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LCD TV

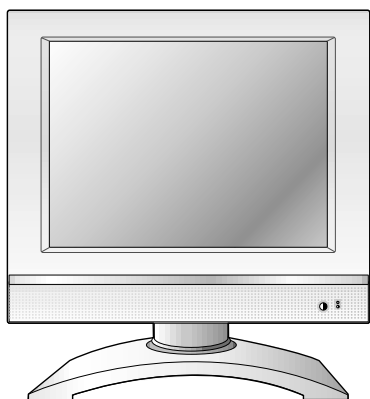
SERVICE MANUAL

CHASSIS : ML-024H

MODEL : RZ-14LA60

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 $\pm$ 1.5KV: 14-19 inch, 26 $\pm$ 1.5KV: 19-21 inch,

29.0 $\pm$ 1.5KV: 25-29 inch, 30.0 $\pm$ 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 Ω and 5.2M Ω .

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.

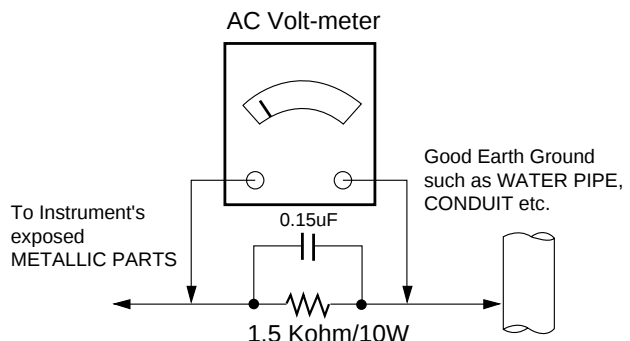
Connect 1.5K/10watt resistor in parallel with a 0.15 μ F capacitor between a known good earth ground (Water Pipe, Conduit, etc.) and the exposed metallic parts.

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. Application range

This specification is applied to ML-024H chassis.

2. Requirement for Test

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

- (1) Temperature: 25°C ± 5°C(But, CST must be tested 40°C ± 2°C (Humidity: 50%))
- (2) Humidity: 65% ± 10%
- (3) Power: Standard input voltage (AC 100-220V, 50/60Hz)
- (4) Measurement must be performed after heat-run more than 15min.
- (5) Adjusting standard for this chassis is followed a special standard.

3. Test and Inspection method

- (1) Capacity: Follow LG electronics TV Testing Standard.
- (2) Another Required Standard
Follow the standard of each nation.

4.General Specification

No.	Item	Specification				Remark
		Min	Typ	Max	Unit	
1	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 (PAL Market)
2	RF input channel	VHF: E02 ~ E12 UHF : E21 ~ E69 CATV : S01 ~ S20 HYPER : S21 ~ S41				PAL
		L/L' : B,C,D				FRANCE
3	Input voltage	AC 100 - 220V ± 10%, 50/60Hz				
4	Tuning system	FVS 100 program				PAL, 200PR.(option)
5	Screen size	354				
6	Aspet ratio	4:3				
7	Operating temperature	0		50	deg	
8	Operating humidity	10		90	%RH	
9	Storage temperature	-20		60	deg	
10	Storage humidity	10		90	%RH	

5. Feature and Function

No.	Item	Specification				Remark
		Min	Typ	Max	Unit	
1	Teletext	TOP,FLOF				TOP(option)
2	REMOCON	RC-5 & NEC code (PAL), NEC code(NTSC)				
3	Scart	1	Rear (Full Scart)			Option, EU
4	AV input	1	Rear			
5	S-viedo input	1	Rear			
6	H/P output	1	Rear			
7	2 Carrier Stereo	BG,DK				
8	NICAM Stereo	BG,I,LL'				
9	2 Carrier Dual	BG,DK				
10	NICAM Dual	BG,I,LL'				
11	Local Key	TV/Video, menu, enter(OK), Vol(◀,▶), Channel(▲,▼)				
12	Sub Power Key	O				
13	AVL	O				
14	On/Off Timer	O				

6. LCD panel specification

No.	Item	Specification				Remark
		Min	Typ	Max	Unit	
1	Screen Size	326.8(H) x 239.2(V)mm				
2	Number of Pixels	640(H) x 480(V) dot				
3	Pixel pitch	0.4425(H) x 0.4425(V)mm				
4	Video driving method	1H inversion				
5	Dot clock		25		MHz	
6	Operating Temperature	0		50	deg	
7	Operating Humidity	10		90	%RH	
8	Storage Temperature	-20		60	deg	
9	Storage Humidity	10		90	%RH	
10	Response time, Ton(at 25°C)		15		ms	
11	Response time, Toff(at 25°C)		10		ms	

ADJUSTMENT INSTRUCTION

1. Application Object

This instruction is for the application to the LCD TV.

2. Notes

- (1) This set uses an power, so connect the power and the set correctly before adjustment.
 - (2) The adjustment must be performed under the correct sequence.
 - (3) The adjustment must be performed in the circumstance of $25 \pm 5^{\circ}\text{C}$ of temperature and $65 \pm 10\%$ of relative humidity if there is no specific designation.
 - (4) The set must be operated for 15 minutes preliminarily before adjustment if there is no specific designation.
- 'Heat Run' must be performed with the full white signal or TV noise signal in the internal part of the set.
 - The time for 'Heat Run' can be changed owing to production plan.
 - Line Test condition (TV): standard color signal $65 \pm 1\text{dBuV}$

4. Option 1 data setting (200PR ~ A2 ST:1bit, SYS:2bit composition)

OPTION Data	200PR	TEXT	I/II SV	TOP	SCART	A2 ST	SYS
0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	1
2	0	0	0	0	0	0	2
3	0	0	0	0	0	0	3
4	0	0	0	0	0	1	0
5	0	0	0	0	0	1	1
6	0	0	0	0	0	1	2
7	0	0	0	0	0	1	3
8	0	0	0	0	1	0	0
9	0	0	0	0	1	0	1
10	0	0	0	0	1	0	2
11	0	0	0	0	1	0	3
12	0	0	0	0	1	1	0
13	0	0	0	0	1	1	1
14	0	0	0	0	1	1	2
15	0	0	0	0	1	1	3
16	0	0	0	1	0	0	0
17	0	0	0	1	0	0	1
18	0	0	0	1	0	0	2
19	0	0	0	1	0	0	3
20	0	0	0	1	0	1	0
21	0	0	0	1	0	1	1
22	0	0	0	1	0	1	2
23	0	0	0	1	0	1	3
24	0	0	0	1	1	0	0
25	0	0	0	1	1	0	1
26	0	0	0	1	1	0	2
27	0	0	0	1	1	0	3
28	0	0	0	1	1	1	0
29	0	0	0	1	1	1	1
30	0	0	0	1	1	1	2
31	0	0	0	1	1	1	3
32	0	0	1	0	0	0	0
33	0	0	1	0	0	0	1
34	0	0	1	0	0	0	2
35	0	0	1	0	0	0	3
36	0	0	1	0	0	1	0
37	0	0	1	0	0	1	1
38	0	0	1	0	0	1	2
39	0	0	1	0	0	1	3
40	0	0	1	0	1	0	0
41	0	0	1	0	1	0	1
42	0	0	1	0	1	0	2

OPTION Data	200PR	TEXT	I/II SV	TOP	SCART	A2 ST	SYS
43	0	0	1	0	1	0	3
44	0	0	1	0	1	1	0
45	0	0	1	0	1	1	1
46	0	0	1	0	1	1	2
47	0	0	1	0	1	1	3
48	0	0	1	1	0	0	0
49	0	0	1	1	0	0	1
50	0	0	1	1	0	0	2
51	0	0	1	1	0	0	3
52	0	0	1	1	0	1	0
53	0	0	1	1	0	1	1
54	0	0	1	1	0	1	2
55	0	0	1	1	0	1	3
56	0	0	1	1	1	0	0
57	0	0	1	1	1	0	1
58	0	0	1	1	1	0	2
59	0	0	1	1	1	0	3
60	0	0	1	1	1	1	0
61	0	0	1	1	1	1	1
62	0	0	1	1	1	1	2
63	0	0	1	1	1	1	3
64	0	1	0	0	0	0	0
65	0	1	0	0	0	0	1
66	0	1	0	0	0	0	2
67	0	1	0	0	0	0	3
68	0	1	0	0	0	1	0
69	0	1	0	0	0	1	1
70	0	1	0	0	0	1	2
71	0	1	0	0	0	1	3
72	0	1	0	0	1	0	0
73	0	1	0	0	1	0	1
74	0	1	0	0	1	0	2
75	0	1	0	0	1	0	3
76	0	1	0	0	1	1	0
77	0	1	0	0	1	1	1
78	0	1	0	0	1	1	2
79	0	1	0	0	1	1	3
80	0	1	0	1	0	0	0
81	0	1	0	1	0	0	1
82	0	1	0	1	0	0	2
83	0	1	0	1	0	0	3
84	0	1	0	1	0	1	0
85	0	1	0	1	0	1	1

