

COLOR TFT-LCD TV SERVICE MANUAL

MODEL : 26M911

CAUTION !!

BEFORE SERVICING THE TFT-LCD TV,
READ THE SAFETY PRECAUTIONS IN THIS MANUAL.



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SAFETY PRECAUTIONS

!! Important Safety Notice !!

Many electrical and mechanical parts in this chassis have special safety-related characteristics.

These parts are identified by in the Schematic Diagram and Replacement Parts List.

It is essential that these special safety parts should be replaced with the same components as recommended in this manual to prevent Shock, Fire, or other Hazards.

Do not modify the original design without permission of manufacturer.

Leakage Current Hot Check (See below Figure)

Plug the AC cord directly into the AC outlet.

Do not use a line Isolation Transformer during this check.

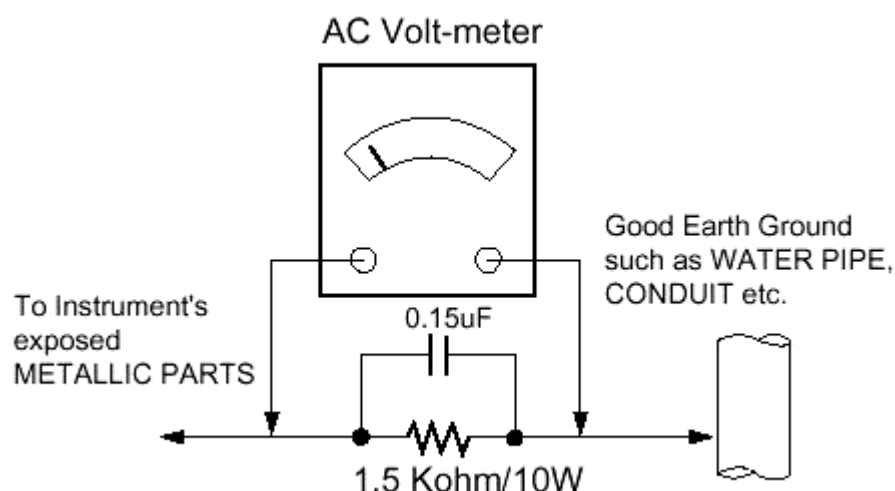
Connect 1.5K/10watt resistor in parallel with a 0.15uF capacitor between a known good earth ground (Water Pipe, Conduit, etc.) and the exposed metallic parts.

Measure the AC voltage across the resistor using AC voltmeter with 1000 ohms/volt or more sensitivity.

Reverse plug of the AC cord into the AC outlet and repeat AC voltage measurements for each exposed metallic part. Any voltage measured must not exceed 0.75 volt RMS, which is, corresponds to 0.5mA.

In case any measurement is out of the limits specified, there is possibility of shock hazard and the set must be checked and repaired before it is returned to the customer.

Leakage Current Hot Check circuit



SERVICING PRECAUTIONS

CAUTION!!

Before servicing receivers covered by this service manual, read and follow the SAFETY PRECAUTIONS on page 2 of this publication.

General Servicing Precautions

1. Always unplug the receiver AC power cord from AC power source before;
Removing or reinstalling any component, circuit board module or any other receiver assembly.
Disconnecting or reconnecting any receiver electrical plug or other electrical connection.
Connecting a test substitute in parallel with an electrolytic capacitor in the receiver.
- CAUTION!!** A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
2. Do not spray chemicals on or near this receiver or any of its assemblies.
3. Do not defect any plug/socket voltage interlocks with which receivers covered by this service manual might be equipped.
4. Always connect the test receiver ground lead to the receiver chassis ground before connecting the test receiver positive lead. Always remove the test receiver ground lead last.
5. Do not connect the test fixture ground strap to power supply heatsink in this receiver

Electrostatically Sensitive(ES) Devices

Some semiconductor(solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive(ES) Device. Examples

Circuit Board Foil Repair

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board causing the foil to separate from or "lift-off" the board. The following guidelines and procedures should be followed whenever this condition is encountered.

At IC Connections

To repair a defective copper pattern at IC connections use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections.)

1. Carefully remove the damaged copper pattern with a sharp knife.
(Remove only as much copper as absolutely necessary.)
2. Carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.
3. Bend a small "U" in one end of a small gauge jumper wire and carefully crimp it around the IC pin.
4. Route the jumper wire along the path of the out-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area and clip off any excess jumper wire.

SPECIFICATIONS

Note: Specifications and others are subject to change without notice for improvement.

1.Scope.

This document is the specification of 26" TFT-LCD Color TV.

2.Power

1) Power requirement

DC 24V / 6A

2) AC / DC Adapter.

Input Frequency : 50/60Hz

Input Voltage: AC 100V AC 240V

Output Voltage: DC 24V

3) Power cord

Use UL listed and CSA certified detachable power cord type; SVT, 3-conductors, 18AWG

For AC 120V area. Use VDE listed detachable power cord type; HO5VV-F, 3-conductors, 18AWG for AC 220 240V area.

3.Tuning system

FVS 100 Program

4.Sound output

10W+10Wrms Stereo (Max)

5.Antenna input impedance

VHF / UHF at 75ohm

6.OSD Type (On Screen Display)

Windows type (Center)

7.External in/output

PC ANALOG INPUT, PC DIGITAL INPUT, PC AUDIO INPUT, HEADPHONE OUTPUT, SCART 1(FULL), SCART 2(HALF), S-VIDEO INPUT, S-VIDEO AUDIO INPUT, TUNER

8. Function

CATV/Hyper band

Auto Program

Manual Program

Auto Sleep

Quick view

ACMS(Auto channel Memory System)

PSM(Picture Status memory)

SSM(Sound Status memory)

PIP : PC ANALOG, PC DIGITAL(Main) – Tuner, SCART 1, SCART 2, S-Video(Sub)

ARC(ASPECT RATIO CONTROL)

SPECIFICATIONS

9.Receiving RF TV system

NO	Model System	26M911	/	/
1	PAL-B	○	/	/
2	PAL-G	○	/	/
3	PAL-I, I /I	○	/	/
4	PAL-D	○	/	/
5	PAL-K	○	/	/
6	SECAM-B	○	/	/
7	SECAM-G	○	/	/
8	SECAM-D	○	/	/
9	SECAM-K	○	/	/
10	SECAM-K1	○	/	/
11	SECAM-I (6.0)	○	/	/
12	NTSC-3.58 / 4.5	X	/	/
13	NTSC-3.58 / 5.5	X	/	/
14	NTSC-3.58 / 6.0	X	/	/
15	NTSC-3.58 / 6.5	X	/	/
16	NTSC-3.58 / 4.5(5.0)	X	/	/
17	NTSC-4.43 / 5.5	X	/	/
18	NTSC-4.43 / 6.0	X	/	/
19	NTSC-4.43 / 6.5	X	/	/
20	PAL 5.5 / 60Hz	○	/	/
21	PAL 6.0 / 60Hz	○	/	/
22	PAL 6.5 / 60Hz	○	/	/
23	SECAM 5.5 / 60Hz	○	/	/
24	SECAM 6.0 / 60Hz	○	/	/
25	SECAM 6.5 / 60Hz	○	/	/
26	SECAM L / L'	○	/	/
	TOTAL SYSTEM	18	/	/

SPECIFICATIONS

10. PC Mode Scan Frequency & Timing

1) Scan Freq: H: 31 56 kHz / V: 56 75Hz

2) Preset Timing Chart

Mode	Resolution	Horizontal frequency(KHz)	Vertical frequency(Hz)
VGA	640 x 480	37.9 KHz	72 Hz
	640 x 480	37.5 KHz	75 Hz
	720 x 400	31.4 KHz	70 Hz
SVGA	800 x 600	35.1 KHz	56 Hz
	800 x 600	37.9 KHz	60 Hz
	800 x 600	48.1 KHz	72 Hz
	800 x 600	46.9 KHz	75 Hz
XGA	1024 x 768	48.4 KHz	60 Hz
	1024 x 768	56.5 KHz	70 Hz
	1024 x 768	60.0 KHz	75 Hz
WXGA	1280 x 768	47.4 KHz	60Hz RB
	1280 x 768	47.8 KHz	60 Hz
	1280 x 768	60.3 KHz	75 Hz
DTV	720 x 480p	31.5 KHz	60 Hz
	720 x 576p	31.2 KHz	50 Hz
	1280 x 720p	45.0 KHz	60 Hz
	1280 x 720p	37.5 KHz	50 Hz
	1920 x 1080i	33.7 KHz	60 Hz
	1920 x 1080i	28.1 KHz	50 Hz

Note!! :

If the set is cold, there may be a small “flicker” when the set is switched on. This is Normal, there is nothing wrong with the set.

If possible, use the XGA 1024 x 768@60HZ video mode to obtain the best image quality for your LCD monitor. If used under the other resolutions, some scaled or processed pictures may appear on the screen.

Some dot defects may appear on the screen, like Red, Green or Blue spot. However, this will have no impact or effect on the monitor performance.

SPECIFICATIONS

11. TFT – LCD Panel Character

Description

LTA260W2-L01 is a color active matrix TFT(Thin Film Transistor) liquid crystal display(LCD) that uses amorphous silicon TFTs as a switching devices. This model is composed of a TFT LCD panel, a driver circuit and a back-light system. The resolution of a 26.0" contains 1366 X 768 pixels and can display up to 16.7 million colors with wide viewing angle of 85 ° or higher in all directions.

Features

- High contrast ratio, high aperture structure
- SPVA(Super Patterned Vertical Align) mode
- Wide viewing angle($\pm 170^\circ$)
- High speed response
- WXGA(1366 X 768 pixels) resolution(16:9)
- Low Power consumption
- 8 U-Type CCFL(Cold Cathode Fluorescent Lamp)
- DE only mode
- LVDS(Low-Voltage Differential Signal) interface.(1pixel/clock)

Applications

- Home-alone Multimedia TFT-LCD TV
- Display terminals for AV applications products
- High Definition TV(HD TV)

● Feature

Size	26.0 inches
Driver element	a-si TFT Active Matrix
Display area	575.77mm(H) X 323.71mm(V)
Display colors	16.7M(8bit-true)
Number of Pixels	1366 X 768 Pixel(16:9)
Pixel arrangement	RGB Vertical Stripe
Pixel Pitch	0.51075mm (H) x 0.51075mm(W)
Display mode	Normally Black
Surface treatment	Haze 44%, Hard-Coating(3H)

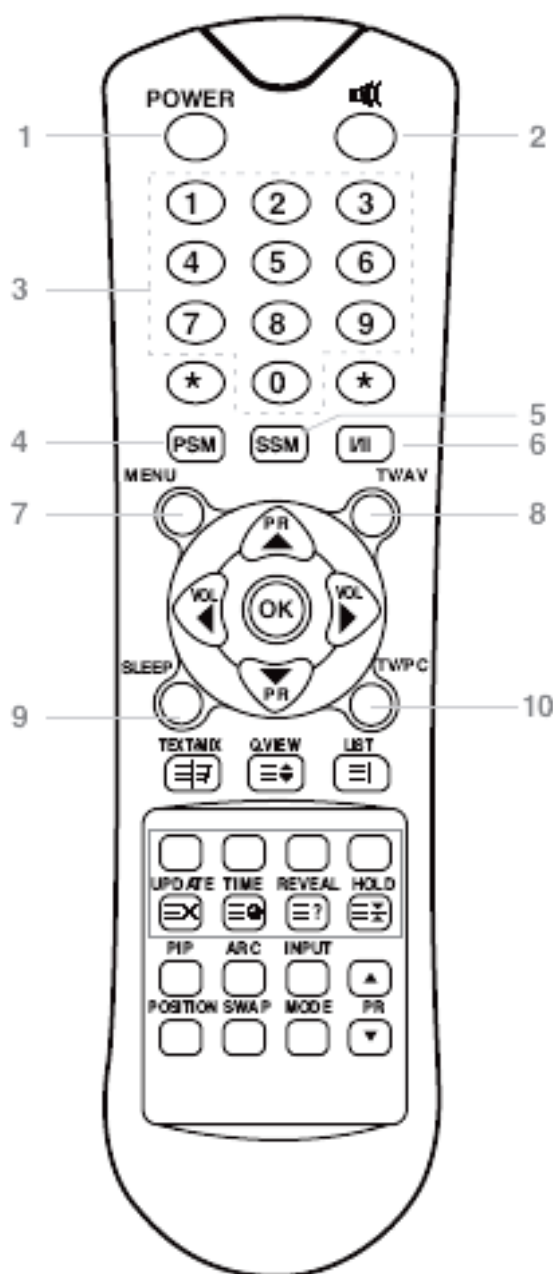
LOCATION OF CONTROL

All the function can be controlled with the remote controller.

Some functions can also adjusted with the buttons on the controls on the TV front panel.

1-1. Remote controller

Note !! : Before you use the remote controller, please install the batteries.



1.POWER:

Turns the TV on from standby or off to standby mode.

2.MUTE:

Turns the sound on and off

3.NUMBER buttons:

Select channel numbers.

4.PSM (Picture Status Memory):

Recalls your preferred picture setting.

5.SSM (Sound Status Memory):

Recalls your preferred sound setting.

6. I / II:

Selects the language during dual language broadcast. / Selects the sound output.

7.MENU:

Displays a main menu.

8.TV / AV:

Selects input signal source.

/ Clears the menu from the screen.

9.SLEEP:

Sets the sleep timer.

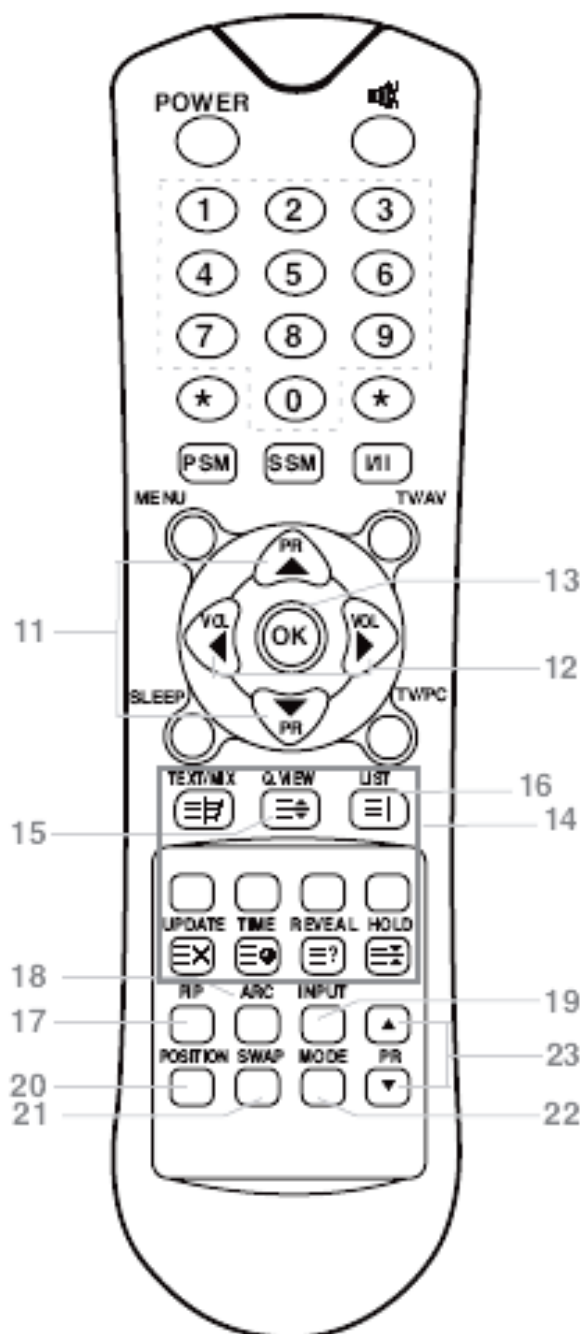
10.TV / PC :

Selects TV or PC mode directly.

LOCATION OF CONTROL

1-2. Remote controller

Note !! : Before you use the remote controller, please install the batteries.



11.PR ▲ ▼ (Programme Up/Down):

Selects a next programme or a menu item.

12.VOL (Volume Up/Down):

Adjusts the sound level or a menu Setting.

13.OK

Accepts your selection or displays the current mode.

14. TELETEXT Buttons:

These buttons are used for TELETEXT. For further details, see the TELETEXT Selection.

15. Q.VIEW

Returns to the previously viewed Programme

Note: TELETEXT mode.

The **Q.VIEW** button is used for TELETEXT function.

16. LIST

Displays the program list menu.

17. PIP

Display a PIP (Picture In Picture) screen.

18. ARC

Selects a screen mode – 16:9, 14:9, ZOOM, 1:1 and auto Wide.

19. INPUT

Selects the AV source of sub picture in PIP mode.

20. POSITION

Selects a position of PIP screen.

21. SWAP

Switches a main picture for sub picture in PIP mode.

22. MODE

Selects a PIP screen mode – Small, Middle, Large

23.▲ PR ▼

Selects a programme when RF signal is displayed in PIP mode.

LOCATION OF CONTROL

1-3. Controller of Panel

< SIDE VIEW >



1.ON/OFF:

Switches TV set on or off.

2.MENU:

Display a menu.

3.+ PR - (Programme Up/Down):

Selects a programme or a menu item.

4.+ VOL -(Volume Up/Down):

Adjusts the volume.

Adjusts menu settings.

5.TV/AV:

Selects input signal source.

Clears the menu from the screen.

6:POWER INDICATOR:

Illuminates red when the TV is in-power standby mode.

Illuminates green when the TV is-switched power on mode.

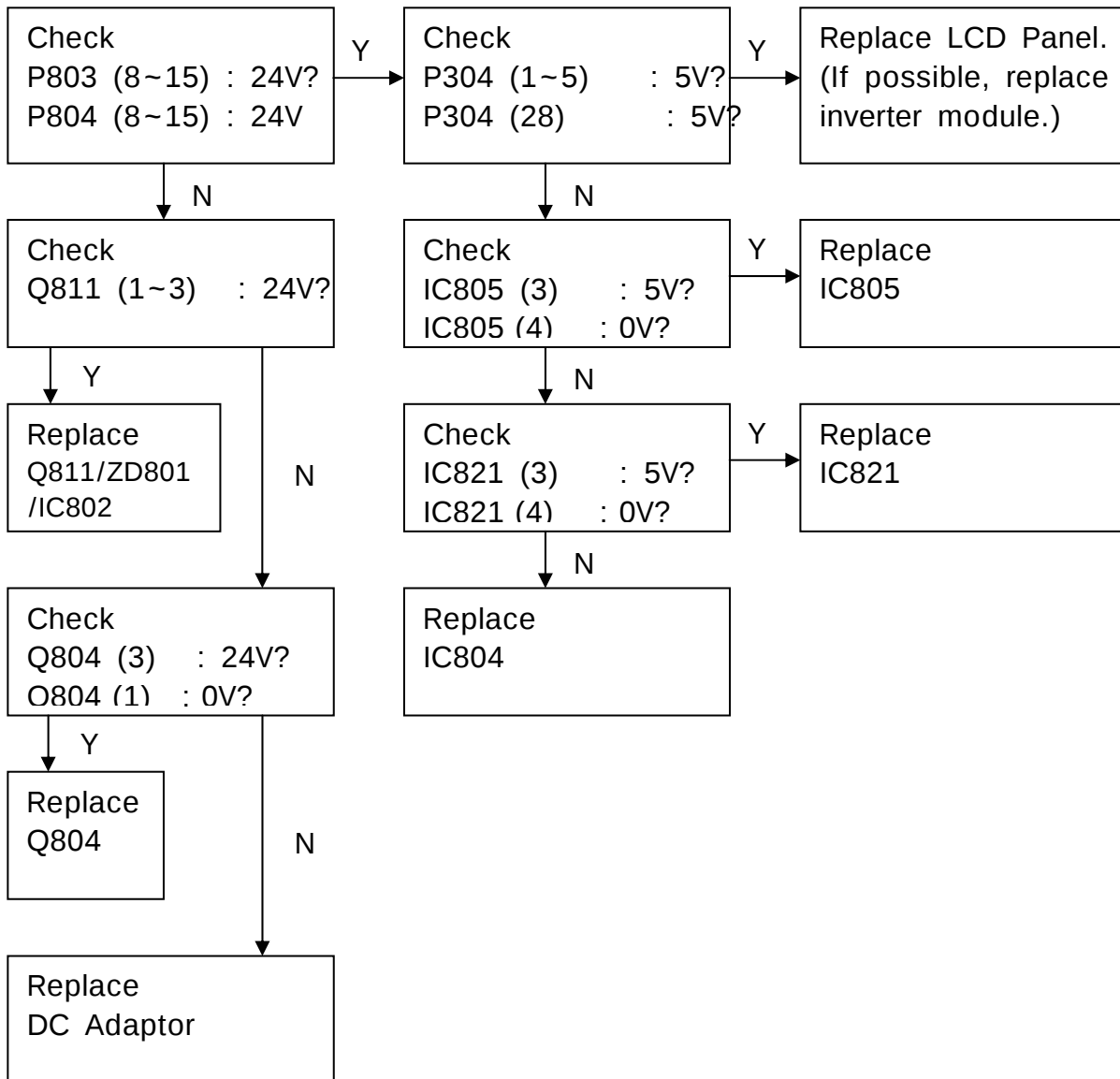
Illuminates amber when the TV is-switched power saving mode.

7.REMOTE CONTROL SENSOR:

Accepts the IR signal of remote controller.

