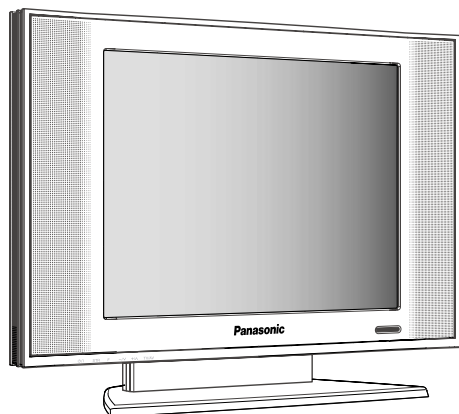


# Service Manual



## LCD Television

TX-20LB5F(WEST EUROPE)

TX-20LB5P(EAST EUROPE)

SL-115P Chassis

### SPECIFICATIONS

#### Power Source

"AC 100-240V, 50/60Hz"

#### Power Consumption

Average use : 50W

Stand-by condition : 2.5W

"TV set DC 15V, 3.5A max"

#### LCD

"20-inch(510.54mm),

4:3 aspect ratio LCD panel"

#### Screen Size

408.0mm(H) \* 306.0mm(V)

#### Sound

##### Speaker

5cm \* 9cm, 2pcs, 4  $\Omega$

##### Audio Output

5W(2.5W+2.5W), 10%THD

##### Headphones

M3(3.5mm) Jack \* 1

#### Receiving Systems / Band name

"PAL B, G, H, SECAM B, G, SECAM L/L"

VHF E2-E12

VHF H1-H2(ITALY)

VHF A-H(ITALY)

UHF E21-E68(UK only)

CATV(S01-S05)

CATV S1-S10 (M1-M10)

CATV S11-S20 (U1-U10)

CATV S21-S41 (Hyperband)

#### PAL 525/60

Playback of NTSC tape from some PAL video recorders (VCR)

#### M.NTSC

Playback From M.NTSC video recorders (VCR)

#### NTSC (AV input only)

Playback From NTSC video recorders (VCR)

#### Aerial-ear

UHF / VHF

#### Operating Conditions

Temperature : 5-35°...

Humidity : 5%-90% RH (non-condensing)

#### Connection Terminals

##### AV1 (Scart connector)

21 Pin socket (Audio/Video in, Audio/Video out, RGB in)

##### AV2

###### VIDEO

RCA PIN Type \* 1

###### S-VIDEO

Mini DIN 4-pin

###### AUDIO L-R

RCA PIN Type \* 2

#### Dimensions (W \* H \* D)

##### Including TV Stand

608mm \* 215mm \* 457.5mm

##### TV Set Only

608mm \* 73.7mm \* 403mm

#### Weight (Mass)

10.1Kg NET

#### Note :

Specifications are subject to change without notice.  
Weights and dimensions shown are approximate.

Design and Specifications are subject to change without notice.  
Weight and Dimensions shown are approximate.

### **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. Safety Instruction

## 1.1. General Guidelines

1. When servicing, observe the original lead dress. If a short circuit is found, replace all part which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

## 1.2. Touch-Current Check

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a measuring network for touch currents between each exposed matallic part on the set and a good earth ground such as a water pipe, as shown in Figure1.
3. Use Leakage Current Tester(Simpson 228 or equivalent) to measure the potential across the measuring network.
4. Check each exposed metallic part, and measure the voltage at each point.
6. The potential at any point (TOUGH CURRENT) expressed as voltage  $U_1$  and  $U_2$ , does not exceed the following values:  
For a. c.:  $U_1 = 35V(\text{peak})$  and  $U_2 = 0.35V(\text{peak})$ ;  
For d. c.:  $U_1 = 1.0V$ ,

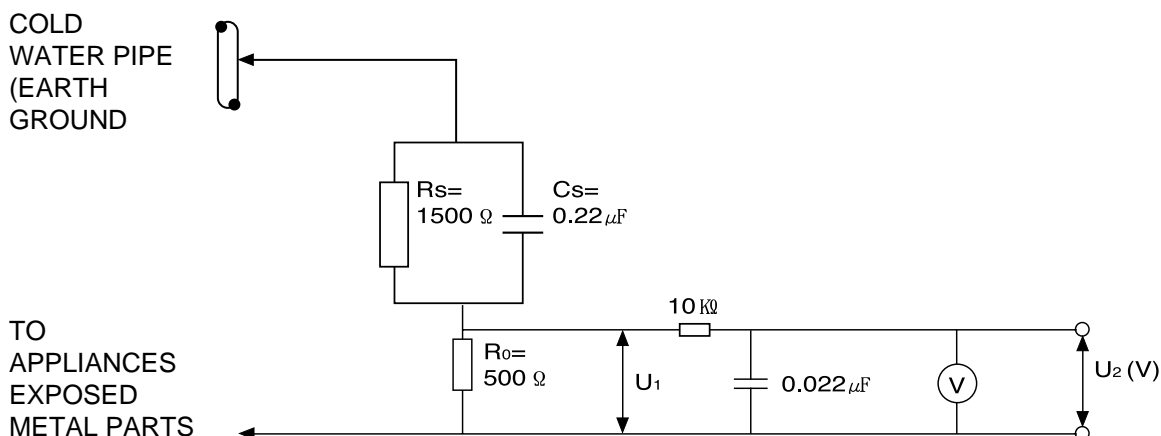
### Note:

The limit value of  $U_2 = 0.35V(\text{peak})$  for a. c. and  $U_1 = 1.0V$  for d. c. correspond to the values 0.7 mA (peak) a. c. and 2.0 mA d. c.

The limit value  $U_1 = 35V(\text{peak})$  for a. c. correspond to the value 70 mA(peak) a. c. for frequencies greater than 100kHz.

7. In case a measurement is out of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

## Measuring network for TOUCH CURRENTS



Resistance values in ohms(  $\Omega$  )

V: Voltmeter or oscilloscope(r.m.s. or peak reading)

Input resistance:  $\geq 1M\Omega$

Input capacitance:  $\leq 200 pF$

Frequency range: 15Hz to 1 MHz and d.c. respectively

NOTE - Appropriate measures should be taken to obtain the correct value in case of non-sinusoidal waveforms.

Figure 1

## 2 Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive(ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor “chip” components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge(ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as “anti-static(ESD protected)” can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.


### Caution

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

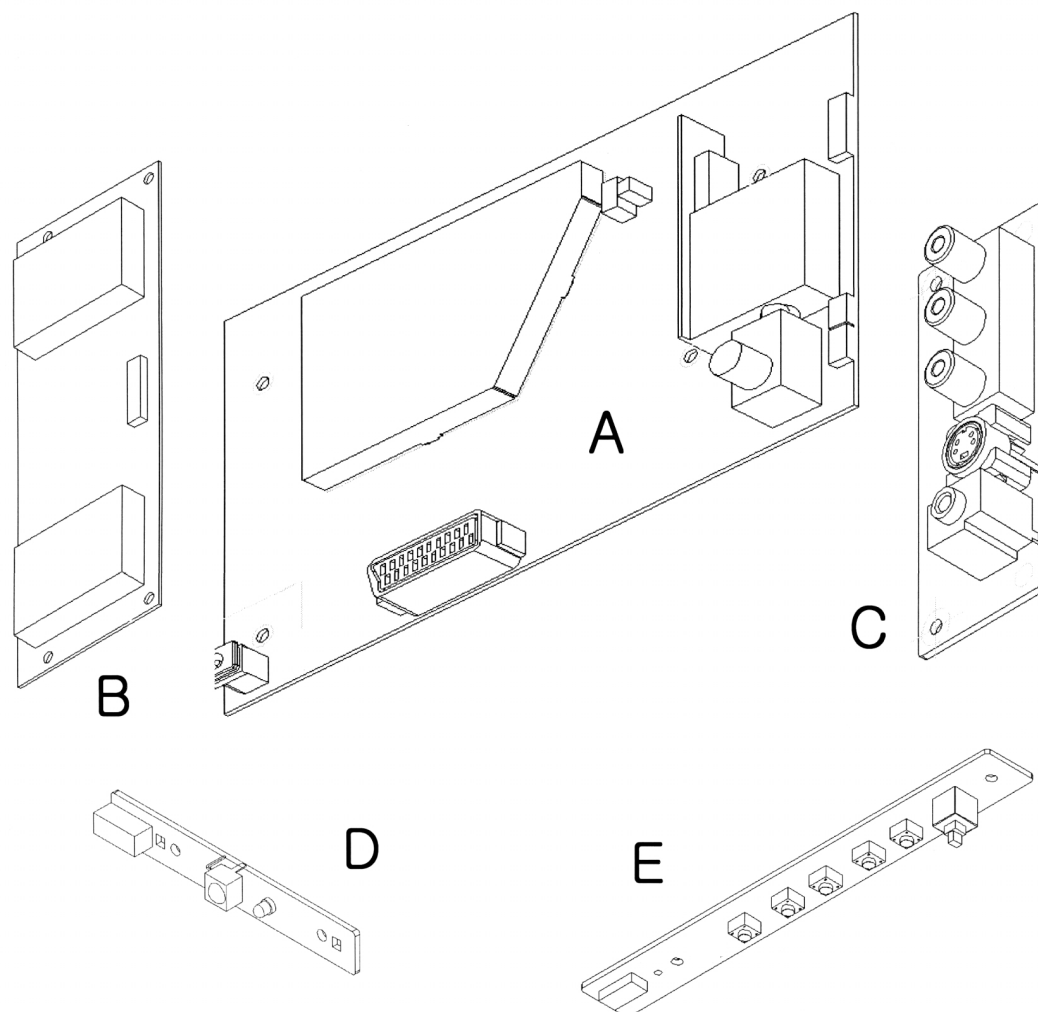
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

### IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety.

These parts are marked by  in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

### 3. Chassis Board Layout

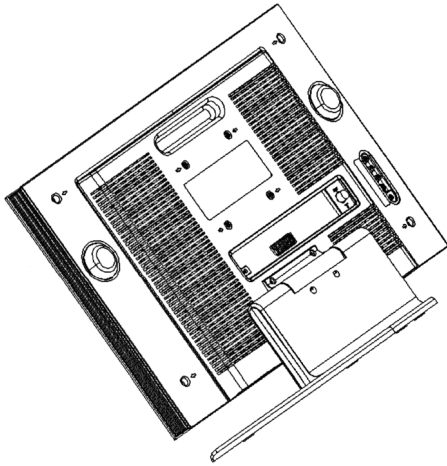


Board Name	Function
A-Board	MAIN PCB
B-Board	INVERTER PCB
C-Board	AV PCB
D-Board	IR/LED PCB
E-Board	CONTROL PCB

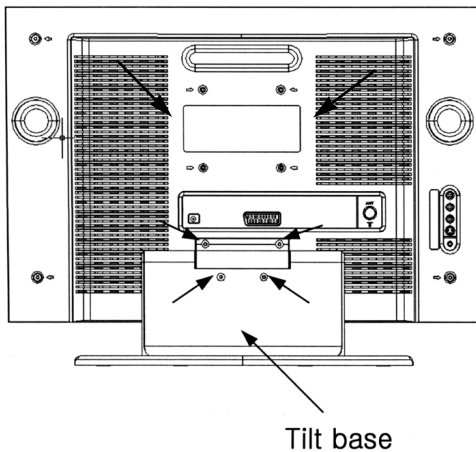
## 4. Servicing method

### 4.1. Removing the tilt base

1. Lay down the main unit so that the rear cover faces upward.

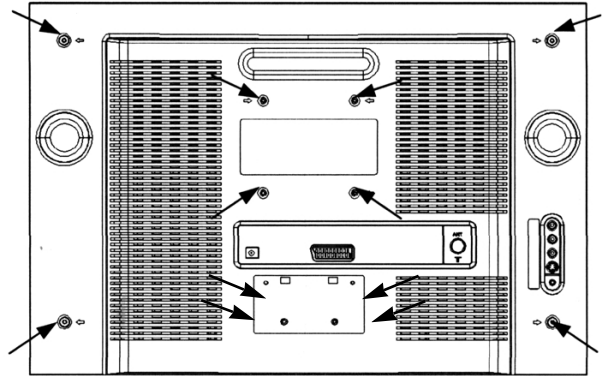


2. Remove the fixing screw(4pcs).
3. Remove the hinge cover.

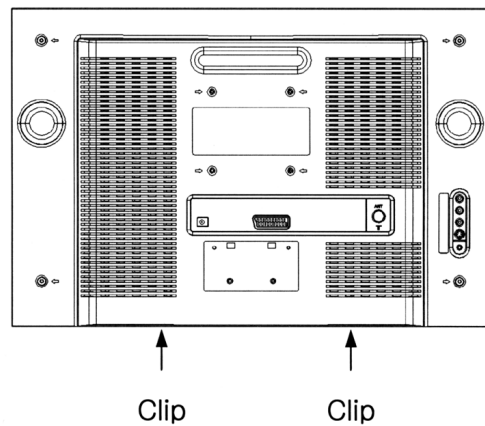


### 4.2. Removing the rear cover

1. Remove the tilt base.(See 4.1.)
2. Remove the fixing screw(8pcs)

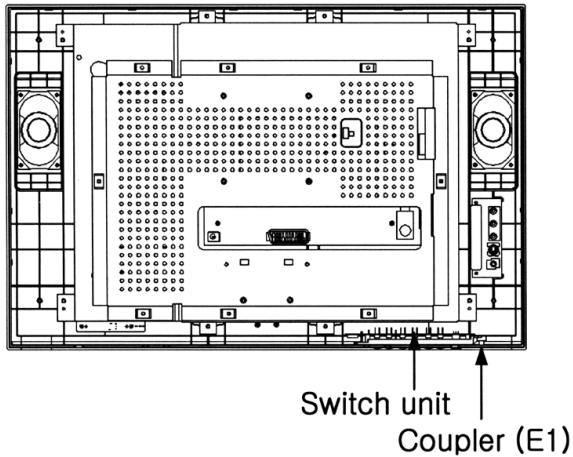


3. Remove the rear cover as pushing clips.  
(2 point clip)



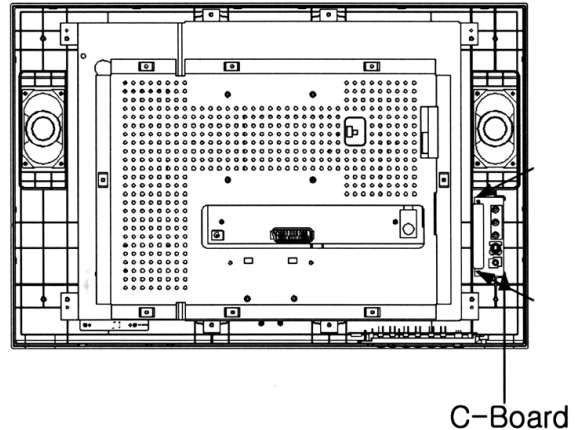
### 4.3. Removing the switch unit

1. Remove the rear cover. (See 4.2.)
2. Disconnect the coupler. (E1)
3. Remove the fixing screw. (1pcs)
4. Remove the switch unit.



