

Pioneer

Service Manual

ORDER NO.
RRV4438

AV Receiver

VSX-323-K

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
VSX-323-K	SYXE8	AC 220 V to 230 V	
VSX-323-K	PWVXE8	AC 220 V to 240 V	
VSX-323-K	DLXE	AC 110 V to 127 V/220 V to 240 V	

This service manual should be used together with the following manual(s).

Model No.	Order No.	Remarks
HTP-072/CMXESM	RRV4432	VSX-324-K-P/YXE8, DLXE, PWXE

For SPECIFICATIONS and PANEL FACILITIES, refer to the operating instructions.

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1. CONTRAST OF MISCELLANEOUS PARTS

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

● 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.

● Screws adjacent to ∇ mark on 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.)

● Nos. indicate the pages and Nos. in the service manual for the base model.

● When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560Ω → 56 x 10¹ → 561 RD1/4PU5 6 1 J
 47kΩ → 47 x 10³ → 473 RD1/4PU4 7 3 J
 0.5Ω → R50 RN2HR 5 0 K
 1Ω → 1R0 RS1P 1 R 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ → 562 x 10¹ → 5621 RN1/4PC 5 6 2 1 F

CONTRAST TABLE

VSX-324-K-P/YXEB, VSX-323-K/SYXE8, VSX-323-K/PWVXE8 and VSX-323-K/DLXE are constructed the same except for the following:

Mark	No.	Symbol and Description	VSX-324-K-P /YXEB	VSX-323-K /SYXE8	VSX-323-K /PWVXE8	VSX-323-K /DLXE	Remarks
PCB ASSEMBLIES							
NSP		1..PCB TTL ASSY MAIN	7025HK1215010-IL	7025HK1212010-IL	7025HK1212020-IL	7025HK1212030-IL	
	P46-1	2..MAIN Assy	7028073701010-IL	7028073651010-IL	7028073651020-IL	7028073651030-IL	
	P46-2	2..OPTCO Assy	7028073702010-IL	7028073653010-IL	7028073653010-IL	7028073653010-IL	
	P46-3	2..G-L Assy	7028073704010-IL	7028073655010-IL	7028073655010-IL	7028073655010-IL	
	P46-4	2..G-T Assy	7028073705010-IL	Not used	Not used	Not used	
	P46-5	2..G-CNT Assy	7028073706010-IL	Not used	Not used	Not used	
	P46-6	2..V_SEL ASSY	Not used	Not used	Not used	7028073654010-IL	
		2..REG Assy	Not used	7028073652010-IL	7028073652010-IL	7028073652010-IL	No. 62
		2..G-R Assy	Not used	7028073656010-IL	7028073656010-IL	7028073656010-IL	No. 63
		2..G-S Assy	Not used	7028073657010-IL	7028073657010-IL	7028073657010-IL	No. 64
NSP		1..PCB TTL ASSY DMAIN	7025HK1215011-IL	7025HK1212011-IL	7025HK1212021-IL	7025HK1212031-IL	
NSP		1..PCB TTL ASSY FRONT	7025HK1215012-IL	7025HK1212012-IL	7025HK1212022-IL	7025HK1212032-IL	
	P46-9	2..HP Assy	7028073672020-IL	7028073672010-IL	7028073672010-IL	7028073672010-IL	
NSP		1..PCB TTL ASSY CPU	7025HK1215013-IL	7025HK1212013-IL	7025HK1212023-IL	7025HK1212033-IL	
	P46-12	2..CPU Assy	7028073681010-IL	7028073681080-IL	7028073681090-IL	70280736810A0-IL	
	P46-13	2..STBY Assy	7028073682010-IL	7028073682010-IL	7028073682030-IL	7028073682040-IL	
	P46-14	2..CNT Assy	7028073683010-IL	7028073683050-IL	7028073683050-IL	7028073683050-IL	
NSP		1..PCB TTL ASSY AMP6	7025HK1215014-IL	Not used	Not used	Not used	
	P46-15	2..AMP6 Assy	7028073711010-IL	Not used	Not used	Not used	
NSP		1..PCB TTL ASSY AMP5	Not used	7025HK1212014-IL	7025HK1212024-IL	7025HK1212034-IL	
	P46-15	2..AMP5 Assy	Not used	7028073661010-IL	7028073661010-IL	7028073661010-IL	
PACKING SECTION							
	Δ P43-1	Power Cord	Not used	Not used	L068250100040-IL	L068250160020-IL	
	P43-2	AM Loop Antenna	E601019000010-IL	E601019000010-IL	E601019000010-IL	E601019000010-IL	
	P43-3	FM Wire Antenna	E605010140010-IL	E605010140010-IL	E605010140010-IL	E605010140010-IL	
	P43-4	Remote Control (AXD7690)	8300769000010-IL	8300769000010-IL	8300769000010-IL	8300769000010-IL	
	P43-12	Operating Instructions (CD-ROM)	6517000001380-IL	6517000001300-IL	6517000001300-IL	6517000001210-IL	
NSP		Operating Instructions VSX-323/423 (En) (pdf)	Not used	ARB7520	ARB7520	Not used	
NSP		Operating Instructions VSX-323/423 (Fr) (pdf)	Not used	ARC8197	ARC8197	Not used	
NSP		Operating Instructions VSX-323/423 (De) (pdf)	Not used	ARC8198	ARC8198	Not used	
NSP		Operating Instructions VSX-323/423 (It) (pdf)	Not used	ARC8199	ARC8199	Not used	
NSP		Operating Instructions VSX-323/423 (Es) (pdf)	Not used	ARC8200	ARC8200	Not used	
NSP		Operating Instructions VSX-323/423 (Ni) (pdf)	Not used	ARC8201	ARC8201	Not used	
NSP		Operating Instructions VSX-323/423 (Ru) (pdf)	Not used	ARC8202	ARC8202	Not used	

Mark	No.	Symbol and Description	VSX-324-K-P /YXEB	VSX-323-K /SYXE8	VSX-323-K /PWVXE8	VSX-323-K /DLXE	Remarks	
NSP		Operating Instructions VSX-323/523 (En) (pdf)	Not used	Not used	Not used	ARB7522	A	
NSP		Operating Instructions VSX-323/523 (Es) (pdf)	Not used	Not used	Not used	ARC8209		
NSP		Operating Instructions VSX-323/523 (Zhtw) (pdf)	Not used	Not used	Not used	ARC8210		
NSP		Operating Instructions VSX-528/828 (En) (pdf)	Not used	ARB7521	ARB7521	Not used	B	
NSP		Operating Instructions VSX-528/828 (Fr) (pdf)	Not used	ARC8203	ARC8203	Not used		
NSP		Operating Instructions VSX-528/828 (De) (pdf)	Not used	ARC8204	ARC8204	Not used		
NSP		Operating Instructions VSX-528/828 (It) (pdf)	Not used	ARC8205	ARC8205	Not used		
NSP		Operating Instructions VSX-528/828 (Es) (pdf)	Not used	ARC8206	ARC8206	Not used		
NSP		Operating Instructions VSX-528/828 (NI) (pdf)	Not used	ARC8207	ARC8207	Not used		
NSP		Operating Instructions VSX-528/828 (Ru) (pdf)	Not used	ARC8208	ARC8208	Not used		
NSP		Operating Instructions VSX-823 (En) (pdf)	Not used	Not used	Not used	ARB7523		
NSP		Operating Instructions VSX-823 (Es) (pdf)	Not used	Not used	Not used	ARC8211		
NSP		Operating Instructions VSX-823 (Zhtw) (pdf)	Not used	Not used	Not used	ARC8212		
	P43-13	Quick Start Guide	5707000008050-IL	5707000007820-IL	5707000007820-IL	5707000007830-IL		
	P43-16	Box, Gift	Not used	60072123701F0-IL	60072123701G0-IL	60072123701H0-IL		
	P43-17	Cushion, Snow	6230212914000-IL	6230213384000-IL	6230213384000-IL	6230213384000-IL		
	P43-18	PE, Sheet	6327040059000-IL	6327040059000-IL	6327040059000-IL	6327040059000-IL		
NSP	P43-24	Warranty Card	Not used	ARY7158	ARY7158	Not used		
		EXTERIOR SECTION (VSX-323-K)					C	
⚠	P46-16	Cord Assy	L068250161710-IL	L068250161710-IL	Not used	Not used		
⚠	P46-17	Socket, Power AC	Not used	Not used	G430040560021-IL	G430040560021-IL		
⚠	P46-18	Power Trans	8200858500320-IL	8200858500320-IL	8200858500320-IL	8200858500350-IL		
	P46-23	Cable, Flat Card 1.0	N711251022480-IL	N711250822480-IL	N711250822480-IL	N711250822480-IL		
	P46-26	Cabinet Assy	3008211846020-IL	3008212076000-IL	3008212076000-IL	3008212076100-IL		
	P46-27	Front Panel	3067215861100-IL	3067215861110-IL	3067215861110-IL	3067215861110-IL		
	P46-28	Chassis Back	3207214696030-IL	3207214566010-IL	3207214566110-IL	3207214566210-IL		
	P46-35	Stopper	4380040162010-IL	4380040162010-IL	Not used	Not used		
	P46-46	Screw, Tap Tite Screw	Not used B020030081B10-IL	B020930083B10-IL Not used	B020930083B10-IL Not used	B020930083B10-IL Not used		
		Screw	CBZ30P080FTB	Not used	Not used	Not used	D	
		Bushing	Not used	2410040353010-IL	2410040353010-IL	2410040353010-IL		No. 59
		Sheet	Not used	1210210235000-IL	1210210235000-IL	1210210235000-IL		No. 60
		Screw Cover	Not used	4050211745100-IL	4050211745100-IL	4050211745100-IL		No. 61

Notes : The numbers in the remarks column correspond to the numbers on the "EXPLODED VIEWS".

For PCB ASSEMBLIES, Refer to "CONTRAST OF PCB ASSEMBLIES", "PCB PARTS LIST", "3. SCHEMATIC DIAGRAM" and "4. PCB CONNECTION DIAGRAM".