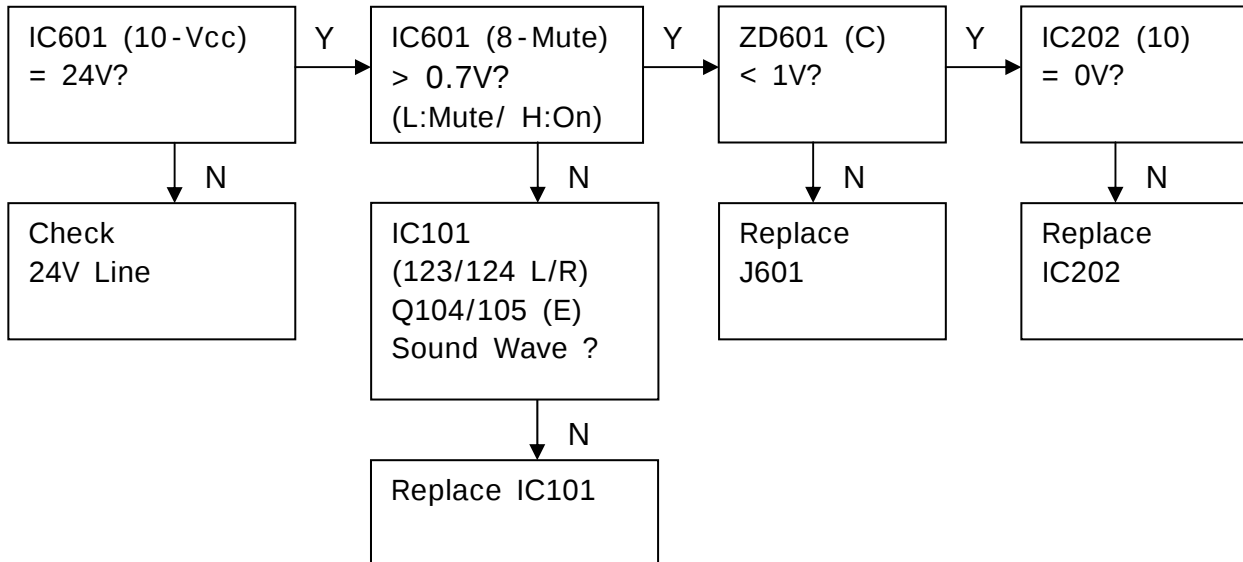
TROUBLE SHOOTING

No Raster

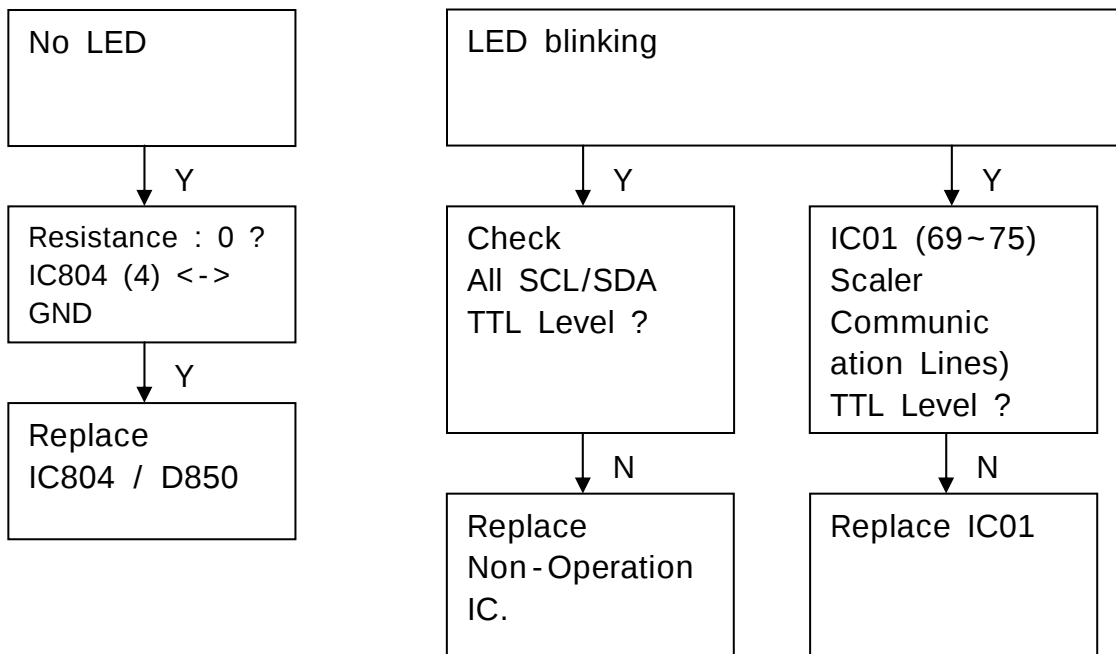


TROUBLE SHOOTING

No Sound & Picture OK



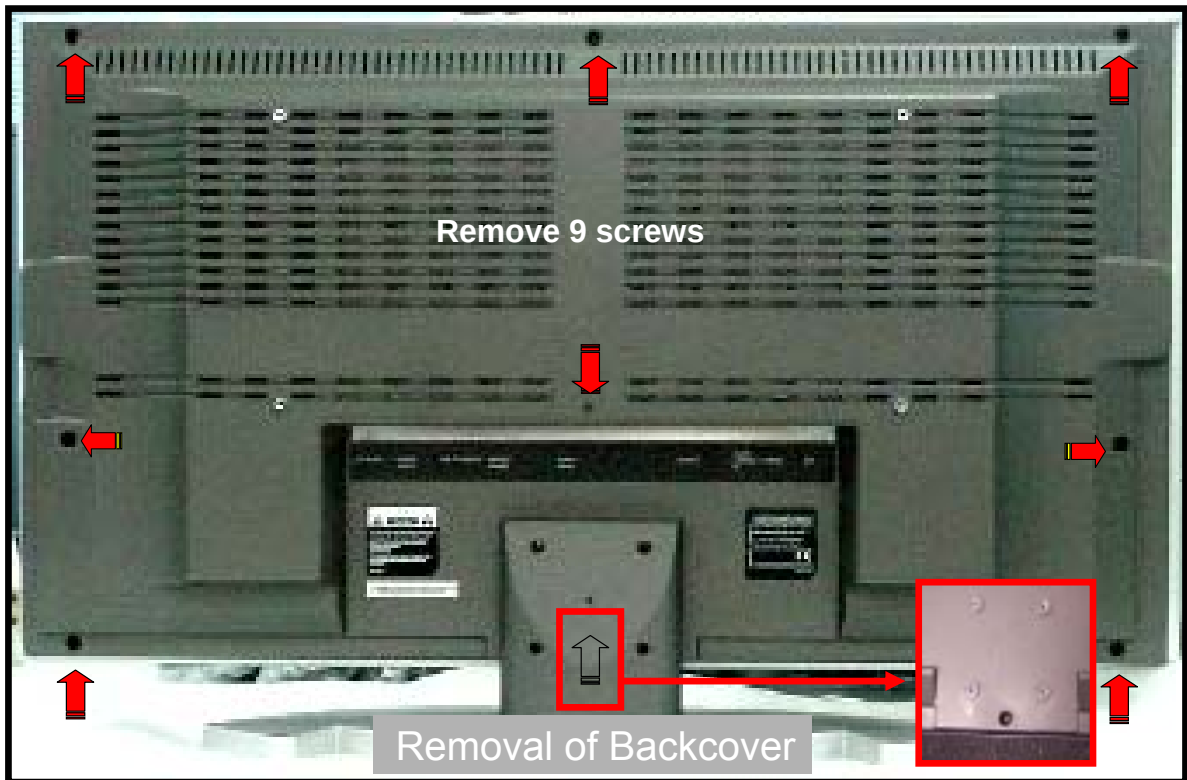
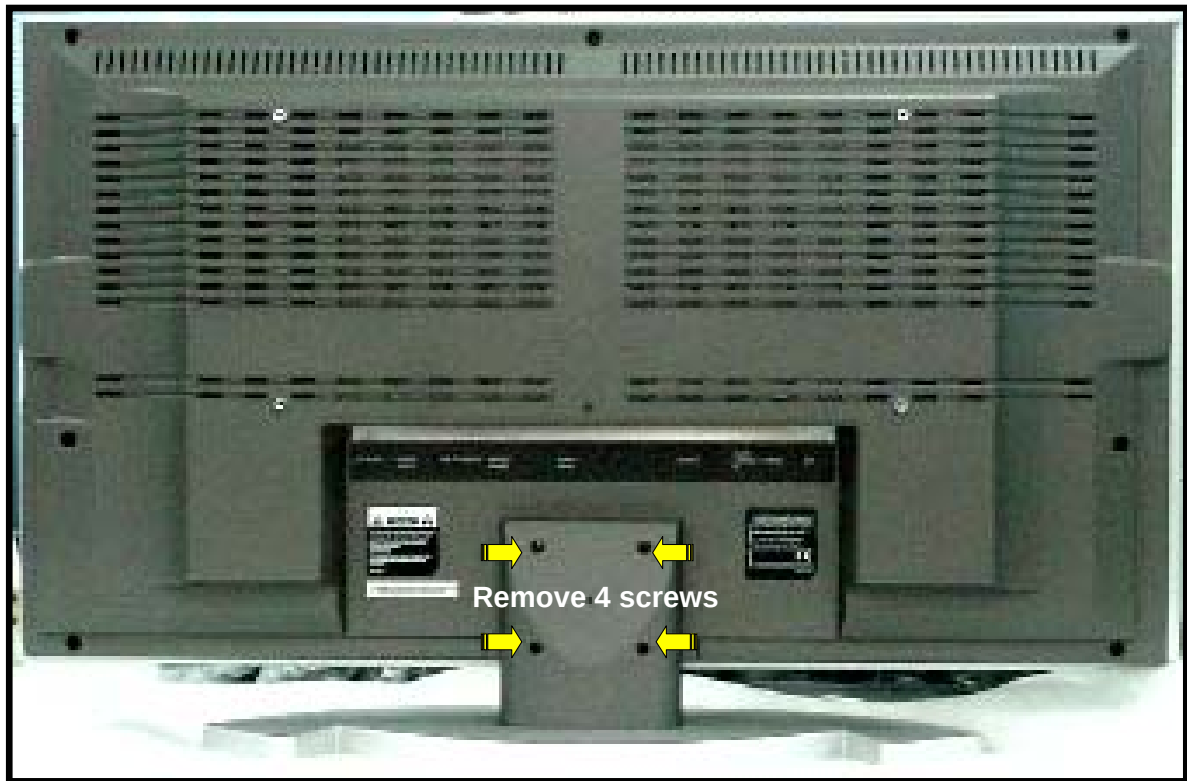
No Operation



DEASSEMBLY PROCEDURE

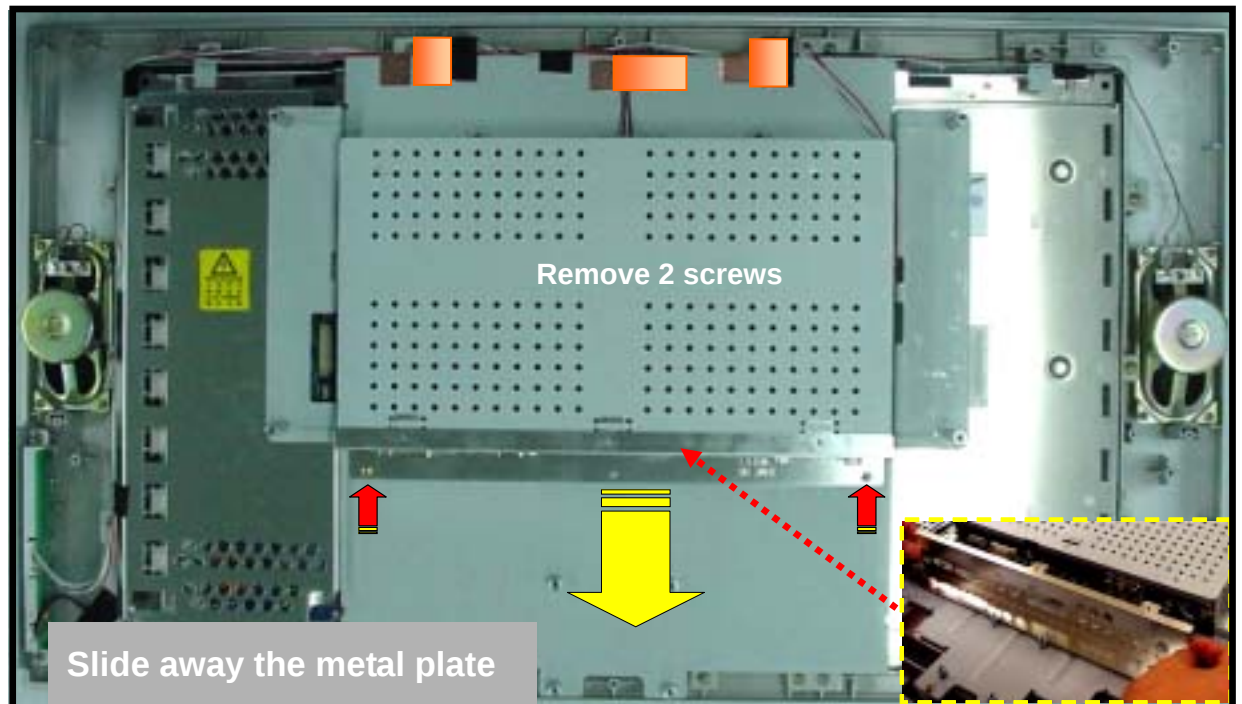
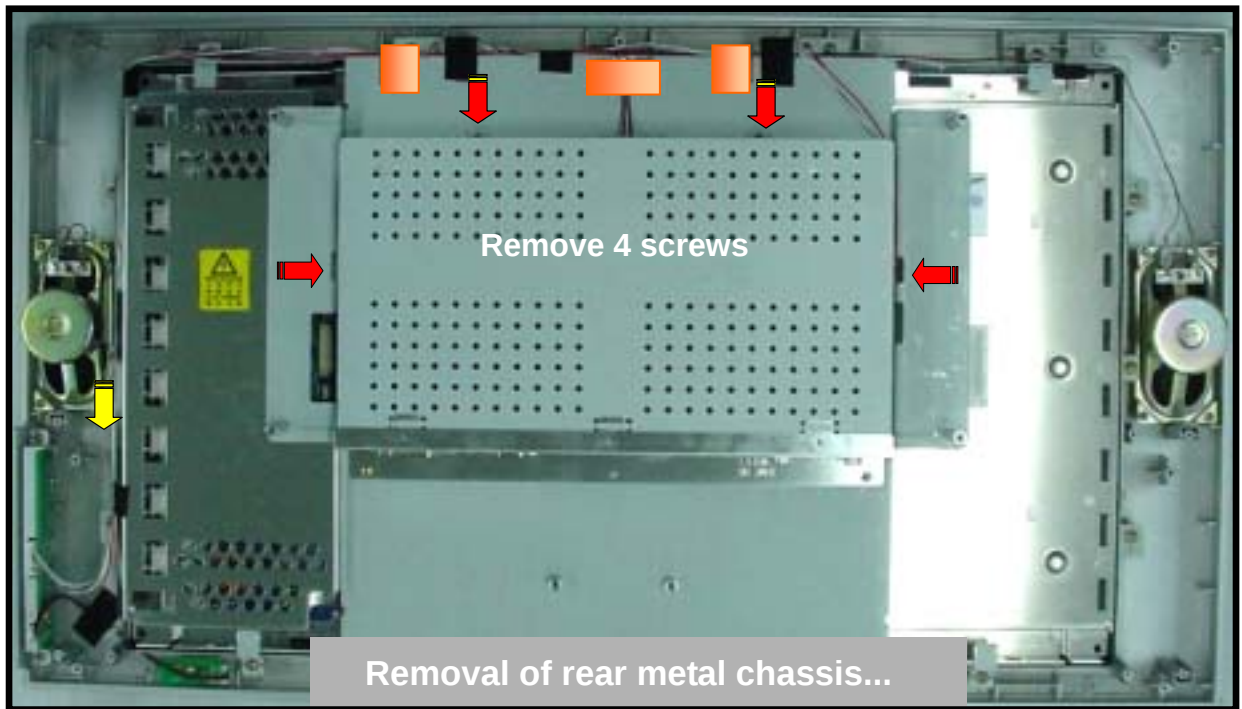
1. Disassembly procedure

1). Back cover



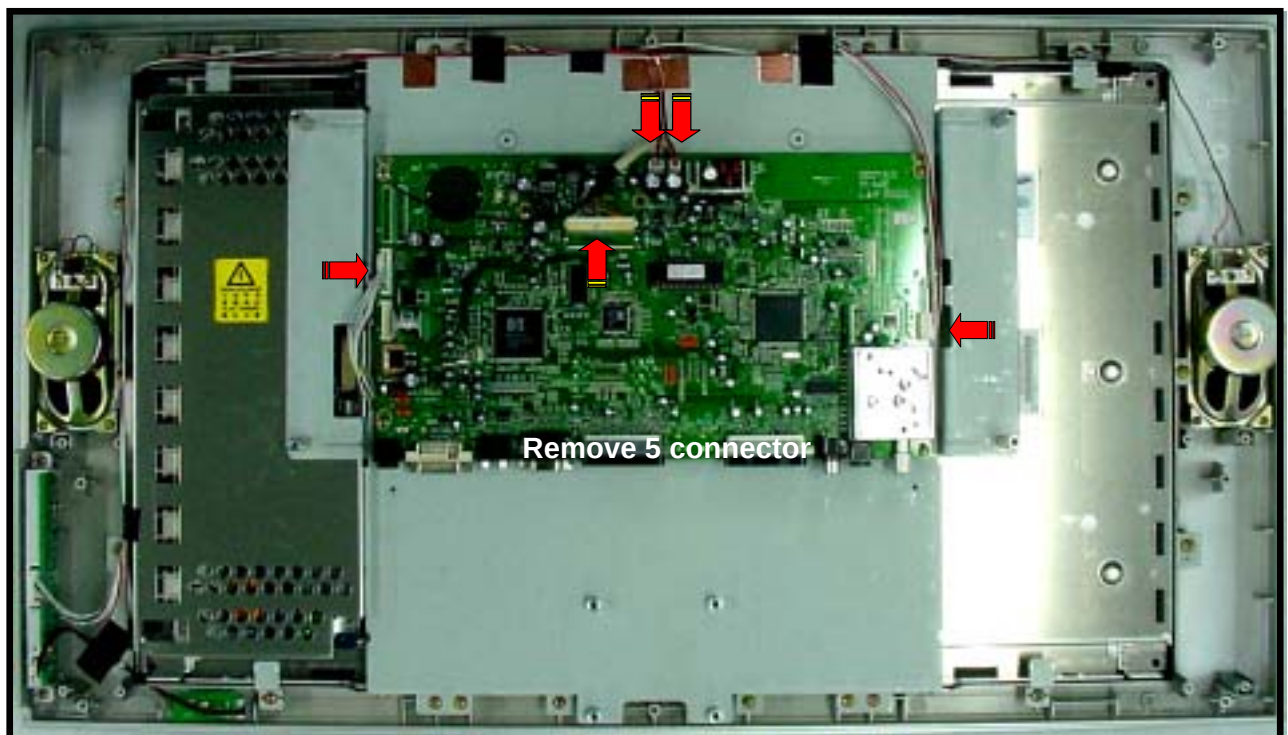
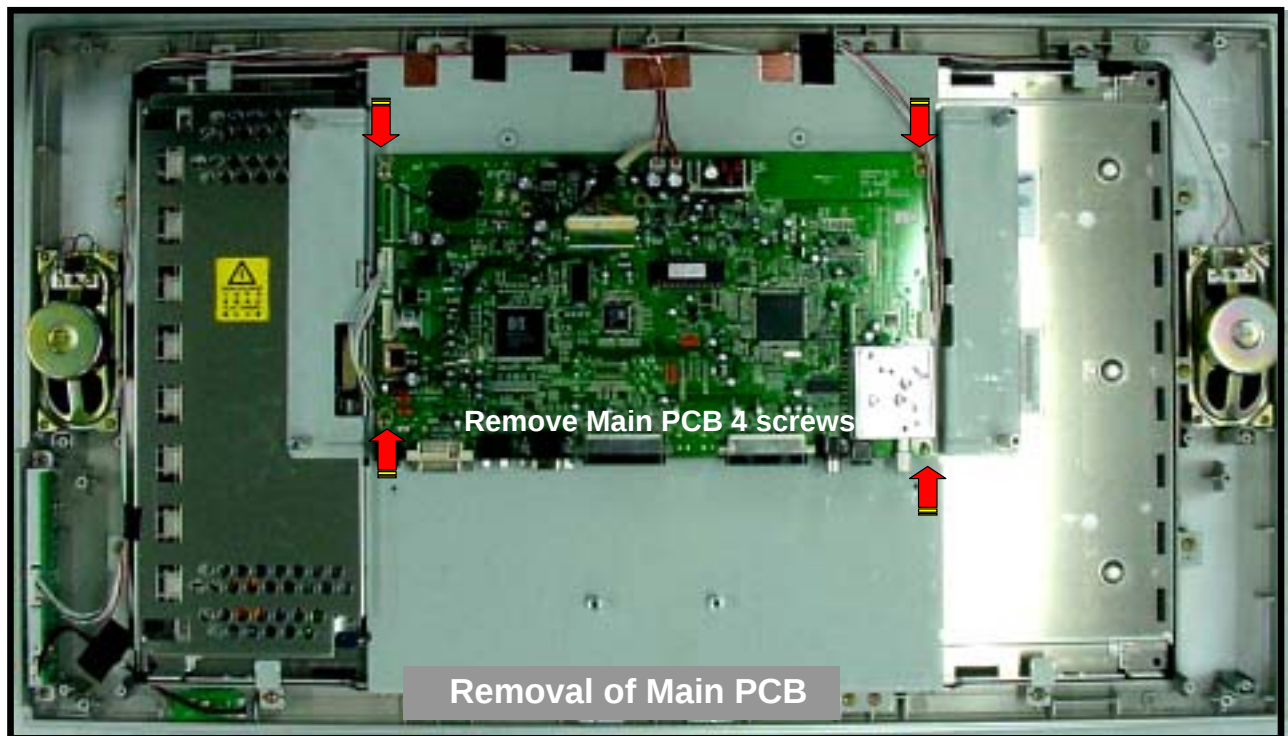
DEASSEMBLY PROCEDURE

