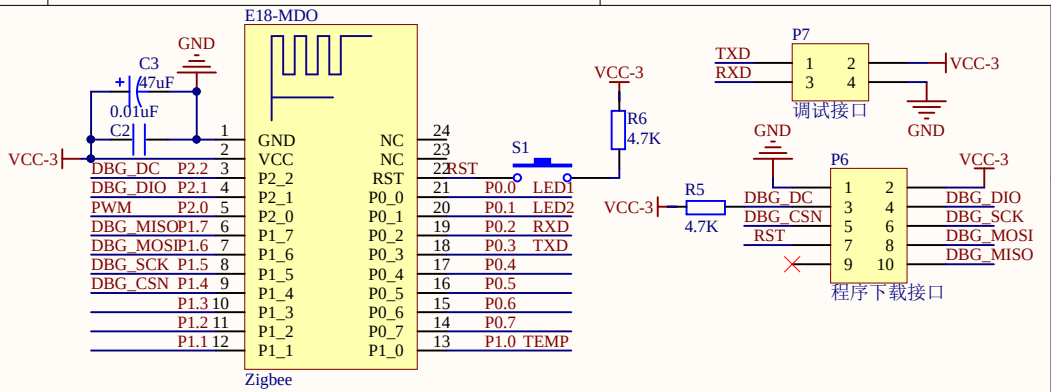
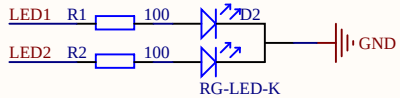