**EXPLODED VIEWS
PACKING SECTION**

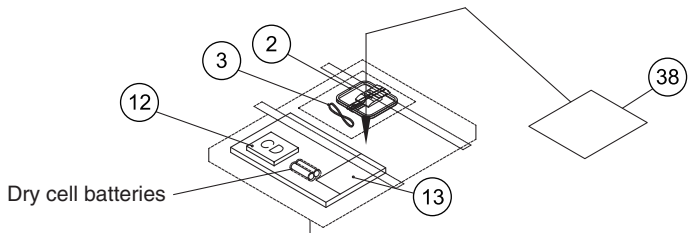
1

2

3

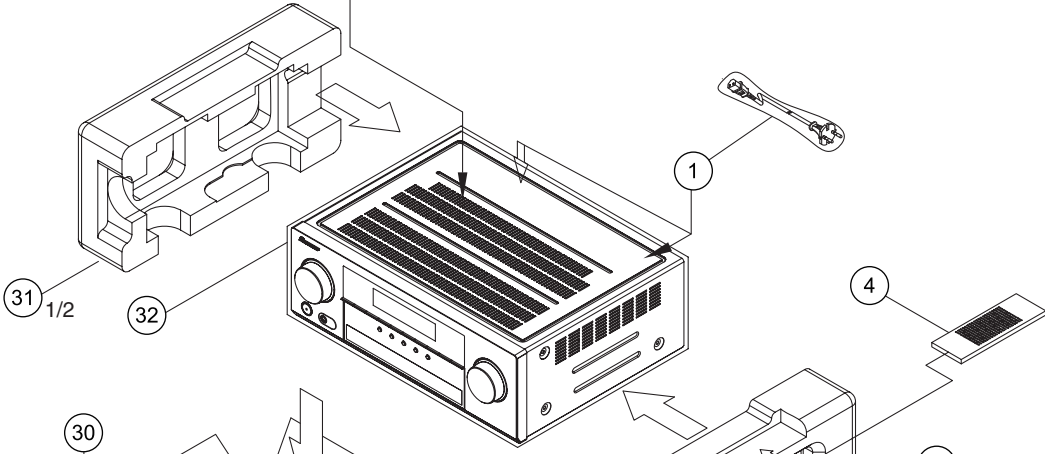
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A

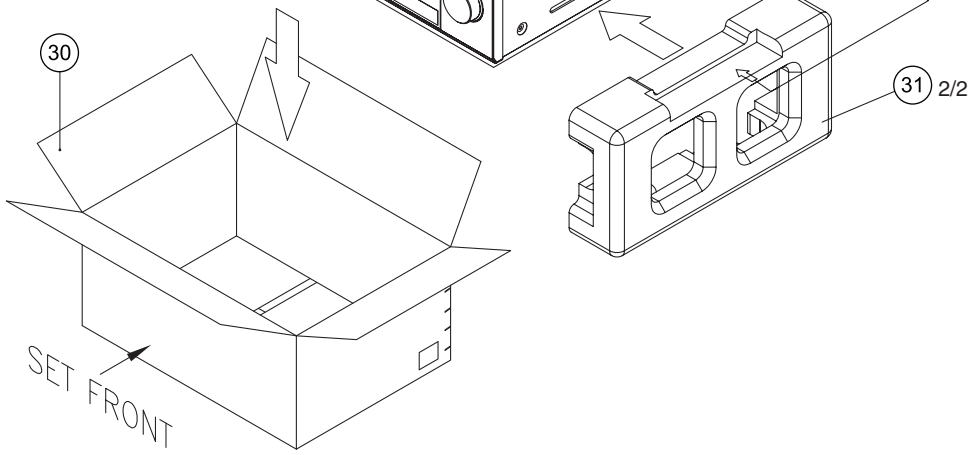


Dry cell batteries

B



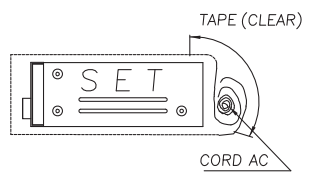
C



SET FRONT

D

* POLY BAG PACKING STYLE



E

F

CONTRAST OF PCB ASSEMBLIES**A F MAIN ASSY**

- A 7028073701010-IL, 7028073651010-IL, 7028073651020-IL and 7028073651030-IL are constructed the same with the exception of some components, including the following:

Mark	Symbol and Description	7028073701010-IL	7028073651010-IL	7028073651020-IL	7028073651030-IL	Remarks
	IC403	J121458001010-IL	Not used	Not used	Not used	
	IC404	Not used	J121458001010-IL	J121458001010-IL	J121458001010-IL	
⚠	IC106	J126780500110-IL	Not used	Not used	Not used	
⚠	IC107	J126781200040-IL	Not used	Not used	Not used	
⚠	IC108	J126791200060-IL	Not used	Not used	Not used	
⚠	D121	K047800500010-IL	Not used	Not used	Not used	
⚠	D114, D115, D117, D119	K000400700220-IL	Not used	Not used	Not used	
	X1200 CRYSTAL (14M32)	Not used	Not used	Not used	E80014R318080-IL	
B	JA101 TER,BOARD PUSH 4P	G594408SA030Y-IL	G612405E0200Y-IL	G612405E0200Y-IL	G612405E0200Y-IL	
	JA102 TER,BOARD PUSH 8P	G598801SA050Y-IL	G596601SA010Y-IL	G596601SA010Y-IL	G596601SA010Y-IL	
	JA103 TER,RCA 1 PIN	Not used	G600107A0000Y-IL	G600107A0000Y-IL	G600107A0000Y-IL	
	R19	C060010066050-IL	Not used	Not used	Not used	
	R28-R30	C060022265050-IL	Not used	Not used	Not used	
	C283	D040472084240-IL	Not used	Not used	Not used	
	C288	D040102084060-IL	Not used	Not used	Not used	
	C292	D040103083020-IL	Not used	Not used	Not used	

Note: This list is not complete. Only components that are available as service part are listed!

C B F OPTCO ASSY

Although 7028073702010-IL and 7028073653010-IL are different and are NOT COMPATIBLE! Some components on these assy's are different. Since these different components are not available as service part, they are not listed.

D F AMP6 ASSY/AMP5 ASSY

Although 7028073711010-IL and 7028073661010-IL are different and are NOT COMPATIBLE! Some components on these assy's are different. Since these different components are not available as service part, they are not listed.

D E F CPU ASSY

Although 7028073681010-IL, 7028073681080-IL, 7028073681090-IL and 70280736810A0-IL are different and are NOT COMPATIBLE! Some components on these assy's are different. Since these different components are not available as service part, they are not listed.

H F HP ASSY

Although 7028073672020-IL and 7028073672010-IL are different and are NOT COMPATIBLE! Some components on these assy's are different. Since these different components are not available as service part, they are not listed.

E J F CNT ASSY

Although 7028073683010-IL and 7028073683050-IL are different and are NOT COMPATIBLE! Some components on these assy's are different. Since these different components are not available as service part, they are not listed.

K F STBY ASSY

7028073682010-IL, 7028073682030-IL and 7028073682040-IL are constructed the same with the exception of some components, including the following:

Mark	Symbol and Description	7028073682010-IL	7028073682030-IL	7028073682040-IL	Remarks
	D9301	K06005R144522-IL	K06005R144522-IL	K06004R744522-IL	
	D9302	Not used	Not used	K06015R044522-IL	
⚠	T301 POWER TRANS	8200280150680-IL	8200280150680-IL	8200280150690-IL	
⚠	CN9301 CN.WAFER 7.92MM	L108396030010-IL	Not used	Not used	
⚠	CN9303 CN.WAFER 7.92MM	Not used	Not used	L108011430310-IL	

Mark	Symbol and Description	7028073682010-IL	7028073682030-IL	7028073682040-IL	Remarks
⚠	FU301 FUSE GLASS TUBE 20MM (T3.15AL250V)	N751503151160-IL	N751503151160-IL	Not used	
⚠	FU301 FUSE GLASS TUBE 20MM (T6.3AL250V)	Not used	Not used	N751506301160-IL	

Note: This list is not complete. Only components that are available as service part are listed!

L F V_SEL ASSY

Although 7028073703020-IL and 7028073654010-IL are different and are NOT COMPATIBLE! Some components on these assy's are different. Since these different components are not available as service part, they are not listed.

PCB PARTS LIST

Mark	No.	Description	Part No.
------	-----	-------------	----------

M F REG ASSY

SEMICONDUCTORS

⚠	IC	106	J126780500110-IL
⚠	IC	107	J126781200040-IL
⚠	IC	108	J126791200060-IL
⚠	D	114,115,117,119	K000400700010-IL
⚠	D	121	K047100600220-IL

RESISTORS

R	280,283,284,286	C060R22065050-IL
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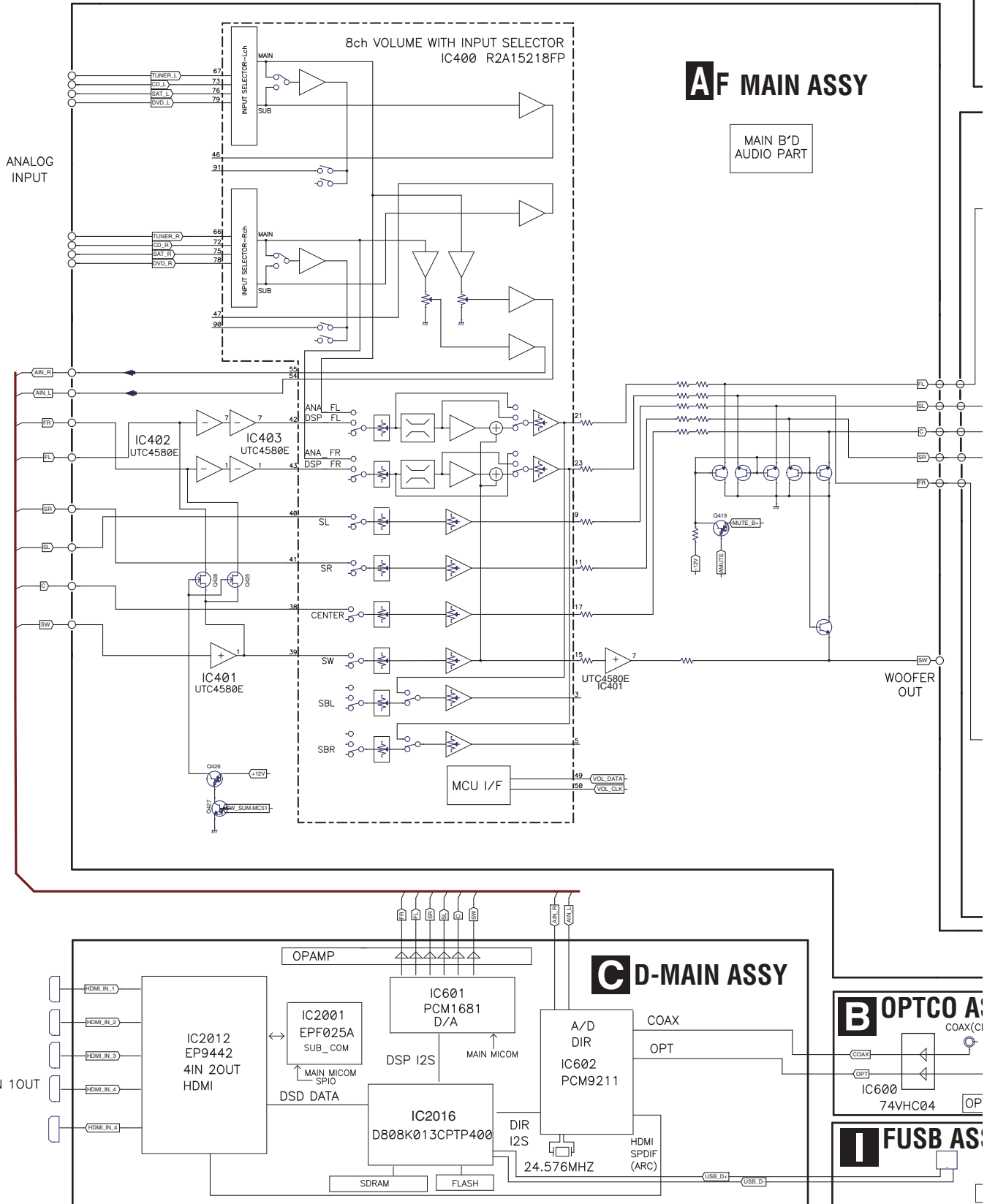
CAPACITORS