2).Metal plate & Rear chassis



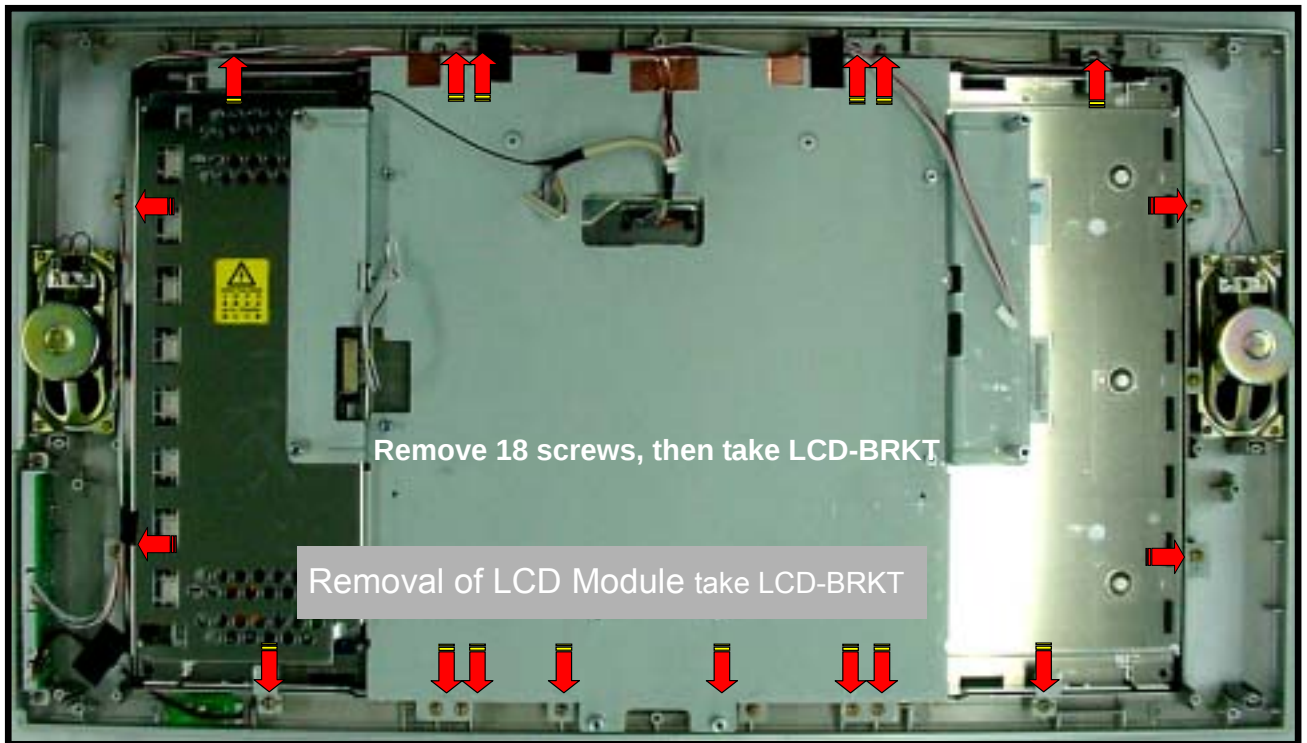
DEASSEMBLY PROCEDURE

3).Metal plate & Rear chassis



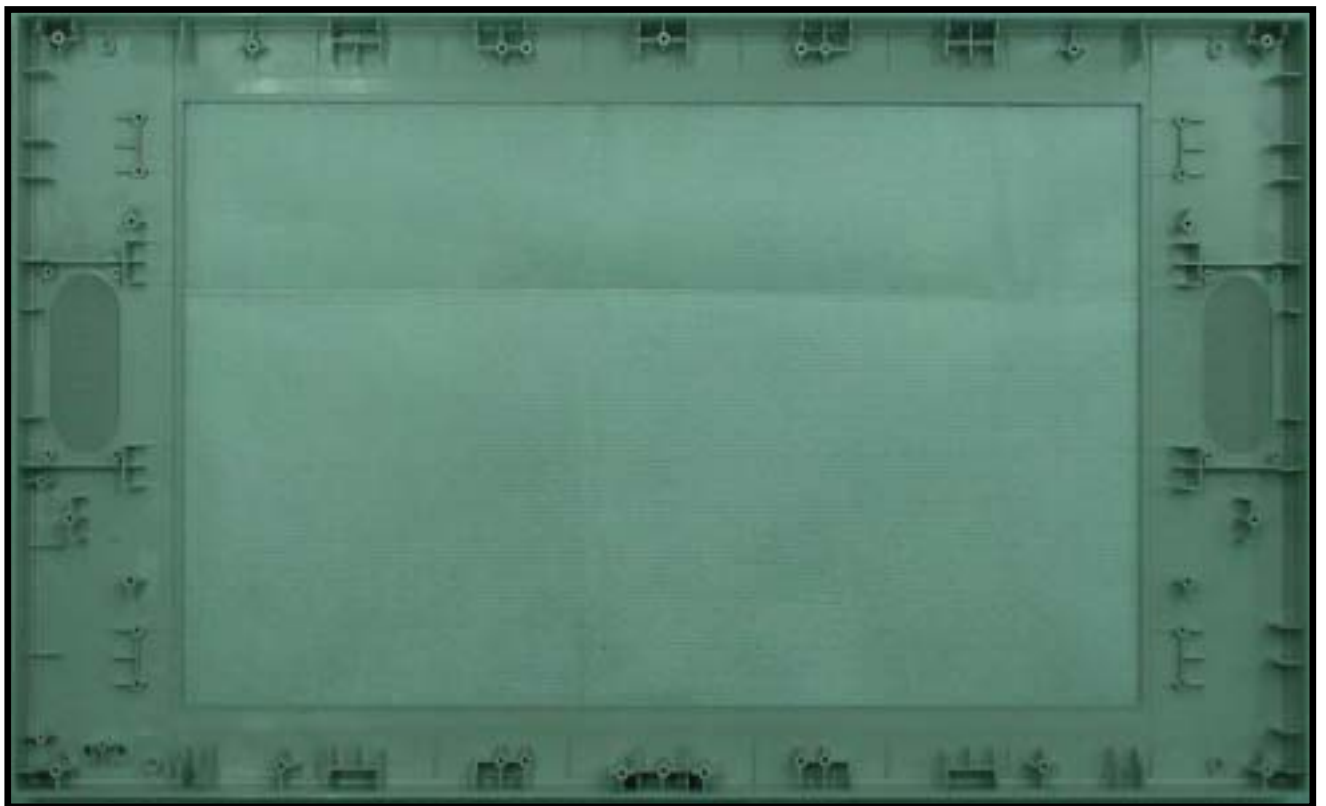
DEASSEMBLY PROCEDURE

4).LCD Panel chassis



DEASSEMBLY PROCEDURE

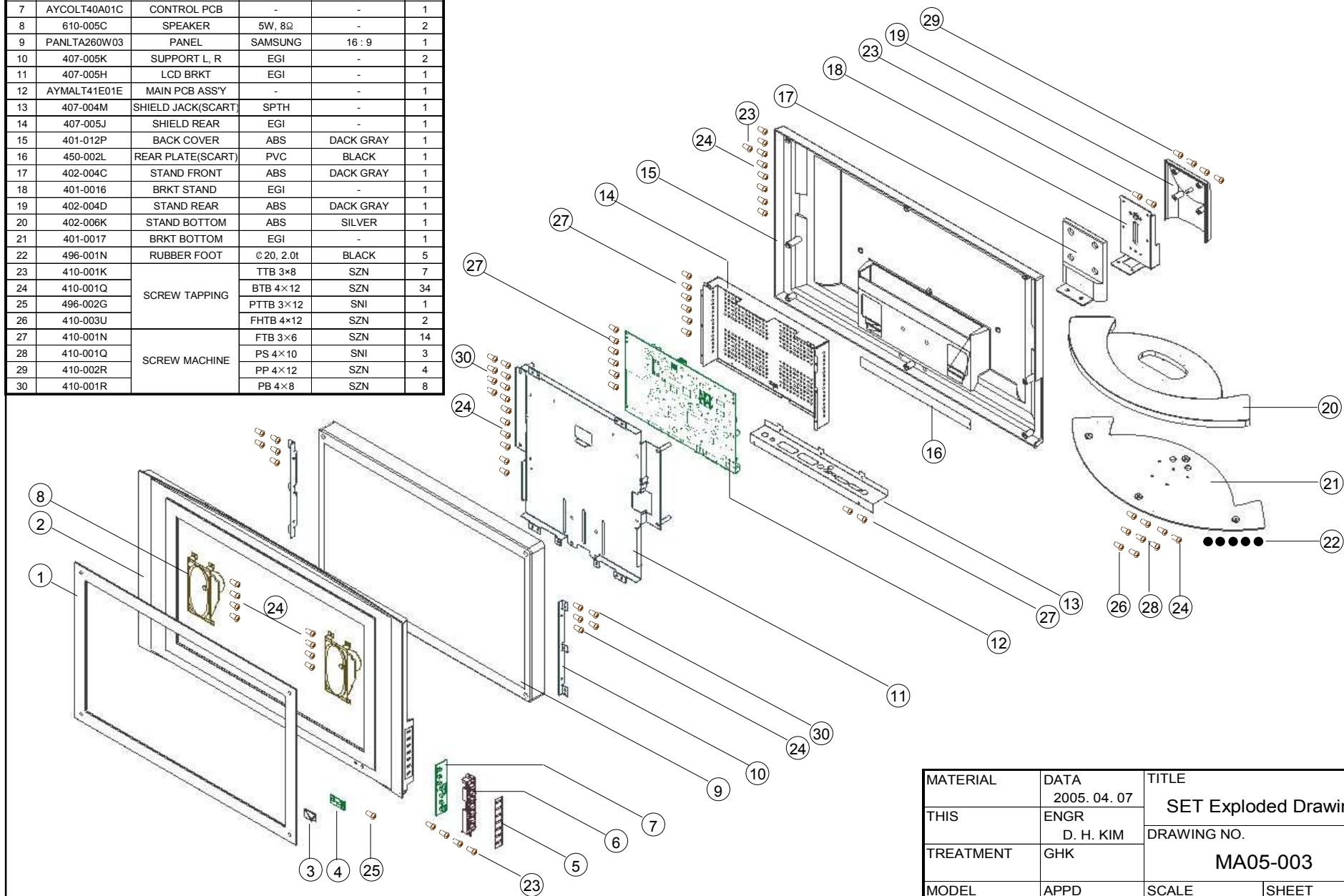
5).LCD Module



Front mask remains after removing LCD Module

NO	PART NO	DESCRIP TION	MATERKAL	COLOR FINISH	Q'TY
1	450-004K	DECO FRONT	PMMA	BLACK	1
2	400-012L	FRONT COVER	ABS	SILVER, BLACK	1
3	408-002F	SENSOR LENS	PC	TRANSPARENCE	1
4	AYCOLT40A01C	IR PCB	-	-	1
5	-	CONTROL PLATE(PR)	AL	SILVER	1
6	404-004G	BLOCK KNOB	ABS	SILVER	1
7	AYCOLT40A01C	CONTROL PCB	-	-	1
8	610-005C	SPEAKER	5W, 8Ω	-	2
9	PANLTA260W03	PANEL	SAMSUNG	16 : 9	1
10	407-005K	SUPPORT L, R	EGI	-	2
11	407-005H	LCD BRKT	EGI	-	1
12	AYMALT41E01E	MAIN PCB ASS'Y	-	-	1
13	407-004M	SHIELD JACK(SCART)	SPTH	-	1
14	407-005J	SHIELD REAR	EGI	-	1
15	401-012P	BACK COVER	ABS	DACK GRAY	1
16	450-002L	REAR PLATE(SCART)	PVC	BLACK	1
17	402-004C	STAND FRONT	ABS	DACK GRAY	1
18	401-0016	BRKT STAND	EGI	-	1
19	402-004D	STAND REAR	ABS	DACK GRAY	1
20	402-006K	STAND BOTTOM	ABS	SILVER	1
21	401-0017	BRKT BOTTOM	EGI	-	1
22	496-001N	RUBBER FOOT	© 20, 2.0t	BLACK	5
23	410-001K	SCREW TAPPING	TTB 3×8	SZN	7
24	410-001Q		BTB 4×12	SZN	34
25	496-002G		PTTB 3×12	SNI	1
26	410-003U		FHTB 4×12	SZN	2
27	410-001N	SCREW MACHINE	FTB 3×6	SZN	14
28	410-001Q		PS 4×10	SNI	3
29	410-002R		PP 4×12	SZN	4
30	410-001R		PB 4×8	SZN	8

MECHANICAL EXPLODED VIEW



MATERIAL	DATA	TITLE	
THIS	2005. 04. 07	SET Exploded Drawing	
TREATMENT	ENGR	DRAWING NO.	
	D. H. KIM	MA05-003	
MODEL	GHK	SCALE	SHEET
LT26S	APPD	-	1 / 1

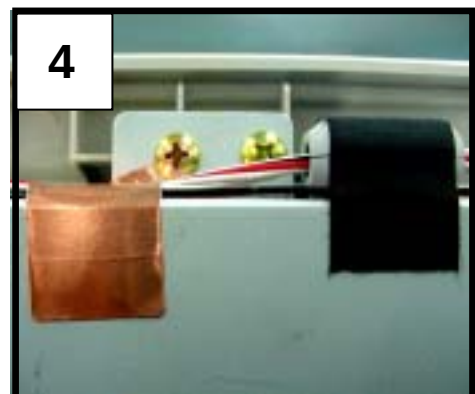
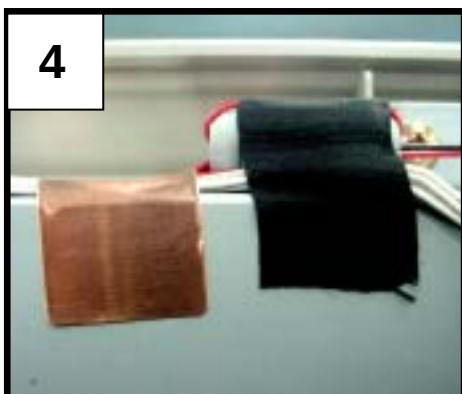
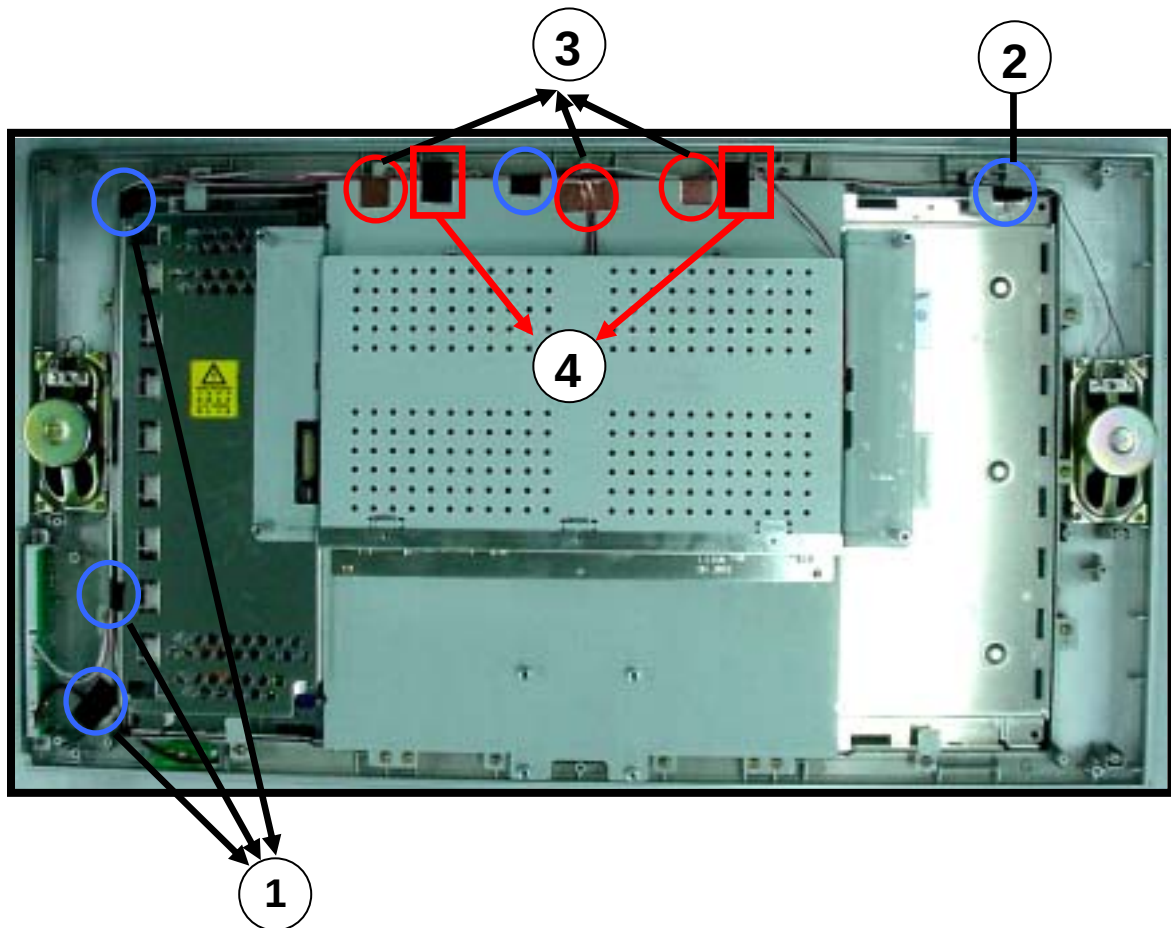
WIRE DRESSING

1. Wire Dressing

Note: Using acetate Tape → No1, No2.

Using Copper Tape → No3(Conducted tape)

Using Ferrite Cpre → No4.



ADJUSTMENT INSTRUCTION WITH DEFAULT FACTORY DATA

1.SVC mode data Adjustment

NOTE!! When the EEPROM has been replaced, the SVC data should be restored as the function of individual system and specification.
When the EEPROM has been replaced White Balance Checking.

[Enter and exit SVC mode]

Note: into the SVC mode, Initialize with default data.

- 1) Press 5 Seconds MENU buttons on both TV set and Remote Controller at the same time to get into SVC mode.
- 2) Press the PR ▲▼ button several times to find SVC Data.
- 3) Input the corresponding SVC data referring to Table below with the VOL , key.
- 4) Press TV/AV button to exit SVC mode

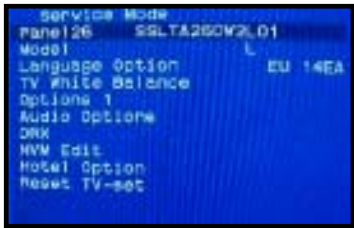
1-1. Factory outgoing setting & Initialize with default data (into the SVC mode)]

Main menu	Change value	Sub menu	Change value
(Model)	(L)		
Language Option	EU 14EA		
(TV White Balance)	TV White Balance Sub - menu	Settings	ALL
		Start	
		PC	Yes
Option 1	Option 1 Sub - menu	System	BG//I/DK/L
		China/Australia	No
		AV1	RGB
		Text	WEST EU
		Top	YES
		VPS/PDC	YES
		Data Service	Text
		ATS Delay Time	60
		Game	No
		DVI	Yes
		DTV	No
		QURAN	No
Audio Options	Audio Options Sub - menu	M	+ 42
		BG//I/DK	+ 21
		NICAM	+ 26
		FM Radio	+ 10
		Scart Volume	+ 118
		Surround	0
		Mute if no carrier	Yes
		High Deviation	No
		DUAL	No
		MONO	No
		STEREO	Yes
(DRX)	(Sub - menu)		
(NVM Edit)	(Sub - menu)		
(Hotel Option)	(Sub - menu)		
(Reset TV-set)	(Sub - menu)		

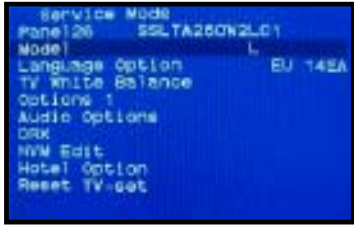
Waring: Do not change the “()” item...

ADJUSTMENT INSTRUCTION WITH DEFAULT FACTORY DATA

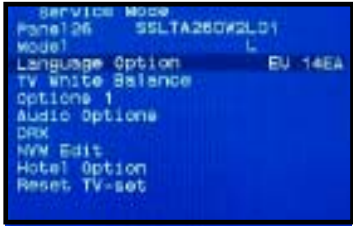
2. White Balance Checking



1. Panel : SSLTA260W2L01



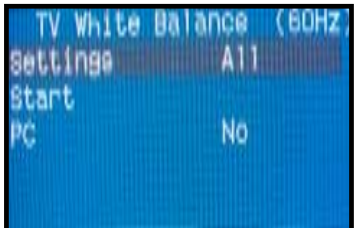
2. MODEL : L



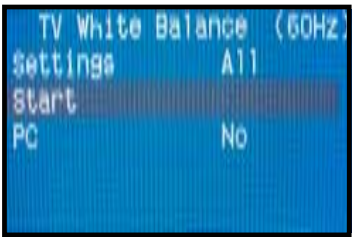
3. Language Option :
EU 14EA



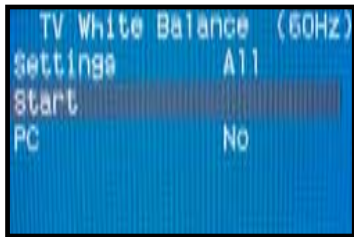
4. PC Pattern Generator
1024 x 768, 60Hz
(Pattern Generator : MSPG-3420)



5. Setting : All



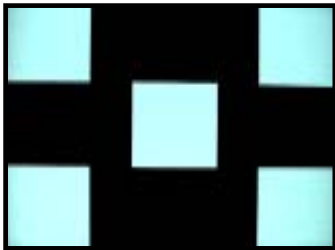
6. Setting : All Start Click



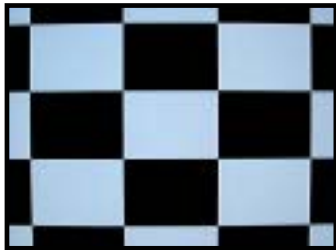
7. PC White Balance Setting中



8. White Balance Setting Verify



9. Pattern Generator : MSPG-3420
PATTEN : Patten No. : 33
MODE : 1024*768(13)



10. Equipment : MSPG-925FS
MODE : 1024*768

INSPECTION INSTRUCTION

1. Supplied Accessories

Note: Make Sure the following accessories are provided with Product.

■ Make Sure the following accessories are provided with Product.

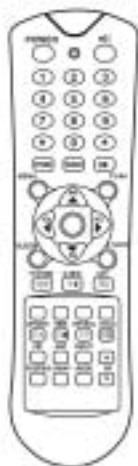
1. AC/DC adaptor



2. AC Cord



3. Remote controller



4. Batteries (type AAA)



5. Instruction manual



6. VGA cable



7. PC Audio IN cable

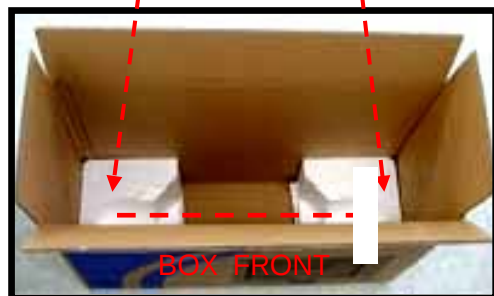


8. 75 ohm antenna cable



INSPECTION INSTRUCTION

2. Packing condition



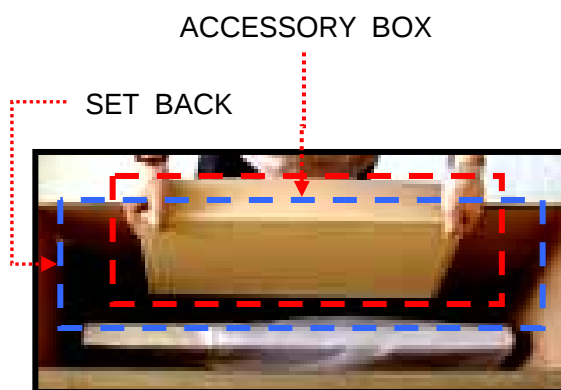
<picture 1> PACKING insert in BOX



<picture2> SET insert in BOX



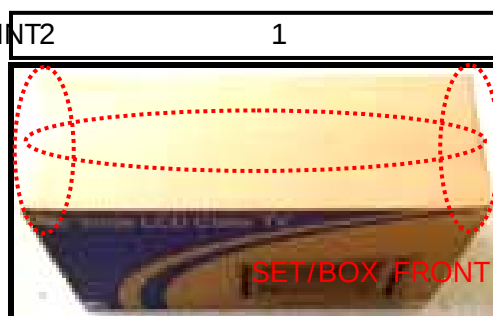
<picture4> TOP PACKING insert in BOX



<picture3> Accessory Box insert



<Picture 1>Staping

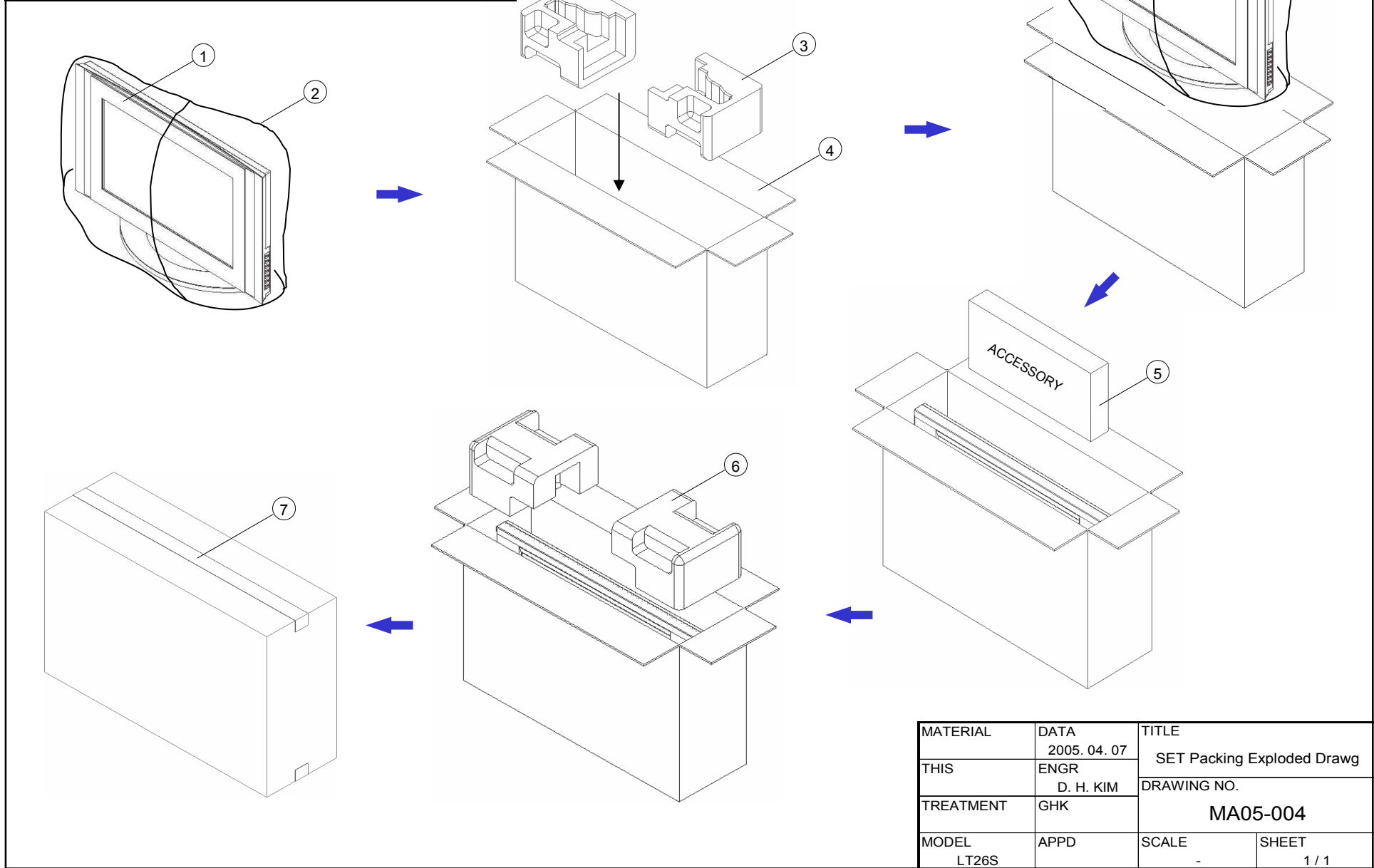


<Picture 2>Taping TOP of SET box with OPP TAPE

3

NO	PART NO	DESCRIP TION	MATERKAL	COLOR	Q'TY
1	-	LCD COLOR TV	-	-	1
2	320-001A	POLY VINLY	PE	-	1
3	310-022N,P	PACKING BOTTOM (L,R)	EPS	WHITE	2
4	-	SET BOX	PAPER	-	1
5	-	ACCESSORY ASS'Y	-	-	1
6	310-022L,M	PACKING TOP (L,R)	EPS	WHITE	2
7	499-002A	TAPE OPP	-	-	4000mm

