



# TFT-LCD TV/MONITOR

Chassis  
DU26EO  
DU32EO

Model  
LE26A41B  
LE32A41B

# *SERVICE Manual*

## TFT-LCD TV/MONITOR



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# 1 Precautions

Follow these safety, servicing and ESD precautions to prevent damage and to protect against potential hazards such as electrical shock.

## 1-1 Safety Precautions

### 1-1-1 Warnings

1. For continued safety, do not attempt to modify the circuit board.
2. Disconnect the AC power and DC Power Jack before servicing.

### 1-1-2 Servicing the LCD Monitor

1. When servicing the LCD Monitor Disconnect the AC line cord from the AC outlet.
2. It is essential that service technicians have an accurate voltage meter available at all times. Check the calibration of this meter periodically.

### 1-1-3 Fire and Shock Hazard

Before returning the monitor to the user, perform the following safety checks:

1. Inspect each lead dress to make certain that the leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the monitor.
2. Inspect all protective devices such as nonmetallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
3. Leakage Current Hot Check (Figure 1-1):  
WARNING: Do not use an isolation transformer during this test.

Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, *Leakage Current for Appliances*), and Underwriters Laboratories (UL Publication UL1410, 59.7).

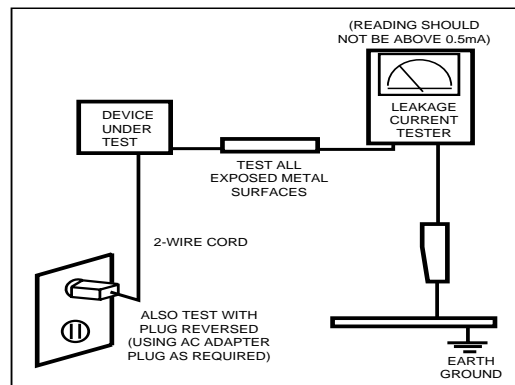


Figure 1-1. Leakage Current Test Circuit

4. With the unit completely reassembled, plug the AC line cord directly into a 120V AC outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.

### 1-1-4 Product Safety Notices

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection. The protection they give may not be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by ⚠ on schematics and parts lists. A substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.

### 1-2 Servicing Precautions

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**WARNING:** An electrolytic capacitor installed with the wrong polarity might explode.

**Caution:** Before servicing units covered by this service manual, read and follow the Safety Precautions section of this manual.

**Note:** If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions, always follow the safety precautions.

#### 1-2-1 General Servicing Precautions

1. Always unplug the unit's AC power cord from the AC power source and disconnect the DC Power Jack before attempting to:  
(a) remove or reinstall any component or assembly, (b) disconnect PCB plugs or connectors, (c) connect a test component in parallel with an electrolytic capacitor.
2. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
3. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the area around the serviced part has not been damaged.
4. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
5. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500 V) to the blades of the AC plug.  
The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.
6. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

### 1-3 Electrostatically Sensitive Devices (ESD) Precautions

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

1. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. To avoid a shock hazard, be sure to remove the wrist strap before applying power to the monitor.
2. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of an electrostatic charge.
3. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESDs.
4. Use only a grounded-tip soldering iron to solder or desolder ESDs.
5. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
7. Immediately before removing the protective material from the leads of a replacement ESD, 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 body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting your foot from a carpeted floor can generate enough static electricity to damage an ESD.

## 2 Product Specifications

### 2-1 LE26A41B, LE32A41B Specifications

Item	Description	
	LE26A41B	LE32A41B
LCD Panel	TFT-LCD panel, RGB vertical stripe, normally white, 26-inch viewable, 0.4425 (H) x 0.264 (V) mm pixel pitch	
Scanning Frequency	Horizontal : 30 kHz ~ 68 kHz (Automatic) Vertical : 50 Hz ~ 85 Hz (Automatic)	Horizontal : 30 kHz ~ 61 kHz (Automatic) Vertical : 56 Hz ~ 75 Hz (Automatic)
Display Colors	16.2 Million colors	
Maximum Resolution	Horizontal : 1280 Pixels Vertical : 768 Pixels	Horizontal : 1366 Pixels Vertical : 768 Pixels
Input Video Signal	Analog 0.7 Vp-p $\pm$ 5% positive at 75 $\Omega$ , internally terminated	
Input Sync Signal	Type : Seperate H/V Level : TTL level	
Maximum Pixel Clock rate	80 MHz	80 MHz
Active Display Horizontal/Vertical	556.4 mm / 339.8 mm	697.7 mm / 392.4 mm
AC power voltage & Frequency	AC 100 ~ 240V, 50 ~ 60 Hz	
Power Consumption	130 W	130 W
Dimensions(W x D x H) Set	32.6 x 10.9 x 20.5 Inches (827.0 X 278 X 520mm) After installation Stand 37.0 x 13.3 x 27.4 Inches (827.5 X 112.5 X 504.5 mm) Without stand	38.2 x 12.5 x 22.7 Inches (972.0 X 317.0 X 577.5 mm) After installation Stand 38.2 x 4.6 x 22.2 Inches (972.0 X 116.0 X 565.0 mm) Without Stand
Package	37.0 x 13.3 x 27.4 Inches (965 X 338 X 695 mm)	44.5 x 16.0 x 22.9 Inches (1130 X 408 X 760 mm)
Weight Set(After installation Stand) / Package	18 Kg (39.7 lbs) / 24 Kg (52.9 lbs)	21.5 Kg (54.0lbs) / 28 Kg (61.7 lbs)
Environmental Considerations	Operating Temperature : 50 °F ~ 104 °F (10 °C ~ 40 °C) Operating Humidity : 10 % ~ 80 % Storage Temperature : -4 °F ~ 113 °F (-20 °C ~ 45 °C) Storage Humidity : 5 % ~ 95 %	
TV System	Tuning	Frequency Synthesize
	System	NTSC-M
	Sound	MONO, STEREO, SAP
Antena Input	75 $\Omega$	
Sound Characteristic	– MAX Internal speaker Out : LN-P267W : Right => 5W, Left => 5W LN-P327W : Right => 10W Left => 10W	
	– BASS Control Range : -8 dB ~ + 8dB – TREBLE Control Range : -8 dB ~ +8 dB – Headphone Out : 10 mW MAX – Output Frequency : RF : 80 Hz ~ 15 kHz A/V : 80 Hz ~ 20 kHz	

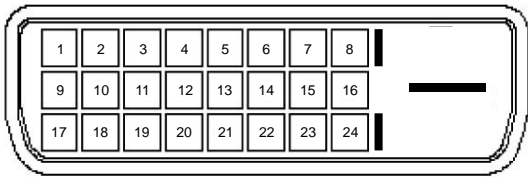


## 2-2 Pin Assignments

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### 2-2-1 DVI-D (Digital)

Ref) DVI-D : Digital only



Pin No.	Signal Assignment	Pin No.	Signal Assignment	Pin No.	Signal Assignment
1	RX2-	11	GND	21	NC
2	RX2+	12	NC	22	GND
3	GND	13	NC	23	RXC+
4	NC	14	DDC Input Power(+5V)	24	RXC-
5	NC	15	IDENT_PC		
6	DDC Clock (SCL)	16	5V		
7	DDC Data (SDA)	17	RX0-		
8	Analog Vertical Sync.	18	RX0+		
9	RX1-	19	GND		
10	RX1+	20	NC		

## 2-2-2 Component 1, 2

RCA Green	Y
	GND
RCA Blue	Pb (Cb)
	GND
RCA Red	Pr (Cr)
	GND
RCA White	Audio L
	GND
RCA Red	Audio R
	GND

## 2-2-3 S-Video

Pin	Separate
1	GND
2	Y
3	C
4	GND
5	GND

## 2-2-4 A/V

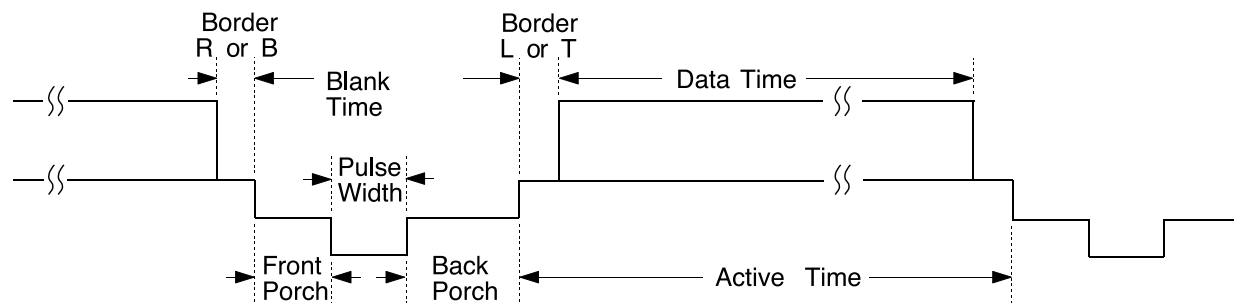
RCA Yellow	CVBS
RCA White	Audio L
	GND
RCA Red	Audio R
	GND

## 2-3 Timing Chart

This section of the service manual describes the timing that the computer industry recognizes as standard for computer-generated video signals.

### 2-3-1 LCD Panel Mode1 mode

Timing No.	LN-P267W	LN-P327W
Originator	VESA	VESA
Mode Name	1280/60Hz	1366/60Hz
Resolution (HxV)	1280x768	1366x768
HORIZONTAL		
Frequency	47.700kHz	47.712kHz
Total time	20.964 $\mu$ s	20.959 $\mu$ s
Activetime	15.973 $\mu$ s	15.906 $\mu$ s
Blank time	4.992 $\mu$ s	5.053 $\mu$ s
Border(L / R)	0.000 $\mu$ s	0.000 $\mu$ s
Data time	15.964 $\mu$ s	15.906 $\mu$ s
Front porch	0.799 $\mu$ s	0.749 $\mu$ s
Sync. width	1.697 $\mu$ s	1.702 $\mu$ s
Back porch	2.496 $\mu$ s	2.994 $\mu$ s
Sync. polarity	Negative	Positive
VERTICAL		
Frequency	60.000Hz	60.015Hz
Total time	16.667ms	16.662 ms
Active time	16.101ms	16.097ms
Blank time	0.566ms	0.566 ms
Border(T / B)	0.000ms	0.000 ms
Data time	16.101ms	16.097ms
Front porch	20.964ms	0.063 ms
Sync. width	62.893ms	0.105 ms
Back porch	482.180	0.377ms
Sync polarity	Positive	Positive
Dot Clock	80.136MHz	85.500MHz
Sync. Type	Separate	Separate
Scan Type	N/I	N/I



## 2-3-1 Supported Modes (1)

Timing No.	2	3	11	17	32
Originator	IBM	IBM	VESA	VESA	MAC
Mode Name	VGA2	VGA3	640/72Hz	640/75Hz	640/67Hz
Resolution (HxV)	720x400	640x480	640x480	640x480	640x480
HORIZONTAL					
Frequency	31.469kHz	31.469kHz	37.861kHz	37.500kHz	35.000kHz
Total time	31.777μs	31.778μs	26.413μs	26.667μs	28.571μs
Activetime	26.058μs	26.058μs	20.825μs	20.317μs	21.164μs
Blank time	5.720μs	5.720μs	5.588μs	6.350μs	7.407μs
Border(L / R)	0.318μs	0.318μs	0.254μs	0.000μs	0.000μs
Data time	25.422μs	25.422μs	20.317μs	20.317μs	21.164μs
Front porch	0.318μs	0.318μs	0.508μs	0.508μs	2.116μs
Sync. width	3.813μs	3.813μs	1.270μs	2.032μs	2.116μs
Back porch	1.589μs	1.589μs	3.810μs	3.810μs	3.175μs
Sync. polarity	Negative	Negative	Negative	Negative	Negative
VERTICAL					
Frequency	70.087Hz	59.940Hz	72.809Hz	75.000Hz	66.667Hz
Total time	14.268ms	16.683ms	13.735ms	13.333ms	15.000ms
Active time	13.155ms	15.761ms	13.100ms	12.800ms	13.714ms
Blank time	1.113ms	0.922ms	0.635ms	0.533ms	1.286ms
Border(T / B)	0.222ms	0.254ms	0.211ms	0.000ms	0.000ms
Data time	12.711ms	15.253ms	12.678ms	12.800ms	13.714ms
Front porch	0.191ms	0.064ms	0.026ms	0.027ms	0.086ms
Sync. width	0.064ms	0.064ms	0.079ms	0.080ms	0.086ms
Back porch	0.858ms	0.794ms	0.528ms	0.427ms	1.114ms
Sync polarity	Positive	Negative	Negative	Negative	Negative
Dot Clock	28.322MHz	25.175MHz	31.500MHz	31.500MHz	30.240MHz
Sync. Type	Separate	Separate	Separate	Separate	Separate
Scan Type	N/I	N/I	N/I	N/I	N/I

## 2 Product Specifications

### 2-3-1 Supported Modes (2)

Timing No.	13	14	18	33
Originator	VESA	VESA	VESA	MAC
Mode Name	800/60Hz	800/72Hz	800/75Hz	832/75Hz
Resolution (HxV)	800x600	800x600	800x600	832x624
HORIZONTAL				
Frequency	37.879kHz	48.077kHz	46.875kHz	49.726kHz
Total time	26.400 $\mu$ s	20.800 $\mu$ s	21.333 $\mu$ s	20.110 $\mu$ s
Activetime	20.000 $\mu$ s	16.000 $\mu$ s	16.162 $\mu$ s	14.524 $\mu$ s
Blank time	6.400 $\mu$ s	4.800 $\mu$ s	5.171 $\mu$ s	5.586 $\mu$ s
Border(L / R)	0.000 $\mu$ s	0.000 $\mu$ s	0.000 $\mu$ s	0.000 $\mu$ s
Data time	20.000 $\mu$ s	16.000 $\mu$ s	16.162 $\mu$ s	14.524 $\mu$ s
Front porch	1.000 $\mu$ s	1.120 $\mu$ s	0.323 $\mu$ s	0.559 $\mu$ s
Sync. width	3.200 $\mu$ s	2.400 $\mu$ s	1.616 $\mu$ s	1.117 $\mu$ s
Back porch	2.200 $\mu$ s	1.280 $\mu$ s	3.232 $\mu$ s	3.910 $\mu$ s
Sync. polarity	Positive	Positive	Positive	Negative
VERTICAL				
Frequency	60.317Hz	72.188Hz	75.000Hz	74.551Hz
Total time	16.579ms	13.853ms	13.333ms	13.414ms
Active time	15.840ms	12.480ms	12.800ms	12.549ms
Blank time	0.739ms	1.373ms	0.533ms	0.865ms
Border(T / B)	0.000ms	0.000ms	0.000ms	0.000ms
Data time	15.840ms	12.480ms	12.800ms	12.549ms
Front porch	0.026ms	0.770ms	0.021ms	0.020ms
Sync. width	0.106ms	0.125ms	0.064ms	0.060ms
Back porch	0.607ms	0.478ms	0.448ms	0.784ms
Sync polarity	Positive	Positive	Positive	Negative
Dot Clock	40.000MHz	50.000MHz	49.500MHz	57.284MHz
Sync. Type	Separate	Separate	Separate	Separate Composite
Scan Type	N/I	N/I	N/I	Sync.- on-G N/I

## 2-3-1 Supported Modes (3)

Timing No.	15	16	19	(Only LN-P327W)
Originator	VESA	VESA	VESA	VESA
Mode Name	1024/60Hz	1024/70Hz	1024/75Hz	1360/60Hz
Resolution (HxV)	1024x768	1024x768	1024x768	1360x768
HORIZONTAL				
Frequency	48.363kHz	56.476kHz	60.023kHz	47.712kHz
Total time	20.677 $\mu$ s	17.707 $\mu$ s	16.660 $\mu$ s	20.959 $\mu$ s
Activetime	15.754 $\mu$ s	13.653 $\mu$ s	13.003 $\mu$ s	15.906 $\mu$ s
Blank time	4.923 $\mu$ s	4.053 $\mu$ s	3.777 $\mu$ s	5.053 $\mu$ s
Border(L / R)	0.000 $\mu$ s	0.000 $\mu$ s	0.000 $\mu$ s	0.000 $\mu$ s
Data time	15.754 $\mu$ s	13.653 $\mu$ s	13.003 $\mu$ s	15.906 $\mu$ s
Front porch	0.369 $\mu$ s	0.320 $\mu$ s	0.323 $\mu$ s	0.749 $\mu$ s
Sync. width	2.092 $\mu$ s	1.813 $\mu$ s	1.219 $\mu$ s	1.702 $\mu$ s
Back porch	2.462 $\mu$ s	1.920 $\mu$ s	2.235 $\mu$ s	2.994 $\mu$ s
Sync. polarity	Negative	Negative	Positive	Positive
VERTICAL				
Frequency	60.004Hz	70.069Hz	75.029Hz	60.015Hz
Total time	16.666ms	14.272ms	13.328ms	16.662ms
Active time	15.880ms	13.599ms	12.795ms	16.097ms
Blank time	0.786ms	0.672ms	0.533ms	0.566ms
Border(T / B)	0.000ms	0.000ms	0.000ms	0.000ms
Data time	15.880ms	13.599ms	12.795ms	16.097ms
Front porch	0.062ms	0.053ms	0.017ms	0.063ms
Sync. width	0.124ms	0.106ms	0.050ms	0.105ms
Back porch	0.600ms	0.513ms	0.466ms	0.377ms
Sync polarity	Negative	Negative	Positive	Positive
Dot Clock	65.000MHz	75.000MHz	78.750MHz	85.500MHz
Sync. Type	Separate	Separate	Separate	Separate
Scan Type	N/I	N/I	N/I	N/I

## Memo

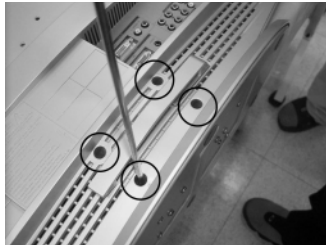
## 3 Disassembly and Reassembly

This section of the service manual describes the disassembly and reassembly procedures for the LE26A41B/LE32A41B LCD TV.

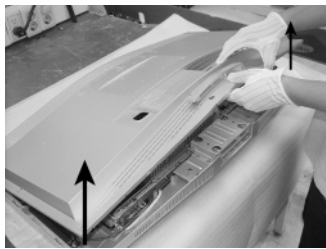
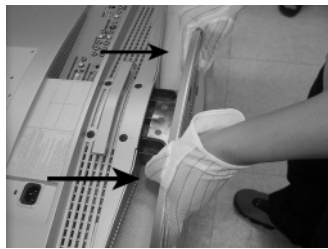
**⚠ WARNING: This monitor contains electrostatically sensitive devices. Use caution when handling these components.**

### 3-1 LE26A41B Disassembly

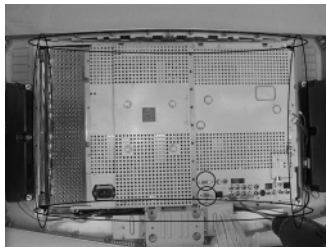
**⚠ Cautions: 1. Disconnect the monitor from the power source before disassembly.**



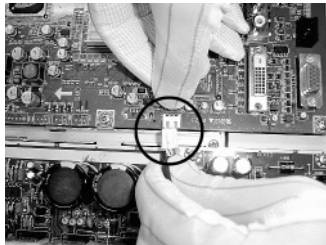
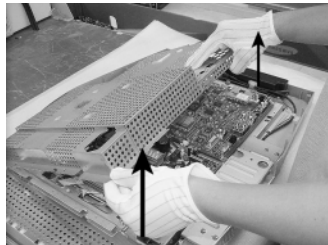
1. Place LCD TV face down on cushioned table. Remove 9 screws from the rear cover. Remove 4 screws from grip on the stand, and remove the stand.



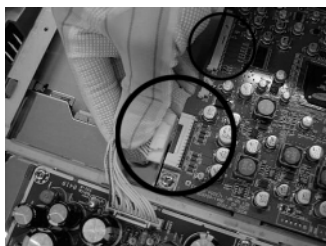
2. Remove the stand and lift up the rear cover.



3. Disconnect speaker cable, function cable from the shield and remove 18 screws from the shield and lift up the shield.

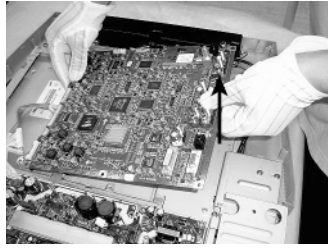
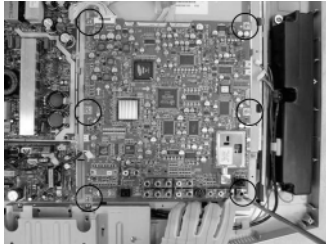


4. Disconnect CN811 connector, LVDS cable, inverter cable from the boards.

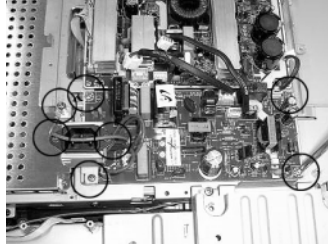




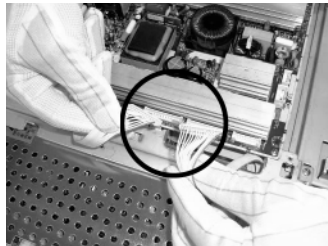
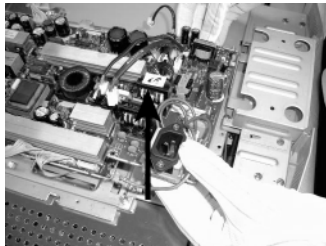
### 3 Disassembly and Reassembly



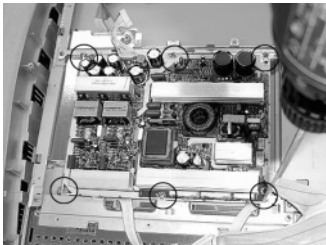
5. Remove 6 screws from the Main board and lift up the board.



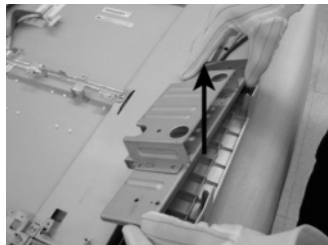
6. Remove 6 screws from the Sub power board and lift up the board.



7. Disconnect inverter cable. Remove 6 screws from the main power board and lift up the board.

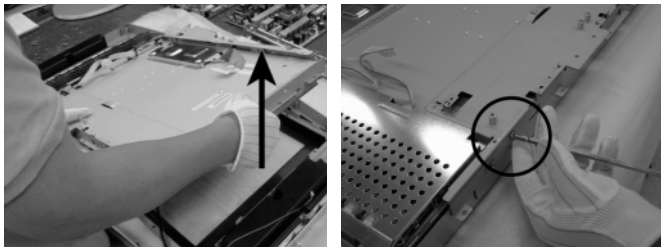


8. Remove 8 screws



9. Remove 6 screws from the panel BRKT. Remove 16 screws from the cabinet BRKT and lift up the panel.

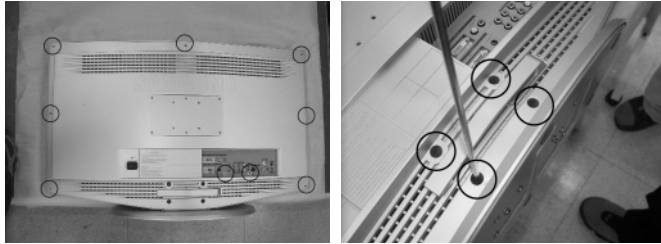




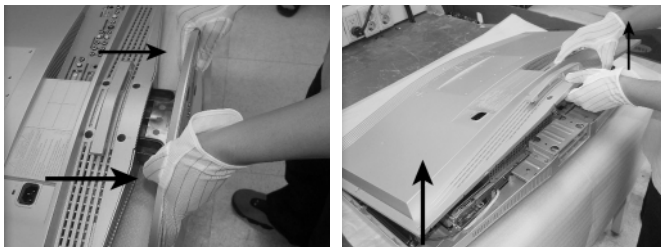
8. Lift up the panel. Remove 4 screws from the panel BRKT. (Left/Right)  
Disconnect BRKT from the panel.

## 3-2 LE32A41B Disassembly

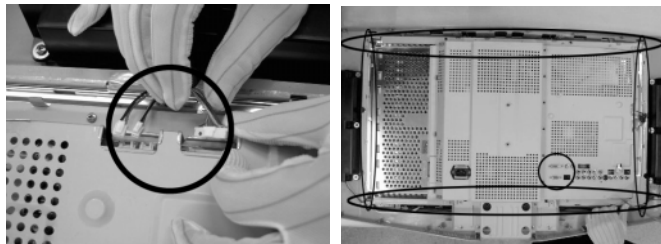
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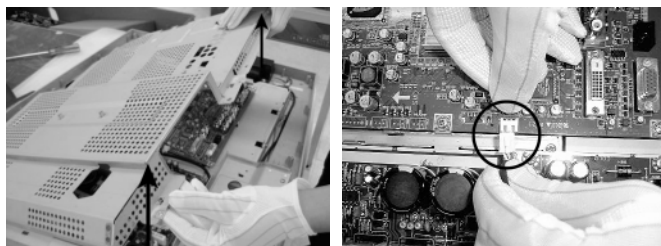
1. Place LCD TV face down on cushioned table. Remove 9 screws from the rear cover. Remove 4 screws from grip on the stand, and remove the stand.



