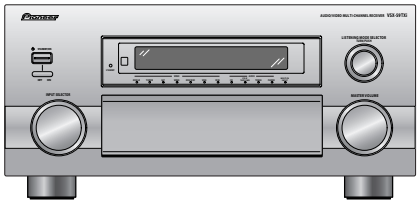
Pioneer *sound.vision.soul*

Service Manual



VSX-59TXi

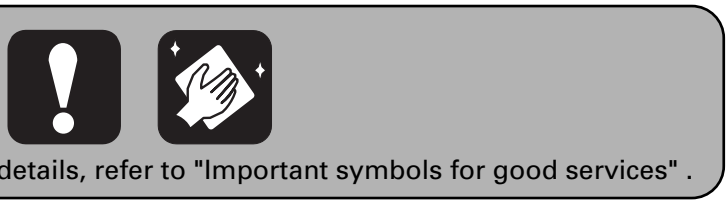
ORDER NO.
RRV2856

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-59TXi

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

Model	Type	Power Requirement	Remarks
VSX-59TXi	KU/CA	AC120V	



PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, 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

T-ZZR DEC. 2003 printed in Japan

SAFETY INFORMATION

This service manual is intended for qualified service technicians ịt 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 mayvoid the warranty. If you are not qualified to perform the repair of this product properly and safely, youshould not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts 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

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

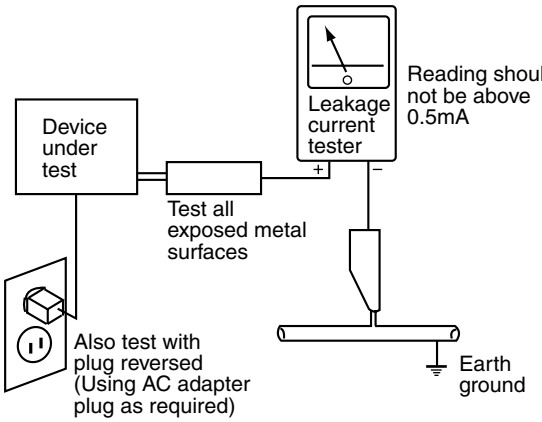
(FOR USA MODEL ONLY)

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 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.



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.

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

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. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

CONTENTS

1. SPECIFICATIONS

Specifications

Amplifier Section

Continuous average power output of 160 watts* per channel, min., at 6 ohms, from 20 Hz to 20,000 Hz with no more than 0.09 % total harmonic distortion (front).**

Continuous Power Output (6 Ω)
- Front ..... 160 W + 160 W (20 Hz-20 kHz, 0.09 %, 6 Ω)
- Center ..... 160 W (20 Hz-20 kHz, 0.09 %, 6 Ω)
- Surround ..... 160 W + 160 W (20 Hz-20 kHz, 0.09 %, 6 Ω)
- Surr. back ..... 160 W + 160 W (20 Hz-20 kHz, 0.09 %, 6 Ω)

Continuous Power Output (8 Ω)
- Front ..... 130 W + 130 W (20 Hz-20 kHz, 0.09 %, 8 Ω)
- Center ..... 130 W (20 Hz-20 kHz, 0.09 %, 8 Ω)
- Surround ..... 130 W + 130 W (20 Hz-20 kHz, 0.09 %, 8 Ω)
- Surr. back ..... 130 W + 130 W (20 Hz-20 kHz, 0.09 %, 8 Ω)

Audio Section

Input (Sensitivity/Impedance)
- PHONO MM ..... 4.7 mV/47 kΩ
- LINE ..... 382 mV/47 kΩ

Phono Overload level (T.H.D.0.1 %, 1kHz)
- PHONO MM ..... 120 mV

Frequency Response
- PHONO MM ..... 20 Hz to 20,000 Hz ± 0.3 dB
- LINE ..... 5 Hz to 100,000 Hz $^{+0}_{-3}$ dB

Output (Level/Impedance)
- LINE ..... 382 mV/2.2 kΩ

Tone Control
- BASS ..... ± 6 dB (100 Hz)
- TREBLE ..... ± 6 dB (10 kHz)
- LOUDNESS ..... +4/+2 dB (100Hz/10 kHz) (at volume position -40dB)

Signal-to-Noise Ratio (IHF, short circuited, A network)
- PHONO MM ..... 86 dB
- LINE ..... 105 dB

Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]
- PHONO MM ..... 83 dB
- LINE ..... 93 dB

* *Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifiers.*

** *Measured by Audio Spectrum Analyzer.*

Maintenance of External Surfaces
- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water, and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzine, insecticide sprays or other chemicals on or near this unit, since these will corrode the surfaces.

Video Section

Input (Sensitivity) ..... 1 Vp-p/75 Ω
Output (Level/Impedance) ..... 1 Vp-p/75 Ω
Signal-to-Noise Ratio ..... 70 dB
Frequency Response ..... 5 Hz to 10 MHz $^{+0}_{-3}$dB

Component Video Section

Input (Sensitivity) ..... 1 Vp-p/75 Ω
Output (Level/Impedance) ..... 1 Vp-p/75 Ω
Signal-to-Noise Ratio ..... 70 dB
Frequency Response ..... 5Hz to 100 MHz $^{+0}_{-3}$dB

FM Tuner Section

Frequency Range ..... 87.5 MHz to 108 MHz
Usable Sensitivity ..... Mono: 13.2 dBf, IHF (1.3 μV/75 Ω)
50 dB Quieting Sensitivity ..... Mono: 20.2 dBf
Stereo: 38.6 dBf
Signal-to-Noise Ratio ..... Mono: 73 dB (at 85 dBf)
Stereo: 70 dB (at 85 dBf)
Distortion ..... Stereo: 0.5 % (1 kHz)
Alternate Channel Selectivity ..... 60 dB (400 kHz)
Stereo Separation ..... 40 dB (1 kHz)
Frequency Response ..... 30 Hz to 15 kHz (± 1) dB
Antenna Input ..... 75 Ω unbalanced

AM Tuner Section

Frequency Range ..... 530 kHz to 1,700 kHz
Sensitivity (IHF, Loop antenna) ..... 350 μV/m
Selectivity ..... 25 dB
Signal-to-Noise Ratio ..... 50 dB
Antenna ..... Loop antenna

Miscellaneous

Power Requirements ..... AC 120 V, 60 Hz
Power Consumption ..... 735 W, 970 VA
Power Consumption in Standby mode ..... 0.65 W
AC Outlet
- SWITCHED ..... 100 W (0.8 A) MAX

Dimensions ..... 440 (W) × 204 (H) × 476 (D) mm (17-$^5/_{16}$ (W) × 8 (H) × 18-$^3/_4$ (D) in.)
Weight (without package) ..... 31.0 kg (68.4lb 6 oz)

Furnished Parts

Microphone 1
Remote control unit 1
Remote control unit recharger 1
AC adapter 1
AM loop antenna 1
FM wire antenna 1
Power cord 1
U-shaped connectors 2
These operating instructions 1
Warranty card 1

Note

Specifications and the design are subject to possible modifications without notice, due to improvements.

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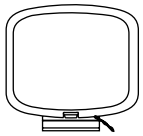
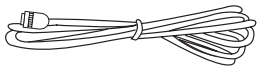
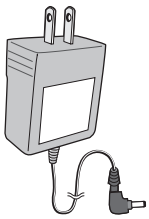
Accessories



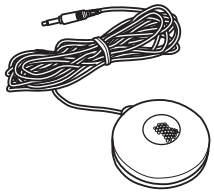
AM loop antenna
(ATB7009)



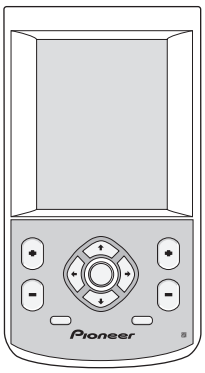
FM wire antenna
(ADH7033)



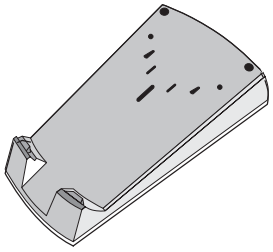
AC Adaptor (AXY7009)
(for Battery Charger)



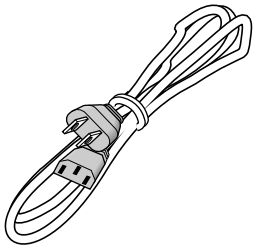
Auto Surround
Setup Microphone
(APM7003)



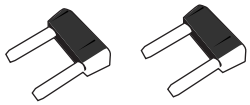
Remote control unit
(AXD7377)



Battery Charger
for Remote Control Unit
(AXY7010)



AC power cord
(ADG7061)

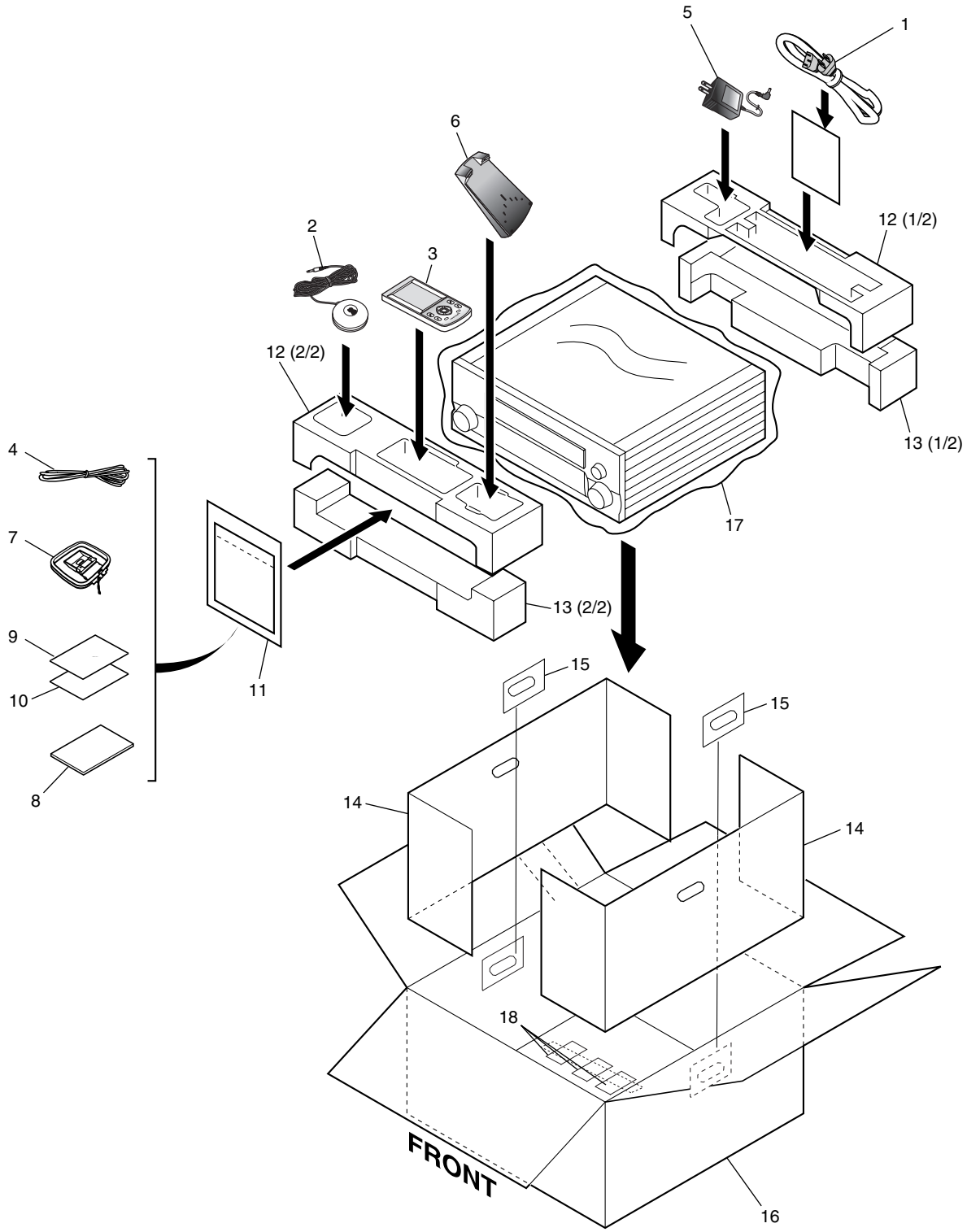


U-shaped connectors x2
(AKM7005)
(attached to back of receiver)

2. EXPLODED VIEWS AND 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.*
- *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.)*

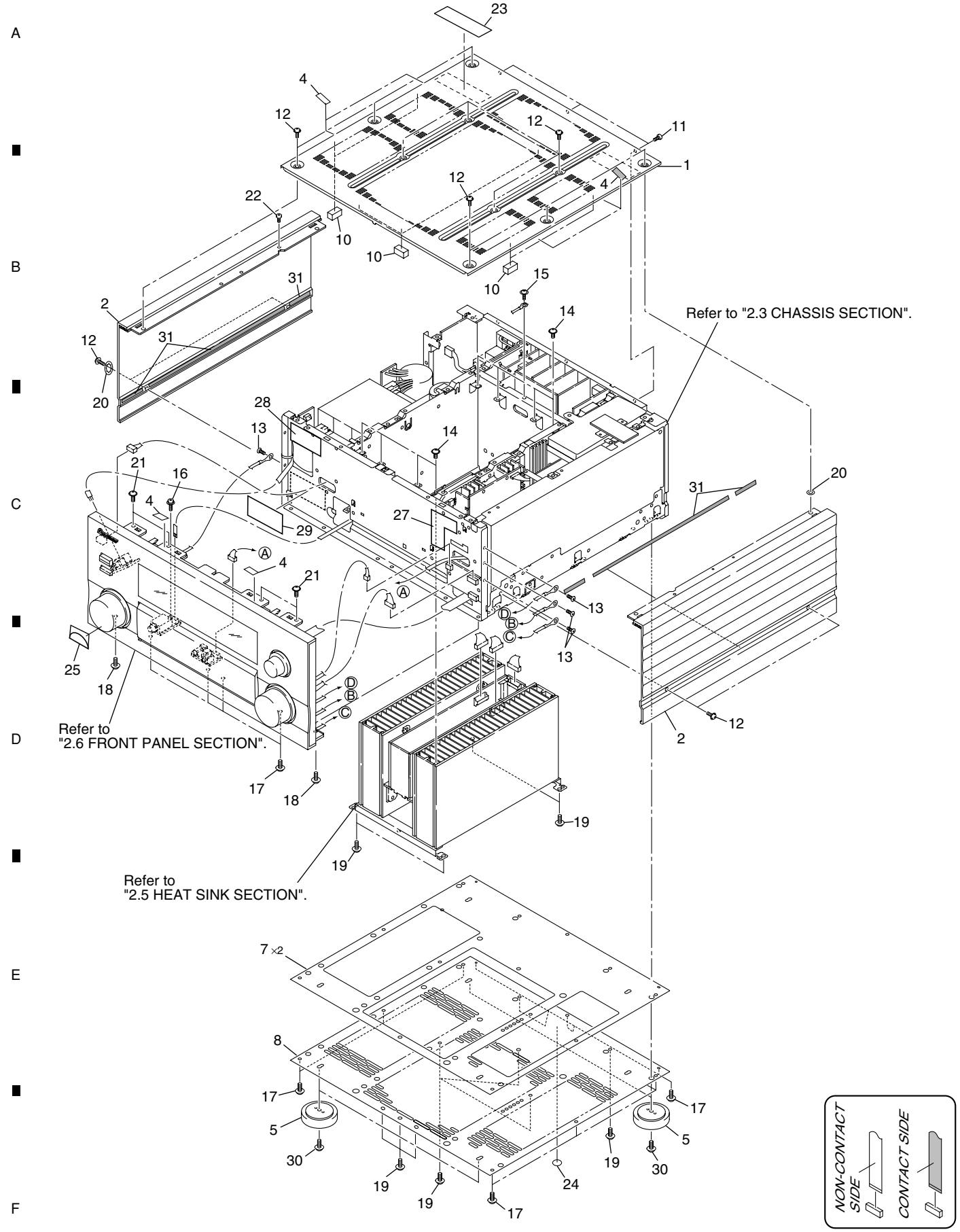
2.1 PACKING



PACKING parts List

Mark	No.	Description	Part No.
⚠	1	Power Cord	ADG7061
	2	Auto Surround (Setup Microphone)	APM7003
	3	Remote Control Unit	AXD7377
	4	FM Wire Antenna	ADH7033
⚠	5	AC Adaptor (for Batter Charger)	AXY7009
	6	Batter Charger for Remote Control Unit	AXY7010
	7	AM Loop Antenna	ATB7009
	8	Operating Instructions (English)	ARB7290
NSP	9	Warranty Card EL	ARY1026
	10	Caution Sheet (SP, E)	ARM7056
NSP	11	Polyethylene Bag (0.03 x 230 x 340)	Z21-038
	12	Top Pad	AHA7426
	13	Bottom Pad	AHA7427
	14	Spacer	AHB7057
	15	Handle Cover	AHX7034
	16	Packing Case 59TXI	AHD8237
	17	Packing Sheet	DHL1022
NSP	18	Silica gel	AEN7001

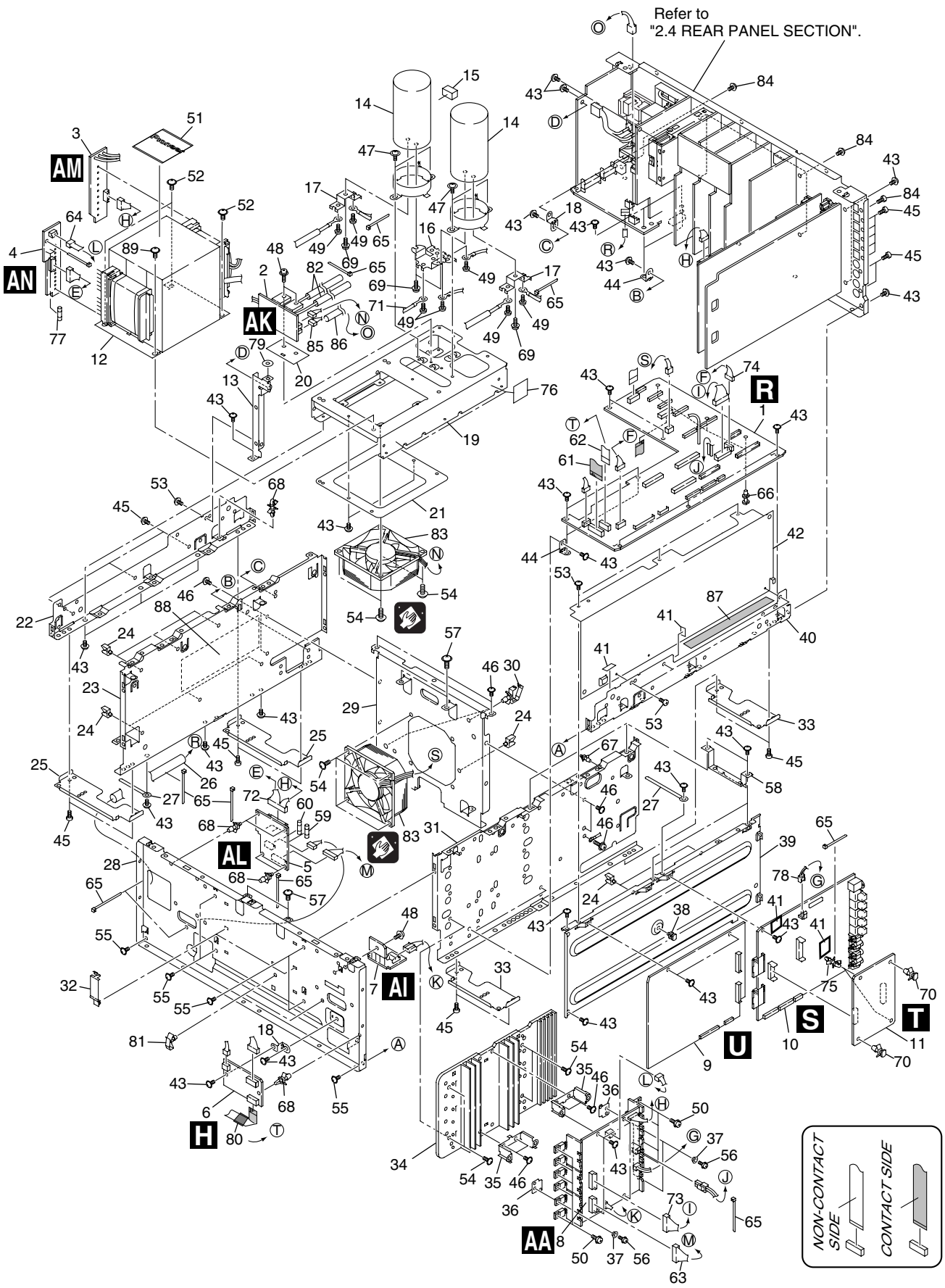
2.2 EXTERIOR SECTION



EXTERIOR SECTION parts List

Mark	No.	Description	Part No.
NSP	1	Top Plate BK	ANE7323
	2	Side Alum BK	AAH7095
	3	• • • •	
NSP	4	Tape	PNM1249
	5	Insulator	ANL7023
	6	• • • •	
NSP	7	Bottom Plate B	ANF7030
NSP	8	Bottom Plate A Cu	ANF7029
	9	Nonskid Heels	AEC7224
	10	FPT Sealer (10 x 20)	AEB7334
	11	Screw	BBT30P060FCC
	12	Screw	FBT40P080FZK
	13	Screw	ABA7079
	14	Screw	ABA7103
	15	Screw	VBA1056
	16	Screw	ABA1011
	17	Screw	ABA7102
	18	Screw	ABA1193
	19	Screw	ABA7101
	20	Washer	AEC7495
	21	Screw	BBT30P100FCC
	22	Screw	ABA7098
	23	License Label	ARW7256
	24	UL Caution Card	AAX-313
NSP	25	Energystar Label	AAX8022
	26	• • • •	
NSP	27	ICP Caution Label	ARW7150
NSP	28	ICP Caution Label	ARW7151
NSP	29	Fuse Caution Label	ARW7175
	30	Screw	BSZ40P200FMC
	31	Tape	ZTA-224-19WH

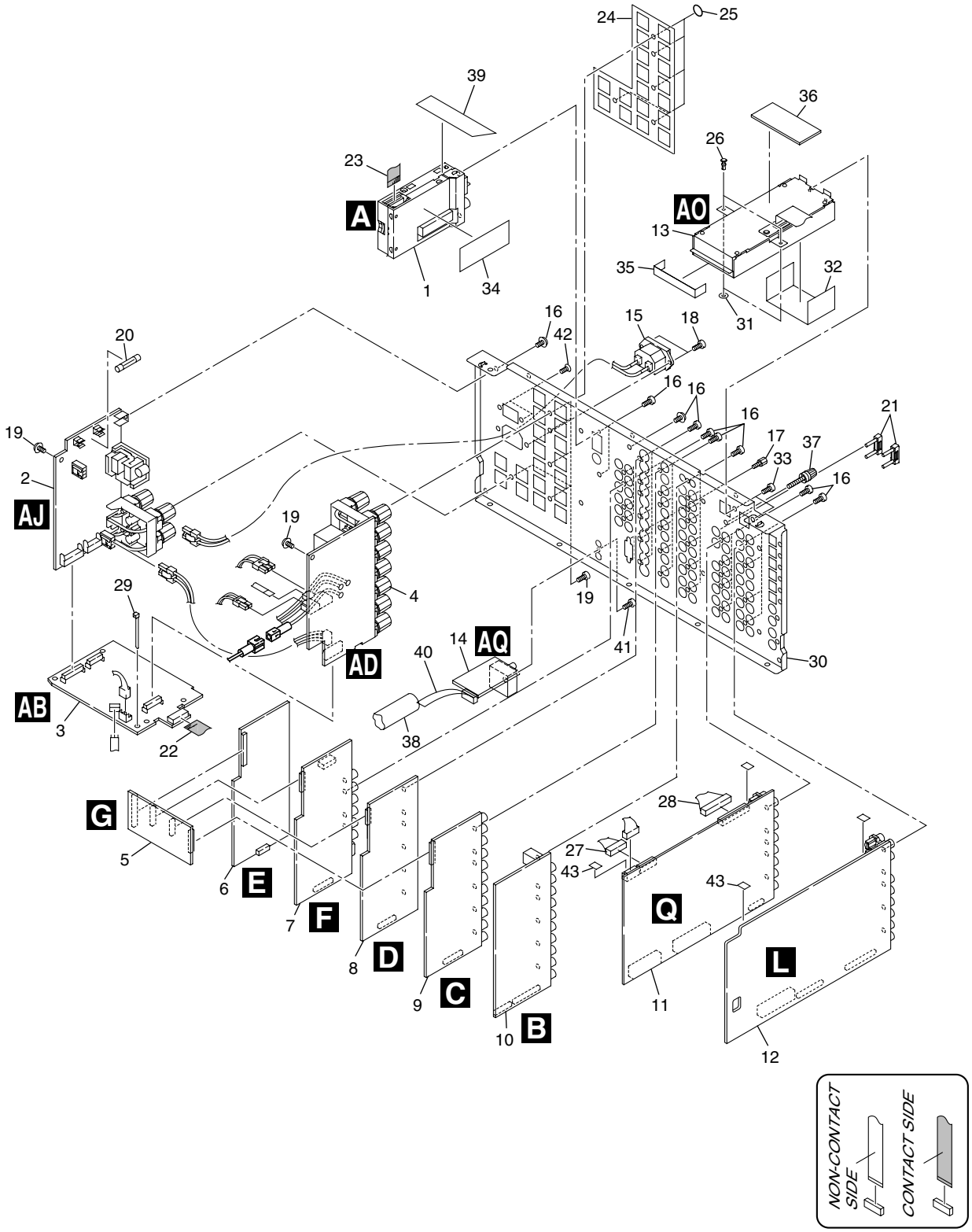
2.3 CHASSIS SECTION



CHASSIS SECTION parts List

Mark	No.	Description	Part No.
	1	MOTHER Assy	AWX8280
	2	DIODE Assy	AWX8412
	3	TRANS (A) Assy	AWX8338
	4	TRANS (B) Assy	AWX8057
	5	FUSE Assy	AWX7843
	6	MIC AMP Assy	AWX8341
	7	DSP DIODE Assy	AWX8339
	8	LOCAL SUPPLY Assy	AWX8278
	9	DAC10 Assy	AWK7773
	10	DSP Assy	AWK7774
	11	DSP3 Assy	AWK7775
⚠	12	Power Transformer (T1)	ATS7320
NSP	13	PCB Holder B	ANG7388
	14	Capacitor (C1, C2)	ACH7201
	15	Rubber Spacer	AEB7324
NSP	16	Earth Plate	ANG7381
NSP	17	Joint Plate	ANG7382
NSP	18	PCB Base	RNE1849
	19	Trans Frame	ANA7162
	20	Radiation Sheet	AEE7043
NSP	21	Trans Stabilizer	ANG7378
NSP	22	Side Frame L	AWA7133
NSP	23	Side Wall L	AND7041
NSP	24	Wire Clip (A)	VEC1355
NSP	25	Insulator Frame B	ANG7487
	26	Glass Tube	ADN7006
	27	Cord Holder	RNH1005
	28	Panel Stay	AND7045
	29	Fan Holder A Cu	ANG7371
NSP	30	Wire Saddle	DEC1450
NSP	31	Side Wall R Cu	AND7043
NSP	32	Flat Cable Clamp	AEC7376
NSP	33	Insulator Frame A	ANG7486
	34	Sub Heat Sink	ANH7154
NSP	35	PCB Holder D	ANG7392
	36	Mica Sheet S	AEE7042
	37	Bushing 26	AEC7128
NSP	38	PCB Spacer	AEC7156
NSP	39	Shield Case A	ANK7093
NSP	40	Side Frame R	ANA7135
NSP	41	Tape	PNM1249
NSP	42	Shield Case B Cu	ANK7107
	43	Screw	ABA1011
NSP	44	PCB Holder C	ANG7389
	45	Screw (3x8)	ABA7098
	46	Screw (3x9)	ABA7101
	47	Screw (4x8:CT)	VBA1056
	48	Screw (S 3x10)	ABA1054
	49	Screw (3x8 : B)	ABA7017
	50	Screw	ABA7076
	51	Trans Label	AAX7897
	52	Screw	ABA1014
	53	Screw	BBT30P060FCC
	54	Screw (3x10)	ABA7102
	55	Screw (3x6)	ABA1192
	56	Screw (2.6x13)	ABA7084
	57	Screw (4x8 BT)	ABA7103
NSP	58	PCB Frame B	ANG7386
⚠	59	Fuse (FU4, 5A)	VEK1024
⚠	60	Fuse (FU5-FU8, 2A)	VEK1019
	61	J29 FFC (17P) (Mother CN5807-DISPLAY CN3001)	ADD7329
	62	J30 FFC (11P) (Mother CN5806-MIC AMP CN3207)	ADD7330
	63	J16 8P Connector Assy (Local Supply CN4001-FUSE CN1802)	ADX7379
	64	J17 3P Connector Assy (Local Supply CN4002-TRANS(B) CN1701)	ADX7380
NSP	65	Binder	ZCA-BK1
NSP	66	Card Spacer	REC1156
NSP	67	PCB Holder	PNW2100
	68	Locking Card Spacer	VEC2234
	69	Screw	PMH40P080FMC
	70	PC Support	DEC1772
	71	Terminal wire (J7)	ADX7366
	72	J1601 5P,7P Parallel wire	ADX7385
	73	J5805 9P Connector Assy (Local Supply CN4004-Mother CN5805)	ADX7378
	74	5802 Crimp Connector Assy (Mother CN5827-Mother CN5828)	PF06PP-R27
	75	PCB Spacer	VEC1508
NSP	76	Trans Frame Spacer	AEC7400
⚠	77	Fuse (FU9-FU10, 1A)	VEK1014
	78	J4001 2P Connector Assy (Local supply CN4005-DSP CN704)	ADX7407
	79	Washer	ABE-053
	80	Acetate tape	AEH7017
NSP	81	Clamp	DEC1759
	82	Glass Tube(6x95)	ADN7010
	83	Fan Motor	AXM7028
	84	Screw	ABA7011
	85	3P Connector Assy (J1102)	ADX7388
	86	Glass Tube (14 x 110)	ADN7005
	87	Tape (15 x 150)	AEH7024
	88	Tape (9 x 210)	AEH7025
	89	Screw	ABA7115

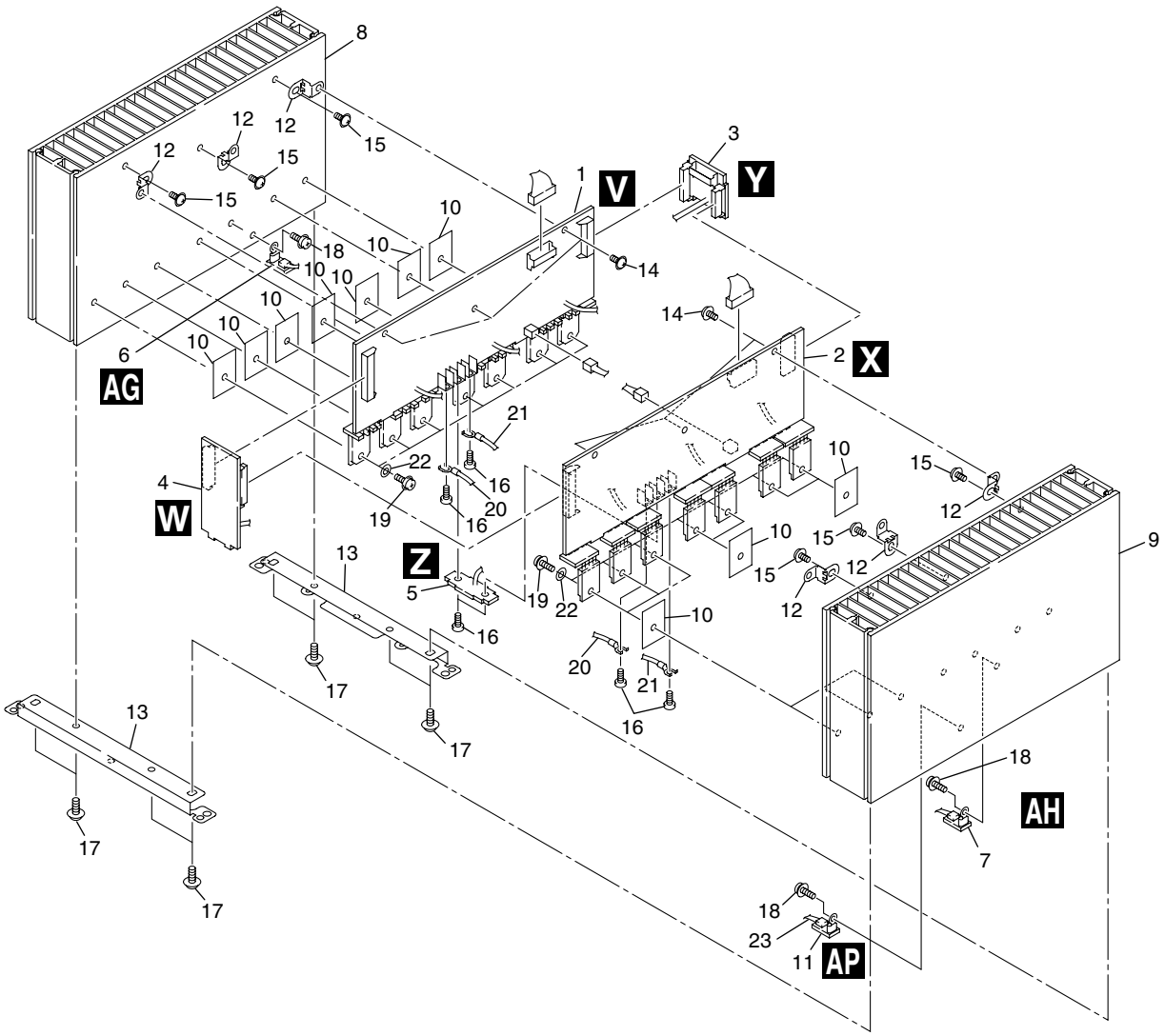
2.4 REAR PANEL SECTION



REAR PANEL SECTION parts List

Mark	No.	Description	Part No.
	1	FM/AM Tuner Module	AXQ7237
	2	SP (B) Assy	AWX8332
	3	AC PRIMARY Assy	AWX8261
	4	SP (A) Assy	AWX8330
	5	VIDEO CONNECT Assy	AWX7876
	6	V-CONVERT Assy	AWX8160
	7	COMPONENT Assy	AWX7953
	8	S-VIDEO Assy	AWX8159
	9	COMPOSITE Assy	AWX7942
	10	A/V I/O Assy	AWX8271
	11	VR & PRE OUT Assy	AWX8271
	12	ANALOG IN & A/D Assy	AWX8273
	13	1394 Module	AXQ7251
	14	12V TRIGGER Assy	AWX8321
	15	AC Inlet Assy	ADX7395
	16	Screw (3x8)	ABA7098
	17	Hexagonal Screw (2.85x7)	ABA7078
	18	Screw (3x10 : T)	ABA1193
	19	Screw (Washer : BT)	ABA1011
⚠	20	Fuse (FU1, 12A/125V)	AEK-306
	21	Short Pin Plug	AKM7005
	22	J23 FFC (14P) (SP(A) CN1104-Mother CN5801)	ADD7334
	23	J22 FFC (13P) (Yuner CN2705-Mother CN5802)	ADD7333
	24	Speaker Sheet 49	AAK7959
	25	Cushion Circle	AED7052
	26	Nyron Rivet	AEC-525
	27	J5001 8P Connector Assy (VR OUT CN5005 - Power AMP(BR) CN4811)	ADX7382
	28	J5002 14P Connector Assy (VR OUT CN5006 - Power AMP(L) CN4801 and Power AMP(R) CN4802)	ADX7381
	29	Binder	ZCA-BK1
	30	Rear Panel	ANC8205
	31	Fiber washer	RBF1045
	32	Acetate Tape	AEH7015
	33	Screw	BCZ30P060FCC
	34	Shield plate	AMR7445
	35	Acetate tape (10x100)	AEH7018
	36	Shield Cushion	AEB7274
	37	Earth Terminal	AKE-031
	38	Tube (8 x 60)	ADN7015
	39	Acetate Tape	ZTA-156A-19
	40	Flexible Cable 4P (J42)	ADD7442
	41	Screw	ABA7098
	42	Screw (HLS_ZK)	ABA7079
NSP	43	Tape	PNM1249

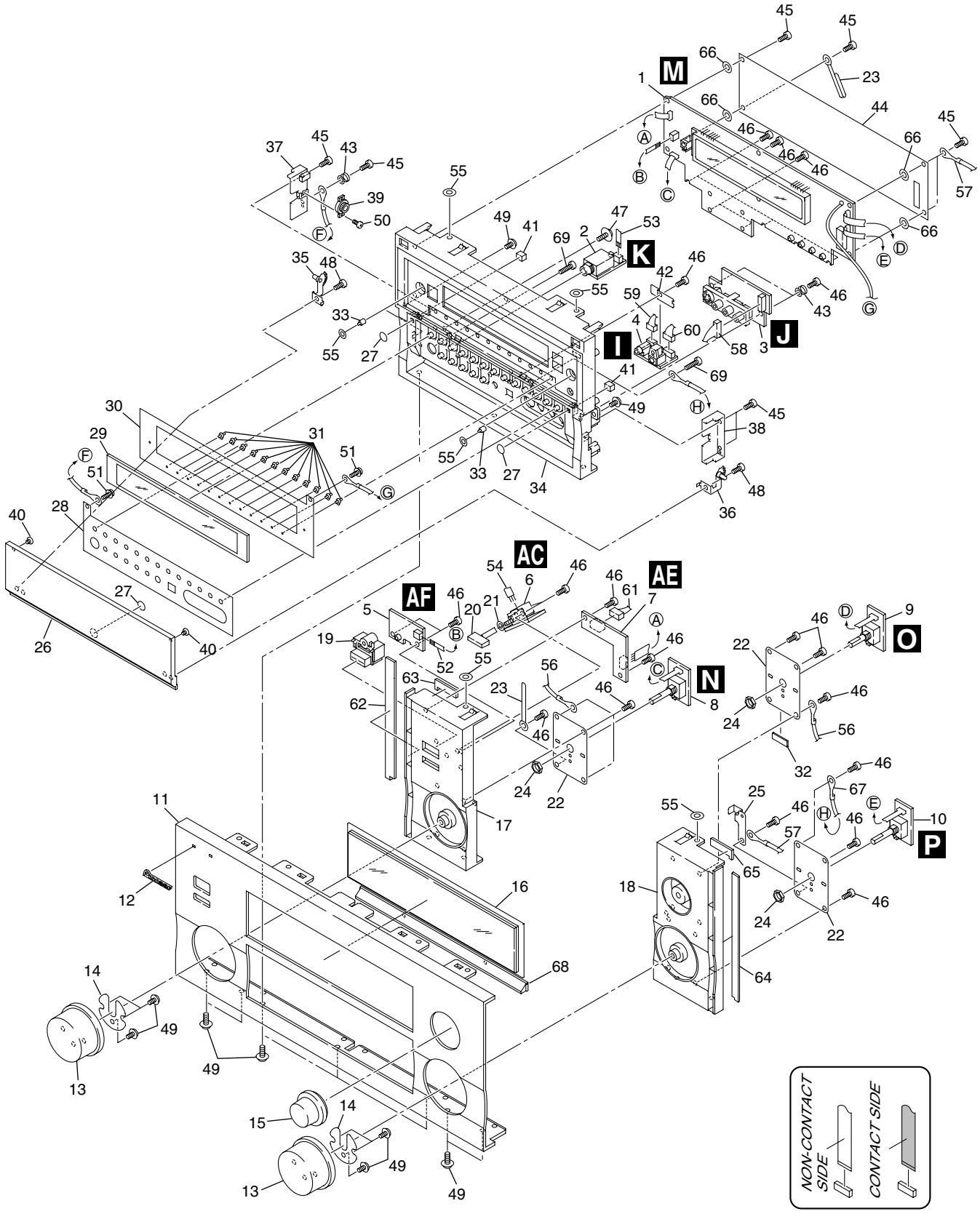
2.5 HEAT SINK SECTION



HEAT SINK SECTION parts List

Mark	No.	Description	Part No.
	1	POWER AMP (L) Assy	AWX8276
	2	POWER AMP (R) Assy	AWX8277
	3	POWER AMP (BR) Assy	AWX8320
	4	POWER AMP (C) Assy	AWX8319
	5	POWER AMP (G) Assy	AWX7886
	6	POSISTER (L) Assy	AWX7844
	7	POSISTER (R) Assy	AWX7846
	8	Heat Sink L	ANH7170
	9	Heat Sink R	ANH7171
	10	Ceramic Plate	AEE7054
	11	POSISTER (MT) Assy	AWX8270
NSP	12	PCB Holder A	ANG7387
NSP	13	Heat Sink Holder	ANG7490
	14	Screw	ABA1011
	15	Screw (3x9)	ABA1193
	16	Screw	BBZ30P060FCU
	17	Screw (4x8)	ABA7103
	18	Screw (3x8)	ABA7076
	19	Screw (S 3x16)	ABA7083
	20	Over head Terminal wire(RED)	ADX7383
	21	Over head Terminal wire(BLUE)	ADX7384
	22	Washer	WA32F100M050
	23	2P Connector Assy (J41)	ADX7394

2.6 FRONT PANEL SECTION



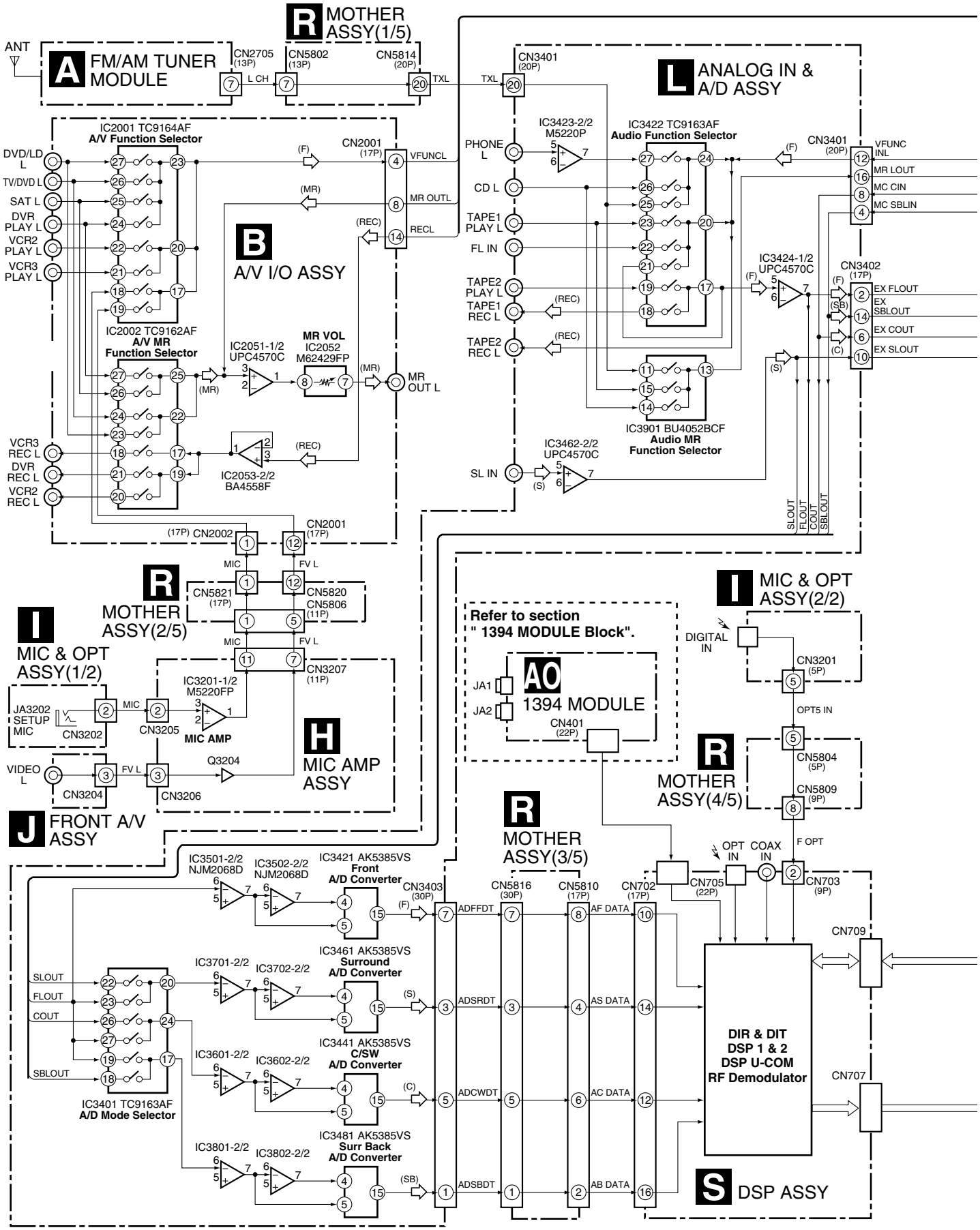
FRONT PANEL SECTION parts List

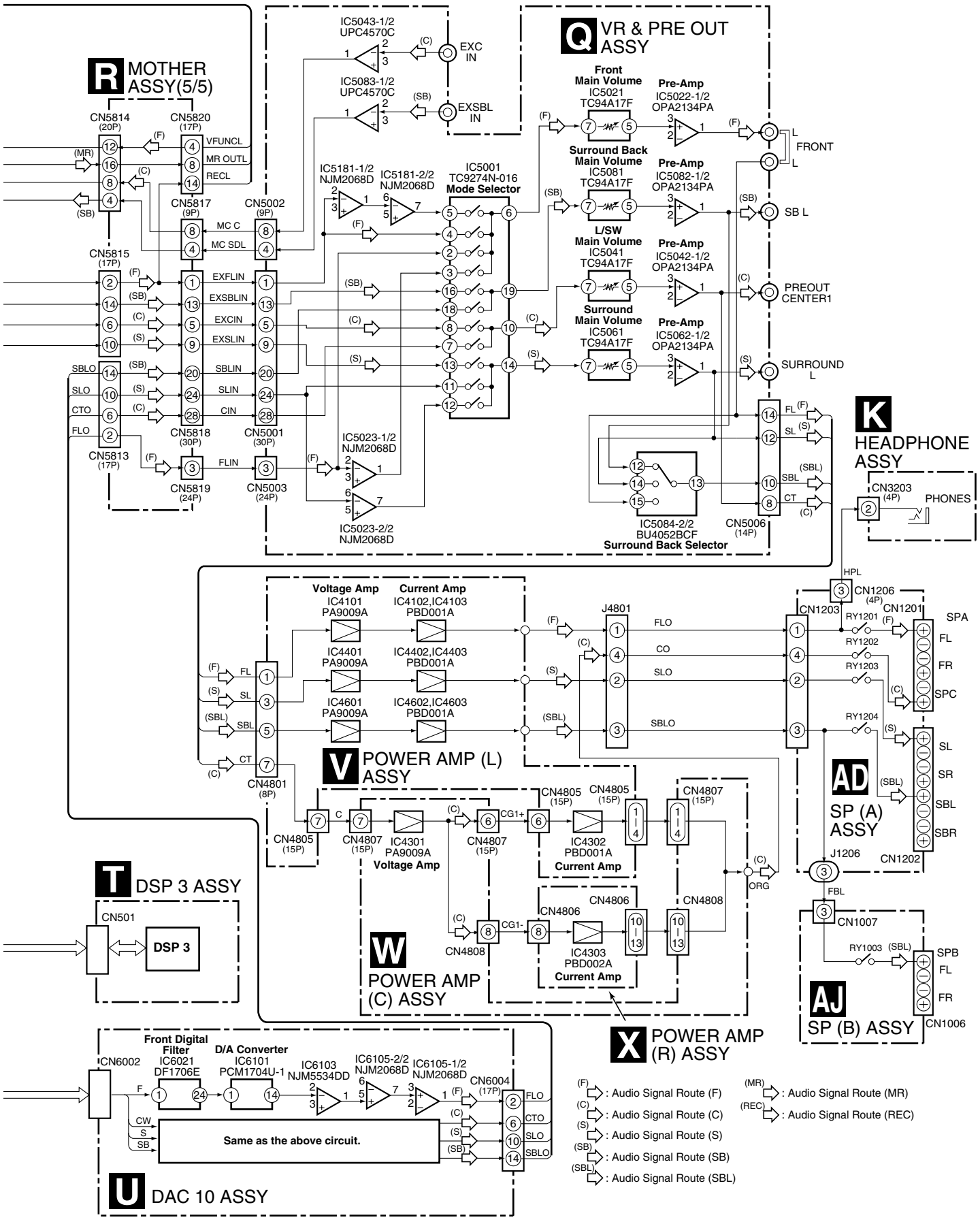
Mark	No.	Description	Part No.
	1	DISPLAY Assy	AWX8317
	2	HEADPHONE Assy	AWX8336
	3	FRONT A/V Assy	AWX8337
	4	MIC & OPT Assy	AWX7875
	5	STANDBY Assy	AWX7901
	6	POWER SW Assy	AWX7840
	7	FL SUPPLY Assy	AWX8269
	8	INPUT SEL Assy	AWX7868
	9	MULTI JOG Assy	AWX7869
	10	VOL Assy	AWX8340
	11	Front Panel 59TXi/ku	ANB7322
	12	Pioneer Badge B	PAN1376
	13	Rotary Knob L BK	AAA7018
	14	Plate	ANG7198
	15	Rotary Knob S BK	AAA7015
	16	Display Panel GTi	AAK8163
	17	Panel Base L BK	AMB7788
	18	Panel Base R BK	AMB7791
	19	Power Button	AAD7440
	20	Power Button M	AAD7442
	21	Washer	ABF7008
NSP	22	VR Stabilizer	ANG7383
	23	Cord Holder	RNH-184
	24	Nut	NK90FCU
NSP	25	Earth Spring	ABK7031
	26	Door Panel 59TXi_BK	ANB7326
NSP	27	Door Cushion	AED7051
	28	Door Plate 59TXi	AAH7105
	29	FL Lens I OR	AAK8169
	30	Inner Panel 59TXi	AAH7109
	31	LED Lens	AAK7931
	32	Tape	ZTA-156A-19
	33	LED Lens	PNW2019
	34	Panel Base C BK	AMB7868
NSP	35	Door Hinge L	ANG7488
NSP	36	Door Hinge R	ANG7489
	37	Door Holder L	AMR7373
	38	Door Holder R	AMR7374
	39	Damper Assy	AXA7108
	40	Screw	ABA7074
	41	Magnet	AMF7004
NSP	42	Input Holder	ANG7384
NSP	43	Earth Spring	ABH7208
	44	Shield plate D	AMR7390
	45	Screw	BBZ30P100FZK
	46	Screw (3x8)	ABA7098
	47	Screw (3x10)	ABA7053
	48	Screw	BBT30P060FCC
	49	Screw	ABA7102

Mark	No.	Description	Part No.
	50	Screw	BBZ20P060FMC
	51	Screw	ABA7076
	52	J33 FFC (3P) (DISPLAY CN3002-STANDBY CN1903)	ADD7331
	53	J35 FFC (4P) (SP(A) CN1206-HEADPHONE CN3203)	ADD7332
	54	J1101 Parallel Wire 3P (POWER SW CN1301-AC PRIMARY CN1105)	D20PYY0365E
	55	Fiber Washer	RBF1045
NSP	56	Earth Metal Fitting	DE007VC0
NSP	57	Earth Metal Fitting	DE012VF0
	58	J32 8P Connector Assy (Front A/V CN3204-MIC AMP CN3206)	ADX7390
	59	J99 4P Connector Assy (MIC & OPT CN3202-MIC AMP CN3205)	ADX7421
	60	J31 5P Connector Assy (MIC & OPT CN3201-Mother CN5804)	ADX7386
	61	J1801 4P Connector Assy (FL Supply CN1901-FUSE CN1803)	ADX7377
NSP	62	Panel spacer left L	AMR7411
NSP	63	Panel spacer left S	AMR7408
NSP	64	Panel spacer right L	AMR7412
NSP	65	Panel spacer right S	AMR7409
	66	Fiber washer T2	AEC7403
NSP	67	Earth Lead (J6009)	DE10VF0
	68	Sash	AAH7103
	69	Screw	BCZ30P140FMC

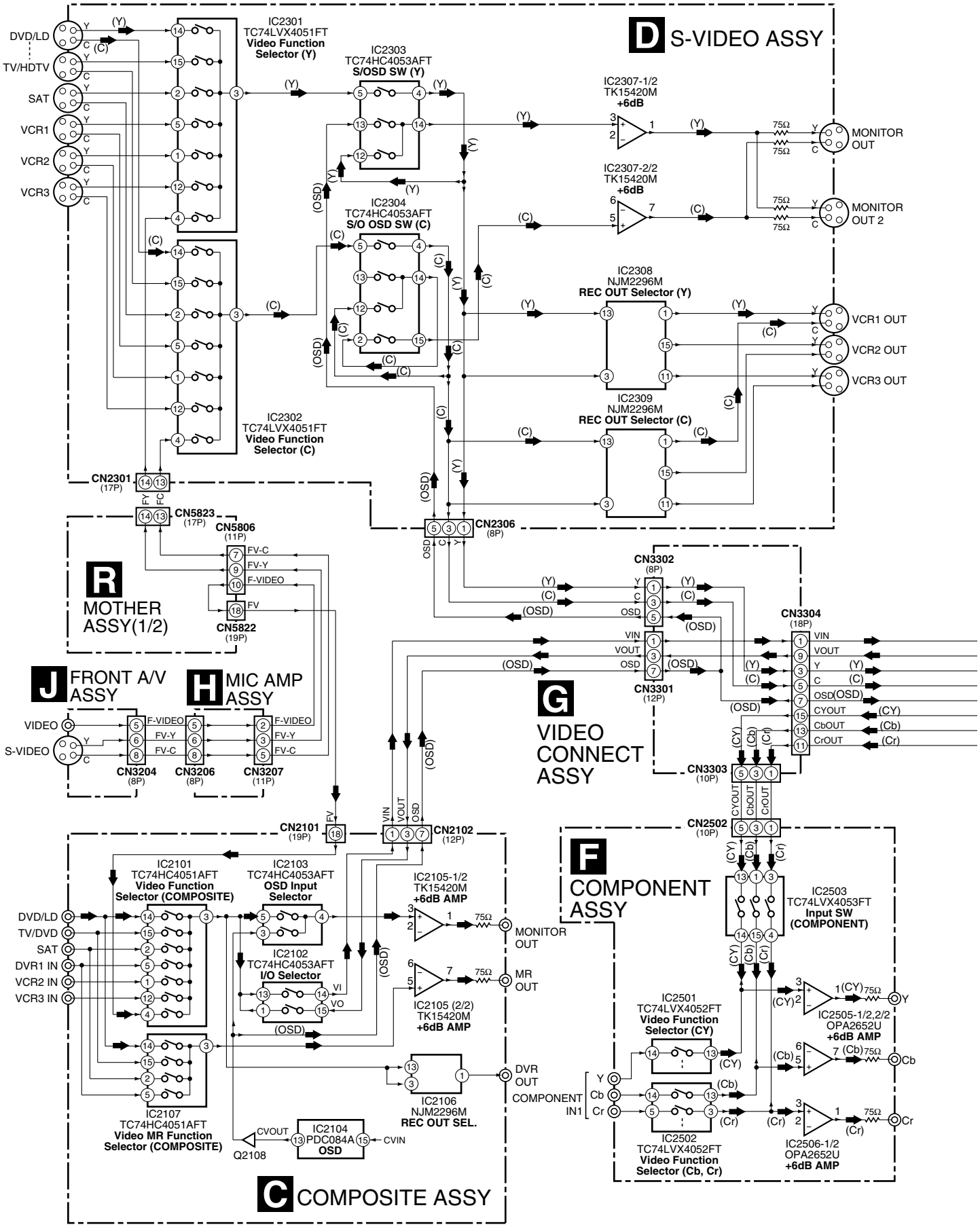
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

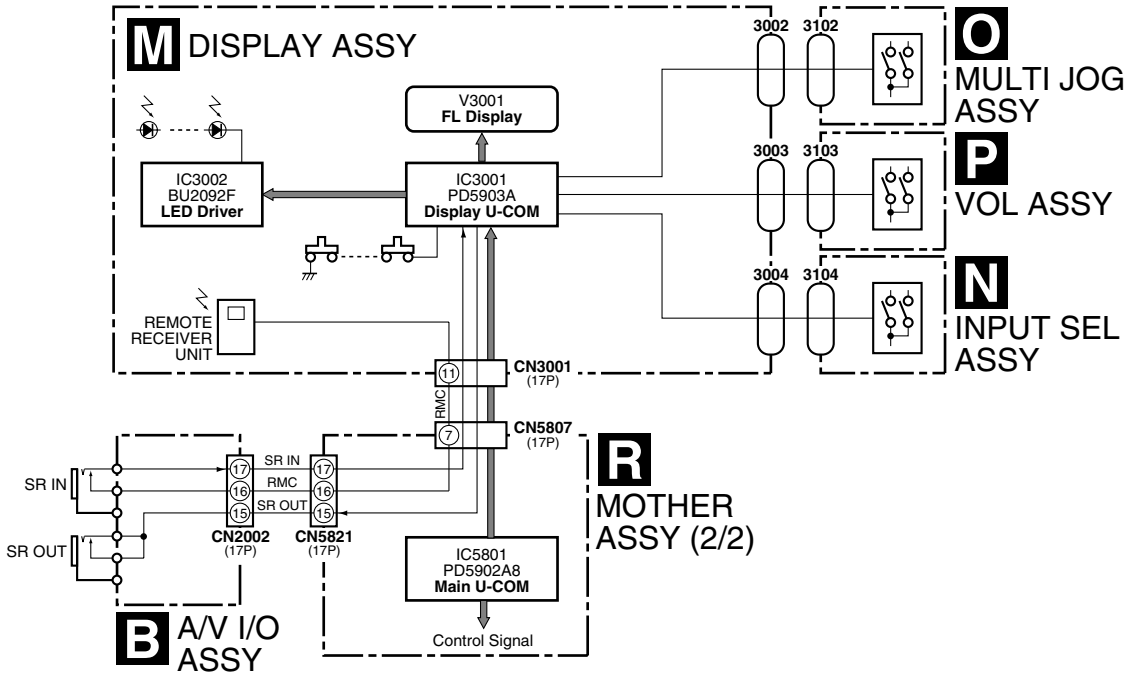



R MOTHER ASSY(5/5)
Q VR & PRE OUT ASSY
K HEADPHONE ASSY
V POWER AMP (L) ASSY
W POWER AMP (C) ASSY
X POWER AMP (R) ASSY
T DSP 3 ASSY
U DAC 10 ASSY
AD SP (A) ASSY
AJ SP (B) ASSY
CN5814 (20P)
CN5820 (17P)
CN5817 (9P)
CN5002 (9P)
CN5815 (17P)
CN5818 (30P)
CN5001 (30P)
CN5813 (17P)
CN5819 (24P)
CN5003 (24P)
IC5043-1/2 UPC4570C
IC5083-1/2 UPC4570C
EXC IN
EXSBL IN
IC5181-1/2 NJM2068D
IC5181-2/2 NJM2068D
IC5001 TC9274N-016 Mode Selector
IC5023-1/2 NJM2068D
IC5023-2/2 NJM2068D
Front Main Volume IC5021 TC94A17F
Surround Back Main Volume IC5081 TC94A17F
L/SW Main Volume IC5041 TC94A17F
Surround Main Volume IC5061 TC94A17F
Pre-Amp IC5022-1/2 OPA2134PA
Pre-Amp IC5082-1/2 OPA2134PA
Pre-Amp IC5042-1/2 OPA2134PA
Pre-Amp IC5062-1/2 OPA2134PA
IC5084-2/2 BU4052BCF Surround Back Selector
CN5006 (14P)
L FRONT L
SB L
PREOUT CENTER1
SURROUND L
CN3203 (4P)
PHONES
Voltage Amp IC4101 PA9009A
Current Amp IC4102,IC4103 PBD001A
IC4401 PA9009A
IC4402,IC4403 PBD001A
IC4601 PA9009A
IC4602,IC4603 PBD001A
CN4801 (8P)
J4801
CN1203
CN1206 (4P)
CN1201
RY1201
RY1202
RY1203
RY1204
SPA
FL
FR
SPC
SL
SR
SBL
SBR
J1206
CN1202
CN4805 (15P)
CN4807 (15P)
IC4301 PA9009A Voltage Amp
IC4302 PBD001A Current Amp
CN4806
CN4808
IC4303 PBD002A Current Amp
ORG
FBL
CN1007
RY1003
SPB
CN1006
CN501
DSP 3
CN6002
Front Digital Filter IC6021 DF1706E
D/A Converter IC6101 PCM1704U-1
IC6103 NJM5534DD
IC6105-2/2 NJM2068D
IC6105-1/2 NJM2068D
CN6004 (17P)
Same as the above circuit.
(F) : Audio Signal Route (F)
(C) : Audio Signal Route (C)
(S) : Audio Signal Route (S)
(SB) : Audio Signal Route (SB)
(SBL) : Audio Signal Route (SBL)
(MR) : Audio Signal Route (MR)
(REC) : Audio Signal Route (REC)

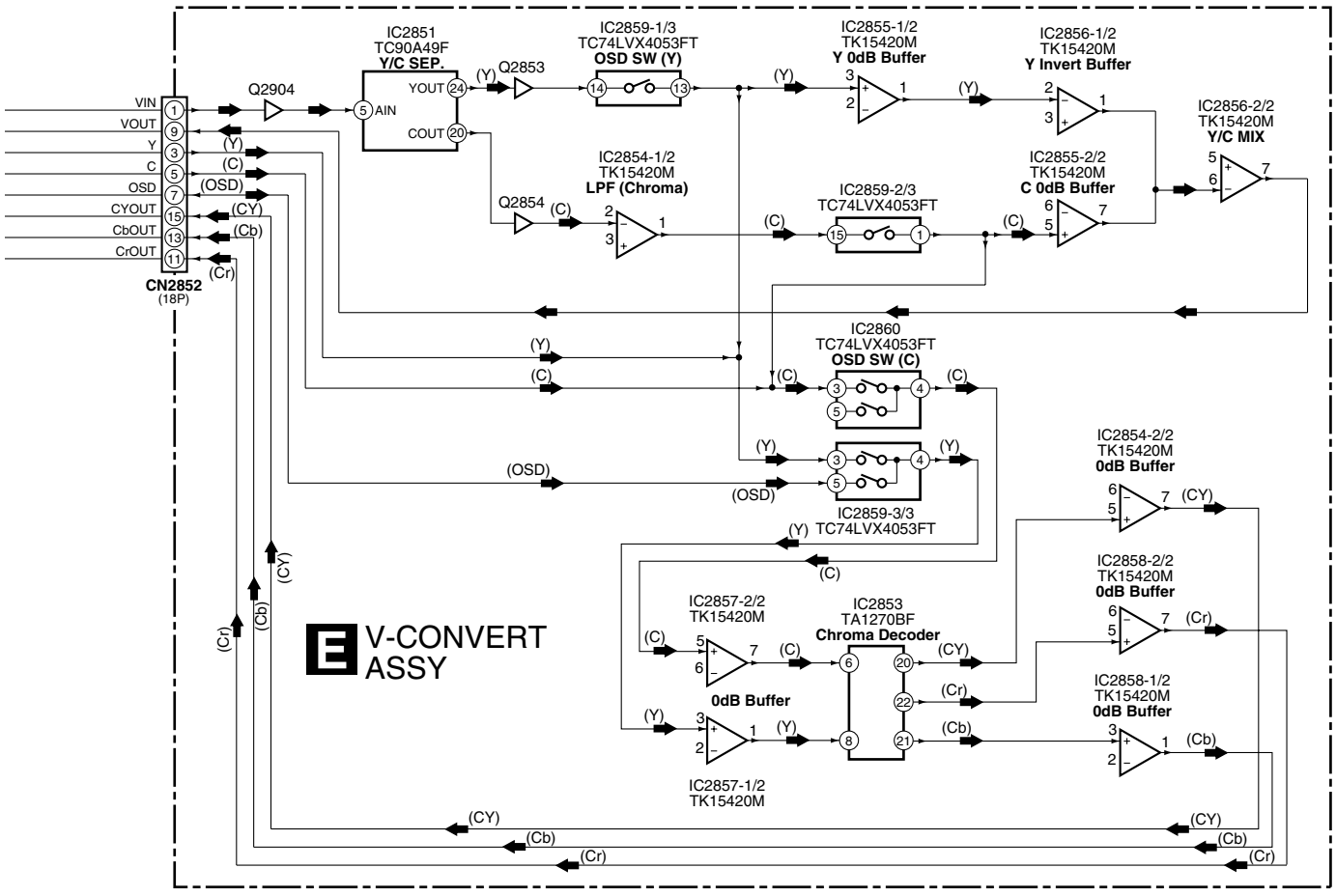
• Video Block


D S-VIDEO ASSY
DVD/LD
TV/HDTV
SAT
VCR1
VCR2
VCR3
IC2301
TC74LVX4051FT
Video Function Selector (Y)
IC2303
TC74HC4053AFT
S/OSD SW (Y)
IC2307-1/2
TK15420M
+6dB
MONITOR OUT
IC2307-2/2
TK15420M
+6dB
MONITOR OUT 2
IC2304
TC74HC4053AFT
S/O OSD SW (C)
IC2308
NJM2296M
REC OUT Selector (Y)
VCR1 OUT
VCR2 OUT
VCR3 OUT
IC2309
NJM2296M
REC OUT Selector (C)
IC2302
TC74LVX4051FT
Video Function Selector (C)
CN2301
(17P)
CN5823
(17P)
CN5806
(11P)
CN5822
(19P)
CN2306
(8P)
R MOTHER ASSY(1/2)
CN3302
(8P)
CN3301
(12P)
CN3304
(18P)
J FRONT A/V ASSY
H MIC AMP ASSY
VIDEO
S-VIDEO
CN3204
(8P)
CN3206
(8P)
CN3207
(11P)
G VIDEO CONNECT ASSY
CN3303
(10P)
CN2101
(19P)
CN2102
(12P)
CN2502
(10P)
IC2101
TC74HC4051AFT
Video Function Selector (COMPOSITE)
IC2103
TC74HC4053AFT
OSD Input Selector
IC2105-1/2
TK15420M
+6dB AMP
DVD/LD
TV/DVD
SAT
DVR1 IN
VCR2 IN
VCR3 IN
MONITOR OUT
IC2102
TC74HC4053AFT
I/O Selector
MR OUT
IC2105 (2/2)
TK15420M
+6dB AMP
DVR OUT
IC2106
NJM2296M
REC OUT SEL.
IC2107
TC74HC4051AFT
Video MR Function Selector (COMPOSITE)
IC2104
PDC084A
OSD
Q2108
C COMPOSITE ASSY
F COMPONENT ASSY
IC2503
TC74LVX4053FT
Input SW (COMPONENT)
IC2501
TC74LVX4052FT
Video Function Selector (CY)
IC2505-1/2,2/2
OPA2652U
+6dB AMP
IC2502
TC74LVX4052FT
Video Function Selector (Cb, Cr)
IC2506-1/2
OPA2652U
+6dB AMP
COMPONENT IN1
Y
Cb
Cr

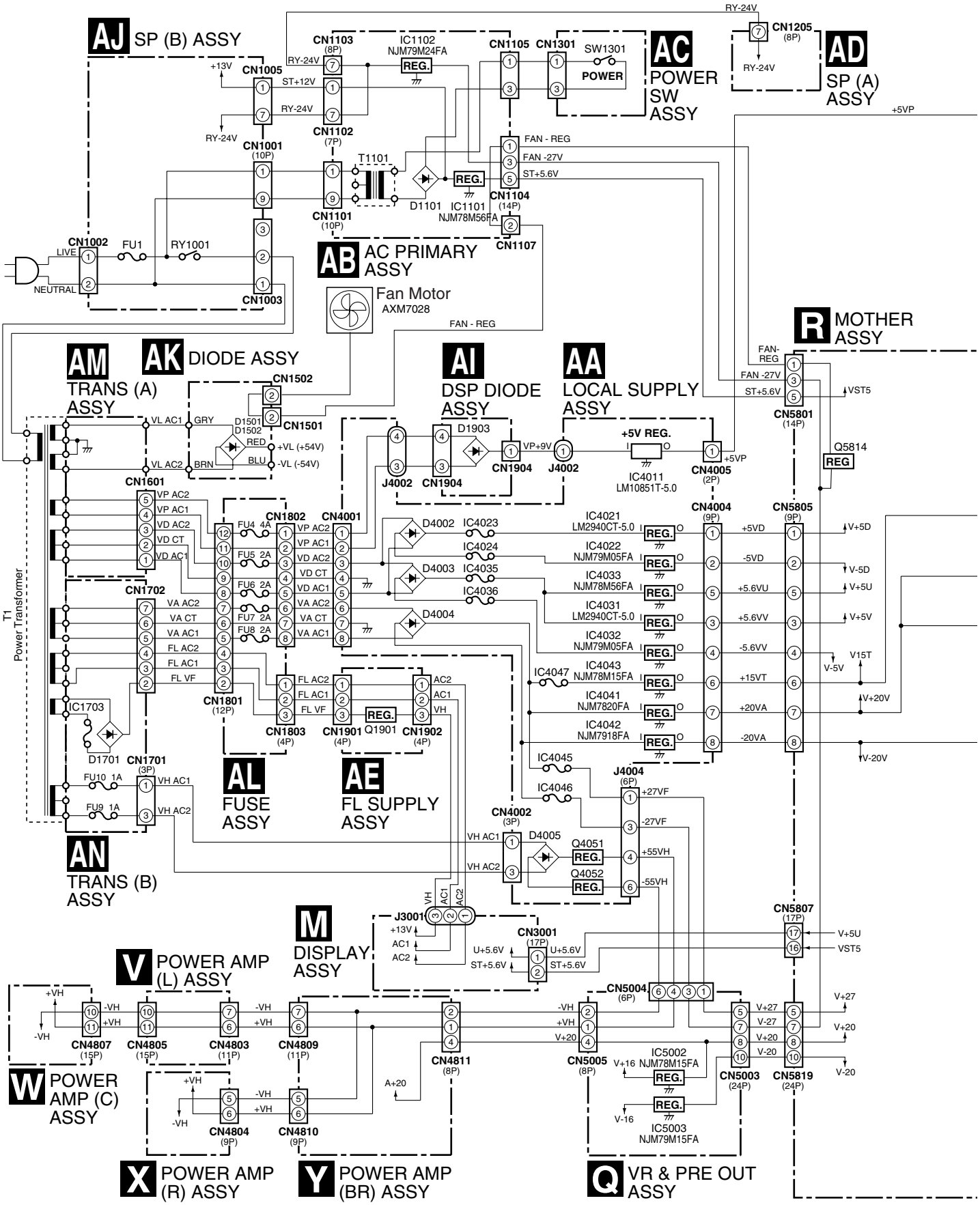
• Display Block

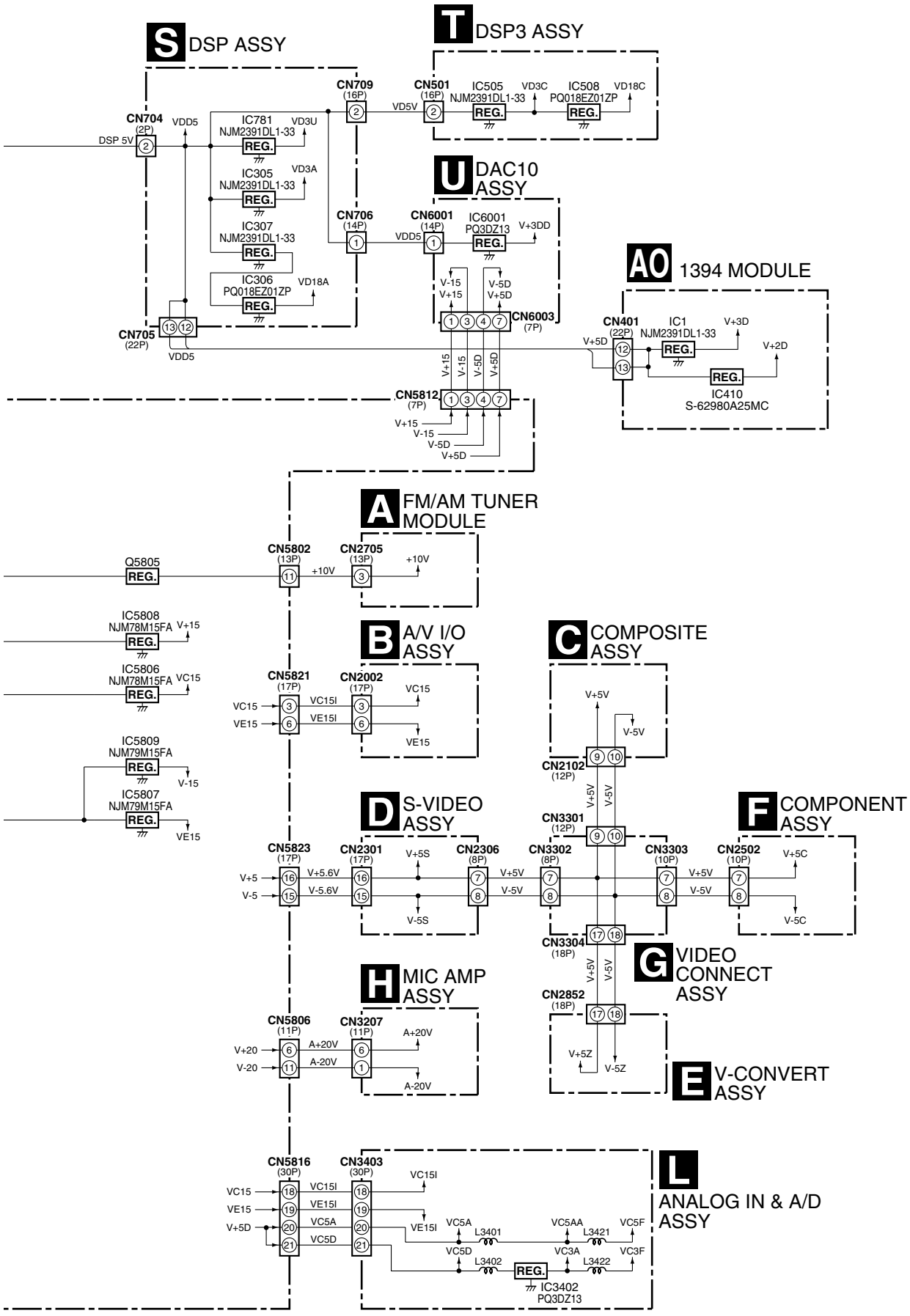


: VIDEO SIGNAL ROUTE
(Y) : VIDEO SIGNAL ROUTE (Y)
(C) : VIDEO SIGNAL ROUTE (C)
(CY) : Y SIGNAL ROUTE (COMPONENT)
(Cb) : Cb SIGNAL ROUTE (COMPONENT)
(Cr) : Cr SIGNAL ROUTE (COMPONENT)
(OSD) : VIDEO SIGNAL ROUTE (OSD)

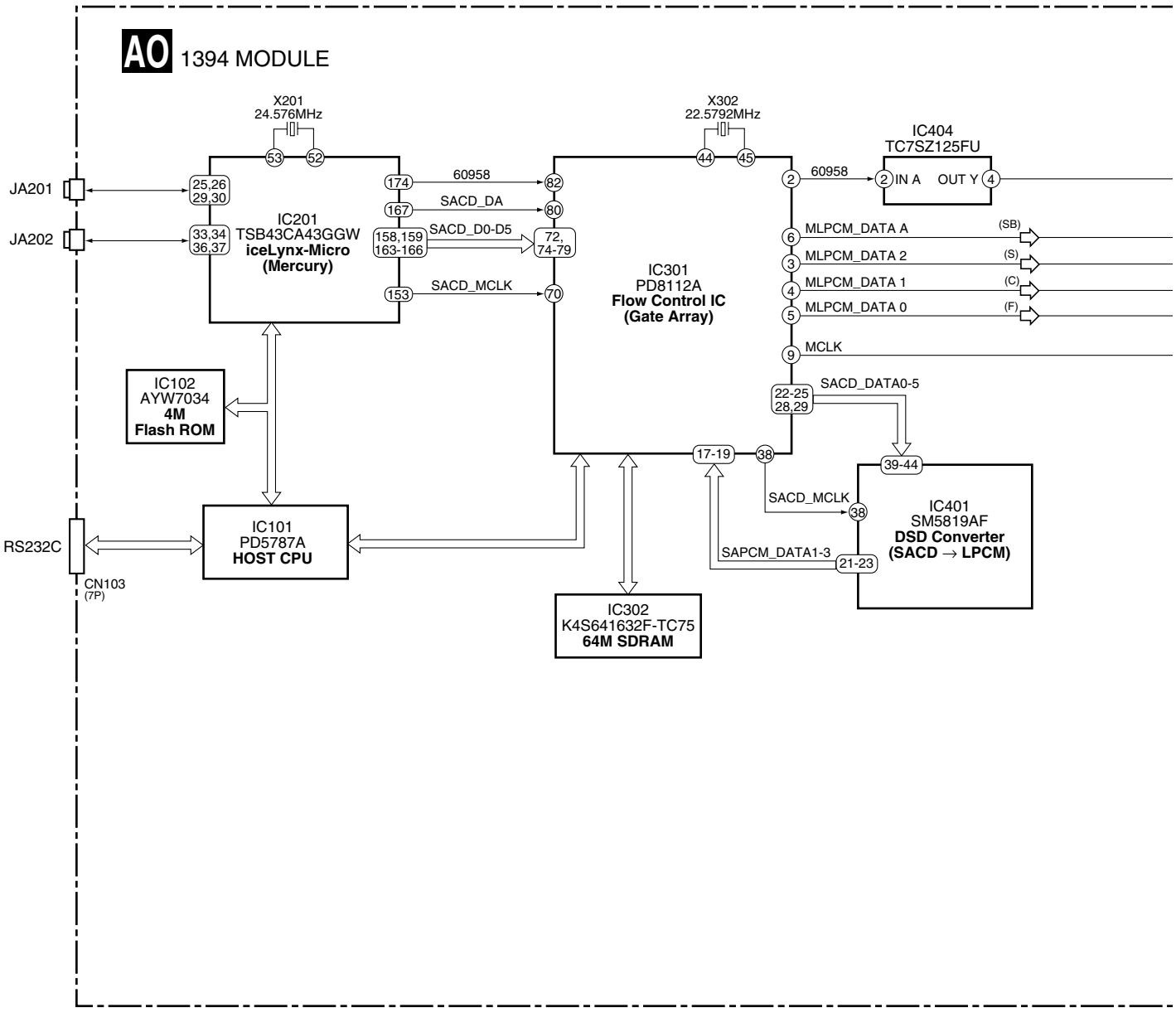


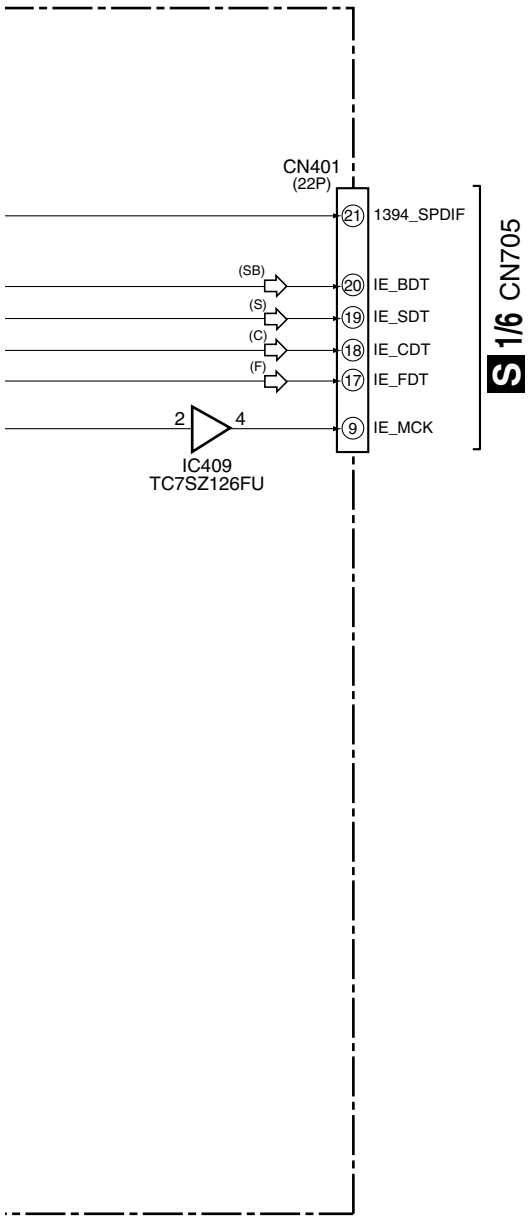
● Power Supply Block




S DSP ASSY
T DSP3 ASSY
U DAC10 ASSY
AO 1394 MODULE
A FM/AM TUNER MODULE
B A/V I/O ASSY
C COMPOSITE ASSY
D S-VIDEO ASSY
F COMPONENT ASSY
G VIDEO CONNECT ASSY
H MIC AMP ASSY
E V-CONVERT ASSY
L ANALOG IN & A/D ASSY
CN709 (16P)
CN501 (16P)
IC505 NJM2391DL1-33
IC508 PQ018EZ01ZP
CN704 (2P)
DSP 5V
VDD5
IC781 NJM2391DL1-33
VD3U
IC305 NJM2391DL1-33
VD3A
IC307 NJM2391DL1-33
IC306 PQ018EZ01ZP
VD18A
CN706 (14P)
CN6001 (14P)
IC6001 PQ3DZ13
V+3DD
CN6003 (7P)
CN705 (22P)
CN401 (22P)
IC1 NJM2391DL1-33
V+3D
V+2D
IC410 S-62980A25MC
CN5812 (7P)
REG.
Q5805
CN5802 (13P)
CN2705 (13P)
+10V
IC5808 NJM78M15FA
IC5806 NJM78M15FA
IC5809 NJM79M15FA
IC5807 NJM79M15FA
CN5821 (17P)
CN2002 (17P)
VC15
VE15
VC15I
VE15I
CN2102 (12P)
CN3301 (12P)
CN3302 (8P)
CN3303 (10P)
CN2502 (10P)
CN5823 (17P)
CN2301 (17P)
CN2306 (8P)
V+5
V-5
V+5.6V
V-5.6V
V+5S
V-5S
V+5V
V-5V
V+5C
V-5C
CN3304 (18P)
CN2852 (18P)
V+5Z
V-5Z
CN5806 (11P)
CN3207 (11P)
V+20
V-20
A+20V
A-20V
CN5816 (30P)
CN3403 (30P)
VC5A
VC5D
VC5AA
VC3A
VC5F
VC3F
L3401
L3402
L3421
L3422
IC3402 PQ3DZ13

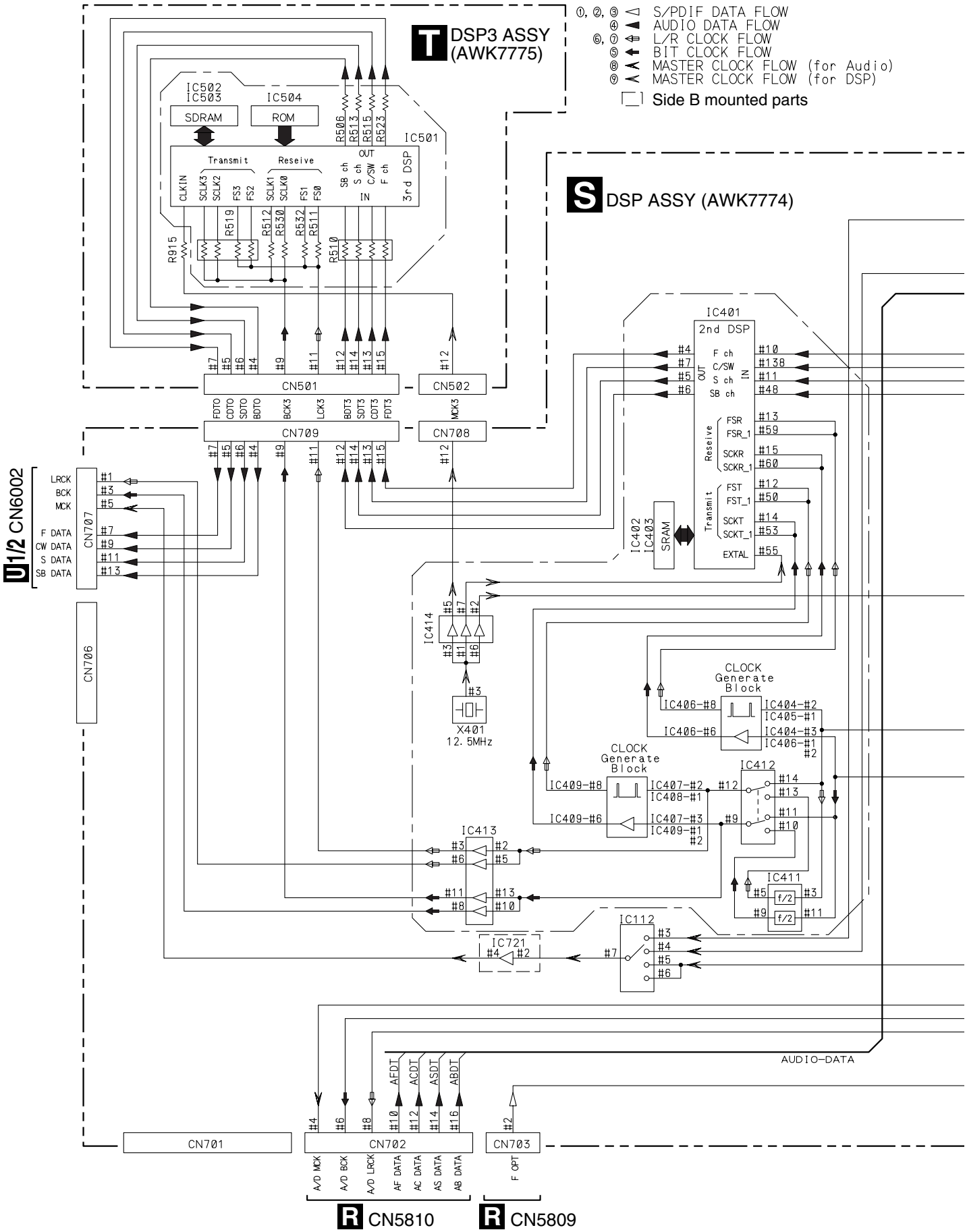
● 1394 MODULE Block

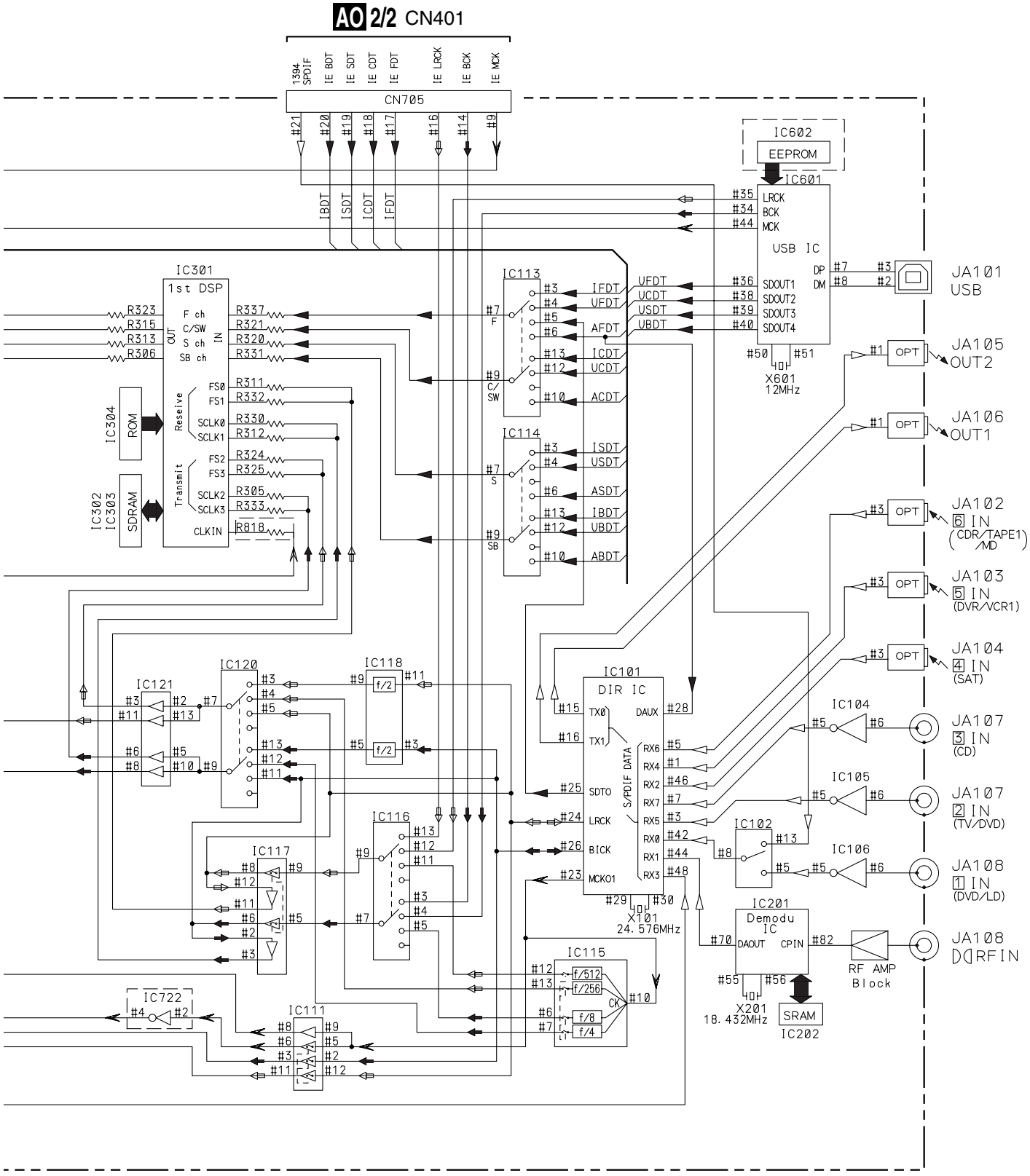




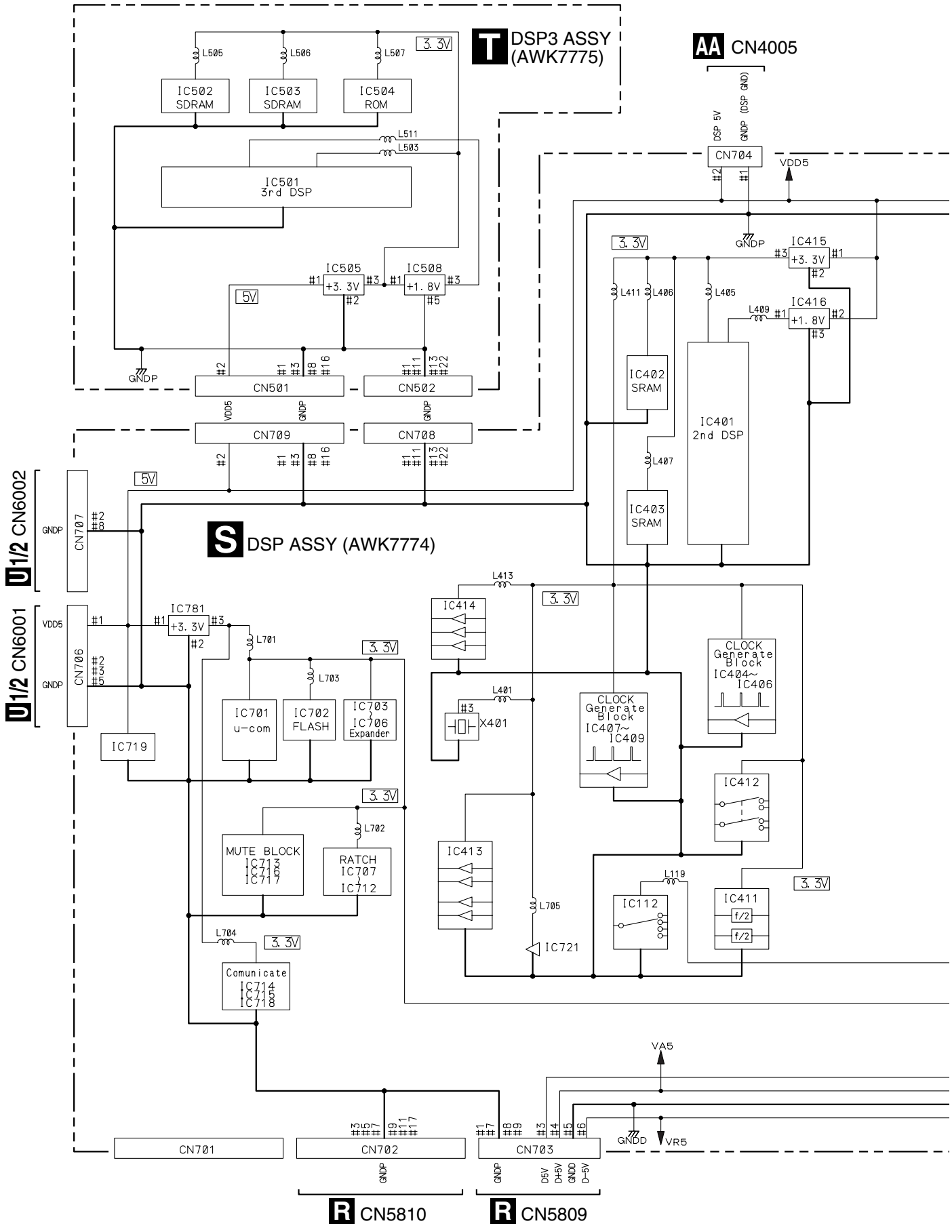
(F) : Audio Signal Route (F)
(C) : Audio Signal Route (C)
(S) : Audio Signal Route (S)
(SB) : Audio Signal Route (SB)

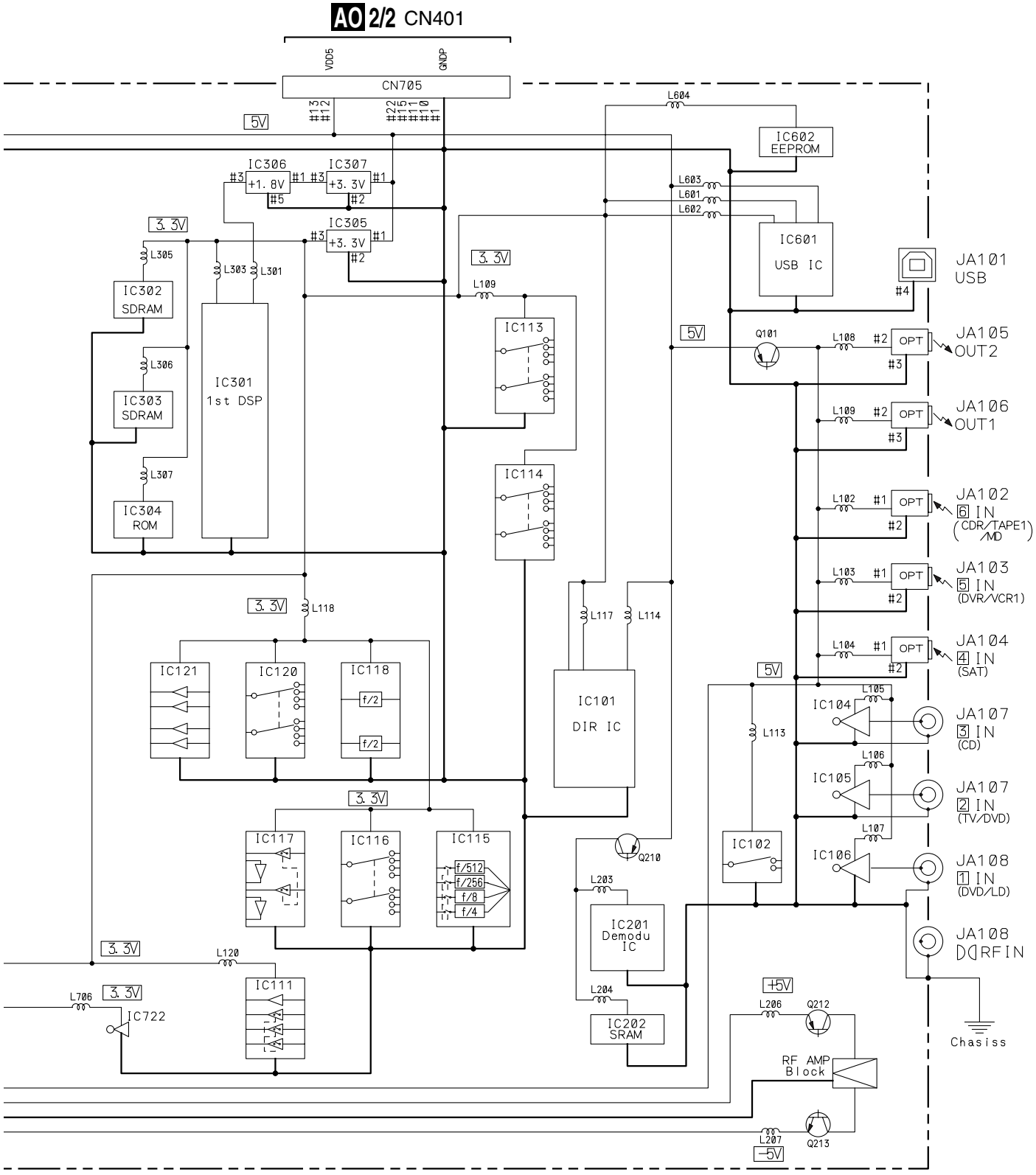
● DSP Clock Flow Diagram



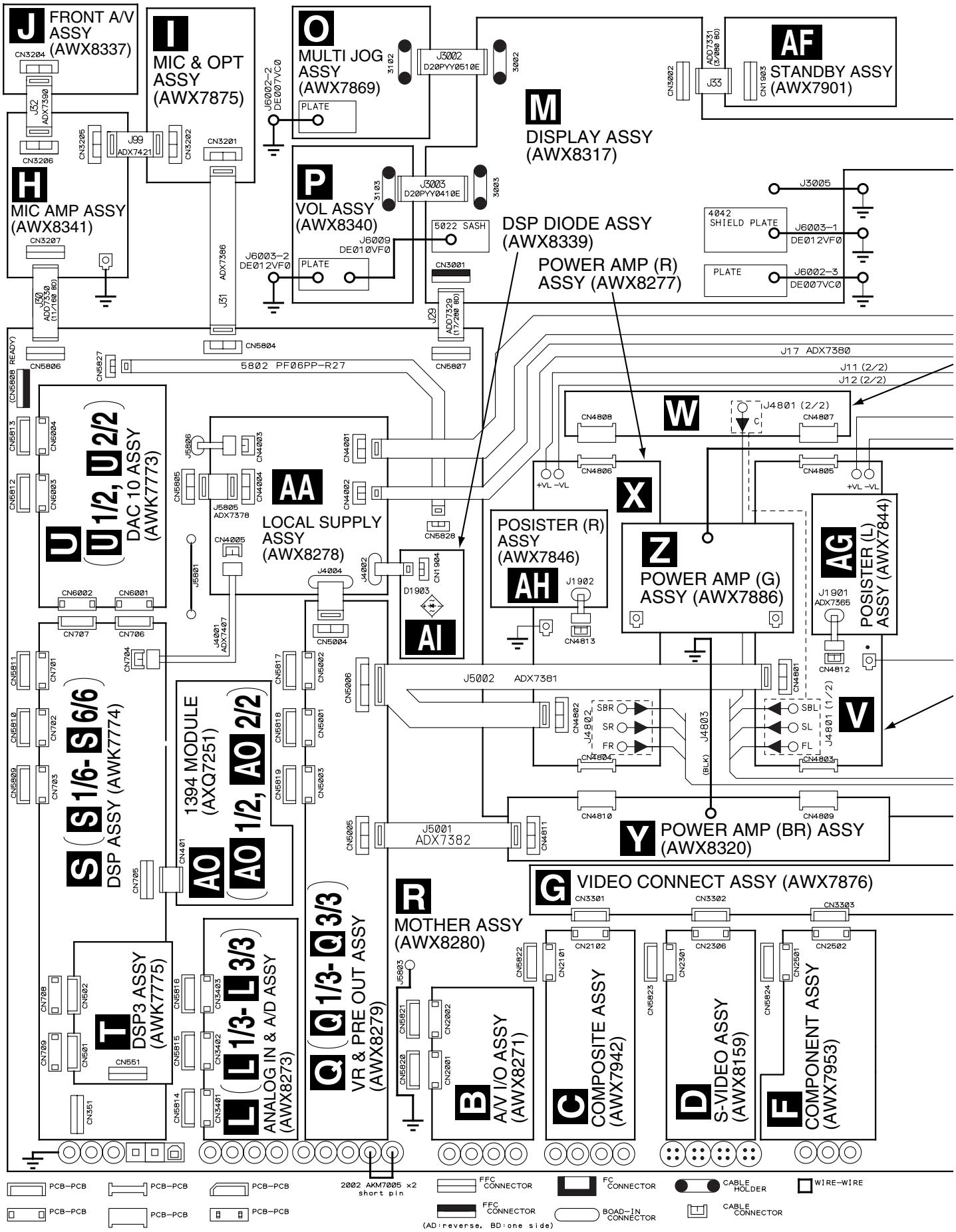

AO 2/2 CN401
1394 SPDIF
IE BDT
IE SDT
IE CDT
IE FDT
IE LRCK
IE BCK
IE MCK
CN705
IC602
EEPROM
IC601
USB IC
LRCK
BCK
MCK
SDOUT1
SDOUT2
SDOUT3
SDOUT4
DP
DM
JA101 USB
X601 12MHz
IC301
1st DSP
F ch
C/SW
S ch
SB ch
IC304 ROM
IC302 IC303 SDRAM
Reseive
Transmit
CLKIN
IC113
IC114
IFDT
UFDT
AFDT
ICDT
UCDT
ACDT
ISDT
USDT
ASDT
IBDT
UBDT
ABDT
JA105 OUT2
JA106 OUT1
JA102 6 IN (CDR/TAPE1/MD)
JA103 5 IN (DVR/VCR1)
JA104 4 IN (SAT)
JA107 3 IN (CD)
JA107 2 IN (TV/DVD)
JA108 1 IN (DVD/LD)
JA108 DIGITAL RF IN
IC101
DIR IC
TX0
TX1
SDTO
LRCK
BICK
MCKO1
DAUX
S/PDIF DATA
X101 24.576MHz
IC104
IC105
IC102
IC106
IC201
Demodu IC
DAOUT
CPIN
RF AMP Block
X201 18.432MHz
SRAM
IC202
IC120
IC121
IC118
IC116
IC117
IC115
IC111
IC722
f/2
f/512
f/256
f/8
f/4
CK

● POWER/GND MAP(DSP3, DSP)

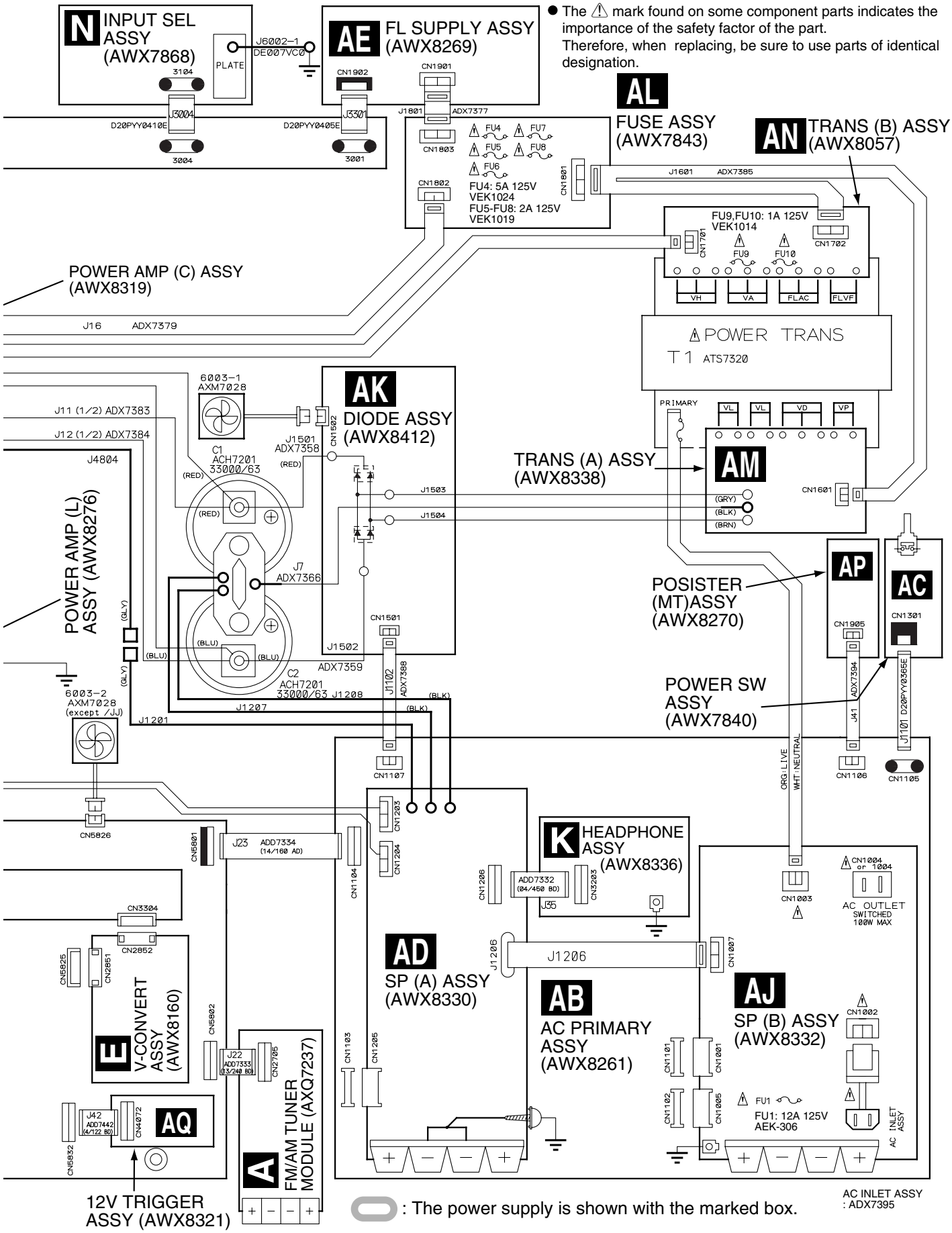



AO 2/2 CN401
VDD5
GNDP
CN705
#13 #12 #22 #15 #11 #10 #1
5V
IC306
+1. 8V
IC307
+3. 3V
IC305
+3. 3V
3. 3V
L305
L303
L301
IC302
SDRAM
L306
IC303
SDRAM
L307
IC304
ROM
IC301
1st DSP
L109
IC113
IC114
L604
IC602
EEPROM
L603
L601
L602
IC601
USB IC
JA101
USB
Q101
L108
OPT
JA105
OUT2
JA106
OUT1
JA102
6 IN
(CDR/TAPE1
/MD)
JA103
5 IN
(DVR/VCR1)
JA104
4 IN
(SAT)
L118
L117
L114
IC121
IC120
IC118
f/2
IC101
DIR IC
L105
IC104
JA107
3 IN
(CD)
L113
L106
IC105
JA107
2 IN
(TV/DVD)
L107
IC106
JA108
1 IN
(DVD/LD)
IC102
Q210
IC117
IC116
IC115
f/512
f/256
f/8
f/4
L203
IC201
Demodu
IC
JA108
DIGITAL RF IN
L120
IC111
L706
IC722
L204
IC202
SRAM
+5V
L206
Q212
RF AMP
Block
L207
Q213
-5V
Chasiss

3.2 OVERALL WIRING DIAGRAM



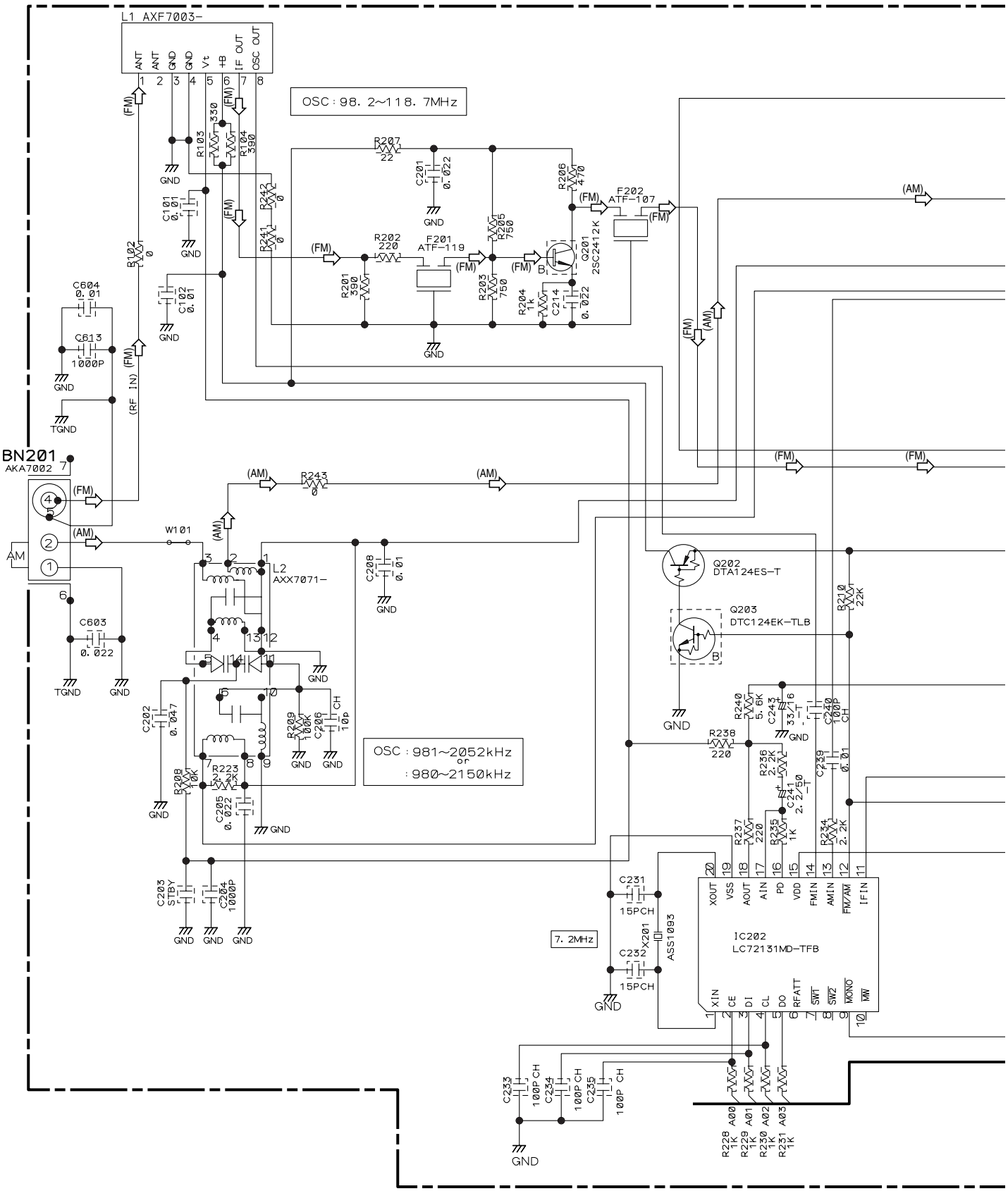
Note: When ordering service parts, be sure to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".



