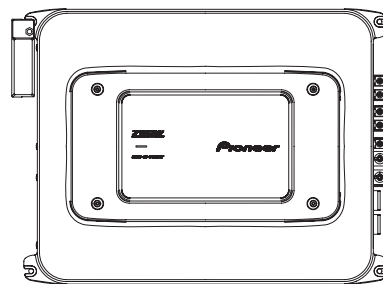


Pioneer

Service Manual



GM-5400T/XJ/UC

ORDER NO.
CRT4251

BRIDGEABLE TWO-CHANNEL POWER AMPLIFIER

GM-5400T /XJ/UC

GM-5400T /XJ/EW5

GM-5400T /XJ/ES



For details, refer to "Important Check Points for Good Servicing".

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SAFETY INFORMATION

CAUTION

- A This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains certain electrical parts that contain chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm.
Health & Safety Code Section 25249.6 - Proposition 65

- B **Where in a manufacturer's service documentation, for example in circuit diagrams or lists of components, a symbol is used to indicate that a specific component shall be replaced only by the component specified in that documentation for safety reasons, the following symbol shall be used:**



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[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol. Please be sure to confirm and follow these procedures.

1. Product safety



Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

- ① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

- ② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification (addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

- ③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris. Soldering should be finished with the proper quantity. (Refer to the example)

- ④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

- ⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

- ⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs. In addition, be sure that there are no pinched wires, etc.

- ⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

- ⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages. If you find a damaged power cord, please exchange it with a suitable one.

- ⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

- ⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries. Please pay attention to your surroundings and repair safely.

2. Adjustments



To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification. Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts



Use grease and adhesives that are equal to the specified substance. Make sure the proper amount is applied.

4. Cleaning



For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws



To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

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1. SERVICE PRECAUTIONS

1.1 SERVICE PRECAUTIONS



1. You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.
2. Be careful in handling ICs. Some ICs such as MOS type are so fragile that they can be damaged by electrostatic induction.

1.2 NOTES ON SOLDERING

- For environmental protection, lead-free solder is used on the printed circuit boards mounted in this unit. Be sure to use lead-free solder and a soldering iron that can meet specifications for use with lead-free solders for repairs accompanied by reworking of soldering.
- Compared with conventional eutectic solders, lead-free solders have higher melting points, by approximately 40 °C. Therefore, for lead-free soldering, the tip temperature of a soldering iron must be set to around 373 °C in general, although the temperature depends on the heat capacity of the PC board on which reworking is required and the weight of the tip of the soldering iron.

Compared with eutectic solders, lead-free solders have higher bond strengths but slower wetting times and higher melting temperatures (hard to melt/easy to harden).

The following lead-free solders are available as service parts:

- Parts numbers of lead-free solder:
 - GYP1006 1.0 in dia.
 - GYP1007 0.6 in dia.
 - GYP1008 0.3 in dia.

2. SPECIFICATIONS

2.1 SPECIFICATIONS

GM-5400T/XJ/UC

Power source.....	14.4 V DC (10.8 V to 15.1 V allowable)
Grounding system.....	Negative type
Current consumption	30 A (at continuous power, 4 ?)
Average current drawn	10 A (4 Ω for two channels) 19 A (4 Ω for one channel)
Fuse	30 A × 2
Backup current	0.03 mA or less
Dimensions (W × H × D) ...	265 mm × 62 mm × 346 mm (10-3/8 in. × 2-1/2 in. × 1 ft. 2 in.)
Weight	3.8 kg (Leads for wiring not included)
Maximum power output	250 W × 2 (4 Ω) / 760 W × 1 (4 Ω)
Continuous power output ..	125 W × 2 (at 14.4 V, 4 Ω, 20 Hz to 20 kHz 0.2% THD) 380 W × 1 (at 14.4 V, 4 Ω, 20 Hz to 20 kHz 0.8% THD) 190 W × 2 (at 14.4 V, 2 Ω, 20 Hz to 20 kHz 0.8% THD)
Load impedance	4 Ω (2 Ω to 8 Ω allowable) (Bridge connection: 4 Ω to 8 Ω allowable)
Frequency response.....	10 Hz to 50 kHz (+0 dB, -1 dB)
Signal-to-noise ratio.....	95 dB (IHF-A network)
Distortion	0.03 % (10 W, 1 kHz)
Separation	70 dB (1 kHz)
Low pass filter:	
Cut off frequency	80 Hz
Cut off slope	-12 dB/oct
Bass boost:	
Frequency.....	50 Hz
Level.....	0 dB/6 dB/12 dB
Gain control:	
RCA	200 mV to 6.5 V
Speaker	0.8 V to 26 V
Maximum input level / impedance:	
RCA	6.5 V / 22 k Ω
Speaker	26 V / 90 k Ω

CEA2006 Specifications



Power output	125 W RMS × 2 Channels (at 14.4 V, 4 Ω and $\leq 1\%$ THD+N) 380 W RMS × 1 Channels (at 14.4 V, 4 Ω BRIDGE and $\leq 1\%$ THD+N) 190 W RMS × 2 Channels (at 14.4 V, 2 Ω and $\leq 1\%$ THD+N)
S/N ratio	75 dBA (reference: 1 W into 4 Ω)

Notes

- Specifications and the design are subject to modifications without notice due to improvements.
- The average current drawn is nearly the maximum current drawn by this unit when an audio signal is input. Use this value when working out total current drawn by multiple power amplifiers. ■

GM-5400T/XJ/EW5, GM-5400T/XJ/ES

Power source.....	14.4 V DC (10.8 V to 15.1 V allowable)
Grounding system.....	Negative type
Current consumption	30 A (at continuous power, 4 Ω)
Average current drawn	10 A (4 Ω for two channels) 19 A (4 Ω for one channel)
Fuse	30 A \times 2
Backup current	0.03 mA or less
Dimensions (W \times H \times D) ...	265 mm \times 62 mm \times 346 mm
Weight	3.8 kg (Leads for wiring not included)
Maximum power output	250 W \times 2 (4 Ω) / 760 W \times 1 (4 Ω)
Continuous power output ..	125 W \times 2 (at 14.4 V, 4 Ω , 20 Hz to 20 kHz 0.2% THD) 380 W \times 1 (at 14.4 V, 4 Ω , 20 Hz to 20 kHz 0.8% THD) 190 W \times 2 (at 14.4 V, 2 Ω , 20 Hz to 20 kHz 0.8% THD)
Load impedance	4 Ω (2 Ω to 8 Ω allowable) (Bridge connection: 4 Ω to 8 Ω allowable)
Frequency response.....	10 Hz to 50 kHz (+0 dB, -1 dB)
Signal-to-noise ratio.....	95 dB (IEC-A network)
Distortion	0.03 % (10 W, 1 kHz)
Separation	70 dB (1 kHz)
Low pass filter:	
Cut off frequency	80 Hz
Cut off slope	-12 dB/oct
Bass boost:	
Frequency.....	50 Hz
Level.....	0 dB/6 dB/12 dB
Gain control:	
RCA	200 mV to 6.5 V
Speaker	0.8 V to 26 V
Maximum input level / impedance:	
RCA	6.5 V / 22 k Ω
Speaker	26 V / 90 k Ω

working out total current drawn by multiple power amplifiers. 

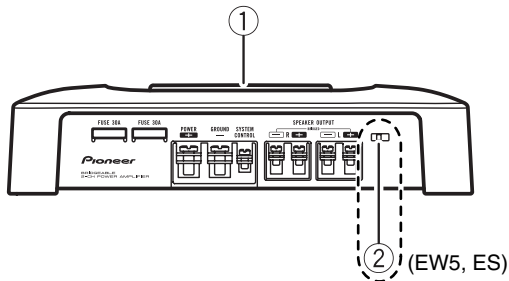
**Notes**

- Specifications and the design are subject to modifications without notice due to improvements.
- The average current drawn is nearly the maximum current drawn by this unit when an audio signal is input. Use this value when

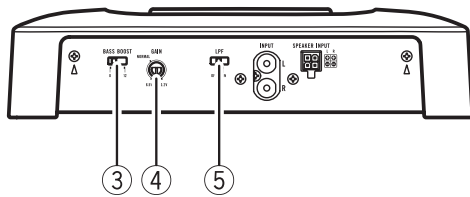
2.2 PANEL FACILITIES

What's what

Front side



Rear side



To adjust the switch, use a flathead screwdriver if needed.

① Power indicator

The power indicator lights up to indicate power ON.

(EW5, ES)

② BFC (beat frequency control) switch

Located front side the unit. If beats are audible while listening to MW/LW broadcasts via car stereo, change the **BFC** switch using a small flathead screwdriver.

③ BASS BOOST (bass boost level control) switch

You can select a bass boost level from 0 dB, 6 dB and 12 dB.

④ GAIN (gain) control

If output remains low, even when the car stereo volume is turned up, turn controls to lower level. If distortion occurs when the car stereo volume is turned up, turn these controls to higher level.

- For use with an RCA equipped car stereo (standard output of 500 mV), set to the

NORMAL position. For use with an RCA equipped Pioneer car stereo, with max. output of 4 V or more, adjust level to match that of the car stereo output.

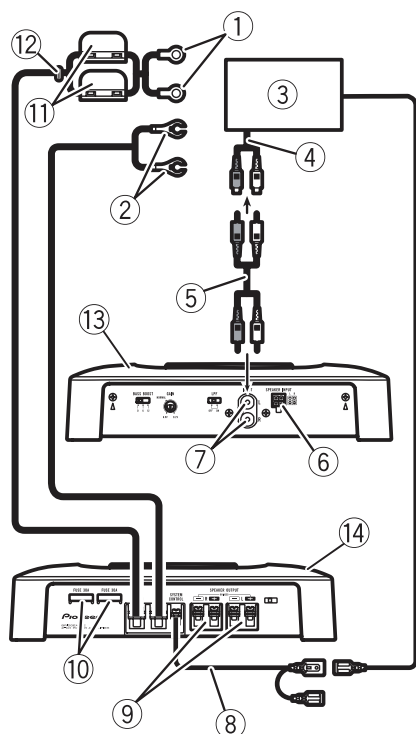
- If you hear too much noise when using the speaker input terminals, turn the gain control to higher level.

⑤ LFP (low-pass filter) switch

Switch the settings based on the connected speaker.

