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# LCD TV

# SERVICE MANUAL

**CHASSIS : ML-041A**

**MODEL : RZ-32LZ50**

**CAUTION**

BEFORE SERVICING THE CHASSIS,  
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  $\triangle$  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 X-RADIATION, Shock, Fire, or other Hazards.

Do not modify the original design without permission of manufacturer.

### General Guidance

An **isolation Transformer should always be used** during the servicing of a receiver whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks.

It will also protect the receiver and its components from being damaged by accidental shorts of the circuitry that may be inadvertently introduced during the service operation.

If any fuse (or Fusible Resistor) in this TV receiver is blown, replace it with the specified.

When replacing a high wattage resistor (Oxide Metal Film Resistor, over 1W), keep the resistor 10mm away from PCB.

Keep wires away from high voltage or high temperature parts.

### X-RAY Radiation

#### Warning:

The source of X-RAY RADIATION in this TV receiver is the High Voltage Section and the LCD PANEL.

For continued X-RAY RADIATION protection, the replacement panel must be the same type panel as specified in the Replacement Parts List.

To determine the presence of high voltage, use an accurate high impedance HV meter.

Adjust brightness, color, contrast controls to minimum.

Measure the high voltage.

The meter reading should indicate

23.5 ; 1.5KV: 14-19 inch, 26 ; 1.5KV: 19-21 inch,

29.0 ; 1.5KV: 25-29 inch, 30.0 ; 1.5KV: 32 inch

If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.

### Before returning the receiver to the customer,

always perform an **AC leakage current check** on the exposed metallic parts of the cabinet, such as antennas, terminals, etc., to be sure the set is safe to operate without damage of electrical shock.

#### Leakage Current Cold Check(Antenna Cold Check)

With the instrument AC plug removed from AC source, connect an electrical jumper across the two AC plug prongs. Place the AC switch in the on position, connect one lead of ohm-meter to the AC plug prongs tied together and touch other ohm-meter lead in turn to each exposed metallic parts such as antenna terminals, phone jacks, etc.

If the exposed metallic part has a return path to the chassis, the measured resistance should be between  $1M\Omega$  and  $5.2M\Omega$ .

When the exposed metal has no return path to the chassis the reading must be infinite.

An other abnormality exists that must be corrected before the receiver is returned to the customer.

#### 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.**

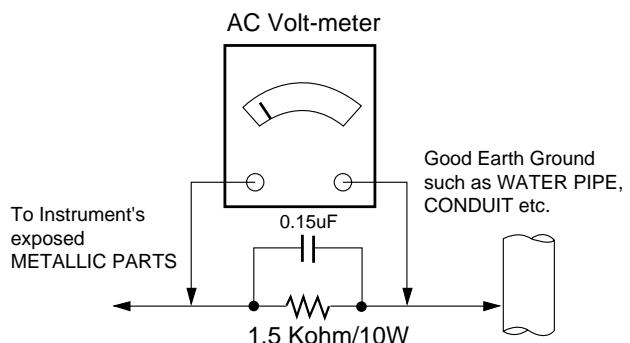
Connect 1.5K/10watt resistor in parallel with a 0.15uF capacitor between a known good earth ground (Water Pipe, Conduit, etc.) and the exposed metallic parts.

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

Reverse plug 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 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 and its supplements and addenda, read and follow the *SAFETY PRECAUTIONS* on page 3 of this publication.

**NOTE:** If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 3 of this publication, always follow the safety precautions. Remember: Safety First.

## General Servicing Precautions

1. Always unplug the receiver AC power cord from the AC power source before;
  - a. Removing or reinstalling any component, circuit board module or any other receiver assembly.
  - b. Disconnecting or reconnecting any receiver electrical plug or other electrical connection.
  - c. 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. Test high voltage only by measuring it with an appropriate high voltage meter or other voltage measuring device (DVM, FETVOM, etc) equipped with a suitable high voltage probe. Do not test high voltage by "drawing an arc".

3. Do not spray chemicals on or near this receiver or any of its assemblies.

4. Unless specified otherwise in this service manual, clean electrical contacts only by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable non-abrasive applicator; 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength)

**CAUTION:** This is a flammable mixture.

Unless specified otherwise in this service manual, lubrication of contacts is not required.

5. Do not defeat any plug/socket B+ voltage interlocks with which receivers covered by this service manual might be equipped.
6. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
7. 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.

8. Use with this receiver only the test fixtures specified in this service manual.

**CAUTION:** Do not connect the test fixture ground strap to any heat sink 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) Devices*. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed to prevent potential shock reasons prior to applying power to the

unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.  
**CAUTION:** Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

## General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range of 500 ;F to 600 ;F.
2. Use an appropriate gauge of RMA resin-core solder composed of 60 parts tin/40 parts lead.
3. Keep the soldering iron tip clean and well tinned.
4. Thoroughly clean the surfaces to be soldered. Use a mall wire-bristle (0.5 inch, or 1.25cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.
5. Use the following unsoldering technique
  - a. Allow the soldering iron tip to reach normal temperature. (500 ;F to 600 ;F)
  - b. Heat the component lead until the solder melts.
  - c. Quickly draw the melted solder with an anti-static, suction-type solder removal device or with solder braid.  
**CAUTION:** Work quickly to avoid overheating the circuitboard printed foil.
6. Use the following soldering technique.
  - a. Allow the soldering iron tip to reach a normal temperature (500 ;F to 600 ;F)
  - b. First, hold the soldering iron tip and solder the strand against the component lead until the solder melts.
  - c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.  
**CAUTION:** Work quickly to avoid overheating the circuit board printed foil.
  - d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.

### **IC Remove/Replacement**

Some chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

#### *Removal*

1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.
2. Draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

#### *Replacement*

1. Carefully insert the replacement IC in the circuit board.
2. Carefully bend each IC lead against the circuit foil pad and solder it.
3. Clean the soldered areas with a small wire-bristle brush.  
(It is not necessary to reapply acrylic coating to the areas).

### **"Small-Signal" Discrete Transistor**

#### **Removal/Replacement**

1. Remove the defective transistor by clipping its leads as close as possible to the component body.
2. Bend into a "U" shape the end of each of three leads remaining on the circuit board.
3. Bend into a "U" shape the replacement transistor leads.
4. Connect the replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact then solder each connection.

### **Power Output, Transistor Device**

#### **Removal/Replacement**

1. Heat and remove all solder from around the transistor leads.
2. Remove the heat sink mounting screw (if so equipped).
3. Carefully remove the transistor from the heat sink of the circuit board.
4. Insert new transistor in the circuit board.
5. Solder each transistor lead, and clip off excess lead.
6. Replace heat sink.

### **Diode Removal/Replacement**

1. Remove defective diode by clipping its leads as close as possible to diode body.
2. Bend the two remaining leads perpendicular y to the circuit board.
3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.
4. Securely crimp each connection and solder it.
5. Inspect (on the circuit board copper side) the solder joints of the two "original" leads. If they are not shiny, reheat them and if necessary, apply additional solder.

### **Fuse and Conventional Resistor**

#### **Removal/Replacement**

1. Clip each fuse or resistor lead at top of the circuit board hollow stake.
2. Securely crimp the leads of replacement component around notch at stake top.
3. Solder the connections.

**CAUTION:** Maintain original spacing between the replaced component and adjacent components and the circuit board to prevent excessive component temperatures.

### **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. Solder the IC connection.
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.

#### *At Other Connections*

Use the following technique to repair the defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.

1. Remove the defective copper pattern with a sharp knife. Remove at least 1/4 inch of copper, to ensure that a hazardous condition will not exist if the jumper wire opens.
2. Trace along the copper pattern from both sides of the pattern break and locate the nearest component that is directly connected to the affected copper pattern.
3. Connect insulated 20-gauge jumper wire from the lead of the nearest component on one side of the pattern break to the lead of the nearest component on the other side. Carefully crimp and solder the connections.  
**CAUTION:** Be sure the insulated jumper wire is dressed so the it does not touch components or sharp edges.

# SPECIFICATION

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

## 1. Application range

This specification is applied to ML-041A chassis.

## 2. Requirement for Test

Testing for standard of each part must be followed in below condition.

- (1) Temperature: 25°C ± 2°C
- (2) Humidity: 65% ± 10%
- (3) Power: Standard input voltage (AC 100-240V, 50/60Hz)
- (4) Measurement must be performed after heat-run more than 30min.
- (5) Adjusting standard for this chassis is followed a special standard.

## 3.General Specification(TV)

No.	Item	Specification	Remark
1	Video input applicable system	1)PAL-D/K,B/G,I 2)NTSC-M 3)SECAM NTSC 4.43'	
2	Receivable broadcasting system	1)PAL/SECAM BG 2)PAL/SECAM DK 3)PAL I/I 4)SECAM L/L' 5)NTSC M	EU/Non-EU(RZ/RT) (PAL Market)
		6)PAL-N/M 7)NTSC M	7)NTSC Area(RM)
3	RF input channel	VHF : E2 ~ E12 UHF : E21 ~ E69 CATV : S1 ~ S20 HYPER : S21 ~ S41	PAL
		L/L' : B,C,D	FRANCE
		VHF : 2 ~ 13 UHF : 14 ~ 69 CATV : 1 ~ 125	NTSC
		VHF Low : 1~M10 VHF High : 4~S22 UHF : S23~62	JAPAN
4	Input voltage	AC 100 - 240V/ 50Hz,60HZ	
5	Picture size	800.4 mm	31.51"
6	Tuning system	FVS 100 program FS	PAL, 200PR.(Option) NTSC
7	Operting environment	1)Temp : 0 ~ 40 deg 2)Humidity : 85%	
8	Storage environment	3)Temp : -20 ~ 60 deg 4)Humidity : 85%	
9	Display	LCD Module	LPL

### 5.General Specification(Monitor)

No.	Item	Specification	Unit	Remark		
1	Panel	32" TFT WXGA LCD				
2	Frequency range	H:31 ~ 61KHz, V: 56 ~ 75Hz		DVI-I input		
3	Control function	1) Contrast/ Brightness 2) H- Position/ V-Position 3) Tracking : Clock/Phase 4) Auto Configure 5) Reset				
4	Component Jack	1: Y 3: Pb 5: Pr 7: Line1 Ready 9: LINE2 11: LINE3 13: Line3 Ready		Middle east /NTSC Only		
	D4 Jack (525i,525p,750p,1125i)	2: Y GND 4: Pb GND 6: Pr GND 8: LINE1 10: Line2 Ready 12: SWITCH GND 14: SWITCH		Japan only		
5		H/V-Sync	Video	Power consumption	LED	
	Power ON	ON/ON	Active	≤ Max 170	W Green	
	Stand by	OFF/ON	OFF	≤ 3.0	W Red	
	DPMS Mode	ON/OFF	OFF	≤typ.30	W Green	
	Power off	-	-	-	W *	
6	LCD Module	Type	LPL	760.0 x 450.0 x 48.0	mm	(H) x (V) x (D)
		Size				
		Pixel Pitch	LPL	0.1702 x 0.5107 x RGB	mm	
		Pixel Format	1366 horiz. By 768 vert. pixels RGB strip arrangement			
		Coating	Hard coating(3H), Anti-glare treatment of the front polarizer			
Back Light	LPL	20EEFL				

## 6.Optical Feature(LCD Module)

No.	Item	Specification				Remark	
				LPL			
1	Viewing Angle <CR ≥ 10>	R/L, U/D		176,176			
2	Luminance	Luminance(cd/ m <sup>2</sup> )		500		Typical	
		Variation		1.3		MAX/MIN	
3	Contrast Ratio			350		ALL white/All back	
4	CIE Color Coordinates	WHITE	W <sub>X</sub>	Typ.	0.285		LPL
			W <sub>Y</sub>	Typ.	0.293		
		RED	X <sub>r</sub>	Typ.	0.640		
			Y <sub>r</sub>	Typ.	0.341		
		Green	X <sub>g</sub>	Typ.	0.287		
			Y <sub>g</sub>	Typ.	0.610		
		Blue	X <sub>b</sub>	Typ.	0.146		
			Y <sub>b</sub>	Typ.	0.069		

## 7.Feature and Function

No.	Item	Specification	Remark
1	Teletext	TOP, FLOF, LIST 10 page	Top(option)
2	REMOCON	NEC code	PAL/NTSC
3	AV input	1	Rear(RT/RM)
4	S-AV input	1	Side
5	Component input	2	Side, Rear(RT/RM)
6	PERI TV connector	Half SCART: 1	Rear(RZ)
7	PERI TV connector	Full SCART: 1	Rear(RZ)
8	RGB input	1	DVI
9	RS-232	1	D-Sub 9 pin(RM)
10	Discrete IR	1	(RM)
11	D-sub audio input	1	Stereo
12	2 Carrier stereo	BG,DK	
13	NICAM stereo	BG,I,LL'	
14	2 Carrier dual	BG,DK	
15	NICAM dual	BG,I,LL'	
16	DW(Double Window) mode	X	
17	MW(Multi Window) mode	X	
18	Film mode	O	
19	Noise reduction	X	
20	Progressive scan	O	
21	Motion detection	O	
22	SRS WOW	X	
23	Swivel Speaker	X	
24	EZ-pip	X	
25	Local Key	Pr+/-, vol+/-, ok, menu, tv/av, power	



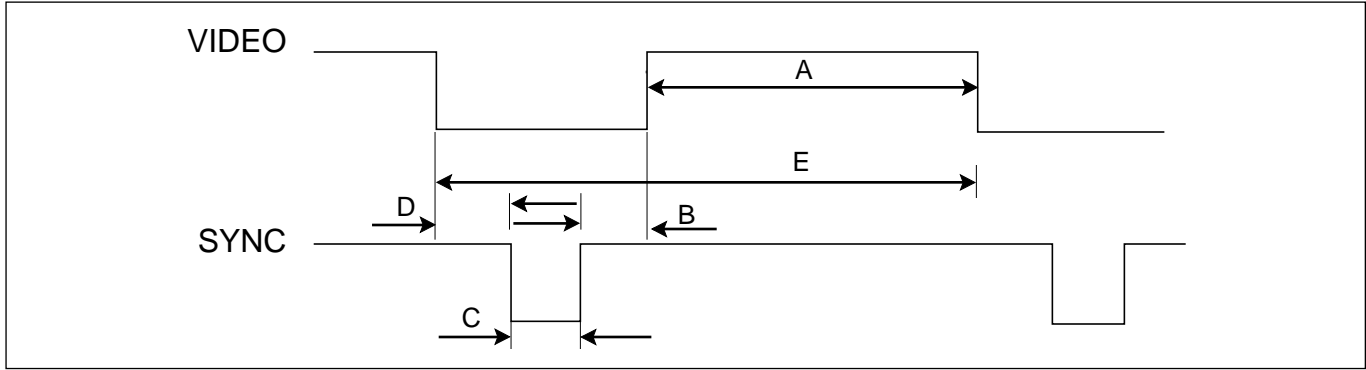
### 8.Component Video Input(Y, P<sub>B</sub>, P<sub>R</sub>)

NO	Resoluton	H-freq(kHz)	V-freq(Hz)	Pixel clock	Proposed
1	640 x 480	15.73	60.00	SDTV. DVD 480i	RZ, RT, RM
2	640 x 480	15.63	59.94	SDTV. DVD 480i	RZ, RT, RM
3	704 x 480	31.47	59.94	EDTV 480p	RT, RM
4	720 x 576	15.625	50.00	SDTV. DVD 625 Line	RZ, RT, RM
5	720 x 576	31.25	50.00	HDTV 576p	RT, RM
6	1280 x 720	45.00	60.00	HDTV 720p	RT, RM
7	1280 x 720	44.96	59.94	HDTV 720p	RT, RM
8	1920 x 1080	31.25	50.00	HDTV 1080i 50Hz(For Australia)	RT, RM
9	1920 x 1080	33.75	60.00	HDTV 1080i 60Hz(ATSC)	RT, RM
10	1920 x 1080	33.72	59.94	HDTV 1080i 59.94Hz	RT, RM

### 9.PC Input Mode

NO	Resoluton	H-freq(kHz)	V-freq(Hz)	Pixel clock(MHz)	Proposed
DVI-PC, Analog RGB					
1	640 x 480	31.469	59.94	25.17	VESA(VGA)
2	800 x 600	37.879	60.31	40.00	VESA(SVGA)
3	1024 x 768	48.363	60.00	65.00	VESA(XGA)
4	1280 x 768	47.693	60.00	80.125	VESA(WXGA)
5	1360 x 768	47.649	59.936	84.625	VESA(WXGA)

# TIMING CHART



<< Dot Clock (MHz), Horizontal Frequency (kHz), Vertical Frequency (Hz), Horizontal etc... (μs), Vertical etc... (ms) >>

Mode	H/V Sort	Sync Polarity	Dot Clock	Frequency	Total Period (E)	Video Active Time (A)	Front Porch (B)	Sync Duration (D)	Back Porch (F)	Resolution
1	H	+	25.175	31.469	800	640	16	96	48	640x480
	V	-		59.94	525	480	10	2	33	
2	H	-	40.0	37.879	1056	800	40	128	88	800x600
	V	+		60.317	628	600	1	4	23	
3	H	-	65.0	48.363	1344	1024	24	136	160	1024x768
	V	-		60.004	806	768	3	6	29	
4	H	-	79.50	47.776	1664	1280	64	128	192	1280x768
	V	-		59.870	798	768	3	7	20	

# ADJUSTMENT INSTRUCTION

## 1. Application Object

This instruction is for the application to the LCD TV.