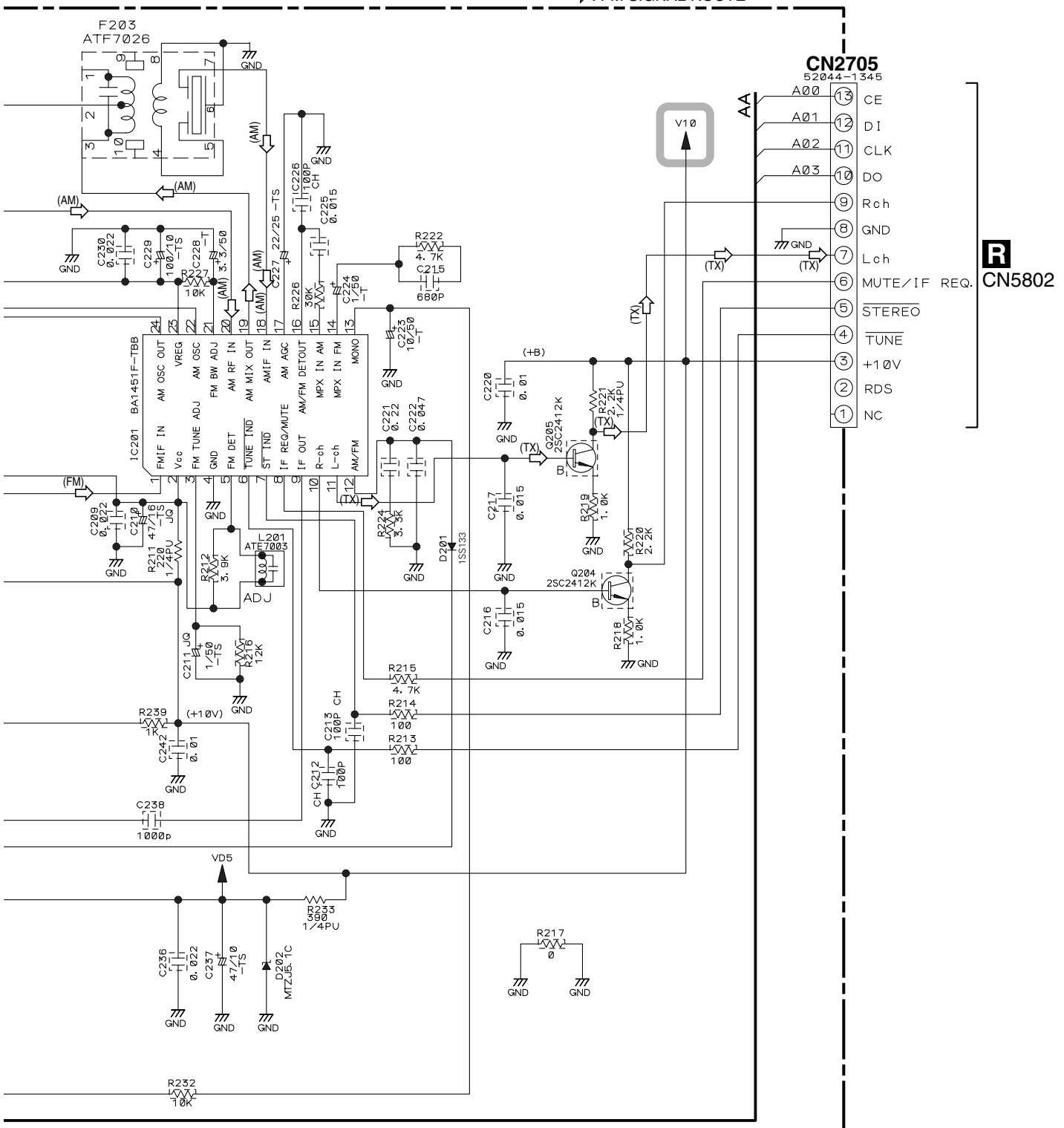
● The ⚠ mark found on some component parts indicates the importance of the safety factor of the part.
Therefore, when replacing, be sure to use parts of identical designation.

3.3 FM/AM TUNER MODULE

A FM/AM TUNER MODULE (AXQ7237)



(TX) : AUDIO SIGNAL ROUTE (TUNER)
(AM) : AM SIGNAL ROUTE
(FM) : FM SIGNAL ROUTE

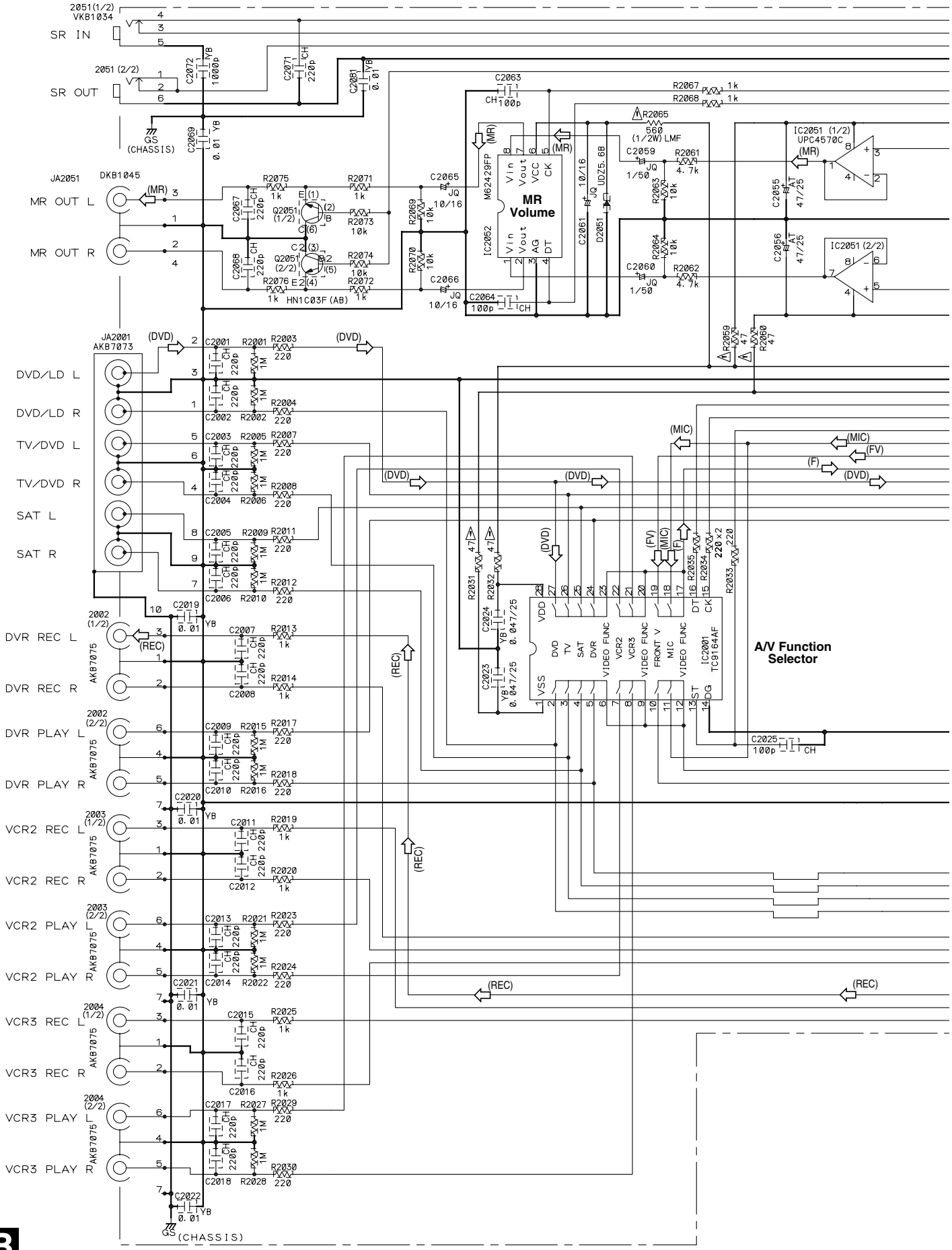


Notes

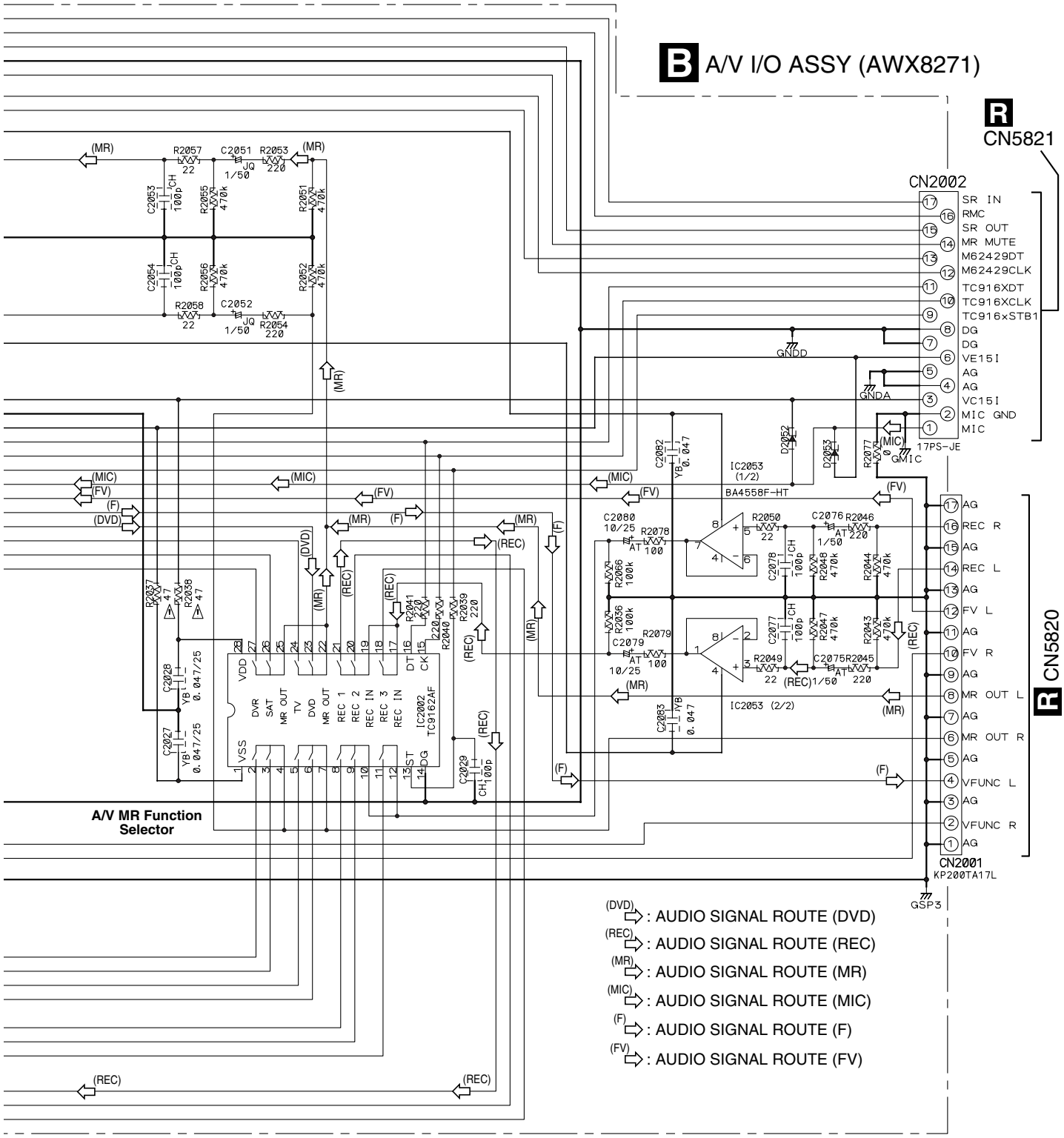
1. RESISTORS
   Indicated in Ω, 1/16W±5% Tolerance unless otherwise noted K:KΩ, M:MΩ.
2. CAPACITORS
   Indicated in Capacity(μF)/VOLTAGE(V) unless otherwise noted P:PF.
3. DIODES
   No mark diode is 1SS133.

A

3.4 A/V I/O ASSY


2051(1/2)
VKB1034
SR IN
2051 (2/2)
SR OUT
GS
(CHASSIS)
JA2051
DKB1045
MR OUT L
MR OUT R
(MR)
M62429FP
MR
Volume
IC2052
HN1C03F (AB)
R2065
560
(1/2W) LMF
IC2051 (1/2)
UPC4570C
IC2051 (2/2)
JA2001
AKB7073
DVD/LD L
DVD/LD R
TV/DVD L
TV/DVD R
SAT L
SAT R
(DVD)
(MIC)
(FV)
(F)
DVR REC L
DVR REC R
DVR PLAY L
DVR PLAY R
VCR2 REC L
VCR2 REC R
VCR2 PLAY
VCR2 PLAY R
VCR3 REC L
VCR3 REC R
VCR3 PLAY L
VCR3 PLAY R
(REC)
AKB7075
IC2001
TC9164AF
A/V Function
Selector
VDD
VSS
DVD
TV
SAT
DVR
VIDEO FUNC
VCR2
VCR3
FRONT V
MIC
DT
CK
ST
DG

B A/V I/O ASSY (AWX8271)

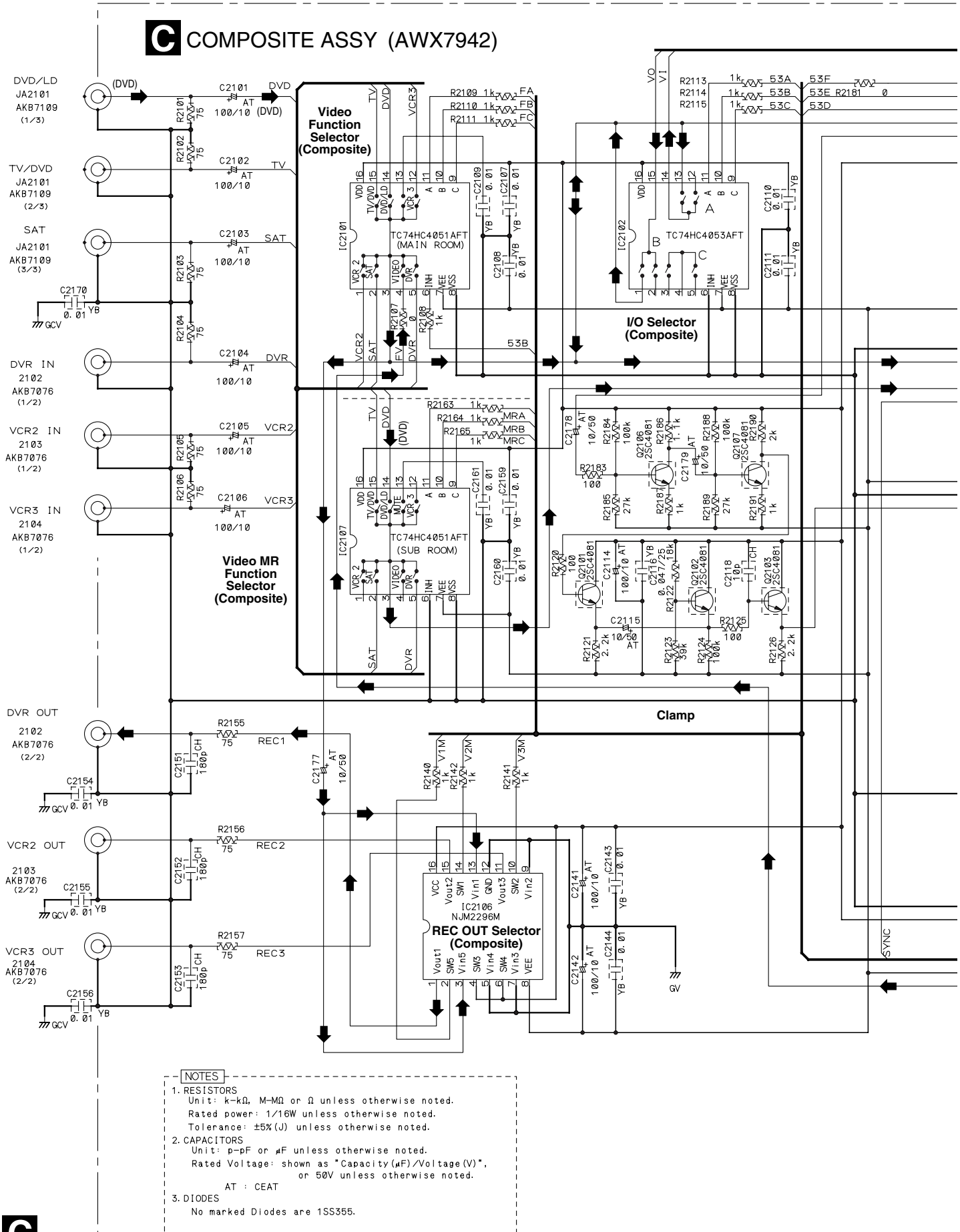


NOTES

1. RESISTORS
   Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/16W unless otherwise noted.
   Tolerance: ±5%(J) unless otherwise noted.
2. CAPACITORS
   Unit: p-pF or μF unless otherwise noted.
   Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
   AT:CEAT, JQ:CEJQ
3. DIODES
   No marked Diodes are 1SS355.

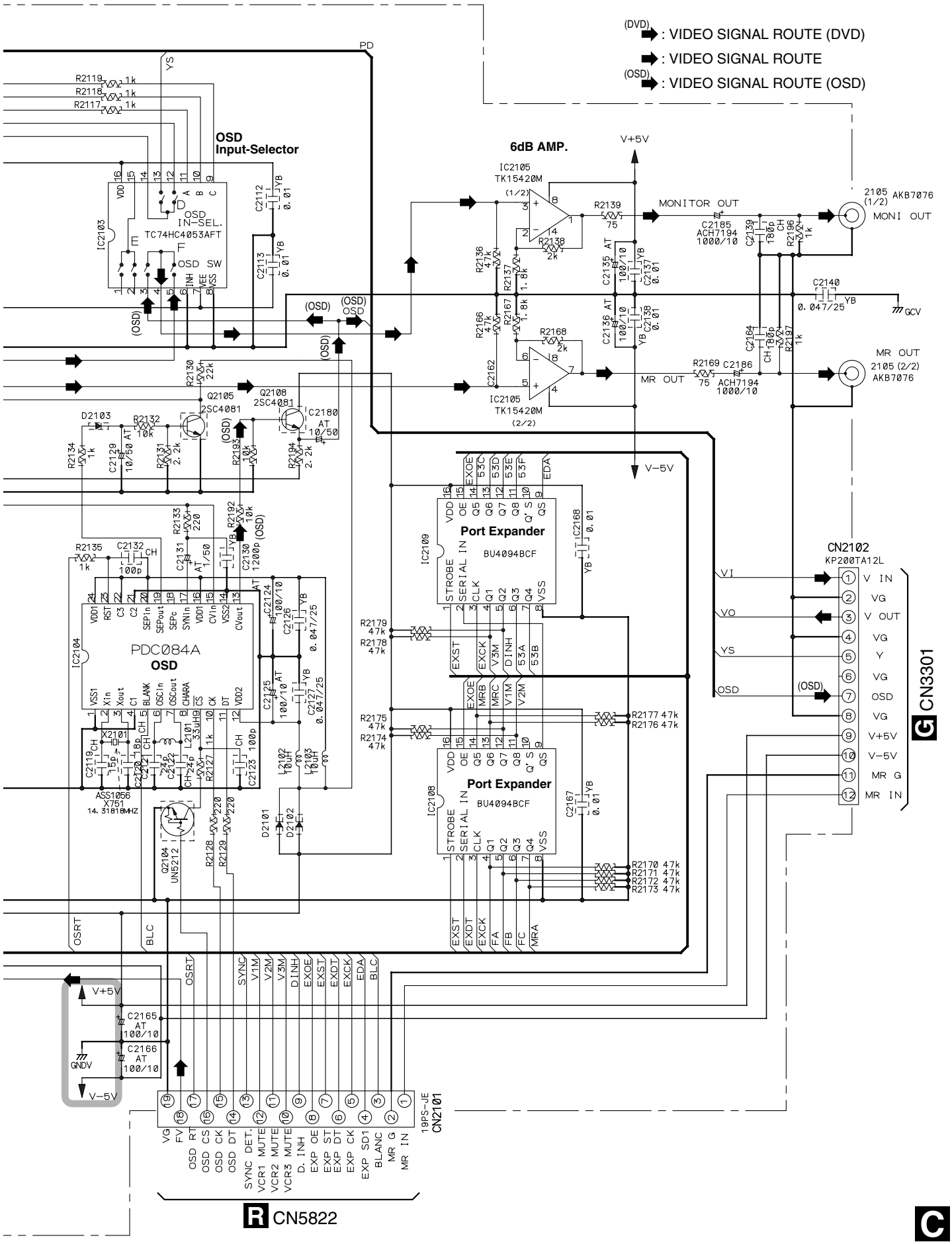
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

3.5 COMPOSITE ASSY

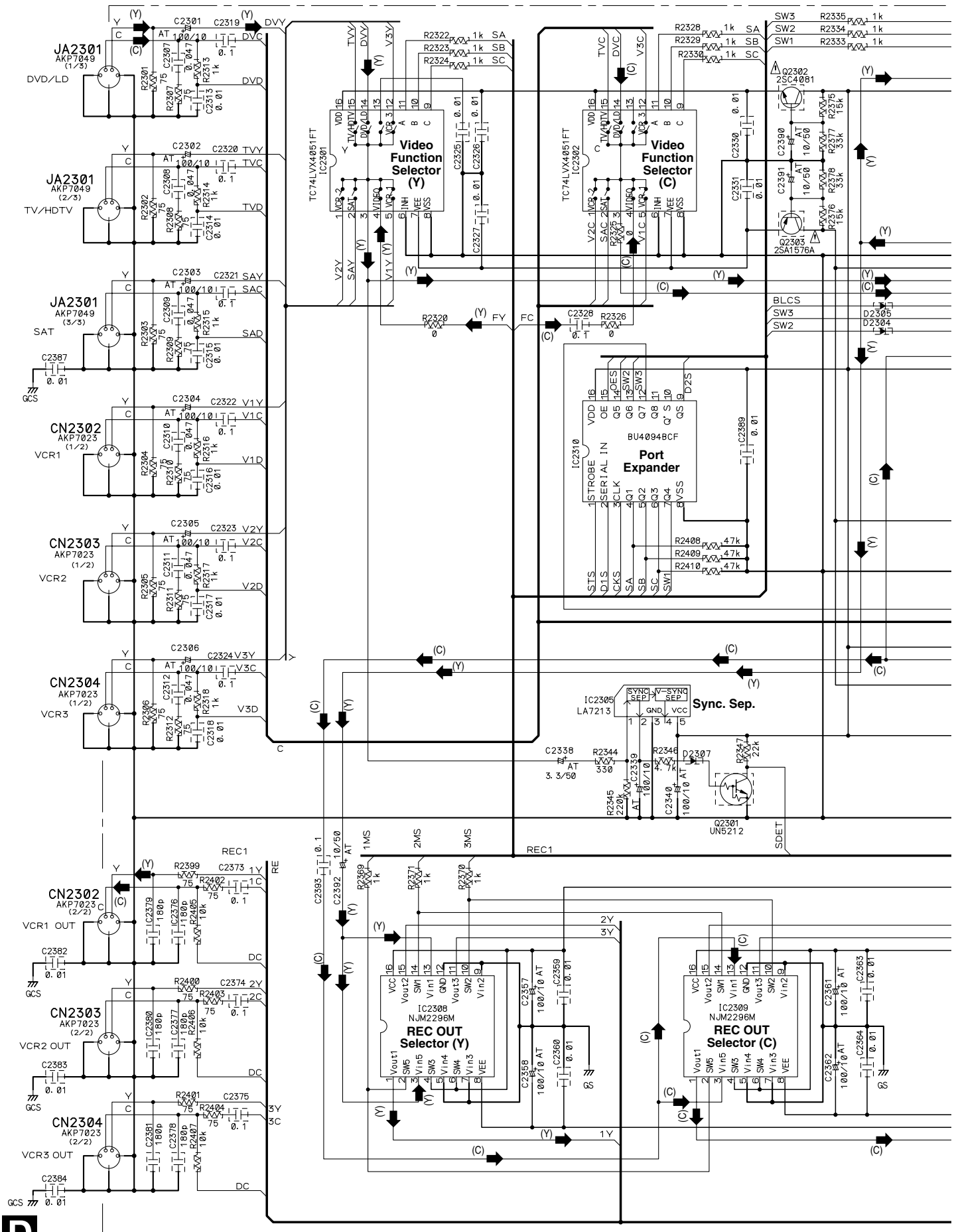


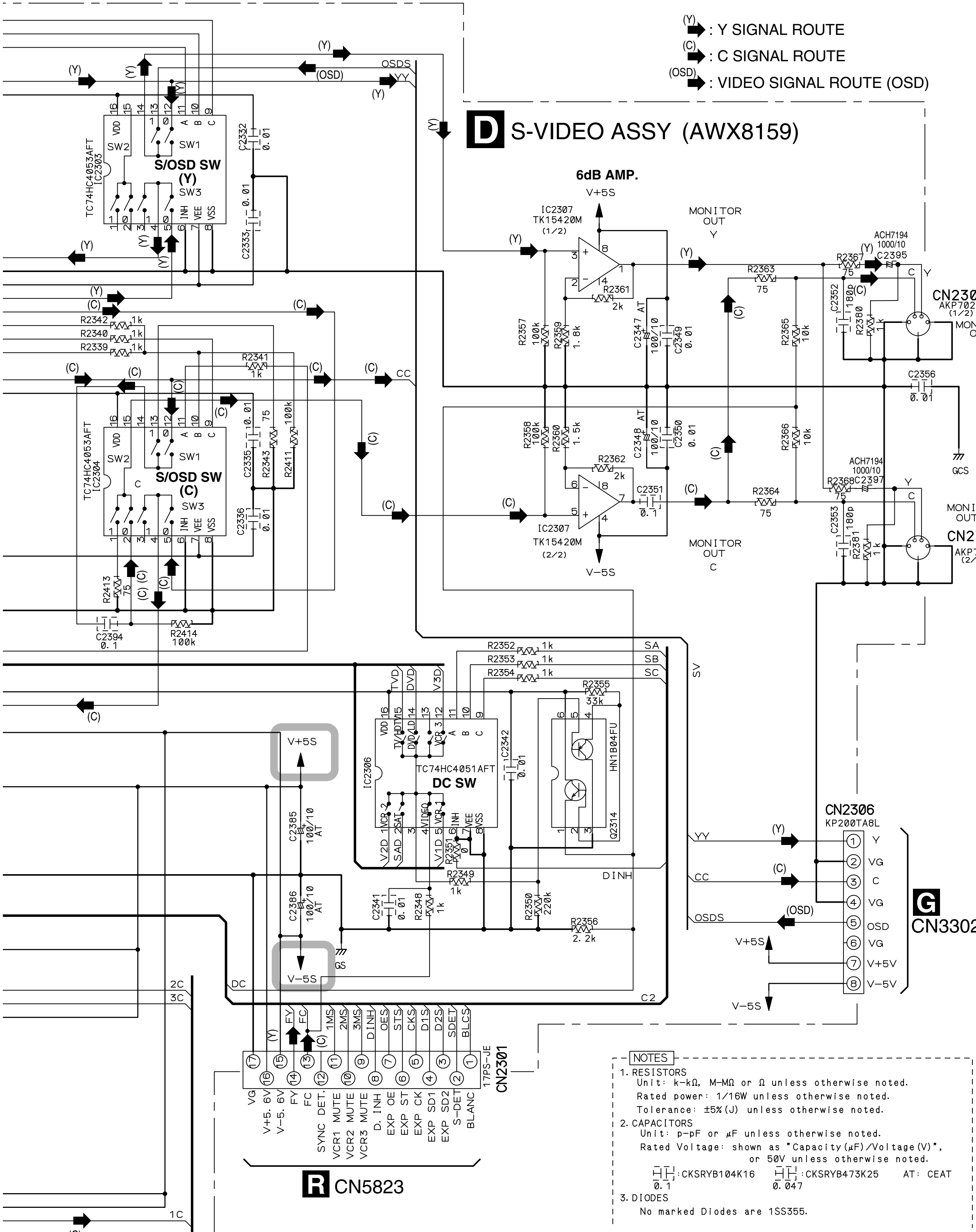
NOTES

1. RESISTORS
   Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/16W unless otherwise noted.
   Tolerance: ±5%(J) unless otherwise noted.
2. CAPACITORS
   Unit: p-pF or μF unless otherwise noted.
   Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
   AT : CEAT
3. DIODES
   No marked Diodes are 1SS355.


(DVD) : VIDEO SIGNAL ROUTE (DVD)
: VIDEO SIGNAL ROUTE
(OSD) : VIDEO SIGNAL ROUTE (OSD)
OSD Input-Selector
6dB AMP.
Port Expander
BU4094BCF
PDC084A
OSD
CN2102
KP200TA12L
CN3301
CN2101
CN5822
MONITOR OUT
MR OUT
MONI OUT
V+5V
V-5V
GCV
GNDV

3.6 S-VIDEO ASSY





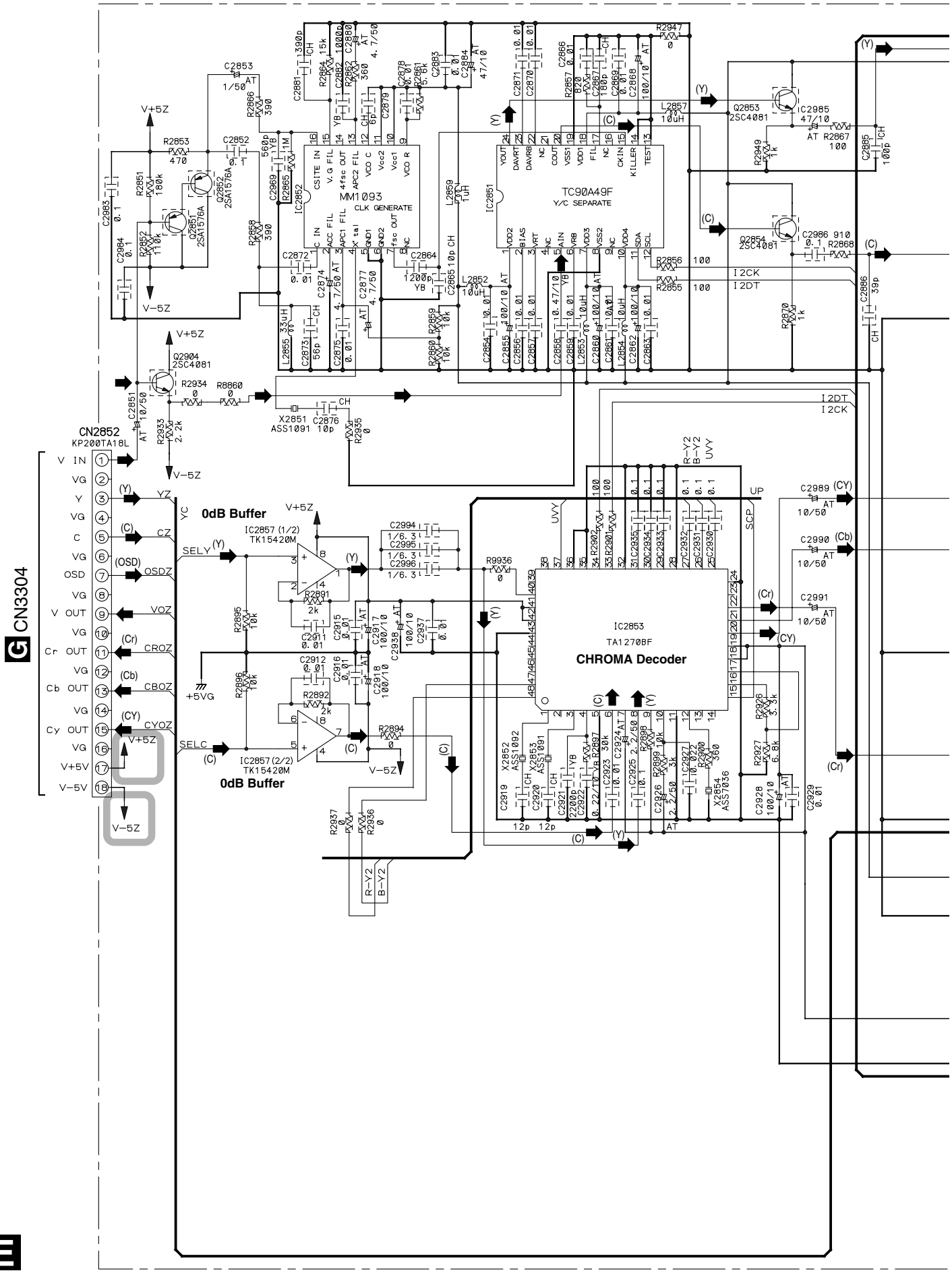
NOTES

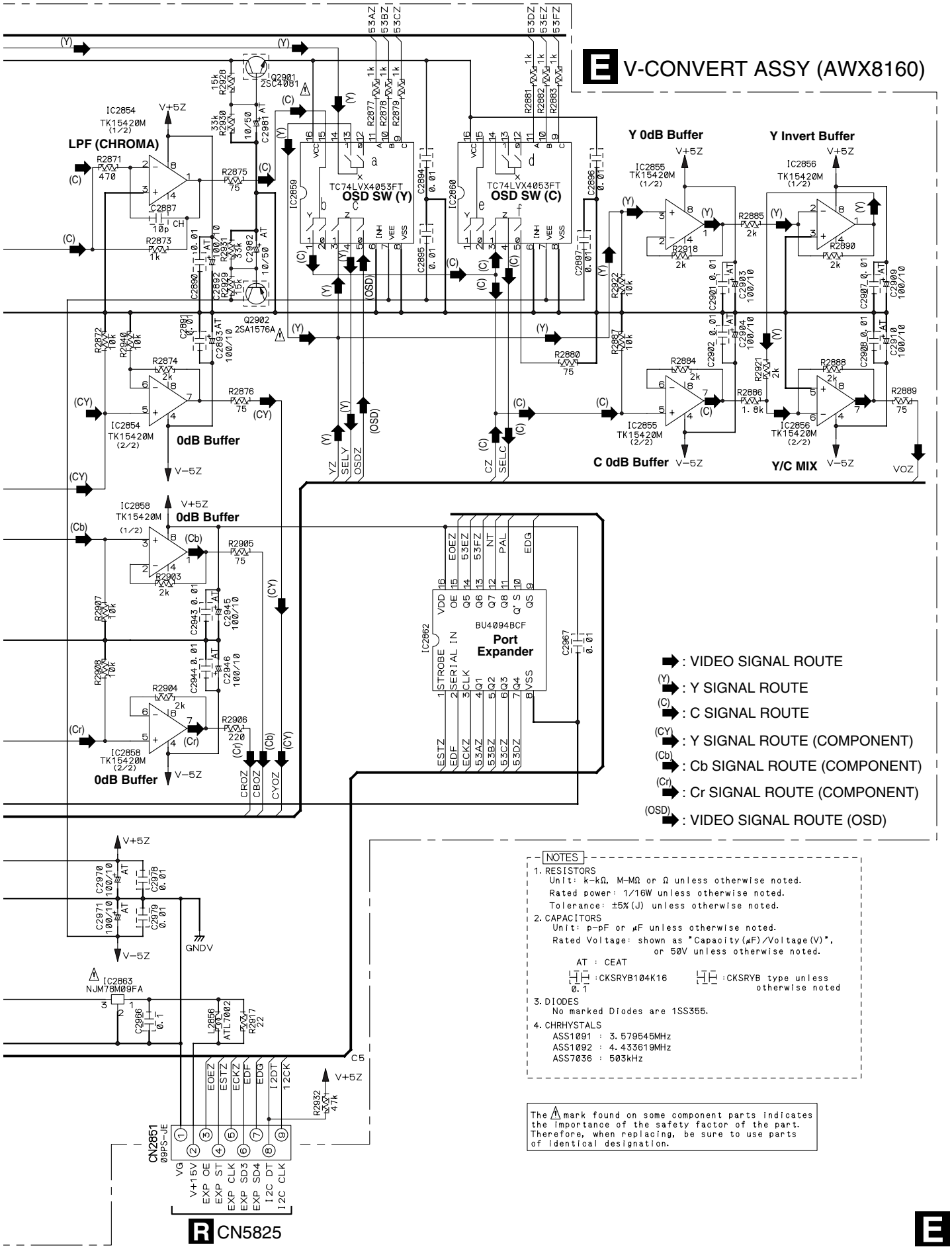
1. RESISTORS
   Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/16W unless otherwise noted.
   Tolerance: ±5%(J) unless otherwise noted.
2. CAPACITORS
   Unit: p-pF or μF unless otherwise noted.
   Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
   0.1 :CKSRYB104K16   0.047 :CKSRYB473K25   AT: CEAT
3. DIODES
   No marked Diodes are 1SS355.

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.

D

3.7 V-CONVERT ASSY



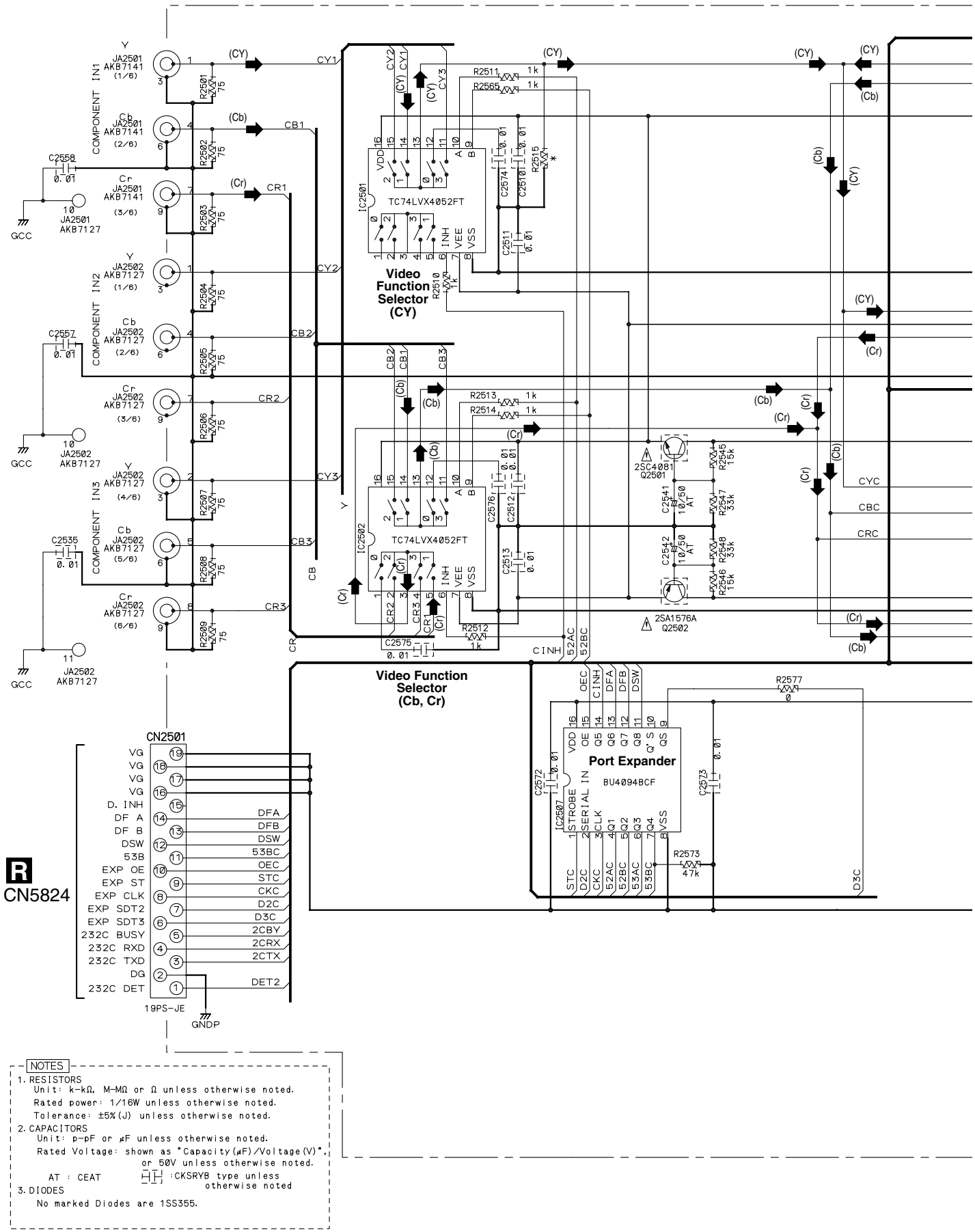


NOTES

1. RESISTORS
   Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/16W unless otherwise noted.
   Tolerance: ±5%(J) unless otherwise noted.
2. CAPACITORS
   Unit: p-pF or μF unless otherwise noted.
   Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
   AT : CEAT
   0.1 : CKSRYB104K16
   : CKSRYB type unless otherwise noted
3. DIODES
   No marked Diodes are 1SS355.
4. CHRHYSTALS
   ASS1091 : 3.579545MHz
   ASS1092 : 4.433619MHz
   ASS7036 : 503kHz

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.

3.8 COMPONENT ASSY

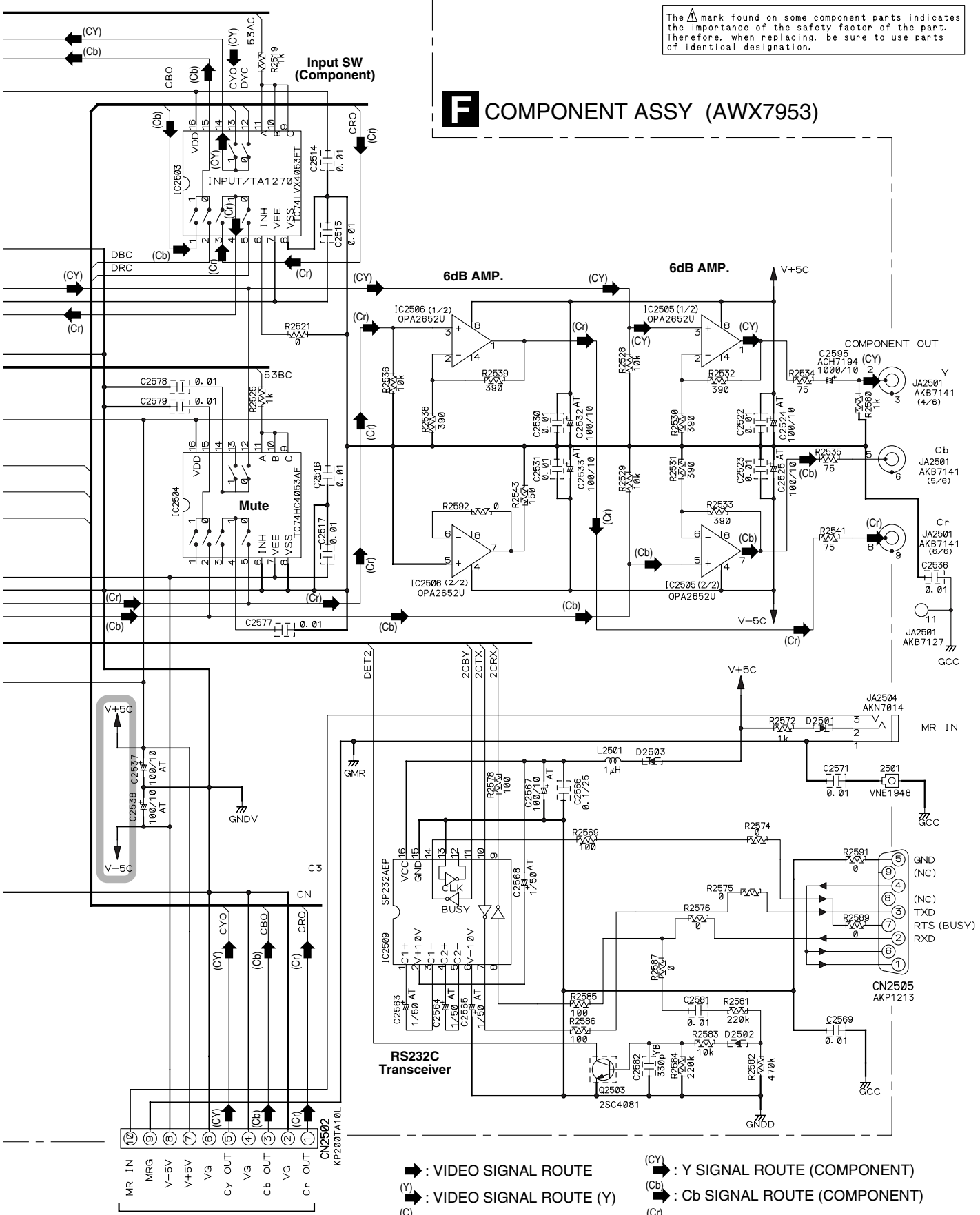


NOTES

1. RESISTORS
   Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/16W unless otherwise noted.
   Tolerance: ±5%(J) unless otherwise noted.
2. CAPACITORS
   Unit: p-pF or μF unless otherwise noted.
   Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
   AT : CEAT
   :CKSRYB type unless otherwise noted
3. DIODES
   No marked Diodes are 1SS355.

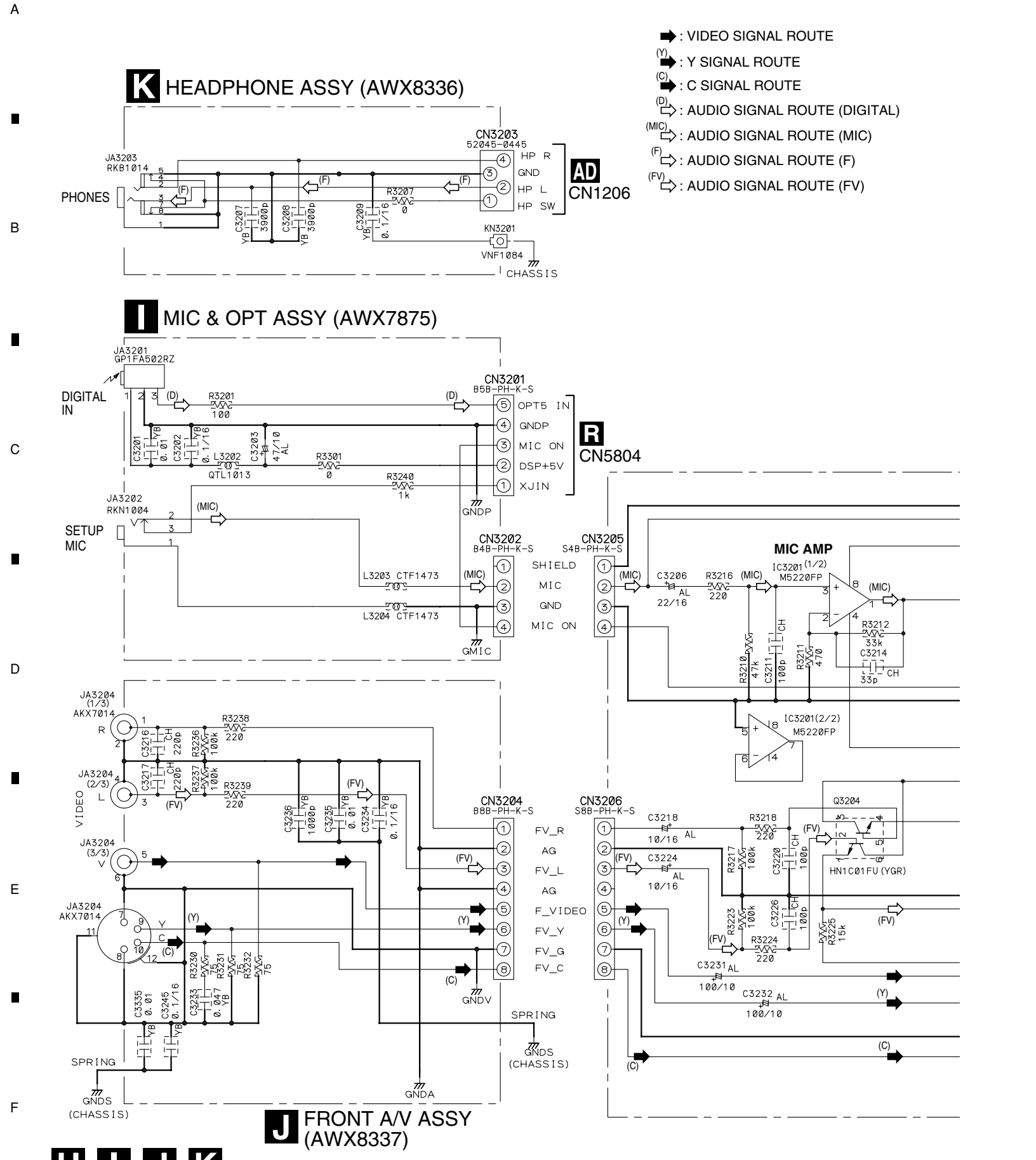
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

F COMPONENT ASSY (AWX7953)



: VIDEO SIGNAL ROUTE
(Y) : VIDEO SIGNAL ROUTE (Y)
(C) : VIDEO SIGNAL ROUTE (C)
(OSD) : VIDEO SIGNAL ROUTE (OSD)
(CY) : Y SIGNAL ROUTE (COMPONENT)
(Cb) : Cb SIGNAL ROUTE (COMPONENT)
(Cr) : Cr SIGNAL ROUTE (COMPONENT)

3.9 VIDEO CON., MIC AMP, MIC & OPT, FRONT A/V and H.P. ASSYS



NOTES

1. RESISTORS
   Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/16W unless otherwise noted.
   Tolerance: ±5%(J) unless otherwise noted.
2. CAPACITORS
   Unit: p-pF or μF unless otherwise noted.
   Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
   AL:CEAL
   :CKSRYB type unless otherwise noted.
3. DIODES
   No marked Diodes are 1SS355.

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.

G VIDEO CONNECT ASSY (AWX7876)

CN3301 KM200TA12
1 V IN, 2 VG, 3 V OUT, 4 VG, 5 Y, 6 VG, 7 OSD, 8 VG, 9 V+5V, 10 V-5V, 11 MR G, 12 MR IN

C CN2102

CN3302 KM200TA8
1 Y, 2 VG, 3 C, 4 VG, 5 OSD, 6 VG, 7 V+5V, 8 V-5V

D CN2306

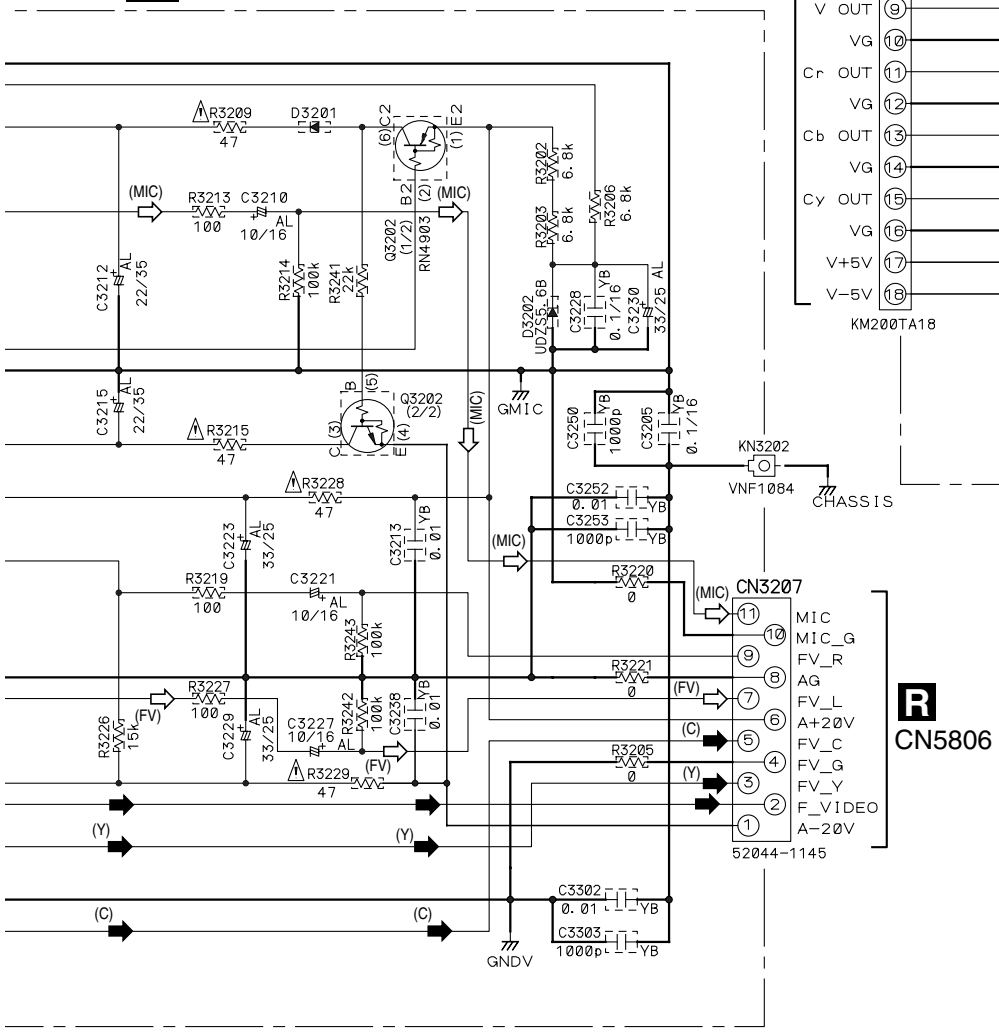
CN3303 KM200TA10
1 Cr OUT, 2 VG, 3 Cb OUT, 4 VG, 5 Cy OUT, 6 VG, 7 V+5V, 8 V-5V, 9 MR G, 10 MR IN

F CN2502

CN3304
1 V IN, 2 VG, 3 Y, 4 VG, 5 C, 6 VG, 7 OSD, 8 VG, 9 V OUT, 10 VG, 11 Cr OUT, 12 VG, 13 Cb OUT, 14 VG, 15 Cy OUT, 16 VG, 17 V+5V, 18 V-5V
KM200TA18

E CN2852

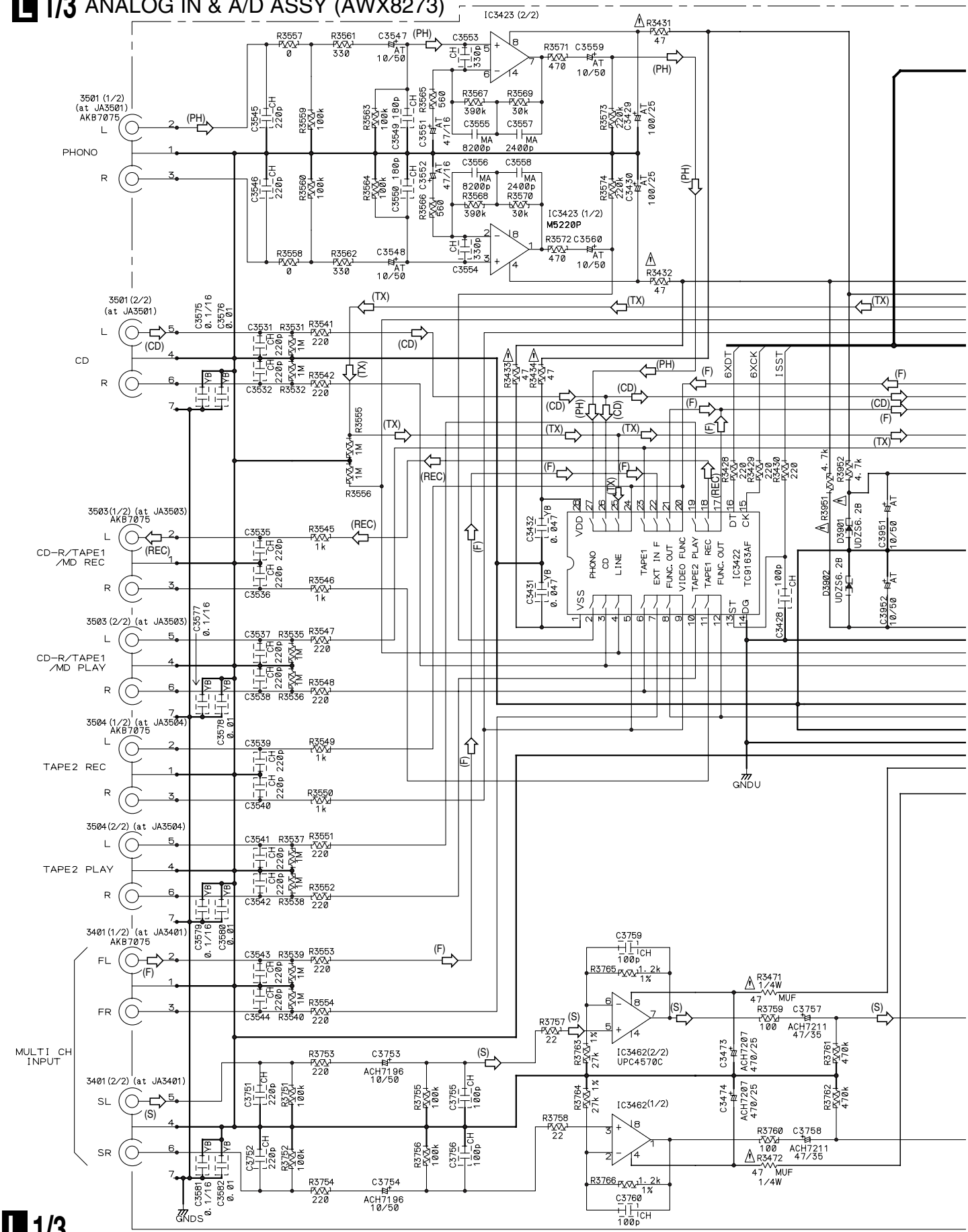
H MIC AMP ASSY (AWX8341)

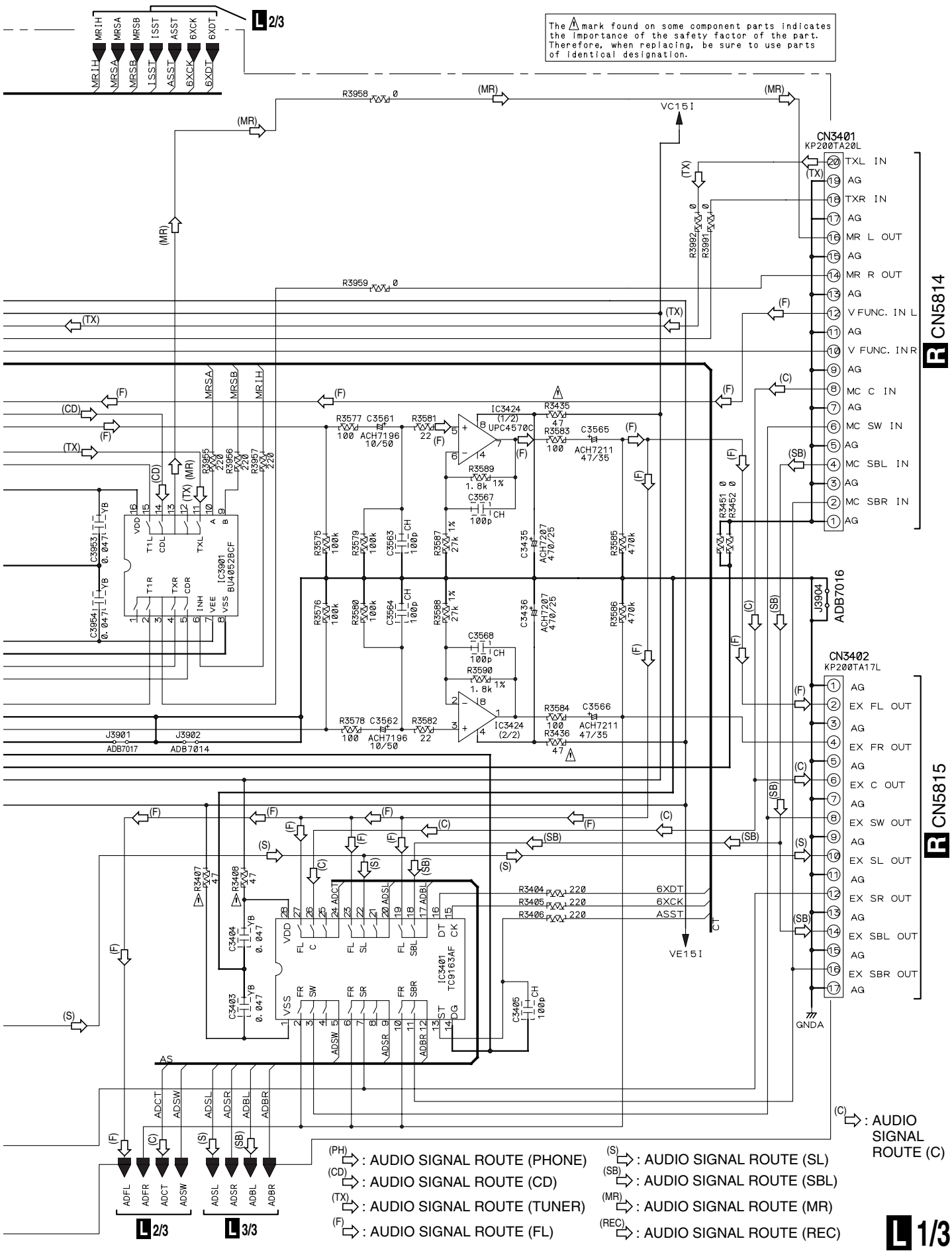


R CN5806

3.10 ANALOG IN & A/D ASSY(1/3)

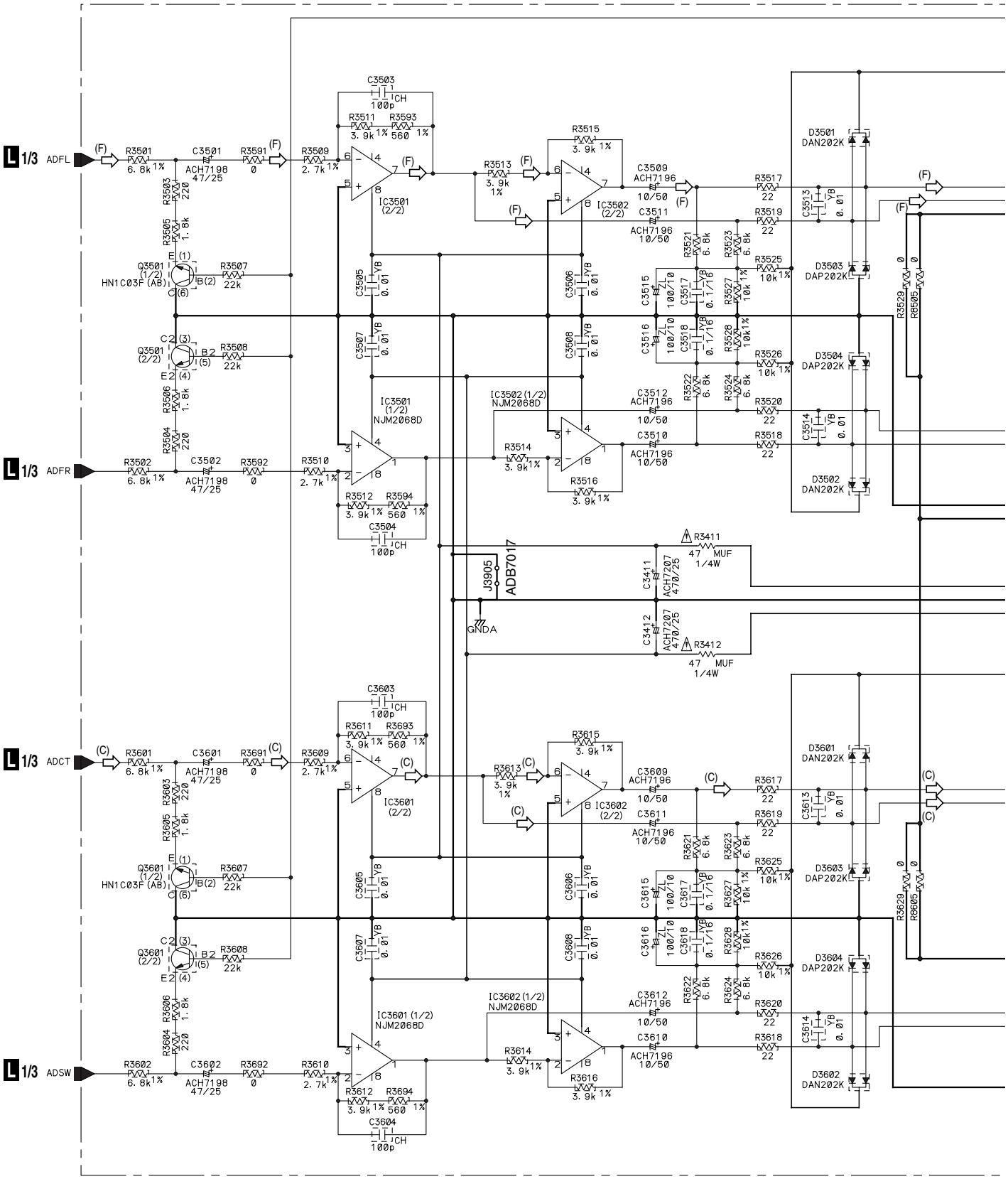
L 1/3 ANALOG IN & A/D ASSY (AWX8273)



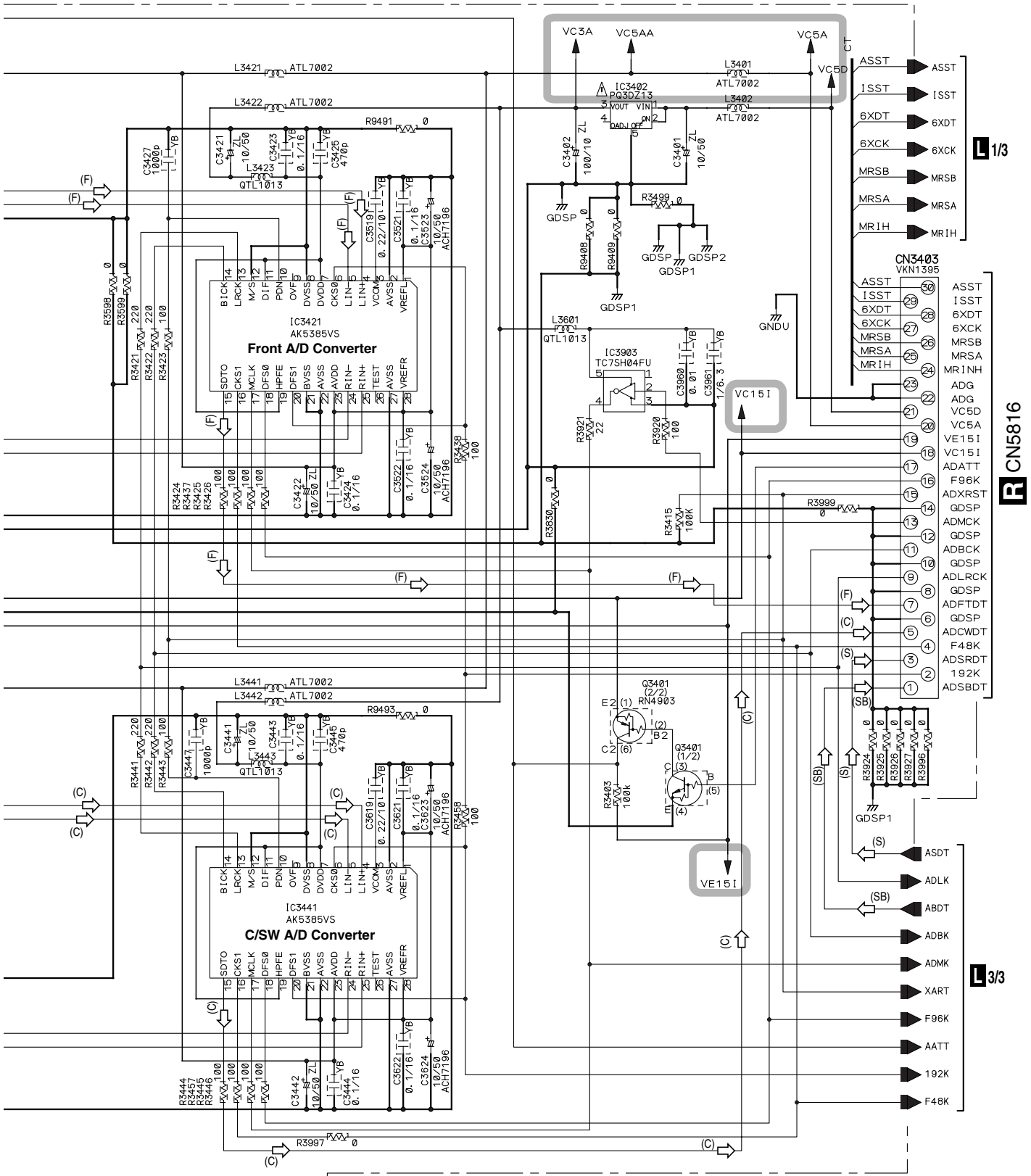

L 2/3
MRIH
MRSA
MRSB
ISST
ASST
6XCK
6XDT
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
R3958 0
R3959 0
(MR)
VC15I
VE15I
CN3401
KP200TA20L
20 TXL IN
19 AG
18 TXR IN
17 AG
16 MR L OUT
15 AG
14 MR R OUT
13 AG
12 V FUNC. IN L
11 AG
10 V FUNC. IN R
9 AG
8 MC C IN
7 AG
6 MC SW IN
5 AG
4 MC SBL IN
3 AG
2 MC SBR IN
1 AG
R CN5814
R3992 0
R3991 0
R3451 0
R3452 0
IC3424 (1/2) UPC4570C
IC3424 (2/2)
R3577 C3561 R3581 100 ACH7196 10/50 22
R3578 C3562 R3582 100 ACH7196 10/50 22
R3435 47
R3436 47
R3583 100
R3584 100
C3565 ACH7211 47/35
C3566 ACH7211 47/35
R3589 1.8k 1%
R3590 1.8k 1%
C3567 CH 100p
C3568 CH 100p
R3587 27k 1%
R3588 27k 1%
C3435 ACH7207 470/25
C3436 ACH7207 470/25
R3585 470k
R3586 470k
R3575 100k
R3576 100k
R3579 100k
R3580 100k
C3563 CH 100p
C3564 CH 100p
R3955 220
R3956 220
R3957 220
C3953 0.047 YB
C3954 0.047 YB
IC3901 BU4052BCF
T1L CDL TXL T1R TXR CDR INH VEE VSS VDD A B
J3901 ADB7017
J3902 ADB7014
J3904 ADB7016
CN3402
KP200TA17L
1 AG
2 EX FL OUT
3 AG
4 EX FR OUT
5 AG
6 EX C OUT
7 AG
8 EX SW OUT
9 AG
10 EX SL OUT
11 AG
12 EX SR OUT
13 AG
14 EX SBL OUT
15 AG
16 EX SBR OUT
17 AG
R CN5815
GNDA
R3407 47
R3408 47
C3404 0.047 YB
C3403 0.047 YB
C3405 CH 100p
IC3401 TC9163AF
VDD VSS FL C FL SL FL SBL DT CK CT FR SW FR SR FR SBR ST DG ADSW ADSR ADBR
R3404 220 6XDT
R3405 220 6XCK
R3406 220 ASST
AS
ADCT ADSW ADSL ADSR ADBL ADBR
ADFL ADFR ADCT ADSW ADSL ADSR ADBL ADBR
L 2/3
L 3/3
(C) : AUDIO SIGNAL ROUTE (C)
(PH) : AUDIO SIGNAL ROUTE (PHONE)
(CD) : AUDIO SIGNAL ROUTE (CD)
(TX) : AUDIO SIGNAL ROUTE (TUNER)
(F) : AUDIO SIGNAL ROUTE (FL)
(S) : AUDIO SIGNAL ROUTE (SL)
(SB) : AUDIO SIGNAL ROUTE (SBL)
(MR) : AUDIO SIGNAL ROUTE (MR)
(REC) : AUDIO SIGNAL ROUTE (REC)
L 1/3

3.11 ANALOG IN & A/D ASSY(2/3)

L 2/3 ANALOG IN & A/D ASSY (AWX8273)



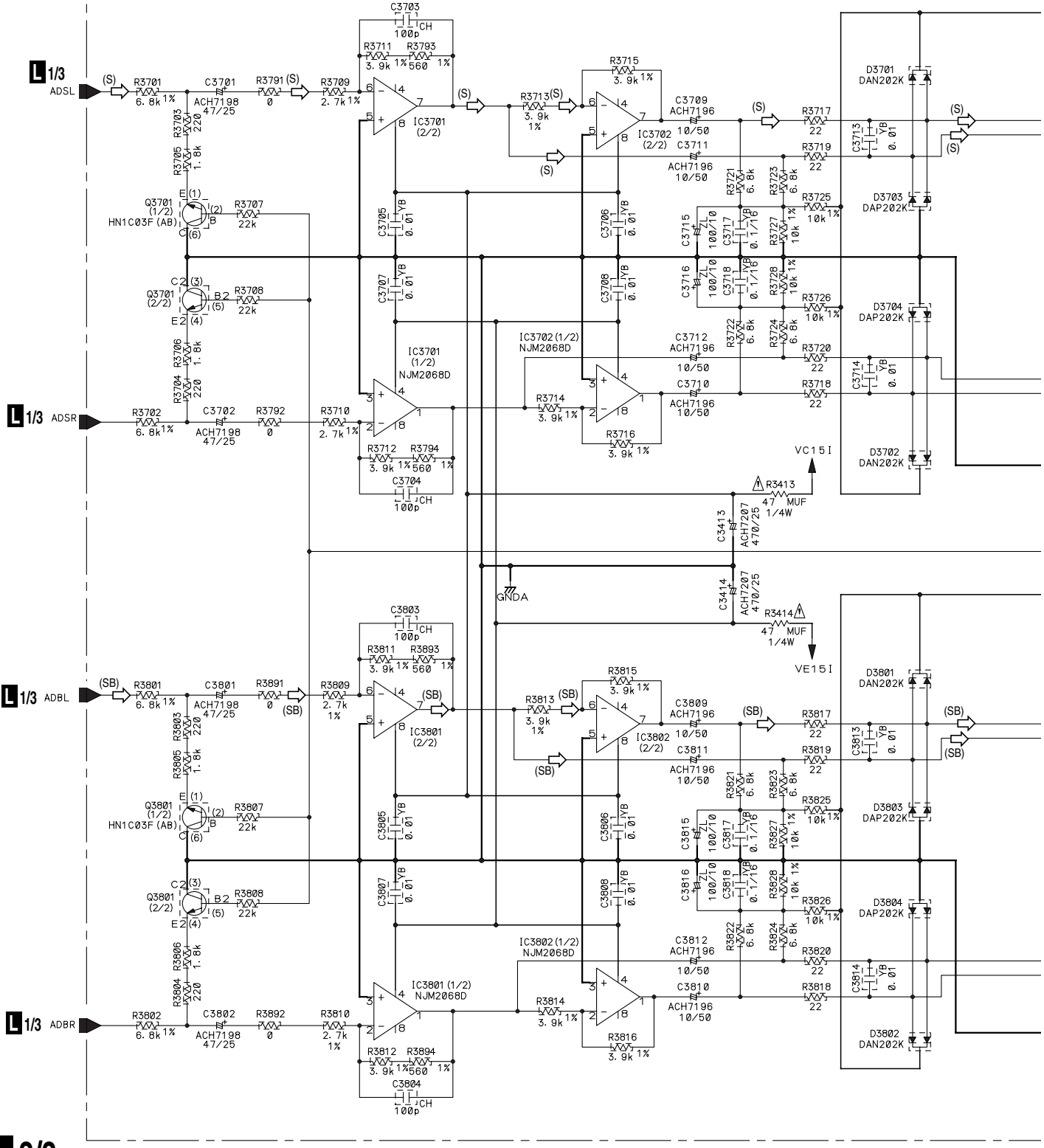
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.



3.12 ANALOG IN & A/D ASSY(3/3)

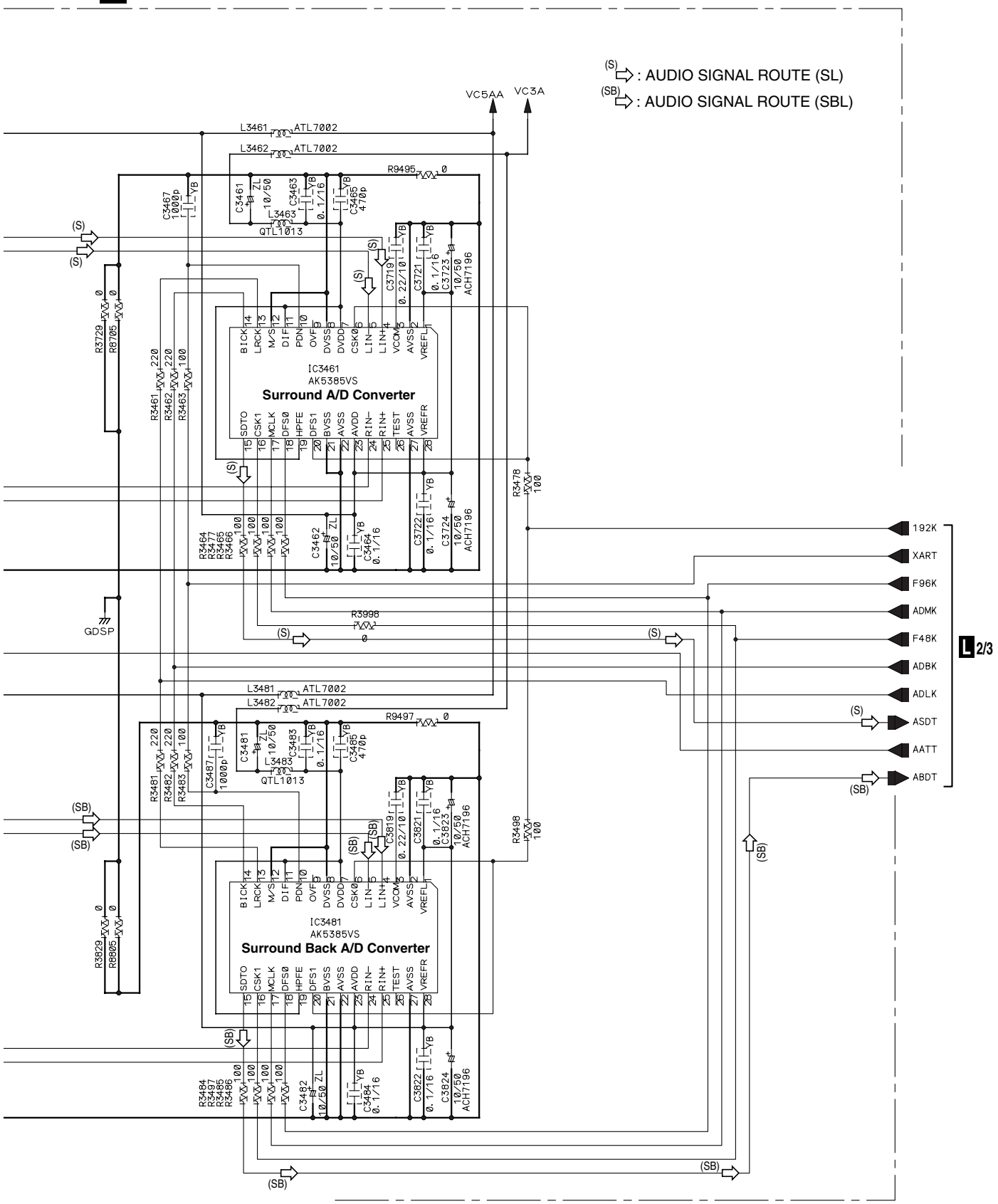
NOTES
1. RESISTORS
Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
Rated power: 1/16W unless otherwise noted.
Tolerance: ±5%(J) unless otherwise noted.
MUF:RD1/4MUF
2. CAPACITORS
Unit: p-pF or μF unless otherwise noted.
Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
ZL:CEHAZL

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.

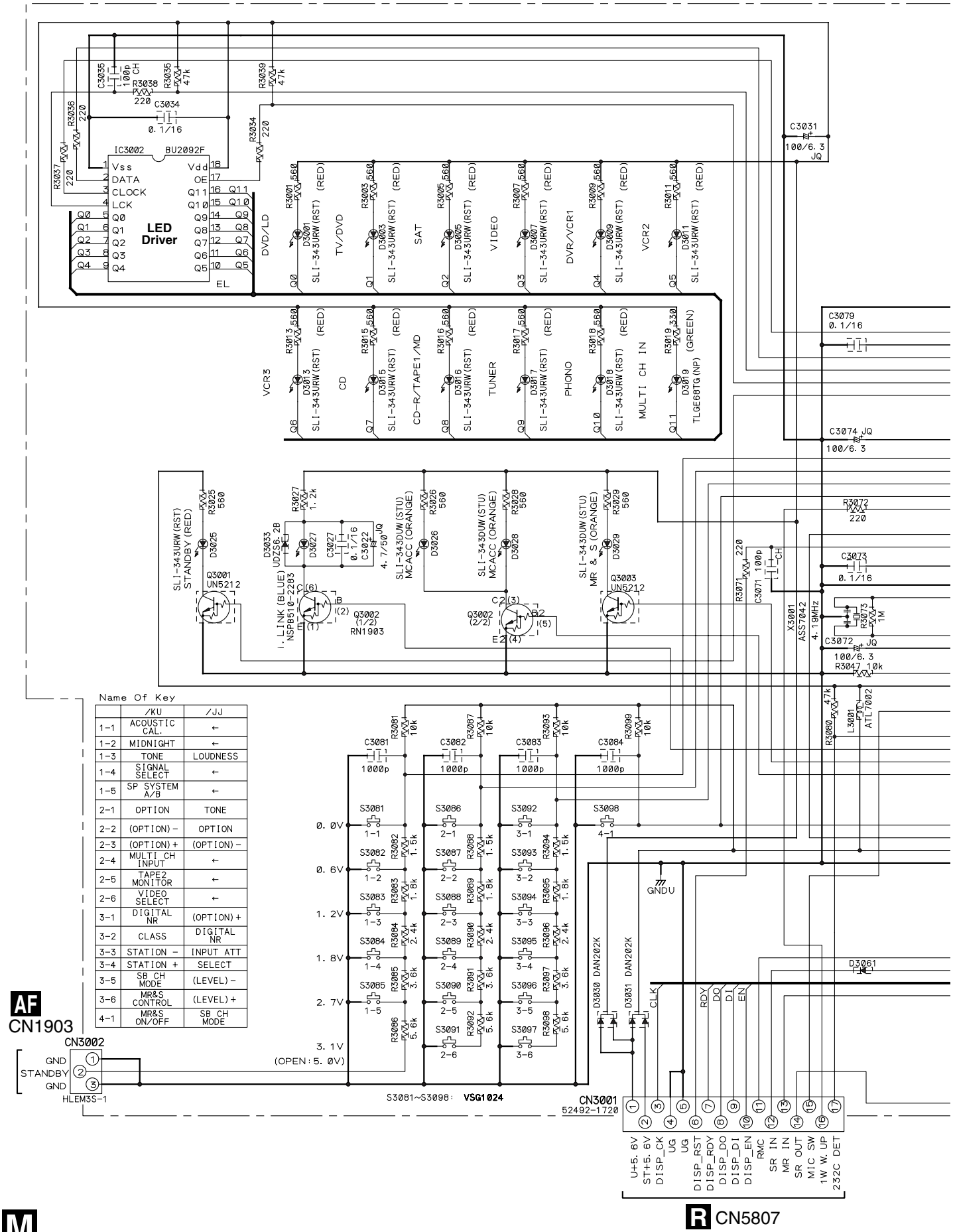


L 3/3

L 3/3 ANALOG IN & A/D ASSY (AWX8273)



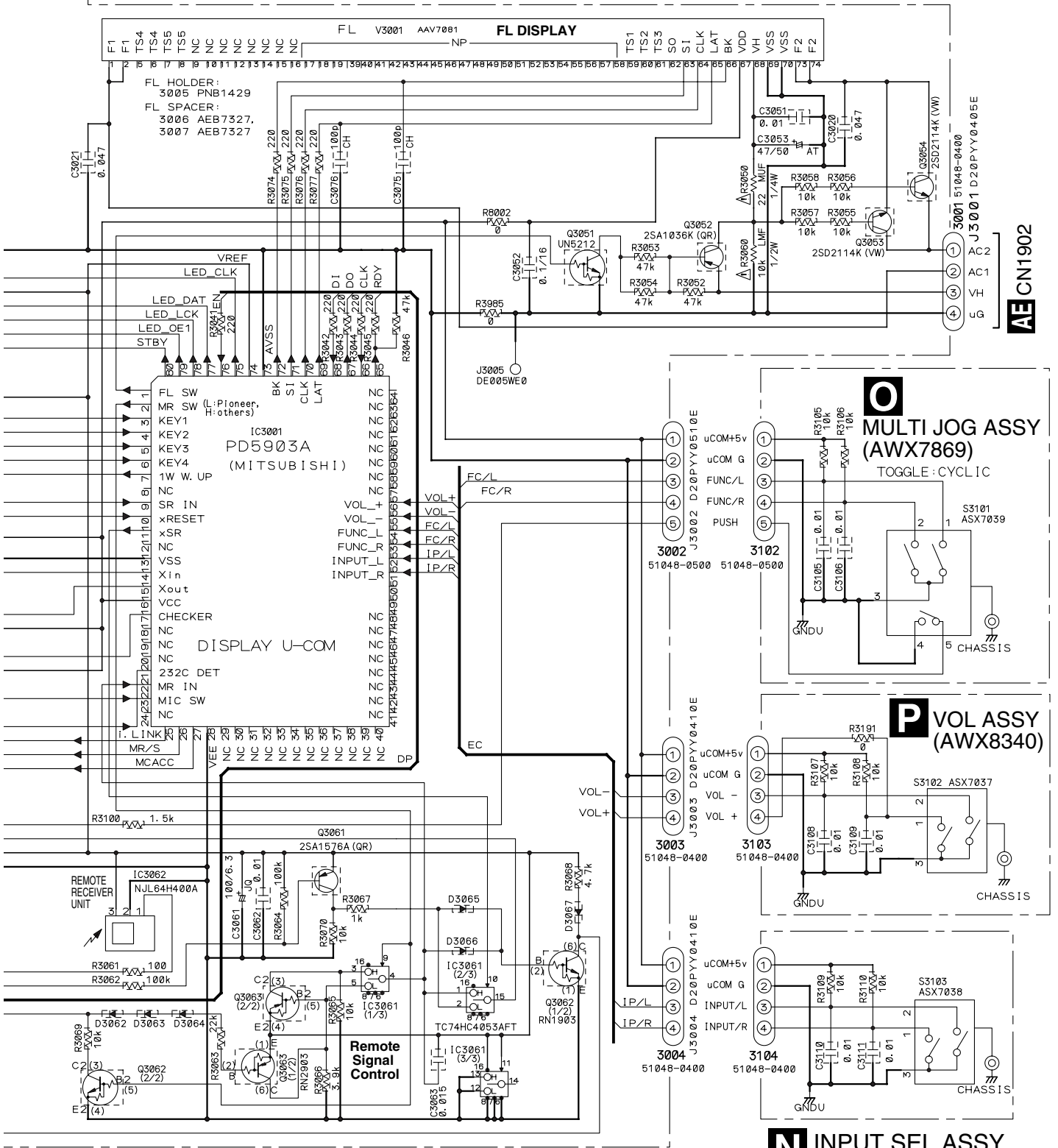
3.13 DISPLAY, INPUT SEL, MULTI JOG and VOL ASSYS



	/KU	/JJ
1-1	ACOUSTIC CAL.	←
1-2	MIDNIGHT	←
1-3	TONE	LOUDNESS
1-4	SIGNAL SELECT	←
1-5	SP SYSTEM A/B	←
2-1	OPTION	TONE
2-2	(OPTION) −	OPTION
2-3	(OPTION) +	(OPTION) −
2-4	MULTI CH INPUT	←
2-5	TAPE2 MONITOR	←
2-6	VIDEO SELECT	←
3-1	DIGITAL NR	(OPTION) +
3-2	CLASS	DIGITAL NR
3-3	STATION −	INPUT ATT
3-4	STATION +	SELECT
3-5	SB CH MODE	(LEVEL) −
3-6	MR&S CONTROL	(LEVEL) +
4-1	MR&S ON/OFF	SB CH MODE

M DISPLAY ASSY (AWX8317)

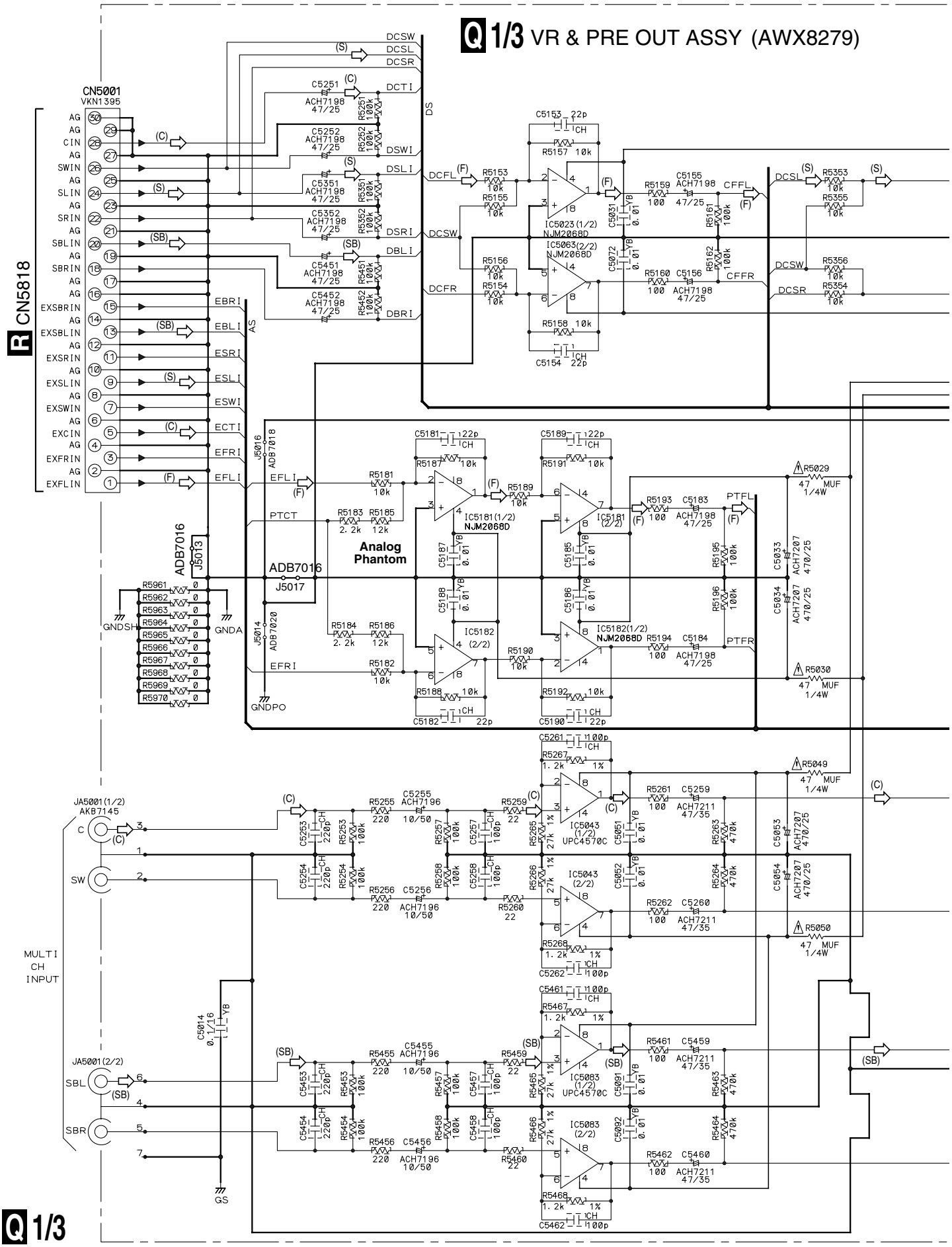
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

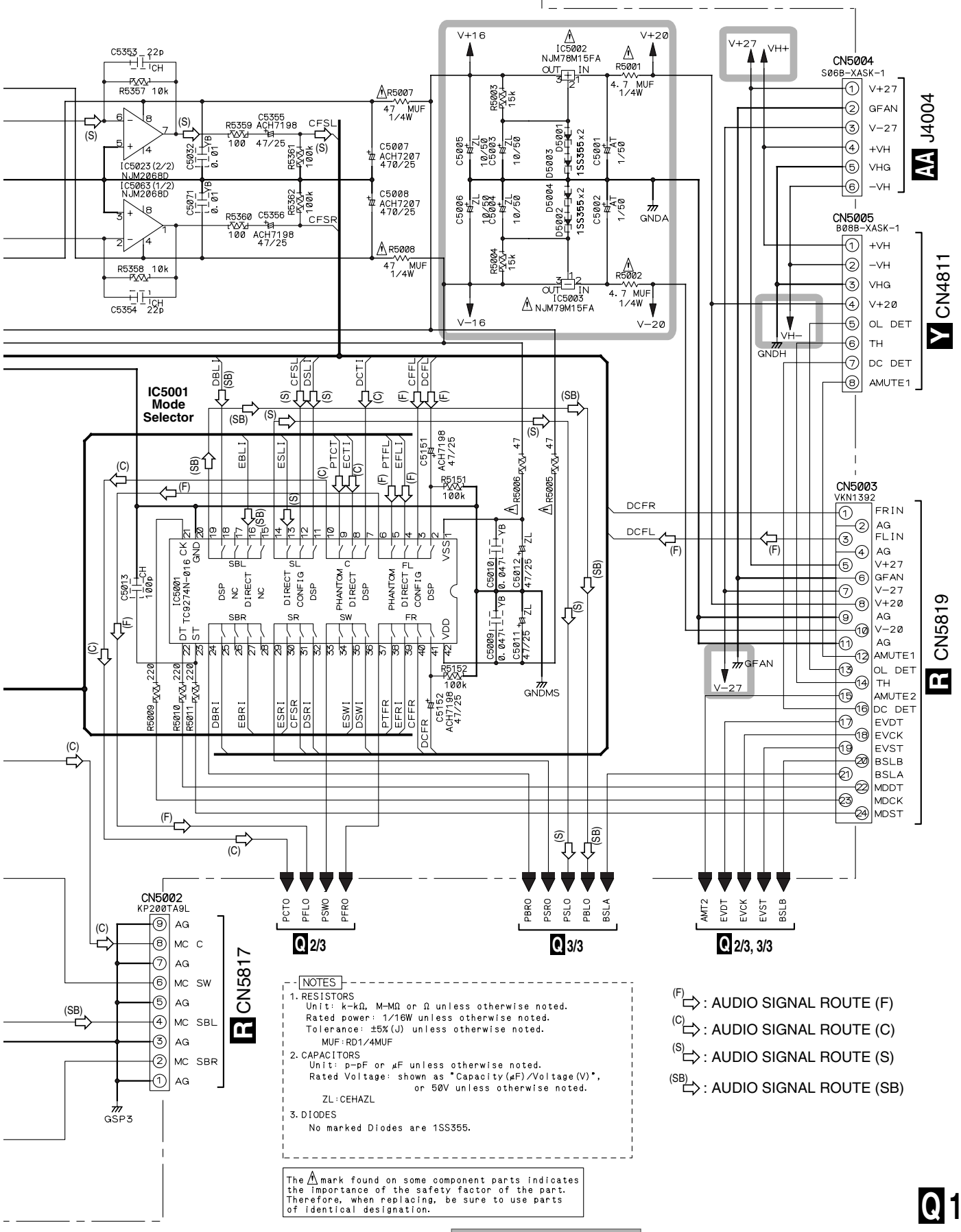


NOTES

1. RESISTORS
   Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/16W unless otherwise noted.
   Tolerance: ±5%(J) unless otherwise noted.
   LMF:RD1/2LMF, MUF:RD1/4MUF
2. CAPACITORS
   Unit: p-pF or μF unless otherwise noted.
   Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
   JQ:CEJQ
   :CKSRYB type unless otherwise noted
3. DIODES
   No marked Diodes are 1SS355.

