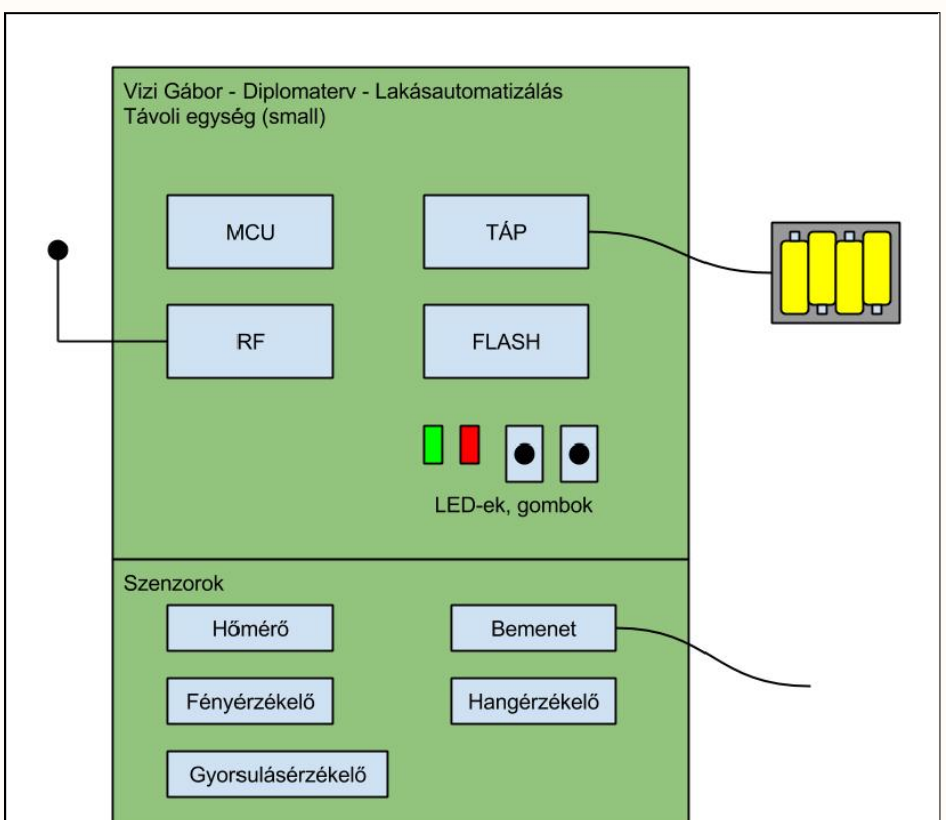
Blockdiagram - NodeSmall

[Blockdiagram link (Google Drive)]



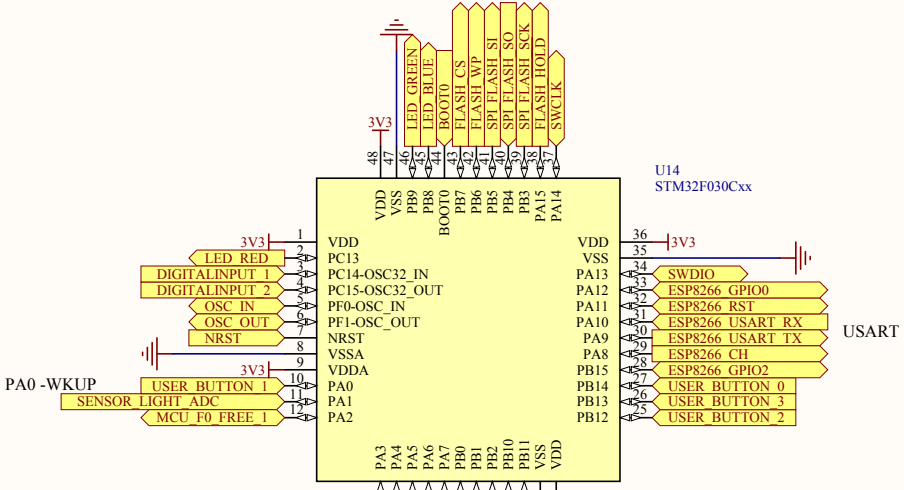
Title: Lakásautomatizálás		
Size: A4	Number:	Revision: v1
Date: 2015.12.11.	Sheet of Sheets	Blockdiagram - NodeSmall
File: C:\Users\..\Sheet_Blockdiagram_NodeSmall.SchDoc		Vizi Gábor

MCU - F0

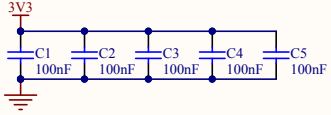
FREE pins

MCU_F0_FREE_1
MCU_F0_FREE_2
MCU_F0_FREE_3
MCU_F0_FREE_4

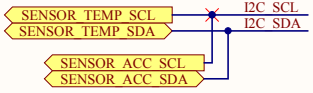
SPI



USART



I2C



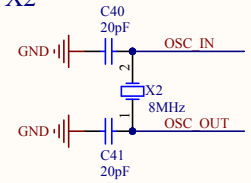
IT

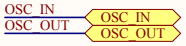
PB10 I2Cx_SCL
PB11 I2Cx_SDA

Title	Lakásautomatizálás		
Size	Number		Revision
A4			v1
Date:	2015.12.11.	Sheet of	MCU - F0
File:	C:\Users\..\Sheet_MCU_F0.SchDoc	Drawn By:	Vizi Gábor

