VCC

R1 1 ⎓ 2 SCl
1623927-1

R2 1 ⎓ 2 SDA
1623927-1

MIC
MIC 01
GND 02
VCC 03
MICD 04

01
02
03
04
TS-104-G-AA

POWER SWITCH
3
GND
4
TL2285EE

POWER IN (5V)
1 1
2 2
B2B-XH-A(LF)(SN)

TOF 1
4 4 SC0
3 3 SD0
2 2 GND
1 1
B4B-XH-A(LF)(SN)

TOF 2
4 4 SC1
3 3 SD1
2 2 GND
1 1
B4B-XH-A(LF)(SN)

TOF 3
4 4 SC2
3 3 SD2
2 2 GND
1 1
B4B-XH-A(LF)(SN)

TOF 4
4 4 SC3
3 3 SD3
2 2 GND
1 1
B4B-XH-A(LF)(SN)

TOF 5
4 4 SC4
3 3 SD4
2 2 GND
1 1
B4B-XH-A(LF)(SN)

TOF 6
4 4 SC5
3 3 SD5
2 2 GND
1 1
B4B-XH-A(LF)(SN)

TOF 7
4 4 SC6
3 3 SD6
2 2 GND
1 1
B4B-XH-A(LF)(SN)

TOF controller
1A — 1B
2A — 2B
3A — 3B
4A — 4B
5A — 5B
6A — 6B
7A — 7B
DS02-254-2L-07BE

VCC

DISP
VCC 1 1
GND 2 2
DISR 3 3
DIST 4 4
B4B-XH-A(LF)(SN)

SERVO 1
GND 1 1
VCC 2 2
SER1 3 3
75160-101-03LF

SERVO 2
GND 1 1
VCC 2 2
SER0 3 3
75160-101-03LF

MEGA
SCL SCL
SDA SDA
AREF AREF
GND3 GND3
13 13
SER0 12 12
SER1 11 11
10 10
9 9
8 8
INB2 7 7
INA2 6 6
INB1 5 5
INA1 4 4
MEB2 3 3
MEB1 2 2
DIST 1 1
DISR 0 0
SCl 21 21
SDA 20 20
MEA1 19 19
MEA2 18 18
17 17
16 16
15 15
14 14
5V_2 22 +5V_2
EN2 24 24
26 26
MICD 28 28
30 30
32 32
34 34
36 36
38 38
40 40
42 42
44 44
46 46
48 48
50 50
52 52
GND4 GND4

NC NC
IOREF IOREF
RESET RESET
3V3 +3V3
5V_1 +5V_1
GND1 GND1
GND2 GND2
VIN VIN
AD0 A0
AD1 A1
AD2 A2
AD3 A3
AD4 A4
AD5 A5
AD6 A6
AD7 A7
AD8 MIC
AD9 AD9
AD10 AD10
AD11 AD11
AD12 AD12
AD13 AD13
AD14 AD14
AD15 AD15
+5V_3 5V_3
23 EN1
25 25
27 27
29 29
31 31
33 33
35 35
37 37
39 39
41 41
43 43
45 45
47 47
49 49
51 51
53 53
GND5 GND5

A000067

VCC

I2C MUX
VIN 1
RST 5
A0 6 GND
A1 7 GND
A2 8 GND
SCL 4 SCl
SDA 3 SDA

SCL0 10 SC0
SDA0 9 SD0
SCL1 12 SC1
SDA1 11 SD1
SCL2 14 SC2
SDA2 13 SD2
SCL3 16 SC3
SDA3 15 SD3
SCL4 18 SC4
SDA4 17 SD4
SCL5 20 SC5
SDA5 19 SD5
SCL6 22 SC6
SDA6 21 SD6
SCL7 24 SC7
SDA7 23 SD7
GND 2
2717
GND

MOTOR 1 EN
MEA1 1 1
MEA2 2 2
GND 3 3
VCC 4 4
B4B-XH-A(LF)(SN)

MOTOR 2 EN
MEB1 1 1
MEB2 2 2
GND 3 3
VCC 4 4
B4B-XH-A(LF)(SN)

IR ARRAY
10 10 GND
9 9 VCC
8 8 A7
7 7 A6
6 6 A5
5 5 A4
4 4 A3
3 3 A2
2 2 A1
1 1 A0
75160-101-10LF

COLOR SENSOR
4 SC7
3 SD7
2 GND
1 VCC
B4B-XH-A(LF)(SN)

MOTOR 1 (C)
4 EN1
3 INA1
2 INB1
1 GND
B4B-XH-A(LF)(SN)

MOTOR 2 (C)
4 EN2
3 INA2
2 INB2
1 GND
B4B-XH-A(LF)(SN)

Title		
Size	Number	Revision
A		
Date:	11/21/2023	Sheet of
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MOTOR 2 (C) MOTOR 1 (C) MOTOR 2 EN MOTOR 1 EN

TOF 1

R2 A03M

TOF 2

R1

TOF 3

COLOR SENSOR

TOF 4

SENTINALS

TOF 5

TOF 6

I2C MUX

DISP

POWER IN (5V)

