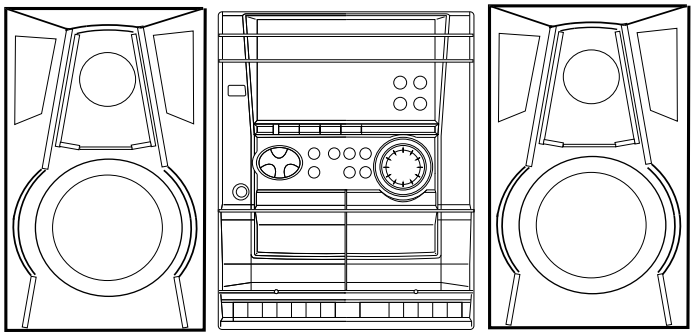
aiwa SERVICE

NSX-AJ10 U
NSX-SZ10 LH
NSZ-SZ10E HA



SERVICE MANUAL

COMPACT DISC STEREO CASSETTE RECEIVER

BASIC TAPE MECHANISM : ZZM-2 PR1NM / PR1NC
BASIC CD MECHANISM : AZG-1

SYSTEM	CD CASSEIVER	SPEAKER	CD MECHANISM	REMOTE CONTROLLER
NSX-AJ10	CX-NAJ10	SX-NAJ12	ZD8RNDC	RC-ZAS02
NSX-SZ10	CX-NSZ10	SX-NSZ15	ZD8RNDC	
NSX-SZ10E	CX-NSZ10E	SX-NSZ15	ZD8RNDM	

- This Service Manual is the “Revision Publishing” and replaces “Simple Manual” NSX-AJ10(U)/NSX-SZ10(LH), (S/M Code No. 09-99C-424-8T1).
- If requiring information about the CD mechanism, see Service Manual of AZG-1 ZD8RNDM, (S/M Code No. 09-001-335-3N6) and AZG-1 ZD8RNDC, (S/M Code No. 09-001-335-3NA).

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S/M Code No. 09-003-424-8R1

REVISION DATA

SPECIFICATIONS <HA,LH>

<FM tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

<AM tuner section>

Tuning range	530 kHz to 1710 kHz (10 kHz step) 531 kHz to 1602 kHz (9 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

<Amplifier section>

Power output	Rated 28 W + 28 W (1 kHz, T.H.D. 1 %, 6 ohms) Reference 35 W + 35 W (1 kHz, T.H.D. 10 %, 6 ohms)
Total harmonic distortion	0.1 % (14 W, 1 kHz, 6 ohms, DIN AUDIO)
Inputs	VIDEO/AUX: 500 mV
Outputs	SPEAKERS: accept speakers of 6 ohms or more PHONES (stereo jack): accepts headphones of 32 ohms or more

<Cassette deck section>

Track format	4 tracks, 2 channels stereo
Frequency response	50 Hz – 8000 Hz
Recording system	AC bias
Heads	Deck 1 : Recording/playback head x 1, erase head x 1 Deck 2 : Playback head x 1

<Compact disc player section>

Laser	Semiconductor laser (λ =780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)

<Speaker system SX-NSZ15>

Speaker System	2 way, bass reflex (magnetic shielded type)
Speaker units	Woofer: 120 mm cone type Tweeter: 20mm ceramic type
Impedance	6 ohms
Sensitivity	86 dB/W/m
Dimensions (W x H x D)	220 x 324 x 204 mm
Weight	2.0 kg

<General>

Power requirements	120 V/220-230 V/240 V AC (switchable), 50/60 Hz
Power consumption	55 W
Power consumption in standby mode	With power-economizing mode off : 12 W With power-economizing mode on : 0.9 W
Dimensions of main unit (W x H x D)	260 x 324 x 346 mm
Weight of main unit	5.7 kg

• Design and specifications are subject to change without notice.

SPECIFICATIONS <U>

<FM tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

<AM tuner section>

Tuning range	530 kHz to 1710 kHz (10 kHz step) 531 kHz to 1602 kHz (9 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

<Amplifier section>

Power output	Rated 10 W + 10 W (50 Hz to 20 kHz, T.H.D. 1 %, 6 ohms) Reference 15 W + 15 W (1 kHz, T.H.D. 10 %, 6 ohms)
Total harmonic distortion	0.1 % (6 W, 1 kHz, 6 ohms, DIN AUDIO)
Inputs	VIDEO/AUX: 500 mV
Outputs	SPEAKERS: accept speakers of 6 ohms or more PHONES (stereo jack): accepts headphones of 32 ohms or more

<Cassette deck section>

Track format	4 tracks, 2 channels stereo
Frequency response	50 Hz – 8000 Hz
Recording system	AC bias
Heads	Deck 1 : Recording/playback head x 1, erase head x 1 Deck 2 : Playback head x 1

<Compact disc player section>

Laser	Semiconductor laser (λ =780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)

<Speaker system SX-NAJ12>

Speaker System	2 way, bass reflex (magnetic shielded type)
Speaker units	Woofer: 120 mm cone type Tweeter: 20mm ceramic type
Impedance	6 ohms
Sensitivity	86 dB/W/m
Dimensions (W x H x D)	220 x 324 x 235 mm
Weight	2.0 kg

<General>

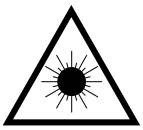
Power requirements	120 V AC, 60 Hz
Power consumption	38 W
Power consumption in standby mode	With power-economizing mode off : 8.0 W With power-economizing mode on : 0.9 W
Dimensions of main unit (W x H x D)	260 x 324 x 346 mm
Weight of main unit	5.7 kg

• Design and specifications are subject to change without notice.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynling laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

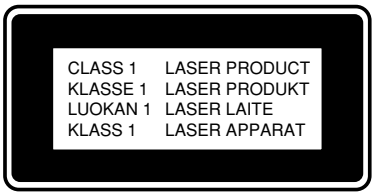
VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!
Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