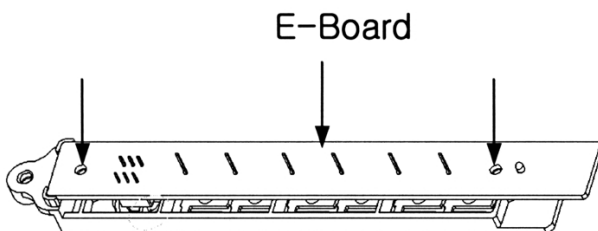
### 4.5. Removing the C-Board

1. Remove the rear cover. (See 4.2.)
2. Disconnect the coupler. (C1)
3. Remove the fixing screws. (2pcs)
4. Remove the C-Board.



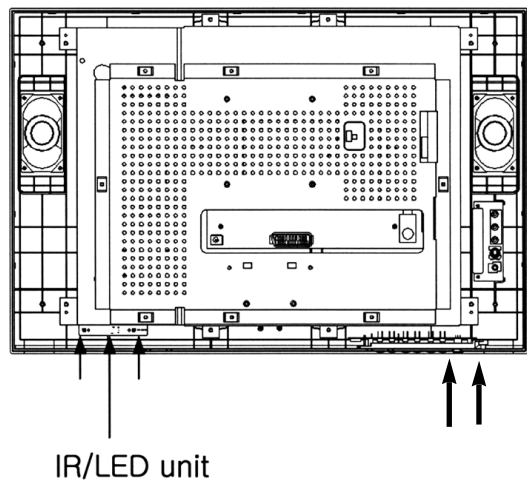
### 4.4. Removing the E-Board

1. Remove the switch unit. (See 4.3.)
2. Remove the fixing screws. (2pcs)
3. Remove the E-Board.



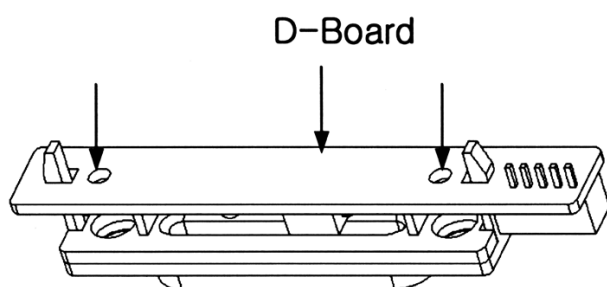
### 4.6. Removing the IR/LED unit

1. Remove the rear cover. (See 4.2.)
2. Disconnect the coupler. (D1)
3. Remove the fixing screws. (2pcs)
4. Remove the D-Board.



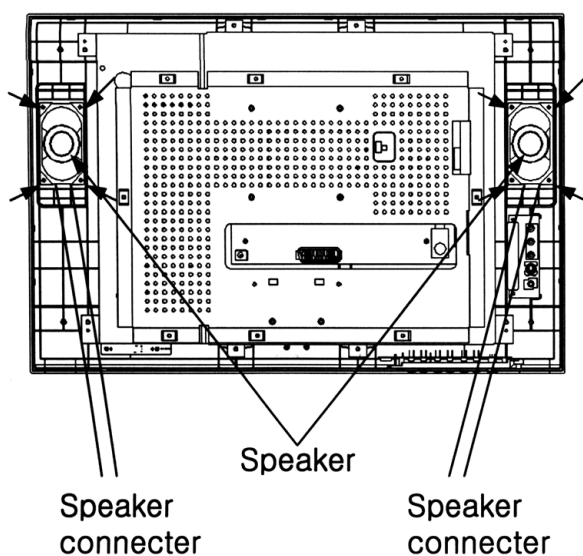
### 4.7. Removing the D-Board

1. Remove the IR/LED unit. (See 4.6.)
2. Remove the fixing screws. (2pcs)
3. Remove the D-Board.



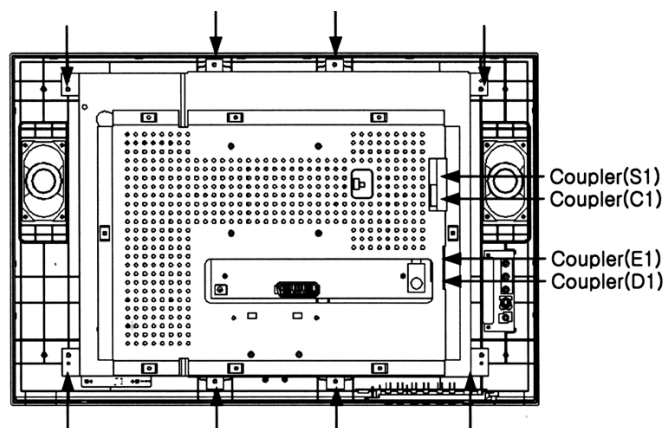
### 4.8. Removing the Speaker unit

1. Remove the rear cover. (See 4.2.)
2. Remove the fixing screws. (8pcs)
3. Disconnect the Speaker connectors. (S1, 4pcs).
4. Remove the speaker units.



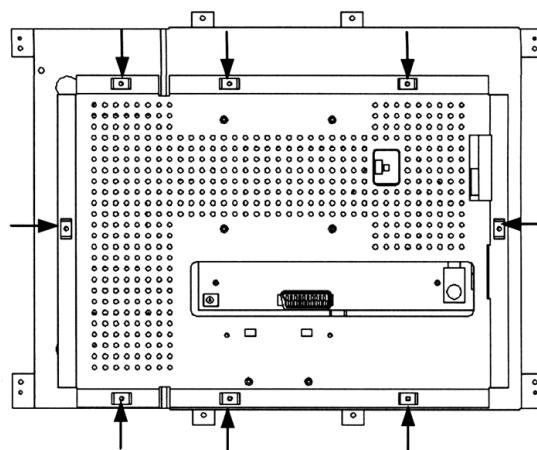
### 4.9. Removing the Shield pcb assy

1. Remove the fixing screws. (8pcs)
2. Disconnect the coupler. (C1), (D1), (E1), (S1)
3. Remove the Shield pcb assy.



### 4.10. Removing the Shield case

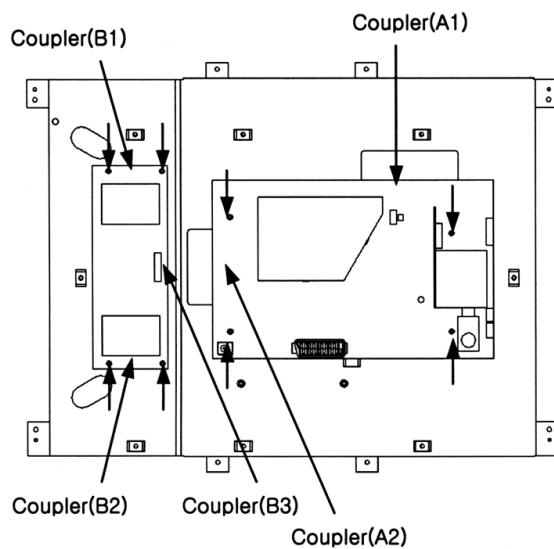
1. Remove the Shield pcb assy. (See 4.9.)
2. Remove the fixing screws. (8pcs).
3. Remove the Shield case.





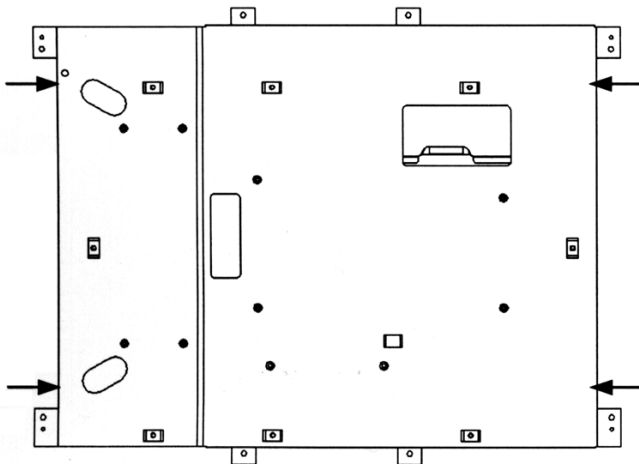
### 4.11. Removing the A-board, B-board

1. Remove the Shield pcb assy. (See 4.10.)
2. Disconnect the coupler.  
(A1), (A2), (B1), (B2), (B3)
3. Remove the fixing screws. (8pcs)
4. Remove the A-Board, B-Board.



### 4.12. Removing the LCD panel

1. Remove the A-Board, B-Board. (See 4.11.)
2. Remove the fixing screws. (4pcs)
3. Remove the LCD Panel.



## 5. Service Mode Function

1. When entering the Service mode, it is necessary to enter the PR99 of the TV mode.

(1) Service Mode 1 INPUT: Teletext R key --> Teletext G key --> Teletext Y key --> MENU key --> Ambience key

Service Mode1

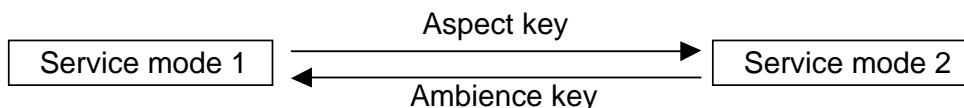
Main Menu	Sub Menu	DATA	REMARK	Main Menu	Sub Menu	DATA	REMARK
VERTICAL GEOMETRY	VERT. BLANKING START	+343		HORIZONTAL GEOMETRY	HOR. Position (NEWLIN)	+178	
	VERT. BLANKING STOP	+4			HOR. RGB Pos. (POF53)	+2	
VCTI MEASUREMENT	CUTOFF RED	0			PICTURE WIDTH	+30	NO USE(CRT)
	CUTOFF GREEN	0			TRAPEZE	+5	NO USE(CRT)
	CUTOFF BLUE	0			HOR. BLANKING START	+1264	
	WHITEDRV. RED	300			HOR. BLANKING STOP	+60	
	WHITEDRV. GREEN	300		Panel MEASUREMENT	CUTOFF RED	128	
ADDITIONAL SETTINGS	WHITEDRV. BLUE	300			CUTOFF GREEN	128	
	DYNFOC-Vertical (PWMV)	+1	NO USE(CRT)		CUTOFF BLUE	128	
	DYNFOC-HorStart (DFHB)	+1	NO USE(CRT)		WHITEDRV. RED	148	
	DYNFOC-HorStop (DFHE)	+1	NO USE(CRT)		WHITEDRV. GREEN	135	
	OSD H-SHIFT	+191	NO USE(CRT)		WHITEDRV. BLUE	140	
	OSD H-SHIFT SPLIT SCREEN	+220	NO USE(CRT)	DEVIATION SETTINGS	M JAPAN	+36	
DRX	OSD V-SHIFT	+36	NO USE(CRT)		BTSC	+36	
	OSD PIXEL CLOCK	+49			DK DUAL	+36	
	STANDARD SELECT	G			BG	+36	
	TOP SETTING	+6			NICAM L	+90	
BLACK LEVEL EXPANDER	VIDEO PEAKING	0			NICAM I	+90	
	SIF REFERENCE	+2			DK NICAM	+90	
	Noise Bs (F1 ver.)	+8			SAT	+36	
	BLE Mode	+2			FM RADIO	+36	
	BLE Tilt	+7		NVM EDIT		-	
	BLE Gain	+1		RESET TV-SET		-	
	BLE Static	+3					
	BLE Brf	+3					

(2) Service Mode 2 INPUT: Teletext R key --> Teletext G key --> Teletext Y key --> MENU key --> ASPECT key

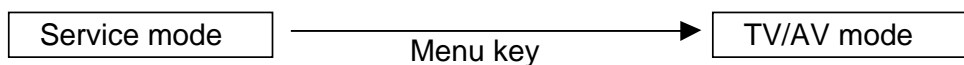
(2) Service Mode 2

MENU	DATA	REMARK
EXTERNAL BRIGHTNESS	< +10 >	
EXTERNAL CONTRAST	< +60 >	
BRIGHTNESS	< +42 >	
CONTRAST	< +46 >	
PKCF	< 0 >	
SET FOR UK	< No >	
0= PHIL, 1=DW TUNER	< 0 >	
AGCMD (0 3)	< +3 >	
AGC ADJ1	< +40 >	
SIZE ( 0:17"W, 1:20"N)	< +1 >	
TEXT ( 0:N, 1:F, 2:T, 3:FT)	< +3 >	

(3) Service Mode can be exchanged by Ambience key of Aspect key INPUT each other.



