



CHAOS AMPLIFIERS

Service Manual

MODEL: CH850M

SPECIFICATIONS

Maximum power output (2 Ohms): 850W x 1ch
RMS power Output: 200W x 1ch

Frequency response: 9 - 50KHz

Harmonic distortion: 0.01%

S/N Ratio: 130dB

Power Source Voltage: 14.4V

Ground: Negative

Power consumption: 25A(with 125Wx2 rated output)

External dimensions: 300(W)x65(H)x235(D)mm

To engineers in charge of repair or inspection of our products.

Before repair or inspection, make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

1. Use specified parts.

The system uses parts with special safety features against fire and voltage. Use only parts with equivalent characteristics when replacing them. The use of unspecified parts shall be regarded as remodeling for which we shall not be liable. The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.

2. Place the parts and wiring back in their original positions after replacement or re-wiring. For proper circuit construction, use of insulation tubes, bonding, gaps to PCB, etc, is involved. The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts. Ensure that they are placed back in their original positions after repair or inspection. If extended damage is caused due to negligence during repair, the legal responsibility shall be with the repairing company.

3. Check for safety after repair. Check that the screws, parts and wires are put back securely in their original position after repair. Ensure for safety reasons there is no possibility of secondary problems around the repaired spots. If extended damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.

4. Caution in removal and making wiring connection to the parts for the automobile. Disconnect the battery terminal after turning the ignition key off. If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur. If extensive damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.

5. Cautions regarding chips.

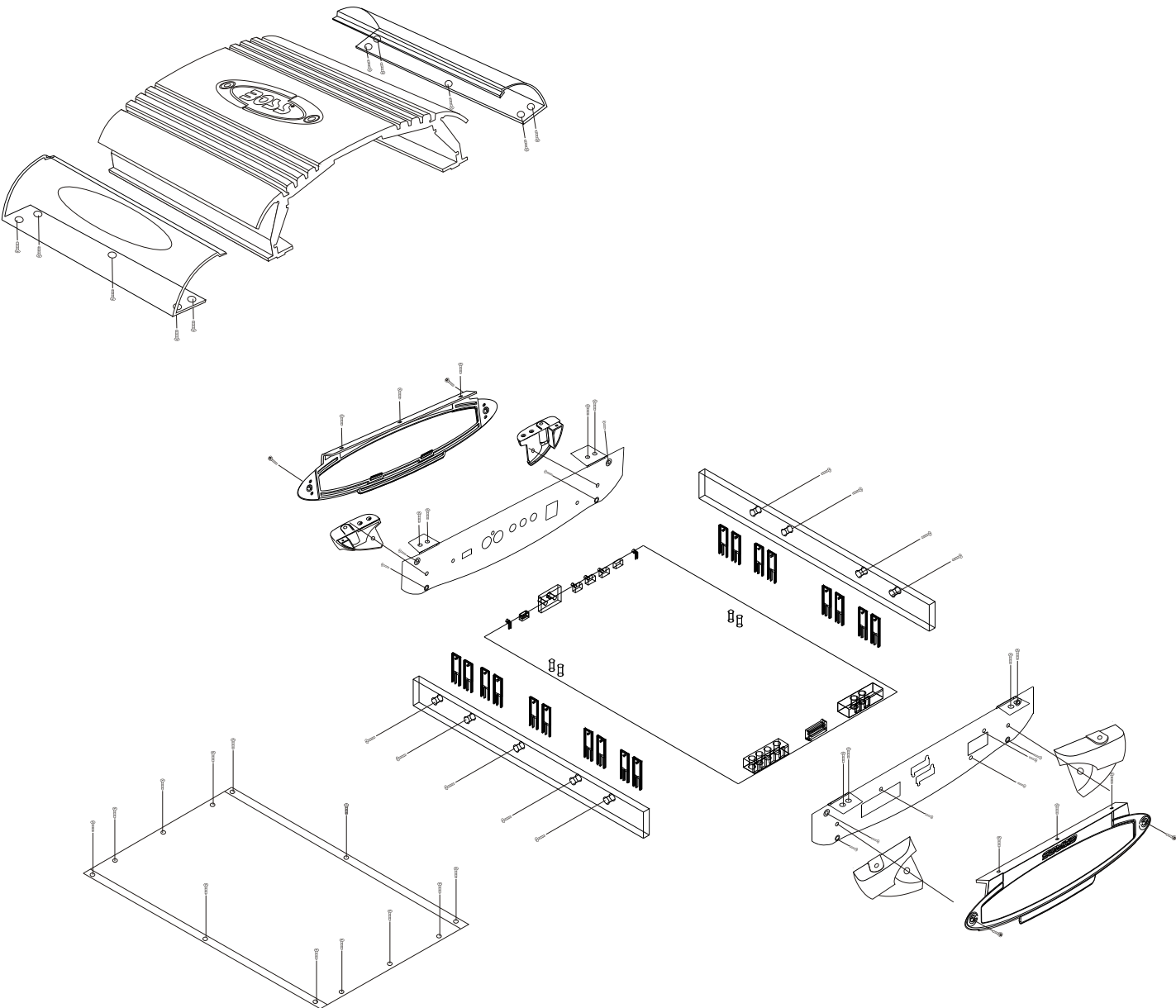
Do not reuse removed chips even when no abnormality is observed in their appearance. Always replace them with new ones. (The chip parts include resistors, capacitors, diodes, transistors, etc). The negative pole of tantalum capacitors is highly susceptible to heat, so use special care when replacing them and check the operation afterwards.

