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Title		
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A		
Date:	3-07-2023	Sheet of
File:	C:\Users\...\[01]-Cover_Page.SchDoc	Drawn By:

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MICRO-CONTROLLER

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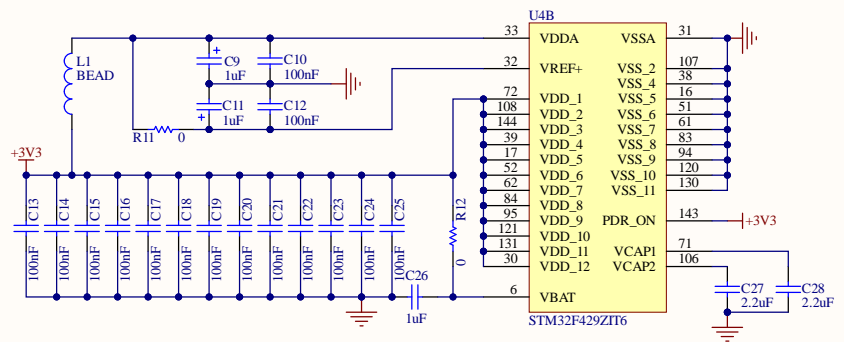
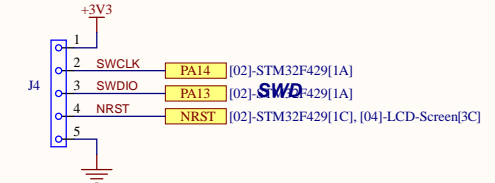
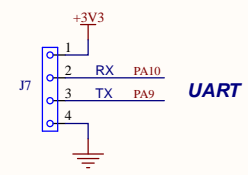
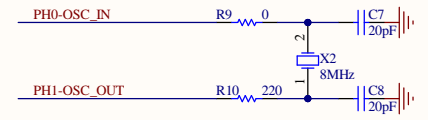
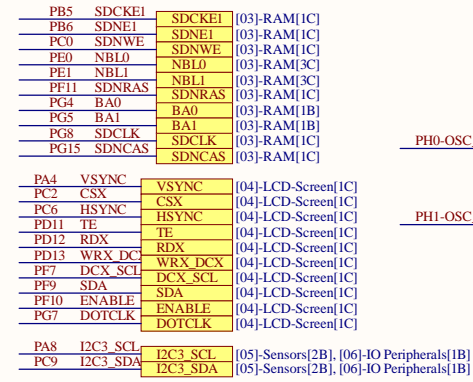
