



CSD-A190

EZ(S),EZ(ST),
EZ(L),K(S),
K(ST),V(ST)

SERVICE MANUAL

COMPACT DISC STEREO
RADIO CASSETTE RECEIVER

BASIC TYPE MECHANISM:TN-21ZVC-2000
BASIC CD MECHANISM :KSM-213 RDM

Replace this Service Manual with "Revision Publishing" when it is issued.

aiwa

S/M Code No. 09-027-456-0T1

SIMPLE

DATA

SPECIFICATIONS

Tuner section

Frequency range, antenna – FM: 87.5 - 108.0 MHz Rod antenna, AM: 530 - 1,605 kHz Ferrite bar antenna

Deck section

Track format – 4 tracks, 2 channels / Frequency range – Normal tape: 50 - 12,500 Hz (EIAJ) / Recording system – AC bias / Erasing system – Magnet erase / Heads – Recording/playback head (1), Erasure head (1)

CD player section

Disc – Compact disc / Scanning method – Non-contact optical scanner (semiconductor laser)

General <EZ, V>

Speaker – 100 mm cone type (2) / Power output – 2 W + 2 W (EIAJ 8 ohms, T.H.D. 10% DC), 1 W + 1 W (DIN 1% Rated Power) / Power requirements – DC 12 V using eight size C (R14) batteries, AC 230 V, 50 Hz / Power consumption – 13 W / Dimensions (W × H × D) – 390 × 167 × 255.5 mm / Weight – 2.7 kg (excluding batteries) / Accessory – AC cord (1)

General <K>

Speaker – 100 mm cone type (2) / Power output – 3.4 W + 3.4 W (DIN MUSIC POWER), 2 W + 2 W (EIAJ 8 ohms, T.H.D. 10% DC), 1 W + 1 W (DIN 1% Rated Power) / Power requirements – DC 12 V using eight size C (R14) batteries, AC 230 V, 50 Hz / Power consumption – 13 W / Dimensions (W × H × D) – 390 × 167 × 255.5 mm / Weight – 2.7 kg (excluding batteries) / Accessory – AC cord (1)

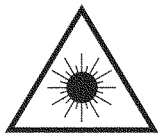
- Design and specifications are subject to change without notice.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING -1/1

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: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

WARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig 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

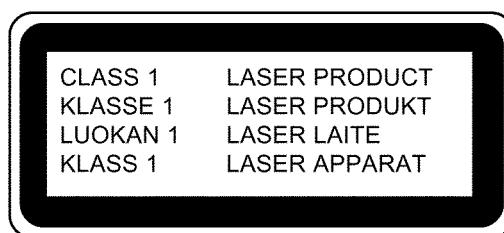
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL

Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.

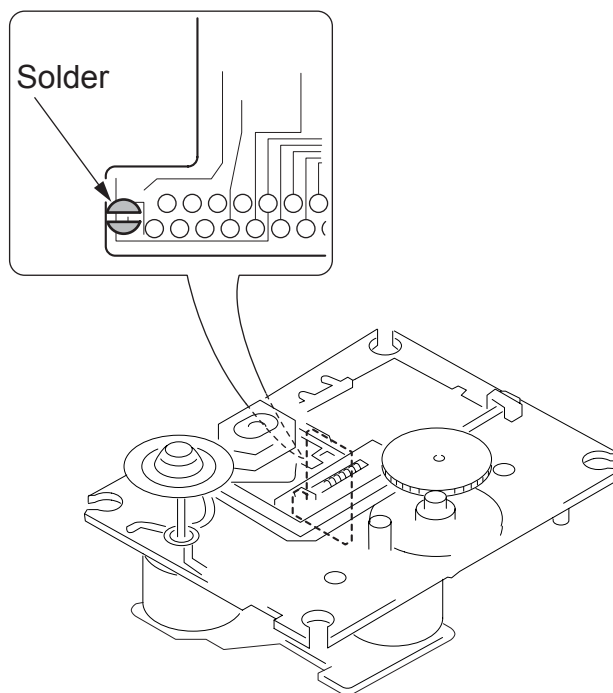
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



PRECAUTION TO REPALCE OPTICAL BLOCK (KSM-213 RDM) -1/1

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.



ACCESSORIES PARTS LIST -1/1

!

= ⚠SAFTY PARTS

C

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UNIT-NAME		! C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL					
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC
		!	O	AS1001	S0-230-000-000 EURO CONVERTOR PLUG 250V/2.5A	.	.	.	.	e	.
		!	O	AS1002	87-099-726-110 EURO CONVERTOR PLUG 250V/2.5A	.	.	.	d	.	.
		X	AS1003	87-B50-079-010 FACILITY LIST(B)		a	b	c	d	e	f
		O	AS1004	8C-CDC-906-010 IB, (EZ)		a	b	c	.	.	.
		O	AS1005	8C-CDC-905-010 IB, (K)		.	.	.	d	e	.
		O	AS1006	8C-CDC-907-010 IB, (V)		.	.	.	.	.	f
		!	O	AS1007	87-A80-081-020 CORD,POWER 2.5A	a	b	.	.	e	.
		!	O	AS1008	87-A80-081-110 PCA-VDE-6'&&-VDE-NM	.	.	c	d	.	f
		X	AS1009	SC-CDC-950-400 CD DOOR CARD		a	b	c	d	e	f
		X	AS1010	8C-CDC-854-010 G/B (EZST)		a	b	.	.	e	.
		X	AS1011	8C-CDC-854-010 G/B(EZST)		.	.	c	d	.	.
		X	AS1012	8C-CDC-878-010 G/B(VST)		.	.	.	.	.	f
		O	AS1013	SC-CDC-950-300 CASS DOOR CARD CCDC-95-03 S:1	a		b	c	d	e	f

ELECTRICAL PARTS LIST -1/7

! = ⚠SAFTY PARTS

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All components used on this model at the production line are shown in this service manual.

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UNIT-NAME		! C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL					
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC
BEAT CUT	O	SW	0802	S2-200-911-010	SW,SLIDE SK22F03G9	a	b	.	.	e	f
BEAT CUT	O	SW	0802	8C-CDC-622-180	SLIDE SW SK22F03G9	.	.	c	d	.	.
CASSETTE	O	C	0302	87-010-263-080	CAP,E 100-10V	a	b	c	d	e	f
CASSETTE	O	C	0303	87-010-404-010	CAP,E 4.7-50V	a	b	c	d	e	f
CASSETTE	O	C	0304	S0-102-101-000	CAP,M 0.001UF-100V	a	b	c	d	e	f
CASSETTE	X	C	0305	S0-273-101-000	CAP,M 0.027UF-100V	a	b	c	d	e	f
CASSETTE	O	C	0306	87-010-037-010	CAP,E 10-50V	a	b	c	d	e	f
CASSETTE	O	C	0307	87-010-404-010	CAP,E 4.7-50V	a	b	c	d	e	f
CASSETTE	O	C	0308	87-010-263-080	CAP,E 100-10V	a	b	c	d	e	f
CASSETTE	O	C	0310	S0-102-101-000	CAP,M 0.001UF-100V	a	b	c	d	e	f
CASSETTE	O	C	0311	87-010-375-010	CAP,E 330-10V	a	b	c	d	e	f
CASSETTE	X	C	0312	S0-273-101-000	CAP,M 0.027UF-100V	a	b	c	d	e	f
CASSETTE	X	C	0313	S0-222-101-000	CAP,M 0.0022UF-100V	a	b	c	d	e	f
CASSETTE	O	C	0314	S0-102-101-000	CAP,M 0.001UF-100V	a	b	c	d	e	f
CASSETTE	X	C	0315	S0-222-101-000	CAP,M 0.0022UF-100V	a	b	c	d	e	f
CASSETTE	O	C	0316	S0-102-101-000	CAP,M 0.001UF-100V	a	b	c	d	e	f
CASSETTE	X	C	0334	S0-102-800-500	CAP,CER 0.001U-50V	a	b	c	d	e	f
CASSETTE	O	C	0335	87-010-248-080	CAP,E 220-10V	a	b	c	d	e	f
CASSETTE	O	C	0336	S0-103-101-000	CAP,M 0.01UF-100V	a	b	c	d	e	f
CASSETTE	O	C	0337	S0-103-101-000	CAP,M 0.01UF-100V	a	b	c	d	e	f
CASSETTE	O	C	0338	S0-472-101-000	CAP,M 0.0047UF-100V	a	b	c	d	e	f
CASSETTE	O	C	0340	87-010-248-080	CAP,E 220-10V	a	b	c	d	e	f
CASSETTE	X	C	0393	S0-331-100-500	CAP,CER 330PF-50V	a	b	c	d	e	f
CASSETTE	X	C	0394	S0-331-100-500	CAP,CER 330PF-50V	a	b	c	d	e	f
CASSETTE	O	CNH0002	S0-401-68C-010	HSG CD168-103 (C) PEC 2507-H-4	a	b	c	d	e	e	f
CASSETTE	O	D	0302	82-135-799-010	DIODE, IN4148	a	b	c	d	e	f
CASSETTE	O	D	0303	82-135-799-010	DIODE, IN4148	a	b	c	d	e	f
CASSETTE	O	IC	0301	87-020-636-010	IC,BA3308	a	b	c	d	e	f
CASSETTE	S	Q	0301	89-318-154-080	TR,2SC1815GR	a	b	c	d	e	f
CASSETTE	S	Q	0302	S6-805-000-000	TR,3DA8050	a	b	c	d	e	f
CASSETTE	X	R	0301	S0-823-510-160	RES,82K-1/16W	a	b	c	d	e	f
CASSETTE	X	R	0302	S0-224-510-160	RES,220K-1/16W	a	b	c	d	e	f
CASSETTE	X	R	0303	S0-823-510-160	RES,82K-1/16W	a	b	c	d	e	f
CASSETTE	X	R	0304	S0-101-510-160	RES,100-1/16W (1	a	b	c	d	e	f
CASSETTE	X	R	0305	S0-680-510-160	RES,68-1/16W (1/	a	b	c	d	e	f
CASSETTE	X	R	0306	S0-472-510-160	RES,4.7K-1/16W	a	b	c	d	e	f
CASSETTE	X	R	0307	S0-472-510-160	RES,4.7K-1/16W	a	b	c	d	e	f
CASSETTE	X	R	0308	S0-680-510-160	RES,68-1/16W (1/	a	b	c	d	e	f
CASSETTE	X	R	0309	S0-472-510-160	RES,4.7K-1/16W	a	b	c	d	e	f
CASSETTE	X	R	0310	S0-223-510-160	RES,22K-1/16W (1	a	b	c	d	e	f
CASSETTE	X	R	0311	S0-103-510-160	RES,10K-1/16W (1	a	b	c	d	e	f
CASSETTE	X	R	0312	S0-102-510-160	RES,1K-1/16W (1/	a	b	c	d	e	f
CASSETTE	X	R	0313	S0-472-510-160	RES,4.7K-1/16W	a	b	c	d	e	f
CASSETTE	X	R	0339	S0-152-101-000	CAP,M 0.0015U-100V	a	b	c	d	e	f
CASSETTE	X	R	0339	S0-103-510-160	RES,10K-1/16W (1	a	b	c	d	e	f
CASSETTE	X	R	0340	S0-470-510-160	RES,47-1/16W	a	b	c	d	e	f
CASSETTE	X	R	0341	S0-332-510-160	RES,3.3K-1/16W	a	b	c	d	e	f
CASSETTE	X	R	0342	S0-103-510-160	RES,10K-1/16W (1	a	b	c	d	e	f
CASSETTE	O	SW	0301	S0-092-200-000	SW,REC 9P2T 2MM	a	b	c	d	e	f
CASSETTE	O	T	0301	S0-036-300-100	IFT,4A363R (B)	a	b	c	d	e	f
CASSETTE	O	VR	0301	S1-030-850-000	SFR,10K	a	b	c	d	e	f
CONTRIOL	O	CN	0501	SF-008-180-000	HSG(2mm)JST PHR-08	a	b	c	d	e	f
CONTROL	O	CN	0502	SF-009-180-000	HSG(2mm)JST PHR-09	a	b	c	d	e	f
CONTROL	O	D	0505	82-135-799-010	DIODE, IN4148	a	b	c	d	e	f
CONTROL	O	D	0506	82-135-799-010	DIODE, IN4148	a	b	c	d	e	f
CONTROL	O	D	0507	82-135-799-010	DIODE, IN4148	a	b	c	d	e	f
CONTRIOL	O	D	0508	82-135-799-010	DIODE, IN4148	a	b	c	d	e	f
CONTROL	O	D	0509	82-135-799-010	DIODE, IN4148	a	b	c	d	e	f
CONTROL	O	D	0510	82-135-799-010	DIODE, IN4148	a	b	c	d	e	f
CONTROL	O	DP	0501	SB-CDC-624-010	LED,A505RD-DR	a	b	c	d	e	f
CONTROL	O	LED0501	S0-330-400-130	LED,W03304RSD	a	b	c	d	e	e	f
CONTROL	X	R	0501	S0-222-510-160	RES,2.2K-1/16W	a	b	c	d	e	f
CONTROL	X	R	0506	S0-101-510-160	RES,100-1/16W (1	a	b	c	d	e	f
CONTRIOL	O	SW	0501	S2-200-410-010	SLIDE SW SS22D07G4/SS22D07G A	a	b	c	d	e	f
CONTRIOL	O	SW	0502	S1-141-650-000	(F021-KHH902-001) TACT SW EVQ	a	b	c	d	e	f
CONTRIOL	O	SW	0503	S1-141-650-000	(F021-KHH902-001) TACT SW EVQ	a	b	c	d	e	f
CONTROL	O	SW	0504	S1-141-650-000	(F021-KHH902-001) TACT SW EVQ	a	b	c	d	e	f
CONTRIOL	O	SW	0505	S1-141-650-000	(F021-KHH902-001) TACT SW EVQ	a	b	c	d	e	f
CONTRIOL	O	SW	0506	S1-141-650-000	(F021-KHH902-001) TACT SW EVQ	a	b	c	d	e	f
CONTRIOL	O	SW	0507	S1-141-650-000	(F021-KHH902-001) TACT SW EVQ	a	b	c	d	e	f
MAIN	X	C	0201	S4-270-500-500	CAP,CER 27PF-50V	a	b	c	d	e	f
MAIN	X	C	0202	S4-180-500-500	CAP,CER 18P-50	a	b	c	d	e	f
MAIN	O	C	0203	87-010-400-010	CAP,E 0.47-50V	a	b	c	d	e	f
MAIN	O	C	0204	87-010-404-010	CAP,E 4.7-50V	a	b	c	d	e	f
MAIN	X	C	0205	S0-203-800-500	CAP,CER 0.02U-50V	a	b	c	d	e	f
MAIN	O	C	0206	87-010-053-810	CAP,E 1-50V	a	b	c	d	e	f
MAIN	O	C	0207	87-010-053-810	CAP,E 1-50V	a	b	c	d	e	f
MAIN	X	C	0208	S0-103-800-500	(F003-010380-025) CERAMIC CAP	a	b	c	d	e	f
MAIN	X	C	0209	S0-103-800-500	(F003-010380-025) CERAMIC CAP	a	b	c	d	e	f
MAIN	O	C	0210	87-010-053-810	CAP,E 1-50V	a	b	c	d	e	f

