





Quantity	Part	Comment	Label	Designator	Description	Footprint	Supplier	Supplier Nr
2	Motor		B1, B2		Motor, General Kind	R6S-10.5		
1	Battery		BT1		Multicell Battery	BAT-2		
36	100nF		100nF(1) [J0603] 100nF	C1, C3, C5, C6, C7, C8, C10, C11, C12, C13, C14, C22, C24, C25, C26, C27, C28, C29, C30, C33, C35, C36, C37, C38, C39, C40, C45, C46, C47, C48, C49, C70, C71	Capacitor	RESC1608X06L	Farnell	1286255
				C2, C4, C32, C46, C51, C52, C72	Capacitor	RESC1608X06L	Farnell	1463375, 9227784
7	10uF		10uF(1) [J0603] 10uF	CAPANP	C15, C16, C17, C18, C20, C21	CAPC1608N		
9	4.7uF		4.7uF(1) [J0603] 4.7uF	C1, C4, C42, C43, C44, C45, C47, C48, C49, C50	Capacitor	RESC1608X06L	Farnell	9227784
1	15uF X5R		15uF(1) [J0603] 15uF	C34	Capacitor	RESC1608X06L	Farnell	1463375
2	18uF		18uF(1) [J0603] 18uF	C41, C42	Capacitor	RESC1608X06L	Farnell	9406182
2	1nF		1000pF(1) [J0603] 1nF	C53, C54	Capacitor	RESC1608X06L	Farnell	1286255
4	1uF		1uF(1) [J0603] 1uF	C26, C60, C61, C63	Capacitor	RESC1608X06L	Datelinec, Farnell	823495, 9227784
1	1.5nF		1000pF(1) [J0603] 1.5nF	C57	Capacitor	RESC1608X06L	Farnell	9406182
2	47nF		470nF(1) [J0603] 47nF	C58, C59	Capacitor	RESC1608X06L	Datelinec, Farnell	823494, 9406182
1	51uF		1000pF(1) [J0603] 51uF	C64	Capacitor	RESC1608X06L	Farnell	9406182
4	19-21SURC/S630-A3/TR8		LED	D1, D3, D4, D5	SMD Red 0603 2V@20ma 50-mcd	DIOC1608X06N		
4	815069GBC-T180		LED RGB SMD	D2, D6, D27, D30	815071200K	LED5MD5		
12	27-21SURC/S630-A3		LED	D7, D9, D10, D11, D12, D17, D18, D25, D26, D32, D35, D36	SMD Red 0603 right angle mount 2V@20ma 57mcd	27-21 Everlight		
3	27-21 BHC-AN/P2-3C		LED	D8, D31, D37	SMD Blue 0603 right angle mount 3.3V@20ma 26mcd	27-21 Everlight Blue		
6	AP7D1608SVCK		LED	D13, D14, D15, D16, D21, D22, D23, D24	LED Standard - 0603 Helix SMD Yellow 5000mcd	DIOC1608X06N		
2	SS-LX3044HD		LED	D19, D20	Red led 2V@20ma 57mcd	Led TH_3mm_20mm		
3	AP7D1608G3CK		LED	D38, D39, D30	LED Standard - 0603 Helix SMD Green 5700mcd	DIOC1608X06N		
2	BAT545		BAT545	D33, D34	Schottky Barrier Double Diode	SDT23_N		
1	Speaker		Speaker	S51	Loudspeaker	PN2		
1	TD4018PN		Microf	MC1	Omnidirectional Back Electret Condenser Microphone	MICRO_FANASCONIC_WM-64PN		
46	BC817-40		BC817-40	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100, R101, R102, R103, R104, R105, R106, R107, R108, R109, R110, R111, R112, R113, R114, R142, R144, R145, R146	NPN General-purpose Transistor	SDT23_N		
22	4.7K		4.7K(1) [J0603] 4.7K	R2, R3, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100, R101, R102, R103, R104, R105, R106, R107, R108, R109, R110, R111, R112, R113, R114, R142, R144, R145, R146	Resistor	RESC1608X06L	Datelinec	715604
16	33		68K(1) [J0603] 33	R58, R59, R100, R135, R147, R148, R149, R150	120, Resistor	RESC1608X06L	Datelinec	715632