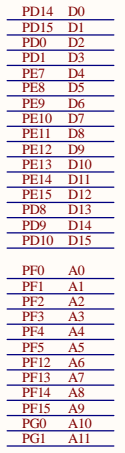
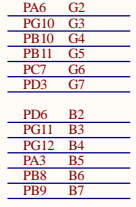
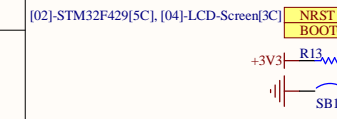
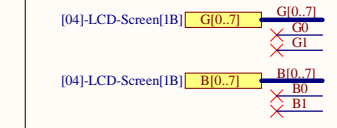
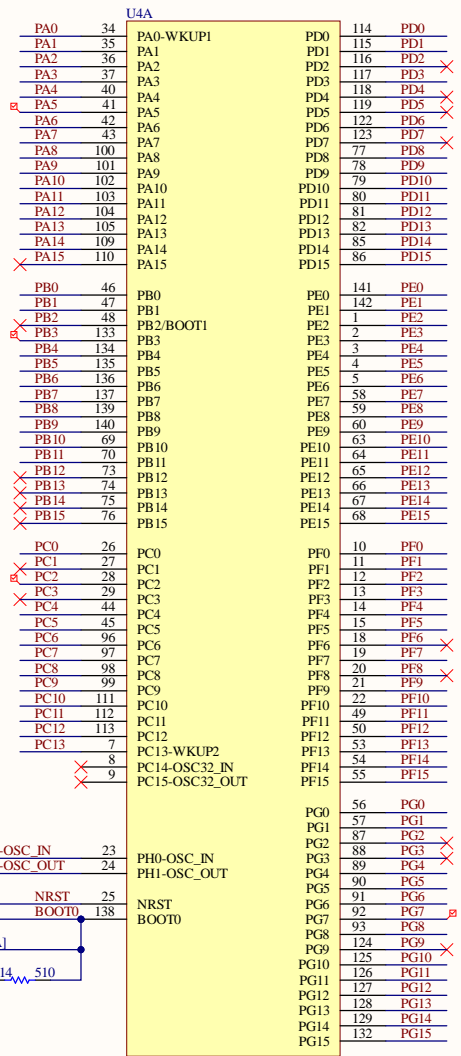
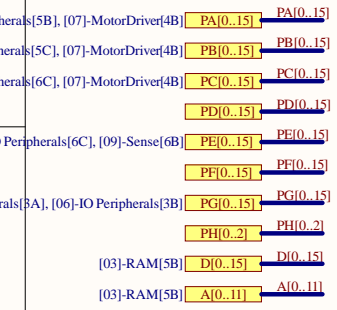
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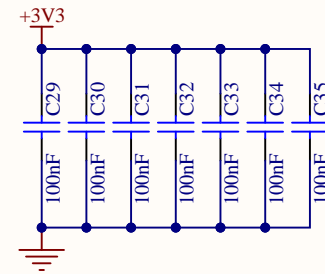
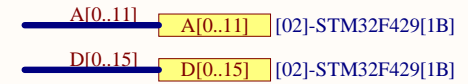
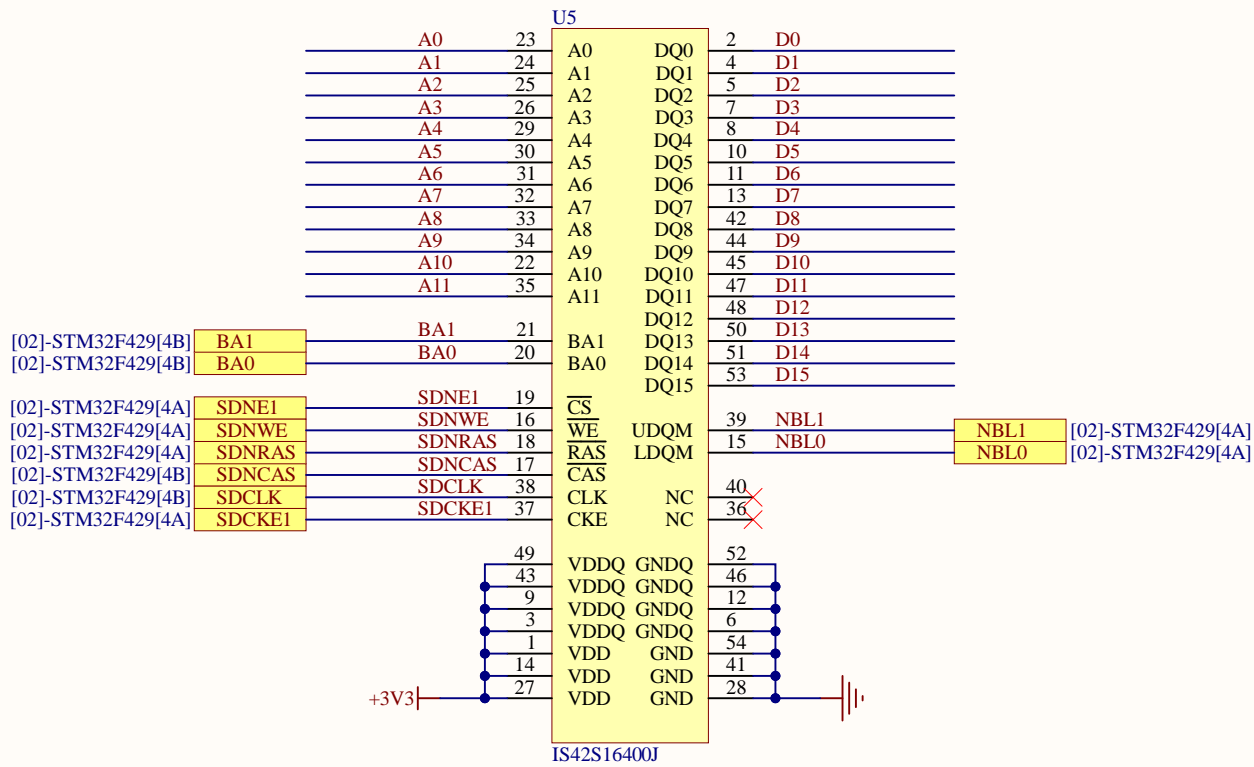
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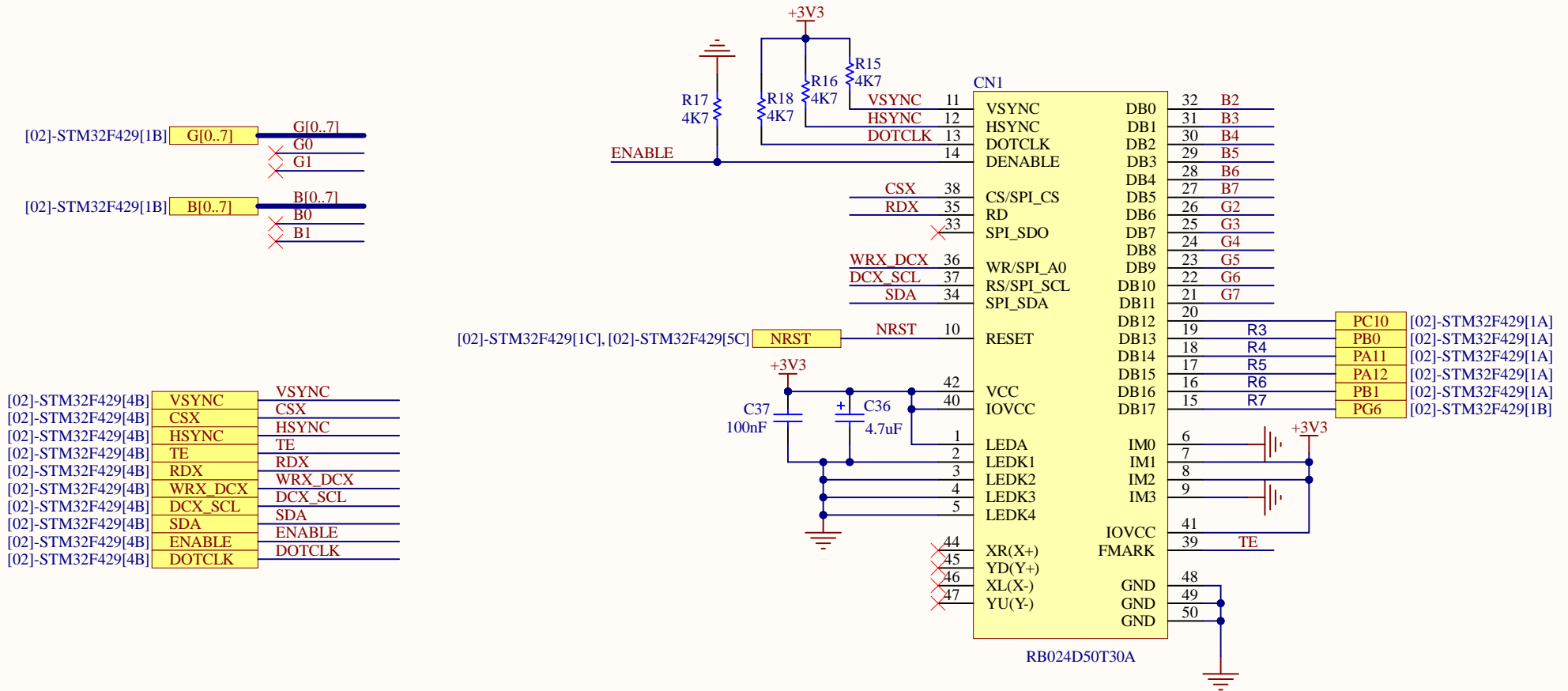
RAM



