



# COLOR TELEVISION RECEIVER

Chassis : S64A(P)\_Unlimited

Model : WS32Z419D8XXEU

# ***SERVICE*** Manual

## COLOR TELEVISION RECEIVER



WS-32Z419D

## FEATURES

- Slimfit(Low Depth) CRT
- Built In D-TV(IDTV)
- DVB-T Broadcasting Receiver
- Flash Download
- OTA(Over The Air) D-TV S/W Upgrade
- 7 Days EPG Service



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## 2. Product Specification

### 2-1 Product Features

Block	Specification	EU	Remark
CRT	- Slimmer than existing CRTs Existing: 495mm → Slimfit : 365mm	Vixlim CRT	
RF Part	- Same as for the OZ(S62A) Model	DNOS403ZV261B Unification of Analog & Digital	
Power	- Input Voltage : AC 230V (Europe) - Stand-By : Less than 3W	STR-W6750	
Video	- PAL/SECAM/NT4.43 - Progressive 100Hz(Full 100Hz)	VCT69xyP CXA2165	
Audio	- Output : 10W x 2 - Function : A2/Nicom, SRS Trusurround	VCT69xyP	
Digital	- DVB-T - OTA,Flash Download,7Days-EPG - MHEG	STi5517SUA MHEG v1.07 / Built in CI	
Cabinet	- New Front and Back Cabinets - 185mm of saved space compared to the existing model A11:600mm → Z41/Z40:415mm	Z41 Design Applied FPTV Looking Design Black 1Tone (Z40:Black Bezel 2Tone)	

#### ■ Core Parts Functions

- VCT69xyP : RF-CVBS,EXT-CVBS,FRONT Y,C,SCART1 R/G/B input and Video Signal Processing.  
Provides S-IF Analog audio And Digital audio signal input and decoding functions.  
I2C-Communication,Master Control Micom, Unit(ROM), Flash Down Load.
- CXA2165 : H-out,VD-P,VD-N,RGB output,Video and Deflection Signal Processing.
- MST3383M : HDMI decoding Functions
- STi5517 : CPU of Digital Block.DEMUX, MPEG Decoder

## 2-2 Key Features

Model	WS32Z419D/WS32Z408D
Voltage	AC230V
Frequency of Operation	50/60 Hz
Dimensions(mm)	910 X 415 X 570 mm
Weight(Kg)	53.2 Kg

### ■ H/W Configuration

- Slimfit(Low Depth) CRT adopted
- Progressive 100Hz (Full 100Hz)
- HD Ready(Optional):720P,1080i
- DVB-T

### ■ S/W Configuration

- VCTP 1 Chip UART communication.
- Output Format identification embodiment by input signal that use Scaler
- Multi Systems PAL/SECAM
- ATS,Auto Wide,Pre Channel, On/Off Timer,Zoom,Blue Screen
- HDMI Algorithm

### ■ Picture

- Multi Systems : PAL/SECAM/NT4.43
- SCAN : Progressive Scan (Full 100Hz)
- AKB (Auto Kinetic Bias)
- Still Picture, Digital Noise Reduction
- Auto Wide
- Black Level expansion,CTI,VM,Dynamic Focus

### ■ Sound

- System : A2/Niacam Stereo, SRS Trusurround
- Output : 10Wx2
- Speaker : 2EA
- AVL, Melody, Auto Stereo, Auto Mute, Equalize

### ■ In/Out Terminals

- Side : 1 CVBS Input, 1 S-Video Input, Sound L/R
- Rear : 2 Scart, 1 CI-Slot, 1 Tuner.
- ※ Options - 1 Component(480i/480p/576i/576p/720p/1080i 50Hz/60Hz)  
1 HDMI(480p/576p/720p/1080i 50Hz,60Hz)

### ■ Remocon : TM86

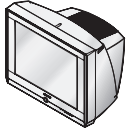


### ■ Power Supply

- Europe(230V), CIS(160V- 300V)




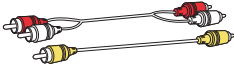




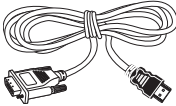
### ■ Power Supply and Power Consumption

- Input : AC 230V
- Max Power : 180W / Stand by : Less than 3W

## 2-3 Specifications Analysis

Model		WS-32M204D	WS-32Z419D	WS-32Z408D
Chassis		S59B	S64A	S64A
Design				
Basic	Product Type	FLAT CRT	Slim Fit CRT	Slim Fit CRT
	Digital Display	SD	SD	SD
	Screen Size	32 Inch	32 Inch	32 Inch
	Aspect Ratio	16:9	16:9	16:9
Visual Quality	Progressive Scan	-	○	○
	Digital Comb Filter	-	4H	4H
	Screen Pitch	0.68	0.73	0.73
	AKB	○	○	○
	Digital Noise Reduction		○	○
	DNle	-	-	-
	3:2 Pull Down Support	-		
Audio	Base/Treble/Balance			
	Equalizer		5 Band	5 Band
	AVL		○	○
	Surround		SRS-Trusurround	SRS-Trusurround
	Speaker System		Direct	Direct
	Speaker Output		10W + 10W	10W + 10W
Function	Dual Screen Function	-	-	-
	Double Screen	-	-	-
	TTX			
	Still Picture		○	○
	Auto Jack Recognition	-	-	-
Ports	Antenna In	Rear : 1	Rear : 1	Rear : 1
	External In	Rear : 2 SCART Side : 1 CVBS	Rear : 2 SCART Side : 1 CVBS	Rear : 2 SCART Side : 1 CVBS
	S-Video	Side : 1	Side : 1	Side : 1
	Y/Pb/Pr	-	Rear : 1	-
	PC	-	-	-
	DVI	-	-	-
	HDMI	-	Rear : 1	-
	Digital Audio Out	-	-	-
	Video Out	Rear : 1	Rear : 1	Rear : 1
Audio Out	Rear : 1	-	-	

## 2-4 Accessories

Accessories		Item	Item code	Remark
Supplied Accessories		Remote Control AAA Alkaline Battery (2)	AA59-00379A 4301-000121	Samsung Service center
		Owner's Instructions	AA68-03776A	
		Warranty Card Registration Card Safety Guide Manual	BN68-00514B AA68-03575A AA68-03242E	
Accessories that can be purchased additionally		Video Cable / Audio Cable	-	Internal shopping mall
		Component Cable	-	
		S-Video Cable	-	
		Antenna Cable	-	
		HDMI Cable	-	
		HDMI/DVI Cable	-	



## 3. Alignment & Adjustment

### 3-1 Service Instruction

#### 1. General Adjustment :

In general, a color TV can provide ideal visual quality by adjusting the basic settings such as the vertical size, horizontal size, focus, etc.

Display a black and white picture on the screen to check if the picture is clearly displayed.

If there are some 'spotted' points on the screen when displaying a black and white picture, degauss the screen using the degauss coil. If the spotted points remain, re-adjust the purity and the convergence. This completes the basic performance examination.

#### ⚠ Notice.

- These adjustments and the check list are only applied to S64A chassis-applied models.
- Only use 230V for the measurement set. It is recommended using an insulation transformer when supplying power to the set so as to prevent shock to the set or to yourself.
- These adjustment specifications have been created on the basis of the domestic S64A chassis-applied remote control model. Some of the contents may be changed subject to the sales location and the product specifications.

#### 2. When replacing the F\_Box Board :

Since the software is loaded to the EPROM of the F\_box board, check the version of the software of the EPROM.

To check the version of the software, Enter service mode presee the key on the remote control according to the following sequenu.

(in stand-by status) Info → Menu → Mute → Power → ON

The software information will then be displayed below the OSD menu.

The notation of the software information : For example, T\_SHPEU\_1009 refers to "CORSET BASIC MODEL Europe. ver.1009".  
Since the settings including the Channel information, Deflection, etc. are saved to the nvRAM, reconfigure these settings when replacing the System Board

#### 3. When replacing the Main Board : No adjustments required. Except that Tilt adjustment, focus adjustment, screen voltage setting and W/B adjustment are all required.

#### 4. When replacing the CRT Ass'y : No adjustments required.

#### 5. When replacing the front panel master power switch : No adjustments required.

#### 6. When replacing the Side AV : No adjustments required.

#### 7. When replacing the control switch : No adjustments required.

## 3-2 How to Access Service Mode

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1. To enter Service Mode, press the keys on the remote control according to the following sequence. (in Stand-by status)

Info → Menu → Mute → Power On

※ When failing to enter Service Mode, repeat the procedure above.

2. The initial screen of Service Mode.

< Europe >



3. Functions of the Keys within Service Mode

MENU	Show all menus
▲ / ▼	Move the cursor to select an item.
◀ / ▶	Adjust the selected configuration value

## 3-3 Factory Data

### ■ Europe

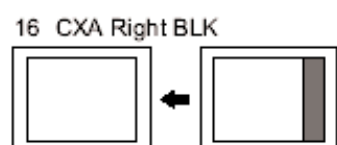
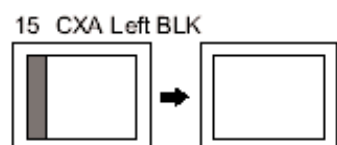
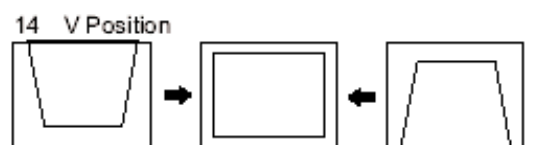
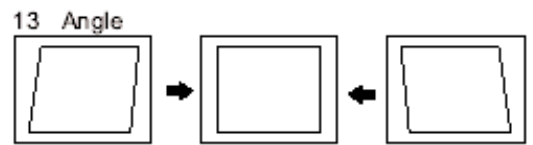
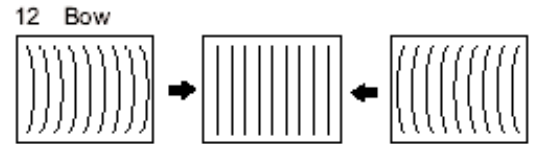
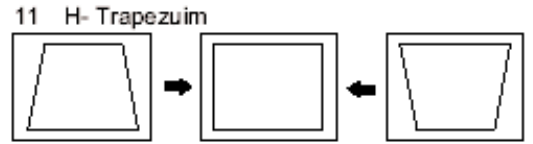
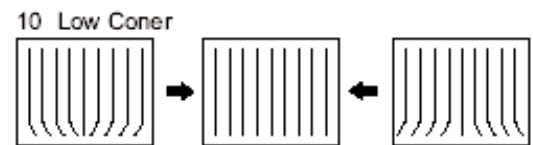
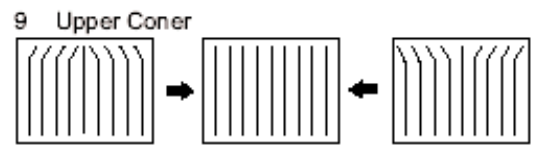
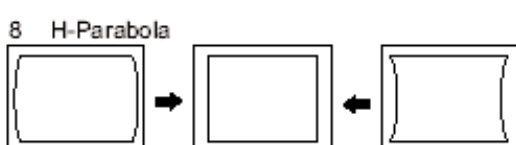
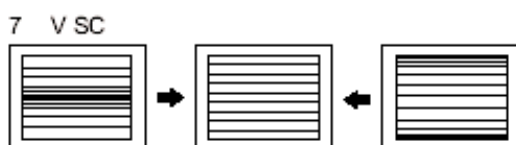
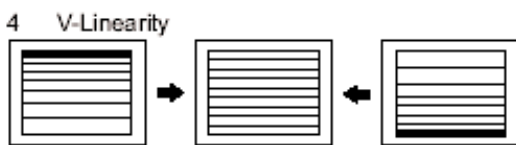
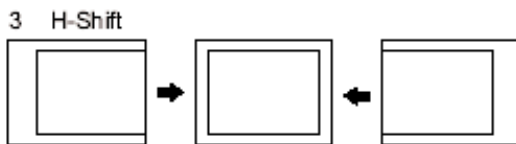
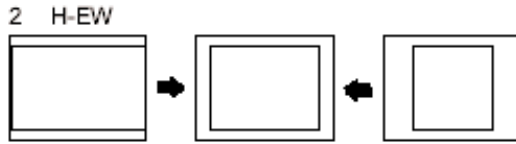
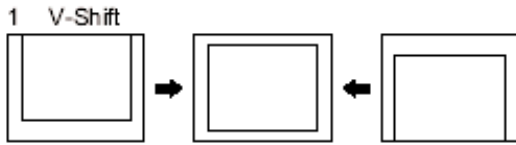
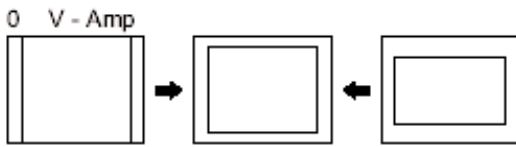
#### 1. Deflection Adjustment (PAL)

No	item	WS-32Z419D	Remark
		Data	
1	V Amp	18	Adjust
2	V Shift	24	Adjust
3	H EW	24	Adjust
4	H Shift	48	Adjust
5	V Linearity	6	FIX
6	Upper Linearity	0	FIX
7	Lower Linearity	1	FIX
8	V SC	4	FIX
9	H Parabola	48	Adjust
10	Upper Corner	38	Adjust
11	Lower Corner	36	Adjust
12	H Trapezium	42	Adjust
13	Bow	36	Adjust
14	Angle	34	Adjust
15	V Position	40	FIX

#### 2. Deflection Adjustment (NTSC)

No	item	WS-32Z419D	Remark
		Data	
1	V Amp	-6	Adjust
2	V Shift	-3	Adjust
3	H EW	0	Adjust
4	H Shift	-1	Adjust
5	V Linearity	0	Adjust
6	Upper Linearity	0	FIX
7	Lower Linearity	0	FIX
8	V SC	0	FIX
9	H Parabola	0	Adjust
10	Upper Corner	0	Adjust
11	Lower Corner	0	Adjust
12	H Trapezium	4	Adjust
13	Bow	0	Adjust
14	Angle	0	Adjust
15	V Position	0	FIX

※ Input NTSC signal. Then, can control this articles.



## 3. 4:3 Offset\_Vixlim

No	item	WS-32Z419D	Remark
		Data	
1	H Para_4:3	1	
2	Up_Corner_4:3	1	
3	Low_Corner_4:3	1	
4	Angle_4:3	0	
5	Bow_4:3	1	
6	H_Shift_4:3	0	
7	H Para_NT_4:3	-1	
8	Up_Corner_NT_4:3	0	
9	Low_Corner_NT_4:3	1	
10	Angle_NT_4:3	0	
11	Bow_NT_4:3	0	
12	H_Shift_NT_4:3	0	

※ Input signal of each resolution, then, can control the article.

