

ONKYO SERVICE MANUAL


7.1-CH THX CERTIFIED HOME THEATER SPEAKER PACKAGE MODEL HTP-960(B)



Black model

B MDC	120V AC, 60Hz
B MPP	230V AC, 50Hz

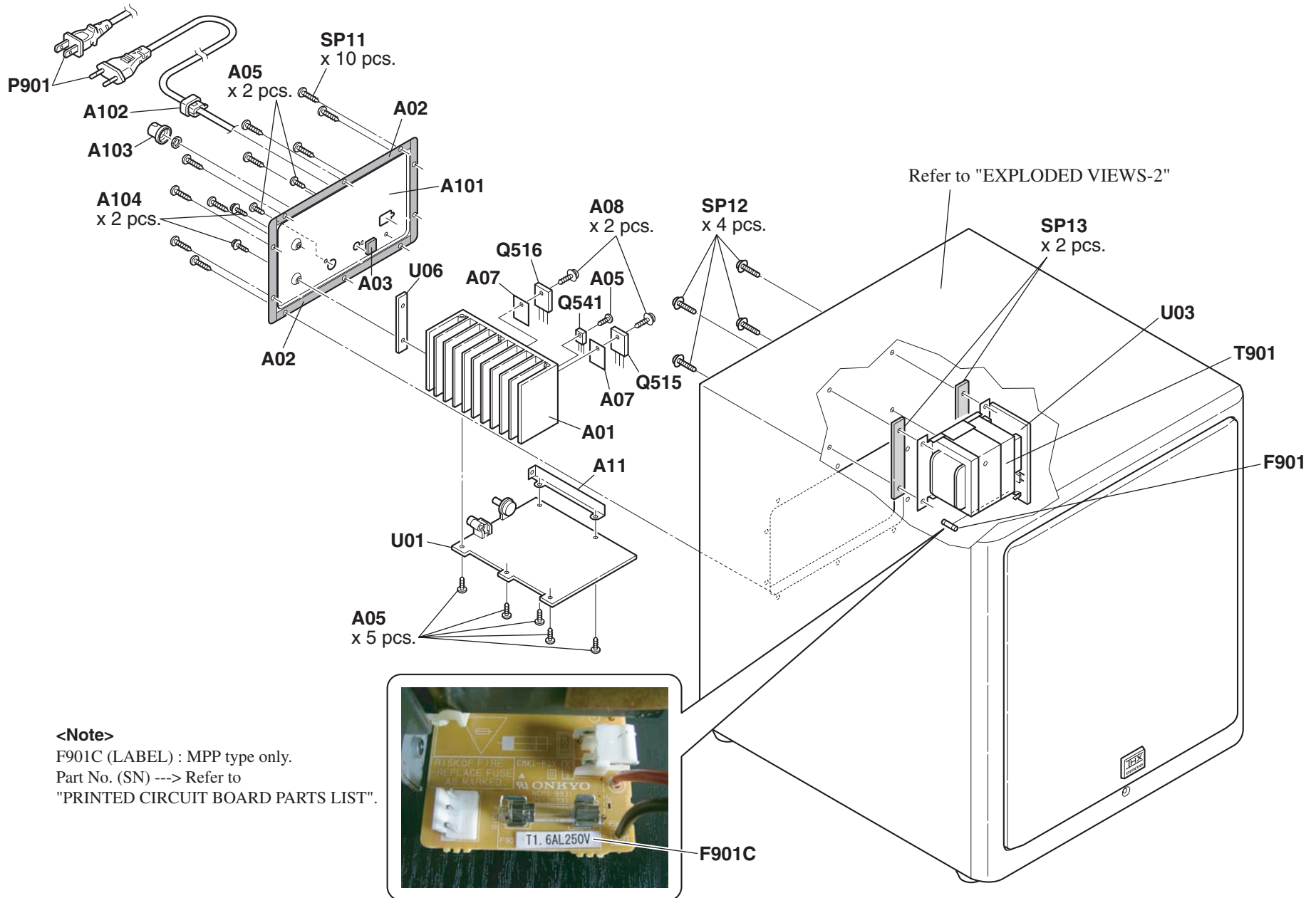
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

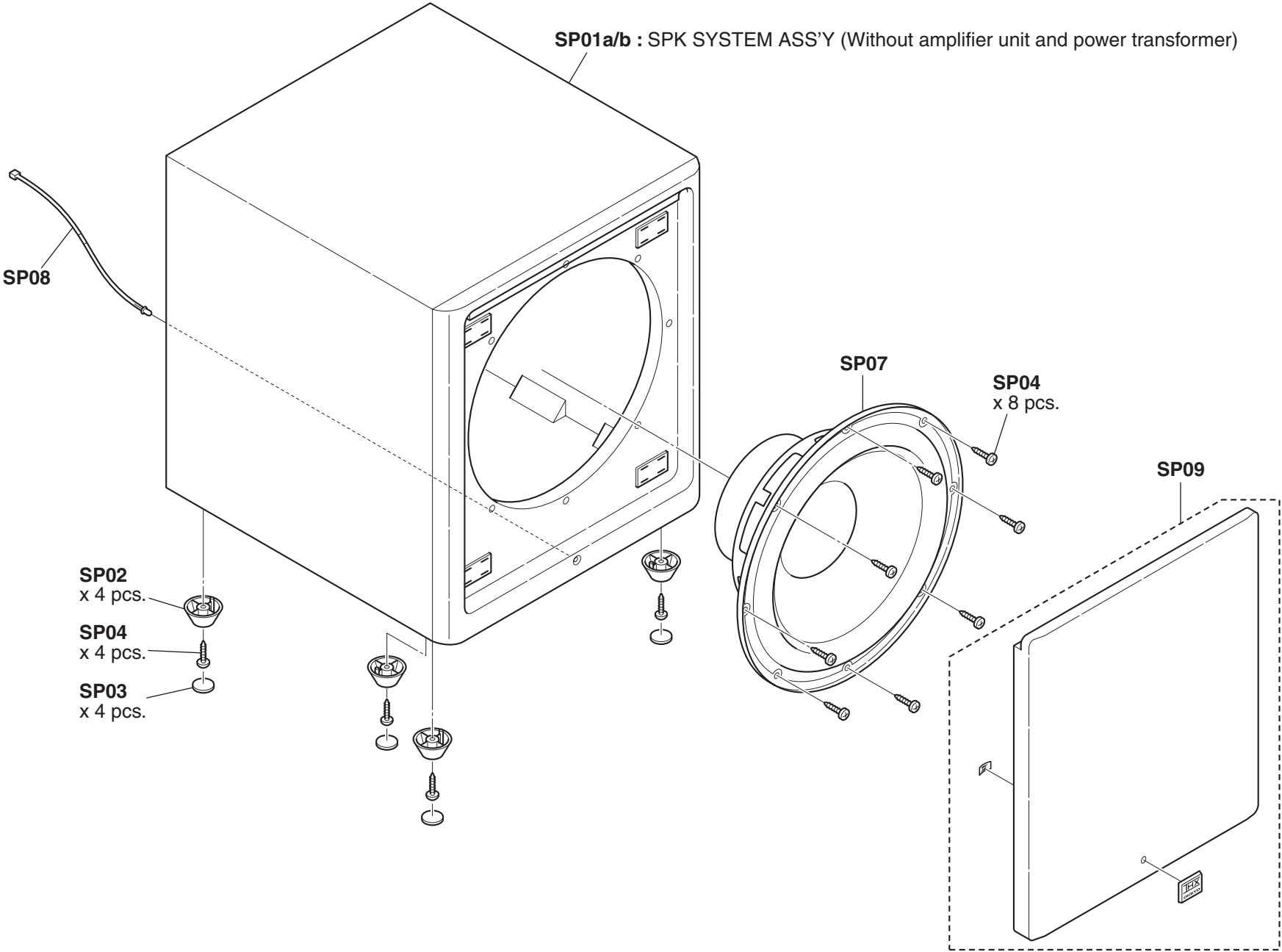
MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

