Realistic View

3V3
5V0
VIN

SOT-223

+5V USB

Case A

RST
3.3
+5
GND
GND
Vin

PC0
PC1
PC2
PC3
PC4
PC5

RESET

MKII

SOT-223

>TXD
<RXD
PB5
PB4
PB3
PB2
PB1
PB0

PD7
PD6
PD5
PD4
PD3
PD2
PD1
PD0

MEGA328P
AU 1343

Top Layer (Scale 2:1)

View from Top side (Scale 2:1)

R7 R13 R12

J2

J3

F2

C12

Y1

XD4 XD6 XD1

F3

C13

F4

R4

U3

C16

C9

C20 C18

U4

C21 C19

C11

R2 R5 R6 R3 R1

F1

C10

R10 X2 X3 XD5

C7 C5

U2

C8 C6

JP1

C17 L1 C3

U1

C1 C2

Y2

C15 C14

S1 R1

P2

C4

Realistic View

ATMEGA328
eBoard V1.1
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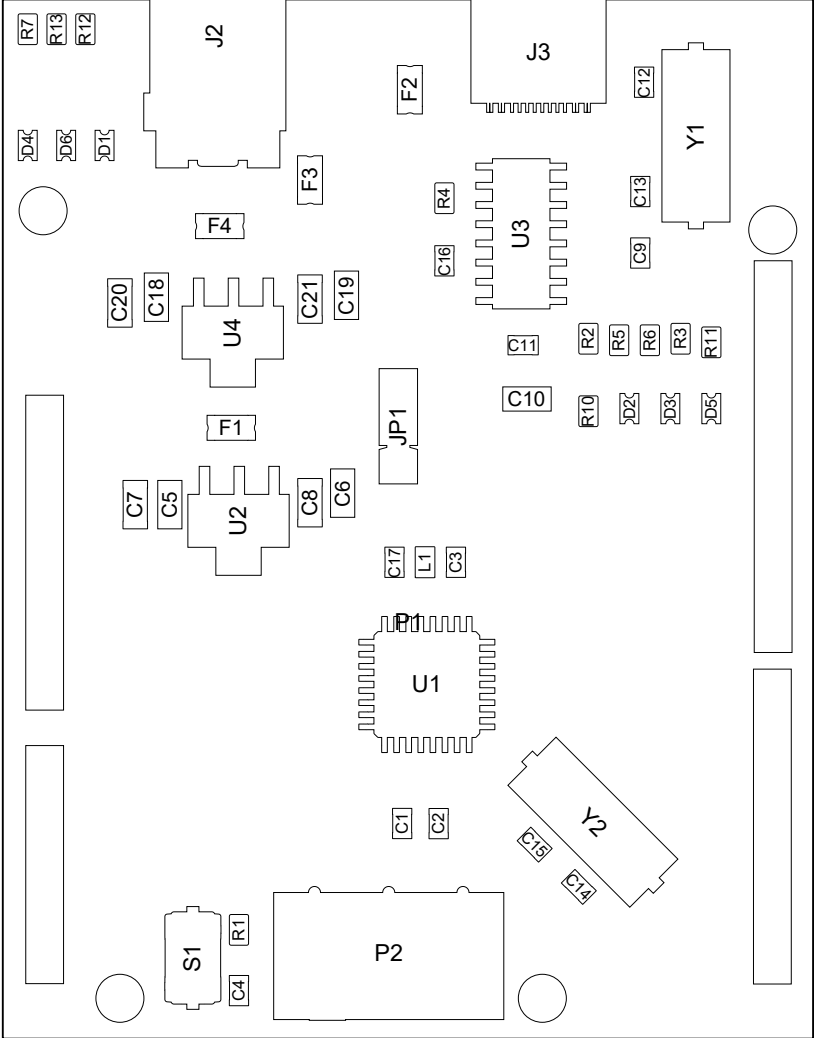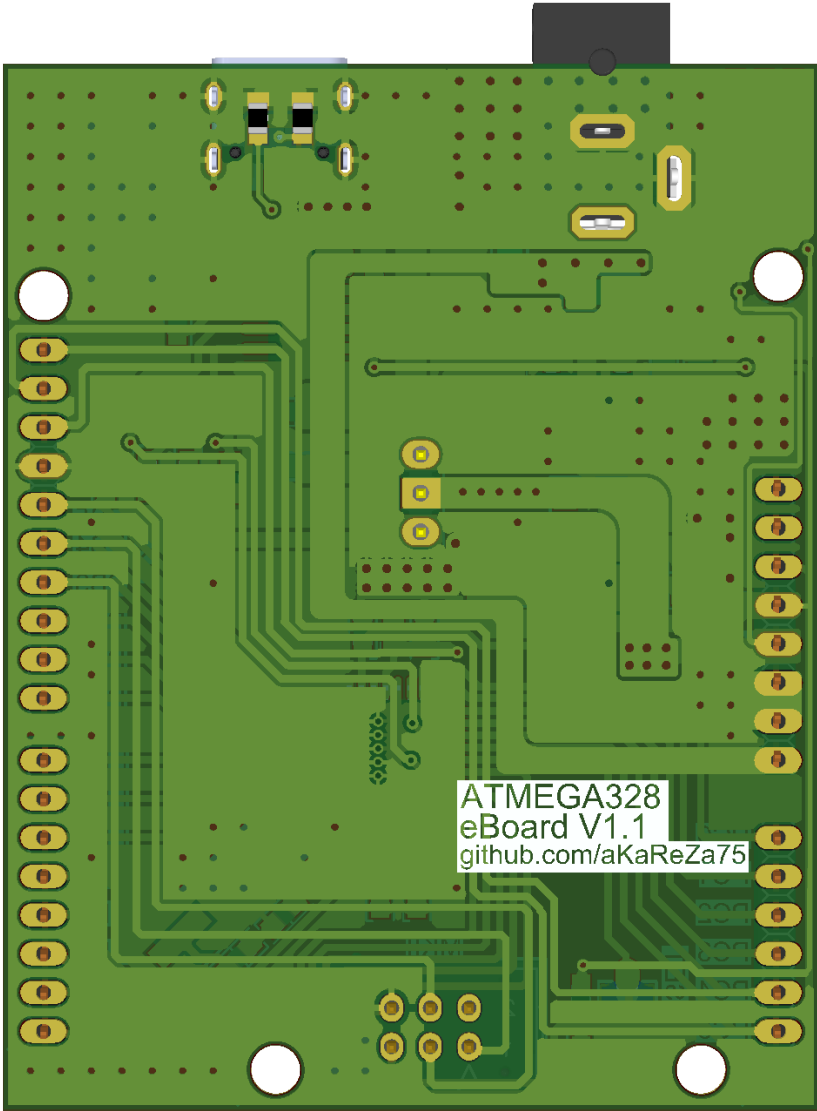
Bottom Layer (Scale 2:1)
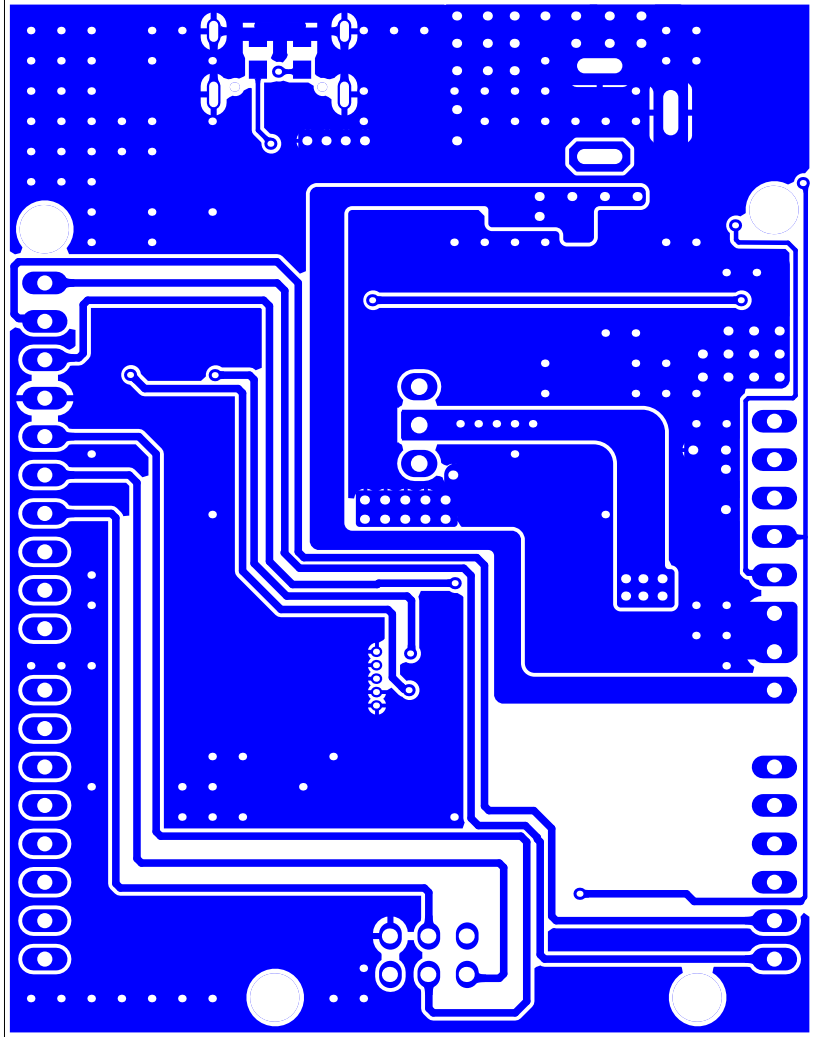
View from Bottom side (Scale 2:1)

