



常禾电子有限公司

EVERICTORY ELECTRONIC COMPANY LIMITED

(Cooler-445 BOM)

model: Cooler-445,MP,

Order	P/N	parts no.	SPEC	reference designator on PCB	remark
10	ACOOOLERM0005	Cooler-445 Unit	AOAM,Cooler-445,MP,		
10	88KE03200451	PCBA	Cooler-445,KEY plate,DIP,		KEY PCBA
10	88KE03000451	PCBA	Cooler-445,KEY plate,SMD,		parts on KEY PCBA
10	040703000027	anti-static diode	▲SMD,0603ESDA-14,0603,	ESD1,ESD2,ESD3,ESD4	parts on KEY PCBA
20	010103000196	chip resistor	SMD 33Ω 1/10W ±1% 0603	R42, R43, R44, R45	parts on KEY PCBA
30	010103000291	chip resistor	SMD 5.1KΩ 1/10W ±1% 0603	R27	parts on KEY PCBA
40	040303000024	Schottky diode	SMD,BAS316,SOT-323,NXP,	D4, D5	parts on KEY PCBA
50	040903000047	LED	SMD 0603 lucency blue (TH8651)	LED6, LED8, LED12, LED14	parts on KEY PCBA
60	040903000026	LED	SMD clear green color 0603 ordinary bright (BL-HG836G-TRB)	LED7, LED9, LED13, LED15	parts on KEY PCBA
70	130123000102	socket	SMD Pitch 1.25MM 6PIN horizontal (Overheating peak furnace can not change color)	CN1E	parts on KEY PCBA
80	060103001624	IC	SMD,TM1628,SOP-28,TITANMEC, Supplier: Huijie	U1E	parts on KEY PCBA
90	040903000180	LED	SMD,LED,red light super bright,YT67-2100SURC,3.5*2.8*1.9mm,YongTai,352819,	LED1	parts on KEY PCBA
100	110403000005	touch switch	SMD 5*6MM white color	S1,S2,S3	parts on KEY PCBA
110	040903000184	LED	SMD,LED,blue light super bright, YT67-2100UBC,3.5*2.8*1.9mm YongTai,352819,	LED2, LED3, LED4, LED5, LED10	parts on KEY PCBA
120	23KE03000292	PCB	KEY board,two layer,94*54*1.6mm,FR-4,REV:TO-01,golden chrome at two sides, green oil painted at two sides, copper thick 10Z		parts on KEY PCBA
130	010103000401	chip resistor	SMD 100Ω 1/8W ±1% 0805	R28,R33,R34,R35,R36,R37,R38,R40,R41	parts on KEY PCBA
20	FL0700007006	dampproof oil	anti-moisture oil TF-7600 18kg for one barrel		parts on KEY PCBA
20	88FA03200457	PCBA	Cooler-445,front plate,DIP processing plate		Front PCBA
10	88FA03000457	PCBA	Cooler-445,front plate,SMD outsourcing		parts on front PCBA
10	040703000027	anti-static diode	▲SMD,0603ESDA-14,0603,	ESD1,ESD2,ESD3,ESD4	parts on front PCBA
20	010103000024	chip resistor	▲SMD,100KΩ,1/10W-0603,±1%,	R6A, R6B, R8A, R8B, R10A, R10B,R12A, R12B	parts on front PCBA
30	010103000869	chip resistor	▲SMD, 10KΩ,1/10W-0603,±1%,YAGEO	R3A,R3B,R4A,R4B,R24,R51,R52,R55,R62,R63,R64	parts on front PCBA
40	010103000012	chip resistor	SMD 10Ω 1/10W ±1% 0603	R13B, R14B, R15B, R16B, R19B, R20B	parts on front PCBA
50	010103000017	chip resistor	SMD 1KΩ 1/10W ±1% 0603	R1, R5, R23, R56	parts on front PCBA
60	010103000879	chip resistor	▲SMD, 1KΩ,1/4W-1206,±5%,YAGEO	R53, R54	parts on front PCBA
70	010103000450	chip resistor	SMD 2.2K 1/4W ±5% 1206	R7	parts on front PCBA
80	010103000130	chip resistor	SMD 220KΩ 1/10W ±1% 0603	R20	parts on front PCBA
90	010103000196	chip resistor	SMD 33Ω 1/10W ±1% 0603	R42, R43, R44, R45	parts on front PCBA
100	010103000803	chip resistor	SMD,3.3KΩ,1/4W-1206,±1%,	R13, R14	parts on front PCBA

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110	010103000860	chip resistor	▲SMD, 4.7KΩ, 1/10W-0603, ±1%, YAGEO	R6	parts on front PCBA
120	010103000588	chip resistor	SMD 4.7KΩ 1/4W ±5% 1206	R8, R9	parts on front PCBA
130	010103000862	chip resistor	▲SMD, 47KΩ, 1/10W-0603, ±1%, YAGEO	R22, R57	parts on front PCBA
140	010103000507	chip resistor	SMD 47KΩ 1/8W ±1% 0805	R10, R11	parts on front PCBA