## 4. 480P Deflect Offset

No	item	WS-32Z419D	Remark
		Data	
1	V Amp	1	Adjust
2	V Shift	0	Adjust
3	H EW	0	Adjust
4	H Shift	3	Adjust
5	V Linearity	0	Adjust
6	Upper Linearity	0	FIX
7	Lower Linearity	0	FIX
8	V SC	0	FIX
9	H Parabola	2	Adjust
10	Upper Corner	1	Adjust
11	Lower Corner	2	Adjust
12	H Trapezium	-4	Adjust
13	Bow	0	Adjust
14	Angle	0	Adjust
15	V Position	0	FIX

## 5. 576P Deflect Offset

No	item	WS-32Z419D	
		Data	Remark
1	V Amp	4	Adjust
2	V Shift	-4	Adjust
3	H EW	0	Adjust
4	H Shift	2	Adjust
5	V Linearity	0	Adjust
6	Upper Linearity	0	FIX
7	Lower Linearity	0	FIX
8	V SC	0	FIX
9	H Parabola	2	Adjust
10	Upper Corner	0	Adjust
11	Lower Corner	1	Adjust
12	H Trapezium	2	Adjust
13	Bow	0	Adjust
14	Angle	0	Adjust
15	V Position	0	FIX

## 6. 720P Deflect Offset

No	item	WS-32Z419D	
		Data	Remark
1	V Amp	0	Adjust
2	V Shift	0	Adjust
3	H EW	0	Adjust
4	H Shift	-2	Adjust
5	V Linearity	0	Adjust
6	Upper Linearity	0	FIX
7	Lower Linearity	0	FIX
8	V SC	0	FIX
9	H Parabola	0	Adjust
10	Upper Corner	0	Adjust
11	Lower Corner	0	Adjust
12	H Trapezium	-2	Adjust
13	Bow	0	Adjust
14	Angle	0	Adjust
15	V Position	0	FIX

## 7. 1080i Deflect Offset

No	item	WS-32Z419D	
		Data	Remark
1	V Amp	-14	Adjust
2	V Shift	-5	Adjust
3	H EW	2	Adjust
4	H Shift	-10	Adjust
5	V Linearity	0	Adjust
6	Upper Linearity	0	FIX
7	Lower Linearity	0	FIX
8	V SC	0	FIX
9	H Parabola	-4	Adjust
10	Upper Corner	-4	Adjust
11	Lower Corner	-3	Adjust
12	H Trapezium	4	Adjust
13	Bow	0	Adjust
14	Angle	0	Adjust
15	V Position	0	FIX

## 8. Video Adjustment 1

No	item	WS-32Z419D	
		Data	Remark
1	R CutOff	18	Adjust
2	G CutOff	20	FIX
3	B CutOff	20	Adjust
4	R Drive	42	Adjust
5	G Drive	32	FIX
6	B Drive	32	Adjust
7	Sub Bright	24	Adjust
8	Sub Contrast	8	Adjust
9	Bright VCTP	140	FIX
10	Contrast VCTP	30	FIX
11	SAT-VCTP	18	FIX
12	Tint VCTP	10	FIX
13	SC_RGB_BRTADJ	128	FIX
14	SC_RGB_CONADJ	38	FIX
15	RGB U_Sat	38	FIX
16	RGB V_Sat	42	FIX
17	RGB24_BRTADJ	16	FIX
18	RGB24_CONADJ	28	FIX
19	RGB24_USATADJ	32	FIX
20	RGB24_VSATADJ	32	FIX

## 9. Video Adjustment 2

No	item	WS-32Z419D	Remark
		Data	
1	ABL Mode	3	FIX
2	Gamma	0	FIX
3	ABL TH	3	FIX
4	AKB Time	15	FIX
5	S - ABL	3	FIX
6	P - ABL	9	FIX
7	VSU	0	FIX
8	LNA EXE	3	FIX
9	H_EHT comp	3	FIX
10	V_EHT comp	5	FIX
11	PIN EHT comp	2	FIX
12	AFC EHT comp	0	FIX
13	Sync Phase	0	FIX
14	Sync Phase (480)	1	FIX
15	Sync Phase (576P)	0	FIX
16	Sync Phase (720P)	1	FIX
17	Sync Phase (1080)	0	FIX

## 10. Video Adjustment 3

No	item	WS-32Z419D	Remark
		Data	
1	TNR Enable	1	FIX
2	TNR Chroma	10	FIX
3	TNR Luma	7	FIX
4	LTI Enable	1	FIX
5	LTI Gain	15	FIX
6	LTI Gain x2	1	FIX
7	LTI Coring	3	FIX
8	Lmix gain	3	FIX
9	Lmix offset	12	FIX
10	Peak Center Freq	3	FIX
11	Peaking Coring	2	FIX
12	CTI BW	1	FIX
13	CTI LP	1	FIX
14	CTI Gain	5	FIX
15	CTI Coring	3	FIX
16	V Peaking	2	FIX
17	V Peak Coring gain	0	FIX
18	V Peak high gain	0	FIX
19	V Peak coring high	0	FIX
20	IF Comp Filter	0	FIX
21	DHYAPRESC	2	FIX
22	DHCAPRESC	2	FIX
23	Nega Peaking	11	FIX
24	DCE Gain	45	FIX
25	CORBP	0	FIX



## 11. Video Adjustment 4

No	item	WS-32Z419D	Remark
		Data	
1	SVM RW	2	FIX
2	SVM Delay	0	FIX
3	SVM Coring	2	FIX
4	SVM Gain	45	FIX
5	SVM C_Gain	0	FIX
6	OSD Contrast	32	FIX
7	OSD Bright	127	FIX
8	TTX Contrast	17	FIX
9	TTX Bright	127	FIX
10	Melody Volume	6	FIX
11	VCR Mode Cnt	30	FIX
12	SLLTHD	2	FIX
13	SLLTHDV	3	FIX
14	THRSEL	0	FIX
15	LPCDEL	0	FIX

## 12. Video Adjustment 5 (576i)

No	item	WS-32Z419D	Remark
		Data	
1	HORWIDTHP_H	5	FIX
2	HORWIDTHP_L	50	FIX
3	VERIWDTHP_H	1	FIX
4	VERIWDTHP_L	30	FIX
5	HORPOSP_H	1	FIX
6	HORPOSP_L	65	FIX
7	VERPOSP_H	0	FIX
8	VERPOSP_L	26	FIX
9	NAPPLIP_H	1	FIX
10	NAPPLIP_L	176	FIX
11	NALPFIP_H	0	FIX
12	NALPFIP_L	18	FIX
13	HSCPOSC_H	8	FIX
14	HSCPOSC_L	160	FIX
15	VSCPOSC_H	31	FIX
16	VSCPOSC_L	100	FIX
17	HORWIDTH_M_H	5	FIX
18	HORWIDTH_M_L	50	FIX
19	VERWIDTH_M_H	1	FIX
20	VERWIDTH_M_L	39	FIX
21	HORPOS_M_H	1	FIX
22	HORPOS_M_L	60	FIX
23	VERPOS_M_H	0	FIX
24	VERPOS_M_L	26	FIX
25	VSCPRESC_H	0	FIX
26	VSCPRESC_L	0	FIX
27	SD_BRTADJ	145	
28	SD_CONADJ	46	
29	SD_USATADJ	32	
30	SD_VSATADJ	32	

## 13. Video Adjustment 5 (480i)

No	item	WS-32Z419D	Remark
		Data	
1	HORWIDTHP_H	5	FIX
2	HORWIDTHP_L	48	FIX
3	VERIWDTHP_H	1	FIX
4	VERIWDTHP_L	246	FIX
5	HORPOSP_H	1	FIX
6	HORPOSP_L	60	FIX
7	VERPOSP_H	0	FIX
8	VERPOSP_L	21	FIX
9	NAPPLIP_H	1	FIX
10	NAPPLIP_L	101	FIX
11	NALPFIP_H	0	FIX
12	NALPFIP_L	16	FIX
13	HSCPOSC_H	8	FIX
14	HSCPOSC_L	158	FIX
15	VSCPOSC_H	12	FIX
16	VSCPOSC_L	0	FIX
17	HORWIDTH_M_H	5	FIX
18	HORWIDTH_M_L	48	FIX
19	VERWIDTH_M_H	1	FIX
20	VERWIDTH_M_L	241	FIX
21	HORPOS_M_H	1	FIX
22	HORPOS_M_L	48	FIX
23	VERPOS_M_H	0	FIX
24	VERPOS_M_L	24	FIX
25	VSCPRESC_H	4	FIX
26	VSCPRESC_L	0	FIX
27	SD_BRTADJ	145	FIX
28	SD_CONADJ	46	FIX
29	SD_USATADJ	32	FIX
30	SD_VSATADJ	32	FIX

## 14. Video Adjustment 6 (480P)

No	item	WS-32Z419D	Remark
		Data	
1	HORWIDTHP_H	5	FIX
2	HORWIDTHP_L	45	FIX
3	VERWIDTHP_H	1	FIX
4	VERWIDTHP_L	226	FIX
5	HORPOSP_H	1	FIX
6	HORPOSP_L	104	FIX
7	VERPOSP_H	0	FIX
8	VERPOSP_L	26	FIX
9	DHSCPRESC_H	11	FIX
10	DHSCPRESC_L	100	FIX
11	DNAPPLIP_H	1	FIX
12	DNAPPLIP_L	11	FIX
13	DVOFPOSC	128	FIX
14	VERPOS_S	6	FIX
15	VEROFFS_S	0	FIX
16	HORPOS_S_H	1	FIX
17	HORPOS_S_L	45	FIX
18	HPULLINMODE	0	FIX
19	DVSCPOSC_HI	64	FIX
20	DVSCPOSC_LO_H	131	FIX
21	DVSCPOSC_LO_L	17	FIX
22	DHSCPOSC_HI	14	FIX
23	DHSCPOSC_LO	255	FIX
24	HD_BRTADJ	145	FIX
25	HD_CONADJ	47	FIX
26	HD_USATADJ	38	FIX
27	HD_VSATADJ	42	FIX

## 15. Video Adjustment 6 (576P)

No	item	WS-32Z419D	Remark
		Data	
1	HORWIDTHP_H	5	FIX
2	HORWIDTHP_L	20	FIX
3	VERWIDTHP_H	2	FIX
4	VERWIDTHP_L	68	FIX
5	HORPOSP_H	1	FIX
6	HORPOSP_L	85	FIX
7	VERPOSP_H	0	FIX
8	VERPOSP_L	26	FIX
9	DHSCPRESC_H	11	FIX
10	DHSCPRESC_L	210	FIX
11	DNAPPLIP_H	1	FIX
12	DNAPPLIP_L	35	FIX
13	DVOFPOSC	100	FIX
14	VERPOS_S	5	FIX
15	VEROFFS_S	6	FIX
16	HORPOS_S_H	1	FIX
17	HORPOS_S_L	0	FIX
18	HPULLINMODE	0	FIX
19	DVSCPOSC_HI	64	FIX
20	DVSCPOSC_LO_H	66	FIX
21	DVSCPOSC_LO_L	203	FIX
22	DHSCPOSC_HI	14	FIX
23	DHSCPOSC_LO	201	FIX
24	HD_BRTADJ	145	FIX
25	HD_CONADJ	47	FIX
26	HD_USATADJ	38	FIX
27	HD_VSATADJ	42	FIX

## 16. Video Adjustment 6 (720P\_50Hz)

No	item	WS-32Z419D	Remark
		Data	
1	HORWIDTHP_H	4	FIX
2	HORWIDTHP_L	226	FIX
3	VERWIDTHP_H	2	FIX
4	VERWIDTHP_L	125	FIX
5	HORPOSP_H	1	FIX
6	HORPOSP_L	50	FIX
7	VERPOSP_H	0	FIX
8	VERPOSP_L	26	FIX
9	DHSCPRESC_H	2	FIX
10	DHSCPRESC_L	30	FIX
11	DNAPPLIP_H	0	FIX
12	DNAPPLIP_L	240	FIX
13	DVOFPOSC	128	FIX
14	VERPOS_S	6	FIX
15	VEROFFS_S	0	FIX
16	HORPOS_S_H	1	FIX
17	HORPOS_S_L	0	FIX
18	HPULLINMODE	1	FIX
19	DVSCPOSC_HI	71	FIX
20	DVSCPOSC_LO_H	60	FIX
21	DVSCPOSC_LO_L	178	FIX
22	DHSCPOSC_HI	15	FIX
23	DHSCPOSC_LO	255	FIX
24	HD_BRTADJ	145	FIX
25	HD_CONADJ	49	FIX
26	HD_USATADJ	38	FIX
27	HD_VSATADJ	42	FIX

## 17. Video Adjustment 6 (720P\_60Hz)

No	item	WS-32Z419D	Remark
		Data	
1	HORWIDTHP_H	4	FIX
2	HORWIDTHP_L	225	FIX
3	VERWIDTHP_H	2	FIX
4	VERWIDTHP_L	16	FIX
5	HORPOSP_H	1	FIX
6	HORPOSP_L	53	FIX
7	VERPOSP_H	0	FIX
8	VERPOSP_L	26	FIX
9	DHSCPRESC_H	3	FIX
10	DHSCPRESC_L	210	FIX
11	DNAPPLIP_H	0	FIX
12	DNAPPLIP_L	214	FIX
13	DVOFPOSC	128	FIX
14	VERPOS_S	24	FIX
15	VEROFFS_S	0	FIX
16	HORPOS_S_H	0	FIX
17	HORPOS_S_L	233	FIX
18	HPULLINMODE	1	FIX
19	DVSCPOSC_HI	85	FIX
20	DVSCPOSC_LO_H	70	FIX
21	DVSCPOSC_LO_L	255	FIX
22	DHSCPOSC_HI	14	FIX
23	DHSCPOSC_LO	162	FIX
24	HD_BRTADJ	145	FIX
25	HD_CONADJ	49	FIX
26	HD_USATADJ	38	FIX
27	HD_VSATADJ	42	FIX

## 18. Video Adjustment 6 (1080i\_50Hz)

No	item	WS-32Z419D	Remark
		Data	
1	HORWIDTHP_H	4	FIX
2	HORWIDTHP_L	220	FIX
3	VERWIDTHP_H	2	FIX
4	VERWIDTHP_L	129	FIX
5	HORPOSP_H	0	FIX
6	HORPOSP_L	250	FIX
7	VERPOSP_H	0	FIX
8	VERPOSP_L	26	FIX
9	DHSCPRESC_H	15	FIX
10	DHSCPRESC_L	30	FIX
11	DNAPPLIP_H	0	FIX
12	DNAPPLIP_L	0	FIX
13	DVOFPOSC	128	FIX
14	VERPOS_S	6	FIX
15	VEROFFS_S	0	FIX
16	HORPOS_S_H	0	FIX
17	HORPOS_S_L	118	FIX
18	HPULLINMODE	1	FIX
19	DVSCPOSC_HI	53	FIX
20	DVSCPOSC_LO_H	69	FIX
21	DVSCPOSC_LO_L	255	FIX
22	DHSCPOSC_HI	13	FIX
23	DHSCPOSC_LO	246	FIX
24	HD_BRTADJ	145	FIX
25	HD_CONADJ	49	FIX
26	HD_USATADJ	38	FIX
27	HD_VSATADJ	42	FIX