## 2. Adjustment

### 2.1 PC Auto Gain/Offset adjustment

#### 2.1.1 Adjustment preparation

- 1) Heat Run after 30 minutes execution of white pattern
- 2) Pattern generator is connected to the DVI Jack of LCD TV.
- 3) To use Pattern Generator(801GF, VG819) the resolution is XGA(1024 X 768), this pattern gives 16 gradation grey scale or 16 gradation which follows in the VG819.
- 4) For (SVC) Adjustment first convert into adjustment mode and after converting press IN-START Key and VOL+ Key consecutively from Auto gain menu.
- 5) After adjustment is complete pressing enter key stores and completes the process

#### 2.1.2 Video Auto Gain/Offset Adjustment

- 1) Heat Run after 30 minutes execution of white pattern
- 2) In RF mode using adjustment remote controller Push IN-START Key. And again push IN-Start Key.
- 3) Gray Scale Pattern appears and then press vol+ key, to adjust Auto-again.
- 4) After adjusting press enter to save the values of auto-gain.

### 2.2 EDID (The Extended Display Identification Data) setting

- 1) Connect D-Sub to DVI-I Cable to DVI-I Jack.
- 2) Input analog signal and check pc video in the screen.
- 3) After appearing the pc video, write Analog EDID data.
- 4) Connect DVI D Cable to DVI Jack..
- 5) Input digital signal and check pc video in the screen.
- 6) After appearing the pc video, write digital EDID data.

### 2.2.1 EDID DATA

[DDC DATA Analog]

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00	00	FF	FF	FF	FF	FF	FF	00	1E	6D	45	75	01	01	01	01
10	00	0E	01	03	01	40	26	78	08	B1	DA	A1	56	48	98	24
20	13	48	4B	A1	08	00	31	40	01	01	01	01	45	40	01	01
30	61	40	81	80	01	01	4E	1F	00	90	51	00	1B	30	40	88
40	13	00	A2	0B	32	00	00	18	1B	21	50	A0	51	00	1E	30
50	48	88	35	00	A2	0B	32	00	00	1C	00	00	00	FD	00	3B
60	3D	1F	30	09	00	0A	20	20	20	20	20	20	00	00	00	FC
70	00	52	52	33	32	4C	5A	35	30	0A	20	20	20	20	00	E6

[DDC DATA Digital]

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00	00	FF	FF	FF	FF	FF	FF	00	1E	6D	46	75	01	01	01	01
10	00	0E	01	03	81	40	26	78	08	B1	DA	A1	56	48	98	24
20	13	48	4B	A1	08	00	31	40	01	01	01	01	45	40	01	01
30	61	40	81	80	01	01	4E	1F	00	90	51	00	1B	30	40	88
40	13	00	A2	0B	32	00	00	18	1B	21	50	A0	51	00	1E	30
50	48	88	35	00	A2	0B	32	00	00	1C	00	00	00	FD	00	38
60	3D	1F	30	09	00	0A	20	20	20	20	20	20	00	00	00	FC
70	00	52	52	33	32	4C	5A	35	30	0A	20	20	20	20	00	65

### 3. Shipping Conditions

NO	ITEM		CONDITION	REMARK	
1	Power		Off		
2	Volume Level		30		
3	Main Pcture Input		TV		
5	Main Last Channel		Pr 01		
8	Mute		Off		
9	ARC		16:9		
10	Station	Auto Program			
		Manual Program			
		Program Edit			
		Favorite Program	None		
11	Picture	PSM	Dynamic		
		Dynamic	Contrast	80	
			Brightness	40	
			Colour	70	
			Sharpness	70	
Tint	0	NTSC OPTION			
14	Sound	SSM	Flat		
		AVL	Off		
		Balance	0		
15	Special	Input	TV		
		Child Lock	Off		
		Auto sleep	Off		
		Language	English(Area Management)		
16	PC	H-Position	Variable by each mode		
		V-Position			
		Clock			
		Phase			
		Auto Configure			

## \*Option(PAL)

NO	ITEM	CONDITION	REMARK
Option 1			
1	Side AV	1	0: Side AV Off 1: Side AV On
2	SCART	1	0: SCART Off 1: SCART On
3	PC	1	0: PC Off 1: PC On
4	SideComp	1	0: SideComp Off 1: SideComp On
5	16:9	1	0: Wide Off 1: Wide On
6	200PR	0	0: 100 Program 1: 200 Program
7	Text	1	0: Text Off 1: Text On
8	ACMS	1	0: ACMS On 1: ACMS Off
Option 2			
1	HiDev	0	0: HiDev Off 1: HiDev On
2	Hotel	0	0: Hotel Off 1: Hotel On
3	Top	1	0: Top Off 1: Top On
4	I II SAVE	1	0: Ch. Sound Non Memory 1: Ch. Sound Memory
5	Turbo Vol	0	0: except below area(Off) 1: Middle-east Area Vol On
6	Ch/Aus	0	0: except below area(Off) 1: China, Australia On

NO	ITEM	CONDITION	REMARK
Option 3			
1	Language	1	0: Eng Only 1: EU5 2: 12 nations(Europe) 3: Eng + Chines 4: Eng + Arab + Urdu 5: Eng + FARSI
2	Txt Lang	0	0: WEST EU 1: EAST EU 1 2: TURKY EU 3: EAST EU 2 4: CYRILLIC 1 5: CYRILLIC 2 6: CYRILLIC 3 7: TURKY GRE 1 8: TURKY GRE 2 9: TURKY GRE 3 10: ARAB FRAN 11: ARAB ENG 12: ARAB HEB 1 13: ARAB HEB 2 14: FARSI ENG 15: FARSI FRA 16: FARI ALL
3	Inch opt	0	reserved
4	Analog	Analog	Analog : Analog Digital : Digital

# EDID ADJUSTMENT

Windows EDID V1.0 User Manual

## 2. EDID Read & Write

### 1) Run WinEDID.exe

Operating System: MS Windows 98, 2000, XP

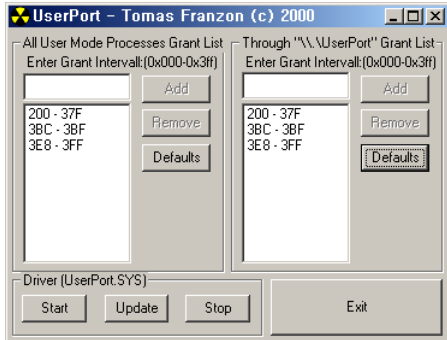
Port Setup: Windows 98 => Don't need setup

Windows 2000, XP => Need to Port Setup.

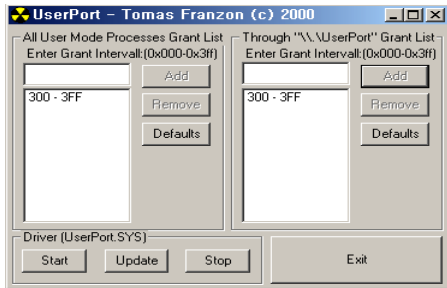
This program is available to LCD Monitor only.

### 1. Port Setup

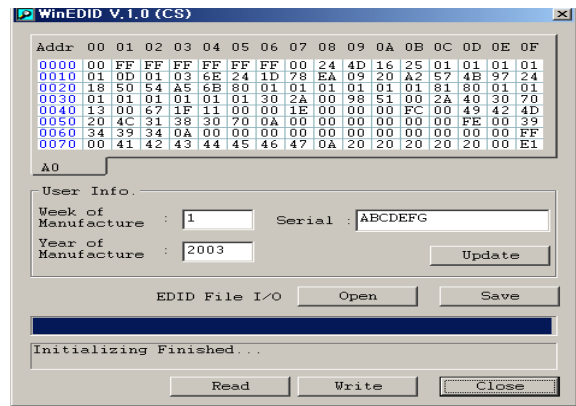
- Copy "UserPort.sys" file to "c:\WINNT\system32\drivers" folder
- Run Userport.exe



- Remove all default number
- Add 300-3FF



- Click Start button.
- Click Exit button.



### 2) Edit Week of Manufacture, Year of Manufacture, Serial Number

- Input User Info Data
- Click "Update" button
- Click " Write" button

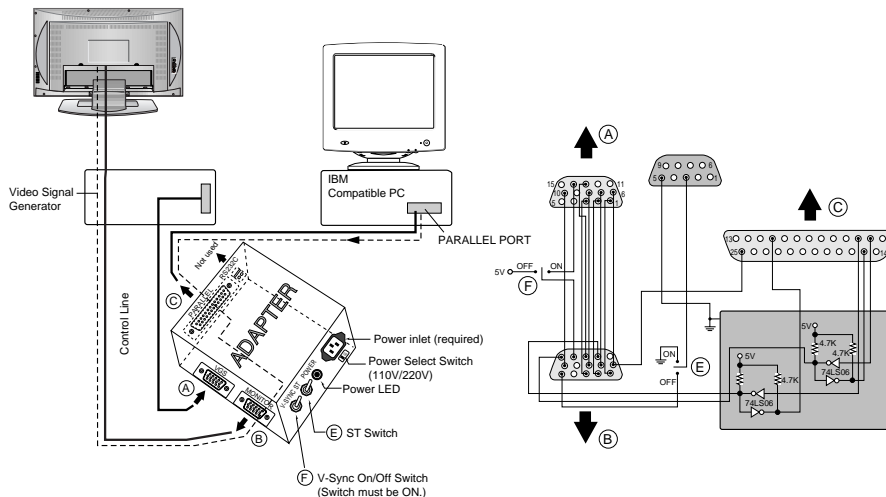
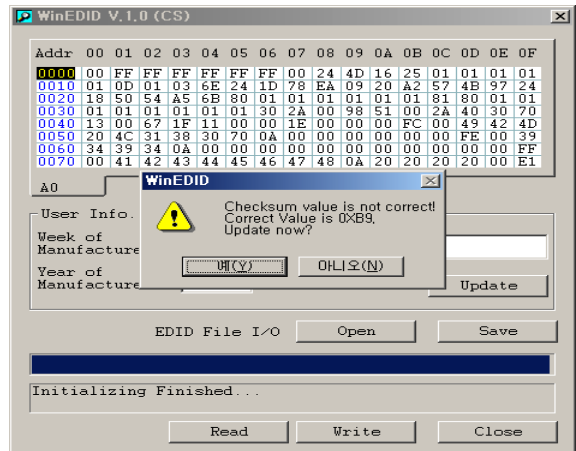
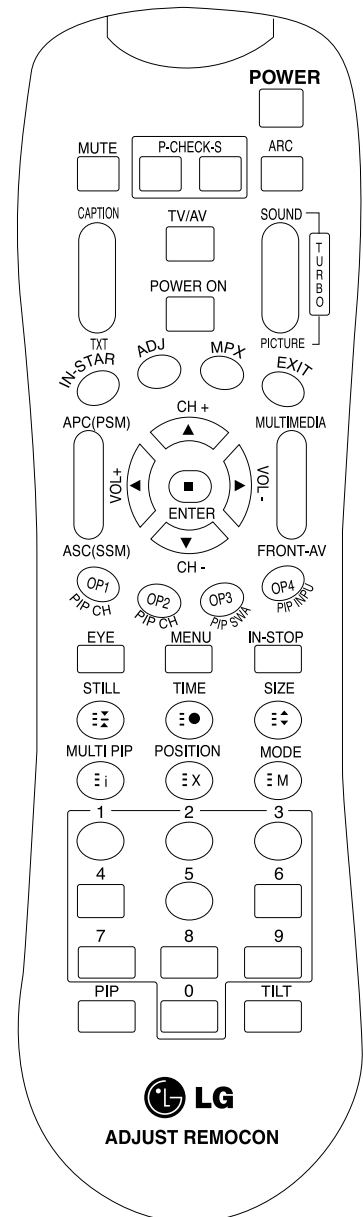


