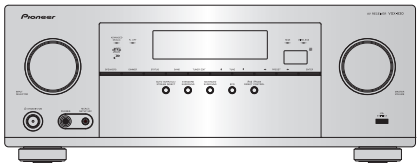
Pioneer

Service Manual



VSX-830-K

ORDER NO.
RRV4595

AV Receiver

VSX-830-K
VSX-45
VSX-830-S
VSA-830

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

Model	Type	Power Requirement	Remarks
VSX-830-K	CUXESM	AC 120 V	
VSX-45	CUXE	AC 120 V	
VSX-830-K	SYXEV8	AC 220 V to 230 V	
VSX-830-S	SYXEV8	AC 220 V to 230 V	
VSA-830	JXEV	AC 100 V	

THIS SERVICE MANUAL SHOULD BE USED TOGETHER WITH THE FOLLOWING MANUAL(S).

Model	Order No.	Remarks
VSX-830-K, VSX-45, VSX-830-S	RRV4594	BLOCK DIAGRAM, EXPLODED VIEWS AND PARTS LIST etc.

PIONEER CORPORATION 1-1, Shin-ogura, Saiwai-ku, Kawasaki-shi, Kanagawa 212-0031, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

K-MZV MAY 2015 Printed in Japan

SAFETY INFORMATION

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 may contain a chemical known to the State of California to cause cancer, or birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

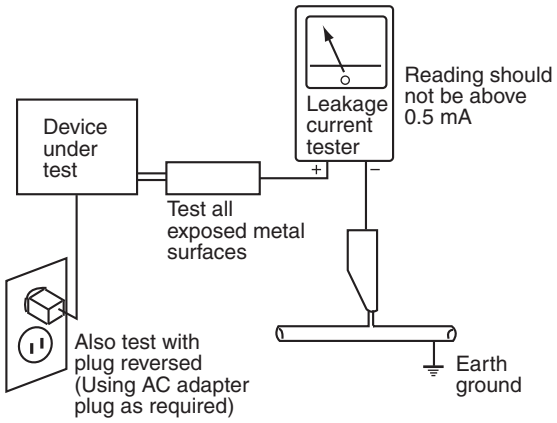
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120 V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

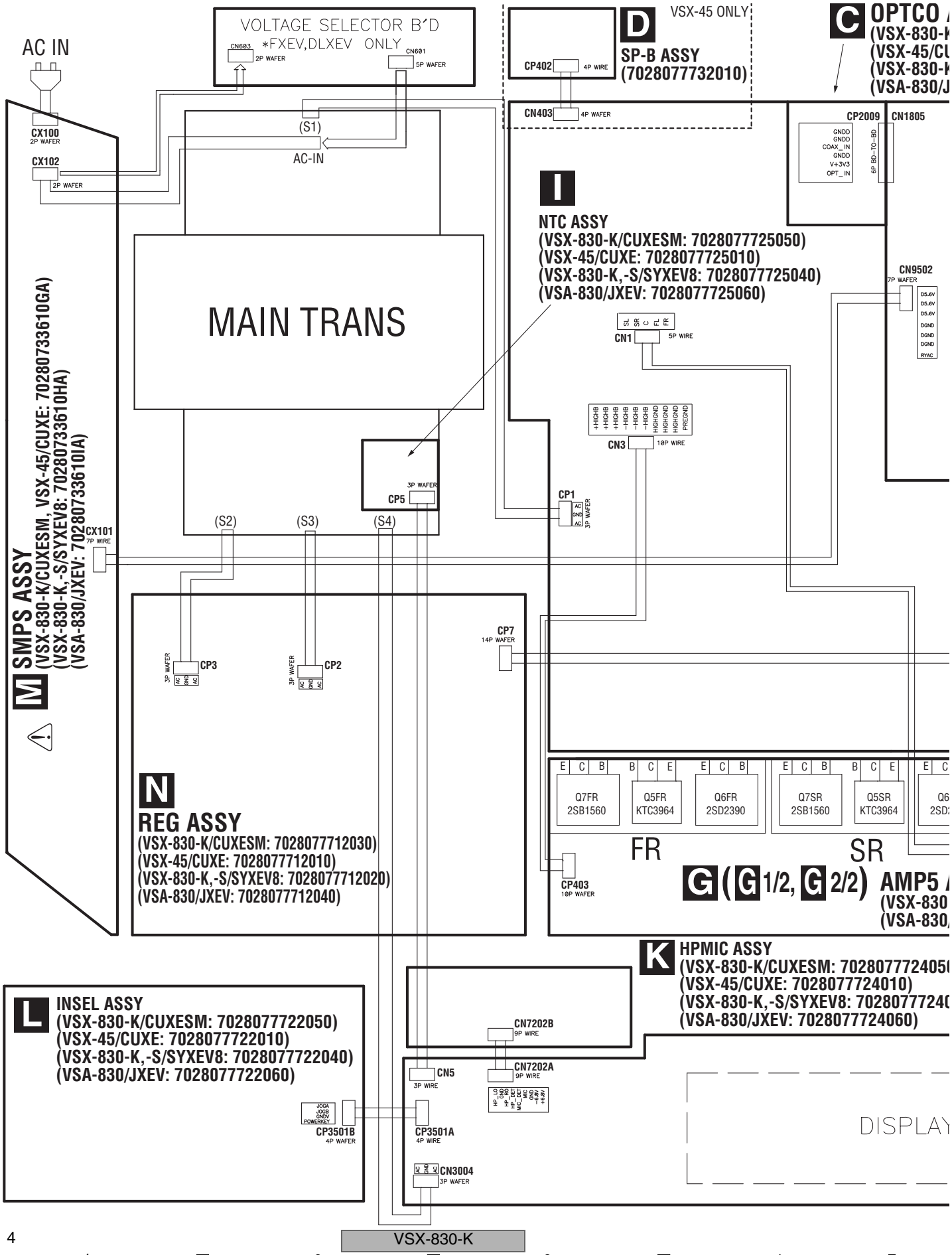
Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

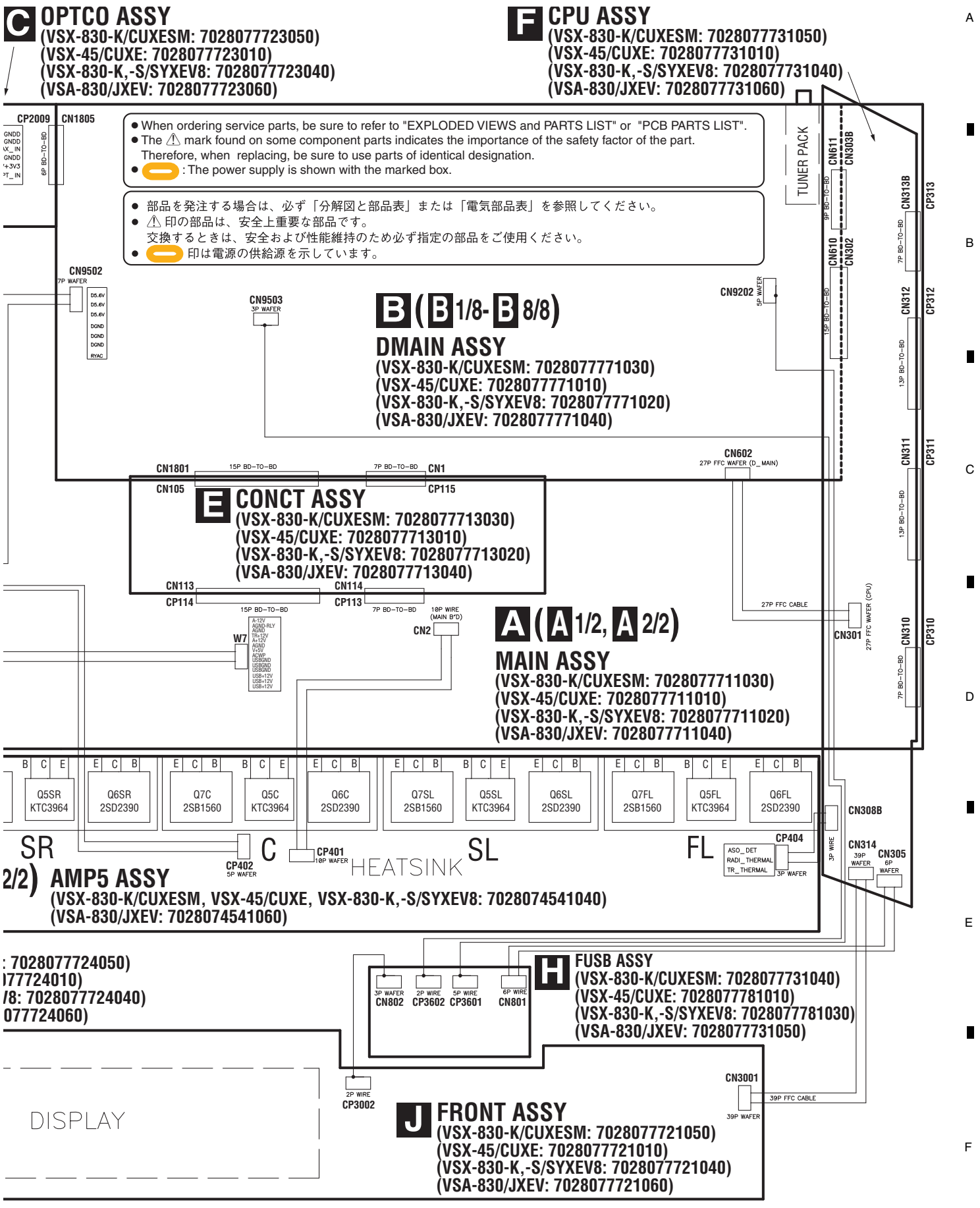
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

CONTENTS

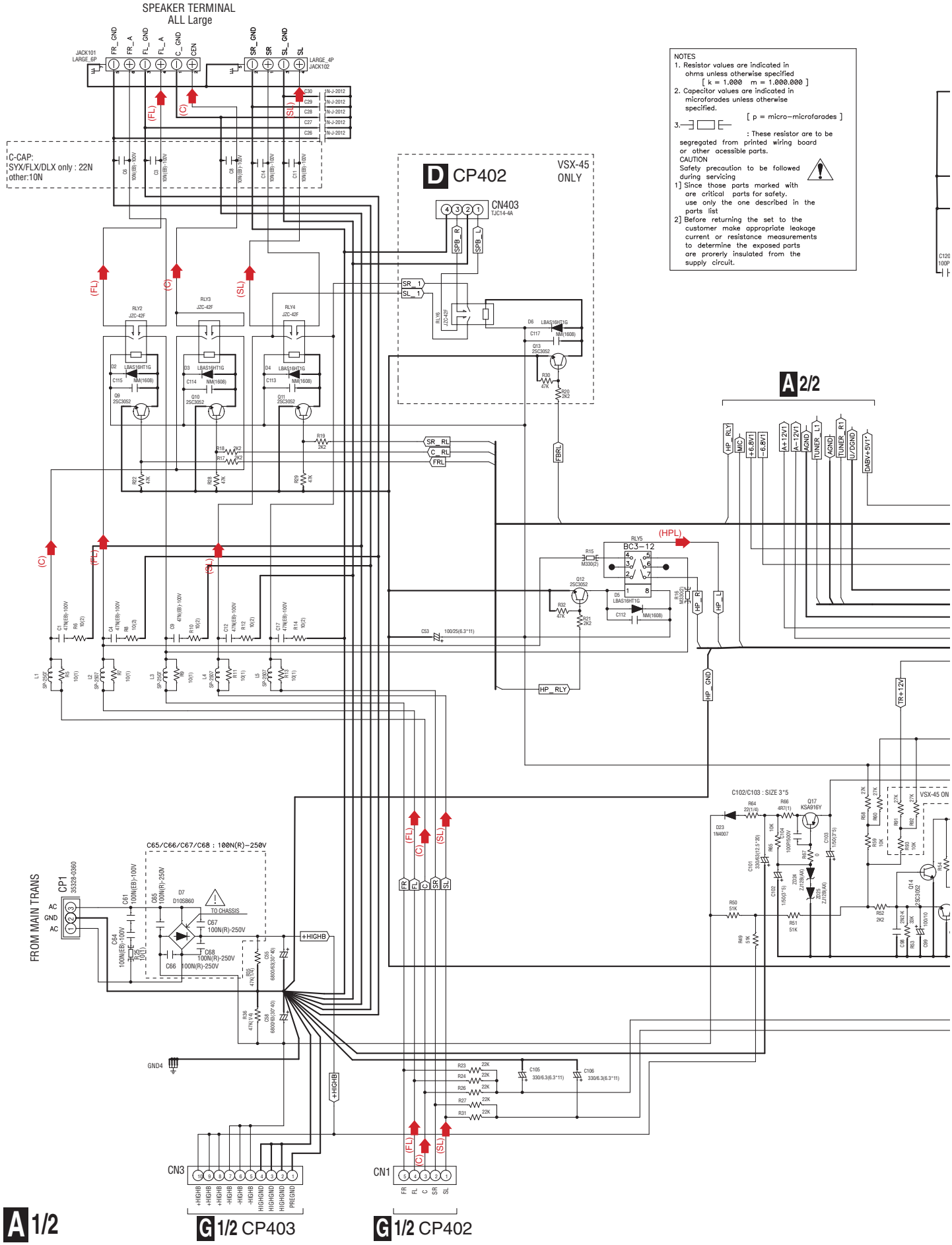
SAFETY INFORMATION 2
10. SCHEMATIC DIAGRAM 4
10.1 OVERALL WIRING DIAGRAM 4
10.2 MAIN ASSY (1/2) 6
10.3 MAIN ASSY (2/2) 8
10.4 D-MAIN ASSY (1/8) 10
10.5 D-MAIN ASSY (2/8) 12
10.6 D-MAIN ASSY (3/8) 14
10.7 D-MAIN ASSY (4/8) 16
10.8 D-MAIN ASSY (5/8) 18
10.9 D-MAIN ASSY (6/8) 20
10.10 D-MAIN ASSY (7/8) 22
10.11 D-MAIN ASSY (8/8) 24
10.12 OPTCO ASSY 26
10.13 SP-B ASSY (VSX-45/CUXE ONLY) 26
10.14 CONCT ASSY 27
10.15 CPU ASSY 28
10.16 AMP5 ASSY (1/2) 30
10.17 AMP5 ASSY (2/2) 32
10.18 FUSB ASSY 34
10.19 NTC, FRONT, HPMIC and INSEL ASSYS 36
10.20 SMPS ASSY 38
10.21 REG ASSY 40
11. PCB CONNECTION DIAGRAM 42
11.1 MAIN ASSY 42
11.2 DMAIN ASSY 46
11.3 OPTCO and SP-B ASSYS 50
11.4 CONCT ASSY 51
11.5 CPU ASSY 52
11.6 AMP5 ASSY 56
11.7 FUSB, NTC, FRONT, HPMIC and INSEL ASSYS 58
11.8 SMPS ASSY 62
11.9 REG ASSY 63
12. PCB PARTS LIST 64

10. SCHEMATIC DIAGRAM
10.1 OVERALL WIRING DIAGRAM




C OPTCO ASSY
(VSX-830-K/CUXESM: 7028077723050)
(VSX-45/CUXE: 7028077723010)
(VSX-830-K,-S/SYXEV8: 7028077723040)
(VSA-830/JXEV: 7028077723060)
F CPU ASSY
(VSX-830-K/CUXESM: 7028077731050)
(VSX-45/CUXE: 7028077731010)
(VSX-830-K,-S/SYXEV8: 7028077731040)
(VSA-830/JXEV: 7028077731060)
● When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
● 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.
● : The power supply is shown with the marked box.
● 部品を発注する場合は、必ず「分解図と部品表」または「電気部品表」を参照してください。
● ⚠ 印の部品は、安全上重要な部品です。
交換するときは、安全および性能維持のため必ず指定の部品をご使用ください。
● 印は電源の供給源を示しています。
CP2009
CN1805
6P BD-TO-BD
TUNER PACK
CN611
CN303B
9P BD-TO-BD
CN610
CN302
15P BD-TO-BD
CN313B
CP313
7P BD-TO-BD
CN312
CP312
13P BD-TO-BD
CN311
CP311
13P BD-TO-BD
CN310
CP310
7P BD-TO-BD
CN9502
7P WAFER
CN9503
3P WAFER
CN9202
5P WAFER
B (B 1/8- B 8/8)
DMAIN ASSY
(VSX-830-K/CUXESM: 7028077771030)
(VSX-45/CUXE: 7028077771010)
(VSX-830-K,-S/SYXEV8: 7028077771020)
(VSA-830/JXEV: 7028077771040)
CN602
27P FFC WAFER (D_MAIN)
CN1801
15P BD-TO-BD
7P BD-TO-BD
CN1
CN105
CP115
E CONCT ASSY
(VSX-830-K/CUXESM: 7028077713030)
(VSX-45/CUXE: 7028077713010)
(VSX-830-K,-S/SYXEV8: 7028077713020)
(VSA-830/JXEV: 7028077713040)
CN113
CN114
CP114
CP113
15P BD-TO-BD
7P BD-TO-BD
10P WIRE (MAIN B'D)
CN2
W7
27P FFC CABLE
CN301
27P FFC WAFER (CPU)
A (A 1/2, A 2/2)
MAIN ASSY
(VSX-830-K/CUXESM: 7028077711030)
(VSX-45/CUXE: 7028077711010)
(VSX-830-K,-S/SYXEV8: 7028077711020)
(VSA-830/JXEV: 7028077711040)
Q5SR KTC3964
Q6SR 2SD2390
Q7C 2SB1560
Q5C KTC3964
Q6C 2SD2390
Q7SL 2SB1560
Q5SL KTC3964
Q6SL 2SD2390
Q7FL 2SB1560
Q5FL KTC3964
Q6FL 2SD2390
CN308B
SR
C
SL
FL
CP402
5P WAFER
CP401
10P WAFER
HEATSINK
CP404
3P WIRE
CN314
39P WAFER
CN305
6P WAFER
2/2) AMP5 ASSY
(VSX-830-K/CUXESM, VSX-45/CUXE, VSX-830-K,-S/SYXEV8: 7028074541040)
(VSA-830/JXEV: 7028074541060)
: 7028077724050)
)77724010)
/8: 7028077724040)
077724060)
H FUSB ASSY
(VSX-830-K/CUXESM: 7028077731040)
(VSX-45/CUXE: 7028077781010)
(VSX-830-K,-S/SYXEV8: 7028077781030)
(VSA-830/JXEV: 7028077731050)
CN802
CP3602
CP3601
CN801
CN3001
39P FFC CABLE
39P WAFER
CP3002
DISPLAY
J FRONT ASSY
(VSX-830-K/CUXESM: 7028077721050)
(VSX-45/CUXE: 7028077721010)
(VSX-830-K,-S/SYXEV8: 7028077721040)
(VSA-830/JXEV: 7028077721060)

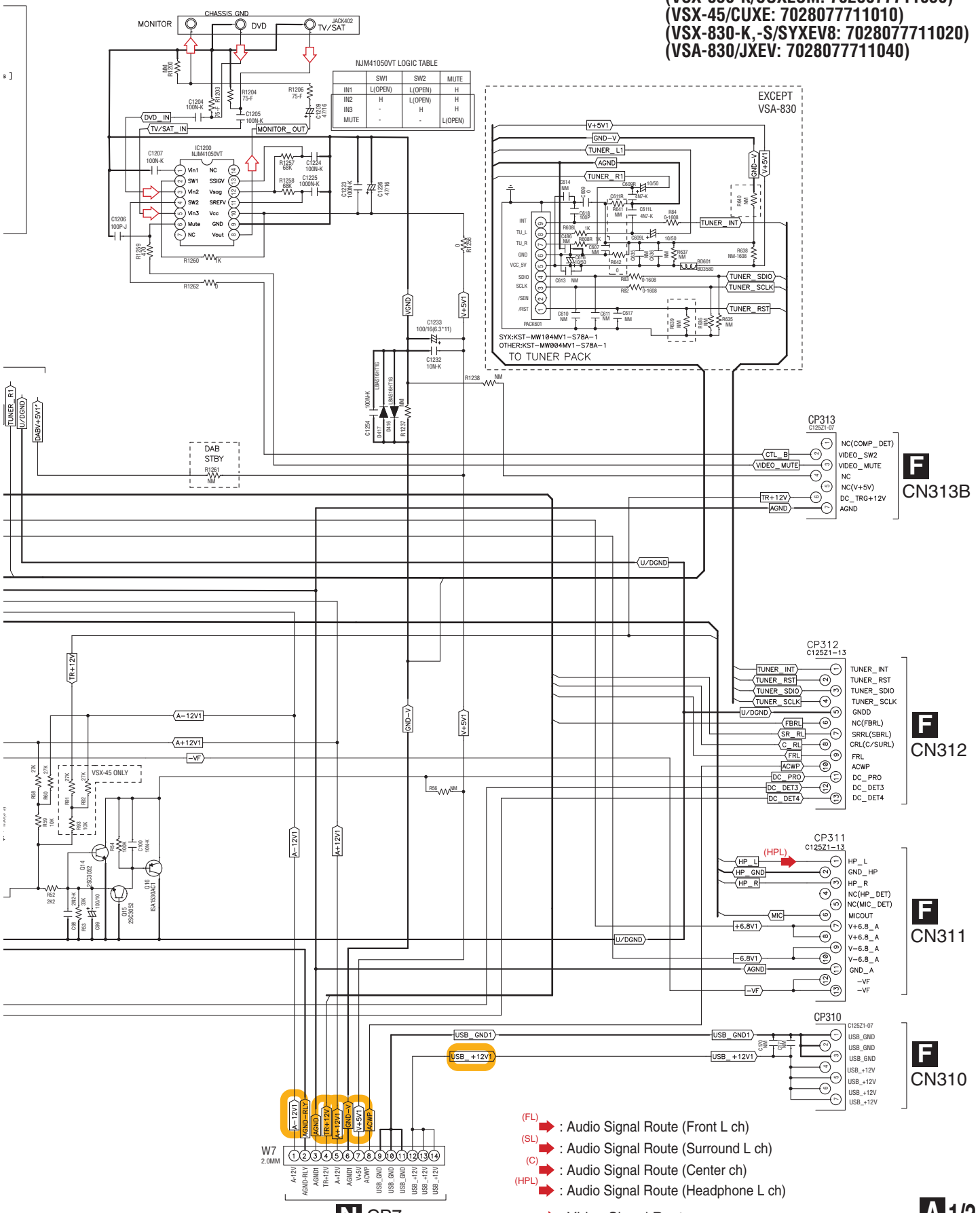
10.2 MAIN ASSY (1/2)



NOTES
1. Resistor values are indicated in ohms unless otherwise specified
[k = 1.000 m = 1.000.000]
2. Capacitor values are indicated in microfarades unless otherwise specified.
[p = micro-microfarades]
3. : These resistor are to be segregated from printed wiring board or other acessible 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 prorerly insulated from the supply circuit.

A 1/2 MAIN ASSY

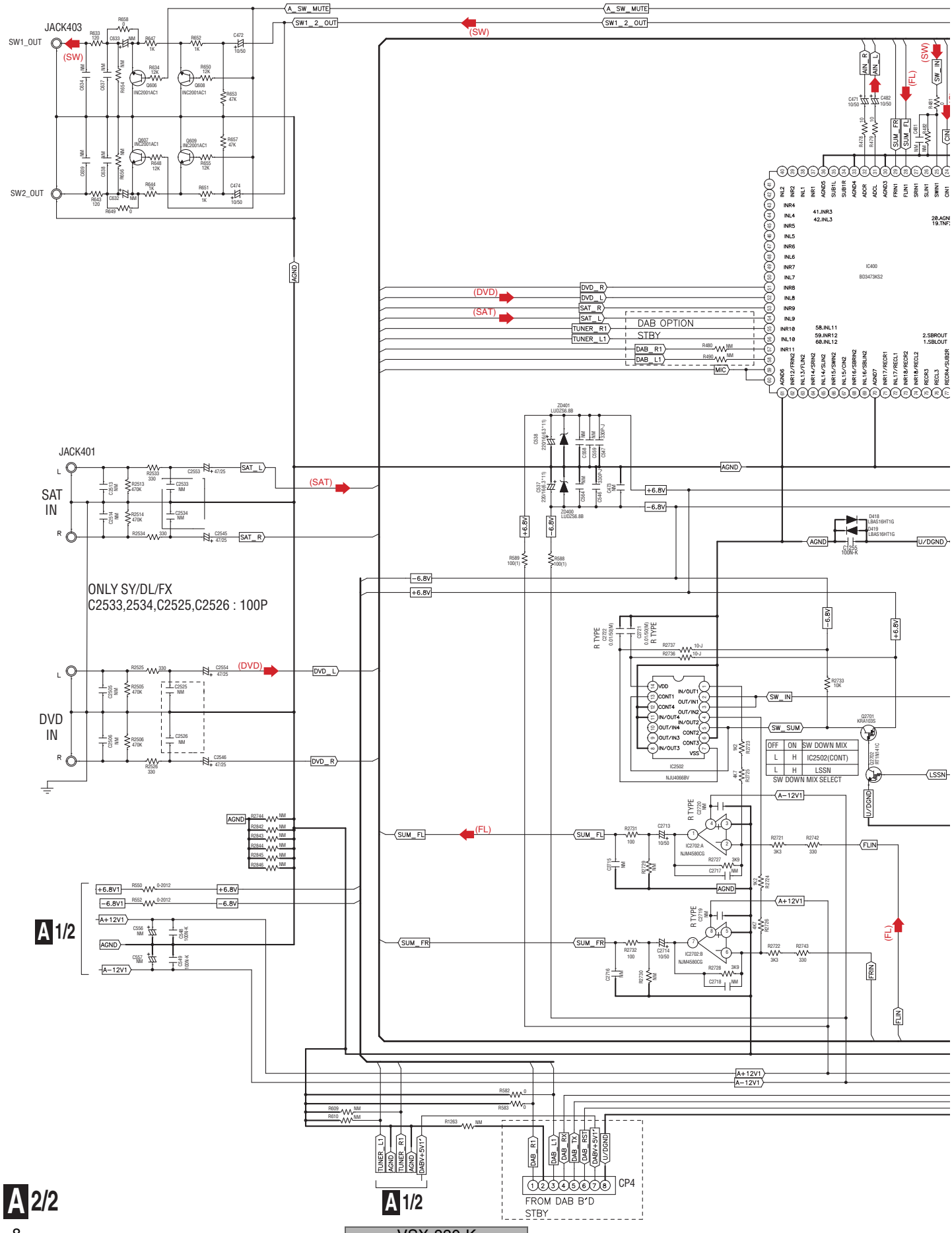
(VSX-830-K/CUXESM: 7028077711030)
(VSX-45/CUXE: 7028077711010)
(VSX-830-K,-S/SYXEV8: 7028077711020)
(VSA-830/JXEV: 7028077711040)



A 1/2

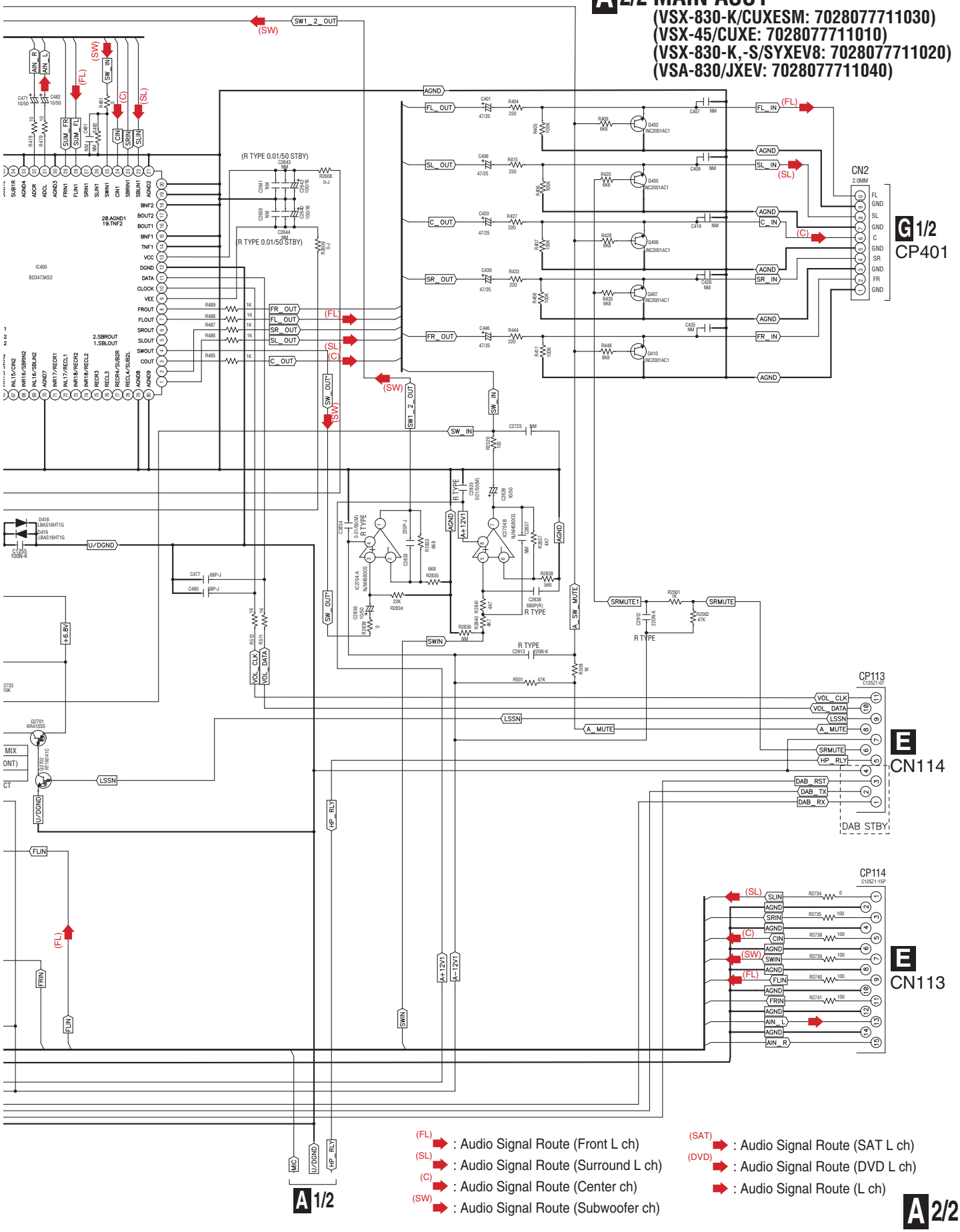
VSX-830-K

10.3 MAIN ASSY (2/2)

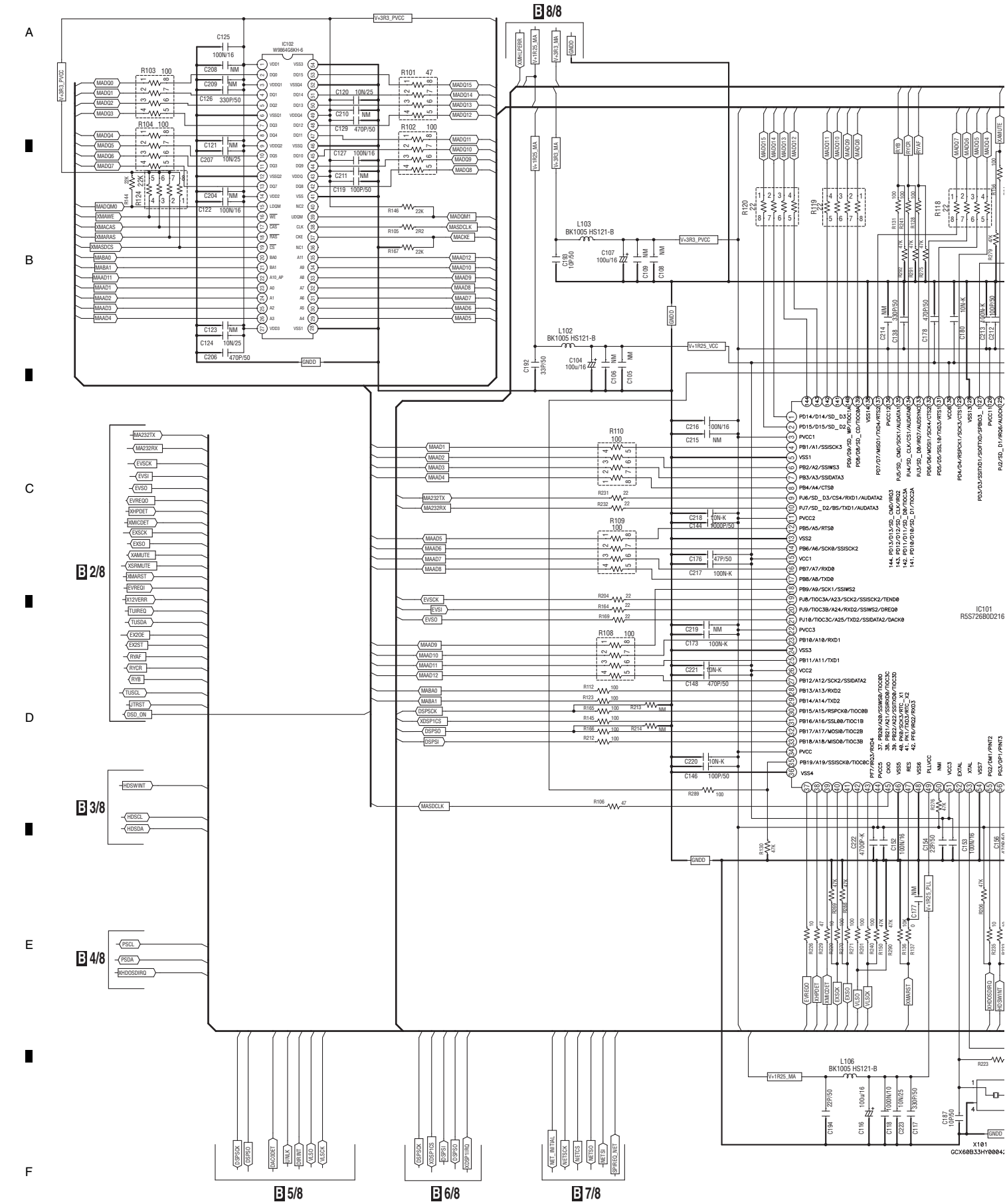


A 2/2 MAIN ASSY

(VSX-830-K/CUXESM: 7028077711030)
(VSX-45/CUXE: 7028077711010)
(VSX-830-K,-S/SYXEV8: 7028077711020)
(VSA-830/JXEV: 7028077711040)