3.14 VR & PRE OUT ASSY(1/3)





NOTES

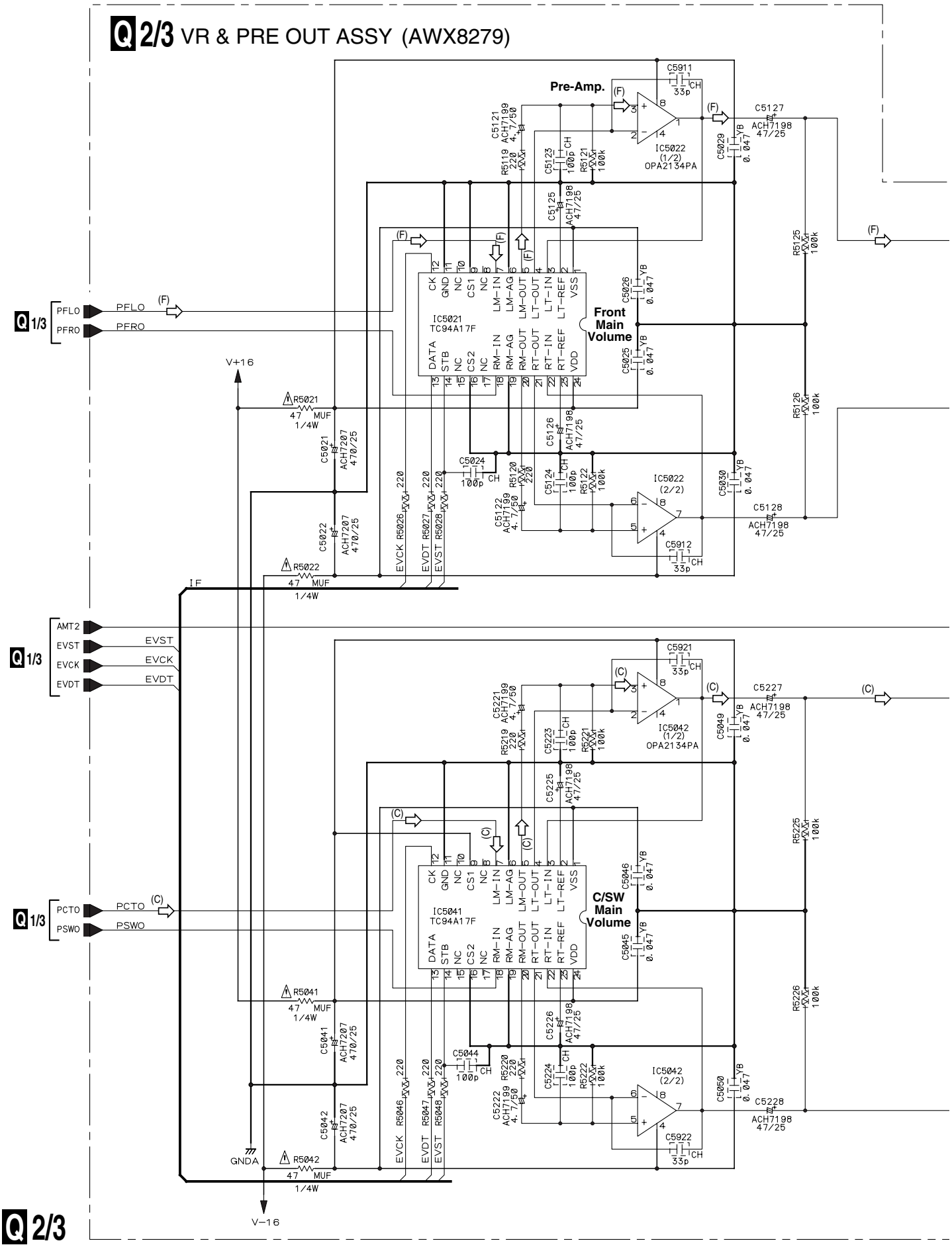
1. RESISTORS
   Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/16W unless otherwise noted.
   Tolerance: ±5%(J) unless otherwise noted.
   MUF:RD1/4MUF
2. CAPACITORS
   Unit: p-pF or μF unless otherwise noted.
   Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
   ZL:CEHAZL
3. DIODES
   No marked Diodes are 1SS355.

(F) : AUDIO SIGNAL ROUTE (F)
(C) : AUDIO SIGNAL ROUTE (C)
(S) : AUDIO SIGNAL ROUTE (S)
(SB) : AUDIO SIGNAL ROUTE (SB)

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.

Q 1/3

3.15 VR & PRE OUT ASSY(2/3)



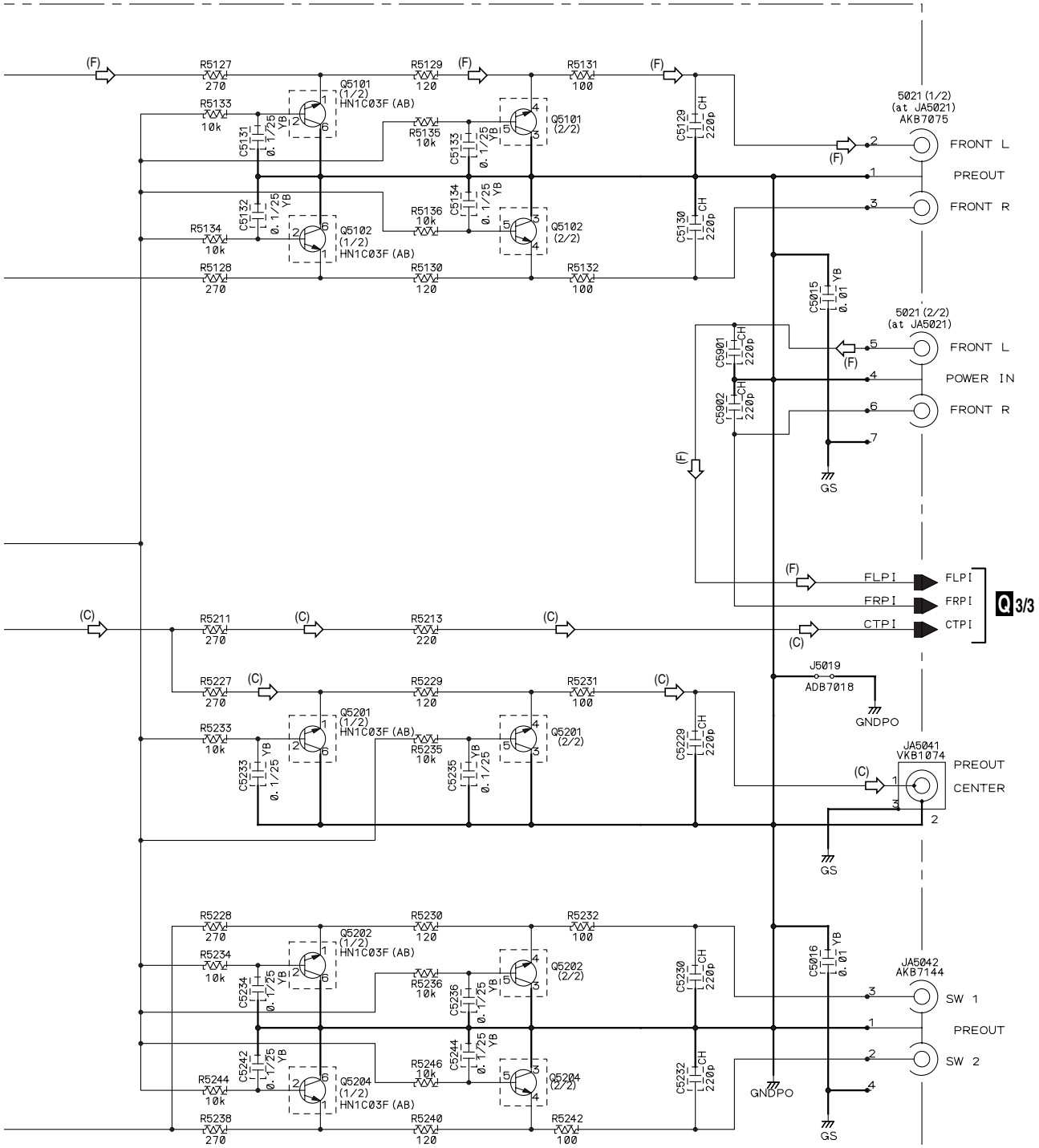
NOTES

1. RESISTORS
   Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/16W unless otherwise noted.
   Tolerance: ±5%(J) unless otherwise noted.
   MUF:RD1/4MUF
2. CAPACITORS
   Unit: p-pF or μF unless otherwise noted.
   Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
   ZL:CEHAZL ZA:CEHAZA

(F) ⇨ : AUDIO SIGNAL ROUTE (F)

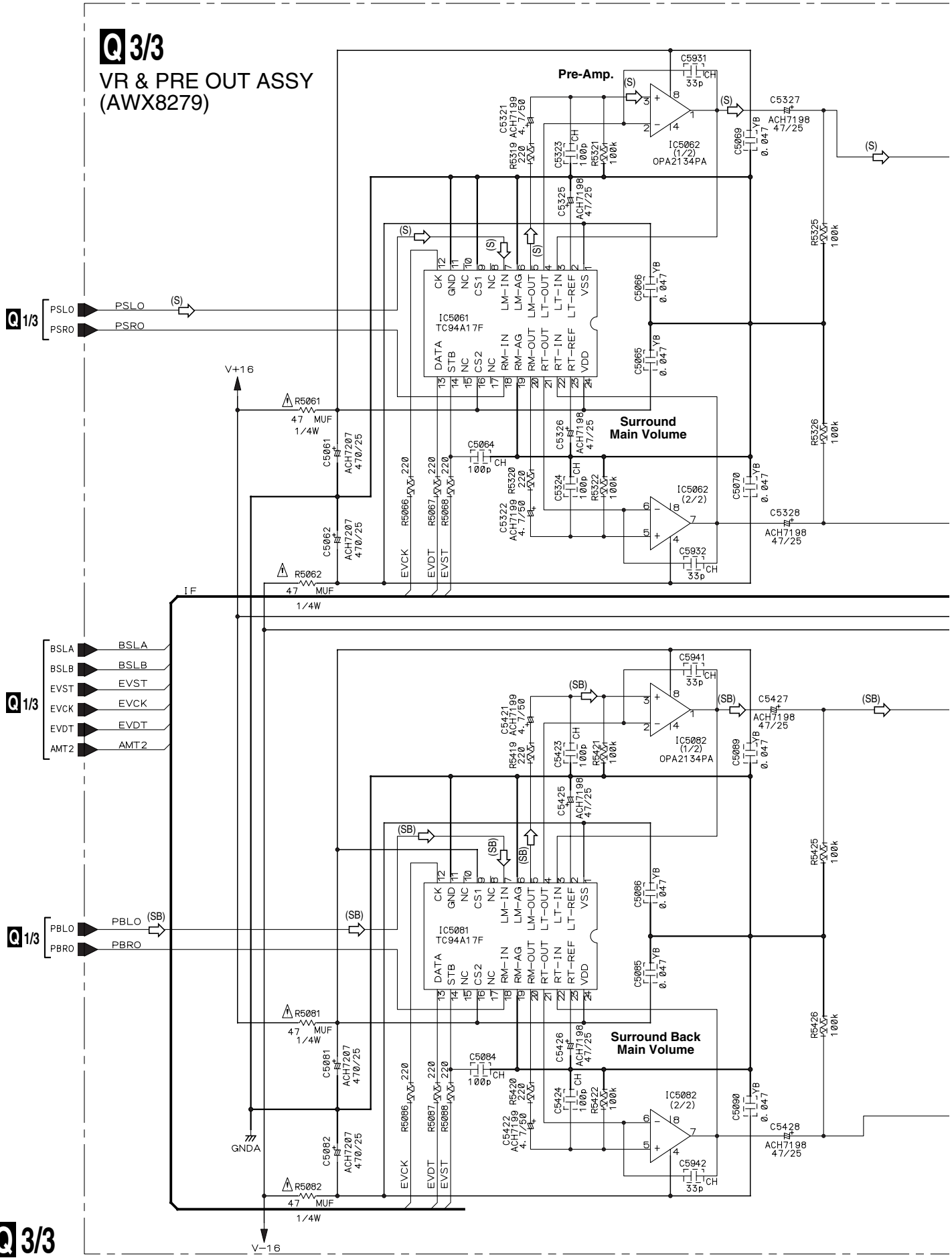
(C) ⇨ : AUDIO SIGNAL ROUTE (C)

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.



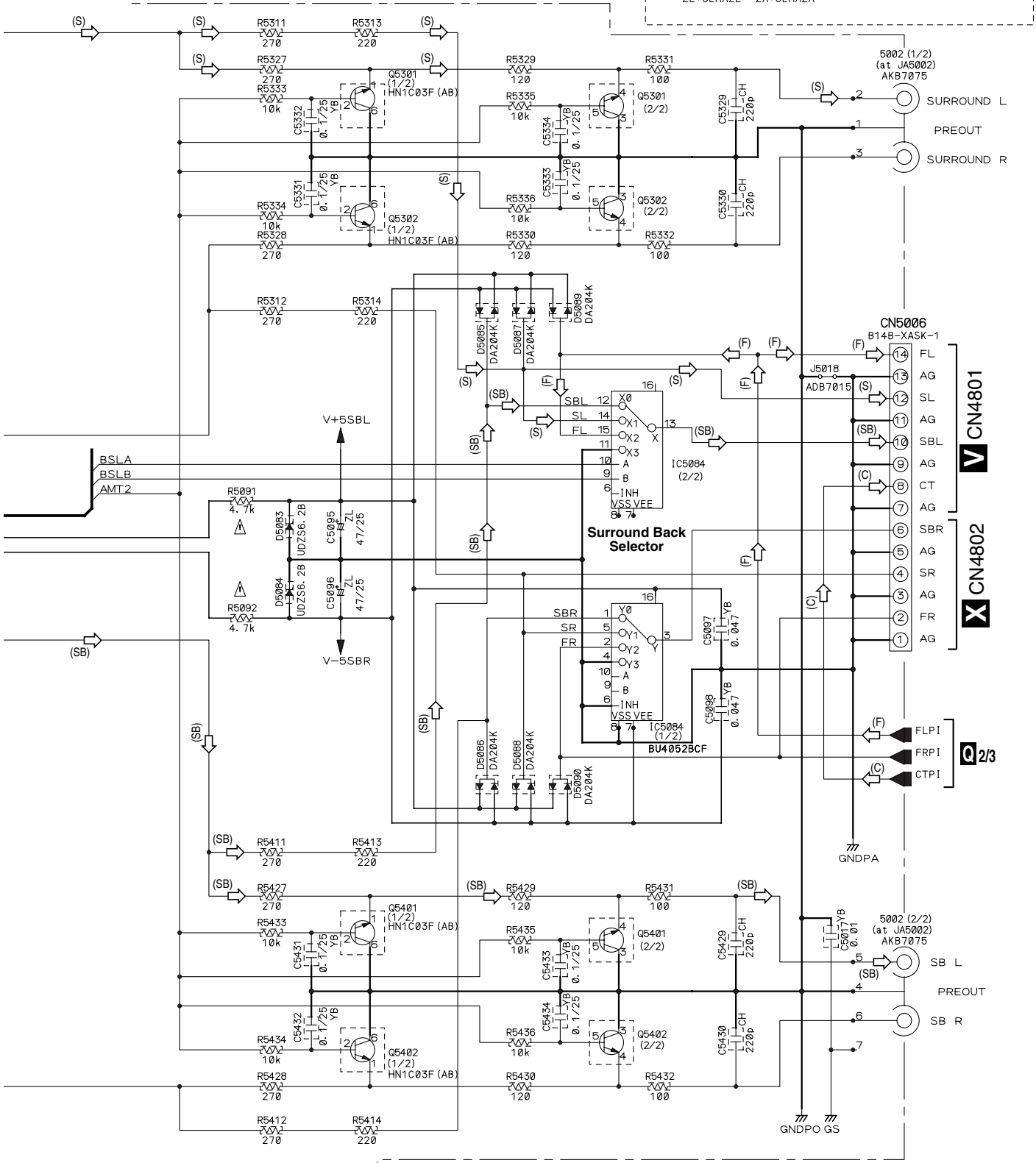
Q 2/3

3.16 VR & PRE OUT ASSY(3/3)



(F) : AUDIO SIGNAL ROUTE (F)
(C) : AUDIO SIGNAL ROUTE (C)
(S) : AUDIO SIGNAL ROUTE (S)
(SB) : AUDIO SIGNAL ROUTE (SB)

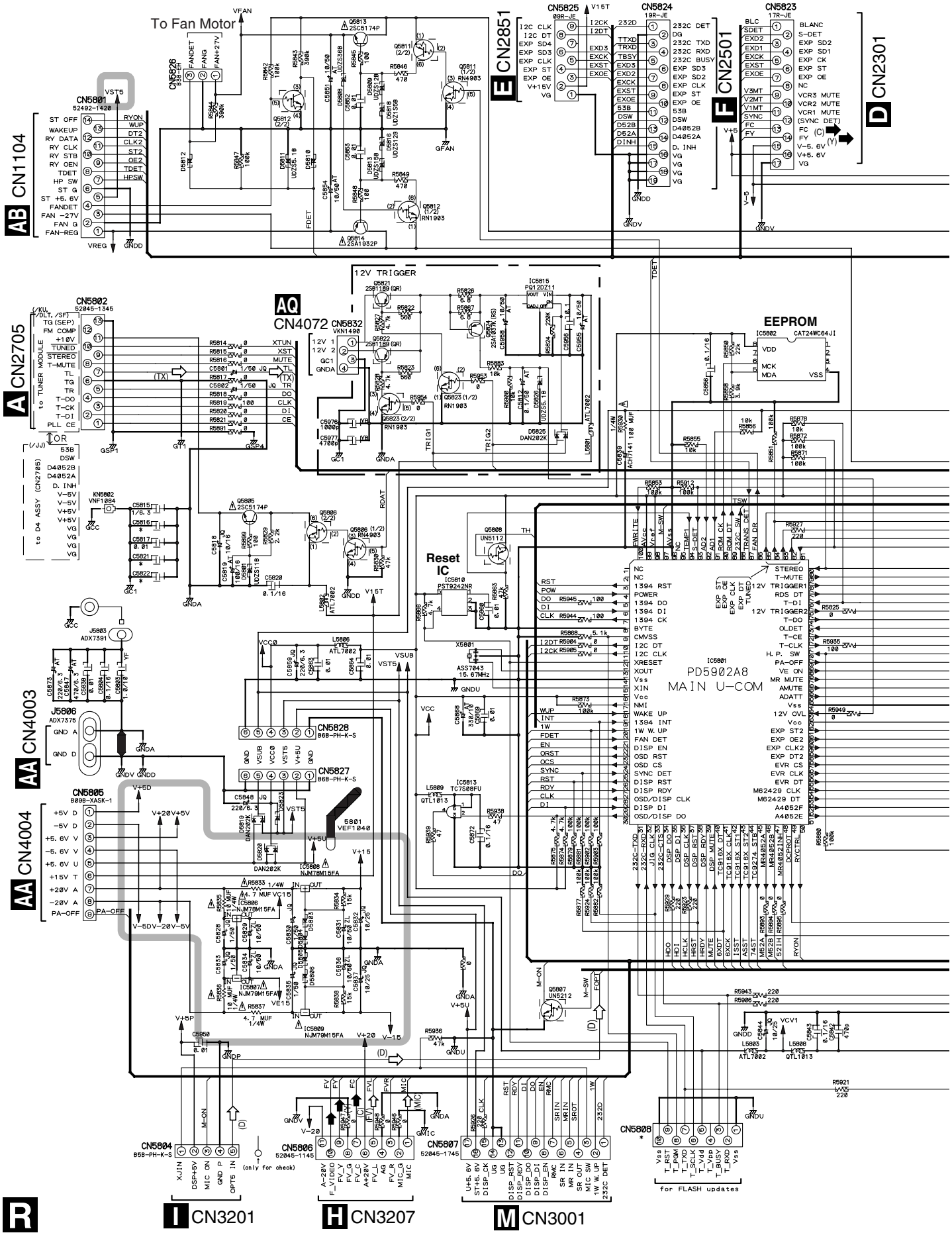
NOTES
1. RESISTORS
Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
Rated power: 1/16W unless otherwise noted.
Tolerance: ±5%(J) unless otherwise noted.
MUF:RD1/4MUF
2. CAPACITORS
Unit: p-pF or μF unless otherwise noted.
Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
ZL:CEHAZL ZA:CEHAZA

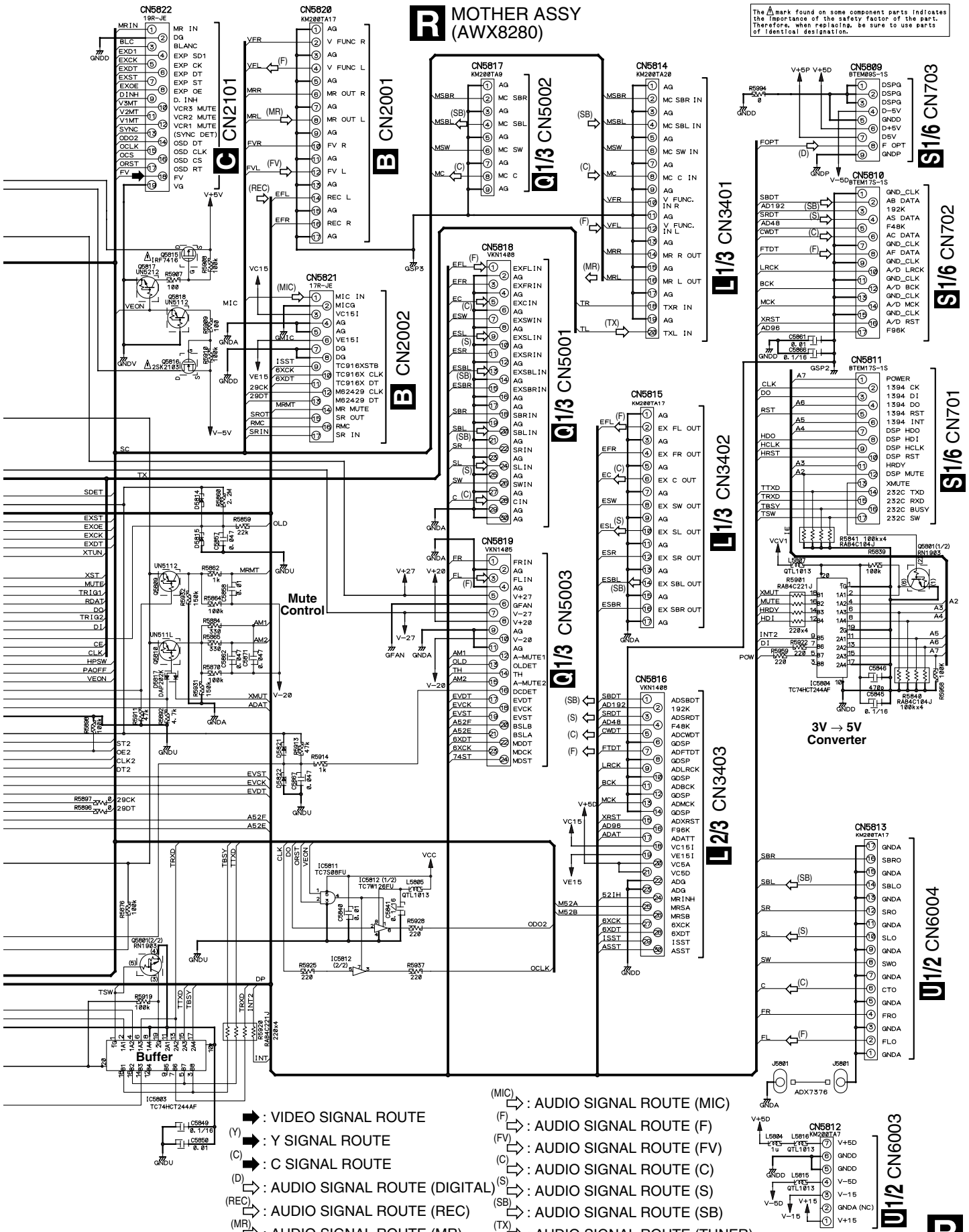


The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

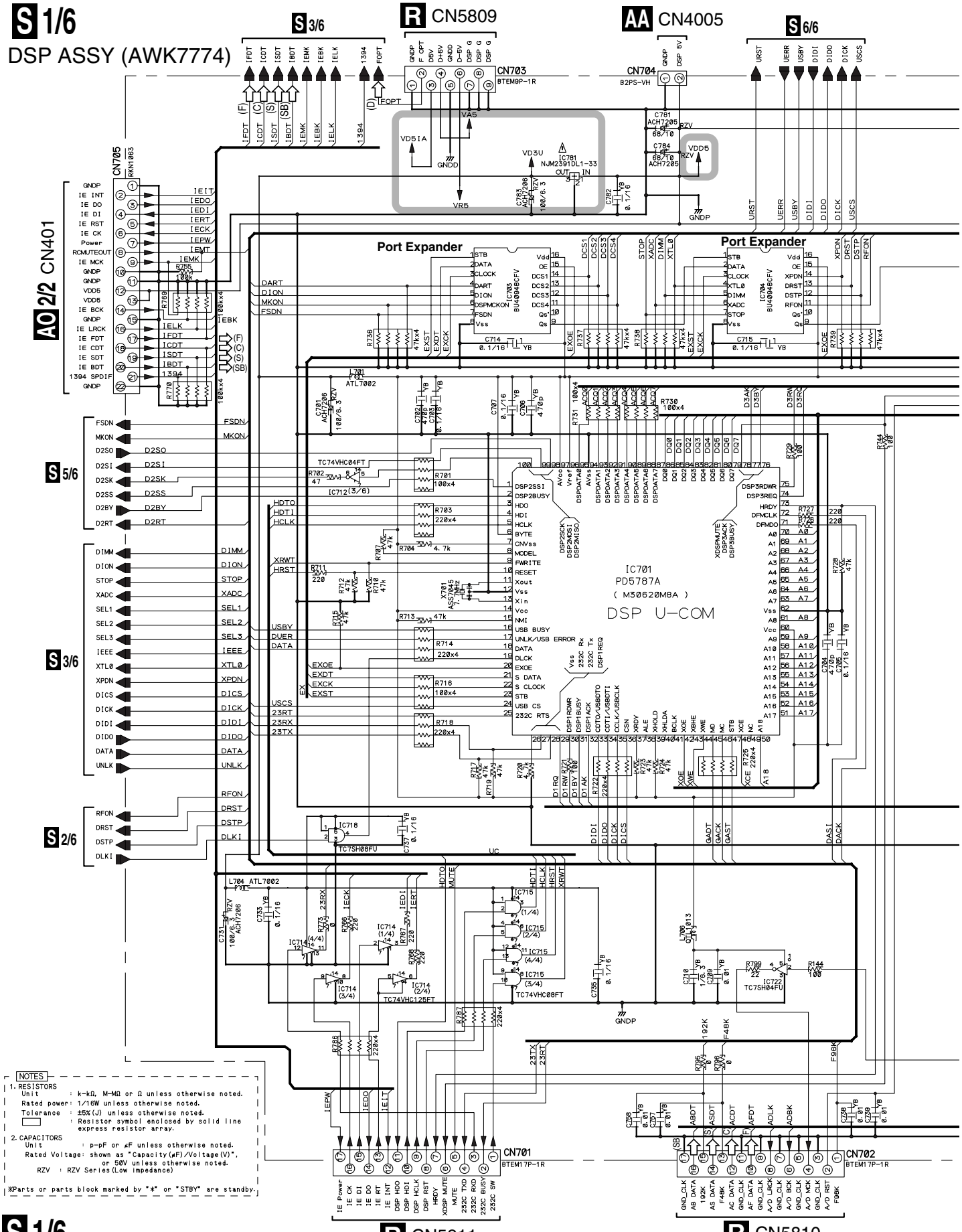
Q 3/3

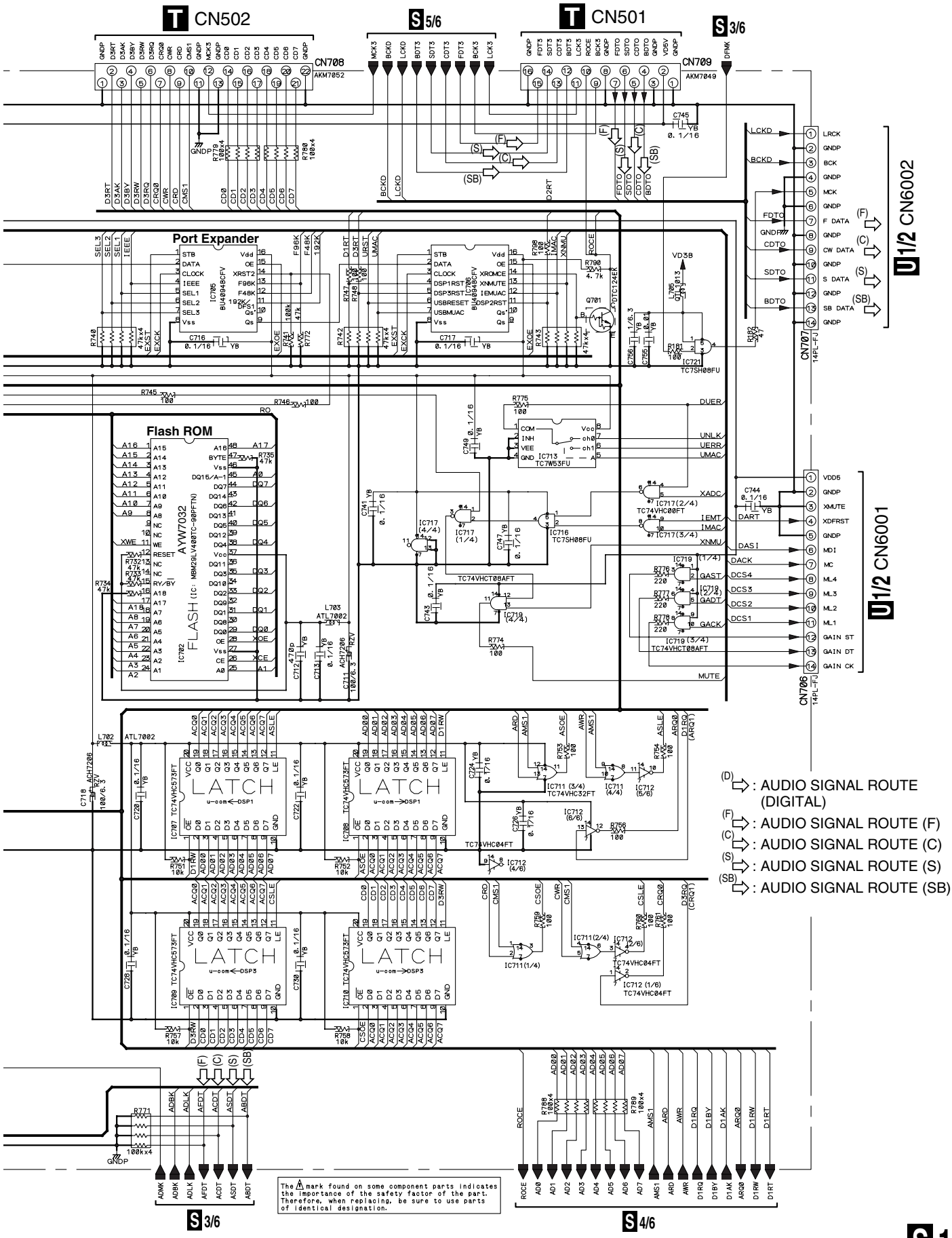
3.17 MOTHER ASSY



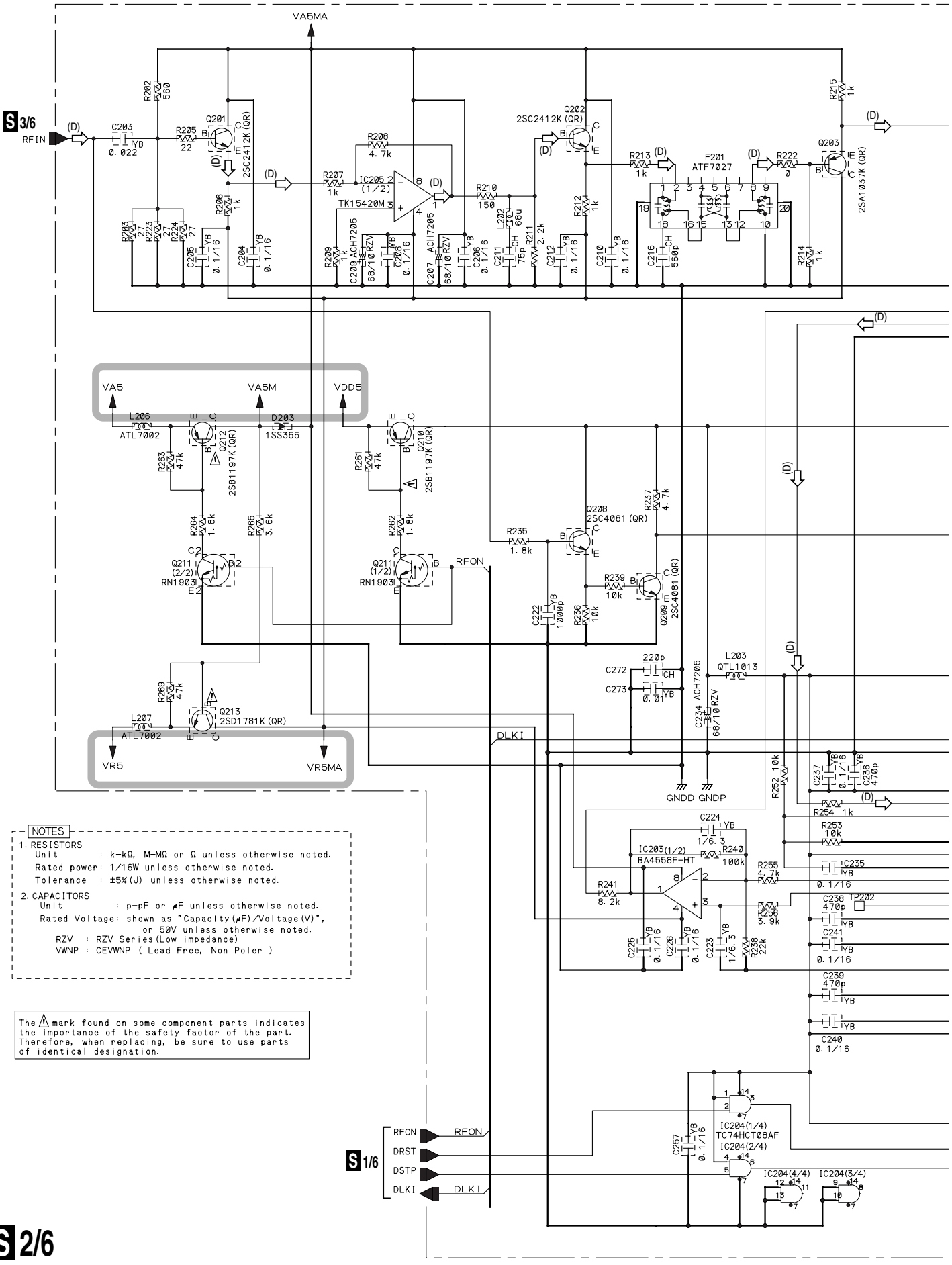

R MOTHER ASSY (AWX8280)
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
C CN2101
B CN2001
B CN2002
Q1/3 CN5002
Q1/3 CN5001
Q1/3 CN5003
L1/3 CN3401
L1/3 CN3402
L2/3 CN3403
S1/6 CN703
S1/6 CN702
S1/6 CN701
U1/2 CN6004
U1/2 CN6003
Mute Control
Buffer
3V → 5V Converter
: VIDEO SIGNAL ROUTE
(Y) : Y SIGNAL ROUTE
(C) : C SIGNAL ROUTE
(D) : AUDIO SIGNAL ROUTE (DIGITAL)
(REC) : AUDIO SIGNAL ROUTE (REC)
(MR) : AUDIO SIGNAL ROUTE (MR)
(MIC) : AUDIO SIGNAL ROUTE (MIC)
(F) : AUDIO SIGNAL ROUTE (F)
(FV) : AUDIO SIGNAL ROUTE (FV)
(C) : AUDIO SIGNAL ROUTE (C)
(S) : AUDIO SIGNAL ROUTE (S)
(SB) : AUDIO SIGNAL ROUTE (SB)
(TX) : AUDIO SIGNAL ROUTE (TUNER)

3.18 DSP ASSY(1/6)




T CN502
S 5/6
T CN501
S 3/6
CN708
AKM7052
CN709
AKM7049
Port Expander
Flash ROM
U1/2 CN6002
U1/2 CN6001
CN707
CN706
14PL-FJ
LATCH
u-com→DSP1
u-com←DSP3
(D) : AUDIO SIGNAL ROUTE (DIGITAL)
(F) : AUDIO SIGNAL ROUTE (F)
(C) : AUDIO SIGNAL ROUTE (C)
(S) : AUDIO SIGNAL ROUTE (S)
(SB) : AUDIO SIGNAL ROUTE (SB)
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.
S 4/6
S 1/6

3.19 DSP ASSY(2/6)



NOTES

1. RESISTORS
   Unit : k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/16W unless otherwise noted.
   Tolerance : ±5%(J) unless otherwise noted.
2. CAPACITORS
   Unit : p-pF or μF unless otherwise noted.
   Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
   RZV : RZV Series(Low impedance)
   VWNP : CEVWNP (Lead Free, Non Poler)

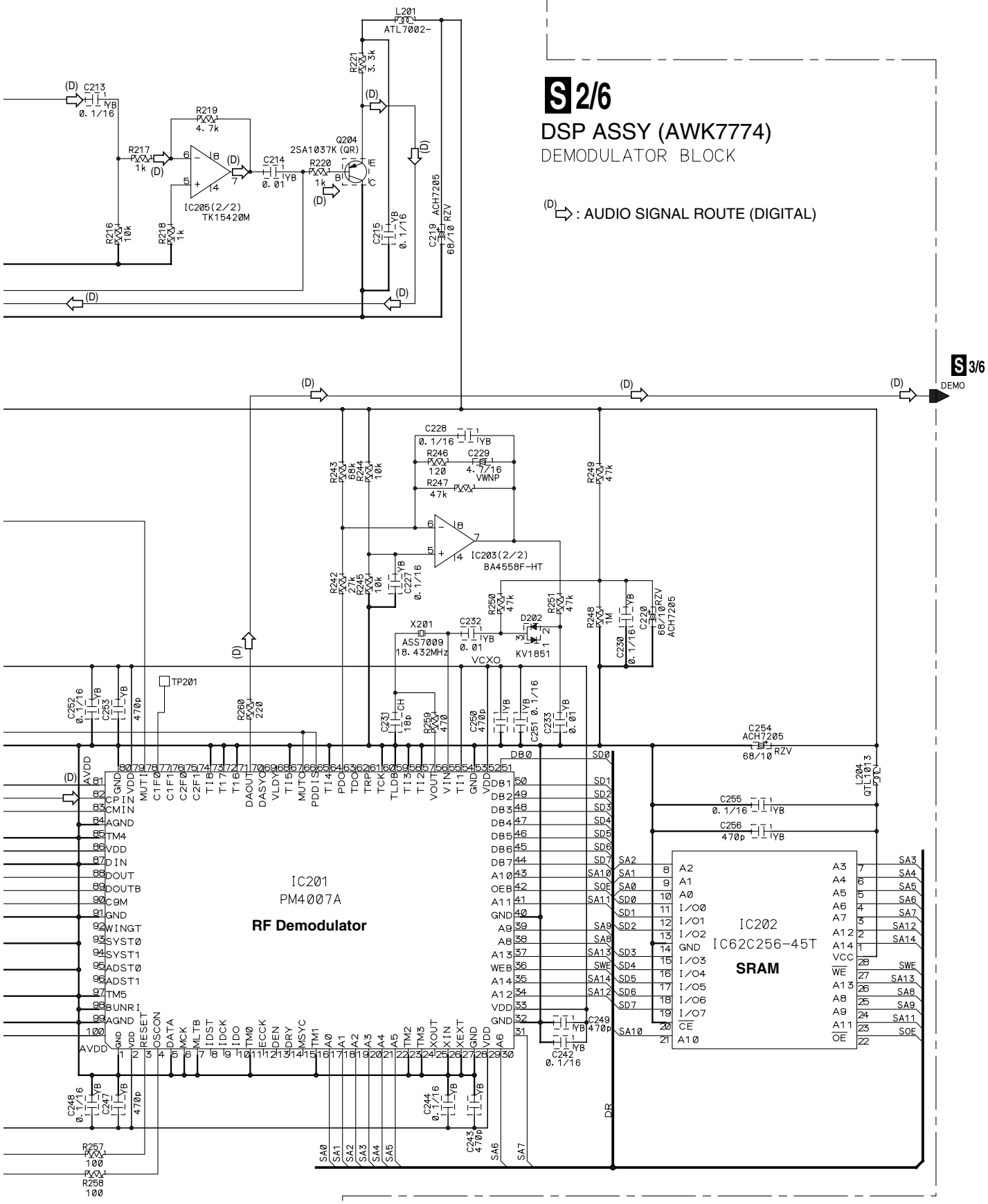
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

S 2/6

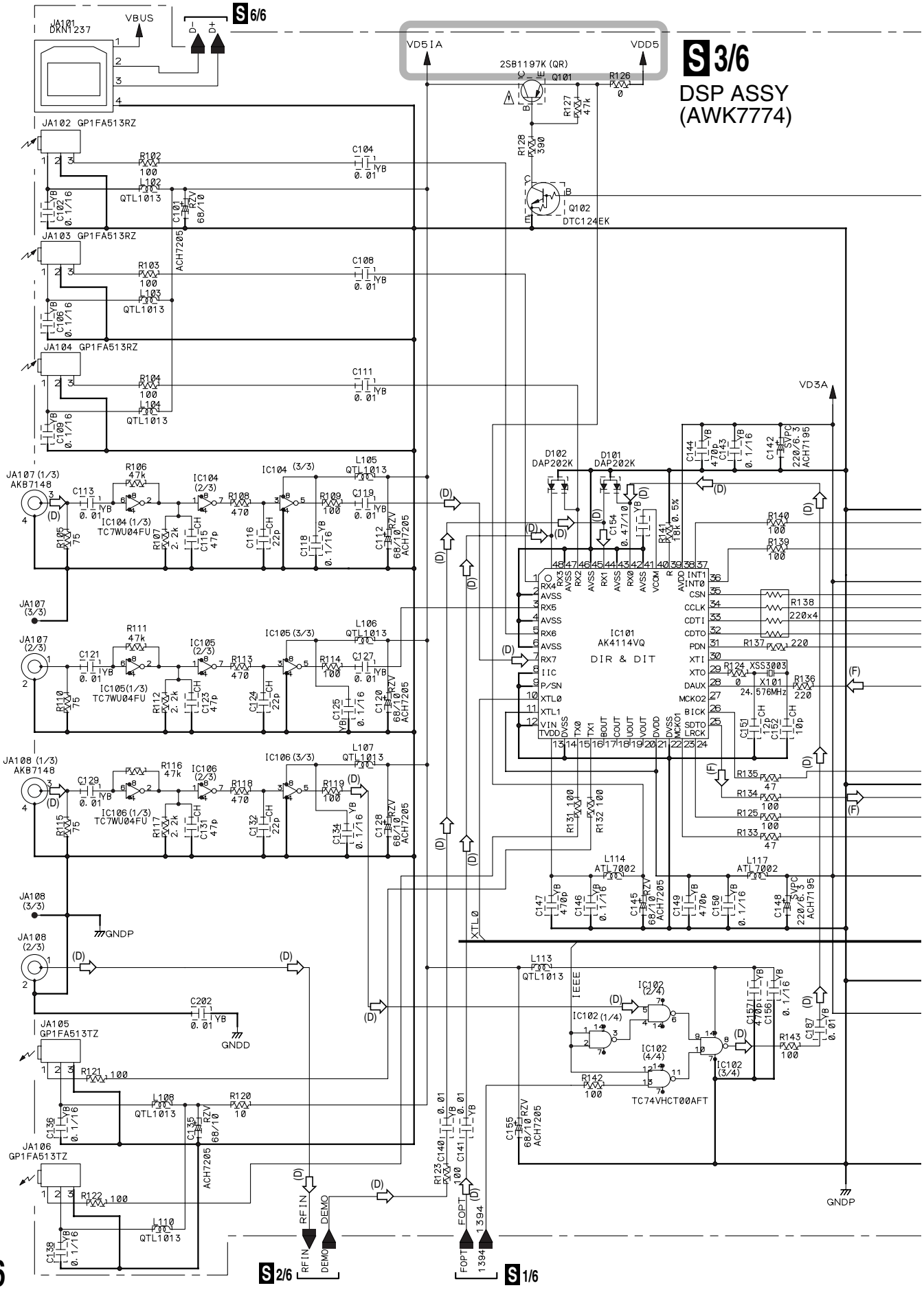
DSP ASSY (AWK7774)

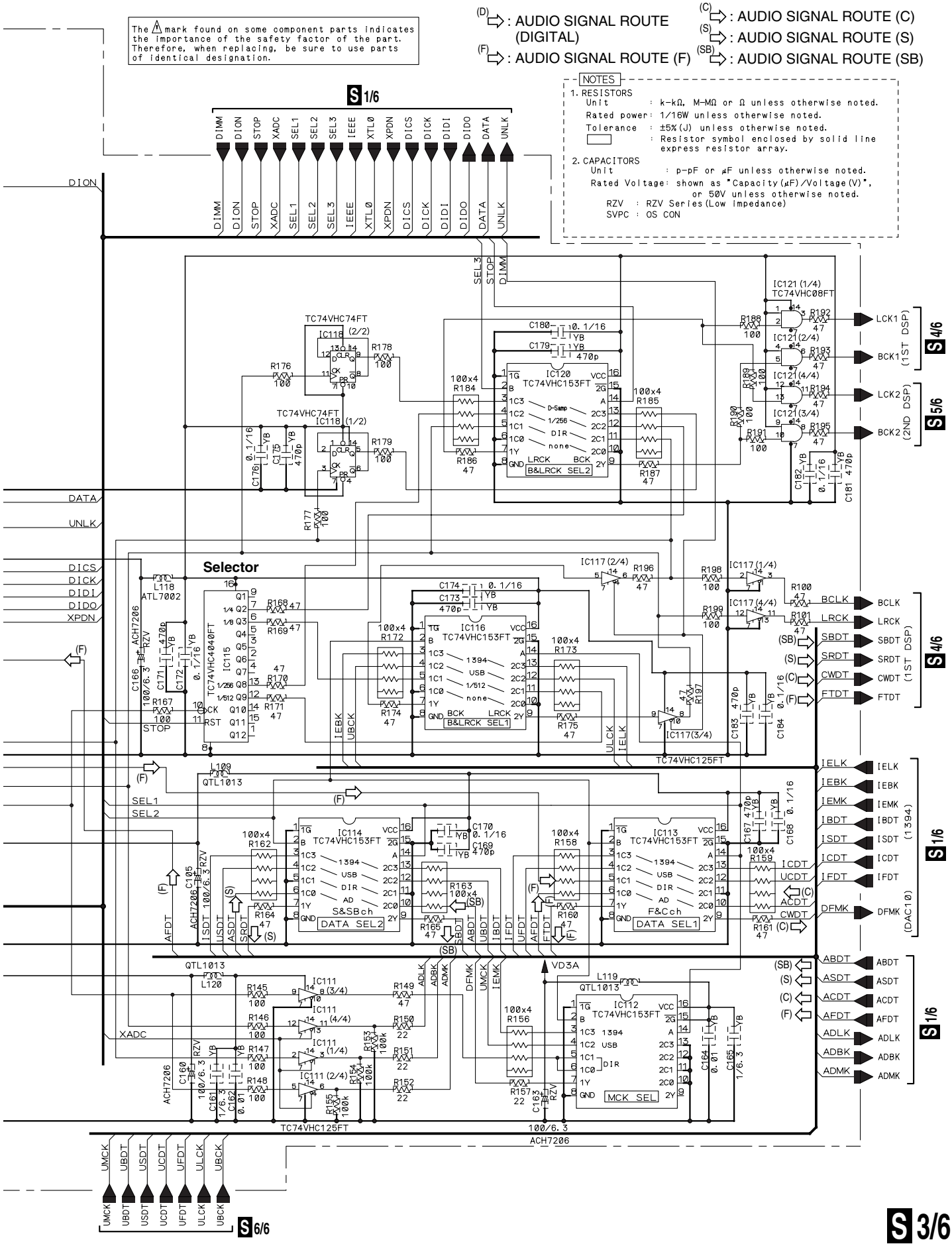
DEMODULATOR BLOCK

(D) ⇨ : AUDIO SIGNAL ROUTE (DIGITAL)

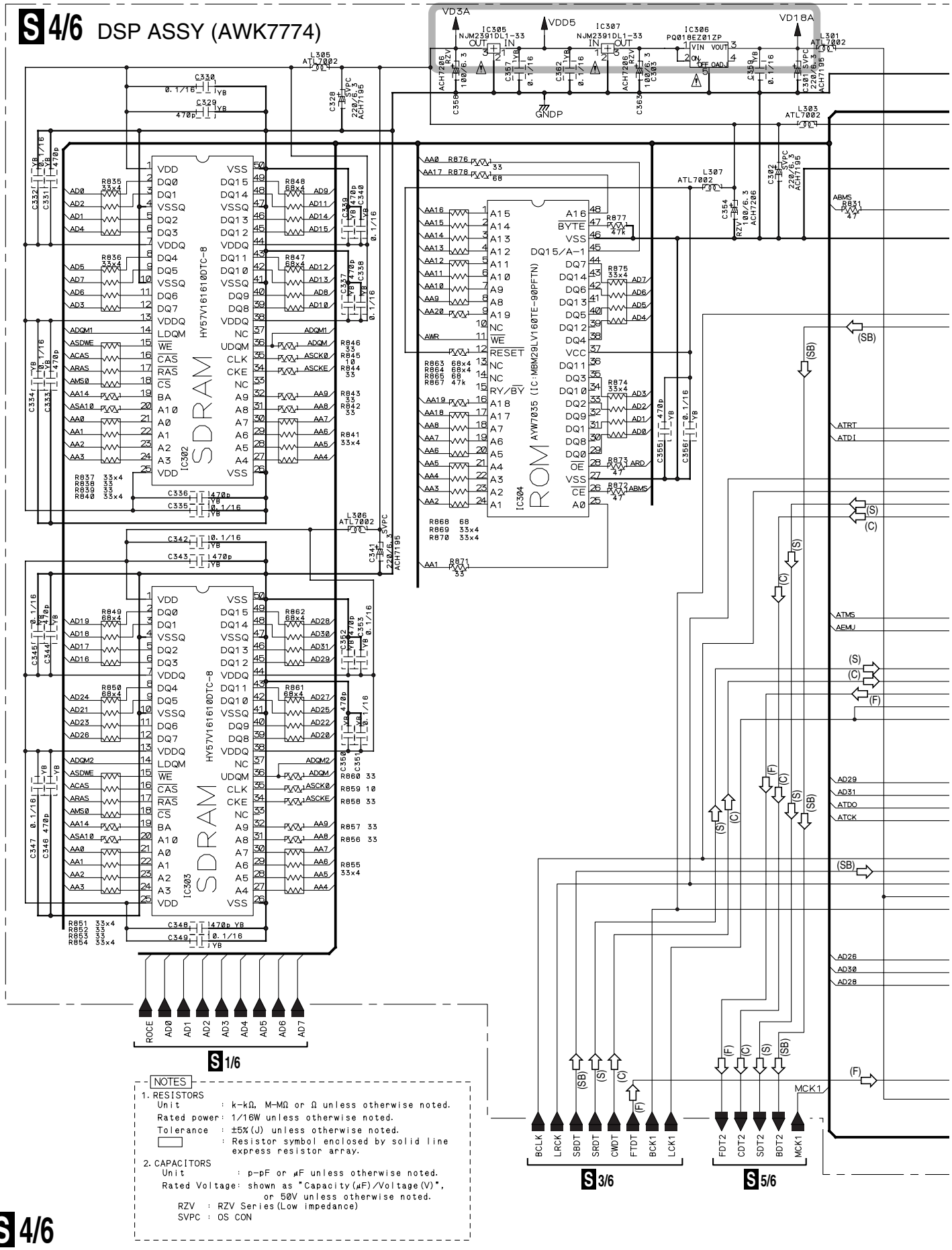


3.20 DSP ASSY(3/6)




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.
(D) : AUDIO SIGNAL ROUTE (DIGITAL)
(C) : AUDIO SIGNAL ROUTE (C)
(S) : AUDIO SIGNAL ROUTE (S)
(F) : AUDIO SIGNAL ROUTE (F)
(SB) : AUDIO SIGNAL ROUTE (SB)
NOTES
1. RESISTORS
Unit : k-kΩ, M-MΩ or Ω unless otherwise noted.
Rated power: 1/16W unless otherwise noted.
Tolerance : ±5%(J) unless otherwise noted.
: Resistor symbol enclosed by solid line express resistor array.
2. CAPACITORS
Unit : p-pF or μF unless otherwise noted.
Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
RZV : RZV Series(Low impedance)
SVPC : OS CON
S 1/6
DIMM DION STOP XADC SEL1 SEL2 SEL3 IEEE XTL0 XPDN DICS DICK DIDI DIDO DATA UNLK
Selector
TC74VHC74FT
TC74VHC153FT
TC74VHC4040FT
TC74VHC125FT
TC74VHC08FT
ATL7002
QTL1013
ACH7206
LCK1
BCK1
LCK2
BCK2
BCLK
LRCK
SBDT
SRDT
CWDT
FTDT
IELK
IEBK
IEMK
IBDT
ISDT
ICDT
IFDT
DFMK
ABDT
ASDT
ACDT
AFDT
ADLK
ADBK
ADMK
XADC
VD3A
S 4/6
S 5/6
S 1/6
S 6/6
S 3/6

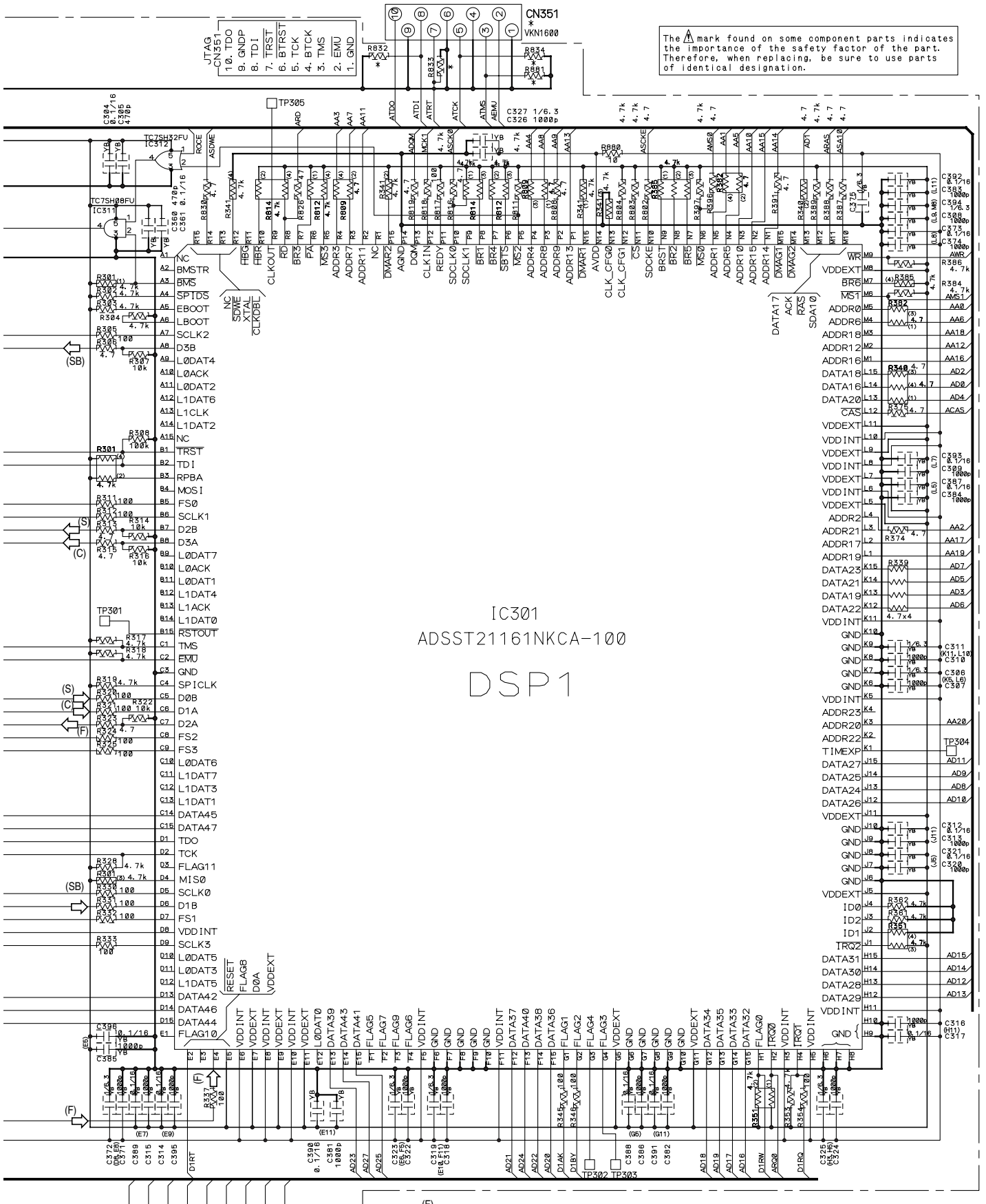
3.21 DSP ASSY(4/6)



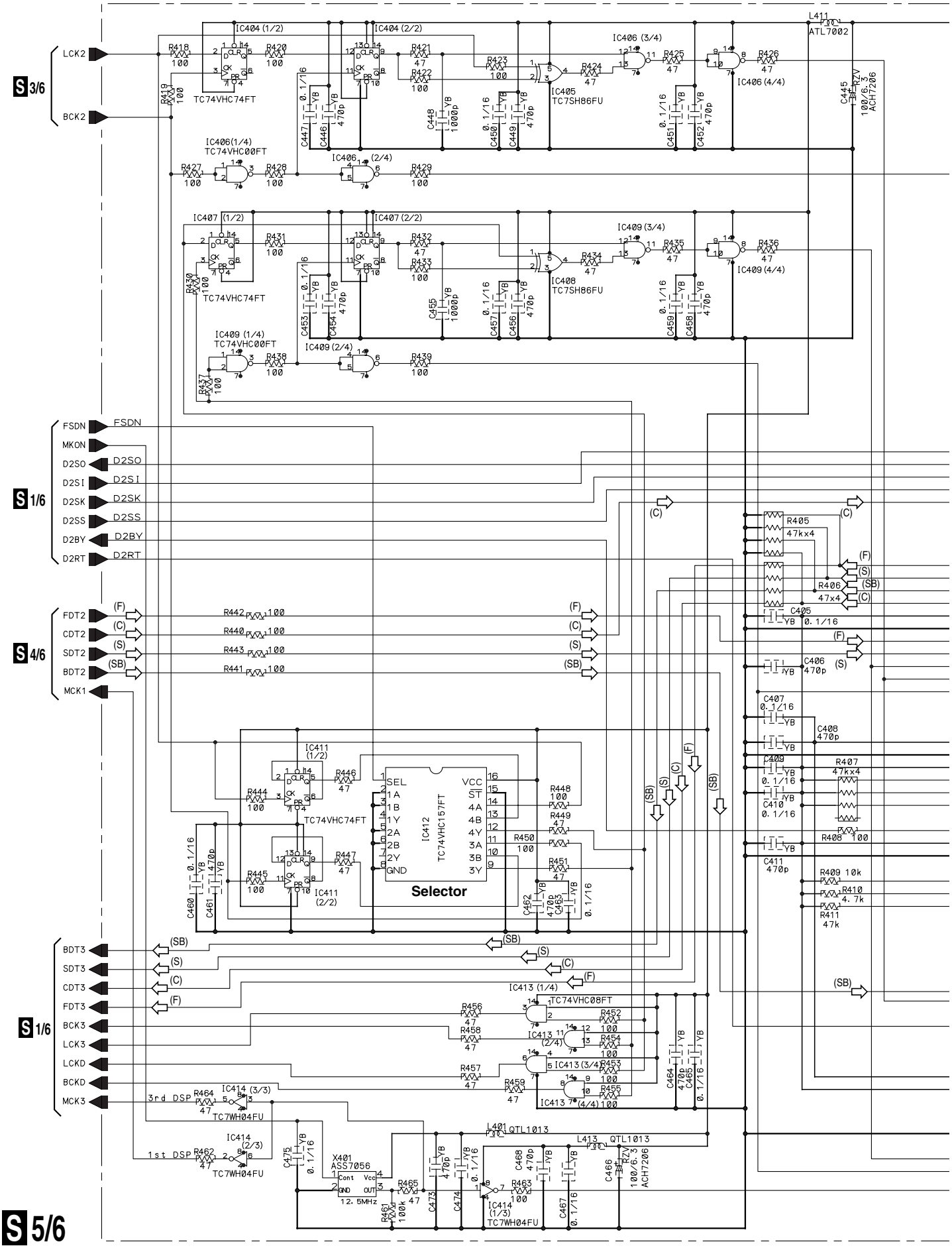
NOTES

1. RESISTORS
   - Unit : k-kΩ, M-MΩ or Ω unless otherwise noted.
   - Rated power: 1/16W unless otherwise noted.
   - Tolerance : ±5%(J) unless otherwise noted.
   - ▭ : Resistor symbol enclosed by solid line express resistor array.
2. CAPACITORS
   - Unit : p-pF or μF unless otherwise noted.
   - Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
   - RZV : RZV Series(Low impedance)
   - SVPC : OS CON

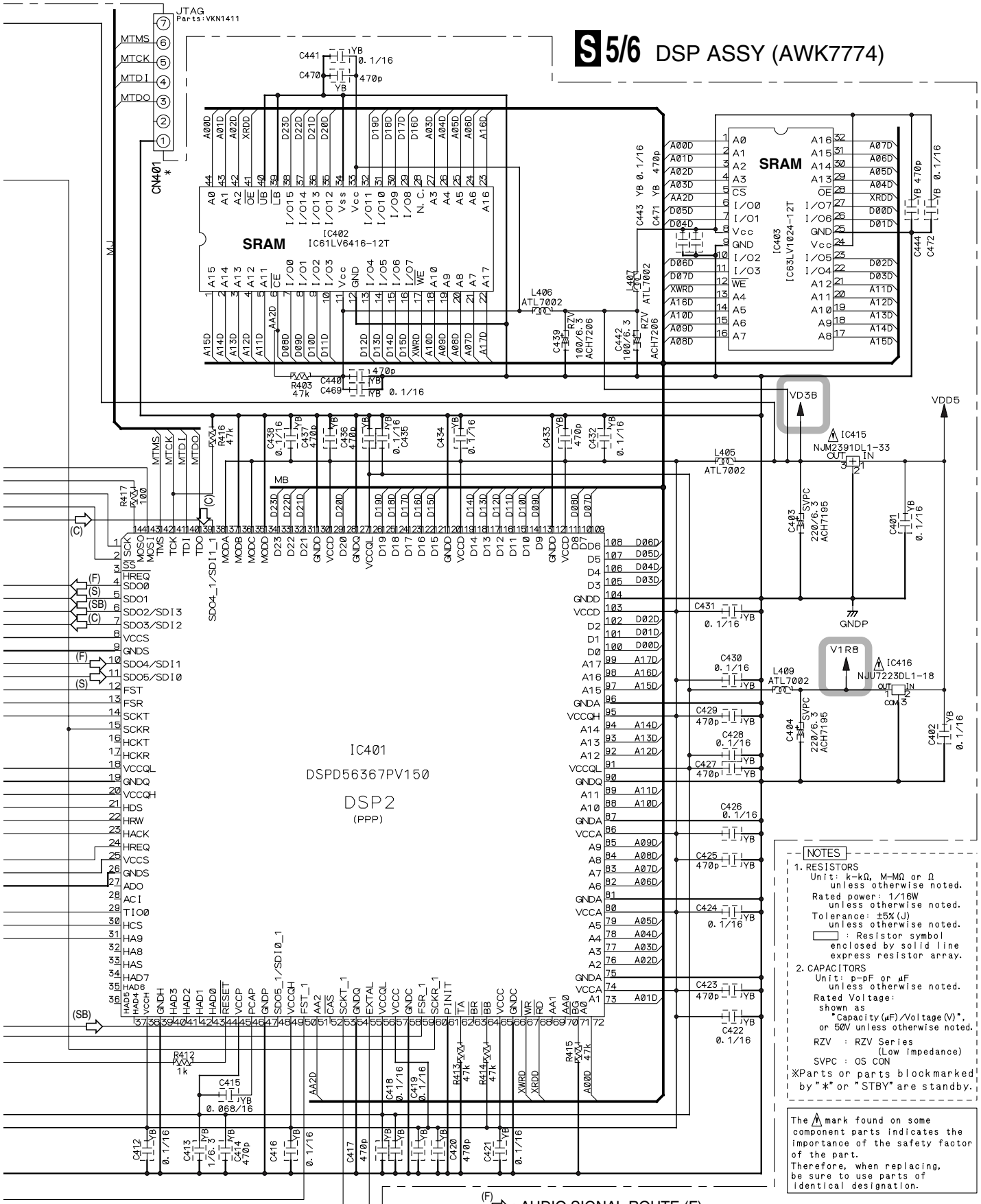
S 4/6


JTAG
CN351
10. TDO
9. GNDP
8. TDI
7. TRST
6. BTRST
5. TCK
4. BTCK
3. TMS
2. EMU
1. GND
CN351
VKN1600
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.
IC301
ADSST21161NKCA-100
DSP1
(F) : AUDIO SIGNAL ROUTE (F)
(C) : AUDIO SIGNAL ROUTE (C)
(S) : AUDIO SIGNAL ROUTE (S)
(SB) : AUDIO SIGNAL ROUTE (SB)
S 1/6
S 4/6

3.22 DSP ASSY(5/6)



S 5/6 DSP ASSY (AWK7774)



NOTES

1. RESISTORS
   Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/16W unless otherwise noted.
   Tolerance: ±5%(J) unless otherwise noted.
   : Resistor symbol enclosed by solid line express resistor array.
2. CAPACITORS
   Unit: p-pF or μF unless otherwise noted.
   Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
   RZV : RZV Series (Low impedance)
   SVPC : OS CON

※Parts or parts blockmarked by "*" or "STBY" are standby.

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.

3.23 DSP ASSY(6/6)

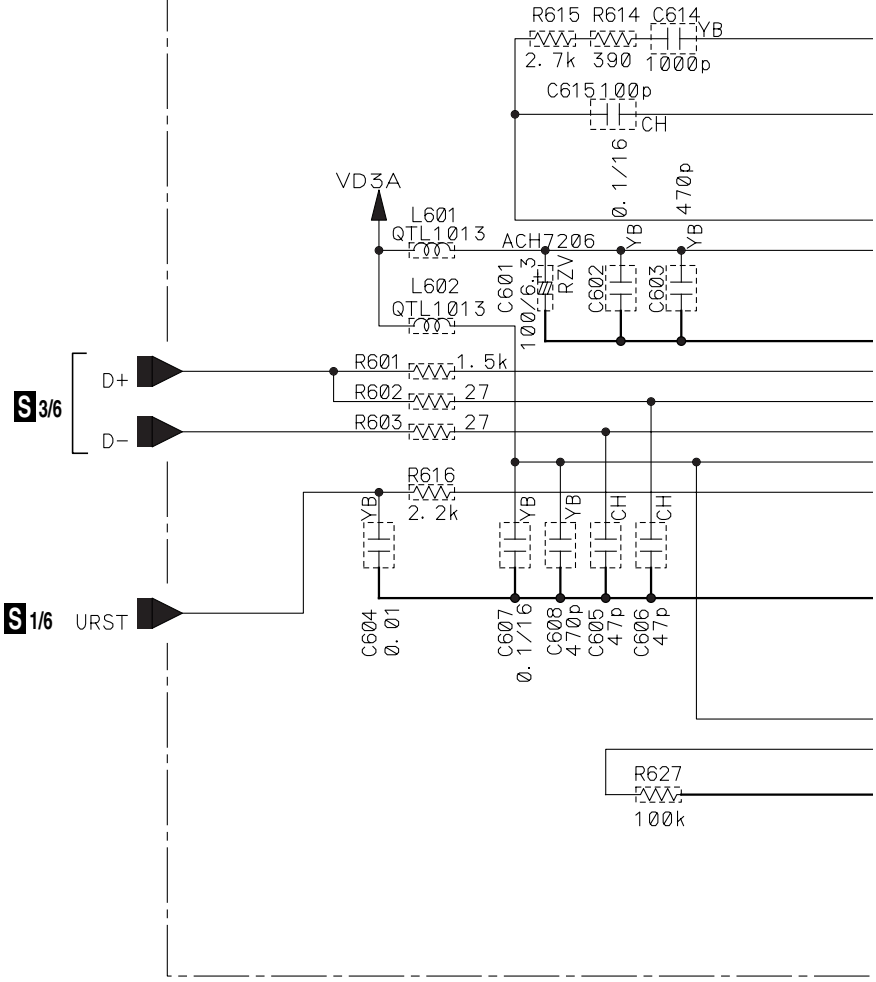
NOTES

1. RESISTORS
   Unit : k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/16W unless otherwise noted.
   Tolerance : ±5%(J) unless otherwise noted.

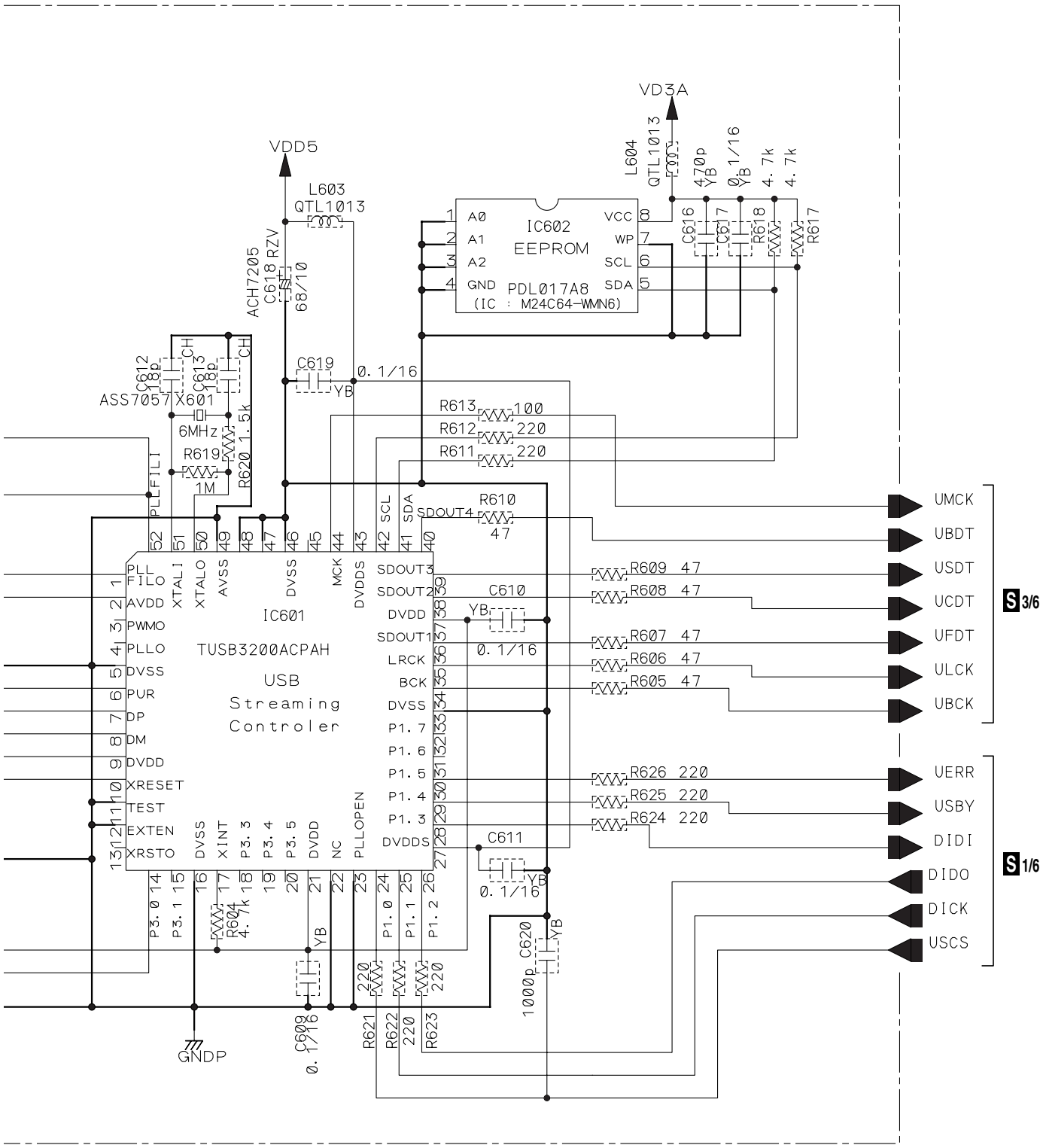
2. CAPACITORS
   Unit : p-pF or μF unless otherwise noted.
   Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
   RZV : RZV Series(Low impedance)

S 6/6

DSP ASSY (AWK7774)

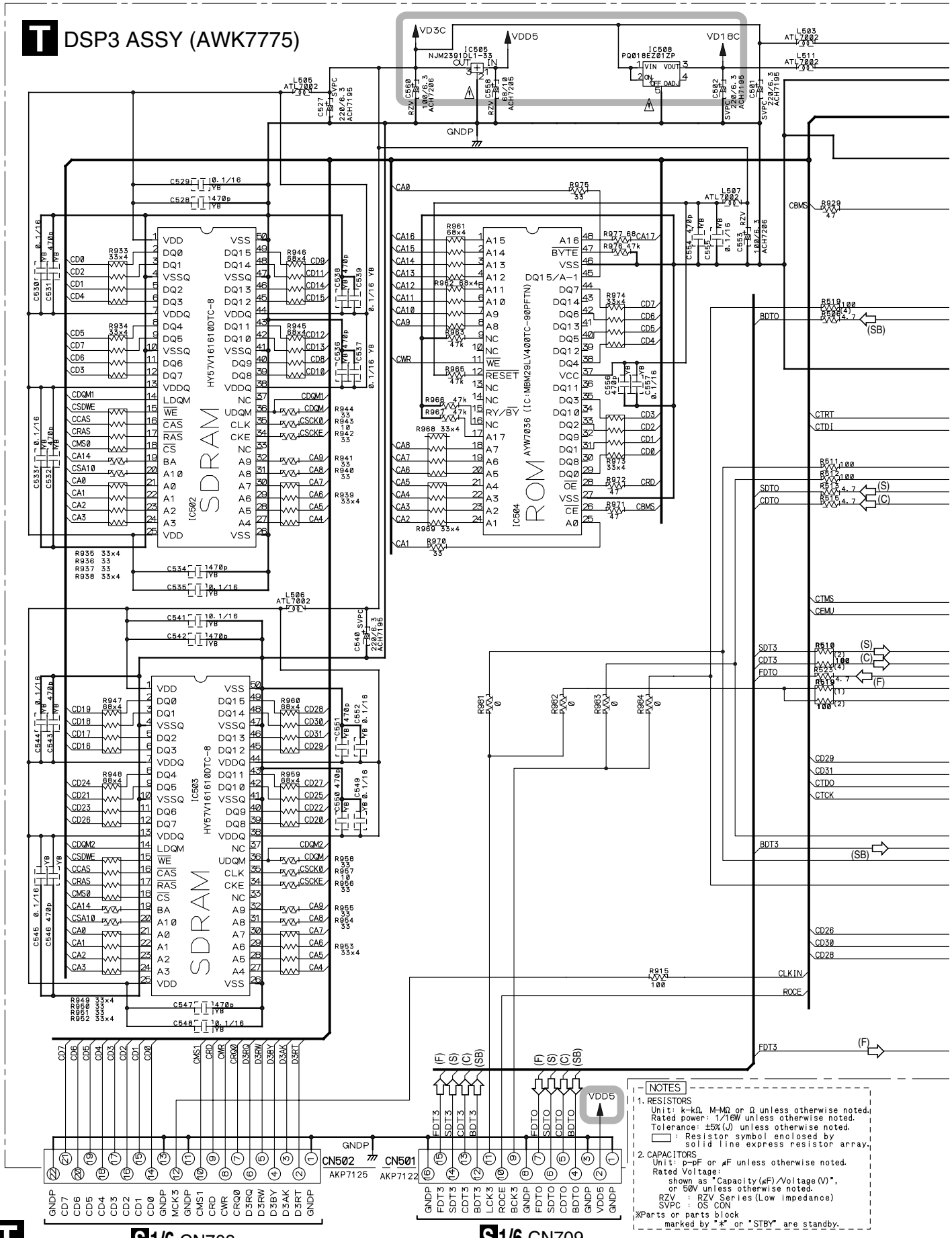


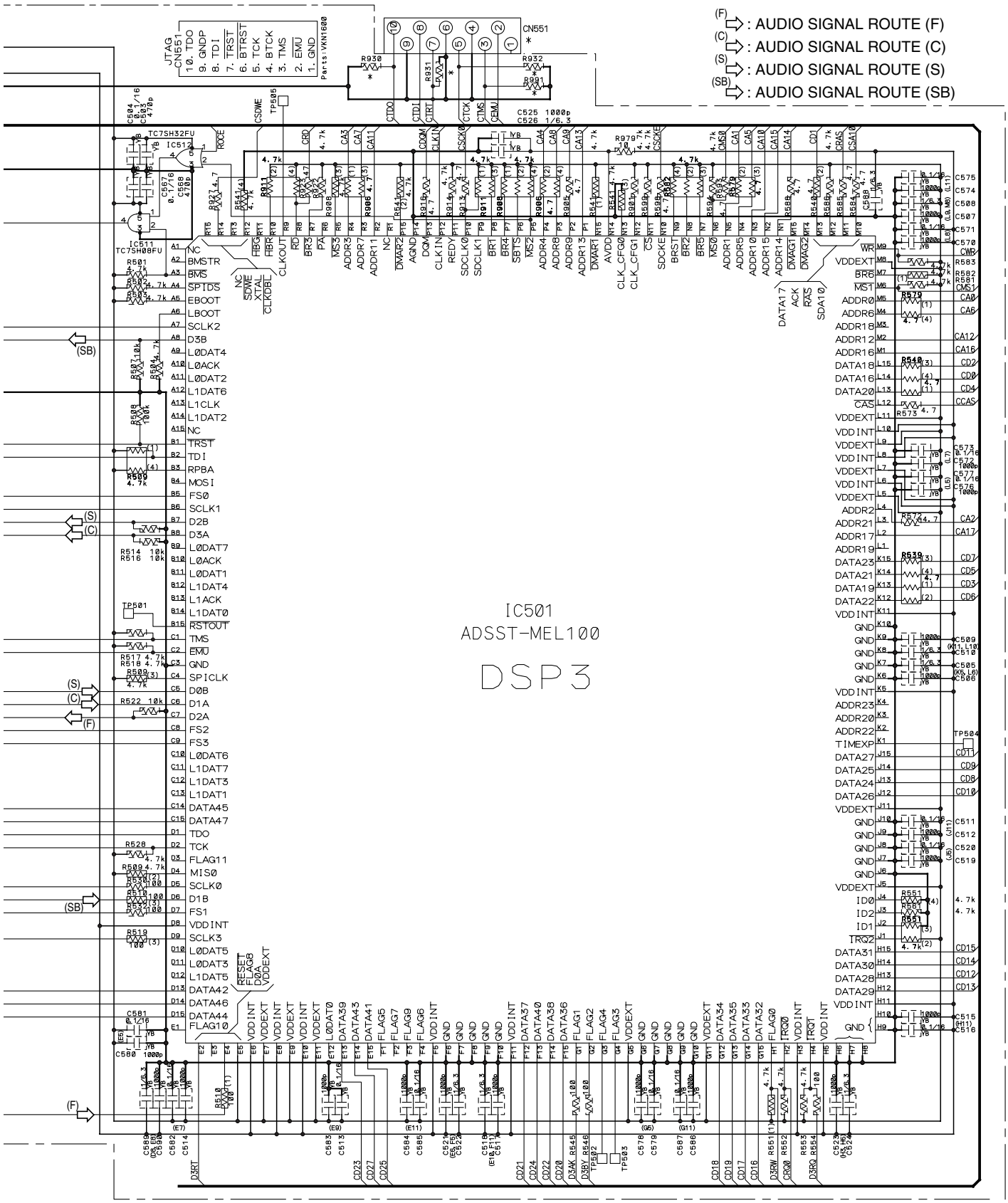
S 6/6


VD3A
VDD5
L603
QTL1013
L604
QTL1013
IC602
EEPROM
PDL017A8
(IC : M24C64-WMN6)
A0
A1
A2
GND
VCC
WP
SCL
SDA
C616
C617
R618
R617
470p
0.1/16
4.7k
4.7k
ACH7205
C618 RZV
68/10
C612
18p
C613
18p
ASS7057
X601
6MHz
R619
1M
R620 1.5k
C619
0.1/16
YB
R613 100
R612 220
R611 220
R610
47
IC601
TUSB3200ACPAH
USB
Streaming
Controler
PLFILI
PLL
FILO
AVDD
PWMO
PLLO
DVSS
PUR
DP
DM
DVDD
XRESET
TEST
EXTEN
XRSTO
XTALI
XTALO
AVSS
DVSS
MCK
DVDDS
SCL
SDA
SDOUT4
SDOUT3
SDOUT2
DVDD
SDOUT1
LRCK
BCK
DVSS
P1.7
P1.6
P1.5
P1.4
P1.3
DVDDS
DVSS
XINT
P3.3
P3.4
P3.5
DVDD
NC
PLLOPEN
P3.0
P3.1
P1.0
P1.1
P1.2
R609 47
R608 47
C610
R607 47
R606 47
R605 47
R626 220
R625 220
R624 220
C611
R604
4.7k
C609
0.1/16
R621
R622
220
R623
C620
1000p
GNDP
UMCK
UBDT
USDT
UCDT
UFDT
ULCK
UBCK
UERR
USBY
DIDI
DIDO
DICK
USCS
S 3/6
S 1/6

S 6/6

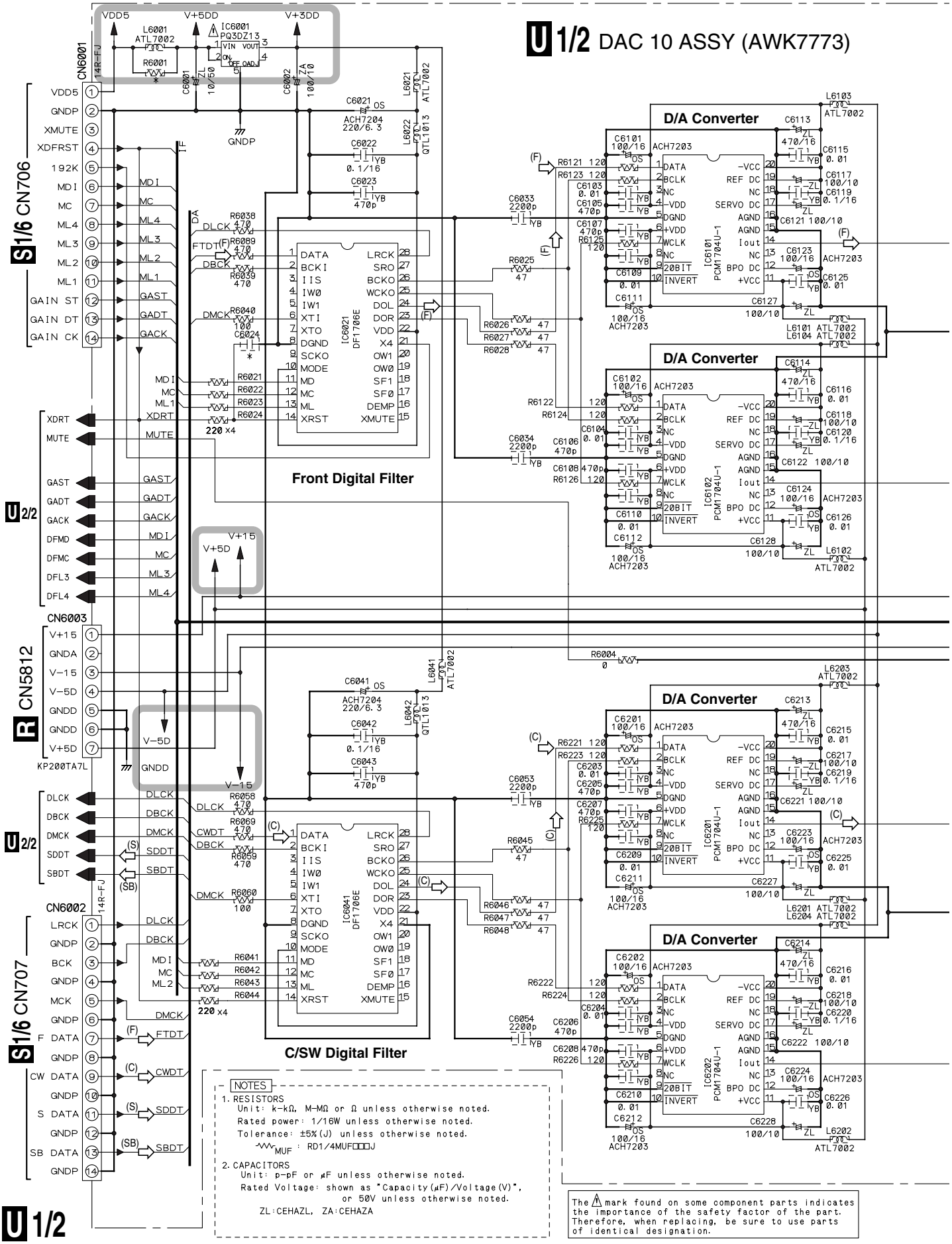
3.24 DSP3 ASSY



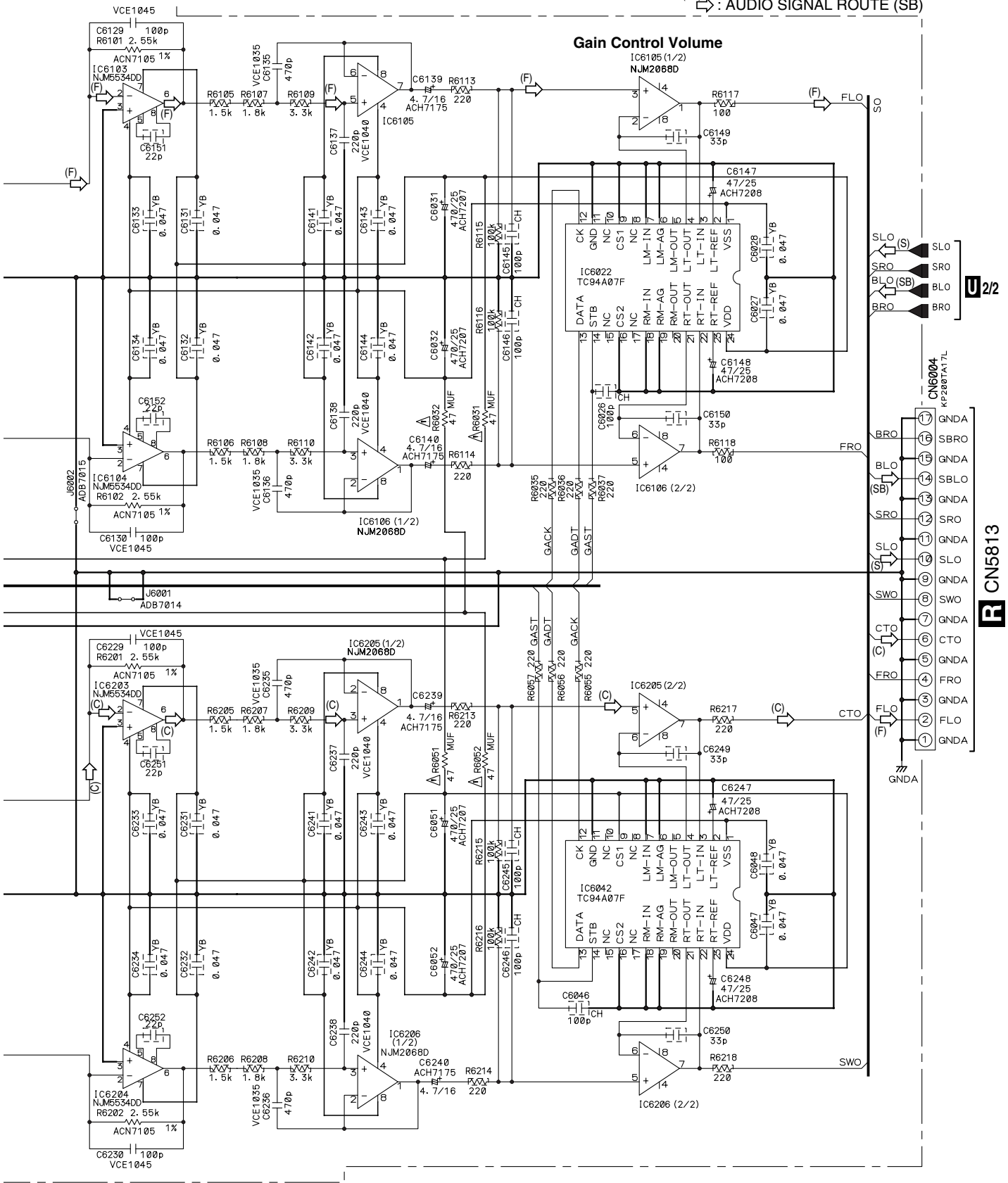


The ⚠ mark found on some component parts indicates the importance of the safety factor of the part.
Therefore, when replacing, be sure to use parts of identical designation.

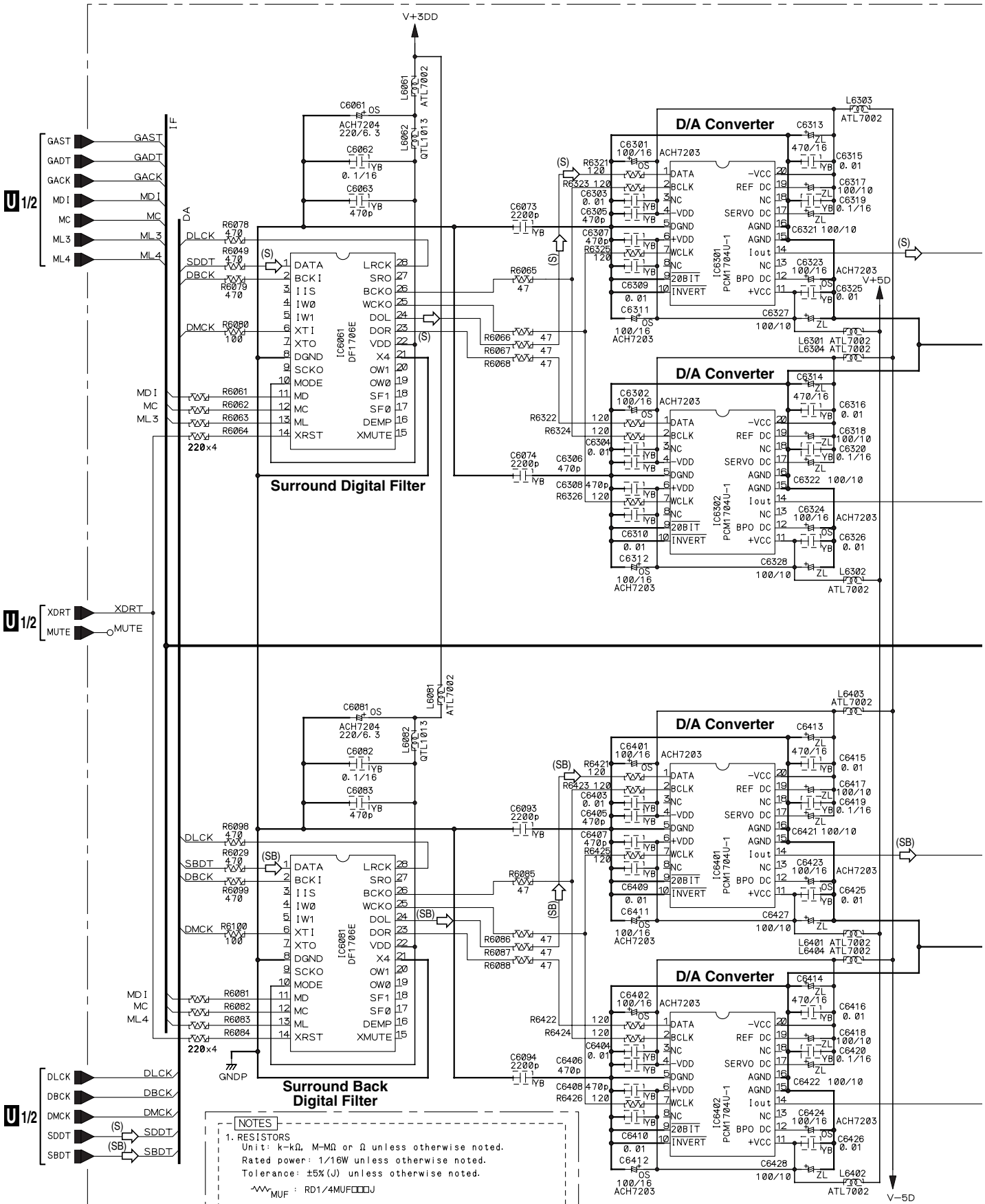
3.25 DAC10 ASSY(1/2)



(F) : AUDIO SIGNAL ROUTE (F)
(C) : AUDIO SIGNAL ROUTE (C)
(S) : AUDIO SIGNAL ROUTE (S)
(SB) : AUDIO SIGNAL ROUTE (SB)

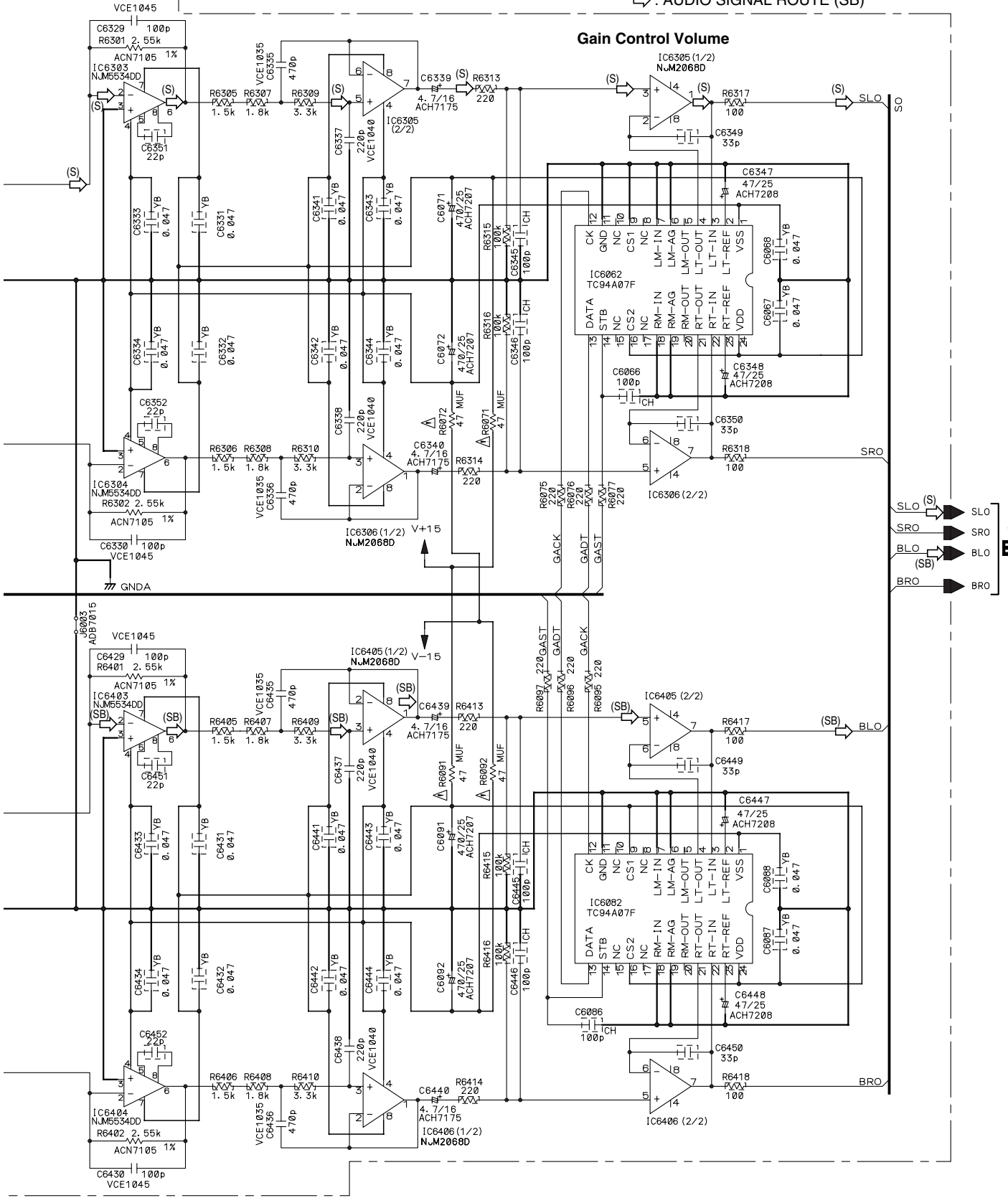


3.26 DAC10 ASSY(2/2)

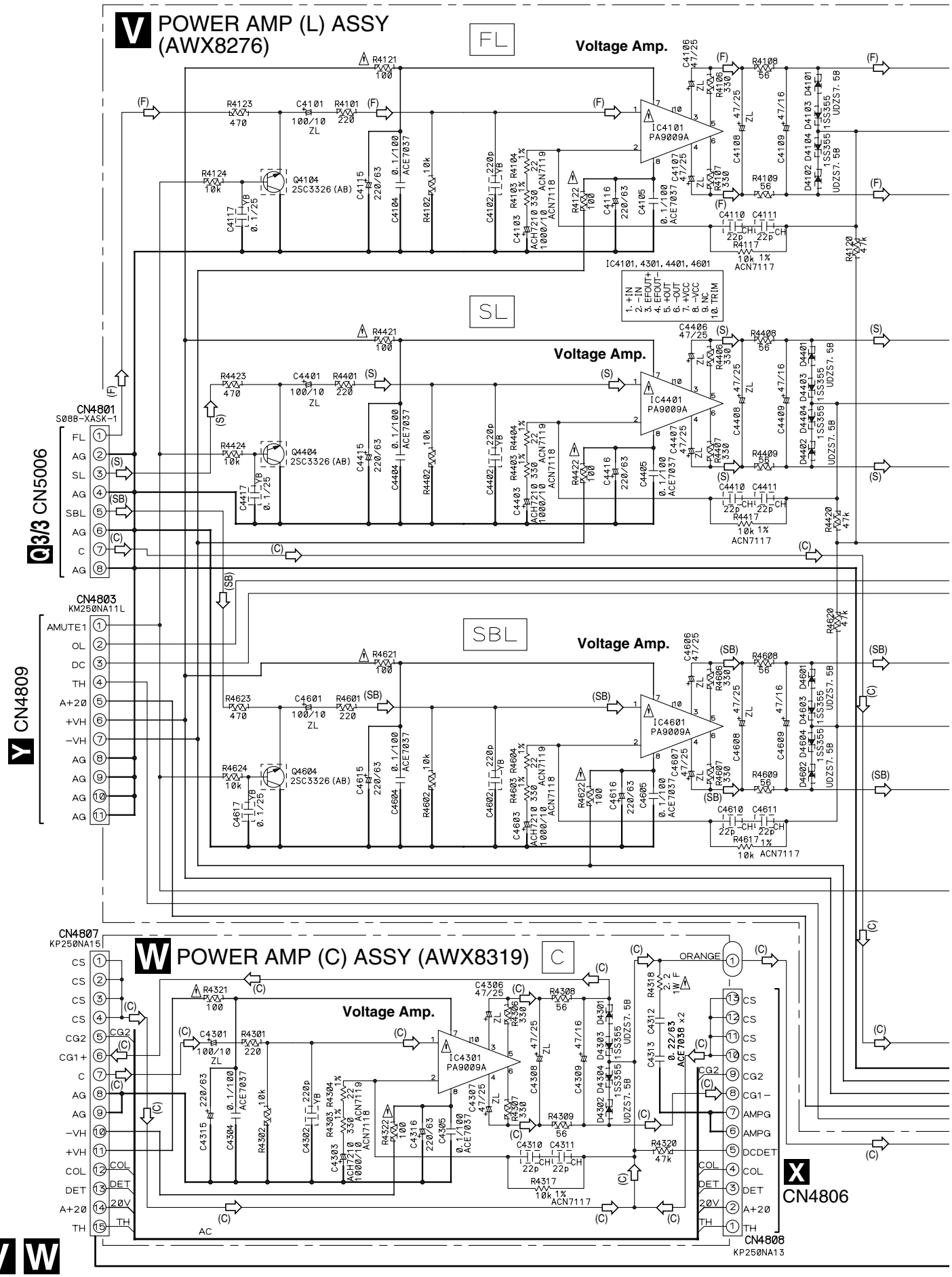


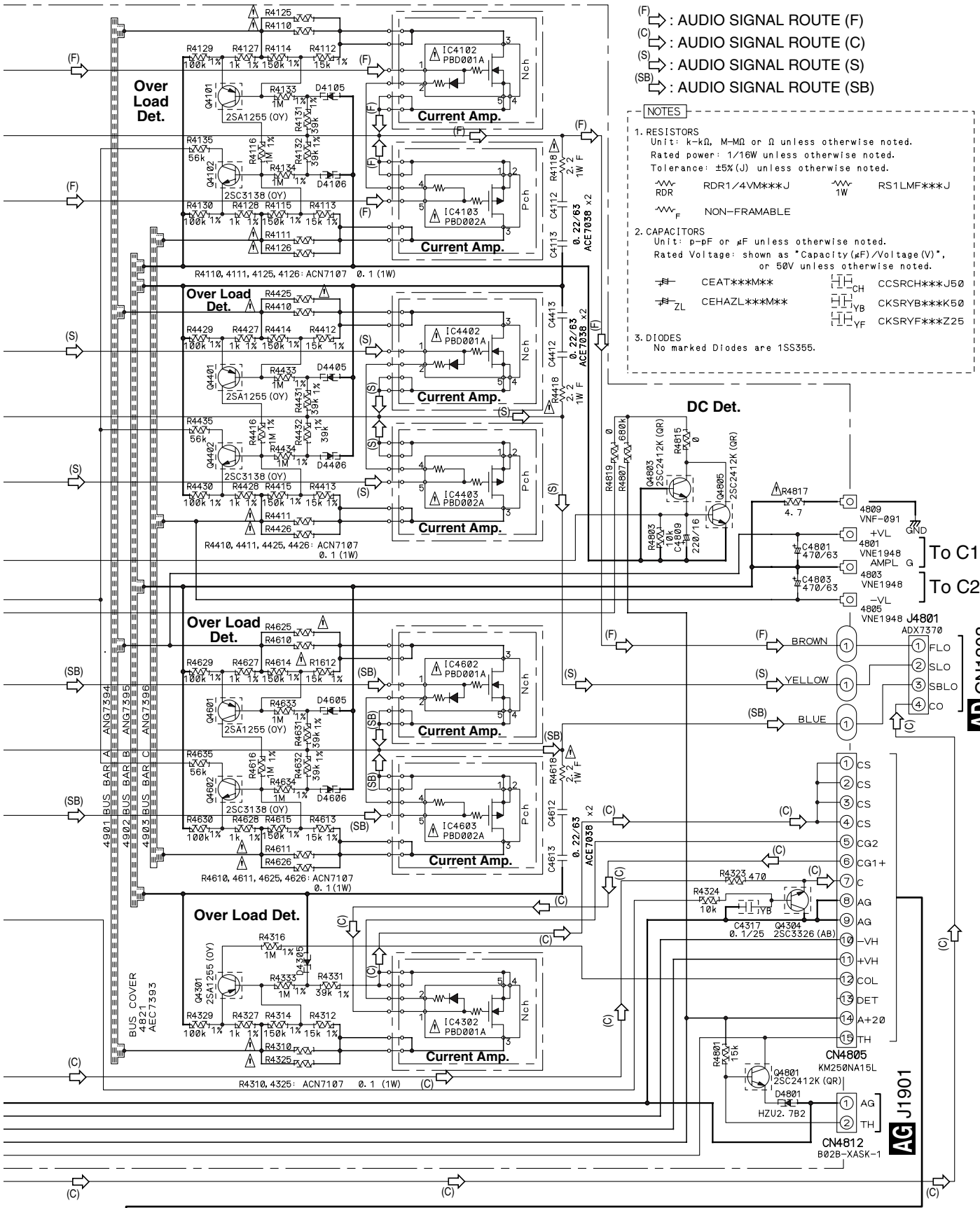
U 2/2 DAC 10 ASSY (AWK7773)

(S) : AUDIO SIGNAL ROUTE (S)
(SB) : AUDIO SIGNAL ROUTE (SB)

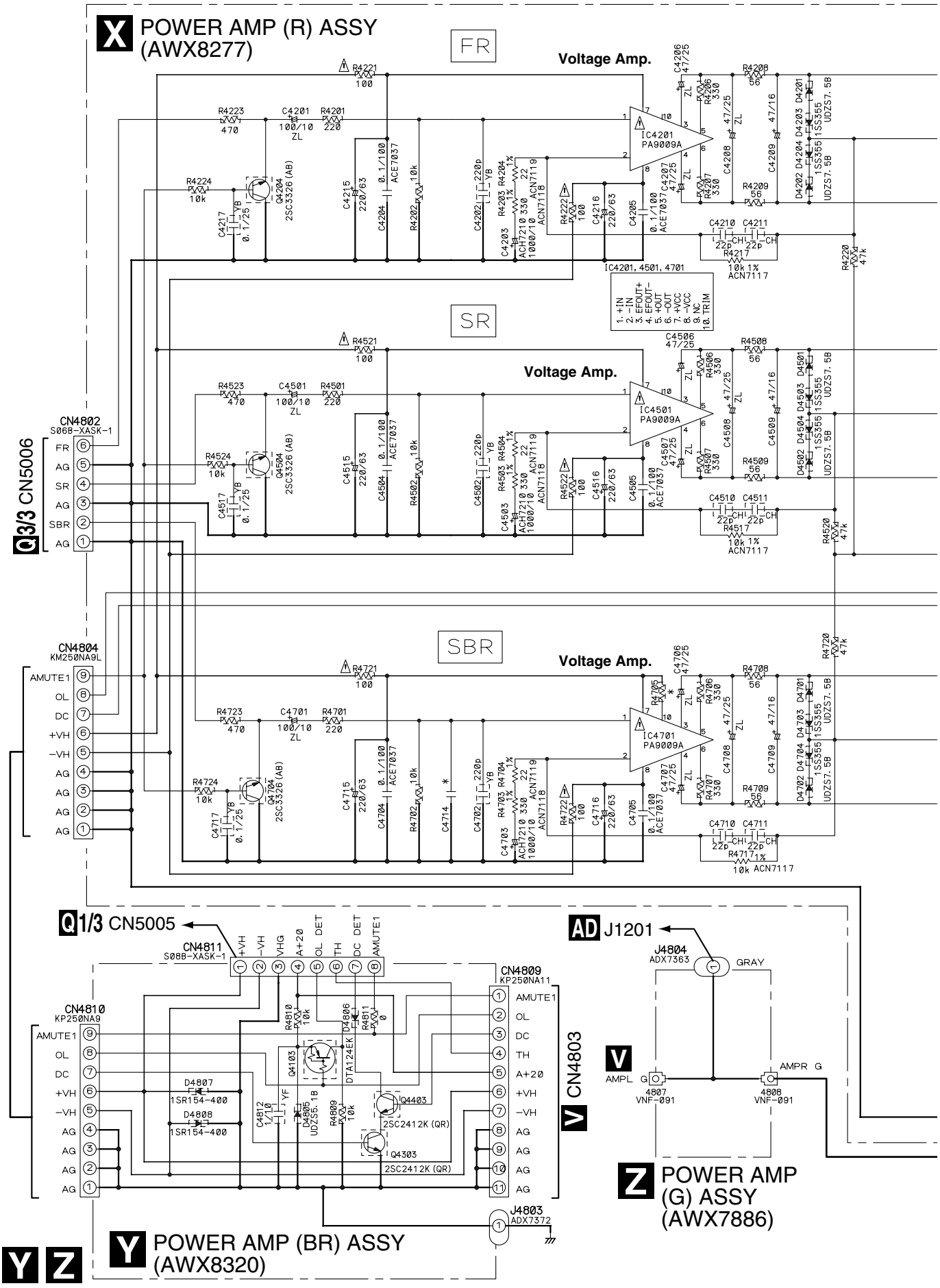


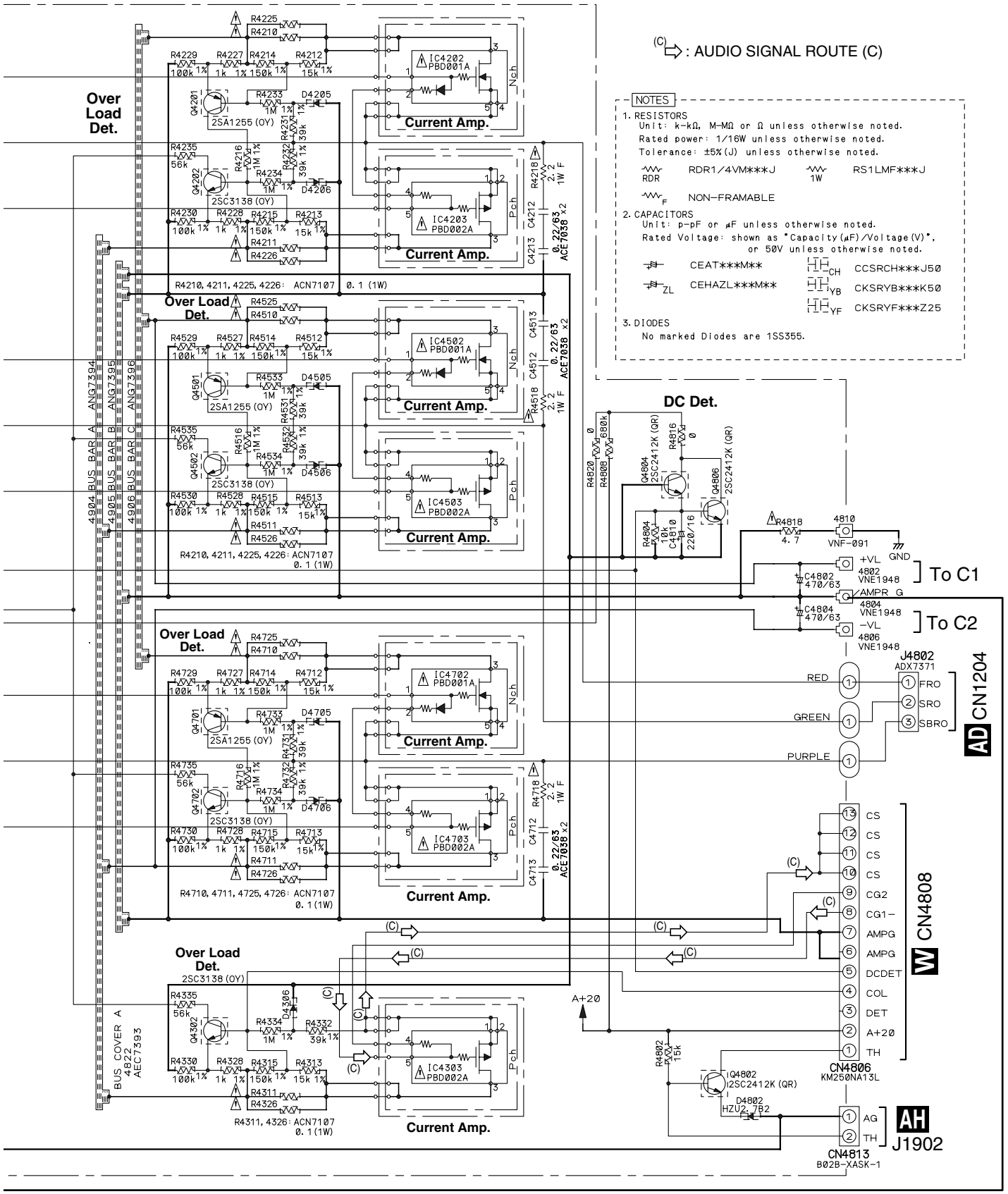
3.27 POWER AMP(L) and POWER AMP(C) ASSYS




(F) : AUDIO SIGNAL ROUTE (F)
(C) : AUDIO SIGNAL ROUTE (C)
(S) : AUDIO SIGNAL ROUTE (S)
(SB) : AUDIO SIGNAL ROUTE (SB)
NOTES
1. RESISTORS
Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
Rated power: 1/16W unless otherwise noted.
Tolerance: ±5%(J) unless otherwise noted.
RDR RDR1/4VM***J
1W RS1LMF***J
F NON-FRAMABLE
2. CAPACITORS
Unit: p-pF or μF unless otherwise noted.
Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
CEAT***M**
CEHAZL***M**
CH CCSRCH***J50
YB CKSRYB***K50
YF CKSRYF***Z25
3. DIODES
No marked Diodes are 1SS355.
Over Load Det.
Current Amp.
IC4102 PBD001A
IC4103 PBD002A
IC4402 PBD001A
IC4403 PBD002A
IC4602 PBD001A
IC4603 PBD002A
IC4302 PBD001A
R4110, 4111, 4125, 4126: ACN7107 0.1 (1W)
R4410, 4411, 4425, 4426: ACN7107 0.1 (1W)
R4610, 4611, 4625, 4626: ACN7107 0.1 (1W)
R4310, 4325: ACN7107 0.1 (1W)
DC Det.
To C1
To C2
CN1203
J4801
ADX7370
BROWN
YELLOW
BLUE
FLO
SLO
SBLO
CO
CN4805
KM250NA15L
J1901
CN4812
B02B-XASK-1
BUS COVER 4821 AEC7393
4901 BUS BAR A ANG7394
4902 BUS BAR B ANG7395
4903 BUS BAR C ANG7396
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.