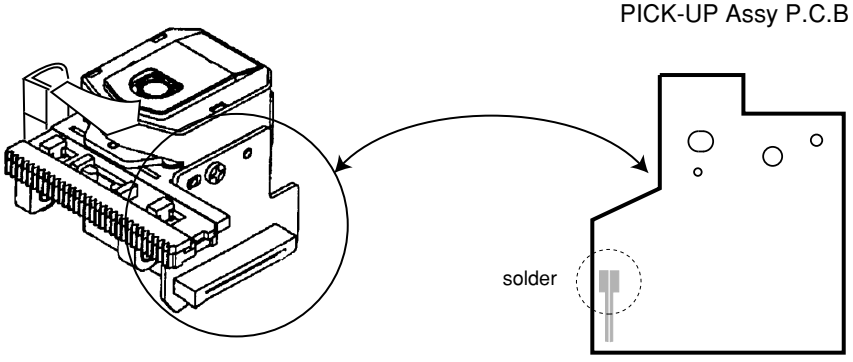
This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



Precaution to replace Optical block (KSM-880CAB)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.



NOTE ON BEFORE STARTING REPAIR

1. Forced discharge of electrolytic capacitor of power supply block

When repair is going to be attempted in the set that uses relay circuit in the power supply block, electric potential is kept charged across the electrolytic capacitors (C101, 102) even though AC power cord is removed. If repair is attempted in this condition, secondary defect can occur.
In order to prevent the secondary trouble, perform the following measures before starting repair work.

Discharge procedure

① Remove the AC power cord.
② Connect a discharging resistor at an end of lead wire that has clips at both ends. Connect the other end of the lead wire to metal chassis.
③ Contact the other end of the discharging resistor to the positive (+) side (+VH) of C101. (For two seconds)
④ Contact the same end of the discharging resistor as step ③ to the negative (-) side (-VH) of C102 in the same way. (For two seconds)
⑤ Check that voltage across C101 and C102 has decreased to 1 V or less using a multimeter or an oscilloscope.

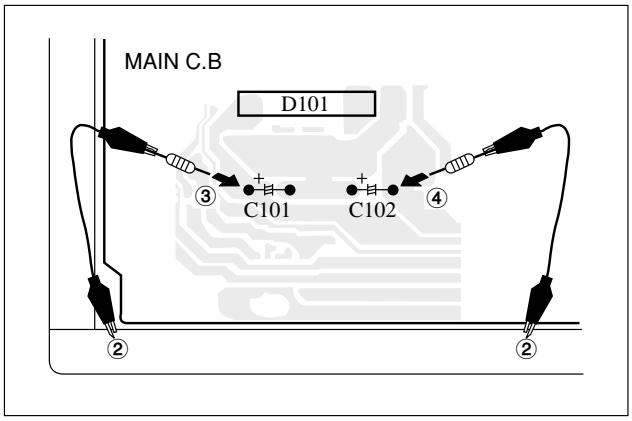


Fig-1

Select a discharging resistor referring to the following table.

Charging voltage (V) (C101, 102)	Discharging resistor (Ω)	Rated power (W)	Parts number
25-48	100	3	87-A00-247-090
49-140	220	5	87-A00-232-090

Note: The reference numbers (C101, C102) of the electrolytic capacitors can change depending on the models. Be sure to check the reference numbers of the charging capacitors on schematic diagram before starting the discharging work.

2. Check items before exchanging the MICROCOMPUTER

Be sure to check the following items before exchanging the MICROCOMPUTER. Exchange the MICROCOMPUTER after confirming that the MICROCOMPUTER is surely defective.

2-1. Regarding the HOLD terminal of the MICROCOMPUTER

When the HOLD terminal (INPUT) of the MICROCOMPUTER is "H", the MICROCOMPUTER is judged to be operating correctly. When this terminal is "L", the main power cannot be turned on. Therefore, be sure to check the terminal voltage of the HOLD terminal before exchange.
When the MICROCOMPUTER is not defective, the HOLD terminal can also go "L" when the POWER AMPLIFIER has any abnormalities that triggers the abnormality detection circuit on the MAIN C. B. that sets the HOLD terminal to "L".

- Good or no good judgement of the MICROCOMPUTER

① Turn on the AC main power.
② Confirm that the main power is turned on and the HOLD terminal of the MICROCOMPUTER keeps the "H" level or not.
③ When the HOLD terminal is "L" level, the abnormality detection circuit is judged to be working correctly and the MICROCOMPUTER is judged to be good.

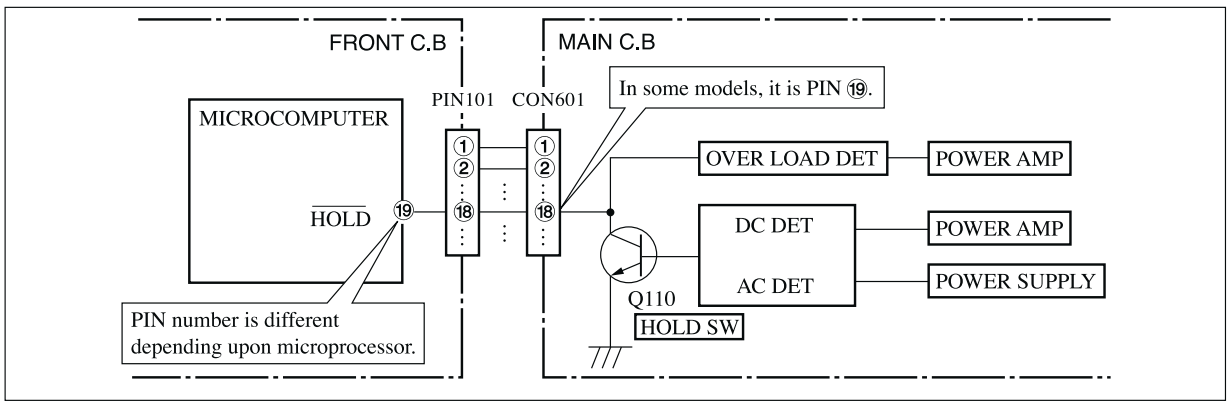


Fig-2-1

In such a case, check also if the POWER AMPLIFIER circuit or power supply circuit has any abnormalities or not.

