ORDER NO. MD0801005AE

Service Manual

DVD Home Theater Sound System

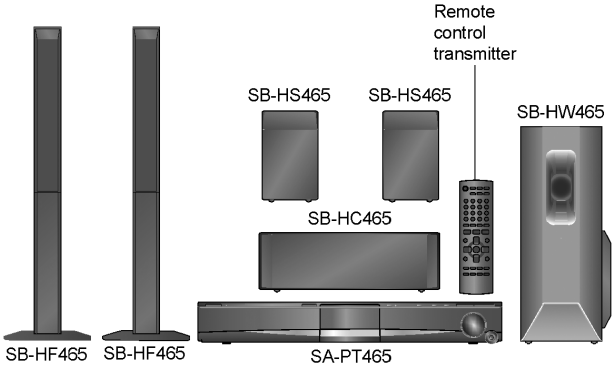
Simplified

SA-PT465E

Colour

(S).....Silver Type

(K).....Black Type



Notes 1: This model is based on SA-PT460EB/EG-K,EG-S. Please refer to the original service manual (Order no. MD0801001CE).
Notes 2: This model's CD/DVD mechanism is DLS6. Please refer to the original service manual (Order No. MD0801003CE) for this mechanism.

Specifications

●GENERAL

Power supply: AC 230-240 V, 50 Hz

Power consumption: This unit 125 W

Power consumption in standby mode: approx. 0.4 W

Dimensions (W×H×D): 430 mm×63 mm×327 mm

Mass: This unit 3.4 kg

Operating temperature range: +5 °C to +35 °C

Operating humidity range: 5 % to 90 % RH (no condensation)

●AMPLIFIER SECTION

RMS Output Power: Dolby Digital Mode

Front Ch:
125 W per channel (3 Ω), 1 kHz, 10% THD

Surround Ch:
125 W per channel (3 Ω), 1 kHz, 10% THD

Center Ch:
125 W per channel (3 Ω), 1 kHz, 10% THD

Subwoofer Ch:
125 W per channel (3 Ω), 100 Hz, 10 % THD

Total RMS Dolby Digital mode power:
750 W

DIN Output Power: Dolby Digital Mode

Front Ch:
75 W per channel (3 Ω), 1 kHz, 1% THD

Surround Ch:
75 W per channel (3 Ω), 1 kHz, 1% THD

Center Ch:
75 W per channel (3 Ω), 1 kHz, 1% THD

Subwoofer Ch:
75 W per channel (3 Ω), 100 Hz, 1 % THD

Total DIN Dolby Digital mode power:
450 W

●FM TUNER, TERMINALS SECTION

Panasonic®

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Preset Memory: FM 30 stations

Frequency Modulation (FM)

Frequency range: 87.50-108.00 MHz (50-kHz step)

Antenna terminals: 75 Ω (unbalanced)

Digital audio input

Optical digital input: Optical terminal

Sampling frequency: 32 kHz, 44.1 kHz, 48 kHz

Phone jack

Terminal: Stereo, 3.5 mm jack

USB Port

USB standard: USB 2.0 full speed

Media file format support: MP3 (*.mp3)
WMA (*.wma)
JPEG (*.jpg) (*.jpeg)
MPEG4 (*.asf) (For EG only)

USB device file system: FAT12, FAT16, FAT32

USB Port power: Max. 500 mA

●DISC SECTION

Discs played [8 cm or 12 cm]:

(1) DVD (DVD-Video, DivX[*5, 6])

(2) DVD-RAM (DVD-VR, MP3[*2, 5], JPEG[*4, 5], MPEG4[*5, 7], DivX[*5, 6])

(3) DVD-R (DVD-Video, DVD-VR, MP3[*2, 5], JPEG[*4, 5], MPEG4[*5, 7], DivX[*5, 6])

(4) DVD-R DL (DVD-Video, DVD-VR)

(5) DVD-RW (DVD-Video, DVD-VR, MP3[*2, 5], JPEG[*4, 5], MPEG4[*5, 7], DivX[*5, 6])

(6) +R/+RW (Video)

(7) +R DL (Video)

(8) CD, CD-R/RW [CD-DA, Video CD, SVCD[*1], MP3[*2, 5], WMA[*3, 5], JPEG[*4, 5], MPEG4[*5, 7], DivX[*5, 6]]

[*1] Conforming to IEC62107

[*2] MPEG-1 Layer 3, MPEG-2 Layer 3

[*3] Windows Media Audio Ver.9.0 L3

●Not compatible with Multiple Bit Rate (MBR)

[*4] Exif Ver 2.1 JPEG Baseline files

●Picture resolution: between 160 x 120 and 6144 x 4096 pixels (Sub sampling is 4:0:0, 4:2:0, 4:2:2 or 4:4:4). Extremely long and narrow pictures may not be displayed.

[*5] The total combined maximum number of recognizable audio, picture and video contents and groups: 4000 audio, picture and video contents and 400 groups.

[*6] Plays all versions of DivX® video (including DivX®6) with standard playback of DivX® media files. Certified to the DivX Home Theater Profile.

[*7] MPEG4 data recorded with the Panasonic SD multi cameras or DVD video recorders.

●Conforming to SD VIDEO specifications (ASF standard)/ MPEG4 (Simple Profile) video system/G.726 audio system.

Pick up

Wavelength (DVD/CD): 655/785 nm

Laser power (DVD/CD): CLASS 1/CLASS 1M

Audio output (Disc)

Number of channels: 5.1 ch (FL, FR, C, SL, SR, SW)

●VIDEO SECTION

Video system: PAL625/50, PAL525/60, NTSC

Composite video output

Output level: 1 Vp-p (75 Ω)

Terminal: Scart jack (1 system)

S-video output

Y output level: 1 Vp-p (75 Ω)

C output level: PAL; 0.3 Vp-p (75 Ω)
NTSC; 0.286 Vp-p (75 Ω)

Terminal: Scart jack (1 system)

RGB video output

R output level: 0.7 Vp-p (75 Ω)

G output level: 0.7 Vp-p (75 Ω)

B output level: 0.7 Vp-p (75 Ω)

Terminal: Scart jack (1 system)

HDMI AV output

Terminal: 19pin type A connector

HDAVI Control:

This unit supports “HDAVI Control 3” function.

Note:

1. Specifications are subject to change without notice.
   Mass and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

Solder:

This model uses lead free solder (PbF).

Mechanism:

This model uses DLS6 mechanism.

System	SC-PT465E-S/K
Main unit	SA-PT465E-S/K
Speaker system	SB-PT465E-S/K

Speaker system	SB-PT465E-S/K
Front speakers	SB-HF465E-S/K*1
Center speaker	SB-HC465E-S/K*1
Surround speakers	SB-HS465E-S/K*1
Subwoofer	SB-HW465E-K*1

Refer to their respective original service manuals for *1.

■ **Built-in decoders**
You can play discs with these symbols.

Manufactured under license from Dolby Laboratories.
"Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories.

"DTS" and "DTS Digital Surround" are registered trademarks of DTS, Inc.

Apparatus Claims of U.S. Patent Nos. 4,631,603, 4,577,216, and 4,819,098, licensed for limited viewing uses only.

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WMA is a compression format developed by Microsoft Corporation. It achieves the same sound quality as MP3 with a file size that is smaller than that of MP3.

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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1 Notes:

—This service manual contains technical information which will allow service personnel's to understand and service this model.

—If the circuit is changed or modified, this information will be followed by supplement service manual to be filled with the original service manual.

1) The base for this model is SA-PT460EB/EG-K,EG-S. You can refer to the original service manual (Order no. MD0801001CE). As such this service manual does not contain the following information as below:-