10	1K		1K(1) [J0603] 1K, RES	R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100, R101, R102, R103, R104, R105, R106, R107, R108, R109, R110, R111, R112, R113, R114, R142, R144, R145, R146	120, Resistor	RESC1608X06L	Datelinec	715588
6	22K		22K(1) [J0603] 22K, RES	R7, R8, R9, R10, R11, R42, R43, R130	120, Resistor	RESC1608X06L	Datelinec	715620
15	2.2K		2.2K(1) [J0603] 2.2K, RES	R12, R13, R14, R15, R16, R32, R33, R34, R35, R41, R44, R45, R52, R53, R120	120, Resistor	RESC1608X06L	Datelinec	715596
7	1.5K		RES	R17, R18, R19, R20, R26, R46, R47	120	RESC1608X06L		
16	10K		10K(1) [J0603] 10K, RES	R27, R28, R29, R30, R31, R50, R51, R101, R102, R109, R110, R117, R118, R128, R129, R143	120, Resistor	RESC1608X06L	Datelinec, Farnell	715612, 9330399, 9331565
7	6.2		RES	R36, R37, R38, R39, R40, R45, R56	120	RESC1608X06L		
14	50		50K(1) [J0603] 50K, RES	R36, R37, R38, R39, R40, R45, R56, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100, R101, R102, R103, R104, R105, R106, R107, R108, R109, R110, R111, R112, R113, R114, R142, R144, R145, R146	Resistor	RESC1608X06L	Datelinec	715632
14	30		30K(1) [J0603] 30K, RES	R36, R37, R38, R39, R40, R45, R56, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100, R101, R102, R103, R104, R105, R106, R107, R108, R109, R110, R111, R112, R113, R114, R142, R144, R145, R146	Resistor	RESC1608X06L	Datelinec	715632
2	100		RES, ACCORT	R105, R106	Resistance	RESC1608X06N		
2	180		180(1) [J0603] 180	R107, R137	Resistor	RESC1608X06L	Datelinec	715570
2	5.6K		5.6K(1) [J0603] 5.6K, RES	R115, R116	Resistor	RESC1608X06L	Datelinec	715596
9	100K		100K(1) [J0603] 100K, RES	R119, R120, R121, R122, R123, R124, R138, R139, R141	Resistor	RESC1608X06L	Datelinec	715612, 715636
1	680K		680K(1) [J0603] 680K, RES	R125	Resistor	RESC1608X06L	Datelinec	715652
1	6.8K		6.8K(1) [J0603] 6.8K, RES	R127	Resistor	RESC1608X06L	Datelinec	715612
1	820		820(1) [J0603] 820, RES	R131	Resistor	RESC1608X06L	Datelinec	715620
1	147K		147K(1) [J0603] 147K, RES	R132	Resistor	RESC1608X06L	Datelinec	715620
1	270K		270K(1) [J0603] 270K, RES	R140	Resistor	RESC1608X06L	Farnell	6330941
1	NCP15KH103F03RC		Res Thermal	RT1	Thermistors - NTC 10K Ohm 1%0402	RESC1005X04L		
1	MicroSD-Astron 5190008-X44-R		SD-Card Micro-ASL-TRON 5190008-X44-R	S1	MicroSD Card connector 5190008-X44-R	Astron 5190008-X44-R		
1	SW-FB		SW-FB	S2	Switch	FSMRA2JH		
4	DMG1013T		DMG1013T	T1, T2, T3, T4	1-Channel MOSFET 1 x 1-Pin, P-10L, 2-5, 3-0	SDT90P160X80-3N		
4	DMG1012T		DMG1012T	T5, T6, T7, T8	1-Channel MOSFET 1 x 1-Pin, P-10L, 2-5, 3-0	SDT90P160X80-3N		
1	MM47660FC		MM47660FC	U1	AC/DC CONVERTER - 4+5.0	QPN5P200X100-12N		
2	ITR9909		ITR9909	U2, U3	Everlight Opto Interrupter	ITR9909_LONG		