150	010103000261	chip resistor	SMD 47Ω 1/10W ±1% 0603	R5A, R5B, R7A, R7B, R9A, R9B, R11A, R11B	parts on front PCBA
160	010103000293	chip resistor	SMD 51KΩ 1/10W ±1% 0603	R21	parts on front PCBA
170	020123000008	chip capacitor	▲SMD, 104/100V, 0603, X7R, ±10%, TDK	C8B, C9B, C10B, C11B, C12, C13, C13B, C14B, C15, C16, C19, C20, C22, C23, C25, C30, C32, C46, C48, C3	parts on front PCBA
180	020123000061	chip capacitor	SMD 104/100V 0805 X7R ±10% TDK	C11	parts on front PCBA
190	020113000141	chip capacitor	▲SMD, 102/50V, 0603, NPO, ±5%, YAGEO	C27	parts on front PCBA
200	020133000007	chip capacitor	SMD 225/25V 0805 X5R ±10%	C17	parts on front PCBA
210	020203000001	electrolytic capacitor	SMD 10uF/16V 4*5.4 ±20% 105°C PANASONIC	C31	parts on front PCBA
220	030163000053	magnetic bead(inductance)	SMD 600Ω 0805	FB1	parts on front PCBA
230	030123000157	inductance	SMD, 10UH, 3A, 8.0*4.0 (MM), ±20%, SWPA8040S100MT	L2	parts on front PCBA
240	030123000174	inductance	SMD, 4.7uH, 3A, 8.0*4.0 (MM), ±20%,	L3	parts on front PCBA
250	050303000042	field-effect tube	▲SMD, AO3401A, SOT-23,	Q4	parts on front PCBA
260	050203000131	audion	SMD, BC846BW, SOT-323, NXP,	Q3, Q5, Q7, Q8	parts on front PCBA
270	050103000095	audion	SMD, BCX52-16, SOT-89, 60V 1A,	Q1	parts on front PCBA
280	050203000130	audion	SMD, BCX55-16, SOT-89, 60V 1A,	Q2	parts on front PCBA
290	040303000024	Schottky diode	SMD, BAS316, SOT-323, NXP,	D4, D5	parts on front PCBA
300	040203000093	voltage stabilizing diode	SMD, 7.5V, SOD-323F, Fairchild, MM3Z7V5C,	ZD1, ZD2	parts on front PCBA
310	060103000654	IC	SMD, NJM4580V, SSOP8, JRC,	U5, U6, U7	parts on front PCBA
320	060103001477	IC	SMD, TPS54335A, package: DDA(R-PDSO-G8), TI, The oscillation frequency and output voltage can be adjusted	U4	parts on front PCBA
330	130113000005	socket	SMD Pitch 1.25MM 6PIN vertical	CN4	parts on front PCBA
340	160203000088	crystal oscillator	▲SMD, 32.768KHz, 2.5*5MM, CRYSTAL	X1	parts on front PCBA
350	060103001625	IC	SMD, AP8064, LQFP64, , loading COOLER-445 FW	U2	parts on front PCBA
360	060103001626	IC	SMD, W25X16, SOP-8, loading COOLER-445FW	U3	parts on front PCBA
370	090503000058	bluetooth module	SMD, HJ1510, V1.0, loading COOLER-445FW	U1	parts on front PCBA
380	020203000131	electrolytic capacitor	▲SMD, 100uF/25V, 6.3*7.7, ±20%, 105°C, nichicon	C4, C26, C29	parts on front PCBA
390	010103000008	chip resistor	SMD 0Ω 1/10W ±1% 0603	R59	parts on front PCBA
400	010103000842	chip resistor	▲SMD, 20KΩ, 1/10W-0603, ±1%, YAGEO	R17A, R17B	parts on front PCBA
410	010103000291	chip resistor	SMD 5.1KΩ 1/10W ±1% 0603	R27	parts on front PCBA
430	050103000096	audion	SMD, BC856BW, SOT-323, NXP,	Q6	parts on front PCBA

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440	23FA03000293	PCB	front plate,two layer,157.5*55.8*1.6mm,FR-4,REV:TO-01,golden chrome, green oil, copper thick10Z		parts on front PCBA
450	020133000062	chip capacitor	SMD,106/25V ,0805,X5R,±10%,MURATA	C1A, C1B, C3A, C3B, C4A, C4B, C5A, C5B, C6A, C6B, C7A, C7B, C9, C10, C18, C5, C6	parts on front PCBA
460	020123000004	chip capacitor	SMD 103/100V 0603 X7R ±10% TDK	C49	parts on front PCBA
470	130113000002	socket	▲SMD single row vertical,4PIN,PITCH 1.25MM,	CN3	parts on front PCBA
480	010103001366	chip resistor	SMD,51Ω,1/4W-1206,±1%,	R32	parts on front PCBA