(4) Service Mode can be exchanged by Menu key INPUT each other.

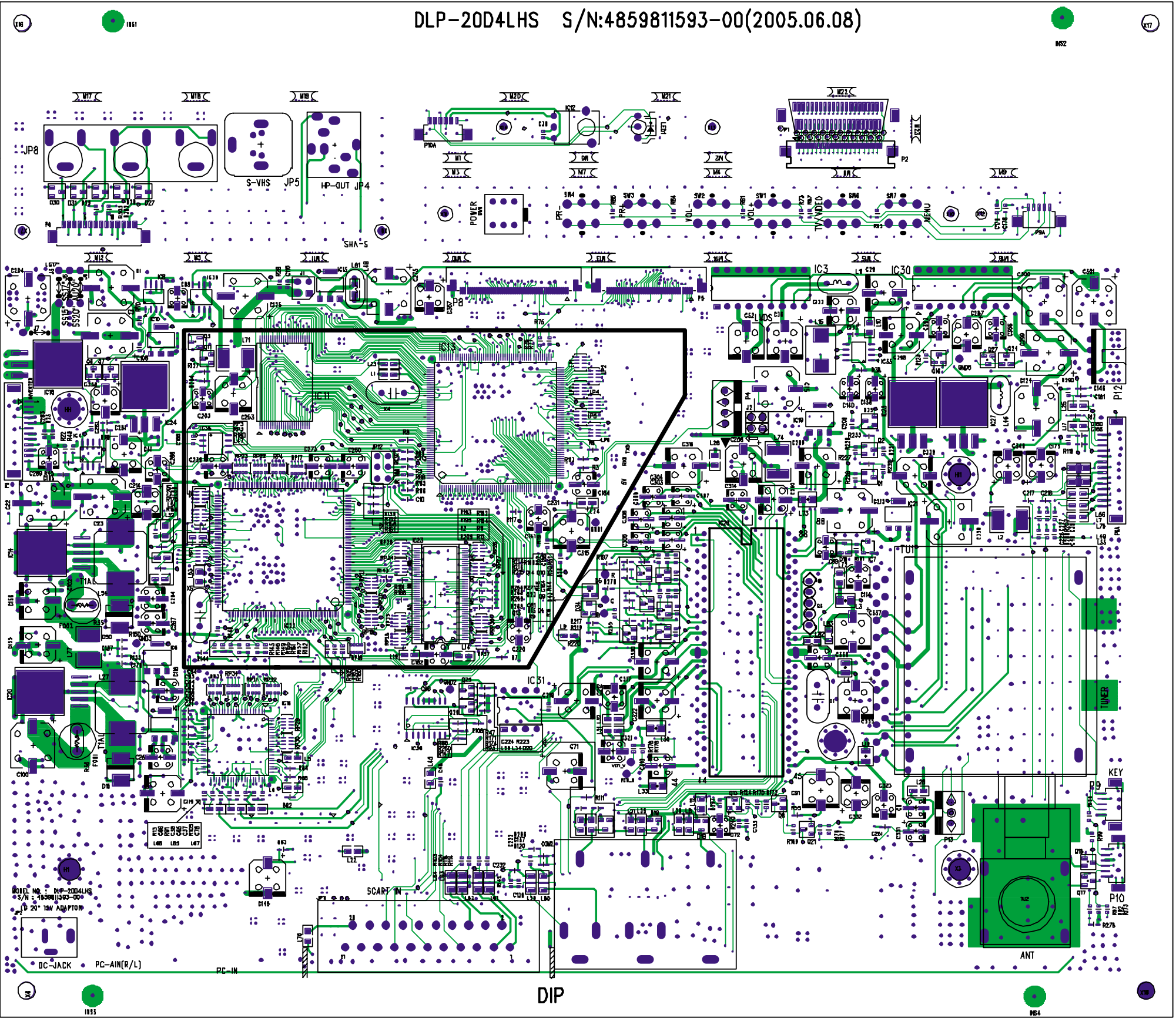


(5) Service Mode can be exchanged by Ambience key or Aspect key INPUT each other.



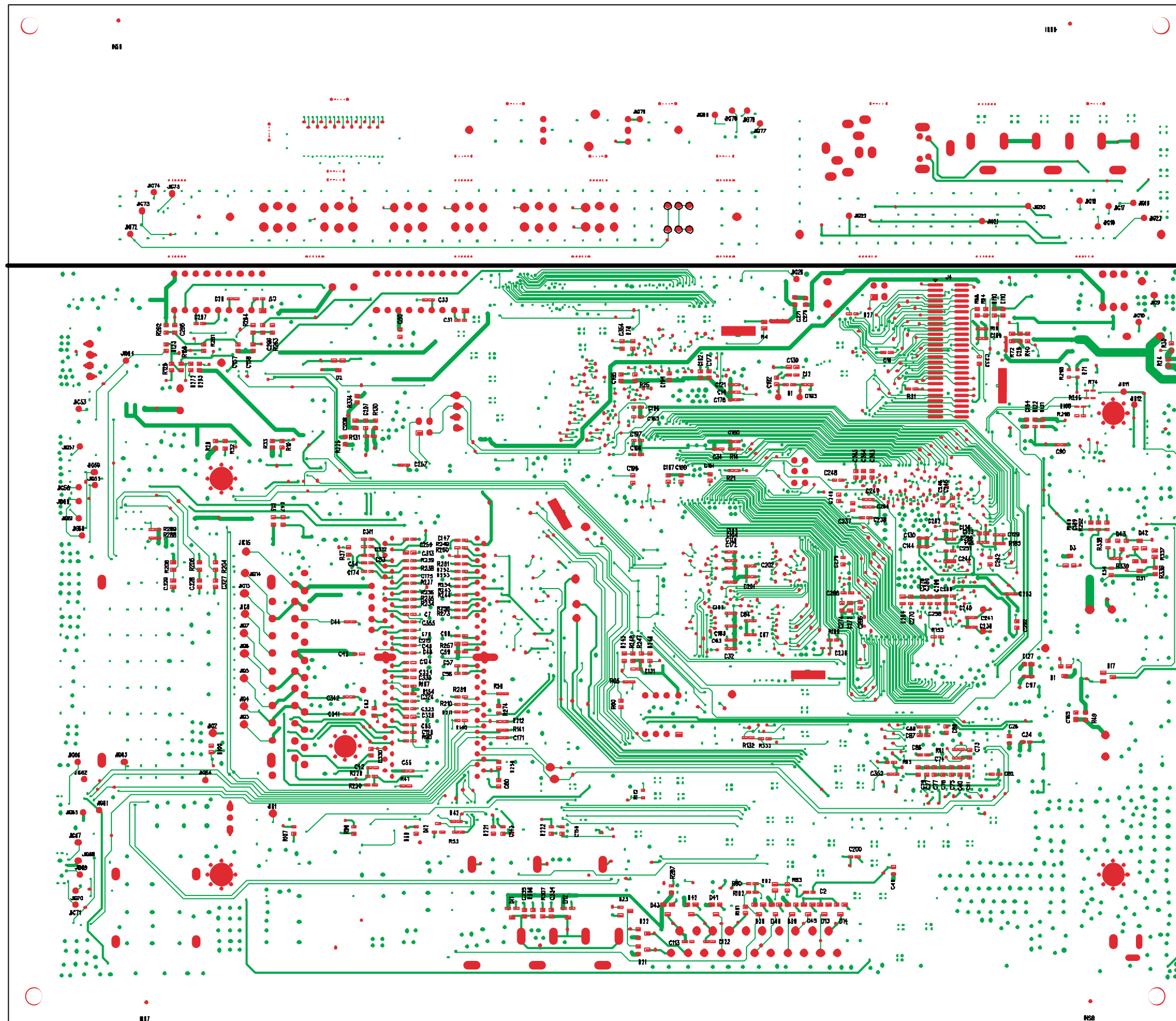
6. Conductor Views

6.1. MAIN PCB (TOP)



PPART LOCATION			
IC		TRANSISTOR	
IC1	A-2	Q1	E-4
IC2	B-2	Q2	E-4
IC3	D-5	Q3	A-4
IC4	A-4	Q4	D-3
IC5	B-2	Q5	D-3
IC6	A-3	Q6	A-4
IC7	E-3	Q7	A-4
IC8	A-5	Q9	D-3
IC9	B-1	Q10	D-3
IC10	A-4	Q11	B-4
IC11	B-4	Q12	D-2
IC12	F-5	Q14	D-3
IC13	C-4	Q15	D-3
IC14	A-3	Q16	E-4
IC15	B-5	Q17	F-1
IC16	B-2	Q18	F-1
IC17	D-4	Q21	E-2
IC18	A-4	Q23	D-3
IC19	E-4	Q24	F-4
IC20	A-2	Q25	C-2
IC21	E-3	Q26	C-2
IC22	B-3	Q27	F-4
IC23	C-3	Q31	B-2
IC24	A-4	Q32	B-2
IC25	E-4	Q33	B-2
IC26	C-2	Q34	B-2
IC27	E-4	Q35	B-2
IC29	D-3	Q36	C-2
IC30	E-5	Q37	C-2
IC31	C-2	Q38	C-2
IC33	C-2	Q39	C-2
IC34	B-2	Q40	C-2
IC35	E-4	Q41	C-2
IC38	B-4		
IC39	B-5		
IC40	B-4		


## 6.2. MAIN PCB (BOTTOM)



# 7 Block and Schematic Diagrams

## 7.1. Schematic Diagram Notes

### Important Safety Notice

Components identified by  mark have special characteristics important for safety. When replacing any of these components, use only manufacture's specified parts.

#### Notes:

##### 1. Resistor

All resistors are cabon 1/4W resistor, unless marked as follows:









Unit of resistance is OHM[Ω] (K=1,000, M=1,000,000).

- |  |  |
|--|--|
|  : Nonflammable |  : Metal Oxide |
|  : Solid        |  : Metal Film  |
|  : Wire Wound   |  : Fuse        |

##### 2. Capacitor

All capacitors are ceramic 50V capacitor, unless marked as follows:

Unit of capacitance is μF, unless otherwise noted.

- |  |   |
|--|---|
|  : Temperature Compensation |  : Electrolytic     |
|  : Polyester                |  : Bipolar          |
|  : Metalized Polyester     |  : Dipped Tantalum |
|  : Polypropylene          |  : Z-Type         |

##### 3. Coil

Unit of inductance is μF, unless otherwise noted.

##### 4. Test Point

 : Test Point position

##### 5. Earth Symbol

 : Chassis Earth (Cold)       : Line Earth (Hot)

##### 6. Voltage Meaaurement

Voltage is measured by a DC voltmeter.

Conditions of the measurement are the following:

Power Source ..... AC 100-240V, 50/60Hz  
Receiving Signal ..... Colour Bar signal(RF)  
All customer's controls ..... Maximum positions

##### 7. Number in red circle indicates waveform number.

(See wavefom pattern table.)

##### 8. When arrow mark() is found, connection is easily found from the direction of arrow

##### 9. Indicates the major signal flow.      : Video      Audio

##### 10. This schematic diagram is the latest at the time of printing and subject to change without notice.

#### Remarks:

1. The Power Circuit contains a circuit area which uses a separate power supply to isolate the earth connection.

The circuit is defined by HOT and COLD indications in the schematic diagram. Take the follwing precautions.

All circuits, except the Power Circuit, are cold.