## 19. Video Adjustment 6 (1080i\_60Hz)

No	item	WS-32Z419D	Remark
		Data	
1	HORWIDTHP_H	5	FIX
2	HORWIDTHP_L	30	FIX
3	VERWIDTHP_H	2	FIX
4	VERWIDTHP_L	17	FIX
5	HORPOSP_H	0	FIX
6	HORPOSP_L	180	FIX
7	VERPOSP_H	0	FIX
8	VERPOSP_L	26	FIX
9	DHSCPRESC_H	14	FIX
10	DHSCPRESC_L	130	FIX
11	DNAPPLIP_H	0	FIX
12	DNAPPLIP_L	100	FIX
13	DVOFPOSC	128	FIX
14	VERPOS_S	6	FIX
15	VEROFFS_S	0	FIX
16	HORPOS_S_H	0	FIX
17	HORPOS_S_L	178	FIX
18	HPULLINMODE	1	FIX
19	DVSCPOSC_HI	64	FIX
20	DVSCPOSC_LO_H	0	FIX
21	DVSCPOSC_LO_L	183	FIX
22	DHSCPOSC_HI	14	FIX
23	DHSCPOSC_LO	66	FIX
24	HD_BRTADJ	147	FIX
25	HD_CONADJ	46	FIX
26	HD_USATADJ	38	FIX
27	HD_VSATADJ	42	FIX

## 20. Video Adjustment 7

No	item	WS-32Z419D	Remark
		Data	
1	R drive offset Warm2	3	FIX
2	B drive offset Warm2	-9	FIX
3	R cutoff offset Warm2	6	FIX
4	B cutoff offset Warm2	-11	FIX
5	R drive offset Warm1	2	FIX
6	B drive offset Warm1	-2	FIX
7	R cutoff offset Warm1	3	FIX
8	B cutoff offset Warm1	-2	FIX
9	R drive offset Normal	0	FIX
10	B drive offset Normal	0	FIX
11	R cutoff offset Normal	0	FIX
12	B cutoff offset Normal	0	FIX
13	R drive offset Cool 1	0	FIX
14	B drive offset Cool 1	4	FIX
15	R cutoff offset Cool 1	2	FIX
16	B cutoff offset Cool 1	6	FIX
17	R drive offset Cool 2	-2	FIX
18	B drive offset Cool 2	6	FIX
19	R cutoff offset Cool 2	0	FIX
20	B cutoff offset Cool 2	9	FIX

## 21. Video Adjustment 8

No	item	WS-32Z419D	
		Data	Remark
0	LTI Gain NTSC	15	FIX
1	Peak_f0_NTSC	2	FIX
2	Peak_cor_NTSC	2	FIX
3	CTI_gain_NTSC	5	FIX
4	Lmix gain_NTSC	3	FIX
5	Lmix offset_NT	12	FIX
6	LTI Gain AV	15	FIX
7	Peak_f0_AV	0	FIX
8	Peak_cor_AV	6	FIX
9	CTI_gain_AV	15	FIX
10	Lmix gain_AV	3	FIX
11	Lmix offset_AV	13	FIX
12	LTI Gain SD	15	FIX
13	Peak_f0_SD	0	FIX
14	Peak_cor_SD	6	FIX
15	CTI_gain_SD	0	FIX
16	Lmix gain_SD	3	FIX
17	Lmix offset_SD	13	FIX
18	LTI Gain HD	15	FIX
19	Peak_f0_HD	0	FIX
20	Peak_cor_HD	6	FIX
21	CTI_gain_HD	15	FIX
22	Lmix gain_HD	3	FIX
23	Lmix offset_HD	13	FIX

※ Convert by DTV mode.then,can control this article.

## 22. IDTV Video Adjust

No	item	WS-32Z419D	Remark
		Data	
1	NAPPLIP_L	224	FIX
2	NAPPLIP_H	1	FIX
4	HSCPOSC_L	128	FIX
3	HSCPOSC_H	8	FIX
6	HORPOS_M_L	42	FIX
5	HORPOS_M_H	1	FIX
7	VSCPOSC_L	20	FIX
8	VSCPOSC_H	31	FIX
10	VERPOS_M_L	25	FIX
9	VERPOS_M_H	0	FIX
11	DTV_RGB_BRTADJ	136	FIX
12	DTV_RGB_CONADJ	38	FIX
13	DTV_RGB_USATADJ	38	FIX
14	DTV_RGB_VSATADJ	42	FIX
15	TUNER TOP	8	FIX
16	DTV_SAT-VP	32	FIX
17	DTV_SD YFDEL	100	FIX
18	DTV_SD_UVDEL	100	FIX
19	DTV_DCE_GAIN	5	FIX
20	DTV_V AMP_Offset	6	FIX

## 23. YC Delay

No	item	WS-32Z419D	Remark
		Data	
1	P.YC (AV) Delay	2	FIX
2	S.YC (AV) Delay	0	FIX
4	N.YC (AV) Delay	2	FIX
3	P.BG.YC Delay	4	FIX
6	P.DK.YC Delay	4	FIX
5	P.I.YC Delay	3	FIX
7	P.M.YC Delay	0	FIX
8	P.L.YC Delay	0	FIX
10	S.BG.YC Delay	-1	FIX
9	S.DK.YC Delay	-1	FIX
11	S.I.YC Delay	0	FIX
12	S.M.YC Delay	0	FIX
13	S.L.YC Delay	0	FIX
14	N.M.YC Delay	4	FIX
15	SD YFDEL	64	FIX
16	SD_UVDEL	64	FIX
17	RGB Y_Delay	118	FIX
18	RGB UV_Delay	118	FIX
19	HD_DELB	0	FIX
20	HD_DELG	0	FIX
21	HD_DELR	0	FIX

## 24. EEPROM

No	item	WS-32Z419D	Remark
		Data	
0	System	1	FIX
1	System_480	2	FIX
2	System_1080	3	FIX
4	Dynamic Contrast	100	FIX
3	Dynamic Brightness	40	FIX
6	Dynamic Sharpness	65	FIX
5	Dynamic Color	50	FIX
7	Dynamic Tint	50	FIX
8	Dynamic Color Tone	2	FIX
10	Standard Contrast	70	FIX
9	Standard Brightness	50	FIX
11	Standard Sharpness	50	FIX
12	Standard Color	45	FIX
13	Standard Tint	50	FIX
14	Standard Color Tone	2	FIX
15	Movie Contrast	50	FIX
16	Movie Brightness	50	FIX
17	Movie Sharpness	40	FIX
18	Movie Color	40	FIX
19	Movie Tint	50	FIX
20	Movie Color Tone	4	FIX
21	Left_Blank	17	FIX
22	Right_Blank	25	FIX
23	Left Blanking (480)	25	FIX
24	Right Blanking (480)	25	FIX
25	Left Blanking (720)	44	FIX
26	Right Blanking (720)	25	FIX
27	Left Blanking (1080)	44	FIX
28	Right Blanking (1080)	25	FIX
29	RGB Tint	0	FIX
30	DVD Tint	0	FIX
31	Bypass Deint	0	FIX
32	SLMCSW	1	FIX
33	DCE Gain	30	FIX
34	TTX V-Position	43	FIX
35	TTX H-Position	195	FIX
36	PIP CONT	255	
37	PIP-Bright	255	
38	PIP-SCURVE	255	
39	PIP-CTI	255	
40	PIP-Sharp	255	
41	PIP-Tint	255	
42	-	255	
43	-	255	
44	-	255	

No	item	WS-32Z419D	Remark
		Data	
45	-	255	
46	-	255	
47	-	255	
48	-	255	
49	-	255	
50	-	255	
51	-	255	
52	-	255	
53	-	255	
54	-	255	
55	-	255	
56	-	255	
57	-	255	
58	-	255	
59	-	255	
60	-	255	
61	-	255	
62	-	255	
63	-	255	
64	TTX_Bow offset	-1	
65	TTX_H_Para offset	-1	
66	TTX_Up corner offset	-1	
67	TTX_Low corner offset	-1	
68	SECAM Dr	1	FIX
69	SECAM Db	2	FIX
70	50_Trap	2	FIX
71	60_Trap	2	FIX
72	LNA PLUS STEP2	14	FIX
73	LNA PLUS STEP3	14	FIX
74	LNA PLUS STEP4	14	FIX
75	LNA PLUS STEP5	14	FIX
76	LNA PLUS STEP6	14	FIX
77	H-PLL(AV)	0	FIX
78	RF color sens	210	FIX
79	AV color sens	210	FIX
80	R drive offset 1080P	7	FIX
81	G drive offset 1080P	3	FIX
82	R cutoff offset 1080P	-1	FIX
83	G cutoff offset 1080P	2	FIX
84	R drive offset 1080i	0	FIX
85	G drive offset 1080i	0	FIX
86	R cutoff offset 1080i	3	FIX
87	G cutoff offset 1080i	3	FIX
88	R drive offset 720P-60HZ	0	FIX
89	G drive offset 720P-60HZ	0	FIX

No	item	WS-32Z419D	Remark
		Data	
90	R cutoff offset 720P-60HZ	3	FIX
91	G cutoff offset 720P-60HZ	3	FIX
92	R drive offset 720P-50HZ	0	FIX
93	G drive offset 720P-50HZ	0	FIX
94	R cutoff offset 720P-50HZ	3	FIX
95	G cutoff offset 720P-50HZ	3	FIX
96	R drive offset 480P	0	FIX
97	G drive offset 480P	0	FIX
98	R cutoff offset 480P	0	FIX
99	G cutoff offset 480P	0	FIX
100	R drive offset 576P	3	FIX
101	G drive offset 576P	2	FIX
102	R cutoff offset 576P	-3	FIX
103	G cutoff offset 576P	-1	FIX
104	R drive offset 480i	0	FIX
105	G drive offset 480i	0	FIX
106	R cutoff offset 480i	0	FIX
107	G cutoff offset 480i	0	FIX
108	R drive offset 576i	0	FIX
109	G drive offset 576i	0	FIX
110	R cutoff offset 576i	0	FIX
111	G cutoff offset 576i	0	FIX
112	H_EHT comp_720p	1	
113	V_EHT comp_720p	5	
114	PIN EHT comp_720p	2	
115	ABL TH_1080i	2	
116	Color On_NTSC	2	
117	Color Killer Threshold_NTSC	210	
118	ACC Limitation_NTSC	16	
119	Color Killer Threshold_AV	230	
245	HDMI 480P H.Shift Offset	-6	FIX
246	HDMI 576P H.Shift Offset	-4	FIX
247	HDMI 720P H.Shift Offset	6	FIX
248	HDMI 1080i H.Shift Offset	6	FIX

## 25. Option

No	Option Byte	Alterable Change mode	WS32Z419D	WS32Z408D	Remark
1	System	CS/CW	CW	CW	
2	CRT	WIDE / 4:3	WIDE	WIDE	
3	Jack	2 Scart/ 2 Scart+Component	2 Scart+Component	2 Scart	
4	Auto-FM	OFF/ON	ON	ON	
5	High DEV	OFF/ON	OFF	OFF	
6	LNA	OFF/ON	ON	ON	
7	Time Sync	OFF/ON	OFF	OFF	
8	TTX	OFF/ON	ON	ON	
9	Txt Group	-	West EU	West EU	
10	OSD Language	ENGLISH / CIS	ENGLISH	ENGLISH	
11	Digital NR	OFF/ON	ON	ON	
12	Carrier Mute	OFF/ON	ON	ON	
13	Search-LNA	OFF/ON	ON	ON	
14	HDMI	OFF/ON	ON	OFF	
15	WSS Wide Fix	OFF/ON	OFF	OFF	
16	Blue Screen	OFF/ON	ON	ON	

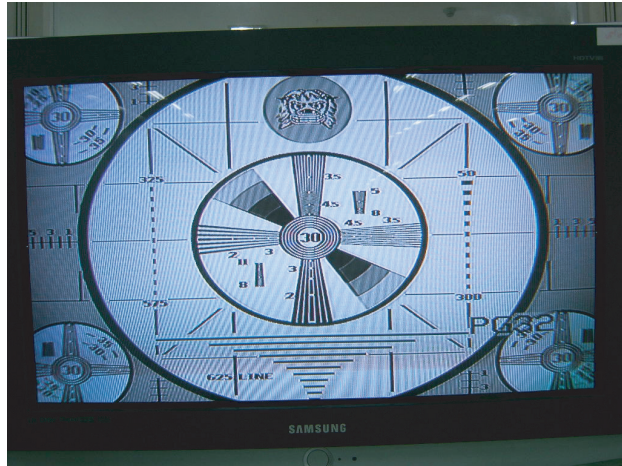


## 3-4 Service Adjustment

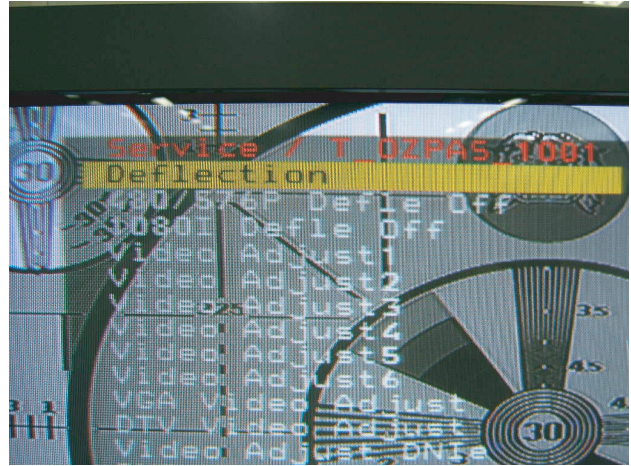
### 3-4-1 Adjusting the Picture Size

■ Since the S62A chassis has the deflection settings data within the Factory Data, the picture size has to be adjusted when replacing the System Board or the Deflection Board, according to the following procedures.

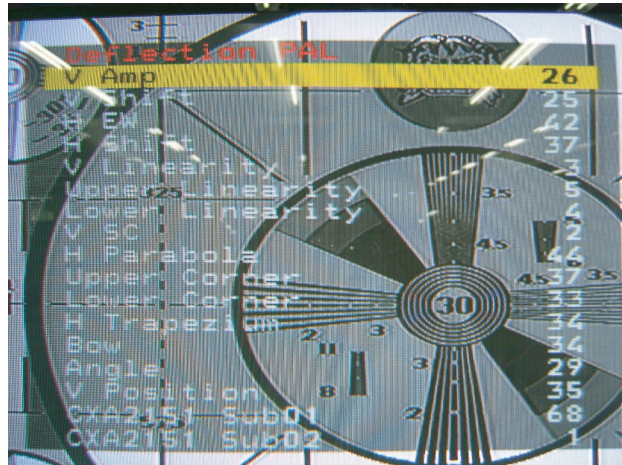
① Display the Lion pattern.



