





Quantity	Comment	LibRef	Designator	Description	Footprint
2	Motor	Motor	B1, B2	Motor, General Kind	BAT-2
1	Battery	Battery	BT1	Multicell Battery	BAT-2
36	100nF	100nF[(\A)0603](\A)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	CAPC1608X08L
8	10uF	10uF[(\A)0603](\A)1, 10uF[(\A)0603](\A)1, 4.7uF[(\A)0603](\A)1, 10uF[(\A)0603](\A)1, 10uF[(\A)0603](\A)1, 10uF[(\A)0603](\A)1, 4.7uF[(\A)0603](\A)1, 10uF[(\A)0603](\A)1	C2, C4, C32, C46, C51, C52, C72, C73	Capacitor	CAPC1608X08L
7	4.7nF	CAP-NP	C15, C16, C17, C18, C19, C20, C21	Capacitor	CAPC1608X08L
9	4.7uF	4.7uF[(\A)0603](\A)1	C31, C40, C43, C44, C45, C47, C48, C49, C50	Capacitor	CAPC1608X08L
1	10uF X5R	10uF[(\A)0603](\A)1	C34	Capacitor	CAPC1608X08L
2	18pF	10pF[(\A)0603](\A)3	C41, C42	Capacitor	CAPC1608X08L
2	1nF	100nF[(\A)0603](\A)1	C53, C54	Capacitor	CAPC1608X08L
3	1uF	4.7uF[(\A)0603](\A)1, 1uF[(\A)0603](\A)1, 1uF[(\A)0603](\A)1	C56, C61, C63	Capacitor	CAPC1608X08L
1	1.5nF	10nF[(\A)0603](\A)1	C57	Capacitor	CAPC1608X08L
3	47nF	470nF[(\A)0603](\A)1, 10nF[(\A)0603](\A)1, 470nF[(\A)0603](\A)1	C58, C59, C60	Capacitor	CAPC1608X08L
1	51pF	10nF[(\A)0603](\A)1	C64	Capacitor	CAPC1608X08L
4	19-21SURC/ S530-A3/ TR8	LED	D1, D3, D4, D5	SMD Red 0603 2V@20ms 56 mcd	DIOCI608X08N
4	BT5050RGBCT180	LED RGB SMD 2	D2, D6, D27, D38	\$0.027/ 2000k	LEDSMD5
12	27-21SURC/ S530-A3	LED	D7, D8, D10, D11, D12, D17, D18, D25, D26, D32, D35, D36	SMD Red led right angle mount 2V@20ms 57mcd	Z7-21 Everlight
3	Z7-21/ BHC-AN1P2/ 3C	LED	D8, D31, D37	SMD Blue led right angle mount 3.3V@20ms 28mcd 460nmcd	Z7-21 Everlight Blue
8	APT01608SVOK	LED	D13, D14, D15, D16, D21, D22, D23, D24	LED standard - CMS Helios SMD Yellow 590nm	DIOCI608X08N
2	WP7104SRC/ D	LED	D19, D20	Red led 2V@20ms 57mcd	Led_TH_3mm_20mm
3	APT01608GOK	LED	D28, D29, D30	LED standard - CMS Helios SMD Green 570nm 230mcd	DIOCI608X08N
2	BAT54S	BAT54S	D33, D34	Schottky Barrier Double Diode	SDT23_N
4	MLP2520S3R3S	IND	L1, L2, L3, L4	Inductor for Power Circuits - Multilayer SMD - Magnetic Shielded	INDC2520X12L
1	Speaker	Speaker	LS1	Loudspeaker	PIN2
1	TD4015BPN	Micro1	MC1	Omnidirectional Back Electret Condenser Microphone	MICRO_TD4015BPN
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, R7, R2, R57, R59, R61, R62, R54, R65, R67, R62, R65, R94, R103, R104, R111, R112, R113, R114, R142, R144, R145, R146	NPN General-purpose Transistor	SOT23_N
22	4.7K	4.7K[(\A)0603](\A)1		Resistor	RESC1608X06L
16	33	RES, RES, RES, RES, RES, RES, RES, RES, 68K[(\A)0603](\A)1, RES, RES, RES, 68K[(\A)0603](\A)1	R3, R5, R68, R69, R70, R71, R72, R73, R98, R99, R100, R135, R147, R148, R149, R150	120, Resistor, 120, 120, 120, 120, 120, 120, 120, Resistor, 120, 120, 120, Resistor	RESC1608X06L