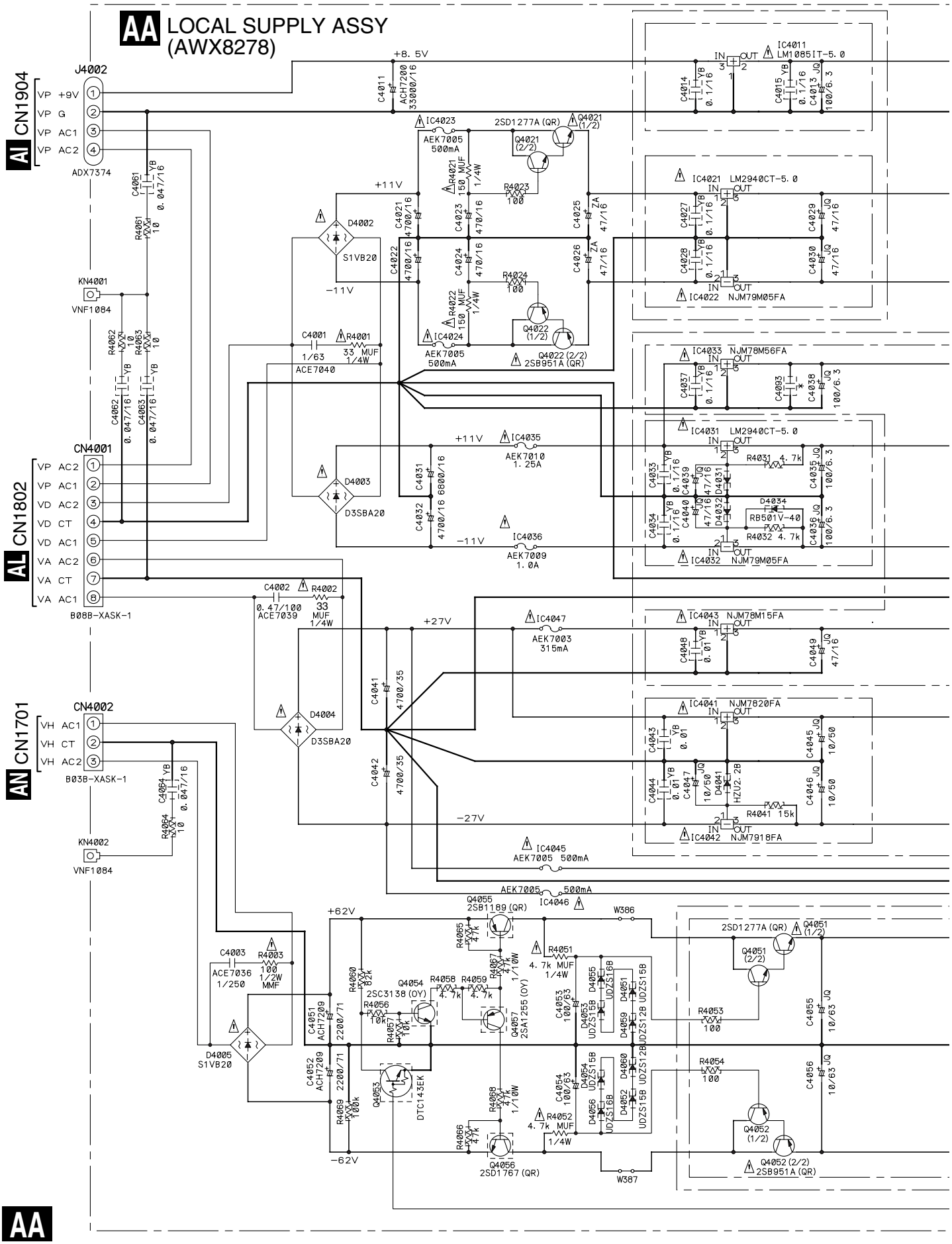
3.28 POWER AMP(R), POWER AMP(BR) and POWER AMP(G) ASSYS

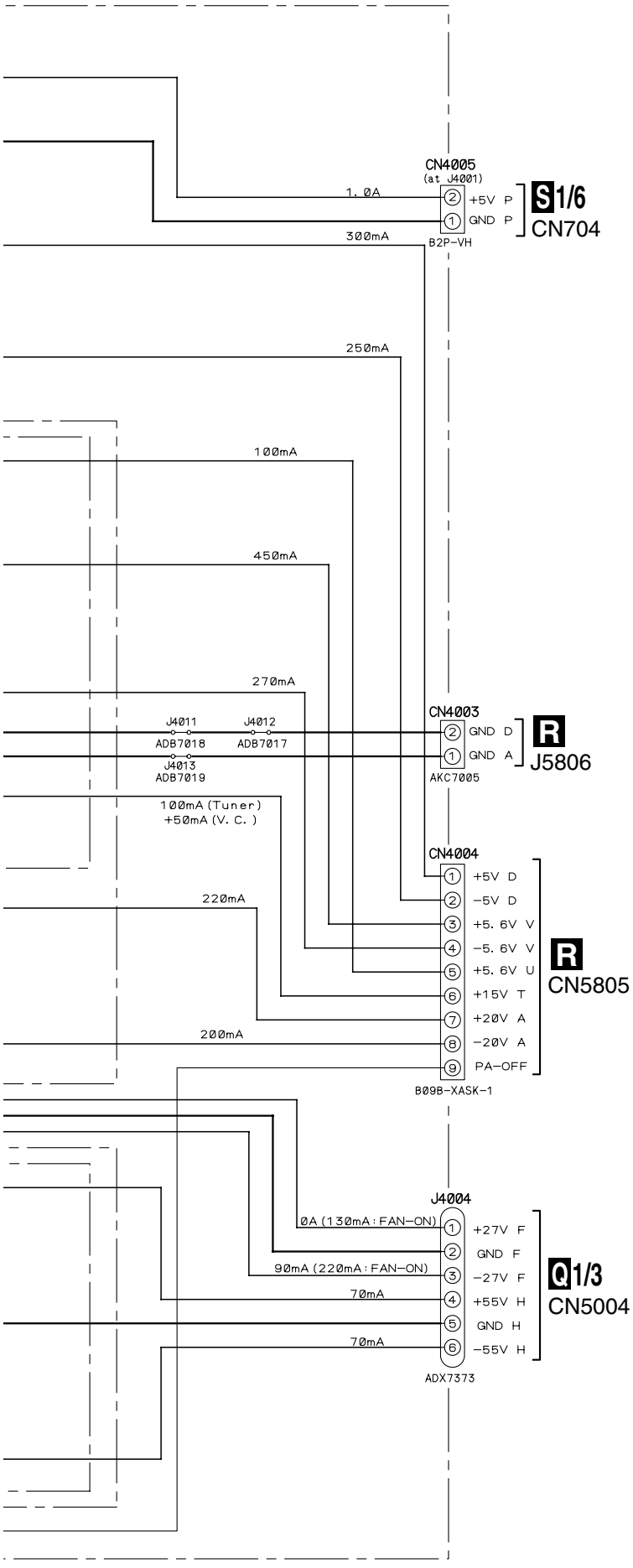




The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

3.29 LOCAL SUPPLY ASSY





CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.315 FOR IC4047 MFD, BY LITTELFUSE INC.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.500 FOR IC4023 AND IC4024 MFD, BY LITTELFUSE INC.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.500 FOR IC4045 AND IC4046 MFD, BY LITTELFUSE INC.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491001 FOR IC4036 MFD, BY LITTELFUSE INC.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 4911.25 FOR IC4035 MFD, BY LITTELFUSE INC.

NOTES

1. RESISTORS
   Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/16W unless otherwise noted.
   Tolerance: ±5%(J) unless otherwise noted.
   MUF RD1/4MUF***J MMF RD1/2MMF***J

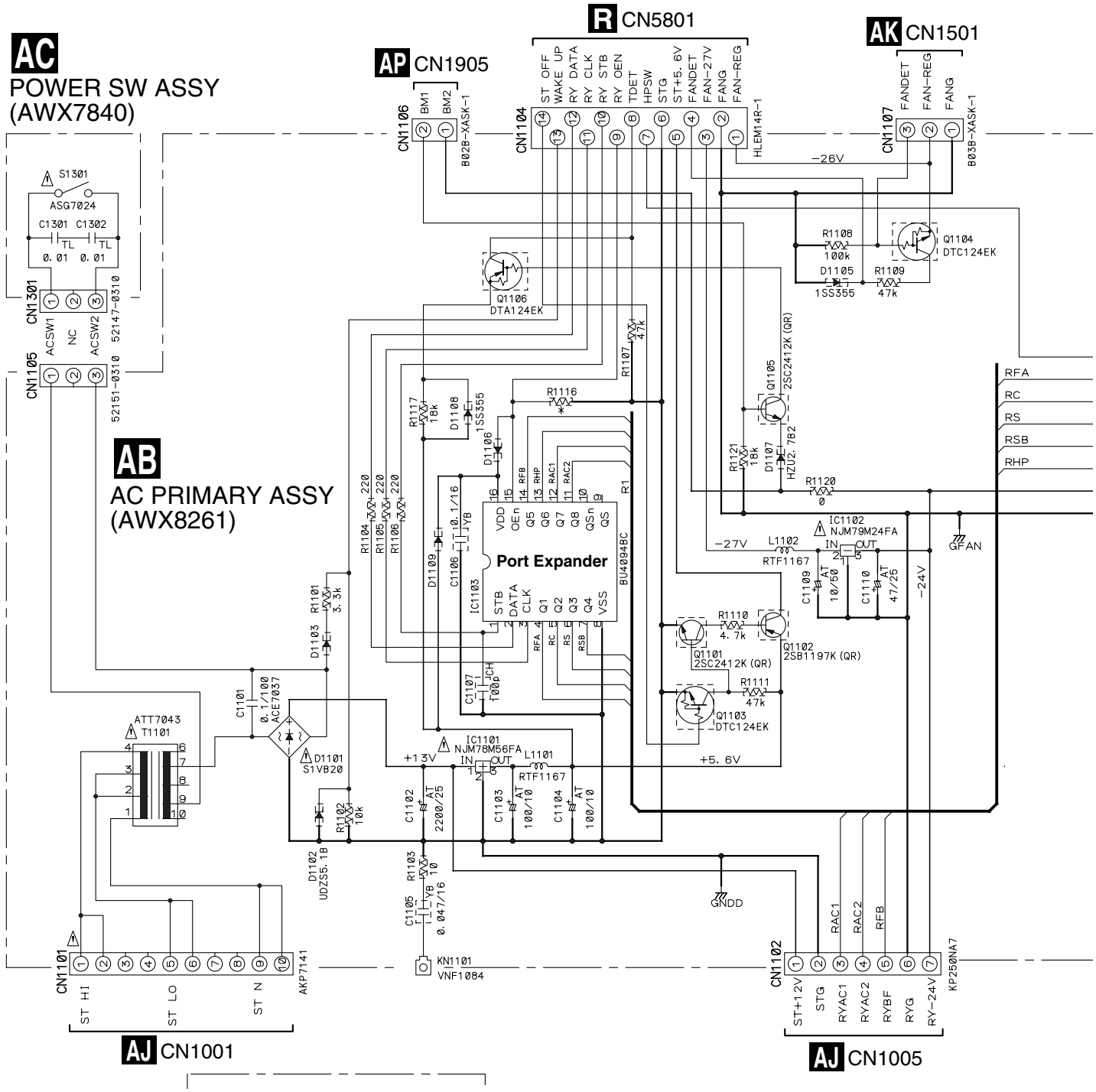
2. CAPACITORS
   Unit: p-pF or μF unless otherwise noted.
   Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
   YB CKSRYB***K** CEAT***M**
   ZA CEHAZA***M**
   JQ CEJQ***M**

3. DIODES
   No marked Diodes are 1SS355.

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.

AA

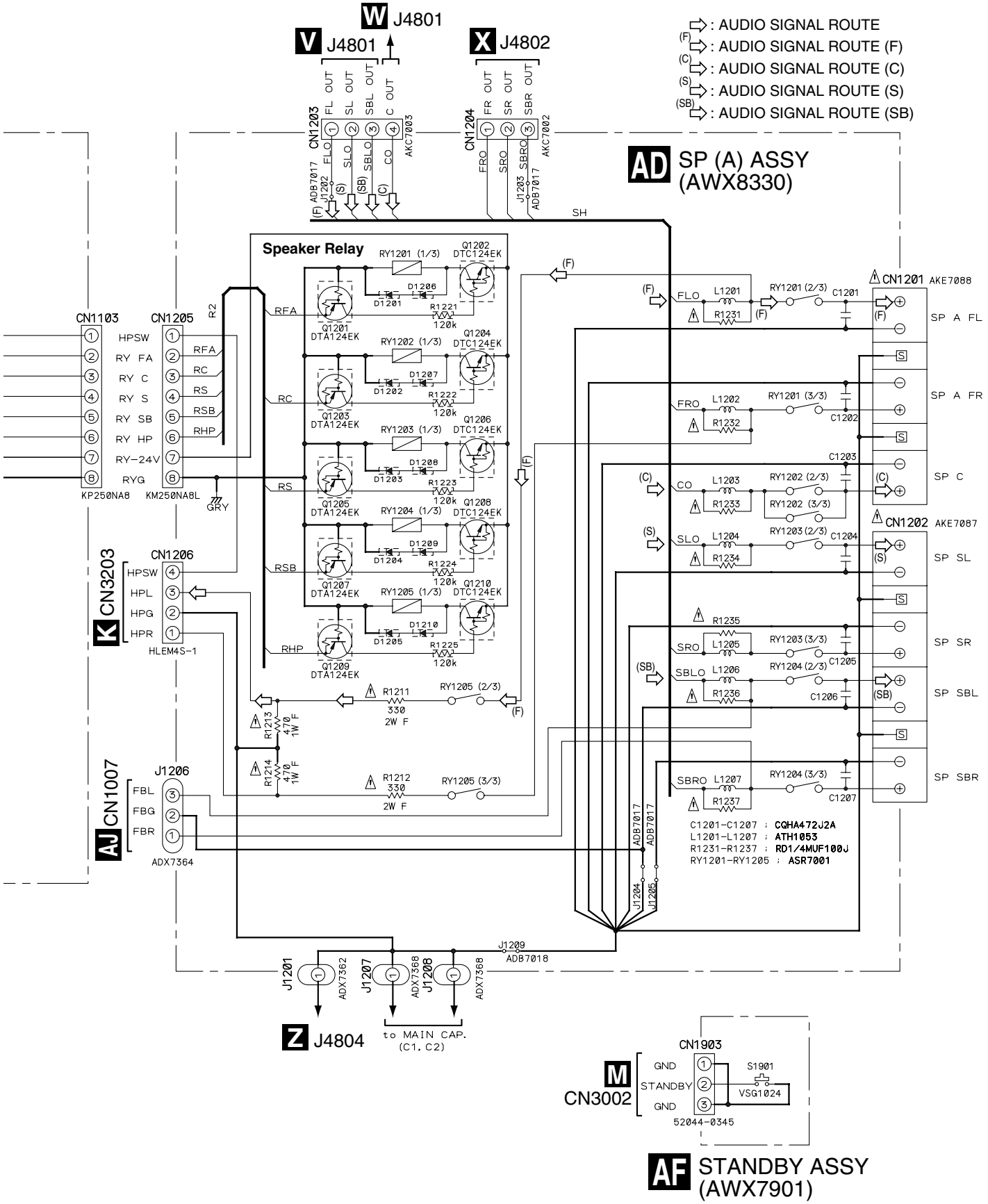
3.30 AC PRIMARY, POWER SW, SP(A), FL SUPPLY and STANDBY ASSYS



NOTES

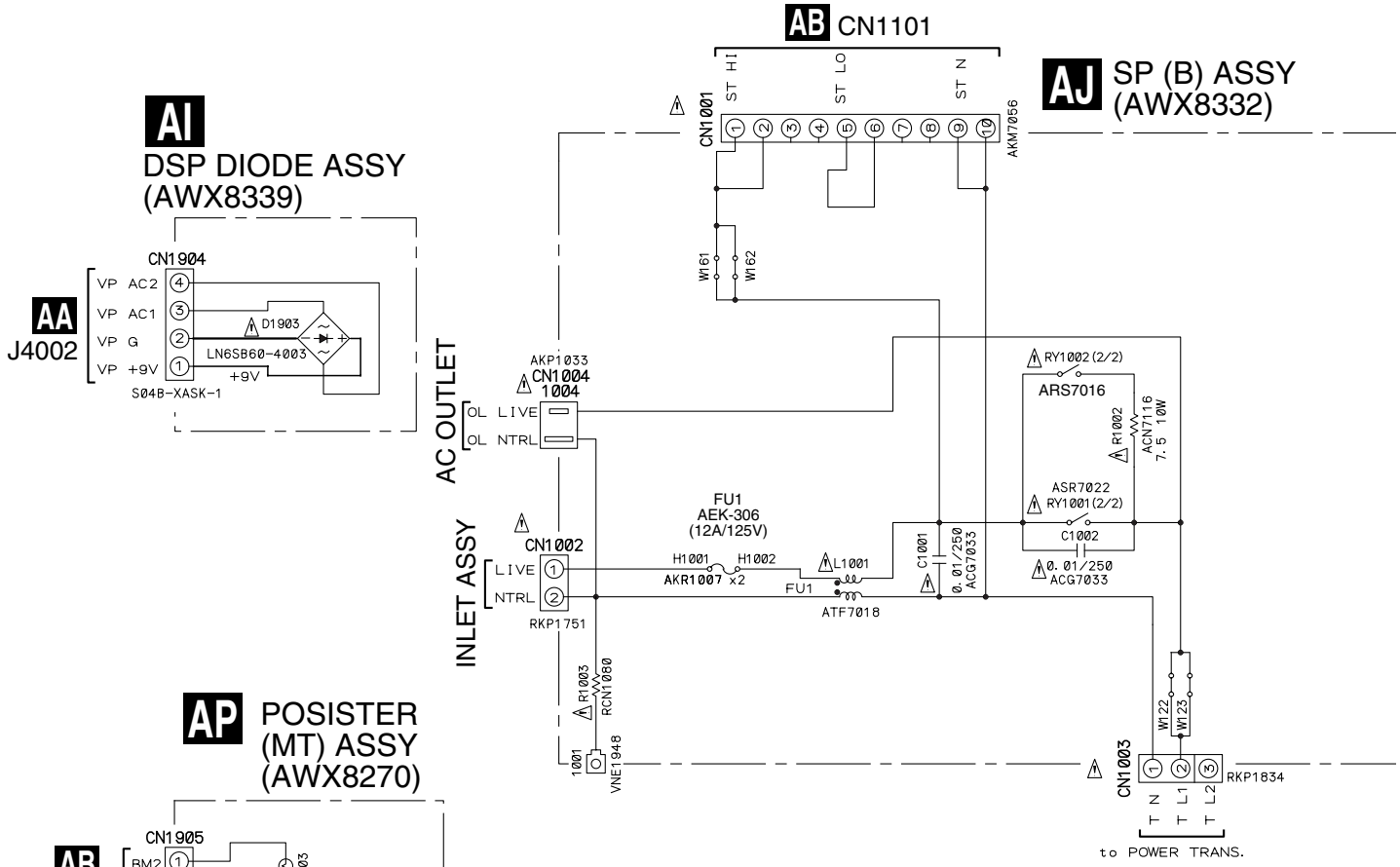
1. RESISTORS
   Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/16W unless otherwise noted.
   Tolerance: ±5%(J) unless otherwise noted.
   MUF:RD1/4MUF
2. CAPACITORS
   Unit: p-pF or μF unless otherwise noted.
   Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
   AT:CEAT, JQ:CEJQ
3. DIODES
   No marked Diodes are 1SS355.
4. VOLTAGE
   Indicated in DC Voltage.

AB AC AE



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.

3.31 POSISTER (L) (R) (MT), DSP DIODE, SP (B), DIODE, FUSE, TARANS (A) (B) and 12V TRIGGER

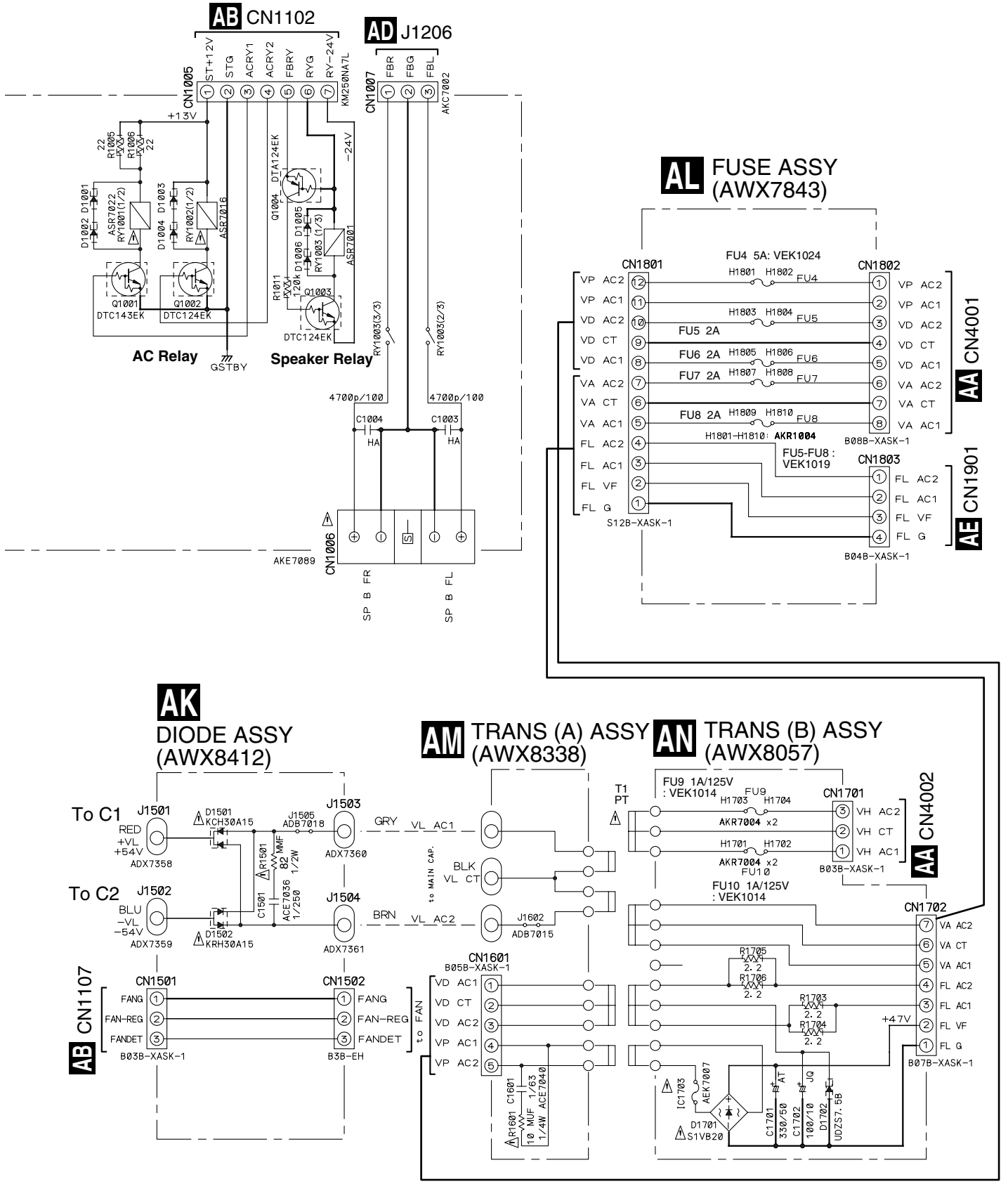


NOTES

1. RESISTORS
   Unit: k-kΩ, M-MΩ or Ω unless otherwise noted.
   Rated power: 1/16W unless otherwise noted.
   Tolerance: ±5%(J) unless otherwise noted.
   MUF :RD1/4MUF MMF :RD1/2MMF
2. CAPACITORS
   Unit: p-pF or μF unless otherwise noted.
   Rated Voltage: shown as "Capacity(μF)/Voltage(V)", or 50V unless otherwise noted.
   HA:CQHA, AT:CEAT
   JQ:CEJQ
3. DIODES
   No marked Diodes are 1SS355.
4. VOLTAGE
   Indicated in DC Voltage.

※Parts or parts block marked by "*" or "STBY" are standby.

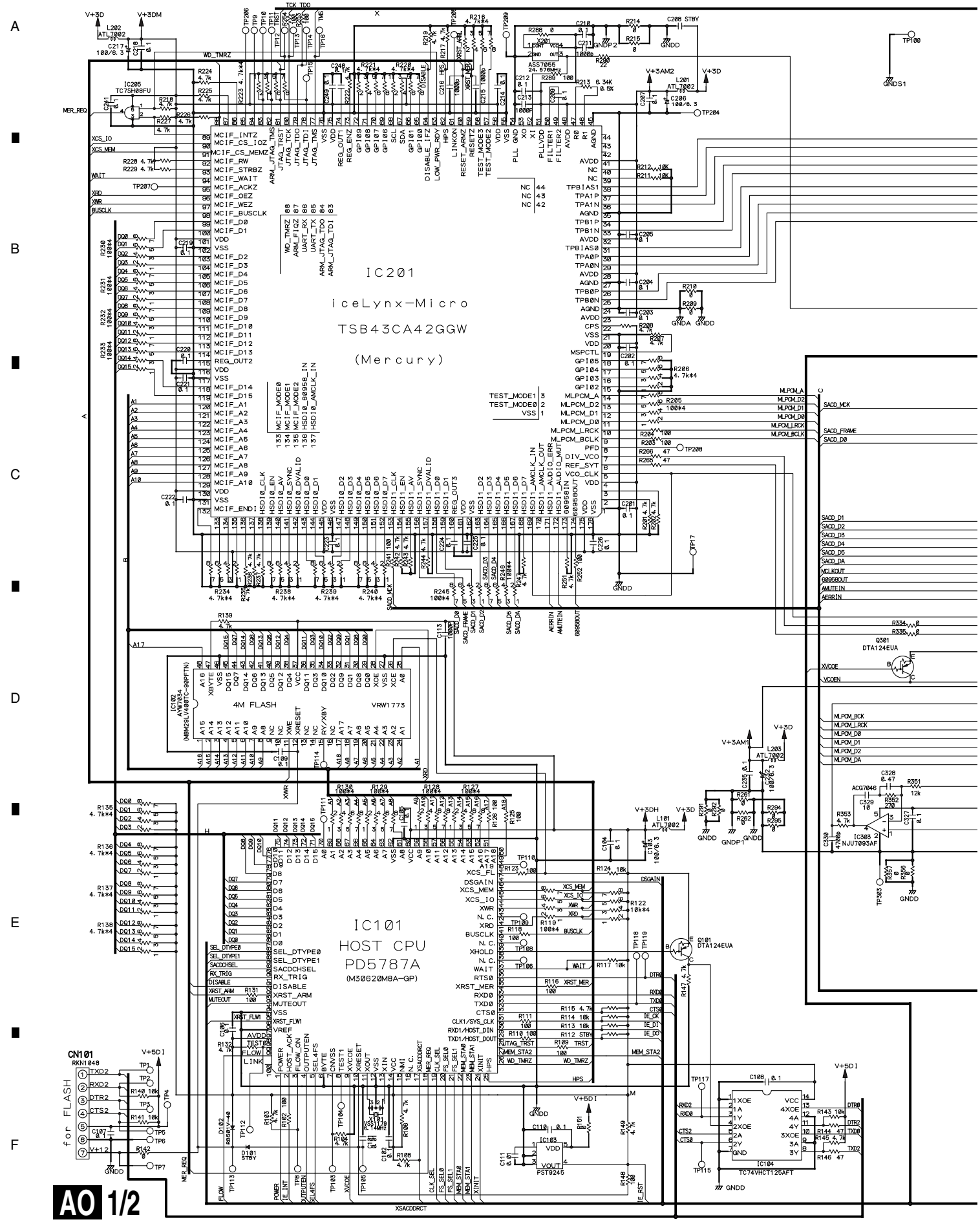
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.



• NOTE FOR FUSE REPLACEMENT

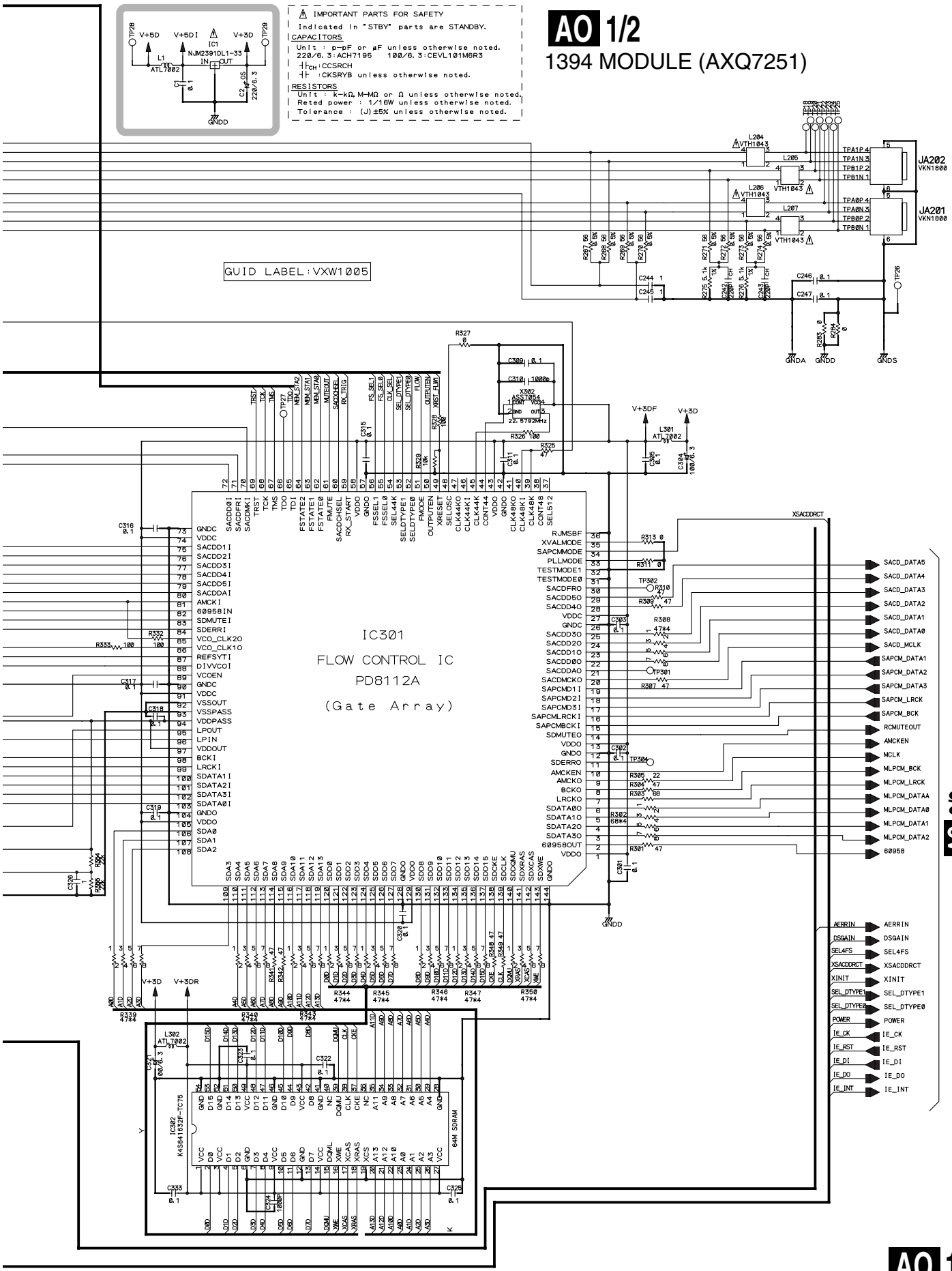
CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
REPLACE WITH SAME TYPE AND RATINGS ONLY.

3.32 1394 MODULE(1/2) ASSY



AO 1/2

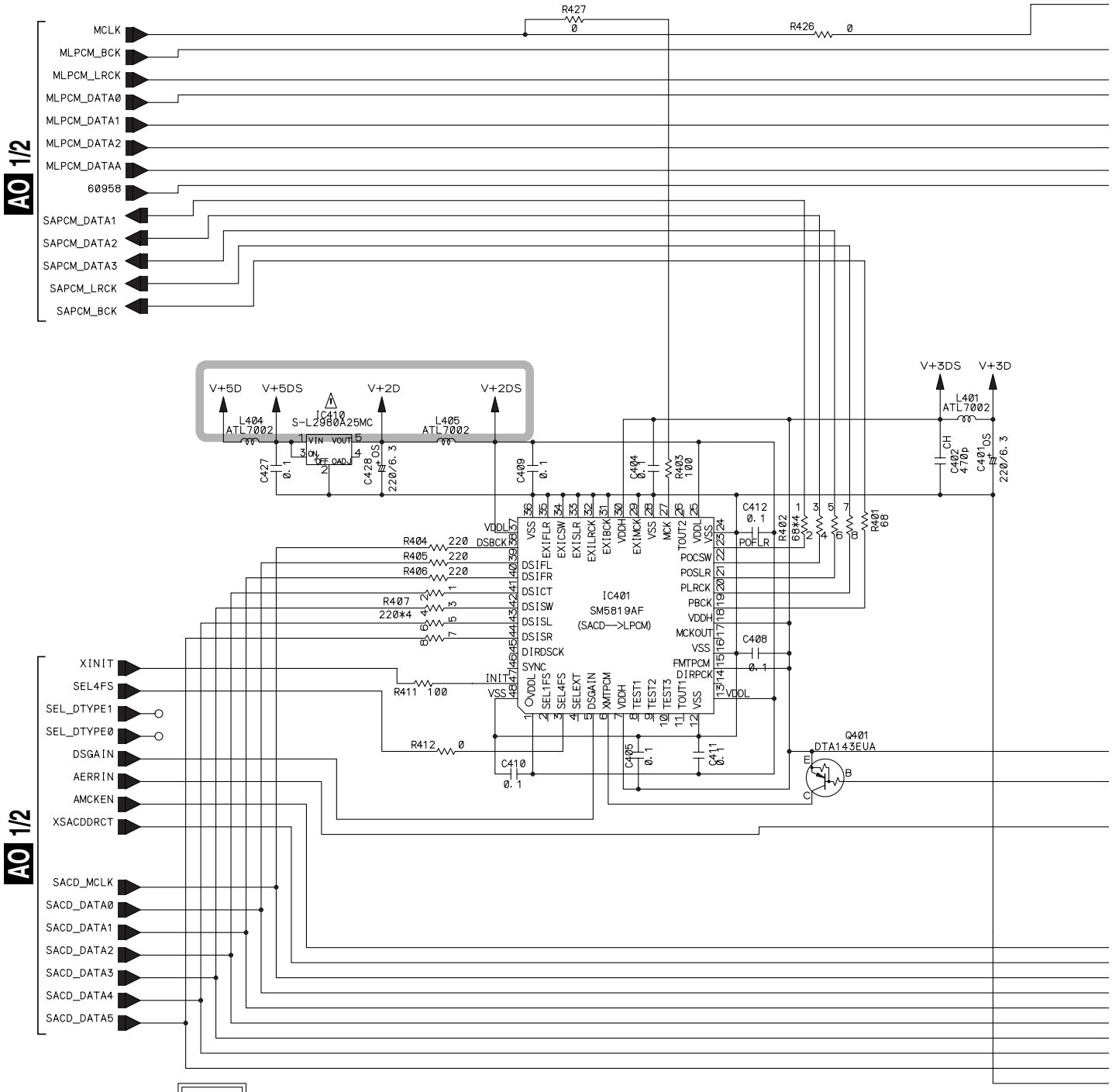
1394 MODULE (AXQ7251)



3.33 1394 MODULE(2/2) ASSY

AO 2/2

1394 MODULE (AXQ7251)



NOTES

⚠ IMPORTANT PARTS FOR SAFETY
Indicated in "STBY" parts are STANDBY.

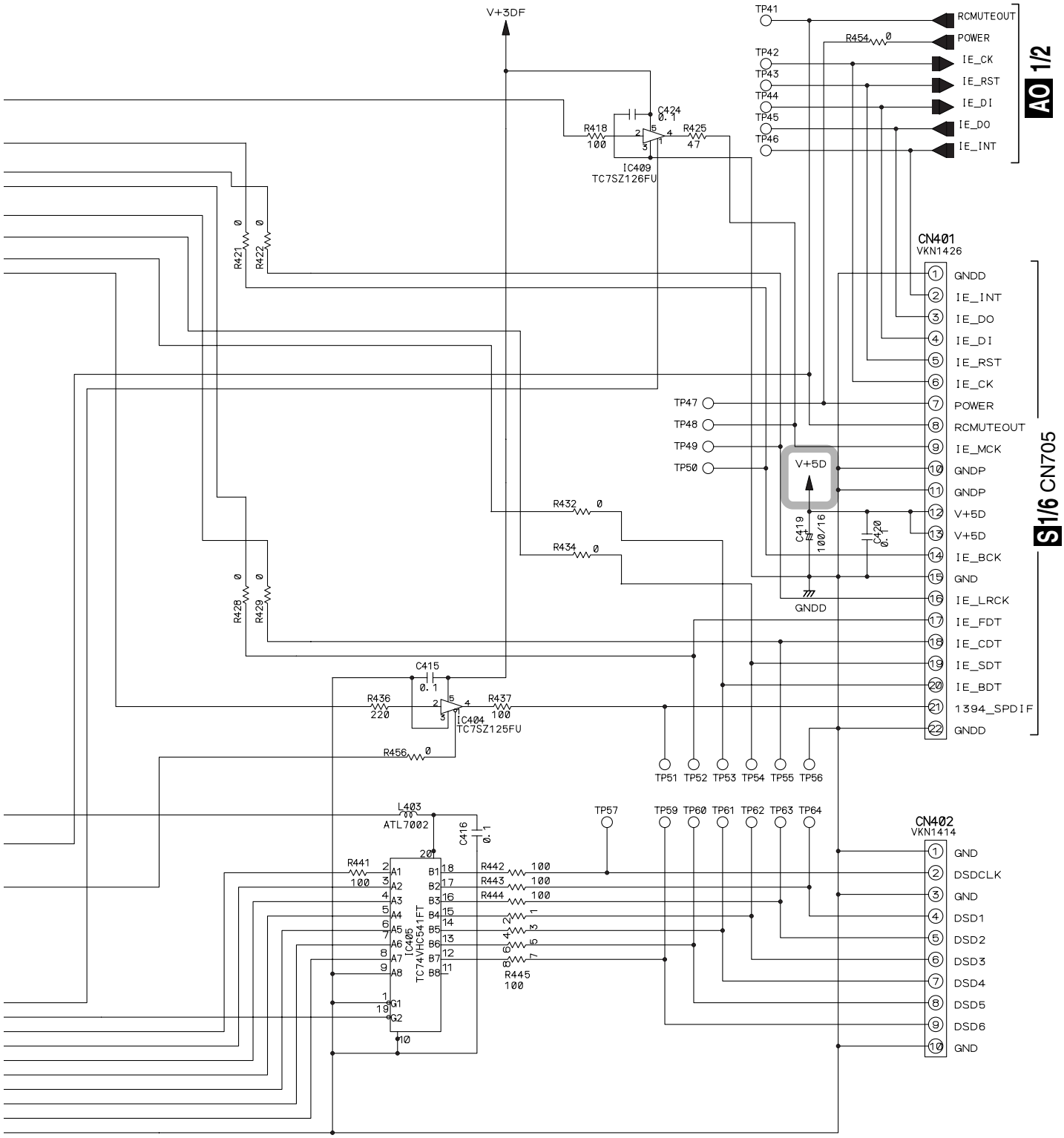
CAPACITORS
Unit : p-pF or μF unless otherwise noted.
Ratings : Capacity(μF)/Voltage(V) unless otherwise noted.
Rated Voltage : 50V except for electrolytic capacitors.

100/16:CEVW101M16 100/6.3:CEVL101M6R3
220/6.3:ACH7195

⊣⊢ :CKSRYB unless otherwise noted

RESISTORS
Unit : k-kΩ, M-MΩ or Ω unless otherwise noted.
Rated power : 1/16W unless otherwise noted.
Tolerance : (J)±5% unless otherwise noted.

AO 2/2


V+3DF
TP41
RCMUTEOUT
R454 0
POWER
TP42
IE_CK
TP43
IE_RST
TP44
IE_DI
TP45
IE_DO
TP46
IE_INT
AO 1/2
C424 0.1
R418 100
R425 47
IC409 TC7SZ126FU
R421 0
R422 0
CN401 VKN1426
1 GNDD
2 IE_INT
3 IE_DO
4 IE_DI
5 IE_RST
6 IE_CK
7 POWER
8 RCMUTEOUT
9 IE_MCK
10 GNDP
11 GNDP
12 V+5D
13 V+5D
14 IE_BCK
15 GND
16 IE_LRCK
17 IE_FDT
18 IE_CDT
19 IE_SDT
20 IE_BDT
21 1394_SPDIF
22 GNDD
S1/6 CN705
TP47
TP48
TP49
TP50
V+5D
C419 100/16
C420 0.1
GNDD
R432 0
R434 0
R428 0
R429 0
C415 0.1
R436 220
R437 100
IC404 TC7SZ125FU
R456 0
TP51 TP52 TP53 TP54 TP55 TP56
L403 ATL7002
C416 0.1
TP57
TP59 TP60 TP61 TP62 TP63 TP64
CN402 VKN1414
R441 100
IC405 TC74VHC541FT
R442 100
R443 100
R444 100
R445 100
1 GND
2 DSDCLK
3 GND
4 DSD1
5 DSD2
6 DSD3
7 DSD4
8 DSD5
9 DSD6
10 GND

AO 2/2

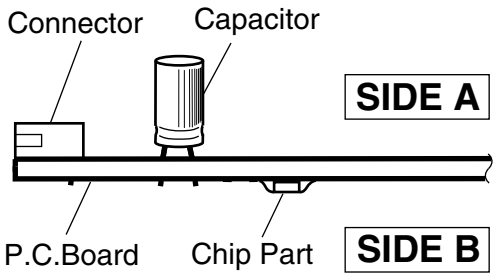
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

3. 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.
4. View point of PCB diagrams.



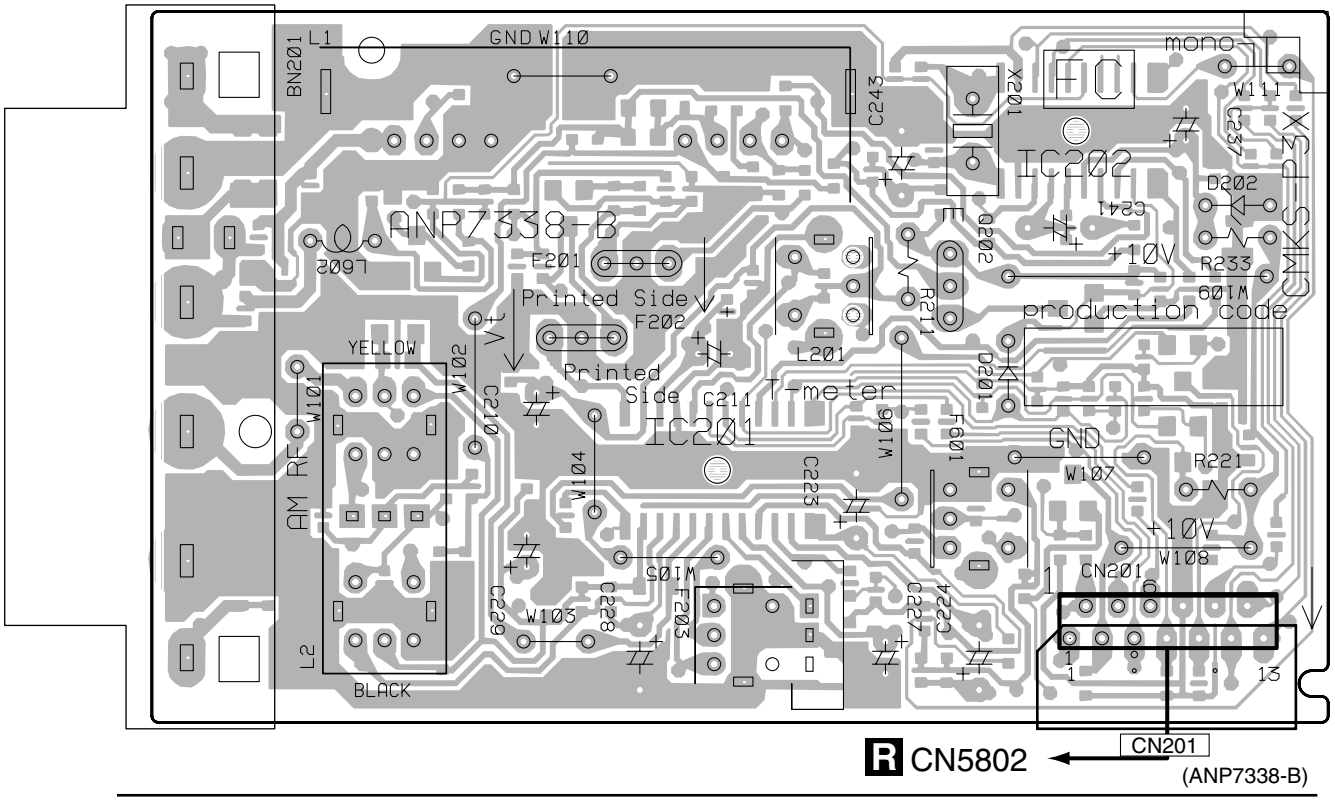
4.1 FM/AM TUNER MODULE

SIDE A

SIDE B

A FM/AM TUNER MODULE

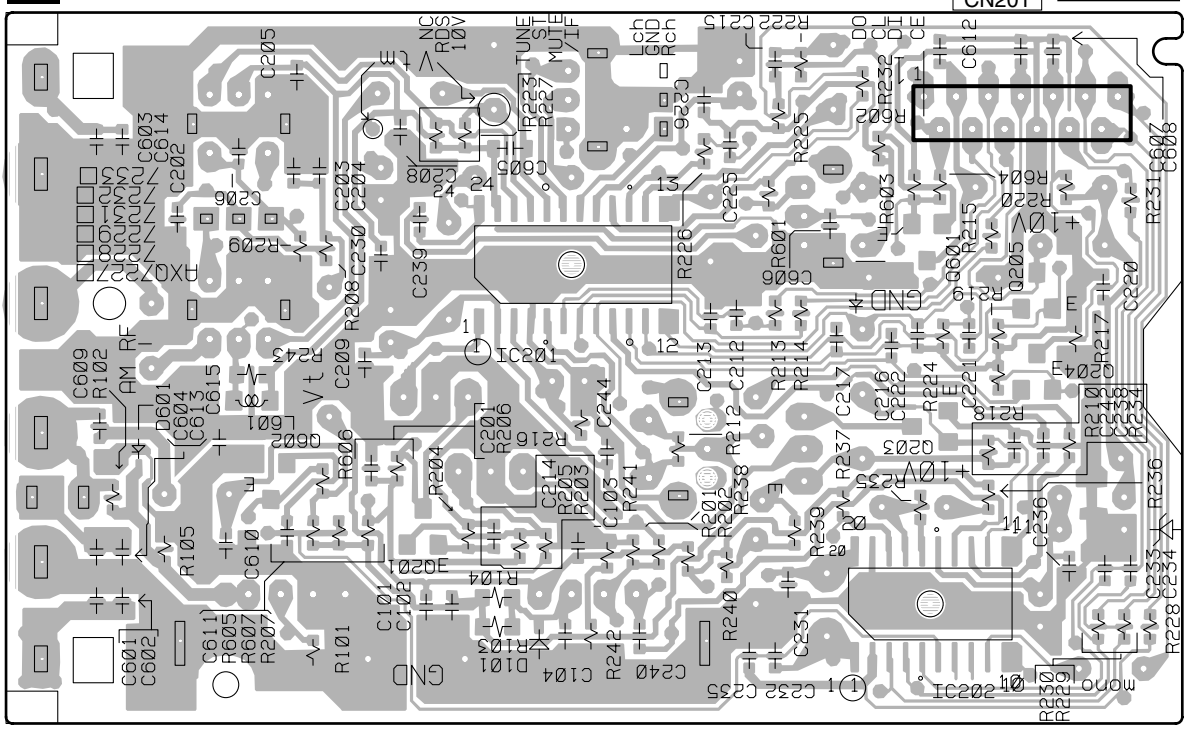
SIDE A



Q202

A FM/AM TUNER MODULE

SIDE B



Q201 IC201 Q203 IC202 Q205 Q204

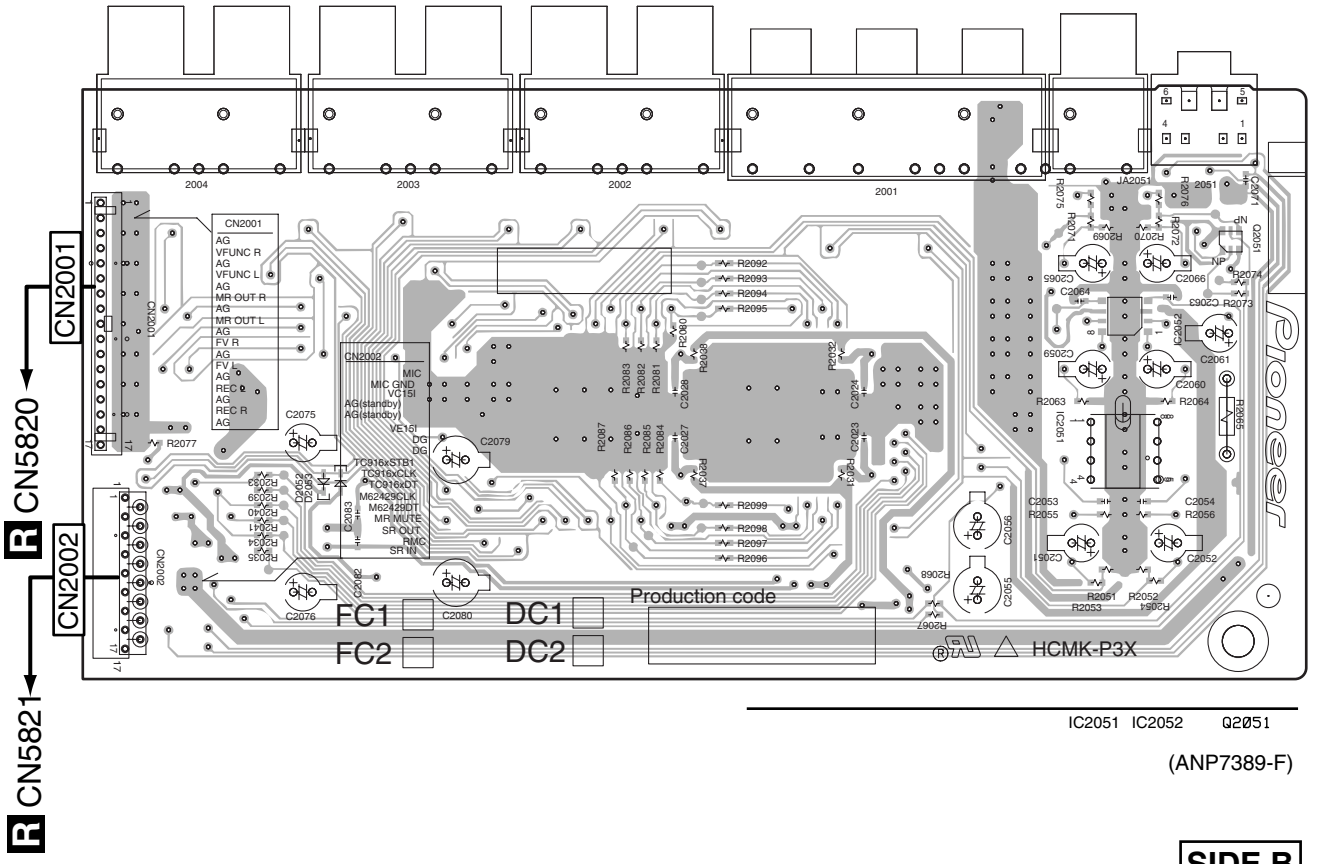
A A

4.2 A/V I/O ASSY

SIDE A **SIDE B**

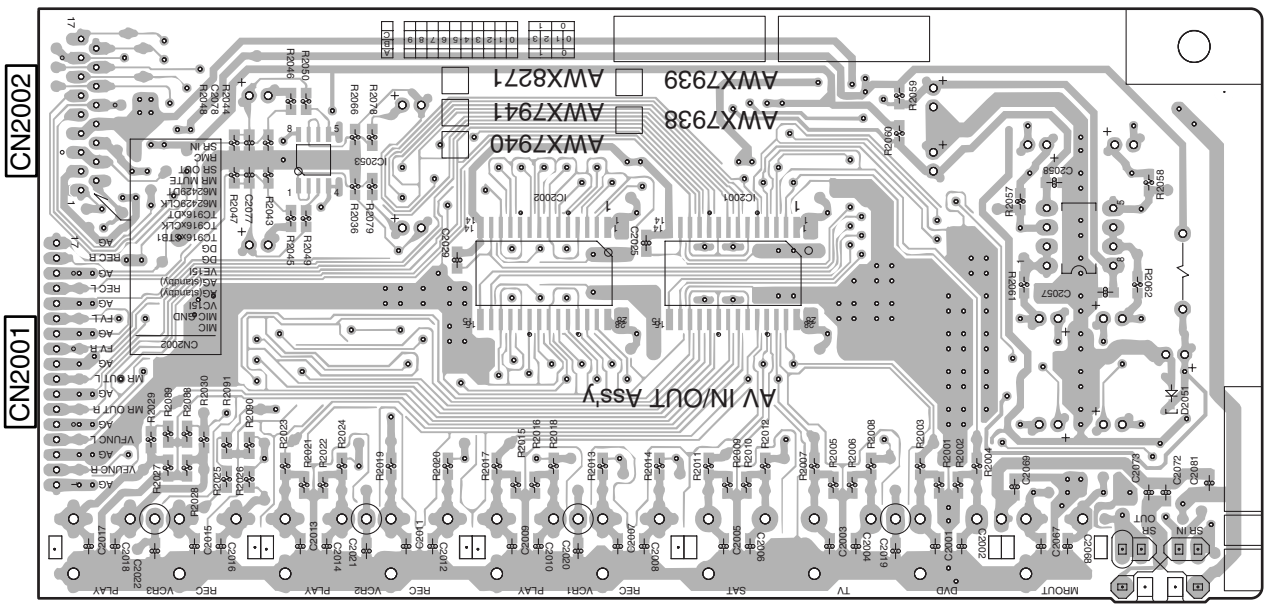
B A/V IN/OUT ASSY

SIDE A



(ANP7389-F)

SIDE B



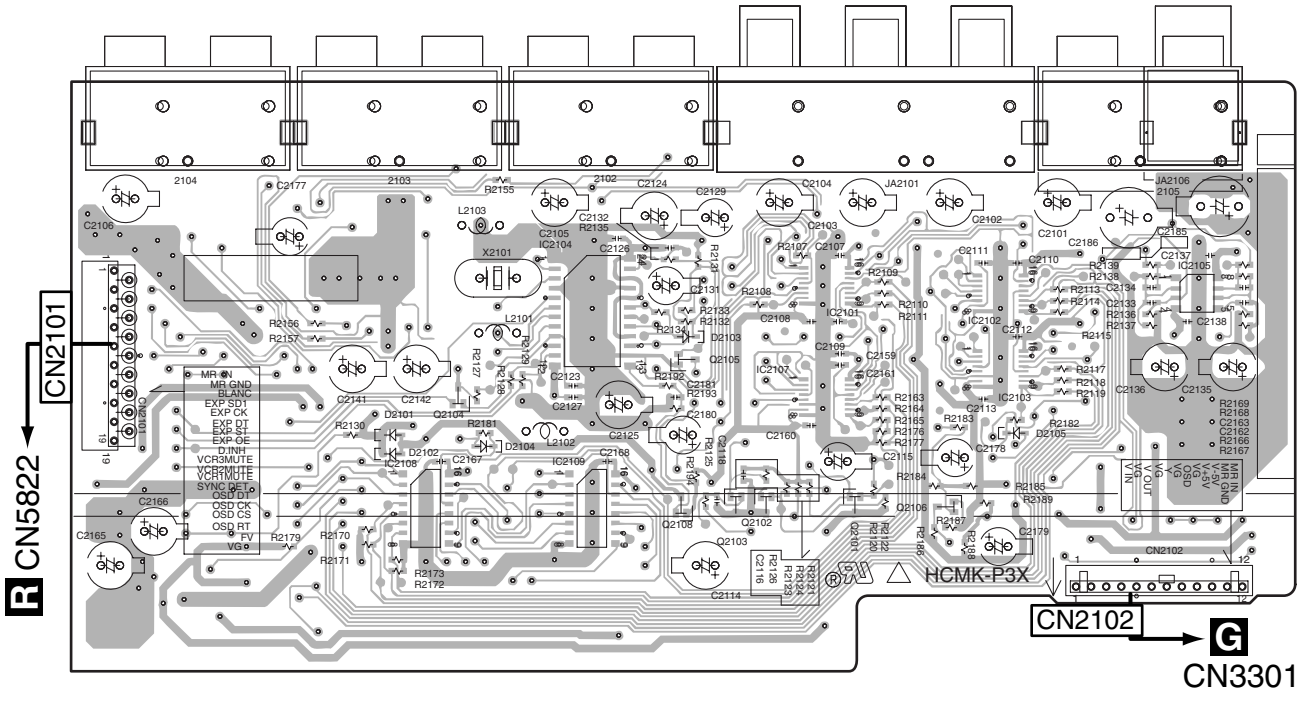
(ANP7389-F)

4.3 COMPOSITE ASSY

SIDE A **SIDE B**

C COMPOSITE ASSY

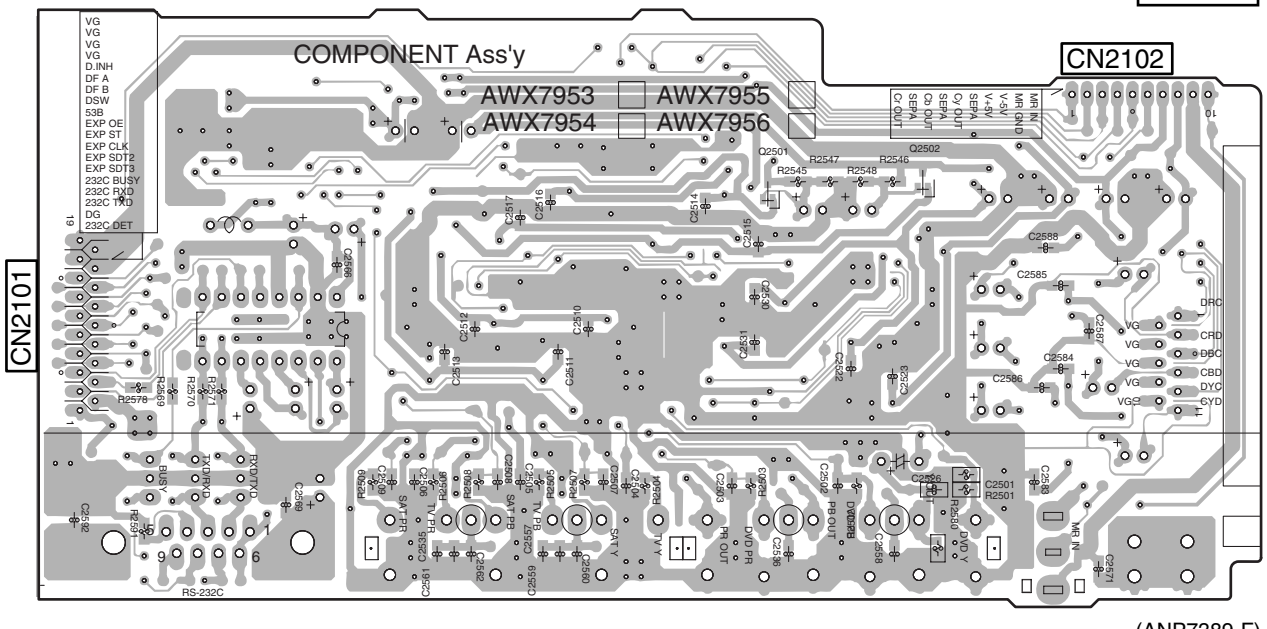
SIDE A



Q2104 IC2104 Q2105 Q2103 IC2107 IC2101 Q2106 IC2102 IC2105
IC2108 IC2109 Q2108 Q2102 Q2101 IC2103

(ANP7389-F)

SIDE B



IC2106 Q2501 Q2502

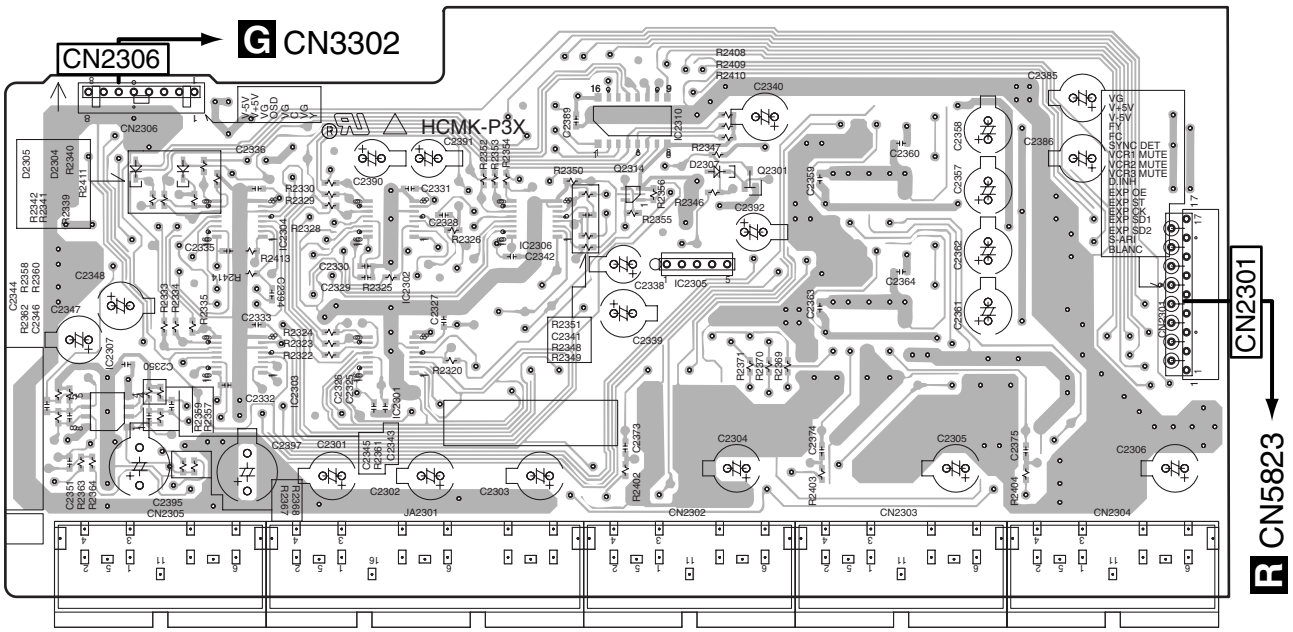
(ANP7389-F)

4.4 S-VIDEO ASSY

SIDE A **SIDE B**

D S-VIDEO ASSY

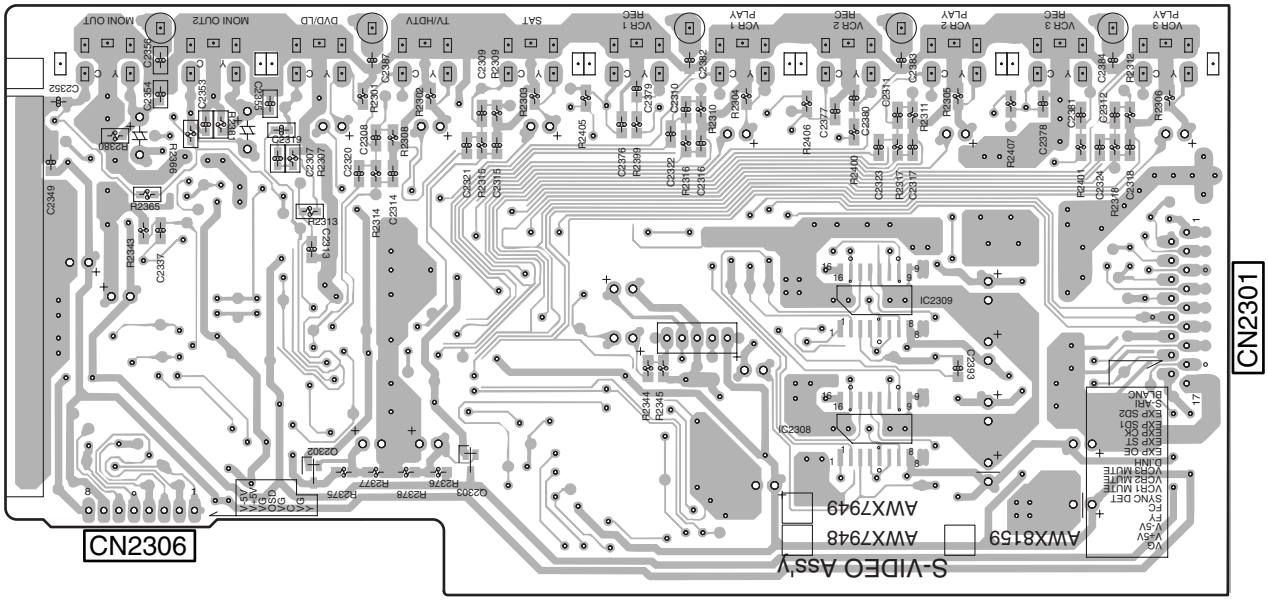
SIDE A



IC2307 IC2304 IC2303 IC2302 IC2301 IC2306 IC2310 Q2314 IC2305 Q2301

(ANP7389-F)

SIDE B



Q2302 Q2303 IC2309 IC2308

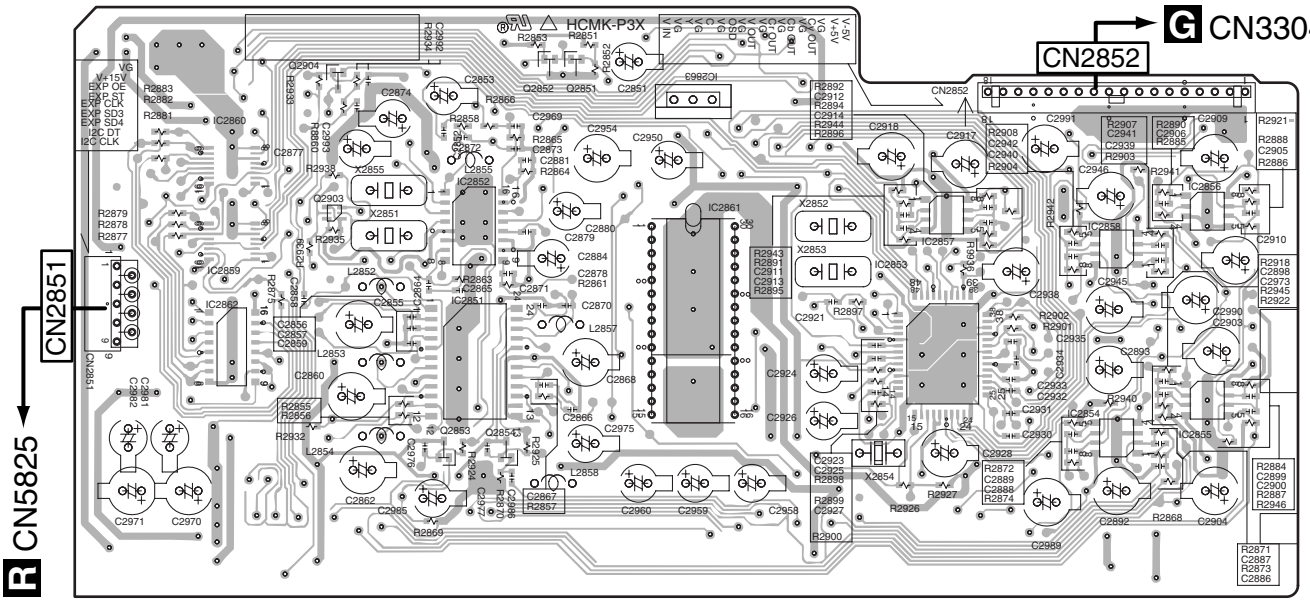
(ANP7389-F)

4.5 V-CONVERT ASSY

SIDE A **SIDE B**

E V-CONVERT ASSY

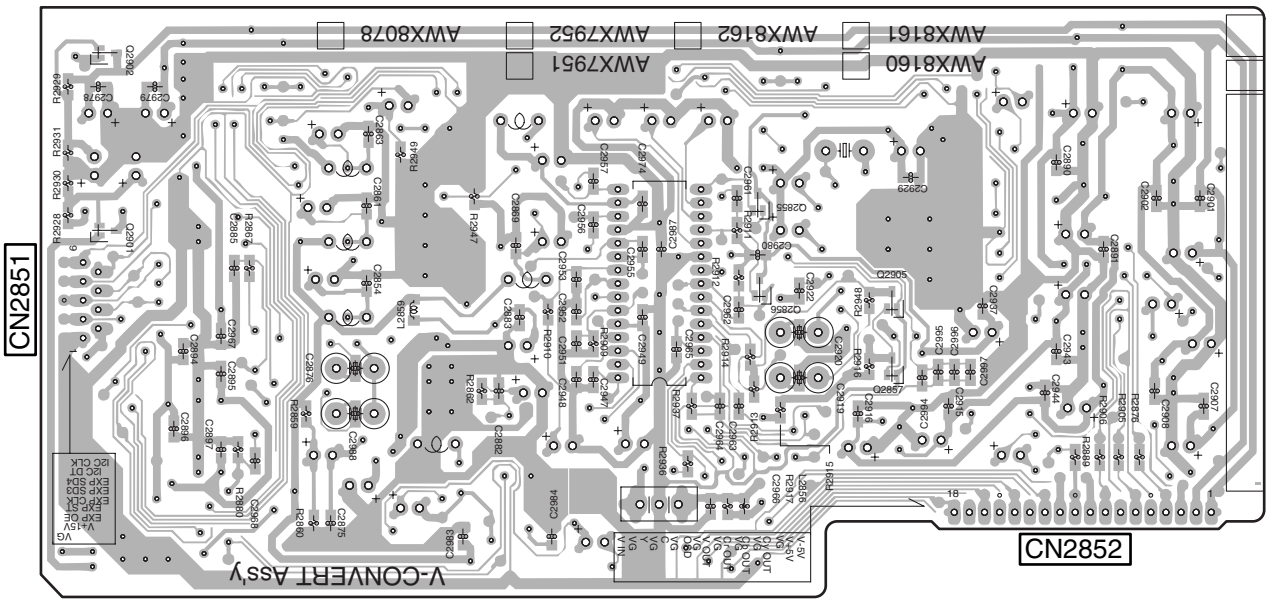
SIDE A



IC2860 IC2859 IC2862 | Q2904 Q2903 | Q2853 | IC2852 IC2851 | Q2854 | Q2852 Q2851 | IC2853 IC2861 | IC2857 IC2853 | IC2858 IC2854 | IC2856 IC2855

(ANP7389-F)

SIDE B



Q2902 Q2901 | Q2855 Q2856 | Q2905 Q2857

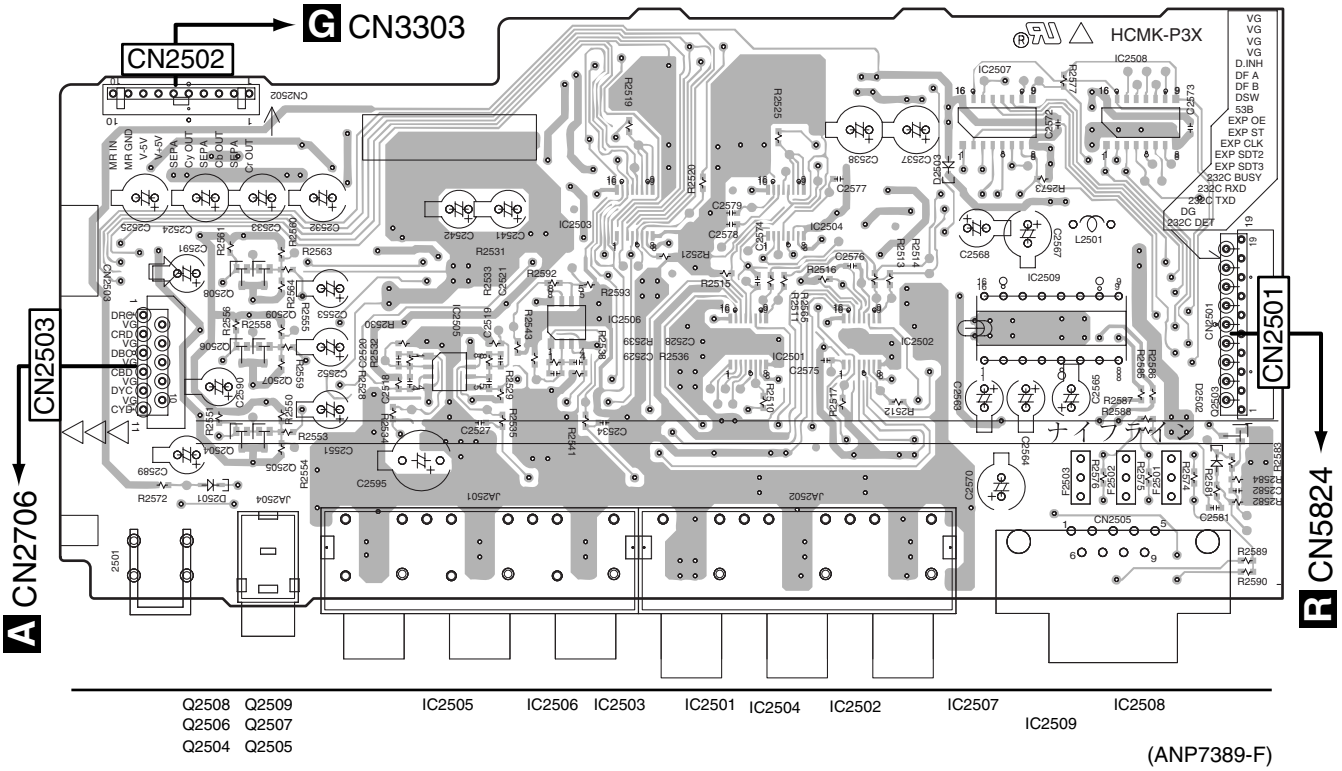
(ANP7389-F)

4.6 COMPONENT ASSY

SIDE A **SIDE B**

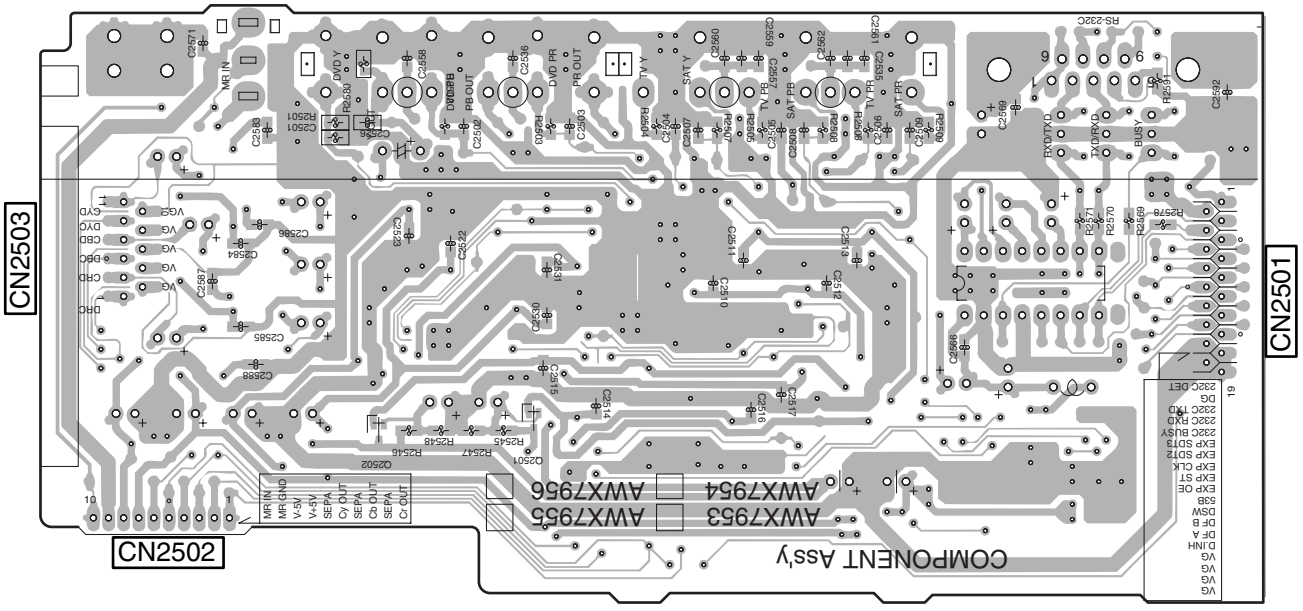
F COMPONENT ASSY

SIDE A



(ANP7389-F)

SIDE B



(ANP7389-F)

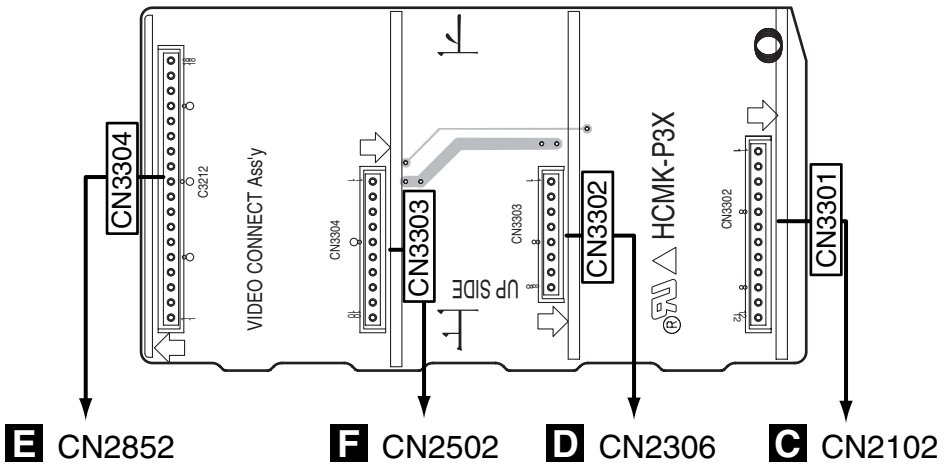
F F

4.7 VIDEO CONNECT ASSY

SIDE A **SIDE B**

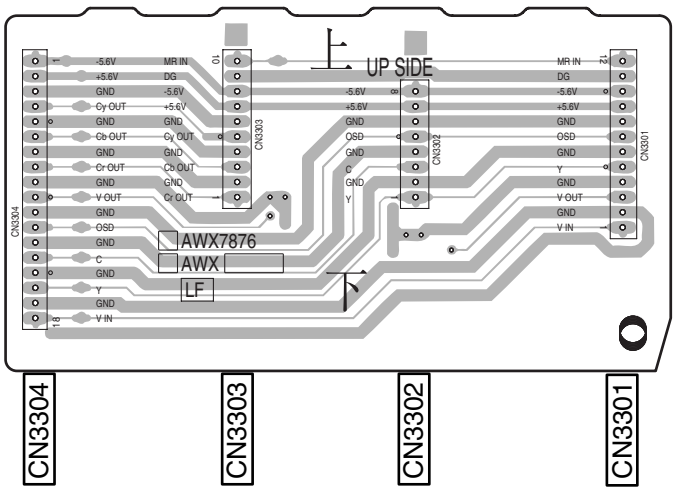
G VIDEO CONNECT ASSY

SIDE A



(ANP7474-A)

SIDE B

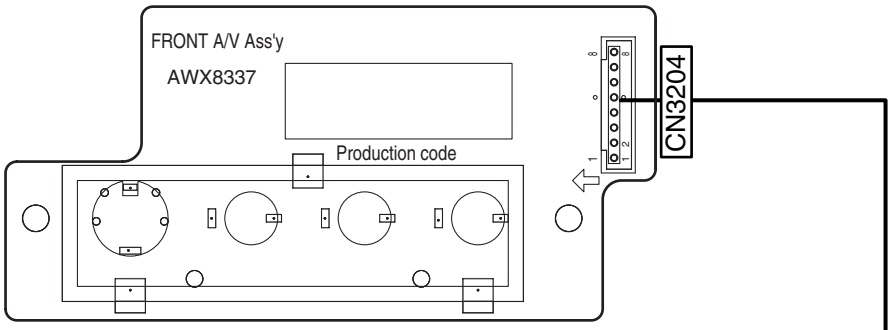


(ANP7474-A)

4.8 MIC AMP, MIC, FRONT A/V and HEADPHONE ASSYS

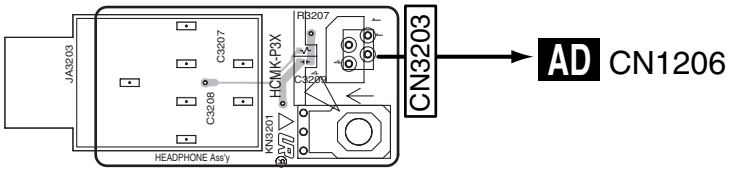
SIDE A

J FRONT A/V ASSY



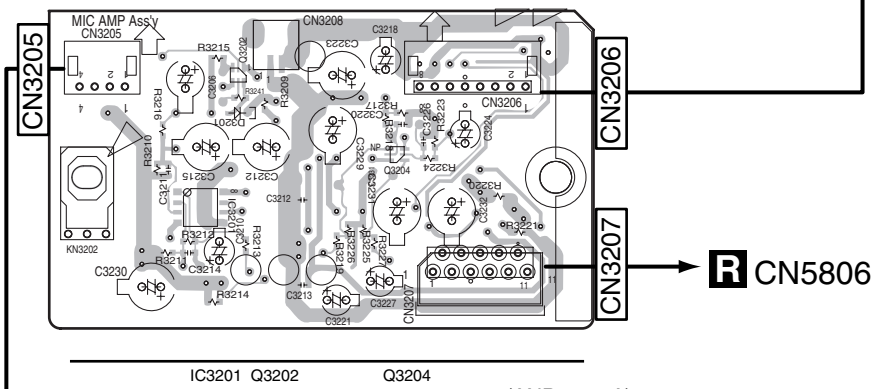
(ANP7474-A)

K HEADPHONE ASSY



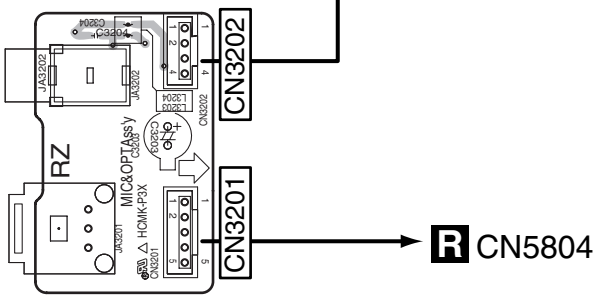
(ANP7474-A)

H MIC AMP ASSY



(ANP7474-A)

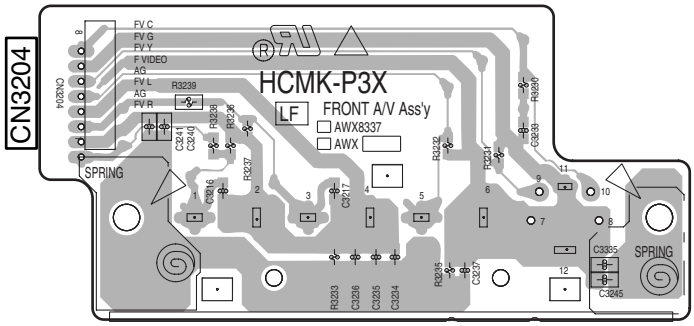
I MIC & OPT ASSY



(ANP7474-A)

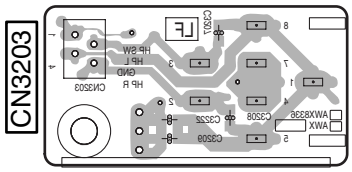
SIDE B

J FRONT A/V ASSY



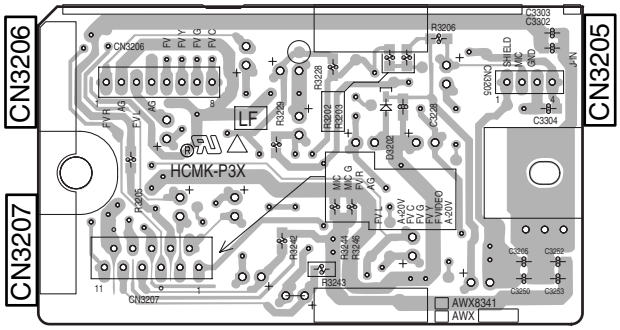
(ANP7474-A)

K HEADPHONE ASSY



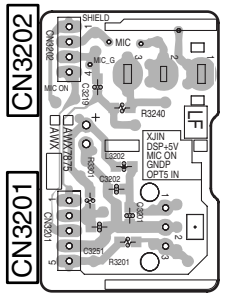
(ANP7474-A)

H MIC AMP ASSY



(ANP7474-A)

I MIC & OPT ASSY

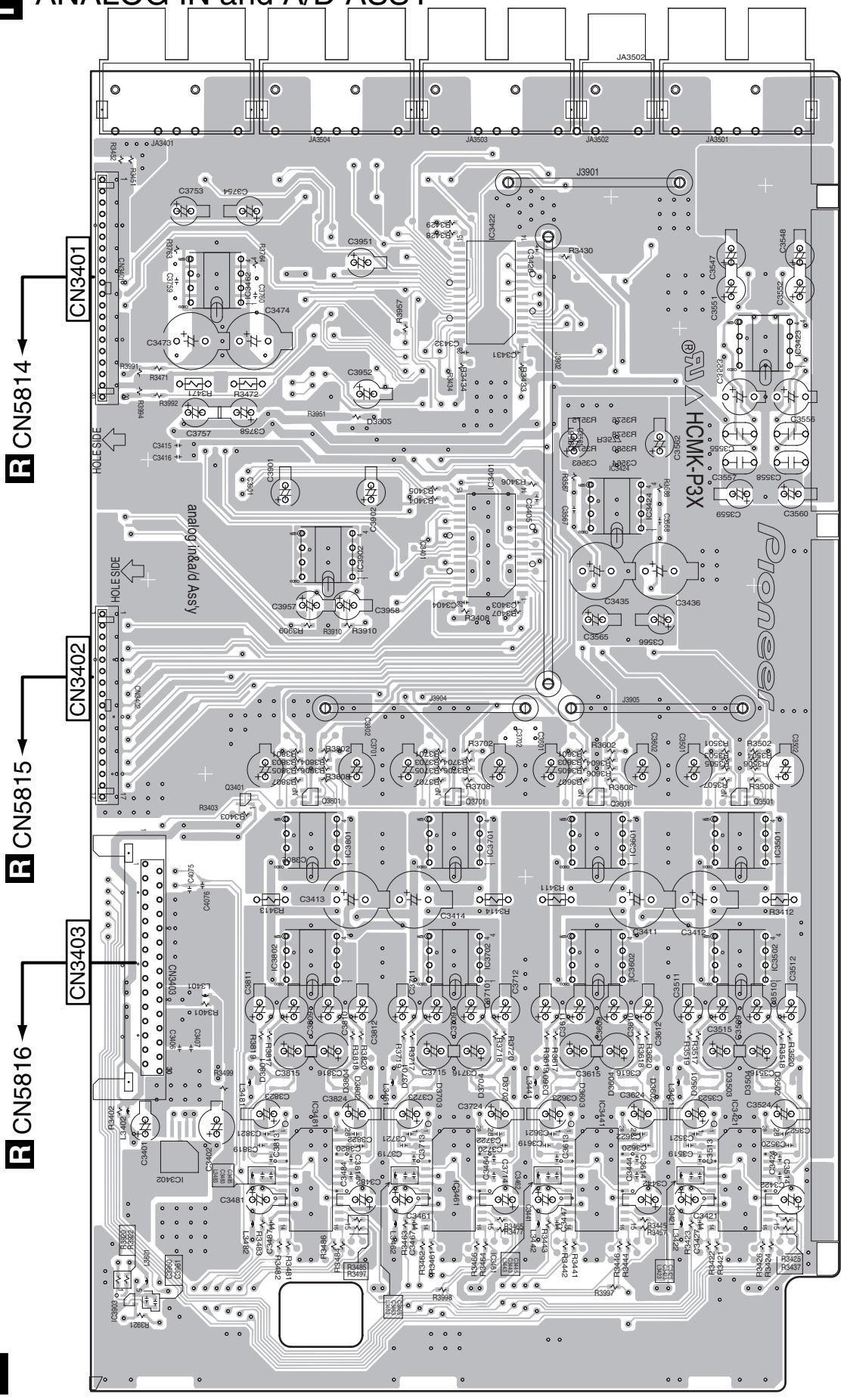


(ANP7474-A)

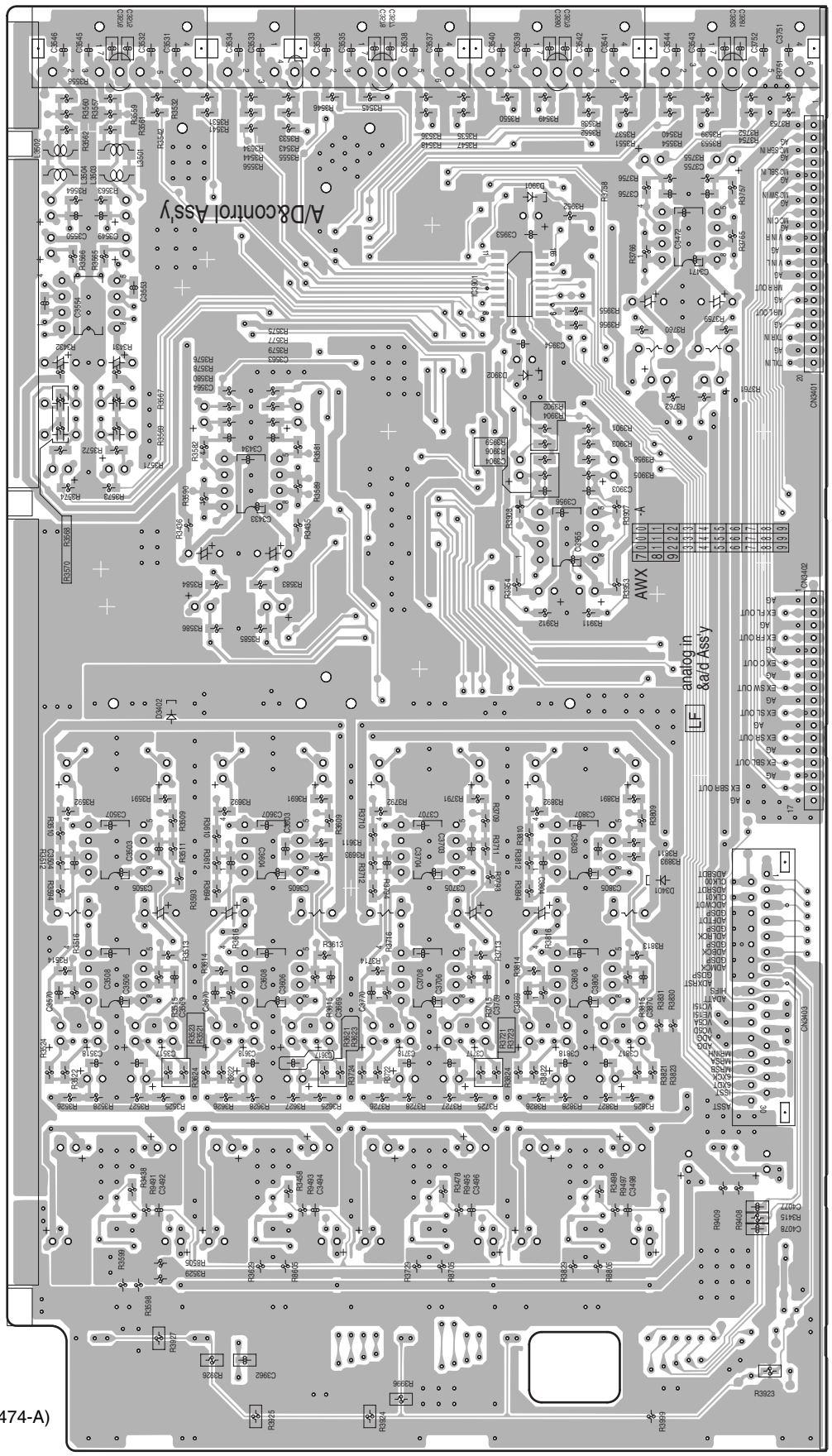
4.9 ANALOG IN & A/D ASSY

L ANALOG IN and A/D ASSY

SIDE A



L ANALOG IN and A/D ASSY

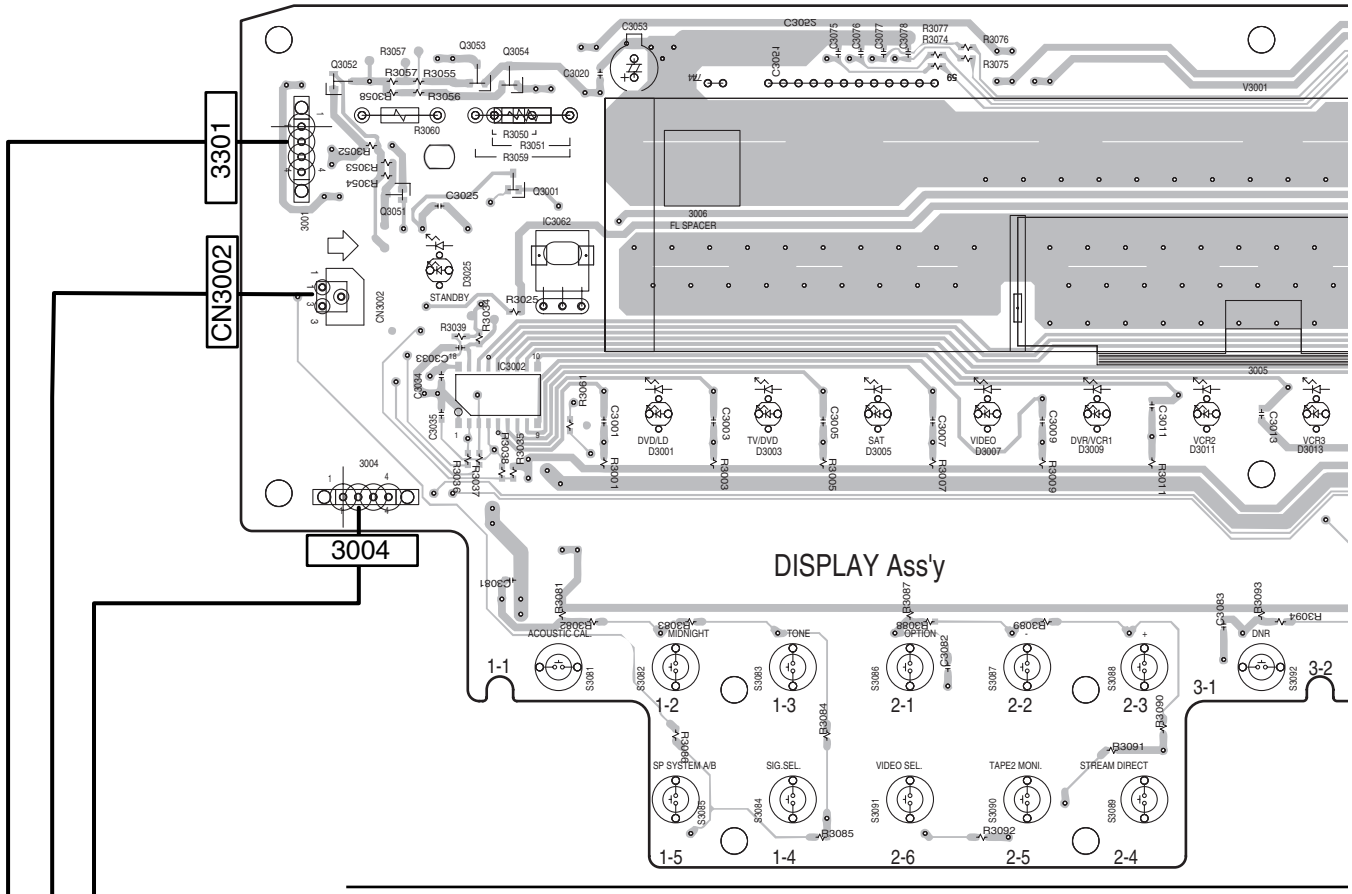


(ANP7474-A)