2-2. Regarding reset

There are cases that the machine does not work correctly because the MICROCOMPUTER is not reset even though the AC power cord is re-inserted, or the software reset (pressing the STOP key + POWER key) is performed.
When the above described phenomenon occurs, it can lead to wrong judgement as if the MICROCOMPUTER is defective and to exchange the MICROCOMPUTER. In such a case, perform the forced-reset by the following procedure and check good or no good of the MICROCOMPUTER.

① Remove the AC power cord.

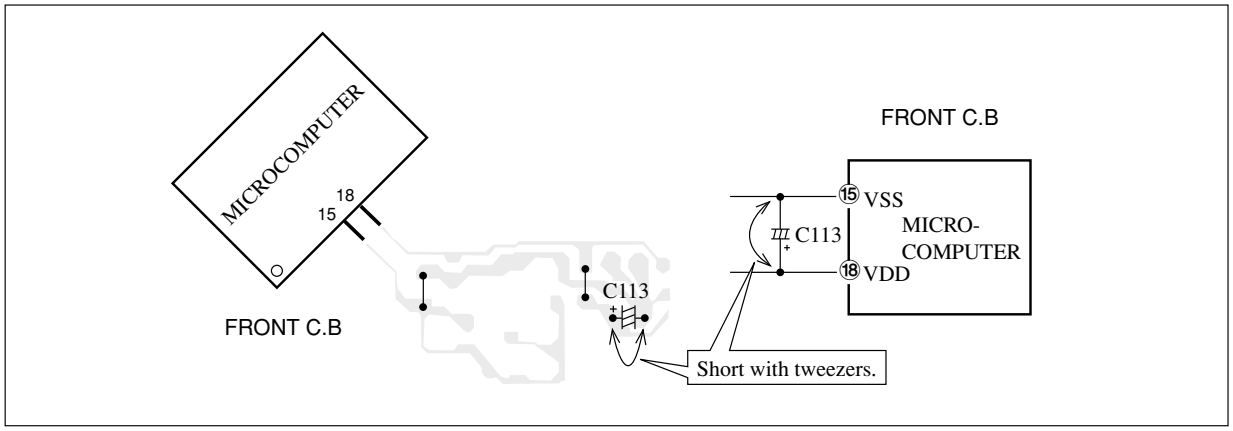


Fig-2-2

② Short both ends of the electrolytic capacitor C113 that is connected to VDD of the MICROCOMPUTER with tweezers.
③ Connect the AC power cord again. If the MICROCOMPUTER returns to the normal operation, the MICROCOMPUTER is good.

Note: The reference number or MICROCOMPUTER pin number of transistor (Q110) and electrolytic capacitor (C113) can change depending on the models. Be sure to check the reference numbers on schematic diagram before starting the discharging work.

2-3. Confirmation of soldering state of MICROCOMPUTER

Check the soldering state of the MICROCOMPUTER in addition to the above described procedures. Be sure to exchange the MICROCOMPUTER after surely confirming that the trouble is not caused by poor soldering but the MICROCOMPUTER itself.

ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	8A-MA6-651-010		C-IC,M38B59MFH-E250FP<U,LH>
	8A-NFA-615-010		C-IC,M38B57MCH-E236FP<HA>
	87-A21-397-010		IC,STK490-070<LH,HA>
	87-A21-419-040		C-IC,NJM14558MD-TE2
	87-A21-443-040		C-IC,M62495AFP
	87-A21-415-010		IC,LA1843
	87-070-127-110		IC,LC72131 D
	87-A21-482-010		IC,RPM6938-H4
TRANSISTOR			
	87-026-609-080		TR,KTA1266GR
	89-213-702-010		TR,2SB1370 (1.8W)
	87-026-610-080		TR,KTC3198GR
	87-A30-076-080		C-TR,2SC3052F
	87-A30-075-080		C-TR,2SA1235F
	87-A30-255-010		C-TR,2SB1342<U>
	87-A30-256-010		TR,2SD1933<U>
	87-A30-190-080		TR,CC5551<U>
	87-026-245-080		TR,DTC114ES<LH,HA>
	87-A30-198-080		TR,KTC3199GR<LH,HA>
	87-A30-090-080		FET,2SK2541
	87-A30-484-080		C-TR,KRA102S
	87-A30-468-080		C-TR,KRC102S-RTK
	87-A30-107-070		C-TR,CMBT5401<LH,HA>
	87-A30-106-040		C-TR,CMBT5551<LH,HA>
	87-A30-091-080		FET,2SJ460
	87-A30-062-080		C-TR,KRC104S
	87-A30-318-080		TR,CSA952K<HA>
	89-333-317-880		TR,2SC3331 (0.5W)
	87-A30-234-080		TR,CSC4115BC
	89-327-143-080		TR,2SC2714 (0.1W)
	87-A30-489-080		C-TR,KRA107S
DIODE			
	87-A40-736-080		DIODE,1N4148M (SEM)<U,LH>
	87-020-465-080		DIODE,1SS133 (110MA)<HA>
	87-A40-455-080		DIODE,RL203 GW<LH,HA>
	87-A40-553-080		DIODE,1N4003 LES
	87-A40-774-080		ZENER,UZ24BSD
	87-A40-764-080		ZENER,UZ10BSC
	87-A40-313-080		C-DIODE,MC 2840<LH,HA>
	87-A40-270-080		C-DIODE,MC2838
	87-A40-269-080		C-DIODE,MC2836
	87-A40-768-080		ZENER,UZ16BSA<LH,HA>
	87-A40-752-080		ZENER,UZ6.2BSC
	87-A40-739-080		ZENER,UZ2.7BSA
	87-017-149-080		ZENER,HZS6A2L
	87-A40-535-080		DIODE,1N5393-GOODARK<U>
MAIN C.B			
C3	87-010-196-080		CHIP CAPACITOR,0.1-25<LH,HA>
C4	87-010-196-080		CHIP CAPACITOR,0.1-25<LH,HA>
C5	87-010-196-080		CHIP CAPACITOR,0.1-25<LH,HA>
C6	87-010-196-080		CHIP CAPACITOR,0.1-25<LH,HA>
C9	87-010-196-080		CHIP CAPACITOR,0.1-25
C10	87-010-196-080		CHIP CAPACITOR,0.1-25
C11	87-010-196-080		CHIP CAPACITOR,0.1-25
C12	87-010-196-080		CHIP CAPACITOR,0.1-25
C19	87-A10-627-000		CAP,E 2200-50 M SMG<LH,HA>
C20	87-A10-627-000		CAP,E 2200-50 M SMG<LH,HA>
C21	87-016-495-000		CAP,E 3300-25 M SMG
C22	87-016-495-000		CAP,E 3300-25 M SMG<LH,HA>
C22	87-A10-011-090		CAP,E 2200-25 SMG<U>
C25	87-010-385-080		CAP, ELECT 220-25V<LH,HA>
C25	87-010-407-080		CAP, ELECT 33-50 M 11L SME<U>
C26	87-010-247-080		CAP, ELECT 100-50V<LH,HA>
C26	87-010-406-080		CAP, ELECT 22-50<U>
C30	87-010-247-080		CAP, ELECT 100-50V<LH,HA>
C30	87-010-384-080		CAP, ELECT 100-25 M 11L SME<U>
C31	87-010-263-080		CAP, ELECT 100-10V
C32	87-010-197-080		CAP, CHIP 0.01 DM
C33	87-010-263-080		CAP, ELECT 100-10V<U>
C34	87-010-247-080		CAP, ELECT 100-50V
C35	87-010-406-080		CAP, ELECT 22-50
C36	87-010-381-080		CAP, ELECT 330-16V
C38	87-A11-567-080		C-CAP,S 0.01-50 K B
C50	87-010-384-080		CAP, ELECT 100-25 M 11L SME<U>
C60	87-010-403-080		CAP, ELECT 3.3-50V
C97	87-010-196-080		CHIP CAPACITOR,0.1-25<LH,HA>
C100	87-018-127-080		CAP TC-U 470P
C101	87-010-183-080		C-CAP,S 2700P-50 B<LH,HA>
C101	87-010-185-080		C-CAP,S 3900P-50 KB<U>
C102	87-010-183-080		C-CAP,S 2700P-50 B<LH,HA>
C102	87-010-185-080		C-CAP,S 3900P-50 KB<U>
C103	87-010-545-080		CAP, ELECT 0.22-50V
C104	87-010-545-080		CAP, ELECT 0.22-50V
C105	87-010-178-080		CHIP CAP 1000P<LH,HA>
C105	87-010-186-080		CAP,CHIP 4700P<U>
C106	87-010-178-080		CHIP CAP 1000P<LH,HA>
C106	87-010-186-080		CAP,CHIP 4700P<U>
C107	87-010-404-080		CAP, ELECT 4.7-50V<LH,HA>
C107	87-010-403-080		CAP, ELECT 3.3-50V<U>
C108	87-010-404-080		CAP, ELECT 4.7-50V<LH,HA>
C108	87-010-403-080		CAP, ELECT 3.3-50V<U>
C111	87-010-391-080		CAP,E 10-35 SME<LH,HA>
C111	87-010-406-080		CAP, ELECT 22-50<U>
C112	87-010-391-080		CAP,E 10-35 SME<LH,HA>
C112	87-010-406-080		CAP, ELECT 22-50<U>
C113	87-010-405-080		CAP, ELECT 10-50V<LH,HA>
C113	87-012-156-080		C-CAP, S 220P-50 J CH<U>
C114	87-010-405-080		CAP, ELECT 10-50V<LH,HA>
C114	87-012-156-080		C-CAP, S 220P-50 J CH<U>
C119	87-010-197-080		CAP, CHIP 0.01 DM
C120	87-010-197-080		CAP, CHIP 0.01 DM
C125	87-012-368-080		C-CAP,S 0.1-50 F<LH,HA>
C125	87-010-196-080		CHIP CAPACITOR,0.1-25<U>
C126	87-012-368-080		C-CAP,S 0.1-50 F<LH,HA>
C126	87-010-196-080		CHIP CAPACITOR,0.1-25<U>
C127	87-012-368-080		C-CAP,S 0.1-50 F<LH,HA>
C127	87-010-196-080		CHIP CAPACITOR,0.1-25<U>
C128	87-012-368-080		C-CAP,S 0.1-50 F<LH,HA>
C128	87-010-196-080		CHIP CAPACITOR,0.1-25<U>
C129	87-A10-592-080		C-CAP,S 0.015-50 K B<LH,HA>
C130	87-A10-592-080		C-CAP,S 0.015-50 K B<LH,HA>
C131	87-010-197-080		CAP, CHIP 0.01 DM<LH,HA>
C132	87-010-197-080		CAP, CHIP 0.01 DM<LH,HA>
C133	87-010-186-080		CAP,CHIP 4700P
C140	87-010-182-080		C-CAP,S 2200P-50 B
C183	87-010-387-080		CAP,E 470-25 SME<U>
C184	87-010-403-080		CAP, ELECT 3.3-50V<U>
C200	87-018-195-080		CAP TC-U 1200P
C300	87-018-195-080		CAP TC-U 1200P
C301	87-010-179-080		CAP,CHIP S B1200P
C302	87-010-179-080		CAP,CHIP S B1200P
C303	87-010-178-080		CHIP CAP 1000P
C304	87-010-178-080		CHIP CAP 1000P
C305	87-010-198-080		CAP, CHIP 0.022
C307	87-010-263-080		CAP, ELECT 100-10V
C308	87-010-263-080		CAP, ELECT 100-10V
C311	87-010-598-080		C-CAP,S 0.068-16VRK
C312	87-010-598-080		C-CAP,S 0.068-16VRK
C313	87-010-188-080		CAP,CHIP 6800P
C314	87-010-188-080		CAP,CHIP 6800P
C315	87-010-263-080		CAP, ELECT 100-10V
C317	87-010-546-080		CAP, ELECT 0.33-50V
C318	87-010-546-080		CAP, ELECT 0.33-50V