Core

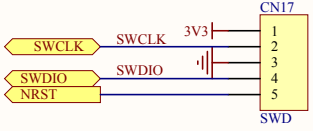
X2



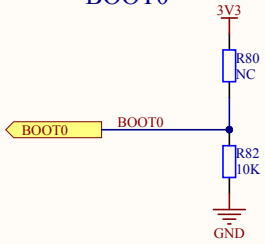


SWD

SWD:
SWCLK &
SWDIO kell
csak



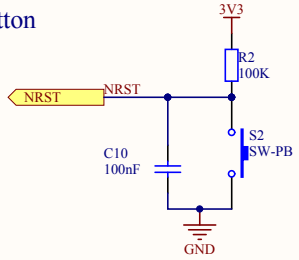
BOOT0



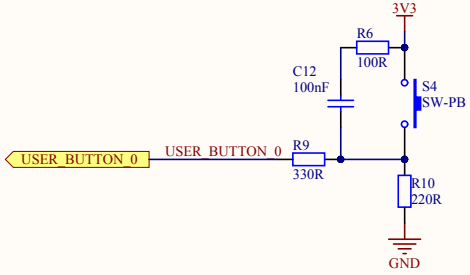
Title: Lakásautomatizálás			
Size: A4	Number:	Revision: v1	
Date: 2015.12.11.	Sheet of: Core		
File: C:\Users\..\Sheet_Core_NodeSmall.SchDoc	Drawn By: Vizi Gábor		

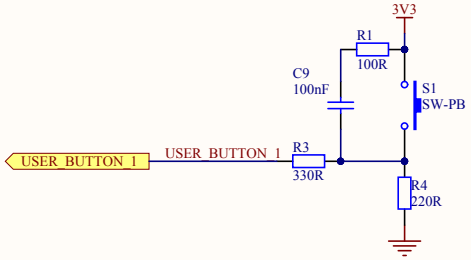
Button

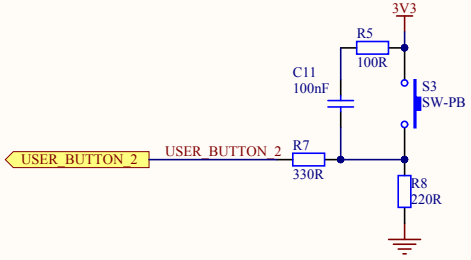
RESET Button

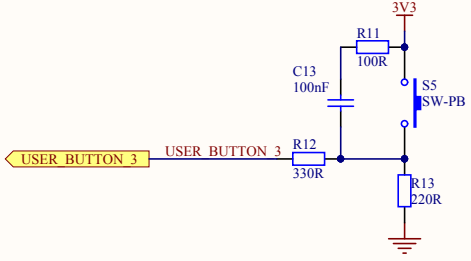


USER & WAKE-UP Button









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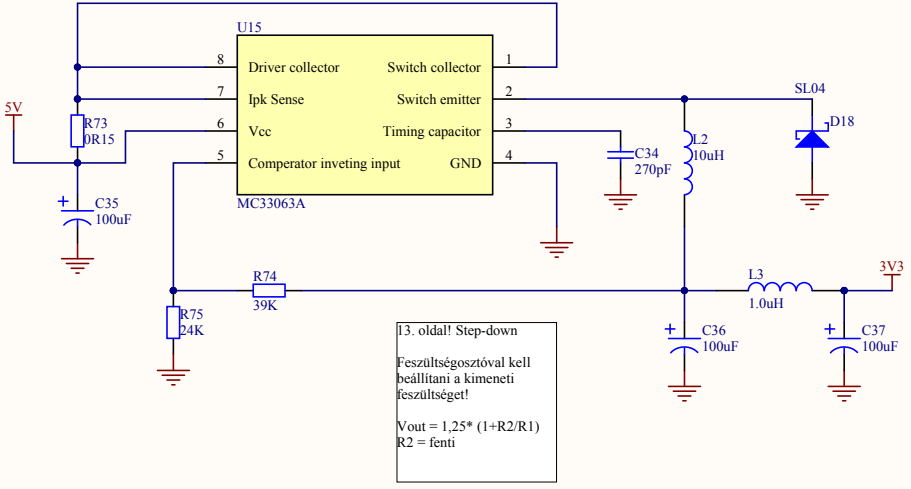
Size: A4	Number:	Revision: v1	
Date: 2015.12.11.		Sheet of Button	
File: C:\Users\..\Sheet_Button.SchDoc		Drawn By: Vizi Gábor	

DC-DC-3V3



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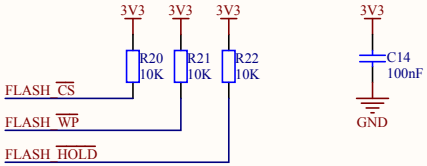
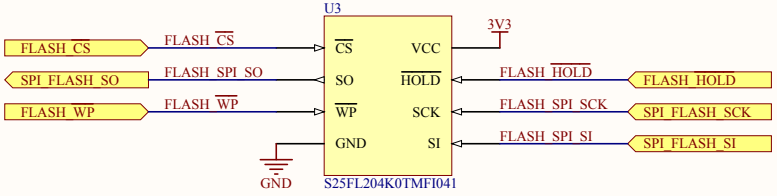
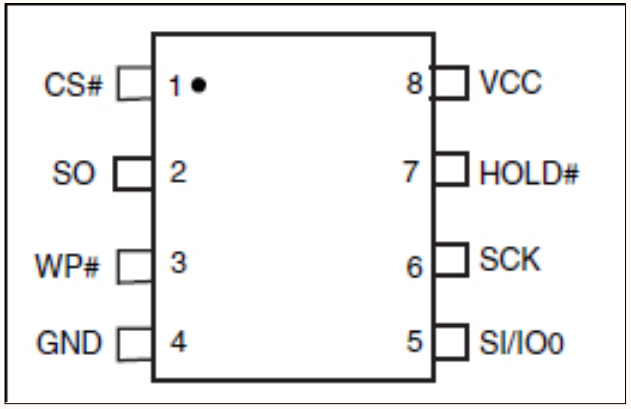
File:	C:\Users\..\Sheet_DC-DC-3V3.SchDoc	Drawn By:	Vizi Gábor

