

12/16/2022

Variant: [No Variations]

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DRAFT		Approved by: *	

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A

A

B

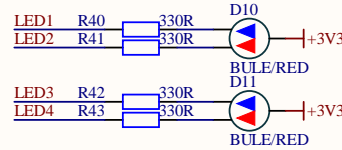
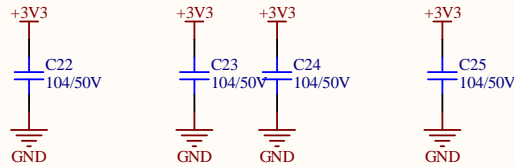
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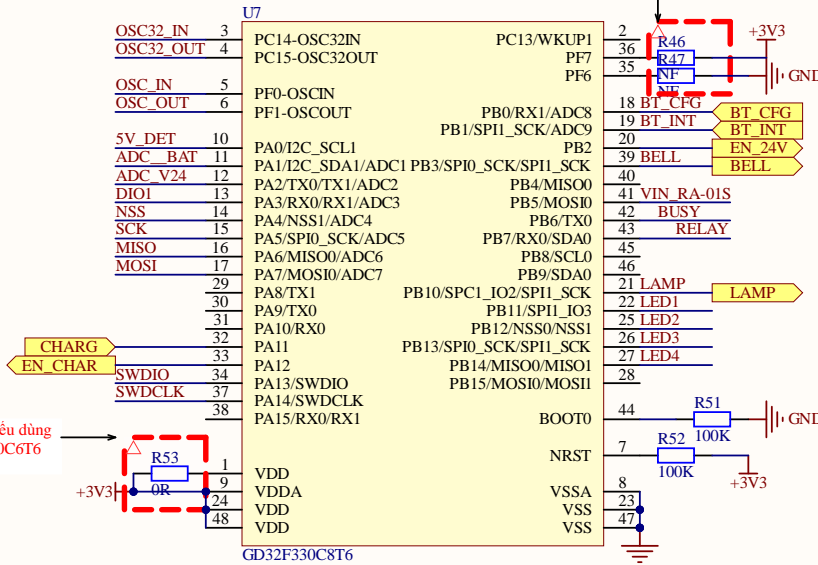
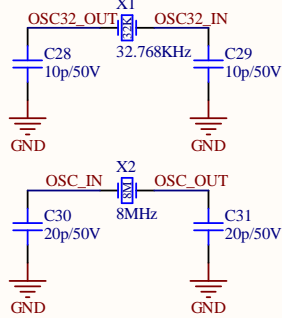
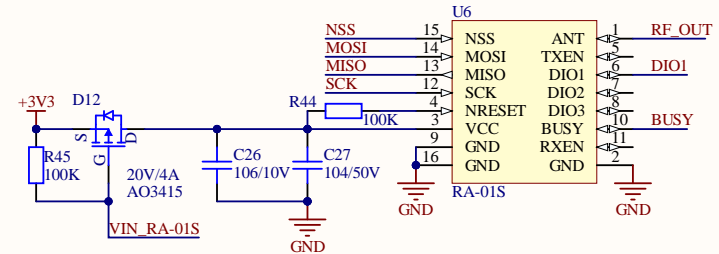
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D



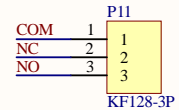
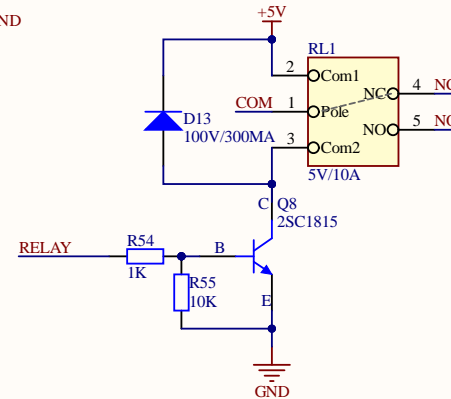
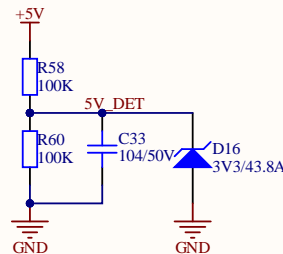
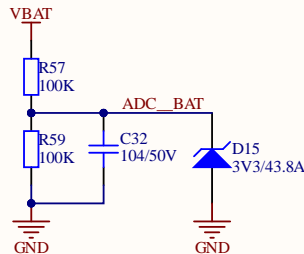
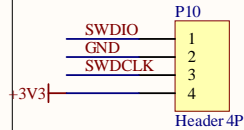
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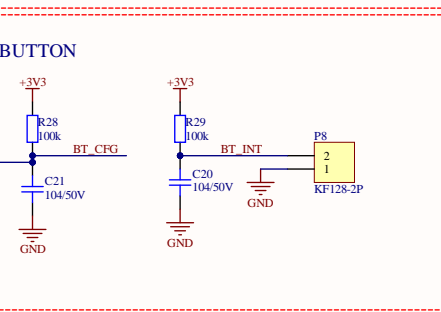
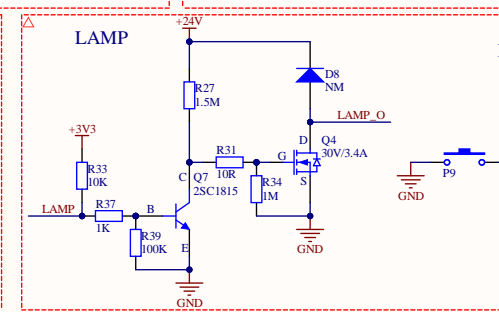
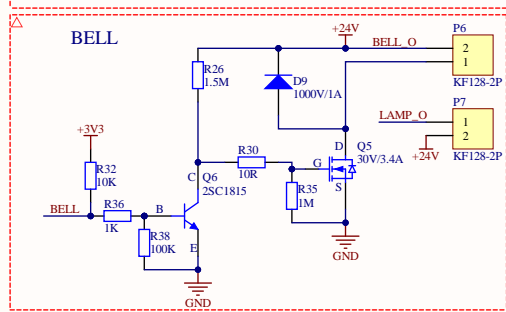
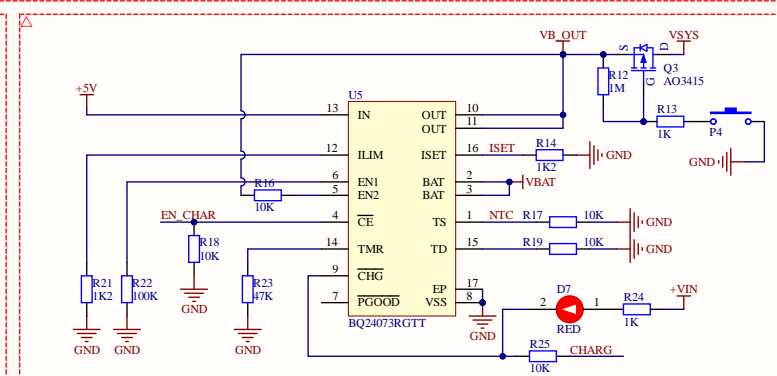
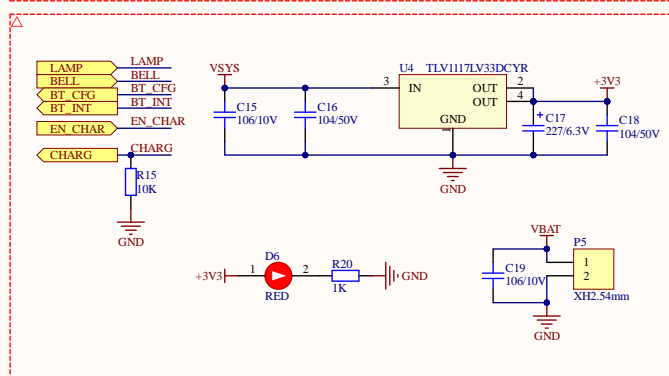