Place close SDRAM

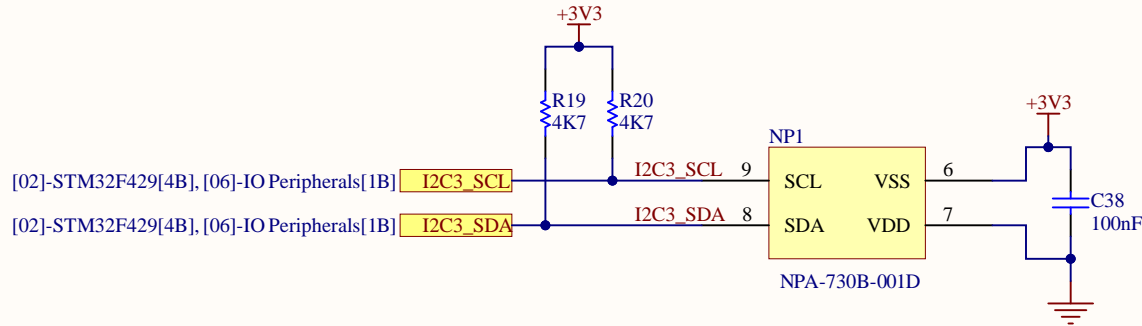
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LCD CONNECTOR

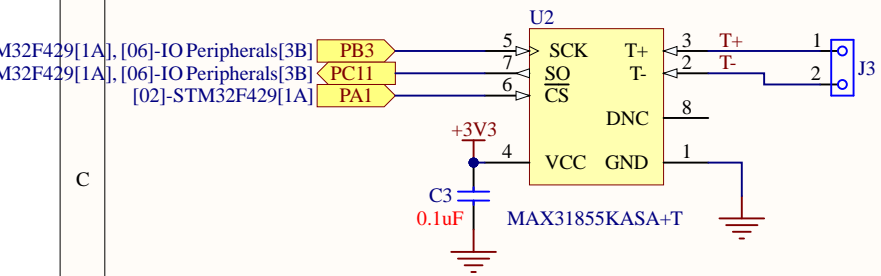


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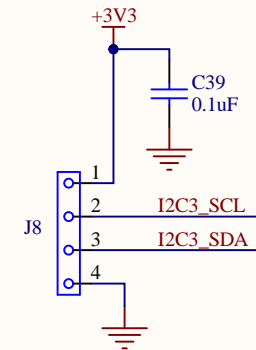
SENSORS



Pressure Sensor



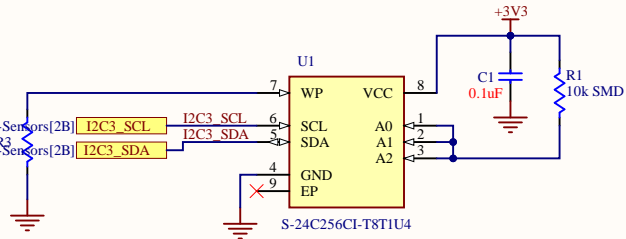
Thermocouple



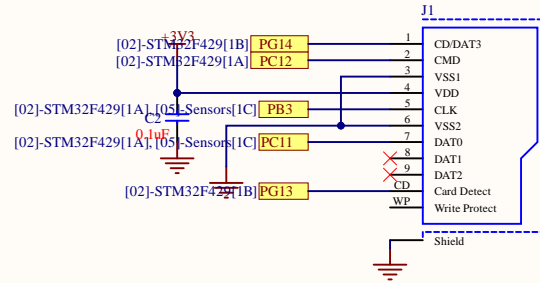
Flow Sensor

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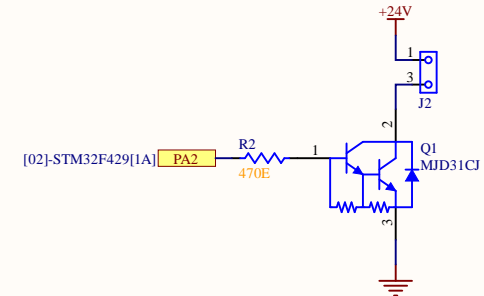
IO PERIPHERALS