R9 R8
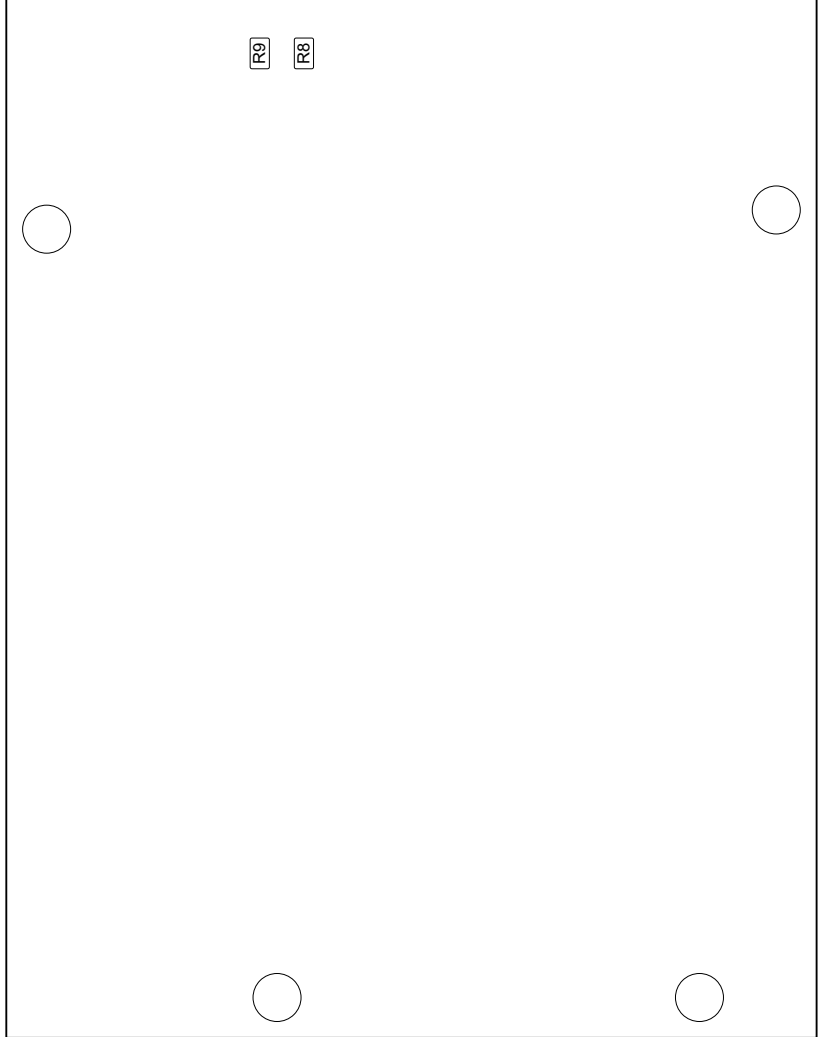
Title: **Bottom View**	Drawn by:	**Hossein Bagheri**
Project: **ATMEGA328**	Revision: **1.1**	aKaReZa
Company: **github.com/aKaReZa75**	Sheet **2** of **7**	

Drill Drawing View (Scale 3:1)

View from Top side (Scale 5:2)