ELECTRICAL PARTS LIST -2/7

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						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC	
MAIN		O	C	0211	87-010-544-010	CAP,E 0.1-50V	a	b	c	d	e	f
MAIN		O	C	0212	87-010-544-010	CAP,E 0.1-50V	a	b	c	d	e	f
MAIN		O	C	0213	87-010-545-010	CAP,E 0.22-50V	a	b	c	d	e	f
MAIN		X	C	0214	S0-102-800-500	CAP,CER 0.001U-50V	a	b	c	d	e	f
MAIN		X	C	0215	S4-408-300-500	CAP,CER 4PF-50V	a	b	c	d	e	f
MAIN		X	C	0216	S4-300-500-500	CAP,CER 30PF-50V	a	b	c	d	e	.
MAIN		X	C	0216	S8-120-500-500	CAP,CER 12PF-50V	.	.	.	.	.	f
MAIN		X	C	0217	S4-200-500-500	CAP,CER 20P-50V	a	b	c	d	e	.
MAIN		X	C	0218	S0-203-800-500	CAP,CER 0.02U-50V	a	b	c	d	e	f
MAIN		X	C	0220	S4-131-500-500	CAP,CER 130PF-50V	a	b	c	d	e	f
MAIN		X	C	0221	S4-240-500-500	CAP,CER 24P-50V	a	b	c	d	e	f
MAIN		O	C	0222	87-010-101-080	CAP,E 220-16V	a	b	c	d	.	f
MAIN		O	C	0223	87-010-101-080	CAP,E 220-16V	a	b	c	d	.	f
MAIN		X	C	0224	S4-150-500-500	CAP,CER 15PF-50V	a	b	c	d	e	f
MAIN		X	C	0225	S0-203-800-500	CAP,CER 0.02U-50V	a	b	c	d	e	f
MAIN		X	C	0226	S0-203-800-500	CAP,CER 0.02U-50V	a	b	c	d	e	f
MAIN		O	C	0227	87-010-053-810	CAP,E 1-50V	a	b	c	d	e	f
MAIN		X	C	0228	S0-203-800-500	CAP,CER 0.02U-50V	a	b	c	d	e	f
MAIN		X	C	0229	S0-104-800-160	CAP,CER 0.1-16V	a	b	c	d	e	f
MAIN		O	C	0230	87-010-248-080	CAP,E 220-10V	a	b	c	d	e	f
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC	
MAIN		X	C	0231	S0-104-800-160	CAP,CER 0.1-16V	a	b	c	d	e	f
MAIN		X	C	0233	S0-183-101-000	CAP,M 0.018-100V	a	b	c	d	e	f
MAIN		X	C	0234	S0-183-101-000	CAP,M 0.018-100V	a	b	c	d	e	f
MAIN		O	C	0322	87-A10-216-080	CAP,E 47-25V	a	b	c	d	e	f
MAIN		O	C	0323	87-010-038-010	CAP,E 22-25V	a	b	c	d	e	f
MAIN		O	C	0330	87-010-045-010	CAP,E 100-25V	a	b	c	d	e	f
MAIN		O	C	0390	87-010-404-010	CAP,E 4.7-50V	a	b	c	d	e	f
MAIN		O	C	0392	87-010-404-010	CAP,E 4.7-50V	a	b	c	d	e	f
MAIN		X	C	0401	S0-104-800-160	CAP,CER 0.1-16V	a	b	c	d	e	f
MAIN		O	C	0402	S0-333-101-000	CAP,M 0.033UF-100V	a	b	c	d	e	f
MAIN		X	C	0403	S0-331-100-500	CAP,CER 330PF-50V	a	b	c	d	e	f
MAIN		O	C	0404	87-010-035-010	CAP,E 2.2-50V	a	b	c	d	e	f
MAIN		X	C	0405	88-266-680-810	CAP,0.0027UF-25V	a	b	c	d	e	f
MAIN		O	C	0406	S0-473-101-000	CAP,M 0.047UF-100V	a	b	c	d	e	f
MAIN		O	C	0407	S0-224-101-000	CAP,M 0.22UF-100V	a	b	c	d	e	f
MAIN		O	C	0408	S0-224-101-000	CAP,M 0.22UF-100V	a	b	c	d	e	f
MAIN		X	C	0409	S0-102-800-500	CAP,CER 0.001U-50V	a	b	c	d	e	f
MAIN		O	C	0410	S0-104-101-000	CAP,M 0.1UF-100V	a	b	c	d	e	f
MAIN		O	C	0411	S0-333-101-000	CAP,M 0.033UF-100V	a	b	c	d	e	f
MAIN		X	C	0412	S0-332-800-500	CAP,CER 0.0033UF-50V	a	b	c	d	e	f
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC	
MAIN		O	C	0413	87-010-545-010	CAP,E 0.22-50V	a	b	c	d	e	f
MAIN		X	C	0414	S0-101-100-500	CAP,CER 100P-50V	a	b	c	d	e	f
MAIN		X	C	0415	S0-332-800-500	CAP,CER 0.0033UF-50V	a	b	c	d	e	f
MAIN		O	C	0416	87-010-544-010	CAP,E 0.1-50V	a	b	c	d	e	f
MAIN		O	C	0417	87-010-037-010	CAP,E 10-50V	a	b	c	d	e	f
MAIN		O	C	0418	S0-104-101-000	CAP,M 0.1UF-100V	a	b	c	d	e	f
MAIN		X	C	0420	S4-220-500-500	CAP,CER 22PF-50V	a	b	c	d	e	f
MAIN		O	C	0421	S0-103-101-000	CAP,M 0.01UF-100V	a	b	c	d	e	f
MAIN		O	C	0423	87-010-037-010	CAP,E 10-50V	a	b	c	d	e	f
MAIN		O	C	0424	87-010-037-010	CAP,E 10-50V	a	b	c	d	e	f
MAIN		X	C	0425	S0-682-101-000	CAP,M 0.0068-100V	a	b	c	d	e	f
MAIN		O	C	0426	S0-473-101-000	CAP,M 0.047UF-100V	a	b	c	d	e	f
MAIN		O	C	0427	87-010-546-080	CAP,E 0.33-50V	a	b	c	d	e	f
MAIN		X	C	0428	S0-103-800-500	(F003-010380-025) CERAMIC CAP	a	b	c	d	e	f
MAIN		O	C	0429	87-010-263-080	CAP,E 100-10V	a	b	c	d	e	f
MAIN		O	C	0430	87-A10-216-080	CAP,E 47-25V	a	b	c	d	e	f
MAIN		X	C	0431	S0-102-800-500	CAP,CER 0.001U-50V	a	b	c	d	e	f
MAIN		O	C	0432	87-010-263-080	CAP,E 100-10V	a	b	c	d	e	f
MAIN		X	C	0433	S0-103-800-500	(F003-010380-025) CERAMIC CAP	a	b	c	d	e	f
MAIN		X	C	0434	S0-103-800-500	(F003-010380-025) CERAMIC CAP	a	b	c	d	e	f
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC	
MAIN		O	C	0435	87-010-263-080	CAP,E 100-10V	a	b	c	d	e	f
MAIN		X	C	0436	S0-203-800-500	CAP,CER 0.02U-50V	a	b	c	d	e	f
MAIN		O	C	0437	87-010-248-080	CAP,E 220-10V	a	b	c	d	e	f
MAIN		X	C	0438	S0-104-800-160	CAP,CER 0.1-16V	a	b	c	d	e	f
MAIN		O	C	0439	87-010-037-010	CAP,E 10-50V	a	b	c	d	e	f
MAIN		O	C	0440	87-010-237-010	CAP,E 1000-16V	a	b	c	d	e	f
MAIN		O	C	0441	87-010-221-010	CAP,E 470-10V	a	b	c	d	e	f
MAIN		X	C	0442	S0-103-800-500	(F003-010380-025) CERAMIC CAP	a	b	c	d	e	f
MAIN		X	C	0443	S4-300-500-500	CAP,CER 30PF-50V	a	b	c	d	e	f
MAIN		X	C	0444	S4-300-500-500	CAP,CER 30PF-50V	a	b	c	d	e	f
MAIN		X	C	0445	S0-104-800-160	CAP,CER 0.1-16V	a	b	c	d	e	f
MAIN		O	C	0446	S0-224-101-000	CAP,M 0.22UF-100V	a	b	c	d	e	f
MAIN		X	C	0447	S0-104-800-160	CAP,CER 0.1-16V	a	b	c	d	e	f
MAIN		X	C	0448	S0-101-100-500	CAP,CER 100P-50V	a	b	c	d	e	f
MAIN		X	C	0449	S0-103-800-500	(F003-010380-025) CERAMIC CAP	a	b	c	d	e	f
MAIN		O	C	0450	87-010-263-080	CAP,E 100-10V	a	b	c	d	e	f
MAIN		O	C	0451	87-010-375-010	CAP,E 330-10V	a	b	c	d	e	f
MAIN		O	C	0452	87-010-053-810	CAP,E 1-50V	a	b	c	d	e	f
MAIN		O	C	0455	87-010-403-010	CAP,E 3.3-50V	a	b	c	d	e	f
MAIN		O	C	0456	87-010-403-010	CAP,E 3.3-50V	a	b	c	d	e	f

ELECTRICAL PARTS LIST -3/7

! = SAFETY PARTS
C = Components marked

All components used on this model at the production line are shown in this service manual.
However, please note that not all components will be available as spare parts for after-sales service.
Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.
Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

UNIT-NAME		! C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL						
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC	
MAIN		X	C	0457	S0-471-100-510	CAP,CER 470PF-50V	a	b	c	d	e	f
MAIN		X	C	0458	S0-471-100-510	CAP,CER 470PF-50V	a	b	c	d	e	f
MAIN		X	C	0459	S0-681-100-500	CAP,CER 680PF-50V	a	b	c	d	e	f
MAIN		O	C	0460	87-010-038-010	CAP,E 22-25V	a	b	c	d	e	f
MAIN		X	C	0462	S0-104-800-160	CAP,CER 0.1-16V	a	b	c	d	e	f
MAIN		O	C	0463	87-010-221-010	CAP,E 470-10V	a	b	c	d	e	f
MAIN		X	C	0464	S0-103-800-500	(F003-010380-025) CERAMIC CAP	a	b	c	d	e	f
MAIN		X	C	0465	S0-103-800-500	(F003-010380-025) CERAMIC CAP	a	b	c	d	e	f
MAIN		X	C	0468	S0-102-800-500	CAP,CER 0.001U-50V	a	b	c	d	e	f
MAIN		X	C	0469	S0-103-800-500	(F003-010380-025) CERAMIC CAP	a	b	c	d	e	f
MAIN		X	C	0473	S0-103-800-500	(F003-010380-025) CERAMIC CAP	a	b	c	d	e	f
MAIN		X	C	0474	S0-103-800-500	(F003-010380-025) CERAMIC CAP	a	b	c	d	e	f
MAIN		X	C	0475	S0-103-800-500	(F003-010380-025) CERAMIC CAP	a	b	c	d	e	f
MAIN		X	C	0476	S0-103-800-500	(F003-010380-025) CERAMIC CAP	a	b	c	d	e	f
MAIN		X	C	0477	S0-102-800-500	CAP,CER 0.001U-50V	a	b	c	d	e	f
MAIN		O	C	0478	87-010-037-010	CAP,E 10-50V	a	b	c	d	e	f
MAIN		X	C	0479	S0-102-800-500	CAP,CER 0.001U-50V	a	b	c	d	e	f
MAIN		X	C	0480	S0-104-800-160	CAP,CER 0.1-16V	a	b	c	d	e	f
MAIN		X	C	0481	S0-102-800-500	CAP,CER 0.001U-50V	a	b	c	d	e	f
MAIN		O	C	0482	87-010-248-080	CAP,E 220-10V	a	b	c	d	e	f
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC	
MAIN		X	C	0483	S0-104-800-160	CAP,CER 0.1-16V	a	b	c	d	e	f
MAIN		X	C	0484	S0-104-800-160	CAP,CER 0.1-16V	a	b	c	d	e	f
MAIN		X	C	0485	S0-103-800-500	(F003-010380-025) CERAMIC CAP	a	b	c	d	e	f
MAIN		O	C	0486	S0-473-101-000	CAP,M 0.047UF-100V	a	b	c	d	e	f
MAIN		O	C	0487	S0-473-101-000	CAP,M 0.047UF-100V	a	b	c	d	e	f
MAIN		O	C	0801	S0-102-101-000	CAP,M 0.001UF-100V	a	.	c	d	.	f
MAIN		X	C	0801	S0-222-101-000	CAP,M 0.0022UF-100V	.	b	.	.	e	.
MAIN		O	C	0802	S0-102-101-000	CAP,M 0.001UF-100V	a	.	c	d	.	f
MAIN		X	C	0802	S0-222-101-000	CAP,M 0.0022UF-100V	.	b	.	.	e	.
MAIN		O	C	0805	87-010-544-010	CAP,E 0.1-50V	a	.	c	d	.	f
MAIN		O	C	0805	87-010-053-810	CAP,E 1-50V	.	b	.	.	e	.
MAIN		O	C	0806	87-010-544-010	CAP,E 0.1-50V	a	.	c	d	.	f
MAIN		O	C	0806	87-010-053-810	CAP,E 1-50V	.	b	.	.	e	.
MAIN		X	C	0807	S0-471-100-510	CAP,CER 470PF-50V	a	b	c	d	e	f
MAIN		X	C	0808	S0-471-100-510	CAP,CER 470PF-50V	a	b	c	d	e	f
MAIN		O	C	0809	87-010-038-010	CAP,E 22-25V	a	.	c	d	.	f
MAIN		O	C	0809	87-A10-216-080	CAP,E 47-25V	.	b	.	.	e	.
MAIN		O	C	0810	87-010-038-010	CAP,E 22-25V	a	.	c	d	.	f
MAIN		O	C	0810	87-A10-216-080	CAP,E 47-25V	.	b	.	.	e	.
MAIN		O	C	0811	87-010-112-010	CAP,E 100-16V	a	b	c	d	e	f
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC	
MAIN		O	C	0812	87-010-112-010	CAP,E 100-16V	a	b	c	d	e	f
MAIN		O	C	0813	S0-331-002-5C0	CAP,E 330-25V	a	.	c	d	.	f
MAIN		O	C	0813	87-010-101-080	CAP,E 220-16V	.	b	.	.	e	.
MAIN		O	C	0814	S0-331-002-5C0	CAP,E 330-25V	a	.	c	d	.	f
MAIN		O	C	0814	87-010-101-080	CAP,E 220-16V	.	b	.	.	e	.
MAIN		O	C	0815	S0-224-101-000	CAP,M 0.22UF-100V	a	b	c	d	e	f
MAIN		O	C	0816	S0-224-101-000	CAP,M 0.22UF-100V	a	b	c	d	e	f
MAIN		O	C	0817	S0-331-002-5C0	CAP,E 330-25V	a	b	c	d	e	f
MAIN		O	C	0818	87-010-387-080	CAP,E 470-25V	a	b	c	d	e	f
MAIN		O	C	0819	87-010-035-010	CAP,E 2.2-50V	a	b	c	d	e	f
MAIN		O	C	0820	87-010-388-010	CAP,E 1000-25V	a	b	c	d	e	f
MAIN		O	C	0824	87-010-546-080	CAP,E 0.33-50V	a	.	c	d	.	f
MAIN		O	C	0824	87-010-053-810	CAP,E 1-50V	.	b	.	.	e	.
MAIN		O	C	0828	87-010-546-080	CAP,E 0.33-50V	a	.	c	d	.	f
MAIN		O	C	0828	87-010-053-810	CAP,E 1-50V	.	b	.	.	e	.
MAIN		O	C	0829	87-010-546-080	CAP,E 0.33-50V	a	.	c	d	.	f
MAIN		O	C	0829	87-010-053-810	CAP,E 1-50V	.	b	.	.	e	.
MAIN		O	C	0856	87-010-053-810	CAP,E 1-50V	a	b	c	d	e	f
MAIN		O	C	0858	87-010-546-080	CAP,E 0.33-50V	a	.	c	d	.	f
MAIN		O	C	0858	87-010-053-810	CAP,E 1-50V	.	b	.	.	e	.
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC	
MAIN		O	C	0859	87-010-546-080	CAP,E 0.33-50V	a	.	c	d	.	f
MAIN		O	C	0859	87-010-053-810	CAP,E 1-50V	.	b	.	.	e	.
MAIN		O	C	0860	87-010-403-010	CAP,E 3.3-50V	a	b	c	d	e	f
MAIN		O	C	0872	87-010-112-010	CAP,E 100-16V	a	b	c	d	e	f
MAIN		O	C	0874	87-010-546-080	CAP,E 0.33-50V	a	.	c	d	.	f
MAIN		O	C	0874	87-010-053-810	CAP,E 1-50V	.	b	.	.	e	.
MAIN		O	C	0877	S0-393-101-000	(F004-039350-050) CAP,M 0.	a	.	c	d	.	f
MAIN		O	C	0877	S0-473-101-000	CAP,M 0.047UF-100V	.	b	.	.	e	.
MAIN		O	C	0878	S0-393-101-000	(F004-039350-050) CAP,M 0.	a	.	c	d	.	f
MAIN		O	C	0878	S0-473-101-000	CAP,M 0.047UF-100V	.	b	.	.	e	.
MAIN		O	C	0901	87-010-112-010	CAP,E 100-16V	a	b	c	d	e	f
MAIN		O	C	0902	87-010-101-080	CAP,E 220-16V	a	b	c	d	e	f
MAIN		X	C	0904	S0-103-800-500	(F003-010380-025) CERAMIC CAP	a	b	c	d	e	f
MAIN		X	C	0905	S0-103-800-500	(F003-010380-025) CERAMIC CAP	a	b	c	d	e	f
MAIN		O	C	C222	87-010-101-080	CAP,E 220-16V	.	.	.	.	e	.
MAIN		O	CD	0402	S0-601-89B-010	HSG CD189-55-6B(C) PEC 2001H-	a	b	c	d	e	f
MAIN		O	CF	0201	S0-004-650-020	CERAMIC FILTER LT-465B	a	b	c	d	e	f
MAIN		O	CF	0202	S0-001-070-000	CER,FIL SFE-10.7MA5-M	a	b	c	d	e	f
MAIN		X	CN	0301	S0-052-670-400	HEADER,MOLEX 4P	a	b	c	d	e	f
MAIN		O	CN	0401	S0-061-161-600	FFC CONN SOCKET 16PINS P:1mm	a	b	c	d	e	f