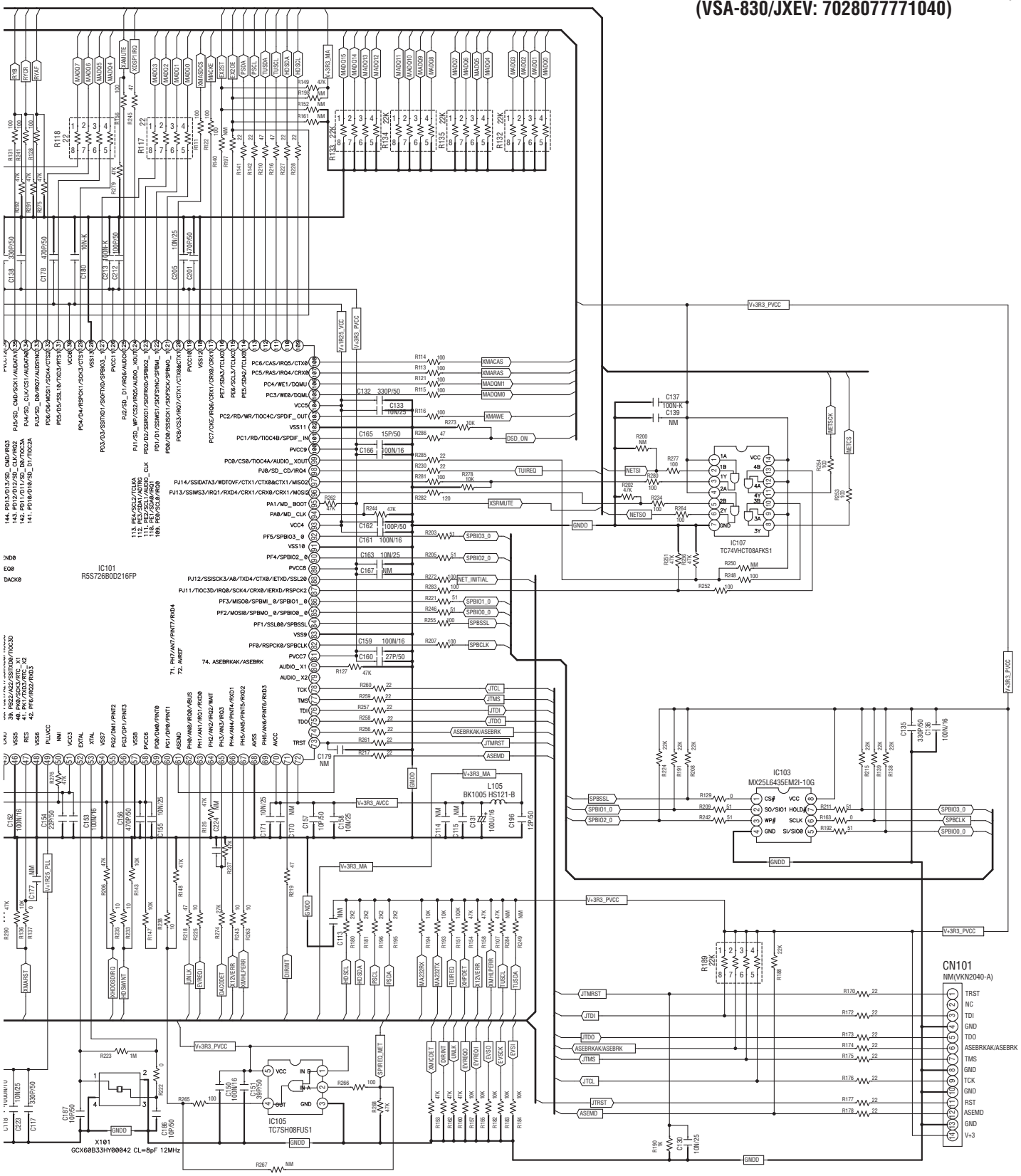


10.4 D-MAIN ASSY (1/8)

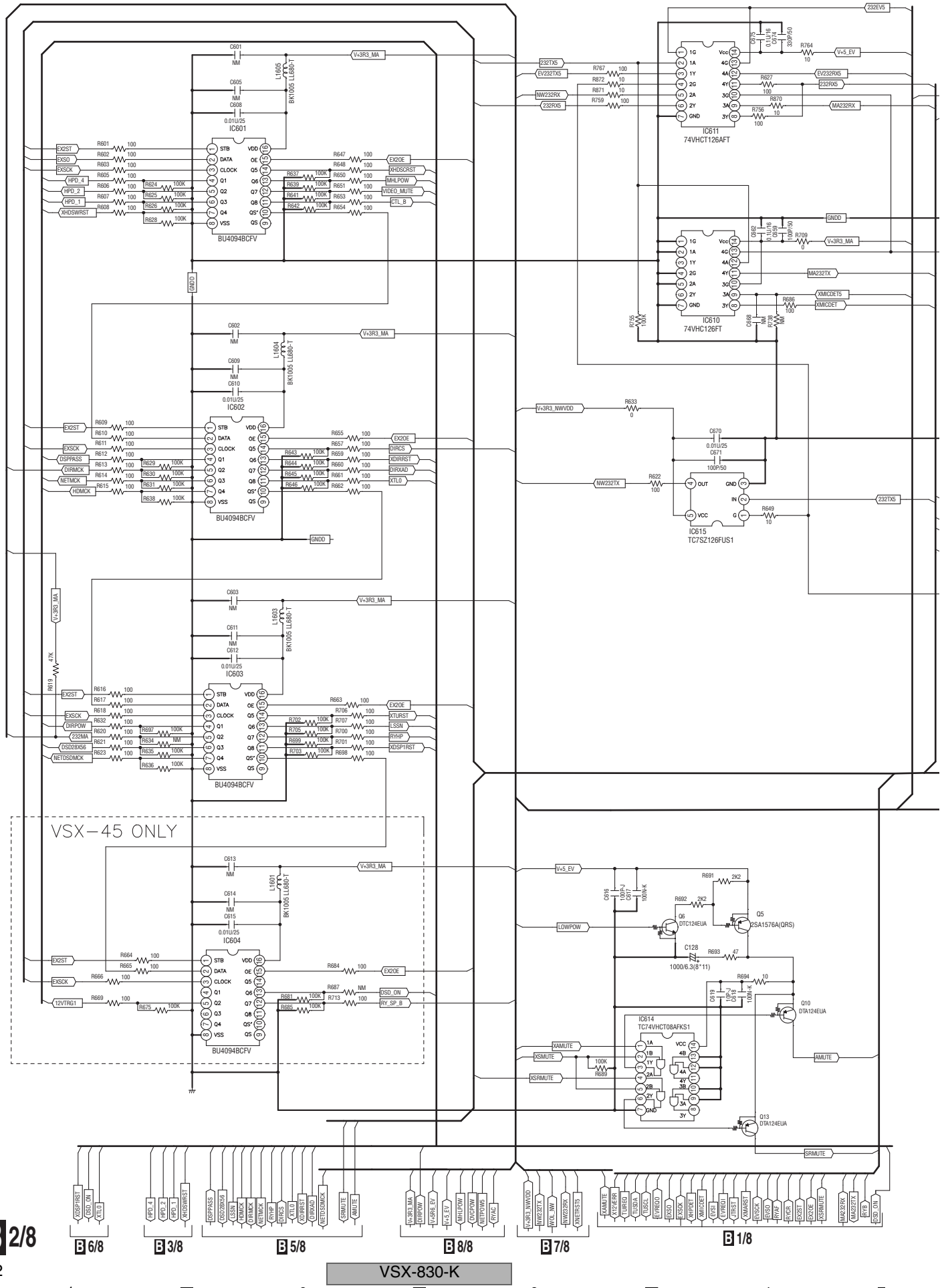


B 1/8 DMAIN ASSY

(VSX-830-K/CUXESM: 7028077771030)
(VSX-45/CUXE: 7028077771010)
(VSX-830-K,-S/SYXEV8: 7028077771020)
(VSA-830/JXEV: 7028077771040)

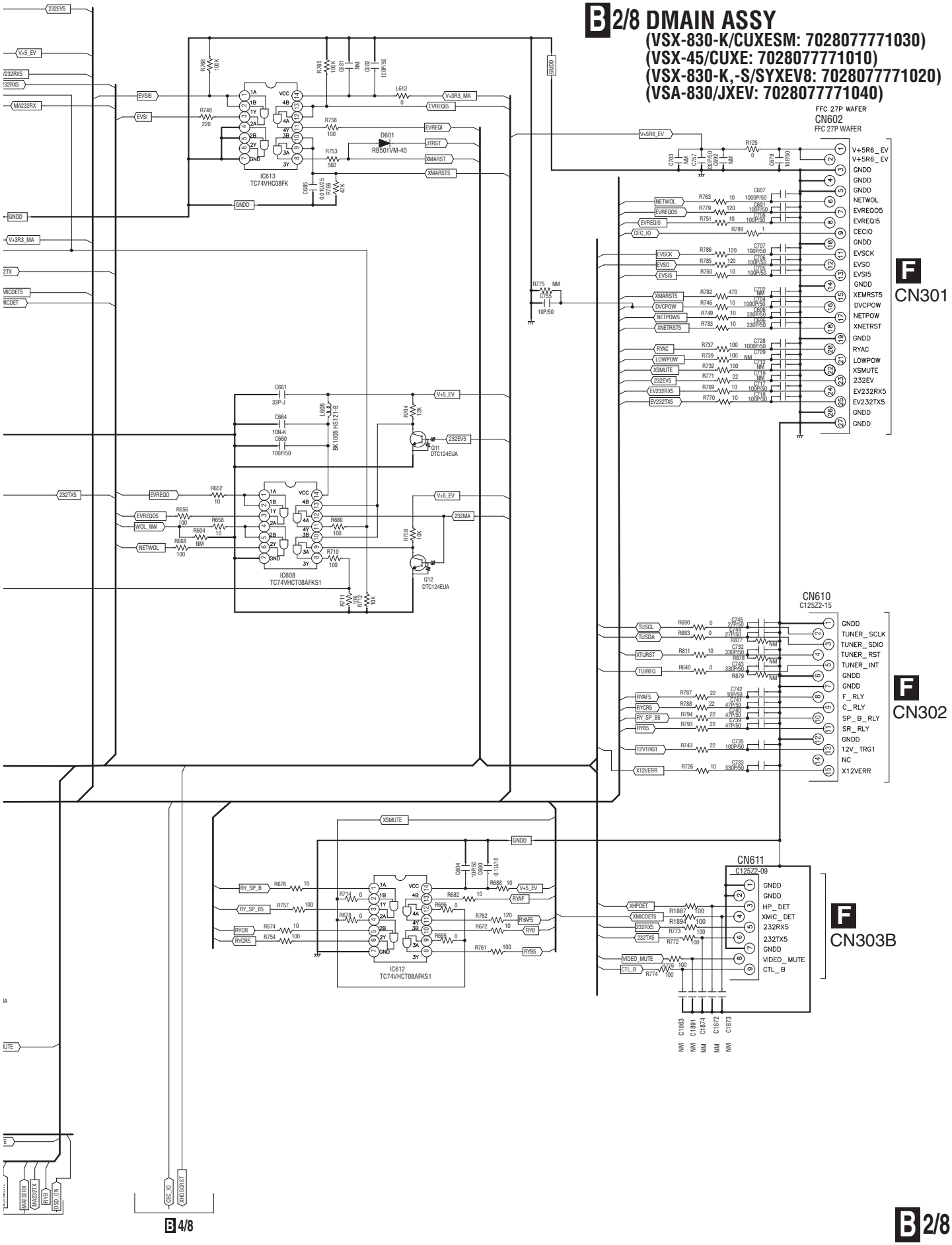


10.5 D-MAIN ASSY (2/8)

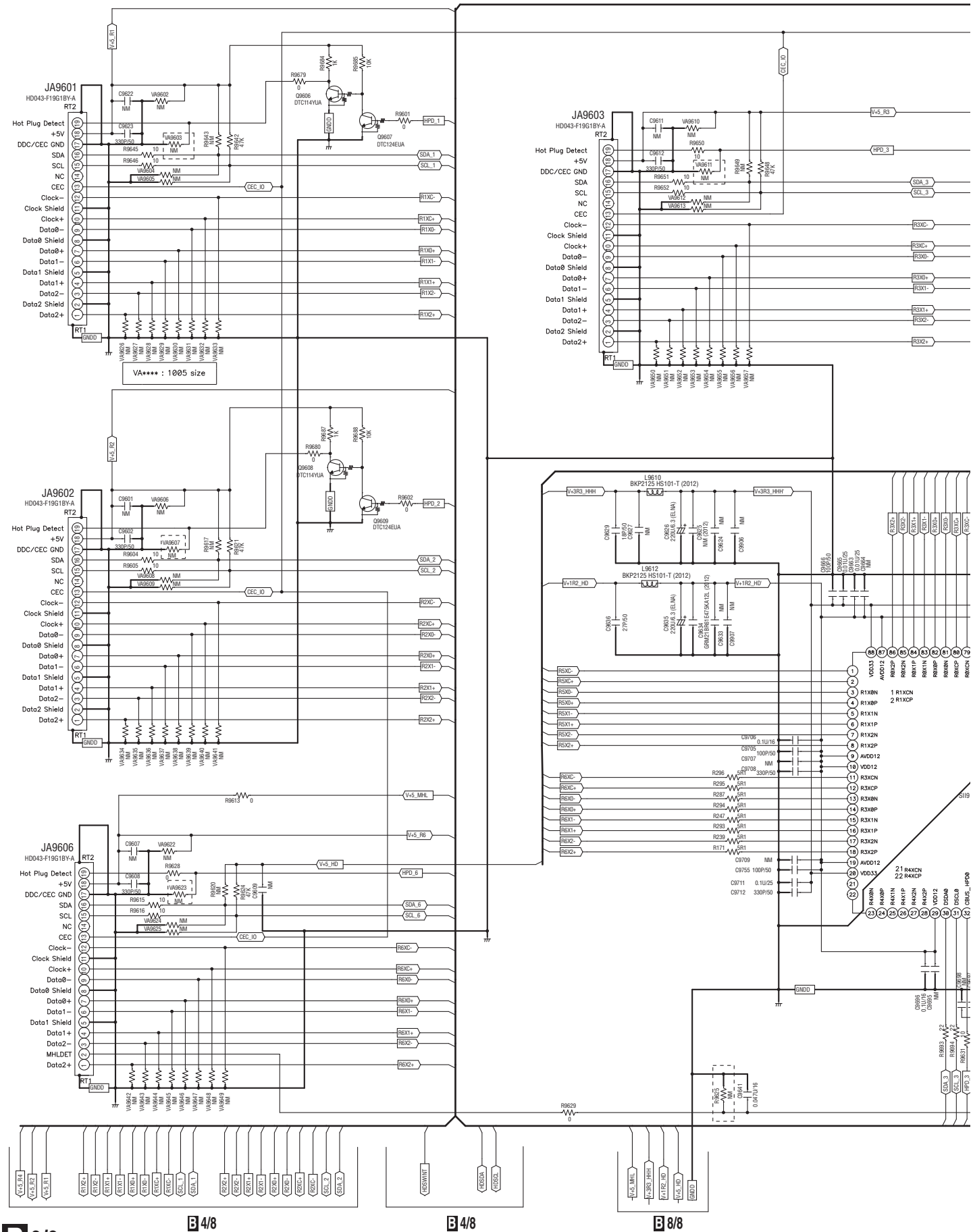


B 2/8 DMAIN ASSY

(VSX-830-K/CUXESM: 7028077771030)
(VSX-45/CUXE: 7028077771010)
(VSX-830-K,-S/SYXEV8: 7028077771020)
(VSA-830/JXEV: 7028077771040)

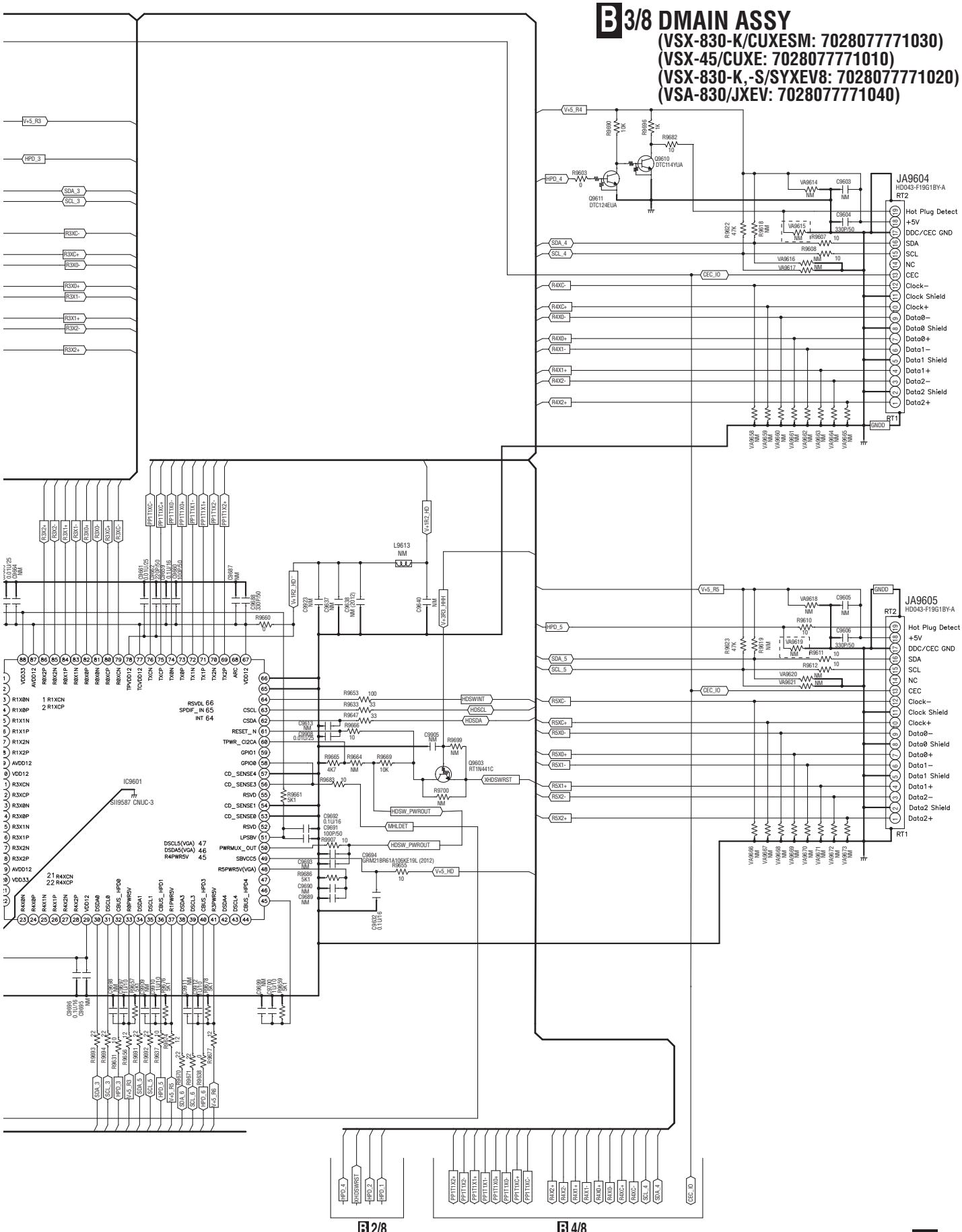


10.6 D-MAIN ASSY (3/8)

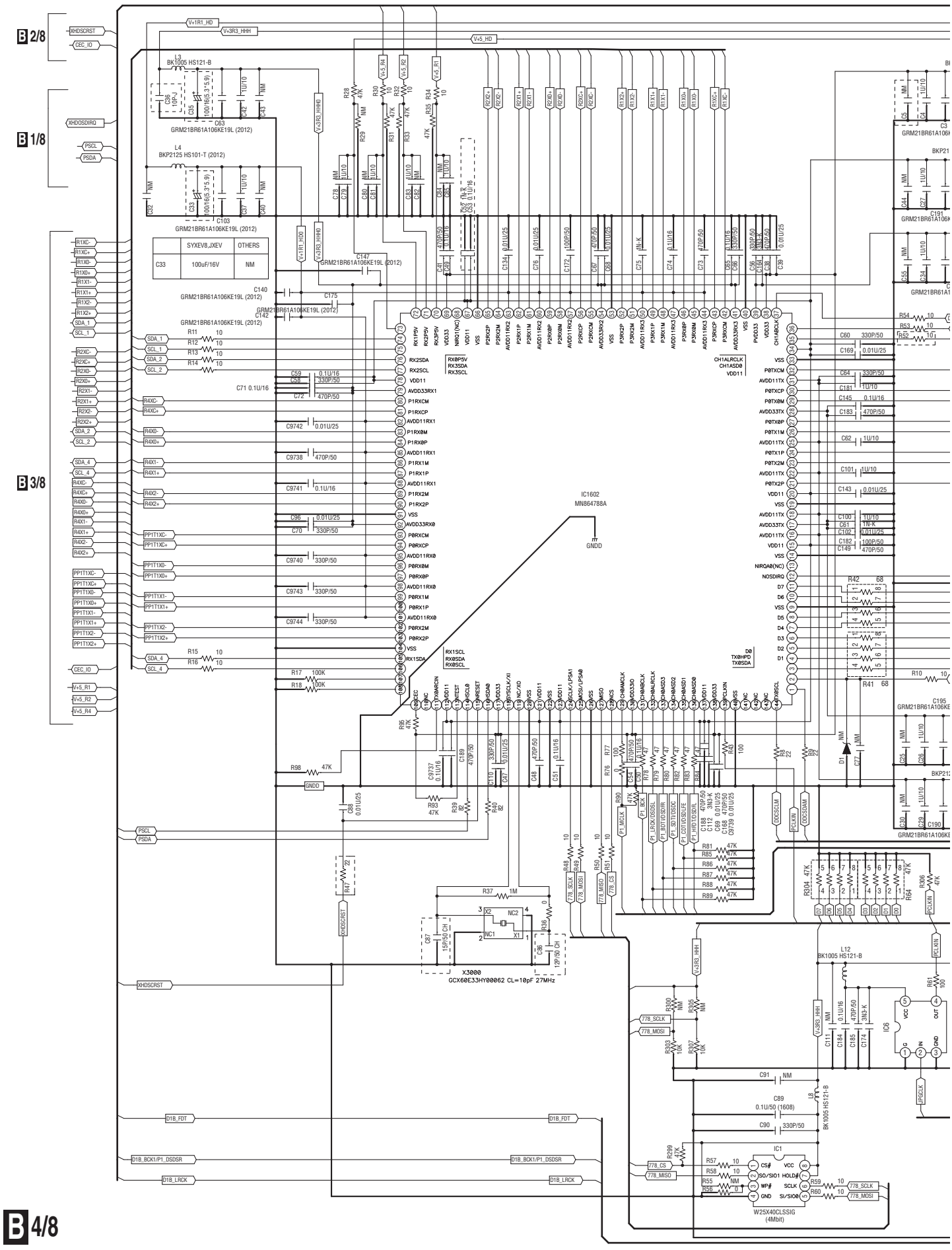


B 3/8 DMAIN ASSY

(VSX-830-K/CUXESM: 7028077771030)
(VSX-45/CUXE: 7028077771010)
(VSX-830-K,-S/SYXEV8: 7028077771020)
(VSA-830/JXEV: 7028077771040)

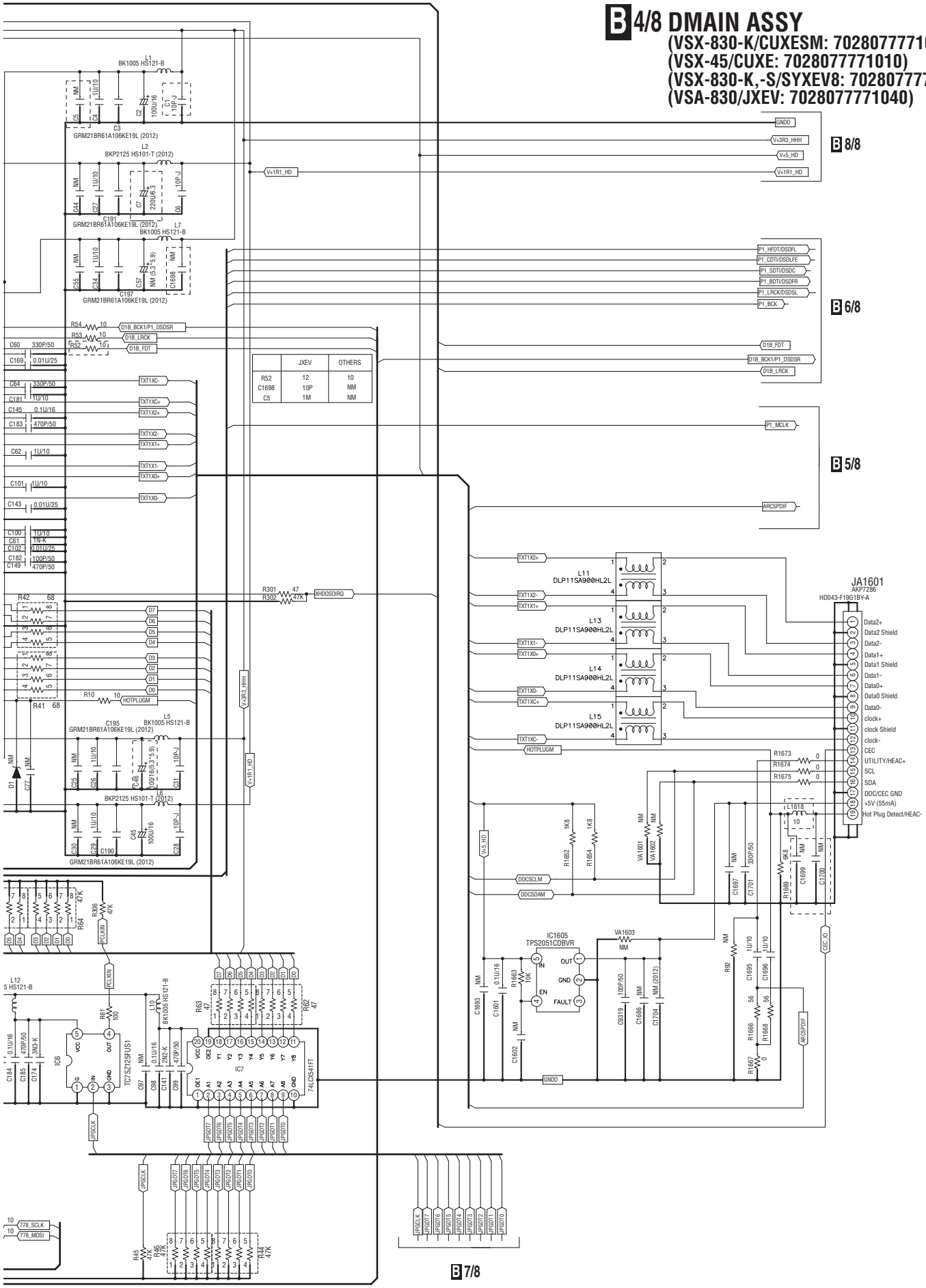


10.7 D-MAIN ASSY (4/8)



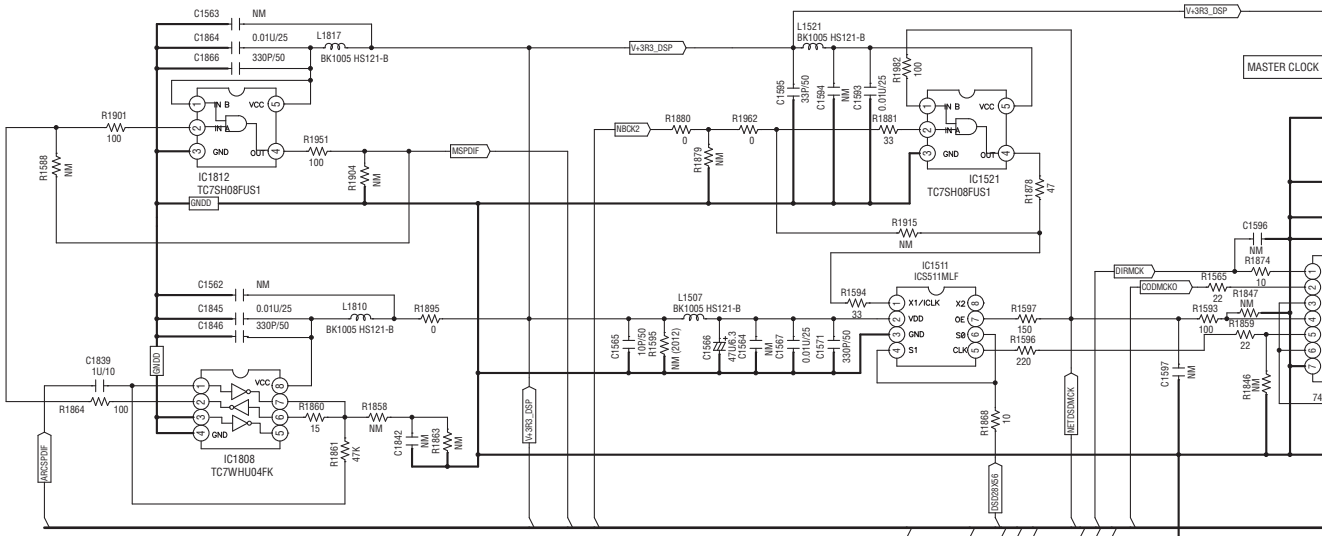
B 4/8 DMAIN ASSY

(VSX-830-K/CUXESM: 7028077771030)
(VSX-45/CUXE: 7028077771010)
(VSX-830-K,-S/SYXEV8: 7028077771020)
(VSA-830/JXEV: 7028077771040)



	JXEV	OTHERS
R52	12	10
C1698	10P	NM
C5	1M	NM

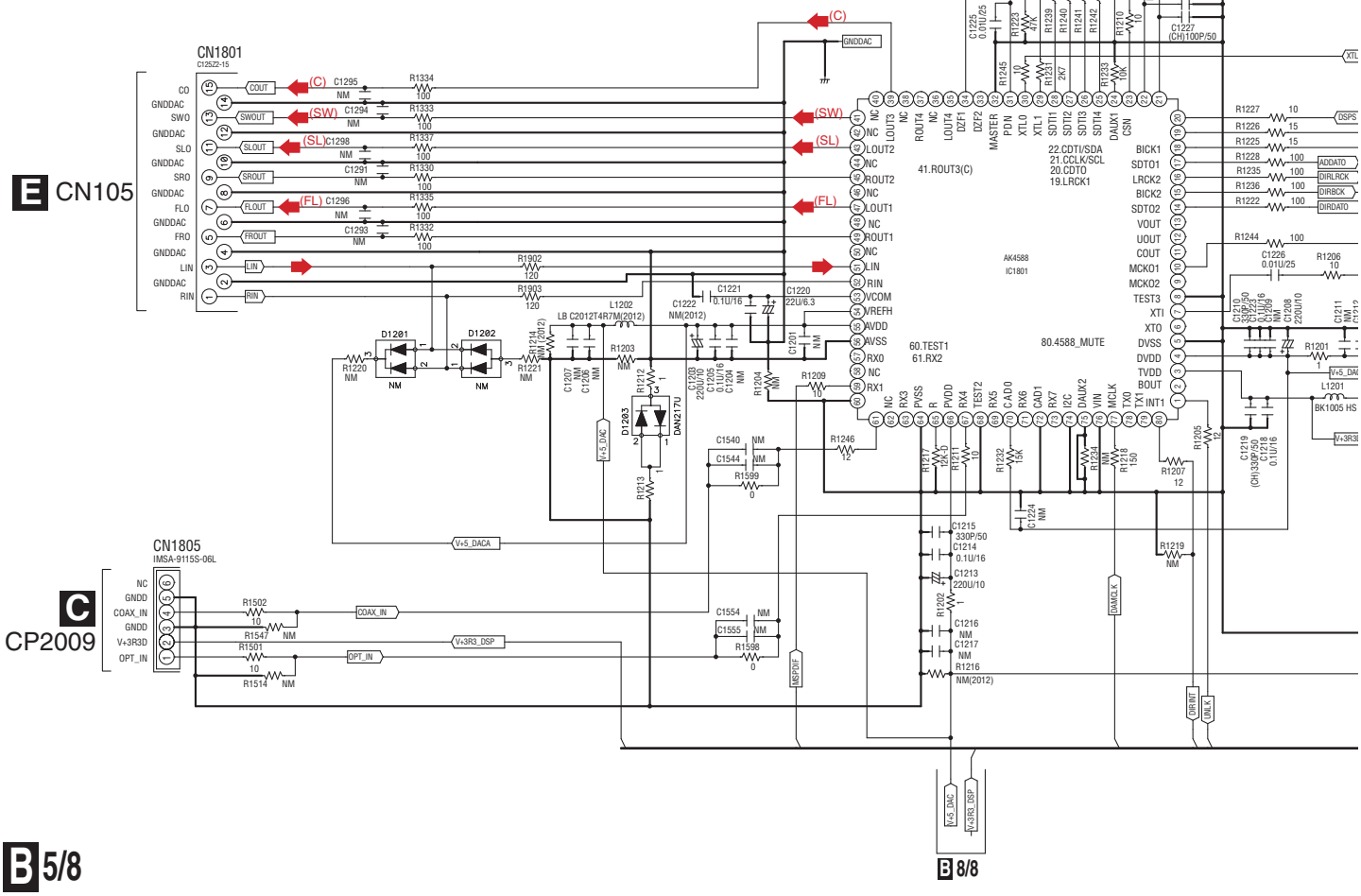
10.8 D-MAIN ASSY (5/8)