EXPLODED VIEWS-1

SKW-960 : POWERED SUBWOOFER

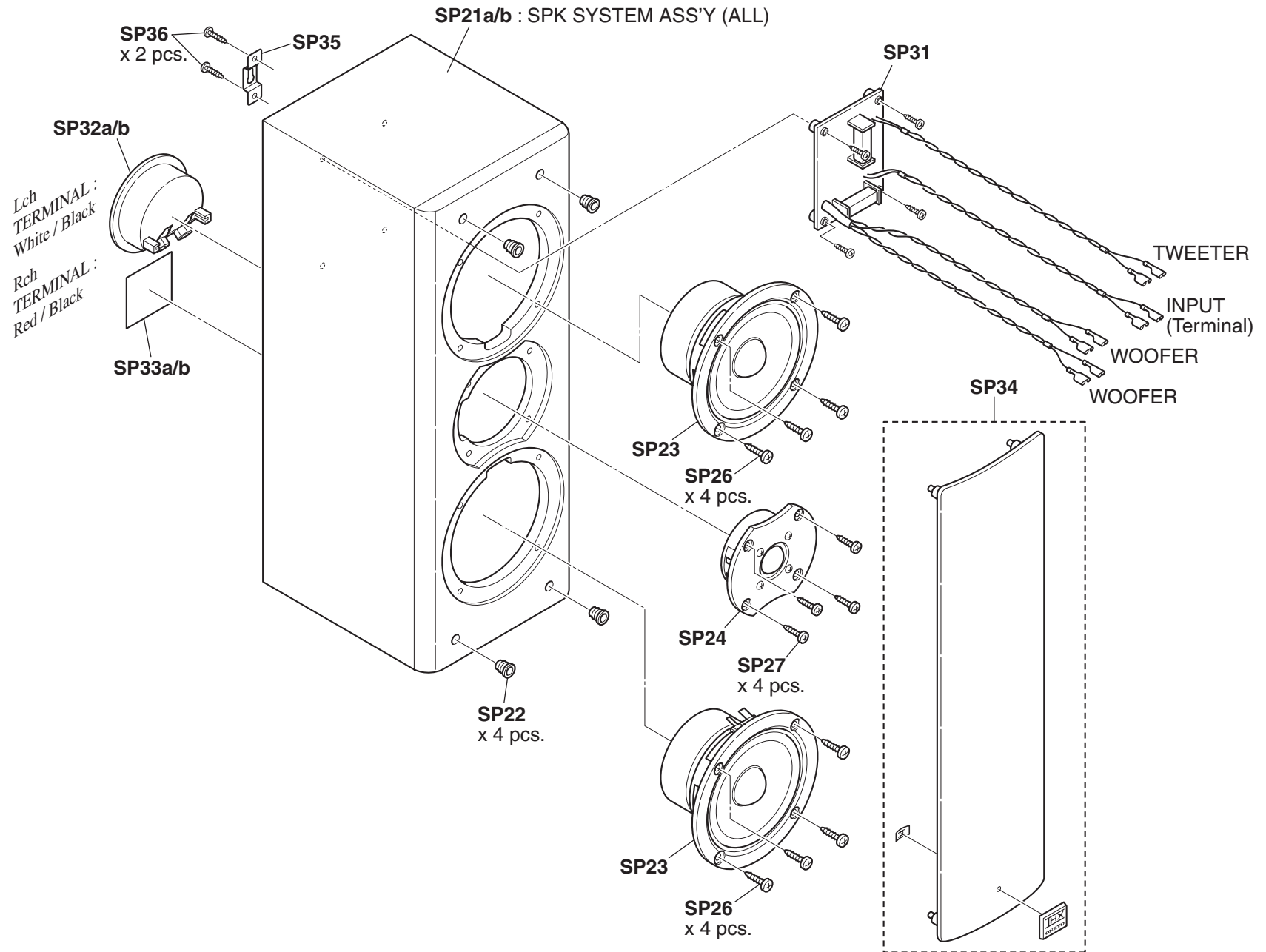


EXPLODED VIEWS-2
SKW-960 : POWERED SUBWOOFER

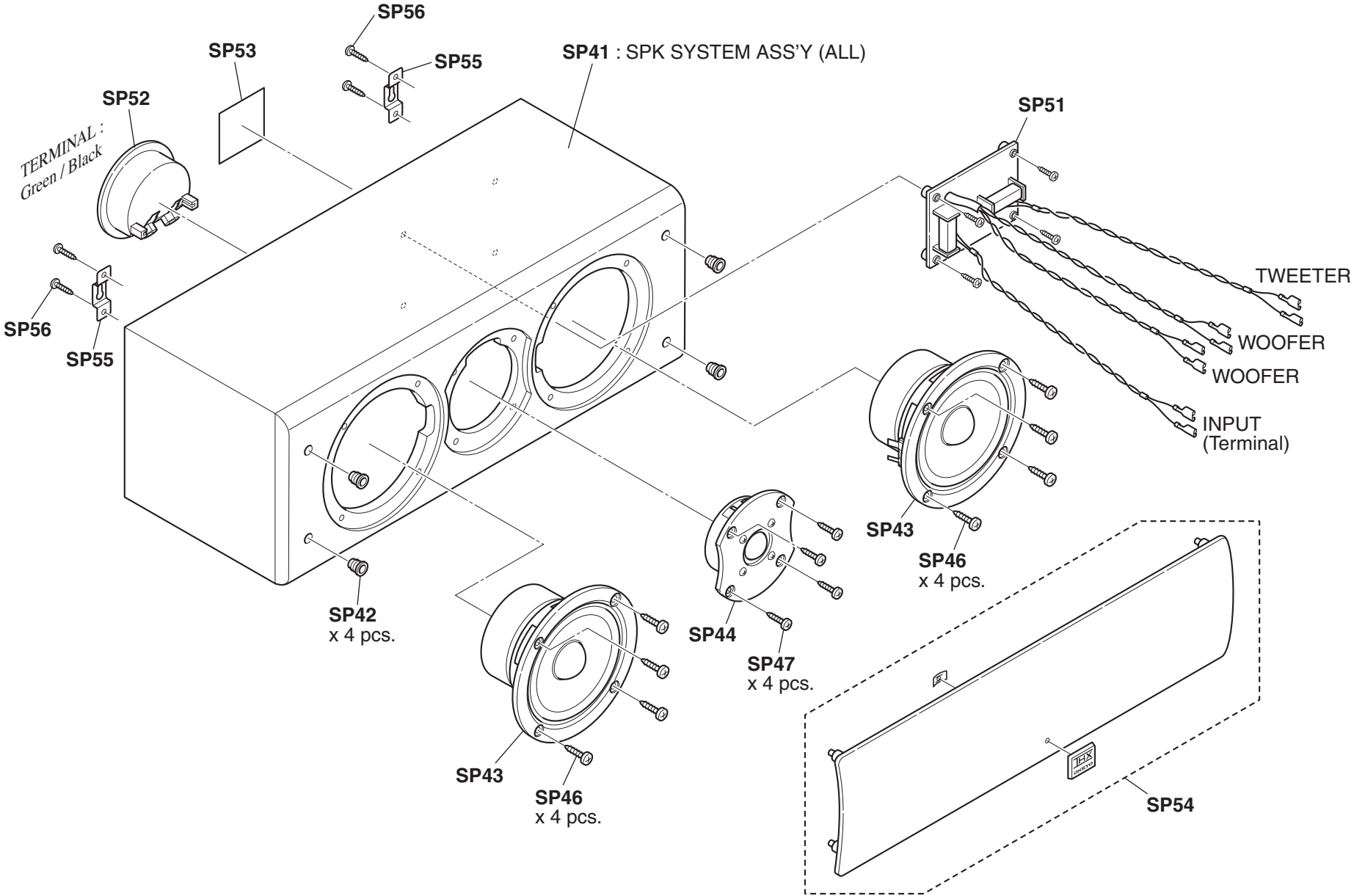


EXPLODED VIEWS-3

SKF-960F <L> / SKF-960F <R>

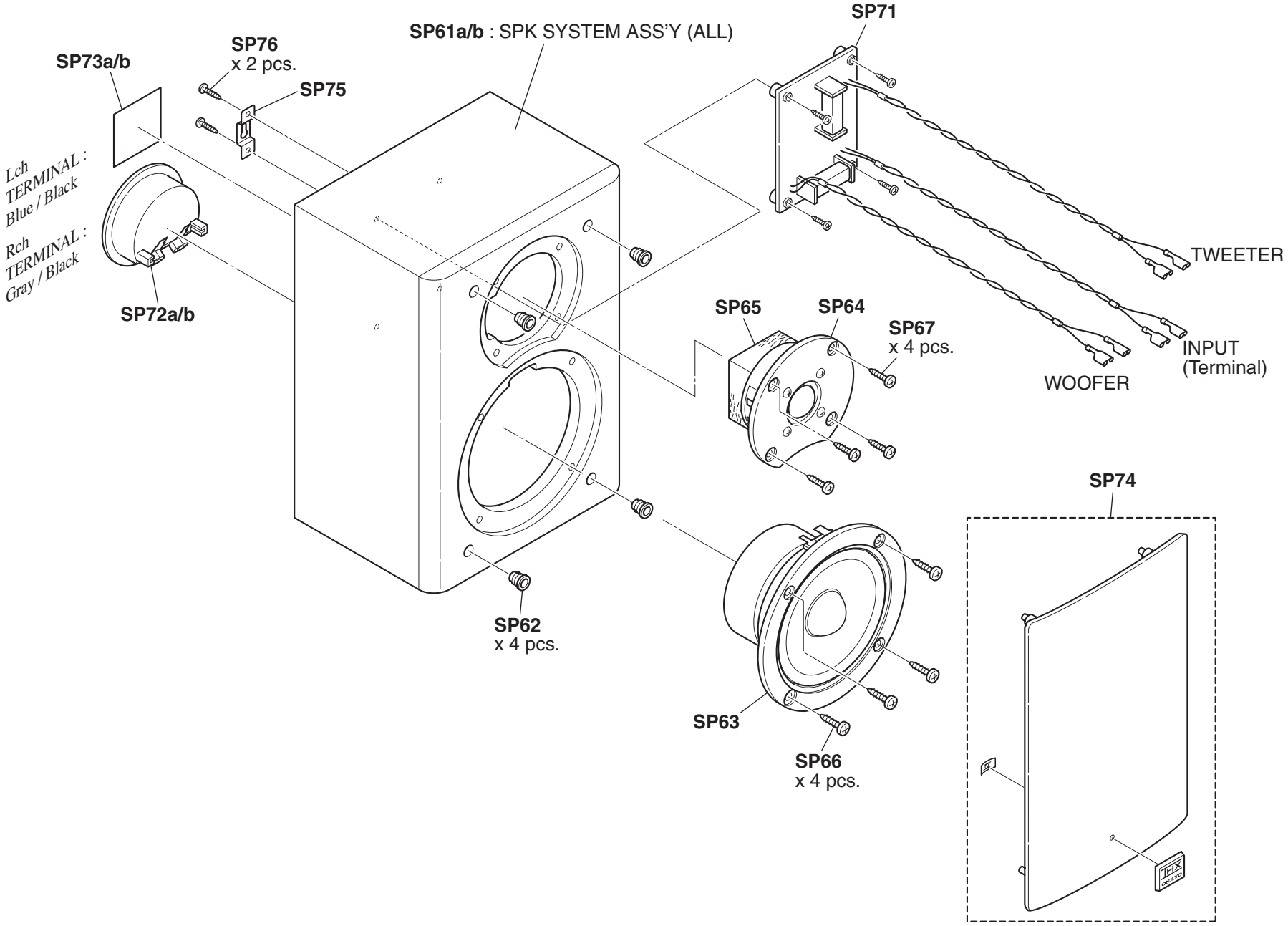


EXPLODED VIEWS-4
SKC-960C



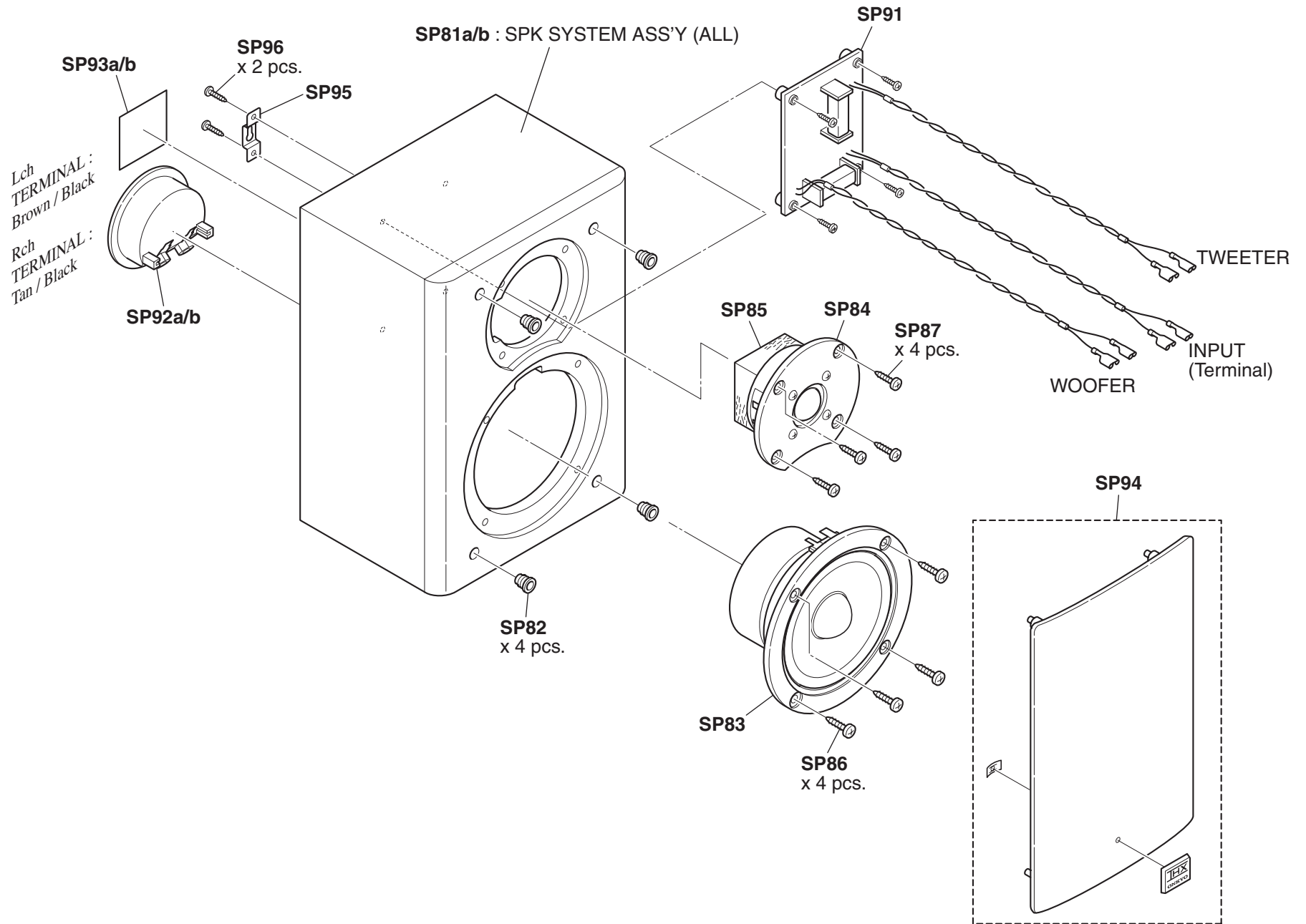
EXPLODED VIEWS-5

SKM-960S <L> / SKM-960S <R>



EXPLODED VIEWS-6

SKB-960 <L> / SKB-960 <R>



SCHEMATIC DIAGRAM SKW-960 : POWERED SUBWOOFER

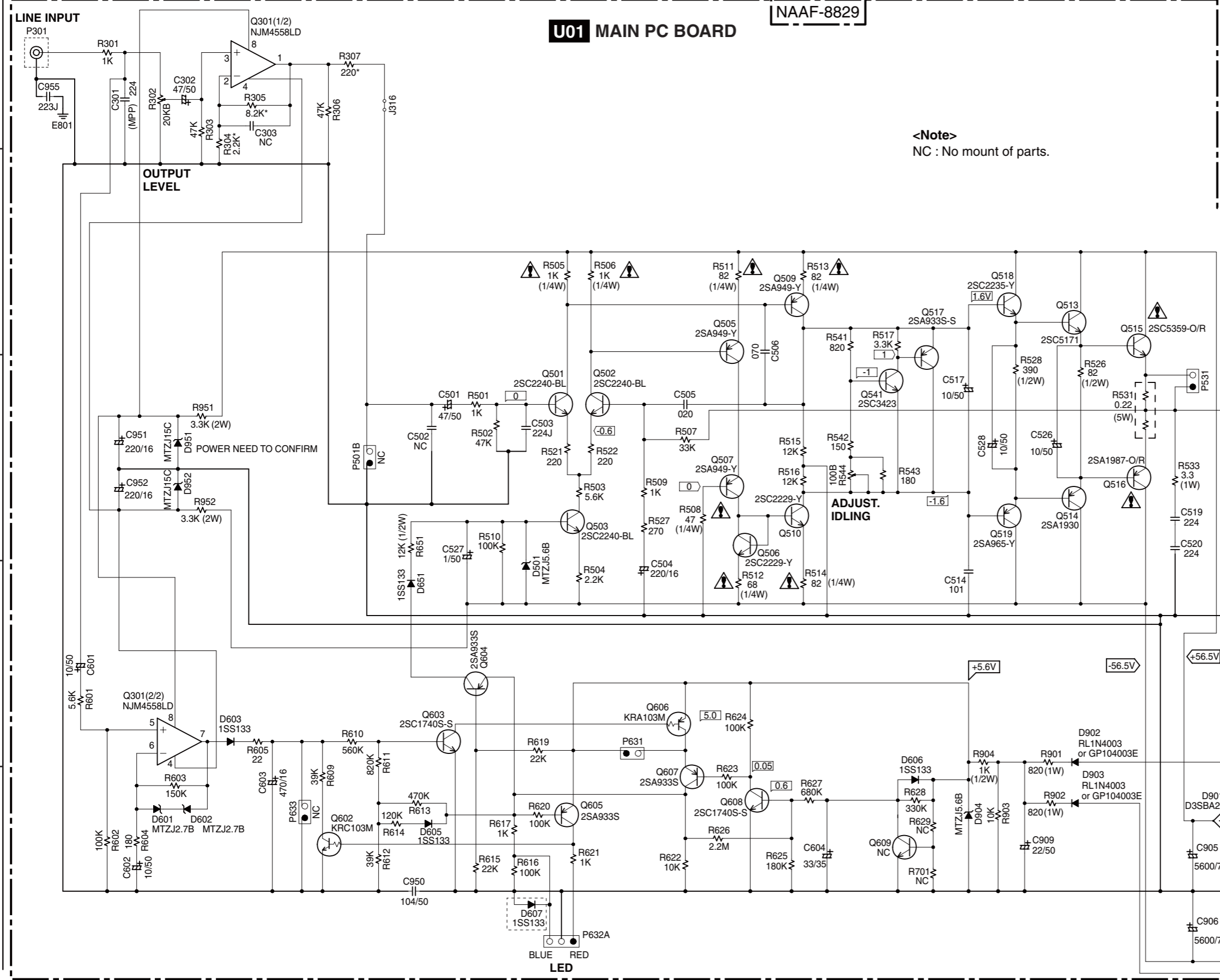
1

2

3

4

5



NAAF-8829

U01 MAIN PC BOARD

CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH FUSE OF SAME TYPE AND RATING INDICATED.