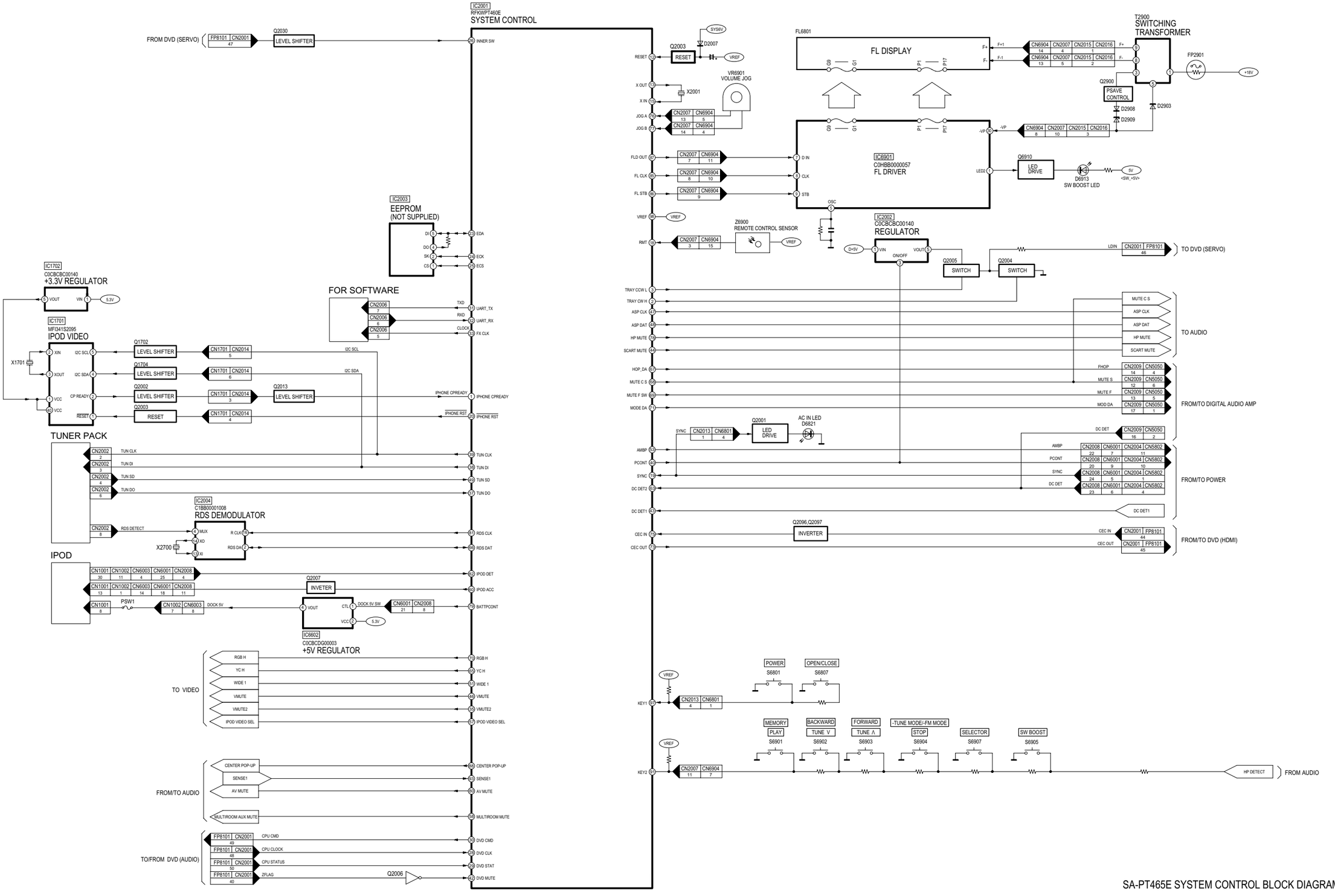
- Operation Procedures
- Self-diagnosis & Special Mode Setting
- Assembling & Disassembling
- Service Position
- Measurements & Adjustments
- Voltage & Waveform Chart
- Illustration of IC's, Transistors & Diodes
- Wiring Connection Diagram
- Schematic Diagram Notes

2) Contents include for this service manual:-

- Block Diagram (System Control/DVD (Audio)/Audio/D-Amp)
- Schematic Diagram (DVD Module/Main/D-Amp)
- Printed Circuit Board (Main/Power/D-Amp)
- Cabinet Exploded Views (Packaging)
- Replacement Parts List

2 Block Diagram

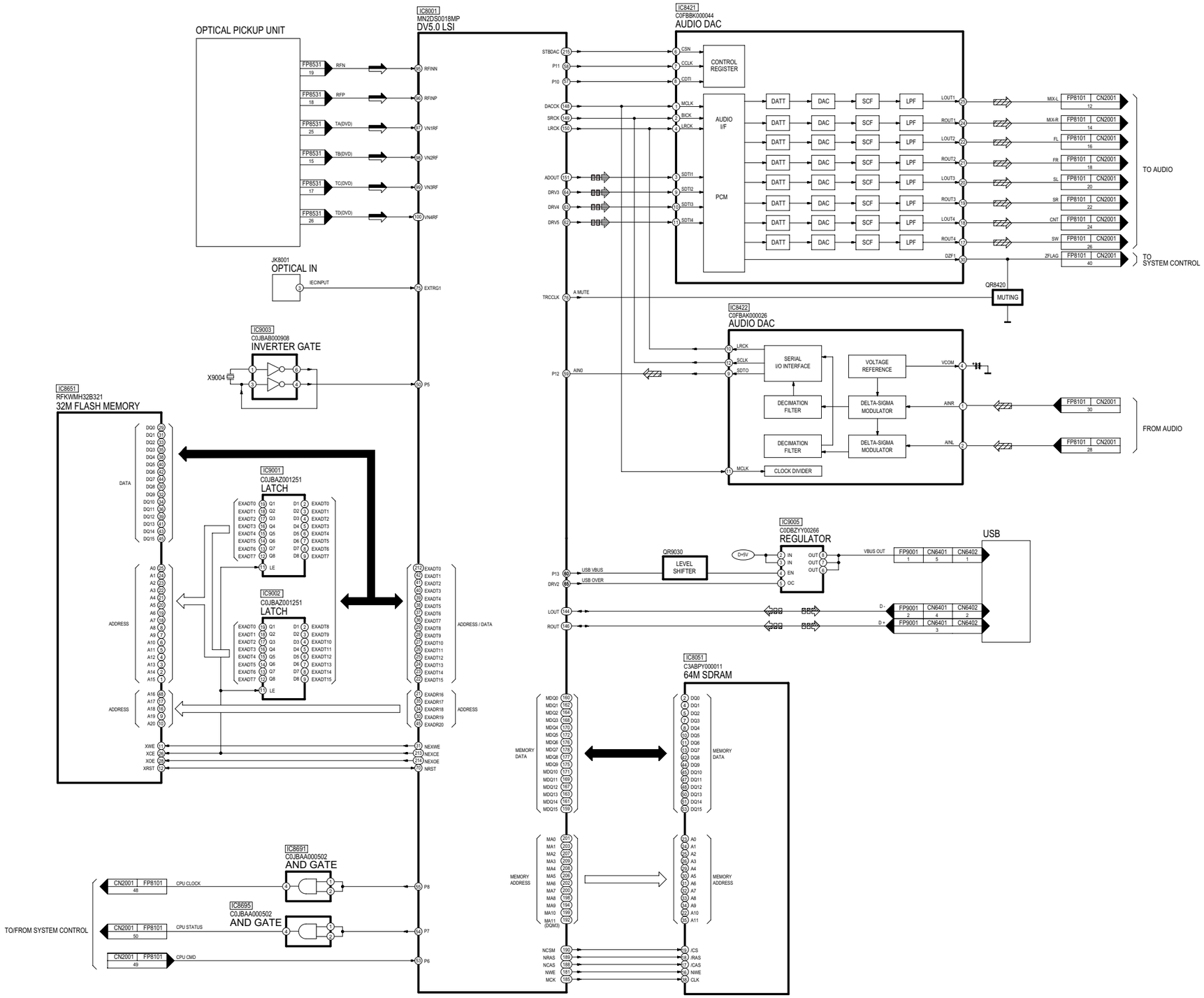
2.1. System Control



SA-PT465E SYSTEM CONTROL BLOCK DIAGRAM

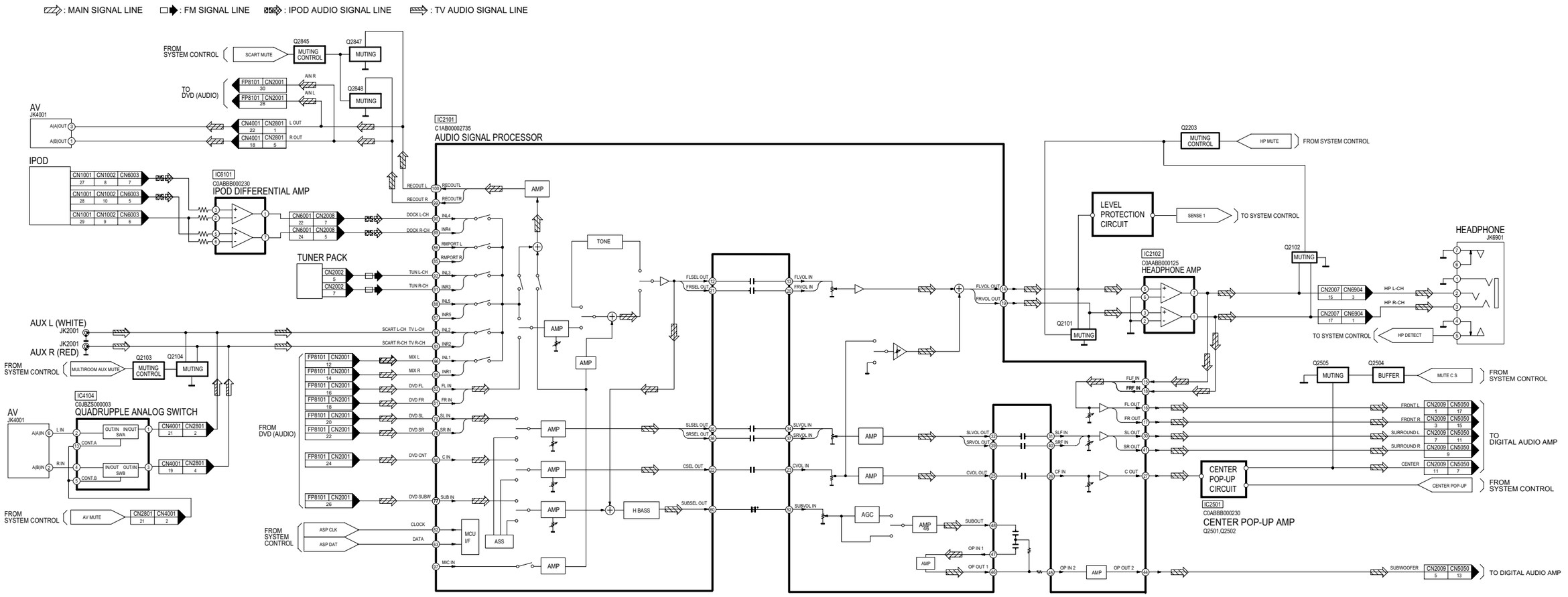
2.2. DVD (Audio)

