

TA-SB500WR2

SERVICE MANUAL

US Model

Ver. 1.0 2007.03



- TA-SB500WR2 is the surround amplifier section in DAV-HDX267W/HDX501W.

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 3 ohms loads, both channels driven, from 120 Hz - 20,000 Hz; rated 60 watts per channel minimum RMS power, with no more than 0.7 % total harmonic distortion from 250 milli watts to rated output.

Amplifier section

Surround mode (reference) RMS output power
SL/SR* : 100 W
(per channel at 3 ohms, 1 kHz, 10 % THD)

* Depending on the sound field setting and the source, there may be no sound output.

Power requirements:	120 V AC, 60 Hz
Power consumption	On: 40 W
Dimensions (approx.)	65 × 89 × 253 mm (2 5/8 × 3 5/8 × 10 inches) (w/h/d) 65 × 89 × 345 mm (2 5/8 × 3 5/8 × 13 5/8 inches) (w/h/d) incl. speaker cord cover
Mass (approx.)	1.3 kg (2 lb 14 oz) 1.4 kg (3 lb 2 oz) incl. speaker cord cover

Design and specifications are subject to change without notice.

SURROUND AMPLIFIER

SONY®

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.

(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size)

LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40 °C higher than ordinary solder.
Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
Soldering irons using a temperature regulator should be set to about 350 °C.
Caution: The printed pattern (copper foil) may peel a way if the heated tip is applied for too long, so be careful!
- Strong viscosity
Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage.

Check leakage as described below.

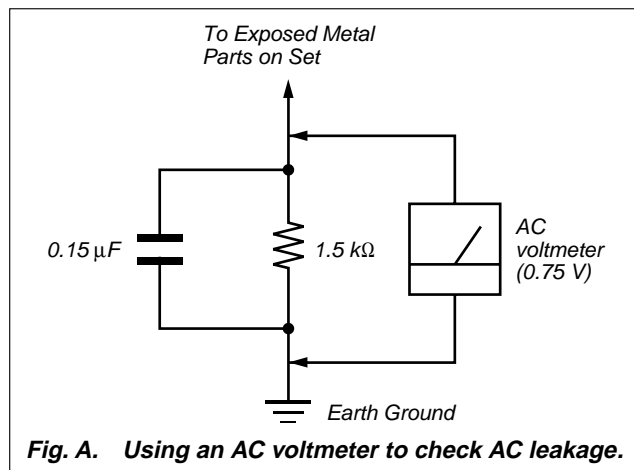
LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes).



Leakage current can be measured by any one of three methods.

1. A commercial leakage tester such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable (See Fig. A)

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SAFETY-RELATED COMPONENT WARNING!!

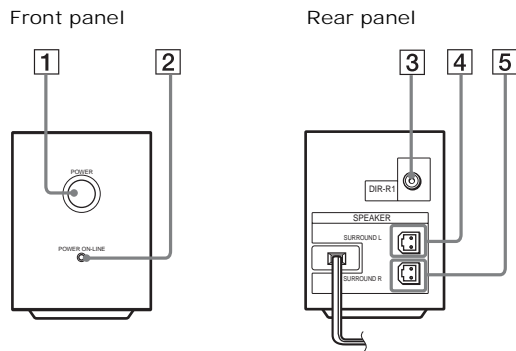
COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

**SECTION 1
GENERAL**

This section is extracted from instruction manual.

LOCATION OF CONTROLS

Surround amplifier

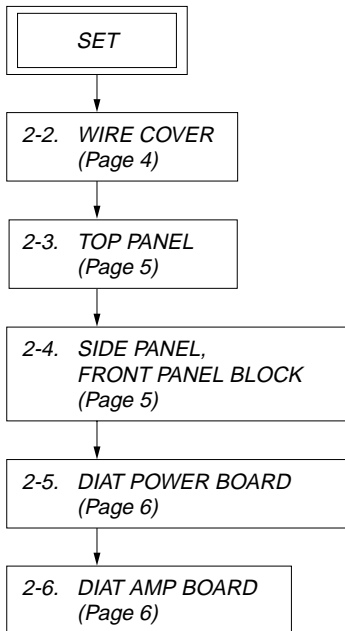


- 1 POWER (ON/OFF)**
- 2 POWER/ON LINE indicator**
- 3 DIR-R1 jack**
- 4 SURROUND L SPEAKER jack**
- 5 SURROUND R SPEAKER jack**

SECTION 2 DISASSEMBLY

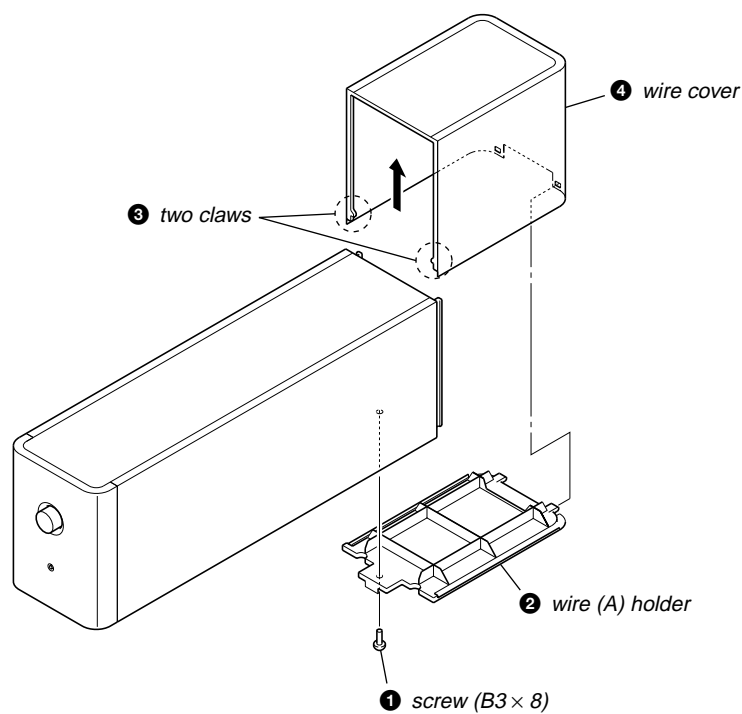
- This set can be disassembled in the order shown below.

2-1. DISASSEMBLY FLOW

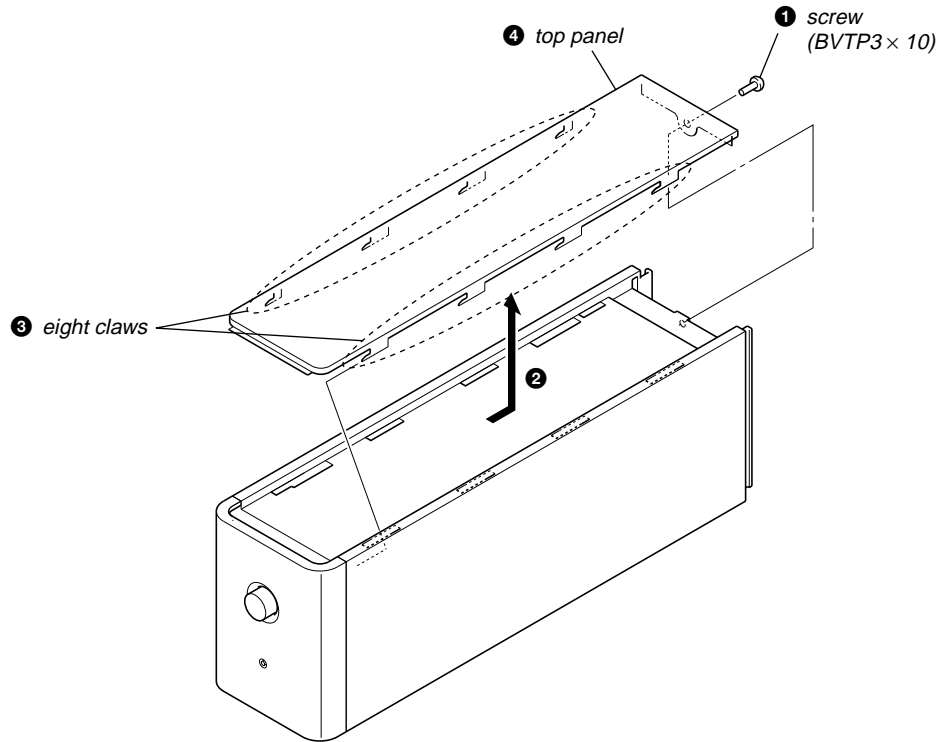


Note: Follow the disassembly procedure in the numerical order given.