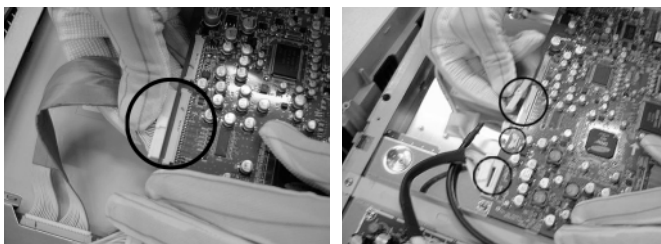
2. Remove the stand and lift up the rear cover.



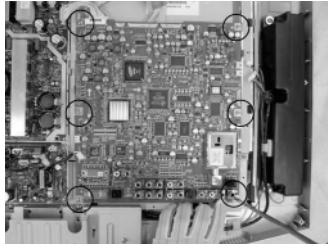
3. Disconnect speaker cable, function cable from the shield and remove 18 screws from the shield and lift up the shield.



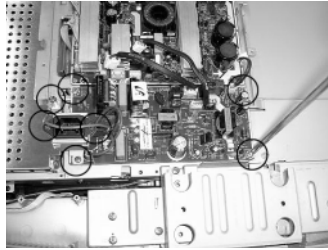
4. Disconnect CN811 connector, LVDS cable, inverter cable from the boards.



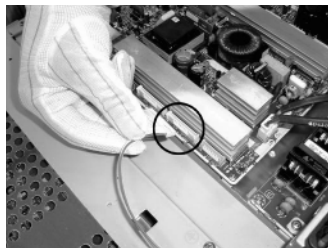
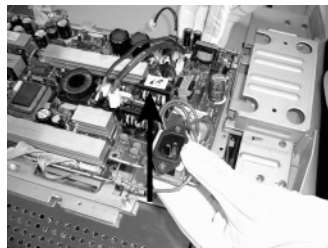
### 3 Disassembly and Reassembly



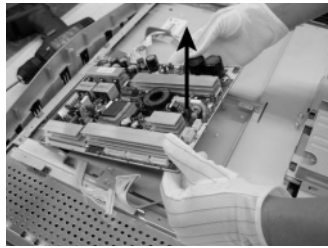
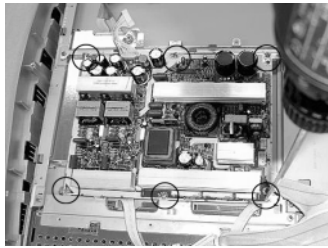
5. Remove 6 screws from the Main board and lift up the board.



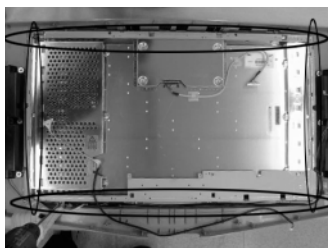
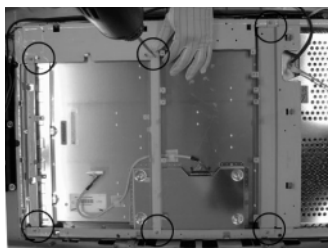
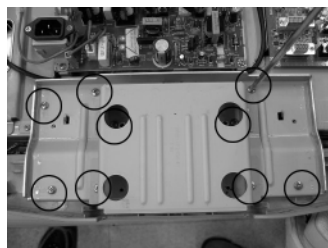
6. Remove 6 screws from the Sub power board and lift up the board.



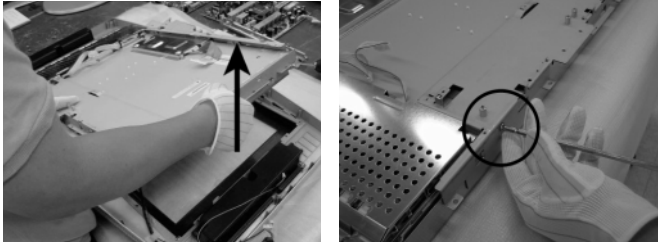
7. Disconnect inverter cable. Remove 6 screws from the main power board and lift up the board.



8. Remove 13 screws



9. Remove 6 screws from the panel BRKT. Remove 14 screws from the cabinet BRKT and lift up the panel.



8. Lift up the panel. Remove 4 screws from the panel BRKT. (Left/Right)  
Disconnect BRKT from the panel.

## 3-3 Reassembly

---

Reassembly procedures are in the reverse order of dissassembly procedures.

## Memo

---

## 4 Alignments and Adjustments

---

### 4-1 General Alignment Instruction

---

1. Usually, a color TV-VCR needs only slight touch-up adjustment upon installation.  
Check the basic characteristics such as height, horizontal and vertical sync.
2. Use the specified test equipment or its equivalent.
3. Correct impedance matching is essential.
4. Avoid overload. Excessive signal from a sweep generator might overload the front-end of the TV. When inserting signal markers, do not allow the marker generator to distort test result.
5. Connect the TV only to an AC power source with voltage and frequency as specified on the backcover nameplate.
6. Do not attempt to connect or disconnect any wire while the TV is turned on. Make sure that the power cord is disconnected before replacing any parts.
7. To protect against shock hazard, use an isolation transform.

## 4-2 Factory Mode Adjustments

### 4-2-1 Entering Factory Mode

- To enter "Service Mode" Press the remote -control keys in this sequence :

- If you do not have Factory remote - control



- If you have Factory remote - control



- The buttons are active in the service mode.

- Remote - Control Key : Power, Arrow Up, Arrow Down, Arrow Left  
Arrow Right, Menu, Enter, Number Key(0~9)
- Function - Control Key : Power, CH +, CH -, VOL +, VOL -,  
Menu, TV/VIDEO(Enter)

### 4-2-2 Factory Mode Tree

<b>1. PC Calibration</b>		
2. Option Table 2C34 0050	10. Checksum	0000
3. Color Control	11. Adjust	
4. PW565	12. Reset	
5. VPC3230-MAIN		
6. ADC		
7. DNle		
8. MDIN - 150		
9. Test Pattern		
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T-DUO32OPEU-0022 07/22/2004 10:17:54		

1. PC Calibration	10. Checksum	0000
<b>2. Option Table 2C34 0050</b>		
3. Color Control	11. Adjust	
4. PW565	12. Reset	
5. VPC3230-MAIN		
6. ADC		
7. DNle		
8. MDIN - 150		
9. Test Pattern		
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#### 2. Option Table 2C34 0050

<b>Panel Type</b>	<b>AMLCD</b>	Area	CW
LNA	Off	DebugExpress	Off
Language	English	High Deviation	Off
Melody Volume	5	TX Group	Osd Language
TTX List	Flop	DNle Demo	On
TTX TOP	Off	TTX Page	200page
Auto FM	On	Bus Stop	Off
		DDC Write	Off
		EMI	On

PanelLifeTime : 3Day 15h 18m

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- |                           |               |      |
|---------------------------|---------------|------|
| 1. PC Calibration         | 10. Check sum | 0000 |
| 2. Option Table 2C34 0050 | 11. Adjust    |      |
| <b>3. Color Control</b>   | 12. Reset     |      |
| 4. PW565                  |               |      |
| 5. VPC3230-MAIN           |               |      |
| 6. ADC                    |               |      |
| 7. DNle                   |               |      |
| 8. MDIN - 150             |               |      |
| 9. Test Pattern           |               |      |

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### 3. Color Control

Pw565 White Balance  
Dnie White Balance

### 3. Color Control

Pw565 White Balance

Sub - Brightness(DNle)	<b>127</b>	Sub - Contrast	<b>155</b>
Red Offset	<b>128</b>	Red Gain	<b>128</b>
Green Offset	<b>128</b>	Green Gain	<b>128</b>
Blue Offset	<b>128</b>	Blue Gain	<b>128</b>
Brightness	<b>45</b>	TTX-Bright	<b>100</b>

### 3. Color Control

Dnie White Balance

Sub - Brightness(PW565)	<b>125</b>	Sub - Contrast	<b>127</b>
Red Offset	<b>129</b>	Red Gain	<b>124</b>
Green Offset	<b>128</b>	Green Gain	<b>128</b>
Blue Offset	<b>131</b>	Blue Gain	<b>113</b>



## 4 Alignments and Adjustments

1. PC Calibration
2. Option Table 2C34 0050
3. Color Control
- 4. PW565**
5. VPC3230-MAIN
6. ADC
7. DNle
8. MDIN - 150
9. Test Pattern
10. Check sum 0000
11. Adjust
12. Reset

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### 4. PW565

Red Gain	140	Pixel Shift	Video Port	YB_1	120
Green Gain	140	Pixel Number	4	YB_2	200
Blue Gain	140	Time	4	Xth_0	110
Red Offset	140	Virtual Framelo	2	Xth_1	190
Green Offset	140	Alpha	255	DECS Demo	Off
Blue Offset	140	Beta	255	Dithering	Off
APL	Off	Degree	30		

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1. PC Calibration
2. Option Table 2C34 0050
3. Color Control
4. PW565
- 5. VPC3230-MAIN**
6. ADC
7. DNle
8. MDIN - 150
9. Test Pattern
10. Check sum 0000
11. Adjust
12. Reset

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T-DUO32OPEU-0022 07/22/2004 10:17:54

### 5. VPC3230-MAIN

CT	2F	CIPCT	2A	KILVL	07
BR	90	PFS	02	PKCOR	01
ACC_SAT	80	PK	01	FB_GAIN	22
TINT	32	VPK	00		
SATCb	24	LPF2	00		
SATCr	2B	CBW2	00		
CIPTNT	21	CBW	03		
CIPBR	C5	IFC	00		

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T-DUO32OPEU-0022 07/22/2004 10:17:54

1. PC Calibration                      10. Check sum    0000  
 2. Option Table 2C34 0050        11. Adjust  
 3. Color Control                    12. Reset  
 4. PW565  
 5. VPC3230-MAIN  
**6. ADC**  
 7. DNle  
 8. M DIN - 150  
 9. Test Pattern

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**6. ADC**

Red Gain	8C	Pr Gain	A0
Green Gain	8C	Y Gain	A0
Blue Gain	8C	Pb Gain	A0
Red Offset	80	Pr Offset	43
Green Offset	80	Y Offset	45
Blue Offset	80	Pb Offset	42
Current	05	TTX Phase	768
VCO	02	TTX Contrast	00

1. PC Calibration                      10. Check sum    0000  
 2. Option Table 2C34 0050        11. Adjust  
 3. Color Control                    12. Reset  
 4. PW565  
 5. VPC3230-MAIN  
 6. ADC  
**7. DNle**  
 8. M DIN - 150  
 9. Test Pattern

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**7. DNle                      TV**

Pattern_SEL	0	Y_TH_HPF	4	DCE_Adap_SEL	2
NR_Limit Y	128	Y_TH_EDGE	4	BS_Tilt	80
NR_Limit C	129	DEP_Gain 1_X	3	BS_Gain Max	330
NR_SEL	2	DEP_Gain 1_Y	3	NE_Core	3
SCALEMAX_Y	32	DEP_Gain 2_X	3	NE_RTH 2	3
SCALEMAX_C	32	DEP_Gain 2_Y	3	CTE_H_min	60
SCALEMIN_Y	16	DEP_Scale_R	50	Coring TH3	1
SCALEMIN_C	16	DEP_Sup_Scale THI	3	Coring TH3	32
SCALENOISE_Y	72	DEP_Sup_Scale THF	107	Offset_CR	128
SCALENOISE_C	100	WTE_MCCT_FAC	150	Offset_CB	128

## 4 Alignments and Adjustments

- |                           |               |      |
|---------------------------|---------------|------|
| 1. PC Callbration         | 10. Check sum | 0000 |
| 2. Option Table 2C34 0050 | 11. Adjust    |      |
| 3. Color Control          | 12. Reset     |      |
| 4. PW565                  |               |      |
| 5. VPC3230-MAIN           |               |      |
| 6. ADC                    |               |      |
| 7. DNle                   |               |      |
| <b>8. MDIN- 150</b>       |               |      |
| 9. Test Pattern           |               |      |

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### 8. MDIN- 150

Front Noise Reduction Filter  
Horizontal Peaking Filter  
Edge Enhancement Filter  
Input Test Pattern  
Output Test Pattern  
Deinterlace Control

### 8. MDIN- 150

Front Noise Reduction Filter

Noise_Reduction_Flt0	256	Noise_Reduction_Flt_On	0
Noise_Reduction_Flt1	0	Noise_Reduction_Flt_Difference	0
Noise_Reduction_Flt2	0	Median_Flt_On	0
Noise_Reduction_Flt3	0	Median_Flt_Difference	0
Noise_Reduction_Flt4	0	Noise_Reduction_Flt_Diff_Sel	0
Noise_Reduction_Flt5	0		
Noise_Reduction_Flt6	0		
Noise_Reduction_Flt7	0		

### 8. MDIN- 150

Horizontal Peaking Filter

H_Peaking_Flt0	256	H_Peaking_Flt7	0
H_Peaking_Flt1	0	H_Peaking_Flt_Enable	1
H_Peaking_Flt2	896	H_Peaking_Flt_Gain	10
H_Peaking_Flt3	0	H_Peaking_No_Sum	0
H_Peaking_Flt4	0	H_Peaking_Inverse	0
H_Peaking_Flt5	0		
H_Peaking_Flt6	0		

### 8. MDIN- 150

Edge Enhancement Filter

Edge_Cor_Offset	8
Edge_Enh_Level	2
Edge_Enh_2D_Flt_Enable	1

### 8. MDIN- 150

Input Test Pattern

In_Test_RGB	0
In_Test_Ptrn	0
In_Test_Format	0

**8. MDIN- 150**

Output Test Pattern

Out\_Test\_Ptrn 0

Out\_Dark\_Scrn\_Main 0

**8. MDIN- 150**

Deinterlace Control

Deint_Mode	1	Deint_Edge_En	2	Deint_Film_Min	0
Deint_C_Delay_Sel	0	Deint_Edge_Thres	255	Film_Mode_Thres	5
Median_Tap	0	Film_Invaild_Lines	8	Bad_Edit_En	1
Expander_Tap	1	Film32_Mo_Thres	160	Caption_Mode	3
Deint_Thres	24	Film_Mode	5	D_Caption_V_Posi	160
Fast_Mode	1	D_Film_Slide_Cnt	0	Deint_Disp_Color	5
N_Median_Tap	1	D_Film_Slide_Cor	40	Deint_Disp_Mode	0
D_Fast_Mode_Thres	4	Deint_Film_Plus	1	Motion_Factor	1
N_Deint_Thres	32	Deint_Film_Minus	3		
Very_Fast_En	1	Deint_Film_Max	3		

- |                   |               |      |
|-------------------|---------------|------|
| 1. PC Callbration | 10. Check sum | 0000 |
| 2. Option Table   | 11. Adjust    |      |
| 3. Color Control  | 12. Reset     |      |
| 4. PW565          |               |      |
| 5. VPC3230-MAIN   |               |      |
| 6. ADC            |               |      |
| 7. DNle           |               |      |
| 8. MDIN- 150      |               |      |

**9. Test Pattern**

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**9. Test Pattern**

1. Luma Ramp (16 Step)
2. Luma Ramp (128 Step)
3. White 16
4. White 240
5. Color Bar
6. RGB Ramp (32 Step)

**9. 3D Comb**

## Register Part 1

YAPS	1	DYCOS	2	YNRLIM	1	VTRH	1
COUTS	1	CDL	4	YNRINV	0	WSC	1
NRMD	0	HDP	0	YNRK	0	TT	0
KILS	0	CPP	0	ST0S	1	FELCHK	1
MSS	0	DYGAIN	9	ST1S	3	TH	0
NSDS	0	DYCOR	2	CLK80FF	1	IS1DECON	1
CLKS	0	DCGAIN	6	IDW0A2	0	WSS	0
EXCSS	1	DCCOR	3	ID1W0A1	0	VAINV	18
PECS	0	CNRLIM	1	ID10N	0	VAPGAIN	3
MFREEZE	0	CNRINV	0	LDSR	2	YPFG	3
EXADINS	0	CNRK	0	VTRR	1	YPFT	3

**9. 3D Comb**

## Register Part 2

SELD2FH	0	YHCGAIN	0	FSCFG	0	ADPDS	1
CLPH	0	YHCOR	0	BPLLFS	1	ADCLKS	2
C0HS	0	CLKGT	0	HPLLFS	0	HIZEN	0
CC3N	0	CLKGEB	0	VSSL	8		
VEGS	2	CLKGGT	0	HSSL	15		
V1PS	2	CLKG2D	1	BGPW	3		
SELD1FL	0	OTT	0	BGPS	7		
KCTT	0	VCT	0	VT VH	0		
CSHDT	0	SHT	0	FSCOFF	0		
OVST	0	KILR	2	NRZOFF	0		
ED20FF	0	PLLFG	1	NSDSW	0		

1. PC Calibration	<b>10. Check sum</b>	<b>0000</b>
2. Option Table	11. Adjust	
3. Color Control	12. Reset	
4. PW565		
5. VPC3230-MAIN		
6. ADC		
7. DNLe		
8. M DIN - 150		
9. Test Pattern		
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T-DUO32OPEU-0022 07/22/2004 10:17:54		

1. PC Calibration	10. Check sum	0000
2. Option Table	<b>11. Adjust</b>	
3. Color Control	12. Reset	
4. PW565		
5. VPC3230-MAIN		
6. ADC		
7. DNLe		
8. M DIN - 150		
9. Test Pattern		
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T-DUO32OPEU-0022 07/22/2004 10:17:54		

**11. Adjust**

TTX-Brightness	20	Movie	70 47 50 50	LD av secam	9
TTX-Contrast	20	LD rf pal-b/g	9	LD av ntsc 3.57	9
TTX-Sharpness	55	LD rf pal-d/k	10	LD av ntsc 4.43	9
CarrierMute	42	LD rf pal-i	10	LD av pal 60	9
Pilot High	14	LD rf secam-b/g	9	ValidLockCnt	2
Pilot Low	7	LD rf secam-d/k	9	PWM Dim	0
Dynamic	100 45 65 65	LD rf secam-l/i	9	Analog Dim	0
Standard	85 45 60 60	LD rf ntsc4.43	9	RF_dB-1	
		LD av pal	10	RF_dB-2	
				RF_dB-3	

1. PC Calibration	10. Check sum	0000
2. Option Table	11. Adjust	
3. Color Control	<b>12. Reset</b>	
4. PW565		
5. VPC3230-MAIN		
6. ADC		
7. DNLe		
8. M DIN - 150		
9. Test Pattern		
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T-DUO32OPEU-0022 07/22/2004 10:17:54		

\* Unless otherwise specifid, do not adjust data in Factory Mode.

\* Data may be changed for display improvement.

## 4-3 White Balance Adjustment

1. In factory mode (1, 3, 6), you can adjust the white balance.
2. As the adjustment and data values differ depending on input sources, different adjustments are required for RF, PC/DVI modes.
3. Optimum condition data for each mode are saved as default values. (Refer to Table 2, 3)
4. As the RF mode is applied with the same vlaues as for VIDEO and S-VIDEO, adjustment can be made in any of RF, VIDEO and S-VIDEO modes.

Table 4-1. White Balance Setting Conditions

Mode	High Light			Low Light		
	"x"	"y"	Y	"x"	"y"	Y
RF	258	295	44(40)	289	287	1.5(1.2)
PC	275	275	26(25)	275	275	0.7
DVI-Digital	285	295	32(35)	289	287	0.8(0.9)

( ) : ACER Panel

Table 4-2. Color Control Default Vlaue &lt;Dnie White Balance&gt;

Mode	RF	DTV	PC	Mode	RF	DTV	PC
Sub-Brightness(PW565)	127	147	141	Sub-Contrast	127	124	113
Red Offset	129	126	125	Red Gain	124	125	128
Green Offset	128	128	128	Green Gain	128	128	128
Blue Offset	131	128	126	Blue Gain	113	116	127

Table 4-3. Color Control Default Vlaue

Mode	PC	Mode	DTV
Red Gain	8C	Pr Gain	A0
Green Gain	8C	Y Gain	A0
Blue Gain	8C	Pb Gain	A0
Red Offset	80	Pr Offset	43
Green Offset	80	Y Offset	45
Blue Offset	80	Pb Offset	42
Current	05	TTX Phase	768
VCO	02	TTX Contrast	00

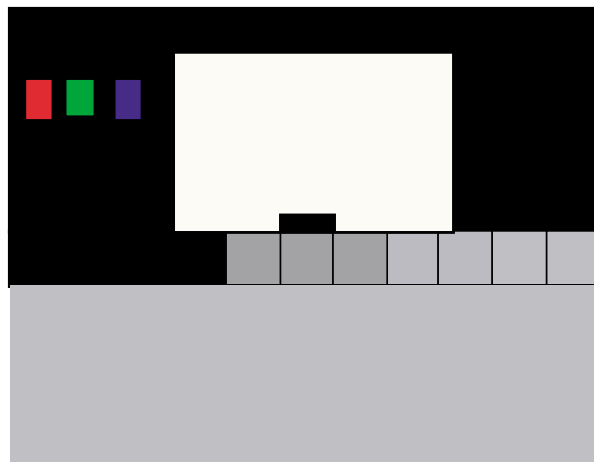
### 4-3-1 Conditions for Measurement

1. On the basis of toshiba ABL pattern : High Light level (57 IRE)
  - INPUT SIGNAL GENERATOR : MSPG-925LTH
    - \* Mode NO 2 : 750X480@60 Hz
    - NO 6 : 1280X720@60 Hz
    - NO 21 : 1024X768@60 Hz
  - \* Pattern NO 85 : 16 Color Bar Pattern
  - NO 16 : Toshiba ABL Pattern
2. Optical measuring device : CA210 (FL)
  - Please use the MSPG-925 LTH generator for model LW26A33W.

### 4-3-2 Method of Adjustment

1. Adjust the basic level of DTV and PC input signals.
  - a) Set the input to the mode in which the adjustment will be made (PC).
    - \* Input signal - PC Mode : Model #21 (1024\*768 Mode), Pattern #16 (Picture 4-1)
  - b) Enter factory Calibration, confirm the ADC data (PC Mode Only).
    - \* ADC default value : Table 4-3.

Picture 4-1 Toshiba ABL Pattern



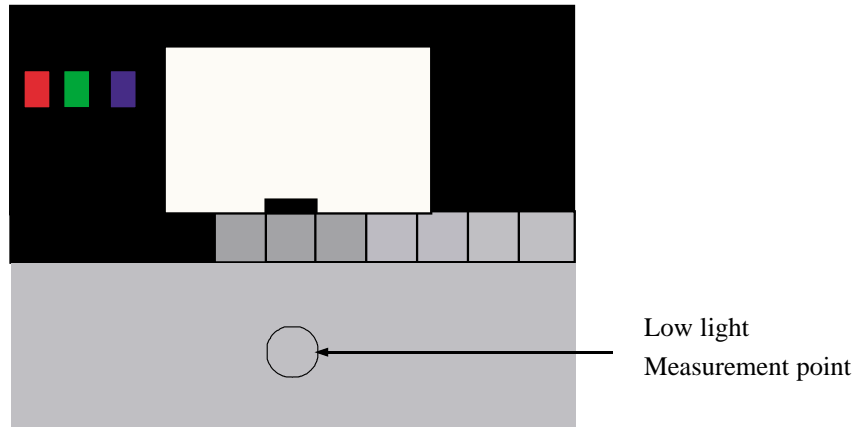
2. Adjust the white balance of RF, DTV and PC Modes.
  - a) Set the input to the mode in which the adjustment will be made (RF → DTV → PC).
    - \* Input signal - VIDEO Mode : Model #1 (750\*480 Mode), Pattern #16
    - PC Mode : Model #21 (1024\*768 Mode), Pattern #16
  - b) Enter factory color control, confirm the data.



## 4 Alignments and Adjustments

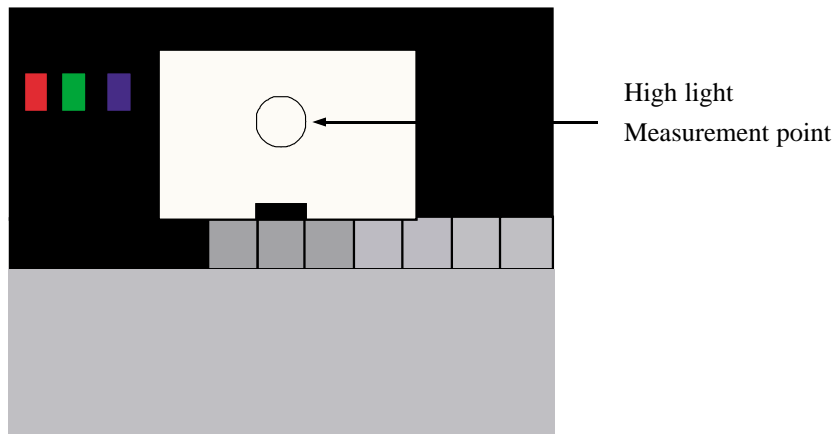
- c) Adjust the low light. (Refer to table 1, 2 in adjustment position by mode)
- Adjust sub - Brightness to set the 'Y' value.
  - Adjust red offset ('x') and blue offset ('y') to the color coordinates.
- \* Do not adjust green offset data.

Picture 4-2 Toshiba ABL Pattern



- d) Adjust the high light. (Refer to table 1, 2 in adjustment position by mode)
- Adjust red gain ('x') and blue gain ('y') to the color coordinates.
- \* Do not adjust the green gain and sub-contrast (Y) data.

Picture 4-3 Toshiba ABL Pattern



## 4-3-3 Option Table

Option Table		2C340028	
PanelType	AMLCD	Area	CW
LNA	Off	Debug Express	Off
Language	English	High Deviation	Off
Melody Volume	5	TXT Group	Osd Language
TTX List	Flop	DNle Demo	On
TTX TOP	Off	TTX Page	200Page
Auto FM	On	Bus Stop	Off
12C MOFS	0	DDC Write	Off
		EMI	On

\* The default settings are most recommended for Option Data. Each data may be adjusted.