6. Cautions in handling flexible PCB

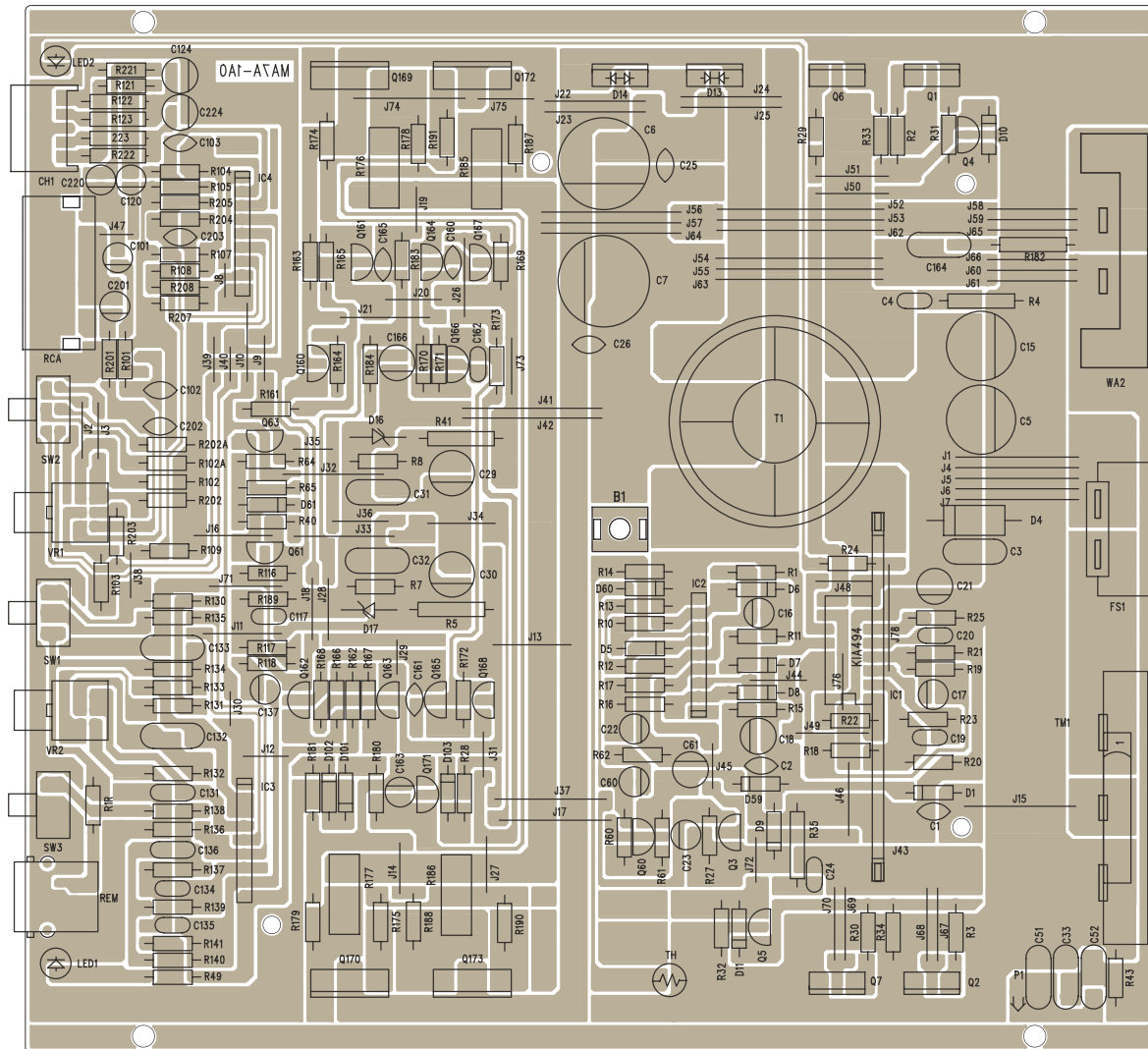
Before working with a soldering iron, make sure that the iron tip temperature is around 270... Take care not to apply the iron tip repeatedly (more than three times) to the same patterns. Also take care not to apply the tip with force.

7. Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

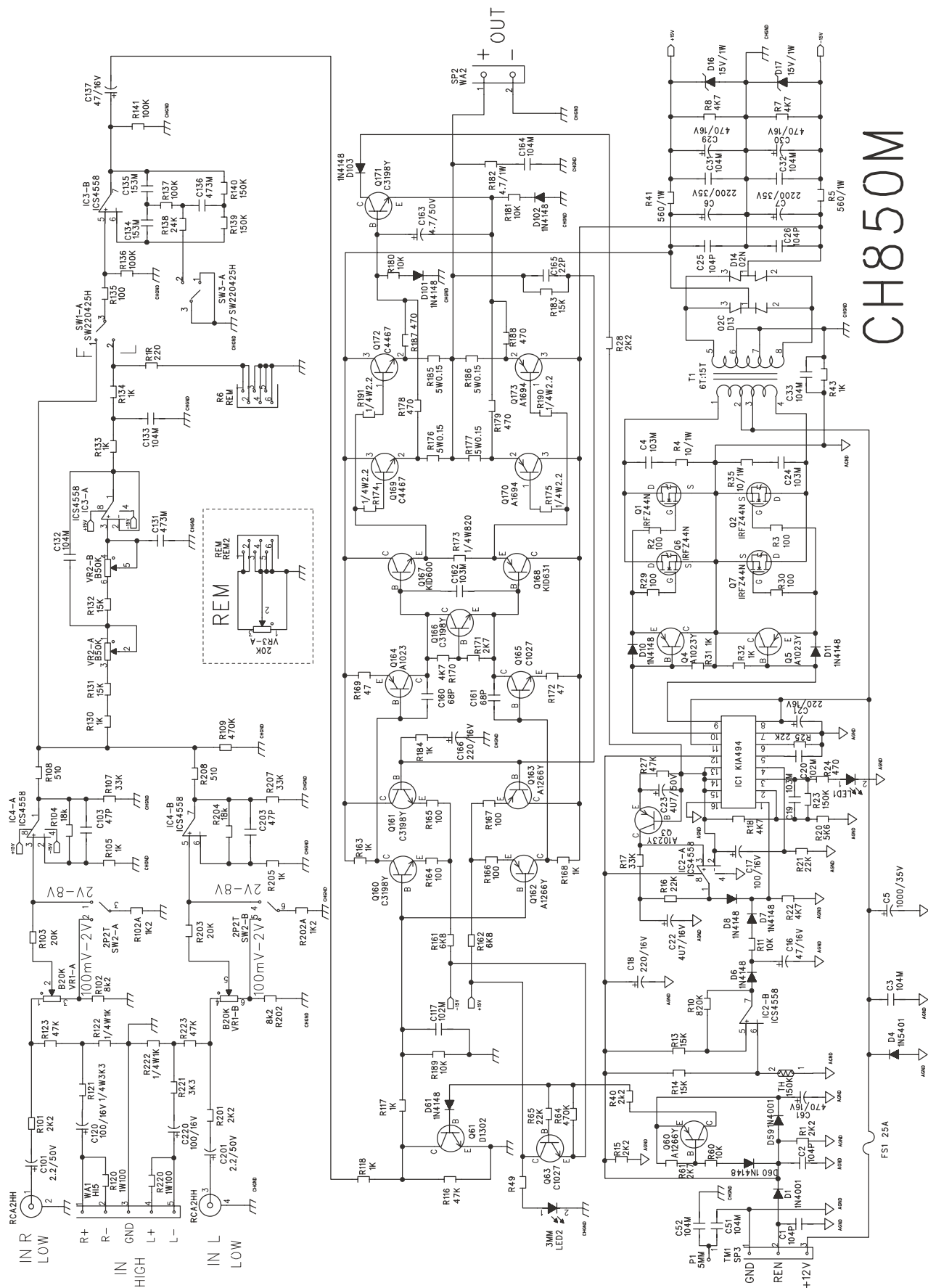
EXPLODED VEIW



PRINTED CIRCUIT BOARD



CIRCUIT DIAGRAM



PARTS LIST - 1

Model Number	desc	Location	qty
CR-2000-X1-VOS14	RCA Jack	RCA	1
CT-SOCKET0-2MA22	Speaker terminal		1
CT-SOCKET1-3MA17	Power terminal		1
CW-50000X0-H0025	High Input Jack	CH1	1
EC-C4104X0-Z6769	C Cap 0.1(Z)	C1,2,25,26	4
EC-C4220X0-D5050	C Cap 22PF(D)	C165	1
EC-C4470X0-Z5050	C Cap 47PF(Z)	C103,203	2
EC-C4680X0-J5050	C Cap 68PF(J)	C160,161	2
EC-E2107X0-M50A1	C Cap 100UF/16	C17,120,220,60	4
EC-E2227X0-M63A1	E Cap 220UF/16	C18,21,166	3
EC-E2476X0-M50A1	E Cap 47UF/16V	C16,137	2
EC-E2477X0-M50A1	E Cap 470UF/16	C29,30,61	3
EC-E4225X0-M50A1	E Cap 2.2UF/50	C101,201	2
EC-E4475X0-M50A1	E Cap 4.7UF/50	C22,23,163	3
EC-E6108X0-MA3B5	E Cap 1000/35V	C5,15	2