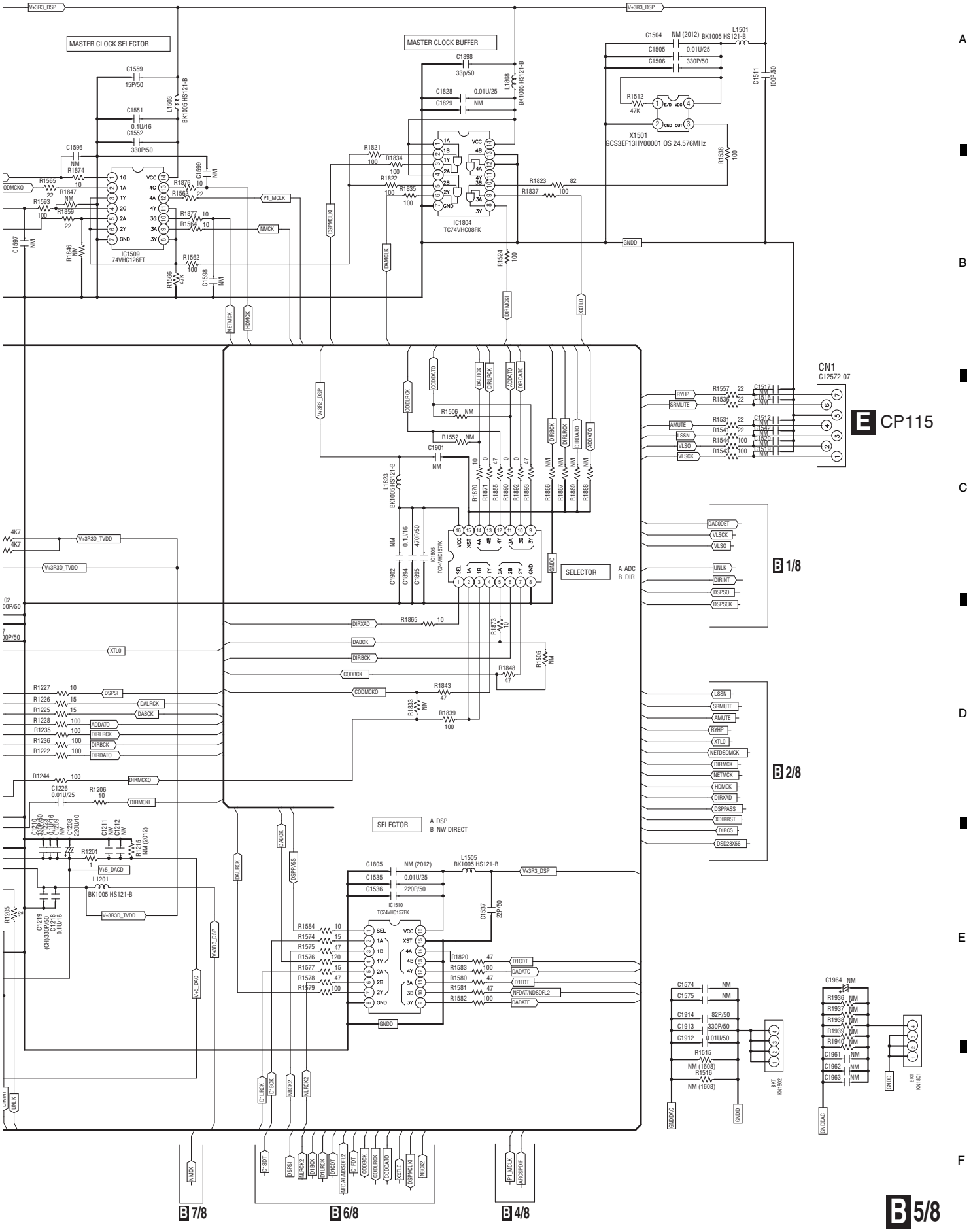


B 5/8 DMAIN ASSY

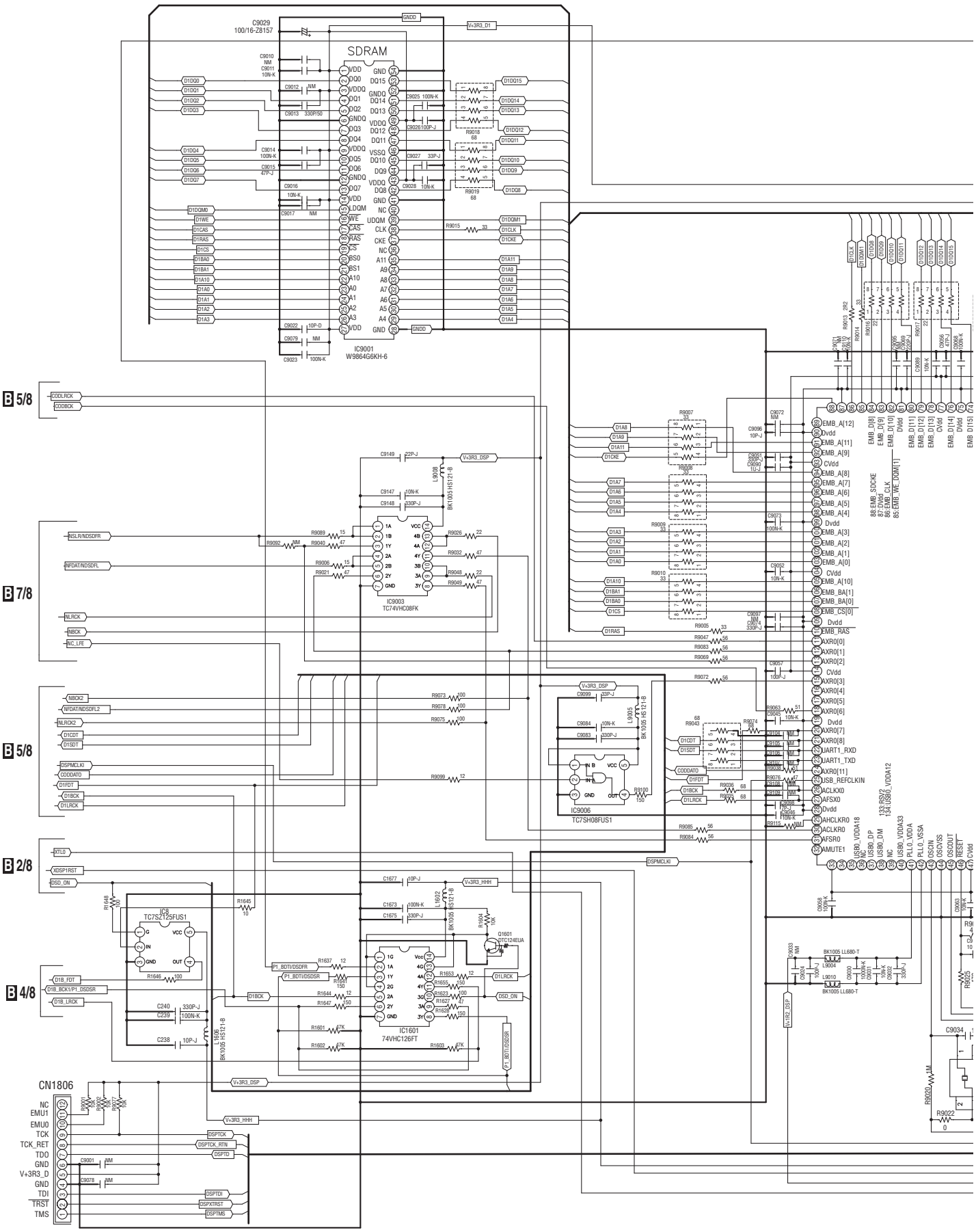
(VSX-830-K/CUXESM: 7028077771030)
(VSX-45/CUXE: 7028077771010)
(VSX-830-K,-S/SYXEV8: 7028077771020)
(VSA-830/JXEV: 7028077771040)

: Audio Signal Route (L ch)
(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)



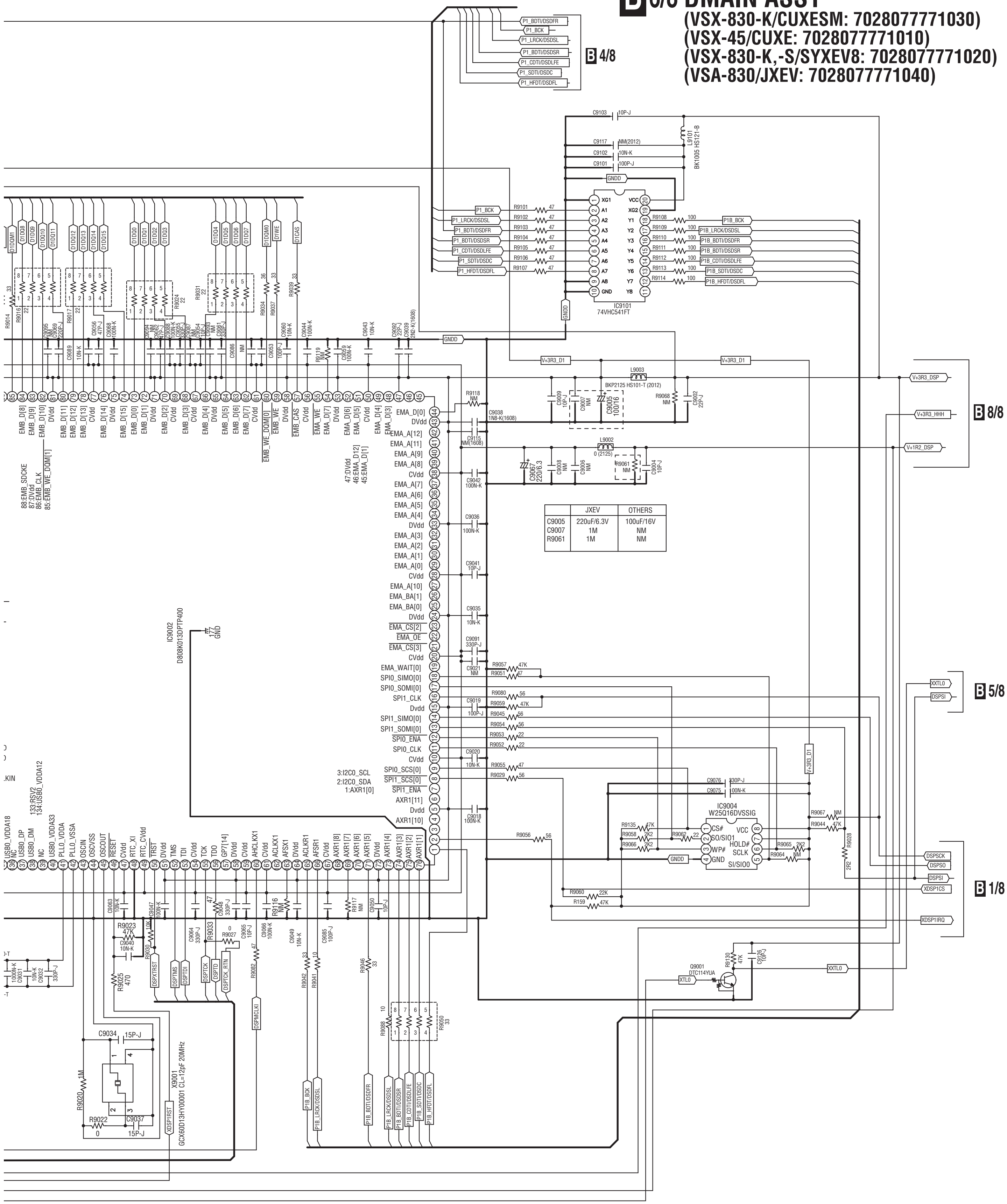

MASTER CLOCK SELECTOR
MASTER CLOCK BUFFER
IC1509 74VHC126FT
IC1804 TC74VHC08FK
X1501 GCS3EF13HY00001 OS 24.576MHz
IC1510 TC74VHC157FK
IC1805 TC74VHC157FK
SELECTOR
A ADC B DIR
SELECTOR
A DSP B NW DIRECT
CN1 C12522-07
E CP115
B 1/8
B 2/8
B 4/8
B 5/8
B 6/8
B 7/8
BK1005 HS121-B
V+3R3_DSP
V+3R3D_TVDD
V+5_DACD
GNDD
GNDDAC

10.9 D-MAIN ASSY (6/8)



B 6/8 DMAIN ASSY

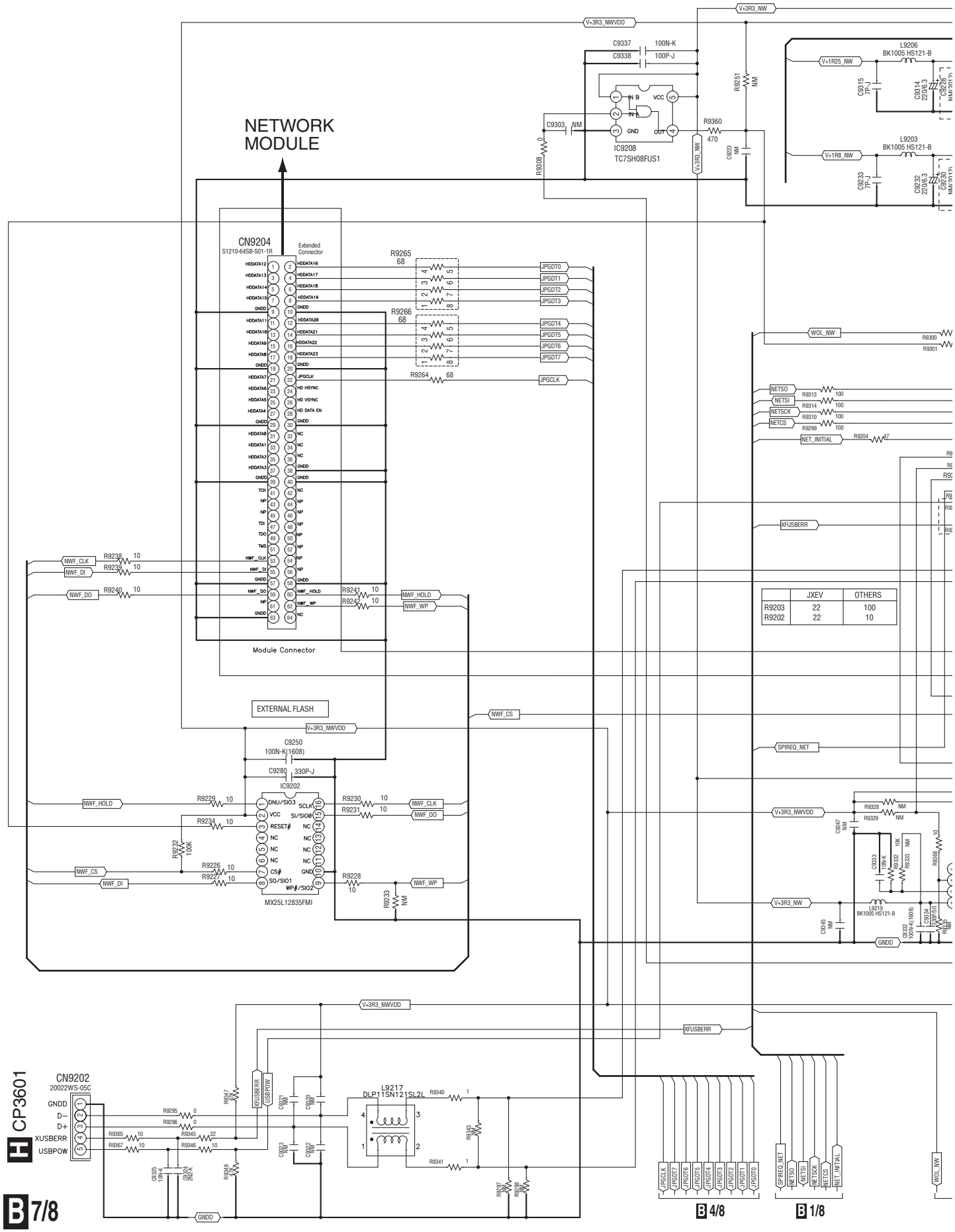
(VSX-830-K/CUXESM: 7028077771030)
(VSX-45/CUXE: 7028077771010)
(VSX-830-K,-S/SYXEV8: 7028077771020)
(VSA-830/JXEV: 7028077771040)



	JXEV	OTHERS
C9005	220uF/6.3V	100uF/16V
C9007	1M	NM
R9061	1M	NM

B 6/8

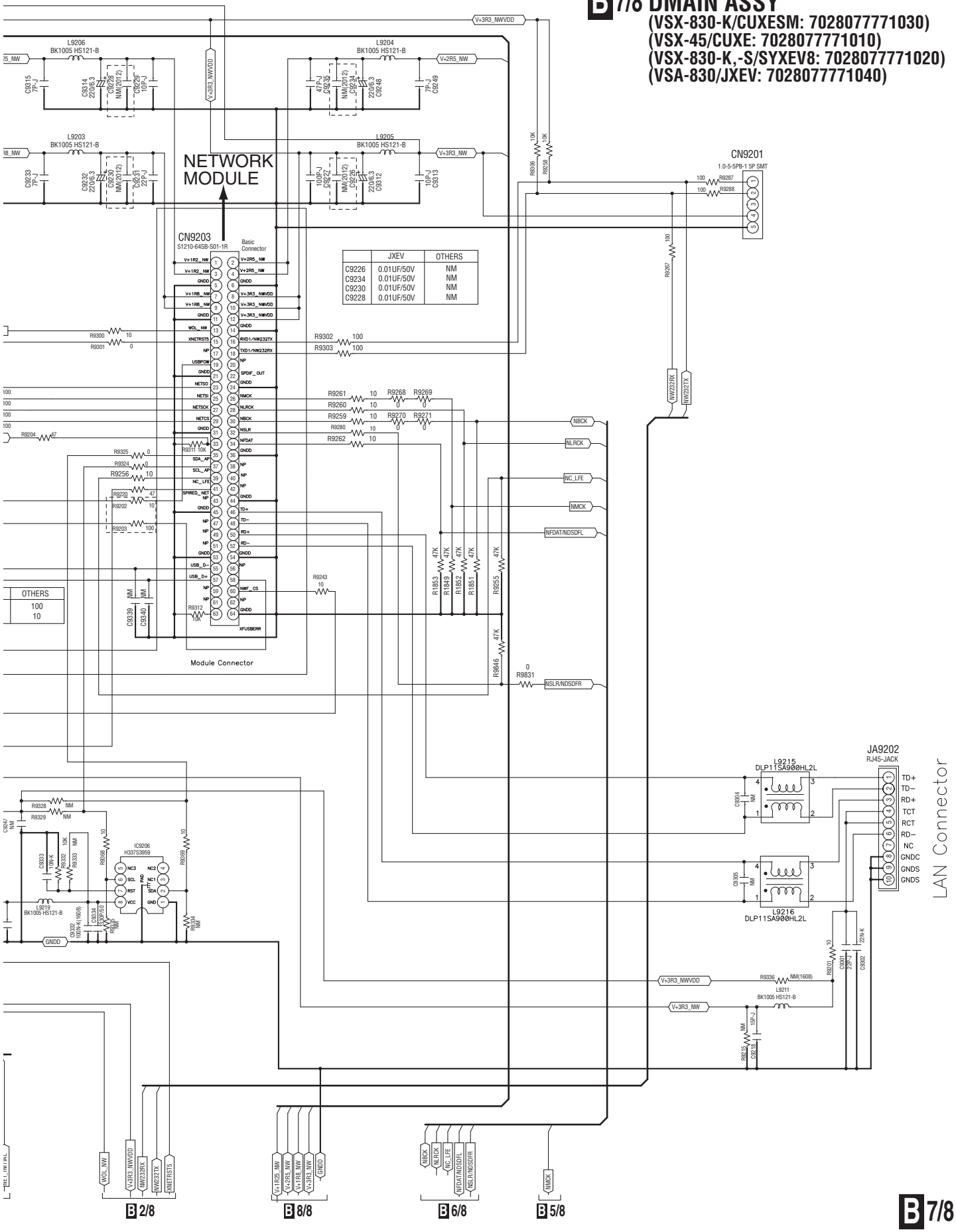
10.10 D-MAIN ASSY (7/8)



	JXEV	OTHERS
R9203	22	100
R9202	22	10

B 7/8 DMAIN ASSY

(VSX-830-K/CUXESM: 7028077771030)
(VSX-45/CUXE: 7028077771010)
(VSX-830-K,-S/SYXEV8: 7028077771020)
(VSA-830/JXEV: 7028077771040)



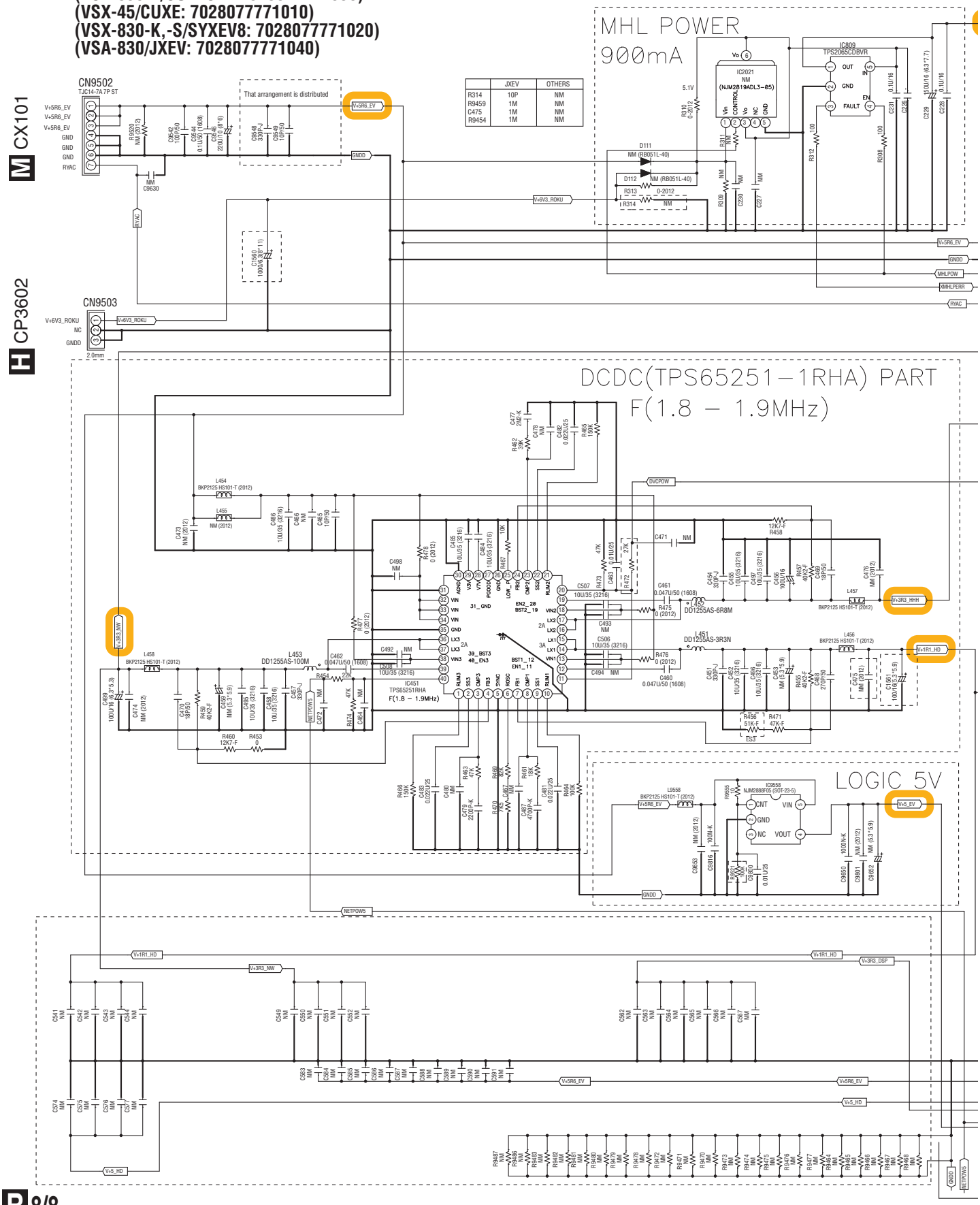
	JXEV	OTHERS
C9226	0.01UF/50V	NM
C9234	0.01UF/50V	NM
C9230	0.01UF/50V	NM
C9228	0.01UF/50V	NM

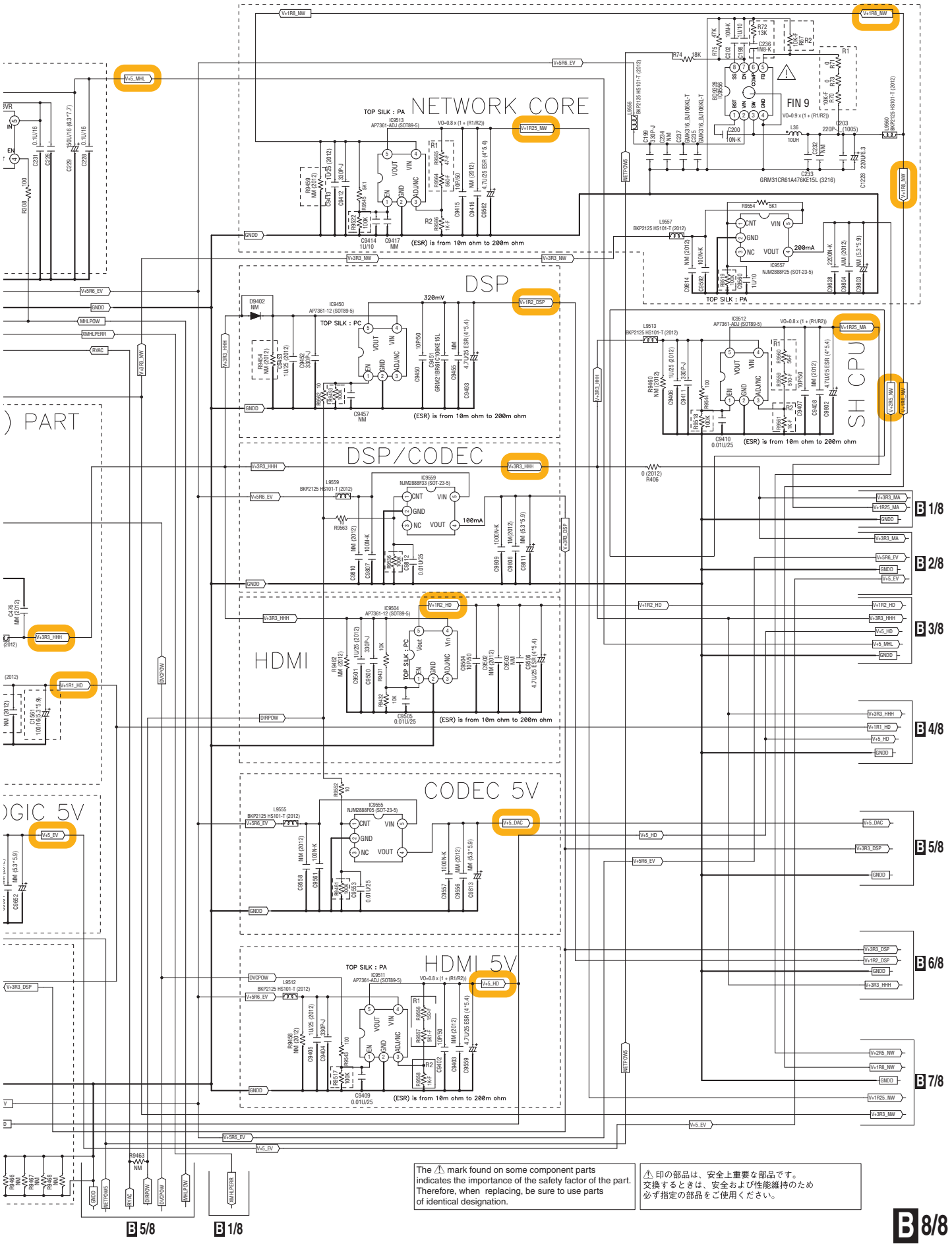
OTHERS
100
10

10.11 D-MAIN ASSY (8/8)

B 8/8 DMAIN ASSY

(VSX-830-K/CUXESM: 7028077771030)
(VSX-45/CUXE: 7028077771010)
(VSX-830-K,-S/SYXEV8: 7028077771020)
(VSA-830/JXEV: 7028077771040)



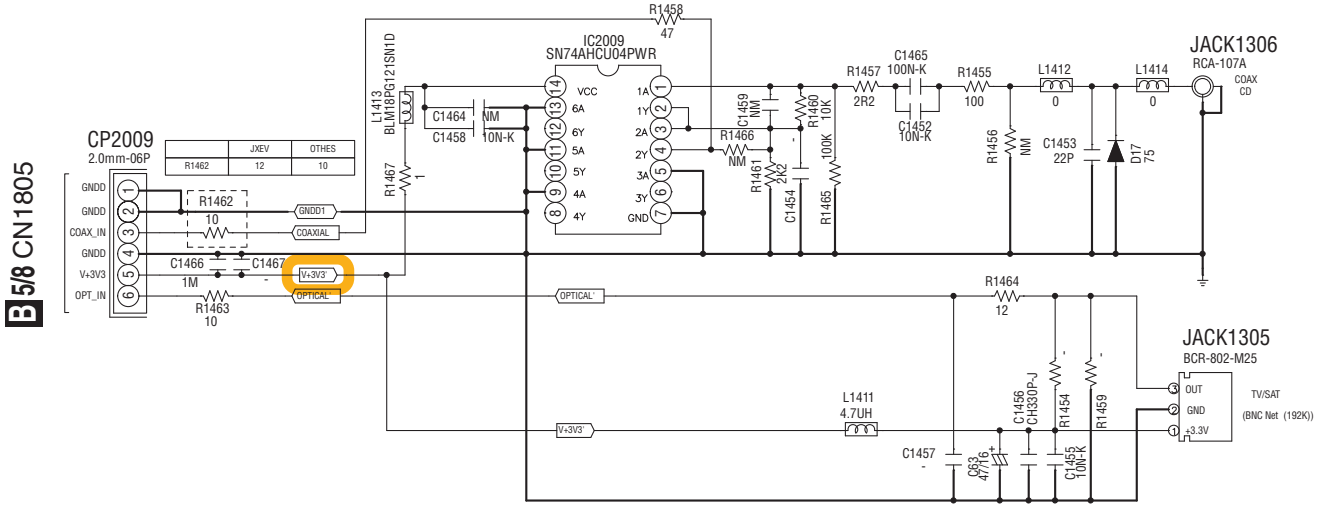


The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

⚠ 印の部品は、安全上重要な部品です。
交換するときは、安全および性能維持のため
必ず指定の部品をご使用ください。

10.12 OPTCO ASSY

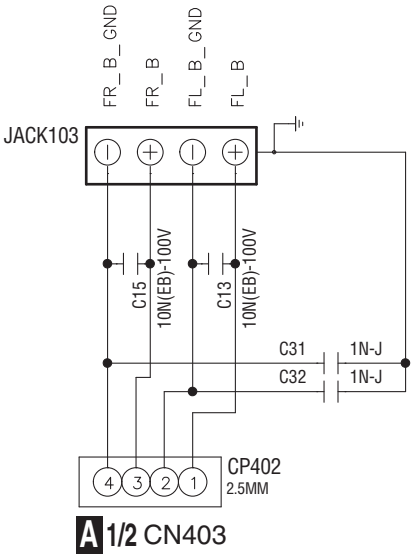
C OPTCO ASSY
(VSX-830-K/CUXESM: 7028077723050)
(VSX-45/CUXE: 7028077723010)
(VSX-830-K,-S/SYXEV8: 7028077723040)
(VSA-830/JXEV: 7028077723060)



C

10.13 SP-B ASSY (VSX-45/CUXE ONLY)

D SP-B ASSY (7028077732010)



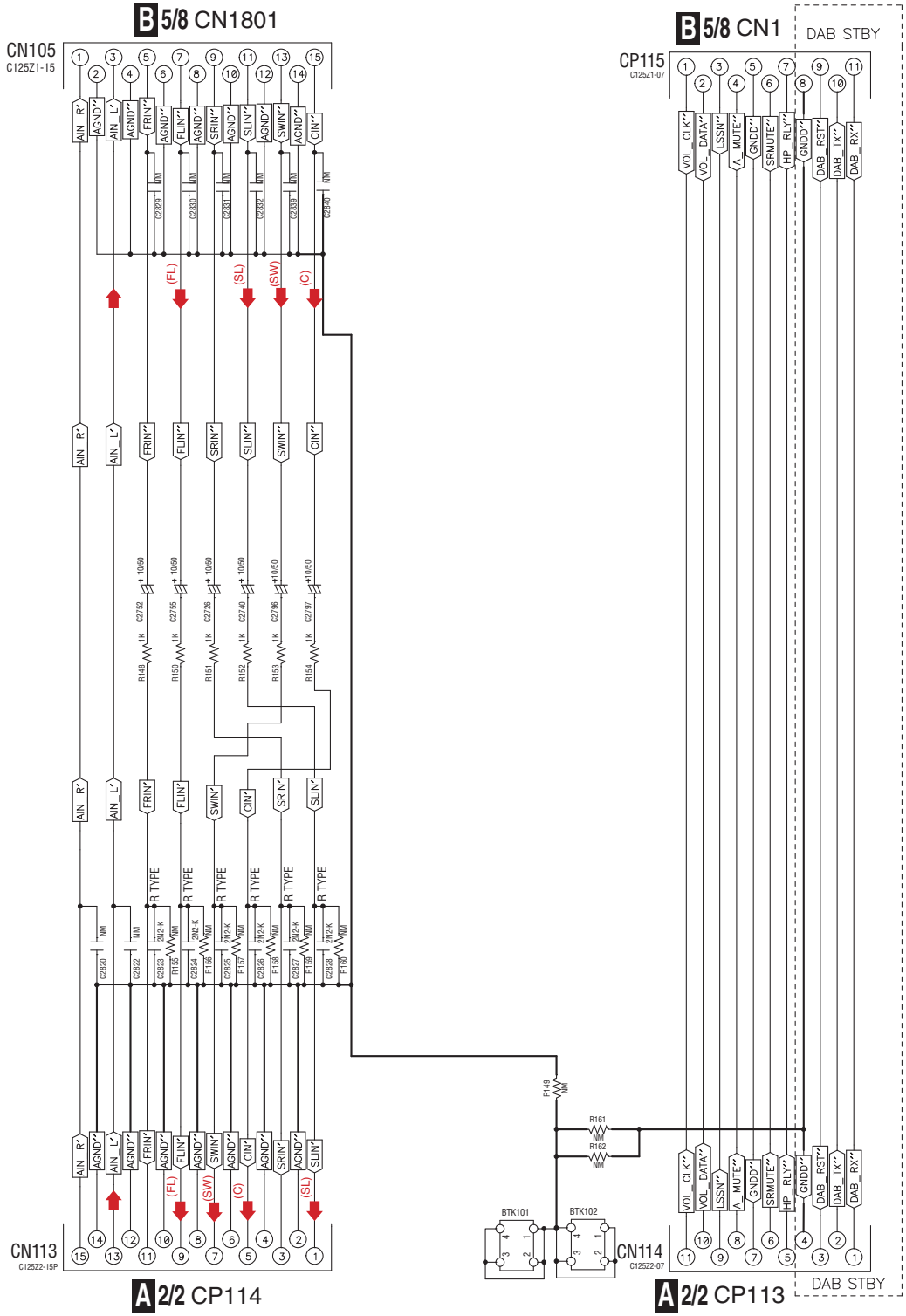
D

10.14 CONCT ASSY

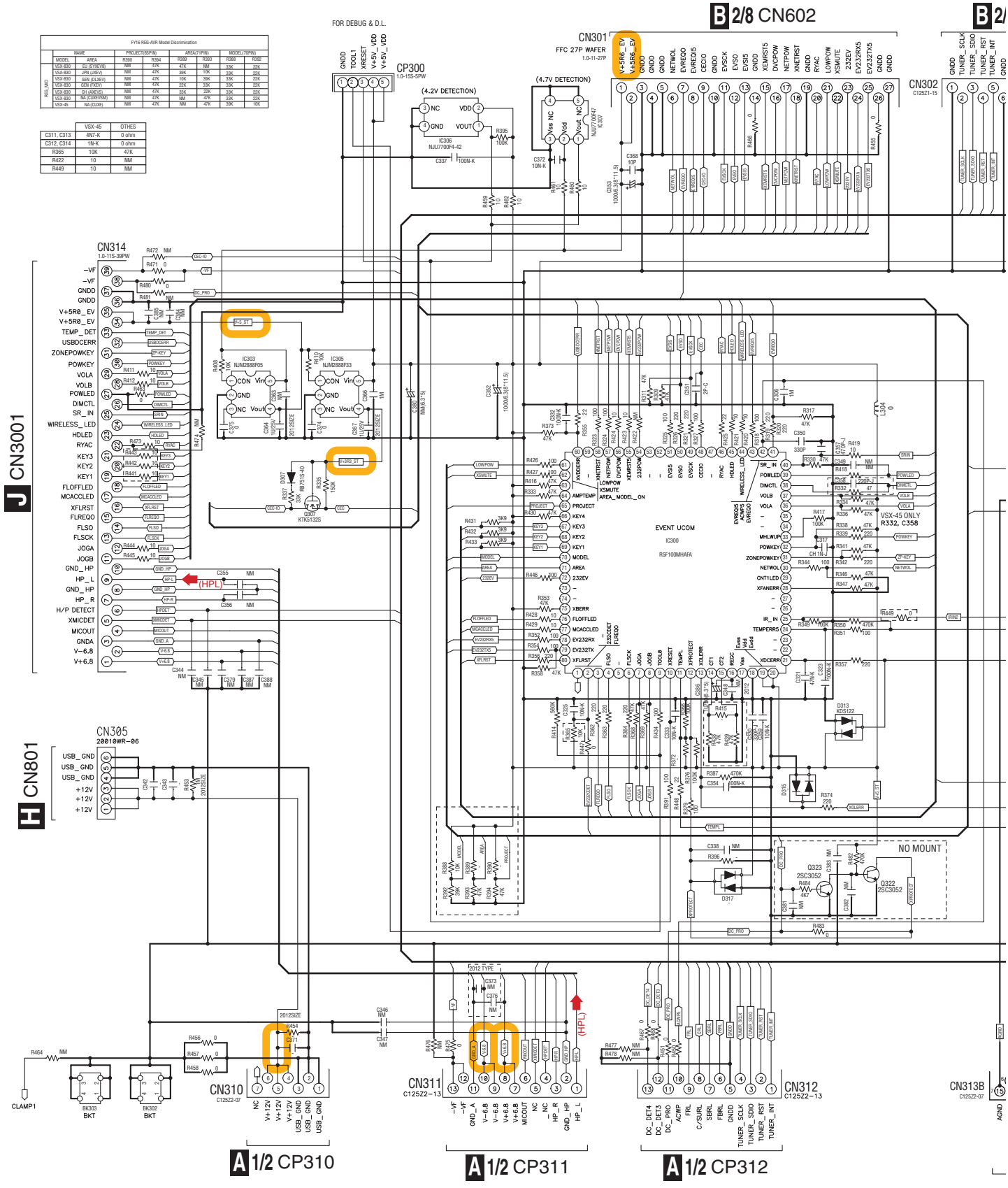
: Audio Signal Route (L ch)
(FL) : Audio Signal Route (Front L ch)
(SL) : Audio Signal Route (Surround L ch)
(C) : Audio Signal Route (Center ch)
(SW) : Audio Signal Route (Subwoofer ch)