ATTENTION
AFIN D'ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE, REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE ET CALIBRATION COMME INDIQUE.

THIS SYMBOL LOCATED NEAR THE FUSE INDICATES THAT THE FUSE USED IS SLOW OPERATING TYPE FOR CONTINUED PROTECTION AGAINST FIRE HAZARD. REPLACE WITH SAME TYPE FUSE. FOR FUSE RATING REFER TO THE MARKING ADJACENT TO THE SYMBOL.

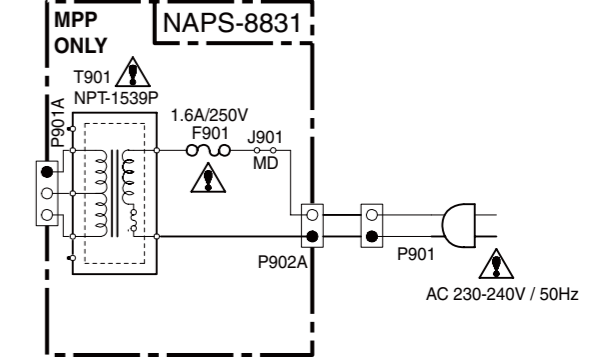
CE SYMBOLE INDIQUE QUE LE FUSIBLE UTILISE EST E LENT. POUR UNE PROTECTION PERMANENTE, UTILISER QUE DES FUSIBLES DE MEME TYPE. CE DARNIER EST INDIQUE LA QU LE PRESENT SYMBOLE EST APPOSE.

NOTE

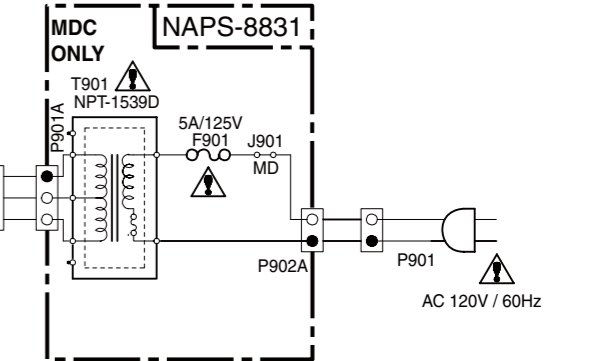