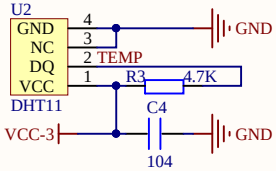

主控板电源模块




主控板核心模块

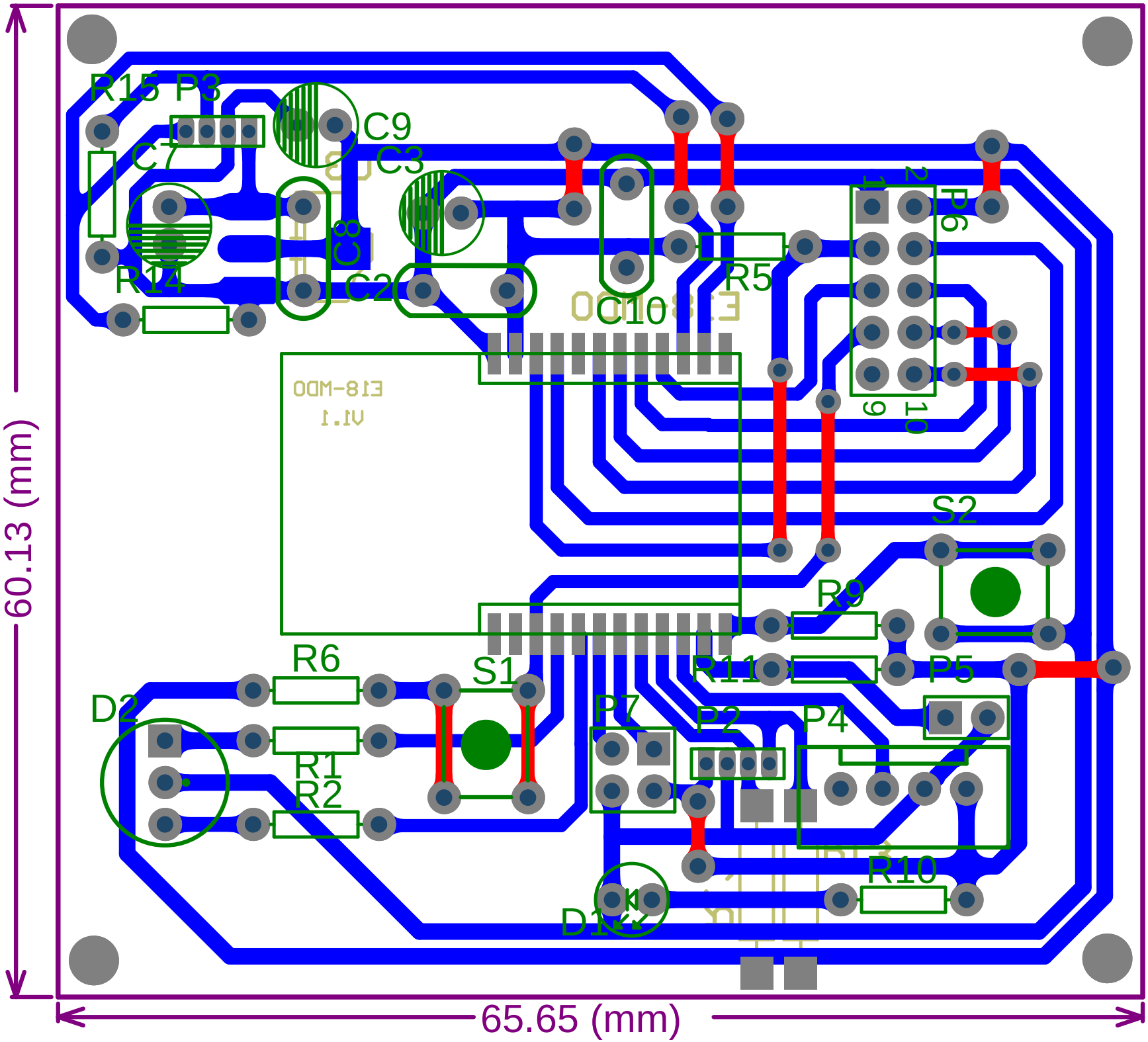


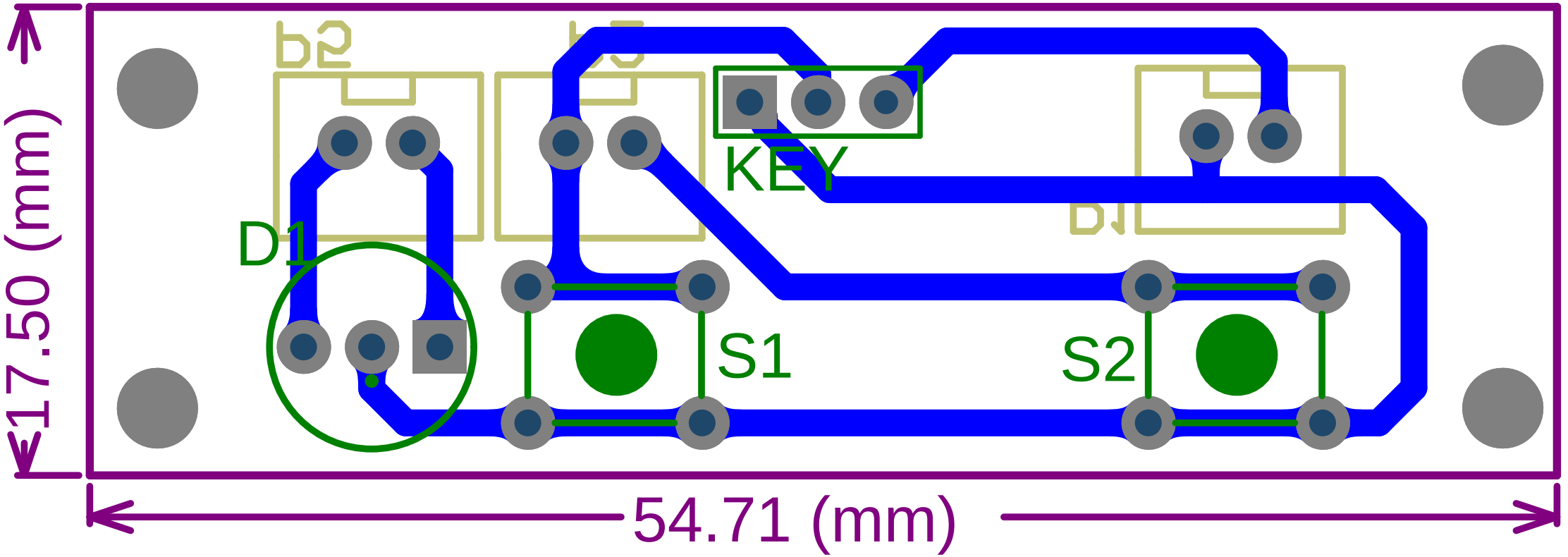