: DVD RF SIGNAL LINE : DVD AUDIO SIGNAL LINE : MAIN SIGNAL LINE : USB SIGNAL LINE

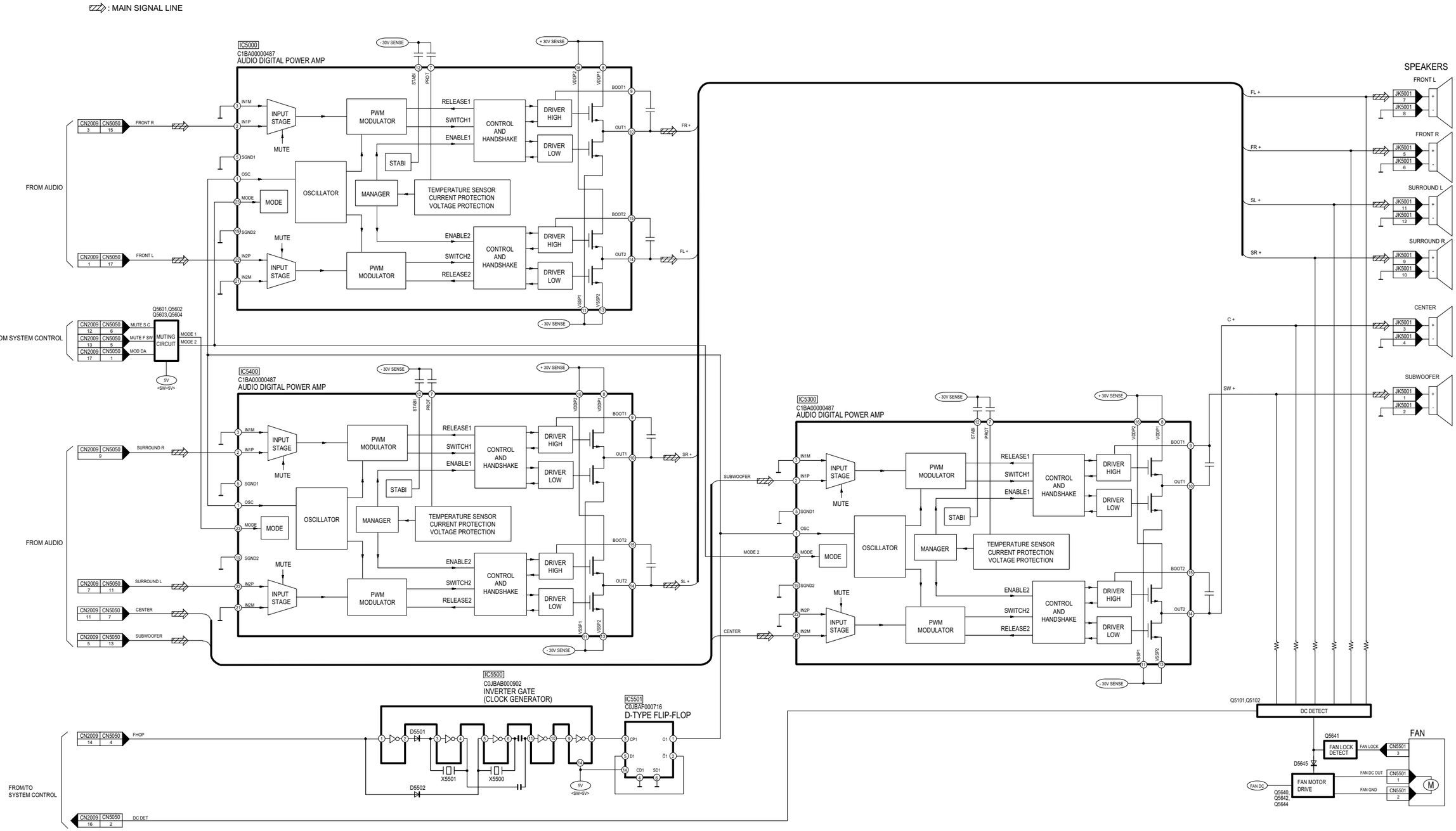


SA-PT465E DVD (AUDIO) BLOCK DIAGRAM

2.3. Audio


: MAIN SIGNAL LINE
: FM SIGNAL LINE
: IPOD AUDIO SIGNAL LINE
: TV AUDIO SIGNAL LINE
IC2101
C1AB00002735
AUDIO SIGNAL PROCESSOR
IC6101
C0ABBB000230
IPOD DIFFERENTIAL AMP
IPOD
AV
JK4001
TUNER PACK
AUX L (WHITE)
AUX R (RED)
JK2001
IC4104
C0JBZ5000003
QUADRUPPLE ANALOG SWITCH
FROM DVD (AUDIO)
TONE
H BASS
ASS
MCU I/F
AGC
LEVEL PROTECTION CIRCUIT
IC2102
C0AABB000125
HEADPHONE AMP
HEADPHONE
JK6901
CENTER POP-UP CIRCUIT
IC2501
C0ABBB000230
CENTER POP-UP AMP
Q2501,Q2502
TO DIGITAL AUDIO AMP
SUBWOOFER
FROM SYSTEM CONTROL
TO SYSTEM CONTROL

2.4. Digital Audio Amp



SA-PT465E DIGITAL AUDIO AMP BLOCK DIAGRAM

3 Schematic Diagram

3.1. DVD Module Circuit

SCHEMATIC DIAGRAM - 1

A DVD MODULE (DV5) CIRCUIT

: CD HEAD SIGNAL LINE
: DVD RF SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: FOCUS ERROR SIGNAL LINE
: MAIN SIGNAL LINE
: +B SIGNAL LINE
: DVD HEAD SIGNAL LINE
: MOTOR DRIVE SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: TRACKING ERROR SIGNAL LINE
: USB SIGNAL LINE

TO E USB CIRCUIT (CN6401) IN SCHEMATIC DIAGRAM - 11

FP9001 DGND DGND D+ D- VBUS

LB9002 0 LB9003 0 L9004 G1BYYYC00026 D+ D- VBUS_OUT

RX3708 D1H84714A043 VOUT7 VOUT6 VOUT5 VOUT4 VOUT3 VOUT2 VOUT1 VOUT0 DVOUT7 DVOUT6 DVOUT5 DVOUT4 DVOUT3 DVOUT2 DVOUT1 DVOUT0

RX3707 D1H84714A043

STBDAC EXADR_0 RSTB

IC8651 RFKWMH32B321 32M FLASH MEMORY

FEXDT_0 FEXDT_1 FEXDT_2 FEXDT_3 FEXDT_4 FEXDT_5 FEXDT_6 FEXDT_7 EXADR_17 EXADR_18 EXADR_16 EXADR_20 FEXDT_8 FEXDT_9 FEXDT_10 FEXDT_11 FEXDT_12 FEXDT_13 FEXDT_14 FEXDT_15

EXADR0_DT0 EXADR15_DT8 EXADR14_DT1 EXADR13_DT9 EXADR12_DT2 EXADR11_DT10 EXADR10_DT3 EXADR9_DT11 EXADR8_DT4 EXADR7_DT12 EXADR6_DT5 EXADR5_DT13 EXADR4_DT6 EXADR3_DT14 EXADR2_DT7 EXADR1_DT15

C8851 0.1 C8852 0.1

XRESET XWE SPMUTE TRVFTMUTE CPU-CMD CPU-STAT

C9007 0.1 C9004 7P IC9003 C0JBAB0000908 INVERTER GATE X9004 H1A4805B0027 R9008 1M R9009 1K C9005 8P LB9001 J0JCC0000042

R9045 10K R9083 47 R9084 47 R9047 10K R9043 10K R9044 10K R9046 10K R9023 10K R9048 10K R9049 10K R9085 47 R9086 47 R9087 47 R9088 47 R9040 10K R8001 10K R8003 10K R9080 10K R9041 10K

C8018 0.1 C8020 0.1 C8006 0.1 C8021 0.1 C8007 0.1 C8022 0.1

RX9014 D1H85604A043 RX9015 D1H85604A043 RX9016 D1H85604A043 RX9017 D1H85604A043

IC8001 MN2DS0018MP DV5.0 LSI

[215]STBDAC [216]FPGACS [55]P8 [56]P9 [107]AVDDB [108]AVSSB [163]MDQ13 [164]MDQ2

TO DVD MODULE (DV5) SECTION (3/4)

TO DVD MODULE (DV5) SECTION (2/4)

DV: DVD MODULE (DV5): SCHEMATIC DIAGRAM 1 - 4
HD: DVD MODULE (HDMI): SCHEMATIC DIAGRAM - 5

JK8001 OPTICAL IN VCC OUT GND R8025 0 C8010 220P C8002 6.3V33 IECINPUT

L8001 G1C100M00049 LB8001 J0JHC0000045 LB8011 J0JHC0000045

C8011 6.3V100 C8001 4V330P

C8005 0.1 C8306 0.1 C8026 0.1 C8401 15P R8401 100 R8403 100 RX8401 D1H410120001 LB8401 J0JCC0000308 DMIXOUT LRCK SRCK ADAC-CLK