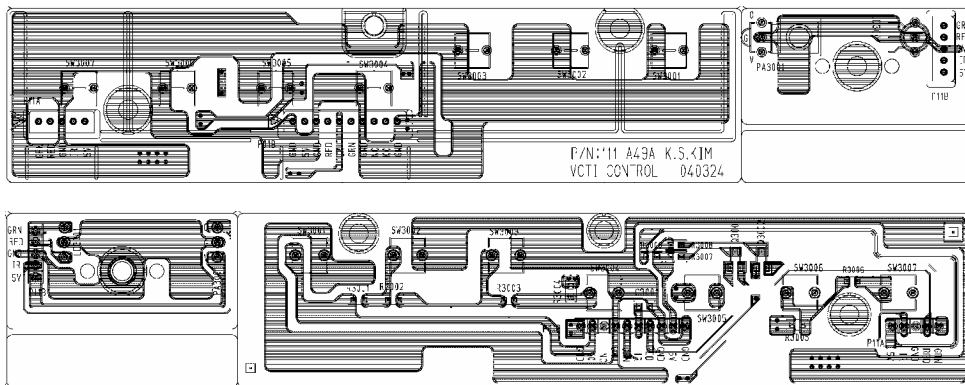
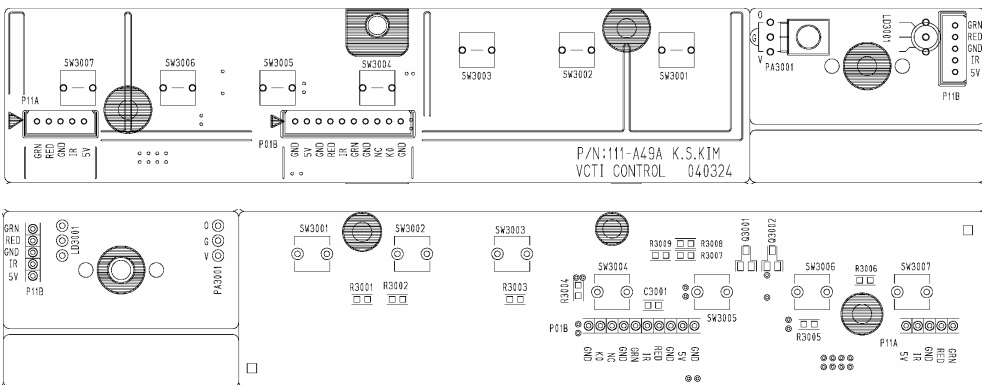
PACKING INSTRUCTION



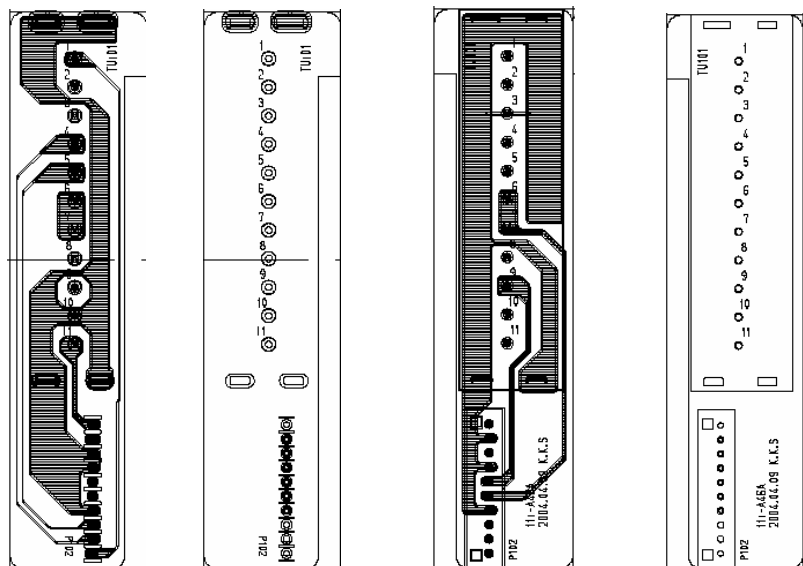
MATERIAL	DATA	TITLE	
THIS	2005. 04. 07	SET Packing Exploded Drawg	
TREATMENT	ENGR	DRAWING NO.	
MODEL	D. H. KIM	MA05-004	
LT26S	GHK	SCALE	SHEET
	APPD	-	1 / 1

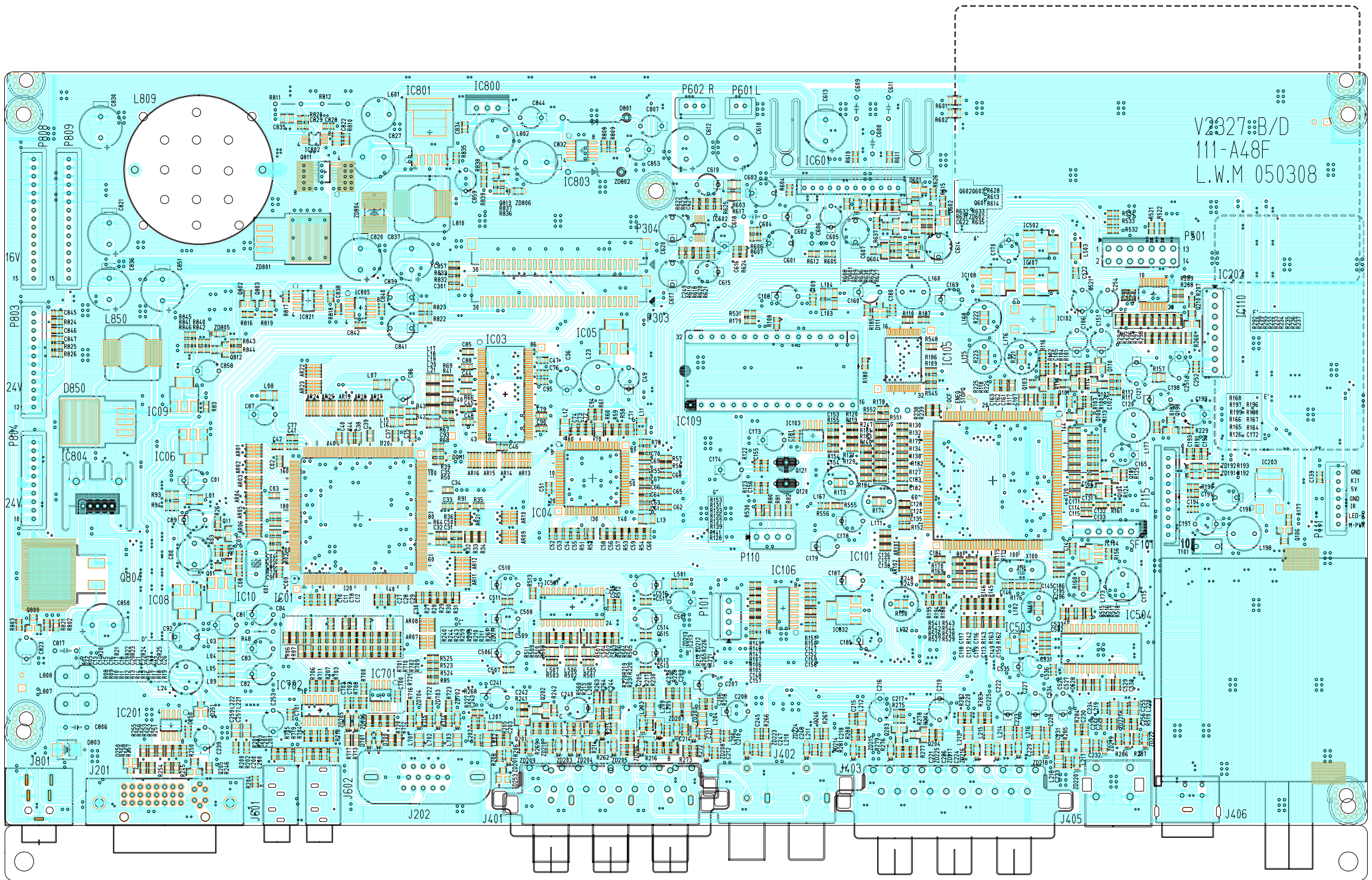
PCB LAYOUT

1. CONTROL PCB

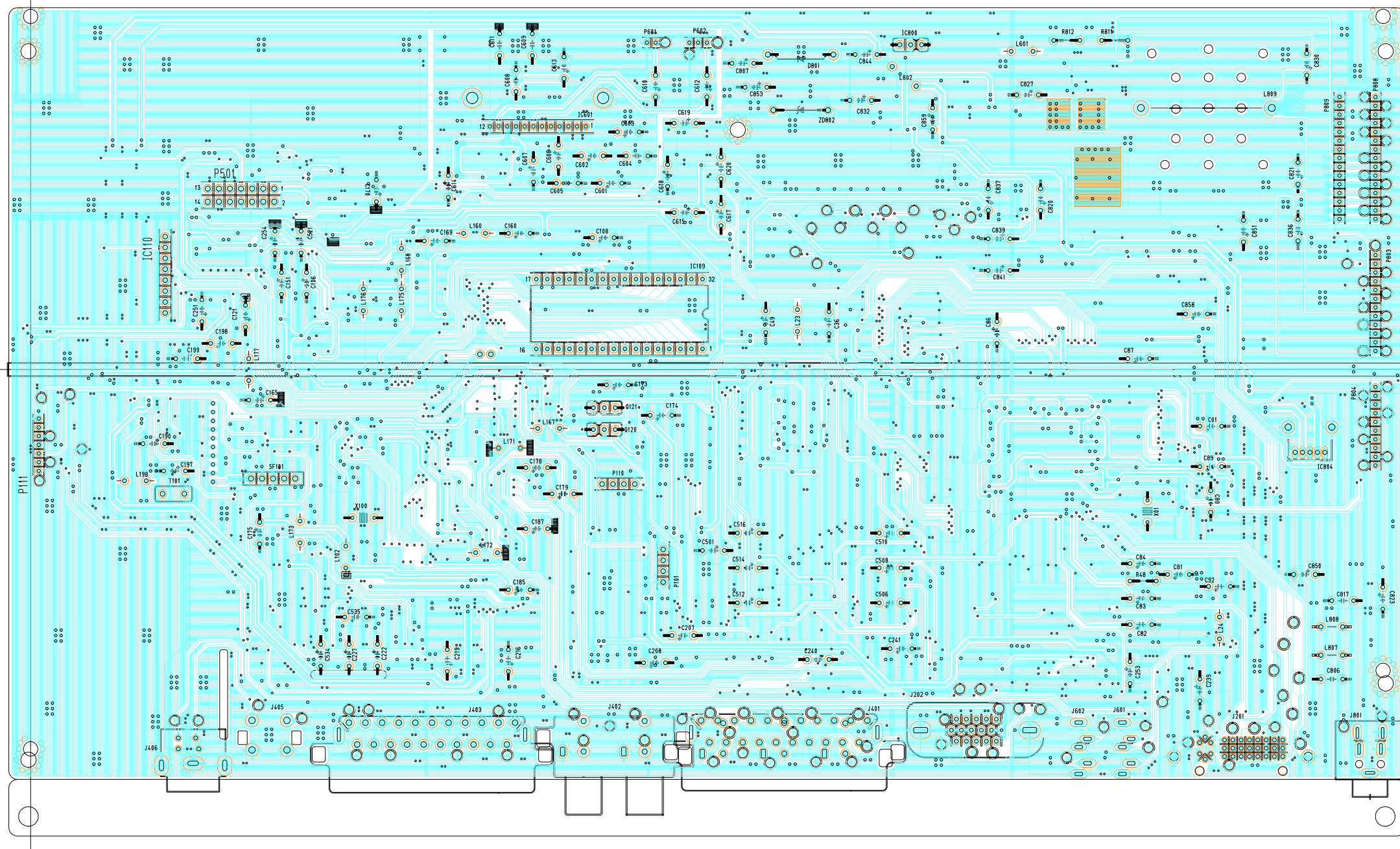


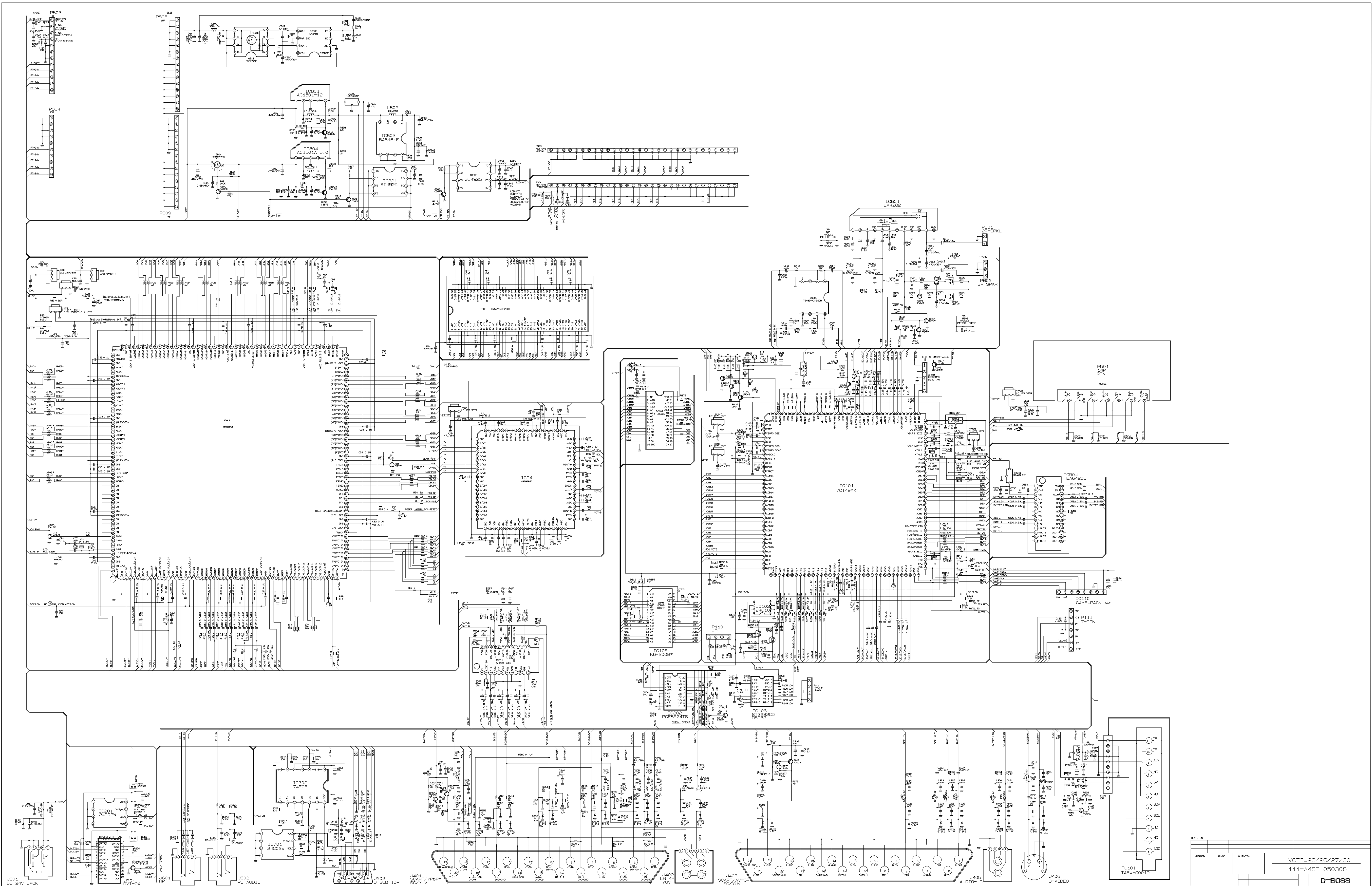
2. Tuner PCB





V3327:B/D
111-A48F
L.W.M 050308





REVISION		
DATE	BY	APP
01/23/26/27/30		
111-A48F 050308		
D-BOSS		

REPLACEMENT PART LIST

1. Parts List (Assemble process)

LEVEL	PART NO	PART NAME	DESCRIPTION	Q,TY
1	300-003G	30 BOX	BOX, ACCESSORY	1
1	300-003K	30 BOX	BOX, ACCESSORY	1
1	300-019Q	LT-26S5LF,Schneider	BOX, GIFT(Schneider)	1
1	310-020Q	26",L-MODEL,TOP-L	PACKING, TOP-L	1
1	310-020R	26",L-MODEL,TOP-R	PACKING, TOP-R	1
1	310-020S	26",L-MODEL,BOTTO-L	PACKING, BOTTOM-L	1
1	310-020T	26",L-MODEL,BOTTO-R	PACKING, BOTTOM-R	1
1	320-001A	ACCESSORY PACKING	BAG, VINYL	1
1	321-013A	27 SET PACKING	BAG, PACKING	1
1	404-004G	KEY(L,S-TOOL),SILVER	BLOCK KNOB	1
1	407-004F	23,FIX BRKT,4-03-006	FIX BRKT	4
1	407-004M	27K SCART	SHIELD, JACK(SCART)	1
1	407-005H	26" L-TOOL	SHIELD, LCD-BRKT	1
1	407-005J	26" L-TOOL	SHIELD, REAR	1
1	407-005K	26" L-TOOL	SHIELD, SUPPORT(SS)	2
1	408-002F	L,32"(L-TOOL)	LENS, SENSOR	1
1	410-001K	TTB3*8	SCREW	7
1	410-001L	TTB3*10	SCREW	8
1	410-001N	FTB3*6	SCREW	13
1	410-001Q	BTB4*12	SCREW	26
1	410-002R	PP4*12	SCREW	4
1	410-001R	PP4*8	SCREW	8
1	499-002A	W:70mm	TAPE, OPP	4000
1	499-004A	W:20mm, L:30m	TAPE, ACETATE	210
1	500-011C	26H/S5 5EA SCHNEIDER	OWNERS MANUAL	1
1	500-011D	26H/S5 6EA SCHNEIDER	OWNERS MANUAL	1
1	501-001B	ENGLISH	LABEL, WARNING	1
1	501-018L	LOGO 50mm SCHNEIDER	STICKER, LOGO	1
1	501-018M	FRONT LOGO SCHNEIDER	SMILEY, LOGO	1
1	501-053L	SET,60*10 SCHNEIDER	LABEL, SERIAL	1
1	501-053M	BOX,60*15 SCHNEIDER	LABEL, SERIAL	2
1	501-112P	LT-26S5LF,Schneider	LABEL, ID	1
1	507-002D	SCHNEIDER, 20/26/32	SHEET, HOME SVC	1
1	510-004E	26,30", (PR),BLACK	REMOCON(BLACK)	1
1	520-001A	1.5V, AAA SIZE	BATTERY	2
1	610-005C	5W, 8 OHM	SPEAKER	2
1	620-004A	24V, 6.0A, 1.8M	AC/DC ADAPTER	1
1	621-001B	VDE KKP-4819R (EU)	POWER CORD	1
1	626-001A	IVORY, 1.8M, 15-PIN	CABLE, PC RGB	1
1	626-001M	CABEL, RF(SHNEIDER)	RF CABLE,80dB	1
1	627-001A	1.8M, BK	CABLE, PC-SOUND	1

REPLACEMENT PART LIST

2. Parts List (Assemble process)

LEVEL	PART NO	PART NAME	DESCRIPTION	Q,TY
1	490-011L	MSF15-20-30-00K(TUNER)	FORM, SHIELD	1
1	490-011C	71TS-FK 20-2-34-13-S(D-SUB)	FORM, SHIELD	1
1	490-011V	MK 15-2-42-11(DVI)	FORM, SHIELD	1
1	490-011W	MK-7-03-325-11(JACK SHIELD)	FORM, SHIELD	1
1	492-001A	CLIP, ZCAT13250530	FERRITE CORE	2
1	491-001A	W40mm,L20mm, COPPER	TAPE, CONDUCTIVE	3
1	CON05P200ABH	301 LED,5P 200MM H/H	LEAD ASSY	1
1	CON02P200A0S	2627,SPK,2P,600MM	LEAD ASSY	1
1	CON03P200A01	2627,SPK,3P,600MM	LEAD ASSY	1
1	CON07P200AD3	27K,7P-10P,1000 CTRL	LEAD ASSY	1
1	CON12P200ACE	26W2,IVT,12P,120MM	LEAD ASSY	1
1	CON30P125ADF	26W2,CORE&GND, 150MM	LEAD ASSY	1
1	PANLTA260W03	26",SS,LTA260W2-L01	PANEL, LCD COLOR	1
1	AYBCLT26A01C	26L,REAR COVER,SCART	REAR COVER ASSY	1
1	AYCALT26C01A	26S,NO BRAND,PR +,-	CABINET ASSY	1
1	AYSTLT32A01G	30",F-MODEL,REV.01	STAND ASSY	1
1	AYMALT41E01E	26 VCTI SCART LL(W2)	MAIN PCB ASSY(SS-W2)	1
1	AYCOLT40A01C	VCTI L-MODEL CONTROL	CONTROL PCB ASSY	1