- When the Subwoofer is connected:
Select **ON**. This eliminates high range frequency and outputs low range frequency.
- When the full range speaker is connected:
Select **OFF**. **OFF** outputs the entire frequency range.

2.3 CONNECTION DIAGRAM



- ① Special red battery wire
RD-223 (sold separately)
After completing all other amplifier connections, finally connect the battery wire terminal of the amplifier to the positive (⊕) battery terminal.
- ② Ground wire (Black)
RD-223 (sold separately)
Connect to metal body or chassis.
- ③ Car stereo with RCA output jacks (sold separately)
- ④ External output
If only one input plug is used, do not connect anything to RCA input jack B. (ES)
- ⑤ Connecting wire with RCA pin plugs (sold separately)
- ⑥ Speaker input terminal
- ⑦ RCA input jack

- ⑧ System remote control wire (sold separately)
Connect male terminal of this wire to the system remote control terminal of the car stereo (**SYSTEM REMOTE CONTROL**). The female terminal can be connected to the auto-antenna relay control terminal. If the car stereo lacks a system remote control terminal, connect the male terminal to the power terminal via the ignition switch.

- ⑨ Speaker output terminals
- ⑩ Fuse (30 A) × 2
- ⑪ Fuse (30 A) × 2
- ⑫ Grommet
- ⑬ Rear side
- ⑭ Front side ■

3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

A

To keep the product quality after servicing, please confirm following check points.

No.	Procedures	Item to be confirmed
1	Confirm whether the customer complain has been solved.	The customer complain must not be reappeared. Audio and operations must be normal.
2	Check the output sound.	Audio and operations must be normal.
3	Appearance check	No scratches or dirt on its appearance after receiving it for service.

B

See the table below for the items to be checked regarding video and audio:

Item to be checked regarding audio
Distortion
Noise
Volume too low
Volume too high
Volume fluctuating
Sound interrupted

C

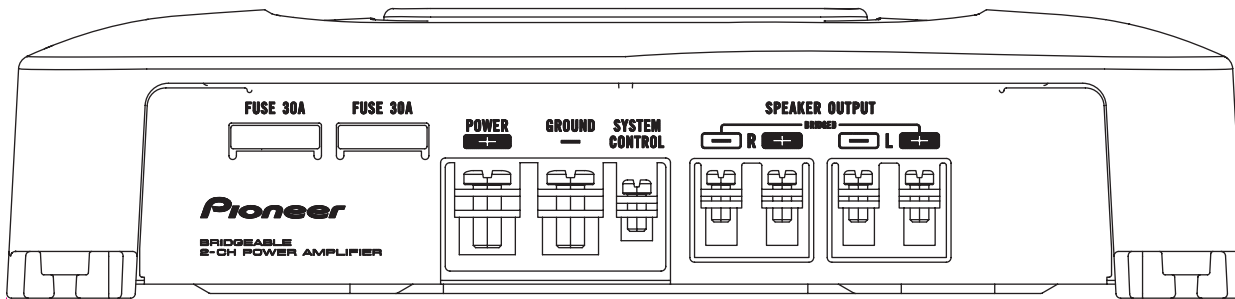
4. BLOCK DIAGRAM

There is not information to be shown in this chapter.

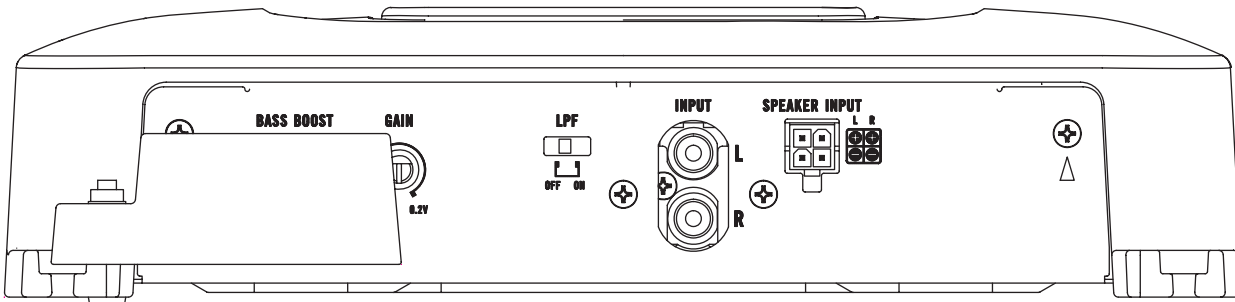
5. DIAGNOSIS

5.1 CONNECTOR FUNCTION DESCRIPTION

D



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F

6. SERVICE MODE

There is not information to be shown in this chapter.

7. DISASSEMBLY

● Removing the Chassis (Fig.1)

- ➔ 1 Remove the two screws.
- ➔ 2 Remove the six screws and then remove the Chassis.

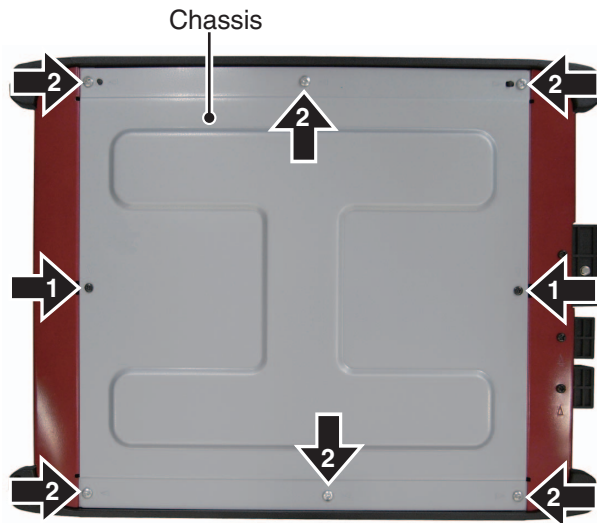


Fig.1

● Removing the Amp Unit (Fig.2)

- ➔ 1 Remove the twenty four screws and then remove the Chassis.

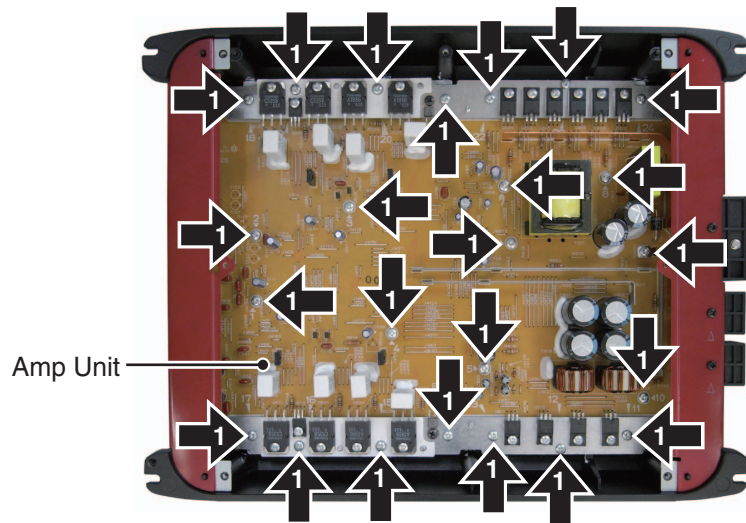
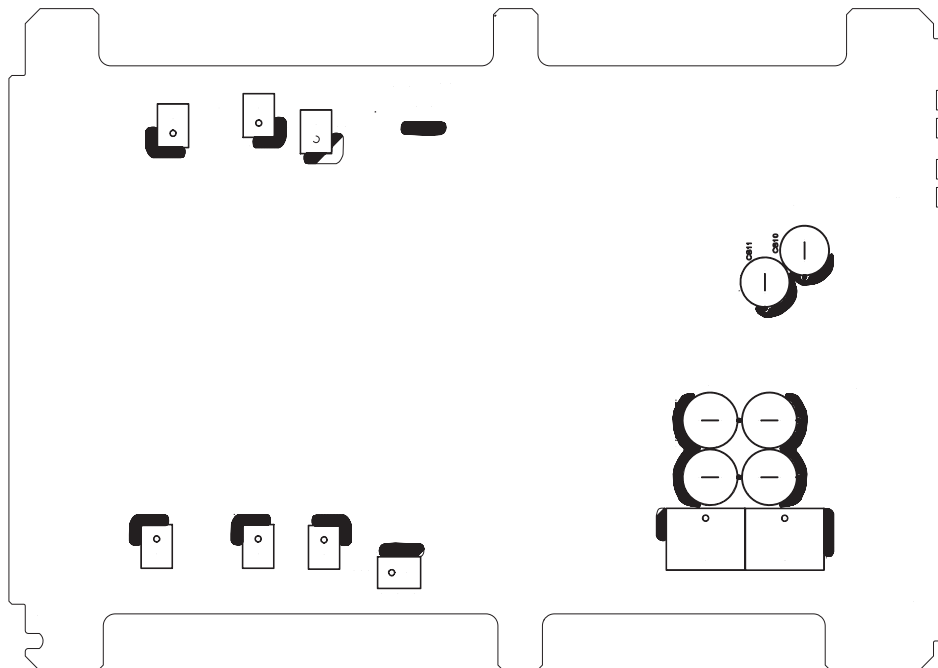