2	MC9L04T-E/ST		MC9L04T-E/ST	U4, U5	1-Channel MOSFET 1 x 1-Pin, P-10L, 2-5, 3-0	SDT90P160X80-3N		
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/Shift Register with Latched 3-State Outputs	948F-01_N		
2	AP131-33WQCT-ND		AP7331	U18, U26	300mA Low Quiescent Current, Fast Transient LDO	SDT99P285X100-5N		
1	PIC24FJ64GB105-I/PT		PIC24FJ64GB105-I/PT	U19	General Purpose 16-Bit Flash Microcontroller with USB On-The-Go, 64KB Flash, 10KB SRAM, 64-Pin TQFP, Industrial Temperature	TQFP-PT64_N		
1	IRM-3636T		TSOP32336	U20	Microcontroller MOSFET 1 x 1-Pin, P-10L, 2-5, 3-0	SDT99P285X100-5N		
1	MC973871-2AAU-NL		MC973871-2AAU-NL	U21	Stand-Alone System Load Sharing and Li-Ion Li-Polymer Battery Charge Management Controller - 4.2V, 20-Pin QFN, Industrial Temperature	QFN-NL20_N		
2	AP7331-33WG-7		AP7331	U22, U24	300mA Low Quiescent Current, Fast Transient LDO	SDT99P285X100-5N		
1	FAN3988		FAN3988	U23	USB/Charger and Over Voltage Detection Device	MLP 1.45x1mm		
1	LM4818M		LM4818M	U25	350mW Audio Power Amplifier with Shutdown Mode	MS0A_N		
1	Qon1u6		Qon1u6	X2	1 x 6 pins connector	MHQR1X6		
1	Astron R3190005-021-R		USB_MINIAB	X3	USB connector Micro B	Astron 3190005-021-R		
1	815-ABL5-8-B2		HC48-4H-SM	Y1	Surface Mount Quartz Crystal 8MHz	HC48-4H-SM		

Quantity	Comment	LibRef	Designator	Description	Footprint	Supplier	Supplier Nr	Layer
1 100		RES_AC ORT	R105	Resistance	RESC1608X06N			Bottom
1 1uF		10uF[/[ 0603[/[ J1	O63	Capacitor	RESC1608X06L	Distrelec	823495	Bottom
1 6.2		RES	R38	120	RESC1608X06L			Bottom
1 815-ABLS-8-B2		HC49/4 H_SMX	Y1	Surface Mount Quartz Crystal 8Mhz	HC49/4H_SMX			Bottom
1 AP131-33WGCT-1 ND		AP7331	U26	300mA, Low Quiescent Current, Fast Transient LDO	SOT95P285X100-5N			Bottom
1 MCP6L04T-E/ST		MCP6L0 4T-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[/[ J1	R1, R2, R57, R59, R61, R63, R64, R65, R111, R112, R113, R114	Resistor	RESC1608X06L	Distrelec	715604	Bottom
15 100nF		100nF[/[ 0603[/[ J1	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[/[ J3	C41, C42		RESC1608X06L	Farnell	8819815	Bottom
2 4.7uF		4.7uF[/[ 0603[/[ J1	C40, C43	Capacitor	RESC1608X06L	Farnell	9227784	Bottom
2 BT5050RGBCT-180		LED RGB SMD 2	D2, D6	\$0.027/2000k	LEDSMD5			Bottom
2 ITR9909		ITR9909	U2, U3	Everlight Opto Interrupter	ITR9909_LONG			Bottom
2 SSL-LX3044HD		LED	D19, D20	Red led 2V@20ma 57mcd	Led_YH_3mm_20mm			Bottom
3 10uF		4.7uF[/[ 0603[/[ J1], 10uF[/[ 0603[/[ J1	C51, C52, C72	Capacitor	RESC1608X06L	Farnell	1463375, 9227784	Bottom
3 MC74HC595ADT-R2		MC74HC 595ADT R2	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 22K		RES	R7, R8, R9, R10	120	RESC1608X06L			Bottom
4 DMG1012T		DMG101 2T	T5, T6, T7, T8	Transistor MOSFET 1 x N, Pining : 1=G, 2=S, 3=D	SOT50P160X80-3N			Bottom