2	2.7K	RES	R4, R6	Resistor	RESC1608X06L
8	22K	RES, RES, RES, RES, RES, RES, 22K[(\A)0603](\A)1	R7, R8, R9, R10, R11, R42, R43, R130	120, 120, 120, 120, 120, 120, Resistor	RESC1608X06L
15	2.2K	RES, RES, RES, RES, RES, RES, 2.2K[(\A)0603](\A)1, 2.2K[(\A)0603](\A)1, 2.2K[(\A)0603](\A)1, 2.2K[(\A)0603](\A)1, 2.2K[(\A)0603](\A)1, RES, RES, 2.2K[(\A)0603](\A)1, 2.2K[(\A)0603](\A)1	R12, R13, R14, R15, R16, R32, R33, R34, R35, R41, R44, R45, R52, R53, R126	120, 120, 120, 120, Resistor, Resistor, Resistor, Resistor, Resistor, 120, 120, Resistor, Resistor, Resistor	RESC1608X06L
7	1.5K	RES	R17, R18, R19, R20, R26, R46, R47	120	RESC1608X06L
8	1K	RES, RES, RES, RES, RES, RES, RES, RES, RES, 1K[(\A)0603](\A)1	R21, R22, R23, R24, R25, R48, R49, R108	120, 120, 120, 120, 120, 120, Resistor	RESC1608X06L
16	10K	RES, RES, RES, RES, 10K[(\A)0603](\A)2, 10K[(\A)0603](\A)2, 10K[(\A)0603](\A)2, 10K[(\A)0603](\A)1, 10K[(\A)0603](\A)1, 8.2K[(\A)0603](\A)2, 8.2K[(\A)0603](\A)2, 10K[(\A)0603](\A)1, 10K[(\A)0603](\A)1, 10K[(\A)0603](\A)2	R27, R28, R29, R30, R31, R50, R51, R101, R102, R109, R110, R117, R116, R128, R129, R136	120, 120, 120, 120, 120, 120, Resistor, Resistor, Resistor, Resistor, Resistor, Resistor, Resistor, Resistor, Resistor	RESC1608X06L
7	6.2	RES	R36, R37, R38, R39, R40, R54, R55	120	RESC1608X06L
14	56	68K[(\A)0603](\A)1	R66, R62, R63, R64, R65, R66, R67, R68, R69, R95, R96, R97, R133, R134	Resistor	RESC1608X06L
14	39	68K[(\A)0603](\A)1	R105, R106	Resistor	RESC1608X06L
2	100	RES_A00RT	R107, R137	Resistance	RESC1608X06N
2	180	180R[(\A)0603](\A)1	R107, R137	Resistor	RESC1608X06L
2	5.6K	2.2K[(\A)0603](\A)1	R115, R116	Resistor	RESC1608X06L
10	100K	100K[(\A)0603](\A)1, 100K[(\A)0603](\A)1, 100K[(\A)0603](\A)1, 100K[(\A)0603](\A)1, 100K[(\A)0603](\A)1, 100K[(\A)0603](\A)1, 100K[(\A)0603](\A)1, 100K[(\A)0603](\A)1	R119, R120, R121, R122, R123, R124, R138, R139, R141, R143	Resistor	RESC1608X06L
1	680K	470K[(\A)0603](\A)1	R125	Resistor	RESC1608X06L
1	6.8K	10K[(\A)0603](\A)1	R127	Resistor	RESC1608X06L
5	820	22K[(\A)0603](\A)1	R131, R151, R152, R153, R154	Resistor	RESC1608X06L
1	47K	22K[(\A)0603](\A)1	R132	Resistor	RESC1608X06L
1	270K	270K[(\A)0603](\A)2	R140	Resistor	RESC1608X06L
1	NCP15XH103F03RC	Res Thermal	RT1	Thermistors - NTC 10K OHM 1% 0402	RESC1005X04L
1	MicroSD-Astron 5190008-XA4-R	SU-LEAD M276-ASL-TRON 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 Pning : 1=6, 2=5, 3=4	SOT50P160X80-3N
4	DMG1012T	DMG1012T	T5, T6, T7, T8	Transistor MOSFET 1 x N, Pning : 1=6, 2=5, 3=4	SOT50P160X80-3N
1	MMA7660FC	MMA7660FC	U1	MMA7660FC XYZ-AXIS ACCELEROMETER ±1.5 g	DFN50P300X300X100-12N
2	ITR9909		U2, U3	Everlight Opto Interrupter	ITR9909_LONG
