

BILL OF MATERIALS
PROJECT NAME: EVLSPIN32G0A1 Revision 1

30 May 2024



Quantity	Reference	Description	Part / Value	Voltage	Power	Tolerance	Package	If this field is shown is mandatory to use this type		Additional Notes
								Manufacturer	Manufacturer's ordering code / Orderable Part Number	
1	6	C1,C11,C13,C14,C15,C53	SMT ceramic capacitor	100nF	10V		Size 0603 (1608 Metric)	WURTH ELEKTRONIK	885012206020 or equivalent	
2	1	C2	SMT ceramic capacitor	4700nF	10V		Size 0603 (1608 Metric)	WURTH ELEKTRONIK	885012106012	
3	1	C3	SMT ceramic capacitor	10nF	10V		Size 0603 (1608 Metric)			
4	1	C4	SMT ceramic capacitor	47uF	10V		Size 1210 (3225 Metric)	WURTH ELEKTRONIK	885012109007	
5	3	C5,C6,C10	SMT ceramic capacitor	1000nF	25V	10%	Size 0603 (1608 Metric)	WURTH ELEKTRONIK	885012206076 or equivalent	
6	1	C7	SMT ceramic capacitor	10uF	25V		Size 1206 (3216 Metric)	WURTH ELEKTRONIK	885012208069	
7	1	C8	SMT ceramic capacitor	100nF	25V		Size 0603 (1608 Metric)			
8	4	C9,C18,C19,C20	SMT ceramic capacitor	220nF	100V		Size 1206 (3216 Metric)			
9	2	C12,C29	SMT ceramic capacitor	4.7nF	6.3V		Size 0603 (1608 Metric)			
10	2	C16,C17	Aluminum Electrolytic capacitor SMD	220uF	63V	20%	Diam. 12.5 mm - 13x13 mm	WURTH ELEKTRONIK	865080762015/865060762009	
11	3	C21,C48,C50	SMT ceramic capacitor	NM	6.3V		Size 0603 (1608 Metric)			Not mounted
12	3	C26,C49,C51	SMT ceramic capacitor	470pF	50V		Size 0603 (1608 Metric)			
13	1	C28	SMT ceramic capacitor	1nF	6.3V		Size 0603 (1608 Metric)			
14	1	C30	SMT ceramic capacitor	10nF	6.3V		Size 0603 (1608 Metric)			
15	1	C31	SMT ceramic capacitor	1uF	25V		Size 0603 (1608 Metric)	WURTH ELEKTRONIK	885012206076 or equivalent	
16	3	C32,C33,C34	SMT ceramic capacitor	1.5nF	50V		Size 0603 (1608 Metric)			
17	8	C35,C36,C38,C43,C44,C45,C46,C47	SMT ceramic capacitor	100nF	6.3V	10%	Size 0603 (1608 Metric)			
18	2	C37,C39	SMT ceramic capacitor	1uF	6.3V	10%	Size 0603 (1608 Metric)	WURTH ELEKTRONIK	885012206076	
19	1	C40	SMT ceramic capacitor	10nF	6.3V	10%	Size 0603 (1608 Metric)			
20	2	C41,C42	SMT ceramic capacitor	100pF	6.3V	10%	Size 0603 (1608 Metric)			
21	1	C52	SMT ceramic capacitor	1000nF	10V		Size 0603 (1608 Metric)			
22	1	D1	Schottky Rectifier	STPS0560Z			SOD-123	STMicroelectronics	STPS0560Z	
23	6	D2,D3,D4,D5,D6,D7	Small Signal Fast Switching Diode	1N4148WS			SOD-323F	VISHAY	1N4148WS-E3-08 / -E3-18 or equivalent	
24	3	D11,D12,D13	40V, 300mA Small signal Schottky Diode	BAT54J	40 V		SOD-323	STMicroelectronics	BAT54JFILM or equivalent	
25	1	D14	35 A - 8/20 us, 22 V TVS in OFN-2L	ESDA25P35-1U1M				STMicroelectronics	ESDA25P35-1U1M	