- THE COMPONENTS IDENTIFIED BY MARK ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) IS DC VOLTAGE. (NO INPUT SIGNAL).
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS () ARE IN uF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED.
- EX) 030- 3pF 330- 33pF 331- 330pF 333- 0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
- EX) PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

<Note>
NC : No mount of parts.

U03 POWER TRANSFORMER PC BOARD



U03 POWER TRANSFORMER PC BOARD



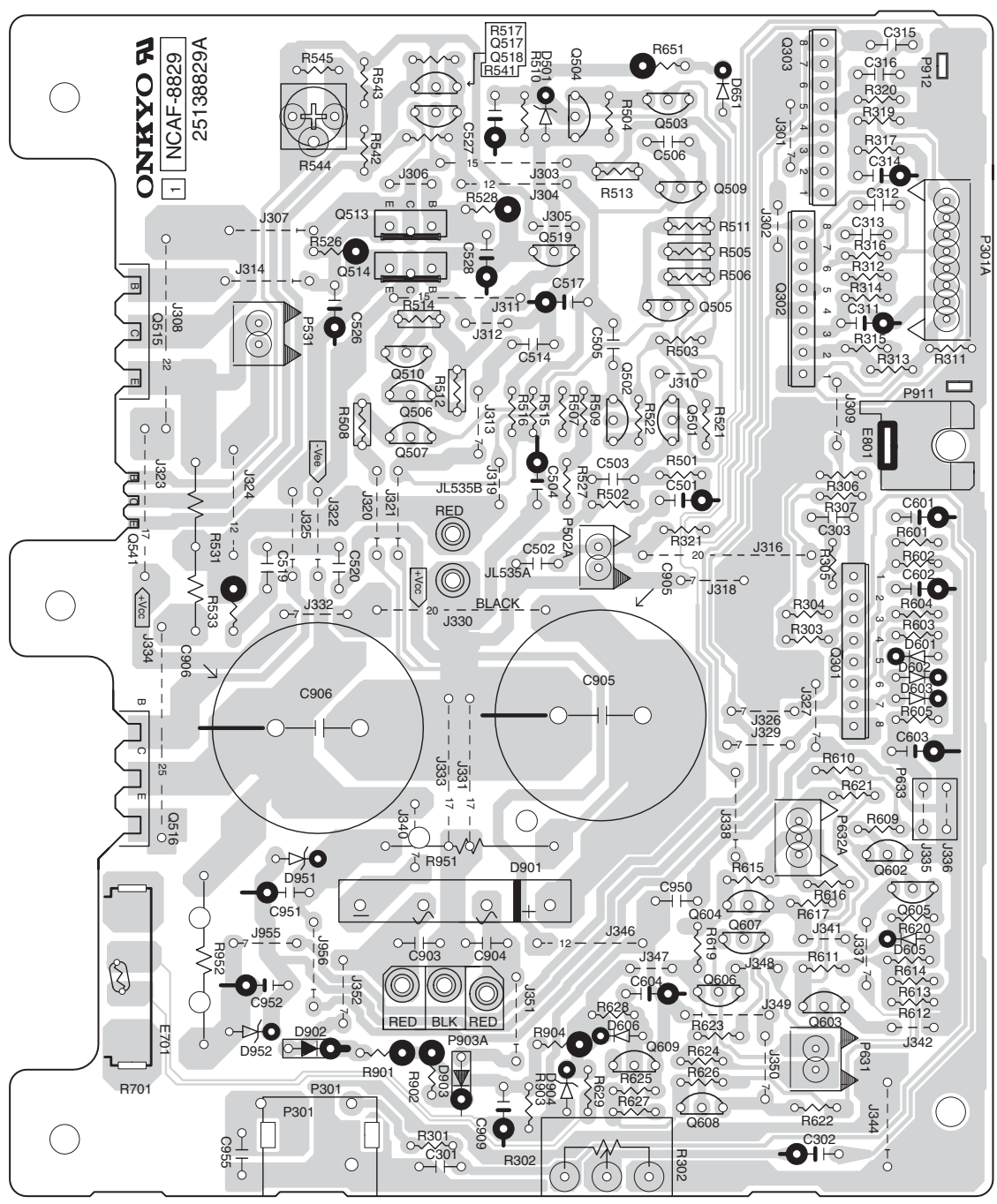
A B C D

PRINTED CIRCUIT BOARD VIEWS-1
SKW-960 : POWERED SUBWOOFER

U01 MAIN PC BOARD (NAAF-8829)