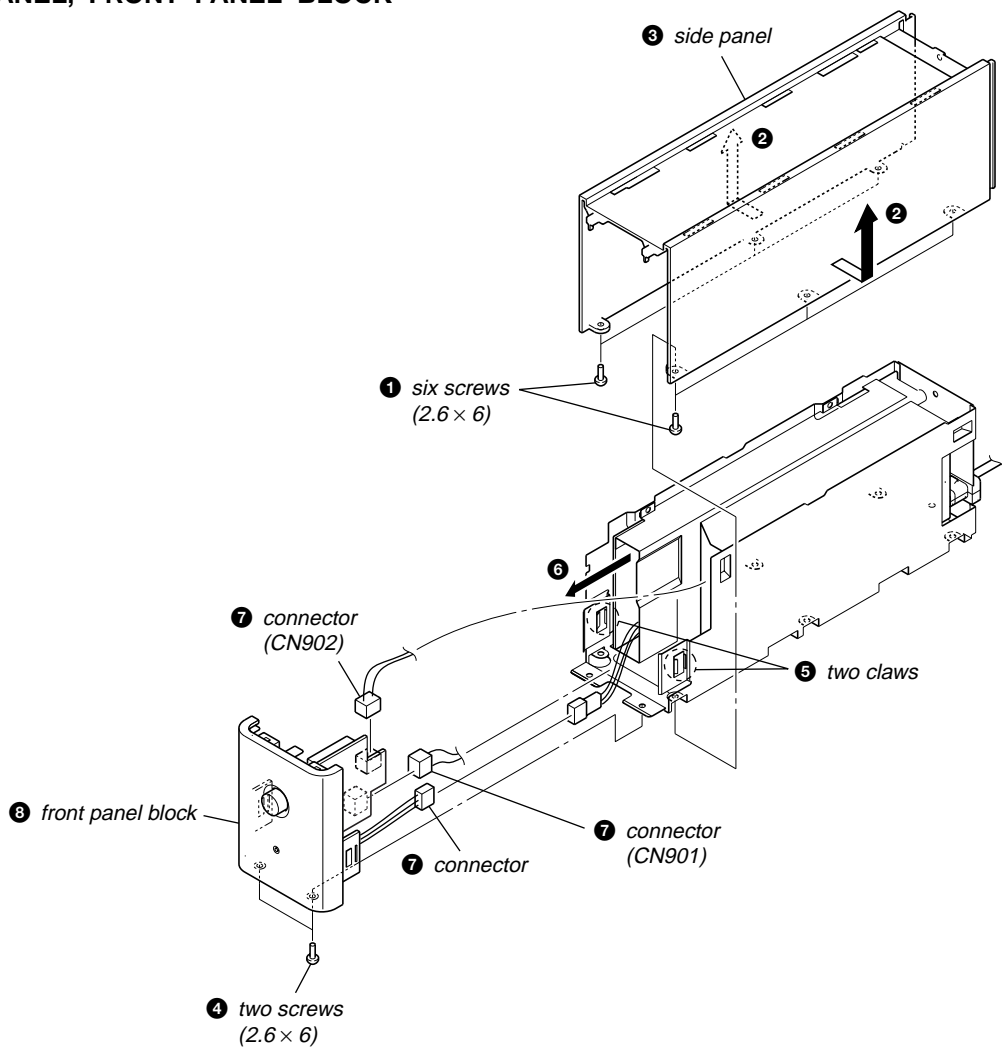
2-2. WIRE COVER



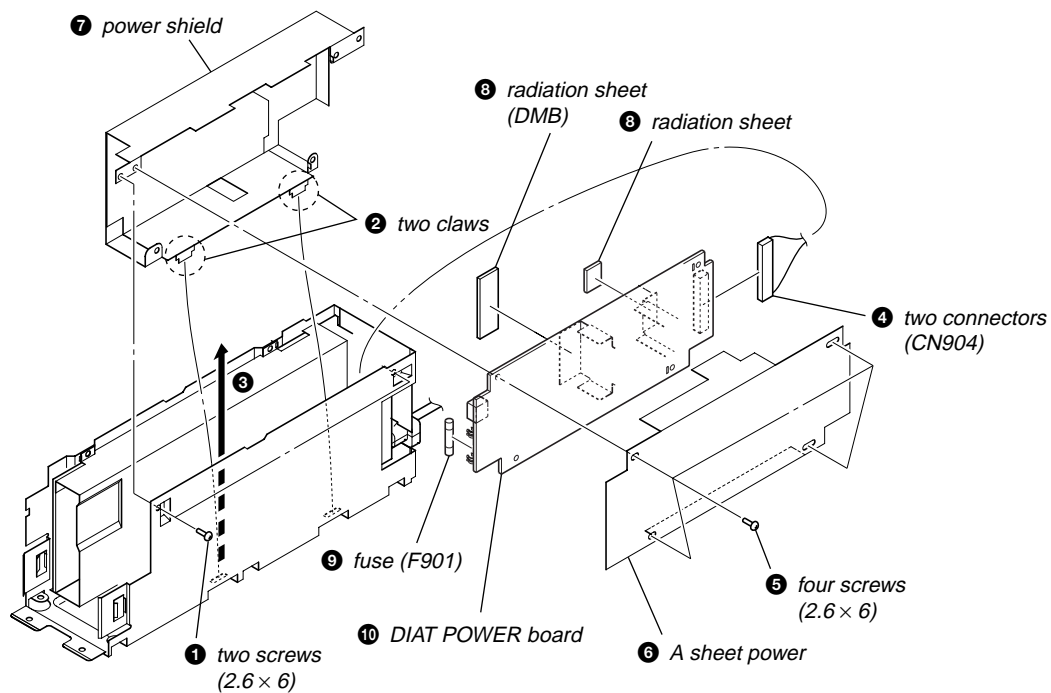
2-3. TOP PANEL



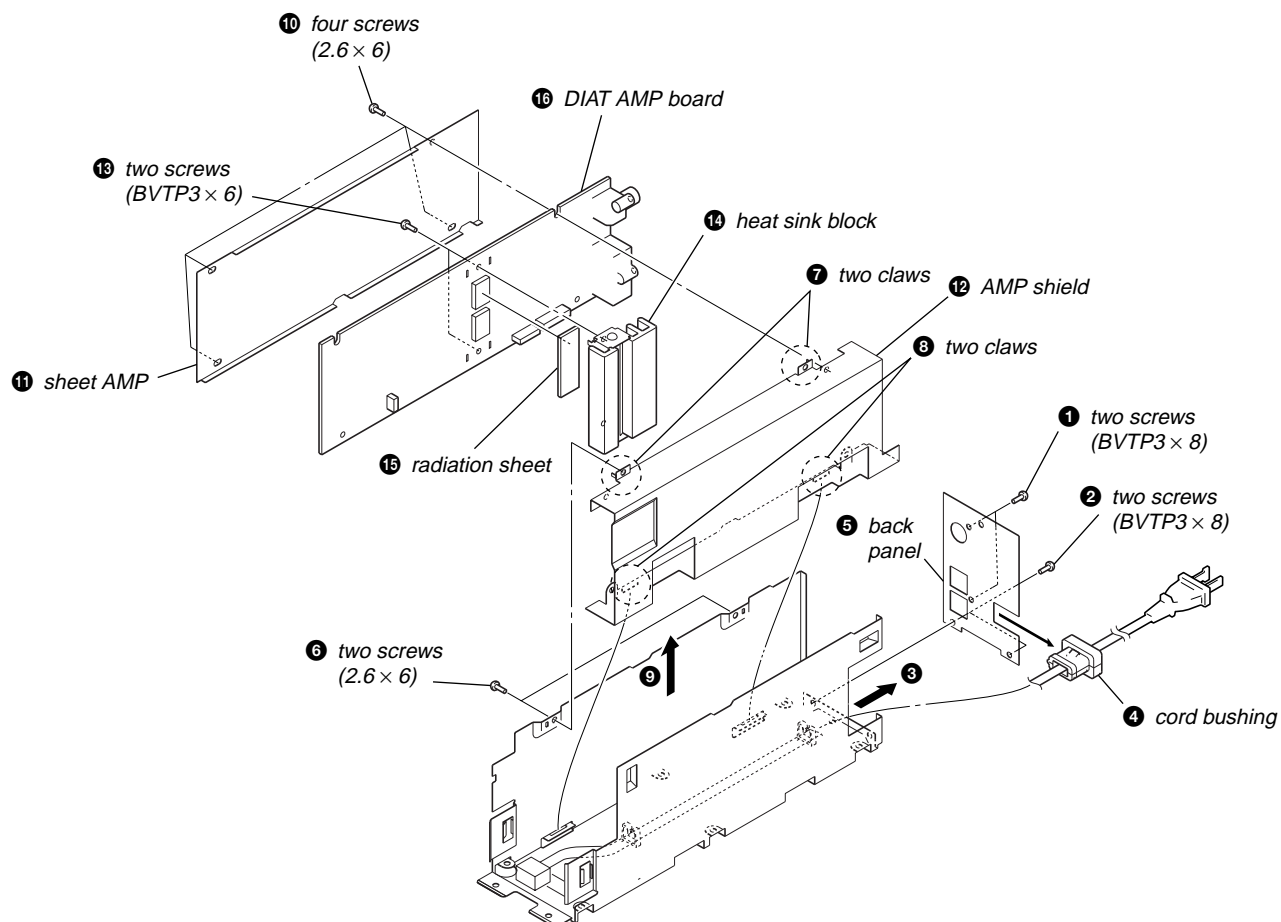
2-4. SIDE PANEL, FRONT PANEL BLOCK



2-5. DIAT POWER BOARD

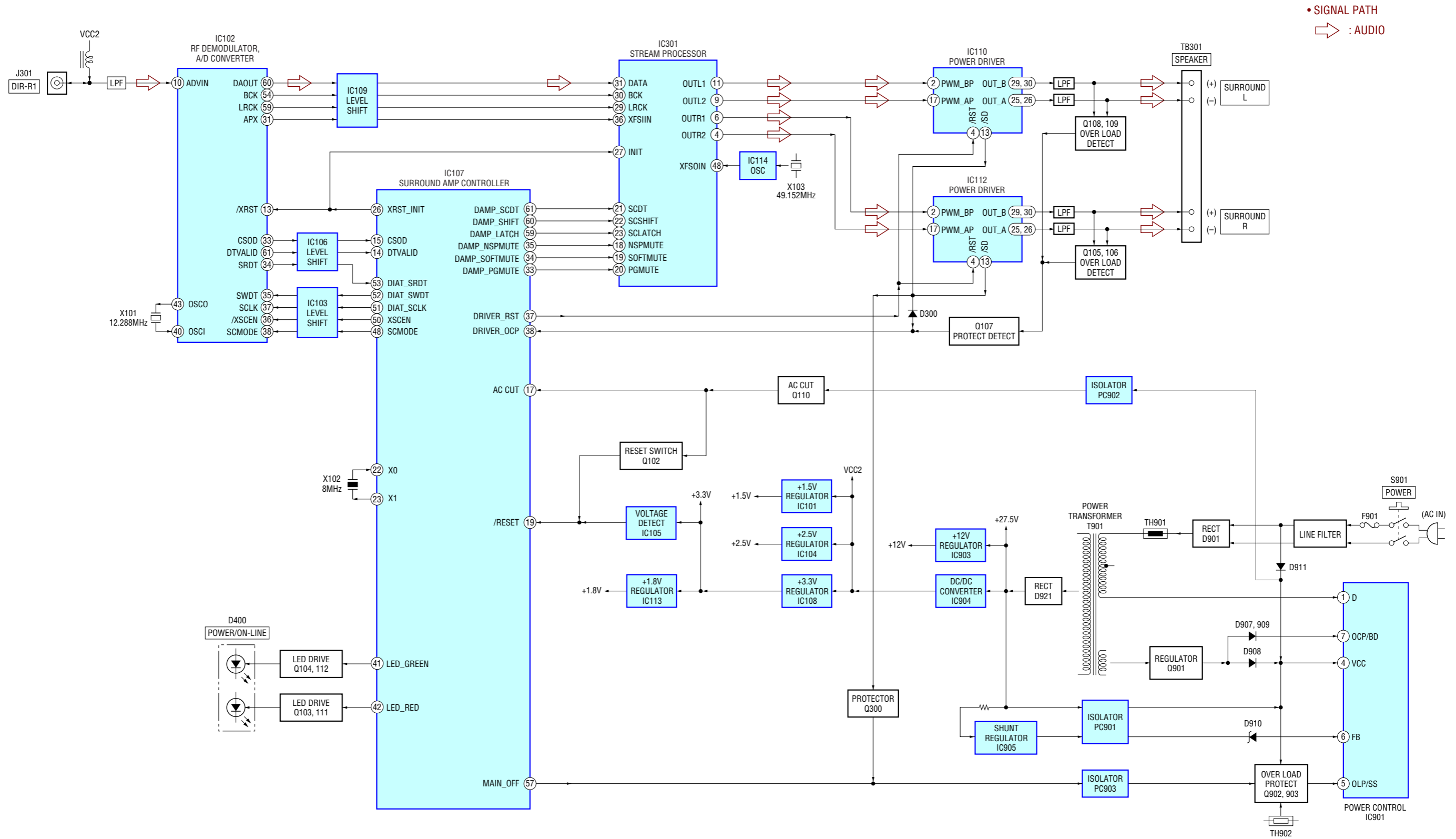


2-6. DIAT AMP BOARD



SECTION 3 DIAGRAMS

3-1. BLOCK DIAGRAM



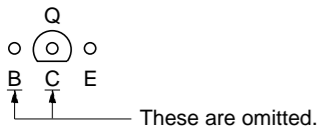
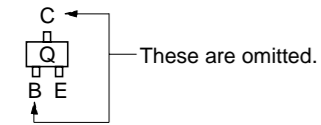
• Note for Printed Wiring Boards and Schematic Diagrams

Note on Printed Wiring Boards:

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- △ : internal component.
- : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

Caution:
 Pattern face side: Parts on the pattern face side seen from (Conductor Side) the pattern face are indicated.
 Parts face side: Parts on the parts face side seen from (Component Side) the parts face are indicated.

- DIAT AMP board is multi-layer printed board. However, the patterns of intermediate layers have not been included in diagrams.
- Indication of transistor.



Note on Schematic Diagram:

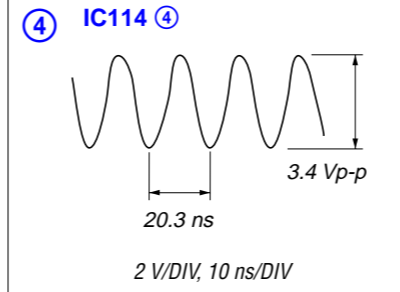
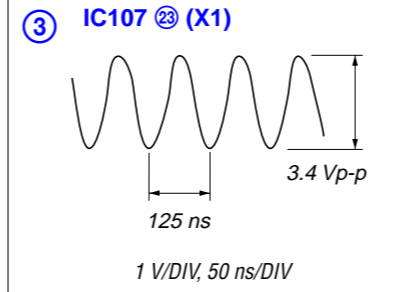
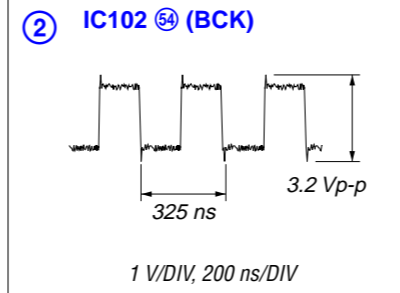
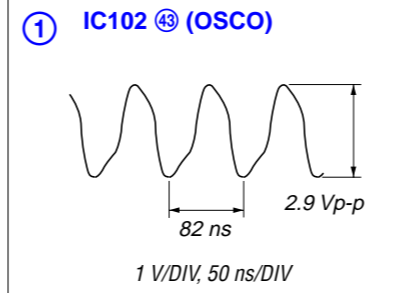
- All capacitors are in μF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{ W}$ or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : panel designation.

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

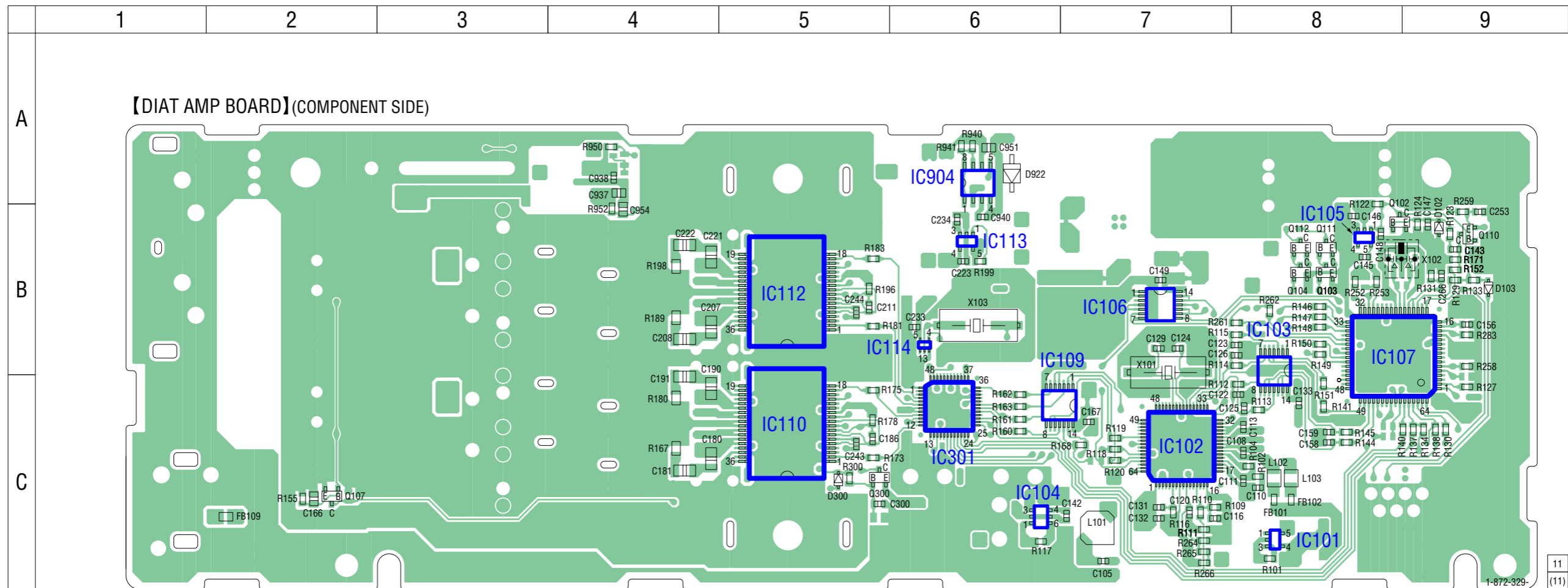
- : B+ Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Note: When measuring voltages and waveforms, connect with HCD-SB500W (HCD-SB500W states: DVD play).
 no mark : DVD PLAY
 * : Impossible to measure
- Voltages are taken with aVOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 ⇨ : AUDIO