C	283	D040472084240-IL
C	288	D040102084060-IL
C	292	D040103083020-IL

2. BLOCK DIAGRAM

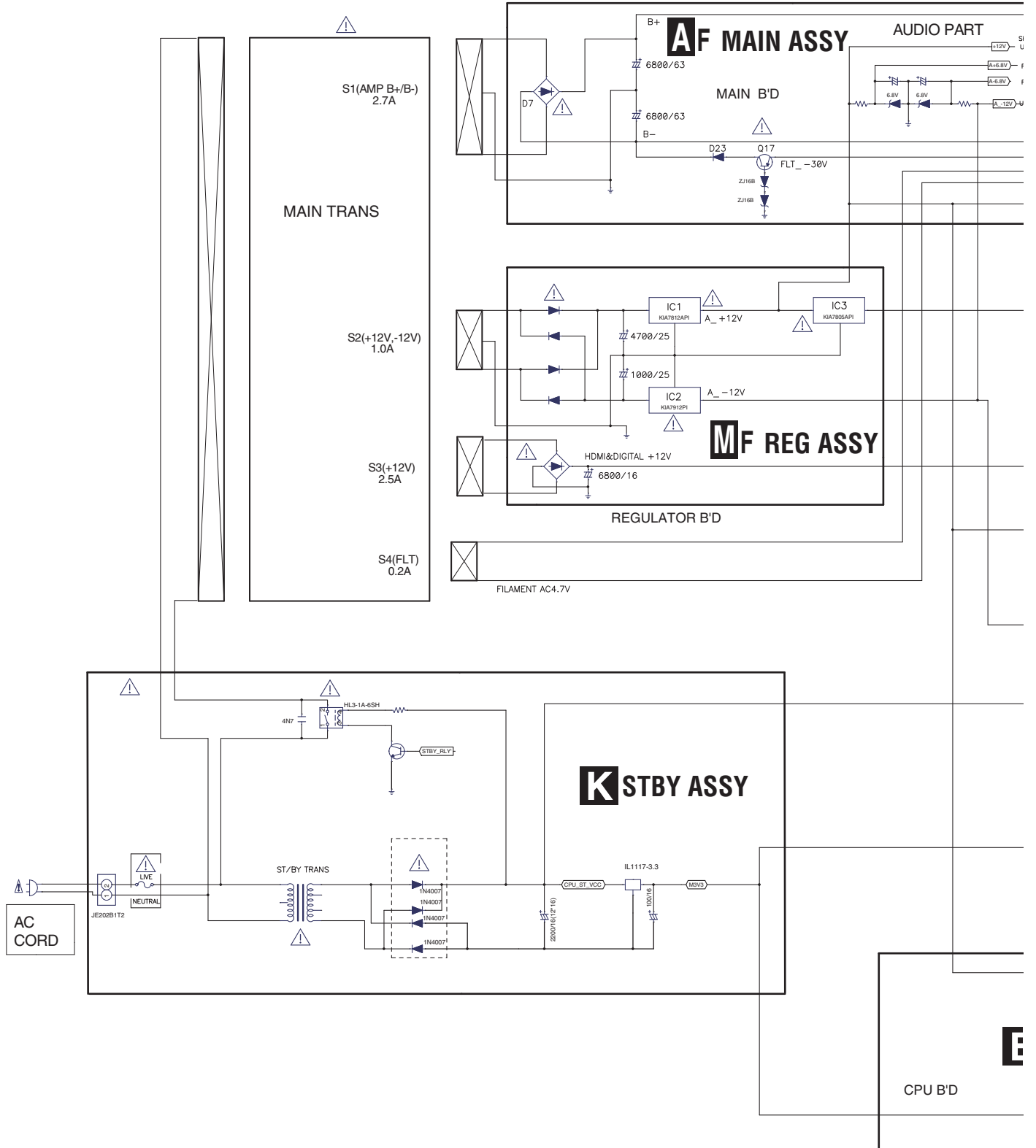
2.1 OVERALL BLOCK DIAGRAM

VSX-323 BLOCK



2.2 VCC BLOCK DIAGRAM

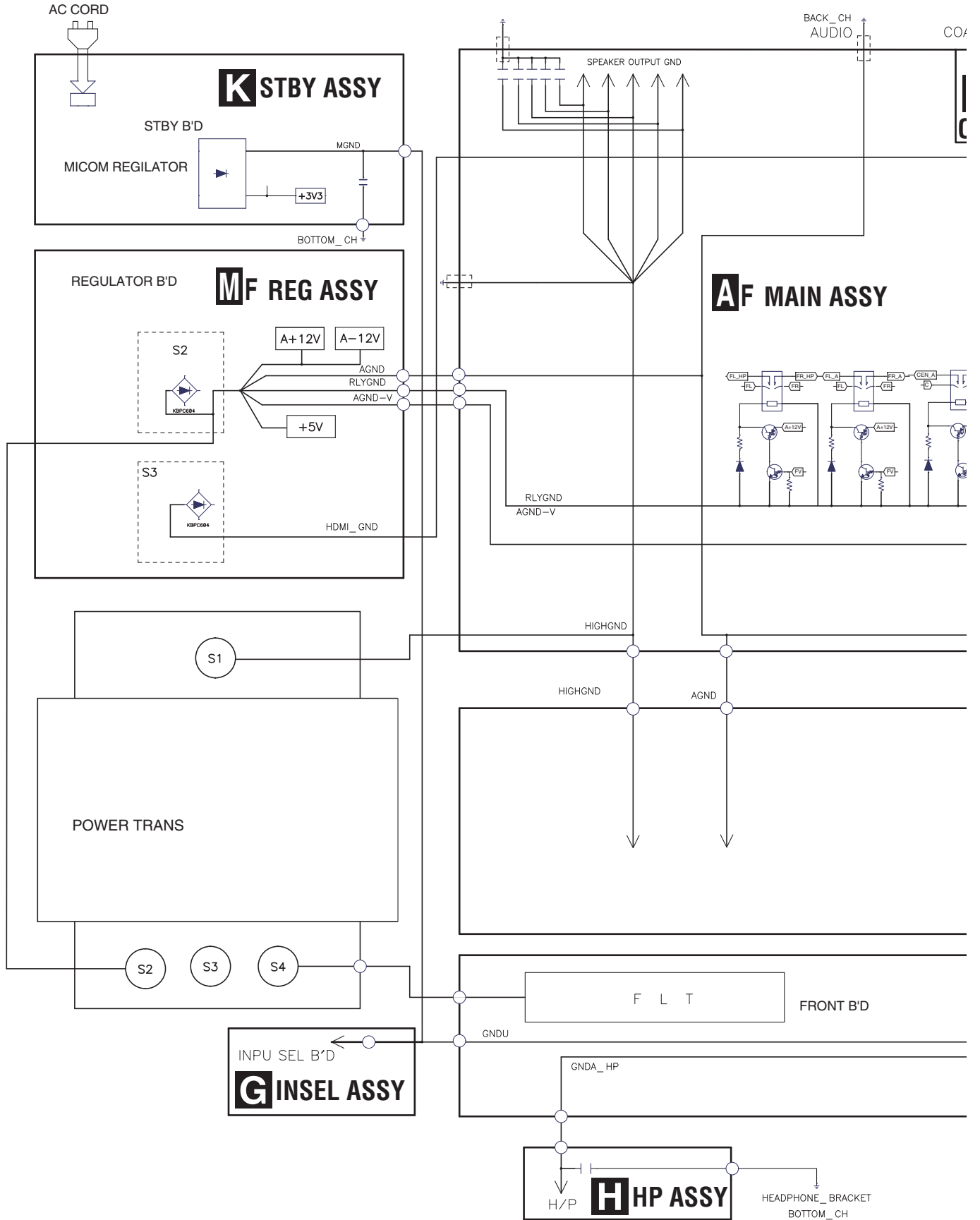
VSX-323 VCC BLOCK

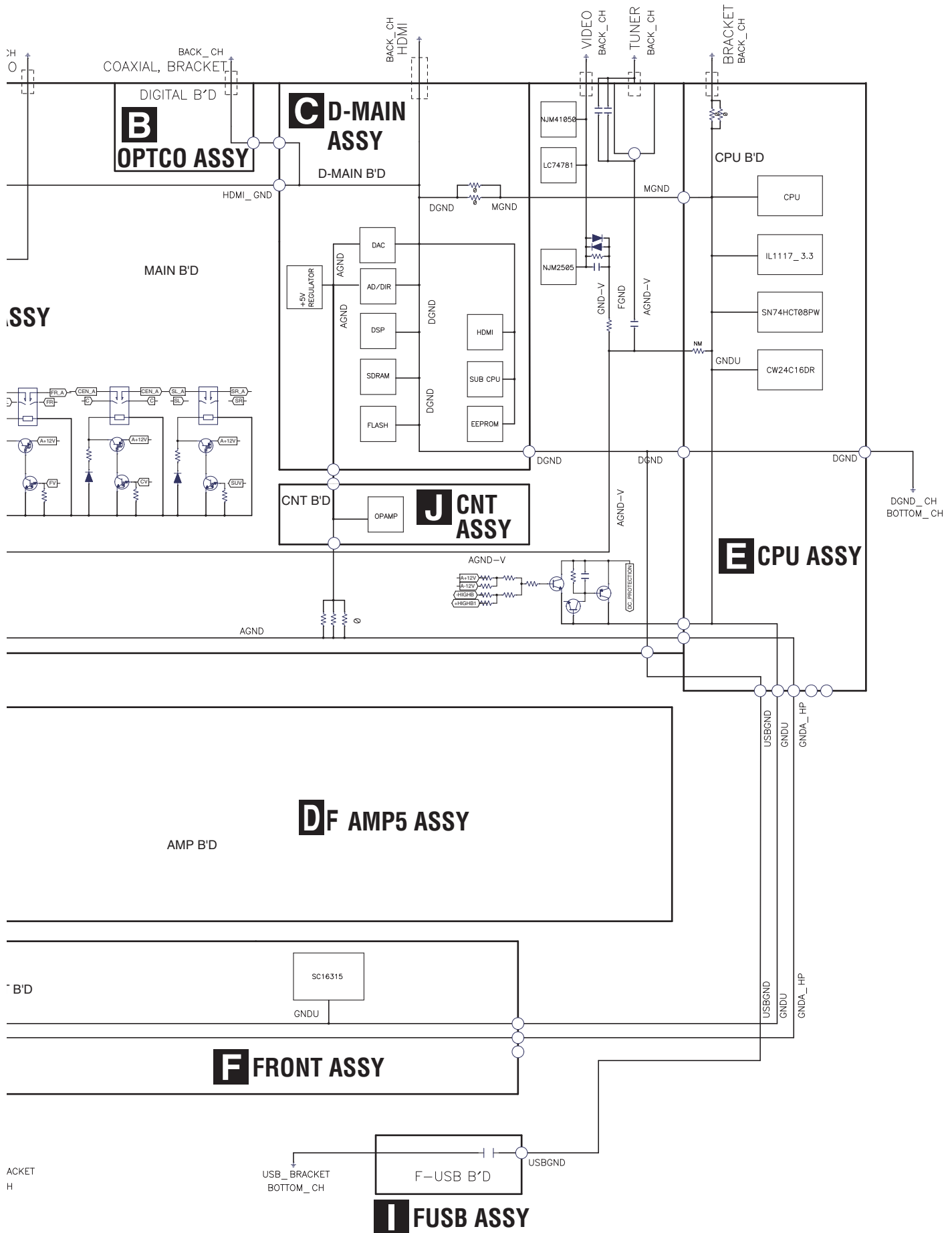


2.3 GND BLOCK DIAGRAM

VSX-323 GND BLOCK

A
B
C
D
E
F





A
B
C
D
E
F

3. SCHEMATIC DIAGRAM

3.1 MAIN (1/2) ASSY