Component side

1
2
3
4
5



A

B

C

D

PRINTED CIRCUIT BOARD VIEWS-2

SKW-960 : POWERED SUBWOOFER

U03 POWER TRANSFORMER PC BOARD (NAPS-8831)

Component side

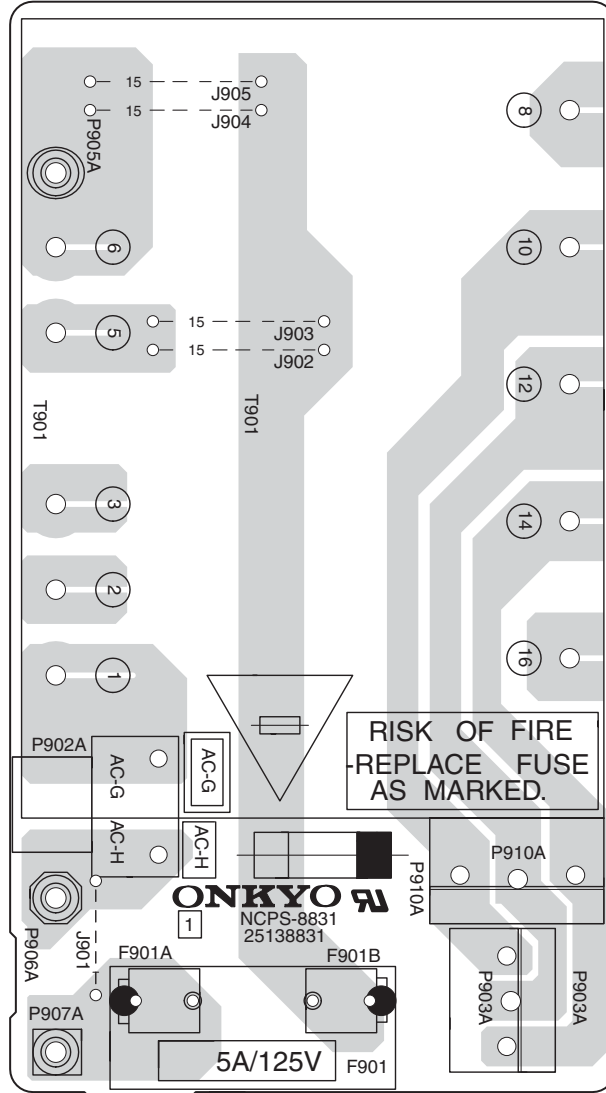
1

2

3

4

5



ADJUSTMENT PROCEDURE

SKW-960 : POWERED SUBWOOFER / ADJUSTMENT OF IDLING CURRENT

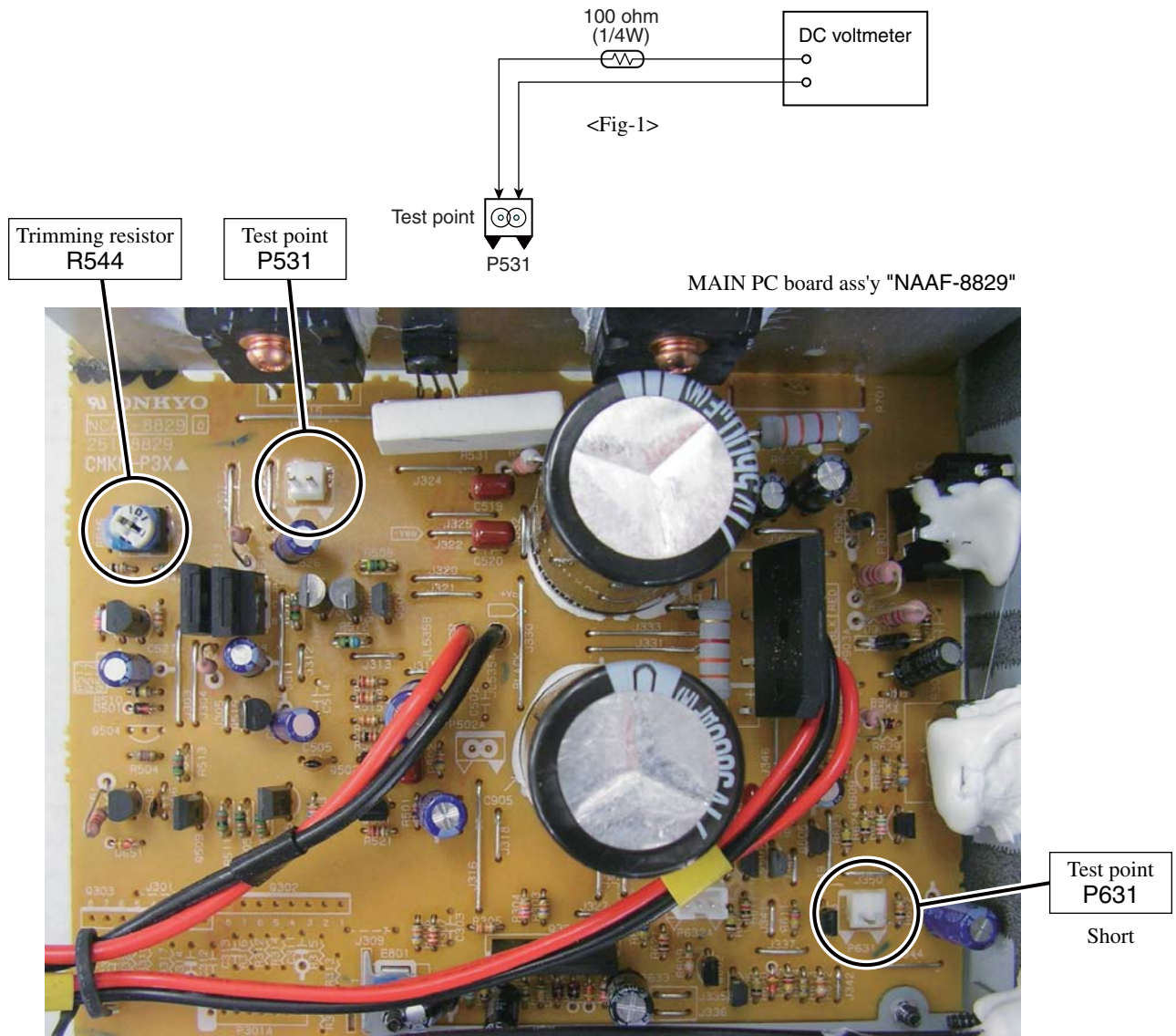
[When]

1. Exchange transistors (Q505 - Q519).
2. Exchange MAIN PC board ass'y (NAAF-8829).

[Procedure]

<Note> No speaker load and No input signal.

1. Short test point P631 for amplifier is under active mode.
2. Adjust the trimming resistor R544 so that the reading of multimeter becomes 52 ohm to 53 ohm.
3. Connect the DC voltmeter to test point P531. <Fig-1>
4. Connect the power cord into the AC outlet.
5. Confirm the voltage of above point after 6 minutes to 8 minutes. (Heat running)
6. When less than 3.20 mV : Readjust the trimming resistor above so that the voltage becomes 4.5 mV to 5.0 mV.
When 3.30 mV to 5.20 mV : Not necessary to adjust.
7. Disconnect the power cord from the AC outlet.
8. Disconnect the DC voltmeter.