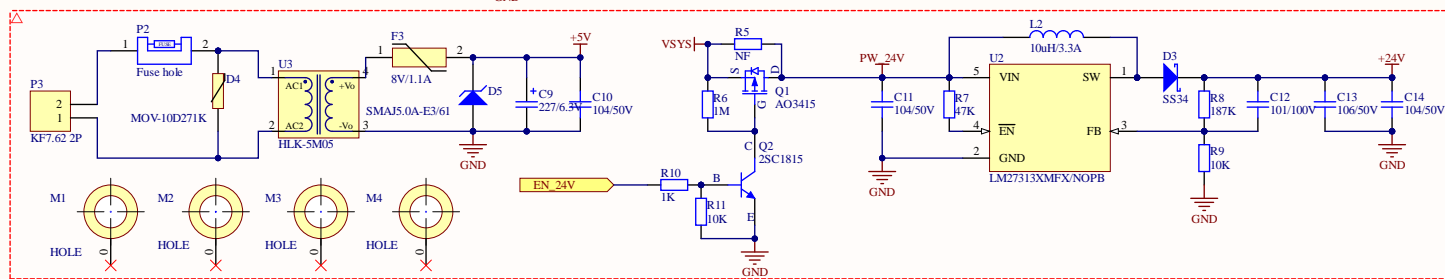
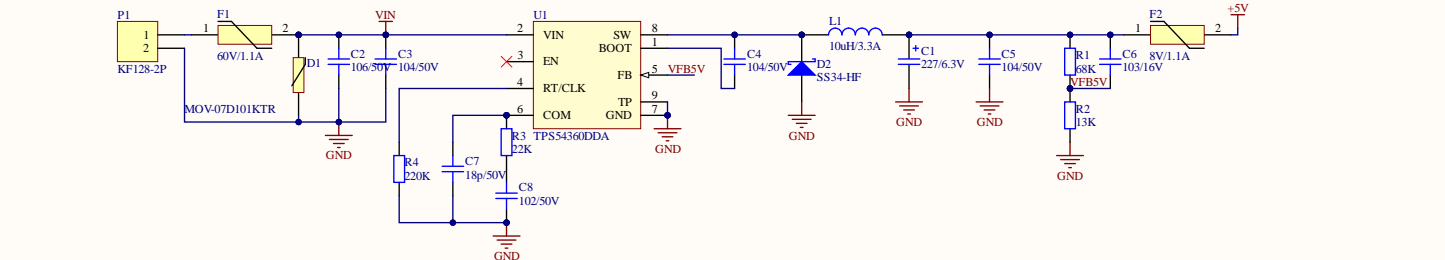
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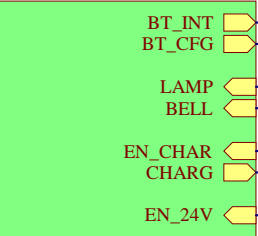
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01 Cover.SchDoc



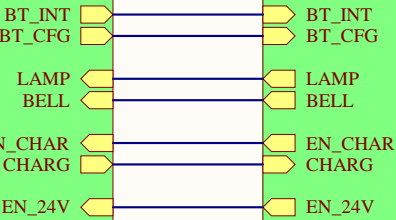
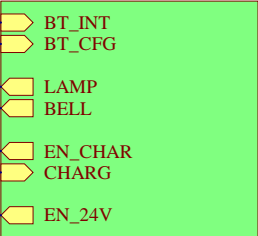
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02 Block diagram.SchDoc



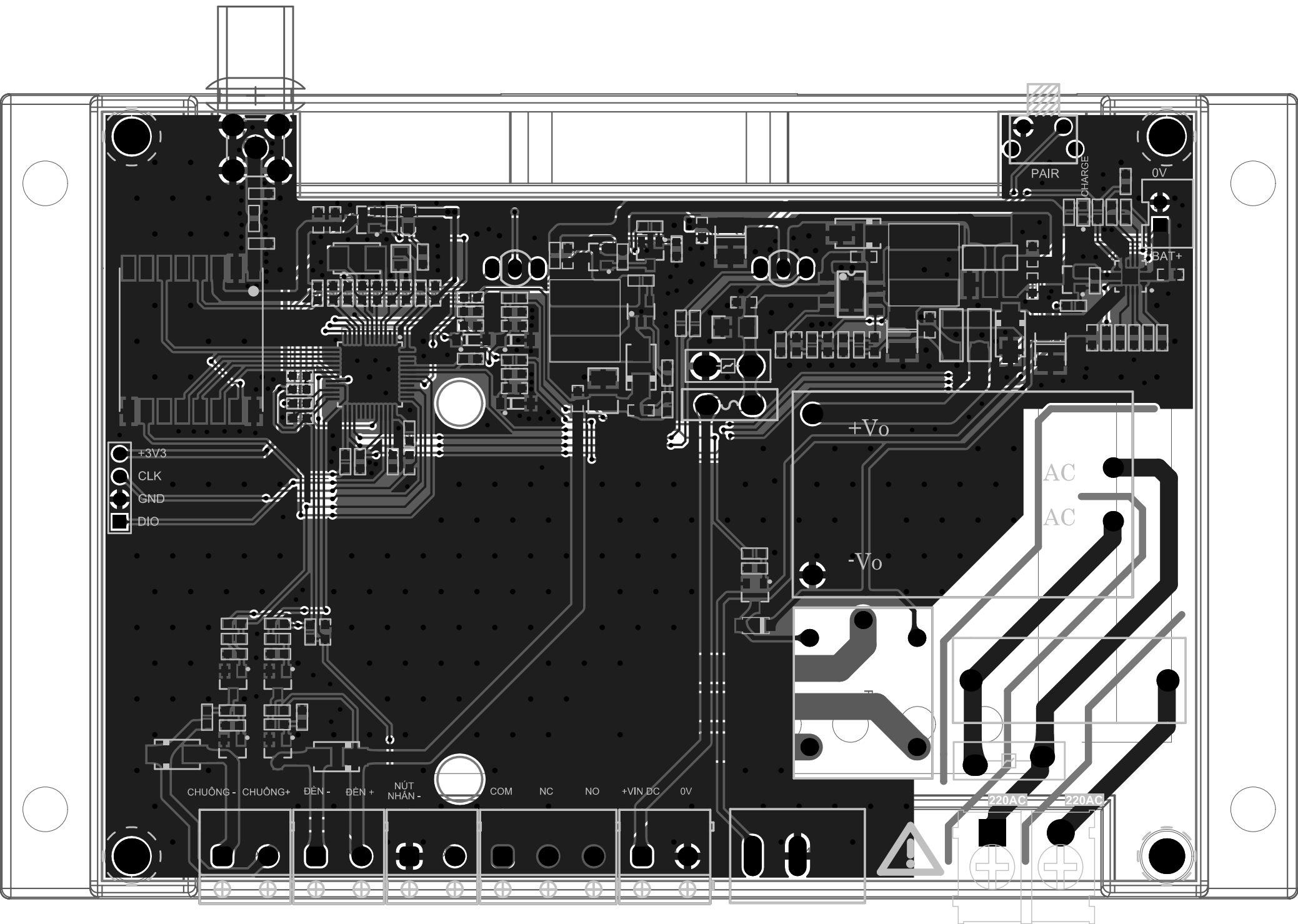
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03 Power.SchDoc

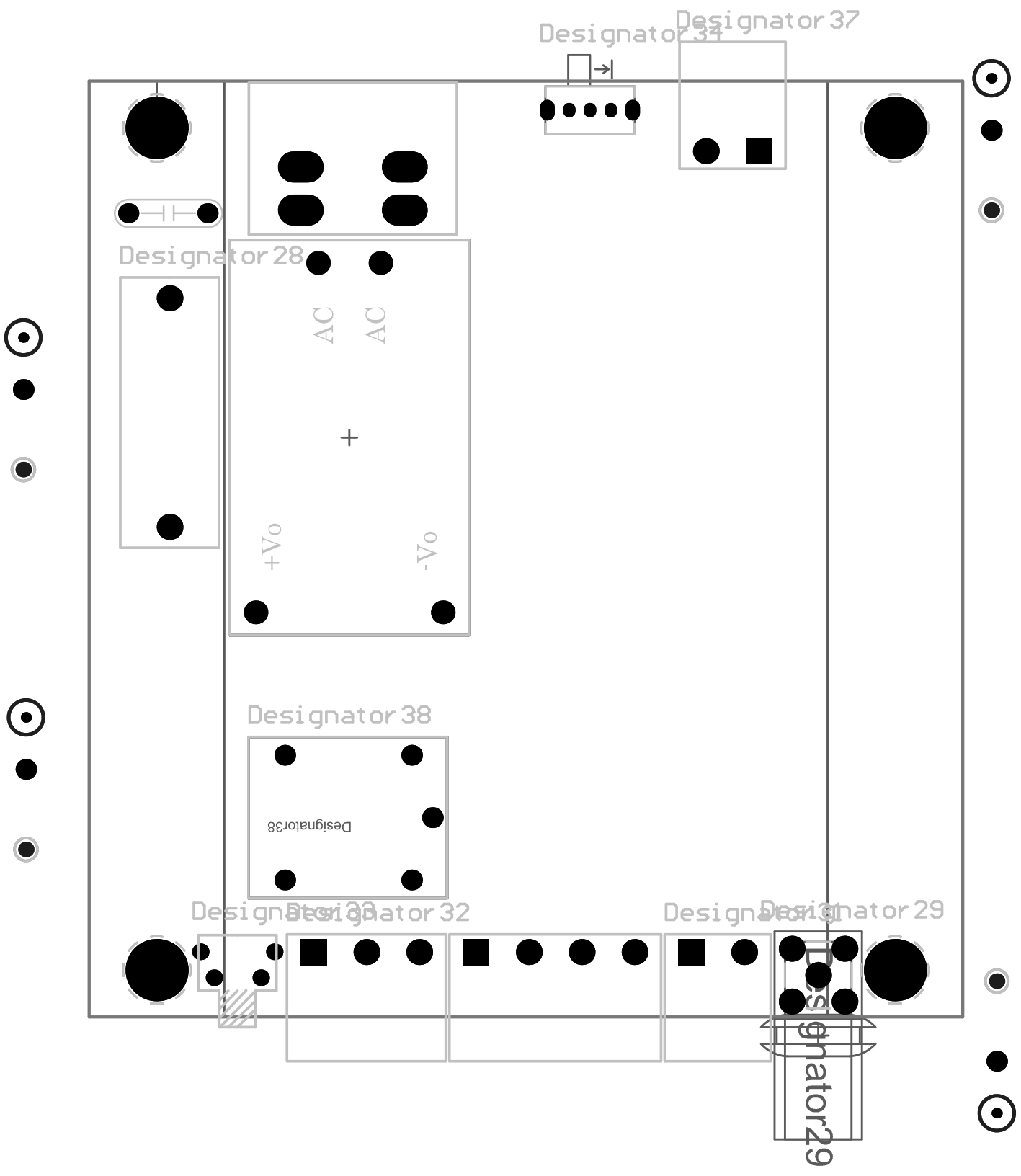


U\_04 MCU  
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Comment	Description	Designator	Footprint	Ref	Quantity
SMA		A11	SMA-KWE-17-V1	SAJ5-9MAJ2M-KWE-17.3	1
227/6.3V	CAP TANT POLY 220uF 20% 6.3V 3528 8mmOhm ESR	C1, C9, C17	CAP_TANTAL_1210J3	TI080227M000ATE03	3
10uF/50V	CAP CER 10uF 50V X7R 1206	C2	CAPC-1206 (3214)	CL31B106KBNNNE	1