73mm

69mm

69mm

54mm

Labels (top view): R7, R13, R12, J2, J3, C12, F2, Y1, D4, D6, D1, F3, C13, R4, C9, U3, C16, F4, C11, R2, R5, R6, R3, R11, C20, C18, U4, C21, C19, C10, R10, D2, D3, D5, F1, JP1, C7, C5, U2, C8, C6, C17, L1, C3, P1, U1, C1, C2, C15, Y2, C14, S1, R1, P2, C4
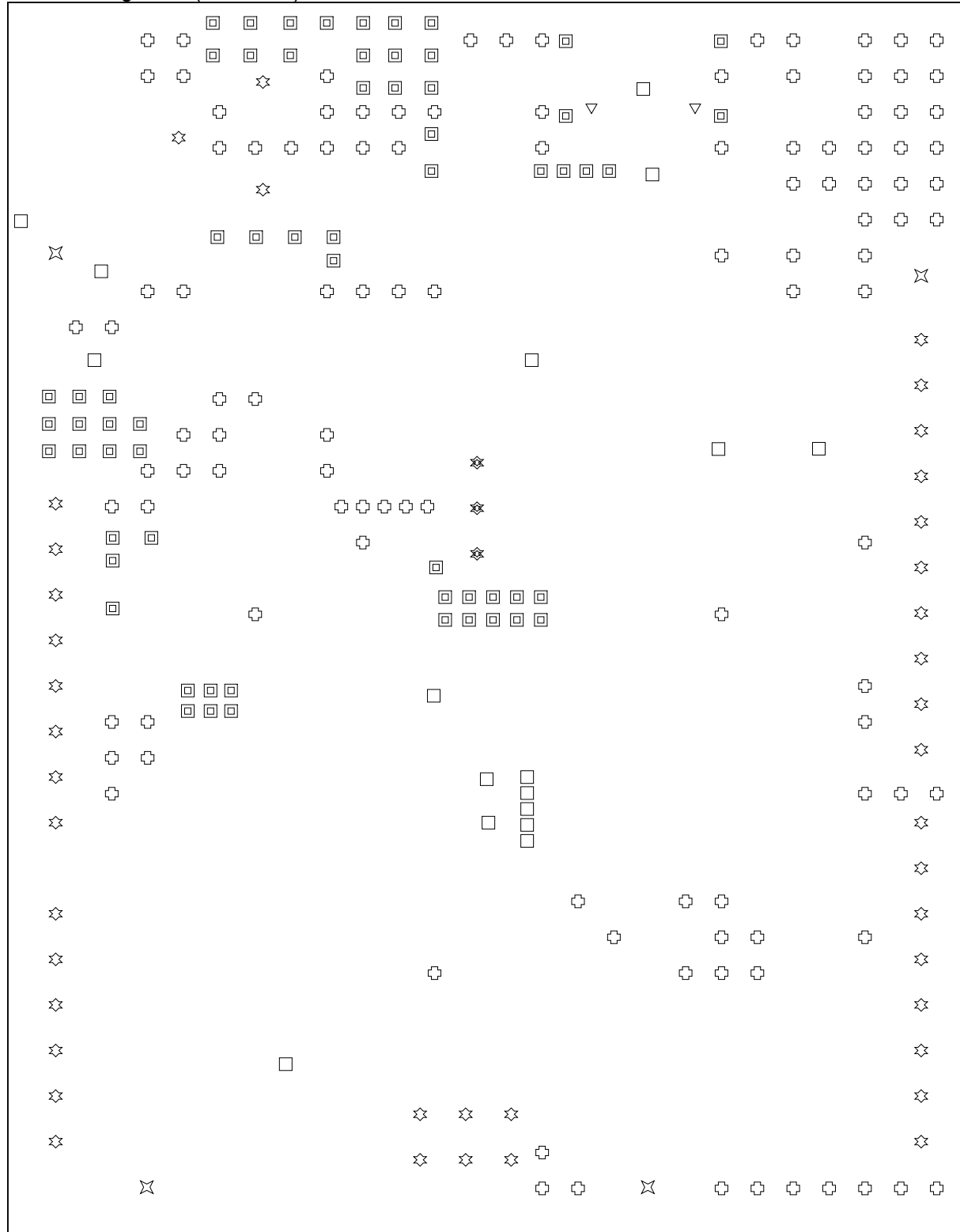
Drill Table

