

POWER AMPLIFIER

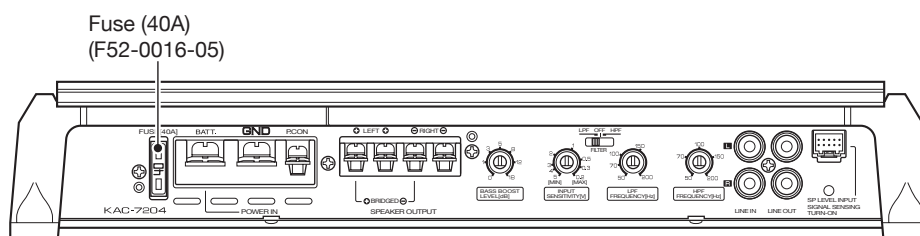
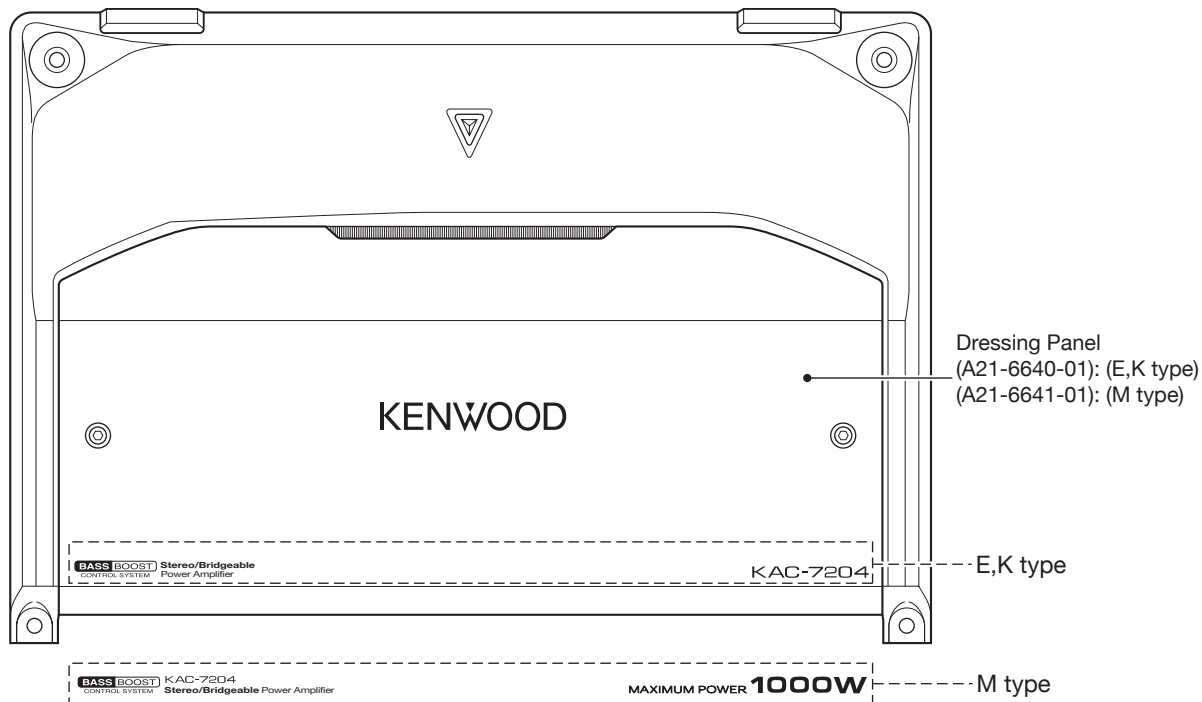
# KAC-7204

## SERVICE MANUAL

# KENWOOD

Kenwood Corporation

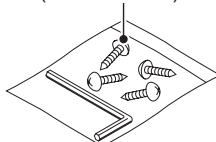
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B53-0612-00 (N) 519



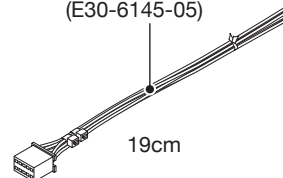
Accessories  
(W01-1606-05)



Screw & wrench key set  
(N99-1820-05)



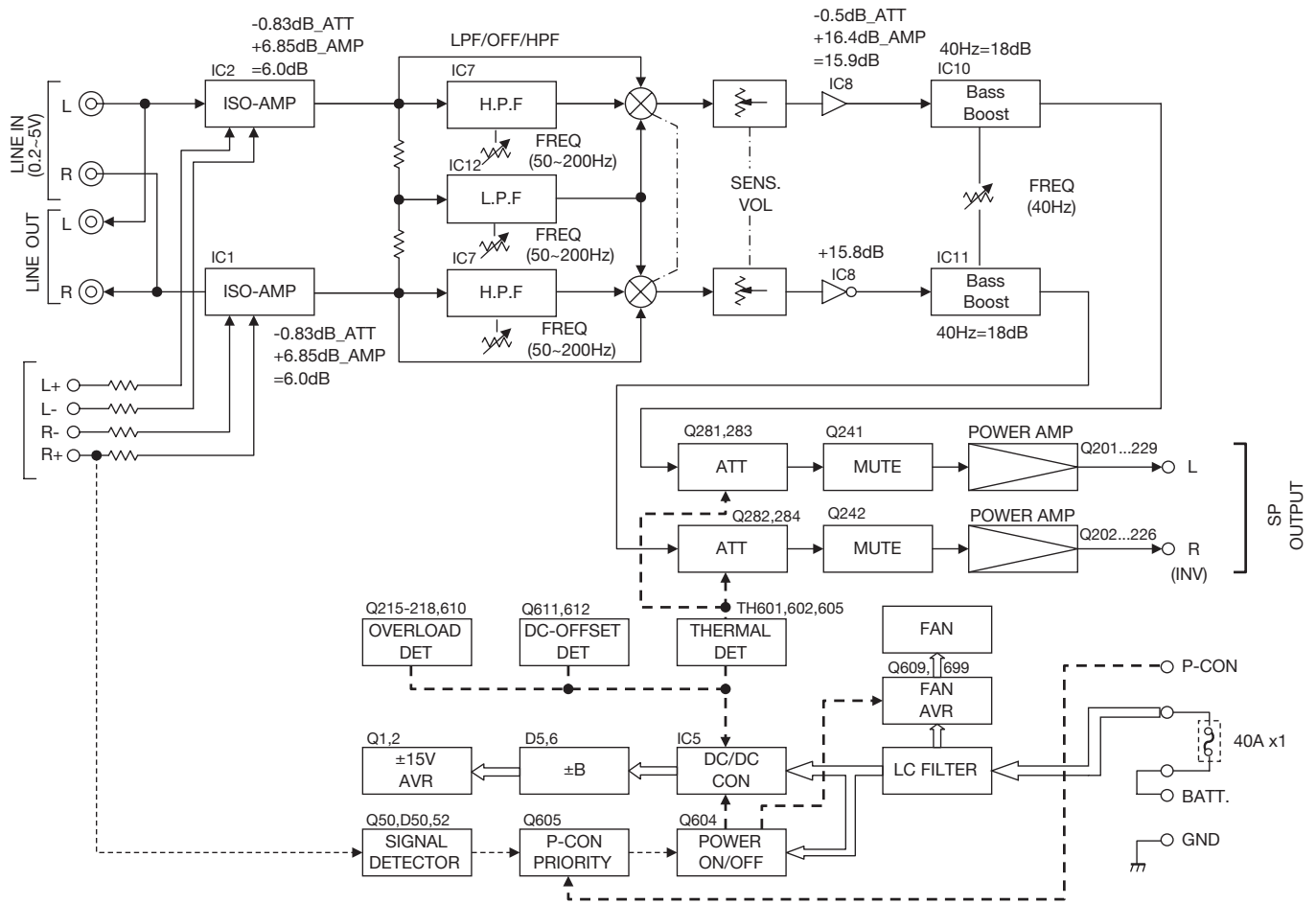
Connecting cord assy  
(E30-6145-05)



This product uses Lead Free solder.

This product complies with the **RoHS** directive for the European market.

## BLOCK DIAGRAM



## COMPONENTS DESCRIPTION

### ● AUDIO UNIT (X09-8760-10)

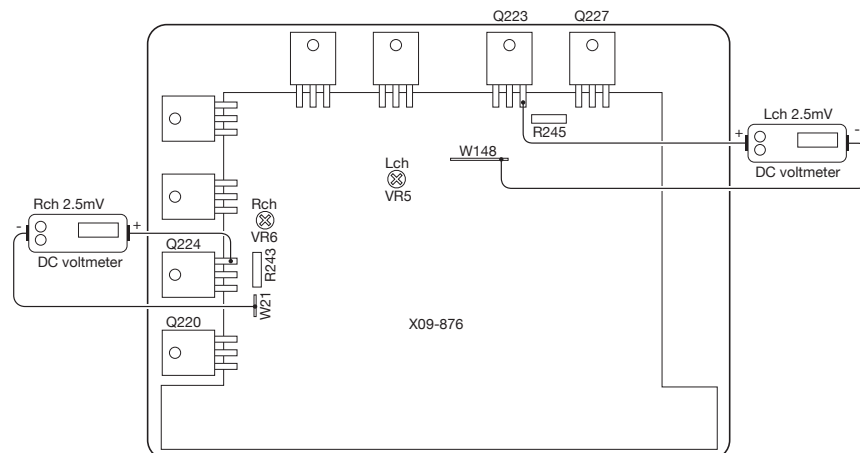
Ref. No.	Application / Function	Operation / Condition / Compatibility
IC1,2	Isolation circuit	
IC5	DC/DC converter	
IC6	Temperature ATT control	ATT2=on by pin1=H, ATT1=on by pin7=H
IC7	HPF	
IC8	Buffer amplifier, Rch inversion amplifier	
IC10,11	bass-boost	
IC12	LPF	
Q1,16	+15V power supply	
Q2,17	-15V power supply	
Q3~8	DC/DC switching FET	
Q9~14	DC/DC switching FET drive Tr	
Q15	Temperature ATT reference power supply	
Q50,51	auto_pcon_off	Disables operation of the auto_pcon circuit when the pcon_ is connected

