



# TFT-LCD TV/MONITOR

Chassis  
GRT26KU  
GRT32KU

Model  
LN-R268WH  
LN-R328WH  
LN-32R51BH

# *SERVICE* Manual

## TFT-LCD TV/MONITOR



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## 4 Alignments and Adjustments

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### 4-1 General Alignment Instruction

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

## 4 Alignments and Adjustments

### 4-2 Factory Mode Adjustments

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#### 4-2-1 Entering Factory Mode

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

- If you do not have Factory remote - control



#### 4-2-2 PANEL CHECK

Specially for **LNR328WHX**, You have to check Panel Maker

Because of different adjustments as follows.

First of all, Check the label rating.

- 1) Label Rating File



- LCD PANEL MARK

A: ACER(AUO) S: SEC

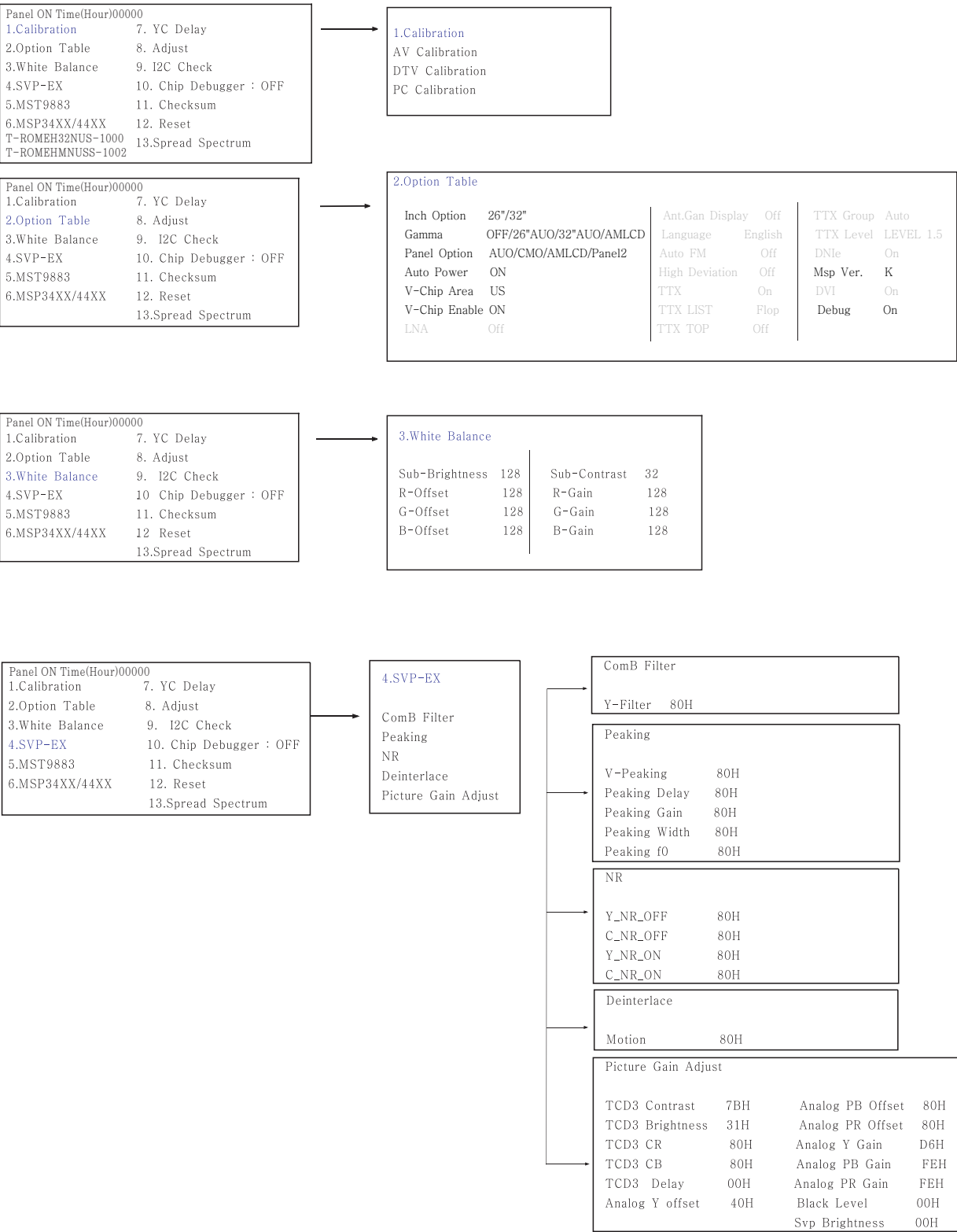
- 2) If Panel Mark is "A", Set the factory mode indicating as follows.

\* Option Byte

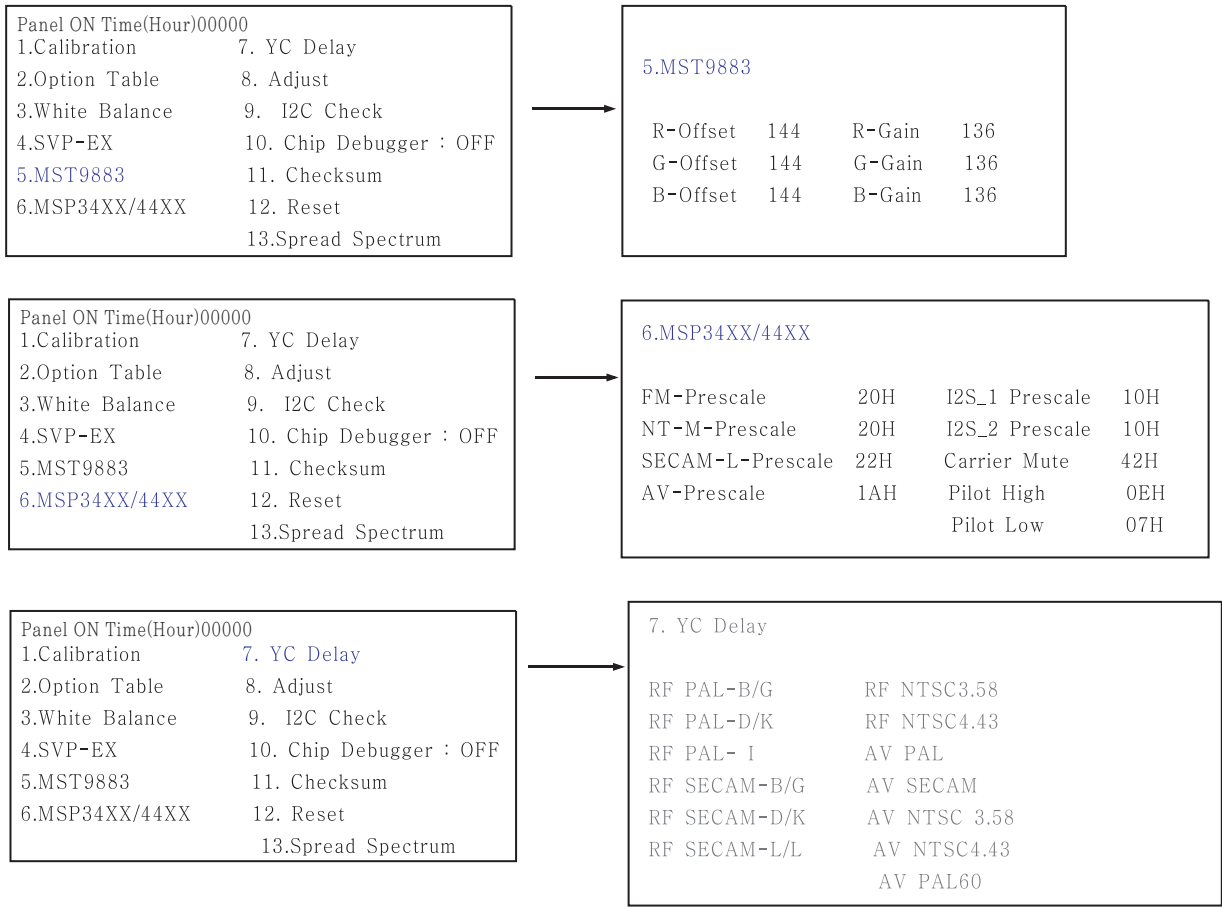
1. Inch Option 32"
2. Gamma 32"AUO
3. Panel Option AUO

Others are same shown below.

4-2-3 Factory Mode Tree



4 Alignments and Adjustments

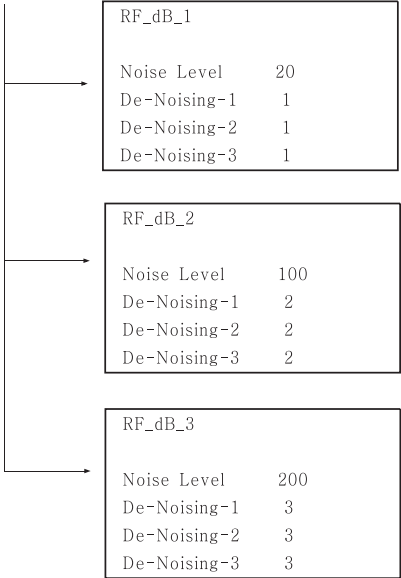


4 Alignments and Adjustments

Panel ON Time(Hour)00000	
1.Calibration	7. YC Delay
2.Option Table	8. Adjust
3.White Balance	9. I2C Check
4.SVP-EX	10. Chip Debugger : OFF
5.MST9883	11. Checksum
6.MSP34XX/44XX	12. Reset
	13.Spread Spectrum



8. Adjust							
Video Mute Time	8	Dynamic Color	50	Movie Brightness	50		
Melody Volume	5	Dynamic Sharpness	60	Movie Color	50		
Ana_Dimm_Max	FEH	Standard Contrast	90	Movie Sharpness	40		
TTX Contrast	50	Standard Brightness	80	RF_dB_1	0		
TTX Brightness	50	Standard Color	70	RF_dB_2	0		
TTX Color	50	Standard Sharpness	70	RF_dB_3	0		
Dynamic Contrast	100	Movie Contrast	60				



#### 4 Alignments and Adjustments

Panel ON Time(Hour)00000  
1.Calibration            7. YC Delay  
2.Option Table        8. Adjust  
3.Whtie Balance      9. I2C Check  
4.SVP-EX            10. Chip Debugger : OFF  
5.MST9883            11. Checksum  
6.MSP34XX/44XX      12. Reset  
                         13.Spread Spectrum



I2C Check  
  
Chip Debugger : OFF/ON  
  
Checksum        :    XXXX  
  
Reset            :    -



## 4-3 White Balance - Calibration

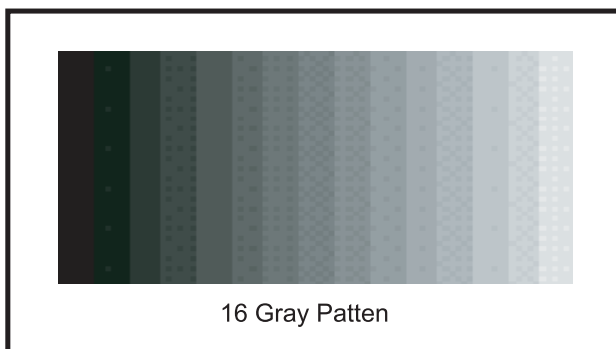
### F-1) White Balance - Calibration

If picture color is wrong, do calibration first

Equipment : CA210, Patten : 16 gray

Execute calibration in Factory Mode

Source AV : Composite, Component : 1280\*720/60Hz  
PC : 1024\*768/60Hz



## 4-3-1 White Balance - Adjustment

### F-2) White Balance - Adjustment

If picture color is wrong, check White Balance condition

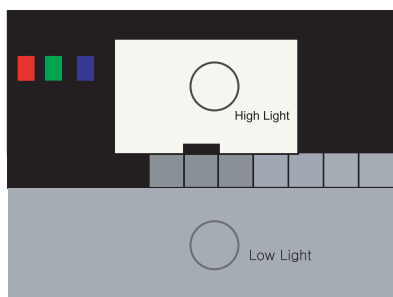
Equipment : CA210, Patten : Toshiba

Adjust W/B in Factory Mode

Sub brightness and R/G/B Offset controls low light region

Sub contrast and R/G/B Gain controls high light region

Source AV : Composite, Component : 1280\*720/60Hz  
HDMI[DVI] : 1280\*720/60Hz



Toshiba Patten

[ Test Pattern : MSPG-945 Series Pattern #16 ]

\*Color temperature  
1500K +/-500, -6 ~-20 MPCD

\*Color coordinate  
H/L : 267/263 +/- 2 35.0 Ft +/- 2.0Ft  
L/L : 270/260 +/- 3 1.5 Ft +/- 0.2Ft

## 4 Alignments and Adjustments

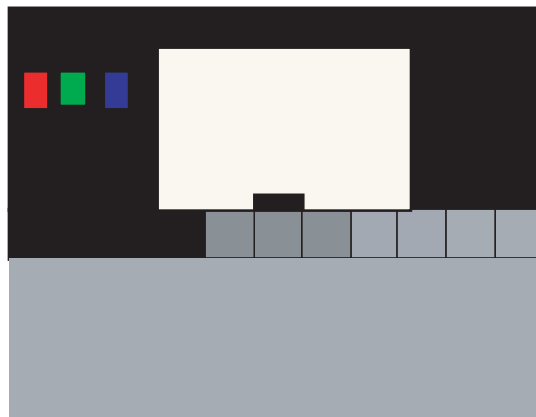
### 4-3-2 Conditions for Measurement

1. On the basis of toshiba ABL pattern : High Light level (57 IRE)
  - INPUT SIGNAL GENERATOR : MSPG-925LTH
    - \* Mode NO 1 : 744X484@60 Hz
    - NO 6 : 1280X720@60 Hz
    - NO 21 : 1024X768@60 Hz
    - \* Pattern NO 36 : 16 Color Pattern
    - NO 16 : Toshiba ABL Pattern
2. Optical measuring device : CA210 (FL)

### 4-3-3 Method of Adjustment

1. Adjust the white balance of RF, DTV, HDMI Modes.
  - a) Set the input to the mode in which the adjustment will be made (RF → DTV → HDMI).
  - \* Input signal - VIDEO Mode : Model #1 (744\*484 Mode), Pattern #16
    - DTV,DVI Mode : Model #6 (1280\*720 Mode), Pattern #16
  - b) Enter factory color control, confirm the data.

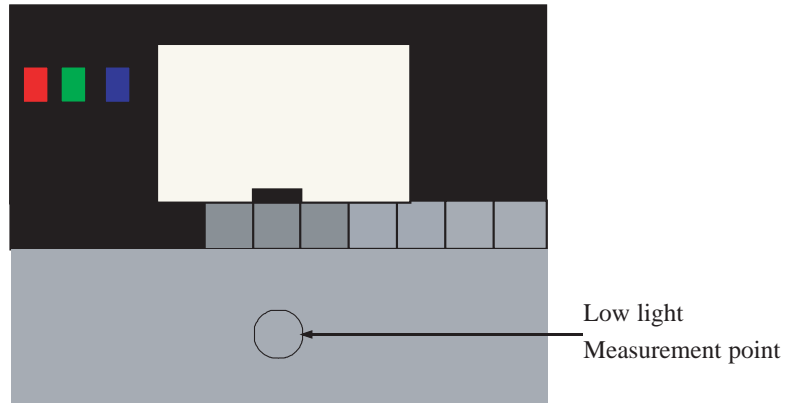
Picture 4-1 Toshiba ABL Pattern



c) Adjust the low light. (Refer to table 1, 2 in adjustment position by mode)

- Adjust sub - Brightness to set the 'Y' value.
- Adjust red offset ('x') and blue offset ('y') to the color coordinates.
- \* Do not adjust green offset data.

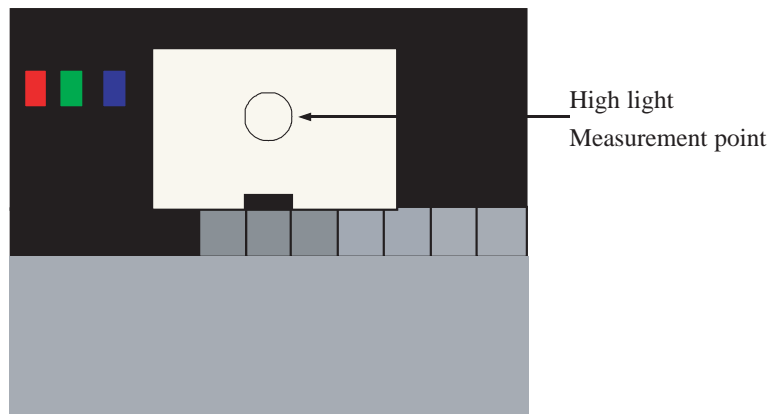
Picture 4-2 Toshiba ABL Pattern



d) Adjust the high light. (Refer to table 1, 2 in adjustment position by mode)

- Adjust red gain ('x') and blue gain ('y') to the color coordinates.
- \* Do not adjust the green gain and sub-contrast (Y) data.

Picture 4-3 Toshiba ABL Pattern



## 4 Alignments and Adjustments

### 4-4 Flash ROM Update

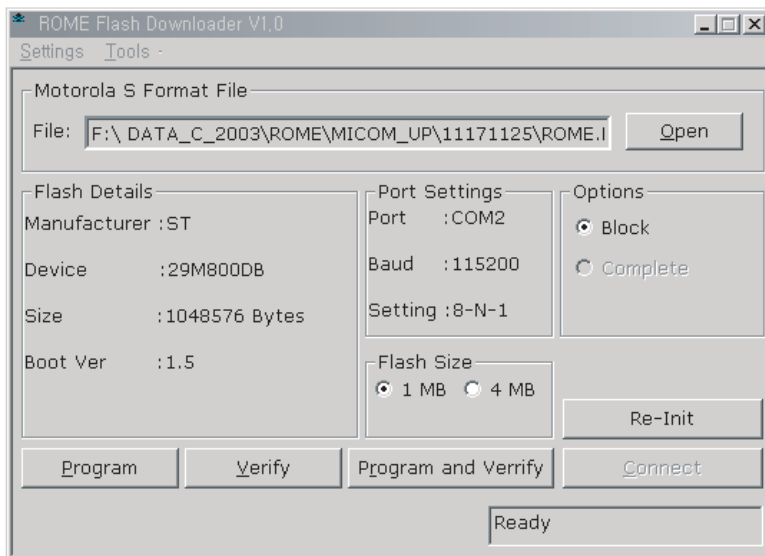
#### 1. Install the Flash Downloader

Connect Set (Service Jack) and Jig Cable to execute Program Update.



#### 2. Flash Downloader program update

- Before Turning on the set, Click "connect" which is under of OSD Screen!
- Turn on the Set.



3. Open the New Update File and Click the Program and Verify.
4. Program update sledding is marked sequentially on OSD screen.
5. After program update completion, message should be pop up.

The diagram illustrates the system architecture of the SVP-EX52, showing the flow of data and control signals between various components. The central component is the **SVP-EX52** (TTX 2.5 (1Kp:4Kp)), which interfaces with a **TFT LCD Panel** via **LVDS Out** and **WXGA** (1366\*768(1280\*768)). The SVP-EX52 also connects to **EEPROM**, **Main-Micom M30620SPGP** (RAM 10K, ROMless 100Pin), and **Flash Memory 1M**. It interfaces with **DDR** memory and a **Sub-Micom S3F866B** (Flash Rom 64KB, RAM 1KB, 44pin). The SVP-EX52 has multiple input/output ports: **MP (CVBS)**, **S.VHS-S (Y/C)**, **De-interface\*2**, **PIP/POP**, **Digital Input (24bit)**, and **LVDS Out (24bit)**. It also connects to an **ADC AD9883** and a **Comp. SW BA7657**. The SVP-EX52 interfaces with a **Multi Sound Process MSP4410G True Surround** and an **Audio S/W TC4052**. The Multi Sound Process also connects to a **Main Sound Amp TPA300202 (6W\*2CH)** and an **H/P Sound Amp TDA7050T (0.5W\*2CH)**. The Audio S/W connects to the Main Sound Amp and the H/P Sound Amp. The Multi Sound Process also connects to a **HDMI Receiver SI9993** and an **Audio S/W TC4052**. The HDMI Receiver connects to the Audio S/W and the Main Sound Amp. The Audio S/W connects to the Main Sound Amp and the H/P Sound Amp. The Main Sound Amp connects to a **Speaker**. The H/P Sound Amp connects to an **H.P out**. The SVP-EX52 also has a **TC4052** component. The SVP-EX52 has a **RF (CVBS)** input and **AV-S (CVBS)**, **AV-1 (CVBS)**, and **AV-2 (CVBS)** outputs. The SVP-EX52 has a **AV-1 (RF)** output and **AV-2 (Monitor Out)** output. The SVP-EX52 has a **Component-1** and **Component-2** output. The SVP-EX52 has a **PC D-Sub** and **HDMI** output. The SVP-EX52 has a **Main Tuner** and **Anynet Sound Out** output. The SVP-EX52 has a **S.VHS-S** and **AV-1 (Scart)** output. The SVP-EX52 has a **AV-1** and **AV-2** output. The SVP-EX52 has a **D4-1** and **Component-2** output. 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8 Block Diagrams

Memo

## 3 Disassembly and Reassembly

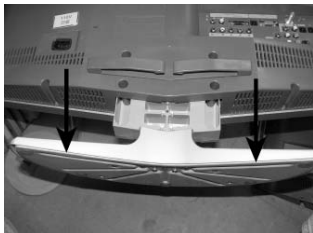
This section of the service manual describes the disassembly and reassembly procedures for the LN-R268WH/LN-R328WH/LN32R51BH LCD TV.

- ⚠ WARNING:** This monitor contains electrostatically sensitive devices. Use caution when handling these components.  
**(ONLY LNR328WHX)** Check the connector of POWER BOARD which are CNI 801, 802.  
 IF Panel MARK is A(AUO), The wire which is from PANEL INVERTER Must be connected into CNI 802.  
 IF Panel MARK is S(Sec), The wire which is from PANEL INVERTER Must be connected into CNI 801.

### 3-1 LN-R268WH Disassembly



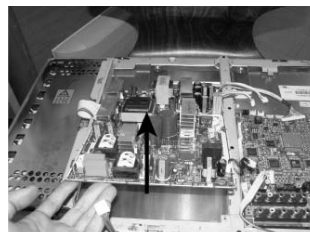
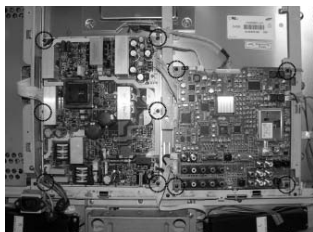
1. Place LCD TV face down on cushioned table. Remove 9 screws from the rear cover. Remove 4 screws from grip on the stand, and remove the stand.



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

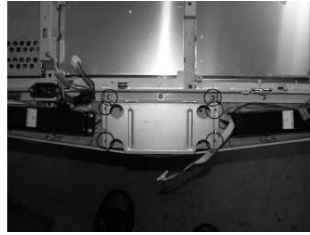
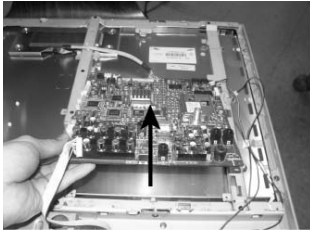


3. Remove 3 screws and lift up the jack cover. Disconnect speaker cable, function cable from the board.

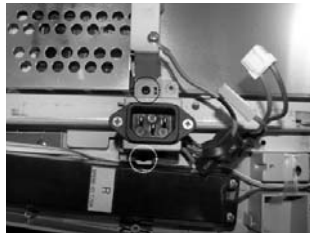
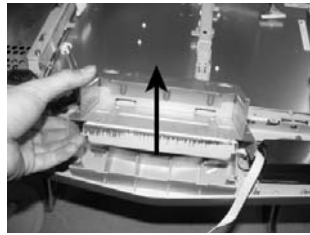


4. Remove 10 screws from the shield and lift up the power board.

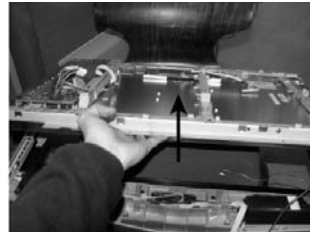
### 3 Disassembly and Reassembly



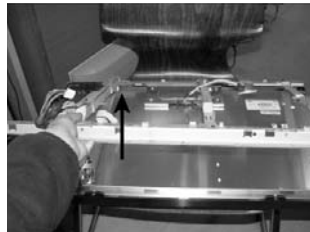
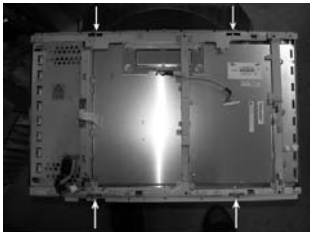
5. Lift up the main board.  
Remove 6 screws.



6. lift up the stand BRKT.



7. Remove 9 screws from the shield and lift up the shield panel.



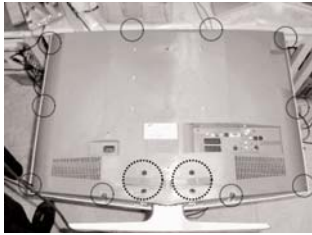
8. Remove 4 screws from the shield and lift up the BRKT.



