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# LCD TV

# SERVICE MANUAL

**CHASSIS : ML-051B**

**FACTORY NAME : 32LB1R-ZE/37LB1R-ZE**

**MODEL : 32LB1R/37LB1R**

## **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 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.

### 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.

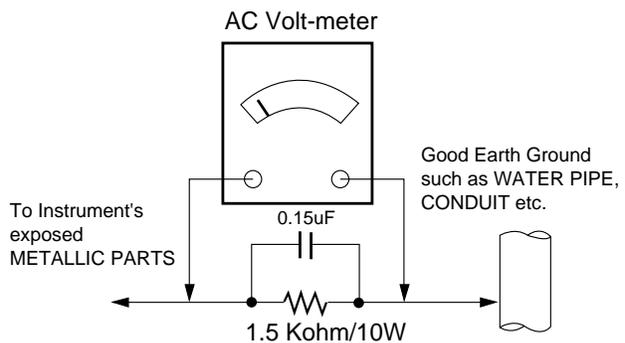
Connect 1.5K/10watt resistor in parallel with a 0.15uF capacitor between a known good earth ground (Water Pipe, Conduit, etc.) and the exposed metallic parts.

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 or 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.General Specification(TV)

No	Item	Specification	Remark
1.	Video input applicable system	PAL-D/K, B/G, I, NTSC-M, 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	(ZE/TE) EU/Non-EU (PAL Market)
		6) PAL-N/M 7) NTSC M	6),7) South America Market 7) Except South America NTSC Market (ME)
3.	RF Input Channel	VHF : E2 ~ E12 UHF : E21 ~ E69 CATV : S1 ~ S20 HYPER : S21~ S47	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 ~ 240 V/50Hz, 60Hz	
5.	Market	Worldwide	
6.	Picture Size	800.4mm	31.51inch(32LB1R)
		940.3mm	37.02 inch(37LB1R)
7.	Tuning System	FVS 100 program	PAL, 200 PR.(Option)
		FS	NTSC
8.	Operating Environment	1) Temp : 0 ~ 40 deg 2) Humidity : 10~90 %	
		3) Temp : -20 ~ 50 deg 4) Humidity : 10~90 %	
9.	Storage Environment	3) Temp : -20 ~ 50 deg 4) Humidity : 10~90 %	
10.	Display	LCD Module	LPL

## 2. General Specification

No	Item	Specification			Remark
1	Panel	32", 37" TFT WXGA LCD			
2	Frequency range	H : 31 ~ 61Khz V : 56 ~ 75Hz			PC 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 Area
	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	-	-	≤ 145W(32") ≤ 180W(37")	Green
	Stand by DPMS Mode	ON/OFF	OFF	≤ 3.0W ≤ 30W	Red Green
	Power off	-	-	-	*
6	LCD Module	Outline	32"	760.0x450.0x48.0(mm)	(H)x(V)x(D)
		Dimension	37"	877.0 x 516.8 x 55.5(mm)	
		Pixel Pitch	32"	0.1702 x 0.5107 x RGB(mm)	
			37"	0.200 x 0.600 x RGB	
		Pixel Format	1366 horiz. By 768 vert. Pixels RGB strip arrangement		
		Coating	Hard coating(3H), Anti-glare reatment of the front polarizer,		
		Back Light	32"	20EEFL	
			37"	16CCFL	

### 3.Optical Feature(LCD Module)

No.	Item	Specification				Remark		
			Min	Typ	Max			
1	Viewing Angle<CR ≥10>	R/L, U/D		176, 176				
2	Luminance	Luminance(cd/㎡)		500				
		Variation			1.3	Typical		
3	Contrast Ratio	CR	400	600		MAX/MIN		
		CR <sub>b</sub> (With AI)	800	1200		ALL white/All back		
4	CIE Color Coordinates	WHITE	W <sub>x</sub>	Typ.	0.285	Typ. -0.03	Typ. +0.03	LPL
			W <sub>y</sub>	Typ.				
		RED	R	Typ.	0.640			
			R <sub>y</sub>	Typ.	0.341			
		GREEN	G <sub>x</sub>	Typ.	0.287			
			G <sub>y</sub>	Typ.	0.610			
		BLUE	B <sub>x</sub>	Typ.	0.146			
			B <sub>y</sub>	Typ.	0.069			

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

No	Specification				Proposed
	Resolution	H-freq(kHz)	V-freq(Hz)		
1.	640x480	15.73	60	SDTV, DVD 480i	ZE, TE, ME
2.	640x480	15.63	59.94	SDTV, DVD 480i	ZE, TE, ME
3.	720x480	31.47	59.94	EDTV 480p	TE, ME
4.	720x576	15.625	50.00	SDTV, DVD 625 Line	ZE, TE, ME
5.	720x576	31.25	50.00	HDTV 576p	TE, ME
6.	1280x720	45.00	60.00	HDTV 720p	TE, ME
7.	1280x720	44.96	59.94	HDTV 720p	TE, ME
8.	1920x1080	31.25	50.00	HDTV 1080i 50Hz (AU Ver.)	TE, ME
9.	1920x1080	33.75	60.00	HDTV 1080i 60Hz (ATSC)	TE, ME
10.	1920x1080	33.72	59.94	HDTV 1080i 59.94Hz	TE, ME

### 5. PC INPUT Mode Table

No	Resolution	H-freq(kHz)	V-freq.(Hz)	Pixel clock(MHz)	Proposed
	Analog RGB, Digital RGB				
1	720x400	31.468	70.8	28.321	
2	640x480	31.469	59.94	25.17	VESA
		37.684	75.00	31.5	VESA
3	800x600	37.879	60.31	40.00	VESA
		46.875	75	49.5	VESA
4	832x624	49.725	74.55	57.283	
5	1024x768	48.363	60.00	65.00	VESA(XGA)
		56.47	70.00	75.00	VESA(XGA)
		60.123	75.029	78.75	VESA(XGA)
6	1280x768	47.776	59.870	79.50	VESA(WXGA)
7	1360x768	47.720	59.799	84.75	VESA(WXGA)
8	1366x768	47.720	59.799	84.75	Supported

## 6. HDMI INPUT Mode Table

No	Resolution	H-freq(kHz)	V-freq.(Hz)	Pixel clock(MHz)	Proposed
	Analog RGB, Digital RGB				
1	720x400	31.468	70.8	28.321	
2	640x480	31.469	59.94	25.17	VESA
		37.684	75.00	31.5	VESA
3	800x600	37.879	60.31	40.00	VESA
		46.875	75	49.5	VESA
4	832x624	49.725	74.55	57.283	
5	1024x768	48.363	60.00	65.00	VESA(XGA)
		56.47	70.00	75.00	VESA(XGA)
		60.123	75.029	78.75	VESA(XGA)
6	1280x768	47.776	59.870	79.50	VESA(WXGA)
7	1360x768	47.720	59.799	84.75	VESA(WXGA)
8	1366x768	47.720	59.799	84.75	Supported

## 7. Mechanical specification

<Table 1> Scart Arrangement 1.(Full Scart)

Pin	Signal	Signal Level	Impedance
1	Audio Output B (right)	0.5 Vrms	< 1 k $\Omega$
2	Audio Input B (right)	0.5 Vrms	> 10 k $\Omega$
3	Audio Output A (left)	0.5 Vrms	< 1 k $\Omega$
4	Ground (audio)	-	-
5	Ground (blue)	-	-
6	Audio input A (left)	0.5 Vrms	> 10 k $\Omega$
7	Blue input	0.7 V	75 $\Omega$
8	Function Select (AV control)	High (9.5 - 12V) - AV Mode Mid (5 - 8V) - Wide Screen Low (0 - 2V) - TV Mode	> 10 k $\Omega$
9	Ground (Green)	-	-
10	Comms Data 2		
11	Green input	0.7 V	75 $\Omega$
12	Comms Data 1		
13	Ground (Red)	-	-
14	Ground (Blanking)	-	-
15	Red input	0.7 V	75 $\Omega$
16	RGB Switching Control	High (1 - 3V) - RGB Low (0 - 0.4V) - Composite	75 $\Omega$
17	Ground (Video input & Output)	-	-
18	Ground (RGB Switching Control)	-	-
19	Video output (Composite)	1V including sync	75 $\Omega$
20	Video input (Composite)	1V including sync	75 $\Omega$
21	Common ground (Shield)	-	-

**<Table 2> Scart Arrangement 2.(Half Scart)**

Pin	Signal	Signal Level	Impedance
1	Audio Output B (right)	0.5 Vrms	< 1 KΩ
2	Audio Input B (right)	0.5 Vrms	> 10 KΩ
3	Audio Output A (left)	0.5 Vrms	< 1 KΩ
4	Ground (audio)	-	-
5	Ground (blue)	-	-
6	Audio input A (left)	0.5 Vrms	> 10 KΩ
7	-	-	-
8	Function Select (AV control)	High (9.5 - 12V) - AV Mode Mid (5 - 8V) - Wide Screen Low (0 - 2V) - TV Mode	> 10 KΩ
9	Ground (Green)	-	-
10	Comms Data 2		
11	-	-	-
12	Comms Data 1		
13	Ground (Red)	-	-
14	Ground (Blanking)	-	-
15	Red input		
16	-	-	-
17	Ground (Video input & Output)	-	-
18	-	-	-
19	Video output (Composite)	1V including sync	75 Ω
20	Video input (Composite)	1V including sync	75 Ω
21	Common ground (Shield)	-	-

**8. Mechanical specification**

**<32LB1R>**

No,	Item	Content			Remark	
1	Product Dimenson	Width(W)	Length(D)	Height(H)		
		Before Packing	911.4	259	596	With Stand
		After Packing	1018	340	741	
2	Product Weight	Only SET	22.6Kg		With Stand	
		With Box	27.1kg			

**<37LB1R>**

No,	Item	Content			Remark	
1	Product Dimenson	Width(W)	Length(D)	Height(H)		
		Before Packing	1061	675	269	With Stand
		After Packing	1160	800	348	
2	Product Weight	Only SET	28.9Kg		With Stand	
		With Box	33.8kg			

# ADJUSTMENT INSTRUCTION

## 1. Application Range

This spec. sheet is applied to all of the ML-051B LB chassis (TORNADO) manufactured at LG TV Plant.

## 2. Specification.

- 2.1 Because this is not a hot chassis, it is not necessary to use an isolation transformer. However, the use of isolation transformer will help to protect test instruments.
- 2.2 Adjustment must be done in the correct sequence.
- 2.3 The adjustment must be performed at  $25 \pm 5^\circ\text{C}$  temperature and  $65 \pm 10\%$  relative humidity if there is no specified designation.
- 2.4 The input voltage of the receiver must be kept between 100~220V, 50/60Hz.
- 2.5 Before adjustment, execute Heat-Run for 30 minutes at RF no signal.