A

FRONT_H/P B'D
DF CN712

SPEAKER TERMINAL

VSX-323 MAIN(1/2) B'D

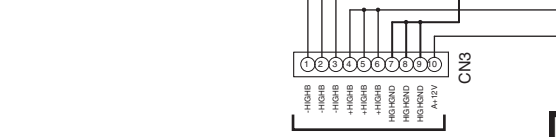
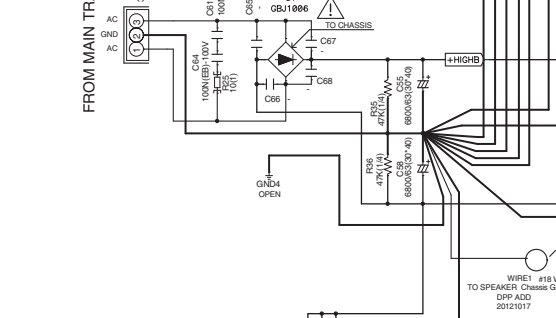
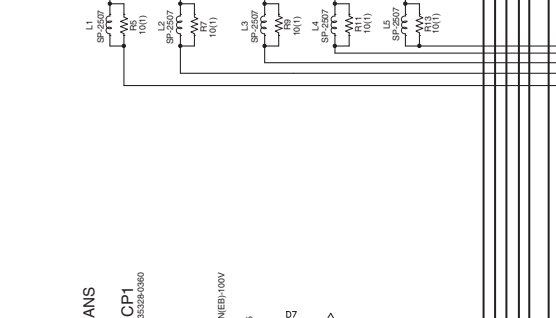
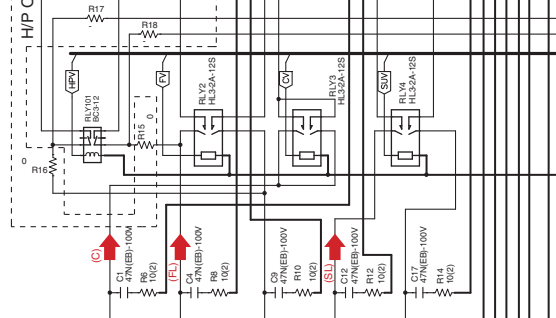
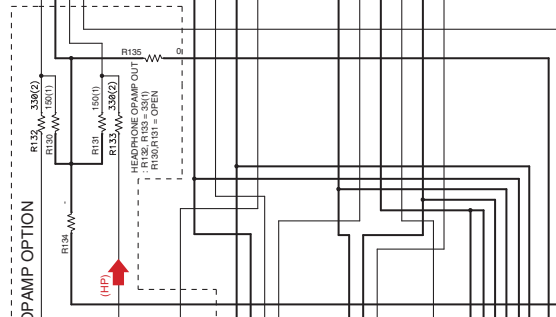
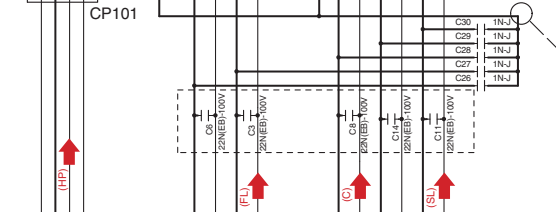
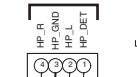
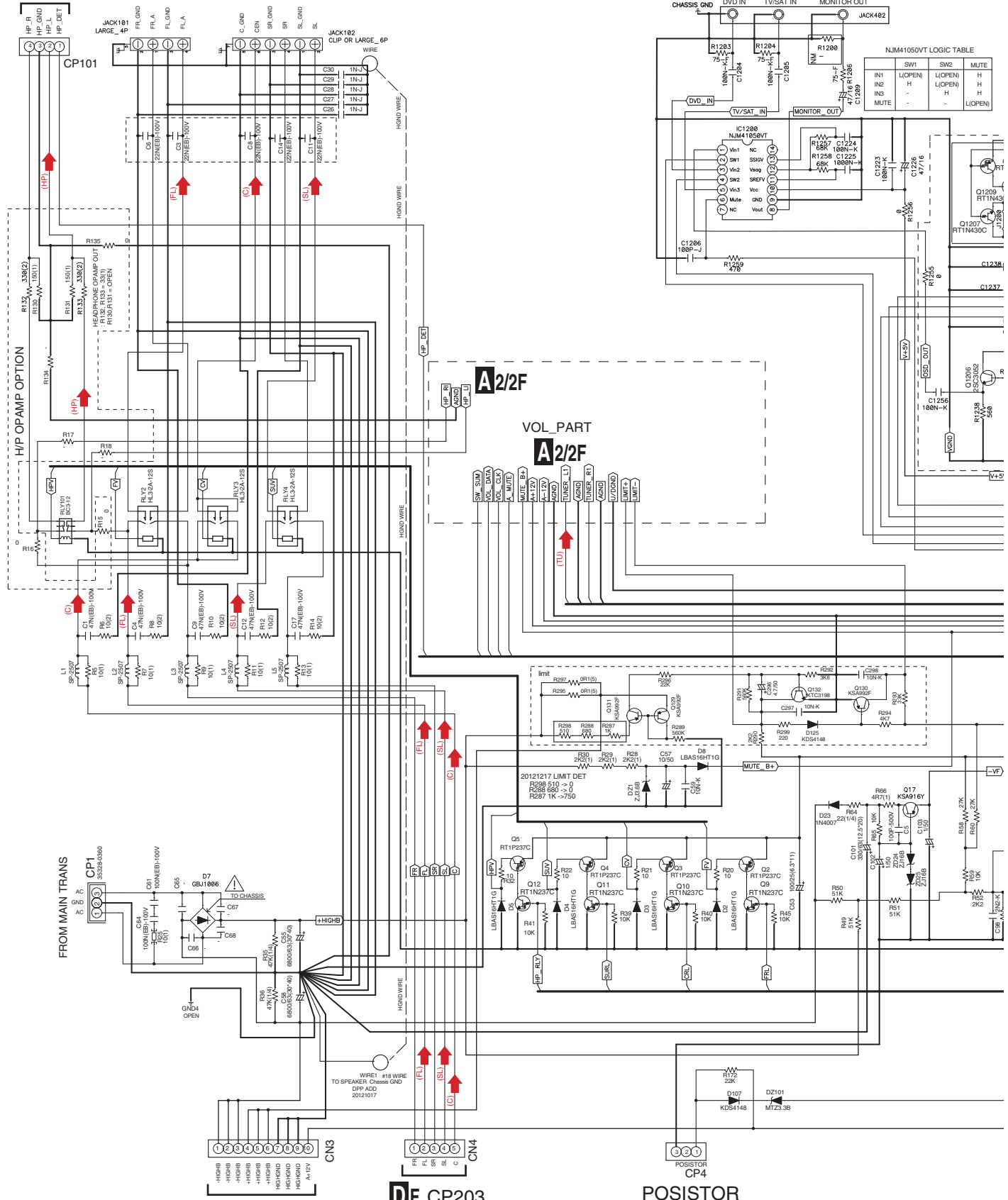
B