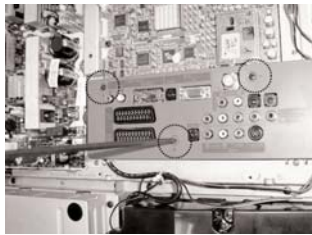


## 3-2 LN-R328WH / LN32R51BH Disassembly

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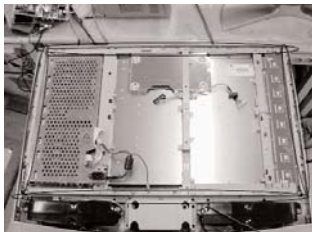
1. Place LCD TV face down on cushioned table.  
Remove 14 screws from the rear cover.  
Lift up the rear cover.



2. Remove 3 screws from the Jack cover.  
Remove 12 screws from The board.



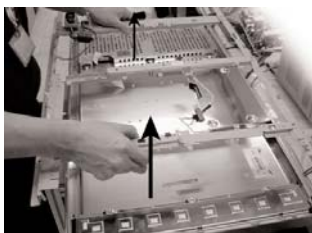
3. Disconnect speaker cable, function cable LVDS cable and lift up the main board and power board.



4. Remove 11 screws from the shield.and lift up the shield.



5. Remove 5 screws(Left :2/Right :3)



6. Lift up the BRKT.

### 3-3 Reassembly

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Reassembly procedures are in the reverse order of dissassembly procedures.

## 7 Electrical Parts List

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

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

### 7-1 LNR238WHX/XAA Parts list

	Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA		
0			LNR238WHX/XAA	LN-R238WH,A21G/23A80-GRE,23,LCD-TV,UNITE				
0.1	M0002		BN90-00695A	ASSY COVER REAR;RE23UO			1	S.N.A
..2	T0081		6002-001294	SCREW-TAPPING;BH,+,M4,L16,ZPC(BLK)			9	S.A
..2			BN63-01728A	COVER-JACK;ROME,23,ABS,V0,GR503,NT(RCA),			1	S.N.A
..2	M0013		BN96-01725A	ASSY COVER P-REAR;ROME,23,HIPS,V0,GR503			1	S.A
...3	M0113		BN61-01302A	BRACKET-VESA;32,DUOMO,SECC,T1.6			1	S.N.A
...3	M0114		BN61-01488A	HOLDER-WIRE;ROME,40,ABS,HB,GR503			1	S.N.A
...3	M0006		BN63-01725A	COVER-REAR;ROME,23,HIPS,V0,GR503			1	S.N.A
...3	M0081		6003-001321	SCREW-TAPTITE;BH,+,B,M4,L8,ZPC(BLK),SWRC			4	S.A
...3	M0081		6003-001321	SCREW-TAPTITE;BH,+,B,M4,L8,ZPC(BLK),SWRC			2	S.A
..2	M0081		6003-000282	SCREW-TAPTITE;BH,+,B,M3,L8,ZPC(BLK),SWCH			3	S.N.A
0.1	M0001		BN90-00696A	ASSY COVER FRONT;RE23UO			1	S.N.A
..2	M0081		6003-001003	SCREW-TAPTITE;BH,+,B,M4,L12,ZPC(BLK),SWR			6	S.N.A
..2	M0081		6003-001003	SCREW-TAPTITE;BH,+,B,M4,L12,ZPC(BLK),SWR			1	S.N.A
..2	M0081		6003-001003	SCREW-TAPTITE;BH,+,B,M4,L12,ZPC(BLK),SWR			2	S.N.A
..2	M0081		6006-001096	SCREW-TAPTITE;WP,BH,+,M4.0,L12,BLK,SWRCH			4	S.N.A
..2	T0003		BN96-01723A	ASSY COVER P-FRONT;ROME,23UO,ABS,HB,BK23			1	S.A
...3	M0112		BN63-01723A	COVER-FRONT;ROME,23,ABS,HB,BK23,STEAM,UO			1	S.N.A
..2	T0023		BN64-00342A	KNOB POWER;ROME,40,PC+ABS,VIOLET			1	S.N.A
...3	T0603		BN64-00343A	WINDOW-RMC;ROME,40,PC,CLEAR			1	S.N.A
...3			BN64-00346A	KNOB-DECORATION;ROME,40,AL,T0.5,TITAN,PO			1	S.N.A
...3	T0060		BN61-01655A	SPRING ETC;STS-304 SUS,D8,L12,T0.5			1	S.A
...3	T0071		BN64-00366A	INDICATOR-LED;ROME-I,PC,CLEAR,ALL MODEL			1	S.N.A
...3	C/F		BN63-02183D	COVER-SHEET;Rhcm,PE Vinyl,T0.05,680mm,20			0.94	S.N.A
..2	T0852		BN96-01724A	ASSY COVER P-MIDDLE;ROME,23UO,HIPS,V0,GR			1	S.A
...3	M0081		6003-001003	SCREW-TAPTITE;BH,+,B,M4,L12,ZPC(BLK),SWR			2	S.N.A
...3			BN61-01489A	GUIDE-CONTROL;ROME,40,ABS,HB,GR70			1	S.N.A
...3	T0069		BN63-01724A	COVER-MIDDLE;ROME,23UO,HIPS,V0,GR504,SV0			1	S.N.A
...3			BN64-00340A	KNOB-DECORATION;ROME,40,ABS,HB,GR515,AL			1	S.N.A
...3	T0022		BN64-00341A	KNOB CONTROL;ROME,40,PC+ABS,5V,GR70			1	S.N.A
...3	T0382		BP61-00509C	HOLDER-CARE;PJT,ACRYL-FOAM,T0.25,W20.0mm			0.28	S.N.A
...3	M0145		BN96-01881A	ASSY BOARD P-FUNCTION;ROME 32",CT5000-32			1	S.A
..2	T0382		BP61-00495C	HOLDER-CARE;PJT,ACRYL-FOAM,T0.25,W30.0mm			0.2	S.N.A
..2	T0175		BN96-02449A	ASSY SPEAKER P;16ohm,Left,5W,320mm,VE RO			1	S.A
..2	T0175		BN96-02450A	ASSY SPEAKER P;16ohm,Right,5W,680mm,VE R			1	S.A
0.1	M0216		BN90-00697A	ASSY STAND;RE23			1	S.N.A
..2	M0045		BN96-01727A	ASSY STAND P-SET;ROME,26,23,HIPS,HB,GR50			1	S.A
...3	T0081		6002-001294	SCREW-TAPPING;BH,+,M4,L16,ZPC(BLK)			4	S.A
...3	M0081		6003-001239	SCREW-TAPTITE;FH,+,B,M4,L10,ZPC(YEL),SWR			5	S.A
...3			BN61-01561A	GUIDE-STAND;ROME,23,ABS,HB,GR70			1	S.N.A
...3			BN61-01562A	BRACKET-STAND BOTTOM;26,ROME,SECC,T2.0			1	S.N.A
...3	M0111		BN63-01718A	COVER-STAND;ROME,26,23,HIPS,HB,GR504,SV0			1	S.N.A
...3	T0132		BN73-00052A	RUBBER FOOT;ARES 17,SILICON,DIA 17 * T1.			5	S.N.A
..2	T0524		6902-000561	BAG PE;HDPE+NITRON(DOUBLE),T0.015+T0.5,W			1	S.N.A
0.1	T0852		BN91-00833C	ASSY LCD-SPZ;RE23UO*AM LCD			1	S.N.A
..2	M0019		BN07-00184A	LCD;LT230W1-L02,8bit,546*318*46.3,16.7M			1	S.A
0.1	M0112		BN91-00947K	ASSY SHIELD;LA26R51BS/XSE			1	S.N.A
..2	M0081		6003-000282	SCREW-TAPTITE;BH,+,B,M3,L8,ZPC(BLK),SWCH			6	S.N.A
..2	M0081		6003-000282	SCREW-TAPTITE;BH,+,B,M3,L8,ZPC(BLK),SWCH			5	S.N.A

## 7 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
..2	M0081	6003-001003	SCREW-TAPTITE;BH,+,B,M4,L12,ZPC(BLK),SWR	4	S.N.A
..2	M0081	6003-001003	SCREW-TAPTITE;BH,+,B,M4,L12,ZPC(BLK),SWR	5	S.N.A
..2	M0081	6003-001003	SCREW-TAPTITE;BH,+,B,M4,L12,ZPC(BLK),SWR	3	S.N.A
..2	T0562	6046-001013	STAND OFF;M3,L5,Ni PLT,SUM24L,#4-40	2	S.N.A
..2	M2893	BN39-00588C	LEAD CONNECTOR;SO40UO,UL20276#30,30P,200	1	S.A
..2	M2893	BN39-00603D	LEAD CONNECTOR;RE26**,UL1007#26,14P,100m	1	S.A
..2	M2893	BN39-00616A	LEAD CONNECTOR;RE26*,UL2835#28,12/15P,30	1	S.A
..2		BN61-01523A	BRACKET-GUIDE STAND;32,ROME,SECC,T1.0	1	S.N.A
..2		BN61-01564A	BRACKET-PANEL SIDE;26,ROME,SECC,T1.2	3	S.N.A
..2	M0107	BN61-01569A	BRACKET-PCB;23,ROME,SECC,T1.0	1	S.N.A
..2	M0114	BN61-01709A	HOLDER-WIRE;NYLON 6/6,NATURAL,DAWS-1ND	2	S.N.A
..2	T0159	BN96-01850C	ASSY PCB P-SMPS;110W SMPS,RE23UO,120*180	1	S.A
..2	M0146	BN96-01882C	ASSY BOARD P-POWER & IR;ROME 26,CT5000-3	1	S.A
0.1	M0017	BN91-00979D	ASSY CHASSIS-AM LCD;LNR238WHX/XAA	1	S.A
..2	M0014	BN94-00793A	ASSY PCB MAIN-AM LCD;LNR238WHX/XAA	1	S.N.A
..3	T0245	0202-001366	SOLDER-WIRE FLUX;-RS60S,D1.2,63Sn/37Pb,	0.01	S.N.A
...3	JA751	3701-001294	CONNECTOR-DSUB;15P,3R,FEMALE,STRAIGHT,AU	1	S.A
...3	CN906	3705-001329	CONNECTOR-COAXIAL;NT(F),ADAPTOR,-,75ohm,	1	S.A
...3	CN802	3711-000057	HEADER-BOARD TO CABLE;BOX,3P,1R,2.5MM,AN	1	S.A
...3	CN815	3711-004068	HEADER-BOARD TO BOARD;BOX,5P,1R,2MM,ANGL	1	S.A
...3	CN801	3711-004122	HEADER-BOARD TO CABLE;BOX,14P,1R,2mm,STR	1	S.A
...3	TEST4	3711-004484	HEADER-BOARD TO CABLE;BOX,5P,1R,2mm,STRA	1	S.A
...3	JA752	3722-001061	JACK-PHONE;1P,3.6PI,AG,BLK,N	1	S.A
...3	JA782	3722-001061	JACK-PHONE;1P,3.6PI,AG,BLK,N	1	S.A
...3	JA785	3722-001061	JACK-PHONE;1P,3.6PI,AG,BLK,N	1	S.A
...3	JA771	3722-001734	JACK-VHS;4P,-,SN,BLK,-	1	S.A
...3	JA731_NT	3722-002143	JACK-PIN;5P,NI,GRN/BLU/RED/WHT/RED,STRAI	1	S.A
...3	JA732_NT	3722-002143	JACK-PIN;5P,NI,GRN/BLU/RED/WHT/RED,STRAI	1	S.A
...3	JA781	3722-002312	JACK-PHONE;4P,-,SN,BLK,-	1	S.A
...3	JA712	3722-002362	JACK-PIN;2P,Sn,WHT/RED,STRAIGHT	1	S.A
...3	JA784	3722-002362	JACK-PIN;2P,Sn,WHT/RED,STRAIGHT	1	S.A
...3	JA713_NT	3722-002363	JACK-PIN;3P,Sn,YEL/WHT/RED,STRAIGHT	1	S.A
...3	JA761	3722-002363	JACK-PIN;3P,Sn,YEL/WHT/RED,STRAIGHT	1	S.A
...3	CIS3	BN40-00050A	TUNER;TMQH6-003B,PDP-NELSON,NTSC,181CH,4	1	S.A
...3	T0530	BN61-01521A	SUPPORT-PCB;ROME,SPT,TO.5,L11.0	1	S.N.A
...3	T0530	BN61-01521A	SUPPORT-PCB;ROME,SPT,TO.5,L11.0	1	S.N.A
...3	T0530	BN61-01521A	SUPPORT-PCB;ROME,SPT,TO.5,L11.0	1	S.N.A
...3	M0107	BN63-01847A	SHIELD-COVER;ROME,SECC,TO.3,49.5,79.5,HE	1	S.N.A
...3	CIS7	BN73-00024C	SILICON/RUBBER-BERGQUIST;VENUS 32,40",SI	1	S.N.A
...3		BN97-00720A	ASSY SMD-AM LCD;LNR238WHX/XAA	1	S.N.A
....4	CIS5	0202-001375	SOLDER-CREAM;RMA-20-21L,S63,-,Sn63/Pb36.	7.46	S.N.A
....4	D101	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D7102	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D7103	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D7104	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D7105	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D7113	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D7114	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D719	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D722	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D741	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D742	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D791_NT	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D792_NT	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D793_NT	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D794_NT	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D795_NT	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D796_NT	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D941_NT	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A

## 7 Electrical Parts List

	Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
....4	D950		0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D951		0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D952		0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D953		0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D954		0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D955		0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D956		0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D957		0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200MA,SO	1	S.A
....4	D812		0402-000553	DIODE-RECTIFIER;SS24,40V,2.0A,DO-214AA	1	S.A
....4	D617		0403-000258	DIODE-ZENER;BZX84C5V6,5.2-6V,225MW,SOT-2	1	S.A
....4	D620		0403-000258	DIODE-ZENER;BZX84C5V6,5.2-6V,225MW,SOT-2	1	S.A
....4	D621		0403-000258	DIODE-ZENER;BZX84C5V6,5.2-6V,225MW,SOT-2	1	S.A
....4	D901		0403-000258	DIODE-ZENER;BZX84C5V6,5.2-6V,225MW,SOT-2	1	S.A
....4	D210		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D211		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D212		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D213		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D214		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D215		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D216		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D217		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D769		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D770		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D771		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D930		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D961		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D962		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D970		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D971		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D972		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D973		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D974		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D975		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D990		0403-000620	DIODE-ZENER;RLZ5.6B,5.45-5.73V,500MW,LL-	1	S.A
....4	D725		0403-001016	DIODE-ZENER;RLZ6.2B,5.96-6.27V,500mW,LL-	1	S.A
....4	D702		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D704		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D706		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D708		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D7108		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D7109		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D7110		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D7111		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D7112		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D717		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D718		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D720		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D721		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D723		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D724		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D7301		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D736_NT		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D743		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D744		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D745		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D746		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D748		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D749_NT		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D750		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D751		0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A

## 7 Electrical Parts List

### 7-2 Others

Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
....4	D752	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D7551	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D7552	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D7553	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D756	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D758	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D759	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D761	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D763	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D764	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D765	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D766	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D767	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D772	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D773	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D774	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D775	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D776	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D777	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D778	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D779	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D780	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D781	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D782	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D958	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D959	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D960	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200MW,SOT-2	1	S.A
....4	D102	0403-001425	DIODE-ZENER;BZX84C33,31-35V,350MW,SOT-23	1	S.A
....4	D7302	0406-001172	DIODE-TVS;CDS3C30GTH,48V,0W,SMD	1	S.A
....4	D7303	0406-001172	DIODE-TVS;CDS3C30GTH,48V,0W,SMD	1	S.A
....4	D7304	0406-001172	DIODE-TVS;CDS3C30GTH,48V,0W,SMD	1	S.A
....4	D7305	0406-001172	DIODE-TVS;CDS3C30GTH,48V,0W,SMD	1	S.A
....4	D7306	0406-001172	DIODE-TVS;CDS3C30GTH,48V,0W,SMD	1	S.A
....4	D622	0407-000123	DIODE-ARRAY;DAN202K,80V,100MA,CA2-3,SOT-	1	S.A
....4	D911	0407-000123	DIODE-ARRAY;DAN202K,80V,100MA,CA2-3,SOT-	1	S.A
....4	D912	0407-000123	DIODE-ARRAY;DAN202K,80V,100MA,CA2-3,SOT-	1	S.A
....4	D963	0407-000123	DIODE-ARRAY;DAN202K,80V,100MA,CA2-3,SOT-	1	S.A
....4	D964	0407-000123	DIODE-ARRAY;DAN202K,80V,100MA,CA2-3,SOT-	1	S.A
....4	D976	0407-000123	DIODE-ARRAY;DAN202K,80V,100MA,CA2-3,SOT-	1	S.A
....4	Q100	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q211	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q221	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q608	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q611	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q612	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q615	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q630	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q631	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q632	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q633	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q634	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q635	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q918	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q930	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q931	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q941_NT	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q952	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q970	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q971	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q215	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A



## 7 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
....4	Q216	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q610	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q620	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q801	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q802	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q803	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q910	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q911	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A
....4	Q409	0505-001170	FET-SILICON;SI9933ADY-T1,P,-20V,3.4A,0.0	1	S.A
....4	IC104	0801-002267	IC-CMOS LOGIC;74LCX14,-,SOIC,14P,150MIL,	1	S.A
....4	IC104	0801-002267	IC-CMOS LOGIC;74LCX14,-,SOIC,14P,150MIL,	1	S.A
....4	IC104	0801-002267	IC-CMOS LOGIC;74LCX14,-,SOIC,14P,150MIL,	1	S.A
....4	IC104	0801-002633	IC-CMOS LOGIC;NC7WBD3125,2BIT BUS SWITCH	1	S.A
....4	IC901	0903-001362	IC-MICROCOMPUTER;M30620SPGP,16BIT,LQFP,1	1	S.N.A
....4	IC605	1001-000164	IC-ANALOG MULTIPLEX;74HC4052,CMOS,SOP,16	1	S.A
....4	IC106	1001-001082	IC-VIDEO SWITCH;BA7657F,-,SOP,24P,300MIL	1	S.A
....4	IC913	1001-001109	IC-ANALOG SWITCH;FST3125M,BUS SWITCH & C	1	S.A
....4	IC203	1001-001211	IC-ANALOG MULTIPLEX;MM74HC4052MTC,DUALMU	1	S.A
....4	IC108	1002-001398	IC-A/D CONVERTER;MST9883CR-110,24Bit(8x3	1	S.A
....4	IC110	1006-001076	IC-DRIVER/RECEIVER;MAX232ECWE+T,SOP,16P,	1	S.A
....4	IC112	1103-000129	IC-EEPROM;24C02,256x8,SOP,8P,5x4mm,4.5/5	1	S.A
....4	IC112	1103-000129	IC-EEPROM;24C02,256x8,SOP,8P,5x4mm,4.5/5	1	S.A
....4	IC112	1103-001279	IC-EEPROM;24C32,4Kx8,SOP,8P,5x4mm,2.5/5	1	S.A
....4	IC113	1105-001674	IC-DRAM;EM6A9320BI,4Mx32Bit,FBGA,144P,12	1	S.A
....4	DU410	1201-000166	IC-OP AMP;LM358,SOP,ST,8P,150MIL,DUAL,10	1	S.A
....4	T0085	1201-001495	IC-AUDIO AMP;7050,SOP,8P,150MIL,DUAL,26D	1	S.A
....4	T0085	1201-002119	IC-AUDIO AMP;TPA3004D2,HTQFP,48P,7x7mm,-	1	S.A
....4	IC616	1203-001109	IC-VOL. DETECTOR;7045,SOT-89,3P,-,PLASTI	1	S.A
....4	IC905	1203-001559	IC-RESET;DS1834A,SOIC,8P,150MIL,PLASTIC,	1	S.A
....4	T0087	1203-001815	IC-POS.FIXED REG.;78M09,TO-252,3P,-,PLA	1	S.A
....4	T0087	1203-001816	IC-POS.FIXED REG.;78M08,TO-252,3P,-,PLA	1	S.A
....4	IC920	1203-001824	IC-VOL. DETECTOR;7042,SOT-89,3P,-,PLASTI	1	S.A
....4	T0087	1203-002708	IC-POS.FIXED REG.;1085,TO-263,3P,340MIL	1	S.A
....4	T0087	1203-002842	IC-POS.FIXED REG.;AP1117D-33A,TO-252,3P	1	S.A
....4	T0087	1203-002842	IC-POS.FIXED REG.;AP1117D-33A,TO-252,3P	1	S.A
....4	T0087	1203-002844	IC-POS.FIXED REG.;AP1117D-18A,TO-252-3L	1	S.A
....4	T0087	1203-002855	IC-POS.FIXED REG.;MC33269DTRK-5.0,DPRK,	1	S.A
....4	T0087	1203-002855	IC-POS.FIXED REG.;MC33269DTRK-5.0,DPRK,	1	S.A
....4	T0087	1203-002855	IC-POS.FIXED REG.;MC33269DTRK-5.0,DPRK,	1	S.A
....4	T0087	1203-002974	IC-POS.FIXED REG.;AP1117D-25A,TO-252,3P	1	S.A
....4	T0170	1203-003059	IC-SWITCH VOL. REG.;MP1583,SOIC,8P,4.9x3	1	S.A
....4	IC118	1204-002352	IC-VIDEO PROCESS;SVP-EX52-7052,PQFP,256P	1	S.A
....4	IC610	1204-002412	IC-AUDIO PROCESSOR;MSP4440K-QA-B3-500,PQ	1	S.A
....4	IC311	1205-002383	IC-RECEIVER;SI9993CT100,TQFP,100P,14x14	1	S.A
....4	R229	2007-000043	R-CHIP;1Kohm,1%,1/10W,TP,1608	1	S.A
....4	R230	2007-000043	R-CHIP;1Kohm,1%,1/10W,TP,1608	1	S.A
....4	R2357	2007-000052	R-CHIP;10Kohm,1%,1/10W,TP,1608	1	S.A
....4	R919	2007-000052	R-CHIP;10Kohm,1%,1/10W,TP,1608	1	S.A
....4	R9401	2007-000052	R-CHIP;10Kohm,1%,1/10W,TP,1608	1	S.A
....4	R9405	2007-000052	R-CHIP;10Kohm,1%,1/10W,TP,1608	1	S.A
....4	R9406_NT	2007-000052	R-CHIP;10Kohm,1%,1/10W,TP,1608	1	S.A
....4	R963	2007-000052	R-CHIP;10Kohm,1%,1/10W,TP,1608	1	S.A
....4	R964	2007-000052	R-CHIP;10Kohm,1%,1/10W,TP,1608	1	S.A

## 7 Electrical Parts List

	Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
....4	R965	2007-000052		R-CHIP;10Kohm,1%,1/10W,TP,1608	1	S.A
....4	R966	2007-000052		R-CHIP;10Kohm,1%,1/10W,TP,1608	1	S.A
....4	R9661	2007-000052		R-CHIP;10Kohm,1%,1/10W,TP,1608	1	S.A
....4	R9662	2007-000052		R-CHIP;10Kohm,1%,1/10W,TP,1608	1	S.A
....4	R121	2007-000060		R-CHIP;100Kohm,1%,1/10W,TP,1608	1	S.A
....4	Z3_	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	HOTEL	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R2008_OP	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R207	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R214	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R215_OP	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R216	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R221	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R222	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R223	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R236	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R237	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R239	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R240	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R241	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R245	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R247	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R248	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R280	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R281	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R282	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R283	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R331	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R332	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R333	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R375	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R378	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R380_EU	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R381_EU	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R640	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R645	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R646	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R650	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R651	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R652	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R655	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R681	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R686	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R688	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R7135_NT	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R7139_NT	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R7141_NT	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R7606_NT	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R7607_NT	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R7622_NT	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R7623_NT	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R772	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R9124	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R9125	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R9129	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R9136	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R9138	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R9140_NT	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R9143_NT	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R918	2007-000070		R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A



## 7 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
....4	R9207	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R9208_NT	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R9209	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R9215	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R9217	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R9218	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R923	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R9330	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R934	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R935	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R9403	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R9404_NT	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R960	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R9664	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R9665	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R994	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R995	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R996	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R997	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	UO_	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R201	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R2013	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R2015	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R202	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R203	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R206	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R208	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R209	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R210	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R212	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R337	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R340	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R345	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R754	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R758	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R9673	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R100	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R101	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R347	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R349	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R350	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R351	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R616	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R617	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R761	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R7610	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R7611	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R762	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R782	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R783	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R982	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R983	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R984	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R985	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R986	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R102	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R2344	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R2345	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R260	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R261	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A

## 7 Electrical Parts List

	Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
....4	R270		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R271		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R272		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R273		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R334		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R613		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R614		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R618		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R628		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R629		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R630		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R631		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R7110_NT		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R7120		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R727_NT		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R738		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R745		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R757		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R7590		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R7613		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R7614		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R7615		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R7619		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R7630		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R781		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R9110_EU		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R9119		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R9120		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R9122		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R9123		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R9146_OP		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R932		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R936		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R937		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R940		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R941		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R953_NT		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R954		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R955		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R962		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R9668		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R9669		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R967		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R968		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R969		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R974		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R975		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R976		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R990		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R991		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R992		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R993		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R190		2007-000076	R-CHIP;330ohm,5%,1/10W,TP,1608	1	S.A
....4	R7488		2007-000076	R-CHIP;330ohm,5%,1/10W,TP,1608	1	S.A
....4	R7490		2007-000076	R-CHIP;330ohm,5%,1/10W,TP,1608	1	S.A
....4	R1246		2007-000077	R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R2358		2007-000077	R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R355		2007-000077	R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R356		2007-000077	R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R357		2007-000077	R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A