## 3. EDID

\* Caution

- Use the proper signal cable for EDID Download

Analogue EDID: Pin3 exists

**Caution: - Never connect HDMI & DVI-D & DVI-A Cable at the same time.**

No	Item	Content	Hexadecimal
1	Manufacturer ID	GSM	1E6D
2	Version	Digital 1	01
3	Revision	Digital 3	03

### 3.1 Data

#### 3.1.1 ANALOG(128Bytes)

#### 3.2.2 DIGITAL(128Bytes)

	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	<b>a</b>	<b>b</b>				
10	<b>c</b>	01	03	01	46	27	78	EA	D9	B0	A3	57	49	9C	25	
20	11	49	4B	A5	6E	80	31	40	01	01	01	01	45	40	01	01
30	61	40	01	01	01	01	1B	21	50	A0	51	00	1E	30	48	88
40	35	00	BC	88	21	00	00	1C	4E	1F	00	80	51	00	1E	30
50	40	80	37	00	BC	88	21	00	00	18	00	00	00	FD	00	38
60	4B	1F	3D	09	00	0A	20	20	20	20	20	20	20	20	00	FC
70	<b>d</b>										0A	20	20	20	00	<b>e</b>

### 3.2.3 EDID FOR HDMI(256Bytes)

	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	<b>a</b>	<b>b</b>					
10	<b>c</b>	01	03	80	46	27	78	EA	D9	B0	A3	57	49	9C	25		
20	11	49	4B	A5	6E	80	31	40	01	01	01	01	45	40	01	01	
30	61	40	01	01	01	01	1B	21	50	A0	51	00	1E	30	48	88	
40	35	00	BC	88	21	00	00	1C	4E	1F	00	80	51	00	1E	30	
50	40	80	37	00	BC	88	21	00	00	18	00	00	00	FC	00	52	
60	<b>d</b>										0A	20	20	20	00	00	FD
70	00	38	4B	1F	3D	09	00	0A	20	20	20	20	20	20	01	<b>e</b>	

=> Detail EDID Options are below(a, b, c, d, e)

a. Product ID

Model name	Product ID	Product ID		
		Dec	Hex	EDID Table
32LB1R	30047(A)	30047(A)	755F	5F75
	30048(A)	30048(D)	7560	6075
37LB1R	30049(A)	30049(A)	7561	6175
	30050(D)	30050(D)	7562	6275
42LB1R	40015(A)	40015(A)	9C4F	4F9C
	40016(D)	40016(D)	9C50	509C

b. Serial No : Controlled on production line

c. Month, Year : Controlled on production line

d. Model Name(Hex) :

Model Name	Model Name(HEX)
32LB1R	33324C4231522D5A45
37LB1R	33374C4231522D5A45
42LB1R	34324C4231522D5A45

e. Checksum: ChangeSable by total EDID data

## 4. ADC Calibration

### 4.1 Adjustment of RF/AV/S-VIDEO

\* Required Equipment

- Remote controller for adjustment
- MSPG-925F Pattern Generator (Which has Video Signal: 75% Color Bar Pattern shown in Fig. 1)

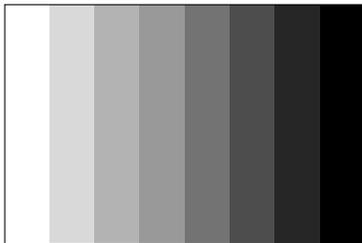
=> Model: 202 / Pattern: 32 (PAL : ZE, TE)  
 Model: 207 / Pattern : 32 (NTSC-J : ME)

Case1) ZE and TE model use PAL-BGDHI (composite signal)

Case2) ME model use NTSC-J pattern (composite signal)

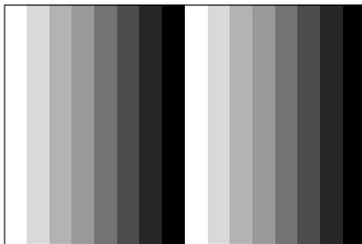
#### 4.1.1 Method of Auto RF/AV/S-VIDEO Color Balance.

- 1) Input the Video Signal: 75% Color Bar signal into AV3 (ZE), AV1(TE), VIDEO1(ME)
- 2) Set the PSM to Standard mode in the Picture menu.



[Fig.1]

- 3) Press ADJ key on R/C for adjustment.



- 4) Press the ►(Vol. +) key to operate the set, then it becomes automatically.
- 5) Auto-RGB OK means the adjustment is completed.

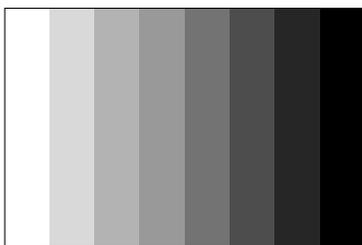
### 4.2 Adjustment of Component.

\* Required Equipments

- Remote controller for adjustment
- MSPG-925F Pattern Generator->Model: 215 / Pattern: 33

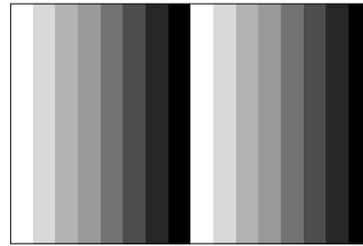
#### 4.2.1 Method of Auto Component Color Balance

- 1) Input the Component 720p 100% Color Bar(MSPG-925F model:215, pattern:33) signal into Component.  
 (ZE : component , TE/ME : component 1 or 2)
- 2) Set the PSM to Standard mode in the Picture menu.



[Fig.2]

- 3) Press the ADJ key on R/C for adjustment.
- 4) Press the ►(Vol. +) key to operate the set , then it becomes automatically.



- 5) Auto-RGB OK means the adjustment is completed.

### 4.3 Adjustment of RGB

\* Required Equipments

- Remote controller for adjustment
- MSPG-925F Pattern Generator

#### 4.3.1 Method of Auto RGB Color Balance

- 1) Input the PC 1024x768@75Hz 1/2 Black & White Pattern(MSPG-925F model:39, pattern:18) into RGB.  
 (using D-sub to DVI-I cable)
- 2) Set the PSM to Standard mode in Picture menu.
- 3) Press the ADJ key on R/C for adjustment.



[Fig.3]

- 4) Press the ►(Vol. +) key operate To set , then it becomes automatically.



- 5) Auto-RGB OK means adjustment is completed.

**=> Before White-Balance, the AV ADC should be done.**

**(ZE : AV3, TE : AV, ME : VIDEO)**

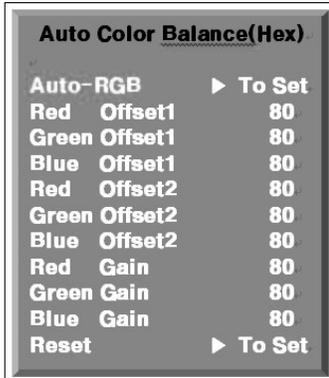
**Notice : Before White-Balance, change input mode**

- Move to AV3(ZE) or AV(TE) or VIDEO(ME) by using Remote controller.

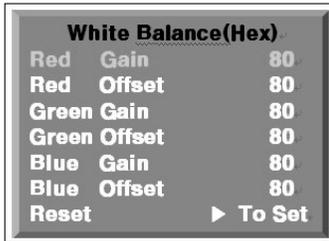
# 5. White Balance

## 5.1 Manual white Balance (AV)

- 1) Execute CA-110 Zero Calibration.
- 2) Execute the SET Heat Run for 30minutes
- 3) Push the ADJ Button then you can see the OSD



- 4) Push the ADJ Button again for White Balance mode



- 5) Adjust High light with R/B Gain/Offset(G Gain fix, G Offset fix)

## 5.2 Auto White Balance(AV)

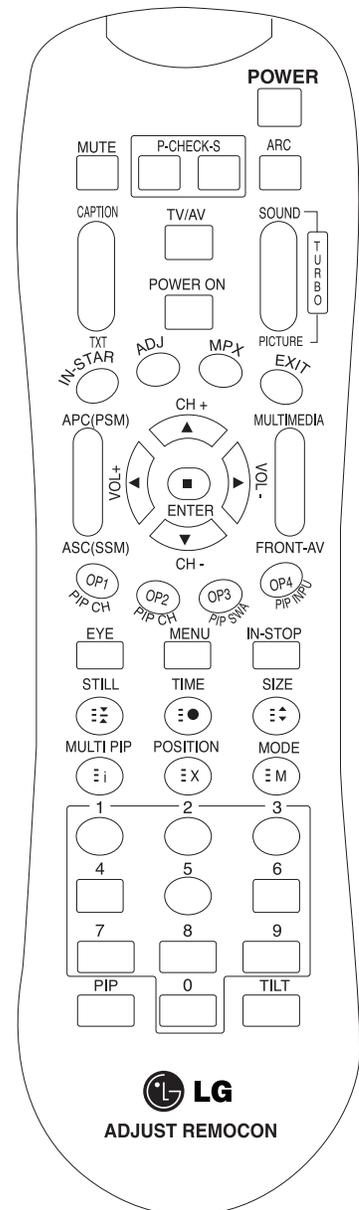
	Command1	Command2	Set ID	Data		Default Value			
				Min	Max	26	32	37	42
Input Select	XB	B	00	00h	90h				
R-Gain	J	A	00	00h	E0h	CE	D6	B8	D0
G-Gain	J	B	00	00h	E0h	BD	BD	B1	BD
B-Gain	J	C	00	00h	E0h	B1	C5	BA	B4
R-Offset	J	D	00	00h	90h	81	81	80	80
G-Offset	J	E	00	00h	90h	80	80	80	80
B-Offset	J	F	00	00h	90h	7F	7F	7F	7E

## 6. Shipping Conditions

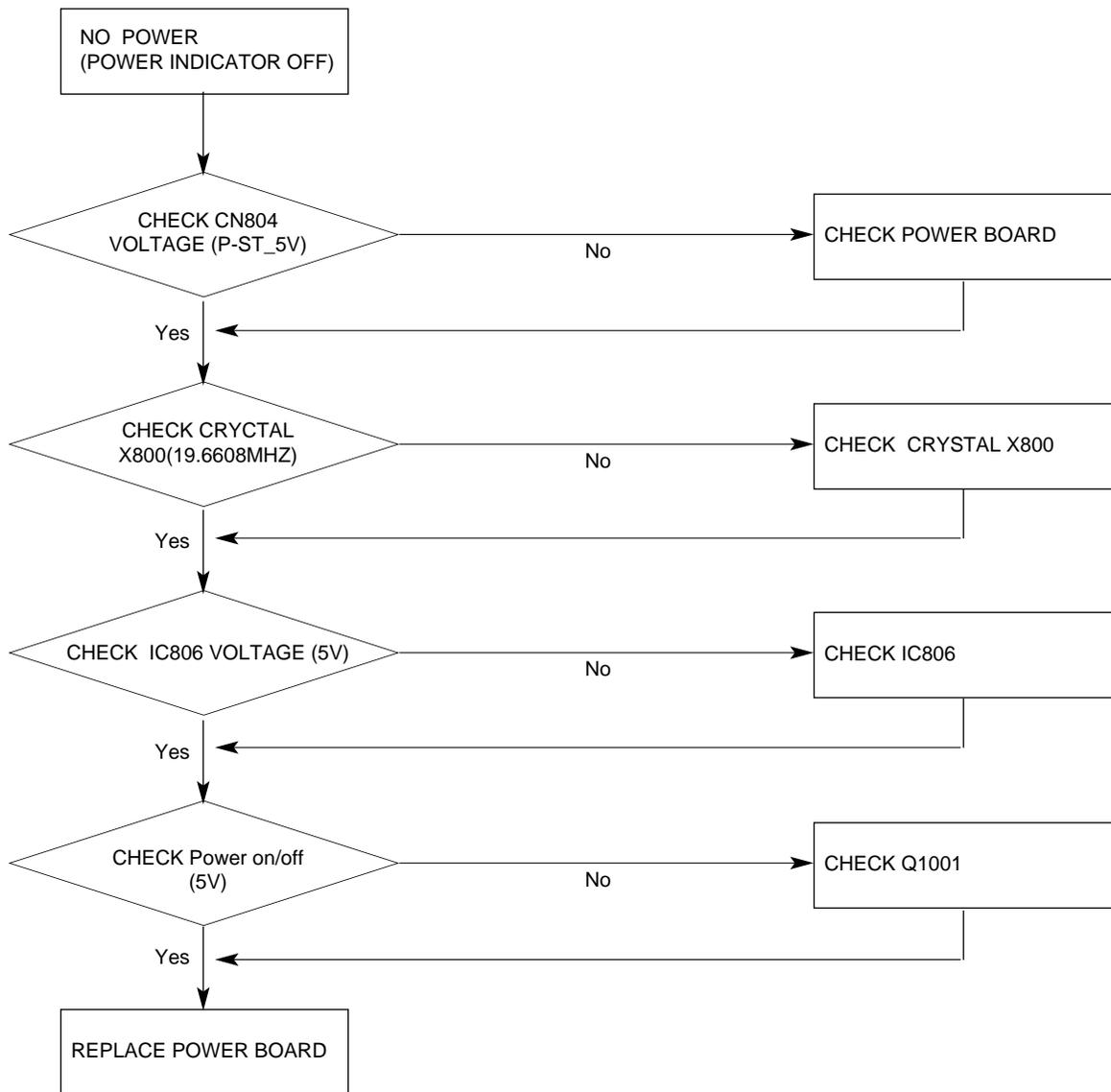
No	Item		Condition	Remark	
1	Power		Off		
2	Volume Level		30		
3	Main Picture Input		TV		
4	Main Last Channel		Pr 01		
5	Mute		Off		
6	ARC		16 : 9		
7	Station	Auto Program			
		Manual Program			
		Program Edit			
		Favorite Program	None		
8	Picture	PSM	Dynamic		
		Dynamic	Contrast	100	
			Brightness	45	
			Colour	50	
			Sharpness	50	
		CSM	Normal	ZE(TE)	
		XD	On		
		ACM	Fleshtone : 1		
Greentone : 1					
Bluetone : 1					
9	Sound	SSM	Flat		
		BBE	Off		
		AVL	Off		
		Balance	0		
		Treble	50		
		Bass	50		
		TV Speaker	On		
		10	Time	Clock	-- : --
Off time	Off				
On time	On				
Auto sleep	Off				
11	Special	Language	English	Area Management	
		Child Lock	Off		
		Set ID	1		
		XD Demo	To Start		
		Logo light	On		
		Index	On		
12	Screen	Auto config	Variable by each mode		
		Manual config			
		XGA Mode			
		ARC			
		Zoom +/-			
		Position			
		Cinema			
		NR			
Reset					