• Waveforms

– DIAT AMP Board –



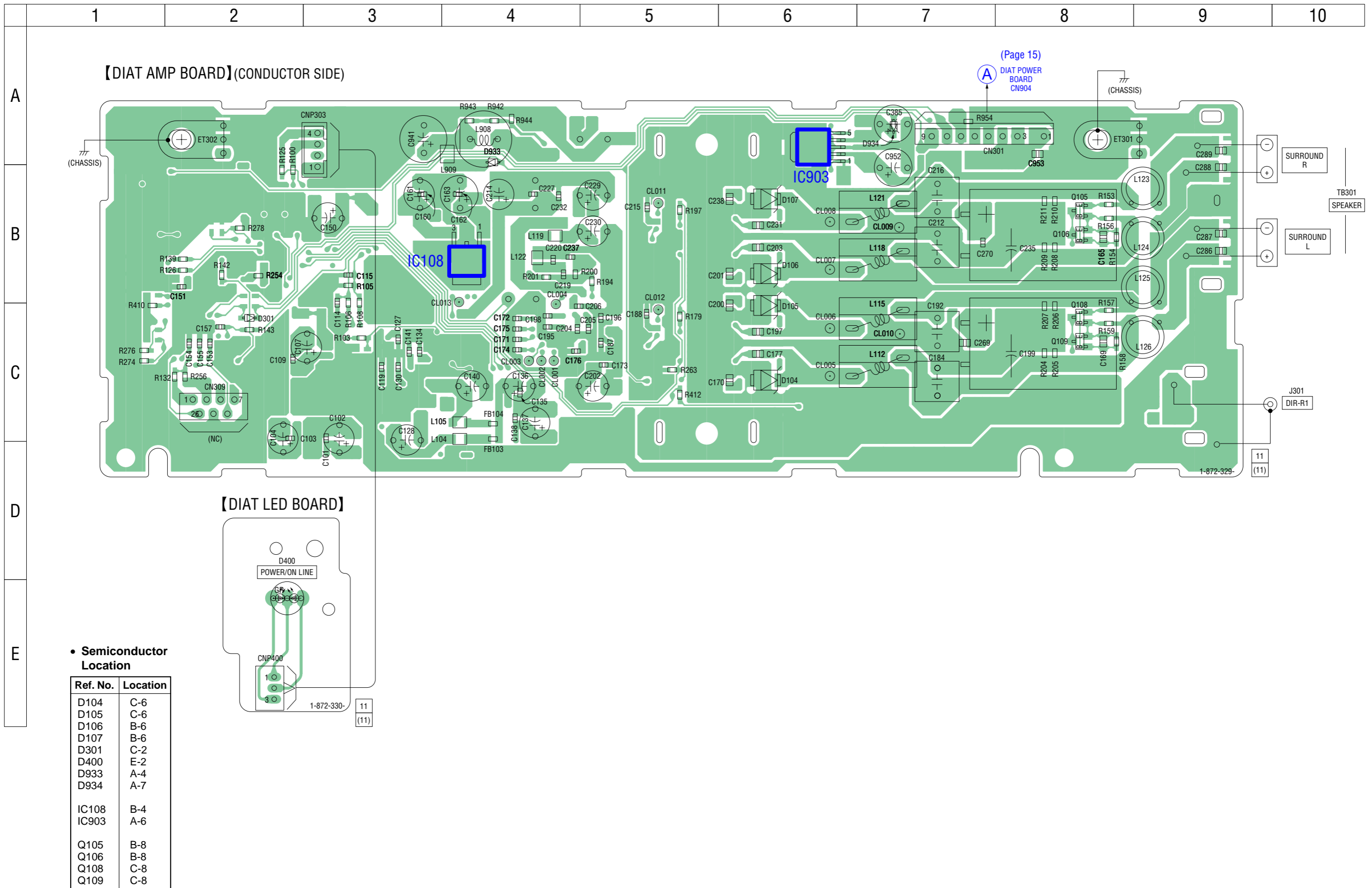
3-2. PRINTED WIRING BOARD – DIAT AMP Section (1/2) –  : Uses unleaded solder.



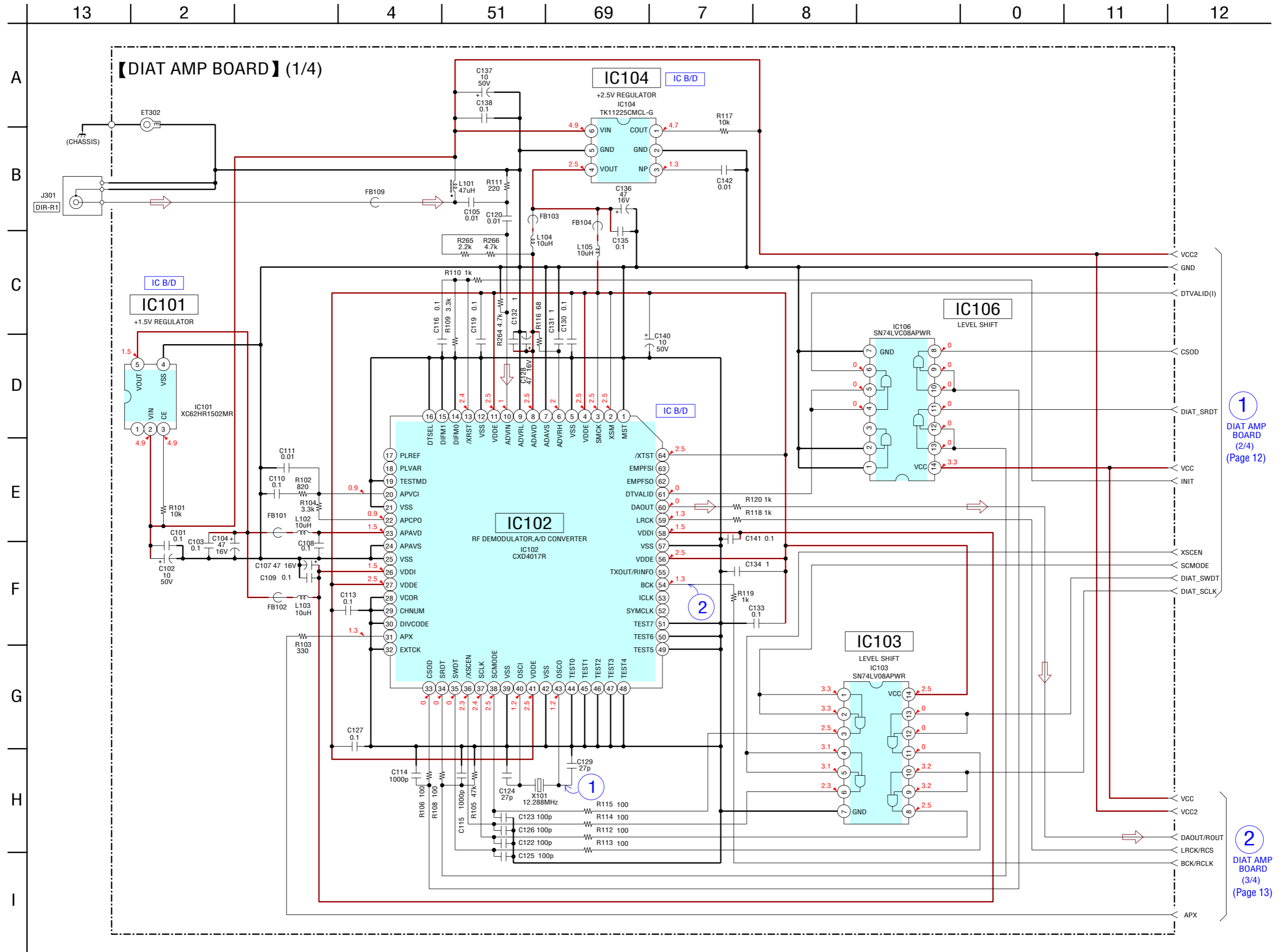
• Semiconductor Location

Ref. No.	Location
D102	B-9
D103	B-9
D300	C-5
D922	A-6
IC101	C-8
IC102	C-7
IC103	B-8
IC104	C-6
IC105	B-8
IC106	B-7
IC107	B-8
IC109	C-6
IC110	C-5
IC112	B-5
IC113	B-6
IC114	B-6
IC301	C-6
IC904	A-6
Q102	A-8
Q103	B-8
Q104	B-8
Q107	C-2
Q110	B-9
Q111	B-8
Q112	B-8
Q300	C-5

3-3. PRINTED WIRING BOARDS – DIAT AMP Section (2/2) –  : Uses unleaded solder.



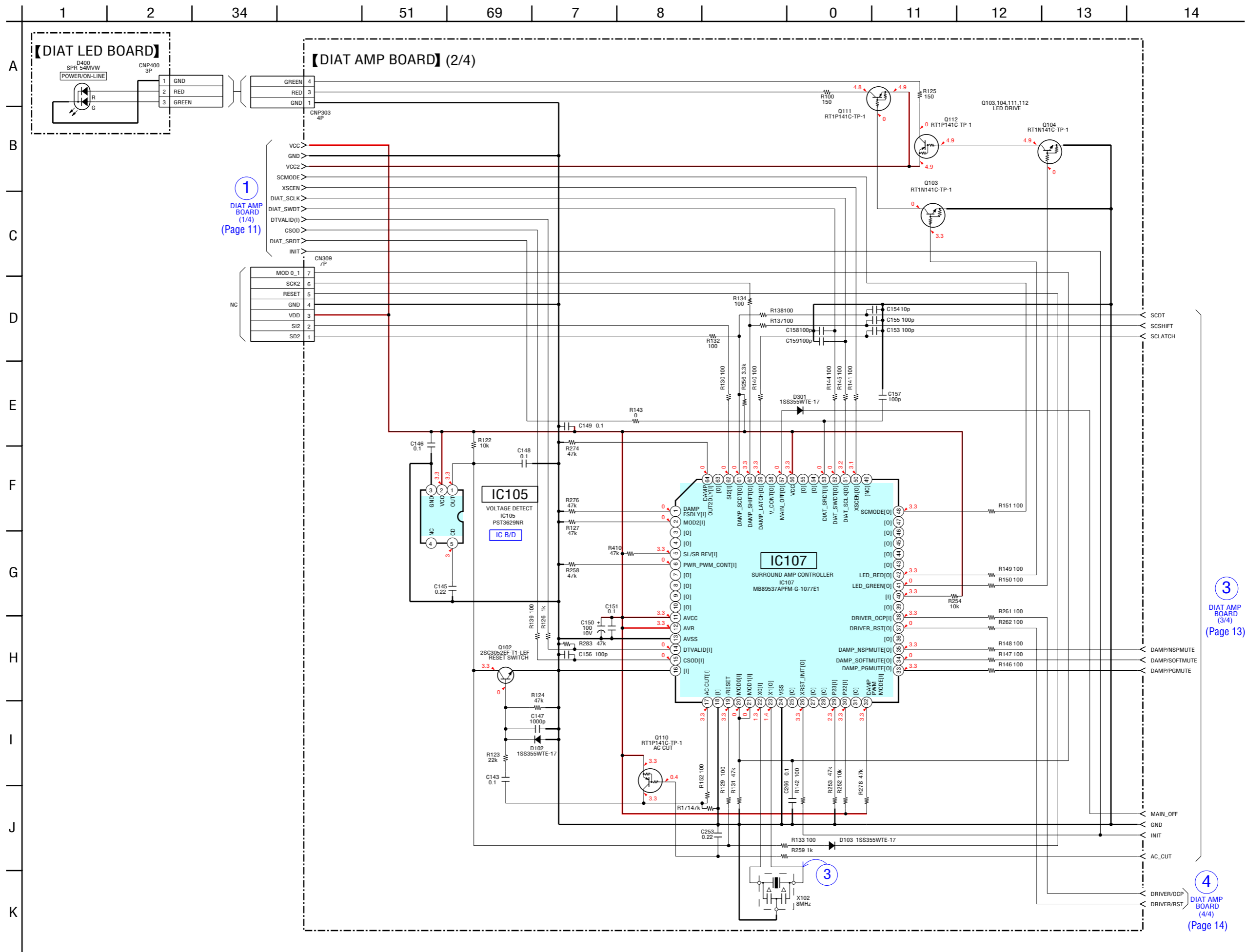
3-4. SCHEMATIC DIAGRAM – DIAT AMP Section (1/4) – • See page 8 for Waveforms. • See page 17 for IC Block Diagrams.



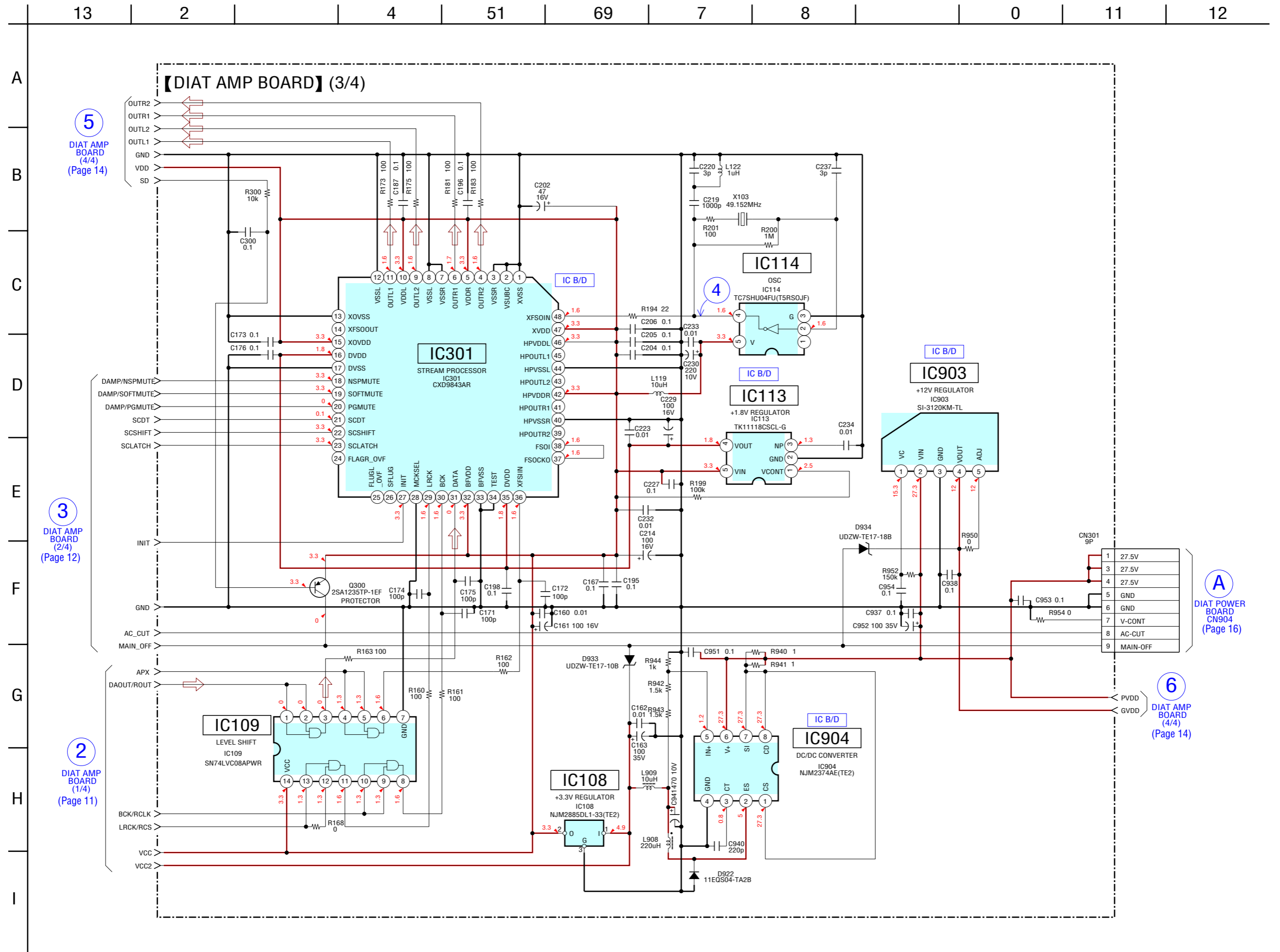
1
DIAT AMP BOARD (2/4)
(Page 12)