## 7 Electrical Parts List

	Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
....4	R7130_NT	2007-000077		R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R7131_NT	2007-000077		R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R729_NT	2007-000077		R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R730_NT	2007-000077		R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R7582	2007-000077		R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R7588	2007-000077		R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R7620_NT	2007-000077		R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R7621_NT	2007-000077		R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R765	2007-000077		R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R766	2007-000077		R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R793	2007-000077		R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R794	2007-000077		R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R9663	2007-000077		R-CHIP;470ohm,5%,1/10W,TP,1608	1	S.A
....4	R131_OP	2007-000078		R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R211	2007-000078		R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R258	2007-000078		R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R259	2007-000078		R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R323	2007-000078		R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R615	2007-000078		R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R6402	2007-000078		R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R6404	2007-000078		R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R692	2007-000078		R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R696	2007-000078		R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R767	2007-000078		R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R768	2007-000078		R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R924	2007-000078		R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R931	2007-000078		R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9666	2007-000078		R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9667	2007-000078		R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R204	2007-000079		R-CHIP;1.8Kohm,5%,1/10W,TP,1608	1	S.A
....4	R205	2007-000079		R-CHIP;1.8Kohm,5%,1/10W,TP,1608	1	S.A
....4	R693	2007-000080		R-CHIP;2Kohm,5%,1/10W,TP,1608	1	S.A
....4	R224	2007-000082		R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R242	2007-000082		R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R244	2007-000082		R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R338	2007-000082		R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R922	2007-000082		R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R925	2007-000082		R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R926	2007-000082		R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R927	2007-000082		R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R928	2007-000082		R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R938	2007-000082		R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R939	2007-000082		R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9408	2007-000082		R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R945	2007-000082		R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R946	2007-000082		R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9671	2007-000082		R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9672	2007-000082		R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R225	2007-000084		R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R2356	2007-000084		R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R238	2007-000084		R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R256	2007-000084		R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R257	2007-000084		R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R321	2007-000084		R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R336	2007-000084		R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R339	2007-000084		R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R342	2007-000084		R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R343	2007-000084		R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R619	2007-000084		R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R632	2007-000084		R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A

## 7 Electrical Parts List

	Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
....4	R657		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R810		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9109_EU		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9118		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9132		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R917		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9187		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9213		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9222		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9224		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9231		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9232		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9234		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9235		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9238		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R929		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9332		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9335		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9336		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9402		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R942		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R943		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R944		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9670		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R988		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R989		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R626_OP		2007-000087	R-CHIP;6.8Kohm,5%,1/10W,TP,1608	1	S.A
....4	R627_OP		2007-000087	R-CHIP;6.8Kohm,5%,1/10W,TP,1608	1	S.A
....4	R233		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R620		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R623		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R639		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R641		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R642		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R649		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R690		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R691		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R759		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R760		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R7609		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R7612		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R763		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R802		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R803		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R804		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R805		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R812		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R8877		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R901		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R913		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9131		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9133		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9135		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9144_NT		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9145_NT		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9211		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R957		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R679		2007-000091	R-CHIP;12Kohm,5%,1/10W,TP,1608	1	S.A
....4	R860		2007-000091	R-CHIP;12Kohm,5%,1/10W,TP,1608	1	S.A
....4	R861		2007-000092	R-CHIP;15Kohm,5%,1/10W,TP,1608	1	S.A

## 7 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
....4	R621	2007-000093	R-CHIP;20Kohm,5%,1/10W,TP,1608	1	S.A
....4	R622	2007-000093	R-CHIP;20Kohm,5%,1/10W,TP,1608	1	S.A
....4	R191	2007-000094	R-CHIP;22Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9337	2007-000094	R-CHIP;22Kohm,5%,1/10W,TP,1608	1	S.A
....4	R110	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R111	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R633	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R634	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R635	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R638	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R7608	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R795	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R796	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R797	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R798	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9114	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R601	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R602	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R603	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R604	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R605	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R606	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R607	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R608	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R609	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R610	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R611	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R612	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R670	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R671	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R672	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R673	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R175	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R636	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R637	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R801	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R806	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9675	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R653	2007-000103	R-CHIP;120Kohm,5%,1/10W,TP,1608	1	S.A
....4	R105	2007-000106	R-CHIP;220Kohm,5%,1/10W,TP,1608	1	S.A
....4	R120	2007-000106	R-CHIP;220Kohm,5%,1/10W,TP,1608	1	S.A
....4	R104	2007-000115	R-CHIP;82ohm,5%,1/10W,TP,1608	1	S.A
....4	R811	2007-000123	R-CHIP;1.5Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9111	2007-000123	R-CHIP;1.5Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9112	2007-000123	R-CHIP;1.5Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9113	2007-000123	R-CHIP;1.5Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9115	2007-000123	R-CHIP;1.5Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9116	2007-000123	R-CHIP;1.5Kohm,5%,1/10W,TP,1608	1	S.A
....4	R9117	2007-000123	R-CHIP;1.5Kohm,5%,1/10W,TP,1608	1	S.A
....4	R335	2007-000125	R-CHIP;3.9Kohm,5%,1/10W,TP,1608	1	S.A
....4	R647	2007-000129	R-CHIP;27Kohm,5%,1/10W,TP,1608	1	S.A
....4	R262	2007-000134	R-CHIP;33Kohm,5%,1/10W,TP,1608	1	S.A
....4	R263	2007-000134	R-CHIP;33Kohm,5%,1/10W,TP,1608	1	S.A
....4	R264	2007-000134	R-CHIP;33Kohm,5%,1/10W,TP,1608	1	S.A
....4	R265	2007-000134	R-CHIP;33Kohm,5%,1/10W,TP,1608	1	S.A
....4	R266	2007-000134	R-CHIP;33Kohm,5%,1/10W,TP,1608	1	S.A
....4	R267	2007-000134	R-CHIP;33Kohm,5%,1/10W,TP,1608	1	S.A
....4	R268	2007-000134	R-CHIP;33Kohm,5%,1/10W,TP,1608	1	S.A
....4	R269	2007-000134	R-CHIP;33Kohm,5%,1/10W,TP,1608	1	S.A
....4	R7132	2007-000293	R-CHIP;100ohm,5%,1/4W,TP,3216	1	S.A

## 7 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
....4	R7133	2007-000293	R-CHIP;100ohm,5%,1/4W,TP,3216	1	S.A
....4	R7134	2007-000293	R-CHIP;100ohm,5%,1/4W,TP,3216	1	S.A
....4	R721	2007-000293	R-CHIP;100ohm,5%,1/4W,TP,3216	1	S.A
....4	R722	2007-000293	R-CHIP;100ohm,5%,1/4W,TP,3216	1	S.A
....4	R726_NT	2007-000293	R-CHIP;100ohm,5%,1/4W,TP,3216	1	S.A
....4	R728_NT	2007-000293	R-CHIP;100ohm,5%,1/4W,TP,3216	1	S.A
....4	R731_NT	2007-000293	R-CHIP;100ohm,5%,1/4W,TP,3216	1	S.A
....4	R3111	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R7309	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R7310	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R7311	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R7312	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R7313	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R7314	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R7315	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R7316	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R9100	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R9101	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R9102	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R9103	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R9105	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R9106	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R9128	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R9331	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R9501_OP	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R9502_OP	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R952	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R970	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R971	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R972	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R973	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R977	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R978	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R979	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R981	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R998	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R999	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	RA920	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R643_OP	2007-000458	R-CHIP;18Kohm,5%,1/10W,TP,1608	1	S.A
....4	R644_OP	2007-000458	R-CHIP;18Kohm,5%,1/10W,TP,1608	1	S.A
....4	R694	2007-000458	R-CHIP;18Kohm,5%,1/10W,TP,1608	1	S.A
....4	R746	2007-000458	R-CHIP;18Kohm,5%,1/10W,TP,1608	1	S.A
....4	R920	2007-000458	R-CHIP;18Kohm,5%,1/10W,TP,1608	1	S.A
....4	R328	2007-000779	R-CHIP;33ohm,1%,1/10W,TP,1608	1	S.A
....4	R330	2007-000779	R-CHIP;33ohm,1%,1/10W,TP,1608	1	S.A
....4	R327	2007-000821	R-CHIP;390ohm,1%,1/10W,TP,1608	1	S.A
....4	R624	2007-000882	R-CHIP;4.7ohm,5%,1/10W,TP,1608	1	S.A
....4	R625	2007-000882	R-CHIP;4.7ohm,5%,1/10W,TP,1608	1	S.A
....4	R231	2007-001014	R-CHIP;51OHM,5%,1/10W,TP,1608	1	S.A
....4	R232	2007-001014	R-CHIP;51OHM,5%,1/10W,TP,1608	1	S.A
....4	R858	2007-001068	R-CHIP;6.8Kohm,1%,1/10W,TP,1608	1	S.A
....4	R921	2007-001139	R-CHIP;7.5Kohm,1%,1/10W,TP,1608	1	S.A
....4	C7790	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R103	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R720	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R744	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R7581	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R7583	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R7584	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R7591	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A

## 7 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
....4	R7592	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R770	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R771	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R7788	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R7789	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R352	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R353	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R354	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R751	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R752	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R753	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R755	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R756	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	RA2015	2011-000002	R-NET;22ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA2016	2011-000002	R-NET;22ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA2017	2011-000002	R-NET;22ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA2018	2011-000002	R-NET;22ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA2019	2011-000002	R-NET;22ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA2020	2011-000002	R-NET;22ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA2021	2011-000002	R-NET;22ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA2022	2011-000002	R-NET;22ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA933	2011-000515	R-NET;4.7Kohm,5%,1/16W,L,CHIP,8P,TP,3.2x	1	S.A
....4	RA934	2011-000515	R-NET;4.7Kohm,5%,1/16W,L,CHIP,8P,TP,3.2x	1	S.A
....4	RA323	2011-000585	R-NET;47ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA324	2011-000585	R-NET;47ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA325	2011-000585	R-NET;47ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA326	2011-000585	R-NET;47ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA327	2011-000585	R-NET;47ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA328	2011-000585	R-NET;47ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA329	2011-000585	R-NET;47ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA330	2011-000585	R-NET;47ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA316	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA317	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA318	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA319	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA320	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA321	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA322	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA913	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA914	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA915	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA916	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA917	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA919	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA910	2011-001093	R-NET;100OHM,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA911	2011-001093	R-NET;100OHM,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA912	2011-001093	R-NET;100OHM,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA922	2011-001093	R-NET;100OHM,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA923	2011-001093	R-NET;100OHM,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA924	2011-001093	R-NET;100OHM,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA925	2011-001093	R-NET;100OHM,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA926	2011-001093	R-NET;100OHM,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA927	2011-001093	R-NET;100OHM,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA928	2011-001093	R-NET;100OHM,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA929	2011-001093	R-NET;100OHM,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA930	2011-001093	R-NET;100OHM,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA931	2011-001093	R-NET;100OHM,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA932	2011-001093	R-NET;100OHM,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	C622	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C646	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A



## 7 Electrical Parts List

	Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
....4	C105		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C120		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C2061		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C2065		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C2102		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C2104		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C2106		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C224		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C225		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C236		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C240		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C241		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C242		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C243		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C244		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C245		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C246		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C247		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C248		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C249		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C25026		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C252		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C253		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C254		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C255		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C256		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C258		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C259		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C260		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C261		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C262		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C263		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C264		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C265		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C266		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C267		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C268		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C269		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C277		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C279		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C281		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C285		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C286		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C287		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C288		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C289		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C290		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C291		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C292		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C293		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C294		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C295		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C296		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C298		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C299		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C317		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C331		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C349		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C353		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA
....4	C356		2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	SA



## 7 Electrical Parts List

	Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
....4	C357	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C359	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C380	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C383	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C385	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C389	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C630	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C649	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C654	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C669	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C671	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C676	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C686	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C687	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C736	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C737	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C802	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C805	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C808	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C811	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C814	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C818	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C820	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C868	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C877	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C907	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C939	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C9553	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C9555	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C9846	2203-000189		C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C118	2203-000236		C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C119	2203-000236		C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C25020	2203-000236		C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C25021	2203-000236		C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C25022	2203-000236		C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C25023	2203-000236		C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C283	2203-000236		C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C323	2203-000236		C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C344	2203-000236		C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C387	2203-000236		C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C5132	2203-000236		C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C702	2203-000236		C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C704	2203-000236		C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C731	2203-000236		C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C733	2203-000236		C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C734	2203-000236		C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C735	2203-000236		C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C988	2203-000236		C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C989	2203-000236		C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C102	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C106	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C213	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C214	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C215	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C216	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C217	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C223	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C226	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C2301	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C388	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A

## 7 Electrical Parts List

	Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
....4	C803	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C806	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C809	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C812	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C819	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C838	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C854	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C869	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C932	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C934	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C936	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C937	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C940	2203-000257		C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C850	2203-000405		C-CER,CHIP;0.18nF,5%,50V,C0G,1608	1	S.A
....4	C25016	2203-000440		C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C25017	2203-000440		C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C25018	2203-000440		C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C25019	2203-000440		C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C341	2203-000440		C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C350	2203-000440		C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C351	2203-000440		C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C354	2203-000440		C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C355	2203-000440		C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C381	2203-000440		C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C386	2203-000440		C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C635	2203-000440		C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C636	2203-000440		C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C901	2203-000440		C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C903	2203-000440		C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C906	2203-000440		C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C9548	2203-000440		C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C9549	2203-000440		C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C990	2203-000440		C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C109	2203-000491		C-CER,CHIP;2.2nF,10%,50V,X7R,1608	1	S.A
....4	C238	2203-000552		C-CER,CHIP;0.02nF,5%,50V,C0G,TP,1608	1	S.A
....4	C239	2203-000552		C-CER,CHIP;0.02nF,5%,50V,C0G,TP,1608	1	S.A
....4	C919	2203-000626		C-CER,CHIP;0.022nF,5%,50V,C0G,1608	1	S.A
....4	C920	2203-000626		C-CER,CHIP;0.022nF,5%,50V,C0G,1608	1	S.A
....4	C929	2203-000626		C-CER,CHIP;0.022nF,5%,50V,C0G,1608	1	S.A
....4	C930	2203-000626		C-CER,CHIP;0.022nF,5%,50V,C0G,1608	1	S.A
....4	C8822	2203-000715		C-CER,CHIP;3.3nF,10%,50V,X7R,1608	1	S.A
....4	C712	2203-000783		C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C713	2203-000783		C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C739	2203-000783		C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C742	2203-000783		C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C7420	2203-000783		C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C7422	2203-000783		C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C743	2203-000783		C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C744	2203-000783		C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C749	2203-000783		C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C750	2203-000783		C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C7579	2203-000783		C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C760	2203-000783		C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	D747	2203-000783		C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C921	2203-000815		C-CER,CHIP;0.033nF,5%,50V,C0G,1608	1	S.A
....4	C922	2203-000815		C-CER,CHIP;0.033nF,5%,50V,C0G,1608	1	S.A
....4	C333	2203-000838		C-CER,CHIP;0.39nF,5%,50V,C0G,TP,1608	1	S.A
....4	C332	2203-000843		C-CER,CHIP;39nF,10%,25V,X7R,1608	1	S.A
....4	C627	2203-000872		C-CER,CHIP;0.003nF,0.25PF,50V,C0G,TP,160	1	S.A
....4	C628	2203-000872		C-CER,CHIP;0.003nF,0.25PF,50V,C0G,TP,160	1	S.A

## 7 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
....4	C110	2203-000888	C-CER,CHIP;4.7nF,10%,50V,X7R,1608	1	S.A
....4	C218	2203-000888	C-CER,CHIP;4.7nF,10%,50V,X7R,1608	1	S.A
....4	C219	2203-000888	C-CER,CHIP;4.7nF,10%,50V,X7R,1608	1	S.A
....4	C324	2203-000888	C-CER,CHIP;4.7nF,10%,50V,X7R,1608	1	S.A
....4	C335	2203-000888	C-CER,CHIP;4.7nF,10%,50V,X7R,1608	1	S.A
....4	C633	2203-000888	C-CER,CHIP;4.7nF,10%,50V,X7R,1608	1	S.A
....4	C634	2203-000888	C-CER,CHIP;4.7nF,10%,50V,X7R,1608	1	S.A
....4	C107	2203-000972	C-CER,CHIP;47nF,10%,16V,X7R,TP,1608	1	S.A
....4	C620	2203-000972	C-CER,CHIP;47nF,10%,16V,X7R,TP,1608	1	S.A
....4	C370	2203-000975	C-CER,CHIP;47nF,10%,25V,X7R,TP,1608,-	1	S.A
....4	C667	2203-000975	C-CER,CHIP;47nF,10%,25V,X7R,TP,1608,-	1	S.A
....4	C668	2203-000975	C-CER,CHIP;47nF,10%,25V,X7R,TP,1608,-	1	S.A
....4	C681	2203-000975	C-CER,CHIP;47nF,10%,25V,X7R,TP,1608,-	1	S.A
....4	C685	2203-000975	C-CER,CHIP;47nF,10%,25V,X7R,TP,1608,-	1	S.A
....4	C935	2203-000998	C-CER,CHIP;0.047nF,5%,50V,C0G,1608	1	S.A
....4	C624	2203-001071	C-CER,CHIP;0.056nF,5%,50V,C0G,1608	1	S.A
....4	C625	2203-001071	C-CER,CHIP;0.056nF,5%,50V,C0G,1608	1	S.A
....4	C626	2203-001071	C-CER,CHIP;0.056nF,5%,50V,C0G,1608	1	S.A
....4	C664	2203-001391	C-CER,CHIP;150nF,10%,25V,X7R,TP,2012,-	1	S.A
....4	C665	2203-001391	C-CER,CHIP;150nF,10%,25V,X7R,TP,2012,-	1	S.A
....4	C682	2203-001391	C-CER,CHIP;150nF,10%,25V,X7R,TP,2012,-	1	S.A
....4	C684	2203-001391	C-CER,CHIP;150nF,10%,25V,X7R,TP,2012,-	1	S.A
....4	C108	2203-001607	C-CER,CHIP;0.22nF,5%,50V,NP0,1608	1	S.A
....4	C675	2203-001607	C-CER,CHIP;0.22nF,5%,50V,NP0,1608	1	S.A
....4	C657	2203-001630	C-CER,CHIP;330nF,+80-20%,16V,Y5V,1608	1	S.A
....4	C658	2203-001630	C-CER,CHIP;330nF,+80-20%,16V,Y5V,1608	1	S.A
....4	C623	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C644	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C100	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C113	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C2107	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C211	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C212	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C221	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C222	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C228	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C230	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C231	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C232	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C25025	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C321	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C322	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C325	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C327	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C328	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C329	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C330	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C334	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C336	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C337	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C338	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C339	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C340	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C342	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C343	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C346	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C347	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C348	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C361	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C392	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A

## 7 Electrical Parts List

### 7-2 Others

	Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
....4	C394	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C609	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C632	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C647	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C679	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C816	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C823	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C825	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C837	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C840	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C842	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C848	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C860	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C862	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C864	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C866	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C871	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C873	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C874	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C881	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C883	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C918	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C941	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C942	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C950_EU	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C952_EU	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C955_EU	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C957_EU	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C960	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C962	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C963	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C964	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C967	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C991	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C992	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C993	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C994	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C995	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C997	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C998	2203-005005		C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C666	2203-005030		C-CER,CHIP;470nF,+80-20%,50V,Y5V,TP,3216	1	S.A
....4	C683	2203-005030		C-CER,CHIP;470nF,+80-20%,50V,Y5V,TP,3216	1	S.A
....4	C2049	2203-005065		C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C235	2203-005065		C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C237	2203-005065		C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C3070_EU	2203-005065		C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C638	2203-005065		C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C639	2203-005065		C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C680	2203-005065		C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C689	2203-005065		C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C690	2203-005065		C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C691	2203-005065		C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C692	2203-005065		C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C693	2203-005065		C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C826	2203-005065		C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C827	2203-005065		C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C876	2203-005065		C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C928	2203-005065		C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C9401_NT	2203-005065		C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C371	2203-005437		C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A

## 7 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
....4	C674	2203-006036	C-CER,CHIP;680NF,+80-20%,16V,Y5V,TP,1608	1	S.A
....4	C678	2203-006036	C-CER,CHIP;680NF,+80-20%,16V,Y5V,TP,1608	1	S.A
....4	C738	2402-000108	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.2m	1	S.A
....4	C670	2402-001081	C-AL,SMD;100uF,20%,25V,WT,TP,8.3x8.3x10	1	S.A
....4	C688	2402-001081	C-AL,SMD;100uF,20%,25V,WT,TP,8.3x8.3x10	1	S.A
....4	C801	2402-001081	C-AL,SMD;100uF,20%,25V,WT,TP,8.3x8.3x10	1	S.A
....4	C817	2402-001081	C-AL,SMD;100uF,20%,25V,WT,TP,8.3x8.3x10	1	S.A
....4	C836	2402-001081	C-AL,SMD;100uF,20%,25V,WT,TP,8.3x8.3x10	1	S.A
....4	C101	2402-001128	C-AL,SMD;100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A
....4	C210	2402-001128	C-AL,SMD;100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A
....4	C220	2402-001128	C-AL,SMD;100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A
....4	C25027	2402-001128	C-AL,SMD;100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A
....4	C345	2402-001128	C-AL,SMD;100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A
....4	C391	2402-001128	C-AL,SMD;100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A
....4	C648	2402-001128	C-AL,SMD;100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A
....4	C660	2402-001128	C-AL,SMD;100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A
....4	C677	2402-001128	C-AL,SMD;100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A
....4	C804	2402-001128	C-AL,SMD;100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A
....4	C807	2402-001128	C-AL,SMD;100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A
....4	C865	2402-001128	C-AL,SMD;100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A
....4	C867	2402-001128	C-AL,SMD;100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A
....4	C619	2402-001129	C-AL,SMD;47UF,20%,16V,WT,TP,6.3X5.2MM	1	S.A
....4	C655	2402-001129	C-AL,SMD;47UF,20%,16V,WT,TP,6.3X5.2MM	1	S.A
....4	C938	2402-001129	C-AL,SMD;47UF,20%,16V,WT,TP,6.3X5.2MM	1	S.A
....4	C958_EU	2402-001129	C-AL,SMD;47UF,20%,16V,WT,TP,6.3X5.2MM	1	S.A
....4	C2109	2402-001158	C-AL,SMD;1UF,20%,50V,WT,TP,4X5.2MM	1	S.A
....4	C250	2402-001158	C-AL,SMD;1UF,20%,50V,WT,TP,4X5.2MM	1	S.A
....4	C2060	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C2064	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C2100	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C2101	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C2103	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C2105	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C229	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C233	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C234	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C25015	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C25024	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C273	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C274	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C275	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C276	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C278	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C280	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C282	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C297	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C390	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C601	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C602	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C603	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C604	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C605	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C606	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C607	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C608	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C6105	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C611	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C612	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C6120	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C629	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A

## 7 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
....4	C631	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C645	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C650	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C651	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C652	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C653	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C7766	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C839	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C910	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C923	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C933	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C949_EU	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C951_EU	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C953_EU	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C9540	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C9543	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C961	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C965	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C966	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C103	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C112	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C2108	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C227	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C284	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C320	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C326	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C352	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C358	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C382	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C384	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C610	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C621	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C656	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C659	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C813	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C815	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C821	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C822	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C824	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C853	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C855	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C861	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C863	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C870	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C872	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C875	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C880	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C882	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C931	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C996	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C393	2402-001226	C-AL,SMD;4.7UF,20%,35V,HR,TP,4.3X4.3X5.8	1	S.A
....4	C6104	2402-001226	C-AL,SMD;4.7UF,20%,35V,HR,TP,4.3X4.3X5.8	1	S.A
....4	C613	2402-001226	C-AL,SMD;4.7UF,20%,35V,HR,TP,4.3X4.3X5.8	1	S.A
....4	C614	2402-001226	C-AL,SMD;4.7UF,20%,35V,HR,TP,4.3X4.3X5.8	1	S.A
....4	C615	2402-001226	C-AL,SMD;4.7UF,20%,35V,HR,TP,4.3X4.3X5.8	1	S.A
....4	C616	2402-001226	C-AL,SMD;4.7UF,20%,35V,HR,TP,4.3X4.3X5.8	1	S.A
....4	C617	2402-001226	C-AL,SMD;4.7UF,20%,35V,HR,TP,4.3X4.3X5.8	1	S.A
....4	C618	2402-001226	C-AL,SMD;4.7UF,20%,35V,HR,TP,4.3X4.3X5.8	1	S.A
....4	C104	2402-001238	C-AL,SMD;1uF,20%,50V,HR,TP,4.3x4.3x5.2mm	1	S.A
....4	C111	2402-001257	C-AL,SMD;470uF,20%,16V,-,TP,8.3*10	1	S.A

## 7 Electrical Parts List

[illegible]



## 7 Electrical Parts List

[illegible]