104/50V	CAP CER 0.1uF 50V 10% X7R 0603	C3, C4, C5, C10, C11, C14, C16, C18, C20, C21, C22, C23, C24, C25, C27, C32, C33	CAPC-0603 (1608)-HD	02603C104K3RACTU	17
103/16V	CAP CER 10uF 16V 10% X7R 0603	C6, C34	CAPC-0603 (1608)-HD	02603K06V78B103	2
18uF/50V	CAP CER 18uF 50V 50% NP0 0603	C7	CAPC-0603 (1608)-HD	CL10C180BBNNNC	1
102/50V	CAP CER 1uF 50V 10% X7R 0603	C8	CAPC-0603 (1608)-HD	02603C102K3RACTU	1
101/100V	CAP CER 100P 100V 50% NP0 0603	C12	CAPC-0603 (1608)-HD	CL10C101CBNNNC	1
10uF/50V	CAP CER 10uF 50V 10% X7R 1210 (1205)	C13	CAPC-1210 (3229)	GRM32E71H06KA12	1
10uF/10V	CAP CER 10uF 10V 10% X5R 0603	C15, C19, C26	CAPC-0603 (1608)-HD	CL10A106KPBNNNC	3
10pF/50V	CAP CER 10PF 50V NP0 0603	C28, C29	CAPC-0603 (1608)-HD	CL10C100BBNNND	2
20pF/50V	CAP CER 20pF 50V 50% NP0 0603	C30, C31	CAPC-0603 (1608)-HD	CL10C200BBNNNC	2
MOV 07D101KTR	VARIABLE 100V 1.2KA DISC 7MM	D1	MOV-07D101KTR	MOV-07D101KTR	1
SS34 HF	DIODE SCHOTTKY 40V 3A SMA	D2	DIODE_D0214AC_SMA	SS34 HF	1
SS34	DIODE SCHOTTKY 40V 3A SMA	D3	DIODE_D0214AC_SMA	SS34	1