E CONCT ASSY

(VSX-830-K/CUXESM: 7028077713030)
(VSX-45/CUXE: 7028077713010)
(VSX-830-K,-S/SYXEV8: 7028077713020)
(VSA-830/JXEV: 7028077713040)



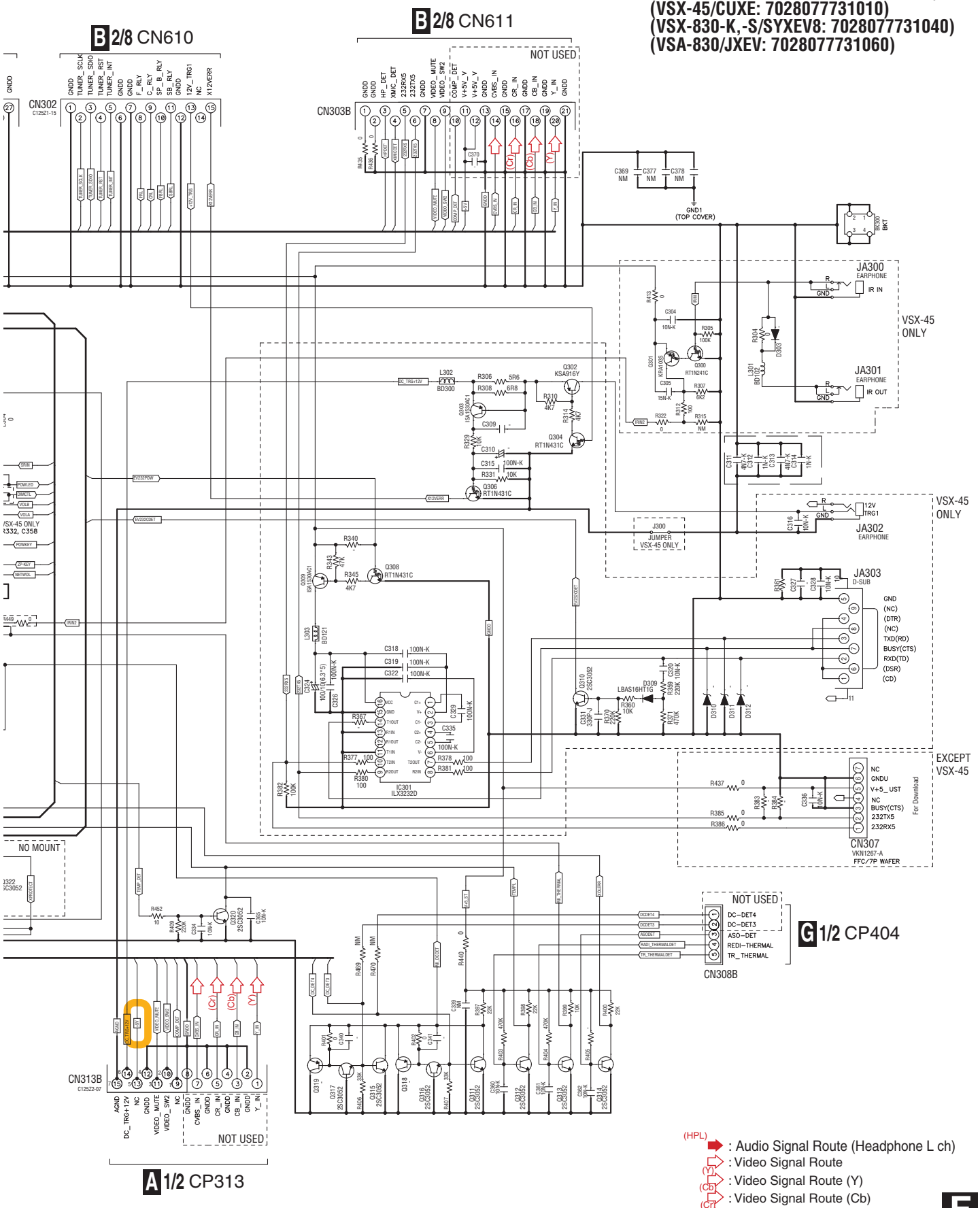
10.15 CPU ASSY



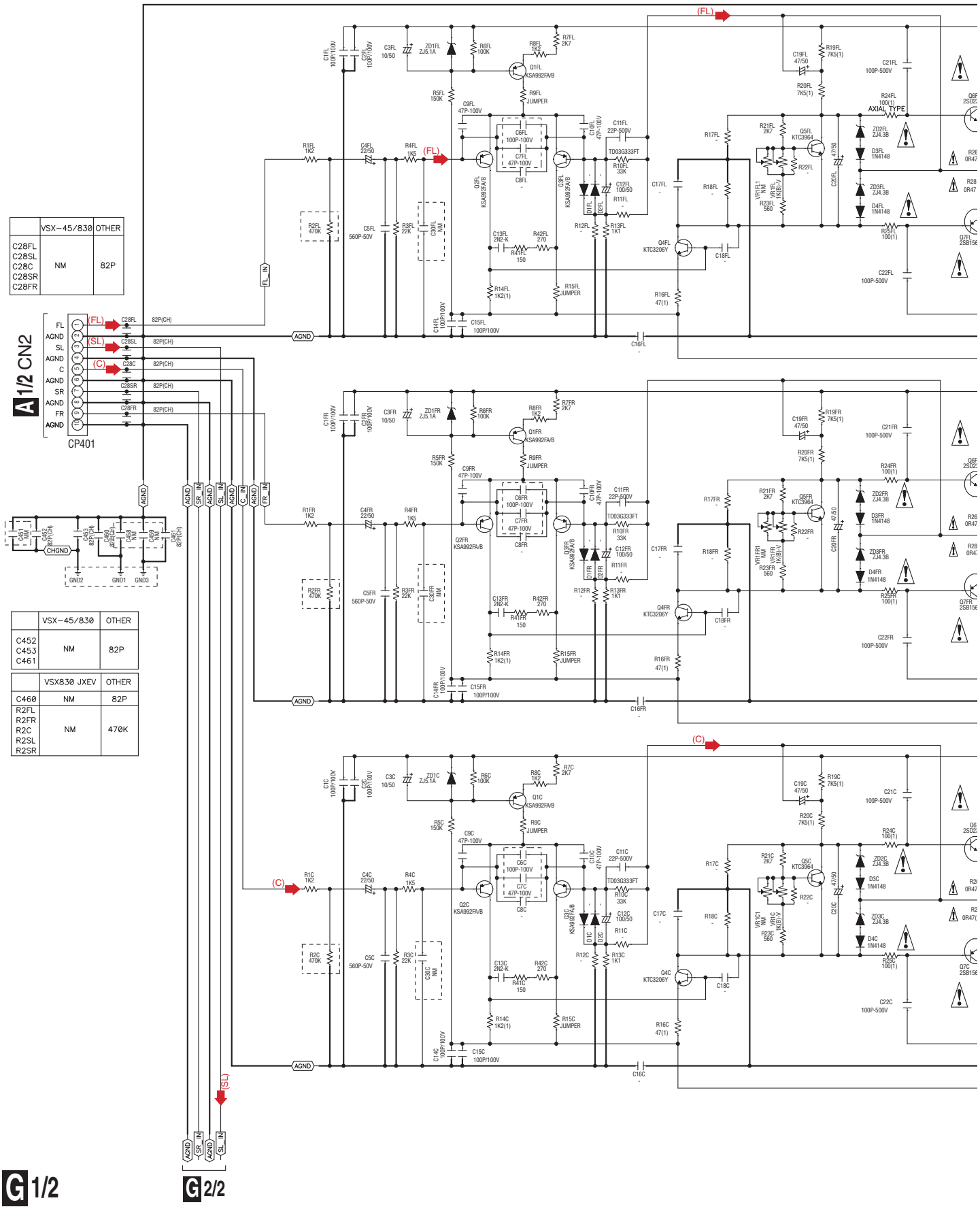
	VSX-45	OTHES
C311, C313	4N7-K	0 ohm
C312, C314	1N-K	0 ohm
R365	10K	47K
R422	10	NM
R449	10	NM

F CPU ASSY

(VSX-830-K/CUXESM: 7028077731050)
(VSX-45/CUXE: 7028077731010)
(VSX-830-K,-S/SYXEV8: 7028077731040)
(VSA-830/JXEV: 7028077731060)

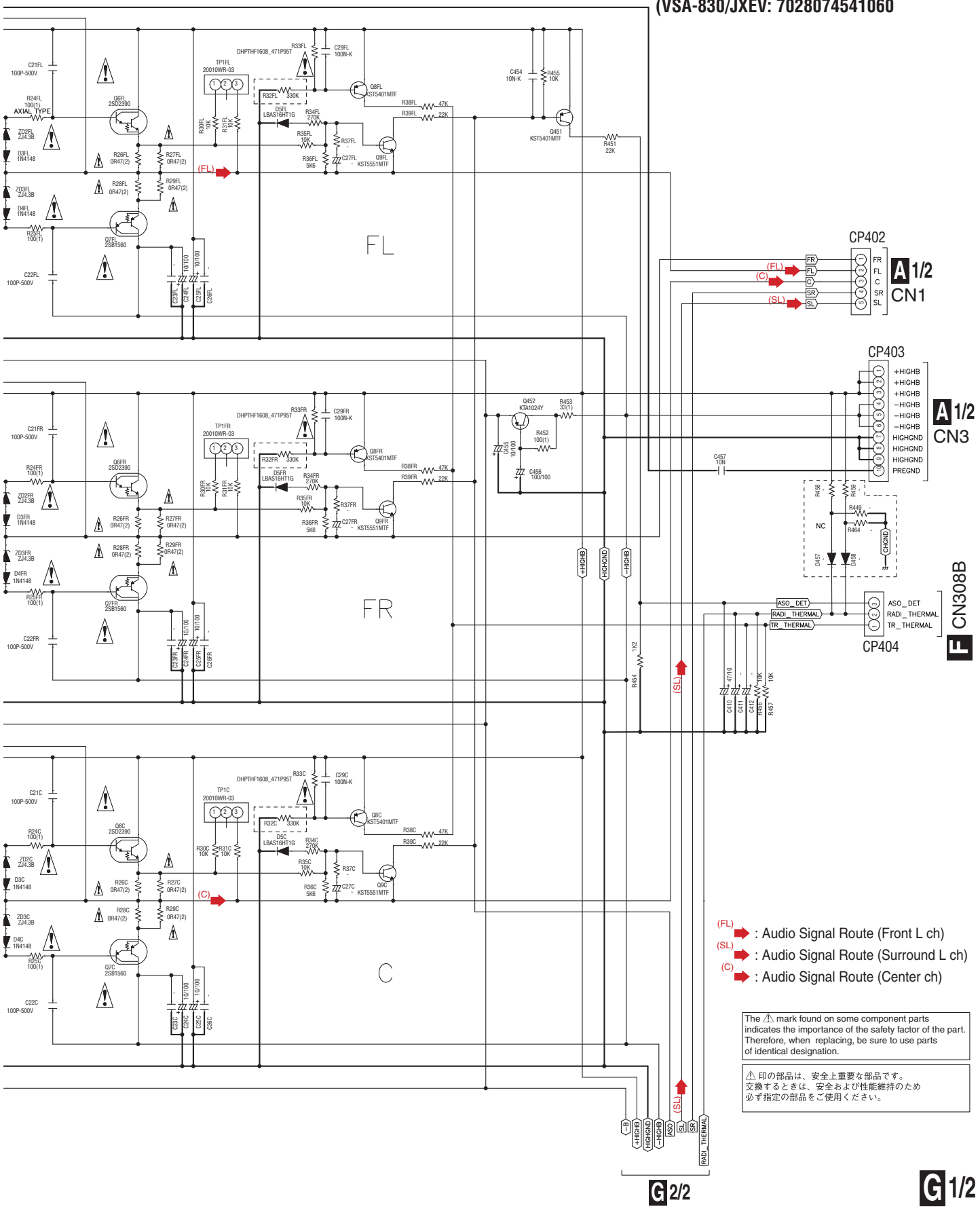


10.16 AMP5 ASSY (1/2)

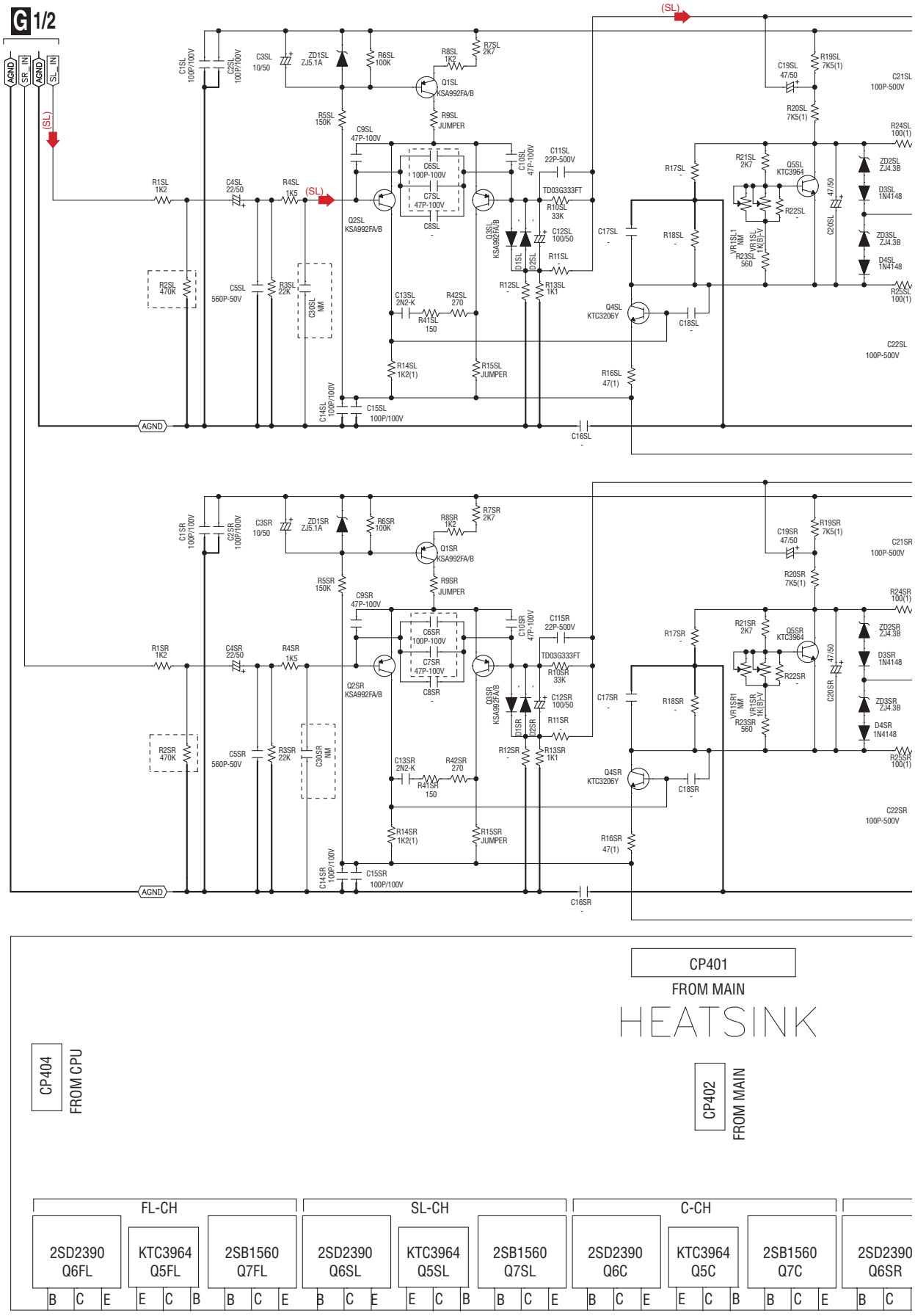


G 1/2 AMP5 ASSY

(VSX-830-K/CUXESM, VSX-45/CUXE, VSX-830-K,-S/SYXEV8: 7028074541040)
(VSA-830/JXEV: 7028074541060)

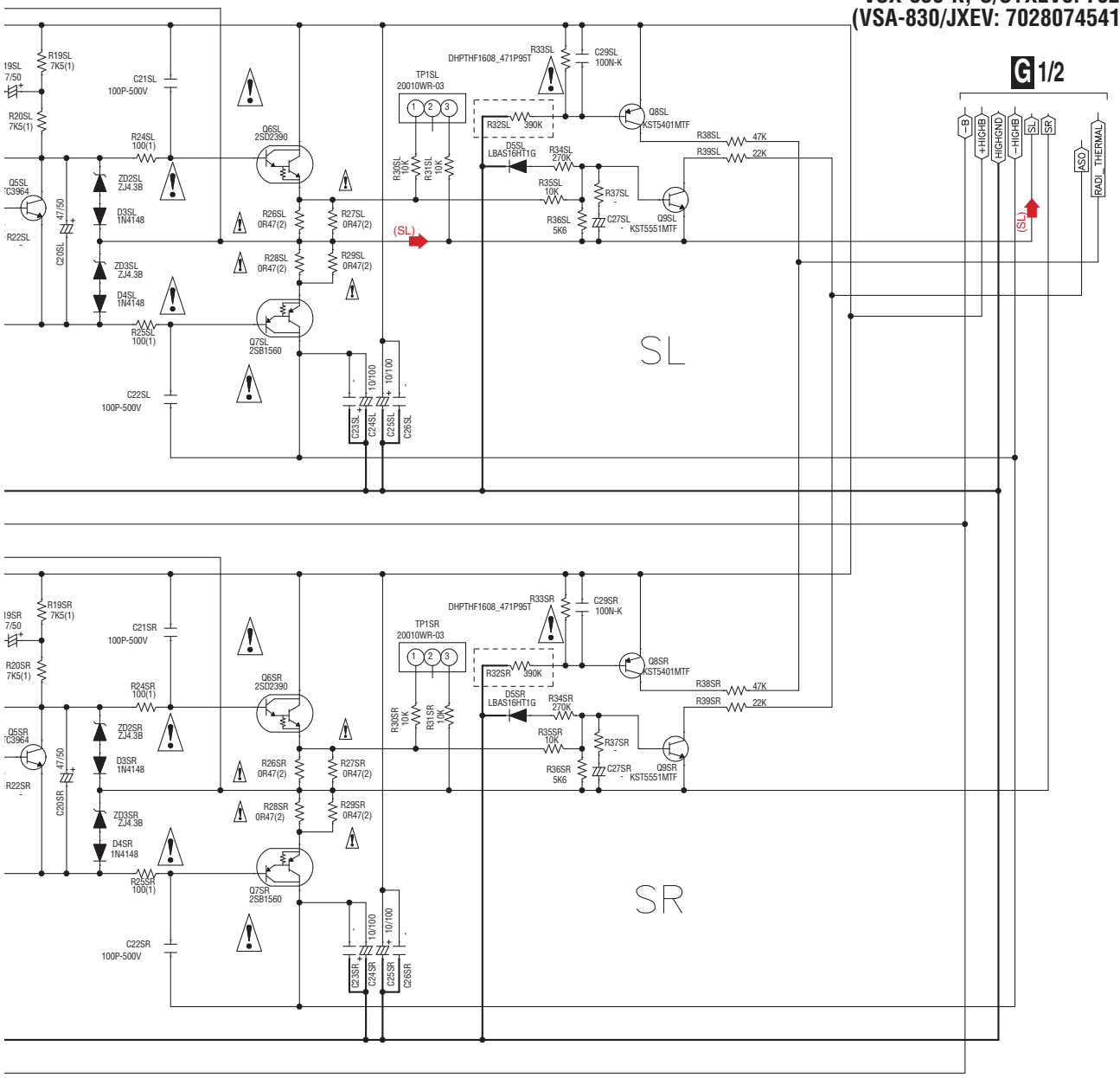


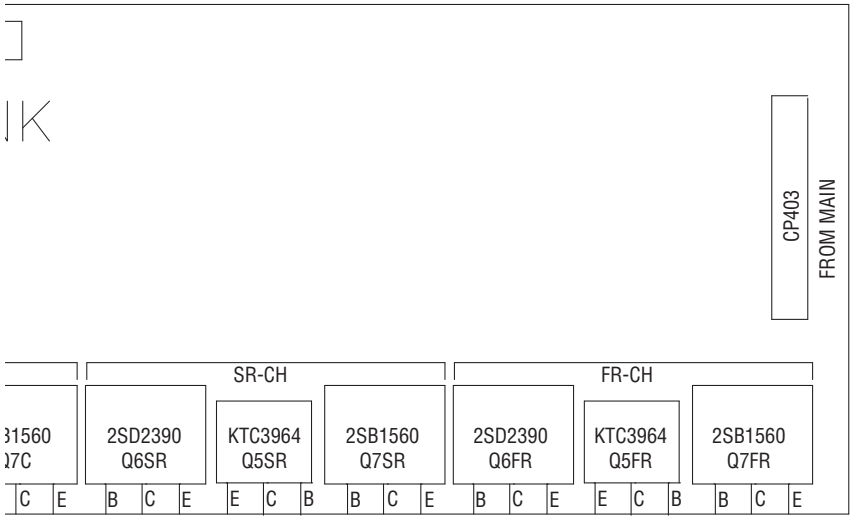
10.17 AMP5 ASSY (2/2)



G 2/2

G 2/2 AMP5 ASSY
(VSX-830-K/CUXESM, VSX-45/CUXE, VSX-830-K,-S/SYXEV8: 7028074541040)
(VSA-830/JXEV: 7028074541060





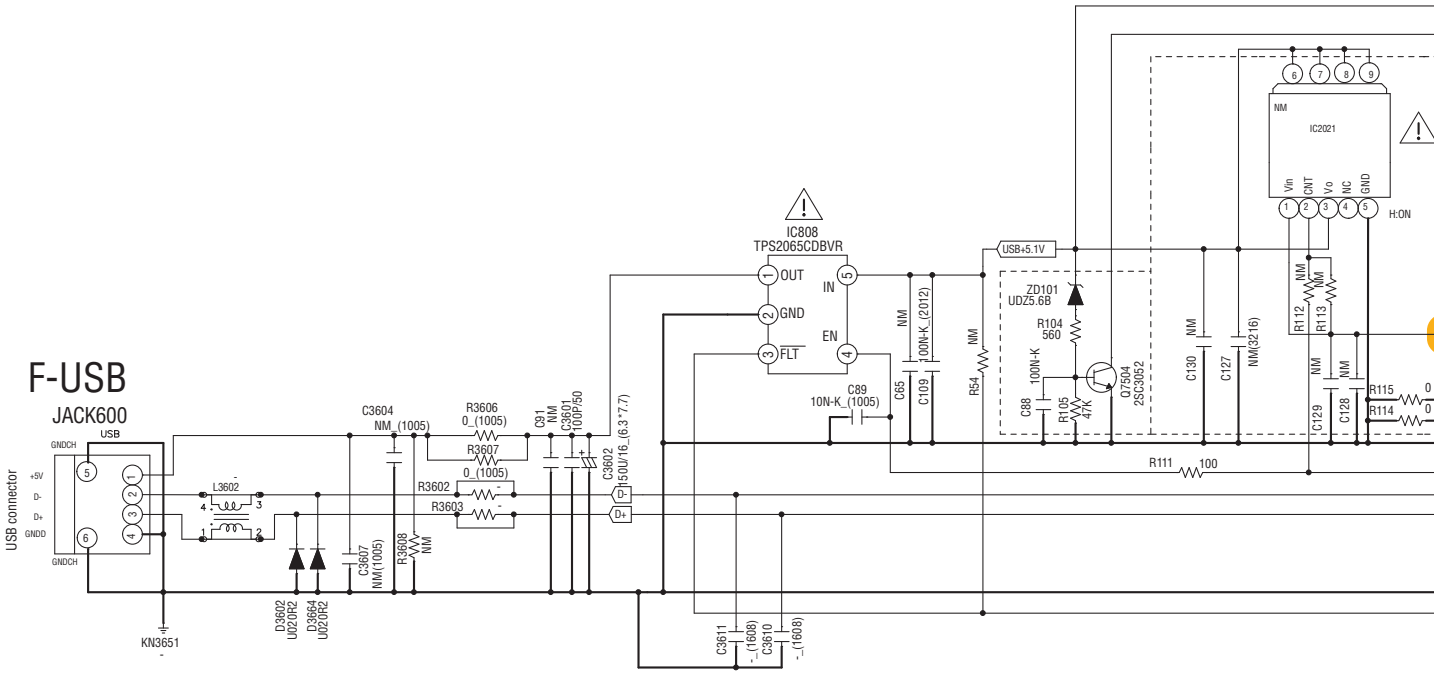
(SL) ➡ : Audio Signal Route (Surround L ch)

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.

⚠ 印の部品は、安全上重要な部品です。
交換するときは、安全および性能維持のため
必ず指定の部品をご使用ください。

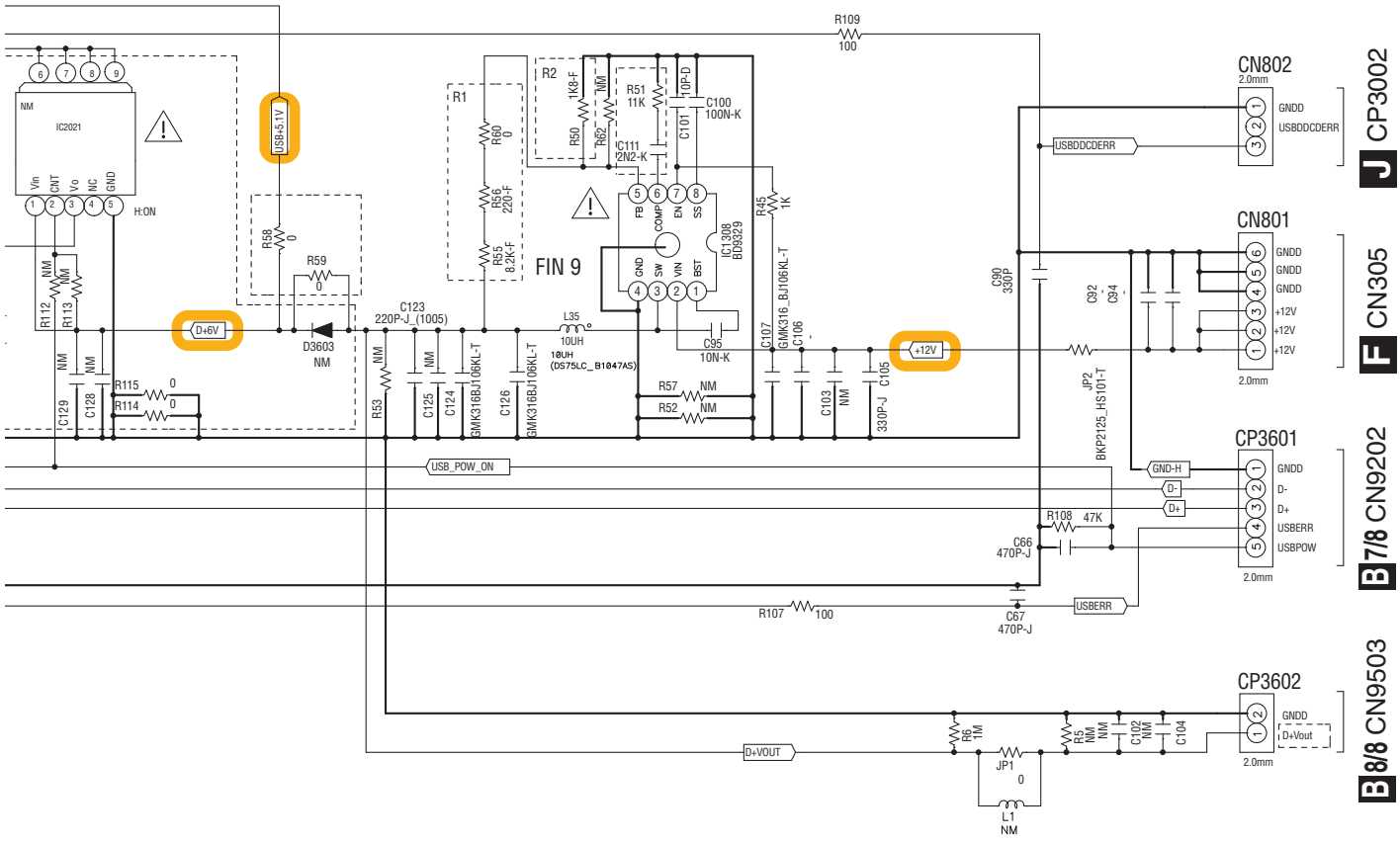
G 2/2

10.18 FUSB ASSY



H FUSB ASSY

(VSX-830-K/CUXESM: 7028077731040)
(VSX-45/CUXE: 7028077781010)
(VSX-830-K,-S/SYXEV8: 7028077781030)
(VSA-830/JXEV: 7028077731050)



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.