REPLACEMENT PART LIST

3. Parts List (Main PCB)

LEVEL	PART NO	PART NAME	DESCRIPTIONS	LOCATION NO
0	AYMALT41E01A	MAIN PCB ASS'Y	LT-26HLF	
1	GRLT41DM001B	GR, SCART MANUAL		
2	0JASCART000D	JACK, SCART	RGB21PIN,VP 381-091B	J401,J403
1	GRLT41DA001B	GR, SCART AUTO		
2	0CESS100CMTR	CESSL1C100M0511AD	Capacitor, AL.E 10UF 16V	C240,C241
2	0CESS220CMTR	CESSL1C220M0511AD	Capacitor, AL.E 22UF 16V	C207,C208
1	GRLT41DS001B	GR, SCART SMD		
2	0CHSS080DCTS	8P	Capacitor, chip 8PF	C202
2	0CHSS101DJTS	CL10C101JBNC	Capacitor, chip 100PF	C203,C212,C214
2	0CHSS104DZTS	CL10F104ZANC	Capacitor, chip 0.1UF	C242
2	0CHSS471DJTS	CL10C471JBNC	Capacitor, chip 470PF	C209,C210
2	0LHSS120EJTS	INDUCTOR, CHIP	12UH, 2012	L205,L206,L202
2	0RHSS000DJTS	RC1608J000CS	Resistor, chip 0 ohm	R269,R271,R272,R219
2	0RHSS102DJTS	RC1608J102CS	Resistor, chip 1K	R210
2	0RHSS103DJTS	RC1608J103CS	Resistor, chip 10K ohm	R243
2	0RHSS182DJTS	RC1608J182CS	Resistor, chip 1.8K ohm	R240
2	0RHSS220DJTS	RC1608J220CS	Resistor, chip 22 ohm	R211,R212,R213
2	0RHSS203DJTS	RESISTOR, CHIP	Resistor, chip 20K OHM	R220
2	0RHSS273DJTS	RC1608J273CS	Resistor, chip 27K	R242
2	0RHSS471DJTS	RC1608J471CS	Resistor, chip 470 ohm	R205,R241
2	0RHSS513DJTS	RC1608J513CS	Resistor, chip 51K	R231
2	0RHSS750DJTS	RC1608J750CS	Resistor, chip 75 ohm	R206,R208,R214,R215,R216 R209
2	0RHSS821DJTS	RC1608J821CS	Resistor, chip 820 ohm	R244
2	0TRKE1504STS	KTA1504S Y	Transistor, chip A1504	Q201
2	0TRKE3875STS	C3875	Transistor, chip C3875	Q202
2	0DHKEKDS226S	KDS226	DIODE, CHIP	D253
2	1DZSC5231BTS	MMSZ5231BS	Zener diode, chip 5.1V	ZD201,ZD203,ZD204,ZD206,ZD
1	GRLT41DM001A	GR, COMMON MANUAL		
2	0CESH471FHBD	CAPACITOR, ELEC.	470UF 35V, 105	C613
2	0CESH471FMBD	CAPACITOR, ELEC.	470UF 35V	C832,C837,C851,C610,C612 C827,C836,C850
2	0ISSY32P00BD	SOCKET, IC	DIP 32P	IC109
2	1ICSY49F040D	IC, MICOM	ATMEL AT49F040	IC109
2	0ICKE78080AD	KIA7808AP	IC, KIA7808	IC800
2	0JADM15RF00D	JACK, D-SUB	DAH-15RF-4B4	J202
2	0JAGE14060BD	JACK, SOUND	RCA-1406(W/R) 2	J405
2	0JAKKST215BD	ST-215	Jack, PC-AUDIO	J601,J602
2	0JAPK6046GBD	S-VHS, PJ6046G	JACK, S-VHS	J406
2	0JASYDC4P0BD	JACK, DC-POWER	4P POWER	J801
2	0JASYDVI29BD	JACK, DVI-CON	DVI-CON	J201
2	0LRSM00100BD	SMC103	Inductor, 1MH	L802
2	0XTKI143180D	CRYSTAL, RADIAL	14.318MHZ	X01
2	0XTKI202500D	CRYSTAL, RADIAL	Crystal, 20.25MHZ	X100
2	1ICSA42820AD	LA4282, SANYO	IC, SOUND AMP	IC601
2	1ICIPAP5T5TD	IC, DC/DC CONVERTER	AP1501A-50T5,5V,5A	IC804
2	WAFLG04250SD	GIL-G-4P-S3T2	Pin wafer, 4-PIN	P110,P101
2	WAFML07200AD	53015-0710	Wafer, 7-PIN	P111
2	WAFYH02200SD	SMW200-02	Pin wafer, 2-PIN	P601
2	WAFYH03200SD	SMW200-03	Pin wafer, 3-PIN	P602
2	WAFYH10200SD	WAFER, PIN	10P, P2.0mm STRAIGHT	P115
1	GRLT10AM001A	GR, HEAT SINK M/I	LA4282, 42*16	
2	410-001J	PB 3*8	SCREW	
2	420-001A	LA4282 42*16	HEAT SINK	
2	498-001A		Silicon Grease	
1	GRLT10AM002A	GR, HEAT SINK M/I	AP1501A-50T5,25*16	
2	410-001J	PB 3*8	SCREW	
2	420-001F	for KIA78R08	HEAT SINK	
2	498-001A		Silicon Grease	

REPLACEMENT PART LIST

4. Parts List (Main PCB)

LEVEL	PART NO	PART NAME	DESCRIPTIONS	LOCATION NO
1	GRLT41DA001A	GR, COMMON AUTO		
2	0CESS100HMTR	CAPACITOR, ELEC.	10UF 50V	C108,C173,C174,C216,C219 C239,C253,C254,C80,C81 C82,C83,C84,C86,C87
2	0CESS101CMTR	CAPACITOR, ELEC.	Capacitor, 100UF 16V	C01,C601,C603,C607,C617
2	0CESS101EMTR	CAPACITOR, ELEC.	100UF 25V	C839
2	0CESS010HMTR	1UF 50V	CAPACITOR, ELEC.	C618
2	0CESS220CMTR	CESSL1C220M0511AD	Capacitor, 22UF 16V	C534,C222,C227
2	0CESS221AMTR	CAPACITOR, ELEC.	220UF 10V	C175,C190
2	0CESS684HMTR	CAPACITOR, ELEC.	Capacitor, 0.68UF 50V	C823
2	0CESS2R2HMTR	CAPACITOR, ELEC.	Capacitor, 2.2UF 50V	C178,C179,C187,C602,C606
2	0CESS3R3HMTR	CAPACITOR, ELEC.	Capacitor, 3.3UF 50V	C165
2	0CESS470CMTR	CESSL1C470M0511AD	Capacitor, 47UF 16V	C121,C151,C251,C535,C844 C160,C169,C170,C185,C3614
2	0CESS470FMTR	CAPACITOR, ELEC.	47UF 35V	C614
2	0CESS4R7HMTR	0CESS4R7HMTR	Capacitor, 4.7UF 50V	C106,C197,C807,C858,C859
2	0CQSS104KKTR	CAPACITOR, MYLER	0.1UF 100V	C608,C609,C611,C817
2	0CQSS682KKTR	CAPACITOR, MYLER	0.0068UF 100V	C604,C605
2	0LBSS3580RTR	BFD-3580R2F	Bead, radial 1UH	L807,L808
2	0LRSU220KKTR	INDUCTOR	22U/RAD,5MM RADIAL	L102,L160,L167,L168,L172 L173,L177,L24
2	0LRSU221KKTR	INDUCTOR	220U/RAD,5MM RADIAL	L198,L23,L601
2	0RNSS391FFTA	Resistor, Axial	390 ohm 1/6W, 1%	R48
2	1DDSKEU1Z0TA	DIODE, RECTIFIER	FAST RECVRY, 200V	D801
2	1DZSSHZT33TA	DIODE, ZENER AXIAL	33V	ZD802
2	1ICFC2N700TR	2N7000TA	IC, 2N7000	Q120,Q121
1	GRLT41DS001A	GR, COMMON SMD		
2	0CHSS080DCTS	8PF,1608	CAPACITOR, CHIP	C215,C255
2	0CHSS100DJTS	CAPACITOR, CHIP	Capacitor, chip 10PF,1608	C702,C703
2	0CHSS104DZTS	CL10F104ZANC	Capacitor, chip 0.1UF	C191,C02,C03,C04,C05 C06,C09,C10,C107,C109 C11,C12,C120,C124,C128 C133,C136,C137,C138,C142 C147,C148,C152,C158,C159 C161,C162,C163,C166,C171 C172,C180,C181,C182,C183 C184,C186,C195,C196,C217 C236,C250,C252,C27,C28 C29,C30,C301,C31,C32 C33,C34,C35,C37,C38 C39,C40,C41,C42,C44 C45,C46,C47,C48,C50 C51,C52,C53,C536,C54 C55,C56,C59,C60,C61

REPLACEMENT PART LIST

5. Parts List (Main PCB)

LEVEL	PART NO	PART NAME	DESCRIPTIONS	LOCATION NO
2	0CHSS101DJTS	CL10C101JBNC	Capacitor, chip 100PF	C155,C156,C211,C213,C218 C221,C224,C226,C229,C2
2	0CHSS102DKTS	CL10B102KBNC	Capacitor, chip 1000PF	C112,C113,C114,C115,C149
2	0CHSS103DKTS	CL10B103KBNC	Capacitor, chip 0.01UF	C192,C193,C507,C509,C511
2	0CHSS105DZTS	CAPACITOR, CHIP	1UF,1608	C62,C65,C68
2	0CHSS150DJTS	15PF,1608	CAPACITOR, CHIP	C235
2	0CHSS220DJTS	CL10C220JBNC	Capacitor, Chip, 22PF	C07,C08
2	0CHSS222DKTS	CAPACITOR, CHIP	Capacitor, chip 2200PF,160	C616,C621
2	0CHSS224DZTS	CAPACITOR, CHIP	Capacitor, chip 0.22UF	C24, C139,C622
2	0CHSS330DJTS	CL10C330JBNC	Capacitor, Chip, 33PF	C145,C146,C234,C94
2	0CHSS331DJTS	CL10C331JBNC	Capacitor, chip 330PF	C153,C154
2	0CHSS334DZTS	CAPACITOR, CHIP	Capacitor, chip,0.33UF,160	C116,C117,C118,C119,C131 C132,C526,C527,C528,C5
2	0CHSS471DJTS	CL10C471JBNC	Capacitor, chip 470PF	C200,C201,C205,C206,C220
2	0CHSS473DKTS	CL10B473KANC	Capacitor, chip 0.047UF	C13,C14,C15,C16,C17 C18,C19,C20,C21,C22 C25,C26
2	0DHKEKDS181S	KDS181, DIODE	Diode, chip KDS181	D01,D250,D251,D601,D602
2	0DHKEKDS226S	KDS226, DIODE	Diode, chip KDS226	D110
2	0DSSCB340ATS	DIODE, SCHOTTKY CHIP	B340A, 3A	ZD804
2	0ICKE7027FTS	KIA7027AF	IC, KIA7027	IC104
2	0ICKE78L9FTS	KIA78L09F	IC, KIA78L09F	IC503
2	0ICVI4925DTS	IC, MOSFET CHIP	DUAL P-CHANNEL 30V MO	IC805,IC821
2	0LBSS101DJTS	BEAD, CHIP	100 OHM, 2012	L15,L16,L17,L18,L19 L20,L21,L22,L701,L702 L703
2	0LBSS601FJTS	BEAD, CHIP	600 OHM, 3216	L01,L02,L03,L04,L05 L07,L08,L09,L104,L11 L12,L13
2	0LHSS120EJTS	INDUCTOR, CHIP	12UH, 2012	L200,L201,L203,L204,L212 L213,L214,L215,L216,L217 L218,L220,L221,L222
2	0LRSL10100BS	33UH, SMD12128.5	INDUCTOR	L810,L850
2	0RHSS000DJTS	RC1608J000CS	Resistor, chip 0 ohm	C135,R06,R07,R09,R10 R108,R109,R11,R110,R118 R12,R127,R128,R13,R14 R15,R152,R16,R161,R164 R165,R166,R167,R178,R179 R18,R180,R185,R188,R19 R196,R197,R198,R199,R224 R225,R238,R239,R251,R27 R30,R40,R41,R42,R545 R548,R55,R66,R67,R68
2	0RHSS000EJTS	RC2012J000CS	Resistor, chip 0 OHM	R157,R617,R603,L219,174 R221,R223

REPLACEMENT PART LIST

6. Parts List (Main PCB)

LEVEL	PART NO	PART NAME	DESCRIPTIONS	LOCATION NO
2	0RHSS100DJTS	RC1608J100CS	Resistor, chip 10 ohm	R168
2	0RHSS101DJTS	RC1608J101CS	Resistor, chip 100 ohm	R08,R105,R106,R107,R130 R131,R132,R133,R135,R137 R138,R139,R140,R141,R142 R143,R145,R146,R147,R148 R149,R150,R151,R153,R162 R163,R17,R194,R195,R288
2	0RHSS102DJTS	RC1608J102CS	Resistor, chip 1K	R117,R254,R518,R628,R631
2	0RHSS103DJTS	RC1608J103CS	Resistor, chip 10K	R189,R190,R232,R233,R234 R235,R236,R237,R255,R256 R278,R290,R613,R627,R629
2	0RHSS104DJTS	RC1608J104CS	Resistor, chip 100K	R620,R621,R632,R633,R637
2	0RHSS105DJTS	RESISTOR, CHIP	1M OHM, 1608 J	R02
2	0RHSS122DJTS	RC1608J122CS	Resistor, chip 1.2K	R809
2	0RHSS123DJTS	RESISTOR, CHIP	12K OHM, 1608 J	R838
2	0RHSS151DJTS	RC1608J151CS	Resistor, chip 150 ohm	R100,R101,R102,R113,R114
2	0RHSS153DJTS	RESISTOR, CHIP	15K OHM, 1608 J	R618,R623
2	0RHSS182DJTS	RESISTOR, CHIP	Resistor, chip 1.8K ohm	R276
2	0RHSS220DJTS	RC1608J220CS	Resistor, chip 22 ohm	R04,R05,R111,R120,R129 R154,R155,R169,R170,R192 R193,R252,R253,R32,R33 R34,R44,R50,R56,R57
2	0RHSS223DJTS	RC1608J223CS	Resistor, chip 22K	R156
2	0RHSS271DJTS	RC1608J271CS	Resistor, chip 270	R103,R104,R116
2	0RHSS272DJTS	RC1608J272CS	Resistor, chip 2.7K	R112,R204
2	0RHSS273DJTS	RC1608J273CS	Resistor, chip 27K	R260,R274,R803,R816,R818
2	0RHSS332DJTS	RC1608J332CS	Resistor, chip 3.3K	R03,R134,R247,R248,R249 R541,R542
2	0RHSS392DJTS	RC1608J392CS	Resistor, chip 3.9K	R124,R125
2	0RHSS393DJTS	RESISTOR, CHIP	Resistor, chip 39K	R619,R622
2	0RHSS3R0DJTS	RESISTOR, CHIP	3 OHM, 1608 J	R43
2	0RHSS3R3DJTS	RC1608J3R3CS	Resistor, chip 3.3 OHM	R610,R611
2	0RHSS470DJTS	RESISTOR, CHIP	Resistor, chip 47 ohm	R257,R258
2	0RHSS471DJTS	RC1608J471CS	Resistor, chip 470 ohm	R275,R280,R519,R844
2	0RHSS472DJTS	RC1608J472CS	Resistor, chip 4.7K	R122,R123,R843,R181,R182 R183,R184,R207,R246,R26 R530,R607,R612,R709,R71
2	0RHSS242DJTS	RESISTOR, CHIP	Resistor, chip, 2.4K OHM, 1	R119,R121
2	0RHSS473DJTS	RC1608J473CS	Resistor, chip 47K	R126,R245,R615,R626,R817

REPLACEMENT PART LIST

7. Parts List (Main PCB)

LEVEL	PART NO	PART NAME	DESCRIPTIONS	LOCATION NO
2	0RHSS474DJTS	RC1608J474CS	Resistor, chip 470K	R202,R203
2	0RHSS512DJTS	5.1K OHM, 1608 J	RESISTOR, CHIP	R191,R200,R201,R217,R218 R282,R283,R284,R285
2	0RHSS560DJTS	RESISTOR, CHIP	56 OHM, 1608 J	R61
2	0RHSS561DJTS	RC1608J561CS	Resistor, chip 560 ohm	R604,R608,R515,R516
2	0RHSS622DJTS	6.2K OHM, 1608 J	RESISTOR, CHIP	R624,R625
2	0RHSS683DJTS	68K OHM, 1608 J	RESISTOR, CHIP	R614
2	0RHSS750DJTS	RC1608J750CS	Resistor, chip 75 ohm	R227,R228,R279,R281,R286 R287,R714,R715,R716
2	0RHSS821DJTS	RC1608J821CS	Resistor, chip 820 ohm	R277
2	0RHSS912DJTS	9.1K OHM 1608, J	RESISTOR, CHIP	R229
2	0RYSS101FJTS	RESISTOR, ARRAY CHIP	100 OHM, 3216	AR09,AR10
2	0RYSS101FJTS	RESISTOR, ARRAY CHIP	100 OHM, 3216	AR01,AR02,AR03
2	0RYSS220FJTS	RESISTOR, ARRAY	22 OHM, *8 J	AR13,AR14,AR15,AR16,AR17 AR18,AR19,AR21,AR22,AR23 AR24,AR25
2	0TRKE1504STS	KTA1504S Y	Transistor, chip A1504	Q100,Q101,Q103,Q601,Q203 Q603,Q104,Q105
2	0TRKE3875STS	KTC3875S Y	Transistor, chip	Q01,Q102,Q11,Q204,Q198 Q205,Q210,Q602,Q604,Q800 Q802,Q803,Q812,Q813
2	1DHSTS1545GS	DIODE, RECTIFIER	D2PAK, 45V 15A	D850
2	1DZSC5231BTS	DIODE, ZENER CHIP	5.1V, MMSZ5231BS-7	D700,D701,ZD191,ZD192,ZD202 ZD205,ZD207,ZD209,ZD213,ZD2 14 ZD215,ZD216,ZD217,ZD218,ZD2 19 ZD220,ZD221,ZD222,ZD225,ZD6
2	1ICIPAP120TS	IC, DC/DC CONVERTER	AP1501A-12K5,12V,5A	IC801
2	1ICMS9883CBS	MST9883C	MST9883C	IC04
2	1ICMST6151BS	MST6151	IC, SCALER	IC01
2	1ICPH74F08TS	N74F08D	IC, N74F08D	IC702
2	1ICPH8574ATS	PCF8574,REMOTE 8-	IC, I/O EXPANDER	IC202
2	1ICRO6161FTS	BA6161F	IC, BA6161F	IC803
2	1ICSE24C16TS	S-24C16AFJA-TB	IC, 24C16	IC103
2	1ICST24C02WS	IC, EEPROM	24C02W	IC201,IC701
2	1ICST6420DTS	TEA6420D	TEA6420D	IC504
2	1ICST80PF55S	STB80PF55	STB80PF55	Q804
2	1ICSTLD18TTS	Regulator(STM)	LD1117S18TR	IC832
2	1ICSTLD33TTS	Regulator(STM)	LD1117S33TR	IC05,IC06,IC08,IC107,IC108
2	1ICSTTS482TS	IC, HEADPHONE AMP	TS482IST, MINI08	IC602
2	0CHSS472DKTS	CAPACITOR, CHIP	4700PF,1608	C249,C257,C259
2	1ICWB986532S	IC, SDRAM CHIP	512Kx32bitx4 SDRAM	IC03
2	0ICKE7805ATS	IC, REGULATOR CHIP	KIA7805AF 5.0V 1A	IC102,IC203
2	111-A48D	PCB, MAIN	48C,VCTI MAIN,REV	
2	1ICMI49XYIC7	IC,V/S DECODER	VCTI, 49XYI-C7	IC101

REPLACEMENT PART LIST

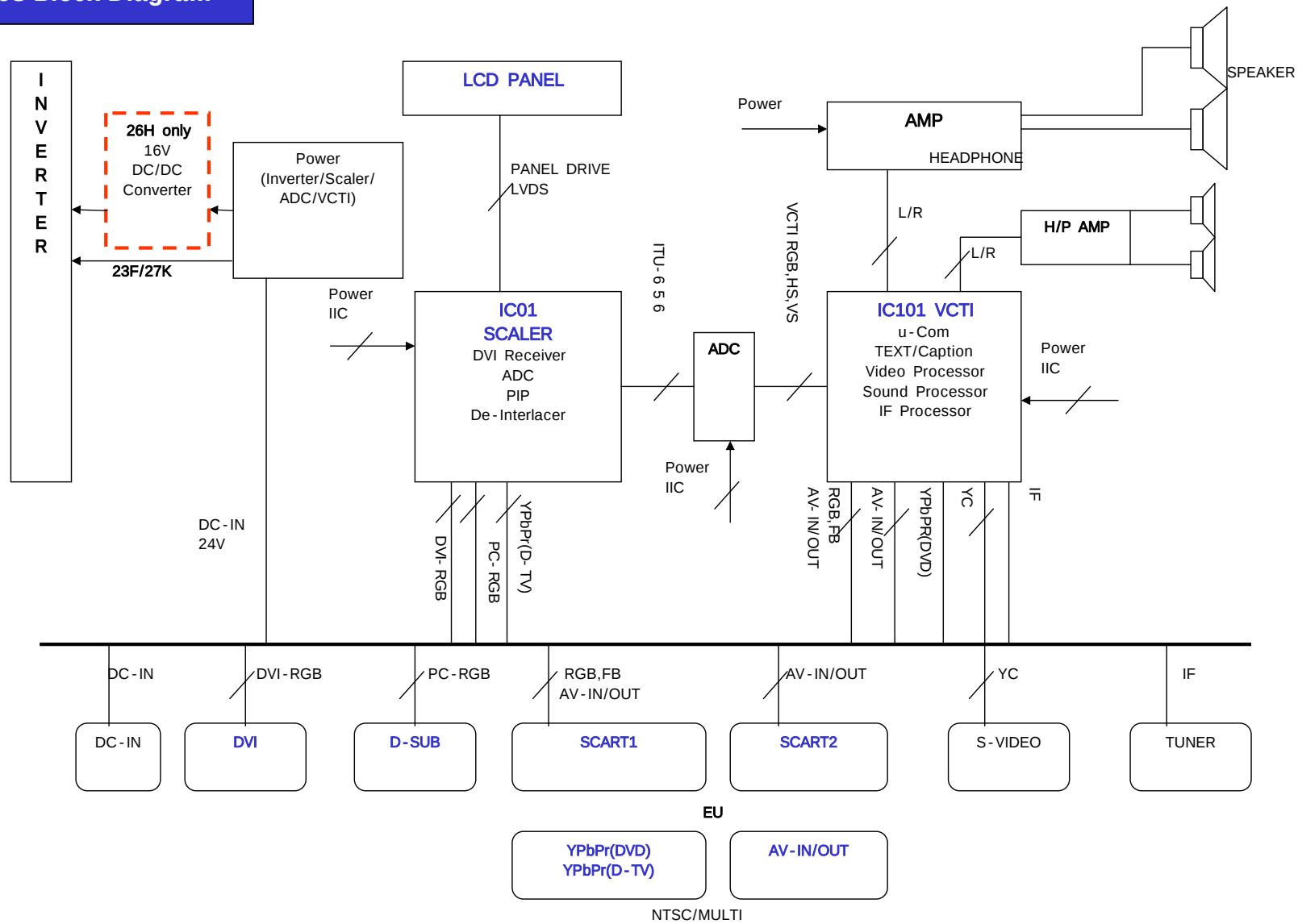
8. Parts List (Main PCB)

LEVEL	PART NO	PART NAME	DESCRIPTIONS	LOCATION NO
1	GRLT41CM001F	GR, 201 CMO TUNER M/I		
2	0TULGG083DBD	TAEM - G083D	Tuner	
2	111 - A46A	20.1", VCT - I	PCB, IF	
2	1SFEPX6966MD	X6966M	SAW FILTER	SF101
2	WAFYH10200AD	WAFER, PIN	Pin wafer, 10 - Pin	P102
1	GRLT41AM001H	GR, LL' MANUAL		
2	1TPMU40R9MTD	TRAP, 40.9MHZ	MKTGA40M9AAHP00A03	T101
1	GRLT41DS001G	GR, LL' SMD		
2	0TRKE3875STS	TRANSISTOR, CHIP	KTC3875S	Q106
2	0RHSS472DJTS	RC1608J472CS	Resistor, chip 4.7K	R177
1	GRLT41DM001E	GR, PANEL MANUAL(SS - W2)		
2	WA1YH10200SD	WAFER, PIN	10P, P2.0mm STRAIGHT	P804
2	WA1YH12200SD	WAFER, PIN	12P, STRAIGHT	P803
1	GRLT41DS001J	GR, PANEL SMD(SS - W2)		
2	0CHSS101DJTS	CL10C101JBNC	Capacitor, chip 100PF	C846
2	0CHSS104DZTS	CL10F104ZANC	Capacitor, chip 0.1UF	C845, C847
1	0RHSS000DJTS	RC1608J000CS	Resistor, chip 0 ohm	R824
2	0RHSS000EJTS	RC2012J000CS	Resistor, chip 0 OHM	R822
2	0RHSS103DJTS	RC1608J103CS	Resistor, chip 10K	R825
2	0RHSS473DJTS	RC1608J473CS	Resistor, chip 47K	R826
2	WAFYH30125AS	WAFER, PIN	30P, P125, ANGLE	P304

BLOCK DIAGRAM

1. Block Diagram

26S Block Diagram



CIRCUIT DESCRIPTIONS

General Description for 26.0" color TFT LCD TV.