ELECTRICAL PARTS LIST -4/7

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UNIT-NAME		! C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL					
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC
MAIN		O	CN	0402	S0-206-682-000 HSG CD668R-2A JST PHR 2mm WIT	a	b	c	d	e	f
MAIN		O	CN	0403	S2-001-WS0-800 CONN,8P #2001-WS-8	a	b	c	d	e	f
MAIN		O	CN	0404	SP-HS0-200-200 HEADER CTL 2 PINS PHS-02 PITC	a	b	c	d	e	f
MAIN		O	CN	0405	S2-001-WS0-900 CONN,9P #2001-WS-9	a	b	c	d	e	f
MAIN		O	CN	0802	8B-CDC-659-010 CONN,4P #2507-WS-4	a	b	c	d	e	f
MAIN		X	CN	0901	S0-052-670-300 HEADER,MOLEX 3P	a	b	c	d	e	f
MAIN		O	CON0302	SP-HS0-200-200 HEADER CTL 2 PINS PHS-02 PITC	a	b	c	d	e	e	f
MAIN		O	CON0501	S0-423-152-500 HSG 2315-4C MOLEX 5264 w/300m	a	b	c	d	e	e	f
MAIN		O	CON0801	S0-476-9C2-500 HSG 769C-4 PINS MOLEX 5264 YE	a	b	c	d	e	e	f
MAIN		O	D	0201	82-135-799-010 DIODE,IN4148	a	b	c	d	e	f
MAIN		O	D	0202	82-135-799-010 DIODE,IN4148	a	b	c	d	e	f
MAIN		O	D	0203	82-135-799-010 DIODE,IN4148	a	b	c	d	e	f
MAIN		O	D	0204	82-135-799-010 DIODE,IN4148	a	b	c	d	e	f
MAIN		O	D	0301	82-135-799-010 DIODE,IN4148	a	b	c	d	e	f
MAIN		S	D	0401	S0-000-010-040 DIODE,GMB01/GMA01U	a	b	c	d	e	f
MAIN		O	D	0402	82-135-799-010 DIODE,IN4148	a	b	c	d	e	f
MAIN		O	D	0403	82-135-799-010 DIODE,IN4148	a	b	c	d	e	f
MAIN		O	D	0404	82-135-799-010 DIODE,IN4148	a	b	c	d	e	f
MAIN		O	D	0411	82-135-799-010 DIODE,IN4148	a	b	c	d	e	f
MAIN		O	D	0418	82-135-799-010 DIODE,IN4148	a	b	c	d	e	f
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC
MAIN		O	D	0855	82-135-799-010 DIODE,IN4148	a	b	c	d	e	f
MAIN		O	D	0856	82-135-799-010 DIODE,IN4148	a	b	c	d	e	f
MAIN		O	D	0901	82-135-799-010 DIODE,IN4148	a	b	c	d	e	f
MAIN		O	D	0903	87-A40-533-080 ZENER,MTZJ8.2B 1/2W	a	b	c	d	e	f
MAIN		O	D	0904	82-135-799-010 DIODE,IN4148	a	b	c	d	e	f
MAIN		S	DZ	0401	S0-100-331-210 ZENER BZX55C3V3 3.3V 1/2W	a	b	c	d	e	f
MAIN		O	FFC0001	S1-601-401-010 FFC CABLE 16P	a	b	c	d	e	e	f
MAIN		O	IC	0201	S8-321-110-010 IC TA2111N (TOSHIBA)	a	b	c	d	e	f
MAIN		S	IC	0401	S1-092-510-000 IC,LA9251M	a	b	c	d	e	f
MAIN		S	IC	0402	S7-178-600-030 IC,LC78602HNE-8612D	a	b	c	d	e	f
MAIN		S	IC	0403	S1-065-410-000 IC,LA6541DLL	a	b	c	d	e	f
MAIN		O	IC	0801	S8-382-270-000 IC,TA8227P	a	b	c	d	e	f
MAIN		O	L	0202	S0-400-500-080 FM COIL 4T,5mm,DIA:0.8mm (CS5	a	b	c	d	e	f
MAIN		O	L	0203	S0-400-400-080 FM COIL,4T 4MM-0.8MM	a	b	c	d	e	.
MAIN		X	L	0203	S0-450-500-080 COIL,FM 4.5-5-0.8	.	.	.	.	.	f
MAIN		O	L	0204	S0-300-400-080 FM,COIL 3T 4	a	b	c	d	e	.
MAIN		X	L	0204	S0-400-450-080 FM,COIL 4T 4.5MM	.	.	.	.	.	f
MAIN		O	L	0207	87-003-147-010 COIL,22UH	a	b	c	d	e	f
MAIN		O	L	0208	87-005-730-080 INDUCTOR,10UH	a	b	c	d	e	f
MAIN		O	L	0209	S1-101-231-200 COIL,AM4-120	a	b	c	d	e	f
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC
MAIN		O	L	0401	87-005-196-080 INDUCTOR,10UH	a	b	c	d	e	f
MAIN		O	L	0404	87-005-196-080 INDUCTOR,10UH	a	b	c	d	e	f
MAIN		O	L	0405	87-005-196-080 INDUCTOR,10UH	a	b	c	d	e	f
MAIN		O	PVC0001	S3-443-040-000 PVC,DF443DF04-B04 AM/FM	a	b	c	d	e	e	.
MAIN		O	PVC0001	S3-443-040-010 PVC,DE443DB04-B04 AM/FM	.	.	.	.	.	.	f
MAIN		S	Q	0401	S1-060-800-000 TR,2SA608N	a	b	c	d	e	f
MAIN		S	Q	0402	S1-134-600-000 TR,2SA1346	a	b	c	d	e	f
MAIN		S	Q	0403	S2-007-640-000 TR,2SB764D/E	a	b	c	d	e	f
MAIN		S	Q	0404	S6-855-000-000 TR,3CA8550	a	b	c	d	e	f
MAIN		S	Q	0405	S6-855-000-000 TR,3CA8550	a	b	c	d	e	f
MAIN		S	Q	0408	S1-134-600-000 TR,2SA1346	a	b	c	d	e	f
MAIN		O	Q	0801	S9-025-410-000 TR,2SK2541-T/2SK2541 (	a	b	c	d	e	f
MAIN		O	Q	0802	S9-025-410-000 TR,2SK2541-T/2SK2541 (	a	b	c	d	e	f
MAIN		O	Q	0803	S9-025-410-000 TR,2SK2541-T/2SK2541 (	a	b	c	d	e	f
MAIN		O	Q	0804	S9-025-410-000 TR,2SK2541-T/2SK2541 (	a	b	c	d	e	f
MAIN		S	Q	0807	89-318-154-080 TR,2SC1815GR	a	b	c	d	e	f
MAIN		S	Q	0808	89-318-154-080 TR,2SC1815GR	a	b	c	d	e	f
MAIN		O	Q	0851	S2-015-661-000 TR,B1566E (LIGHTNING)	a	b	c	d	e	f
MAIN		S	Q	0852	S6-805-000-000 TR,3DA8050	a	b	c	d	e	f
MAIN		O	Q	0901	S5-901-300-060 TR,9013G	a	b	.	.	e	.
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC
MAIN		S	Q	0901	S5-901-300-070 TR,9013G/KTC	.	.	c	d	.	f
MAIN		O	Q	0902	S6-901-200-000 TR,3CG9012	a	b	c	d	e	f
MAIN		X	R	0201	S0-331-510-160 RES,330-1/16W (1	a	b	c	d	e	f
MAIN		X	R	0202	S0-331-510-160 RES,330-1/16W (1	a	b	c	d	e	f
MAIN		X	R	0203	S0-472-510-160 RES,4.7K-1/16W	a	b	c	d	e	f
MAIN		X	R	0204	S0-472-510-160 RES,4.7K-1/16W	a	b	c	d	e	f
MAIN		X	R	0205	S0-332-510-160 RES,3.3K-1/16W	a	b	c	d	e	f
MAIN		X	R	0206	S0-332-510-160 RES,3.3K-1/16W	a	b	c	d	e	f
MAIN		X	R	0207	S0-332-510-160 RES,3.3K-1/16W	a	b	c	d	e	f
MAIN		X	R	0208	S0-331-510-160 RES,330-1/16W (1	a	b	c	d	e	f
MAIN		X	R	0210	S0-568-510-160 RES,5.6-1/16W	a	b	c	d	.	f
MAIN		X	R	0211	S0-104-510-160 RES,100K-1/16W (	a	b	c	d	e	f
MAIN		X	R	0212	S0-104-510-160 RES,100K-1/16W (	a	b	c	d	e	f
MAIN		X	R	0217	S0-103-510-160 RES,10K-1/16W (1	a	b	c	d	e	f
MAIN		X	R	0218	S0-331-510-160 RES,330-1/16W (1	a	b	c	d	e	f
MAIN		X	R	0225	S0-568-510-160 RES,5.6-1/16W	a	b	c	d	e	f
MAIN		X	R	0314	S0-682-510-160 RES,6.8K-1/16W	a	b	c	d	e	f
MAIN		X	R	0315	S0-103-510-160 RES,10K-1/16W (1	a	b	c	d	e	f
MAIN		X	R	0316	S0-102-510-160 RES,1K-1/16W (1/	a	b	c	d	e	f
MAIN		X	R	0317	S0-682-510-160 RES,6.8K-1/16W	a	b	c	d	e	f

ELECTRICAL PARTS LIST -5/7

! = ⚠SAFTY PARTS
C = Components marked

All components used on this model at the production line are shown in this service manual.
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Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