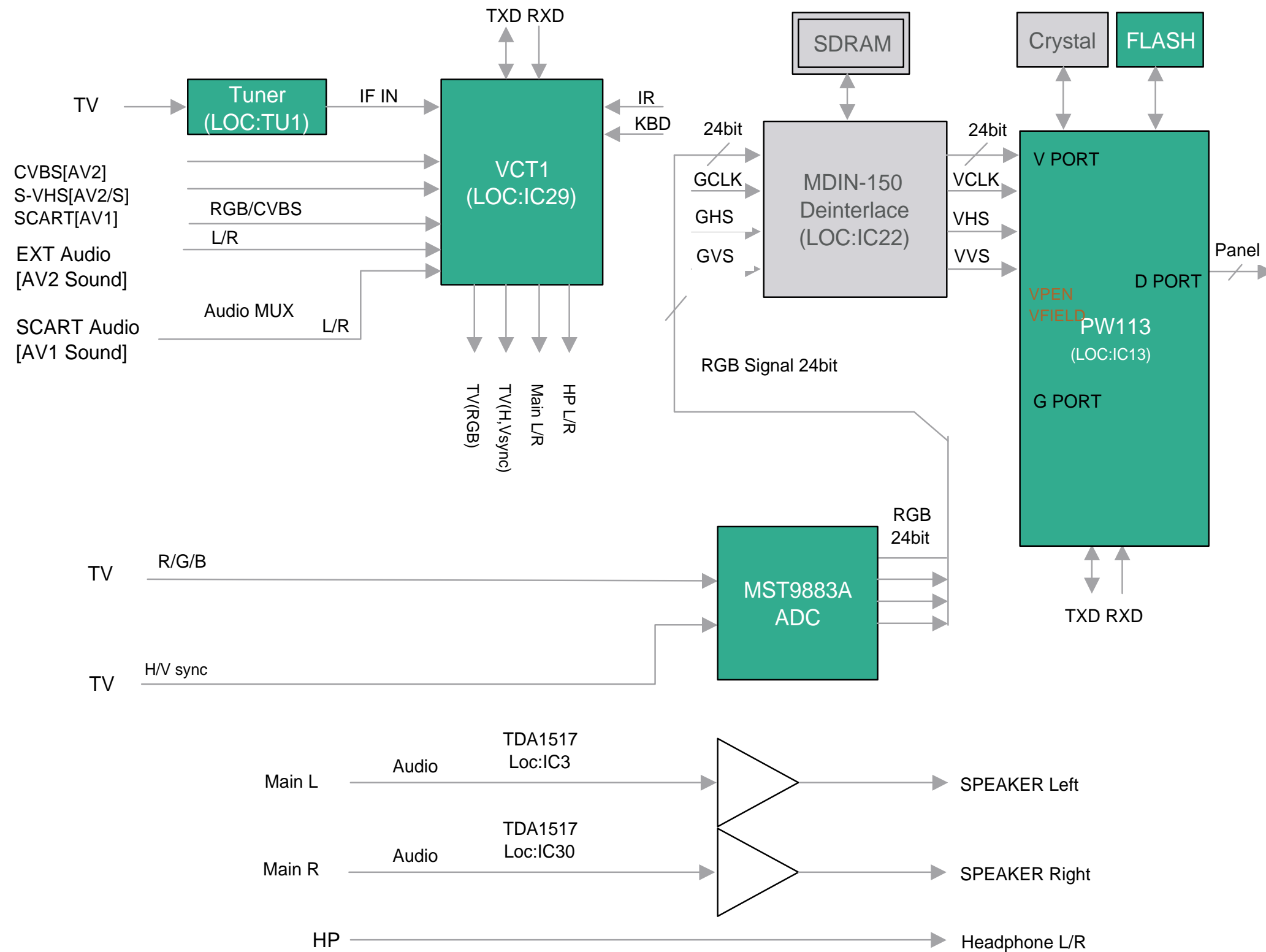
##### Precautions

- Do not touch the hot part or the hot and cold parts at the same time or you may be shocked.
- Do not short-circuit the hot and cold circuits or a fuse may blow and parts may break.
- Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously or a fuse may blow.  
Connect the earth of instruments to the earth connection of the circuit being measured.
- Make sure to disconnect the power plug before removing the chassis.