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C326	87-010-198-080		CAP, CHIP 0.022
C327	87-010-196-080		CHIP CAPACITOR,0.1-25
C360	87-010-401-080		CAP, ELECT 1-50V
C399	87-012-140-080		CAP 470P
C401	87-010-544-080		CAP, ELECT 0.1-50V
C402	87-010-544-080		CAP, ELECT 0.1-50V
C405	87-010-197-080		CAP, CHIP 0.01 DM
C406	87-010-197-080		CAP, CHIP 0.01 DM
C407	87-010-197-080		CAP, CHIP 0.01 DM
C408	87-010-197-080		CAP, CHIP 0.01 DM
C409	87-010-182-080		C-CAP,S 2200P-50 B
C410	87-010-182-080		C-CAP,S 2200P-50 B
C411	87-010-405-080		CAP, ELECT 10-50V
C412	87-010-405-080		CAP, ELECT 10-50V
C452	87-010-382-080		CAP, ELECT 22-25V
C453	87-010-183-080		C-CAP,S 2700P-50 B
C454	87-010-183-080		C-CAP,S 2700P-50 B
C455	87-010-183-080		C-CAP,S 2700P-50 B
C456	87-010-197-080		CAP, CHIP 0.01 DM
C460	87-010-196-080		CHIP CAPACITOR,0.1-25
C461	87-012-158-080		C-CAP,S 390P-50 CH
C462	87-012-158-080		C-CAP,S 390P-50 CH
C605	87-010-179-080		CAP,CHIP S B1200P
C606	87-010-179-080		CAP,CHIP S B1200P
C609	87-010-213-080		C-CAP,S 0.015-50 B
C610	87-010-213-080		C-CAP,S 0.015-50 B
C611	87-010-545-080		CAP, ELECT 0.22-50V
C612	87-010-545-080		CAP, ELECT 0.22-50V
C613	87-010-545-080		CAP, ELECT 0.22-50V
C614	87-010-545-080		CAP, ELECT 0.22-50V
C615	87-010-154-080		CAP CHIP 10P
C616	87-010-385-080		CAP, ELECT 220-25V<LH,HA>
C616	87-010-248-080		CAP, ELECT 220-10<U>
C617	87-010-385-080		CAP, ELECT 220-25V<LH,HA>
C617	87-010-248-080		CAP, ELECT 220-10<U>
C618	87-010-405-080		CAP, ELECT 10-50V
C630	87-016-669-080		C-CAP,S 0.1-25 K B
C669	87-010-322-080		C-CAP,S 100P-50 CH<LH,HA>
C670	87-010-322-080		C-CAP,S 100P-50 CH<LH,HA>
C677	87-010-197-080		CAP, CHIP 0.01 DM
C771	87-010-263-080		CAP, ELECT 100-10V
C772	87-010-197-080		CAP, CHIP 0.01 DM
C782	87-010-197-080		CAP, CHIP 0.01 DM
C783	87-010-197-080		CAP, CHIP 0.01 DM
C784	87-010-197-080		CAP, CHIP 0.01 DM
C785	87-010-197-080		CAP, CHIP 0.01 DM
C786	87-010-197-080		CAP, CHIP 0.01 DM
C788	87-010-149-080		C-CAP,S 5P-50 CH
C789	87-A12-052-080		C-CAP,S 0.033-25 J B
C790	87-A12-052-080		C-CAP,S 0.033-25 J B
C791	87-010-196-080		CHIP CAPACITOR,0.1-25
C792	87-010-197-080		CAP, CHIP 0.01 DM
C793	87-010-404-080		CAP, ELECT 4.7-50V
C795	87-010-197-080		CAP, CHIP 0.01 DM
C796	87-010-197-080		CAP, CHIP 0.01 DM
C797	87-010-405-080		CAP, ELECT 10-50V
C798	87-010-197-080		CAP, CHIP 0.01 DM
C799	87-010-407-080		CAP, ELECT 33-50V
C800	87-012-369-080		C-CAP,S 0.047-50F
C801	87-010-403-080		CAP, ELECT 3.3-50V
C802	87-012-369-080		C-CAP,S 0.047-50F
C803	87-010-198-080		CAP, CHIP 0.022
C804	87-010-263-080		CAP, ELECT 100-10V
C807	87-010-400-080		CAP, ELECT 0.47-50V
C808	87-010-401-080		CAP, ELECT 1-50V
C809	87-010-401-080		CAP, ELECT 1-50V
C810	87-010-196-080		CHIP CAPACITOR,0.1-25
C814	87-010-197-080		CAP, CHIP 0.01 DM
C815	87-010-403-080		CAP, ELECT 3.3-50V
C816	87-010-403-080		CAP, ELECT 3.3-50V