Flash







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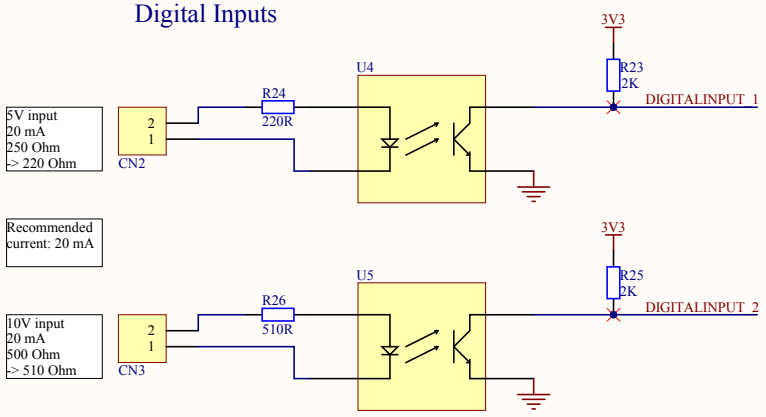
Size: A4	Number:	Revision: v1
Date: 2015.12.11.	Sheet of: Flash	
File: C:\Users\..\Sheet_Flash.SchDoc	Drawn By: Vizi Gábor	

Digital Input

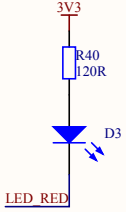


Title: Lakásautomatizálás		
Size: A4	Number:	Revision: v1
Date: 2015.12.11.	Sheet of: Digital Input	
File: C:\Users\..\Sheet_InputOpto_NodeSmall.SchDoc	Drawn By: Vizi Gábor	

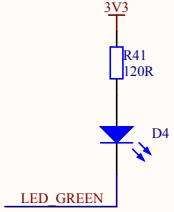
LED

LEDs

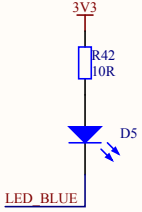
Alarm LED
Red
2,1V -> 10mA
3,3V-2,1V = 1,2V
1,2V / 10mA = 120 Ohm

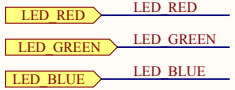


All Right LED
Green
2,1V -> 10mA
3,3V-2,1V = 1,2V
1,2V / 10mA = 120 Ohm



Power LED
Blue
3,4V -> 10mA
0Ohm





Title: Lakásautomatizálás		
Size: A4	Number:	Revision: v1
Date: 2015.12.11.	Sheet of: LED	
File: C:\Users\..\Sheet_LED_NodeSmall.SchDoc	Drawn By: Vizi Gábor	

Power

-Tápegység

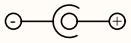
- Zener dióda a túlfeszültség ellen

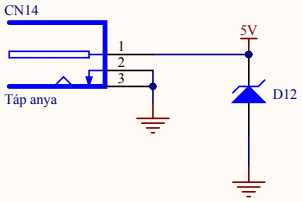
- Schottky dióda bemenetre védelemnek

- kapcsológomb

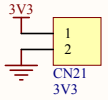
- tápjelző LED-ek beállítása

IN:
Supply source:

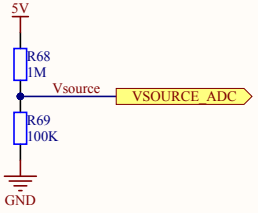




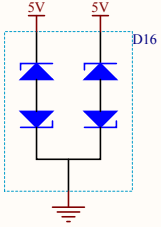
Feszültségszintek kivezetése



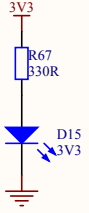
Feszültségforrás feszültségének mérésére



Szupresszor



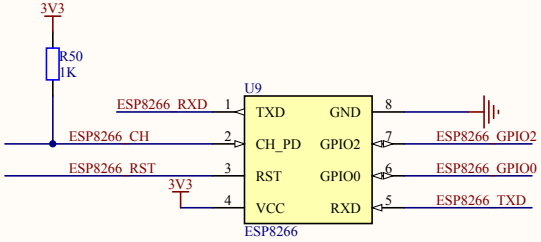
Tápjelző LED

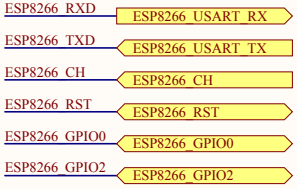


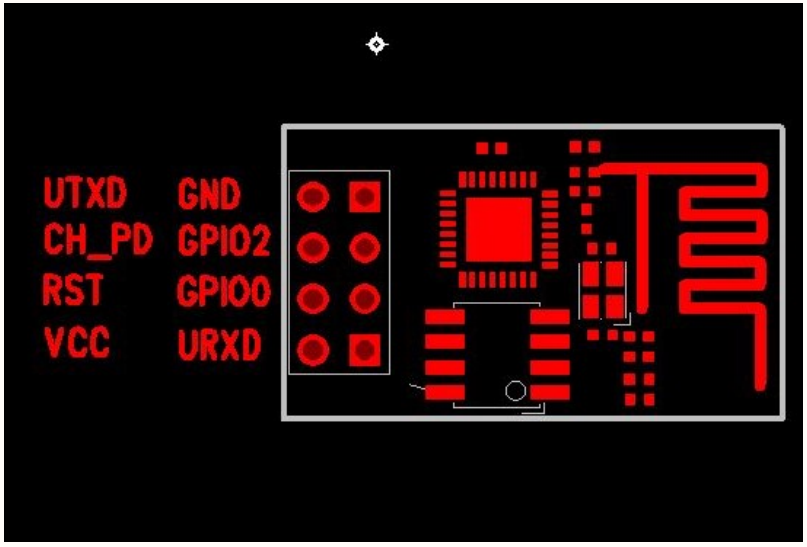
Title: Lakásautomatizálás			
Size: A4	Number:	Revision: v1	
Date: 2015.12.11.	Sheet of: Power		
File: C:\Users\..\Sheet_Power_NodeSmall.SchDoc	Drawn By: Vizi Gábor		