C8429 0.1 R8316 24 R8315 24

C8305 0.1 C8304 0.1 C8302 6.3V33 C8303 0.1 C8313 1 R8313 15K C8312 1 R8314 15K C8301 6.3V220

C8202 0.1 C8203 0.1 R8225 8.2K C8223 1000P C8226 1000P FODRV R8221 8.2K C8221 1000P C8222 820P TRDRV R8541 15K C8541 4700P D8211 MA2J11100L C8211 1200P R8211 10K

VIN1 VIN2 VIN4 VIN3 VIN8 VIN7 VIN6 VIN5 VHALF VREFH

1/4 2/4 3/4 4/4

SA-PT465E
DVD MODULE (DV5) CIRCUIT

SCHEMATIC DIAGRAM - 2

A DVD MODULE (DV5) CIRCUIT

: +B SIGNAL LINE
: CD HEAD SIGNAL LINE
: DVD HEAD SIGNAL LINE
: DVD RF SIGNAL LINE
: MOTOR DRIVE SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: FOCUS ERROR SIGNAL LINE
: TRACKING ERROR SIGNAL LINE
: MAIN SIGNAL LINE
: USB SIGNAL LINE

TO DVD MODULE (DV5) SECTION (1/4)

IC8422 C0FBAK000026 AUDIO DAC

IC8421 C0FBBK000044 AUDIO DAC

IC9005 C0DBZYY00266 REGULATOR

IC8701 C0JBAB000907 INVERTER GATE

IC8151 C0DBEHG00006 +1.2V REGULATOR

IC8691 C0JBAA000502 AND GATE

IC8695 C0JBAA000502 AND GATE

QR8420 UNR521100L MUTING

Q8325 2SB1218ARL BUFFER

Q8321 2SB1218ARL BUFFER

Q8331 2SB1218ARL BUFFER

Q8335 2SB1218ARL BUFFER

Q8341 2SB1218ARL BUFFER

FP8101

TO B MAIN CIRCUIT (CN2001) IN SCHEMATIC DIAGRAM - 8

DV: DVD MODULE (DV5): SCHEMATIC DIAGRAM 1 - 4
HD: DVD MODULE (HDMI): SCHEMATIC DIAGRAM - 5

TO DVD MODULE (DV5) SECTION (4/4)

1/4	2/4
3/4	4/4

SA-PT465E
DVD MODULE (DV5) CIRCUIT

SCHEMATIC DIAGRAM - 3

A DVD MODULE (DV5) CIRCUIT

: +B SIGNAL LINE
: CD HEAD SIGNAL LINE
: DVD HEAD SIGNAL LINE
: DVD RF SIGNAL LINE
: MOTOR DRIVE SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: FOCUS ERROR SIGNAL LINE
: TRACKING ERROR SIGNAL LINE
: MAIN SIGNAL LINE
: USB SIGNAL LINE

TO DVD MODULE (DV5) SECTION (1/4)

IC9001 C0JBAZ001251 LATCH

QR9030 B1GDCFJJ0002 LEVEL SHIFTER

IC8611 16M EEPROM (NOT SUPPLIED)

IC8601 C0EBA0000039 RESET

IC8606 C0EBE0000456 RESET

IC9002 C0JBAZ001251 LATCH

IC8901 C0JBAA000501 AND GATE

IC8051 C3ABPY000011 64M SDRAM

TO DVD MODULE (DV5) SECTION (4/4)

DV: DVD MODULE (DV5): SCHEMATIC DIAGRAM 1 - 4
HD: DVD MODULE (HDMI): SCHEMATIC DIAGRAM - 5

1/4	2/4
3/4	4/4

SA-PT465E
DVD MODULE (DV5) CIRCUIT

SCHEMATIC DIAGRAM - 4

A DVD MODULE (DV5) CIRCUIT

: +B SIGNAL LINE
: CD HEAD SIGNAL LINE
: DVD HEAD SIGNAL LINE
: DVD RF SIGNAL LINE
: MOTOR DRIVE SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: FOCUS ERROR SIGNAL LINE
: TRACKING ERROR SIGNAL LINE
: MAIN SIGNAL LINE
: USB SIGNAL LINE

TO DVD MODULE (DV5) SECTION (3/4)

TO DVD MODULE (DV5) SECTION (2/4)

IC8111 C0DBZYY00018 +3.3V DC-DC CONVERTER

QR8111 XP0621400L POWER CONTROL

IC8251 C0GBG0000048 MOTOR DRIVE

Q8561 2SD1819A0L LD DRIVE

Q8562 B1ADGB000008 LD DRIVE

Q8551 2SD1819A0L LD DRIVE

Q8552 B1ADGB000008 LD DRIVE

Q8565 2SD1819A0L INVERTER

Q8563 B1CFHA000002 SWITCH

Q8564 B1CFHA000002 SWITCH

FP8251

1	DGND
2	UNLOAD_SW
3	INNER_SW
4	SP-
5	SP+
6	TR-
7	TR+

TO TRAVERSE / SPINDLE

FP8531

1	NC
2	VCC
3	E1/e2+f2
4	E2/e3+f3
5	F-
6	T-
7	F+
8	T+
9	PIN(DVD/CD)
10	DVDIN-GND
11	CDIN-GND
12	LDCD+
13	LDGND
14	LDDVD+
15	C/c
16	HFM
17	D/d
18	RF+
19	RF-
20	VREF
21	PD GND
22	SW
23	F1/e1+F1
24	F2/e4+f4
25	B/b
26	A/a

TO OPTICAL PICKUP UNIT

DV: DVD MODULE (DV5): SCHEMATIC DIAGRAM 1 - 4
HD: DVD MODULE (HDMI): SCHEMATIC DIAGRAM - 5

1/4	2/4
3/4	4/4

SA-PT465E
DVD MODULE (DV5) CIRCUIT

3.2. Main Circuit

SCHEMATIC DIAGRAM - 6

B MAIN CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE : MAIN SIGNAL LINE : FM SIGNAL LINE : DVD VIDEO SIGNAL LINE : IPOD VIDEO SIGNAL LINE : IPOD AUDIO SIGNAL LINE : TV AUDIO SIGNAL LINE

TO **G** POWER SUPPLY CIRCUIT (CN6001) IN SCHEMATIC DIAGRAM - 14

CN2008

TO **F** D-AMP CIRCUIT (CN5050) IN SCHEMATIC DIAGRAM - 13

CN2009

TO **C** PANEL CIRCUIT (CN6904) IN SCHEMATIC DIAGRAM - 10

CN2007

TO **D** POWER BUTTON CIRCUIT (CN6801) IN SCHEMATIC DIAGRAM - 11

CN2013

TO MAIN SECTION (2/4)

TO MAIN SECTION (3/4)

FOR SOFTWARE

CN2006

TO **K** COPROCESSOR CIRCUIT (CN1701) IN SCHEMATIC DIAGRAM - 19

CN2014

IC2101
C1AB00002735
AUDIO SIGNAL PROCESSOR

IC2004
C1BB00001008
RDS DEMODULATOR

Q2007 B1GBCFJJ0051 INVERTER

Q2002 B1GBCFJJ0051 LEVEL SHIFTER

Q2001 B1ADCE000012 LED DRIVE

Q2013 B1GBCFJJ0051 LEVEL SHIFTER

JK2001 AUX

SA-PT465E
MAIN CIRCUIT

SCHEMATIC DIAGRAM - 7

B MAIN CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE : MAIN SIGNAL LINE : FM SIGNAL LINE : DVD VIDEO SIGNAL LINE : IPOD VIDEO SIGNAL LINE : IPOD AUDIO SIGNAL LINE : TV AUDIO SIGNAL LINE

IC2001
RFKWPT460E
SYSTEM CONTROL

[81] RDS_CLK
[82] IPOD_DET
[83] ECHO_LVL1
[84] ECHO_LVL2

[1] IPHONE_CPREADY
[2] TRAY_CW_H

[50] MIC_VOLDOWN
[49] TUN_SD
[48] ASP_DAT
[47] ASP_CLK

[34] FX_DET1
[33] FX_CLK
[32] UART_RX
[31] UART_TX

Q2504
B1GDCFGA0018
BUFFER

Q2505
B1ABGC000005
MUTING

Q2845
B1GDCFGA0018
MUTING CONTROL

Q2848
B1ABGC000005
MUTING

Q2847
B1ABGC000005
MUTING

Q2030
B1GBCFJJ0051
LEVEL SHIFTER

Q2003
B1GBCFLL0037
RESET

X2001
H2B100500007

IC2003
EEPROM
(NOT SUPPLIED)

CN2801

TO MAIN SECTION (1/4)

TO MAIN SECTION (4/4)