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C821	87-010-405-080		CAP, ELECT 10-50V
C823	87-010-177-080		C-CAP,S 820P-50 SL
C824	87-010-405-080		CAP, ELECT 10-50V
C825	87-010-596-080		CAP, S 0.047-16
C842	87-010-197-080		CAP, CHIP 0.01 DM
C844	87-010-197-080		CAP, CHIP 0.01 DM
C851	87-010-197-080		CAP, CHIP 0.01 DM
C852	87-010-197-080		CAP, CHIP 0.01 DM
C853	87-010-197-080		CAP, CHIP 0.01 DM
C858	87-010-196-080		CHIP CAPACITOR,0.1-25
C859	87-010-196-080		CHIP CAPACITOR,0.1-25
C860	87-010-197-080		CAP, CHIP 0.01 DM
C959	87-010-196-080		CHIP CAPACITOR,0.1-25
C960	87-010-196-080		CHIP CAPACITOR,0.1-25
C961	87-010-152-080		C-CAP,S 8P-50 CH
C963	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C971	87-010-381-080		CAP, ELECT 330-16V
C972	87-010-404-080		CAP, ELECT 4.7-50V
C973	87-010-197-080		CAP, CHIP 0.01 DM
C974	87-010-197-080		CAP, CHIP 0.01 DM
C979	87-010-322-080		C-CAP,S 100P-50 CH
C982	87-010-196-080		CHIP CAPACITOR,0.1-25
C983	87-010-197-080		CAP, CHIP 0.01 DM
C984	87-010-197-080		CAP, CHIP 0.01 DM
C987	87-010-197-080		CAP, CHIP 0.01 DM
C993	87-010-178-080		CHIP CAP 1000P
C995	87-010-178-080		CHIP CAP 1000P
C997	87-010-196-080		CHIP CAPACITOR,0.1-25
C999	87-A11-155-080		CAP,TC U 0.01-16 Z F
CF831	87-008-261-010		FILTER, SFE10.7MA5-A
CF832	87-008-261-010		FILTER, SFE10.7MA5-A
CN301	87-A60-620-010		CONN,3P V 2MM JMT
CN351	87-A60-625-010		CONN,8P V 2MM JMT
CN601	87-099-719-010		CONN,30P TYK-B(X)
CN602	87-099-194-010		CONN,6P 6216V
CNA1	8A-NF8-653-010		CONN ASSY,9P TID-A(480)<LH,HA>
FFE831	A8-8ZA-193-070		8ZA-1 YFEUNC<U,LH>
FFE831	A8-8ZA-190-030		8ZA-1 FEUNM<HA>
J101	87-A60-602-010		JACK,DIA6.3 BLK ST W/SW TC
J203	87-A60-238-010		TERMINAL,SP 4P (MSC)<HA,LH>
J602	87-A60-881-010		JACK,PIN 2P MSP 242V05 PBSN
J831	87-A60-202-010		TERMINAL,ANT 4P MSP-154V-02
L101	87-003-383-010		COIL,1UH-S
L102	87-003-383-010		COIL,1UH-S
L451	87-007-342-010		COIL,OSC 85K BIAS
L801	87-A50-540-010		COIL,FM DET (TOK)
L802	87-A91-551-010		FLTR,PCFJZH-450 L(TOK)
L811	87-005-847-080		COIL,2.2UH(CECS)
L832	87-005-847-080		COIL,2.2UH(CECS)
L951	8A-NF8-667-010		COIL,AM PACK 4(TOK)
R131	87-A00-258-080		RES,M/F 0.22-1W J<LH,HA>
R132	87-A00-258-080		RES,M/F 0.22-1W J<LH,HA>
R653	87-A11-144-080		CAP,TC U 0.1-50 K B<HA>
R654	87-A11-144-080		CAP,TC U 0.1-50 K B<HA>
R790	87-010-197-080		CAP, CHIP 0.01 DM
R991	87-010-322-080		C-CAP,S 100P-50 CH
R993	87-010-322-080		C-CAP,S 100P-50 CH
R995	87-010-322-080		C-CAP,S 100P-50 CH
WH1	87-A90-510-010		HLDR,WIRE 2.5-9P<LH,HA>
WH1	87-A90-460-010		HLDR,WIRE 2.5-7P<U>
X991	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309

FRONT C.B

C101	87-010-196-080		CHIP CAPACITOR,0.1-25
C102	87-012-369-080		C-CAP,S 0.047-50F
C103	87-010-374-040		CAP, ELECT 47-10
C104	87-A10-797-040		CAP,E 47-35 M 5L SRM
C105	87-010-192-080		C-CAP,S 0.022-50 F
C107	87-010-196-080		CHIP CAPACITOR,0.1-25

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C108	87-010-178-080		CHIP CAP 1000P
C109	87-012-369-080		C-CAP,S 0.047-50F
C110	87-010-197-080		CAP, CHIP 0.01 DM
C111	87-010-196-080		CHIP CAPACITOR,0.1-25
C113	87-010-178-080		CHIP CAP 1000P
C114	87-010-154-080		CAP CHIP 10P
C115	87-010-175-080		CAP 560P
C116	87-010-400-040		CAP,E 0.47-50
C117	87-016-460-080		C-CAP,S 0.22-16 B
C118	87-A10-189-040		CAP,E 220-10
C119	87-A10-189-040		CAP,E 220-10
C120	87-012-156-080		C-CAP,S 220P-50 CH
C123	87-010-196-080		CHIP CAPACITOR,0.1-25
C124	87-010-196-080		CHIP CAPACITOR,0.1-25
C125	87-010-405-040		CAP,E 10-50
C126	87-010-196-080		CHIP CAPACITOR,0.1-25
C129	87-010-374-040		CAP,E 47-10
C210	87-012-156-080		C-CAP,S 220P-50 CH
C212	87-010-404-040		CAP,E 4.7-50 SME
C213	87-010-404-040		CAP,E 4.7-50 SME
C701	87-010-384-040		CAP,E 100-25 SME
CN101	87-099-720-010		CONN,30P TYK-B(P)
CN701	87-A60-673-010		CONN,9P H 2MM JMT
CN801	87-099-015-010		CONN,13P 6216V<HA>
CN801	87-A60-055-010		CONN,13P 9604V<U,LH>
FL201	8A-NFA-604-010		FL,10-BT-224GNK
L101	87-A50-050-010		COIL,CLK 4.19M(COI)
LED101	87-A40-317-080		LED,SLR-342VCT31 RED
S101	87-A91-555-010		SW,RTRY EC12E24504
S301	87-A90-164-080		SW,TACT SKQAB(N)
S302	87-A90-164-080		SW,TACT SKQAB(N)
S303	87-A90-164-080		SW,TACT SKQAB(N)
S304	87-A90-164-080		SW,TACT SKQAB(N)
S305	87-A90-164-080		SW,TACT SKQAB(N)
S306	87-A90-164-080		SW,TACT SKQAB(N)
S307	87-A90-164-080		SW,TACT SKQAB(N)
S308	87-A90-164-080		SW,TACT SKQAB(N)
S309	87-A90-164-080		SW,TACT SKQAB(N)
S321	87-A90-164-080		SW,TACT SKQAB(N)
S322	87-A90-164-080		SW,TACT SKQAB(N)
S323	87-A90-164-080		SW,TACT SKQAB(N)
S324	87-A90-164-080		SW,TACT SKQAB(N)
S325	87-A90-164-080		SW,TACT SKQAB(N)
S326	87-A90-164-080		SW,TACT SKQAB(N)
S327	87-A90-164-080		SW,TACT SKQAB(N)
S328	87-A90-164-080		SW,TACT SKQAB(N)
S329	87-A90-164-080		SW,TACT SKQAB(N)
S330	87-A90-164-080		SW,TACT SKQAB(N)
S331	87-A90-164-080		SW,TACT SKQAB(N)
SFR701	87-024-431-080		SFR,3.3K RH063EC<HA>
SFR701	87-024-351-080		SFR,3.3K DJAA03<U,LH>