2
DIAT AMP BOARD (3/4)
(Page 13)

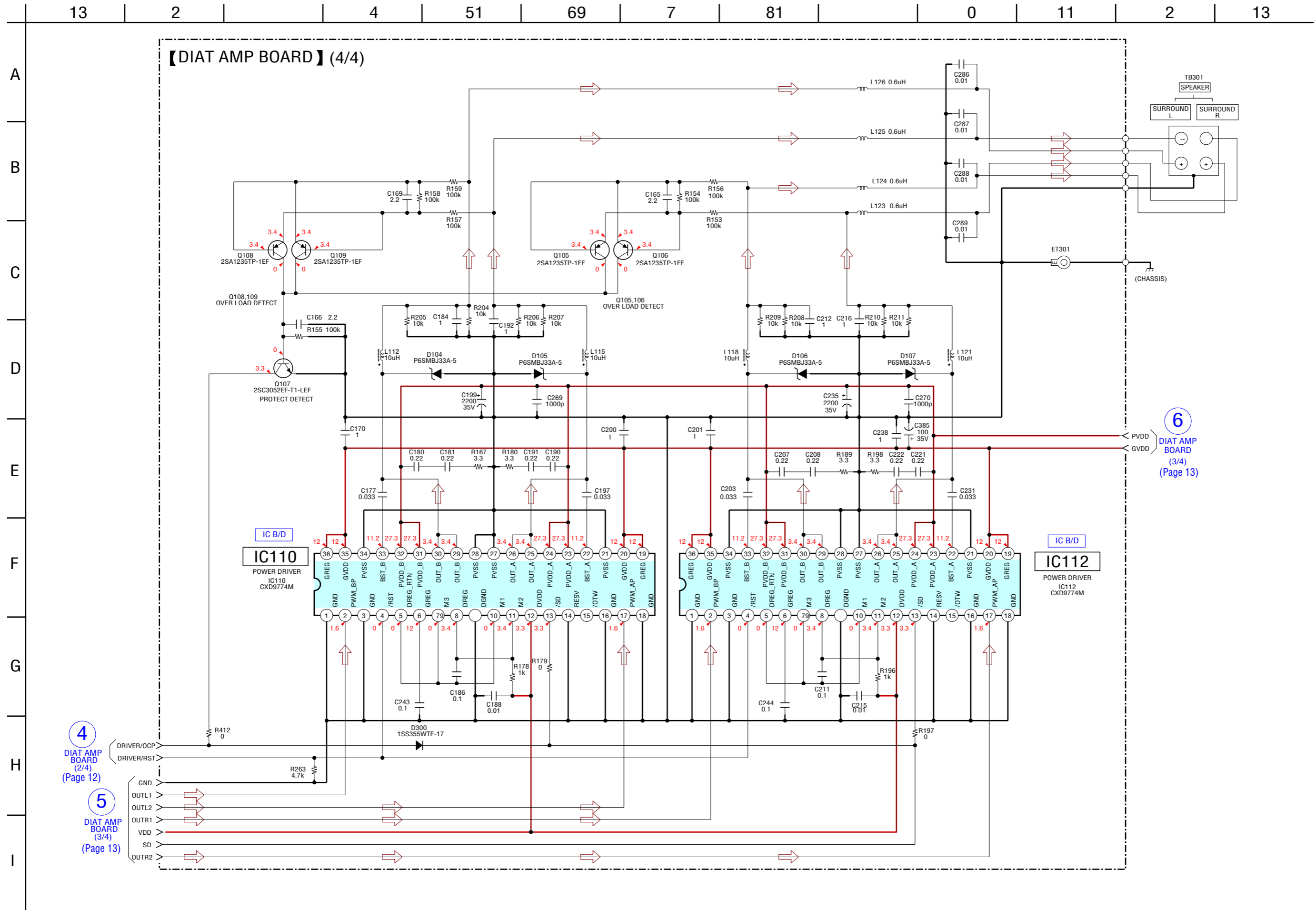
3-5. SCHEMATIC DIAGRAM – DIAT AMP Section (2/4) – • See page 8 for Waveforms. • See page 17 for IC Block Diagrams. • See page 21 for IC Pin Function Description.



3-6. SCHEMATIC DIAGRAM – DIAT AMP Section (3/4) – • See page 8 for Waveforms. • See page 17 for IC Block Diagrams.



3-7. SCHEMATIC DIAGRAM – DIAT AMP Section (4/4) – • See page 17 for IC Block Diagrams.

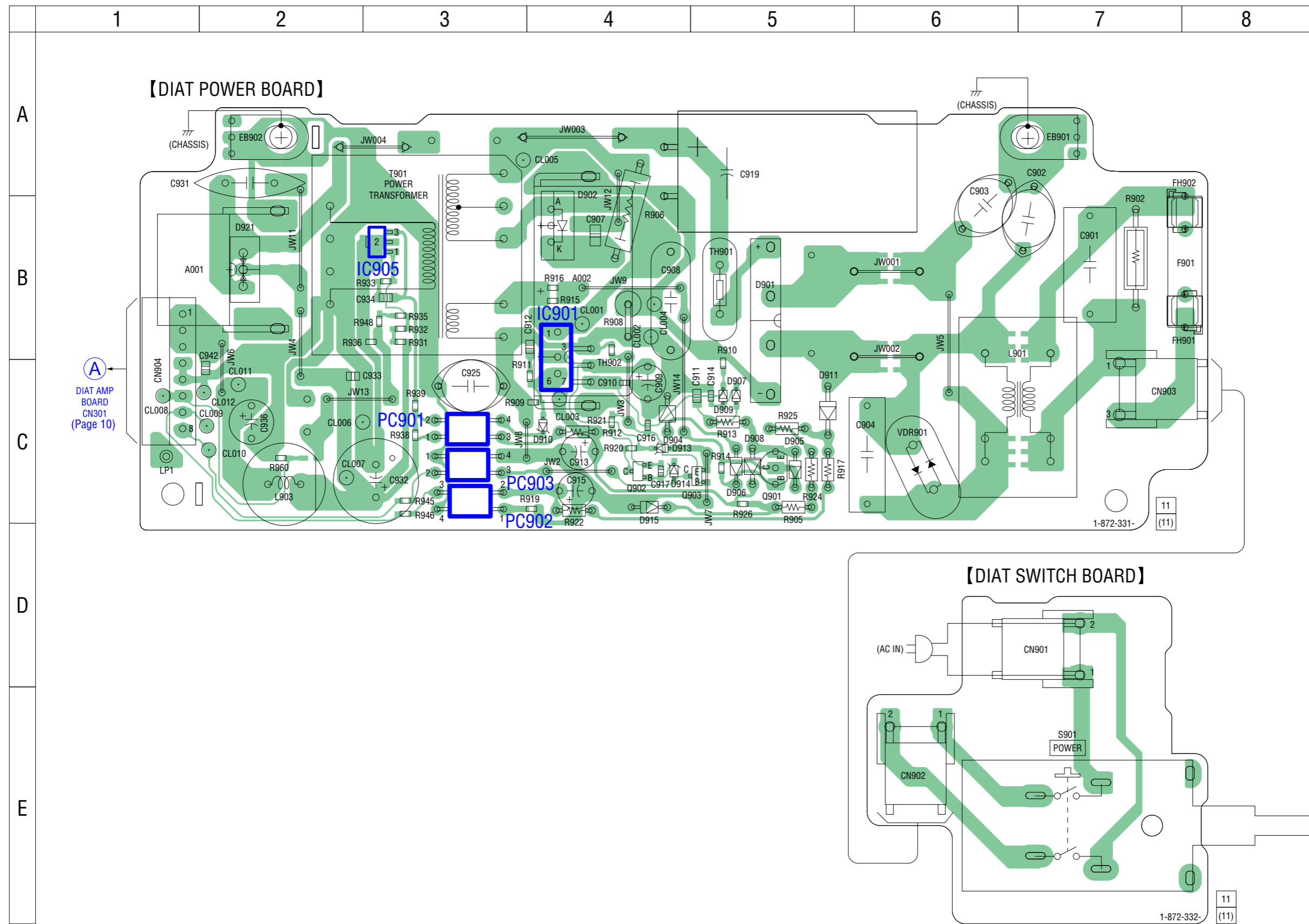


4
DIAT AMP BOARD (2/4)
(Page 12)

5
DIAT AMP BOARD (3/4)
(Page 13)

6
DIAT AMP BOARD (3/4)
(Page 13)

3-8. PRINTED WIRING BOARDS – POWER SUPPLY Section –  : Uses unleaded solder.



• Semiconductor Location

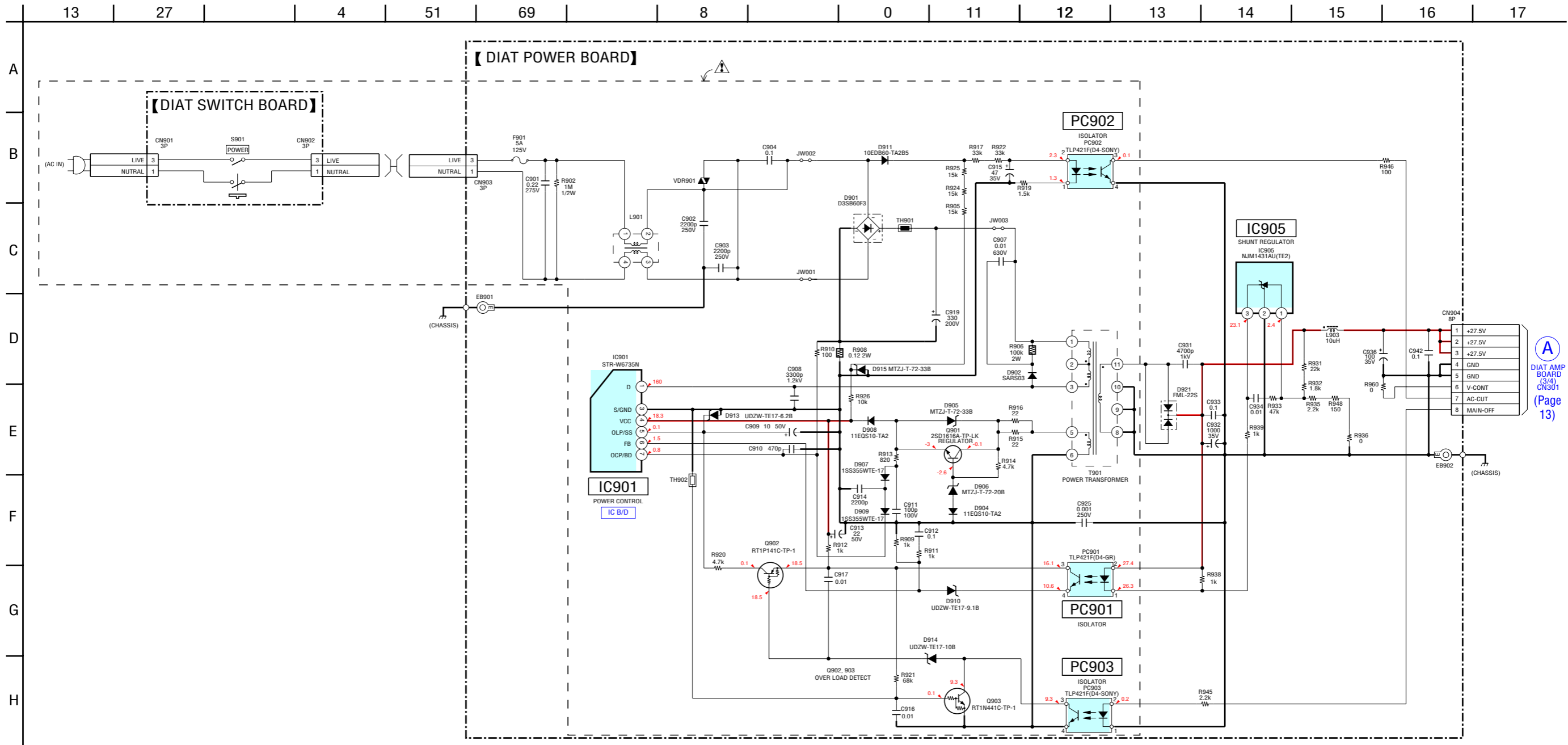
Ref. No.	Location
D901	B-5
D902	B-4
D904	C-4
D905	C-5
D906	C-5
D907	C-5
D908	C-5
D909	C-5
D910	C-4
D911	C-5
D913	C-4
D914	C-4
D915	C-4
D921	B-2
IC901	B-4
IC905	B-3
PC901	C-3
PC902	C-3
PC903	C-3
Q901	C-5
Q902	C-4
Q903	C-5

A
DIAT AMP BOARD
CN301
(Page 10)

11
(11)

11
(11)

3-9. SCHEMATIC DIAGRAM – POWER SUPPLY Section – • See page 17 for IC Block Diagrams.