Fig.2



Bonding Position
GYL1006



8. EACH SETTING AND ADJUSTMENT

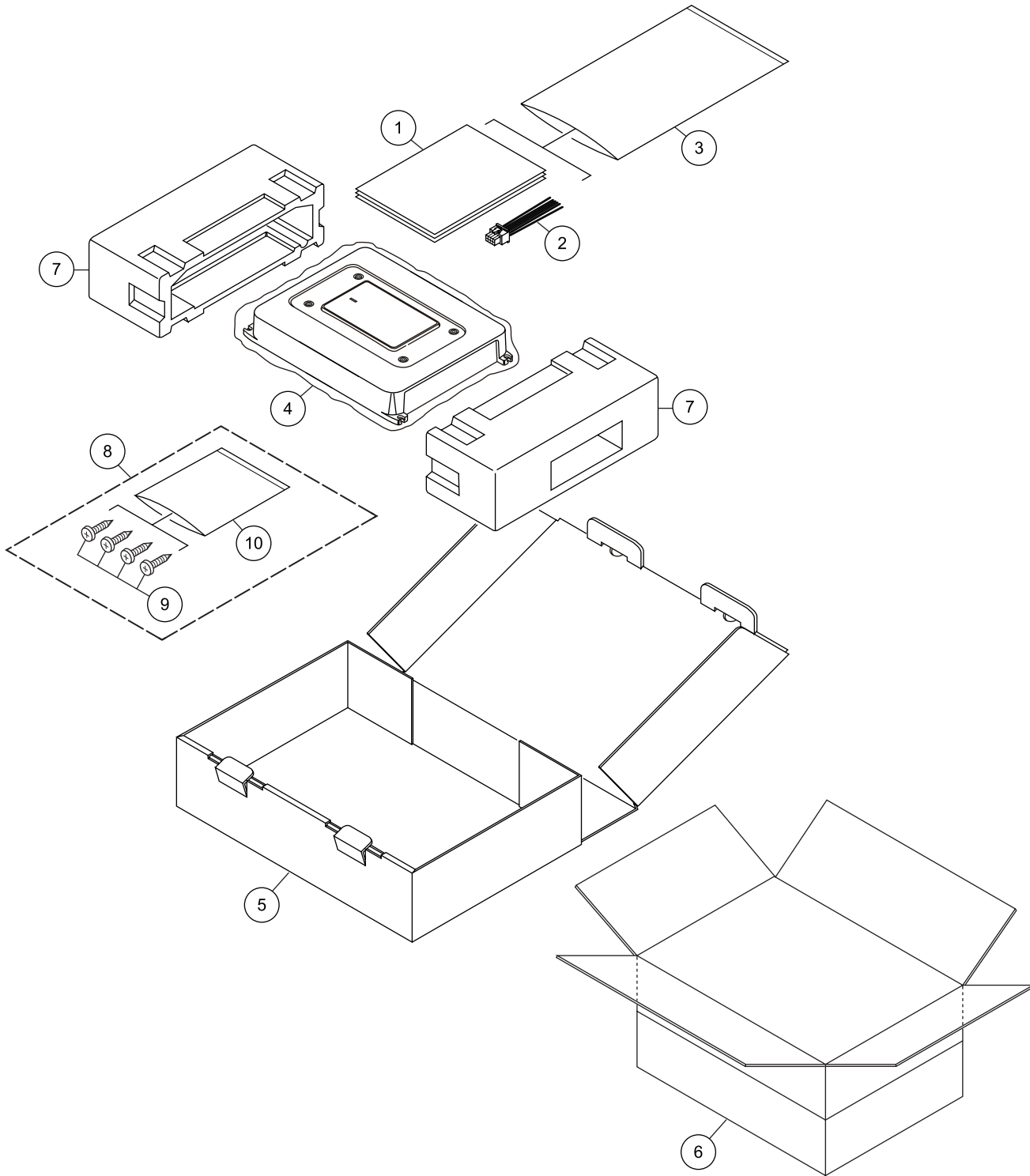
There is not information to be shown in this chapter.

9. EXPLODED VIEWS AND PARTS LIST

NOTES : • Parts marked by " * " are generally unavailable because they are not in our Master Spare Parts List.

- The \triangle mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Screw adjacent to ∇ mark on the product are used for disassembly.
- For the applying amount of lubricants or glue, follow the instructions in this manual.
(In the case of no amount instructions, apply as you think it appropriate.)

9.1 PACKING



(1) PACKING SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
* 1-1	Caution Card	See Contrast table (2)	5	Unit Box	See Contrast table (2)
* 1-2	Warranty Card	See Contrast table (2)	6	Contain Box	See Contrast table (2)
1-3	Owner's Manual	See Contrast table (2)	7	Cushion	CZH6698
2	Cord Assy	CZD5517	8	Screw Assy	CEA5330
3	Polyethylene Bag	CZE2962			
			9	Screw	BYC40P180FTB
4	Polyethylene Bag	See Contrast table (2)	* 10	Polyethylene Sheet	CNM4338

(2) CONTRAST TABLE

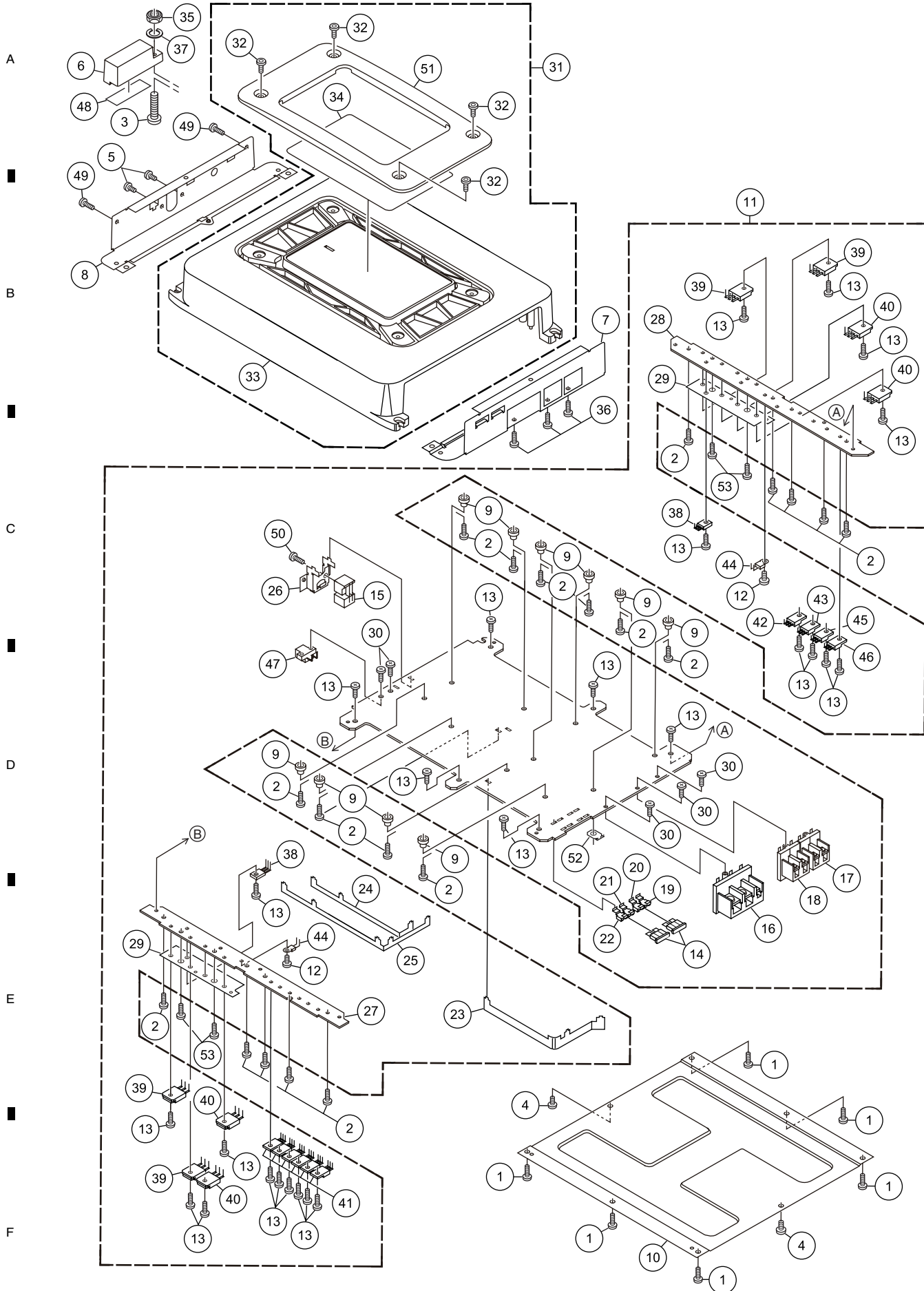
GM-5400T/XJ/UC, GM-5400T/XJ/EW5 and GM-5400T/XJ/ES are constructed the same except for the following:

Mark	No.	Description	GM-5400T/XJ/UC	GM-5400T/XJ/EW5	GM-5400T/XJ/ES
*	1-1	Caution Card	CZR5560	Not used	Not used
*	1-2	Warranty Card	CRY1276	CRY1279	Not used
	1-3	Owner's Manual	CZR5552	CZR5551	CZR5553
	4	Polyethylene Bag	CEG1351	*CZE2987	*CZE2987
	5	Unit Box	CZH6684	CZH6682	CZH6686
	6	Contain Box	CZH6685	CZH6683	CZH6687

Owner's Manual, Installation Manual

Part No.	Language
CZR5552	English, French, Spanish(Espanol)
CZR5551	English, Spanish(Espanol), German, French, Italian, Dutch, Russian
CZR5553	English, Spanish(Espanol), Portuguese(B), Arabic

9.2 EXTERIOR



(1) EXTERIOR SECTION PARTS LIST

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	Screw	BBZ30P100FTC	* 28	Heat Sink	CZN8433
2	Screw	BBZ30P120FTC	29	Sheet	CZN8443
* 3	Screw	See Contrast table (2)	30	Screw	PPZ30P100FNN
4	Screw	BSZ26P060FTB			
5	Screw	BSZ30P060FTB	31	Case Unit	See Contrast table (2)
			32	Screw	BBZ30H060FTB
6	Holder	See Contrast table (2)	* 33	Heat Sink	See Contrast table (2)
7	Plate	CZN8435	34	Plate Assy	See Contrast table (2)
8	Plate	CZN8438	35	Nut	See Contrast table (2)
9	Spacer	CZN8440			
10	Chassis	CZN8441	36	Screw	PPZ30P100FTB
			* 37	Washer	See Contrast table (2)
11	Amp Unit	See Contrast table (2)	38	Transistor(Q515,516)	KTC3114
12	Screw	BBZ30P080FTB	39	Transistor(Q523,524,525,526)	2SC5358
13	Screw	BBZ30P100FTC	40	Transistor(Q527,528,529,530)	2SA1986
⚠ 14	Fuse(30 A)	CEK1330			
15	Pin Jack(JA101)	CKB1068	41	Transistor(Q805,806,807,808,809,810)	FKV550N
			42	Transistor(Q811)	KTC2026
16	Terminal(JA801)	CKE1055	43	Transistor(Q812)	KTA1046
17	Terminal(JA501)	CKE1057	44	Thermistor(TH701,702)	CCX1057
18	Terminal(JA502)	CKE1057	45	Diode(D801)	FML22S
19	Terminal(JA802)	CND2458			
20	Terminal(JA803)	CND2458	46	Diode(D802)	FML22R
			47	Socket(J1)	CKM1463
21	Terminal(JA804)	CND2458	* 48	Seal	CAN3984
22	Terminal(JA805)	CND2458	49	Screw	BBZ30P080FTB
* 23	Bas Bar(1)	CZN8425	50	Screw	PPZ30P100FTB
* 24	Bas Bar(5)	CZN8429			
* 25	Bas Bar(3)	CZN8427	51	Plate	CZN8417
			52	Earth Terminal(KN801)	CZK2969
26	Holder	CZN8430	53	Screw	PBZ30P120FTB
* 27	Heat Sink	CZN8432			