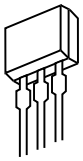
PT C.B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C1	87-010-387-080		CAP,E 470-25 SME<LH,HA>
C31	87-010-403-080		CAP, ELECT 3.3-50V<LH,HA>
C183	87-010-387-080		CAP, ELECT 470-25 M<U>
C184	87-010-403-080		CAP, ELECT 3.3-50V<U>
CN1	87-A61-110-010		CONN,9P V TID-A<LH,HA>
⚠ PT1	8A-NFA-609-010		PT,ANF-A LH<LH,HA>
⚠ PT1	8A-NFA-607-010		PT,ANF-A U<U>
⚠ PT2	8A-NF8-673-010		PT,SUB ANF-8 (H)KAMI<LH,HA>
⚠ PT181	8A-NF8-661-010		PT,SUB ANF-8 (U)<U>
⚠ RY1	87-A91-281-010		RELAY,AC DC12V OSA-SS-212DM5<LH,HA>
⚠ RY181	87-A90-976-010		RELAY,AC12V SDT-S-112LMR<U>
⚠ S1	87-A90-165-010		SW,SL 1-2-3 SWS2301<LH,HA>
⚠ T1	87-A60-317-010		TERMINAL, 1P MSC<LH,HA>
⚠ T2	87-A60-317-010		TERMINAL, 1P MSC<LH,HA>
⚠ T181	87-A60-317-010		TERMINAL, 1P MSC<U>
⚠ T182	87-A60-317-010		TERMINAL, 1P MSC<U>
WH181	87-A90-460-010		HLDR,WIRE 2.5-7P<U>

TRANSISTOR ILLUSTRATION

E C B

CSA952
CSC4115
KTA1266
KTC3198
KTC3199



S D G

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E C B

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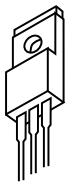

B C E

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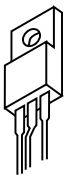
2SD1933



B C E

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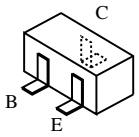
E B C

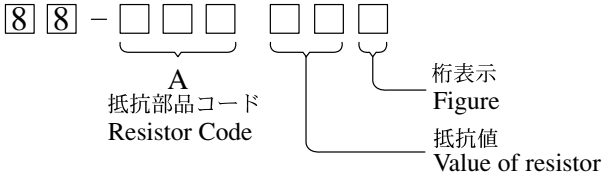
CC5551



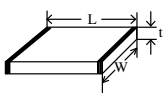
2SA1235 KRA102
2SC2714 KRA107
2SC3052 KRC102
CMBT5401 KRC104
CMBT5551

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

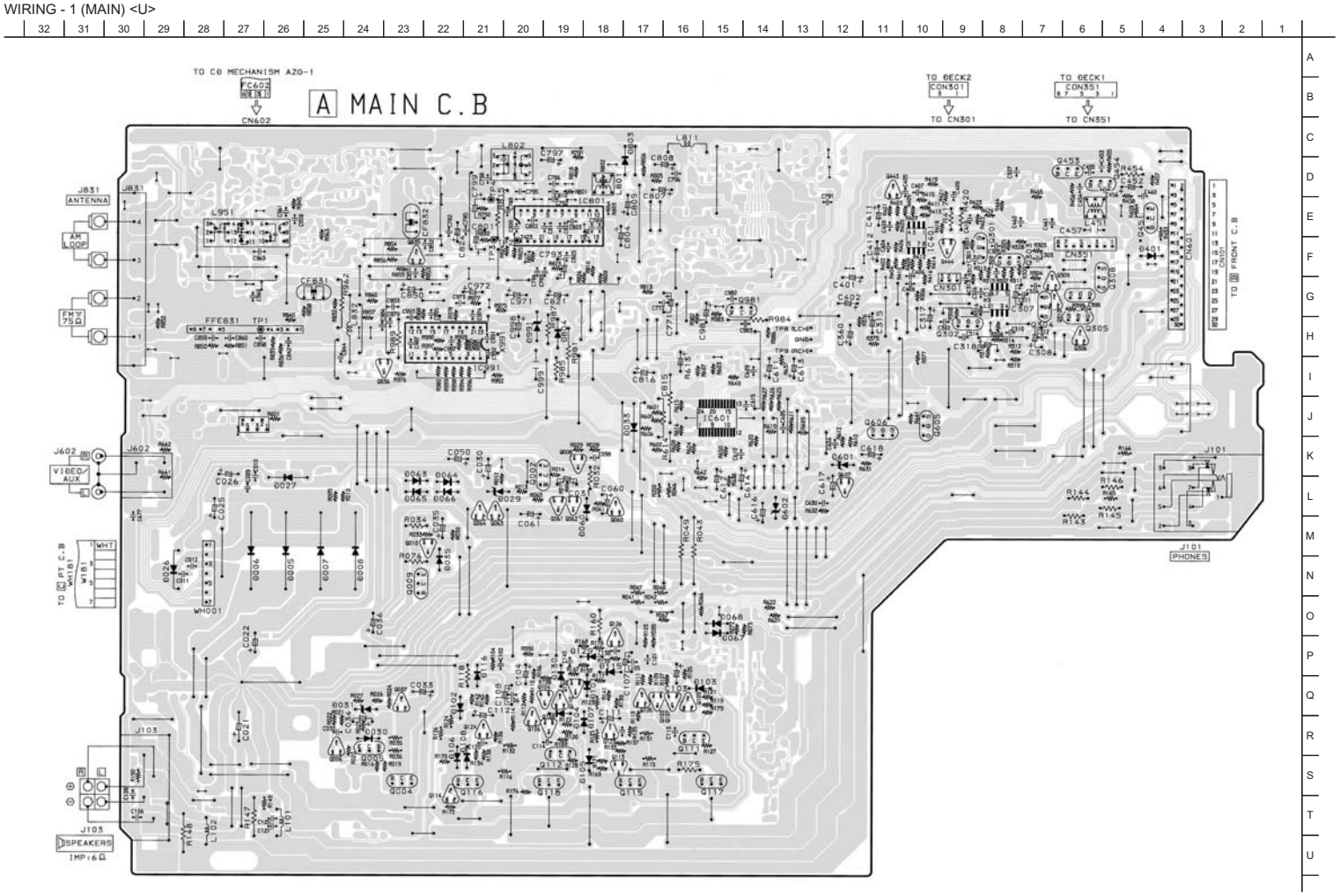
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