MOV-10D271K	Varistors 375pF 270volts 10% 20mm	D4	MOV-10D271K	MOV-10D271K	1
5MAJ5.0A E3/61	DIODE TVS 5V5WMM 9.2V C SMA	D5	DIODE_D0214AC_SMA	5MAJ5.0A E3/61	1
RED	LED RED 0603 SMD	D6	LED_0603_RED	LED RED 0603	1
RED	LED 0603 RED	D7	LED 0603	LED 0603 RED	1
NM	DIODE GEN PURP 1KV 1A SMA	D8	DIODE_D0214AC_SMA	N4007_SMA	1
1000V/1A	DIODE GEN PURP 1KV 1A SMA	D9	DIODE_D0214AC_SMA	N4007_SMA	1
BLUE/RED	LED DUAL COLOR BLUE/RED 3MM COMMON ANODE	D10, D11	LED_3MM_DUALCOL	LED BLUE/RED 3MM	2
20V/4A	MOSEFET P-CH 20V 4A SOT23	D12	SOT23_3	AO3415	1
100V/300MA	DIODE GEN PURP 100V 300MA SOD123	D13	SOD-123	1N4148-W-7	1
0V/3.43 8A	TVS DIODE 3.3V5WMM BYC CFP3	D14, D15, D16	SOD123	PTV33V351UR115	3
60V/1.1A	PTC RESET FUSE 60V 1.1A RADIAL	F1	FUSE_RUEF300	RKEF110	1
0V/1.1A	FUSE PTC RESET 0V 1.1A 1206	F2, F3	FUSE_1206(3214)	1206L110THRR	2
10uH/3.3A	INDUCT 10uH 3.3A 30 MOHM SMD	L1, L2	IND-744D00H150	3MPA0035100MT	2
K7128-2P	K7128-2P 5.08MM 2 Pin Header 820PFS	P1, P6, P7, P8	K7128-2P 5.08MM	K7128-2P 5.08MM	4