⚠ 印の部品は、安全上重要な部品です。
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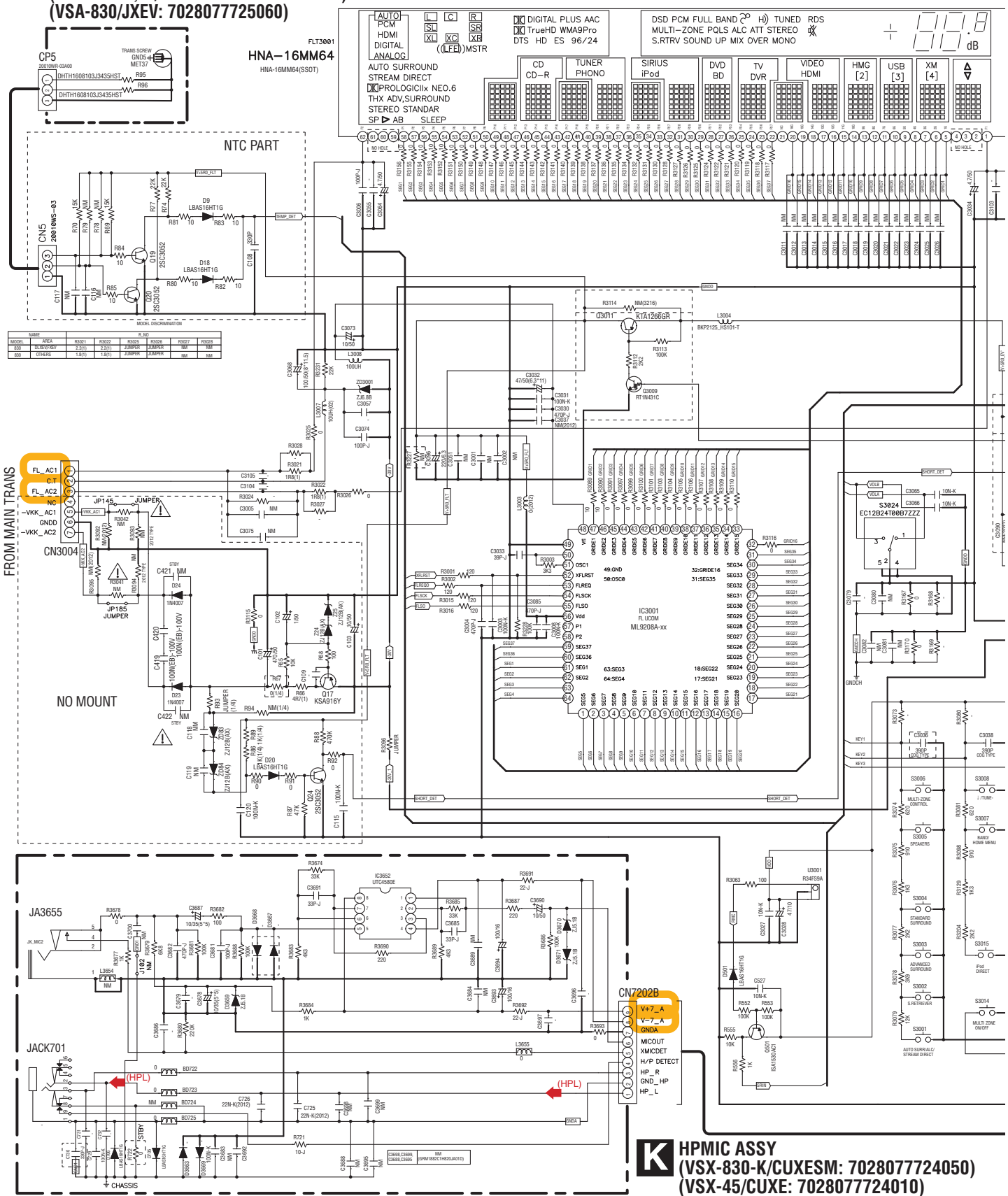
10.19 NTC, FRONT, HPMIC and INSEL ASSYS

I NTC ASSY
(VSX-830-K/CUXESM: 7028077725050)
(VSX-45/CUXE: 7028077725010)
(VSX-830-K,-S/SYXEV8: 7028077725040)
(VSA-830/JXEV: 7028077725060)

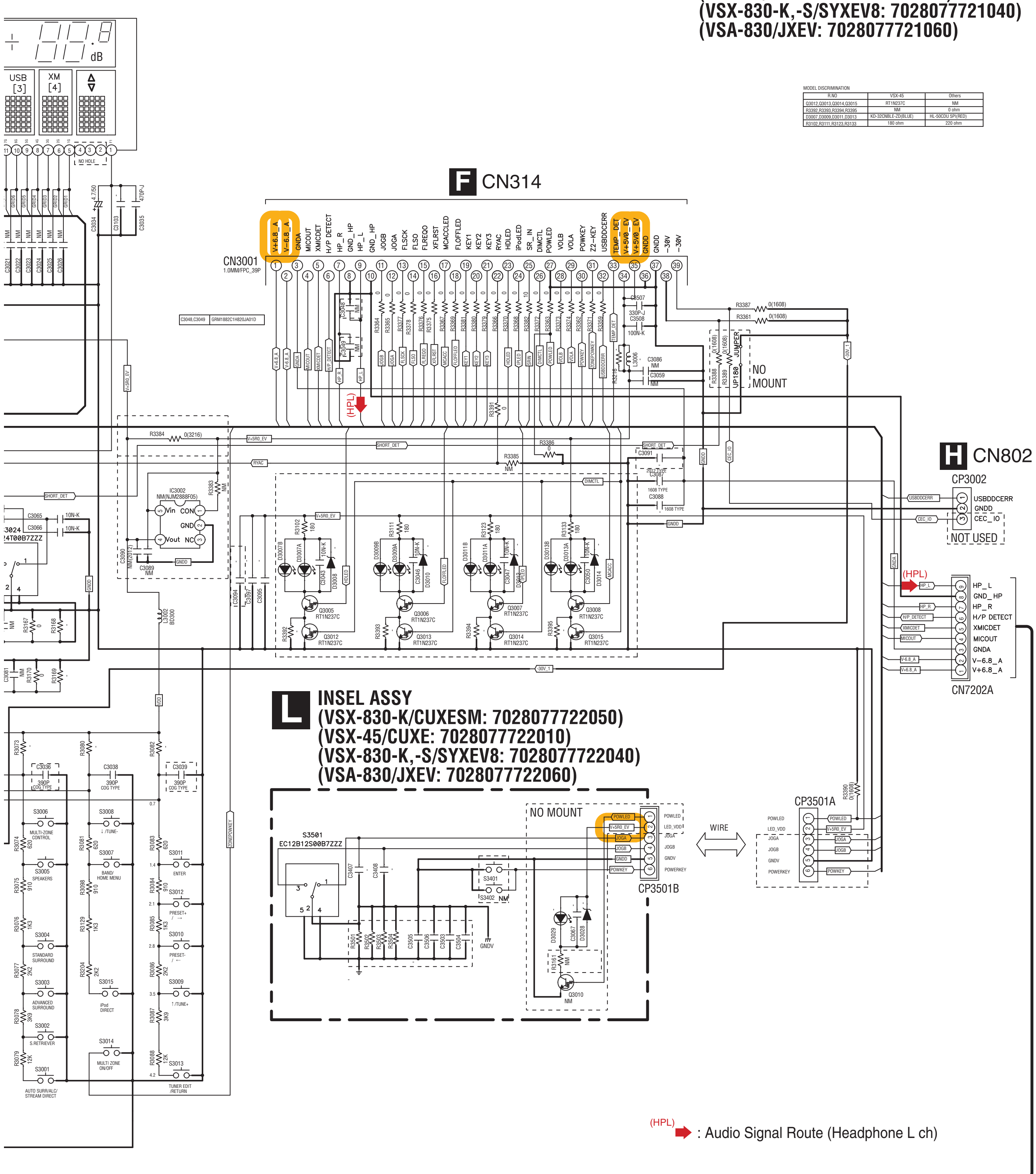


K HPMIC ASSY
(VSX-830-K/CUXESM: 7028077724050)
(VSX-45/CUXE: 7028077724010)
(VSX-830-K,-S/SYXEV8: 7028077724040)
(VSA-830/JXEV: 7028077724060)

J FRONT ASSY
(VSX-830-K/CUXESM: 7028077721050)
(VSX-45/CUXE: 7028077721010)
(VSX-830-K,-S/SYXEV8: 7028077721040)
(VSA-830/JXEV: 7028077721060)

MODEL DISCRIMINATION

R.NO	VSX-45	Others
Q3012,Q3013,Q3014,Q3015	RT1N237C	NM
R3392,R3393,R3394,R3395	NM	0 ohm
D3007,D3009,D3011,D3013	KD-32CNBLE-ZD(BLUE)	HL-50CDU 5PI(RED)
R3102,R3111,R3123,R3133	180 ohm	220 ohm



077724050)
4010)
28077724040)
24060)

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.

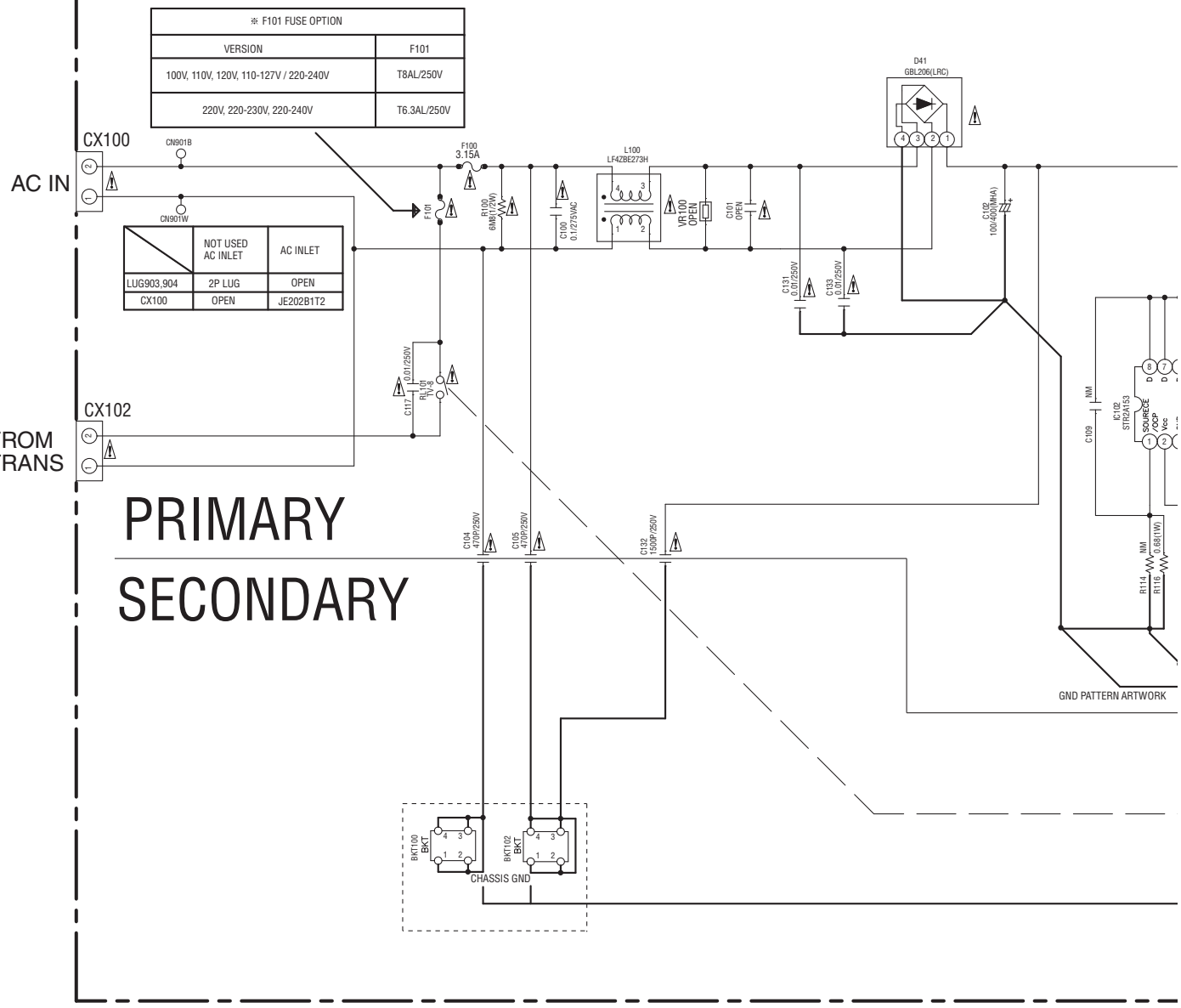
⚠ 印の部品は、安全上重要な部品です。
交換するときは、安全および性能維持のため
必ず指定の部品をご使用ください。

J L

10.20 SMPS ASSY

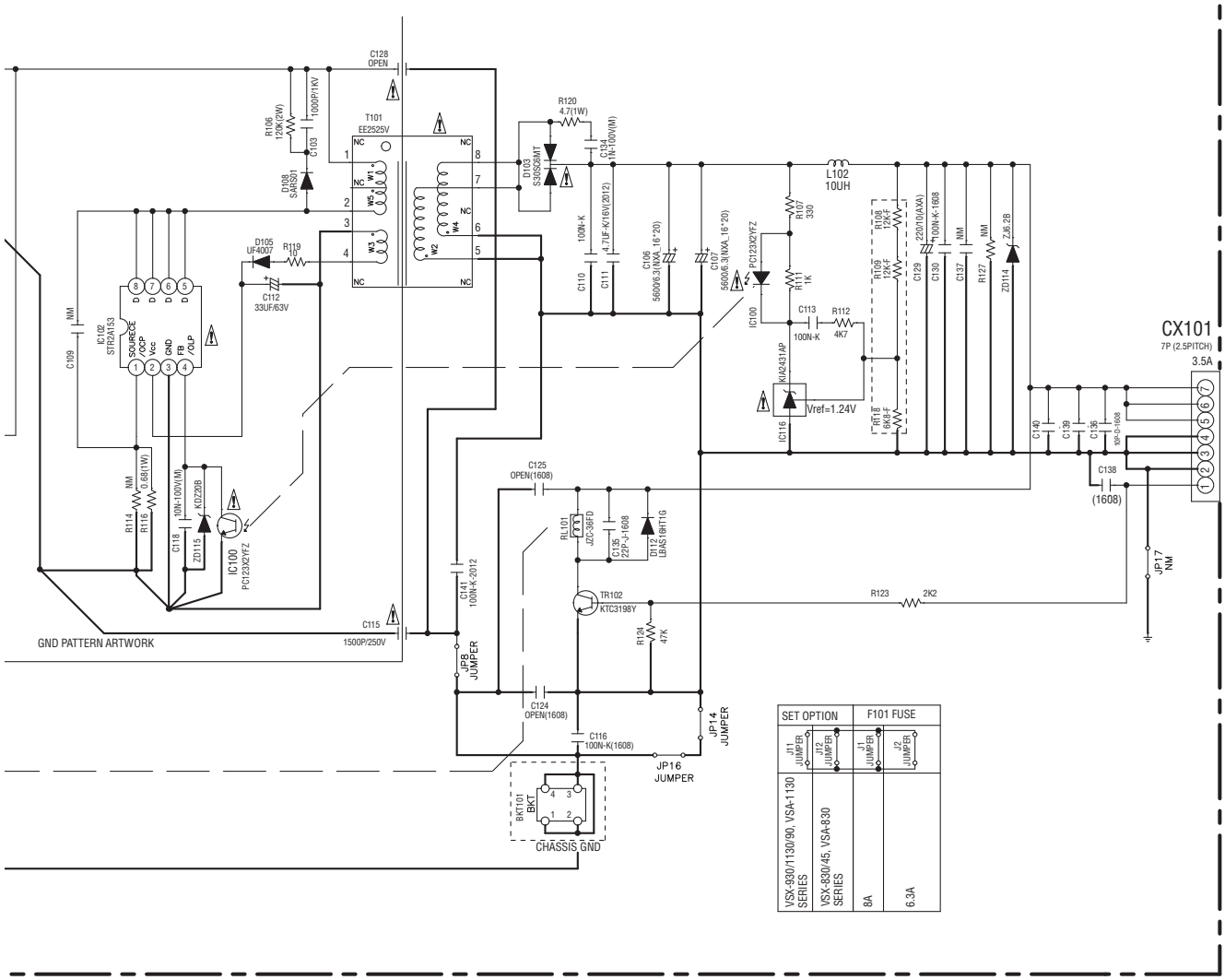
• NOTE FOR FUSE REPLACEMENT

CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE WITH SAME TYPE AND RATINGS OF FUSE.



⚠ M SMPS ASSY

(VSX-830-K/CUXESM, VSX-45/CUXE: 70280733610GA)
(VSX-830-K,-S/SYXEV8: 70280733610HA)
(VSA-830/JXEV: 70280733610IA)



SET OPTION		F101 FUSE	
JI1 JUMPER	JI2 JUMPER	J1 JUMPER	J2 JUMPER
VSX-930/1130/90, VSA-1130 SERIES			
VSX-830/45, VSA-830 SERIES		8A	6.3A

NOTES
1. Resistor values are indicated in ohms unless otherwise specified
   [k = 1.000 m = 1.000.000]
2. Capacitor values are indicated in microfarades unless otherwise specified.
   [p = micro-microfarades]
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 prorerly insulated from the supply circuit.

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.

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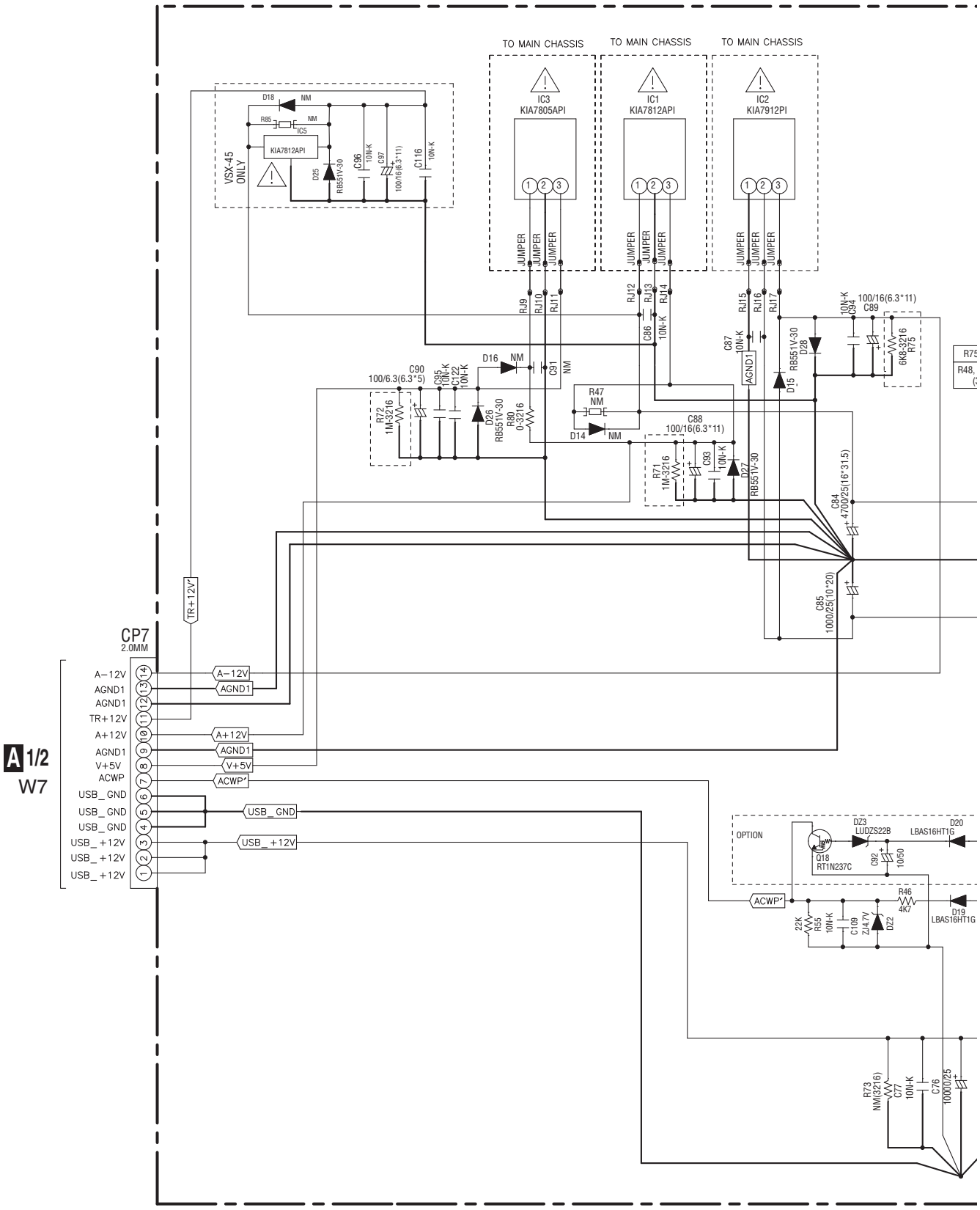
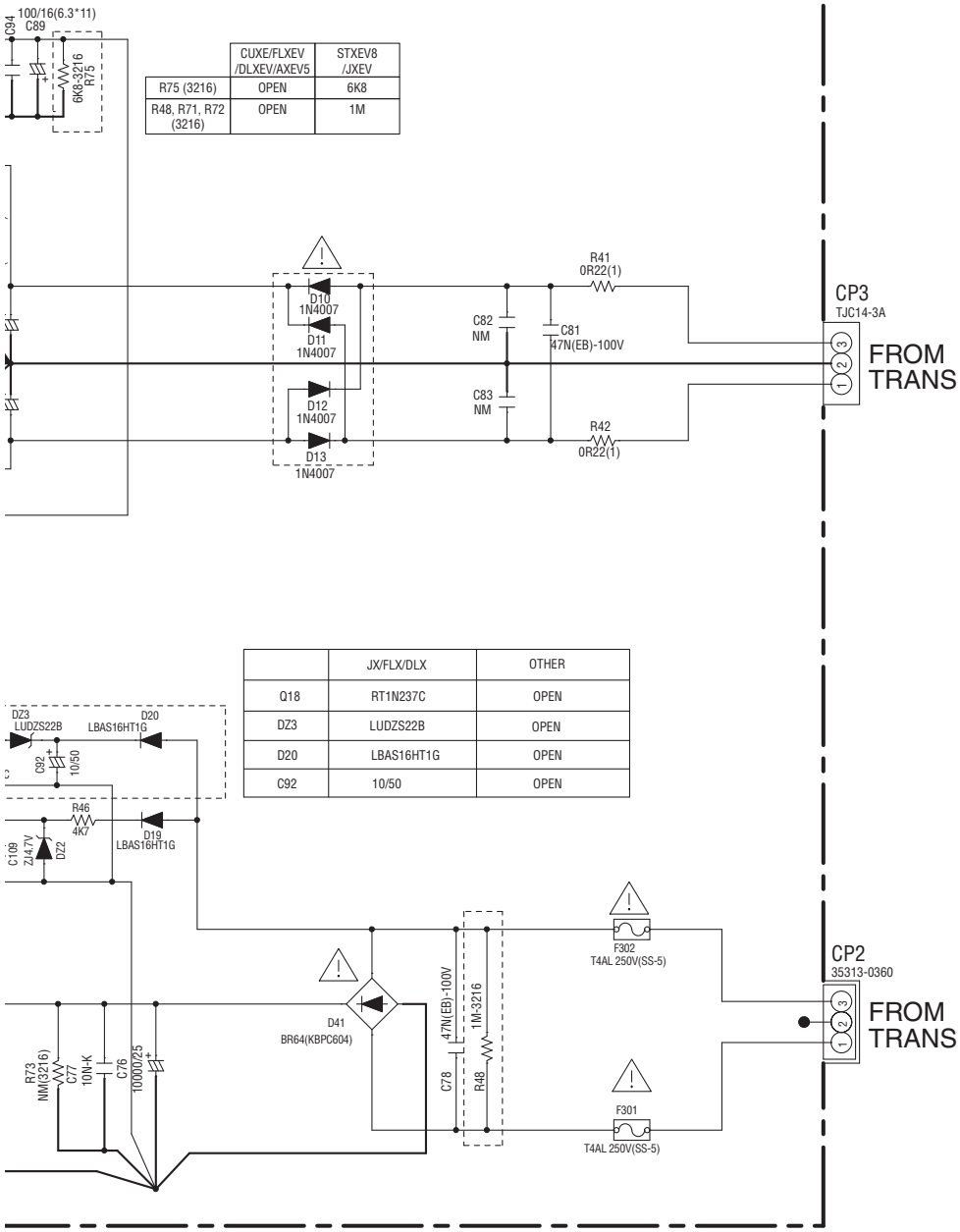
必ず指定の部品をご使用ください。

10.21 REG ASSY



N REG ASSY

(VSX-830-K/CUXESM: 7028077712030)
(VSX-45/CUXE: 7028077712010)
(VSX-830-K,-S/SYXEV8: 7028077712020)
(VSA-830/JXEV: 7028077712040)



	CUXE/FLXEV /DLXEV/AXEV5	STXEV8 /JXEV
R75 (3216)	OPEN	6K8
R48, R71, R72 (3216)	OPEN	1M

	JX/FLX/DLX	OTHER
Q18	RT1N237C	OPEN
DZ3	LUDZS22B	OPEN
D20	LBAS16HT1G	OPEN
C92	10/50	OPEN

NOTES
1. Resistor values are indicated in ohms unless otherwise specified
[k = 1.000 m = 1.000.000]
2. Capacitor values are indicated in microfarades unless otherwise specified.
[p = micro−microfarades]
3. : These resistor are to be segregated from printed wiring board or other acessible 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 prorerly insulated from the supply circuit.

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.

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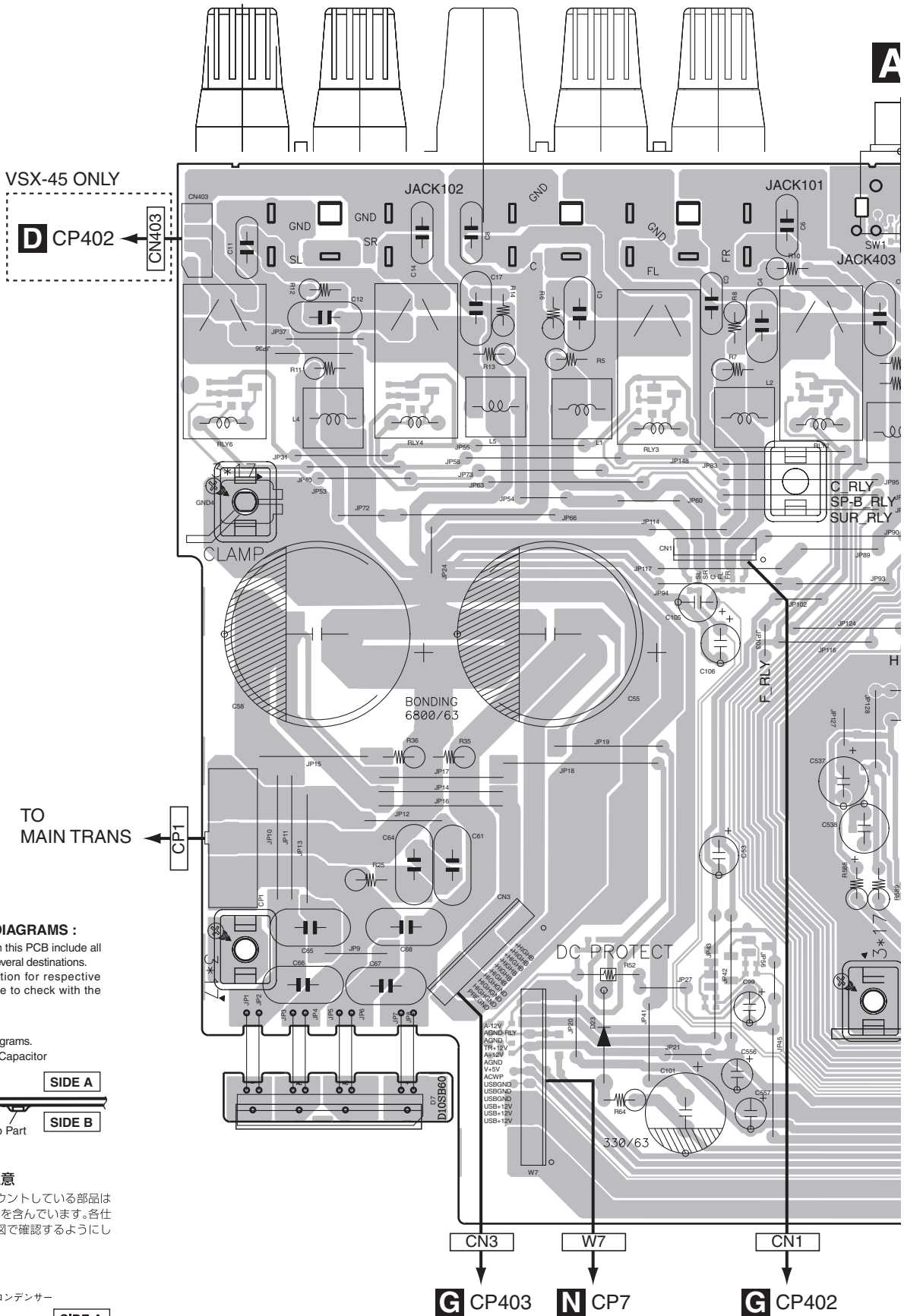
必ず指定の部品をご使用ください。

• NOTE FOR FUSE REPLACEMENT

CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE WITH SAME TYPE AND RATINGS OF FUSE.

11. PCB CONNECTION DIAGRAM
11.1 MAIN ASSY

SIDE A



NOTE FOR PCB DIAGRAMS :

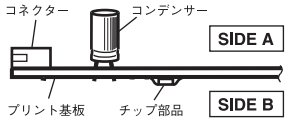
1. The parts mounted on this PCB include all necessary parts for several destinations. For further information for respective destinations, be sure to check with the schematic diagram.

2. View point of PCB diagrams.

PCB 図に対する注意

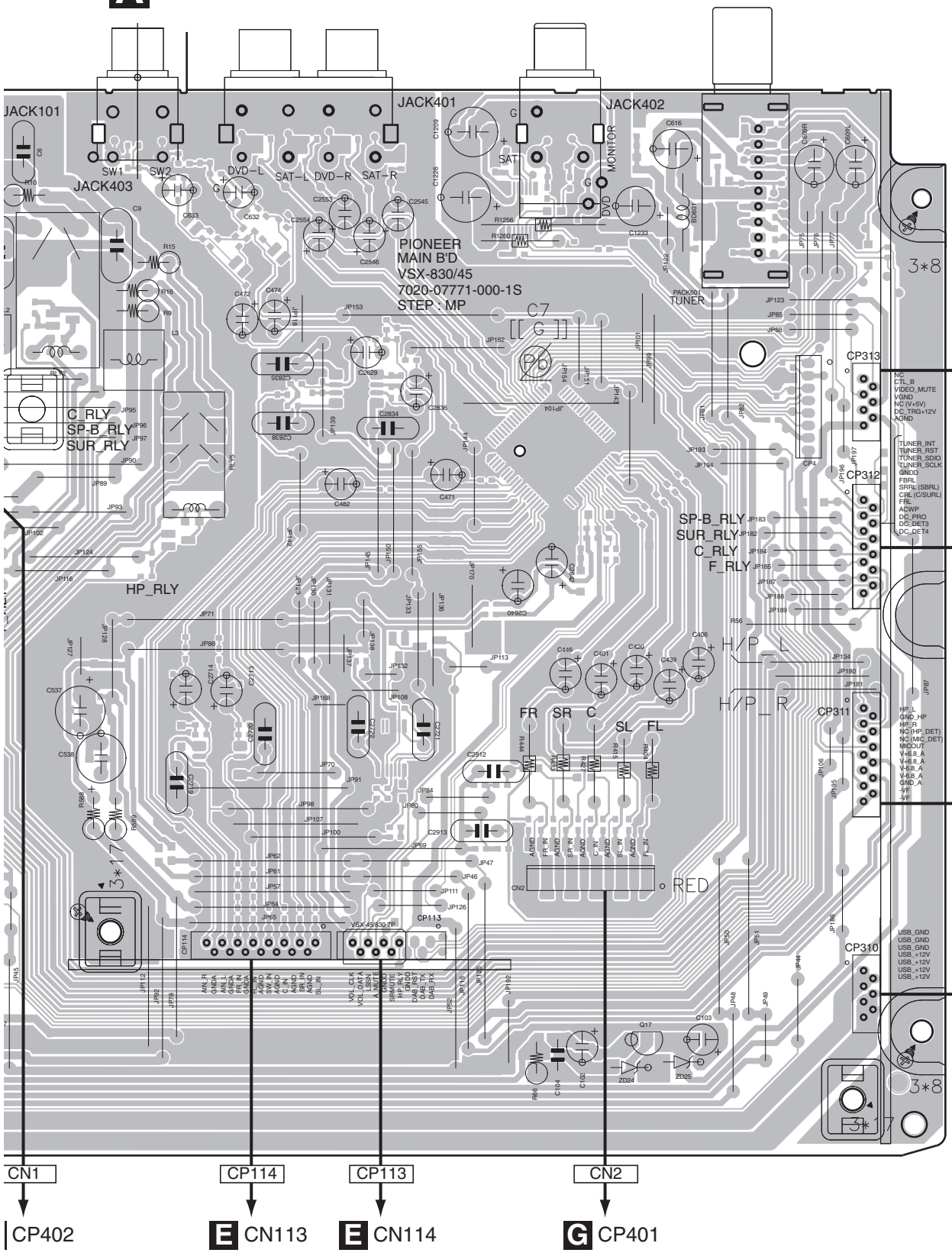
1. この PCB 図にマウントしている部品は複数の仕向地の部品を含んでいます。各仕向地の情報は、回路図で確認するようにしてください。