HTP-960

EXPLODED VIEWS PARTS LIST

**NOTE : THE COMPONENTS IDENTIFIED BY THE MARK
! ARE CRITICAL FOR RISK OF FIRE AND
ELECTRIC SHOCK. REPLACE ONLY WITH PART
NUMBER SPECIFIED.**

<Notes>

- <L> : Lch
- <R> : Rch
- <MDC> : Canadian model only
- <MPP> : European model only

REF. NO.	PART NAME	DESCRIPTION	Q'TY	PART NO. (SN)	REMARKS
EXPLODED	SKW-960 (B) : POWERED SUBWOOFER				
EXPLODED	AMPLIFIER SECTION				
EXPLODED	Q515	TR		2203082	!
EXPLODED	Q515 or	TR	(1)	2203083	!
EXPLODED	Q516	TR		2203072	!
EXPLODED	Q516 or	TR	(1)	2203073GR	!
EXPLODED	Q541	TR		2202104	
EXPLODED	Q541 or	TR	(1)	2202103	
EXPLODED	<Note>				
EXPLODED	When replacement the following the transistor, made from the same HFE rank as the original type.				
EXPLODED	Q515, Q516, Q541				
EXPLODED	A01	HEAT SINK		27160591	
EXPLODED	A02	CUSHION		28141682	
EXPLODED	A03	CUSHION		28141691	
EXPLODED	A05	SCREW		838430088GR	
EXPLODED	A07	ISO SHEET		223025	
EXPLODED	A08	SCREW		801634	
EXPLODED	A11	RETAINER		27142025	
EXPLODED	A101	REAR PANEL		27123964B	<MDC>
EXPLODED	A101	REAR PANEL		27123965B	<MPP>
EXPLODED	A102	BUSHING		27300750	!
EXPLODED	A103	KNOB		28326463	
EXPLODED	A104	SCREW		801433GR	
EXPLODED	F901	FUSE		252326GR	! <MDC>

EXPLODED	F901	FUSE	1.6A-SE-EAK IECFUSE	1	252073GR	! <MPP>
EXPLODED	F901 or	FUSE	1.6A-SE-TL250V	(1)	252273GR	! <MPP>
EXPLODED	P901	AC CORD	AS-UC-2	1	253333VOL	! <MDC>
EXPLODED	P901 or	AC CORD	AS-UC-2	(1)	253368BLTK	! <MDC>
EXPLODED	P901 or	AC CORD	AS-UC-2	(1)	253368AYUN	! <MDC>
EXPLODED	P901 or	AC CORD	AS-UC-2	(1)	253368HSN	! <MDC>
EXPLODED	P901	AC CORD	AS-CEE	1	253336VOL	! <MPP>
EXPLODED	T901	P TRANS	NPT-1539D	1	2301863	! <MDC>
EXPLODED	T901	P TRANS	NPT-1539P	1	2301864	! <MPP>
EXPLODED	U01	MAIN PC BOARD ASS'Y	NAAF-8829-1W*	1	1B138529-1W	<MDC>
EXPLODED	U01	MAIN PC BOARD ASS'Y	NAAF-8829-1X*	1	1B138529-1X	<MPP>
EXPLODED	U03	POWER TRANS. PC BOARD ASS'Y	NAPS-8831-1W	1	1B138531-1W	<MDC>
EXPLODED	U03	POWER TRANS. PC BOARD ASS'Y	NAPS-8831-1X	1	1B138531-1X	<MPP>
EXPLODED	U06	HOLDER PC BOARD	NAETC-8834	1	---	NSP
EXPLODED	SPEAKER SECTION (SKW-960)					
EXPLODED	SP01a	SPK SYSTEM ASS'Y(ALL)	SKW-960 (B) MDC	1	000-SKW960BMDC	<MDC>
EXPLODED	SP01b	SPK SYSTEM ASS'Y(ALL)	SKW-960 (B) MPP	1	000-SKW960BMPP	<MPP>

EXPLODED	<Note>					
EXPLODED	SP01a/b = Without amplifier unit and power transformer					
EXPLODED	SP02	FOOT	(PLASTIC)	4	D249-W54001B-00	
EXPLODED	SP03	CUSHION	Dia17.5 x 2T	4	442-902133-00	
EXPLODED	SP04	WOOD SCREW	4STT + 20A (FOR SPx8 / FOOTx4)	12	837440204	
EXPLODED	SP07	WOOFER	12 inch (30cm) (FPI)	1	300-DNS4243000	
EXPLODED	SP08	LED HARNESS ASS'Y	---	1	335-SKW750-01	
EXPLODED	SP09	CLOTH FRAME ASS'Y	---	1	113-06W960-10	
EXPLODED	SP11	WOOD SCREW	4STT + 20A (FOR AMPx10)	10	837440204	
EXPLODED	SP12	SCREW	4 x 25 W12-ED BLK (FOR P-TRANS)	4	412-DE40250B1	
EXPLODED	SP13	CUSHION RUBBER PAD	19 x 89 T2 RUBBER (FOR P-TRANS)	2	442-902138-00	
EXPLODED	SKF-960F (B) <L> / <R> : FRONT SPEAKERS					
EXPLODED	SP21a	SPK SYSTEM ASS'Y(ALL)	SKF-960F (B) <L>	1	000-SKF960FLB	<L>
EXPLODED	SP21b	SPK SYSTEM ASS'Y(ALL)	SKF-960F (B) <R>	1	000-SKF960FRB	<R>
EXPLODED	SP22	CATCHING HOLDER	---	4	D230-DN3X01B-01	
EXPLODED	SP23	WOOFER	W1277C (ONKYO ELE M)	2	W1277C	
EXPLODED	SP24	TWEETER	TW3208B (ONKYO ELE M)	1	TW3208B	
EXPLODED	SP26	SCREW	4 x 20 BIND AB BLK ED (For WF)	8	411-BE4020AB1	
EXPLODED	SP27	SCREW	4 x 16 BIND AB BLK ED (For TW)	4	411-BE4016AB1	
EXPLODED	SP31	CROSSOVER	SKF/SKC NETWORK PCB ASS'Y	1	311-SKF940-00	
EXPLODED	SP32a	TERMINAL	WHITE / BLACK	1	332-H8107B-41	<L>
EXPLODED	SP32b	TERMINAL	RED / BLACK	1	332-H8107B-01	<R>
EXPLODED	SP33a	SPEC LABEL (L)	<L>	1	600-0F960L-00	<L>
EXPLODED	SP33b	SPEC LABEL (R)	<R>	1	600-0F960R-00	<R>
EXPLODED	SP34	CLOTH FRAME ASS'Y	(WITH GRILLE CLOTH and LOGO)	1	D201-F96001B-50	
EXPLODED	SP35	METAL BRACKET	---	1	427-100022-00	
EXPLODED	SP36	SCREW	4 x 12 BIND ED	2	411-BG4012AB1	
EXPLODED	SKC-960C (B) : CENTER SPEAKER					
EXPLODED	SP41	SPK SYSTEM ASS'Y(ALL)	SKC-960C (B)	1	000-SKC960CB	
EXPLODED	SP42	CATCHING HOLDER	---	4	D230-DN3X01B-01	
EXPLODED	SP43	WOOFER	W1277C (ONKYO ELE M)	2	W1277C	
EXPLODED	SP44	TWEETER	TW3208B (ONKYO ELE M)	1	TW3208B	
EXPLODED	SP46	SCREW	4 x 20 BIND AB BLK ED (For WF)	8	411-BE4020AB1	
EXPLODED	SP47	SCREW	4 x 16 BIND AB BLK ED (For TW)	4	411-BE4016AB1	

EXPLODED	SP51	CROSSOVER	SKF/SKC NETWORK PCB ASS'Y	1	311-SKF940-00	
EXPLODED	SP52	TERMINAL	GREEN / BLACK	1	332-H8107B-31	
EXPLODED	SP53	SPEC LABEL	---	1	600-SKC960-00	
EXPLODED	SP54	CLOTH FRAME ASS'Y	(WITH GRILLE CLOTH and LOGO)	1	D201-C96001B-50	
EXPLODED	SP55	METAL BRACKET	---	2	427-100022-00	
EXPLODED	SP56	SCREW	4 x 12 BIND ED	4	411-BG4012AB1	
EXPLODED	SKM-960S (B) <L> / <R> : SURROUND SPEAKERS					
EXPLODED	SP61a	SPK SYSTEM ASS'Y(ALL)	SKM-960S (B) <L>	1	000-SKM960SLB	<L>
EXPLODED	SP61b	SPK SYSTEM ASS'Y(ALL)	SKM-960S (B) <R>	1	000-SKM960SRB	<R>
EXPLODED	SP62	CATCHING HOLDER	---	4	D230-DN3X01B-01	
EXPLODED	SP63	WOOFER	W1367B (ONKYO ELE M)	1	W1367B	
EXPLODED	SP64	TWEETER	TW3223A (ONKYO ELE M)	1	TW3223A	
EXPLODED	SP65	S. ABSORBER	25t x 50 x 50	1	443-925404-00	
EXPLODED	SP66	SCREW	4 x 20 BIND AB BLK ED (For WF)	4	411-BE4020AB1	
EXPLODED	SP67	SCREW	4 x 16 BIND AB BLK ED (For TW)	4	411-BE4016AB1	
EXPLODED	SP71	CROSSOVER	SKM/SKB NETWORK PCB ASS'Y	1	311-SKM940-00	
EXPLODED	SP72a	TERMINAL	BLUE / BLACK	1	332-H8107B-81	<L>