2	MCPL04T-E/ ST	MCPL04T-E/ ST	U4, U5	1TMRZ, 50 µA Load Up 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 Universal Shift Register with Latched 3-State Outputs	948F-01_N
4	AP7331-33WG-V	AP7331	U18, U22, U24, 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	Supercapacitor System (360mAh) and Charge Controller (OCV, Battery Charge Management Controller, 4.2V, 20-Pin Off-Chain, Industrial Temperature	QFN-ML20_N
1	FAN3988	FAN3988	U23	USB Charger and Over Voltage Detection Device	MLP-145x1mm
1	LM4819M	LM4819M	U25	350mW Audio Power Amplifier with Shutdown Mode	MO8A_N
1	Con1x6	Con1x6	X2	1 x 6 pins connector	MHDR1X6
1	Astron R3190005-021-R	USB_MINIAB	X3	USB connector Micro B	Astron 3190005-x21-r
1	815-ABLS-S-B2	HC49/ 4H_ SMX	Y1	Surface Mount Quartz Crystal 8MHz	HC49/ 4H_ SMX

Quantity	Comment	LibRef	Designator	Description	Footprint	Layer
1	100	RES_A00 RT	R105	Resistance	RESC1608X06N	Bottom
1	1uF	10uF[/\ ]0 603[/\ ]1	C63	Capacitor	CAPC1608X08L	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	AP7331-33WG-7	AP7331	U26	300mA, Low Quiescent Current, Fast Transient LDO	SOT95FP285X100-6N	Bottom
1	MCP6L04T-E/ST	MCP6L04 T-E/ST	U4	1MHz, 85 $\mu$ A Quad Op Amp, 14-Pin TSSOP, Extended Temperature Range, Tape and Reel	TSSOP-ST14_N	Bottom
12	4.7K	4.7K[/\ ]0 603[/\ ]1	R1, R2, R57, R59, R61, R63, R64, R65, R111, R112, R113, R114	Resistor	RESC1608X06L	Bottom
15	100nF	100nF[/\ ]0 0603[/\ ]1	C5, C7, C8, C9, C14, C22, C25, C26, C28, C30, C55, C68, C69, C70, C71	Capacitor	CAPC1608X08L	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[/\ ]0 0603[/\ ]3	C41, C42		CAPC1608X08L	Bottom
2	2.7K	RES	R4, R6	Resistor	RESC1608X06L	Bottom
2	4.7uF	4.7uF[/\ ]0 0603[/\ ]1	C40, C43	Capacitor	CAPC1608X08L	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	MC74HC595ADTR2	MC74HC5 95ADTR2	U13, U15, U17	8-Bit Serial-Input/Serial or Parallel-Output Shift Register with Latched 3- State Outputs	948F-01_N	Bottom
4	1.5K	RES	R17, R18, R19, R20	120	RESC1608X06L	Bottom
4	10uF	10uF[/\ ]0 0603[/\ ]1 1, 10uF[/\ ]0 0603[/\ ]1 1, 4.7uF[/\ ]0 0603[/\ ]1 1, 10uF[/\ ]0 0603[/\ ]1 1	C51, C52, C72, C73	Capacitor	CAPC1608X08L	Bottom
4	1K	RES	R21, R22, R23, R24	120	RESC1608X06L	Bottom
4	22K	RES	R7, R8, R9, R10	120	RESC1608X06L	Bottom
4	820	22K[/\ ]0 603[/\ ]1	R151, R152, R153, R154	Resistor	RESC1608X06L	Bottom
4	DMG1012T	DMG1012 T	T5, T6, T7, T8	Transistor MOSFET 1 X N, Pining : 1=G, 2=S, 3=D	SOT50P160X80-3N	Bottom
4	DMG1013T	DMG1013 T	T1, T2, T3, T4	Transistor MOSFET 1 X P, Pining : 1=G, 2=S, 3=D	SOT50P160X80-3N	Bottom
4	MLP2520S3R3S	IND	L1, L2, L3, L4	Inductors for Power Circuits, Multilayer/STD Magnetic Shielded	INDC2520X12L	Bottom
6	100K	100K[/\ ]0 0603[/\ ]1	R119, R120, R121, R122, R123, R124	Resistor	RESC1608X06L	Bottom