OPTION Data	200PR	TEXT	I/II SV	TOP	SCART	A2 ST	SYS
86	0	1	0	1	0	1	2
87	0	1	0	1	0	1	3
88	0	1	0	1	1	0	0
89	0	1	0	1	1	0	1
90	0	1	0	1	1	0	2
91	0	1	0	1	1	0	3
92	0	1	0	1	1	1	0
93	0	1	0	1	1	1	1
94	0	1	0	1	1	1	2
95	0	1	0	1	1	1	3
96	0	1	1	0	0	0	0
97	0	1	1	0	0	0	1
98	0	1	1	0	0	0	2
99	0	1	1	0	0	0	3
100	0	1	1	0	0	1	0
101	0	1	1	0	0	1	1
102	0	1	1	0	0	1	2
103	0	1	1	0	0	1	3
104	0	1	1	0	1	0	0
105	0	1	1	0	1	0	1
106	0	1	1	0	1	0	2
107	0	1	1	0	1	0	3
108	0	1	1	0	1	1	0
109	0	1	1	0	1	1	1
110	0	1	1	0	1	1	2
111	0	1	1	0	1	1	3
112	0	1	1	1	0	0	0
113	0	1	1	1	0	0	1
114	0	1	1	1	0	0	2
115	0	1	1	1	0	0	3
116	0	1	1	1	0	1	0
117	0	1	1	1	0	1	1
118	0	1	1	1	0	1	2
119	0	1	1	1	0	1	3
120	0	1	1	1	1	0	0
121	0	1	1	1	1	0	1
122	0	1	1	1	1	0	2
123	0	1	1	1	1	0	3
124	0	1	1	1	1	1	0
125	0	1	1	1	1	1	1
126	0	1	1	1	1	1	2
127	0	1	1	1	1	1	3
128	1	0	0	0	0	0	0
129	1	0	0	0	0	0	1
130	1	0	0	0	0	0	2
131	1	0	0	0	0	0	3

OPTION Data	200PR	TEXT	I/II SV	TOP	SCART	A2 ST	SYS
132	1	0	0	0	0	1	0
133	1	0	0	0	0	1	1
134	1	0	0	0	0	1	2
135	1	0	0	0	0	1	3
136	1	0	0	0	1	0	0
137	1	0	0	0	1	0	1
138	1	0	0	0	1	0	2
139	1	0	0	0	1	0	3
140	1	0	0	0	1	1	0
141	1	0	0	0	1	1	1
142	1	0	0	0	1	1	2
143	1	0	0	0	1	1	3
144	1	0	0	1	0	0	0
145	1	0	0	1	0	0	1
146	1	0	0	1	0	0	2
147	1	0	0	1	0	0	3
148	1	0	0	1	0	1	0
149	1	0	0	1	0	1	1
150	1	0	0	1	0	1	2
151	1	0	0	1	0	1	3
152	1	0	0	1	1	0	0
153	1	0	0	1	1	0	1
154	1	0	0	1	1	0	2
155	1	0	0	1	1	0	3
156	1	0	0	1	1	1	0
157	1	0	0	1	1	1	1
158	1	0	0	1	1	1	2
159	1	0	0	1	1	1	3
160	1	0	1	0	0	0	0
161	1	0	1	0	0	0	1
162	1	0	1	0	0	0	2
163	1	0	1	0	0	0	3
164	1	0	1	0	0	1	0
165	1	0	1	0	0	1	1
166	1	0	1	0	0	1	2
167	1	0	1	0	0	1	3
168	1	0	1	0	1	0	0
169	1	0	1	0	1	0	1
170	1	0	1	0	1	0	2
171	1	0	1	0	1	0	3
172	1	0	1	0	1	1	0
173	1	0	1	0	1	1	1
174	1	0	1	0	1	1	2
175	1	0	1	0	1	1	3
176	1	0	1	1	0	0	0
177	1	0	1	1	0	0	1

OPTION Data	200PR	TEXT	I/II SV	TOP	SCART	A2 ST	SYS
178	1	0	1	1	0	0	2
179	1	0	1	1	0	0	3
180	1	0	1	1	0	1	0
181	1	0	1	1	0	1	1
182	1	0	1	1	0	1	2
183	1	0	1	1	0	1	3
184	1	0	1	1	1	0	0
185	1	0	1	1	1	0	1
186	1	0	1	1	1	0	2
187	1	0	1	1	1	0	3
188	1	0	1	1	1	1	0
189	1	0	1	1	1	1	1
190	1	0	1	1	1	1	2
191	1	0	1	1	1	1	3
192	1	1	0	0	0	0	0
193	1	1	0	0	0	0	1
194	1	1	0	0	0	0	2
195	1	1	0	0	0	0	3
196	1	1	0	0	0	1	0
197	1	1	0	0	0	1	1
198	1	1	0	0	0	1	2
199	1	1	0	0	0	1	3
200	1	1	0	0	1	0	0
201	1	1	0	0	1	0	1
202	01	1	0	0	1	0	2
203	1	1	0	0	1	0	3
204	1	1	0	0	1	1	0
205	1	1	0	0	1	1	1
206	1	1	0	0	1	1	2
207	1	1	0	0	1	1	3
208	1	1	0	1	0	0	0
209	1	1	0	1	0	0	1
210	1	1	0	1	0	0	2
211	1	1	0	1	0	0	3
212	1	1	0	1	0	1	0
213	1	1	0	1	0	1	1
214	1	1	0	1	0	1	2
215	1	1	0	1	0	1	3
216	1	1	0	1	1	0	0
217	1	1	0	1	1	0	1
218	1	1	0	1	1	0	2
219	1	1	0	1	1	0	3
220	1	1	0	1	1	1	0
221	1	1	0	1	1	1	1
222	1	1	0	1	1	1	2
223	1	1	0	1	1	1	3

OPTION Data	200PR	TEXT	I/II SV	TOP	SCART	A2 ST	SYS
224	1	1	1	0	0	0	0
225	1	1	1	0	0	0	1
226	1	1	1	0	0	0	2
227	1	1	1	0	0	0	3
228	1	1	1	0	0	1	0
229	1	1	1	0	0	1	1
230	1	1	1	0	0	1	2
231	1	1	1	0	0	1	3
232	1	1	1	0	1	0	0
233	1	1	1	0	1	0	1
234	1	1	1	0	1	0	2
235	1	1	1	0	1	0	3
236	1	1	1	0	1	1	0
237	1	1	1	0	1	1	1
238	1	1	1	0	1	1	2
239	1	1	1	0	1	1	3
240	1	1	1	1	0	0	0
241	1	1	1	1	0	0	1
242	1	1	1	1	0	0	2
243	1	1	1	1	0	0	3
244	1	1	1	1	0	1	0
245	1	1	1	1	0	1	1
246	1	1	1	1	0	1	2
247	1	1	1	1	0	1	3
248	1	1	1	1	1	0	0
249	1	1	1	1	1	0	1
250	1	1	1	1	1	0	2
251	1	1	1	1	1	0	3
252	1	1	1	1	1	1	0
253	1	1	1	1	1	1	1
254	1	1	1	1	1	1	2
255	1	1	1	1	1	1	3

5. Option2 data(ACMS~BBACK:1bit,LANG:3bit)

OPTION Data	ACMS	VOL	BBACK	LANG
0	0	0	0	0
1	0	0	0	1
2	0	0	0	2
3	0	0	0	3
4	0	0	0	4
5	0	0	0	5
6	0	0	0	6
7	0	0	0	7
8	0	0	1	0
9	0	0	1	1
10	0	0	1	2
11	0	0	1	3
12	0	0	1	4
13	0	0	1	5
14	0	0	1	6
15	0	0	1	7
16	0	1	0	0
17	0	1	0	1
18	0	1	0	2
19	0	1	0	3
20	0	1	0	4
21	0	1	0	5
22	0	1	0	6
23	0	1	0	7
24	0	1	1	0
25	0	1	1	1
26	0	1	1	2
27	0	1	1	3
28	0	1	1	4
29	0	1	1	5
30	0	1	1	6
31	0	1	1	7

OPTION Data	ACMS	VOL	BBACK	LANG
32	1	0	0	0
33	1	0	0	1
34	1	0	0	2
35	1	0	0	3
36	1	0	0	4
37	1	0	0	5
38	1	0	0	6
39	1	0	0	7
40	1	0	1	0
41	1	0	1	1
42	1	0	1	2
43	1	0	1	3
44	1	0	1	4
45	1	0	1	5
46	1	0	1	6
47	1	0	1	7
48	1	1	0	0
49	1	1	0	1
50	1	1	0	2
51	1	1	0	3
52	1	1	0	4
53	1	1	0	5
54	1	1	0	6
55	1	1	0	7
56	1	1	1	0
57	1	1	1	1
58	1	1	1	2
59	1	1	1	3
60	1	1	1	4
61	1	1	1	5
62	1	1	1	6
63	1	1	1	7

6. Option3 data(IIC AFT~CH+AU:1bit)

OPTION Data	HiDEV	TSS	IIC T	MONO	CH+AUS
0	0	0	0	0	0
1	0	0	0	0	1
2	0	0	0	1	0
3	0	0	0	1	1
4	0	0	1	0	0
5	0	0	1	0	1
6	0	0	1	1	0
7	0	0	1	1	1
8	0	1	0	0	0
9	0	1	0	0	1
10	0	1	0	1	0
11	0	1	0	1	1
12	0	1	1	0	0
13	0	1	1	0	1
14	0	1	1	1	0
15	0	1	1	1	1
16	1	0	0	0	0
17	1	0	0	0	1
18	1	0	0	1	0
19	1	0	0	1	1
20	1	0	1	0	0
21	1	0	1	0	1
22	1	0	1	1	0
23	1	0	1	1	1
24	1	1	0	0	0
25	1	1	0	0	1
26	1	1	0	1	0
27	1	1	0	1	1
28	1	1	1	0	0
29	1	1	1	0	1
30	1	1	1	1	0
31	1	1	1	1	1