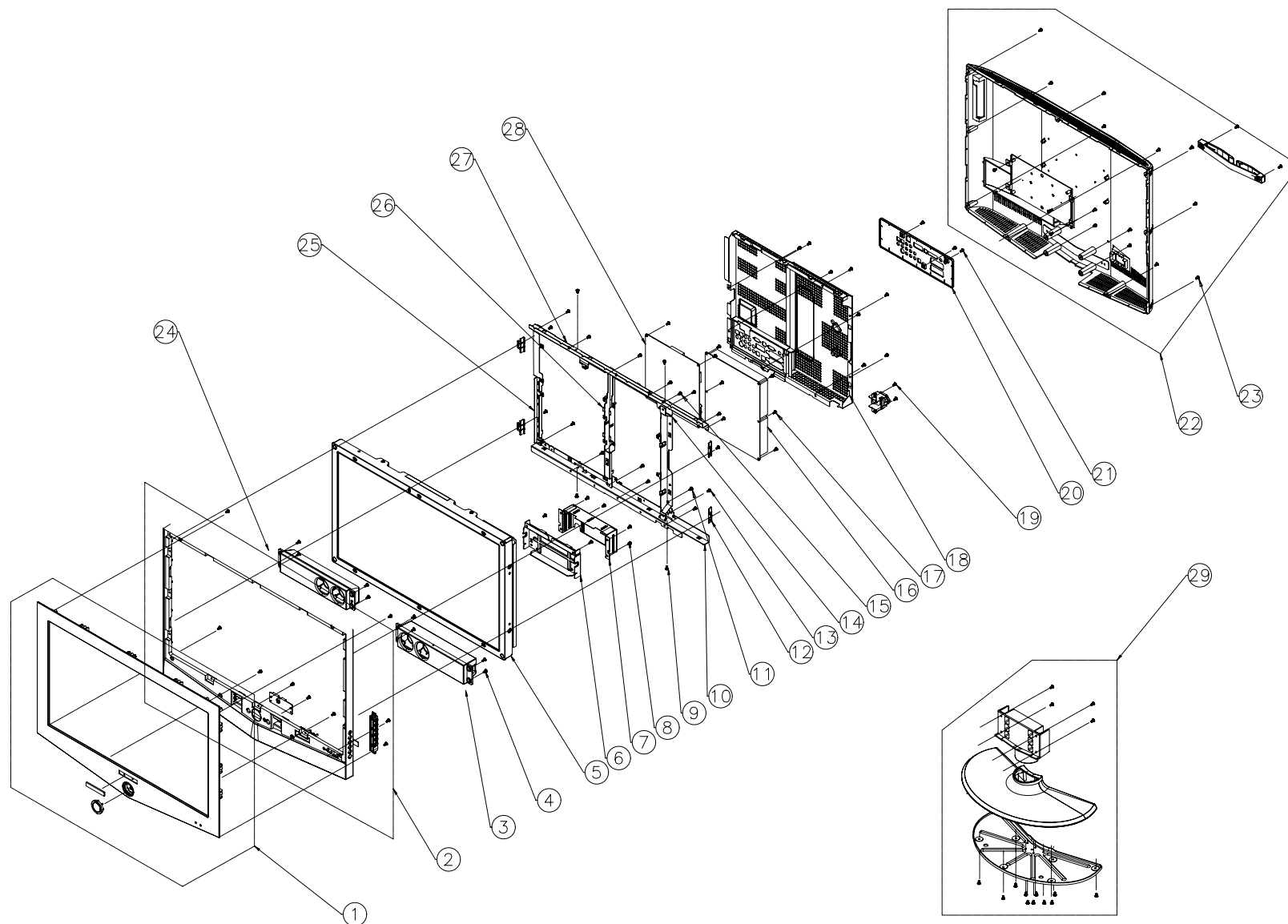
## 7 Electrical Parts List

Level	Loc. No.	Code No.	Description & Specification	EA	SA/SNA
..2	T0376	6902-000379	BAG AIR;LDPE,T0.2,W1000,L1800,TRP,-,-	0.004	S.N.A
..2	T0524	6902-000520	BAG PE;HDPE/NITRON(DOUBLE),T0.015/T0.5(D	1	S.N.A
..2		6902-000604	BAG WRAPPING;LDPE,T0.02,W500,L10000,TRP,	2.5	S.N.A
0.1	M0003	BN92-01296V	ASSY BOX;LNR238WHX/XAA	1	S.N.A
..2		BN69-00955A	BOX-01,SET;RE23UO,SW4,A,YEL,A1,668,567,2	1.02	S.N.A
0.1	M0045	BN92-01498C	ASSY ACCESSORY;LNR328WHX/XAA	1	S.N.A
..2	M0045	BN96-02327A	ASSY ACCESSORY;LNR328WHX/XAA	1	S.A
...3	T0268	3903-000085	CBF-POWER CORD;DT,US,BP3/YES,I(IEC C13/C	1	S.A
...3	T0524	6902-000110	BAG PE;LDPE,T0.05,W250,L400,TRP,28,2	1	S.N.A
...3	ACCESSORY	BN39-00654A	CBF IF-STEREO/MODULAR;ROME HOTEL,4P/6P,U	1	S.A
...3	M0045	BN96-01800A	ASSY ACCESSORY;ROME32,SCREW	1	S.A
....4	T0081	6002-001294	SCREW-TAPPING;BH,+,,M4,L16,ZPC(BLK)	4	S.A
....4	ACCESSORY	6902-000128	BAG ZIPPER;LDPE,T0.05,W200,L150,TRP,8,2-	1	S.N.A
0.1	M0019	BN92-01534M	ASSY LABEL;LNR237W1X/XAA	1	S.N.A

## 6 Exploded View and Parts List

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

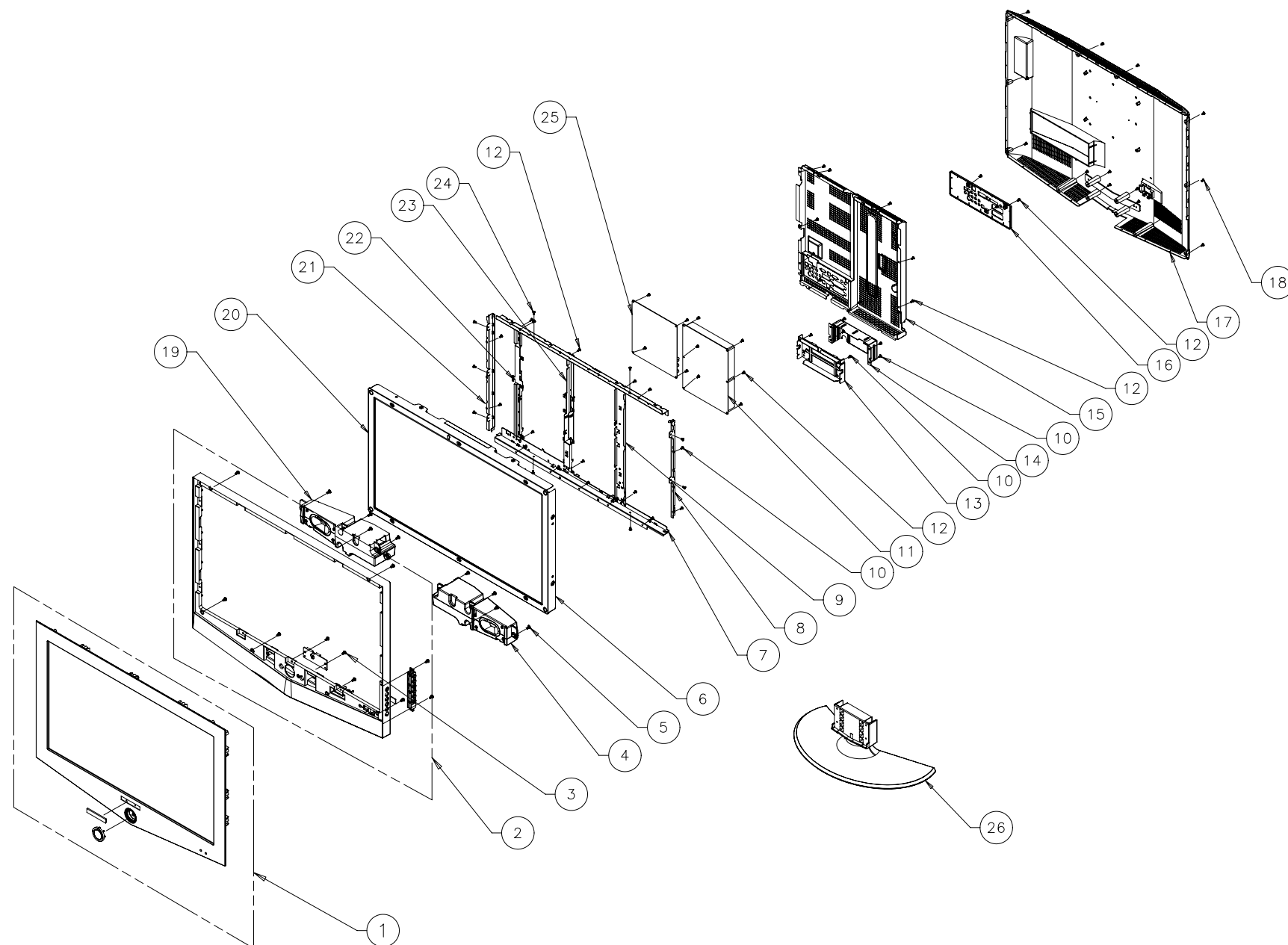
6-1 LN-R268WH



## 6 Exploded View & Parts List

NO	ITEM	CODE NO.	SPECIFICATION	Q'TY	LOCATION	REMARK
1	ASSY COVER P-FRONT	BN96-01728A	ROME 26*, ABS HB ,RHCM	1		SA
2	ASSY COVER P-MIDDLE	BN96-01729A	ROME 26*,ABS	1		SA
3	ASSY SPEAKER,R	BN96-01770A	5W/16ohm	1		SA
4	SCREW-TAPTITE	6003-001003	BH,M4,L12 ZPC(BLK)	8	MIDDLE+SPK	SNA
5	ASSY-LCD-SPZ	BN96-00833D	RE26U0*AM LCD	1		SNA
6	BRKT-STAND LINK	BN61-01525A	ROME 32*,SECC T1.6	1		SNA
7	BRKT-GUIDE STAND	BN61-01523A	ROME 32*,SECC T1.0	1		SNA
8	SCREW-TAPTITE	6003-001003	BH,M4,L12 ZPC(BLK)	6	MIDDLE+BRKT STAND LINK MIDDLE+BRKT GUIDE STAND	SA
9	SCREW-TAPTITE	6003-000133	BH,M4,L8 ZPC(BLK)	4	BRKT+PANEL	SA
10	BRKT-PANEL BOTTOM	BN61-01565A	ROME 26*,SECC T1.6	1		SNA
11	SCREW-MACHINE	6006-000245	WSP,PH,+,M4,L8,ZPC(YEL)	1	GROUND+BRKT	SA
12	BRKT-PANEL SIDE	BN61-01525A	ROME 32*,SECC T1.6	4		SNA
13	SCREW-TAPTITE	6001-000115	BH,M3,L6 ZPC(BLK)	6	BRKT+BRKT	SA
14	BRKT-GUIDE POWER-LEFT	BN61-01567A	ROME 26*,SECC T1.2	1		SNA
15	SCREW-TAPTITE	6003-001003	BH,M4,L12 ZPC(BLK)	5	MIDDLE+BRKT	SA
16	POWER PCB	—	ROME 26*	1		SA
17	SCREW-TAPTITE	6001-000115	BH,M3,L6 ZPC(BLK)	10	PCB+BRKT	SA
18	ASSY SHIELD P-PCB	BN96-01730A	ROME 26*,SECC T0.5	1		SNA
19	SCREW-TAPTITE	6001-000115	BH,M3,L6 ZPC(BLK)	10	SHIELD+BRKT POWER SOCKET+BRKT	SA
20	COVER-JACK	BN63-01653A	ROME 40*,ABS,V0	1		SNA
21	SCREW-TAPTITE	6001-000115	BH,M3,L6 ZPC(BLK)	3	PCB+COVER JACK	SA
22	ASSY COVER P-REAR	BN96-01736A	ROME 26*,ABS	1		SA
23	SCREW-TAPTITE	6002-001294	BH,M4,L16 ZPC(BLK)	13	C/F+MIDDLE+C/R	SA
24	ASSY SPEAKER,L	BN96-01769A	5W/16ohm	1		SA
25	BRKT-GUIDE MAIN	BN61-01568A	ROME 26*,SECC T1.2	1		SNA
26	BRKT-GUIDE POWER-RIGHT	BN61-01566A	ROME 26*,SECC T1.2	1		SNA
27	BRKT-PANEL TOP	BN61-01563A	ROME 26*,SECC T1.2	1		SNA
28	MAIN PCB	—	ROME 26*	1		SA
29	ASSY STAND	BN90-00694A	ROME26*	1		SA

## 6-2 LN-R328W / LN32R51BH



# 6 Exploded View & Parts List

NO	ITEM	CODE NO.	SPECIFICATION	Q'TY	LOCATION	REMARK
1	ASSY COVER P-FRONT	BN96-01735A	ROME 32" , ABS HB ,RHCM	1		SA
2	ASSY LCD-SPZ	BN91-00407K	DU32E0	1		SNA
3	ASSY SPEAKER,L			1		SA
4	ASSY SPEAKER,R			1		SA
5	SCREW-TAPTITE	6006-001096	BH,M4,L12 BLK	8	MIDDLE+SPEAKER	SA
6	BRKT-PANEL BOTTOM	BN61-01529A	ROME 32",SECC T1.6	1	BRKT+PANEL	SNA
7	BRKT-PANEL-SIDE LEFT	BN61-01528A	ROME 32",SECC T1.2	1	BRKT+PANEL	SNA
8	BRKT-GUIDE POWER-LEFT	BN61-01531A	ROME 32",SECC T1.2	1		SNA
9	BRKT-PANEL-SIDE RIGHT	BN61-01527A	ROME 32",SECC T1.2	1	BRKT+PANEL	SNA
10	BRKT-GUIDE-MAIN	BN61-01532A	ROME 32",SECC T1.2	1		SNA
11	BRKT-GUIDE-POWER RIGHT	BN61-01530A	ROME 32",SECC T1.2	1		SNA
12	BRKT-PANEL TOP	BN61-01526A	ROME 32",SECC T1.2	1	BRKT+PANEL	SNA
13						
14	SCREW-TAPTITE	6001-000115	BH,M3,L6 ZPC(BLK)		PCB+BRKT, BRKT+BRKT SHIELD+BRKT	SA
15	SCREW-TAPTITE	6003-001003	BH,M4,L12 ZPC(BLK)	17		SA
16	POWER PCB	—	ROME	1		SA
17	MAIN PCB	—	ROME	1		SA
18	BRKT-STAND LINK	BN61-0525A	ROME 32",SECC T1.6	1		SNA
19	BRKT-GUIDE STAND	BN61-01523A	ROME 32",SECC T1.0	1		SNA
20	ASSY SHIELD P-PCB	BN96-01734A	ROME 32",SECC T0.5(NT/PAL)	1		SNA
21	COVER-JACK	BN63-01653A	ROME 40",ABS,V0	1		SA
22	ASSY COVER P-REAR	BN96-01732A	ROME 32",HIPS V0	1		SA
23	BRKT-GUIDE-POWER RIGHT	BN61-01530A	ROME 32",SECC T1.2	1		SNA
24	SCREW-TAPTITE	6003-000133	BH,M4,L8 ZPC(BLK)	9	BRKT+PANEL	SA
25	MAIN PCB	—	ROME	1		SA
26	ASSY STAND	BN90-00688A	ROME32"	1		SA

## 12 Panel Description

Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	STICKER_CODE	Remarks
SEC	LT140X1-002	BN07-00004A	SA	BN68-00239H	-
SEC	LT150XS-L01	BN07-00009A	SB		-
SEC	LT150XS-L01-B	BN07-00022A	SC		-
SEC	LTM150XS-L02	BN07-00005A	SD		-
SEC	LT181E2-132	BN07-00001A	SE		-
SEC	LT150XS-T01	BN07-00010A	SF		-
SEC	LTM181E3-132	BN07-00019A	SG		-
SEC	LT170E2-131	BN07-10001D	SH		-
SEC	LT181E2-131	BN07-10001E	SJ		-
SEC	LTM170E4-L01	BN07-00018A	SK		-
SEC	LTM240W1-L01	BN07-00015A	SL		-
SEC	LTM213U3-L01	BN07-00016A	SM		-
SEC	LTM150XH-L01	BN07-00026A	SN		-
SEC	LTM150XH-L03	BN07-00027A	SP		-
SEC	LTM150XS-L01	BN07-00032A	SQ		DELL(ZPD)
SEC	LTM181E4-L01	BN07-00034A	SR		PVA
SEC	LTM170EH-L01	BN07-00036A	SS		TN
SEC	LTM170E5-L01	BN07-00037A	SU		PVA
SEC	LTM150XH-L11	BN07-00041A	SV		-
SEC	LTM213U4-L01	BN07-00039A	SW		PVA
SEC	LTM150XH-L01(ZPD)	BN07-00045A	SX		ZPD
SEC	LTM150XH-L04	BN07-00046A	SY		"New panel with high brightness"
SEC	LTM170W1-L01	BN07-00047A	SZ		Panel for TV
SEC	LTM150XH-L06	BN07-00053A	EA		Panel for TV/ High Luminance for 450cd _SONY&EOS Team Panel for TV
SEC	LTM153W1-L01	BN07-00054A	EB		Use NIKE MODEL
SEC	LTM170EH-L05	BN07-00055A	EC		Panel EOS proj. for high brightness of 17" EH-L05
SEC	LTM170E5-L03	BN07-00056A	ED		Dell 1702FP pro. E4. EH mechanicalCompatible
SEC	LTM190E1-L01	BN07-00057A	EE		DELL 1900 FP
SEC	LTM181E5-L01	BN07-00061A	EF		18" narrow bezel GH18PS
SEC	LTM150XP-L01	BN07-00065A	EG		AMLCD PVA PANEL
SEC	LTM240W1-L02	BN07-00062A	EH		Panel for 15" Wide TV
SEC	LTM170EU-L01	BN07-00071A	EJ		Slim design, TN
SEC	LTM170E5-L04	BN07-00072A	EK		E5-L04 6 bits FRC... for IBM
SEC	LTA220W1-L01	BN07-00074A	EL		Panel for 22" TV
SEC	LTM170E6-L02	BN07-00075A	EM		AMLCD Narrow & slim design 17" PVAmode
SEC	LTM170W1-L01	BN07-00082A	EN		LTM170W1-L01 ZPD panel
SEC	LTM170EH-L01	BN07-00080A	EP		LTM170EH-L01 ZPD panel
SEC	LTM170E5-L01	BN07-00081A	EQ		LTM170E5-L01 ZPD panel
SEC	LTM170EH-L05	BN07-00083A	ER		LTM170EH-L05 ZPD panel
SEC	LTM170E5-L03	BN07-00084A	ES		LTM170E5-L03 ZPD panel
SEC	LTM170EU-L01	BN07-00085A	ET		LTM170EU-L01 ZPD panel
SEC	LTM170E5-L04	BN07-00086A	EU		LTM170E5-L04 ZPD panel
SEC	LTM170E6-L02	BN07-00087A	EV		LTM170E6-L02 ZPD panel
SEC	LTM150XH-L06	BN07-00091A	EW		"Color coordinates change for LCD TV"
SEC	LTM153W1-L01	BN07-00092A	EX		AMLCD WIDE 15",9/10
SEC	LTM170W1-L01	BN07-00100A	EY		"Color Coordinates change code management"
SEC	LTM170EH-L05	BN07-00097A	EZ		"LTM170E5-L05 Color Coordinates Change Panel Code"
SEC	LTA400W1-L01	BN07-00109A	S1		"PANEL of AMLCD 40"" TV"
SEC	LTM153W1-L01	BN07-00110A	S2		"Color coordinates change 0.280/0.290, 10000k & ZPD Panel"
SEC	LTM150XH-L06	BN07-00111A	S3		"Color coordinates change 0.280/0.290, 10000k & ZPD Panel"
SEC	LTM170W1-L01	BN07-00112A	S4		"Color coordinates change 0.280/0.290, 10000k & ZPD Panel"
SEC	LTM170EH-L05	BN07-00113A	S5		"Color coordinates change 0.280/0.290, 10000k & ZPD Panel"
SEC	LTM220W1-L01	BN07-00114A	S6		"ZPD Panel for AMLCD 22"" TV"

## 12 Panel Description

Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	STICKER_CODE	Remarks
SEC	LTM150XH-L06	BN07-00117A	S7		"ZPD Panel code"
SEC	LTM153W1-L01	BN07-00118A	S8		"ZPD Panel code"
SEC	LTM170WP-L01	BN07-00119A	S9		"PVA Panel for NIKE"
SEC	LTM213U4-L01	BN07-00039A	E1		21.3" NARROW
SEC	LTA260W1-L01	BN07-00121A	E2		VENUS
SEC	LTA220W1-L01	BN07-00074B	E3		"Panel B-level panel code for 22"" TV Panel "
SEC	LTA320W1-L01	BN07-00108A	E4		"Panel for AMLCD 32"" TV"
SEC	LTM213U4-L01	BN07-00124A	E5		NARROW BEZEL 21 " PANEL
SEC	LTM170E6-L04	BN07-00129A	E6		"HIGHLAND 17"" LOW PANEL (Panel only for TCO03)"
SEC	LTM190E1-L01	BN07-00088A	E7		LTM190E1-L01 ZPD panel
SEC	M150X4-L06	BN07-00137A	E8		15" Narrow & Slim panel
SEC	LTA170V1	BN07-00139A	E9		"17"" Panel for Muse 4:3 VGA TV"
SEC	LTM190E1-L02	BN07-00128A	E10		"New Panel from AMLCDI, Specification : 6bit Driver IC"
SEC	LTM170EX-L01	BN07-00143A	E11		"Development new Panel from AMLCD"
SEC	LTM170E8-L01	BN07-00144A	E12		"Development new Panel from AMLCD"
SEC	LTM170E6-L04	BN07-00129B	E13		"ZPD panel for AMLCD (Panel only for TCO03)"
SEC	LTA320W1-L02	BN07-00108B	E14		"Creat B-level Panel code for AMLCD 32"" TV"
SEC	LTM190E1-L03	BN07-00151A	E15		"Development new 19"" Panel form AMLCD (Panel only for TCO03)"
SEC	LTM240W1-L03	BN07-00134A	E16		"AMLCD 24"" panel development"
SEC	LTM190E1-L02	BN07-00128B	E17		"New Panel from AMLCD, Specification : 6bit Driver IC(ZPD)"
SEC	LTM190E4-L01	BN07-00145A	E18		"AMLCD 24"" new panel development"
SEC	LTM170E8-L01	BN07-00158A	E19		"ZPD code derivation"
SEC	LTM170EX-L01	BN07-00159A	E20		"ZPD code derivation"
SEC	LTM190E1-L03	BN07-00151B	E21		"Creat new panel code for AMLCD 19"" (Panel only for TCO03)"
SEC	LTA460H1-L01	BN07-00157A	E22		"creat panel code for AMLCD 46"" TV "
SEC	LTM170EU-L11	BN07-00160A	E23		"creat new panel code for AMLCD 17"" (Panel only for TCO03)"
SEC	LTM240W1-L03	BN07-00134B	E24		"24"" panel ZPD code derivation"
SEC	LTM190E4-L01	BN07-00145B	E25		"AMLCD 19"" ZPD Panel code derivation"
SEC	LTM240W1-L03	BN07-00134B	E26		24" panel ZPD code derivation
SEC	LTM150XO-L01	BN07-00164A	E27		AMLCD 15" XO-L01 new panel development
SEC	LTM150XO-L01	BN07-00164B	E28		AMLCD 15" XO-L01 ZPD code derivation
SEC	LTM170EU-L11	BN07-00160B	E29		AMLCD 17" NEW panel code derivation
SEC	LTA320W2-L01	BN07-00172A	SPZ		AMLCD 32" NEW panel
SEC	LTM213U4-L01	BN07-00124B	SPZ		21.3" Narrow PANEL ZPD Panel derivation
SEC	LTM170EU-L11	BN07-00189A	STH		AMLCD EU-L11 Pb free panel code derivation
SEC	LTM170EU-L11	BN07-00189B	STZ		AMLCD EU-L11 Pb free panel ZPD code derivation
SEC	LTM240W1-L04	BN07-00188A	SPH		24" A-DCC new panel development
SEC	LTM190EX-L01	BN07-00191A	STH		AMLCD 19" TN new Panel
SEC	LTM190EX-L02	BN07-00191B	STZ		AMLCD 19" TN new Panel ZPD derivation
SEC	LTA230W1-L02	BN07-00184A	SPZ		AMLCD 23" 16:9 new Panel
SEC	LTA260W2-L01	BN07-00185A	SPZ		AMLCD 26" 16:9 new Panel
SEC	LTM240M1-L01	BN07-00195A	SPH		24" panel with high brightness development
SEC	LTA400W2-L01	BN07-00186A	SPZ		AMLCD 40" 16:9 new Panel
SEC	LTM150XO-L01	BN07-00197A	STH		AMLCD 15" XO-L01 Pb free panel code
SEC	LTM150XO-L01	BN07-00197B	STZ		AMLCD 15" XO-L01 Pb free panel ZPD code
SEC	LTM170EU-L21	BN07-00202A	STZ		AMLCD EU-L21 ZPD new code derivation
SEC	LTA460W2-L03	BN07-00187A	SPZ		BEETOVEN 46"ZPD new Panel
CPT	CLAA150XG09	BN07-00141A	PA		CPT 15" Monitor new panel development
CPT	CLAA170EA02	BN07-00148A	PB		17" CPT NEW development panel
CPT	CLAA170EA02	BN07-00148B	PC		17" CPT ZPD panel code derivation
CPT	CLAA150XG09	BN07-00141B	PTZ		"CPT 15"" panel ZPD code derivation (GOYA-PJT)"
CPT	CLAA150XP01	BN07-00173A	PTH		CPT 15" PSWG code derivation
CPT	CLAA150XP01	BN07-00173B	PTZ		CPT 15" PSWG panel ZPD code