4.10 DISPLAY, INPUT SEL, MULTI JOG, FL SUP. and STANDBY ASSYS

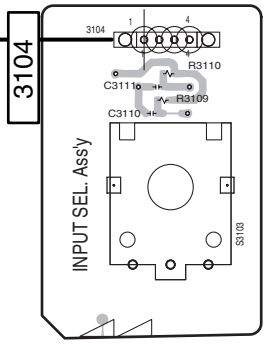
SIDE A

M DISPLAY ASSY



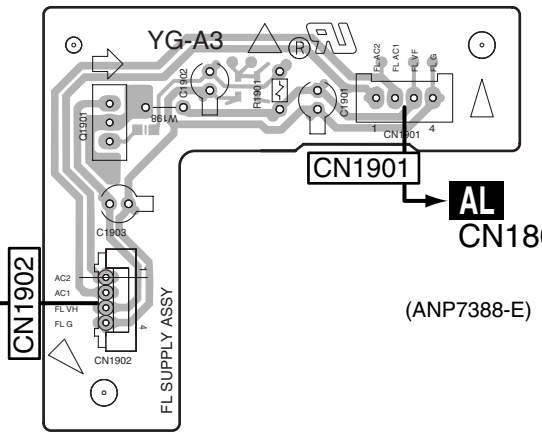
Q3052 Q3053 Q3054
Q3051 Q5001 IC3062
IC3002

N INPUT SEL ASSY



(ANP7474-A)

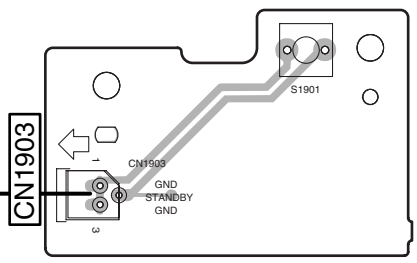
AE FL SUPPLY ASSY



AL CN1803

(ANP7388-E)

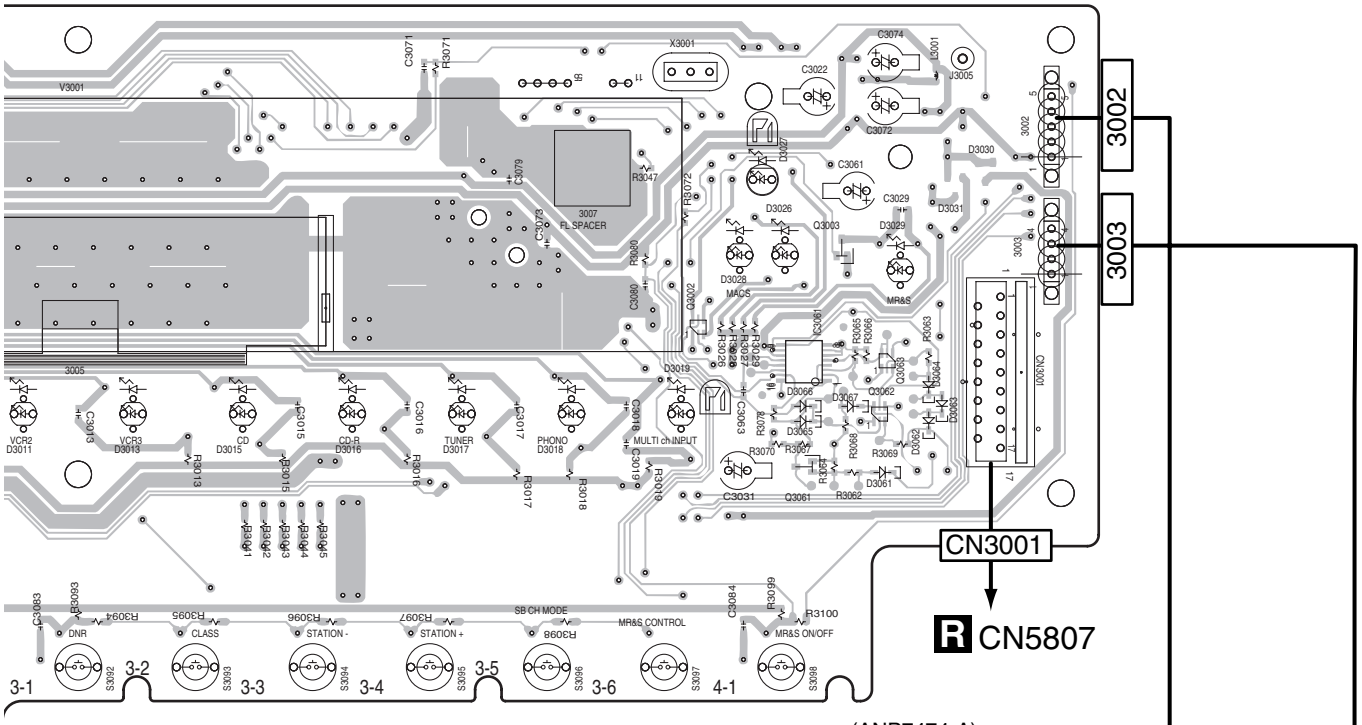
AF STANDBY ASSY



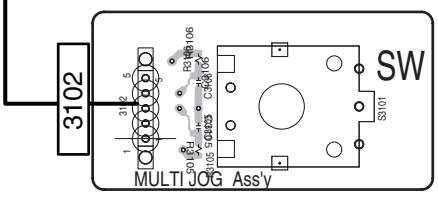
(ANP7388-E)

M N AE AF

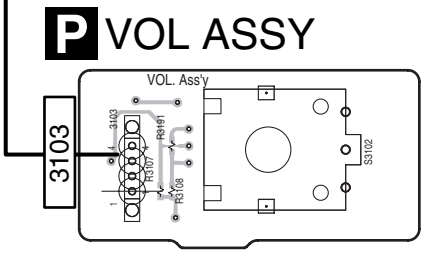
SIDE A



Q3002 IC3061 Q3003 Q3063
Q3061 Q3062

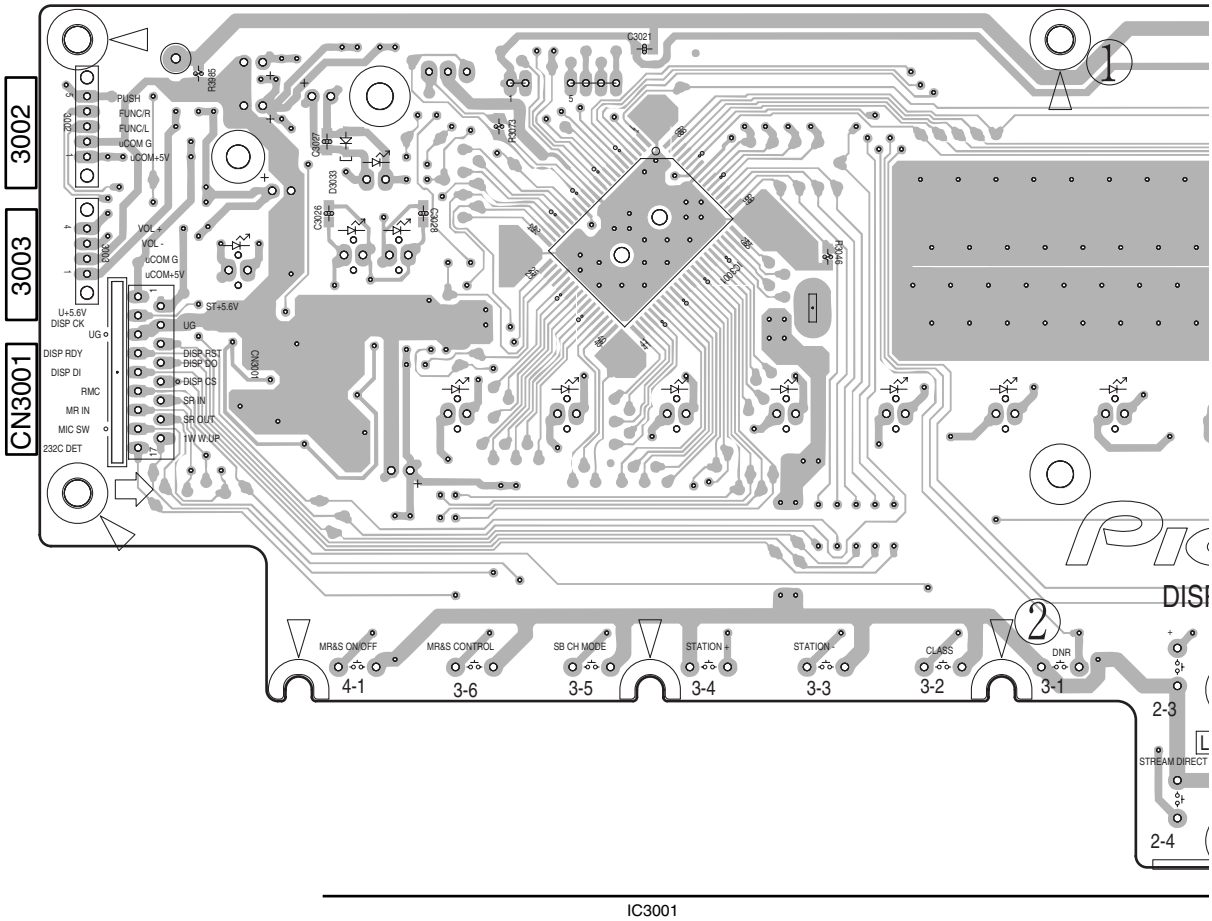


)3



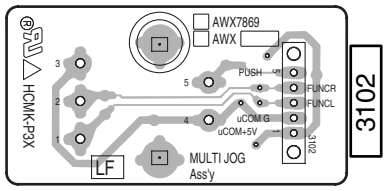
SIDE B

M DISPLAY ASSY



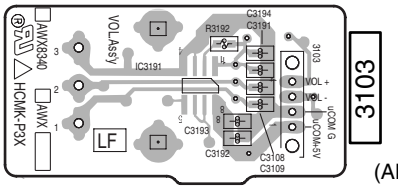
IC3001

O MULTI JOG ASSY



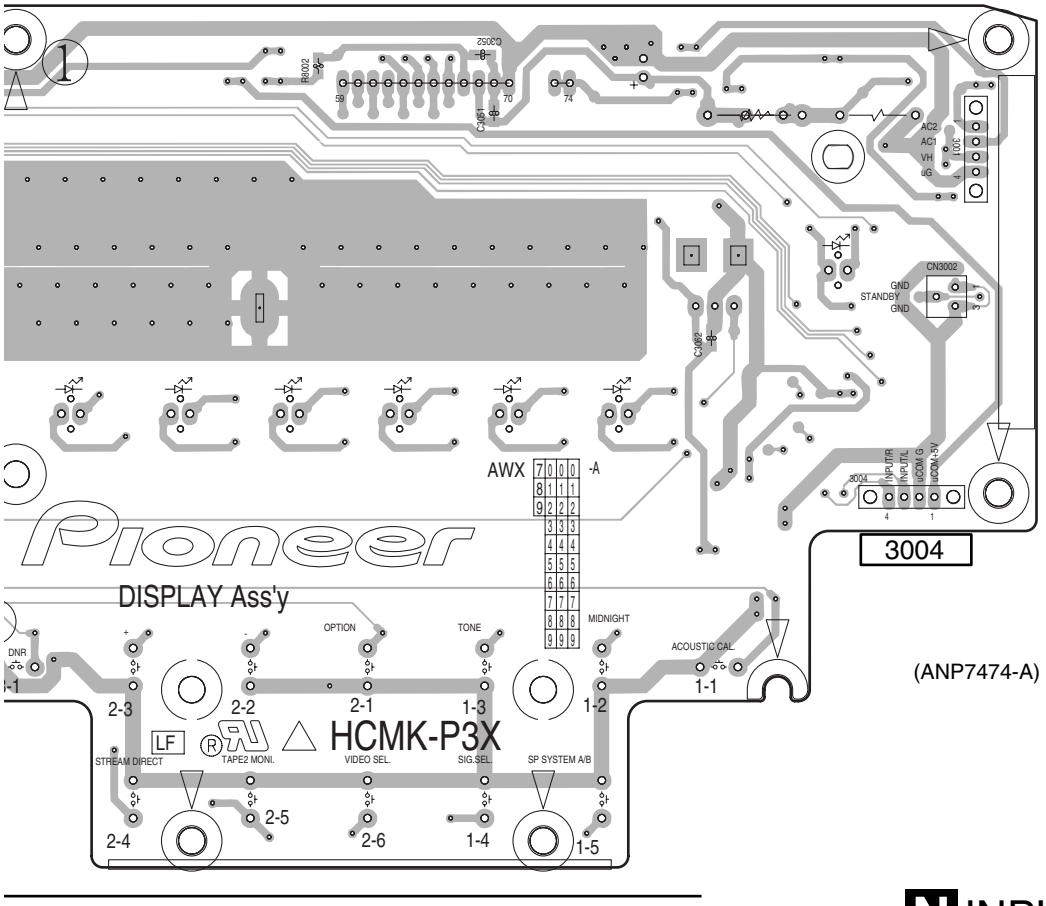
(ANP7474-A)

P VOL ASSY

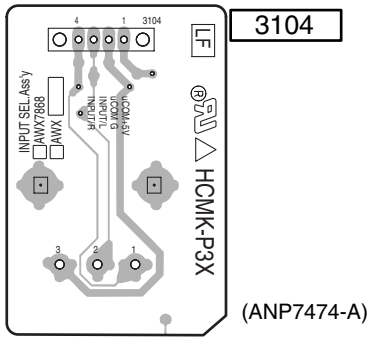


(ANP7474-A)

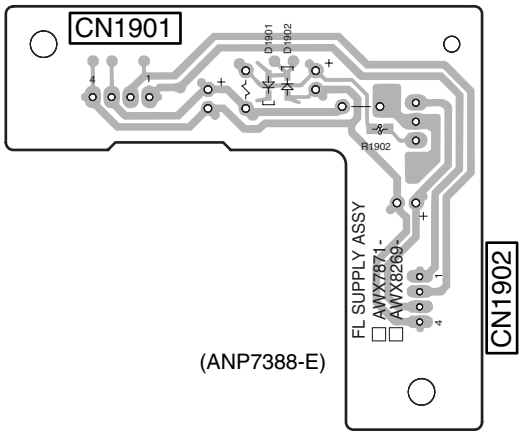
SIDE B



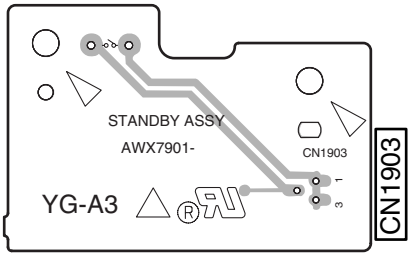
N INPUT SEL ASSY



AE FL SUPPLY ASSY

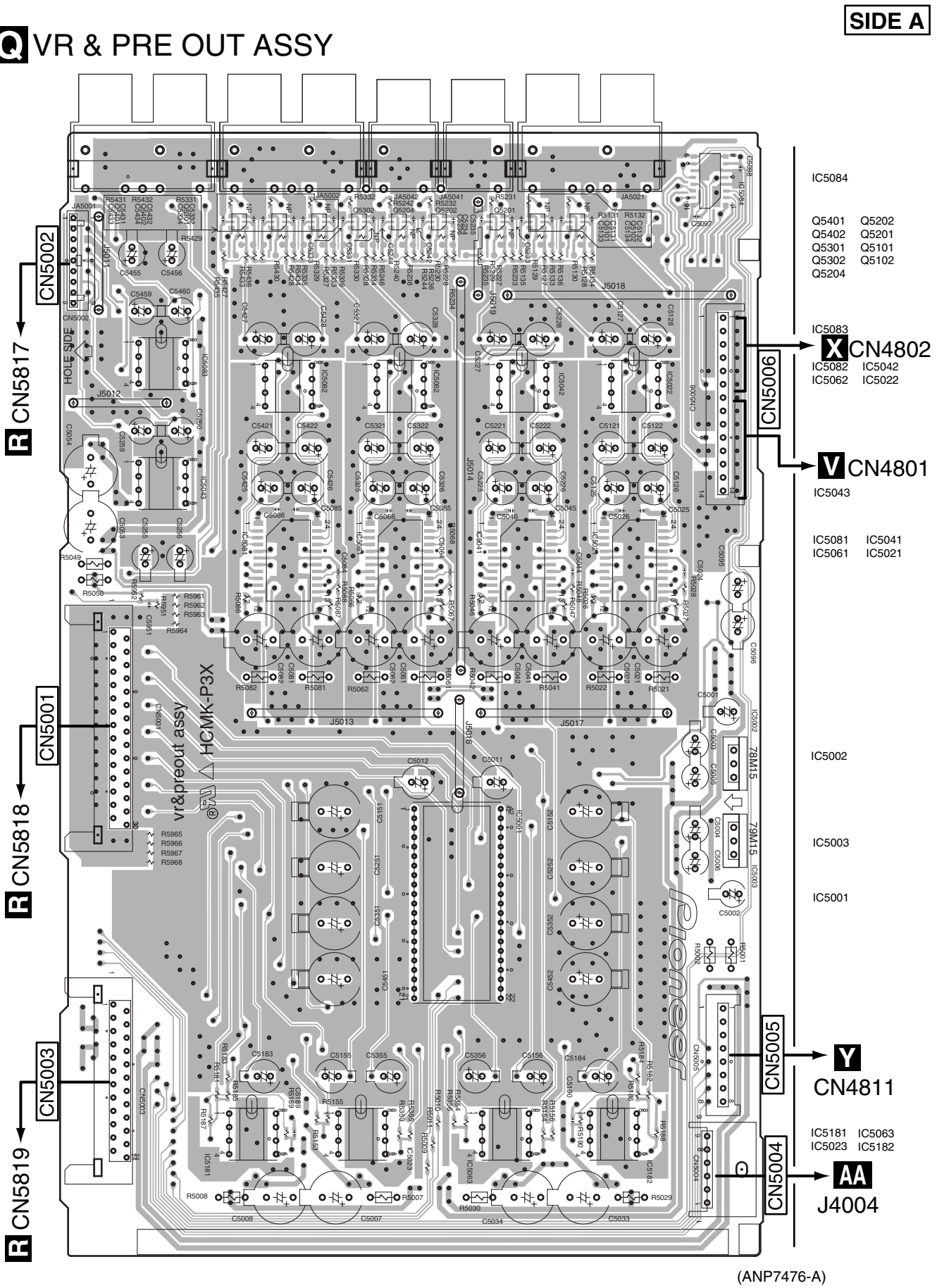


AF STANDBY ASSY

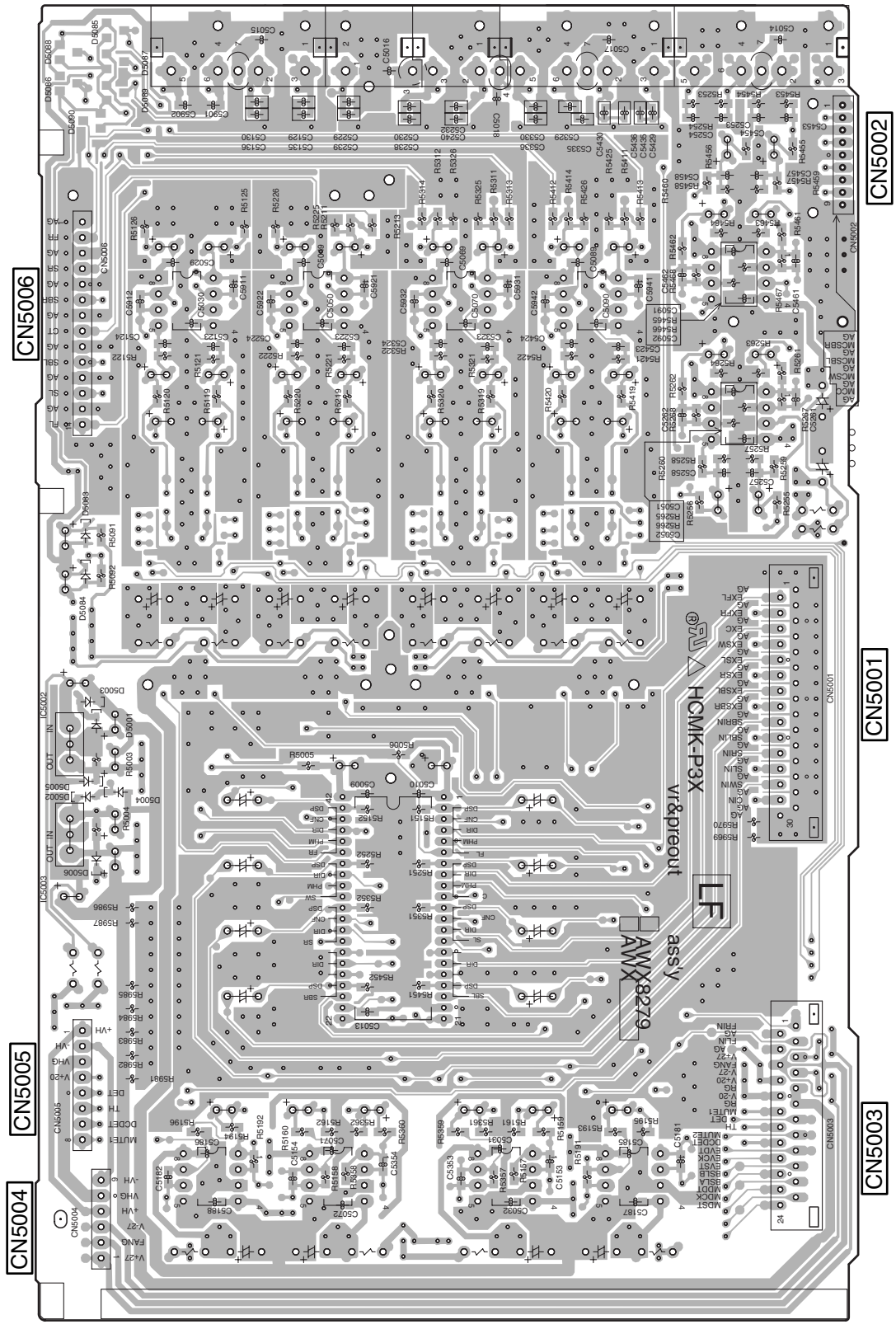


M N AE AF

4.11 VR & PRE OUT ASSY

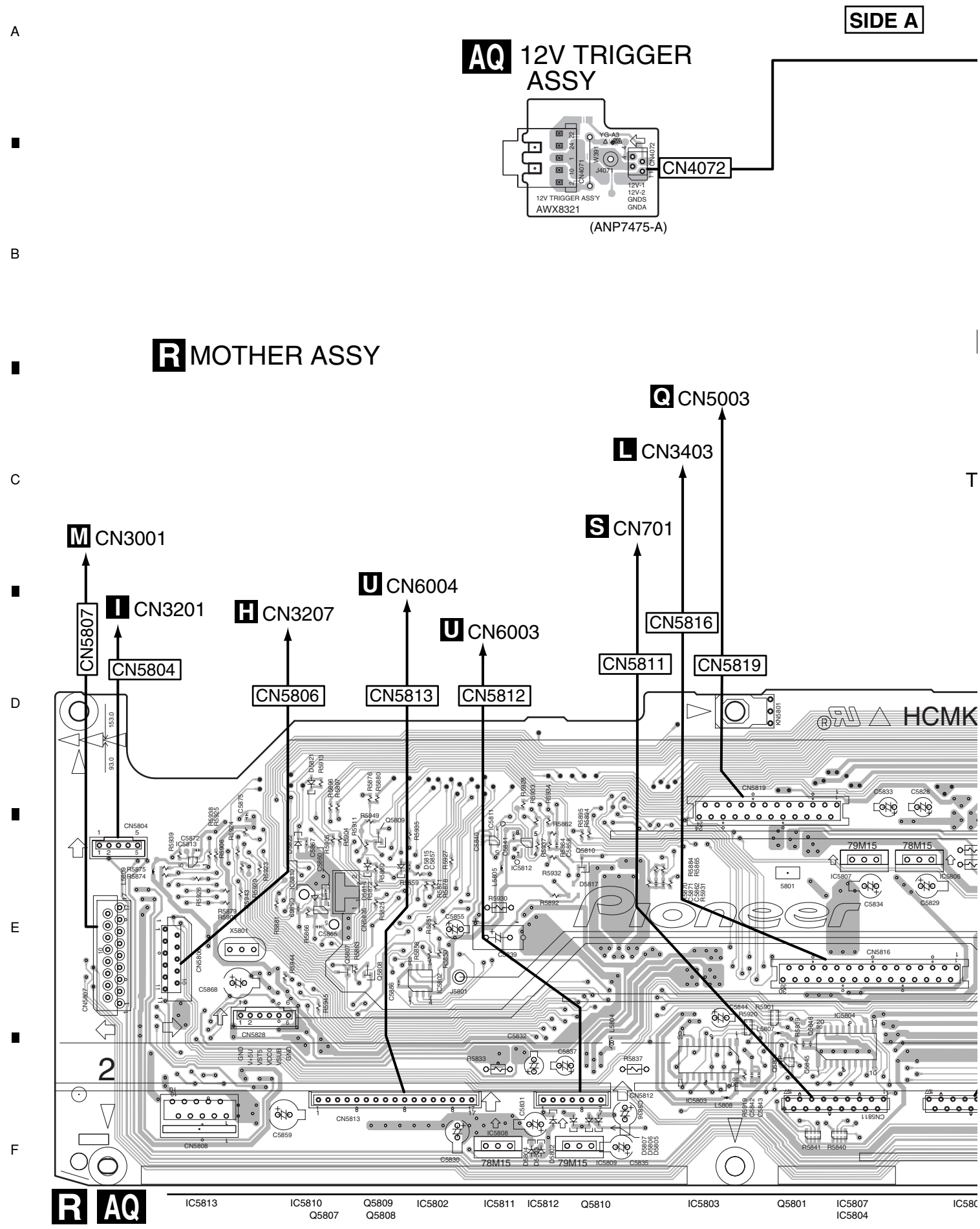


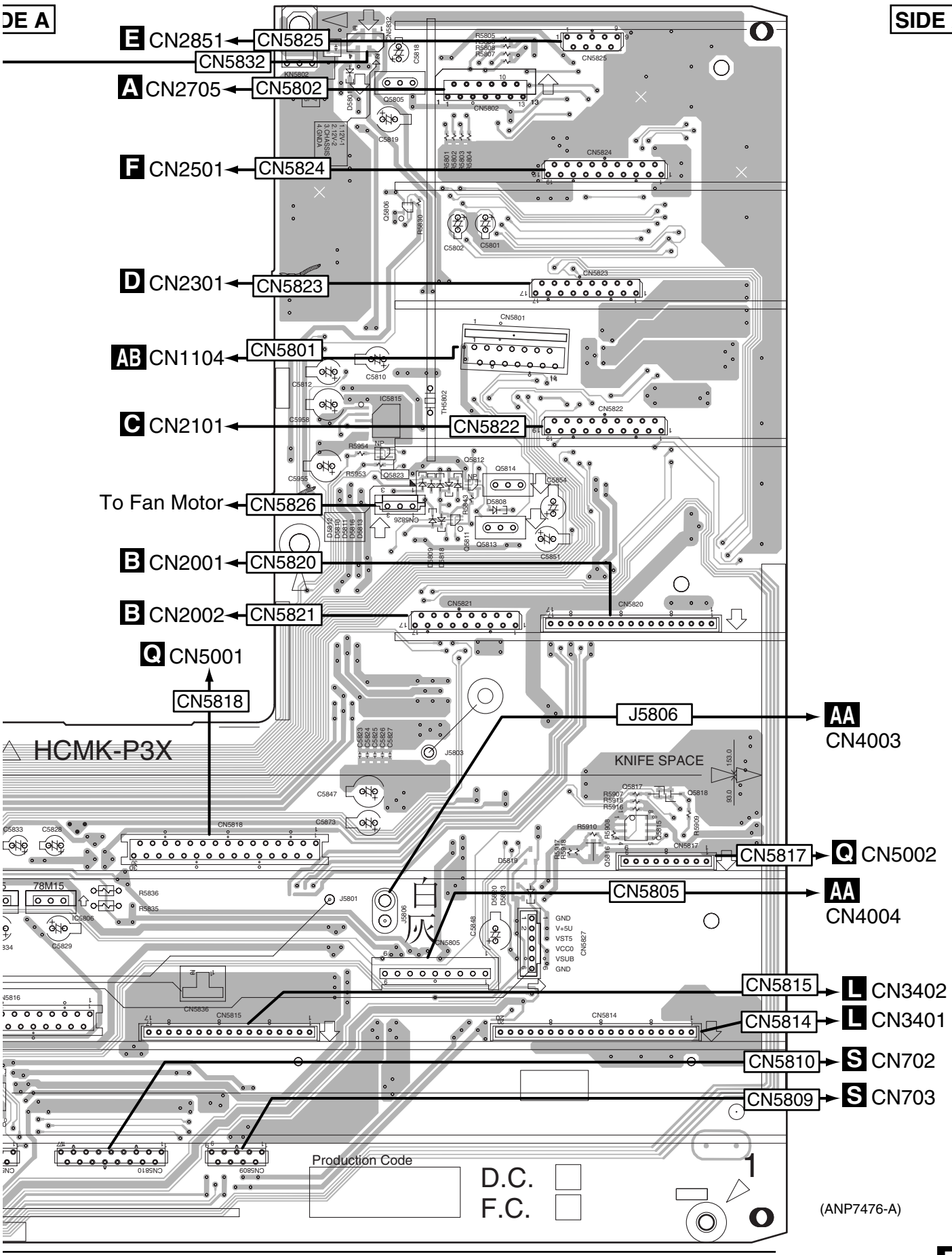
Q VR & PRE OUT ASSY

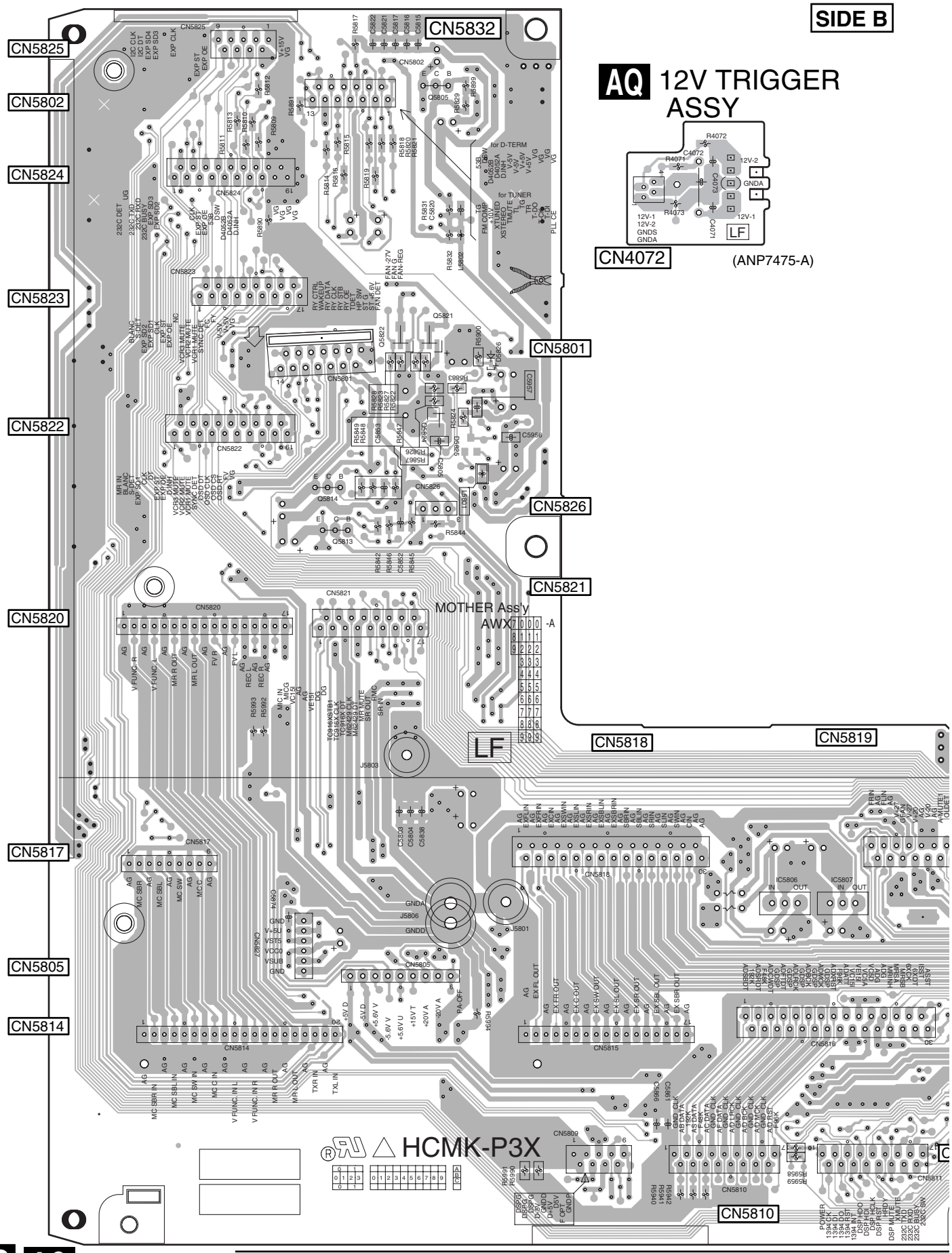


(ANP7476-A)

4.12 MOTHER and 12V TRIGGER ASSYS




SIDE A
SIDE A
E CN2851
CN5825
CN5832
A CN2705
CN5802
F CN2501
CN5824
D CN2301
CN5823
AB CN1104
CN5801
C CN2101
CN5822
To Fan Motor
CN5826
B CN2001
CN5820
B CN2002
CN5821
Q CN5001
CN5818
HCMK-P3X
J5806
AA
CN4003
KNIFE SPACE
CN5817
Q CN5002
CN5805
AA
CN4004
CN5815
L CN3402
CN5814
L CN3401
CN5810
S CN702
CN5809
S CN703
Production Code
D.C.
F.C.
(ANP7476-A)
IC5806
Q5802 Q5803 Q5805
Q5804 IC5815 Q5806
Q5812 Q5814
Q5811 Q5813
Q5816 Q5817 Q5818
Q5815
VSX-59TXi


SIDE B
AQ 12V TRIGGER ASSY
CN4072
(ANP7475-A)
CN5825
CN5802
CN5824
CN5823
CN5822
CN5820
CN5817
CN5805
CN5814
CN5832
CN5801
CN5826
CN5821
CN5818
CN5819
CN5810
MOTHER Ass'y
AWX
-A
LF
HCMK-P3X
Q5814
Q5813
Q5805
Q5822
Q5821
Q5824
IC5806
IC5807
VSX-59TXi
116

DE B

SIDE B

A

B

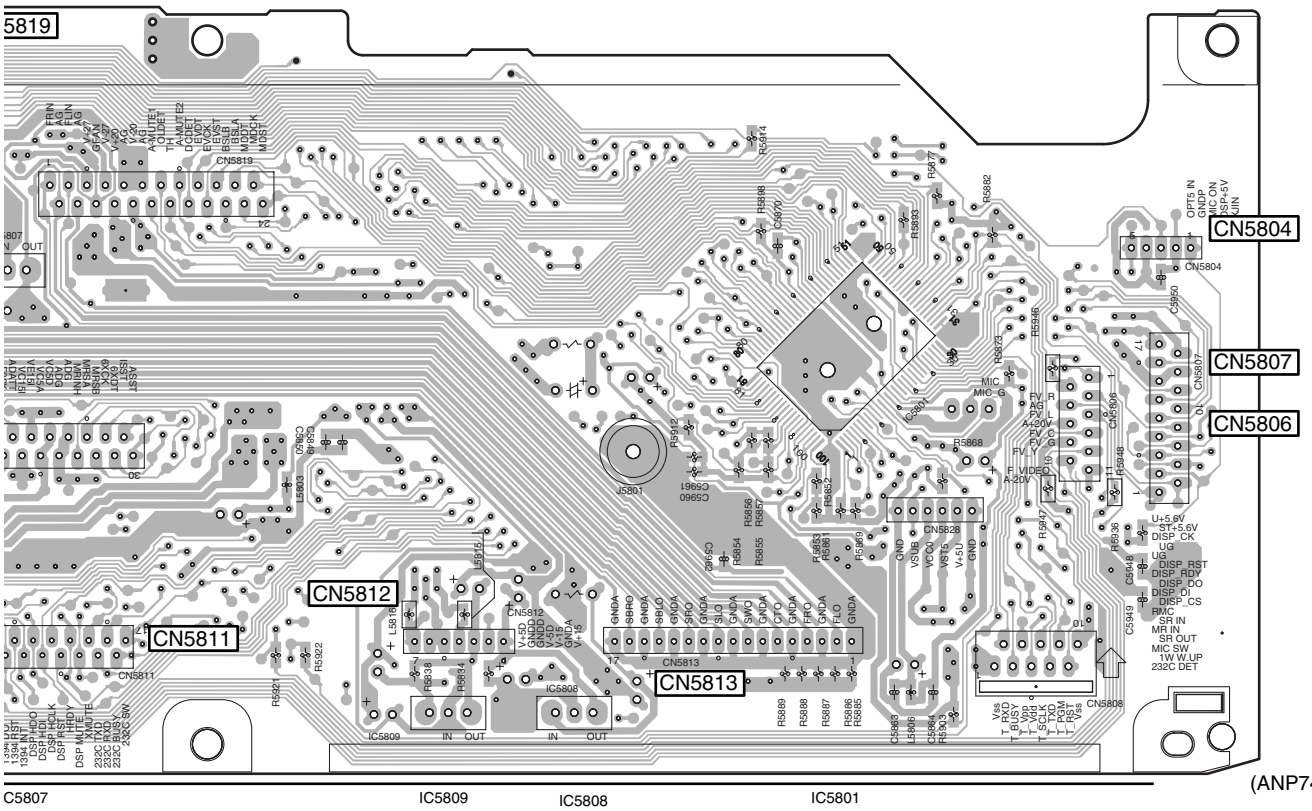
C

D

E

F

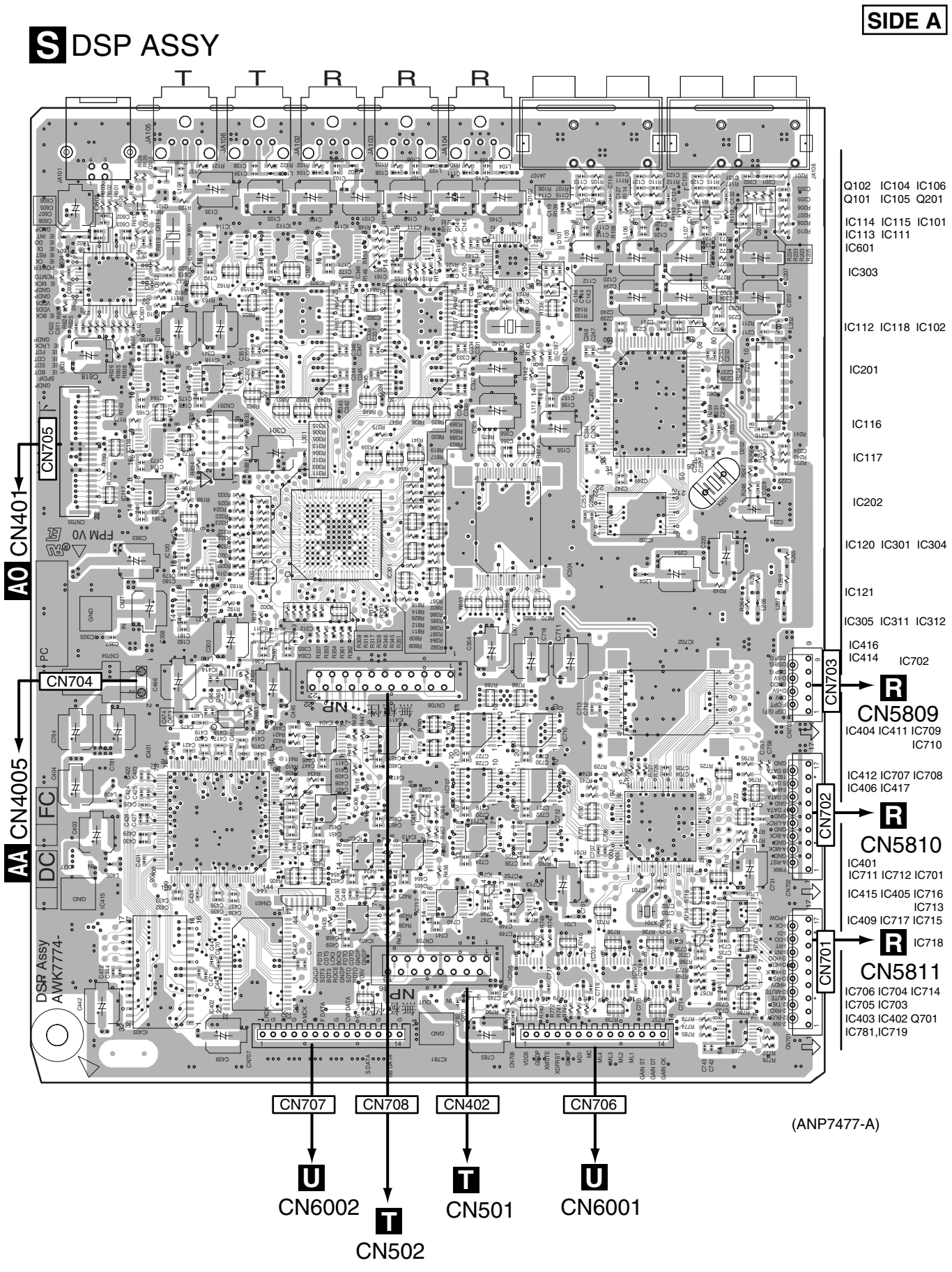
R MOTHER ASSY



(ANP7476-A)

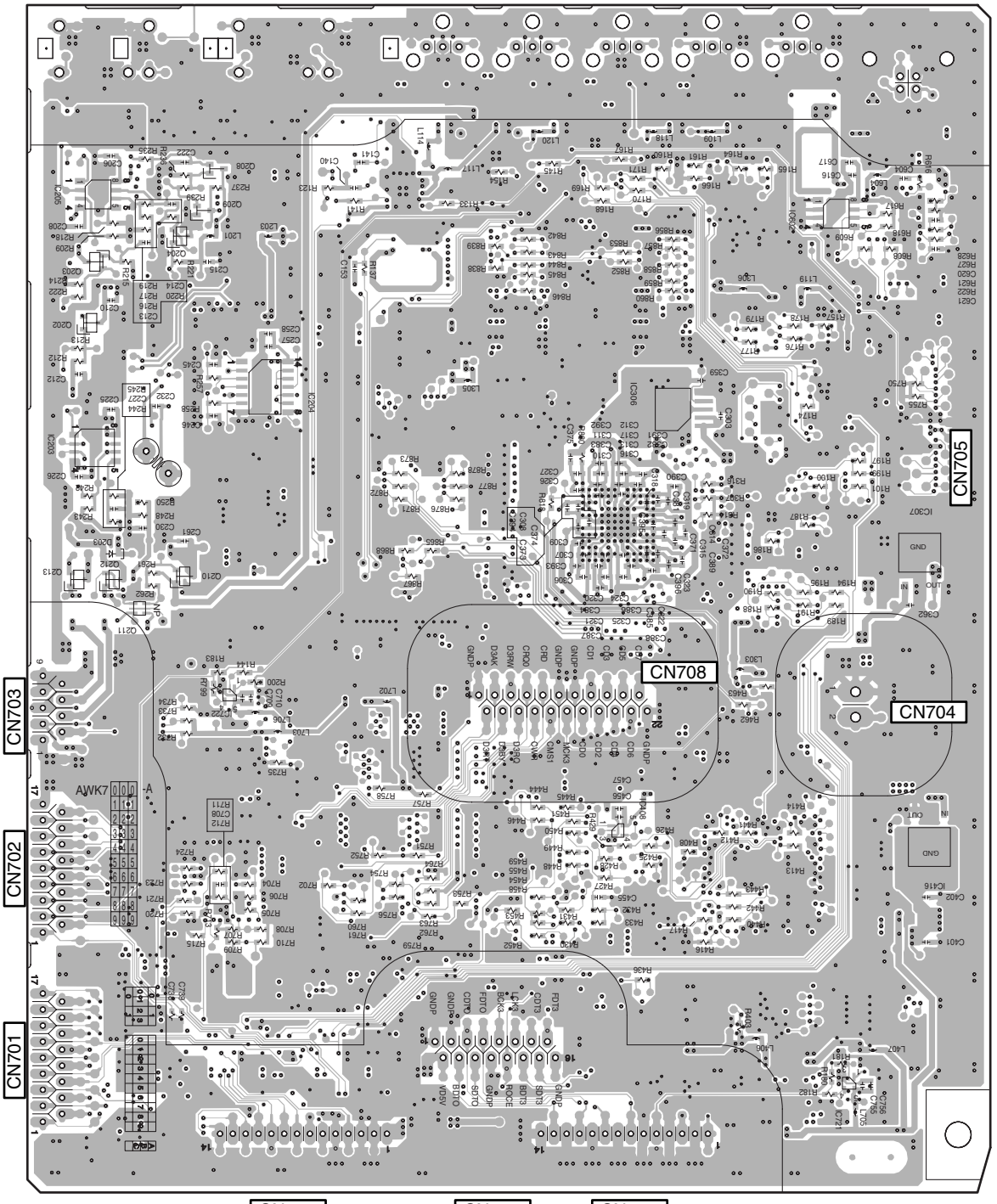
R

4.13 DSP ASSY


SIDE A
S DSP ASSY
CN705
CN401
A0
CN704
CN4005
AA
DSP Assy
AWK7774-
Q102 IC104 IC106
Q101 IC105 Q201
IC114 IC115 IC101
IC113 IC111
IC601
IC303
IC112 IC118 IC102
IC201
IC116
IC117
IC202
IC120 IC301 IC304
IC121
IC305 IC311 IC312
IC416
IC414
IC702
CN703
R
CN5809
IC404 IC411 IC709
IC710
IC412 IC707 IC708
IC406 IC417
CN702
R
CN5810
IC401
IC711 IC712 IC701
IC415 IC405 IC716
IC713
IC409 IC717 IC715
R
IC718
CN701
CN5811
IC706 IC704 IC714
IC705 IC703
IC403 IC402 Q701
IC781,IC719
CN707
CN708
CN402
CN706
(ANP7477-A)
U
CN6002
T
CN502
T
CN501
U
CN6001

SIDE B

S DSP ASSY

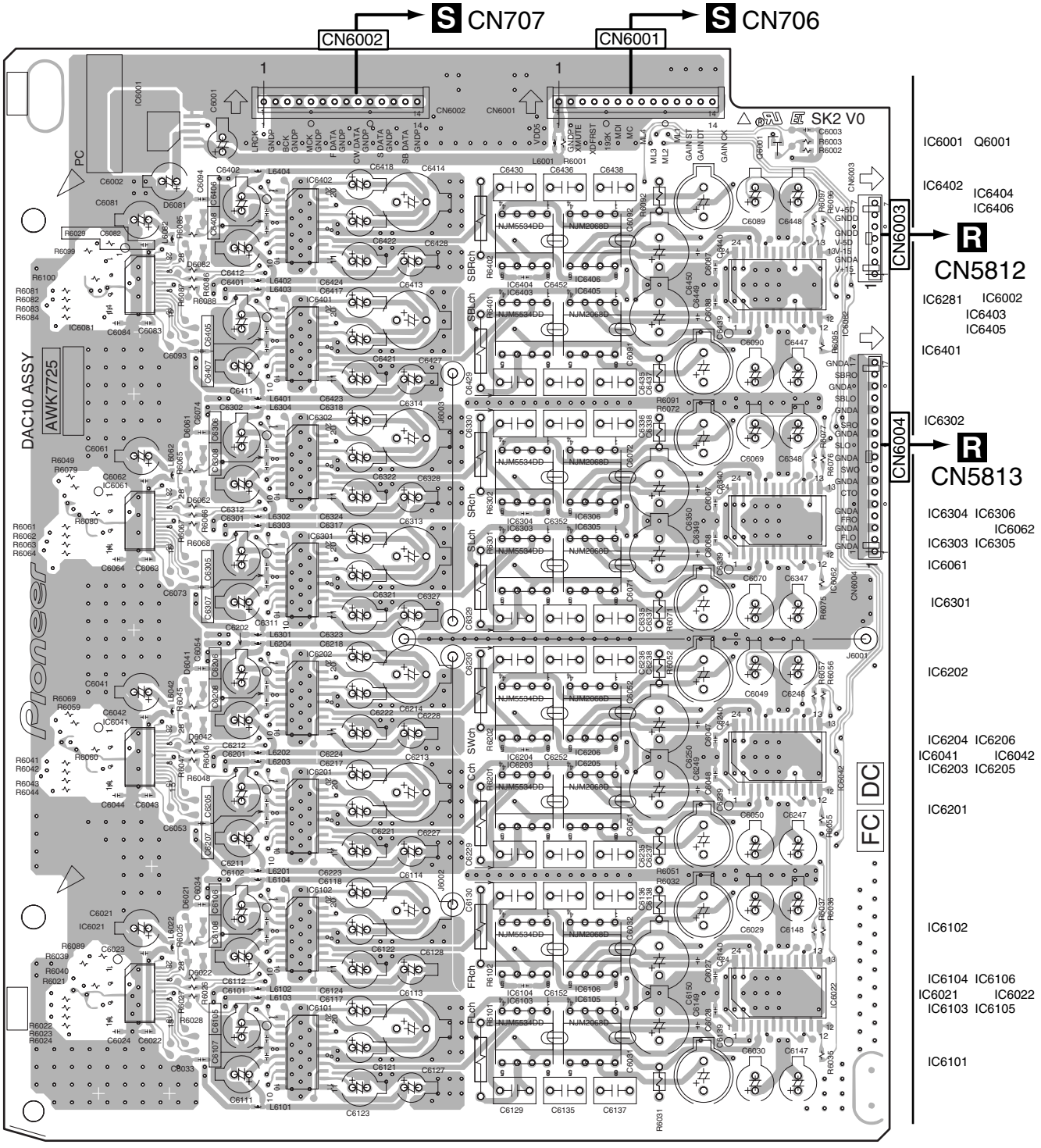


(ANP7477-A)

4.14 DAC10 ASSY

SIDE A

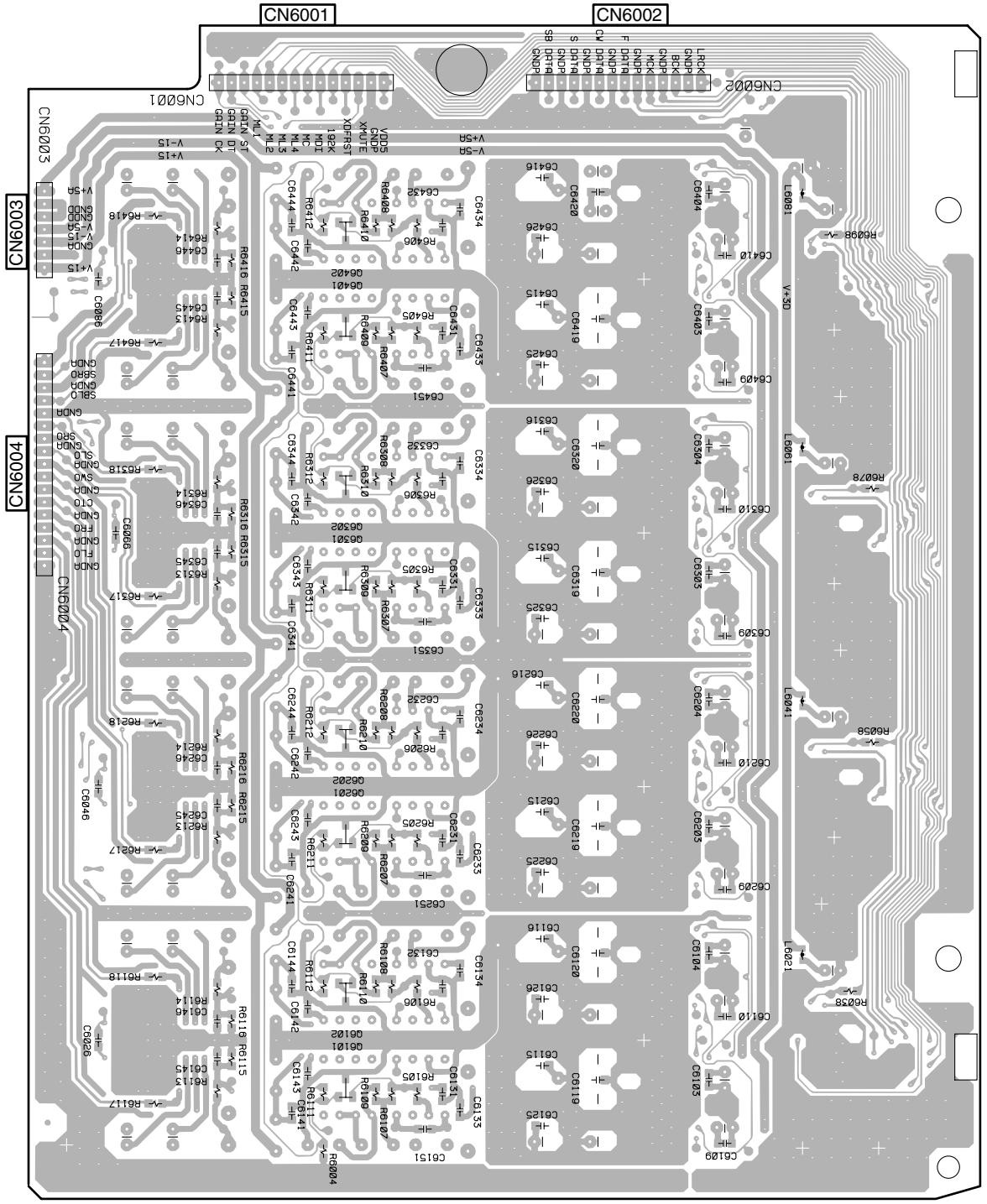
U DAC10 ASSY



(ANP7394-B)

SIDE B

U DAC10 ASSY



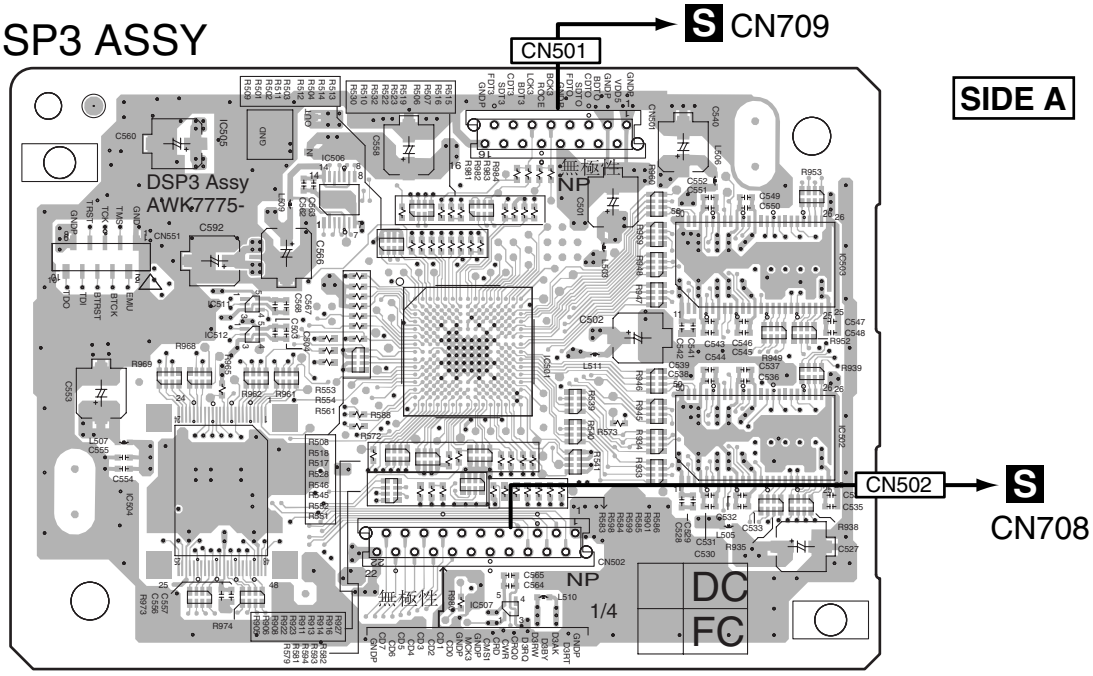
(ANP7394-B)

4.15 DSP3 ASSY

SIDE A

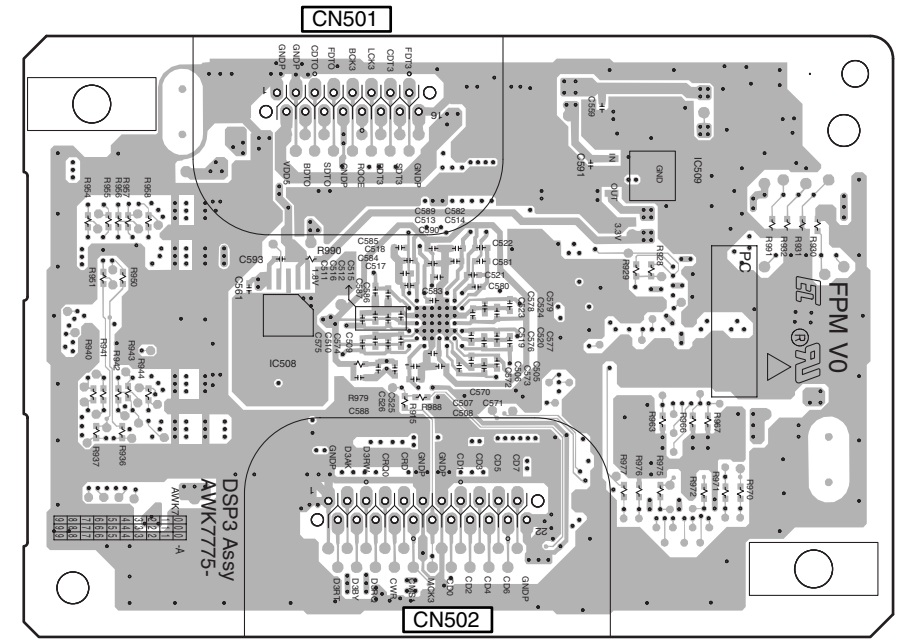
SIDE B

T DSP3 ASSY



IC504 IC505 ICP25 ICP32 ICP1 ICP11 ICP8 IC503
IC511 IC506 ICP27 ICP9 ICP3 ICP14 ICP18 IC502
IC512 ICP30 ICP20 ICP5 ICP17
ICT88 ICP29 ICP2 ICP6 ICP19
ICP31 ICP35 ICP41 ICP4 ICP16
ICP34 ICP24 ICP39 ICP7 ICP22
ICP33 ICP28 IC507 ICP12 ICP23
ICP36 ICP40 ICP10 ICP45
ICT98 ICP42 ICP21 ICP13
ICP44 ICP43 ICP15
ICP38 IC501 ICP26 ICP37

(ANP7478-A)

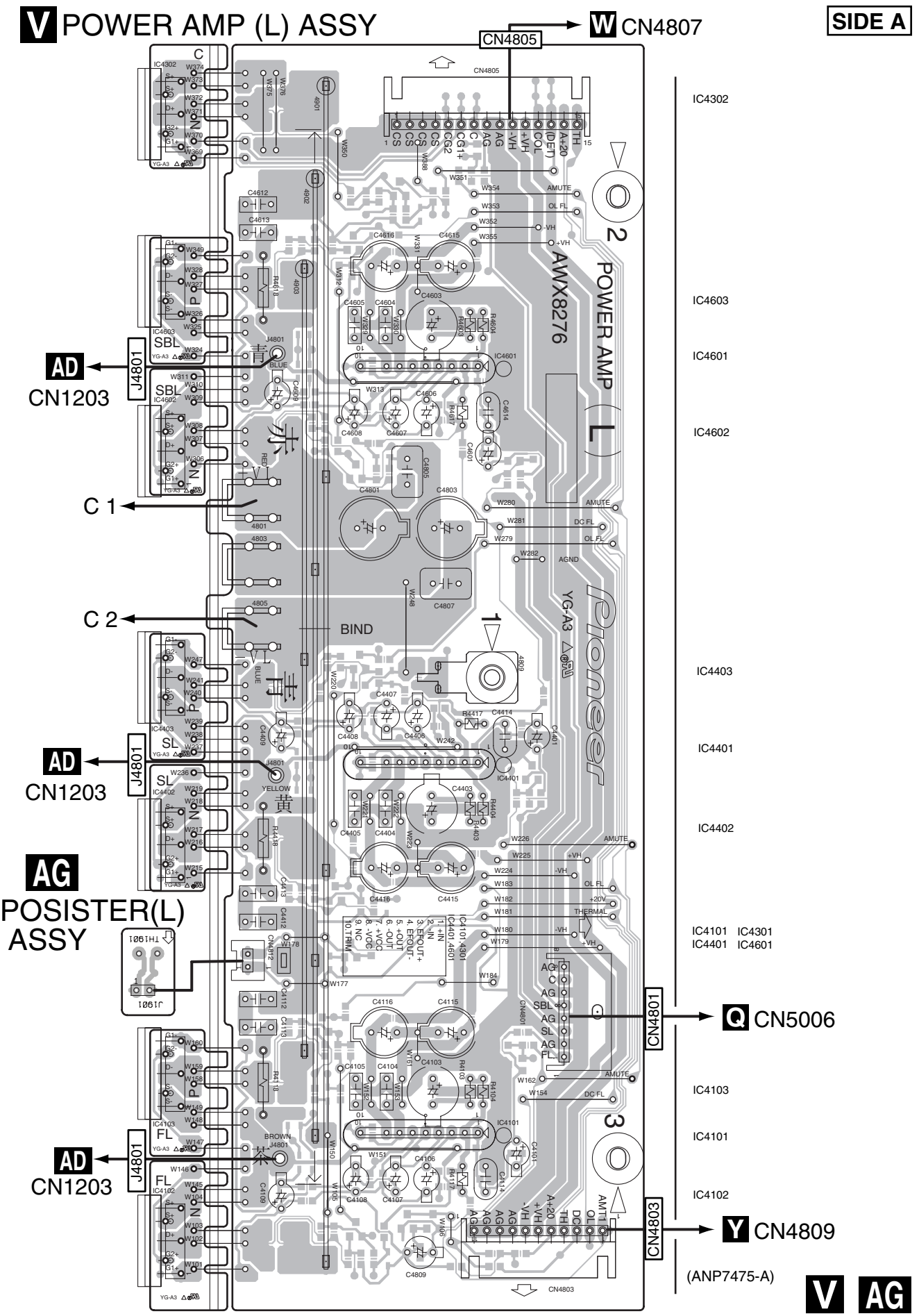


ICT86 ICT60 ICT47 ICT49 ICT50 ICT66 ICT71 ICT25 ICT73
ICT32 ICT59 ICT48 ICT68 ICT12 ICT13 ICT20
ICT58 ICT29 ICT81 IC508 ICT75 ICT11 ICT69 ICT82
ICT31 IC55 ICT61 ICT26 ICT10 ICT51 ICT70
ICT53 ICT54 ICT13 ICT21 ICT24
ICT57 ICT62 ICT46 ICT22
ICT30 ICT80 ICT74 ICT44 IC509
ICT64 ICT15 ICT36
ICT27 ICT28 ICT14 ICT41 ICT37 ICT16
ICT52 ICT56 ICT17 ICT23 ICT72
ICT65 ICT39 ICT35
ICT85 ICT78 ICT76 ICT45 ICT42 ICT38 ICT34
ICT79 ICT77 ICT63 ICT43 ICT40 ICT37 ICT33

(ANP7478-A)

T **T**

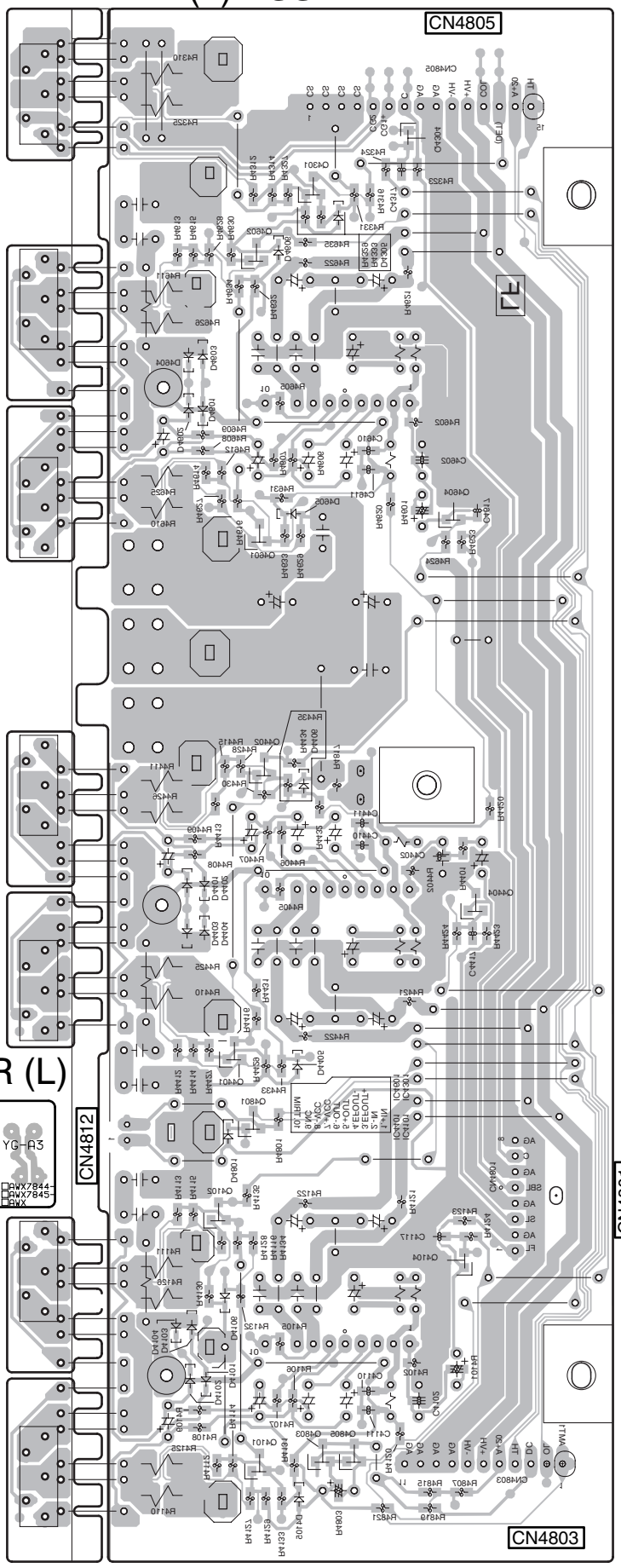
4.16 POWER AMP(L) and POSISTER(L) ASSYS



SIDE B

V POWER AMP (L) ASSY

SIDE B



Q4304
Q4301
Q4602
Q4604
Q4601
Q4402
Q4404
Q4801
IC4101 IC4301
IC4401 IC4601
Q4401
Q4102
Q4104
Q4101 Q4803
Q4805

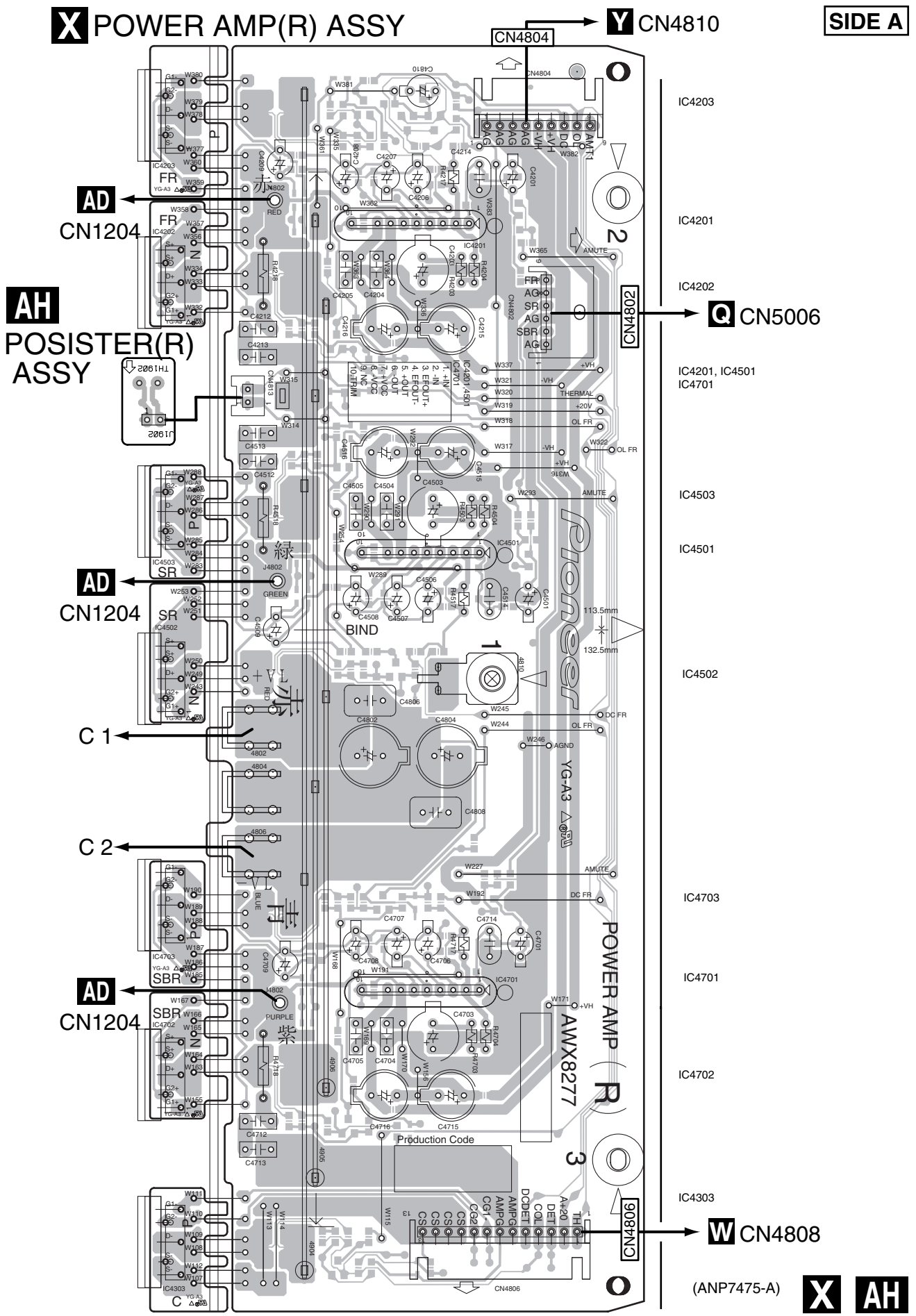
(ANP7475-A)

AG POSISTER (L) ASSY

V AG

V AG

4.17 POWER AMP(R) and POSISTER(R) ASSYS



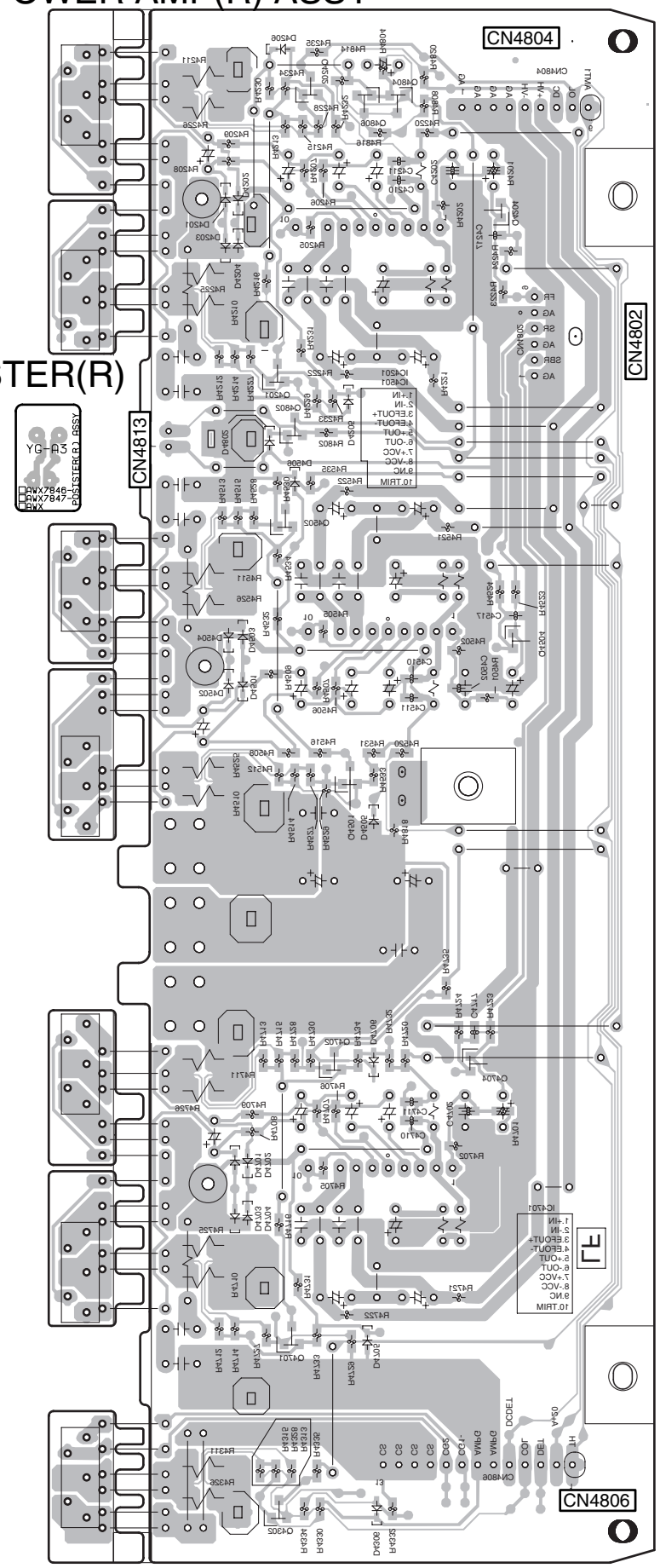
SIDE B

X POWER AMP(R) ASSY

SIDE B

AH

POSISTER(R) ASSY



Q4806
Q4202
Q4804
Q4204
Q4201
IC4501
Q4802
IC4201
Q4502
Q4504
Q4501
Q4702
Q4704
IC4701
Q4701
Q4302

(ANP7475-A)

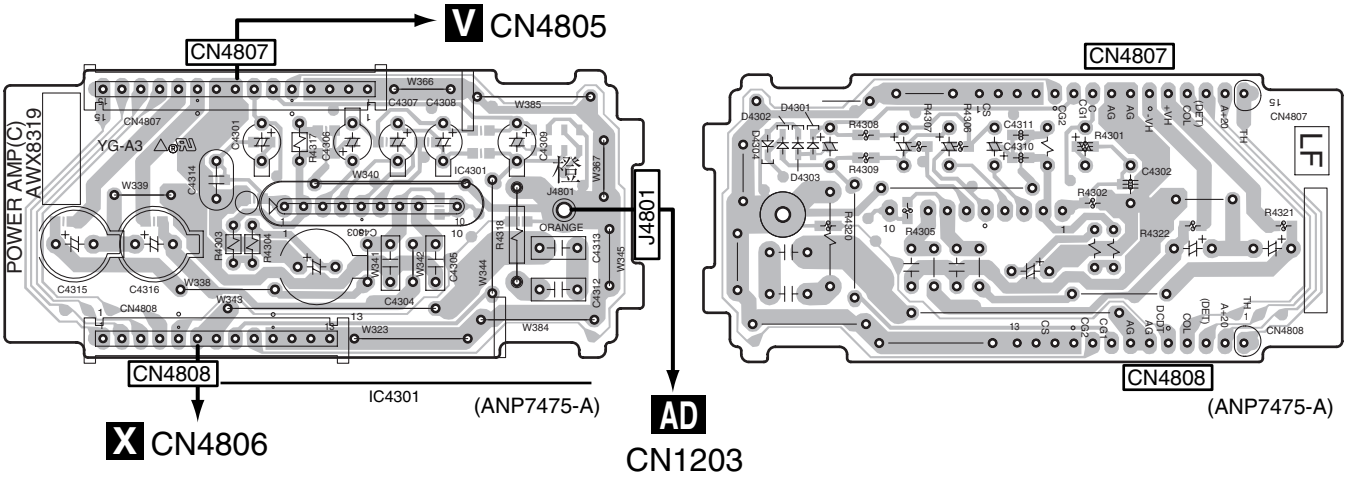
X AH

X AH

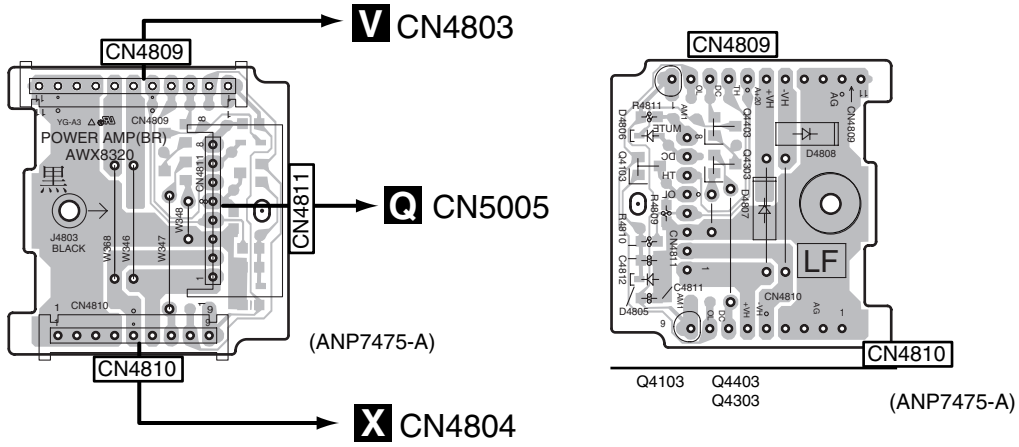
4.18 POWER AMP(C), POWER AMP(BR) and POWER AMP(G) ASSYS

SIDE A **SIDE B**

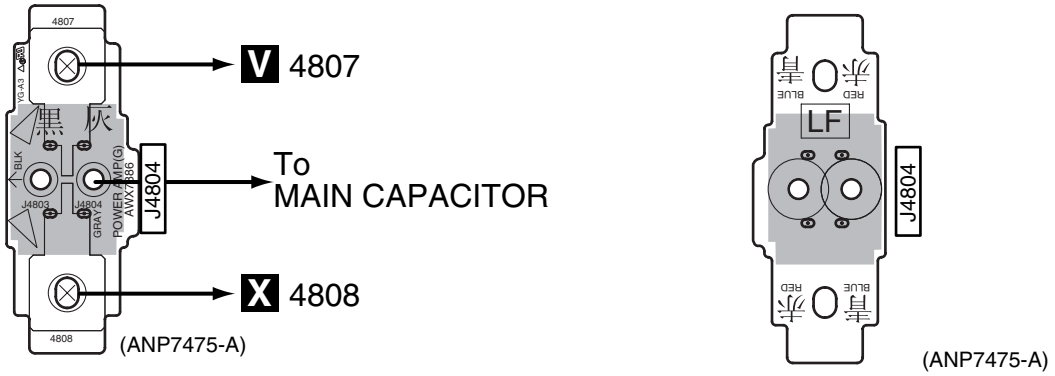
W POWER AMP (C) ASSY



Y POWER AMP (BR) ASSY

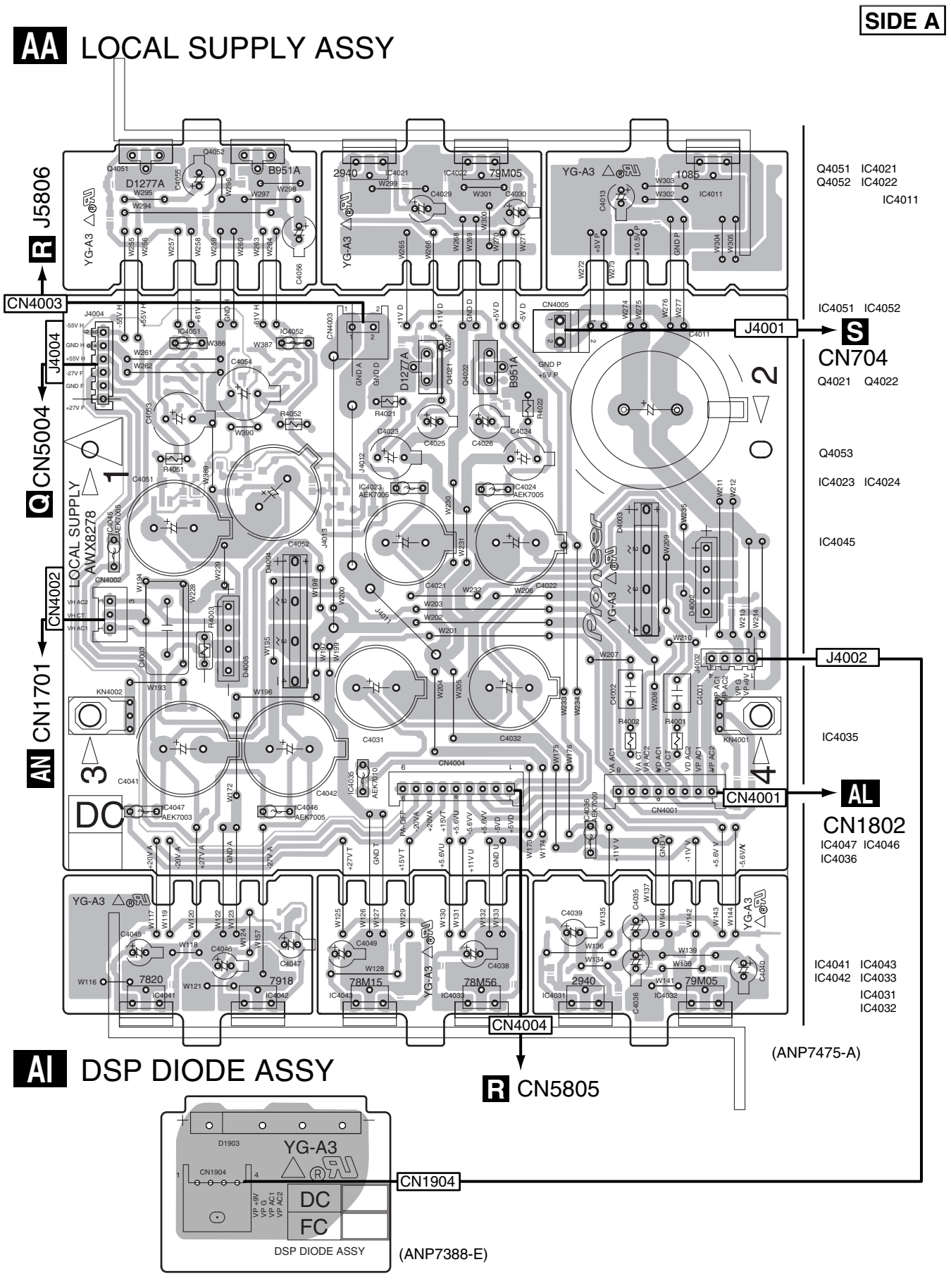


Z POWER AMP (G) ASSY



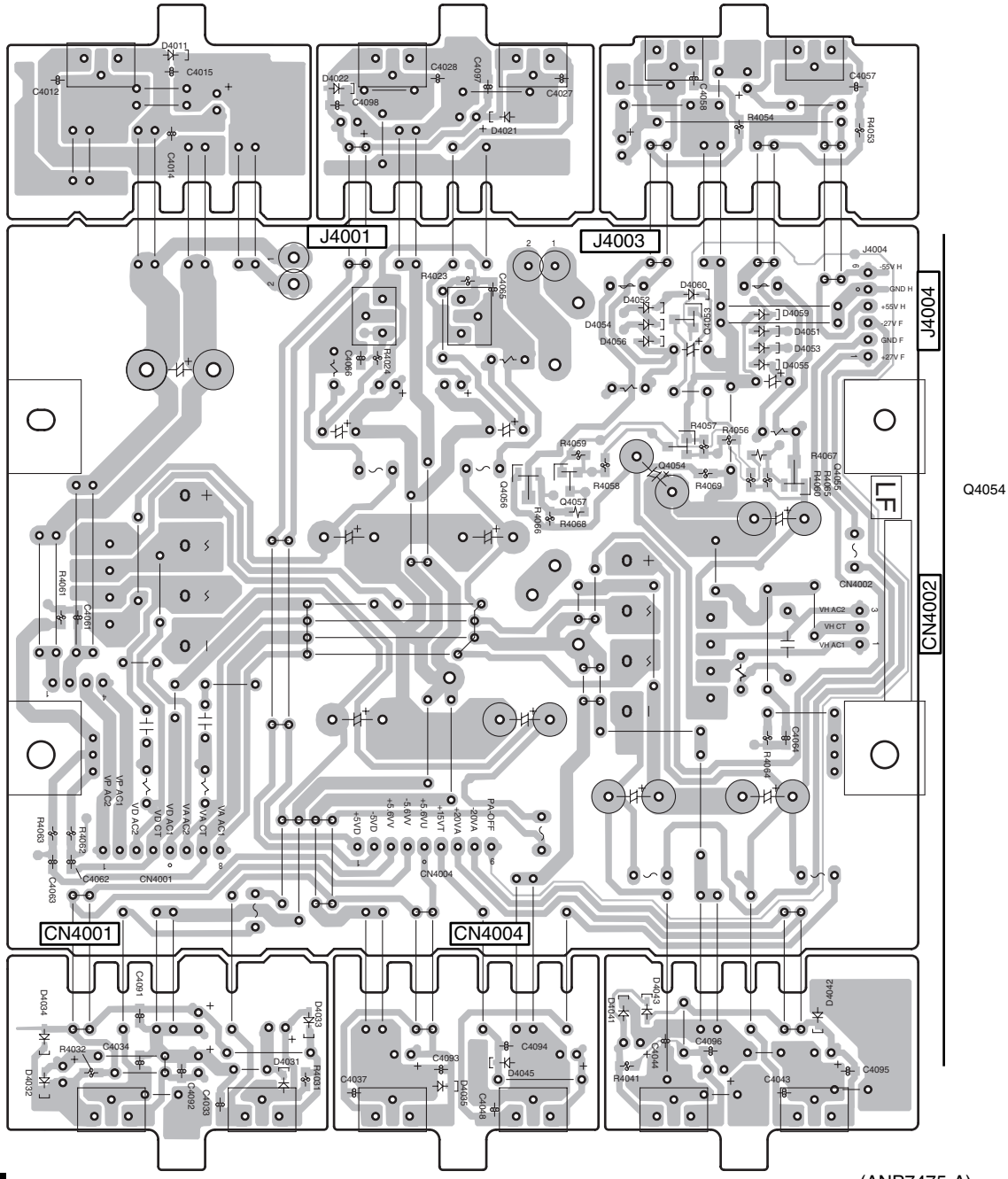
W Y Z W Y Z

4.19 LOCAL SUPPLY and DSP DIODE ASSYS



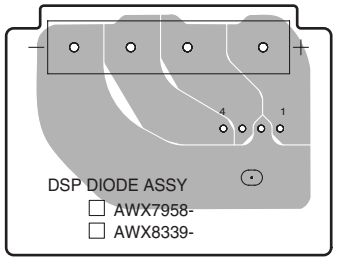
SIDE B

AA LOCAL SUPPLY ASSY



(ANP7475-A)

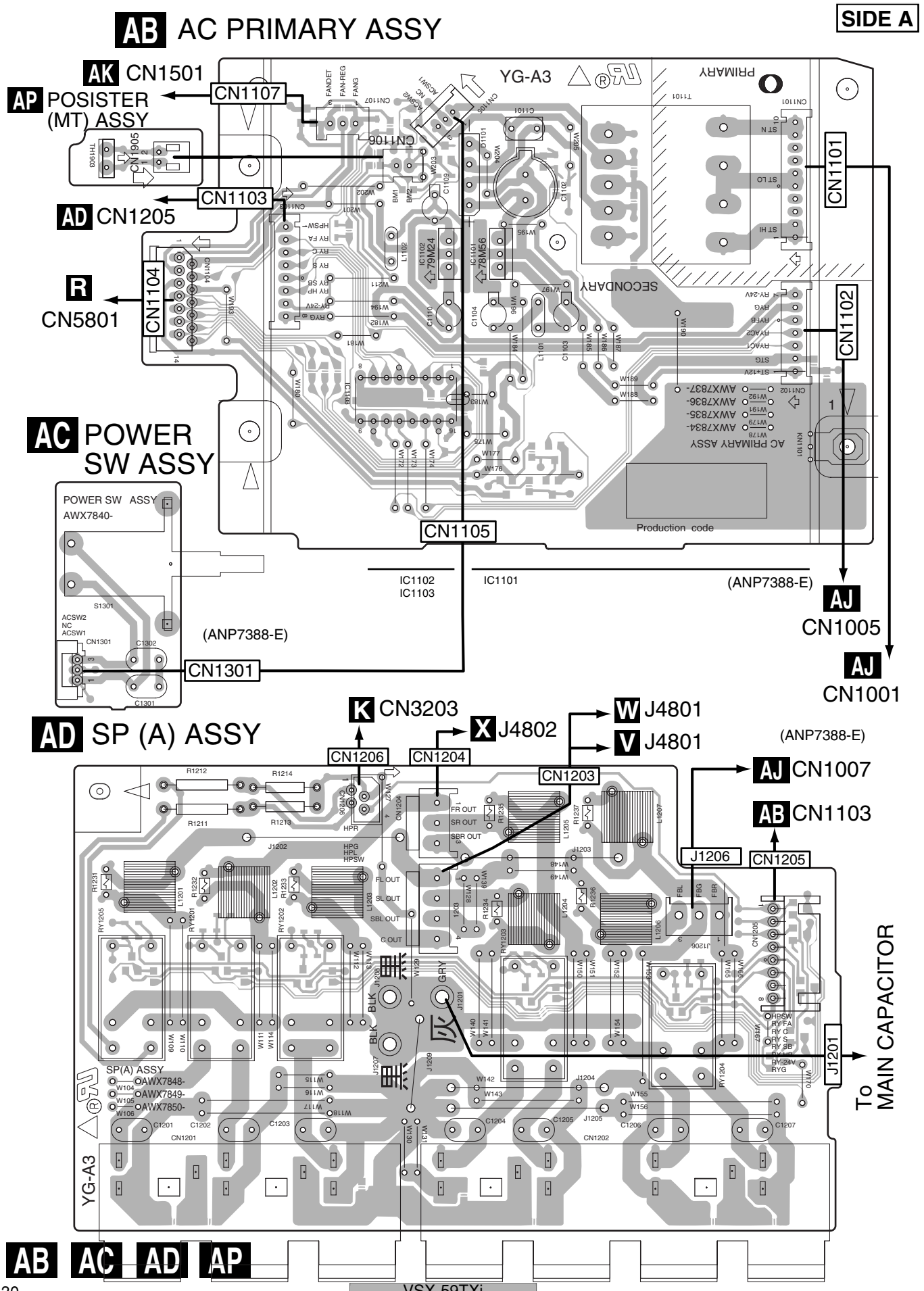
AI DSP DIODE ASSY



(ANP7388-E)

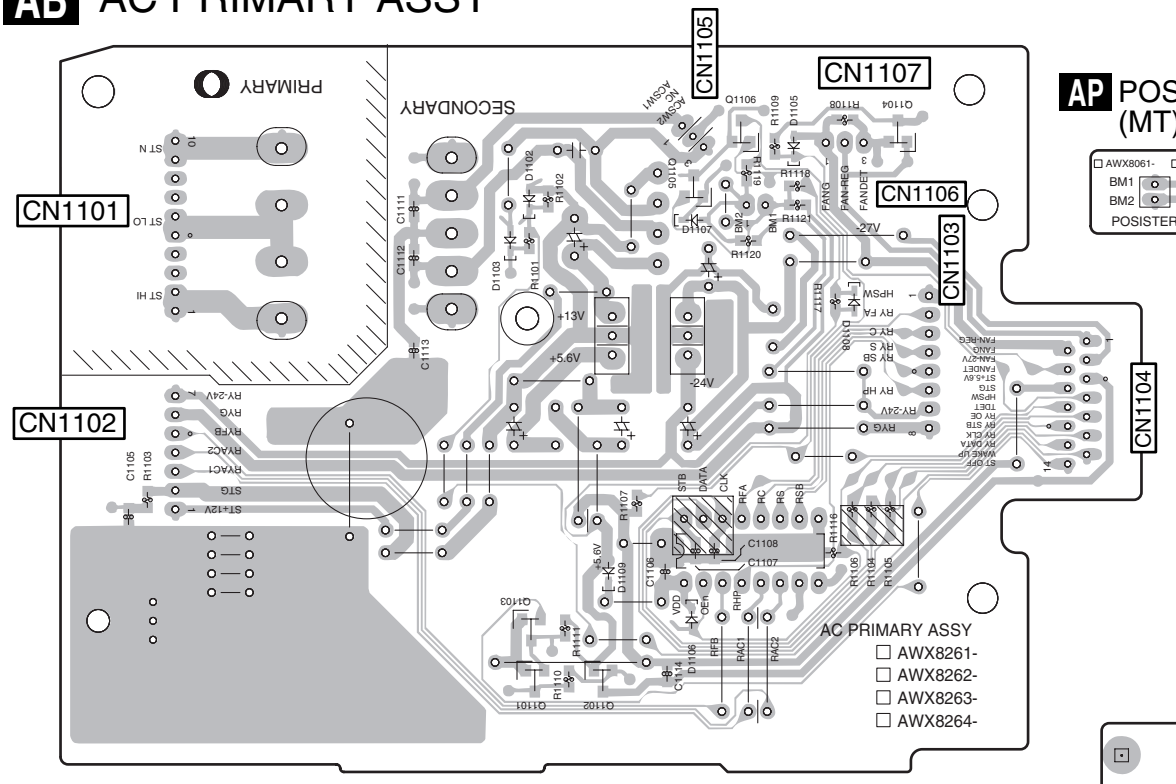
AA AI

4.20 AC PRIMARY, POWER SW, POSISTER(MT) and SP(A) ASSYS



AB AC PRIMARY ASSY

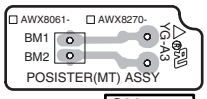
SIDE B



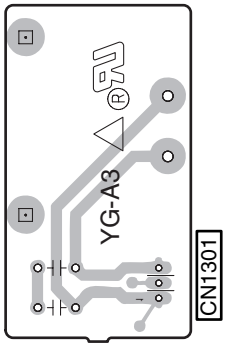
(ANP7388-E)

Q1103 Q1102 Q1104
Q1101

AP POSISTER (MT) ASSY

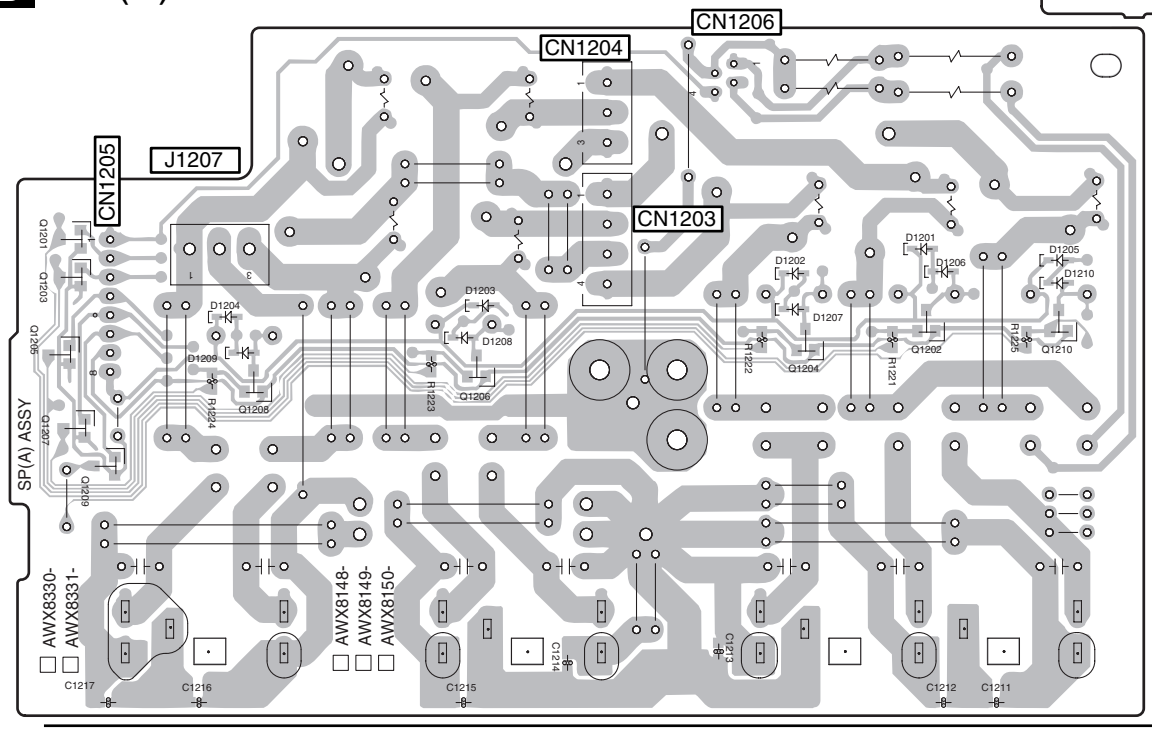


AC POWER SW ASSY



(ANP7388-E)

AD SP (A) ASSY

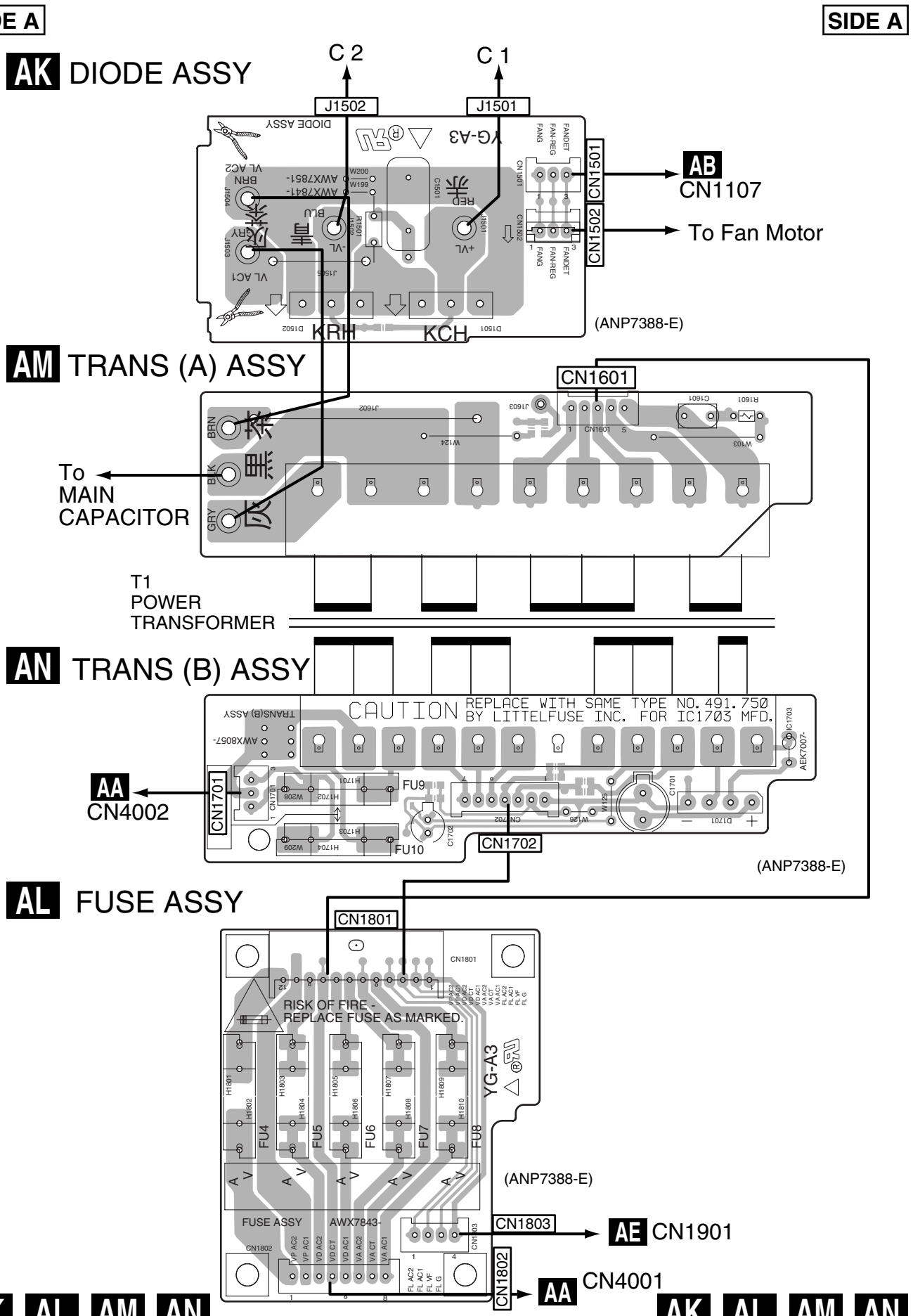


Q1201 Q1205 Q1209 Q1208 Q1206 Q1204 Q1202 Q1210
Q1203 Q1207

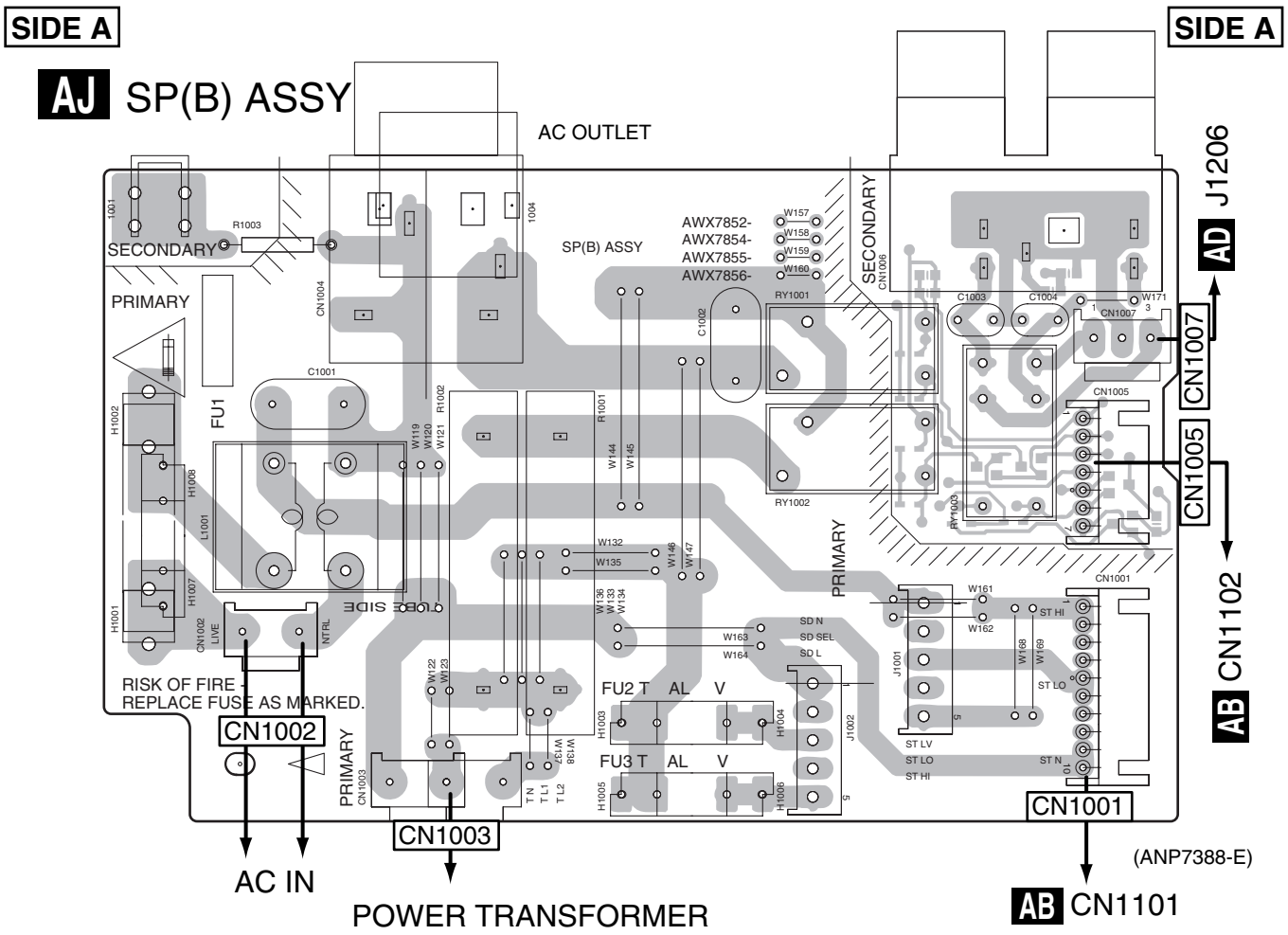
(ANP7388-E)

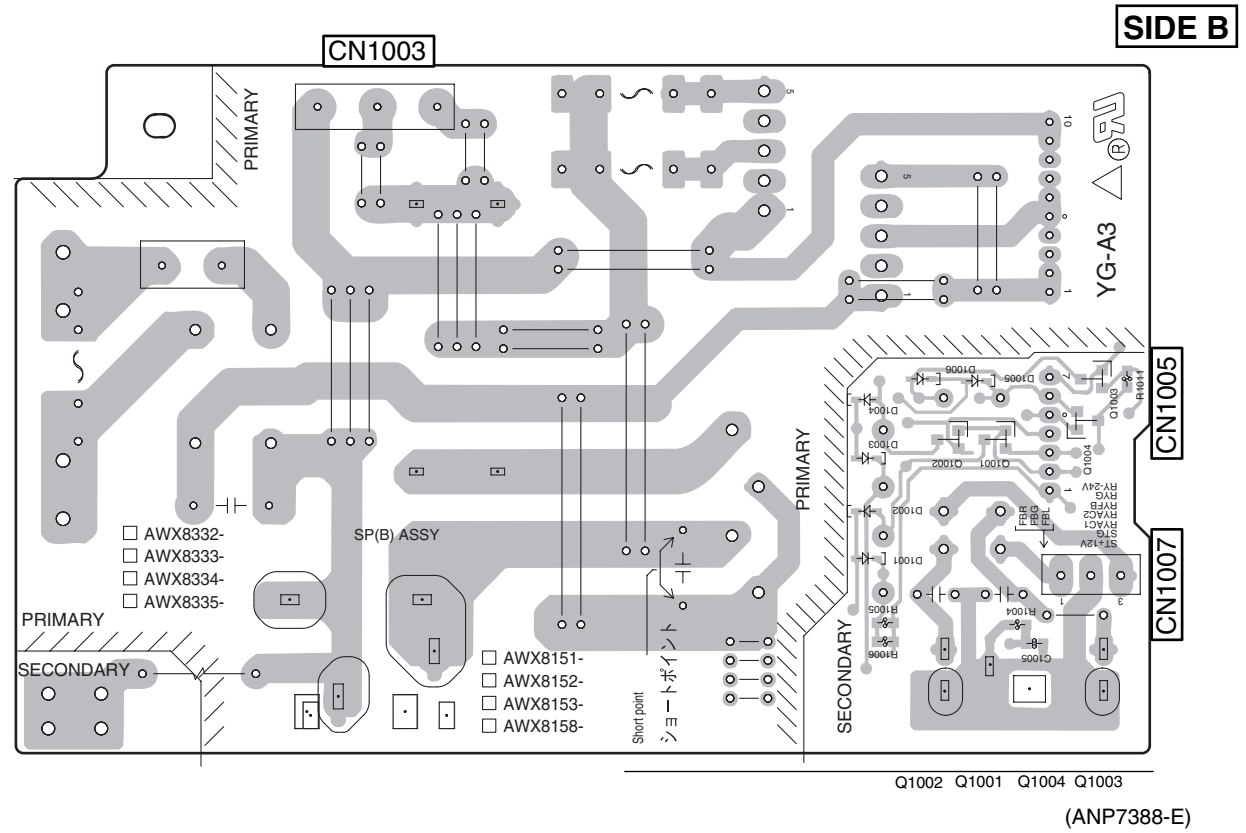
AB AC AD AP

4.21 TRANS(A), TRANS(B), DIODE and FUSE ASSYS



4.22 SP(B) ASSY


SIDE A
AJ SP(B) ASSY
AC OUTLET
SECONDARY
PRIMARY
SP(B) ASSY
AWX7852-
AWX7854-
AWX7855-
AWX7856-
FU1
RISK OF FIRE -
REPLACE FUSE AS MARKED.
CN1002
CN1003
CN1001
CN1005
CN1007
J1206
AD
CN1102
AB
AC IN
POWER TRANSFORMER
AB CN1101
(ANP7388-E)

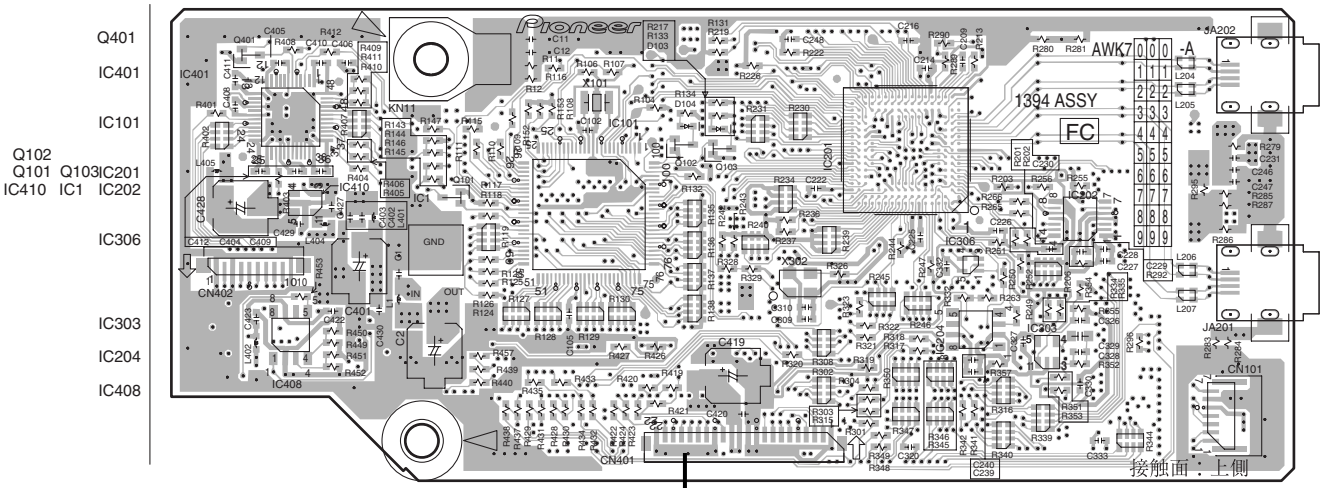

SIDE B
CN1003
PRIMARY
YG-A3
CN1005
CN1007
AWX8332-
AWX8333-
AWX8334-
AWX8335-
SP(B) ASSY
PRIMARY
SECONDARY
AWX8151-
AWX8152-
AWX8153-
AWX8158-
Short point
ショートポイント
Q1002 Q1001 Q1004 Q1003
(ANP7388-E)

4.23 1394 MODULE ASSY

SIDE A **SIDE B**

AO 1394 MODULE

SIDE A

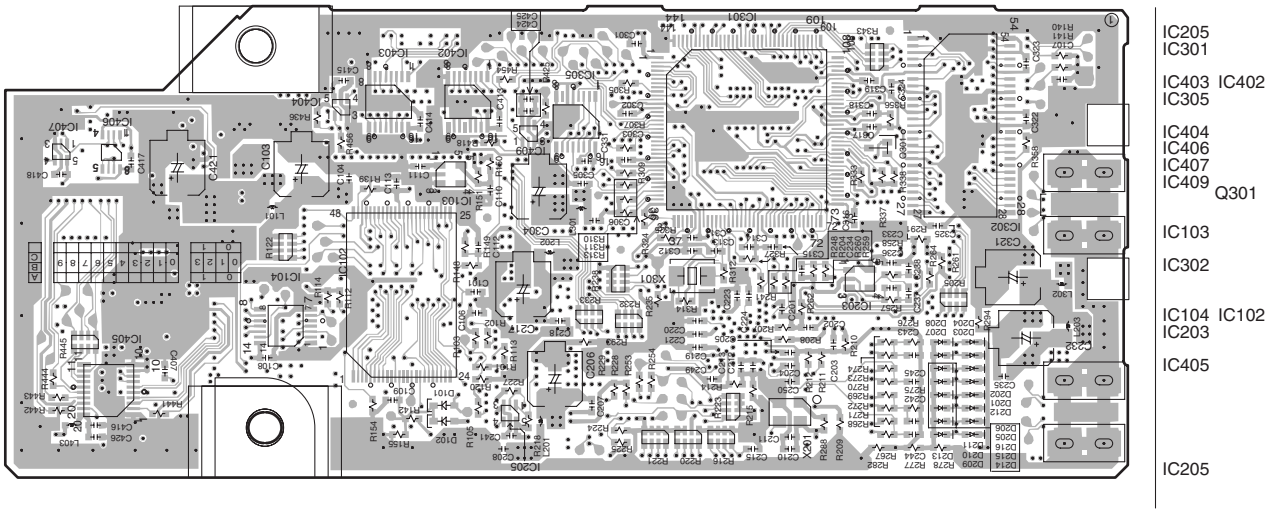


(ANP7489-A)

CN401

S CN705

SIDE B



(ANP7489-A)

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

560 Ω	→	*56 x 10¹* →	*561*	*RD1/4PU 5 6 1 J*
47k Ω	→	*47 x 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).