TOF 7

MIC

POWER SWITCH

ENTC
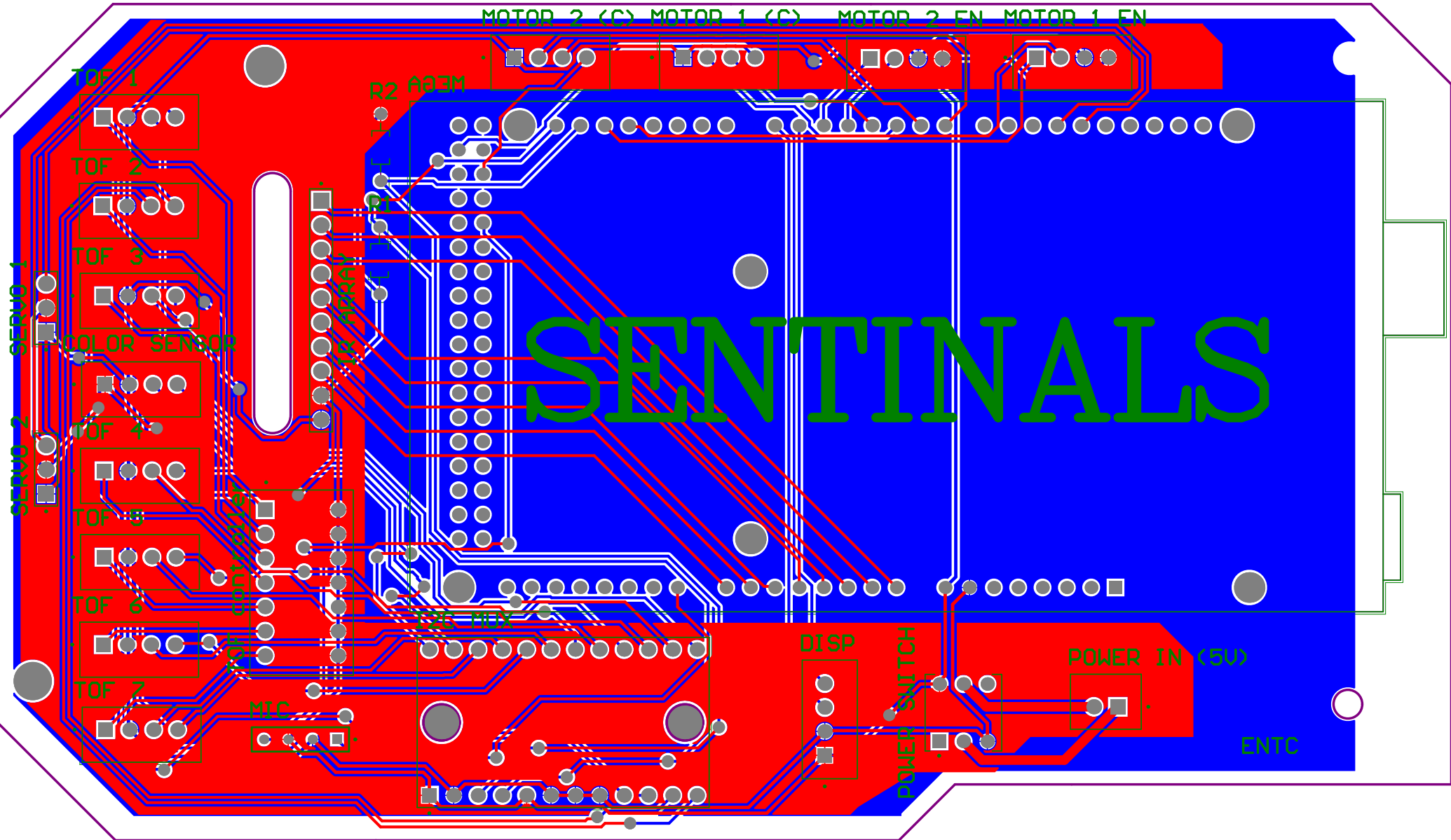
Comment	Description	Designator	Footprint	LibRef	Quantity
B4B-XH-A(LF)(SN)	Connector Header Through Hole 4 position 0.098 (2.50mm)	COLOR SENSOR, DISP, MOTOR 1 (C), MOTOR 1 EN, MOTOR 2 (C), MOTOR 2 EN, TOF 1, TOF 2, TOF 3, TOF 4, TOF 5, TOF 6, TOF 7	JST_B4B-XH-A(LF)(SN)	B4B-XH-A(LF)(SN)	13
2717	Module: multiplexer; I2C interface multiplexer; TCA9548A; 3Ã·5VDC	I2C MUX	MODULE_2717	2717	1
75160-101-10LF		IR ARRAY	AMPHENOL_75160-101-10LF	75160-101-10LF	1
A000067	Arduino Mega 2560 Rev3. ATmega2560 Microcontroller Mega Development Board 16MHz CPU 8KB RAM 4KB/256KB EEPROM/Flash	MEGA	ARDUINO_A000067	A000067	1
TS-104-G-AA		MIC	SAMTEC_TS-104-G-AA	TS-104-G-AA	1
B2B-XH-A(LF)(SN)	Connector Header Through Hole 2 position 0.098 (2.50mm)	POWER IN (5V)	JST_B2B-XH-A(LF)(SN)	B2B-XH-A(LF)(SN)	1
TL2285EE		POWER SWITCH	SW_TL2285EE	TL2285EE	1
1623927-1	Res Carbon Film 100K Ohm 5% 0.25W(1/4W) - 700ppm/Â°C to 0ppm/Â°C Conformal Coated AXL Ammo Pack	R1, R2	RESAD700W45L350D185	1623927-1	2
75160-101-03LF	BergStikÂ®, Board to Board connector, Unshrouded vertical header, through hole, single Row,3 position, 2.54mm pitch	SERVO 1, SERVO 2	AMPHENOL_75160-101-03LF	75160-101-03LF	2
DS02-254-2L-07BE		TOF controller	SW_DS02-254-2L-07BE	DS02-254-2L-07BE	1