## 4-3-4 PW565

\* Below figures are for contrast adjustment of PW565 (IC602). Do not change the data.

Mode	Data
Red Gain	140
Green Gain	140
Blue Gain	140
Red Offset	140
Green Offset	140
Blue Offset	140

## 4 Alignments and Adjustments

### 4-3-5 VPC 3230-MAIN

\* Data may be adjusted.

MODE	Data	MODE	Data
CT	2F	PK	01
BR	90	VPK	00
ACC_SAT	80	LPF2	00
TINT	32	CBW2	00
SATCb	24	CBW	03
SATCr	2B	IFC	00
CIPTNT	20	KILVL	07
CIPBR	C5	PKCOR	01
CIPCT	2A	FB_GAIN	22
PFS	02		

### 4-3-6 ADC

\*Adjust the R(Pr), G(Y), B(Pb) gain and offset to the basic level of DTV and PC Input signals.

Mbde	PC	Mbde	DTV
Red Gai n	8C →Adj ust	Pr Gai n	A0 →Adj ust
Green Gai n	8C →Adj ust	Y Gai n	A0 →Adj ust
Bl ue Gai n	8C →Adj ust	Pb Gai n	A0 →Adj ust
Red Of f set	80 →Adj ust	Pr Of f set	43 →Adj ust
Green Of f set	80 →Adj ust	Y Of f set	45 →Adj ust
Bl ue Of f set	80 →Adj ust	Pb Of f set	42 →Adj ust
Current	04		
VCO	02		

### 4-3-7 DNle

\* Control the specify item that a output signals of scalar (PW565).

\* This data can be changed without notice.

7. DNle			TV		
Pattern_SEL	0	Y_TH_HPF	4	DCE_Adap_SEL	2
NR_Limit Y	128	Y_TH_EDGE	4	BS_Tilt	80
NR_Limit C	129	DEP_Gain 1_X	3	BS_Gain Max	330
NR_SEL	2	DEP_Gain 1_Y	3	NE_Core	3
SCALEMAX_Y	32	DEP_Gain 2_X	3	NE_RTH 2	3
SCALEMAX_C	32	DEP_Gain 2_Y	3	CTE_H_min	60
SCALEMIN_Y	16	DEP_Scale_R	50	Coring TH3	1
SCALEMIN_C	16	DEP_Sup_Scale THI	3	Coring TH3	32
SCALENOISE_Y	72	DEP_Sup_Scale THF	107	Offset_CR	128
SCALENOISE_C	100	WTE_MCCT_FAC	150	Offset_CB	128

### 4-3-8 MDIN-150

\* Control the specify item that a output signals (RF, CVBS, S-VHS Modes) of MDIN-150 (IC405).

\* This data can be changed without notice.

### 4-3-9 Test Pattern

\* Use below test patters to demonstrate the image display of PW565 (IC602).

- 1) Luma Ramp (16 step)
- 2) Luma Ramp (128 Step)
- 3) White 16
- 4) White 240
- 5) Color Bar
- 6) RGB Ramp (32 Step)

### 4-3-10 Check sum

\* XXXX : Displays the current check sum size of the MICOM.  
(Varies depending on program update)

### 4-3-11 Reset

\* Initializes the data in the MICOM. (Set to default value)

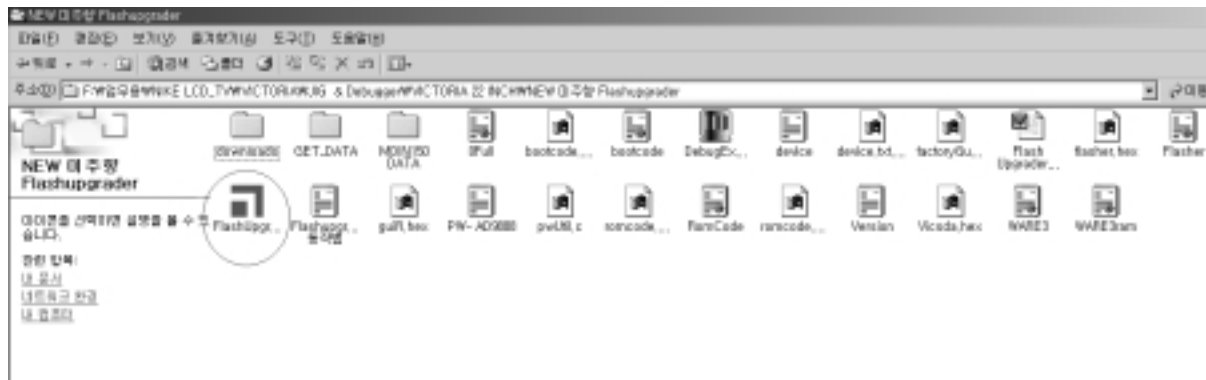
Use 'Reset' to restore adjustmints made in Factory Mode to the original settings.

### 4-3-12 T\_NPL26PEU\_0130 03/08/2004 18:34:23

\* Displays the MICOM program version

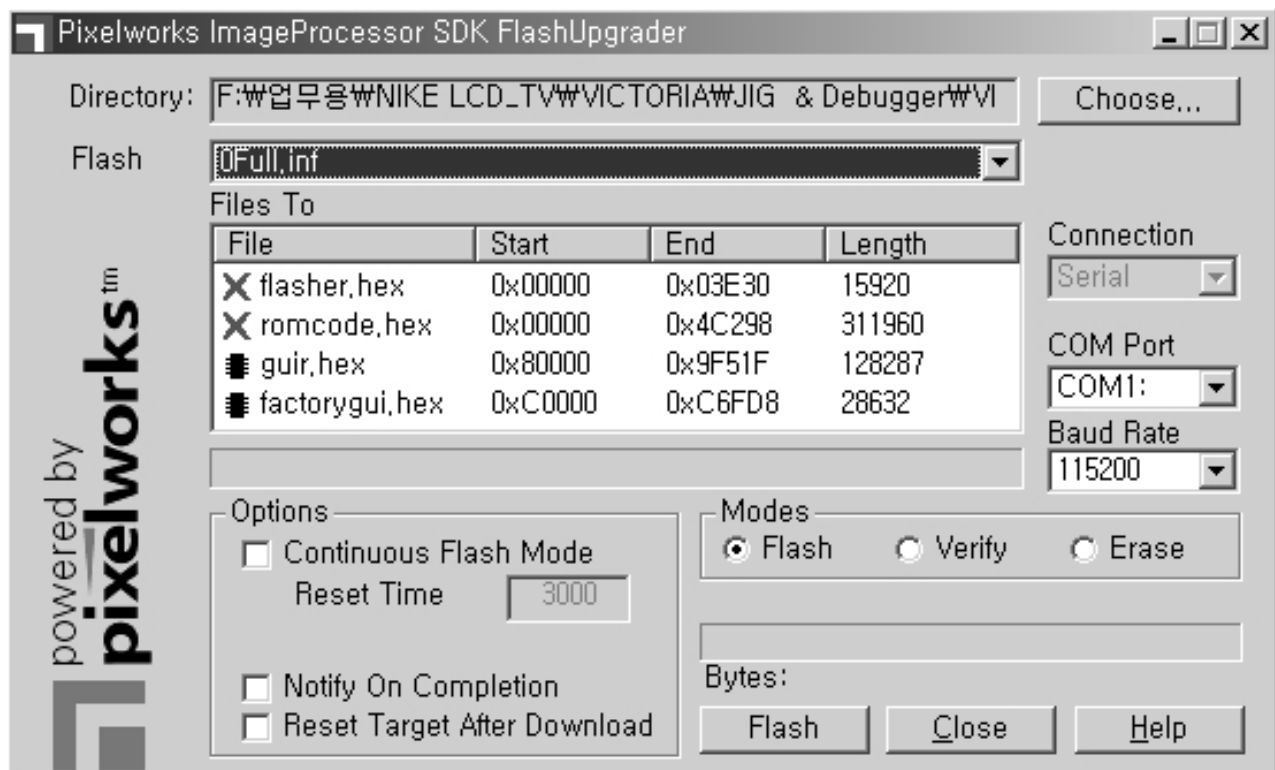
## 4-4 How to use SW(FlashupgradNT) for LW26A33W Set program update

1. Store program practice file in new folder.
2. Connect Set and Jig Cable to execute Program Update.  
(Refer to the Picture 4-4 attachment)
3. After completing the JIG Cable connection, store Update practice program (hex file 3EA) in new folder. (guiR, romcode, factoryGui).
4. Click FlashupgradNT.exe icon 2 times and execute it.  
(Upgrader OSD screen is marked)



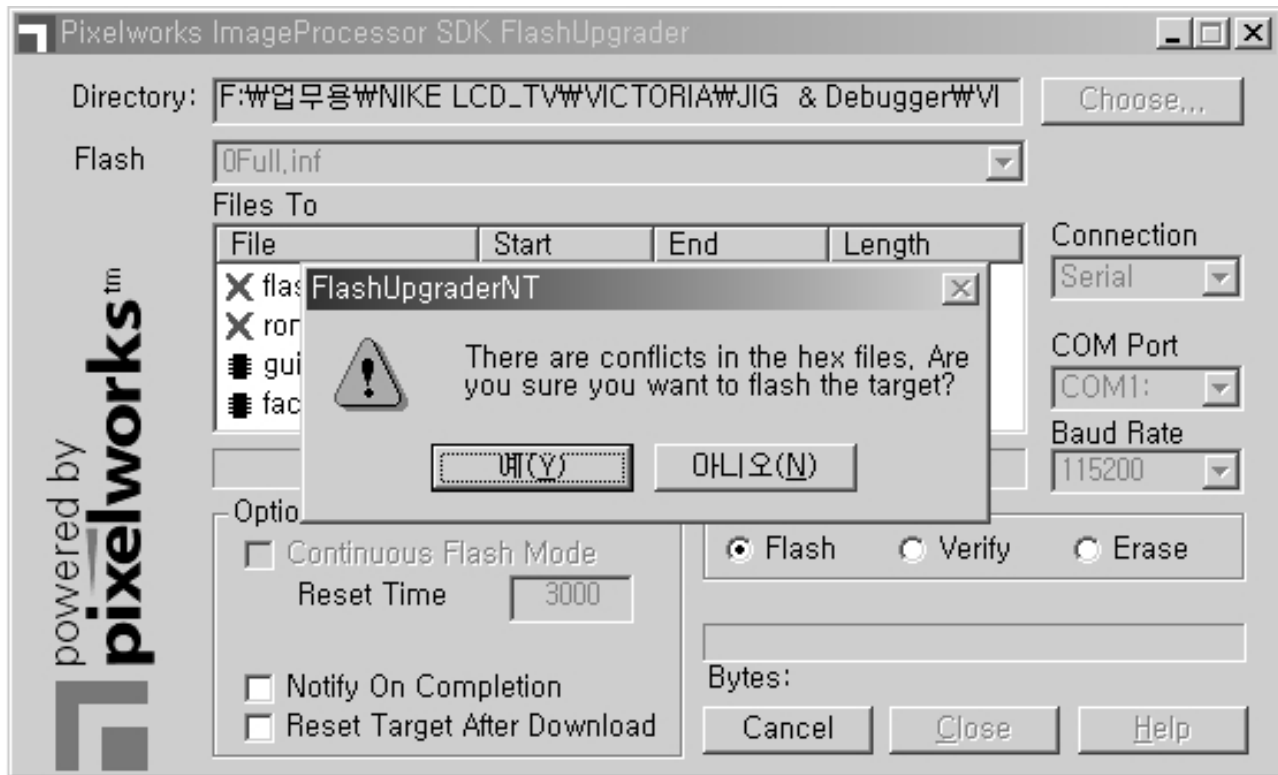
Picture 4-4

5. Select OFull.inf in Flash.  
(flaher, romcode, guir, factorygui items look in Files To)



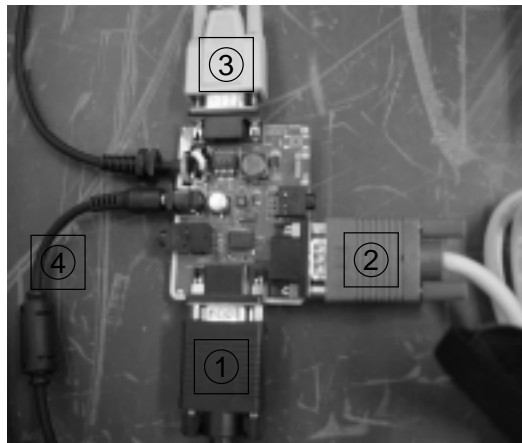
Picture 4-5

6. Click the “Flash” that is under right of OSD screen.  
(if warning message comes out, Click the “Yes”(Y).)



Picture 4-6

7. After acting No.6, extract Set's Power Cable and connect it again.  
8. During acting No.7, program Update sledding is marked sequentially on OSD screen.  
9. After Program Update completion, act NO.7 again.  
10. Program Update is completed.



Picture 4-7

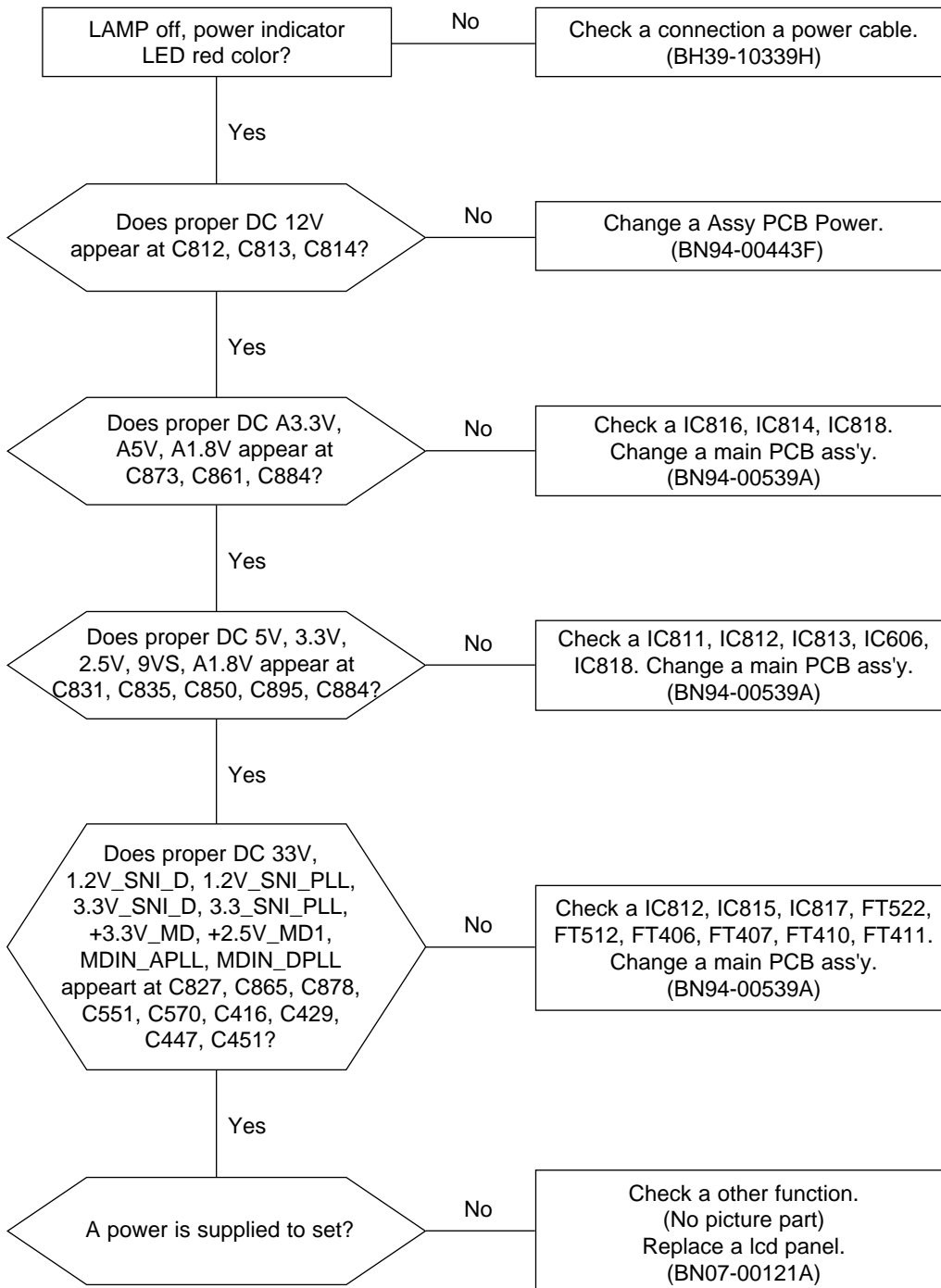
<Attachment Picture 4-7 : JIG Cable Connection Explain>

1. Connect with PC Pattern Generator's output.  
(Connect only when you want to see PC screen.)
2. Connect with JIG Output (15 pins) and PC Input (PC/DVI 24 pins) terminal.
3. Connect with COM Port1 of PC (9 Pins).
4. Connect 14V 4.5A Adaptor Cable.

## Memo

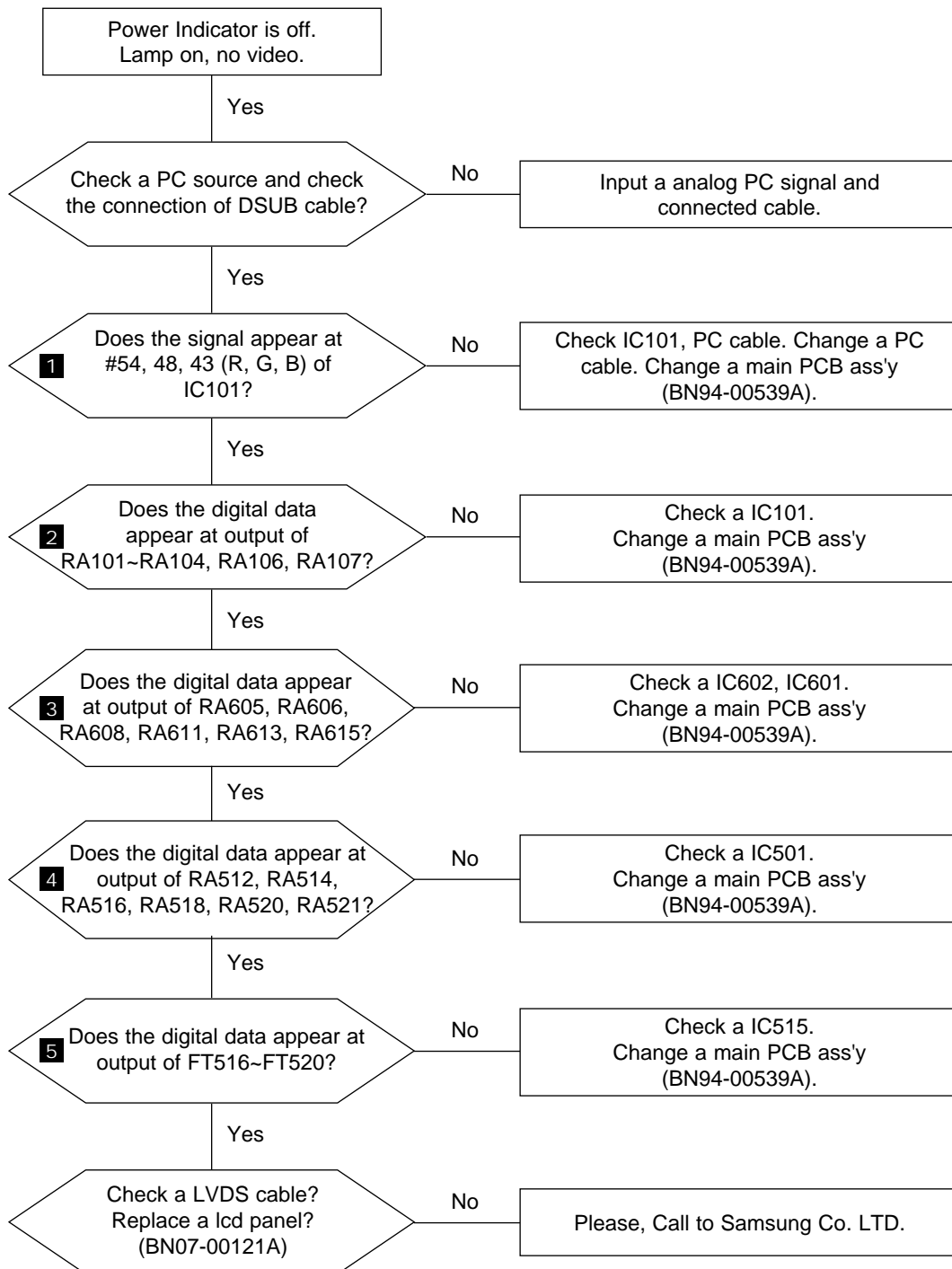
## 5 Troubleshooting

### 5-1 No Power



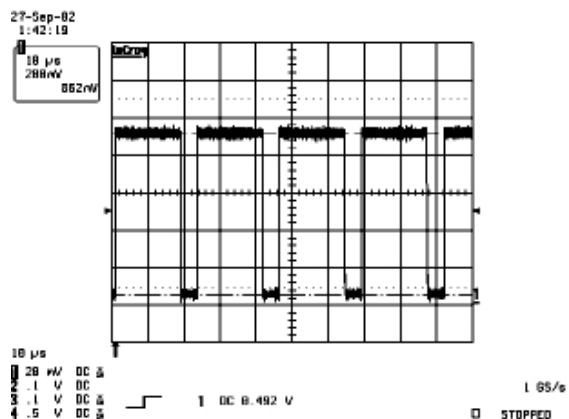


## 5-2 No Video (Analog PC Signal)

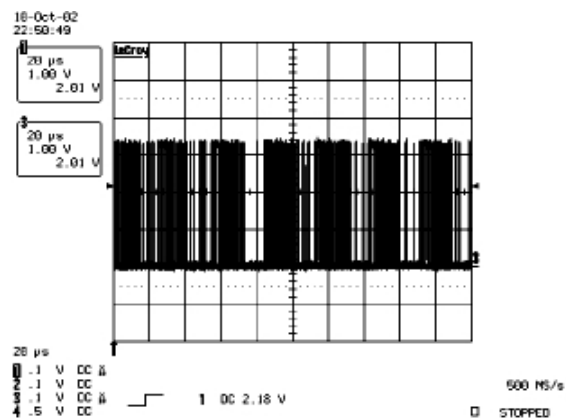


## WAVEFORMS

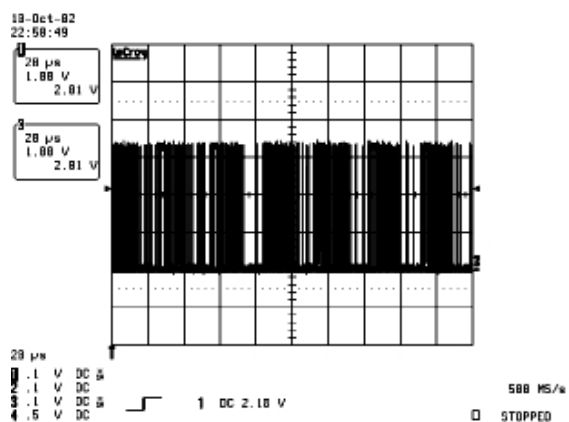
1 R,G,B Output Signal (#54, 48, 43) Of IC101