5.62k Ω	→	*562 x 10¹* →	*5621*	*RN1/4PC 5 6 2 1 F*

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
	1	FM/AM TUNER Module	AXQ7237
NSP	1	VIDEO Assy	AWQ7020
	2	A/V I/O Assy	AWX8271
	2	COMPOSITE Assy	AWX7942
	2	COMPONENT Assy	AWX7953
	2	S-VIDEO Assy	AWX8159
	2	V-CONVERT Assy	AWX8160
NSP	1	A/D & CONTROL Assy	AWM7830
	2	INPUT SEL Assy	AWX7868
	2	MULTI JOG Assy	AWX7869
	2	VOL Assy	AWX8340
	2	MIC AMP Assy	AWX8341
	2	HEAD PHONE Assy	AWX8336
	2	MIC & OPT Assy	AWX7875
	2	VIDEO CONNECT Assy	AWX7876
	2	ANALOG IN&A/D Assy	AWX8273
	2	DISPLAY Assy	AWX8317
	2	FRONT A/V Assy	AWX8337
NSP	1	VR & MOTHER Assy	AWM7833
	2	VR&PRE OUT Assy	AWX8279
	2	MOTHER Assy	AWX8280
	1	DAC10 Assy	AWK7773
	1	DSP3 Assy	AWK7775
	1	DSP Assy	AWK7774
NSP	1	POWER AMP Assy	AWH7005
	2	POWER AMP(L) Assy	AWX8276
	2	POWER AMP(R) Assy	AWX8277
	2	POWER AMP(C) Assy	AWX8319
	2	POWER AMP(BR) Assy	AWX8320
	2	POWER AMP(G) Assy	AWX7886
	2	LOCAL SUPPLY Assy	AWX8278
	2	12V TRIGGER Assy	AWX8321
NSP	1	PS&SP Assy	AWK7769
	2	AC PRIMARY Assy	AWX8261
	2	TRANS(A) Assy	AWX8338
	2	POWER SW Assy	AWX7840
	2	DIODE Assy	AWX8412
	2	FUSE Assy	AWX7843
	2	POSISTER(L) Assy	AWX7844
	2	POSISTER(R) Assy	AWX7846
	2	FL SUPPLY Assy	AWX8269
	2	STANDBY Assy	AWX7901
	2	DSP DIODE Assy	AWX8339
	2	TRANS(B) Assy	AWX8057
	2	SP(A) Assy	AWX8330
	2	SP(B) Assy	AWX8332
	2	POSISTER(MT) Assy	AWX8270
	1	1394 Assy	AWK7794

A FM/AM TUNER MODULE

Mark	No.	Description	Part No.
SEMICONDUCTORS			
		IC201	BA1451F
		IC202	LC72131MD
		Q201, Q204, Q205	2SC2412K
		Q202	DTA124ES
		Q203	DTC124EK
		D201	1SS133
		D202	MTZJ5.1C
COILS AND FILTERS			
		L201 FM DET COIL	ATE7003
		F202 FM CERAMIC FILTER	ATF-107
		F201 FM CERAMIC FILTER	ATF-119
		F203 AM CERAMIC FILTER	ATF7026
CAPACITORS			
		C206	CCSRCH100D50
		C212, C213, C226, C233-C235	CCSRCH101J50
		C240	CCSRCH101J50
		C231, C232	CCSRCH150J50
		C223	CEAT100M50
		C229	CEAT101M10
		C224	CEAT1R0M50
		C227	CEAT220M25
		C241	CEAT2R2M50
		C243	CEAT330M16
		C228	CEAT3R3M50
		C237	CEAT470M10
		C211	CEJQ1R0M50
		C210	CEJQ470M16
		C204, C238, C613	CKSRYB102K50
		C101, C102, C208, C220, C239	CKSRYB103K50
		C242, C604	CKSRYB103K50
		C216, C217, C225	CKSRYB153K50
		C201, C205, C209, C214, C230	CKSRYB223K50
		C236, C603	CKSRYB223K50
		C221	CKSRYB224K10
		C202, C222	CKSRYB473K16
		C215	CKSRYB681K50
RESISTORS			
		R211	RD1/4PU221J
		R221	RD1/4PU222J
		R233	RD1/4PU391J
		R243	RS1/10S0R0J
		R103	RS1/10S331J
		R104	RS1/10S391J

Mark	No.	Description	Part No.
		Other Resistors	RS1/16S###J

OTHERS

	CN201 13P FFCCONNECTOR	52044-1345
	BN201 2P ANTENNA TER.	AKA7002
	SHIELD CASE T	ANK7072
	SHIELD CASE B	ANK7073
	X201 CRYSTAL RES.(7.2MHz)	ASS1093

B A/V I/O ASSY

SEMICONDUCTORS

	IC2053	BA4558F-HT
	IC2052	M62429FP
	IC2002	TC9162AF
	IC2001	TC9164AF
	IC2051	UPC4570C
	Q2051	HN1C03F
	D2052, D2053	1SS355
	D2051	UDZS5.6B

CAPACITORS

	C2025, C2029, C2053, C2054	CCSRCH101J50
	C2063, C2064, C2077, C2078	CCSRCH101J50
	C2001- C2018, C2071	CCSRCH221J50
	C2067, C2068	CCSRCH221J50
	C2079, C2080	CEAT100M50
	C2075, C2076	CEAT1R0M50
	C2055, C2056	CEAT470M25
	C2061, C2065, C2066	CEJQ100M16
	C2051, C2052, C2059, C2060	CEJQ1R0M50
	C2072	CKSRYB102K50
	C2019-C2022, C2069, C2081	CKSRYB103K50
	C2023, C2024, C2027, C2028	CKSRYB473K25
	C2082, C2083	CKSRYB473K50

RESISTORS

	R2065	RD1/2LMF561J
⚠	R2067, R2068	RS1/16S102J
⚠	R2031, R2032, R2037, R2038	RS1/16S470J
⚠	R2059, R2060	RS1/16S470J
	Other Resistors	RS1/16S###J

OTHERS

	CN2002 JE CONNECTOR	17PS-JE
	2001 6P PIN JACK	AKB7073
	2002-2004 4P PIN JACK	AKB7075
	JA2051 2P PIN JACK	DKB1045
	CN2001 17P SOCKET	KP200TA17L
	2051 2P MINI JACK	VKN1034

C COMPOSITE ASSY

SEMICONDUCTORS

	IC2108, IC2109	BU4094BCF
	IC2106	NJM2296M
	IC2104	PDC084A
	IC2101, IC2107	TC74HC4051AFT
	IC2102, IC2103	TC74HC4053AFT
	IC2105	TK15420M
	Q2101-Q2103, Q2105-Q2108	2SC4081
	Q2104	UN5212
	D2101-D2103	1SS355

COILS AND FILTERS

Mark	No.	Description	Part No.
		X2101 CRYSTAL RES.(14.3MHz)	ASS1056
		L2102, L2103	LAU100J
		L2101	LAU330J

CAPACITORS

	C2118	CCSRCH100D50
	C2123, C2132	CCSRCH101J50
	C2119	CCSRCH150J50
	C2120	CCSRCH180J50
	C2139, C2151-C2153, C2164	CCSRCH181J50
	C2121, C2122	CCSRCH240J50
	C2115, C2129, C2177-C2180	CEAT100M50
	C2101-C2106,C2114,C2124,C2125	CEAT101M10
	C2135, C2136, C2141, C2142	CEAT101M10
	C2165, C2166	CEAT101M10
	C2131	CEAT1R0M50
	C2107-C2113, C2137, C2138	CKSRYB103K50
	C2143, C2144, C2154-C2156	CKSRYB103K50
	C2159-C2161,C2167,C2168,C2170	CKSRYB103K50
	C2130	CKSRYB122K50
	C2116, C2126, C2127, C2140	CKSRYB473K25
	C2185, C2186 (1000/10)	ACH7194

RESISTORS

	Other Resistors	RS1/16S###J

OTHERS

	CN2101 JE CONNECTOR	19PS-JE
	2102-2105 2P PIN JACK	AKB7076
	JA2101 3P PIN JACK	AKB7109
	CN2102 12P SOCKET	KP200TA12L

D S-VIDEO ASSY

SEMICONDUCTORS

	IC2310	BU4094BCF
	IC2305	LA7213
	IC2308, IC2309	NJM2296M
	IC2306	TC74HC4051AFT
	IC2303, IC2304	TC74HC4053AFT
	IC2301, IC2302	TC74LVX4051FT
	IC2307	TK15420M
⚠	Q2303	2SA1576A
⚠	Q2302	2SC4081
	Q2314	HN1B04FU
	Q2301	UN5212
	D2304, D2305, D2307	1SS355

CAPACITORS

	C2352, C2353, C2376-C2381	CCSRCH181J50
	C2390-C2392	CEAT100M50
	C2301-C2306, C2339, C2340	CEAT101M10
	C2347, C2348, C2357, C2358	CEAT101M10
	C2361, C2362, C2385, C2386	CEAT101M10
	C2338	CEAT3R3M50
	C2313-C2318, C2325-C2327	CKSRYB103K50
	C2330-C2333, C2335, C2336	CKSRYB103K50
	C2341,C2342,C2349,C2350,C2356	CKSRYB103K50
	C2359, C2360, C2363, C2364	CKSRYB103K50
	C2382-C2384, C2387, C2389	CKSRYB103K50
	C2319-C2324, C2328, C2351	CKSRYB104K16
	C2373-C2375, C2393, C2394	CKSRYB104K16
	C2307-C2312	CKSRYB473K25

Mark	No.	Description	Part No.
RESISTORS			
		Other Resistors	RS1/16S###J
OTHERS			
		CN2301 JE CONNECTOR	17PS-JE
		CN2302-CN2305 4PMINI DINSOCKET	AKP7023
		JA2301 4P MINI DIN SOCKET	AKP7049
		CN2306 8P SOCKET	KP200TA8L

E V-CONVERT ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
		IC2862	BU4094BCF
		IC2852	MM1093NF
⚠		IC2863	NJM78M09FA
		IC2853	TA1270BF
		IC2859, IC2860	TC74LVX4053FT
		IC2851	TC90A49F
		IC2854-IC2858	TK15420M
		Q2851, Q2852	2SA1576A
⚠		Q2902	2SA1576A
		Q2853, Q2854	2SC4081
⚠		Q2901	2SC4081
		Q2904	2SC4081
COILS AND FILTERS			
		L2856 CHIP FERRITE BEAD	ATL7002
		L2852-L2854, L2857	LAU100J
		L2855	LAU330J
		L2859	LCTA1R0J2520
CAPACITORS			
		C2865, C2876, C2887	CCSRCH100D50
		C2885	CCSRCH101J50
		C2919, C2920	CCSRCH120J50
		C2867	CCSRCH181J50
		C2886	CCSRCH390J50
		C2881	CCSRCH391J50
		C2873	CCSRCH560J50
		C2879	CCSRCH6R0D50
		C2851,C2981,C2982,C2989-C2991	CEAT100M50
		C2855, C2860, C2862, C2868	CEAT101M10
		C2892, C2893, C2903, C2904	CEAT101M10
		C2909,C2910,C2917,C2918,C2928	CEAT101M10
		C2938,C2945,C2946,C2970,C2971	CEAT101M10
		C2853	CEAT1R0M50
		C2924, C2926	CEAT2R2M50
		C2884, C2985	CEAT470M10
		C2874, C2877, C2880	CEAT4R7M50
		C2882	CKSRYB102K50
		C2854,C2856,C2857,C2859,C2861	CKSRYB103K50
		C2863,C2866,C2869-C2872,C2875	CKSRYB103K50
		C2878, C2883, C2890, C2891	CKSRYB103K50
		C2894-C2897, C2901, C2902	CKSRYB103K50
		C2907, C2908, C2911, C2912	CKSRYB103K50
		C2915,C2916,C2923,C2929,C2937	CKSRYB103K50
		C2943,C2944,C2967,C2978,C2979	CKSRYB103K50
		C2852,C2925,C2930-C2935,C2966	CKSRYB104K16
		C2983, C2984, C2986	CKSRYB104K16
		C2994-C2996	CKSRYB105K6R3
		C2864	CKSRYB122K50
		C2921	CKSRYB222K50
		C2927	CKSRYB223K50
		C2922	CKSRYB224K10
		C2858	CKSRYB474K10
		C2969	CKSRYB561K50
RESISTORS			
		Other Resistors	RS1/16S###J
OTHERS			
		CN2851 JE CONNECTOR	09PS-JE
		X2851, X2853 CRYS, RES.(3.58MHz)	ASS1091
		X2852 CRYSTAL RES.(4.43MHz)	ASS1092
		X2854 Ceramic RES.(503kHz)	ASS7036
		CN2852 18P SOCKET	KP200TA18L

F COMPONENT ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
		IC2507	BU4094BCF
		IC2505, IC2506	OPA2652U
		IC2509	SP232AEP
		IC2504	TC74HC4053AFT
		IC2501, IC2502	TC74LVX4052FT
		IC2503	TC74LVX4053FT
⚠		Q2502	2SA1576A
⚠		Q2501	2SC4081
		Q2503	2SC4081
		D2501-D2503	1SS355
COILS AND FILTERS			
		L2501	LAU1R0J
CAPACITORS			
		C2541, C2542	CEAT100M50
		C2524, C2525, C2532, C2533	CEAT101M10
		C2537, C2538, C2567	CEAT101M10
		C2563-C2565, C2568	CEAT1R0M50
		C2510-C2517, C2522, C2523	CKSRYB103K50
		C2530, C2531, C2535, C2536	CKSRYB103K50
		C2557,C2558,C2569,C2571-C2579	CKSRYB103K50
		C2581	CKSRYB103K50
		C2566	CKSRYB104K25
		C2582	CKSRYB331K50
RESISTORS			
		Other Resistors	RS1/16S###J
OTHERS			
		CN2501 JE CONNECTOR	19PS-JE
		JA2502 6P PIN JACK	AKB7127
		JA2501 6P PIN JACK	AKB7141
		JA2504 MULTI JACK	AKN7014
		CN2505 9P D-SUB SOCKET	AKP1213
		CN2502 10P SOCKET	KP200TA10L
		2501 SCREW TERMINAL	VNE1948

G VIDEO CONNECT ASSY

Mark	No.	Description	Part No.
OTHERS			
		CN3303 10P PLUG	KM200TA10
		CN3301 12P PLUG	KM200TA12
		CN3304 18P PLUG	KM200TA18
		CN3302 8P PLUG	KM200TA8

H MIC AMP ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
		IC3201	M5220FP

Mark	No.	Description	Part No.
	Q3204		HN1C01FU
	Q3202		RN4903
	D3201		1SS355
	D3202		UDZS5.6B

CAPACITORS

	C3211, C3220, C3226	CCSRCH101J50
	C3214	CCSRCH330J50
	C3210, C3218, C3221, C3224, C3227	CEAL100M16
	C3231, C3232	CEAL101M10
	C3206	CEAL220M16
	C3212, C3215	CEAL220M35
	C3223, C3229, C3230	CEAL330M25
	C3250, C3253, C3303	CKSRYB102K50
	C3213, C3238, C3252, C3302	CKSRYB103K50
	C3205, C3228	CKSRYB104K16

RESISTORS

	Other Resistors	RS1/16S###J

OTHERS

	CN3207	52044-1145
	CN3205	S4B-PH-K
	KN3202	VNF1084

I MIC & OPT ASSY

COILS AND FILTERS

	L3202 (CHIP INDCTER)	QTL1013
	L3203, L3204 (CHIP INDCTER)	VTL1075

CAPACITORS

	C3203	CEAL470M10
	C3201	CKSRYB103K50
	C3202	CKSRYB104K16

RESISTORS

	Other Resistors	RS1/16S###J

OTHERS

	CN3202 KR CONNECTOR	B4B-PH-K
	CN3201 KR CONNECTOR	B5B-PH-K
	JA3201 OPTICAL LINK IN	GP1FA502RZ
	JA3202 REMO CON. JACK	RKN1004

J FRONT A/V ASSY

CAPACITORS

	C3236	CKSRYB102K50
	C3235, C3335	CKSRYB103K50
	C3234, C3245	CKSRYB104K16
	C3233	CKSRYB473K50
	C3216, c3217	CCSRCH221J50

RESISTORS

	Other Resistors	RS1/16S###J

OTHERS

	JA3204 FRONT PIN JACK	AKX7014
	CN3204 KR CONNECTOR	B8B-PH-K

K HEAD PHONE ASSY

CAPACITORS

	C3209	CKSRYB104K16
	C3207, C3208	CKSRYB392K50

RESISTORS

Mark	No.	Description	Part No.
	Other Resistors		RS1/16S###J

OTHERS

	CN3203 4P FFC CONNECTOR	52045-0445
	JA3203 HEADPHONE JACK	RKB1014
	KN3201 EARTH METAL FITT.	VNF1084

L ANALOG IN & A/D ASSY

SEMICONDUCTORS

	IC3421, IC3441, IC3461, IC3481	AK5385VS
	IC3901	BU4052BCF
	IC3423	M5220P
	IC3501, IC3502, IC3601, IC3602	NJM2068D
	IC3701, IC3702, IC3801, IC3802	NJM2068D
⚠	IC3402	PQ3DZ13
	IC3401, IC3422	TC9163AF
	IC3424, IC3462	UPC4570C
	IC3903	TC7SH04FU
	Q3501, Q3601, Q3701, Q3801	HN1C03F
	Q3401	RN4903
	D3501, D3502, D3601, D3602	DAN202K
	D3701, D3702, D3801, D3802	DAN202K
	D3503, D3504, D3603, D3604	DAP202K
	D3703, D3704, D3803, D3804	DAP202K
	D3901, D3902	UDZS6.2B

COILS AND FILTERS

	L3401, L3402, L3421, L3422	ATL7002
	L3441, L3442, L3461, L3462	ATL7002
	L3481, L3482 (CHIP BEAD)	ATL7002
	L3601	QTL1013
	L3423, L3443, L3463, L3483 (CHIP SOLID INDUCTOR)	QTL1013

CAPACITORS

	C3411-C3414, C3435, C3436	ACH7207
	C3473, C3474 (470uF/25V)	ACH7207
	C3405, C3428, C3503, C3504	CCSRCH101J50
	C3563, C3564	CCSRCH101J50
	C3567, C3568, C3603, C3604	CCSRCH101J50
	C3703, C3704, C3755, C3756	CCSRCH101J50
	C3759, C3760, C3803, C3804	CCSRCH101J50
	C3549, C3550	CCSRCH181J50
	C3531- C3546, C3751,C3752	CCSRCH221J50
	C3553, C3554	CCSRCH331J50
	C3401	CEHAZL100M50
	C3547,C3548,C3559,C3560	CEAT100M50
	C3951, C3952	CEAT100M50
	C3515, C3516, C3615, C3616	CEAHAZL101M10
	C3715, C3716, C3815, C3816	CEAHAZL101M10
	C3429, C3430	CEAT101M25
	C3551, C3552	CEAT470M16
	C3402	CEHAZL101M10
	C3421, C3422, C3441, C3442	CENHAZL100M50
	C3461, C3462, C3481, C3482	CENHAZL100M50
	C3509-C3512, C3523, C3524	ACH7196
	C3561, C3562, C3609-C3612	ACH7196
	C3709- C3712 (10uF/50)	ACH7196
	C3723, C3724	CENA100M50
	C3753, C3754 (10uF/50)	ACH7196
	C3623, C3624 (10uF/50)	ACH7196
	C3757, C3758 (47uF/35)	ACH7211
	C3809-C3812 (10uF/50)	ACH7196

Mark	No.	Description	Part No.
	C3823, C3824 (10uF/50)		ACH7196
	C3565, C3566 (47uF/35)		ACH7211
	C3501, C3502, C3601, C3602		ACH7198
	C3801, C3802 (47uF/25)		ACH7198
	C3701, C3702 (47uF/25)		ACH7198
	C3427, C3447, C3467, C3487		CKSRYB102K50
	C3505-C3508, C3513, C3514		CKSRYB103K50
	C3576, C3578, C3580, C3582		CKSRYB103K50
	C3605-C3608, C3613, C3614		CKSRYB103K50
	C3705-C3708, C3713, C3714		CKSRYB103K50
	C3805-C3808, C3813, C3814		CKSRYB103K50
	C3960		CKSRYB103K50
	C3423, C3424, C3443, C3444		CKSRYB104K16
	C3463, C3464, C3483, C3484		CKSRYB104K16
	C3517,C3518,C3521,C3522,C3575		CKSRYB104K16
	C3577,C3579,C3581,C3617,C3618		CKSRYB104K16
	C3621, C3622, C3717, C3718		CKSRYB104K16
	C3721, C3722, C3817, C3818		CKSRYB104K16
	C3821, C3822		CKSRYB104K16
	C3961		CKSRYB105K6R3
	C3519, C3619		CKSRYB224K10
	C3719, C3819		CKSRYB224K10
	C3425, C3445, C3465, C3485		CKSRYB471K50
	C3403, C3404, C3431, C3432		CKSRYB473K50
	C3953, C3954		CKSRYB473K50
	C3557, C3558		CQMA242J50
	C3555, C3556		CQMA822J50

RESISTORS

⚠	R3411-R3414, R3471, R3472	RD1/4MUF470J
	R3525-R3528, R3625-R3628	RS1/16S1002F
	R3725-R3728, R3825-R3828	RS1/16S1002F
	R3765, R3766	RS1/16S1201F
	R3589, R3590	RS1/16S1801F
	R3509, R3510, R3609, R3610	RS1/16S2701F
	R3709, R3710, R3809, R3810	RS1/16S2701F
	R3587, R3588, R3763, R3764	RS1/16S2702F
	R3511-R3516, R3611-R3616	RS1/16S3901F
	R3711-R3716, R3811-R3816	RS1/16S3901F
⚠	R3407, R3408, R3431-R3436	RS1/16S470J
⚠	R3951, R3952	RS1/16S472J
	R3593, R3594, R3693, R3694	RS1/16S5600F
	R3793, R3794, R3893, R3894	RS1/16S5600F
	R3501, R3502, R3601, R3602	RS1/16S6801F
	R3701, R3702, R3801, R3802	RS1/16S6801F
	Other Resistors	RS1/16S###J

OTHERS

3401,3501,3503,3504 4P PINJACK	AKB7075
CN3402 17P SOCKET	KP200TA17L
CN3401 20P SOCKET	KP200TA20L
CN3403 30P B TO B CONNECTOR	VKN1395
J3904 Tie Wire	ADB7016
J3901,J3905 Tie Wire	ADB7017

M DISPLAY ASSY

SEMICONDUCTORS

IC3002	BU2092F
IC3001	PD5903A
IC3061	TC74HC4053AFT
Q3052	2SA1036K
Q3061	2SA1576A
Q3053, Q3054	2SD2114K
Q3002, Q3062	RN1903
Q3063	RN2903
Q3001, Q3003, Q3051	UN5212
D3061-D3067	1SS355
D3030, D3031	DAN202K
D3027	NSPB510-2283
D3026, D3028, D3029	SLI-343DUW
D3001,D3003,D3005,D3007,D3009	SLI-343URW
D3011,D3013,D3015-D3018,D3025	SLI-343URW
D3019	TLGE68TG
D3033	UDZS6.2B

COILS AND FILTERS

X3001 CERAMIC RES.(4.19MHz)	ASS7042
L3001 CHIP BEAD	ATL7002

SWITCHES AND RELAYS

S3081-S3098	ASG7024

CAPACITORS

C3035, C3071, C3075, C3076	CCSRCH101J50
C3053	CEAT470M50
C3031, C3061, C3072, C3074	CEJQ101M6R3
C3022	CEJQ4R7M50
C3081-C3084	CKSRYB102K50
C3051, C3062	CKSRYB103K50
C3027,C3034,C3052,C3073,C3079	CKSRYB104K16
C3063	CKSRYB153K50
C3020, C3021	CKSRYB473K50

RESISTORS

R3060	RD1/2LMF103J
⚠ R3050	RD1/4MUF220J
Other Resistors	RS1/16S###J

OTHERS

3001,3003,3004 4P CABLE HOL.	51048-0400
3002 5P CABLE HOL.	51048-0500
CN3001 17P FFC CON.	52492-1720
V3001 FL TUBE	AAV7081
J3005 EARTHLEAD WIRE	DE005WE0
CN3002 3P FFC CONNECTOR	HLEM3S-1
IC3062 REMOE RECEIVER	NJL64H400A

N INPUT SEL ASSY

SWITCHES AND RELAYS

S3103	ASX7038

CAPACITORS

C3110, C3111	CKSRYB103K50

RESISTORS

R3109, R3110	RS1/16S473J

OTHERS

3104 4P CABLE HOLDER	51048-0400

O MULTI JOG ASSY

SWITCHES AND RELAYS

S3101	ASX7039

Mark	No.	Description	Part No.
		CAPACITORS	
	C3105, C3106		CKSRYB103K50
		RESISTORS	
	R3105, R3106		RS1/16S473J
		OTHERS	
	3102 5P CABLE HOLDER		51048-0500

P VOL ASSY

Mark	No.	Description	Part No.
		SWITCHES AND RELAYS	
	S3102		ASX7037
		CAPACITORS	
	C3108, C3109		CKSRYB103K50
		RESISTORS	
	R3191		RS1/16S0R0J
	R3107, R3108		RS1/16S103J
		OTHERS	
	3103 4P CABLE HOLDER		51048-0400

Q VR OUT & PRE OUT ASSY

Mark	No.	Description	Part No.
		SEMICONDUCTORS	
	IC5084		BU4052BCF
	IC5023, IC5063, IC5181, IC5182		NJM2068D
⚠	IC5002		NJM78M15FA
⚠	IC5003		NJM79M15FA
	IC5022, IC5042, IC5062, IC5082		OPA2134PA
	IC5001		TC9274N-016
	IC5021, IC5041, IC5061, IC5081		TC94A17F
	IC5043, IC5083		UPC4570C
	Q5101,Q5102,Q5201,Q5202,Q5204		HN1C03F
	Q5301, Q5302, Q5401, Q5402		HN1C03F
	D5001-D5004		1SS355
	D5085-D5090		DA204K
	D5083, D5084		UDZS6.2B
		CAPACITORS	
	C5007, C5008, C5021, C5022		ACH7207
	C5033, C5034, C5041, C5042		ACH7207
	C5053, C5054, C5061, C5062		ACH7207
	C5081, C5082 (470uF/25v)		ACH7207
	C5013,C5024,C5044,C5064,C5084		CCSRCH101J50
	C5123, C5124, C5223, C5224		CCSRCH101J50
	C5257, C5258, C5261, C5262		CCSRCH101J50
	C5323, C5324, C5423, C5424		CCSRCH101J50
	C5457, C5458, C5461, C5462		CCSRCH101J50
	C5153, C5154, C5181, C5182		CCSRCH220J50
	C5129,C5130,C5229-C5230,C5232		CCSRCH221J50
	C5253, C5254, C5329,C5330,C59O1		CCSRCH221J50
	C5429, C5430, C5453, C5454,C5902		CCSRCH221J50
	C5189, C5190, C5353, C5354		CCSRCH220J50
	C5911, C5912, C5921, C5922		CCSRCH330J50
	C5931, C5932, C5941, C5942		CCSRCH330J50
	C5003-C5006		CEHAZL100M50
	C5001, C5002		CEAT1R0M50
	C5011, C5012		CEAT470M25
	C5095, C5096		CEHAZL470M25
	C5251, C5252 (47uF/25)		ACH7198
	C5451, C5452 (47uF/25)		ACH7198
	C5255, C5256 (10uF/50)		ACH7196
	C5259, C5260 (47uF/35)		ACH7211
	C5455, C5456, C5459, C5460		ACH7211
	C5125-C5128 (47uF/25)		ACH7198
	C5183, C5184		CENA470M25
	C5325-C5328		CENA470M25
	C5151, C5152, C5155, C5156		ACH7198
	C5183, C5184 (47uF/25)		ACH7198
	C5225- C5228, C5351, C5352		ACH7198
	C5355, C356 (47uF/25)		ACH7198
	C5425-C5428 (47uF/25)		ACH7198
	C5121, C5122 (4.7uF/50)		ACH7199
	C5221, C5222 (4.7uF/50)		ACH7199
	C5321, C5322 (4.7uF/50)		ACH7199
	C5421, C5422 (4.7uF/50)		ACH7199
	C5015-C5017, C5031, C5032		CKSRYB103K50
	C5051, C5052, C5071, C5072		CKSRYB103K50
	C5091, C5092, C5185-C5188		CKSRYB103K50
	C5014		CKSRYB104K16
	C5131-C5134, C5233-C5236		CKSRYB104K25
	C5242, C5244		CKSRYB104K25
	C5331-C5334		CKSRYB104K25
	C5009, C5010, C5025, C5026		CKSRYB473K50
	C5029, C5030, C5045, C5046		CKSRYB473K50
	C5049, C5050, C5065, C5066		CKSRYB473K50
	C5069, C5070, C5085, C5086		CKSRYB473K50
	C5089, C5090, C5097, C5098		CKSRYB473K50
	C5431-C5434		CKSRYB104K25
		RESISTORS	
⚠	R5007, R5008, R5021, R5022		RD1/4MUF470J
⚠	R5029, R5030, R5041, R5042		RD1/4MUF470J
⚠	R5049, R5050, R5061, R5062		RD1/4MUF470J
⚠	R5081, R5082		RD1/4MUF470J
⚠	R5001, R5002		RD1/4MUF4R7J
	R5267, R5268, R5467, R5468		RS1/16S1201F
	R5265, R5266, R5465, R5466		RS1/16S2702F
⚠	R5005, R5006		RS1/16S470J
⚠	R5091, R5092		RS1/16S472J
	Other Resistors		RS1/16S###J
		OTHERS	
	5002,5021 4P PIN JACK		AKB7075
	JA5042 2P PIN JACK		AKB7144
	JA5001 4P PIN JACK		AKB7145
	CN5005 8P CONNECTOR		B08B-XASK-1
	CN5006 14P CONNECTOR		B14B-XASK-1
	CN5002 9P SOCKET		KP200TA9L
	CN5004 6P CONNECTOR		S06B-XASK-1
	JA5041 1P PIN JACK		VKB1074
	CN5003 24P B TO B CON.		VKN1392
	CN5001 30P B TO B CON.		VKN1395
	J5013, J5017 Tie Wire		ADB7016

R MOTHER ASSY

Mark	No.	Description	Part No.
		SEMICONDUCTORS	
	IC5802		CAT24WC64JI
⚠	IC5806, IC5808		NJM78M15FA
⚠	IC5807, IC5809		NJM79M15FA
	IC5801		PD5902A8
	IC5810		PST9242NR
	IC5803, IC5804		TC74HCT244AF

Mark	No.	Description	Part No.
		IC5811, IC5813	TC7S08FU
		IC5812	TC7W126FU
		IC5815	PQ12DZ11
⚠		Q5805	2SC5174P
⚠		Q5816	2SK2103
⚠		Q5815	IRF7416
		Q5801, Q5823	RN1903
		Q5806	RN4903
		Q5808, Q5809, Q5818	UN5112
		Q5810	UN511L
		Q5821, Q5822	2SB1189
		Q5824	2SA1037K
		Q5807, Q5817	UN5212
		D5803-D5806, D5814, D5815	1SS355
		D5821-D5823, D5812	1SS355
		D5819, D5820, D5825	DAN202K
		D5817	DAP202K
		D5801	UDZ511B
		D5826	UDZS5.1B

COILS AND FILTERS

	L5801, L5802, L5803, L5806 (CHIP)	ATL7002
	L5804	LCTAW1R0J2520
	L5805, L5807-L5809 (CHIP)	QTL1013
	L5815, L5816 (CHIP)	QTL1013

CAPACITORS

	C5839 (0.1uF/5.5V)	ACH7141
	C5901, C5902	CCSRCH221J50
	C5829, C5831, C5834, C5836	CEHAZL100M50
	C5859, C5955	CEAT100M50
	C5819	CEAT101M16
	C5873	CEAT221M6R3
	C5868	CEAT331M10
	C5847	CEAT471M6R3
	C5812	CEATR10M50
	C5818	CEJQ100M16
	C5832, C5837, C5844	CEJQ100M25
	C5801,C5802,C5828,C5830,C5833	CEJQ1R0M50
	C5835	CEJQ1R0M50
	C5848, C5859	CEJQ221M6R3
	C5976	CKSRYB102K50
	C5817,C5838,C5840,C5850,C5858	CKSRYB103K50
	C5860,C5861,C5863,C5864,C5869	CKSRYB103K50
	C5950	CKSRYB103K50
	C5804,C5820,C5841,C5843,C5845	CKSRYB104K16
	C5849, C5856, C5866, C5872	CKSRYB104K16
	C5815	CKSRYB105K6R3
	C5842, C5846	CKSRYB471K50
	C5977	CKSRYB472K50
	C5857, C5862, C5867, C5871	CKSRYB473K50
	C5803	CKSRYF105Z10

RESISTORS

	R5840, R5841	RAB4C104J
	R5901, R5920	RAB4C221J
⚠	R5835, R5836	RD1/4MUF100J
⚠	R5930	RD1/4MUF101J
⚠	R5833, R5837	RD1/4MUF4R7J
	Other Resistors	RS1/16S###J

OTHERS

	CN5825 JE CONNECTOR	09R-JE
	CN5821, CN5823 JE CONNECTOR	17R-JE
	CN5822, CN5824 JE CONNECTOR	19R-JE
	CN5806 11P FFC CONNECTOR	52045-1145
	CN5802 13P FFC CONNECTOR	52045-1345
	CN5807 17P FFC CONNECTOR	52045-1745
	CN5801 14P FFC CONNECTOR	52492-1420
	J5806 2P CONNECTOR ASSY	ADX7375
	J5801 1P BOARD IN WIRE	ADX7376
	J5803 1P BOARD IN WIRE	ADX7391
	X5801 CERAMIC RES.(15.67MHz)	ASS7043
	CN5805 9P CONNECTOR	B09B-XASK-1
	CN5804 KR CONNECTOR	B5B-PH-K
	CN5827,CN5828 KR CONNECTOR	B6B-PH-K
	CN5810,CN5811 17P B TOB CON.	BTEM17S-1S
	CN5809 CONNECTOR	BTEM9S-1S
	CN5813,CN5815,CN5820 17P PLUG	KM200TA17
	CN5814 20P PLUG	KM200TA20
	CN5812 7P PLUG	KM200TA7
	CN5817 9P PLUG	KM200TA9
	5801 PCB BINDER	VEF1040
	CN5819 24P B TO B CON.	VKN1405
	CN5816,CN5818 30P B TO B CON.	VKN1408
	KN5802 EARTH METAL FITT.	VNF1084
	CN5826 3P TOP POST	B3B-EH
	CN5832 4P FFC Connector	VKN1490

S DSP ASSY

SEMICONDUCTORS

	IC301	ADSST21161NKCA100
	IC101	AK4114VQ
	IC702	AYW7032
	IC203	BA4558F-HT
	IC703-IC706	BU4094BCFV
	IC401	DSPD56367PV150
	IC302, IC303	HY57V161610DTC-8
	IC402	IS61LV6416-12T
	IC202	IS62C256-45T
	IC403	IS63LV1024-12T
⚠	IC305, IC307, IC415, IC781	NJM2391DL1-33
⚠	IC416	NJM7223DL1-18
	IC701	PD5787A
	IC602	PDL017A8
	IC201	PM4007A
⚠	IC306	PQ018EZ01ZP
	IC204	TC74HCT08AF
	IC406, IC409, IC717	TC74VHC00FT
	IC712	TC74VHC04FT
	IC121, IC413, IC715	TC74VHC08FT
	IC111, IC714, IC117	TC74VHC125FT
	IC112-IC14, IC116, IC120	TC74VHC153FT
	IC412	TC74VHC157FT
	IC711	TC74VHC32FT
	IC115	TC74VHC4040FT
	IC707-IC710	TC74VHC573FT
	IC118, IC404, IC407, IC411	TC74VHC74FT
	IC102	TC74VHC00AFT
	IC719	TC74VHCT08AFT
	IC414	TC74VHCU04FT
	IC722	TC7SH04FU
	IC311, IC716, IC718, IC721	TC7SET08FU

Mark	No.	Description	Part No.
	IC312		TC7SH32FU
	IC405, IC408		TC7SH86FU
	IC713		TC7W53FU
	IC414		TC7WH04FU
	IC104-IC106		TC7WU04FU
	IC205		TK15420M
	IC601		TUSB3200ACPAH
	Q203, Q204		2SA1037K
⚠	Q101, Q210, Q212		2SB1197K
	Q201, Q202		2SC2412K
	Q208, Q209		2SC4081
⚠	Q213		2SD1781K
	Q102, Q701		DTC124EK
	Q211		RN1903
	D203		1SS355
	D101, D102		DAP202K
	D202		KV1851

COILS AND FILTERS

F201 (BAND PASS FILTER)		ATF7027
L114, L117, L201, L206, L207(CHIP)		ATL7002
L118, L301, L303(CHIP)		ATL7002
L303, L305-L307, L405-L407 (CHIP)		ATL7002
L409,L411,L701-L704(CHIP BEAD)		ATL7002
L202		LCTA680J2520
L102-L110, L113, L119, L120 (CHIP)		QTL1013
L203, L204, L413 L401		QTL1013
L601- L604, L705, L706		QTL1013

CAPACITORS

C142, C148, C301, C302, C328		ACH7195
C341, C403, C404		ACH7195
C101, C112, C120, C128, C135		ACH7205
C145, C155, C207, C209		ACH7205
C219, C220, C234, C254, C618		ACH7205
C781, C784		ACH7205
C105, C160, C163, C166, C354		ACH7206
C358, C363, C439, C442, C445		ACH7206
C466, C601, C701, C711, C718		ACH7206
C731, C783		ACH7206
C152		CCSRCH100D50
C615		CCSRCH101D50
C151		CCSRCH120D50
C231, C612, C613		CCSRCH180J50
C116, C124, C132		CCSRCH220J50
C272		CCSRCH221J50
C115, C123, C131, C605, C606		CCSRCH470J50
C216		CCSRCH561J50
C211		CCSRCH750J50
C229		CEVWNP4R7M16
C222, C307-C310, C313		CKSRYB102K50
C315, C316, C318, C320, C322		CKSRYB102K50
C324, C326, C371, C374		CKSRYB102K50
C381-C386, C395, C448, C455		CKSRYB102K50
C614, C620		CKSRYB102K50
C104, C108, C111, C113, C119		CKSRYB103K50
C121, C127, C129, C140, C141		CKSRYB103K50
C162, C164, C187, C202, C214		CKSRYB103K50
C232, C233, C273, C604, C709		CKSRYB103K50
C738, C739, C755, C757, C758		CKSRYB103K50
C102, C106, C109, C118, C125		CKSRYB104K16
C134, C136, C138, C143, C146		CKSRYB104K16
C150, C156, C168, C170, C172		CKSRYB104K16
C174, C176, C180, C182, C184		CKSRYB104K16
C204-C206, C208, C210		CKSRYB104K16
C212, C213, C215, C225-C228		CKSRYB104K16
C230, C235, C237, C240-C242		CKSRYB104K16
C244, C248, C251, C252, C255		CKSRYB104K16
C257, C304, C312, C314, C317		CKSRYB104K16
C321, C325, C330, C332		CKSRYB104K16
C334, C335, C338, C340, C342		CKSRYB104K16
C345, C347, C349, C351, C353		CKSRYB104K16
C356, C357, C359, C361, C362		CKSRYB104K16
C373, C387-C393, C396		CKSRYB104K16
C401, C402, C405, C407		CKSRYB104K16
C409, C410, C412, C416		CKSRYB104K16
C418, C419, C421, C422, C424		CKSRYB104K16
C426, C428, C430-C432		CKSRYB104K16
C434, C435, C438, C441, C443		CKSRYB104K16
C447, C450, C451, C453, C457		CKSRYB104K16
C459, C460, C463, C465, C467		CKSRYB104K16
C469, C472, C474, C475, C602		CKSRYB104K16
C607, C609-C611, C617, C619		CKSRYB104K16
C703, C705, C707, C713-C717		CKSRYB104K16
C720, C722, C724, C726, C728		CKSRYB104K16
C730, C733, C735, C737, C741		CKSRYB104K16
C743-C745, C747, C749, C782		CKSRYB104K16
C161, C165, C223, C224, C306		CKSRYB105K6R3
C311, C319, C323, C327, C372		CKSRYB105K6R3
C375, C394, C413, C710, C756		CKSRYB105K6R3
C203		CKSRYB223K50
C144, C147, C149, C157, C167		CKSRYB471K50
C169, C171, C173, C175, C179		CKSRYB471K50
C181, C183, C236, C238, C239		CKSRYB471K50
C243, C247, C249, C250, C253		CKSRYB471K50
C256, C305, C329, C331, C333		CKSRYB471K50
C336, C337, C339, C343, C344		CKSRYB471K50
C346, C348, C350, C352, C355		CKSRYB471K50
C360, C406, C408, C411, C414		CKSRYB471K50
C417, C420, C423, C425, C427		CKSRYB471K50
C429, C433, C436, C437, C440		CKSRYB471K50
C444, C446, C449, C452, C454		CKSRYB471K50
C456, C458, C461, C462, C464		CKSRYB471K50
C468, C470, C471, C473, C603		CKSRYB471K50
C608, C616, C702, C704, C706		CKSRYB471K50
C712		CKSRYB471K50
C157		CKSRYB474K10
C415		CKSRYB683K16

RESISTORS

R156, R158, R159, R162, R163		RAB4C101J
R172, R173, R184, R185, R701		RAB4C101J
R716, R730, R731, R779, R780		RAB4C101J
R788, R789		RAB4C101J
R769-R771		RAB4C104J
R138, R703, R714, R718, R722		RAB4C221J
R725, R786, R787		RAB4C221J
R835-R837, R840, R841, R851		RAB4C330J
R854, R855, R869, R870		RAB4C330J
R874, R875		RAB4C330J
R406		RAB4C470J

Mark	No.	Description	Part No.
	R301, R341, R351, R385, R812		RAB4C472J
	R814		RAB4C472J
	R405, R407, R736-R740		RAB4C473J
	R742, R743		RAB4C473J
	R339, R340, R382, R809		RAB4C4R7J
	R847-R850, R861-R864		RAB4C680J
	R141		RS1/16S1802D
	Other Resistors		RS1/16S###J

OTHERS

	CN706, CN707 14P FJ CONN.	14PL-FJ
	JA107, JA108 2P PIN JACK	AKB7148
	CN709 16P CONNECTOR	AKM7049
	CN708 22P CONNECTOR	AKM7052
	X201 CRYSTAL RES.(18.43MHz)	ASS7009
	X101 CRYSTAL RES.(24.576MHz)	XSS3003
	X601 CRYSTAL RES.(6.00MHz)	ASS7057
	X401 CRYSTAL RES.(12.5MHz)	ASS7056
	X701 CRYSTAL RES.(7.7MHz)	ASS7045
	CN704 2P VH SIDE CONN.	B2PS-VH
	CN701, CN702 17P B TO B CON.	BTEM17P-1R
	CN703 9P B TO B CON.	BTEM9P-1R
	JA101 USB CONNECTOR	DKN1237
	JA102-JA104 OPTICAL IN	GP1FA513RZ
	JA105, JA106 OPTICAL OUT	GP1FA502TZ
	CN705 22P CONNECTOR	RKN1063

T DSP3 ASSY

SEMICONDUCTORS

	IC501	ADSST-MEL100-K
	IC504(Flash Rom)	AYW7036
	IC502, IC503	HY57V161610DTC-8
⚠	IC505	NJM2391DL1-33
	IC508	PQ018EZ01ZP
	IC511	TC7SH08FU
	IC512	TC7SH32FU

COILS AND FILTERS

	L503, L505-L507, L511(CHIP)	ATL7002

CAPACITORS

	C501, C502 (CHIP OS 220/6.3)	ACH7195
	C527, C540 (CHIP OS 220/6.3)	ACH7195
	C553 (CHIP RZV 68/10)	ACH7205
	C553 (CHIP RZV100/6.3)	ACH7206
	C525, C578, C580	CKSRYB102K50
	C564, C506, C572, C574, C576	CKSRYB102K50
	C507, C509 , C512, C514, C515	CKSRYB102K50
	C517, C519, C521, C523, C525	CKSRYB102K50
	C584, C586, C590	CKSRYB102K50
	C510, C518, C522, C524, C526	CKSRYB105K6R3
	C505, C508, C588, C589	CKSRYB105K6R3
	C504, C520, C535, C537, C545	CKSRYB104K16
	C530, C533, C539, C541, C544	CKSRYB104K16
	C552, C557, C548, C549, C577	CKSRYB104K16
	C560, C562, C566, C568, C579	CKSRYB104K16
	C573, C575, C584, C586, C581	CKSRYB104K16
	C588, C590, C592, C594, C595	CKSRYB104K16
	C598, C511, C513, C516, C529	CKSRYB104K16
	C555, C567, C571, C573, C575	CKSRYB104K16
	C581, C582, C585, C587	CKSRYB104K16
	C532, C546, C547, C550, C551	CKSRYB471K50
	C559, C561, C554, C556, C568	CKSRYB471K50
	C565, C567, C571, C574, C587	CKSRYB471K50
	C589, C597, C503, C528, C531	CKSRYB471K50
	C534, C536, C538, C542, C543	CKSRYB471K50

RESISTORS

	R510, R519	RAB4C101J
	R933- R935, R938, R939	RAB4C330J
	R952, R953, R968, R969	RAB4C330J
	R973, R974	RAB4C330J
	R539, R540, R579, R906	RAB4C4R7J
	R911	RAB4C472J
	R509, R541, R551, R582, R908	RAB4C472J
	R510	RAB4C101J
	R945- R948	RAB4C680J
	R559- R962	RAB4C680J
	Other Resistors	RS1/16S###J

OTHERS

	CN501 16P SOCKET	AKP7122
	CN502 22P SOCKET	AKP7125
	CADE SPESER	DEC1772

U DAC10 ASSY

SEMICONDUCTORS

	IC6021, IC6041, IC6061, IC6081	DF1706E
	IC6105, IC6106, IC6205, IC6206	NJM2068D
	IC6305, IC6306, IC6405, IC6406	NJM2068D
	IC6103, IC6104, IC6203, IC6204	NJM5534DD
	IC6303, IC6304, IC6403, IC6404	NJM5534DD
	IC6101, IC6102, IC6201, IC6202	PCM1704U-1
	IC6301, IC6302, IC6401, IC6402	PCM1704U-1
⚠	IC6001	PQ3DZ13
	IC6022, IC6042, IC6062, IC6082	TC94A07F

COILSANDFILTERS

	L6001,L6021,L6041,L6061,L6081	ATL7002
	L6101-L6104, L6201-L6204(CHIP)	ATL7002
	L6301-L6304, L6401-L6404	ATL7002
	L6022, L6042, L6062, L6082	QTL1013

CAPACITORS

	C6147, C6148, C6247, C6248 (47uF/	ACH7208
	C6347, C6348, C6447, C6448 25V)	ACH7208
	C6031, C6032, C6051, C6052 (470uF	ACH7207
	C6071, C6072, C6091, C6092 /25V)	ACH7207
	C6026, C6046, C6066, C6086	CCSRCH101J50
	C6145, C6146, C6245, C6246	CCSRCH101J50
	C6345, C6346, C6445, C6446	CCSRCH101J50
	C6151, C6152, C6251, C6252	CCSRCH220J50
	C6351, C6352, C6451, C6452	CCSRCH220J50
	C6149, C6150, C6249, C6250	CCSRCH330J50
	C6349, C6350, C6449, C6450	CCSRCH330J50
	C6339, C6340, C6439 (4.7/16)	ACH7175
	C6139, C6140, C6239, (4.7/16)	ACH7175
	C6240, C440 (4.7/16)	ACH7175
	C6002	CEHAZA101M10
	C6323, C6324, C6423, C6424	CEHAZA101M10
	C6117, C6118, C6121, C6122	CEHAZL101M10
	C6127, C6128, C6217, C6218	CEHAZL101M10
	C6221, C6222, C6227, C6228	CEHAZL101M10
	C6317, C6318, C6321, C6322	CEHAZL101M10

Mark	No.	Description	Part No.
	C6327, C6328, C6417, C6418		CEHAZL101M10
	C6421, C6422, C6427, C6428		CEHAZL101M10
	C6081(220/6.3)		ACH7204
	C6021, C6041, C6061(220/6.3)		ACH7204
	C6113, C6114, C6213, C6214		CEHAZL471M16
	C6313, C6314, C6413, C6414		CEHAZL471M16
	C6001		CEHAZL100M50
	C6103, C6104, C6109, C6110		CKSRYB103K50
	C6115, C6116, C6125, C6126		CKSRYB103K50
	C6203, C6204, C6209, C6210		CKSRYB103K50
	C6215, C6216, C6225, C6226		CKSRYB103K50
	C6303, C6304, C6309, C6310		CKSRYB103K50
	C6315, C6316, C6325, C6326		CKSRYB103K50
	C6403, C6404, C6409, C6410		CKSRYB103K50
	C6415, C6416, C6425, C6426		CKSRYB103K50
	C6022, C6042, C6062, C6082		CKSRYB104K16
	C6119, C6120, C6219, C6220		CKSRYB104K16
	C6319, C6320, C6419, C6420		CKSRYB104K16
	C6033, C6034, C6053, C6054		CKSRYB222K50
	C6073, C6074, C6093, C6094		CKSRYB222K50
	C6023, C6043, C6063, C6083		CKSRYB471K50
	C6105-C6108, C6205-C6208		CKSRYB471K50
	C6305-C6308, C6405-C6408		CKSRYB471K50
	C6027, C6028, C6047, C6048		CKSRYB473K50
	C6067, C6068, C6087, C6088		CKSRYB473K50
	C6131-C6134, C6141-C6144		CKSRYB473K50
	C6231-C6234, C6241-C6244		CKSRYB473K50
	C6331-C6334, C6341-C6344		CKSRYB473K50
	C6431-C6434, C6441-C6444		CKSRYB473K50
	C6101, C6102, C6111 (100uF/16v)		ACH7203
	C6112, C6202, C6211 (100uF/16v)		ACH7203
	C6123, C6124 (100uF/16v)		ACH7203
	C6212, C6302, C6311 (100uF/16v)		ACH7203
	C6223, C6224 (100uF/16v)		ACH7203
	C6201,C6301,C6401(100uF/16v)		ACH7203
	C6402,C6411,C6412(100uF/16v)		ACH7203
	C6423,C6424(100uF/16v)		ACH7203
	C6135,C6136,C6235,C6236(470pF)		VCE1035
	C6335,C6336,C6435,C6436(470pF)		VCE1035
	C6137,C6138,C6237,C6238(220pF)		VCE1040
	C6337,C6338,C6437,C6438(220pF)		VCE1040
	C6129,C6130,C6229,C6230(100pF)		VCE1045
	C6329,C6330,C6429,C6430(100pF)		VCE1045

RESISTORS

	R6101,R6102,R6201,R6202(2.55k)	ACN7105
	R6301,R6302,R6401,R6402(2.55k)	ACN7105
⚠	R6031, R6032, R6051, R6052	RD1/4MUF470J
⚠	R6071, R6072, R6091, R6092	RD1/4MUF470J
	Other Resistors	RS1/16S###J

OTHERS

	CN6001, CN6002 14P FJ CONN.	14R-FJ
	CN6004 17P SOCKET	KP200TA17L
	CN6003 7P SOCKET	KP200TA7L

V POWER AMP(L) ASSY

SEMICONDUCTORS

⚠	IC4101, IC4401, IC4601	PA9009A
⚠	IC4102, IC4302, IC4402, IC4602	PBD001A
⚠	IC4103, IC4403, IC4603	PBD002A
	Q4101, Q4301, Q4401, Q4601	2SA1255
	Q4801, Q4803, Q4805	2SC2412K
	Q4102, Q4402, Q4602	2SC3138
	Q4104, Q4304, Q4404, Q4604	2SC3326
	D4103-D4106,D4305,D4403-D44061SS355	
	D4603-D4606	1SS355
	D4801	UDZ2.7B
	D4101, D4102, D4401, D4402	UDZS7.5B
	D4601, D4602	UDZS7.5B

CAPACITORS

	C4103, C4403(1000uF/10v)	ACH7210
	C4104, C4105 (0.1/200)	ACH7037
	C4110, C4111, C4410, C4411	CCSRCH220J50
	C4610, C4611	CCSRCH220J50
	C4809	CEAT221M16
	C4115, C4116, C4415, C4416	CEAT221M63
	C4615, C4616	CEAT221M63
	C4109, C4409, C4609	CEAT470M16
	C4801, C4803	CEAT471M63
	C4603 (1000uF/10v)	ACH7210
	C4608	CEHAZL470M25
	C4108, C4408	CEHAZL470M25
	C4101, C4401, C4601	CEHAZL101M10
	C4106, C4107, C4406, C4407	CEHAZL470M25
	C4606, C4607 (0.1/200)	ACH7037
	C4404, C4405 (0.1/200)	ACE7037
	C4604, C4605 (0.1/200)	ACE7037
	C4412, C4413 (0.22/50)	ACE7038
	C4112, C4113 (0.22/50)	ACE7038
	C4612, C4613 (0.22/50)	ACE7038
	C4117, C4317, C4417, C4617	CKSRYB104K25
	C4102, C4402, C4602	CKSRYB221K50

RESISTORS

⚠	R4110,R4111,R4125,R4126,R4310	ACN7107
⚠	R4325,R4410,R4411,R4425,R4426	ACN7107
⚠	R4610,R4611,R4625,R4626(0.1)	ACN7107
	R4117, R4417, R4617 (10k)	ACN7117
	R4103, R4403, R4603 (330)	ACN7118
	R4104, R4404, R4604 (22)	ACN7119
	R4127,R4128,R4327,R4427,R4428	RS1/16S1001F
	R4627, R4628	RS1/16S1001F
	R4129,R4130,R4329,R4429,R4430	RS1/16S1003F
	R4629, R4630	RS1/16S1003F
	R4116,R4133,R4134,R4316,R4333	RS1/16S1004F
	R4416, R4433, R4434, R4616	RS1/16S1004F
	R4633, R4634	RS1/16S1004F
	R4112,R4113,R4312,R4412,R4413	RS1/16S1502F
	R4612, R4613	RS1/16S1502F
	R4114,R4115,R4314,R4414,R4415	RS1/16S1503F
	R4614, R4615	RS1/16S1503F
	R4131,R4132,R4331,R4431,R4432	RS1/16S3902F
	R4631, R4632	RS1/16S3902F
⚠	R4118, R4418, R4618	RS1LMF2R2J
	Other Resistors	RS1/16S###J

OTHERS

	J4801 LEAD HOUSING	ADX7370
	CN4812 2P CONNECTOR	B02B-XASK-1
	CN4803 11P PLUG	KM250NA11L
	CN4805 15P PLUG	KM250NA15L

Mark	No.	Description	Part No.
	CN4801	8P CONN.	S08B-XASK-1
	4801,4803,4805	SCREW TERM.	VNE1948
	4809	EARTH FITTING	VNF-091

W POWER AMP(C) ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
⚠	IC4301		PA9009A
	D4303, D4304		1SS355
	D4301, D4302		UDZS7.5B

CAPACITORS

Mark	No.	Description	Part No.
	C4310, C4311		CCSRCH220J50
	C4315, C4316		CEAT221M63
	C4309		CEAT470M16
	C4303	(1000uF/10v)	ACH7210
	C4308		CEHAZL470M25
	C4301		CEHAZL101M10
	C4306, C4307		CEHAZL470M25
	C4304, C4305	(0.1/200)	ACE7037
	C4312, C4313	(0.22/50)	ACE7038
	C4302		CKSRYB221K50

RESISTORS

Mark	No.	Description	Part No.
	R4317	(10k)	ACN7117
	R4303	(330)	ACN7118
	R4304	(22)	ACN7119
⚠	R4318		RS1LMF2R2J
	Other Resistors		RS1/16S###J

OTHERS

Mark	No.	Description	Part No.
	CN4808	13P SOCKET	KP250NA13
	CN4807	15P SOCKET	KP250NA15

X POWER AMP(R) ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
⚠	IC4201, IC4501, IC4701		PA9009A
⚠	IC4202, IC4502, IC4702		PBD001A
⚠	IC4203, IC4303, IC4503, IC4703		PBD002A
	Q4201, Q4501, Q4701		2SA1255
	Q4802, Q4804, Q4806		2SC2412K
	Q4202, Q4302, Q4502, Q4702		2SC3138
	Q4504, Q4704, Q4204		2SC3326
	D4203-D4206,D4306,D4503-D4506		1SS355
	D4703-D4706		1SS355
	D4802		HZU2.7B2
	D4201, D4202, D4501, D4502		UDZS7.5B
	D4701, D4702		UDZS7.5B

CAPACITORS

Mark	No.	Description	Part No.
	C4210, C4211, C4510, C4511		CCSRCH220J50
	C4710, C4711		CCSRCH220J50
	C4810		CEAT221M16
	C4215, C4216, C4515, C4516		CEAT221M63
	C4715, C4716		CEAT221M63
	C4209, C4509, C4709		CEAT470M16
	C4802, C4804		CEAT471M63
	C4203, C4503	(1000uF/10v)	ACH7210
	C4703	(1000uF/10v)	ACH7210
	C4208, C4508, C4708		CEHAZL470M25
	C4201, C4501, C4701		CEHAZL101M10
	C4206, C4207, C4506, C4507		CEHAZL470M25
	C4706, C4707		CEHAZL470M25
	C4204	(0.1/200)	ACE7037
	C4504, C4505	(0.1/200)	ACE7037
	C4205	(0.1/200)	ACE7037
	C4704, C4705	(0.1/200)	ACE7037
	C4512, C4513	(0.22/50)	ACE7038
	C4212, C4213	(0.22/50)	ACE7038
	C4712, C4713	(0.22/50)	ACE7038
	C4217, C4517, C4717		CKSRYB104K25
	C4202, C4502, C4702		CKSRYB221K50

RESISTORS

Mark	No.	Description	Part No.
⚠	R4210,R4211,R4225,R4226,R4311		ACN7107
⚠	R4326,R4510,R4511,R4525,R4526		ACN7107
⚠	R4710, R4711, R4725, R4726	(0.1)	ACN7107
	R4217, R4517, R4717	(10k)	ACN7117
	R4203, R4503, R4703	(330)	ACN7118
	R4204, R4504, R4704	(22)	ACN7119
	R4227,R4228,R4328,R4527,R4528		RS1/16S1001F
	R4727, R4728		RS1/16S1001F
	R4229,R4230,R4330,R4529,R4530		RS1/16S1003F
	R4729, R4730		RS1/16S1003F
	R4216,R4233,R4234,R4334,R4516		RS1/16S1004F
	R4533,R4534,R4716,R4733,R4734		RS1/16S1004F
	R4212,R4213,R4313,R4512,R4513		RS1/16S1502F
	R4712, R4713		RS1/16S1502F
	R4214,R4215,R4315,R4514,R4515		RS1/16S1503F
	R4714, R4715		RS1/16S1503F
	R4231,R4232,R4332,R4531,R4532		RS1/16S3902F
	R4731, R4732		RS1/16S3902F
⚠	R4218, R4518, R4718		RS1LMF2R2J
	Other Resistors		RS1/16S###J

OTHERS

Mark	No.	Description	Part No.
	J4802	LEAD HOUSING	ADX7371
	CN4813	2P CONNECTOR	B02B-XASK-1
	CN4806	13 PLUG	KM250NA13L
	CN4804	9P PLUG	KM250NA9L
	CN4802	6P CONNECTOR	S06B-XASK-1
	4802,4804,4806	SCREW TER.	VNE1948
	4810	EARTH FITTING	VNF-091

Y POWER AMP(BR) ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	Q4303, Q4403		2SC2412K
	Q4103		DTA124EK
	D4806		1SS355
	D4805		UDZS5.1B
	D4807, D4808		1SR154-400

CAPACITORS

Mark	No.	Description	Part No.
	C4812		CKSRYF105Z10

RESISTORS

Mark	No.	Description	Part No.
	Other Resistors		RS1/16S###J

OTHERS

Mark	No.	Description	Part No.
	J4803	BOARD IN WIRE	ADX7372
	CN4809	11P SOCKET	KP250NA11
	CN4810	9P SOCKET	KP250NA9
	CN4811	8P CONNECTOR	S08B-XASK-1

Z POWER AMP(G) ASSY

Mark	No.	Description	Part No.
		OTHERS	
		J4804 BOARD IN WIRE	ADX7363
		4807,4808 EARTH FITTING	VNF-091

AA LOCAL SUPPLY ASSY

Mark	No.	Description	Part No.
		SEMICONDUCTORS	
⚠	IC4047	(315mA)	AEK7003
⚠	IC4023, IC4024	(500mA)	AEK7005
⚠	IC4045, IC4046	(500mA)	AEK7005
⚠	IC4036	(1A)	AEK7009
⚠	IC4035	(1.25A)	AEK7010
⚠	IC4011		LM1085IT-5.0
⚠	IC4021, IC4031		LM2940CT-5.0
⚠	IC4041		NJM7820FA
⚠	IC4043		NJM78M15FA
⚠	IC4033		NJM78M56FA
⚠	IC4042		NJM7918FA
⚠	IC4022, IC4032		NJM79M05FA
	Q4054		2SC3138
⚠	Q4022, Q4052		2SB951A
⚠	Q4021, Q4051		2SD1277A
	Q4055		2SB1189
	Q4056		2SD1767
	Q4057		2SA1255
	Q4053		DTC143EK
	D4031, D4032		1SS355
⚠	D4003, D4004		D3SBA20(B)
	D4041		HZU2.2B
	D4034		RB501V-40
	D4051-D4054		UDZS15B
	D4055, D4056		UDZS16B
	D4059, D4060		UDZS12B
		CAPACITORS	
	C4003	(1uF/250V)	ACE7036
	C4051, C4052	(2200uF/71V)	ACH7209
	C4011	(33OO0uF/16V)	ACH7200
	C4053, C4054		CEAT101M63
	C4023, C4024		CEAT471M16
	C4021, C4022, C4032		CEAT472M16
	C4041, C4042		CEAT472M35
	C4031		CEAT682M16
	C4025, C4026		CEHAZA470M16
	C4045-C4047		CEJQ100M50
	C4055, C4056		CEJQ100M63
	C4013, C4035, C4036, C4038		CEJQ101M6R3
	C4029,C4030,C4039,C4040,C4049		CEJQ470M16
	C4002	(0.47/200)	ACE7039
	C4001	(1uF/63v)	ACE7040
	C4043, C4044, C4048		CKSRYB103K50
	C4014, C4015, C4027, C4028		CKSRYB104K16
	C4033, C4034, C4037		CKSRYB104K16
	C4061-C4064		CKSRYB473K16
⚠	D4002, D4005		S1VB20/F03
	D4059, D4060		UDZ12B
	D4051-D4054		UDZ15B
	D4055, D4056		UDZ16B
		RESISTORS	
⚠	R4003		RD1/2MMF101J
⚠	R4021, R4022		RD1/4MUF151J
⚠	R4001, R4002		RD1/4MUF330J
⚠	R4051, R4052		RD1/4MUF472J
	R4067, R4068		RS1/10S473J
	Other Resistors		RS1/16S###J
		OTHERS	
	J4004	6P CONNECTOR	ADX7373
	J4002	4P CONNECTOR	ADX7374
	CN4002	3P CONNECTOR	B03B-XASK-1
	CN4001	8P CONNECTOR	B08B-XASK-1
	CN4004	9P CONNECTOR	B09B-XASK-1
	CN4005	2P CONNECTOR	B2P-VH
	KN4001, KN4002	EARTH FIT.	VNF1084

AB AC PRIMARY ASSY

Mark	No.	Description	Part No.
		SEMICONDUCTORS	
	IC1103		BU4094BC
⚠	IC1101		NJM78M56FA
⚠	IC1102		NJM79M24FA
	Q1102		2SB1197K
	Q1101, Q1105		2SC2412K
	Q1106		DTA124EK
	Q1103, Q1104		DTC124EK
	D1103, D1106, D1109, D1108, D1105		1SS355
⚠	D1101		S1VB20/F03
	D1102		UDZS5.1B
	D1107		HZU2.7B2
	IC351		M56788AFP
⚠	IC303	(1.8V)	PQ018EZ01ZP
	IC601		STI5519AVB-B0C
	IC605		TC7WU04FU
	IC603		VYW1948
		COILS AND FILTERS	
	L1101, L1102	(NOISE FILTER)	RTF1167
		TRANSFORMERS	
⚠	T1101		ATT7043
		CAPACITORS	
	C1107		CCSRCH101J50
	C1109		CEAT100M50
	C1103, C1104		CEAT101M10
	C1102		CEAT222M25
	C1110		CEAT470M25
	C1101	(1uF/100)	ACE7037
	C1106		CKSRYB104K16
	C1105		CKSRYB473K16
		RESISTORS	
	Other Resistors		RS1/16S###J
		OTHERS	
	CN1105	3P JUMPER CON.	52151-0310
⚠	CN1101	6P SOCKET	AKP7141
	CN1104	14P FFC CON.	HLEM14R-1
	CN1102	7P SOCKET	KP250NA7
	CN1103	8P SOCKET	KP250NA8
	CN1106	2P SOCKET	B02B-XASK
	CN1107	3P SOCKET	B03B-XASK
	KN1101	EARTH FITT.	VNF1084

AC POWER SW ASSY

SWITCHES AND RELAYS

Mark	No.	Description	Part No.
⚠	S1301		ASG7024

CAPACITORS

	C1301, C1302		CFTLA103J50

OTHERS

	CN1301	3P JUMPER CON.	52147-0310

AD SP(A) ASSY

SEMICONDUCTORS

	Q1201, Q1203, Q1205, Q1207		DTA124EK
	Q1202, Q1204, Q1206, Q1208		DTC124EK
	Q1209, Q1210		DTC124EK
	D1201-D1210		1SS355

SWITCHES AND RELAYS

	RY1201-RY1205		ASR7001

CAPACITORS

	C1201-C1207		CQHA472J2A

RESISTORS

⚠	R1231-R1237		RD1/4MUF100J
⚠	R1211, R1212		RS2LMF331J
⚠	R1213, R1214		RS1LMF471J
	Other Resistors		RS1/16S###J

OTHERS

	J1201	BOARD IN WIRE	ADX7362
	J1206	3P CONN.	ADX7364
	J1207, J1208	1P WIRE	ADX7368
⚠	CN1202	8P SP TERMINAL	AKE7087
⚠	CN1201	6P SP TERMINAL	AKE7088
	L1201-L1207	AF COIL	ATH1053
	CN1206	4P FFC CONN.	HLEM4S-1
	CN1205	8P PLUG	KM250NA8L

AE FL SUPPLY ASSY

SEMICONDUCTORS

⚠	Q1901		2SC5174P
	D1901, D1902		UDZ22B

CAPACITORS

	C1901-C1903		CEJQ100M50

RESISTORS

⚠	R1901		RD1/4MUF272J
	Other Resistors		RS1/16S###J

OTHERS

	CN1902	4P JUMPER CONN.	52147-0410
	CN1901	4P CONN.	B04B-XASK-1

AF STANDBY ASSY

SWITCHES AND RELAYS

	S1901		ASG7013

OTHERS

	CN1903	3P FFC CONN.	52044-0345

AG POSISTER(L) ASSY

OTHERS

	J1901	2P CONNECTOR ASSY	ADX7365
⚠	TH1901	POSISTOR	AEX7006

AH POSISTER(R) ASSY

OTHERS

	J1902	2P CONNECTOR ASSY	ADX7365
⚠	TH1902	POSISTOR	AEX7006

AI DSP DIODE ASSY

SEMICONDUCTORS

⚠	D1903		LN6SB60-4003

OTHERS

	CN1904	4P CONNECTOR	S04B-XASK-1

AJ SP(B) ASSY

SEMICONDUCTORS

	Q1004		DTA124EK
	Q1002, Q1003		DTC124EK
	Q1001		DTC143EK
	D1001-D1006		1SS355

COILS AND FILTERS

⚠	L1001	(LINE FILTER)	ATF7018

SWITCHES AND RELAYS

	RY1003		ASR7001
⚠	RY1002		ASR7016
⚠	RY1001		ASR7022

CAPACITORS

⚠	C1001, C1002	(0.01uF/AC250V)	ACG7033
	C1003, C1004		CQHA472J2A

RESISTORS

⚠	R1002	(15ohm 10W)	ACN7116
⚠	R1003	(2.2ohm 1/2W)	RCN1080
	Other Resistors		RS1/16S###J

OTHERS

⚠	CN1006	4P SP TERMINAL	AKE7089
⚠	CN1001	6P PLUG	AKM7056
⚠	1004	1P AC OUTLET	AKP1033
	H1001,H1002	FUSE HOL.	AKR1007
	CN1005	7P PLUG	KM250NA7L
⚠	CN1002	AC CORD SOCKET	RKP1751
⚠	CN1003	AMP U-P CONN.	RKP1834
	1001	SCREW TER.	VNE1948

AK DIODE ASSY

SEMICONDUCTORS

⚠	D1501		KCH30A15
⚠	D1502		KRH30A15

CAPACITORS

	C1501	(1uF/250V)	ACE7036

RESISTORS

⚠	R1501		RD1/2MMF820J

OTHERS

	J1501	BOARD IN WIRE	ADX7358
	J1502	BOARD IN WIRE	ADX7359
	J1503	BOARD IN WIRE	ADX7360
	J1504	BOARD IN WIRE	ADX7361
	CN1501	Connector	B03B-XASK
	CN1502	Connector	B3B-EH

Mark No.	Description	Part No.

AL FUSE ASSY

OTHERS

	H1801-H1810 FUSE CLIP	AKR1004
	CN1803 4P CONNECTOR	B04B-XASK-1
	CN1802 8P CONNECTOR	B08B-XASK-1
	CN1801 12P CONNECTOR	S12B-XASK-1

AM TRANS(A) ASSY

CAPACITORS

	C1601 (1uF/63v)	ACE7040

RESISTORS

⚠	R1601	RD1/4MUF100J

OTHERS

	CN1601 5P CONNECTOR	B05B-XASK-1

AN TRANS(B) ASSY

SEMICONDUCTORS

⚠	D1701	S1VB20/F03
	D1702	UDZS7.5B

CAPACITORS

	C1701	CEAT331M50
	C1702	CEJQ101M10

RESISTORS

⚠	R1703-R1706	RS1/16S2R2J

OTHERS

⚠	IC1703 PROTECTOR(750mA)	AEK7007
	H1701-H1704 FUSE CLIP	AKR1004
	CN1701 3P CONNECTOR	B03B-XASK-1
	CN1702 7P CONNECTOR	B07B-XASK-1

AO 1394 MODULE ASSY

SEMICONDUCTORS

	IC203	BU2370FV
	IC303	NJU7093AF
	IC302	K4S641632F-TC75
⚠	IC2	MM1562FF
⚠	IC1	NJM2391DL1-33
	IC204	NJU7093AF
	IC101	PD5787A
	IC103	PST9245
	IC401	SM5819AF
	IC405	TC74VHC541FT
	IC104	TC74VHCT125AFT
	IC205	TC7SH08FU
	IC404	TC7SZ125FT
	IC201	TSB43CA42GGW
	IC301	PD8112A
	Q101, Q301	DTA124EUA
	Q401	DTA143EUA
	D102	RB501V-40

COILS AND FILTERS

	X302 (22.579MHz)	ASS7054
	L1, L101, L201-L203 (CHIP_	ATL7002
	L301, L302, L401 INDUCTOR)	ATL7002
	L403- L405	ATL7002
	X201 (24.58MHz)	ASS7055
	X101 (CERAMIC RES.)	VSS1179
	L204- L207 (COIL)	VTH1043

CAPACITORS

	C329 (10/6.3)	ACG7046
	C401, C428 (220/6.3)	ACG7195
	C242, C241	CCSRCH221J50
	C13, C401	CCSRCH471J50
	C9, C419	CEV101M16
	C206, C304, C321	CEVL101M6R3
	C103, C21, C232	CEVL101M6R3
	C211, C324	CKSRYB102K50
	C113, C213	CKSRYB102K50
	C215, C216, C310	CKSRYB102K50
	C102, C111	CKSRYB103K50
	C105- C109, C205	CKSRYB104K16
	C101, C104, C110, C202, C204	CKSRYB104K16
	C1, C201, C203, C207, C212	CKSRYB104K16
	C209-C210, C214, C22O, C221	CKSRYB104K16
	C222, C223, C235, C241, C246	CKSRYB104K16
	C224-C226, C112, C322, C323	CKSRYB104K16
	C411, C412, C427	CKSRYB104K16
	C248, C249, C325, C327	CKSRYB104K16
	C3, C301-C305, C309, C318-C320	CKSRYB104K16
	C408-C410, C333, C404, C416	CKSRYB104K16
	C415, C424, C247, C420	CKSRYB104K16
	C10, C11, C14, C15, C244	CKSRYB105K6R3
	C245, C326	CKSRYB105K6R3
	C330	CKSRYB472K50
	C328	CKSRYB474K10

RESISTORS

	R110, R119, R205, R220-R223	RAB4C101J
	R230- R231, R245, R246	RAB4C101J
	R127- R130	RAB4C101J
	R407	RAB4C221J
	R308, R309, R310, R339, R340	RAB4C470J
	R343- R350	RAB4C470J
	R203, R216, R220, R206	RAB4C472J
	R221, R223, R234, R239, R240	RAB4C472J
	R238, R356, R135- R138	RAB4C472J
	R302, R402	RAB4C680J
	R294, R295, R275, R276	RS1/16S5101F
	R283-R286, R289-R292	RS1/16S56R0D
	R206, R213	RS1/16S6341D
	Other Resistors	RS1/16S###J

OTHERS

	CN101 7P Connector	RKN1048
	CN401 22P Connector	VKN1426
	CN402 10P FFC Connector	VKN1414
	JA1, JA2 iLINK	VKN1800

AP POSISTER(MT) ASSY

OTHERS

	CN1905 KR Connector	S2B-PH-K-S
⚠	TH1903 POSISTOR	PTFM04B220Q2N34B0

AQ 12V TRIGGER ASSY

CAPACITORS

	C4071, C4072	CKSRYB103K50

Mark No.	Description	Part No.
RESISTORS		
R4071- R4073		RS1/16S0R0J
OTHERS		
CN4071	2P MIN JACK	AKN-209
CN4072	4P FFC Connector	VKN1235

6. ADJUSTMENT

There is no information to be shown in this chapter.

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 Test mode

●How to Enter the Test Mode

With the attached Remote Control Unit.

1. Press the [CH -], [VOL +] and [ENTER] keys simultaneously for 3 seconds.
2. Press the [DEVICE] key.
3. Press the [⬇] key to advance a page.
4. Press the [AV AMP] key.
5. Press the [➡] key so that the page advances to 5/7.

1. Test Mode ON (Press [ON] key)

- Set the function to CD.
- Set the signal selection to AUTO.
- Set speaker A to ON and speaker B to OFF.
- Set the BASS and TREBLE to +6.
- Set the remaining items to their factory settings.

LCD Display: TEST MODE

2. Test Mode OFF (Press [OFF] key)

When you quit Test mode, the unit automatically enters STANDBY status.

Note: Do NOT quit Test mode by disconnecting the power cord or turn the Mecha. switch to OFF. Doing so prevents factory-set data

3. Items to be checked in Test mode

For checking the main unit of a product: Remote control keys display each item.

1. FL display check (Press [1] key (page 5/7 of AV AMP))

Normal display → All FLs and LEDs on → All FLs and LEDs off → Normal display→ . . .

FL Display transition:
TEST MODE → FL ALL ON → FL ALL OFF → TEST MODE

2. Bass and treble operations (Press [4] key (page 5/7 of AV AMP))

Each time this code is issued, the bass and treble values change.
In modes (THX and Stream Direct) in which tone control is invalid, the display also changes as shown below.
To use, select a mode (Standard, etc.) in which tone control is valid.

FL Display transition:
TRE/BASS 0dB → TRE/BASS MAX → TRE/BASS 0dB

Remarks:
In Test mode, the bass and treble keys on the main unit functions as follows:
+ : 0 dB → +6 dB → 0 dB → +6 dB, . . .
– : 0 dB → – 6 dB → 0 dB → – 6 dB, . . .

3. Master volume switching (Press [5] key (page 5/7 of AV AMP))

When this code is issued, the master volume changes.
Trimming of all channels becomes 0 dB at this time.

FL Display transition:
TEST VOL MIN → TEST VOL MAX → TEST VOL MIN

4. Tuner 9K/10K switching (Press [6] key (page 6/7 of AV AMP))

When this code is issued, the reception frequency interval of the tuner cyclically changes.
The code is valid only with models (SD models) having 9K/10K switching capability.

FL display transition:
TEST TUN 9K → TEST TUN 10K → TEST TUN 9K

5. FAN ON/OFF (Press [8] key (page 6/7 of AV AMP))

When this code is issued, the fan turns on or off.

FL display transition: FAN OFF → FAN ON

OFF : Fan stops.
ON : Fan operates.

6. Microphone input check (Press [9] key (page 6/7 of AV AMP))

When this code is issued, Direct mode is selected (a path that bypasses DSP), and a microphone input signal will be output from the pre-output on the front panel.

- Function becomes CD.
- Signal selection becomes AUTO.

FL display transition: TEST MIC CHECK

7. RS232C operation check (Press [2] key (page 7/7 of AV AMP))

When this code is issued, the RS-232C transmission port is switched to act as a general-purpose port, and self-check of data input/output ports is performed.
The signal ("L" output) at the data output port is read to the data-input port and checked as to whether it is correct or not. "H" is output from the CTS port.

If the port self-check successfully ends:

FL display transition: MAIN RS232C OK

If the port self-check fails:

FL display transition: MAIN RS232C NG

8. Tuner: Auto scan (Press [3] key (page 8/8 of AV AMP))

When this code is issued, an auto scan operation begins. The step of frequency increment is forcibly set to 9K.
If the function is not Tuner, it is switched to Tuner, then auto scanning starts from 88.5 MHz FM in the + direction.When the code is issued again, auto scan starts from 1062 kHz AM in the – direction.
The reception points on the line:
AM: 1008 kHz
FM: 89 MHz

Note: If this code is issued during auto scanning, it merely causes the operation to stop. Issue the code again to resume auto scanning.

9. Video converter operation check (Press [7] key (page 8/8 of AV AMP))

When this code is issued, All-through mode will be selected.
The video converter operation is deactivated.
The following assignment will be made for component connectors 1 to 3 and D4 connectors 1 and 2.

Component 1 : DVD/LD
Component 2 : TV/DVD
Component 3 : VCR2
D4-1 : SAT
D4-2 : DVR/VCR1

FL display transition: ALL THROUGH

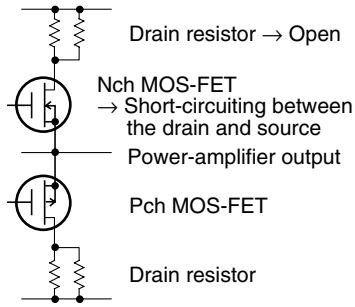
7.1.2 FAILURE DIAGNOSIS OF THE POWER AMPLIFIER

If the power is turned off after "AMP ERR" flashes on the FL, the power amplifier is damaged, and DC voltage is output.
In this case, either or both of the current amplifier section or/and the voltage amplifier section is/are damaged. Diagnose the sections in failure, as indicated below.

The main cause for power amplifier damage is damage to the MOS-FET caused by current overload as a result of short-circuiting of the speaker terminals, use of speakers with impedance lower than guaranteed, etc. Therefore, first diagnose the current amplifier section, then the voltage amplifier section.

1. Damage to the current amplifier section

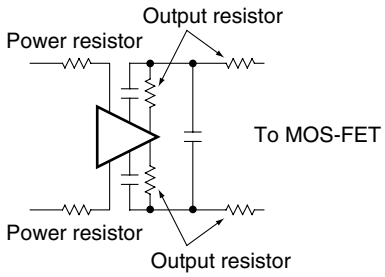
Many cases of MOS-FET damage caused by current overload are results of short-circuiting between the drain and source. The drain resistor opens because of excessive drain current.
In this case, the channel in failure can be identified by measuring the resistance of a MOS-FET; if the resistance between the drain and source of a channel is 0 ohm, and the drain resistance is • ohms, that channel is in failure. You can also visually confirm the channel in failure from a damage scar on the surface of the part generated as a result of opening of the drain resistor.



If one of the paired MOS-FETs in a push-pull circuit is damaged, another MOS-FET may be damaged even if the resistance measured by a tester shows no sign of short-circuiting of that MOS-FET. Replace both parts when either needs to be replaced.

2. Damage to the voltage amplifier section

The voltage amplifier section may be damaged by oscillation caused by unusual load connection, high-frequency output outside the audible frequency range with high amplitude, or the effect of damage to the power amplifier section. One possible part to be damaged is the IC, and two power resistors and four output resistors may be open. As a MOS-FET and IC are simultaneously damaged in most cases, both the MOS-FET and IC must be replaced when the MOS-FET is damaged. Therefore, if either the N-ch MOS-FET, P-ch MOS-FET, or IC needs to be replaced, replace all of them.

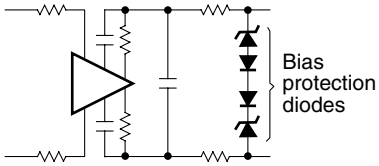


In a rare case when only the IC was damaged, the channel in failure can be identified by searching for a channel that outputs DC voltage when the power is turned on.

If is recommended that failure diagnosis of the power amplifier of this unit be performed with the power off, because the power amplifier section, which has a small number of components, can be easily repaired by replacement of semiconductors or according to measurement of resistance values.
If failure diagnosis of the voltage amplifier section must be performed while the power is on, be sure to disconnect the connection between the voltage amplifier section and the MOS-FET. If a measuring instrument touches the gate of the MOS-FET being powered, the MOS-FET may be damaged by its oscillation.

3. Damage to other parts

If the power amplifier is damaged, the bias protection diodes may be degraded or open.
After repairing the power amplifier, check that the four bias protection diodes of the channel in failure are not degraded or open by measuring their Vf (forward voltage drop) with a tester.
If these diodes are degraded, distortion may appear or the frequency characteristics may be affected. If they are open, when any abnormality occurs in the power amplifier next time, the damage to the MOS-FETs may be expanded.



7.1.3 PROTECTION CIRCUIT CONTROL SPECIFICATIONS

(1) Fan control

Valid with European and other general-area models only.

1. Fan on/off

If the temperature at the transformer rises, the TRANS_DET port becomes "L". Detecting "L", the microcomputer starts the fan.

2. Fan detection

If the fan is forcibly stopped, the FAN_DET port becomes "H". Detecting "H", the microcomputer performs the following operations:

1. System muting on
2. Protection relays off

The warning indication "FAN STOP" appears (flashing) on the FL display.
If this status continues for more than 3 seconds, the power is turned off (for Standby mode) and Standby indicator blinks.
If the port becomes "L" within 3 seconds, the unit resets automatically.

(2) Temperature detection

If the temperature at the heat sink rises, the TEMP1 port becomes "H". Detecting "H", the microcomputer performs the following operations:

1. System muting on
2. Protection relays off

The warning indication "OVER HEAT" appears on the FL display. If the temperature fall down and the port becomes "L", the unit resets automatocally.

(3) Overload detection (abnormality detection)

If the speaker terminals are short-circuited or low-load driving is detected, the OL_DET port becomes "H"
Detecting "H" edge interrupt in an interrupt process, the microcomputer performs the following operations:

1. System muting on
2. All relays off (expander output off)
   The expander output is turned off to perform detection during the interrupt. As the AC relay is also turned off, no warning indication appears on the FL display.
3. Power off (Standby mode)
   Standby indicator blinks.

(4) DC detection (defect detection)

Only DC detection is enabled 2 seconds after power-on.
If there is a fault in the power amplifier or a high-level signal lower than 5 Hz is input, the DC_DET port becomes "H"
Detecting "H" the microcomputer performs the following operations:

1. System muting on
2. Speaker relay off (Control with the display microcomputer)

The warning indication "AMP ERR" appears on the FL display.
If this status continues for more than 3 seconds, the power is turned off (for Standby mode) and Standby indicator blinks.
If the port becomes "L" within 3 seconds, the unit resets automatically.

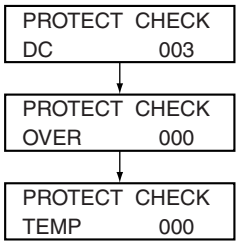
When the power is turned off owing to DC detection (also when a user prompted by the warning indication turns off the switch on the primary side), key inputs are disabled for 60 seconds.
The microcomputer backs up the value of the 60-second timer.
The unit will only enter Standby mode, and power will not be turned on within 60 seconds in response to a key input after power-off on the primary side. (When the switch on the primary side is turned on again, key inputs will be limited for 60 seconds even if the timer value is less than 60 seconds.)
After DC detection, power-on from the multiroom side is also disabled for 60 seconds.
If the unit resets within 3 seconds (before the power is turned off) after DC detection, the normal operation is restored.

(5) Diagnostic mode

This mode is only for servicing and checking the circuit design, and not open to users.
When the DNR key and VSEL key are both held pressed for 3 seconds in Standby mode, the power is turned on, and the number of times of each defect or abnormality detection is sequentially displayed on the FL display.
Displayed items:

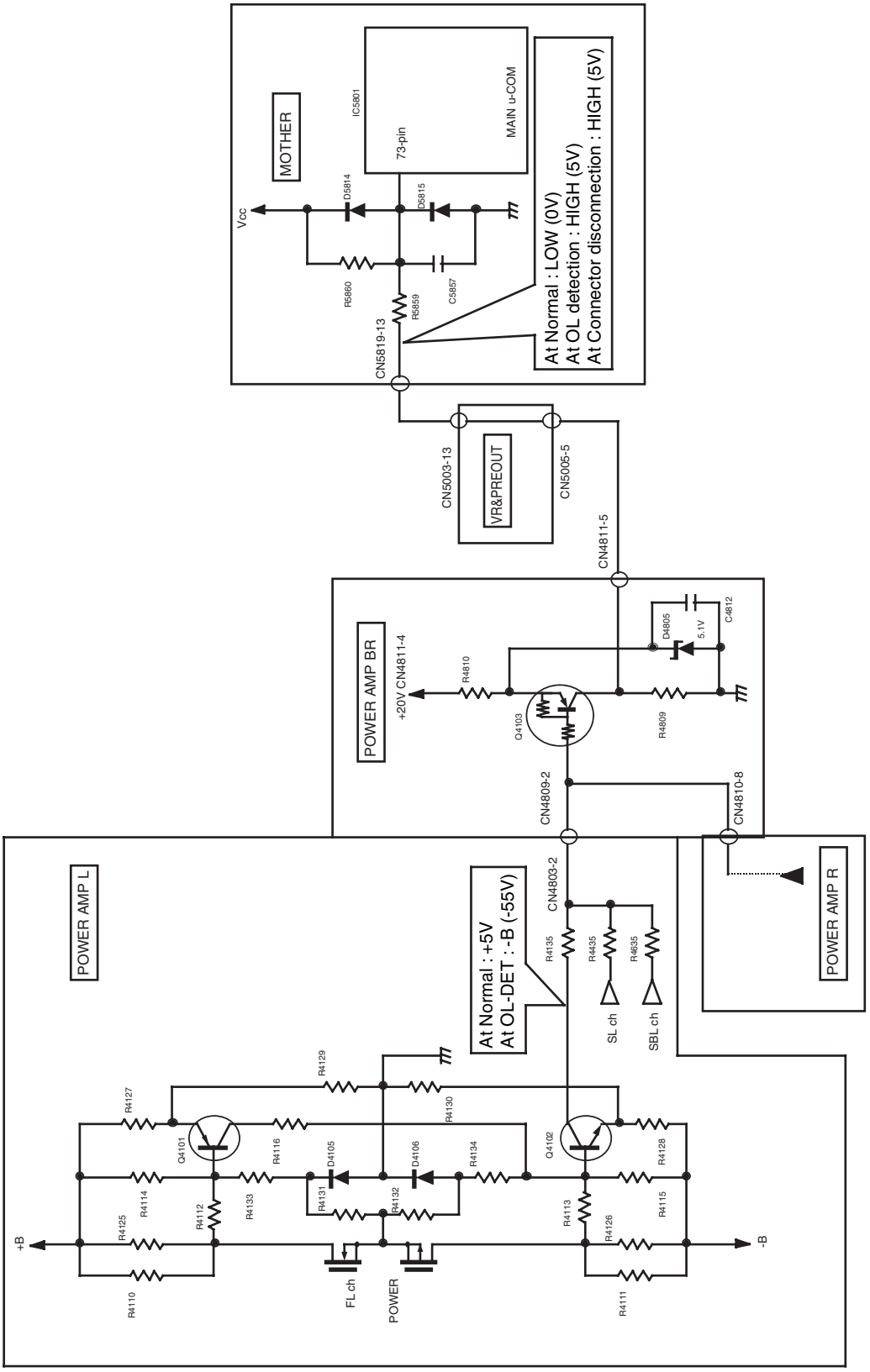
- DC detection
- Overload detection
- Fan detection
- Temperature detection

Hold the DNR key and VSEL key pressed for 3 seconds in Standby mode.

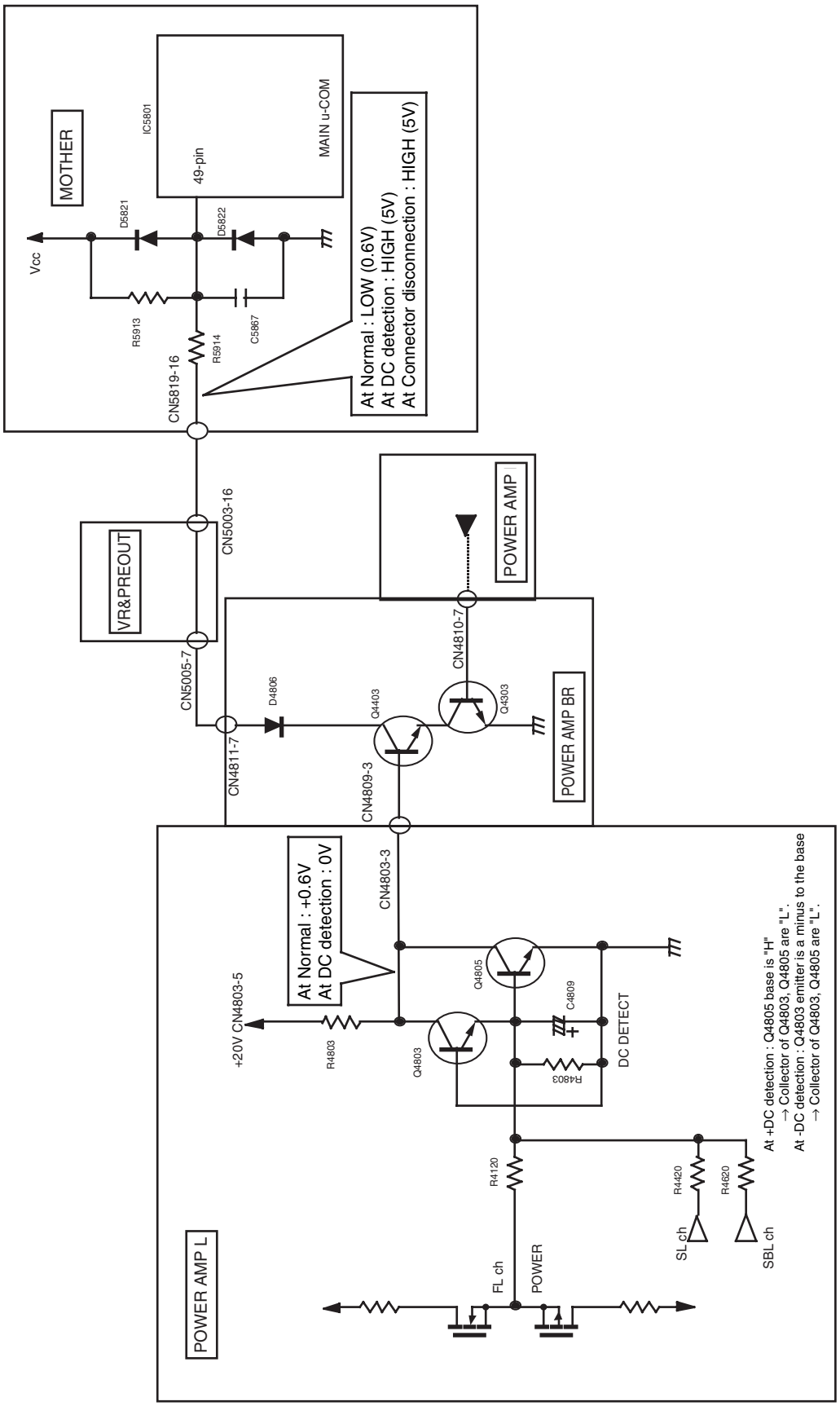


There is no specific mode for clearing the above-mentioned diagnostic mode.
Diagnostic mode is only cleared with an all-reset operation.