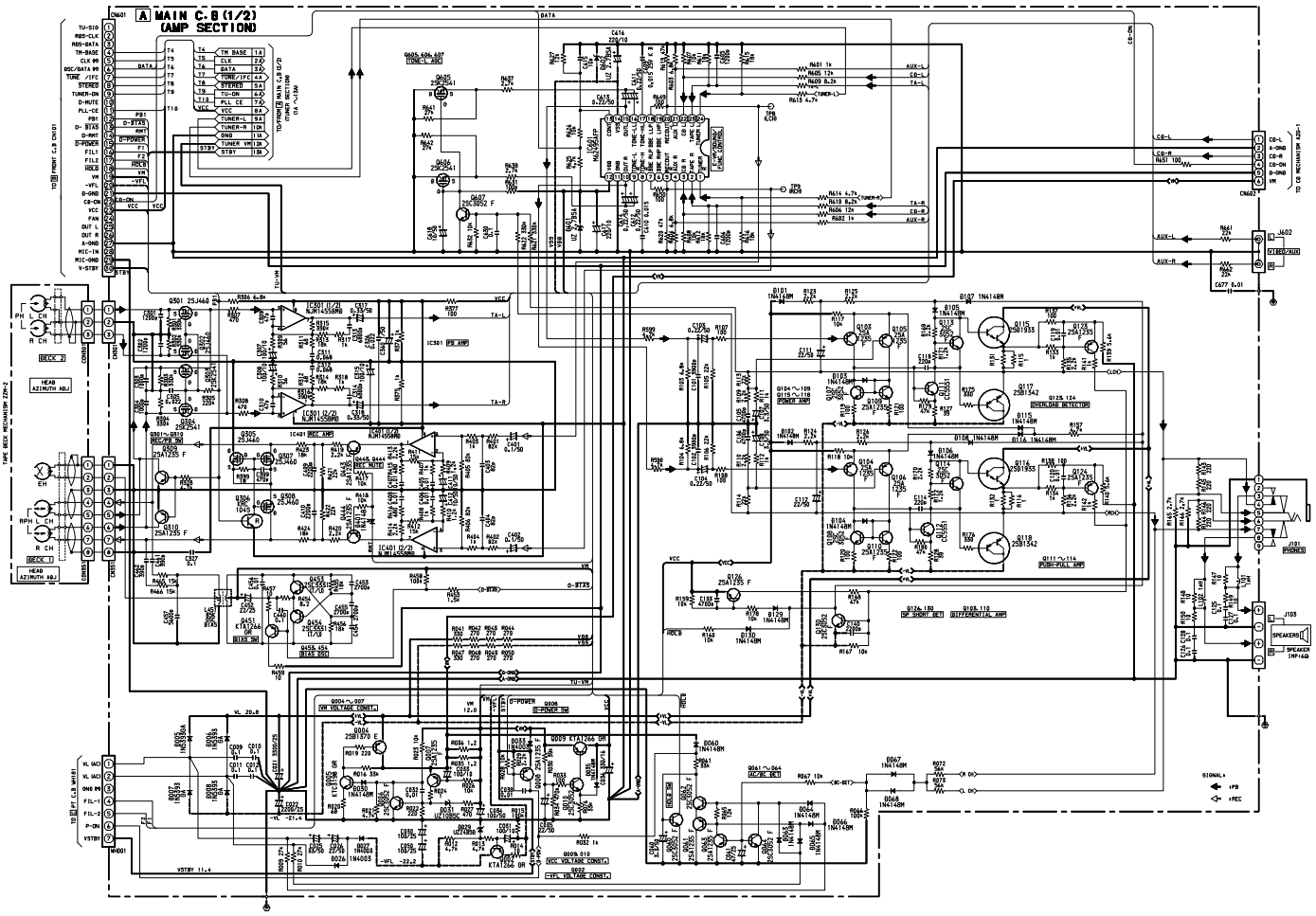
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード ：A Resistor Code ：A
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

WIRING - 1 (MAIN) <U>



SCHEMATIC DIAGRAM - 1 (MAIN : 1 / 2) <U>



SCHEMATIC DIAGRAM - 2 (MAIN : 2 / 2) <U>