TROUBLE SHOOTING

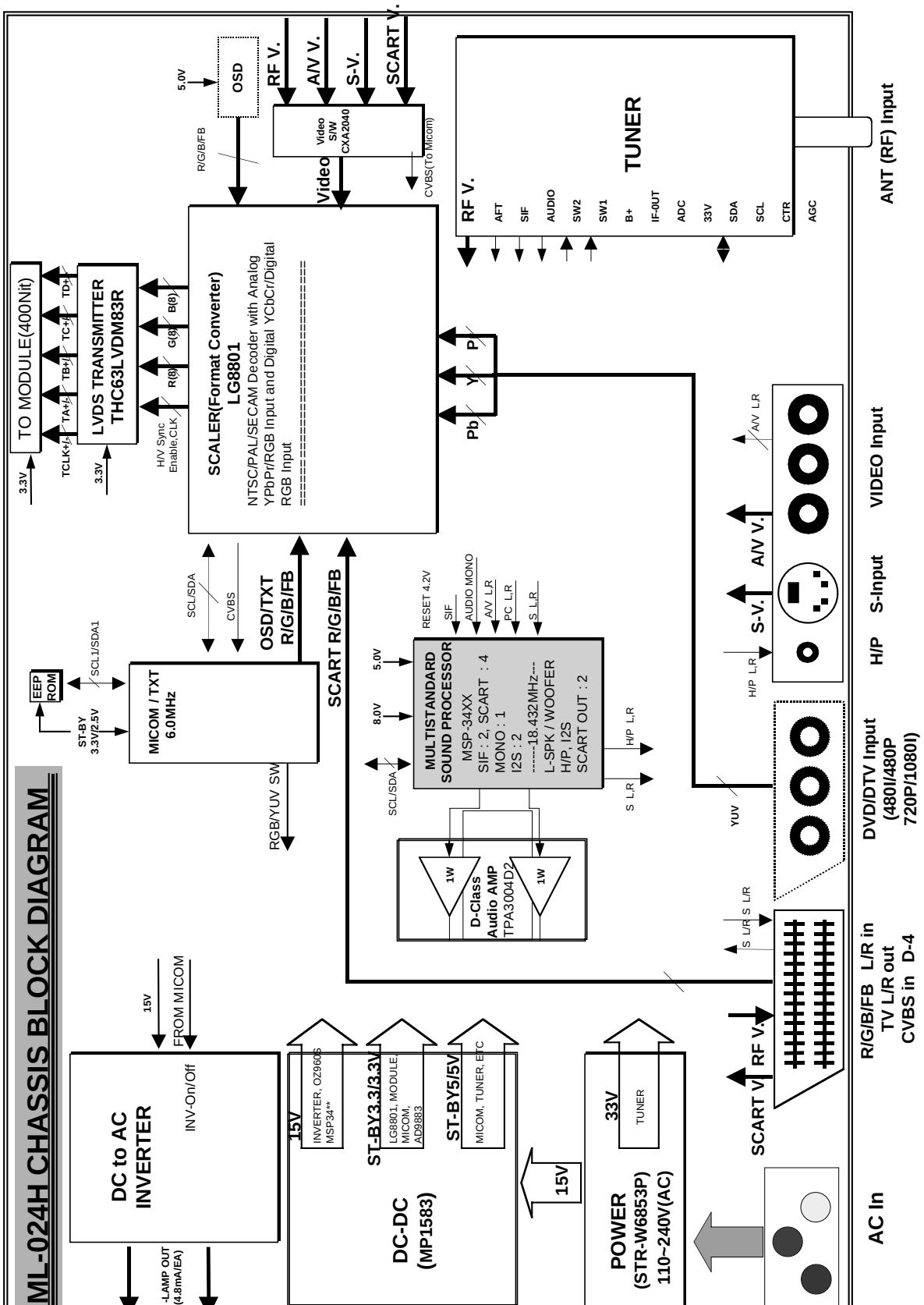
1. General Features

No.	Symptom	Cause	Check Point
1	No screen	Input error of inverter connector	1) Bend the pin legs of P802B connector -> recheck them 2) Check and repair IC805 SI4925.
		P1 and Pin 50 connector being slipped out	1) Check and fix P1 connector
		Cracked components and soldering at tuner board	1) Check and repair tuner board and main board 2) Solder Q403
2	Dark screen	1) Defective LCD lamp 2) Defective inverter 3) Input error of inverter connector	1) Replace the inverter 2) Replace the LCD lamp 3) Check the connector input.

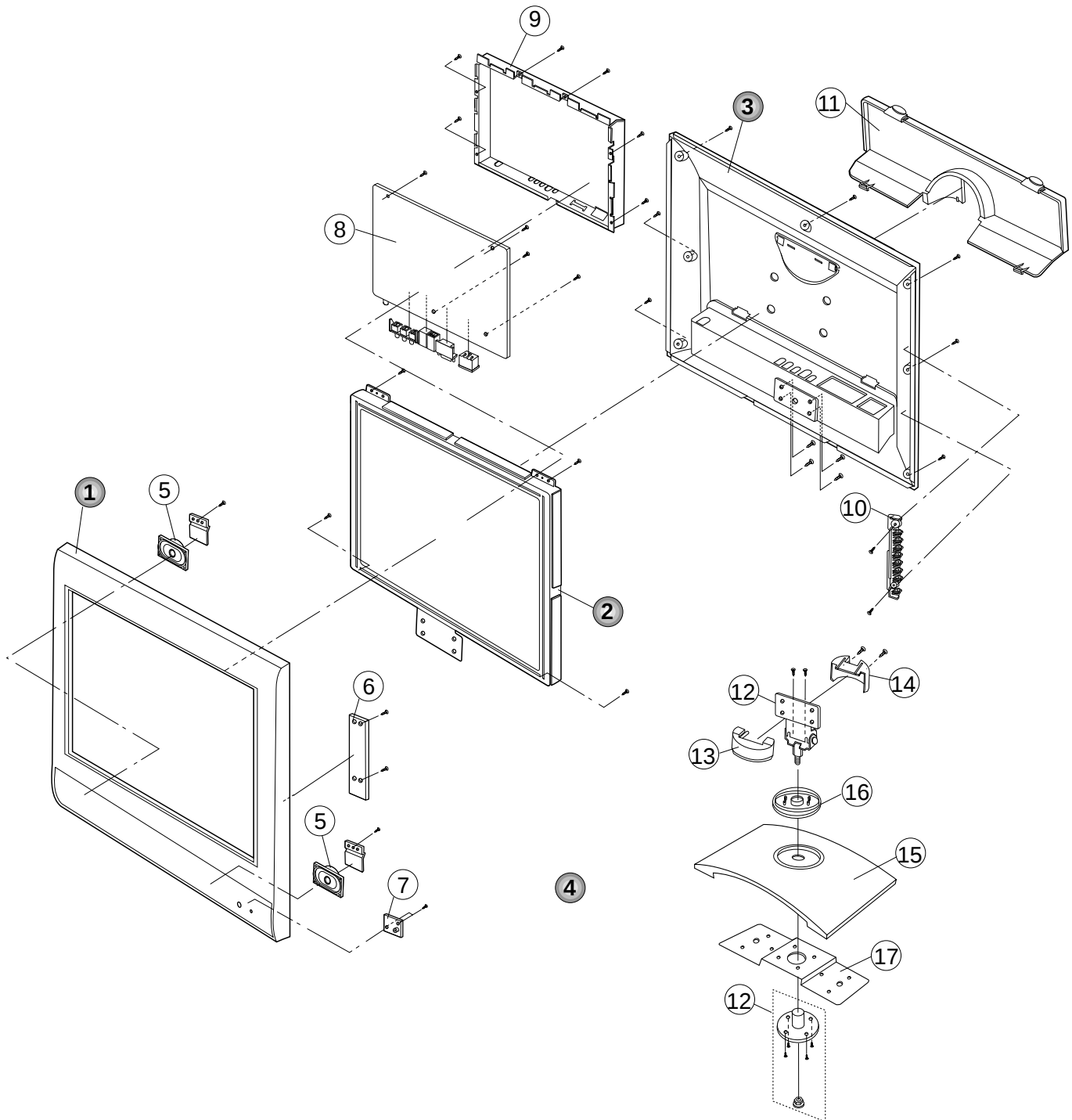
2. TV and external input

No.	Symptom	Cause	Check Point
1	No sound - Speaker - Earphone	Defective Reset IC of IC604. Defective MSP3410G of IC601. Defective B+(8V) of IC604.	1) Check volume and speaker. - Sound comes out only when being inputted into Audio L/R. 2) Check after replacing IC603. 3) Replace IC601. 4) Check and replace B+ of IC604.
2	Video color beat noise	Earphone shield case being touched.	Check the mould of shield and SJ209, Replace shield case.
		Soldering IC501.	1) Check signal of Video input. 2) Check signal of R.G.B output. 3) Re-soldering