2. PCB 図の見かた。



SIDE A

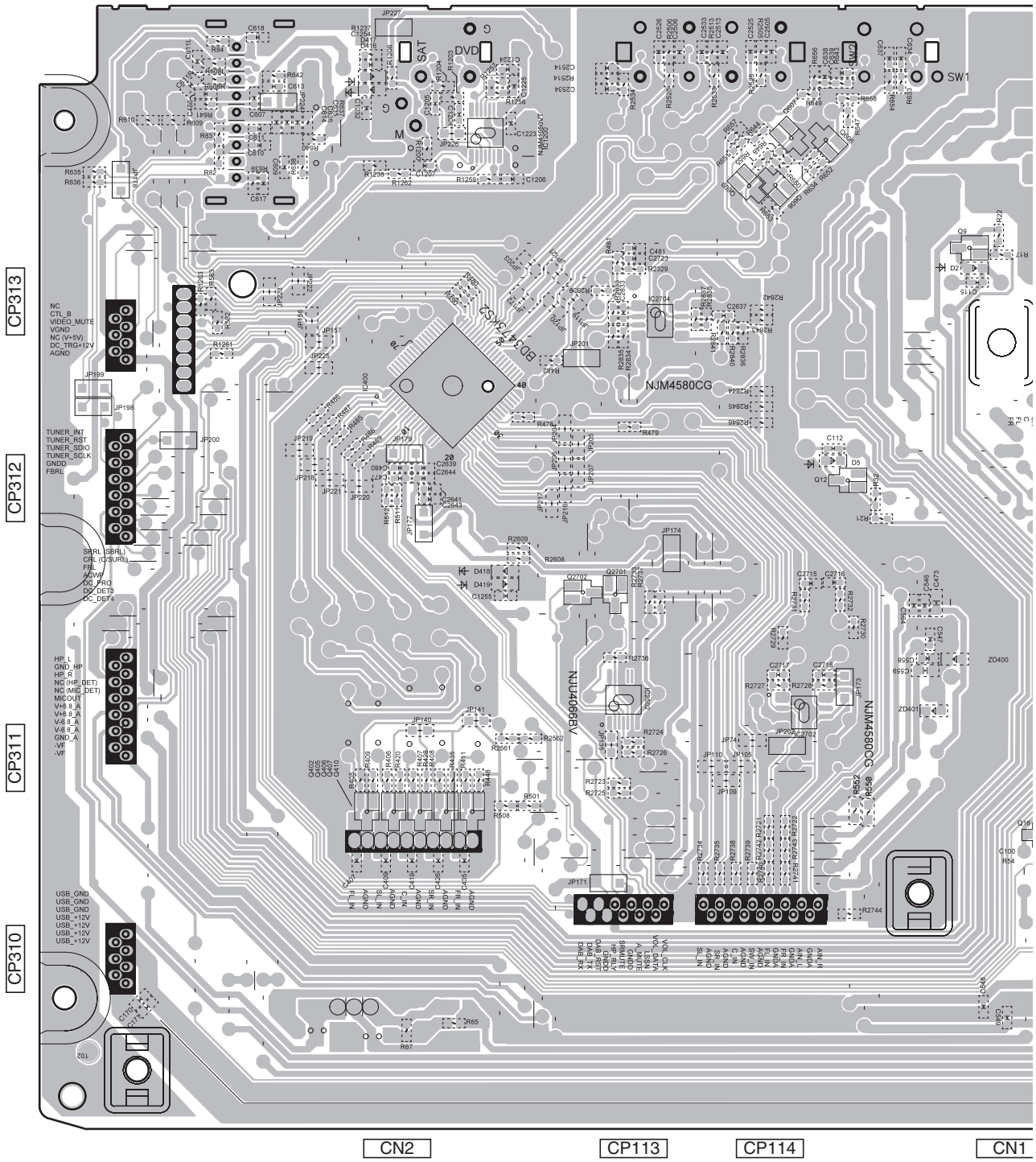
A MAIN ASSY



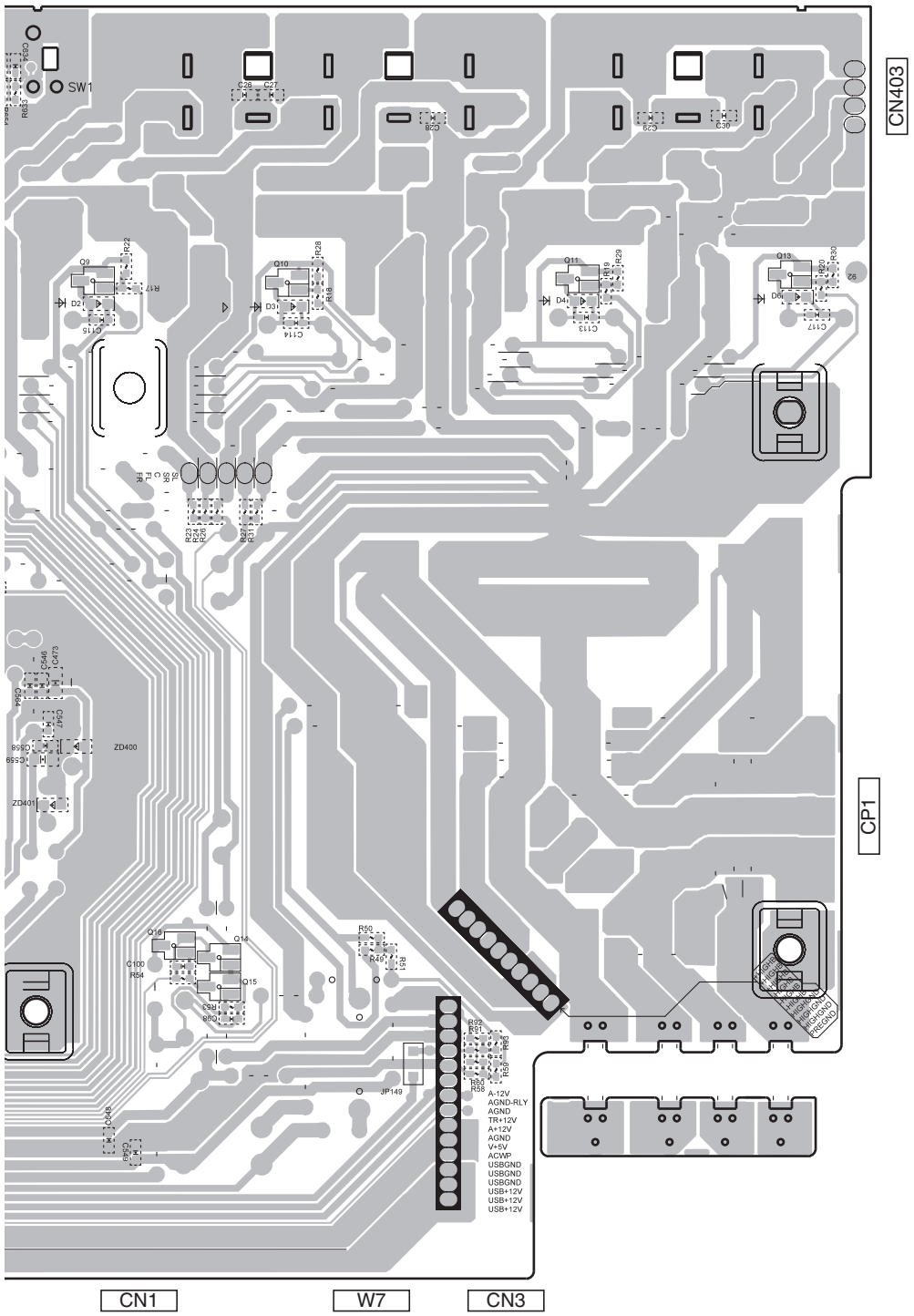
Q17

SIDE B

A MAIN ASSY



SIDE B



IC1200 Q607 Q606

Q609 Q608

Q9 Q10 Q11 Q13

IC2704

IC400

Q12

Q2702 Q2701

IC2502 IC2702

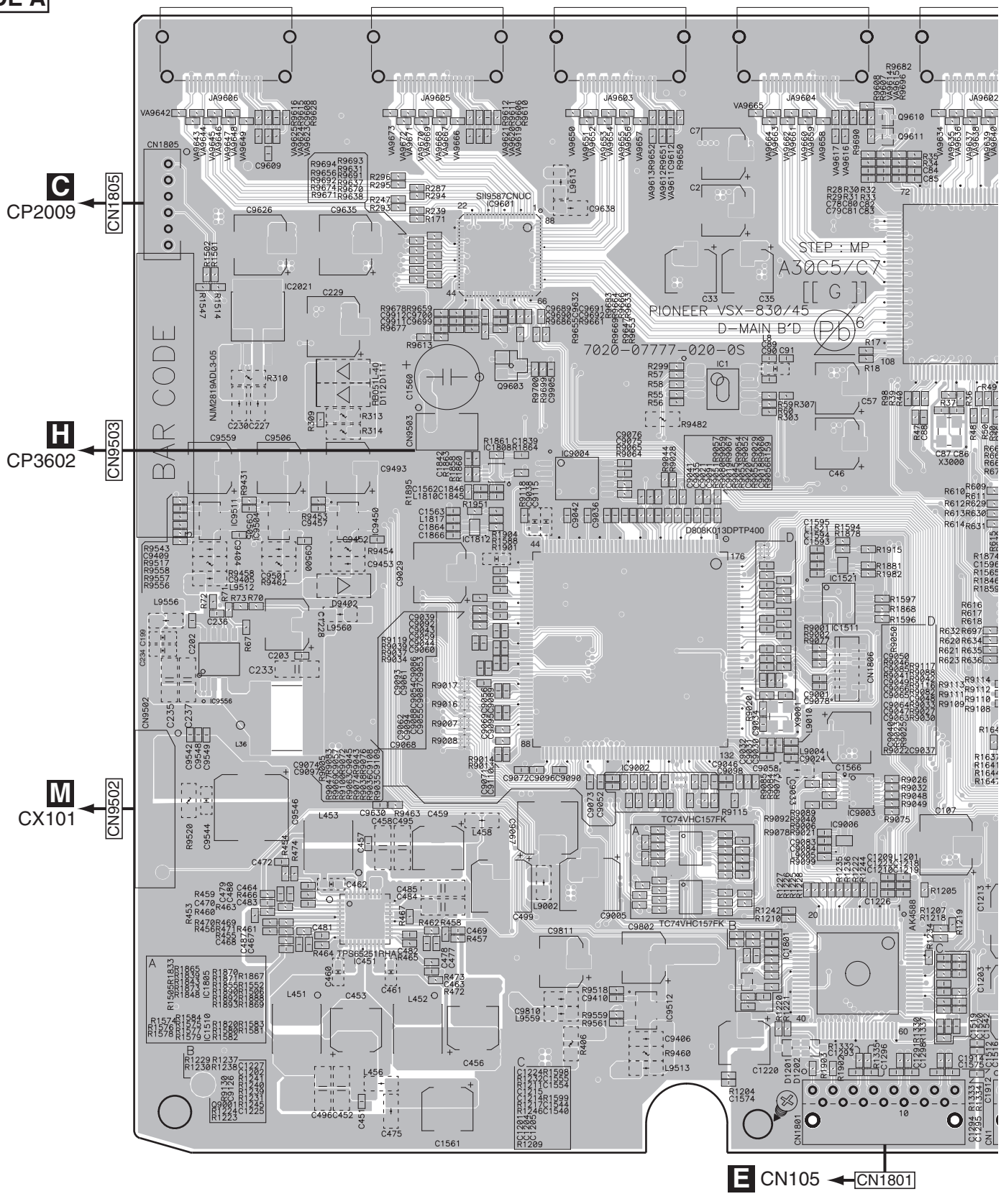
Q402 Q405-Q407

Q14-Q16

A

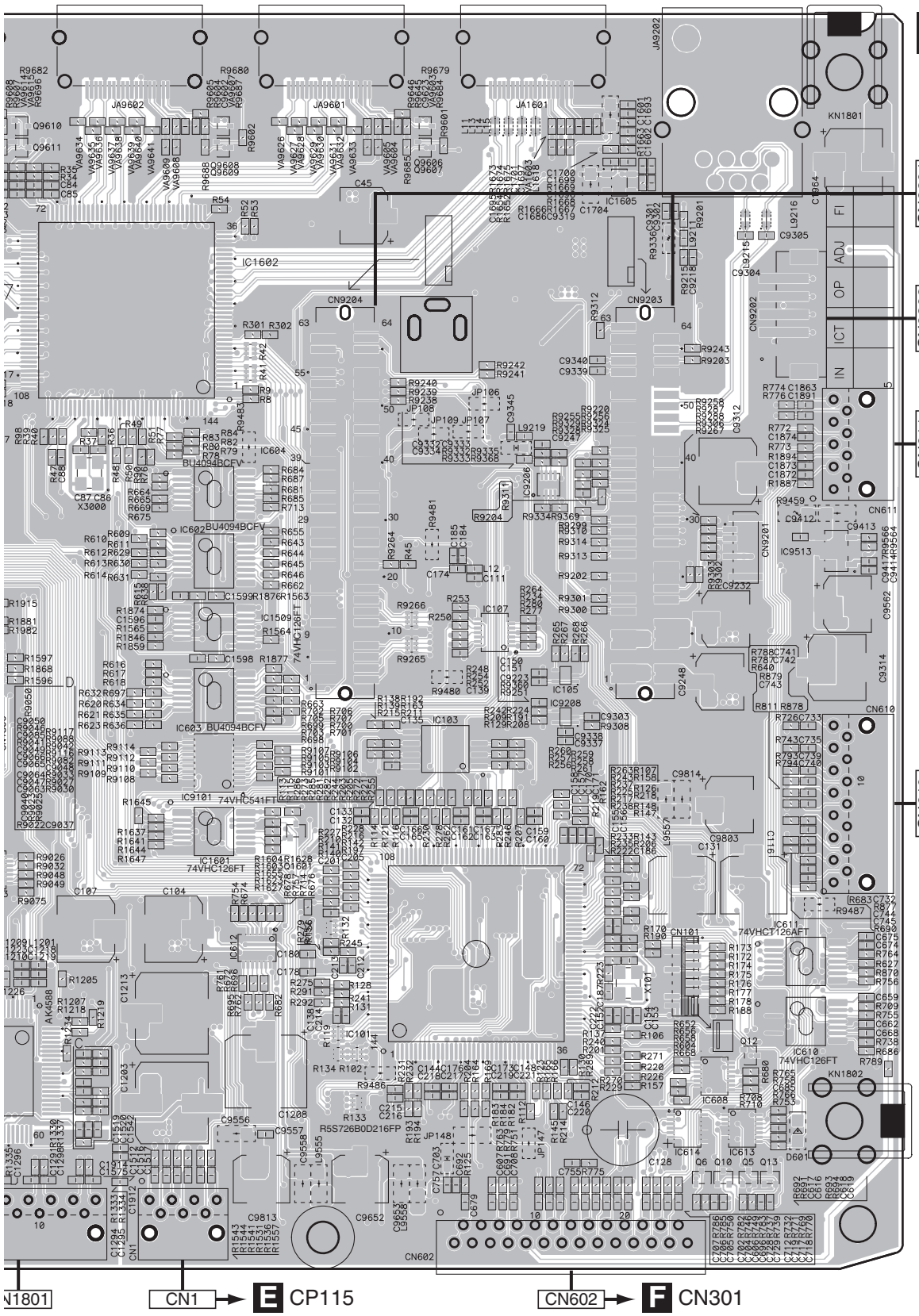
11.2 DMAIN ASSY

SIDE A



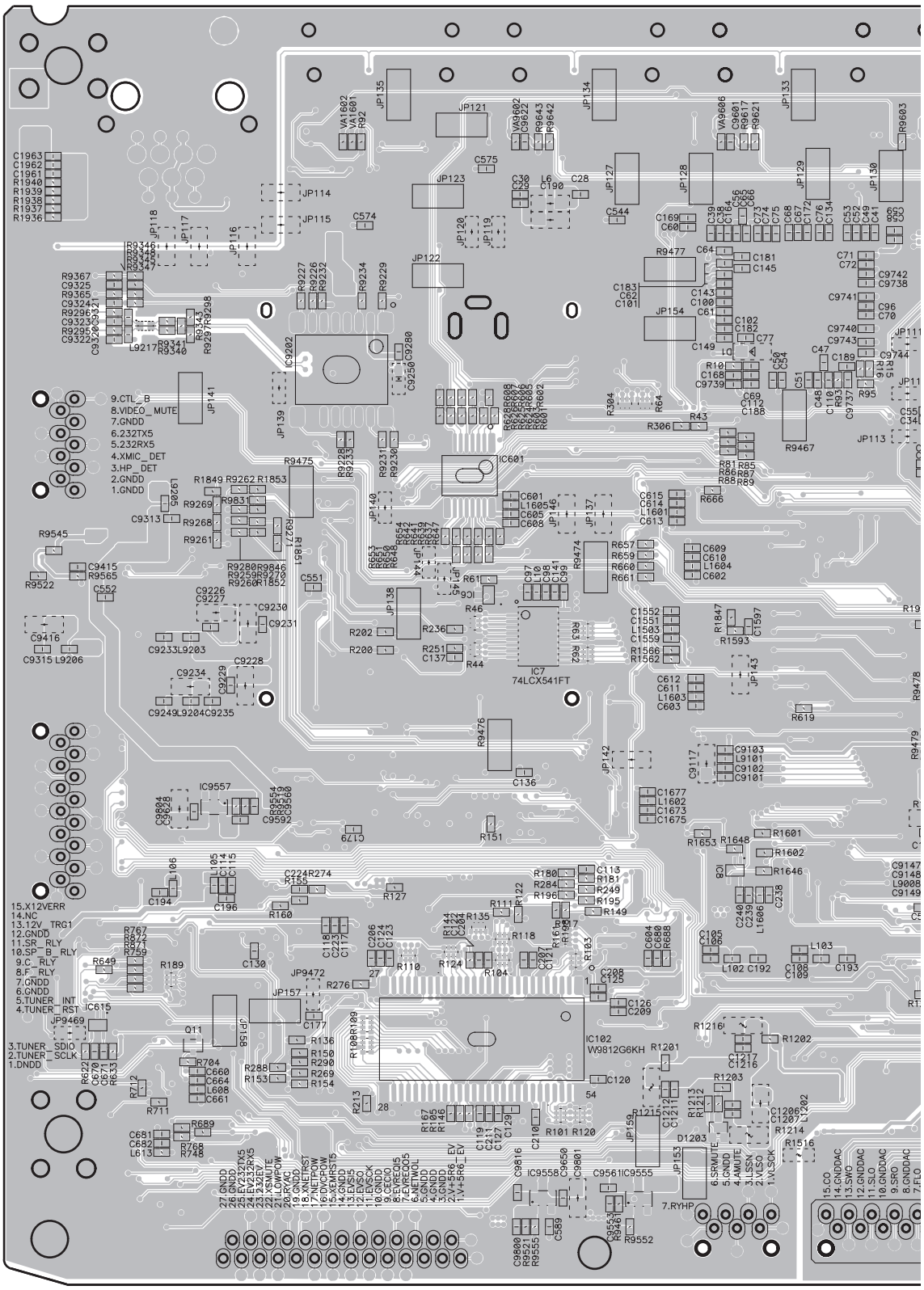
SIDE A

B DMAIN ASSY

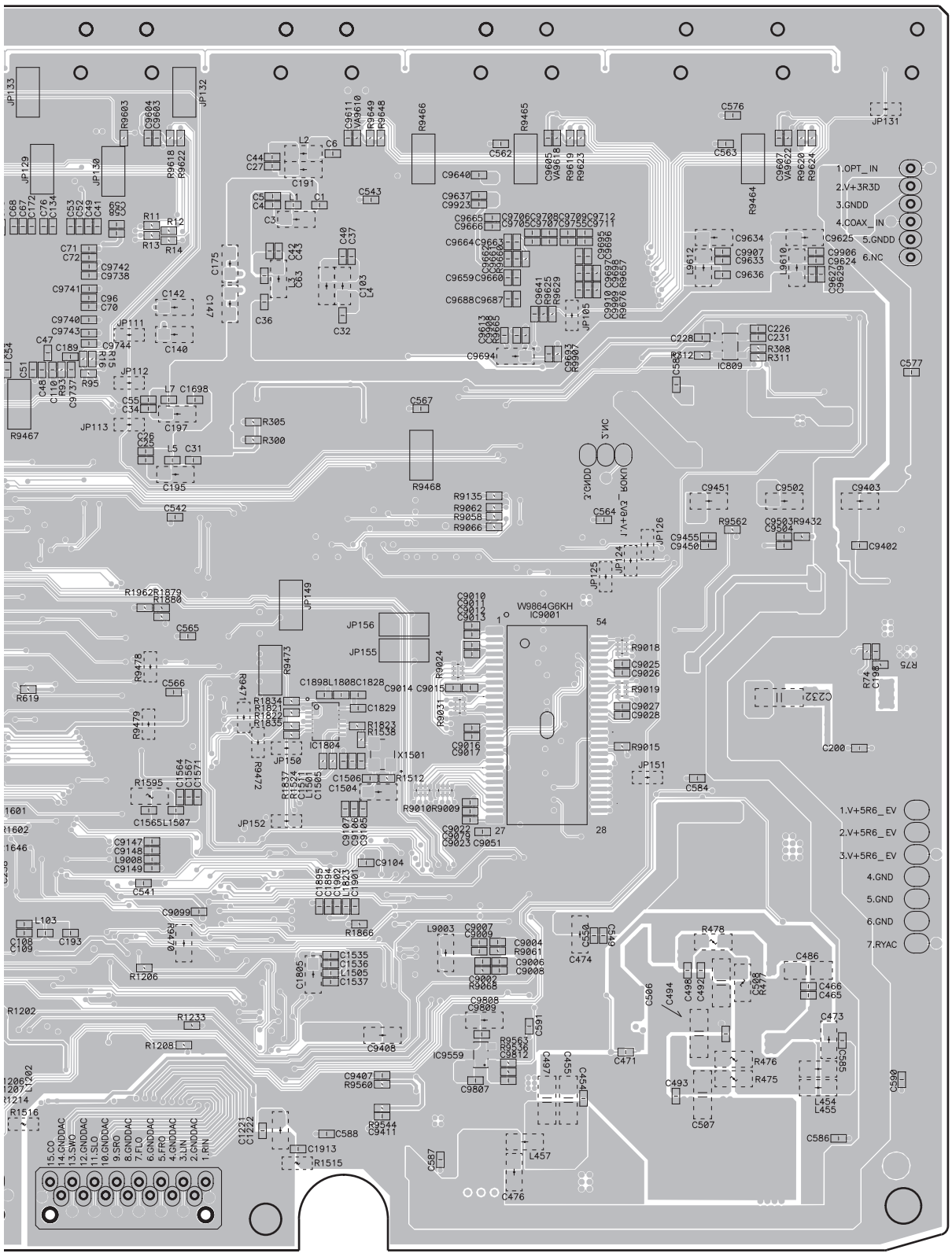


SIDE B

B DMAIN ASSY



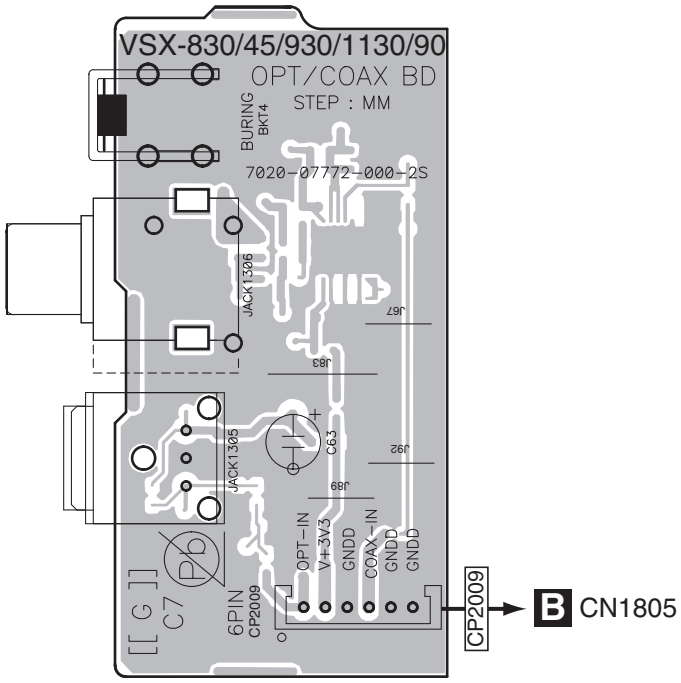
SIDE B


CN1805
CN9503
CN9502
CN1801
1.OPT_IN
2.V+3R3D
3.GNDD
4.COAX_IN
5.GNDD
6.NC
1.V+5R6_EV
2.V+5R6_EV
3.V+5R6_EV
4.GND
5.GND
6.GND
7.RYAC
W9864G6KH
IC9001
IC1804
IC809
IC9559

