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LCD TV
SERVICE MANUAL

CHASSIS : ML-041D

MODEL : 23LX1RV-MC

CAUTION
BEFORE SERVICING THE CHASSIS,
READ THE SAFETY PRECAUTIONS IN THIS MANUAL.

CONTENTS

SAFETY PRECAUTIONS

IMPORTANT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These parts are identified by ⚠ in the Schematic Diagram and Replacement Parts List.
It is essential that these special safety parts should be replaced with the same components as recommended in this manual to prevent 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 it's 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.

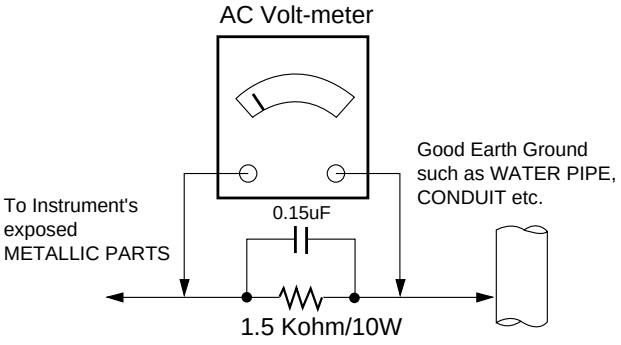
Before returning the receiver to the customer,

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 1MΩ and 5.2MΩ.
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 is corresponds to 0.5mA.
In case any measurement is out of the limits specified, there is possibility of shock hazard and the set must be checked and repaired before it is returned to the customer.

Leakage Current Hot Check circuit



SERVICING PRECAUTIONS

CAUTION: Before servicing receivers covered by this service manual 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 in 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-041D chassis.

2. Requirement for Test

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

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

3.General Specification(TV)

No.	Item	Specification	Remark
1	Video input applicable system	1)PAL-D/K,B/G,I 2)NTSC-M 3)SECAM NTSC 4.43'	
2	Receivable broadcasting system	1)PAL/SECAM BG 2)PAL/SECAM DK 3)PAL I/I 4)SECAM L/L' 5)NTSC M	South America Market Except South America NTSC Market (RM)
		6)PAL-N/M 7)NTSC M	
3	RF input channel	VHF : E2 ~ E12 UHF : E21 ~ E69 CATV : S1 ~ S20 HYPER : S21 ~ S41	PAL
		L/L' : B,C,D	FRANCE
		VHF : 2 ~ 13 UHF : 14 ~ 69 CATV : 1 ~ 125	NTSC
		VHF Low : 1~M10 VHF High : 4~S22 UHF : S23~62	JAPAN
4	Input voltage	AC 100 - 240V/ 50Hz,60HZ	
5	Picture size	583mm	23"
6	Tuning system	FVS 100 program FS	PAL, 200PR.(Option) NTSC
7	Operting environment	1)Temp : 0 ~ 40 deg 2)Humidity : 85%	
8	Storage environment	3)Temp : -20 ~ 60 deg 4)Humidity : 85%	
9	Display	LCD Module	

5.General Specification(Monitor)

No.	Item	Specification			Unit	Remark
1	Panel	23" TFT WXGA LCD				
2	Frequency range	H:31 ~ 61KHz, V: 56 ~ 75Hz				DVI-I input
3	Control function	1) Contrast/ Brightness 2) H- Position/ V-Position 3) Tracking : Clock/Phase 4) Auto Configure 5) Reset				
4	Component Jack	1: Y 3: Pb 5: Pr 7: Line1 Ready 9: LINE2 11: LINE3 13: Line3 Ready				Middle east /NTSC Only
	D4 Jack (525i,525p,750p,1125i)	2: Y GND 4: Pb GND 6: Pr GND 8: LINE1 10: Line2 Ready 12: SWITCH GND 14: SWITCH				Japan only
5		H/V-Sync	Video	Power consumption		LED
	Power ON	ON/ON	Active	≤ Max 170	W	Green
	Stand by	OFF/ON	OFF	≤ 3.0	W	Red
	DPMS Mode	ON/OFF	OFF	≤typ.3.5	W	Green
	Power off	-	-	-	W	*.
6	LCD Module	Type	LPL	559.8 x 333.8x45.7	mm	(H) x (V) x (D)
		Size				
		Pixel Pitch	LPL	0.372 x 0.124 x RGB	mm	
		Pixel Format	1366 horiz. By 768 vert. pixels RGB strip arrangement			
		Coating	Hard coating(3H), Anti-glare treatment of the front polarizer			
		Back Light	LPL	EEFL		

6.Optical Feature(LCD Module)

No.	Item	Specification						Remark
					LPL			
1	Viewing Angle <CR≥10>	R/L, U/D			176,176			
2	Luminance	Luminance(cd/㎡)			450			Typical
		Variation			1.3			MAX/MIN
3	Contrast Ratio				500			ALL white/All back
4	CIE Color Coordinates	WHITE	W_X	Typ.	0.284	0.285	0.289	LPL
			W_Y	Typ.	0.295	0.293	0.303	
		RED	W_r	Typ.				
			Y_r	Typ.				
		Green	X_g	Typ.				
			Y_g	Typ.				
		Blue	Xb	Typ.				
			Yb	Typ.				

7.Feature and Function

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

8.Component Video Input(Y, P_B, P_R)

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

9.PC Input Mode

NO	Resoluton	H-freq(kHz)	V-freq(Hz)	Pixel clock(MHz)	Proposed
DVI-PC, Analog RGB, Digital RGB					
1	640 x 480	31.469	59.94	25.17	VESA(VGA)
2	800 x 600	37.879	60.31	40.00	VESA(SVGA)
3	1024 x 768	48.363	60.00	65.00	VESA(XGA)
4	1280 x 768	47.693	60.00	80.125	VESA(WXGA)
5	1360 x 768	47.649	59.93	84.625	VESA(WXGA)
6	1920 x 1080	33.75	60.00	86.375	HDCP DVI Digital 1080i(RM Only)
7	1280 x 720	45.00	60.00	74.375	HDCP DVI Digital 720p(RM Only)

ADJUSTMENT INSTRUCTION

1. Application Object

This instruction is for the application to the LCD TV.

2. Designation

2.1 The adjustment is according to the order which is designated and which must be followed, according to the plan which can be changed only on agreeing.
2.2 Power Adjustment : Free Voltage
2.3 Magnetic Field Condition: Nil.
2.4 Input signal Unit : Product specification standard
2.5 Reserve after operation : Above 2 hours
2.6 Adjustment equipments : Pattern Generator(801GF, MSPG925F), DDC Adjustment Jig equipment HDCP Adjustment Jig equipment.

3. Adjustments

3.1 Adjustment Details

: The machine can be adjusted by itself automatically with factory automatic equipment, in case error occurs, set manual adjustment to standard.

3.2 Adjustment signal Composition of The Auto Adjustment equipment

3.2.1 RS-232C Interchange
9600bps, Pin#2 : Rx, Pin#3 : Tx, 8bit, STOP bit=1, No Parity

3.2.2 Adjust data save
* Save the adjusted data to the EEPROM with default value

ai - 0 - 00

3.2.3 Adjust OK

ak - 0 - 00

3.2.4 Screen Adjustment Instruction Forms
CMD1 CMD2 SetID(0) Value
a. CMD1,CMD2 : Instructions operated by Monitor
b. SetID L 0h Set always 0 in Adjustment
c. VALUE : Adjustment Value

3.3 PC signal Gain/Offset Adjustment
3.3.1 Adjustment Preparation
- Execution of RF no signal during Heat Run over 30min
- Pattern generator signal is connected to the DVI-I Jack of LCD TV.

3.3.1 Auto Gain/Offset Adjustment .
- To use Pattern Generator(MSPG-925FS), Apply Model 37, Patten 19 (XGA(1024 X 768)60Hz, Half balck and Half white signal (Don't apply 16 gray signal)
- Press IN-START Key by using the Remote Controller(SVC) , after converting to Adjustment-Mode, press VOL+ Key consecutively in Auto-Gain Menu.
- After adjustment is complete, pressing enter key, stores and completes the process.

**** Note) : PC Adjustment must be completed before auto adjustment.***

3.4 Video signal Gain/Offset Adjustment(Auto adjustment)
- Execution of White Pattern during Heat Run over 30min
- Connect to the LCD TV AV1 Scart input terminal with Patten Generator(MSPG-925FS).
- Convert INPUT MODE to Video & Confirm whether PSM Mode is Standard
- Connect RS-232C Communication Cable to the Auto Adjustment Equipment and SET's upgrade Port

3.4.1 Adjustment Preparation
- Apply Gray-Level Gray-Level (Model : 202, pattern : 59) signal by using Pattern Generator(MSPG-925FS)
- Check weather color-coordinates(x : 0.280, y : 0.280, ±0.005) is operated by using CA-110 equipment
- If color-coordinates is not in Spec, adjust color-coordinates(x : 0.280 , y : 0.280, ±0.005)by adjusting Red Offset, Blue Offset

3.4.2 White Balance Adjustment
- Apply Gray-Level Gray-Level (Model : 202, pattern : 59) signal by using Pattern Generator(MSPG-925FS)
- Check weather color-coordinates(x : 0.280, y : 0.280, ±0.005) is operated by using CA-110 equipment
- If color-coordinates is not in Spec, adjust color-coordinates(x : 0.280 , y : 0.280, ±0.005)by adjusting Red Offset, Blue Offset

3.5 Component signal Gain/Offset Adjustment(Auto adjustment)
- Execution of RF no signal during Heat Run over 30min
- Connect to the LCD TV Component1 terminal with Patten Generator(MSPG-925FS)
- Convert INPUT MODE to Component1.& Confirm whether PSM Mode is Standard
- Connect RS-232C Communication Cable to the Auto Adjustment Equipment and SET's upgrade Port

3.5.1 Low Gray Adjustment
- Apply Gray-Level (Model : 210, pattern : 59)signal by using Patten Generator(MSPG925FS)
- Check whether color-coordinates (x : 0.280, y : 0.280, ±0.005) is operated by using CA-110 equipment
- If color-coordinates is not in Spec, adjust color-coordinates(x : 0.280, y : 0.280, ±0.005) by adjusting Red Offset, Blue Offset

3.5.2 White Balance Adjustment
- Apply full White (Model : 210, pattern : 47) signal by using Patten Generator(MSPG925FS)
- Check whether color-coordinates (x : 0.280, y : 0.280, ±0.005) is operated by using CA-110 equipment
- If color-coordinates is not in Spec, adjust color-coordinates (x : 0.283, y : 0.298, ±0.005)by adjusting Red Gain, Blue Gain
- All adjustment takes color-coordinates with based on G, changing R and B If it is not adjusted, adjust with fixed B, changing G and R.

3.3 EDID (The Extended Display Identification Data)

- Connect D-Sub to DVI-I Cable to DVI-I Jack.
- Confirm the pc display by inputting the Analog signal.
- After displayed, input the Analog EDID data.
- Connect DVI D Cable to DVI Jack.
- Confirm the pc display by inputting the Digital signal.
- After displayed, input the Digital EDID data.

3.3.1 EDID DATA

<DDC DATA Analog Set>

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00	00	FF	FF	FF	FF	FF	FF	FF	1E	6D	17	56	01	01	01	01
10	00	0F	01	03	01	40	26	78	08	B1	DA	A1	56	48	98	24
20	13	48	4B	A1	08	00	31	40	01	01	01	01	45	40	01	01
30	61	40	81	80	01	01	4E	1F	00	90	51	00	1B	30	40	88
40	13	00	A2	0B	32	00	00	18	1B	21	50	0	51	00	1E	30
50	48	88	35	00	A2	0B	32	00	00	1C	00	00	00	FD	00	3B
60	3D	1F	30	09	00	0A	20	20	20	20	20	20	00	00	00	FC
70	00	32	33	4C	58	31	52	56	0A	20	20	20	20	20	00	46

< DDC DATA Digital Set>

	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	18	56	01	01	01	01
10	00	0F	01	03	81	40	26	78	08	B1	DA	D1	56	48	98	24
20	13	48	4B	A1	08	00	31	40	01	01	01	01	45	40	01	01
30	61	40	81	80	01	01	4E	1F	00	90	51	00	1B	30	40	88
40	13	00	A2	0B	32	00	00	18	1B	21	50	A0	51	00	1E	30
50	48	88	35	00	A2	0B	32	00	00	1C	00	00	00	FD	00	3B
60	3D	1F	30	09	00	0A	20	20	20	20	20	20	00	00	00	FC
70	00	32	33	4C	58	31	52	56	0A	20	20	20	20	20	01	C4

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00	02	01	04	00	01	1D	00	72	51	D0	1E	20	6E	28	55	00
10	C4	8E	21	00	00	1E	8C	0A	D0	8A	20	E0	2D	10	10	3E
20	96	00	C4	8E	21	00	00	18	01	1D	80	18	71	1C	16	20
30	58	2C	25	00	C4	8E	21	00	00	9E	00	00	00	00	00	00
40	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
50	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
60	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
70	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	BF

3.4 HDCP (High-Bandwidth Digital Contents Protection) Setting

3.4.1 When transmitting HD video source of HD STB through DVI(Digital Visual Interface), HDCP function is to execute Display & copy protection for securing contents security.