BLOCK DIAGRAM



EXPLODED VIEW



EXPLODED VIEW PARTS LIST

No.	PART NO.	DESCRIPTION
1	3091TKA005A	CABINET ASSEMBLY, RZ-14LA60 BRAND NON NON
	3091TKA005B	CABINET ASSEMBLY, RZ-14LA60 BRAND 3090TKA003 C/SKD
2	6304FAU016A	LCD(LIQUID CRYSTAL DISPLAY), T140VN01 AU TFT COLOR MVA 450NITS 25MS
3	3809TKA002B	BACK COVER ASSEMBLY, RZ-14LA60 3808TKA002 3850VC0002F
	3809TKA002C	BACK COVER ASSEMBLY, RZ-14LA60 3808TKA002 C/SKD
	3809TKA002D	BACK COVER ASSEMBLY, RZ-14LA60 3808TKA002 412-386D UK ONLY SKD
4	4811V00047C	BRACKET ASSEMBLY, STAND RJ-13LA60 ML024C .
	4811V00047F	BRACKET ASSEMBLY, STAND RZ-13LA60 SKD ML024C .
5	6401VB0003Y	SPEAKER ASSEMBLY, RU-13LA60 CPT FULL RANGE(R/L) 6400VA0017A (3P + 4P)
6	6871VSMV23A	PWB(PCB) ASSEMBLY,SUB, CONT ML024C CONTROL 13
7	6871VSMV22B	PWB(PCB) ASSEMBLY,SUB, POWER ML024C POWER 13 SKD
8	3313TP1002A	MAIN TOTAL ASSEMBLY, RZ-14LA60 BRAND ML-024H
9	4951TKS151A	METAL ASSEMBLY, FRAME .
	4951TKS151B	METAL ASSEMBLY, FRAME MAIN RZ-14LA60 SKD
10	4940TKC019A	KNOB, ROTARY CONTROL BUTTON
11	3550TKK539A	COVER, RZ-14LA60 REAR AV
12	4950V00157B	METAL, HINGE ASSY NON RJ-13LA60
13	3550V00300C	COVER, FRONT RJ-13LA60 ABS .
14	3550V00301C	COVER, REAR RJ-13LA60 ABS HINGE
15	4810V00784C	BRACKET, STAND RJ-13LA60 ML024C ABS .
16	4810V00785B	BRACKET, DECO RU-13LA60 NON ABS, HF-380 .
17	4950V00161B	METAL, STAND EGI RJ-13LA60 PRESS

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. 06.16.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
MAIN BOARD				
CAPACITOR				
		C10	0CE227DF618	220UF STD 16V M FL TP5
		C1107	0CE337BH618	330UF KME 25V M FL TP5
		C1150	0CE337BH618	330UF KME 25V M FL TP5
		C1151	0CE337BH618	330UF KME 25V M FL TP5
		C1200	0CE227DH618	220UF STD 25V M FL TP5
		C1235	0CE107DD618	100UF STD 10V M FL TP5
		C13	0CE227DF618	220UF STD 16V M FL TP5
		C209	0CE476DF618	47UF STD 16V M FL TP5
		C211	0CE106DF618	10UF STD 16V M FL TP5
		C212	0CE227DD618	220UF STD 10V M FL TP5
		C215	0CE106DF618	10UF STD 16V M FL TP5
		C216	0CE106DF618	10UF STD 16V M FL TP5
		C289	0CE104DK618	0.1000UF STD 50V M FL TP5
		C331	0CE107DF618	100UF STD 16V M FL TP5
		C351	0CE227DF618	220UF STD 16V M FL TP5
		C354	0CE476DF618	47UF STD 16V M FL TP5
		C356	0CE106DF618	10UF STD 16V M FL TP5
		C362	0CE107DF618	100UF STD 16V M FL TP5
		C364	0CE336DF618	33UF STD 16V M FL TP5
		C380	0CE105DK618	1UF STD 50V M FL TP5
		C381	0CE106DF618	10UF STD 16V M FL TP5
		C383	0CE106DF618	10UF STD 16V M FL TP5
		C408	0CE106DK618	10UF STD 50V M FL TP5
		C410	0CE227DF618	220UF STD 16V M FL TP5
		C412	0CE105DK618	1UF STD 50V M FL TP5
		C499	0CE476DK618	47UF STD 50V M FL TP5
		C501	0CE107DF618	100UF STD 16V M FL TP5
		C523	0CE104DK618	0.1000UF STD 50V M FL TP5
		C526	0CE107DF618	100UF STD 16V M FL TP5
		C541	0CE107DF618	100UF STD 16V M FL TP5
		C581	0CE107DF618	100UF STD 16V M FL TP5
		C613	0CE106DF618	10UF STD 16V M FL TP5
		C614	0CE106DF618	10UF STD 16V M FL TP5
		C616	0CE107DF618	100UF STD 16V M FL TP5
		C629	0CE107DF618	100UF STD 16V M FL TP5
		C633	0CE107DF618	100UF STD 16V M FL TP5
		C706	0CE226BK618	22UF KME 50V M FL TP5
		C719	0CE227BJ618	220U KME 35V M FL TP5
		C728	0CE476BK618	47UF KME 50V M FL TP5
		C731	0CE227BJ618	220U KME 35V M FL TP5
		C744	0CE107BK638	100UF KME 50V M FM5 TP5
		C1127	0CH3105F946	1UF 16V Z F 2012 R/TP
		C1128	0CH3105F946	1UF 16V Z F 2012 R/TP
		C1131	0CH3153K516	15000PF 50V K B 2012 R/TP
		C1132	0CH3105F946	1UF 16V Z F 2012 R/TP
		C1133	0CH3105F946	1UF 16V Z F 2012 R/TP
		C1134	0CH3105F946	1UF 16V Z F 2012 R/TP
		C1137	0CH3105F946	1UF 16V Z F 2012 R/TP
		C1207	0CH3105F946	1UF 16V Z F 2012 R/TP
		C1208	0CH3105F946	1UF 16V Z F 2012 R/TP
		C1209	0CH3105F946	1UF 16V Z F 2012 R/TP
		C1210	0CH3105F946	1UF 16V Z F 2012 R/TP
		C1211	0CH3105F946	1UF 16V Z F 2012 R/TP

DATE: 2004. 06.16.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C1226	0CH3105F946	1UF 16V Z F 2012 R/TP
		C1227	0CH3105F946	1UF 16V Z F 2012 R/TP
		C1228	0CH3105F946	1UF 16V Z F 2012 R/TP
		C1229	0CH3105F946	1UF 16V Z F 2012 R/TP
		C1231	0CH3105F946	1UF 16V Z F 2012 R/TP
		C1234	0CH3105F946	1UF 16V Z F 2012 R/TP
		C402	0CH3472K516	4700PF 50V K B 2012 R/TP
		C611	0CH3222K516	2200PF 50V K B 2012 R/TP
		C612	0CH3222K516	2200PF 50V K B 2012 R/TP
		C622	0CH3222K516	2200PF 50V K B 2012 R/TP
		C623	0CH3222K516	2200PF 50V K B 2012 R/TP
		C716	0CH3222K516	2200PF 50V K B 2012 R/TP
		C111	0CH6101K416	100PF 50V J NP0 2012 R/TP
		C1121	0CH6271K416	270PF 50V J NP0 2012 R/TP
		C122	0CH6330K416	33PF 50V J NP0 2012 R/TP
		C123	0CH6330K416	33PF 50V J NP0 2012 R/TP
		C1233	0CH6221K416	220PF 50V J NP0 2012 R/TP
		C132	0CH6101K416	100PF 50V J NP0 2012 R/TP
		C133	0CH6101K416	100PF 50V J NP0 2012 R/TP
		C134	0CH6101K416	100PF 50V J NP0 2012 R/TP
		C135	0CH6101K416	100PF 50V J NP0 2012 R/TP
		C150	0CH6101K416	100PF 50V J NP0 2012 R/TP
		C191	0CH6330K416	33PF 50V J NP0 2012 R/TP
		C192	0CH6330K416	33PF 50V J NP0 2012 R/TP
		C193	0CH6330K416	33PF 50V J NP0 2012 R/TP
		C194	0CH6330K416	33PF 50V J NP0 2012 R/TP
		C196	0CH6330K416	33PF 50V J NP0 2012 R/TP
		C197	0CH6330K416	33PF 50V J NP0 2012 R/TP
		C198	0CH6330K416	33PF 50V J NP0 2012 R/TP
		C199	0CH6330K416	33PF 50V J NP0 2012 R/TP
		C202	0CH6331K416	330PF 50V J NP0 2012 R/TP
		C207	0CH6471K416	470F 50V J NP0 2012 R/TP
		C208	0CH6471K416	470F 50V J NP0 2012 R/TP
		C213	0CH6221K416	220PF 50V J NP0 2012 R/TP
		C214	0CH6101K416	100PF 50V J NP0 2012 R/TP
		C217	0CH6471K416	470F 50V J NP0 2012 R/TP
		C218	0CH6471K416	470F 50V J NP0 2012 R/TP
		C221	0CH6471K416	470F 50V J NP0 2012 R/TP
		C222	0CH6471K416	470F 50V J NP0 2012 R/TP
		C223	0CH6101K416	100PF 50V J NP0 2012 R/TP
		C224	0CH6101K416	100PF 50V J NP0 2012 R/TP
		C360	0CH6221K416	220PF 50V J NP0 2012 R/TP
		C382	0CH6151K416	150PF 50V J NP0 2012 R/TP
		C384	0CH6151K416	150PF 50V J NP0 2012 R/TP
		C385	0CH6151K416	150PF 50V J NP0 2012 R/TP
		C406	0CH6101K416	100PF 50V J NP0 2012 R/TP
		C407	0CH6101K416	100PF 50V J NP0 2012 R/TP
		C44	0CH6150K416	15PF 50V J NP0 2012 R/TP
		C510	0CH6150K416	15PF 50V J NP0 2012 R/TP
		C511	0CH6150K416	15PF 50V J NP0 2012 R/TP
		C536	0CH6151K416	150PF 50V J NP0 2012 R/TP
		C635	0CH6560K416	56PF 50V J NP0 2012 R/TP
		C636	0CH6560K416	56PF 50V J NP0 2012 R/TP
		C739	0CH6101K416	100PF 50V J NP0 2012 R/TP