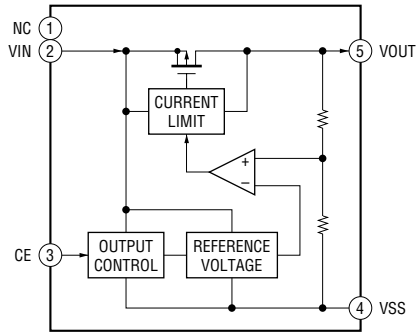


(A) DIAT AMP BOARD (3/4) CN301 (Page 13)

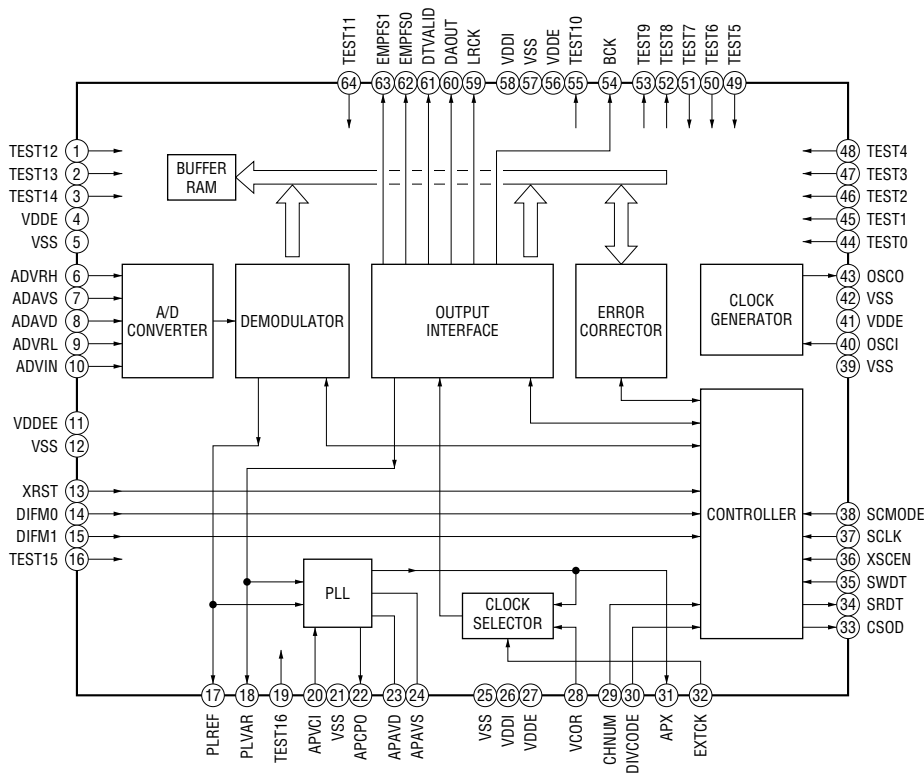
• IC Block Diagrams

– DIAT AMP Board –

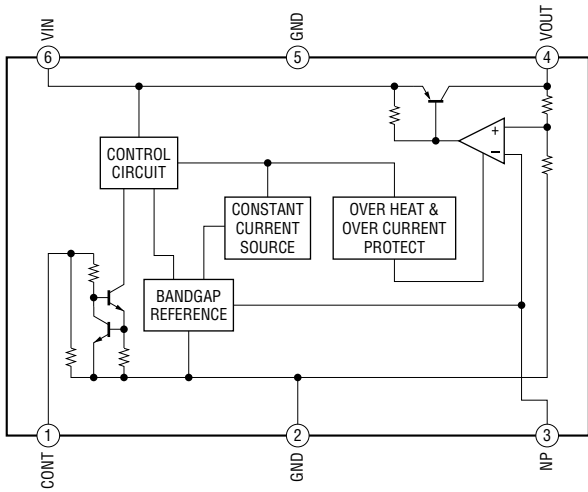
IC101 XC62HR1502MR



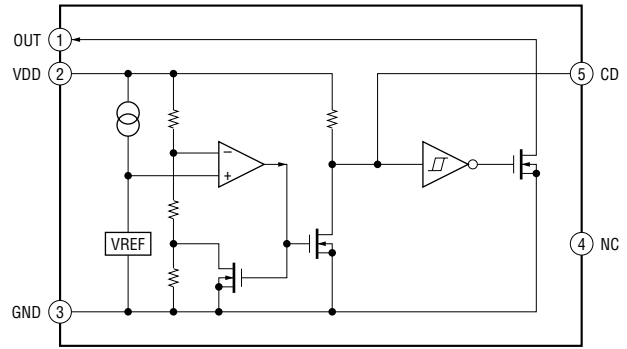
IC102 CXD4017R



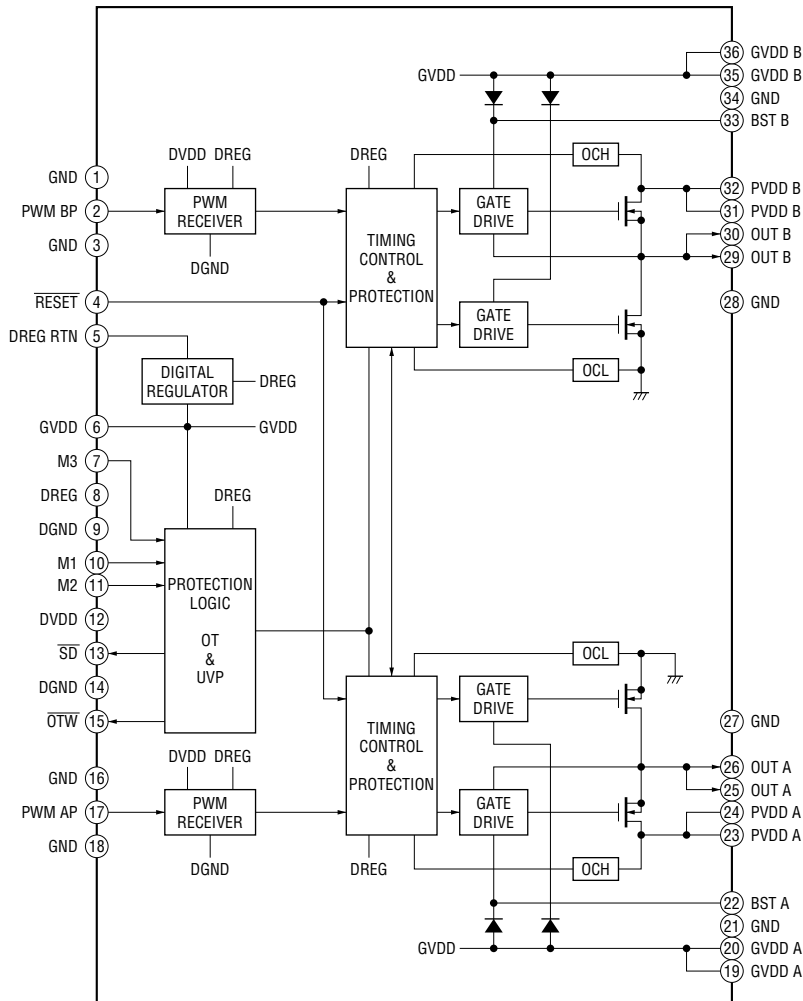
IC104 TK11225CMCL-G



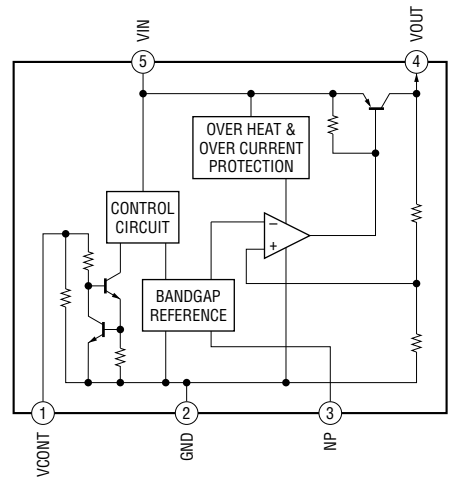
IC105 PST3629NR



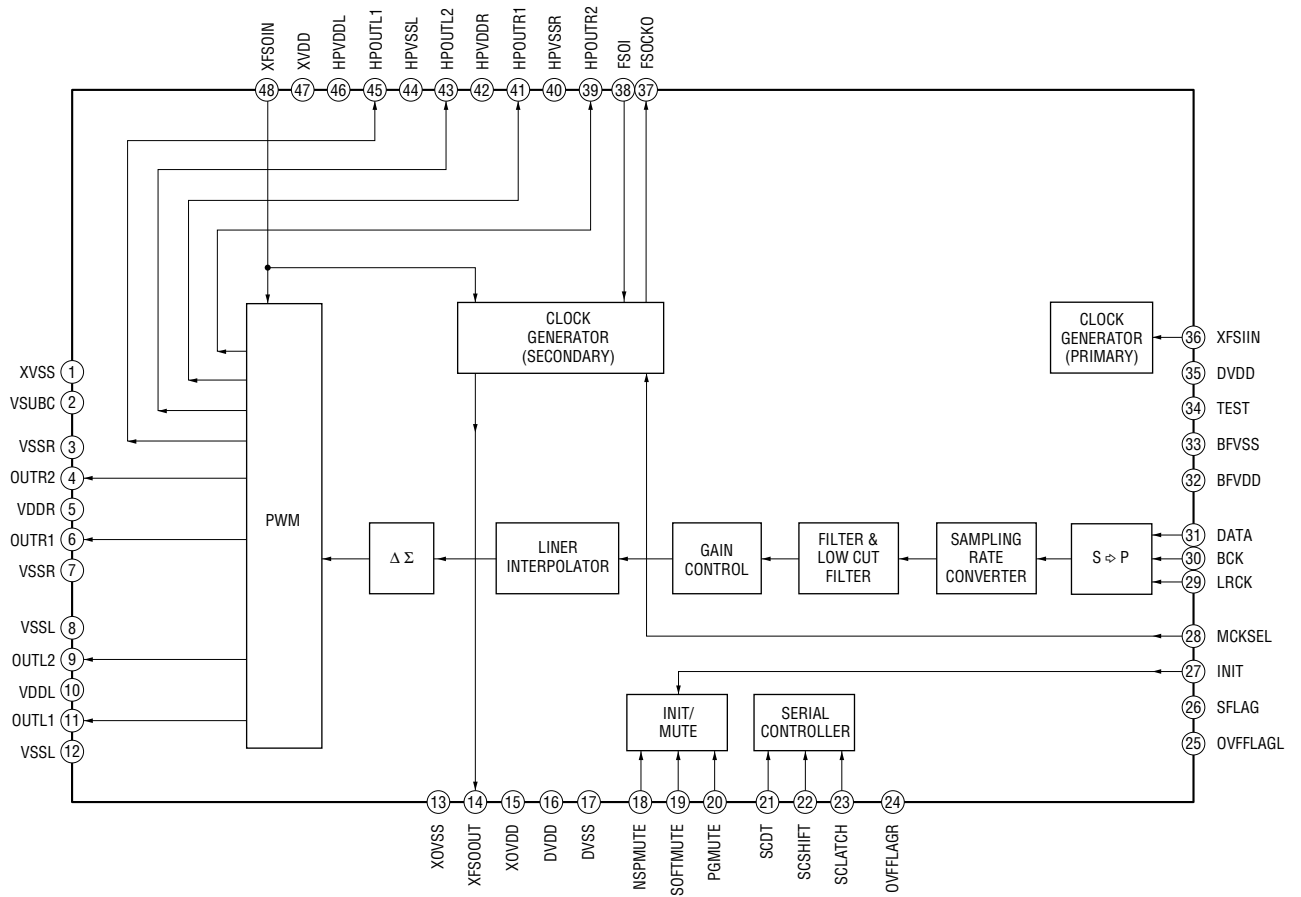
IC110, 112 CXD9774M



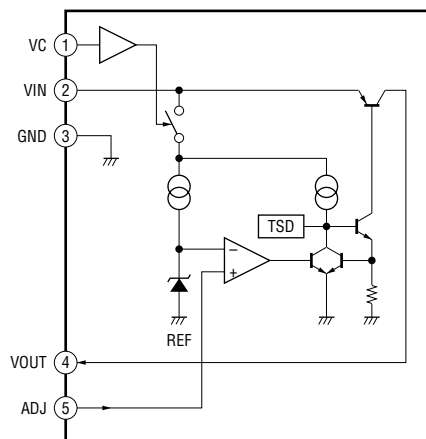
IC113 TK11118CSCL-G



IC301 CXD9843AR

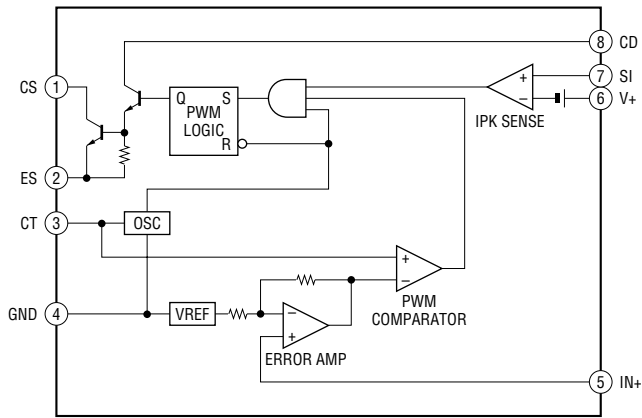


IC903 SI-3120KM-TL



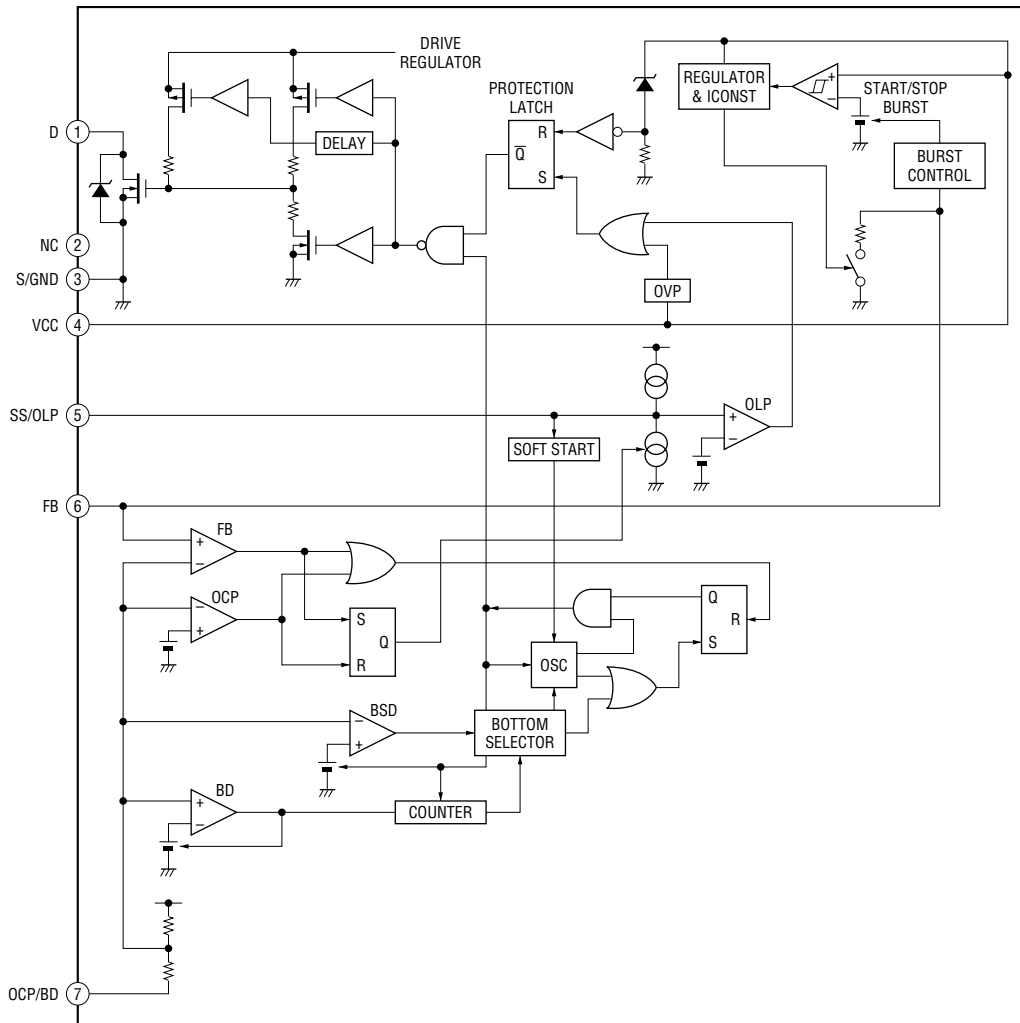
TA-SB500WR2

IC904 NJM2374AE (TE2)



- DIAT POWER Board -

IC901 STR-W6735N



• IC Pin Function Description

DIAT AMP BOARD IC107 MB89537APFM-G-1077E1 (SURROUND AMP CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	DAMP FSDLY	I	Clock delay switch input terminal Fixed at "L" in this set
2	MOD2	I	Setting terminal for the CPU operation mode Fixed at "L" in this set
3, 4	-	O	Not used
5	SL/SR REV	I	Setting terminal for the SL/SR reverse function Fixed at "H" in this set
6	PWR_PWM_CONT	I	Setting terminal for the power control (fix/variable) Fixed at "L" in this set
7 to 10	-	O	Not used
11	AVCC	-	Power supply terminal (+3.3V) (for A/D converter)
12	AVR	I	Reference voltage (+3.3V) input terminal (for A/D converter)
13	AVSS	-	Ground terminal (for A/D converter)
14	DTVALID	I	Data valid flag input from the RF demodulator "L": invalid, "H": valid
15	CSOD	I	Captor start delay signal input from the RF demodulator "H" active
16	-	I	Not used
17	AC CUT	I	AC cut detection signal input terminal "L": AC cut
18	-	I	Not used
19	/RESET	I	Reset signal input terminal "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
20, 21	MOD0, MOD1	I	CPU operation mode setting signal input terminal
22	X0	I	Main system clock input terminal (8 MHz)
23	X1	O	Main system clock output terminal (8 MHz)
24	VSS	-	Ground terminal
25	-	O	Not used
26	XRST_INIT	O	Reset signal output to the RF demodulator and stream processor "L": reset
27, 28	-	O	Not used
29	P23	I	Setting terminal for the CPU operation mode Fixed at "L" in this set
30	P22	I	Setting terminal for the CPU operation mode Fixed at "H" in this set
31	-	O	Not used
32	DAMP_PWM_MODE	I	Setting terminal for the PWM mode output switch Fixed at "H" in this set
33	DAMP_PGMUTE	O	PG muting on/off control signal output to the stream processor "L": muting on
