Bill of Materials

Linefollower_main_board_ver1.0

Project: **Linefollower_main_board.PrjPcb**
Author: **Patryk Matusiak**
Date: **02.03.2021**

Designator	Description	Part_number	Quantity	Package	#Column Name Error:Value	Tolerance	Manufacturer	Comment
C1, C13	Capacitor		2	0603				10uF 0603
C2, C4, C9, C10, C14, C15, C16, C17	Capacitor		8	0603				100nF 0603
C3	Capacitor_Polarity		1	SMD_A				22uF SMD_A
C5	Capacitor		1	1206				10uF 1206
C6, C8	Capacitor		2	1206				22uF 1206
C7	Capacitor		1	0603				470nF 0603
C11, C12	Capacitor		2	0402				22pF 0402
D1	Diode RGB, SMD LED Side Look Red/Green/Blue	LTST-S310F2KT	1					SMD-4 LTST-S310F2KT
D2	LED; SMD; 0603; red 80mcd; 1,6x0,8x0,8mm; 130°; 2,1÷2.6V	FYLS-0603URC	1	0603			Foryard	0603 FYLS-0603URC
D3	LED; SMD; 0603; blue 120mcd; 1,6x0,8x0,8mm; 130°; 2,8÷3,6V	FYLS-0603UBC	1	0603			Foryard	0603 FYLS-0603UBC
E1, E2	Magnetic Encoder Pair Kit for Micro Metal Gearmotors, 12 CPR, 2.7-18V	Encoder	2	Individual			Pololu	Individual Encoder
F1	FUSE, 500mA, 32V, 0805	FUSE 0805-FF PW 0A5	1	0805				500mA 0805 FUSE 0805-FF PW 0A5
FL1	Ferrite Beads	BLM18HE152SN1	1	0603				0603 BLM18HE152SN1
G1	Goldpin 2,54mm 6PIN	68000-106	1	THT				THT 68000-106
G2	JST 2,5mm, XH, 3PIN, THT, 250V, 3A	B3B-XH-A	1				JST Japanese Solderless Terminals	B3B-XH-A
G3	PAD Hole 0.6mm Radius 0.5mm	PAD_4P	1					PAD_4P
J1	Connector Molex FFC 1mm 10 PIN	52207-1033	1	PIN10, SMD, 1mm			Molex	PIN10, SMD, 1mm 52207-1033
L1	Inductor 10uH 20% 2.1A SMD 0735 AEC-Q200	SRR0735A-100M	1	7.3x7.3x3.5mm				10uH 7.3x7.3x3.5mm SRR0735A-100M
M1	Driver IC for Dual DC motor	TB6612FNG	1	SSOP24			Toshiba	SSOP24 TB6612FNG
R1, R2, R3	Resistor		3	0603				330R 0603
R4, R5, R6, R9, R10	Resistor		5	0603				10K 0603
R7	Resistor		1	0603				100K 0603
R8	Resistor		1	0603		1%		10M 0603
R11	Resistor		1	0603		1%		6M8 0603
S1, S2	TACT; SPST-NO; Poz: 2; 0,05A/24VDC; SMT; 1,5N	B3U-1000PM	2					B3U-1000PM

S3	Slide switch; Poz: 2; 0,5A/60VDC; THT	SS12D03	1				SHENZHEN XIEJIA ELECTRONICS	SS12D03
U1	Medium-density performance line ARM-based 32-bit MCU with 64 or128 KB Flash, USB, CAN, 7 timers, 2 ADCs, 9 communication interfaces	STM32F103RBT6	1	LQFP (64) 10MMX10MM			STMicroelectronics	LQFP (64) 10MMX10MM STM32F103RBT6
U2	Synchronous Step-Down Converter, 800mA, Vout=3.3V	TPS62056	1	MSOP-10			Texas Instruments	MSOP-10 TPS62056
U3	MCP6L01, Operational Amplifier, 1MHz, 85uA	MCP6L01T	1	SC-70-5			Microchip	SC-70-5 MCP6L01T
X1	Crystals 8MHz; ±50ppm; 18pF; SMD; 5x3,2x1,1mm	ABM3B-8.000MHZ-B2-T	1	SMD, 5mm x 3.2mm			Abracon	8MHz SMD, 5mm x 3.2mm ABM3B-8.000MHZ-B2-T