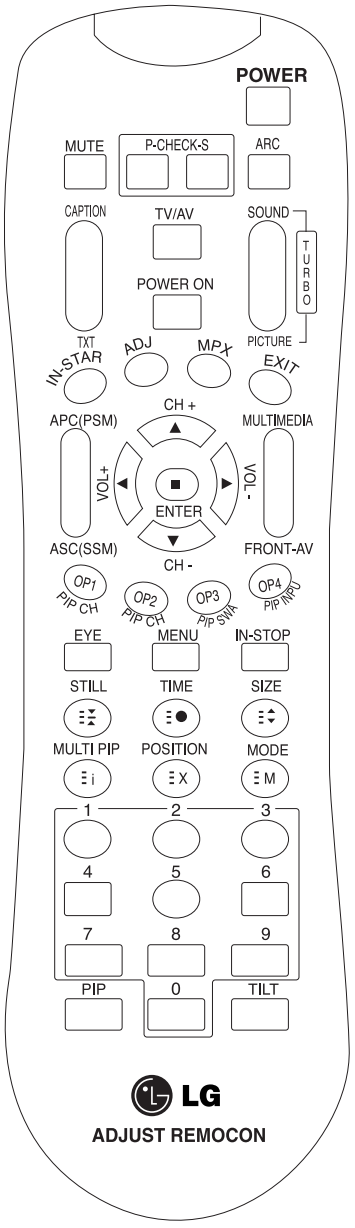
3.4.2 Confirm whether HDCP function is operated properly by connecting DVI Cable, after storing HDCP Key value on EEPROM(AT24C16)[address 0x1EF] (Refer to Working Order for Detailed work content).

* Reference : HDCP adjustment is not use. We are planning HDCP adjustment from NTSC.

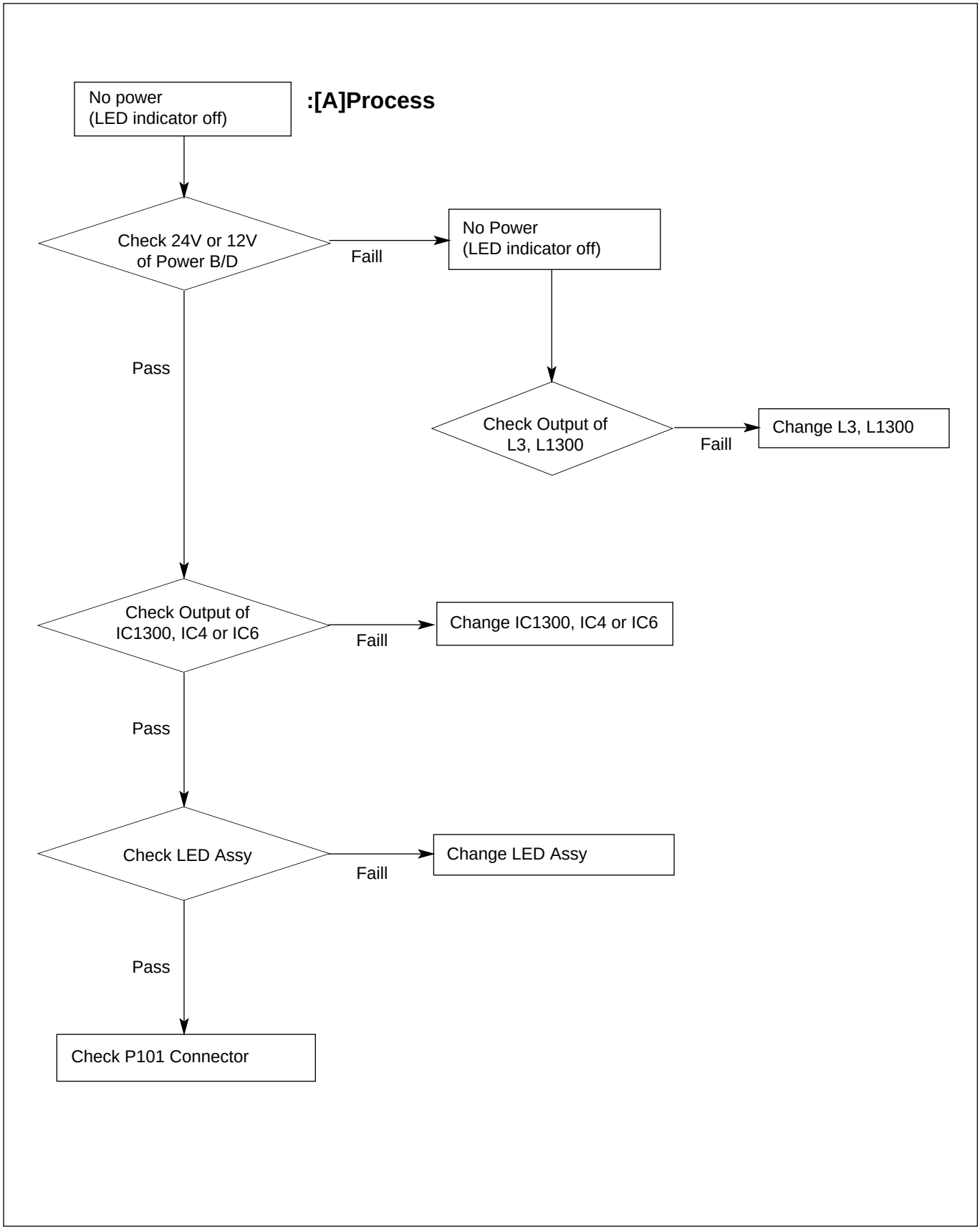
Note. : HDCP will temporarily exclude in spec.
HDCP will apply from USA Product later.

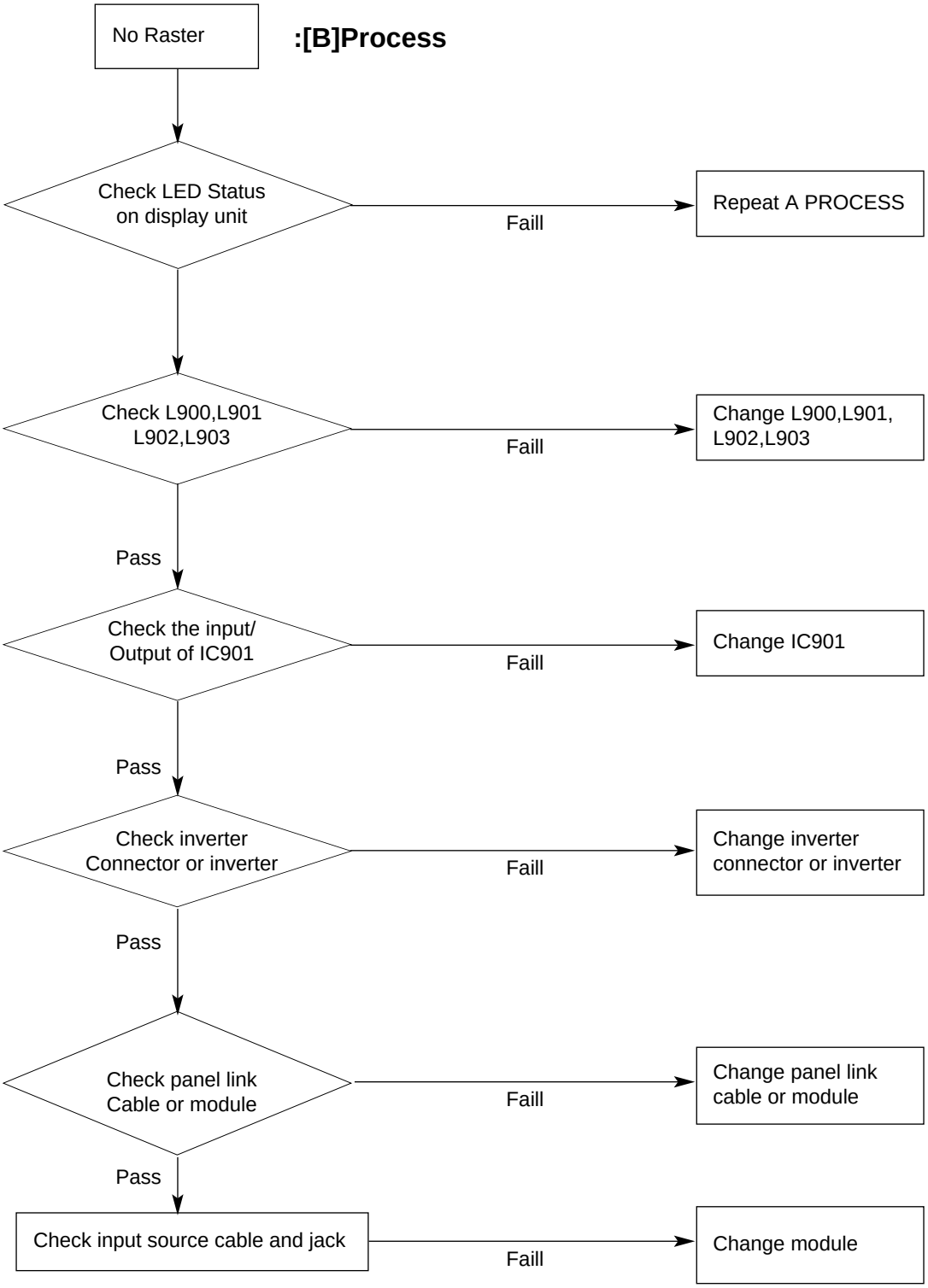
SVC REMOCON

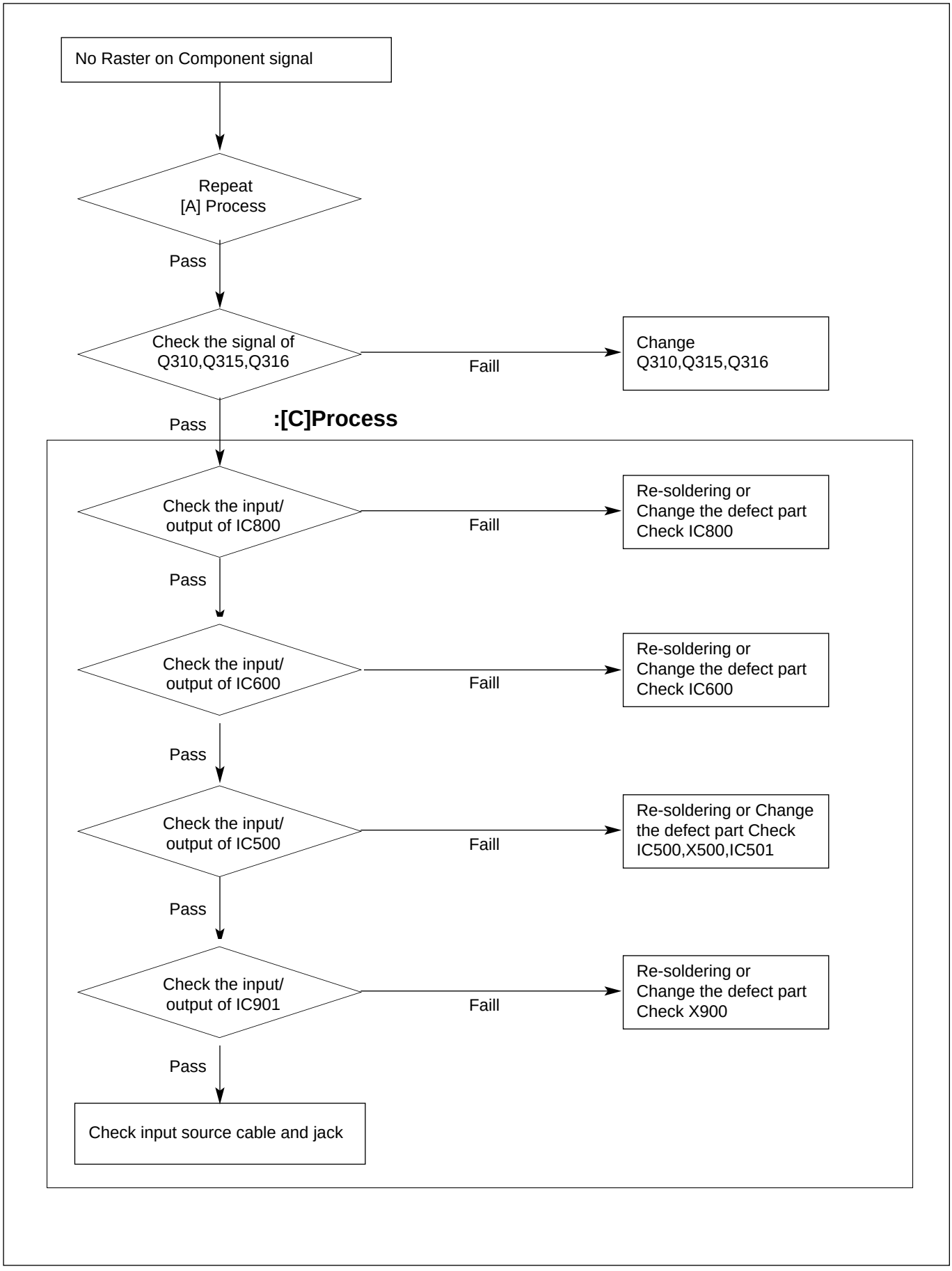
NO	KEY	FUNTION	REAMARK
1	POWER	To turn the TV on or off	
2	POWER ON	To turn the TV on automatically if the power is supplied to the TV. (Use the POWER key to deactivate): It should be deactivated when delivered.	
3	MUTE	To activate the mute function.	
4	P-CHECK	To check TV screen image easily.	Shortcut keys
5	S-CHECK	To check TV screen sound easily	Shortcut keys
6	ARC	To select size of the main screen (Normal, Spectacle, Wide or Zoom)	Shortcut keys
7	CAPTION	Switch to closed caption broadcasting	
8	TXT	To toggle on/off the teletext mode	
9	TV/AV	To select an external input for the TV screen	
10	TURBO SOUND	To start turbo sound	
11	TURBO PICTURE	To start turbo picture	
12	IN-START	To enter adjustment mode when manufacturing the TV sets.	Use the AV key to enter the screen W/B adjustment mode.
		To adjust the screen voltage (automatic): In-start →mute →Adjust →AV(Enter into W/B adjustment mode)	
		W/B adjustment (automatic): After adjusting the screen →W/B adjustment →Exit two times (Adjustment completed)	
13	ADJ	To enter into the adjustment mode. To adjust horizontal line and sub-brightness.	
14	MPX	To select the multiple sound mode (Mono, Stereo or Foreign language)	
15	EXIT	To release the adjustment mode	
16	APC(PSM)	To easily adjust the screen according to surrounding brightness	
17	ASC(SSM)	To easily adjust sound according to the program type	
18	MULTIMIDIA	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.	