## 12 Panel Description

Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	STICKER_CODE	Remarks
CPT	CLAA170EA07	BN07-00174A	PTH		"CPT 17"" PSWG panel code derivation?
CPT	CLAA170EA07	BN07-00174B	PTZ		CPT 17"" PSWG type new Panel code""
CPT	CLAA170EA07	BN07-00174B	PTZ		CPT 17" PSWG type new Panel code
TOSHIBA	LTM15C419(A)	BN07-00002A	TA		-
TOSHIBA	LTM15C423(B)	BN07-00006A	TB		-
TOSHIBA	LTM18C161	BN07-00008A	TC		-
TOSHIBA	LTM15C443	BN07-00031A	TD		-
TOSHIBA	LTM15C458	BN07-00043A	TE		-
TOSHIBA	LTM15C458S	BN07-00077A	TF		"TSB 15"" high brightness Panel"
TOSHIBA	LTM15C458	BN07-00078A	TG		Toshiba ZPD panel
TOSHIBA	LTM15C458S	BN07-00099A	TH		TSB LTM15C458S ( ZPD )
HANNSTAR	HSD150MX41A(A)	BN07-00020A	NA		"TTL type"
HANNSTAR	HSD150MX12	BN07-00030A	NB		"TTL type"
HANNSTAR	HSD170ME13	BN07-00180A	NTH		Hannstar 17" TN new panel development
HANNSTAR	HSD170ME13	BN07-00180B	NTZ		Hannstar 17" TN new panel development ZPD code derivation
TORISAN	TM150XG-22L03(A)	BN07-00021A	RA		-
TORISAN	TM150XG-26L06	BN07-00042A	RB		-
TORISAN	TM181SX-76N01	BN07-00048A	RC		-
TORISAN	TM150XG-26L06	BN07-00059A	RD		15" XGA TN MODE(ZPD)
TORISAN	TM290WX-71N31	BN07-00063A	RE		"RS24NS (TORISAN 29"" NEW PANEL)"
TORISAN	TM396WX-71N31	BN07-00064A	RF		"RS24NS (TORISAN 40"" NEW PANEL)"
TORISAN	TM150XG-26L09	BN07-00073A	RG		"Panel for 15"" TV"
TORISAN	TM150XG-26L10	BN07-00089A	RH		"L10(change except D/IC) ZPD"
TORISAN	TM150XG-26L10	BN07-00090A	RJ		L10 NORMAL
TORISAN	TM190SX-70N01	BN07-00098A	RK		Torisan 19" Panel
TORISAN	TM181SX-76N01	BN07-00106A	RL		ZPD Panel code
TORISAN	TM190SX-70N01	BN07-00107A	RM		ZPD Panel code
TORISAN	TM290WX-71N31	BN07-00115A	RN		"Color Coordinates change panel for TORISAN 29"" TV"
TORISAN	TM396WX-71N31	BN07-00116A	RP,Q		"Color Coordinates change panel for TORISAN 40"" TV"
TORISAN	TM220WX-71N31	BN07-00125A	RR		"Development TORISAN 22"" TV PANEL (ZPD)"
TORISAN	TM220WX-71N31	BN07-00127A	RS		"Development TORISAN 22"" TV PANEL (HPD)"
TORISAN	TM396WX-71N32A	BN07-00150A	RT		120V inverter Exclusive panel
TORISAN	TM190SX-70N02	BN07-00154A	RMH		Torisan 6bit panel code Derivation
TORISAN	TM190SX-70N02	BN07-00154B	RMZ		Torisan 6bit panel code Derivation
SHARP	LQ181E1DG11(A)	BN07-10001C	PA		-
SHARP	LQ150X1LW71	BN07-00067A	PB		SHARP 15" PVA PANEL
HITACHI	TX38D12VC0CAA(A)	BN07-00003A	HA		-
HITACHI	TX43DVCOCAB	BN07-00060A	HB		17" SXGA PVA MODE
HITACHI	TX43D15VC0CAB	BN07-00101A	HC		ZPD Panel
HITACHI	TX51D11VC0CAB	BN07-00122A	HD		20.1" NARROW
HITACHI	TX54D11VC0CAB	BN07-00123A	HE		21.3" NARROW
HITACHI	TX80D12VC0CAB	BN07-00169A	HIZ		"Development new panel for Hitachi 32"" TV (ZPD)"
HITACHI	TX54D11VC0CAB	BN07-00123B	HIZ		Hitachi 21.3"ZPD panel
IBM	ITSX94S	BN07-00017A	IA		-
UNIPAC	UM170E0	BN07-00028A	UA		Loaded by cisdba
HYUNDAI	HT15X13	BN07-00035A	DA		-



## 12 Panel Description

Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	STICKER_CODE	Remarks
HYUNDAI	HT17E11-200	BN07-00049A	DB		TN MODE
HYUNDAI	HT17E11-300	BN07-00093A	DC		HT17E11-300 ZPD panel
HYUNDAI	HT17E11-400	BN07-00094A	DD		HT17E11-400 normal panel
HYUNDAI	HT17E11-400	BN07-00095A	DE		HT17E11-400 ZPD panel code
HYUNDAI	HT17E12	BN07-00096A	DF		HT17E12 ( Narrow & slim Design )
HYUNDAI	HT17E12	BN07-00105A	DG		ZPD Panel code
HYUNDAI	HT15X15-D00	BN07-00146A	DH		"Development for Ares 15"" Hydys TV"
HYUNDAI	HT15X15-D01	BN07-00146B	DJ		"Derivation panel HPD for Ares 15"" Hydys TV "
HYUNDAI	HT17E13-100	BN07-00167A	DTH		"PINEHURST-2(IBM) PJT 17"" HYDIS PANEL Derivation"
HYUNDAI	HT17E13-100	BN07-00167B	DTZ		"PINEHURST-2(IBM) Hydys 17"" ZPD code Derivation"
ACER	L170E3	BN07-00044A	AA		TN(ADT)
ACER	M170EN05	BN07-00076A	AB		AU 17" Panel (Narrow & slim design)
ACER	M170EN05	BN07-00102A	AC		ZPD Panel code
ACER	M190EN02	BN07-00170A	AMH		"AU Monitor 19"" new panel development (P19-1S)"
ACER	M190EN02	BN07-00170B	AMZ		"AU 19"" ZPD code derivation (ZPD)"
ACER	M170EN06	BN07-00171A	ATH		"AU Monitor 17"" New panel development"
ACER	T260XW01	BN07-00163A	AMZ		"AU 26"" new panel development (NF26EO)"
ACER	A201SN01	BN07-00177A	ATZ		"AU TV panel 20.1"" TN SVGA new panel development"
ACER	M170EN06	BN07-00171B	ATZ		"AU Monitor 17"" ZPD code Derivation
ACER	T315XW01	BN07-00194A	AMZ		AU 32" new
ACER	M170EG01	BN07-00192A	ATH		AU TN PSWG type new Panel code
ACER	M170EG01	BN07-00192B	ATZ		AU TN PSWG type NEW panel code derivation
CHIMEI	M170E3-L01	BN07-00050A	CA		TN PANEL
CHIMEI	M150X3-L01	BN07-00051A	CB		COMPATIBLE
CHIMEI	M170E4-L01	BN07-00052A	CC		MVA PANEL
CHIMEI	M150X2-L01	BN07-00066A	CD		CHIMEI 15" PVA PANEL
CHIMEI	M150X3-L01	BN07-00079A	CE		Chimei ZPD panel
CHIMEI	M170E3-L01	BN07-00103A	CF		ZPD Panel code
CHIMEI	M170E4-L01	BN07-00104A	CG		ZPD Panel code
CHIMEI	V296W1-L01	BN07-00120A	CH		MVA
CHIMEI	M170E6-L02	BN07-00126A	CJ		HIGHLAND 17" LOW PANEL
CHIMEI	M190E2-L01	BN07-00131A	CK		GH19AS,BS CHIMEI PANEL
CHIMEI	M150X4-L06	BN07-00137A	CL		15" Narrow & Slim panel
CHIMEI	M170E6-L01	BN07-00133A	CM		"2003-03-11 vendor change"
CHIMEI	M170E6-L01	BN07-00133B	CN		"ZPD derivation panel"
CHIMEI	V201V1-T01	BN07-00135A	CP		"CHIMEI 20.1"" panel development"
CHIMEI	M170E6-L02	BN07-00126B	CQ		"HIGHLAND 17"" LOW PANEL ZPD derivation panel"
CHIMEI	M170E6-L05	BN07-00152A	CR		"CMO 17"" new panel development code"
CHIMEI	M170E6-L05	BN07-00152B	CS		"CMO 17"" ZPD panel code derivation"
CHIMEI	M150X4-L06	BN07-00137B	CT		Chimei 15" Narrow & Slim panel ZPD derivation
CHIMEI	M170E5-L05	BN07-00165A	CTH		CMO 17" new panel development code (GOYA2-PJT)
CHIMEI	M170E5-L05	BN07-00165B	CTZ		CMO 17" ZPD panel(GOYA2-PJT)



## 10 PCB Layout

Loc. No.	Description	X	Y
DIODE			
D101	DIODE-SWITCHING	175.2	138.4
D102	DIODE-ZENER	166.0	118.4
D210	DIODE-ZENER	99.0	130.8
D211	DIODE-ZENER	100.2	146.6
D212	DIODE-ZENER	105.8	145.6
D213	DIODE-ZENER	104.2	130.8
D214	DIODE-ZENER	109.4	130.8
D215	DIODE-ZENER	108.8	145.6
D216	DIODE-ZENER	102.4	123.2
D217	DIODE-ZENER	107.6	122.8
D617	DIODE-ZENER	138.4	191.6
D620	DIODE-ZENER	160.0	172.8
D621	DIODE-ZENER	144.0	187.0
D622	DIODE-ARRAY	144.0	191.6
D701_EU	DIODE-ZENER	13.2	23.2
D702	DIODE-ZENER	29.2	23.2
D703_EU	DIODE-ZENER	21.2	23.2
D704	DIODE-ZENER	37.2	23.2
D705_EU	DIODE-ZENER	9.2	23.2
D706	DIODE-ZENER	25.2	23.2
D707_EU	DIODE-ZENER	17.2	23.2
D708	DIODE-ZENER	33.2	23.2
D709_EU	DIODE-SWITCHING	85.2	63.2
D710_EU	DIODE-SWITCHING	92.4	63.2
D7102	DIODE-SWITCHING	76.0	45.6
D7103	DIODE-SWITCHING	76.0	50.0
D7104	DIODE-SWITCHING	133.2	66.8
D7105	DIODE-SWITCHING	133.2	62.4
D7108	DIODE-ZENER	46.0	50.4
D7109	DIODE-ZENER	46.0	56.0
D711_EU	DIODE-SWITCHING	99.6	63.2
D7110	DIODE-ZENER	42.0	50.4
D7111	DIODE-ZENER	42.0	56.0
D7112	DIODE-ZENER	160.0	61.6
D7113	DIODE-SWITCHING	137.2	66.8
D7114	DIODE-SWITCHING	137.2	62.4
D712_EU	DIODE-SWITCHING	57.2	23.2
D713_EU	DIODE-ZENER	84.4	20.2
D714_EU	DIODE-ZENER	70.4	23.2
D715_EU	DIODE-ZENER	84.4	15.8
D716_EU	DIODE-ZENER	66.4	23.2
D717	DIODE-ZENER	163.6	52.8
D718	DIODE-ZENER	191.2	13.6
D719	DIODE-SWITCHING	180.0	13.6
D720	DIODE-ZENER	110.4	24.0
D721	DIODE-ZENER	117.6	13.6
D722	DIODE-SWITCHING	180.0	18.0

Loc. No.	Description	X	Y
D723	DIODE-ZENER	106.4	24.0
D724	DIODE-ZENER	117.6	18.0
D725	DIODE-ZENER	39.2	60.6
D726_EU	DIODE-ZENER	41.2	23.2
D727_EU	DIODE-ZENER	41.8	45.6
D7301	DIODE-ZENER	131.6	38.8
D7302	DIODE-TVS	101.0	10.0
D7303	DIODE-TVS	101.0	6.0
D7304	DIODE-TVS	162.8	37.6
D7305	DIODE-TVS	162.8	44.4
D736_NT	DIODE-ZENER	51.6	23.2
D737_IP	DIODE-ZENER	96.8	24.0
D738_IP	DIODE-ZENER	102.4	24.0
D739_IP	DIODE-ZENER	91.2	24.0
D740_IP	DIODE-ARRAY	102.8	44.0
D741	DIODE-SWITCHING	184.0	18.0
D742	DIODE-SWITCHING	184.0	13.6
D743	DIODE-ZENER	137.2	52.4
D744	DIODE-ZENER	133.2	52.4
D745	DIODE-ZENER	123.6	43.6
D746	DIODE-ZENER	123.6	38.8
D747	"C-CER,CHIP"	128.4	42.8
D748	DIODE-ZENER	131.6	43.6
D749_NT	DIODE-ZENER	160.0	68.8
D750	DIODE-ZENER	45.2	44.8
D751	DIODE-ZENER	42.6	71.8
D752	DIODE-ZENER	42.6	67.0
D753_EU	DIODE-ZENER	76.0	54.4
D754_EU	DIODE-ZENER	76.0	58.8
D755_EU	DIODE-ZENER	13.2	44.8
D7551	DIODE-ZENER	125.2	67.6
D7552	DIODE-ZENER	5.2	21.6
D7553	DIODE-ZENER	5.2	17.2
D756	DIODE-ZENER	29.2	44.8
D757_EU	DIODE-ZENER	21.2	44.8
D758	DIODE-ZENER	37.2	44.8
D759	DIODE-ZENER	41.2	44.8
D760_EU	DIODE-ZENER	25.2	44.8
D761	DIODE-ZENER	33.2	44.8
D762_EU	DIODE-ZENER	17.2	44.8
D763	DIODE-ZENER	98.8	44.0
D764	DIODE-ZENER	94.4	48.8
D765	DIODE-ZENER	94.4	53.6
D766	DIODE-ZENER	94.4	58.4
D767	DIODE-ZENER	106.8	63.2
D769	DIODE-ZENER	118.8	63.2
D770	DIODE-ZENER	114.8	63.2
D771	DIODE-ZENER	110.8	63.2

Loc. No.	Description	X	Y
D772	DIODE-ZENER	129.2	93.6
D773	DIODE-ZENER	129.2	89.2
D774	DIODE-ZENER	125.2	89.2
D775	DIODE-ZENER	125.2	93.6
D776	DIODE-ZENER	125.2	80.4
D777	DIODE-ZENER	129.2	80.4
D778	DIODE-ZENER	129.2	67.6
D779	DIODE-ZENER	164.4	53.2
D780	DIODE-ZENER	176.4	53.2
D781	DIODE-ZENER	172.4	53.2
D782	DIODE-ZENER	168.4	53.2
D791_NT	DIODE-SWITCHING	94.8	44.0
D792_NT	DIODE-SWITCHING	90.8	44.0
D793_NT	DIODE-SWITCHING	76.0	23.2
D794_NT	DIODE-SWITCHING	80.0	23.2
D795_NT	DIODE-SWITCHING	86.8	44.0
D796_NT	DIODE-SWITCHING	82.8	44.0
D812	DIODE-RECTIFIER	35.4	182.4
D901	DIODE-ZENER	32.4	110.8
D911	DIODE-ARRAY	85.2	70.4
D912	DIODE-ARRAY	67.2	72.2
D930	DIODE-ZENER	93.2	93.4
D950	DIODE-SWITCHING	51.6	67.4
D951	DIODE-SWITCHING	49.2	71.4
D952	DIODE-SWITCHING	56.4	67.4
D953	DIODE-SWITCHING	54.0	71.4
D954	DIODE-SWITCHING	61.2	67.4
D955	DIODE-SWITCHING	58.8	71.4
D956	DIODE-SWITCHING	66.0	67.4
D957	DIODE-SWITCHING	63.6	71.4
D958	DIODE-ZENER	46.0	61.2
D959	DIODE-ZENER	46.0	61.2
D960	DIODE-ZENER	42.0	61.2
D961	DIODE-ZENER	66.6	66.4
D962	DIODE-ZENER	48.0	69.0
D963	DIODE-ARRAY	112.6	98.6
D964	DIODE-ARRAY	112.6	103.0
D970	DIODE-ZENER	5.2	30.6
D971	DIODE-ZENER	5.2	35.0
D972	DIODE-ZENER	5.2	39.2
D973	DIODE-ZENER	5.2	21.4
D974	DIODE-ZENER	5.2	16.8
D975	DIODE-ZENER	114.8	91.6
D976	DIODE-ARRAY	106.0	88.0
D980_DE	DIODE-ZENER	33.6	117.8
D981_DE	DIODE-ZENER	30.8	117.8
D982_DE	DIODE-ZENER	147.3	182.1
D983_DE	DIODE-ZENER	136.0	182.1

Loc. No.	Description	X	Y
D990	DIODE-ZENER	5.2	44.8
IC			
IC201	IC-VIDEO PROCESS	82.0	138.4
IC2019	R-NETWORK	50.8	123.2
IC202	IC-DRAM	51.2	134.0
IC203	IC-ANALOG MULTIPLEX	125.0	133.4
IC204	IC-OP AMP	58.8	183.2
IC3010_EU	IC-CMOS LOGIC	8.4	95.6
IC3011	IC-POSIFIXED REG.	20.8	108.0
IC311	IC-RECEIVER	50.4	96.4
IC312	IC-AID CONVERTER	81.2	96.4
IC313	IC-CMOS LOGIC	38.4	80.6
IC605	IC-ANALOG MULTIPLEX	133.8	131.2
IC610	IC-SOUND PROCESSOR	135.2	169.2
IC611	IC-AUDIO AMP	173.4	173.4
IC615	IC-AUDIO AMP	135.2	168.0
IC616	IC-VOL. DETECTOR	152.4	185.6
IC710	IC-EEPROM	79.2	70.4
IC712	IC-EEPROM	72.8	70.4
IC801	IC-POSIFIXED REG.	20.0	70.8
IC802	IC-POSIFIXED REG.	107.2	172.4
IC803	IC-POSIFIXED REG.	187.2	72.8
IC804	IC-POSIFIXED REG.	187.2	57.6
IC805	FET-SILICON	111.6	184.4
IC807	IC-SWITCH VOL. REG.	29.6	182.0
IC808	IC-POSIFIXED REG.	51.6	159.0
IC811	IC-POSIFIXED REG.	58.0	172.4
IC812	IC-POSIFIXED REG.	30.4	70.8
IC813	IC-POSIFIXED REG.	90.0	172.4
IC814	IC-POSIFIXED REG.	74.8	172.4
IC901	IC-MICROCOMPUTER	22.0	145.2
IC902	IC-MICROCONTROLLER	103.6	98.0
IC904	IC-CMOS LOGIC	24.4	82.8
IC905	IC-RESET	120.0	91.6
IC906_EU	IC-VIDEO SWITCH	104.8	78.6
IC907	IC-SRAM	20.2	150.8
IC908	IC-FLASH MEMORY	20.0	136.4
IC909_EU	IC-ANALOG SWITCH	24.4	94.0
IC910	IC-EEPROM	8.8	96.0
IC913	IC-ANALOG SWITCH	14.4	82.4
IC920	IC-VOL. DETECTOR	112.8	91.6
IC931	IC-DRIVER/RECEIVER	24.8	110.4
TRANSISTOR			
Q100	TR-SMALL SIGNAL	165.6	137.2
Q1210_EU	TR-SMALL SIGNAL	186.8	128.4
Q1211_EU	TR-SMALL SIGNAL	190.8	128.4

Loc. No.	Description	X	Y
Q1212_EU	TR-SMALL SIGNAL	186.8	123.6
Q211	TR-SMALL SIGNAL	50.8	185.6
Q212_EU	TR-SMALL SIGNAL	100.4	136.8
Q213_EU	TR-SMALL SIGNAL	107.6	140.8
Q214_EU	TR-SMALL SIGNAL	107.6	136.8
Q215	TR-SMALL SIGNAL	124.8	148.8
Q216	TR-SMALL SIGNAL	124.8	144.8
Q221	TR-SMALL SIGNAL	50.8	180.8
Q3004_EU	TR-SMALL SIGNAL	8.8	89.6
Q608	TR-SMALL SIGNAL	138.4	187.2
Q610	TR-SMALL SIGNAL	148.8	186.8
Q611	TR-SMALL SIGNAL	128.0	168.8
Q612	TR-SMALL SIGNAL	128.0	164.8
Q615	TR-SMALL SIGNAL	132.8	191.6
Q620	TR-SMALL SIGNAL	152.8	191.6
Q630	TR-SMALL SIGNAL	130.4	192.8
Q631	TR-SMALL SIGNAL	127.2	191.6
Q632	TR-SMALL SIGNAL	134.4	192.8
Q633	TR-SMALL SIGNAL	141.6	192.8
Q634	TR-SMALL SIGNAL	152.4	192.8
Q635	TR-SMALL SIGNAL	146.0	192.8
Q801	TR-SMALL SIGNAL	101.6	177.0
Q802	TR-SMALL SIGNAL	113.6	177.0
Q803	TR-SMALL SIGNAL	4.8	84.8
Q910	TR-SMALL SIGNAL	93.0	106.2
Q911	TR-SMALL SIGNAL	93.0	102.0
Q912_EU	TR-SMALL SIGNAL	104.8	76.0
Q914	FET-SILICON	12.8	117.6
Q915	FET-SILICON	16.8	117.6
Q918	TR-SMALL SIGNAL	19.2	167.2
Q920	FET-SILICON	16.8	109.6
Q921	FET-SILICON	12.8	109.6
Q922	FET-SILICON	143.5	182.1
Q923	FET-SILICON	139.8	182.1
Q930	TR-SMALL SIGNAL	12.8	83.6
Q931	TR-SMALL SIGNAL	152.8	186.8
Q952	TR-SMALL SIGNAL	77.6	70.4
Q960	FET-SILICON	19.2	171.6
Q970	TR-SMALL SIGNAL	22.4	94.4

# 1 Precautions

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

## 1-1 Safety Precautions

### 1-1-1 Warnings

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

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

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

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

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

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

**WARNING :** Do not use an isolation transformer during this test.

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

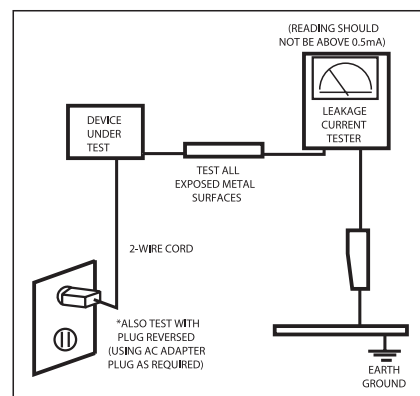


Figure 1-1. Leakage Current Test Circuit

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

### 1-1-4 Product Safety Notices

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

### 1-2 Servicing Precautions

---

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

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

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

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

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

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

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

1. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. To avoid a shock hazard, be sure to remove the wrist strap before applying power to the monitor.
2. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of an electrostatic charge.
3. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESDs.
4. Use only a grounded-tip soldering iron to solder or desolder ESDs.
5. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
7. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.  
  
**Caution:** Be sure no power is applied to the chassis or circuit and observe all other safety precautions.
8. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting your foot from a carpeted floor can generate enough static electricity to damage an ESD.

## 1-4 Installation Precautions

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1. For safety reasons, more than two people are required for carrying the product.
2. Keep the power cord away from any heat emitting devices, as a melted covering may cause fire or electric shock.
3. Do not place the product in areas with poor ventilation such as a bookshelf or closet. The increased internal temperature may cause fire.
4. Bend the external antenna cable when connecting it to the product. This is a measure to protect it from being exposed to moisture. Otherwise, it may cause a fire or electric shock.
5. Make sure to turn the power off and unplug the power cord from the outlet before repositioning the product. Also check the antenna cable or the external connectors if they are fully unplugged. Damage to the cord may cause fire or electric shock.
6. Keep the antenna far away from any high-voltage cables and install it firmly. Contact with the highvoltage cable or the antenna falling over may cause fire or electric shock.
7. When installing the product, leave enough space (10cm) between the product and the wall for ventilation purposes.  
A rise in temperature within the product may cause fire.