(2) CONTRAST TABLE

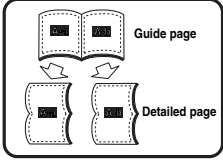
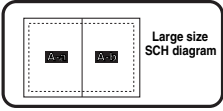
GM-5400T/XJ/UC, GM-5400T/XJ/EW5 and GM-5400T/XJ/ES are constructed the same except for the following:

<u>Mark</u>	<u>No.</u>	<u>Description</u>	<u>GM-5400T/XJ/UC</u>	<u>GM-5400T/XJ/EW5</u>	<u>GM-5400T/XJ/ES</u>
*	3	Screw	BMZ40P250FTB	Not used	Not used
	6	Holder	CNV8522	Not used	Not used
	7	Plate	CZN8435	CZN8435	CZN8435
	11	Amp Unit	CZW5578	CZW5577	CZW5577
	31	Case Unit	CZX6645	CZX6644	CZX6646
*	33	Heat Sink	CZN8444	CZN8416	CZN8416
	34	Plate Assy	CZX6639	CZX6638 CZX6639	
	35	Nut	NB40FTB	Not used	Not used
*	37	Washer	WB45FTB	Not used	Not used

10. SCHEMATIC DIAGRAM

10.1 AMP UNIT(GUIDE PAGE)

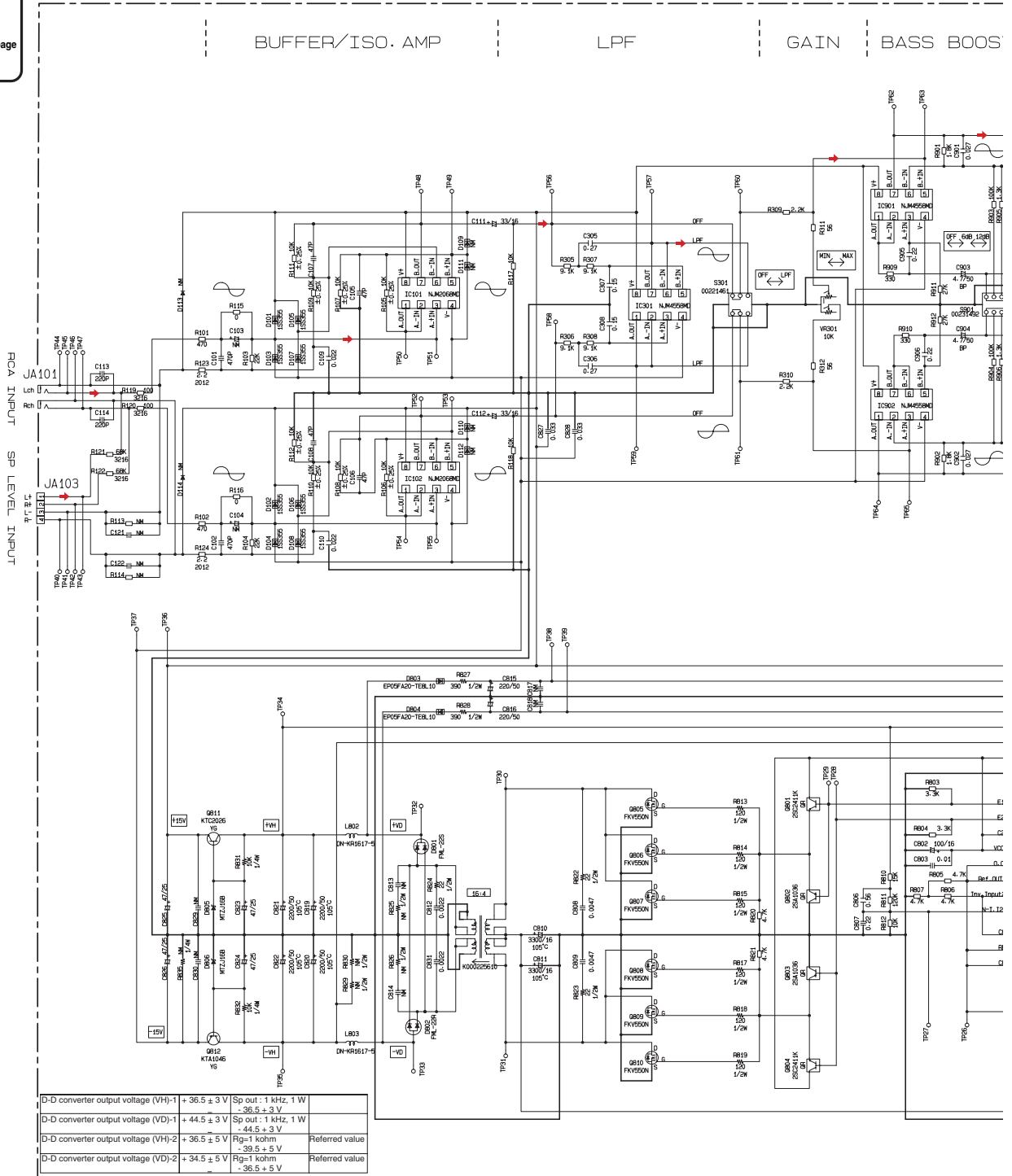
Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".



A-a

NOTE :
For resistors and capacitors in the circuit diagrams, their resistance values or capacitance values are expressed in codes:

Ex. *Resistors Code	Practical value	*Capacitors Code	Practical value
123	12 k ohms	103	0.01 uF
103	10 k ohms	101/10	100 uF/10 V



D-D converter output voltage (VH)-1	+36.5 ± 3 V	Sp out : 1 kHz, 1 W	
D-D converter output voltage (VD)-1	+44.5 ± 3 V	Sp out : 1 kHz, 1 W	
D-D converter output voltage (VH)-2	+36.5 ± 5 V	Rg=1 kohm	Referred value
D-D converter output voltage (VD)-2	+34.5 ± 5 V	Rg=1 kohm	Referred value