组网状态指示模块

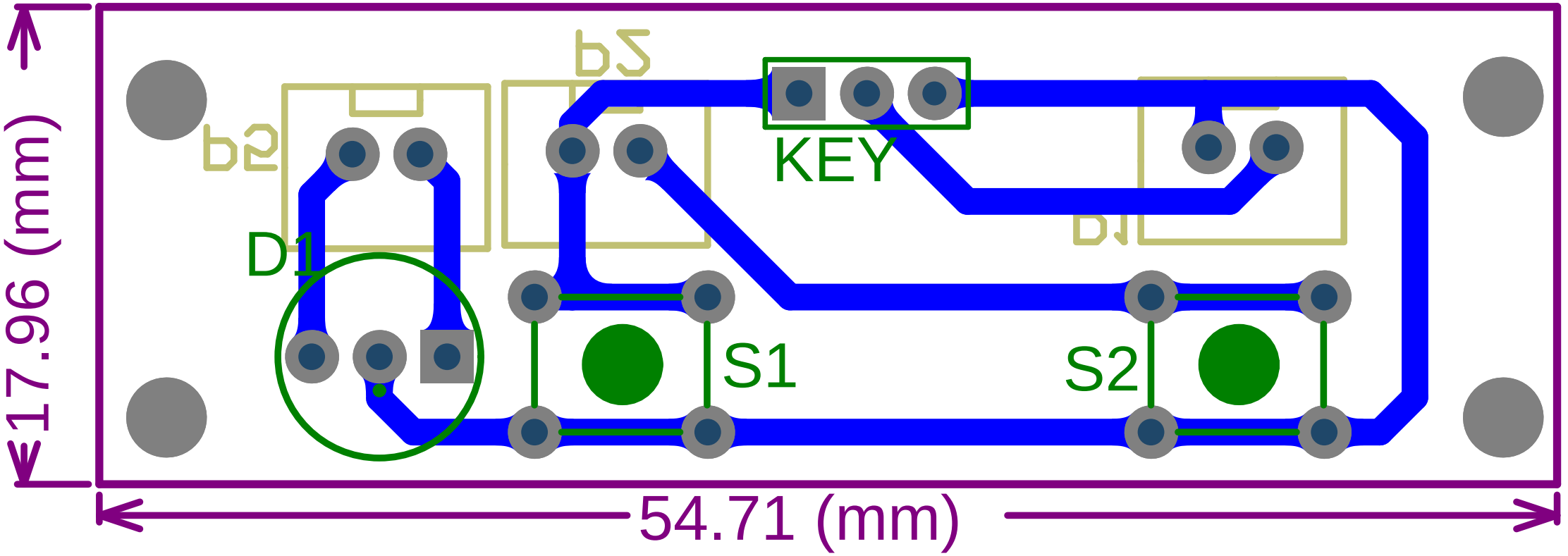


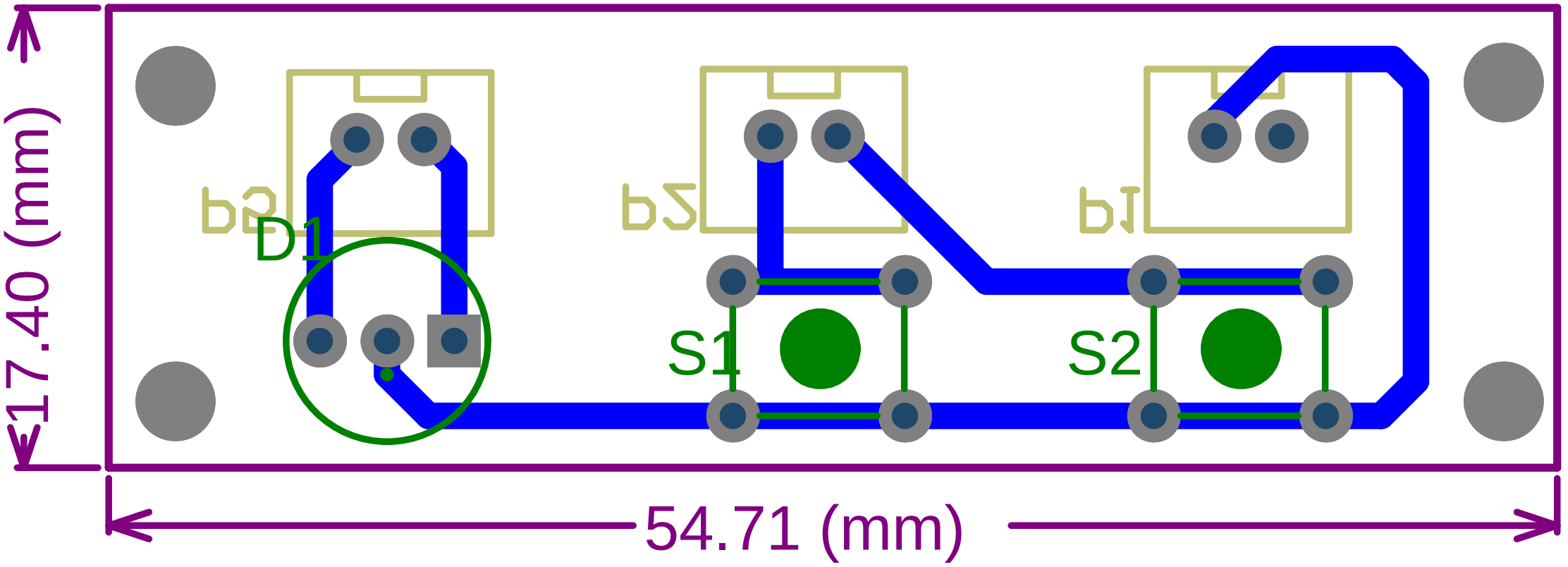

温湿度传感器模块

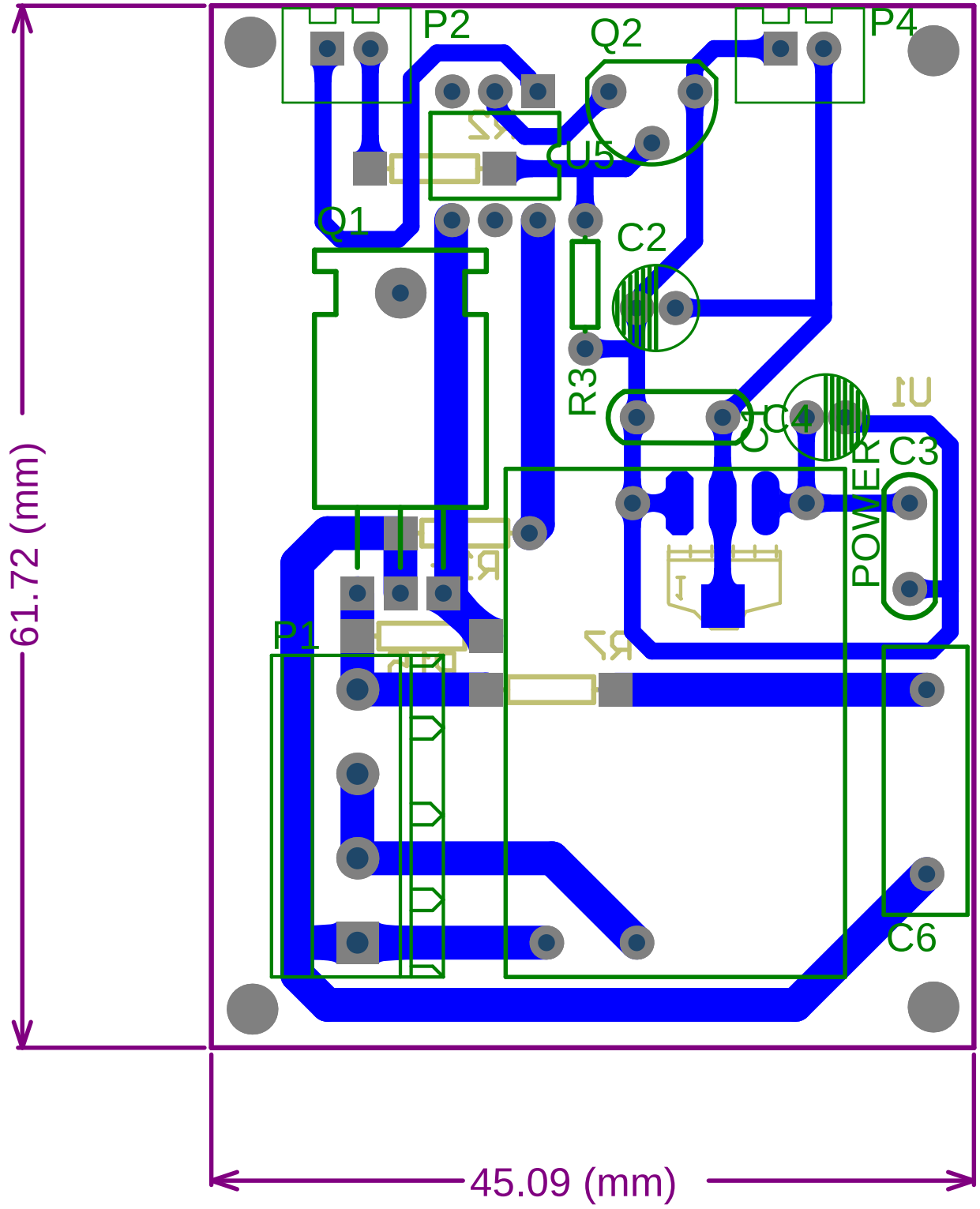
| | | |
|---|---|---|
| Title | | |
| Size A4 | Number | Revision |
| Date: 2016/11/20 | | Sheet of |
| File: C:\Users\..\智能家居-温湿度传感器.SchDoc | | Drawn By: |