The TFT LCD TV described in the followings is based on a Multi TV system, digital Control display, 26.0" diagonal. The TFT LCD TV is intended to be a finished product, Basically a display device mounted inside an enclosure which will provide the safety Requirements. With the exception of LCD Panel, the display device shall be composed entirely of solid state components.

These components shall have a history of reliable service in identity applications and shall be applied in the circuits.

1. SCALER SECTION.
2. VCT 49xxi SECTION.
3. Video A/D Converter

CIRCUIT DESCRIPTIONS

1.SCALER SECTION.

Device : MST6151

Features: Input supports up to UXGA & 1080P

Panel supports up to SXGA/WXGA

Integrated two-port triple-ADC/PLL

Integrated DVI/HDCP compliant receiver

YUV422 digital video input ports

Dual high-quality scaling engines

Built-in 3-D video de-interlacer

Video-over-graphic PIP

Video-by-graphic split screen

MStarACE advanced picture/color processing engine

Embedded On-screen Display Controller (OSD) engine

Built-in dual-link LVDS transmitter

5-Volt tolerant inputs

Low EMI and power saving features

Supports PWM & GPO controls

208-pin PQFP package

Analog RGB/YPbPr Input Ports

DVI/HDCP Compliant Input Port

Video Input Port

Auto-Configuration/Auto-Detection

Dual High-Performance Scaling Engines

Video Processing & Conversion

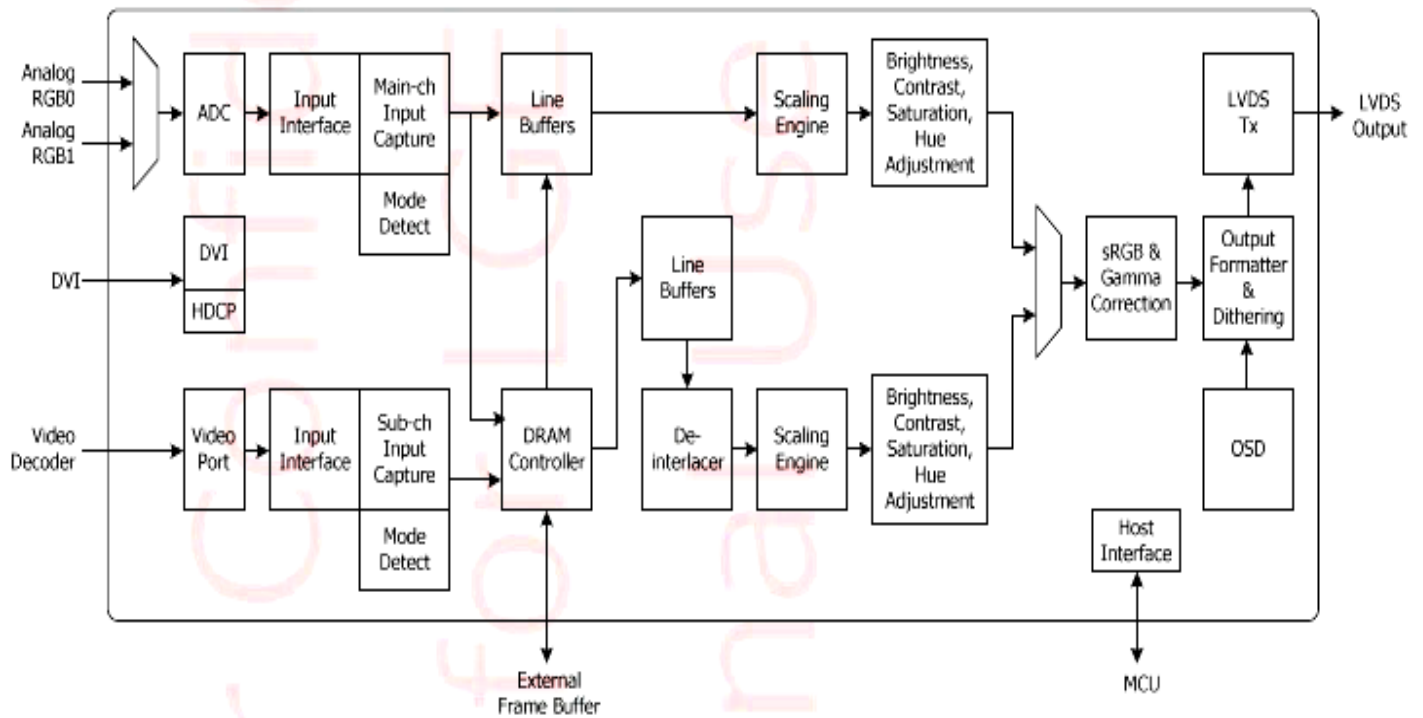
On-Screen OSD Controller

1) Description

The MST6151 is a high performance and fully integrated graphics processing IC solution for multi-function LCD monitor/TV with resolutions up to SXGA/WXGA. It is configured with an integrated triple-ADC/PLL, an ntegrated DVI/HDCP receiver, a video de-interlacer, two high quality scaling engines, an on-screen display controller, and a built-in output clock generator. By use of external frame buffer, PIP is provided for multimedia applications. It supports de-interlaced full-screen video, video-on-graphic overlay, video-by-graphic split screen, frame rate conversion, and aspect ratio conversion for various video sources. To further reduce system costs, the MST6151 also integrates intelligent power management control capability for green-mode requirements and spread-spectrum support for EMI management.

CIRCUIT DESCRIPTIONS

2) Block Diagram.



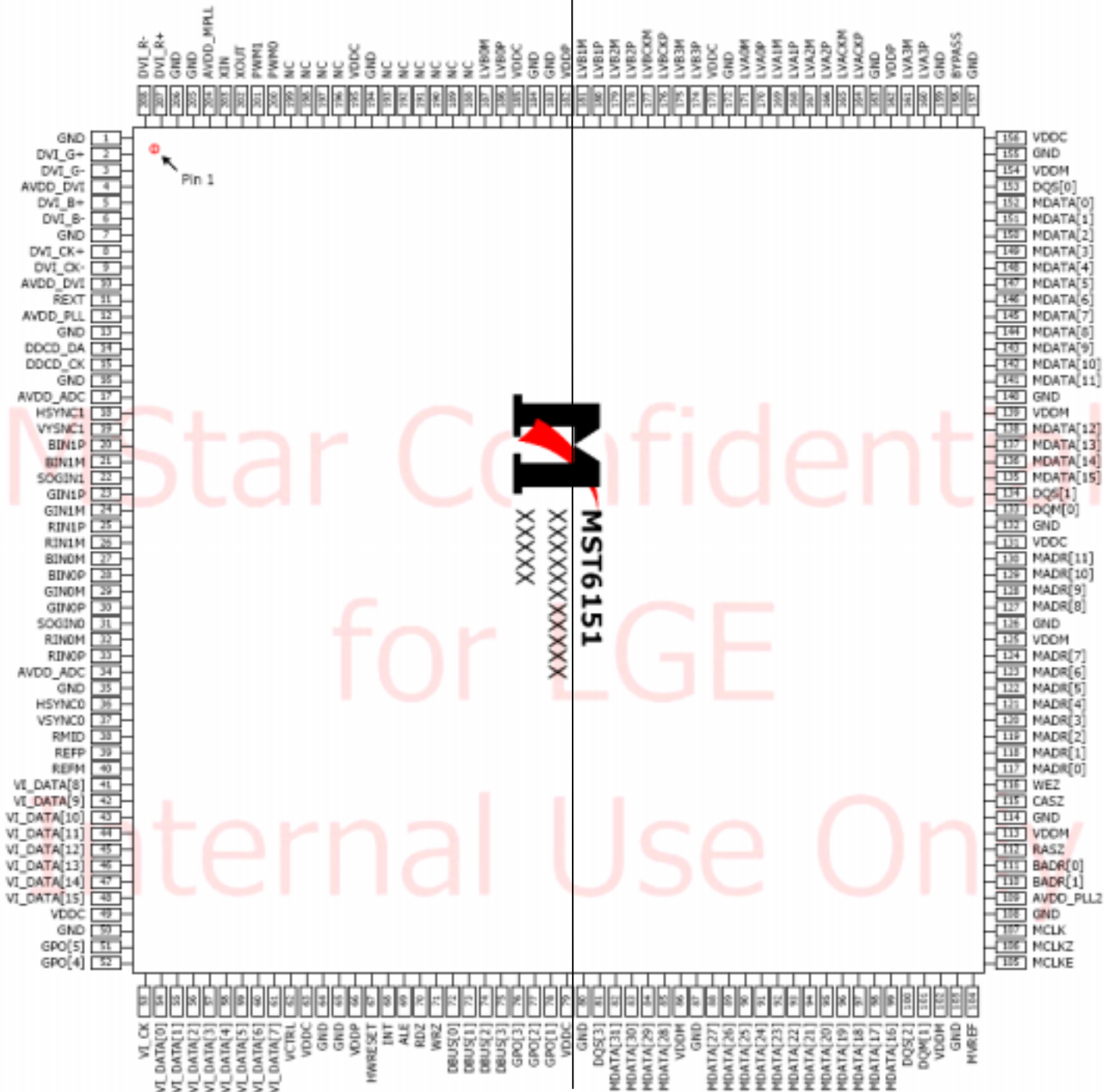
CIRCUIT DESCRIPTIONS

3) Pin configuration.

Reference line

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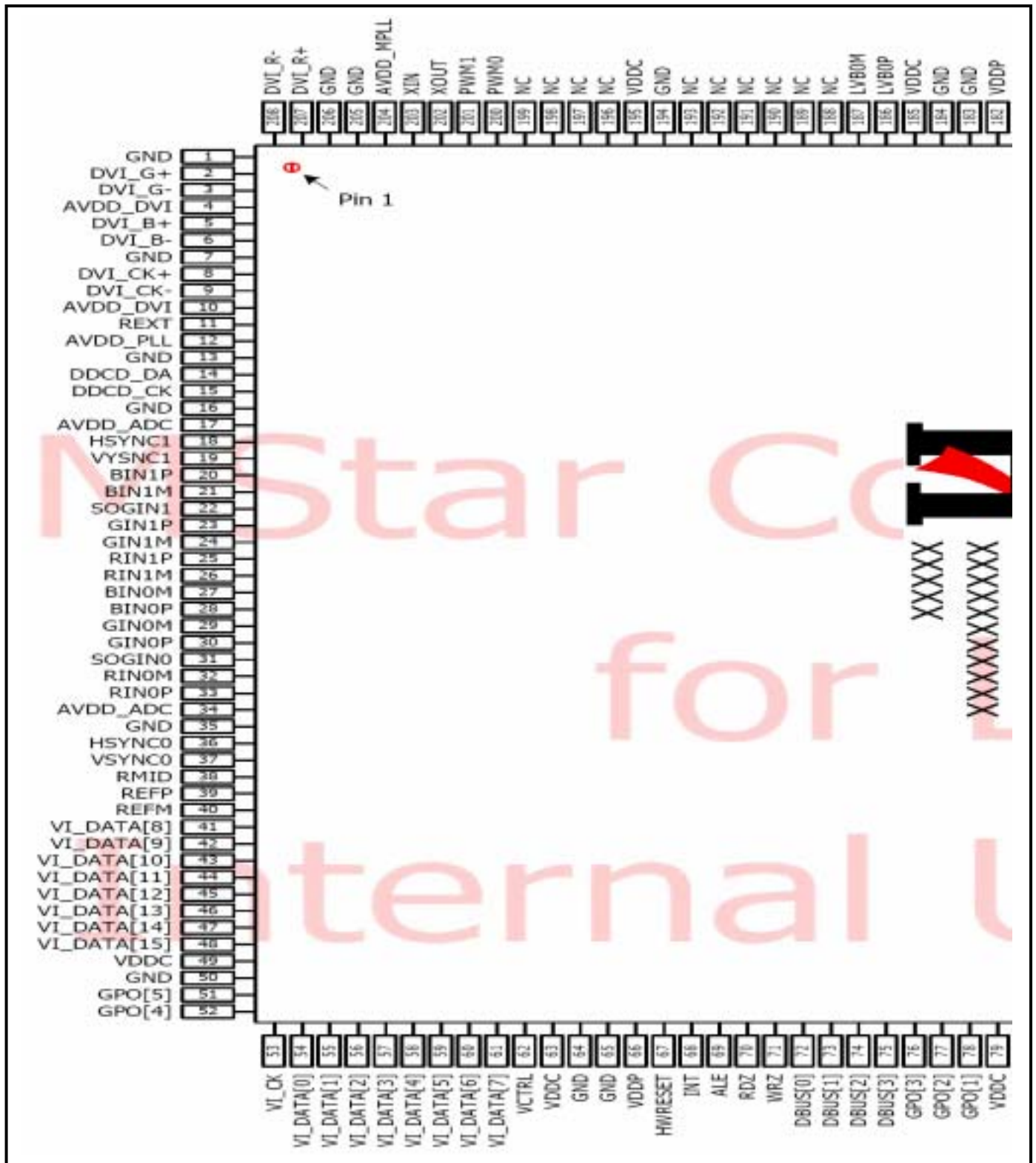
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CIRCUIT DESCRIPTIONS

3-1) Pin configuration

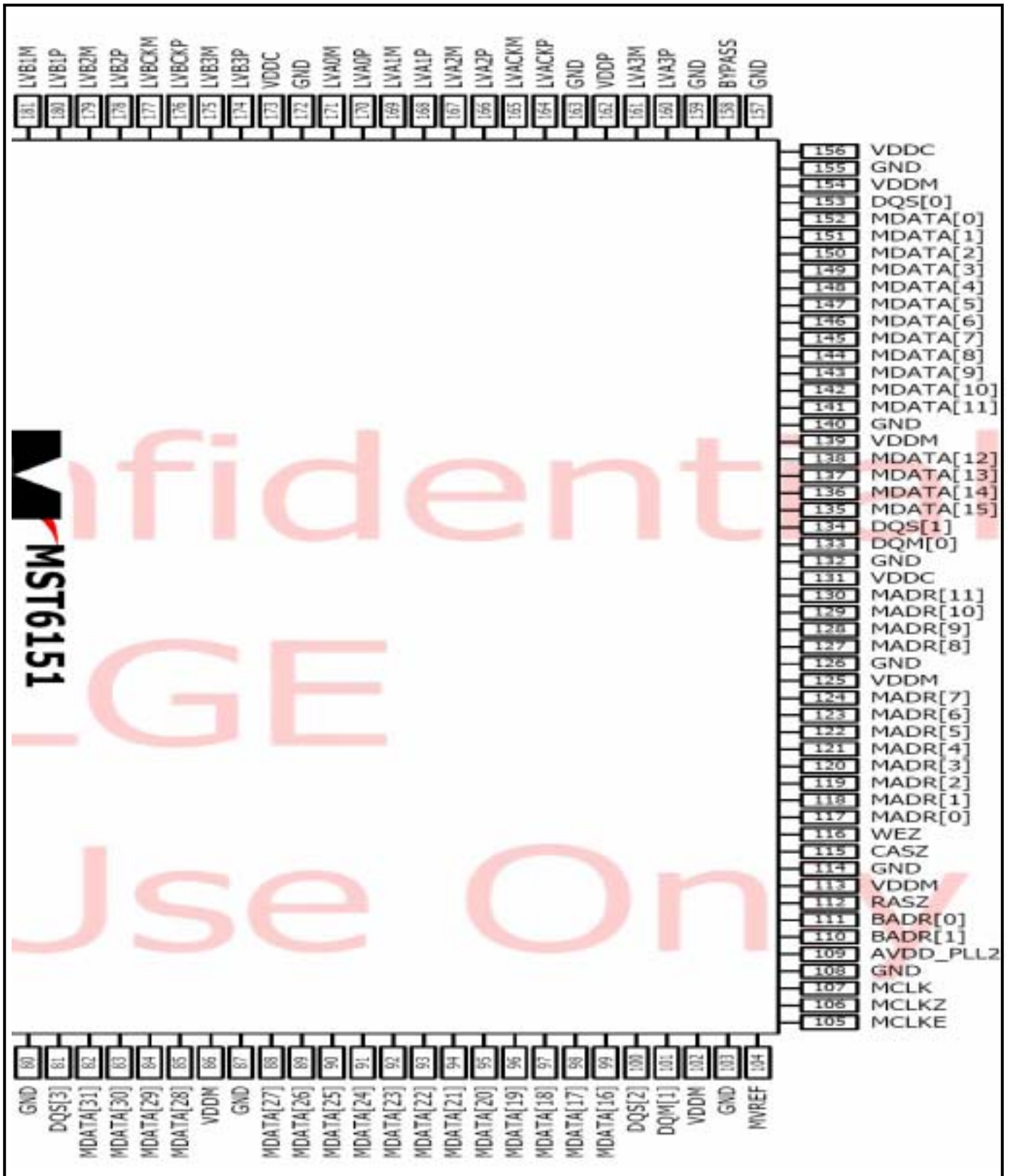
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CIRCUIT DESCRIPTIONS

3-2) Pin configuration

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CIRCUIT DESCRIPTIONS

4) Pin Functions. [MCU Interface]

Pin Name	Pin Type	Function	Pin
HWRESET	Schmitt Trigger Input w/ 5V-tolerant	Hardware Reset, active high	67
DBUS [3:0]	I/O w/ 5V-tolerant	MCU 4-bit DDR Direct bus; 4mA driving strength	75-72
ALE	I w/ 5V-tolerant	MCU Bus ALE, active high	69
RDZ	I w/ 5V-tolerant	MCU Bus RDZ, active high	70
WRZ	I w/ 5V-tolerant	MCU Bus WDZ, active high	71
INT	Output	MCU Bus Interrupt; 4mA driving strength	68

[Analog Interface]

Pin Name	Pin Type	Function	Pin
RMID		Mid-Scale Voltage Bypass	38
REFP		Internal ADC Top De-coupling Pin	39
REFM		Internal ADC Bottom De-coupling Pin	40
REXT	Analog Input	External Resister 390 ohm to AVDD_DVI	11
HSYNC0	Schmitt Trigger Input w/ 5V-tolerant	Analog HSYNC Input from Channel 0	36
VSYNC0	Schmitt Trigger Input w/ 5V-tolerant	Analog VSYNC Input from Channel 0	37
BIN0M	Analog Input	Reference Ground for Analog Blue Input from Channel 0	27
BIN0P	Analog Input	Analog Blue Input from Channel 0	28
GIN0M	Analog Input	Reference Ground for Analog Green Input from Channel 0	29
GIN0P	Analog Input	Analog Green Input from Channel 0	30
SOGINO	Analog Input	Sync On Green Input from Channel 0	31
RIN0M	Analog Input	Reference Ground for Analog Red Input from Channel 0	32
RIN0P	Analog Input	Analog Red Input from Channel 0	33
HSYNC1	Schmitt Trigger Input w/ 5V-tolerant	Analog HSYNC Input from Channel 1	18
VSYNC1	Schmitt Trigger Input w/ 5V-tolerant	Analog VSYNC Input from Channel 1	19
BIN1M	Analog Input	Reference Ground for Analog Blue Input from Channel 1	21
BIN1P	Analog Input	Analog Blue Input from Channel 1	20
SOGIN1	Analog Input	Sync On Green Input from Channel 1	22
GIN1M	Analog Input	Reference Ground for Analog Green Input from Channel 1	24

CIRCUIT DESCRIPTIONS

Pin Name	Pin Type	Function	Pin
GIN1P	Analog Input	Analog Green Input from Channel 1	23
RIN1M	Analog Input	Reference Ground for Analog Red Input from Channel 1	26
RIN1P	Analog Input	Analog Red Input from Channel 1	25

[DVI Interface]

Pin Name	Pin Type	Function	Pin
DVI_R+	Input	DVI Input Channel Red +	207
DVI_R-	Input	DVI Input Channel Red -	208
DVI_G+	Input	DVI Input Channel Green +	2
DVI_G-	Input	DVI Input Channel Green -	3
DVI_B+	Input	DVI Input Channel Blue +	5
DVI_B-	Input	DVI Input Channel Blue -	60
DVI_CK+	Input	DVI Input Clock +	8
DVI_CK-	Input	DVI Input Clock -	9

[Video Interface]

Pin Name	Pin Type	Function	Pin
VI_CK	Input w/ 5V-tolerant	Digital Video Input Clock	53
VI_DATA[15:0]	Input w/ 5V-tolerant	Digital Video Input Data[15:0]	48-41, 61-54