## COMPONENTS DESCRIPTION

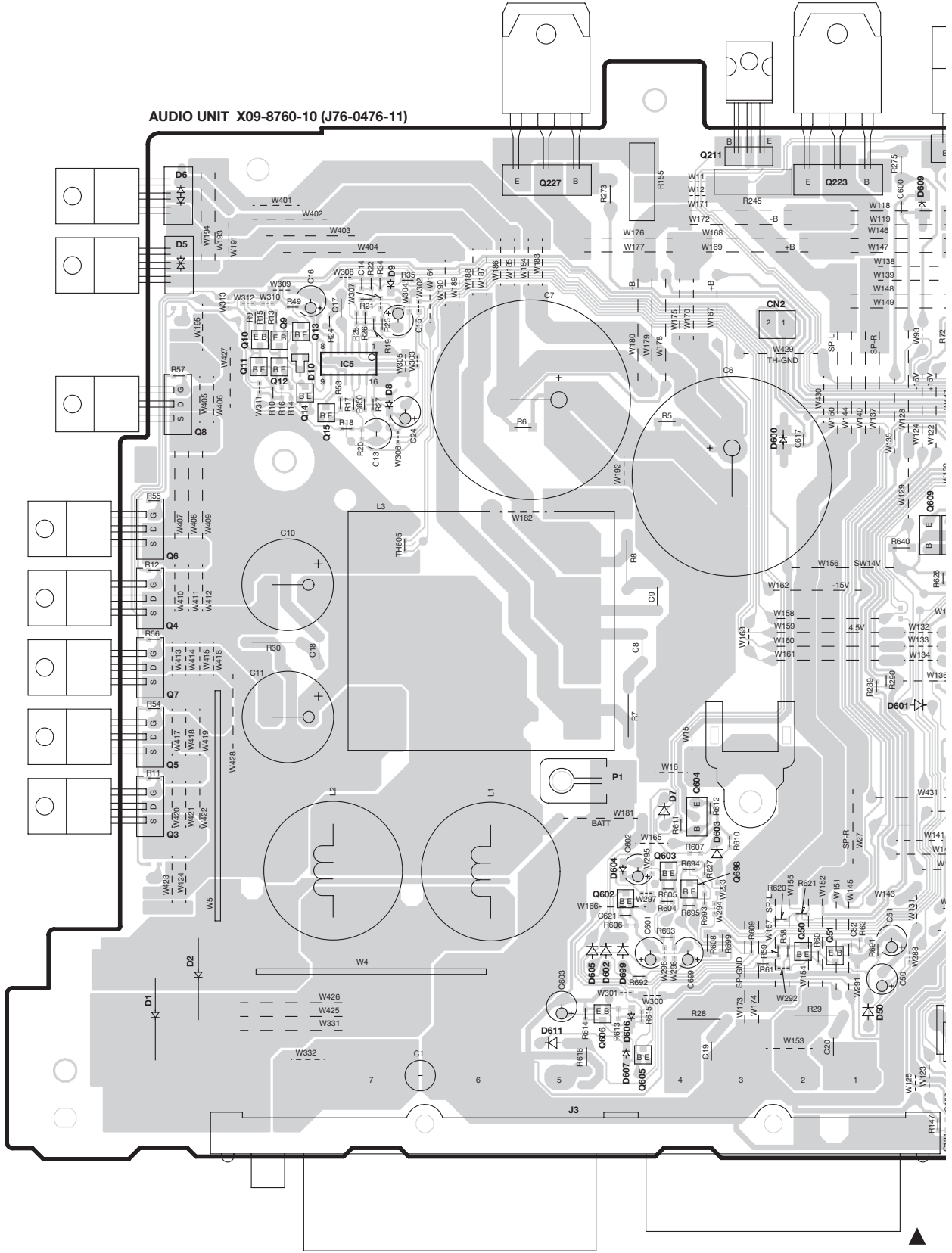
Ref. No.	Application / Function	Operation / Condition / Compatibility
Q201~204	Differential first stage amplifier	
Q205~208	Differential second stage amplifier	
Q209,210	Differential second stage current mirror	
Q211,213	Temperature compensation Tr	
Q215~218	Current limiter	
Q220,222~227,229	Power amplifier final Tr	
Q241,242	mute_Tr	Mute_on when is ON
Q251~258	Power amplifier driver	
Q281,282	ATT2_Tr	The signal level becomes -3dB when is ON
Q283,284	ATT1_Tr	The signal level becomes -1.5dB when is ON
Q602	Mute control	ON when is pcon_off
Q603,698	Power supply for the mute_Tr	
Q604	SW14V	Power supply for DC/DC_IC
Q605	Pcon control	ON by pcon=H
Q606	Over voltage detection	Turn off Q605 when over voltage is detected
Q609	Power supply for FAN	
Q610	Over current protection	
Q611,612	DC protection	
Q613,614	Latch circuit for DC protection	Hold the protection operation while the DC protection is being operational
Q615,616	Shock noise prevention circuit	
Q617,618	Shock noise prevention circuit control	

## ADJUSTMENT

NO.	ITEM	ALIGNMENT POINT	METHOD	ALIGN FOR	NOTE
1	IDLE CURRENT	VR5 (Lch) VR6 (Rch)	Connect a DC voltmeter between check land. Lch: Q223_emitter ↔ W148 Rch: Q224_emitter ↔ W21	2.5mV	after 5minutes from power on

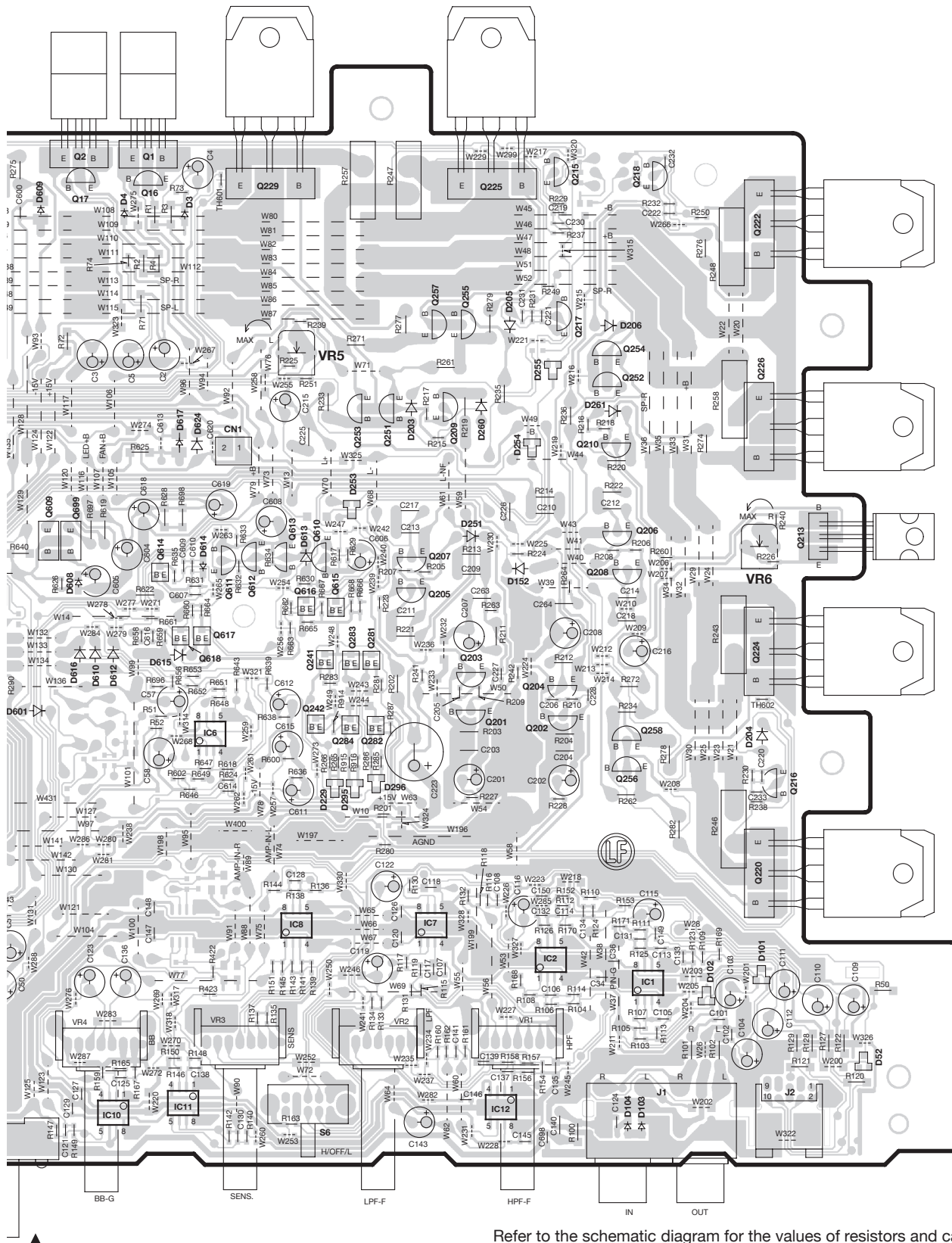


# KAC-7204 PC BOARD (FOIL SIDE VIEW)



### X09-8760-10

Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address		
IC1	5H	IC8	5G	Q2	2F	Q7	4B	Q12	3C	Q17	2F	Q203	4H	Q208	4H	Q215	2H
IC2	5H	IC10	6F	Q3	5B	Q8	3B	Q13	3C	Q50	5E	Q204	4H	Q209	3H	Q216	5I
IC5	3C	IC11	6F	Q4	4B	Q9	3C	Q14	3C	Q51	5E	Q205	4G	Q210	3H	Q217	3H
IC6	4F	IC12	6H	Q5	4B	Q10	3B	Q15	3C	Q201	4H	Q206	3H	Q211	2D	Q218	2H
IC7	5G	Q1	2F	Q6	4B	Q11	3B	Q16	2F	Q202	4H	Q207	4G	Q213	3I	Q220	5I