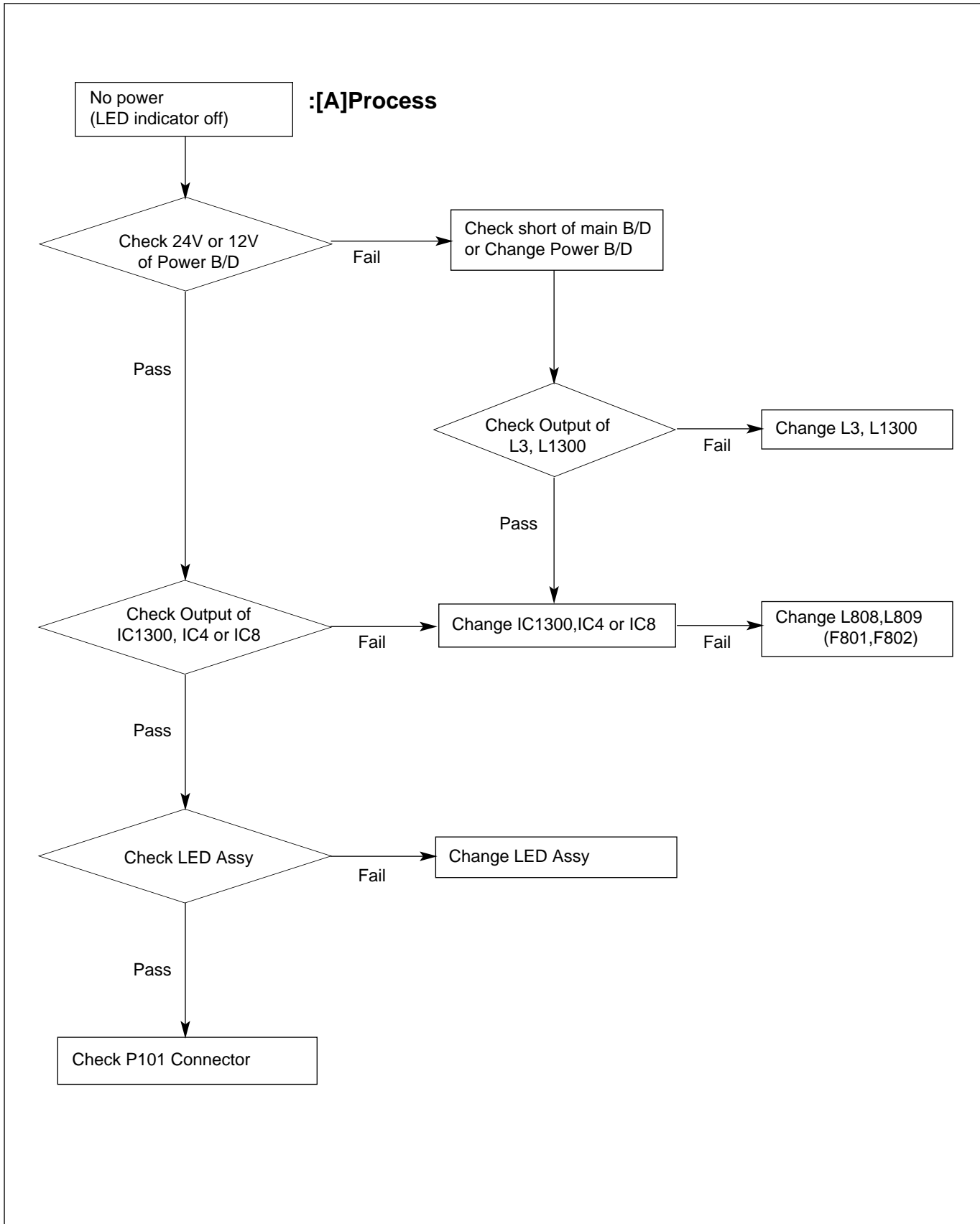
Figure 1. Cable Connection

# SVC REMOCON

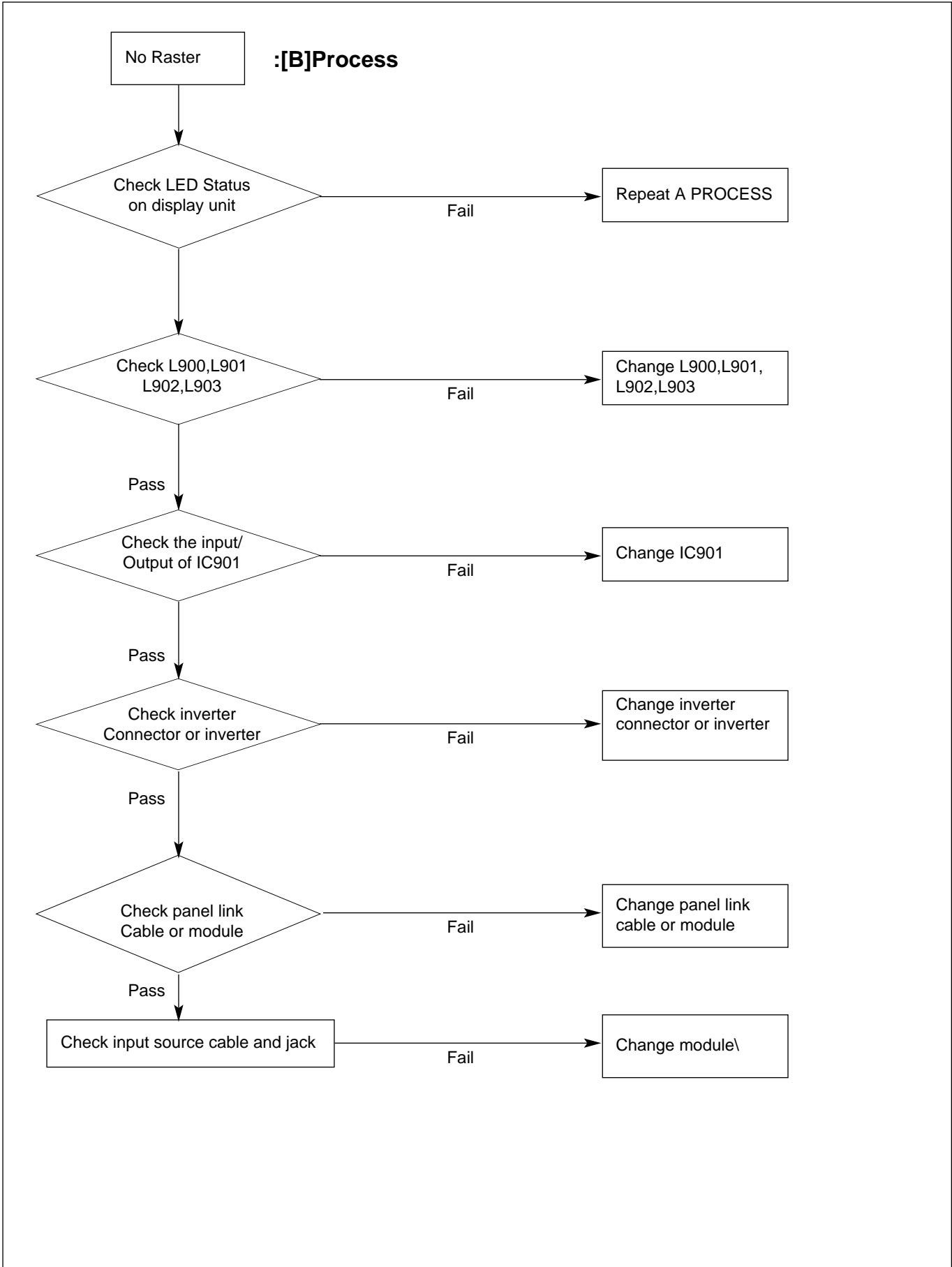
NO	KEY	FUNTION	REAMARK
1	POWER	To turn the TV on or off	
2	POWER ON	To turn the TV on automatically if the power is supplied to the TV. (Use the POWER key to deactivate): It should be deactivated when delivered.	
3	MUTE	To activate the mute function.	
4	P-CHECK	To check TV screen image easily.	Shortcut keys
5	S-CHECK	To check TV screen sound easily	Shortcut keys
6	ARC	To select size of the main screen (Normal, Spectacle, Wide or Zoom)	Shortcut keys
7	CAPTION	Switch to closed caption broadcasting	
8	TXT	To toggle on/off the teletext mode	
9	TV/AV	To select an external input for the TV screen	
10	TURBO SOUND	To start turbo sound	
11	TURBO PICTURE	To start turbo picture	
12	IN-START	To enter adjustment mode when manufacturing the TV sets.	Use the AV key to enter the screen W/B adjustment mode.
		To adjust the screen voltage (automatic): In-start → mute → Adjust → AV(Enter into W/B adjustment mode)	
		W/B adjustment (automatic): After adjusting the screen →W/B adjustment →Exit two times (Adjustment completed)	
13	ADJ	To enter into the adjustment mode. To adjust horizontal line and sub-brightness.	
14	MPX	To select the multiple sound mode (Mono, Stereo or Foreign language)	
15	EXIT	To release the adjustment mode	
16	APC(PSM)	To easily adjust the screen according to surrounding brightness	
17	ASC(SSM)	To easily adjust sound according to the program type	
18	MULTIMEDIA	To check component input	Shortcut keys
19	FRONT-AV	To check the front AV	Shortcut keys
20	CH ±	To move channel up/down or to select a function displayed on the screen.	
21	VOL ±	To adjust the volume or accurately control a specific function.	
22	ENTER	To set a specific function or complete setting.	
23	PIP CH-(OP1)	To move the channel down in the PIP screen. To use as a red key in the teletext mode	
24	PIP CH+(OP2)	To move the channel in the PIP screen To use as a green key in the teletext mode	
25	PIP SWAP(OP3)	To switch between the main and sub screens To use as a yellow key in the teletext mode	
26	PIP INPUT(OP4)	To select the input status in the PIP screen To use as a blue key in the teletext mode	
27	EYE	To set a function that will automatically adjust screen status to match the surrounding brightness so natural color can be displayed.	
28	MENU	To select the functions such as video, voice, function or channel.	
29	IN-STOP	To set the delivery condition status after manufacturing the TV set.	
30	STILL	To halt the main screen in the normal mode, or the sub screen at the PIP screen. Used as a hold key in the teletext mode (Page updating is stopped.)	
31	TIME	Displays the teletext time in the normal mode Enables to select the sub code in the teletext mode	
32	SIZE	Used as the size key in the PIP screen in the normal mode Used as the size key in the teletext mode	
33	MULTI PIP	Used as the index key in the teletext mode (Top index will be displayed if it is the top text.)	
34	POSITION	To select the position of the PIP screen in the normal mode Used as the update key in the teletext mode (Text will be displayed if the current page is updated.)	
35	MODE	Used as Mode in the teletext mode	
36	PIP	To select the simultaneous screen	
37	TILT	To adjust screen tilt	Shortcut keys
38	0~9	To manually select the channel.	

