

Title	TESC 6.6					
Total Parts	136					
Total Unique Parts	55					

No	Ref	Qty	Value	Footprint	Description	Part Number	Note
1	C1 C7 C28 C49 C58	5	100n	C_0603	CAP 0.1uF 50V 0603 5% X7R	C0603X104J5RACTU	
2	C2 C8	2	15p	C_0603	CAP 15pF 100V 0603 5% C0G	06035A150GAT2A	
3	C3 C4 C5 C6 C9 C10 C11 C12 C13 C14 C15 C17 C20 C31 C33 C34 C35 C36 C38 C42 C48 C50 C51 C64	24	2.2u	C_0603	CAP 2.2uF 16V 0603 10% X5R	C1608X5R1C225K080AB	
4	C16	1	6.8n	C_0603	CAP 6800pF 50V 0603 10% X7R	GCD188R71H682KA01D	
5	C18	1	120p	C_0603	CAP 120pF 50V 0603 5% C0G	06035A121JAT2A	
6	C19	1	22n	C_0603	CAP 0.022uF 50V 0603 10% X7R	GCM188R71H223KA37J	
7	C21 C32	2	100u	CP_Tantalum_Case-A_EIA-3216-18_Reflow	CAP 100uF 6.3V 1206 10% 1206	TLJA107M006R0500	
8	C22 C52 C53 C54	4	15n	C_0603	CAP 0.015uF 50V 0603 10% X7R	GCM188R71H153KA37D	
9	C23 C24 C25	3	220n	C_0603	CAP 0.22uF 25V 0603 10% X7R	GCM188R71E224KA55D	
10	C26 C27 C37 C39 C40 C41 C43 C44	8	4.7u_100V	C_1210	CAP 4.7uF 100V 1210 10% X7S	CGA6M3X7S2A475K200AE	
11	C29 C30 C45	3	1n	C_0603	CAP 1nF 50V 0603 5% X7R	06035C102JAT2A	
12	C46 C47	2	680u_63V	C_0603	CAP 680uF 63V 20%	EKZN630ELL681MK30S	
13	D1	1	BLUE	LED_0603	LED Blue	VLMB1300-GS08	
14	D2 D6	2	RED	LED_0603	LED Red	VLMS1300-GS08	
15	D3	1	GREEN	LED_0603	LED Green	VLMTG1300-GS08	
16	D4	1	DIODE	D_SMA	Schottky Diodes & Rectifiers 2.0 Amp 60 Volt	PMEG6020ER,115	
17	D5	1	TVS 5V	D_SMA	TVS Diodes 5V	SMAJ5.0A	
18	L2	1	22u	L_Coilcraft_XAL5050	IND 22uH 3.4A 20%	XAL5050-223MEC	
19	P1	1	USB_OTG	USB_Micro-B_Vertical_Molex-105133-0001	USB Connectors MICRO VERTICAL	1051330001	
20	P2	1	CAN	b4b-ph-kl	Micro-JST 4PIN 2mm	B4B-PH-K-S (LF)(SN)	
21	P4	1	HALL_ENC	b6b-ph-kl	Micro-JST 6PIN 2mm	B6B-PH-K-S (LF)(SN)	
22	P5	1	COM	b8b-ph-kl	Micro-JST 8PIN 2mm	B8B-PH-K-S (LF)(SN)	
23	P6	1	SERVO	b3b-ph-kl	Micro-JST 3PIN 2mm	B3B-PH-K-S (LF)(SN)	
24	P7	1	SWD	b5b-ph-kl	Micro-JST 5PIN 2mm	B5B-PH-K-S (LF)(SN)	
25	P8	1	PH_A	1PAD_4x5mm	Motor Cable		
26	P9	1	PH_B	1PAD_4x5mm	Motor Cable		
27	P10	1	PH_C	1PAD_4x5mm	Motor Cable		
28	P11	1	SUPPLY	1PAD_6x5mm	RED Silicon Cable		
29	P12	1	GND	1PAD_6x5mm	BLACK Silicon Cable		
30	Q1 Q2 Q3 Q4 Q5 Q6	6	IRF7749	DirectFET_L8	MOSFET 60V	IRF7749L1TRPBF/IRF7749L2TRPBF	
31	R1	1	0R	R_0603	RES 0 OHM 50 V 0603 5% 1/10W	CR0603-J/-000ELF	DO NOT MOUNT
32	R2 R3	2	22R	R_0603	SMD 22 ohm 1%	CR0603-FX-22R0ELF	
33	R4 R5 R7 R35 R36 R37 R38	7	1k	R_0603	SMD 1K 1% 1/10W	CR0603-FX-1001ELF	
34	R6	1	100R	R_0603	SMD 100ohm 1% 1/10W	CR0603-FX-1000ELF	
35	R8 R9 R23	3	220R	R_0603	SMD 220 ohm 1%	CR0603-FX-2200ELF	
36	R10	1	3.3k	R_0603	SMD 3.3KOHM 1/10WATT 1%	CR0603-FX-3301ELF	
37	R11	1	18k	R_0603	SMD 1/10watt 18Kohms 1%	CR0603-FX-1802ELF	
38	R12	1	15k	R_0603	SMD 1/10watt 15Kohms 1%	CR0603-FX-1502ELF	