K7162-2P	Header 2 Pin, pitch 5.08mm	P3	K7162-2P	K7162-2P	1
KCD11	Switch ON OFF	R4	KCD11	KCD11	1
XH2 54mm	XH2 54mm - 2P 180 degree	R5	XH2 54-2P	XH2 54-2P	1
Button	Button reset (H=4.3-13mm)	P9	KTC-A06W1-6	KTC-A06W1-H	1
Header 4P	Header 4 Pin Pitch 2.54mm	P10	HDR1X4	Header 4x1	1
K7128-3P	K7128-3P 5.08MM	P11	K7128-3P 5.08MM	K7128-3P 5.08MM	1
AO3415	MOSEFET P-CH 20V 4.1A SOT-23	Q1, Q3	SOT23_3	RLML6402TRPBF	2
25C1815	TRANS NPN 50V 0.15A SOT23-3	Q2, Q6, Q7, Q8	SOT23_3	25C1815	4
10V/1.4A	MOSEFET N-CH 20V 1.4A SOT23	Q4, Q5	SOT23_3	RLML6346TRPBF	2
60K	RES SMD 60K OHM 1% 1/10W 0603	R1, R61	RESC-0603 (1608)-HD	RC20603060K06KEA	2
10K	RES SMD 10K OHM 1% 1/10W 0603	R2	RESC-0603 (1608)-HD	RC20603FR-0713KL	1
22K	RES SMD 22K OHM 1% 1/10W 0603	R3	RESC-0603 (1608)-HD	RC20603FR-0722KL	1
220K	RES SMD 220K OHM 1% 1/10W 0603	R4	RESC-0603 (1608)-HD	RC20603FR-07220KL	1
1M	RES SMD 1M OHM 1% JUMPER 1/10W 0603	R5, R46, R47, R49, R50	RESC-0603 (1608)-HD	RC20603FR-0700KL	5