490	010103001367	chip resistor	SMD,3.74K,1/4W-1206,±1%,	R29	parts on front PCBA
500	010103001368	chip resistor	SMD,19.1KΩ,1/4W-1206,±1%,	R30	parts on front PCBA
510	010103001369	chip resistor	SMD,43KΩ,1/4W-1206,±1%,	R28	parts on front PCBA
520	010103001370	chip resistor	SMD,43.2KΩ,1/4W-1206,±1%,	R26	parts on front PCBA
530	010103000561	chip resistor	SMD 100KΩ 1/4W ±1% 1206	R27,R31	parts on front PCBA
540	010103001184	chip resistor	SMD,220KΩ,1/4W-1206,±1%,	R25	parts on front PCBA
550	020133000082	chip capacitor	▲SMD,105/25V,0603,X5R,±10%,MURATA	C1,C2	parts on front PCBA
560	020123000271	chip capacitor	▲SMD,474/25V,0603,X7R,±10%,MURATA	C28	parts on front PCBA
570	020113000051	chip capacitor	SMD 47pF/50V 0603 NPO ±5%	C2A,C2B,C12A,C12B	parts on front PCBA
580	010103000046	chip resistor	SMD 12KΩ 1/10W ±1% 0603	R1A,R1B	parts on front PCBA
590	010103000212	chip resistor	SMD 35.7KΩ 1/10W ±1% 0603	R2A,R2B	parts on front PCBA
600	010103001269	chip resistor	SMD,10.5KΩ,1/10W-0603,±1%,0603	R18A, R18B	parts on front PCBA
20	030603000005	annular inductance	TOROID COIL 500uH JDF1605 21*10mm horizontal Jingdu	L1	parts on front PCBA
30	020513000444	electrolytic capacitor	DIP,270uF/35V,8*15,±20%,PANASONIC, EEUFR1V271L	C21	parts on front PCBA
40	020513000443	electrolytic capacitor	DIP,390uF/25V,8*15,±20%,PANASONIC, EEUFR1E391L	C24	parts on front PCBA
50	010403000004	metal oxide film resitance	DIP 1/4W 4.7Ω±5% tape style	R17, R18	parts on front PCBA
60	130263000027	needle file	DIP 9PIN single row direct pin P=2.0MM H=4.0MM	CN2	parts on front PCBA
70	120303000055	earphone socket	DIP,7PIN,with switch, stereo 3.5 jack,CKX-3.5-29,	JK1,JK3	parts on front PCBA
80	130223000058	socket	DIP-single row horizontal,2PIN,Pitch 3.96MM, ,90 degree	CN5	parts on front PCBA
90	170103001133	cable	UL2468 26AWG,20P,L=120mm,one side 20P-2.54connector other end 11P-2.0+9P-2.0, red white row,	CN1/CN6	parts on front PCBA
100	LP0902000008	glue	ES 601B rubber neutral 300ml/bottle		parts on front PCBA
110	FL0700007006	dampproof oil	anti-moisture oil TF-7600 18kg/barrel		parts on front PCBA
30	88AM03200893	PCBA	Cooler-445,amp board,DIPprocessing test,		parts on front PCBA
10	88AM03000893	PCBA	Cooler-445,amp board,SMDoutsourcing,		parts on front PCBA
10	010103000024	chip resistor	▲SMD,100KΩ,1/10W-0603,±1%,	R6A, R6B, R8A, R8B, R10A, R10B,R12A, R12B	parts on front PCBA

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20	020123000164	chip capacitor	▲SMD, 104/50V, 0603, X7R, ±10%, YAGEO	C111, C137, C112, C115, C119, C132, C135, C138, C201, C204, C205, C206, C212, C226, C301, C304, C305, C306, C312, C326, C401, C404, C405, C406, C412, C426, C501, C504, C505, C506, C512, C526	parts on front PCBA
30	020123000103	chip capacitor	SMD 104/250V 1206 X7R ±10% TDK	C509, C209, C309, C409	parts on front PCBA
40	020113000135	chip capacitor	▲SMD, 101/50V, 0603, NPO, ±5%, YAGEO	C127, C211, C222, C311, C322, C411, C422, C511, C522	parts on front PCBA
50	010103000014	chip resistor	SMD 100Ω 1/10W ±1% 0603	R216, R316, R416, R516	parts on front PCBA
60	010103000557	chip resistor	SMD 100Ω 1/4W ±1% 1206	R108, R112	parts on front PCBA
70	010103000022	chip resistor	SMD 10KΩ 1/10W ±1% 0603	R115, R145, R147, R152, R162, R164, R166, R167, R175, R178, R206, R210, R211, R306, R310, R311, R406, R410, R411, R506, R510, R511	parts on front PCBA