1 Precautions

Memo

## 2 Product Specifications

### 2-1 LN-R268WH Specifications

Item	Description	
LCD Panel	TFT-LCD panel, RGB vertical stripe, normally white, 26-Inch viewable, 0.4215 (H) x 0.4215(V)mm pixel pitch	
Scanning Frequency	Horizontal : 30 kHz ~ 61 kHz (Automatic) Vertical : 60 Hz ~ 75 Hz (Automatic)	
Display Colors	16.7 Million colors	
Maximum Resolution	Horizontal : 1360 Pixels Vertical : 768 Pixels	
Input Video Signal	Analog 0.7 Vp-p $\pm$ 5% positive at 75 $\Omega$ , internally terminated	
Input Sync Signal	Type : Seperate H/V Level : TTL level	
Maximum Pixel Clock rate	80 MHz	
Active Display Horizontal/Vertical	556.4 mm / 339.8 mm	
AC power voltage & Frequency	AC 110 ~ 120 V, 60 Hz	
Power Consumption	140 W	
Dimensions(W x D x H) Set	26.06 x 3.70 x 19.60 inches (662.0 x 94.0 x 497.8 mm) Body  26.06 x 8.11 x 21.22 inches (662.0 x 206.0 x 539.0 mm) With stand	
Weight Set(With stand)	33.07 lbs (15.0 kg)	
Environmental Considerations	Operating Temperature : 50 ° F ~ 104 ° F (10 ° C ~ 40 ° C) Operating Humidity : 10 % ~ 80 % Storage Temperature : -4 ° F ~ 113 ° F (-20 ° C ~ 45 ° C) Storage Humidity : 5 % ~ 95 %	
TV System	Tunning	Frequency Synthesize
	System	NTSC
	Sound	STEREO
Antena Input	75 $\Omega$	
Sound Characteristic	- MAX Internal speaker Out : Right => 5W, Left => 5W	
	- BASS Control Range : -8 dB ~ + 8dB - TREBLE Control Range : -8 dB ~ +8 dB - Headphone Out : 10 mW MAX - Output Frequency : RF : 80 Hz ~ 15 kHz A/V : 80 Hz ~ 20 kHz	



## 2 Product Specifications

### 2-2 LN-R328WH / LN32R51BH Specifications

Item	Description	
LCD Panel	TFT-LCD panel, RGB vertical stripe, normally white, 32-Inch viewable, 0.511 (H) x 0.511(V)mm pixel pitch	
Scanning Frequency	Horizontal : 30 kHz ~ 61 kHz (Automatic) Vertical : 60 Hz ~ 75 Hz (Automatic)	
Display Colors	16.7 Million colors	
Maximum Resolution	Horizontal : 1360 Pixels Vertical : 768 Pixels	
Input Video Signal	Analog 0.7 Vp-p $\pm$ 5% positive at 75 $\Omega$ , internally terminated	
Input Sync Signal	Type : Seperate H/V Level : TTL level	
Maximum Pixel Clock rate	80 MHz	
Active Display Horizontal/Vertical	556.4 mm / 339.8 mm	
AC power voltage & Frequency	AC 110 ~ 120 V, 60 Hz	
Power Consumption	184 W	
Dimensions(W x D x H) Set	31.38 x 3.898 x 23.31 inches (797.0 x 99.0 x 592.0 mm) With stand 31.38 x 9.80 x 25.62 inches (797.0 x 249.0 x 650.7 mm) Body	
Weight Set(With Stand)	39.02 lbs (17.7 Kg)	
Environmental Considerations	Operating Temperature : 50 ° F ~ 104 ° F (10 ° C ~ 40 ° C) Operating Humidity : 10 % ~ 80 % Storage Temperature : -4 ° F ~ 113 ° F (-20 ° C ~ 45 ° C) Storage Humidity : 5 % ~ 95 %	
TV System	Tunning	Frequency Synthesize
	System	NTSC
	Sound	STEREO
Antena Input	75 $\Omega$	
Sound Characteristic	- MAX Internal speaker Out : Right => 10W, Left => 10W	
	- BASS Control Range : -8 dB ~ + 8dB - TREBLE Control Range : -8 dB ~ +8 dB - Headphone Out : 10 mW MAX - Output Frequency : RF : 80 Hz ~ 15 kHz A/V : 80 Hz ~ 20 kHz	

## 2-3 Pin Assignments

### 2-3-1 HDMI

Type A pin	Singnal Name	Wire
1	TMDS Data2+	TMDS Signal wire
2	TMDS Data2 Shield	TMDS Shield
3	TMDS Data2-	TMDS Signal wire
4	TMDS Data1+	TMDS Signal wire
5	TMDS Data2 Shield	TMDS Shield
6	TMDS Data1-	TMDS Signal wire
7	TMDS Data0+	TMDS Signal wire
8	TMDS Data0 Shield	TMDS Shield
9	TMDS Data0-	TMDS Signal wire
10	TMDS Clock+	TMDS Signal wire
11	TMDS Clock Shield	TMDS Clock Shield
12	TMDS Clock-	TMDS Shield
13	CEC	Control
14	Reserved (in cable but N.C on device)	Control
15	SCL	Control
16	SDA	Control
17	DDC/CEC Ground	Control
18	+5V Power	5 Volts Power wire
19	Hot Plug Delect	Control

## 2 Product Specifications

### 2-3-2 Component 1, 2

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

### 2-3-3 S-Video

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

### 2-3-4 A/V

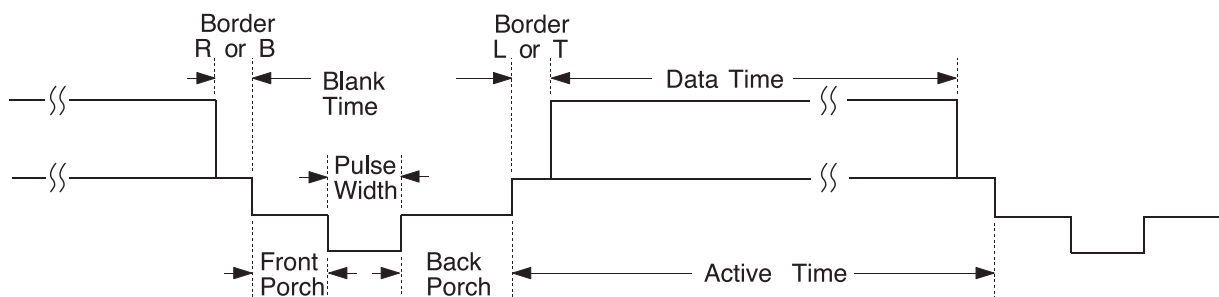
RCA Yellow	CVBS
RCA White	Audio L
	GND
RCA Red	Audio R
	GND

## 2-4 Timing Chart

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

### 2-4-1 LCD Panel Mode1 mode

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



## 2 Product Specifications

### 2-4-2 Supported Modes (1)

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

## 2-4-3 Supported Modes (2)

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

## 2 Product Specifications

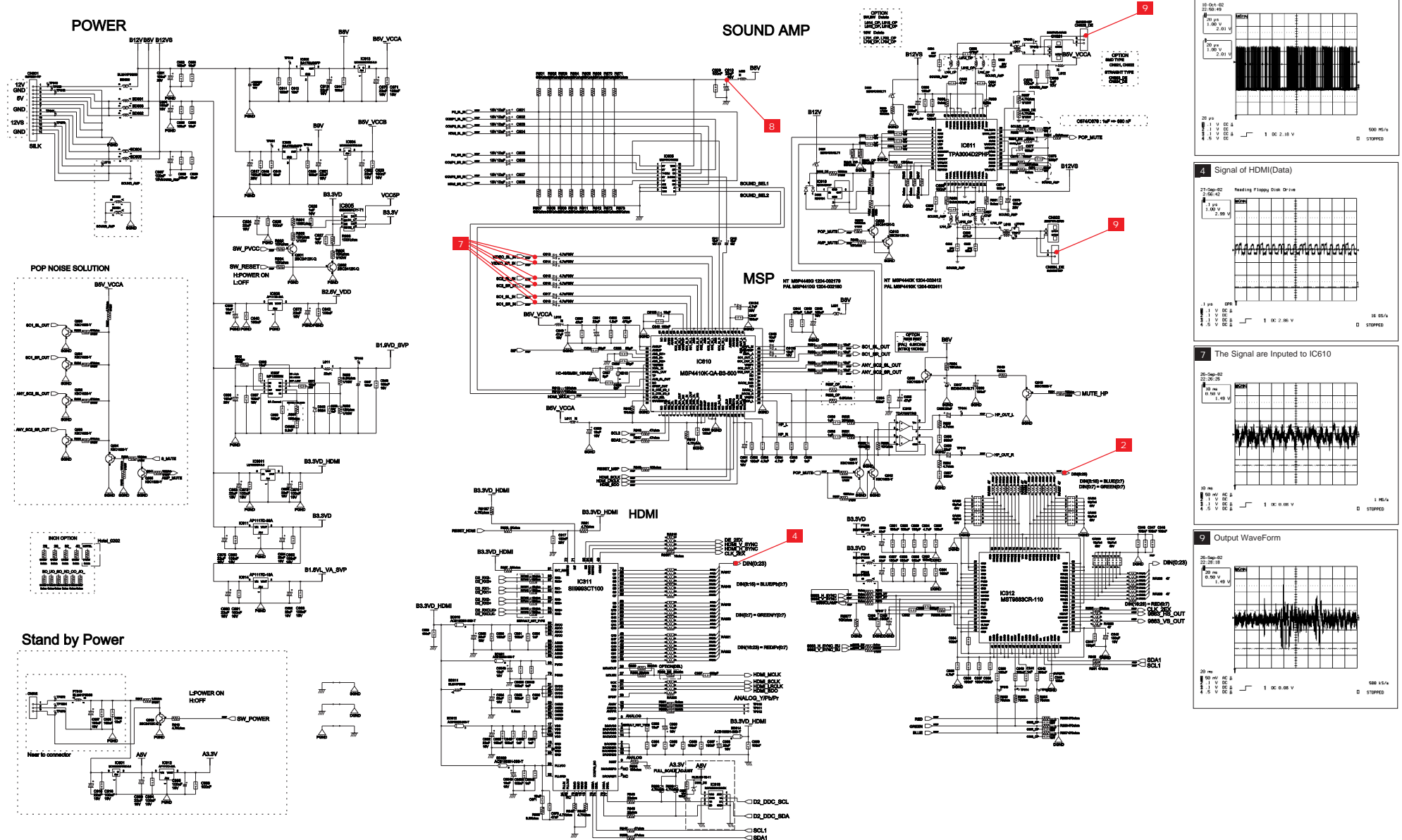
### 2-4-4 Supported Modes (3)

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

## 11 Schematic Diagrams

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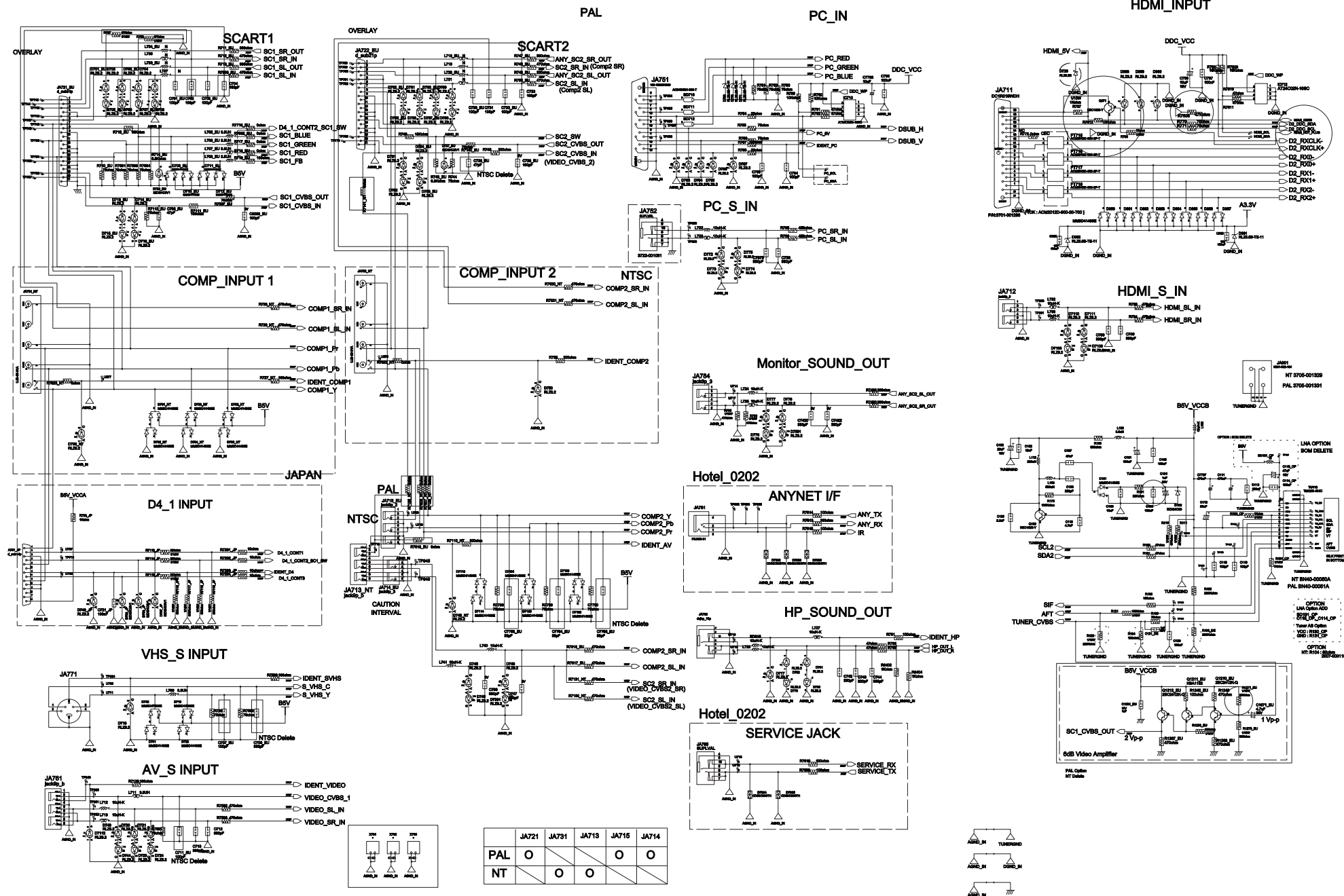
## 11-1 Power\_Sound Schematic Diagram



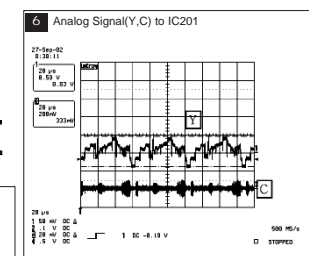


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## 11-2 In\_Out\_Jack Schematic Diagram



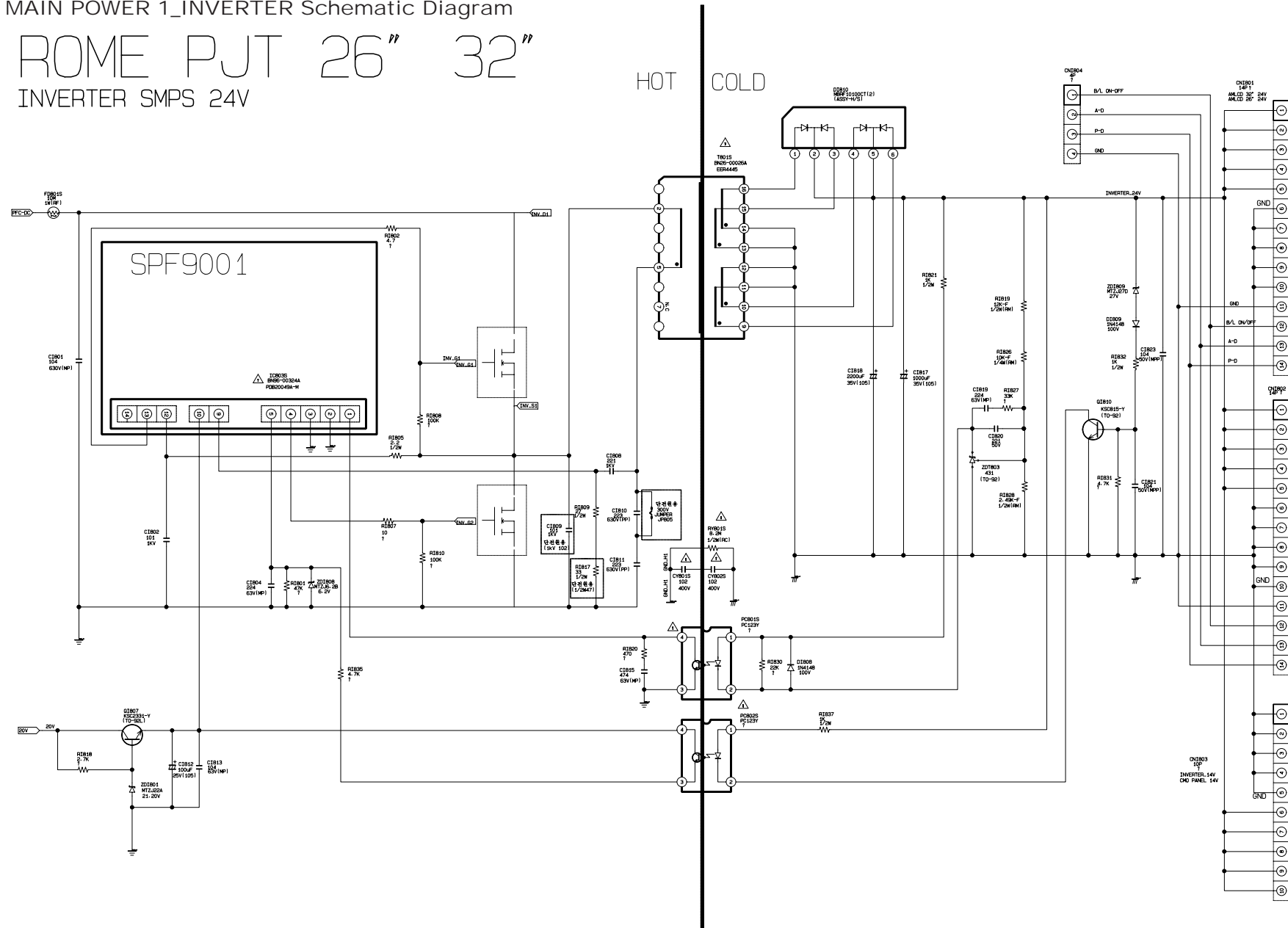




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# 11-5 MAIN POWER 1\_INVERTER Schematic Diagram

ROME PJT 26" 32"  
INVERTER SMPS 24V

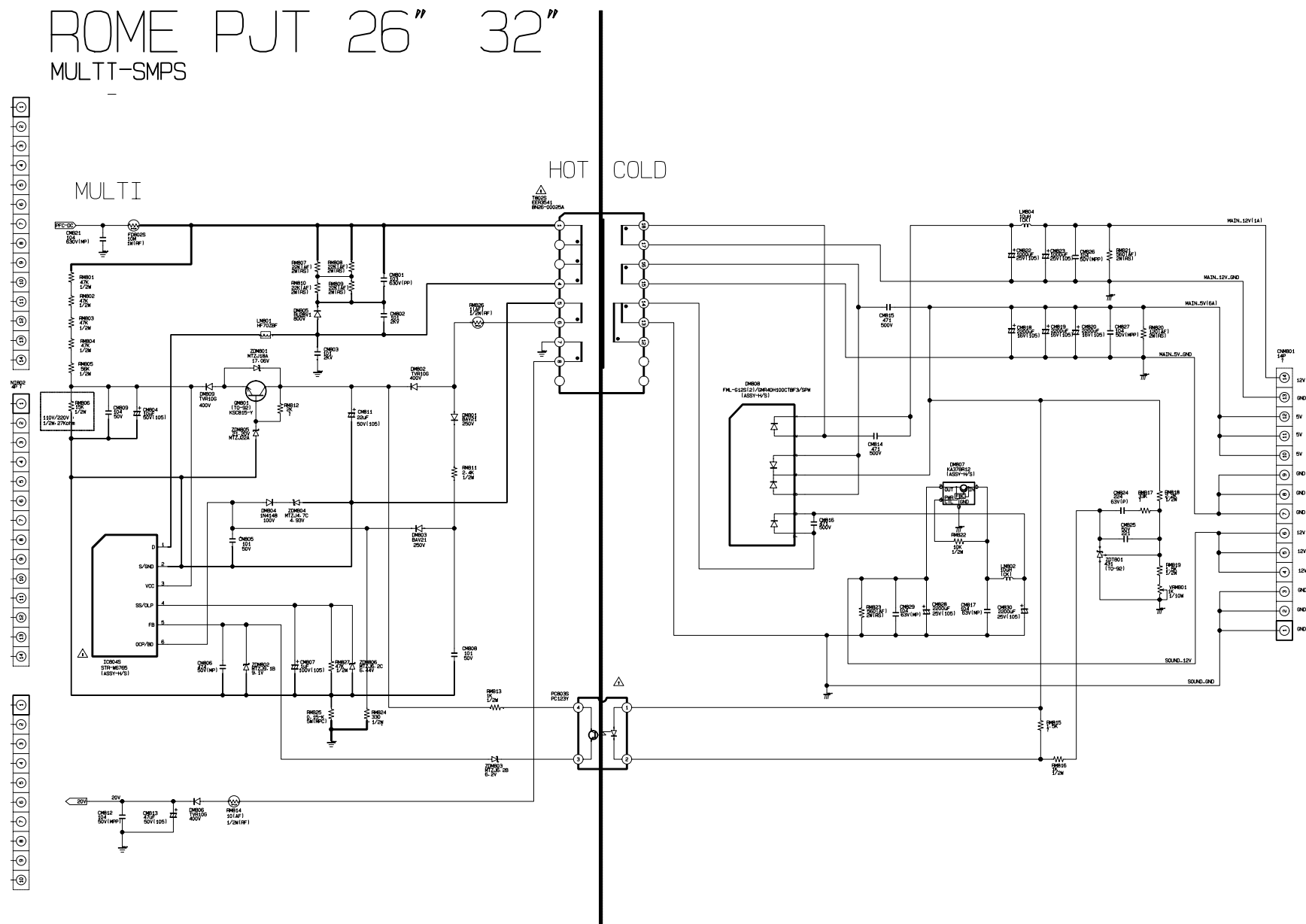


ROME PJT 26<sup>pp</sup> 32<sup>pp</sup>  
PFC-CONTROL SMPS



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### 11-7 MAIN POWER 3\_MULTI Schematic Diagram

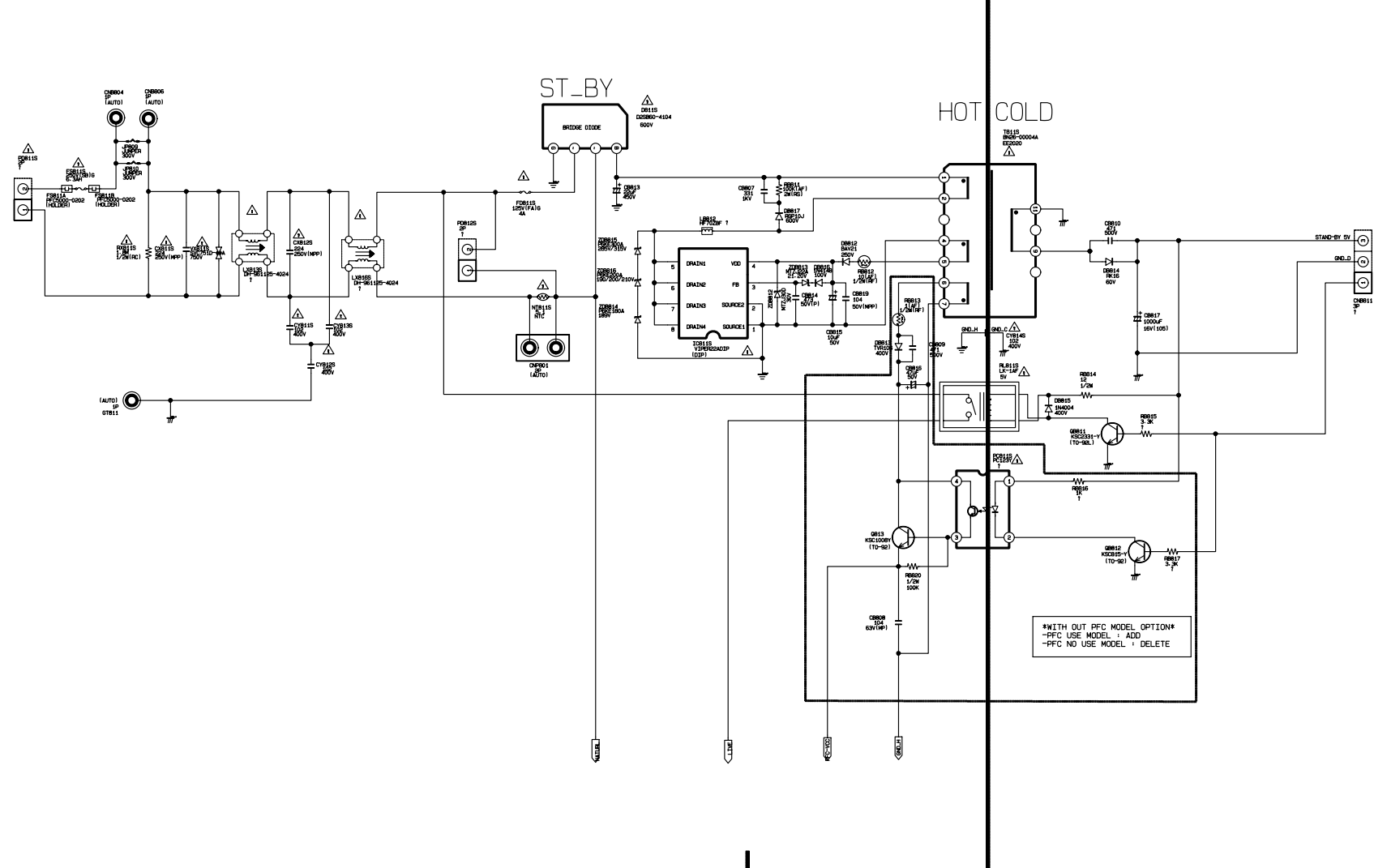


## 11 Schematic Diagrams

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### 11-8 SUB POWER Schematic Diagram