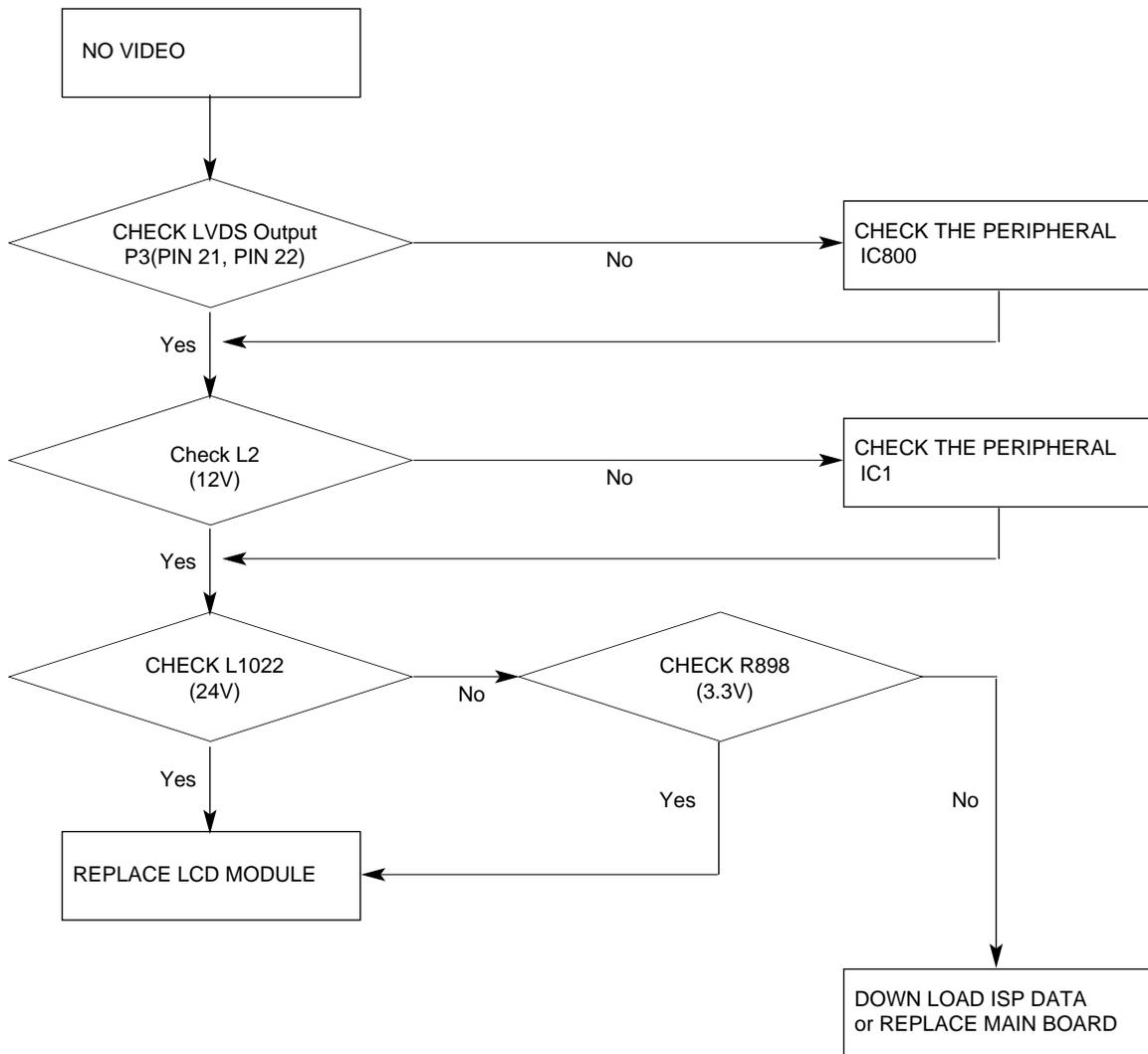
# SVC REMOCON

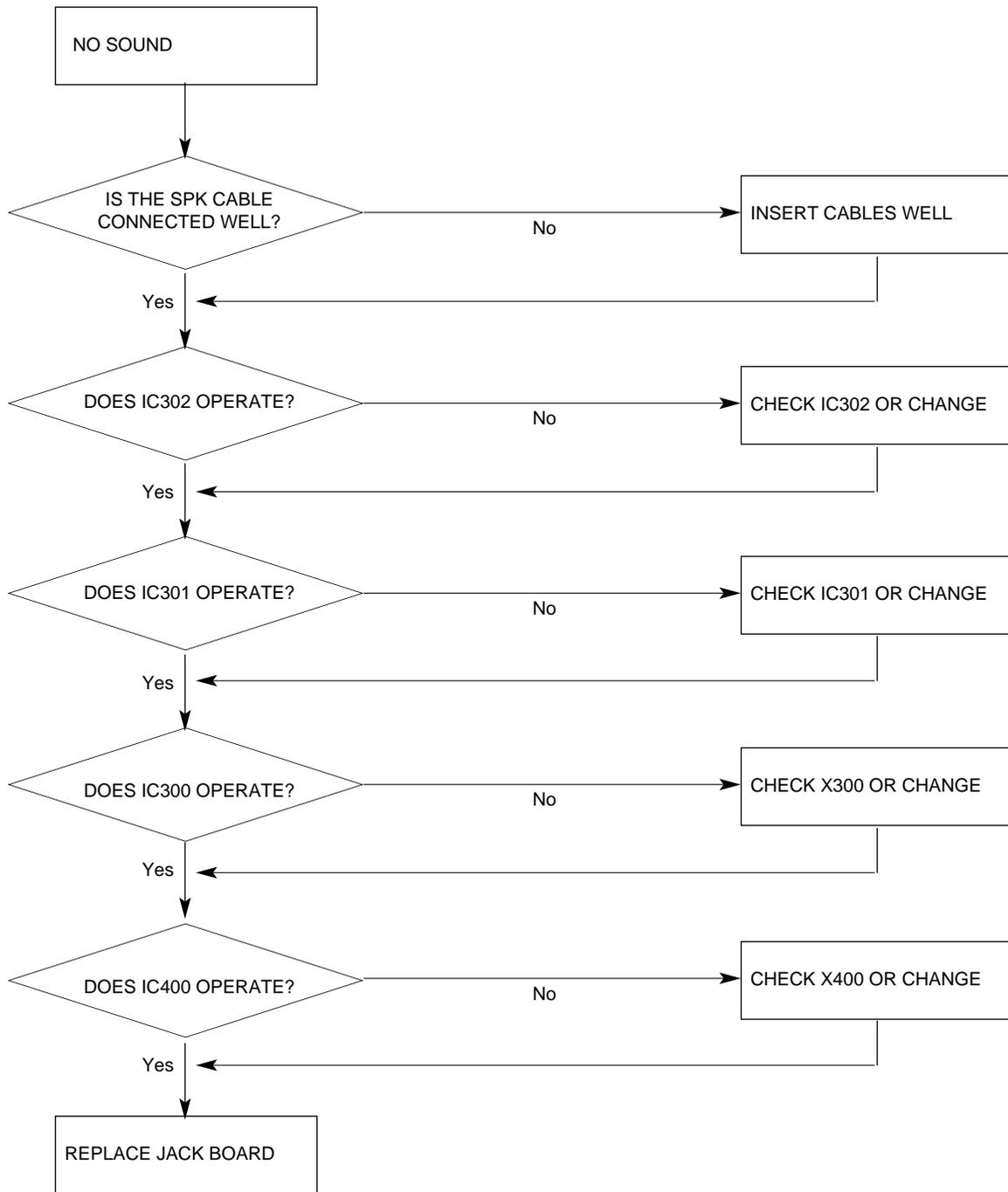
NO	KEY	FUNTION	REAMARK
1	POWER	To turn the TV on or off	
2	POWER ON	To turn the TV on automatically if the power is supplied to the TV. (Use the POWER key to deactivate): It should be deactivated when delivered.	
3	MUTE	To activate the mute function.	
4	P-CHECK	To check TV screen image easily.	Shortcut 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. 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)	Use the AV key to enter the screen W/B adjustment mode.
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.	