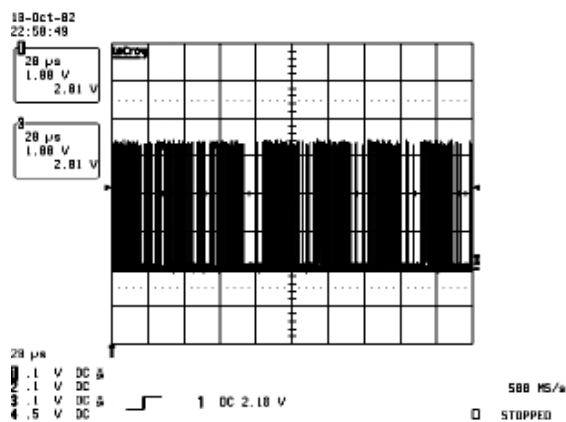
2 R,G,B Output Signal Of IC101



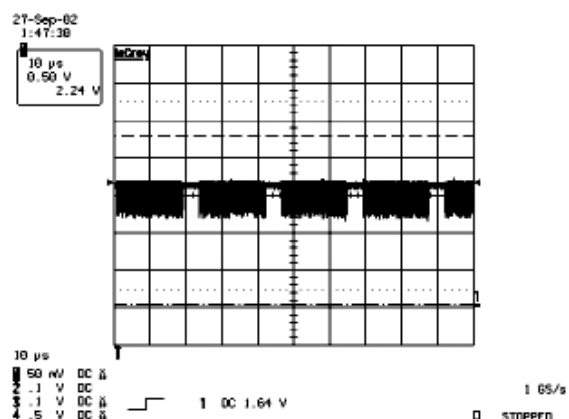
3 Output Digital Signal of IC602



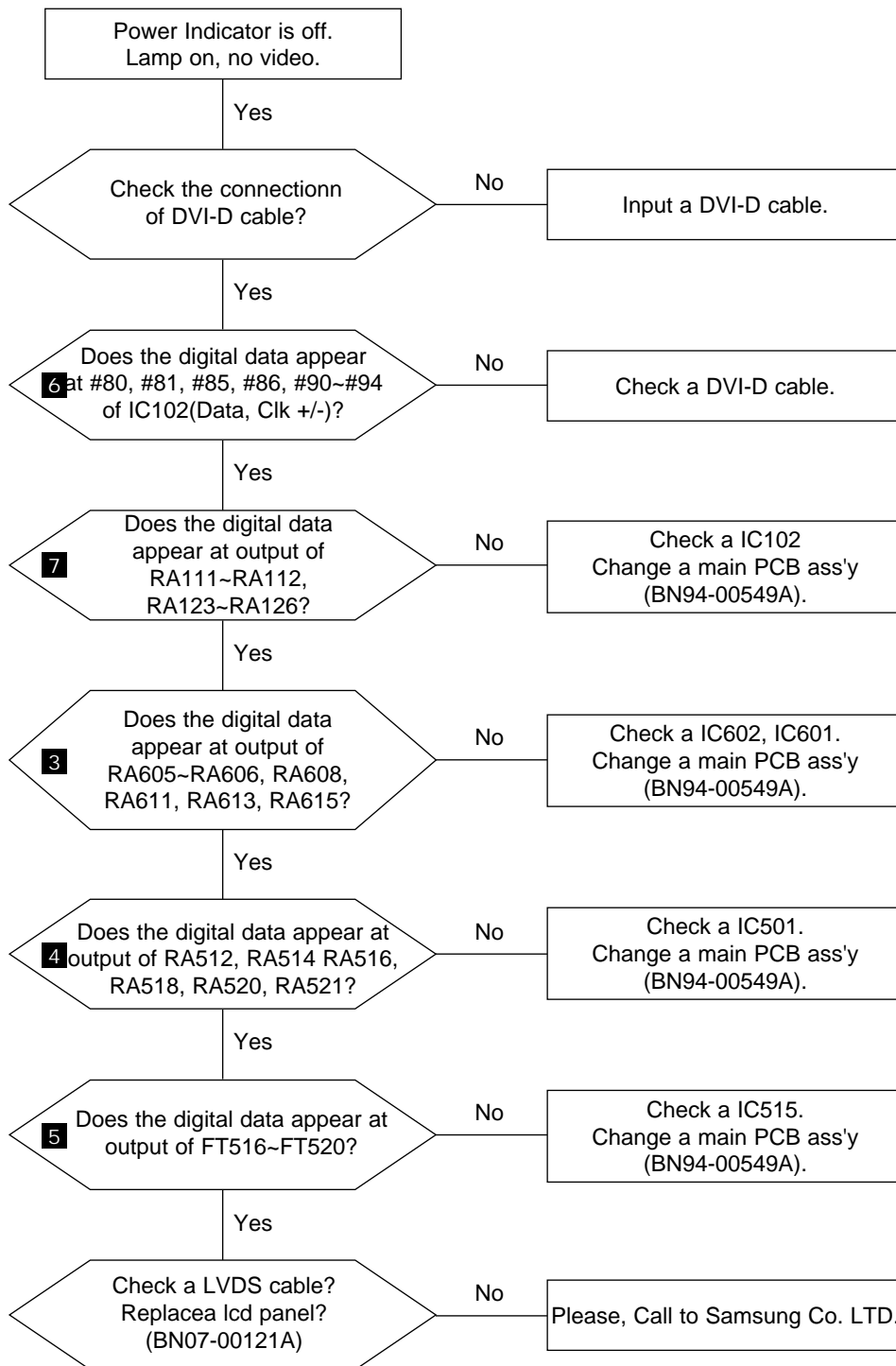
4 Output Digital Signal of IC501



5 Digital Output Data of IC515

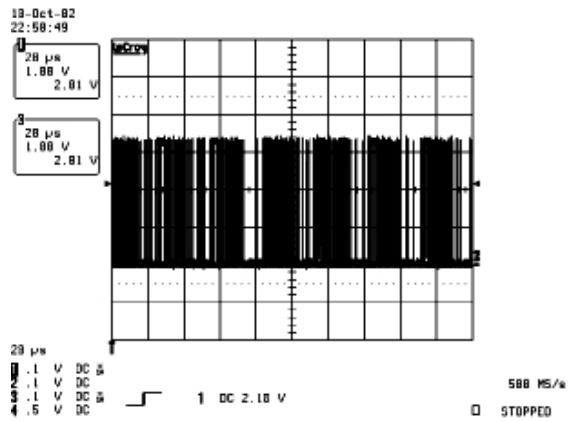


## 5-3 No Video (DVI-Digital Signal)

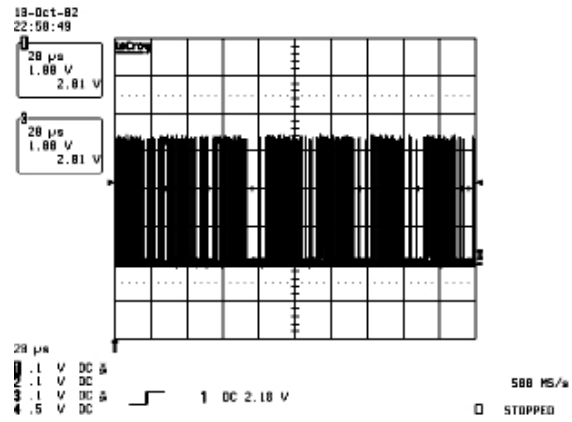


# WAVEFORMS

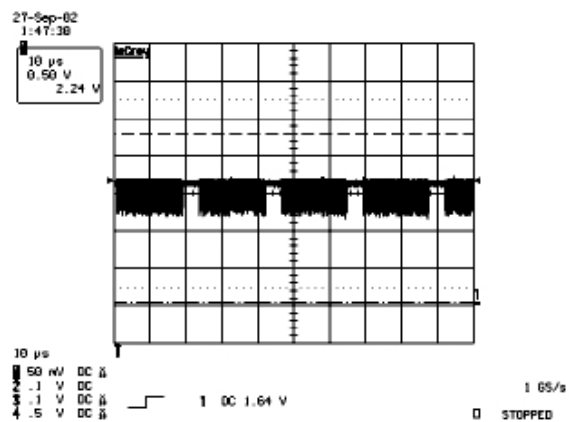
## 3 Output Digital Signal of IC602



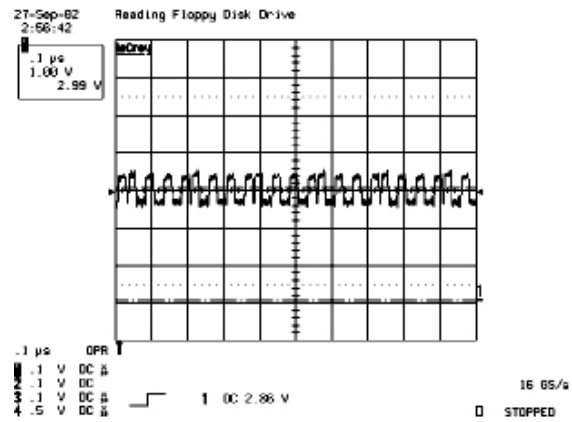
## 4 Output Digital Signal of I501



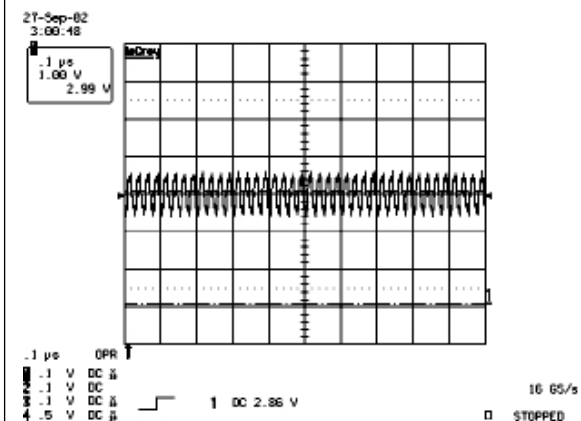
## 5 Digital Output Data of IC515



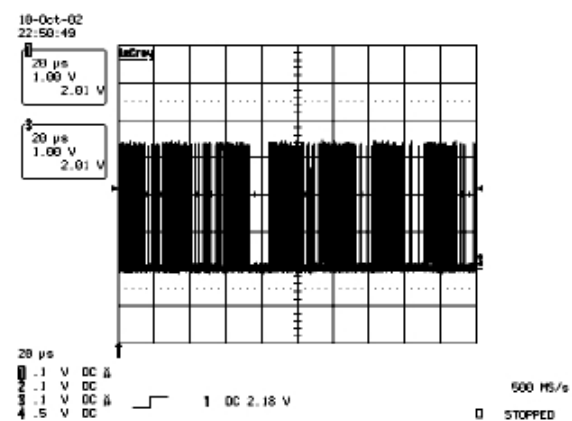
## 6 Signal of DVI\_RX 0~2 (Data)



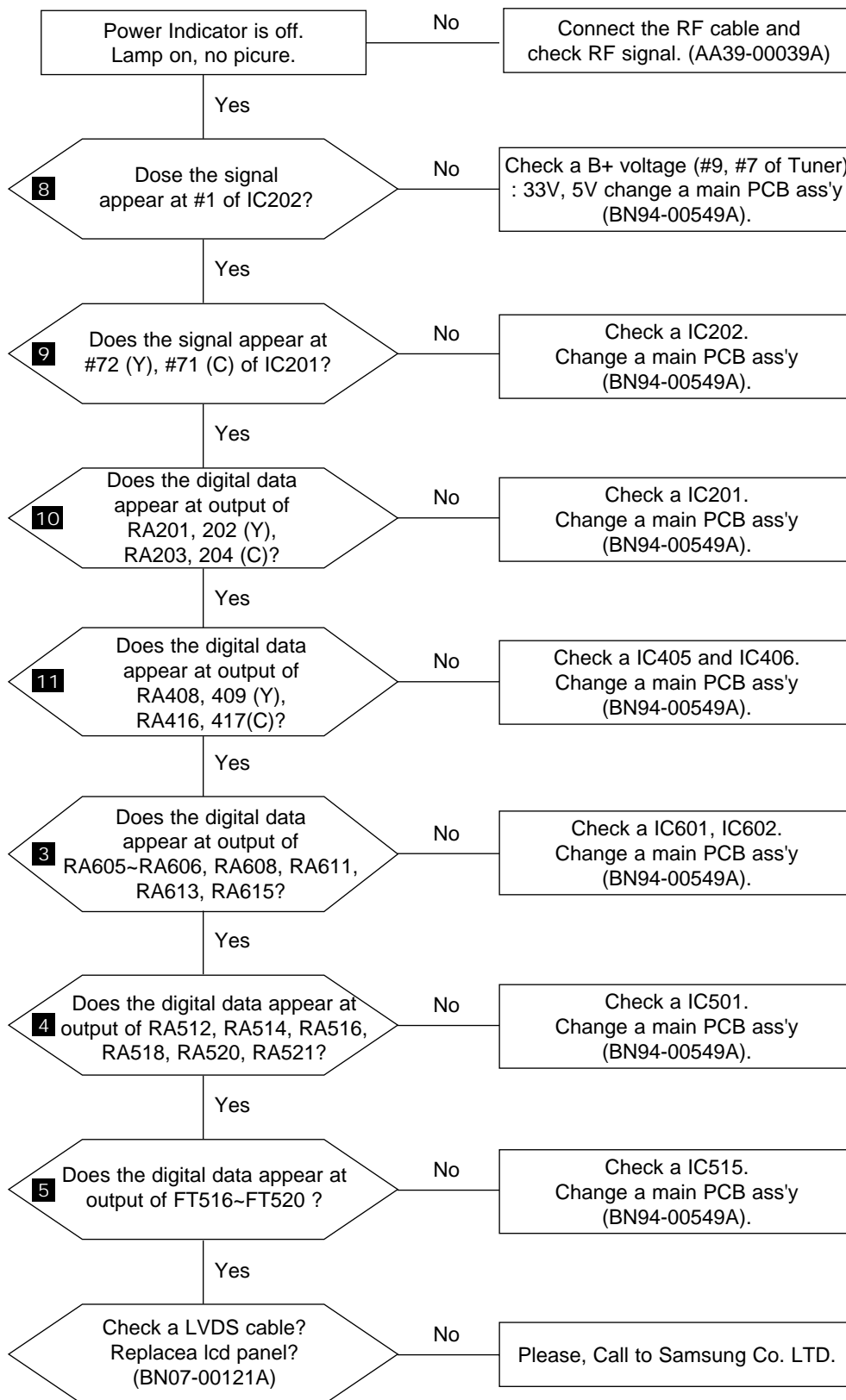
## 6-1 Signal of DVI\_RXC (CLK)



## 7 Digital Output Signal Of IC102

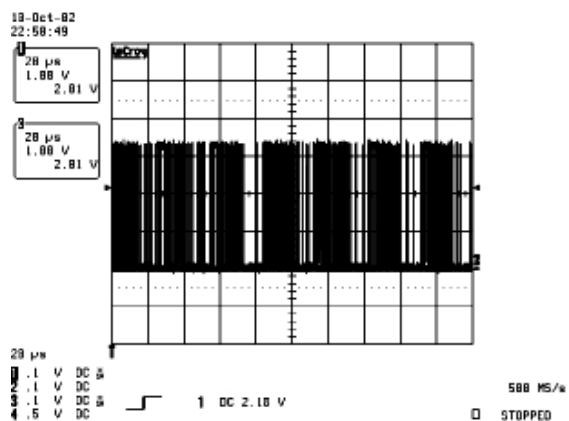


## 5-4 No Picture (Tuner\_CVBS)

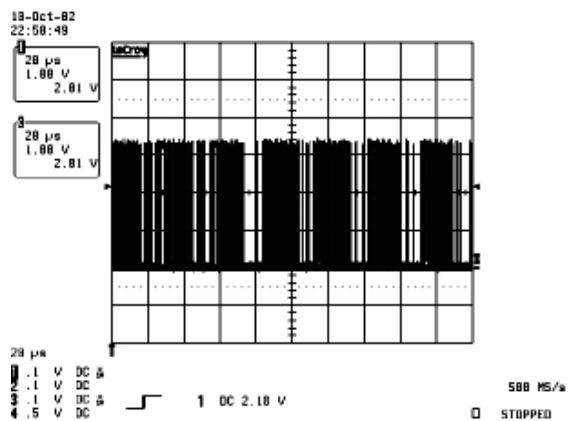


## WAVEFORMS

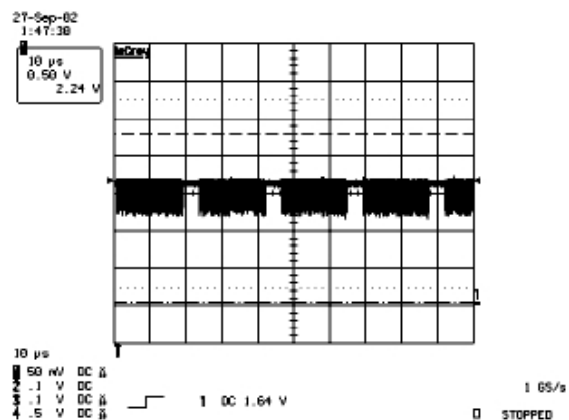
### 3 Output Digital Signal of IC602



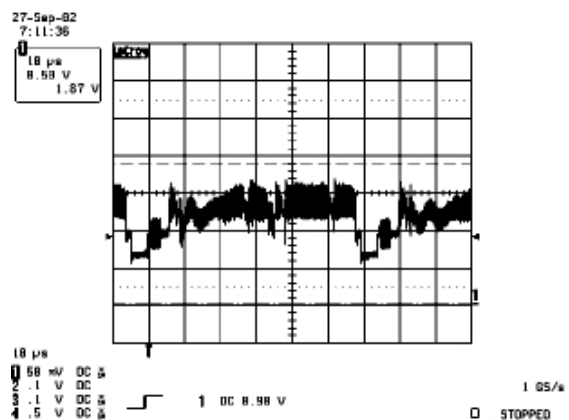
### 4 Output Digital Signal of IC501



### 5 Digital Output Data of IC515

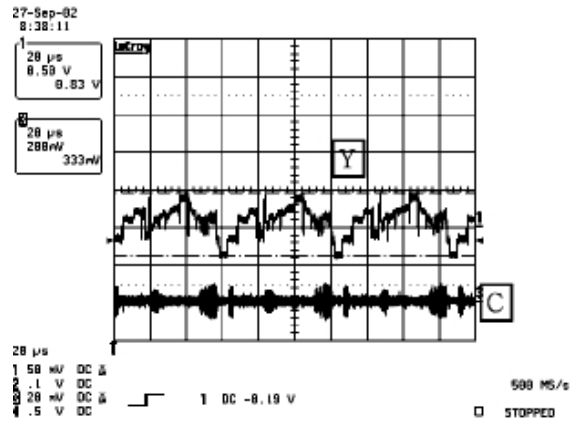


### 8 Tuner\_CVBS Output Signal

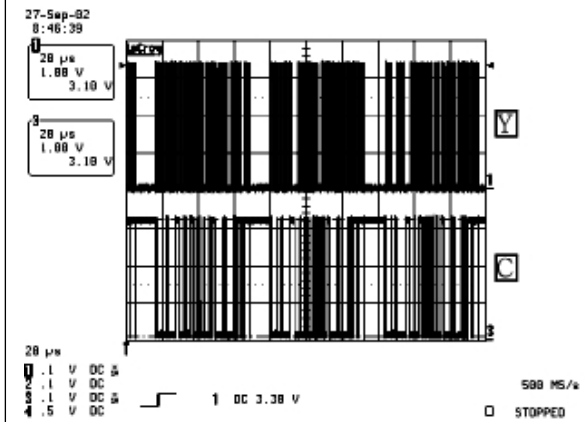


## WAVEFORMS

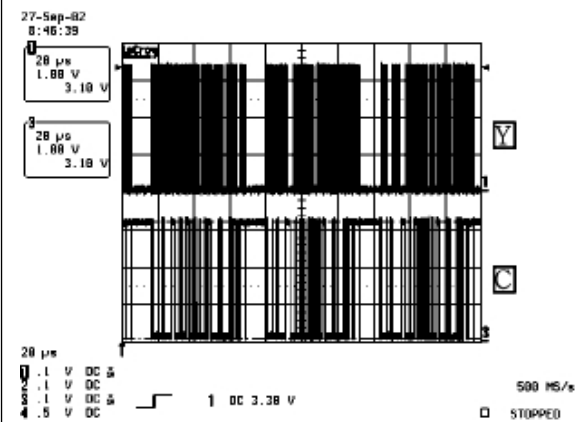
9 Analog Signal (Y,C) to IC201



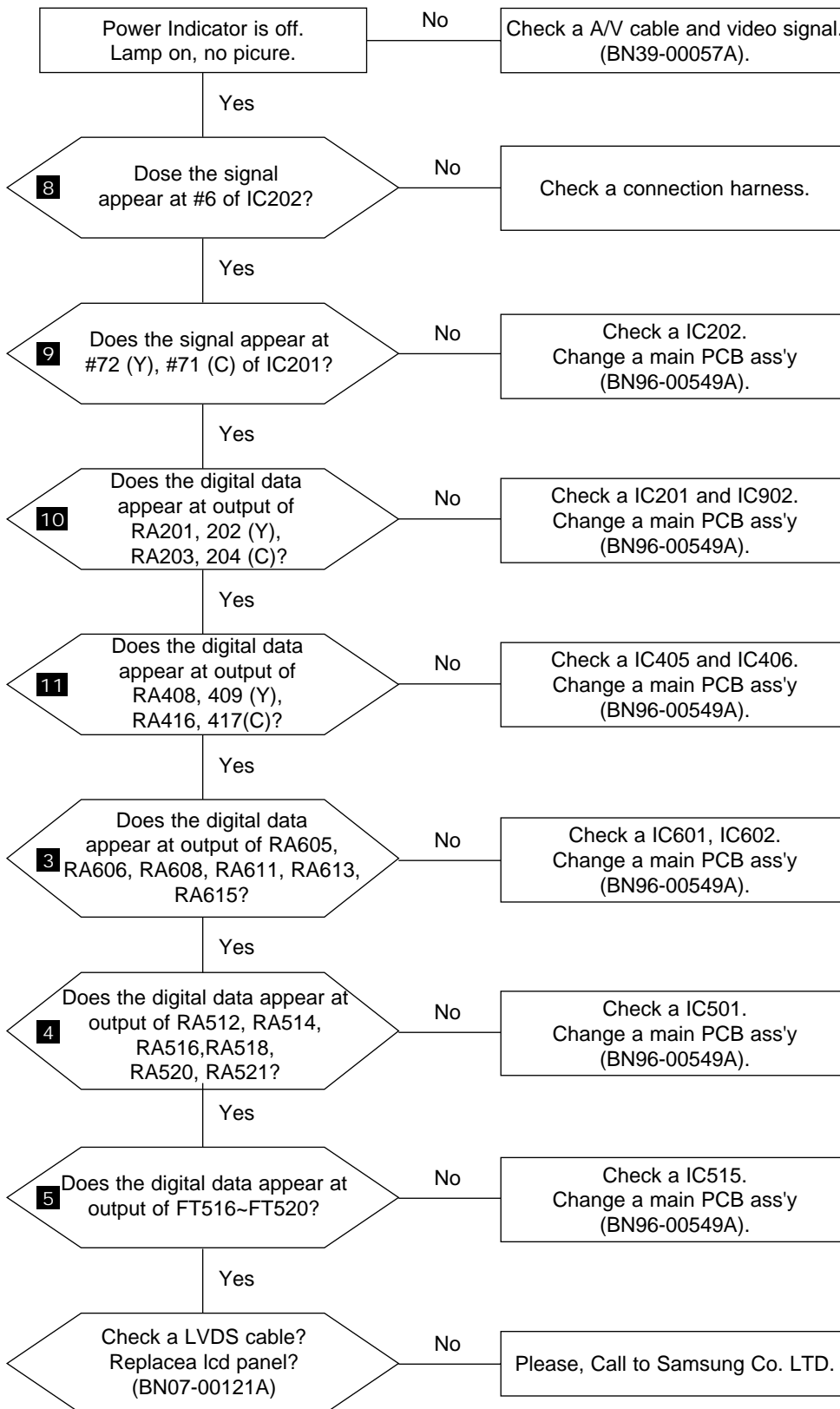
10 3230 Y,C\_OUT (0:7) Data



11 Digital Output Y,C\_OUT (0:7) Data Of IC405



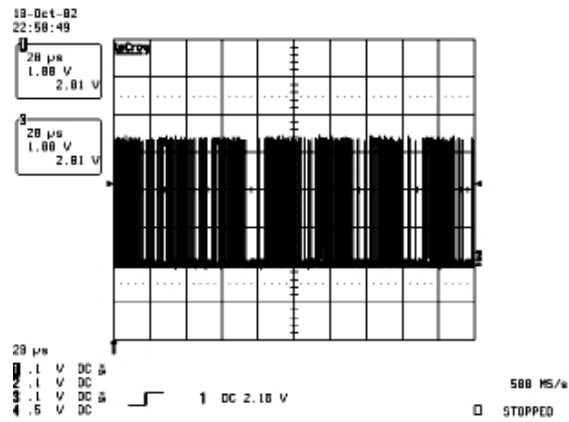
## 5-5 No Picture (Video\_CVBS)