C

D

E

F



NJM41050VT LOGIC TABLE

SW1	SW2	MUTE
IN1 (L)OPEN	IN2 (L)OPEN	H
IN3 (L)OPEN	IN4 (L)OPEN	H
MUTE		(L)OPEN

A1/2F

DF CN204
TO AMP B'D

DF CP203
TO AMP B'D

POSISTOR
CP4

VSX-323-K

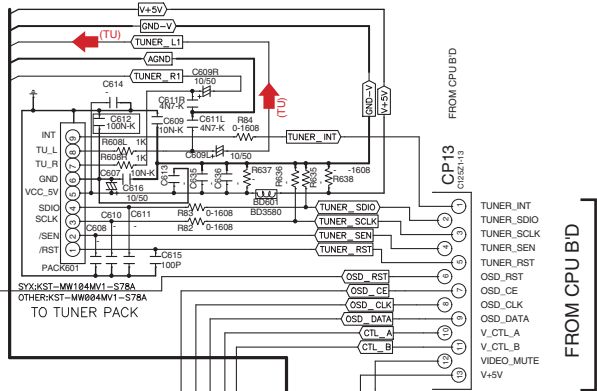
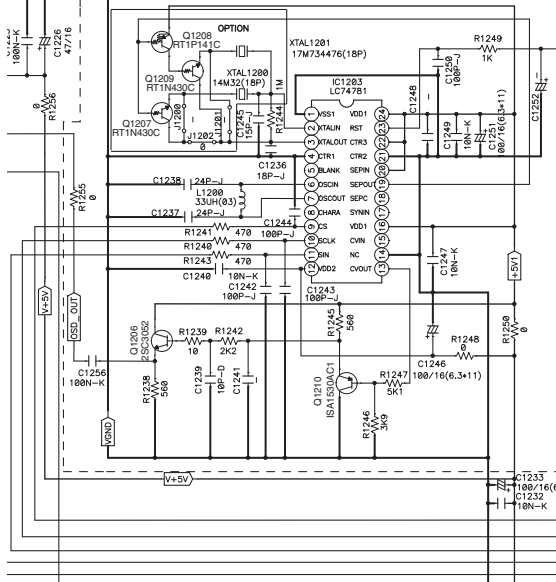
02

NUM1050VT LOGIC TABLE

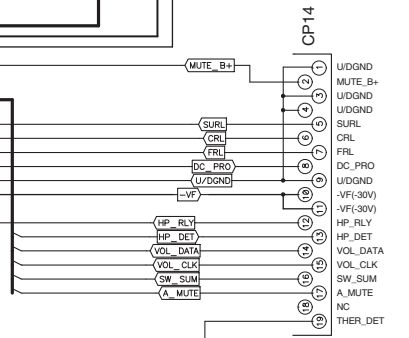
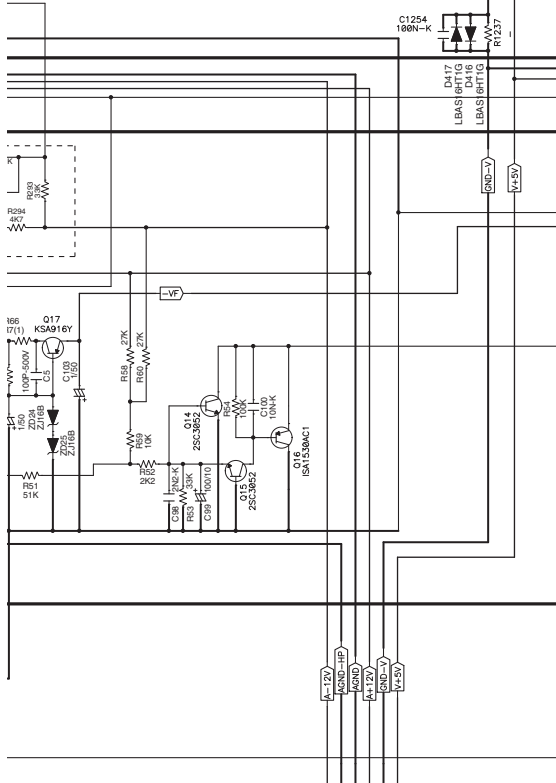
SW1	SW2	MUTE
L(OPEN)	L(OPEN)	H
H	L(OPEN)	H
H	H	H
L(OPEN)	L(OPEN)	L(OPEN)

* OSD OPTION TABLE

NO.	REF. NO.	MODEL	DUXJK (PAL)	PWVX/SYXE (NTSC)	DLXE (NTSC/PAL SELECT)
1	XTAL1200	14M318(18P)	NM	14M318(18P)	
2	J1200	0-150B	NM		
3	XTAL1201	NM	17M734(18P)	17M734(18P)	
4	J1201	NM	0-150B	NM	
5	Q1207	NM	NM	RT1N430C	
6	Q1208	NM	NM	RT1P141C	
7	J1202	0-150B	NM	0-150B	



- ▶ (FL) : Audio Signal Route (Front L ch)
- ▶ (SL) : Audio Signal Route (Surround L ch)
- ▶ (C) : Audio Signal Route (Center ch)
- ▶ (SW) : Audio Signal Route (SubWoofer ch)
- ▶ (TU) : Audio Signal Route (Tuner L ch)
- ▶ (HP) : Audio Signal Route (Headphone L ch)

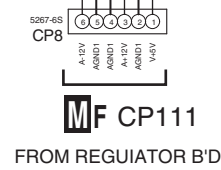


NOTES

- Resistor values are indicated in ohms unless otherwise specified. [k = 1,000 m = 1,000,000]
- Capacitor values are indicated in microfarads unless otherwise specified. [p = micro-microfarads]
- : These resistor are to be segregated from printed wiring board or other accessible parts.

CAUTION
Safety precaution to be followed during servicing

- Since those parts marked with are critical parts for safety, use only the one described in the parts list.
- Before returning the set to the customer, make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.



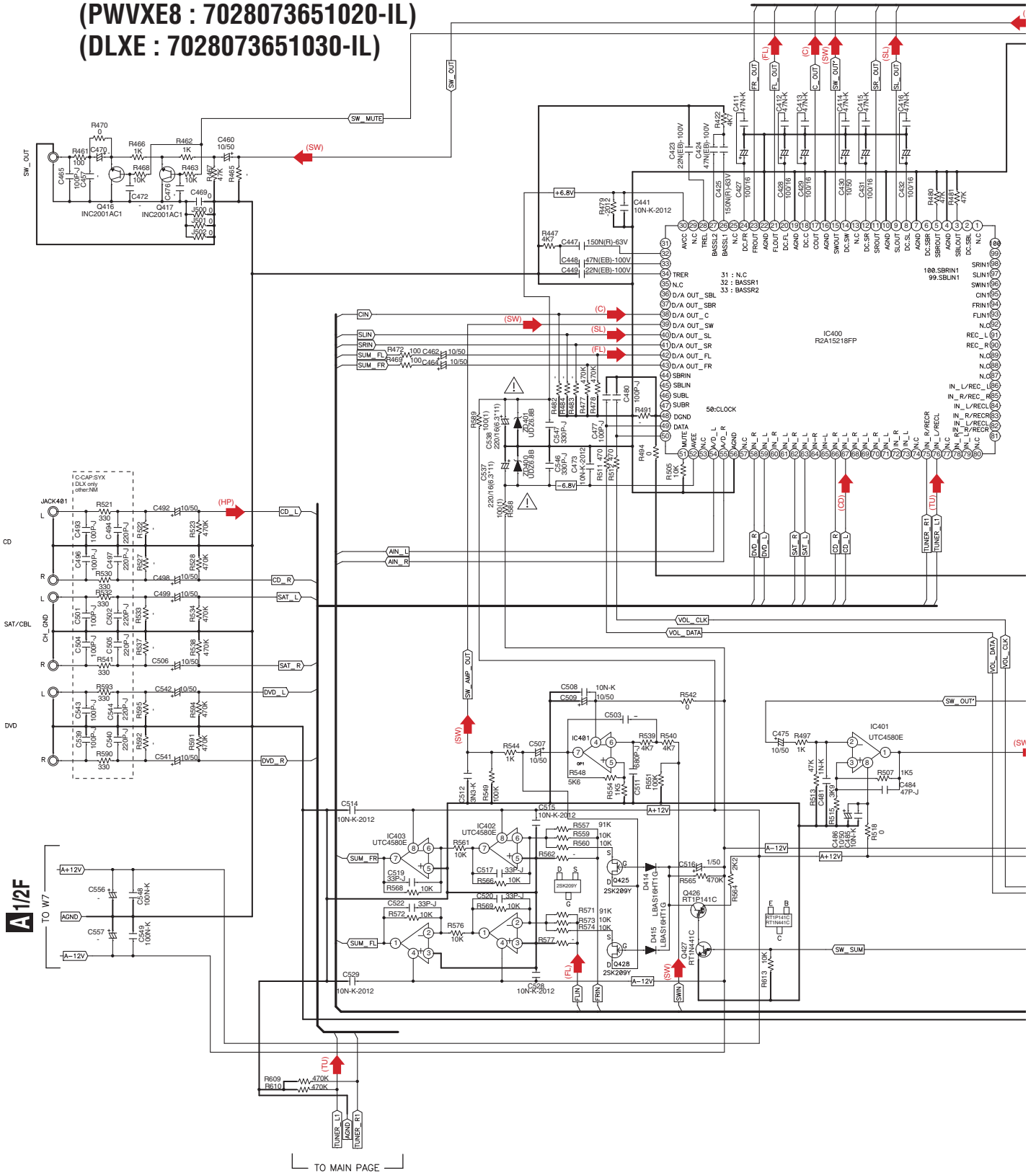
A 1/2F MAIN ASSY
 (SYXE8 : 7028073651010-IL)
 (PWVXE8 : 7028073651020-IL)
 (DLXE : 7028073651030-IL)

VSX-323-K

3.2 MAIN (2/2) ASSY


VSX-323 MAIN(2/2) B'D (AUDIO PART)