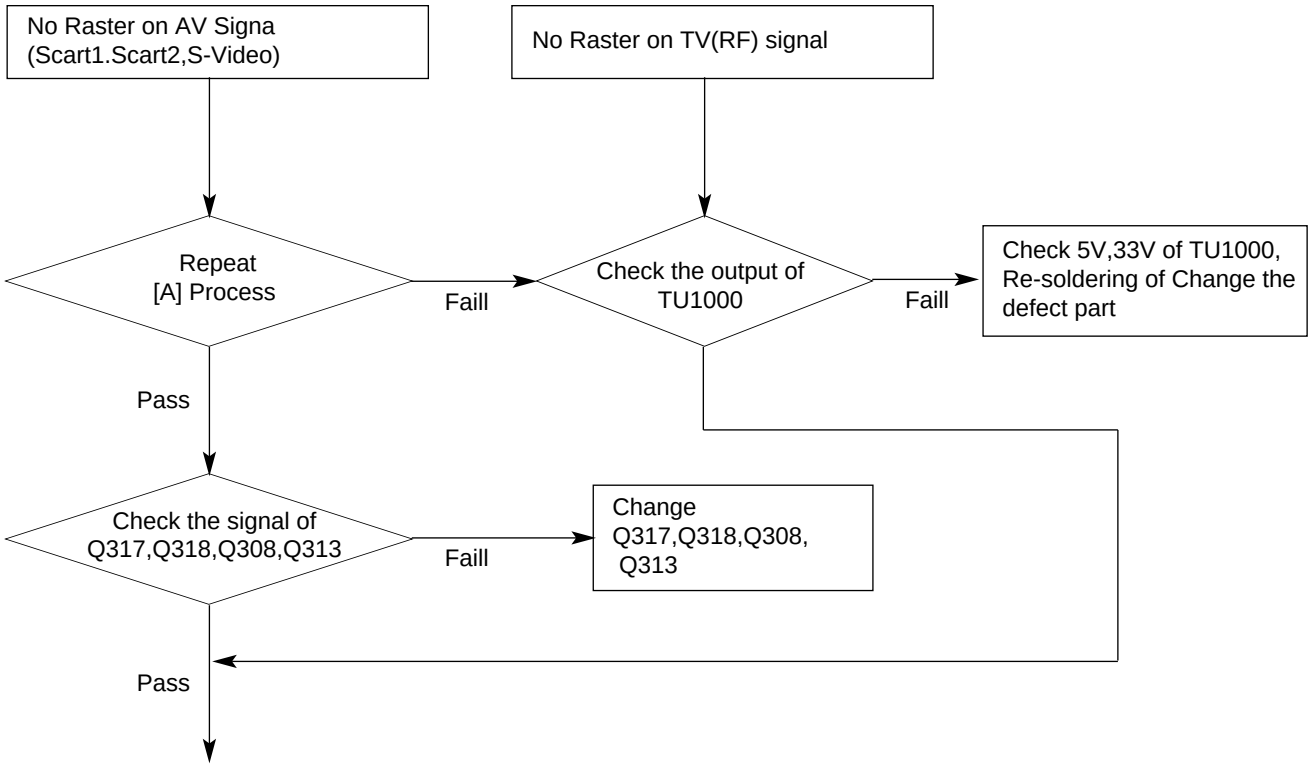


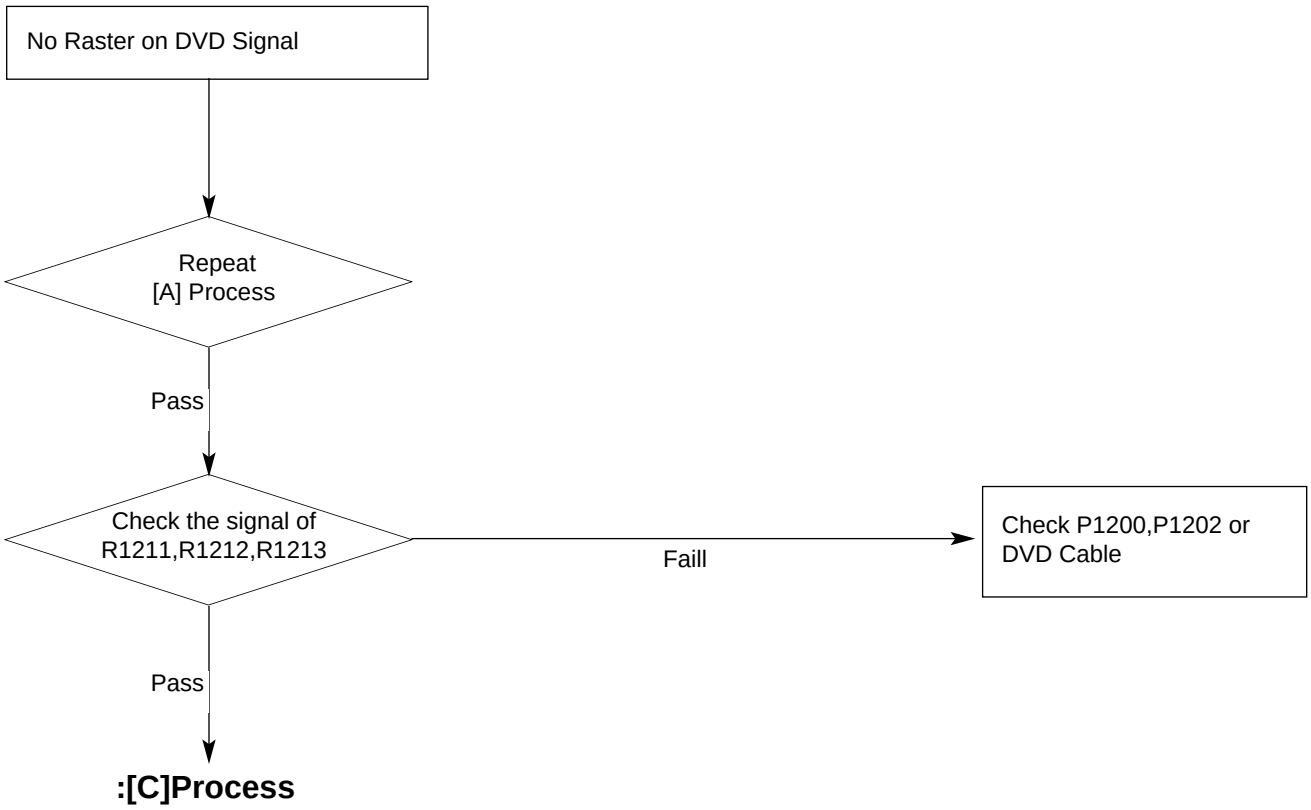
TROUBLESHOOTING

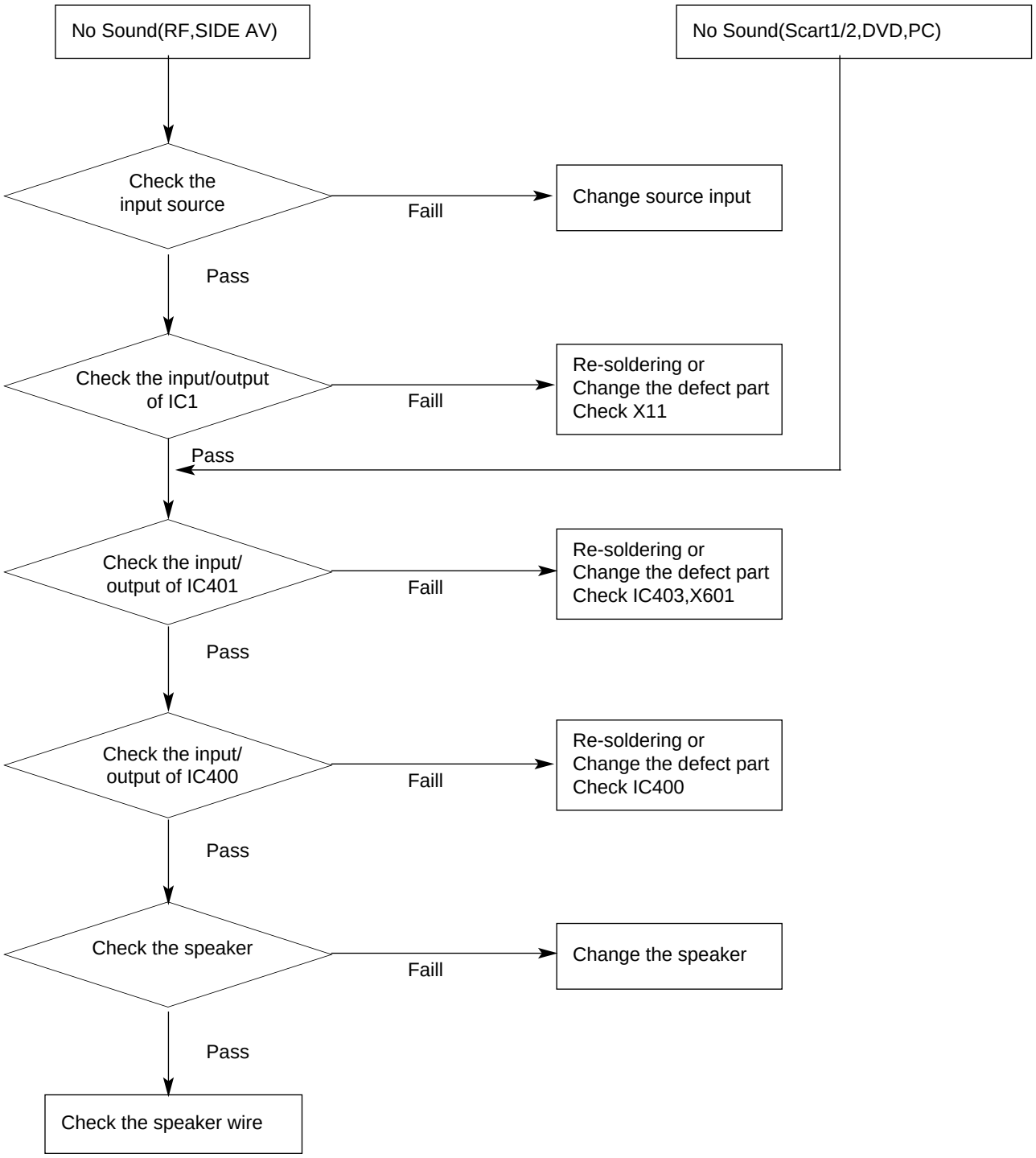



No Raster
:[B]Process
Check LED Status
on display unit
Faill
Repeat A PROCESS
Check L900,L901
L902,L903
Faill
Change L900,L901,
L902,L903
Pass
Check the input/
Output of IC901
Faill
Change IC901
Pass
Check inverter
Connector or inverter
Faill
Change inverter
connector or inverter
Pass
Check panel link
Cable or module
Faill
Change panel link
cable or module
Pass
Check input source cable and jack
Faill
Change module