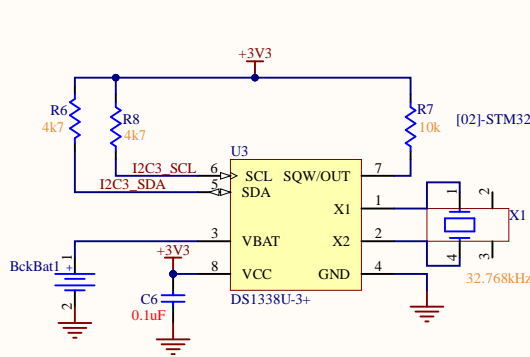
EEPROM



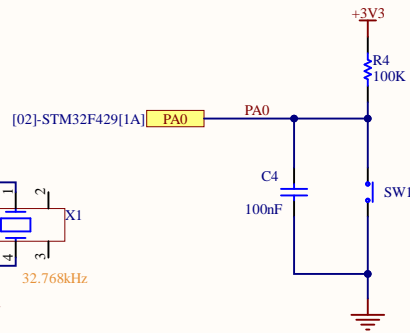
SD Card



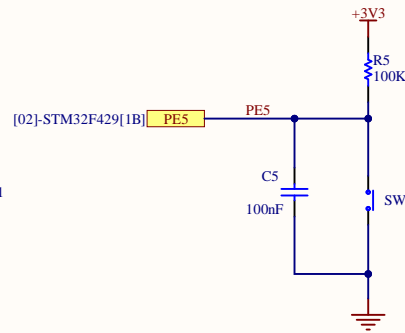
Humidifier Driver



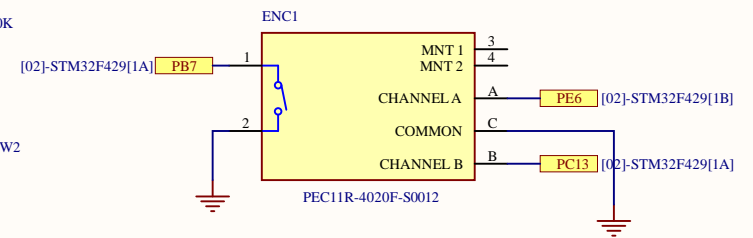
START



START



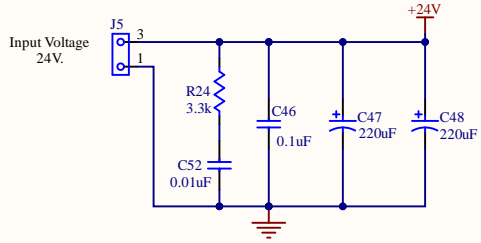
RAMP



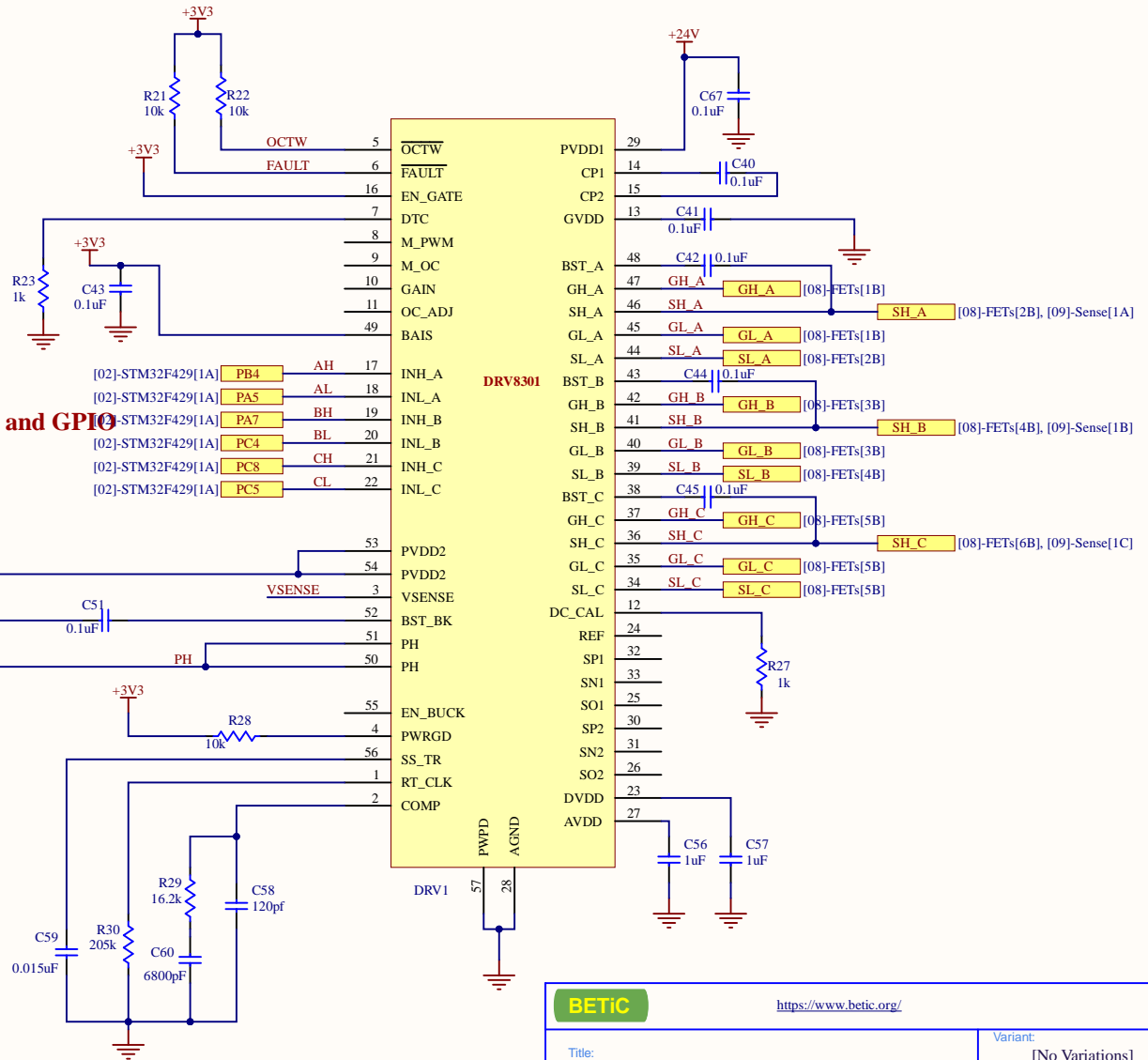
ROTARY ENCODER

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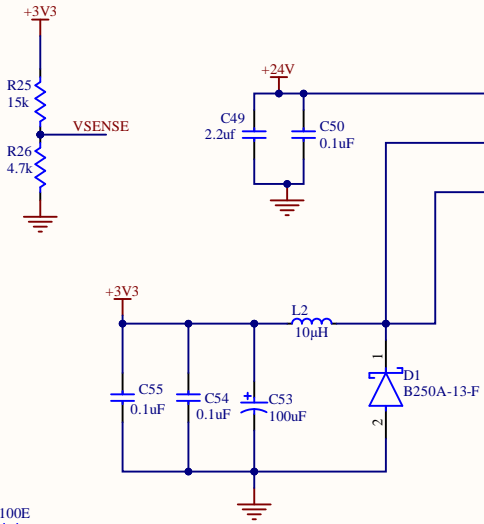