Symbol	Count	Hole Size	Plated	Hole Tolerance
□	17	0mm	Plated	
⬡	112	0mm	Plated	
▽	2	1mm	Non-Plated	
▣	63	1mm	Plated	
✧	41	1mm	Plated	
✺	3	1mm	Plated	
⋈	4	3mm	Plated	
	242 Total			
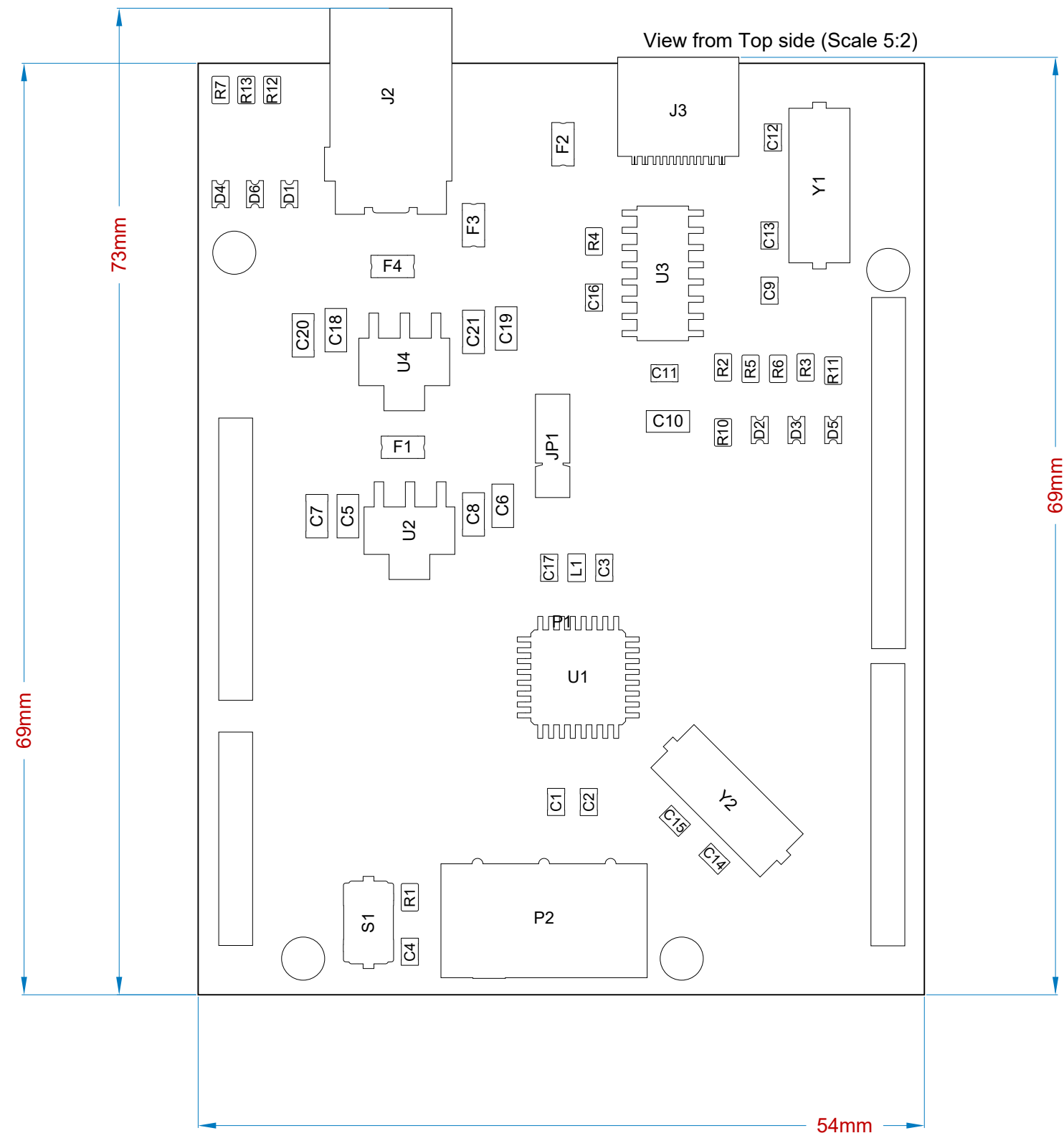
Title:	Drill Drawing and Dimensions	Drawn by:	Hossein Bagheri
Project:	ATMEGA328	Revision: 1.1	aKaReZa
Company:	github.com/aKaReZa75	Sheet 3 of 7	

View from Left side (Scale 5:2)

View from Back side (Scale 5:2)

View from Right side (Scale 5:2)