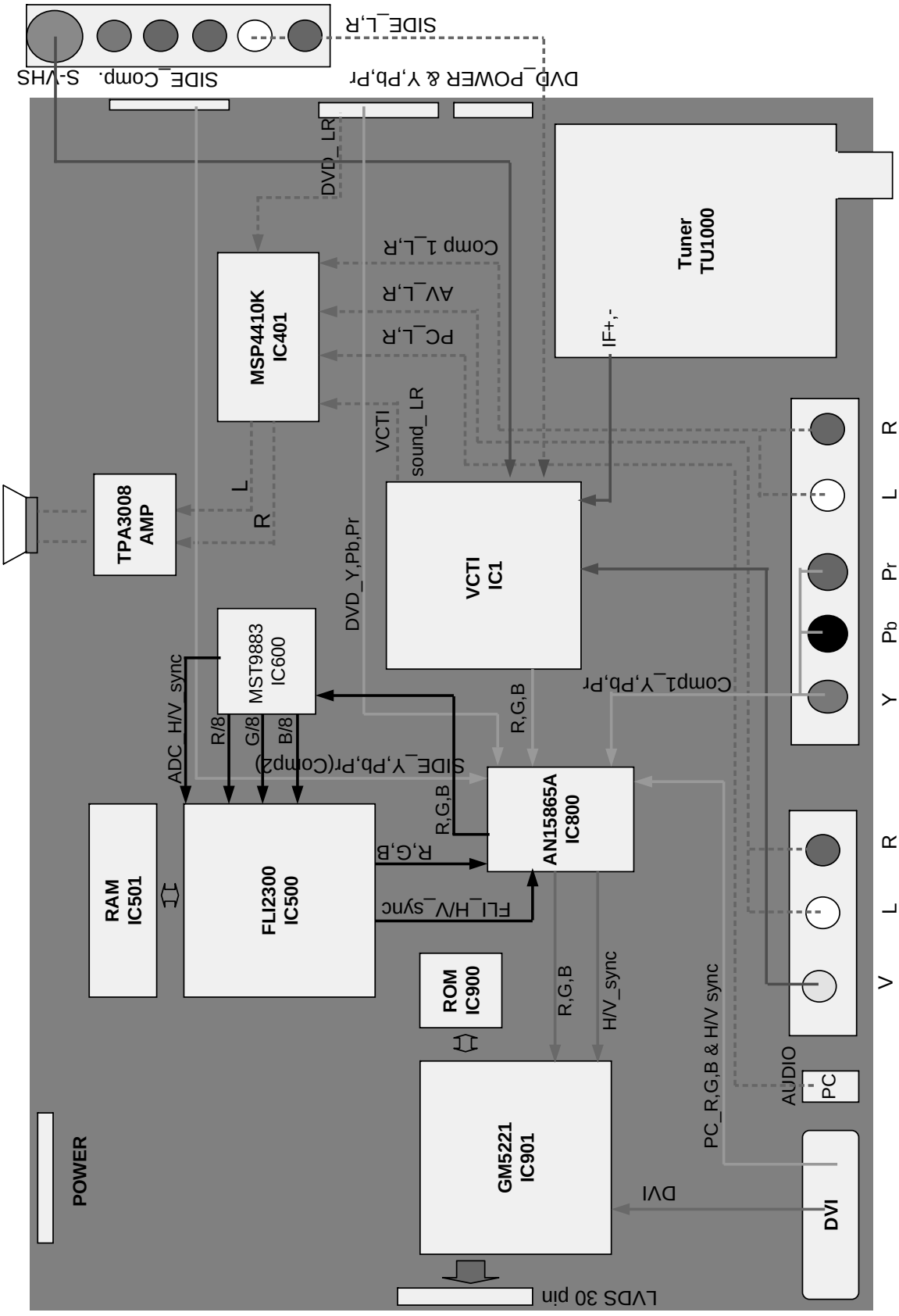

No Raster on Component signal
Repeat
[A] Process
Pass
Check the signal of
Q310,Q315,Q316
Faill
Change
Q310,Q315,Q316
Pass
:[C]Process
Check the input/
output of IC800
Faill
Re-soldering or
Change the defect part
Check IC800
Pass
Check the input/
output of IC600
Faill
Re-soldering or
Change the defect part
Check IC600
Pass
Check the input/
output of IC500
Faill
Re-soldering or Change
the defect part Check
IC500,X500,IC501
Pass
Check the input/
output of IC901
Faill
Re-soldering or
Change the defect part
Check X900
Pass
Check input source cable and jack


No Raster on AV Signa
(Scart1.Scart2,S-Video)
No Raster on TV(RF) signal
Repeat
[A] Process
Faill
Check the output of
TU1000
Faill
Check 5V,33V of TU1000,
Re-soldering of Change the
defect part
Pass
Check the signal of
Q317,Q318,Q308,Q313
Faill
Change
Q317,Q318,Q308,
Q313
Pass
:[C]Process


No Raster on DVD Signal
Repeat
[A] Process
Pass
Check the signal of
R1211,R1212,R1213
Faill
Check P1200,P1202 or
DVD Cable
Pass
:[C]Process


No Sound(RF,SIDE AV)
No Sound(Scart1/2,DVD,PC)
Check the input source
Faill
Change source input
Pass
Check the input/output of IC1
Faill
Re-soldering or Change the defect part Check X11
Pass
Check the input/ output of IC401
Faill
Re-soldering or Change the defect part Check IC403,X601
Pass
Check the input/ output of IC400
Faill
Re-soldering or Change the defect part Check IC400
Pass
Check the speaker
Faill
Change the speaker
Pass
Check the speaker wire

BLOCK DIAGRAM



BLOCK DIAGRAM DESCRIPTION

1. Video Controller Unit & Display Data Conversion Unit

The video controller unit receives the video signals inputted through the tuner, AV port (VIDEO1, VIDEO2), and converts them into an ITU656 signal through the microcomputer (VCTI) combined with the video decoder that integrates various functions in one chip.

Either the analog RGB(FLI2300) signal or PC RGB signal is selected by the switching IC and inputted to a scaler (GM2221), which is sent to the LCD module after being modified to an LVDS signal through the integrated LVDS IC.

VCTi is the main microprocessor that handles video signal processing and sound signal processing.

It also manages the RF signals received from the tuner.

The scaler can control timing to fit into the LCD panel, and can also control the size and position of the inputsignal.

2. Power Supply Unit

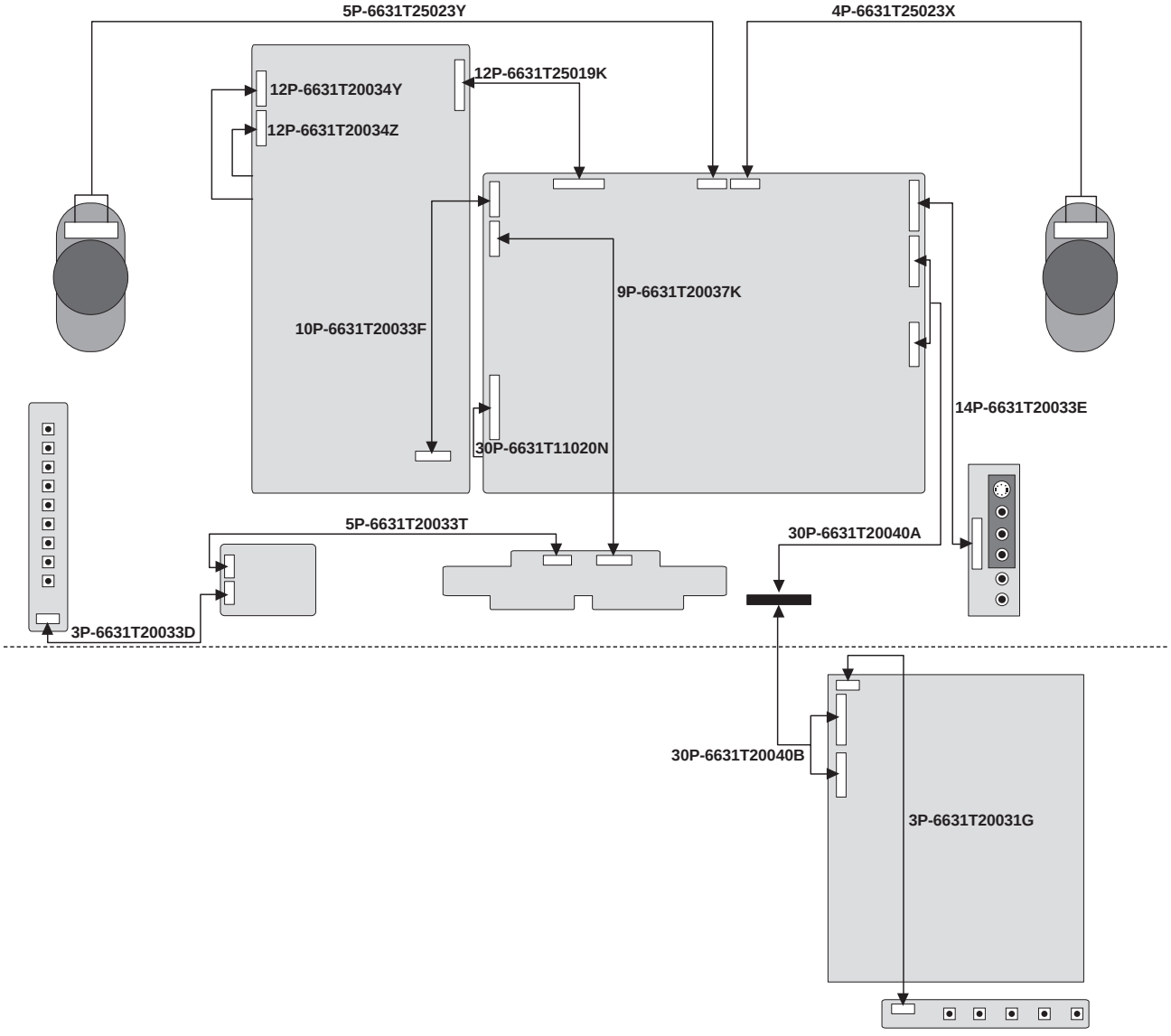
The power supply unit provides 24V, 12V and 5V DC power to the mainboard.

The PWM Step-Up DC/DC Converter circuit is used to generate the 33V used for the tuner.

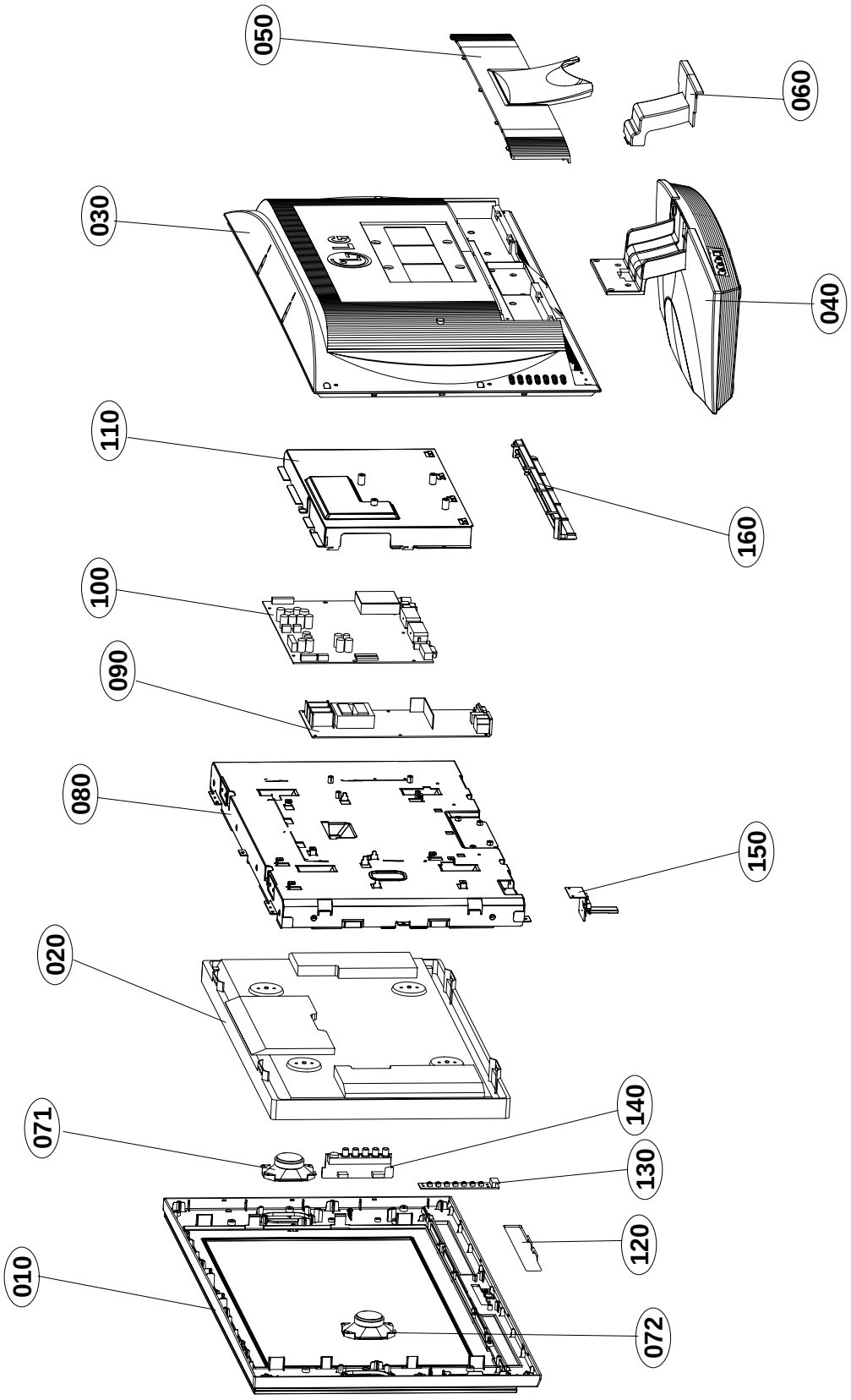
Supplied 24V power is descended by the 13.3V step-down DDC. 13.3V provides source to sound amplifier IC. 24V power is also used to generate 5V and 3.3V power through the Step-Down DC/DC Converter and supplied 12V.