(3) Overload detection (abnormality detection)



(4) DC detection (defect detection)



● List of the protection measures

○ : Protection available × : Protection not available

Type of Protection	Purpose	How to Detect	Measures	Warning Indication	Remarks	North America	Japan	Europe	General
DC detection	To detect failure in the amplifiers To perform processing for protection of externally connected speakers	When the DC_DET port becomes "H"	Muting is set to ON, and the protection relay is set to OFF. Then after 3 seconds, the power is turned off.	"AMP ERR" flashes for 3 sec.	Once "H" is detected, key input is restricted for 60 sec. If the DC_DET port becomes "L" within 3 sec, the unit will automatically recover.	○	○	○	○
AMP overload	To detect an overload (abnormal status) To protect the amplifiers when a low-load drive or speaker terminal is short-circuited	When the AMP_OL port becomes "H" (detected by an interrupt)	Muting is set to ON, and all relays are set to OFF. Then, the power is immediately turned off.	None		○	○	○	○
Fan control	To protect against temperature rise of the heat sink	When the TEMP 1 port becomes "H"	The fan is activated.	None	The fan is stopped when the TEMP 1 port becomes "L."	×	×	○	○
Fan stopped	To protect against forcible fan shutoff while the fan is operating	When the FAN_DET port becomes "H"	Muting is set to ON, and the protection relay is set to OFF. Then after 3 seconds, the power is turned off.	"FAN STOP" flashes for 3 sec.	If the FAN_DET port becomes "L" within 3 sec, the unit will automatically recover.	×	○	○	○
Detection of temperature rise of the transformer	To protect against temperature rise of the transformer	When the TRANS_DET port becomes "L"	The fan is activated.	None	The fan is stopped when the TRANS_DET port becomes "H."	×	○	×	×
Temperature detection (1)	To protect against temperature rise of the heat sink	When the TEMP 1 port becomes "H"	Muting is set to ON, and the protection relay is set to OFF. Then after 3 seconds, the power is turned off.	"OVERHEAT" flashes for 3 sec.	If the TEMP 1 port becomes "L" within 3 sec, the unit will automatically recover.	○	○	×	×
Temperature detection (2)	To protect against temperature rise of the heat sink. Self-recovery-type protection function (thermal cutout)	When the TRANS_DET port becomes "H"	Muting is set to ON, and the speaker relay is set to OFF.	"OVERHEAT" flashes.	A warning indication will be displayed until the TRANS_DET port becomes "L." Five seconds after the TRANS_DET port becomes "L," the unit will automatically recover.	×	×	○	○

Note: The reason for the unit's self-recovery or enabling of key input after DC was detected is that the DC detection circuit is designed to detect not only DC but also low frequencies (5 Hz or less), which may result in cases of DC detection when there is no failure.

7.1.4 1394 Unit

●Operational Outline of the IEEE 1394 Unit

This unit supports the A&M protocol (Audio and Music Data transmission Protocol), which, among the IEEE 1394 audio and video protocols, is employed for audio equipment and electronic musical instruments, etc. As the unit does not support the MPEG2-TS protocol (for BS digital tuners and D-VHS) or the DV protocol (for digital video cameras and Pioneer's DVR) among IEEE 1394 audio and video protocols, it does not support video data transmission.

The main commands supported by this unit are: For sending, the PLAY command to a player, and for receiving, the commands for switching functions, increasing/decreasing the volume, muting on/off, and stream information (for inquiring about the receiving capabilities of the receiver).

Audio data (media) that can be received by the unit are as follows:
• DVD-A (2 channels, multiple channels)
• SACD (2 channels, multiple channels)
• IEC 60958 (DVD-V, DVD-RW, CD, VCD, MP3, DTS-CD, etc.)

The received data are demodulated separately for the above three signal formats in the IEEE 1394 receiving IC, output to another IC for jitterless transmission, then output to a third IC for DIR or to the DSP of the main unit.

As to SACD data, DSD streams are converted to multibit data at the SACD/PCM converting IC, and this enables SACD data processing at the DSP of the main unit.
In jitterless transmission, audio data with jitter generated during IEEE 1394 transmission (actually, jitter contained in sync signals that cannot be reduced by the PLL for audio receiving) are cached in the buffer RAM in the receiver up to a certain amount, and then read out by a highly accurate crystal-oscillation clock in the receiver, which enables reduction of jitter. The receiver controls the amount of cached data in the buffer RAM such that a certain amount of data is always cached. If the amount of cached data falls below the specified level, a request is sent to increase the playback speed (transmission volume per unit hour) (+1%). If the amount of cached data exceeds the specified level, a request is sent to decrease the playback speed (-1%). Thus, data transmitted in jitterless transmission are delayed by about 0.7 sec behind the time indicated on the FL of the transmitting device, compared with data transmitted in normal transmission. Moreover, as mentioned above, because the sending device switches the system clock according to the request of the receiving device, sync of the video signal may be unlocked, and the audio signal would be delayed behind a video signal because of its being cached. So many sending devices do not adopt jitterless transmission for content having both audio and video signals.

Both the sending and receiving devices must support jitterless transmission to enable this type of transmission. Start of jitterless transmission is requested by the receiving device; however, depending on the status of the sending device (type of media, etc.), jitterless transmission may not be possible. Media for which jitterless transmission is supported and those for which it is not (only normal transmission is supported) are shown below:
• Jitterless transmission : DVD-A, SACD, CD, DTS-CD
• Normal transmission only : DVD-V, DVD-RW, VCD, MP3

Depending on the specifications of the sending device, it may not support jitterless transmission, even for those media for which it can be supported.
As to copyright protection, IEEE 1394 employs the DTCP (Digital Transmission Content Protection) system, which consists of the following:
1. Copy-control information
2. Authentication and key exchange
3. Encryption
4. System renewability

The procedures for copy protection are basically as follows: After authentication and key exchange for encryption/decryption, the sending device will send the data encrypted using the keys. The receiving device in turn will decipher the data using the exchanged keys.
• Media whose data can be encrypted: DVD-V, DVD-A, SACD, DVD-RW
• Media whose data cannot be encrypted: CD, DTS-CD, VCD, MP3

● IEEE 1394 Error Indications

No.	Message	Error Code	Cause and Actions to be taken	Remarks
1	WRITING CONFIG	E7	The Config ROM data are being written to flash memory. Do NOT turn off the power while this message is displayed. While this message is displayed, the Standby button on the main unit is disabled.	This message is displayed when a unit whose host board was replaced with a new one is turned on for the first time.
2	MODEL ID ERROR	CO	The MODEL ID stored in flash memory on the host board and that stored in the main unit do not match. Download the GUID again.	This error is generated when a host board for the wrong destination is mounted in the unit, and it will only be generated during servicing. The message will remain displayed until the error is corrected.
3	CONFIG ERROR	C1	The Config ROM data are erroneous. Download the GUID again.	This message is displayed when the power is turned off while the Config ROM data are being written. As this is generated while the unit is operated online, this error will only be generated during servicing. The message will remain displayed until the error is corrected.

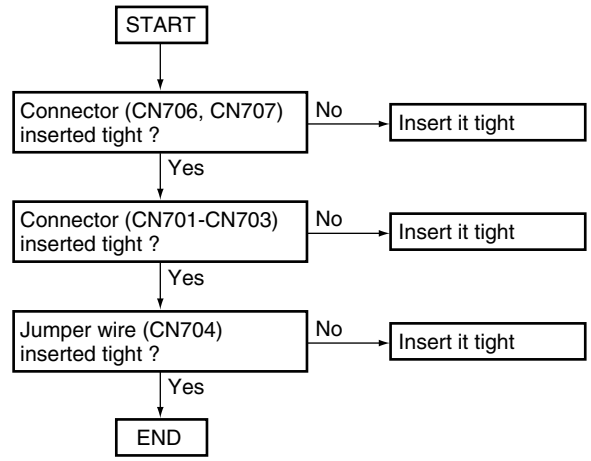
Note: If downloading of the GUID cannot be performed for corrective measures for messages 1 and 2, replace the host board with a new one.

7.1.5 TROUBLE SHOOTING OF THE DSP ASSY

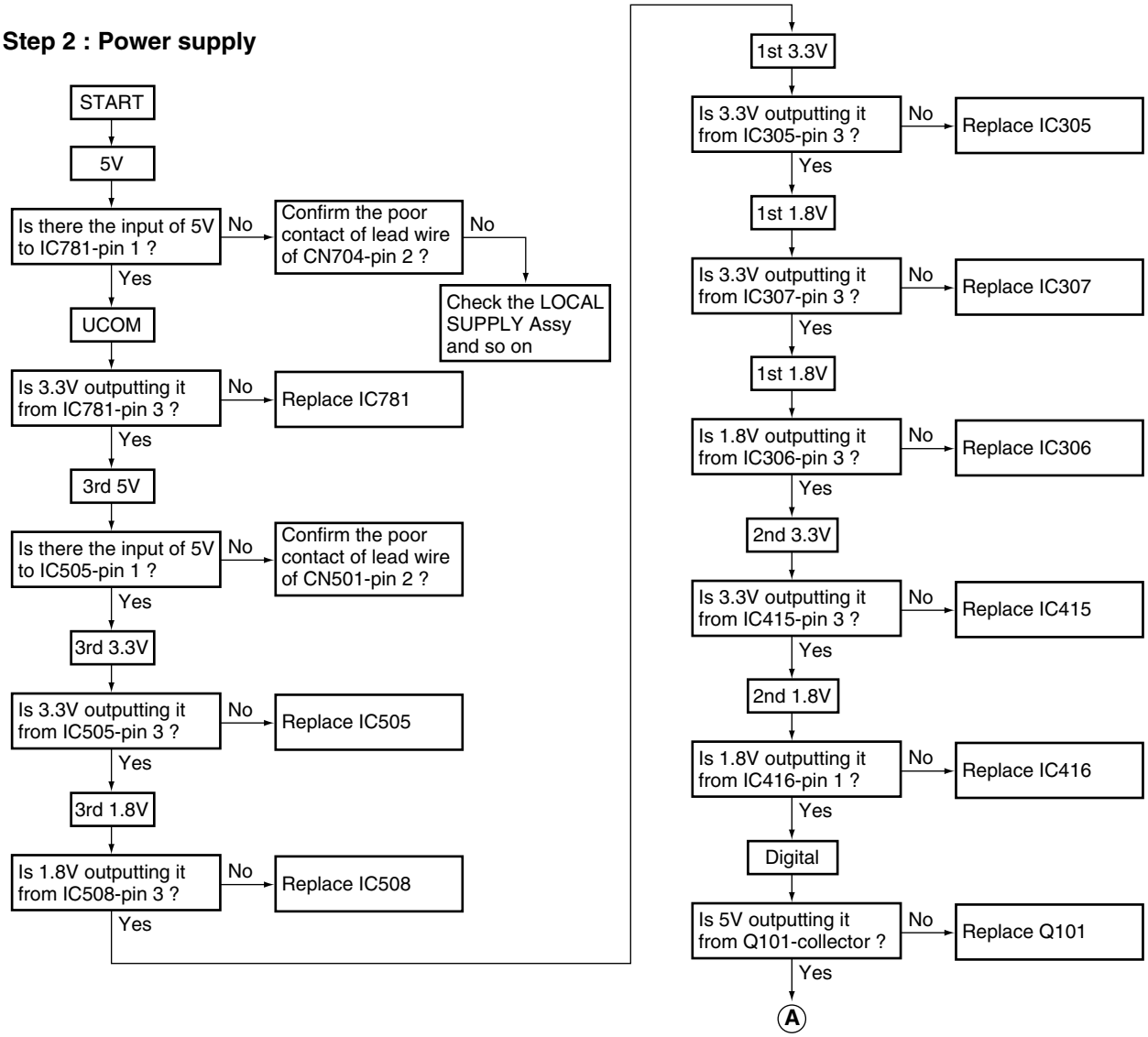
■ When a sound is not out in the surround mode with the digital signal input (SPDIF input)

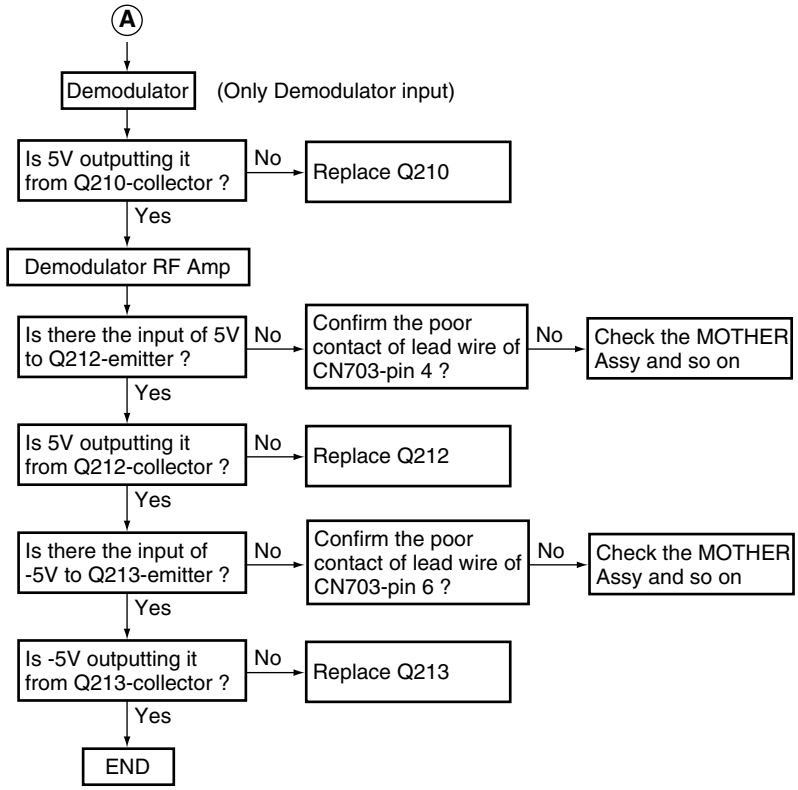
- Function: DVD/LD
- Suppose coils, capacitors and resistors to be poor contact and that is not damaged.

Step 1 : Connection

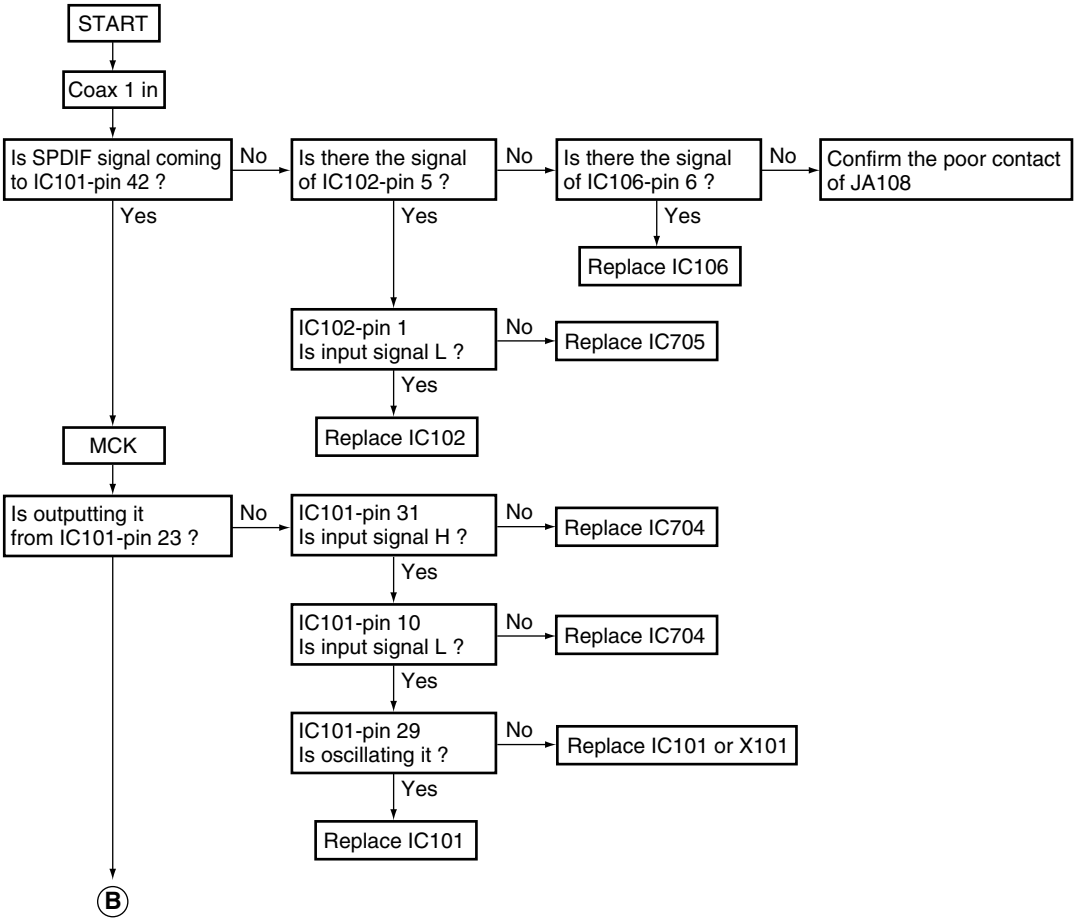


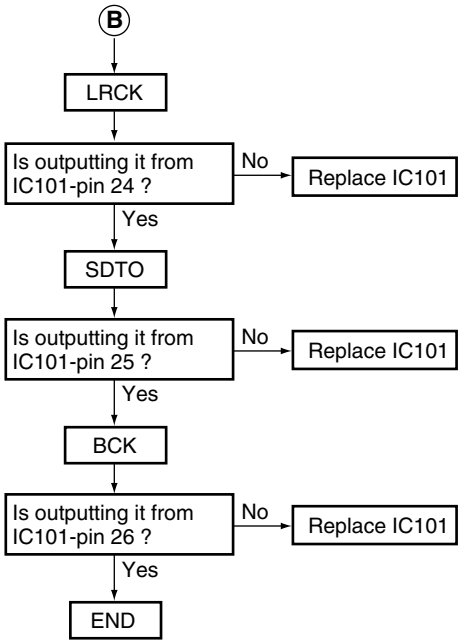
Step 2 : Power supply




A
Demodulator
(Only Demodulator input)
Is 5V outputting it from Q210-collector ?
No
Replace Q210
Yes
Demodulator RF Amp
Is there the input of 5V to Q212-emitter ?
No
Confirm the poor contact of lead wire of CN703-pin 4 ?
No
Check the MOTHER Assy and so on
Yes
Is 5V outputting it from Q212-collector ?
No
Replace Q212
Yes
Is there the input of -5V to Q213-emitter ?
No
Confirm the poor contact of lead wire of CN703-pin 6 ?
No
Check the MOTHER Assy and so on
Yes
Is -5V outputting it from Q213-collector ?
No
Replace Q213
Yes
END

Step 3 : DIR

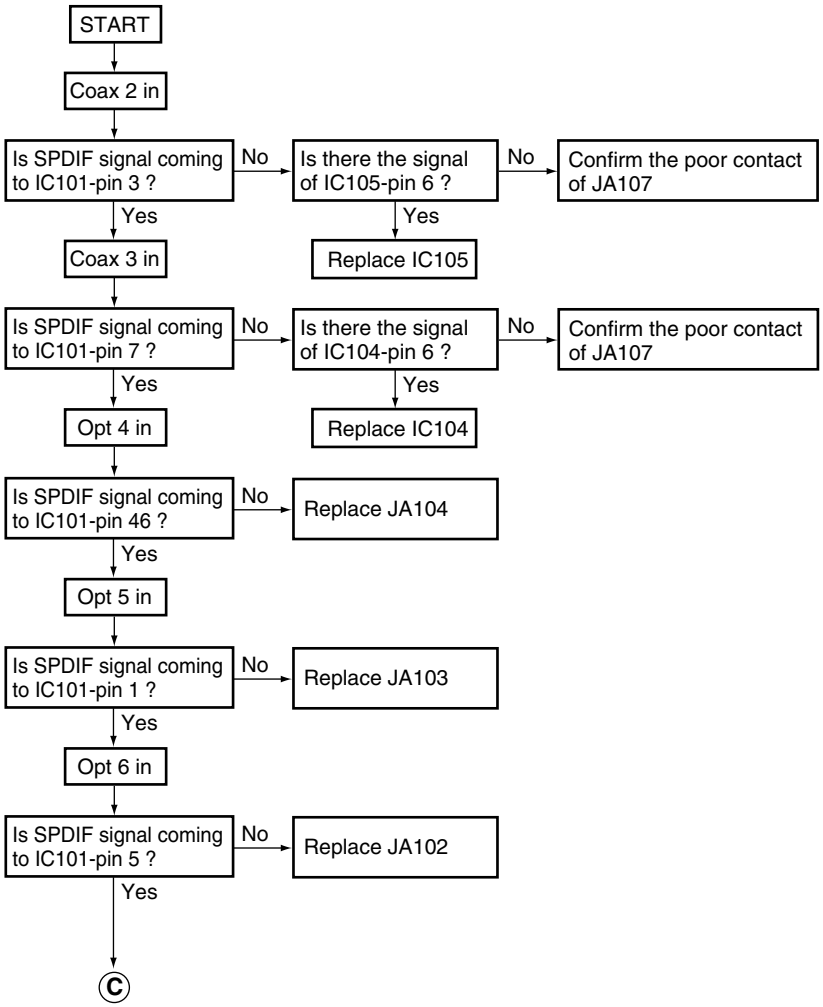

START
Coax 1 in
Is SPDIF signal coming to IC101-pin 42 ?
No
Is there the signal of IC102-pin 5 ?
No
Is there the signal of IC106-pin 6 ?
No
Confirm the poor contact of JA108
Yes
Yes
Yes
Replace IC106
IC102-pin 1 Is input signal L ?
No
Replace IC705
Yes
Replace IC102
MCK
Is outputting it from IC101-pin 23 ?
No
IC101-pin 31 Is input signal H ?
No
Replace IC704
Yes
IC101-pin 10 Is input signal L ?
No
Replace IC704
Yes
IC101-pin 29 Is oscillating it ?
No
Replace IC101 or X101
Yes
Replace IC101
B

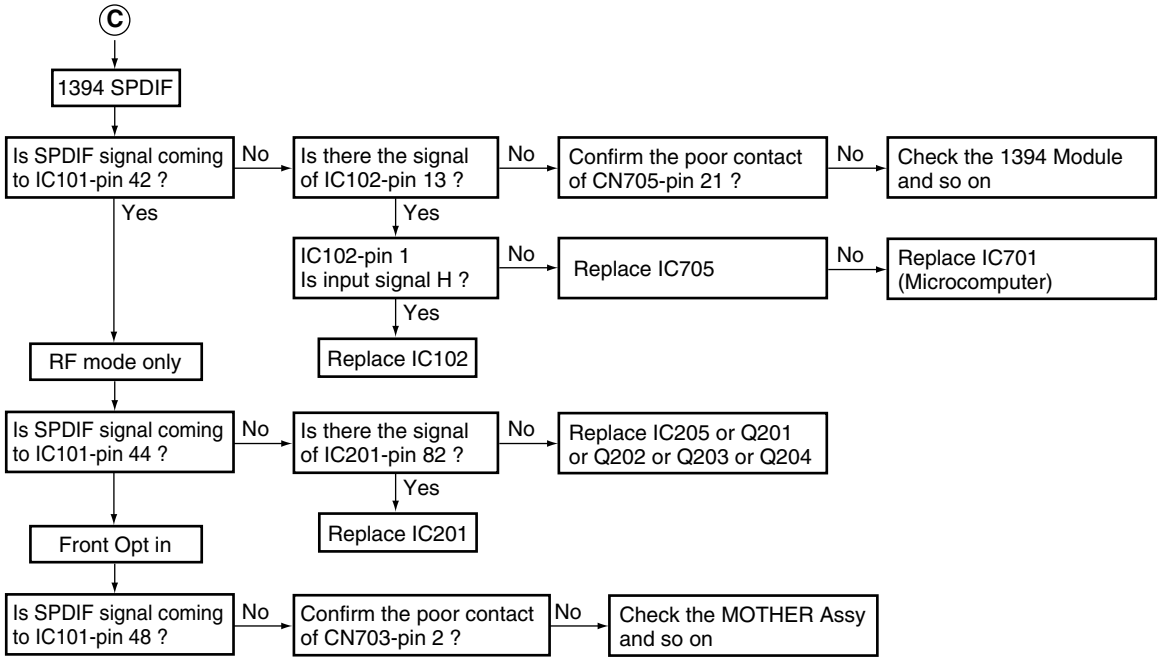


Go to another step by input format afterward.

Step 3' : DIR

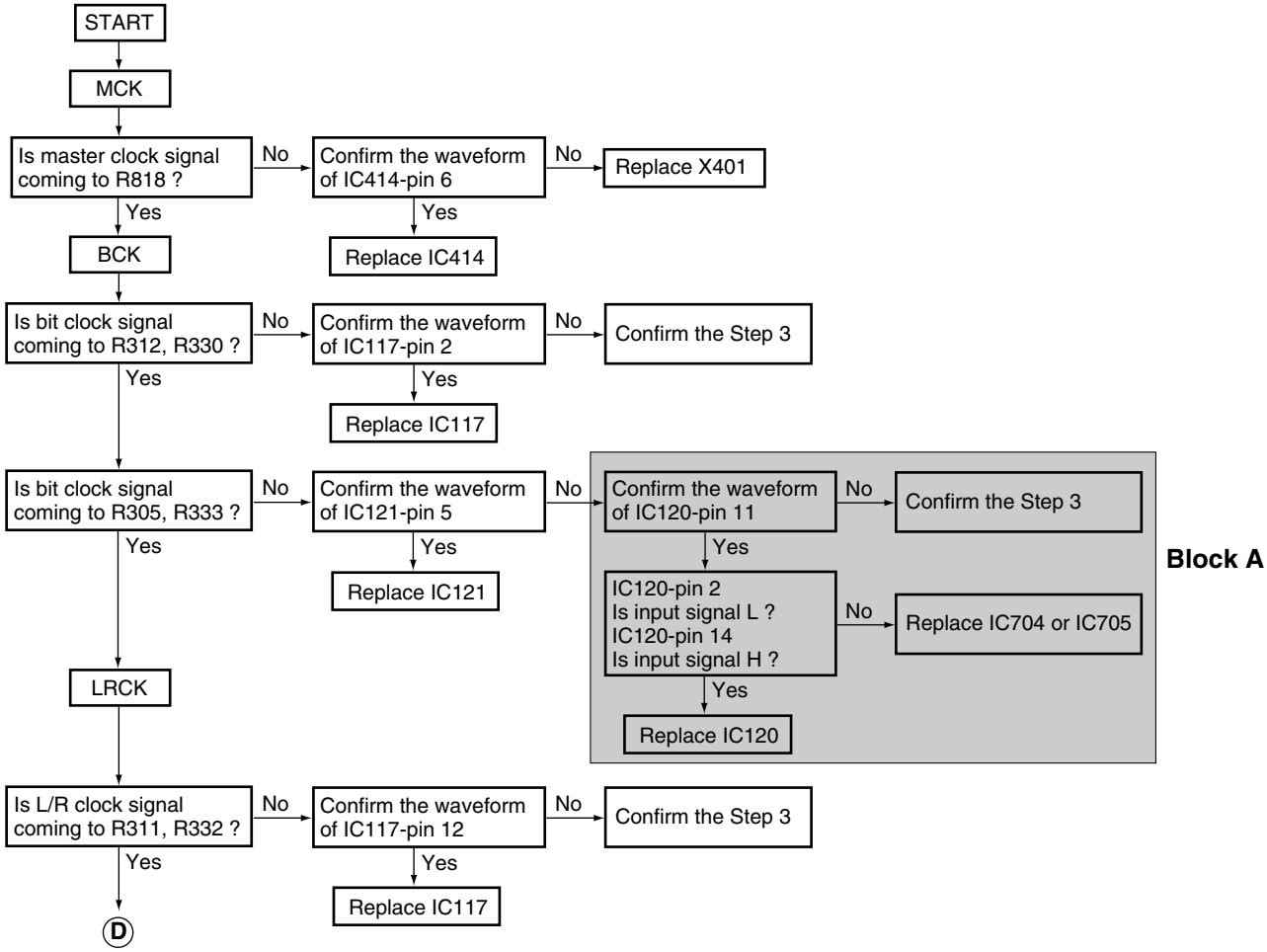
• Function: except DVD/LD



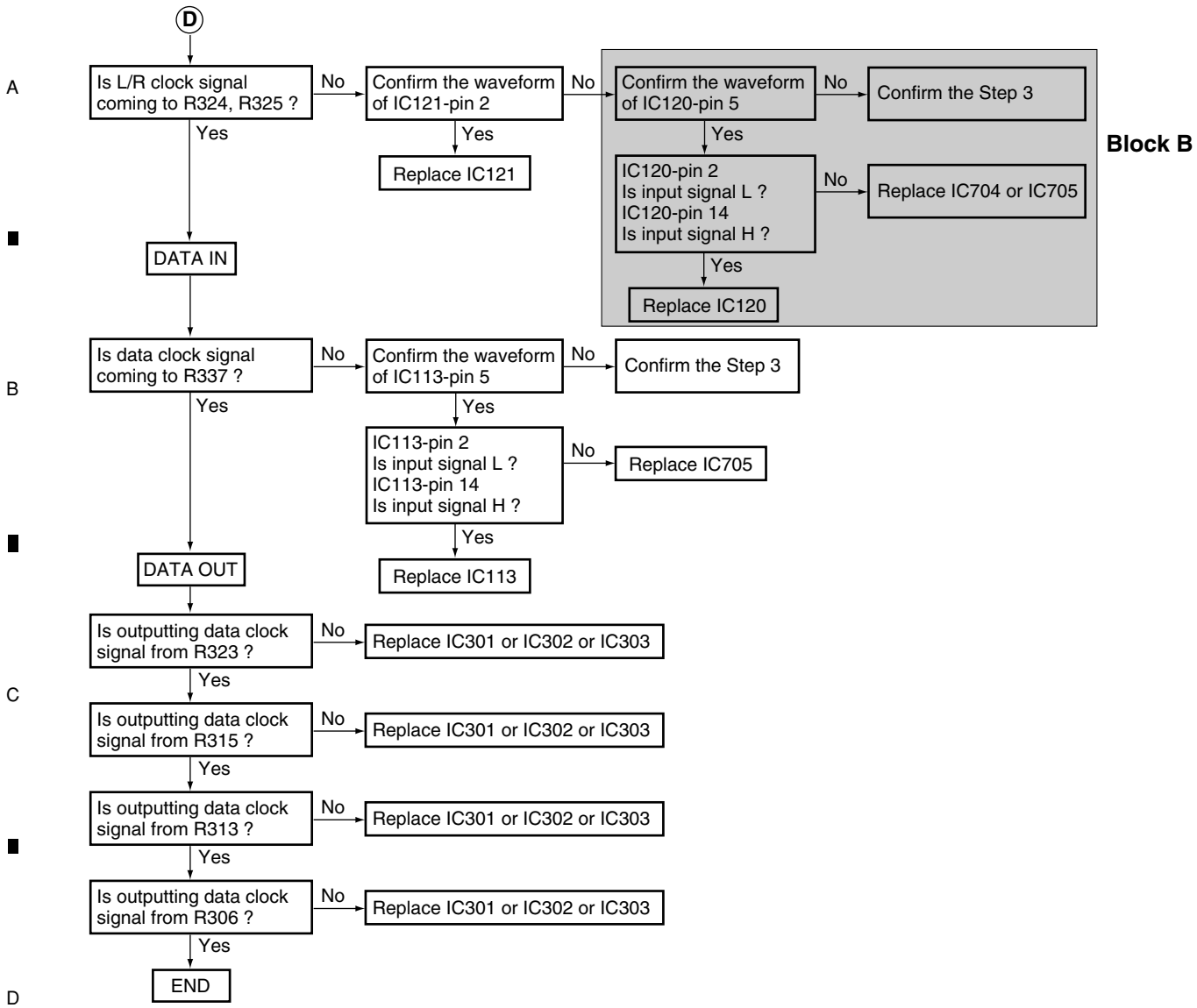


■ When a sound is not out in the surround mode with the digital signal input (Dolby Digital input)

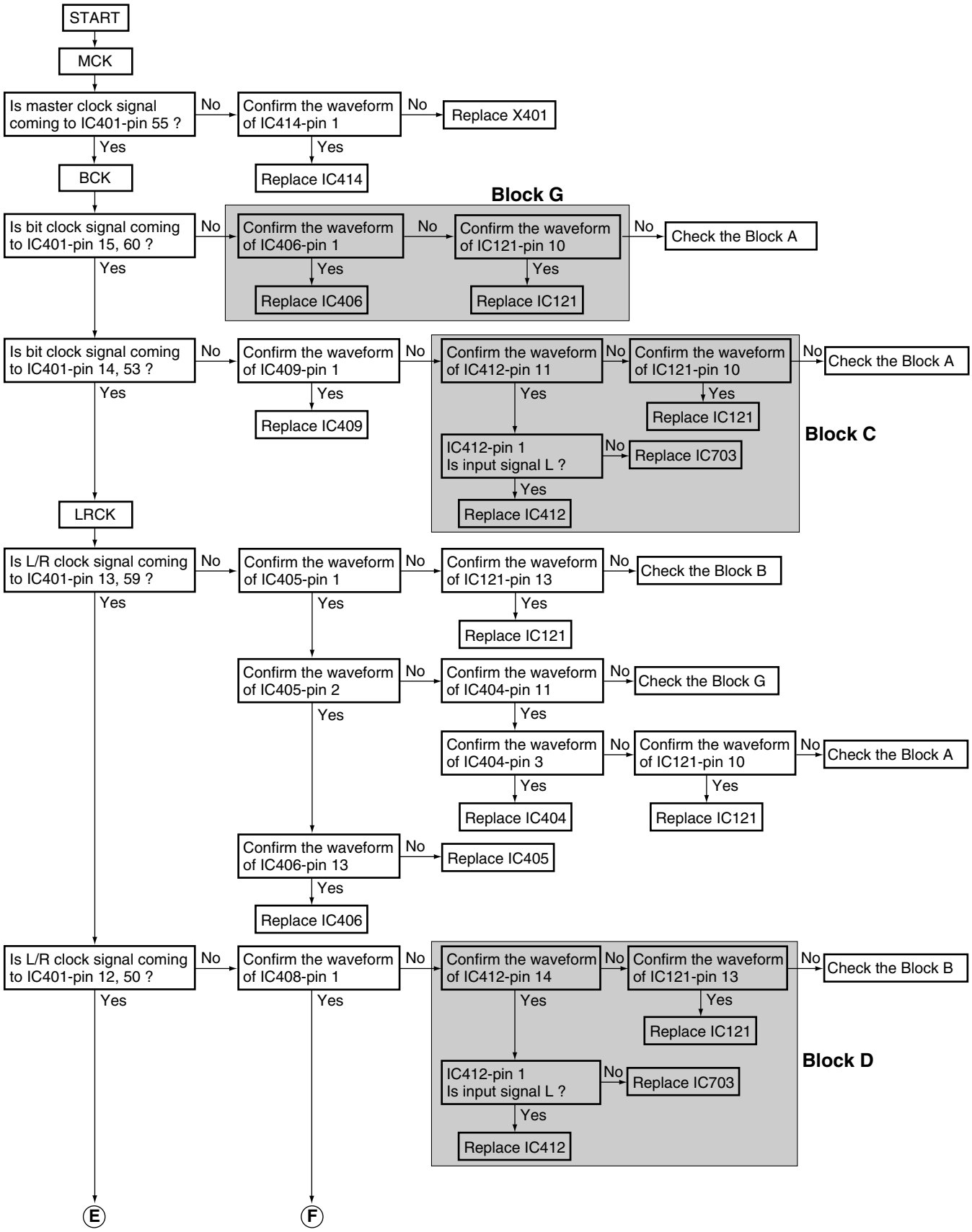
Step 4 : 1st DSP

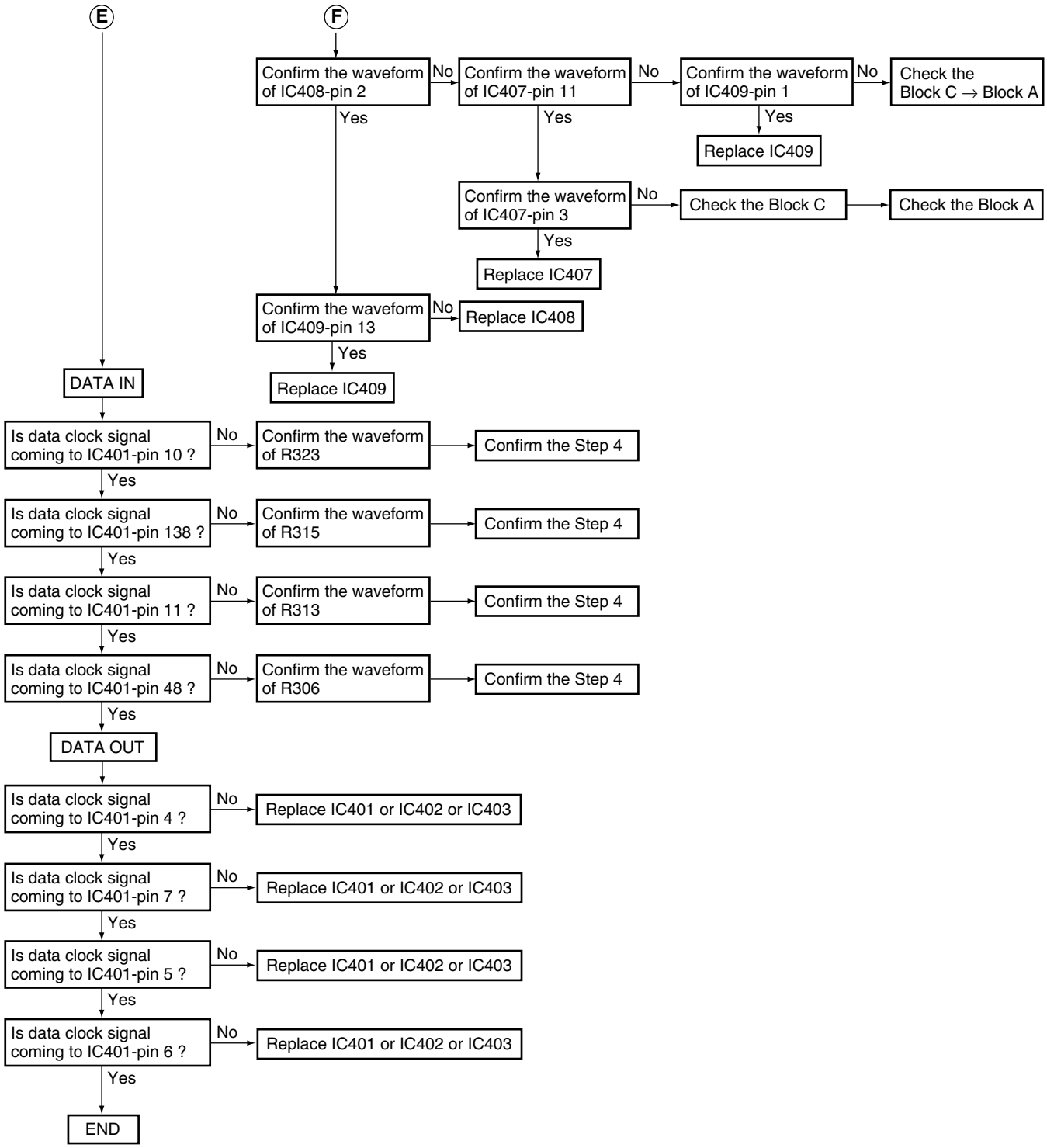


Block A

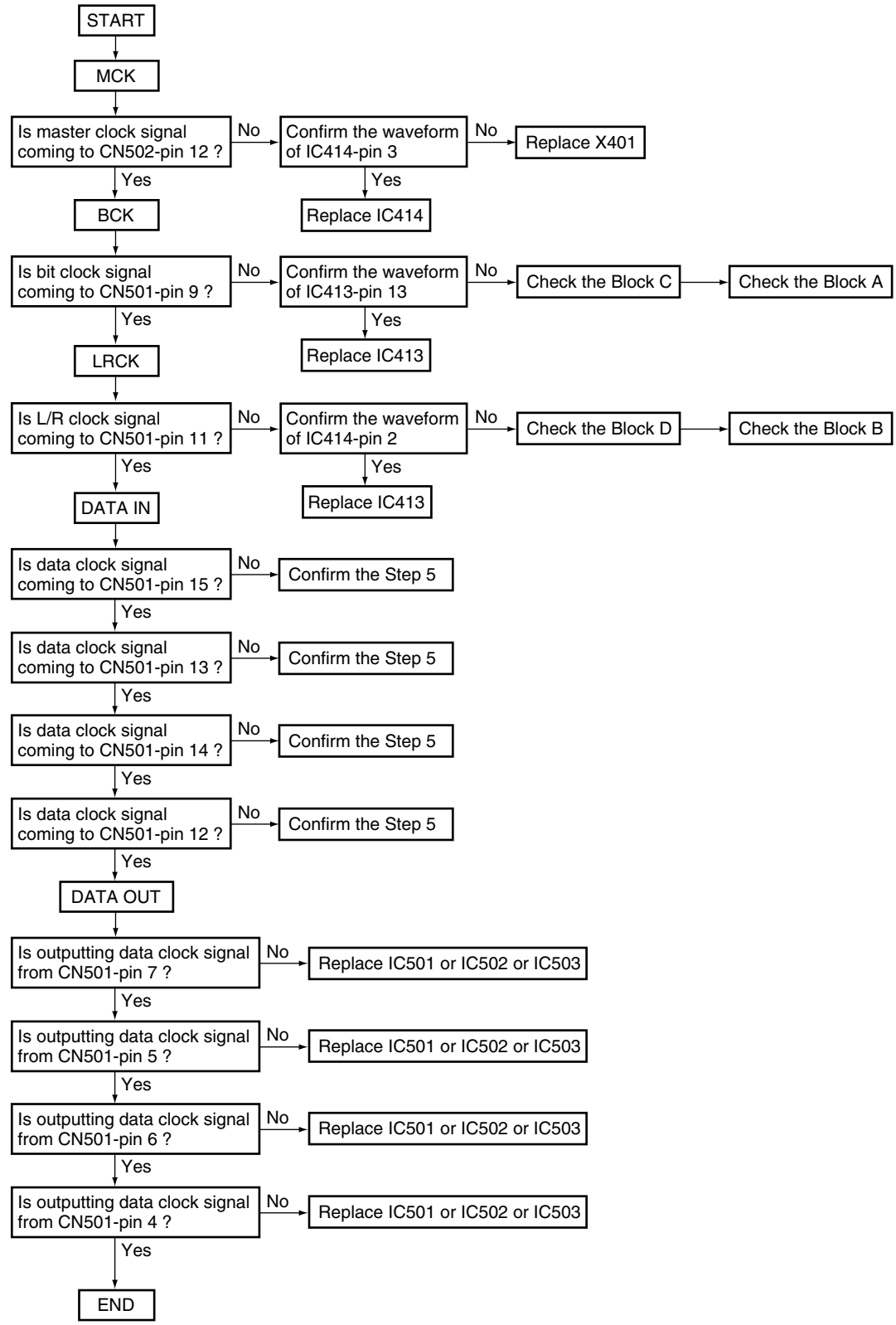

D
Is L/R clock signal coming to R324, R325 ?
No
Confirm the waveform of IC121-pin 2
No
Confirm the waveform of IC120-pin 5
No
Confirm the Step 3
Yes
Yes
Yes
Replace IC121
IC120-pin 2
Is input signal L ?
IC120-pin 14
Is input signal H ?
No
Replace IC704 or IC705
Yes
Replace IC120
Block B
DATA IN
Is data clock signal coming to R337 ?
No
Confirm the waveform of IC113-pin 5
No
Confirm the Step 3
Yes
Yes
IC113-pin 2
Is input signal L ?
IC113-pin 14
Is input signal H ?
No
Replace IC705
Yes
Replace IC113
DATA OUT
Is outputting data clock signal from R323 ?
No
Replace IC301 or IC302 or IC303
Yes
Is outputting data clock signal from R315 ?
No
Replace IC301 or IC302 or IC303
Yes
Is outputting data clock signal from R313 ?
No
Replace IC301 or IC302 or IC303
Yes
Is outputting data clock signal from R306 ?
No
Replace IC301 or IC302 or IC303
Yes
END

Step 5 : 2nd DSP

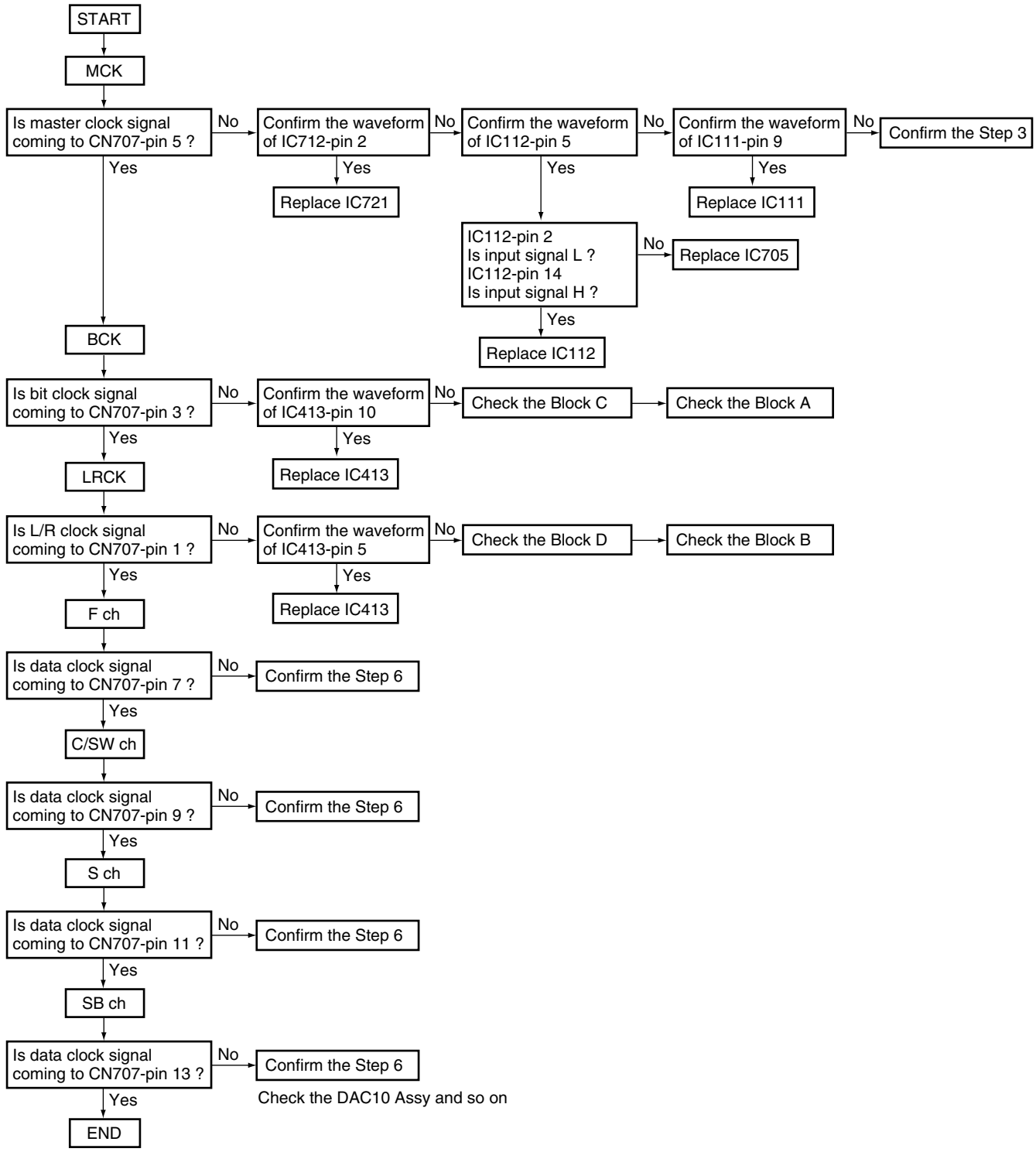



E
F
Confirm the waveform of IC408-pin 2
No
Confirm the waveform of IC407-pin 11
No
Confirm the waveform of IC409-pin 1
No
Check the Block C → Block A
Yes
Yes
Yes
Replace IC409
Confirm the waveform of IC407-pin 3
No
Check the Block C
Check the Block A
Yes
Replace IC407
Confirm the waveform of IC409-pin 13
No
Replace IC408
Yes
Replace IC409
DATA IN
Is data clock signal coming to IC401-pin 10 ?
No
Confirm the waveform of R323
Confirm the Step 4
Yes
Is data clock signal coming to IC401-pin 138 ?
No
Confirm the waveform of R315
Confirm the Step 4
Yes
Is data clock signal coming to IC401-pin 11 ?
No
Confirm the waveform of R313
Confirm the Step 4
Yes
Is data clock signal coming to IC401-pin 48 ?
No
Confirm the waveform of R306
Confirm the Step 4
Yes
DATA OUT
Is data clock signal coming to IC401-pin 4 ?
No
Replace IC401 or IC402 or IC403
Yes
Is data clock signal coming to IC401-pin 7 ?
No
Replace IC401 or IC402 or IC403
Yes
Is data clock signal coming to IC401-pin 5 ?
No
Replace IC401 or IC402 or IC403
Yes
Is data clock signal coming to IC401-pin 6 ?
No
Replace IC401 or IC402 or IC403
Yes
END

Step 6 : 3rd DSP

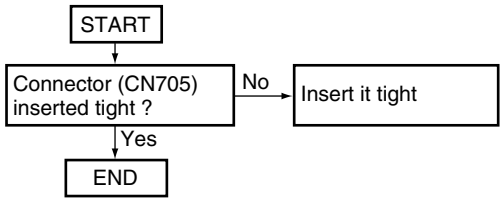


Step 7 : to DAC

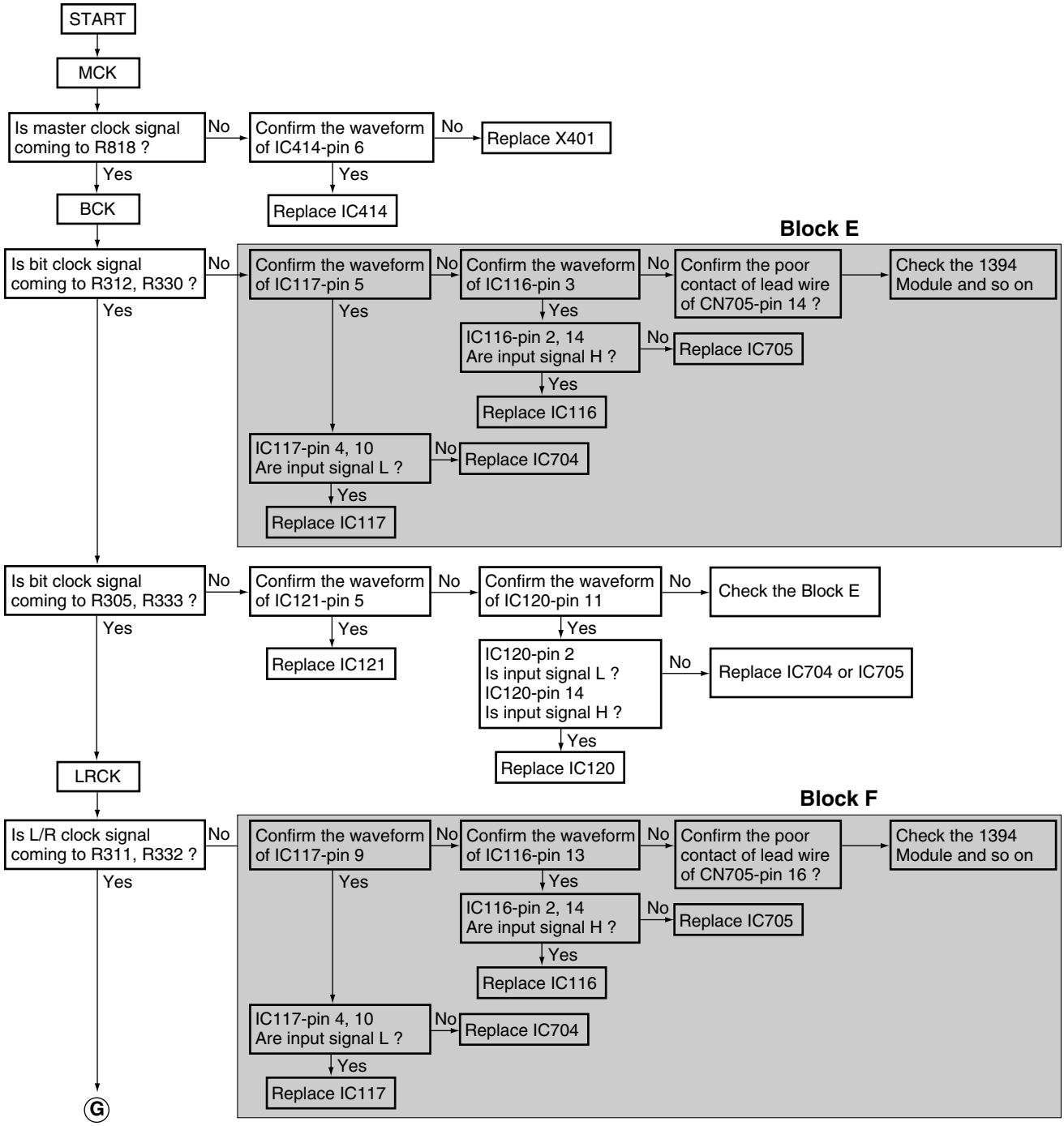

START
MCK
Is master clock signal coming to CN707-pin 5 ?
No
Confirm the waveform of IC712-pin 2
No
Confirm the waveform of IC112-pin 5
No
Confirm the waveform of IC111-pin 9
No
Confirm the Step 3
Yes
Yes
Replace IC721
Yes
Replace IC111
IC112-pin 2 Is input signal L ? IC112-pin 14 Is input signal H ?
No
Replace IC705
Yes
Replace IC112
BCK
Is bit clock signal coming to CN707-pin 3 ?
No
Confirm the waveform of IC413-pin 10
No
Check the Block C
Check the Block A
Yes
Yes
Replace IC413
LRCK
Is L/R clock signal coming to CN707-pin 1 ?
No
Confirm the waveform of IC413-pin 5
No
Check the Block D
Check the Block B
Yes
Yes
Replace IC413
F ch
Is data clock signal coming to CN707-pin 7 ?
No
Confirm the Step 6
Yes
C/SW ch
Is data clock signal coming to CN707-pin 9 ?
No
Confirm the Step 6
Yes
S ch
Is data clock signal coming to CN707-pin 11 ?
No
Confirm the Step 6
Yes
SB ch
Is data clock signal coming to CN707-pin 13 ?
No
Confirm the Step 6
Yes
Check the DAC10 Assy and so on
END

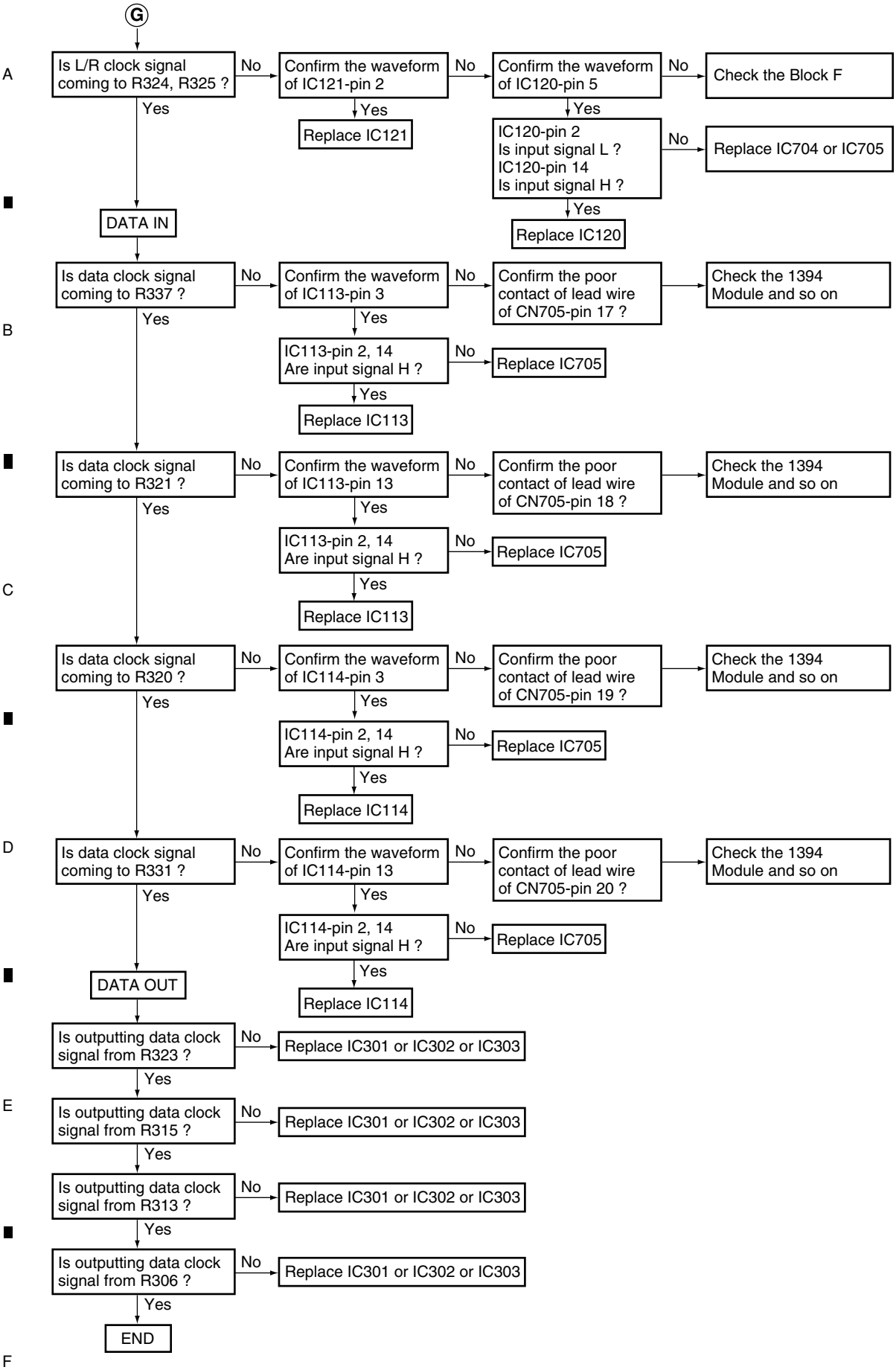
■ When a sound is not out in the surround mode with the digital signal input (DVD-Audio or SACD input → i-Link Connect)

Step 4 : Connection

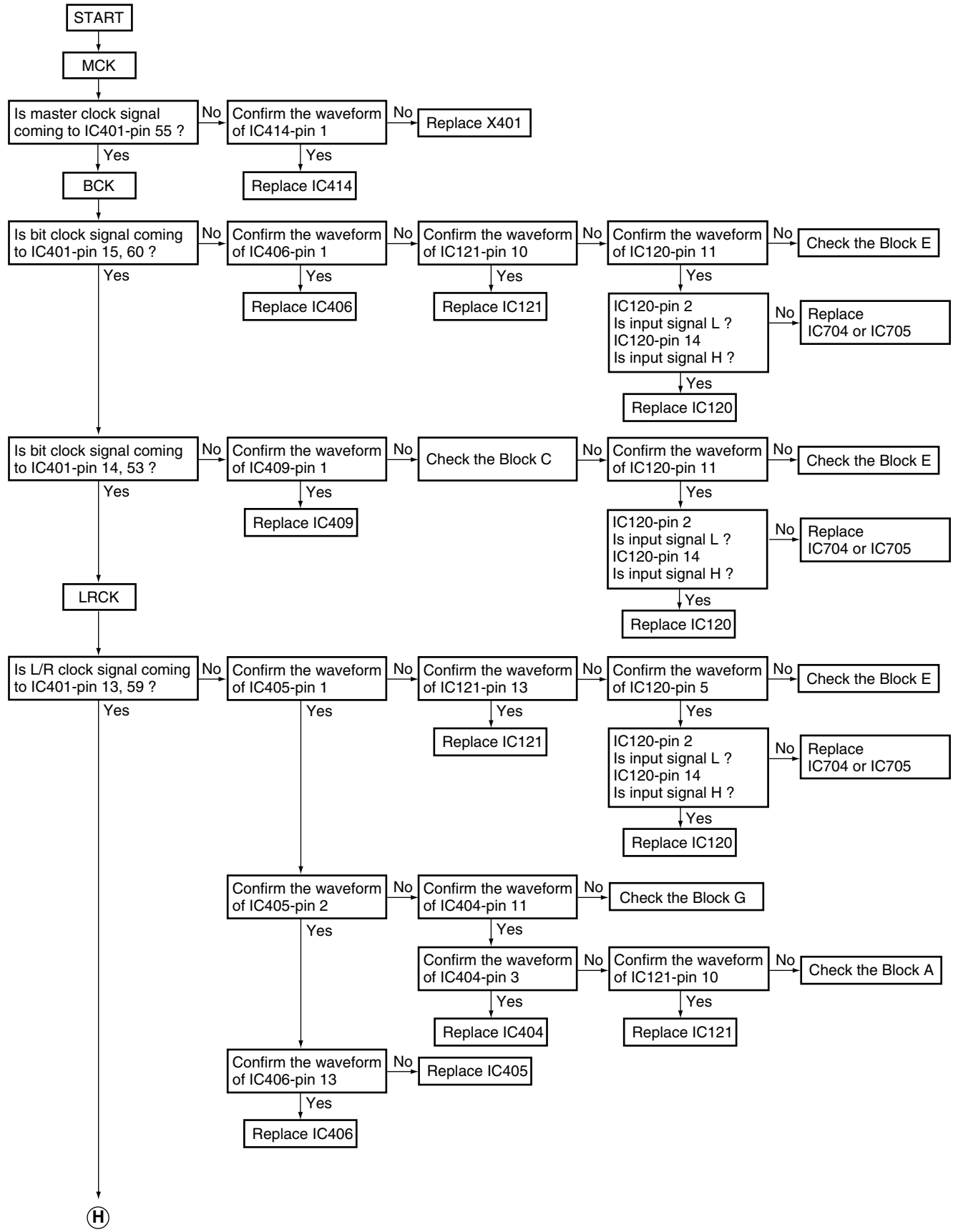


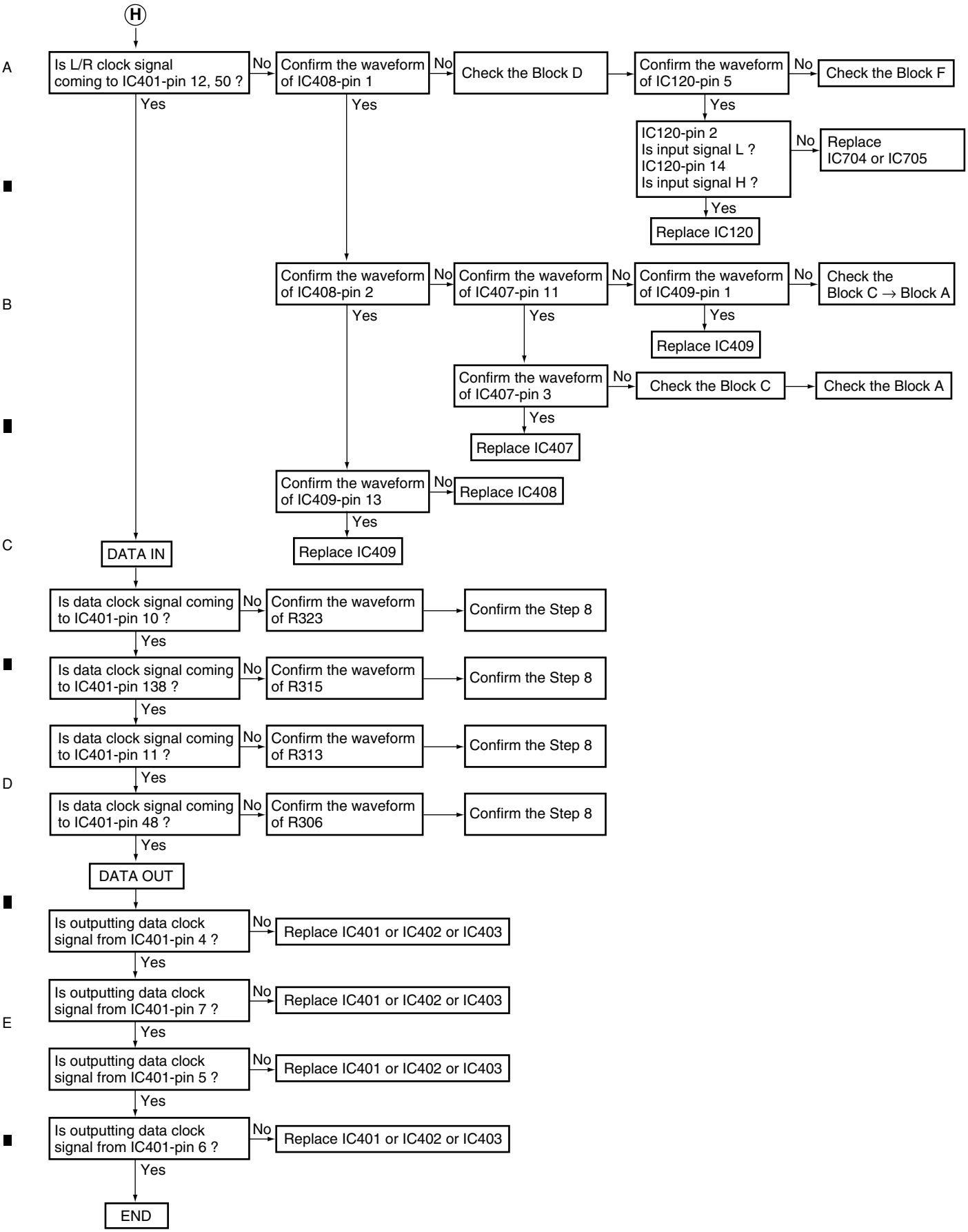
Step 5 : 1st DSP



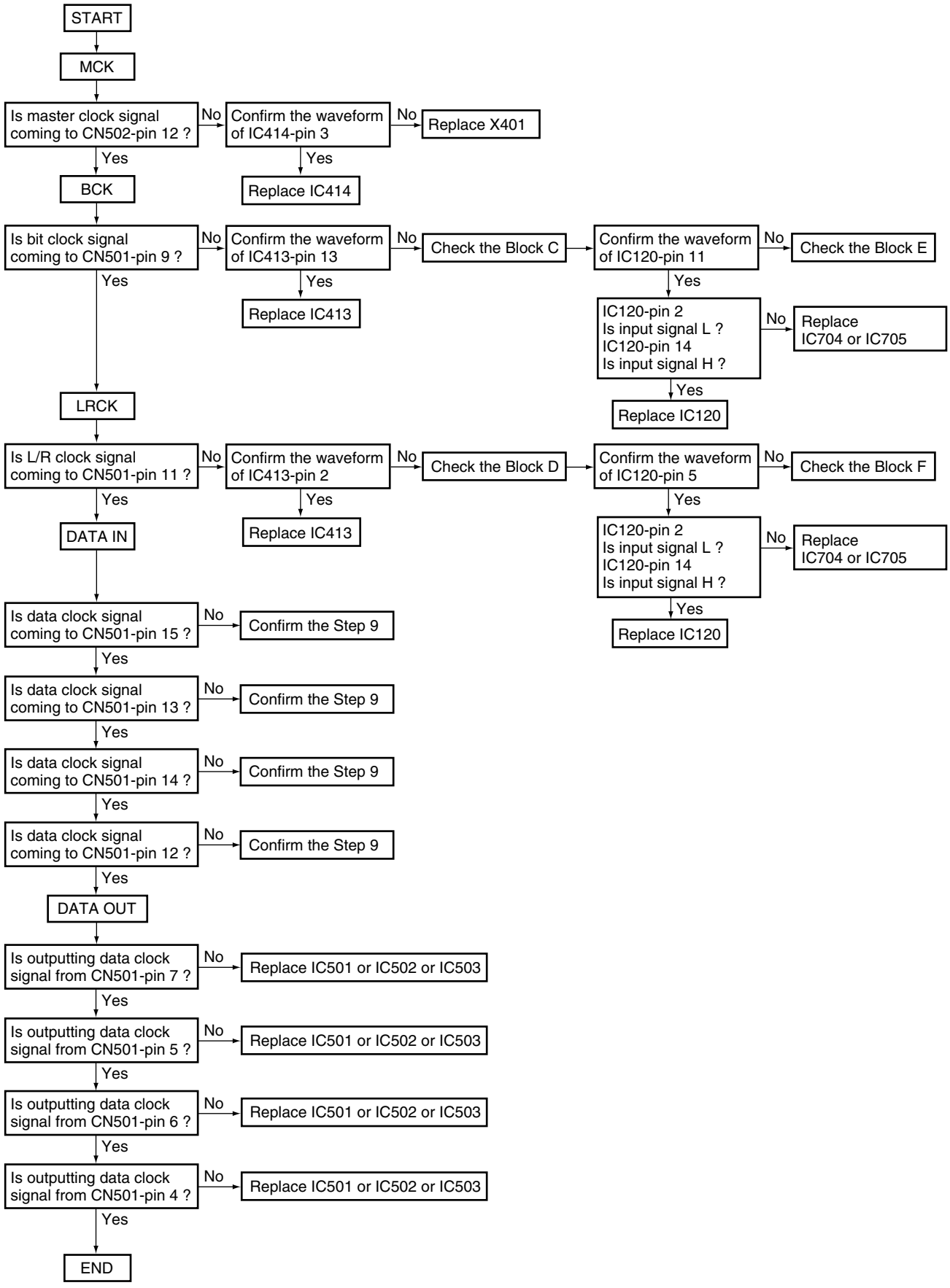

G
Is L/R clock signal coming to R324, R325 ?
No
Confirm the waveform of IC121-pin 2
No
Confirm the waveform of IC120-pin 5
No
Check the Block F
Yes
Yes
Replace IC121
Yes
IC120-pin 2
Is input signal L ?
IC120-pin 14
Is input signal H ?
No
Replace IC704 or IC705
Yes
Replace IC120
DATA IN
Is data clock signal coming to R337 ?
No
Confirm the waveform of IC113-pin 3
No
Confirm the poor contact of lead wire of CN705-pin 17 ?
Check the 1394 Module and so on
Yes
Yes
IC113-pin 2, 14
Are input signal H ?
No
Replace IC705
Yes
Replace IC113
Is data clock signal coming to R321 ?
No
Confirm the waveform of IC113-pin 13
No
Confirm the poor contact of lead wire of CN705-pin 18 ?
Check the 1394 Module and so on
Yes
Yes
IC113-pin 2, 14
Are input signal H ?
No
Replace IC705
Yes
Replace IC113
Is data clock signal coming to R320 ?
No
Confirm the waveform of IC114-pin 3
No
Confirm the poor contact of lead wire of CN705-pin 19 ?
Check the 1394 Module and so on
Yes
Yes
IC114-pin 2, 14
Are input signal H ?
No
Replace IC705
Yes
Replace IC114
Is data clock signal coming to R331 ?
No
Confirm the waveform of IC114-pin 13
No
Confirm the poor contact of lead wire of CN705-pin 20 ?
Check the 1394 Module and so on
Yes
Yes
IC114-pin 2, 14
Are input signal H ?
No
Replace IC705
Yes
Replace IC114
DATA OUT
Is outputting data clock signal from R323 ?
No
Replace IC301 or IC302 or IC303
Yes
Is outputting data clock signal from R315 ?
No
Replace IC301 or IC302 or IC303
Yes
Is outputting data clock signal from R313 ?
No
Replace IC301 or IC302 or IC303
Yes
Is outputting data clock signal from R306 ?
No
Replace IC301 or IC302 or IC303
Yes
END

Step 6 : 2nd DSP

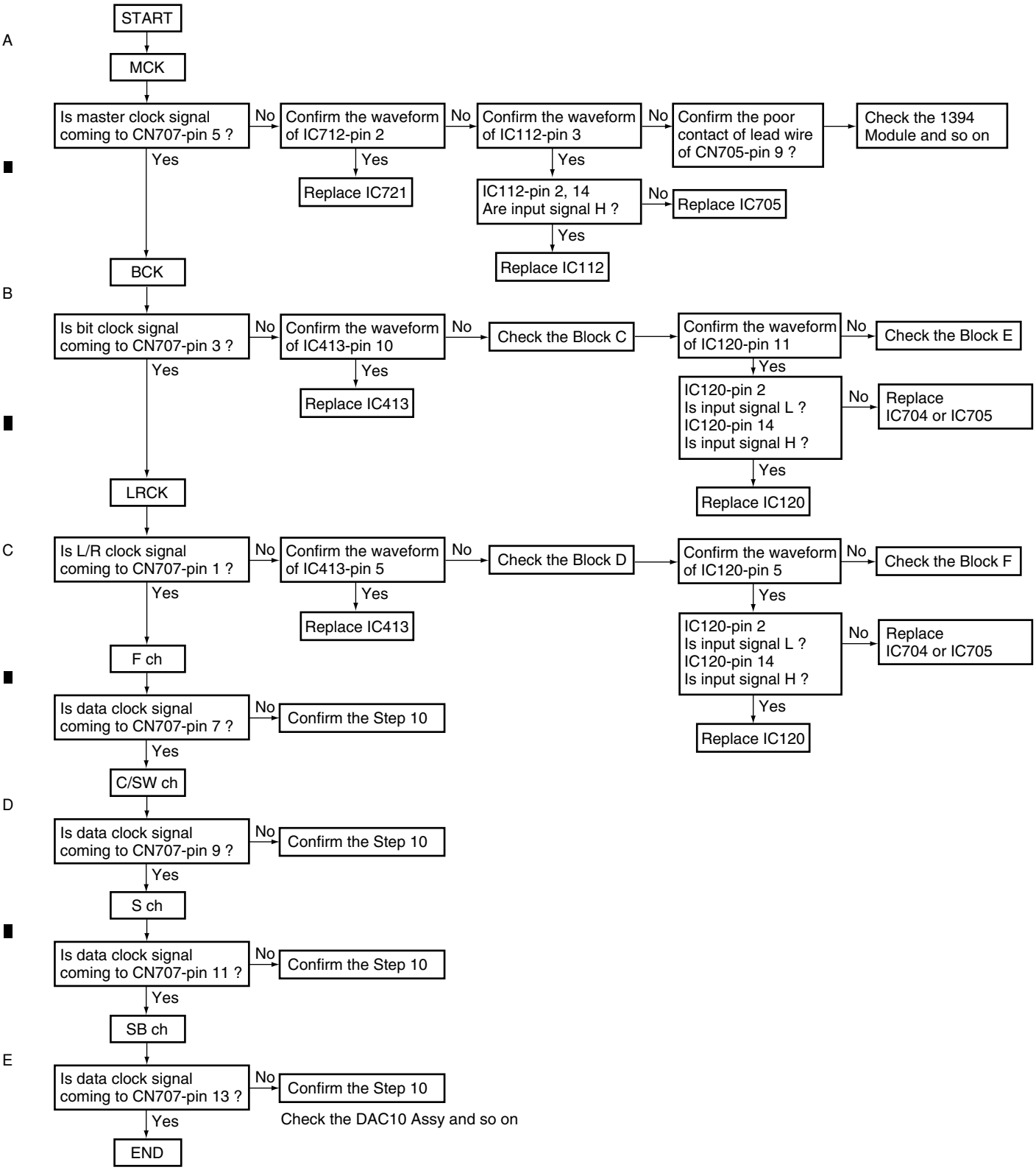



H
Is L/R clock signal coming to IC401-pin 12, 50 ?
No
Confirm the waveform of IC408-pin 1
No
Check the Block D
Confirm the waveform of IC120-pin 5
No
Check the Block F
Yes
Yes
Yes
IC120-pin 2 Is input signal L ? IC120-pin 14 Is input signal H ?
No
Replace IC704 or IC705
Yes
Replace IC120
Confirm the waveform of IC408-pin 2
No
Confirm the waveform of IC407-pin 11
No
Confirm the waveform of IC409-pin 1
No
Check the Block C → Block A
Yes
Yes
Yes
Replace IC409
Confirm the waveform of IC407-pin 3
No
Check the Block C
Check the Block A
Yes
Replace IC407
Confirm the waveform of IC409-pin 13
No
Replace IC408
Yes
Replace IC409
DATA IN
Is data clock signal coming to IC401-pin 10 ?
No
Confirm the waveform of R323
Confirm the Step 8
Yes
Is data clock signal coming to IC401-pin 138 ?
No
Confirm the waveform of R315
Confirm the Step 8
Yes
Is data clock signal coming to IC401-pin 11 ?
No
Confirm the waveform of R313
Confirm the Step 8
Yes
Is data clock signal coming to IC401-pin 48 ?
No
Confirm the waveform of R306
Confirm the Step 8
Yes
DATA OUT
Is outputting data clock signal from IC401-pin 4 ?
No
Replace IC401 or IC402 or IC403
Yes
Is outputting data clock signal from IC401-pin 7 ?
No
Replace IC401 or IC402 or IC403
Yes
Is outputting data clock signal from IC401-pin 5 ?
No
Replace IC401 or IC402 or IC403
Yes
Is outputting data clock signal from IC401-pin 6 ?
No
Replace IC401 or IC402 or IC403
Yes
END

Step 7 : 3rd DSP



Step 8 : to DAC


START
MCK
Is master clock signal coming to CN707-pin 5 ?
No
Confirm the waveform of IC712-pin 2
No
Confirm the waveform of IC112-pin 3
No
Confirm the poor contact of lead wire of CN705-pin 9 ?
Check the 1394 Module and so on
Yes
Yes
Replace IC721
Yes
IC112-pin 2, 14 Are input signal H ?
No
Replace IC705
Yes
Replace IC112
BCK
Is bit clock signal coming to CN707-pin 3 ?
No
Confirm the waveform of IC413-pin 10
No
Check the Block C
Confirm the waveform of IC120-pin 11
No
Check the Block E
Yes
Yes
Replace IC413
Yes
IC120-pin 2 Is input signal L ? IC120-pin 14 Is input signal H ?
No
Replace IC704 or IC705
Yes
Replace IC120
LRCK
Is L/R clock signal coming to CN707-pin 1 ?
No
Confirm the waveform of IC413-pin 5
No
Check the Block D
Confirm the waveform of IC120-pin 5
No
Check the Block F
Yes
Yes
Replace IC413
Yes
IC120-pin 2 Is input signal L ? IC120-pin 14 Is input signal H ?
No
Replace IC704 or IC705
Yes
Replace IC120
F ch
Is data clock signal coming to CN707-pin 7 ?
No
Confirm the Step 10
Yes
C/SW ch
Is data clock signal coming to CN707-pin 9 ?
No
Confirm the Step 10
Yes
S ch
Is data clock signal coming to CN707-pin 11 ?
No
Confirm the Step 10
Yes
SB ch
Is data clock signal coming to CN707-pin 13 ?
No
Confirm the Step 10
Yes
Check the DAC10 Assy and so on
END

CLEANING

Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	Cleaning tools
Pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

Position to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008

7.1.6 OUTLINE OF THE WAVEFORMS RECEIVED BY THE DSP SECTION

The illustrated signal waveform is an example of the signal waveform when a Dolby Digital (Fs = 48 kHz) signal is received. It must be noted that a frequency (waveform period) other than that of the Master clock supplied to the DSP section changes depending on the format of input signals or mode of the unit. It must also be noted that the waveform being observed changes depending on the environment of the measurement system (high-frequency characteristics of an oscilloscope or a probe, grounding method, etc.).
(The numbers ①-⑨ of the waveform names correspond to those of the waveform data and those in the clock flowchart.)

S/PDIF signal waveforms

- Flow indicated with "◅" in the clock flowchart
  Aperiodic rectangular-wave signal
  ① COAXIAL or demodulator input: Amplitude of approx. 5 Vp-p (when the signal is input to IC101)
  ② OPTICAL input: Amplitude of approx. 4 Vp-p (when the signal is input to IC101)
  ③ OPTICAL output: Amplitude of approx. 3.3 Vp-p (when the signal is output from IC101)

In the following waveforms, the amplitude of all clocks is approx. 3.3 Vp-p.

Audio data waveform

- Flow indicated with "◄" in the clock flowchart
  Aperiodic rectangular-wave signal
  ④ Audio data waveform

Audio bit clock waveform

- Flow indicated with "◄" in the clock flowchart
  Aperiodic rectangular-wave signal
  ⑤ Bit clock waveform

Audio L/R clock waveform

- Flow indicated with "⇐" in the clock flowchart
  Aperiodic rectangular-wave signal
  ⑥ L/R clock waveform (except 2nd DPS)
  Waveforms of the lines other than those supplied to the second DSP
  ⑦ L/R clock waveform (2nd DPS)
  Waveforms generated in the block that supplies signals to the second DSP

Audio master clock waveform

- Flow indicated with "≺" in the clock flowchart
  Aperiodic rectangular-wave signal
  ⑧ Master clock waveform (for Audio signal)

DSP master clock waveform

- Flow indicated with "≺" in the clock flowchart
  Aperiodic rectangular-wave signal
  ⑨ Master clock waveform (for DSP)
  Only this clock operates on a fixed frequency: 12.5 MHz (80 ns).

A

B

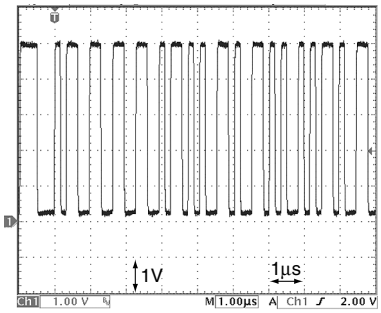
C

D

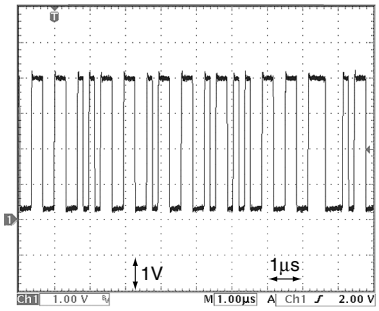
E

F

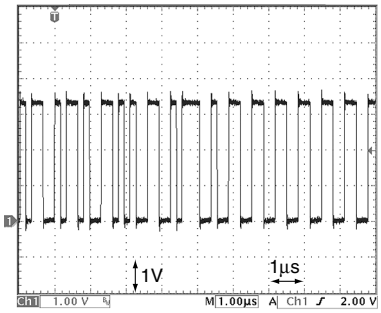
① COAXIAL or Demodulator input



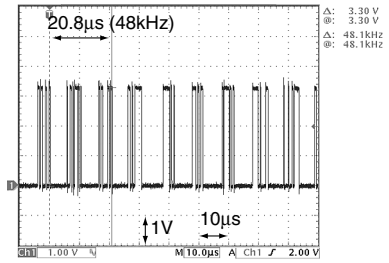
② OPTICAL input



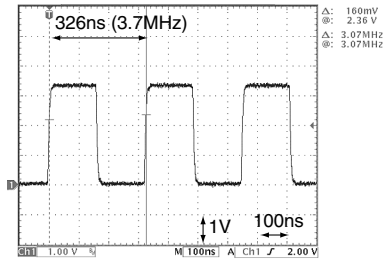
③ OPTICAL output



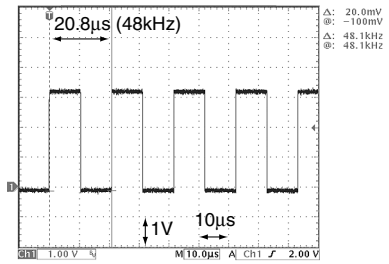
④ Audio data waveform



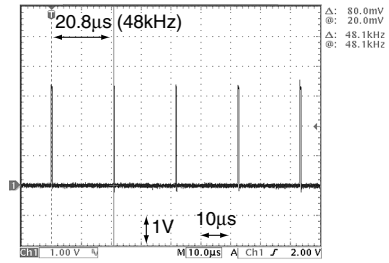
⑤ Bit clock waveform



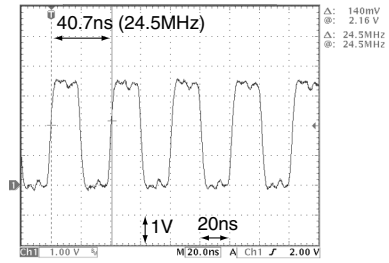
⑥ L/R clock waveform (except 2nd DSP)



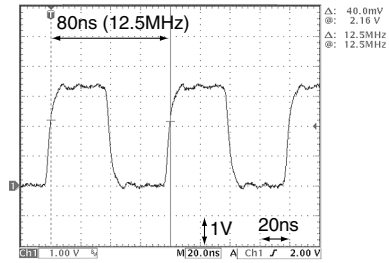
⑦ L/R clock wave form (2nd DSP)



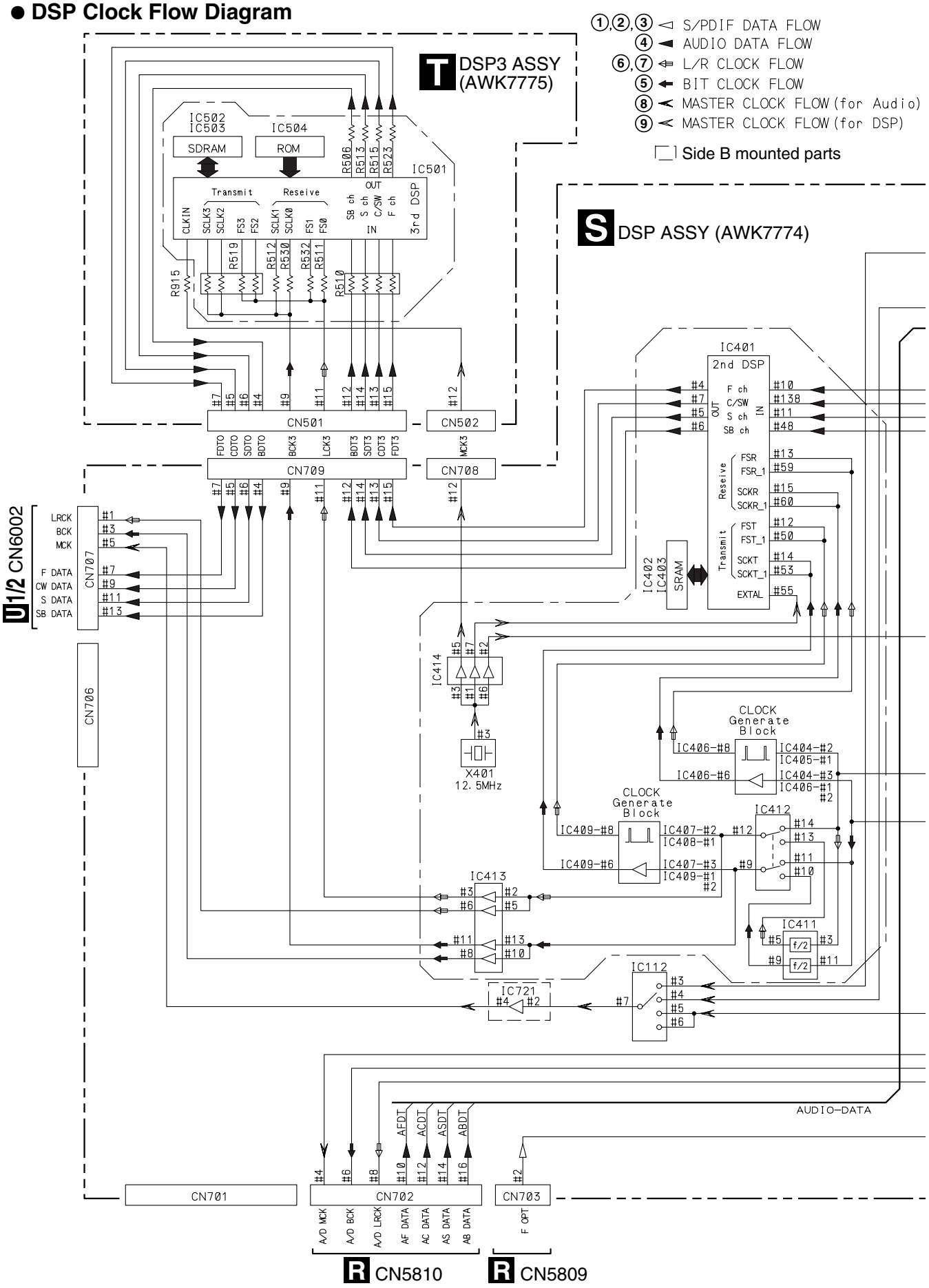
⑧ Master clock waveform (for Audio signal)

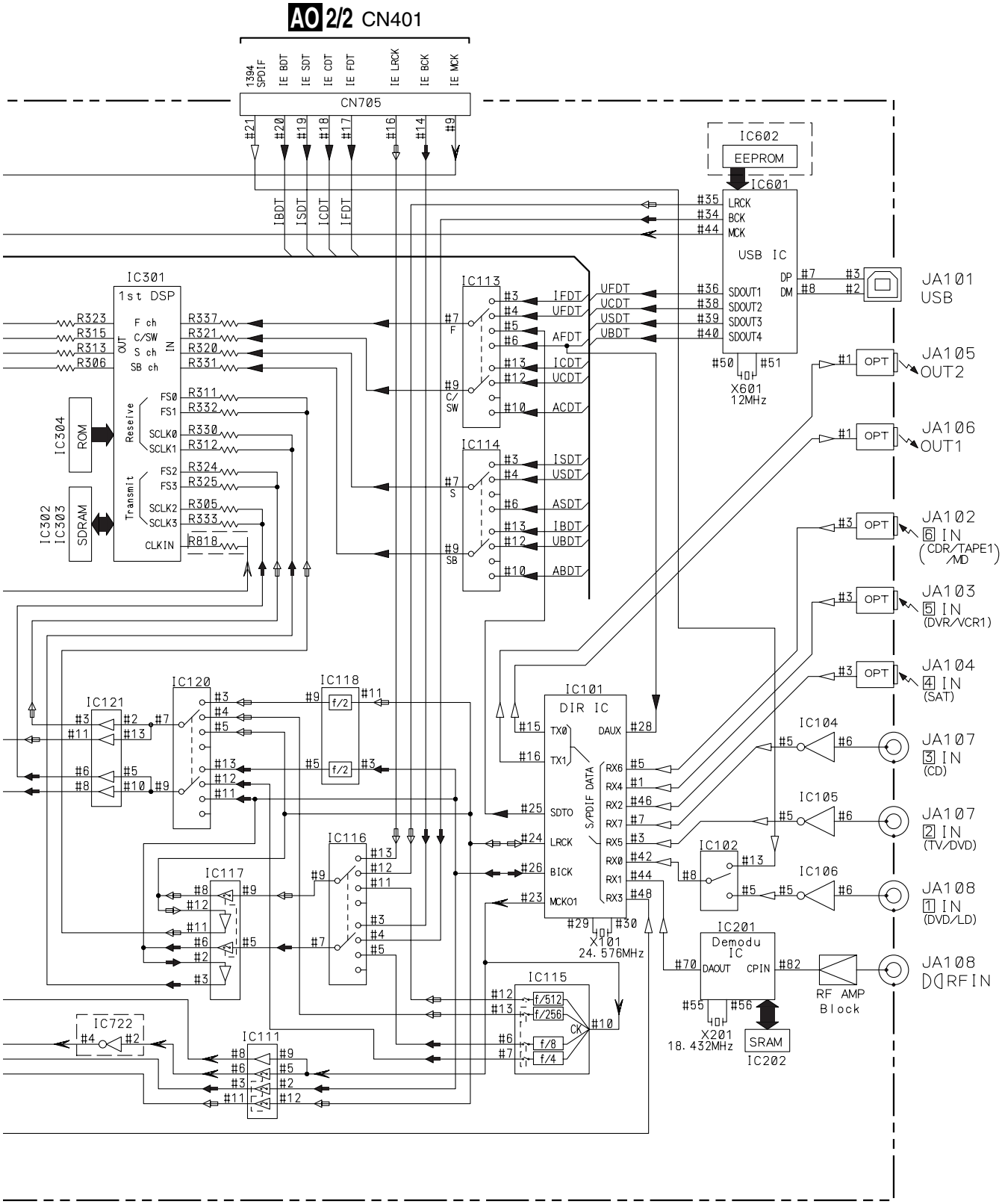


⑨ Master clock waveform (for DSP)

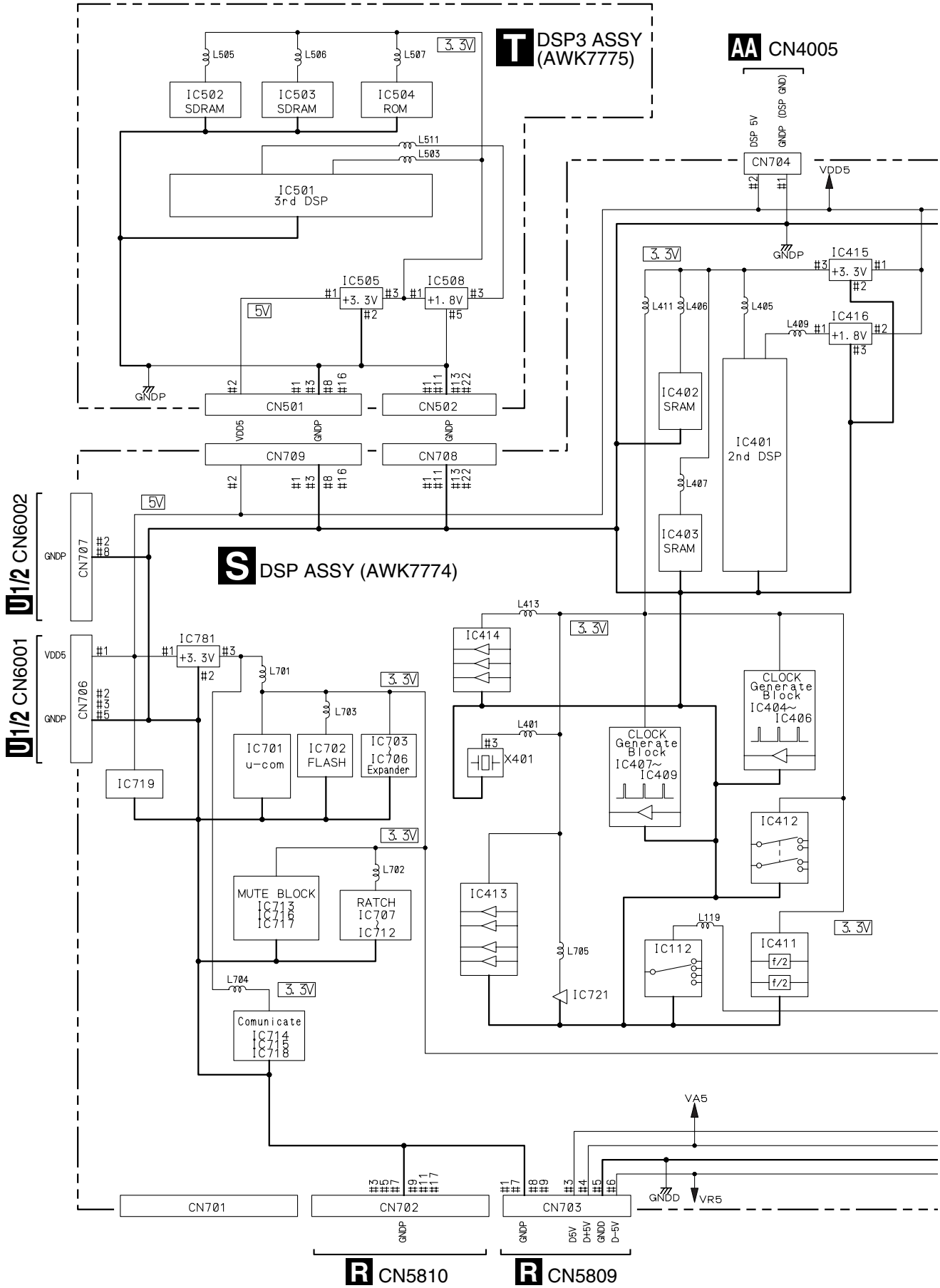


● DSP Clock Flow Diagram




AO 2/2 CN401
1394 SPDIF
IE BDT
IE SDT
IE CDT
IE FDT
IE LRCK
IE BCK
IE MCK
CN705
IBDT
ISDT
ICDT
IFDT
IC602
EEPROM
IC601
LRCK
BCK
MCK
USB IC
SDOUT1
SDOUT2
SDOUT3
SDOUT4
DP
DM
JA101 USB
X601 12MHz
IC301
1st DSP
F ch
C/SW
S ch
SB ch
IC304 ROM
IC302 IC303 SDRAM
Reselve
Transmit
CLKIN
IC113
IC114
IFDT
UFDT
UCDT
USDT
UBDT
AFDT
ICDT
ACDT
ISDT
USDT
ASDT
IBDT
UBDT
ABDT
JA105 OUT2
JA106 OUT1
JA102 6 IN (CDR/TAPE1/MD)
JA103 5 IN (DVR/VCR1)
JA104 4 IN (SAT)
JA107 3 IN (CD)
JA107 2 IN (TV/DVD)
JA108 1 IN (DVD/LD)
JA108 DIGITAL RF IN
OPT
IC120
IC121
IC118
IC116
IC117
IC115
IC111
IC722
f/2
f/512
f/256
f/8
f/4
IC101
DIR IC
TX0
TX1
SDTO
LRCK
BICK
MCKO1
DAUX
S/PDIF DATA
RX6
RX4
RX2
RX7
RX5
RX0
RX1
RX3
X101 24.576MHz
IC102
IC104
IC105
IC106
IC201
Demodu IC
DAOUT
CPIN
X201 18.432MHz
SRAM
IC202
RF AMP Block

● POWER/GND MAP



A

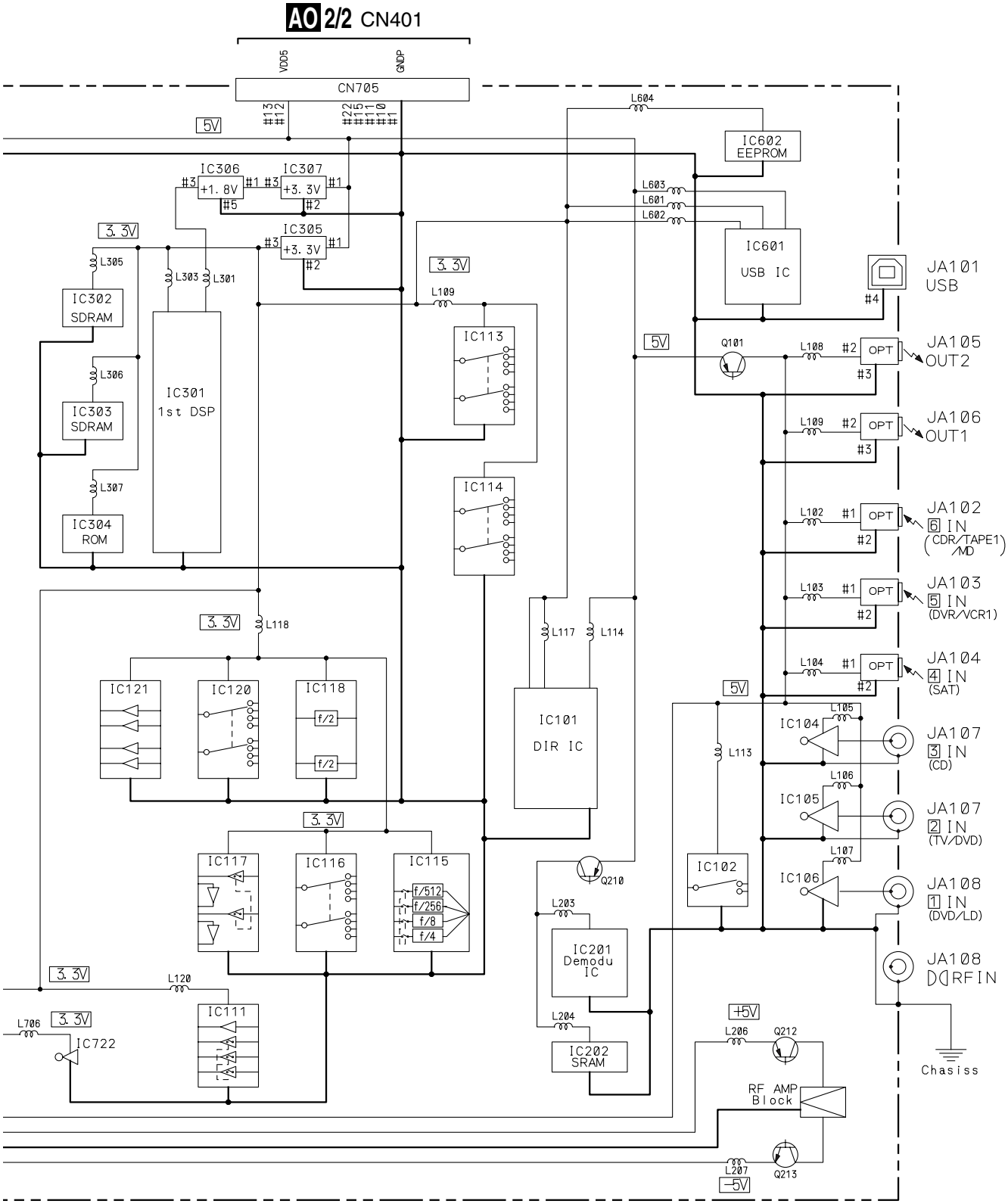
B

C

D

E

F

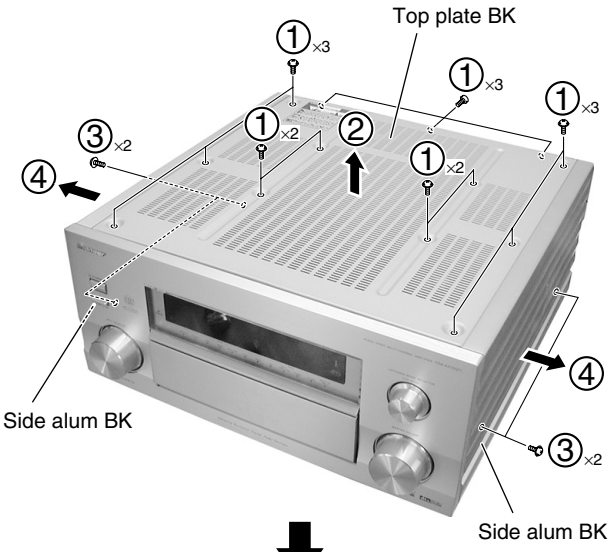

AO 2/2 CN401
VDD5
GNDP
CN705
5V
3.3V
IC306
+1.8V
IC307
+3.3V
IC305
+3.3V
L305
L303
L301
IC302
SDRAM
L306
IC303
SDRAM
L307
IC304
ROM
IC301
1st DSP
L109
IC113
IC114
L118
IC121
IC120
IC118
f/2
f/2
L117
L114
IC101
DIR IC
IC117
IC116
IC115
f/512
f/256
f/8
f/4
L120
IC111
L706
IC722
Q210
L203
IC201
Demodu
IC
L204
IC202
SRAM
IC102
L113
L604
IC602
EEPROM
L603
L601
L602
IC601
USB IC
JA101
USB
Q101
L108
OPT
JA105
OUT2
L109
OPT
JA106
OUT1
L102
OPT
JA102
6 IN
(CDR/TAPE1
/MD
L103
OPT
JA103
5 IN
(DVR/VCR1)
L104
OPT
JA104
4 IN
(SAT)
L105
IC104
JA107
3 IN
(CD)
L106
IC105
JA107
2 IN
(TV/DVD)
L107
IC106
JA108
1 IN
(DVD/LD)
JA108
DIGITAL RF IN
Chasiss
+5V
L206
Q212
RF AMP
Block
L207
Q213
-5V

7.1.7 Disassembly

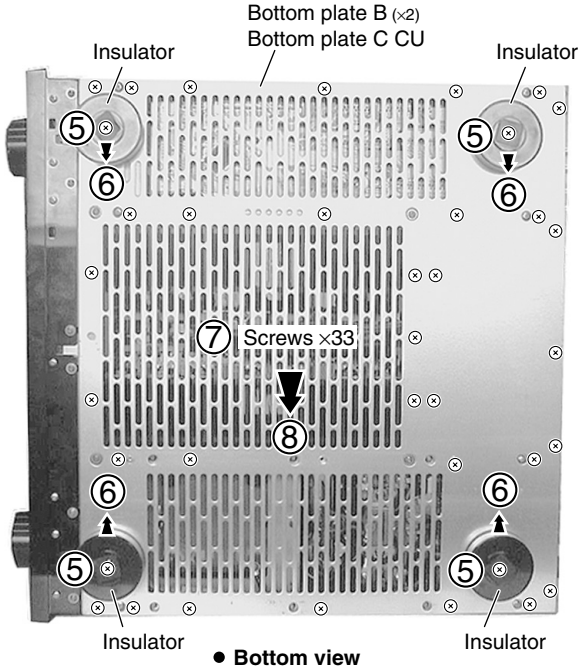
Note :
Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

1 Exterior Section

① Remove the thirteen screws.
② Remove the top plate BK.
③ Remove the four screws.
④ Remove the two side alum BKs.