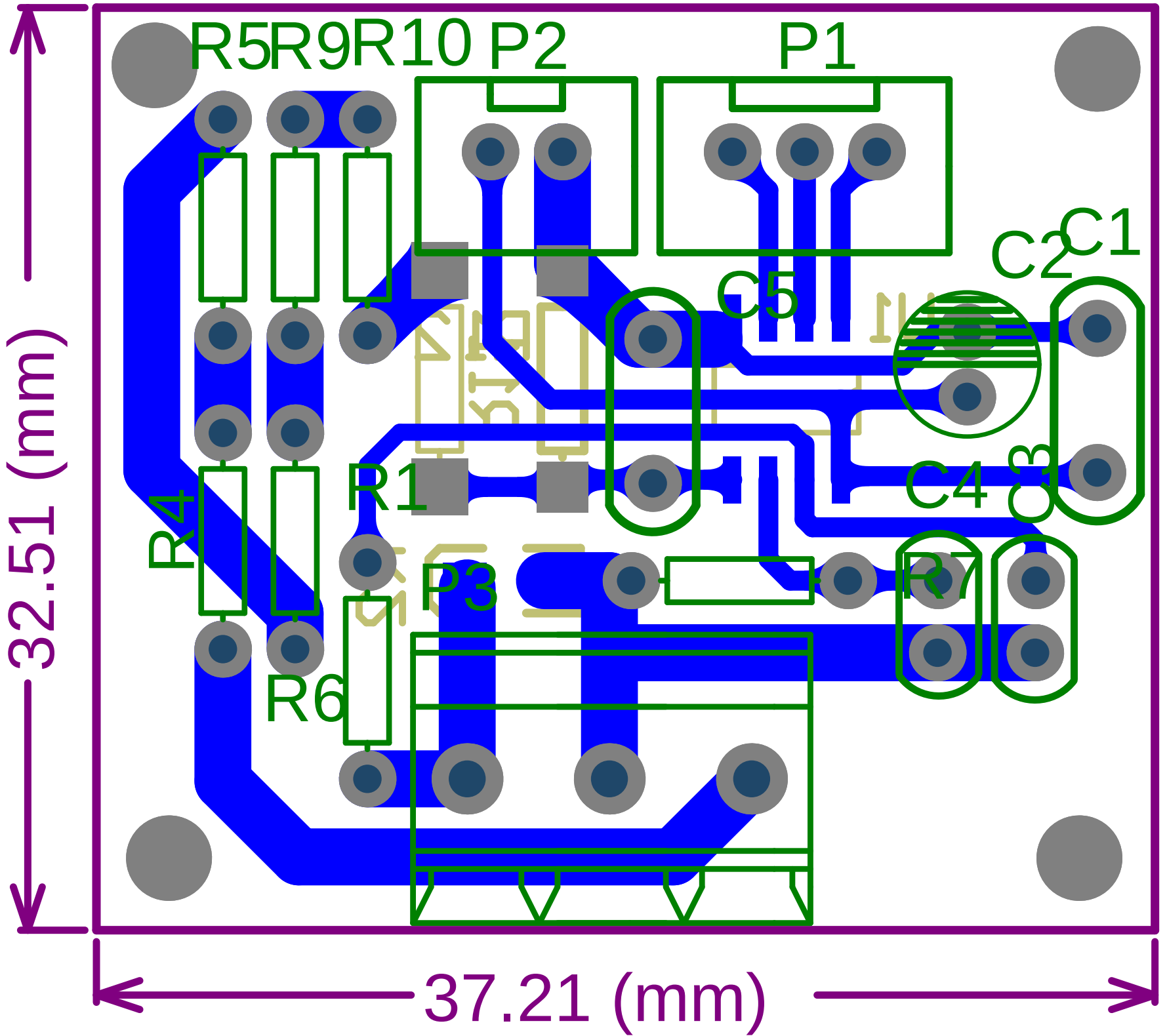

R15
P3
C9
C7
C3
C8
C2
R14
R5
P6
S2
R9
R6
S1
R11
P5
D2
P7
P2
P4
R1
R2
R10
D1
60.13 (mm)
65.65 (mm)

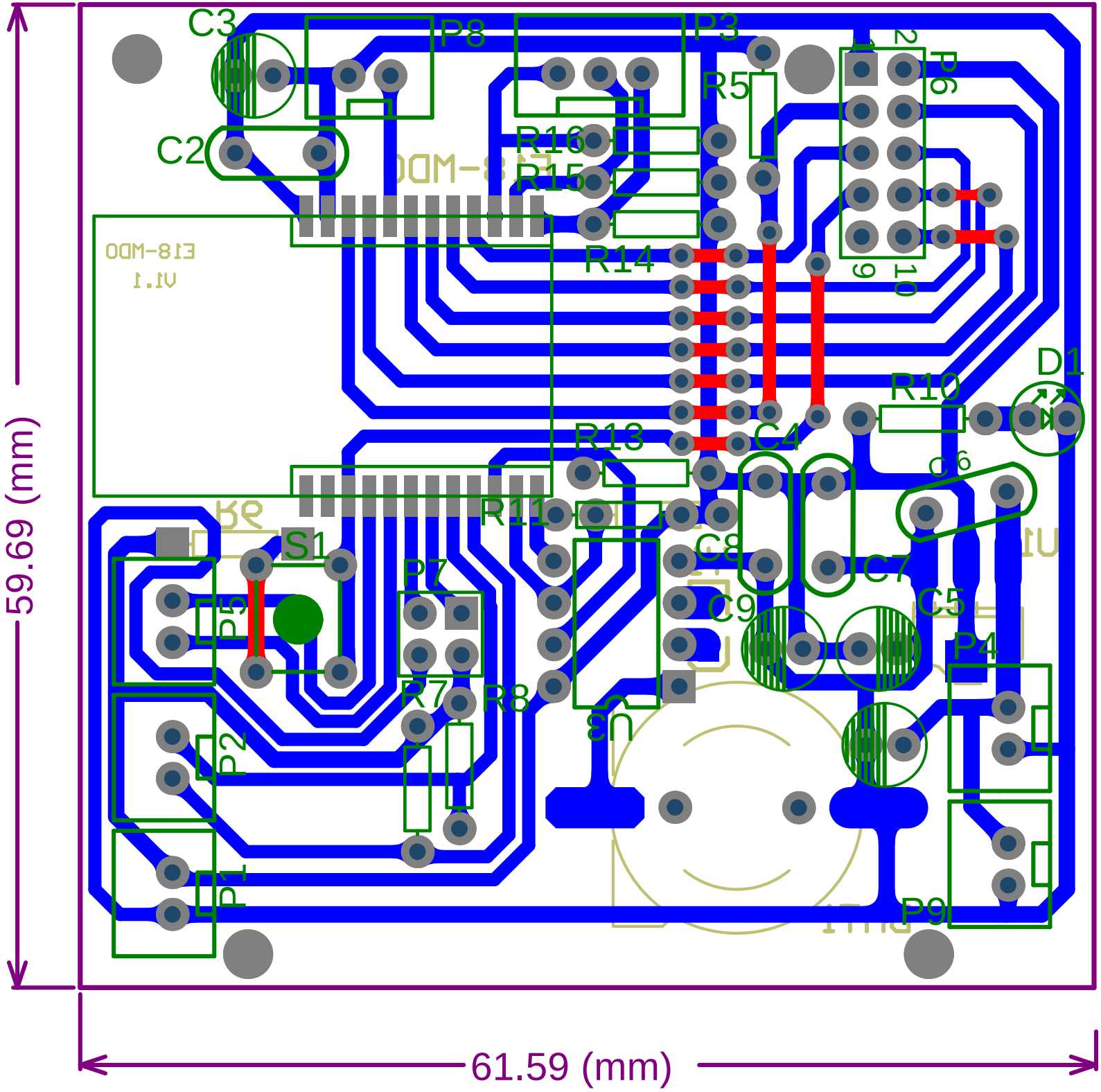

b2
KEY
D1
S1
S2
17.50 (mm)
54.71 (mm)