DATE: 2004. 06.16.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C749	0CH6101K416	100PF 50V J NP0 2012 R/TP
		C750	0CH6101K416	100PF 50V J NP0 2012 R/TP
		C8	0CH6101K416	100PF 50V J NP0 2012 R/TP
		C824	0CH6220K416	22PF 50V J NP0 2012 R/TP
		C825	0CH6220K416	22PF 50V J NP0 2012 R/TP
		C826	0CH6220K416	22PF 50V J NP0 2012 R/TP
		C1120	0CH2473K516	47000P 50V K B 2.0X1.25 R/TP
		C1122	0CH2473K516	47000P 50V K B 2.0X1.25 R/TP
		C512	0CH2473K516	47000P 50V K B 2.0X1.25 R/TP
		C513	0CH2473K516	47000P 50V K B 2.0X1.25 R/TP
		C517	0CH2473K516	47000P 50V K B 2.0X1.25 R/TP
		C518	0CH2473K516	47000P 50V K B 2.0X1.25 R/TP
		C519	0CH2473K516	47000P 50V K B 2.0X1.25 R/TP
		C520	0CH2473K516	47000P 50V K B 2.0X1.25 R/TP
		C703	181-120P	470 PF 4KV K JE R FL 10
		C704	181-120P	470 PF 4KV K JE R FL 10
		C708	181-091D	DEHR33A102KN2A 1000PF 1KV 10
		C709	181-120K	2200PF 4KV M E FMTW LEAD 4.5
		C710	181-120K	2200PF 4KV M E FMTW LEAD 4.5
		C717	181-091D	DEHR33A102KN2A 1000PF 1KV 10
		C718	181-091D	DEHR33A102KN2A 1000PF 1KV 10
		C726	181-091N	"SL 100PF 1KV 10%, -10% R/TP T"
		C777	181-091D	DEHR33A102KN2A 1000PF 1KV 10
		C100	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C102	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C103	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C106	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C107	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C108	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C11	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C110	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1110	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1111	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1114	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1115	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C112	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1123	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1124	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1126	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1129	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1130	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C114	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1140	0CK225DFK4A	"2.2UF 2012 16V 20%, -20% F(Y5"
		C1141	0CK225DFK4A	"2.2UF 2012 16V 20%, -20% F(Y5"
		C1142	0CK225DFK4A	"2.2UF 2012 16V 20%, -20% F(Y5"
		C1143	0CK225DFK4A	"2.2UF 2012 16V 20%, -20% F(Y5"
		C1144	0CK225DFK4A	"2.2UF 2012 16V 20%, -20% F(Y5"
		C1145	0CK225DFK4A	"2.2UF 2012 16V 20%, -20% F(Y5"
		C1146	0CK225DFK4A	"2.2UF 2012 16V 20%, -20% F(Y5"
		C1147	0CK225DFK4A	"2.2UF 2012 16V 20%, -20% F(Y5"
		C115	0CH5620K416	62PF 50V 5% NP0 2012 R/TP
		C116	0CH5620K416	62PF 50V 5% NP0 2012 R/TP
		C117	0CH5620K416	62PF 50V 5% NP0 2012 R/TP
		C118	0CH5620K416	62PF 50V 5% NP0 2012 R/TP
		C119	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C12	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C120	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1203	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1204	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1205	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1206	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C121	0CH3103K516	10000PF 50V 10% B(Y5P) 2012

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		C1220	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1221	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1224	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1225	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1232	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C124	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C125	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C200	0CK225DFK4A	"2.2UF 2012 16V 20%, -20% F(Y5"
		C201	0CK225DFK4A	"2.2UF 2012 16V 20%, -20% F(Y5"
		C204	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C206	0CH6391K416	390PF 50V 5% NP0 2012 R/TP
		C210	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C225	0CK225DFK4A	"2.2UF 2012 16V 20%, -20% F(Y5"
		C226	0CK225DFK4A	"2.2UF 2012 16V 20%, -20% F(Y5"
		C253	0CH6391K416	390PF 50V 5% NP0 2012 R/TP
		C287	0CH6391K416	390PF 50V 5% NP0 2012 R/TP
		C288	0CH6391K416	390PF 50V 5% NP0 2012 R/TP
		C3	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C352	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C363	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C365	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C4	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C405	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C409	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C411	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C413	0CK224DF56A	220000PF 2012 16V 10% R/TP X
		C498	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C5	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C502	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C503	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C504	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
		C514	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C515	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C516	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C527	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C528	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C529	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C530	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C533	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C534	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C535	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C537	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C538	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C539	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C540	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C556	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C557	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C558	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C580	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C587	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C6	0CH5102K416	1000PF 50V 5% NP0 2012 R/TP
		C609	0CH3822K516	8200PF 2012 50V 10% B(Y5P) R
		C610	0CH3822K516	8200PF 2012 50V 10% B(Y5P) R
		C615	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C618	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C619	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C624	0CK224DF56A	220000PF 2012 16V 10% R/TP X

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		C625	0CK224DF56A	220000PF 2012 16V 10% R/TP X
		C626	0CK224DF56A	220000PF 2012 16V 10% R/TP X
		C627	0CK224DF56A	220000PF 2012 16V 10% R/TP X
		C628	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C631	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C634	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C638	0CH6020K116	2PF 50V 0.5 PF NP0 2012 R/TP
		C639	0CH6020K116	2PF 50V 0.5 PF NP0 2012 R/TP
		C640	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C644	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C645	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C661	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C662	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C663	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C664	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C665	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C666	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C667	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C668	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C669	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C670	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C671	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C672	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C673	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C674	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C675	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C676	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C677	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C678	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C679	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C680	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C681	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C682	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C683	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C684	0CH5120K416	12PF 50V 5% NP0 2012 R/TP
		C698	0CK224DF56A	220000PF 2012 16V 10% R/TP X
		C699	0CK224DF56A	220000PF 2012 16V 10% R/TP X
		C711	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C712	0CH5821K416	820PF 50V 5% NP0 2012 R/TP
		C724	0CH5102K416	1000PF 50V 5% NP0 2012 R/TP
		C737	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C738	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C740	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C741	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C742	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C748	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C751	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C752	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		L200	0CK225DFK4A	"2.2UF 2012 16V 20%, -20% F(Y5"
		C1101	0CC15003G06	"15PF D 3KV 10%, -10% SL FMTW"
		C1102	0CC15003G06	"15PF D 3KV 10%, -10% SL FMTW"
		C1105	0CC15003G06	"15PF D 3KV 10%, -10% SL FMTW"
		C1106	0CC15003G06	"15PF D 3KV 10%, -10% SL FMTW"
		C1125	0CH2474F566	0.47UF 16V 10% X7R 2012 R/TP
		C1212	0CH2474F566	0.47UF 16V 10% X7R 2012 R/TP
		C1213	0CH2474F566	0.47UF 16V 10% X7R 2012 R/TP
		C1214	0CH2474F566	0.47UF 16V 10% X7R 2012 R/TP
		C1217	0CH2474F566	0.47UF 16V 10% X7R 2012 R/TP
		C1218	0CH2474F566	0.47UF 16V 10% X7R 2012 R/TP
		C1219	0CH2474F566	0.47UF 16V 10% X7R 2012 R/TP
		C151	0CH2272K516	2700PF 50V 10% B(Y5P) 2012 R
		C152	0CH2182K516	1800PF 50V 10% B(Y5P) 2012 R