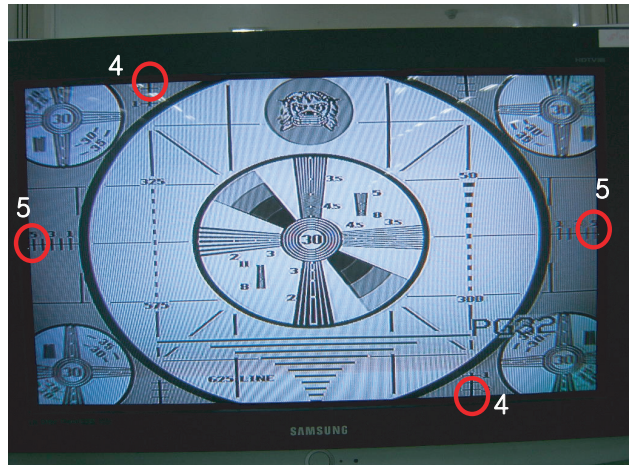
② Press "Info → Menu → Mute → Power On" using the remote control and enter Factory Mode.



③ Enter Deflection Mode.

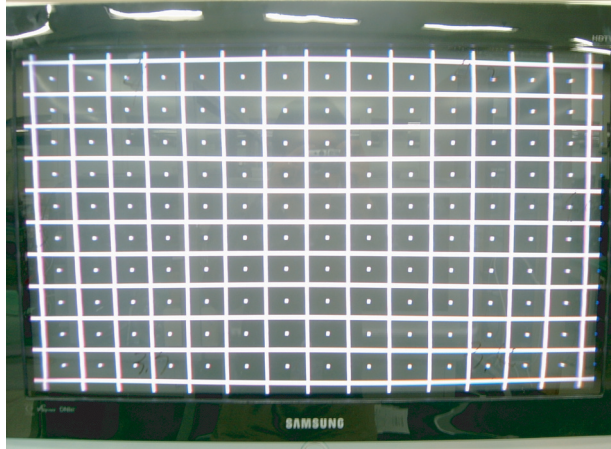


④ Adjust the V-AMP, V-SHIFT, H-AMP and H-SHIFT items so that the width becomes 5 and the height becomes 4.



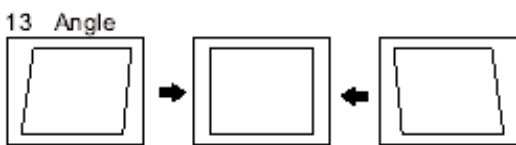
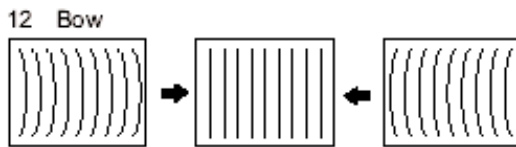
### 3-4-2 Adjusting the Picture Straight Lines

- ① Display the Cross Hatch pattern.

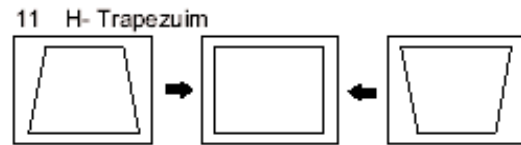
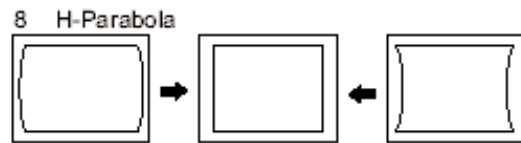


- ② Adjust settings other than V-AMP, V-SHIFT, H-AMP and H-SHIFT so that straight lines are displayed without curves.

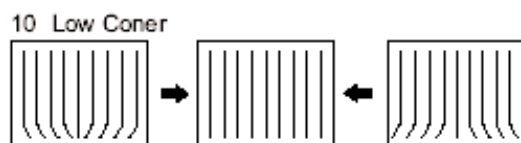
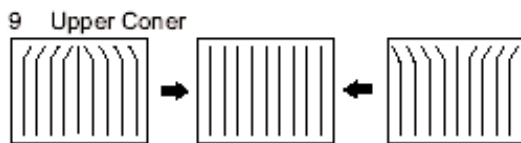
- ③ Adjust BOW and the Angle settings so that the center line becomes a straight line.



- ④ Adjust the H-Parabola and H-Trapezium settings so that the left and right lines become straight.



- ⑤ Adjust the Upper Corner and the Low Corner settings so that the end of the lines become straight.



- ⑥ Adjust the V-Linearity and V-SC settings so that the intervals of the horizontal lines become uniform.



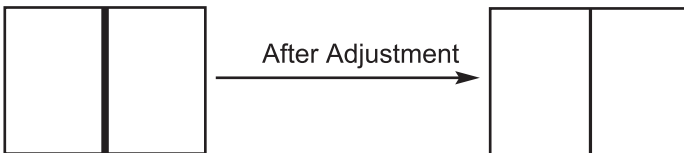
- ⑦ When the adjustments are complete, display the Lion pattern and check that the picture size has not been changed. If there is no change, finish the adjustments.

## 3-5 Replacements & Calibration

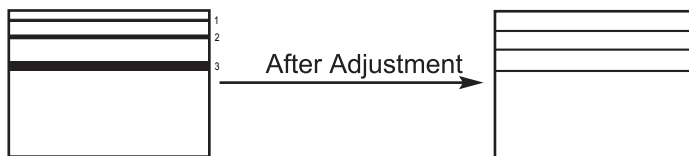
### 3-5-1 Adjusting the Focus

■ Since the S62A chassis has a built-in dynamic focus circuit, take care when adjusting the focus. When the CRT PCB, FBT or CRT has been replaced, the focus has to be adjusted according to the following procedures.

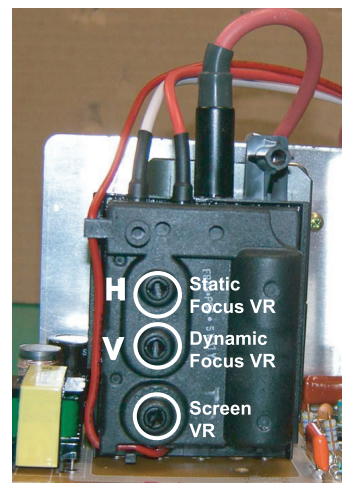
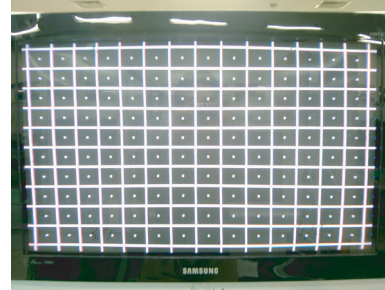
1. Display the CROSS Hatch pattern.
2. Set the Screen Adjustment to "View as Standard".
3. Turn the Static Focus VR clockwise to the maximum position.  
(End of clockwise direction)
4. Turn the Dynamic Focus VR counter clockwise to the maximum position.  
(End of counter clockwise direction)
5. Slowly turn the Static Focus VR counter clockwise so that the center vertical line is the most clearly displayed.



6. Slowly turn the Dynamic Focus VR clockwise so that the 2nd line is the most clearly displayed.

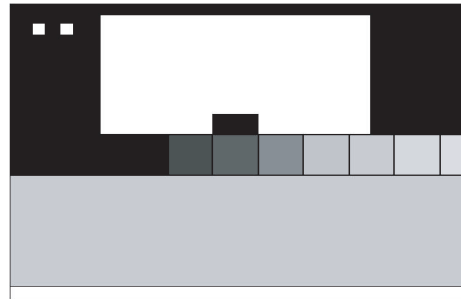


7. Check the entire screen focus and repeat steps 3 to 6, if necessary.

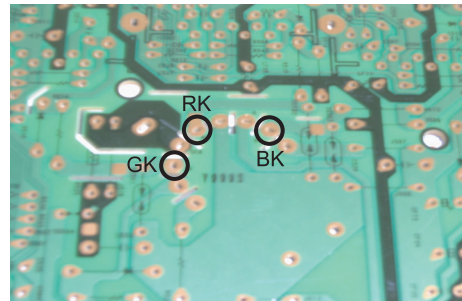


### 3-5-2 Adjusting the Screen Voltage

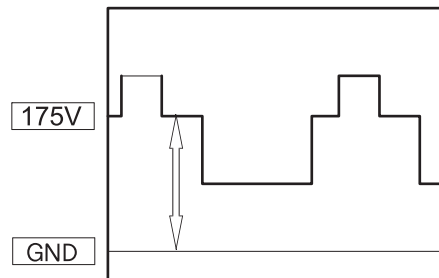
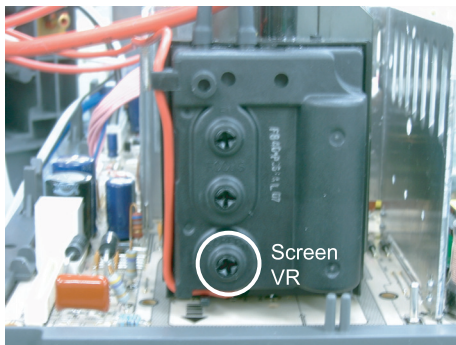
1. Select "Info → Menu → Mute → Power On" to enter Service Mode.
2. Initialize all settings to the values appropriate to the corresponding model.
3. Display the Toshiba pattern.



4. Using an Oscilloscope, measure the size of RK, BK and GK to the Pedestal Level.



5. Adjust the Screen VR of FEB so that the highest point of the Pedestal Level is 175V.



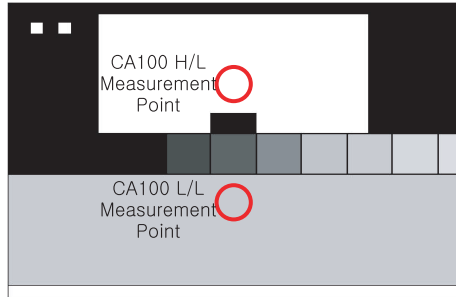
Adjust Method the Screen Voltage for Toshiba Pattern by Oscilloscope

※ Screen Voltage Measurement Data

No	Item	Data	Required Adjustment
1	Screen Voltage	The Highest Voltage among RK, GK and BK 190Vp-p-3V	Screen Voltage

### 3-5-3 Adjusting the White Balance

1. Initialize all settings to the values appropriate to the corresponding model.
2. Select "Info → Menu → Mute → Power On" to enter Service Mode.
3. Initialize all settings to the values appropriate to the corresponding model.
4. Display the Toshiba pattern and adjust the White Balance using CA100 with the coordinates of the corresponding model.



[CA100]

5. Enter Video Adjust1 of Service Mode. Adjust Low/Light.
  - Adjust Sub Bright to set Y.
  - Adjust B Cutoff to set y.
  - Adjust R Cutoff to set x.
6. Enter Video Adjust1 of Service Mode. Adjust High/Light.
  - Adjust Sub Contrast to set Y.
  - Adjust B Drive to set y.
  - Adjust R Drive to set x.
7. Check Low/Light and readjust it if its value has been changed.
8. If you have readjusted Low/Light, readjust High/Light until the two values are identical to the coordinates of the corresponding model.

#### ※ White Balance Standard Data

No	Item	Data	Required Adjustment
1	White Balance	x:282±3 / y:290±3 / 40±3(High) x:282±3 / y:290±3 / 2.5±0.2(Low)	White Balance (Europe)

### 3-5-4 Check List for the Screen Voltage and White Balance Adjustment

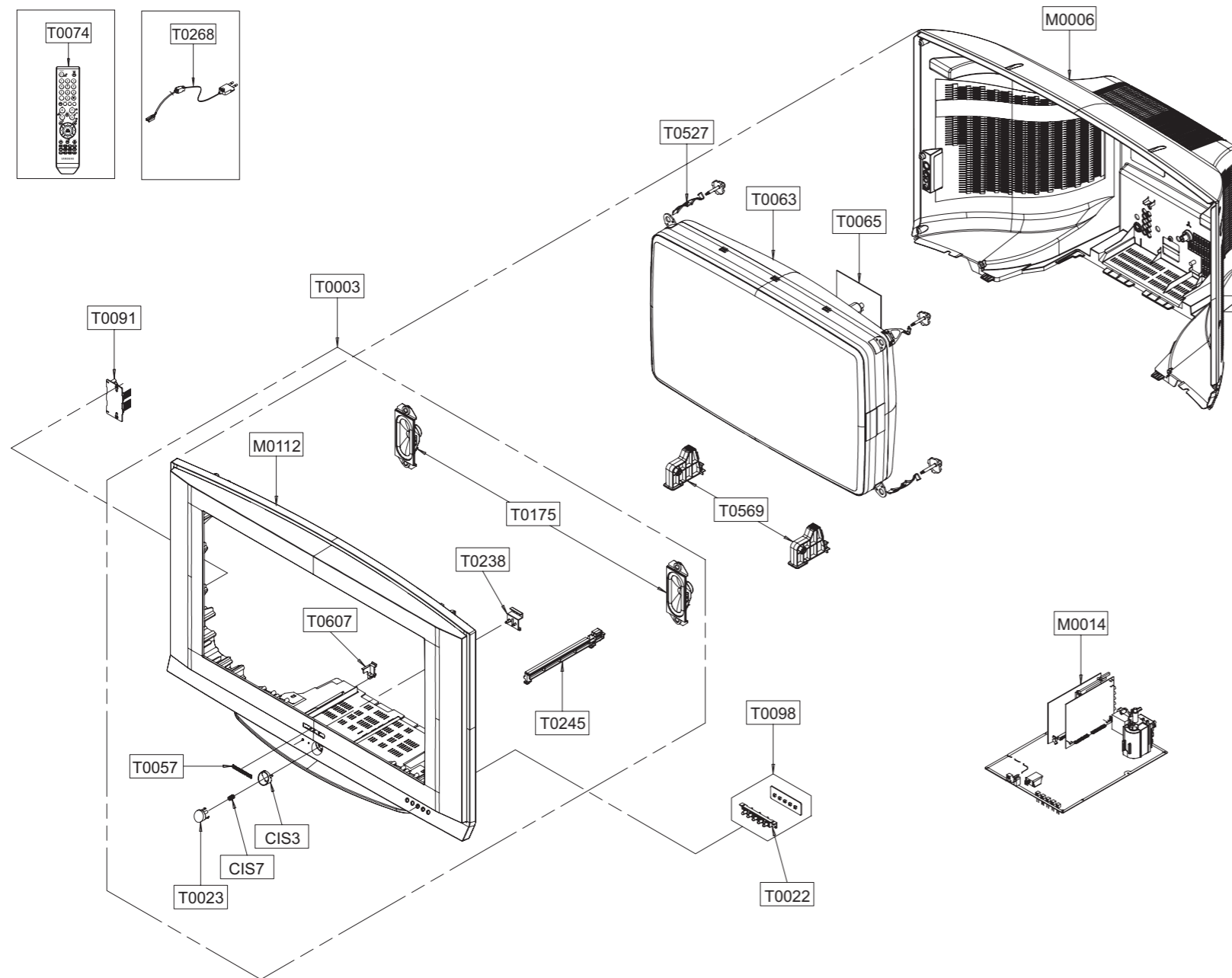
1. The Screen Voltage and White Balance are connected each other, and both of them have to be configured to the correct values.
2. Adjust the White Balance after the Screen Voltage was adjusted, and check if the Screen Voltage is normal after adjusting the White Balance.
3. If the White Balance is readjusted, check the Screen Voltage again.
4. When the adjustment is finished, check the following checklist.
  - If there is a spot on the screen when turning the TV set off/on, adjust the Screen Voltage again.
  - If there is a ghost line on the screen, adjust the Screen Voltage again.