MOTOR DRIVER



INPUT



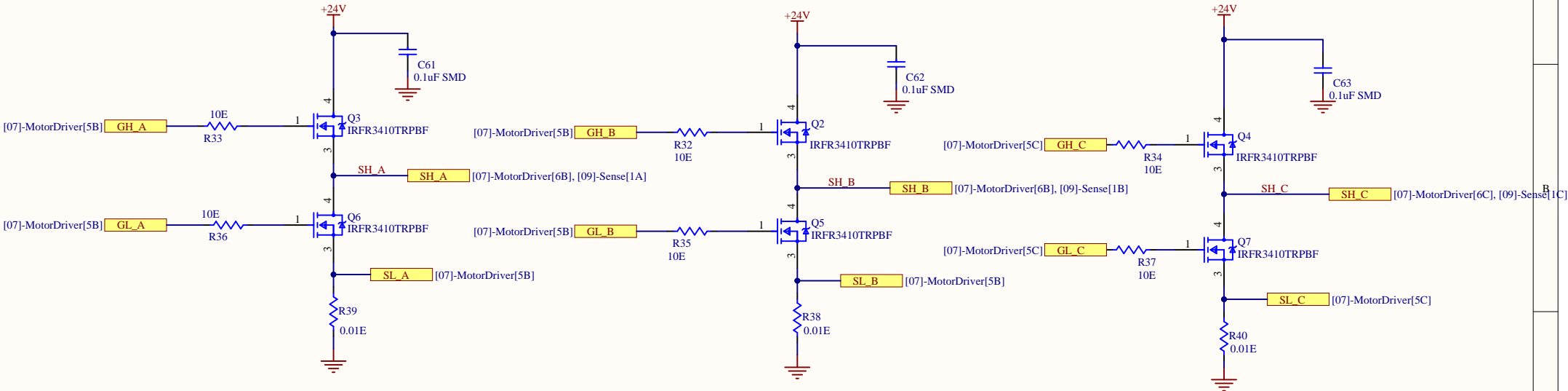
PWM and GPIO



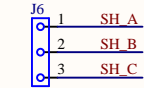
Voltage Indicators

BETIC		https://www.betic.org/	
Title:		Variant: [No Variations]	
Size: D	Dwg No: *	Revision:	
Drawn by: Ajay Dusa	Checked by: Tapas Pandey	Approved by: *	
Date: 07-03-2023		Sheet 7 of 10	