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		C153	0CH2102K516	1000PF 50V 10% B(Y5P) 2012 R
		C630	0CH2152K516	1500PF 50V 10% B(Y5P) 2012 R
		C101	0CE107BF618	100UF KME 16V M FL TP5
		C113	0CE107BF618	100UF KME 16V M FL TP5
		C219	0CE226DF618	22UF STD 16V M FL TP5
		C220	0CE226DF618	22UF STD 16V M FL TP5
		C353	0CE475DK618	4.7UF STD 50V 20% FL TP 5
		C357	0CE225DK618	2.2UF STD 50V 20% FL TP 5
		C403	0CE476DH618	47UF STD 25V 20% FL TP 5
		C404	0CE687DD618	680UF STD 10V 20% FL TP 5
		C617	0CE107BH618	100UF KME TYPE 25V 20% FL TP
		C620	0CE335DK618	3.3UF STD 50V 20% FL TP 5
		C621	0CE107BF618	100UF KME 16V M FL TP5
		C643	0CE476BF618	47UF KME TYPE 16V 20% FL TP
		C707	0CE1072V610	100UF KMF 450V 20% FL BULK
		C725	0CE4772J618	470UF KMF 35V 20% TP 5 FL
		C727	0CE226BN618	22UF KME 100V M FL TP5
		C730	0CE4772J618	470UF KMF 35V 20% TP 5 FL
		C734	0CE4772J618	470UF KMF 35V 20% TP 5 FL
		C743	0CE477BD618	470UF KME TYPE 10V 20% FL TP
		C745	0CE477BD618	470UF KME TYPE 10V 20% FL TP
		C746	0CE477BD618	470UF KME TYPE 10V 20% FL TP
		C747	0CE477BD618	470UF KME TYPE 10V 20% FL TP
		C701	0CF474285B0	0.47UF S 275V 10% PCX2 337 B
		C1202	0CN475FH67A	4.7UF 3225 25V 20% R/TP X5R
		C1222	0CN475FH67A	4.7UF 3225 25V 20% R/TP X5R
		C1230	0CN475FH67A	4.7UF 3225 25V 20% R/TP X5R
DIODEs				
		D701	0DRSA00150A	RBV-406 SANKEN BK USC 600V 4
		D702	0DD100009AM	EU1ZV(1) TP SANKEN
		D704	0DD100009AM	EU1ZV(1) TP SANKEN
		D706	0DR060009AA	TVR06J TP GULF SEMICONDUCTOR
		D710	0DR340009AA	MBRS340 TP FAIRCHILD NON 40V
		D711	0DR340009AA	MBRS340 TP FAIRCHILD NON 40V
		D707	0DRSD00091A	SF20JC10 SHINDENGEN ST FTO22
		D100	0DS181009AA	KDS181 TP KEC SOT-23 80V 3
		D1101	0DS181009AA	KDS181 TP KEC SOT-23 80V 3
		D1102	0DS181009AA	KDS181 TP KEC SOT-23 80V 3
		D1105	0DS181009AA	KDS181 TP KEC SOT-23 80V 3
		D1106	0DS181009AA	KDS181 TP KEC SOT-23 80V 3
		ZD1101	0DZ510009EE	UDZ S 5.1B TP ROHM-K SOD323
		ZD1102	0DZ510009EE	UDZ S 5.1B TP ROHM-K SOD323
		ZD202	0DZ510009EE	UDZ S 5.1B TP ROHM-K SOD323
		ZD203	0DZ510009EE	UDZ S 5.1B TP ROHM-K SOD323
		ZD704	0DZ110009AD	MTZJ11B TP ROHM-K DO34 500MW
		ZD400	0DZ330009BA	ZENER HZT33 TAPING
		ZD701	0DZ910009AJ	MTZJ9.1B TP ROHM-K DO34 0.5W
IC				
		IC701	0IPMGSK012A	STR-W6853P SANKEN 6P T0-220
		IC502	0ICTMMO005B	SC786110DW MOTOROLA SOIC 16P
		IC102	0IFA752700A	KA75270Z 3 TP RE-SET IC MC-0
		IC1106	0IKE704200J	KIA7042AF SOT-89 TP 4.2V VOL
		IC603	0IKE704200J	KIA7042AF SOT-89 TP 4.2V VOL
		IC101	0IAL241610B	AT24C16A-10PI-2.7 8PIN DIP S
		IC1101	0IMCRO2001A	OZ960S O2MICRO 20P SSOP R/TP
		IC1110	0IMCRRH005A	UM6K1N ROHM 6P SOT363 R/TP 3
		IC1112	0IMCRRH005A	UM6K1N ROHM 6P SOT363 R/TP 3
		IC1121	0IMCRMZ001A	MP1583DN MONOLITHIC POWER SY

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		IC1122	0IMCRMZ001A	MP1583DN MONOLITHIC POWER SY
		IC352	0ISO204000A	"CXA2040AQ 32P,QFP BK IIC BUS"
		IC501	0IMCRTW001B	LG8801-H TECHWELL 160P QPFD
		IC601	0IMCRMN011D	MSP3410G QA B8 V3 MICRONAS 8
		IC1	0ITH638300B	"THC63LVDM83R THINE 56P,TSSOP"
		IC650	0IPRPTI036A	TPA3004D2PHPR TEXAS INSTRUME
		IC351	0IMCRFA010A	"KA7809R, FAIRCHILD 2P D-PAK,"
		IC500	0IMCRFA016A	KA78RH33RTF FAIRCHILD 2P D-P
		PC1	0IL1817000E	LTV-817M-V(B) 4P BK PHOTO C
		IC604	0ISS780800J	"KA78M08R 3P,D-PAK TP VOL. RE"
		IC702	0ISS431000A	KA431AZ (LM431AZ)
		Q101	0IFA270000A	"2N7000TA TO-92, 3P TP LEVEL"
		Q102	0IFA270000A	"2N7000TA TO-92, 3P TP LEVEL"
COIL & CORE & INDUCTOR				
		L1201	6140VR0005B	SLF7045T-330MR82 TDK 33UF SM
		L1202	6140VR0005B	SLF7045T-330MR82 TDK 33UF SM
		L1203	6140VR0005B	SLF7045T-330MR82 TDK 33UF SM
		L1204	6140VR0005B	SLF7045T-330MR82 TDK 33UF SM
		L705	6140VR0008B	SLF12575T-150M3R2 15UH SMD
		L706	6140VR0008B	SLF12575T-150M3R2 15UH SMD
		L1	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L101	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L1101	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L119	6210TCE001A	HB-1S2012-080JT CERATEC 2012
		L1200	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L1205	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L1206	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L204	6210TCE001A	HB-1S2012-080JT CERATEC 2012
		L205	6210TCE001A	HB-1S2012-080JT CERATEC 2012
		L206	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L208	6210TCE001A	HB-1S2012-080JT CERATEC 2012
		L209	6210TCE001A	HB-1S2012-080JT CERATEC 2012
		L351	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L400	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L402	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L501	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L515	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L517	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L581	6210TCE001A	HB-1S2012-080JT CERATEC 2012
		L601	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L602	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L603	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L701	125-022K	FERRITE 1UH NY 3.5*6.0MM AX
		L702	125-022K	FERRITE 1UH NY 3.5*6.0MM AX
		L703	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L704	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		L99	6210TCE001G	HH-1M3216-501 CERATEC 3216MM
		R505	6210TCE001A	HB-1S2012-080JT CERATEC 2012
		R710	125-022K	FERRITE 1UH NY 3.5*6.0MM AX
		L401	0LA0272K139	27UH K 4X10.5 TP
		L174	0LC0233002A	3.3UH CERATECH R/TP
		L175	0LC0233002A	3.3UH CERATECH R/TP
		L176	0LC0233002A	3.3UH CERATECH R/TP
		L177	0LC0233002A	3.3UH CERATECH R/TP
		L203	0LC0233002A	3.3UH CERATECH R/TP
		L296	0LC0233002A	3.3UH CERATECH R/TP
		L297	0LC0233002A	3.3UH CERATECH R/TP

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FET & TRANSISTOR				
		IC1223	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A
		IC1224	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A
		IC2	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A
		Q1	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q100	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q1101	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q1200	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q200	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q202	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q353	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q402	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q403	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q404	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q405	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q406	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q407	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q501	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q502	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q510	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q551	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q602	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q603	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q701	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q706	0TR322709AA	"KTC3227 TP KEC -Y, (KTC162"
		Q801	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q802	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		IC1102	0TFFC80044A	FDS8958A FAIRCHILD R/TP SO-8
		IC1103	0TFFC80044A	FDS8958A FAIRCHILD R/TP SO-8
		IC1104	0TFFC80044A	FDS8958A FAIRCHILD R/TP SO-8
		IC1105	0TFFC80044A	FDS8958A FAIRCHILD R/TP SO-8
RESISTORS				
		L111	0RH1000D622	100 1/10W 5 D.R/TP
		L112	0RH1000D622	100 1/10W 5 D.R/TP
		L113	0RH1000D622	100 1/10W 5 D.R/TP
		L114	0RH1000D622	100 1/10W 5 D.R/TP
		L115	0RH1000D622	100 1/10W 5 D.R/TP
		L116	0RH1000D622	100 1/10W 5 D.R/TP
		L117	0RH1000D622	100 1/10W 5 D.R/TP
		L118	0RH1000D622	100 1/10W 5 D.R/TP
		R100	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R101	0RH1000D622	100 1/10W 5 D.R/TP
		R102	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R103	0RH1000D622	100 1/10W 5 D.R/TP
		R104	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R105	0RH1000D622	100 1/10W 5 D.R/TP
		R106	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R107	0RH1000D622	100 1/10W 5 D.R/TP
		R108	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R109	0RH1000D622	100 1/10W 5 D.R/TP
		R1101	0RH1601D622	1.6K 1/10W 5 TA
		R1102	0RH1004D622	1.0M 1/10W 5 D.R/TP
		R1104	0RH1601D622	1.6K 1/10W 5 TA
		R1105	0RH1004D622	1.0M 1/10W 5 D.R/TP
		R1116	0RH1601D622	1.6K 1/10W 5 TA
		R1117	0RH1004D622	1.0M 1/10W 5 D.R/TP
		R112	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R1120	0RH1601D622	1.6K 1/10W 5 TA
		R1121	0RH1004D622	1.0M 1/10W 5 D.R/TP
		R113	0RH1000D622	100 1/10W 5 D.R/TP