11.3 OPTCO and SP-B ASSYS

SIDE A

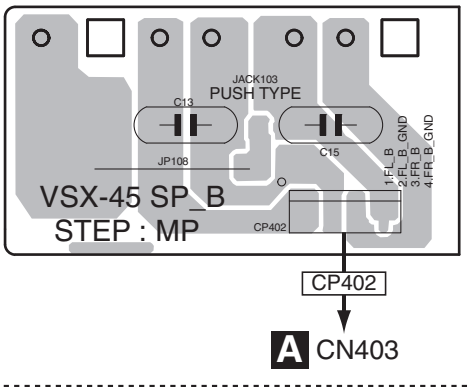
C OPTCO ASSY



VSX-45 ONLY

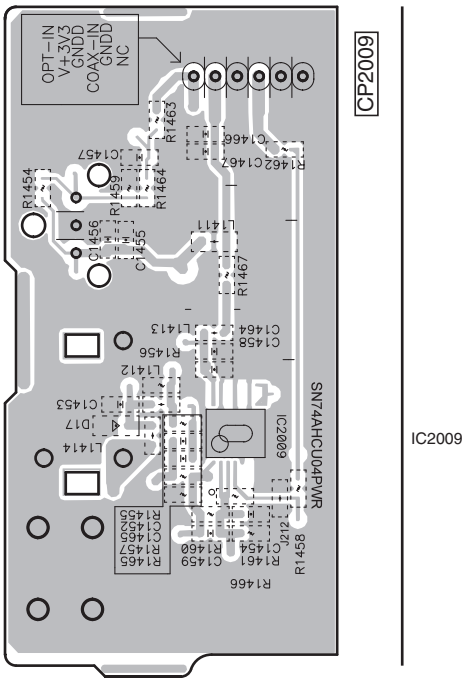
SIDE A

D SP-B ASSY



SIDE B

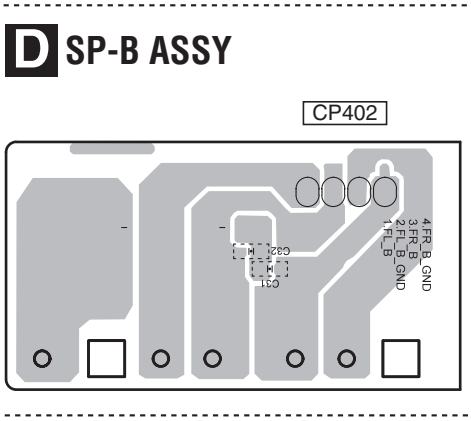
C OPTCO ASSY



VSX-45 ONLY

SIDE B

D SP-B ASSY



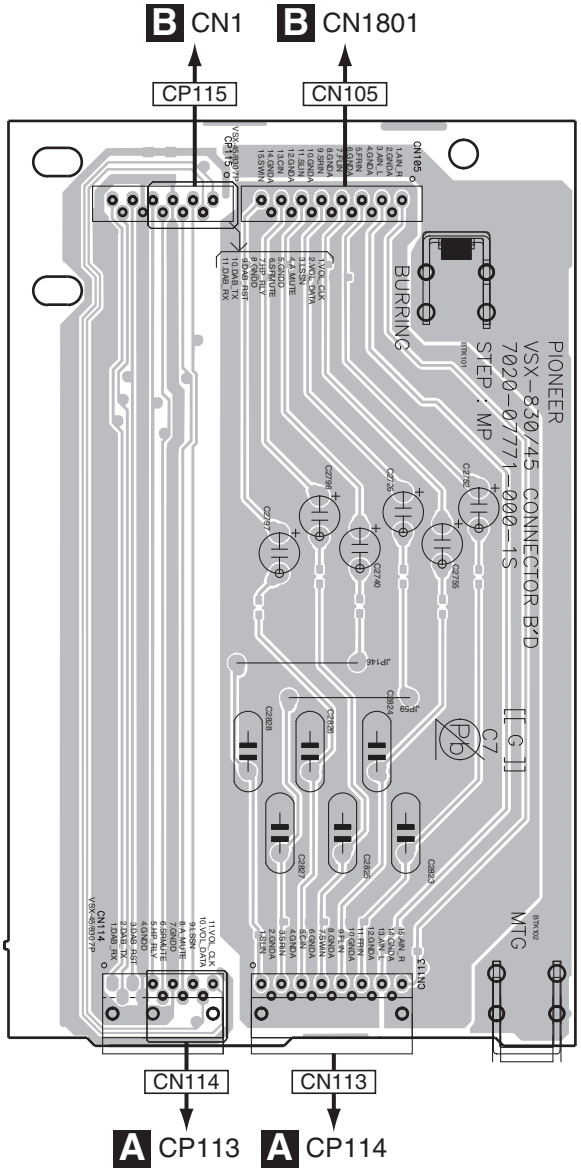
C D

11.4 CONCT ASSY

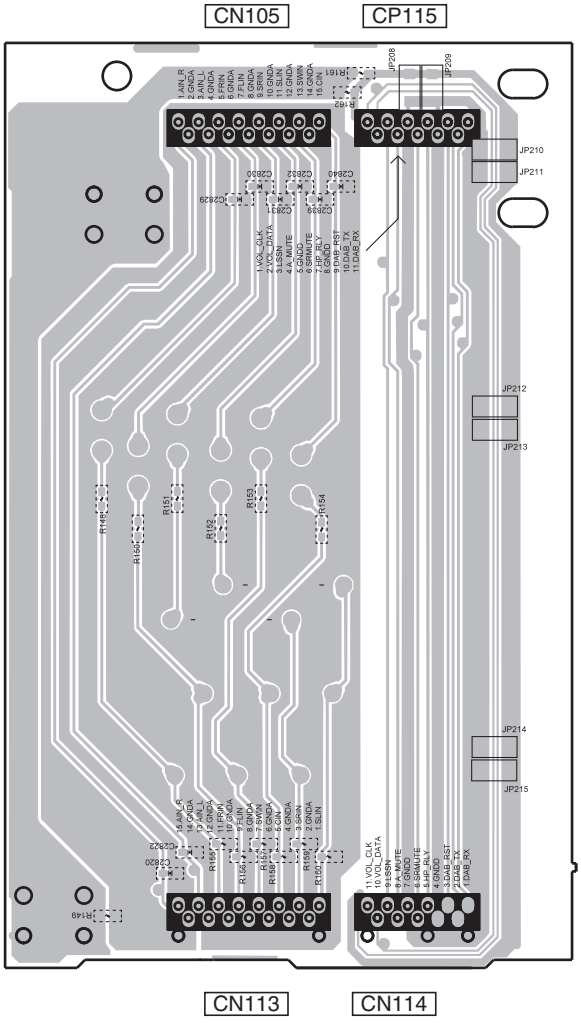
SIDE A

SIDE B

E CONCT ASSY

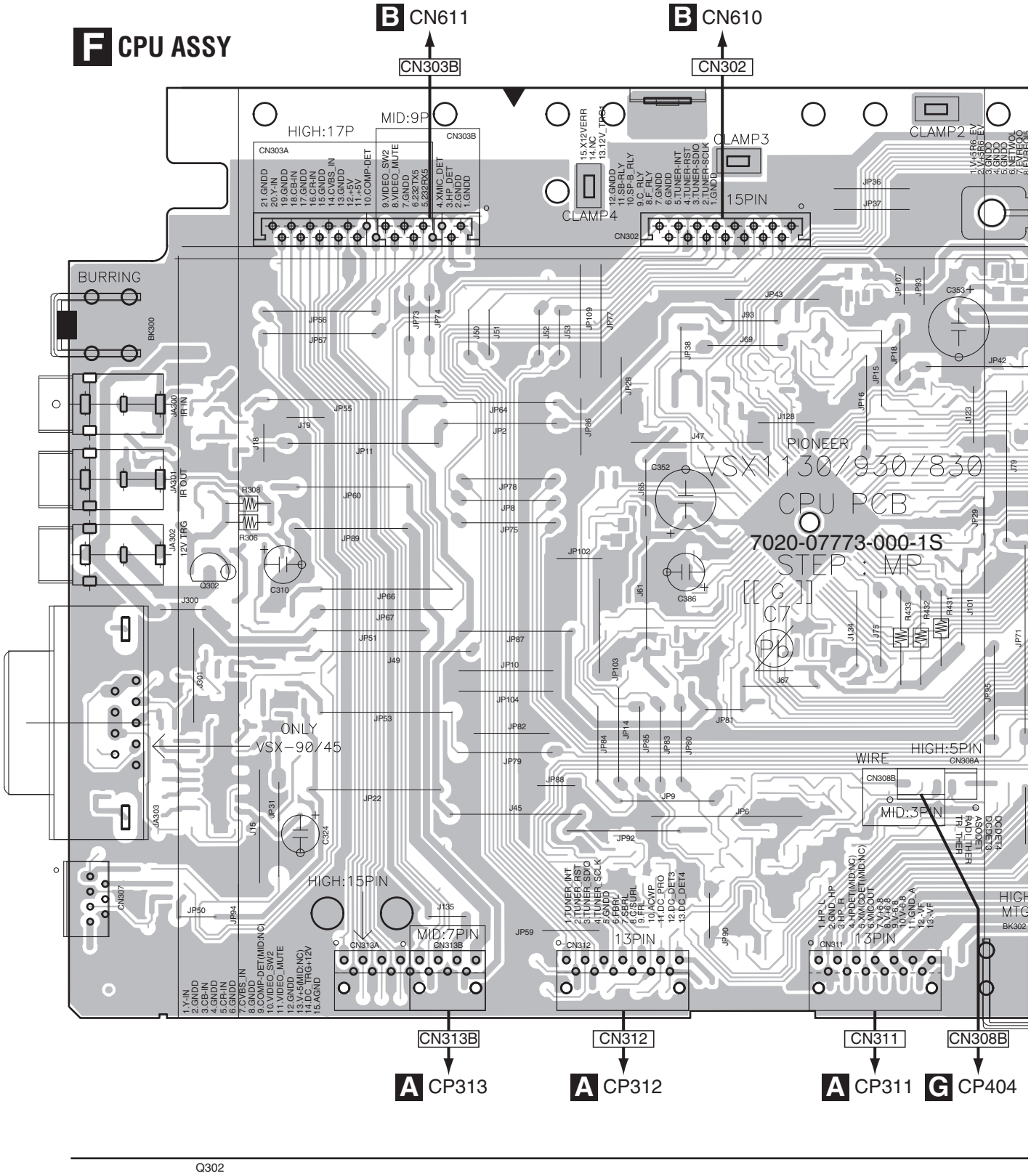


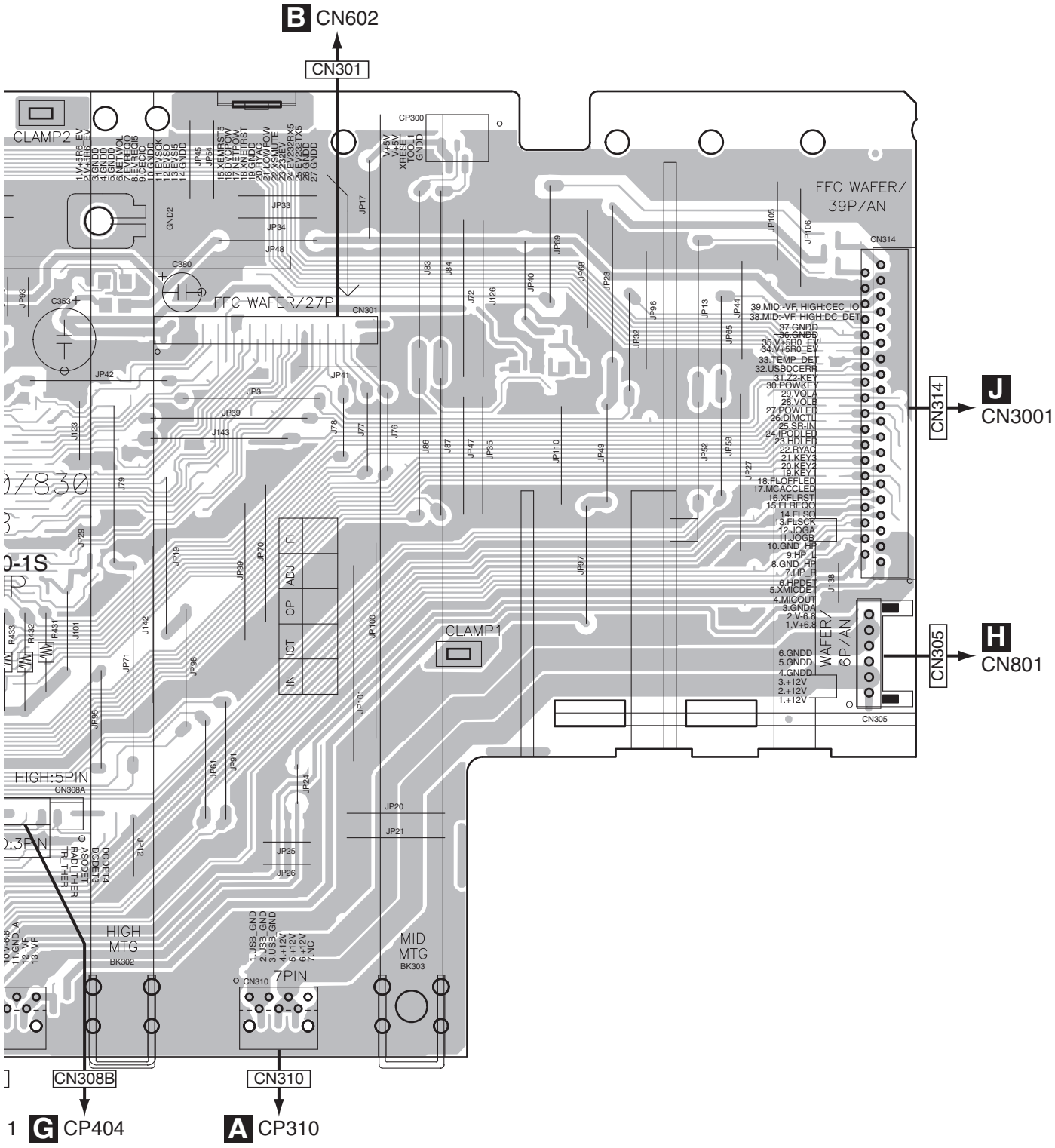
E CONCT ASSY



11.5 CPU ASSY

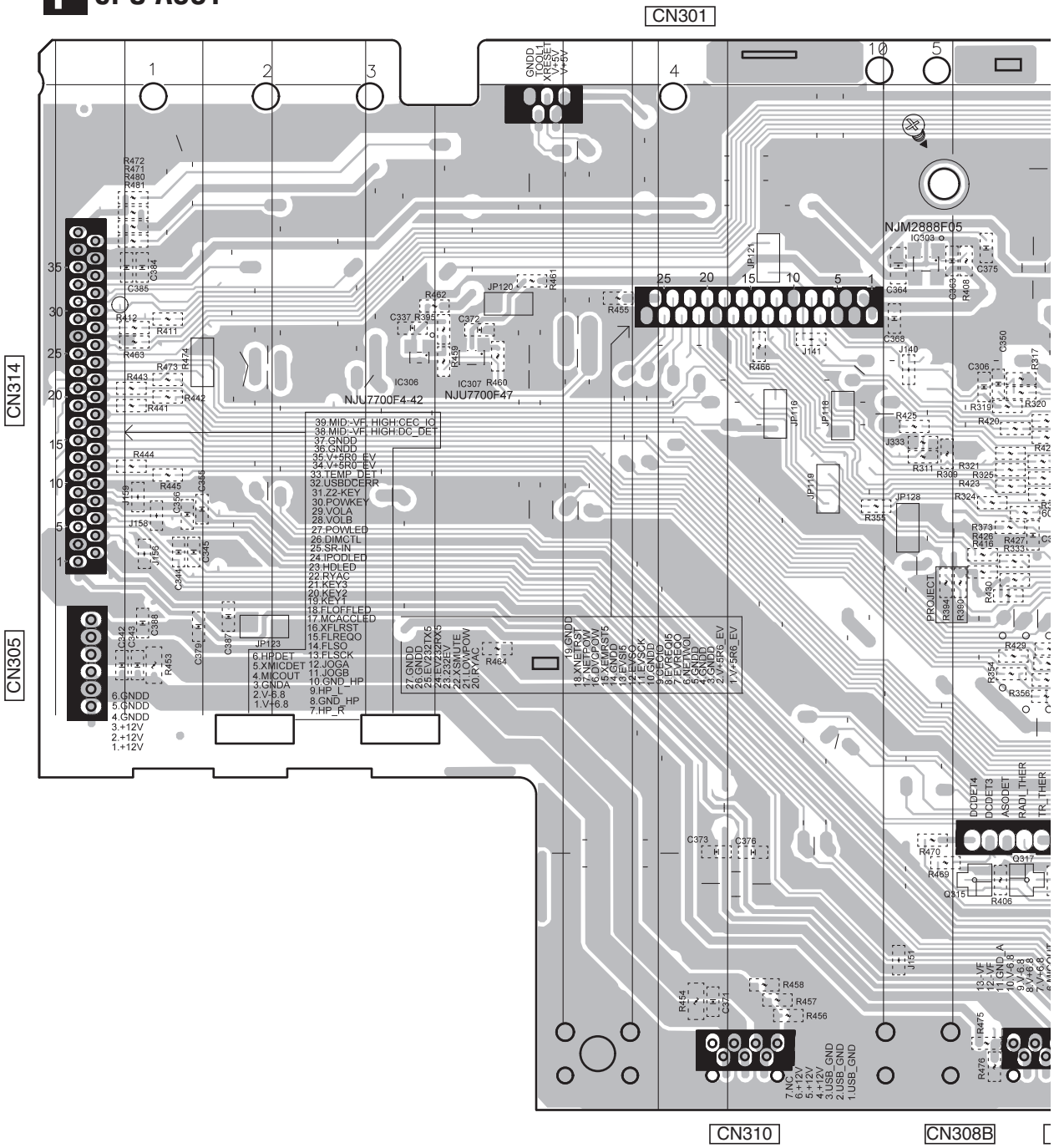
SIDE A



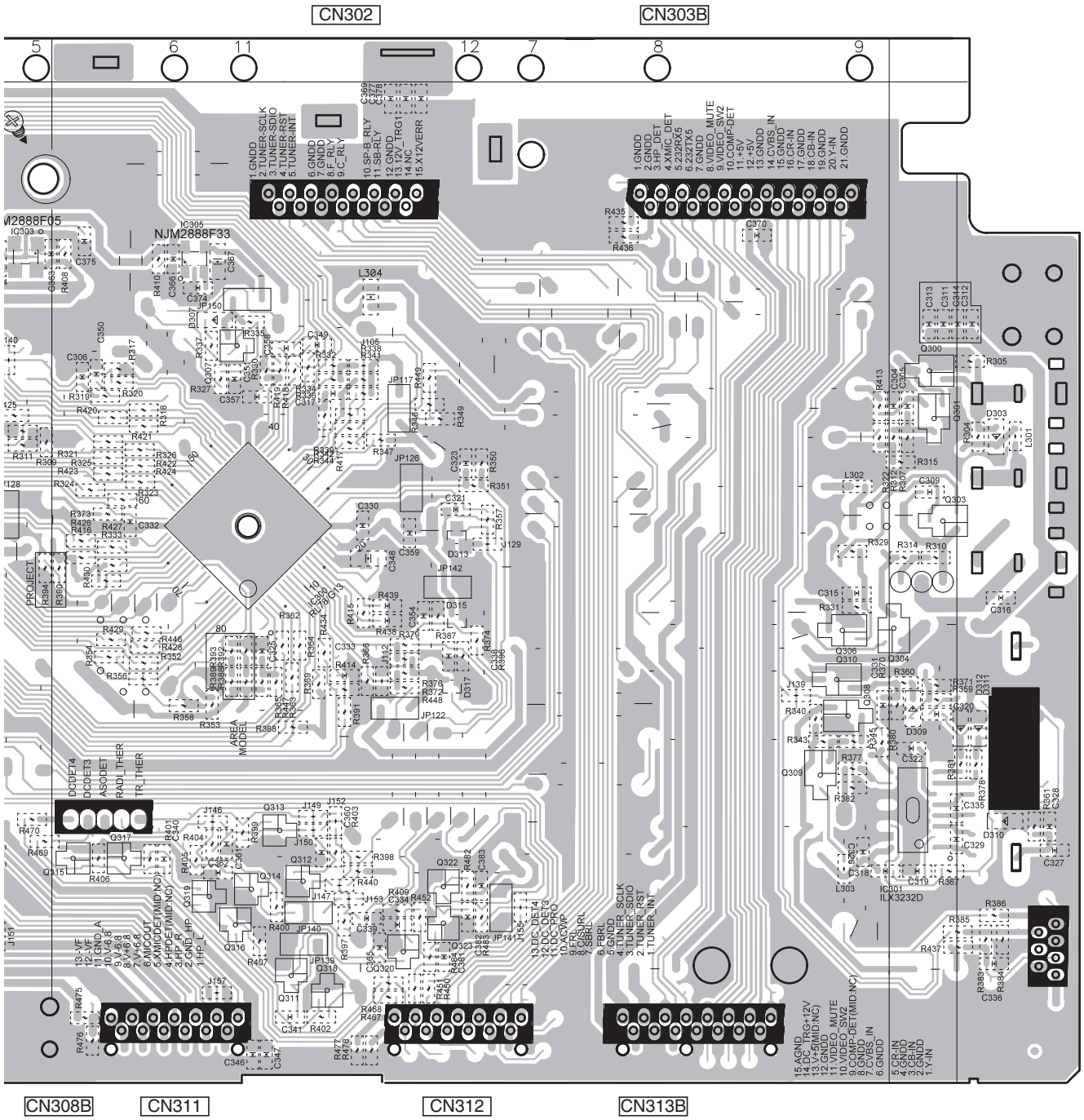

B CN602
CN301
CLAMP2
FFC WAFER/27P
CN301
FFC WAFER/
39P/AN
CN314
J
CN3001
CN314
H
CN801
CN305
CLAMP1
HIGH:5PIN
CN308A
HIGH
MTG
BK302
MID
MTG
BK303
7PIN
CN310
CN308B
CN310
G CP404
A CP310

SIDE B

F CPU ASSY



SIDE B

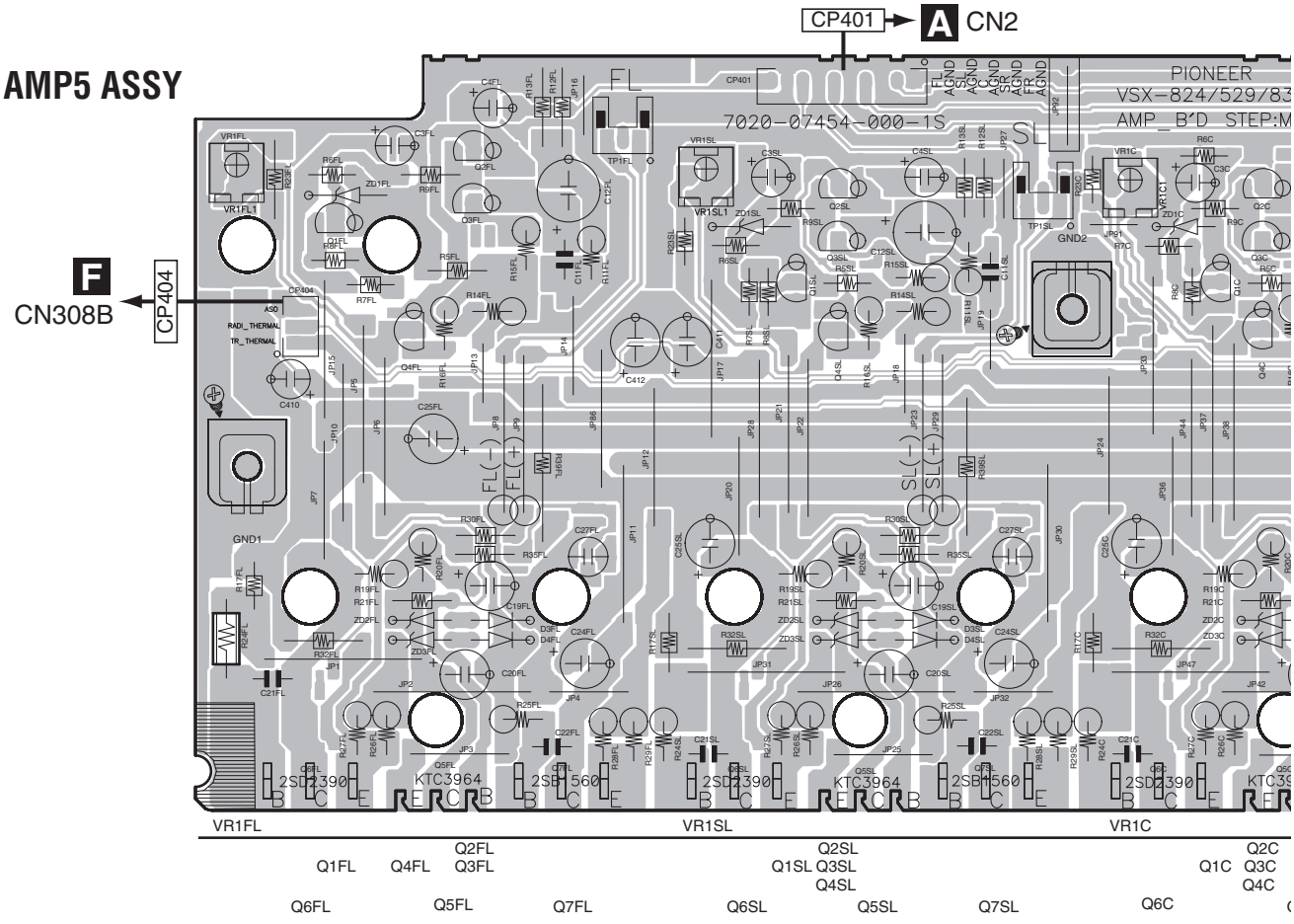


IC303 IC305 Q307 Q300
Q315 Q317 IC300 Q313 Q306 Q304 Q301
Q319 Q314 Q312 Q322 Q310 Q303
Q316 Q311 Q320 Q323 Q308
Q318 Q309 IC301

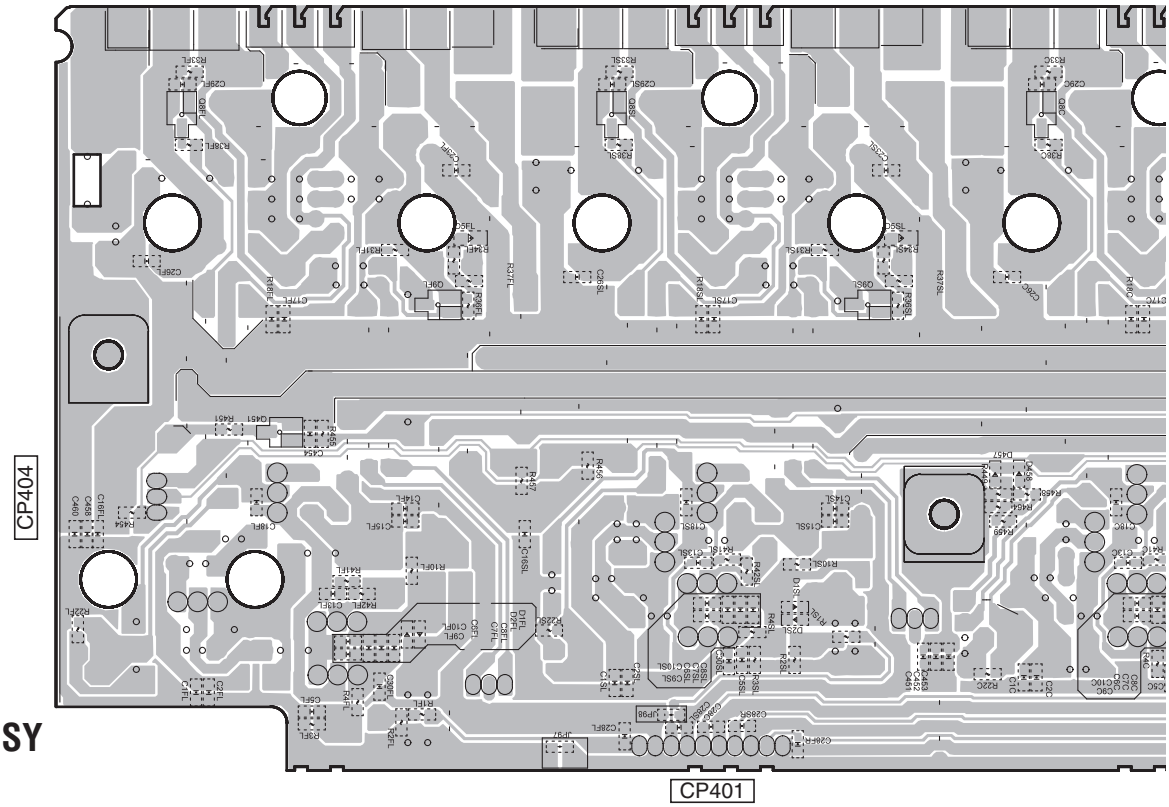
11.6 AMP5 ASSY

SIDE A

G AMP5 ASSY



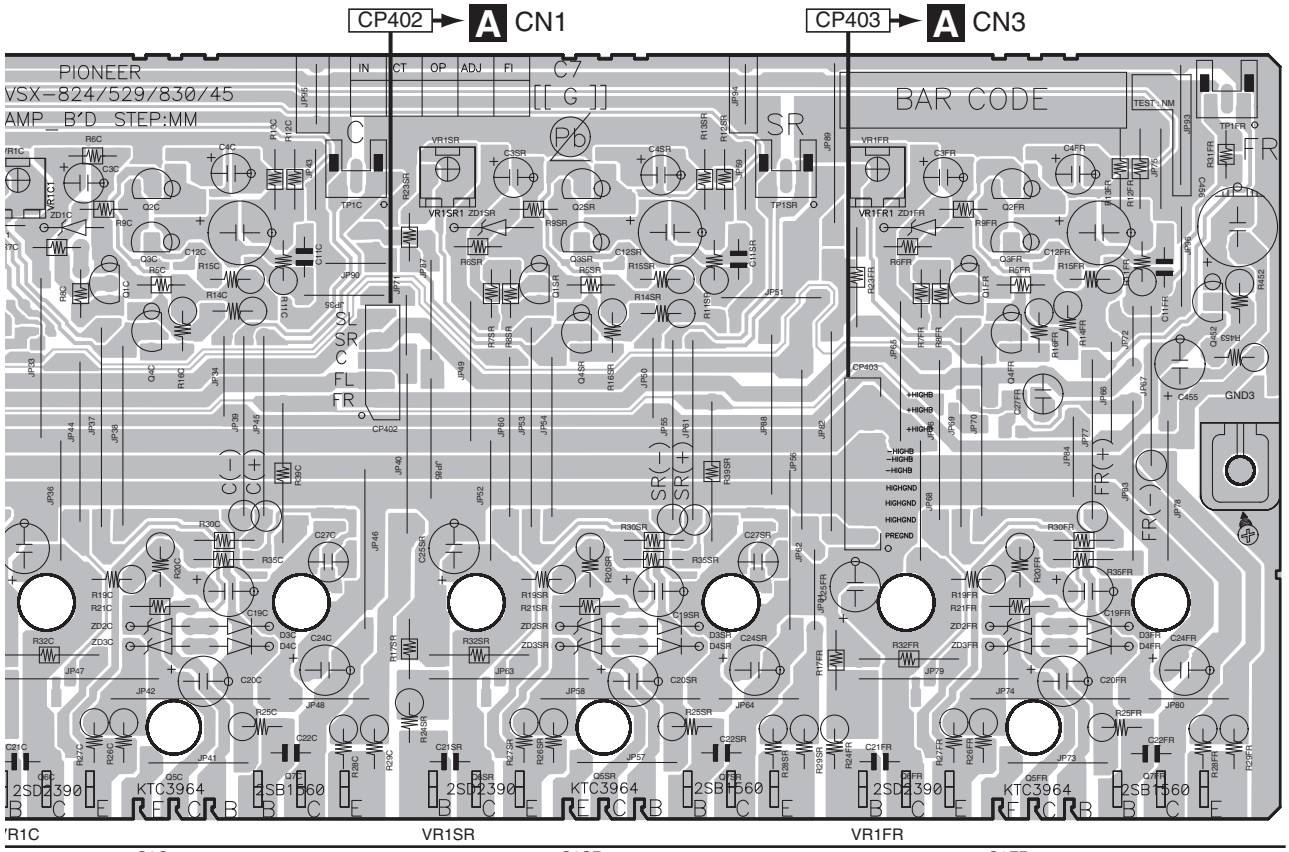
SIDE B



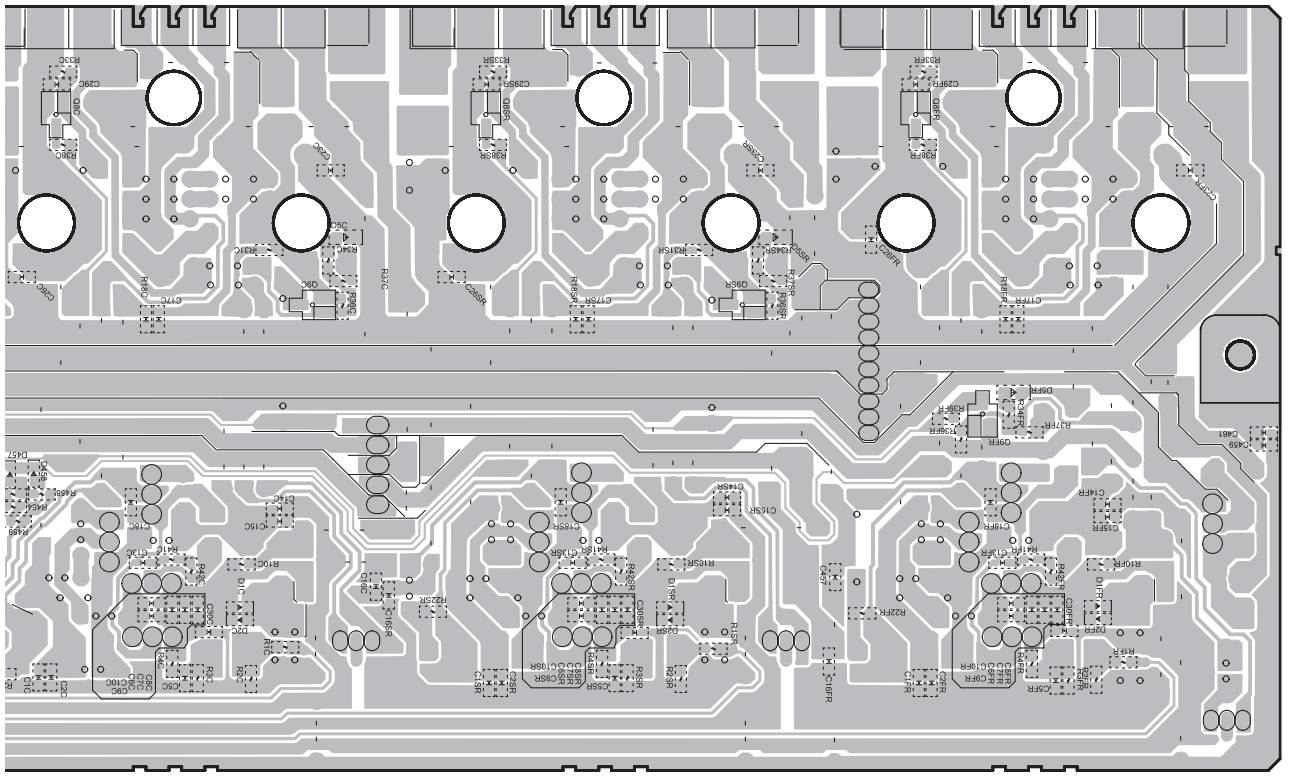
G AMP5 ASSY

G

SIDE A

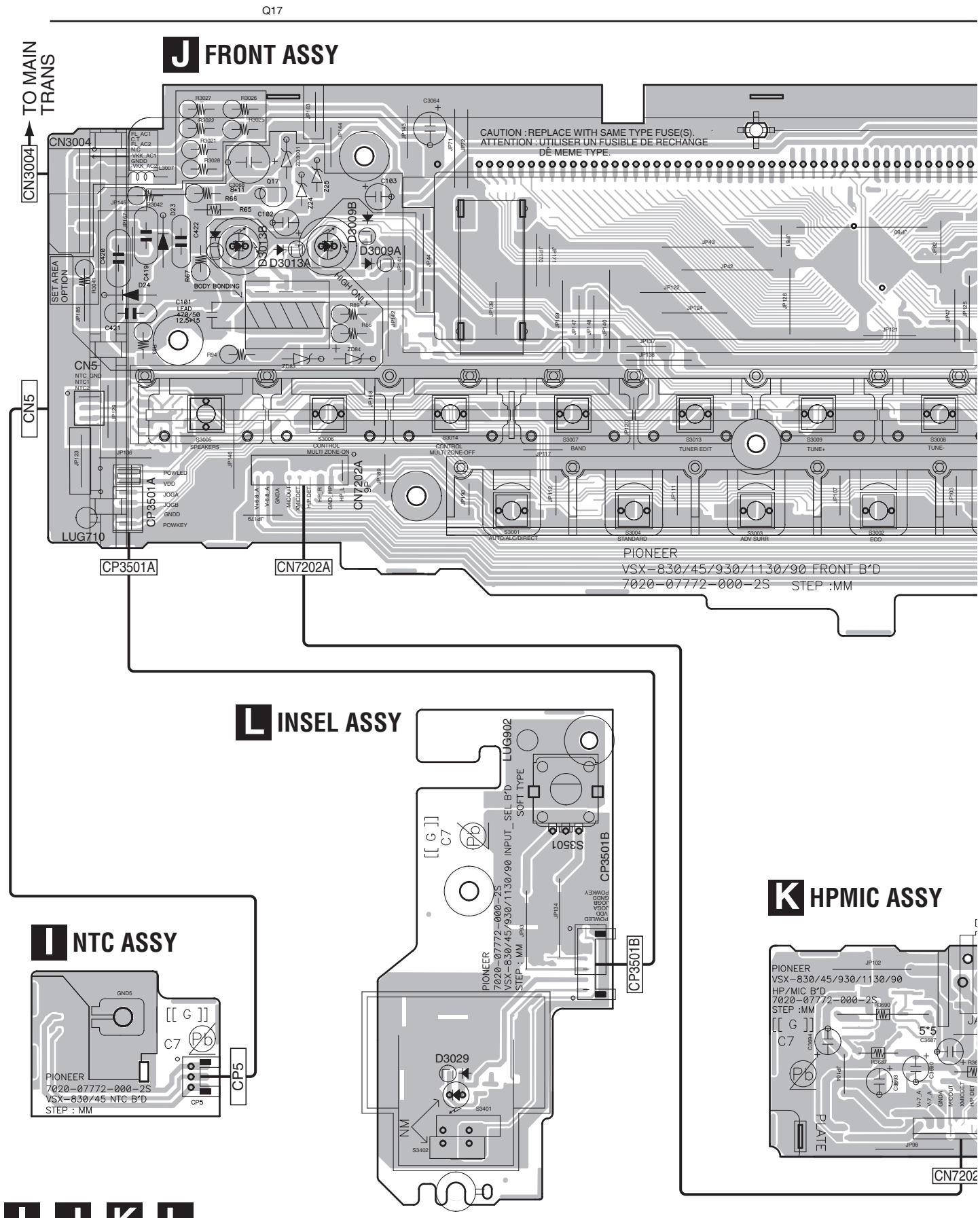

CP402 A CN1
CP403 A CN3
PIONEER
VSX-824/529/830/45
AMP B'D STEP:MM
BAR CODE
VR1C
VR1SR
VR1FR
Q1C Q2C Q3C Q4C
Q5C Q6C Q7C
Q1SR Q2SR Q3SR Q4SR
Q5SR Q6SR Q7SR
Q1FR Q2FR Q3FR Q4FR
Q5FR Q6FR Q7FR
Q452

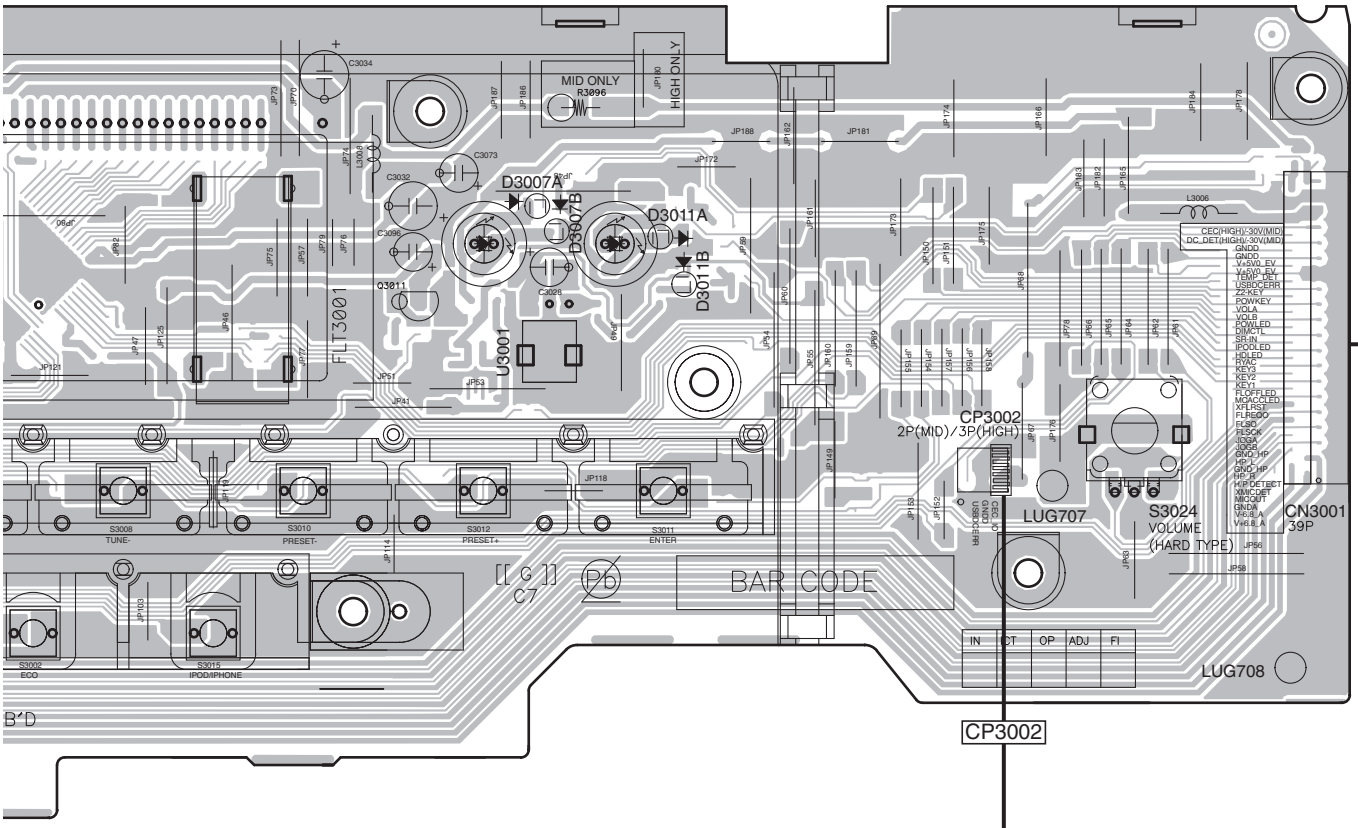
SIDE B


CP402
CP403
Q8C Q9C Q8SR Q9SR Q8FR Q9FR

11.7 FUSB, NTC, FRONT, HPMIC and INSEL ASSYS

SIDE A

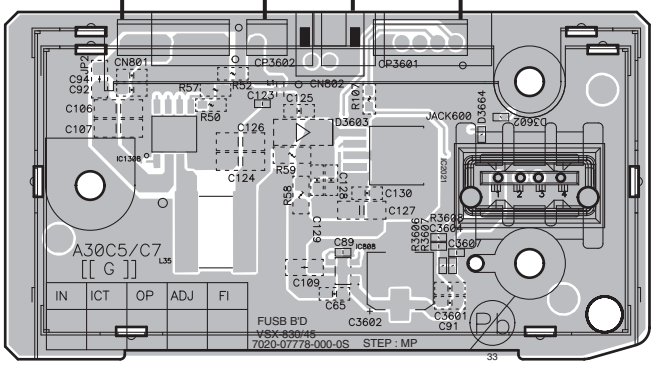




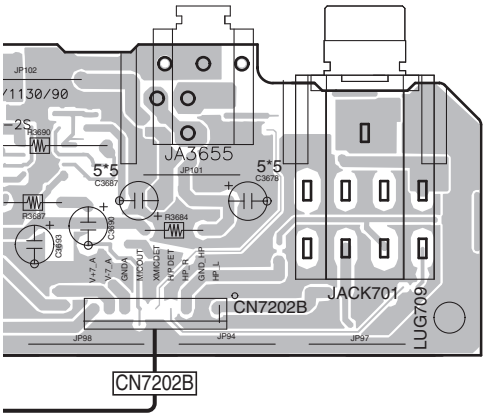
H FUSB ASSY

F CN305 B CN9503 B CN9202

CN801 CP3602 CN802 CP3601



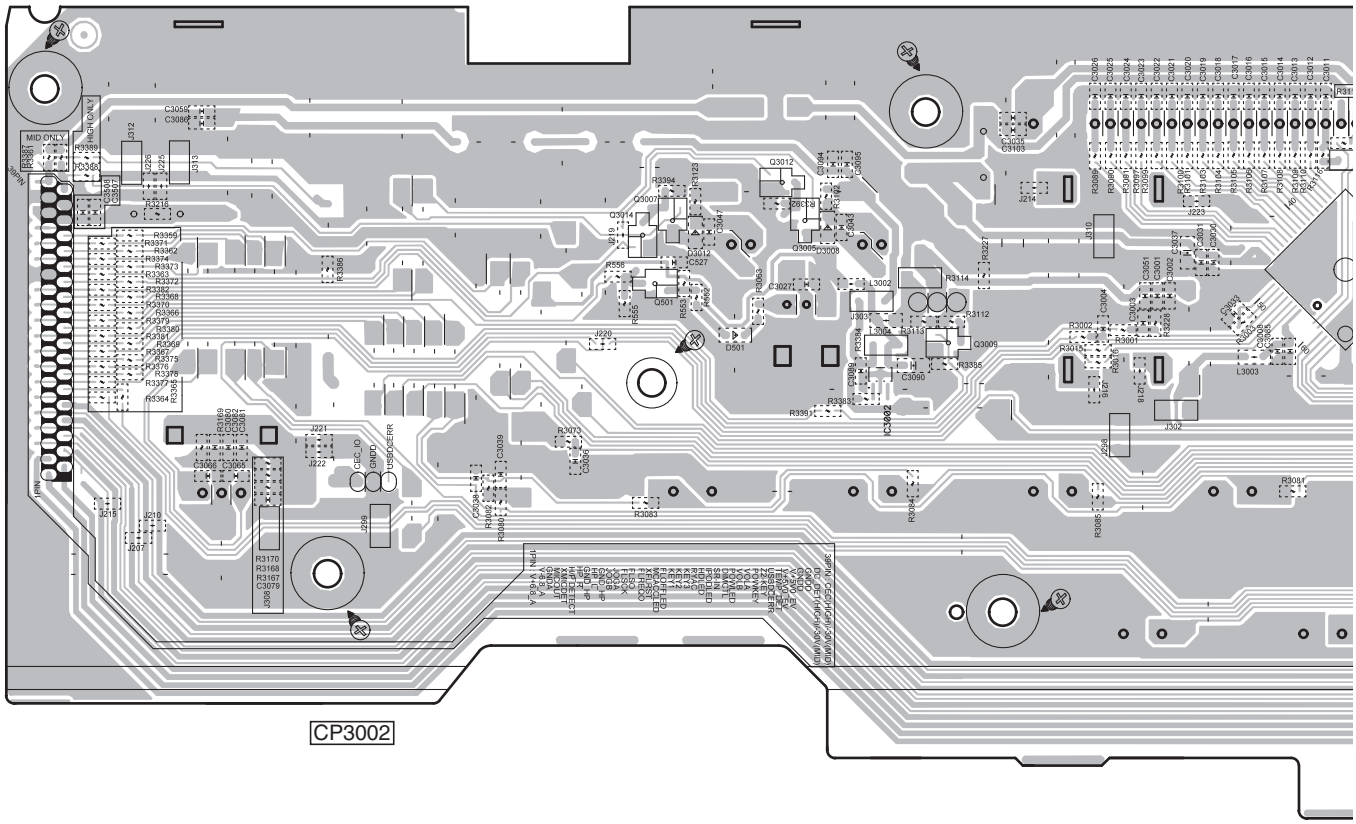
IC ASSY



SIDE B

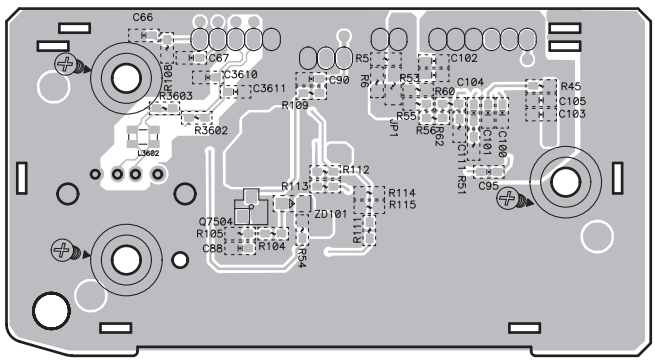
Q3007 Q3012
Q3014 Q3005
Q501 IC3002 IC30