TO L SCART CIRCUIT (CN4001) IN SCHEMATIC DIAGRAM - 20

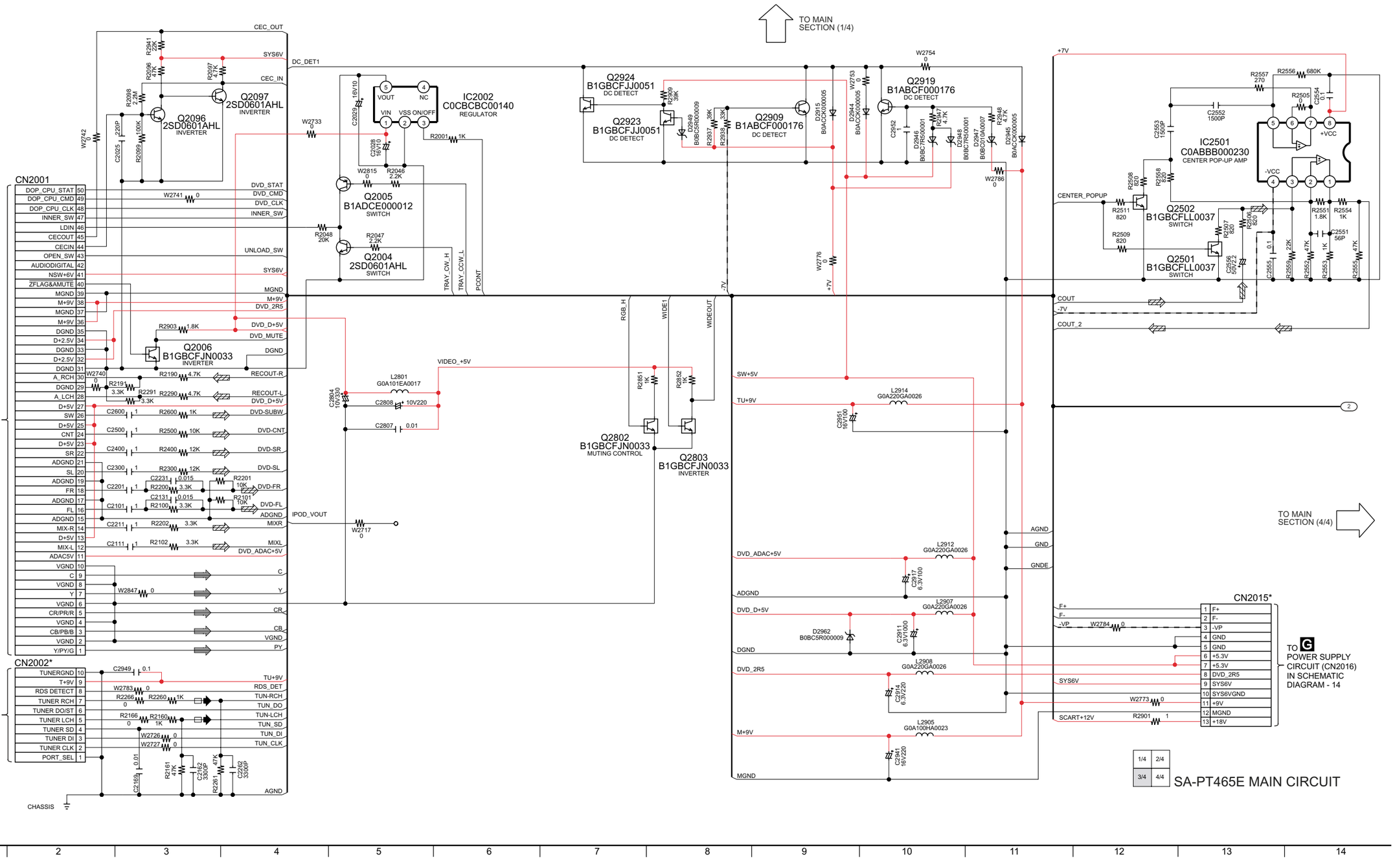
1/4	2/4		
3/4	4/4		

SA-PT465E MAIN CIRCUIT

SCHEMATIC DIAGRAM - 8

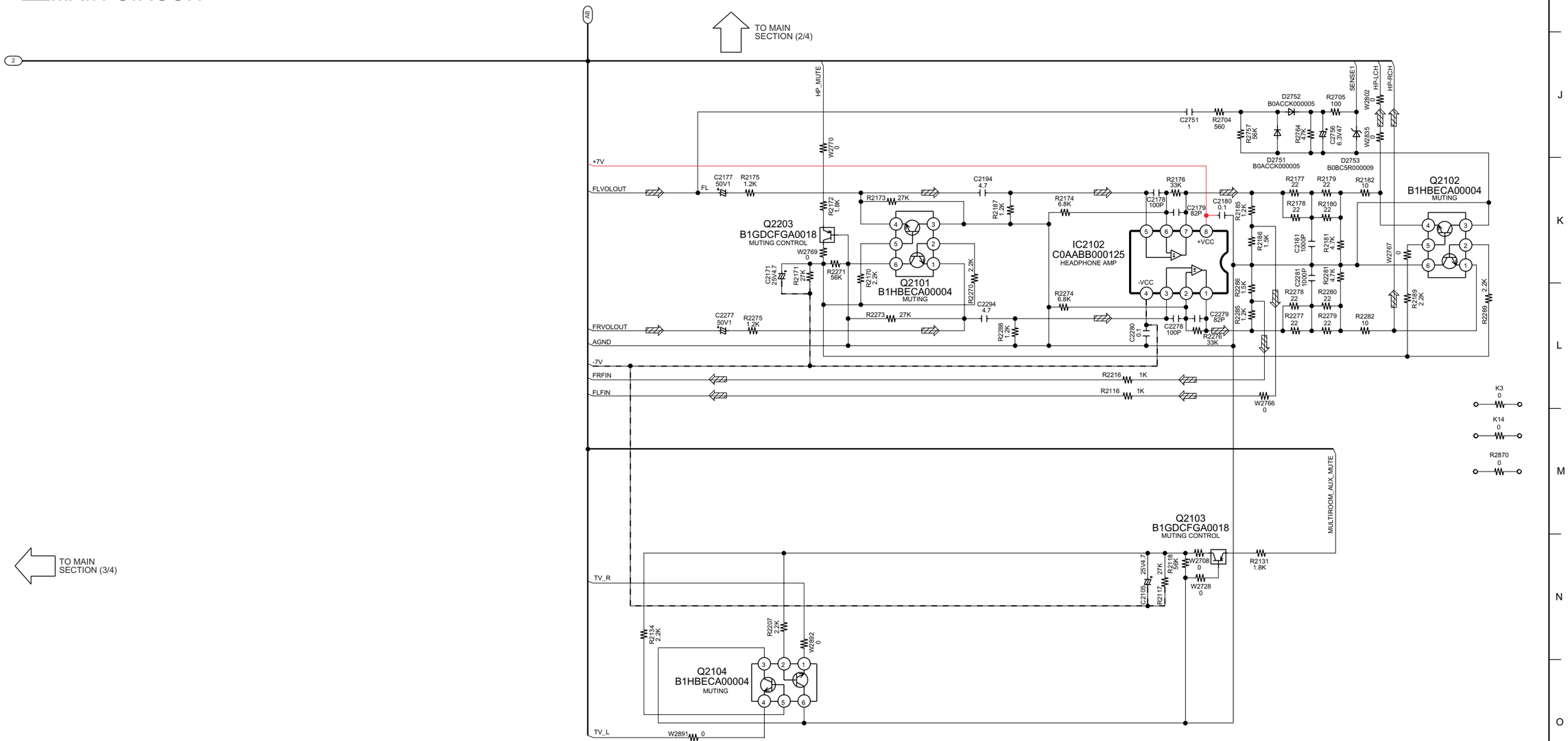
B MAIN CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE : MAIN SIGNAL LINE : FM SIGNAL LINE : DVD VIDEO SIGNAL LINE : IPOD VIDEO SIGNAL LINE : IPOD AUDIO SIGNAL LINE : TV AUDIO SIGNAL LINE



SCHEMATIC DIAGRAM - 9

B MAIN CIRCUIT



1/4 | 2/4
3/4 | 4/4

SA-PT465E MAIN CIRCUIT

3.3. D-Amp Circuit

SCHEMATIC DIAGRAM - 12

F D-AMP CIRCUIT

—— : +B SIGNAL LINE – – – – : -B SIGNAL LINE ▨ : MAIN SIGNAL LINE

IC5500
C0JBAB000902
INVERTER GATE
(CLOCK GENERATOR)

IC5501
C0JBAF000716
D-TYPE FLIP-FLOP

IC5300
C1BA00000487
AUDIO DIGITAL POWER AMP

JK5001
TO SPEAKERS

CN5501
TO FAN

L5300 G0A150L00003

L5301 G0B9R5K00003

Q5101 B1ABCF000176 DC DETECT

Q5102 B1ABCF000176 DC DETECT

Q5601 B1ABCF000176 SWITCH

Q5602 B1ABCF000176 SWITCH

Q5603 B1ADCE000012 SWITCH

Q5604 B1ABCF000176 SWITCH

Q5640 B1BACD000018 FAN MOTOR DRIVE

Q5641 2SC5854500L FAN LOCK DETECT

Q5642 2SC5854500L FAN MOTOR DRIVE

Q5644 2SC5854500L FAN MOTOR DRIVE

TO D-AMP SECTION (2/2)

1/2 2/2 SA-PT465E D-AMP CIRCUIT

SCHEMATIC DIAGRAM - 13

F D-AMP CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE : MAIN SIGNAL LINE

IC5000
C1BA00000487
AUDIO DIGITAL POWER AMP

IC5400
C1BA00000487
AUDIO DIGITAL POWER AMP

CN5500

TO H SMPS CIRCUIT (H5801*) IN SCHEMATIC DIAGRAM - 16

TO D-AMP SECTION (1/2)