26	3	JP2,JP3,JP4	Strip connector 2 pos, 2.54 mm	STRIP 1x2			1x2 pins	WURTH ELEKTRONIK	61300211121 or equivalent	
27	1	JUMPER2	Jumper, 2.54 mm	Jumper				WURTH ELEKTRONIK	60900213421 or equivalent	
28	3	J1,J8,J9	Strip connector 2 pos, 2.54 mm	STRIP 1x2			1x2 pins, 2.54mm		NM	Not mounted
29	1	J2	Strip connector 3 pos, 2.54 mm	STRIP 1x3			1x3 pins	WURTH ELEKTRONIK	61300311121 or equivalent	
30	1	J3	Horizontal Entry Modular w. Rising Cage Clamp, Serie 2135 - 5.08 mm	MORSV-508-2P_screw			Pitch 5.08 mm	WURTH ELEKTRONIK	691213510002 or equivalent	
31	1	J4	Horizontal Entry Modular w. Rising Cage Clamp, Serie 2135 - 5.08 mm	MORSV-508-3P_screw			Pitch 5.08 mm	WURTH ELEKTRONIK	691213510003 or equivalent	
32	1	J5	Strip connector 5 pos, 2.54 mm	STRIP 1x5			1x5 pins	WURTH ELEKTRONIK	61300511121 or equivalent	
33	1	J6	WR-COM USB 2.0 Type C Receptacle Horizontal	USB 2.0 Type C				WURTH ELEKTRONIK	629722000214	
34	1	J7	SMT_Receptacle,16pins,20vdc	STRIP 2x5				WURTH ELEKTRONIK	62201021121 or FTSH-105-01-F-D-K	
35	2	LED1,LED2	WL-SMCW SMT Mono-color Chip LED Waterclear	YELLOW			Size 0603	WURTH ELEKTRONIK	150060YS75000 or Equivalent	
36	1	LED3	WL-SMCW SMT Mono-color Chip LED Waterclear	RED			Size 0805	WURTH ELEKTRONIK	150080RS75000 or equivalent	
37	1	LED4	LED indicators, PLCC-4 Red/Yellow Green	RED-GREEN LED			PLCC 4	AVAGO	HSMF-A201-A00J1 or equivalent	
38	1	L1	WE-MAPI SMT Power Inductor 22uH 0.6 A	22uH		20%	3015	WURTH ELEKTRONIK	74438335220 or equivalent	
39	1	NTC1	NTC Thermistor	10k	100mW	+/- 1%	Size 0603	muRata	NCP18XH103F03RB	
40	6	Q1,Q2,Q3,Q4,Q5,Q6	N-channel 60 V, 0.0031 Ohm typ., 80 A STripFET F7 Power MOSFET	STD140N6F7			DPAK	STMicroelectronics	STD140N6F7	
41	1	Q7	NPN General Purposes Transistor	BC847B			SOT23	Nexperia	BC847B or equivalent	
42	1	R1	SMT resistor	10k	0.1W		Size 0603 (1608 Metric)			
43	2	R2,R3	SMT resistor	120R	0.1W		Size 0603 (1608 Metric)			
44	2	R4,R5	SMT resistor	200R	0.1W		Size 0603 (1608 Metric)			
45	3	R6,R7,R8	SMT resistor	4.7k	0.125W	5%	Size 0805 (2012 Metric)			
46	6	R9,R10,R11,R15,R16,R17	SMT resistor	0R	0.0625W (1/16)		Size 0603 (1608 Metric)			
47	6	R12,R13,R14,R18,R19,R20	SMT resistor	120R	0.0625W (1/16)		Size 0603 (1608 Metric)			
48	6	R21,R22,R68,R69,R70,R71	SMT resistor	0.02R	2W	1%	Size 2512	TE CONNECTIVITY	TLRP3A20DR020FTE	
49	3	R26,R72,R78	SMT resistor	7.5k	0.0625W (1/16)	1%	Size 0603 (1608 Metric)			
50	6	R30,R34,R74,R77,R80,R83	SMT resistor	15k	0.0625W (1/16)	1%	Size 0603 (1608 Metric)			
51	6	R31,R33,R73,R76,R79,R82	SMT resistor	1k	0.0625W (1/16)	1%	Size 0603 (1608 Metric)			

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52	3	R32,R75,R81	SMT resistor	220R	0.0625W (1/16)	1%	Size 0603 (1608 Metric)			