[LVDS Interface]

Pin Name	Pin Type	Function	Pin
LVA0M	Output	A-Link Negative LVDS Differential Data Output	171
LVA0P	Output	A-Link Positive LVDS Differential Data Output	170
LVA1M	Output	A-Link Negative LVDS Differential Data Output	169
LVA1P	Output	A-Link Positive LVDS Differential Data Output	168
LVA2M	Output	A-Link Negative LVDS Differential Data Output	167
LVA2P	Output	A-Link Positive LVDS Differential Data Output	166
LVA3M	Output	A-Link Negative LVDS Differential Data Output	161
LVA3P	Output	A-Link Positive LVDS Differential Data Output	160
LVACKM	Output	A-Link Negative LVDS Differential Data Output	165
LVACKP	Output	A-Link Positive LVDS Differential Data Output	164
LVB0M	Output	B-Link Negative LVDS Differential Data Output	187
LVB0P	Output	B-Link Positive LVDS Differential Data Output	186
LVB1M	Output	B-Link Negative LVDS Differential Data Output	181

CIRCUIT DESCRIPTIONS

Pin Name	Pin Type	Function	Pin
LVB1P	Output	B-Link Positive LVDS Differential Data Output	180
LVB2M	Output	B-Link Negative LVDS Differential Data Output	179
LVB2P	Output	B-Link Positive LVDS Differential Data Output	178
LVB3M	Output	B-Link Negative LVDS Differential Data Output	175
LVB3P	Output	B-Link Positive LVDS Differential Data Output	174
LVBCKM	Output	B-Link Negative LVDS Differential Data Output	177
LVBCKP	Output	B-Link Positive LVDS Differential Data Output	176

[GPO Interface]

Pin Name	Pin Type	Function	Pin
PWM0	Output	GPO with PWM Function; 4mA driving strength	200
PWM1	Output	GPO with PWM Function; 4mA driving strength	201
GPO[1]	I/O	GPO / FIELD input; 4mA driving strength	78
GPO[2]	I/O	GPO / Digital VSYNC Input; 4mA driving strength	77
GPO[3]	I/O	GPO / DE Input; 4mA driving strength	76
GPO[4]	I/O	GPO / Secondary Video Clock Input; 4mA driving strength	52
GPO[5]	I/O	GPO / Digital HSYNC Input; 4mA driving strength	51

[DRAM Interface]

Pin Name	Pin Type	Function	Pin
MVREF	Input	Reference Voltage for DDR SDRAM Interface	104
MCLKE	Output	DRAM Memory Clock Enable	105
MCLKZ	Output	DRAM Memory clock Complementary /Input (for differential clocks)	106
MCLK	Output	DRAM Memory Clock	107
RASZ	Output	Row Address Strobe, active low	112
CASZ	Output	Column Address Strobe, active low	115
WEZ	Output	Write Enable, active low	116
DQM[1:0]	Output	Data Mask Byte Enable	133, 101
DQS[3:0]	Output	Data Strobe	81, 100, 134, 153
BADR[1:0]	Output	Memory Bank Address	110, 111
MADR[11:0]	Output	Memory Address	130-127, 124-117
MDATA[31:0]	I/O	Memory Data	82-85, 88-99, 135-138, 141-152

CIRCUIT DESCRIPTIONS

[Misc. Interface]

Pin Name	Pin Type	Function	Pin
XIN	Crystal Oscillator Input	Crystal Oscillator Input	203
XOUT	Crystal Oscillator Output	Crystal Oscillator Output	202
DDCD_DA	I/O w/ 5V-tolerant	HDCP Serial Bus Data / DDC data of DVI port; 4mA driving strength	14
DDCD_CK	Input w/ 5V-Tolerant	HDCP Serial Bus Clock / DDC Clock of DVI Port	15
BYPASS		For External Bypass Capacitor	158
VCTRL	Output	Regulator Control	62

[Power Pins]

Pin Name	Pin Type	Function	Pin
AVDD_DVI	3.3V Power	DVI Power	4, 10
AVDD_ADC	3.3V Power	ADC Power	17, 34
AVDD_PLL	3.3V Power	PLL Power	12
AVDD_PLL2	3.3V Power	PLL Power	109
AVDD_MPLL	3.3V Power	PLL Power	204
VDDM	3.3V Power (SDR SDRAM) / 2.5V Power (DDR SDRAM)	DRAM Interface Power	86, 102, 113, 125, 139, 154
VDDP	3.3V Power	Digital Output Power	66, 162, 182
VDDC	2.5V Power	Digital Core Power	49, 63, 79, 131, 156, 173, 185, 195
GND	Ground	Ground	1, 7, 13, 16, 35, 50, 64, 65, 80, 87, 103, 108, 114, 126, 132, 140, 155, 157, 159, 163, 172, 183, 184, 194, 205, 206

[No Connects]

Pin Name	Pin Type	Function	Pin
NC		No connect. Leave these pins floating.	188-193, 196-199

CIRCUIT DESCRIPTIONS

2. VCT 49xxi SECTION.

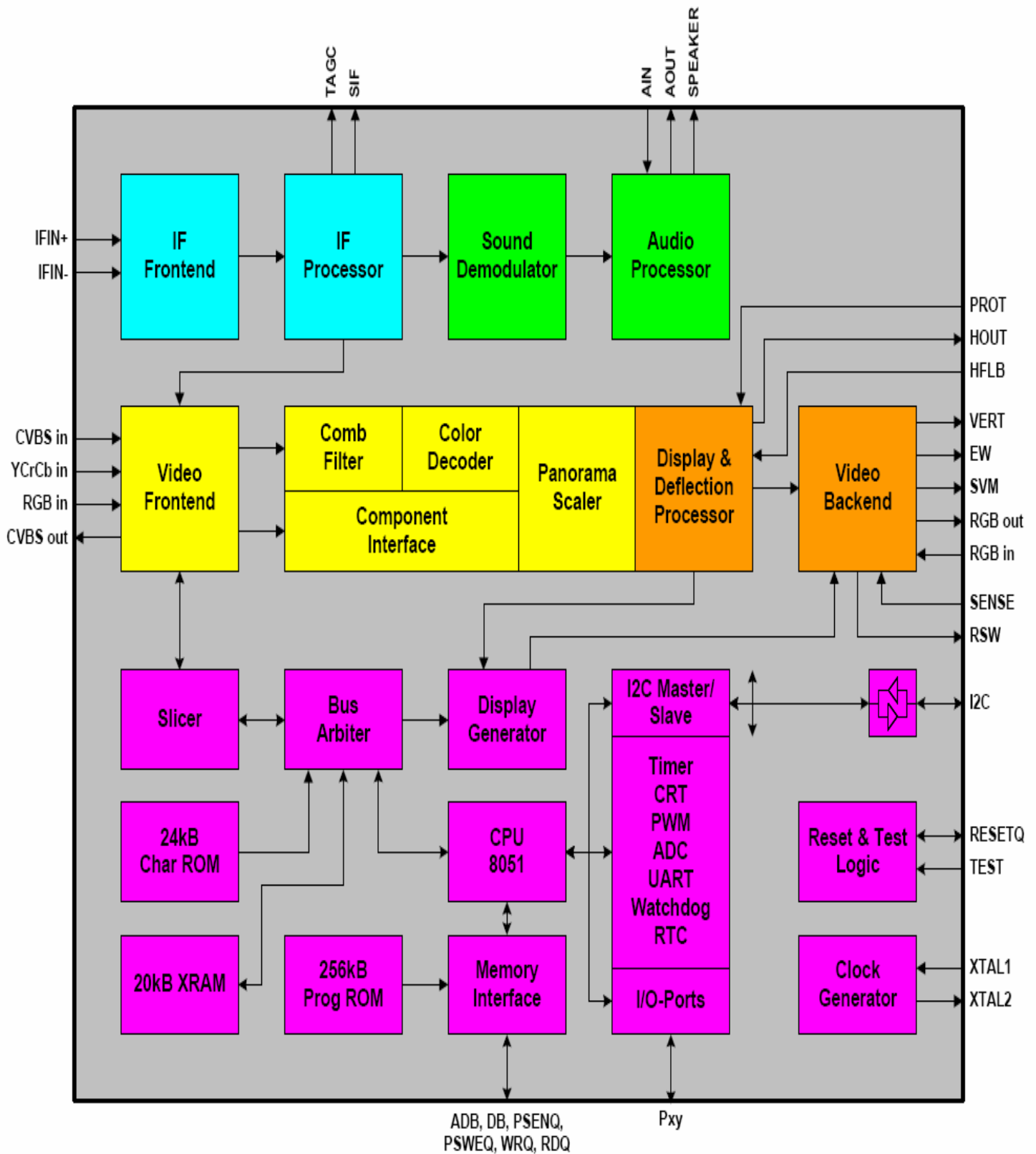
Device : VCT 49xxi
Features : PSSDIP88-1/-2 package
PMQFP144-2 package
Submicron CMOS technology
Low-power standby mode
Single 20.25-MHz reference crystal
8-bit 8051 instruction set compatible CPU
Up to 256 kB on-chip program ROM
WST, PDC, VPS, and WSS acquisition
Closed Caption and V-chip acquisition
Up to 10 pages on-chip teletext memory
Multi-standard QSS IF processing with single SAW
FM Radio and RDS with standard TV tuner
TV-sound demodulation:
Baseband sound processing for loudspeaker channel:
CVBS, S-VHS, YCrCb and RGB inputs
4H adaptive comb filter (PAL/NTSC)
multi-standard color decoder (PAL/NTSC/SECAM)
Nonlinear horizontal scaling "panorama vision"
Luma and chroma transient improvement (LTI, CTI)
Non-linear color space enhancement (NCE)
Dynamic black level expander (BLE)
Scan velocity modulation output
Soft start/stop of H-drive
Vertical angle and bow correction
Average and peak beam current limiter
Nonlinear and dynamic EHT compensation
Black switch off procedure (BSO)

1) Description

The VCT 49xxi is an IC family of high-quality singlechip TV processors. Modular design and deep-submicron technology allow the economic integration of features in all classes of single-scan TV sets. The VCT 49xxi family is based on functional blocks contained and approved in existing products like DRX 396xA, MSP 34x5G, VSP 94x7B, DDP 3315C and SDA 55xx. Each member of the family contains the entire IF, audio, video, display, and deflection processing for 4:3 and 16:9 50/60-Hz mono and stereo TV sets. The integrated microcontroller is supported by a powerful OSD generator with integrated Teletext & CC acquisition including on-chip page memory.

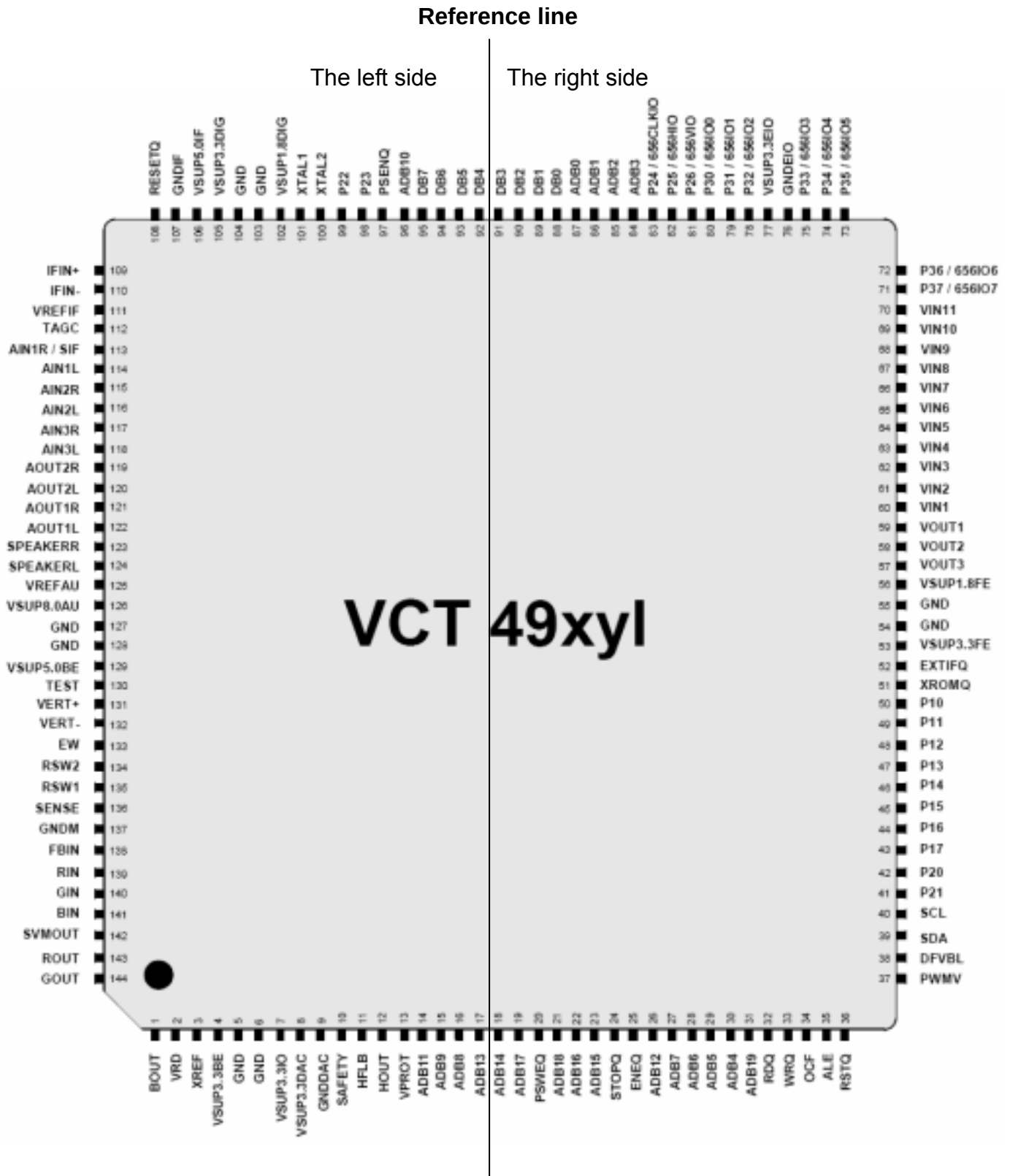
CIRCUIT DESCRIPTIONS

2) Block Diagram.



CIRCUIT DESCRIPTIONS

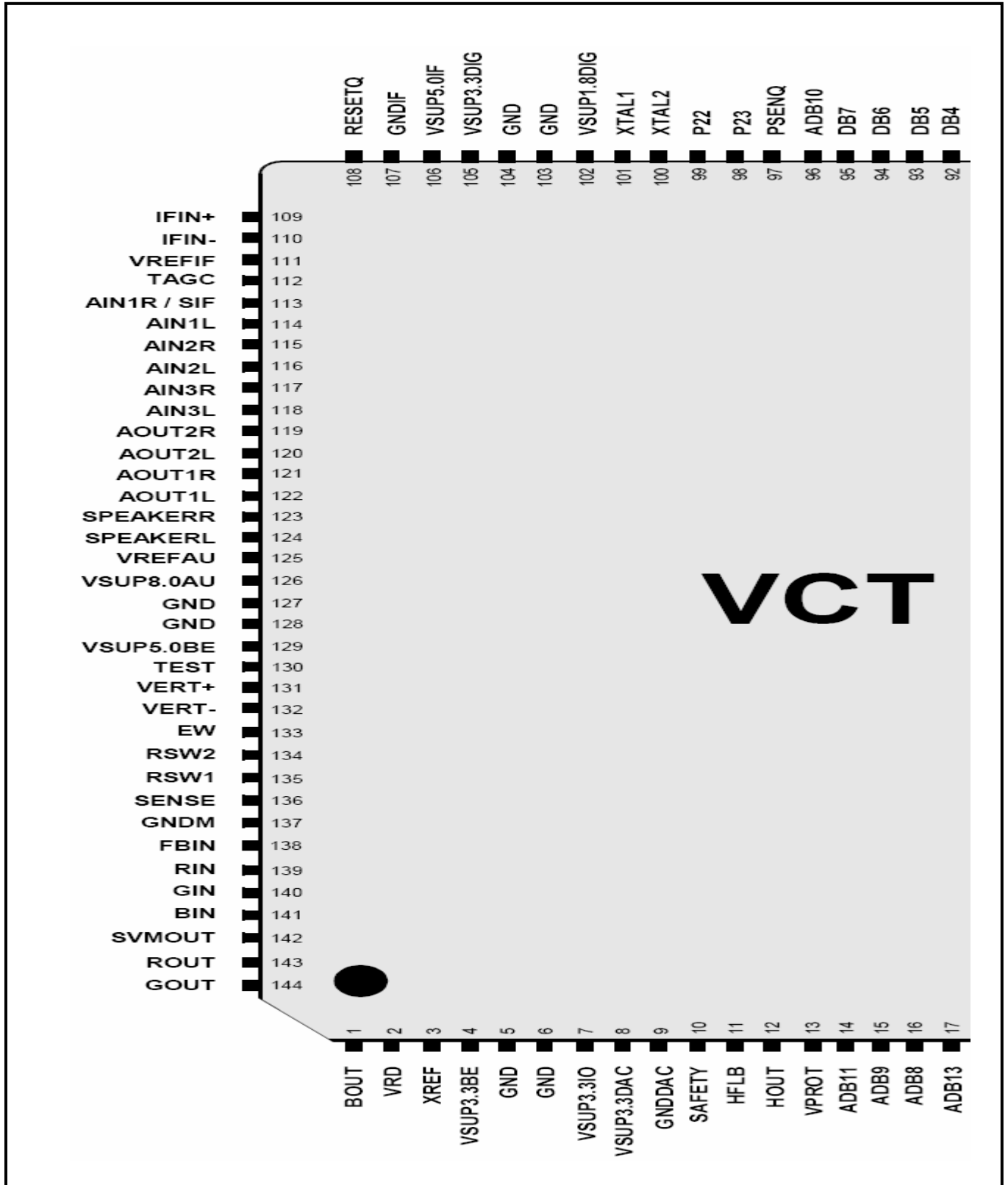
3) Pin configuration.



CIRCUIT DESCRIPTIONS

3-1) Pin configuration

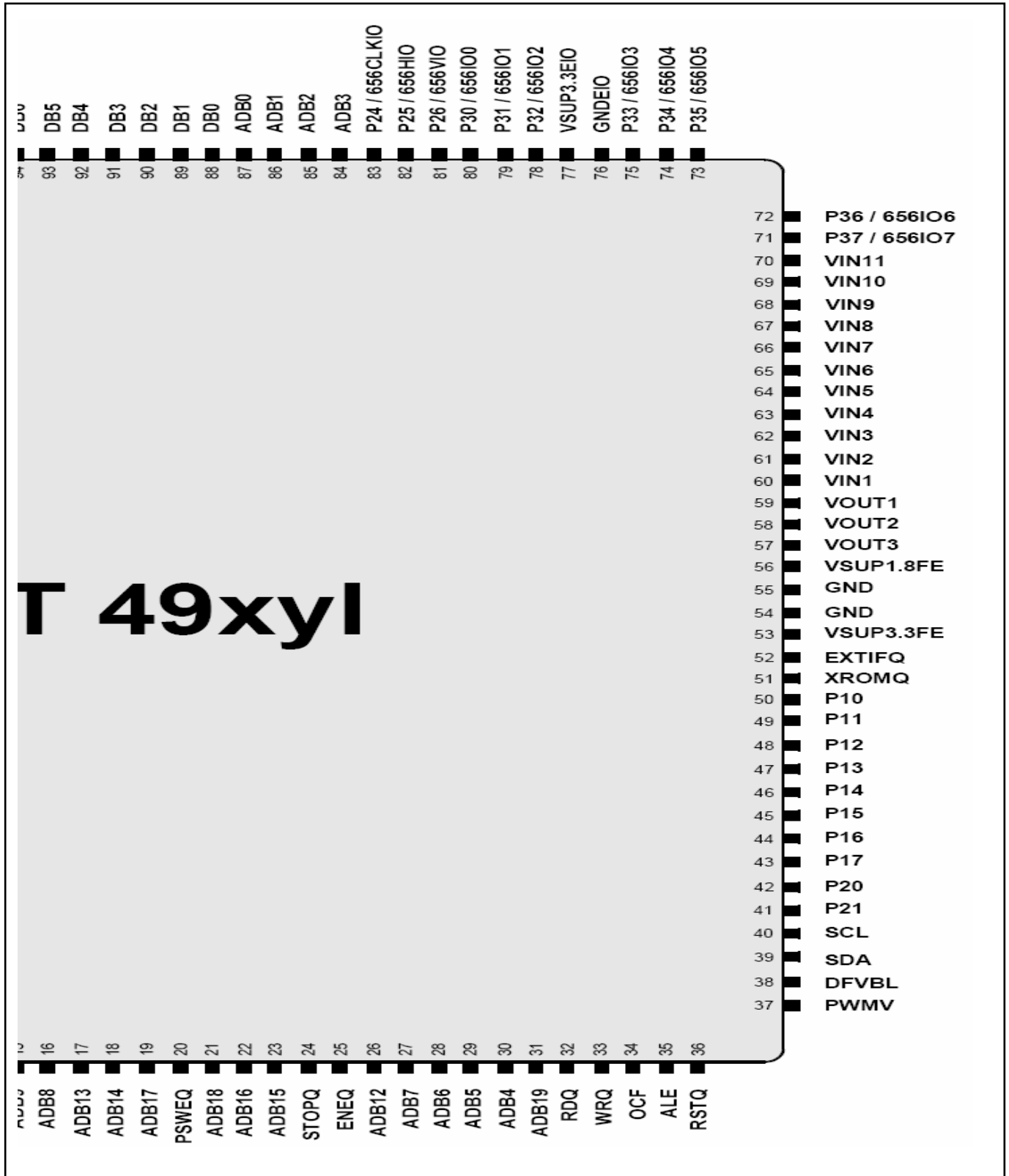
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CIRCUIT DESCRIPTIONS

3-2) Pin configuration

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CIRCUIT DESCRIPTIONS

4) Pin Connections and Short Descriptions

NC = not connected

LV = if not used, leave vacant

OBL = obligatory; connect as described in circuit diagram

IN = Input Pin

OUT = Output Pin

SUPPLY = Supply Pin

4-1) Pin(Port) Functions

Pin No.		Pin Name	Type	Connection (If not used)	Short Description
PSSDIP 88-pin	PMQFP-2 144-pin				
1	128	GND	SUPPLY	OBL	Ground Platform
2	129	VSUP5.0BE	SUPPLY	OBL	Supply Voltage Analog Video Back-end, 5.0 V
3	130	TEST	IN	GND	Test Input, reserved for Test
4	131	VERT+	OUT	LV	Differential Vertical Sawtooth Output
5	132	VERT-	OUT	LV	Differential Vertical Sawtooth Output
6	133	EW	OUT	LV	Vertical Parabola Output
7	134	RSW2	OUT	LV	Range Switch 2 Output
8	135	RSW1	OUT	LV	Range Switch 1 Output
9	136	SENSE	IN	GND	Sense ADC Input
10	137	GNDM	IN	GND	Reference Ground for Sense ADC
11	138	FBIN	IN	GND	Fast Blank Input, Back-end
12	139	RIN	IN	GND	Analog Red Input, Back-end
13	140	GIN	IN	GND	Analog Green Input, Back-end
14	141	BIN	IN	GND	Analog Blue Input, Back-end
15	142	SVMOUT	OUT	VSUP5.0BE	Scan Velocity Modulation Output
16	143	ROUT	OUT	VSUP5.0BE	Analog Red Output
17	144	GOUT	OUT	VSUP5.0BE	Analog Green Output
18	1	BOUT	OUT	VSUP5.0BE	Analog Blue Output
19	2	VRD		OBL	Reference Voltage for RGB DACs
20	3	XREF		OBL	Reference Current for RGB DACs
21	4	VSUP3.3BE	SUPPLY	OBL	Supply Voltage Analog Video Back-end, 3.3 V
22	5	GND	SUPPLY	OBL	Ground Platform
23	6	GND	SUPPLY	OBL	Ground Platform
24	7	VSUP3.3IO	SUPPLY	OBL	Supply Voltage I/O Ports, 3.3 V
25	8	VSUP3.3DAC	SUPPLY	OBL	Supply Voltage Video DACs, 3.3 V
26	9	GNDDAC	SUPPLY	OBL	Ground Video DACs
27	10	SAFETY	IN	GND	Safety Input