UNIT-NAME		! C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL					
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC
MAIN		X R	0323	S0-223-510-160	RES,22K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0336	S0-183-510-160	RES,18K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0343	S0-568-510-160	RES,5.6-1/16W	a	b	c	d	e	f
MAIN		X R	0344	S0-221-510-160	RES,220-1/16W	a	b	c	d	e	f
MAIN		X R	0390	S0-333-510-160	RES,33K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0397	S0-333-510-160	RES,33K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0401	S0-563-510-160	RES,56K-1/16W	a	b	c	d	e	f
MAIN		X R	0402	S0-563-510-160	RES,56K-1/16W	a	b	c	d	e	f
MAIN		X R	0403	S0-563-510-160	RES,56K-1/16W	a	b	c	d	e	f
MAIN		X R	0404	S0-563-510-160	RES,56K-1/16W	a	b	c	d	e	f
MAIN		X R	0405	S0-104-510-160	RES,100K-1/16W (	a	b	c	d	e	f
MAIN		X R	0406	S0-104-510-160	RES,100K-1/16W (	a	b	c	d	e	f
MAIN		X R	0407	S0-154-510-160	RES,150K-1/16W (	a	b	c	d	e	f
MAIN		X R	0408	S0-223-510-160	RES,22K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0409	S0-222-510-160	RES,2.2K-1/16W	a	b	c	d	e	f
MAIN		X R	0410	S0-561-510-160	RES,560-1/16W	a	b	c	d	e	f
MAIN		X R	0411	S0-393-510-160	RES,39K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0412	S0-183-510-160	RES,18K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0413	S0-103-510-160	RES,10K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0414	S0-104-510-160	RES,100K-1/16W (	a	b	c	d	e	f
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC
MAIN		X R	0416	S0-222-510-160	RES,2.2K-1/16W	a	b	c	d	e	f
MAIN		X R	0417	S0-273-510-160	RES,27K-1/16W	a	b	c	d	e	f
MAIN		X R	0418	S0-223-510-160	RES,22K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0419	S0-223-510-160	RES,22K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0420	S0-223-510-160	RES,22K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0421	S0-152-500-160	RES,1.5K-1/16W	a	b	c	d	e	f
MAIN		X R	0422	S0-273-510-160	RES,27K-1/16W	a	b	c	d	e	f
MAIN		X R	0424	S0-563-510-160	RES,56K-1/16W	a	b	c	d	e	f
MAIN		X R	0425	S0-563-510-160	RES,56K-1/16W	a	b	c	d	e	f
MAIN		X R	0426	S0-102-510-160	RES,1K-1/16W (1/	a	b	c	d	e	f
MAIN		X R	0427	S0-333-510-160	RES,33K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0428	S0-333-510-160	RES,33K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0429	S0-394-510-160	RES,390K-1/16W	a	b	c	d	e	f
MAIN		X R	0430	S0-153-510-160	RES,15K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0431	S0-224-510-160	RES,220K-1/16W	a	b	c	d	e	f
MAIN		X R	0432	S0-224-510-160	RES,220K-1/16W	a	b	c	d	e	f
MAIN		X R	0433	S0-392-510-160	RES,3.9K-1/16W (1/8W	a	b	c	d	e	f
MAIN		X R	0434	S0-682-510-160	RES,6.8K-1/16W	a	b	c	d	e	f
MAIN		X R	0435	S0-153-510-160	RES,15K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0436	S0-223-510-160	RES,22K-1/16W (1	a	b	c	d	e	f
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC
MAIN		X R	0437	S0-123-510-160	RES,12K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0438	S0-273-510-160	RES,27K-1/16W	a	b	c	d	e	f
MAIN		X R	0439	S0-331-510-160	RES,330-1/16W (1	a	b	c	d	e	f
MAIN		X R	0440	S0-331-510-160	RES,330-1/16W (1	a	b	c	d	e	f
MAIN		X R	0441	S0-472-510-160	RES,4.7K-1/16W	a	b	c	d	e	f
MAIN		X R	0442	S0-564-510-160	RES,560K-1/16W	a	b	c	d	e	f
MAIN		X R	0443	S0-101-510-160	RES,100-1/16W (1	a	b	c	d	e	f
MAIN		X R	0444	S0-220-510-160	RES,22-1/16W (1/	a	b	c	d	e	f
MAIN		X R	0445	S0-471-510-160	RES,470-1/16W	a	b	c	d	e	f
MAIN		X R	0446	S0-153-510-160	RES,15K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0447	S0-103-510-160	RES,10K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0448	S0-333-510-160	RES,33K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0449	S0-103-510-160	RES,10K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0450	S0-103-510-160	RES,10K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0451	S0-103-510-160	RES,10K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0452	S0-124-510-160	RES,120K-1/16W (	a	b	c	d	e	f
MAIN		X R	0453	S0-124-510-160	RES,120K-1/16W (	a	b	c	d	e	f
MAIN		X R	0457	S0-101-510-160	RES,100-1/16W (1	a	b	c	d	e	f
MAIN		X R	0458	S0-101-510-160	RES,100-1/16W (1	a	b	c	d	e	f
MAIN		X R	0459	S0-101-510-160	RES,100-1/16W (1	a	b	c	d	e	f
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC
MAIN		X R	0460	S0-101-510-160	RES,100-1/16W (1	a	b	c	d	e	f
MAIN		X R	0461	S0-101-510-160	RES,100-1/16W (1	a	b	c	d	e	f
MAIN		X R	0462	S0-101-510-160	RES,100-1/16W (1	a	b	c	d	e	f
MAIN		X R	0463	S0-101-510-160	RES,100-1/16W (1	a	b	c	d	e	f
MAIN		X R	0464	S0-101-510-160	RES,100-1/16W (1	a	b	c	d	e	f
MAIN		X R	0465	S0-392-510-160	RES,3.9K-1/16W (1/8W	a	b	c	d	e	f
MAIN		X R	0466	S0-392-510-160	RES,3.9K-1/16W (1/8W	a	b	c	d	e	f
MAIN		X R	0468	S0-150-510-160	RES,15-1/6W	a	b	c	d	e	f
MAIN		X R	0470	S0-103-510-160	RES,10K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0473	S0-562-510-160	RES,5.6K-1/16W	a	b	c	d	e	f
MAIN		X R	0474	S0-223-510-160	RES,22K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0477	S0-473-510-160	RES,47K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0478	S0-271-510-160	RES,270-1/16W	a	b	c	d	e	f
MAIN		X R	0479	S0-100-510-160	RES,10-1/16W (1/	a	b	c	d	e	f
MAIN		X R	0480	S0-100-510-160	RES,10-1/16W (1/	a	b	c	d	e	f
MAIN		X R	0482	S0-102-510-160	RES,1K-1/16W (1/	a	b	c	d	e	f
MAIN		X R	0801	S0-332-510-160	RES,3.3K-1/16W	a	b	c	d	e	f
MAIN		X R	0802	S0-153-510-160	RES,15K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0803	S0-153-510-160	RES,15K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0804	S0-332-510-160	RES,3.3K-1/16W	a	b	c	d	e	f

ELECTRICAL PARTS LIST -6/7

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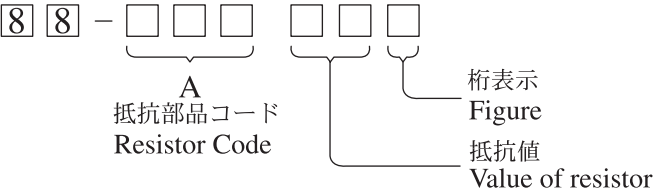
UNIT-NAME		! C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL					
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC
MAIN		X R	0805	S0-822-510-160	RES,8.2K-1/16W	a	.	c	d	.	f
MAIN		X R	0805	S0-102-510-160	RES,1K-1/16W (1/	.	b	.	.	e	.
MAIN		X R	0806	S0-822-510-160	RES,8.2K-1/16W	a	.	c	d	.	f
MAIN		X R	0806	S0-102-510-160	RES,1K-1/16W (1/	.	b	.	.	e	.
MAIN		X R	0807	S0-102-510-160	RES,1K-1/16W (1/	a	b	c	d	e	f
MAIN		X R	0808	S0-102-510-160	RES,1K-1/16W (1/	a	b	c	d	e	f
MAIN		X R	0809	S0-101-510-160	RES,100-1/16W (1	a	b	c	d	e	f
MAIN		X R	0810	S0-101-510-160	RES,100-1/16W (1	a	b	c	d	e	f
MAIN		X R	0813	S0-102-510-160	RES,1K-1/16W (1/	a	b	c	d	e	f
MAIN		X R	0815	S0-228-507-140	RES,2.2-1/4W	.	.	c	d	.	f
MAIN		X R	0816	S0-228-507-140	RES,2.2-1/4W	.	.	c	d	.	f
MAIN		X R	0821	S0-104-510-160	RES,100K-1/16W (	a	b	c	d	e	f
MAIN		X R	0822	S0-104-510-160	RES,100K-1/16W (	a	b	c	d	e	f
MAIN		X R	0825	S0-682-510-160	RES,6.8K-1/16W	a	.	c	d	.	f
MAIN		X R	0825	S0-332-510-160	RES,3.3K-1/16W	.	b	.	.	e	.
MAIN		X R	0826	S0-103-510-160	RES,10K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0828	S0-103-510-160	RES,10K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0829	S0-102-510-160	RES,1K-1/16W (1/	a	b	c	d	e	f
MAIN		X R	0830	S0-102-510-160	RES,1K-1/16W (1/	a	b	c	d	e	f
MAIN		X R	0848	S0-223-510-160	RES,22K-1/16W (1	a	b	c	d	e	f
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC
MAIN		X R	0849	S0-223-510-160	RES,22K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0851	S0-103-510-160	RES,10K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0852	S0-471-510-160	RES,470-1/16W	a	b	c	d	e	f
MAIN		X R	0853	S0-682-510-160	RES,6.8K-1/16W	a	b	c	d	e	f
MAIN		X R	0854	S0-561-510-160	RES,560-1/16W	a	b	c	d	e	f
MAIN		X R	0855	S0-104-510-160	RES,100K-1/16W (	a	b	c	d	e	f
MAIN		X R	0856	S0-104-510-160	RES,100K-1/16W (	a	b	c	d	e	f
MAIN		X R	0857	S0-473-510-160	RES,47K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0858	S0-473-510-160	RES,47K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0859	S0-222-510-160	RES,2.2K-1/16W	a	b	c	d	e	f
MAIN		X R	0860	S0-222-510-160	RES,2.2K-1/16W	a	b	c	d	e	f
MAIN		X R	0861	S0-152-500-160	RES,1.5K-1/16W	a	.	c	d	.	f
MAIN		X R	0861	S0-102-510-160	RES,1K-1/16W (1/	.	b	.	.	e	.
MAIN		X R	0862	S0-152-500-160	RES,1.5K-1/16W	a	.	c	d	.	f
MAIN		X R	0862	S0-102-510-160	RES,1K-1/16W (1/	.	b	.	.	e	.
MAIN		X R	0866	S0-682-510-160	RES,6.8K-1/16W	a	.	c	d	.	f
MAIN		X R	0866	S0-332-510-160	RES,3.3K-1/16W	.	b	.	.	e	.
MAIN		X R	0867	S0-152-500-160	RES,1.5K-1/16W	a	.	c	d	.	f
MAIN		X R	0867	S0-392-510-160	RES,3.9K-1/16W (1/8W	.	b	.	.	e	.
MAIN		X R	0868	S0-152-500-160	RES,1.5K-1/16W	a	.	c	d	.	f
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC
MAIN		X R	0868	S0-392-510-160	RES,3.9K-1/16W (1/8W	.	b	.	.	e	.
MAIN		X R	0872	S0-471-510-160	RES,470-1/16W	a	b	c	d	e	f
MAIN		X R	0901	S0-471-510-160	RES,470-1/16W	a	b	c	d	e	f
MAIN		X R	0902	S0-103-510-160	RES,10K-1/16W (1	a	b	c	d	e	f
MAIN		X R	0903	S0-472-510-160	RES,4.7K-1/16W	a	b	c	d	e	f
MAIN		X R	0904	S0-471-510-160	RES,470-1/16W	a	b	.	.	e	.
MAIN		X R	0904	S0-681-510-160	RES,680-1/16W (1	.	.	c	d	.	f
MAIN		X R	0906	S0-221-510-160	RES,220-1/16W	a	b	c	d	e	f
MAIN		O	SPK0001	S4-080-020-150	SPK,8OHM 2W	a	.	c	d	.	.
MAIN		O	SPK0001	S4-080-020-140	SPK00004"008OHM0002W w/RED	.	b	.	.	e	f
MAIN		O	SPK0002	S4-080-020-150	SPK,8OHM 2W	a	.	c	d	.	.
MAIN		O	SPK0002	S4-080-020-140	SPK00004"008OHM0002W w/RED	.	b	.	.	e	f
MAIN		O	SW 0401	S0-011-200-020	LEAF SWITCH LSA-1120Y2	a	b	c	d	e	f
MAIN		O	SW 0801	S6-400-610-000	SW,SLIDE 6P4T	a	b	c	d	e	f
MAIN		O	T 0201	S0-110-300-100	IFT,1A1103R B	a	b	c	d	e	f
MAIN		O	T 0202	S0-022-400-100	IFT,4A-224R,10mm	a	b	c	.	e	f
MAIN		O	T 0203	S0-024-700-100	IFT,A247R(B) 10MM	a	b	c	d	e	f
MAIN		O	VR 0801	SD-165-031-020	RES,VARIABLE 50KA	a	b	c	d	e	f
MAIN		O	X 0401	S0-016-930-000	CER,RESO	a	b	c	d	e	f
RECTIFIER		X C	0601	S0-203-800-500	CAP,CER 0.02U-50V	a	b	c	d	e	f
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC
RECTIFIER		X C	0602	S0-203-800-500	CAP,CER 0.02U-50V	a	b	c	d	e	f
RECTIFIER		X C	0603	S0-203-800-500	CAP,CER 0.02U-50V	a	b	c	d	e	f
RECTIFIER		X C	0604	S0-203-800-500	CAP,CER 0.02U-50V	a	b	c	d	e	f
RECTIFIER		O	C 0605	87-010-388-010	CAP,E 1000-25V	a	b	c	d	e	f
RECTIFIER		X C	0606	S0-203-800-500	CAP,CER 0.02U-50V	a	b	c	d	e	f
RECTIFIER		O	CNH0852	S0-302-68C-000	HSG CD268-3B(C) 2507H-3	a	b	c	d	e	f
RECTIFIER		O	D 0601	82-596-799-010	DI,1N4001B	a	b	c	d	e	f
RECTIFIER		O	D 0602	82-596-799-010	DI,1N4001B	a	b	c	d	e	f
RECTIFIER		O	D 0603	82-596-799-010	DI,1N4001B	a	b	c	d	e	f
RECTIFIER		O	D 0604	82-596-799-010	DI,1N4001B	a	b	c	d	e	f
RECTIFIER		! O	HP 0002	S2-201-000-070	AC SOCKET PSE27 DAIICHI 2.5A/	a	b	.	.	e	.
RECTIFIER		! O	HP 0002	87-A60-178-010	AC SOCKET PSE27	.	.	c	d	.	f
RECTIFIER		! O	PT 0001	S3-801-391-400	PT001WEI48/18&F&WEN& 230V:11.	a	b	c	d	e	f

- Regarding connectors, they are not stocked as they are not the initial order items.
The connectors are available after they are supplied from connector manufacturers upon the order is received.

○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)				抵抗コード : A Resistor Code : A
				外形/Form	L	W	t	
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