39	R13 R28 R39	3	10k	R_0603	SMD 10K 1% 1/10W	CR0603-FX-1002ELF	
40	R14	1	220k	R_0603	SMD 0603 220Kohms 1%	CR0603-FX-2203ELF	
41	R15 R17 R19 R21	4	39k	R_0603	SMD 39K ohm 1%	CR0603-FX-3902ELF	
42	R16 R18 R20 R22 R42 R43 R44	7	2k2	R_0603	SMD 2.2K 1% 1/10W	CR0603-FX-2201ELF	
43	R24 R29 R32	3	0.0005R	SHUNT_CSS2H-3920	SMD 0.5mOHMS 9W 1%	CSS2H-3920R-L500FE	
44	R25 R26 R30 R31 R33 R34	6	4.7R	R_0603	SMD 1/10watt 4.7ohms 1%	CRCW06034R70FKEA	
45	R27	1	NTC 10k	R_0603	NTC Thermistors 10K OHM 1%	NCP18XH103F03RB	
46	U1	1	STM32F40X_LQFP64	STM32F4x5RG	MCU ARM M4 1024 LQFP-64	STM32F405RGT6	
47	U2	1	NRF51822-TY_EYSGJNZWY	Taiyo-Yuden_EYSGJNZWY	BLE	EYSGJNZWY	
48	U3	1	DRV8301	TSSOP-56-PP	MOSFET Driver DRV8301	DRV8301DCA	
49	U4	1	TJA1051TK3	DFN-8-1EP_3x3mm_Pitch0.65mm	CAN TRANSCEIVER	TJA1051TK/3,118	
50	U5 U6 U7	3	AD8418	MSOP-8_3x3mm_Pitch0.65mm	Current Sense Amplifiers	AD8418AWBRMZ	
51	U8	1	TC2117	SOT-223	LDO Voltage Regulators	TC2117-3.3VDBTR	
52	U9	1	MPU9250	QFN-24_3x3mm_Pitch0.4mm	IMUs - Inertial Measurement Units	MPU-9250	
53	U10 U12 U13	3	MC74VHC1GT66	SOT-23-5	Analog Switch	M74VHC1GT66DTT1G	
54	U11	1	SENSOR_VOLTAGE	SW_SPDT_PCM12	Slide Switches SPDT ON-ON	PCM12SMTR	
55	Y1	1	8M	Crystal_SMD_5032_4Pads	Crystals 8.0MHz 10pf 10ppm	ABM3B-8.000MHZ-10-1-U-T	