J FRONT ASSY



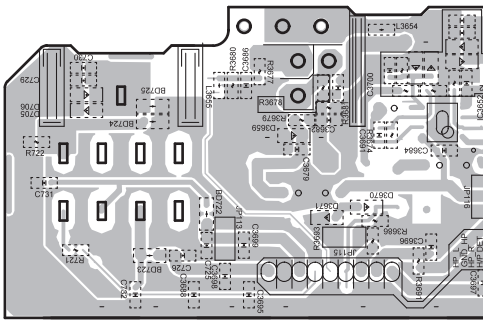
H FUSB ASSY

CP3601 CN802 CP3602 CN801



Q7504

K HPMIC ASSY



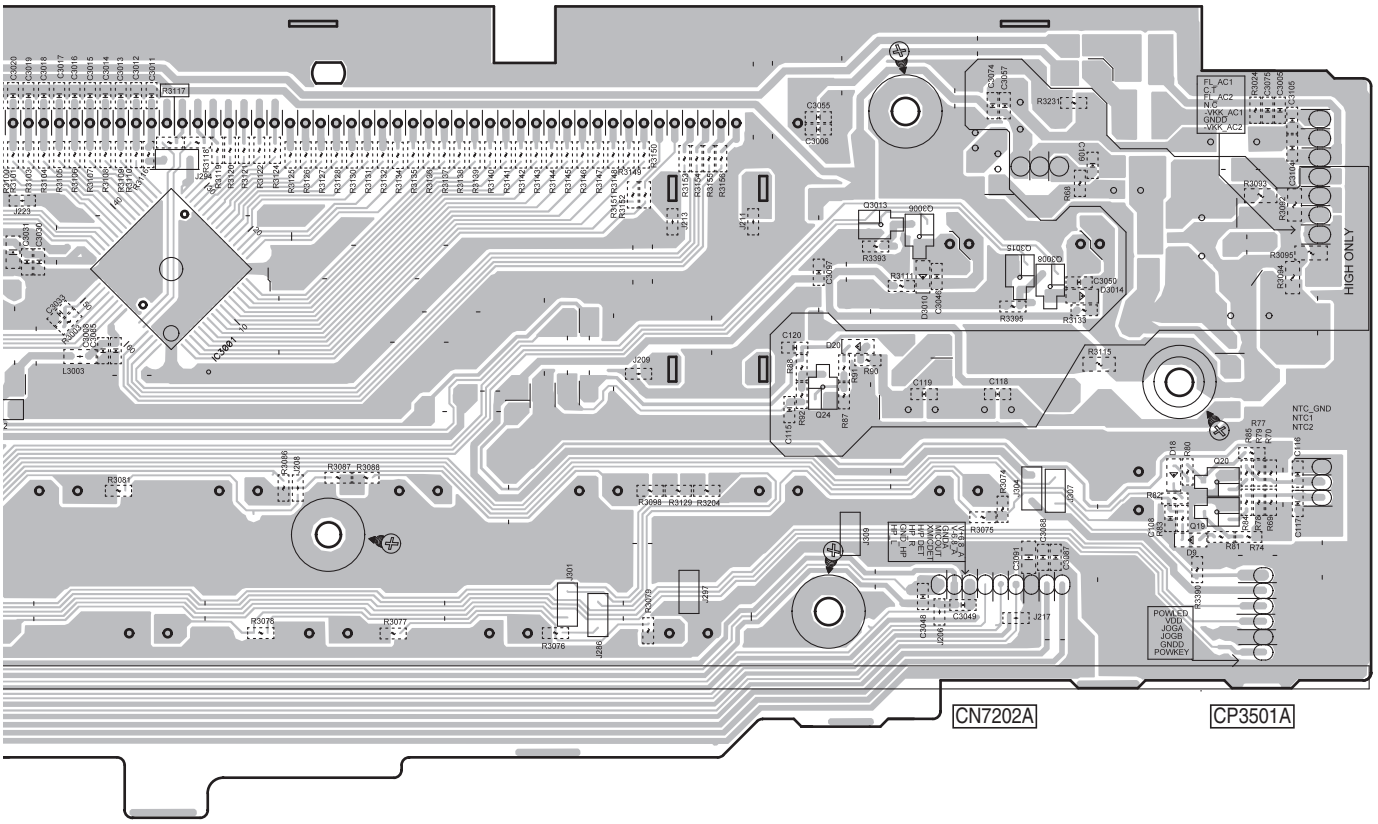
CN7202B

IC3652

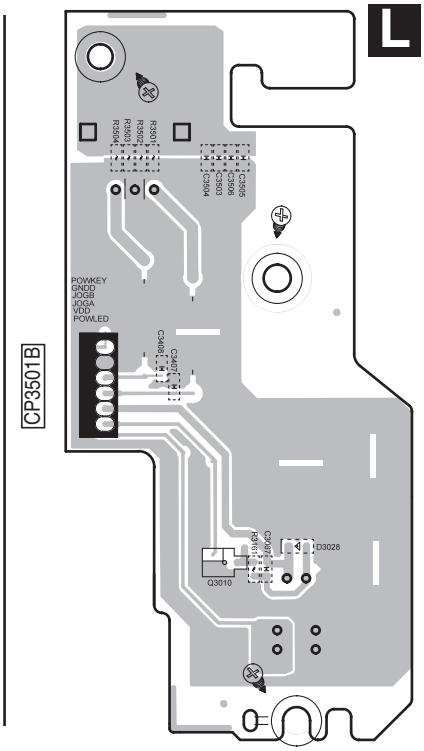
H J K

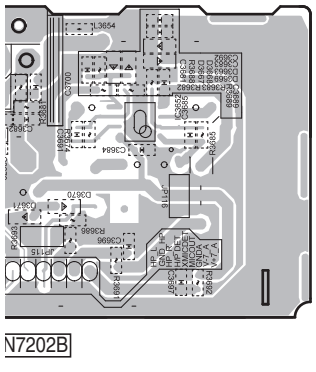
SIDE B

Q3013 Q3006
Q3015 Q3008
IC3001 Q24 Q20 Q19

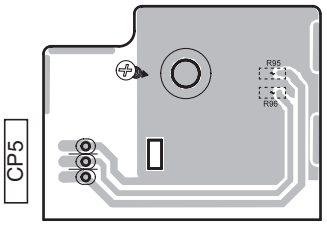


L INSEL ASSY





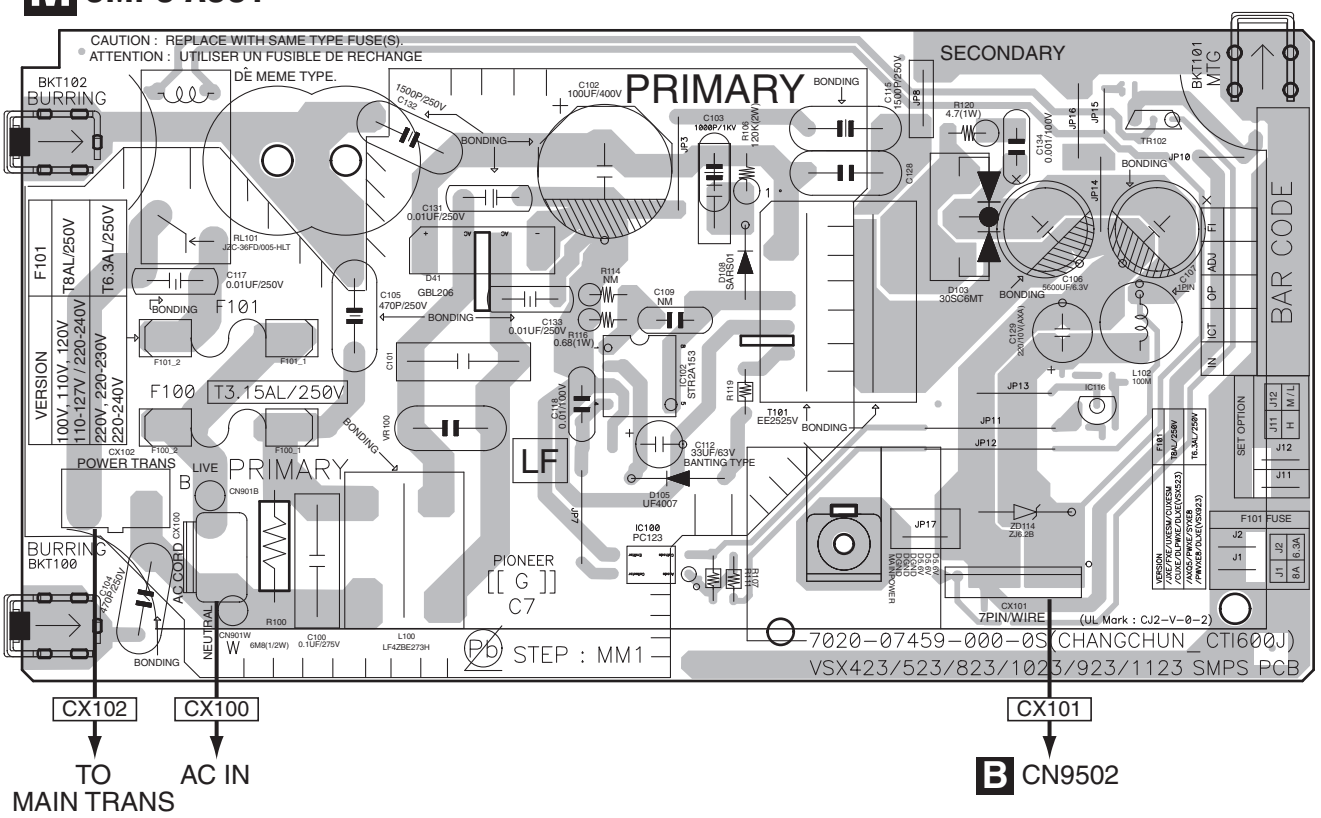
I NTC ASSY



11.8 SMPS ASSY

SIDE A **SIDE A**

M SMPS ASSY

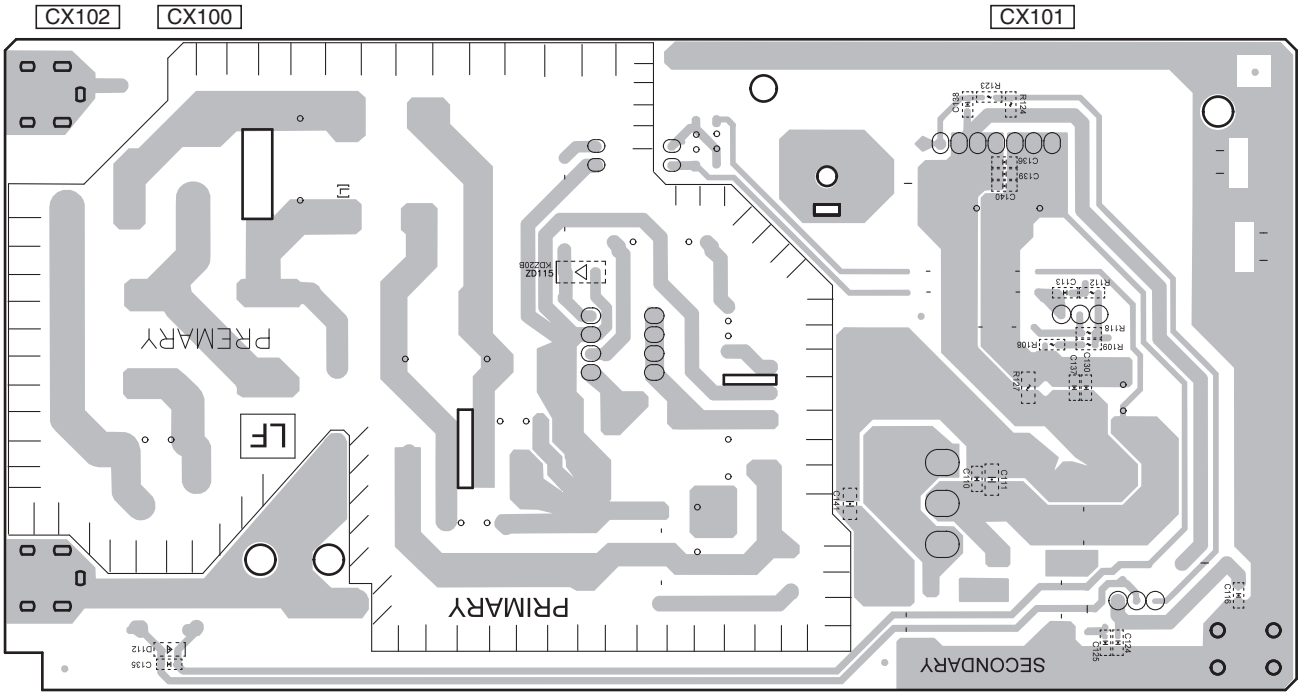


IC102
IC100
PC123

IC116 TR102

SIDE B **SIDE B**

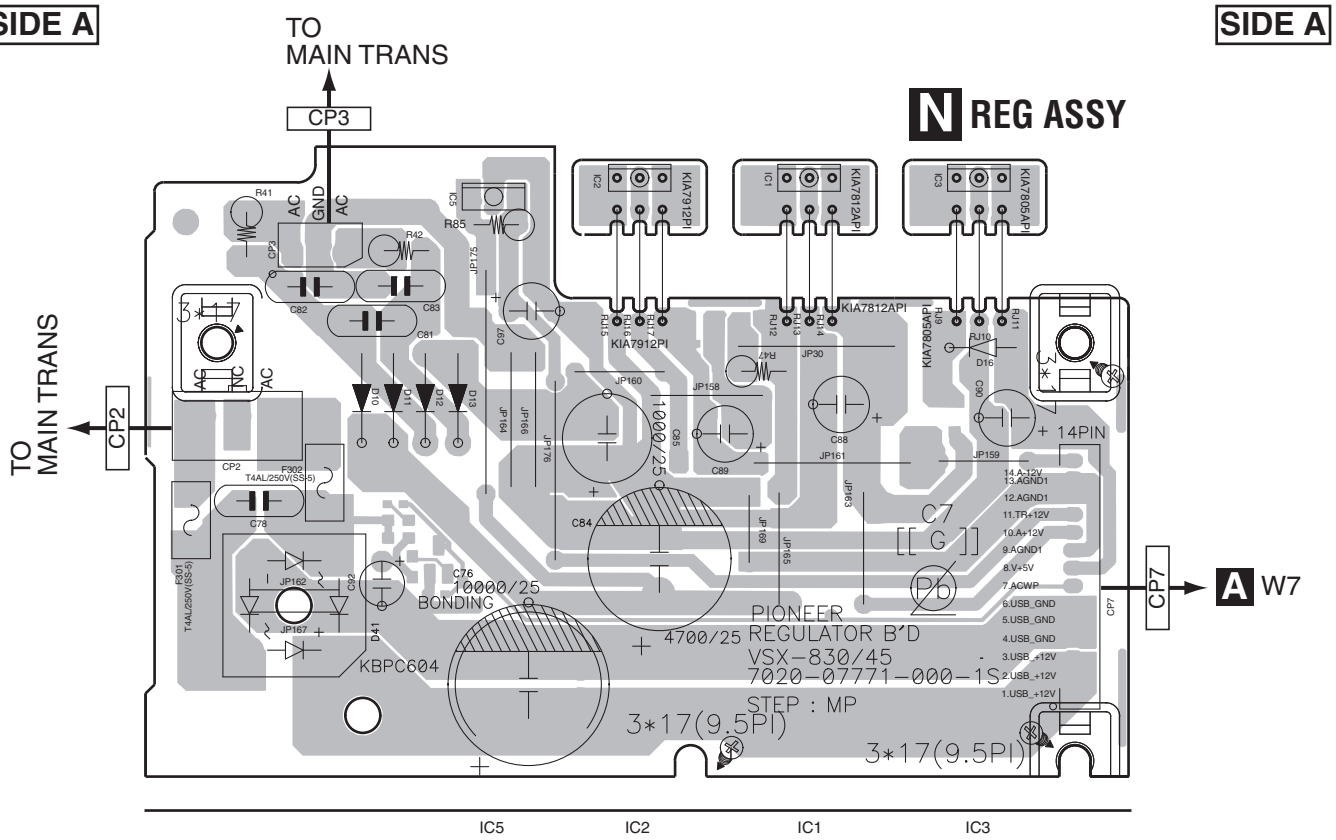
M SMPS ASSY



M

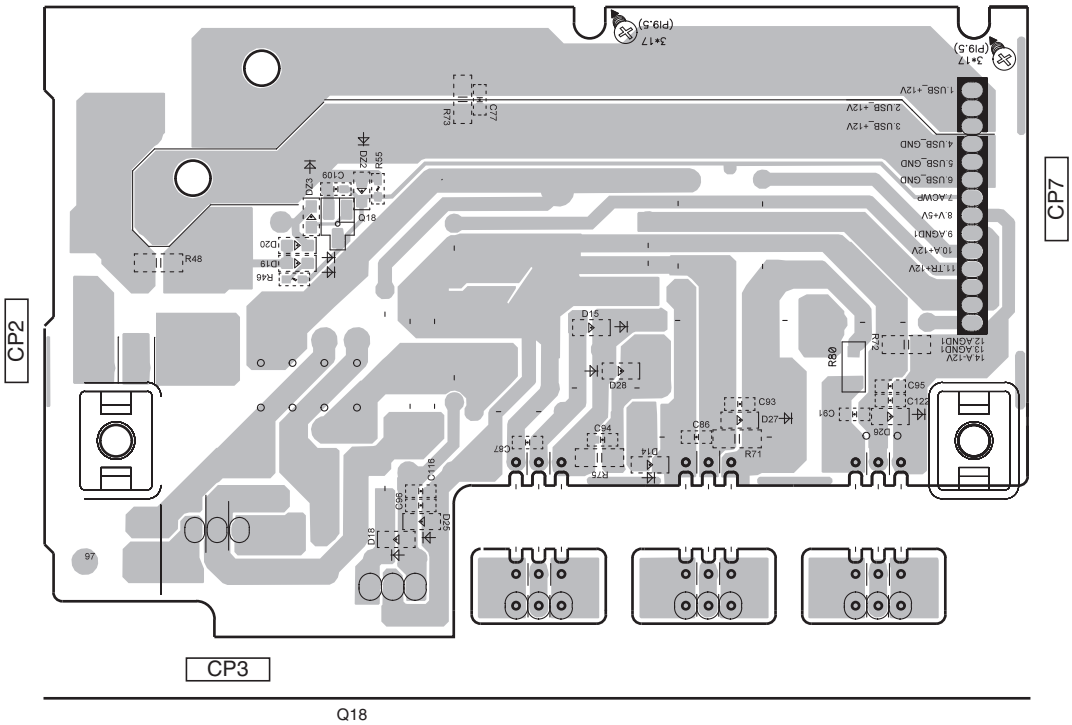
11.9 REG ASSY

SIDE A



SIDE A

SIDE B



SIDE B

12. PCB PARTS LIST

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

● *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.*

● *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 47 k ohm (tolerance is shown by J = 5%, and K = 10%).

560 Ω	→	*56 × 10¹*	→	*561* ····· *RD1/4PU 5 6 1 J*
47 kΩ	→	*47 × 10³*	→	*473* ····· *RD1/4PU 4 7 3 J*
0.5 Ω	→	*R50*		····· *RN2H R 5 0 K*
1 Ω	→	*1R0*		····· *RS1P 1 R 0 K*

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

5.62 kΩ	→	*562 × 10¹*	→	*5621* ····· *RN1/4PC 5 6 2 1 F*

● *SCHEMATIC DIAGRAM and PCB CONNECTION DIAGRAM* → ● *PCB PARTS LIST*

BKT	→ *none*	*BEAD*	→ *L*	*RLY*	→ *RY*	*SW*	→ *S*
CLAMP	→ *none*	*F*	→ *FU*	*RMC*	→ *U*	*VEC*	→ *S9****
W	→ *none*	*FLT*	→ *V*	*RES*	→ *X*	*GND*	→ *KN*
LUG	→ *none*	*JACK*	→ *JA*	*XTAL*	→ *X9****		
P	→ *none*	*JACK*	→ *JA9****	*BD*	→ *L7****		
PACK	→ *9****	*JK*	→ *JA*	*LED*	→ *D8****		
CP	→ *CN*	*PT*	→ *T*	*Z*	→ *D9****		
CP	→ *CN9****	*REG*	→ *IC*	*ZD*	→ *D9****		
CX	→ *CN9****	*REG*	→ *IC9****	*DZ*	→ *D9****		
FPC	→ *CN9****						

LIST OF ASSEMBLIES

Mark	Symbol and Description	VSX-830-K /CUXESM	VSX-45 /CUXE	VSX-830-K /SYXEV8	VSX-830-S /SYXEV8	VSA-830 /JXEV
NSP	1..PCB TTL ASSY MAIN	7025HK1402010	7025HK1402020	7025HK1402030	7025HK1402040	7025HK1402050
	2..MAIN ASSY (PCB SUB ASSY MAIN)	7028077711030	7028077711010	7028077711020	7028077711020	7028077711040
	2..REG ASSY (PCB SUB ASSY REG)	7028077712030	7028077712010	7028077712020	7028077712020	7028077712040
	2..CONCT ASSY (PCB SUB ASSY CONCT)	7028077713030	7028077713010	7028077713020	7028077713020	7028077713040
	2..G-R ASSY (PCB SUB ASSY G-R)	7028077714030	7028077714010	7028077714020	7028077714020	7028077714040
NSP	1..PCB TTL ASSY DMAIN	7025HK1402011	7025HK1402021	7025HK1402031	7025HK1402041	7025HK1402051
	2..DMAIN ASSY (PCB SUB ASSY DMAIN)	7028077771030	7028077771010	7028077771020	7028077771020	7028077771040
	2..NETWORK MODULE	AXX7293	AXX7293	AXX7293	AXX7293	AXX7293
NSP	1..PCB TTL ASSY FRONT	7025HK1402012	7025HK1402022	7025HK1402032	7025HK1402042	7025HK1402052
	2..FRONT ASSY (PCB SUB ASSY FRONT)	7028077721050	7028077721010	7028077721040	7028077721040	7028077721060
	2..INSEL ASSY (PCB SUB ASSY INSEL)	7028077722050	7028077722010	7028077722040	7028077722040	7028077722060
	2..OPTCO ASSY (PCB SUB ASSY OPTCO)	7028077723050	7028077723010	7028077723040	7028077723040	7028077723060
	2..HPMIC ASSY (PCB SUB ASSY HPMIC)	7028077724050	7028077724010	7028077724040	7028077724040	7028077724060
	2..NTC ASSY (PCB SUB ASSY NTC)	7028077725050	7028077725010	7028077725040	7028077725040	7028077725060
	2..G-L ASSY (PCB SUB ASSY G-L)	7028077726050	7028077726010	7028077726040	7028077726040	7028077726060
NSP	1..PCB TTL ASSY CPU	7025HK1402013	7025HK1402023	7025HK1402033	7025HK1402043	7025HK1402053
	2..CPU ASSY (PCB SUB ASSY CPU)	7028077731050	7028077731010	7028077731040	7028077731040	7028077731060
	2..SP-B ASSY (PCB SUB ASSY SP-B)	Not used	7028077732010	Not used	Not used	Not used
NSP	1..PCB TTL ASSY AMP5	7025HK1402014	7025HK1402024	7025HK1402034	7025HK1402044	7025HK1402054
	2..AMP5 ASSY (PCB SUB ASSY AMP5)	7028074541040	7028074541040	7028074541040	7028074541040	7028074541060
	2..WG ASSY (PCB SUB ASSY WG)	7028074542040	7028074542040	7028074542040	7028074542040	7028074542060
NSP	1..PCB TTL ASSY SMPS	7025HK1402015	7025HK1402025	7025HK1402035	7025HK1402045	7025HK1402055
⚠	2..SMPS ASSY (PCB SUB ASSY SMPS)	70280733610GA	70280733610GA	70280733610HA	70280733610HA	70280733610IA
NSP	1..PCB TTL ASSY FUSB	7025HK1402016	7025HK1402026	7025HK1402036	7025HK1402046	7025HK1402056
	2..FUSB ASSY (PCB SUB ASSY FUSB)	7028077781040	7028077781010	7028077781030	7028077781030	7028077781050

CONTRAST OF PCB ASSEMBLIES

A MAIN ASSY

7028077711030, 7028077711010, 7028077711020 and 7028077711040 are constructed the same with the exception of some components, including the following:

Mark	Symbol and Description	7028077711030	7028077711010	7028077711020	7028077711040
	RY6 Relay	Not used	G680060103010-IL	Not used	Not used
	601 Tuner_FM/AM	E903004100781S	E903004100781S	E903104100781S	Not used

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

B DMAIN ASSY

7028077771030, 7028077771010, 7028077771020 and 7028077771040 are constructed the same with the exception of some components, including the following:

Mark	Symbol and Description	7028077771030	7028077771010	7028077771020	7028077771040
	IC604	Not used	J040140940040S	Not used	Not used

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

C OPTCO ASSY

7028077723050, 7028077723010, 7028077723040 and 7028077723060 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 CONCT ASSY

7028077713030, 7028077713010, 7028077713020 and 7028077713040 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.

F CPU ASSY

7028077731050, 7028077731010, 7028077771020 and 7028077731060 are constructed the same with the exception of some components, including the following:

Mark	Symbol and Description	7028077731050	7028077731010	7028077731040	7028077731060
	IC301	Not used	J046323200020-IL	Not used	Not used
	Q302	Not used	J5000916Y0050-IL	Not used	Not used
	JA300-302 Jack_D3.5	Not used	G401PJ3080100-IL	Not used	Not used
	JA303 CN.Wafer Interface	Not used	L103090090040-IL	Not used	Not used

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

G AMP5 ASSY

7028074541040 and 7028074541060 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 FUSB ASSY

7028077781040, 7028077781010, 7028077781030 and 7028077781050 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.

I NTC ASSY

7028077725050, 7028077725010, 7028077725040 and 7028077725060 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.

J FRONT ASSY

7028077721050, 7028077721010, 7028077721040 and 7028077721060 are constructed the same with the exception of some components, including the following:

Mark	Symbol and Description	7028077721050	7028077721010	7028077721040	7028077721060
	D3007,3009,3011,3013	K500052009011-IL	K500036000160-IL	K500052009011-IL	K500052009011-IL

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

K HPMIC ASSY

7028077724050, 7028077724010, 7028077724040 and 7028077724060 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.

L INSEL ASSY

7028077722050, 7028077722010, 7028077722040 and 7028077722060 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.

M SMPS ASSY

70280733610GA, 70280733610HA and 70280733610IA are constructed the same with the exception of some components, including the following:

Mark	Symbol and Description	70280733610GA	70280733610HA	70280733610IA
⚠	CN9100 CN.Wafer 7.92mm	L108396030010-IL	Not used	L108396030010-IL
⚠	FU101 Fuse Glass tube 20mm	N751508001160-IL	N751506301160-IL	N751508001160-IL

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

N REG ASSY

7028077712030, 7028077712010, 7028077712020 and 7028077712040 are constructed the same with the exception of some components, including the following:

Mark	Symbol and Description	7028077712030	7028077712010	7028077712020	7028077712040
⚠	IC5	Not used	J126781200040-IL	Not used	Not used
	R85	Not used	C060033166050-IL	Not used	Not used

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

Mark	No.	Description	Part No.
		A MAIN ASSY	
		SEMICONDUCTORS	
	IC 400		BD3473KS2
	IC 1200		J127410500010-IL
	IC 2502		J040406600010-IL
	IC 2702,2704		J121458000050-IL
	Q 14,15		J522305200050-IL
	Q 16		J520015301210-IL
	Q 17		J5000916Y0050-IL
⚠	D 7		K047100600220-IL
		MISCELLANEOUS	
	JA 101	TER_BOARD SCREW 6P	G613602A0200Y-IL
	JA 102	TER_BOARD SCREW 4P	G612405E0200Y-IL
	JA 401	TER_RCA 4PIN	G602421E0002Y-IL
	JA 402	TER_RCA 3PIN	G606305AW140Y-IL
	JA 403	RCA JACK	G601207AE060Y-IL
	RY 2-4	RELAY	G680060103010-IL
	RY 5	RELAY	G680240202030-IL
	CN 9113,9310,9313	CN.WAFER	L109012510740S
	CN 9114	CN_WAFER	L109012511540S
	CN 9311,9312	CN_WAFER	L109012511340S
	601	TUNER_FM/AM	E903004100781S
		RESISTORS	
	R 5,7,9,11		C060010065050-IL
	R 13,25		C060010065050-IL
	R 15,16		C060033166050-IL
	R 64		C060022063050-IL
	R 66		C0604R7065050-IL
	R 588,589		C060010165060-IL
		CAPACITORS	
	C 55,58		D040682088010-IL
		B DMAIN ASSY	
		SEMICONDUCTORS	
	IC 1		8952VS8300040
	IC 6,8,615		TC7SZ125FUS1
	IC 7		74LCX541FT

Mark	No.	Description	Part No.
	IC 101		R5S726B0D216FP
	IC 102,9001		J001986466020S
	IC 103		8952VS8300011
	IC 105,1521,1812,9006		TC7SH08FUS1
	IC 107,608,612,614		TC74VHCT08AFKS1
	IC 601-603		J040140940040S
	IC 610,1509,1601		74VHC126FT
	IC 611		74VHCT126AFT
	IC 613,1804,9003		TC74VHC08FK
⚠	IC 809		J046206501010S
	IC 1510,1805		TC74VHC157FK
	IC 1511		ICS511MLF
⚠	IC 1605		J046205101010S
	IC 1801		J080458800010-IL
	IC 1808		TC7WHU04FK
	IC 9004		8952VS8300020
	IC 9101		74VHC541FT
	IC 9202		8952VS8300031
	IC 9208		TC7SH08FUS1
⚠	IC 9450,9504		J126736112010S
⚠	IC 9511-9513		J126736100010S
⚠	IC 9555,9558		NJM2888F05
⚠	IC 9557		NJM2888F25
⚠	IC 9559		NJM2888F33

MISCELLANEOUS

Mark	No.	Description	Part No.
	JA 1601,9601-9606	HDMI JACK	AKP7286
	JA 9202	JACK_MODULAR	G4060RJ450450S

CAPACITORS

Mark	No.	Description	Part No.
	C 128,1560		D040102081070-IL

C OPTCO ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 2009		J040740400290-IL

MISCELLANEOUS

Mark	No.	Description	Part No.
	JA 1305	MODULE	E100802000250-IL
	JA 1306	TER_RCA 1PIN	G600107A0000Y-IL
	CN 2009	CN.WAFER	L101911500610S

D SP-B ASSY (VSX-45 only)

MISCELLANEOUS

Mark	No.	Description	Part No.
	JA 103	TER_BOARD PUSH 4P	G594408SA030Y-IL

E CONCT ASSY

MISCELLANEOUS

Mark	No.	Description	Part No.
	CN 105	CN_WAFER	L109012511540S
	CN 9115	CN.WAFER	L109012510740S

F CPU ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 300		8952VS8300050
⚠	IC 303		NJM2888F05
⚠	IC 305		J126288833010S
	IC 306		J126077004210-IL
	IC 307		J126077004720S

MISCELLANEOUS

Mark	No.	Description	Part No.
	CN 302	CN_WAFER	L109012511540S
	CN 303	CN_WAFER	L109012510940S

CAPACITORS

Mark	No.	Description	Part No.
	C 352,353		D040102081070-IL

G AMP5 ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	Q 1,2		J5000992FA050-IL
	Q 4		J5023206Y0050-IL
	Q 5		J502396400010-IL
⚠	Q 6		J5032390Y0000-IL
⚠	Q 7		J5011560Y0000-IL
	Q 452		J5001024Y0050-IL
	D 9001		K06005R134522-IL
	D 9002,9003		K06004R344522-IL

RESISTORS

Mark	No.	Description	Part No.
	R 16		C060047065060-IL
⚠	R 24,25		C060010165060-IL
⚠	R 26-29		N113136647820-IL
⚠	R 33		F320471000950-IL
	R 452		C060010165060-IL
	R 453		C060033065050-IL
	VR 1	VR_SEMI CARBON MOLD	C541102315020S

H FUSB ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
⚠	IC 808		J046206501010S

MISCELLANEOUS

Mark	No.	Description	Part No.
	JA 600	CN_PLUG CONTACT	G480040030020S

I FUSB ASSY

RESISTORS

Mark	No.	Description	Part No.
	R 95,96		F340160801030S

J FRONT ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC 3001		PD8198A
	Q 19,20		J522305200050-IL
	Q 3011		J5001266G0050-IL
	D 9,18		K005041480230-IL
	D 3001		K06006R844522-IL
	D 3007,3009,3011,3013		K500052009011-IL

MISCELLANEOUS

Mark	No.	Description	Part No.
	V 3001	DISPLAY_FLT	K530166400012-IL
	S 3001-3015	SWITCH	G180501000010-IL
	S 3024	SW_ENCODER	G121122400231S
	1	HOLDER	4320211306000-IL
	U 3001	MODULE_REMOCON	E940349003810-IL

RESISTORS

Mark	No.	Description	Part No.
	R 3021,3022		C0601R8065050S

Mark	No.	Description	Part No.

K HPMIC ASSY

SEMICONDUCTORS

	IC	3652	J121458001010-IL

MISCELLANEOUS

	JA	701 JACK_D6.5	G402PJ612AG1Y-IL
	JA	3655 JACK_D3.5	G40132340000Y-IL

L INSEL ASSY

MISCELLANEOUS

	S	3401 SWITCH	G180501000010-IL
	S	3501 SW_ENCODER	G121121200230-IL

M SMPS ASSY

SEMICONDUCTORS

⚠	IC	100	K614123000010-IL
⚠	IC	102	J122201530080-IL
⚠	IC	116	J126243118010-IL
	Q	102	J5023198Y0000-IL
⚠	D	41	K047200600010-IL
⚠	D	103	K120300600010-IL
	D	105	K050400700010-IL
	D	108	K050010010010-IL
	D	9114	K06006R244522-IL

MISCELLANEOUS

⚠	L	100	COIL_LINE FILTER	D320201405510-IL
⚠	RY	101	RELAY	G680060103030-IL
⚠	T	101	TRANS_SWITCHING	E060252505510-IL
⚠	CN	9100	CN.WAFER 7.92MM	L108396030010-IL
⚠	CN	9102	CN.WAFER 7.92MM	L108011430210-IL
		100,102	BRACKET	4010215796000-IL
		101	BRACKET	4010210196000-IL
⚠	FU	100	FUSE GLASS TUBE 20MM (3.15 A)	N751503151160-IL
⚠	FU	101	FUSE GLASS TUBE 20MM (T8AL/250V)	N751508001160-IL
	Z	9115	D_ZENER CHIP	K06620R04P410-IL

RESISTORS

⚠	R	100	C060068564520-IL
	R	106	C060012466050S
	R	116	C060R68065050-IL
	R	120	C0604R7065050-IL

CAPACITORS

⚠	C	100	D02110407H010-IL
	C	102	D04010108K000-IL
	C	103	D00810207Q010-IL
⚠	C	104,105	D00847127H010-IL
	C	106,107	D041562081001-IL
	C	112	D041330088050S
⚠	C	115,132	D00815248H010-IL
⚠	C	117,131,133	D008103589010-IL
	C	129	D041221082230-IL

N REG ASSY

SEMICONDUCTORS

⚠	IC	1	J126781200040-IL
⚠	IC	2	J126791200060-IL
⚠	IC	3	J126780500110-IL
⚠	D	10-13	K000400700220-IL
	D	19	K005041480230-IL
⚠	D	41	K047604000030S
	D	9002	K06604R74P430S

MISCELLANEOUS

⚠	FU	301,302 FUSE_MICRO (T4AL 250V)	G658402250050-IL

RESISTORS

	R	41,42	C060R22065050-IL

CAPACITORS

	C	76	D040103084000-IL
	C	84	D040472084020-IL
	C	85	D040102084060-IL