34	DAMP_SOFTMUTE	O	Soft muting on/off control signal output to the stream processor "L": muting on
35	DAMP_NSPMUTE	O	NSP muting on/off control signal output to the stream processor "L": muting on
36	-	O	Not used
37	DRIVER_RST	O	Reset signal output to the power driver "L": reset
38	DRIVER_OCP	I	Shut down state input from the power driver "L": shut down
39	-	I	Not used
40	-	I	Setting terminal for the CPU operation mode Fixed at "H" in this set
41	LED_GREEN	O	LED drive signal output of the ON LINE indicator "H": LED on
42	LED_RED	O	LED drive signal output of the POWER indicator "H": LED on
43 to 47	-	O	Not used
48	SCMODE	O	Control mode selection signal output to the RF demodulator "L": pin setting, "H": serial setting
49	-	-	Not used
50	XSCEN	O	Serial interface enable signal output to the RF demodulator
51	DIAT_SCLK	O	Serial interface data clock signal output to the RF demodulator
52	DIAT_SWDT	O	Serial interface data write signal output to the RF demodulator
53	DIAT_SRDT	I	Serial interface data read signal input from the RF demodulator

Pin No.	Pin Name	I/O	Description
54, 55	-	O	Not used
56	VCC	-	Power supply terminal (+3.3V)
57	MAIN_OFF	O	Power off control signal output to the power control "H": power off
58	V_CONT	O	Voltage control PWM signal output terminal Not used
59	DAMP_LATCH	O	Latch control signal output to the stream processor
60	DAMP_SHIFT	O	Shift clock signal output to the stream processor
61	DAMP_SCDT	O	Serial data output to the stream processor
62	SI2	I	Serial data input terminal
63	-	O	Not used
64	DAMP_OUT2DLY	I	Clock delay switch input terminal Fixed at "L" in this set

SECTION 4 EXPLODED VIEWS

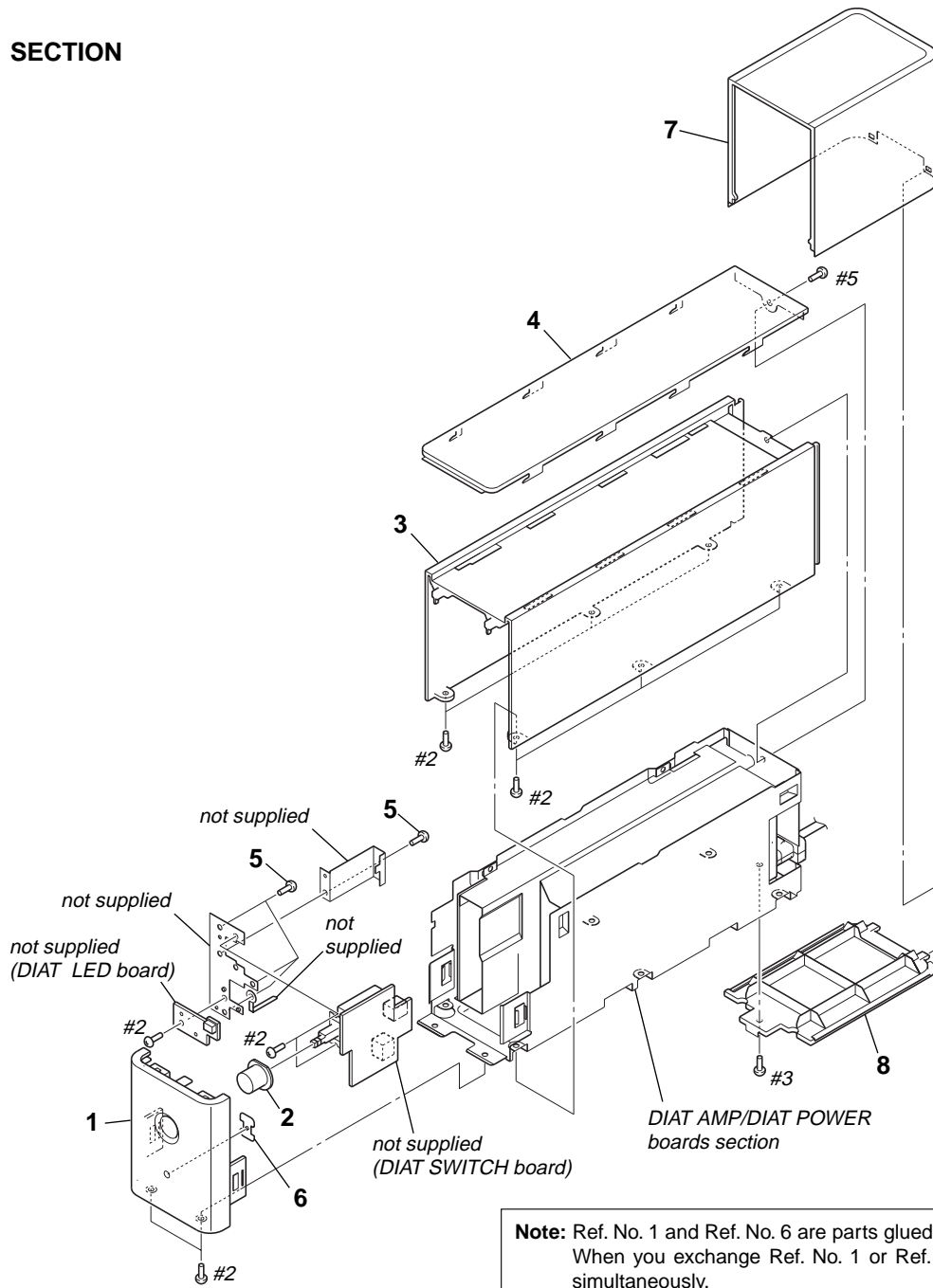
NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) . . . (RED)
 ↑↑
 Parts Color Cabinet's Color

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

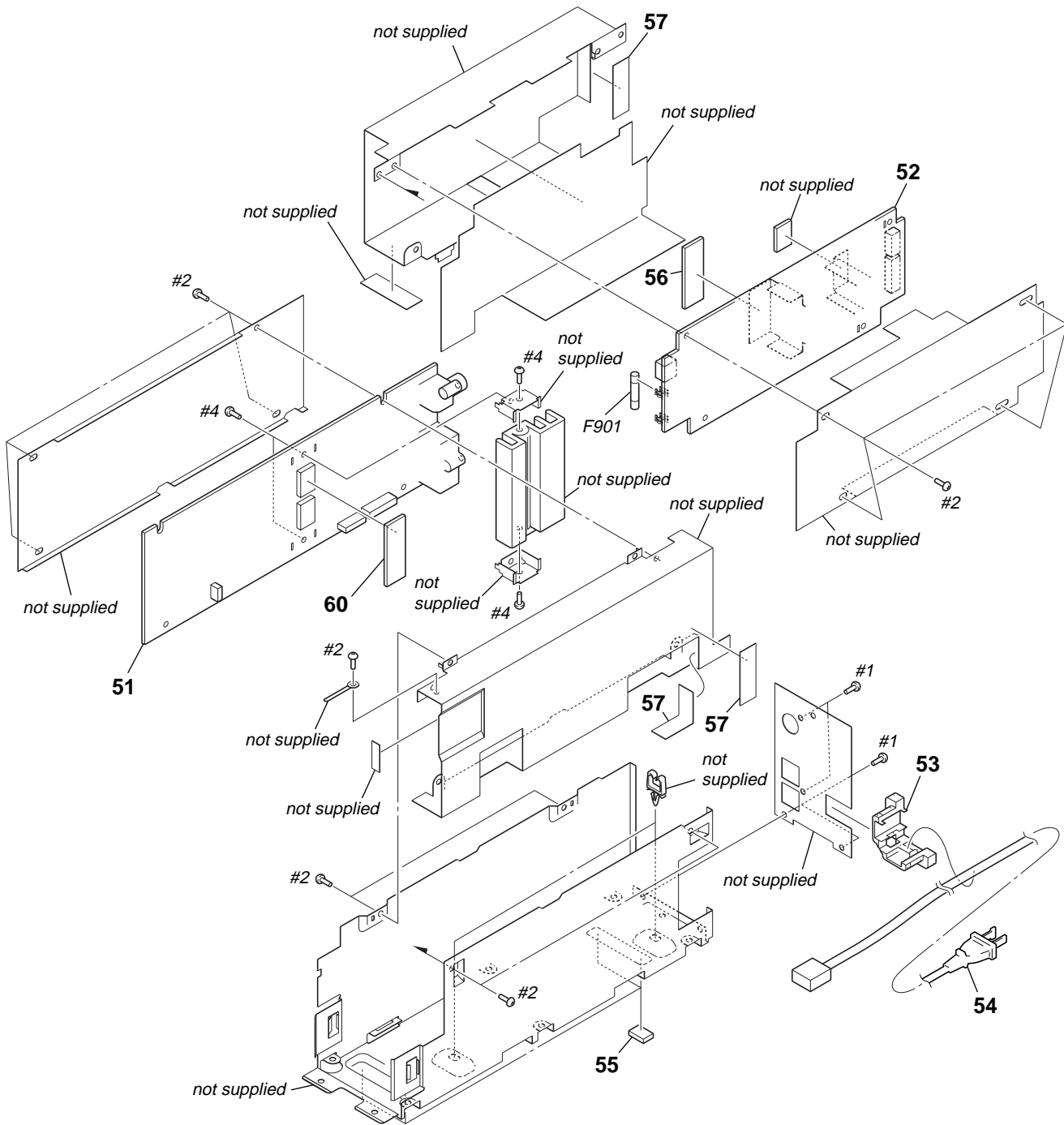
4-1. PANEL SECTION



Note: Ref. No. 1 and Ref. No. 6 are parts glued together. When you exchange Ref. No. 1 or Ref. No. 6, exchange simultaneously.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	2-894-636-01	CABINET, FRONT		7	2-149-273-21	COVER, WIRE	
2	2-891-290-01	BUTTON, POWER		8	2-149-272-11	HOLD, WIRE (A)	
3	2-149-270-21	SIDE, PANEL		#2	7-685-133-19	SCREW +P 2.6X6 TYPE2 NON-SLIT	
4	2-149-269-11	PANEL, TOP		#3	7-682-548-09	SCREW +B 3X8	
5	3-087-053-01	+BVTP2.6 (3CR)		#5	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	
6	2-149-422-02	INDICATOR, POWER					