5V power is converted to 3.3V and 1.8V power through the regulator, which in turn supplies electrical power for ICs such as VCTI and scaler.

WIRING DIAGRAM



EXPLODED VIEW



EXPLODED VIEW PARTS LIST

No.	PART NO.	DESCRIPTION
010	3091TKE035A	CABINET ASSEMBLY, 23LX1R BRAND 3090TKE025A USA V0 AUTOBAHN
	3091TKE035B	CABINET ASSEMBLY, 23LX1R BRAND 3090TKE025A USA V0 AUTOBAHN C/SKD
020	6304FLP283A	LCD(LIQUID CRYSTAL DISPLAY), RESET CIRCUIT ADDITION
030	3809TKE024D	BACK COVER ASSEMBLY, 23LX1R-MA 3808TKE017 FOR USA, V0, NTSC, PHONE JACK
	3809TKE024E	BACK COVER ASSEMBLY, 23LX1R 3808TKE017 FOR USA, V0, NTSC, C/SKD
040	3043TKK239D	TILT SWIVEL ASSEMBLY, 23LX1RV 3043TKK239 DVDP STAND,KUMI
	3043TKK239B	TILT SWIVEL ASSEMBLY, 23LX1RV 3043TKK239 DVDP STAND
050	3550TKK838A	COVER, RZ-23LG10 REAR CAP
060	3550TKK822A	COVER, KZ-23LG10 REAR DVDP
071	6401TZZ063A	SPEAKER ASSEMBLY, KZ-26LZ51 R 4P
072	6401TZZ063B	SPEAKER ASSEMBLY, KZ-26LZ51 L 5P
080	4951TKS236A	METAL ASSEMBLY, FRAME 23INCH MAIN
	4951TKS236B	METAL ASSEMBLY, FRAME 23INCH MAIN, CKD
090	6871TPT287J	PWB(PCB) ASSEMBLY,POWER, RZ-23LZ50 POWER TOTAL BRAND DVD(23LX1RV)
	or 6871TPT287E	PWB(PCB) ASSEMBLY,POWER, RZ-23LZ50 POWER TOTAL BRAND AUTOBAHN 23" (PB-FREE)
100	3313TN2038A	MAIN TOTAL ASSEMBLY, 23LX1RV-MC BRAND ML-041D MAIN CHASSIS ASSY
110	4951TKK174D	METAL ASSEMBLY, REAR ML-041A RZ-23LZ50S
	4951TKK174E	METAL ASSEMBLY, REAR C/SKD ML-041A RZ-23LZ50S
120	6871TSTA01A	PWB(PCB) ASSEMBLY,SUB, 23LX1R LOGO ASSY LED & P/SW TOTAL BRAND LF
130	6871TST630B	PWB(PCB) ASSEMBLY,SUB, RZ-23LZ50 KEY CONTROL TOTAL BRAND LF
140	6871TVT370C	PWB(PCB) ASSEMBLY,VIDEO, RM-32/26/23LZ50 SIDE A/V SUB TOTAL BRAND LF
150	6871TST763C	PWB(PCB) ASSEMBLY,SUB, 23LX1R LED & P/SW TOTAL BRAND LF
160	3551TKK530F	COVER ASSEMBLY, 23KX1R REAR A/V BRACKET ASSY FOR USA DARK SILVER(7227S00112A)

REPLACEMENT PARTS LIST

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

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

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

DATE: 2005. 6. 28.

*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
CAPACITOR				
		C1102	0CE107EK638	100UF KMG 50V M FM5 TP 5
		C407	0CH6152K406	1500PF 50V J SL 2012 R/TP
		C410	0CH6152K406	1500PF 50V J SL 2012 R/TP
		C1001	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1002	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1003	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1004	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1007	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1010	0CK273DK51A	27000PF 2012 50V 10% B(Y5P)
		C11	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C12	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1209	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1210	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1211	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1212	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1213	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1300	0CK105DK94A	"1UF 2012 50V 80%,-20% R/TP"
		C1302	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C1305	0CK105DK94A	"1UF 2012 50V 80%,-20% R/TP"
		C1307	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C15	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C16	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C18	0CK106EF56A	10UF 3216 16V 10% X7R R/TP
		C19	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C23	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C3	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C4	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C411	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C412	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C417	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C42	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C421	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C426	0CH3222K516	2200PF 2012 50V 10% B(Y5P)
		C428	0CH3222K516	2200PF 2012 50V 10% B(Y5P)
		C431	0CH3222K516	2200PF 2012 50V 10% B(Y5P)
		C432	0CH3222K516	2200PF 2012 50V 10% B(Y5P)
		C434	0CH3222K516	2200PF 2012 50V 10% B(Y5P)
		C436	0CH3222K516	2200PF 2012 50V 10% B(Y5P)
		C44	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C440	0CK105DK94A	"1UF 2012 50V 80%,-20% R/TP"
		C441	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C444	0CK105DK94A	"1UF 2012 50V 80%,-20% R/TP"
		C447	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C45	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C459	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C460	0CK225DH94A	"2.2UF 2012 25V 80%,-20% F(Y"
		C461	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C462	0CK225DH94A	"2.2UF 2012 25V 80%,-20% F(Y"
		C469	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C471	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C472	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C473	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C474	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C477	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP

DATE: 2005. 6. 28.

*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C478	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C480	0CK225DH94A	"2.2UF 2012 25V 80%,-20% F(Y"
		C481	0CK225DH94A	"2.2UF 2012 25V 80%,-20% F(Y"
		C49	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C490	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C491	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C494	0CK225DH94A	"2.2UF 2012 25V 80%,-20% F(Y"
		C500	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C505	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C506	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C507	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C508	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C509	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C510	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C511	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C512	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C513	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C514	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C517	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C518	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C519	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C521	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C522	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C523	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C526	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
		C531	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C532	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
		C536	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
		C541	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C544	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C545	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C546	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C547	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C550	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C551	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C553	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C554	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C555	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
		C559	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C6	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP

DATE: 2005. 6. 28.

*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C60	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C606	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C608	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C609	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C61	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C614	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C616	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C619	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C620	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C621	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C622	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C623	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C624	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C625	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C627	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C628	0CH3822K516	8200PF 2012 50V 10% B(Y5P)
		C629	0CH3823K516	82000PF 2012 50V 10% B(Y5P)
		C632	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C633	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C634	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C635	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C636	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C637	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C638	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C639	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C64	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C640	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C65	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C66	0CK106EF56A	10UF 3216 16V 10% X7R R/TP
		C67	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C700	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C705	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C75	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C751	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C76	0CK106EF56A	10UF 3216 16V 10% X7R R/TP
		C760	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C761	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C77	0CK106EF56A	10UF 3216 16V 10% X7R R/TP
		C79	0CK106EF56A	10UF 3216 16V 10% X7R R/TP
		C80	0CK106EF56A	10UF 3216 16V 10% X7R R/TP
		C803	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C804	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C807	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C808	0CK273DK51A	27000PF 2012 50V 10% B(Y5P)
		C81	0CK106EF56A	10UF 3216 16V 10% X7R R/TP
		C82	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C821	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C822	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C823	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C824	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C826	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C827	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C828	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C84	0CK106EF56A	10UF 3216 16V 10% X7R R/TP
		C841	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C843	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C857	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C858	0CK474DH56A	0.47UF 2012 25V 10% R/TP X7
		C891	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C894	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C908	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C909	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP

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		C910	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C911	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C912	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C913	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C914	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C915	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C916	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C917	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C918	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C919	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C920	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C921	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C922	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C923	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C926	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C927	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C928	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C929	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C930	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C931	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C935	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C936	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C938	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C939	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C940	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C941	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C942	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C943	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C944	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C945	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C946	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C947	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C948	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C949	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C950	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C951	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C952	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C958	0CK225DH94A	"2.2UF 2012 25V 80%,-20% F(Y"
		C960	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C963	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C969	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C970	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C973	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C983	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C984	0CH3103K516	10000PF 50V 10% B(Y5P) 2012
		C10	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C1301	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C1306	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C25	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C26	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C27	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C29	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C31	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C35	0CK334CF94A	"0.33UF 1608 16V 80%,-20% F("
		C37	0CK334CF94A	"0.33UF 1608 16V 80%,-20% F("
		C40	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C405	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C406	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C408	0CK222CK51A	2200PF 1608 50V 10% R/TP B(
		C409	0CK222CK51A	2200PF 1608 50V 10% R/TP B(
		C41	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C413	0CK222CK51A	2200PF 1608 50V 10% R/TP B(

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		C414	0CK222CK51A	2200PF 1608 50V 10% R/TP B(
		C415	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C420	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C424	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP"
		C425	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP"
		C429	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP"
		C437	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP"
		C438	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP"
		C439	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP"
		C453	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C455	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP"
		C456	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP"
		C458	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C463	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C464	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP"
		C466	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP"
		C470	0CK105CF94A	"1UF 1608 16V 80%,-20% R/TP"
		C476	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C479	0CK224CF56A	0.22UF 1608 16V 10% R/TP X7
		C483	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C484	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C485	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C486	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C487	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C5001	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C5004	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C5005	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C504	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C524	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C542	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C611	0CK473CK56A	47000PF 1608 50V 10% R/TP X
		C612	0CK473CK56A	47000PF 1608 50V 10% R/TP X
		C613	0CK473CK56A	47000PF 1608 50V 10% R/TP X
		C626	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C7	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C70	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C704	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C71	0CK106EF56A	10UF 3216 16V 10% X7R R/TP
		C72	0CK106EF56A	10UF 3216 16V 10% X7R R/TP
		C73	0CK106EF56A	10UF 3216 16V 10% X7R R/TP
		C750	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C752	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C753	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C759	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C78	0CK106EF56A	10UF 3216 16V 10% X7R R/TP
		C8	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C801	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C802	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C806	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C817	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C818	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C819	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C820	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C825	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C829	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C840	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C842	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C844	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C845	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C846	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C847	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C848	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"

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		C850	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C851	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C853	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C856	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C859	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C860	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C861	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C862	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C863	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C892	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C893	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C9	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C901	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C902	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C903	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C904	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C905	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C906	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C907	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C96	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C981	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		R851	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C1017	0CC390DK41A	39PF 2012 50V 5% NP0 R/TP
		C1018	0CC390DK41A	39PF 2012 50V 5% NP0 R/TP
		C13	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C1303	0CH6101K416	100PF 50V 5% NP0 2012 R/TP
		C1308	0CH6101K416	100PF 50V 5% NP0 2012 R/TP
		C14	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C2	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C20	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C237	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C238	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C319	0CH6120K416	12PF 2012 50V 5% NP0 -
		C321	0CH6120K416	12PF 2012 50V 5% NP0 -
		C324	0CH6120K416	12PF 2012 50V 5% NP0 -
		C326	0CH6120K416	12PF 2012 50V 5% NP0 -
		C327	0CH6120K416	12PF 2012 50V 5% NP0 -
		C329	0CH6120K416	12PF 2012 50V 5% NP0 -
		C331	0CH6150K416	15PF 2012 50V 5% NP0 R/TP
		C333	0CH6150K416	15PF 2012 50V 5% NP0 R/TP
		C336	0CH6150K416	15PF 2012 50V 5% NP0 R/TP
		C338	0CH6150K416	15PF 2012 50V 5% NP0 R/TP
		C339	0CH6150K416	15PF 2012 50V 5% NP0 R/TP
		C341	0CH6150K416	15PF 2012 50V 5% NP0 R/TP
		C43	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C451	0CH6020K116	2PF 2012 50V 0.5 PF C0G R/T
		C452	0CH6020K116	2PF 2012 50V 0.5 PF C0G R/T
		C46	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C50	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C515	0CH6330K416	33PF 50V 5% NP0 2012 R/TP
		C516	0CH6330K416	33PF 50V 5% NP0 2012 R/TP
		C53	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C59	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C701	0CH6120K416	12PF 2012 50V 5% NP0 -
		C702	0CH6120K416	12PF 2012 50V 5% NP0 -
		C74	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C755	0CH6471K416	470PF 2012 50V 5% NP0 R/TP
		C756	0CH6471K416	470PF 2012 50V 5% NP0 R/TP
		C757	0CH6471K416	470PF 2012 50V 5% NP0 R/TP
		C758	0CH6101K416	100PF 50V 5% NP0 2012 R/TP
		C83	0CH6102K406	1000PF 50V 5% SL 2012 R/TP
		C86	0CH6102K406	1000PF 50V 5% SL 2012 R/TP