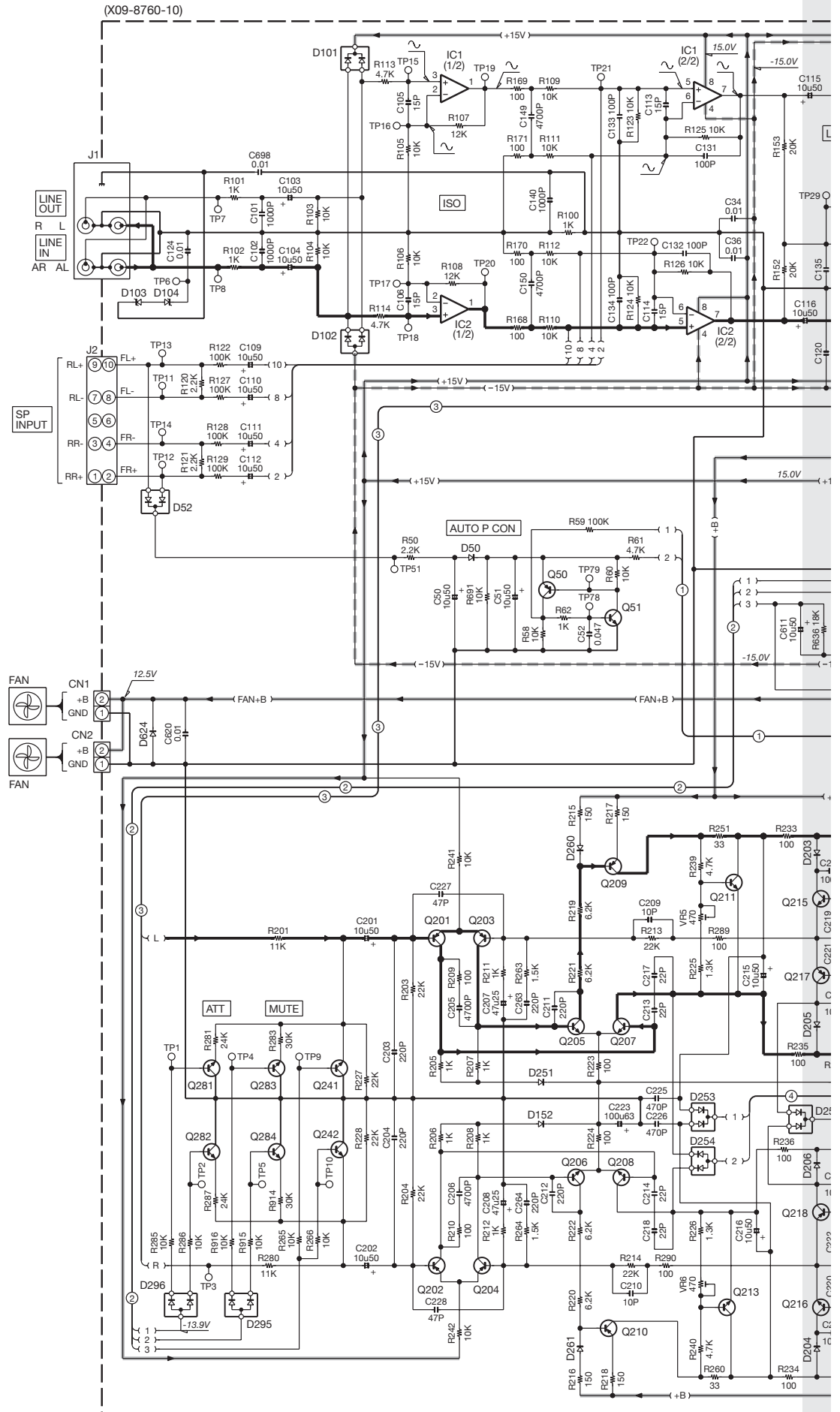


Refer to the schematic diagram for the values of resistors and capacitors.

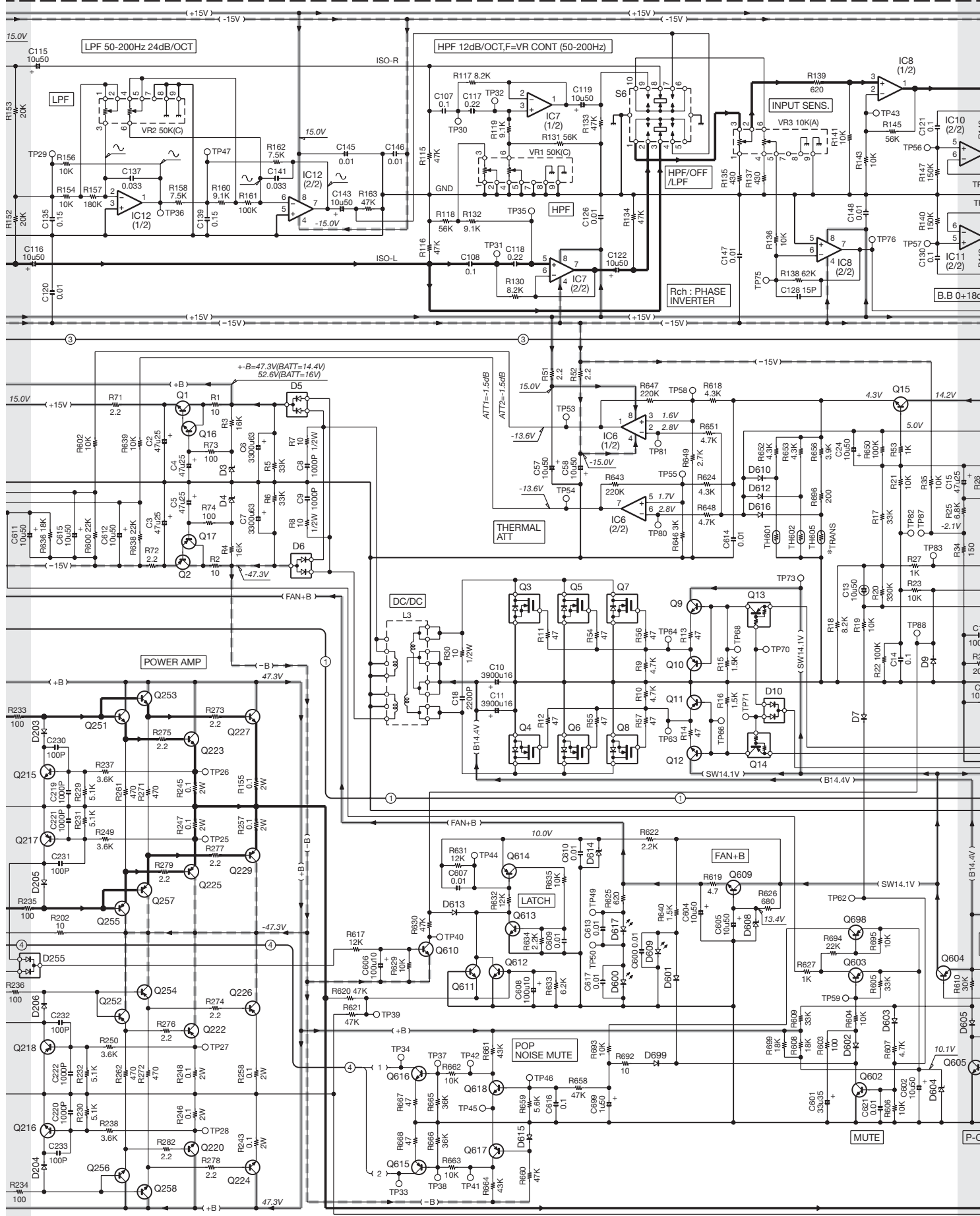
Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
Q222	2I	Q227	2D	Q252	3H	Q257	2G	Q284	4G	Q606	6D	Q613	3G
Q223	2E	Q229	2G	Q253	3G	Q258	4H	Q602	5D	Q609	3F	Q614	4F
Q224	4I	Q241	4G	Q254	3H	Q281	4G	Q603	5D	Q610	3G	Q615	4G
Q225	2H	Q242	4G	Q255	2H	Q282	4G	Q604	5D	Q611	4F	Q616	4G
Q226	3I	Q251	3G	Q256	5H	Q283	4G	Q605	6D	Q612	4G	Q617	4F

1  
2  
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7

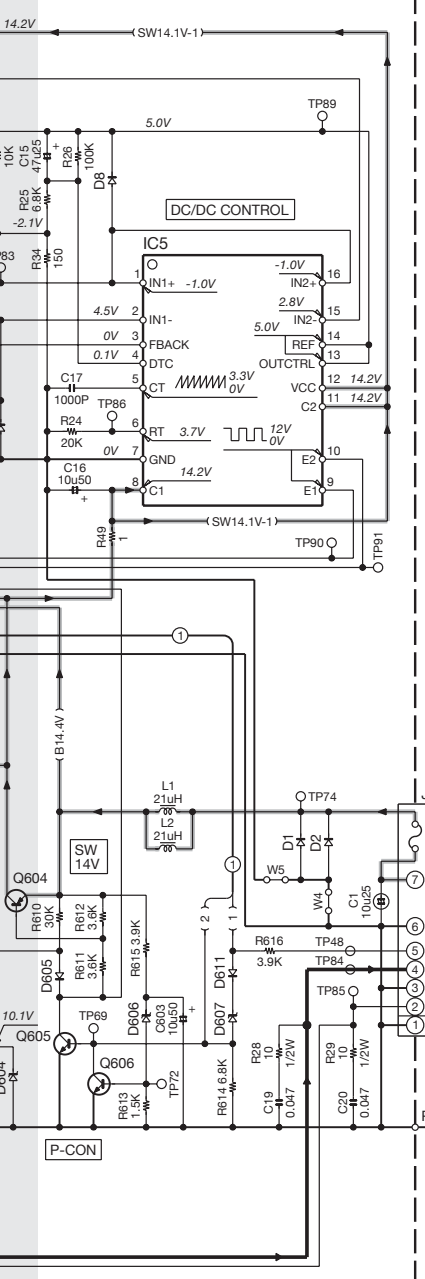
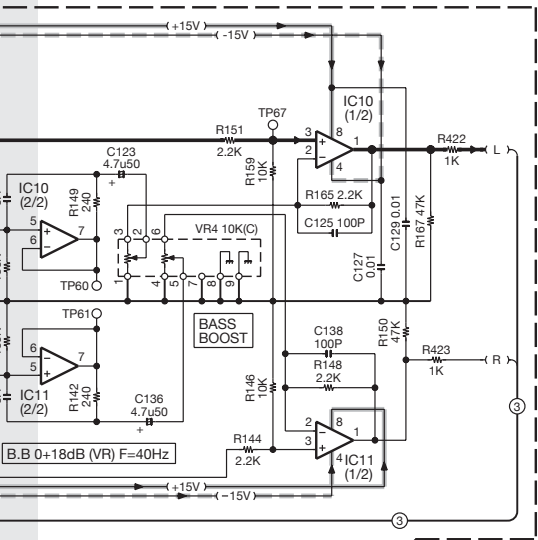
# KAC-7204