4-2. DIAT AMP/DIAT POWER BOARDS SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	A-1227-906-A	DIAT AMP BOARD, COMPLETE		57	3-228-738-01	SHEET (D)	
52	A-1221-192-A	DIAT POWER BOARD, COMPLETE		60	2-597-972-21	SHEET, RADIATION	
53	3-703-244-00	BUSHING (2104), CORD		△ F901	1-533-453-12	FUSE, GLASS TUBE (DIA. 5) (5A/125V)	
△ 54	1-830-190-11	CORD, POWER		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
55	2-895-066-01	FOOT		#2	7-685-133-19	SCREW +P 2.6X6 TYPE2 NON-SLIT	
56	4-254-954-01	SHEET (DMB), RADIATION		#4	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3	

SECTION 5 ELECTRICAL PARTS LIST

DIAT AMP

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA... : μ A... uPA... : μ PA...
uPB... : μ PB... uPC... : μ PC...
uPD... : μ PD...
- CAPACITORS
uF: μ F
- COILS
uH: μ H

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	A-1227-906-A	DIAT AMP BOARD, COMPLETE *****					
		< CAPACITOR >					
C101	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C148	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C102	1-126-964-11	ELECT	10uF 20% 50V	C149	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C103	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C150	1-104-658-91	ELECT	100uF 20% 10V
C104	1-126-947-11	ELECT	47uF 20% 35V	C151	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C105	1-107-726-91	CERAMIC CHIP	0.01uF 10% 16V	C153	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C107	1-126-947-11	ELECT	47uF 20% 35V	C154	1-162-915-11	CERAMIC CHIP	10PF 0.5PF 50V
C108	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C155	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C109	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C156	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C110	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C157	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C111	1-107-726-91	CERAMIC CHIP	0.01uF 10% 16V	C158	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C113	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C159	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C114	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C160	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C115	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C161	1-126-933-11	ELECT	100uF 20% 16V
C116	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C162	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C119	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C163	1-126-948-11	ELECT	100uF 20% 35V
C120	1-107-726-91	CERAMIC CHIP	0.01uF 10% 16V	C165	1-164-505-11	CERAMIC CHIP	2.2uF 16V
C122	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	C166	1-164-505-11	CERAMIC CHIP	2.2uF 16V
C123	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	C167	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C124	1-162-920-11	CERAMIC CHIP	27PF 5% 50V	C169	1-164-505-11	CERAMIC CHIP	2.2uF 16V
C125	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	C170	1-164-346-11	CERAMIC CHIP	1uF 16V
C126	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	C171	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C127	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C172	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C128	1-126-947-11	ELECT	47uF 20% 35V	C173	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C129	1-162-920-11	CERAMIC CHIP	27PF 5% 50V	C174	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C130	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C175	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C131	1-125-837-11	CERAMIC CHIP	1uF 10% 6.3V	C176	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C132	1-125-837-11	CERAMIC CHIP	1uF 10% 6.3V	C177	1-115-185-11	CERAMIC CHIP	0.033uF 10% 50V
C133	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C180	1-125-898-11	CERAMIC CHIP	0.22uF 10% 50V
C134	1-125-837-11	CERAMIC CHIP	1uF 10% 6.3V	C181	1-125-898-11	CERAMIC CHIP	0.22uF 10% 50V
C135	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C184	1-137-198-81	FILM	1uF 5% 50V
C136	1-126-947-11	ELECT	47uF 20% 35V	C186	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C137	1-126-964-11	ELECT	10uF 20% 50V	C187	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C138	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C188	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C140	1-126-964-11	ELECT	10uF 20% 50V	C190	1-125-898-11	CERAMIC CHIP	0.22uF 10% 50V
C141	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C191	1-125-898-11	CERAMIC CHIP	0.22uF 10% 50V
C142	1-107-726-91	CERAMIC CHIP	0.01uF 10% 16V	C192	1-137-198-81	FILM	1uF 5% 50V
C143	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C195	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C145	1-115-467-11	CERAMIC CHIP	0.22uF 10% 10V	C196	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C146	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C197	1-115-185-11	CERAMIC CHIP	0.033uF 10% 50V
C147	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C198	1-164-156-11	CERAMIC CHIP	0.1uF 25V
				C199	1-107-898-21	ELECT	2200uF 20% 35V
				C200	1-164-346-11	CERAMIC CHIP	1uF 16V
				C201	1-164-346-11	CERAMIC CHIP	1uF 16V

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DIAT AMP

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C202	1-126-947-11	ELECT	47uF 20%	35V	D107	6-500-885-01	DIODE P6SMBJ33A-5
C203	1-115-185-11	CERAMIC CHIP	0.033uF 10%	50V	D300	6-501-193-01	DIODE 1SS355WTE-17
C204	1-164-156-11	CERAMIC CHIP	0.1uF	25V	D301	6-501-193-01	DIODE 1SS355WTE-17
C205	1-164-156-11	CERAMIC CHIP	0.1uF	25V	D922	8-719-210-21	DIODE 11EQS04
C206	1-164-156-11	CERAMIC CHIP	0.1uF	25V	D933	6-501-174-01	DIODE UDZW-TE17-10B
C207	1-125-898-11	CERAMIC CHIP	0.22uF 10%	50V	D934	6-501-180-01	DIODE UDZW-TE17-18B
C208	1-125-898-11	CERAMIC CHIP	0.22uF 10%	50V			< FERRITE BEAD >
C211	1-164-156-11	CERAMIC CHIP	0.1uF	25V	FB101	1-500-283-11	INDUCTOR, FERRITE BEAD
C212	1-137-198-81	FILM	1uF 5%	50V	FB102	1-500-283-11	INDUCTOR, FERRITE BEAD
C214	1-126-933-11	ELECT	100uF 20%	16V	FB103	1-500-283-11	INDUCTOR, FERRITE BEAD
C215	1-162-970-11	CERAMIC CHIP	0.01uF 10%	25V	FB104	1-500-283-11	INDUCTOR, FERRITE BEAD
C216	1-137-198-81	FILM	1uF 5%	50V	FB109	1-469-760-21	FERRITE, EMI (SMD) (2012)
C219	1-162-964-11	CERAMIC CHIP	0.001uF 10%	50V			< IC >
C220	1-162-908-11	CERAMIC CHIP	3PF 0.25PF	50V	IC101	6-701-851-01	IC XC62HR1502MR
C221	1-125-898-11	CERAMIC CHIP	0.22uF 10%	50V	IC102	8-752-425-06	IC CXD4017R
C222	1-125-898-11	CERAMIC CHIP	0.22uF 10%	50V	IC103	8-759-548-99	IC SN74LV08APWR
C223	1-162-970-11	CERAMIC CHIP	0.01uF 10%	25V	IC104	6-704-261-01	IC TK11225CMCL-G
C227	1-164-156-11	CERAMIC CHIP	0.1uF	25V	IC105	6-701-680-01	IC PST3629NR
C229	1-126-933-11	ELECT	100uF 20%	16V	IC106	8-759-679-55	IC SN74LVC08APWR
C230	1-126-923-91	ELECT	220uF 20%	10V	IC107	6-807-371-01	IC MB89537APFM-G-1077E1
C231	1-115-185-11	CERAMIC CHIP	0.033uF 10%	50V	IC108	6-707-487-01	IC NJM2885DL1-33 (TE2)
C232	1-162-970-11	CERAMIC CHIP	0.01uF 10%	25V	IC109	8-759-679-55	IC SN74LVC08APWR
C233	1-162-970-11	CERAMIC CHIP	0.01uF 10%	25V	IC110	6-704-802-01	IC CXD9774M
C234	1-162-970-11	CERAMIC CHIP	0.01uF 10%	25V	IC112	6-704-802-01	IC CXD9774M
C235	1-107-898-21	ELECT	2200uF 20%	35V	IC113	6-702-300-01	IC TK11118CSSL-G
C237	1-162-908-11	CERAMIC CHIP	3PF 0.25PF	50V	IC114	6-706-492-01	IC TC7SHU04FU (T5RSOJF)
C238	1-164-346-11	CERAMIC CHIP	1uF	16V	IC301	6-707-939-01	IC CXD9843AR
C243	1-164-156-11	CERAMIC CHIP	0.1uF	25V	IC903	6-707-746-01	IC SI-3120KM-TL
C244	1-164-156-11	CERAMIC CHIP	0.1uF	25V	IC904	6-703-978-01	IC NJM2374AE (TE2)
C253	1-115-467-11	CERAMIC CHIP	0.22uF 10%	10V			< JACK >
C266	1-164-156-11	CERAMIC CHIP	0.1uF	25V	J301	1-818-633-11	JACK, PIN 1P (DIR-R1)
C269	1-162-964-11	CERAMIC CHIP	0.001uF 10%	50V			< COIL >
C270	1-162-964-11	CERAMIC CHIP	0.001uF 10%	50V	L101	1-400-305-11	INDUCTOR 47uH
C286	1-163-021-11	CERAMIC CHIP	0.01uF 10%	50V	L102	1-469-525-11	INDUCTOR 10uH
C287	1-163-021-11	CERAMIC CHIP	0.01uF 10%	50V	L103	1-469-525-11	INDUCTOR 10uH
C288	1-163-021-11	CERAMIC CHIP	0.01uF 10%	50V	L104	1-469-525-11	INDUCTOR 10uH
C289	1-163-021-11	CERAMIC CHIP	0.01uF 10%	50V	L105	1-469-525-11	INDUCTOR 10uH
C300	1-100-566-91	CERAMIC CHIP	0.1uF 10%	25V	L112	1-456-680-11	INDUCTOR 10uH
C385	1-126-948-11	ELECT	100uF 20%	35V	L115	1-456-680-11	INDUCTOR 10uH
C937	1-115-339-11	CERAMIC CHIP	0.1uF 10%	50V	L118	1-456-680-11	INDUCTOR 10uH
C938	1-164-156-11	CERAMIC CHIP	0.1uF	25V	L119	1-414-754-11	INDUCTOR 10uH
C940	1-164-230-11	CERAMIC CHIP	220PF 5%	50V	L121	1-456-680-11	INDUCTOR 10uH
C941	1-135-372-31	ELECT	470uF 20%	10V	L122	1-412-939-11	INDUCTOR 1uH
C951	1-115-339-11	CERAMIC CHIP	0.1uF 10%	50V	L123	1-457-078-11	AIR-CORE COIL
C952	1-126-948-11	ELECT	100uF 20%	35V	L124	1-457-077-11	AIR-CORE COIL
C953	1-115-339-11	CERAMIC CHIP	0.1uF 10%	50V	L125	1-457-078-11	AIR-CORE COIL
C954	1-115-339-11	CERAMIC CHIP	0.1uF 10%	50V	L126	1-457-077-11	AIR-CORE COIL
		< CONNECTOR >			L908	1-416-040-11	INDUCTOR 220uH
CN309	1-568-826-11	CONNECTOR SOCKET 7P			L909	1-414-398-11	INDUCTOR 10uH
		< DIODE >					< TRANSISTOR >
D102	6-501-193-01	DIODE 1SS355WTE-17			Q102	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF
D103	6-501-193-01	DIODE 1SS355WTE-17			Q103	8-729-027-43	TRANSISTOR DTC114EKA-T146
D104	6-500-885-01	DIODE P6SMBJ33A-5					
D105	6-500-885-01	DIODE P6SMBJ33A-5					
D106	6-500-885-01	DIODE P6SMBJ33A-5					