EXPLODED	SP72b	TERMINAL	GRAY / BLACK	1	332-H8107B-21	<R>
EXPLODED	SP73a	SPEC LABEL (L)	<L>	1	600-0M960L-00	<L>
EXPLODED	SP73b	SPEC LABEL (R)	<R>	1	600-0M960R-00	<R>
EXPLODED	SP74	CLOTH FRAME ASS'Y	(WITH GRILLE CLOTH and LOGO)	1	D201-M96001B-50	
EXPLODED	SP75	METAL BRACKET	---	1	427-100022-00	
EXPLODED	SP76	SCREW	4 x 12 BIND ED	2	411-BG4012AB1	
EXPLODED	SKB-960 (B) <L> / <R> : SURROUND BACK SPEAKERS					
EXPLODED	SP81a	SPK SYSTEM ASS'Y(ALL)	SKB-960 (B) <L>	1	000-SKB960BLB	<L>
EXPLODED	SP81b	SPK SYSTEM ASS'Y(ALL)	SKB-960 (B) <R>	1	000-SKB960BRB	<R>
EXPLODED	SP82	CATCHING HOLDER	---	4	D230-DN3X01B-01	
EXPLODED	SP83	WOOFER	W1367B (ONKYO ELE M)	1	W1367B	
EXPLODED	SP84	TWEETER	TW3223A (ONKYO ELE M)	1	TW3223A	
EXPLODED	SP85	S. ABSORBER	25t x 50 x 50	1	443-925404-00	
EXPLODED	SP86	SCREW	4 x 20 BIND AB BLK ED (For WF)	4	411-BE4020AB1	
EXPLODED	SP87	SCREW	4 x 16 BIND AB BLK ED (For TW)	4	411-BE4016AB1	
EXPLODED	SP91	CROSSOVER	SKM/SKB NETWORK PCB ASS'Y	1	311-SKM940-00	
EXPLODED	SP92a	TERMINAL	BROWN / BLACK	1	332-H8107B-91	<L>
EXPLODED	SP92b	TERMINAL	TAN / BLACK	1	332-H8107B-A1	<R>
EXPLODED	SP93a	SPEC LABEL (L)	<L>	1	600-0B960L-00	<L>
EXPLODED	SP93b	SPEC LABEL (R)	<R>	1	600-0B960R-00	<R>
EXPLODED	SP94	CLOTH FRAME ASS'Y	(WITH GRILLE CLOTH and LOGO)	1	D201-M96001B-50	
EXPLODED	SP95	METAL BRACKET	---	1	427-100022-00	
EXPLODED	SP96	SCREW	4 x 12 BIND ED	2	411-BG4012AB1	

HTP-960

PRINTED CIRCUIT BOARD PARTS LIST

**NOTE : THE COMPONENTS IDENTIFIED BY THE MARK
! ARE CRITICAL FOR RISK OF FIRE AND
ELECTRIC SHOCK. REPLACE ONLY WITH PART
NUMBER SPECIFIED.**

<Notes>

<MDC> : Canadian model only

<MPP> : European model only

SKW-960**U01** MAIN PC BOARD (NAAF-8829-1W / -1X)

U03		POWER TRANS. PC BOARD (NAPS-8831-1W / -1X)			
CIRCUIT NO.	PART NAME	DESCRIPTION	Q'TY	PART NO. (SN)	REMARKS
PWB	<Note>				
PWB	When replacement the following the transistor, made from the same HFE rank as the original type.				
PWB	Q301	IC		NJM4558L-D	1 22240293
PWB	Q501	TR		2SC2240-BL(TPE2_F)	1 2211406T
PWB	Q502	TR		2SC2240-BL(TPE2_F)	1 2211406T
PWB	Q503	TR		2SC2240-BL(TPE2_F)	1 2211406T
PWB	Q505	TR		KTA1024-Y	1 2215844T
PWB	Q505 or	TR		2SA949-Y(TPE6_F)	(1) 2211354T
PWB	Q505 or	TR		2SA949-O(TPE6_F)	(1) 2211353T
PWB	Q506	TR		2SC2229-Y(TPE6_F)	1 2211634T
PWB	Q506 or	TR		2SC2229-O(TPE6_F)	(1) 2211633T
PWB	Q507	TR		2SA949-Y(TPE6_F)	1 2211354T
PWB	Q507 or	TR		2SA949-O(TPE6_F)	(1) 2211353T
PWB	Q507 or	TR		KTA1024-Y	(1) 2215844T
PWB	Q509	TR		KTA1024-Y	1 2215844T

PWB	Q509 or	TR	2SA949-Y(TPE6_F)	(1)	2211354T
PWB	Q509 or	TR	2SA949-O(TPE6_F)	(1)	2211353T
PWB	Q510	TR	KTC3206-Y	1	2215854T
PWB	Q510 or	TR	2SC2229-Y(TPE6_F)	(1)	2211634T
PWB	Q510 or	TR	2SC2229-O(TPE6_F)	(1)	2211633T
PWB	Q513	TR	KTD2061-Y	1	2203434
PWB	Q513 or	TR	2SC5171(ONK_Q)	(1)	2203010
PWB	Q514	TR	KTB1369-Y	1	2203424
PWB	Q514 or	TR	2SA1930(ONK_Q)	(1)	2203000
PWB	Q517	TR	2SA933S-S	1	2213355T
PWB	Q517 or	TR	2SA933S-R	(1)	2213354T
PWB	Q517 or	TR	KTA1267-GR	(1)	2215995T
PWB	Q518	TR	2SC2235-Y(TPE6_F)	1	2211654T
PWB	Q519	TR	2SA965-Y(TPE6_F)	1	2211644T
PWB	Q602	TR	KRC103M	1	2215810T
PWB	Q602 or	TR	DTC124ES	(1)	2213160T
PWB	Q603	TR	2SC1740S-S	1	2213285T
PWB	Q603 or	TR	2SC1740S-R	(1)	2213284T
PWB	Q603 or	TR	KTC3199-GR	(1)	2215864T
PWB	Q604	TR	2SA933S-S	1	2213355T
PWB	Q604 or	TR	2SA933S-R	(1)	2213354T
PWB	Q604 or	TR	KTA1267-GR	(1)	2215995T
PWB	Q605	TR	2SA933S-S	1	2213355T
PWB	Q605 or	TR	2SA933S-R	(1)	2213354T
PWB	Q605 or	TR	KTA1267-GR	(1)	2215995T
PWB	Q606	TR	KRA103M	1	2215780T
PWB	Q606 or	TR	DTA124ES	(1)	2212600T
PWB	Q607	TR	2SA933S-S	1	2213355T
PWB	Q607 or	TR	2SA933S-R	(1)	2213354T
PWB	Q607 or	TR	KTA1267-GR	(1)	2215995T
PWB	Q608	TR	2SC1740S-S	1	2213285T
PWB	Q608 or	TR	2SC1740S-R	(1)	2213284T
PWB	Q608 or	TR	KTC3199-GR	(1)	2215864T
PWB	D501	ZENER D	MTZJ5.6B	1	224470562T

PWB	D501 or	ZENER D	DZ-5.6BSB	(1)	224850562T
PWB	D601	ZENER D	MTZJ2.7B	1	224470272T
PWB	D601 or	ZENER D	DZ-2.7BSB	(1)	224850272T
PWB	D602	ZENER D	MTZJ2.7B	1	224470272T
PWB	D602 or	ZENER D	DZ-2.7BSB	(1)	224850272T
PWB	D603	DIODE	1SS133	1	223163T
PWB	D603 or	DIODE	1SS133(DS)	(1)	223280T
PWB	D605	DIODE	1SS133	1	223163T
PWB	D605 or	DIODE	1SS133(DS)	(1)	223280T
PWB	D606	DIODE	1SS133	1	223163T
PWB	D606 or	DIODE	1SS133(DS)	(1)	223280T
PWB	D607	DIODE	1SS133	1	223163T
PWB	D651	DIODE	1SS133	1	223163T
PWB	D651 or	DIODE	1SS133(DS)	(1)	223280T
PWB	D901	DIODE	D3SBA20	1	22380271F
PWB	D902	DIODE	RL1N4003	1	22380260T
PWB	D902 or	DIODE	GP104003E	(1)	22380035T

