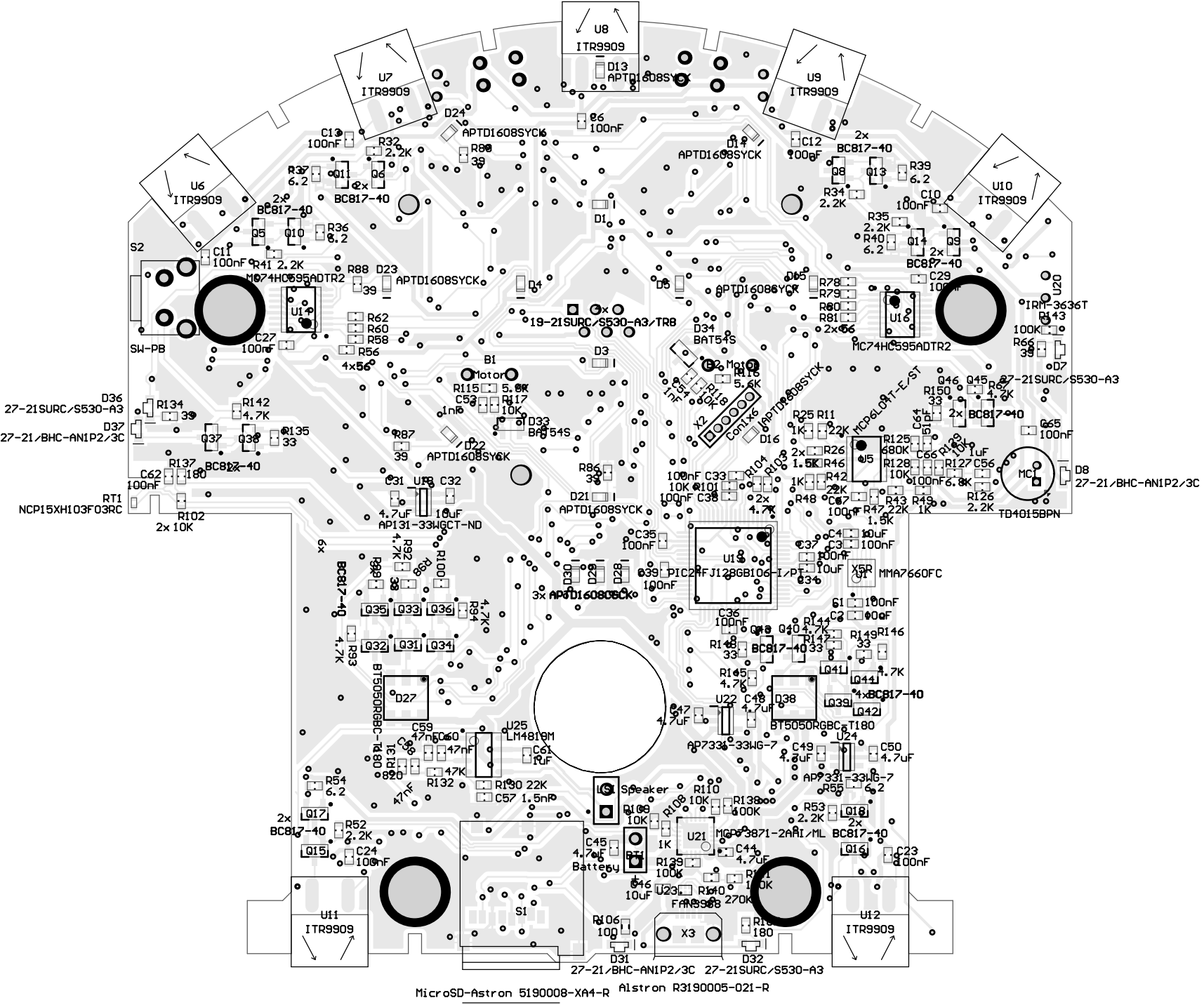
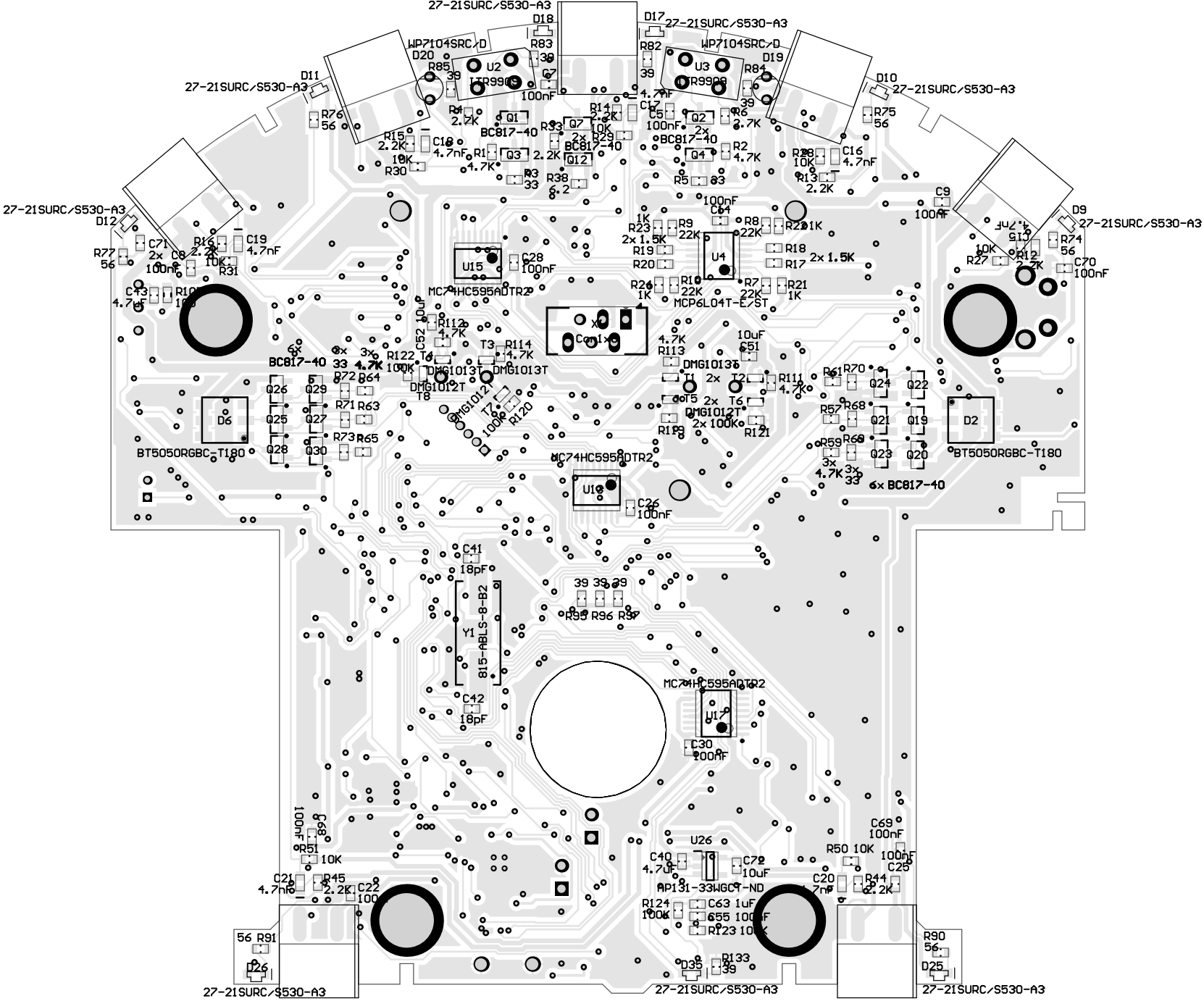
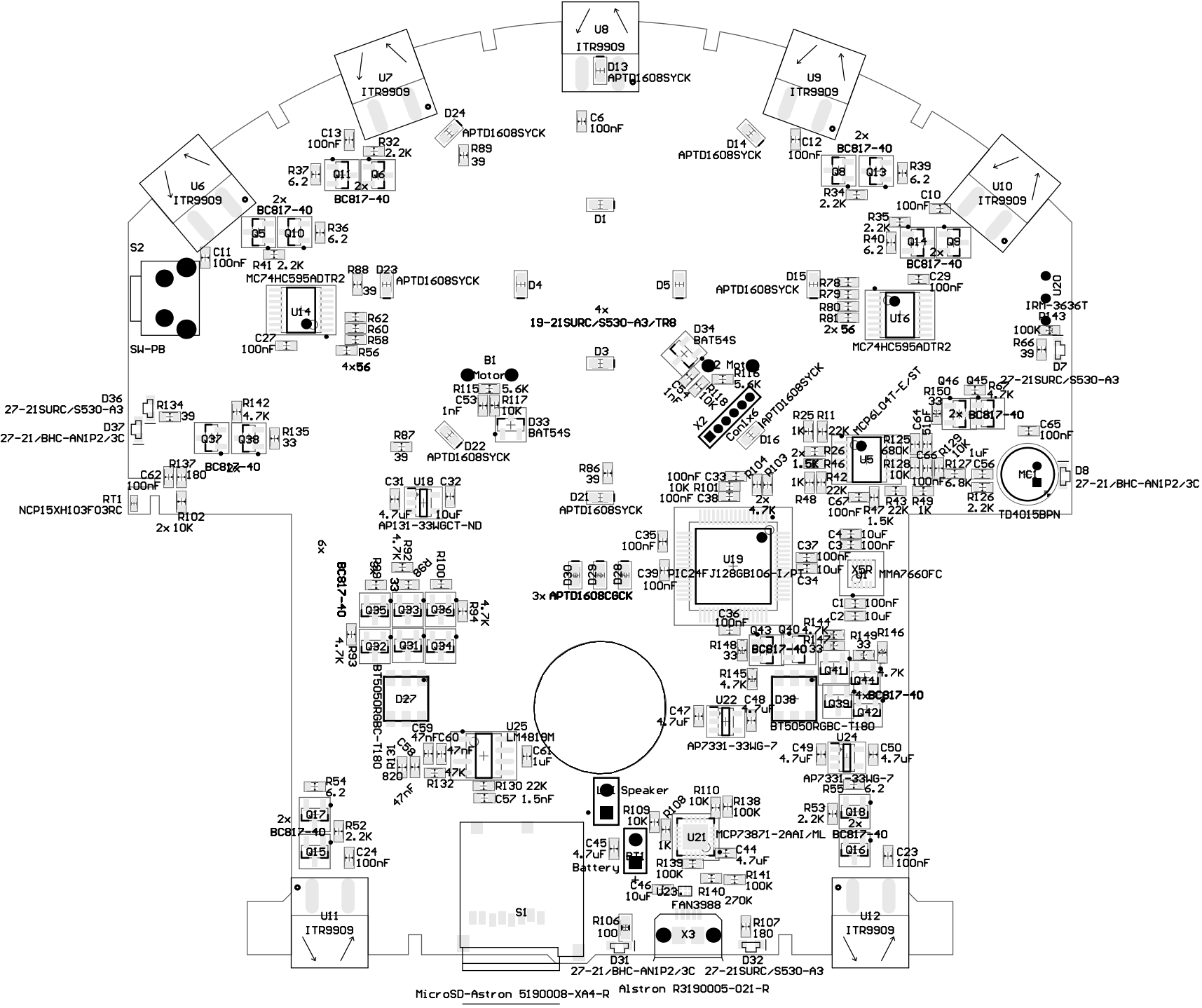

U8
ITR9909
U7
ITR9909
U9
ITR9909
U6
ITR9909
U10
ITR9909
U11
ITR9909
U12
ITR9909
D13
APTD1608SYCK
D24
APTD1608SYCK
D14
APTD1608SYCK
D23
APTD1608SYCK
D4
D5
D1
D3
D34
BAT54S
D33
BAT54S
D22
APTD1608SYCK
D21
APTD1608SYCK
D30
D29
D28
D27
D38
D16
D36
27-21SURC/S530-A3
D37
27-21/BHC-AN1P2/3C
D8
27-21/BHC-AN1P2/3C
D7
27-21SURC/S530-A3
D31
27-21/BHC-AN1P2/3C
D32
27-21SURC/S530-A3
S2
SW-PB
S1
X2
Con1x6
X3
X5R
U14
MC74HC595ADTR2
U16
MC74HC595ADTR2
U20
IRM-3636T
U19
PIC24FJ128GB106-I/PT
U5
MCP6L04T-E/ST
U1
MMA7660FC
U22
AP7331-33WG-7
U24
AP7331-33WG-7
U25
LM4819M
U21
MCP73871-2AAI/ML
U23
FAN3988
U18
AP131-33WGCT-ND
U13
BT5050RGBC-T180
U15
BT5050RGBC-T180
MC1
TD4015BPN
RT1
NCP15XH103F03RC
RT1
Battery
LS1
Speaker
Motor
Motor
19-21SURC/S530-A3/TR8
MicroSD-Astron 5190008-XA4-R
Alstron R3190005-021-R


27-21SURC/S530-A3
WP7104SRC/D
LTR9908
BC817-40
MC74HC595ADTR2
MCP6L04T-E/ST
DMG1013T
DMG1012T
BT5050RGBC-T180
AP131-33WGC-T-ND
815-ABLS-8-B2

Quantity	Comment	LibRef	Designator	Description	Footprint	Supplier	Supplier Nr
2	Motor	Motor	B1, B2	Motor, General Kind	RB5-10.5		
1	Battery	Battery	BT1	Multicell Battery	BAT-2		
36	100nF	100nF[/\]]0603[/\]]1	C1, C3, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C22, C23, C24, C25, C26, C27, C28, C29, C30, C33, C35, C36, C37, C38, C39, C55, C62, C65, C66, C67, C68, C69, C70, C71	Capacitor	RESC1608X06L	Farnell	1288255
7	10uF	4.7uF[/\]]0603[/\]]1, 10uF[/\]]0603[/\]]1	C2, C4, C32, C46, C51, C52, C72	Capacitor	RESC1608X06L	Farnell	1463375, 9227784
7	4.7nF	CAP-NP	C15, C16, C17, C18, C19, C20, C21	Capacitor	CAPC1608N		
9	4.7uF	4.7uF[/\]]0603[/\]]1	C31, C40, C43, C44, C45, C47, C48, C49, C50	Capacitor	RESC1608X06L	Farnell	9227784
1	10uF X5R	10uF[/\]]0603[/\]]1	C34	Capacitor	RESC1608X06L	Farnell	1463375
2	18pF	10pF[/\]]0603[/\]]3	C41, C42		RESC1608X06L	Farnell	8819815
2	1nF	100nF[/\]]0603[/\]]1	C53, C54	Capacitor	RESC1608X06L	Farnell	1288255
3	1uF	1uH[/\]]0603[/\]]1, 4.7uF[/\]]0603[/\]]1	C56, C61, C63	Capacitor	RESC1608X06L	Distrelec, Farnell	823495, 9227784
1	1.5nF	10nF[/\]]0603[/\]]1	C57	Capacitor	RESC1608X06L	Farnell	9406182
3	47nF	10nF[/\]]0603[/\]]1, 470nF[/\]]0603[/\]]1	C58, C59, C60	Capacitor	RESC1608X06L	Distrelec, Farnell	823494, 9406182