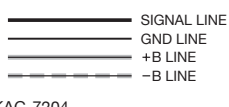
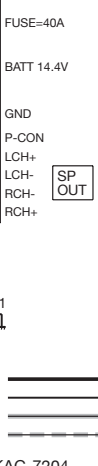
# KAC-7204



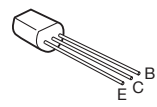
# KAC-7204



- IC1,2,6-8,10-12 : BA4560RF  
 IC5 : TL494IDR  
 Q1 : 2SC4883ANF  
 Q2 : 2SA1859ANF  
 Q3-8 : STP60NF06FP  
 Q9,12 : 2SC4097  
 Q10,11 : 2SA1577  
 Q13,14 : DTA114EUA  
 Q15,51,241,242, 281-284,602,605,606, 616,618 : 2SC4081  
 Q16,215,216 : 2SC1845-A(F,E)  
 Q17,201-204,217,218 : 2SA992-A(F,E)  
 Q50,603,614,615, 617,698 : 2SA1576A  
 Q205-208 : 2SC3478AA(L,K)  
 Q209,210 : 2SA1376AA(L,K)  
 Q211,213 : KTC3114-PH(A)  
 Q220,223,224,227 : 2SC4468NF  
 Q222,225,226,229 : 2SA1695NF  
 Q251,253,256,258 : 2SC2235-F  
 Q252,254,255,257 : 2SA965-F  
 Q604 : 2SB1241  
 Q609 : 2SD1863  
 Q610-613 : 2SC945AA(Q,P)  
 D1,2 : 1N5406-TSC  
 D3,4 : UDZS16B  
 D5 : FCH10A20  
 D6 : FRH10A20  
 D7,50,152,203-206,251, 260,261,601-603, 605,610-613,615,616, 624,699 : 1SS133  
 D8,9 : 1SS355  
 D10,52,101,253,255 : LM1MA142WK-G  
 D102,254,295,296 : LM1MA142WA-G  
 D103,104 : UDZS6.8B  
 D600,617 : B30-1770-05  
 D604,614 : UDZS10B  
 D606 : UDZS15B  
 D607 : UDZS6.2B  
 D608 : UDZS13B  
 D609 : B30-1743-05



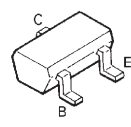
- 2SA965-F
- 2SA992-A
- 2SC1845-A
- 2SC2235-F



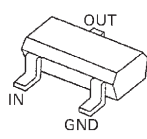
- 2SA1576A



- 2SC4081



- DTA114EUA

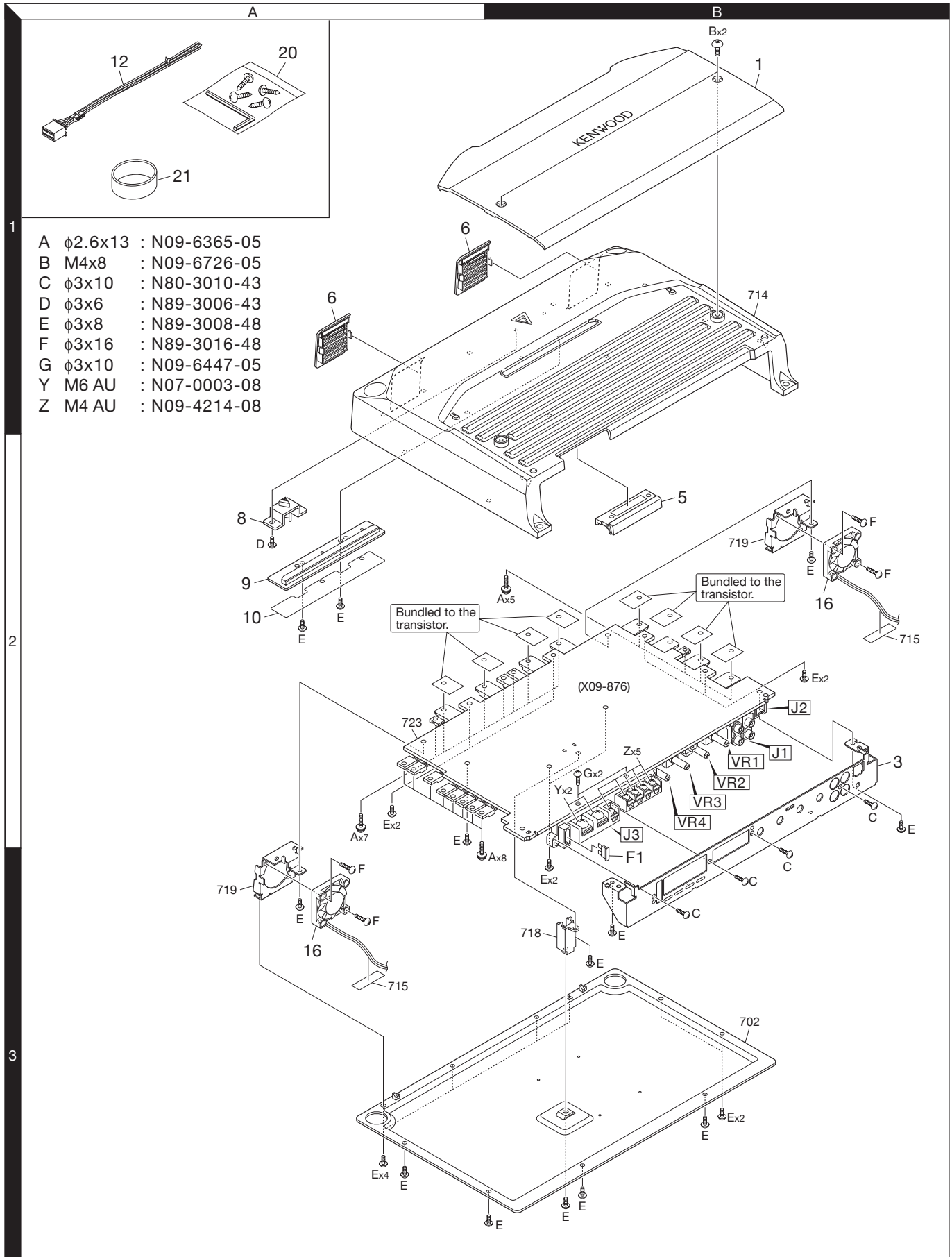


**CAUTION :** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

- DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.



## EXPLODED VIEW



# KAC-7204

## PARTS LIST

\* New parts

Parts without **Parts No.** are not supplied.

Les articles non mentionnés dans le **Parts No.** ne sont pas fournis.

Teile ohne **Parts No.** werden nicht geliefert.

Ref. No.	Add	New	Parts No.	Description	Destination
<b>KAC-7204</b>					
1	1B	*	A21-6640-01	DRESSING PANEL	KE1
1	1B	*	A21-6641-01	DRESSING PANEL	M1
3	2B	*	A64-4421-02	PANEL	
5	2B		B07-3231-03	ESCUTCHEON	
6	1A		B07-3232-02	ESCUTCHEON	
8	2A		B19-2324-03	LIGHTING BOARD	
9	2A		B19-2468-03	LIGHTING BOARD	
10	2A		B19-2502-03	LIGHTING BOARD	
-		*	B64-3928-00	INSTRUCTION MANUAL (ENG.FRE.SPA)	KE1
-		*	B64-3929-00	INSTRUCTION MANUAL (GE.DU.IT.PO)	E1
-		*	B64-3930-00	INSTRUCTION MANUAL (ENG.S-CHI)	M1
12	1A		E30-6145-05	CONNECTING CORD ASSY	
16	3A		F09-2974-05	FAN	
F1	3B		F52-0016-05	FUSE (BLADE TYPE) 40A	
-		*	H54-4231-03	ITEM CARTON CASE	KE1
-		*	H54-4233-03	ITEM CARTON CASE	M1
20	1A		N99-1820-05	SCREW & WRENCH KEY SET	
A	2A		N09-6365-05	SEMS (TAPTITE SCREW)(2.6X13)	
B	1B		N09-6726-05	DRESSED SCREW (M4X8)	
C	3B		N80-3010-43	PAN HEAD TAPTITE SCREW	
D	2A		N89-3006-43	BINDING HEAD TAPTITE SCREW	
E	3B		N89-3008-48	BINDING HEAD TAPTITE SCREW	
F	3A		N89-3016-48	BINDING HEAD TAPTITE SCREW	
Y	2B		N07-0003-08	TERMINAL SCREW (M6 AU)	
Z	2B		N09-4214-08	TERMINAL SCREW (M4 AU)	
21	1A		W01-1606-05	ACCESSORIES	
<b>AUDIO UNIT (X09-8760-10)</b>					
C1			C90-5557-05	ELECTRO 10UF 25WV	
C2-5			CD04BJ1E470M	ELECTRO 47UF 25WV	
C6,7		*	C90-5546-05	ELECTRO 3300UF 63WV	
C8,9			C91-2293-05	M P F C 1000PF 200WV	
C10,11			CD04BC1C392M	ELECTRO 3900UF 16WV	
C13			C90-5557-05	ELECTRO 10UF 25WV	
C14			CK73GB1H104K	CHIP C 0.10UF K	
C15			CD04BJ1E470M	ELECTRO 47UF 25WV	
C16			CD04BJ1H100M	ELECTRO 10UF 50WV	
C17			CQ93FMG1H102J	MYLAR 1000PF J	
C18			CK45FB1H222K	CERAMIC 2200PF K	
C19,20			CQ93FMG1H473J	MYLAR 0.047UF J	
C24			CD04BJ1H100M	ELECTRO 10UF 50WV	
C34			CK73GB1H103K	CHIP C 0.010UF K	
C36			CK73GB1H103K	CHIP C 0.010UF K	
C50,51			CD04BJ1H100M	ELECTRO 10UF 50WV	
C52			CK73GB1H473K	CHIP C 0.047UF K	
C57,58			CD04BJ1H100M	ELECTRO 10UF 50WV	
C101,102			CK73GB1H102K	CHIP C 1000PF K	
C103,104			CD04BJ1H100M	ELECTRO 10UF 50WV	
C105,106			CC73GCH1H150J	CHIP C 15PF J	
C107,108			CK73GB1H104K	CHIP C 0.10UF K	
C109-112			CD04BJ1H100M	ELECTRO 10UF 50WV	