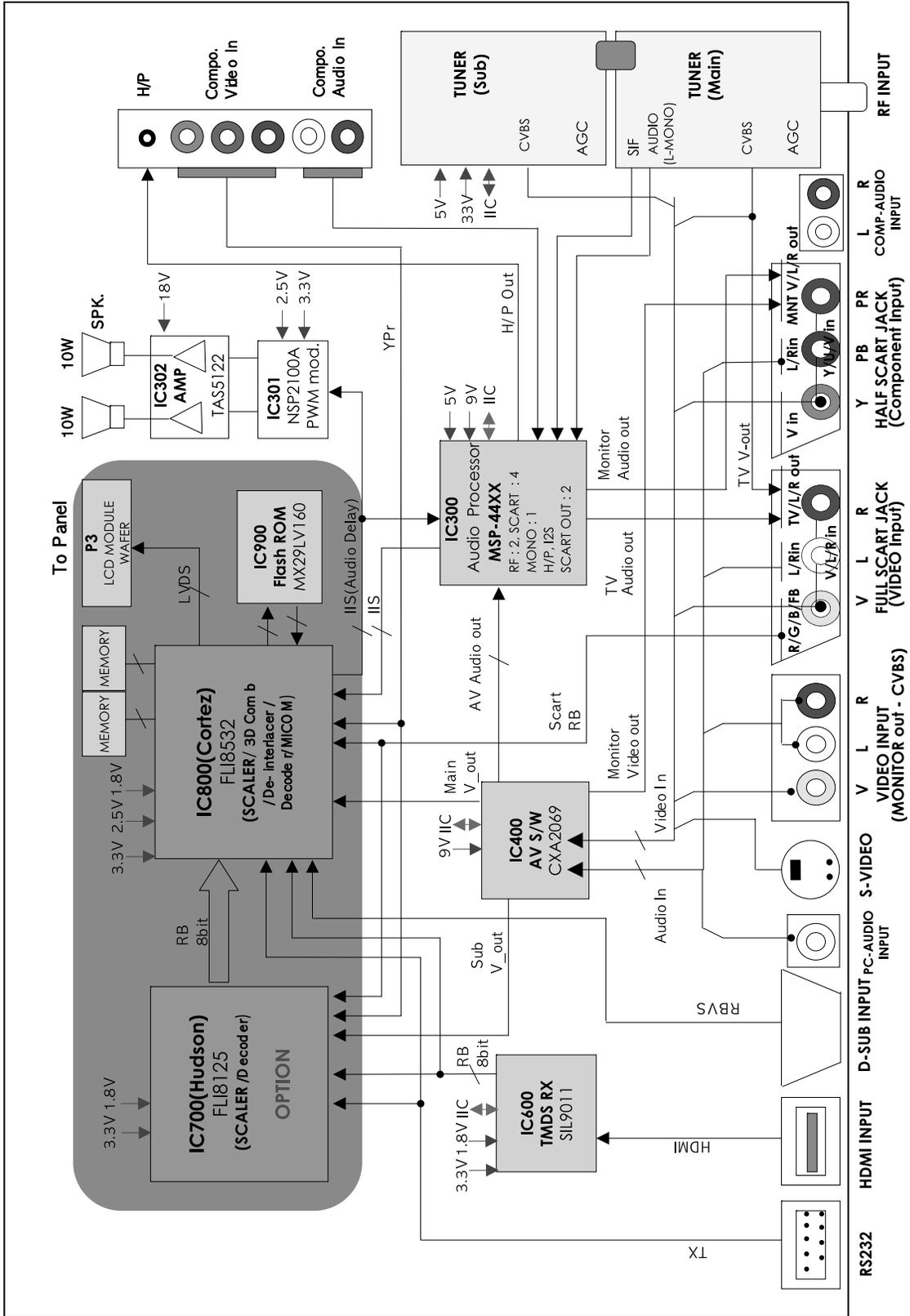
# TROUBLESHOOTING



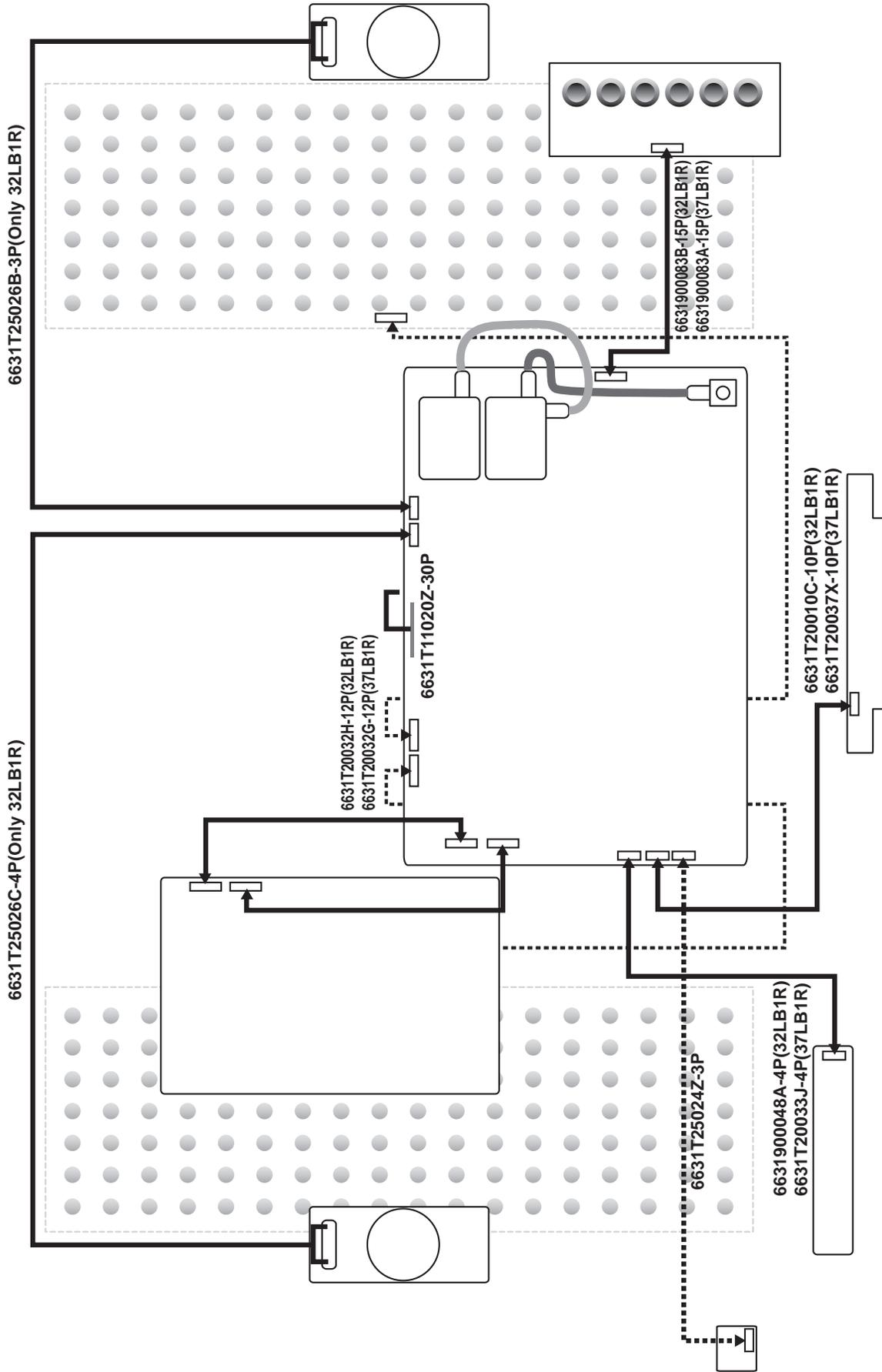




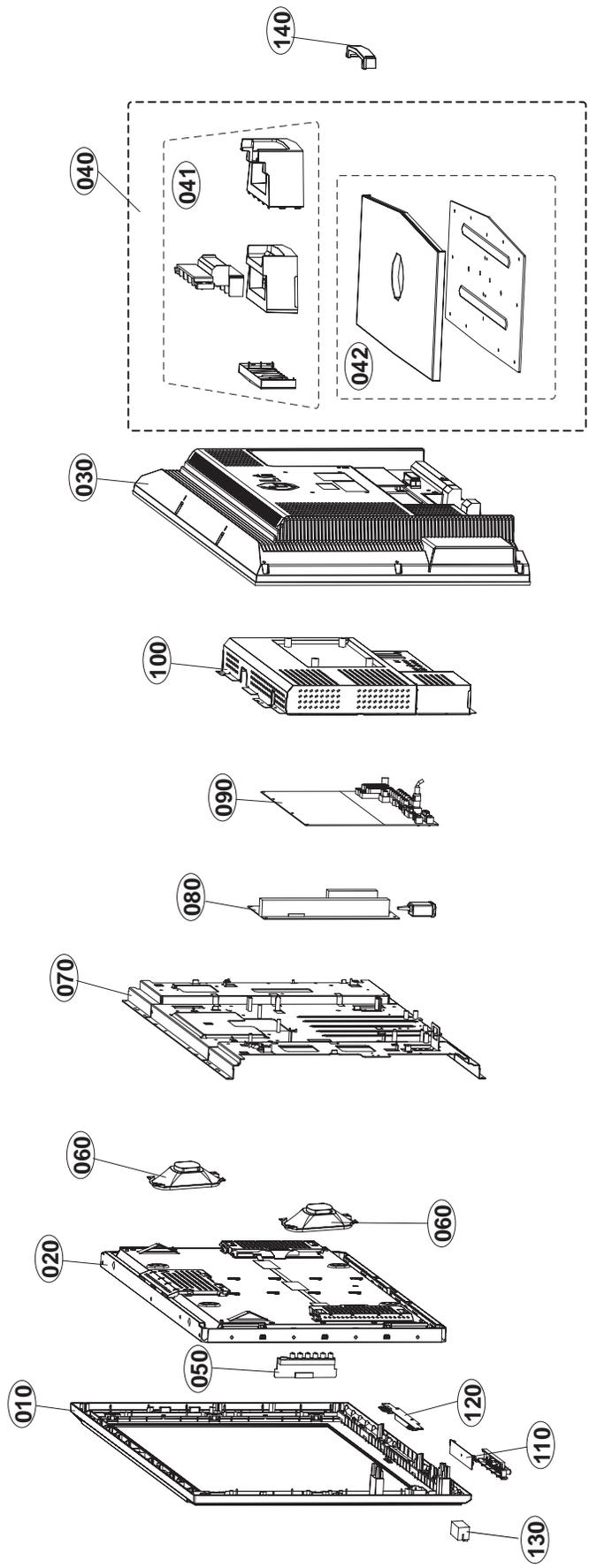
# BLOCK DIAGRAM



# WIRING DIAGRAM



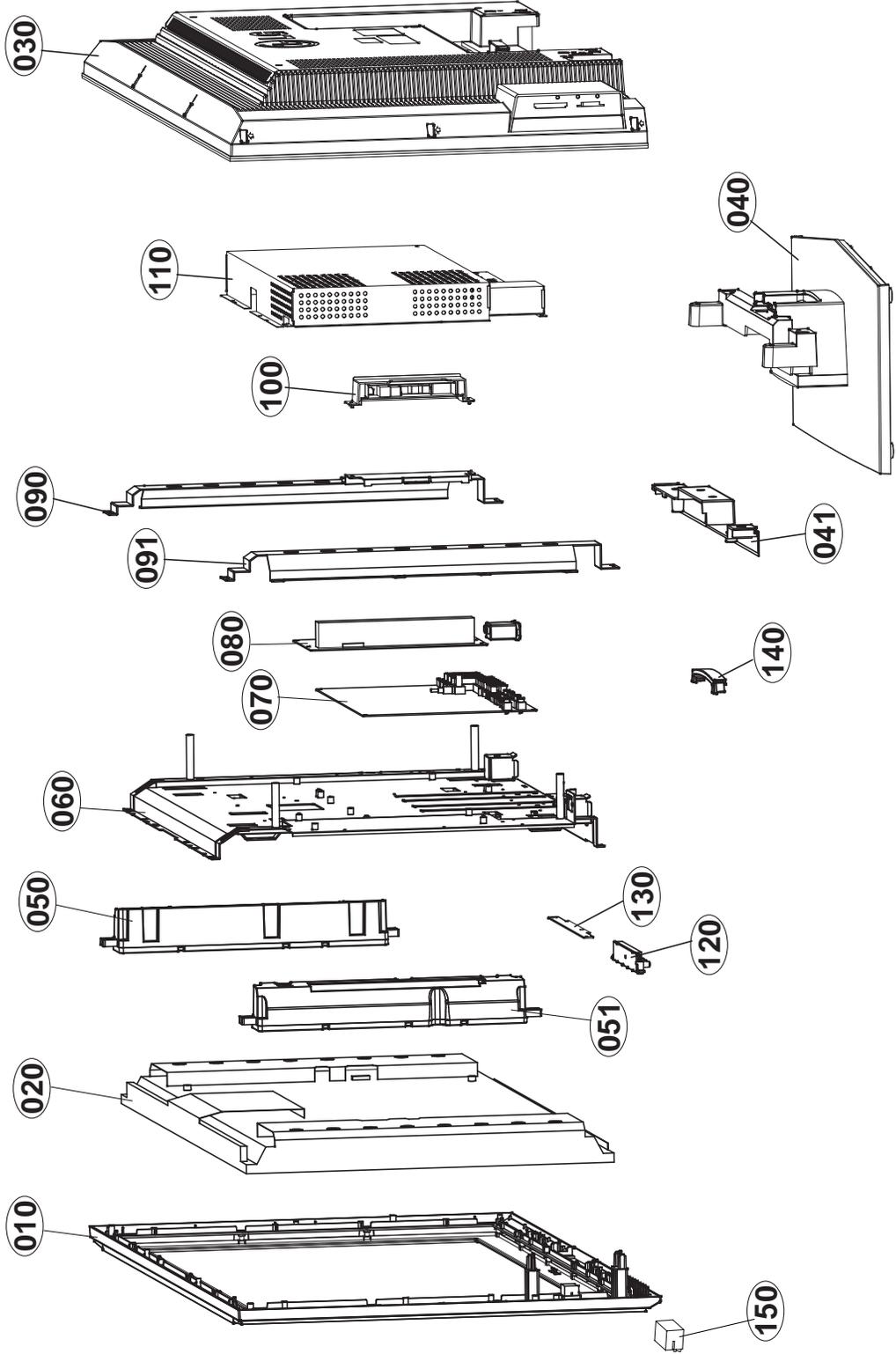
# EXPLODED VIEW(32LB1R)