View from Front side (Scale 5:2)
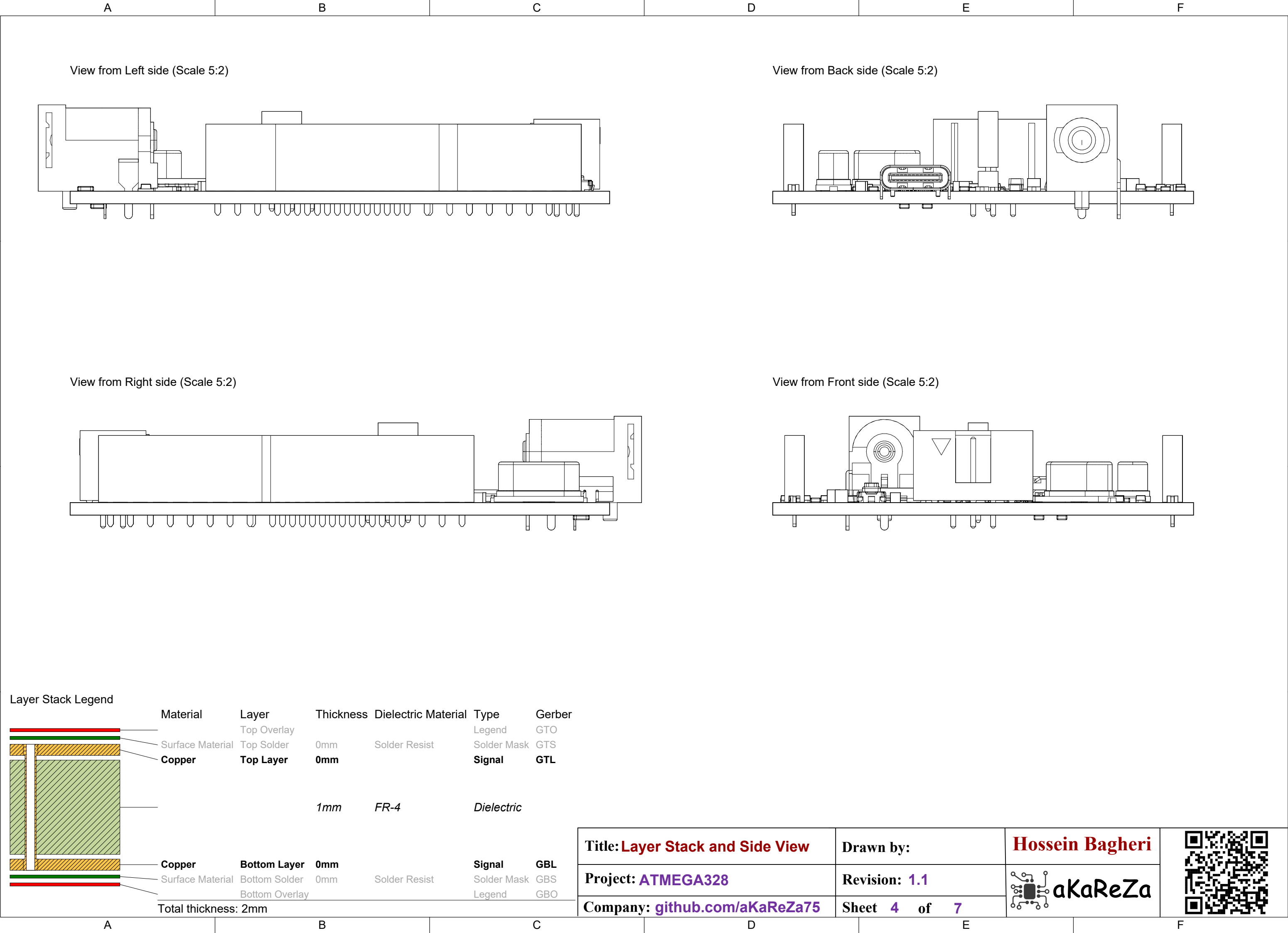
Layer Stack Legend

Material	Layer	Thickness	Dielectric Material	Type	Gerber
	Top Overlay			Legend	GTO
Surface Material	Top Solder	0mm	Solder Resist	Solder Mask	GTS
Copper	**Top Layer**	**0mm**		**Signal**	**GTL**
		1mm	*FR-4*	*Dielectric*	
Copper	**Bottom Layer**	**0mm**		**Signal**	**GBL**
Surface Material	Bottom Solder	0mm	Solder Resist	Solder Mask	GBS
	Bottom Overlay			Legend	GBO