CIRCUIT DESCRIPTIONS

4-2) Pin(Port) Functions

Pin No.		Pin Name	Type	Connection (If not used)	Short Description
PSSDIP 88-pin	PMQFP-2 144-pin				
28	11	HFLB	IN	HOUT	Horizontal Flyback Input
29	12	HOUT	OUT	LV	Horizontal Drive Output
30	13	VPROT	IN	GND	Vertical Protection Input
	37	PWMV	OUT	LV	PWM Vertical Output
	38	DFVBL	OUT	LV	Dynamic Focus Vertical Blanking Output
31	39	SDA	IN/OUT	OBL	I ² C Bus Data Input/Output
32	40	SCL	IN/OUT	OBL	I ² C Bus Clock Input/Output
33	41	P21	IN/OUT	LV	Port 2, Bit 1 Input/Output
34	42	P20	IN/OUT	LV	Port 2, Bit 0 Input/Output
35	43	P17	IN/OUT	LV	Port 1, Bit 7 Input/Output
36	44	P16	IN/OUT	LV	Port 1, Bit 6 Input/Output
37	45	P15	IN/OUT	LV	Port 1, Bit 5 Input/Output
38	46	P14	IN/OUT	LV	Port 1, Bit 4 Input/Output
39	47	P13	IN/OUT	LV	Port 1, Bit 3 Input/Output
40	48	P12	IN/OUT	LV	Port 1, Bit 2 Input/Output
41	49	P11	IN/OUT	LV	Port 1, Bit 1 Input/Output
42	50	P10	IN/OUT	LV	Port 1, Bit 0 Input/Output
43	53	VSUP3.3FE	SUPPLY	OBL	Supply Voltage Analog Video Front-end, 3.3 V
44	54	GND	SUPPLY	OBL	Ground Platform
45	55	GND	SUPPLY	OBL	Ground Platform
46	56	VSUP1.8FE	SUPPLY	OBL	Supply Voltage Analog Video Front-end, 1.8 V
47	57	VOUT3	OUT	LV	Analog Video 3 Output
48	58	VOUT2	OUT	LV	Analog Video 2 Output
49	59	VOUT1	OUT	LV	Analog Video 1 Output
50	60	VIN1	IN	GND	Analog Video 1 Input
51	61	VIN2	IN	GND	Analog Video 2 Input
52	62	VIN3	IN	GND	Analog Video 3 Input
53	63	VIN4	IN	GND	Analog Video 4 Input
54	64	VIN5	IN	GND	Analog Video 5 Input
55	65	VIN6	IN	GND	Analog Video 6 Input
56	66	VIN7	IN	GND	Analog Video 7 Input
57	67	VIN8	IN	GND	Analog Video 8 Input
58	68	VIN9	IN	GND	Analog Video 9 Input

CIRCUIT DESCRIPTIONS

4-3) Pin(Port) Functions

Pin No.		Pin Name	Type	Connection (If not used)	Short Description
PSSDIP 88-pin	PMQFP-2 144-pin				
59	69	VIN10	IN	GND	Analog Video 10 Input
60	70	VIN11	IN	GND	Analog Video 11 Input
61	98	P23	IN/OUT	LV	Port 2, Bit 3 Input/Output
62	99	P22	IN/OUT	LV	Port 2, Bit 2 Input/Output
63	100	XTAL2	OUT	OBL	Analog Crystal Output
64	101	XTAL1	IN	OBL	Analog Crystal Input
65	102	VSUP1.8DIG	SUPPLY	OBL	Supply Voltage Digital Core, 1.8 V (main and standby supply)
66	103	GND	SUPPLY	OBL	Ground Platform
67	104	GND	SUPPLY	OBL	Ground Platform
68	105	VSUP3.3DIG	SUPPLY	OBL	Supply Voltage Digital Core, 3.3 V (main and standby supply)
69	106	VSUP5.0IF	SUPPLY	OBL	Supply Voltage Analog IF Front-end, 5.0 V
70	107	GNDIF	SUPPLY	OBL	Ground Analog IF Front-end
71	108	RESETQ	IN/OUT	OBL	Reset Input/Output
72	109	IFIN+	IN	VREF _{IF}	Differential IF Input
73	110	IFIN-	IN	VREF _{IF}	Differential IF Input
74	111	VREFIF		OBL	Reference Voltage, IF ADC
75	112	TAGC	OUT	LV	Tuner AGC Output
76	113	AIN1R / SIF	IN/OUT	GND	Analog Audio 1 Input, Right Analog 2nd Sound IF Output
77	114	AIN1L	IN	GND	Analog Audio 1 Input, Left
78	115	AIN2R	IN	GND	Analog Audio 2 Input, Right
79	116	AIN2L	IN	GND	Analog Audio 2 Input, Left
	117	AIN3R	IN	GND	Analog Audio 3 Input, Right
	118	AIN3L	IN	GND	Analog Audio 3 Input, Left
	119	AOUT2R	OUT	LV	Analog Audio 2 Output, Right
	120	AOUT2L	OUT	LV	Analog Audio 2 Output, Left
80		AIN3R / AOUT2R	IN / OUT	LV	Analog Audio 3 Input, Right Analog Audio 2 Output, Right
81		AIN3L / AOUT2L	IN / OUT	LV	Analog Audio 3 Input, Left Analog Audio 2 Output, Left
82	121	AOUT1R	OUT	LV	Analog Audio 1 Output, Right
83	122	AOUT1L	OUT	LV	Analog Audio 1 Output, Left
84	123	SPEAKERR	OUT	LV	Analog Loudspeaker Output, Right

CIRCUIT DESCRIPTIONS

4-4) Pin(Port) Functions

Pin No.		Pin Name	Type	Connection (If not used)	Short Description
PSSDIP 88-pin	PMQFP-2 144-pin				
85	124	SPEAKERL	OUT	LV	Analog Loudspeaker Output, Left
86	125	VREFAU		OBL	Reference Voltage, Audio
87	126	VSUP8.0AU	SUPPLY	OBL	Supply Voltage Analog Audio, 8.0 V
88	127	GND	SUPPLY	OBL	Ground Platform
	71	P37 / 656IO7	IN/OUT	LV	Port 3, Bit 7 Input/Output Digital 656 Bus 7 Input/Output
	72	P36 / 656IO6	IN/OUT	LV	Port 3, Bit 6 Input/Output Digital 656 Bus 6 Input/Output
	73	P35 / 656IO5	IN/OUT	LV	Port 3, Bit 5 Input/Output Digital 656 Bus 5 Input/Output
	74	P34 / 656IO4	IN/OUT	LV	Port 3, Bit 4 Input/Output Digital 656 Bus 4 Input/Output
	75	P33 / 656IO3	IN/OUT	LV	Port 3, Bit 3 Input/Output Digital 656 Bus 3 Input/Output
	76	GNDEIO	SUPPLY	OBL	Ground Extended I/O Ports
	77	VSUP3.3EIO	SUPPLY	OBL	Supply Voltage Extended I/O Ports, 3.3 V
	78	P32 / 656IO2	IN/OUT	LV	Port 3, Bit 2 Input/Output Digital 656 Bus 2 Input/Output
	79	P31 / 656IO1	IN/OUT	LV	Port 3, Bit 1 Input/Output Digital 656 Bus 1 Input/Output
	80	P30 / 656IO0	IN/OUT	LV	Port 3, Bit 0 Input/Output Digital 656 Bus 0 Input/Output
	81	P26 / 656VIO	IN/OUT	LV	Port 2, Bit 6 Input/Output Digital 656 Vsync Input/Output
	82	P25 / 656HIO	IN/OUT	LV	Port 2, Bit 5 Input/Output Digital 656 Hsync Input/Output
	83	P24 / 656CLKIO	IN/OUT	LV	Port 2, Bit 4 Input/Output Digital 656 Clock Input/Output
	31	ADB19	OUT	LV	Address Bus 19 Output
	21	ADB18	OUT	LV	Address Bus 18 Output
	19	ADB17	OUT	LV	Address Bus 17 Output
	22	ADB16	OUT	LV	Address Bus 16 Output
	23	ADB15	OUT	LV	Address Bus 15 Output
	18	ADB14	OUT	LV	Address Bus 14 Output
	17	ADB13	OUT	LV	Address Bus 13 Output
	26	ADB12	OUT	LV	Address Bus 12 Output
	14	ADB11	OUT	LV	Address Bus 11 Output

CIRCUIT DESCRIPTIONS

4-5) Pin(Port) Functions

Pin No.		Pin Name	Type	Connection (If not used)	Short Description
PSSDIP 88-pin	PMQFP-2 144-pin				
	96	ADB10	OUT	LV	Address Bus 10 Output
	15	ADB9	OUT	LV	Address Bus 9 Output
	16	ADB8	OUT	LV	Address Bus 8 Output
	27	ADB7	OUT	LV	Address Bus 7 Output
	28	ADB6	OUT	LV	Address Bus 6 Output
	29	ADB5	OUT	LV	Address Bus 5 Output
	30	ADB4	OUT	LV	Address Bus 4 Output
	84	ADB3	OUT	LV	Address Bus 3 Output
	85	ADB2	OUT	LV	Address Bus 2 Output
	86	ADB1	OUT	LV	Address Bus 1 Output
	87	ADB0	OUT	LV	Address Bus 0 Output
	88	DB0	IN/OUT	LV	Data Bus 0 Input/Output
	89	DB1	IN/OUT	LV	Data Bus 1 Input/Output
	90	DB2	IN/OUT	LV	Data Bus 2 Input/Output
	91	DB3	IN/OUT	LV	Data Bus 3 Input/Output
	92	DB4	IN/OUT	LV	Data Bus 4 Input/Output
	93	DB5	IN/OUT	LV	Data Bus 5 Input/Output
	94	DB6	IN/OUT	LV	Data Bus 6 Input/Output
	95	DB7	IN/OUT	LV	Data Bus 7 Input/Output
	32	RDQ	OUT	LV	Data Read Enable Output
	33	WRQ	OUT	LV	Data Write Enable Output
	34	OCF	OUT	LV	Opcode Fetch Output
	35	ALE	OUT	LV	Address Latch Enable Output
	36	RSTQ	OUT	LV	Internal CPU Reset Output
	97	PSENQ	OUT	LV	Program Store Enable Output
	20	PSWEQ	OUT	LV	Program Store Write Enable Output
	51	XRQM	IN	OBL	External ROM Enable Input
	52	EXTIFQ	IN	LV	Enable External Interface Input
	24	STOPQ	IN	LV	Stop CPU Input
	25	ENEQ	IN	LV	Enable Emulation Input

CIRCUIT DESCRIPTIONS

3. Video A/D Converter

Device: MST9883CR.

Features: *Triple ADC with 12 - 140 MHz Sampling Rate

- *Integrated line locked PLL generates pixel clock from HSYNC
- *Integrated 5-bit pixel clock phase adjustment for precise sample timing control
- *Integrated clamp with timing generator
- *Integrated Brightness & Contrast controls
- *Integrated precision voltage reference
- *Compatible with VGA through SXGA RGB graphics signals, and component TV, DTV and HDTV
- *Pin Compatible with AD9883A
- *Serial port programming interface
- *Mid-Scale Clamping
- *Fully Sync Processing
- *4:2:2 and 4:4:4 Output Format Mode
- *Color space conversion (RGB to YCbCr)
- *Internal pattern generator*
- *Sawtooth vertical deflection signals for VSYNC input*
- *BT656 output format mode*
- *Black and mid-level precision clamp and calibration*
- *Please see MST9883C Application Note for details.RGB Graphics Processing (A/D Converter).

1) Description

Most flat-panel monitors and projectors require a digital graphics input in order to accurately scale and display

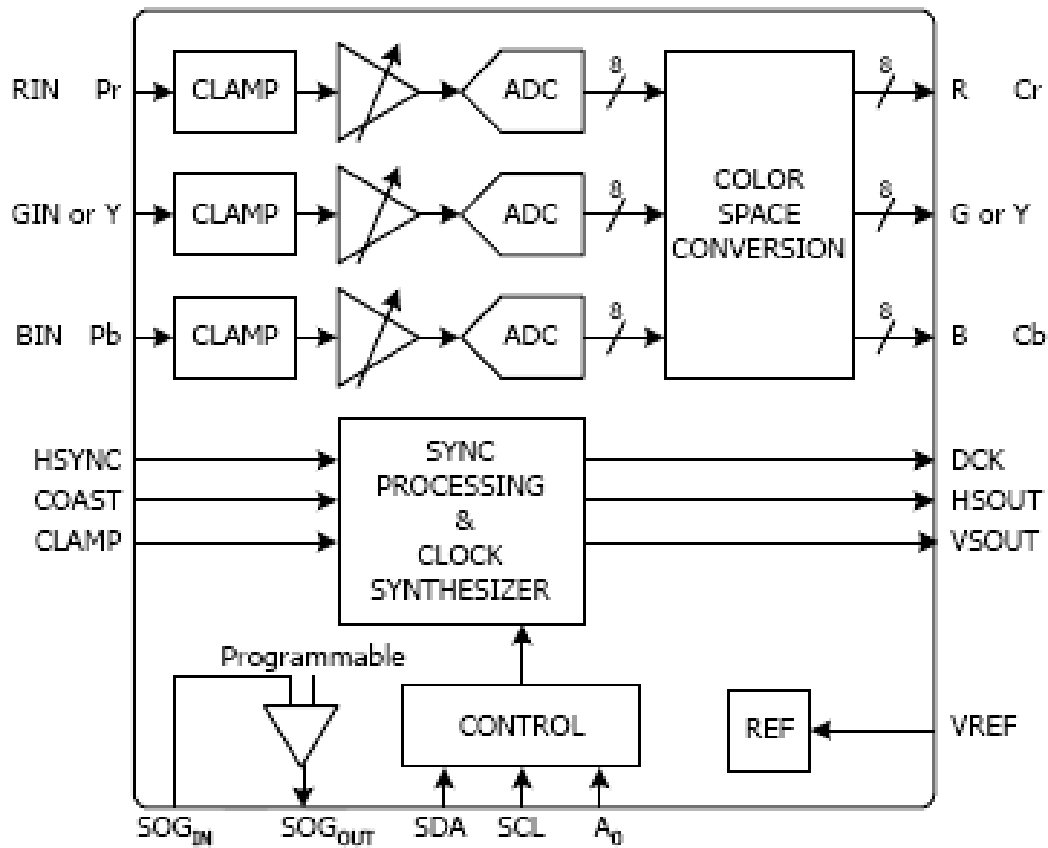
graphics. The huge installed base of computers with analog video graphics interfaces necessitates the use of a

graphics digitizer to re-digitize the analog RGB signal before further processing.

- The MST9883CR is a fully integrated analog interface for digitizing high-resolution RGB graphics signals from PC's and workstations. With a sampling rate capability of up to 140 MHz, it can accurately support display resolutions up to 1280x1024 (SXGA) at 75 Hz. The clamped input circuits provide sufficient band width to accurately digitize each pixel.
- The MST9883CR provides a high performance highly integrated solution to support the digitization process, including the ADC's, a voltage reference, a PLL to generate the pixel sampling clock from HSYNC, clamping circuits, and programmable offset and gain circuits to provide brightness and contrast controls.
- When the COAST signal is asserted, the PLL will maintain its output frequency when HSYNC pulses are absent, such as during the VSYNC period in some systems.
- A 32-step programmable phase adjustment control (0-360 deg) is provided for the pixel sampling clock to adjust for the difference between the HSYNC edge and RGB pixel edge timing.
- The MST9883CR can send output data through one 24-bit port at the pixel clock rate.
- The MST9883CR can also support RGB to YCbCr conversion.
- The MST9883CR has internal programmable pattern generator for testing.
- The MST9883CR can accept either standard TTL, CMOS levels or sawtooth vertical deflection signals for VSYNC input.

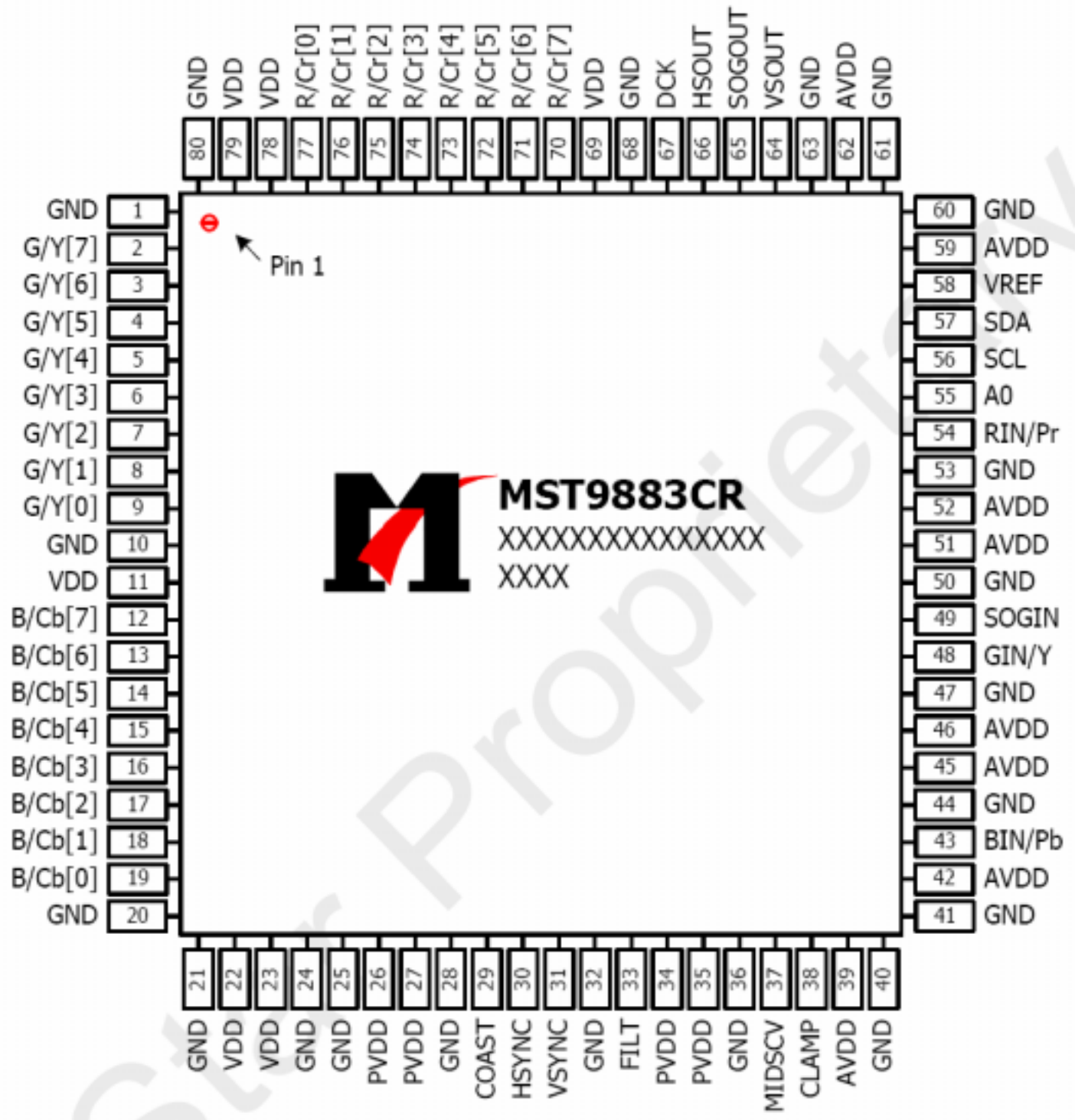
CIRCUIT DESCRIPTIONS

2) Block Diagram.



CIRCUIT DESCRIPTIONS

3) Pin configuration.



CIRCUIT DESCRIPTIONS

4-1) Analog Interface

Pin Name	Pin Type	Function	Pin
VSYN	Digital CMOS Input (5V-tolerant)	Vertical SYNC Input	31
HSYN	Digital CMOS Input (5V-tolerant)	Horizontal SYNC Input	30
SOGIN	Analog Input (0.5~1.0 V _{pp})	Sync-on-Green analog input	49
RIN/Pr	Analog Input (0.5~1.0 V _{pp})	Red/Pr analog input	54
GIN/Y	Analog Input (0.5~1.0 V _{pp})	Green/Y analog input	48
BIN/Pb	Analog Input (0.5~1.0 V _{pp})	Blue/Pb analog input	43
VREF	Reference	Internal reference bypass	58
CLAMP	Digital CMOS Input (5V-tolerant)	External clamp input	38
MIDSCV	Reference	Internal mid-scale voltage bypass	37
COAST	Digital CMOS Input (5V-tolerant)	Hold PLL frequency and do not track HSYNC	29

4-2) Misc. Interface

Pin Name	Pin Type	Function	Pin
SCL	Digital CMOS Input (5V-tolerant)	Serial interface clock	56
SDA	Digital CMOS Input/Output (5V-tolerant)	Serial interface data pin	57
A0	Digital CMOS Input (5V-tolerant)	Serial interface address pin	55
FILT		No connection	33

CIRCUIT DESCRIPTIONS

4-3) Output Interface

Pin Name	Pin Type	Function	Pin
R/Cr[7:0]	Digital CMOS 3-state Output (2.2~3.6V)	Red/Cr output data	70-77
G/Y[7:0]	Digital CMOS 3-state Output (2.2~3.6V)	Green/Y output data	2-9
B/Cb[7:0]	Digital CMOS 3-state Output (2.2~3.6V)	Blue/Cb output data	12-19
DCK	Digital CMOS 3-state Output (2.2~3.6V)	Output data clock	67
HSOUT	Digital CMOS 3-state Output (2.2~3.6V)	HSYNC output	66
VSOUT	Digital CMOS 3-state Output (2.2~3.6V)	VSYNC output	64
SOGOUT	Digital CMOS 3-state Output (2.2~3.6V)	SYNC-on-Green Slicer Output	65

4-4) Power Pins

Pin Name	Pin Type	Function	Pin
AVDD	3.3v Power (3.0~3.6V)	Analog power	39, 42, 45, 46, 51, 52, 59, 62
PVDD	3.3v Power (3.0~3.6V)	PLL power	26, 27, 34, 35
VDD	3.3v Power (2.2~3.6V)	Digital output power	11, 22, 23, 69, 78, 79
GND	System Ground	System ground	1, 10, 20, 21, 24, 25, 28, 32, 36, 40, 41, 44, 47, 50, 53, 60, 61, 63, 68, 80