RF

ESP8266
Link: nurdspace - ESP8266







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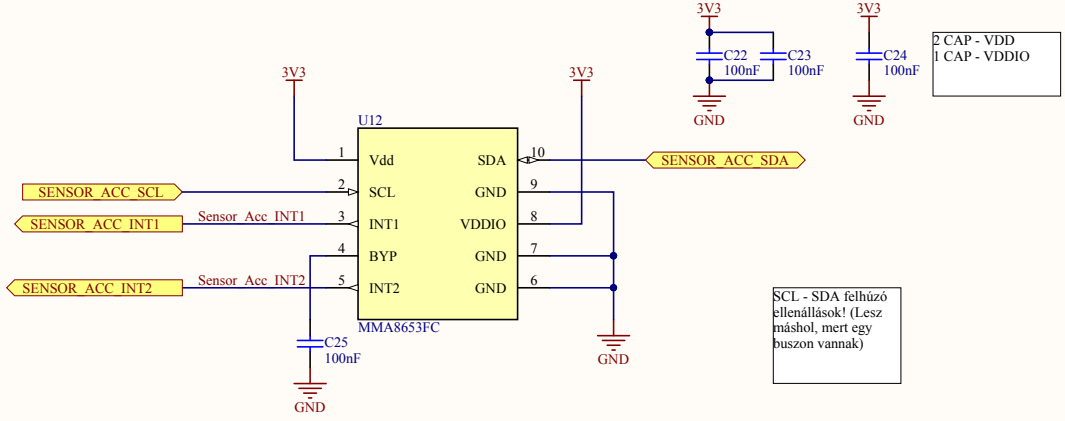
Size: A4	Number:	Revision: v1	
Date: 2015.12.11.		Sheet of: RF	
File: C:\Users\..\Sheet_RF.SchDoc		Drawn By: Vizi Gábor	

Accelerometer



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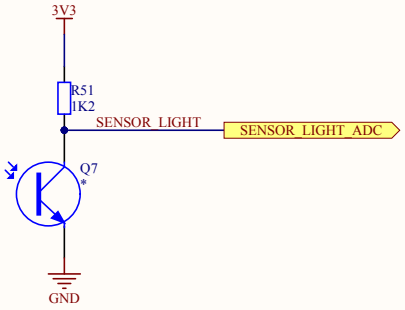
Size: A4	Number:	Revision: v1
Date: 2015.12.11.	Sheet of: Accelerometer	
File: C:\Users\..\Sheet_SensorAccelerometer.SchDoc	Drawn By: Vizi Gábor	

Light Sensor



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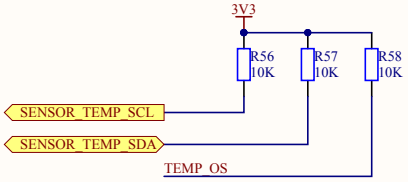
Size: A4	Number:	Revision: v1
Date: 2015.12.11.	Sheet of: Light Sensor	
File: C:\Users\..\Sheet_SensorLight.SchDoc	Drawn By: Vizi Gábor	

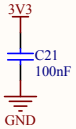
Sound sensor

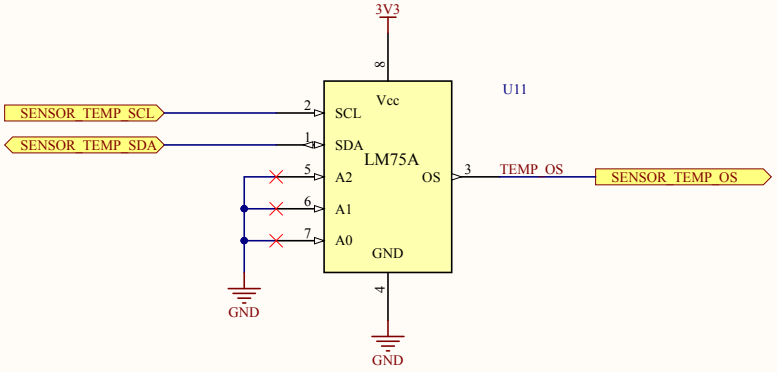
Title	Lakásautomatizálás		
Size: A4	Number:	Revision: v1	
Date: 2015.12.11.		Sheet of: Sound sensor	
File: C:\Users\..\Sheet_SensorSound.SchDoc		Drawn By: Vizi Gábor	