## EXPLODED VIEW PARTS LIST(32LB1R)

No.	PART NO.	DESCRIPTION
010	30919K0010D	CABINET ASSEMBLY, 32LB1 BRAND 30909K0013 32LB1R-ZE, FOR SKD
020	6304FLP359A	LCD(LIQUID CRYSTAL DISPLAY), LC320W01-SL11 LG PHILIPS TFT COLOR 4MASK SYNC INVERTER
030	3809900133D	BACK COVER ASSEMBLY, 32LB1R-ZE NON FOR SKD
040	3043900014D	TILT SWIVEL ASSEMBLY, 32LB1 . STAND FOR SKD
041	3043900014C	TILT SWIVEL ASSEMBLY, 32LB1 . STAND NECK ASSY FOR SKD
042	3043900014B	TILT SWIVEL ASSEMBLY, 32LB1 . STAND BASE ASSY FOR SKD
050	68719ST931A	PWB(PCB) ASSEMBLY,SUB, SUB T.T ML051B 32LB1R-ZE SIDE
060	6400GESF01A	SPEAKER,FULLRANGE, C112A02K1450 ESTEC FULL-RANGE(GENERAL) 8OHM 10/15W .DB 110 32LG10
070	49519S0031C	METAL ASSEMBLY, FRAME TORNADO 32LB1R-ZE C/SKD
080	6871TPT316C	PWB(PCB) ASSEMBLY,POWER, 26LX2R-ZE POWER TOTAL BRAND TORNADO 26-32 LB1
090	33139L3008A	MAIN TOTAL ASSEMBLY, 37LB1R-ZE BRAND ML-051B
100	49509K0157E	METAL, SHIELD 32LB1R-ZE TORNADO C/SKD
110	68719ST930B	PWB(PCB) ASSEMBLY,SUB, SUB T.T ML051B 32LB1R-ZE CONTROL KEY
120	68719ST884B	PWB(PCB) ASSEMBLY,SUB, SUB T.T ML051B 32LB1R-ZE INDEX,IR
130	6500VR0003A	SENSOR, YGCA-T071A LG INNO TEK NONE DIGITAL EYE
140	4810900028A	BRACKET, COVER 32LB1 AB00EA ABS CABLE MANAGEMENT

**EXPLODED VIEW(37LB1R)**



## EXPLODED VIEW PARTS LIST(37LB1R)

No.	PART NO.	DESCRIPTION
010	30919E0038E	CABINET ASSEMBLY, 37LB1 BRAND . RZ-C/SKD
020	6304FLP360A	LCD(LIQUID CRYSTAL DISPLAY), LC370WX1-SL11 LG PHILIPS TFT COLOR 4MASK SYNK INVERTER
	or 6304FLP289A	LCD(LIQUID CRYSTAL DISPLAY), LC370WX1-SL01 LG PHILIPS TFT COLOR WXGA AIODC SPEC UP LEAD FREE
030	3809900157E	BACK COVER ASSEMBLY, 37LB1 NON RZ-C/SKD
040	3043900025B	TILT SWIVEL ASSEMBLY, 37LB1 . SILVER-C/SKD
041	4810900032A	BRACKET, NON 37LB1 AB ABS REAR BOTTOM
050	6401900133B	SPEAKER ASSEMBLY, 37LB1 LEFT
051	6401900133A	SPEAKER ASSEMBLY, 37LB1 RIGHT
060	49519S0027E	METAL ASSEMBLY, FRAME 37LB1R-ZE,C/SKD
070	6709900002A	POWER SUPPLY ASSEMBLY, FREE TORNADO 37 LCD KN/HE/YY
080	33139L3008A	MAIN TOTAL ASSEMBLY, 37LB1R-ZE BRAND ML-051B
090	49509K0023A	METAL, SIDE SUPPORTER RIGHT FOR 37LZ55
091	49519K0136B	METAL ASSEMBLY, SIDE SUP(L),37LB1
100	68719ST933A	PWB(PCB) ASSEMBLY,SUB, SUB T.T ML051B 37LB1R-ZE SIDE
110	4950TKA362H	METAL, SHIELD MAIN PLUS ANALOG AV(37LB1R-ZE) C/SKD
120	68719ST932B	PWB(PCB) ASSEMBLY,SUB, SUB T.T ML051B 37LB1R-ZE CONTROL KEY
130	68719ST884A	PWB(PCB) ASSEMBLY,SUB, SUB T.T ML051B 32/37/42LB1R-ZE INDEX,IR
140	4810900031A	BRACKET, NON 37LB1 AB ABS CABLE MANAGEMENT 37LB1
150	6500VR0003A	SENSOR, YGCA-T071A LG INNOTEK NONE DIGITALEYE

# 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: 2005. 12. 01.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
<b>CAPACITOR</b>				
		C100	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1000	OCH5220K416	22PF 50V 5% NP0 2012 R/TP
		C1004	OCH5220K416	22PF 50V 5% NP0 2012 R/TP
		C1008	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C101	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1010	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1011	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1014	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1015	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1016	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1017	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1020	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1021	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1022	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1024	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1026	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1027	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1029	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1031	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1032	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1036	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1038	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1039	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1041	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1043	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1044	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1046	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1047	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C105	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1050	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1051	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1052	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1053	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1056	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1057	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1058	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1059	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1062	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1063	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1065	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1066	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1067	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1068	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1071	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1072	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1074	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1076	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1077	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1079	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1080	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1082	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1083	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1086	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1087	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1088	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1089	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1092	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1093	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1094	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1095	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1098	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1099	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1104	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1106	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP

DATE: 2005. 12. 01.					
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION	
			C1113	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1116	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1118	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1119	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1120	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1121	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1122	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1123	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
			C1124	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
			C1125	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
			C1126	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
			C1127	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
			C1133	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1135	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1137	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
			C1138	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1139	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
			C1143	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1146	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1147	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1149	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C115	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
			C1150	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
			C1153	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
			C1154	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1155	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1156	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
			C1159	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
			C116	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
			C1160	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1162	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
			C1163	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1165	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
			C1166	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
			C1167	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1169	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
			C1171	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1172	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1173	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1175	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1176	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1177	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1179	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1180	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1181	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1182	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1183	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1184	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1185	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1186	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1187	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1188	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1192	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1194	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1196	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1198	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1199	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C120	OCH3103K516	10000PF 50V 10% B(Y5P) 2012
			C1201	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1203	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1205	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1209	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1210	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1211	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP
			C1212	OCH3104K566	0.1UF 50V 10% X7R 2012 R/TP





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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C396	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C401	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C408	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C409	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C410	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C416	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C417	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C418	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C419	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C420	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C421	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C422	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C423	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C424	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C425	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C426	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C429	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C430	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C444	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C446	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C654	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C663	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C704	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C705	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C709	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C710	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C711	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C714	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C715	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C717	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C723	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C724	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C725	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C803	0CK105DH56A	1UF 2012 25V 10% X7R R/TP
		C815	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C818	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C820	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C823	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C825	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C826	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C827	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C828	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C829	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C830	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C831	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C832	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C833	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C834	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C835	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C836	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C837	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C838	0CH5080K116	8PF 2012 50V 0.5 PF NP0 R/T
		C839	0CH5080K116	8PF 2012 50V 0.5 PF NP0 R/T
		C103	0CC270DK41A	27PF 2012 50V 5% NP0 R/TP
		C104	0CC270DK41A	27PF 2012 50V 5% NP0 R/TP
		C117	0CC270DK41A	27PF 2012 50V 5% NP0 R/TP
		C118	0CC270DK41A	27PF 2012 50V 5% NP0 R/TP
		C1297	0CC270DK41A	27PF 2012 50V 5% NP0 R/TP
		C207	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C209	0CH6101K416	100PF 50V 5% NP0 2012 R/TP
		C210	0CH6101K416	100PF 50V 5% NP0 2012 R/TP
		C211	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C220	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C222	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C223	0CH6101K416	100PF 50V 5% NP0 2012 R/TP
		C224	0CH6101K416	100PF 50V 5% NP0 2012 R/TP
		C225	0CH6391K416	390PF 2012 50V 5% NP0 R/TP
		C227	0CH6471K416	470PF 2012 50V 5% NP0 R/TP
		C228	0CH6471K416	470PF 2012 50V 5% NP0 R/TP
		C2334	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C254	0CH6391K416	390PF 2012 50V 5% NP0 R/TP
		C307	0CH6560K416	56PF 2012 50V 5% NP0 -
		C319	0CH6101K416	100PF 50V 5% NP0 2012 R/TP
		C330	0CH6102K406	1000PF 50V 5% SL 2012 R/TP