2. Following diodes are interchangeable.  
MA150-MA162(Replacement part)

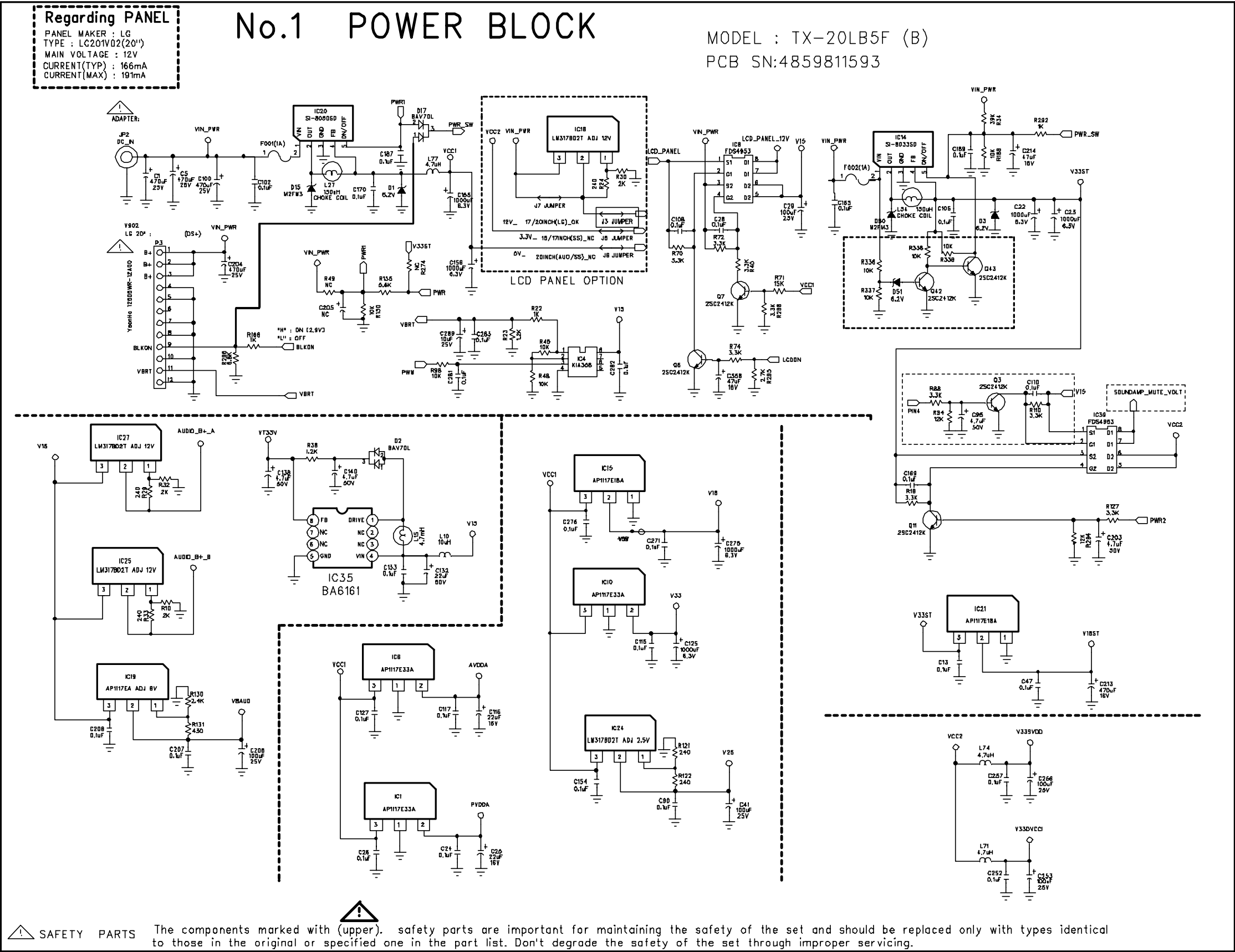
## 7.2. Signal Block Diagram

## Signal Block



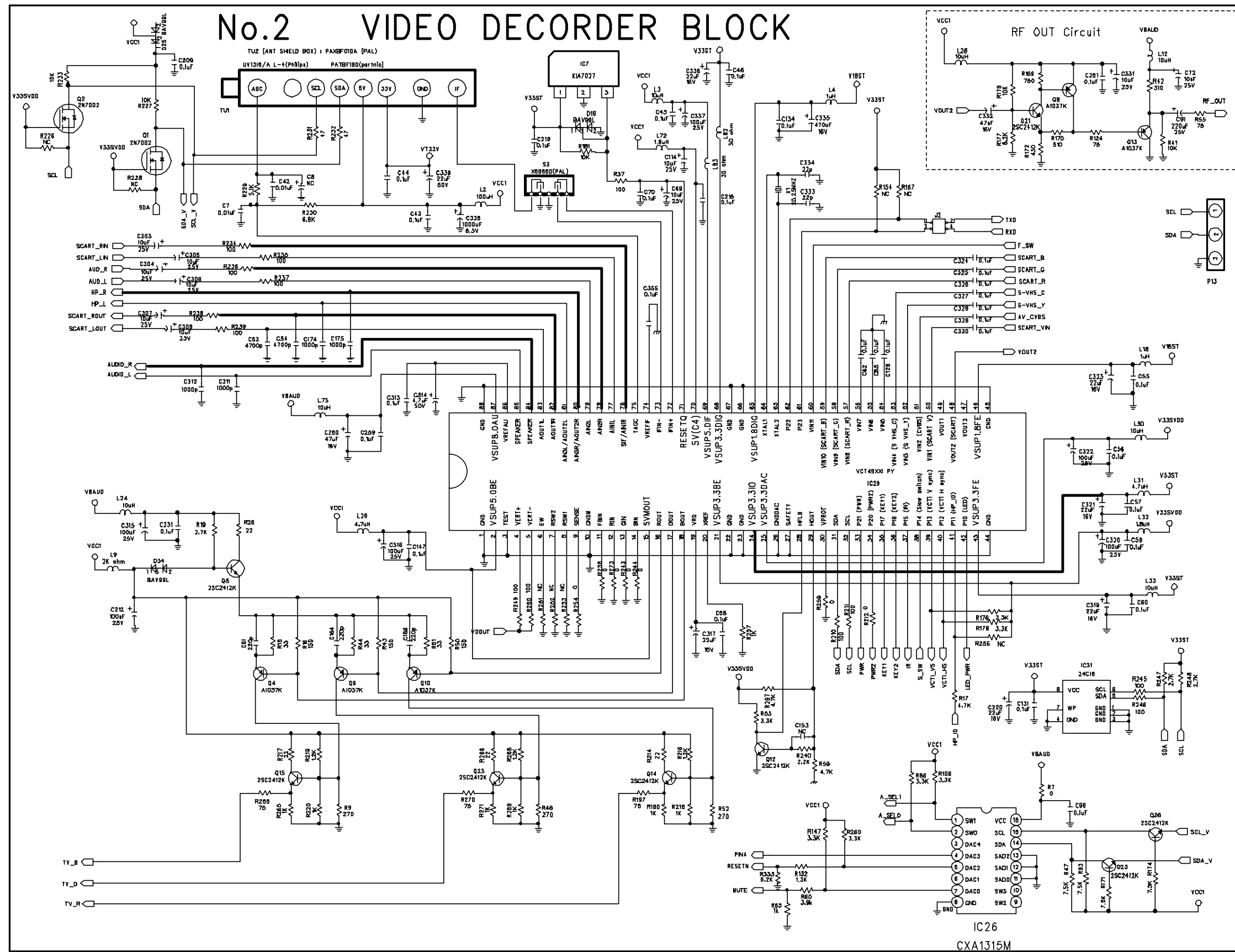


7.3. Power Schematic Diagram



14

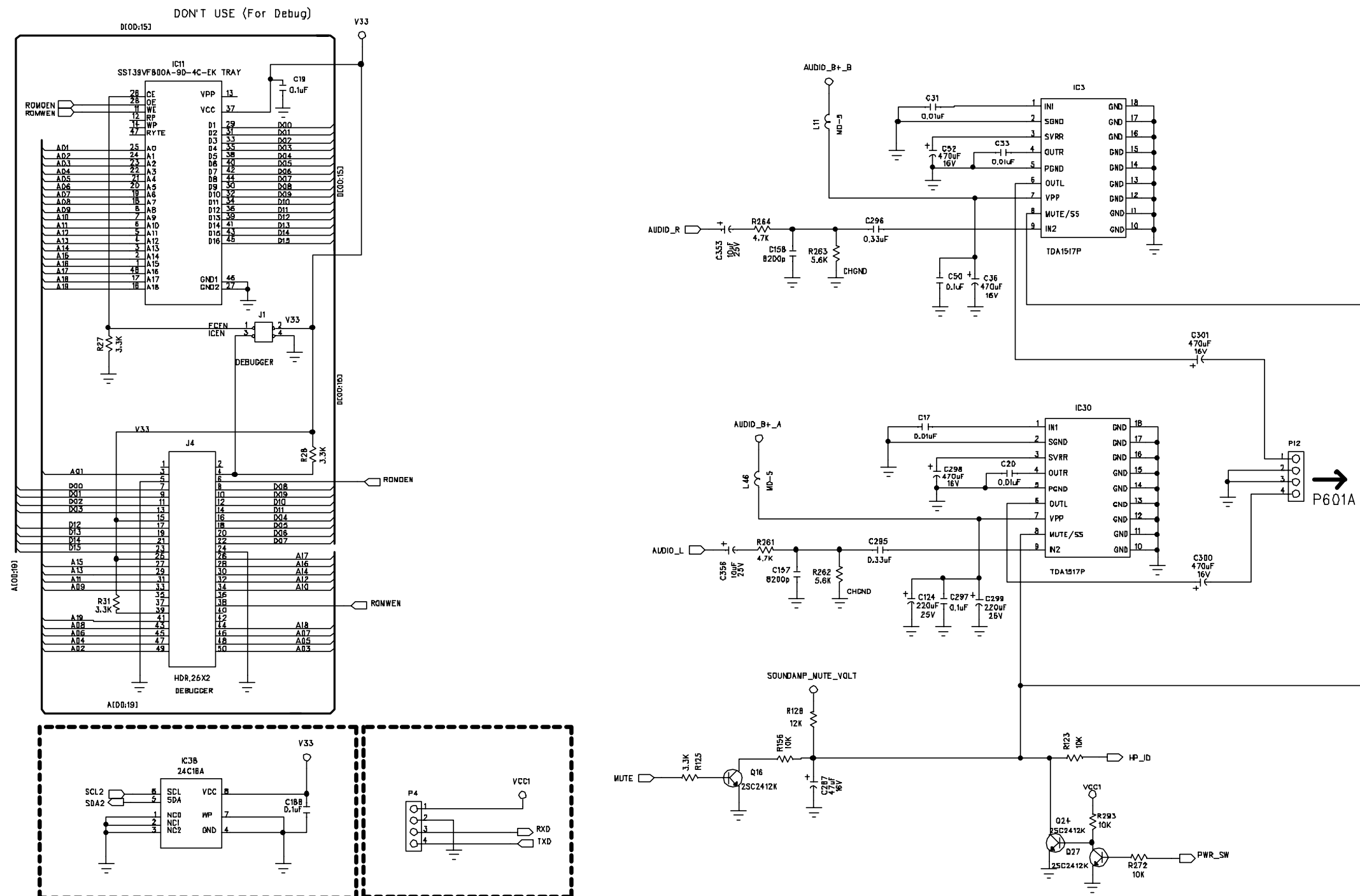
#### 7.4. VCTI Schematic Diagram





### 7.5. Memory AMP Schematic Diagram

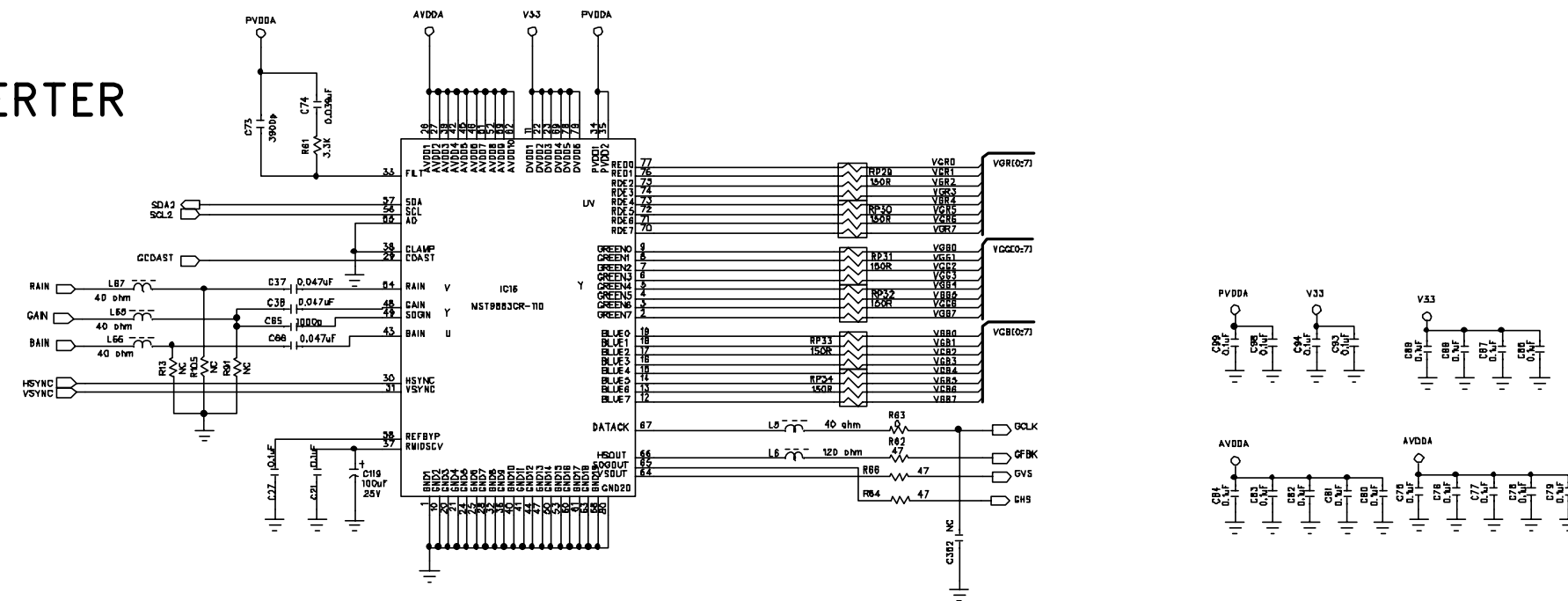
## No.3 FLASH MEMORY and AUDIO AMP BLOCK