# MEMO

## 4. Exploded View & Part List

### 4-1 WS32Z419D8XXEU

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



Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
CIS3	AA64-04333A	DECORATION-POWER	Z40,ABS,HB,GR515,AL	1	S.N.A	
CIS7	AA61-60003J	SPRING ETC-CS	-,SUS304,-,OD6,N7,OD6,-,	1	S.N.A	
M0006	AA63-01369B	COVER-REAR	32Z40(SEH),HIPS,FV2,BK500,S64	1	S.A	
M0014	AA94-15817C	ASSY PCB MAIN	WS32Z419D8XXEU,S64A,UNLIMI	1	S.A	
M0112	AA63-01364C	COVER-FRONT	32Z41,SEH,HIPS,HB,BLK,BKN157	1	S.A	
T0003	AA96-04064C	ASSY COVER P-FRONT	32Z41,XEU,HIPS HB,BLK	1	S.A	
T0022	AA64-04326B	KNOB CONTROL	Z41,ABS,HB,BK500	1	S.N.A	
T0023	AA64-04328B	KNOB POWER	Z40,ABS,HB,BKN1576	1	S.N.A	
T0057	AA64-01062B	BADGE-BRAND	ALL,AL,T1.5,10.6,L65,BLK.SIL	1	S.N.A	
T0063	AA03-00482A	CRT COLOR	W76QFV891X302,+380mG,0.245,14.	1	S.A	
T0065	AA94-15823A	ASSY PCB CRT	WS32Z409D8XXEU,S64A,UNLIMIT	1	S.A	
T0074	AA59-00379A	REMOCON	WS32Z40,TM86,44,PAL,S59B,IDTV/TV	1	S.A	
T0091	AA94-15824A	ASSY PCB MISC-AV SIDE	WS32Z409D8XXEU,S6	1	S.A	
T0098	AA94-15114H	ASSY PCB MISC-CONTROL	32Z41,S64A,UNLIMIT	1	S.N.A	
T0175	AA96-03164A	ASSY SPEAKER P	8ohm,6*13cm,Z31,10W,SPK+W	1	S.A	
T0238	AA64-04340A	WINDOW REMOCON-LED	Z40(SEH,TSE),PC,CLEAR	1	S.N.A	
T0245	AA61-00711D	HOLDER-PCB	29U1,U2,HIPS VO,BK502(HB-PROP	1	S.N.A	
T0268	AA39-10007X	CBF-POWER CORD	-,EP3/YES(HK),H03VVH2-F,2	1	S.A	
T0527	AA65-00061A	CLAMPER CORE-D,COIL	NYLON-66,VO,NTR	5	S.N.A	
T0569	AA61-01433A	SUPPORT-CRT	Z40,HIPS VO,GR503	2	S.A	
T0607	AA61-40113A	STOPPER-PCB	501H,HIPS,-,HB,NTR,-	1	S.A	

## 5. Electrical Part List

### 5-1 WS32Z419D8XXEU

You can search for the updated part code through ITSELF web site.

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

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
<b>ASSY CHASSIS</b>						
M0017	AA91-09846A	ASSY CHASSIS	WS32Z419D8XXEU,S64A,UNLIMIT	1	S.N.A	
<b>T0098</b>	<b>AA94-15114H</b>	<b>ASSY PCB MISC-CONTROL</b>	<b>32Z41,S64A,UNLIMIT</b>	<b>1</b>	<b>S.N.A</b>	
DZY04	2202-000796	C-CERAMIC,MLC-AXIAL	1NF,10%,50V,Y5P,TP,3	1	S.A	
LY01	2701-000114	INDUCTOR-AXIAL	10UH,10%,2534	1	S.A	
M0119	AA41-01199A	PCB CONTROL	CT-32Z30HDK,FR-1,1L,A,1.6T,2	1	S.N.A	
M2893	BH39-00419A	LEAD CONNECTOR	CT-32Z32HD,UL1007#26,UL/C	1	S.A	
RY02	2001-000577	R-CARBON	2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RY03	2001-000007	R-CARBON	3KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RY04	2001-000878	R-CARBON	6.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
RY05	2001-000009	R-CARBON	20KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
SWY02	3404-000243	SWITCH-TACT	15V,20mA,160gf,6x3.4mm,SPST	1	S.A	
SWY03	3404-000243	SWITCH-TACT	15V,20mA,160gf,6x3.4mm,SPST	1	S.A	
SWY04	3404-000243	SWITCH-TACT	15V,20mA,160gf,6x3.4mm,SPST	1	S.A	
SWY05	3404-000243	SWITCH-TACT	15V,20mA,160gf,6x3.4mm,SPST	1	S.A	
SWY06	3404-000243	SWITCH-TACT	15V,20mA,160gf,6x3.4mm,SPST	1	S.A	
T0022	AA64-04326B	KNOB CONTROL	Z41,ABS,HB,BK500	1	S.N.A	
T0057	AA97-15792E	ASSY AUTO-CONTROL	CT-32Z40HD,K63A,NATURA	1	S.N.A	
T0245	0202-001522	SOLDER-WIRE FLUX	LFA3-107,-,D1.2,96.5Sn/	0.001	S.N.A	
<b>T0065</b>	<b>AA94-15823A</b>	<b>ASSY PCB CRT</b>	<b>WS32Z409D8XXEU,S64A,UNLIMIT</b>	<b>1</b>	<b>S.A</b>	
C501	2201-000193	C-CERAMIC,DISC	0.01nF,0.25pF,50V,C0G,-,4	1	S.A	
C504	2301-000016	C-FILM,LEAD-PEF	22nF,5%,100V,TP,7.2x4.5x	1	S.A	
C505	2301-000016	C-FILM,LEAD-PEF	22nF,5%,100V,TP,7.2x4.5x	1	S.A	
C506	2301-000016	C-FILM,LEAD-PEF	22nF,5%,100V,TP,7.2x4.5x	1	S.A	
C507	2301-000016	C-FILM,LEAD-PEF	22nF,5%,100V,TP,7.2x4.5x	1	S.A	
C508	2301-001211	C-FILM,LEAD-PPF	22nF,5%,400V,TP,20x7x14m	1	S.A	
C509	2301-000016	C-FILM,LEAD-PEF	22nF,5%,100V,TP,7.2x4.5x	1	S.A	
C511	2301-001211	C-FILM,LEAD-PPF	22nF,5%,400V,TP,20x7x14m	1	S.A	
C512	2301-001211	C-FILM,LEAD-PPF	22nF,5%,400V,TP,20x7x14m	1	S.A	
C513	2201-000600	C-CERAMIC,DISC	0.56NF,10%,50V,Y5P,TP,5X3	1	S.A	
C514	2201-000599	C-CERAMIC,DISC	0.56NF,10%,500V,Y5P,TP,5.	1	S.A	
C515	2201-000599	C-CERAMIC,DISC	0.56NF,10%,500V,Y5P,TP,5.	1	S.A	
C516	2401-000302	C-AL	100uF,20%,25V,GP,TP,6.3x11,5	1	S.A	
C517	2201-000173	C-CERAMIC,DISC	10NF,10%,500V,Y5P,BK,16X4	1	S.A	
C518	2305-000665	C-FILM,LEAD-PEF	100nF,5%,63V,TP,7.5x4.0x	1	S.A	
C519	2401-000430	C-AL	10uF,20%,250V,GP,TP,10x16mm,5m	1	S.A	
C520	2401-000703	C-AL	2200uF,20%,25V,GP,-,12.5x25mm,	1	S.A	
C521	2201-000173	C-CERAMIC,DISC	10NF,10%,500V,Y5P,BK,16X4	1	S.A	
C522	2201-002117	C-CERAMIC,DISC	4.7nF,20%,3000V,Y5U,-,16x	1	S.A	
C526	2301-001211	C-FILM,LEAD-PPF	22nF,5%,400V,TP,20x7x14m	1	S.A	
C528	2401-000832	C-AL	220uF,20%,25V,GP,TP,8x11.5,5	1	S.A	
C532	2401-001563	C-AL	47uF,20%,400V,GP,TP,16x25,7.5	1	S.A	
C533	2305-000665	C-FILM,LEAD-PEF	100nF,5%,63V,TP,7.5x4.0x	1	S.A	
C534	2401-000832	C-AL	220uF,20%,25V,GP,TP,8x11.5,5	1	S.A	
C536	2202-000121	C-CERAMIC,MLC-AXIAL	0.1nF,10%,50V,Y5P,-,	1	S.A	
C537	2202-000121	C-CERAMIC,MLC-AXIAL	0.1nF,10%,50V,Y5P,-,	1	S.A	
C538	2202-000121	C-CERAMIC,MLC-AXIAL	0.1nF,10%,50V,Y5P,-,	1	S.A	
CF01	2401-000025	C-AL	100uF,20%,16V,GP,TP,6.3x11,5	1	S.A	
CF02	2201-000017	C-CERAMIC,DISC	1nF,10%,50V,Y5P,-,5x3.5mm	1	S.A	
CF04	2401-000045	C-AL	10uF,20%,160V,GP,TP,10x16,5	1	S.A	
CF05	2201-000019	C-CERAMIC,DISC	10nF,+80-20%,500V,Y5V,-,1	1	S.A	
CF06	2201-002103	C-CERAMIC,DISC	0.015NF,5%,500V,C0G,TP,6.	1	S.A	
CF07	2201-000604	C-CERAMIC,DISC	0.056nF,+100-0%,500V,SL,-	1	S.A	
CF71	2401-000318	C-AL	100uF,20%,25V,LZ,TP,8x11.5,5	1	S.A	
CF73	2401-000045	C-AL	10uF,20%,160V,GP,TP,10x16,5	1	S.A	





Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R523	2001-000890	R-CARBON	6.8KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R525	2002-001006	R-COMPOSITION	4.7Kohm,15%,1/2W,AA,TP,3.7	1	S.A	
R527	2001-000241	R-CARBON	1.5KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R528	2008-000205	R-FUSIBLE(S)	10ohm,5%,1/2W,AF,TP,2.5x6.5	1	S.A	
R529	2008-000204	R-FUSIBLE(S)	0.22ohm,10%,1/2W,AF,TP,2.5x	1	S.A	
R530	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R531	2001-000009	R-CARBON	20KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R532	2004-001893	R-METAL(S)	22Kohm,1%,1/2W,AA,TP,2.5x6.5m	1	S.A	
R533	2001-000066	R-CARBON(S)	10KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R534	2004-004097	R-METAL	1.6Kohm,2%,1/2W,AA,TP,2.4X6.4mm	1	S.A	
R535	2001-001103	R-CARBON(S)	20KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R536	2001-000085	R-CARBON(S)	100KOHM,5%,1/2W,AA,TP,2.4X6.	1	S.A	
R537	2001-001196	R-CARBON(S)	9.1KOHM,5%,1/2W,AA,TP,2.4X6.	1	S.A	
R538	2001-001062	R-CARBON(S)	10MOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R540	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R541	2008-001053	R-FUSIBLE	22ohm,5%,1/2W,AF,TP,2.5x6.5mm	1	S.A	
R554	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R555	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R556	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R559	2008-001110	R-FUSIBLE(S)	68ohm,5%,2W,AG,TP,3.9X12mm	1	S.A	
R560	2001-000052	R-CARBON(S)	3.3KOHM,5%,1/2W,AA,TP,2.4X6.	1	S.A	
R561	2001-001126	R-CARBON(S)	300OHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R562	2001-000085	R-CARBON(S)	100KOHM,5%,1/2W,AA,TP,2.4X6.	1	S.A	
R563	2001-000085	R-CARBON(S)	100KOHM,5%,1/2W,AA,TP,2.4X6.	1	S.A	
R564	2001-000066	R-CARBON(S)	10KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R565	2001-001071	R-CARBON(S)	12KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R566	2001-001040	R-CARBON(S)	0.68OHM,5%,1/2W,AA,TP,2.4X6.	1	S.A	
R567	2006-001081	R-CEMENT	82ohm,5%,5W,CJ,TP,14x10x27mm	1	S.A	
R568	2006-001081	R-CEMENT	82ohm,5%,5W,CJ,TP,14x10x27mm	1	S.A	
RF11	2001-001175	R-CARBON(S)	62OHM,5%,1/2W,AA,TP,2.4X6.4M	1	S.A	
RF12	2003-001093	R-METAL OXIDE(S)	12Kohm,5%,2W,AF,TP,3.9x	1	S.A	
RF13	2008-000292	R-FUSIBLE(S)	3.3ohm,5%,2W,AF,TP,3.9x10mm	1	S.A	
RF20	2003-001042	R-METAL OXIDE(S)	5.6Kohm,5%,2W,AF,TP,3.9	1	S.A	
RF21	2003-001042	R-METAL OXIDE(S)	5.6Kohm,5%,2W,AF,TP,3.9	1	S.A	
RF22	2003-000995	R-METAL OXIDE(S)	3.3Kohm,5%,2W,AF,TP,3.9	1	S.A	
RF35	2003-001024	R-METAL OXIDE(S)	150ohm,5%,2W,AF,TP,3.9x	1	S.A	
T0074	1201-001131	IC-VIDEO AMP	6111,SIP,9P,-,SINGLE,-,PLAS	1	S.A	
T0081	BH62-00041A	HEAT SINK-TR	PN17LT,A1050S,T1.0,50,23,WH	1	S.N.A	
T0087	1203-000243	IC-POSI.FIXED REG.	7812,TO-220,3P,-,PLAS	1	S.A	
T0100	AA97-16540A	ASSY AUTO-CRT	WS32Z409D8XXEU,S64A,UNLIMI	1	S.N.A	
T0175	AA62-00147A	HEAT SINK-PS	K62A,A1050,T2.0,35mm,40mm,W	1	S.N.A	
T0245	0202-001522	SOLDER-WIRE FLUX	LFA3-107,-,D1.2,96.5Sn/	0.01	S.N.A	
T0245	AA39-20010D	LEAD CONNECTOR-ASSY	,1P,400,YFH800-01,S,	1	S.A	
T0310	4715-001036	SURGE ABSORBER	500V,20%,--,-,TP	1	S.N.A	
T0310	4715-001036	SURGE ABSORBER	500V,20%,--,-,TP	1	S.N.A	
T0310	4715-001036	SURGE ABSORBER	500V,20%,--,-,TP	1	S.N.A	
△V999S	3704-001194	SOCKET-CRT	8P+SEN,29PI,22.5PI,NI+SN,-	1	S.A	
<b>T0091</b>	<b>AA94-15824A</b>	<b>ASSY PCB MISC-A/V SIDE</b>	<b>WS32Z409D8XXEU,S6</b>	<b>1</b>	<b>S.A</b>	
C701	2202-000279	C-CERAMIC,MLC-AXIAL	47pF,5%,50V,SL,TP,3.	1	S.A	
C702	2202-000121	C-CERAMIC,MLC-AXIAL	0.1nF,10%,50V,Y5P,-,	1	S.A	
C703	2202-000121	C-CERAMIC,MLC-AXIAL	0.1nF,10%,50V,Y5P,-,	1	S.A	
C704	2202-000279	C-CERAMIC,MLC-AXIAL	47pF,5%,50V,SL,TP,3.	1	S.A	
DZ701	0403-000708	DIODE-ZENER	MTZJ13B,12.55-13.21V,500mW,D	1	S.A	
DZ702	0403-000708	DIODE-ZENER	MTZJ13B,12.55-13.21V,500mW,D	1	S.A	
DZ703	0403-000720	DIODE-ZENER	MTZJ9.1B,8.57-9.01V,500mW,DO	1	S.A	
DZ704	0403-001322	DIODE-ZENER	MTZJ8.2B,7.78-8.19V,500mW,DO	1	S.A	
DZ705	0403-001322	DIODE-ZENER	MTZJ8.2B,7.78-8.19V,500mW,DO	1	S.A	
DZ706	0403-001322	DIODE-ZENER	MTZJ8.2B,7.78-8.19V,500mW,DO	1	S.A	
DZ707	0403-001322	DIODE-ZENER	MTZJ8.2B,7.78-8.19V,500mW,DO	1	S.A	
JA701	3722-001164	JACK-PIN	3P,SN,WH:YE:RE,STRAIGHT	1	S.A	
JK01	3722-000544	JACK-VHS	4P,AG,BLK,STRAIGHT	1	S.A	
L701	2701-000114	INDUCTOR-AXIAL	10UH,10%,2534	1	S.A	
L702	2701-000168	INDUCTOR-AXIAL	3.3UH,5%,2534	1	S.A	
L703	2701-000168	INDUCTOR-AXIAL	3.3UH,5%,2534	1	S.A	
L704	2701-000114	INDUCTOR-AXIAL	10UH,10%,2534	1	S.A	
M2893	AA39-00381A	LEAD CONNECTOR	CS29M6SPNX/BWT,UL1185#26,	1	S.A	
R701	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	