6	56	88K[/\ ]0 603[/\ ]1	R74, R75, R76, R77, R90, R91	Resistor	RESC1608X06L	Bottom
7	4.7nF	CAP-NP	C15, C16, C17, C18, C19, C20, C21	Capacitor	CAPC1608X08L	Bottom
		RES, RES, RES, RES, RES, RES, 100K[/\ ]0 0603[/\ ]1		120, 120, 120, 120, 120		

8	10K	RES, RES, RES, RES, RES, 10K[(\ )0 603[(\ )2	R27, R28, R29, R30, R31, R50, R51, R136	120, 120, 120, 120, 120, 120, Resistor	RESC1608X06L	Bottom
8	2.2K	RES, RES, RES, RES, RES, 2.2K[(\ )0 603[(\ )1], RES, RES	R12, R13, R14, R15, R16, R33, R44, R45	120, 120, 120, 120, 120, Resistor, 120, 120, 120, Resistor, 120, 120, 120, 120, 120	RESC1608X06L	Bottom
8	33	RES	R3, R5, R68, R69, R70, R71, R72, R73		RESC1608X06L	Bottom
8	39	68K[(\ )0 603[(\ )1]	R82, R83, R84, R85, R95, R96, R97, R133	SMD Red led right angle mount 2V@20ma 57mcd	RESC1608X06L	Bottom
9	A3	27-21SURC/SS30- 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	100nF[(\ ) 0603[(\ ) 1	C57	Capacitor	CAPC1608X08L	Top
1	100	RES, ACC RT	R106	Resistance	RESC1608X06N	Top
1	10uF X5R	100F[(\ ) 0603[(\ ) 1	C34	Capacitor	CAPC1608X08L	Top
1	270K	270K[(\ ) 0603[(\ ) 2	R140	Resistor	RESC1608X06L	Top
1	47K	22K[(\ ) 0603[(\ ) 1	R132	Resistor	RESC1608X06L	Top
1	51pF	100nF[(\ ) 0603[(\ ) 1	C64	Capacitor	CAPC1608X08L	Top
1	6.8K	10K[(\ ) 0603[(\ ) 1	R127	Resistor	RESC1608X06L	Top
1	680K	470K[(\ ) 0603[(\ ) 1	R125	Resistor	RESC1608X06L	Top
1	820	22K[(\ ) 0603[(\ ) 1	R131	Resistor	RESC1608X06L	Top
1	Astron R3190005-021-R	USB, MINI AB	X3	USB connector Micro B	Astron 3190005-x21-r	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	TSOP322 36	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	MCP6L04 T-E/ ST	U5	1 MHz, 85 $\mu$ A Quad Op Amp, 14-Pin TSSOP, Extended Temperature Range, Tape and Reel	TSSOP-ST14_N	Top
1	MCP73871-2AAI/ ML	MCP7387 1- 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- ASL TRON 5190008-XA4-R	S1	MicroSD Card connector 5190008-XA4-R	Astron 5190008-XA4-R	Top
1	MMA7660FC	MMA7660 FC	U1	MMA7660FC: XYZ-AXIS ACCELEROMETER $\pm$ 1.5 g	DFN50P300X300X100-12N	Top
1	NCP15XH103F03R C	Res Thermal	RT1	Thermistors - NTC 10K OHM 1% 0402	RESC1005X04L	Top
1	PIC24FJ128GB106-I/PT	PIC24FJ1 28GB106-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	Electret Condenser Microphone	MICRO_TD4015BPN	Top
10	4.7K	4.7K[(\ ) 0603[(\ ) 1	R67, R92, R93, R94, R103, R104, R142, R144, R145, R146	Resistor	RESC1608X06L	Top
2	180	180K[(\ ) 0603[(\ ) 1	R107, R137	Resistor	RESC1608X06L	Top
2	1nF	100nF[(\ ) 0603[(\ ) 1	CS3, C54	Capacitor	CAPC1608X08L	Top
2	1uF	4.7uF[(\ ) 0603[(\ ) 1, 1uF[(\ ) 0603[(\ ) 1	C56, C61	Capacitor	CAPC1608X08L	Top
2	5.6K	2.2K[(\ ) 0603[(\ ) 1	R115, R116	Resistor	RESC1608X06L	Top
2	BAT54S	BAT54S	D33, D34	Schottky Barrier Diode	SOT23_N	Top