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		C924	0CH6080K116	8PF 2012 50V 0.5 PF C0G R/T
		C925	0CH6080K116	8PF 2012 50V 0.5 PF C0G R/T
		C98	0CC390DK41A	39PF 2012 50V 5% NP0 R/TP
		C99	0CC390DK41A	39PF 2012 50V 5% NP0 R/TP
		C203	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C21	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C214	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C22	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C24	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C343	0CC270CK41A	27PF 1608 50V 5% R/TP NP0
		C345	0CC270CK41A	27PF 1608 50V 5% R/TP NP0
		C348	0CC270CK41A	27PF 1608 50V 5% R/TP NP0
		C350	0CC270CK41A	27PF 1608 50V 5% R/TP NP0
		C351	0CC270CK41A	27PF 1608 50V 5% R/TP NP0
		C353	0CC270CK41A	27PF 1608 50V 5% R/TP NP0
		C465	0CC221CK41A	220PF 1608 50V 5% R/TP NP0
		C47	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C48	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C501	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C600	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C601	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C602	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C603	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C610	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C754	0CC471CK41A	470PF 1608 50V 5% R/TP NP0
		C85	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C1100	0CE106BF618	10UF KME TYPE 16V 20% FL TP
		C1112	0CE108EF618	1000UF KMG 16V 20% FL TP 5
		C1113	0CE108EF618	1000UF KMG 16V 20% FL TP 5
		C1114	0CE108EF618	1000UF KMG 16V 20% FL TP 5
		C1115	0CE108EF618	1000UF KMG 16V 20% FL TP 5
		C1201	0CE477BF618	470UF KME TYPE 16V 20% FL T
		C1204	0CE477EJ618	470UF KMG 35V 20% FL TP 5
		C1214	0CE477EJ618	470UF KMG 35V 20% FL TP 5
		C1304	0CE477EJ618	470UF KMG 35V 20% FL TP 5
		C890	0CE337ZF638	330UF SEP 16V 20% FM5 TP 5
		C100	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C1006	0CH8106J691	10UF 35V 20% 105STD (CYL) R
		C1008	0CE227WF6DC	220UF MVK 16V 20% R/TP(SMD)
		C103	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C107	0CE107WH6DC	100UF MVK 25V 20% R/TP(SMD)
		C1215	0CE477WF6DC	470UF MVK 16V 20% SMD R/TP(
		C1216	0CE477WF6DC	470UF MVK 16V 20% SMD R/TP(
		C17	0CH8106J691	10UF 35V 20% 105STD (CYL) R
		C201	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C212	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C213	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C216	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C307	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C309	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C312	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C314	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C315	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C317	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C404	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C416	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C418	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C419	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C422	0CE335WK6D8	"3.3UF MVK,RC 50V 20% SMD TA"
		C423	0CE477WF6DC	470UF MVK 16V 20% SMD R/TP(
		C442	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C445	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C454	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C457	0CE476WK6DC	47UF MVK 50V 20% R/TP(SMD)
		C482	0CE226WJ6DC	22UF MVK 35V 20% R/TP(SMD)
		C488	0CE227WJ6DC	220UF MVK/RC 35V 20% SMD TA
		C493	0CE476WK6DC	47UF MVK 50V 20% R/TP(SMD)
		C5	0CE475WJ6DC	4.7UF MVK 35V 20% R/TP(SMD)
		C5000	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C502	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C503	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C52	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C520	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C525	0CH8106F691	10UF 16V 20% 105STD (CYL) R
		C54	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C543	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C560	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C604	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C605	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C607	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C62	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C63	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C68	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C703	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C805	0CE475WK6DC	"4.7UF MVK,RC 50V 20% SMD TA"
		C836	0CE477WF6DC	470UF MVK 16V 20% SMD R/TP(
		C837	0CE477WF6DC	470UF MVK 16V 20% SMD R/TP(
		C839	0CE477WF6DC	470UF MVK 16V 20% SMD R/TP(
		C864	0CE227WF6DC	220UF MVK 16V 20% R/TP(SMD)
		C866	0CE227WF6DC	220UF MVK 16V 20% R/TP(SMD)
		C87	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C88	0CH8476H691	47UF 25V 20% 105STD (CYL) R
		C888	0CE227WJ6DC	220UF MVK/RC 35V 20% SMD TA
		C889	0CE227VH6DC	220UF MV 25V 20% R/TP(SMD)
		C900	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C953	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C956	0CH8476H691	47UF 25V 20% 105STD (CYL) R
		C957	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C959	0CH8476F691	47UF 16V 20% 105STD (CYL) R
		C97	0CH8476H691	47UF 25V 20% 105STD (CYL) R
		C972	0CH8476H691	47UF 25V 20% 105STD (CYL) R
		C980	0CE227WJ6DC	220UF MVK/RC 35V 20% SMD TA
		C982	0CE476WK6DC	47UF MVK 50V 20% R/TP(SMD)
		DIODEs		
		ZD1300	0DR340009AA	MBRS340 TP FAIRCHILD NON 40
		ZD1301	0DR340009AA	MBRS340 TP FAIRCHILD NON 40
		ZD1302	0DR340009AA	MBRS340 TP FAIRCHILD NON 40
		IC751	0DRSE00018B	"SRV05-4.TCT, SEMTECH R/TP S"
		IC754	0DRSE00018B	"SRV05-4.TCT, SEMTECH R/TP S"
		D107	0DS226009AA	KDS226 TP KEC - 80V - - 4NS
		D400	0DS181009AA	KDS181 TP KEC SOT-23 80V
		D711	0DD184009AA	KDS184 TP KEC - 85V - - - 3
		D703	0DZ510009EE	UDZ S 5.1B TP ROHM-K SOD323
		D704	0DZ510009EE	UDZ S 5.1B TP ROHM-K SOD323
		ZD220	0DZ510009EE	UDZ S 5.1B TP ROHM-K SOD323
		ZD222	0DZ510009EE	UDZ S 5.1B TP ROHM-K SOD323
		D700	0DZ510009EE	UDZ S 5.1B TP ROHM-K SOD323
		D701	0DZ510009EE	UDZ S 5.1B TP ROHM-K SOD323
		D702	0DZ510009EE	UDZ S 5.1B TP ROHM-K SOD323
		D705	0DZ510009EE	UDZ S 5.1B TP ROHM-K SOD323
		D706	0DZ510009EE	UDZ S 5.1B TP ROHM-K SOD323
		ZD209	0DZ510009EE	UDZ S 5.1B TP ROHM-K SOD323

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		ZD221	0DZ510009EE	UDZ S 5.1B TP ROHM-K SOD323
		ZD5001	0DZ510009EE	UDZ S 5.1B TP ROHM-K SOD323
		ZD5002	0DZ510009EE	UDZ S 5.1B TP ROHM-K SOD323
		ZD5003	0DZ510009EE	UDZ S 5.1B TP ROHM-K SOD323
		ZD1000	0DZ330009DF	MTZJ33B TP ROHM-K DO34 0.5W
		ZD10	0DZ910009FE	UDZS 9.1B TP ROHM - - 9.1V
		IC		
		IC501	0IMMREB010A	"M12L64322A-6T ESMT 86P,TSOP"
		IC749	0IMMRSG036A	"M24C02-WMN6T(P),LF SGS-THOM"
		IC753	0IMMRSG036A	"M24C02-WMN6T(P),LF SGS-THOM"
		IC907	0IMCRAL006A	"AT24C16AN-10SU-2.7,LF ATMEL"
		IC918	0IMCRAL006A	"AT24C16AN-10SU-2.7,LF ATMEL"
		IC1201	0IMCRNS007E	LMS1587CS-3.3 NATIONAL SEMI
		IC401	0IMCRMN028B	MSP4410K MICRONAS 80P/PQFP
		IC500	0IMCRGN002D	"FLI2300BD-LF,PB FREE GENESI"
		IC750	0IMCRSG010A	ST3232CDR SGS-THOMSON SOP16
		IC808	0IMCRNS007C	LMS1587CS-ADJ NATIONAL SEMI
		IC1	0IPRPMN003C	VCT49XYF C7(NTSC+PAL) MICRO
		IC2001	0IPRPJR017A	"NJU26901E2 JRC 8P,EMP R/TP"
		IC400	0IPRP00522A	"TPA3008D2PHPRG4,LF TEXAS IN"
		IC600	0IPRPM3002D	"MST9883C-LF-110 MSTAR 80P,L"
		IC800	0IPRPMA013A	"AN15865AAVT,PB FREE MATSUSH"
		IC901	0IPRPGN014C	"GM5221H-BC-LF,PB FREE GENES"
		IC1300	0IPMG00063A	MP1593DN-LF-Z MONOLITHIC PO
		IC1301	0IPMG00063A	MP1593DN-LF-Z MONOLITHIC PO
		IC2	0IPMGK2001B	AIC1117A-33CYTR(BS33) AIC S
		IC3	0IKE702700D	"KIA7027AF 3, SOT-89 TP RESE"
		IC4	0IPMGK2001B	AIC1117A-33CYTR(BS33) AIC S
		IC4007	0IPMGK2001C	AIC1117A-25CYTR(BS25) AIC 3
		IC402	0IPMGK2001B	AIC1117A-33CYTR(BS33) AIC S
		IC403	0IKE704200J	KIA7042AF SOT-89 TP 4.2V VO
		IC6	0IPMGSG018D	LD1086DT18TR-LF SGS-THOMSON
		IC8	0IMCRFA015A	KA7805R FAIRCHILD 2P D-PAK
		IC888	0IMCRNS007A	LM2940S 8V NATIONAL SEMICON
		IC9	0IMCRFA010A	"KA7809R, FAIRCHILD 2P D-PAK"
		IC905	0IPMGFA061A	"FAN1587AD33X FAIRCHILD 3P,D"
		IC906	0IPMGSG018D	LD1086DT18TR-LF SGS-THOMSON
		IC950	0IPMGNS004B	LM2676S-ADJ NATIONAL SEMICO
		IC2000	0ISTL00026A	"MC14066BDR2G,LF ON SEMI 14P"
		IC702	0ISTL00024A	"MC14053BDR2G,LF ON SEMI 16P"
		IC752	0IMCRTI001A	"SN74HCT157DR,LF TEXAS INST"
		COIL & CORE & INDUCTOR		
		L910	6200TEZ012L	SLF12575T-680M2R0 TDK R/TP
		L1300	6140VR0008B	SLF12575T-150M3R2 15UH SMD
		L1301	6140VR0008B	SLF12575T-150M3R2 15UH SMD
		L414	6140VR0008A	SLF12575T-330M4R7 33UH SMD
		L415	6140VR0008A	SLF12575T-330M4R7 33UH SMD
		L416	6140VR0008A	SLF12575T-330M4R7 33UH SMD
		L417	6140VR0008A	SLF12575T-330M4R7 33UH SMD
		L100	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1002	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L101	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1205	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1206	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1207	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1208	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1209	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L1210	6210TCE001G	HH-1M3216-501 CERATEC 3216M

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		L3	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L301	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L302	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L311	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L4	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L401	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L404	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L407	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L410	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L413	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L418	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L420	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L422	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L425	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L426	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L500	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L5000	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L501	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L502	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L503	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L505	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L600	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L601	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L602	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L701	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L802	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L900	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L901	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L902	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L903	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L907	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L202	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L203	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L207	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L208	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L211	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L212	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L504	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L603	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L801	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		Z1000	6200QL3002F	"X6966M EPCOS ST SIP5K, 6200"
		L1	0LC1032101A	10UH 10% 3216 R/TC FI-C3216
		L1001	0LC1020101A	1UH 10% 2012 R/TC FI-B2012-
		L11	0LC1032101A	10UH 10% 3216 R/TC FI-C3216
		L13	0LC1032101A	10UH 10% 3216 R/TC FI-C3216
		L14	0LC1032101A	10UH 10% 3216 R/TC FI-C3216
		L15	0LC1032101A	10UH 10% 3216 R/TC FI-C3216
		L17	0LC1032101A	10UH 10% 3216 R/TC FI-C3216
		L2	0LC1032101A	10UH 10% 3216 R/TC FI-C3216
		L403	0LC1532101A	15UH 10% 3216 R/TC FI-C3216
		L7	0LC1032101A	10UH 10% 3216 R/TC FI-C3216
		L10	0LC1032101A	10UH 10% 3216 R/TC FI-C3216
		L12	0LC1032101A	10UH 10% 3216 R/TC FI-C3216
		L16	0LC1032101A	10UH 10% 3216 R/TC FI-C3216
		L306	0LC1532101A	15UH 10% 3216 R/TC FI-C3216
		L307	0LC1532101A	15UH 10% 3216 R/TC FI-C3216
		L308	0LC1532101A	15UH 10% 3216 R/TC FI-C3216
		L309	0LC1532101A	15UH 10% 3216 R/TC FI-C3216
		L310	0LC1532101A	15UH 10% 3216 R/TC FI-C3216
		L8	0LC1032101A	10UH 10% 3216 R/TC FI-C3216
		L9	0LC1032101A	10UH 10% 3216 R/TC FI-C3216