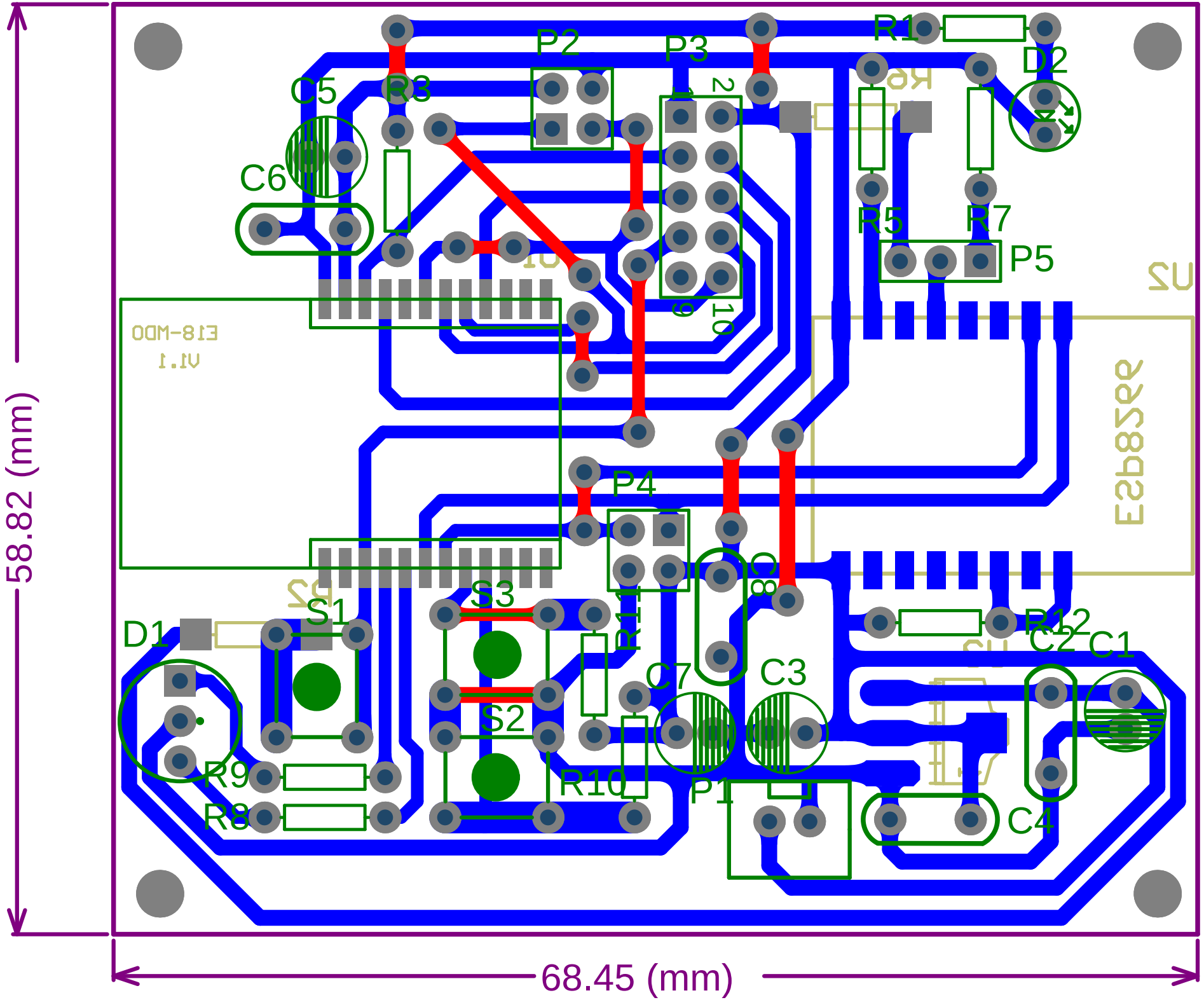

17.96 (mm)
54.71 (mm)
KEY
D1
S1
S2

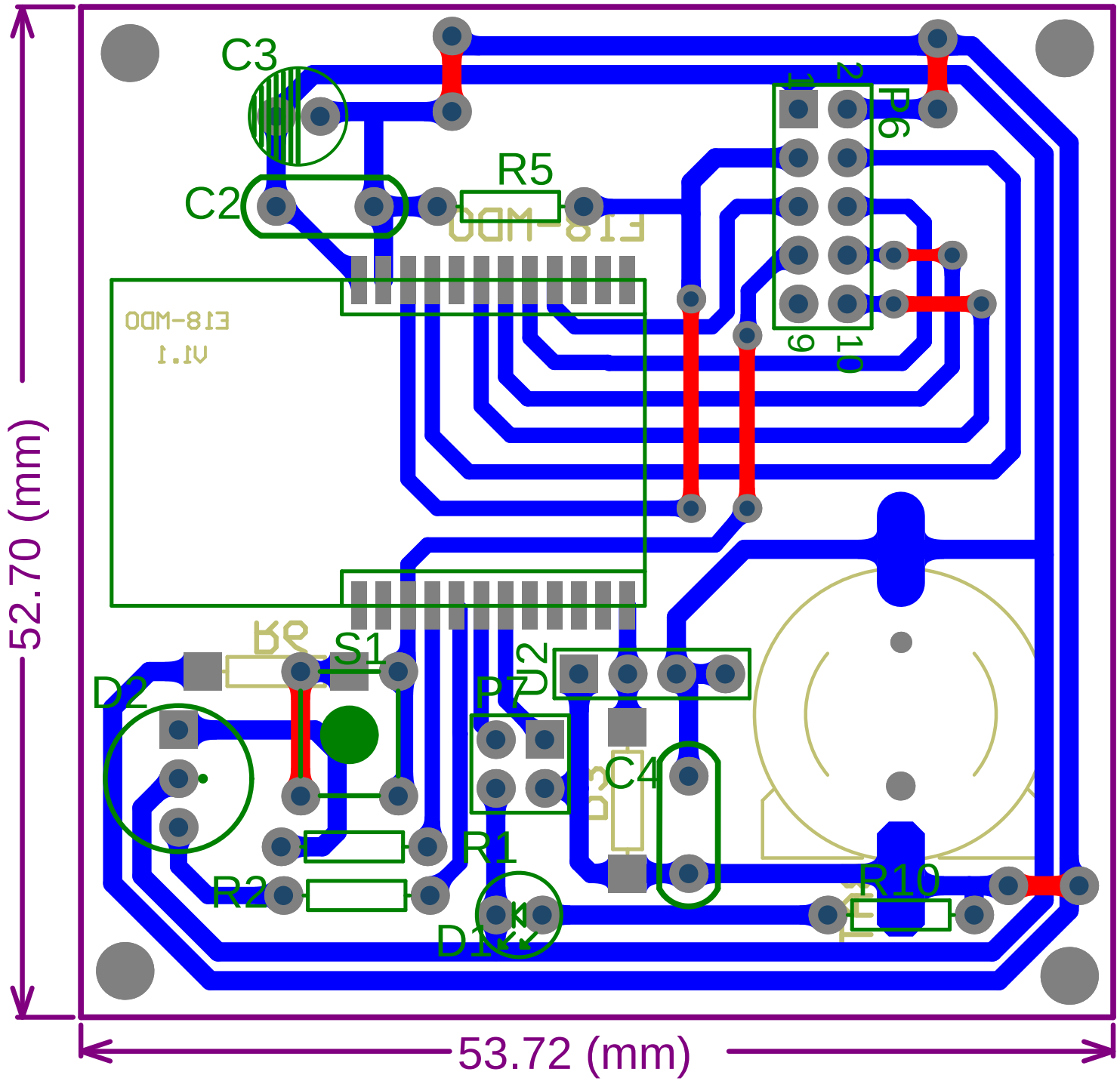

17.40 (mm)
54.71 (mm)
D1
S1
S2


P2
Q2
P4
U5
Q1
C2
R3
C4
U1
C3
POWER
P1
C6
61.72 (mm)
45.09 (mm)


R5
R9
R10
P2
P1
C2
C1
C5
R1
C4
C3
R4
P3
R7
R6
32.51 (mm)
37.21 (mm)


59.69 (mm)
61.59 (mm)
C3
P8
P3
R5
P6
C2
R16
R15
R14
D1
R10
R13
C4
C6
R11
C8
C7
S1
P7
C9
C5
P5
P4
R7
R8
P2
P1
P9


58.82 (mm)
68.45 (mm)
P2
P3
R1
D2
C5
R3
C6
R5
R7
P5
P4
S3
S1
S2
D1
R11
C8
C7
C3
C2
C1
R12
R9
R8
R10
P1
C4


C3
C2
R5
P6
1
2
9
10
S1
D2
P7
U2
C4
R1
R2
D1
R10
52.70 (mm)
53.72 (mm)