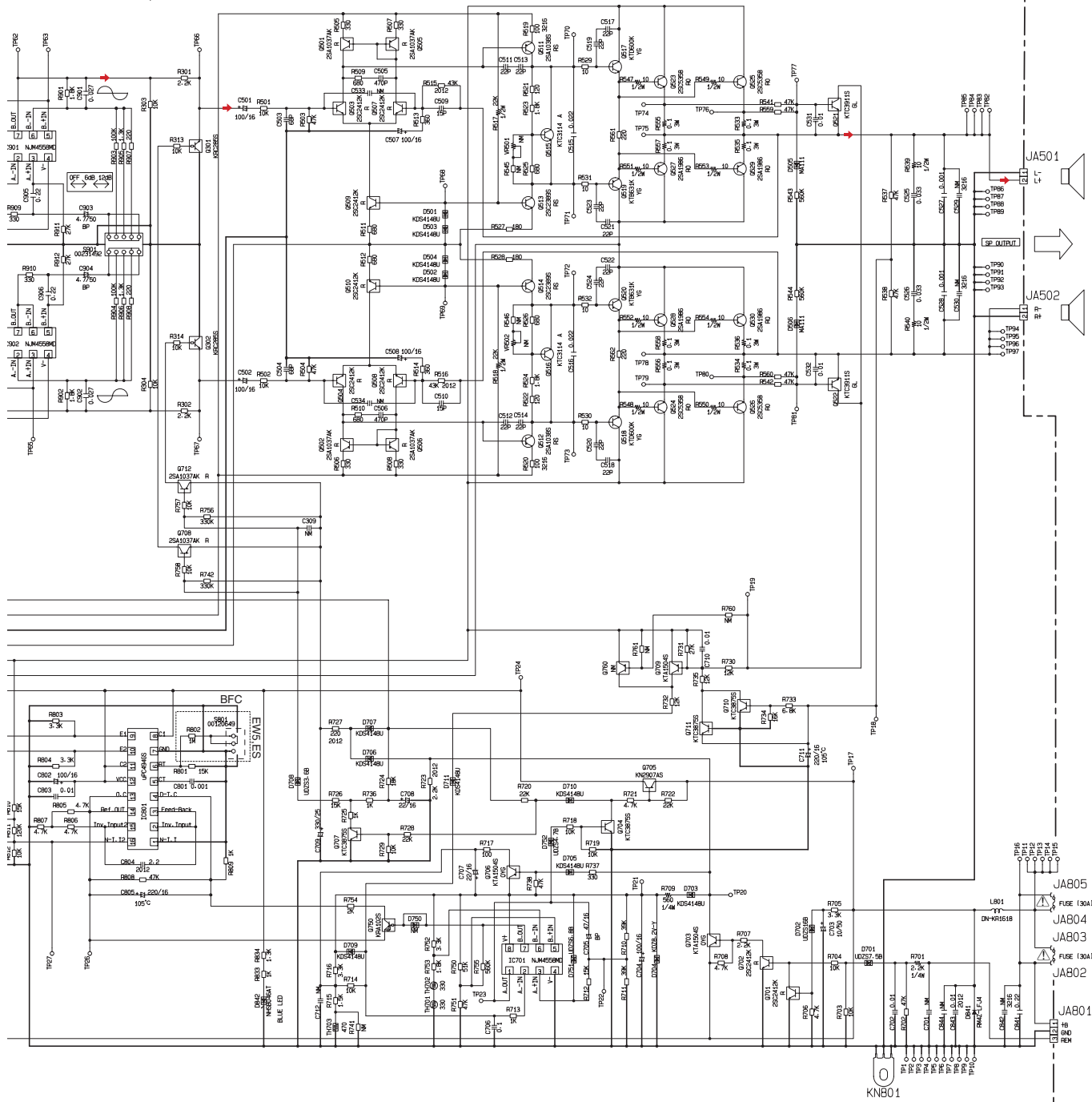
A-b

NM : No Mount

The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

A AMP UNIT

BASS BOOST



AMP UNIT

NM : No Mount

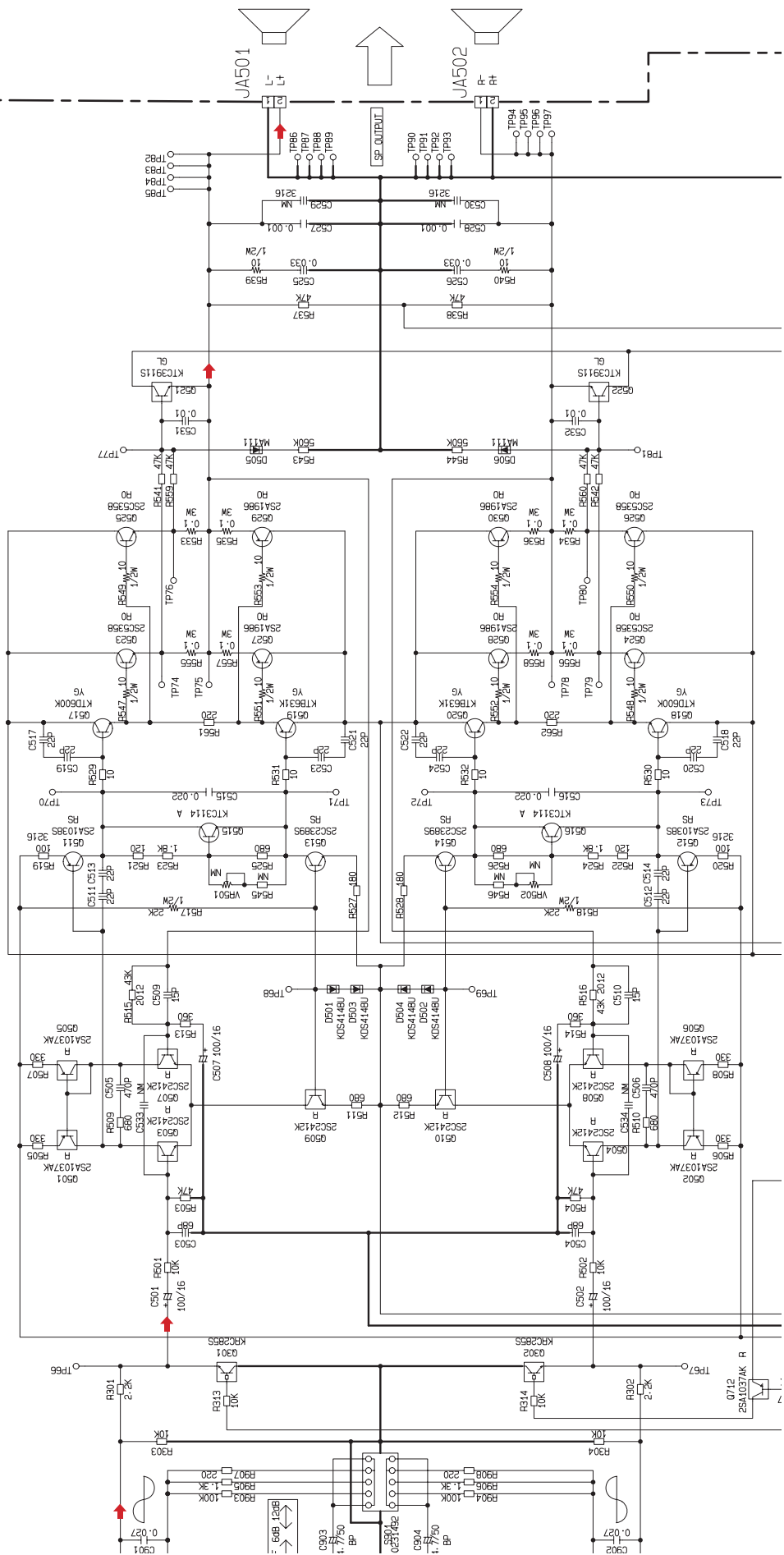
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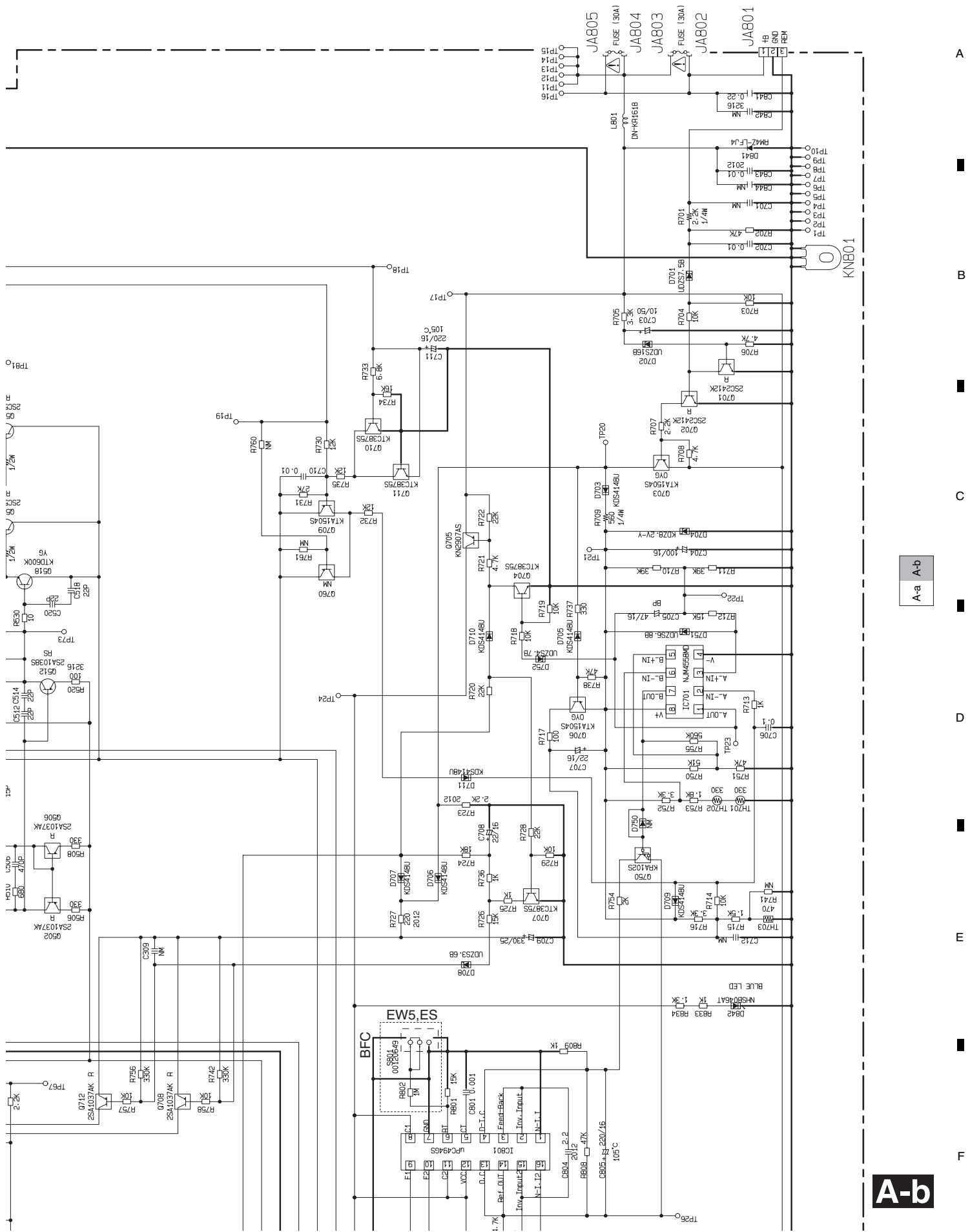
300ST

GM-5400T/XJ/UC

A-a A-b

A-b





A-a A-b

A-b

1

2

3

4

A-b

A-a

A-a

NOTE :
 For resistors and capacitors in the circuit diagrams, their resistance values or capacitance values are expressed in codes:

Ex. *Resistors
 Code 123
 Practical value 12 k ohms

*Capacitors
 Code 103
 Practical value 0.01 uF

Code 101/10
 Practical value 100 uF/10 V

The diagram illustrates the internal circuitry of the GM-5400T/XJUC amplifier, organized into four functional sections from left to right:

- BUFFER/ISO. AMP:** This section handles the initial signal input. It features two channels (A and B) with inputs TP48 and TP49. It uses two operational amplifiers, IC101 and IC102, configured as buffers. Input coupling capacitors C101 and C102 are present. The outputs are TP50 and TP51.
- LPF (Low Pass Filter):** This section filters the buffered signals. It uses two more operational amplifiers, IC901 and IC902, in a filter configuration. It includes several resistors (R901-R908) and capacitors (C901-C908) to define the filter characteristics. Outputs are TP52 and TP53.
- GAIN:** This section provides the main amplification. It uses two operational amplifiers, IC901 and IC902, in a gain stage configuration. It includes resistors (R909-R912) and capacitors (C901-C908) for gain control and stability. Outputs are TP54 and TP55.
- BASS BOOST:** This section provides additional low-frequency gain. It uses two operational amplifiers, IC901 and IC902, in a bass boost configuration. It includes resistors (R901-R912) and capacitors (C901-C908) to boost the bass response. Outputs are TP56 and TP57.

The final outputs of the amplifier are TP58 and TP59, which are connected to the RCA INPUT and SP LEVEL INPUT respectively. The circuit also includes various passive components like resistors (R101-R117) and capacitors (C101-C117) for timing, filtering, and biasing.