80	020123000171	chip capacitor	▲SMD, 103/50V, 0603, X7R, ±5%, YAGEO	C122, C126, C131, C133, C136, C203, C220, C303, C320, C403, C420, C503, C520	parts on front PCBA
90	010103000012	chip resistor	SMD 10Ω 1/10W ±1% 0603	R13B, R14B, R15B, R16B, R19B, R20B	parts on front PCBA
100	010103000399	chip resistor	SMD 10Ω 1/8W ±1% 0805	R101, R102, R140	parts on front PCBA
110	020133000006	chip capacitor	SMD 106/16V 0805 X5R ±10%	C134, C213, C214, C228, C313, C314, C328, C413, C414, C428, C513, C514, C528	parts on front PCBA
120	010103000033	chip resistor	SMD 11KΩ 1/10W ±1% 0603	R133	parts on front PCBA
130	010103000048	chip resistor	SMD 120KΩ 1/10W ±1% 0603	R202, R203, R302, R303, R402, R403, R502, R503	parts on front PCBA
140	010103000063	chip resistor	SMD 15Ω 1/10W ±1% 0603	R104, R105, R128, R129	parts on front PCBA
150	040203000088	voltage stabilizing diode	SMD, 15V, SOD-323F, Fairchild, MM3Z15VB,	D103	parts on front PCBA
160	010103000088	chip resistor	SMD 180Ω 1/10W ±1% 0603	R149	parts on front PCBA
170	040203000092	voltage stabilizing diode	SMD, 18V, SOD-323F, Fairchild, MM3Z18VC,	D119	parts on front PCBA
180	010103000017	chip resistor	SMD 1KΩ 1/10W ±1% 0603	R1, R5, R23, R56	parts on front PCBA
190	010103000757	chip resistor	SMD, 1.3K, 1/10W-0603, ±1%,	R230, R232, R233, R330, R332, R333, R430, R432, R433, R530, R532, R533	parts on front PCBA
200	010103000067	chip resistor	SMD 1.5KΩ 1/10W ±1% 0603	R214, R219, R314, R319, R414, R419, R514, R519	parts on front PCBA
210	010103000090	chip resistor	SMD 1.8KΩ 1/10W ±1% 0603	R204, R304, R404, R504	parts on front PCBA
220	020123000009	chip capacitor	SMD 105/16V 0603 X7R ±10%	C123, C130, C224, C225, C324, C325, C424, C425, C524, C525, C141	parts on front PCBA
230	010103000113	chip resistor	SMD 20KΩ 1/10W ±1% 0603	R111, R113, R119, R125, R127, R155, R156, R161, R163, R165, R208, R308, R408, R508	parts on front PCBA
240	010103000130	chip resistor	SMD 220KΩ 1/10W ±1% 0603	R20	parts on front PCBA

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250	020113000139	chip capacitor	▲SMD, 221/50V, 0603, NPO, ±5%, YAGEO	C114, C118, C207, C217, C219, C307, C317, C319, C407, C417, C419, C507, C517, C519	parts on front PCBA
260	010103000128	chip resistor	SMD 22KΩ 1/10W ±1% 0603	R137	parts on front PCBA
270	020113000143	chip capacitor	▲SMD, 222/50V, 0603, NPO, ±5%, TDK	C216, C316, C416, C516	parts on front PCBA
280	010103000119	chip resistor	SMD 22Ω 1/10W ±1% 0603	R221, R229, R321, R329, R421, R429, R521, R529	parts on front PCBA
290	010103000446	chip resistor	SMD 22Ω 1/8W ±1% 0805	R218, R224, R318, R324, R418, R424, R518, R524	parts on front PCBA
300	010103000150	chip resistor	SMD 240KΩ 1/10W ±1% 0603	R130	parts on front PCBA
310	040203000090	voltage stabilizing diode	SMD, 24V, SOD-323F, Fairchild, MM3Z24VC,	D110, D113	parts on front PCBA
320	010103000758	chip resistor	SMD, 270KΩ, 1/10W-0603, ±1%,	R131	parts on front PCBA
330	010103000111	chip resistor	SMD 2KΩ 1/10W ±1% 0603	R109, R153, R213, R222, R313, R322, R413, R422, R513, R522	parts on front PCBA
340	010103000126	chip resistor	SMD 2.2KΩ 1/10W ±1% 0603	R160	parts on front PCBA
350	010103000162	chip resistor	SMD 2.7KΩ 1/10W ±1% 0603	R142	parts on front PCBA
360	020123000025	chip capacitor	SMD 223/50V 0603 X7R ±10%	C210, C223, C310, C323, C410, C423, C510, C523	parts on front PCBA