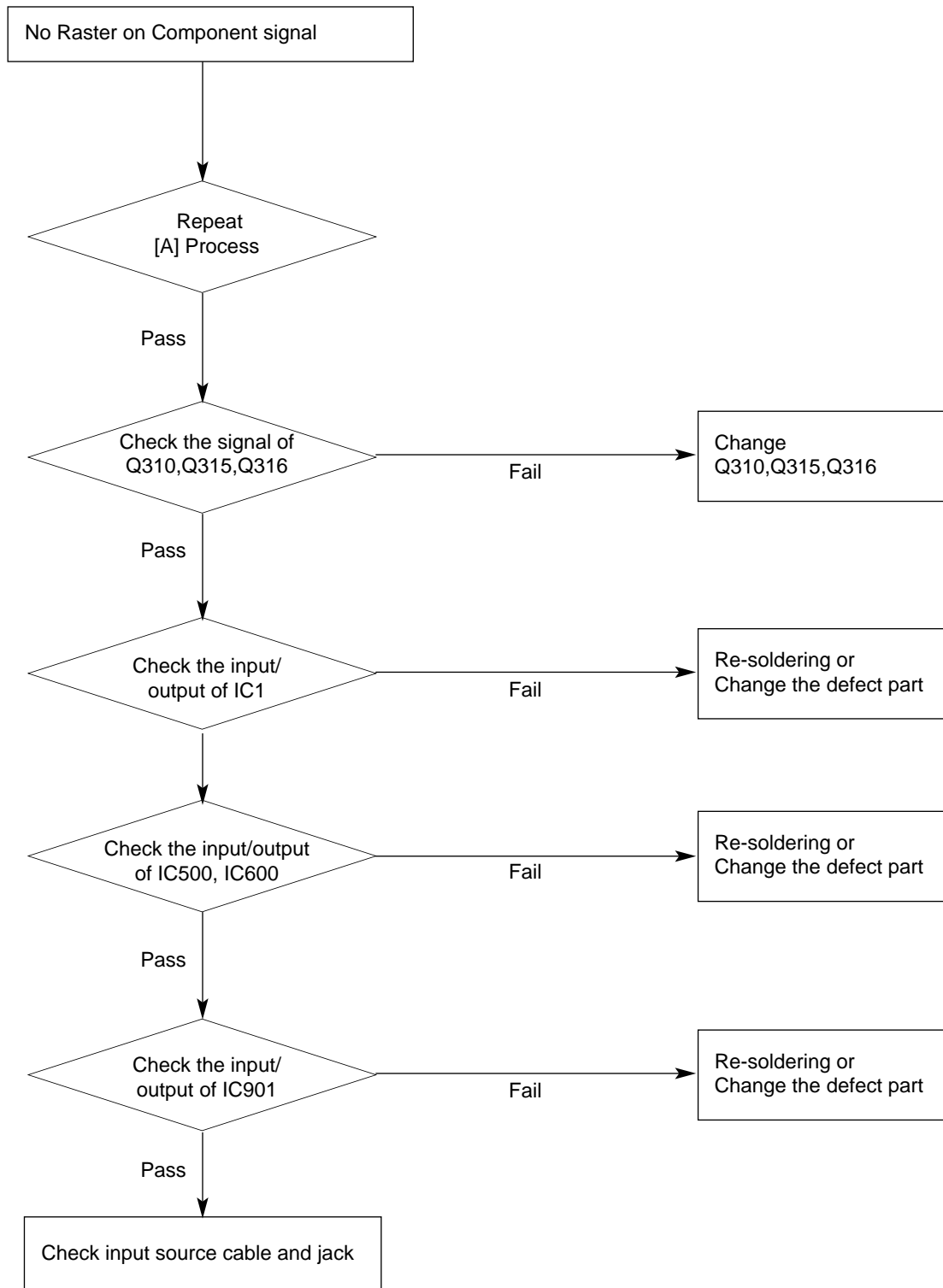


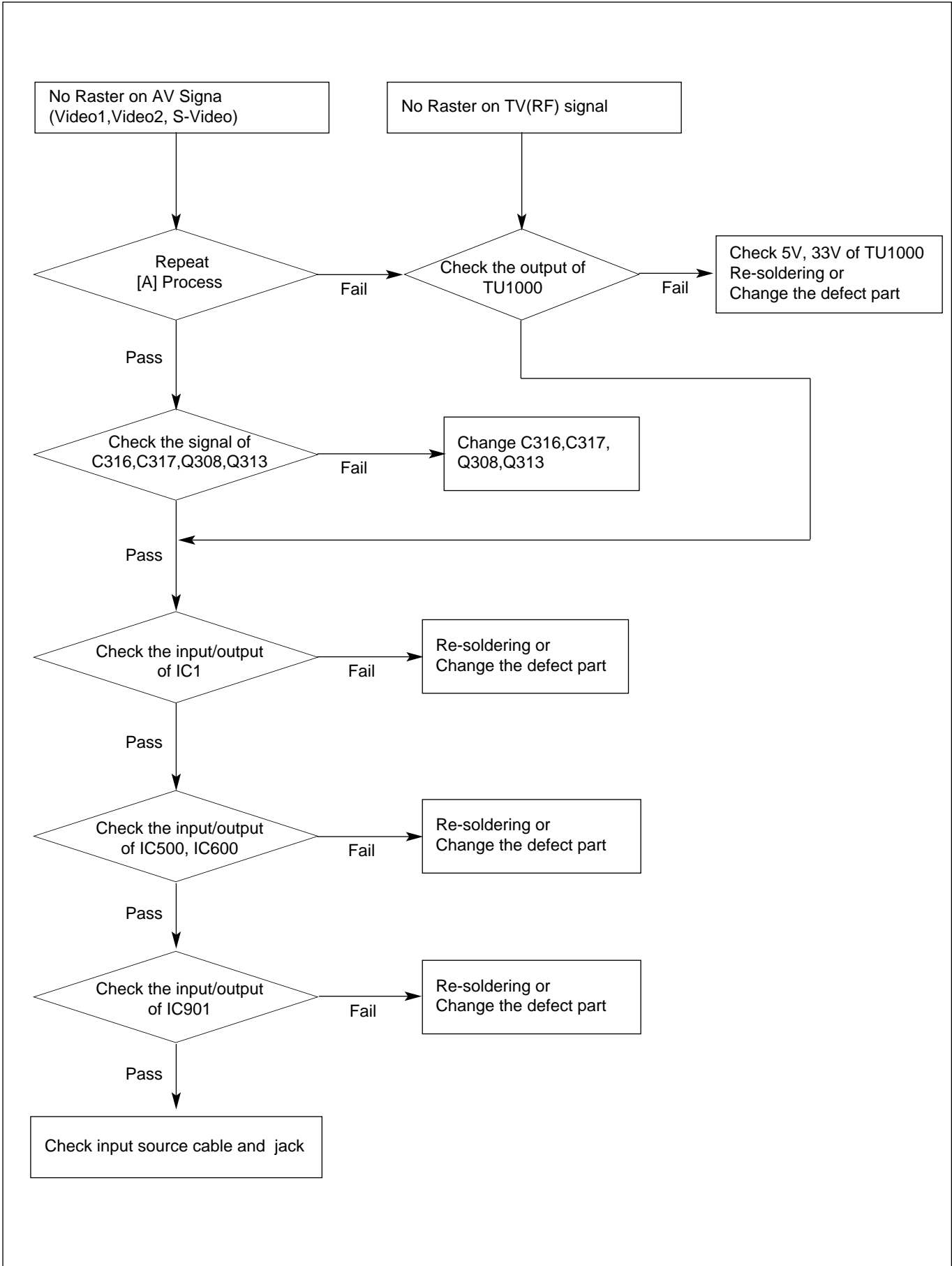
# TROUBLESHOOTING

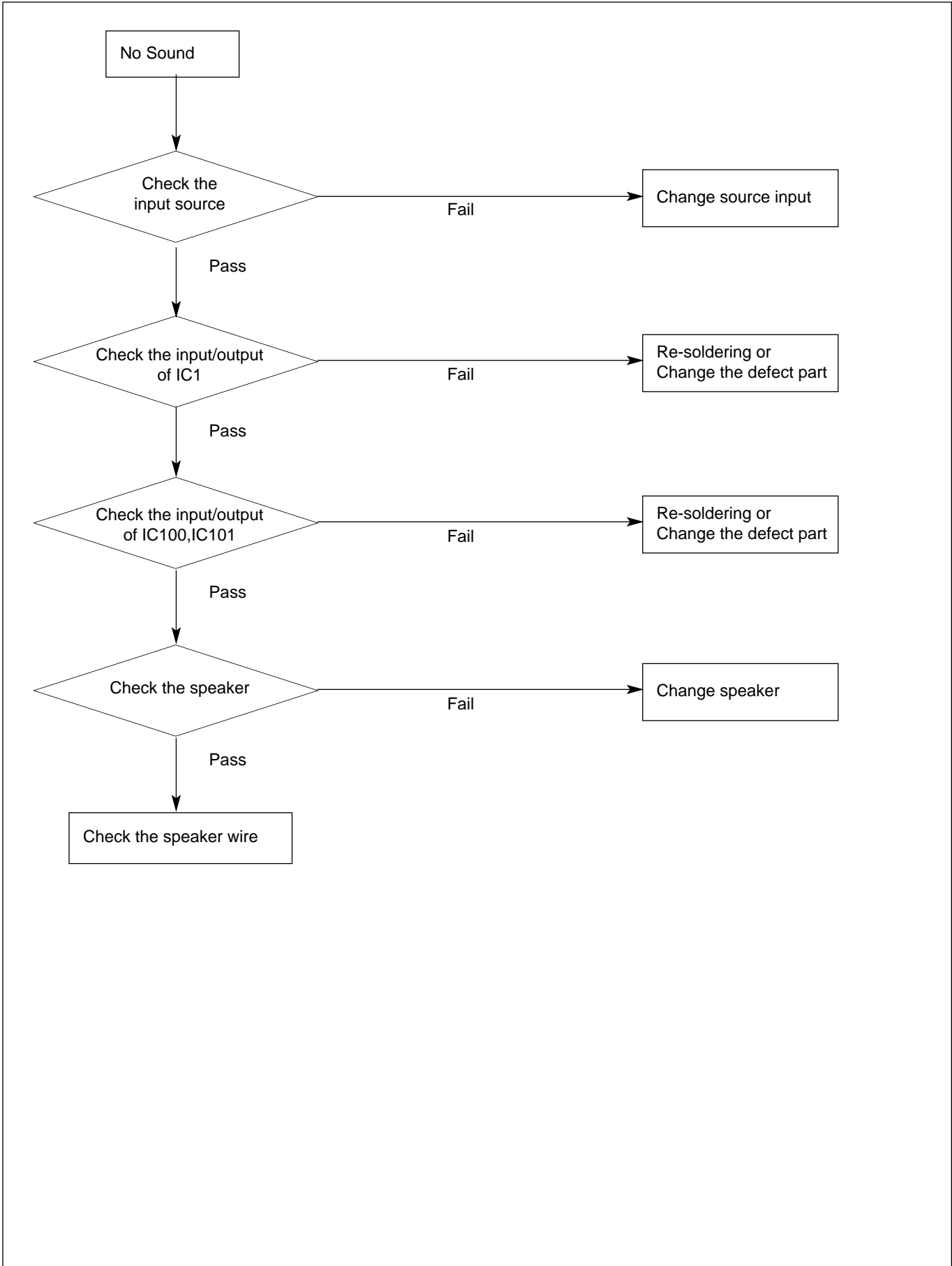




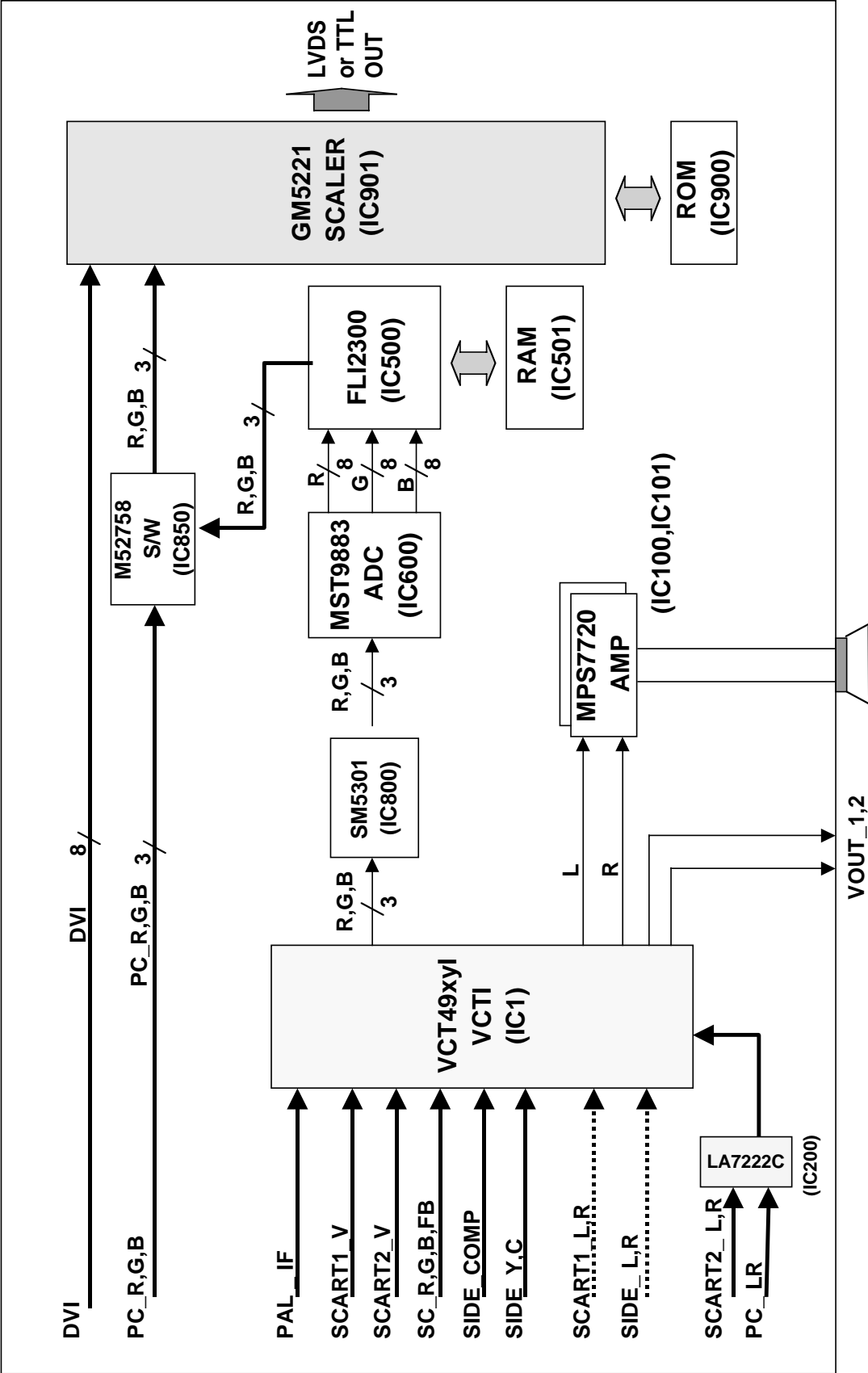








# BLOCK DIAGRAM



# BLOCK DIAGRAM DESCRIPTION

## 1. Video controller unit and display data conversion unit

The video controller unit receives the video signal inputted to the tuner, AV port (AV1, AV2, S-Video and component) and converts it to the analog RGB signal through the microcomputer (VCTI) combined with the video decoder that integrates various functions in one chip.

Then, it is inputted to the AD converter (AD9883) and generates the 4:4:4 format digital signal. This digital signal is inputted to the picture enhancer (FLI2300), which processes the video signal and converts the image quality enhanced data to an analog RGB signal again before displaying it.

The image quality enhanced de-interlace signal is inputted to the scaler (GM5221) and converted to the LVDS signal by the integrated LVDS IC before being sent to the LCD module.

VCTI is the main microcomputer that processes both video signals and sound signals. It also processes the RF signal received from the tuner.

The scaler enables to adjust timing on the LCD panel, as well as an adjustment of the size and position of the input signal.

The graphic controller unit receives the PC (analog RGB) input and the DVI-D (digital signal), and sends the PC input to the scaler analog port and DVI-D input to the digital port.

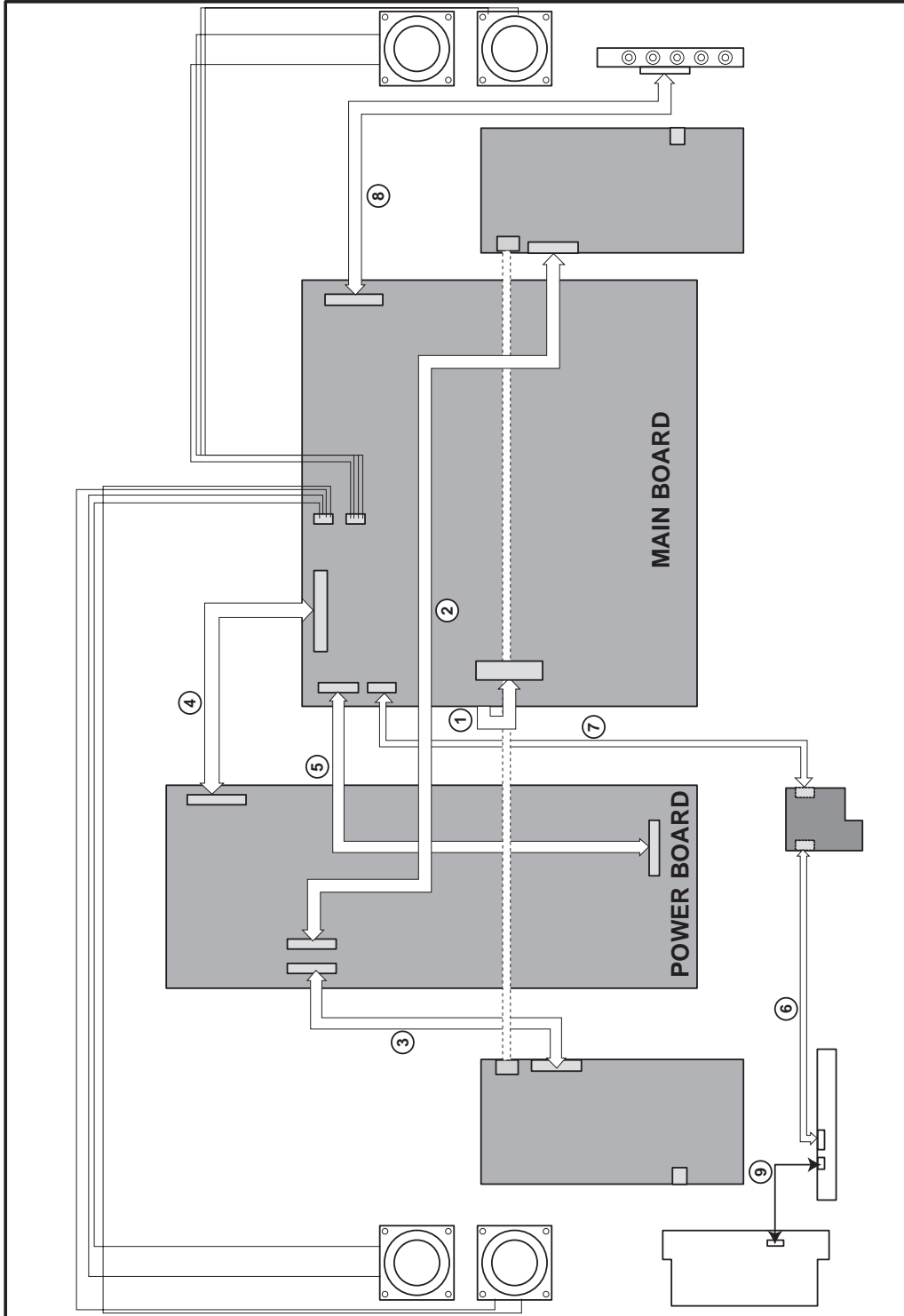
The scaler receives two inputs and converts them to the LVDS signal before sending to the module.

## 2. Power unit

The power unit supplies 33V, 24V and 12V DC power to the main board. 33V DC power is used for the tuner, whereas 24V DC power is directly used by the inverter and the sound amplifier IC. 24V DC power is also used to generate 5V through the regulator. 12V DC power is used for the LCD panel.

5V DC is converted to 3.3V and 1.8V through the regulator, which supplies the necessary power to various ICs, such as VCTI, scaler, FLI2300 and AD9883.

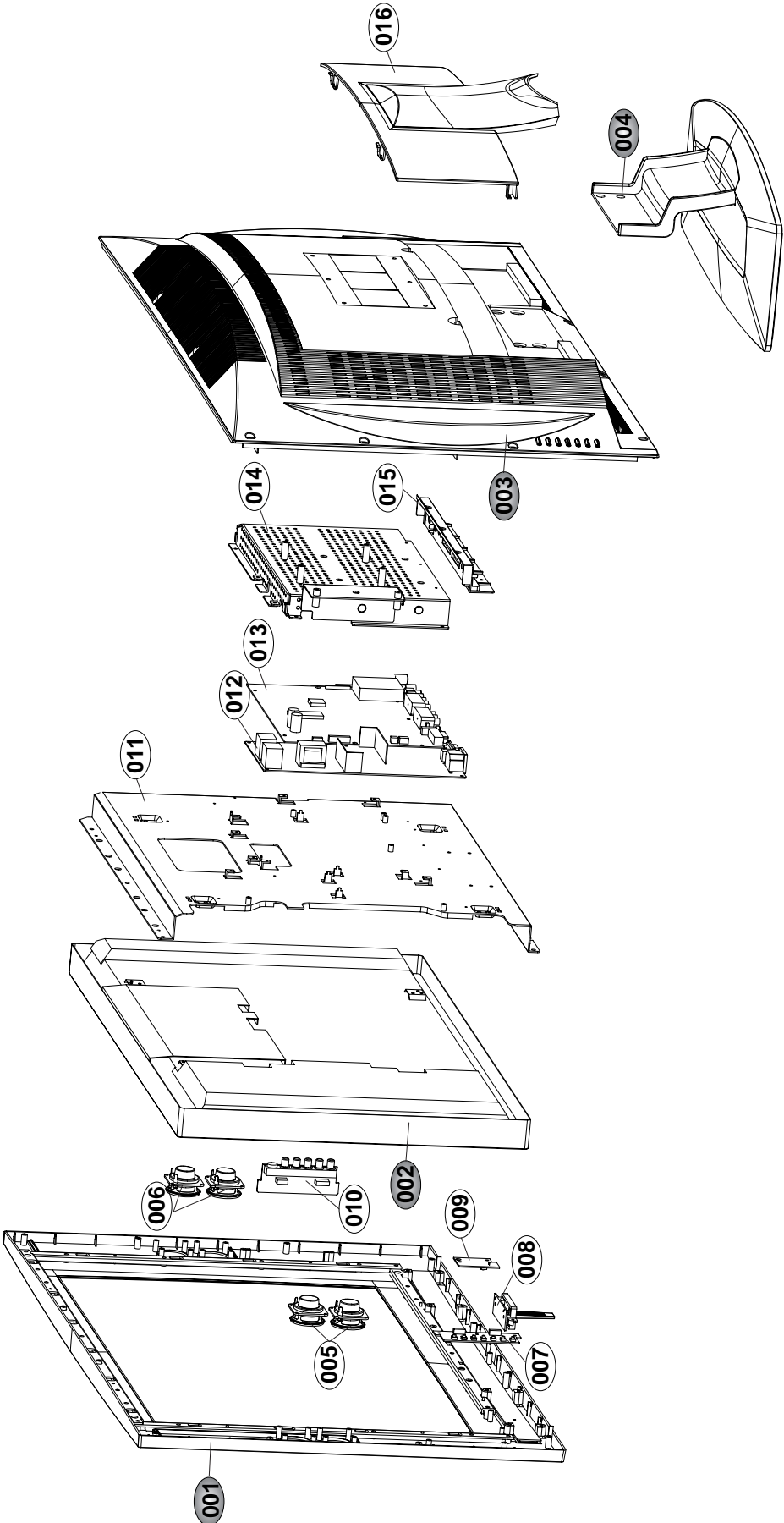
# WIRING DIAGRAM



## Wiring Part List

No.	Part No.
1	6631T11020N
2	6631T20032S
3	6631T20032T
4	6631T25019K
5	6631T20033F
6	6631T20033T
7	6631T20033A
8	6631T20033E
9	6631T20033D

**EXPLODED VIEW**





## EXPLODED VIEW PARTS LIST

No.	PART NO.	DESCRIPTION
001	3091TKE019B	CABINET ASSEMBLY, RT-32LZ50 BRAND 3090TKE014 .
	3091TKE019C	CABINET ASSEMBLY, RZ-32LZ50 BRAND 3090TKE014 SKD
002	6304FLP163A	LCD(LIQUID CRYSTAL DISPLAY), LC320W01-A6 LG PHILIPS TFT COLOR WXGA, 16:9, 500NITS, 16MS, 8BIT, LVDS
003	3809TKE018C	BACK COVER ASSEMBLY, RZ-32LZ50 .
	3809TKE018M	BACK COVER ASSEMBLY, RZ-32LZ50.ALPLRA 3808TKE014 SET RUSSIA
	3809TKE018D	BACK COVER ASSEMBLY, RZ-32LZ50 3808TKE014 SKD
004	3043TKK172A	TILT SWIVEL ASSEMBLY, RZ-30LZ50 NONE NONE
	3043TKK172B	TILT SWIVEL ASSEMBLY, RZ-30LZ50 LGewa C/SKD
005	6401TZZ042C	SPEAKER ASSEMBLY, RZ-30LZ50 5WX2EA,8OHM,ESTEC(L),5P,UL1185#24,
006	6401TZZ042D	SPEAKER ASSEMBLY, RZ-30LZ50 5WX2EA,8OHM,ESTEC(R),4P,UL1185#24
007	6871TST589A	PWB(PCB) ASSEMBLY,SUB, 26LZ50 KEY SUB TOTAL BRAND KEY BOARD
008	6871TST642B	PWB(PCB) ASSEMBLY,SUB, RM-32LZ50 LED & P/SW TOTAL BRAND .
009	6871TST588A	PWB(PCB) ASSEMBLY,SUB, 30LZ50 IR SUB TOTAL BRAND IR BOARD
010	6871TVT370A	PWB(PCB) ASSEMBLY,VIDEO, RZ-30LZ50 SIDE A/V SUB TOTAL BRAND .
011	4951TKS170C	METAL ASSEMBLY, FRAME 32LZ50
	4951TKS170D	METAL ASSEMBLY, FRAME 32LZ50 SKD
012	6871TPT275A	PWB(PCB) ASSEMBLY,POWER, RZ-30LZ50 POWER TOTAL BRAND ML-041A, 23",26",27",30",32" AUTOBAN
013	3313TP3009A	MAIN TOTAL ASSEMBLY, RZ-32LZ50 BRAND ML-041A
014	4951TKK169C	METAL ASSEMBLY, REAR RZ-32LZ50
	4951TKK169F	METAL ASSEMBLY, REAR RZ-32LZ50
015	3551TKK516A	COVER ASSEMBLY, RZ-30LZ50 REAR NON AV
	3551TKK516B	COVER ASSEMBLY, RZ-30LZ50 REAR NON AV C/SKD
016	3550TKK581A	COVER, RZ-32LZ50 REAR AV
	3550TKK581B	COVER, RZ-32LZ50 REAR SKD

# REPLACEMENT PARTS LIST

For Capacitor & Resistors, the characters at 2nd and 3rd digit in the P/No. means as follows;

CC, CX, CK, CN, CH : Ceramic  
CQ : Polyester  
CE : Electrolytic  
CF : Fixed Film

RD : Carbon Film  
RS : Metal Oxide Film  
RN : Metal Film  
RH : CHIP, Metal Glazed(Chip)  
RR : Drawing

DATE: 2004. 10. 28.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
<b>MAIN BOARD</b>				
<b>CAPACITOR</b>				
			C108	0CE476EK638 47UF KMG 50V M FM5 TP 5
			C1100	0CE106BF618 10UF KME 16V M FL TP5
			C1102	0CE107CK638 "100UF SHL,SD 50V M FM5 TP 5"
			C1112	0CE108EF618 1000UF KMG 16V M FL TP 5
			C1113	0CE108EF618 1000UF KMG 16V M FL TP 5
			C1114	0CE108EF618 1000UF KMG 16V M FL TP 5
			C1115	0CE108EF618 1000UF KMG 16V M FL TP 5
			C119	0CE106BF618 10UF KME 16V M FL TP5
			C120	0CE106BF618 10UF KME 16V M FL TP5
			C404	0CE227EJ638 220UF KMG 35V M FM5 TP 5
			C1015	0CH6680K416 68PF 50V J NPO 2012 R/TP
			C1016	0CH6680K416 68PF 50V J NPO 2012 R/TP
			C13	0CH6102K406 1000PF 50V J SL 2012 R/TP
			C1303	0CH6101K416 100PF 50V J NPO 2012 R/TP
			C1308	0CH6101K416 100PF 50V J NPO 2012 R/TP
			C14	0CH6102K406 1000PF 50V J SL 2012 R/TP
			C2	0CH6102K406 1000PF 50V J SL 2012 R/TP
			C20	0CH6102K406 1000PF 50V J SL 2012 R/TP
			C200	0CH6221K416 220PF 50V J NPO 2012 R/TP
			C237	0CH6102K406 1000PF 50V J SL 2012 R/TP
			C238	0CH6102K406 1000PF 50V J SL 2012 R/TP
			C319	0CH6120K416 12PF 50V J NPO 2012 R/TP
			C321	0CH6120K416 12PF 50V J NPO 2012 R/TP
			C324	0CH6120K416 12PF 50V J NPO 2012 R/TP
			C326	0CH6120K416 12PF 50V J NPO 2012 R/TP
			C327	0CH6120K416 12PF 50V J NPO 2012 R/TP
			C328	0CH6120K416 12PF 50V J NPO 2012 R/TP
			C329	0CH6120K416 12PF 50V J NPO 2012 R/TP
			C331	0CH6150K416 15PF 50V J NPO 2012 R/TP
			C333	0CH6150K416 15PF 50V J NPO 2012 R/TP
			C336	0CH6150K416 15PF 50V J NPO 2012 R/TP
			C338	0CH6150K416 15PF 50V J NPO 2012 R/TP
			C339	0CH6150K416 15PF 50V J NPO 2012 R/TP
			C340	0CH6150K416 15PF 50V J NPO 2012 R/TP
			C341	0CH6150K416 15PF 50V J NPO 2012 R/TP
			C354	0CH6471K416 470F 50V J NPO 2012 R/TP
			C355	0CH6471K416 470F 50V J NPO 2012 R/TP
			C43	0CH6102K406 1000PF 50V J SL 2012 R/TP
			C46	0CH6102K406 1000PF 50V J SL 2012 R/TP
			C50	0CH6102K406 1000PF 50V J SL 2012 R/TP
			C515	0CH6330K416 33PF 50V J NPO 2012 R/TP
			C516	0CH6330K416 33PF 50V J NPO 2012 R/TP
			C53	0CH6102K406 1000PF 50V J SL 2012 R/TP
			C59	0CH6102K406 1000PF 50V J SL 2012 R/TP
			C701	0CH6120K416 12PF 50V J NPO 2012 R/TP
			C702	0CH6120K416 12PF 50V J NPO 2012 R/TP
			C74	0CH6102K406 1000PF 50V J SL 2012 R/TP
			C755	0CH6471K416 470F 50V J NPO 2012 R/TP
			C756	0CH6471K416 470F 50V J NPO 2012 R/TP
			C757	0CH6471K416 470F 50V J NPO 2012 R/TP
			C758	0CH6101K416 100PF 50V J NPO 2012 R/TP
			C83	0CH6102K406 1000PF 50V J SL 2012 R/TP