## Electrical Part List

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R702	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
T0091	AA41-01211A	PCB-SIDE A/V	WS32Z40,FR-1,1,A,1.6T,330X2	1	S.N.A	
T0245	0202-001522	SOLDER-WIRE FLUX	LFA3-107,-,D1.2.96.5Sn/	0.001	S.N.A	
T0569	AA97-16541A	ASSY AUTO-A/V SIDE	WS32Z409D8XXEU,S64A,U	1	S.N.A	
<b>M0014</b>	<b>AA94-15817C</b>	<b>ASSY PCB MAIN</b>	<b>WS32Z419D8XXEU,S64A,UNLIMI</b>	<b>1</b>	<b>S.A</b>	
C101	2401-000603	C-AL	1UF,20%,50V,GP,TP,5X11,2	1	S.A	
C102	2305-000665	C-FILM,LEAD-PEF	100nF,5%,63V,TP,7.5x4.0x	1	S.A	
C103	2305-000665	C-FILM,LEAD-PEF	100nF,5%,63V,TP,7.5x4.0x	1	S.A	
C104	2401-002463	C-AL	470uF,20%,16V,GP,TP,8x11.5,5	1	S.A	
C105	2305-000665	C-FILM,LEAD-PEF	100nF,5%,63V,TP,7.5x4.0x	1	S.A	
C106	2401-003578	C-AL	1000uF,20%,10V,GP,TP,8x20mm,5	1	S.A	
C107	2401-000480	C-AL	10uF,20%,50V,GP,TP,5x11,5	1	S.A	
C108	2401-002144	C-AL	47uF,20%,16V,GP,TP,5x11,5	1	S.A	
C109	2202-000121	C-CERAMIC,MLC-AXIAL	0.1nF,10%,50V,Y5P,-,	1	S.A	
C110	2202-000121	C-CERAMIC,MLC-AXIAL	0.1nF,10%,50V,Y5P,-,	1	S.A	
C302	2401-000365	C-AL	100uF,20%,50V,WT,TP,10x12.5mm,	1	S.A	
C303	2201-000132	C-CERAMIC,DISC	0.1NF,10%,500V,Y5P,TP,6.5	1	S.A	
C304	2305-000285	C-FILM,LEAD-PEF	220NF,5%,100V,TP,10.5X5.	1	S.A	
C306	2301-000224	C-FILM,LEAD-PEF	22nF,5%,50V,TP,7.4x3.9x1	1	S.A	
C307	2401-000365	C-AL	100uF,20%,50V,WT,TP,10x12.5mm,	1	S.A	
C308	2305-000411	C-FILM,LEAD-PEF	470nF,5%,50V,TP,7.3x4.8x	1	S.A	
C401	2201-000556	C-CERAMIC,DISC	0.47NF,10%,500V,Y5P,TP,5.	1	S.A	
C402	2401-002231	C-AL	470uF,20%,50V,WT,TP,13x20mm,5m	1	S.A	
C403	2201-000556	C-CERAMIC,DISC	0.47NF,10%,500V,Y5P,TP,5.	1	S.A	
C404	2401-001838	C-AL	470uF,20%,25V,WT,TP,10x16,5	1	S.A	
C405	2401-000038	C-AL	470uF,20%,25V,GP,TP,10x12.5mm,	1	S.A	
C406	2303-000163	C-FILM,LEAD-PPF	2.2nF,5%,800V,TP,15x13x8	1	S.A	
C407	2305-000412	C-FILM,LEAD-PEF	470nF,5%,63V,TP,-,5mm	1	S.A	
C408	2301-001083	C-FILM,LEAD-PPF	27nF,5%,400V,TP,20x7.5x1	1	S.A	
C409	2301-001211	C-FILM,LEAD-PPF	22nF,5%,400V,TP,20x7x14m	1	S.A	
C411	2301-000160	C-FILM,LEAD-PEF	12nF,5%,50V,TP,11.0x6.0x	1	S.A	
C412	2301-000383	C-FILM,LEAD-PEF	10nF,5%,50V,TP,6x7x3.2mm	1	S.A	
C414	2401-003139	C-AL	1000uF,20%,25V,WT,TP,10*20,5mm	1	S.A	
C415	2303-000002	C-FILM,LEAD-PPF	8.2nF,0.05,400V,TP,19x18	1	S.A	
C416	2305-000665	C-FILM,LEAD-PEF	100nF,5%,63V,TP,7.5x4.0x	1	S.A	
C417	2305-000665	C-FILM,LEAD-PEF	100nF,5%,63V,TP,7.5x4.0x	1	S.A	
C418	2401-002459	C-AL	220uF,20%,25V,LZ,TP,10x16,5	1	S.A	
C419	2305-000285	C-FILM,LEAD-PEF	220NF,5%,100V,TP,10.5X5.	1	S.A	
C420	2301-000213	C-FILM,LEAD-PEF	220nF,5%,250V,TP,21.5x11	1	S.A	
C421	2201-000556	C-CERAMIC,DISC	0.47NF,10%,500V,Y5P,TP,5.	1	S.A	
C422	2401-000040	C-AL	47UF,20%,250V,WT,TP,12.5X25MM,5	1	S.A	
C423	2301-001257	C-FILM,LEAD	640nF,5%,400V,BK,26x14.5x24,	1	S.A	
C424	2201-000556	C-CERAMIC,DISC	0.47NF,10%,500V,Y5P,TP,5.	1	S.A	
C425	2301-001774	C-FILM,LEAD	130nF,5%,400V,TP,18.0X13.5X7	1	S.A	
C426	2306-000166	C-FILM,LEAD-PPF	220nF,5%,400V,BK,26x17x9	1	S.A	
C433	2401-000480	C-AL	10uF,20%,50V,GP,TP,5x11,5	1	S.A	
C448	2401-000787	C-AL	220uF,20%,160V,GP,BK,16x31.5mm,7.5	1	S.A	
C601	2401-001261	C-AL	4.7uF,20%,50V,BP,TP,5x11mm,5mm	1	S.A	
C602	2401-001261	C-AL	4.7uF,20%,50V,BP,TP,5x11mm,5mm	1	S.A	
C603	2401-001261	C-AL	4.7uF,20%,50V,BP,TP,5x11mm,5mm	1	S.A	
C604	2401-001261	C-AL	4.7uF,20%,50V,BP,TP,5x11mm,5mm	1	S.A	
C607	2301-000342	C-FILM,LEAD-PEF	2.2nF,5%,50V,TP,7.4x3.9x	1	S.A	
C608	2301-000342	C-FILM,LEAD-PEF	2.2nF,5%,50V,TP,7.4x3.9x	1	S.A	
C609	2401-001914	C-AL	1uF,20%,50V,BP,TP,5x11,5	1	S.A	
C610	2401-001914	C-AL	1uF,20%,50V,BP,TP,5x11,5	1	S.A	
C615	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
C616	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
C619	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
C621	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
C628	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
C629	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
C630	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
C634	2202-000231	C-CERAMIC,MLC-AXIAL	0.33NF,10%,50V,Y5P,T	1	S.A	
C640	2401-002075	C-AL	4.7uF,20%,50V,GP,TP,5x11,5	1	S.A	
C642	2401-001998	C-AL	1000uF,20%,25V,GP,TP,10x20,5mm	1	S.A	
C648	2305-000665	C-FILM,LEAD-PEF	100nF,5%,63V,TP,7.5x4.0x	1	S.A	
C801	2401-000703	C-AL	2200uF,20%,25V,GP,-,12.5x25mm,	1	S.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
C802	2401-000822	C-AL	220uF,20%,200V,WT,BK,22x35,10	1	S.A	
C803	2401-002227	C-AL	330uF,20%,450V,GP,BK,35x45,10	1	S.A	
C804	2401-002463	C-AL	470uF,20%,16V,GP,TP,8x11.5,5	1	S.A	
C805	2401-000480	C-AL	10uF,20%,50V,GP,TP,5x11,5	1	S.A	
C806	2306-000112	C-FILM,LEAD-PPF	100nF,20%,250V,BK,-,15mm	1	S.A	
C807	2301-001435	C-FILM,LEAD-PPF	1.5nF,5%,1.2kV,TP,15x8x1	1	S.A	
C808	2401-001561	C-AL	47uF,20%,35V,WT,TP,8x11.5,5	1	S.A	
C809	2301-000192	C-FILM,LEAD-PEF	1nF,5%,50V,TP,5.3x10mm,5	1	S.A	
C810	2401-000039	C-AL	1000uF,20%,16V,GP,TP,10x16,5	1	S.A	
C811	2401-002075	C-AL	4.7uF,20%,50V,GP,TP,5x11,5	1	S.A	
C812	2401-000603	C-AL	1uF,20%,50V,GP,TP,5X11,2	1	S.A	
C813	2401-000603	C-AL	1uF,20%,50V,GP,TP,5X11,2	1	S.A	
C814	2401-003036	C-AL	100uF,20%,16V,GP,TP,5X11mm,5mm	1	S.A	
C815	2201-000406	C-CERAMIC,DISC	0.27NF,10%,2KV,Y5P,TP,6.3	1	S.A	
C816	2201-000599	C-CERAMIC,DISC	0.56NF,10%,500V,Y5P,TP,5.	1	S.A	
C817	2305-000289	C-FILM,LEAD-PEF	220nF,5%,63V,TP,-,5mm	1	S.A	
C818	2301-001194	C-FILM,LEAD-PPF	470nF,5%,250V,TP,18x16x8	1	S.A	
C819	2201-000374	C-CERAMIC,DISC	0.22NF,5%,50V,C0G,TP,10.5	1	S.A	
C820	2301-000192	C-FILM,LEAD-PEF	1nF,5%,50V,TP,5.3x10mm,5	1	S.A	
C821	2301-000356	C-FILM,LEAD-PEF	47nF,5%,50V,TP,7.5x4.0x6	1	S.A	
C822	2201-000599	C-CERAMIC,DISC	0.56NF,10%,500V,Y5P,TP,5.	1	S.A	
C823	2401-000142	C-AL	1000uF,20%,16V,WT,TP,10x20,5	1	S.A	
C825	2401-000038	C-AL	470uF,20%,25V,GP,TP,10x12.5mm,	1	S.A	
C826	2201-000332	C-CERAMIC,DISC	2.2nF,20%,250V,Y5U,-,9x4m	1	S.A	
C838	2401-000039	C-AL	1000uF,20%,16V,GP,TP,10x16,5	1	S.A	
C839	2201-000599	C-CERAMIC,DISC	0.56NF,10%,500V,Y5P,TP,5.	1	S.A	
C840	2401-002463	C-AL	470uF,20%,16V,GP,TP,8x11.5,5	1	S.A	
C841	2401-000039	C-AL	1000uF,20%,16V,GP,TP,10x16,5	1	S.A	
C842	2401-003036	C-AL	100uF,20%,16V,GP,TP,5X11mm,5mm	1	S.A	
C843	2401-003036	C-AL	100uF,20%,16V,GP,TP,5X11mm,5mm	1	S.A	
C901	2401-002144	C-AL	47uF,20%,16V,GP,TP,5x11,5	1	S.A	
C902	2202-002037	C-CERAMIC,MLC-AXIAL	100nF,80-20%,50V,Y5V	1	S.A	
CA701	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA702	2203-000783	C-CER,CHIP	0.33nF,5%,50V,C0G,1608	1	S.A	
CA703	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA704	2203-000783	C-CER,CHIP	0.33nF,5%,50V,C0G,1608	1	S.A	
CA705	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA706	2402-001178	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A	
CA707	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA709	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA710	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA711	2203-005065	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,1608	1	S.A	
CA712	2203-005065	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,1608	1	S.A	
CA713	2203-005065	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,1608	1	S.A	
CA714	2203-005065	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,1608	1	S.A	
CA715	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA801	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA802	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4	1	S.A	
CA803	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA804	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4	1	S.A	
CA805	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4	1	S.A	
CA806	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA807	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA811	2402-001178	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A	
CA812	2402-001178	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A	
CA813	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA815	2402-001178	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A	
CA816	2402-001178	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A	
CA817	2402-001178	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A	
CA818	2402-001178	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A	
CA819	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA820	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA821	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA822	2402-001178	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A	
CA823	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA824	2402-001178	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A	
CA825	2402-001178	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A	
CA827	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	