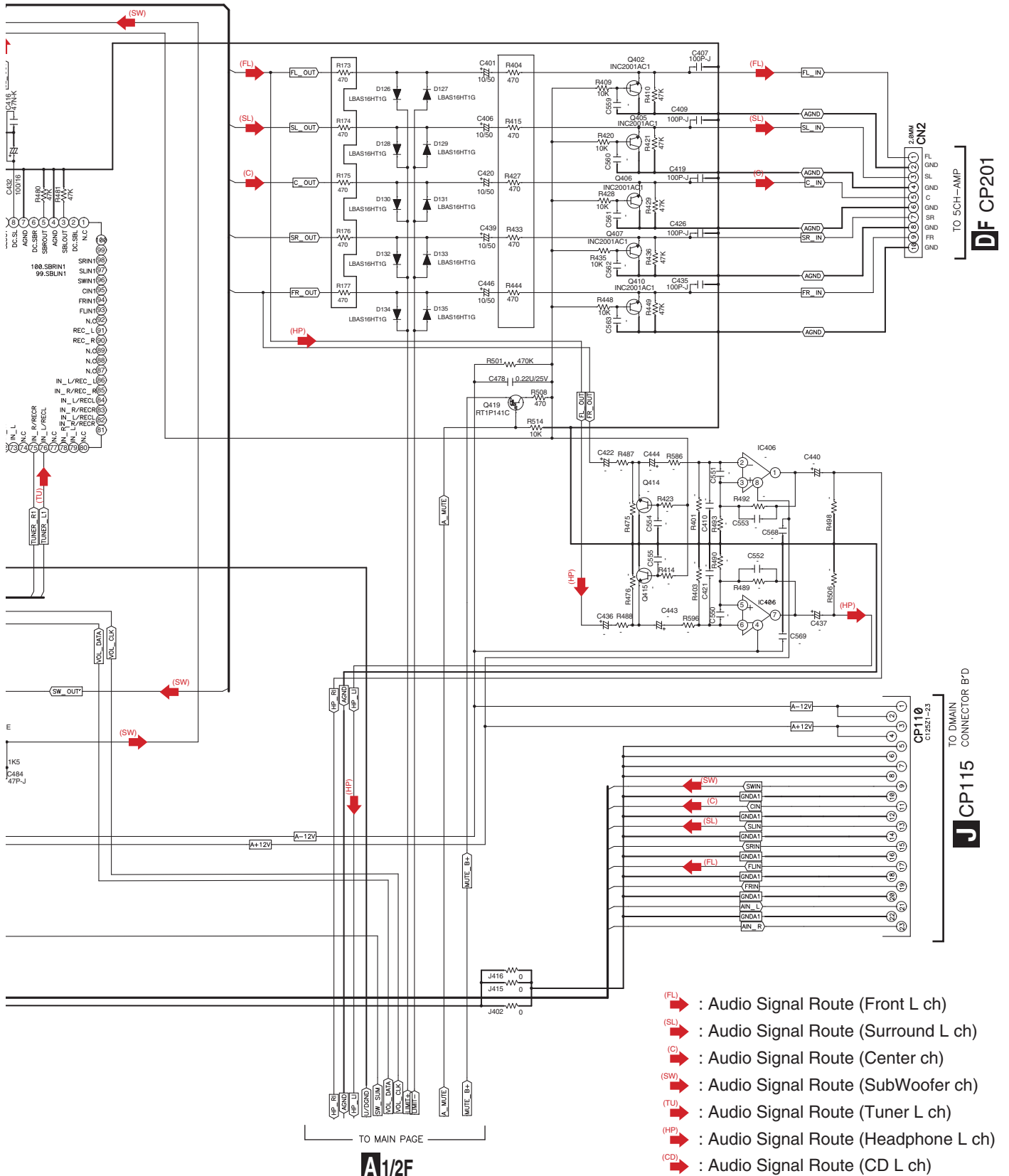
A 2/2F MAIN ASSY
 (SYXE8 : 7028073651010-IL)
 (PWVXE8 : 7028073651020-IL)
 (DLXE : 7028073651030-IL)



A 1/2F

A 2/2F

The  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



A1/2F

VSX-323-K

A2/2F

3.3 REG ASSY

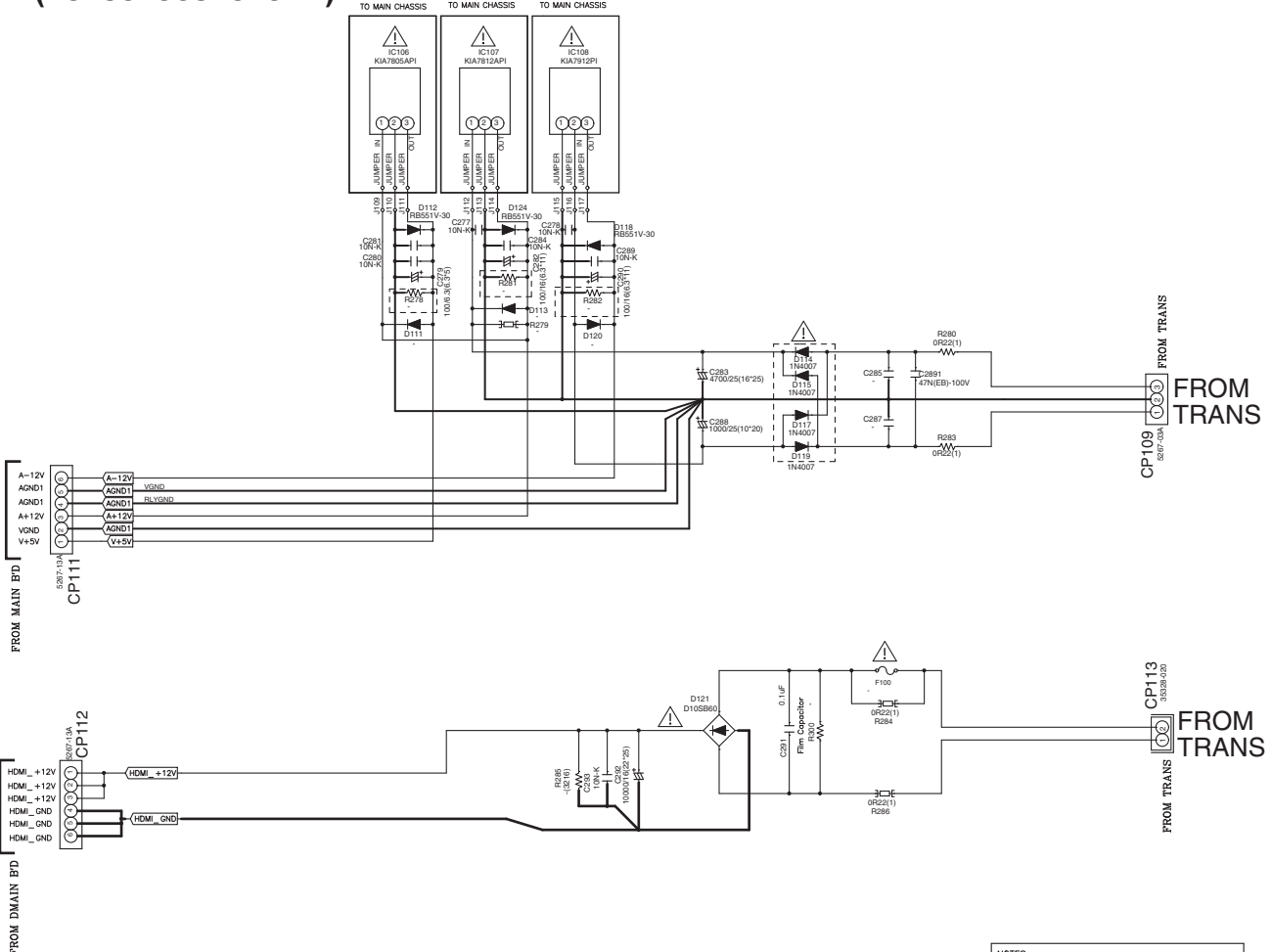
MF REG ASSY (7028073652010-IL)



VSX-323 REGULATOR B'D

A
B
C
D
E
F

A1/2F CP8

C2/3 CP2200

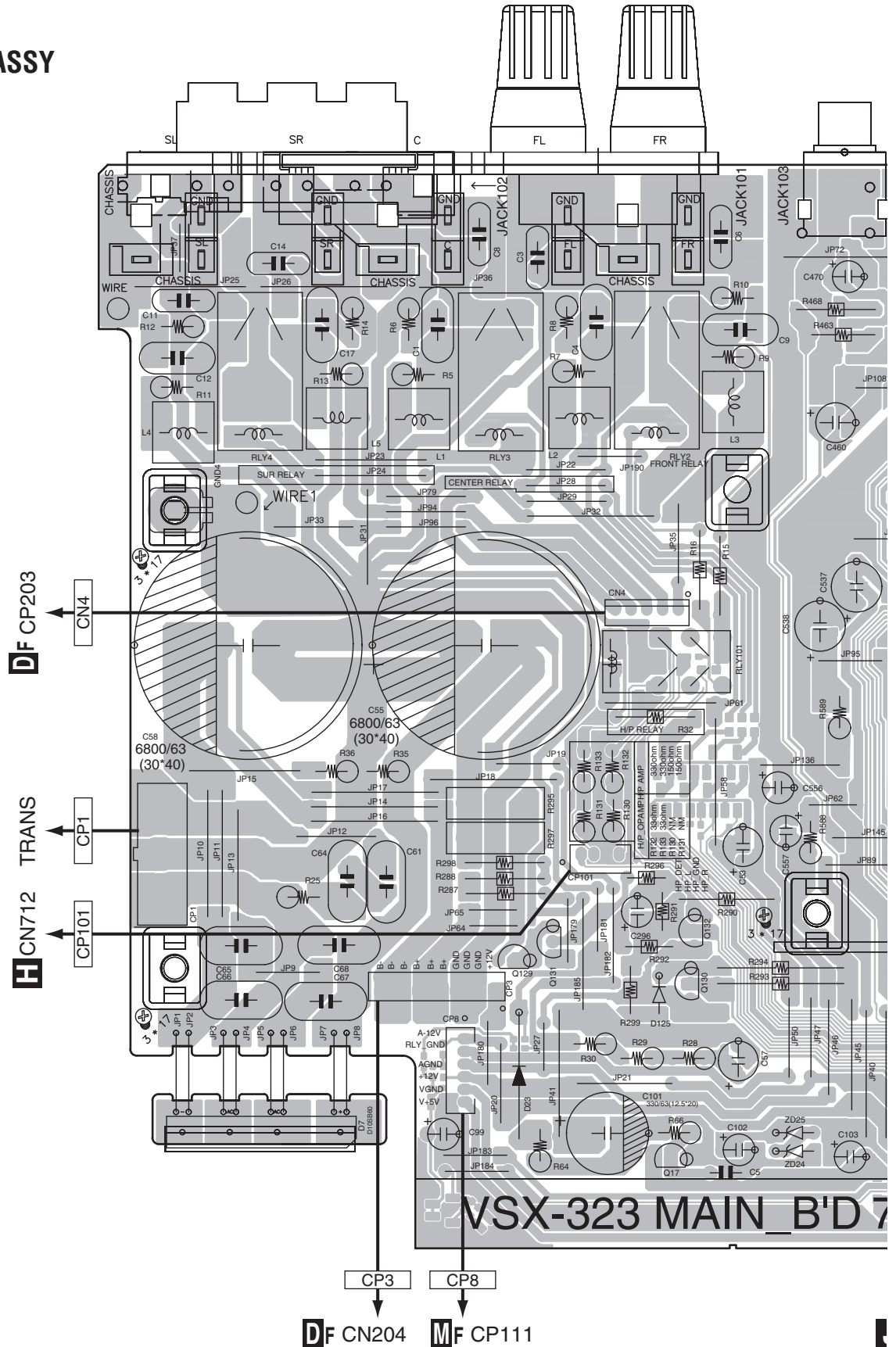


- NOTES**
1. Resistor values are indicated in ohms unless otherwise specified
[k = 1,000; m = 1,000,000]
 2. Capacitor values are indicated in microfarads unless otherwise specified.
[p = micro-microfarads]
 3.  : These resistor are to be segregated from printed wiring board or other accessible parts.
- CAUTION**
Safety precaution to be followed during servicing 
- 1) Since those parts marked with are critical parts for safety, use only the one described in the parts list
 - 2) Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.