DATE: 2004. 10. 28.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
			C86	0CH6102K406 1000PF 50V J SL 2012 R/TP
			C924	0CH6080K116 8PF 50V D NPO 2012 R/TP
			C925	0CH6080K116 8PF 50V D NPO 2012 R/TP
			C129	181-007F "MPE ECQ-V1H224JL3(TR), 50V 0"
			C130	181-007F "MPE ECQ-V1H224JL3(TR), 50V 0"
			C1001	0CH3103K516 10000PF 50V 10% B(Y5P) 2012
			C1002	0CH3103K516 10000PF 50V 10% B(Y5P) 2012
			C1003	0CH3103K516 10000PF 50V 10% B(Y5P) 2012
			C1004	0CH3103K516 10000PF 50V 10% B(Y5P) 2012
			C1007	0CH3103K516 10000PF 50V 10% B(Y5P) 2012
			C1010	0CK273DK51A 27000PF 2012 50V 10% B(Y5P)
			C107	0CK225DFK4A "2.2UF 2012 16V 20%,-20% F(Y5"
			C109	0CH3103K516 10000PF 50V 10% B(Y5P) 2012
			C11	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C110	0CH3103K516 10000PF 50V 10% B(Y5P) 2012
			C113	0CK225DFK4A "2.2UF 2012 16V 20%,-20% F(Y5"
			C114	0CK225DFK4A "2.2UF 2012 16V 20%,-20% F(Y5"
			C12	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C127	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C128	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C1300	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C1302	0CH3103K516 10000PF 50V 10% B(Y5P) 2012
			C1305	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C1307	0CH3103K516 10000PF 50V 10% B(Y5P) 2012
			C135	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C136	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C15	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C16	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C18	0CK106EF56A 10UF 3216 16V 10% X7R R/TP
			C19	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C23	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C3	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C306	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C318	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C4	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C42	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C44	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C45	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C49	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C500	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C505	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C506	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C507	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C508	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C509	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C51	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C510	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C511	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C512	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C513	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C514	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C517	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C518	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP
			C519	0CH3104K566 0.1UF 50V 10% X7R 2012 R/TP



DATE: 2004. 10. 28.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C930	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C931	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C935	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C936	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C938	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C939	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C940	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C941	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C942	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C943	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C944	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C945	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C946	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C947	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C948	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C949	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C950	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C951	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C952	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C958	0CK225DFK4A	"2.2UF 2012 16V 20%,-20% F(Y5"
		C96	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C960	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C963	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C969	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C970	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C973	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C10	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C115	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C116	0CK562CK51A	5600PF 1608 50V 10% R/TP B(Y
		C117	0CK562CK51A	5600PF 1608 50V 10% R/TP B(Y
		C118	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C125	0CK105EK56A	1UF 3216 50V 10% X7R R/TP
		C126	0CK105EK56A	1UF 3216 50V 10% X7R R/TP
		C1301	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C1306	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C25	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C26	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C27	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C28	0CK334CF94A	"0.33UF 1608 16V 80%,-20% F(Y"
		C29	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C30	0CK334CF94A	"0.33UF 1608 16V 80%,-20% F(Y"
		C31	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C32	0CK334CF94A	"0.33UF 1608 16V 80%,-20% F(Y"
		C33	0CK334CF94A	"0.33UF 1608 16V 80%,-20% F(Y"
		C34	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C35	0CK334CF94A	"0.33UF 1608 16V 80%,-20% F(Y"
		C36	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C37	0CK334CF94A	"0.33UF 1608 16V 80%,-20% F(Y"
		C38	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C39	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C40	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C41	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C5001	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C504	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C524	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C611	0CK473CK56A	47000PF 1608 50V 10% R/TP X7
		C612	0CK473CK56A	47000PF 1608 50V 10% R/TP X7
		C613	0CK473CK56A	47000PF 1608 50V 10% R/TP X7
		C626	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C7	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C70	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C71	0CK106EF56A	10UF 3216 16V 10% X7R R/TP

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		C72	0CK106EF56A	10UF 3216 16V 10% X7R R/TP
		C73	0CK106EF56A	10UF 3216 16V 10% X7R R/TP
		C750	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C752	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C753	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C759	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C78	0CK106EF56A	10UF 3216 16V 10% X7R R/TP
		C8	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C800	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP F"
		C801	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP F"
		C802	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP F"
		C803	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP F"
		C9	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C901	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C902	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C903	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C904	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C905	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C906	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C907	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C352	0CC270DK41A	27PF 2012 50V 5% NP0 R/TP
		C121	0CC100CK41A	10PF 1608 50V 5% R/TP NP0
		C122	0CC100CK41A	10PF 1608 50V 5% R/TP NP0
		C202	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C203	0CC221CK41A	220PF 1608 50V 5% R/TP NP0
		C204	0CC471CK41A	470PF 1608 50V 5% R/TP NP0
		C205	0CC471CK41A	470PF 1608 50V 5% R/TP NP0
		C207	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C209	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C21	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C210	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C211	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C214	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C217	0CC471CK41A	470PF 1608 50V 5% R/TP NP0
		C218	0CC471CK41A	470PF 1608 50V 5% R/TP NP0
		C22	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C220	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C222	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C223	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C224	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C24	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C343	0CC270CK41A	27PF 1608 50V 5% R/TP NP0
		C345	0CC270CK41A	27PF 1608 50V 5% R/TP NP0
		C348	0CC270CK41A	27PF 1608 50V 5% R/TP NP0
		C350	0CC270CK41A	27PF 1608 50V 5% R/TP NP0
		C351	0CC270CK41A	27PF 1608 50V 5% R/TP NP0
		C353	0CC270CK41A	27PF 1608 50V 5% R/TP NP0
		C47	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C48	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C501	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C600	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C601	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C602	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C603	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C610	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C754	0CC471CK41A	470PF 1608 50V 5% R/TP NP0
		C85	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C111	0CE475EK638	4.7UF KMG 50V 20% FM5 TP 5
		C112	0CE475EK638	4.7UF KMG 50V 20% FM5 TP 5
		C1202	0CE477EJ618	470UF KMG 35V 20% FL TP 5
		C123	0CE477EJ618	470UF KMG 35V 20% FL TP 5
		C124	0CE477EJ618	470UF KMG 35V 20% FL TP 5

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		C1299	OCE477EJ618	470UF KMG 35V 20% FL TP 5
		C1304	OCE477EJ618	470UF KMG 35V 20% FL TP 5
		C131	OCE477EJ618	470UF KMG 35V 20% FL TP 5
		C132	OCE477EJ618	470UF KMG 35V 20% FL TP 5
		C133	OCE477EJ618	470UF KMG 35V 20% FL TP 5
		C134	OCE477EJ618	470UF KMG 35V 20% FL TP 5
		C100	OCH8476F691	47UF 16V 20% 105STD (CYL) R/
		C1006	OCH8106J691	10UF 35V 20% 105STD (CYL) R/
		C1008	OCE227WF6DC	220UF MVK 16V 20% R/TP(SMD)
		C17	OCH8106J691	10UF 35V 20% 105STD (CYL) R/
		C206	OCH8226F691	22UF 16V 20% 105STD (CYL) R/
		C208	OCH8226F691	22UF 16V 20% 105STD (CYL) R/
		C219	OCH8226F691	22UF 16V 20% 105STD (CYL) R/
		C221	OCH8226F691	22UF 16V 20% 105STD (CYL) R/
		C225	OCH8106J691	10UF 35V 20% 105STD (CYL) R/
		C226	OCH8106J691	10UF 35V 20% 105STD (CYL) R/
		C227	OCH8106J691	10UF 35V 20% 105STD (CYL) R/
		C228	OCH8106J691	10UF 35V 20% 105STD (CYL) R/
		C231	OCH8106J691	10UF 35V 20% 105STD (CYL) R/
		C232	OCH8106J691	10UF 35V 20% 105STD (CYL) R/
		C235	OCE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C236	OCE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C300	OCE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C301	OCE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C302	OCH8106F691	10UF 16V 20% 105STD (CYL) R/
		C303	OCH8106F691	10UF 16V 20% 105STD (CYL) R/
		C304	OCH8106F691	10UF 16V 20% 105STD (CYL) R/
		C307	OCH8106F691	10UF 16V 20% 105STD (CYL) R/
		C308	OCH8476H691	47UF 25V 20% 105STD (CYL) R/
		C309	OCH8106F691	10UF 16V 20% 105STD (CYL) R/
		C312	OCH8106F691	10UF 16V 20% 105STD (CYL) R/
		C313	OCH8476H691	47UF 25V 20% 105STD (CYL) R/
		C314	OCH8106F691	10UF 16V 20% 105STD (CYL) R/
		C315	OCH8106F691	10UF 16V 20% 105STD (CYL) R/
		C316	OCH8106F691	10UF 16V 20% 105STD (CYL) R/
		C317	OCH8106F691	10UF 16V 20% 105STD (CYL) R/
		C5	OCE475WJ6DC	4.7UF MVK 35V 20% R/TP(SMD)
		C502	OCH8476F691	47UF 16V 20% 105STD (CYL) R/
		C503	OCH8476F691	47UF 16V 20% 105STD (CYL) R/
		C52	OCH8476F691	47UF 16V 20% 105STD (CYL) R/
		C520	OCH8106F691	10UF 16V 20% 105STD (CYL) R/
		C525	OCH8106F691	10UF 16V 20% 105STD (CYL) R/
		C54	OCH8476F691	47UF 16V 20% 105STD (CYL) R/
		C543	OCH8476F691	47UF 16V 20% 105STD (CYL) R/
		C55	OCH8476H691	47UF 25V 20% 105STD (CYL) R/
		C560	OCH8476F691	47UF 16V 20% 105STD (CYL) R/
		C566	OCH8476F691	47UF 16V 20% 105STD (CYL) R/
		C604	OCH8476F691	47UF 16V 20% 105STD (CYL) R/
		C605	OCH8476F691	47UF 16V 20% 105STD (CYL) R/
		C607	OCH8476F691	47UF 16V 20% 105STD (CYL) R/
		C62	OCH8476F691	47UF 16V 20% 105STD (CYL) R/
		C63	OCH8476F691	47UF 16V 20% 105STD (CYL) R/
		C703	OCE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C805	OCE227WF6DC	220UF MVK 16V 20% R/TP(SMD)
		C806	OCE227WF6DC	220UF MVK 16V 20% R/TP(SMD)
		C807	OCE227WF6DC	220UF MVK 16V 20% R/TP(SMD)
		C814	OCE227WF6DC	220UF MVK 16V 20% R/TP(SMD)
		C815	OCH8476F691	47UF 16V 20% 105STD (CYL) R/
		C857	OCE227WF6DC	220UF MVK 16V 20% R/TP(SMD)
		C858	OCH8476F691	47UF 16V 20% 105STD (CYL) R/
		C859	OCH8476F691	47UF 16V 20% 105STD (CYL) R/
		C860	OCH8476F691	47UF 16V 20% 105STD (CYL) R/

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			C861	OCH8476F691 47UF 16V 20% 105STD (CYL) R/
			C862	OCH8476F691 47UF 16V 20% 105STD (CYL) R/
			C863	OCH8476F691 47UF 16V 20% 105STD (CYL) R/
			C87	OCH8476F691 47UF 16V 20% 105STD (CYL) R/
			C88	OCH8476H691 47UF 25V 20% 105STD (CYL) R/
			C900	OCH8476F691 47UF 16V 20% 105STD (CYL) R/
			C953	OCH8476F691 47UF 16V 20% 105STD (CYL) R/
			C956	OCH8476H691 47UF 25V 20% 105STD (CYL) R/
			C957	OCH8476F691 47UF 16V 20% 105STD (CYL) R/
			C959	OCH8476F691 47UF 16V 20% 105STD (CYL) R/
			C97	OCH8476H691 47UF 25V 20% 105STD (CYL) R/
			C972	OCH8476H691 47UF 25V 20% 105STD (CYL) R/
<b>DIODEs</b>				
			D100	ODRFC00288A SS14 FAIR CHILD R/TP SMA 20-
			D101	ODRFC00288A SS14 FAIR CHILD R/TP SMA 20-
			IC751	ODRSE00018A SRV05-4.TC SEMTECH R/TP SOT2
			IC754	ODRSE00018A SRV05-4.TC SEMTECH R/TP SOT2
			ZD1300	ODR340009AA MBRS340 TP FAIRCHILD NON 40V
			ZD1301	ODR340009AA MBRS340 TP FAIRCHILD NON 40V
			D107	ODS226009AA KDS226 TP KEC SOT-23 80V 30
			D711	ODD184009AA KDS184 TP KEC - 85V - - - 30
			D102	ODS181009AA KDS181 TP KEC SOT-23 80V 3
			D103	ODS181009AA KDS181 TP KEC SOT-23 80V 3
			D104	ODZ620009HB UDZ S 6.2B TP ROHM SOD323 20
			D105	ODZ620009HB UDZ S 6.2B TP ROHM SOD323 20
			D703	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			D704	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD101	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD215	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD216	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD217	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD218	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD219	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD220	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD222	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			D700	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			D701	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			D702	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			D705	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			D706	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD203	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD204	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD205	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD206	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD207	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD208	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD210	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD213	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD214	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD221	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD5001	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD5002	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD5003	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD851	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD852	ODZ510009EE UDZ S 5.1B TP ROHM-K SOD323
			ZD1000	ODZ330009DF MTZJ33B TP ROHM-K DO34 0.5W
			ZD10	ODZ910009FE UDZS 9.1B TP ROHM - - 9.1V -

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<b>IC</b>				
		IC3	OIKE702700D	"KIA7027AF 3, SOT-89 TP RESET"
		IC200	OISA722200A	LA7222 (1280 AUDIO) - - -
		IC501	OIMMREB010A	"M12L64322A-6T ESMT 86P,TSOP"
		IC749	OIMMRSG036A	"M24C02-WMN6T SGS-THOMSON 8P,"
		IC753	OIMMRSG036A	"M24C02-WMN6T SGS-THOMSON 8P,"
		IC907	OIMCRAL006A	AT24C16AN-10SI-2.7 ATMEL 8P
		IC918	OIMCRAL006A	AT24C16AN-10SI-2.7 ATMEL 8P
		IC100	OIMCRMZ002A	MP7720 MONOLITHIC POWER SYST
		IC101	OIMCRMZ002A	MP7720 MONOLITHIC POWER SYST
		IC1300	OIMCRMZ001A	MP1583DN MONOLITHIC POWER SY
		IC1301	OIMCRMZ001A	MP1583DN MONOLITHIC POWER SY
		IC500	OIMCRGN002C	FLI2300BD GENESIS 208P PQFP
		IC750	OIMCRSG010A	ST3232CDR SGS-THOMSON SOP16
		IC850	OIMCRM1006A	"M52758FP MITSUBISHI 36PIN, R"
		IC2000	OIMO140662A	"MC14066BDR2 14P,SOIC TP BILA"
		IC702	OIMO140662A	"MC14066BDR2 14P,SOIC TP BILA"
		IC1	OIPRPMN003C	VCT49XYF C7(NTSC+PAL) MICRON
		IC600	OIPRPM3002B	"MST9883C-110 MSTAR 80P,LQFP"
		IC800	OIPRPNP001A	"SM5301BS(ATSC DTV) NPC 28P,H"
		IC901	OIPRPGN014A	GM5221H(HDCP) GENESIS 208P Q
		IC2	OIPMGNS001E	LM1117MPX-3.3 NATIONAL SEMIC
		IC300	OIPMGKE039A	"KIA78D09F KEC 3P,DPAK R/TP 9"
		IC4	OIPMGNS001E	LM1117MPX-3.3 NATIONAL SEMIC
		IC505	OIPMGSG018D	"LD1086DT18TR SGS-THOMSON 3P,"
		IC6	OIPMGSG018D	"LD1086DT18TR SGS-THOMSON 3P,"
		IC601	OIPMGNS001E	LM1117MPX-3.3 NATIONAL SEMIC
		IC604	OIPMGFA061A	"FAN1587AD33X FAIRCHILD 3P,DP"
		IC8	OIMCRFA015A	KA7805R FAIRCHILD 2P D-PAK R
		IC905	OIPMGFA061A	"FAN1587AD33X FAIRCHILD 3P,DP"
		IC906	OIPMGSG018D	"LD1086DT18TR SGS-THOMSON 3P,"
		IC103	OISS780800J	"KA78M08R 3P,D-PAK TP VOL. RE"
		IC752	OIMCRT1001A	SN74HCT157D TEXAS INSTRUMENT
<b>COIL &amp; CORE &amp; INDUCTOR</b>				
		L104	6140TBZ045A	"38.5UH(DIP), 6A, P7.5, DR8.3"
		L105	6140TBZ045A	"38.5UH(DIP), 6A, P7.5, DR8.3"
		L1300	6140VR0008B	SLF12575T-150M3R2 15UH SMD
		L1301	6140VR0008B	SLF12575T-150M3R2 15UH SMD
		L100	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L1002	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L3	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L301	6210TCE001A	HB-1S2012-080JT CERATEC 2012
		L302	6210TCE001A	HB-1S2012-080JT CERATEC 2012
		L304	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L311	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L4	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L401	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L500	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L501	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L502	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L503	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L504	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L505	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L600	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L601	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L602	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L701	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L800	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L850	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L900	6210TCE001G	HH-1M3216-501 CERATEC 3216MM