TRANSISTOR ILLUSTRATION-1/1



E C B

2SC1815GR
3CG9012
3DA8050
3CA8550
2SB764D/E
9013G



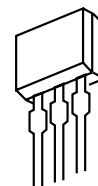
B C E

B1566E



E C B

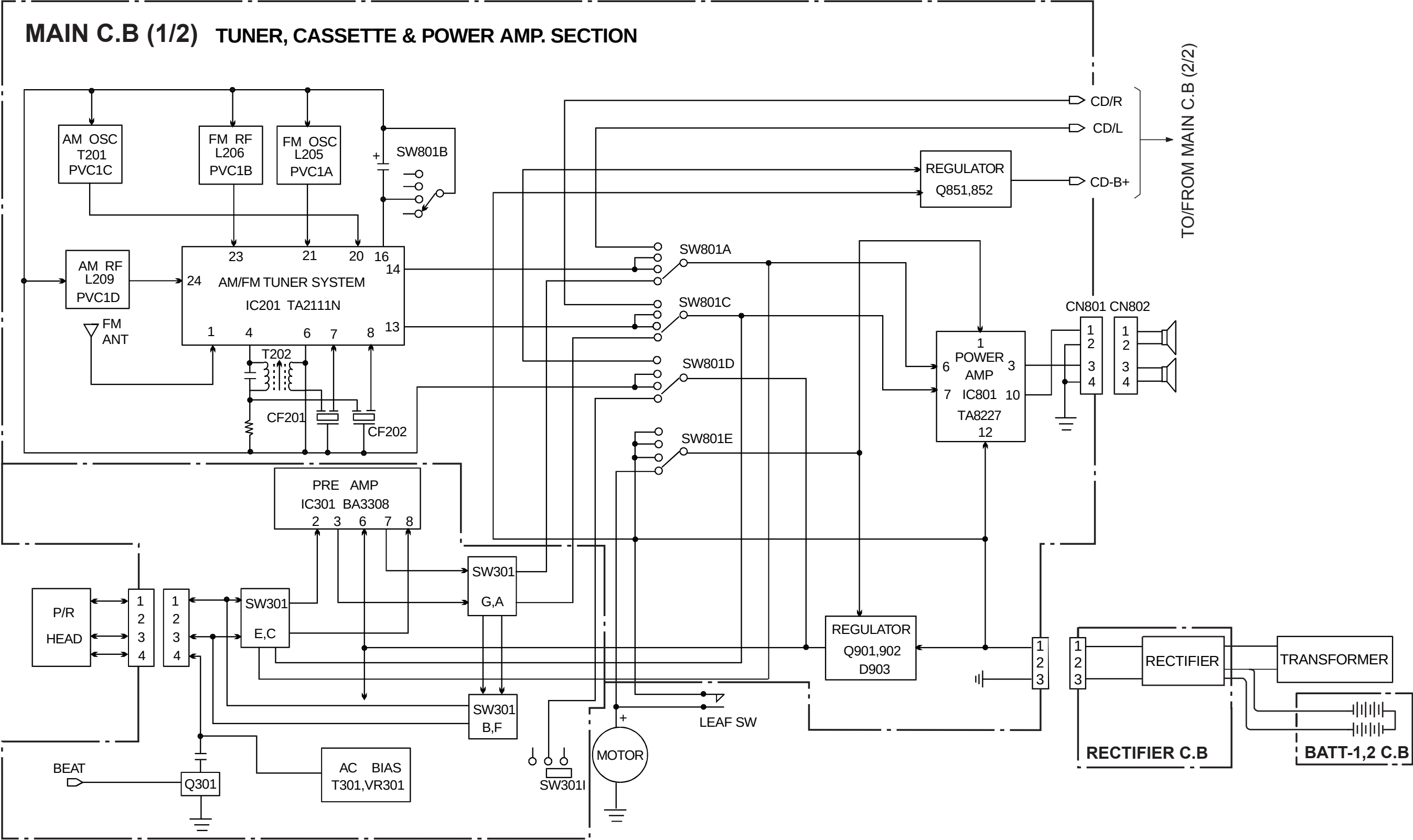
2SA1346

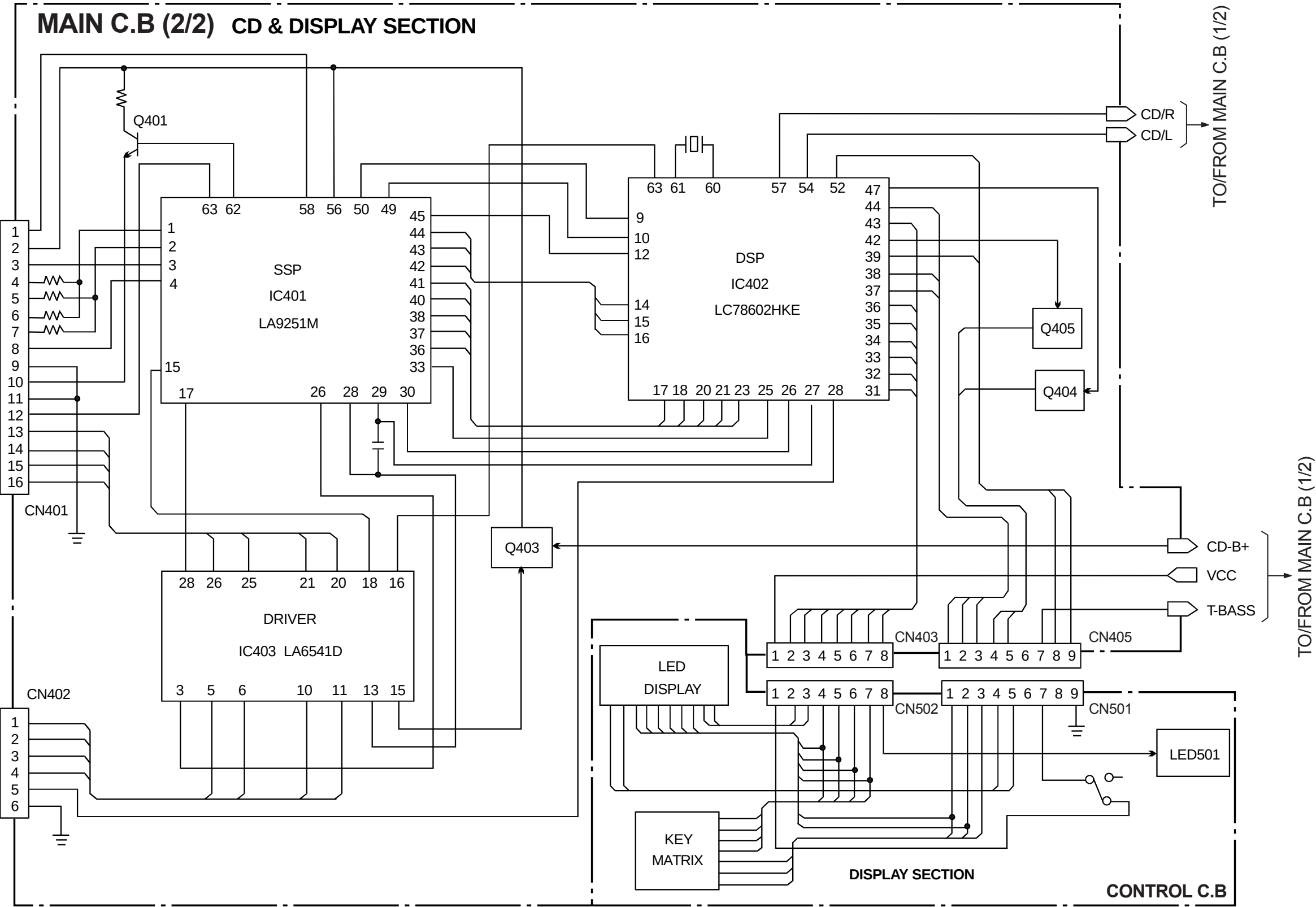


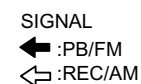
2SK2541

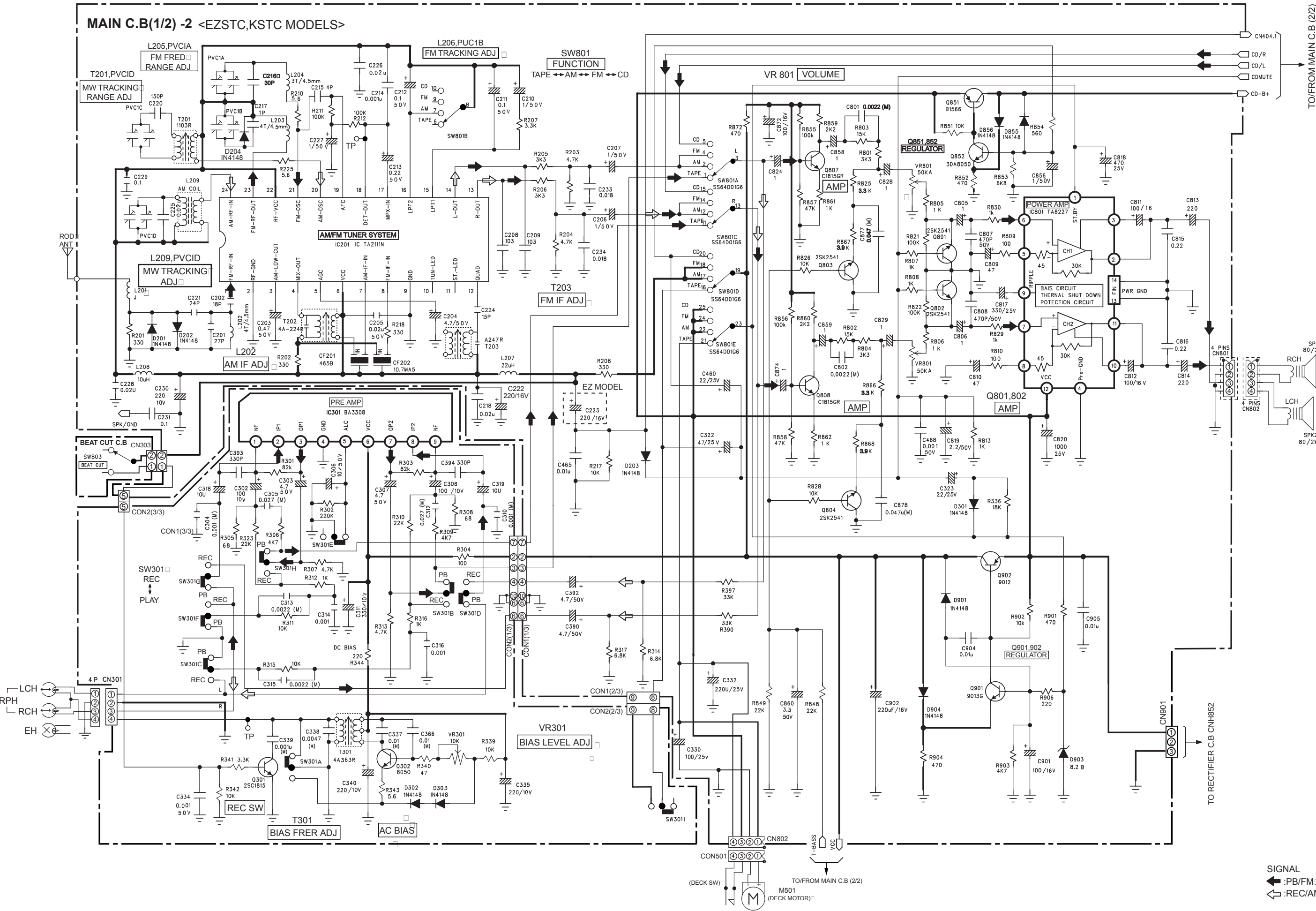


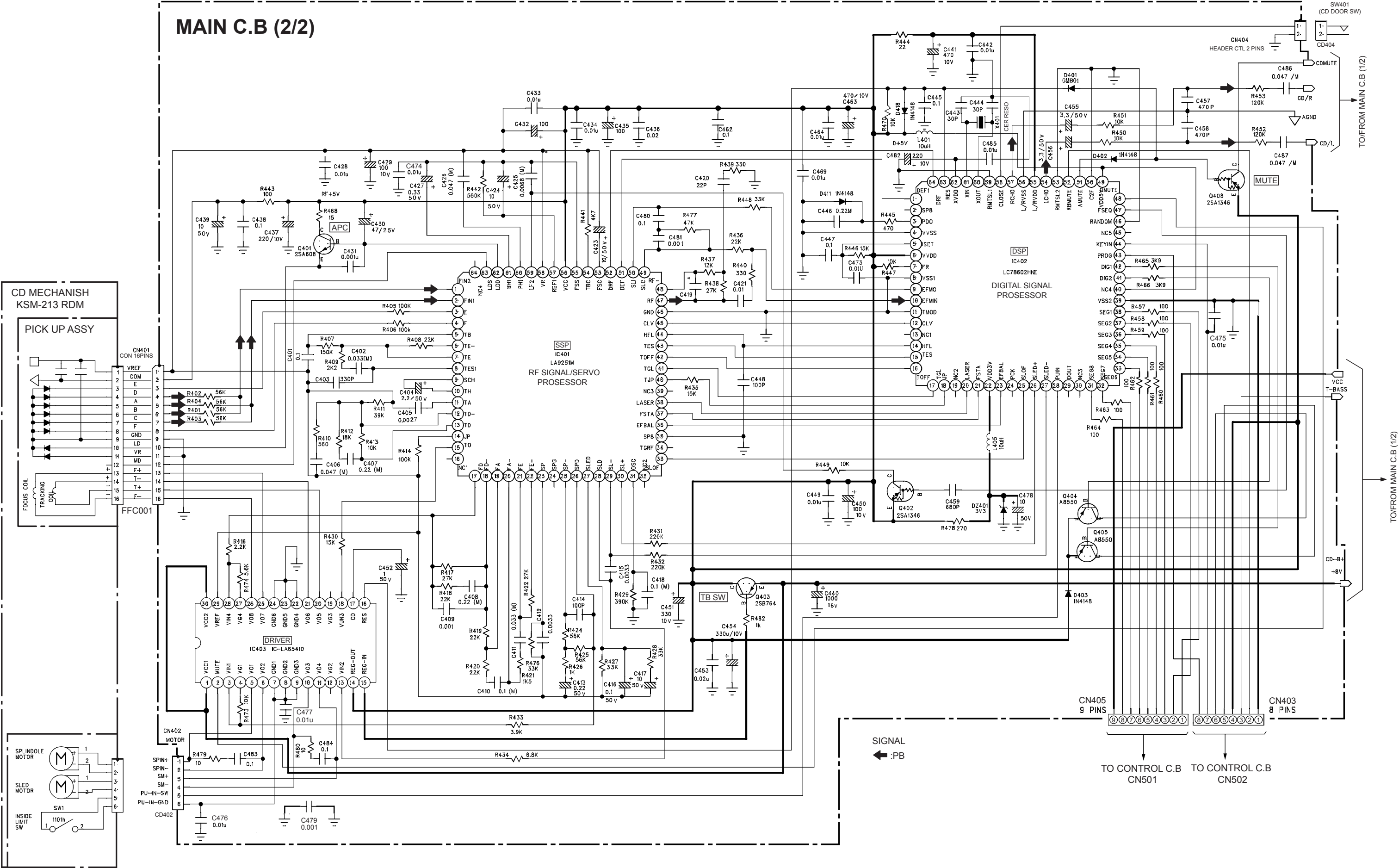
2SA608N







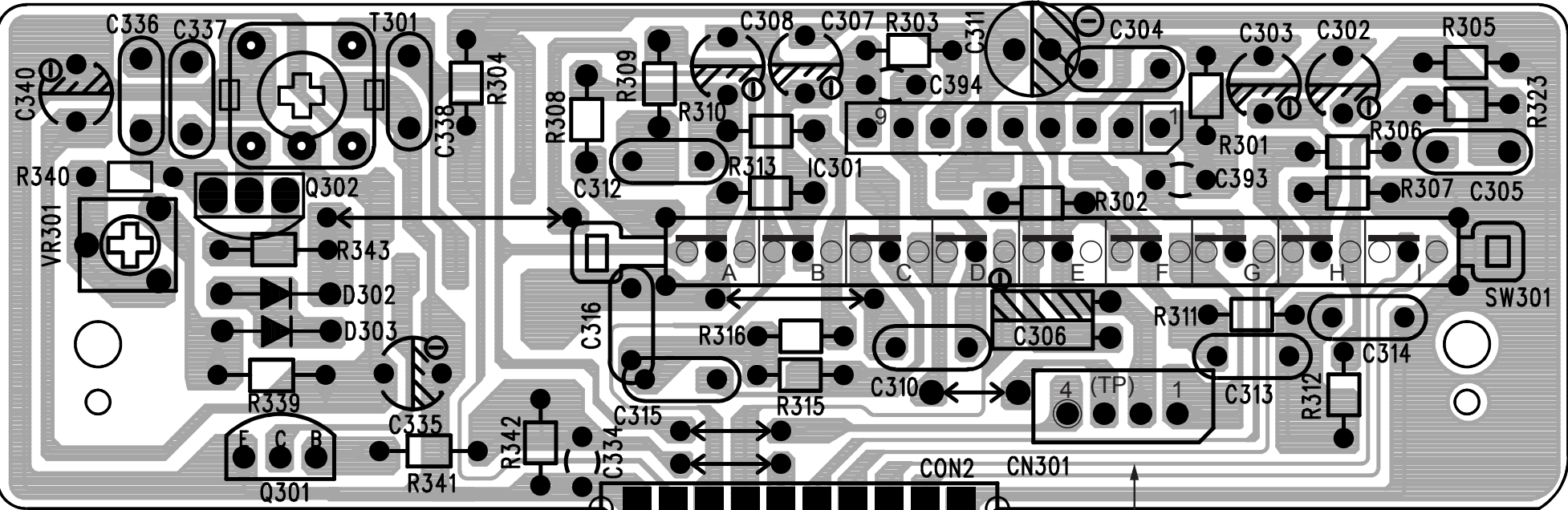






	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
--	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	---	---	---	---	---	---	---	---	---	--

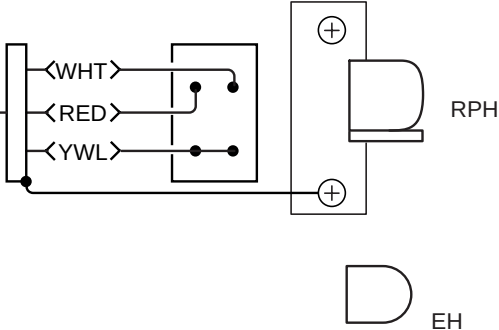
CASSETTE C.B (PARTS SIDE)