1	51pF	10nF[/\]]0603[/\]]1	C64	Capacitor	RESC1608X06L	Farnell	9406182
4	19-21SURC/ S530-A3/ TR8	LED	D1, D3, D4, D5	SMD Red 0603 2V@20ma 56 mcd	DIOC1608X08N		
4	BT5050RGBCT180	LED RGB SMD 2	D2, D6, D27, D38	$0.027/ 2000k	LEDSMD5		
12	27-21SURC/ S530-A3	LED	D7, D9, D10, D11, D12, D17, D18, D25, D26, D32, D35, D36	SMD Red led right angle mount 2V@20ma 57mcd	27-21 Everlight		
3	27-21/ BHC-AN1P2/ 3C	LED	D8, D31, D37	SMD blue led right angle mount 3.3V@20ma 28mcd	27-21 Everlight Blue		
8	APTD1608SYCK	LED	D13, D14, D15, D16, D21, D22, D23, D24	LED standard - CMS Helios SMD Yellow 590nm 480mcd	DIOC1608X08N		
2	WP7104SRC/ D	LED	D19, D20	Red led 2V@20ma 57mcd	Led_TH_3mm_20mm		
3	APTD1608CGCK	LED	D28, D29, D30	LED standard - CMS Helios SMD Green 570nm 230mcd	DIOC1608X08N		
2	BAT54S	BAT54S	D33, D34	Schottky Barrier Double Diode	SOT23_N		
1	Speaker	Speaker	LS1	Loudspeaker	PIN2		
1	TD4015BPN	Micro1	MC1	Omnidirectional Back Electret Condenser Microphone	MICRO_PANASONIC_WM-64PN		
46	BC817-40	BC817-40	Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q24, Q25, Q26, Q27, Q28, Q29, Q30, Q31, Q32, Q33, Q34, Q35, Q36, Q37, Q38, Q39, Q40, Q41, Q42, Q43, Q44, Q45, Q46	NPN General-purpose Transistor	SOT23_N		
22	4.7K	4.7K[/\]]0603[/\]]1	R1, R2, R57, R59, R61, R63, R64, R65, R67, R82, R93, R94, R103, R104, R111, R112, R113, R114, R142, R144, R145, R146	Resistor	RESC1608X06L	Distrelec	715604
16	33	68K[/\]]0603[/\]]1, RES	R3, R5, R68, R69, R70, R71, R72, R73, R98, R99, R100, R135, R147, R148, R149, R150	120, Resistor	RESC1608X06L	Distrelec	715632
2	2.7K	RES	R4, R6	Resistor	RESC1608X06L		
8	22K	22K[/\]]0603[/\]]1, RES	R7, R8, R9, R10, R11, R42, R43, R130	120, Resistor	RESC1608X06L	Distrelec	715620
15	2.2K	2.2K[/\]]0603[/\]]1, RES	R12, R13, R14, R15, R16, R32, R33, R34, R35, R41, R44, R45, R52, R53, R126	120, Resistor	RESC1608X06L	Distrelec	715596
7	1.5K	RES	R17, R18, R19, R20, R26, R46, R47	120	RESC1608X06L		
8	1K	1K[/\]]0603[/\]]1, RES	R21, R22, R23, R24, R25, R48, R49, R108	120, Resistor	RESC1608X06L	Distrelec	715588
15	10K	8.2K[/\]]0603[/\]]2, 10K[/\]]0603[/\]]1, 10K[/\]]0603[/\]]2, RES	R27, R28, R29, R30, R31, R50, R51, R101, R102, R109, R110, R117, R118, R128, R129	120, Resistor	RESC1608X06L	Distrelec, Farnell	715612, 9330399, 9331565