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R1132	ORH4702D622	47K 1/10W 5 D.R/TP
		R1135	ORH5102D622	51K 1/10W 5 D.R/TP
		R1136	ORH1003D622	100K 1/10W 5 D.R/TP
		R114	ORH4701D622	4.7K 1/10W 5 D.R/TP
		R1140	ORH2001D622	2.0K 1/10W 5 D.R/TP
		R1143	ORH2702D622	27K 1/10W 5 D.R/TP
		R115	ORH1000D622	100 1/10W 5 D.R/TP
		R118	ORH4701D622	4.7K 1/10W 5 D.R/TP
		R120	ORH4302D622	43K 1/10W 5 D.R/TP
		R1200	ORH1000D622	100 1/10W 5 D.R/TP
		R1201	ORH1302D622	13K 1/10W 5 TA
		R1204	ORH1502D622	15K 1/10W 5 D.R/TP
		R1208	ORH1003D622	100K 1/10W 5 D.R/TP
		R1209	ORH1003D622	100K 1/10W 5 D.R/TP
		R1210	ORH1000D622	100 1/10W 5 D.R/TP
		R1212	ORH3301D622	3.3K 1/10W 5 D.R/TP
		R125	ORH1000D622	100 1/10W 5 D.R/TP
		R126	ORH1000D622	100 1/10W 5 D.R/TP
		R127	ORH4701D622	4.7K 1/10W 5 D.R/TP
		R128	ORH4701D622	4.7K 1/10W 5 D.R/TP
		R130	ORH1000D622	100 1/10W 5 D.R/TP
		R133	ORH1000D622	100 1/10W 5 D.R/TP
		R134	ORH1000D622	100 1/10W 5 D.R/TP
		R135	ORH1000D622	100 1/10W 5 D.R/TP
		R138	ORH2202D622	22K 1/10W 5 D.R/TP
		R139	ORH3301D622	3.3K 1/10W 5 D.R/TP
		R140	ORH1000D622	100 1/10W 5 D.R/TP
		R141	ORH3301D622	3.3K 1/10W 5 D.R/TP
		R143	ORH4701D622	4.7K 1/10W 5 D.R/TP
		R152	ORH1000D622	100 1/10W 5 D.R/TP
		R153	ORH1000D622	100 1/10W 5 D.R/TP
		R154	ORH1000D622	100 1/10W 5 D.R/TP
		R155	ORH1000D622	100 1/10W 5 D.R/TP
		R167	ORH4701D622	4.7K 1/10W 5 D.R/TP
		R168	ORH4701D622	4.7K 1/10W 5 D.R/TP
		R169	ORH4701D622	4.7K 1/10W 5 D.R/TP
		R170	ORH4701D622	4.7K 1/10W 5 D.R/TP
		R174	ORH0752D622	75 1/10W 5 D.R/TP
		R175	ORH0752D622	75 1/10W 5 D.R/TP
		R176	ORH0752D622	75 1/10W 5 D.R/TP
		R177	ORH0752D622	75 1/10W 5 D.R/TP
		R178	ORH3301D622	3.3K 1/10W 5 D.R/TP
		R179	ORH3301D622	3.3K 1/10W 5 D.R/TP
		R180	ORH6801D622	6.8K 1/10W 5 D.R/TP
		R183	ORH1202D622	12K 1/10W 5 D.R/TP
		R184	ORH1003D622	100K 1/10W 5 D.R/TP
		R185	ORH3300D622	330 1/10W 5 D.R/TP
		R194	ORH1000D622	100 1/10W 5 D.R/TP
		R196	ORH4701D622	4.7K 1/10W 5 D.R/TP
		R202	ORH0472D622	47 1/10W 5 D.R/TP
		R203	ORH0752D622	75 1/10W 5 D.R/TP
		R204	ORH0752D622	75 1/10W 5 D.R/TP
		R205	ORH1000D622	100 1/10W 5 D.R/TP
		R206	ORH0752D622	75 1/10W 5 D.R/TP
		R207	ORH5101D622	5.1K 1/10W 5 D.R/TP
		R208	ORH4703D622	470K 1/10W 5 D.R/TP
		R209	ORH5101D622	5.1K 1/10W 5 D.R/TP
		R210	ORH4703D622	470K 1/10W 5 D.R/TP
		R212	ORH4702D622	47K 1/10W 5 D.R/TP
		R213	ORH1000D622	100 1/10W 5 D.R/TP
		R214	ORH2702D622	27K 1/10W 5 D.R/TP
		R218	ORH0682D622	68 1/10W 5 D.R/TP

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R222	ORH0752D622	75 1/10W 5 D.R/TP
		R231	ORH0752D622	75 1/10W 5 D.R/TP
		R232	ORH0752D622	75 1/10W 5 D.R/TP
		R233	ORH0752D622	75 1/10W 5 D.R/TP
		R235	ORH2702D622	27K 1/10W 5 D.R/TP
		R236	ORH5102D622	51K 1/10W 5 D.R/TP
		R240	ORH5101D622	5.1K 1/10W 5 D.R/TP
		R241	ORH5101D622	5.1K 1/10W 5 D.R/TP
		R285	ORH4703D622	470K 1/10W 5 D.R/TP
		R286	ORH4703D622	470K 1/10W 5 D.R/TP
		R351	ORH6802D622	68K 1/10W 5 D.R/TP
		R352	ORH1000D622	100 1/10W 5 D.R/TP
		R353	ORH1000D622	100 1/10W 5 D.R/TP
		R354	ORH0102D622	10 1/10W 5 D.R/TP
		R355	ORH0102D622	10 1/10W 5 D.R/TP
		R357	ORH0102D622	10 1/10W 5 D.R/TP
		R361	ORH3300D622	330 1/10W 5 D.R/TP
		R362	ORH4700D622	470 1/10W 5 D.R/TP
		R363	ORH2200D622	220 1/10W 5 D.R/TP
		R364	ORH1000D622	100 1/10W 5 D.R/TP
		R365	ORH2200D622	220 1/10W 5 D.R/TP
		R366	ORH2200D622	220 1/10W 5 D.R/TP
		R377	ORH2200D622	220 1/10W 5 D.R/TP
		R408	ORH1000D622	100 1/10W 5 D.R/TP
		R410	ORH1000D622	100 1/10W 5 D.R/TP
		R411	ORH4700D622	470 1/10W 5 D.R/TP
		R412	ORH4700D622	470 1/10W 5 D.R/TP
		R413	ORH2001D622	2.0K 1/10W 5 D.R/TP
		R416	ORH4702D622	47K 1/10W 5 D.R/TP
		R419	ORH9102D622	91K 1/10W P-TYPE TAPPING
		R420	ORH6802D622	68K 1/10W 5 D.R/TP
		R421	ORH4701D622	4.7K 1/10W 5 D.R/TP
		R422	ORH2001D622	2.0K 1/10W 5 D.R/TP
		R44	ORH1000D622	100 1/10W 5 D.R/TP
		R492	ORH0102D622	10 1/10W 5 D.R/TP
		R496	ORH1000D622	100 1/10W 5 D.R/TP
		R501	ORH1000D622	100 1/10W 5 D.R/TP
		R502	ORH1000D622	100 1/10W 5 D.R/TP
		R503	ORH1000D622	100 1/10W 5 D.R/TP
		R504	ORH1000D622	100 1/10W 5 D.R/TP
		R509	ORH1000D622	100 1/10W 5 D.R/TP
		R512	ORH4701D622	4.7K 1/10W 5 D.R/TP
		R513	ORH1004D622	1.0M 1/10W 5 D.R/TP
		R516	ORH1000D622	100 1/10W 5 D.R/TP
		R525	ORH1000D622	100 1/10W 5 D.R/TP
		R574	ORH6800D622	680 OHM 1 / 10 W 5% D R/TP
		R576	ORH1000D622	100 1/10W 5 D.R/TP
		R579	ORH4700D622	470 1/10W 5 D.R/TP
		R580	ORH2200D622	220 1/10W 5 D.R/TP
		R583	ORH1000D622	100 1/10W 5 D.R/TP
		R584	ORH1000D622	100 1/10W 5 D.R/TP
		R590	ORH1000D622	100 1/10W 5 D.R/TP
		R591	ORH1000D622	100 1/10W 5 D.R/TP
		R593	ORH1000D622	100 1/10W 5 D.R/TP
		R594	ORH1000D622	100 1/10W 5 D.R/TP
		R595	ORH1000D622	100 1/10W 5 D.R/TP
		R596	ORH1000D622	100 1/10W 5 D.R/TP
		R597	ORH1000D622	100 1/10W 5 D.R/TP
		R598	ORH1000D622	100 1/10W 5 D.R/TP
		R599	ORH1000D622	100 1/10W 5 D.R/TP
		R602	ORH3901D622	3.9K 1/10W 5 D.R/TP
		R603	ORH3901D622	3.9K 1/10W 5 D.R/TP