370	010103000188	chip resistor	SMD 30KΩ 1/10W ±1% 0603	R144, R146, R148, R150	parts on front PCBA
380	020113000047	chip capacitor	SMD 331/50V 0603 NPO ±5%	C129	parts on front PCBA
390	010103000482	chip resistor	SMD 33KΩ 1/8W ±1% 0805	R126	parts on front PCBA
400	010103000205	chip resistor	SMD 33KΩ 1/10W ±1% 0603	R138, R139, R158	parts on front PCBA
410	020123000035	chip capacitor	SMD 333/50V 0603 X7R ±10%	C124, C125	parts on front PCBA
420	010103000596	chip resistor	SMD 360Ω 1/10W ±1% 0603	R121, R122	parts on front PCBA
430	010103000227	chip resistor	SMD 390Ω 1/10W ±1% 0603	R141	parts on front PCBA
440	010103000759	chip resistor	SMD, 390Ω, 1/4W-1206, ±1%,	R171	parts on front PCBA
450	010103000472	chip resistor	SMD 3KΩ 1/8W ±1% 0805	R103	parts on front PCBA
460	010103000200	chip resistor	SMD 3.3KΩ 1/10W ±1% 0603	R117, R132, R173	parts on front PCBA
470	010103000229	chip resistor	SMD 3.9KΩ 1/10W ±1% 0603	R114, R179	parts on front PCBA
480	010103000385	chip resistor	SMD 9.1KΩ 1/10W ±1% 0603	R124, R217, R317, R417, R517	parts on front PCBA
490	010103000265	chip resistor	SMD 4.7KΩ 1/10W ±1% 0603	R234, R334, R434, R534	parts on front PCBA
500	020123000154	chip capacitor	SMD, 472/50V, 0603, NPO, ±5%,	C113, C208, C215, C308, C315, C408, C415, C508, C515	parts on front PCBA
510	010103000283	chip resistor	SMD 4.7Ω 1/10W ±1% 0603	R120	parts on front PCBA
520	040203000091	voltage stabilizing diode	SMD, 4.7V, SOD-323F, Fairchild, MM3Z4V7B,	D201, D301, D401, D501	parts on front PCBA
530	010103000289	chip resistor	SMD 510Ω ±1% 1/10W 0603	R118, R135, R212, R312, R412, R512	parts on front PCBA
540	010103000293	chip resistor	SMD 51KΩ 1/10W ±1% 0603	R21	parts on front PCBA
550	010103000305	chip resistor	SMD 560Ω 1/10W ±1% 0603	R215, R220, R315, R320, R415, R420, R515, R520	parts on front PCBA
560	010103000307	chip resistor	SMD 5.6KΩ 1/10W ±1% 0603	R123, R134, R231, R331, R431, R531	parts on front PCBA
570	010103000340	chip resistor	SMD 680Ω 1/10W ±1% 0603	R151	parts on front PCBA
580	010103000804	chip resistor	SMD, 1.3K, 1/4W-1206, ±1%,	R170	parts on front PCBA

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590	010103000345	chip resistor	SMD 68K Ω 1/10W $\pm$ 1% 0603	R154	parts on front PCBA
600	020113000059	chip capacitor	▲SMD, 68pF/50V, 0603, NPO, $\pm$ 5%,	C218, C318, C418, C518	parts on front PCBA
610	010103000369	chip resistor	SMD 8.2K Ω 1/10W $\pm$ 1% 0603	R209, R228, R309, R328, R409, R428, R509, R528	parts on front PCBA
620	010103000761	chip resistor	SMD, 8.2K Ω , 1/8W-0805, $\pm$ 1%,	R223, R323, R423, R523	parts on front PCBA
630	010103000387	chip resistor	SMD 91K Ω 1/10W $\pm$ 1% 0603	R136	parts on front PCBA
640	010103000762	chip resistor	SMD, 6.2 Ω , 1/4W-1206, $\pm$ 1%,	R110	parts on front PCBA
650	040203000086	voltage stabilizing diode	SMD, 12V, SOD-323F, Fairchild, MM3Z12VC,	D115	parts on front PCBA
660	040203000087	voltage stabilizing diode	SMD, 13V, SOD-323F, Fairchild, MM3Z13VC,	D114, D207, D208, D307, D308, D407, D408, D507, D508	parts on front PCBA
670	020123000242	chip capacitor	SMD, 103/1KV , 1206, X7R, $\pm$ 10%, MURATA	C2, C103, C104, C105, C106, C107, C108	parts on front PCBA
680	010103000268	chip resistor	SMD 47K Ω 1/10W $\pm$ 1% 0603	R143	parts on front PCBA
690	030163000091	magnetic bead (inductance)	SMD, LB2012T100KR, Taiyo Yuden	L203, L303, L403, L503	parts on front PCBA