Total thickness: 2mm

Title: Layer Stack and Side View

Drawn by:

Hossein Bagheri

Project: ATMEGA328

Revision: 1.1

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View from Top side (Scale 5:2)

View from Bottom side (Scale 5:2)

44 50 49
3V3 5V0 VIN
25 27 22

32

29

33

12

56

30

31

13

41

9

16

54

20 18
55
21 19

11

39 42 43 40 48

10

28

34
+5V USB

47 23 24 26

RST
3.3
+5
GND
GND
Vin

7 5
53
8 6

17 35 3

36
52

PB5
PB4
PB3
PB2
PB1
PB0

TXD> <RXD

PD7
PD6
PD5
PD4
PD3
PD2
PD1
PD0

PC0
PC1
PC2
PC3
PC4
PC5

RESET

51 38

1 2

15

57

14

MKII
2
1   37

4

46 45

ATMEGA328
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Bill Of Materials

Line #	Designator	Comment	Library Ref	Footprint	Package	Rating	Type	Value
1	C1	100n	Cap_Multi_SMD_100nF_0805	CAP 0805/2012	0805	50V	MultiLayer	100n
2	C2	100n	Cap_Multi_SMD_100nF_0805	CAP 0805/2012	0805	50V	MultiLayer	100n
3	C3	100n	Cap_Multi_SMD_100nF_0805	CAP 0805/2012	0805	50V	MultiLayer	100n
4	C4	100n	Cap_Multi_SMD_100nF_0805	CAP 0805/2012	0805	50V	MultiLayer	100n
5	C5	10u	Cap_Tantalum	SMT_C_Tantalum_A	Package?	16V	Tantalum	10u
6	C6	22u	Cap_Tantalum	SMT_C_Tantalum_A	Package?	6.3V	Tantalum	22u
7	C7	100n	Cap_Multi_SMD_100nF_1206	CAP 1206/3216	1206	50V	MultiLayer	100n
8	C8	100n	Cap_Multi_SMD_100nF_1206	CAP 1206/3216	1206	50V	MultiLayer	100n
9	C9	10n	Cap_Multi_SMD_0805	CAP 0805/2012	0805	Rating?	MultiLayer	10n
10	C10	10u	Cap_Tantalum	SMT_C_Tantalum_A	Package?	6.3V	Tantalum	10u
11	C11	100n	Cap_Multi_SMD_100nF_0805	CAP 0805/2012	0805	50V	MultiLayer	100n
12	C12	22p	Cap_Multi_SMD_0805	CAP 0805/2012	0805	Rating?	MultiLayer	22p
13	C13	22p	Cap_Multi_SMD_0805	CAP 0805/2012	0805	Rating?	MultiLayer	22p
14	C14	22p	Cap_Multi_SMD_0805	CAP 0805/2012	0805	Rating?	MultiLayer	22p
15	C15	22p	Cap_Multi_SMD_0805	CAP 0805/2012	0805	Rating?	MultiLayer	22p
16	C16	100n	Cap_Multi_SMD_100nF_0805	CAP 0805/2012	0805	50V	MultiLayer	100n
17	C17	100n	Cap_Multi_SMD_100nF_0805	CAP 0805/2012	0805	50V	MultiLayer	100n
18	C18	10u	Cap_Tantalum	SMT_C_Tantalum_A	Package?	16V	Tantalum	10u
19	C19	22u	Cap_Tantalum	SMT_C_Tantalum_A	Package?	6.3V	Tantalum	22u
20	C20	100n	Cap_Multi_SMD_100nF_1206	CAP 1206/3216	1206	50V	MultiLayer	100n
21	C21	100n	Cap_Multi_SMD_100nF_1206	CAP 1206/3216	1206	50V	MultiLayer	100n
22	D1	Yellow	Semi_LED_SMD	LED 0805/2012 YELLOW	Package?	Rating?	LED	Yellow
23	D2	Red	Semi_LED_SMD	LED 0805/2012 RED	Package?	Rating?	LED	Red
24	D3	Red	Semi_LED_SMD	LED 0805/2012 RED	Package?	Rating?	LED	Red
25	D4	Green	Semi_LED_SMD	LED 0805/2012 GREEN	Package?	Rating?	LED	Green
26	D5	Green	Semi_LED_SMD	LED 0805/2012 GREEN	Package?	Rating?	LED	Green
27	D6	Red	Semi_LED_SMD	LED 0805/2012 RED	Package?	Rating?	LED	Red
28	F1	0.5A	Other_Elec_Fuse_SMD	1206_F	1206	Rating?	Fast	0.5A
29	F2	500m	Other_Elec_Fuse_SMD	1206_F	1206	Rating?	Fast	500m
30	F3	3A	Other_Elec_Fuse_SMD	1206_F	1206	Rating?	Fast	3A
31	F4	0.5A	Other_Elec_Fuse_SMD	1206_F	1206	Rating?	Fast	0.5A
32	J2	Female	Con_Power_Jack	Power Jack BIG	Package?	Rating?	Type?	Female
33	J3	12b	Con_USB_C	HRO_TYPE-C-31-M-12 - Extended	SMD	Rating?	C	12b
34	JP1	0b	SW_Other_JSelector_Dip	jumper selector	Dip	Rating?	Selector	0b
35	L1	100u	Ind_SMD_0805	IND0805	0805	Rating?	SMD	100u
36	P1	UNO	Con_Arduino_UNO_Con	ARDUINO_UNO_CONNECTOR	Package?	Rating?	Type?	UNO
37	P2	3x2	Con_Prog_MKII_ISP	IDC_2X3	Package?	Rating?	Type?	3x2
38	R1	10K	Res_SMD_0805	RES 0805 (2012X06L)	0805	0.125W	10%	10K
39	R2	1K	Res_SMD_0805	RES 0805 (2012X06L)	0805	0.125W	10%	1K
40	R3	1K	Res_SMD_0805	RES 0805 (2012X06L)	0805	0.125W	10%	1K
41	R4	10K	Res_SMD_0805	RES 0805 (2012X06L)	0805	0.125W	10%	10K
42	R5	680	Res_SMD_0805	RES 0805 (2012X06L)	0805	0.125W	10%	680
43	R6	680	Res_SMD_0805	RES 0805 (2012X06L)	0805	0.125W	10%	680
44	R7	220b	Res_SMD_0805	RES 0805 (2012X06L)	0805	0.125W	10%	220b
45	R8	4.7K	Res_SMD_0805	RES 0805 (2012X06L)	0805	0.125W	10%	4.7K
46	R9	4.7K	Res_SMD_0805	RES 0805 (2012X06L)	0805	0.125W	10%	4.7K