4.2 MAIN ASSY

SIDE A

AF MAIN ASSY



AF

SIDE A

A

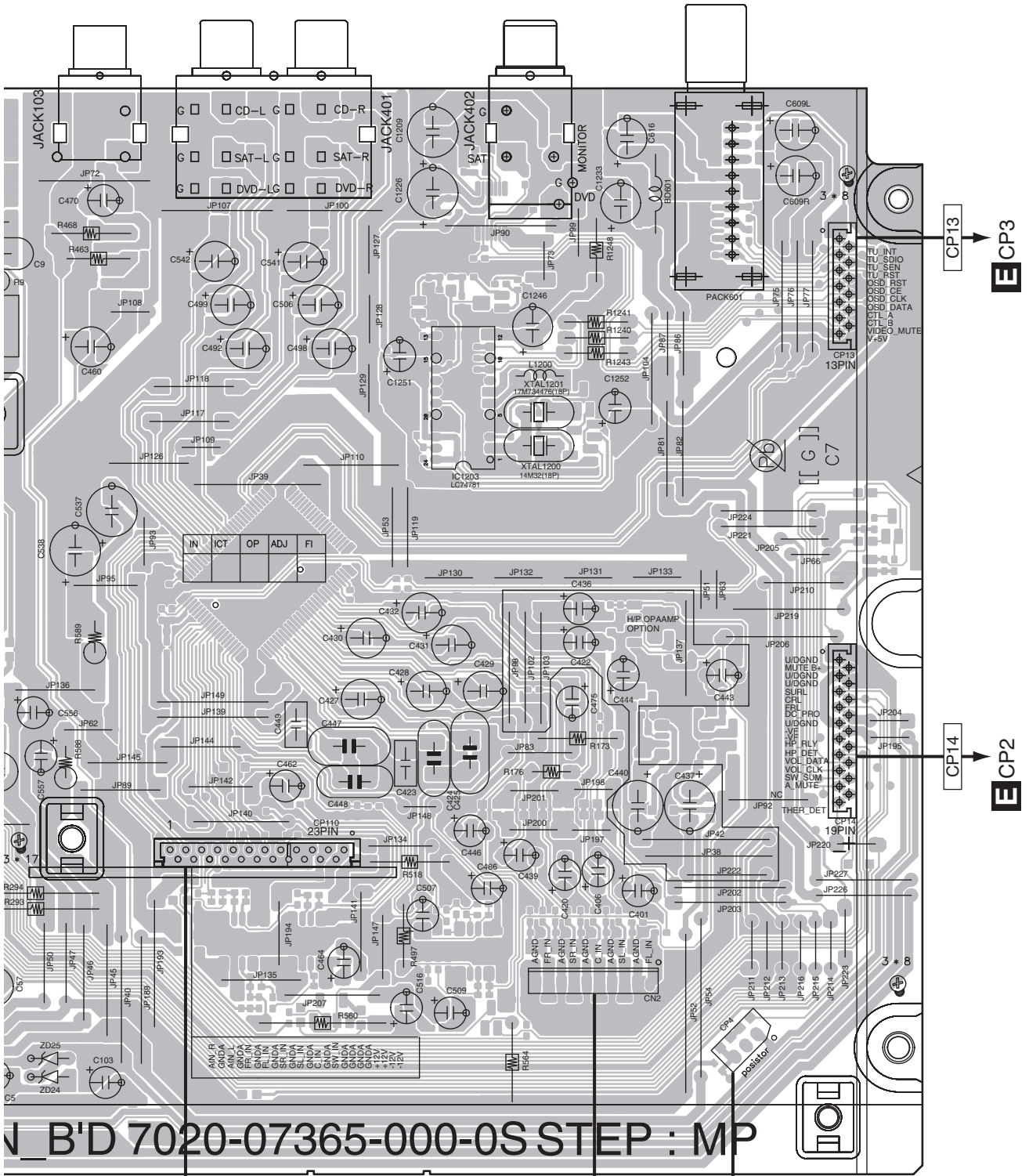
B

C

D

E

F



N_B'D 7020-07365-000-0S STEP : MP

CP110
CP115

CN2
CP201

CP4
POSISTOR

CP13
CP3

CP14
CP2

IC1203

VSX-323-K

AF

SIDE B

AF MAIN ASSY

A

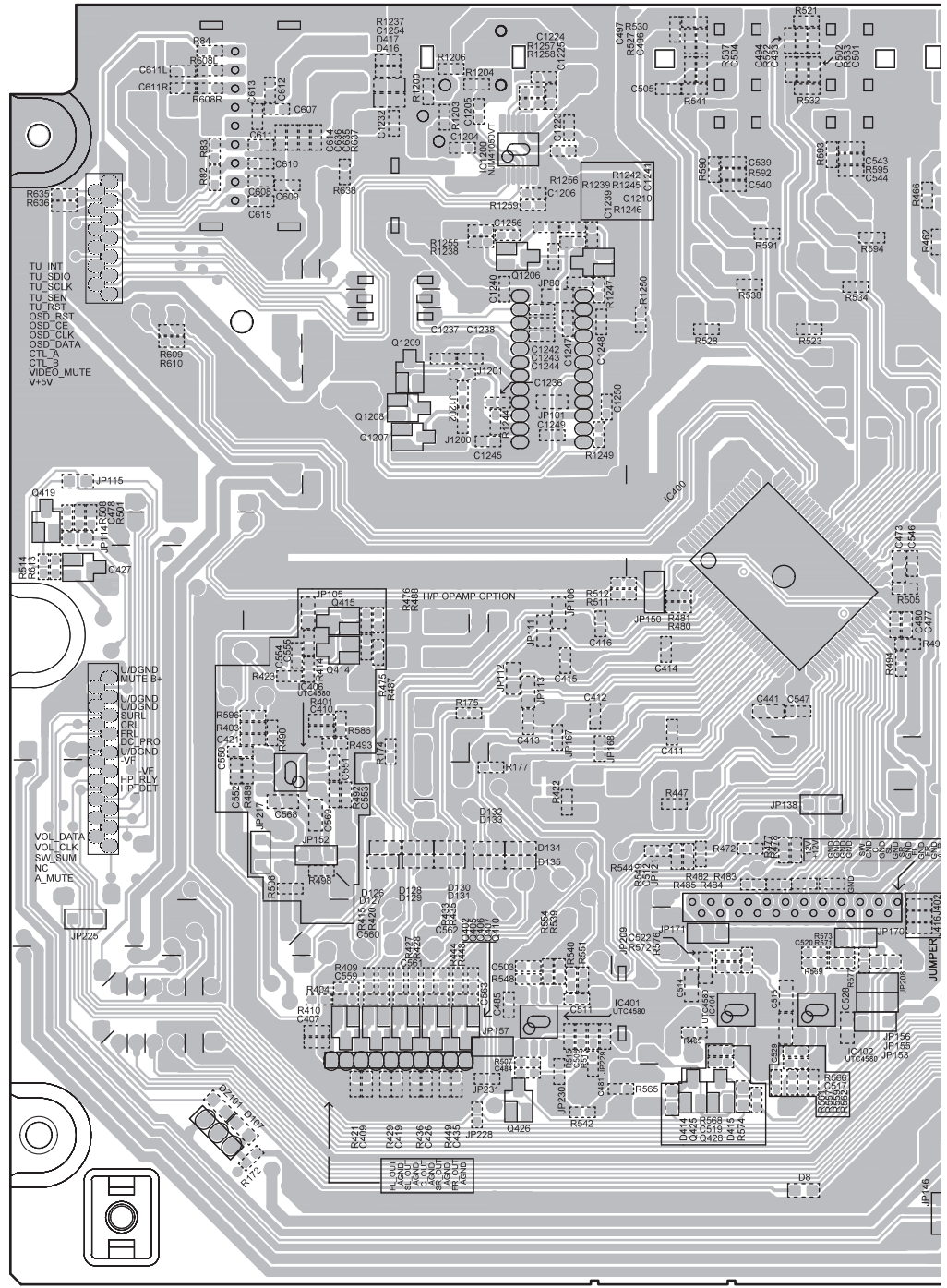
B

C

D

E

F



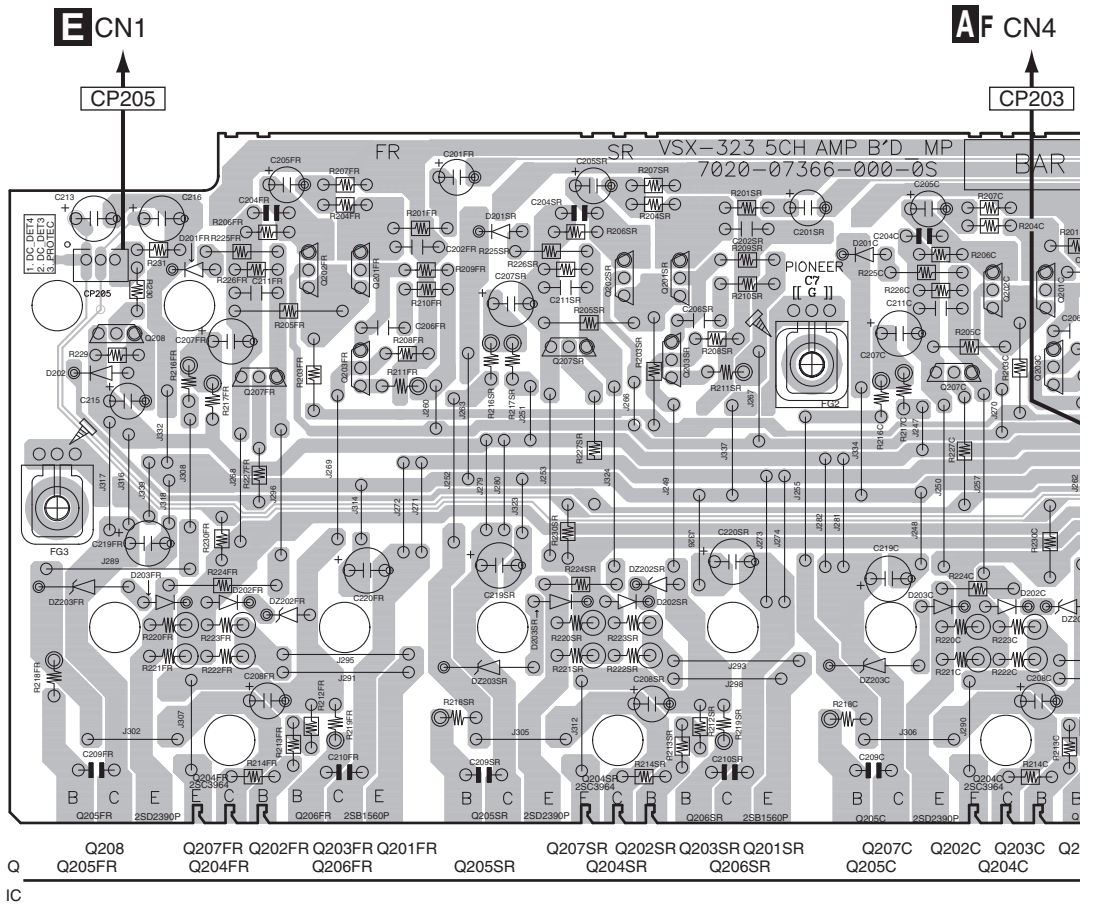
Q419	Q427	Q414	Q425	Q402	Q405	Q406	Q407	Q410	Q426	Q425	Q428
IC406		IC1200	IC401	IC404	IC400	IC402					