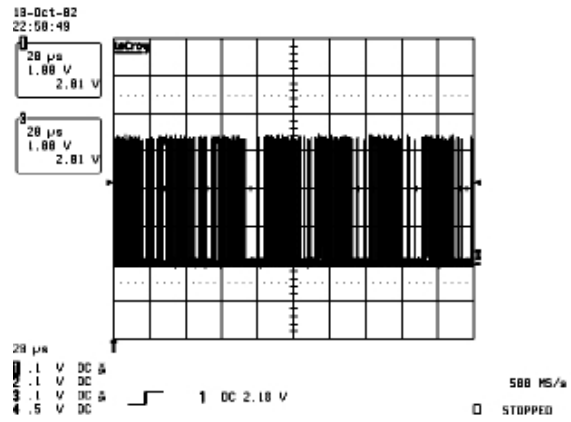


## WAVEFORMS

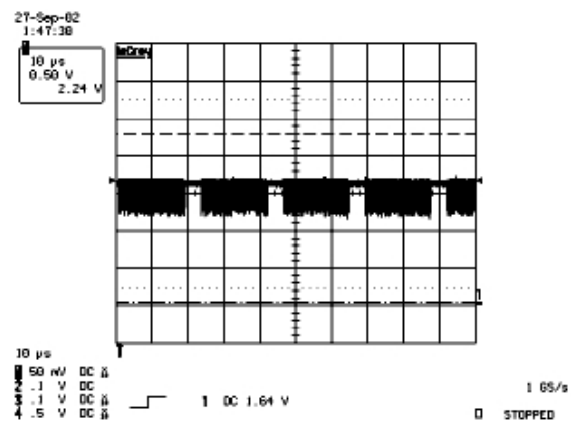
### 3 Output Digital Signal of IC602



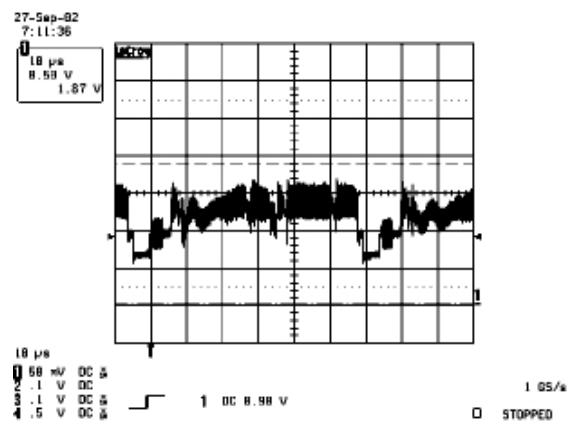
### 4 Output Digital Signal of IC501



### 5 Digital Output Data of IC515

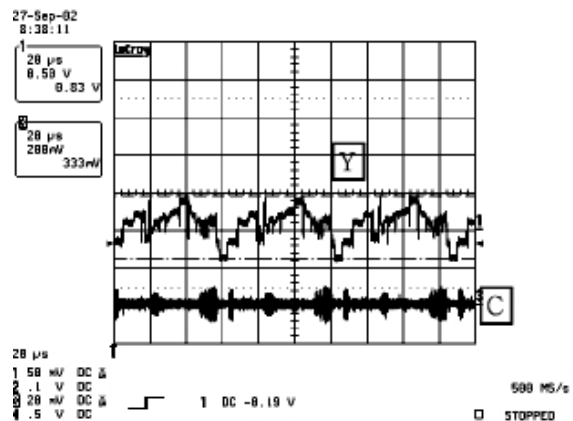


### 8 Tuner\_CVBS Output Signal

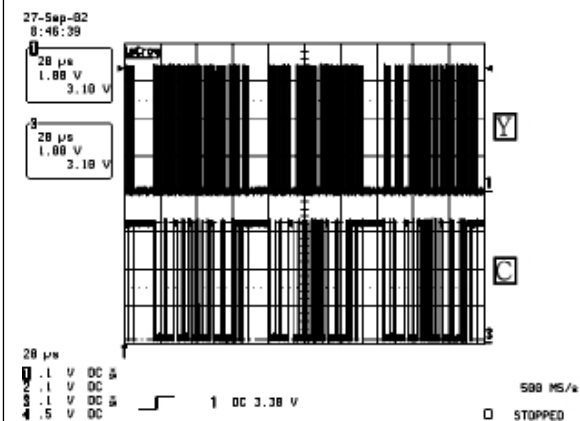


# WAVEFORMS

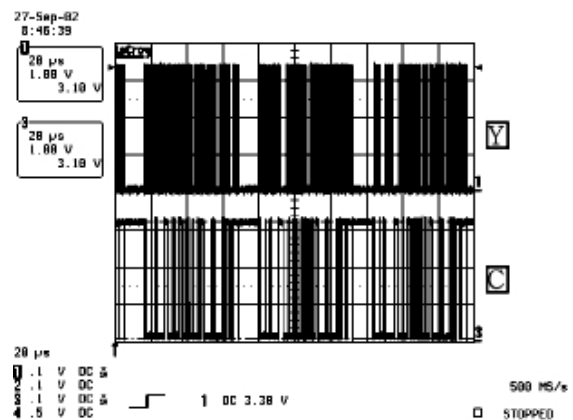
## 9 Analog Signal (Y,C) to IC201



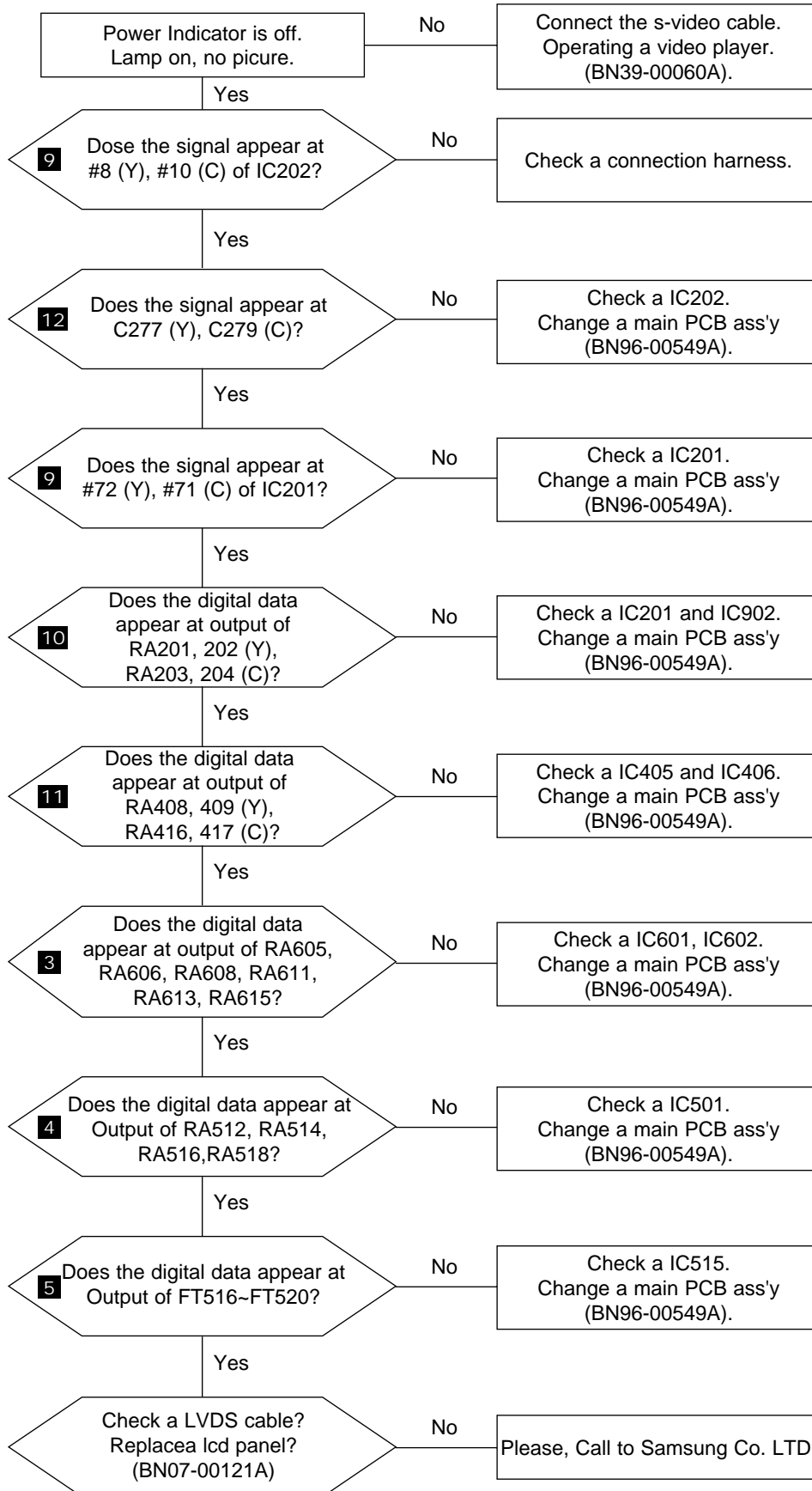
## 10 3230 Y,C\_OUT (0:7) Data



## 11 Digital Output Y,C\_OUT (0:7) Data Of IC405

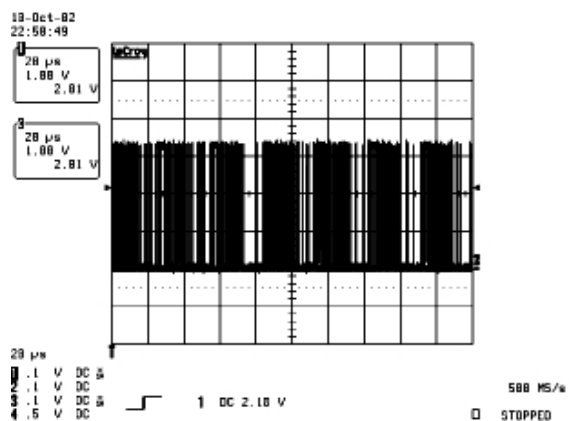


## 5-6 No Picture (S-VIDEO\_Y,C)

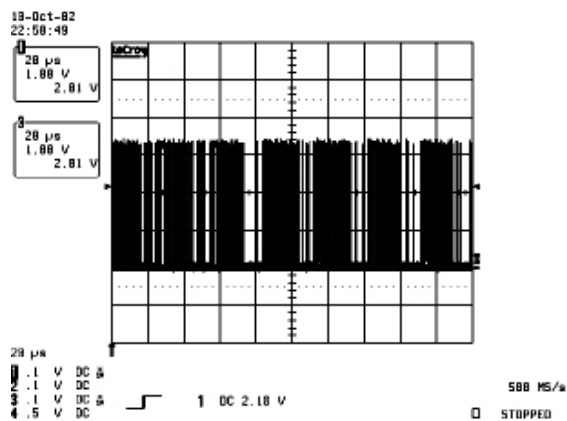


# WAVEFORMS

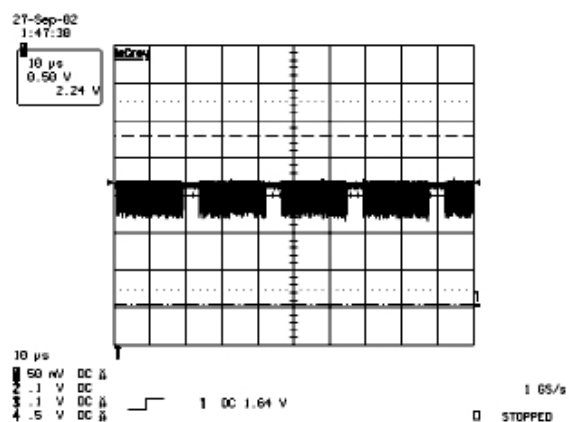
## 3 Output Digital Signal of IC602



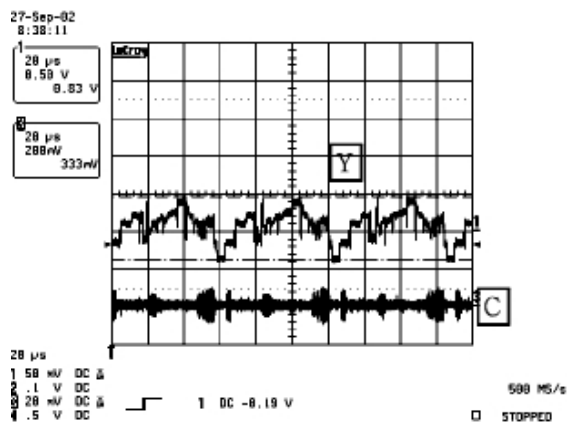
## 4 Output Digital Signal of IC501



## 5 Digital Output Data of IC515

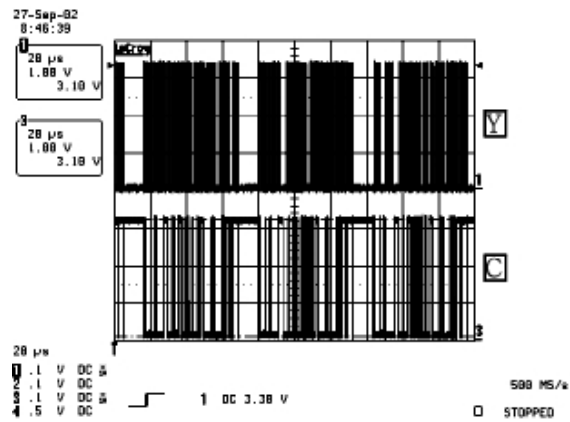


## 9 Analog Signal (Y,C) to IC201

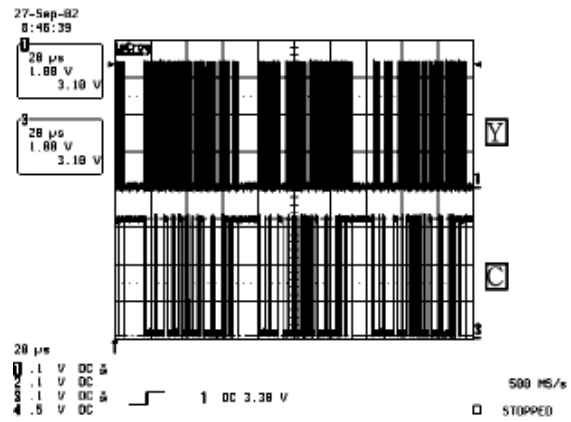


## WAVEFORMS

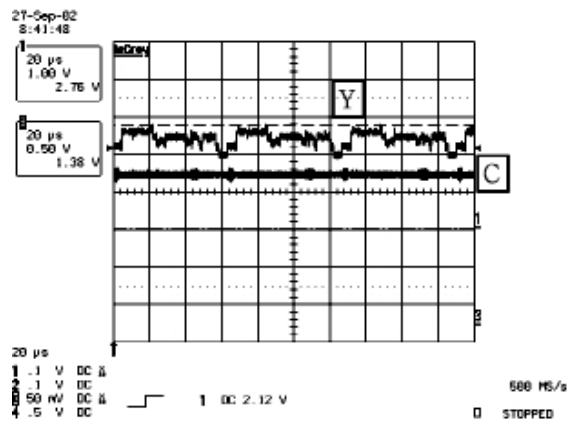
10 3230 Y,C\_OUT (0:7) Data



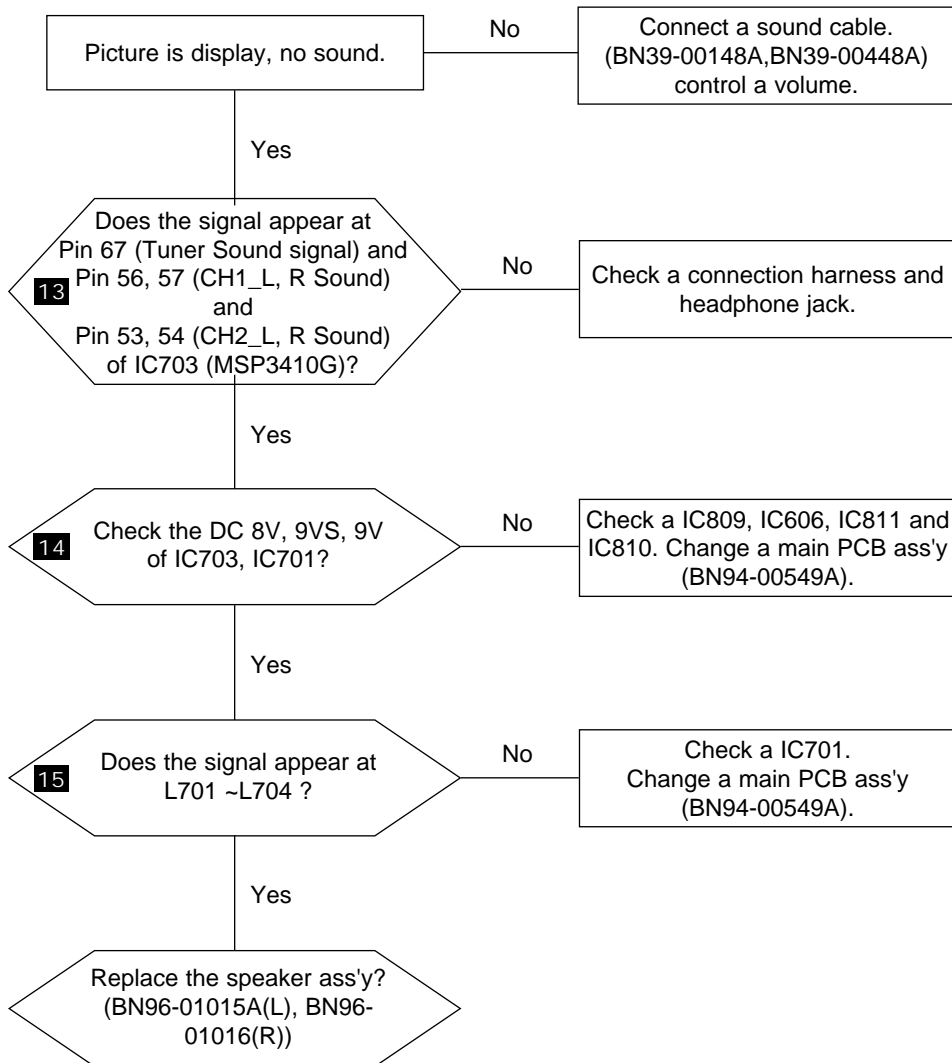
11 Digital Output Y,C\_OUT (0:7) Data Of IC405



12 SVHS\_Y,C Input Signal to IC202

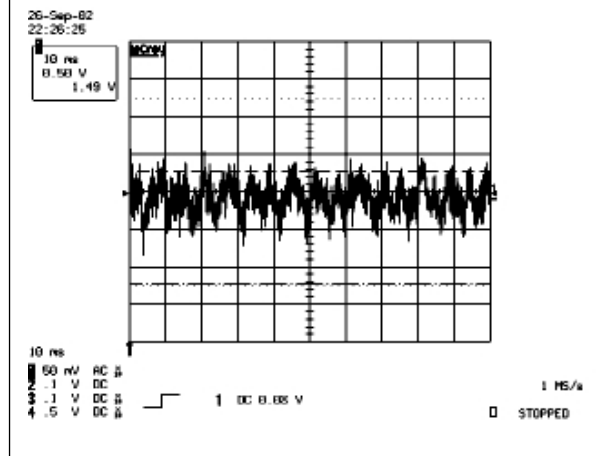


## 5-7 No Sound

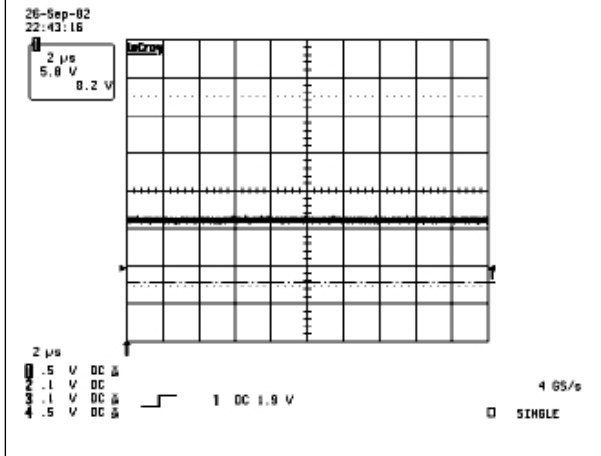


## WAVEFORMS

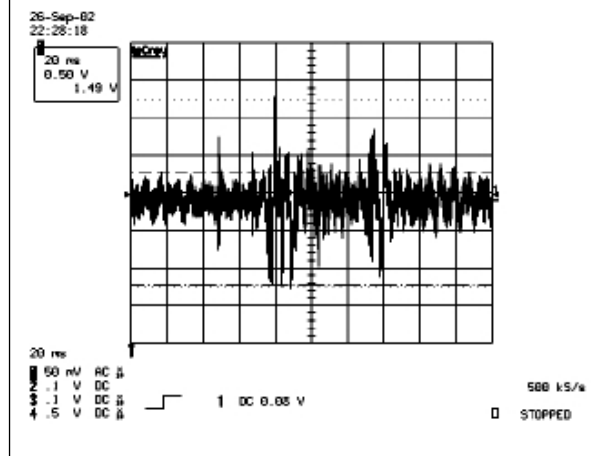
13 The Signal are Inputed to IC703



14 DC +8V



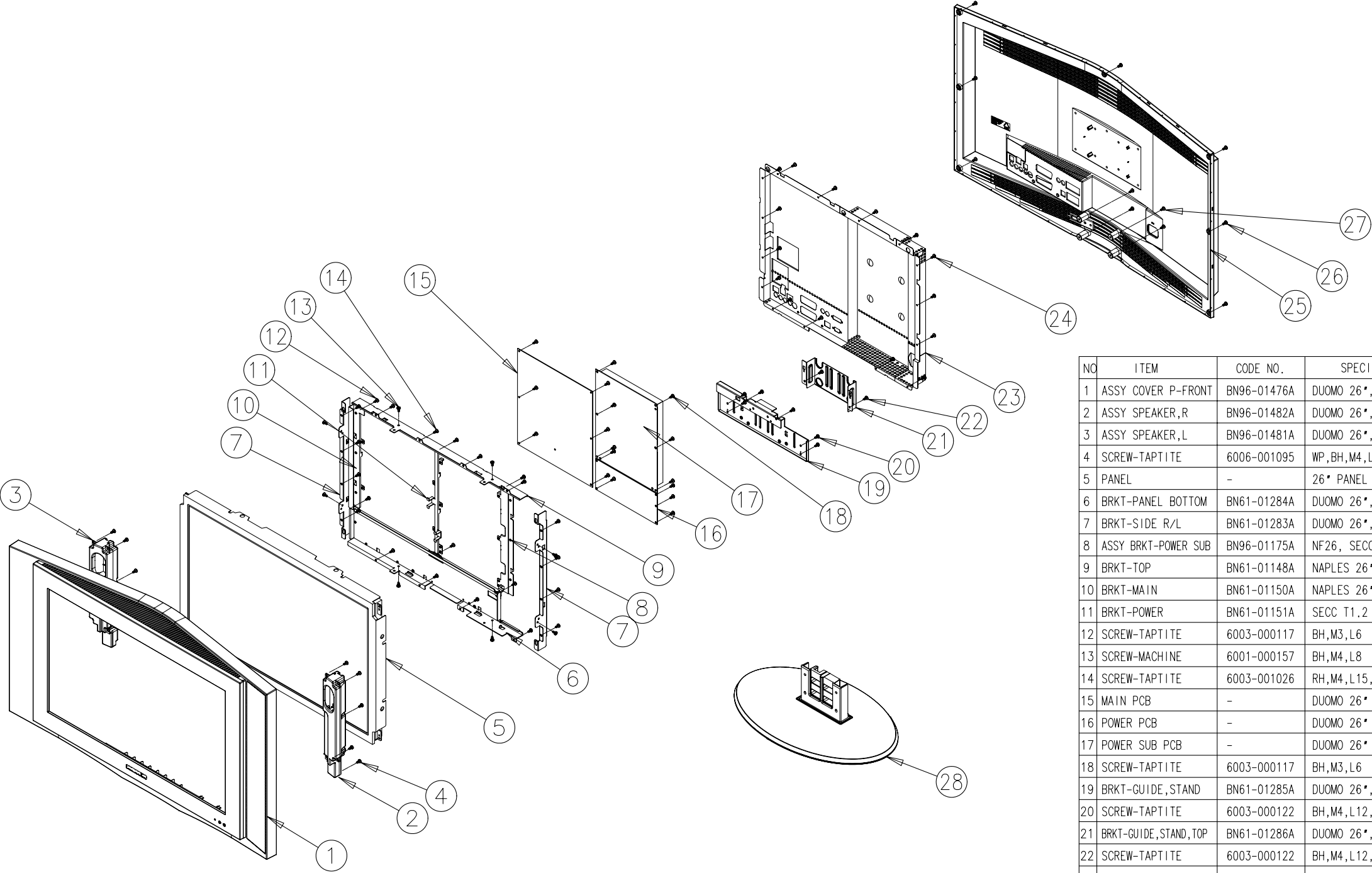
15 Output WaveForm



6 Exploded View and Parts List

※ You can search for updated part codes through ITSELF web site.  
URL : <http://itself.sec.samsung.co.kr/>