1M	RES SMD 1M OHM 1% 1/10W 0603	R6, R12, R34, R35	RESC-0603 (1608)-HD	RC2060301M00FKEA	4
47K	RES SMD 47K OHM 1% 1/10W 0603	R7, R23	RESC-0603 (1608)-HD	RC20603FR0747KL	2
187K	RES SMD 180K OHM 1% 1/10W 0603	R8	RESC-0603 (1608)-HD	RC20603FR-07187KL	1
10K	RES SMD 10K OHM 1% 1/10W 0603, RES 10K OHM 1% 1/10W 0603	R9, R11, R15, R16, R17, R18, R19, R25, R22, R33, R55	RESC-0603 (1608)-HD	RC20603FR-0710KL	11
1K	RES SMD 1K OHM 1% 1/10W 0603	R10, R13, R20, R24, R36, R37, R54	RESC-0603 (1608)-HD	RC20603FR-071KL	7
1K2	RES SMD 1.2K OHM 1% 1/10W 0603	R14, R21	RESC-0603 (1608)-HD	RC20603FR-071K2KL	2
100K	RES SMD 100K OHM 1% 1/10W 0603	R22, R28, R29, R38, R39, R44, R45, R51, R52, R57, R58, R59, R60	RESC-0603 (1608)-HD	RC20603FR-07100KL	13
15M	RES SMD 1.5M OHM 1% 1/10W 0603	R26, R27	RESC-0603 (1608)-HD	RC20603FR-071M5KL	2
10R	RES SMD 10 OHM 1% 1/10W 0603	R30, R31	RESC-0603 (1608)-HD	RC20603FR-0710RL	2