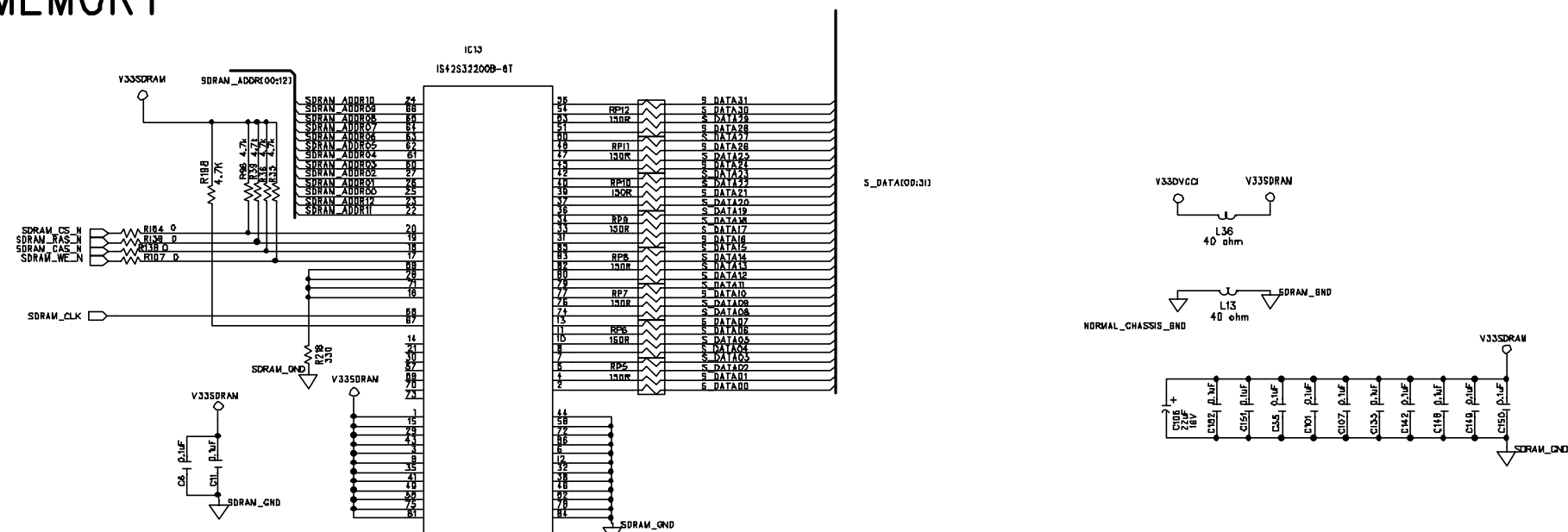
## 7.6. AD9883 Schematic Diagram

## No.4

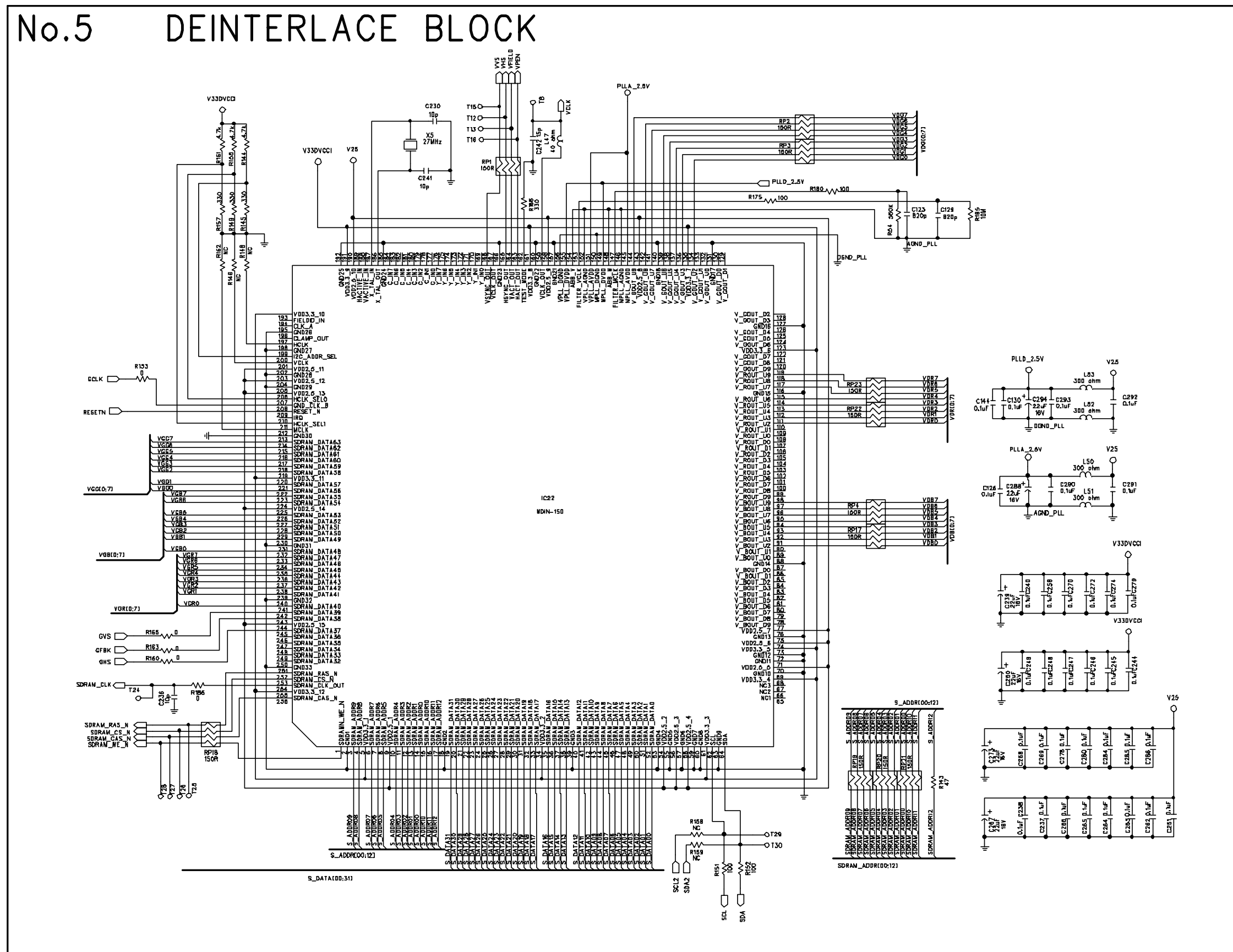
# AD CONVERTER



## SDRAM MEMORY

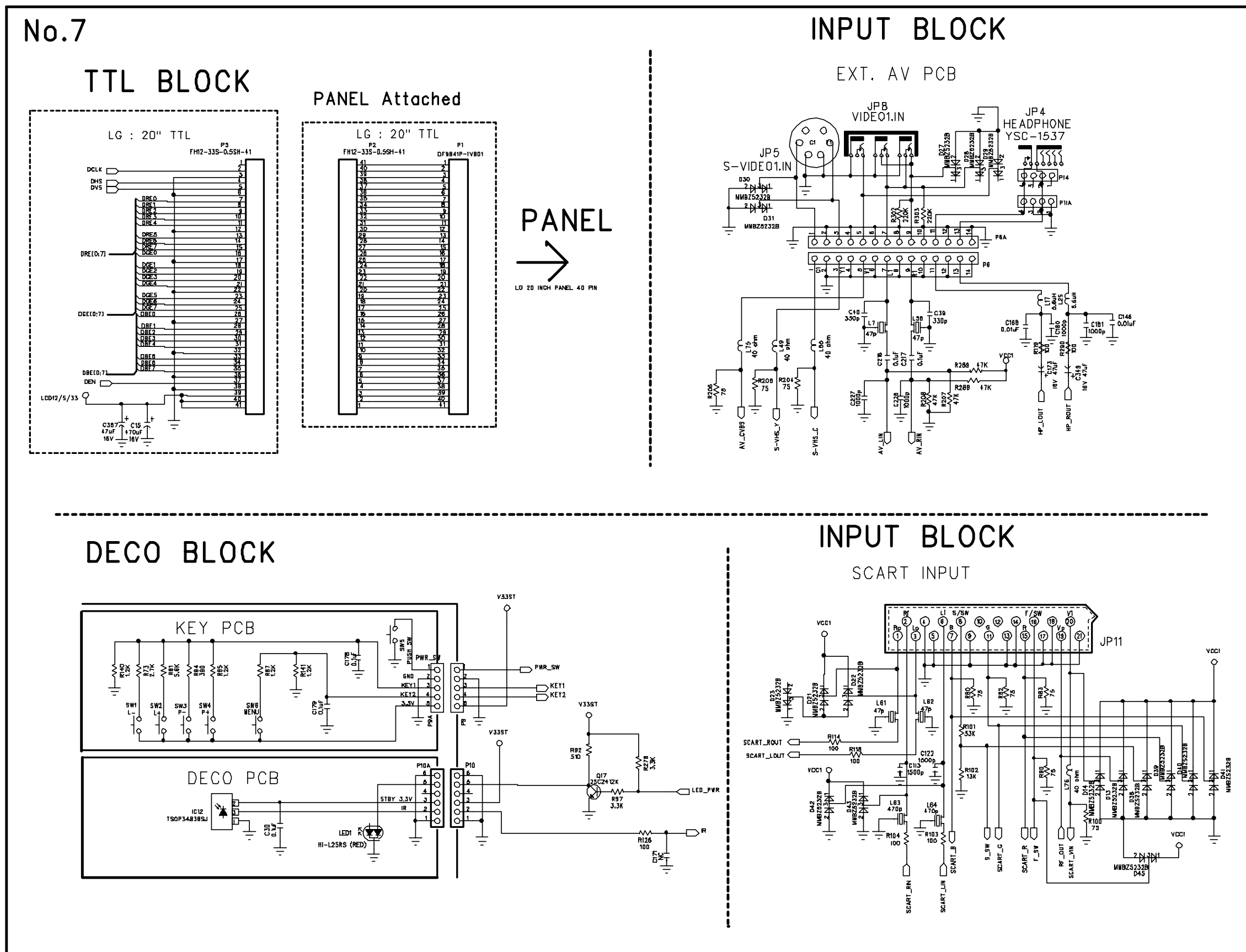


### 7.7. Deinterlace Schematic Diagram





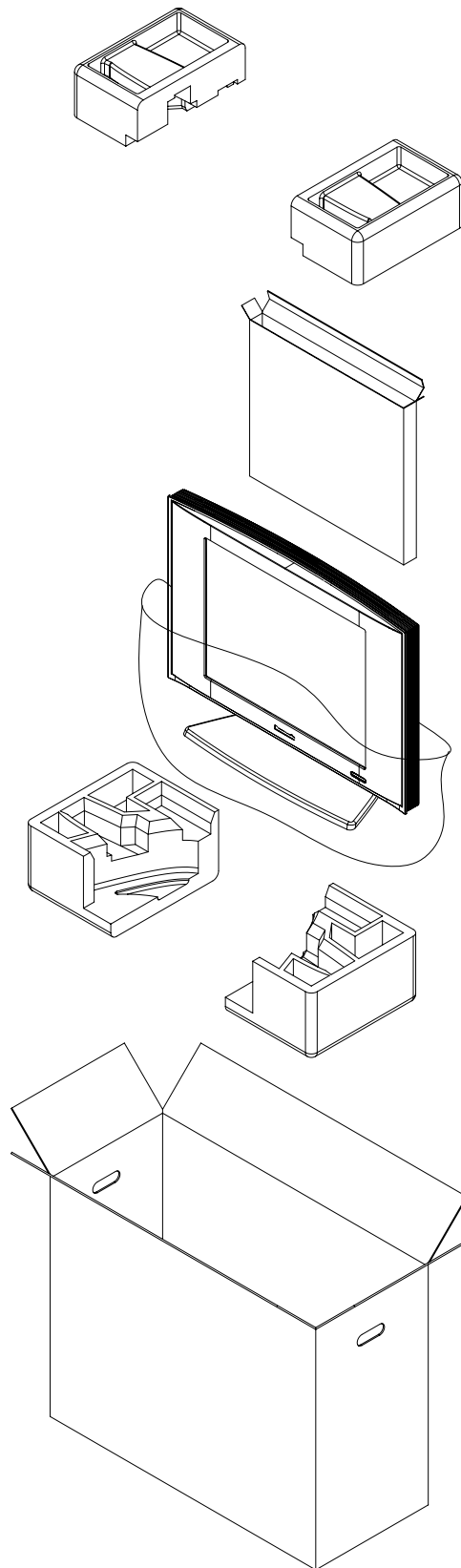
### 7.9. LVDS, Key, Input Schematic Diagram



## 8.1. Parts Location



### 8.2. Packing Exploded View



## 9. Service Part List

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK	LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
ZZ100	48BEUR7636	TRANSMITTER REMOCN	EUR7636060		IC12	1TS0P34838	IC PREAMP	TSOP34838SJ	
ZZ110	PTACPWG096	ACCESSORY AS DLP-20D4LHS			IC29	149531PYFP	IC TV PROCESSORS	VCT49531-PY-F1	
M822	4858213801	BAG INSTRUCTION	L.D.P.E T0.05X250X400		IC3	1TDA1517PP	IC	TDA1517P	
PWC1	4859910110	CORD POWER AS	EU KKP-419C KKS-15A 1.8M		IC30	1TDA1517PP	IC	TDA1517P	
ZZ120	PTBCSHE033	COVER BACK AS	DLP-20D3AHS		IC31	124LC16B1B	IC MEMORY	24LC16B1B	
M211	4852167911	COVER BACK	ABS GY		J2	4859295420	CONN WAFER	4602-04MV2-60-1 PLUG 4P ST	
M781	4857817300	CLOTH NET	CLOTH 152X15X0.5		J2A	4859295620	CONN WAFER	4605-2FV2-1 JUMPER 2P 2.54	
M791	4857942500	RUBBER CUSION	PVC 180 X 20 T=4.0		J2B	4859295620	CONN WAFER	4605-2FV2-1 JUMPER 2P 2.54	
ZZ130	PTPKCPE069	PACKING AS	DLP-20D4AHS		J3	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
M801	4858066700	BOX CARTON	DW-3		JP11	4859112950	JACK SCART	DSSM-0378 STR	
M802	4858068000	BOX ACCESSORY	SW-2		JP2	4859101310	JACK DC	DC-037	
M811	485819AT01	PAD	EPS		JP4	97P6316100	JACK HEAD PHONE	DHSE-9959	
M822	4858220001	BAG P.E	PE FOAM T0.5X800X800		JP5	4859105340	JACK S-VHS	DSW-10 (STRAIGHT)	
ZZ140	PTCACAG096	CABINET AS	DLP-20D4LHS		JP8	4859112850	JACK PIN	DPSS-0173 3PIN STR	
ADT1	4859000940	ADAPTER	NOJZHK000011		L10A	2224050077	BOND SILICON	SE-9590 RTV(V0)	
M124	485A101770	SHIELDRON	18X300X18T		L11	58C0000116	COIL BEAD	HC-3550R	
M125	485A101870	SHIELDRON	40X190X24T		L46	58C0000116	COIL BEAD	HC-3550R	
M126	485A102170	SHIELDRON	27X140X27T		L81	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
M127	485A102270	SHIELDRON	54X140X27T		LED1	DHL320CRU-	LED	HL-L320CRU	
M191	4851955800	HINGE ASSY	DLP-20D3		M100A	485A100770	SHIELDRON	40X60X10T	
M191A	7001400512	SCREW MACHINE	PAN 4X5 MFZN BK		M110A	485A100170	SHIELDRON	20X40X8.5T	
M191B	7001400808	SCREW MACHINE	PAN 4X8 SUS		M481	4854867811	BUTTON POWER	ABS GY	
M191C	7002401412	SCREW MACHINE	TRS 4X14 MFZN BK		M491	4854959921	BUTTON CH	ABS GY - 5 BUTTON	
M191D	4856017400	SCREW SPECIAL	7002401412+ WAS(PVC T1) DIA 9.0 BK		M491A	7178301011	SCREW TAPPTITE	TT2 WAS 3X10 MFZN	
M201A	7178301011	SCREW TAPPTITE	TT2 WAS 3X10 MFZN		M491B	7178301011	SCREW TAPPTITE	TT2 WAS 3X10 MFZN	
M211A	7172401612	SCREW TAPPTITE	TT2 TRS 4X16 MFZN BK		M722	4857252900	SHIELD COVER	SPTH-C T-0.3	
M211B	7002400812	SCREW MACHINE	TRS 4X8 MFZN BK		P12	4859236120	CONN WAFER	YAW025-04	
M211C	4855839502	DECO PLATE	PVC T0.5 (PANA)		P13	4859231620	CONN WAFER	YVW025-03	
M212	4852168911	COVER STAND BASE	FR HIPS GY		P4	485923172S	CONN WAFER	YVW025-04 (STICK)	
M212A	4855839911	DECO STNAD	ABS GY		PA10	4850706S26	CONNECTOR	12505HS-06+12505HS-06+ULW=500	
M213	4852168311	COVER HINGE FRONT	ABS GY		PA3	4850712S01	CONNECTOR	12505HS-12+12505HS-12+ULW=100	
M213A	7172401212	SCREW TAPPTITE	TT2 TRS 4X12 MFZNBK		PA6	4850714S01	CONNECTOR	12505HS-14+12505HS-14+ULW=180	
M214	4852168411	COVER HINGE BACK	ABS GY		PA8	4859004260	CABLE FFC	0.50P-40N-130L-T3	
M215	4852168511	COVER HINGE	ABS GY		PA9	4850705S17	CONNECTOR	12505HS-05+12505HS-05+ULW=270	
M321	4853219700	BRKT STAND	SECC T2.3		S3	5PX6897D—	FILTER SAW	X6897D	
M321A	7172401212	SCREW TAPPTITE	TT2 TRS 4X12 MFZNBK		SW1	5S50101Z90	SW TACT	THVV502GDA	
M351	4853536411	HOLDER SENSOR	ABS GY		SW2	5S50101Z90	SW TACT	THVV502GDA	
M381	4853821900	FRAME MAIN PCB	SECC T1.2 (LG)		SW3	5S50101Z90	SW TACT	THVV502GDA	
M381A	7008301411	SCREW MACHINE	M-WAS 3X14 MFZN		SW4	5S50101Z90	SW TACT	THVV502GDA	
M381B	7172401212	SCREW TAPPTITE	TT2 TRS 4X12 MFZNBK		SW5	5S40101009	SW PUSH	PS-22E06	
M381C	7008300611	SCREW MACHINE	WAS 3X6 MFZN		SW6	5S50101Z90	SW TACT	THVV502GDA	
M381D	7008300611	SCREW MACHINE	WAS 3X6 MFZN		TU1A	485A100970	SHIELDRON	40X30X6T	
M521	4855217000	PLATE BASE STAND	GI T2.3		TU2	4850A23840	ANT SHIELD BOX	PAXBFO1DA (PAL)	
M521A	4857942700	RUBBER	BK PHI 19X1.6T HRC 70-75		X1	5XJ20R25AE	CRYSTAL QUARTZ	HC-49/S 20.2500MHZ 16PF 30PPM	
M521B	7005400608	SCREW MACHINE	FLT 4X6 SUS		X4	5XJ14R31AE	CRYSTAL QUARTZ	HC-49/S 14.31818MHZ 30PPM	
M521C	7115400810	SCREW TAPPING	FLT 4X8 MFZN WHITE		X5	5XJ27R00AC	CRYSTAL QUARTZ	HC-49/S 27.000MHZ 13PF 20PPM	
M541	4855421500	SPEC PLATE	PS T0.3 149X59 (PANA)		ZZ200	PTMPJ2G096	PCB MAIN CHIP MOUNT B AS	DLP-20D4LHS	
M551	4855552800	DECO SENSOR	PC		C103	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
M551A	7178301011	SCREW TAPPTITE	TT2 WAS 3X10 MFZN		C104	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
M681	4856812001	TIE CABLE	NYLON66 DA100		C110	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
M721	4857252000	SHIELD CASE	SECC T1.2		C113	HCBK152KBA	C CHIP CERA	50V X7R 1500PF K 1608	
M721A	7178301011	SCREW TAPPTITE	TT2 WAS 3X10 MFZN		C117	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
M791	4857942400	SPONGE SPK	U-FORM		C12	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
V901	485LD03203	LCD PANEL	LC201V02-A3		C120	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
V902	4850M003NV	MODULE INVERTER	DS-1020WDL		C121	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
ZZ200	PTFMSJE069	MASK FRONT AS	DLP-20D4AHS		C122	HCBK152KBA	C CHIP CERA	50V X7R 1500PF K 1608	
M201	4852088411	MASK FRONT	ABS GY		C123	HCBK821KBA	C CHIP CERA	50V X7R 820PF K 1608	
M561	4855624700	MARK BRAND	PANA LCD 17INCH		C126	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
M771	4857743800	CUSION PANEL	PVC 400 X 10 T=1.0		C127	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
M772	4857743900	CUSION PANEL	PVC 300 X 10 T=1.0		C128	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
ZZ210	PTSPPWG096	SPEAKER AS	DLP-20D4LHS		C129	HCBK821KBA	C CHIP CERA	50V X7R 820PF K 1608	
M610A	4850704S50	CONNECTOR	YH025-04+YRT205+YRT110+ULW=900+200		C13	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
SP01	4858317110	SPEAKER	SP-5090N04		C130	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
SP02	4858317110	SPEAKER	SP-5090N04		C131	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
ZZ290	PTMPMSG096F	PCB MAIN MANUAL AS	DLP-20D4LHS	TX-20LB5F	C134	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
ZZ290	PTMPMSG096P	PCB MAIN MANUAL AS	DLP-20D4LHS	TX-20LB5P	C139	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
F001	5FWPS1022L	FUSE	WIDE TL 250V 1A CASE		C14	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
F002	5FWPS1022L	FUSE	WIDE TL 250V 1A CASE		C144	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	