MOTOR FET'S



Half Bridges

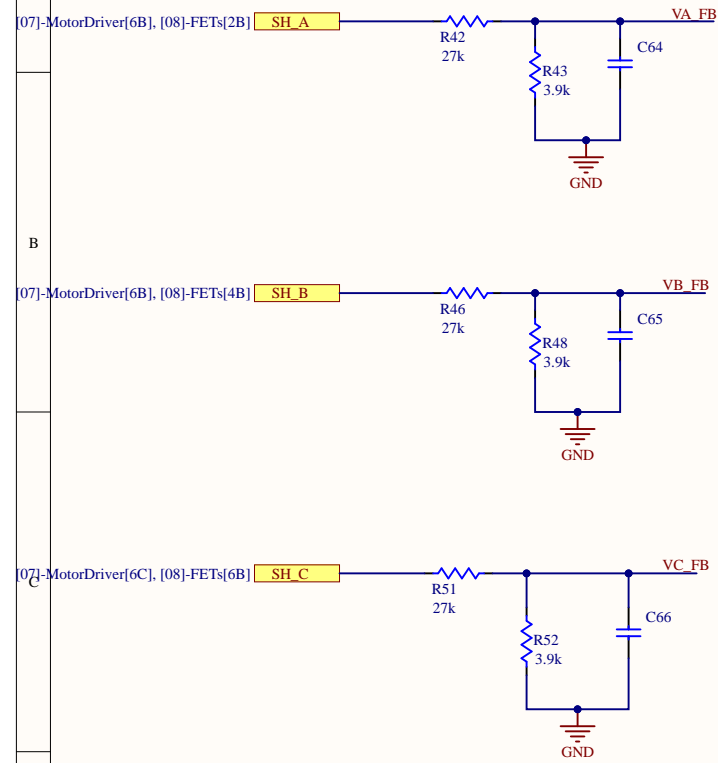


3PIN BLK

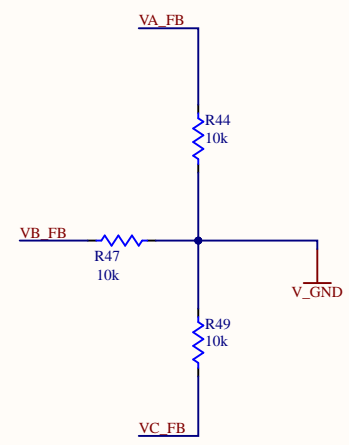
MTR CONN

BETiC		https://www.betic.org/	
Title:			Variant: [No Variations]
Size: D	Dwg No: *		Revision:
Drawn by: Ajay Dusa	Checked by: Tapas Pandey	Approved by: *	
Date: 07-03-2023		Sheet 8 of 10	

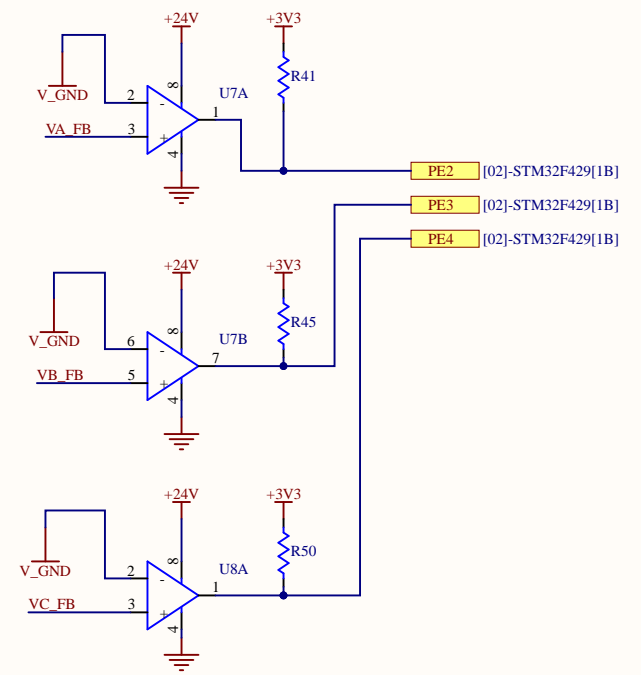
SENSING, CROSS-OVER DETECT



Voltage Sense



3Phase Circuit



Cross Over Detection

BETIC		https://www.betic.org/	
Title:			Variant: [No Variations]
Size: D	Dwg No: *		Revision:
Drawn by: Ajay Dusa	Checked by: Tapas Pandey	Approved by: *	
Date: 07-03-2023		Sheet 9 of 10	

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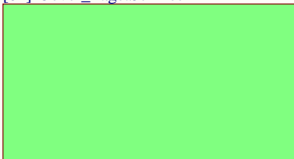
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U_[01]-Cover_Page
[01]-Cover_Page.SchDoc



U_[02]-STM32F429
[02]-STM32F429.SchDoc



U_[03]-RAM
[03]-RAM.SchDoc



U_[04]-LCD-Screen
[04]-LCD-Screen.SchDoc



U_[05]-Sensors
[05]-Sensors.SchDoc



U_[06]-IO Peripherals
[06]-IO Peripherals.SchDoc



U_[07]-MotorDriver
[07]-MotorDriver.SchDoc



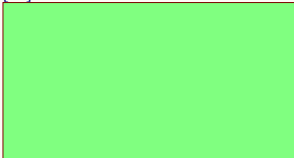
U_[08]-FETs
[08]-FETs.SchDoc



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U_[09]-Sense
[09]-Sense.SchDoc