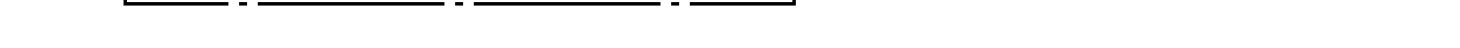


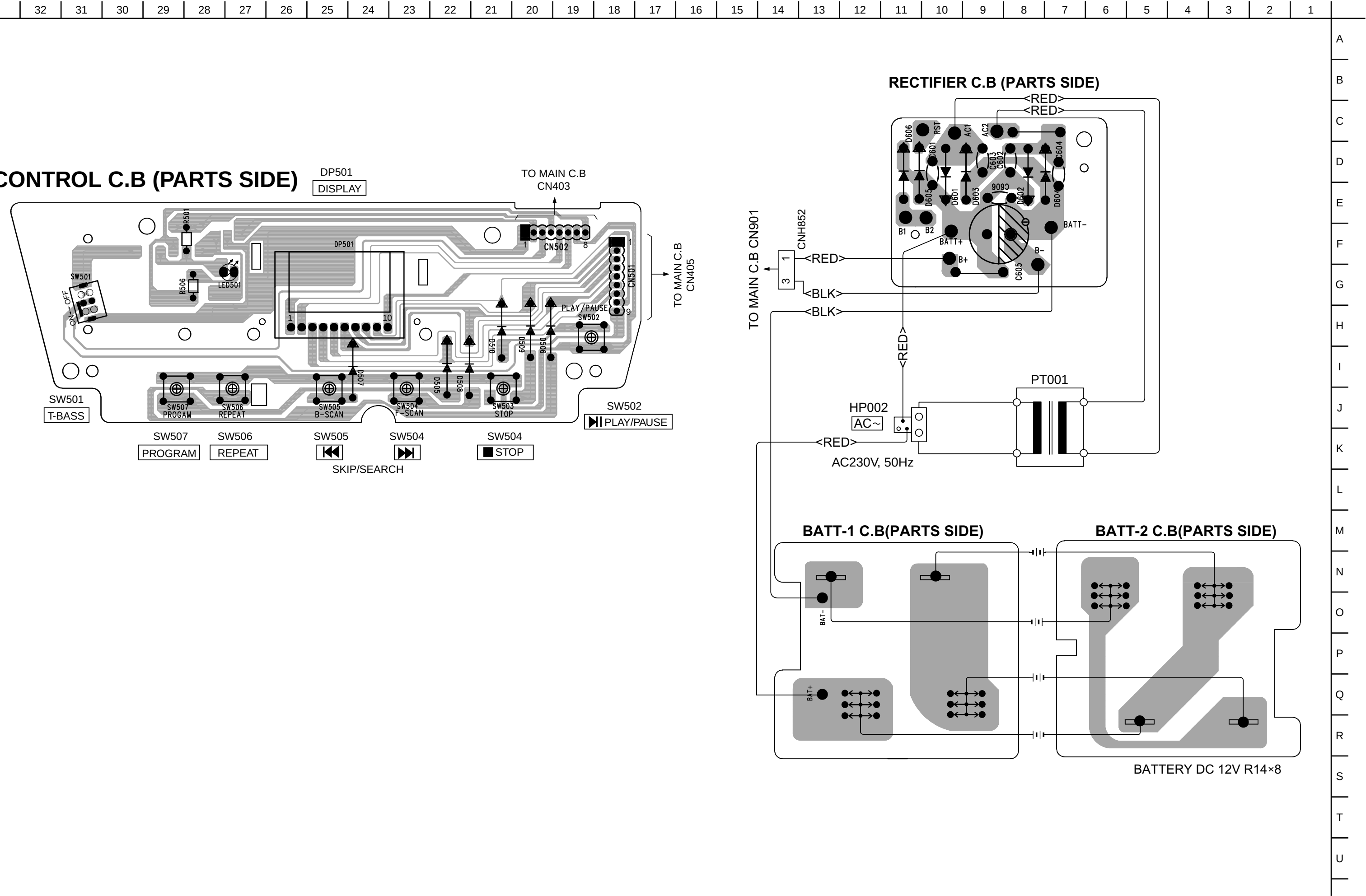
TO MAIN C.B
CON1

SW301
PB ↔ REC

4 1
CNH002







VOLTAGE CHART -1/2

TUNER

SET FM/AM TUNER ON ONE FREQUENCY

IC201 AM

PIN'S NUMBER	1	2	3	4	5	6	7	8	9	10
AM	0	0	1.13	6.28	0.41	6.29	5.54	6.29	0	0
FM	0.78	0	0.61	4.94	0.02	5.09	4.54	5.09	0	0
PIN'S NUMBER	11	12	13	14	15	16	17	18	19	20
AM	0	5.69	6.23	6.3	6.3	6.3	6.33	1.01	1.05	0.71
FM	0	4.3	5.09	5.09	5.09	5.09	5.09	0.76	1.06	0.71
PIN'S NUMBER	21	22	23	24						
AM	6.3	5.53	0.78	0.79						
FM	4.28	4.35	0.76	0.78						

TAPE

TAPE PLAY

IC801

PIN'S NUMBER	1	2	3	4	5	6	7	8	9	10
	13.5	7.07	13.2	0	0.56	0	13.5	7.09	13.2	7.2
PIN'S NUMBER	11	12								
	0.6	0								

IC301

PIN'S NUMBER	1	2	3	4	5	6	7	8	9
	1.84	0	1.85	0	0	7.79	1.86	0	1.84

Q301

	E	C	B
OSC ON	0	0	0.7
OFF	0	0	0

Q302

E	C	B
7.72	8.13	8.12

CD

CDPLAY

IC401

PIN'S NUMBER	1	2	3	4	5	6	7	8	9	10
	2.44	2.44	2.49	2.49	2.43	2.47	2.45	2.48	2.48	2.46
PIN'S NUMBER	11	12	13	14	15	16	17	18	19	20
	2.44	2.46	2.47	2.47	2.51	0	2.61	2.47	2.35	2.48
PIN'S NUMBER	21	22	23	24	25	26	27	28	29	30
	2.49	2.47	2.43	2.43	2.48	2.58	2.47	2.51	2.26	2.26
PIN'S NUMBER	31	32	33	34	35	36	37	38	39	40
	1.57	0	0.05	0	0	0.06	0.06	4.95	0	2.47
PIN'S NUMBER	41	42	43	44	45	46	47	48	49	50
	4.96	0.04	0.9	0	2.64	0	2.12	2.48	2.49	2.51
PIN'S NUMBER	51	52	53	54	55	56	57	58	59	60
	0.05	4.89	2.47	2.47	0	4.96	2.47	2.47	2.27	2.25
PIN'S NUMBER	61	62	63	64						
	2.27	3.59	0.19	0						

VOLTAGE CHART -2/2

IC402

PIN'S NUMBER	1	2	3	4	5	6	7	8	9	10
	0.02	0	1.49	0.05	1.16	4.94	2.04	0.06	2.49	2.49
PIN'S NUMBER	11	12	13	14	15	16	17	18	19	20
	0.07	2.64	0.02	0.02	0.95	0.07	4.94	2.47	0.14	4.95
PIN'S NUMBER	21	22	23	24	25	26	27	28	29	30
	0.06	3.07	3.07	0.04	0.05	0.05	0.05	4.94	2.5	0.11
PIN'S NUMBER	31	32	33	34	35	36	37	38	39	40
	2	4.91	4.91	4.83	4.91	3.01	3.09	4.63	0.04	4.96
PIN'S NUMBER	41	42	43	44	45	46	47	48	49	50
	2.85	2.8	4.94	4.94	0.04	0.04	4.96	4.96	4.96	0.05
PIN'S NUMBER	51	52	53	54	55	56	57	58	59	60
	4.96	0	0.05	2.33	4.66	0	2.33	0	0.04	2.08
PIN'S NUMBER	61	62	63	64						
	2.11	4.37	5.03	4.89						

IC403

PIN'S NUMBER	1	2	3	4	5	6	7	8	9	10
	7.61	4.95	2.51	2.45	3.67	3.13	0	0	0	3.32
PIN'S NUMBER	11	12	13	14	15	16	17	18	19	20
	3054	246	2.53	4.93	6.39	5.03	4.95	2.46	2.45	2.45
PIN'S NUMBER	21	22	23	24	25	26	27	28	29	30
	3.39	0	0	0	3.15	3.66	2.45	2.56	2.45	7.62

Q402

E	C	B
4.95	2.26	4.93

Q403

E	C	B
7.59	4.94	6.91

Q404

E	C	B
4.3	2.35	4.28

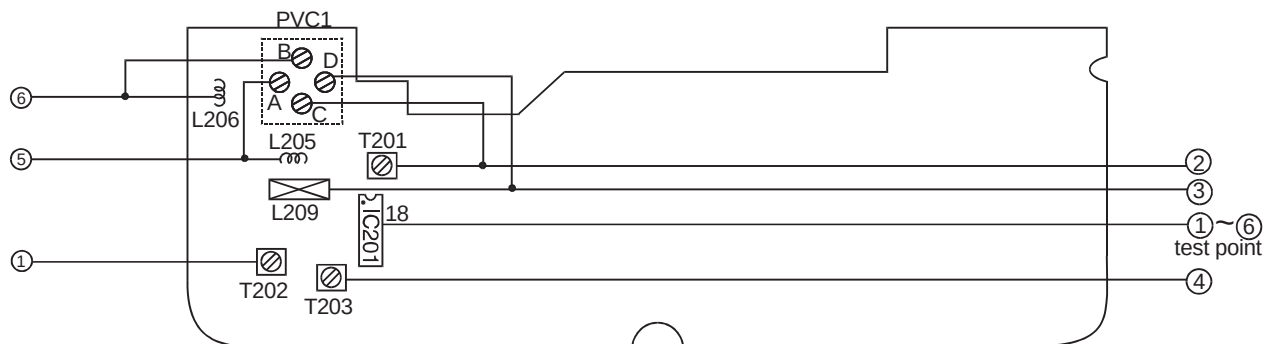
Q405

E	C	B
4.32	2.35	4.35

Q408

E	C	B
4.96	0	4.93

TUNER SECTION



1. AM IF adjustment

Test point : IC201 (TA2111N) 18Pin

Adjustment location: T202

T202465kHz (K/EZ)
.....455kHz (V)

2. MW frequency range adjustment

Test point: IC201 (TA2111N) 18Pin

Adjustment location: T201, PVC1C

T201 515kHz
PVC1C 1635kHz

3. MW tracking adjustment

Test point: IC201 (TA2111N) 18Pin

Adjustment location: L209, PVC1D

L209 600kHz waveform max.
PVC1D 1400kHz waveform max.

4. FM IF adjustment

Test point: IC201 (TA2111N) 18Pin

Adjustment location: T203

T203 10.7MHz

5. FM frequency range adjustment

Test point: IC201 (TA2111N) 18pin

Adjustment location: L205, PVC1A

L205 87.4MHz (K/EZ)
..... 87MHz (V)
PVC1A 108.3MHz (K/EZ)
..... 109MHz (V)

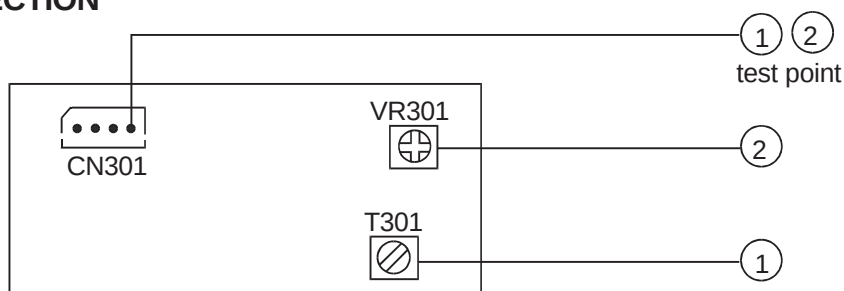
6. FM tracking adjustment

Test point :IC201 (TA2111N) 18Pin

Adjustment location: L206, PVC1B

L206 90MHz waveform max.
PVC1B 106MHz waveform max.