700	060103000640	IC	SMD, TS431ACX, SOT-23, TSC,	IC102	parts on front PCBA
710	060103000612	IC	SMD, 98-1036TRPBF , SO-16, IR,	IC201, IC301, IC401, IC501	parts on front PCBA
720	060103000643	IC	SMD, LM2903D, SOIC (D)-8, TI,	IC103	parts on front PCBA
730	060103000649	IC	SMD, ZXCT1008FTA, SOT-23, Zetex,	IC104	parts on front PCBA
740	030123000124	power inductance	SMD, 15uH, 14*18*8.7, $\pm$ 10%, IND120_1	L202, L302, L402, L502	parts on front PCBA
750	080513000010	thermistor-PTC	SMD, PRF18BC471QB1RB/PRF18BC471QB5RB, PTC 470R/105°C, MURATA,	PTC101	parts on front PCBA
760	080513000009	thermistor-PTC	SMD, PRF18BD471QB1RB /PRF18BD471QB5RB, PTC 470R/95°C, MURATA,	PTC201, PTC301, PTC401, PTC501	parts on front PCBA
770	040303000024	Schottky diode	SMD, BAS316, SOT-323, NXP,	D4, D5	parts on front PCBA
780	060103000642	IC	SMD, ISL6744ABZ, 8 Ld SOIC, INTERSIL,	IC101	parts on front PCBA
790	050203000131	audion	SMD, BC846BW, SOT-323, NXP,	Q3, Q5, Q7, Q8	parts on front PCBA
800	050403000040	field-effect tube	SMD, IRF6712STRPBF, Direct FET, IR,	Q102, Q103, Q104, Q105	parts on front PCBA
810	050403000041	field-effect tube	SMD, 2N7002DW, SOT-363, Diodes Inc, double field MOS,	Q109	parts on front PCBA
820	050203000130	audion	SMD, BCX55-16, SOT-89, 60V 1A,	Q2	parts on front PCBA
830	050103000094	audion	SMD, MMDT4403-7-F, SOT-363, Diodes Inc, double transistor,	Q202, Q302, Q402, Q502	parts on front PCBA
840	050203000129	audion	SMD, MMDT3904-7-F, SOT-363, Diodes Inc, double transistor	Q203, Q303, Q403, Q503	parts on front PCBA
850	050403000039	field-effect tube	SMD, IRF6665TR1FB, Direct FET, IR,	Q205, Q206, Q305, Q306, Q405, Q406, Q505, Q506	parts on front PCBA
860	030163000090		SMD, 180 Ω , 3A, 1806, $\pm$ 25%, BLM41PG181SN1L: Murata	L201, L204, L301, L304, L401, L404, L501, L504	parts on front PCBA
870	040403000023	half bridge Rectifier	SMD BAW56 SOT-23	D203, D303, D403, D503	parts on front PCBA
880	040303000023	Schottky diode	SMD, BAT54SDW, SOT-323, DIODES INC,	D107	parts on front PCBA
890	040303000015	Schottky diode	SMD BAT54J SOD_323	D101, D102, D108, D109	parts on front PCBA
900	050203000132	audion	SMD, BC847PN, SOT-363, Diodes Inc, NPN/PNP,	Q204, Q304, Q404, Q504, Q120, Q106, Q107	parts on front PCBA

Order	P/N	parts no.	SPEC	reference designator on PCB	remark
910	020123000152	chip capacitor	SMD,104/630V,1812,X7R,±10%,	C3	parts on front PCBA
920	020123000153	chip capacitor	SMD,102/630V,1206,NPO,±5%,	C1	parts on front PCBA
930	040203000089	voltage stabilizing diode	SMD,1.8V,SOD-123,ON,MMSZ4678T1G,	D111,D112	parts on front PCBA
940	010103000755	chip resistor	SMD,3.9KΩ,1/4W-1206,±1%,	R207,R226,R307,R326,R407,R426,R507,R526	parts on front PCBA
950	010103000756	chip resistor	SMD,3.9Ω,1/10W-0603,±1%,	R225,R227,R325,R327,R425,R427,R525,R527	parts on front PCBA
960	040103000071	diode	SMD,Z5W27V/P,DO-218,KEC,	D1	parts on front PCBA
970	050103000098	audion	SMD,BC857BS,SOT-363,NXP,double transistor	Q112	parts on front PCBA
980	050203000133	audion	SMD,BC847BS,SOT-363,NXP,double transistor	Q113	parts on front PCBA
990	040403000035	brige SMD	SMD,12CWQ10FNPBF,TO-252,IR,	D104,D105,D106	parts on front PCBA
1000	050103000096	audion	SMD,BC856BW,SOT-323,NXP,	Q6	parts on front PCBA
1010	010103000071	chip resistor	SMD 150K 1/10W ±1% 0603	R177	parts on front PCBA
1020	200403000156	transformer	DC14V,14V*2,TRF135_1,KTP-445U	T102	parts on front PCBA