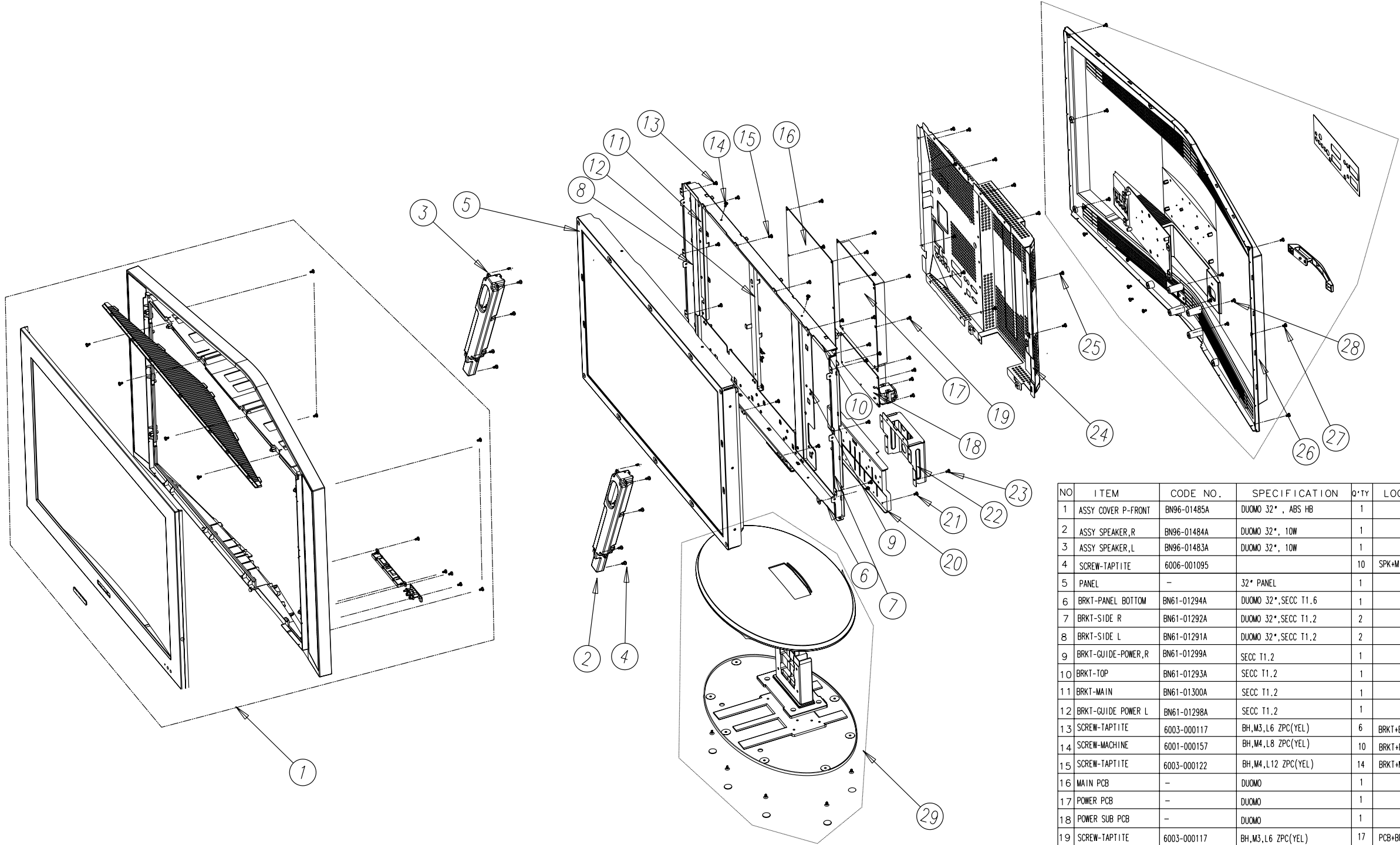
6-1 LE26A41B



NO	ITEM	CODE NO.	SPECIFICATION	Q'TY	LOCATION	REMARK
1	ASSY COVER P-FRONT	BN96-01476A	DUOMO 26", ABS HB	1		SA
2	ASSY SPEAKER,R	BN96-01482A	DUOMO 26", 5W	1		SA
3	ASSY SPEAKER,L	BN96-01481A	DUOMO 26", 5W	1		SA
4	SCREW-TAPTITE	6006-001095	WP,BH,M4,L12	10	SPK+MIDDLE	SA
5	PANEL	-	26" PANEL	1		SA
6	BRKT-PANEL BOTTOM	BN61-01284A	DUOMO 26", SECC T1.0	1		SNA
7	BRKT-SIDE R/L	BN61-01283A	DUOMO 26", SECC T1.0	2		SNA
8	ASSY BRKT-POWER SUB	BN96-01175A	NF26, SECC T1.2	1		SNA
9	BRKT-TOP	BN61-01148A	NAPLES 26" SECC T1.2	1		SNA
10	BRKT-MAIN	BN61-01150A	NAPLES 26" SECC T1.2	1		SNA
11	BRKT-POWER	BN61-01151A	SECC T1.2	1		SNA
12	SCREW-TAPTITE	6003-000117	BH,M3,L6	6	BRKT+BRKT	SA
13	SCREW-MACHINE	6001-000157	BH,M4,L8	8	BRKT+PANEL	SA
14	SCREW-TAPTITE	6003-001026	RH,M4,L15,BLK	16	BRKT+MIDDLE	SA
15	MAIN PCB	-	DUOMO 26"	1		SA
16	POWER PCB	-	DUOMO 26"	1		SA
17	POWER SUB PCB	-	DUOMO 26"	1		SA
18	SCREW-TAPTITE	6003-000117	BH,M3,L6	17	PCB+BRKT	SA
19	BRKT-GUIDE,STAND	BN61-01285A	DUOMO 26", SECC T1.6	1		SNA
20	SCREW-TAPTITE	6003-000122	BH,M4,L12,YEL	6	B/GUIDE+MIDDLE	SA
21	BRKT-GUIDE,STAND,TOP	BN61-01286A	DUOMO 26", SECC T1.0	1		SNA
22	SCREW-TAPTITE	6003-000122	BH,M4,L12,YEL	2	GUIDE,TOP+B/GUIDE	SA
23	ASSY SHIELD-PCB	BN96-01129A	NA26, SECC T0.5	1		SA
24	SCREW-TAPTITE	6003-000117	BH,M3,L6	15	SHIELD+BRKT	SNA
25	ASSY COVER-REAR	BN96-01477A	DUOMO 26", ABS HB	1		SA
26	SCREW-TAPTITE	6003-001323	BH,M4,L12,NI PLT	1	REAR+C/MIDDLE	SA
27	SCREW-TAPTITE	6003-000009	BH,M4,L16,YEL	4	SET+STAND	SA
28	ASSY STAND	BN96-01478A	DUOMO 26", ABS HB	1		SA



6-2 LE32A41B



NO	ITEM	CODE NO.	SPECIFICATION	Q'TY	LOCATION	REMARK
1	ASSY COVER P-FRONT	BN96-01485A	DUOMO 32" , ABS HB	1		SA
2	ASSY SPEAKER,R	BN96-01484A	DUOMO 32" , 10W	1		SA
3	ASSY SPEAKER,L	BN96-01483A	DUOMO 32" , 10W	1		SA
4	SCREW-TAPTITE	6006-001095		10	SPK+MIDDLE	SA
5	PANEL	-	32" PANEL	1		SA
6	BRKT-PANEL BOTTOM	BN61-01294A	DUOMO 32",SECC T1.6	1		SNA
7	BRKT-SIDE R	BN61-01292A	DUOMO 32",SECC T1.2	2		SNA
8	BRKT-SIDE L	BN61-01291A	DUOMO 32",SECC T1.2	2		SNA
9	BRKT-GUIDE-POWER,R	BN61-01299A	SECC T1.2	1		SNA
10	BRKT-TOP	BN61-01293A	SECC T1.2	1		SNA
11	BRKT-MAIN	BN61-01300A	SECC T1.2	1		SNA
12	BRKT-GUIDE POWER L	BN61-01298A	SECC T1.2	1		SNA
13	SCREW-TAPTITE	6003-000117	BH,M3,L6 ZPC(YEL)	6	BRKT+BRKT	SNA
14	SCREW-MACHINE	6001-000157	BH,M4,L8 ZPC(YEL)	10	BRKT+PANEL	SA
15	SCREW-TAPTITE	6003-000122	BH,M4,L12 ZPC(YEL)	14	BRKT+MIDDLE	SA
16	MAIN PCB	-	DUOMO	1		SA
17	POWER PCB	-	DUOMO	1		SA
18	POWER SUB PCB	-	DUOMO	1		SA
19	SCREW-TAPTITE	6003-000117	BH,M3,L6 ZPC(YEL)	17	PCB+BRKT	SA
20	BRKT-GUIDE,STAND,BTM	BN61-01296A	DUOMO 32",SECC T2.0	1		SNA
21	SCREW-TAPTITE	6003-000122	BH,M4,L12 ZPC(YEL)	7	B/GUIDE+MIDDLE	SA
22	BRKT-GUIDE,STAND,TOP	BN61-01295A	DUOMO 32",SECC T1.0	1		SNA
23	SCREW-TAPTITE	6003-000122	BH,M4,L12 ZPC(YEL)	6	GUIDE,TOP+B/GUIDE	SA
24	ASSY SHIELD-PCB	BN96-01611A	SECC T1.0	1		SNA
25	SCREW-TAPTITE	6003-000117	BH,M3,L6 ZPC(YEL)	11	SHIELD+BRKT	SA
26	ASSY COVER-REAR	BN96-01486A	DUOMO 32",HIPS HB	1		SA
27	SCREW-TAPTITE	6003-001324	BH,M4,L16,N1 PLT	12	REAR+C/MIDDLE	SA
28	SCREW-TAPTITE	6003-000009	BH,M4,L16,ZPC(YEL)	4	SET+STAND	SA
29	ASSY STAND	BN96-01487A	DOMO 32",ABS HB	1		SA

## 7 Parts List

※ You can search for updated part codes through ITSELF web site.

URL : <http://itself.sec.samsung.co.kr/>

### 7-1 Part Lists

Description	Code No.(LE26A41B)	Description	Code No.(LE32A41B)
ASSY PCB MAIN	BN94 - 00595V	ASSY PCB MAIN	BN94 - 00595Q
ASSY COVER FRONT	BN90 - 00677D	ASSY COVER FRONT	BN90 - 00677K
ASSY COVER REAR	BN90 - 00663V	ASSY COVER REAR	BN90 - 00663Y
LCD-PANEL	BN07 - 00121A	LCD-PANEL	BN07 - 00172A
ASSY CHASSIS	BN91 - 00814C	ASSY CHASSIS	BN91 - 00808Y
ASSY SHIELD	BN91 - 00807V	ASSY SHIELD	BN91 - 00807X
ASSY BOX	BN92 - 01133N	ASSY BOX	BN92 - 01133U
ASSY LABEL	BN92 - 01044C	ASSY LABEL	BN92 - 01044U
REMOCON	BN59 - 00412B	REMOCON	BN59 - 00412B
ASSY ACCESSORY	BN92 - 01146E	ASSY ACCESSORY	BN92 - 01146P
ASSY PCB POWER_CH	BN94 - 00443F	ASSY PCB POWER_CH	BN94 - 00443Z
ASSY PCB POWER_SUB PCB	BN94 - 00444N	ASSY PCB POWER_SUB PCB	BN94 - 00444N

#### <OPTION PART LIST>

IF Cable	: AA39-00039A
A/V Cable	: BN39-00057A
S-Video Cable	: BN39-00060A
COMPONENT Cable	: BN39-00279A
SOUND Cable(R, L)	: BN39-00148A
PC DVI(D) Cable	: BN39-00126A
PC DVI(A) Cable	: BN39-00310A
DVI AUDIO Cable	: BN81-00120A
STEREO Cable	: BN39-00448A
D-SUB Cable	: BN39-00244B

7 Parts List

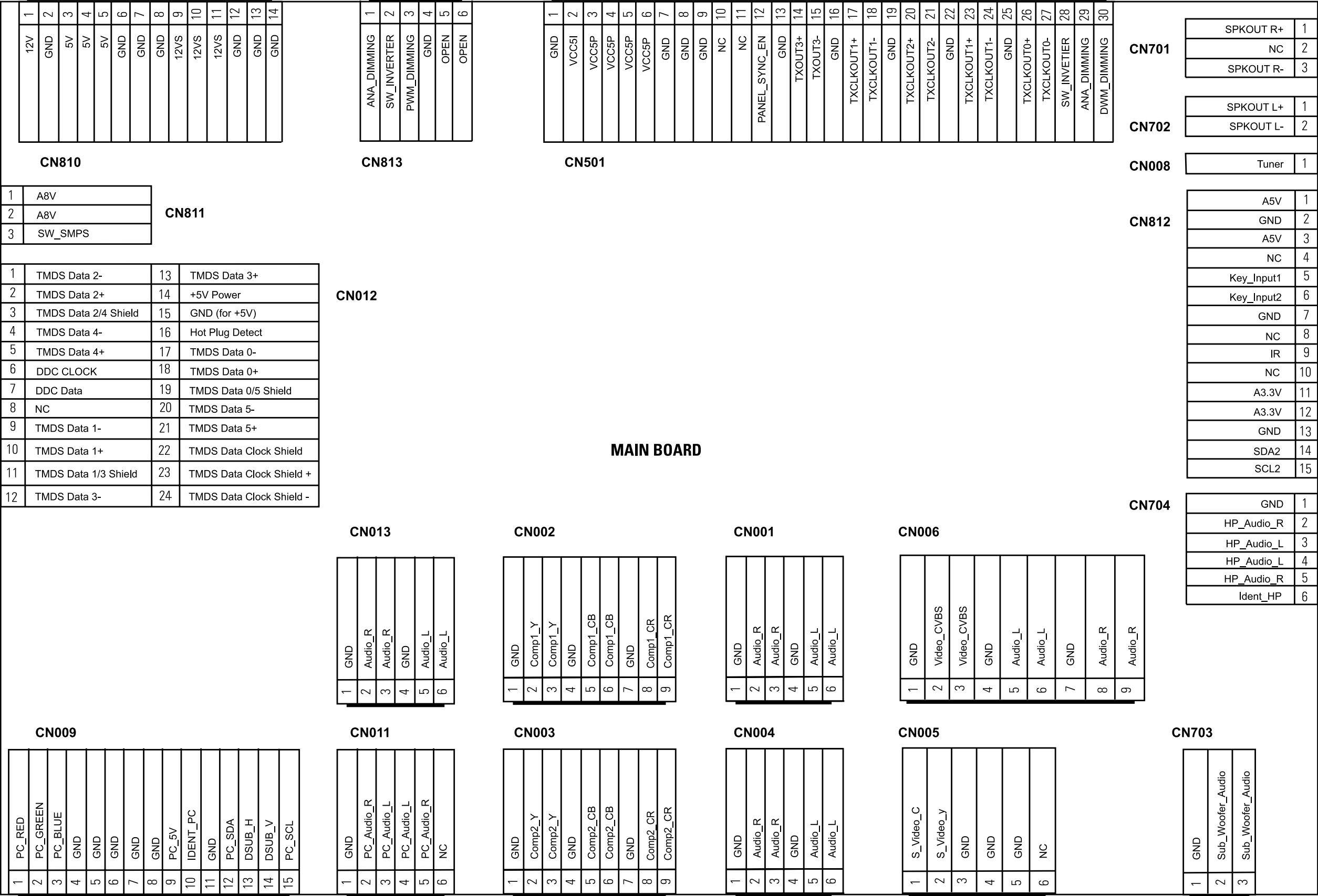
Memo

## 8-1 Signal Path Block Diagram



## Memo

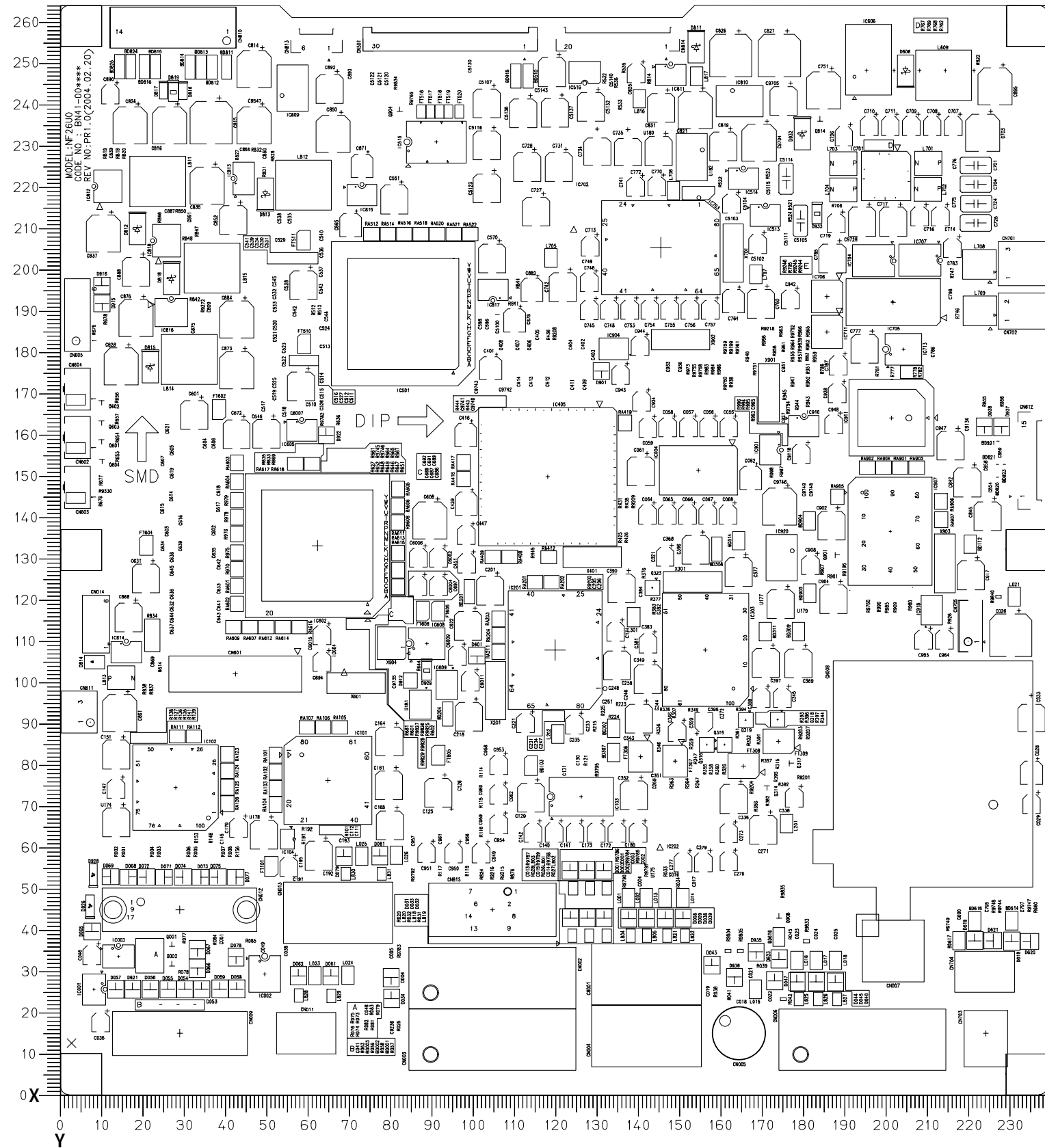
9 Wiring Diagram



Memo

## 10 PCB Layout

## 10-1 Main PCB Layout





10 PCB Layout

Loc. No.	Description	X	Y
DIODE			
D001	DIODE-ZENER	123.9	54.6
D002	DIODE-ZENER	132.1	54.6
D003	DIODE-ZENER	128.0	54.6
D004	DIODE-ZENER	80.5	28.6
D005	DIODE-ZENER	123.9	54.6
D006	DIODE-ZENER	132.1	54.6
D007	DIODE-ZENER	128.0	54.6
D008	DIODE-ZENER	138.2	42.9
D009	DIODE-ZENER	142.5	42.9
D010	DIODE-ZENER	138.2	42.9
D011	DIODE-ZENER	142.5	42.9
D031	DIODE-ZENER	124.0	43.0
D032	DIODE-ZENER	132.2	43.0
D033	DIODE-ZENER	128.1	43.0
D034	DIODE-ZENER	80.5	23.4
D035	DIODE-ZENER	124.8	43.0
D036	DIODE-ZENER	133.0	43.0
D037	DIODE-ZENER	128.9	43.0
D038	DIODE-ZENER	147.1	42.9
D039	DIODE-ZENER	151.4	42.9
D041	DIODE-ZENER	147.1	42.9
D042	DIODE-ZENER	151.4	42.9
D043	DIODE-ZENER	158.4	31.5
D044	DIODE-ZENER	179.1	27.5
D045	DIODE-ZENER	183.8	27.5
D046	DIODE-ZENER	188.4	27.4
D047	DIODE-ZENER	173.6	27.7
D048	DIODE-ZENER	179.1	27.5
D049	DIODE-ZENER	183.8	27.5
D051	DIODE-ZENER	188.4	27.5
D052	DIODE-ARRAY	7.8	26.0
D053	DIODE-SWITCHING	34.3	25.7
D054	DIODE-SWITCHING	30.2	25.7
D055	DIODE-SWITCHING	26.1	25.7
D056	DIODE-ZENER	21.8	25.6
D057	DIODE-ZENER	13.4	25.6
D058	DIODE-ZENER	42.8	25.7
D059	DIODE-ZENER	38.7	25.7
D061	DIODE-ZENER	65.7	28.9
D062	DIODE-ZENER	57.8	28.9
D063	DIODE-ZENER	57.8	28.9
D064	DIODE-ZENER	65.7	28.9
D065	DIODE-ARRAY	7.6	39.8

Loc. No.	Description	X	Y
D066	DIODE-ZENER	33.3	30.9
D067	DIODE-ZENER	33.3	35.5
D068	DIODE-SWITCHING	16.6	53.0
D069	DIODE-SWITCHING	12.1	53.0
D071	DIODE-SWITCHING	25.2	53.0
D072	DIODE-SWITCHING	20.8	53.0
D073	DIODE-SWITCHING	34.1	53.0
D074	DIODE-SWITCHING	29.7	53.0
D075	DIODE-SWITCHING	38.2	53.0
D077	DIODE-SWITCHING	42.6	53.0
D078	DIODE-ZENER	42.7	33.6
D079	DIODE-ZENER	68.9	58.0
D081	DIODE-ZENER	77.6	58.1
D082	DIODE-ZENER	68.9	58.0
D083	DIODE-ZENER	77.6	58.1
D105	DIODE-SWITCHING	45.7	62.0
D106	DIODE-ZENER	39.2	64.6
D324	DIODE-SWITCHING	142.1	110.4
D601	DIODE-SWITCHING	101.3	106.8
D606	DIODE-RECTIFIER	205.5	249.2
D618	DIODE-ZENER	231.3	37.3
D619	DIODE-ZENER	222.3	37.5
D620	DIODE-ZENER	235.8	37.3
D621	DIODE-ZENER	226.8	37.5
D622	DIODE-ZENER	174.7	33.0
D623	DIODE-ZENER	174.7	33.0
D701	DIODE-ZENER	119.1	217.9
D702	DIODE-SWITCHING	114.5	217.7
D703	DIODE-ZENER	126.8	231.0
D704	DIODE-ZENER	134.9	230.9
D705	DIODE-ZENER	119.5	197.5
D706	DIODE-ZENER	148.3	221.8
D707	DIODE-ZENER	166.9	194.0
D811	DIODE-RECTIFIER	154.6	254.8
D812	DIODE-RECTIFIER	18.7	210.6
D813	DIODE-RECTIFIER	49.8	219.2
D814	DIODE-SCHOTTKY	8.4	105.3
D815	DIODE-RECTIFIER	21.8	177.0
D816	DIODE-ZENER	29.8	244.1
D817	DIODE-ZENER	25.0	244.2
D818	DIODE-RECTIFIER	27.0	198.5
D819	DIODE-ZENER	27.4	243.9
D901	DIODE-SWITCHING	131.6	176.1
D908	DIODE-SWITCHING	205.8	112.1

Loc. No.	Description	X	Y
D912	DIODE-ZENER	85.1	100.8
D915	DIODE-SWITCHING	10.1	192.5
D916	DIODE-SWITCHING	10.0	196.9
D921	DIODE-ZENER	17.5	25.6
D922	DIODE-SWITCHING	64.6	160.5
D924	DIODE-SWITCHING	194.2	212.7
D926	DIODE-ZENER	7.2	46.0
D927	DIODE-ZENER	20.1	31.7
D928	DIODE-ZENER	8.0	53.6
D929	DIODE-ZENER	89.0	103.2
D932	DIODE-RECTIFIER	180.4	233.7
D933	DIODE-ZENER	184.0	214.3
D935	DIODE-ZENER	169.2	34.8
D936	DIODE-ZENER	163.9	28.7
D937	DIODE-ZENER	228.9	162.6
D938	DIODE-ZENER	224.7	162.6
D939	DIODE-ZENER	227.3	147.0
D940	DIODE-ZENER	231.0	154.3
IC			
IC001	IC-EEPROM	8.1	25.7
IC002	IC-CMOS LOGIC	49.7	29.4
IC003	IC-EEPROM	14.1	33.7
IC004	IC-AUDIO SWITCH	155.1	151.9
IC101	IC-A/D CONVERTER	65.0	76.5
IC102	IC-RECEIVER	28.0	74.8
IC103	IC-VIDEO SWITCH	126.6	72.6
IC104	IC-POSITIVE REG.	55.2	62.2
IC105	IC-VIDEO SWITCH	95.1	69.6
IC106	IC-VOL. DETECTOR	45.6	68.1
IC201	IC-VIDEO PROCESS	120.3	108.2
IC202	IC-VIDEO SWITCH	151.5	67.8
IC303	IC-SEPARATOR	156.8	108.2
IC405	IC-VIDEO PROCESS	118.5	150.4
IC406	IC-DRAM	119.4	176.4
IC501	IC-VIDEO PROCESS	83.3	190.0
IC510	IC-DRAM	58.9	176.2
IC511	IC-DRAM	58.9	200.5
IC513	IC-TIMER	171.4	213.9
IC514	IC-TIMER	166.1	222.9
IC515	IC-TRANSMITTER	91.4	231.8
IC516	FET-SILICON	127.5	248.6
IC601	IC-FLASH MEMORY	40.8	102.0
IC602	IC-LCD CONTROLLER	62.5	133.6