Ref. No.	Add	New	Parts No.	Description	Destination
C113,114			CC73GCH1H150J	CHIP C 15PF J	
C115,116			CD04BJ1H100M	ELECTRO 10UF 50WV	
C117,118			CK73FB1H224K	CHIP C 0.22UF K	
C119			CD04BJ1H100M	ELECTRO 10UF 50WV	
C120			CK73GB1H103K	CHIP C 0.010UF K	
C121			CK73GB1H104K	CHIP C 0.10UF K	
C122			CD04BJ1H100M	ELECTRO 10UF 50WV	
C123			CD04BJ1H4R7M	ELECTRO 4.7UF 50WV	
C124			CK73GB1H103K	CHIP C 0.010UF K	
C125			CC73GCH1H101J	CHIP C 100PF J	
C126,127			CK73GB1H103K	CHIP C 0.010UF K	
C128			CC73GCH1H150J	CHIP C 15PF J	
C129			CK73GB1H103K	CHIP C 0.010UF K	
C130			CK73GB1H104K	CHIP C 0.10UF K	
C131-134			CC73GCH1H101J	CHIP C 100PF J	
C135			CK73FB1E154K	CHIP C 0.15UF K	
C136			CD04BJ1H4R7M	ELECTRO 4.7UF 50WV	
C137			CK73GB1H333K	CHIP C 0.033UF K	
C138			CC73GCH1H101J	CHIP C 100PF J	
C139			CK73FB1E154K	CHIP C 0.15UF K	
C140			CQ93FMG1H102J	MYLAR 1000PF J	
C141			CK73GB1H333K	CHIP C 0.033UF K	
C143			CD04BJ1H100M	ELECTRO 10UF 50WV	
C145-148			CK73GB1H103K	CHIP C 0.010UF K	
C149,150			CK73GB1H472K	CHIP C 4700PF K	
C201,202			CD04BJ1H100M	ELECTRO 10UF 50WV	
C203,204			CC45FCH1H221J	CERAMIC 220PF J	
C205,206			CK73GB1H472K	CHIP C 4700PF K	
C207,208			CD04BJ1E470M	ELECTRO 47UF 25WV	
C209,210			CC45FCH1H100D	CERAMIC 10PF D	
C211,212			CC45FCH1H221J	CERAMIC 220PF J	
C213,214			CC45FCH1H220J	CERAMIC 22PF J	
C215,216			CD04BJ1H100M	ELECTRO 10UF 50WV	
C217,218			CC45FCH1H220J	CERAMIC 22PF J	
C219-222			CK73GB1H102K	CHIP C 1000PF K	
C223			CD04BJ1J101M	ELECTRO 100UF 63WV	
C225,226			CC45FSL1H471J	CERAMIC 470PF J	
C227,228			CC73GCH1H470J	CHIP C 47PF J	
C230-233			CC73GCH1H101J	CHIP C 100PF J	
C263,264			CC45FCH1H221J	CERAMIC 220PF J	
C600			CK73GB1H103K	CHIP C 0.010UF K	
C601			CD04BJ1V330M	ELECTRO 33UF 35WV	
C602-605			CD04BJ1H100M	ELECTRO 10UF 50WV	
C606			CD04BJ1A101M	ELECTRO 100UF 10WV	
C607			CK73GB1H103K	CHIP C 0.010UF K	
C608			CD04BJ1A101M	ELECTRO 100UF 10WV	
C609,610			CK73GB1H103K	CHIP C 0.010UF K	
C611,612			CD04BJ1H100M	ELECTRO 10UF 50WV	
C613,614			CK73GB1H103K	CHIP C 0.010UF K	
C615			CD04BJ1H100M	ELECTRO 10UF 50WV	
C616			CK73GB1H104K	CHIP C 0.10UF K	
C617			CK73GB1H103K	CHIP C 0.010UF K	
C620,621			CK73GB1H103K	CHIP C 0.010UF K	
C698			CK73GB1H103K	CHIP C 0.010UF K	
C699			CD04BJ1H010M	ELECTRO 1.0UF 50WV	

E1 : KAC-7204 (Europe) K : KAC-7204 (North America)

M1 : KAC-7204 (Other Areas)

△ Indicates safety critical components.

## PARTS LIST

### AUDIO UNIT (X09-8760-10)

Ref. No.	Add	New	Parts No.	Description	Destination	Ref. No.	Add	New	Parts No.	Description	Destination
CN1,2			E41-1682-05	PIN ASSY		R127-129			RK73EB2E104J	CHIP R 100K J 1/4W	
J1			E63-0947-05	PIN JACK		R130			RK73GB2A822J	CHIP R 8.2K J 1/10W	
J2			E58-1031-05	RECTANGULAR RECEPTACLE		R131			RK73GB2A563J	CHIP R 56K J 1/10W	
J3			E70-0832-15	SCREW TERMINAL BOARD		R132			RK73GB2A912J	CHIP R 9.1K J 1/10W	
L1,2		*	L33-2444-05	CHOKE COIL 21UH		R133,134			RK73GB2A473J	CHIP R 47K J 1/10W	
L3			L19-0771-05	TRANSFORMER FOR CONVERTER		R135			RK73GB2A431J	CHIP R 430 J 1/10W	
G	2B		N09-6447-05	TAPTITE SCREW		R136			RK73GB2A103J	CHIP R 10K J 1/10W	
R1,2		*	RK73EB2E100J	CHIP R 10 J 1/4W		R137			RK73GB2A431J	CHIP R 430 J 1/10W	
R3,4			RK73EB2E163J	CHIP R 16K J 1/4W		R138			RK73GB2A623J	CHIP R 62K J 1/10W	
R5,6			RK73EB2E333J	CHIP R 33K J 1/4W		R139			RK73GB2A621J	CHIP R 620 J 1/10W	
R7,8			RD14DB2H100J	SMALL-RD 10 J 1/2W		R140			RK73GB2A154J	CHIP R 150K J 1/10W	
R9,10			RK73GB2A472J	CHIP R 4.7K J 1/10W		R141			RK73GB2A103J	CHIP R 10K J 1/10W	
R11-14			RK73GB2A470J	CHIP R 47 J 1/10W		R142			RK73GB2A241J	CHIP R 240 J 1/10W	
R15,16			RK73GB2A152J	CHIP R 1.5K J 1/10W		R143			RK73GB2A103J	CHIP R 10K J 1/10W	
R17			RK73GB2A333J	CHIP R 33K J 1/10W		R144			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R18			RK73GB2A822J	CHIP R 8.2K J 1/10W		R145			RK73GB2A563J	CHIP R 56K J 1/10W	
R19			RK73GB2A103J	CHIP R 10K J 1/10W		R146			RK73GB2A103J	CHIP R 10K J 1/10W	
R20			RK73GB2A334J	CHIP R 330K J 1/10W		R147			RK73GB2A154J	CHIP R 150K J 1/10W	
R21			RK73GB2A103J	CHIP R 10K J 1/10W		R148			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R22			RK73GB2A104J	CHIP R 100K J 1/10W		R149			RK73GB2A241J	CHIP R 240 J 1/10W	
R23			RK73GB2A103J	CHIP R 10K J 1/10W		R150			RK73GB2A473J	CHIP R 47K J 1/10W	
R24			RK73GB2A203J	CHIP R 20K J 1/10W		R151			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R25			RK73GB2A682J	CHIP R 6.8K J 1/10W		R152,153			RK73GB2A203J	CHIP R 20K J 1/10W	
R26			RK73GB2A104J	CHIP R 100K J 1/10W		R154			RK73GB2A103J	CHIP R 10K J 1/10W	
R27			RK73GB2A102J	CHIP R 1.0K J 1/10W		R155			R92-0205-05	METAL-PLATE 0.1 K 2W	
R28-30			RD14DB2H100J	SMALL-RD 10 J 1/2W		R156			RK73GB2A103J	CHIP R 10K J 1/10W	
R34			RK73GB2A151J	CHIP R 150 J 1/10W		R157			RK73GB2A184J	CHIP R 180K J 1/10W	
R35			RK73GB2A103J	CHIP R 10K J 1/10W		R158			RK73GB2A752J	CHIP R 7.5K J 1/10W	
R49			RK73GB2A1R0J	CHIP R 1.0 J 1/10W		R159			RK73GB2A103J	CHIP R 10K J 1/10W	
R50			RK73EB2E222J	CHIP R 2.2K J 1/4W		R160			RK73GB2A912J	CHIP R 9.1K J 1/10W	
R51,52			RK73GB2A2R2J	CHIP R 2.2 J 1/10W		R161			RK73GB2A104J	CHIP R 100K J 1/10W	
R53			RK73GB2A102J	CHIP R 1.0K J 1/10W		R162			RK73GB2A752J	CHIP R 7.5K J 1/10W	
R54-57			RK73GB2A470J	CHIP R 47 J 1/10W		R163			RK73GB2A473J	CHIP R 47K J 1/10W	
R58			RK73GB2A103J	CHIP R 10K J 1/10W		R165			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R59			RK73GB2A104J	CHIP R 100K J 1/10W		R167			RK73GB2A473J	CHIP R 47K J 1/10W	
R60			RK73GB2A103J	CHIP R 10K J 1/10W		R168-171	*		RN73GE1J101D	MF R 100 D 1/16W	
R61			RK73GB2A472J	CHIP R 4.7K J 1/10W		R201			RK73GB2A113J	CHIP R 11K J 1/10W	
R62			RK73GB2A102J	CHIP R 1.0K J 1/10W		R202			RD14NB2E100J	RD 10 J 1/4W	
R71,72			RK73EB2E2R2J	CHIP R 2.2 J 1/4W		R203,204			RD14BB2C223J	RD 22K J 1/6W	
R73,74			RK73GB2A101J	CHIP R 100 J 1/10W		R205-208			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R100			RK73EB2E102J	CHIP R 1.0K J 1/4W		R209,210			RK73GB2A101J	CHIP R 100 J 1/10W	
R101,102			RD14BB2C102J	RD 1.0K J 1/6W		R211,212			RD14BB2C102J	RD 1.0K J 1/6W	
R103-106			RK73GB2A103J	CHIP R 10K J 1/10W		R213,214			RD14BB2C223J	RD 22K J 1/6W	
R107,108			RK73GB2A123J	CHIP R 12K J 1/10W		R215-218			RK73GB2A151J	CHIP R 150 J 1/10W	
R109-112		*	RN73GE1J103D	CHIP R 10K D 1/16W		R219-222			RD14BB2C622J	RD 6.2K J 1/6W	
R113,114			RK73GB2A472J	CHIP R 4.7K J 1/10W		R223,224			RK73GB2A101J	CHIP R 100 J 1/10W	
R115,116			RK73GB2A473J	CHIP R 47K J 1/10W		R225,226			RK73GB2A132J	CHIP R 1.3K J 1/10W	
R117			RK73GB2A822J	CHIP R 8.2K J 1/10W		R227,228			RK73GB2A223J	CHIP R 22K J 1/10W	
R118			RK73GB2A563J	CHIP R 56K J 1/10W		R229-232			RK73GB2A512J	CHIP R 5.1K J 1/10W	
R119			RK73GB2A912J	CHIP R 9.1K J 1/10W		R233-236			RD14NB2E101J	RD 100 J 1/4W	
R120,121			RK73EB2E222J	CHIP R 2.2K J 1/4W		R237,238			RK73GB2A362J	CHIP R 3.6K J 1/10W	
R122			RK73EB2E104J	CHIP R 100K J 1/4W		R239,240			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R123-126		*	RN73GE1J103D	CHIP R 10K D 1/16W		R241,242			RK73GB2A103J	CHIP R 10K J 1/10W	
						R243			R92-0205-05	METAL-PLATE 0.1 K 2W	
						R245-248			R92-0205-05	METAL-PLATE 0.1 K 2W	