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C333	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C358	0CH2333K516	33000PF 50V 10% B(Y5P) 2012
		C359	0CH2333K516	33000PF 50V 10% B(Y5P) 2012
		C360	0CH2333K516	33000PF 50V 10% B(Y5P) 2012
		C361	0CH2333K516	33000PF 50V 10% B(Y5P) 2012
		C392	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C395	0CH6101K416	100PF 50V 5% NP0 2012 R/TP
		C399	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C605	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C606	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C607	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C608	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C609	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C610	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C616	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C617	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C618	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C619	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C620	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C621	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C622	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C623	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C624	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C631	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C634	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C635	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C636	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C637	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C643	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C644	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C816	0CH6151K416	150PF 2012 50V 5% NP0 -
		C1081	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C1333	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C202	0CH6101K416	100PF 50V 5% NP0 2012 R/TP
		C214	0CH6101K416	100PF 50V 5% NP0 2012 R/TP
		C241	0CH6010K116	1PF 2012 50V 0.5 PF NP0 R/T
		C242	0CH6010K116	1PF 2012 50V 0.5 PF NP0 R/T
		C304	0CH6010K116	1PF 2012 50V 0.5 PF NP0 R/T
		C305	0CH6010K116	1PF 2012 50V 0.5 PF NP0 R/T
		C308	0CH6560K416	56PF 2012 50V 5% NP0 -
		C324	0CH6471K416	470PF 2012 50V 5% NP0 R/TP
		C437	0CH6151K416	150PF 2012 50V 5% NP0 -
		C441	0CC821DK41A	820PF 2012 50V 5% NP0 R/TP
		C645	0CH6180K416	18PF 2012 50V 5% NP0 R/TP
		C646	0CH6180K416	18PF 2012 50V 5% NP0 R/TP
		C655	0CH6120K416	12PF 2012 50V 5% NP0 -
		C656	0CH6120K416	12PF 2012 50V 5% NP0 -
		C352	0CE108EJK18	"1000UF KMG,RD 35V 20%,-20%"
		C374	0CE108EJK18	"1000UF KMG,RD 35V 20%,-20%"
		C1007	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C1009	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1012	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1013	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1018	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C1019	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C102	0CE475VK6DC	4.7UF MV 50V 20% R/TP(SMD)
		C1023	0CE477WF6DC	470UF MVK 16V 20% SMD R/TP(
		C1025	0CE477WF6DC	470UF MVK 16V 20% SMD R/TP(
		C1028	0CE477WF6DC	470UF MVK 16V 20% SMD R/TP(
		C1030	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1035	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C1037	0CE477WF6DC	470UF MVK 16V 20% SMD R/TP(
		C1040	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C1042	0CE477WF6DC	470UF MVK 16V 20% SMD R/TP(
		C1045	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1048	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1049	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1054	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1055	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C106	0CE227WF6DC	220UF MVK 16V 20% R/TP(SMD)
		C1060	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1061	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1064	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C1069	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C1070	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C1073	0CE477WF6DC	470UF MVK 16V 20% SMD R/TP
		C1075	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1078	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C108	0CE477WF6DC	470UF MVK 16V 20% SMD R/TP
		C1084	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1085	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1090	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1091	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1096	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1097	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C110	0CE477WF6DC	470UF MVK 16V 20% SMD R/TP
		C1105	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1107	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C111	0CE475VK6DC	4.7UF MV 50V 20% R/TP(SMD)
		C1110	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1112	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C1114	0CE477WF6DC	470UF MVK 16V 20% SMD R/TP
		C1117	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C112	0CE227WF6DC	220UF MVK 16V 20% R/TP(SMD)
		C1128	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C1129	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C113	0CE106VF6DC	10UF MV 16V 20% R/TP(SMD) S
		C1130	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C1131	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C1132	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1134	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C1136	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C114	0CE475VK6DC	4.7UF MV 50V 20% R/TP(SMD)
		C1140	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1142	0CE107WK6DC	100UF MVK 50V 20% R/TP(SMD)
		C1144	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1148	0CE477WF6DC	470UF MVK 16V 20% SMD R/TP
		C1151	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1152	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1157	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1158	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1161	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C1168	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C1170	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1174	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1178	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1189	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1190	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1191	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1193	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1195	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1197	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1200	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1202	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1204	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1206	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1207	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1208	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C121	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C1214	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1230	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1231	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1264	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1265	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1266	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1268	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C127	0CE475VK6DC	4.7UF MV 50V 20% R/TP(SMD)
		C1273	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1275	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1283	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1285	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1296	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1299	0CE107WH6DC	100UF MVK 25V 20% R/TP(SMD)
		C130	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1302	0CE107WH6DC	100UF MVK 25V 20% R/TP(SMD)
		C1304	0CE106VK6DC	10UF MV 50V 20% R/TP(SMD) S
		C1305	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1307	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C1312	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C1313	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C1314	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C1332	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C1334	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C1335	0CE475VK6DC	4.7UF MV 50V 20% R/TP(SMD)
		C1406	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C1408	0CE476VK6DC	47UF MV 50V 20% R/TP(SMD) S
		C1411	0CE476VK6DC	47UF MV 50V 20% R/TP(SMD) S
		C1412	0CE476VK6DC	47UF MV 50V 20% R/TP(SMD) S
		C1415	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C201	0CE106VF6DC	10UF MV 16V 20% R/TP(SMD) S
		C206	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C208	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C212	0CE106VF6DC	10UF MV 16V 20% R/TP(SMD) S
		C219	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C221	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C229	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C230	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C232	0CE106VF6DC	10UF MV 16V 20% R/TP(SMD) S
		C233	0CE106VF6DC	10UF MV 16V 20% R/TP(SMD) S
		C235	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C236	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C249	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C3	0CE227WF6DC	220UF MVK 16V 20% R/TP(SMD)
		C302	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C303	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C314	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C325	0CE335VK6DC	3.3UF MV 50V 20% R/TP(SMD)
		C327	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C328	0CE106VF6DC	10UF MV 16V 20% R/TP(SMD) S
		C329	0CE106VF6DC	10UF MV 16V 20% R/TP(SMD) S
		C331	0CE475VK6DC	4.7UF MV 50V 20% R/TP(SMD)
		C334	0CE475VK6DC	4.7UF MV 50V 20% R/TP(SMD)
		C337	0CE106VF6DC	10UF MV 16V 20% R/TP(SMD) S
		C338	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C341	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C347	0CE475VK6DC	4.7UF MV 50V 20% R/TP(SMD)
		C351	0CE475VK6DC	4.7UF MV 50V 20% R/TP(SMD)
		C372	0CE335VK6DC	3.3UF MV 50V 20% R/TP(SMD)
		C378	0CE475WJ6DC	4.7UF MVK 35V 20% R/TP(SMD)
		C393	0CE475VK6DC	4.7UF MV 50V 20% R/TP(SMD)
		C394	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C400	0CE227WF6DC	220UF MVK 16V 20% R/TP(SMD)
		C404	0CE227WF6DC	220UF MVK 16V 20% R/TP(SMD)
		C406	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C411	0CE106VF6DC	10UF MV 16V 20% R/TP(SMD) S
		C434	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C436	0CE476WF6DC	47UF MVK 16V 20% R/TP(SMD)
		C438	0CE105VK6DC	1UF MV 50V 20% R/TP(SMD) SM
		C443	0CE105VK6DC	1UF MV 50V 20% R/TP(SMD) SM
		C611	0CE106VF6DC	10UF MV 16V 20% R/TP(SMD) S
		C625	0CE106VF6DC	10UF MV 16V 20% R/TP(SMD) S
		C633	0CE106VF6DC	10UF MV 16V 20% R/TP(SMD) S
		C640	0CE106VF6DC	10UF MV 16V 20% R/TP(SMD) S
		C653	0CE106VF6DC	10UF MV 16V 20% R/TP(SMD) S
		C904	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C905	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C952	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C955	0CE226WF6DC	22UF MVK 16V 20% R/TP(SMD)
		C362	0CF4741L438	0.47UF D 63V 5% TP 5 M/PE N
		C363	0CF4741L438	0.47UF D 63V 5% TP 5 M/PE N
<b>DIODEs</b>				
		ZD400	0DR050008AA	SD05.TC R/TP SEMTECH SOD323
		ZD401	0DR050008AA	SD05.TC R/TP SEMTECH SOD323
		D100	0DS226009AA	KDS226 TP KEC - 80V -- 4NS
		D1001	0DS226009AA	KDS226 TP KEC - 80V -- 4NS
		D1002	0DS226009AA	KDS226 TP KEC - 80V -- 4NS
		D1003	0DS226009AA	KDS226 TP KEC - 80V -- 4NS
		D1004	0DS226009AA	KDS226 TP KEC - 80V -- 4NS
		D1005	0DS226009AA	KDS226 TP KEC - 80V -- 4NS
		D1006	0DS226009AA	KDS226 TP KEC - 80V -- 4NS

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		D1009	ODS226009AA	KDS226 TP KEC - 80V -- 4NS
		D101	ODS226009AA	KDS226 TP KEC - 80V -- 4NS
		D1014	ODS226009AA	KDS226 TP KEC - 80V -- 4NS
		D601	ODS226009AA	KDS226 TP KEC - 80V -- 4NS
		D602	ODS226009AA	KDS226 TP KEC - 80V -- 4NS
		D603	ODD184009AA	KDS184 TP KEC - 85V --- 3
		D604	ODD184009AA	KDS184 TP KEC - 85V --- 3
		ZD1201	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD1202	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD1400	ODZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD200	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD201	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD208	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD212	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD213	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD214	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD215	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD216	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD223	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD226	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD227	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD228	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD229	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD300	ODZKE00048A	KDZ8.2V USC KEC R/TP NON
		ZD604	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD1401	ODZ330009DF	MTZJ33B TP ROHM-K DO34 0.5W
		ZD221	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD222	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD601	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD602	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD603	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
		ZD609	ODZ510009EE	UDZ S 5.1B TP ROHM SOD323 -
<b>IC</b>				
		IC900	OIZ29H0172A	OIMMRMR010F MACRONIX TSOP-I
		IC301	OILNR00015A	"NSP-2100A,LF NEOFIDELITY TQ"
		IC900	OIMMRMR010F	MX29LV160CTTC-70G MACRONIX
		IC602	OICS240213A	CAT24W(F)C02J-TE13 8P SOP
		IC603	OICS240213A	CAT24W(F)C02J-TE13 8P SOP
		IC701	OIMMRSG036D	"M24C32-WMN6TPW,LF SGS-THOMS"
		IC702	OIMMR00004C	"SST25VF040-20-4C-S2AE,LF SS"
		IC804	OIAL242561B	AT24C256W-10SU-2.7V ATMEL 8
		IC901	OIMMRHY052C	"HY5DU281622ETP-5,PB FREE HY"
		IC902	OIMMRHY052C	"HY5DU281622ETP-5,PB FREE HY"
		IC201	OIMCRSG010A	ST3232CDR SGS-THOMSON SOP16
		IC300	OIMCRMN028B	MSP4410K MICRONAS 80P/PQFP
		IC302	OIMCRTI028C	"TAS5122DCARG4,LF TEXAS INS"
		IC400	OISO206900A	CXA2069Q QFP64 BK I2C BUS A
		IC700	OIMCR02006A	FLI8125BB-LF GENESIS 208P/P
		IC800	OIMCR02005A	FLI8532BD-LF GENESIS 416P/P
		IC304	OIPRPTI034B	"TPA6110A2DGNRG4,LF TEXAS IN"
		IC600	OIPRPS5005A	SI9011CLU(PB FREE) SILICON
		IC601	OIPRP00623A	CM2021-00TR CAMD TSSOP-38 R
		IC802	OISA721700C	LA7217M MFP14 TP SYNC SEPAR
		IC1000	OIMCRFA010A	"KA7809R, FAIRCHILD 2P D-PAK"
		IC1001	OIPMGKE011A	KIA78D33F KEC DPAK R/TP 3.3
		IC1002	OIPMGKE011A	KIA78D33F KEC DPAK R/TP 3.3
		IC1003	OIPMGSG018D	LD1086DT18TR-LF SGS-THOMSON
		IC1004	OIPRPMLO01A	MIC39100 MICREL 3P SOT223 R
		IC1005	OIPMGKE011A	KIA78D33F KEC DPAK R/TP 3.3
		IC1006	OIPMGSG018D	LD1086DT18TR-LF SGS-THOMSON
		IC1007	OIPMGKE011A	KIA78D33F KEC DPAK R/TP 3.3
		IC1009	OIPMGSG018D	LD1086DT18TR-LF SGS-THOMSON
		IC1010	OIPMGKE011A	KIA78D33F KEC DPAK R/TP 3.3
		IC1011	OIPMGKE011A	KIA78D33F KEC DPAK R/TP 3.3
		IC1012	OIMCRSH001A	"PQ05DZ1U SHARP 5, SMD TYPE"
		IC1013	OIMCRSH001A	"PQ05DZ1U SHARP 5, SMD TYPE"
		IC1014	OIMCRSH001A	"PQ05DZ1U SHARP 5, SMD TYPE"
		IC303	OIKE704200J	KIA7042AF SOT-89 TP 4.2V VO
		IC801	OIKE704200J	KIA7042AF SOT-89 TP 4.2V VO
		IC806	OIKE704200J	KIA7042AF SOT-89 TP 4.2V VO
		IC401	OIPH741400E	74HC14D 14SOP TP SHITTER TR
		IC604	OISTLFA058A	"74F14SCX FAIRCHILD 14P,SOIC"

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
<b>COIL &amp; CORE &amp; INDUCTOR</b>				
		L303	6140VB0032A	DBF-1015A DONGBANG DIGITECH
		L304	6140VB0032A	DBF-1015A DONGBANG DIGITECH
		L305	6140VB0032A	DBF-1015A DONGBANG DIGITECH
		L306	6140VB0032A	DBF-1015A DONGBANG DIGITECH
		AR601	6210TCE002B	HB-4M3216-121JT CERATECH 32
		AR602	6210TCE002B	HB-4M3216-121JT CERATECH 32
		AR603	6210TCE002B	HB-4M3216-121JT CERATECH 32
		AR604	6210TCE002B	HB-4M3216-121JT CERATECH 32
		AR605	6210TCE002B	HB-4M3216-121JT CERATECH 32
		AR606	6210TCE002B	HB-4M3216-121JT CERATECH 32
		L106	6210TCE001L	HB-1T2012-102JT CERATECH 20
		L107	6210TCE001L	HB-1T2012-102JT CERATECH 20
		L108	6210TCE001L	HB-1T2012-102JT CERATECH 20
		L109	6210TCE001L	HB-1T2012-102JT CERATECH 20
		L110	6210TCE001L	HB-1T2012-102JT CERATECH 20
		L113	6210TCE001L	HB-1T2012-102JT CERATECH 20
		L114	6210TCE001L	HB-1T2012-102JT CERATECH 20
		L115	6210TCE001L	HB-1T2012-102JT CERATECH 20
		L100	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1001	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1003	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1004	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1005	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1006	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1008	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1009	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L101	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1010	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1011	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1012	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1013	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1015	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1016	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1017	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1018	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1019	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L102	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1020	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1021	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1022	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1023	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1024	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1026	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1028	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L103	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1031	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1032	6210TCE001S	HU-1M2012-121 CERATECH 2012
		L1033	6210TCE001S	HU-1M2012-121 CERATECH 2012
		L1035	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1036	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1037	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1038	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1039	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L104	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1042	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1045	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1046	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1047	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1048	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1049	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L105	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1050	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1201	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L202	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L203	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L204	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L205	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L209	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L214	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L215	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L216	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L217	6210TCE001A	HB-1S2012-080JT CERATEC 201