EC-E6228X0-MA3B5	E Cap 2200/35V	C6,7	2
EC-M5102X0-J5590	Mylar Cap 0.001	C20,117	2
EC-M5103X0-J5590	Mylar Cap 0.01	C4,19,24,162	4
EC-M5104X0-JA0A3	Mylar Cap 0.1	C3,31~33,51,52,132,133,164	9
EC-M5153X0-J5785	Mylar Cap 0.015	C134,135	2
EC-M5473X0-J80A1	Mylar Cap 0.047	C136,131	2
ED-R2502C0-H0000	ESAC25-02C	D13	1
ED-R2502N0-H0000	ESAC25-02N	D14	1
ED-R4001X0-H0000	Diode IN-4001	D1,59	2
ED-R5401X0-H0000	Diode IN-5401	D4	1
ED-Z15VXX0-H4744	ZENER IN4744	D16,17	2
EE-C23X5X0-10302	LED Red 3MM	LED2	1
EE-C53X5X0-10302	LED Green 3MM	LED1	1
EO-IM9B1A0-VXXX8	Transformer	T1	1
ER-CS001X0-VE0I0	SLR0.1 5W J	R176,177,185,186	4
ER-HG153X0-HXXXX	THERMISTOR 150K	TH	1
ER-OG022X0-H2526	Resistor 2.2 1/4W	R174,175,190,191	4
ER-OG047X0-HA04C	Resistor 4.7 1W	R182	1
ER-OG047X0-HA04C	Resistor 4.7 1W	R182	1
ER-OG100X0-HA04C	Resistor 10 1W	R4,35	2