1030	23AM03000388	PCB	Cooler-445 amp board,4 layer,183.6*54.5*1.6mm,FR-4,ALP-CB1-AMP-R1, copper thick 10Z, doule sided with golden chrome and green oil		AMP PCBA
1040	020133000023	chip capacitor	SMD,475/25V,0805,±10%,X5R	C128	parts on AMP PCBA
20	020743000012	MET capacitance	DIP 105/100V ±5% pitch distance5MM	C221,C321,C421,C521	parts on AMP PCBA
30	020513000444	electrolytic capacitor	DIP,270uF/35V,8*15,±20%,PANASONIC, EEUFRI1V271L	C21	parts on AMP PCBA
40	020513000443	electrolytic capacitor	DIP,390uF/25V,8*15,±20%,PANASONIC, EEUFRI1E391L	C24	parts on AMP PCBA
50	200403000155	transformer	DC14V,24V*2,TRF140_1,KTP-445U	T101	parts on AMP PCBA
60	170803000179	singlet line	UL1007#18AWG,1PIN,L=148MM,red,	X7	parts on AMP PCBA
80	130213000135	connector	DIP-single row vertical,20PIN,Pitch 2.54MM,	CON2	parts on AMP PCBA
90	170103001131	cable	UL1007 16AWG,2P,L=220mm,one end 2P-3.96 connector, another end 2PCS/terminal,	red wire+12V black wireGND	parts on AMP PCBA
100	130213000036	socket	DIP Pitch 2.5MM 4PIN direct insert	CON1	parts on AMP PCBA
110	120103000027	fuse holder	DIP,4PIN,19.8*7.0*7.3MM, PIN material: copper black,	FUSE	parts on AMP PCBA
120	LP0902000008	glue	ES 601B rubber neutral 300ml/bottle		parts on AMP PCBA
130	FL0700007006	dampproof oil	anti-moisture oil TF-7600 18kg/barrel		parts on AMP PCBA
140	140203000032	fuse	15A,32V, ,UL cert LitteiFuse	used on the fuse holder	parts on AMP PCBA
40	LS0201000195	screw	KA3*12MM black zinc plated SWC		
50	BA0202000003	cable tie	Φ3*150MM,white nylon		
60	LS0201000196	screw	KT3*6 black zinc plated hardness		
70	LS0201000073	screw	PT3*12 black zinc plated hardness		
80	LS0201000151	screw	TB2*6MM black zinc plated SWC		
90	LS0101000304	screw	KM3*6 steel,machinery,black zinc plated		
100	LS0101000237	screw	BM3*5 black zinc plated		
110	JD0201000310	anti-flamming paper	paper,55*183*0.3MM,material red anti-flamming paper		

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120	LM0101000003	cooling fin nut	M3*2.5 Hexagonal black zinc		
130	ZL0101000146	Hex copper cylinder	copper,screw post at two side, H5*2,M3*5,M3*3.5,		
140	120503000034	socket	DIP,M12-2PIN,metal,		
150	ZL0101000124	copper cylinder	hexagonal copper post H5*8.5mm M3*8.5		
160	LS0201000194	screw	KA3*10MM black zinc SWC		
170	LS0201000392	screw	2.6*8,self taping screw,black zinc, head dia6.5MM		
180	ZL0101000254	Hex copper cylinder	copper,H5*21,M3 screws,		
190	JD0101000207	heat conduction silica gel 1	rubber,28*9*2.5MM,		
200	JD0101000208	heat conduction silica gel 2	rubber,35*9*2.5MM		
210	SR0301000349	IO cooling fin	alu,220.2*152.27*17.5MM, matte black painting		
220	JD0401000679	seal gasket B	silicon,black hardness50° 41.7X30.7X2.1MM,		
230	JD0401000680	seal gasket A	silicon,black, hardness65° 118.7X63.6X1.8MM,		
240	JD0101000871	gasket	silicon for diving purpose, one side adhensive		
250	CP0201000091	cover	PC, transparent,IML processing,artwork,		
260	FH0701000064	silica gel cover	silicon black with surface texture		
270	ZL0101000255	pixel	stainless steel,Φ1.8X83.5MM,		
280	JD0401000682	gasketA	PORON,66.6X36.5X3MM,one side 3M tape adhensive		
290	JD0401000683	gasketB	silicon for diving purpose 82.4X60.2X1.5MM, one side 3M adhensive		
300	JD0101000839	gasket-2	EVA,15.5X9.5X9.5MM 50degree, one side 3M tape adhensive		