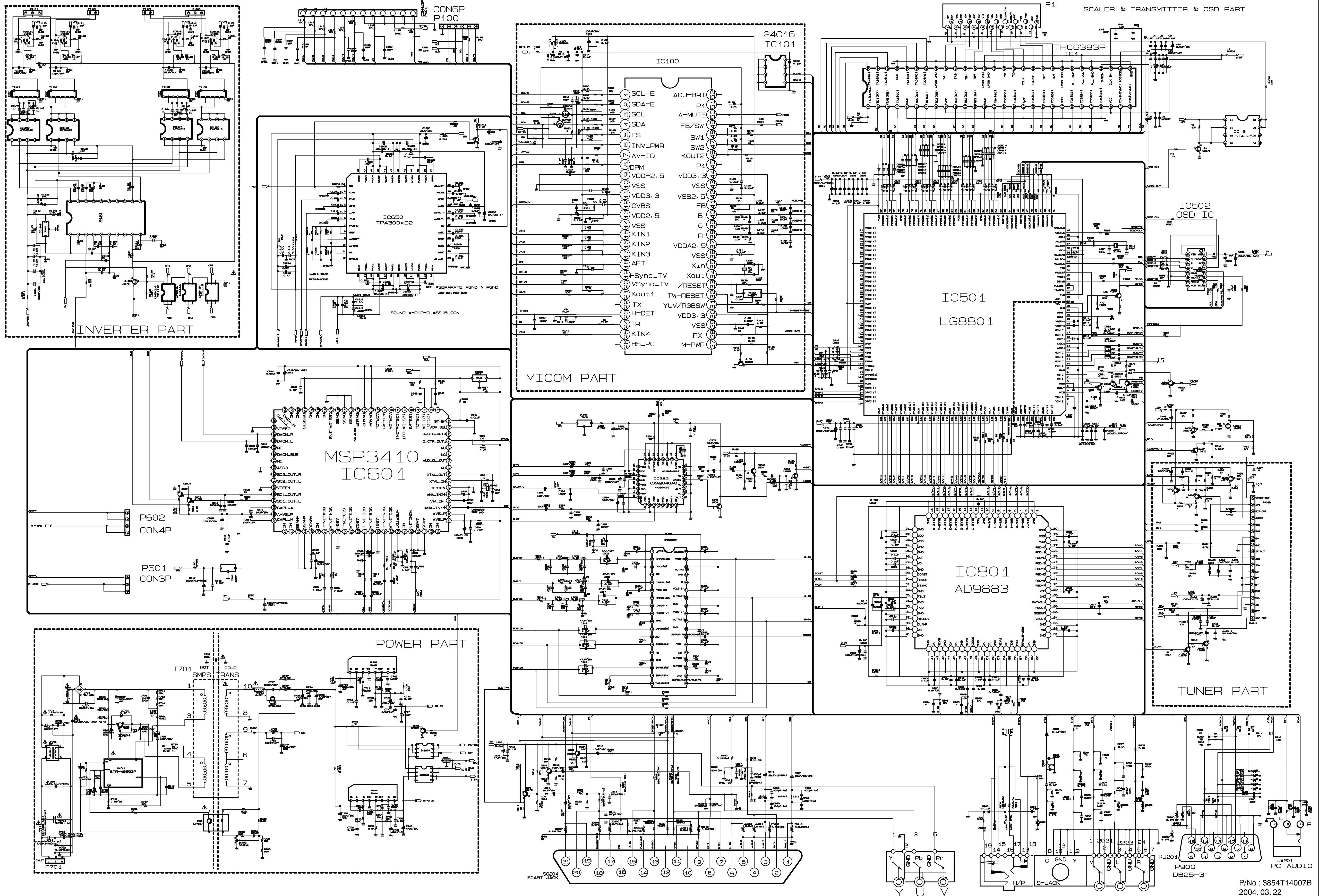
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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R614	ORH1000D622	100 1/10W 5 D.R/TP
		R617	ORH2702D622	27K 1/10W 5 D.R/TP
		R618	ORH0102D622	10 1/10W 5 D.R/TP
		R619	ORH1000D622	100 1/10W 5 D.R/TP
		R620	ORH4701D622	4.7K 1/10W 5 D.R/TP
		R621	ORH1004D622	1.0M 1/10W 5 D.R/TP
		R622	ORH1000D622	100 1/10W 5 D.R/TP
		R707	ORH4700D622	470 1/10W 5 D.R/TP
		R708	ORH8203D622	820K 1/10W 5 D.R/TP
		R717	ORH3300D622	330 1/10W 5 D.R/TP
		R722	ORH8202D622	82K 1/10W 5 D.R/TP
		R723	ORH5601D622	5.6K 1/10W 5 D.R/TP
		R725	ORH1800D622	180 1/10W 5 D.R/TP
		R726	ORH9100D622	910 1/10W 5 D.R/TP
		R732	ORH1302D622	13K 1/10W 5 TA
		R734	ORH6801D622	6.8K 1/10W 5 D.R/TP
		R738	ORH4702D622	47K 1/10W 5 D.R/TP
		R739	ORH1502D622	15K 1/10W 5 D.R/TP
		L502	ORRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		L503	ORRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		L504	ORRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		L505	ORRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		L506	ORRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		L507	ORRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		L518	ORRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		L521	ORRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		L522	ORRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		L523	ORRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		L524	ORRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		L525	ORRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		L526	ORRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		R702	ORKZVTA001C	8.2M OHM 1/2 W 5% TA52 UL PI
		R703	ORKZVTA001K	0.47M OHM 1/2 W 5% TA52 PILK
		R715	180-A01E	2 W RW ROUND G 2W 0.33J TA31
		R727	ORD0472H609	47 1/2W 5 TA52
		R736	ORD0472H609	47 1/2W 5 TA52
		R704	ORS5602K619	56K OHM 2 W 5.00% TR
		R705	ORS5602K619	56K OHM 2 W 5.00% TR
		R706	ORS1203K607	120K OHM 2 W 5.00% TA62
		R711	ORS5602K619	56K OHM 2 W 5.00% TR
		R712	ORS5602K619	56K OHM 2 W 5.00% TR
		R714	ORS5602K619	56K OHM 2 W 5.00% TR
		FR704	ORP0020J809	0.02 OHM 1 W 20% TA52
		C521	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		L210	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		L211	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		L477	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R10	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R1100	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R1103	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R1106	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R1107	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R1118	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R1119	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R1122	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R1123	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R1130	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R1131	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R1133	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R1134	ORH3902D622	39K OHM 1 / 10 W 2012 5.00%
		R1137	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R1141	ORH1501D622	1.5K OHM 1 / 10 W 2012 5.00%

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R116	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R119	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R1211	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R123	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R124	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R131	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R132	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R142	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R158	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R164	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R171	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R172	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R173	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R181	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R182	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R186	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R197	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R198	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R2	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R200	ORJ1000H680	100 OHM 1/2 W 5% 5025 R/TP
		R201	ORJ1000H680	100 OHM 1/2 W 5% 5025 R/TP
		R211	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R221	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R289	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R3	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R358	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R4	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R400	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R407	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R414	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R415	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R417	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R418	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R423	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R493	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R494	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R497	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R498	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R499	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R500	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R519	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R520	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R521	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R522	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R523	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R524	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R551	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R553	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R555	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R556	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R575	ORH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R578	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R581	ORH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R582	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R585	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R586	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R587	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R588	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R589	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R592	ORH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R608	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R609	ORH1001D622	1K OHM 1 / 10 W 2012 5.00% D

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R610	0RH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R611	0RH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R612	0RH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R613	0RH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R615	0RH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R616	0RH0222D622	22 OHM 1 / 10 W 2012 5.00% D
		R696	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R697	0RH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R699	0RH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R701	0RH2002D622	20K OHM 1 / 10 W 2012 5.00%
		R721	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R728	0RH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R730	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R731	0RH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R733	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R740	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R741	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R799	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		RB1CB	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		RG1Y	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		RR1CR	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
OTHERs				
		Z100	156-A01L	HC49U SUNNY RADIAL 6.000MHZ
		Z500	156-A02X	HC49U SUNNY RADIAL 27.000MHZ
		Z600	156-A02M	HC49U KJE RADIAL 18.432MHZ 3
		P701	6620VZ0002A	IS7007 I-SHENG AC SOCKET
		IC100	381-204F	52PIN(1.78-15.24 AMMON)
		TH701	163-048D	KL15L2R5 SSANSHIN +/- 15% 12
		T1101	6170VH0002A	UI-11.7 860000UH 1-CH 5W TRS
		T1102	6170VH0002A	UI-11.7 860000UH 1-CH 5W TRS
		T1105	6170VH0002A	UI-11.7 860000UH 1-CH 5W TRS
		T1106	6170VH0002A	UI-11.7 860000UH 1-CH 5W TRS
		T701	6170VMCA65A	EER3019 450UH RZ-15/20LA70
		L201	6200JB8010L	MLB-201209-1000L-N2 MAG LAYE
		L202	6200JB8010L	MLB-201209-1000L-N2 MAG LAYE
		L207	6200JB8010L	MLB-201209-1000L-N2 MAG LAYE
		L516	6210VC0004A	BK3216 4S600 TAIYOYUDEN 3.2X
		LF701	6200JB8012Q	OR 14*7*7.5H SMC BK 6.0-11.0
		R226	6200JB8010L	MLB-201209-1000L-N2 MAG LAYE
		R228	6200JB8010L	MLB-201209-1000L-N2 MAG LAYE
		R229	6200JB8010L	MLB-201209-1000L-N2 MAG LAYE
		R230	6200JB8010L	MLB-201209-1000L-N2 MAG LAYE
		F701	131-098B	4000MA 250 V 5.2X20 CY/GL SE
		RJ201	6613V00008F	PMJ014F PARK ELEC E/P(ST)+S-
		SC204	381-091B	S-091B UGCOM SCART 21 PIN W/
		TU401	6700PF0002A	TAFH-S312D LG PAL FS LE/LL-1
		VA701	164-003K	SVC621D-14A ILJIN 620V 0% UL
CONTROL & LED POWER BOARD				
		SW1101	140-313A	TACT 2LEAD 100G(TA) LG C&D N
		SW1102	140-313A	TACT 2LEAD 100G(TA) LG C&D N
		SW1103	140-313A	TACT 2LEAD 100G(TA) LG C&D N
		SW1104	140-313A	TACT 2LEAD 100G(TA) LG C&D N
		SW1105	140-313A	TACT 2LEAD 100G(TA) LG C&D N
		SW1106	140-313A	TACT 2LEAD 100G(TA) LG C&D N
		SW1107	140-313A	TACT 2LEAD 100G(TA) LG C&D N
		SW1108	140-313A	TACT 2LEAD 100G(TA) LG C&D N
		C1101	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		Q1101	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -

DATE: 2004. 06.16.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		Q1102	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q1103	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		R1101	0RH1000D622	100 1/10W 5 D.R/TP
		R1102	0RH1000D622	100 1/10W 5 D.R/TP
		R1103	0RH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R1104	0RH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R1105	0RH1500D622	150 1/10W 5 D.R/TP
		R1106	0RH1000D622	100 1/10W 5 D.R/TP
		LED1	0DL200000CA	SAM5670(DL-2LRG) BK Y-GREEN
		PA1101	6726TV0001A	TSOP4838SO1 VISHAY 38.0KHZ H

CIRCUIT DIAGARM FOR MLO24H CHASSIS





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