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TRANSISTOR				
		Q1000	0TR388109AA	KTC3881 CHIP TP KEC - -
		Q1101	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q1102	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q318	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q410	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q411	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q412	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q700	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q12	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q13	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q14	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q15	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q16	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q17	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q210	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q211	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q213	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q308	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q310	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q313	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q315	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q316	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q401	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q402	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q403	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q404	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC -
		Q500	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q805	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q806	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q807	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q901	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		IC1101	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A
		IC902	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A
RESISTORs				
		RA600	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		RA601	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		RA602	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		RA603	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		RA604	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		RA605	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100
		R10	0RH3301D622	3.3K OHM 1 / 10 W 2012 5.00
		R1001	0RH0562D622	56 OHM 1 / 10 W 2012 5.00%
		R1002	0RH1501D622	1.5K OHM 1 / 10 W 2012 5.00
		R1003	0RH8200D622	820 OHM 1 / 10 W 2012 5.00%
		R1004	0RH3000D622	300 OHM 1 / 10 W 2012 5.00%
		R1005	0RH0682D622	68 OHM 1 / 10 W 2012 5.00%
		R1010	0RH7501D622	7.5K OHM 1 / 10 W 2012 5.00
		R1011	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R1012	0RH7502D622	75K OHM 1 / 10 W 2012 5.00%
		R1014	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R1026	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R104	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R106	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R11	0RH3301D622	3.3K OHM 1 / 10 W 2012 5.00
		R1100	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R1101	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R1102	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R1105	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R1106	0RH1202D622	12K OHM 1 / 10 W 2012 5.00%

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		R1107	0RH1502D622	15K OHM 1 / 10 W 2012 5.00%
		R1108	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R118	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R12	0RH6801D622	6.8K OHM 1 / 10 W 2012 5.00
		R1203	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R1204	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R1205	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R1206	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R1207	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R1210	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R1211	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R1212	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R1213	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R1220	0RH2003D622	200K OHM 1 / 10 W 2012 5.00
		R1221	0RH2003D622	200K OHM 1 / 10 W 2012 5.00
		R1290	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R13	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R1301	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R1304	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R1350	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R154	0RH0822D622	82 OHM 1 / 10 W 2012 5.00%
		R156	0RH0822D622	82 OHM 1 / 10 W 2012 5.00%
		R158	0RH0822D622	82 OHM 1 / 10 W 2012 5.00%
		R162	0RH2701D622	2.7K OHM 1 / 10 W 2012 5.00
		R201	0RH4703D622	470K OHM 1 / 10 W 2012 5.00
		R202	0RH2402D622	24K OHM 1 / 10 W 2012 5.00%
		R203	0RH2402D622	24K OHM 1 / 10 W 2012 5.00%
		R204	0RH4703D622	470K OHM 1 / 10 W 2012 5.00
		R22	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R223	0RH2702D622	27K OHM 1 / 10 W 2012 5.00%
		R226	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R227	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R229	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R230	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R232	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R233	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R24	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R25	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R338	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R339	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R342	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R343	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R348	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R349	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R352	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R353	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R354	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R355	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R363	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R367	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R373	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R377	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R379	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R383	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R395	0RH6800D622	680 OHM 1 / 10 W 5% D R/TP
		R403	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R418	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R421	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R435	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R44	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R45	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R451	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R453	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R455	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R46	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R460	0RH1500D622	150 OHM 1 / 10 W 2012 5.00%
		R461	0RH1500D622	150 OHM 1 / 10 W 2012 5.00%
		R462	0RH1503D622	150K OHM 1 / 10 W 2012 5.00
		R463	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R464	0RH1502D622	15K OHM 1 / 10 W 2012 5.00%
		R465	0RH3301D622	3.3K OHM 1 / 10 W 2012 5.00
		R467	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R468	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R5006	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R5008	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R5014	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R502	0RH3301D622	3.3K OHM 1 / 10 W 2012 5.00
		R5032	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R505	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R506	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R516	0RH0222D622	22 OHM 1 / 10 W 2012 5.00%
		R517	0RH0222D622	22 OHM 1 / 10 W 2012 5.00%
		R519	0RH0222D622	22 OHM 1 / 10 W 2012 5.00%
		R520	0RH1800D622	180 OHM 1 / 10 W 2012 5.00%
		R527	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R530	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R532	0RH0222D622	22 OHM 1 / 10 W 2012 5.00%
		R607	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R61	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R610	0RH2701D622	2.7K OHM 1 / 10 W 2012 5.00
		R703	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R705	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R712	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R713	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R715	0RH1202D622	12K OHM 1 / 10 W 2012 5.00%
		R716	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R719	0RH1502D622	15K OHM 1 / 10 W 2012 5.00%
		R725	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R726	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R729	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R730	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R731	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R737	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R738	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R753	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R755	0RH0102D622	10 OHM 1 / 10 W 2012 5.00%
		R756	0RH0102D622	10 OHM 1 / 10 W 2012 5.00%
		R758	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R761	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R809	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R810	0RH7502D622	75K OHM 1 / 10 W 2012 5.00%
		R83	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R835	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R836	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R837	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R838	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R839	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R848	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R849	0RH0752D622	75 OHM 1 / 10 W 2012 5.00%
		R85	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R852	0RH2200D622	220 OHM 1 / 10 W 2012 5.00%
		R853	0RH2200D622	220 OHM 1 / 10 W 2012 5.00%
		R87	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R89	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R930	0RH3301D622	3.3K OHM 1 / 10 W 2012 5.00
		R931	0RH3301D622	3.3K OHM 1 / 10 W 2012 5.00
		R941	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R960	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R963	0RH1002D622	10K OHM 1 / 10 W 2012 5.00%
		R964	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R969	0RH1202D622	12K OHM 1 / 10 W 2012 5.00%
		R971	0RH1502D622	15K OHM 1 / 10 W 2012 5.00%
		R974	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R976	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R977	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R980	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		R990	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R991	0RH9101D622	9.1K OHM 1 / 10 W 2012 5.00
		R992	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R999	0RH0000D622	0 OHM 1 / 10 W 2012 5.00% D
		R100	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R1013	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R1015	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R102	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R1027	0RJ1202D677	12K OHM 1/10 W 5% 1608 R/TP
		R1028	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R108	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R109	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R110	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R1109	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R111	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R1110	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R112	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R113	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R114	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R115	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R116	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R117	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R120	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R1202	0RJ0682D677	68 OHM 1/10 W 5% 1608 R/TP
		R121	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R122	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R123	0RJ2202D677	22K OHM 1/10 W 5% 1608 R/TP
		R1300	0RJ6801D477	6.8K OHM 1/10 W 1% 1608 R/T
		R1302	0RJ2202D677	22K OHM 1/10 W 5% 1608 R/TP
		R1303	0RJ6801D477	6.8K OHM 1/10 W 1% 1608 R/T
		R1305	0RJ2202D677	22K OHM 1/10 W 5% 1608 R/TP
		R15	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R152	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R153	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R155	0RJ2700D677	270 OHM 1/10 W 5% 1608 R/TP
		R157	0RJ2700D677	270 OHM 1/10 W 5% 1608 R/TP
		R159	0RJ2700D677	270 OHM 1/10 W 5% 1608 R/TP
		R16	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R160	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R161	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R163	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R164	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R17	0RJ2202D677	22K OHM 1/10 W 5% 1608 R/TP
		R173	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/T
		R175	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/T
		R206	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R207	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R210	0RJ3902D677	39K OHM 1/10 W 5% 1608 R/TP
		R211	0RJ5102D677	51K OHM 1/10 W 5% 1608 R/TP
		R212	0RJ4703D677	470K OHM 1/10 W 5% 1608 R/T

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R213	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R214	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R215	0RJ4703D677	470K OHM 1/10 W 5% 1608 R/T
		R222	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R224	0RJ4702D677	47000 OHM 1/10 W 5% 1608 R/
		R225	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R228	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R231	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R234	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R238	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R239	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R242	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R243	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R250	0RJ3902D677	39K OHM 1/10 W 5% 1608 R/TP
		R251	0RJ5102D677	51K OHM 1/10 W 5% 1608 R/TP
		R252	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R255	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R260	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R261	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R262	0RJ4703D677	470K OHM 1/10 W 5% 1608 R/T
		R263	0RJ4703D677	470K OHM 1/10 W 5% 1608 R/T
		R326	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R329	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R34	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R35	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R358	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R359	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R385	0RJ6800D677	680 OHM 1/10 W 5% 1608 R/TP
		R387	0RJ6800D677	680 OHM 1/10 W 5% 1608 R/TP
		R390	0RJ6800D677	680 OHM 1/10 W 5% 1608 R/TP
		R392	0RJ6800D677	680 OHM 1/10 W 5% 1608 R/TP
		R393	0RJ6800D677	680 OHM 1/10 W 5% 1608 R/TP
		R401	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R402	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R405	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R406	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R407	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R408	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R409	0RJ3901D677	3.9K OHM 1/10 W 5% 1608 R/T
		R410	0RJ3901D677	3.9K OHM 1/10 W 5% 1608 R/T
		R411	0RJ3901D677	3.9K OHM 1/10 W 5% 1608 R/T
		R412	0RJ3901D677	3.9K OHM 1/10 W 5% 1608 R/T
		R413	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R414	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R415	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R416	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R417	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R419	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R423	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R424	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R426	0RJ1004D677	1000000 OHM 1/10 W 5% 1608
		R427	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R428	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R429	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R430	0RJ2201D677	2200 OHM 1/10 W 5% 1608 R/T
		R432	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R436	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/T
		R438	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/T
		R439	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R456	0RJ1203D677	120K OHM 1/10 W 5% 1608 R/T
		R50	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R500	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R5002	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R5007	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R5009	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R501	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R5013	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R5015	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R5016	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R5017	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R5019	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R5020	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R5021	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R5030	0RJ4702D677	47000 OHM 1/10 W 5% 1608 R/
		R5031	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T
		R504	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R51	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R514	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R515	0RJ4703D677	470K OHM 1/10 W 5% 1608 R/T
		R518	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R52	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R521	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R522	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R523	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R524	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R525	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R526	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R528	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R529	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R53	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R533	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R534	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R54	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R55	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R56	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R57	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R58	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R59	0RJ1201D677	1200 OHM 1/10 W 5% 1608 R/T
		R60	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R600	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R601	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R602	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R603	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R604	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R606	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R608	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R609	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R62	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R63	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R64	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R66	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R68	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R70	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R700	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R701	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R702	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R706	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R71	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R711	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R717	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R718	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R72	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R720	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R721	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R722	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R727	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R728	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R73	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R739	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R740	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R751	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R752	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R754	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R757	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R759	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R760	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R79	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R801	0RJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R802	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R803	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R804	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R805	0RJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R806	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R807	0RJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R808	0RJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R81	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R811	0RJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R812	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R813	0RJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R814	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R815	0RJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R816	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R817	0RJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R820	0RJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R822	0RJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R826	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R827	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R828	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R830	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R831	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R832	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R834	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R840	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R841	0RJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R842	0RJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R843	0RJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R845	0RJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R846	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R847	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R850	0RJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R854	0RJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R855	0RJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R856	0RJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R857	0RJ2200D677	220 OHM 1/10 W 5% 1608 R/TP
		R86	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R867	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R868	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R88	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R90	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R901	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R902	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R903	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R904	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R906	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R908	0RJ0822D677	82 OHM 1/10 W 5% 1608 R/TP
		R909	0RJ0822D677	82 OHM 1/10 W 5% 1608 R/TP

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R910	0RJ0822D677	82 OHM 1/10 W 5% 1608 R/TP
		R913	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R917	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R918	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R920	0RJ4990D477	499 OHM 1/10 W 1% 1608 R/TP
		R921	0RJ4990D477	499 OHM 1/10 W 1% 1608 R/TP
		R929	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R93	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R933	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R934	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R935	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R936	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R938	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R939	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R940	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R942	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R944	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R945	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R946	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R947	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R948	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R949	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R95	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R950	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R952	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R953	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R970	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R972	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R975	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R981	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R982	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R983	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R984	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R985	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R986	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R987	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R988	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R989	0RH4701D622	4.7K OHM 1 / 10 W 2012 5.00
		OTHERs		
		X11	6202VDT002E	SX-1SMD SUNNY RADIAL 202500
		X500	6202VDT002J	SX-1 SUNNY 13.500000MHZ +/-
		X601	6202VDT002H	SX-1 SUNNY 18.432000MHZ +/-
		X900	6202VDT002B	SX-1 SUNNY SC14.3MHZ +/- 30
		IC900	6620F00017A	CCSD-32T-SM WOOYOUNG 32P PL
		TU1000	6700VS0003D	TAEW-G052P LGIT MULTI VS RC
		CONTROL BOARD		
		L1700	0LA0102K119	10UH K 2.3*3.4 TP
		R1700	0RN8200F409	820 1/6W 1% TA52
		R1701	0RN6200F409	620 1/6W 1% TA52
		R1702	0RN5100F409	510 OHM 1/6 W 1.00% TA52
		R1703	0RN4300F409	430 OHM 1/6 W 1.00% TA52
		R1704	0RN3300F409	330 1/6W 1% TA52
		R1705	0RN2700F409	270 1/6W 1% TA52
		R1706	0RN2701F409	2.7K OHM 1/6 W 1.00% TA52
		SW1700	140-313A	TACT 2LEAD 100G(TA) LG C&D
		SW1701	140-313A	TACT 2LEAD 100G(TA) LG C&D
		SW1702	140-313A	TACT 2LEAD 100G(TA) LG C&D
		SW1703	140-313A	TACT 2LEAD 100G(TA) LG C&D