310	JD0101000840	gasket-3	EVA,25X13X2MM 50degree, one side 3M tape adhensive		
320	BG0601000020	astigmatism paper	plastics,49.7X14.1X0.3MM,milk white color, one side 3M tape adhensive		
330	FL0700007006	dampproof oil	anti-moisture oil TF-7600 18kg/barrel		
340	MK0101100801	IO cover	ABS+PC,black,8020,texture, matte black painting, no artwork,		
10	MK0101000801	IO cover	ABS+PC,blakc,8020, black painting		
10	PTABS2000050	plastic material	▲ABS+PC 8020,black,black painting		
20	VSA200000037	paint	▲TAB-53320, black		
350	XG0101100117	IO bottom cover	ABS+PC,black, texture, matte black painting, no artwork		
10	XG0101000117	IO bottom cover	ABS+PC,black,8020,texture		
10	PTABS2000050	plastic material	▲ABS+PC 8020,black		
20	VSA200000037	paint	▲TAB-53320,blakc		
360	HG0101000227	outgoing line cover	ABS+PC,black,8020,		
10	PTABS2000050	plastic material	▲ABS+PC 8020,black		
370	HG0101000228	rear cover	ABS+PC,black,8020,		
10	PTABS2000050	plastic material	▲ABS+PC 8020,black		
380	GD0301000204	key pressing plate	PC,transparent		
10	PTPC02000013	plastic material	▲PC-1225Y,transparent		

Order	P/N	parts no.	SPEC	reference designator on PCB	remark
390	BG0301000060	LGP	PC,transparent		
10	PTPC02000013	plastic material	▲PC-1225Y,transparent		
400	AJ0111100865	Key1	ABS+PC, black, first paint black, artwork, white, then paint glossy oil		
10	AJ01111000865	key1	ABS+PC,black,8020,polishing		
10	PTABS2000050	plastic material	▲ABS+PC 8020,black		
20	VSA200000125	paint	881223231,black		
30	VSA200000050	paint	H8500 glossy oil		
410	AJ0111100866	key2	ABS+PC, black, first paint black, artwork, white, then paint glossy oil		
10	AJ01111000866	key2	ABS+PC,black,8020,glossy		
10	PTABS2000050	plastic material	▲ABS+PC 8020,black		
20	VSA200000125	paint	881223231,black		
30	VSA200000050	paint	H8500glossy		
420	MK0101000802	control panel	ABS+PC,blakc,8020,		
10	PTABS2000050	plastic material	▲ABS+PC 8020,black		
430	AJ0141000062	silica gel key	silicon, milk white color, semi-transparent, 3M tape adhensive		
440	AJ0111100867	key3	PMMA, slight blue color, texture, artwork, white color		
10	AJ01111000867	key3	PMMA,slight blue, texture		
450	JD0401000685	gasket E	PORON,54.5X8X2MM ,3M tape adhensive		
460	JD0401000686	gasket D	PORON,51.5X8.5X0.5MM ,3M tape adhensive		
470	170103001132	cable	UL1007 16AWG,2P,L=50mm,one end 5mm, another end 2PCS/terminal		
480	TG0301000040	heat-shrinkable tubing	φ5*15MM black		
490	170103001109	cable	UL1571 28AWG,6P,L=720mm,two sides6P-1.25connector with adding waterproof clip		
500	JD0401000700	gasket F	PORON,3M tape adhensive		
20	170403000379	cigar lighter power cable	UL1007 14AWG,2P,L=5M,10A cigarrate another side M12-2PINmale metal		
30	170103001134	speaker cable	UL1007 18AWG,4P,L=620mm/L=1080mm,4P-2.54 connector, 2PCS/110female+2PCS/205female, red black/blue black joint wires		
40	LS0201000391	screw	KA,4*10MM, black zinc, stainless steel, hardnes		
50	KG0101000008	buckle	PP,D72,milk white color		
60	JD0101000837	seal gasket	silicon, black, hardness 50- 424X87.5X11.18MM ,		
70	JD0101000838	gasket-1	EVA,27.3X12X5.8MM 50degree,3M tape adhensive		
80	BA0202000007	ribbon	L=132MM, black		
90	FH0301000100	protective film	PVC,422X85.4X0.1MM ,		
100	GD0201000131	base plate	ABS+PC,8020 black		
10	PTABS2000050	plastic material	▲ABS+PC 8020,blakc		
110	BA0102000003	packing rope	1450MM,total length:94250mm		