GM-5400T/XJUC

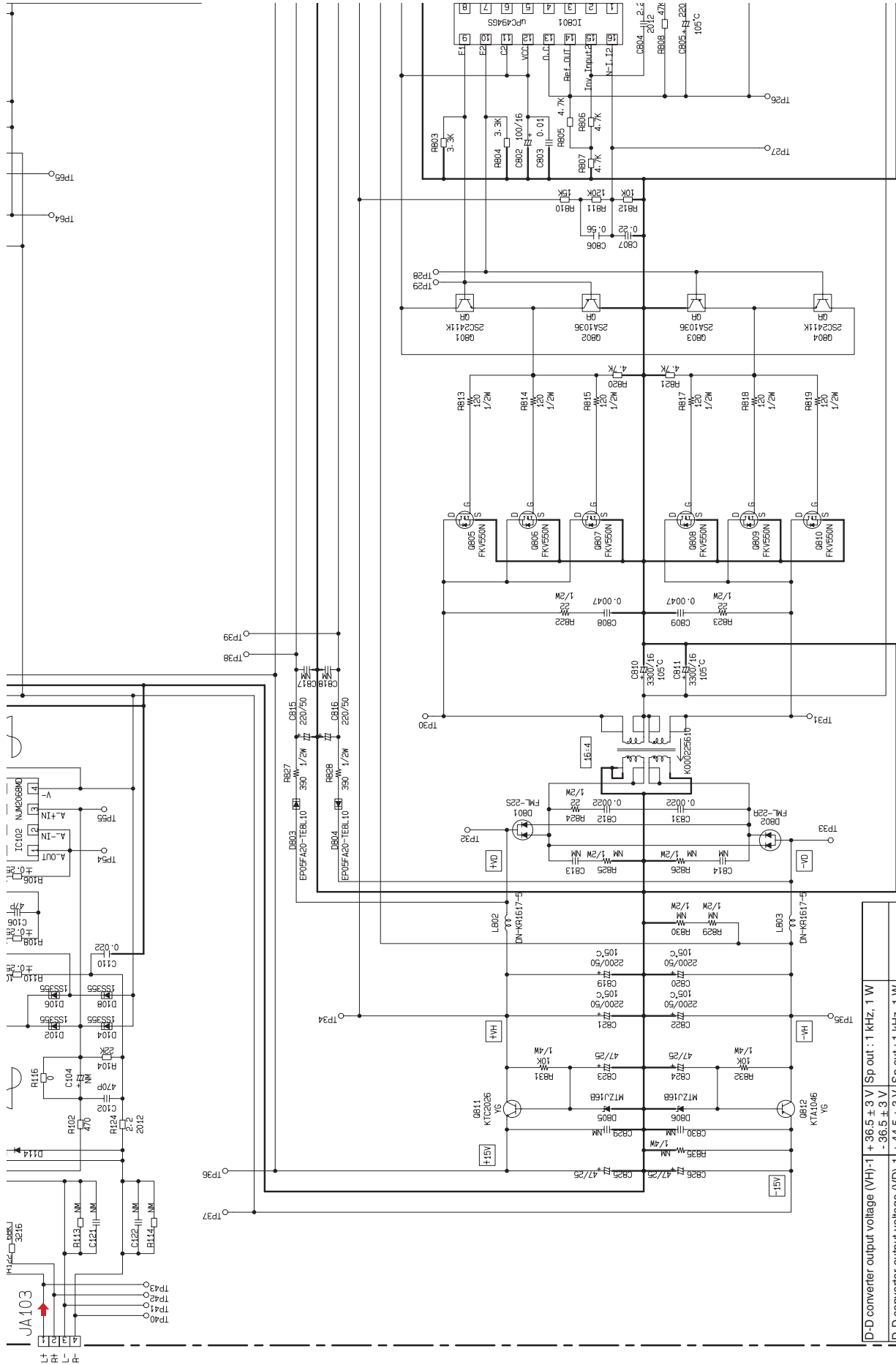
1

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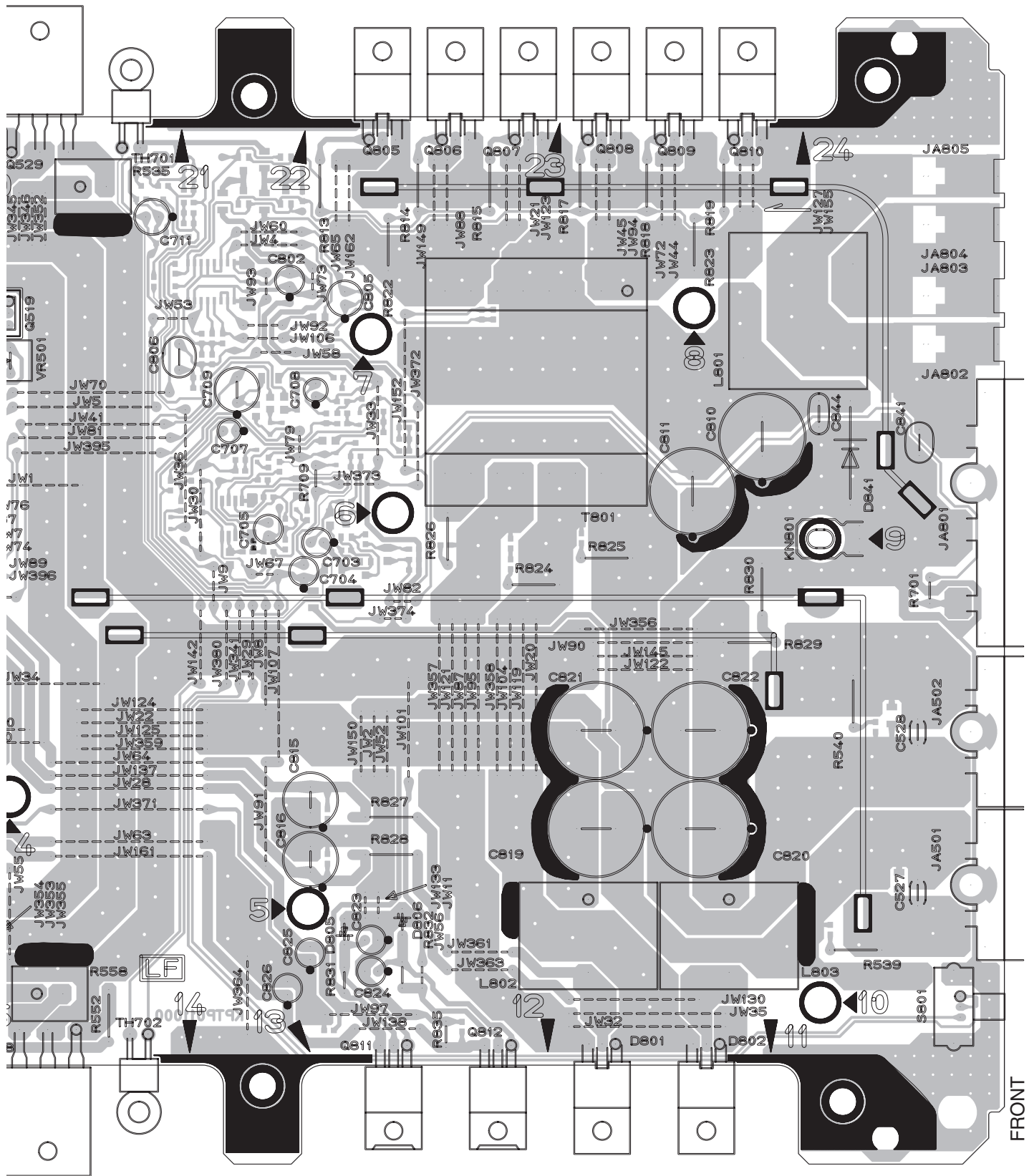
D-D converter output voltage (VH)-1	+36.5 ± 3 V	Sp out : 1 kHz, 1 W
D-D converter output voltage (VD)-1	-36.5 ± 3 V	Sp out : 1 kHz, 1 W
D-D converter output voltage (VH)-2	+44.5 ± 3 V	Sp out : 1 kHz, 1 W
D-D converter output voltage (VD)-2	-44.5 ± 3 V	Sp out : 1 kHz, 1 W
Referred value	Referred value	Referred value
D-D converter output voltage (VH)-1	+36.5 ± 5 V	Rg=1 kohm
D-D converter output voltage (VD)-1	-36.5 ± 5 V	Rg=1 kohm
D-D converter output voltage (VH)-2	+34.5 ± 5 V	Rg=1 kohm
D-D converter output voltage (VD)-2	-34.5 ± 5 V	Rg=1 kohm