CASSETTE SECTION



1. Bias frequency adjustment

Test point: CN301 4Pin

Adjustment location: T301

T301 60±5kHz

2. Bias level adjustment

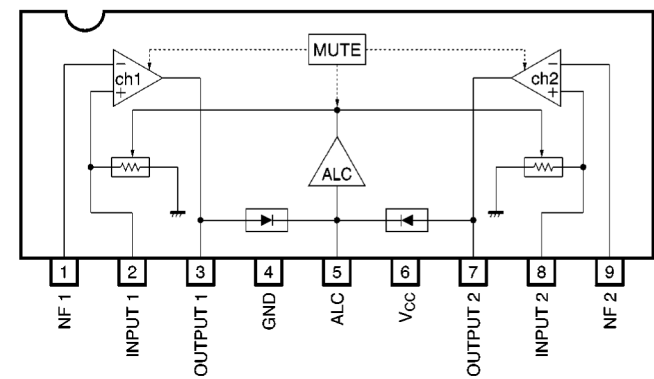
Test point: CON301 4Pin

Adjustment location: VR301

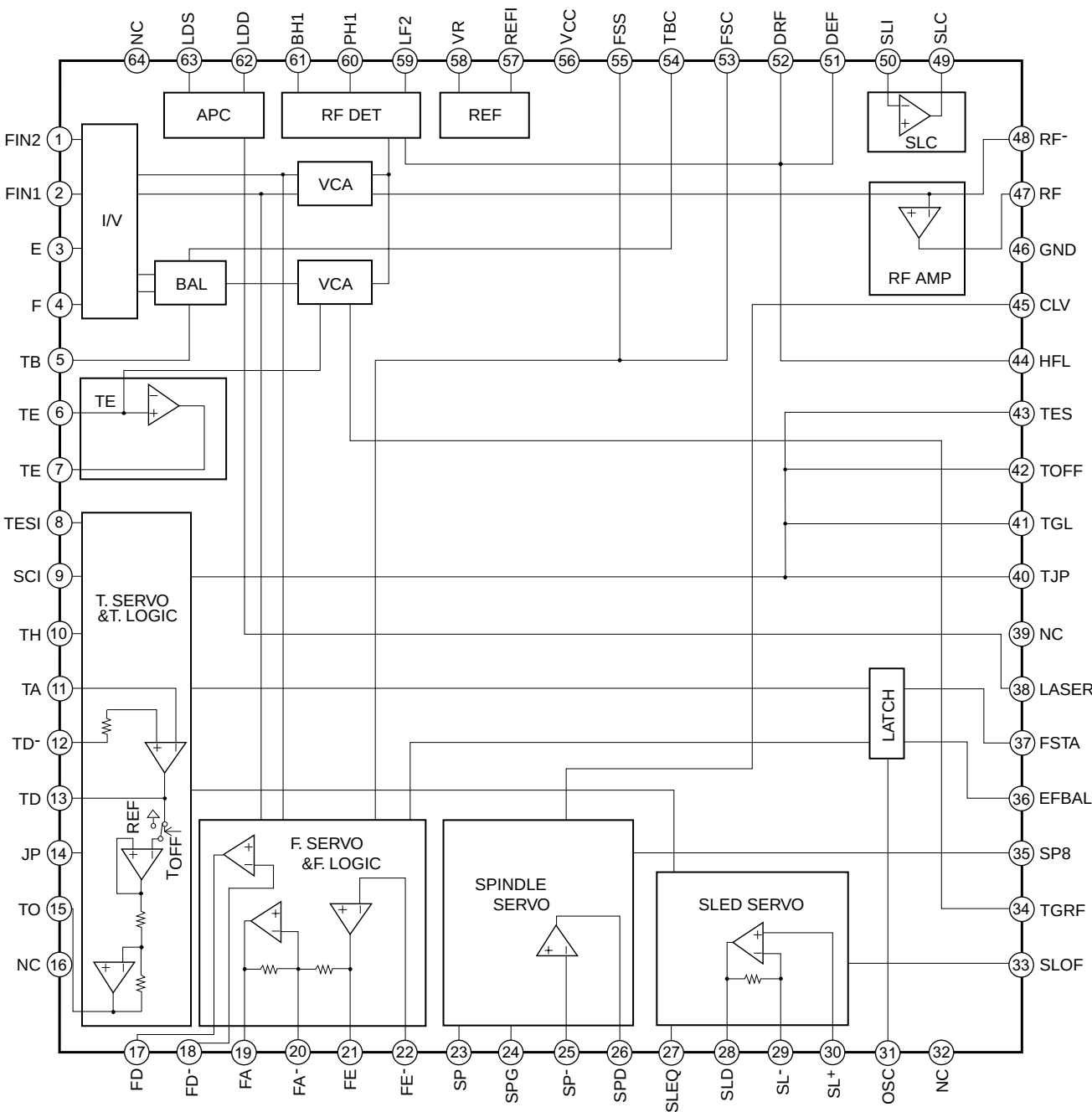
VR301 11V

IC BLOCK DIAGRAM -1/2

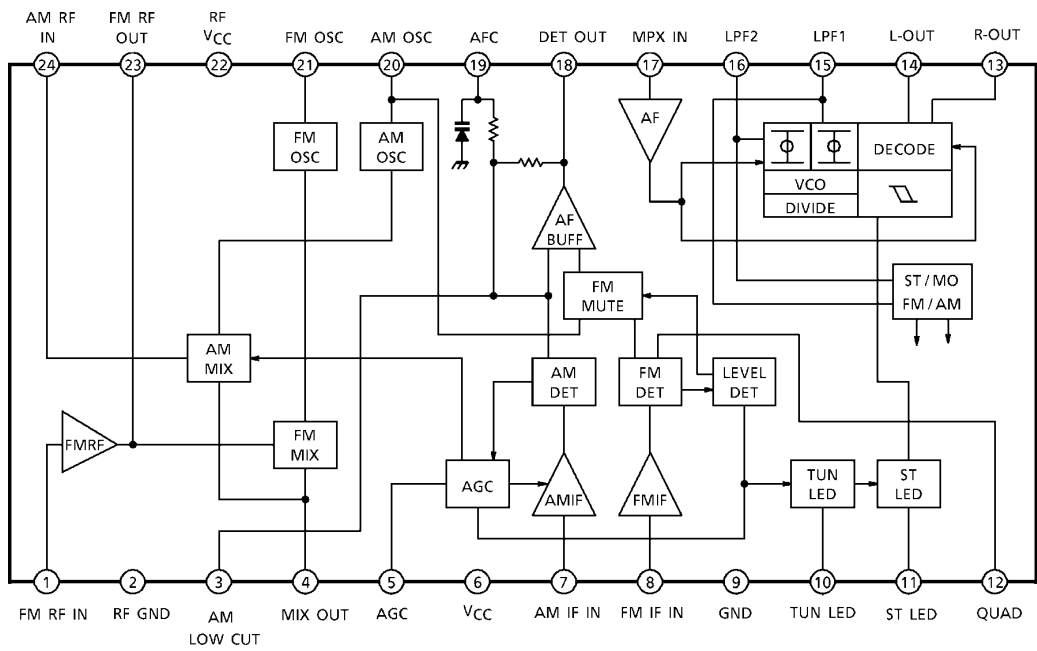
IC, BA3308



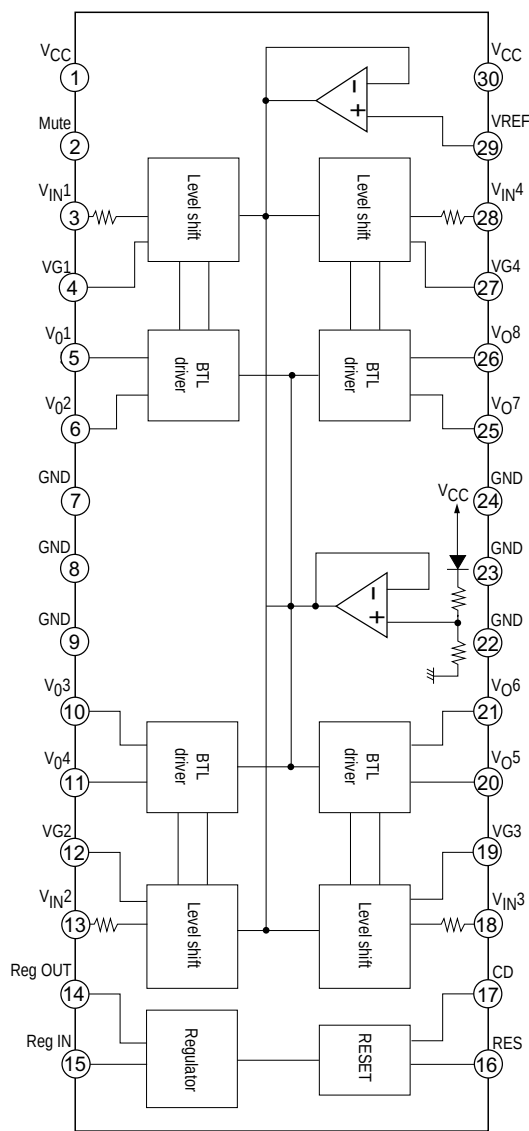
IC, LA9251M



IC, TA2111N



IC, LA6541DLL

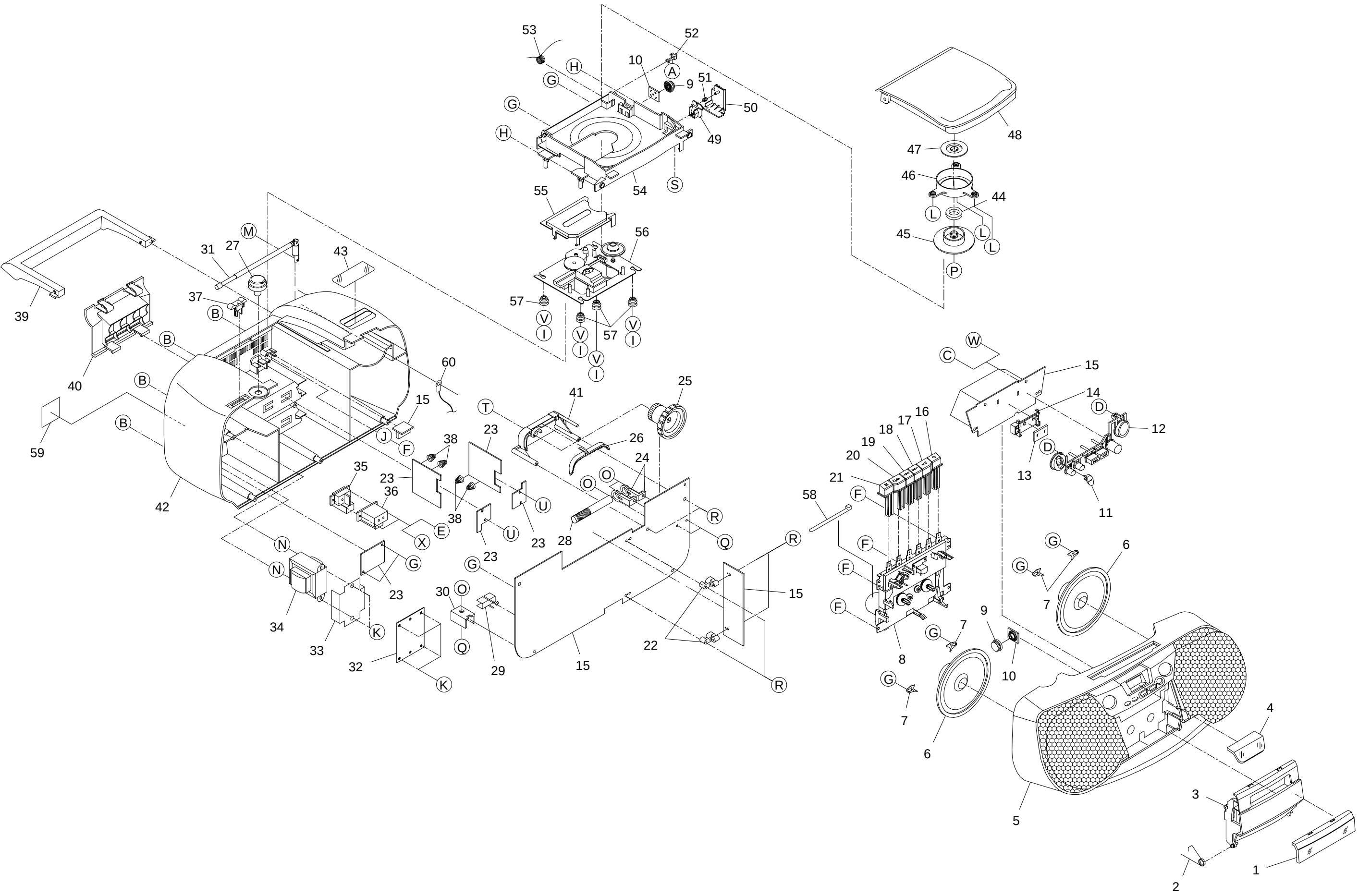


IC DESCRIPTION -1/1 (IC, LC78602HNE-8612D) -1/2

Pin No.	Pin	I/O	Function	
1	DEFI	I	Defect detection signal (DEF) input. (Must be connected to 0V if unused).	
2	SP8	O	SP8 control output.	
3	PDO	O	PLL circuit pins	Internal VCO control phase comparator output.
4	VVSS	–		Internal VCO ground. This pin must be connected to 0V.
5	ISSET	AI		PDO output current adjustment resistor connection.
6	VVDD	–		Internal VCO power supply.
7	FR	AI		VCO frequency range adjustment.
8	VSS	–	Digital system ground. This pin must be connected to 0V.	
9	EFMO	O	Slice level	EFM signal output.
10	EFMIN	I	Control pins	EFM signal input.
11	TMOD	I	Test input. This pin must be connected to 0V.	
12	CLV	O	Disc motor control output. This is a three-state output.	
13	NC1	O	Unused pin. This pin must be left open.	
14	HFL	I	Track detection signal input. This is a Schmitt input.	
15	TES	I	Tracking error signal input. This is a Schmitt input.	
16	TOFF	O	Tracking off output.	
17	TGL	O	Tracking gain switching output. A low level output raises the gain.	
18	JP	O	Track jump control output. This is a three-state output.	
19	NC2	O	Unused pin. This pin must be left open.	
20	LASER	O	Laser control output.	
21	FSTA	O	FSTA control output.	
22	VDD3V	–	Internal digital circuit power supply.	
23	EFBAL	O	EFBAL control output.	
24	PCK	O	EFM data playback clock monitor. 4.3218MHz when the phase is locked. (Note that this output pin is only provided for testing. Mount a external resistor between VDD5V in order to monitor this signal but connect this pin to the digital ground in normal mode operation.	
25	SLOF	O	Sled off control output.	
26	SLED+	O	Sled feed output.	
27	SLED–	O		
28	PUIN	I	Limit switch detection input. A pull-up resistor is built in.	
29	DOUT	O	Digital output(SPDIF).	
30	NC3	–	Unused pin. This pin must be left open.	
31	SEG8	O	Segment output (8). A pull-up resistor is built in.	
32	SEG7	O	Segment output (7). A pull-up resistor is built in.	
33	SEG6	O	Segment output (6). A pull-up resistor is built in.	
34	SEG5	O	Segment output (5). A pull-up resistor is built in.	
35	SEG4	O	Segment output (4). A pull-up resistor is built in.	
36	SEG3	O	Segment output (3). A pull-up resistor is built in.	
37	SEG2	O	Segment output (2). A pull-up resistor is built in.	
38	SEG1	O	Segment output (1). A pull-up resistor is built in.	
39	VSS	–	Digital system ground. This pin must be connected to 0V.	
40	NC4	–	Unused pin. This pin must be left open.	
41	DIG2	O	Common driver output (2). A pull-up resistor is built in.	
42	DIG1	O	Common driver output (1). A pull-up resistor is built in.	
43	PROG	O	Program operation monitor. A pull-up resistor is built in.	
44	KEYIN	I	Key matrix input. A pull-up resistor is built in.	
45	NC5	O	Unused pin. This pin must be connected to 0V.	

IC DESCRIPTION -1/1 (IC, LC78602HNE-8612D) -2/2

Pin No.	Pin	I / O	Function
46	RANDOM	O	Random mode indicator output. (Low : random mode , high , modes other than random mode).
47	FSEQ	O	Synchronizing signal detection output. Outputs a high level if the synchronizing signal detected from the EFM signal and internally generated synchronizing signal match.
48	DMUTE	O	Driver mute control signal output. (Low : driver mute , High : driver not mute).
49	VDD5V	–	Digital power supply for pins.
50	C2F	O	C2 error signal monitor. (Note that this output pin is only provided for testing. Mount a external resistor between VDD5V in order to monitor this signal but connect this pin to the digital ground in normal mode operation.)
51	AMUTE	O	Audio mute control signal output. (Low : audio mute , High : audio not mute)
52	REMOTE	I	Remote controller signal input.
53	RMTSL2	I	Remote controller identifier input (2). A pull-down resistor is built in. (Open : "0" . Connected to VDD5V : "1")
54	LCHO	O	left channed D/A converter output.
55	L/RVDD	–	D/A converter power supply.
56	L/RVSS	–	D/A converter ground. This pin must be connected to 0V.
57	RCHO	O	Right channel D/A converter output.
58	CLOSE	I	Close switch detection input. A pull-up resistor is built in.
59	RMTSL1	I	Remote controller identifier input (1). A pull-up resistor is built in. (Connected to digital ground : "0" . Open : "1")
60	XOUT	O	Connections for a 16.9344MHz crystal oscillator element.
61	XIN	I	
62	XVDD	–	Crystal oscillator circuit power supply.
63	RES	I	LSI reset input. Applications must be set this pin low temporarily when power is first applied.
64	DRF	I	DRF input.