Temperature sensor

Address:
0b000

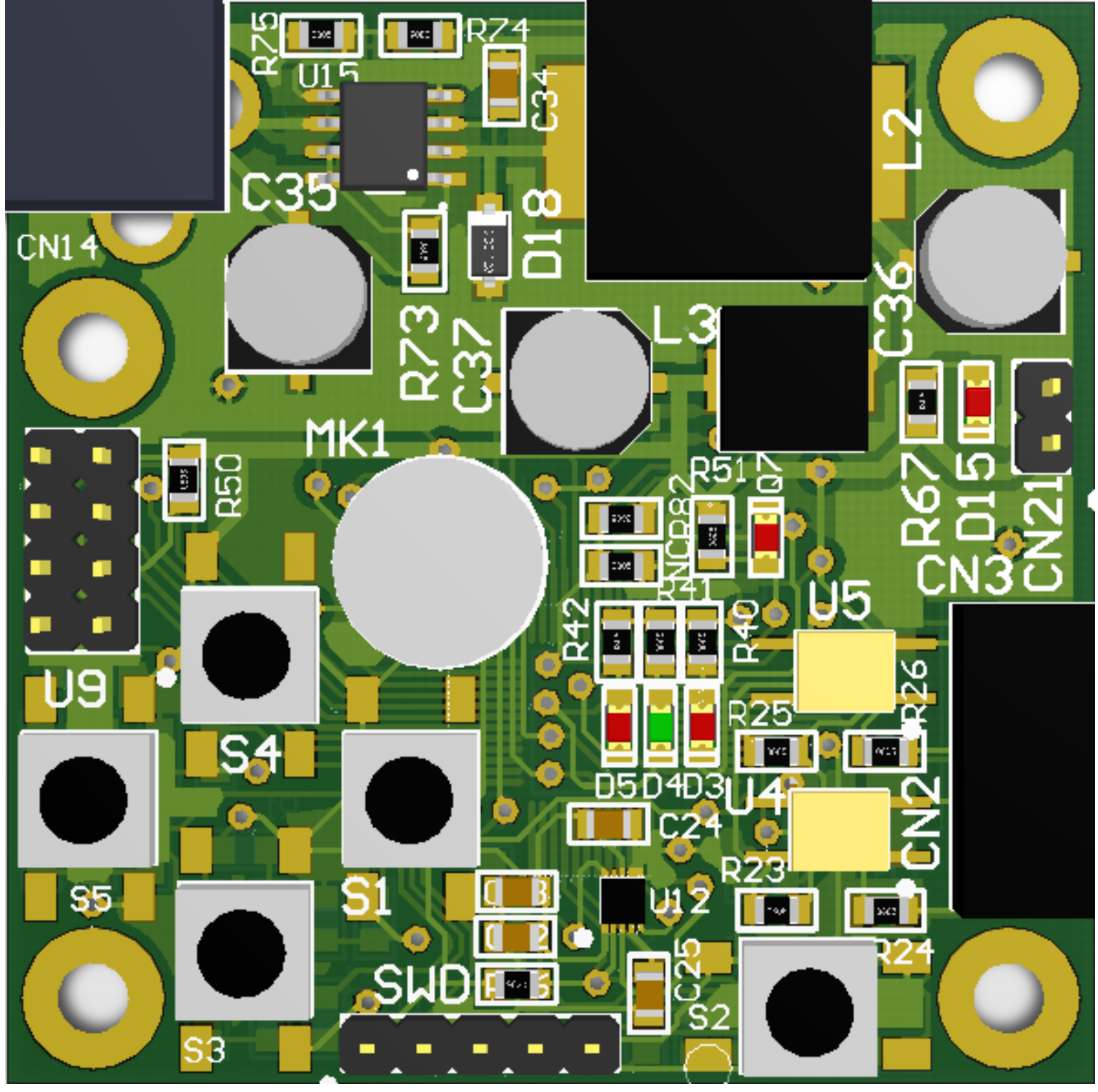


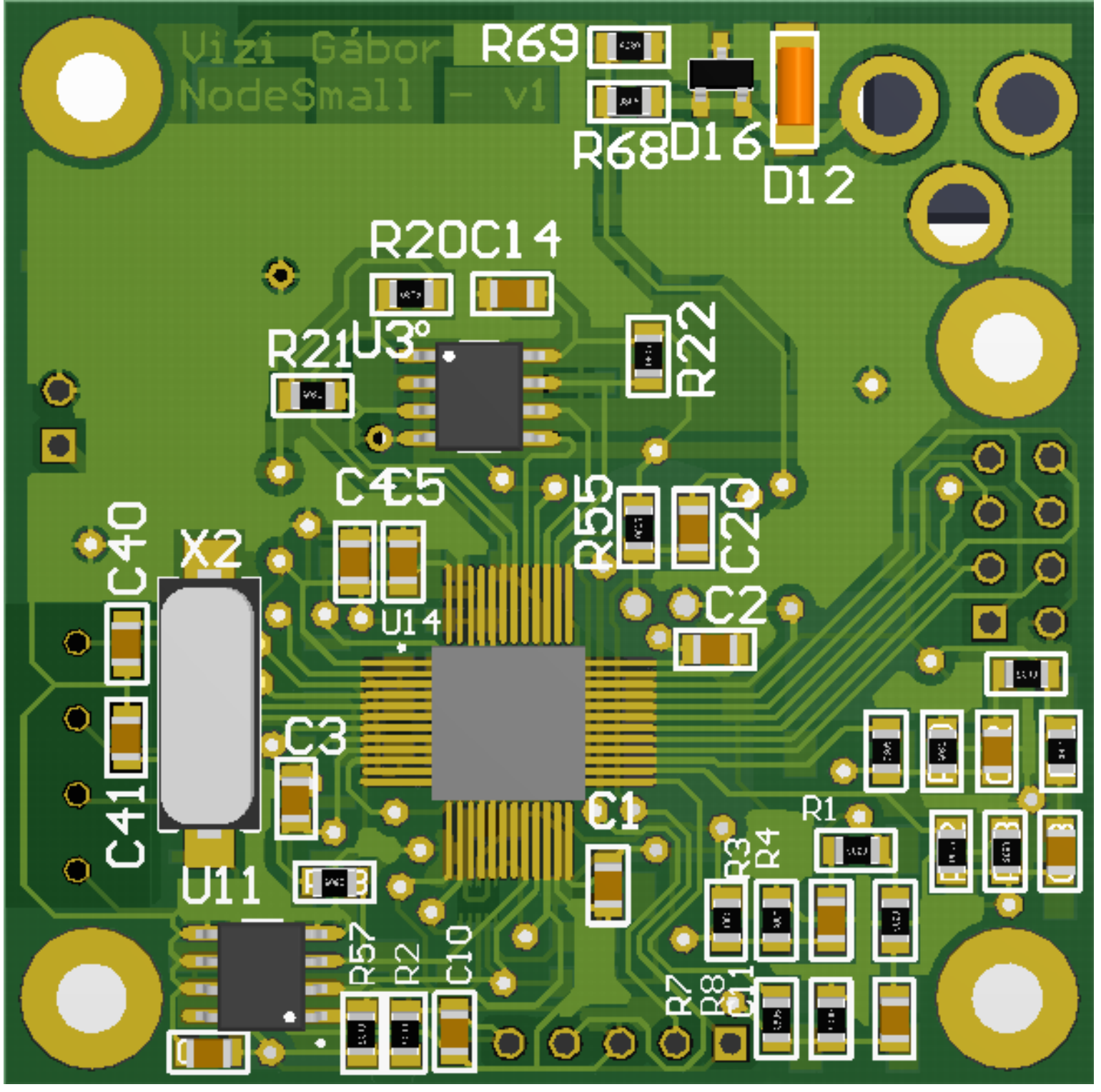


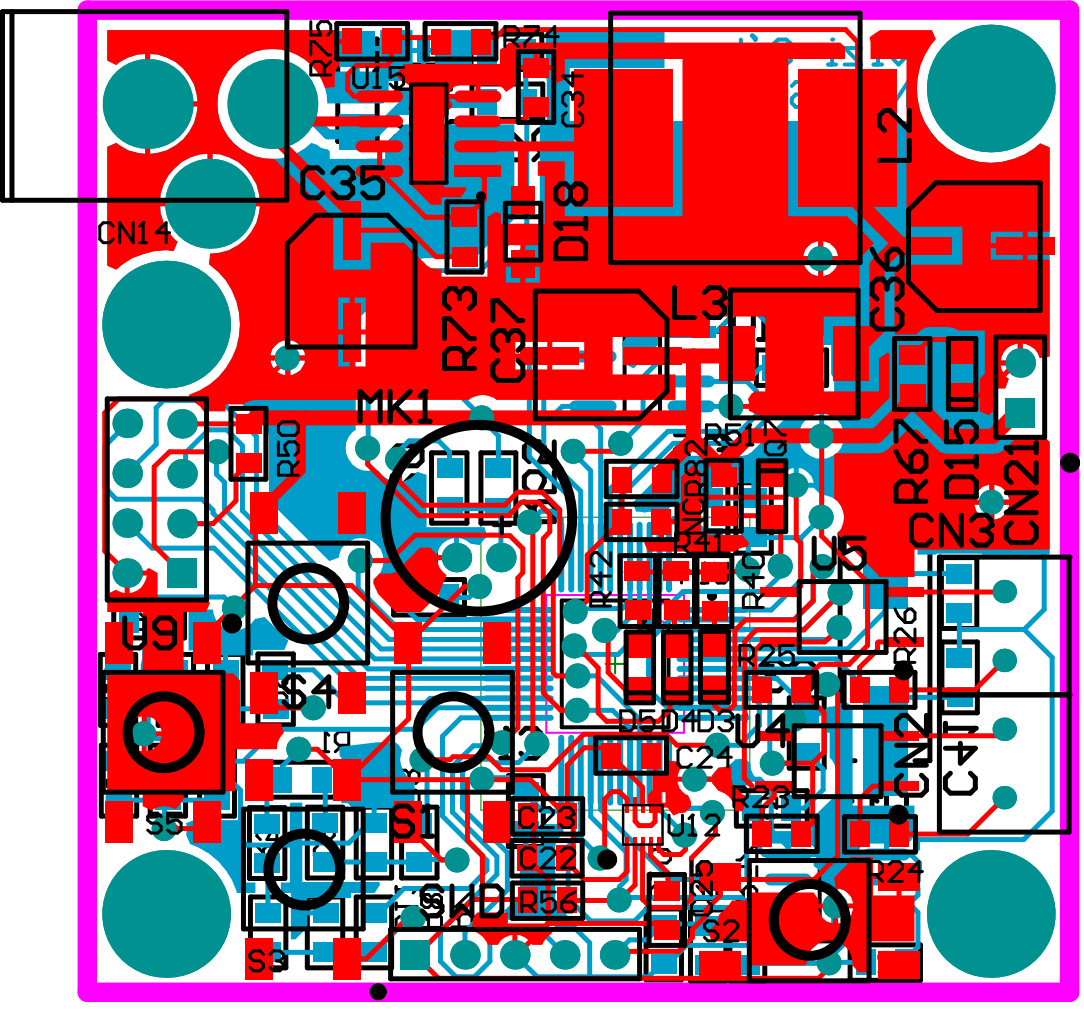


Title	Lakásautomatizálás		
Size A4	Number	Revision	v1
Date:	2015.12.11.	Sheet of	Temperature sensor
File:	C:\Users\..\Sheet_SensorTemp.SchDoc	Drawn By:	Vizi Gábor