4 DMG1013T		DMG101 3T	T1, T2, T3, T4	Transistor MOSFET 1 x P Pining : 1=G, 2=S, 3=D	SOT50P160X80-3N			Bottom
6 100K		100K[/[ 0603[/[ J1	R119, R120, R121, R122, R123, R124	Resistor	RESC1608X06L	Distrelec	715636	Bottom
6 1K		RES	R4, R6, R21, R22, R23, R24	120, Resistor	RESC1608X06L			Bottom
6 56		68K[/[ 0603[/[ J1	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[/[ J1], 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[/[ J1	R82, R83, R84, R85, R95, R96, R97, R133	Resistor	RESC1608X06L	Distrelec	715632	Bottom
9 27-21SURC/SS30-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[/[ J1	C57	Capacitor	RESC1608X06L	Farnell	9406182	Top
1 100		RES_AC ORT	R106	Resistance	RESC1608X06N			Top
1 10uF X5R		10uF[/[ 0603[/[ J1	C34	Capacitor	RESC1608X06L	Farnell	1463375	Top
1 270K		270K[/[ 0603[/[ J2	R140	Resistor	RESC1608X06L	Farnell	9330941	Top
1 47K		22K[/[ 0603[/[ J1	R132	Resistor	RESC1608X06L	Distrelec	715620	Top
1 51pF		10nF[/[ 0603[/[ J1	O64	Capacitor	RESC1608X06L	Farnell	9406182	Top
1 6.8K		10K[/[ 0603[/[ J1	R127	Resistor	RESC1608X06L	Distrelec	715612	Top
1 680K		470K[/[ 0603[/[ J1	R125	Resistor	RESC1608X06L	Distrelec	715652	Top
1 820		22K[/[ 0603[/[ J1	R131	Resistor	RESC1608X06L	Distrelec	715620	Top
1 Astron R3190005-021-R		USB_MII NIAB	X3	USB connector Micro B	Astron 3190005-x21-r			Top
1 AP131-33WGCT-1 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		FAN398 8	U23	USB/ Charger and Over Voltage Detection Device	MLP 1.45x1mm			Top
1 IRM-3636T		TSOP32 Z36	U20	IR Receiver Module (36 kHz) for Remote Control Systems	IR-receiver			Top
1 LM4819M		LM4819 M	U25	350mW Audio Power Amplifier with Shutdown Mode	M08A_N			Top
1 MCP6L04T-E/ST		MCP6L0 4T-E/ST	U5	1 MHz, 85 µA Quad Op Amp, 14-Pin TSSOP, Extended Temperature Range, Tape and Reel	TSSOP-ST14_N			Top
		MCP738		Stand-Alone System Load Sharing and Li-Ion/ Li-Polymer Battery Charge Management Controller, 4.2V, 76				

1	MCP6L04T-E/ST	MCP6L04T-E/ST	U5			Temperature Range, Tape and Reel	TSSOP-ST14_N				Top
	MCP73871-1 2AAJ/ML	MCP73871-1 2AAJ/ML	U21			Stand-Alone System Load Sharing and Li-Ion/ Li-Polymer Battery Charge Management Controller, 4.2V, 20-Pin QFN, Industrial Temperature					Top
	MicroSD-Astron 1 5190008-XA4-R	SD-Card-Micro-ASLTRO N 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 NCP15XH103F0 3RC	Res Thermal	RT1			Thermistors - NTC 10K OHM 1% 0402	RESC1005X04L				Top
	PIC24FJ64GB10 6-I/PT	PIC24FJ64GB10 6-I/PT	U19			General Purpose 16-Bit Flash Microcontroller with USB On-The-Go, 64KB 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 TD40158PN	Micro1	MC1			Omnidirectional Back Electret Condenser Microphone	MICRO_PANASONIC_WM-64PN				Top
10	4.7K	4.7K[[\A]]0603[[\V]]1	R67, R92, R93, R94, R103, R104, R142, R144, R145, R146			Resistor	RESC1608X06L	Distrel ec	715604		Top