AF

4.3 AMP5 ASSY

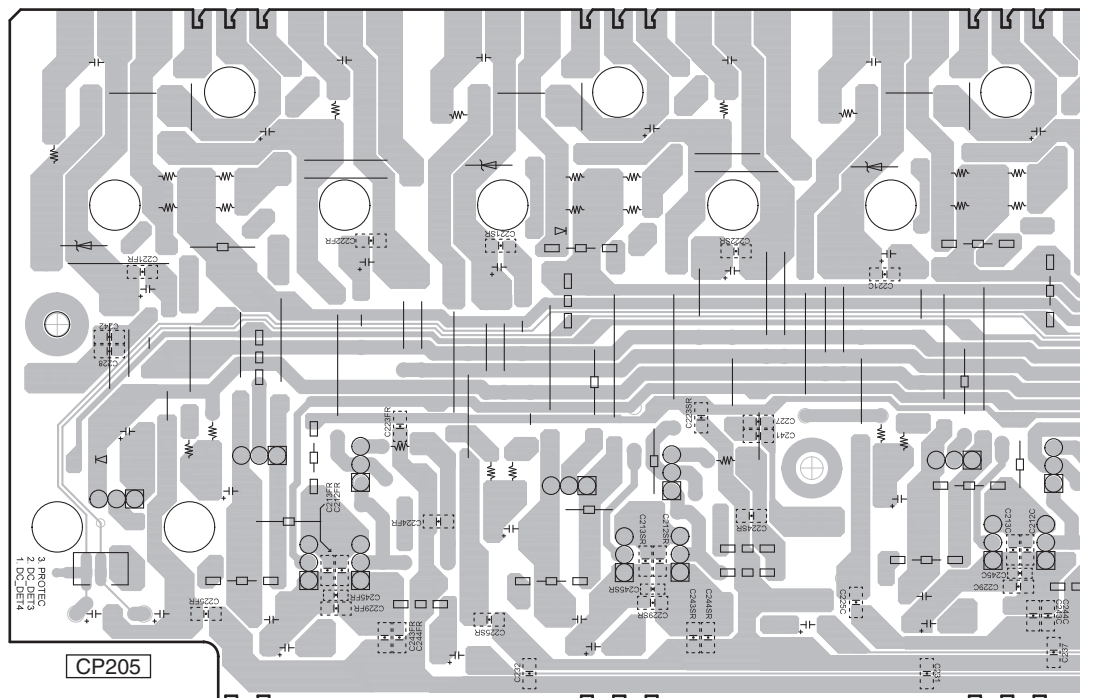
SIDE A

DF AMP5 ASSY

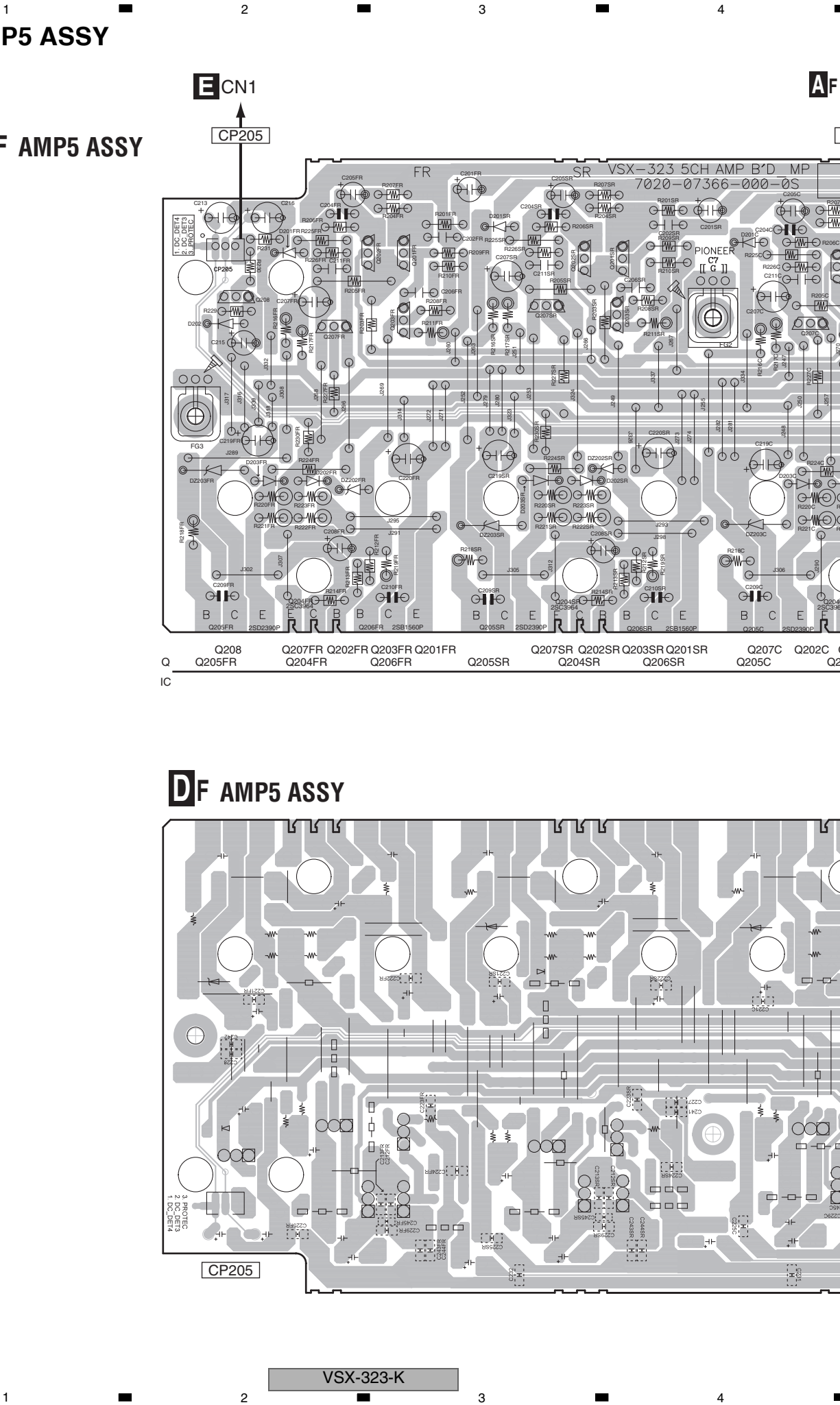


SIDE B

DF AMP5 ASSY



DF



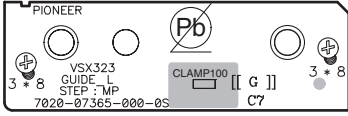
4.4 G-L, G-R and G-S ASSYS

SIDE A

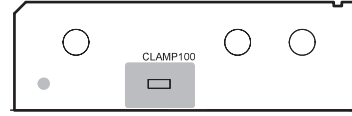
SIDE B

A

G-L ASSY

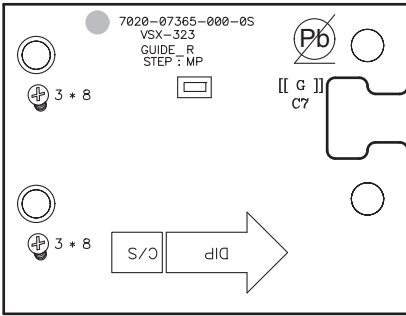


G-L ASSY

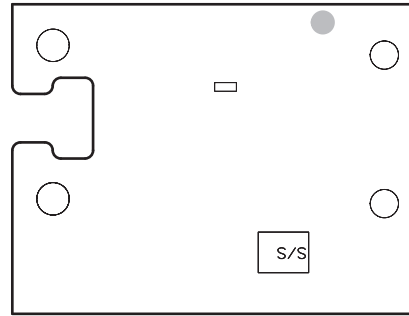


B

G-R ASSY

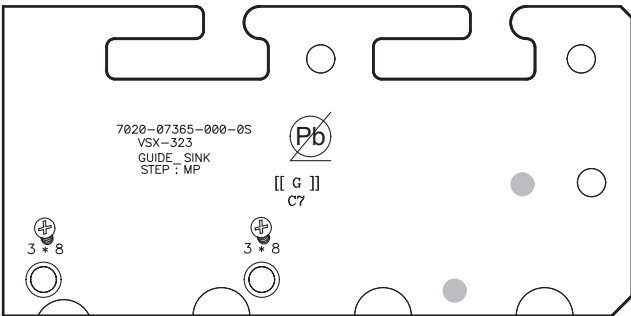


G-R ASSY

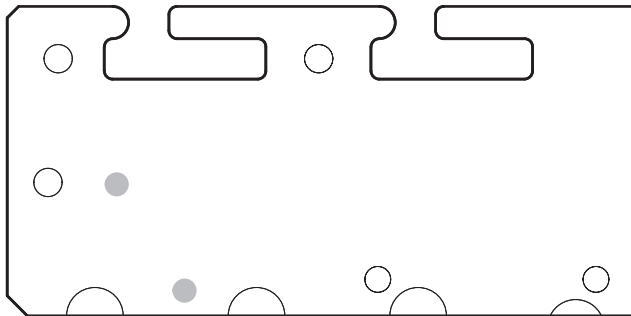


C

G-S ASSY



G-S ASSY



E

F