## Service Part List

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
D13	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
D14	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
D17	DBAV70—B	DIODE CHIP	BAV70	
D2	DBAV70—B	DIODE CHIP	BAV70	
D21	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
D22	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
D23	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
D3	DZ02W6R2VA	DIODE CHIP ZENER	Z02W6.2V	
D38	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
D39	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
D40	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
D41	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
D42	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
D43	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
D45	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
D51	DZ02W6R2VA	DIODE CHIP ZENER	Z02W6.2V	
Q12	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q42	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q43	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
R1	HRFT155JBA	R CHIP	1/10 1.5M OHM J 1608	
R10	HRFT202JBA	R CHIP	1/10 2K OHM J 1608	
R100	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
R101	HRFT333JBA	R CHIP	1/10 33K OHM J 1608	
R102	HRFT133JBA	R CHIP	1/10 13K OHM J 1608	
R107	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
R110	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R112	HRFT470JBA	R CHIP	1/10 47 OHM J 1608	
R121	HRFT241JBA	R CHIP	1/10 240 OHM J 1608	
R122	HRFT241JBA	R CHIP	1/10 240 OHM J 1608	
R123	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R128	HRFT123JBA	R CHIP	1/10 12K OHM J 1608	
R130	HRFT242JBA	R CHIP	1/10 2.4K OHM J 1608	
R131	HRFT431JBA	R CHIP	1/10 430 OHM J 1608	
R132	HRFT132JBA	R CHIP	1/10 1.3K OHM J 1608	
R14	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R140	HRFT122JBA	R CHIP	1/10 1.2K OHM J 1608	
R141	HRFT122JBA	R CHIP	1/10 1.2K OHM J 1608	
R153	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R156	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R168	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R18	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R185	HRFT106JBA	R CHIP	1/10 10M OHM J 1608	
R186	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R189	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R204	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
R205	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
R206	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
R21	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R210	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R211	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R212	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R229	HRFT512JBA	R CHIP	1/10 5.1K OHM J 1608	
R230	HRFT682JBA	R CHIP	1/10 6.8K OHM J 1608	
R234	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R235	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R236	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R237	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R238	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R239	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R24	HRFT241JBA	R CHIP	1/10 240 OHM J 1608	
R243	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R244	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R245	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R246	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R247	HRFT272JBA	R CHIP	1/10 2.7K OHM J 1608	
R248	HRFT272JBA	R CHIP	1/10 2.7K OHM J 1608	
R249	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R25	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
R250	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R254	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R257	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R258	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R259	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R261	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R262	HRFT562JBA	R CHIP	1/10 5.6K OHM J 1608	
R263	HRFT562JBA	R CHIP	1/10 5.6K OHM J 1608	
R264	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R27	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R272	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R273	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R288	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
R289	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
R29	HRFT241JBA	R CHIP	1/10 240 OHM J 1608	
R292	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R293	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R295	HRFT272JBA	R CHIP	1/10 2.7K OHM J 1608	
R296	HRFT682JBA	R CHIP	1/10 6.8K OHM J 1608	
R298	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R30	HRFT202JBA	R CHIP	1/10 2K OHM J 1608	
R31	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R32	HRFT202JBA	R CHIP	1/10 2K OHM J 1608	
R33	HRFT241JBA	R CHIP	1/10 240 OHM J 1608	
R333	HRFT622JBA	R CHIP	1/10 6.2K OHM J 1608	
R335	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R336	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R337	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R338	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R339	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R34	HRFT393JBA	R CHIP	1/10 39K OHM J 1608	
R37	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R39	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
R4	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R40	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R41	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R42	HRFT511JBA	R CHIP	1/10 510 OHM J 1608	
R53	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R54	HRFT564JBA	R CHIP	1/10 560K OHM J 1608	
R59	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R60	HRFT392JBA	R CHIP	1/10 3.9K OHM J 1608	
R61	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R63	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R65	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R71	HRFT153JBA	R CHIP	1/10 15K OHM J 1608	
R72	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R74	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R78	HRFT560JBA	R CHIP	1/10 56 OHM J 1608	
R80	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
R82	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
R83	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
R88	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R90	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
R94	HRFT123JBA	R CHIP	1/10 12K OHM J 1608	
R96	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
ZZ200	PTMPJ0G096	PCB MAIN (RHU) AS	DLP-20D4LHS	
ZZ200	PTMPJBG096	PCB MAIN M-10 AS	DLP-20D4LHS	
ZZ200	PTMPJRG096	PCB MAIN RADIAL AS	DLP-20D4LHS	
ZZ200	PTMPJAG096	PCB MAIN AXIAL AS	DLP-20D4LHS	
ZZ200	PTMPJ1G096	PCB MAIN CHIP MOUNT A	DLP-20D4LHS	
A001	4859811593	PCB MAIN	270X234 G4V	
C1	HCELH471MD	C CHIP ELECTRO	25V 470MF CM 1010	
C10	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C100	HCELH471MD	C CHIP ELECTRO	25V 470MF CM 1010	
C102	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C105	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C108	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C114	HCELH100MC	C CHIP ELECTRO	25V 10MF CM 4052	

## Service Part List

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
C115	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C116	HCELF220MD	C CHIP ELECTRO	16V 22MF CM 4052	
C119	HCELF101MD	C CHIP ELECTRO	25V 100MF CM 8063	
C124	HCELF221ME	C CHIP ELECTRO	25V 220MF CM 8010	
C125	HCELC102ME	C CHIP ELECTRO	6.3V 1000MF CM 8010	
C132	HCELF220MC	C CHIP ELECTRO	50V 22MF CM 6353	
C133	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C138	HCELF479MC	C CHIP ELECTRO	50V 4.7MF CM 4052	
C140	HCELF479MC	C CHIP ELECTRO	50V 4.7MF CM 4052	
C141	HCELF220MD	C CHIP ELECTRO	16V 22MF CM 4052	
C145	HCELF101MD	C CHIP ELECTRO	25V 100MF CM 8063	
C146	HCBK103KBA	C CHIP CERA	50V X7R 0.01MF K 1608	
C15	HCELF471ME	C CHIP ELECTRO	16V 470MF CM 8010	
C155	HCELC102ME	C CHIP ELECTRO	6.3V 1000MF CM 8010	
C156	HCELC102ME	C CHIP ELECTRO	6.3V 1000MF CM 8010	
C164	HCQK221JBA	C CHIP CERA	50V CH 220PF J 1608	
C168	HCBK103KBA	C CHIP CERA	50V X7R 0.01MF K 1608	
C170	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C173	HCELF470MC	C CHIP ELECTRO	16V 47MF CM 5053	
C178	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C179	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C180	HCBK102KBA	C CHIP CERA	50V X7R 1000PF K 1608	
C181	HCBK102KBA	C CHIP CERA	50V X7R 1000PF K 1608	
C182	HCELF220MD	C CHIP ELECTRO	16V 22MF CM 4052	
C184	HCELF220MD	C CHIP ELECTRO	16V 22MF CM 4052	
C186	HCQK221JBA	C CHIP CERA	50V CH 220PF J 1608	
C187	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C188	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C203	HCELF479MC	C CHIP ELECTRO	50V 4.7MF CM 4052	
C204	HCELF471MD	C CHIP ELECTRO	25V 470MF CM 1010	
C206	HCELF101MD	C CHIP ELECTRO	25V 100MF CM 8063	
C209	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C21	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C212	HCELF101MD	C CHIP ELECTRO	25V 100MF CM 8063	
C213	HCELF471ME	C CHIP ELECTRO	16V 470MF CM 8010	
C214	HCELF470MC	C CHIP ELECTRO	16V 47MF CM 5053	
C216	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C217	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C219	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C22	HCELC102ME	C CHIP ELECTRO	6.3V 1000MF CM 8010	
C220	HCELF220MD	C CHIP ELECTRO	16V 22MF CM 4052	
C226	HCBK102KBA	C CHIP CERA	50V X7R 1000PF K 1608	
C227	HCBK102KBA	C CHIP CERA	50V X7R 1000PF K 1608	
C23	HCELC102ME	C CHIP ELECTRO	6.3V 1000MF CM 8010	
C231	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C239	HCELF220MD	C CHIP ELECTRO	16V 22MF CM 4052	
C25	HCELF220MD	C CHIP ELECTRO	16V 22MF CM 4052	
C250	HCELF220MD	C CHIP ELECTRO	16V 22MF CM 4052	
C253	HCELF101MD	C CHIP ELECTRO	25V 100MF CM 8063	
C256	HCELF101MD	C CHIP ELECTRO	25V 100MF CM 8063	
C260	HCELF470MC	C CHIP ELECTRO	16V 47MF CM 5053	
C261	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C267	HCELF220MD	C CHIP ELECTRO	16V 22MF CM 4052	
C273	HCELF220MD	C CHIP ELECTRO	16V 22MF CM 4052	
C275	HCELC102ME	C CHIP ELECTRO	6.3V 1000MF CM 8010	
C281	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C282	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C283	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C287	HCELF470MC	C CHIP ELECTRO	16V 47MF CM 5053	
C288	HCELF220MD	C CHIP ELECTRO	16V 22MF CM 4052	
C289	HCELF100MC	C CHIP ELECTRO	25V 10MF CM 4052	
C29	HCELF101MD	C CHIP ELECTRO	25V 100MF CM 8063	
C291	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C294	HCELF220MD	C CHIP ELECTRO	16V 22MF CM 4052	
C298	HCELF221ME	C CHIP ELECTRO	25V 220MF CM 8010	
C299	HCELF221ME	C CHIP ELECTRO	25V 220MF CM 8010	
C30	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C300	HCELF471ME	C CHIP ELECTRO	16V 470MF CM 8010	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
C301	HCELF471ME	C CHIP ELECTRO	16V 470MF CM 8010	
C303	HCELF100MC	C CHIP ELECTRO	25V 10MF CM 4052	
C304	HCELF100MC	C CHIP ELECTRO	25V 10MF CM 4052	
C305	HCELF100MC	C CHIP ELECTRO	25V 10MF CM 4052	
C306	HCELF100MC	C CHIP ELECTRO	25V 10MF CM 4052	
C307	HCELF100MC	C CHIP ELECTRO	25V 10MF CM 4052	
C309	HCELF100MC	C CHIP ELECTRO	25V 10MF CM 4052	
C314	HCELF479MC	C CHIP ELECTRO	50V 4.7MF CM 4052	
C315	HCELF101MD	C CHIP ELECTRO	25V 100MF CM 8063	
C316	HCELF101MD	C CHIP ELECTRO	25V 100MF CM 8063	
C317	HCELF220MD	C CHIP ELECTRO	16V 22MF CM 4052	
C319	HCELF220MD	C CHIP ELECTRO	16V 22MF CM 4052	
C320	HCELF101MD	C CHIP ELECTRO	25V 100MF CM 8063	
C321	HCELF220MD	C CHIP ELECTRO	16V 22MF CM 4052	
C322	HCELF101MD	C CHIP ELECTRO	25V 100MF CM 8063	
C323	HCELF220MD	C CHIP ELECTRO	16V 22MF CM 4052	
C331	HCELF100MC	C CHIP ELECTRO	25V 10MF CM 4052	
C332	HCELF470MC	C CHIP ELECTRO	16V 47MF CM 5053	
C335	HCELF471ME	C CHIP ELECTRO	16V 470MF CM 8010	
C336	HCELF220MD	C CHIP ELECTRO	16V 22MF CM 4052	
C337	HCELF101MD	C CHIP ELECTRO	25V 100MF CM 8063	
C338	HCELC102ME	C CHIP ELECTRO	6.3V 1000MF CM 8010	
C339	HCELF220MC	C CHIP ELECTRO	50V 22MF CM 6353	
C349	HCELF470MC	C CHIP ELECTRO	16V 47MF CM 5053	
C353	HCELF100MC	C CHIP ELECTRO	25V 10MF CM 4052	
C356	HCELF100MC	C CHIP ELECTRO	25V 10MF CM 4052	
C357	HCELF470MC	C CHIP ELECTRO	16V 47MF CM 5053	
C358	HCELF470MC	C CHIP ELECTRO	16V 47MF CM 5053	
C36	HCELF471ME	C CHIP ELECTRO	16V 470MF CM 8010	
C37	HCBK473KBA	C CHIP CERA	50V X7R 0.047MF K 1608	
C38	HCBK473KBA	C CHIP CERA	50V X7R 0.047MF K 1608	
C39	HCQK331JBA	C CHIP CERA	50V CH 330PF J 1608	
C40	HCQK331JBA	C CHIP CERA	50V CH 330PF J 1608	
C41	HCELF101MD	C CHIP ELECTRO	25V 100MF CM 8063	
C48	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C5	HCELF471MD	C CHIP ELECTRO	25V 470MF CM 1010	
C52	HCELF221ME	C CHIP ELECTRO	25V 220MF CM 8010	
C61	HCQK221JBA	C CHIP CERA	50V CH 220PF J 1608	
C65	HCBK102KBA	C CHIP CERA	50V X7R 1000PF K 1608	
C66	HCBK473KBA	C CHIP CERA	50V X7R 0.047MF K 1608	
C68	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C69	HCELF100MC	C CHIP ELECTRO	25V 10MF CM 4052	
C72	HCELF100MC	C CHIP ELECTRO	25V 10MF CM 4052	
C78	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C83	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C84	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C91	HCELF221ME	C CHIP ELECTRO	25V 220MF CM 8010	
C93	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C94	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C95	HCELF479MC	C CHIP ELECTRO	50V 4.7MF CM 4052	
C96	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C98	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C99	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
D15	DM2FM3—C	DIODE CHIP SCHOTTKY	M2FM3 M2F TYPE	
D16	DBAV99ML-B	DIODE CHIP	BAV99ML	
D25	DBAV99ML-B	DIODE CHIP	BAV99ML	
D27	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
D28	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
D29	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
D30	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
D31	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
D34	DBAV99ML-B	DIODE CHIP	BAV99ML	
D50	DM2FM3—C	DIODE CHIP SCHOTTKY	M2FM3 M2F TYPE	
IC1	1A1117E33D	IC CHIP REGULATOR	AP1117E33A 3.3V 2% SOT-223	
IC10	1A1117E33D	IC CHIP REGULATOR	AP1117E33A 3.3V 2% SOT-223	
IC11	1VF800A70Q	IC CHIP FLASH	SST39VF800A-70 4C-EK TRAY	
IC13	1PW11310LQ	IC CHIP IMAGE PROCESSOR	PW113-10QL	
IC14	1S18033SDE	IC CHIP SW REG	SI-8033SD 3.0A 3.3V 60KHZ 5PIN	