	2 180	180R[[\A]]0603[[\V]]1	R107, R137			Resistor	RESC1608X06L	Distrel ec	715570		Top
	2 1nF	100nF[[\A]]0603[[\V]]1	C53, C54			Capacitor	RESC1608X06L	Farnell	1288255		Top
	2 47nF	10nF[[\A]]0603[[\V]]1, 470nF[[\A]]0603[[\V]]1	C58, C59			Capacitor	RESC1608X06L	Distrel ec, Farnell	823494, 9406182		Top
	2 5.6K	2.2K[[\A]]0603[[\V]]1	R115, R116			Resistor	RESC1608X06L	Distrel ec	715596		Top
	2 AP7331-33WG-7	AP7331	U22, U24			300µA, Low Quiescent Current, Fast Transient LDO	SOT95P285X100-5N				Top
	2 BAT54S	BAT54S	D33, D34			Schottky Barrier Double Diode	SOT23_N				Top
	2 BT5050RGB-C-2 T180	LED RGB SMD 2	D27, D38			\$0.027/2000k	LEDSMD5				Top
	2 MC74HC595ADT R2	MC74HC595ADT R2	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	RB5-10.5				Top
	21 100nF	100nF[[\A]]0603[[\V]]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	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 100K	10K[[\A]]0603[[\V]]1, 100K[[\A]]0603[[\V]]1	R138, R139, R141			Resistor	RESC1608X06L	Distrel ec	715612, 715636		Top
	3 1uF	10nF[[\A]]0603[[\V]]1, 4.7uF[[\A]]0603[[\V]]1	C56, C60, C61			Capacitor	RESC1608X06L	Distrel ec, Farnell	823495, 9227784		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/ S530-3 A3	LED	D7, D32, D36			SMD Red led right angle mount 2V@20ma 57mcd	27-21 Everlight				Top
	3 APTD1608CGCK	LED	D28, D29, D30			LED standard - CMS Helios SMD Green 570nm 230mcd	DIOC1608X08N				Top
	4 10uF	4.7uF[[\A]]0603[[\V]]1, 10uF[[\A]]0603[[\V]]1	C2, C4, C32, C46			Capacitor	RESC1608X06L	Farnell	1463375, 9227784		Top
	4 21SURC/ S530-4 A3/ TR8	LED	D1, D3, D4, D5			SMD Red 0603 2V@20ma 56 mcd	DIOC1608X08N				Top
	4 1K	1K[[\A]]0603[[\V]]1, RES	R25, R48, R49, R108			120, Resistor	RESC1608X06L	Distrel ec	715588		Top
	4 22K	22K[[\A]]0603[[\V]]1, RES	R11, R42, R43, R130			120, Resistor	RESC1608X06L	Distrel ec	715620		Top
	6 39	68K[[\A]]0603[[\V]]1	R66, R86, R87, R88, R89, R134			Resistor	RESC1608X06L	Distrel ec	715632		Top
	6 6.2	RES	R36, R37, R39, R40, R54, R55			120	RESC1608X06L				Top
	7 2.2K	2.2K[[\A]]0603[[\V]]1	R32, R34, R35, R41, R52, R53, R126			Resistor	RESC1608X06L	Distrel ec	715596		Top
	7 4.7uF	4.7uF[[\A]]0603[[\V]]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 Intempler	ITR9909_EDGE				Top
	8 33	68K[[\A]]0603[[\V]]1, RES	R98, R99, R100, R135, R147, R148, R149, R150			120, Resistor	RESC1608X06L	Distrel ec	715632		Top
	8 56	68K[[\A]]0603[[\V]]1	R56, R58, R60, R62, R78, R79, R80, R81			Resistor	RESC1608X06L	Distrel ec	715632		Top
	8 APTD1608SYCK	LED	D13, D14, D15, D16, D21, D22, D23, D24			LED standard - CMS Helios SMD Yellow 590nm 480mcd	DIOC1608X08N				Top
	9 10K	8.2K[[\A]]	R101, R102, R109, R110, R117, R118, R128, R129, R143			Resistor	RESC1608X06L	Distrel ec	715612, 9330399, 9331565		Top