A-b

A-a

A-a

SIDE A



A

B

C

D

E

F

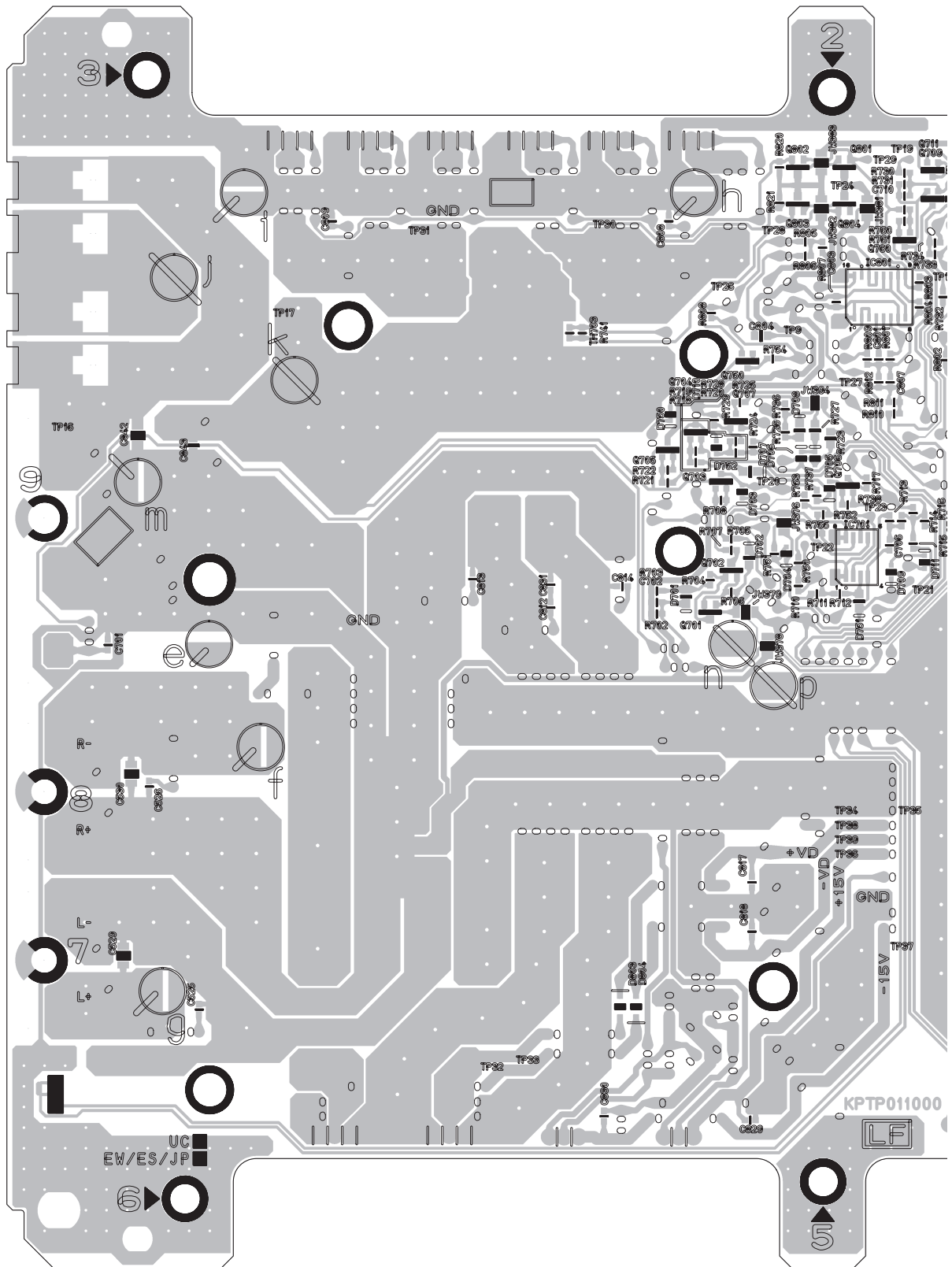
FRONT

A

GM-5400T/XJ/UC

A

A AMP UNIT



B

C

D

E

F

A

SIDE B

A

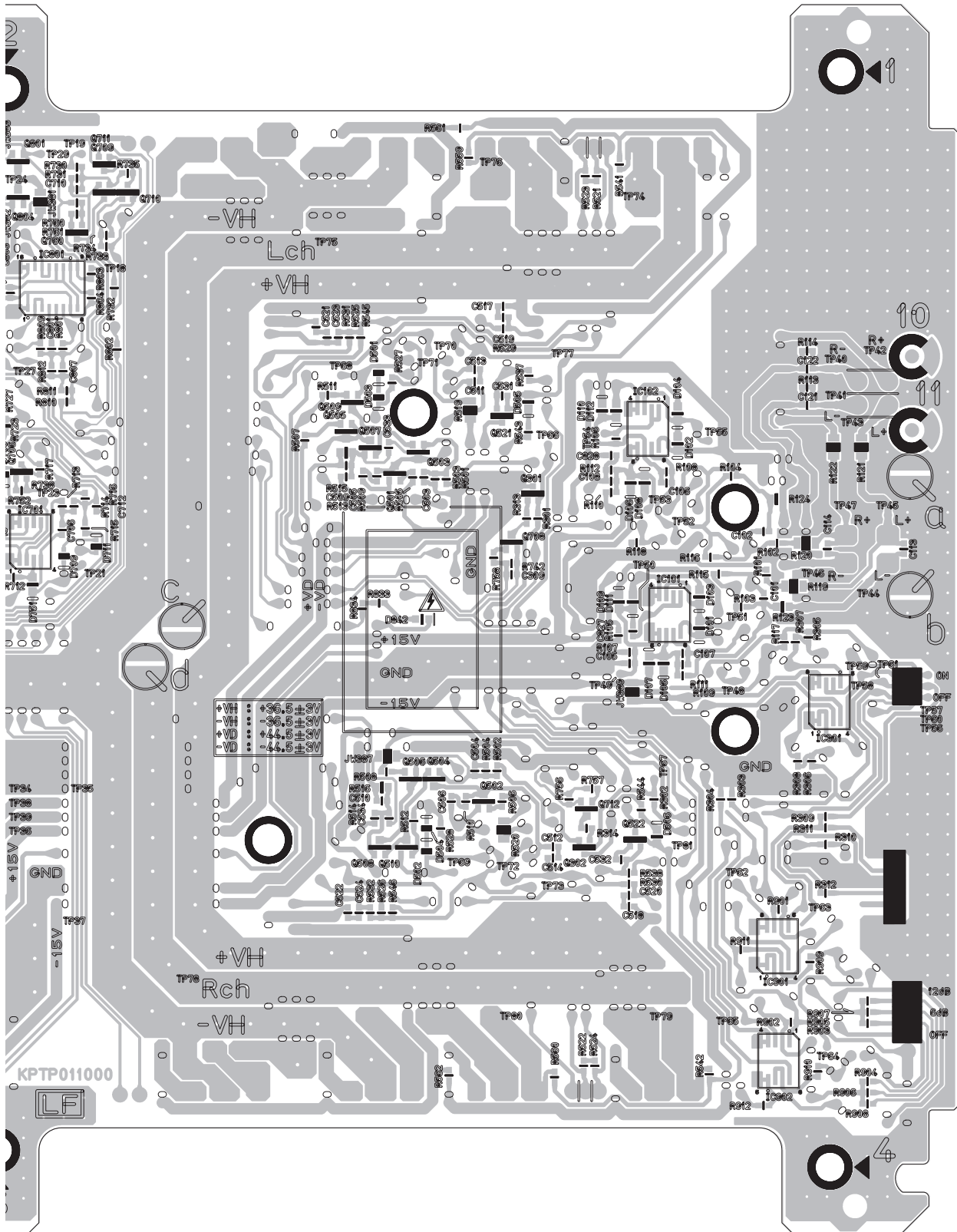
B

C

D

E

F



A

12. ELECTRICAL PARTS LIST

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/○S○○○○J,RS1/○○S○○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

- The \triangle mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Meaning of the figures and others in the parentheses in the parts list.

Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.

IC 301 (A, 91, 111) IC NJM2068V

- The expression of the unit in this manual is shown by u instead of μ . Please do not make a mistake.

Circuit Symbol and No.

Part No.

Circuit Symbol and No.

Part No.

Q 523	Transistor	2SC5358
Q 524	Transistor	2SC5358
Q 525	Transistor	2SC5358
Q 526	Transistor	2SC5358

Q 527	Transistor	2SA1986
Q 528	Transistor	2SA1986
Q 529	Transistor	2SA1986
Q 530	Transistor	2SA1986
Q 701	Transistor	2SC2412K

Q 702	Transistor	2SC2412K
Q 703	Transistor	KTA1504S
Q 704	Transistor	KTC3875S
Q 705	Transistor	KN2907AS
Q 706	Transistor	KTA1504S

Q 707	Transistor	KTC3875S
Q 708	Transistor	2SA1037K
Q 709	Transistor	KTA1504S
Q 710	Transistor	KTC3875S
Q 711	Transistor	KTC3875S

Q 712	Transistor	2SA1037K
Q 750	Transistor	KRA102S
Q 801	Transistor	2SC2411K
Q 802	Transistor	2SA1036K
Q 803	Transistor	2SA1036K

Q 804	Transistor	2SC2411K
Q 805	Transistor	FKV550N
Q 806	Transistor	FKV550N
Q 807	Transistor	FKV550N
Q 808	Transistor	FKV550N

Q 809	Transistor	FKV550N
Q 810	Transistor	FKV550N
Q 811	Transistor	KTC2026
Q 812	Transistor	KTA1046
D 101	Diode	1SS355

D 102	Diode	1SS355
D 103	Diode	1SS355
D 104	Diode	1SS355
D 105	Diode	1SS355
D 106	Diode	1SS355

D 107	Diode	1SS355
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A

Unit Number : CZW5578(UC)

Unit Number : CZW5577(EW5,ES)

Unit Name : Amp Unit

MISCELLANEOUS

IC 101	IC	NJM2068MD
IC 102	IC	NJM2068MD
IC 301	IC	NJM4558MD
IC 701	IC	NJM4558MD
IC 801	IC	UPC494GS

IC 901	IC	NJM4558MD
IC 902	IC	NJM4558MD
Q 301	Transistor	KRC285S
Q 302	Transistor	KRC285S
Q 501	Transistor	2SA1037K

Q 502	Transistor	2SA1037K
Q 503	Transistor	2SC2412K
Q 504	Transistor	2SC2412K
Q 505	Transistor	2SA1037K
Q 506	Transistor	2SA1037K

Q 507	Transistor	2SC2412K
Q 508	Transistor	2SC2412K
Q 509	Transistor	2SC2412K
Q 510	Transistor	2SC2412K
Q 511	Transistor	2SA1038S

Q 512	Transistor	2SA1038S
Q 513	Transistor	2SC2389S
Q 514	Transistor	2SC2389S
Q 515	Transistor	KTC3114
Q 516	Transistor	KTC3114

Q 517	Transistor	KTD600K
Q 518	Transistor	KTD600K
Q 519	Transistor	KTB631K
Q 520	Transistor	KTB631K
Q 521	Transistor	KTC3911S