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
Q104	8-729-027-43	TRANSISTOR	DTC114EKA-T146			R150	1-216-809-11	METAL CHIP	100	5%	1/10W
Q105	8-729-600-22	TRANSISTOR	2SA1235-F			R151	1-216-809-11	METAL CHIP	100	5%	1/10W
Q106	8-729-600-22	TRANSISTOR	2SA1235-F			R152	1-216-809-11	METAL CHIP	100	5%	1/10W
Q107	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF			R153	1-216-845-11	METAL CHIP	100K	5%	1/10W
Q108	8-729-600-22	TRANSISTOR	2SA1235-F			R154	1-216-845-11	METAL CHIP	100K	5%	1/10W
Q109	8-729-600-22	TRANSISTOR	2SA1235-F			R155	1-216-845-11	METAL CHIP	100K	5%	1/10W
Q110	8-729-027-23	TRANSISTOR	DTA114EKA-T146			R156	1-216-845-11	METAL CHIP	100K	5%	1/10W
Q111	8-729-027-23	TRANSISTOR	DTA114EKA-T146			R157	1-216-845-11	METAL CHIP	100K	5%	1/10W
Q112	8-729-027-23	TRANSISTOR	DTA114EKA-T146			R158	1-216-845-11	METAL CHIP	100K	5%	1/10W
Q300	8-729-600-22	TRANSISTOR	2SA1235-F			R159	1-216-845-11	METAL CHIP	100K	5%	1/10W
		< RESISTOR >				R160	1-216-809-11	METAL CHIP	100	5%	1/10W
R100	1-216-811-11	METAL CHIP	150	5%	1/10W	R161	1-216-809-11	METAL CHIP	100	5%	1/10W
R101	1-216-833-11	METAL CHIP	10K	5%	1/10W	R162	1-216-809-11	METAL CHIP	100	5%	1/10W
R102	1-216-820-11	METAL CHIP	820	5%	1/10W	R163	1-216-809-11	METAL CHIP	100	5%	1/10W
R103	1-216-815-11	METAL CHIP	330	5%	1/10W	R167	1-220-942-11	METAL CHIP	3.3	1%	1/4W
R104	1-216-827-11	METAL CHIP	3.3K	5%	1/10W	R168	1-216-864-11	SHORT CHIP	0		
R105	1-216-841-11	METAL CHIP	47K	5%	1/10W	R171	1-216-841-11	METAL CHIP	47K	5%	1/10W
R106	1-216-809-11	METAL CHIP	100	5%	1/10W	R173	1-216-809-11	METAL CHIP	100	5%	1/10W
R108	1-216-809-11	METAL CHIP	100	5%	1/10W	R175	1-216-809-11	METAL CHIP	100	5%	1/10W
R109	1-216-827-11	METAL CHIP	3.3K	5%	1/10W	R178	1-216-821-11	METAL CHIP	1K	5%	1/10W
R110	1-216-821-11	METAL CHIP	1K	5%	1/10W	R179	1-216-864-11	SHORT CHIP	0		
R111	1-216-813-11	METAL CHIP	220	5%	1/10W	R180	1-220-942-11	METAL CHIP	3.3	1%	1/4W
R112	1-216-809-11	METAL CHIP	100	5%	1/10W	R181	1-216-809-11	METAL CHIP	100	5%	1/10W
R113	1-216-809-11	METAL CHIP	100	5%	1/10W	R183	1-216-809-11	METAL CHIP	100	5%	1/10W
R114	1-216-809-11	METAL CHIP	100	5%	1/10W	R189	1-220-942-11	METAL CHIP	3.3	1%	1/4W
R115	1-216-809-11	METAL CHIP	100	5%	1/10W	R194	1-216-801-11	METAL CHIP	22	5%	1/10W
R116	1-216-807-11	METAL CHIP	68	5%	1/10W	R196	1-216-821-11	METAL CHIP	1K	5%	1/10W
R117	1-216-833-11	METAL CHIP	10K	5%	1/10W	R197	1-216-864-11	SHORT CHIP	0		
R118	1-216-821-11	METAL CHIP	1K	5%	1/10W	R198	1-220-942-11	METAL CHIP	3.3	1%	1/4W
R119	1-216-821-11	METAL CHIP	1K	5%	1/10W	R199	1-216-845-11	METAL CHIP	100K	5%	1/10W
R120	1-216-821-11	METAL CHIP	1K	5%	1/10W	R200	1-216-857-11	METAL CHIP	1M	5%	1/10W
R122	1-216-833-11	METAL CHIP	10K	5%	1/10W	R201	1-216-809-11	METAL CHIP	100	5%	1/10W
R123	1-216-837-11	METAL CHIP	22K	5%	1/10W	R204	1-216-833-11	METAL CHIP	10K	5%	1/10W
R124	1-216-841-11	METAL CHIP	47K	5%	1/10W	R205	1-216-833-11	METAL CHIP	10K	5%	1/10W
R125	1-216-811-11	METAL CHIP	150	5%	1/10W	R206	1-216-833-11	METAL CHIP	10K	5%	1/10W
R126	1-216-821-11	METAL CHIP	1K	5%	1/10W	R207	1-216-833-11	METAL CHIP	10K	5%	1/10W
R127	1-216-841-11	METAL CHIP	47K	5%	1/10W	R208	1-216-833-11	METAL CHIP	10K	5%	1/10W
R129	1-216-809-11	METAL CHIP	100	5%	1/10W	R209	1-216-833-11	METAL CHIP	10K	5%	1/10W
R130	1-216-809-11	METAL CHIP	100	5%	1/10W	R210	1-216-833-11	METAL CHIP	10K	5%	1/10W
R131	1-216-841-11	METAL CHIP	47K	5%	1/10W	R211	1-216-833-11	METAL CHIP	10K	5%	1/10W
R132	1-216-809-11	METAL CHIP	100	5%	1/10W	R252	1-216-833-11	METAL CHIP	10K	5%	1/10W
R133	1-216-809-11	METAL CHIP	100	5%	1/10W	R253	1-216-841-11	METAL CHIP	47K	5%	1/10W
R134	1-216-809-11	METAL CHIP	100	5%	1/10W	R254	1-216-833-11	METAL CHIP	10K	5%	1/10W
R137	1-216-809-11	METAL CHIP	100	5%	1/10W	R256	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R138	1-216-809-11	METAL CHIP	100	5%	1/10W	R258	1-216-841-11	METAL CHIP	47K	5%	1/10W
R139	1-216-809-11	METAL CHIP	100	5%	1/10W	R259	1-216-821-11	METAL CHIP	1K	5%	1/10W
R140	1-216-809-11	METAL CHIP	100	5%	1/10W	R261	1-216-809-11	METAL CHIP	100	5%	1/10W
R141	1-216-809-11	METAL CHIP	100	5%	1/10W	R262	1-216-809-11	METAL CHIP	100	5%	1/10W
R142	1-216-809-11	METAL CHIP	100	5%	1/10W	R263	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R143	1-216-864-11	SHORT CHIP	0			R264	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R144	1-216-809-11	METAL CHIP	100	5%	1/10W	R265	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R145	1-216-809-11	METAL CHIP	100	5%	1/10W	R266	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R146	1-216-809-11	METAL CHIP	100	5%	1/10W	R274	1-216-841-11	METAL CHIP	47K	5%	1/10W
R147	1-216-809-11	METAL CHIP	100	5%	1/10W	R276	1-216-841-11	METAL CHIP	47K	5%	1/10W
R148	1-216-809-11	METAL CHIP	100	5%	1/10W	R278	1-216-841-11	METAL CHIP	47K	5%	1/10W
R149	1-216-809-11	METAL CHIP	100	5%	1/10W	R283	1-216-841-11	METAL CHIP	47K	5%	1/10W
						R300	1-216-833-11	METAL CHIP	10K	5%	1/10W
						R410	1-216-841-11	METAL CHIP	47K	5%	1/10W

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DIAT AMP **DIAT LED** **DIAT POWER**

Ref. No.	Part No.	Description	Remark
R412	1-216-864-11	SHORT CHIP	0
R940	1-218-446-11	METAL CHIP	1 5% 1/10W
R941	1-218-446-11	METAL CHIP	1 5% 1/10W
R942	1-216-823-11	METAL CHIP	1.5K 5% 1/10W
R943	1-216-823-11	METAL CHIP	1.5K 5% 1/10W
R944	1-216-821-11	METAL CHIP	1K 5% 1/10W
R950	1-216-864-11	SHORT CHIP	0
R952	1-216-847-11	METAL CHIP	150K 5% 1/10W
R954	1-216-864-11	SHORT CHIP	0
< TERMINAL >			
TB301	1-780-452-11	TERMINAL BOARD (SPEAKER) 2P	
< VIBRATOR >			
X101	1-781-465-21	VIBRATOR, CRYSTAL (12.288MHz)	
X102	1-795-313-21	VIBRATOR, CERAMIC (8MHz)	
X103	1-795-660-21	QUARTZ CRYSTAL UNIT (49.152MHz)	

DIAT LED BOARD			

< LED >			
D400	8-719-920-55	LED SPR-54MVW (POWER/ON-LINE)	

A-1221-192-A	DIAT POWER BOARD, COMPLETE		

7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3		
< CAPACITOR >			
△ C901	1-165-529-11	MYLAR	0.22uF 10 275V
△ C902	1-117-700-51	CERAMIC	0.0022uF 250V
△ C903	1-117-700-51	CERAMIC	0.0022uF 250V
△ C904	1-165-528-11	MYLAR	0.1uF 10 275V
△ C907	1-165-883-11	CERAMIC CHIP	10000PF 10% 630V
△ C908	1-117-631-11	FILM	3300PF 3% 1.2KV
△ C909	1-107-906-11	ELECT	10uF 20% 50V
△ C910	1-164-315-11	CERAMIC CHIP	470PF 5% 50V
△ C911	1-164-162-11	CERAMIC CHIP	100PF 5% 100V
△ C912	1-115-339-11	CERAMIC CHIP	0.1uF 10% 50V
△ C913	1-107-907-11	ELECT	22uF 20% 50V
△ C914	1-162-966-11	CERAMIC CHIP	0.0022uF 10% 50V
△ C915	1-104-962-91	ELECT	47uF 20% 35V
△ C916	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
△ C917	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
△ C919	1-100-922-11	ELECT	330uF 20% 200V
△ C925	1-117-699-11	CERAMIC	0.001uF 250V
C931	1-125-782-91	CERAMIC	4700PF 10% 1KV
C932	1-128-959-21	ELECT	1000uF 20% 35V
C933	1-115-339-11	CERAMIC CHIP	0.1uF 10% 50V
C934	1-163-021-11	CERAMIC CHIP	0.01uF 10% 50V
C936	1-126-948-11	ELECT	100uF 20% 35V
C942	1-115-339-11	CERAMIC CHIP	0.1uF 10% 50V
< CONNECTOR >			
△ CN903	1-695-044-11	PIN, CONNECTOR (3.96mm PITCH) 2P	

Ref. No.	Part No.	Description	Remark
* CN904	1-564-523-11	PLUG, CONNECTOR 8P	
< DIODE >			
△ D901	8-719-077-77	DIODE D3SB60F3	
△ D902	6-500-241-01	DIODE SARS03	
△ D904	8-719-200-93	DIODE 11EQS10-TA2	
△ D905	8-719-982-26	DIODE MTZJ-33B	
△ D906	8-719-079-19	DIODE MTZJ-T-72-20B	
△ D907	6-501-193-01	DIODE 1SS355WTE-17	
△ D908	8-719-200-93	DIODE 11EQS10-TA2	
△ D909	6-501-193-01	DIODE 1SS355WTE-17	
△ D910	6-501-173-01	DIODE UDZW-TE17-9.1B	
△ D911	6-500-593-41	DIODE 10EDB60-TA2B5	
△ D913	6-501-169-01	DIODE UDZW-TE17-6.2B	
△ D914	6-501-174-01	DIODE UDZW-TE17-10B	
△ D915	8-719-982-26	DIODE MTZJ-33B	
D921	8-719-313-14	DIODE FML-22S	
< FUSE HOLDER >			
FH901	1-533-217-31	HOLDER, FUSE	
FH902	1-533-217-31	HOLDER, FUSE	
< IC >			
△ IC901	6-706-347-01	IC STR-W6735N	
IC905	6-707-799-01	IC NJM1431AU (TE2)	
< COIL >			
△ L901	1-424-930-11	COIL, LINE FILTER	
L903	1-456-509-11	INDUCTOR	10uH
< IC >			
△ PC901	6-600-438-01	IC TLP421F (D4-GR)	
△ PC902	8-749-018-06	IC TLP421F (D4-SONY)	
△ PC903	8-749-018-06	IC TLP421F (D4-SONY)	
< TRANSISTOR >			
△ Q901	8-729-142-51	TRANSISTOR	2SD1616A-TP-LK
△ Q902	8-729-027-23	TRANSISTOR	DTA114EKA-T146
△ Q903	8-729-038-28	TRANSISTOR	RT1N441C-TP-1
< RESISTOR >			
△ R902	1-219-759-11	METAL	1M 5% 1/2W F
△ R905	1-249-431-11	CARBON	15K 5% 1/4W
△ R906	1-215-904-11	METAL OXIDE	100K 5% 2W F
△ R908	1-245-261-61	METAL OXIDE	0.12 5% 2W F
△ R909	1-216-821-11	METAL CHIP	1K 5% 1/10W
△ R910	1-216-809-11	METAL CHIP	100 5% 1/10W
△ R911	1-216-821-11	METAL CHIP	1K 5% 1/10W
△ R912	1-249-417-11	CARBON	1K 5% 1/4W
△ R913	1-249-416-11	CARBON	820 5% 1/4W
△ R914	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
△ R915	1-216-801-11	METAL CHIP	22 5% 1/10W
△ R916	1-216-801-11	METAL CHIP	22 5% 1/10W
△ R917	1-249-435-11	CARBON	33K 5% 1/4W
△ R919	1-216-823-11	METAL CHIP	1.5K 5% 1/10W
△ R920	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
△ R921	1-216-843-11	METAL CHIP	68K 5% 1/10W

Ref. No.	Part No.	Description			Remark
△ R922	1-249-435-11	CARBON	33K	5%	1/4W
△ R924	1-249-431-11	CARBON	15K	5%	1/4W
△ R925	1-249-431-11	CARBON	15K	5%	1/4W
△ R926	1-216-833-11	METAL CHIP	10K	5%	1/10W
R931	1-218-724-11	METAL CHIP	22K	0.5%	1/10W
R932	1-216-824-11	METAL CHIP	1.8K	5%	1/10W
R933	1-216-841-11	METAL CHIP	47K	5%	1/10W
R935	1-218-700-11	METAL CHIP	2.2K	0.5%	1/10W
R936	1-216-864-11	SHORT CHIP	0		
R938	1-216-821-11	METAL CHIP	1K	5%	1/10W
R939	1-216-821-11	METAL CHIP	1K	5%	1/10W
R945	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R946	1-216-809-11	METAL CHIP	100	5%	1/10W
R948	1-216-811-11	METAL CHIP	150	5%	1/10W
R960	1-216-864-11	SHORT CHIP	0		
< TRANSFORMER >					
△ T901	1-445-131-11	TRANSFORMER, DC CONVERTER			
< THERMISTOR >					
△ TH901	1-805-799-11	THERMISTOR, NTC 8.0			
△ TH902	1-805-553-21	THERMISTOR, POSITIVE			
< VARISTOR >					
△ VDR901	1-805-482-11	VARISTOR			

DIAT SWITCH BOARD					

< CONNECTOR >					
△ CN901	1-695-044-11	PIN, CONNECTOR (3.96mm PITCH) 2P			
△ CN902	1-695-044-11	PIN, CONNECTOR (3.96mm PITCH) 2P			
< SWITCH >					
△ S901	1-571-433-31	SWITCH, PUSH (AC POWER) (POWER)			

MISCELLANEOUS					

△ 54	1-830-190-11	CORD, POWER			
△ F901	1-533-453-12	FUSE, GLASS TUBE (DIA. 5) (5A/125V)			