## Service Part List

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
IC15	1A1117E18D	IC CHIP REGULATOR	AP1117E18A 1.8V 2% SOT-223	
IC16	19883C110Q	IC CHIP ADC	MST9883CR-110 MSPS	
IC18	1LM317BD2E	IC CHIP REGULATOR	LM317BD2T ADJ 1.2V 37V 1.5A D2PAK	
IC19	1A1117EA-D	IC CHIP REGULATOR	AP1117EA ADJ 2% SOT-223	
IC20	1S18050SDE	IC CHIP SW REG	SI-8050SD 3.0A 5.0V 60KHZ 5PIN	
IC21	1A1117E18D	IC CHIP REGULATOR	AP1117E18A 1.8V 2% SOT-223	
IC22	1MD1N150LQ	IC CHIP HD DEINTERLACER	MDIN-150L	
IC23	12S32200BQ	IC CHIP	IS42S32200B-6T	
IC24	1LM317BD2E	IC CHIP REGULATOR	LM317BD2T ADJ 1.2V 37V 1.5A D2PAK	
IC25	1LM317BD2E	IC CHIP REGULATOR	LM317BD2T ADJ 1.2V 37V 1.5A D2PAK	
IC26	1CXA1315MD	IC CHIP D/A	CXA1315M	
IC27	1LM317BD2E	IC CHIP REGULATOR	LM317BD2T ADJ 1.2V 37V 1.5A D2PAK	
IC35	1BA6161F-C	IC CHIP SW REG	BA6161F 30-35V 100KHZ SOP8 REEL	
IC38	124LC16BTC	IC CHIP EEPROM	24LC16BT-I/SN 16K 8 PIN SOIC REEL	
IC39	TFDS4953-C	FET CHIP	FDS4953 SO-8 -30V -5A REEL	
IC4	1K1A358F-C	IC CHIP OP AMP	KIA358F DUAL OP AMP FLP-8	
IC6	1A1117E33D	IC CHIP REGULATOR	AP1117E33A 3.3V 2% SOT-223	
IC7	1K1A7027TB	IC CHIP RESET	KIA7027AT 2.7V TSM TYPE	
IC8	TFDS4953-C	FET CHIP	FDS4953 SO-8 -30V -5A REEL	
L1	HLC569K00A	L CHIP COIL	5.6UH MLF2012E	
L10	HLC100K02A	L CHIP COIL	10UH MLF 2012	
L12	HLC100K02A	L CHIP COIL	10UH MLF 2012	
L14	HFFMMZ400A	F CHIP FERRITE BEAD	40 OHM MMZ 2012S	
L15	HLC472M01D	L CHIP COIL	4.7MH M SLF7045	
L17	HLC569K00A	L CHIP COIL	5.6UH MLF2012E	
L19	HFFMMZ400A	F CHIP FERRITE BEAD	40 OHM MMZ 2012S	
L2	HLC101K01C	L CHIP COIL	100UH K NLC5650T	
L23	HLC569K00A	L CHIP COIL	5.6UH MLF2012E	
L24	HLC100K02A	L CHIP COIL	10UH MLF 2012	
L25	HLC569K00A	L CHIP COIL	5.6UH MLF2012E	
L26	HLC479J00A	L CHIP COIL	4.7UH MLF2012	
L27	HLC151K01E	L CHIP COIL	150UH K 120120	
L28	HLC100K02A	L CHIP COIL	10UH MLF 2012	
L3	HLC100K03B	L CHIP COIL	10UH K NLCV25T-PF	
L30	HLC100K03B	L CHIP COIL	10UH K NLCV25T-PF	
L31	HLC479J00A	L CHIP COIL	4.7UH MLF2012	
L32	HLC189K00A	L CHIP COIL	1.8UH K MLF 2012	
L33	HLC100K03B	L CHIP COIL	10UH K NLCV25T-PF	
L45	HLC569K00A	L CHIP COIL	5.6UH MLF2012E	
L47	HFFMMZ400A	F CHIP FERRITE BEAD	40 OHM MMZ 2012S	
L49	HFFMMZ400A	F CHIP FERRITE BEAD	40 OHM MMZ 2012S	
L5	HFFMMZ400A	F CHIP FERRITE BEAD	40 OHM MMZ 2012S	
L50	HFFMMZ301A	F CHIP FERRITE BEAD	300 OHM MMZ 2012Y	
L51	HFFMMZ301A	F CHIP FERRITE BEAD	300 OHM MMZ 2012Y	
L52	HFFMMZ301A	F CHIP FERRITE BEAD	300 OHM MMZ 2012Y	
L53	HFFMMZ301A	F CHIP FERRITE BEAD	300 OHM MMZ 2012Y	
L54	HLC151K01E	L CHIP COIL	150UH K 120120	
L55	HFFMMZ400A	F CHIP FERRITE BEAD	40 OHM MMZ 2012S	
L56	HFEACF470B	F CHIP EMI	ACF321825 47P	
L6	HFFMMZ400A	F CHIP FERRITE BEAD	40 OHM MMZ 2012S	
L61	HFEACF470B	F CHIP EMI	ACF321825 47P	
L62	HFEACF470B	F CHIP EMI	ACF321825 47P	
L63	HFEACF471C	F CHIP LC	ACF321825-471	
L64	HFEACF471C	F CHIP LC	ACF321825-471	
L65	HFFMMZ400A	F CHIP FERRITE BEAD	40 OHM MMZ 2012S	
L66	HFFMMZ400A	F CHIP FERRITE BEAD	40 OHM MMZ 2012S	
L67	HFFMMZ400A	F CHIP FERRITE BEAD	40 OHM MMZ 2012S	
L7	HFEACF470B	F CHIP EMI	ACF321825 47P	
L71	HLC479K03C	L CHIP COIL	4.7UH K NLC5650T	
L72	HLC189K00A	L CHIP COIL	1.8UH K MLF 2012	
L73	HLC100K03B	L CHIP COIL	10UH K NLCV25T-PF	
L74	HLC479K03C	L CHIP COIL	4.7UH K NLC5650T	
L75	HFFMMZ400A	F CHIP FERRITE BEAD	40 OHM MMZ 2012S	
L76	HFFMMZ400A	F CHIP FERRITE BEAD	40 OHM MMZ 2012S	
L77	HLC479M02D	L CHIP COIL	4.7UH M SLF0628	
L82	HLB300M04A	L CHIP BEAD	30 OHM MPZ 2012	
L83	HLB300M04A	L CHIP BEAD	30 OHM MPZ 2012	
L9	HFFMMZ202A	F CHIP FERRITE BEAD	2000 OHM MMZ 2012Y	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
LP1	HFRMZA600A	F CHIP BEAD ARRAY	60 OHM MZA 3216Y	
LP2	HFRMZA600A	F CHIP BEAD ARRAY	60 OHM MZA 3216Y	
LP3	HFRMZA600A	F CHIP BEAD ARRAY	60 OHM MZA 3216Y	
LP4	HFRMZA600A	F CHIP BEAD ARRAY	60 OHM MZA 3216Y	
LP5	HFRMZA600A	F CHIP BEAD ARRAY	60 OHM MZA 3216Y	
LP6	HFRMZA600A	F CHIP BEAD ARRAY	60 OHM MZA 3216Y	
P1	4859200970	CONN WAFER SMD	DF9B-41S-1V SMD	
P10	49590001S0	CONN WAFER	12505WR-06A00	
P10A	49590001S0	CONN WAFER	12505WR-06A00	
P2	4859200870	CONN WAFER FFC	05003HR-40B01	
P3	49590004S0	CONN WAFER	12505WR-12(SMD)	
P5	4859200870	CONN WAFER FFC	05003HR-40B01	
P6	4859294420	CONN WAFER	12505WR-14(SMD)	
P6A	4859294420	CONN WAFER	12505WR-14(SMD)	
P9	49590009S0	CONN WAFER	12505WR-05A00	
P9A	49590009S0	CONN WAFER	12505WR-05A00	
Q1	T2N7002M-B	FET CHIP	2N7002MTF SOT-23 60V 0.2A	
Q10	T2SA1037KB	TR CHIP	2SA1037AKT146-R	
Q11	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q13	T2SA1037KB	TR CHIP	2SA1037AKT146-R	
Q14	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q15	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q16	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q17	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q2	T2N7002M-B	FET CHIP	2N7002MTF SOT-23 60V 0.2A	
Q21	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q23	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q24	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q25	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q26	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q27	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q3	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q4	T2SA1037KB	TR CHIP	2SA1037AKT146-R	
Q5	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q6	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q7	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q8	T2SA1037KB	TR CHIP	2SA1037AKT146-R	
Q9	T2SA1037KB	TR CHIP	2SA1037AKT146-R	
R103	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R104	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R106	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R11	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R111	HRFT470JBA	R CHIP	1/10 47 OHM J 1608	
R114	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R115	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R116	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R117	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R118	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R119	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R12	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R124	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
R125	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R126	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R127	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R135	HRFT562JBA	R CHIP	1/10 5.6K OHM J 1608	
R143	HRFT470JBA	R CHIP	1/10 47 OHM J 1608	
R144	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R145	HRFT331JBA	R CHIP	1/10 330 OHM J 1608	
R147	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R149	HRFT331JBA	R CHIP	1/10 330 OHM J 1608	
R15	HRFT330JBA	R CHIP	1/10 33 OHM J 1608	
R150	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R151	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R152	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R155	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R157	HRFT331JBA	R CHIP	1/10 330 OHM J 1608	
R16	HRFT151JBA	R CHIP	1/10 150 OHM J 1608	
R160	HRFT000-BA	R CHIP	1/10 0 OHM 1608	

## Service Part List

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
R161	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R163	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R165	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R166	HRFT331JBA	R CHIP	1/10 330 OHM J 1608	
R169	HRFT751JBA	R CHIP	1/10 750 OHM J 1608	
R17	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R170	HRFT511JBA	R CHIP	1/10 510 OHM J 1608	
R171	HRFT752JBA	R CHIP	1/10 7.5K OHM J 1608	
R172	HRFT431JBA	R CHIP	1/10 430 OHM J 1608	
R174	HRFT752JBA	R CHIP	1/10 7.5K OHM J 1608	
R175	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R176	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R177	HRFT822JBA	R CHIP	1/10 8.2K OHM J 1608	
R178	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R179	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R180	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R181	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R188	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R19	HRFT272JBA	R CHIP	1/10 2.7K OHM J 1608	
R190	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R191	HRFT331JBA	R CHIP	1/10 330 OHM J 1608	
R192	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R193	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R194	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R195	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R197	HRFT750JBA	R CHIP	1/10 750 OHM J 1608	
R2	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R207	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
R208	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
R209	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R214	HRFT220JBA	R CHIP	1/10 22 OHM J 1608	
R215	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R216	HRFT122JBA	R CHIP	1/10 1.2K OHM J 1608	
R217	HRFT220JBA	R CHIP	1/10 22 OHM J 1608	
R219	HRFT122JBA	R CHIP	1/10 1.2K OHM J 1608	
R22	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R220	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R227	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R23	HRFT122JBA	R CHIP	1/10 1.2K OHM J 1608	
R231	HRFT470JBA	R CHIP	1/10 47 OHM J 1608	
R232	HRFT470JBA	R CHIP	1/10 47 OHM J 1608	
R233	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R240	HRFT222JBA	R CHIP	1/10 2.2K OHM J 1608	
R255	HRFT750JBA	R CHIP	1/10 750 OHM J 1608	
R26	HRFT220JBA	R CHIP	1/10 22 OHM J 1608	
R260	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R265	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R266	HRFT220JBA	R CHIP	1/10 22 OHM J 1608	
R268	HRFT122JBA	R CHIP	1/10 1.2K OHM J 1608	
R269	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R270	HRFT750JBA	R CHIP	1/10 750 OHM J 1608	
R271	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R278	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R28	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R290	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R294	HRFT123JBA	R CHIP	1/10 12K OHM J 1608	
R297	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R3	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R302	HRFT224JBA	R CHIP	1/10 220K OHM J 1608	
R303	HRFT224JBA	R CHIP	1/10 220K OHM J 1608	
R340	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R38	HRFT122JBA	R CHIP	1/10 1.2K OHM J 1608	
R43	HRFT151JBA	R CHIP	1/10 150 OHM J 1608	
R44	HRFT330JBA	R CHIP	1/10 33 OHM J 1608	
R45	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R46	HRFT271JBA	R CHIP	1/10 270 OHM J 1608	
R47	HRFT752JBA	R CHIP	1/10 7.5K OHM J 1608	
R48	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
R50	HRFT151JBA	R CHIP	1/10 150 OHM J 1608	
R51	HRFT330JBA	R CHIP	1/10 33 OHM J 1608	
R52	HRFT271JBA	R CHIP	1/10 270 OHM J 1608	
R55	HRFT750JBA	R CHIP	1/10 750 OHM J 1608	
R6	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R62	HRFT470JBA	R CHIP	1/10 47 OHM J 1608	
R64	HRFT470JBA	R CHIP	1/10 47 OHM J 1608	
R66	HRFT470JBA	R CHIP	1/10 47 OHM J 1608	
R7	HRFT000JBA	R CHIP	1/10 0 OHM J 1608	
R70	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R73	HRFT272JBA	R CHIP	1/10 2.7K OHM J 1608	
R75	HRFT470JBA	R CHIP	1/10 47 OHM J 1608	
R76	HRFT470JBA	R CHIP	1/10 47 OHM J 1608	
R77	HRFT470JBA	R CHIP	1/10 47 OHM J 1608	
R8	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R81	HRFT562JBA	R CHIP	1/10 5.6K OHM J 1608	
R84	HRFT391JBA	R CHIP	1/10 390 OHM J 1608	
R85	HRFT122JBA	R CHIP	1/10 1.2K OHM J 1608	
R86	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R87	HRFT122JBA	R CHIP	1/10 1.2K OHM J 1608	
R9	HRFT271JBA	R CHIP	1/10 270 OHM J 1608	
R92	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R93	HRFT752JBA	R CHIP	1/10 7.5K OHM J 1608	
R97	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R98	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RP1	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP17	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP18	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP19	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP2	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP20	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP21	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP22	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP23	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP24	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP25	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP26	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP27	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP28	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP29	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP3	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP30	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP31	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP32	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP33	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP34	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP35	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP36	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP37	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
RP4	HRTS8E151J	R CHIP ARRAY	1/16 8P 150 OHM 3216	
ZZ201	PT1FMSG096	PCB IF MANUAL AS	DLP-20D4LHS	
A001	4859801412	PCB IF	55X17.5(246X246/3X9)T1.6 D1B	
P701	4859297420	CONN WAFER(PIN HEADER)	4603-12MH1D-1	
TU1	4859724930	TUNER VARACTOR	UV1316/A1-4	