7	6.2	RES	R36, R37, R38, R39, R40, R54, R55	120	RESC1608X06L		
14	56	68K[/\]]0603[/\]]1	R56, R58, R60, R62, R74, R75, R76, R77, R78, R79, R80, R81, R90, R91	Resistor	RESC1608X06L	Distrelec	715632
14	39	68K[/\]]0603[/\]]1	R66, R82, R83, R84, R85, R86, R87, R88, R89, R95, R96, R97, R133, R134	Resistor	RESC1608X06L	Distrelec	715632
2	100	RES_ACORT	R105, R106	Resistance	RESC1608X06N		
2	180	180R[/\]]0603[/\]]1	R107, R137	Resistor	RESC1608X06L	Distrelec	715570
2	5.6K	2.2K[/\]]0603[/\]]1	R115, R116	Resistor	RESC1608X06L	Distrelec	715596
10	100K	10K[/\]]0603[/\]]1, 100K[/\]]0603[/\]]1	R119, R120, R121, R122, R123, R124, R138, R139, R141, R143	Resistor	RESC1608X06L	Distrelec	715612, 715636
1	680K	470K[/\]]0603[/\]]1	R125	Resistor	RESC1608X06L	Distrelec	715652
1	6.8K	10K[/\]]0603[/\]]1	R127	Resistor	RESC1608X06L	Distrelec	715612
1	820	22K[/\]]0603[/\]]1	R131	Resistor	RESC1608X06L	Distrelec	715620
1	47K	22K[/\]]0603[/\]]1	R132	Resistor	RESC1608X06L	Distrelec	715620
1	270K	270K[/\]]0603[/\]]2	R140	Resistor	RESC1608X06L	Farnell	9330941
1	NCP15XH103F03RC	Res Thermal	RT1	Thermistors - NTC 10K OHM 1% 0402	RESC1005X04L		
1	MicroSD-Astron 5190008-XA4-R	SD-Card-Micro-ASLTRON 5190008-XA4-R	S1	MicroSD Card connector 5190008-XA4-R	Astron 5190008-XA4-R		
1	SW-PB	SW-PB	S2	Switch	FSMRA2JH		
4	DMG1013T	DMG1013T	T1, T2, T3, T4	Transistor MOSFET 1 x P Pining : 1=G, 2=S, 3=D	SOT50P160X80-3N		
4	DMG1012T	DMG1012T	T5, T6, T7, T8	Transistor MOSFET 1 x N, Pining : 1=G, 2=S, 3=D	SOT50P160X80-3N		
1	MMA7660FC	MMA7660FC	U1	MMA7660FC: XYZ-AXIS ACCELEROMETER ±1.5 g	DFN50P300X300X100-12N		
2	ITR9909	ITR9909	U2, U3	Everlight Opto Interrupter	ITR9909_LONG		
2	MCP6L04T-E/ ST	MCP6L04T-E/ ST	U4, U5	1 MHz, 85 µA Quad Op Amp, 14-Pin TSSOP, Extended Temperature Range, Tape and Reel	TSSOP-ST14_N		
7	ITR9909	ITR9909	U6, U7, U8, U9, U10, U11, U12	Everlight Opto Interrupter	ITR9909_EDGE		
5	MC74HC595ADTR2	MC74HC595ADTR2	U13, U14, U15, U16, U17	8-Bit Serial-Input/Serial or Prallel-Output Shift Register with Latched 3-State Outputs	948F-01_N		
2	AP131-33WGCT-ND	AP7331	U18, U26	300mA, Low Quiescent Current, Fast Transient LDO	SOT95P285X100-5N		
1	PIC24FJ128GB106-I/PT	PIC24FJ128GB106-I/PT	U19	General Purpose 16-bit Flash Microcontroller with USB On-The-Go, 128KB Flash, 16KB SRAM, 64-Pin TQFP, Industrial Temperature	TQFP-PT64_N		