| Item # | mn Name Error:Manufa | #Column Name Error:Manufacturer No | Quantity | #Column Name Error:Note | Designator | Description | Footprint | Comment | LibRef |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2 | | BAT, BAT1 | | BATM | BATT | BAT |
| 2 | | | 15 | | C1, C1, C2, C2, C3, C3, C3, C3, C4, C5, C5, C7, C7, C9, C9 | Polarized Capacitor (Radial) | CD5 | Cap Pol1 | Cap Pol1 |
| 3 | | | 2 | | C1, C5 | Capacitor | 0.1UF | Cap | Cap |
| 4 | | | 12 | | C2, C2, C2, C2, C3, C4, C4, C6, C7, C8, C8, C10 | [NoValue], [NoValue], [NoValue], [NoValue], Capacitor, Capacitor, [NoValue], [NoValue], [NoValue], [NoValue], [NoValue], [NoValue], [NoValue] | 0.1UF | 0.01uF | C, C, C, C, Cap, Cap, C, C, C, C, C, C |
| 5 | | | 2 | | C3, C4 | Capacitor | 150PF | Cap | Cap |
| 6 | | | 1 | | C4 | | 0.1UF | 104 | C |
| 7 | | | 1 | | C6 | Capacitor | 0.1UF/275V | Cap | Cap |
| 8 | | | 2 | | C6, C8 | | 0.1UF | 103 | C |
| 9 | | | 4 | | D1, D1, D1, D2 | Typical INFRARED GaAs LED | LED-3 | LED0 | LED0 |
| 10 | | | 4 | | D1, D1, D2, D2 | | RG-LED | RG-LED-K | RG-LED-K |
| 11 | | | 4 | | E18-MDO, E18-MDO, E18-MDO, U1 | Zigbee模块 | E18-MD0-1 | Zigbee | E18-MDO |
| 12 | | | 1 | | P1 | Header, 3-Pin | DG1283 | 功率测量芯片通讯端口 | Header 3 |
| 13 | | | 1 | | P1 | Header, 2-Pin, Right Angle | DG1282 | 按键板电源接口 | Header 2H |
| 14 | | | 1 | | P1 | Header, 2-Pin, Right Angle | DG1282 | 操作面板电源接口 | Header 2H |
| 15 | | | 1 | | P1 | Header, 4-Pin | JK128-500-4P | 电源端口 | Header 4 |
| 16 | | | 2 | | P1, P4 | Header, 2-Pin, Right Angle | DG1282 | 主控板电源接口 | Header 2H |
| 17 | | | 1 | | P2 | Header, 2-Pin | DG1282 | 功率测量芯片电源端口 | Header 2 |
| 18 | | | 1 | | P2 | Header, 2-Pin | TJC3-2A | 双向可控硅控制端口 | Header 2 |
| 19 | | | 2 | | P2 | Header, 2-Pin, Right Angle | DG1282 | 按键控制接口 | Header 2H |
| 20 | | | 1 | | P2 | Header, 4-Pin | MHDR1X4 | 电机测速板 | Header 4 |
| 21 | | | 4 | | P2, P7, P7, P7 | Header, 2-Pin, Dual row, Right Angle | HDR2X2 | 调试接口 | Header 2X2H |
| 22 | | | 1 | | P3 | Header, 3-Pin | DG1283 | 功率测量通讯端口 | Header 3 |
| 23 | | | 1 | | P3 | Header, 4-Pin | MHDR1X4 | 电源控制板 | Header 4 |
| 24 | | | 1 | | P3 | Header, 3-Pin | JK128-500-3P | 电源输入端口 | Header 3 |
| 25 | | | 4 | | P3, P6, P6, P6 | Header, 5-Pin, Dual row | HDR2X5 | 程序下载接口 | Header 5X2 |
| 26 | | | 1 | | P4 | Header, 2-Pin | TJC3-2A | 控制板电源端口 | Header 2 |
| 27 | | | 1 | | P4 | Header, 2-Pin, Dual row, Right Angle | HDR2X2 | 程序下载接口 | Header 2X2H |
| 28 | | | 1 | | P4 | Header, 4-Pin | DG1284 | 雨滴模块 | Header 4 |
| 29 | | | 1 | | P5 | Header, 3-Pin | HDR1X3 | ESP8266启动模式选择 | Header 3 |
| 30 | | | 1 | | P5 | Header, 2-Pin | HDR1X2 | 光敏电阻 | Header 2 |
| 31 | | | 1 | | P5 | Header, 2-Pin, Right Angle | DG1282 | 指示灯接口 | Header 2H |
| 32 | | | 1 | | P5 | Header, 2-Pin, Right Angle | DG1282 | 状态指示灯接口 | Header 2H |
| 33 | | | 1 | | P8 | Header, 2-Pin, Right Angle | DG1282 | 双向晶闸管控制接口 | Header 2H |
| 34 | | | 1 | | P9 | Header, 2-Pin, Right Angle | DG1282 | 功率测量器电源端口 | Header 2H |
| 35 | | | 1 | | POWER | | 220/5开关电源 | 220/5开关电源 | 220/5开关电源 |
| 36 | | | 1 | | Q1 | Silicon Bidirectional Triode Thyristor | TO-220(2) | Triac | Triac |
| 37 | | | 1 | | Q2 | NPN Bipolar Transistor | TO-92D | NPN | NPN |
| 38 | | | 6 | | R1, R1, R2, R2, R8, R9 | | AXIAL-0.3 | 100 | R |
| 39 | | | 2 | | R1, R7 | | AXIAL-0.3 | 1K | R |
| 40 | | | 4 | | R1, R10, R10, R10 | Resistor | AXIAL-0.3 | Res1 | Res1 |
| 41 | | | 1 | | R2 | | 3216 | 0.002r/2w/锰铜电阻 | R |
| 42 | | | 2 | | R2, R3 | Resistor | AXIAL0.3 | 4.7K | Res1 |
| 43 | | | 21 | | R2, R3, R3, R5, R5, R5, R5, R6, R6, R6, R6, R7, R7, R8, R9, R10, R11, R11, R12, R14, R15 | | AXIAL-0.3 | 4.7K | R |
| 44 | | | 6 | | R4, R5, R6, R9, R10, R11 | | AXIAL-0.3 | 470K | R |
| 45 | | | 1 | | R7 | Resistor | AXIAL0.3 | 100 | Res1 |
| 46 | | | 6 | | R11, R12, R13, R14, R15, R16 | | AXIAL-0.3 | 10K | R |
| 47 | | | 1 | | R12 | | AXIAL0.3 | 1K | R |
| 48 | | | 2 | | R12, R13 | | AXIAL-0.4 | 4.7K | R |
| 49 | | | 2 | | R14, R15 | Resistor | AXIAL0.3 | 300 | Res1 |
| 50 | | | 9 | | S1, S1, S1, S1, S1, S2, S2, S2, S3 | Switch | KEY_M | SW-PB | SW-PB |
| 51 | | | 1 | | U1 | | SOP-8 | HLW8012 | HLW8012 |
| 52 | | | 3 | | U1, U1, U3 | | AMS1117 | AMS1117-3.3 | AMS1117 |
| 53 | | | 1 | | U2 | 数字温湿度传感器 | HDR1X4 | DHT11 | DHT11 |
| 54 | | | 1 | | U2 | | ESP8266 - 12S | ESP8266-12F | ESP8266_12S |
| 55 | | | 1 | | U3 | | AMS1117 | AMS1117-5 | AMS1117 |
| 56 | | | 1 | | U3 | | DIP-8N | DS1302 | DS1302 |
| 57 | | | 1 | | U5 | | DIP-6N | MOC3061 | OPTOTRIAC |
| 58 | | | 1 | | Y1 | Crystal Oscillator | 3216 | 32KHz | XTAL |