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		L901	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L902	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L903	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L907	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L202	6210TCE001A	HB-1S2012-080JT CERATEC 2012
		L203	6210TCE001A	HB-1S2012-080JT CERATEC 2012
		L204	6210TCE001A	HB-1S2012-080JT CERATEC 2012
		L205	6210TCE001A	HB-1S2012-080JT CERATEC 2012
		L207	6210TCE001A	HB-1S2012-080JT CERATEC 2012
		L208	6210TCE001A	HB-1S2012-080JT CERATEC 2012
		L209	6210TCE001A	HB-1S2012-080JT CERATEC 2012
		L210	6210TCE001A	HB-1S2012-080JT CERATEC 2012
		L5000	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L603	6210TCE001A	HB-1S2012-080JT CERATEC 2012
		L1	0LC1032101A	10UH 10% 3216 R/TC FI-C3216-
		L1001	0LC1020101A	1UH 10% 2012 R/TC FI-B2012-1
		L11	0LC1032101A	10UH 10% 3216 R/TC FI-C3216-
		L13	0LC1032101A	10UH 10% 3216 R/TC FI-C3216-
		L14	0LC1032101A	10UH 10% 3216 R/TC FI-C3216-
		L15	0LC1032101A	10UH 10% 3216 R/TC FI-C3216-
		L17	0LC1032101A	10UH 10% 3216 R/TC FI-C3216-
		L2	0LC1032101A	10UH 10% 3216 R/TC FI-C3216-
		L402	0LC1532101A	15UH 10% 3216 R/TC FI-C3216-
		L403	0LC1532101A	15UH 10% 3216 R/TC FI-C3216-
		L7	0LC1032101A	10UH 10% 3216 R/TC FI-C3216-
		L10	0LC1032101A	10UH 10% 3216 R/TC FI-C3216-
		L12	0LC1032101A	10UH 10% 3216 R/TC FI-C3216-
		L16	0LC1032101A	10UH 10% 3216 R/TC FI-C3216-
		L200	0LC1020101A	1UH 10% 2012 R/TC FI-B2012-1
		L201	0LC1020101A	1UH 10% 2012 R/TC FI-B2012-1
		L306	0LC1532101A	15UH 10% 3216 R/TC FI-C3216-
		L307	0LC1532101A	15UH 10% 3216 R/TC FI-C3216-
		L308	0LC1532101A	15UH 10% 3216 R/TC FI-C3216-
		L309	0LC1532101A	15UH 10% 3216 R/TC FI-C3216-
		L310	0LC1532101A	15UH 10% 3216 R/TC FI-C3216-
		L8	0LC1032101A	10UH 10% 3216 R/TC FI-C3216-
		L9	0LC1032101A	10UH 10% 3216 R/TC FI-C3216-
<b>FET &amp; TRANSISTOR</b>				
		IC1101	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A
		IC902	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A
		Q1000	0TR388109AA	KTC3881 CHIP TP KEC - -
		Q1101	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q212	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q300	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q302	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q303	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q304	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q318	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q701	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q100	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q101	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q12	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q13	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q14	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q15	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q16	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q17	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q301	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q305	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q306	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -

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		Q308	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q310	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q313	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q315	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q316	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q317	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q500	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q901	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
RESISTORS				
		R10	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R1001	0RH0562D622	56 1/10W 5 D.R/TP
		R1003	0RH8200D622	820 1/10W 5 D.R/TP
		R1004	0RH3000D622	300 1/10W 5 D.R/TP
		R1005	0RH0682D622	68 1/10W 5 D.R/TP
		R1010	0RH7501D622	7.5K 1/10W 5 D.R/TP
		R1012	0RH7502D622	75K 1/10W 5 D.R/TP
		R1014	0RH1000D622	100 1/10W 5 D.R/TP
		R104	0RH1000D622	100 1/10W 5 D.R/TP
		R106	0RH1500D622	150 1/10W 5 D.R/TP
		R107	0RH1503D622	150K 1/10W 5 D.R/TP
		R11	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R1100	0RH1000D622	100 1/10W 5 D.R/TP
		R1102	0RH1000D622	100 1/10W 5 D.R/TP
		R1106	0RH1202D622	12K 1/10W 5 D.R/TP
		R1107	0RH1502D622	15K 1/10W 5 D.R/TP
		R118	0RH1000D622	100 1/10W 5 D.R/TP
		R126	0RH1502D622	15K 1/10W 5 D.R/TP
		R132	0RH1003D622	100K 1/10W 5 D.R/TP
		R133	0RH1003D622	100K 1/10W 5 D.R/TP
		R134	0RH1003D622	100K 1/10W 5 D.R/TP
		R135	0RH1003D622	100K 1/10W 5 D.R/TP
		R140	0RH0392D622	39 1/10W 5 D.R/TP
		R141	0RH0392D622	39 1/10W 5 D.R/TP
		R142	0RH0392D622	39 1/10W 5 D.R/TP
		R143	0RH0392D622	39 1/10W 5 D.R/TP
		R144	0RH0392D622	39 1/10W 5 D.R/TP
		R145	0RH0392D622	39 1/10W 5 D.R/TP
		R146	0RH0392D622	39 1/10W 5 D.R/TP
		R147	0RH0392D622	39 1/10W 5 D.R/TP
		R154	0RH0822D622	82 1/10W 5 D.R/TP
		R156	0RH0822D622	82 1/10W 5 D.R/TP
		R158	0RH0822D622	82 1/10W 5 D.R/TP
		R162	0RH2701D622	2.7K 1/10W 5 D.R/TP
		R201	0RH4703D622	470K 1/10W 5 D.R/TP
		R202	0RH5601D622	5.6K 1/10W 5 D.R/TP
		R203	0RH5601D622	5.6K 1/10W 5 D.R/TP
		R204	0RH4703D622	470K 1/10W 5 D.R/TP
		R24	0RH1000D622	100 1/10W 5 D.R/TP
		R25	0RH1000D622	100 1/10W 5 D.R/TP
		R266	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R267	0RH4702D622	47K 1/10W 5 D.R/TP
		R268	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R312	0RH4700D622	470 1/10W 5 D.R/TP
		R313	0RH1500D622	150 1/10W 5 D.R/TP
		R314	0RH4700D622	470 1/10W 5 D.R/TP
		R315	0RH1500D622	150 1/10W 5 D.R/TP
		R320	0RH4703D622	470K 1/10W 5 D.R/TP
		R322	0RH1500D622	150 1/10W 5 D.R/TP
		R324	0RH4703D622	470K 1/10W 5 D.R/TP
		R394	0RH6800D622	680 OHM 1 / 10 W 5% D R/TP

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R395	0RH6800D622	680 OHM 1 / 10 W 5% D R/TP
		R44	0RH1000D622	100 1/10W 5 D.R/TP
		R45	0RH1000D622	100 1/10W 5 D.R/TP
		R502	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R520	0RH1800D622	180 1/10W 5 D.R/TP
		R527	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R607	0RH1000D622	100 1/10W 5 D.R/TP
		R610	0RH2701D622	2.7K 1/10W 5 D.R/TP
		R703	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R705	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R712	0RH0752D622	75 1/10W 5 D.R/TP
		R713	0RH0752D622	75 1/10W 5 D.R/TP
		R715	0RH1202D622	12K 1/10W 5 D.R/TP
		R716	0RH0752D622	75 1/10W 5 D.R/TP
		R719	0RH1502D622	15K 1/10W 5 D.R/TP
		R725	0RH1000D622	100 1/10W 5 D.R/TP
		R729	0RH1000D622	100 1/10W 5 D.R/TP
		R730	0RH1000D622	100 1/10W 5 D.R/TP
		R737	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R738	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R755	0RH0102D622	10 1/10W 5 D.R/TP
		R756	0RH0102D622	10 1/10W 5 D.R/TP
		R802	0RH8200D622	820 1/10W 5 D.R/TP
		R805	0RH0752D622	75 1/10W 5 D.R/TP
		R806	0RH4700D622	470 1/10W 5 D.R/TP
		R809	0RH0102D622	10 1/10W 5 D.R/TP
		R83	0RH1000D622	100 1/10W 5 D.R/TP
		R85	0RH1000D622	100 1/10W 5 D.R/TP
		R850	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R851	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R87	0RH1000D622	100 1/10W 5 D.R/TP
		R89	0RH1000D622	100 1/10W 5 D.R/TP
		R930	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R931	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R941	0RH1000D622	100 1/10W 5 D.R/TP
		R960	0RH1000D622	100 1/10W 5 D.R/TP
		R969	0RH1202D622	12K 1/10W 5 D.R/TP
		R971	0RH1502D622	15K 1/10W 5 D.R/TP
		R974	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R976	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R977	0RH4701D622	4.7K 1/10W 5 D.R/TP
		RA600	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		RA601	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		RA602	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		RA603	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		RA604	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		RA605	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		L303	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R1002	0RH1501D622	1.5K OHM 1 / 10 W 2012 5.00%
		R1011	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R1013	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R1015	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R1026	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R1105	0RH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R128	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R129	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R1290	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R1301	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R1304	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R1350	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R22	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R264	0RH1001D622	1K OHM 1 / 10 W 2012 5.00% D

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R265	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R271	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R273	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R300	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R301	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R302	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R304	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R305	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R306	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R307	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R308	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R309	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R338	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R339	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R342	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R343	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R348	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R349	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R352	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R353	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R354	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R355	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R363	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R367	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R373	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R377	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R379	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R381	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R383	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R46	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R5006	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R5007	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R5008	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R5009	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R5019	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R505	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R506	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R516	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R517	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R519	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R530	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R532	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R700	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R726	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R732	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R752	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R753	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R760	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R761	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R803	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R854	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R963	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R964	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R999	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R100	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R101	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R102	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R1027	ORJ1202D677	12K OHM 1/10 W 5% 1608 R/TP
		R1028	ORJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R103	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R105	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R108	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP

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		R109	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R110	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R111	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R1110	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R112	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R113	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R114	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R115	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R116	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R117	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R120	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R121	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R122	ORJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R123	ORJ2202D677	22K OHM 1/10 W 5% 1608 R/TP
		R124	ORJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R125	ORJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R127	ORJ3301D677	3.3K OHM 1/10 W 5% 1608 R/TP
		R130	ORJ5601D477	5.6K OHM 1/10 W 1% 1608 R/TP
		R1300	ORJ6801D477	6.8K OHM 1/10 W 1% 1608 R/TP
		R1302	ORJ2202D477	22K OHM 1/10 W 1% 1608 R/TP
		R1303	ORJ6801D477	6.8K OHM 1/10 W 1% 1608 R/TP
		R1305	ORJ2202D477	22K OHM 1/10 W 1% 1608 R/TP
		R131	ORJ5601D477	5.6K OHM 1/10 W 1% 1608 R/TP
		R136	ORJ8202D677	82K OHM 1/10 W 5% 1608 R/TP
		R137	ORJ8202D677	82K OHM 1/10 W 5% 1608 R/TP
		R138	ORJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R139	ORJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R15	ORJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R152	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R153	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R155	ORJ2700D677	270 OHM 1/10 W 5% 1608 R/TP
		R157	ORJ2700D677	270 OHM 1/10 W 5% 1608 R/TP
		R159	ORJ2700D677	270 OHM 1/10 W 5% 1608 R/TP
		R16	ORJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R160	ORJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R161	ORJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R163	ORJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R164	ORJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R17	ORJ2202D677	22K OHM 1/10 W 5% 1608 R/TP
		R173	ORJ3301D677	3.3K OHM 1/10 W 5% 1608 R/TP
		R175	ORJ3301D677	3.3K OHM 1/10 W 5% 1608 R/TP
		R18	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R205	ORJ0682D677	68 OHM 1/10 W 5% 1608 R/TP
		R207	ORJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R209	ORJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R210	ORJ3902D677	39K OHM 1/10 W 5% 1608 R/TP
		R211	ORJ5102D677	51K OHM 1/10 W 5% 1608 R/TP
		R213	ORJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R214	ORJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R218	ORJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R220	ORJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R237	ORJ0682D677	68 OHM 1/10 W 5% 1608 R/TP
		R238	ORJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R239	ORJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R240	ORJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R241	ORJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R244	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R245	ORJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R246	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R247	ORJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R248	ORJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R249	ORJ0752D677	75 OHM 1/10 W 5% 1608 R/TP