1	IRM-3636T	TSOP32236	U20	IR Receiver Module (36 kHz) for Remote Control Systems	IR-receiver		
1	MCP73871-2AAI/ ML	MCP73871-2AAI/ ML	U21	Stand-Alone System Load Sharing and Li-Ion/ Li-Polymer Battery Charge Management Controller, 4.2V, 20-Pin QFN, Industrial Temperature	QFN-ML20_N		
2	AP7331-33WG-7	AP7331	U22, U24	300mA, Low Quiescent Current, Fast Transient LDO	SOT95P285X100-5N		
1	FAN3988	FAN3988	U23	USB/Charger and Over Voltage Detection Device	MLP 1.45x1mm		
1	LM4819M	LM4819M	U25	350mW Audio Power Amplifier with Shutdown Mode	M08A_N		
1	Con1x6	Con1x6	X2	1 x 6 pins connector	MHDR1X6		
1	Alstron R3190005-021-R	USB_MINIAB	X3	USB connector Micro B	Astron 3190005-x21-r		
1	815-ABLS-8-B2	HC49/ 4H_SMX	Y1	Surface Mount Quartz Crystal 8Mhz	HC49/ 4H_SMX		

Quantity	Comment	LibRef	Designator	Description	Footprint	Supplier	Supplier Nr	Layer
1	100	RES_ACORT	R105	Resistance	RESC1608X06N			Bottom
1	1uF	1uF[[/\]]0603[[/\]]1	C63	Capacitor	RESC1608X06L	Distrelec	823495	Bottom
1	6.2	RES	R38	120	RESC1608X06L			Bottom
1	815-ABLS-8-B2	HC49/4H_SMX	Y1	Surface Mount Quartz Crystal 8Mhz	HC49/4H_SMX			Bottom
1	AP131-33WGCT-ND	AP7331	U26	300mA, Low Quiescent Current, Fast Transient LDO	SOT95P285X100-5N			Bottom
1	MCP6L04T-E/ST	MCP6L04T-E/ST	U4	1 MHz, 85 µA Quad Op Amp, 14-Pin TSSOP, Extended Temperature Range, Tape and Reel	TSSOP-ST14_N			Bottom
12	4.7K	4.7K[[/\]]0603[[/\]]1	R1, R2, R57, R59, R61, R63, R64, R65, R111, R112, R113, R114	Resistor	RESC1608X06L	Distrelec	715604	Bottom
15	100nF	100nF[[/\]]0603[[/\]]1	C5, C7, C8, C9, C14, C22, C25, C26, C28, C30, C55, C68, C69, C70, C71	Capacitor	RESC1608X06L	Farnell	1288255	Bottom
18	BC817-40	BC817-40	Q1, Q2, Q3, Q4, Q7, Q12, Q19, Q20, Q21, Q22, Q23, Q24, Q25, Q26, Q27, Q28, Q29, Q30	NPN General-purpose Transistor	SOT23_N			Bottom
2	18pF	10pF[[/\]]0603[[/\]]3	C41, C42		RESC1608X06L	Farnell	8819815	Bottom
2	2.7K	RES	R4, R6	Resistor	RESC1608X06L			Bottom
2	4.7uF	4.7uF[[/\]]0603[[/\]]1	C40, C43	Capacitor	RESC1608X06L	Farnell	9227784	Bottom
2	BT5050RGBC-T180	LED RGB SMD 2	D2, D6	$0.027/2000k	LEDSMD5			Bottom
2	ITR9909	ITR9909	U2, U3	Everlight Opto Interrupter	ITR9909_LONG			Bottom
2	WP7104SRC/D	LED	D19, D20	Red led 2V@20ma 57mcd	Led_TH_3mm_20mm			Bottom
3	10uF	4.7uF[[/\]]0603[[/\]]1, 10uF[[/\]]0603[[/\]]1	C51, C52, C72	Capacitor	RESC1608X06L	Farnell	1463375, 9227784	Bottom