PARTS LIST - 2

ER-OG100X0-HA04C	Resistor	10 1W	R4,35	2
ER-OG101X0-H2526	Resistor	100 1/4W	R29,30,2,3,135,164~167	9
ER-OG101X0-HA04C	Resistor	100 1W	R120,220	2
ER-OG101X0-HA04C	Resistor	100 1W	R120,220	2
ER-OG102X0-H2526	Resistor	1K 1/4W	R122,222,31,32,43,62,105,117,130,133,134,163,168,184,205,118	16
ER-OG103X0-H2526	Resistor	10K 1/4W	R11,60,180,181,189	5
ER-OG104X0-H2526	Resistor	100K 1/4W	R136,137,141	3
ER-OG105X0-H2526	Resistor	1M 1/4W	R19	1
ER-OG122X0-H2526	Resistor	1.2K 1/4W	R102A,202A	2
ER-OG153X0-H2526	Resistor	15K 1/4W	R13,183,14,131,132	5
ER-OG154X0-H2526	Resistor	150K 1/4W	R23,139,140	3
ER-OG183X0-H2526	Resistor	18K 1/4W	R12,104,204	3
ER-OG203X0-H2526	Resistor	20K 1/4W	R103,203	2
ER-OG221X0-H2526	Resistor	220 1/4W	R33,34,R1R	3
ER-OG222X0-H2526	Resistor	2.2K 1/4W	R1,15,28,49,101,201,40	7
ER-OG223X0-H2526	Resistor	22K 1/4W	R16,21,25,65	4
R-OG243X0-H2526	Resistor	24K 1/4W	R138	1
ER-OG272X0-H2526	Resistor	2.7K 1/4W	R61,171	2
ER-OG331X0-H2526	Resistor	330 1/4W	R173	1
ER-OG332X0-H2526	Resistor	3.3K 1/4W	R121,221	2
ER-OG333X0-H2526	Resistor	33K 1/4W	R17,107,207	3
ER-OG470X0-H2526	Resistor	47 1/4W	R169,172	2
ER-OG471X0-H2526	Resistor	470 1/4W	R178,179,187,188,24	5
ER-OG472X0-H2526	Resistor	4.7K 1/4W	R18,22,170,7,8	5
ER-OG473X0-H2526	Resistor	47K 1/4W	R27,123,223,116	4
ER-OG474X0-H2526	Resistor	470K 1/4W	R64,109	2
ER-OG511X0-H2526	Resistor	510 1/4W	R108,208	2
ER-OG561X0-HA04C	Resistor	560 1W	R5,41	2
ER-OG561X0-HA04C	Resistor	560 1W	R5,41	2
ER-OG562X0-H2526	Resistor	5.6K 1/4W	R20	1
ER-OG682X0-H2526	Resistor	6.8K 1/4W	R161,162	2
ER-OG822X0-H2526	Resistor	8.2K 1/4W	R102,202	2
ER-OG824X0-H2526	Resistor	820K 1/4W	R10	1
ES-S2219X0-H0006	Switch	JSS2219		3
ET-C1023X0-PY000	Transistor	KTA1023-Y	Q3~5,164	4
ET-C1027X0-NY000	Transistor	KTC1027-Y	Q63,165	2

PARTS LIST - 3

ET-C1266X0-PY000	Transistor A1266Y	Q60,162~163	3
ET-C1302K0-N0000	Transistor KTD-1302	Q61	1
ET-C1694X0-PY000	Transistor 2SA1694	Q170,173	2
ET-C3198K0-NY000	Transistor KTC3198-Y	Q160,161,166,171	4
ET-C4467X0-NY000	Transistor 2SC4467	Q169,172	2
ET-CB631X0-P0000	Transistor KTB631-KY	Q168	1
ET-CD600X0-N0000	Transistor KTD600-KY	Q167	1
ET-FFZ44X0-X0000	Mosfet IRFZ 44N	Q1,2,6,7	4
EW-CS06XX0-05AA0	Bare wire 6MM	J8,29,30,40	4
EW-CS07XX0-05AA0	Bare wire 7MM	J35	1
EW-CS08XX0-05AA0	Bare wire 8MM	J9,12,19,31,38,39,45,72	8
EW-CS09XX0-05AA0	Bare wire 9MM	J14	1
EW-CS10XX0-05AA0	Bare wire 10MM	J2,3,20,27,36,44,48,73,75,76	10
EW-CS11XX0-05AA0	Bare wire 11MM	J18,28	2
EW-CS11XX0-05AA0	Bare wire 11MM	J18,28	2
EW-CS12XX0-05AA0	Bare wire 12MM	J34	1
EW-CS13XX0-05AA0	Bare wire 13MM	J46,49,50,51,67,68,69,70,71	9
EW-CS14XX0-05AA0	Bare wire 14MM	J10,11,13,16,26	5
EW-CS16XX0-05AA0	Bare wire 16MM	J21,58,59,60,61,65,66	7
EW-CS18XX0-05AA0	Bare wire 18MM	J21,23,24,25,32,33	6
EW-CS19XX0-05AA0	Bare wire 19MM	J78	1
EW-CS20XX0-05AA0	Bare wire 20MM	J15,17,37,74	4
EW-CS22XX0-05AA0	Bare wire 22MM	J1,4,5,6,7	5
EW-CS22XX0-05AA0	Bare wire 22MM	J1,4,5,6,7	5
EW-CS25XX0-05AA0	Bare wire 5MM	J41,42,56,57,64	5
EW-CS25XX0-05AA0	Bare wire 25MM	J41,42,56,57,64	5
EW-CS30XX0-05AA0	Bare wire 30MM	J52,53,54,55,62,63	6
EW-CS30XX0-05AA0	Bare wire 30MM	J52,53,54,55,62,63	6
II-4558SX0-V0009	IC KA4558S	IC2,3,4	3
II-DBL494X-H0016	IC S-494P	IC1	1
VR-BN203X0-V0A26	VR 20KB T12	VR1	1
VR-BN503X0-V0A26	VR 50KB T12	VR2	1