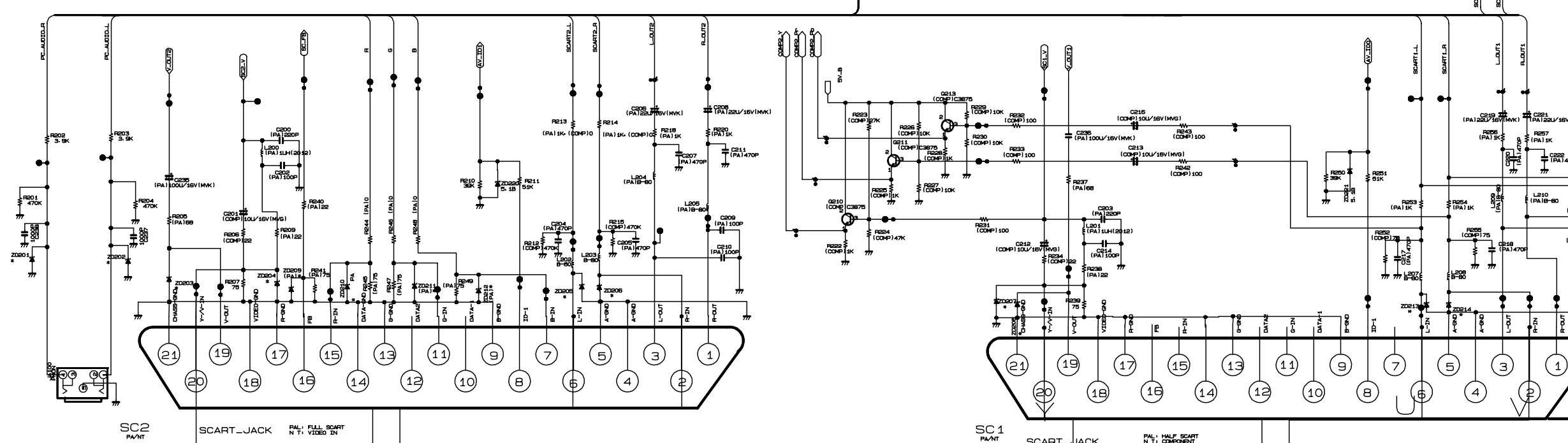
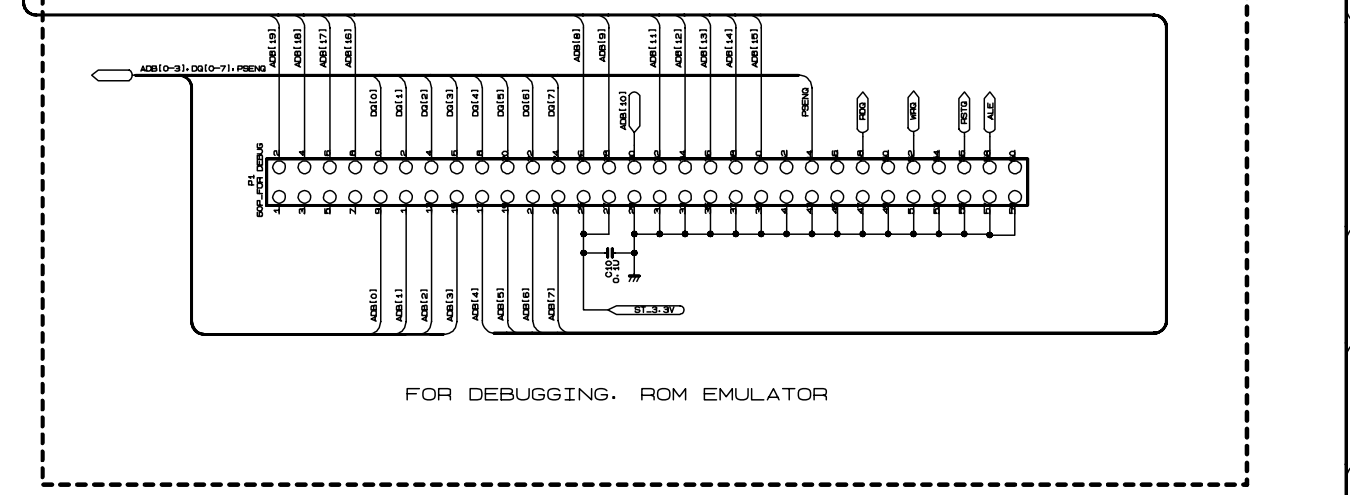
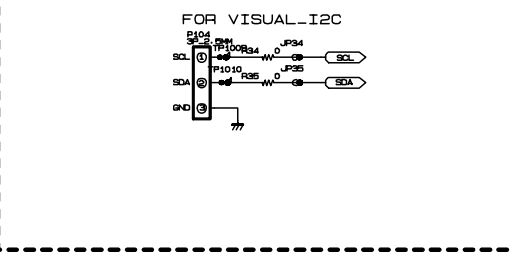
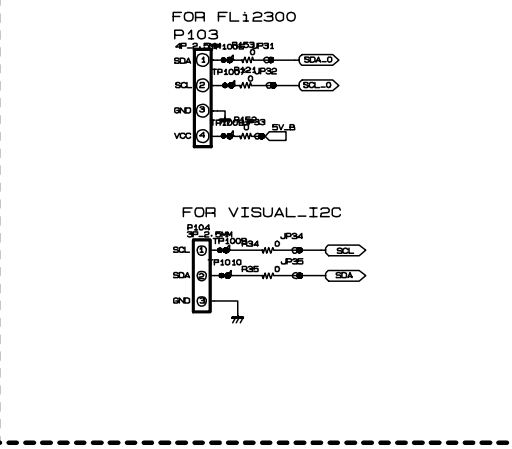
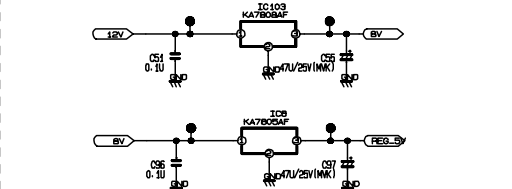
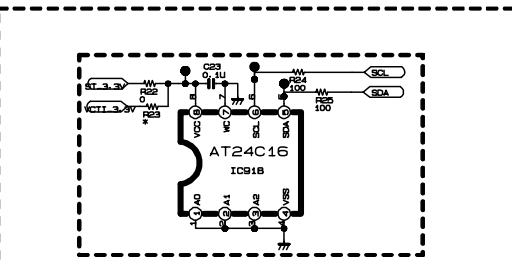
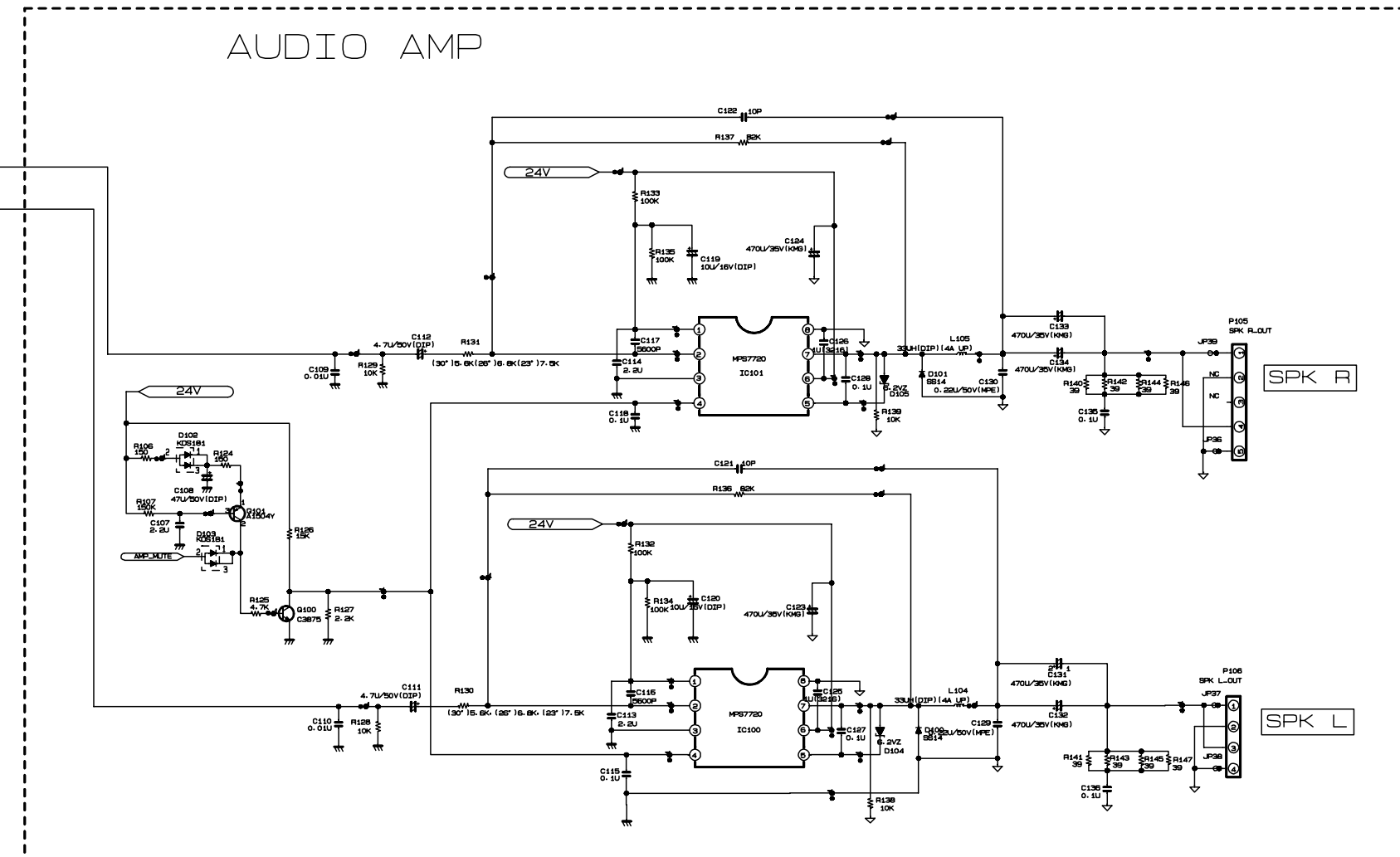
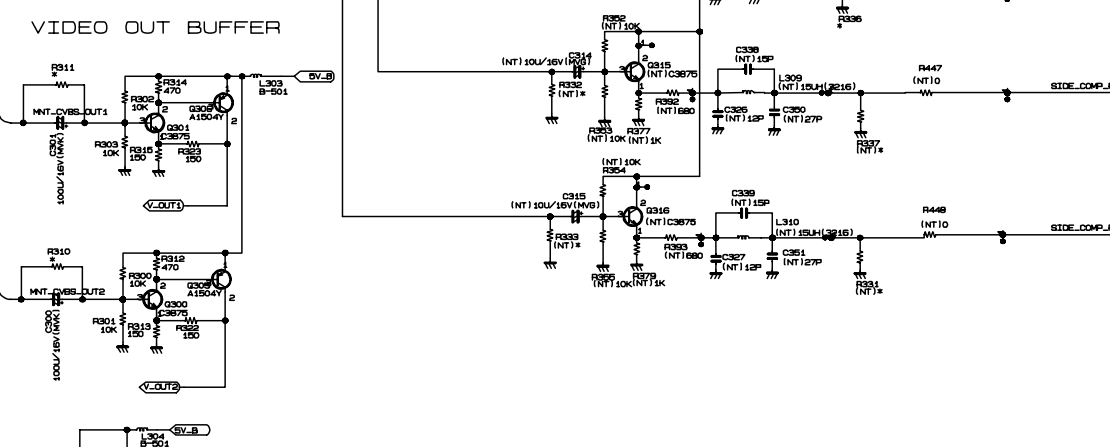
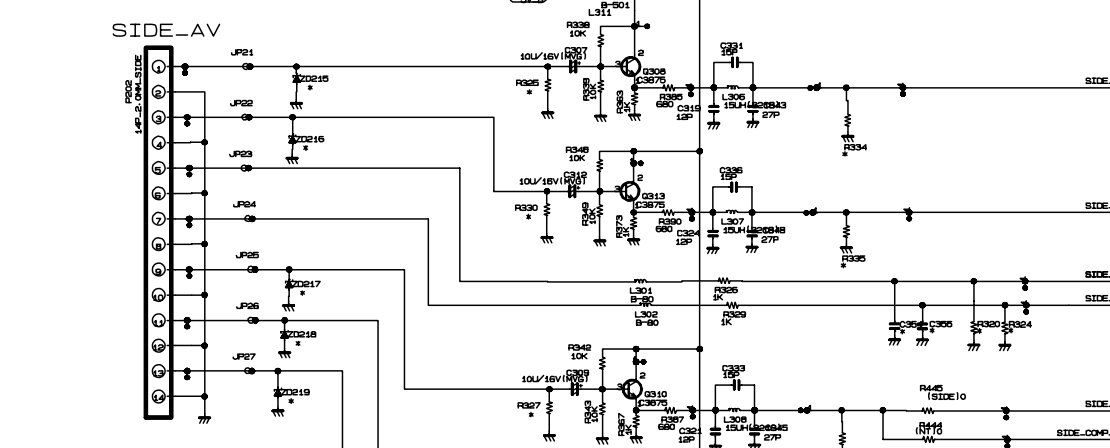
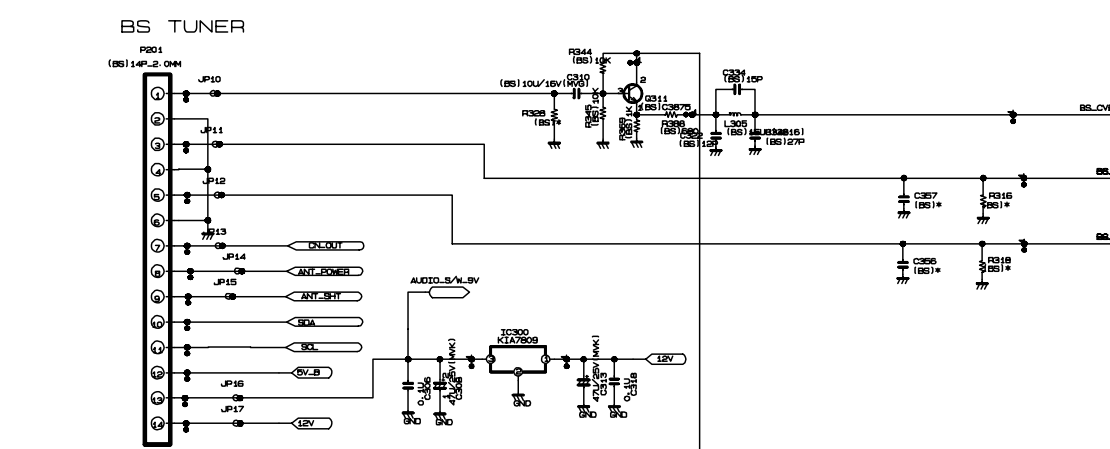
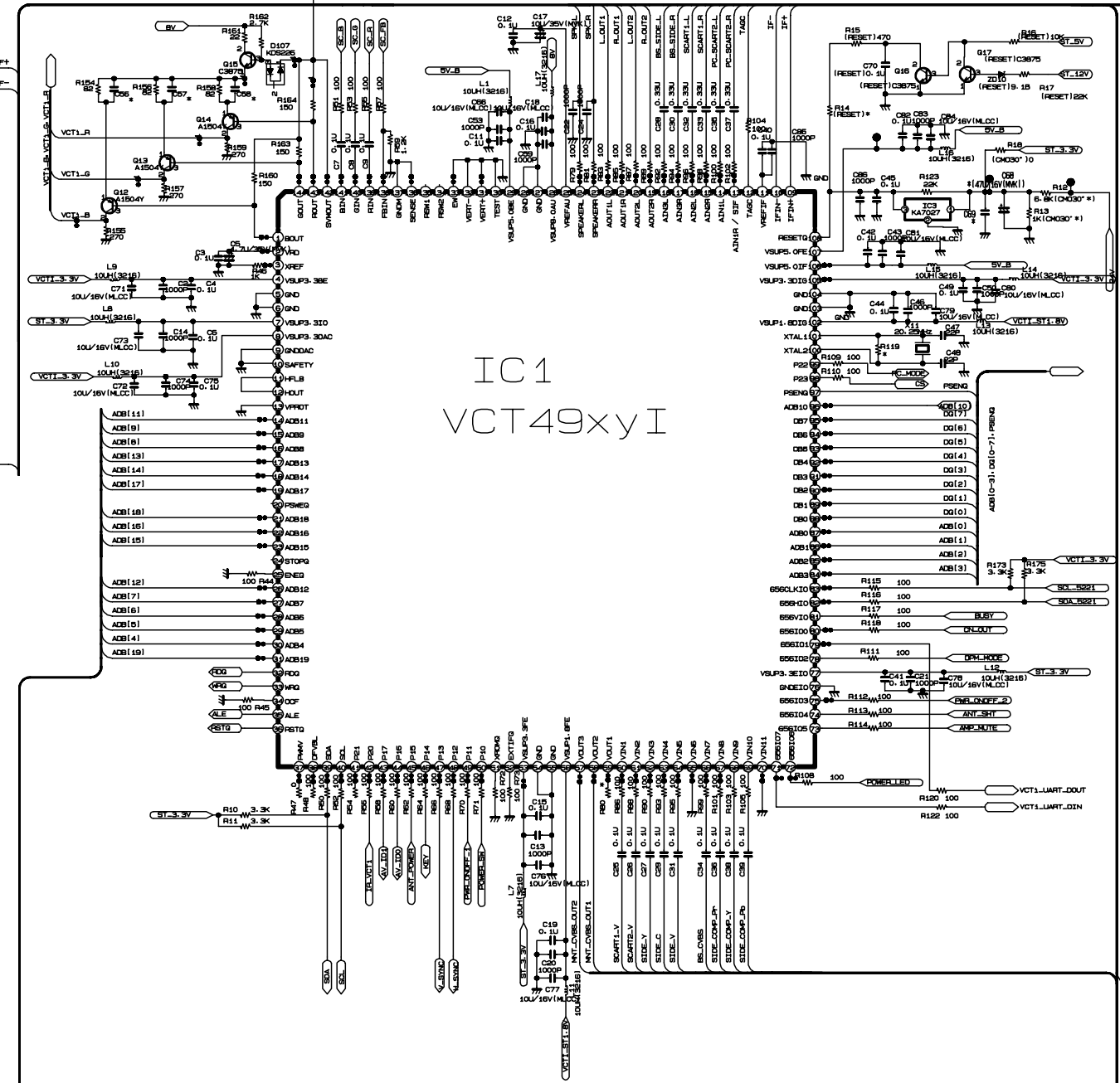
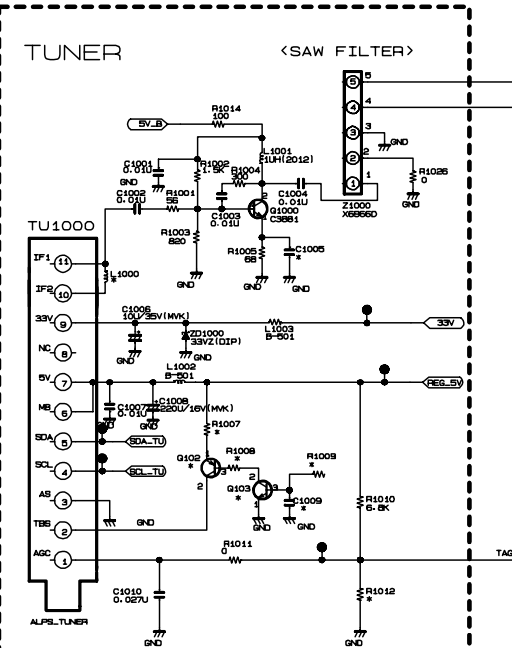
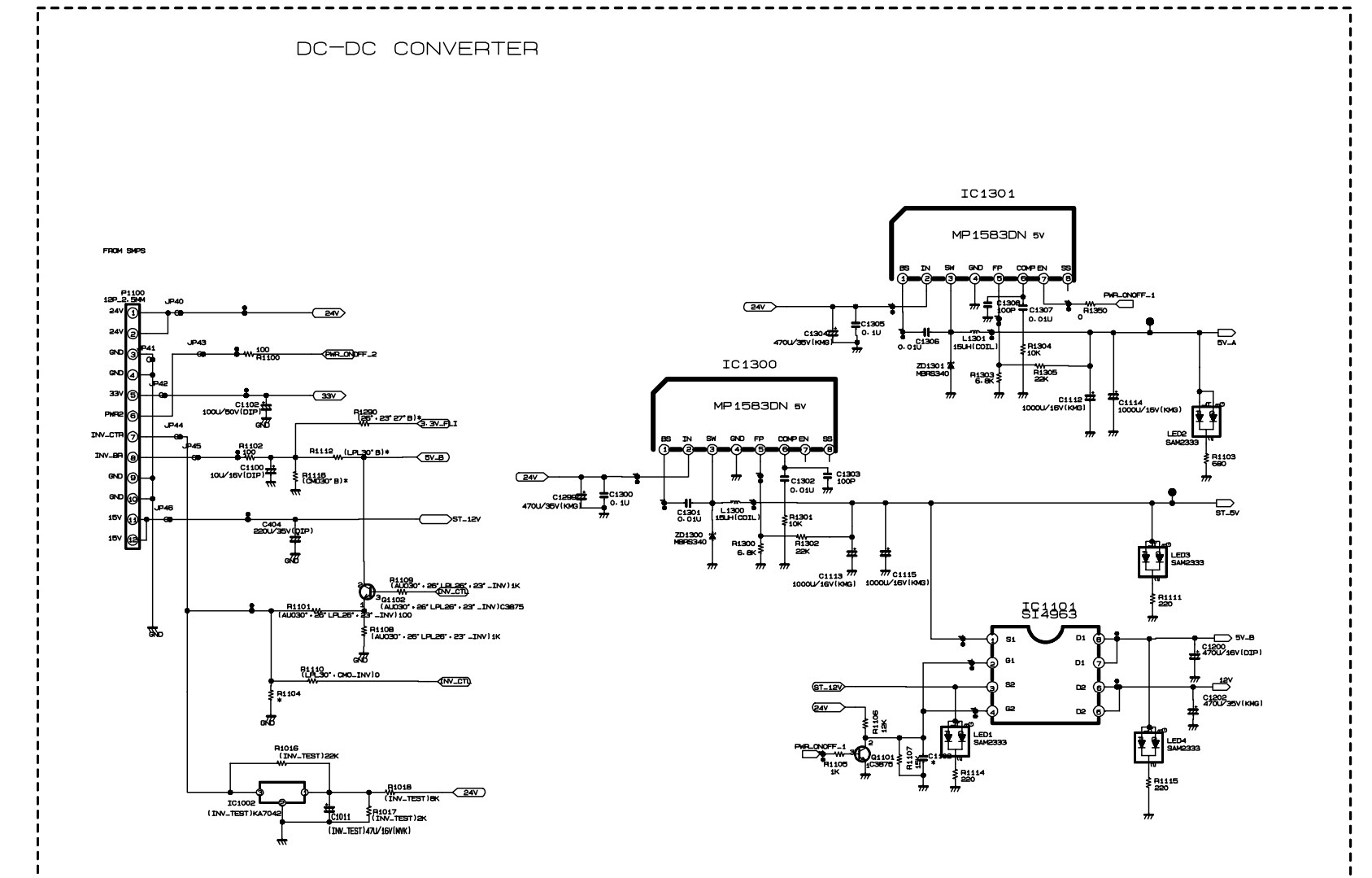
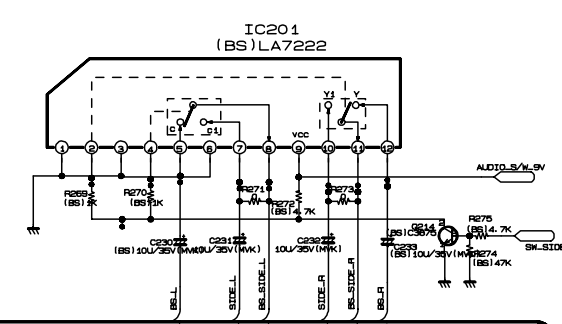
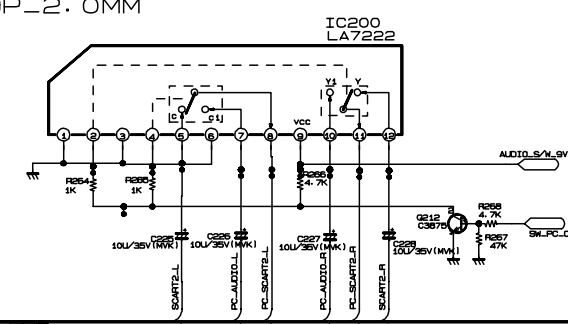
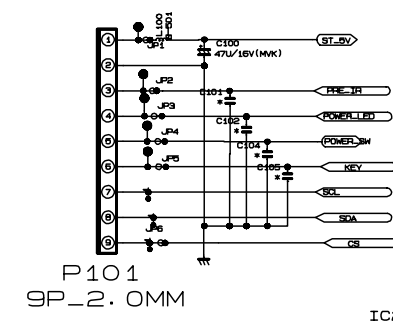
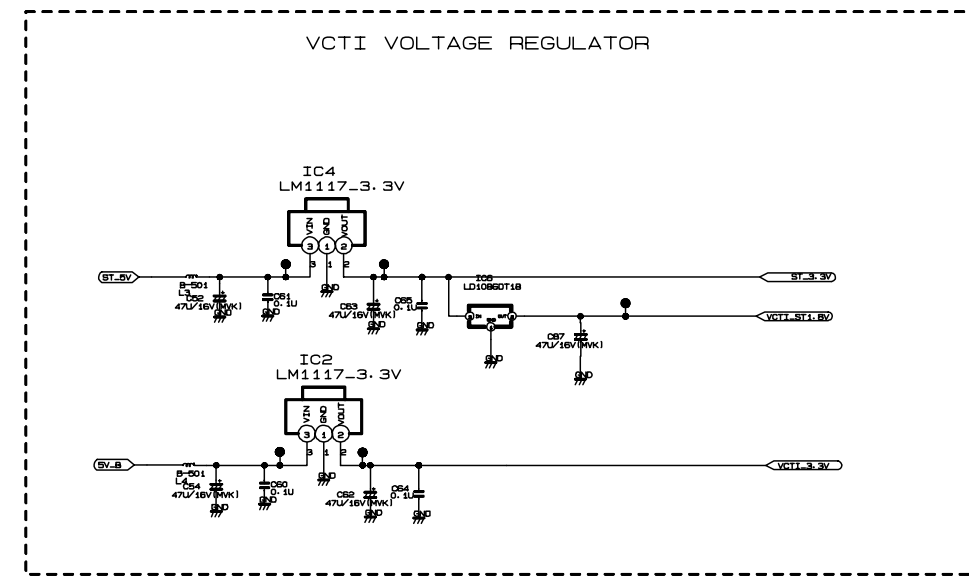
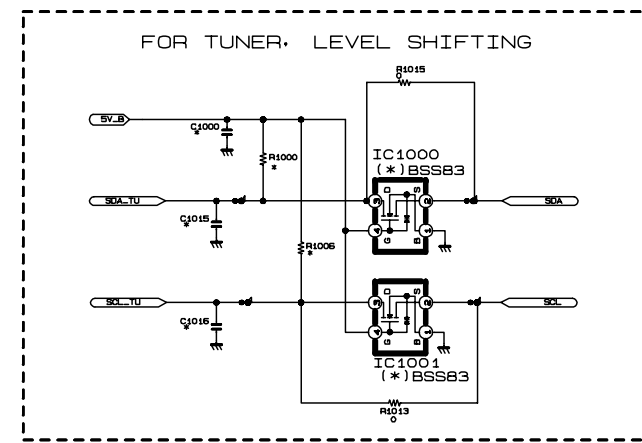