3	MC74HC595ADTR2	MC74HC595ADTR2	U13, U15, U17	8-Bit Serial-Input/Serial or Prallel-Output Shift Register with Latched 3-State Outputs	948F-01_N			Bottom
4	1.5K	RES	R17, R18, R19, R20	120	RESC1608X06L			Bottom
4	1K	RES	R21, R22, R23, R24	120	RESC1608X06L			Bottom
4	22K	RES	R7, R8, R9, R10	120	RESC1608X06L			Bottom
4	DMG1012T	DMG1012T	T5, T6, T7, T8	Transistor MOSFET 1 x N, Pining : 1=G, 2=S, 3=D	SOT50P160X80-3N			Bottom
4	DMG1013T	DMG1013T	T1, T2, T3, T4	Transistor MOSFET 1 x P Pining : 1=G, 2=S, 3=D	SOT50P160X80-3N			Bottom
6	100K	100K[[/\]]0603[[/\]]1	R119, R120, R121, R122, R123, R124	Resistor	RESC1608X06L	Distrelec	715636	Bottom
6	56	68K[[/\]]0603[[/\]]1	R74, R75, R76, R77, R90, R91	Resistor	RESC1608X06L	Distrelec	715632	Bottom
7	10K	RES	R27, R28, R29, R30, R31, R50, R51	120	RESC1608X06L			Bottom
7	4.7nF	CAP-NP	C15, C16, C17, C18, C19, C20, C21	Capacitor	CAPC1608N			Bottom
8	2.2K	2.2K[[/\]]0603[[/\]]1, RES	R12, R13, R14, R15, R16, R33, R44, R45	120, Resistor	RESC1608X06L	Distrelec	715596	Bottom
8	33	RES	R3, R5, R68, R69, R70, R71, R72, R73	120, Resistor	RESC1608X06L			Bottom
8	39	68K[[/\]]0603[[/\]]1	R82, R83, R84, R85, R95, R96, R97, R133	Resistor	RESC1608X06L	Distrelec	715632	Bottom
9	27-21SURC/S530-A3	LED	D9, D10, D11, D12, D17, D18, D25, D26, D35	SMD Red led right angle mount 2V@20ma 57mcd	27-21 Everlight			Bottom
1	1.5nF	10nF[[/\]]0603[[/\]]1	C57	Capacitor	RESC1608X06L	Farnell	9406182	Top
1	100	RES_ACORT	R106	Resistance	RESC1608X06N			Top
1	10uF X5R	10uF[[/\]]0603[[/\]]1	C34	Capacitor	RESC1608X06L	Farnell	1463375	Top
1	270K	270K[[/\]]0603[[/\]]2	R140	Resistor	RESC1608X06L	Farnell	9330941	Top
1	47K	22K[[/\]]0603[[/\]]1	R132	Resistor	RESC1608X06L	Distrelec	715620	Top
1	51pF	10nF[[/\]]0603[[/\]]1	C64	Capacitor	RESC1608X06L	Farnell	9406182	Top
1	6.8K	10K[[/\]]0603[[/\]]1	R127	Resistor	RESC1608X06L	Distrelec	715612	Top
1	680K	470K[[/\]]0603[[/\]]1	R125	Resistor	RESC1608X06L	Distrelec	715652	Top
1	820	22K[[/\]]0603[[/\]]1	R131	Resistor	RESC1608X06L	Distrelec	715620	Top
1	Alstron R3190005-021-R	USB_MINIAB	X3	USB connector Micro B	Astron 3190005-x21-r			Top
1	AP131-33WGCT-ND	AP7331	U18	300mA, Low Quiescent Current, Fast Transient LDO	SOT95P285X100-5N			Top
1	Battery	Battery	BT1	Multicell Battery	BAT-2			Top
1	Con1x6	Con1x6	X2	1 x 6 pins connector	MHDR1X6			Top