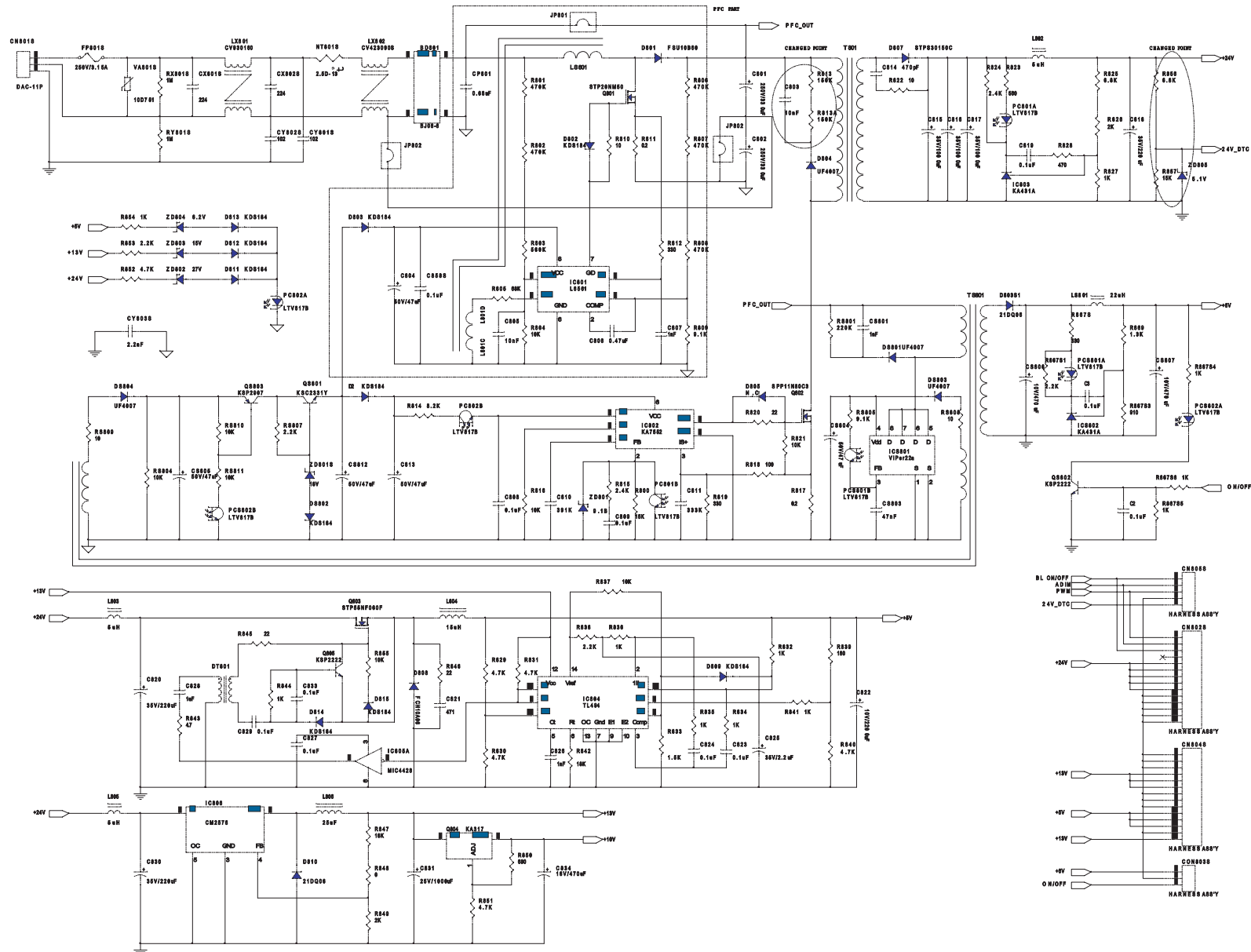
ROME PJT 26" 32"  
STAND-BY SMPS



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## 11-9 LCD23FAX Schematic Diagram

### ROME PJT 23"





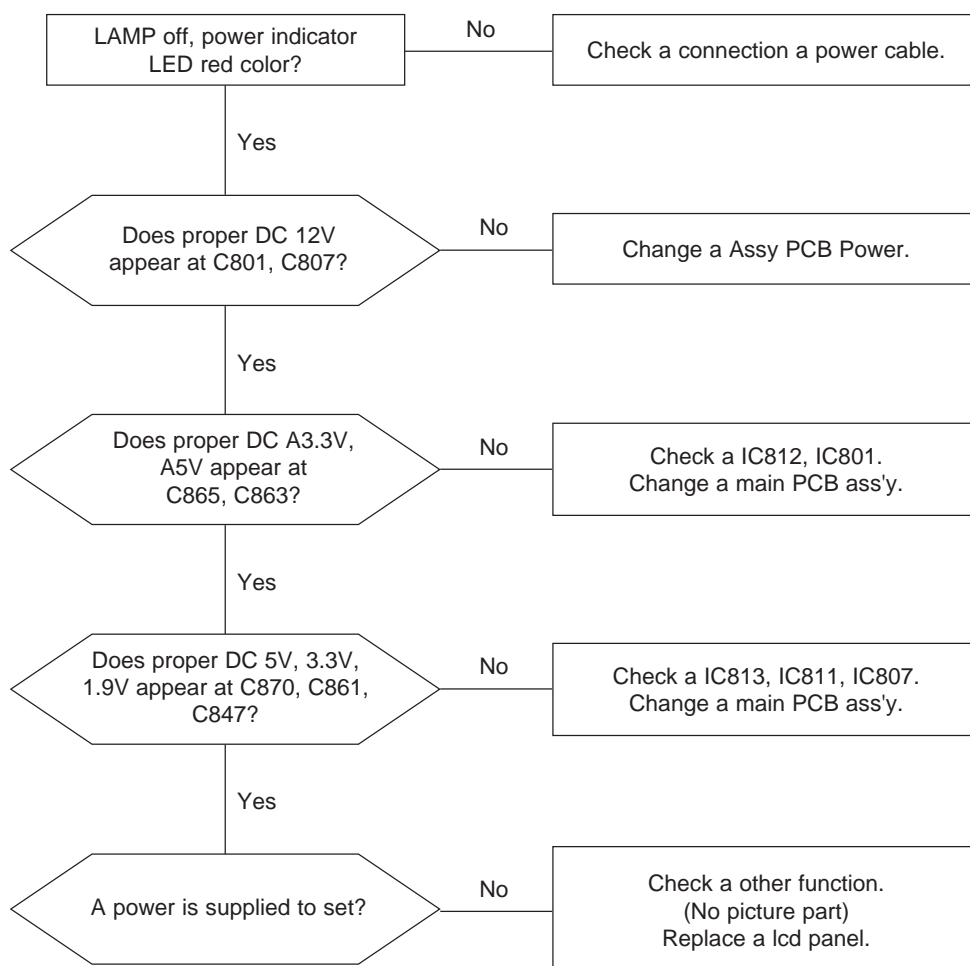
## Memo

---

## 5 Troubleshooting

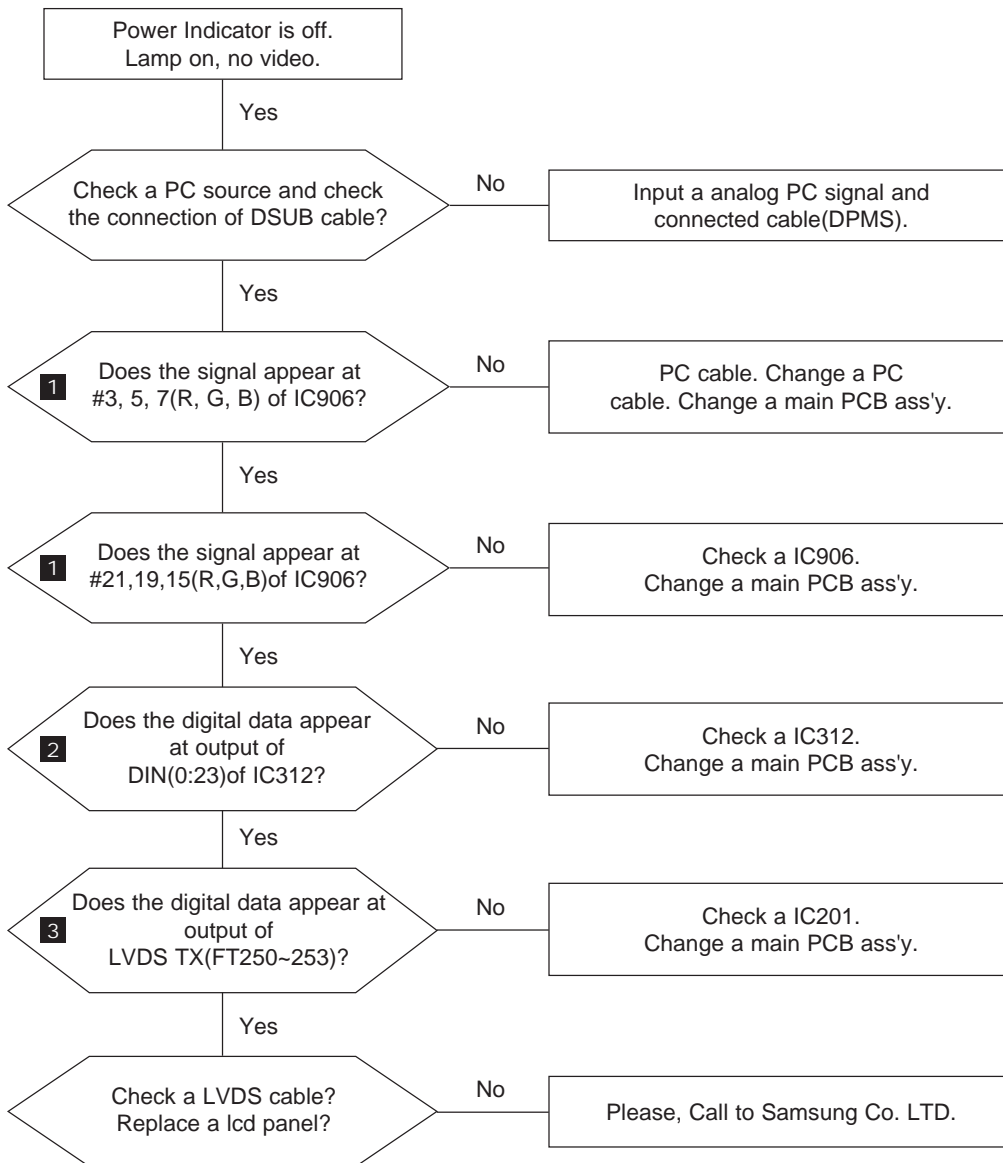
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### 5-1 No Power