DATE: 2004. 10. 28.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R250	0RJ3902D677	39K OHM 1/10 W 5% 1608 R/TP
		R251	0RJ5102D677	51K OHM 1/10 W 5% 1608 R/TP
		R253	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP
		R254	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP
		R256	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R257	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R303	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R317	0RJ2700D677	270 OHM 1/10 W 5% 1608 R/TP
		R319	0RJ2700D677	270 OHM 1/10 W 5% 1608 R/TP
		R321	0RJ2700D677	270 OHM 1/10 W 5% 1608 R/TP
		R323	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R326	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R329	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R34	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R35	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R356	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R357	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R358	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R359	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R385	0RJ6800D677	680 OHM 1/10 W 5% 1608 R/TP
		R387	0RJ6800D677	680 OHM 1/10 W 5% 1608 R/TP
		R390	0RJ6800D677	680 OHM 1/10 W 5% 1608 R/TP
		R392	0RJ6800D677	680 OHM 1/10 W 5% 1608 R/TP
		R393	0RJ6800D677	680 OHM 1/10 W 5% 1608 R/TP
		R444	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R445	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R447	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R448	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R47	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R48	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R50	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R500	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R5002	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R501	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R5013	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R5014	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R5015	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R5016	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R5017	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R5020	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R5021	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R504	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R51	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R514	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R515	0RJ4703D677	470K OHM 1/10 W 5% 1608 R/TP
		R518	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R52	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R521	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R522	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R523	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R524	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R525	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R526	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R528	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R529	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R53	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R533	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R534	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R54	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R55	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R56	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R57	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP

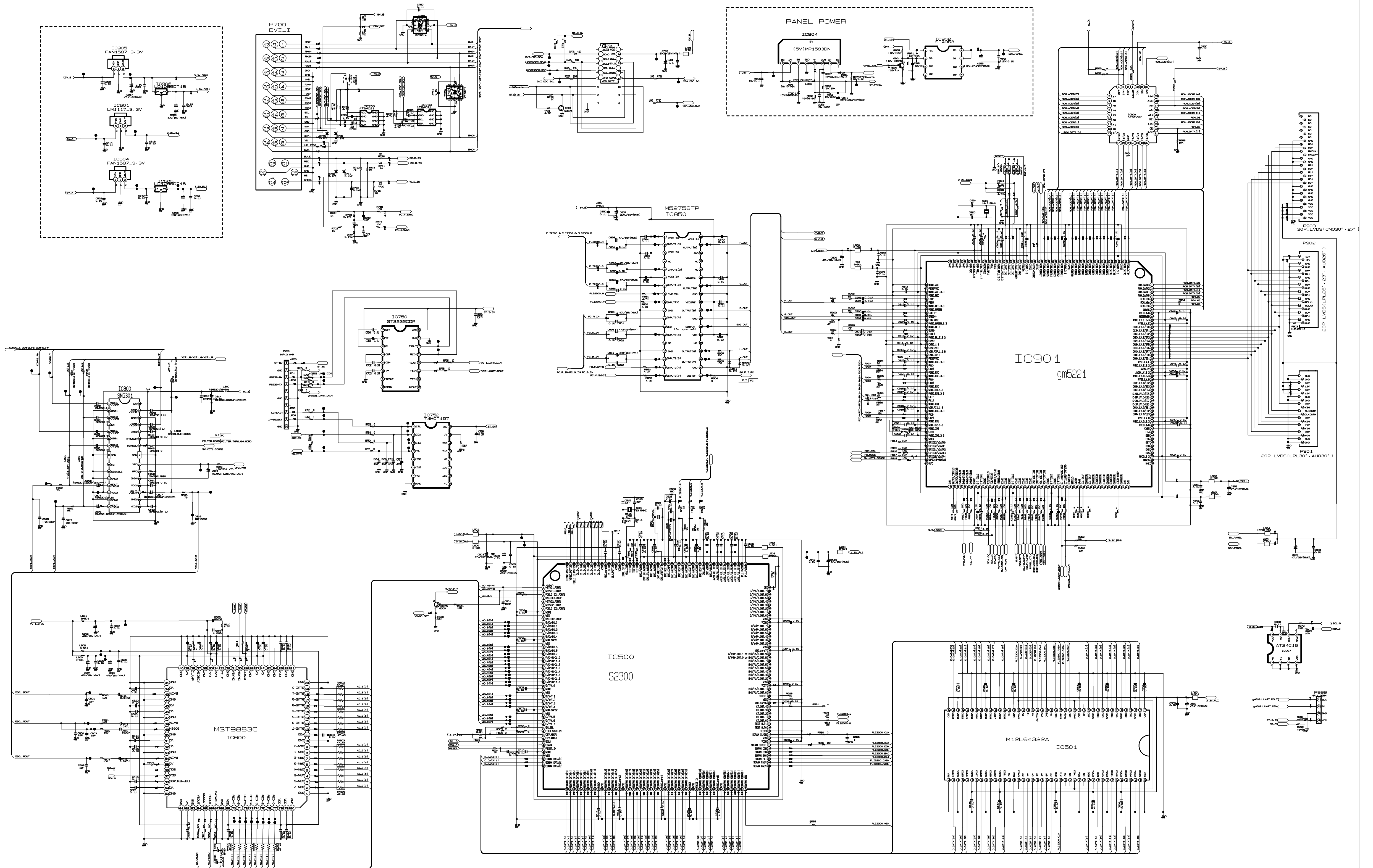
DATE: 2004. 10. 28.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R58	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R59	0RJ1211D477	1.21K OHM 1/10 W 1% 1608 R/T
		R60	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R600	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R601	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R602	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R603	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R604	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R606	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R608	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R609	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R62	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R64	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R66	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R68	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R70	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R701	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R702	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R706	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R71	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R711	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R717	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R718	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R72	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R720	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R721	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R722	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R727	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R728	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R73	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R731	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R739	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R740	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R751	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R754	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R757	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R758	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R759	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R79	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R800	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R801	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R807	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R808	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R81	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R852	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R853	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R855	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R856	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R86	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R88	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R90	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R901	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R902	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R904	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R906	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R908	0RJ0822D677	82 OHM 1/10 W 5% 1608 R/TP
		R909	0RJ0822D677	82 OHM 1/10 W 5% 1608 R/TP
		R910	0RJ0822D677	82 OHM 1/10 W 5% 1608 R/TP
		R913	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R914	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R915	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R916	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP

DATE: 2004. 10. 28.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R917	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R918	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R919	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R92	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R920	0RJ4990D477	499 OHM 1/10 W 1% 1608 R/TP
		R921	0RJ4990D477	499 OHM 1/10 W 1% 1608 R/TP
		R923	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R924	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R925	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R926	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R927	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R928	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R929	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R93	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R933	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R934	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R935	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R936	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R937	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R938	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R939	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R94	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R940	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R942	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R943	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R944	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R945	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R946	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R947	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R948	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R949	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R95	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R950	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R952	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R953	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R96	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R965	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R966	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R967	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R968	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R970	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R972	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R975	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R98	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R99	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
<b>OTHERs</b>				
		Z1000	6200QL3001Z	B39361-X6966-D100 EPCOS ST
		C500	4920V00042B	NON 22*6MM NON IC401
		X11	6202VDT002E	SX-1SMD SUNNY RADIAL 2025000
		X500	6202VDT002J	SX-1 SUNNY 13.500000MHZ +/-
		X900	6202VDT002B	SX-1 SUNNY SC14.3MHZ +/- 30
		IC900	6620F00017A	CCSD-32T-SM WOYOUNG 32P PLC
		SC1	381-091C	UPJ-R1-019 UGCOM 21PIN W/SHI
		SC2	381-091C	UPJ-R1-019 UGCOM 21PIN W/SHI
		TU1000	6700VS0003A	TAEW-G051D LG INOTEK MULTI V
<b>CONTROL BOARD</b>				
		L1700	0LA0102K119	10UH K 2.3*3.4 TP
		R1700	0RN8200F409	820 1/6W 1% TA52

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R1701	0RN6200F409	620 1/6W 1% TA52
		R1702	0RN5100F409	510 1/6W 1 TA52
		R1703	0RN4300F409	430 OHM 1/6 W 1.00% TA52
		R1704	0RN3300F409	330 1/6W 1% TA52
		R1705	0RN2700F409	270 1/6W 1% TA52
		R1706	0RN2701F409	2.7K OHM 1/6 W 1.00% TA52
		SW1700	140-313A	TACT 2LEAD 100G(TA) LG C&D N
		SW1701	140-313A	TACT 2LEAD 100G(TA) LG C&D N
		SW1702	140-313A	TACT 2LEAD 100G(TA) LG C&D N
		SW1703	140-313A	TACT 2LEAD 100G(TA) LG C&D N
		SW1704	140-313A	TACT 2LEAD 100G(TA) LG C&D N
		SW1705	140-313A	TACT 2LEAD 100G(TA) LG C&D N
		SW1706	140-313A	TACT 2LEAD 100G(TA) LG C&D N
<b>IR BOARD</b>				
		C1500	0CN1040K949	0.1M 50V Z F TA52
		L1500	0LA0102K119	10UH K 2.3*3.4 TP
		IR1500	6726TV0001A	TSOP4838SO1 VISHAY 38.0KHZ H
<b>LED &amp; P/SW BOARD</b>				
		C1600	0CN1040K949	0.1M 50V Z F TA52
		L1600	0LA0102K119	10UH K 2.3*3.4 TP
		Q1601	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO
		Q1602	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO
		Q1603	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO
		R1600	0RD3301Q609	3.30K 1/4W(3 5% TA52
		R1601	0RD2701Q609	2.70K 1/4W(3 5% TA52
		R1602	0RD2700Q609	270 1/4W(3 5% TA52
		R1603	0RD1001Q609	1K 1/4W(3 5% TA52
		R1604	0RD1001Q609	1K 1/4W(3 5% TA52
		R1605	0RD1001Q609	1K 1/4W(3 5% TA52
		R1606	0RD1500Q609	150 1/4W(3 5% TA52
		SW1600	140-313A	TACT 2LEAD 100G(TA) LG C&D N
		LED1600	0DLBE0128AA	BRIGHT LED ELECTRONICS BL-BU
<b>VIDEO BOARD</b>				
		C2006	0CN4710K519	470P 50V K B TA52
		C2007	0CN4710K519	470P 50V K B TA52
		R2001	0RD0752Q609	75 1/4W(3 5% TA52
		R2002	0RD0752Q609	75 1/4W(3 5% TA52
		R2003	0RD0752Q609	75 1/4W(3 5% TA52
		R2004	0RD0752Q609	75 1/4W(3 5% TA52
		R2005	0RD0752Q609	75 1/4W(3 5% TA52
		R2006	0RD4703Q609	470K 1/4W(3 5% TA52
		R2007	0RD4703Q609	470K 1/4W(3 5% TA52



CAUTION !!  
PCB LAYOUT





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