1	FAN3988	FAN3988	U23	USB/Charger and Over Voltage Detection Device	MLP 1.45x1mm			Top
1	IRM-3636T	TSOP32236	U20	IR Receiver Module (36 kHz) for Remote Control Systems	IR-receiver			Top
1	LM4819M	LM4819M	U25	350mW Audio Power Amplifier with Shutdown Mode	M08A_N			Top
1	MCP6L04T-E/ST	MCP6L04T-E/ST	U5	1 MHz, 85 µA Quad Op Amp, 14-Pin TSSOP, Extended Temperature Range, Tape and Reel	TSSOP-ST14_N			Top
1	MCP73871-2AAI/ML	MCP73871-2AAI/ML	U21	Stand-Alone System Load Sharing and Li-Ion/Li-Polymer Battery Charge Management Controller, 4.2V, 20-Pin QFN, Industrial Temperature	QFN-ML20_N			Top

1	MCP73871-2AAI/ML	MCP73871-2AAI/ML	U21	Stand-Alone System Load Sharing and Li-Ion/Li-Polymer Battery Charge Management Controller, 4.2V, 20-Pin QFN, Industrial Temperature	QFN-ML20_N			Top
1	MicroSD-Astron 5190008-XA4-R	SD-Card-Micro-ASLTRON 5190008-XA4-R	S1	MicroSD Card connector 5190008-XA4-R	Astron 5190008-XA4-R			Top
1	MMA7660FC	MMA7660FC	U1	MMA7660FC: XYZ-AXIS ACCELEROMETER ±1.5 g	DFN50P300X300X100-12N			Top
1	NCP15XH103F03RC	Res Thermal	RT1	Thermistors - NTC 10K OHM 1% 0402	RESC1005X04L			Top
1	PIC24FJ128GB106-I/PT	PIC24FJ128GB106-I/PT	U19	General Purpose 16-Bit Flash Microcontroller with USB On-The-Go, 128KB Flash, 16KB SRAM, 64-Pin TQFP, Industrial Temperature	TQFP-PT64_N			Top
1	Speaker	Speaker	LS1	Loudspeaker	PIN2			Top
1	SW-PB	SW-PB	S2	Switch	FSMRA2JH			Top
1	TD4015BPN	Micro1	MC1	Omnidirectional Back Electret Condenser Microphone	MICRO_PANASONIC_WM-64PN			Top
10	4.7K	4.7K[[/\]]0603[[/\]]1	R67, R92, R93, R94, R103, R104, R142, R144, R145, R146	Resistor	RESC1608X06L	Distrelec	715604	Top
2	180	180R[[/\]]0603[[/\]]1	R107, R137	Resistor	RESC1608X06L	Distrelec	715570	Top
2	1nF	100nF[[/\]]0603[[/\]]1	C53, C54	Capacitor	RESC1608X06L	Farnell	1288255	Top
2	1uF	1uF[[/\]]0603[[/\]]1, 4.7uF[[/\]]0603[[/\]]1	C56, C61	Capacitor	RESC1608X06L	Distrelec, Farnell	823495, 9227784	Top
2	5.6K	2.2K[[/\]]0603[[/\]]1	R115, R116	Resistor	RESC1608X06L	Distrelec	715596	Top
2	AP7331-33WG-7	AP7331	U22, U24	300mA, Low Quiescent Current, Fast Transient LDO	SOT95P285X100-5N			Top
2	BAT54S	BAT54S	D33, D34	Schottky Barrier Double Diode	SOT23_N			Top
2	BT5050RGBC-T180	LED RGB SMD 2	D27, D38	$0.027/ 2000k	LEDSMD5			Top