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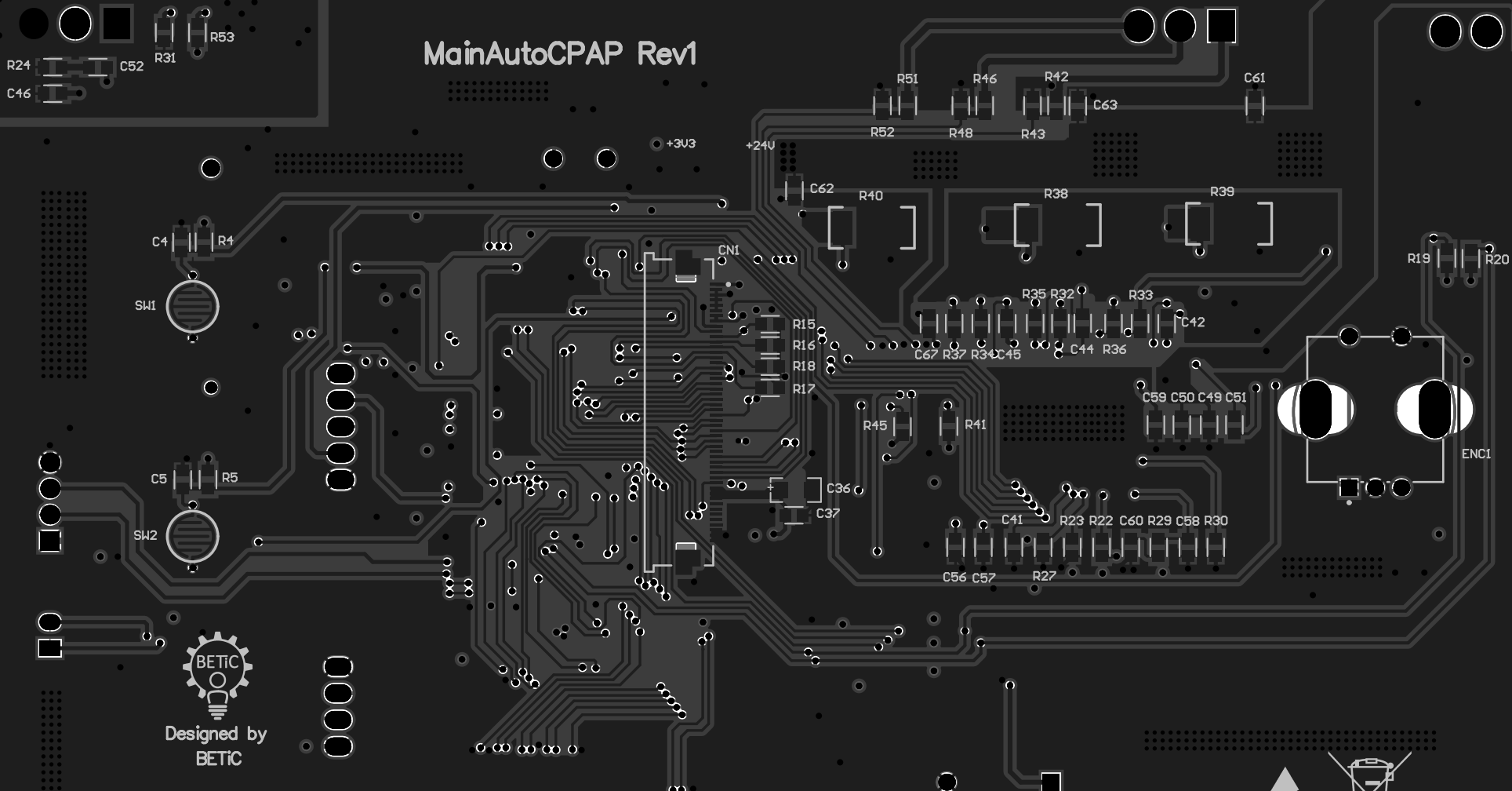
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Title		
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MainAutoCPAP Rev1