Electrical Part List

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
CA829	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA830	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA831	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA834	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA835	2409-001049	C-ORGANIC	47UF,20%,6.3V,FX,TP,5X5.9MM,-	1	S.A	
CA836	2409-001049	C-ORGANIC	47UF,20%,6.3V,FX,TP,5X5.9MM,-	1	S.A	
CA839	2409-001065	C-ORGANIC	82uF,20%,16V,WT,TP,8X6.9mm,-	1	S.A	
CA840	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,1608	1	S.A	
CA841	2203-000405	C-CER,CHIP	0.18nF,5%,50V,C0G,1608	1	S.A	
CA842	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,1608	1	S.A	
CA843	2203-000715	C-CER,CHIP	3.3nF,10%,50V,X7R,1608	1	S.A	
CA845	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA846	2402-001158	C-AL,SMD	1UF,20%,50V,WT,TP,4X5.2MM	1	S.A	
CA847	2409-001114	C-POLYMER ,CHIP	220UF,20%,10V,LR,TP,7343	1	S.A	
CA848	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA849	2409-001049	C-ORGANIC	47UF,20%,6.3V,FX,TP,5X5.9MM,-	1	S.A	
CA850	2402-000173	C-AL,SMD	4.7uF,20%,35V,GP,TP,4.3x4.3x5.4	1	S.A	
CA851	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA901	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CA902	2402-000108	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.2m	1	S.A	
CD901	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4	1	S.A	
CD902	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD903	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4	1	S.A	
CD904	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD905	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD906	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4	1	S.A	
CD907	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD908	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD909	2203-001397	C-CER,CHIP	2.2nF,5%,50V,NP0,1608	1	S.A	
CD910	2203-002494	C-CER,CHIP	470nF,10%,16V,X7R,2012	1	S.A	
CD911	2402-001238	C-AL,SMD	1uF,20%,50V,HR,TP,4.3x4.3x5.2mm	1	S.A	
CD912	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD913	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD914	2402-001165	C-AL,SMD	4.7UF,20%,35V,WT,TP,4X5.8MM	1	S.A	
CD915	2402-001178	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A	
CD916	2203-000440	C-CER,CHIP	1nF,10%,50V,X7R,1608	1	S.A	
CD917	2203-000440	C-CER,CHIP	1nF,10%,50V,X7R,1608	1	S.A	
CD918	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD919	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4	1	S.A	
CD920	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD921	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD922	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD923	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD924	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD925	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD927	2301-001664	C-FILM,LEAD-OTHER	100nF,3%,50V,TP,20x16x	1	S.A	
CD928	2203-000440	C-CER,CHIP	1nF,10%,50V,X7R,1608	1	S.A	
CD930	2402-001178	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A	
CD931	2203-002494	C-CER,CHIP	470nF,10%,16V,X7R,2012	1	S.A	
CD932	2203-002494	C-CER,CHIP	470nF,10%,16V,X7R,2012	1	S.A	
CD933	2402-001165	C-AL,SMD	4.7UF,20%,35V,WT,TP,4X5.8MM	1	S.A	
CD934	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4	1	S.A	
CD935	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD936	2203-001034	C-CER,CHIP	5.6nF,10%,50V,X7R,1608	1	S.A	
CD939	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD940	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD941	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD942	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD943	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD944	2203-000888	C-CER,CHIP	4.7nF,10%,50V,X7R,1608	1	S.A	
CD945	2203-002494	C-CER,CHIP	470nF,10%,16V,X7R,2012	1	S.A	
CD946	2203-002494	C-CER,CHIP	470nF,10%,16V,X7R,2012	1	S.A	
CD947	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD948	2203-006170	C-CER,CHIP	220nF,10%,16V,X7R,1608	1	S.A	
CD949	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4	1	S.A	
CD950	2203-000975	C-CER,CHIP	47nF,10%,25V,X7R,TP,1608,-	1	S.A	
CD951	2402-001129	C-AL,SMD	47UF,20%,16V,WT,TP,6.3X5.2MM	1	S.A	
CD952	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
CD953	2203-006170	C-CER,CHIP	220nF,10%,16V,X7R,1608	1	S.A	
CD954	2203-001397	C-CER,CHIP	2.2nF,5%,50V,NP0,1608	1	S.A	
CD955	2203-006333	C-CER,CHIP	10000nF,20%,16V,X5R,TP,3216	1	S.A	
CD956	2203-001397	C-CER,CHIP	2.2nF,5%,50V,NP0,1608	1	S.A	
CD958	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CD959	2301-000224	C-FILM,LEAD-PEF	22nF,5%,50V,TP,7.4x3.9x1	1	S.A	
CD960	2301-001664	C-FILM,LEAD-OTHER	100nF,3%,50V,TP,20x16x	1	S.A	
CF01	2203-000783	C-CER,CHIP	0.33nF,5%,50V,C0G,1608	1	S.A	
CF02	2203-000783	C-CER,CHIP	0.33nF,5%,50V,C0G,1608	1	S.A	
CF03	2203-000783	C-CER,CHIP	0.33nF,5%,50V,C0G,1608	1	S.A	
CF05	2203-000783	C-CER,CHIP	0.33nF,5%,50V,C0G,1608	1	S.A	
CF06	2203-000783	C-CER,CHIP	0.33nF,5%,50V,C0G,1608	1	S.A	
CF07	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,1608	1	S.A	
CF08	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,1608	1	S.A	
CF09	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,1608	1	S.A	
CF10	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,1608	1	S.A	
CF11	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,1608	1	S.A	
CF12	2203-000236	C-CER,CHIP	0.1nF,5%,50V,C0G,1608	1	S.A	
CH001	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH002	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH003	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH004	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH005	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH006	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH007	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH008	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH009	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH010	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH011	2203-000626	C-CER,CHIP	0.022nF,5%,50V,C0G,1608	1	S.A	
CH012	2203-000626	C-CER,CHIP	0.022nF,5%,50V,C0G,1608	1	S.A	
CH013	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH014	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH015	2402-001128	C-AL,SMD	100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A	
CH016	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH017	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH018	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH019	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH020	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH021	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH022	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH023	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH024	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH025	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH026	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH027	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH028	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH029	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH030	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH031	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH032	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH033	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH034	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH035	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH036	2402-000176	C-AL,SMD	10uF,20%,16V,GP,TP,4.3x4.3x5.4	1	S.A	
CH037	2402-000176	C-AL,SMD	10uF,20%,16V,GP,TP,4.3x4.3x5.4	1	S.A	
CH038	2402-000176	C-AL,SMD	10uF,20%,16V,GP,TP,4.3x4.3x5.4	1	S.A	
CH039	2402-000176	C-AL,SMD	10uF,20%,16V,GP,TP,4.3x4.3x5.4	1	S.A	
CH040	2402-000176	C-AL,SMD	10uF,20%,16V,GP,TP,4.3x4.3x5.4	1	S.A	
CH041	2402-000176	C-AL,SMD	10uF,20%,16V,GP,TP,4.3x4.3x5.4	1	S.A	
CH042	2402-001128	C-AL,SMD	100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A	
CH043	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CH044	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CIS05	0202-001477	SOLDER-CREAM	LST309-M,-,D20-45S,-96.5Sn/	0.465	S.N.A	
CIS1	0205-001154	OIL-SILICON	G746,-,-	0.2	S.N.A	
CIS1	0205-001154	OIL-SILICON	G746,-,-	0.1	S.N.A	
CIS1	0205-001154	OIL-SILICON	G746,-,-	0.1	S.N.A	
CIS1	0205-001154	OIL-SILICON	G746,-,-	0.4	S.N.A	
CIS1	0205-001154	OIL-SILICON	G746,-,-	0.1	S.N.A	

## Electrical Part List

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
CIS1	0205-001154	OIL-SILICON	G746,-,-	0.1	S.N.A	
CIS1	0205-001154	OIL-SILICON	G746,-,-	0.2	S.N.A	
CIS3	AA40-00154A	TUNER	DNOS403ZV261B(S),DNOS403ZV261B(S),	1	S.A	
CN01	3711-003495	HEADER-BOARD TO BOARD	NOWALL,34P,2R,2.54	1	S.A	
CN02	3711-003495	HEADER-BOARD TO BOARD	NOWALL,34P,2R,2.54	1	S.A	
CN03	3711-001111	HEADER-BOARD TO CABLE	BOX,8P,1R,2.5MM,AN	1	S.A	
CN05	3711-004067	HEADER-BOARD TO CABLE	BOX,4P,1R,2mm,ANGL	1	S.A	
CN10	3711-004484	HEADER-BOARD TO CABLE	BOX,5P,1R,2mm,STRA	1	S.A	
CN11	3711-002001	HEADER-BOARD TO CABLE	BOX,20P,2R,2MM,STR	1	S.A	
CN14	3711-003245	HEADER-BOARD TO CABLE	BOX,14P,1R,2.5MM,A	1	S.A	
CN301	AA60-40012F	PIN-GT	4P,2.36PI,6/12/14mm,NYLON66,LOCKI	1	S.N.A	
CN403	3711-001084	HEADER-BOARD TO CABLE	BOX,8P,1R,2.5MM,ST	1	S.A	
CN601	3711-003043	HEADER-BOARD TO CABLE	BOX,4P,1R,2.5MM,ST	1	S.A	
CN802	AA60-40012G	PIN-GT	3P,2.36PI,10/5mm,NYLON66,LOCKING	1	S.N.A	
CN906	3711-003543	CONNECTOR-HEADER	NOWALL,16P,1R,2.5MM,ANG	1	S.A	
CN906	3711-003543	CONNECTOR-HEADER	NOWALL,16P,1R,2.5MM,ANG	1	S.A	
CN909	AA37-00001A	CONNECTOR-FBT FIX PIN	JM-3500,CPTTV,0.36	1	S.A	
CN909	AA37-00001A	CONNECTOR-FBT FIX PIN	JM-3500,CPTTV,0.36	1	S.A	
△ CR405S	2306-000353	C-FILM,LEAD-PPF	6.3nF,5%,1.6KV,BK,26.5x8	1	S.A	
△ CR406S	2306-000326	C-FILM,LEAD-PPF	4.7nF,5%,1.6KV,BK,28.5X1	1	S.A	
△ CR407S	2301-001418	C-FILM,LEAD-PPF	1.5nF,5%,2kV,TP,29x7x13.	1	S.A	
CR425	2301-001420	C-FILM,LEAD-PPF	1200nF,5%,400V,BK,31x16.	1	S.A	
CS01	2402-001178	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A	
CS01	2401-000603	C-AL	1UF,20%,50V,GP,TP,5X11,2	1	S.A	
CS02	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CV201	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
CV202	2402-000173	C-AL,SMD	4.7uF,20%,35V,GP,TP,4.3x4.3x5.4	1	S.A	
CV203	2203-005384	C-CER,CHIP	4700nF,+80-20%,10V,Y5V,2012	1	S.A	
CV250	2203-000440	C-CER,CHIP	1nF,10%,50V,X7R,1608	1	S.A	
△ CX801S	2306-000318	C-FILM,LEAD-PPF	220nF,20%,275V,BK,26x7x1	1	S.A	
△ CY801S	2201-000987	C-CERAMIC,DISC	2.2NF,20%,400V,Y5U,BK,12.	1	S.A	
△ CY802S	2201-000963	C-CERAMIC,DISC	1NF,20%,400V,Y5U,TP,9.5X6	1	S.A	
D301	0402-000493	DIODE-RECTIFIER	1R5GU41,400V,1.5A,DO-15L	1	S.A	
D302	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
D401	0402-001295	DIODE-RECTIFIER	GUR460L-5700,600V,4A,DO-	1	S.A	
D402	0402-000540	DIODE-RECTIFIER	RU20A,600V,1.5A,-,TP	1	S.A	
D403	0402-000132	DIODE-RECTIFIER	1N4004,400V,1A,DO-41,TP	1	S.A	
D404	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
D405	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
D406	0402-000132	DIODE-RECTIFIER	1N4004,400V,1A,DO-41,TP	1	S.A	
D407	0402-000132	DIODE-RECTIFIER	1N4004,400V,1A,DO-41,TP	1	S.A	
D410	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
D411	0402-000534	DIODE-RECTIFIER	RG10V,400V,1.2A,DO-201,T	1	S.A	
D412	0402-000534	DIODE-RECTIFIER	RG10V,400V,1.2A,DO-201,T	1	S.A	
D413	0402-000534	DIODE-RECTIFIER	RG10V,400V,1.2A,DO-201,T	1	S.A	
D415	0402-000132	DIODE-RECTIFIER	1N4004,400V,1A,DO-41,TP	1	S.A	
D604	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
D801	0401-000006	DIODE-SWITCHING	BAV21,250V,200mA,DO-35,T	1	S.A	
△ D801S	0402-001399	DIODE-BRIDGE	GSIB660,600V,6A,SIP-4,BK	1	S.A	
D802	0401-000006	DIODE-SWITCHING	BAV21,250V,200mA,DO-35,T	1	S.A	
D803	0401-000006	DIODE-SWITCHING	BAV21,250V,200mA,DO-35,T	1	S.A	
D804	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
D805	0402-000546	DIODE-RECTIFIER	TVR10G,400V,1A,DO-41,TP	1	S.A	
D806	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
D807	0401-000005	DIODE-SWITCHING	1N4148,75V,150mA,DO-35,T	1	S.A	
D808	0402-000132	DIODE-RECTIFIER	1N4004,400V,1A,DO-41,TP	1	S.A	
DA801	0401-001099	DIODE-SWITCHING	1N4148WS,75V,150mA,SOD-3	1	S.A	
DA802	0402-000553	DIODE-RECTIFIER	SS24,40V,2A,DO-214AA,TP	1	S.A	
DC100	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,1608	1	S.A	
DC101	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC102	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,1608	1	S.A	
DC103	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC104	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC105	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,1608	1	S.A	
DC106	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC107	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,1608	1	S.A	
DC108	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC109	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,1608	1	S.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
DC110	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC111	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,1608	1	S.A	
DC112	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,1608	1	S.A	
DC113	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC114	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,1608	1	S.A	
DC115	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC116	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,1608	1	S.A	
DC117	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC118	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,1608	1	S.A	
DC119	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC120	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC121	2402-000108	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.2m	1	S.A	
DC122	2402-000108	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.2m	1	S.A	
DC123	2402-000108	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.2m	1	S.A	
DC124	2402-000108	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.2m	1	S.A	
DC125	2402-000108	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.2m	1	S.A	
DC126	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC127	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC128	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC129	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC130	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC131	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC132	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC133	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC134	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC135	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC136	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC137	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC138	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC139	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC140	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC141	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC142	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC143	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC144	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC145	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC146	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC147	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC148	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC149	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC150	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC151	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC152	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC153	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC154	2402-001128	C-AL,SMD	100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A	
DC155	2203-001630	C-CER,CHIP	330nF,+80-20%,16V,Y5V,1608	1	S.A	
DC202	2402-001216	C-AL,SMD	470uF,20%,16V,WT,TP,10.3x10.3x1	1	S.A	
DC203	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC400	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC401	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC402	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC403	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC404	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC500	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC501	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC502	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC503	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC504	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC505	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC506	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC507	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC508	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC509	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC510	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC511	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC512	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC513	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC514	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	