PWB	D903	DIODE	RL1N4003	1	22380260T	
PWB	D903 or	DIODE	GP104003E	(1)	22380035T	
PWB	D904	ZENER D	MTZJ5.6B	1	224470562T	
PWB	D904 or	ZENER D	DZ-5.6BSB	(1)	224850562T	
PWB	D951	ZENER D	MTZJ15C	1	224471503T	
PWB	D951 or	ZENER D	DZ-15BSC	(1)	224851503T	
PWB	D952	ZENER D	MTZJ15C	1	224471503T	
PWB	D952 or	ZENER D	DZ-15BSC	(1)	224851503T	
PWB	C301	TF C	ECQ-V50V-224J	1	374722244T	<MPP>
PWB	C302	VX C	CE04W50V-47M(VX_BLK)	1	397384707T	
PWB	C501	VX C	CE04W50V-47M(VX_BLK)	1	397384707T	
PWB	C503	TF C	ECQ-V50V-224J	1	374722244T	
PWB	C504	VX C	CE04W16V-220M(VX_BLK)	1	397342217T	
PWB	C505	CERA C	CC45CH50V-020C	1	345340201T	
PWB	C506	CERA C	CC45CH50V-070D	1	345340702T	
PWB	C514	TF C	ECQ-B50V-101J	1	374721014T	
PWB	C517	VX C	CE04W50V-10M(VX_BLK)	1	397381007T	
PWB	C519	TF C	ECQ-V50V-224J	1	374722244T	
PWB	C520	TF C	ECQ-V50V-224J	1	374722244T	
PWB	C526	VX C	CE04W50V-10M(VX_BLK)	1	397381007T	
PWB	C527	VX C	CE04W50V-1M(VX_BLK)	1	397380107T	
PWB	C528	VX C	CE04W50V-10M(VX_BLK)	1	397381007T	
PWB	C601	VR C	CE04W50V-10M(VR)	1	394681007T	
PWB	C602	VR C	CE04W50V-10M(VR)	1	394681007T	
PWB	C603	VR C	CE04W16V-470M(VR)	1	394644717T	
PWB	C603 or	VX C	CE04W16V-470M(VX_BLK)	(1)	397344717T	
PWB	C604	VR C	CE04W35V-33M(VR)	1	394663307T	
PWB	C604 or	ELECT C	CE04W35V-33M	(1)	354763309T	
PWB	C903	TF C	ECQ-V100-104J	1	374731044T	<MPP>
PWB	C904	TF C	ECQ-V100-104J	1	374731044T	<MPP>
PWB	C905	ELECT C	CE62W71V5600M	1	3504444	
PWB	C906	ELECT C	CE62W71V5600M	1	3504444	
PWB	C909	VR C	CE04W50V-22M(VR)	1	394682207T	
PWB	C950	TF C	ECQ-V50V-104J	1	374721044T	

PWB	C951	VR C	CE04W16V-220M(VR)	1	394642217T	
PWB	C952	VR C	CE04W16V-220M(VR)	1	394642217T	
PWB	C955	TF C	ECQ-B50V-223J	1	374722234T	
PWB	R301	CARBON R	R16J-1K	1	417341024T	
PWB	R302	VARI R	N17RGL20KB15M	1	5151508	
PWB	R303	CARBON R	R16J-47K	1	417344734T	
PWB	R304	CARBON R	R16J-2.2K	1	417342224T	
PWB	R305	CARBON R	R16J-8.2K	1	417348224T	
PWB	R306	CARBON R	R16J-47K	1	417344734T	
PWB	R307	CARBON R	R16J-220	1	417342214T	
PWB	R501	CARBON R	R16J-1K	1	417341024T	
PWB	R502	CARBON R	R16J-47K	1	417344734T	
PWB	R503	CARBON R	R16J-5.6K	1	417345624T	
PWB	R504	CARBON R	R16J-2.2K	1	417342224T	
PWB	R505	NF CARBON R	R25J-1.0K	1	415471024T	!
PWB	R506	NF CARBON R	R25J-1.0K	1	415471024T	!
PWB	R507	CARBON R	R16J-33K	1	417343334T	

PWB	R508	NF CARBON R	R25J-47	1	415474704T	!
PWB	R509	CARBON R	R16J-1K	1	417341024T	
PWB	R510	CARBON R	R16J-100K	1	417341044T	
PWB	R511	NF CARBON R	R25J-82	1	415478204T	!
PWB	R512	NF CARBON R	R25J-68	1	415476804T	!
PWB	R513	NF CARBON R	R25J-82	1	415478204T	!
PWB	R514	NF CARBON R	R25J-82	1	415478204T	!
PWB	R515	CARBON R	R16J-12K	1	417341234T	
PWB	R516	CARBON R	R16J-12K	1	417341234T	
PWB	R517	CARBON R	R16J-3.3K	1	417343324T	
PWB	R521	CARBON R	R16J-220	1	417342214T	
PWB	R522	CARBON R	R16J-220	1	417342214T	
PWB	R526	METAL O R	RS1/2WBJ-82	1	443528204T	
PWB	R527	CARBON R	R16J-270	1	417342714T	
PWB	R528	METAL O R	RS1/2WBJ-390	1	443523914T	
PWB	R531	METAL PR	RF-5EGKR22	1	4000201	
PWB	R531 or	METAL P R	RGC55C 0.22 K	(1)	4000157	
PWB	R531 or	METAL PR	RGC55 0.22	(1)	4000132	
PWB	R531 or	METAL PR	MPR5W+5W 0R22	(1)	4000233	
PWB	R533	METAL R	RNU1WCJ-3.3	1	453630334T	
PWB	R541	CARBON R	R16J-820	1	417348214T	
PWB	R542	CARBON R	R16J-150	1	417341514T	
PWB	R543	CARBON R	R16J-180	1	417341814T	
PWB	R544	TRIM R	N06HR100BC	1	5210359T	
PWB	R601	CARBON R	R16J-5.6K	1	417345624T	
PWB	R602	CARBON R	R16J-100K	1	417341044T	
PWB	R603	CARBON R	R16J-150K	1	417341544T	
PWB	R604	CARBON R	R16J-180	1	417341814T	
PWB	R605	CARBON R	R16J-22	1	417342204T	
PWB	R609	CARBON R	R16J-39K	1	417343934T	
PWB	R610	CARBON R	R16J-560K	1	417345644T	
PWB	R611	CARBON R	R16J-820K	1	417348244T	
PWB	R612	CARBON R	R16J-39K	1	417343934T	
PWB	R613	CARBON R	R16J-470K	1	417344744T	

PWB	R614	CARBON R	R16J-120K	1	417341244T
PWB	R615	CARBON R	R16J-22K	1	417342234T
PWB	R616	CARBON R	R16J-100K	1	417341044T
PWB	R617	CARBON R	R16J-1K	1	417341024T
PWB	R619	CARBON R	R16J-22K	1	417342234T
PWB	R620	CARBON R	R16J-100K	1	417341044T
PWB	R621	CARBON R	R16J-1K	1	417341024T
PWB	R622	CARBON R	R16J-10K	1	417341034T
PWB	R623	CARBON R	R16J-100K	1	417341044T
PWB	R624	CARBON R	R16J-100K	1	417341044T
PWB	R625	CARBON R	R16J-180K	1	417341844T
PWB	R626	CARBON R	R16J-2.2M	1	417342254T
PWB	R627	CARBON R	R16J-680K	1	417346844T
PWB	R628	CARBON R	R16J-330K	1	417343344T
PWB	R651	METAL O R	RS1/2WBJ-12K	1	443521234T
PWB	R901	METAL O R	RS1WBJ-820	1	443628214T
PWB	R902	METAL O R	RS1WBJ-820	1	443628214T

PWB	R903	CARBON R	R16J-10K	1	417341034T	
PWB	R904	METAL O R	RS1/2WBJ-1K	1	443521024T	
PWB	R951	METAL O R	RS2WBJ-3.3K	1	441723324F	
PWB	R952	METAL O R	RS2WBJ-3.3K	1	441723324F	
PWB	F901A	FUSE HOL	NSCT-1P2506	1	25052609T	!
PWB	F901Aor	FUSE HOL	NSCT-1P2031	(1)	25052133T	!
PWB	F901B	FUSE HOL	NSCT-1P2506	1	25052609T	!
PWB	F901Bor	FUSE HOL	NSCT-1P2031	(1)	25052133T	!
PWB	F901C	LABEL	T1.6AL250V	1	29361769	<MPP>
PWB	JL535A	SOCKET AS	NSAS-2P1787	1	2009991153UL	
PWB	P301	PIN JACK	NPJ-1PDB556	1	25045774	
PWB	P301 or	PIN JACK	NPJ-1PDB581	(1)	25045801	
PWB	P531	PLUG	NPLG-2P29	1	25055038	
PWB	P631	PLUG	NPLG-2P29	1	25055038	
PWB	P632A	PLUG	NPLG-3P131	1	25055147	
PWB	P901A	PLUG	B3P-VB-2(LF)	1	25056616	
PWB	P902A	PLUG	NPLG-2P632	1	25055676	!
PWB	P903A	SOCKET AS	NSAS-6P1694	1	2009991089UL	
PWB	P911	WS CLAMP	CB-71683(L=50)	1	260261	
PWB	E801	RETAINER	KANAGU(EARTH)	1	27141059	

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