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		L299	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L300	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L301	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L302	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L309	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L315	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L316	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L317	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L319	6210TCE001S	HU-1M2012-121 CERATECH 2012
		L400	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L601	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L602	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L603	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L604	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L605	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L606	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L607	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L609	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L610	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L611	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L612	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1000	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1002	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1007	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1014	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1025	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1027	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1029	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1030	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1034	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1040	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1043	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1044	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L116	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1401	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1402	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1403	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1404	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L2	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L207	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L208	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L307	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L308	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L310	6210TCE001S	HU-1M2012-121 CERATECH 2012
		L311	6210TCE001S	HU-1M2012-121 CERATECH 2012
		L312	6210TCE001S	HU-1M2012-121 CERATECH 2012
		L313	6210TCE001S	HU-1M2012-121 CERATECH 2012
		L314	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L318	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L401	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L608	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1200	0LC1020101A	1UH 10% 2012 R/TC FI-B2012-
		L213	0LC0233002A	3.3UH CERATECH R/TP
		L218	0LC1032101A	10UH 10% 3216 R/TC FI-C3216
		L219	0LC1032101A	10UH 10% 3216 R/TC FI-C3216
		L402	0LC1032101A	10UH 10% 3216 R/TC FI-C3216
		L200	0LC1020101A	1UH 10% 2012 R/TC FI-B2012-
		L201	0LC1020101A	1UH 10% 2012 R/TC FI-B2012-
<b>TRANSISTOR</b>				
		Q1001	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q102	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q103	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q105	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q107	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q108	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q109	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q113	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q301	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 -

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		Q305	0TR102008AA	KRA102S R/TP KEC SOT23 CHIP
		Q306	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q307	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q309	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q402	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q1	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q100	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q110	0TR830009BA	BSS83 TP PHILIPS NON N-CHAN
		Q111	0TR830009BA	BSS83 TP PHILIPS NON N-CHAN
		Q308	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q400	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q401	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q403	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q405	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q406	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		IC1	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A
<b>RESISTORS</b>				
		AR700	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3
		AR701	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3
		AR702	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3
		AR703	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3
		AR704	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3
		AR705	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3
		AR801	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3
		AR802	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3
		AR803	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3
		AR804	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3
		AR806	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3
		AR807	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3
		AR808	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3
		AR809	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3
		AR810	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3
		AR811	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3
		AR812	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3
		AR813	0RHZTCZ001D	RCA SMART 220HM 1/16 W 5% 3
		R100	0RH2200D622	220 OHM 1 / 10 W 2012 5.00%
		R1004	0RH1801D622	1.8K OHM 1 / 10 W 2012 5.00
		R1005	0RH3601D622	3.6K OHM 1 / 10 W 2012 5.00
		R1006	0RH2401D622	2.4K OHM 1 / 10 W 2012 5.00
		R1007	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R1008	0RH1801D622	1.8K OHM 1 / 10 W 2012 5.00
		R101	0RH2700D622	270 OHM 1 / 10 W 2012 5.00%
		R1012	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R1014	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R102	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R103	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R104	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R105	0RH2200D622	220 OHM 1 / 10 W 2012 5.00%
		R106	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R107	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R109	0RH2201D622	2.2K OHM 1 / 10 W 2012 5.00
		R110	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R111	0RH0222D622	22 OHM 1 / 10 W 2012 5.00%
		R112	0RH0102D622	10 OHM 1 / 10 W 2012 5.00%
		R114	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R115	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R116	0RH2200D622	220 OHM 1 / 10 W 2012 5.00%
		R117	0RH2200D622	220 OHM 1 / 10 W 2012 5.00%
		R119	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R120	0RH1003D622	100K OHM 1 / 10 W 2012 5.00
		R1201	0RH0822D622	82 OHM 1 / 10 W 2012 5.00%
		R1202	0RH0222D622	22 OHM 1 / 10 W 2012 5.00%
		R1204	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R1205	0RH0822D622	82 OHM 1 / 10 W 2012 5.00%
		R1206	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R121	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R122	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R123	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R124	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R125	0RH2200D622	220 OHM 1 / 10 W 2012 5.00%
		R126	0RH2200D622	220 OHM 1 / 10 W 2012 5.00%
		R127	0RH2000D622	200 OHM 1 / 10 W 5% D R/TP

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R128	ORH1500D622	150 OHM 1 / 10 W 2012 5.00%
		R129	ORH2001D622	2K OHM 1 / 10 W 2012 5.00%
		R130	ORH2001D622	2K OHM 1 / 10 W 2012 5.00%
		R1300	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R1301	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R1309	ORH0471D622	4.7 OHM 1 / 10 W 2012 5.00%
		R1401	ORH6800D622	680 OHM 1 / 10 W 5% D R/TP
		R1402	ORH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R142	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R143	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R151	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R157	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R1801	ORH0332D622	33 OHM 1 / 10 W 2012 5.00%
		R1802	ORH0332D622	33 OHM 1 / 10 W 2012 5.00%
		R1804	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R1807	ORH4700D622	470 OHM 1 / 10 W 2012 5.00%
		R200	ORH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R201	ORH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R202	ORH5101D622	5.1K OHM 1 / 10 W 2012 5.00
		R203	ORH4703D622	470K OHM 1 / 10 W 2012 5.00
		R204	ORH5101D622	5.1K OHM 1 / 10 W 2012 5.00
		R205	ORH0682D622	68 OHM 1 / 10 W 2012 5.00%
		R207	ORH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R208	ORH4703D622	470K OHM 1 / 10 W 2012 5.00
		R210	ORH3902D622	39K OHM 1 / 10 W 2012 5.00%
		R211	ORH5102D622	51K OHM 1 / 10 W 2012 5.00%
		R212	ORH4703D622	470K OHM 1 / 10 W 2012 5.00
		R213	ORH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R214	ORH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R215	ORH4703D622	470K OHM 1 / 10 W 2012 5.00
		R218	ORH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R220	ORH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R2328	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R2332	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R236	ORH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R237	ORH0682D622	68 OHM 1 / 10 W 2012 5.00%
		R238	ORH0222D622	22 OHM 1 / 10 W 2012 5.00%
		R239	ORH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R240	ORH0222D622	22 OHM 1 / 10 W 2012 5.00%
		R241	ORH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R242	ORH2201D622	2.2K OHM 1 / 10 W 2012 5.00
		R244	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R245	ORH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R246	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R247	ORH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R248	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R249	ORH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R250	ORH3902D622	39K OHM 1 / 10 W 2012 5.00%
		R251	ORH5102D622	51K OHM 1 / 10 W 2012 5.00%
		R257	ORH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R269	ORH4703D622	470K OHM 1 / 10 W 2012 5.00
		R270	ORH4703D622	470K OHM 1 / 10 W 2012 5.00
		R271	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R272	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R277	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R279	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R280	ORH2200D622	220 OHM 1 / 10 W 2012 5.00%
		R281	ORH2200D622	220 OHM 1 / 10 W 2012 5.00%
		R282	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R283	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R284	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R287	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R288	ORH1200D622	120 OHM 1 / 10 W 2012 5.00%
		R301	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R304	ORH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R306	ORH0432D622	43 OHM 1 / 10 W 2012 5.00%
		R307	ORH0432D622	43 OHM 1 / 10 W 2012 5.00%
		R309	ORH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R317	ORH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R319	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R320	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R321	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R322	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R323	ORH4703D622	470K OHM 1 / 10 W 2012 5.00

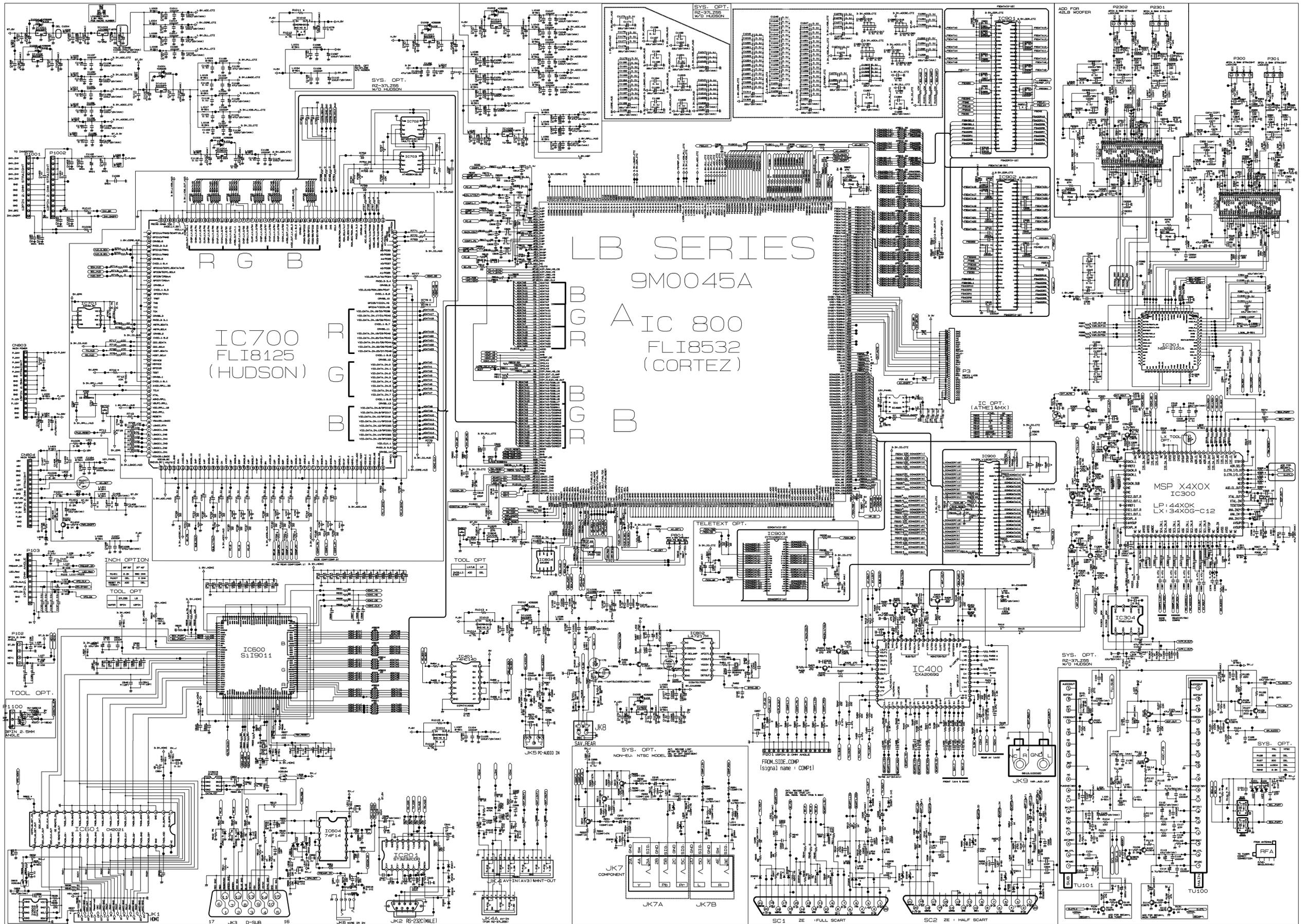
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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R326	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R329	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R330	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R331	ORH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R338	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R341	ORH3301D622	3.3K OHM 1 / 10 W 2012 5.00
		R342	ORH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R343	ORH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R346	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R348	ORH0331D622	3.3 OHM 1 / 10 W 2012 5.00%
		R349	ORH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R350	ORH0221D622	2.2 OHM 1 / 10 W 2012 5.00%
		R351	ORH4703D622	470K OHM 1 / 10 W 2012 5.00
		R352	ORH0221D622	2.2 OHM 1 / 10 W 2012 5.00%
		R353	ORH0221D622	2.2 OHM 1 / 10 W 2012 5.00%
		R354	ORH0221D622	2.2 OHM 1 / 10 W 2012 5.00%
		R355	ORH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R356	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R358	ORH2001D622	2K OHM 1 / 10 W 2012 5.00%
		R359	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R360	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R361	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R362	ORH0221D622	2.2 OHM 1 / 10 W 2012 5.00%
		R363	ORH0101D622	1 OHM 1 / 10 W 2012 5.00% D
		R364	ORH0101D622	1 OHM 1 / 10 W 2012 5.00% D
		R365	ORH0101D622	1 OHM 1 / 10 W 2012 5.00% D
		R366	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R367	ORH0102D622	10 OHM 1 / 10 W 2012 5.00%
		R372	ORH1501D622	1.5K OHM 1 / 10 W 2012 5.00
		R376	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R379	ORH0331D622	3.3 OHM 1 / 10 W 2012 5.00%
		R380	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R381	ORH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R382	ORH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R389	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R391	ORH0221D622	2.2 OHM 1 / 10 W 2012 5.00%
		R392	ORH0221D622	2.2 OHM 1 / 10 W 2012 5.00%
		R393	ORH0221D622	2.2 OHM 1 / 10 W 2012 5.00%
		R394	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R395	ORH2001D622	2K OHM 1 / 10 W 2012 5.00%
		R396	ORH4703D622	470K OHM 1 / 10 W 2012 5.00
		R397	ORH0101D622	1 OHM 1 / 10 W 2012 5.00% D
		R398	ORH1501D622	1.5K OHM 1 / 10 W 2012 5.00
		R408	ORH3300D622	330 OHM 1 / 10 W 2012 5.00%
		R411	ORH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R412	ORH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R415	ORH4700D622	470 OHM 1 / 10 W 2012 5.00%
		R428	ORH1201D622	1.2K OHM 1 / 10 W 2012 5.00
		R430	ORH1201D622	1.2K OHM 1 / 10 W 2012 5.00
		R444	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R447	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R448	ORH1003D622	100K OHM 1 / 10 W 2012 5.00
		R449	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R459	ORH1503D622	150K OHM 1 / 10 W 2012 5.00
		R462	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R466	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R468	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R603	ORH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R604	ORH2001D622	2K OHM 1 / 10 W 2012 5.00%
		R632	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R633	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R634	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R635	ORH4702D622	47K OHM 1 / 10 W 2012 5.00%
		R636	ORH4702D622	47K OHM 1 / 10 W 2012 5.00%
		R637	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R638	ORH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R639	ORH0512D622	51 OHM 1 / 10 W 2012 5.00%
		R640	ORH0512D622	51 OHM 1 / 10 W 2012 5.00%
		R651	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R657	ORH1202D622	12K OHM 1 / 10 W 2012 5.00%
		R658	ORH1502D622	15K OHM 1 / 10 W 2012 5.00%
		R715	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R716	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R717	ORH1000D622	100 OHM 1 / 10 W 2012 5.00%