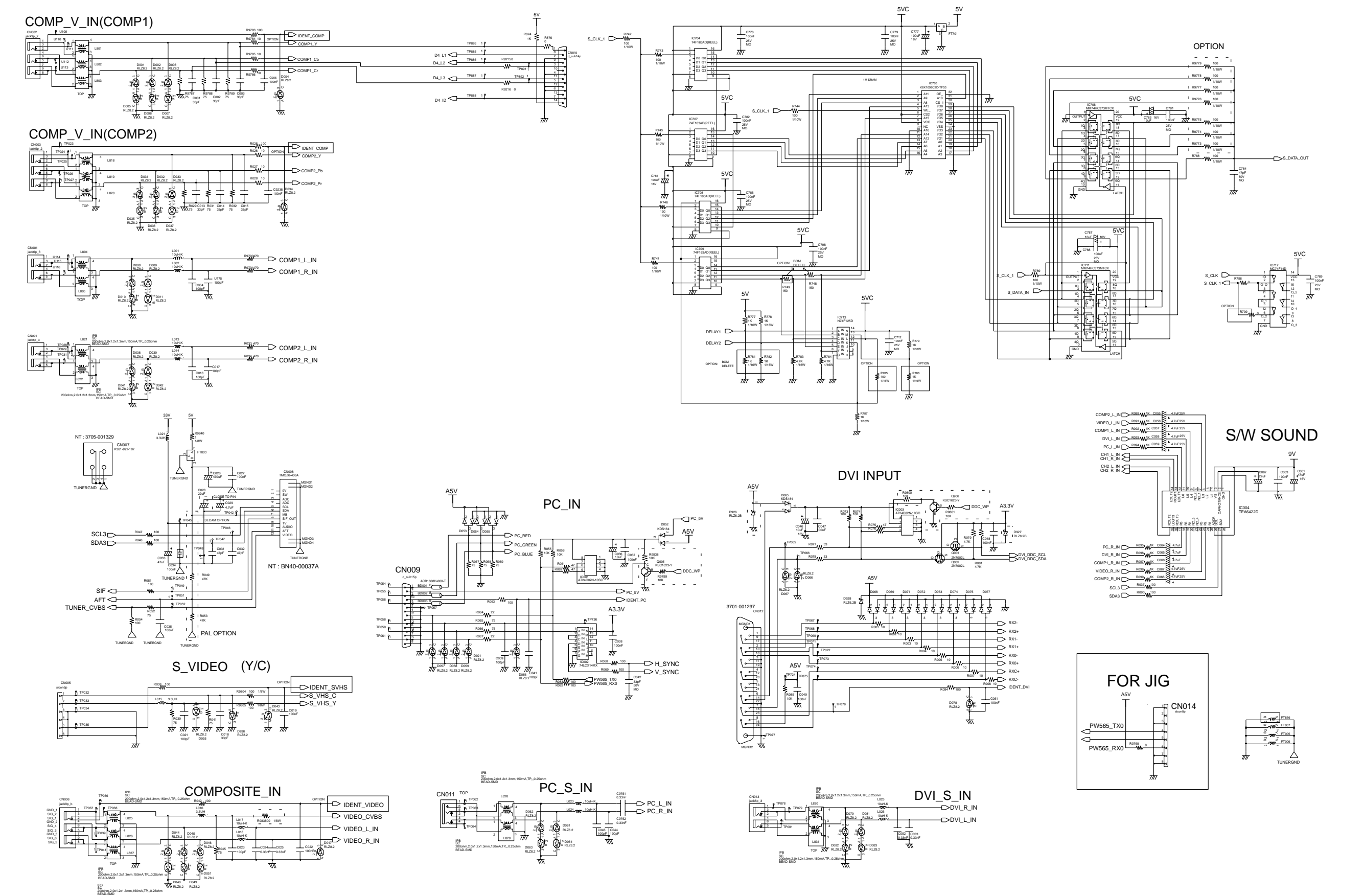
Loc. No.	Description	X	Y
IC604	IC-MODULATOR	70.9	108.2
IC605	IC-EEPROM	58.7	161.8
IC606	IC-DC/DC CONVERTER	196.5	252.3
IC607	IC-DRAM	31.6	148.4
IC608	IC-CMOS LOGIC	89.1	109.8
IC609	IC-VOL. DETECTOR	93.9	99.6
IC612	IC-DRAM	31.6	124.7
IC613	IC-OP AMP	196.0	249.2
IC614	IC-OP AMP	202.7	249.2
IC616	IC-OP AMP	208.9	249.2
IC617	IC-OP AMP	215.2	249.2
IC618	IC-OP AMP	222.1	249.2
IC701	IC-AUDIO AMP	200.8	223.5
IC702	IC-AUDIO AMP	126.7	215.9
IC703	IC-SOUND PROCESSOR	146.0	206.1
IC704	IC-TTL	197.7	202.9
IC705	IC-SRAM	202.5	192.8
IC706	IC-CMOS LOGIC	186.4	194.2
IC707	IC-TTL	209.0	203.0
IC708	IC-TTL	214.8	186.1
IC709	IC-TTL	214.8	197.4
IC711	IC-CMOS LOGIC	186.4	185.6
IC712	IC-TTL	202.4	193.0
IC713	IC-TTL	205.0	181.4
IC809	IC-POSITIVE REG.	56.4	245.3
IC810	IC-POSITIVE REG.	165.6	241.7
IC811	IC-SWITCH REG.	148.4	248.2
IC812	IC-SWITCH VOL. REG.	11.5	221.0
IC813	IC-DC/DC CONVERTER	44.5	222.9
IC814	IC-DC/DC CONVERTER	16.0	107.8
IC815	IC-POSITIVE ADJUST REG.	73.3	218.9
IC816	IC-SWITCH VOL. REG.	27.0	190.3
IC817	IC-POSITIVE ADJUST REG.	105.2	195.8
IC818	IC-SWITCH VOL. REG.	25.8	207.8
IC901	IC-RESET	172.7	156.9
IC902	IC MICOM	177.6	178.4
IC903	IC MICOM	157.3	178.1
IC904	IC-VOL. DETECTOR	134.4	181.5
IC907	IC-DECODER	201.8	137.1
IC911	IC-EPROM	202.1	164.7
IC916	IC-OP AMP	180.8	162.7
IC918	IC-VOL. DETECTOR	211.9	118.1
IC919	IC-MODULATOR	75.7	108.9
IC920	IC-POSITIVE REG.	175.4	130.2

Loc. No.	Description	X	Y
TRANSISTOR			
Q001	FET-SILICON	27.1	36.1
Q002	FET-SILICON	27.1	31.4
Q301	TR-SMALL SIGNAL	160.8	91.7
Q302	TR-SMALL SIGNAL	154.0	93.1
Q303	TR-SMALL SIGNAL	164.9	92.0
Q304	TR-SMALL SIGNAL	135.7	83.4
Q305	TR-SMALL SIGNAL	135.5	79.4
Q306	TR-SMALL SIGNAL	139.6	79.4
Q307	TR-SMALL SIGNAL	139.8	83.4
Q308	TR-SMALL SIGNAL	147.7	93.4
Q309	TR-SMALL SIGNAL	145.1	78.8
Q311	TR-SMALL SIGNAL	151.2	78.9
Q312	TR-SMALL SIGNAL	147.4	74.8
Q313	TR-SMALL SIGNAL	151.0	89.2
Q314	TR-SMALL SIGNAL	171.8	75.2
Q315	TR-SMALL SIGNAL	161.5	85.2
Q316	TR-SMALL SIGNAL	157.2	85.2
Q317	TR-SMALL SIGNAL	177.2	80.7
Q318	TR-SMALL SIGNAL	174.4	91.3
Q319	TR-SMALL SIGNAL	166.6	91.2
Q323	TR-SMALL SIGNAL	143.9	123.4
Q510	TR-SMALL SIGNAL	135.9	237.9
Q511	TR-SMALL SIGNAL	136.0	248.0
Q601	FET-SILICON	10.0	159.4
Q602	FET-SILICON	10.0	168.9
Q603	FET-SILICON	10.0	164.0
Q604	FET-SILICON	10.1	154.6
Q611	TR-SMALL SIGNAL	125.7	203.5
Q612	TR-SMALL SIGNAL	128.7	196.8
Q701	TR-SMALL SIGNAL	122.3	227.5
Q702	TR-SMALL SIGNAL	227.5	234.9
Q703	TR-SMALL SIGNAL	202.4	215.1
Q810	TR-SMALL SIGNAL	226.6	158.0
Q811	TR-SMALL SIGNAL	224.9	165.2
Q812	TR-SMALL SIGNAL	13.1	240.7
Q814	TR-SMALL SIGNAL	184.7	236.9
Q901	TR-SMALL SIGNAL	188.4	131.4
Q903	TR-SMALL SIGNAL	201.6	123.0
Q904	TR-SMALL SIGNAL	82.5	239.2
Q905	TR-SMALL SIGNAL	10.1	32.4
Q906	TR-SMALL SIGNAL	16.2	30.2
Q907	TR-SMALL SIGNAL	190.0	215.3
Q908	TR-SMALL SIGNAL	174.7	43.1

11 Schematic Diagrams

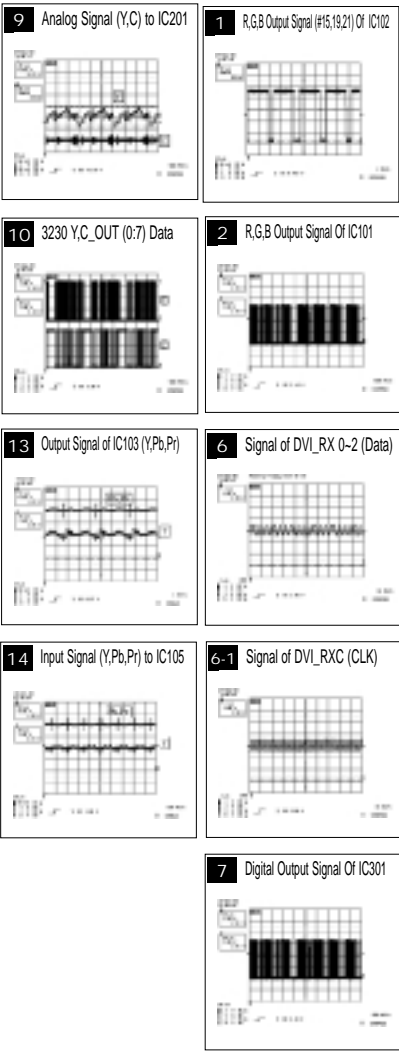
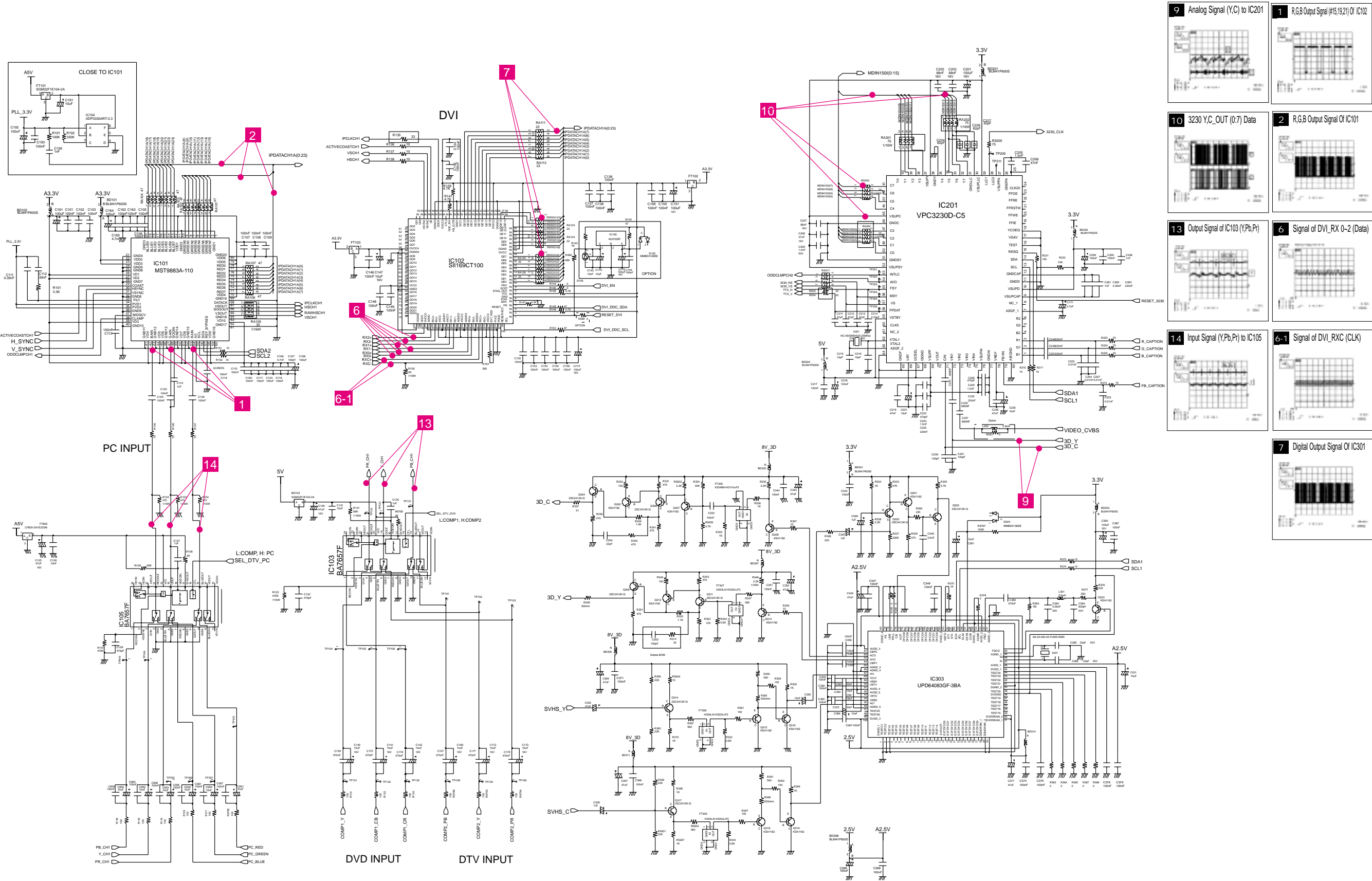
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11-1 AV INOUT SOUND DELAY Schematic Diagram

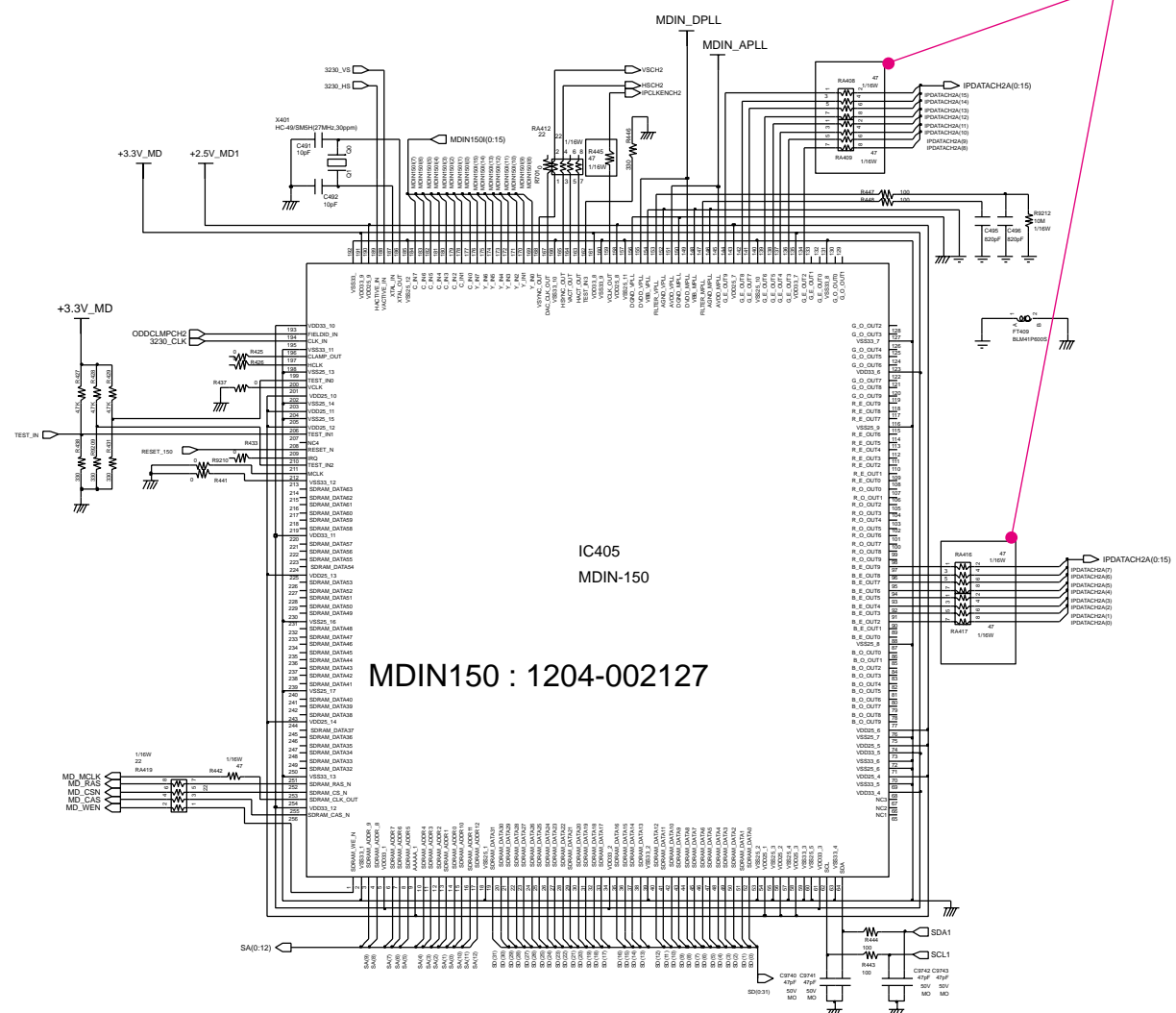
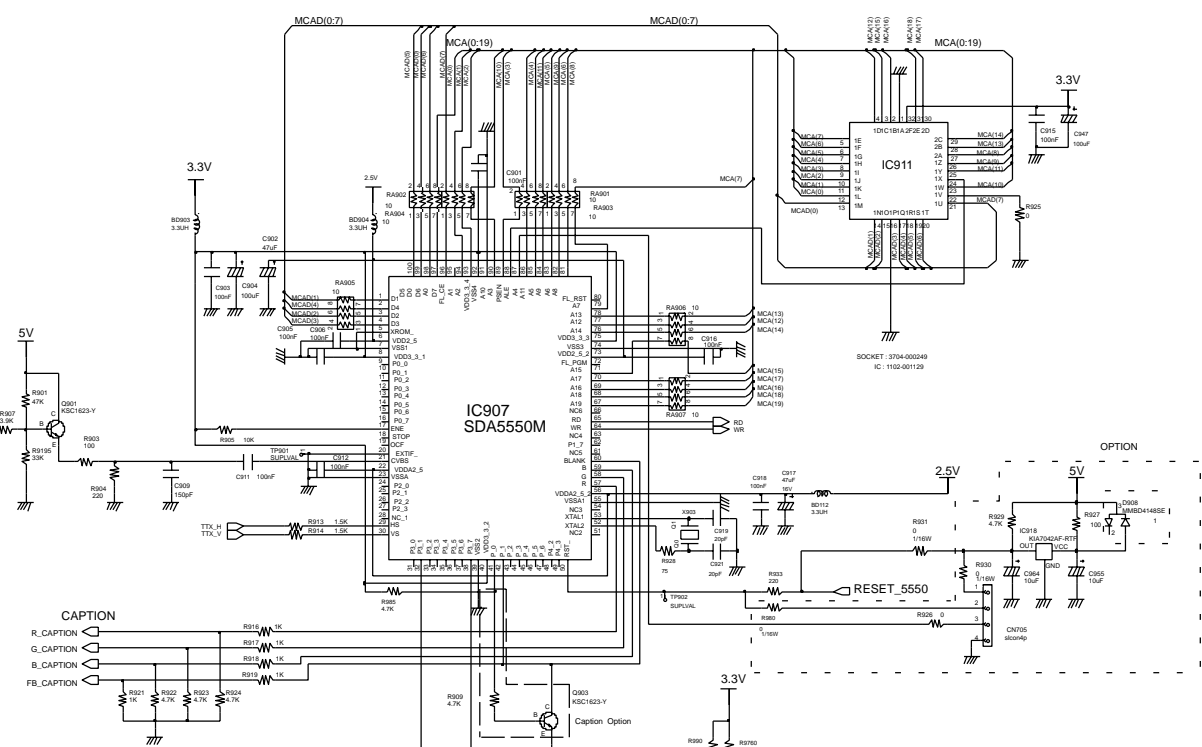
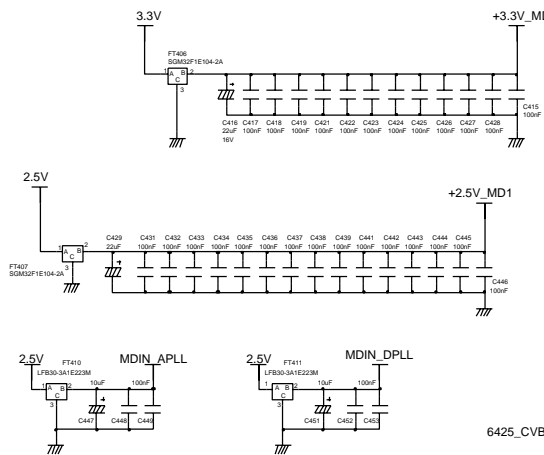


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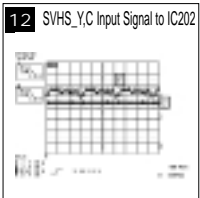
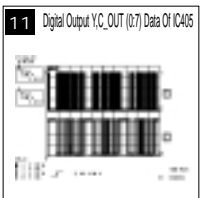
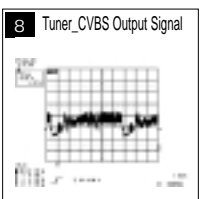
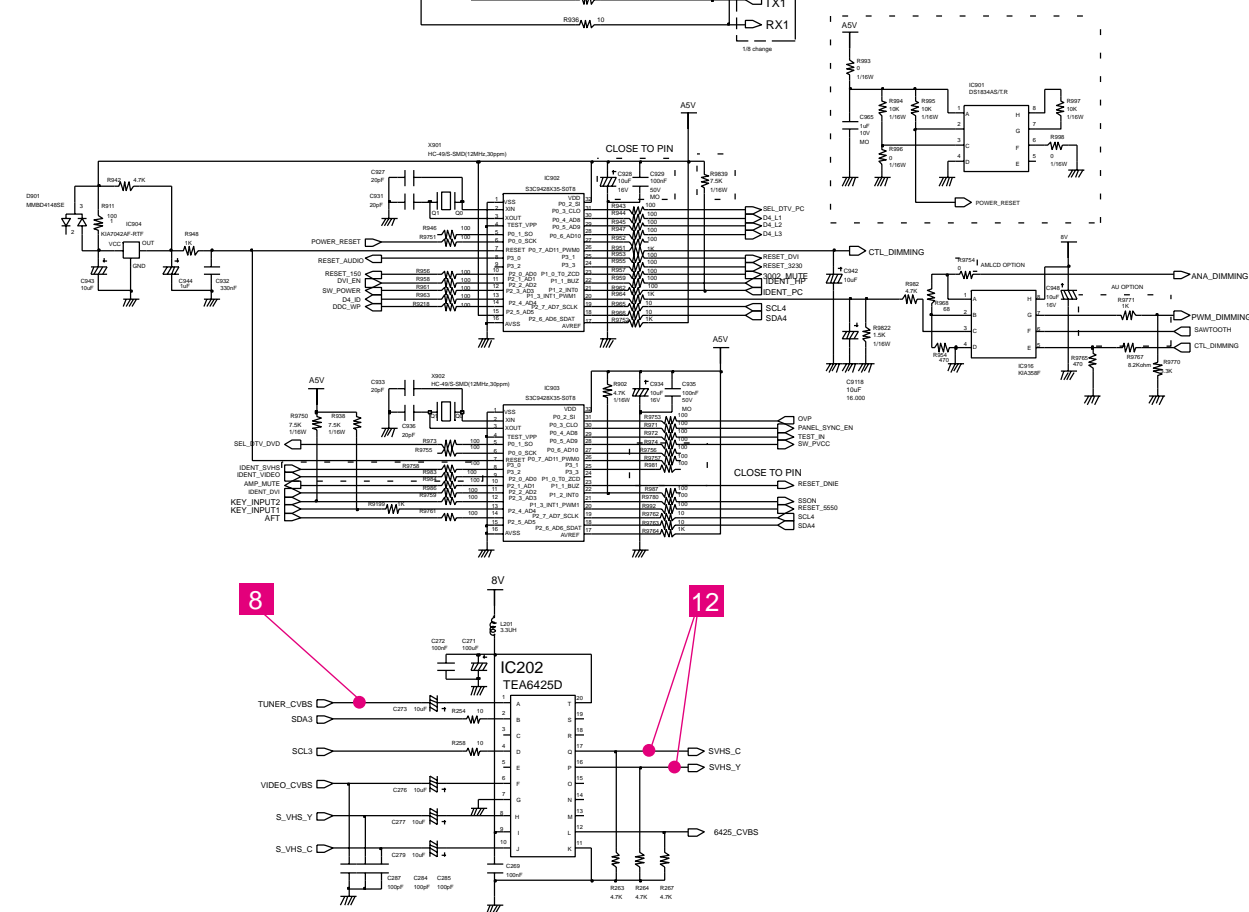
11-2 ADC DVI VIDEO Schematic Diagram