2D CYKD



20/10/22

Comment	Description	Designator	Footprint	Value	Quantity
S1220	Battery TAB	Bat1	FP-OR-1220-HFN-MFG		1
1.1uF SMD	Capacitor, XSR, ±10%	C1, C2, C3, C4, C61, C62, C63, C64, C65, C66	0603C		10
100nF	Capacitor 0402 / 0603 / 0805	C4, C5, C10, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C30, C31, C32, C33, C34, C35, C37, C38	0603C	Capacitor_ST	26
20pF	Capacitor 0402 / 0603 / 0805	C7, C8	0603C	Capacitor_ST	2
1uF	Polarized Capacitor (Radial)	C9, C11	TAN-A	Cap-Pol1	2
1uF	Capacitor 0402 / 0603 / 0805, Capacitor, XSR, ±10%	C26, C56, C57	0603C	Capacitor_ST (NoValue)	3
2.2uF	Low ESR Ceramic Capacitor (270)	C27, C28	TAN-A	Cap-Low ESR	2
4.7uF	Polarized Capacitor (Radial)	C36	TAN-A	Cap-Pol1	1
0.1uF	Capacitor 0402 / 0603 / 0805, Capacitor, XSR, ±10%	C39, C40, C41, C42, C43, C44, C45, C46, C50, C51, C54, C55, C57	0603C	Capacitor_ST (NoValue)	10
220uF	PartNo: ERK221M505099AA	C47, C48	BMD_CAP_EEE	Electrolytic_Capacitor	2
2.2uF	Capacitor, XSR, ±10%	C49	0603C		1
0.01uF	Capacitor, XSR, ±10%	C52	0603C		1
100uF	PartNo: ERK221M505099AA	C53	BMD_CAP_EE-REF-MFG_BK10.2	Electrolytic_Capacitor	1
120uF	Capacitor, XSR, ±10%	C58	0603C		1
0.01uF	Capacitor, XSR, ±10%	C59	0603C		1
680uF	Capacitor, XSR, ±10%	C60	0603C		1
RB024D50T30A		DN1	MOCK_SOPIN_FPC_01_0mm	RB024D50T30A	1
8250A-13.F	DIODE SCHOTTKY 40V 1A SMD	D1	FP-SMA-MFG	8240A-13.F	1
DRV8301DCA	AS-Vmax 3-phase gate driver with buck regulator, current shunt amplifiers & SW 5A-HTSCOP-40 to 125	DRV1	FP-DCA00568-IPC_A	DRV8301DCA	1
PEC118-4020F-50012	ROTARY ENCODER MECHANICAL, 10PPS	ENC1	FP-PEC118-4020F-50012-Rotary_Encoder_SPN	Rotary_Encoder_SPN	1
4930X020P11	WR-CRD SD Card Connector, Push & Pull - Short Type, with Card Detection Part no: 4930X020P11, SD Card Big	J1	SD Card Big	SD Card Holder Big	1
3PIN Molex	Connector	J2	RT-83P-WH(F)30N-SPIN	CONN_SPN_1	1
3PIN 251	Connector	J3	RT-83B-WH_A_2P	CONN_SPN_1	1
CONN HDR BE RG_1P	Connector	J4	KSR-BERG-SP-2	CONN HDR BERG_1P	1
2PIN CONN	Connector	J5	RT-83P-WH(F)30N-SPIN	CONN_SPN_1	1
3PIN BLK	Connector	J6	RT-83P-WH(F)30N-SPIN	CONN HDR BERG_3P	1
	Connector	J7	KSR-BERG-4P-1	CONN HDR BERG_4P	1
	Connector	J8	FP-848-RH-A_LF_5N-MFG_4PIN	CONN HDR BERG_4P	1
BEAD	Inductor	L1	0603L	Inductor	1
10uH	Inductor, 80mA, ±10%	L2	DR74_Inductor		1
LED 3MM GRN		L31, LED	LED_0603_G	LED_1	2
NPA-730B-001D	NPA Calibrated Differential Low Pressure Sensor with 3-Byte DC Digital Output 3.3Vdc Excitation Type Surface Mount	NP1	NPA-730B-001D	NPA-730B-001D	1
MD31C1J	Passive Medium-Power Complementary Silicon Transistor, 3 Pin 10-220, Pb-Free, Tube	Q1	TO-252_N_DPAK	T9P120	1
HRF041010R9BF	MS2411 TACH 100V 31A DPAK	Q2, Q3, Q4, Q5, Q6	FP-PC-TQ252-3-MFG	MS2411_NPR_R9341	6
10k SMD		R1, R3	0603R	RES1	2
47k		R2	0603R	RES1	1
100k	Resistor 0402 / 0603 / 0805	R4, R5	0603R	Resistor_ST	2
4k7	Resistor 0402 / 0603 / 0805	R6, R9, R16, R17, R18, R19, R20	0603R	RES1, Resistor_ST	8
10k		R7, R21, R22, R28, R29, R41, R44, R45, R47, R49, R50	0603R	RES1	11
0	Resistor 0402 / 0603 / 0805	R9, R11, R12	0603R	Resistor_ST	3
220	Resistor 0402 / 0603 / 0805	R10	0603R	Resistor_ST	1
(N/A)	Resistor 0402 / 0603 / 0805	R13	0603R	Resistor_ST	1
510	Resistor 0402 / 0603 / 0805	R14	0603R	Resistor_ST	1
1k		R23, R27	0603R	RES1	2
3.3k		R24	0603R	RES1	1
15k		R25	0603R	RES1	1
4.7k		R26	0603R	RES1	1
10.2k		R29	0603R	RES1	1
200k		R30	0603R	RES1	1
10k		R31, R32, R34, R35, R36, R37	0603R	RES1	6
0.01E		R38, R39, R40	MSD2512	RES1	3
20k		R42, R46, R51	0603R	RES1	3
3.3k		R43, R48, R52	0603R	RES1	3
100k		R53	0603R	RES1	1
Circuit Breaker	Circuit Breaker	SB1	FP-3MD	Circuit Breaker	1
PB SW	Facile Switch, SPNO, 040, 10x9, 6.2x3, 3x2 5mm	SW1, SW2	CARBON_KEY		2
5-24C256C1-18T1U4	C EEPROM 256K 1DC 18Mhz BUEN	U1	TSOP-578_M	AT24C256C	1
MAX31855KASA-1	Cold Junction Compensated Thermocouple to Digital Converter, 14 Bits Temperature Resolution, 40 to 125 degC, 8 Pin SOIC (8-4), Pb-Free, Tape and Reel	U2	MAX98-58-4_N	MAX31855	1
DS1388U-3+	32C Real-Time Clock with 56-Byte NV SRAM 3.0V, 8 Pin uSOP, 40 to 85 degC, Pb-Free	U3	UB-1_N	DS1388U-3+	1
STM32F429ZIT6	STM32 Big Memory STM32F429ZIT6	U4	TOPF144	STM32F429ZIT6U1	1
IS45S16400U	DYNAMIC RAM, 1 Meg Bit x 16 Bits x 4 Banks (64-MBT)	U5	TSOP54-II	IS45S16400U	1
LM93		U7, U8	SOIC_8	LM93B-1	2
32.768K(N/A) MC-300	Crystal	U9	XTAL_4MHz_3038	MC300	1
8MHz	Crystal Oscillator 8MHz 209K 20PFM, 10.70 Frequency 20PF AC-495	U2	XTAL1	XTAL	1