53	3	R36,R37,R38	SMT resistor	4.7k	0.1W	5%	Size 0603			
54	1	R39	SMT resistor	169k	0.0625W (1/16)	1%	Size 0603 (1608 Metric)			
55	1	R40	SMT resistor	18k	0.0625W (1/16)	1%	Size 0603 (1608 Metric)			
56	3	R41,R42,R44	SMT resistor	330R	0.1W	5%	Size 0603			
57	3	R43,R84,R85	SMT resistor	3k	0.0625W (1/16)	1%	Size 0603 (1608 Metric)			
58	1	R45	SMT resistor	9.31k	0.0625W (1/16)	1%	Size 0603 (1608 Metric)			
59	1	R46	SMT resistor	910R	0.0625W (1/16)	1%	Size 0603 (1608 Metric)			
60	2	R47,R57	SMT resistor	10k	0.1W	5%	Size 0603 (1608 Metric)			
61	4	R48,R56,R61,R62	SMT resistor	100R	0.1W	5%	Size 0603 (1608 Metric)			
62	1	R49	SMT resistor	36k	0.1W	5%	Size 0603 (1608 Metric)			
63	1	R50	SMT resistor	1.5k	0.1W	5%	Size 0603 (1608 Metric)			
64	2	R52,R54	SMT resistor	4.7k	0.1W	1%	Size 0603 (1608 Metric)			
65	1	R53	SMT resistor	2.7k	0.1W	5%	Size 0603 (1608 Metric)			
66	1	R55	SMT resistor	4.7k	0.1W	5%	Size 0603 (1608 Metric)			
67	1	R58	SMT resistor	NM	0.1W	5%	Size 0603 (1608 Metric)			Not mounted
68	2	R59,R60	SMT resistor	100k	0.1W	5%	Size 0603 (1608 Metric)			
69	2	R63,R64	SMT resistor	5.1k	0.1W	5%	Size 0603 (1608 Metric)			
70	3	R65,R66,R67	SMT resistor	20k	0.1W	5%	Size 0603			
71	3	SB1,SB12,SB14	SMT resistor	NM			Size 0603			Not mounted
72	4	SB2,SB10,SB11,SB13	SMT resistor	0R			Size 0603			
73	5	SB5,SB6,SB7,SB8,SB9	SMT resistor	0R			Size 0603 (1608 Metric)			
74	3	SW1,SW2,SW3	Tactile Switch - 6x6 J-bend SMT	WS-TASV J-Bend SMT				WURTH ELEKTRONIK	430483025816 or equivalent	
75	13	TP1,TP2,TP3,TP9,TP12,TP13,TP14,TP15,TP16,TP17,TP18,TP19,TP20	50 mils SMD PAD	TP-SMD-diam1_27mm			Copper pad			
76	5	TP4,TP5,TP6,TP7,TP8	65x128 mils SMD Hardware Test Points	TP-SMD-S1751-46R			SMD 65x128 Pad	HARWIN	S1751-46R or Equivalent	
77	1	TR1	3362 -1/4 ? Square Trimpot Trimming Potentiometer	100k	0.5W (1/2)	+/- 10%	3362P	Bourns	3362P-1-104 LF	
78	1	U3	Ultra low drop and low noise BiCMOS voltage regulators	LD3985M33R			SOT23-5L	STMicroelectronics	LD3985M33R or Equivalent	
79	1	U4	Common-mode filter and ESD protection for USB 2.0 and MIPi/MDDI interfaces	ECMF02-2AMX6				STMicroelectronics	ECMF02-2AMX6	
80	1	U5	Medium-density performance line ARM®-based 32-bit MCU with 128 KB Flash, USB, CAN, 7 timers, 2 ADCs, 9 com. interfaces	STM32F103CBT6			LQFP48 - 7x7 mm	STMicroelectronics	STM32F103CBT6	
81	1	U6	STSPIN32G0A1 Three-phase controller with MCU	STSPIN32G0A1			VFOFPN 7 x 7 x 1.0-48L	STMicroelectronics	STSPIN32G0A1	
82	1	X1	CRYSTAL 8.0000MHZ 8pF SMD	NX3225CD-CRYSTAL			NDK NX3225GD	NDK	NX3225GD-8MHZ-EXS00A-CG04874 or equivalent	