2	BT5050RGBCT180	LED RGB SMD 2	D27, D38	\$0.027/ 2000k	LEDSMD5	Top
2	MC74HC595ADTR2	MC74HC5 95ADTR2	U14, U16	8-Bit Serial-Input/Serial or Parallel-Output Shift Register with Latched 3-State Outputs	948F-01_N	Top
2	Motor	Motor	B1, B2	Motor, General Kind	BAT-2	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	CAPC1608X08L	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-3 AN1P2/ 3C	LED	D8, D31, D37	SMD Blue led right angle mount 3.3V@20ma 28mcd	27-21 Everlight Blue	Top
3	27-21SURC/SS30- A3	LED	D7, D32, D36	SMD Red led right angle mount 2V@20ma 57mcd	27-21 Everlight	Top
3	47nF	470nF[(\ ) 0603[(\ ) 1, 10nF[(\ ) 0603[(\ ) 1, 470nF[(\ ) 0603[(\ ) 1	C58, C59, C60	Capacitor	CAPC1608X08L	Top
3	AP7331-33WG-7	AP7331	U18, U22, U24	300mA, Low Quiescent Current, Fast Transient LDO	SOT95P285X100-5N	Top
3	APTD1608GOK	LED	D28, D29, D30	LED standard - CMS Helios SMD Green 570nm 230mcd	DIOC1608X08N	Top
		470nF[(\ ) 0603[(\ ) 1, 100K[(\ ) 0603[(\ ) 1, 100K[(\ ) 0603[(\ ) 1				

3	APTD1608DGOK	LED	D28, D29, D30	Resistor	DIOC1608X08N	Top
4	100K	100K[F][\] 0603[\] 1, 100K[F][\] 0603[\] 1, 10K[F][\] 0603[\] 1, 100K[F][\] 0603[\] 1	R138, R139, R141, R143	Resistor	RESC1608X06L	Top
4	10uF	10uF[F][\] 0603[\] 1, 10uF[F][\] 0603[\] 1, 4.7uF[F][\] 0603[\] 1, 10uF[F][\] 0603[\] 1	C2, C4, C32, C46	Capacitor	CAPC1608X08L	Top
4	19-21SURC/SS30-AS/TR8	LED	D1, D3, D4, D5	SMD Red 0603 2V@20mA 56 mcd	DIOC1608X08N	Top
4	1K	RES, RES, 1K[F][\] 0603[\] 1	R25, R48, R49, R108	120, 120, 120, Resistor	RESC1608X06L	Top
4	22K	RES, RES, 22K[F][\] 0603[\] 1	R11, R42, R43, R130	120, 120, 120, Resistor	RESC1608X06L	Top
6	39	68K[F][\] 0603[\] 1	R66, R86, R87, R88, R89, R134	Resistor	RESC1608X06L	Top
6	6.2	RES	R36, R37, R39, R40, R54, R55	120	RESC1608X06L	Top
7	2.2K	2.2K[F][\] 0603[\] 1	R32, R34, R35, R41, R52, R53, R126	Resistor	RESC1608X06L	Top
7	4.7uF	4.7uF[F][\] 0603[\] 1	C31, C44, C45, C47, C48, C49, C50	Capacitor	CAPC1608X08L	Top
7	ITR9909	ITR9909	U6, U7, U8, U9, U10, U11, U12	Everlight Opto Interrupter	ITR9909_EDGE	Top
8	10K	10K[F][\] 0603[\] 2, 10K[F][\] 0603[\] 2, 10K[F][\] 0603[\] 2, 10K[F][\] 0603[\] 1, 10K[F][\] 0603[\] 1, 8.2K[F][\] 0603[\] 2, 8.2K[F][\] 0603[\] 2, 10K[F][\] 0603[\] 2, 10K[F][\] 0603[\] 1, 10K[F][\] 0603[\] 1	R101, R102, R109, R110, R117, R118, R128, R129	Resistor	RESC1608X06L	Top
8	33	RES, RES, RES, 68K[F][\] 0603[\] 1, RES, RES, 68K[F][\] 0603[\] 1	R98, R99, R100, R135, R147, R148, R149, R150	120, 120, 120, Resistor, 120, 120, 120, Resistor	RESC1608X06L	Top
8	56	68K[F][\] 0603[\] 1	R56, R58, R60, R62, R78, R79, R80, R81	Resistor	RESC1608X06L	Top
8	APTD1608SYCK	LED	D13, D14, D15, D16, D21, D22, D23, D24	LED standard - CMS Helios	DIOC1608X08N	Top