CN5050

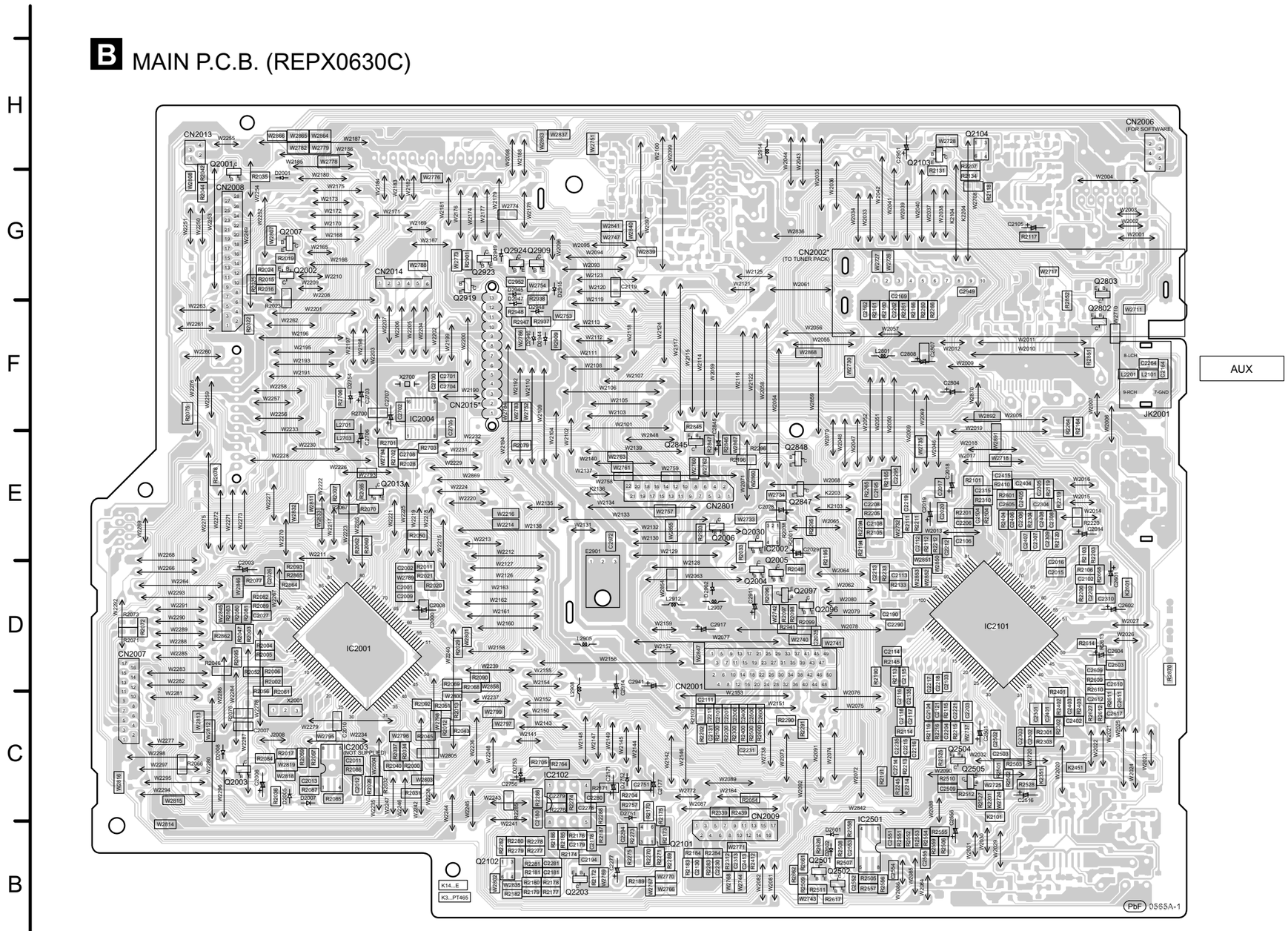
TO B MAIN CIRCUIT (CN2009) IN SCHEMATIC DIAGRAM - 6

1/2 2/2 SA-PT465E D-AMP CIRCUIT

4 Printed Circuit Board

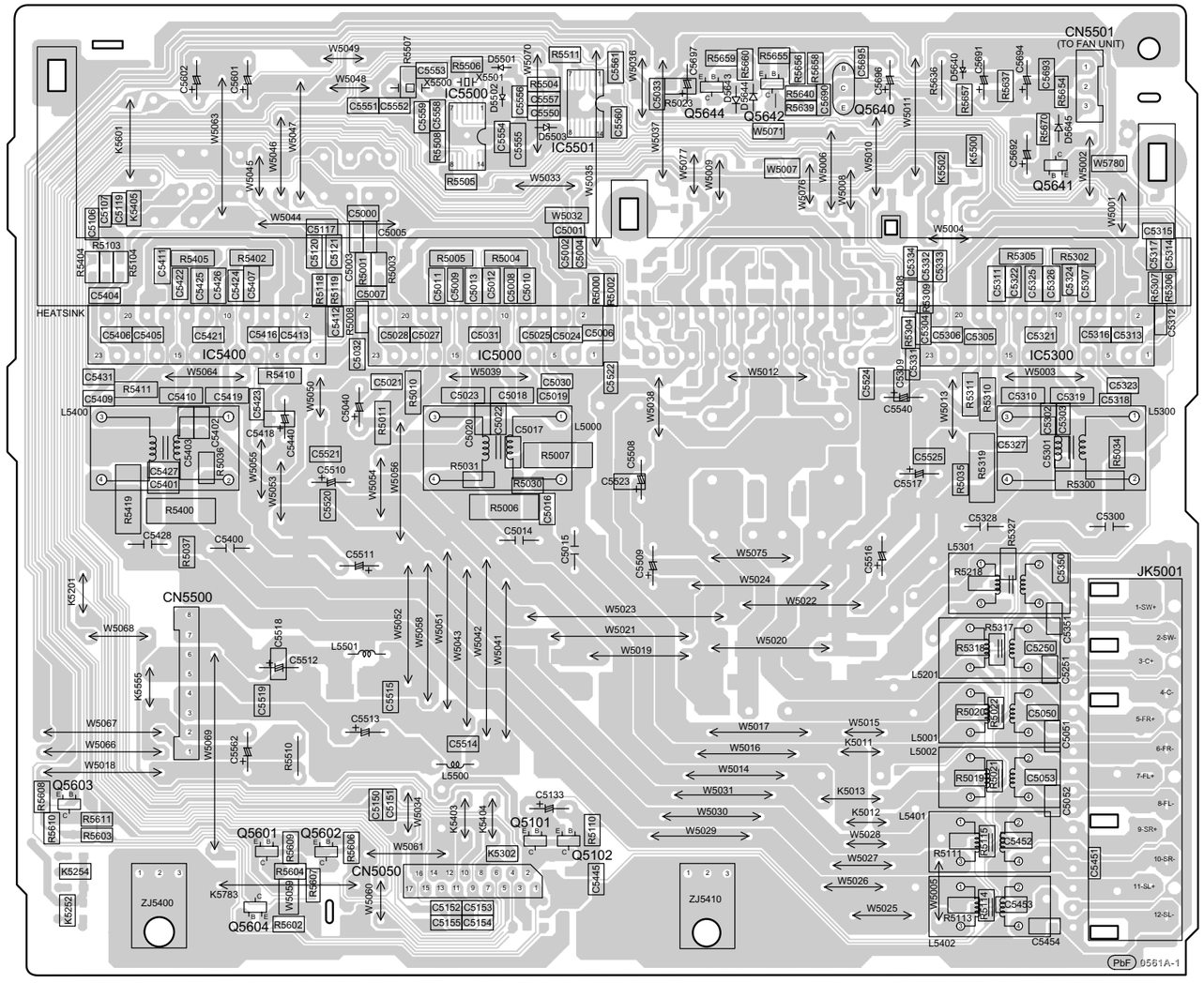
4.1. Main P.C.B.

B MAIN P.C.B. (REPX0630C)



4.2. D-Amp P.C.B.

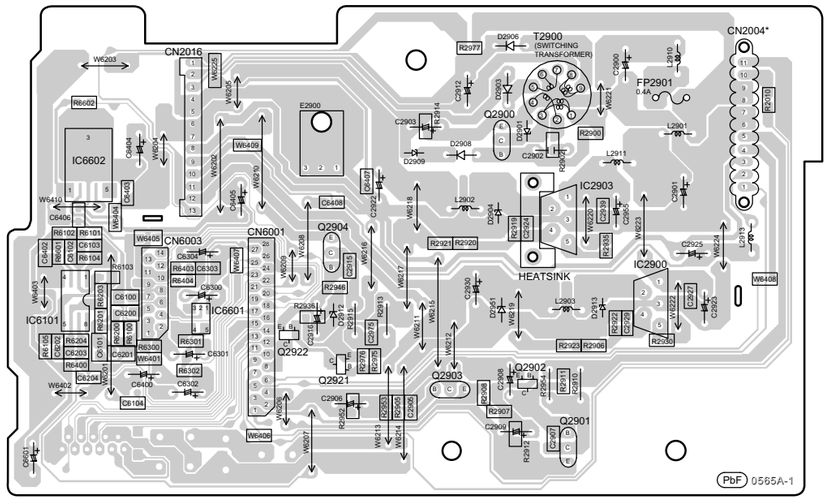
F D-AMP P.C.B. (REPX0621F)



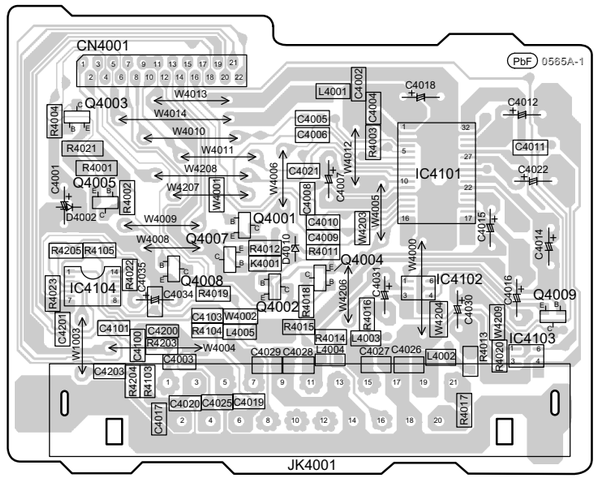
SA-PT465E
D-AMP P.C.B.