E1 : KAC-7204 (Europe) K : KAC-7204 (North America)  
M1 : KAC-7204 (Other Areas)

△ Indicates safety critical components.

## PARTS LIST

### AUDIO UNIT (X09-8760-10)

Ref. No.	Add	New	Parts No.	Description	Destination
R249,250			RK73GB2A362J	CHIP R 3.6K J 1/10W	
R251			RK73GB2A330J	CHIP R 33 J 1/10W	
R257,258			R92-0205-05	METAL-PLATE 0.1 K 2W	
R260			RK73GB2A330J	CHIP R 33 J 1/10W	
R261,262			RD14NB2E471J	RD 470 J 1/4W	
R263,264			RK73GB2A152J	CHIP R 1.5K J 1/10W	
R265,266			RK73GB2A103J	CHIP R 10K J 1/10W	
R271,272			RD14NB2E471J	RD 470 J 1/4W	
R273-279			RD14NB2E2R2J	RD 2.2 J 1/4W	
R280			RK73GB2A113J	CHIP R 11K J 1/10W	
R281			RK73GB2A243J	CHIP R 24K J 1/10W	
R282			RD14NB2E2R2J	RD 2.2 J 1/4W	
R283			RK73GB2A303J	CHIP R 30K J 1/10W	
R285,286			RK73GB2A103J	CHIP R 10K J 1/10W	
R287			RK73GB2A243J	CHIP R 24K J 1/10W	
R289,290			RK73GB2A101J	CHIP R 100 J 1/10W	
R422,423			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R600			RK73GB2A223J	CHIP R 22K J 1/10W	
R602			RK73GB2A103J	CHIP R 10K J 1/10W	
R603			RK73GB2A101J	CHIP R 100 J 1/10W	
R604			RK73GB2A103J	CHIP R 10K J 1/10W	
R605			RK73GB2A333J	CHIP R 33K J 1/10W	
R606			RK73GB2A103J	CHIP R 10K J 1/10W	
R607			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R608			RK73EB2E183J	CHIP R 18K J 1/4W	
R609			RK73GB2A333J	CHIP R 33K J 1/10W	
R610			RK73GB2A303J	CHIP R 30K J 1/10W	
R611,612			RK73GB2A362J	CHIP R 3.6K J 1/10W	
R613			RK73GB2A152J	CHIP R 1.5K J 1/10W	
R614			RK73GB2A682J	CHIP R 6.8K J 1/10W	
R615			RK73GB2A392J	CHIP R 3.9K J 1/10W	
R616			RD14BB2C392J	RD 3.9K J 1/6W	
R617			RK73GB2A123J	CHIP R 12K J 1/10W	
R618			RK73GB2A432J	CHIP R 4.3K J 1/10W	
R619			RD14BB2C4R7J	RD 4.7 J 1/6W	
R620,621			RK73GB2A473J	CHIP R 47K J 1/10W	
R622			RD14BB2C222J	RD 2.2K J 1/6W	
R624			RK73GB2A432J	CHIP R 4.3K J 1/10W	
R625			RK73EB2E621J	CHIP R 620 J 1/4W	
R626			RK73GB2A681J	CHIP R 680 J 1/10W	
R627			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R629			RK73GB2A103J	CHIP R 10K J 1/10W	
R630			RK73GB2A473J	CHIP R 47K J 1/10W	
R631,632			RK73GB2A123J	CHIP R 12K J 1/10W	
R633			RK73GB2A622J	CHIP R 6.2K J 1/10W	
R634			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R635			RK73GB2A103J	CHIP R 10K J 1/10W	
R636			RK73GB2A183J	CHIP R 18K J 1/10W	
R638			RK73GB2A223J	CHIP R 22K J 1/10W	
R639			RK73GB2A103J	CHIP R 10K J 1/10W	
R640			RK73EB2E152J	CHIP R 1.5K J 1/4W	
R643			RK73GB2A224J	CHIP R 220K J 1/10W	
R646			RK73GB2A302J	CHIP R 3.0K J 1/10W	
R647			RK73GB2A224J	CHIP R 220K J 1/10W	
R648			RK73GB2A472J	CHIP R 4.7K J 1/10W	

Ref. No.	Add	New	Parts No.	Description	Destination
R649			RK73GB2A272J	CHIP R 2.7K J 1/10W	
R650			RK73GB2A104J	CHIP R 100K J 1/10W	
R651			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R652,653			RK73GB2A432J	CHIP R 4.3K J 1/10W	
R656			RK73GB2A392J	CHIP R 3.9K J 1/10W	
R658			RK73GB2A473J	CHIP R 47K J 1/10W	
R659			RK73GB2A562J	CHIP R 5.6K J 1/10W	
R660			RK73GB2A473J	CHIP R 47K J 1/10W	
R661			RK73GB2A433J	CHIP R 43K J 1/10W	
R662,663			RK73GB2A103J	CHIP R 10K J 1/10W	
R664			RK73GB2A433J	CHIP R 43K J 1/10W	
R665,666			RK73GB2A363J	CHIP R 36K J 1/10W	
R667,668			RK73GB2A470J	CHIP R 47 J 1/10W	
R691			RK73GB2A103J	CHIP R 10K J 1/10W	
R692			RK73GB2A100J	CHIP R 10 J 1/10W	
R693			RK73GB2A103J	CHIP R 10K J 1/10W	
R694			RK73GB2A223J	CHIP R 22K J 1/10W	
R695			RK73GB2A103J	CHIP R 10K J 1/10W	
R696			RK73GB2A201J	CHIP R 200 J 1/10W	
R699			RK73EB2E183J	CHIP R 18K J 1/4W	
R914			RK73GB2A303J	CHIP R 30K J 1/10W	
R915,916			RK73GB2A103J	CHIP R 10K J 1/10W	
VR1,2			R31-0255-05	VARIABLE RESISTOR 50K, C	
VR3			R31-0253-05	VARIABLE RESISTOR 10K, A	
VR4			R31-0254-05	VARIABLE RESISTOR 10K, C	
VR5,6			R32-0151-05	SEMI FIXED VARIABLE R 470	
W200			R92-2053-05	CHIP R 0 OHM J 1/8W	
W201			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W202,203			R92-2053-05	CHIP R 0 OHM J 1/8W	
W204-217			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W218			R92-2053-05	CHIP R 0 OHM J 1/8W	
W219			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W220			R92-2053-05	CHIP R 0 OHM J 1/8W	
W221			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W223			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W224			R92-2053-05	CHIP R 0 OHM J 1/8W	
W225-231			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W232,233			R92-2053-05	CHIP R 0 OHM J 1/8W	
W234-237			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W238			R92-2053-05	CHIP R 0 OHM J 1/8W	
W239-242			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W243,244			R92-2053-05	CHIP R 0 OHM J 1/8W	
W245			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W246			R92-2053-05	CHIP R 0 OHM J 1/8W	
W247-250			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W252			R92-2053-05	CHIP R 0 OHM J 1/8W	
W253-257			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W258			R92-2053-05	CHIP R 0 OHM J 1/8W	
W259-263			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W265-269			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W270			R92-2053-05	CHIP R 0 OHM J 1/8W	
W271-273			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W274,275			R92-2053-05	CHIP R 0 OHM J 1/8W	
W276-282			RK73GB2A000J	CHIP R 0.0 J 1/10W	
W283			R92-2053-05	CHIP R 0 OHM J 1/8W	

E1 : KAC-7204 (Europe) K : KAC-7204 (North America)

M1 : KAC-7204 (Other Areas)

△Indicates safety critical components.