2	MC74HC595ADTR2	MC74HC595ADTR2	U14, U16	8-Bit Serial-Input/Serial or Prallel-Output Shift Register with Latched 3-State Outputs	948F-01_N			Top
2	Motor	Motor	B1, B2	Motor, General Kind	RB5-10.5			Top
21	100nF	100nF[[/\]]0603[[/\]]1	C1, C3, C6, C10, C11, C12, C13, C23, C24, C27, C29, C33, C35, C36, C37, C38, C39, C62, C65, C66, C67	Capacitor	RESC1608X06L	Farnell	1288255	Top
28	BC817-40	BC817-40	Q5, Q6, Q8, Q9, Q10, Q11, Q13, Q14, Q15, Q16, Q17, Q18, Q31, Q32, Q33, Q34, Q35, Q36, Q37, Q38, Q39, Q40, Q41, Q42, Q43, Q44, Q45, Q46	NPN General-purpose Transistor	SOT23_N			Top
3	1.5K	RES	R26, R46, R47	120	RESC1608X06L			Top
3	27-21/BHC-AN1P2/3C	LED	D8, D31, D37	SMD Blue led right angle mount 3.3V@20ma 28mcd	27-21 Everlight Blue			Top
3	27-21SURC/S530-A3	LED	D7, D32, D36	SMD Red led right angle mount 2V@20ma 57mcd	27-21 Everlight			Top
3	47nF	10nF[[/\]]0603[[/\]]1, 470nF[[/\]]0603[[/\]]1	C58, C59, C60	Capacitor	RESC1608X06L	Distrelec, Farnell	823494, 9406182	Top
3	APTD1608CGCK	LED	D28, D29, D30	LED standard - CMS Helios SMD Green 570nm 230mcd	DIOC1608X08N			Top
4	100K	10K[[/\]]0603[[/\]]1, 100K[[/\]]0603[[/\]]1	R138, R139, R141, R143	Resistor	RESC1608X06L	Distrelec	715612, 715636	Top
4	10uF	4.7uF[[/\]]0603[[/\]]1, 10uF[[/\]]0603[[/\]]1	C2, C4, C32, C46	Capacitor	RESC1608X06L	Farnell	1463375, 9227784	Top
4	19-21SURC/S530-A3/TR8	LED	D1, D3, D4, D5	SMD Red 0603 2V@20ma 56 mcd	DIOC1608X08N			Top
4	1K	1K[[/\]]0603[[/\]]1, RES	R25, R48, R49, R108	120, Resistor	RESC1608X06L	Distrelec	715588	Top
4	22K	22K[[/\]]0603[[/\]]1, RES	R11, R42, R43, R130	120, Resistor	RESC1608X06L	Distrelec	715620	Top
6	39	68K[[/\]]0603[[/\]]1	R66, R86, R87, R88, R89, R134	Resistor	RESC1608X06L	Distrelec	715632	Top
6	6.2	RES	R36, R37, R39, R40, R54, R55	120	RESC1608X06L			Top
7	2.2K	2.2K[[/\]]0603[[/\]]1	R32, R34, R35, R41, R52, R53, R126	Resistor	RESC1608X06L	Distrelec	715596	Top
7	4.7uF	4.7uF[[/\]]0603[[/\]]1	C31, C44, C45, C47, C48, C49, C50	Capacitor	RESC1608X06L	Farnell	9227784	Top
7	ITR9909	ITR9909	U6, U7, U8, U9, U10, U11, U12	Everlight Opto Interrupter	ITR9909_EDGE			Top
8	10K	8.2K[[/\]]0603[[/\]]2, 10K[[/\]]0603[[/\]]1, 10K[[/\]]0603[[/\]]2	R101, R102, R109, R110, R117, R118, R128, R129	Resistor	RESC1608X06L	Distrelec, Farnell	715612, 9330399, 9331565	Top
8	33	68K[[/\]]0603[[/\]]1, RES	R98, R99, R100, R135, R147, R148, R149, R150	120, Resistor	RESC1608X06L	Distrelec	715632	Top