4.3. Power, Scart P.C.B

G POWER SUPPLY P.C.B. (REPX0630C)



L SCART P.C.B. (REPX0630C)



AV

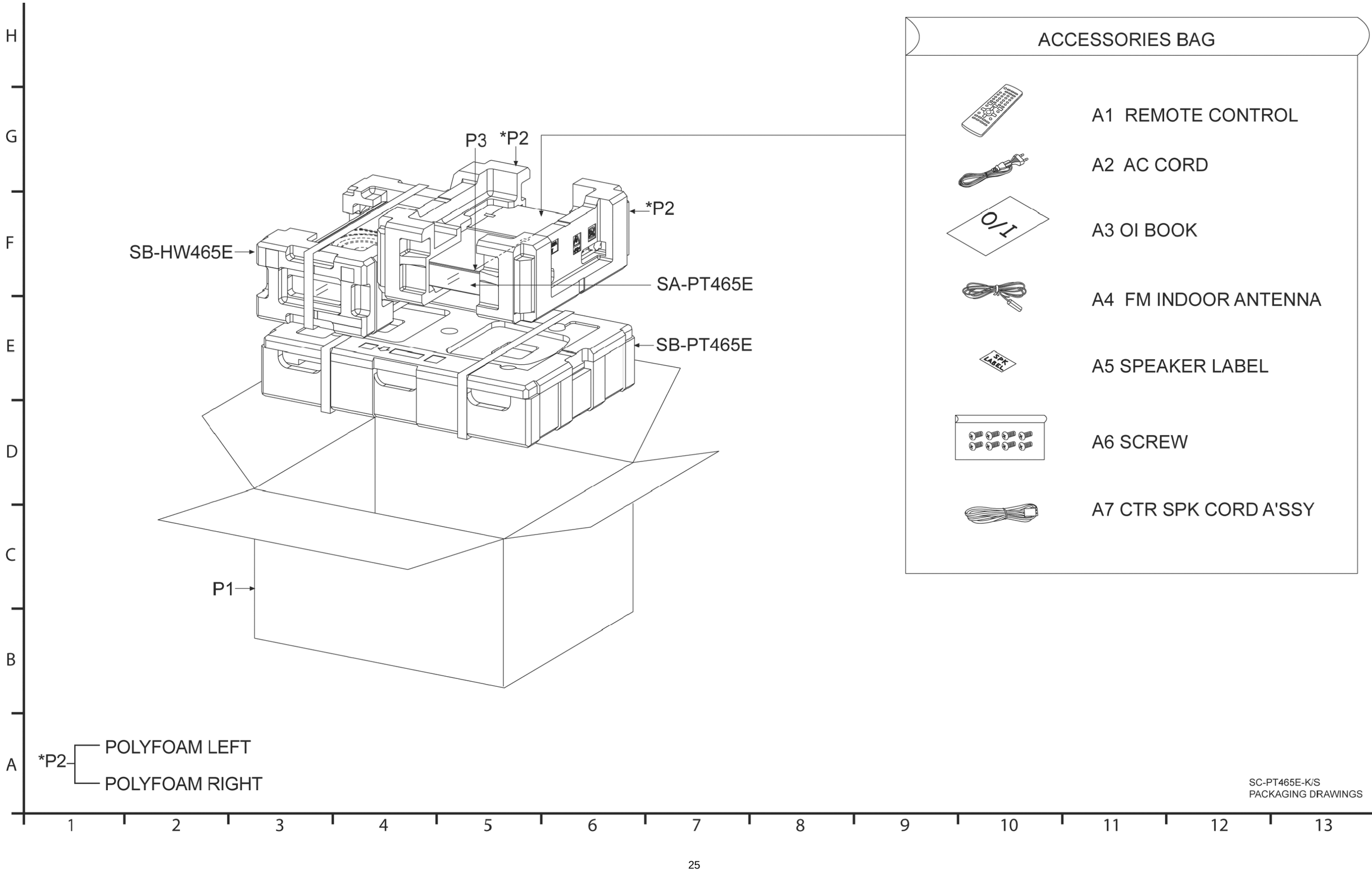
* FOR INDICATION ONLY

SA-PT465E
POWER SUPPLY/SCART P.C.B.

SA-PT465E

5 Exploded Views

5.1. Packaging



SA-PT465E

6 Replacement Parts List

Notes:

- Important safety notice:

  Components identified by ⚠ mark have special characteristics important for safety purpose.

  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

  When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
- Warning: This product uses a laser diode. Refer to caution statements.

  ACHTUNG:

  - Die Lasereinheit nicht zerlegen.
  - Die Lasereinheit darf nur gegen eine vom Hertsteller spezifizierte Einheit ausgetauscht werden.
- Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000K (OHM).
- The parenthesized indications in the Remarks columns specify the model names and areas. (Refer to the cover page)
- The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.
- Parts mentioned [M] are supplied from PAVCSG.
- Parts mentioned [SPG] are supplied from PAVC.
- Reference for O/I book languages are as follows:

Ar:	Arablic	Du:	Dutch	It:	Italian	Sp:	Spanish
Cf:	Canadian French	En:	English	Ko:	Korean	Sw:	Swedish
Cz:	Czech	Fr:	French	Po:	Polish	Co:	Traditional Chinese
Da:	Danish	Ge:	German	Ru:	Russian	Cn	Simplified Chinese
Pe:	Persian	Ur:	Ukrainian	Pr:	Portuguese		

6.1. Component Parts List

Note: With reference to section 25 of original service manual for SA-PT460EB/EG-K,EG-S.