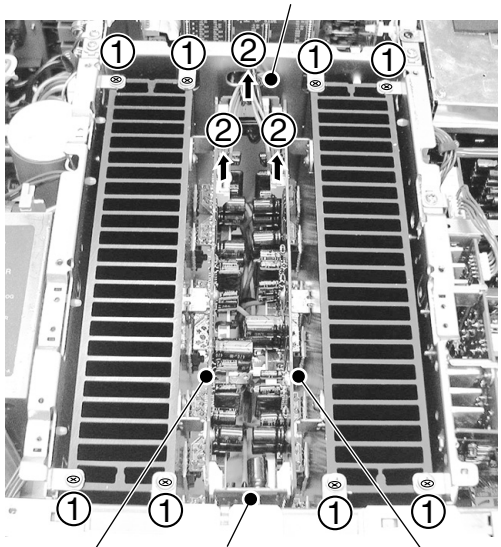
⑤ Remove the four screws.
⑥ Remove the four insulators.
⑦ Remove the thirty three screws.
⑧ Remove the two Bottom Plate Bs and the Bottom Plate C CU.



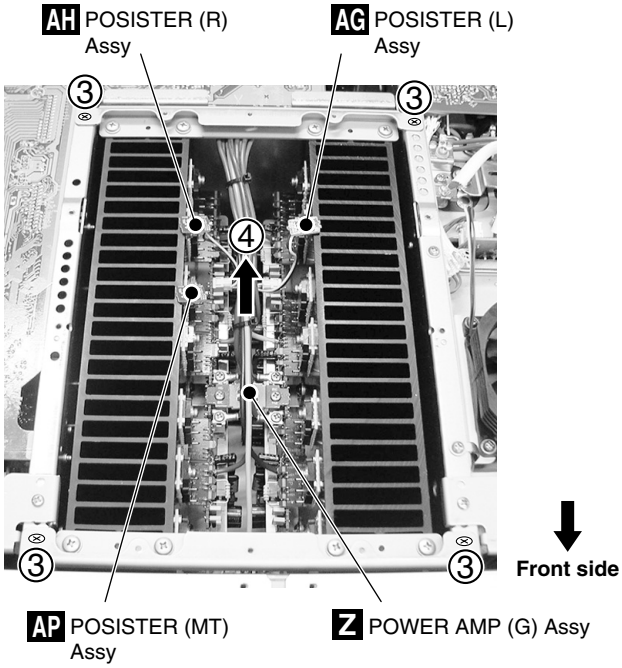
● **Bottom view**

2 Heat Sink Section

① Remove the eight screws.
② Disconnect the three connectors.



③ Remove the four screws.
④ Remove the heat sink section.

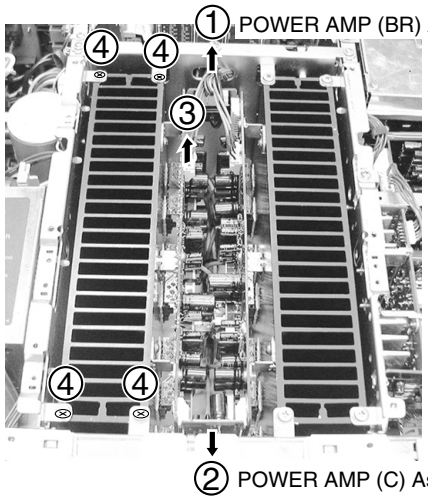


● **Bottom view**

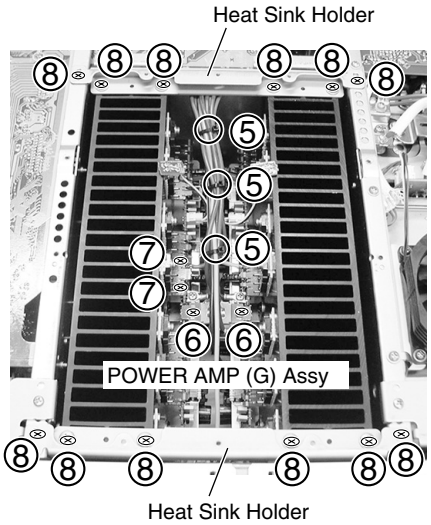
● How to Diagnose the Power Amplifier Blocks One by One (e.g., L channel)

① Remove the POWER AMP (BR) Assy.
② Remove the POWER AMP (C) Assy.
③ Remove the one connector.
④ Remove the four screws.

Note: Be sure not to remove the screws that secure the heat sink for the R channel.

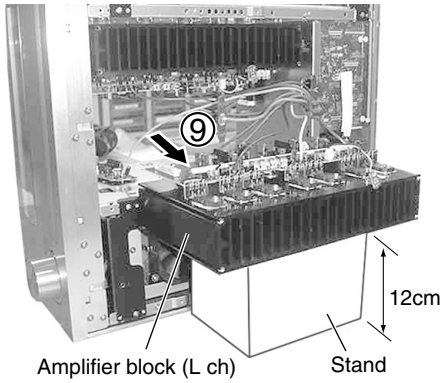


⑤ Remove the three binders.
⑥ Remove the POWER AMP (G) Assy by removing the two screws.
⑦ Remove the two rug terminals by removing the two screws.
⑧ Remove the heat sink holder by removing the twelve screws.

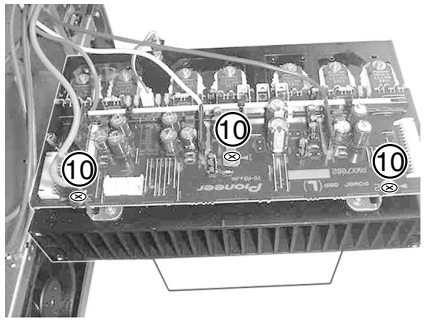


⑨ Pull up the amprifer block.

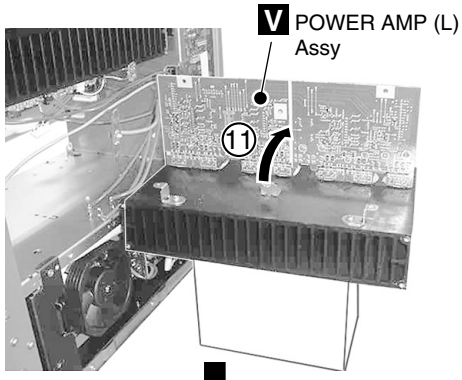
Note: Stand the main unit so that the amplifier block to be pulled out is toward the bottom.
Provide a stand just below the amplifier block with a height of approx. 12 cm.



⑩ Remove the three screws.



⑪ Stand the POWER AMP (L) Assy.

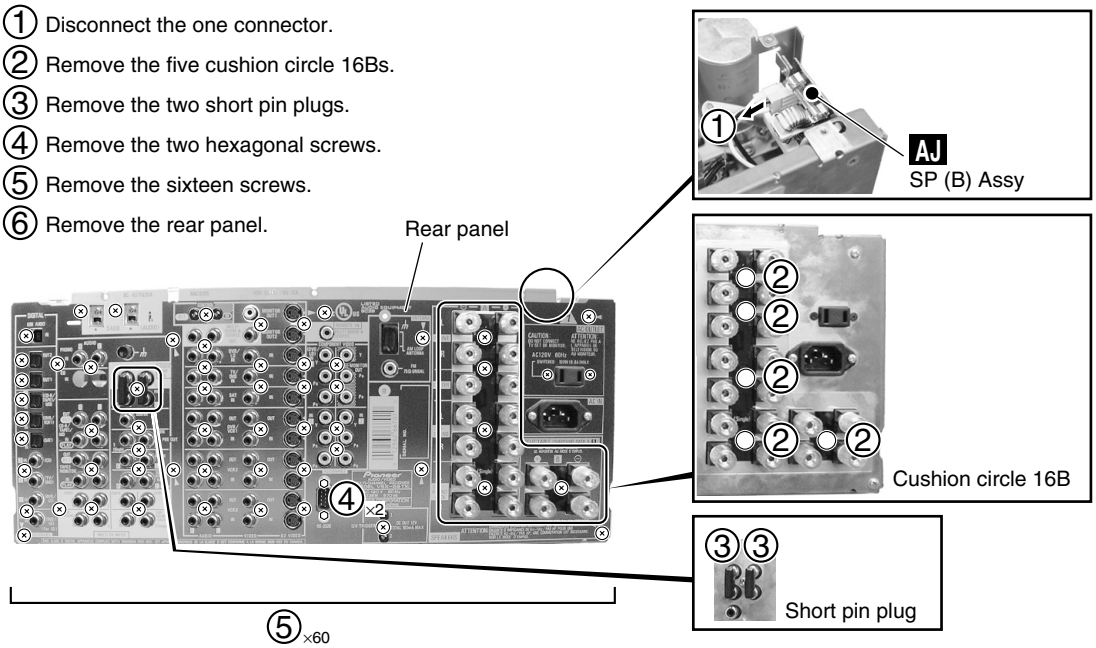


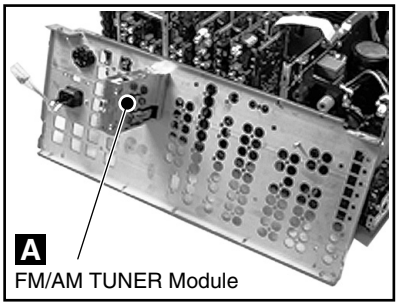
Diagnosis

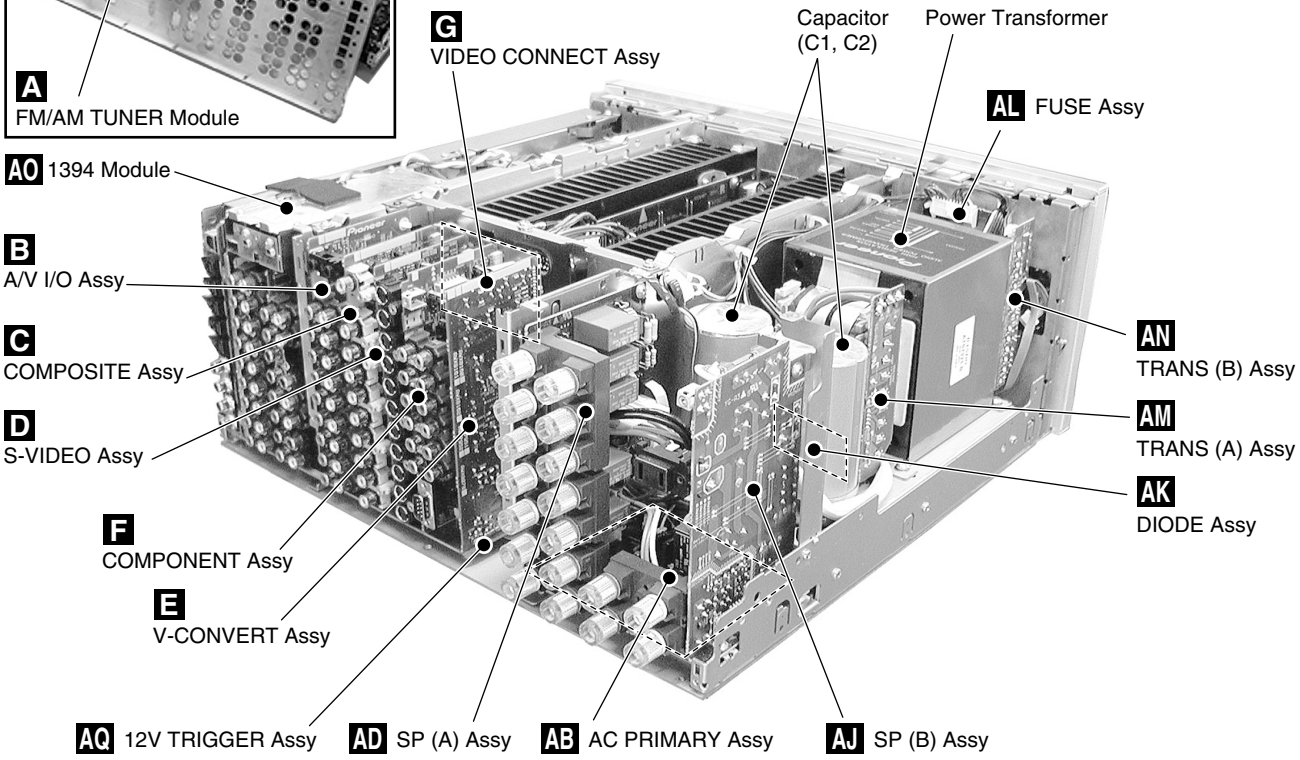
Note: Proceed with diagnosis of the amplifier block for the R channel in the same way.
To reassemble, reverse the procedures above.

3 Rear Panel Section

① Disconnect the one connector.
② Remove the five cushion circle 16Bs.
③ Remove the two short pin plugs.
④ Remove the two hexagonal screws.
⑤ Remove the sixteen screws.
⑥ Remove the rear panel.

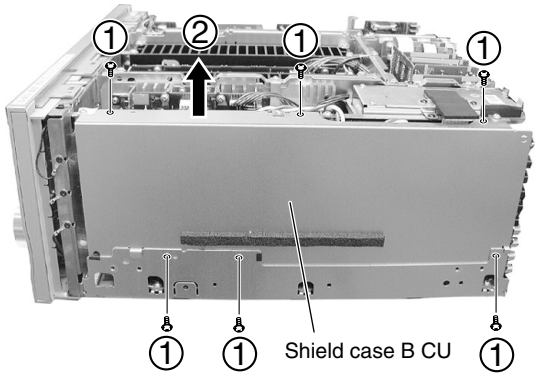




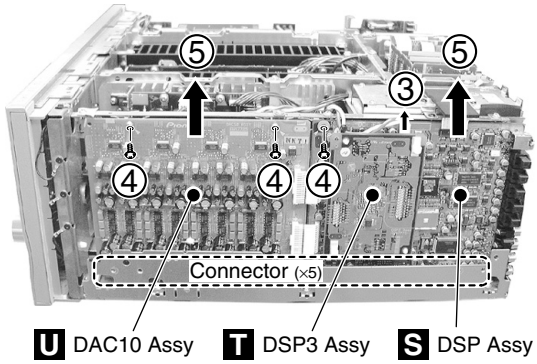


4 DSP and DAC Section

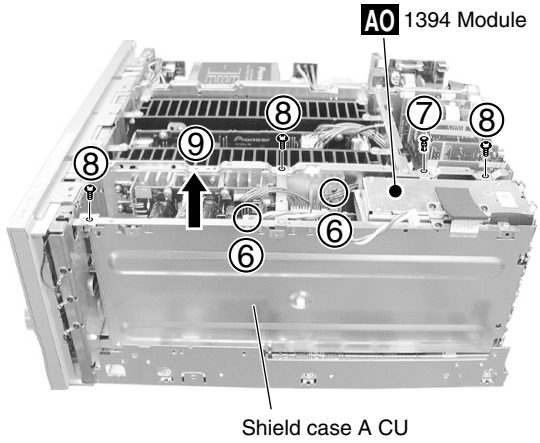
① Remove the six screws.
② Remove the shield case B CU.

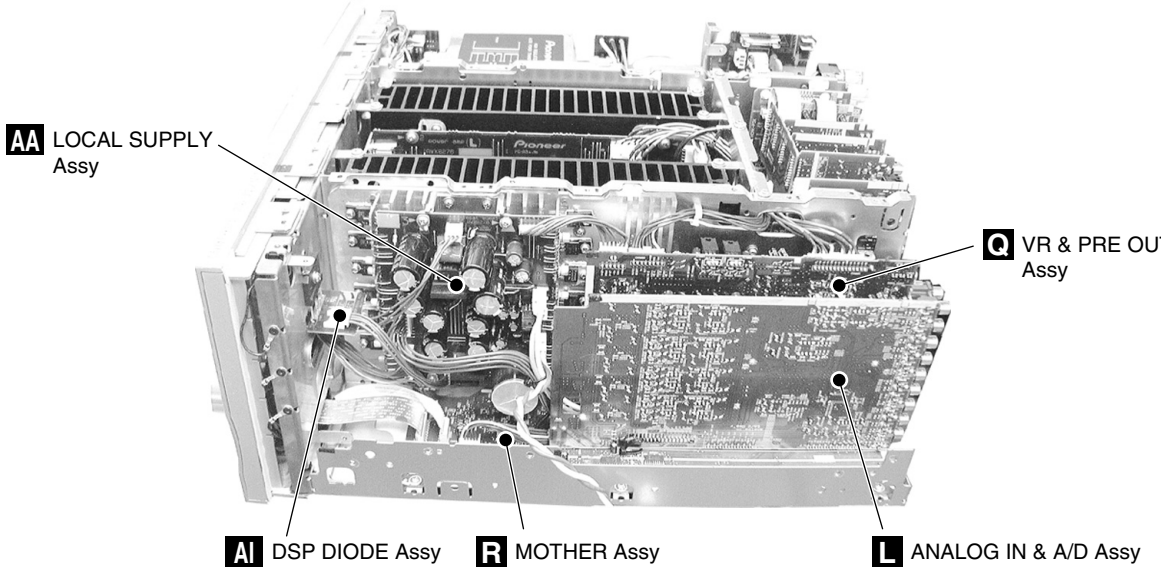


③ Disconnect the one connector.
④ Remove the three screws.
⑤ Remove the DAC10 Assy and the DSP Assys.



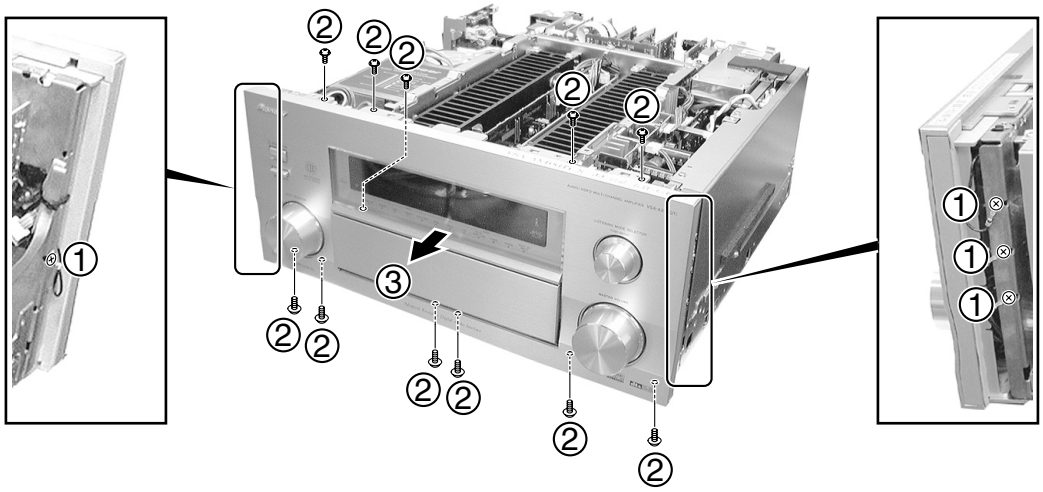
⑥ Remove the two jumper wires.
⑦ Remove the one nyron rivet.
⑧ Remove the three screws.
⑨ Remove the shield case A CU with 1394 Module.

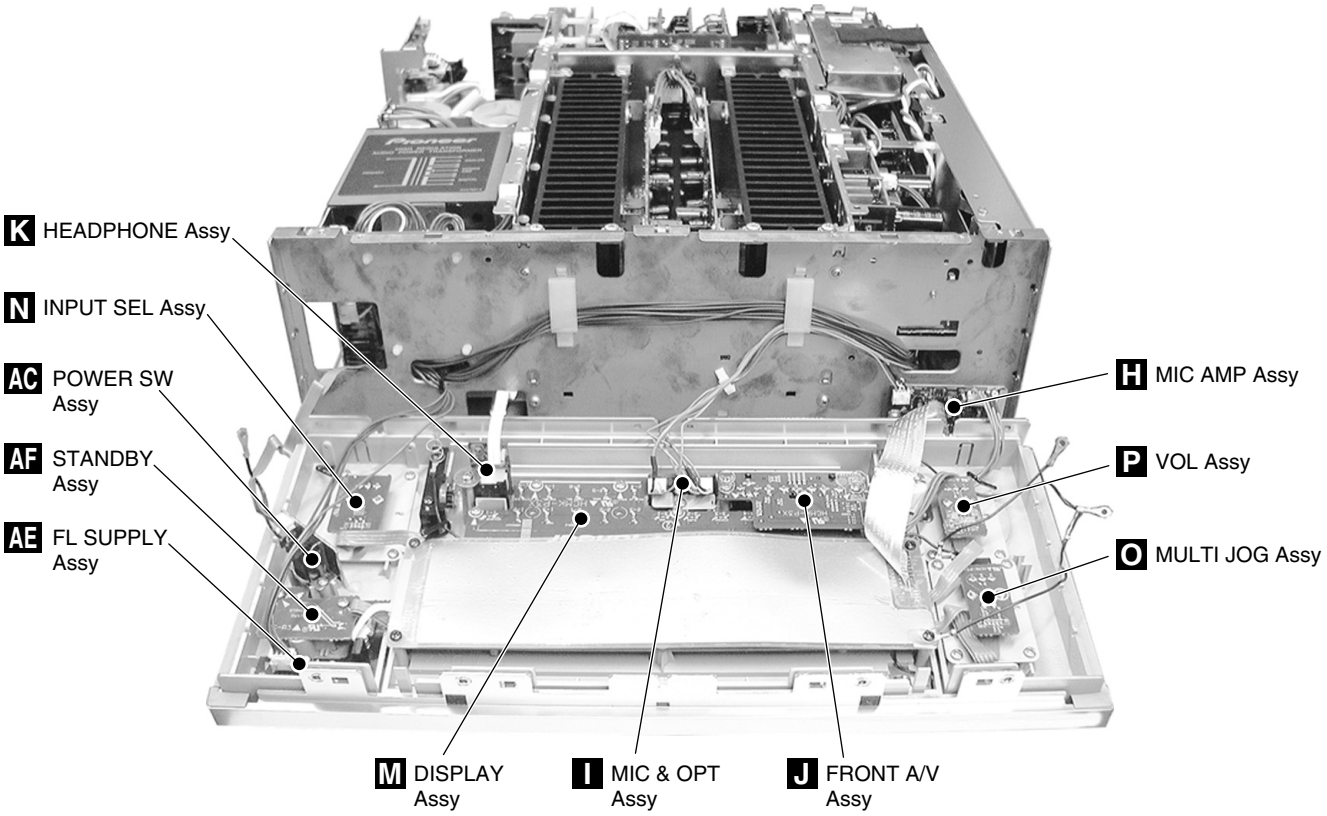




5 Front Panel Section

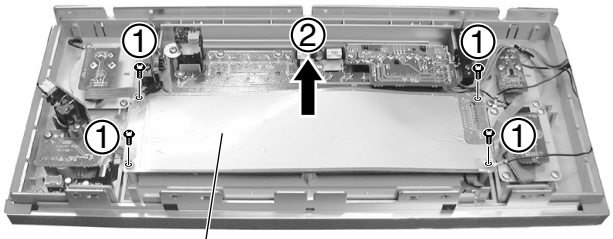
① Remove the four screws.
② Remove the eleven screws.
③ Remove the front panel section.



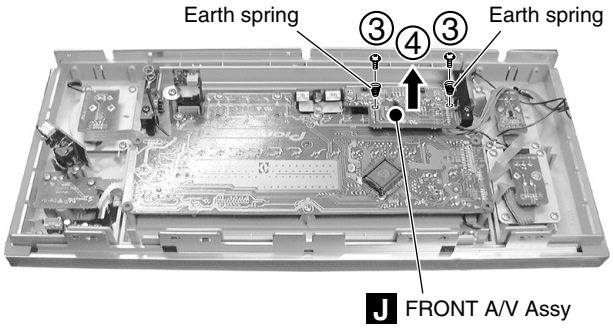


6 Sash

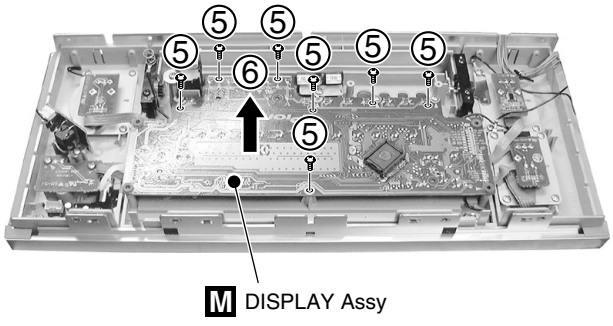
① Remove the four screws.
② Remove the shield plate D.



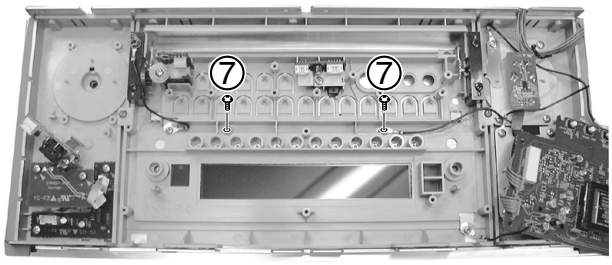
③ Remove the two screws.
④ Remove the FRONT A/V Assy.



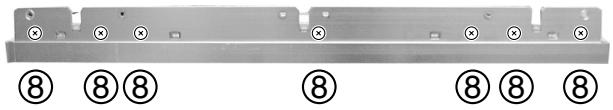
⑤ Remove the seven screws.
⑥ Remove the DISPLAY Assy.



⑦ Remove the two screws.

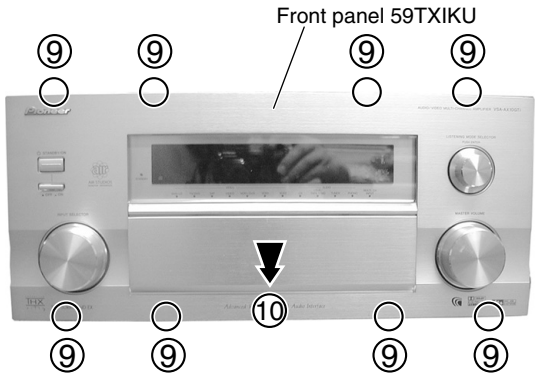


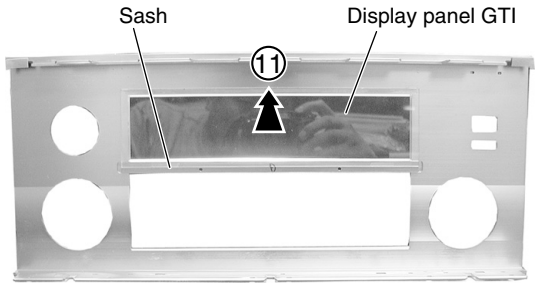
⑧ Remove the seven screws.



● **Bottom view**

⑨ Remove the eight hooks.
⑩ Remove the front panel 59TXIKU.
⑪ Remove the Display Panel GTI and the Sash.





● **Rear view**

7.2 PARTS
7.2.1 IC

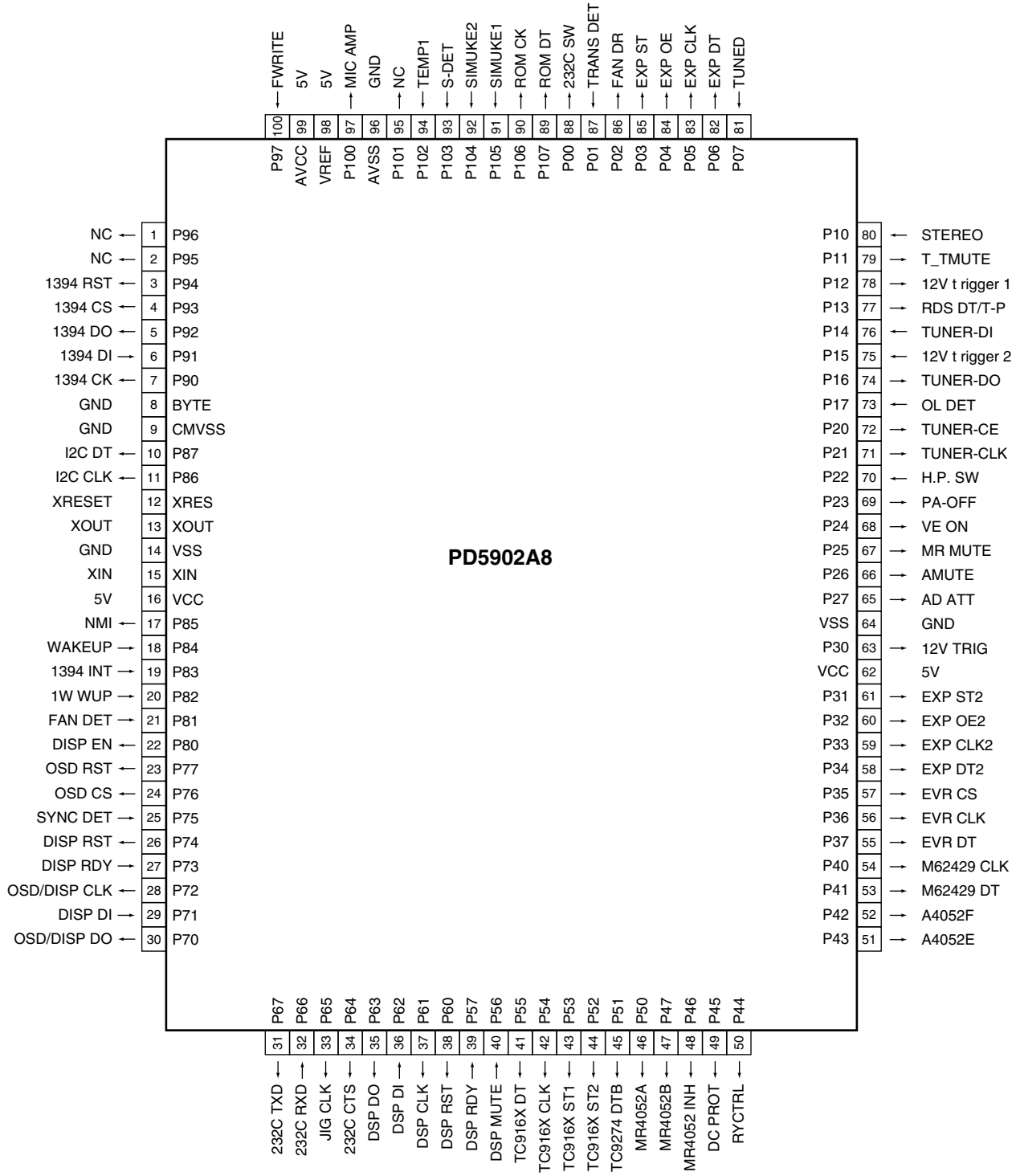
• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

● List of IC
PD5902A8, PD5686C, PD5787A

■ PD5902A8 (MOTHER ASSY : IC5801)

• Main Microcomputer

● Pin Assignment (Top view)



• **Pin Function**

No.	Pin Name	I/O	Pin Function	Active
1	–	O	NC "L" fixed.	
2	–	O	NC "L" fixed.	
3	1394 RST	O	Standby for 1394 (Not used) "L" fixed.	
4	1394 CS	O	Standby for 1394 (Not used) "L" fixed.	
5	1394 DO	O	Standby for 1394 (Not used) "L" fixed.	
6	1394 DI	I	Standby for 1394 (Not used) Standby with the circuit.	
7	1394 CK	O	Standby for 1394 (Not used) "L" fixed.	
8	GND	–	Ground	
9	GND	–	Ground	
10	I2C DT	I/O	Data signal for video converter IC control I2C bus system	
11	I2C CLK	O	Clock signal for video converter IC control I2C bus system	
12	XRESET	–	Reset	
13	XOUT	–	Oscillator	
14	GND	–	Ground	
15	XIN	–	Oscillator	
16	5V	–	5V power supply	
17	NMI	I	Cannot use it as usual input port (100kΩ pullup)	
18	WAKEUP	I	Wakeup	H
19	1394 INT	I	Standby for 1394 (Not used) Standby with the circuit.	
20	1W WUP	I	Wakeup signal at standby (from the display microcomputer) (pulldown)	H
21	FAN DET	I	Fix to "L" with the hardware.	
22	DISP EN	O	Communication enabling signal to the display microcomputer	H
23	OSD RST	O	OSD-IC reset signal L: reset, H: release reset	
24	OSD CS	O	OSD-IC chip select signal	H
25	SYNC DET	I	Internal/external sync detection (Switch the internal/external sync of OSD-IC.)	L: EXT
26	DISP RST	O	Display microcomputer reset signal L: reset, H: release reset (pulldown)	
27	DISP RDY	I	Communication enabling signal from the display microcomputer	H
28	OSD/DISP CLK	O	Communication clock signal with the OSD-IC/display microcomputer	
29	DISP DI	I	Communication data in signal with the display microcomputer (N ch open drain: pullup)	
30	OSD/DISP DO	O	Communication data out signal with the OSD-IC/display microcomputer (N ch open drain: pullup)	
31	232C TXD	O	For 232C rewriting (data output)	
32	232C RXD	I	For 232C rewriting (data input)	
33	CLK	O	Not used	
34	232C CTS	O	For 232C rewriting (communication enabling)	
35	DSP DO	O	Communication data out signal with the DSP microcomputer	
36	DSP DI	I	Communication data in signal with the DSP microcomputer	
37	DSP CLK	O	Communication clock signal with the DSP microcomputer	
38	DSP RST	O	DSP microcomputer reset signal L: reset, H: release reset	
39	DSP RDY	I	Communication enabling signal from the DSP microcomputer	H
40	DSP MUTE	I	Mute request signal from the DSP microcomputer H: Mute request	H
41	TC916X DT	O	Function SW control data	
42	TC916X CLK	O	Function SW control clock	
43	TC916X ST1	O	Main audio switching control strobe of TC9162 and TC9163. Multi audio switching control strobe of TC9164	
44	TC9163 STX	O	Multi/2ch signal switch	
45	TC9274 STB	O	DIRECT/DSP switching control strobe	
46	MR4052A	O	Switching control signal 1 of multi room audio system	
47	MR4052B	O	Switching control signal 2 of multi room audio system	
48	MR4052INH	O	Switching control signal 3 of multi room audio system H: output OFF	
49	DC PROT	I	DC detection H: detection	H
50	RYCTRL	O	SP relay ON/OFF	H

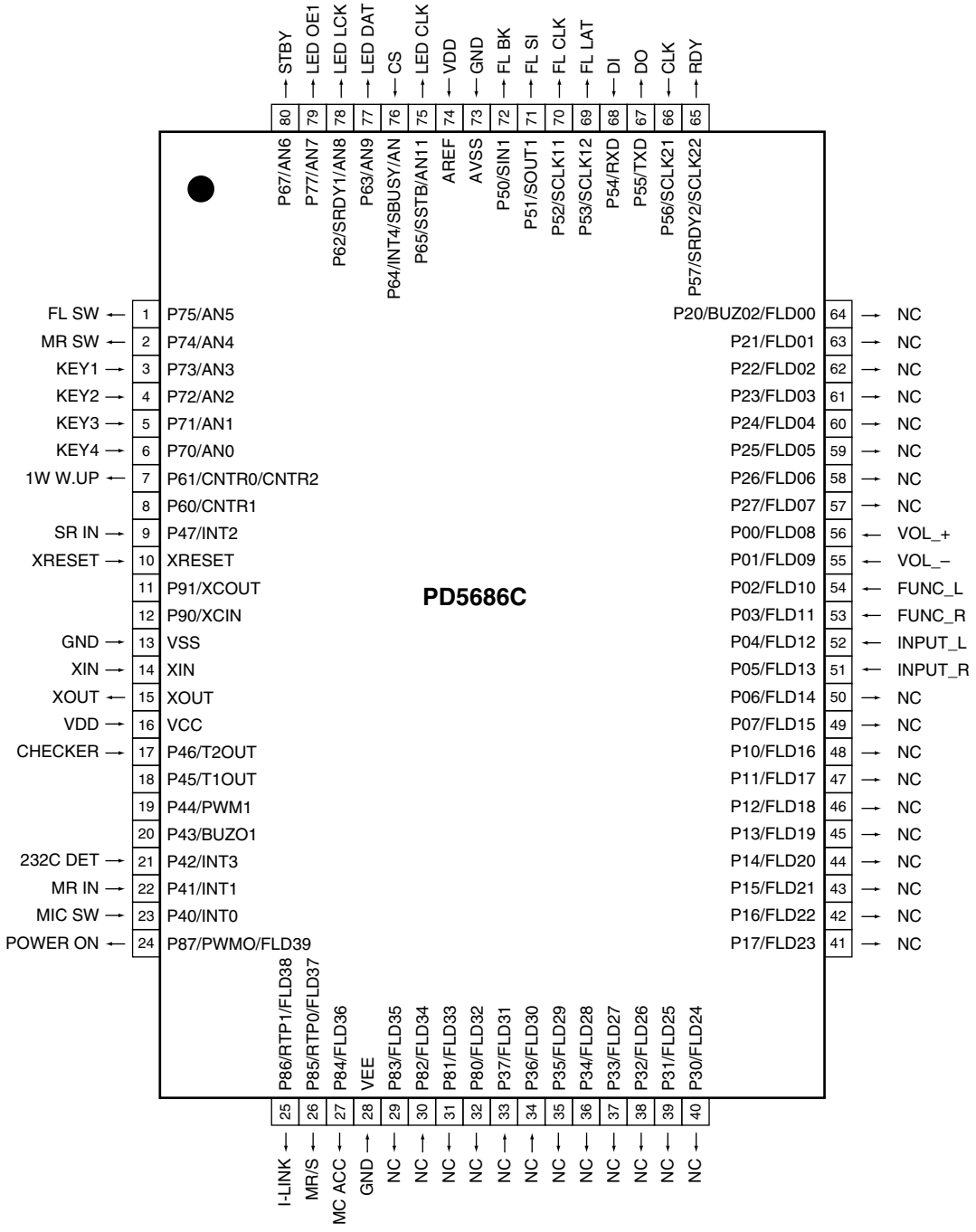
• Pin Function

No.	Pin Name	I/O	Pin Function	Active
51	A4052E	O	Output switching control signal 1 of surround back ch	
52	A4052F	O	Output switching control signal 2 of surround back ch	
53	M62429 DT	O	Data signal for multi room volume IC control	
54	M62429 CLK	O	Clock signal for multi room volume IC control	
55	EVR DT	O	Data signal for erectronic volume	
56	EVR CLK	O	Clock signal for erectronic volume	
57	EVR CS	O	Chip select signal for erectronic volume	
58	EXP DT2	O	Data signal for expansion IC control	
59	EXP CLK2	O	Clock signal for expansion IC control	
60	EXP OE2	O	Output enable signal for expansion IC control	
61	EXP ST2	O	Chip clock signal for expansion IC control	
62	5V	–	5V power supply	
63	NC	O	NC "L" fixed.	
64	GND	–	Ground	
65	AD ATT	O	Atteneuator	H
66	AMUTE	O	System mute L: Mute ON	L
67	MRMUTE	O	Multi room mute L: Mute ON	L
68	VE ON	O	Video system power supply switch At Power ON of video system: L	L
69	NECK	O	4/6Ω switch 4Ω: H , 6Ω: L , Initial value: 6Ω	
70	H.P. SW	I	Headphone detection H: Detection	H
71	TUNER CLK	O	Clock signal of tuner control	
72	TUNER CE	O	Chip select signal of tuner control	
73	OL DET	I	Amp. overload detection H: Detection	H
74	TUNER DO	O	Data output signal of tuner control	
75	RDS CLK	O	"L" fixed	
76	TUNER DI	I	Data input signal of tuner control (pullup)	
77	T-POWER	O	Power ON/OFF of tuner module	H
78	NC	O	NC	
79	T-TMUTE	O	Tuner mute	H
80	STEREO	I	L: STEREO (pullup)	L
81	TUNED	I	L: TUNED (pullup)	L
82	EXP DT	O	Data signal of expansion IC control	
83	EXP CLK	O	Clock signal of expansion IC control	
84	EXP OE	O	Output enable signal of expansion IC control	
85	EXP ST	O	Chip clock signal of expansion IC control	
86	FAN DR	O	"L" fixed	
87	TRANS DET	I	"H" fixed by hardware	
88	232CSW	I/O	232C switch L: Main unit, H: DSP microcomputer	
89	ROM DT	I/O	EEPROM control data signal	
90	ROM CK	O	EEPROM control clock signal	
91	SIMUKE1	I	Destination read 1	
92	SIMUKE2	I	Destination read 2	
93	S-DET	I	Sync detection H: S signal present "H" for sync detection	H
94	TEMP1	I	Temperature detection H: Protection function ON	H
95	NC	O	"L" fixed	
96	AVSS	–	Connect to VSS	
97	MIC-SW	O	5-3V conversion IC control H: MIC AMP ON	H
98	VREF	–	Connect to VCC	
99	AVCC	–	Connect to VCC	
100	FWRITE	I	Forced rewriting mode detection (H: Rewriting mode)	H

■ PD5686C (DISPLAY ASSY : IC3001)

- **Display Microcomputer**

- **Pin Assignment (Top view)**



• Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	FL SW	O	FL power supply ON/OFF	41	NC	O/L	Non connection
2	MR SW	O	MR PIONEER / OTHER	42	NC		
3	KEY1	I	KEY AD input	43	NC		
4	KEY2			44	NC		
5	KEY3			45	NC		
6	KEY4			46	NC		
7	1W W.UP	O	1W correspondence main wakeup	47	NC		
8	NC	O/L		48	NC		
9	SR IN	I	Remote control input of main room	49	NC		
10	RESET	–	Reset	50	NC		
11	NC	O/L	Non connection	51	NC		
12	NC			52	INPUT_R	I	Input SEL L
13	GND	–	Ground	53	INPUT_L	I	Input SEL R
14	XIN	–	Oscillator	54	FUNC_R	I	Multi JOG R
15	XOUT	–	Oscillator	55	FUNC_L	I	Multi JOG L
16	VDD	–	Power supply	56	VOL_–	I	VOL_–
17	CHECKER	I	Checker mode detection	57	VOL_+	I	VOL_+
18	NC	O/L	Non connection	58	NC	O/L	Non connection
19	NC			59	NC		
20	NC			60	NC		
21	232C DET	I	232C detection	61	NC		
22	MR IN	I	Remote control input of sub room	62	NC		
23	MIC SW	I	MIC detection	63	NC		
24	POWER ON	O	Power ON LED	64	NC		
25	I-LINK	O	I-LINK LED	65	RDY	O	Main communication RDY
26	MR/S	O	MR/S LED	66	CLK	I	Main communication CLK
27	MC ACC	O	Sound field	67	DO	O	Main communication data out
28	GND	–	Ground	68	DI	I	Main communication data in
29	NC	O/L	Non connection	69	FL_LAT	O	FL DRV LAT
30	NC			70	FL_CLK	O	FL DRV CLK
31	NC			71	FL_SI	O	FL DRV SI
32	NC			72	FL_BK	O	FL DRV BK
33	NC			73	GND	–	Ground
34	NC			74	VDD	–	Power supply
35	NC			75	LED_CLK	O	LED DRV CLK
36	NC			76	CS	O	Main communication CS
37	NC			77	LED_DAT	O	LED DRV DATA
38	NC			78	LED_LCK	O	LED DRV LCK
39	NC			79	LED_OE1	O	LED DRV OE
40	NC			80	STBY	O	STBY LED

PD5787A (DSP ASSY : IC701)

• DSP Microcomputer

• Pin Function

No.	Pin Name	I/O	Pin Function
1	DSP2MOSI	O	2nd DSP communication data output
2	DSP2SCK	O	2nd DSP communication clock output
3	DSP2SSI	O	2nd DSP communication strobe
4	DSP2RST	O	2nd DSP reset
5	HDO	O	Data output of microcomputer communication to main microcomputer
6	HDI	I	Data input of microcomputer communication from main microcomputer
7	HCLK	I	Clock input of microcomputer communication from main microcomputer
8	BYTE	I	Vcc (bus width 8 bit)
9	CNVSS	I	Vss (Use with memory expansion mode)
10	MODEL	I	Upper/lower model distinction input
11	FWRITE	I	FLASH rewrite control input
12	RESET	I	Reset input from main microcomputer
13	XOUT	O	Connect a ceramic resonator (7.7MHz)
14	VSS	–	Vss
15	XIN	I	Connect a ceramic resonator (7.7MHz)
16	VCC	–	Vcc
17	NMI	I	Vcc
18	96DTS	I	DTS 96kHz detection input
19	UNLK	I	UNLOCK signal input
20	DATA	I	DIR various factor data
21	DLCK	I	Demodulator UNLOCK
22	EXOE	O	OE output of expansion IC
23	S DATA	O	Data output of expansion IC
24	S CLOCK	O	Clock output of expansion IC
25	STB	O	Strobe output of expansion IC
26	DSP1RST	O	1st DSP reset
27	9624	O	DSP IC mute output (at DTS 96kHz)
28	DACMCLK	O	DAC/D.F. clock output
29	DSCMDI	I	DAC data input
30	DACMDO	O	DAC/D.F. data output
31	DSP1REQ	O	1st DSP communication request
32	DSP1RDWR	O	1st DSP READ/WRITE switch
33	DSP1BUSY	I	1st DSP BUSY communication wait
34	DSP1ACK	I	1st DSP communication completion check
35	CDTO	O	DIR serial communication data output / TxD (rewrite)
36	CDTI	I	DIR serial communication data input / RxD (rewrite)
37	CCLK	O	DIR serial communication output
38	CSN	O	DIR serial communication chip select / RTS (rewrite)
39	XRDY	I	Vcc
40	ALE	O	NC
41	XHOLD	I	Vcc
42	XHLDA	O	NC
43	BCLK	O	NC
44	XOE	O	Flash memory I/F read enable
45	XBHE	O	NC
46	XWE	O	Flash memory I/F write enable
47	MD	O	Gain amp data output
48	MC	O	Gain amp clock output
49	STB	O	Gain amp strobe output
50	XCE	O	Flash ROM CE control

• **Pin Function**

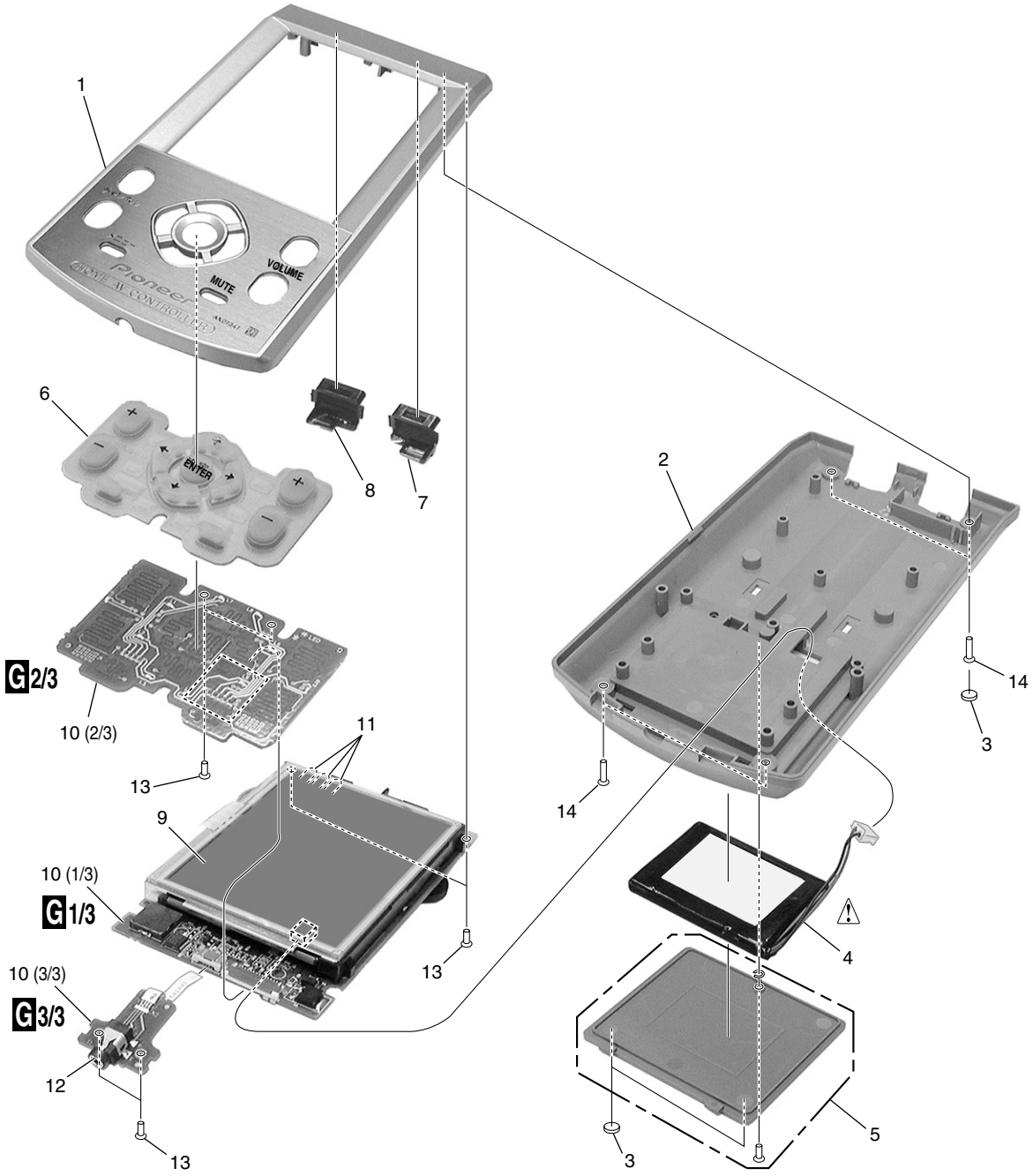
No.	Pin Name	I/O	Pin Function
51	A19	O	NC
52	A18	O	Address output of flash memory communication
53	A17		
54	A16		
55	A15		
56	A14		
57	A13		
58	A12		
59	A11		
60	A10		
61	A9		
62	Vcc	–	Vcc
63	A8	O	Address output of flash memory communication
64	Vss	–	Vss
65	A7	O	Address output of flash memory communication
66	A6		
67	A5		
68	A4		
69	A3		
70	A2		
71	A1		
72	A0		
73	XRST2	O	ADC reset output
74	DSPMUTE	O	Mute (Notify to the main microcomputer)
75	HRDY	O	Communication permission to the main microcomputer
76	DSP3REQ	O	3rd DSP communication request
77	DSP3RDWR	O	3rd DSP READ / WRITE switch
78	DSP3BUSY	I	3rd DSP BUSY communication wait
79	DSP3ACK	I	3rd DSP communication complete check
80	DSP3RST	O	3rd DSP reset
81	DQ7	I/O	Data input/output of flash memory communication
82	DQ6		
83	DQ5		
84	DQ4		
85	DQ3		
86	DQ2		
87	DQ1		
88	DQ0		
89	DSPDATA7	I/O	1st/3rd DSP data bit 7 (sharing port)
90	DSPDATA6		1st/3rd DSP data bit 6 (sharing port)
91	DSPDATA5		1st/3rd DSP data bit 5 (sharing port)
92	DSPDATA4		1st/3rd DSP data bit 4 (sharing port)
93	DSPDATA3		1st/3rd DSP data bit 3 (sharing port)
94	DSPDATA2		1st/3rd DSP data bit 2 (sharing port)
95	DSPDATA1		1st/3rd DSP data bit 1 (sharing port)
96	AVss	–	Vss
97	DSPDATA0	I/O	1st/3rd DSP data bit 0 (sharing port)
98	Vref	–	Vcc
99	AVcc	–	Vcc
100	DSP2MISO	I	2nd DSP communication data input

7.3 REMOTE CONTROL UNIT

7.3.1 EXPLODED VIEWS and PARTS LIST

■ AXD7377 (Remote control unit)

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.*
- *Screws adjacent to ▼ mark on the product are used for disassembly.*



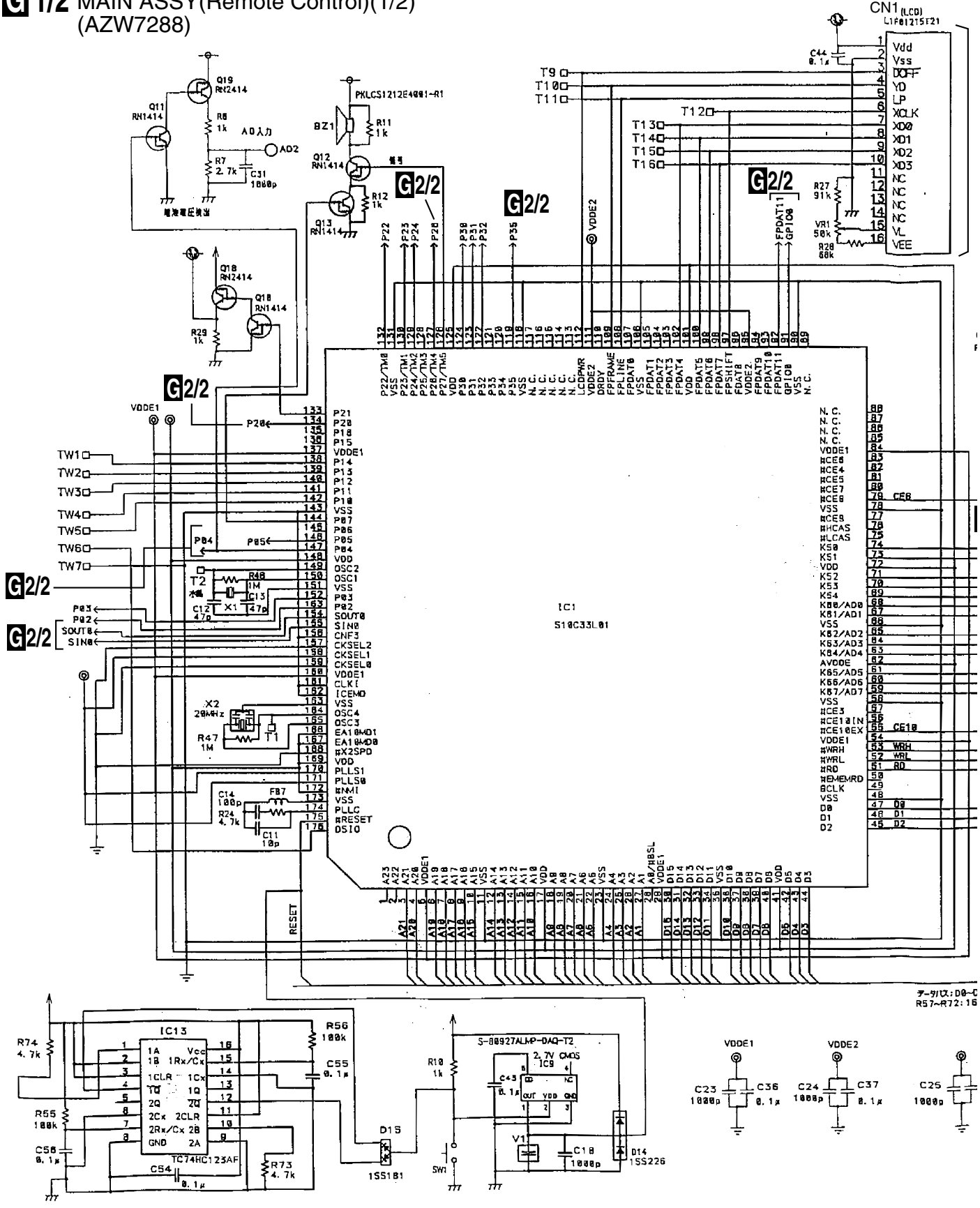
• parts List

Mark	No.	Description	Part No.
	1	Case A	AZN7985
	2	Case B	AZN7989
	3	Cushion	AZN7927
⚠	4	Lithium Battery	AZW7264
	5	Battery Cover	AZN7991
	6	Rubber Button	AZN7979
	7	Radiation Filter R	AZN7931
	8	Radiation Filter L	AZN7930

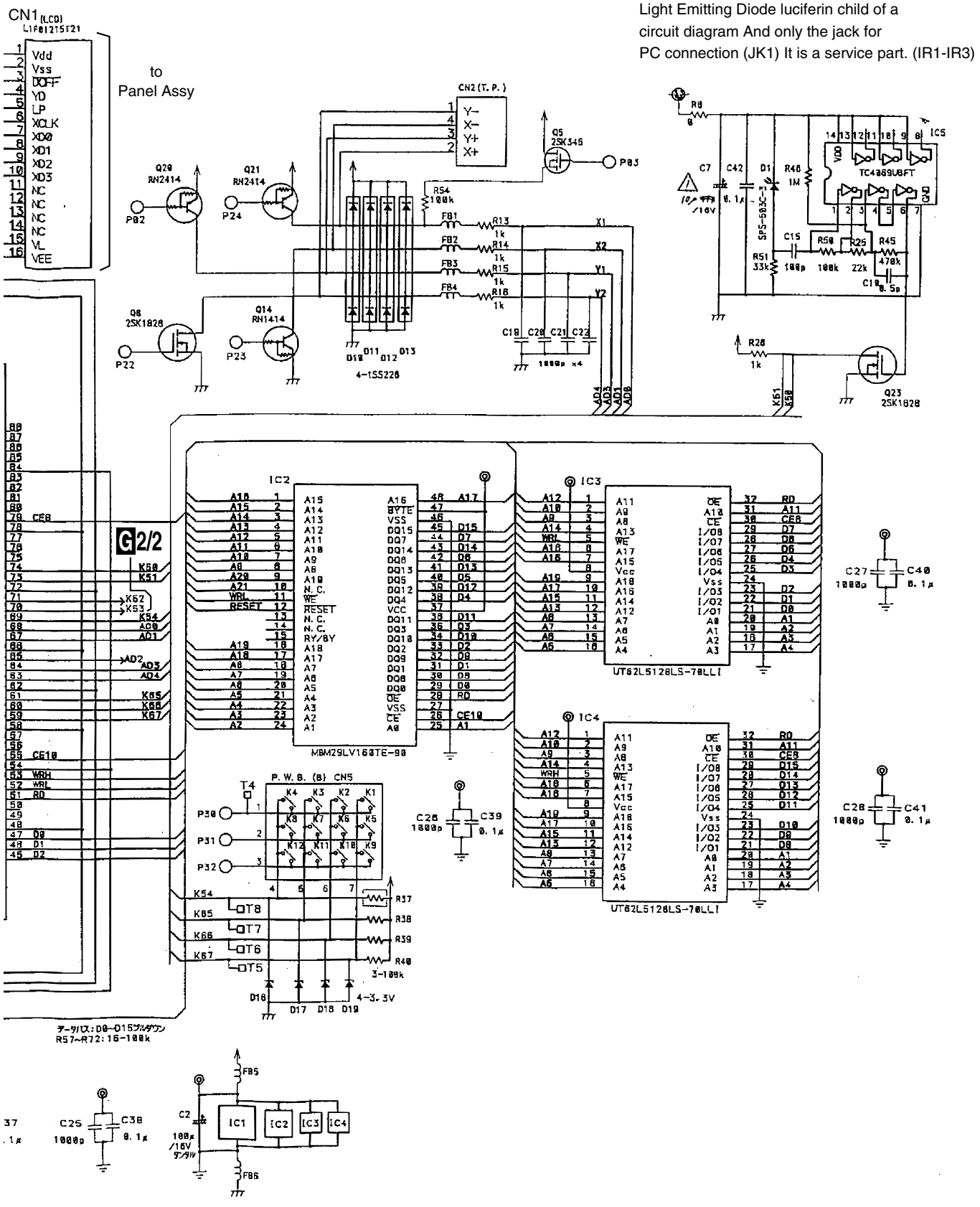
Mark	No.	Description	Part No.
	9	Touch Panel Assy	AZW7287
	10	MAIN ASSY (Remote)	AZW7288
	11	LED Radiation	AZC7303
	12	1P Mini Jack	AZK7251
	13	ZN Screw (M2x5)	AZB7146
	14	NI Screw (M2x8)	AZB7147
	15	•••••	

7.3.2 Remote SCH

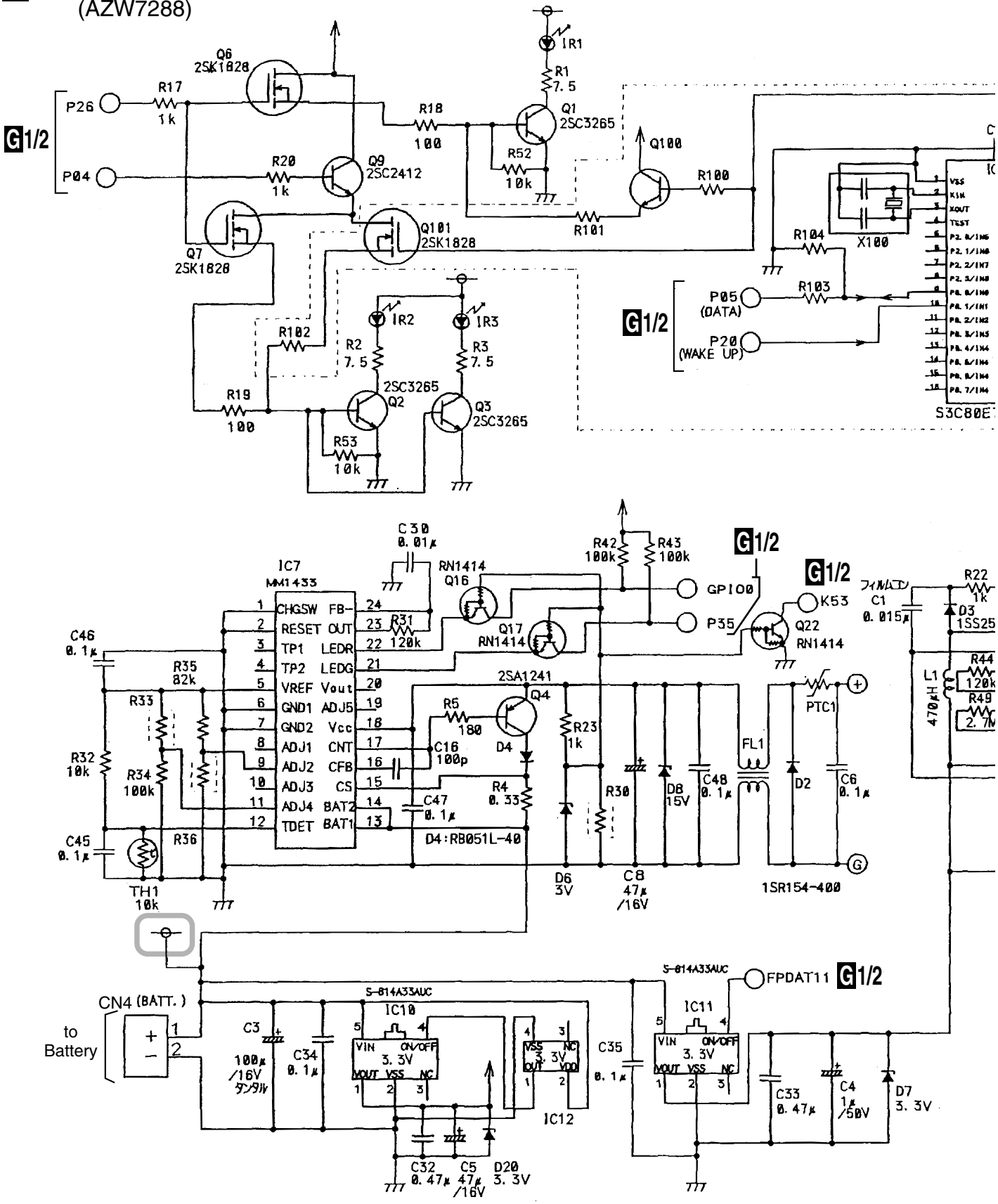
G1/2 MAIN ASSY(Remote Control)(1/2)
(AZW7288)

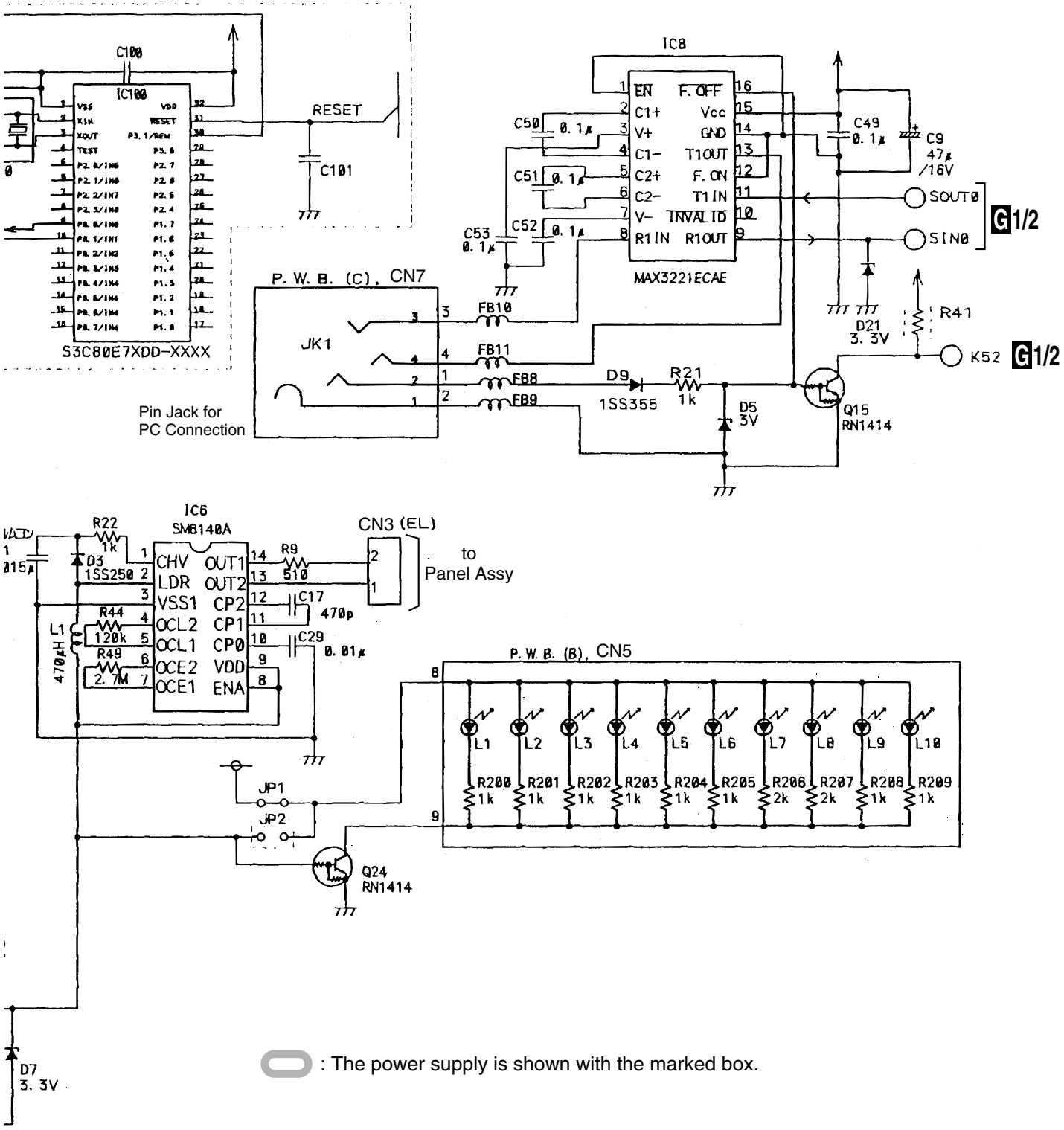


NOTE : remote control main board is substrate exchange correspondence. (2/2)
Light Emitting Diode luciferin child of a circuit diagram And only the jack for PC connection (JK1) It is a service part. (IR1-IR3)



G 2/2 MAIN ASSY(Remote Control)(2/2) (AZW7288)

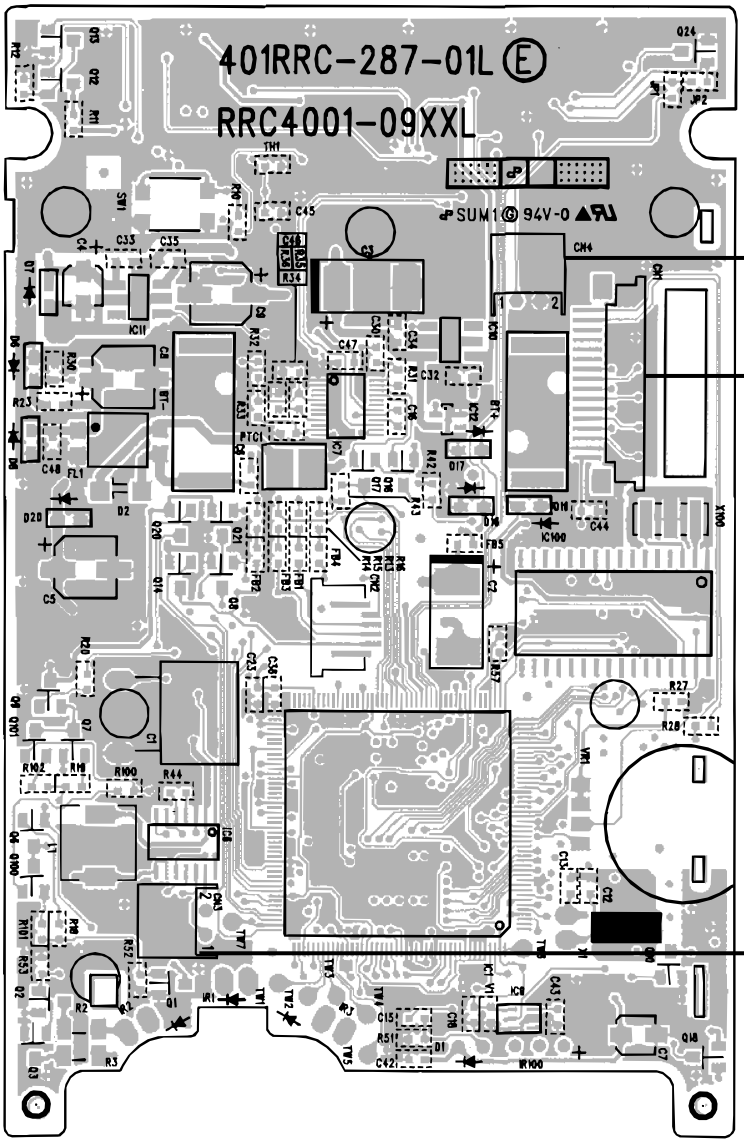


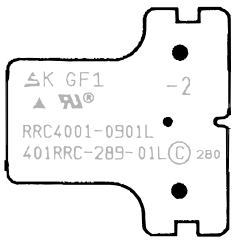

C100
IC100
S3C80E7XDD-XXXX
RESET
C101
IC8
MAX3221ECAE
C50 0.1µ
C51 0.1µ
C52 0.1µ
C53 0.1µ
C49 0.1µ
C9 47µ /16V
SOUT0
SIN0
G1/2
P. W. B. (C), CN7
JK1
FB10
FB11
FB8
FB9
Pin Jack for PC Connection
D9 1SS355
R21 1k
D5 3V
Q15 RN1414
D21 3. 3V
R41
K52
G1/2
IC6 SM8140A
R22 1k
D3 1SS250
CHV
LDR
VSS1
OCL2
OCL1
OCE2
OCE1
OUT1
OUT2
CP2
CP1
CP0
VDD
ENA
R9 510
CN3 (EL)
to Panel Assy
C17 470p
C29 0.01µ
R44 120k
R49 2.7M
L1 470µH
P. W. B. (B), CN5
L1 L2 L3 L4 L5 L6 L7 L8 L9 L10
R200 1k
R201 1k
R202 1k
R203 1k
R204 1k
R205 1k
R206 2k
R207 2k
R208 1k
R209 1k
JP1
JP2
Q24 RN1414
D7 3. 3V
: The power supply is shown with the marked box.

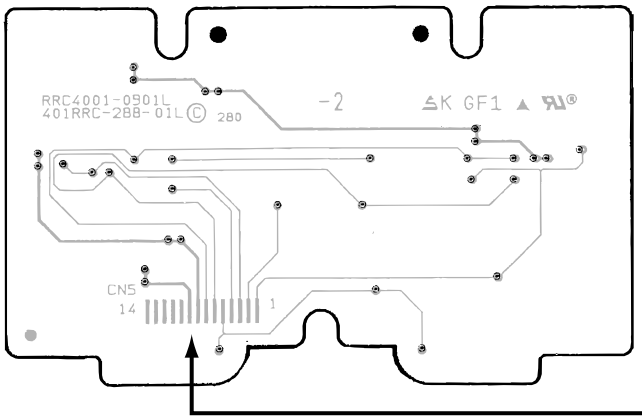
7.3.3 Remote PCB Diagram

SIDE A

G MAIN ASSY(Remote Control)





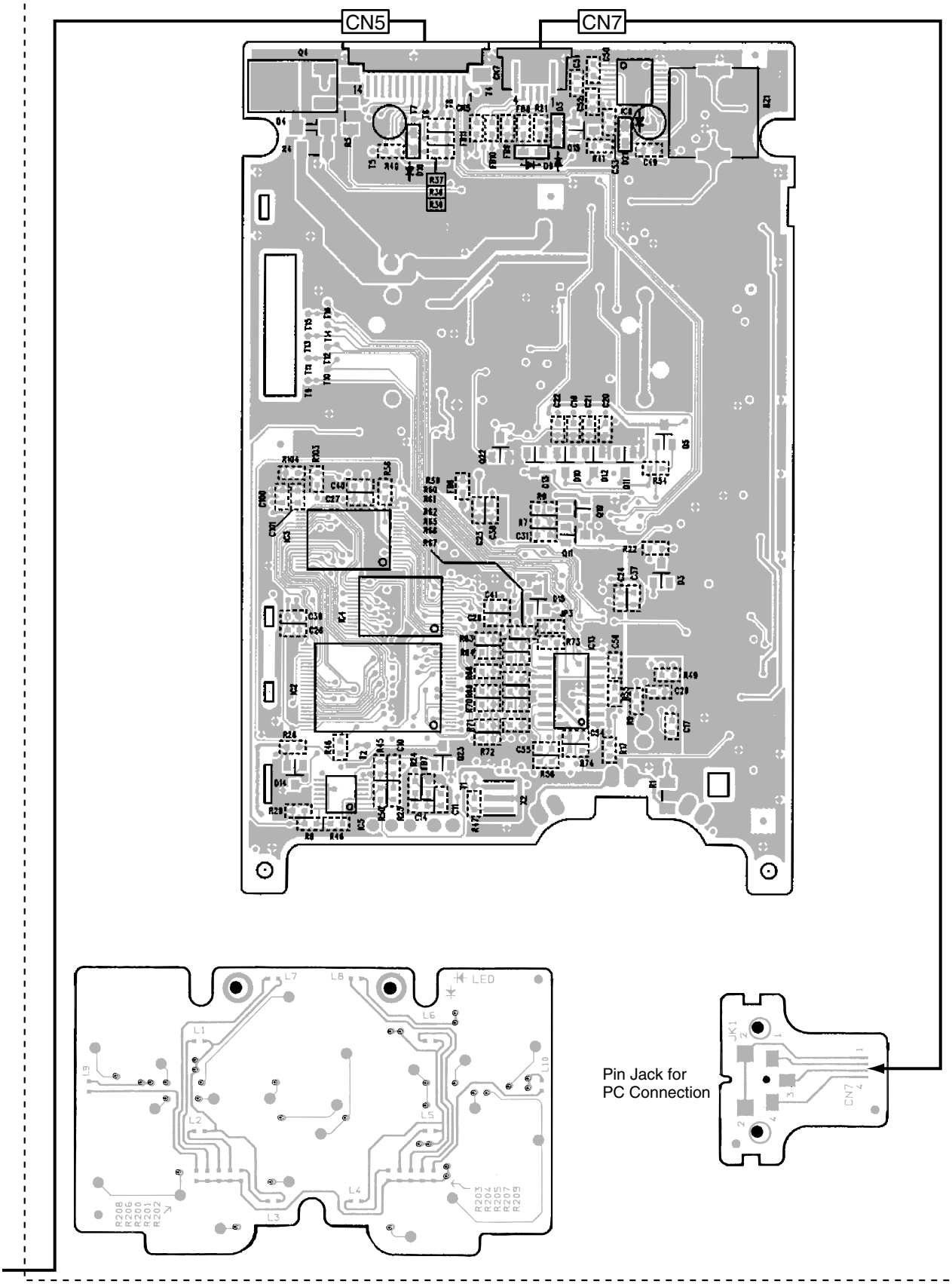


NOTE : remote control main board is substrate exchange correspondence. (2/2)
Light Emitting Diode luciferin child of a circuit diagram And only the jack for PC connection (JK1) It is a service part. (IR1-IR3)

G

SIDE B

G MAIN ASSY(Remote Control)

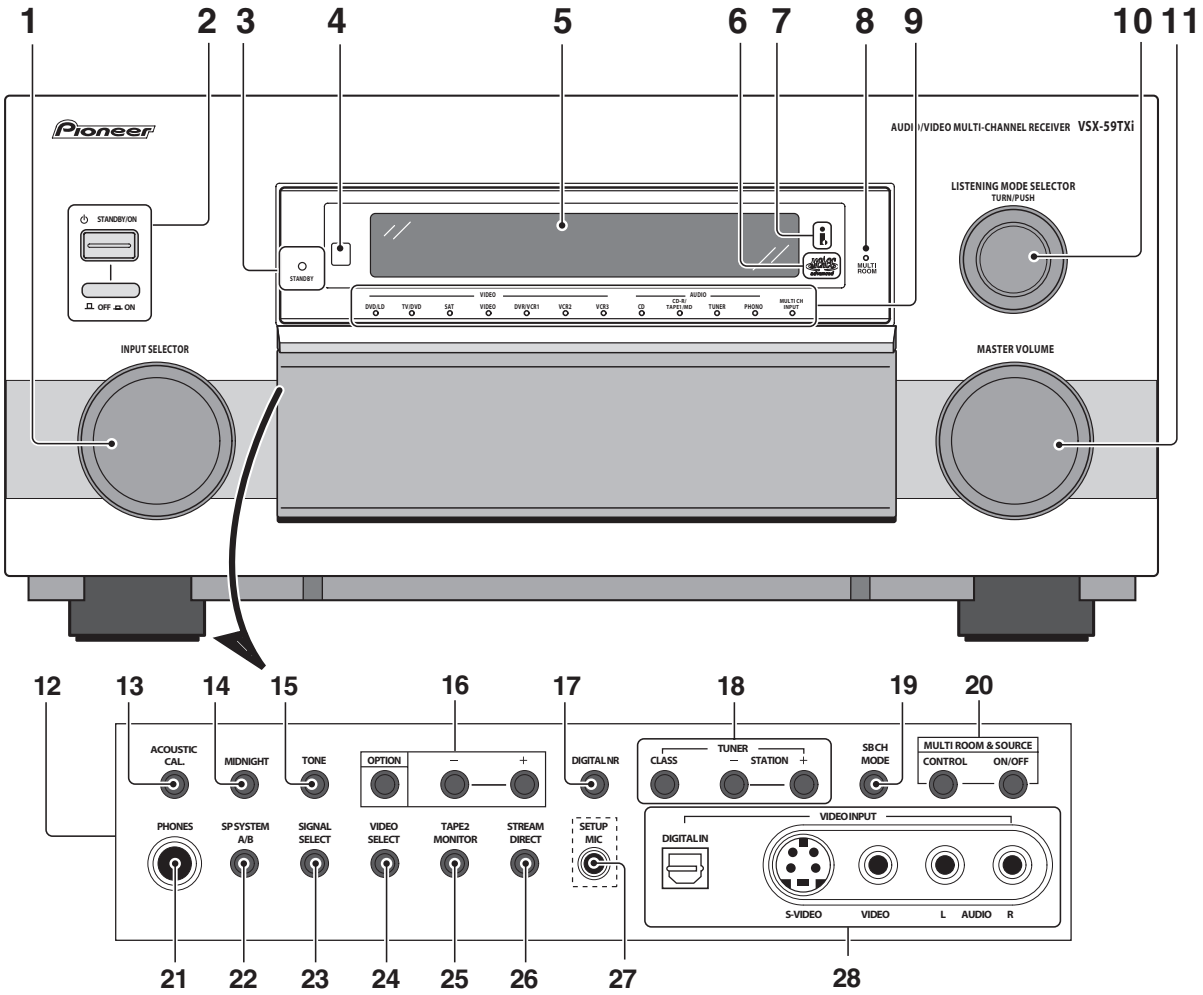


G

8. PANEL FACILITIES
8.1 PANEL FACILITIES

■ Front section

Front panel



1 INPUT SELECTOR dial
Turn to select a source component. The input indicators show the current component.

2 ⏻ STANDBY/ON and power OFF ⏚ / ON ⏚
Press ⏻ **STANDBY/ON** to switch the receiver on or into standby. The **OFF**⏚ / **ON**⏚ switch turns of the main power (you can't switch on using the remote when it is in the **OFF**⏚ position).

3 STANDBYindicator
Lights when the receiver is in standby.

4 Remote sensor
Receives the signals from the remote control.

5 Display

6 MCACC indicator
Lights when Acoustic Calibration EQ is on. **Acoustic Cal EQ** is automatically set after the Auto Surround Setup has been completed.

7 i.LINK indicator
Lights when an i.LINK-Audio-equipped component is selected.

8 MULTI ROOM indicator
Shows whether the multi-room function is active or not.

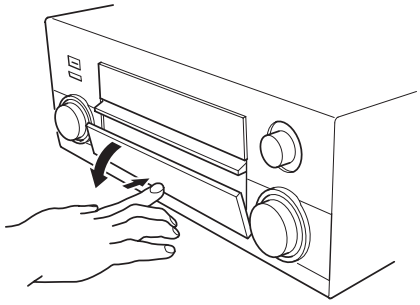
Displays & Controls

9 Input indicators
Shows the currently selected source component. The **MULTI CH INPUT** indicator lights when a component connected to the **MULTI CH INPUT** is selected. Nothing lights if an unassigned i.LINK-equipped component or USB connection is selected.

10 LISTENING MODE SELECTOR dial
Turn and push to select a listening mode.

11 MASTER VOLUME dial
Adjusts the volume.

12 Front panel controls
To access the front panel controls, push gently on the lower third portion of the panel with your finger.



13 ACOUSTIC CAL.
Press to switch Acoustic Calibration EQ on or off.

14 MIDNIGHT
Press to switch **MIDNIGHT** mode on/off.

15 TONE
Press to switch between **TONE ON** and **TONE BYPASS**, which bypasses the tone controls.

16 OPTION (–/+)
Press **OPTION** repeatedly to select an option menu item, then use **–/+** to adjust the settings.

17 DIGITAL NR
Press to switch **DIGITAL NR** on/off.

18 TUNER controls
Use the front panel tuner controls for recalling station presets.

19 SB CH MODE
Use to select the surround/virtual back channel mode.

20 MULTI ROOM & SOURCE controls
If you've made multi-room connections
use these controls to control the sub room
from the main room .

21 PHONES jack
Use to connect headphones (no sound will be heard through the speakers).

22 SP SYSTEM A/B
Press repeatedly to select speaker system **A**,**B**, **A/B** or off (in that order).

23 SIGNAL SELECT
Press to select the type of input signal for the current source (**DVD**, **DVR/VCR**, etc.), and also to select the number of input channels for the USB and analog multichannel inputs.

24 VIDEO SELECT
Press repeatedly to select the video source.

25 TAPE 2 MONITOR
Press to monitor recordings on the device connected to the **TAPE 2 MONITOR** inputs/outputs as they are being made.

26 STREAM DIRECT
Press to switch on/off Stream Direct.

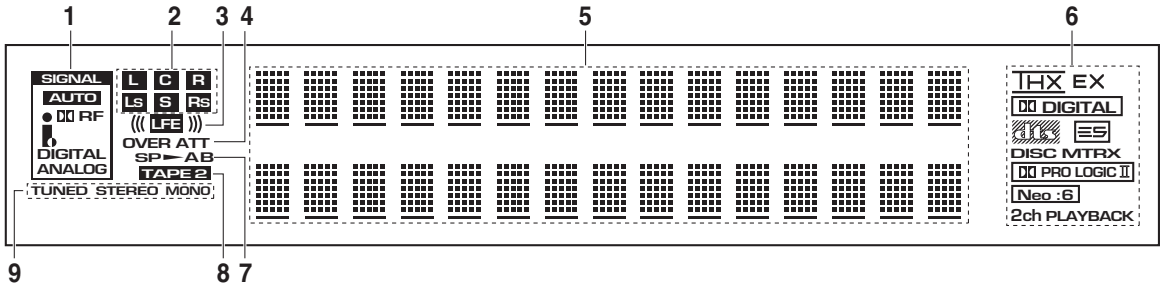
27 SETUP MIC jack
Use to connect the supplied microphone.

28 VIDEO INPUT jacks
DIGITAL IN – Connect a game console, portable DVD player, video camera (etc.), that has an optical digital connection.

S-VIDEO – Connect a video camera (etc.), that has an S-video out.

VIDEO / **AUDIO** (**L**/**R**) – Connect a video camera, etc. that has standard RCA video/audio outputs.

Display



1 SIGNAL indicators
Light to indicate the currently selected input signal. **AUTO** lights when the receiver is set to select the input signal automatically.

2 Program format indicators
These change according to which channels are active in Dolby, DTS, DVD-A and SACD sources.

LS, **S** and **RS** will light at the same time to indicate 6.1channel sources.

L – Left front channel

C – Center channel

R – Right front channel

LS – Left surround channel

S – Surround channel (mono)

RS – Right surround channel

LFE – Low frequency effects channel

3 ((( )))
Lights when an LFE signal is being input.

4 Analog level indicators

OVER indicator
Lights when an analog input signal is too high, risking distortion. Use the input attenuator to reduce the level.

ATT indicator
Lights when the input attenuator is on.

5 Character display

6 Digital format indicators

DIGITAL – Lights when a Dolby Digital signal is detected.

– Lights when a DTS signal is detected.

THX – Lights when one of the Home THX modes is selected.

EX – Lights during Surround EX matrix processing.

ES – Lights when a decoding DTS-ES audio.

DISC – Lights during DTS-ES discrete processing.

MTRX – Lights during DTS-ES matrix processing.

PRO LOGIC II – Lights during Dolby Pro Logic II and Pro Logic IIx processing.

Neo:6 – Lights during Neo:6 processing with 2-channel sources.

2ch PLAYBAC – Lights during two-channel playback.

7 Speaker indicators
Light to indicate the current speaker system, **A** and/or **B**.

8 TAPE 2
Lights when the **TAPE 2** monitor is switched on.

9 Tuner indicators

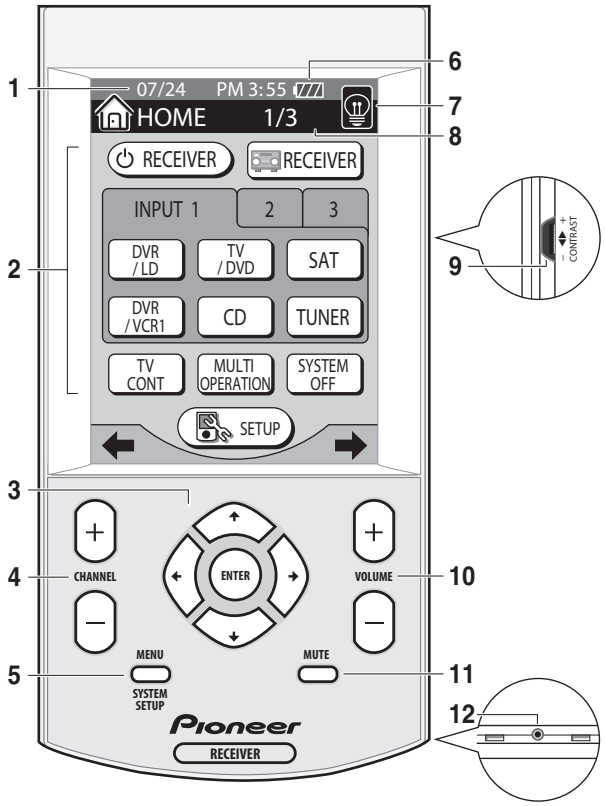
STEREO
Lights when listening to a stereo FM broadcast in auto/stereo mode.

TUNED
Lights when tuned to a broadcast.

MONO
Lights when the tuner MPX mode is set to mono.

8.2 Remote Control

Remote Control



1 Date and time display
This to the current time.

2 LCD touch screen
The LCD touch screen appears when the screen is touched or a button on the remote control is pressed.

3 Cursor hard keys andENTER
Use to navigate menus and select options/execute commands.

4 CHANNEL +/–
Use to select channels.

5 MENU / SYSTEM SETUP
Use to display the System Setup menu (or a menu when controlling other components, such as a DVD or TV).

6
Displays the rechargeable battery status. The recharge indicator ( ) shows when the remote is being recharged.

7
Press to switch the touch screen backlight on or off.

8 Menu screen number
Displays the screen number in the current menu, as well as the number of screens.

9 Contrast control
Use to adjust the contrast of the LCD touch screen.

10 VOLUME +/–
Use to adjust the volume.

11 MUTE
Press to mute all output. Press again (or adjust the volume using the **MASTER VOLUME** control) to restore the sound.

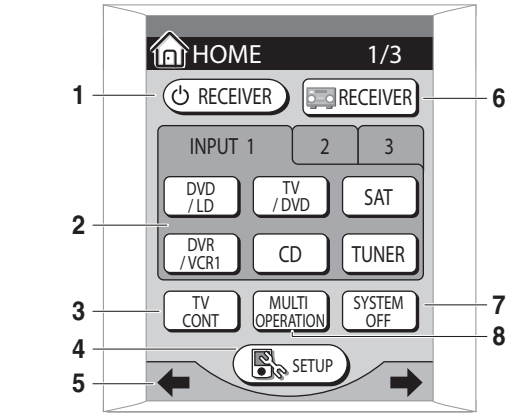
12 Servicing terminal
For use by Pioneer service technicians.

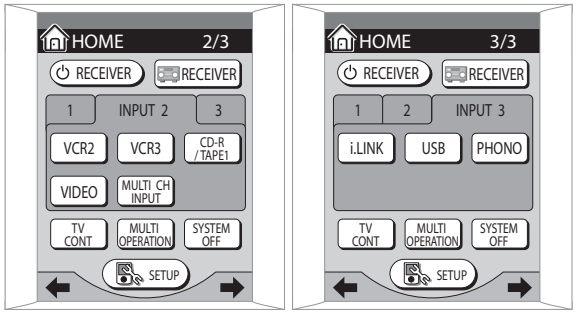
Basic remote control displays

The remote control LCD touch screen has a number of displays from which you can control receiver functions, as well as control operations for other components. The basic menu screens are explained here.

Home menu screens

There are three Home menu screens, which can be navigated by using the touch panel ⬅/➡ (cursor left/right) soft keys or **INPUT 1**, **2** or **3**.





1 ⏻ RECEIVER
Press to switch the receiver on or into standby.

Receiver MAIN Screen 1/2

2 INPUT 1 / 2 / 3
Press **1**, **2** or **3** to find the screen with the input source you want. After pressing the appropriate button to choose a source, you are taken to the corresponding function menu.

3 TV CONT
Press to access the TV control menu (see *TV control menu screens* below).

4 SETUP
Press to access the remote control setup menu.

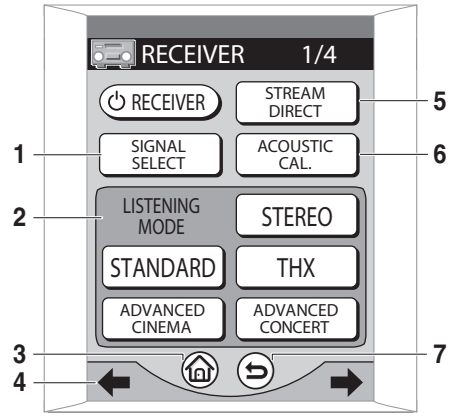
5 ⬅/➡ (soft keys)
Press to go to the previous/next Home menu screen.

6 RECEIVER
Press to go to the receiver main menu.

7 SYSTEM OFF
Press to switch off all Pioneer components in your system, or any other component you have also programmed to switch off using the System Off function.

8 MULTI OPERATION
Use this button to perform multi operations.

Receiver menu screens
There are four receiver menu screens, which can be navigated by using the touch panel ⬅/➡ (cursor left/right) soft keys.



1 SIGNAL SELECT
Press to select the type of input signal for the current source (**DVD**, **DVR/VCR**, etc.), and also to select the number of input channels for the USB and analog multichannel inputs.

2 LISTENING MODE selector
Use to select a listening mode.

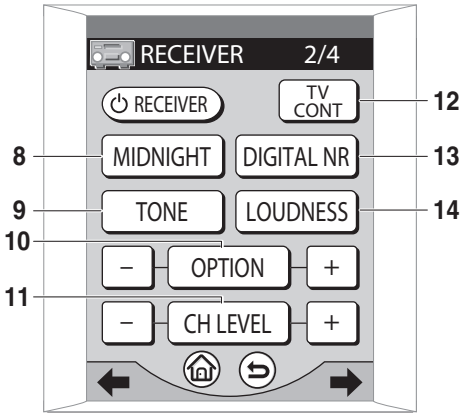
3 ⌂
Press to return to the main Home menu.

4 ⬅/➡ (soft keys)
Press to go to the previous/next receiver menu screen.

5 STREAM DIRECT
Press to select a Stream Direct mode.

6 ACOUSTIC CAL.
Press to select an acoustic calibration EQ setting.

7 ⮌
Press to go to the previous screen (or set of screens).



8 MIDNIGHT
Press to switch on/off Midnight listening.

9 TONE
Press to switch the tone controls on/off.

10 OPTION (–/+)
Press **OPTION** repeatedly to select an option menu item, then use **–/+** to adjust the settings.

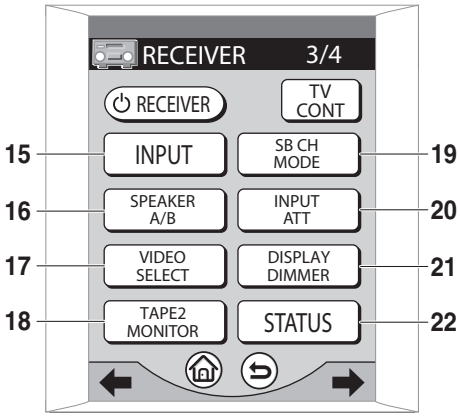
11 CH LEVEL (+/–)
Press **CH LEVEL** repeatedly to select a channel, then use **–/+** to adjust the level.

12 TV CONT
Press to access the TV control menu (see *TV control menu screens* below).

13 DIGITAL NR
Press to switch digital noise reduction on/off.

14 LOUDNESS
Press to switch Loudness on/off.

Receiver MAIN Screen 2/2



15 INPUT
Press repeatedly to cycle through all possible input sources.

16 SPEAKER A/B
Press repeatedly to select speaker system **A**,**B**, **A/B**or off (in that order).

17 VIDEO SELECT
Press repeatedly to select the video source.

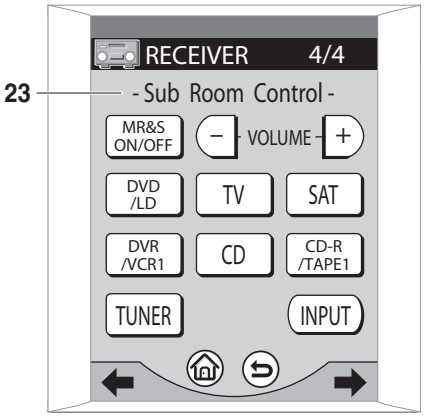
18 TAPE 2 MONITOR
Press to monitor recordings on the device connected to the **TAPE 2 MONITOR** inputs/outputs as they are being made.

19 SB CH MODE
Use to select the surround/virtual back channel mode.

20 INPUT ATT
Press to switch the input attenuator on/off.

21 DISPLAY DIMMER
Use to adjust the brightness of the front panel display.

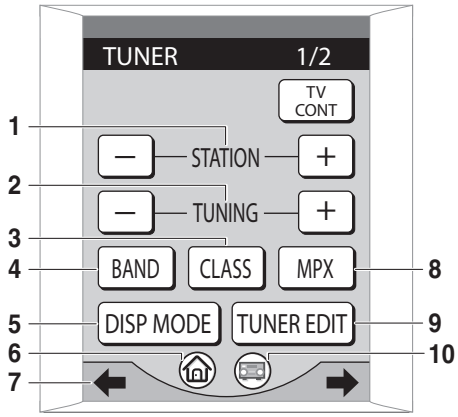
22 STATUS
Press to check selected receiver settings.



23 Sub Room Control
Use this menu screen to control your sub room setup (if you've made multi-room connections). The source and **INPUT** buttons select input sources, and **VOLUME (+/–)** controls the sub room volume. Press **MR&S ON/OFF** to use the buttons on this screen in the sub room.

Remote control displays for the tuner

The functions on these screens are used to control the tuner.



1 STATION + / –
Press to select station presets.

2 TUNING + / –
Use to select a listening mode.

3 CLASS
Press to switch between the three banks (classes) of station presets.

4 BAND
Press to switch between AM and FM radio bands.

5 DISP MODE
Press to switch between the frequency display and the station name display.

6
Press to return to the main Home menu (see *Home menu screens* above).

7 ⬅/➡ (soft keys)
Press to go to the previous/next receiver menu screen.

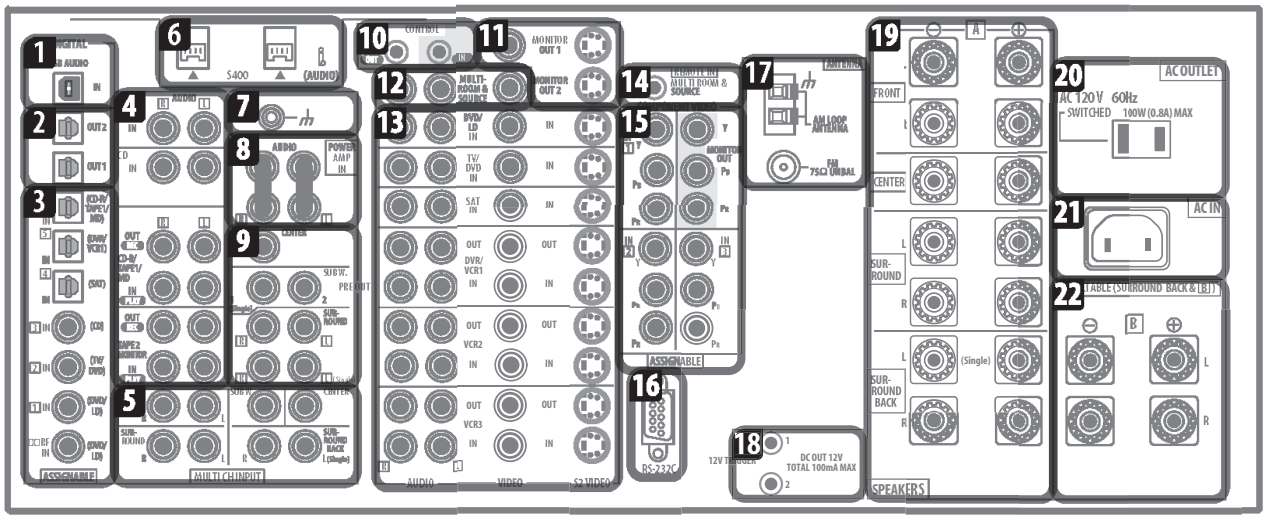
8 MPX
Press to listen to a radio broadcast in mono.

9 TUNER EDIT
Press to memorize and name a station preset.

10
Press to go to the receiver main menu (see *menu screens* above).

8.3 Rear Panel

Rear panel



Caution

Before making or changing the connections, switch off the power and disconnect the power cord from the power outlet. Plugging in components should be the last connection you make with your system.

1 USB audio input
The USB audio input allows you to use your PC as a playback source for stereo or multichannel digital audio.

2 Digital audio outputs
Two optical digital audio outputs for connecting to a CD, MD or other digital recorder.

3 Digital audio inputs
Three optical and three coaxial digital audio inputs for connecting digital audio sources to this receiver. There's also a **RF IN** jack for connection to an LD player with a **RF** output.

All the inputs are freely assignable to input functions for maximum flexibility.
If a connected component does not correspond to the input function (**DVD/LD**, etc.).

4 Stereo analog audio source inputs/outputs
Four sets of analog audio jacks for connection to audio sources such as CD players, tape decks and turntables. The **CD-R/TAPE 1/MD** and **TAPE 2 MONITOR** functions also feature outputs for recording.

5 Multichannel analog audio inputs
7.1 channel analog inputs for connection to a DVD player with multichannel analog outputs.

6 i.LINK connectors
Two S400-type i.LINK connectors allow you to connect this receiver to other compatible i.LINK audio devices for high-resolution, multichannel digital audio input/output.

7 Turntable ground
A grounding (earth) terminal for use with turntables that require it.

8 Pre-amplifier output/power amplifier input

9 Multichannel pre-amplifier outputs

10 Control input/output

11 Monitor video outputs

12 Multi-room and source outputs

13 Audio/video source inputs

14 Remote input (multi-room and source)

15 Component video inputs/output

16 RS-232C connector

17 Antenna terminals

18 12V trigger jacks

19 Speaker terminals

20 AC power outlet

21 AC power inlet

22 B speaker terminals