## PARTS LIST

### AUDIO UNIT (X09-8760-10)

Ref. No.	Add	New	Parts No.	Description	Destination	Ref. No.	Add	New	Parts No.	Description	Destination
W284-288			RK73GB2A000J	CHIP R 0.0 J 1/10W		Q3-8			STP60NF06FP	FET	
W291-299			RK73GB2A000J	CHIP R 0.0 J 1/10W		Q9			2SC4097	TRANSISTOR	
W300			R92-2053-05	CHIP R 0 OHM J 1/8W		Q10,11			2SA1577	TRANSISTOR	
W301-304			RK73GB2A000J	CHIP R 0.0 J 1/10W		Q12			2SC4097	TRANSISTOR	
W305			R92-2053-05	CHIP R 0 OHM J 1/8W		Q13,14			DTA114EUA	DIGITAL TRANSISTOR	
W306-308			RK73GB2A000J	CHIP R 0.0 J 1/10W		Q15			2SC4081	TRANSISTOR	
W309			R92-2053-05	CHIP R 0 OHM J 1/8W		Q16			2SC1845-A (F,E)	TRANSISTOR	
W310-315			RK73GB2A000J	CHIP R 0.0 J 1/10W		Q17			2SA992-A (F,E)	TRANSISTOR	
W317,318			RK73GB2A000J	CHIP R 0.0 J 1/10W		Q50			2SA1576A	TRANSISTOR	
W320,321			RK73GB2A000J	CHIP R 0.0 J 1/10W		Q51			2SC4081	TRANSISTOR	
W322-325			R92-2053-05	CHIP R 0 OHM J 1/8W		Q201-204			2SA992-A (F,E)	TRANSISTOR	
W326-328			RK73GB2A000J	CHIP R 0.0 J 1/10W		Q205-208			2SC3478AA (L,K)	TRANSISTOR	
S6			S31-2630-05	SLIDE SWITCH		Q209,210			2SA1376AA (L,K)	TRANSISTOR	
D1,2			1N5406-TSC	DIODE		Q211	*		KTC3114-PH (A)	TRANSISTOR	
D3,4			UDZS16B	ZENER DIODE		Q213	*		KTC3114-PH (A)	TRANSISTOR	
D5			FCH10A20	DIODE		Q215,216			2SC1845-A (F,E)	TRANSISTOR	
D6			FRH10A20	DIODE		Q217,218			2SA992-A (F,E)	TRANSISTOR	
D7			1SS133	DIODE		Q220			2SC4468NF	TRANSISTOR	
D8,9			1SS355	DIODE		Q222			2SA1695NF	TRANSISTOR	
D10			LM1MA142WK-G	DIODE		Q223,224			2SC4468NF	TRANSISTOR	
D50			1SS133	DIODE		Q225,226			2SA1695NF	TRANSISTOR	
D52			LM1MA142WK-G	DIODE		Q227			2SC4468NF	TRANSISTOR	
D101			LM1MA142WK-G	DIODE		Q229			2SA1695NF	TRANSISTOR	
D102			LM1MA142WA-G	DIODE		Q241,242			2SC4081	TRANSISTOR	
D103,104			UDZS6.8B	ZENER DIODE		Q251			2SC2235-F	TRANSISTOR	
D152			1SS133	DIODE		Q252			2SA965-F	TRANSISTOR	
D203-206			1SS133	DIODE		Q253			2SC2235-F	TRANSISTOR	
D251			1SS133	DIODE		Q254,255			2SA965-F	TRANSISTOR	
D253			LM1MA142WK-G	DIODE		Q256			2SC2235-F	TRANSISTOR	
D254			LM1MA142WA-G	DIODE		Q257			2SA965-F	TRANSISTOR	
D255			LM1MA142WK-G	DIODE		Q258			2SC2235-F	TRANSISTOR	
D260,261			1SS133	DIODE		Q281-284			2SC4081	TRANSISTOR	
D295,296			LM1MA142WA-G	DIODE		Q602			2SC4081	TRANSISTOR	
D600			B30-1770-05	LED		Q603			2SA1576A	TRANSISTOR	
D601-603			1SS133	DIODE		Q604			2SB1241	TRANSISTOR	
D604			UDZS10B	ZENER DIODE		Q605,606			2SC4081	TRANSISTOR	
D605			1SS133	DIODE		Q609			2SD1863	TRANSISTOR	
D606			UDZS15B	ZENER DIODE		Q610-613			2SC945AA (Q,P)	TRANSISTOR	
D607			UDZS6.2B	ZENER DIODE		Q614,615			2SA1576A	TRANSISTOR	
D608			UDZS13B	ZENER DIODE		Q616			2SC4081	TRANSISTOR	
D609			B30-1743-05	LED (RED)		Q617			2SA1576A	TRANSISTOR	
D610-613			1SS133	DIODE		Q618			2SC4081	TRANSISTOR	
D614			UDZS10B	ZENER DIODE		Q698			2SA1576A	TRANSISTOR	
D615,616			1SS133	DIODE		TH601,602			NCP18XH103J0S	THERMISTOR	
D617			B30-1770-05	LED (BLUE)		TH605			NCP18XH103J0S	THERMISTOR	
D624			1SS133	DIODE							
D699			1SS133	DIODE							
IC1,2			BA4560RF	ANALOGUE IC							
IC5			TL494IDR	ANALOGUE IC							
IC6-8			BA4560RF	ANALOGUE IC							
IC10-12			BA4560RF	ANALOGUE IC							
Q1			2SC4883ANF	TRANSISTOR							
Q2			2SA1859ANF	TRANSISTOR							

E1 : KAC-7204 (Europe) K : KAC-7204 (North America)  
M1 : KAC-7204 (Other Areas)

△ Indicates safety critical components.

# KAC-7204

## SPECIFICATIONS

### KAC-7204 (K, E type)

#### CEA-2006

Primary Power Output Ratings

(RMS Watts per channel @ 4 ohms, 1 % THD+N)

..... 170 W × 2

Signal to Noise Ratio (Reference: 1Watt into 4 ohms)

.....83 dBA

#### Audio Section

Max Power Output ..... 1000 W (500 W × 2)

Rated Power Output (+B = 14.4 V)

Normal (4 Ω) (20 Hz – 20 kHz, 0.08 % THD)..... 170 W × 2

Normal (4 Ω) (DIN : 45324 , +B = 14.4V)..... 170 W × 2

Normal (2 Ω) (1 kHz, 0.8 % THD).....250 W × 2

Bridged (4 Ω) (1 kHz, 0.8 % THD)..... 500 W × 1

Frequency Response (+0, -3 dB) ..... 5 Hz – 50 kHz

Sensitivity (rated output)..... 0.2 V – 5.0 V

Input Impedance ..... 10 kΩ

Signal to Noise Ratio ..... 100 dB

Low Pass Filter Frequency (-24 dB/oct.)

..... 50 – 200 Hz (variable)

High Pass Filter Frequency (-12 dB/oct.)

.....50 – 200 Hz (variable)

Bass Boost Circuit (40 Hz) .....0 – +18 dB (variable)

#### General

Operating Voltage..... 14.4 V (11 – 16 V allowable)

Current Consumption..... 40 A

Installation Size (W × H × D)

.....350 × 59 × 238 mm (13 3/4 × 2 5/16 × 9 3/8 inch)

Weight .....3.2 kg (7.0 lbs)

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KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

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### KAC-7204 (M type)

#### Audio Section

Max Power Output ..... 1000 W (500 W × 2)

Rated Power Output (+B = 14.4 V)

Normal (4 Ω) (20 Hz – 20 kHz, 0.08 % THD)..... 170 W × 2

Normal (2 Ω) (1 kHz, 0.8 % THD).....250 W × 2

Bridged (4 Ω) (1 kHz, 0.8 % THD).....500 W × 1

Frequency Response (+0, -3 dB) ..... 5 Hz – 50 kHz

Sensitivity (rated output)..... 0.2 V – 5.0 V

Input Impedance ..... 10 kΩ

Signal to Noise Ratio ..... 100 dB

Low Pass Filter Frequency (-24 dB/oct.)

..... 50 – 200 Hz (variable)

High Pass Filter Frequency (-12 dB/oct.)