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	L6FAJCCH0007	DC FAN MOTOR	[M]
2	REEX0813	22P FFC WIRE (MN-SCART)	[M]
3	REEX0814	50P FFC WIRE (MN-DVD)	[M]
4	REEX0815	17P FFC WIRE (MN-DAMP)	[M]
5	REEX0817	7P FFC WIRE (OPU-DVD)	[M]
6	REEX0820	17P FFC WIRE (PAN-MN)	[M]
7	REEX0821	14P FFC WIRE (IPOD-PWRSUPP)	[M]
8	REEX0822	28P FFC WIRE (PWRSUPP-MN)	[M]
9	REEX0823	4P FFC WIRE (PWRBUT-MN)	[M]
10	RGUX0744-K	SUBWOOFER BUTTON	[M]K
10	RGUX0744-S	SUBWOOFER BUTTON	[M]S
11	REXX0636-J	5P USB WIRE (USB-DVD)	[M]
12	REXX0640-J	BLACK WIRE (AC-SMPS)	[M] ⚠
13	REXX0641-J	RED WIRE (AC-SMPS)	[M] ⚠
14	REXX0651	8P FLAT WIRE (SMPS-DAMP)	[M]
15	RGB0164-S	PANASONIC BADGE	[M]
16	RGKX0443-K	DVD LID	[M]
17	RGKX0489-S	FRONT ORNAMENT	[M]
18	VHD1224-1	SCREW	[M]
19	RYPX0258-K1	CRADLE UNIT	[M]K
19	RYPX0258-S1	CRADLE UNIT	[M]S
20	RGLX0160-Q	LIGHTING CHIP	[M]
21	RGPX0334-K3	FRONT PANEL	[M]K
21	RGPX0334-S3	FRONT PANEL	[M]S
22	RGPX0335B-K2	CRADLE CHASSIS	[M]K
22	RGPX0335B-S2	CRADLE CHASSIS	[M]S
23	RGRX0067A-C2	REAR PANEL	[M] ⚠
24	RGUX0741-K1	OPEN CLOSE BUTTON	[M]K
24	RGUX0741-S1	OPEN CLOSE BUTTON	[M]S
25	RGUX0742-K	POWER BUTTON	[M]K
25	RGUX0742-S	POWER BUTTON	[M]S
26	RXXX0085-1J	HEATSINK UNIT A	[M]
27	RGUX0745-K	OPERATION BUTTON	[M]K
27	RGUX0745-S	OPERATION BUTTON	[M]S
28	RGWX0104-K	VOLUME KNOB	[M]K
28	RGWX0104-S	VOLUME KNOB	[M]S
29	RHD26046	SCREW	[M]
30	RHD30007-1SJ	SCREW	[M]K
30	RHD30007-K2J	SCREW	[M]S
31	RHD30090-1	SCREW	[M]
32	RHD30111-3	SCREW	[M]
33	RHD30119-S	SCREW	[M]
34	ENG07824QRF	TUNER PACK	[M]
35	RHDX03001	SCREW	[M]
36	RKA0059-K	LEG FELT	[M]
37	RKWX0279-Q	FL WINDOW	[M]
38	RMAX0118-1	PCB BRACKET	[M]
39	RMAX0129	PANEL ANGLE	[M]
40	RMAX0130	DVD LID HOLDER	[M]
41	RMAX0131	MAIN PCB BRACKET B	[M]
42	RMAX0132	MECHA CHASSIS	[M]
43	RMBX0075	DOOR SPRING	[M]
44	RMC0465	TR SPRING	[M]
45	RMCX0042	EARTH SPRING	[M]
46	RMCX0055	SPRING PLATE	[M]
47	RMCX0057	EARTH PART (FOR USB)	[M]
48	RMGX0050	CRADLE RUBBER	[M]
49	RMNX0207	SMPS PCB INSULATOR	[M]
50	RXQX0077	FL SHIELD PLATE UNIT	[M]
51	RMNX0254	USB BRACKET	[M]
52	RMNX0260	FL HOLDER	[M]
53	RMNX0282A	AC-IN PC SHEET A	[M]
54	RMNX0282B	AC-IN PC SHEET B	[M]
55	RXXX0104	HEATSINK UNIT B	[M]
56	RXQX0041	CUSHION ASSY	[M]
57	RMNX0286	HDMI PC SHEET	[M]
58	RMQX0233-K	FAN COVER	[M]
59	RMR0502A-W	PCB SUPPORT	[M]
60	RXXX0105	HEATSINK UNIT C	[M]
61	RMVX0117-K	CONNECTOR COVER	[M]K
61	RMVX0117-S	CONNECTOR COVER	[M]S
62	RMX0302	DAMPER RUBBER	[M]
63	RMYX0191	HEATSINK EXTRUSSION	[M]
64	RMZX0038	IC INSULATOR	[M]
65	RSCX0188	AC-IN SHIELD PLATE	[M]
66	RKMX0141-K	TOP CABINET	[M] ⚠ K
66	RKMX0141-S	TOP CABINET	[M] ⚠ S
67	RSCX0191	HDMI SHIELD PLATE	[M]
68	RMKX0144	BOTTOM CHASSIS	[M]
69	XSN3+4FJ	SCREW	[M]
70	XTB3+10JFJ	SCREW	[M]
71	XTB3+8JFJ	SCREW	[M]
72	XTW3+8TFJ	SCREW	[M]
73	REXX0653-J	13P WIRE (MAINN-PWRSUPP)	[M]
74	REXX0639-J	11P WIRE (SMPS-PWRSUPP)	[M]
		PRINTED CIRCUIT BOARDS	
	REPX0621F	D-AMP P.C.B.	[M] (RTL)
	REPX0630C	MAIN/SCART/POWER SUPPLY P.C.B.	[M] (RTL)
		INTEGRATED CIRCUITS	
IC2001	RFKWPT460E	IC SYSTEM CONTROL	[M]
IC8651	RFKWMH32B321	IC 32MB FLASH ROM	[SPG]
		TRANSISTORS	
Q2504	B1GDCFGA0018	TRANSISTOR	[M]
Q2505	B1ABGC000005	TRANSISTOR	[M]
		COILS AND INDUCTORS	
L5002	G0B9R5K00004	LINE FILTER	[M]
L5201	G0B9R5K00004	LINE FILTER	[M]
L5402	G0B9R5K00004	LINE FILTER	[M]
		PACKING MATERIALS	
P1	RPGX1869-1	PACKING CASE	[M]K
P1	RPGX1950-1	PACKING CASE	[M]S
P2	RPNX0529	POLYFOAM	[M]
		ACCESSORIES	
A3	RQTX0087-1R	O/I BOOK (En)	[M]
A5	RQCA0968	SPEAKER LABEL	[M]
A6	XTN5+10FFJK	SCREW	[M]
A7	REEX0858	CTR SPK CORD A'SSY	[M]
		RESISTORS	
R2006	ERJ3GEYJ221V	220 1/10W	[M]
R2026	ERJ3GEYJ221V	220 1/10W	[M]
R2052	ERJ3GEYJ221V	220 1/10W	[M]
R2056	ERJ3GEYJ221V	220 1/10W	[M]
R2082	ERJ3GEYJ103V	10K 1/10W	[M]
R2115	ERJ3GEYJ472V	4.7K 1/10W	[M]
R2174	ERJ3GEYJ682V	6.8K 1/10W	[M]
R2175	ERJ3GEYJ122V	1.2K 1/10W	[M]
R2176	ERJ3GEYJ333V	33K 1/10W	[M]
R2184	ERJ3GEYJ272V	2.7K 1/10W	[M]
R2186	ERJ3GEYJ152V	1.5K 1/10W	[M]
R2187	ERJ3GEYJ122V	1.2K 1/10W	[M]
R2215	ERJ3GEYJ472V	4.7K 1/10W	[M]
R2274	ERJ3GEYJ682V	6.8K 1/10W	[M]
R2275	ERJ3GEYJ122V	1.2K 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2276	ERJ3GEYJ333V	33K 1/10W	[M]
R2284	ERJ3GEYJ272V	2.7K 1/10W	[M]
R2286	ERJ3GEYJ152V	1.5K 1/10W	[M]
R2288	ERJ3GEYJ122V	1.2K 1/10W	[M]
R2302	ERJ3GEYJ562V	5.6K 1/10W	[M]
R2303	ERJ3GEYJ153V	15K 1/10W	[M]
R2312	ERJ3GEYJ102V	1K 1/10W	[M]
R2339	ERJ3GEYJ182V	1.8K 1/10W	[M]
R2402	ERJ3GEYJ562V	5.6K 1/10W	[M]
R2403	ERJ3GEYJ153V	15K 1/10W	[M]
R2412	ERJ3GEYJ102V	1K 1/10W	[M]
R2439	ERJ3GEYJ182V	1.8K 1/10W	[M]
R2502	ERJ3GEYJ472V	4.7K 1/10W	[M]
R2510	ERJ3GEYJ222V	2.2K 1/10W	[M]
R2512	ERJ3GEYJ332V	3.3K 1/10W	[M]
R2525	ERJ3GEYJ182V	1.8K 1/10W	[M]
R2527	ERJ3GEYJ563V	56K 1/10W	[M]
R2528	ERJ3GEYJ273V	27K 1/10W	[M]
R2611	ERJ3GEYJ563V	56K 1/10W	[M]
R2626	ERJ3GEYJ682V	6.8K 1/10W	[M]
R2627	ERJ3GEYJ473V	47K 1/10W	[M]
R2865	ERJ3GEYJ103V	10K 1/10W	[M]
K3	ERJ3GEY0R00V	0 1/10W	[M]
K14	ERJ3GEY0R00V	0 1/10W	[M]
K5252	ERJ3GEY0R00V	0 1/10W	[M]
K5405	ERJ8GEY0R00V	0 1/4W	[M]
K5502	ERJ3GEY0R00V	0 1/10W	[M]
		CAPACITORS	
C2104	ECJ1VB1C393K	0.039uF 16V	[M]
C2113	ECJ1VB1H681K	680pF 50V	[M]
C2121	ECJ1VB1H104K	0.1uF 50V	[M]
C2130	ECJ1VB1H822K	8200pF 50V	[M]
C2131	ECJ1VB1H153K	0.015uF 50V	[M]
C2179	ECJ1VC1H820J	82pF 50V	[M]
C2204	ECJ1VB1C393K	0.039uF 16V	[M]
C2213	ECJ1VB1H681K	680pF 50V	[M]
C2221	ECJ1VB1H104K	0.1uF 50V	[M]
C2230	ECJ1VB1H822K	8200pF 50V	[M]
C2231	ECJ1VB1H153K	0.015uF 50V	[M]
C2279	ECJ1VC1H820J	82pF 50V	[M]
C2303	ECJ1VB1H333K	0.033pF 50V	[M]
C2313	ECJ1VB1H682K	6800pF 50V	[M]
C2403	ECJ1VB1H333K	0.033pF 50V	[M]
C2413	ECJ1VB1H682K	6800pF 50V	[M]
C2502	ECJ1VB1H473K	0.047uF 50V	[M]
C2503	ECJ1VB1C563K	0.056uF 16V	[M]
C2504	ECJ1VB1H681K	680pF 50V	[M]
C2509	ECJ1VB1H822K	8200pF 50V	[M]
C2516	ECEA1EKS4R7B	4.7uF 25V	[M]
C2609	ECJ1VB1A474K	0.470uF 10V	[M]
C2610	ECJ1VB1A474K	0.470uF 10V	[M]
C2611	ECJ1VB1A154K	0.150uF 10V	[M]
C2612	ECJ1VB1H682K	6800pF 50V	[M]
C2617	ECJ1VB1A184K	0.180uF 10V	[M]
C2949	ECJ1VB1H104K	0.1uF 50V	[M]
C5016	ECJ1VB1H104K	0.1uF 50V	[M]
C5017	ECJ1VB1H104K	0.1uF 50V	[M]
C5020	ECJ1VB1H104K	0.1uF 50V	[M]
C5021	ECJ1VB1H104K	0.1uF 50V	[M]