Title: **Bill of Materials**

Drawn by:

Hossein Bagheri

Project: **ATMEGA328**

Revision: **1.1**

aKaReZa

Company: **github.com/aKaReZa75**

Sheet **6** of **7**

Bill Of Materials

Line #	Designator	Comment	Library Ref	Footprint	Package	Rating	Type	Value
47	R10	1.8K	Res_SMD_0805	RES 0805 (2012X06L)	0805	0.125W	10%	1.8K
48	R11	1K	Res_SMD_0805	RES 0805 (2012X06L)	0805	0.125W	10%	1K
49	R12	1.8K	Res_SMD_0805	RES 0805 (2012X06L)	0805	0.125W	10%	1.8K
50	R13	680b	Res_SMD_0805	RES 0805 (2012X06L)	0805	0.125W	10%	680b
51	S1	PB	SW_PushButton_2_SMD	SW_PB_SMD_2PIN_SPST_6X3X2	SMD	2b	Vertical	PB
52	U1	ATmega328P	IC_MCU_ATmega328P_SMD	ATMEGA328	Package?	Rating?	Type?	ATmega328P
53	U2	3.3V	IC_Reg_AMS1117_3.3	SOT223_M	SOT223	1A	LDO	3.3V
54	U3	CH340G	IC_Converter_CH340G	SO16_M	SO-16	Rating?	USB to TTL	CH340G
55	U4	5V	IC_Reg_AMS1117_3.3	SOT223_M	SOT223	1A	LDO	5V
56	Y1	12M	Other_Elec_Xtal_SMD	Crystal SMD	SMD	Rating?	Quartz	12M
57	Y2	12M	Other_Elec_Xtal_SMD	Crystal SMD	SMD	Rating?	Quartz	12M

Title: Bill of Materials

Drawn by:

Hossein Bagheri

Project: ATMEGA328

Revision: 1.1

aKaReZa

Company: github.com/aKaReZa75

Sheet 7 of 7