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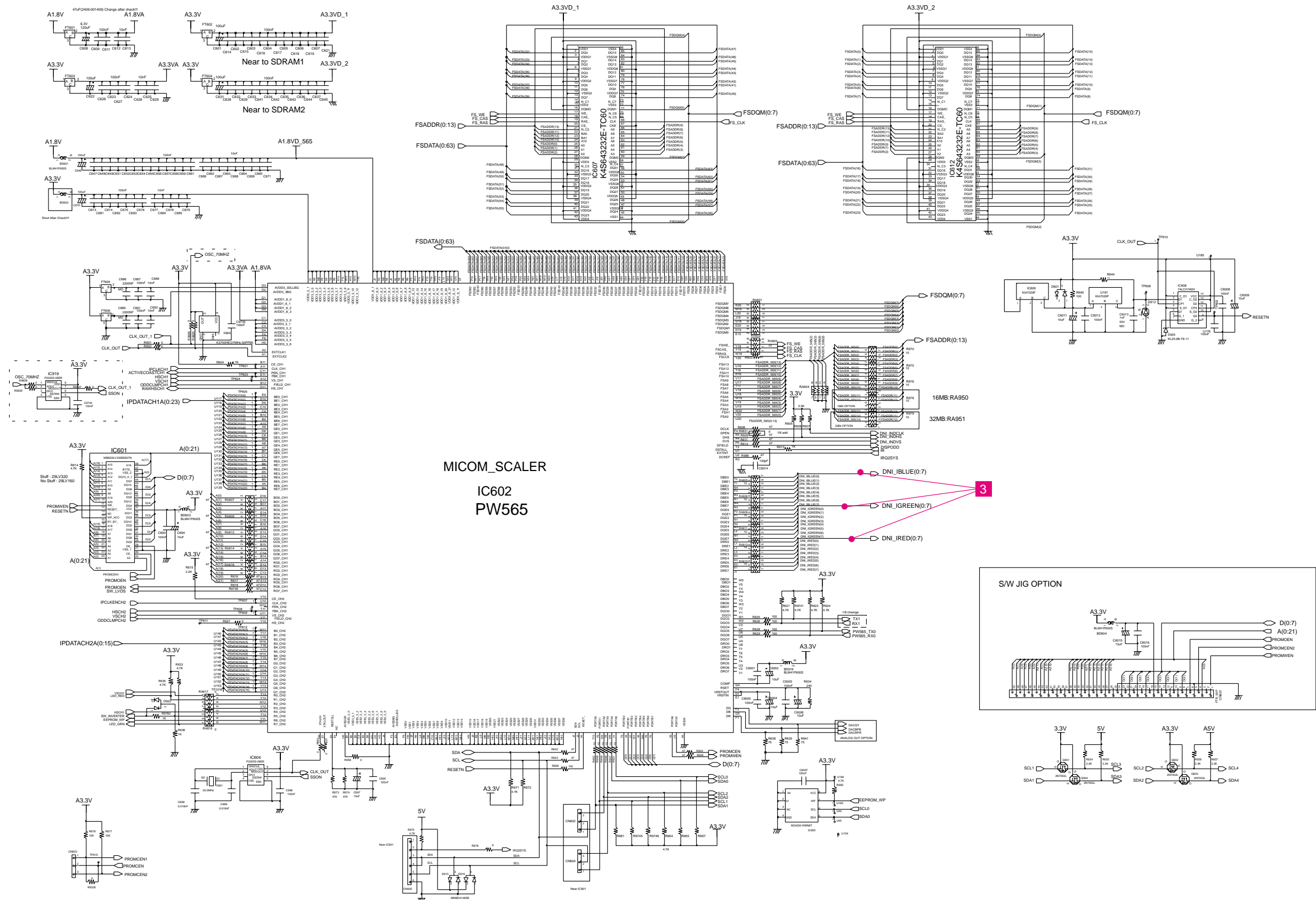


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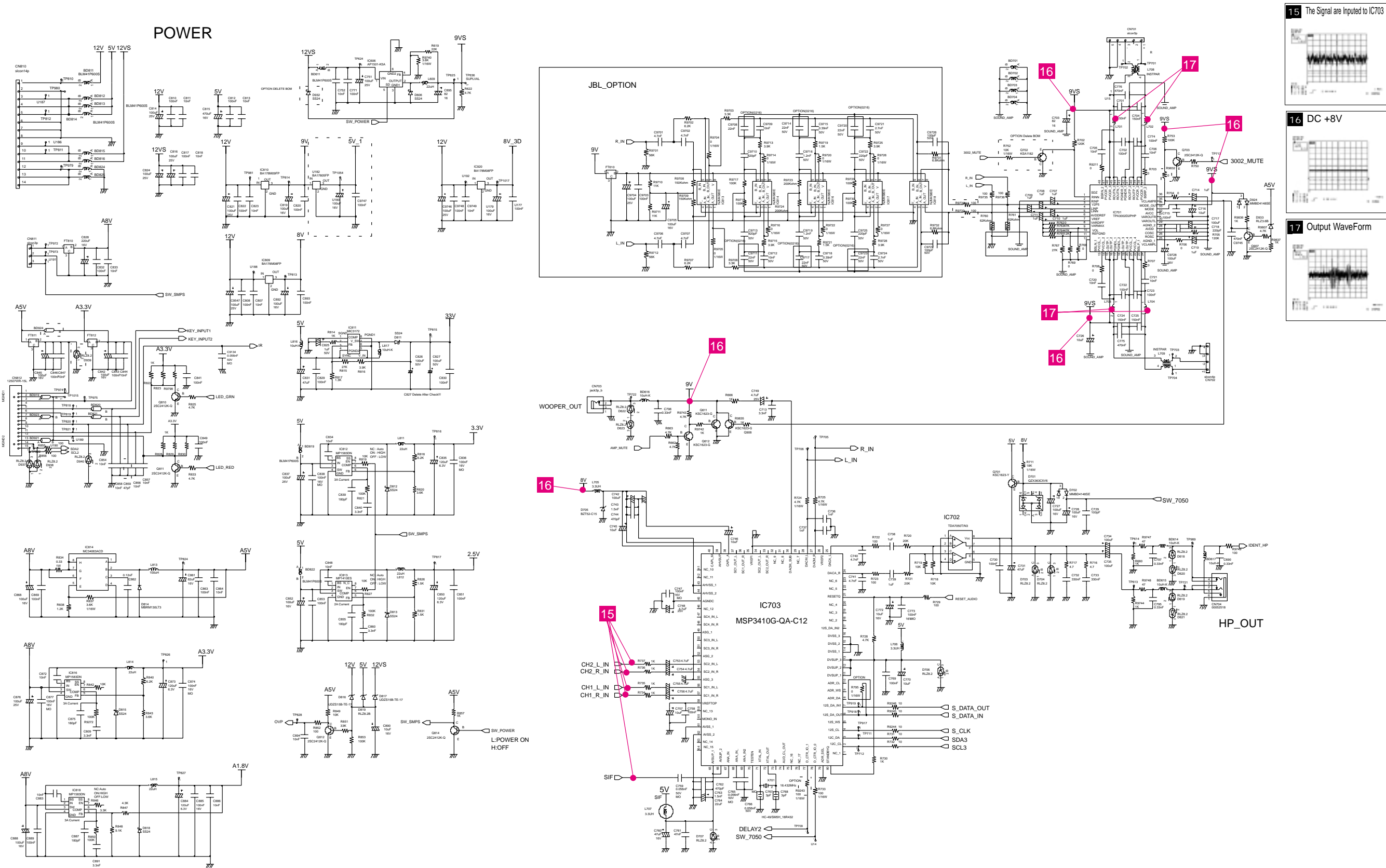
#### 11-4 PW565\_SCALER Schematic Diagram





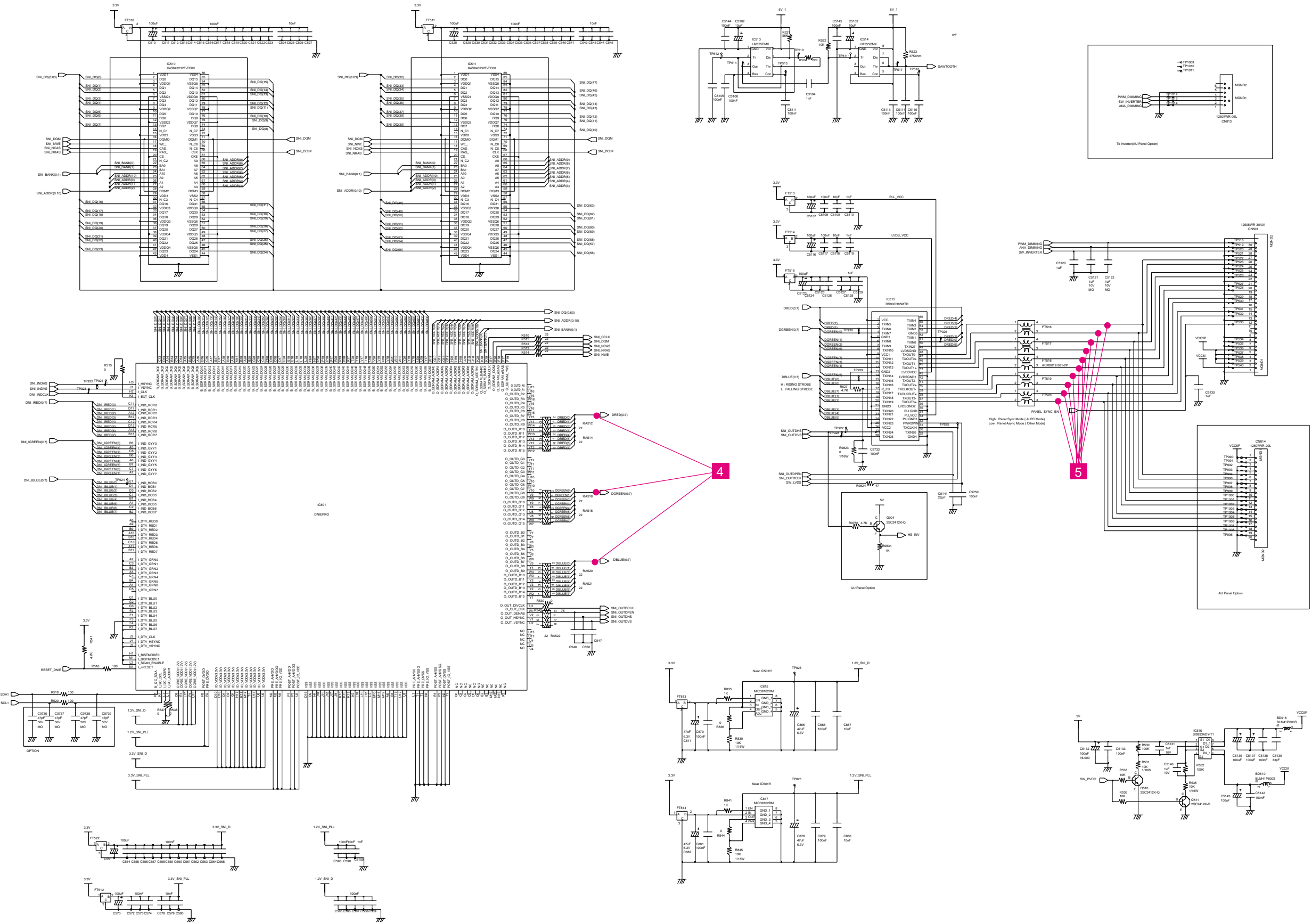
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11-5 POWER SOUND PROCESS Schematic Diagram

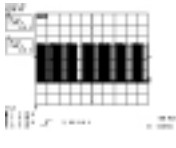


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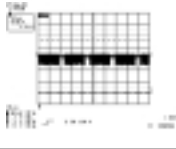
11-6 DNIE, LVDS Schematic Diagram



4 Output Digital Signal of IC501

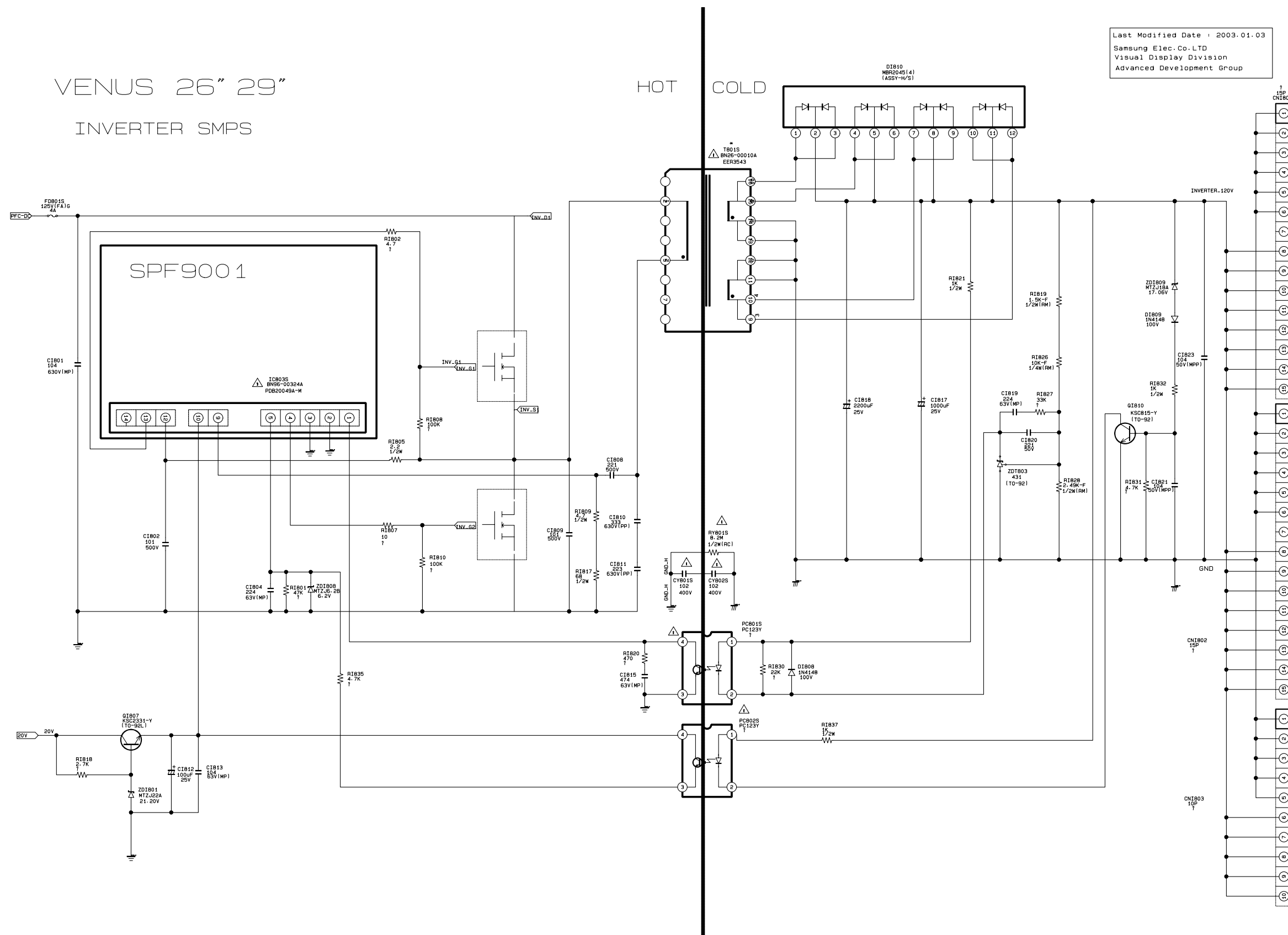


5 Digital Output Data of IC515



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### 11-7 MAIN POWER 1\_INVERTER Schematic Diagram



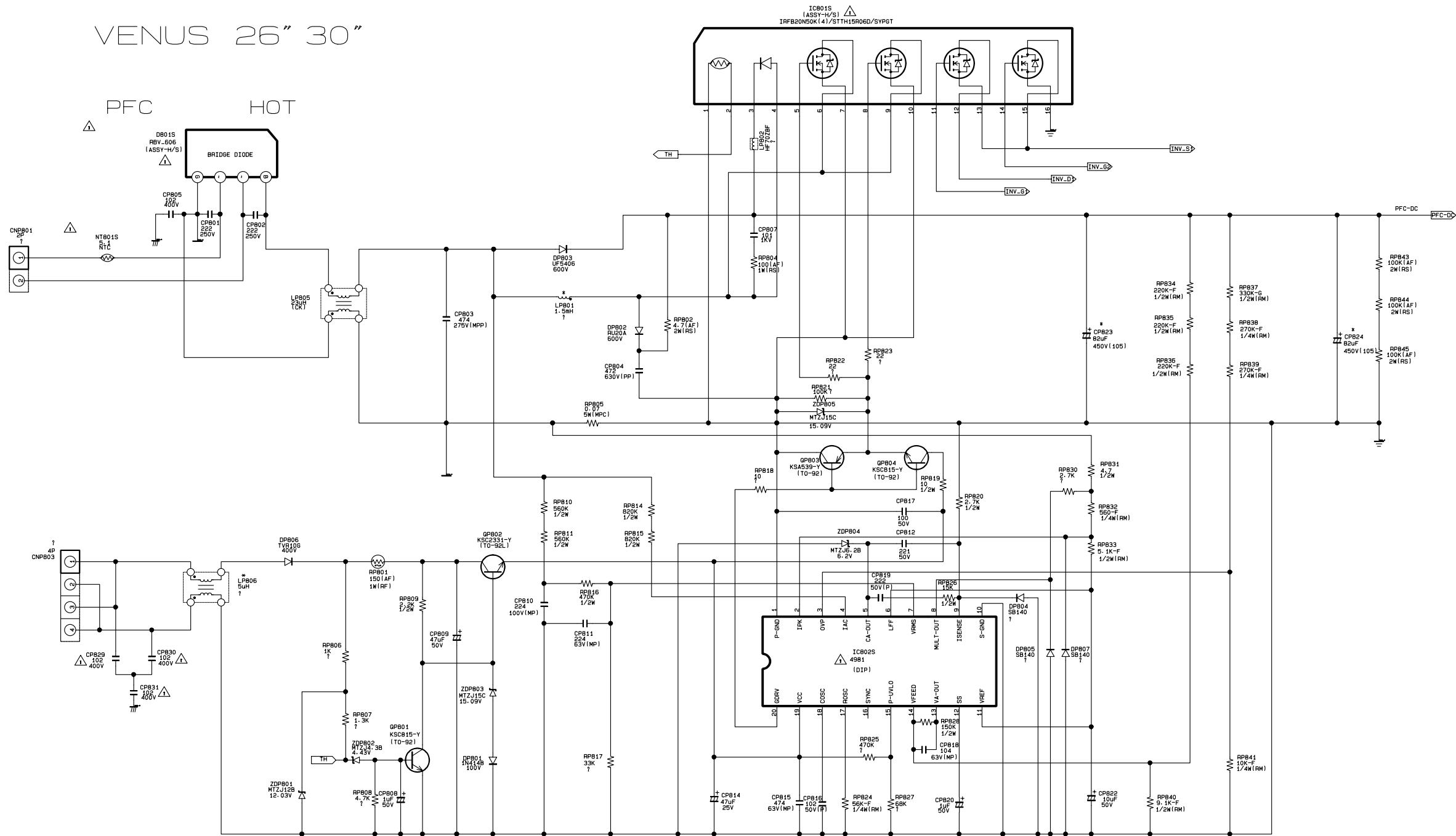


11 Schematic Diagrams

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11-8 MAIN POWER 2\_PFC Schematic Diagram

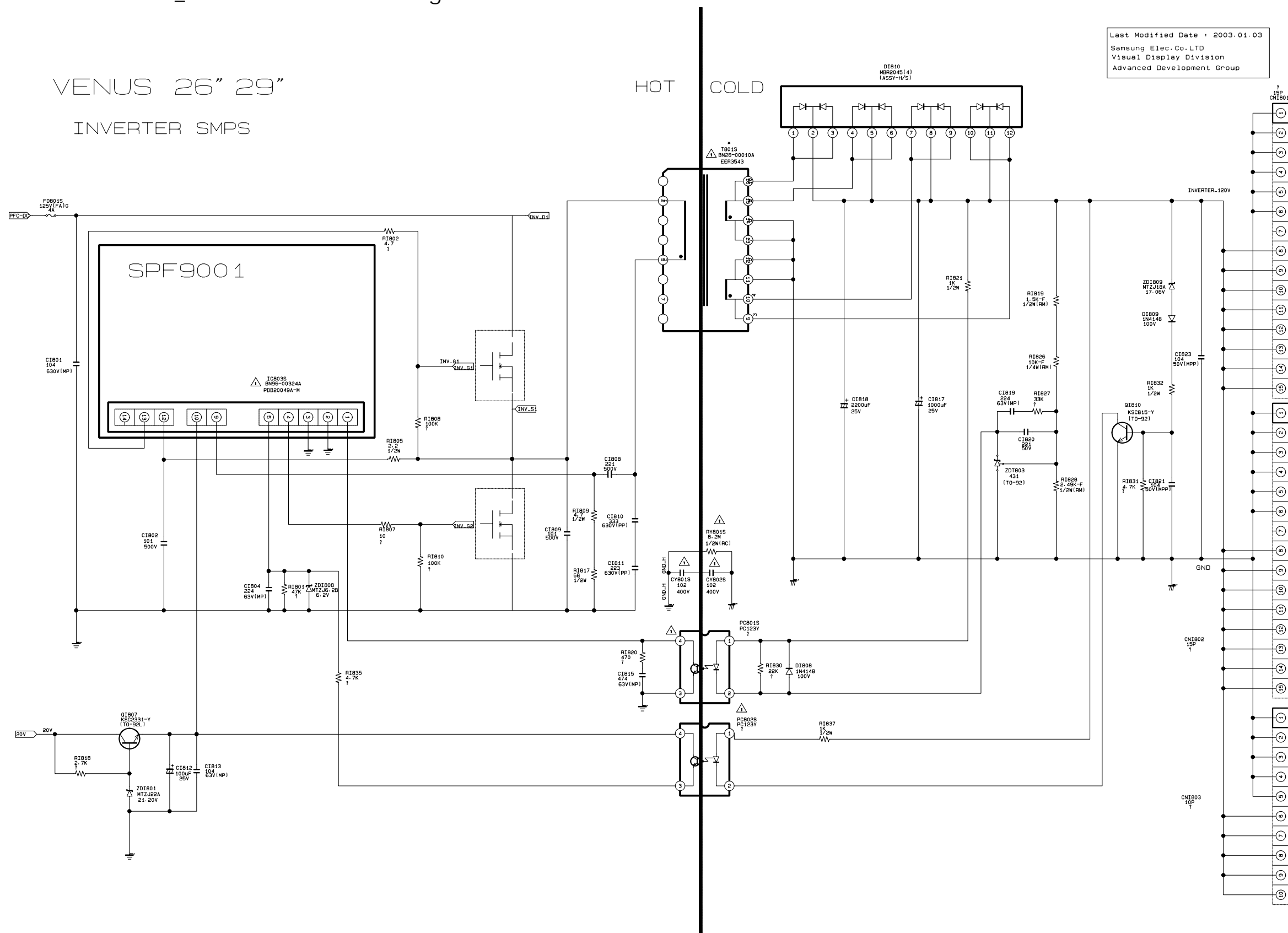
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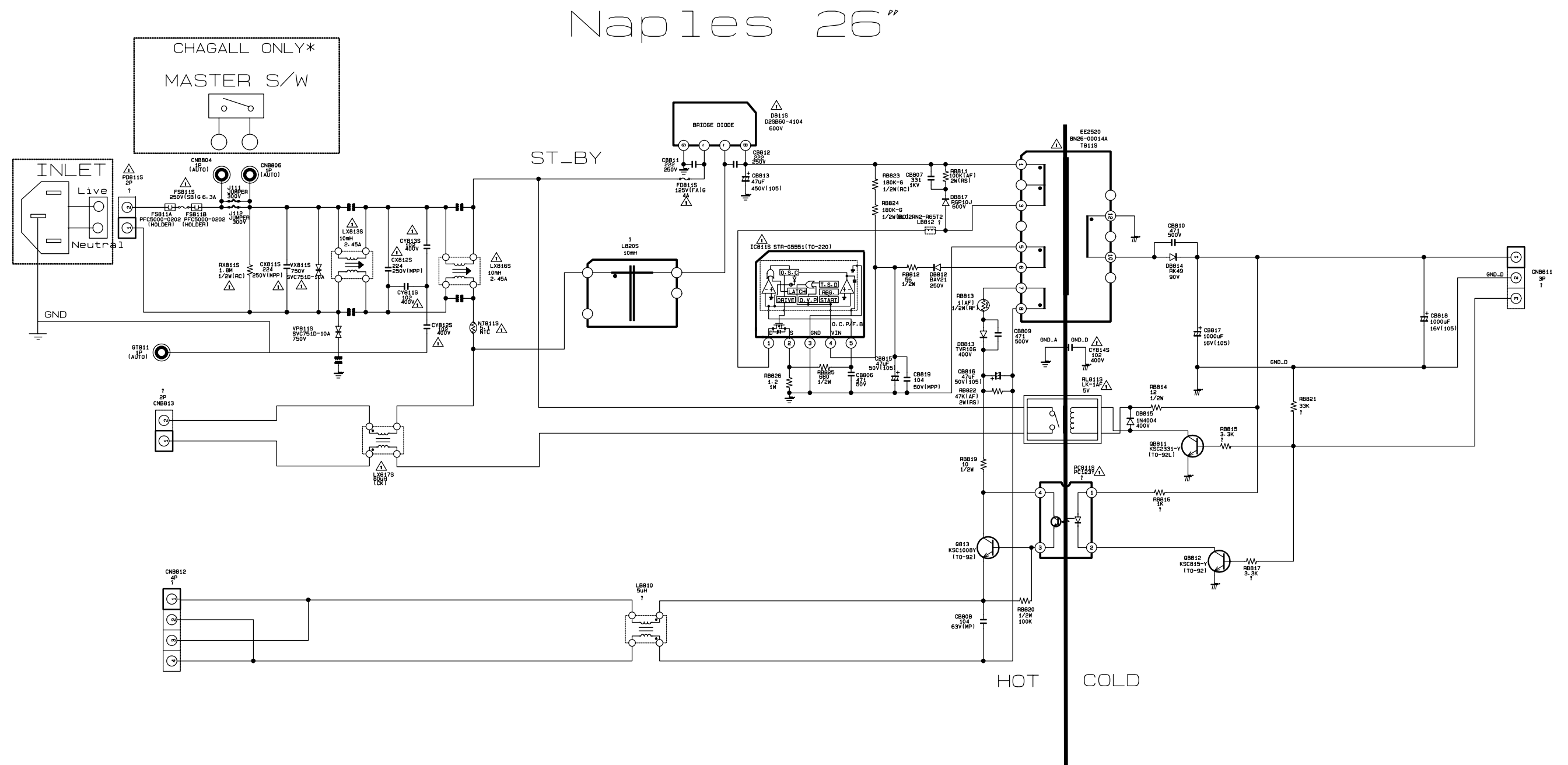
### 11-9 MAIN POWER 3\_MULTI Schematic Diagram



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## 11-10 SUB POWER Schematic Diagram

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Samsung Electronics Co.,Ltd.  
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