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		SW1704	140-313A	TACT 2LEAD 100G(TA) LG C&D
		SW1705	140-313A	TACT 2LEAD 100G(TA) LG C&D
		SW1706	140-313A	TACT 2LEAD 100G(TA) LG C&D
		DVD BOARD		
		R3201	0RD7501F609	7.5K OHM 1/6 W 5.00% TA52
		R3202	0RD2401F609	2.4K OHM 1/6 W 5.00% TA52
		R3203	0RD9100F609	910 OHM 1/6 W 5.00% TA52
		R3204	0RD6200F609	620 OHM 1/6 W 5.00% TA52
		R3205	0RD2400F609	240 OHM 1/6 W 5.00% TA52
		R3206	0RD3301F609	3.3K OHM 1/6 W 5.00% TA52
		R3207	0RD6201F609	6.2K OHM 1/6 W 5.00% TA52
		SW3201	140-313A	TACT 2LEAD 100G(TA) LG C&D
		SW3202	140-313A	TACT 2LEAD 100G(TA) LG C&D
		SW3203	140-313A	TACT 2LEAD 100G(TA) LG C&D
		SW3204	140-313A	TACT 2LEAD 100G(TA) LG C&D
		SW3205	140-313A	TACT 2LEAD 100G(TA) LG C&D
		LED & P/SW BOARD		
		C1600	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		L1600	0LC1032101A	10UH 10% 3216 R/TC FI-C3216
		R1600	0RH3301D622	3.3K OHM 1 / 10 W 2012 5.00
		C2100	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C3111	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C3112	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C3113	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C3114	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C3115	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C3116	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C3117	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		L2100	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L2101	0LC1032101A	10UH 10% 3216 R/TC FI-C3216
		Q1601	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q1602	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q1603	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q3101	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q3102	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q3103	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q3104	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q3105	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q3106	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q3107	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		Q3108	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC -
		R1601	0RH2701D622	2.7K OHM 1 / 10 W 2012 5.00
		R1602	0RH2700D622	270 OHM 1 / 10 W 2012 5.00%
		R1603	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R1604	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R1605	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		R1606	0RH1500D622	150 OHM 1 / 10 W 2012 5.00%
		R3101	0RH2200D622	220 OHM 1 / 10 W 2012 5.00%
		R3102	0RH2200D622	220 OHM 1 / 10 W 2012 5.00%
		R3103	0RH2200D622	220 OHM 1 / 10 W 2012 5.00%
		R3104	0RH2200D622	220 OHM 1 / 10 W 2012 5.00%
		R3105	0RH2200D622	220 OHM 1 / 10 W 2012 5.00%
		R3106	0RH2200D622	220 OHM 1 / 10 W 2012 5.00%
		R3107	0RH2200D622	220 OHM 1 / 10 W 2012 5.00%
		R3121	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R3122	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R3123	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R3124	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%

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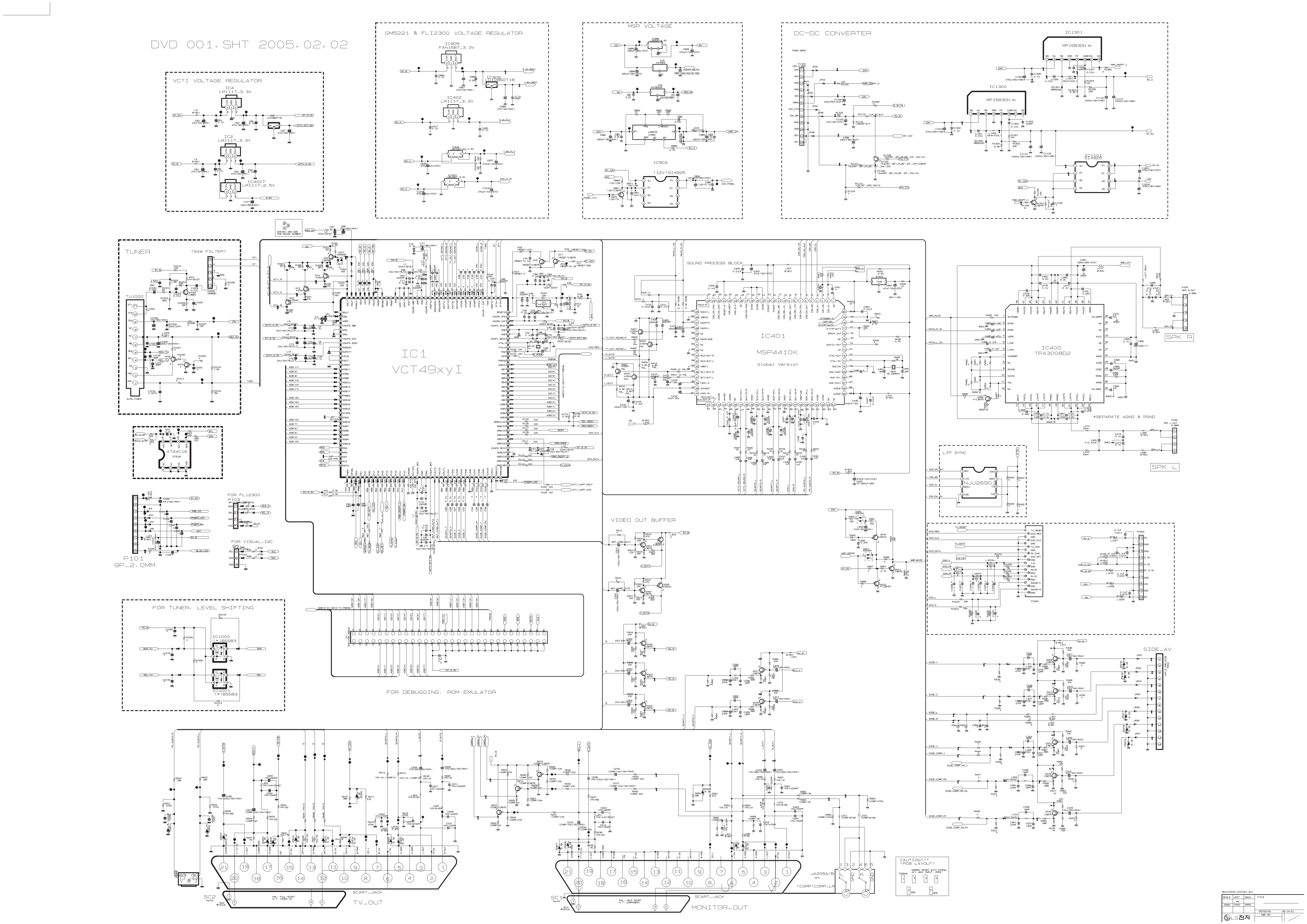
		R3125	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R3126	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R3127	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R3137	0RH1000D622	100 OHM 1 / 10 W 2012 5.00%
		R3138	0RH1001D622	1K OHM 1 / 10 W 2012 5.00%
		SW1600	140-313A	TACT 2LEAD 100G(TA) LG C&D
		LED1600	0DL200000CA	SAM5670(DL-2LRG) BK Y-GREEN
		PA2101	6726TV0001A	TSOP4838SO1 VISHAY 38.0KHZ
		LED801	0DLBE0158AA	BRIGHT LED ELECTRONICS BL-H
		LED802	0DLBE0158AA	BRIGHT LED ELECTRONICS BL-H
		LED803	0DLBE0158AA	BRIGHT LED ELECTRONICS BL-H
		LED804	0DLBE0158AA	BRIGHT LED ELECTRONICS BL-H
		LED805	0DLBE0158AA	BRIGHT LED ELECTRONICS BL-H
		LED806	0DLBE0158AA	BRIGHT LED ELECTRONICS BL-H
		LED807	0DLBE0158AA	BRIGHT LED ELECTRONICS BL-H
		VIDEO BOARD		
		C2006	0CN4710K519	470PF D 50V 10% B(Y5P) TA52
		C2007	0CN4710K519	470PF D 50V 10% B(Y5P) TA52
		R2001	0RD0752Q609	75 1/4W(3 5% TA52
		R2002	0RD0752Q609	75 1/4W(3 5% TA52
		R2003	0RD0752Q609	75 1/4W(3 5% TA52
		R2004	0RD0752Q609	75 1/4W(3 5% TA52
		R2005	0RD0752Q609	75 1/4W(3 5% TA52
		R2006	0RD4703Q609	470K 1/4W(3 5% TA52
		R2007	0RD4703Q609	470K 1/4W(3 5% TA52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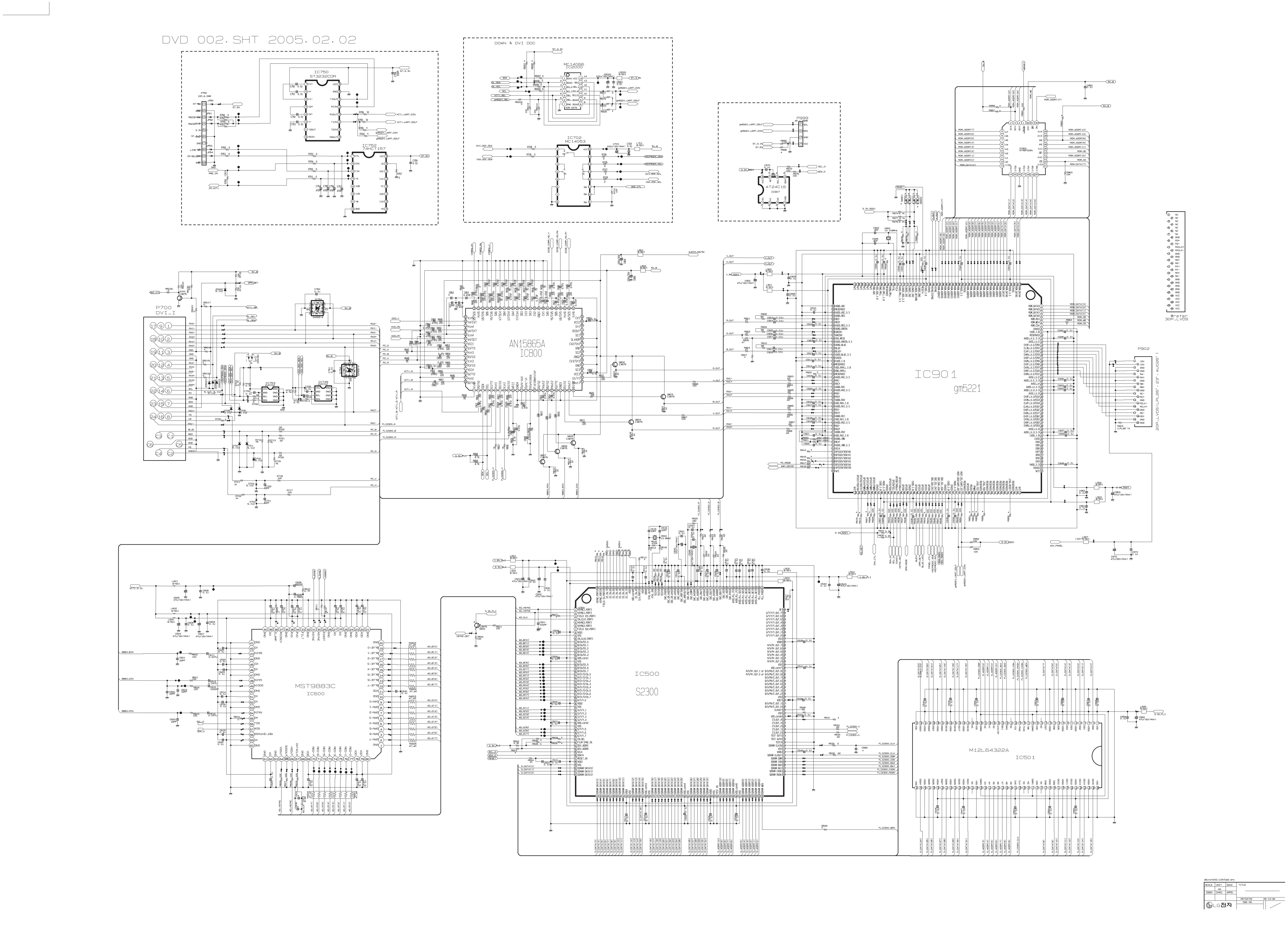
GM5221 & FLI2300 VOLTAGE REGULATOR
MSP VOLTAGE
DC-DC CONVERTER
TUNER
IC1
VCT49xyI
SOUND PROCESS BLOCK
IC401
MSP4410K
Global Version
IC400
TPA3008D2
SPK R
SPK L
LIP SYNC
AT24C16
P101
9P_2.0MM
VIDEO OUT BUFFER
FOR TUNER, LEVEL SHIFTING
FOR DEBUGGING, ROM EMULATOR
SIDE_AV
SC2
TV_OUT
SC1
MONITOR_OUT
SCART_JACK
CAUTION!!!
(PCB LAYOUT)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IC750
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DOWN & DVI DDC
IC702
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P999
AT24C16
AN15865A
IC800
P700
DVI_I
IC901
gm5221
P902
MST9883C
IC600
IC500
S2300
M12L64322A
IC501
LG전자

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