330R	RES SMD 330 OHM 1% 1/10W 0603	R40, R41, R42, R43	RESC-0603 (1608)-HD	RC20603FR-07330RL	4
0R	RES SMD 0 OHM JUMPER 1/10W 0603	R48, R53	RESC-0603 (1608)-HD	RC20603FR-0700KL	2
470K	RES SMD 470K OHM 1% 1/10W 0603	R54	RESC-0603 (1608)-HD	RC20603FR-07470KL	1
5V/10A	SHD-05VDC-SL-C Relay 5V DC 10A 1 FORM C	RL1	RELAY 5V	Relay 5V	1
TP554300DDA	IC REG BCK SPLIT RAIL ADJ BICPMAR	U1	SOIC8 - TP	TP554300DDAR	1
LM27313AMF/NOPB	IC REG BOOST ADJ 80VMA SOT23-5	U2	SOT23-5	LM27313AMF/NOPB	1
HLK-5M05	Ultra-compact module-power 5V/5W	U3	HLK-5M12	HLK-5M05	1
TLV1117LV33DCVR	IC REG LINEAR 3.3V 1A SOT223-4	U4	SOT-223-4	TLV1117LV33DCVR	1
BC124073RGTT	IC U-I-CON CHARGE PUMP REGMT 16-CH	U5	RG16-1700X1700TP	BC124073RGTT	1
RA-015	Module Iora RA-015 SX1208	U6	Lora1276V1.2	RA-015	1
GD32F330C8T6	ARM Cortex-M33 32-bit MCU 64K Flash BK RAM	U7	LOFP-48	GD32F330C8T6	1
32.768KHz	CRYSTAL 32.76800KHz 4uF SMD	X1	CRYSTAL_AB036	AB036-103-32.768KHz	1
BMH2	CRYSTAL 8.000MHz 19uF SMD	X2	CRYSTAL_AB043	AB043-8.000MHz-02V1	1