..... 50 – 200 Hz (variable)

Bass Boost Circuit (40 Hz) .....0 – +18 dB (variable)

#### General

Operating Voltage..... 14.4 V (11 – 16 V allowable)

Current Consumption..... 40 A

Installation Size (W × H × D)..... 350 × 59 × 238 mm

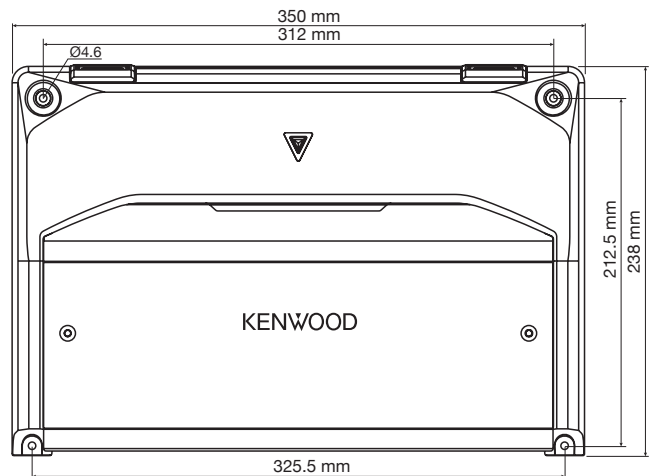
Weight .....3.2 kg

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KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

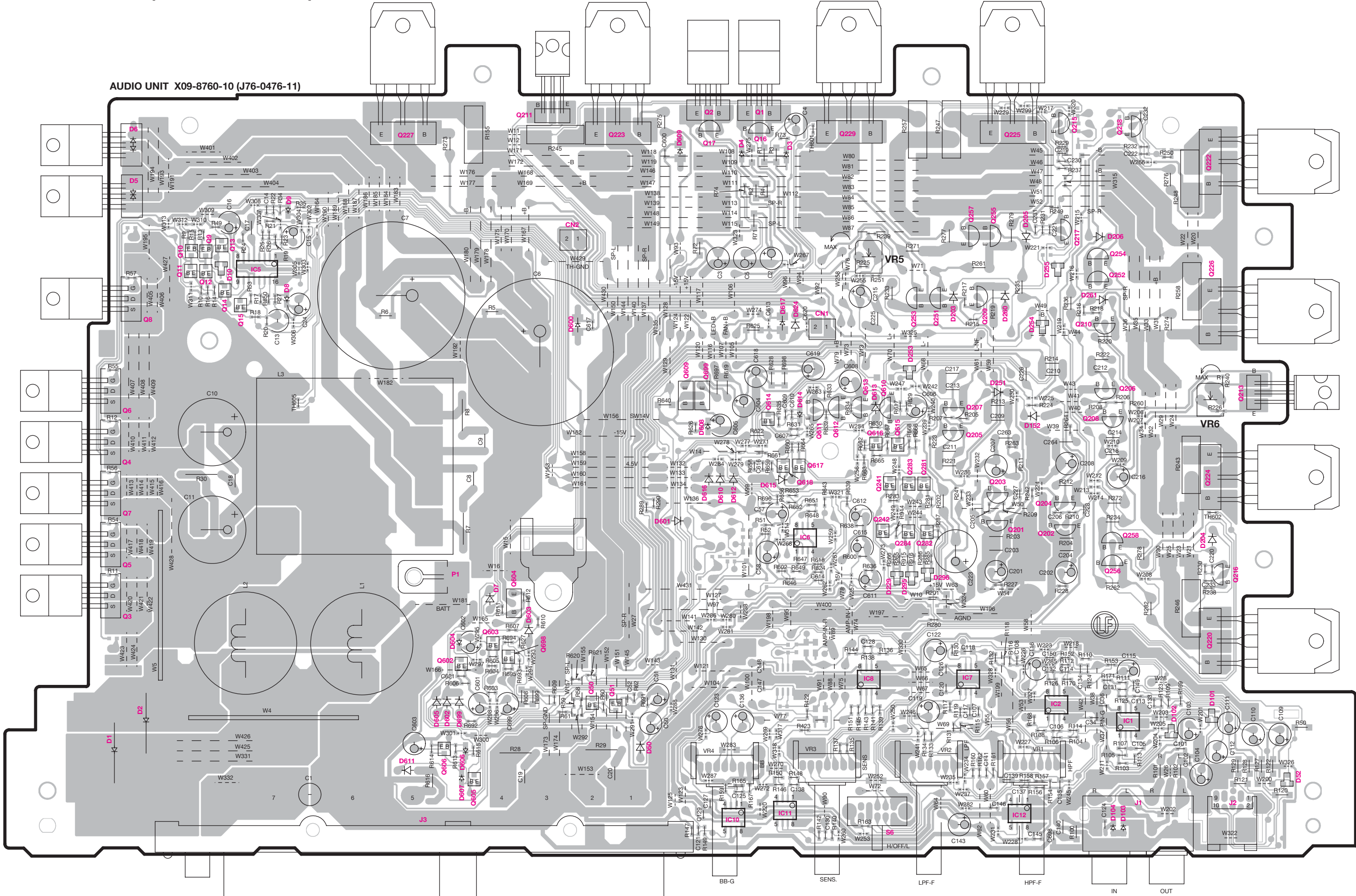
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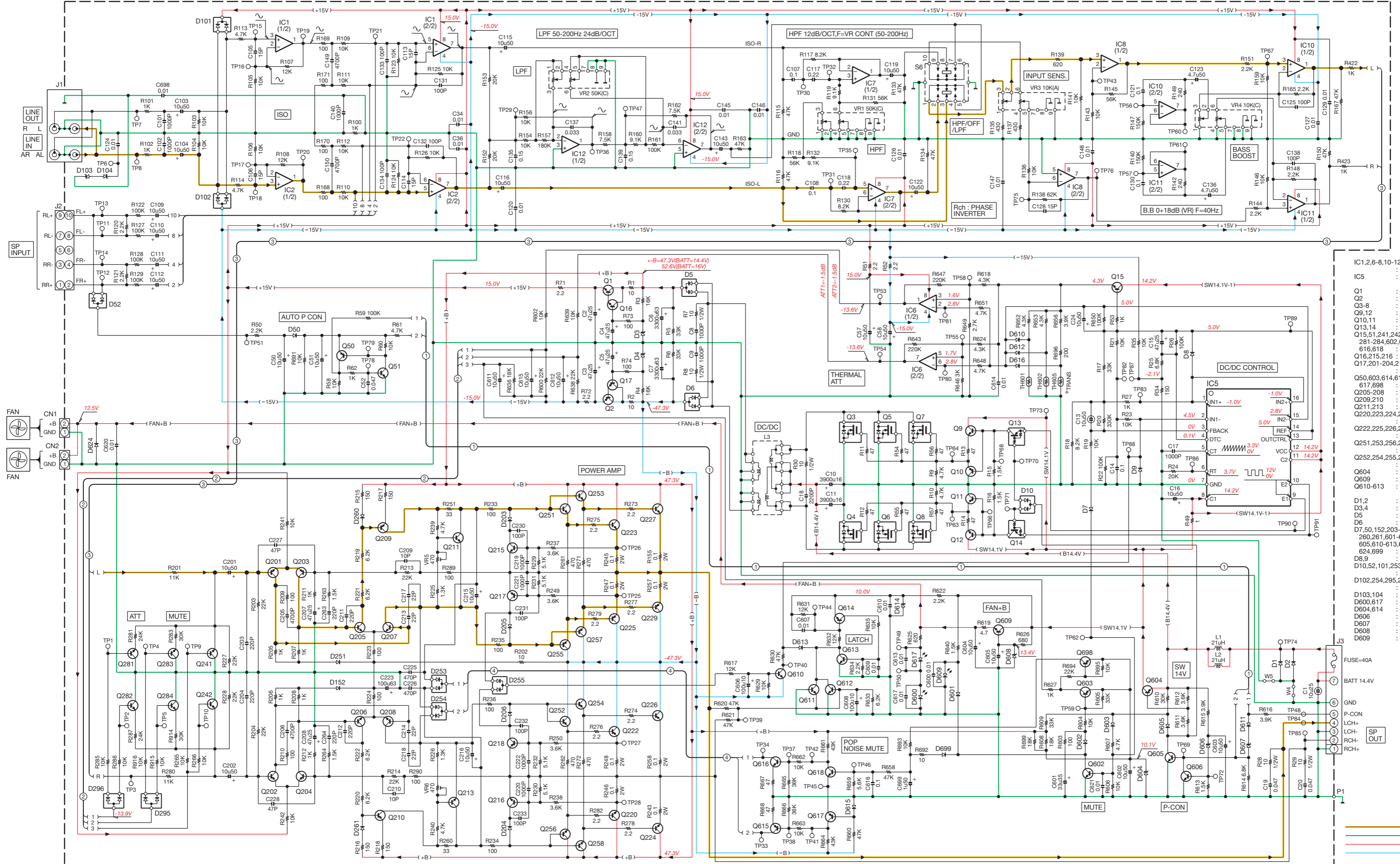
## INSTALLATION



# KAC-7204

## PC BOARD (FOIL SIDE VIEW)





- IC1,2,6,8,10-12 : BA4560RF
- IC5 : TL494IDR
- Q1 : 2SC4883ANF
- Q2 : 2SA1859ANF
- Q3-8 : STP60NF06FP
- Q9,12 : 2SC4097
- Q10,11 : 2SA1577
- Q13,14 : DTA114EUA
- Q15,51,241,242 : 2B1-254,602,605,606,616,618
- Q16,215,216 : 2SC1845-A(FE)
- Q17,201-204,217,218 : 2SA992-A(FE)
- Q50,603,614,615,617,698 : 2SA1576A
- Q205-208 : 2SC3478AA(L,K)
- Q209,210 : 2SA1376AA(L,K)
- Q211,213 : KT3114-PH(A)
- Q220,223,224,227 : 2SC4468NF
- Q222,225,226,229 : 2SA1695NF
- Q251,253,256,258 : 2SC2235-F
- Q252,254,255,257 : 2SA965-F
- Q604 : 2SB1241
- Q609 : 2SD1863
- Q610-613 : 2SC945AA(Q,P)
- D1,2 : 1N5406-TSC
- D3,4 : UDZS16B
- D5 : FCH10A20
- D6 : FRH10A20
- D7,50,152,203-206,251,260,261,601-603,605,610-613,615,616,624,699 : 1SS133
- D8,9 : 1SS355
- D10,52,101,253,255 : LM1MA142W-G
- D102,254,295,296 : LM1MA142WA-G
- D103,104 : UDZS6.8B
- D600,617 : B30-1770-05
- D604,614 : UDZS10B
- D606 : UDZS15B
- D607 : UDZS6.2B
- D608 : UDZS13B
- D609 : B30-1743-05

- FUSE=40A
- BATT 14.4V
- GND
- P-CON
- LCH+
- LCH-
- RCH-
- RCH+