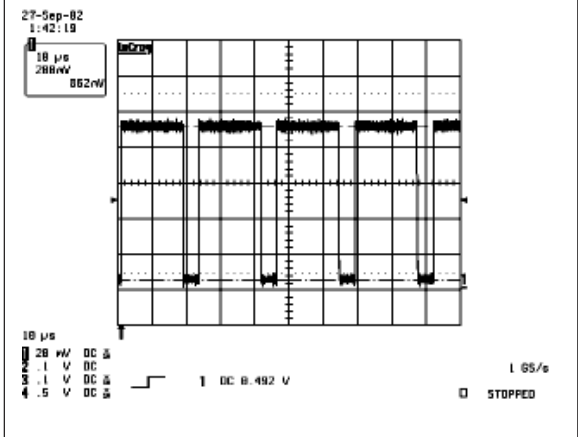
## 5 Troubleshooting

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

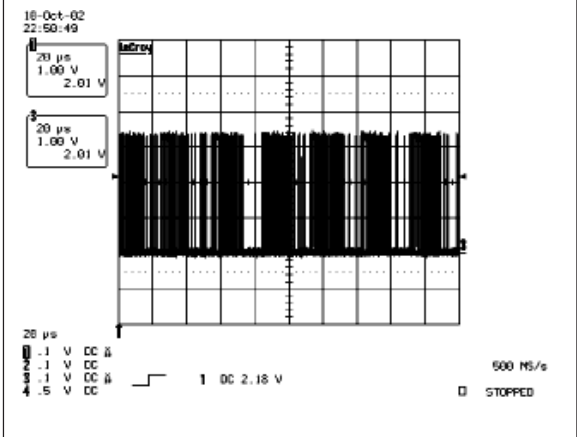


WAVEFORMS

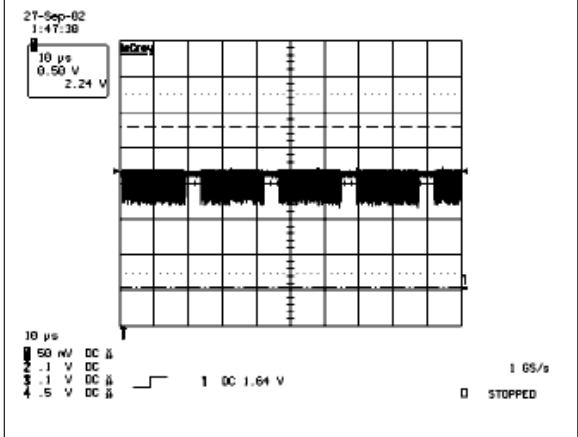
1 R,G,B Output Signal of IC906



2 R,G,B Output Signal of IC312

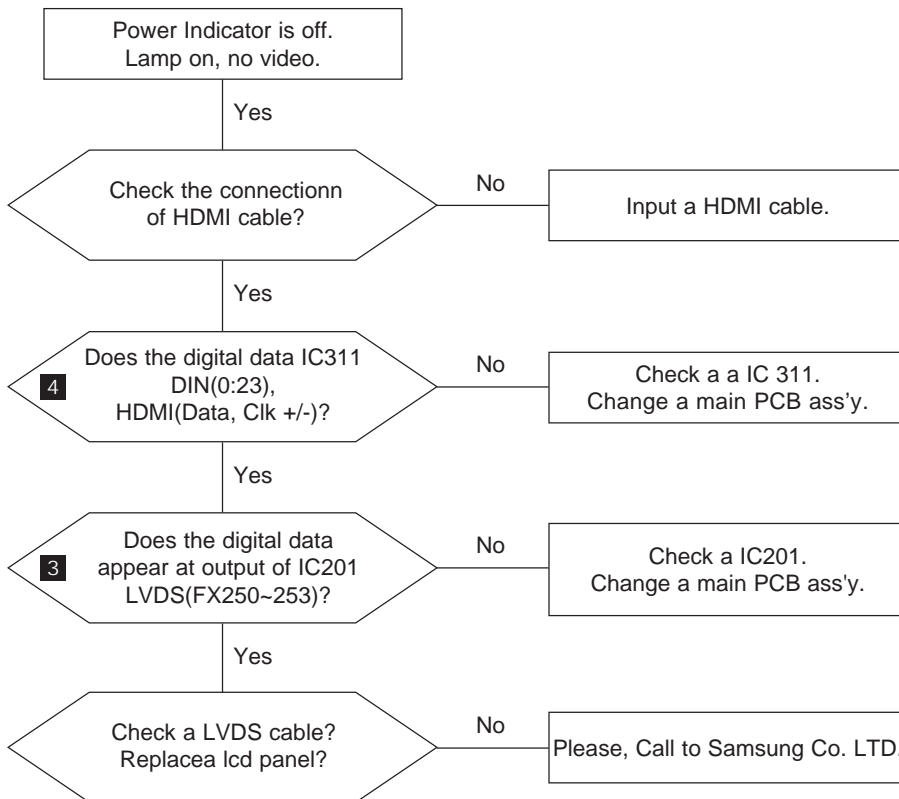


3 Digital Output Data of IC201



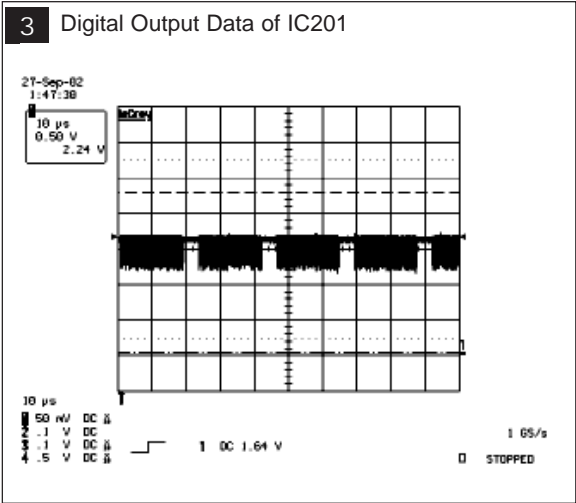
## 5 Troubleshooting

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

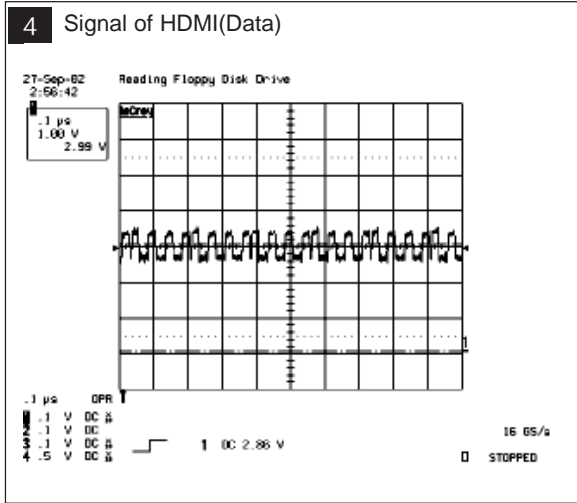


WAVEFORMS

3 Digital Output Data of IC201

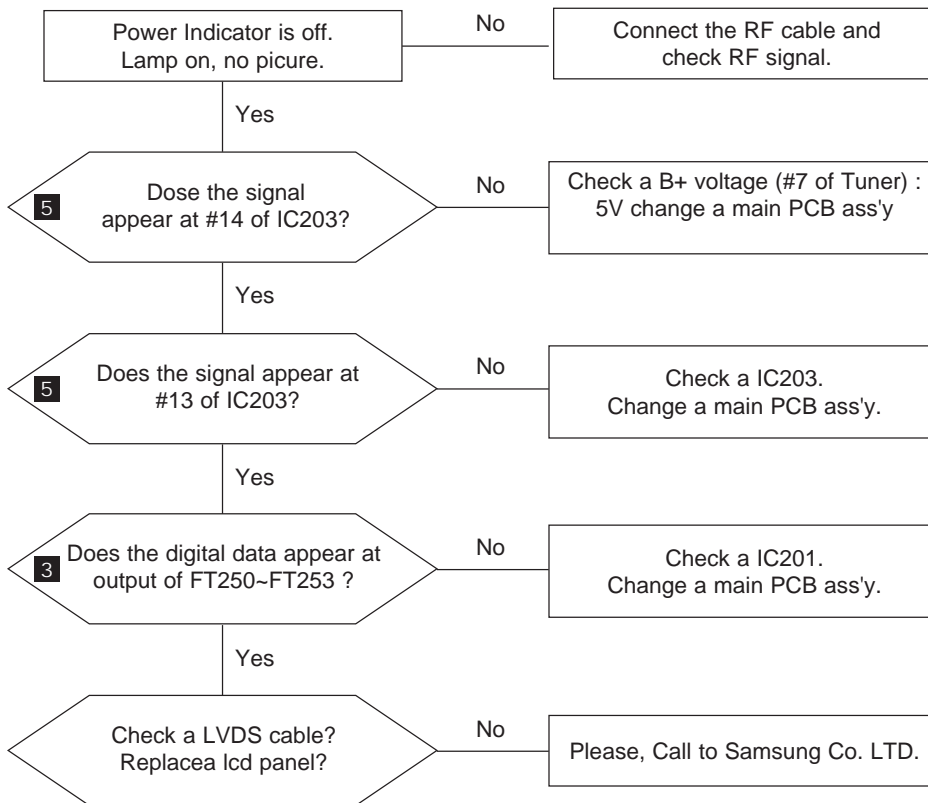


4 Signal of HDMI(Data)



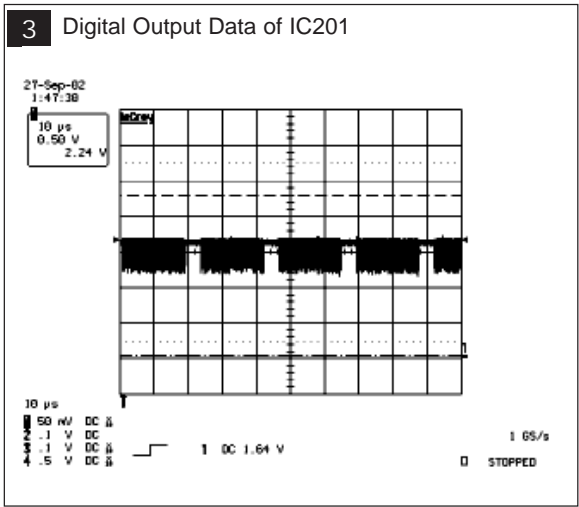
## 5 Troubleshooting

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

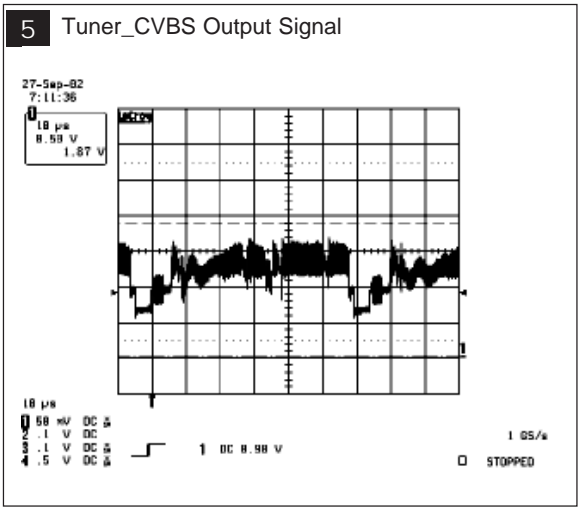


WAVEFORMS

3 Digital Output Data of IC201



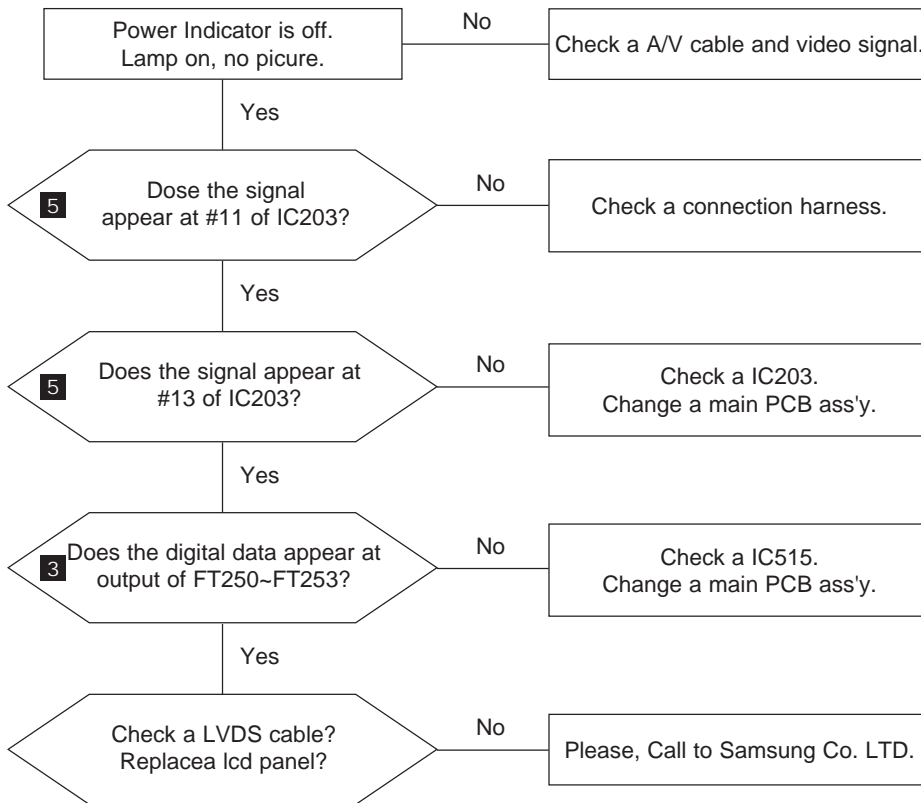
5 Tuner\_CVBS Output Signal





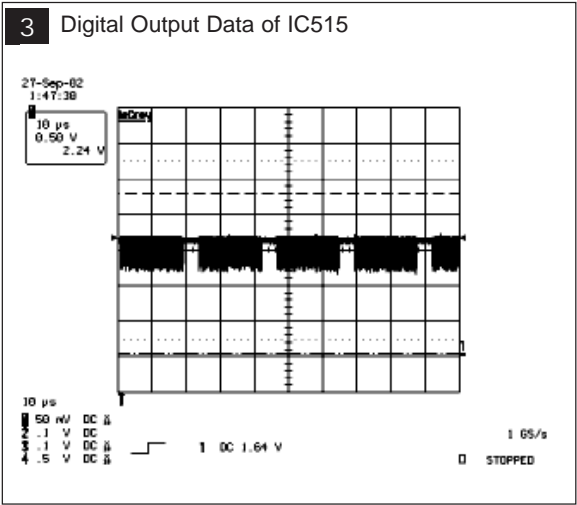
## 5 Troubleshooting

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

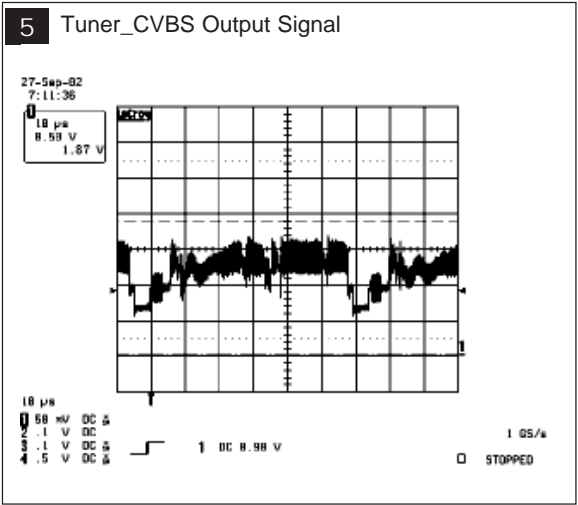


WAVEFORMS

3 Digital Output Data of IC515

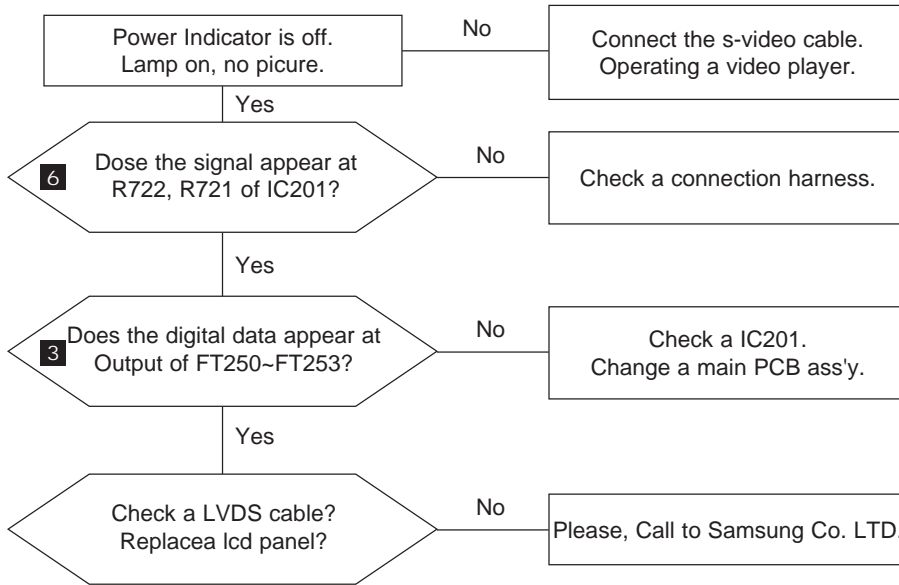


5 Tuner\_CVBS Output Signal



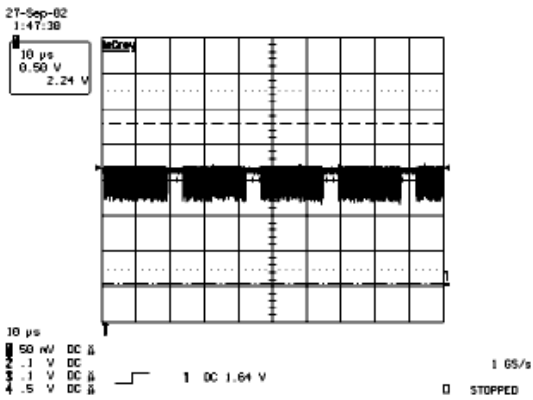
## 5 Troubleshooting

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

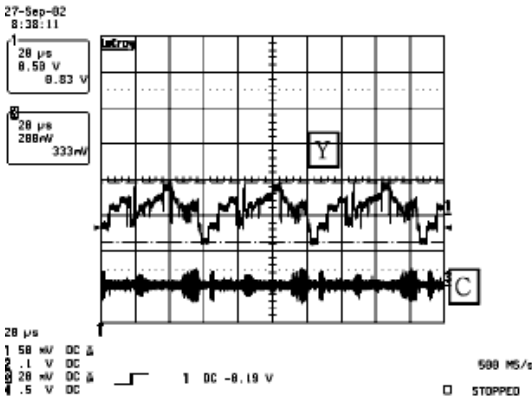


WAVEFORMS

3 Digital Output Data of IC201

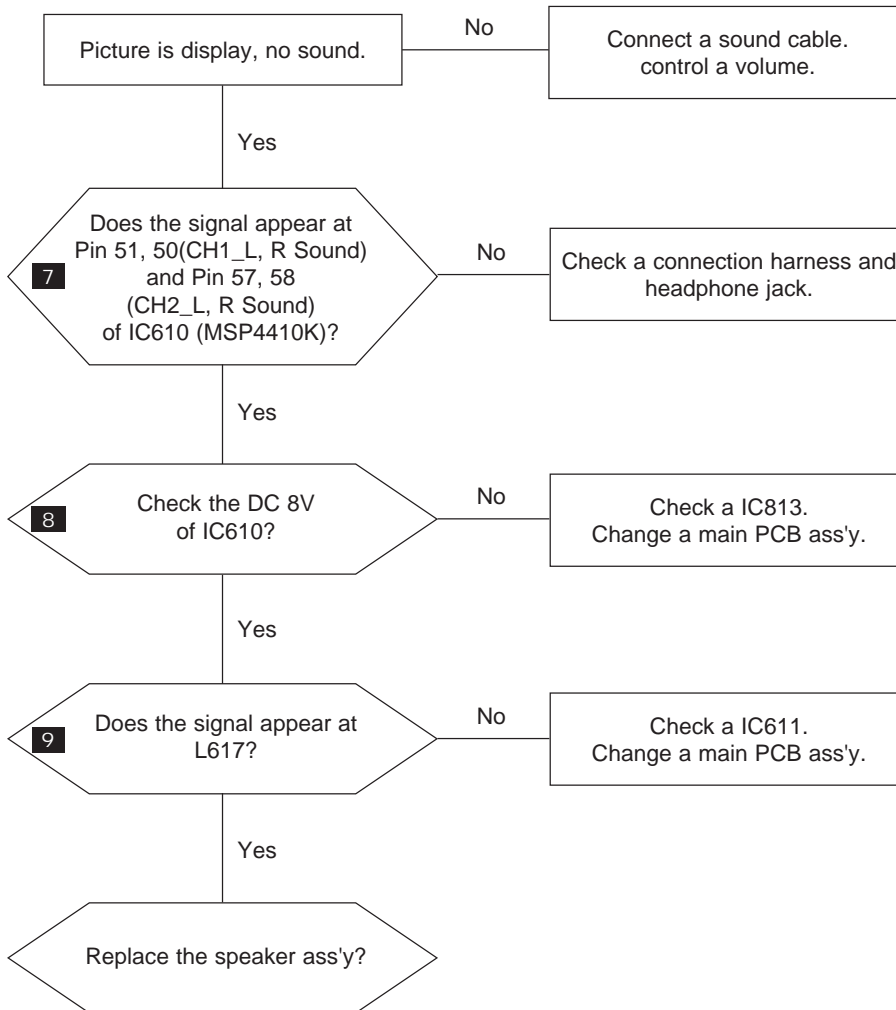


6 Analog Signal(Y,C) to IC201



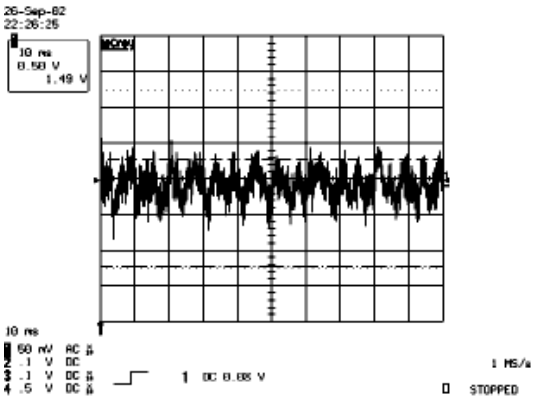
## 5 Troubleshooting

### 5-7 No Sound

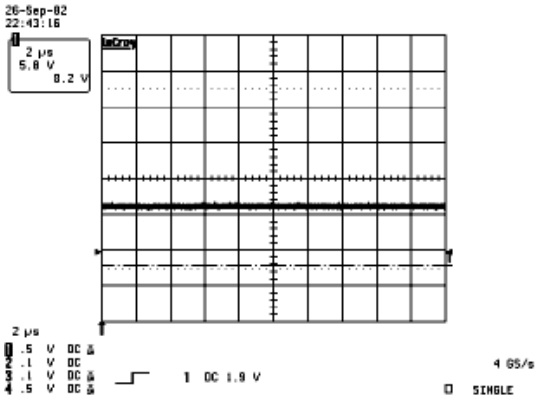


WAVEFORMS

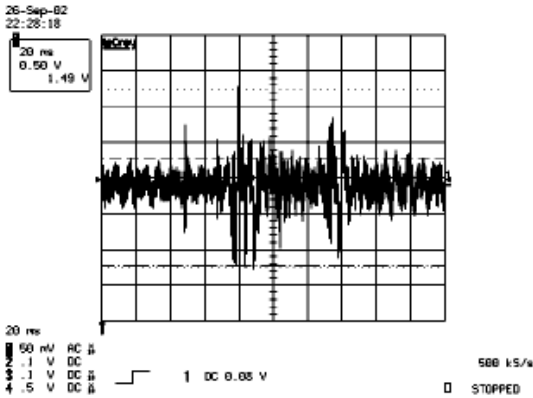
7 The Signal are Inputed to IC610



8 DC +8V



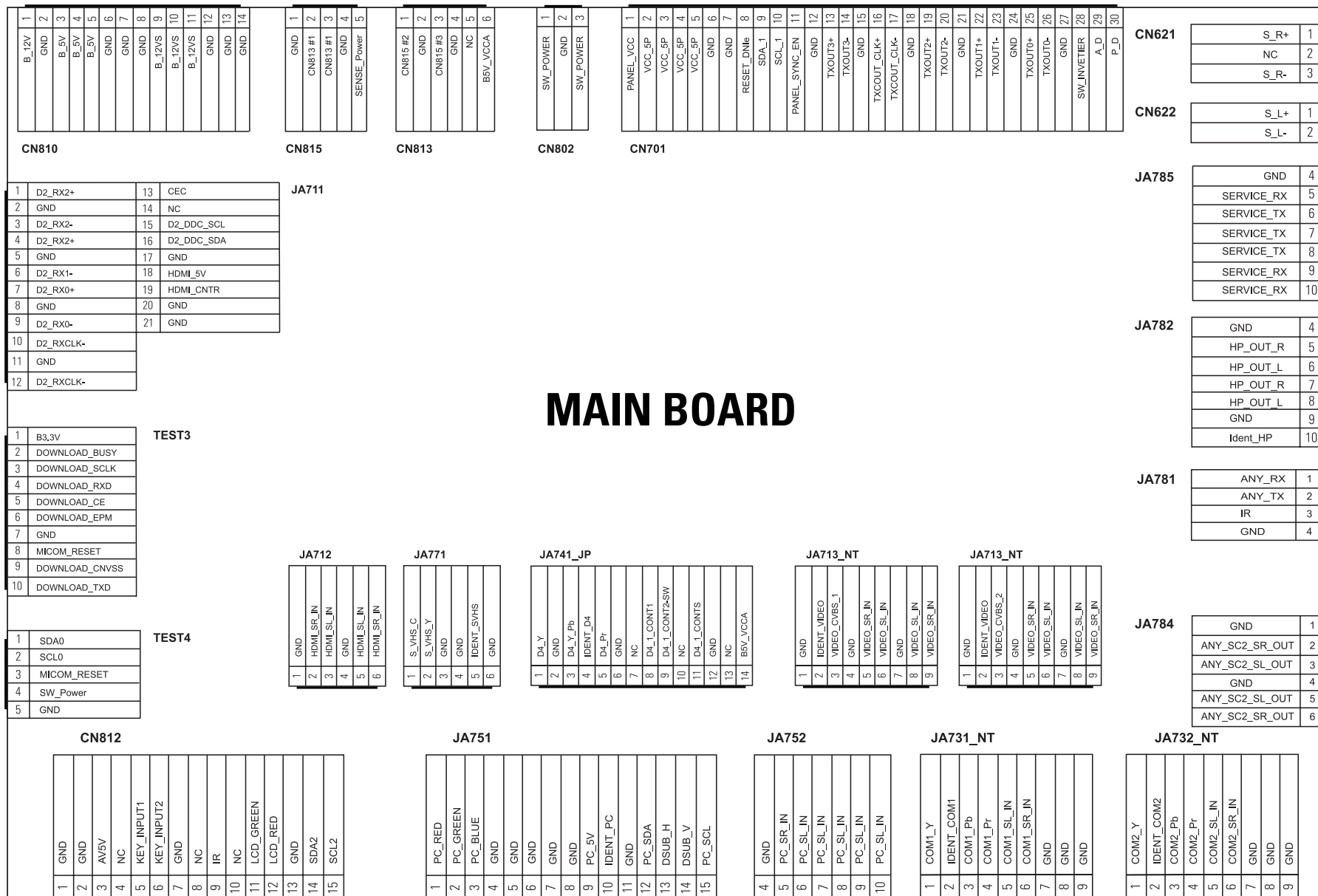
9 Output WaveForm



## Memo

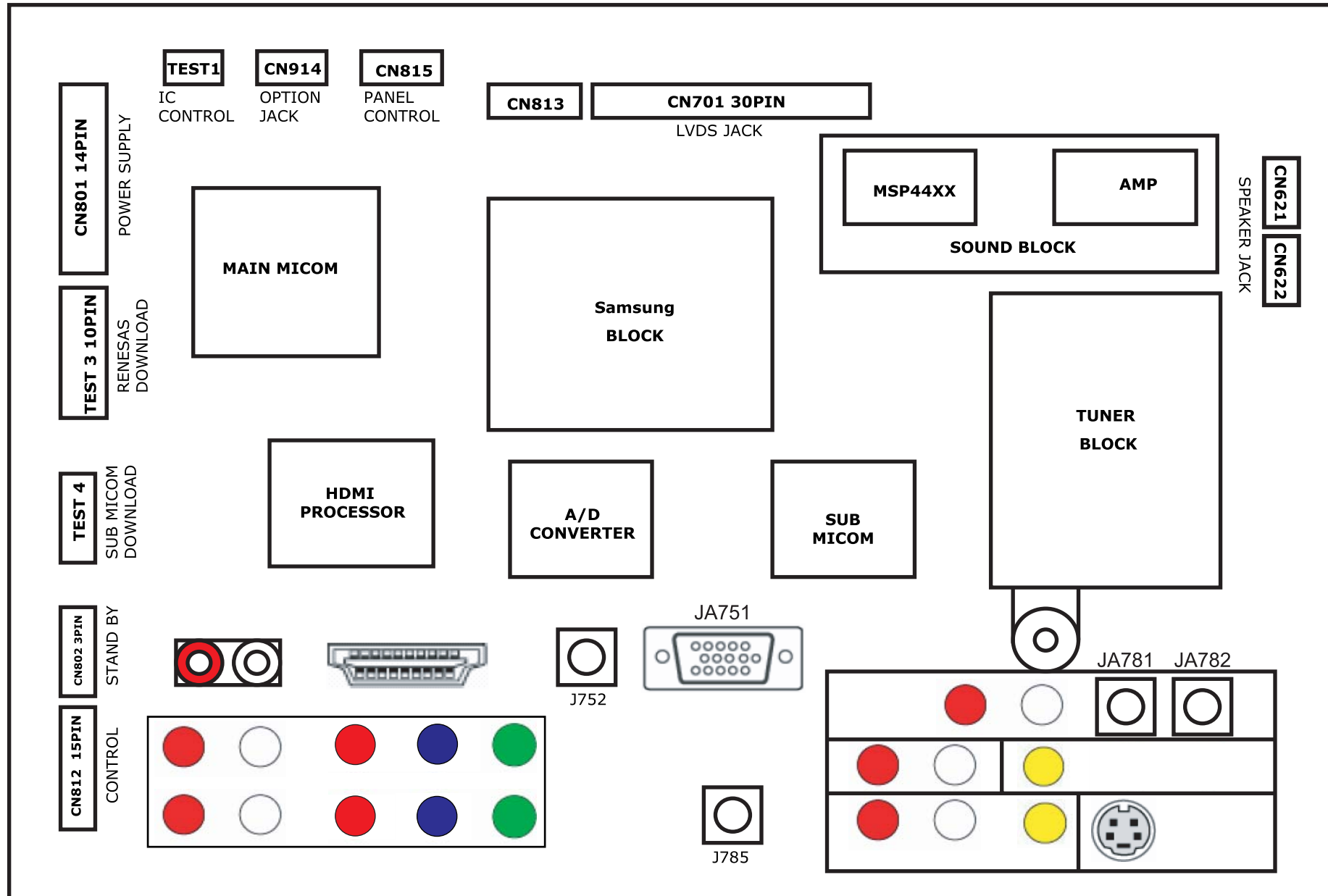
## 9 Wiring Diagram

## 9-1 LN-R268WH / LN-R328WH / LN32R51BH Wiring Diagram





# 9-2 Main Board Layout



## 9-3 PIN characteristic

**CN801**- Main Board power supply

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14
NAME	12V	GND	5V	5V	5V	GND	GND	GND	12VS	12VS	12VS	GND	GND	GND

FUNCTIONING DEFINE:

-- 12V      B5V\_VCCA   B5V\_VCCB   IC611 POWER SUPPERLY  
 -- 5V      B5V   B3.3V   B2.5V\_VDD   B3.3VD   VCC50  
 -- 12VS    B12VS

**CN802**-stand by supply

PIN	1	2	3
NAME	POWER	GND	SW_POWER
VOLTAGE	6V	0V	ON/OFF

FUNCTIONING DEFINE:

-- POWER 6V      STAND BY 5V , Sub-MICOM power supply  
 -- SW\_POWER    L: Power OFF ,   H: Power ON

**CN621/CN622**-SPEAKER CONNECTOR

PIN	1	2	3
NAME	R-OUT	NOP	R-REFERENCE

PIN	1	2
NAME	L-OUT	L-REFERENCE

**CN812**-Front control

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
NAME	GND	GND	A5V	-	KEY INPUT1	KEY INPUT2	GND	-	IR	-	LED_ GREEN	LED_ RED	GND	SDA	SCL

## FUNCTIONING DEFINE:

- A5V            Front control board power supply
- KEY INPUT1,2/SDA/SCL    key control, form the Menu , channel up/down Etc.
- IR            remote control signal
- LED\_GREEN/LED\_RED    control the timing and standby LED color

**CN815**-panel control

PIN	1	2	3	4	5
NAME	SW_inverter	Ana_dimming	PWM_dimming	GND	SENSOR POWER

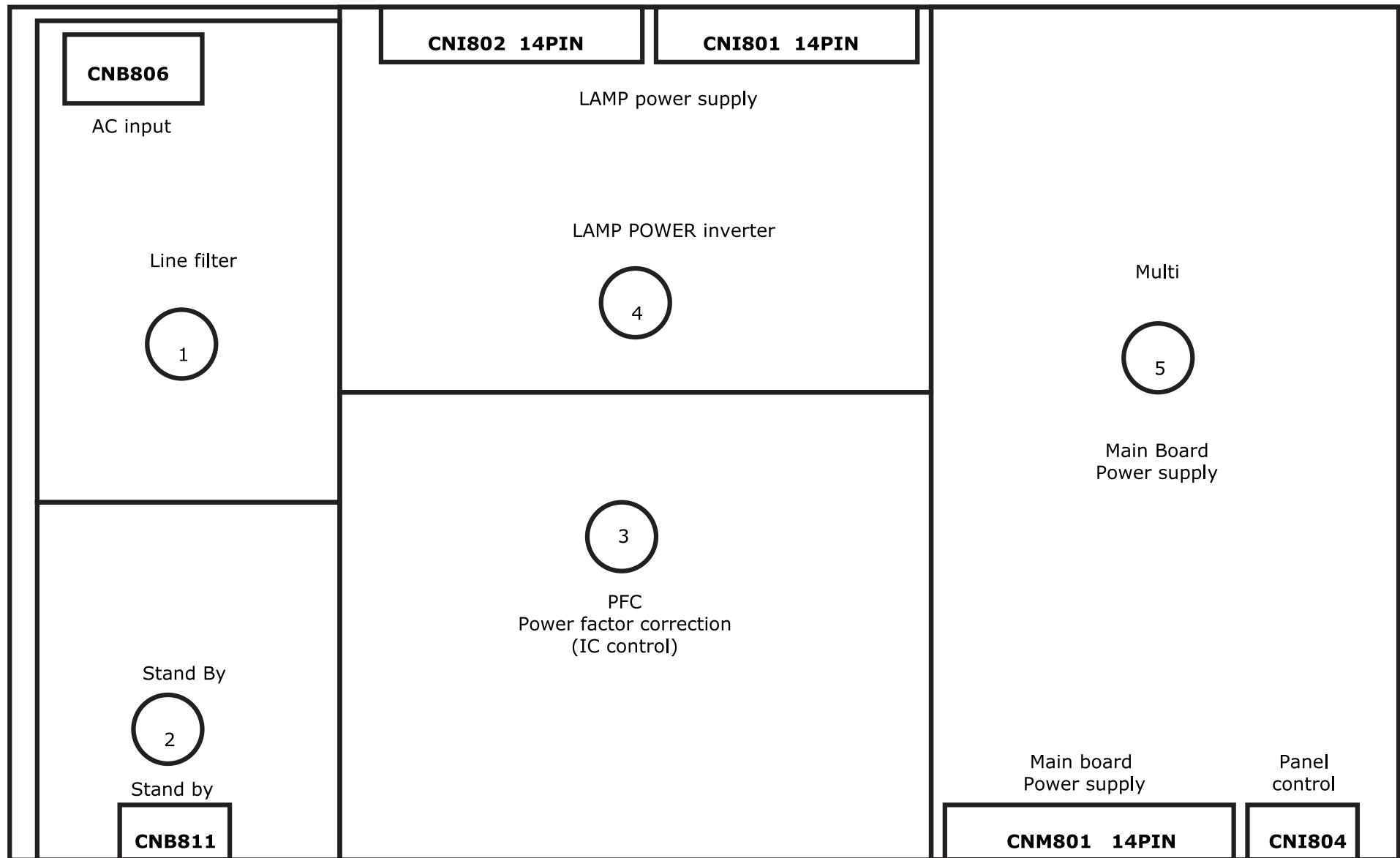
## FUNCTIONING DEFINE:

- SW\_inverter    panel inverter control, about 5V
- Ana\_dimming    panel dimming control
- PWM\_dimming    panel PWM control, duty 40%~90%
- SENSOR POWER    brightness sensor power supply

## CN702-LVDS Signal

PIN	NAME	PIN	NAME
1	VCC	16	TXOUTCLK+
2	VCC5P	17	TXOUTCLK-
3	VCC5P	18	GND
4	VCC5P	19	TXOUT2+
5	VCC5P	20	TXOUT2-
6	GND	21	GND
7	GND	22	TXOUT1+
8	NOP (NOT USE)	23	TXOUT1-
9	SDA1	24	GND
10	SCL1	25	TXOUT0+
11	PANEL_SYNC_EN	26	TXOUT0-
12	GND	27	GND
13	TXOUT3+	28	SW_INVERTER
14	TXOUT3-	29	ANA_DIMMING
15	GND	30	PWM_DIMMING

9-4 Power Board Layout



**CNB811**-stand by supply

PIN	1	2	3
NAME	POWER	GND	SW_POWER
VOLTAGE	6V	0V	ON/OFF

FUNCTIONING DEFINE:

Refer to: CN802 function define

**CNM801**- Main Board power supply

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14
NAME	12V	GND	5V	5V	5V	GND	GND	GND	12V	12V	12V	GND	GND	GND

FUNCTIONING DEFINE:

Refer to: CN801 function define

**CNI804**-panel control

PIN	1	2	3	4	5
NAME	SW_inverter	Ana_dimming	PWM_dimming	GND	SENSOR POWER

FUNCTIONING DEFINE:

Refer to: CN815 function define

**CNI801**- Main Board power supply

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14
NAME	24V	24V	24V	24V	24V	GND	GND	GND	GND	GND	GND	B/L	A_D	P_D

## FUNCTIONING DEFINE:

- 24V      LAMP INVERTER Voltage
- B/L      Brightness sensor power
- A\_D      ANA\_DIMMING
- P\_D      PWM\_DIMMING