8	56	68K[[/\]]0603[[/\]]1	R56, R58, R60, R62, R78, R79, R80, R81	Resistor	RESC1608X06L	Distrelec	715632	Top
8	APTD1608SYCK	LED	D13, D14, D15, D16, D21, D22, D23, D24	LED standard - CMS Helios	DIOC1608X08N			Top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U7 ITR9909
U9 ITR9909
U6 ITR9909
U10 ITR9909
U11 ITR9909
U12 ITR9909
D13 APTD1608SYCK
D24 APTD1608SYCK
D14 APTD1608SYCK
D1
D4
D5
D15 APTD1608SYCK
D3
D34 BAT54S
D33 BAT54S
D22 APTD1608SYCK
D21 APTD1608SYCK
D16 APTD1608SYCK
3x APTD1608C6CK
4x 19-21SURC/S530-A3/TR8
D36 27-21SURC/S530-A3
D37 27-21/BHC-AN1P2/3C
D43 27-21SURC/S530-A3
D7
D8 27-21/BHC-AN1P2/3C
D31 27-21/BHC-AN1P2/3C
D32 27-21SURC/S530-A3
D27 BT5050RGBC-T180
D38 BT5050RGBC-T180
U14 MC74HC595ADTR2
U16 MC74HC595ADTR2
U5 MCP6L04T-E/ST
U19 PIC24FJ128GB106-I/PT
U20 IRM-3636T
U21 MCP73871-2AAI/ML
U22 AP7331-33WG-7
U24 AP7331-33WG-7
U25 LM4819M
U23 FAN3988
U18 AP131-33WGCT-ND
X2 ConTx6
X3
X5R MMA7660FC
MIC TD4015BPN
Motor
Speaker
Battery
S1
S2 SW-PB
RT1 NCP15XH103F03RC
BC817-40
2x BC817-40
4x BC817-40
R32 2.2K
R89 39
R37 6.2
R39 6.2
R34 2.2K
R35 2.2K
R40 6.2
R36 6.2
R41 2.2K
R88 39
R78 R79 R80 R81 2x 56
R62 R60 R58 R56 4x 56
R115 5.6K
R116 5.6K
R117 10K
R118 10K
R87 39
R86 39
R134 39
R142 4.7K
R135 33
R137 180
R102 2x 10K
R25 1K
R11 22K
R26 2x 1.5K
R46 1K
R42 22K
R48
R125 680K
R128 10K
R129 10K
R127 6.8K
R126 2.2K
R47 22K
R43 1K
R49 1.5K
R150 33
R67 4.7K
R66 39
R104 2x 4.7K
R103
R101 10K
R99 R98 R100 4.7K
R96 R97 33
R94 4.7K
R93 4.7K
R144 4.7K
R147 33
R149 33
R146 4.7K
R148 33
R145 4.7K
R131 820
R132 47K
R130 22K
R54 6.2
R52 2.2K
R55 6.2
R53 2.2K
R110 10K
R109 10K
R108 1K
R138 100K
R139 100K
R141 100K
R140 270K
R106 100
R107 180
C11 100nF
C13 100nF
C6 100nF
C12 100nF
C10 100nF
C29 100nF
C27 100nF
C62 100nF
C31 4.7uF
C32 10uF
C33 100nF
C38 100nF
C35 100nF
C39 100nF
C36 100nF
C37 100nF
C34 10uF
C4 10uF
C3 100nF
C1 100nF
C2 10uF
C64 51pF
C65 100nF
C66 1uF
C67 100nF
C56 100nF
C59 47nF
C60 47nF
C58 47nF
C61 1uF
C57 1.5nF
C47 4.7uF
C48 4.7uF
C49 4.7uF
C50 4.7uF
C45 4.7uF
C44 4.7uF
C46 10uF
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C23 100nF
C1 1nF
X2 10K
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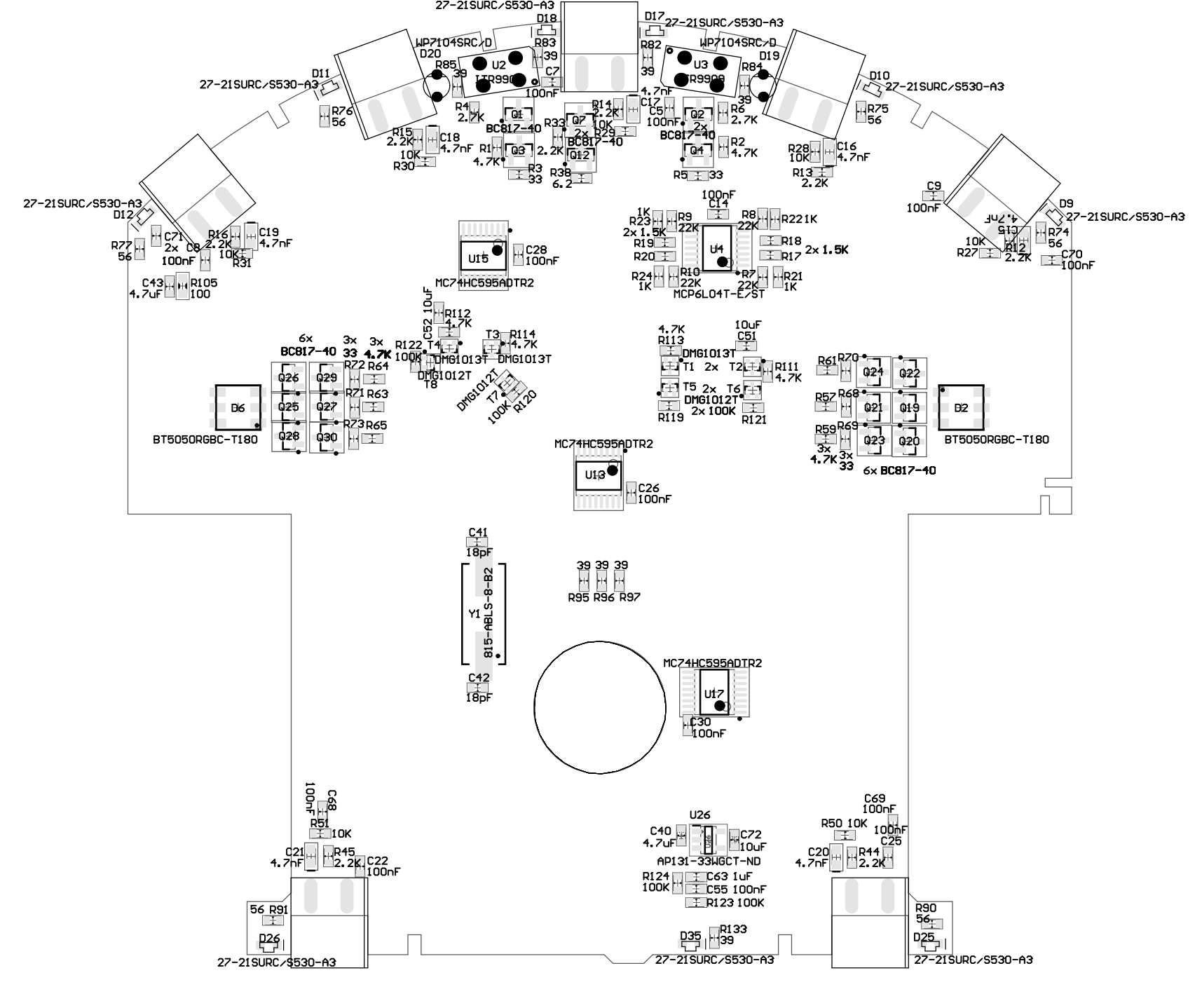
Alstron R3190005-021-R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