



PROJECT NAME: EVALKIT-ROBOT-1 Control Board

REV

1.0

POW CODE:

18 Nov 2019

BILL OF MATERIALS

Item	Quantity	Reference	Description	Value	Volt.	Pow.	Tol.	Package	MANUFACTURER		Supplier Advices-Not Mandatory		MORE INFO
									Manufacturer's ordering code / Orderable Part Number	Manufacturer	Supplier/Distributor	Supplier/Distributor code	
1	3	C1,C7,C10	SMT ceramic capacitor	100nF	6.3 V			Size 0402					
2	1	C2	SMT ceramic capacitor	10uF	50 V			Size 1206					
3	1	C3	SMT ceramic capacitor	10uF	25 V			Size 0805					
4	3	C4,C5,C6	SMT ceramic capacitor	470nF	25 V			Size 0603					
5	2	C8,C11	SMT ceramic capacitor	10nF	6.3 V			Size 0402					
6	2	C9,C19	SMT ceramic capacitor	1nF	6.3 V			Size 0402					
7	3	C12,C14,C16	SMT ceramic capacitor	33p	6.3 V			Size 0402					
8	3	C13,C15,C17	SMT ceramic capacitor	150nF	50 V			Size 0805					
9	1	C18	SMT ceramic capacitor	2.2nF	6.3 V			Size 0402					
10	2	C20,C21	SMD Electrolytic capacitor	47uF	50 V			Diam.6.3 h7.7	865080645012 or equivalent	Würth Elektronik			
11	2	C22,C28	SMT ceramic capacitor	100n	50 V			Size 0603					
12	1	C23	SMT ceramic capacitor	1.7p	6.3 V			Size 0402					
13	1	C24	SMT ceramic capacitor	4700n	50 V			Size 1206					
14	1	C25	SMD Electrolytic capacitor	150u	10 V			Diam.6.3 h5.5	865080243008 or equivalent	Würth Elektronik			
15	1	C26	SMT ceramic capacitor	330n	6.3 V			Size 0402					
16	2	C27,C29	SMT ceramic capacitor	100n	6.3 V			Size 0402					
17	3	C30,C31,C32	SMT ceramic capacitor	220p	6.3 V			Size 0402					
18	6	D4,D5,D6,D7,D8,D9	Small signal Schottky diode	BAT30	30 V			SOD-523	BAT30K or equivalent	STMicroelectronics			
19	1	D10	Schottky Rectifier	STPS0560Z	60 V			SOD-123	STPS0560Z	STMicroelectronics			
20	1	J4	WR-MM Female Connector with latch w/o polarization 10 poles	Flat connector 10 pole				690367191072	690367191072	Würth Elektronik			
21	1	J7	Horizontal terminal block pitch 3.50 mm	Terminal 2P_screw p3.5mm				2 poles terminal block pitch 3.5 mm	691214110002	Würth Elektronik			
22	1	J8	Terminal block T.H. 4 positions, 2.54 mm	Terminal 4P_screw p2.54mm				4 poles terminal block pitch 2,54 mm	691210910004	Würth Elektronik			
23	1	J10	WR-MPC3 - 3.00MM MAle dual-row right angle 8 poles	Connector 8 pole w polarization				66200821022	66200821022	Würth Elektronik			
24	1	J12	WR-PHD 1.27 mm SMT Dual Pin Header, H=3.80 mm	Header 10x2				Header male 10 poles 2 rows pitch 1.27mm	62101021021	Würth Elektronik			
25	1	LED1	WL-SMCW SMT RED LED	RED				0603	150060RS75000	Würth Elektronik			
26	1	L1	WE-TPC SMD Tiny Power Inductor	39uH					744043390 or equivalent	Würth Elektronik			
27	3	Q2,Q3,Q4	Automotive-grade dual N-channel 60 V, 35 mOhm typ., 6.5 A StripFET F3 Power MOSFET in PowerFLAT 5x6 double island package	STL7DN6LF3				PowerFLAT 5x6 double island type C	STL7DN6LF3	STMicroelectronics			
28	1	R1	SMT resistor	330		1/10 W	1%	Size 0603					
29	1	R2	SMT resistor	100k		1/16 W	5%	Size 0402					
30	4	R3,R6,R60,R62	SMT resistor	12k		1/16 W	5%	Size 0402					
31	1	R14	SMT resistor	10k		1/16 W	5%	Size 0402					
32	3	R15,R24,R33	SMT resistor	10.5k		1/16 W	1%	Size 0402					
33	3	R16,R29,R40	Thick Film Chip Resistors	0.100R		1W	1%	Size 1206	ERJ8BWR100V	Panasonic			
34	6	R17,R22,R26,R30,R35,R39	SMT resistor	21k		1/16 W	1%	Size 0402					
35	6	R18,R20,R27,R28,R36,R38	SMT resistor	2.4k		1/16 W	1%	Size 0402					
36	6	R21,R23,R32,R34,R42,R44	SMT resistor	100R		1/10 W	5%	Size 0603					
37	3	R43,R45,R49	SMT resistor	2.2k		1/16 W	1%	Size 0402					
38	1	R46	SMT resistor	180k		1/16 W	1%	Size 0402					
39	1	R47	SMT resistor	18k		1/16 W	1%	Size 0402					
40	1	R50	SMT resistor	10k		1/16 W	1%	Size 0402					
41	1	R51	SMT resistor	187k		1/16 W	1%	Size 0402					
42	1	R52	SMT resistor	60k4		1/16 W	1%	Size 0402					
43	1	R53	SMT resistor	NP		1/16 W	5%	Size 0402	NP				
44	1	R54	SMT resistor	OR		1/16 W	5%	Size 0402					
45	3	R59,R61,R63	SMT resistor	1k		1/16 W	5%	Size 0402					
46	1	R64	SMT resistor	120R		1/10 W	1%	Size 0603					
47	16	TP3,TP4,TP5,TP6,TP7,TP8,TP9,TP11,TP12,TP13,TP14,TP15,TP16,TP17,TP18,TP19	40 mils SMD PAD	TP-SMD-diam1_016mm				SMD Pad diam. 40mils					
48	1	U1	STSPIN32FOA Three-phase controller with MCU	STSPIN32FOA				VFQFPN 7 x 7 x 1.0-48L	STSPIN32FOA	STMicroelectronics			
49	1	U3	Up to 3 A step-down switching regulator	ST1S14PHR				HSOP8	ST1S14PHR	STMicroelectronics			
50	1	U4	Positive Voltage Regulator	L78L33ABUTR				SOT-89	L78L33ABUTR	STMicroelectronics			
51	1	U5	3.3V RS485 compatible with 1.8V I/Os and selectable speed 20Mbps or 250kbps	STR485				DFN 3 x 3 x 1 10L	STR485LV	STMicroelectronics			
52	1	U6	Quadruple Differential Line Receiver	AM26LV32E				PVQFN 4 x 3.5 x 1 16L	AM26LV32EIRGYR	TI			