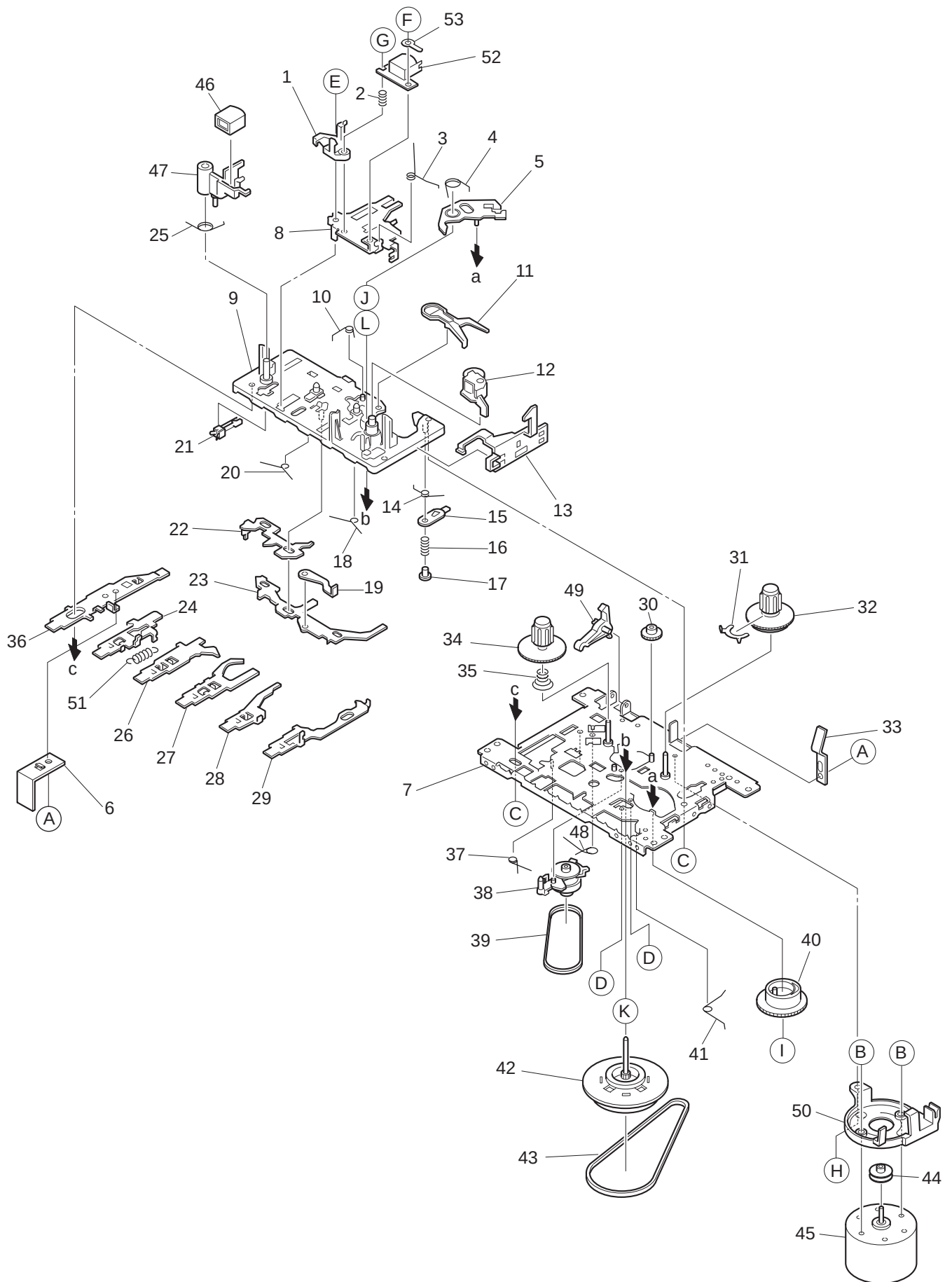
! = ⚠SAFTY PARTS
C = Components marked
All components used on this model at the production line are shown in this service manual.
However, please note that not all components will be available as spare parts for after-sales service.
Components marked S and O are designated as spare parts for service and will be stocked at the spare parts centers.
Components marked X and R are not designated as spare parts for after sales service, and will not be stocked at the spare parts centers.

UNIT-NAME		! C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL					
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC
		0	MC1048	8C-CDC-033-110	CD DOOR(T)	.	b	.	.	e	.
		0	MC1048	8C-CDC-024-010	CD DOOR(EXL)	.	.	c	.	.	.
		0	MC1048	8C-CDC-033-110	CD DOOR(T)	.	.	.	.	.	f
		0	MC1049	8C-CDC-204-010	LEVER, CD LOCK	a	b	c	d	e	f
		0	MC1050	8C-CDC-205-010	HLDR, CD LOCK	a	b	c	d	e	f
		0	MC1051	SB-CH8-270-000	LOCK SPRING BCH8-27 MAT'L=SUS	a	b	c	d	e	f
		0	MC1053	SC-CDC-280-000	CD LID SPRING CCDC-28 DIA:1.2	a	b	c	d	e	f
		0	MC1054	8C-CHC-006-010	CHAS, CD	a	.	.	d	.	.
		0	MC1054	8C-CHC-024-010	CHAS, CD (T)	.	b	.	.	e	f
		0	MC1054	8C-CHC-066-010	CHAS, CD (L)	.	.	c	.	.	.
		0	MC1055	SB-CDC-290-000	CD COVER BCDC-29 MOLDED BLACK	a	b	c	d	e	f
		0	MC1056	M8-CZK-490-070	KSM-213RDM	a	b	c	d	e	f
		0	MC1057	S1-892-390-010	CD CUSHION 1892-39 HARDNESS T	a	b	c	d	e	f
		X	MC1058	S0-001-000-000	CABLE/PLASTIC TIE	.	.	c	d	.	f
		! 0	MC1059	SC-CDC-320-000	AC VOLTAGE PLATE CCDC-32 T=0.	a	b	c	d	e	f
		X	MC1060	S3-000-000-000	SOLDERING LUG	a	b	c	d	e	f
		0	MC1A	87-357-036-010	SCREW ST 2-8	a	b	c	d	e	f
		0	MC1B	87-741-104-010	SCREW, ST3-30MM PAB	a	b	c	d	e	f
		0	MC1C	87-352-075-010	VT2+2.6-10	.	.	c	d	.	f
		0	MC1D	87-743-073-410	SCREW, ST2.6-6MM	a	b	c	d	e	f
						CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC
		0	MC1E	S0-402-601-200	SCREW, ST2.6x12 PWB2/AC	.	.	c	d	.	f
		0	MC1F	87-352-095-010	SCREW, ST3-8	a	b	c	d	e	f
		0	MC1G	87-741-096-410	SCREW, ST3-10MM	a	b	c	d	e	f
		0	MC1H	87-B10-071-010	SCREW, ST3-15	a	b	c	d	e	f
		0	MC1I	S1-102-601-720	SCREW ST2.6x17mm BB w/CHROMAT	a	b	c	d	e	f
		0	MC1J	S2-032-120-800	METAL WASHER 03.2x012x0.8mm	a	b	c	d	e	f
		0	MC1K	87-741-103-410	SCREW, ST3-25	a	b	c	d	e	f
		0	MC1L	S1-402-600-600	SCREW ST2.6x6mm, KB BRASS BAS	a	b	c	d	e	f
		0	MC1M	87-343-075-210	SCREW, 2.6-10	a	b	c	d	e	f
		0	MC1N	87-261-095-410	V+3-8	a	b	c	d	e	f
		0	MC1O	87-741-096-010	SCREW, 3-10MM PM	a	b	c	d	e	f
		0	MC1P	87-263-033-010	SCREW, 2-4	a	b	c	d	e	f
		0	MC1Q	S0-000-305-000	NUT M3x0.5 PITCH Ni	a	b	c	d	e	f
		0	MC1R	S0-203-001-010	SCREW, ST3x10mm KAB BRASS BASE	.	.	c	d	.	f
		0	MC1S	87-261-095-010	SCREW, ST3-8MM HEAD V5.9-6.3 B	.	.	c	d	.	f
		0	MC1T	87-261-072-010	SCREW, PM 2.6-5	a	b	c	d	e	f
		0	MC1U	87-741-094-410	SCREW, ST3-6	.	.	c	d	.	f
		0	MC1V	S2-028-095-500	METAL WASHER DIA:2.8/DIA:9.5x	a	b	c	d	e	f
		0	MC1W	87-343-075-210	SCREW, ST 2.6-10	a	b	.	.	e	.
		0	MC1X	S0-202-601-000	SCREW, ST2.6-10	a	b	.	.	e	.

COLOR NAME TABLE -1/1

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange	PT	Transparent Pink
LA	Aqua Blue	GL	Light Green	HT	Transparent Gray
HM	Metallic Gray	NH	Champagne Gold	M	Wood Pattern

MECHANISM EXPLODED VIEW -1/1 (TN-21ZV-2000)



MECHANISM PARTS LIST -1/1 (TN-21Z-2000)

! =  SAFETY PARTS
C = Components marked

All components used on this model at the production line are shown in this service manual.
However, please note that not all components will be available as spare parts for after-sales service.
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UNIT-NAME	! C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL
					2000 TN-21ZVC
		0	ST1001	S1-921-030-4A0 HEAD BASE	a
		0	ST1002	S1-821-030-070 AZIMUTH SPRING	a
		0	ST1003	S1-921-030-090 PANEL P SPRING	a
		0	ST1004	S1-921-260-050 GEAR PLATE SPRING	a
		0	ST1005	S1-921-265-020 GEAR PLATE ASSY	a
		0	ST1006	S1-510-020-020 REC SPRING PLATE	a
		0	ST1007	S1-921-015-010 CHASSIS ASSY	a
		0	ST1008	S1-921-030-110 HEAD PANEL	a
		0	ST1009	S1-921-143-160 BASE ASSY	a
		0	ST1010	S1-921-141-8A0 M CONTROL SPRING	a
		0	ST1011	S1-921-260-4A0 SENSING LEVER	a
		0	ST1012	S1-921-043-100 PINCH ROLLER ARM ASSY	a
		0	ST1013	S1-921-130-010 EJECT SLIDE LEVER	a
		0	ST1014	S1-921-141-3A0 P CONTROL SPRING	a
		0	ST1015	S1-921-140-550 PAUSE LEVER(E)	a
		0	ST1016	S1-921-140-120 PAUSE LEVER SPRING	a
		0	ST1017	S1-921-140-110 PAUSE STOPPER	a
		0	ST1018	S1-921-140-150 BUTTON LEVER SPRING(B)	a
		0	ST1019	S1-821-011-590 E KICK LEVER	a
		0	ST1020	S1-921-141-070 BUTTON LEVER SPRING(A)	a
					2000 TN-21ZVC
		0	ST1021	S6-401-011-490 LEAF SW MSW-1541T	a
		0	ST1022	S1-921-140-090 SWITCH ACTUATOR	a
		0	ST1023	S1-921-140-080 PUSH BUTTON ACTUATOR	a
		0	ST1024	S1-921-140-190 PLAY BUTTON LEVER	a
		0	ST1025	S1-921-030-100 MG ARM SPRING	a
		0	ST1026	S1-921-140-040 REW BUTTON LEVER	a
		0	ST1027	S1-921-140-050 FF,BUTTON REVER	a
		0	ST1028	S1-921-140-060 STOP BUTTON LEVER	a
		0	ST1029	S1-921-140-600 PAUSE BUTTON LEVER	a
		0	ST1030	S1-821-100-700 FF GEAR	a
		0	ST1031	S1-921-050-060 SENSER	a
		0	ST1032	S1-921-053-100 TAKE UP REEL ASSY	a
		0	ST1033	S1-829-100-010 PACK SPRING	a
		0	ST1034	S1-921-050-150 S REEL HUB	a
		0	ST1035	S1-921-050-220 BACK TENSION SPRING	a
		0	ST1036	S1-921-140-030 REC BUTTON LEVER	a
		0	ST1037	S1-921-140-170 P.S.LEVER SPRING	a
		0	ST1038	S1-921-073-040 RF CLUTCH ASSY	a
		0	ST1039	S1-921-070-030 RF BELT	a
		0	ST1040	S1-921-260-020 CAM GEAR	a
					2000 TN-21ZVC
		0	ST1041	S1-921-140-160 E ACTUATOR SPRING	a
		0	ST1042	S1-921-093-210 FLYWHEEL ASSY	a
		0	ST1043	S1-921-090-380 MAIN BELT	a
		0	ST1044	S1-921-120-590 MOTOR PULLEY	a
		0	ST1045	S1-212-240-020 (F151-121224-000) MOTOR-DC-01	a
		0	ST1046	S0-200-060-000 E-HEAD,6PA	a
		0	ST1047	S1-921-030-050 MG ARM	a
		0	ST1048	S1-921-140-210 REC BUTTON LEVER SPRING	a
		0	ST1049	S1-821-100-690 RECORD SAFETY LEVER	a
		0	ST1050	S1-821-128-9A0 MOTOR BRACKET	a
		0	ST1051	S1-821-010-500 PLAY BUTTON LEVER SPRING	a
		0	ST1052	S0-209-510-020 RP/HEAD-ST-TECHREC0& #TC951(0	a
		X	ST1053	S9-F04-302-040 B3 LUG PLATE	a
		0	ST1A	S9-P04-200-310 C TAPPING SCREW 2-3	a
		0	ST1B	S1-921-120-020 MOTOR COLLER SCREW	a
		0	ST1C	S9-B10-200-510 P TAPPING BIND SCREW M2-5	a
		0	ST1D	S9-C07-204-510 SCREW,TAPPING(CAMERA)M2-4.5	a
		0	ST1E	S9-P01-200-610 SCREW,M2-6	a
		0	ST1F	S9-B01-200-310 (+)BIND SCREW M2-3	a
		0	ST1G	S9-F08-200-710 AZIMUTH SCREW M2-7	a
					2000 TN-21ZVC
		0	ST1H	S1-921-120-030 MB SCREW	a
		0	ST1I	S9-W02-300-100 P WASHER CUT 1.2-3.8-0.3	a
		0	ST1J	S9-W02-500-100 P WASHER CUT 1.45-3.8-0.5	a
		0	ST1K	S9-W01-400-100 P WASHER 2-3.5-0.4	a
		0	ST1L	S9-W01-130-200 P WASHER 2.1-4-0.13	a

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UNIT-NAME	! C	REF-NO	PARTS-NO	PARTS-NAME	SUFFIX&MODEL					
					CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC
	X	S3-000-000-020		SOLDERING PIN	a	b	c	d	e	f
	X	87-056-770-010		COLOR LABEL(SILVER)	a	.	.	d	.	.
	X	87-057-961-010		CAUTION LABEL	a	b	c	d	e	f
	X	8A-CH4-040-010		CAUTION LABEL(Rw-E)	a	b	c	d	e	f
	X	SC-CDC-350-000		FIBER PAPER	a	b	c	d	e	f
	X	S9-938-560-000		SPK. BOX FELT 80x8x0.3mm, 993	.	.	c	d	.	f
	X	87-CD8-229-010		SPONGE 15-10	.	.	c	d	.	.
	X	87-B40-281-010		LBL,BAR CODE(A-35-8)	a	b	c	d	e	f
	X	87-057-995-010		LBL,CLASS 1	a	b	c	d	e	f
	X	87-B40-085-010		POLY BAG 0.045-8.5-14	a	b	c	d	e	f
	X	8C-CDC-851-010		POLYFOAM,CCDC-90 #2691	a	b	c	d	e	f
	X	87-056-168-010		INFORMATION WARRANTY SHEET	a	b	c	d	e	.
	X	8C-CDC-971-010		POP LABEL (K)	a	b	c	d	e	.
	X	S0-401-300-000		PE POLY BAG 0.045x4"x13" w/RE	a	b	c	.	e	f
	X	S0-600-450-220		POLYFOAM SHEET 60mmx45mmx22mm	a	b	.	.	e	.
	X	8C-CDC-052-010		SPEC LBL(EZ)	a	b	.	.	.	.
	X	87-056-926-010		LBL,COLOR BLU	.	.	c	.	.	.
	X	S0-600-400-200		POLYFOAM BAR S:60x40x20	.	.	c	d	.	f
	X	8C-CDC-052-110		SPEC LBL(EZ)	.	.	c	.	.	.
	X	S0-000-000-000		LBL,DIFFERENCE	.	.	.	d	.	.
					CSD-A190 EZSC	CSD-A190 EZSTC	CSD-A190 EZLC	CSD-A190 KSC	CSD-A190 KSTC	CSD-A190 VSTC
	X	8C-CDC-051-010		SPEC LBL(K)	.	.	.	d	e	.
	X	S0-402-600-000		PE POLY BAG 0.045x4"x26"	.	.	.	d	.	.
	X	87-056-864-010		DIFFERENCE LABEL <K>	.	.	.	.	e	.
	X	8C-CDC-975-010		POP LABEL(V)	.	.	.	.	.	f
	X	8C-CDC-058-010		SPEC LBL(V)	.	.	.	.	.	f



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