Q 522	Transistor	KTC3911S
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5		6	7		8
<u>Circuit Symbol and No.</u>		<u>Part No.</u>	<u>Circuit Symbol and No.</u>		<u>Part No.</u>
D 108	Diode	1SS355	R 122		RS1/8S683J
D 501	Diode	KDS4148U			
D 502	Diode	KDS4148U	R 123		RS1/10S2R2J
D 503	Diode	KDS4148U	R 124		RS1/10S2R2J
			R 301		RS1/16S222J
D 504	Diode	KDS4148U	R 302		RS1/16S222J
D 505	Diode	MA111	R 303		RS1/16S103J
D 506	Diode	MA111			
D 701	Diode	UDZS7R5(B)	R 304		RS1/16S103J
D 702	Diode	UDZS16(B)	R 305		RS1/16S912J
			R 306		RS1/16S912J
D 703	Diode	KDS4148U	R 307		RS1/16S912J
D 704	Diode	KDZ8R2V(Y)	R 308		RS1/16S912J
D 705	Diode	KDS4148U			
D 706	Diode	KDS4148U	R 309		RS1/16S222J
D 707	Diode	KDS4148U	R 310		RS1/16S222J
			R 311		RS1/16S560J
D 708	Diode	UDZS3R6(B)	R 312		RS1/16S560J
D 709	Diode	KDS4148U	R 313		RS1/16S103J
D 710	Diode	KDS4148U			
D 711	Diode	KDS4148U	R 314		RS1/16S103J
D 751	Diode	UDZS6R8(B)	R 501		RS1/16S103J
			R 502		RS1/16S103J
D 752	Diode	UDZS4R7(B)	R 503		RS1/16S473J
D 801	Diode	FML22S	R 504		RS1/16S473J
D 802	Diode	FML22R			
D 803	Diode	EP05FA20	R 505		RS1/16S331J
D 804	Diode	EP05FA20	R 506		RS1/16S331J
			R 507		RS1/16S331J
D 805	Diode	MTZJ16(B)	R 508		RS1/16S331J
D 806	Diode	MTZJ16(B)	R 509		RS1/16S681J
D 841	Diode	RM4Z-LFJ4			
D 842	LED	NHSB046AT	R 510		RS1/16S681J
L 801	Choke Coil 45 uH	CZT2939	R 511		RS1/16S681J
			R 512		RS1/16S681J
L 802	Choke Coil 105 uH	CZT2938	R 513		RS1/16S361J
L 803	Choke Coil 105 uH	CZT2938	R 514		RS1/16S361J
T 801	Transformer	CZT2940			
TH701	Thermistor	CCX1057	R 515		RS1/10S433J
TH702	Thermistor	CCX1057	R 516		RS1/10S433J
			R 517		RD1/2PM223J
TH703	Posistor	CZC2982	R 518		RD1/2PM223J
S 301	Switch(OFF/LPF)	CZS2928	R 519		RS1/8S101J
S 801	Switch(BFC)(EW5,ES)	CZS2927			
S 901	Switch(OFF/6dB/12dB)	CZS2929	R 520		RS1/8S101J
VR301	Variable Resistor 10 kohm	CZC2975	R 521		RS1/16S121J
			R 522		RS1/16S121J
			R 523		RS1/16S182J
			R 524		RS1/16S182J
RESISTORS					
R 101		RS1/16S471J			
R 102		RS1/16S471J	R 525		RS1/16S681J
R 103		RS1/16S223J	R 526		RS1/16S681J
R 104		RS1/16S223J	R 527		RS1/16S181J
R 105	10 kohm	CCN1152	R 528		RS1/16S181J
			R 529		RS1/16S100J
R 106	10 kohm	CCN1152			
R 107	10 kohm	CCN1152	R 530		RS1/16S100J
R 108	10 kohm	CCN1152	R 531		RS1/16S100J
R 109	10 kohm	CCN1152	R 532		RS1/16S100J
R 110	10 kohm	CCN1152	R 533	0.1 ohm(3 W)	CZC2973
			R 534	0.1 ohm(3 W)	CZC2973
R 111	10 kohm	CCN1152			
R 112	10 kohm	CCN1152	R 535	0.1 ohm(3 W)	CZC2973
R 113		RS1/16S0R0J	R 536	0.1 ohm(3 W)	CZC2973
R 114		RS1/16S0R0J	R 537		RS1/16S473J
R 115		RS1/16S0R0J	R 538		RS1/16S473J
			R 539		RD1/2PM100J
R 116		RS1/16S0R0J			
R 117		RS1/16S103J	R 540		RD1/2PM100J
R 118		RS1/16S103J	R 541		RS1/16S473J
R 121		RS1/8S683J	R 542		RS1/16S473J
			R 543		RS1/16S564J

	1	2	3	4
	<u>Circuit Symbol and No.</u>	<u>Part No.</u>	<u>Circuit Symbol and No.</u>	<u>Part No.</u>
	R 544	RS1/16S564J	R 753	RS1/16S182J
	R 547	RD1/2PM100J	R 754	RS1/16S202J
A	R 548	RD1/2PM100J	R 756	RS1/16S334J
	R 549	RD1/2PM100J	R 757	RS1/16S103J
	R 550	RD1/2PM100J	R 758	RS1/16S103J
	R 551	RD1/2PM100J	R 801	RS1/16S153J
	R 552	RD1/2PM100J	R 802	RS1/16S105J
	R 553	RD1/2PM100J	R 803	RS1/16S332J
	R 554	RD1/2PM100J	R 804	RS1/16S332J
	R 555	0.1 ohm(3 W) CZC2973	R 805	RS1/16S472J
	R 556	0.1 ohm(3 W) CZC2973	R 806	RS1/16S472J
	R 557	0.1 ohm(3 W) CZC2973	R 807	RS1/16S472J
	R 558	0.1 ohm(3 W) CZC2973	R 808	RS1/16S473J
B	R 559	RS1/16S473J	R 809	RS1/16S102J
	R 560	RS1/16S473J	R 810	RS1/16S153J
	R 561	RS1/16S221J	R 811	RS1/16S124J
	R 562	RS1/16S221J	R 812	RS1/16S103J
	R 701	2.2 kohm(1/4 W) CZC2980	R 813	RD1/2PM121J
	R 702	RS1/16S473J	R 814	RD1/2PM121J
	R 703	RS1/16S103J	R 815	RD1/2PM121J
	R 704	RS1/16S103J	R 817	RD1/2PM121J
	R 705	RS1/16S332J	R 818	RD1/2PM121J
	R 706	RS1/16S472J	R 819	RD1/2PM121J
	R 707	RS1/16S222J	R 820	RS1/16S472J
C	R 708	RS1/16S472J	R 821	RS1/16S472J
	R 709	560 ohm(1/4 W) CZC2981	R 822	RD1/2PM220J
	R 710	RS1/16S393J	R 823	RD1/2PM220J
	R 711	RS1/16S393J	R 824	RD1/2PM220J
	R 712	RS1/16S153J	R 827	RD1/2PM391J
	R 713	RS1/16S102J	R 828	RD1/2PM391J
	R 714	RS1/16S103J	R 831	10 kohm(1/4 W) CZC2979
	R 715	RS1/16S152J	R 832	10 kohm(1/4 W) CZC2979
	R 716	RS1/16S332J	R 833	RS1/16S102J
	R 717	RS1/16S101J	R 834	RS1/16S132J
	R 718	RS1/16S103J	R 901	RS1/16S182J
D	R 719	RS1/16S103J	R 902	RS1/16S182J
	R 720	RS1/16S223J	R 903	RS1/16S104J
	R 721	RS1/16S472J	R 904	RS1/16S104J
	R 722	RS1/16S223J	R 905	RS1/16S132J
	R 723	RS1/10S222J	R 906	RS1/16S132J
	R 724	RS1/16S183J	R 907	RS1/16S221J
	R 725	RS1/16S102J	R 908	RS1/16S221J
	R 726	RS1/16S153J	R 909	RS1/16S331J
	R 727	RS1/10S221J	R 910	RS1/16S331J
	R 728	RS1/16S223J	R 911	RS1/16S273J
E	R 729	RS1/16S103J	R 912	RS1/16S273J
	R 730	RS1/16S123J	CAPACITORS	
	R 731	RS1/16S273J		
	R 732	RS1/16S123J	C 101	CCSRCH471J50
	R 733	RS1/16S682J	C 102	CCSRCH471J50
	R 734	RS1/16S163J	C 105	CCSRCH470J50
	R 735	RS1/16S123J	C 106	CCSRCH470J50
	R 736	RS1/16S102J	C 107	CCSRCH470J50
	R 737	RS1/16S331J	C 108	CCSRCH470J50
	R 738	RS1/16S473J	C 109	CFTLA223J50
	R 742	RS1/16S334J	C 110	CFTLA223J50
	R 743	RS1/16S472J	C 111	CEAT330M16
F	R 750	RS1/16S513J	C 112	CEAT330M16
	R 751	RS1/16S473J	C 113	CCSRCH221J50
	R 752	RS1/16S332J		

5		6	7		8
<u>Circuit Symbol and No.</u>		<u>Part No.</u>	<u>Circuit Symbol and No.</u>		<u>Part No.</u>
C 114		CCSRCH221J50	C 820	2 200 uF/50 V	CZC2976
C 305		CFTLA274J50	C 821	2 200 uF/50 V	CZC2976
C 306		CFTLA274J50	C 822	2 200 uF/50 V	CZC2976
C 307		CFTLA154J50	C 823		CEAT470M25
C 308		CFTLA154J50	C 824		CEAT470M25
C 501		CEAT101M16	C 825		CEAT470M25
C 502		CEAT101M16	C 826		CEAT470M25
C 503		CCSRCH680J50	C 827		CKSRYB333K50
C 504		CCSRCH680J50	C 828		CKSRYB333K50
C 505		CCSRCH471J50	C 831		CCSRCH222J50
C 506		CCSRCH471J50	C 841		CFTLA224J50
C 507		CEAT101M16	C 843		CCSQCH103J50
C 508		CEAT101M16	C 901		CFTLA273J50
C 509		CCSRCH150J50	C 902		CFTLA273J50
C 510		CCSRCH150J50	C 903		CEANP4R7M50
C 511		CCSRCH220J50	C 904		CEANP4R7M50
C 512		CCSRCH220J50	C 905		CFTLA224J50
C 513		CCSRCH220J50	C 906		CFTLA224J50
C 514		CCSRCH220J50			
C 515		CFTLA223J50			
C 516		CFTLA223J50			
C 517		CCSRCH220J50			
C 518		CCSRCH220J50			
C 519		CCSRCH220J50			
C 520		CCSRCH220J50			
C 521		CCSRCH220J50			
C 522		CCSRCH220J50			
C 523		CCSRCH220J50			
C 524		CCSRCH220J50			
C 525		CKSRYB333K50			
C 526		CKSRYB333K50			
C 527		CQMA102J50			
C 528		CQMA102J50			
C 531		CKSRYB103K50			
C 532		CKSRYB103K50			
C 702		CKSRYB103K50			
C 703		CEJQ100M50			
C 704		CEAT101M16			
C 705		CEANP470M16			
C 706		CKSRYB104K50			
C 707		CEJQ220M16			
C 708		CEJQ220M16			
C 709		CEAT331M25			
C 710		CKSRYB103K50			
C 711		CEAT221M16			
C 801		CCSRCH102J50			
C 802		CEAT101M16			
C 803		CKSRYB103K50			
C 804		CKSQYB225K10			
C 805		CEAT221M16			
C 806		CFTLA564J50			
C 807		CKSRYB224K16			
C 808		CKSRYB472K50			
C 809		CKSRYB472K50			
C 810	3 300 uF/16 V	CZC2977			
C 811	3 300 uF/16 V	CZC2977			
C 812		CCSRCH222J50			
C 815		CEAT221M50			
C 816		CEAT221M50			
C 819	2 200 uF/50 V	CZC2976			