Comment	Description	Designator	Footprint	LibRef	Quantity
100nF	Capacitor	C1, C2, C3, C4, C5, C9, C10, C11, C12, C13, C14, C21, C22, C23, C24, C25	FP_0805_CAP_085	CAP	16
10uF	Capacitor	C20	FP_0805_CAP_085	CAP	1
270pF	Capacitor	C34	FP_0805_CAP_085	CAP	1
100uF	CAP - ELECT	C35, C36, C37	FP_CAP_ELKO_6,3X6,3	CAP - ELECT	3
20pF	Capacitor	C40, C41	FP_0805_CAP_085	CAP	2
Connector-2	Connector, 2-Pin	CN2, CN3	FP_CONN2_TL001	Connector 2	2
Táp anya	2.xmm	CN14	FP_DC_TAP_ANYA	DC_TAP_ANYA	1
SWD	Header, 5-Pin	CN17	FP_HEADER_1X5	Header 5	1
3V3	Header, 2-Pin	CN21	FP_HEADER_1X2_CIRCLED	Header 2	1
LED	LED	D3, D5	FP_0805_LED_RED	LED	2
LED	LED	D4	FP_0805_LED_GREEN	LED	1
ZENER	Zener Diode	D12	FP_SOD80-MINIMELF	ZENER	1
3V3	LED - yellow	D15	FP_0805_LED_RED	LED	1
Supressor - bidirectional double ESD protection diode	Supressor - bidirectional double ESD protection diode	D16	FP_SOT23-3	Supressor - bidirectional double ESD protection diode	1
SL04	Schottky diode	D18	FP_DO-219AB	SCHOTTKY	1
10uH	Inductor	L2	FP_IND_12.7-12.7mm	IND	1
1.0uH	Inductor	L3	FP_IND_3.3uH_SS06043R3MLB	IND	1
Supply polarity	Logo - Supply polarity	LOGO1		LOGO_Supply-Polarity	1
BCM9767P4.5-40	Microphone	MK1	FP_MICROPHONE	Microphone	1
	NPN Phototransistor	Q7	FP_0805_PHOTONPN	Photo NPN	1
100R	Resistor	R1, R5, R6, R11	FP_0805_RES	RES	4
100K	Resistor	R2, R69	FP_0805_RES	RES	2
330R	Resistor	R3, R7, R9, R12, R67	FP_0805_RES	RES	5
220R	Resistor	R4, R8, R10, R13, R24	FP_0805_RES	RES	5
10K	Resistor	R20, R21, R22, R56, R57, R58, R82	FP_0805_RES	RES	7
2K	Resistor	R23, R25	FP_0805_RES	RES	2
510R	Resistor	R26	FP_0805_RES	RES	1
120R	Resistor	R40, R41	FP_0805_RES	RES	2
10R	Resistor	R42	FP_0805_RES	RES	1
1K	Resistor	R50, R55	FP_0805_RES	RES	2
1K2	Resistor	R51	FP_0805_RES	RES	1
1M	Resistor	R68	FP_0805_RES	RES	1
0R15	Resistor	R73	FP_0805_RES	RES	1
39K	Resistor	R74	FP_0805_RES	RES	1
24K	Resistor	R75	FP_0805_RES	RES	1
NC	Resistor	R80	FP_0805_RES	RES	1
SW-PB	Switch	S1, S2, S3, S4, S5	FP_FSMJSMA_button	SW-PB	5
S25FL204K0TMFI041	FLASH - SPI - 8pin	U3	FP_SOIC_SOA008_150mil	FLASH - SPI - 8pin	1
Photocoupler	Photocoupler - 4pin	U4, U5	FP_DIP4-TLP181	Photocoupler	2
ESP8266	Wifi module - ESP8266	U9	FP_ESP8266	WIFI-ESP8266	1
LM75AD	Sensor - Temperature - digital	U11	FP_SO8	Sensor_TemperatureDigital	1
MMA8653FC	Accelerometer - MMA8653FC - 10 pin - I2C	U12	FP_DFN_10PIN_2x2x1mm	ACCELEROMETER_MMA8653FC	1
STM32F030Cxx	STM32F030Cx - 48pin	U14	FP_LQFP48_QFP127P600-8N	STM32F030C-48pin	1
MC33063A	MC33063A - power IC	U15	FP_SO8	MC33063A	1
8MHz	Crystal Oscillator	X2	FP_CRYSTAL_HC49_SMD	XTAL	1


R75
R74
U15
C34
C35
D18
L2
CN14
R73
C37
L3
C36
MK1
R50
R51
R67
D15
CN21
CN3
RNCD82
RN41
U5
R42
R40
U9
R26
R25
S4
D5
D4
D3
U4
C24
CN2
S5
S1
U12
R23
R24
SWD
C25
S2
S3