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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R938 R939 R952	ORH0222D622 ORH0222D622 ORH0222D622	22 OHM 1 / 10 W 2012 5.00% 22 OHM 1 / 10 W 2012 5.00% 22 OHM 1 / 10 W 2012 5.00%
<b>OTHERs</b>				
		LED3 X401 X300 X600 X700 X800 TU100 TU101	ODL233309AC 166-E02F 6202VDT002H 6212AB2845A 6212AB2015G 6212AB2015G 6700MF0012A 6700MF0012B	SAM2333 TP KWANG GREEN/RED CSBLA500KECZF09-B0 CSB500F9 SX-1 SUNNY 18.432000MHZ +/- ABLS-27.000MHZ-16-B-4Y-F-T HC-49/SM BUBANG 19.6608MHZ HC-49/SM BUBANG 19.6608MHZ TAUM-W101P LGIT MULTI FS PH TAFM-W102P LGIT MULTI FS PH
<b>CONTROL BOARD</b>				
		SW1201 SW1202 SW1203 SW1204 SW1205 SW1206 SW1207 SW1208 R2111 R2112 R2113 R2114 R2115 R2116 R2117 R2118 R2119 R2120	140-313B 140-313B 140-313B 140-313B 140-313B 140-313B 140-313B 140-313B ORH3001D622 ORH3001D622 ORH1502D622 ORH1000D622 ORH1301D622 ORH5601D622 ORH1301D622 ORH1000D622 ORH5601D622 ORH1502D622	TACT 2LEAD 160G(TA) LG C&D TACT 2LEAD 160G(TA) LG C&D 3K OHM 1 / 10 W 2012 5.00% 3K OHM 1 / 10 W 2012 5.00% 15K OHM 1 / 10 W 2012 5.00% 100 OHM 1 / 10 W 2012 5.00% 1.3K OHM 1 / 10 W 2012 5.00 5.6K OHM 1 / 10 W 2012 5.00 1.3K OHM 1 / 10 W 2012 5.00 100 OHM 1 / 10 W 2012 5.00% 5.6K OHM 1 / 10 W 2012 5.00 15K OHM 1 / 10 W 2012 5.00%
<b>IR BOARD</b>				
		C3005 L3104 R3051 R3052 R3057 R3058 R3101 IC3002 IC3003 LED1 C3001 C3002 C3003 C3004 C3006 C3007 C3008 IC3001 L3103 Q3001 Q3002 Q3003 Q3004 Q3005 Q3006 Q3200 Q3215 Q3217 R3001 R3002 R3003 R3004 R3005 R3006 R3007 R3008	0CH3104K566 6210TCE001G ORH0222D622 ORH0222D622 ORH0222D622 ORH0222D622 ORH0222D622 6301900003A 6712000011B ODLAU0410AA OCE106VF6DC 0CH3104K566 0CH3104K566 OCE106VF6DC OCE106VF6DC OCH3104K566 OCE475WJ6DC 0IM623200B 6210TCE001G 0TR387500AA 0TR387500AA 0TR387500AA 0TR387500AA 0TR387500AA 0TR387500AA 0TR387500AA 0TR387500AA 0TR387500AA 0TR387500AA 0TR387500AA 0TR387500AA 0TR387500AA 0TR387500AA 0TR387500AA ORH7500D622 ORH1000D622 ORH7500D622 ORH1000D622 ORH7500D622 ORH1000D622 ORH7500D622 ORH1000D622	0.1UF 50V 10% X7R 2012 R/TP HH-1M3216-501 CERATEC 3216M 22 OHM 1 / 10 W 2012 5.00% 22 OHM 1 / 10 W 2012 5.00% LB YANGWOO WHITE 6HOLE KSM-2013TE2A KODENSHI 37.9 AUK SAW5670 BULK AMBER/WHIT 10UF MV 16V 20% R/TP(SMD) S 0.1UF 50V 10% X7R 2012 R/TP 0.1UF 50V 10% X7R 2012 R/TP 10UF MV 16V 20% R/TP(SMD) S 10UF MV 16V 20% R/TP(SMD) S 0.1UF 50V 10% X7R 2012 R/TP 4.7UF MVK 35V 20% R/TP(SMD) "M62320FP,I/O EXPANDER 16P S" HH-1M3216-501 CERATEC 3216M CHIP 2SC3875S(ALY) BK KEC - CHIP 2SC3875S(ALY) BK KEC - 750 OHM 1 / 10 W 5% D R/TP 100 OHM 1 / 10 W 2012 5.00% 750 OHM 1 / 10 W 5% D R/TP 100 OHM 1 / 10 W 2012 5.00% 750 OHM 1 / 10 W 5% D R/TP 100 OHM 1 / 10 W 2012 5.00% 750 OHM 1 / 10 W 5% D R/TP 100 OHM 1 / 10 W 2012 5.00% 750 OHM 1 / 10 W 5% D R/TP 100 OHM 1 / 10 W 2012 5.00%

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R3009 R3010 R3011 R3012 R3013 R3053 R3054 R3055 R3056 R3100 R3102 R3103 R3105 R3106 R3107 R3108 R3109 R3111	ORH7500D622 ORH1000D622 ORH7500D622 ORH1000D622 ORH0000D622 ORH0222D622 ORH0222D622 ORH0222D622 ORH0222D622 ORH0000D622 ORH4701D622 ORH4701D622 ORH5600D622 ORH4701D622 ORH5600D622 ORH1001D622 ORH1000D622 ORH0000D622 ORH0000D622	750 OHM 1 / 10 W 5% D R/TP 100 OHM 1 / 10 W 2012 5.00% 750 OHM 1 / 10 W 5% D R/TP 100 OHM 1 / 10 W 2012 5.00% 0 OHM 1 / 10 W 2012 5.00% D 22 OHM 1 / 10 W 2012 5.00% 22 OHM 1 / 10 W 2012 5.00% 22 OHM 1 / 10 W 2012 5.00% 22 OHM 1 / 10 W 2012 5.00% 0 OHM 1 / 10 W 2012 5.00% D 4.7K OHM 1 / 10 W 2012 5.00 560 OHM 1 / 10 W 2012 5.00% 4.7K OHM 1 / 10 W 2012 5.00 560 OHM 1 / 10 W 2012 5.00% 1K OHM 1 / 10 W 2012 5.00% 100 OHM 1 / 10 W 2012 5.00% 0 OHM 1 / 10 W 2012 5.00% D 0 OHM 1 / 10 W 2012 5.00% D
<b>SIDE BOARD</b>				
		C3103 C3104 L3108 L3109 R3100 R3101 R3102 R3103 R3104 R3111 R3113 R3115 R3117 R3119 R3123 R3124 R3160 ZD3100 ZD3101 ZD3105 ZD3106 ZD3107	0CH6102K406 0CH6102K406 6210TCE001A 6210TCE001A ORH0000D622 ORH4703D622 ORH4703D622 ORH0000D622 ORH0000D622 ORH0752D622 ORH0752D622 ORH0752D622 ORH4703D622 ORH4703D622 ORH0000D622 ORH1001D622 0DZ510009EE 0DZ510009EE 0DZ510009EE 0DZ510009EE 0DZ510009EE	1000PF 50V 5% SL 2012 R/TP 1000PF 50V 5% SL 2012 R/TP HB-1S2012-080JT CERATEC 201 HB-1S2012-080JT CERATEC 201 0 OHM 1 / 10 W 2012 5.00% D 470K OHM 1 / 10 W 2012 5.00 470K OHM 1 / 10 W 2012 5.00 0 OHM 1 / 10 W 2012 5.00% D 0 OHM 1 / 10 W 2012 5.00% D 75 OHM 1 / 10 W 2012 5.00% 75 OHM 1 / 10 W 2012 5.00% 75 OHM 1 / 10 W 2012 5.00% 470K OHM 1 / 10 W 2012 5.00 470K OHM 1 / 10 W 2012 5.00 0 OHM 1 / 10 W 2012 5.00% D 0 OHM 1 / 10 W 2012 5.00% D 1K OHM 1 / 10 W 2012 5.00% UDZ S 5.1B TP ROHM SOD323 - UDZ S 5.1B TP ROHM SOD323 -



R G B

IC700  
FLI8125  
(HUDSON)

R  
G  
B

LB SERIES  
9M0045A

ATME800  
FLI8532  
(CORTEZ)

R  
G  
B

B

IC600  
S119011

IC400  
CX420690

MSP X4X0X  
IC300  
LP: 44X0K  
LX: 34X0G-C12

SYS. OPT.  
NON-EU. NTSC MODEL

FROM SIDE COMP  
(signal name: COMP1)

SYS. OPT.  
RZ-97LZS  
W/O HUDSON

SYS. OPT.



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