Vizi Gábor
NodeSmall - v1
R69
R68
D16
D12
R20
C14
R21
U3
R22
C4
C5
C40
X2
R55
C20
C2
U14
C41
C3
C1
U11
R1
R3
R4
R57
R2
C10
R7
R8
C11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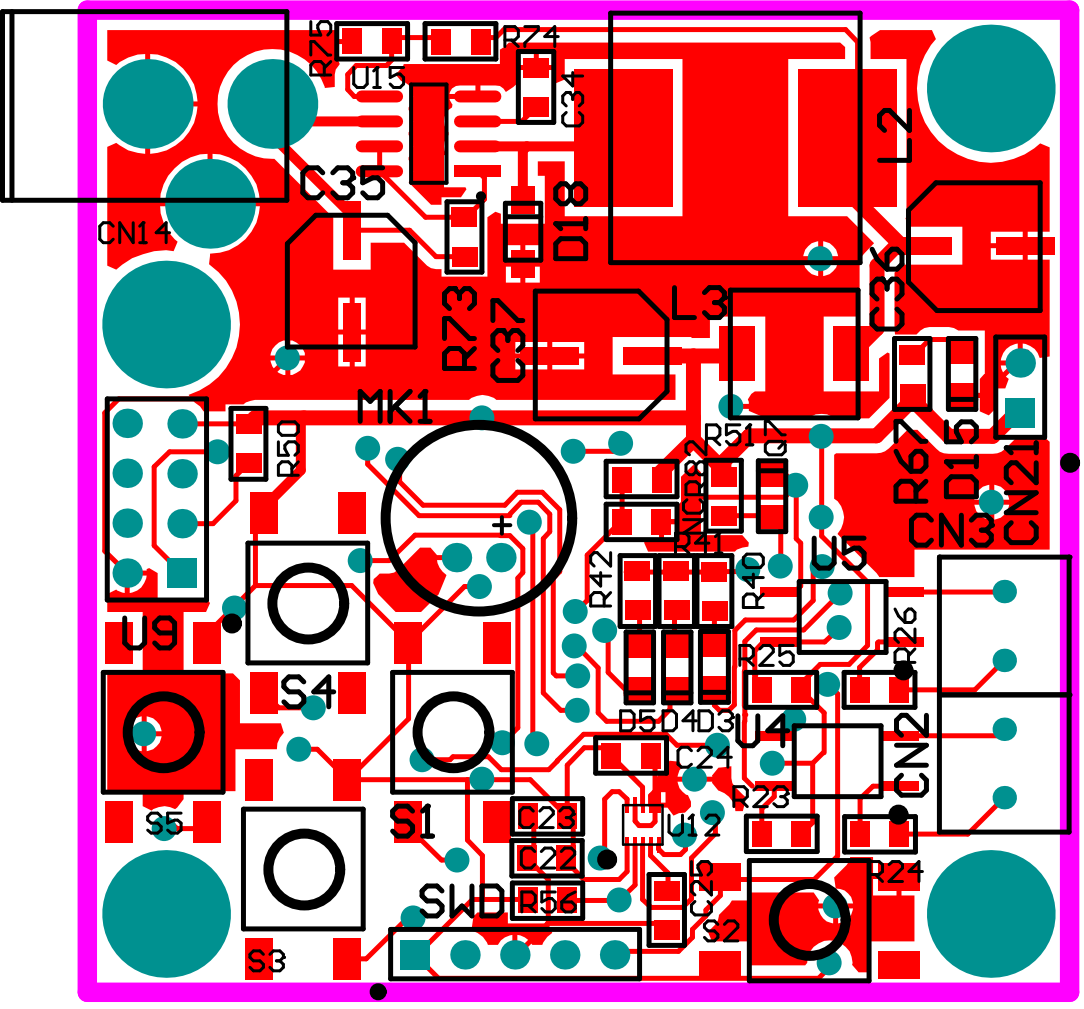
R74
C34
C35
CN14
D18
L2
C36
R73
C37
L3
MK1
R50
R51
R67
D15
CN21
CN3
U5
U9
S4
R26
R25
D5
D4
D3
U4
C24
CN2
C23
S1
C22
U12
R24
R56
S2
S3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C35
CN14
D18
L2
R73
C37
L3
C36
MK1
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R51
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R67
D15
CN21
CN3
R41
R42
R40
J5
U9
R26
R25
S4
D5
D4
D3
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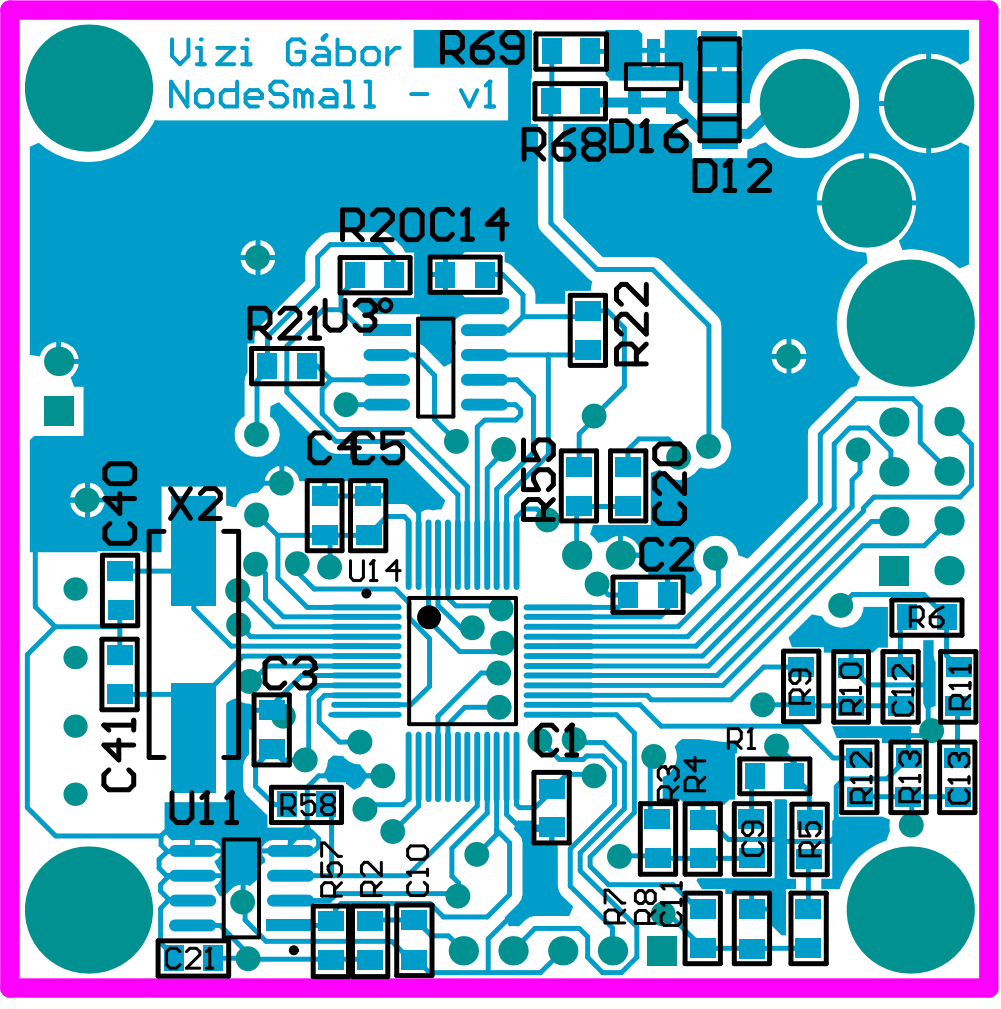
U12
R23
R24
SWD
R56
C25
S2
S3


Vizi Gábor
NodeSmall - v1
R69
R68
D16
D12
R20
C14
R21
U3
R22
C4
C5
R55
C20
C40
X2
U14
C2
C41
C3
R6
R9
R10
C12
R11
R1
C1
R3
R4
R12
R13
C13
U11
R58
C9
R5
R57
R2
C10
R7
R8
C11
C21