Electrical Part List

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
DC522	2402-001128	C-AL,SMD	100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A	
DC601	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC602	2402-000108	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.2m	1	S.A	
DC611	2402-001128	C-AL,SMD	100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A	
DC612	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC613	2402-001216	C-AL,SMD	470uF,20%,16V,WT,TP,10.3x10.3x1	1	S.A	
DC614	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC631	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC632	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC633	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC634	2402-001128	C-AL,SMD	100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A	
DC635	2402-001158	C-AL,SMD	1UF,20%,50V,WT,TP,4X5.2MM	1	S.A	
DC636	2402-001158	C-AL,SMD	1UF,20%,50V,WT,TP,4X5.2MM	1	S.A	
DC637	2402-001159	C-AL,SMD	3.3UF,20%,50V,WT,TP,4X5.2MM	1	S.A	
DC638	2402-001159	C-AL,SMD	3.3UF,20%,50V,WT,TP,4X5.2MM	1	S.A	
DC700	2203-001630	C-CER,CHIP	330nF,+80-20%,16V,Y5V,1608	1	S.A	
DC701	2203-001630	C-CER,CHIP	330nF,+80-20%,16V,Y5V,1608	1	S.A	
DC801	2203-000659	C-CER,CHIP	0.27nF,5%,50V,C0G,1608	1	S.A	
DC804	2203-000659	C-CER,CHIP	0.27nF,5%,50V,C0G,1608	1	S.A	
DC807	2203-000659	C-CER,CHIP	0.27nF,5%,50V,C0G,1608	1	S.A	
DC810	2203-000659	C-CER,CHIP	0.27nF,5%,50V,C0G,1608	1	S.A	
DC901	2402-001128	C-AL,SMD	100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A	
DC902	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC903	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC904	2402-001128	C-AL,SMD	100UF,20%,16V,WT,TP,6.3X5.7MM	1	S.A	
DC905	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC906	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC907	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC909	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC910	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC915	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC916	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC921	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC922	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DC9906	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,1608	1	S.A	
DD901	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,	1	S.A	
DD902	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,	1	S.A	
DD903	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,	1	S.A	
DD904	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,	1	S.A	
DD905	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,	1	S.A	
DD906	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,	1	S.A	
DD907	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,	1	S.A	
DD908	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,	1	S.A	
DD909	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,	1	S.A	
DD910	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,	1	S.A	
DD911	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,	1	S.A	
DD912	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,	1	S.A	
DH001	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200mA,SO	1	S.A	
DH002	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200mA,SO	1	S.A	
DH003	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200mA,SO	1	S.A	
DH004	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200mA,SO	1	S.A	
DH005	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200mA,SO	1	S.A	
DH006	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200mA,SO	1	S.A	
DH007	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200mA,SO	1	S.A	
DH008	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200mA,SO	1	S.A	
DH009	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200mA,SO	1	S.A	
DH010	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200mA,SO	1	S.A	
DH011	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,	1	S.A	
DH012	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,	1	S.A	
DJ301	3709-001346	CONNECTOR-CARD SLOT	68P,0.27mm,ANGLE,AU1	1	S.A	
DJ402	3722-001055	JACK-PHONE	5P/2C,AG,BLK,ANGLE	1	S.A	
DQ401	0501-000669	TR-SMALL SIGNAL	KTA1505Y,PNP,150mW,SOT-2	1	S.A	
DQ402	0501-000669	TR-SMALL SIGNAL	KTA1505Y,PNP,150mW,SOT-2	1	S.A	
DQ701	0501-000434	TR-SMALL SIGNAL	KTC3875S-GR,NPN,150mW,SO	1	S.A	
DQ703	0501-000669	TR-SMALL SIGNAL	KTA1505Y,PNP,150mW,SOT-2	1	S.A	
DQ704	0501-000669	TR-SMALL SIGNAL	KTA1505Y,PNP,150mW,SOT-2	1	S.A	
DR101	2007-000119	R-CHIP	560ohm,5%,1/10W,TP,1608	1	S.A	
DR102	2007-000102	R-CHIP	100Kohm,5%,1/10W,TP,1608	1	S.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
DR104	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR105	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR1101	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR1102	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR111	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR112	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR113	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR114	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
DR116	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR117	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR118	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR119	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR120	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR121	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR122	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR123	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR124	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR125	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR126	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR127	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR128	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR129	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR130	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR131	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR132	2007-000539	R-CHIP	200ohm,5%,1/10W,TP,1608	1	S.A	
DR133	2007-000539	R-CHIP	200ohm,5%,1/10W,TP,1608	1	S.A	
DR134	2007-000539	R-CHIP	200ohm,5%,1/10W,TP,1608	1	S.A	
DR135	2007-000539	R-CHIP	200ohm,5%,1/10W,TP,1608	1	S.A	
DR137	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR138	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR139	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
DR140	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	S.A	
DR141	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
DR142	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
DR143	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
DR144	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
DR145	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR146	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR147	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR148	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR149	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR150	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR151	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR152	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR153	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
DR154	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	S.A	
DR155	2007-000052	R-CHIP	10Kohm,1%,1/10W,TP,1608	1	S.A	
DR156	2007-000052	R-CHIP	10Kohm,1%,1/10W,TP,1608	1	S.A	
DR158	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	S.A	
DR159	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	S.A	
DR160	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR161	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR162	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	S.A	
DR163	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	S.A	
DR164	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	S.A	
DR165	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	S.A	
DR166	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR167	2007-000539	R-CHIP	200ohm,5%,1/10W,TP,1608	1	S.A	
DR169	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR170	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR171	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR172	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR173	2007-000372	R-CHIP	130ohm,5%,1/10W,TP,1608	1	S.A	
DR174	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR175	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR176	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR177	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR178	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	

## Electrical Part List

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
DR179	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR180	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR181	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR182	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR183	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR184	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR185	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR186	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR187	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR188	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR189	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR190	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR191	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR192	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR193	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR194	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR195	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR196	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR197	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR198	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR199	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR200	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR201	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR202	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR203	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR204	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR205	2007-000372	R-CHIP	130ohm,5%,1/10W,TP,1608	1	S.A	
DR22	2007-000107	R-CHIP	470Kohm,5%,1/10W,TP,1608	1	S.A	
DR221	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR400	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR401	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR402	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR403	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR404	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR405	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR406	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR407	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR408	2007-000113	R-CHIP	33ohm,5%,1/10W,TP,1608	1	S.A	
DR409	2007-000113	R-CHIP	33ohm,5%,1/10W,TP,1608	1	S.A	
DR410	2007-000113	R-CHIP	33ohm,5%,1/10W,TP,1608	1	S.A	
DR411	2007-000113	R-CHIP	33ohm,5%,1/10W,TP,1608	1	S.A	
DR412	2007-000113	R-CHIP	33ohm,5%,1/10W,TP,1608	1	S.A	
DR413	2007-000113	R-CHIP	33ohm,5%,1/10W,TP,1608	1	S.A	
DR414	2007-000113	R-CHIP	33ohm,5%,1/10W,TP,1608	1	S.A	
DR415	2007-000113	R-CHIP	33ohm,5%,1/10W,TP,1608	1	S.A	
DR416	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR417	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
DR418	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
DR419	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR420	2007-001167	R-CHIP	75ohm,5%,1/10W,TP,1608	1	S.A	
DR421	2007-001167	R-CHIP	75ohm,5%,1/10W,TP,1608	1	S.A	
DR423	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR424	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR501	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR502	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	S.A	
DR503	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	S.A	
DR505	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	S.A	
DR601	2007-000113	R-CHIP	33ohm,5%,1/10W,TP,1608	1	S.A	
DR632	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR633	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR700	2007-000097	R-CHIP	47Kohm,5%,1/10W,TP,1608	1	S.A	
DR701	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
DR702	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	S.A	
DR703	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
DR704	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
DR705	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
DR706	2007-000097	R-CHIP	47Kohm,5%,1/10W,TP,1608	1	S.A	
DR707	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
DR800	2007-000763	R-CHIP	330ohm,1%,1/10W,TP,1608	1	S.A	
DR801	2007-000763	R-CHIP	330ohm,1%,1/10W,TP,1608	1	S.A	
DR802	2007-000763	R-CHIP	330ohm,1%,1/10W,TP,1608	1	S.A	
DR803	2007-000763	R-CHIP	330ohm,1%,1/10W,TP,1608	1	S.A	
DR804	2007-000763	R-CHIP	330ohm,1%,1/10W,TP,1608	1	S.A	
DR805	2007-000763	R-CHIP	330ohm,1%,1/10W,TP,1608	1	S.A	
DR806	2007-000763	R-CHIP	330ohm,1%,1/10W,TP,1608	1	S.A	
DR807	2007-000763	R-CHIP	330ohm,1%,1/10W,TP,1608	1	S.A	
DR811	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	S.A	
DR812	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	S.A	
DR901	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR902	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR903	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR904	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR905	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR906	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR907	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	S.A	
DR908	2007-000113	R-CHIP	33ohm,5%,1/10W,TP,1608	1	S.A	
DR909	2007-000113	R-CHIP	33ohm,5%,1/10W,TP,1608	1	S.A	
DR910	2007-000113	R-CHIP	33ohm,5%,1/10W,TP,1608	1	S.A	
DR911	2007-000113	R-CHIP	33ohm,5%,1/10W,TP,1608	1	S.A	
DR912	2007-000113	R-CHIP	33ohm,5%,1/10W,TP,1608	1	S.A	
DR913	2007-000113	R-CHIP	33ohm,5%,1/10W,TP,1608	1	S.A	
DR914	2007-000113	R-CHIP	33ohm,5%,1/10W,TP,1608	1	S.A	
DR915	2007-000113	R-CHIP	33ohm,5%,1/10W,TP,1608	1	S.A	
DR916	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR917	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR918	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR919	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR920	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR921	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR922	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
DR923	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
DR999	2007-000113	R-CHIP	33ohm,5%,1/10W,TP,1608	1	S.A	
DRA103	2011-001011	R-NET	10Kohm,5%,1/16W,L,CHIP,8P,TP,3.2x1	1	S.A	
DRA108	2011-001410	R-NET	120OHM,5%,1/16W,L,CHIP,8P,TP,3.2X1	1	S.A	
DRA109	2011-001410	R-NET	120OHM,5%,1/16W,L,CHIP,8P,TP,3.2X1	1	S.A	
DRA110	2011-001410	R-NET	120OHM,5%,1/16W,L,CHIP,8P,TP,3.2X1	1	S.A	
DRA111	2011-001410	R-NET	120OHM,5%,1/16W,L,CHIP,8P,TP,3.2X1	1	S.A	
DRA112	2011-001410	R-NET	120OHM,5%,1/16W,L,CHIP,8P,TP,3.2X1	1	S.A	
DRA113	2011-001410	R-NET	120OHM,5%,1/16W,L,CHIP,8P,TP,3.2X1	1	S.A	
DRA114	2011-001410	R-NET	120OHM,5%,1/16W,L,CHIP,8P,TP,3.2X1	1	S.A	
DRA115	2011-001410	R-NET	120OHM,5%,1/16W,L,CHIP,8P,TP,3.2X1	1	S.A	
DRA116	2011-001410	R-NET	120OHM,5%,1/16W,L,CHIP,8P,TP,3.2X1	1	S.A	
DRA117	2011-001410	R-NET	120OHM,5%,1/16W,L,CHIP,8P,TP,3.2X1	1	S.A	
DRA118	2011-001410	R-NET	120OHM,5%,1/16W,L,CHIP,8P,TP,3.2X1	1	S.A	
DRA119	2011-001410	R-NET	120OHM,5%,1/16W,L,CHIP,8P,TP,3.2X1	1	S.A	
DRA120	2011-001410	R-NET	120OHM,5%,1/16W,L,CHIP,8P,TP,3.2X1	1	S.A	
DRA121	2011-001410	R-NET	120OHM,5%,1/16W,L,CHIP,8P,TP,3.2X1	1	S.A	
DRA122	2011-001410	R-NET	120OHM,5%,1/16W,L,CHIP,8P,TP,3.2X1	1	S.A	
DRA123	2011-001410	R-NET	120OHM,5%,1/16W,L,CHIP,8P,TP,3.2X1	1	S.A	
DRA124	2011-001410	R-NET	120OHM,5%,1/16W,L,CHIP,8P,TP,3.2X1	1	S.A	
DRA125	2011-001410	R-NET	120OHM,5%,1/16W,L,CHIP,8P,TP,3.2X1	1	S.A	
DRA401	2011-001011	R-NET	10Kohm,5%,1/16W,L,CHIP,8P,TP,3.2x1	1	S.A	
DU101	1204-002400	IC-DECODER	STI5517SUA,PBGA,416P,27x27mm,	1	S.A	
DU402	1006-001165	IC-LINE TRANSCEIVER	MAX3243CDBR,SSOP,28P	1	S.A	
DU701	1203-001824	IC-VOL. DETECTOR	7042,SOT-89,3P,-,PLASTI	1	S.A	
DV201	0401-000133	DIODE-SWITCHING	RLS4148,75V,150mA,LL-34,	1	S.A	
DX601	2806-001308	OSCILLATOR-VCXO	27MHZ,-,30PF,TP,3.3V,50M	1	S.A	
DZ302	0403-000699	DIODE-ZENER	TZP27B,27-30.8V,1000mW,DO-41	1	S.A	
DZ303	0403-001329	DIODE-ZENER	MTZJ24B,22.75-23.73V,500mW,D	1	S.A	
DZ304	0403-001221	DIODE-ZENER	UZ39BSB,35.36-37.19V,500mW,D	1	S.A	
DZ305	0403-001329	DIODE-ZENER	MTZJ24B,22.75-23.73V,500mW,D	1	S.A	
DZ306	0403-000700	DIODE-ZENER	TZP33A,5%,1000mW,DO-41,TP	1	S.A	
DZ307	0403-000754	DIODE-ZENER	MTZJ30C,28.2-29.6V,500mW,DO-	1	S.A	
DZ401	0403-001325	DIODE-ZENER	MTZJ15C,14.42-15.02V,500MW,D	1	S.A	
DZ402	0403-000708	DIODE-ZENER	MTZJ13B,12.55-13.21V,500mW,D	1	S.A	
DZ405	0403-000700	DIODE-ZENER	TZP33A,5%,1000mW,DO-41,TP	1	S.A	

## Electrical Part List

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
DZ707	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ708	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ709	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ710	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ715	0403-000314	DIODE-ZENER	RLZJ9.1B,8.8-9.3V,500MW,LL-3	1	S.A	
DZ716	0403-000314	DIODE-ZENER	RLZJ9.1B,8.8-9.3V,500MW,LL-3	1	S.A	
DZ717	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ718	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ719	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ720	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ721	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ722	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ723	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ724	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ725	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ726	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ727	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ728	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ729	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ730	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ731	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ732	0403-000614	DIODE-ZENER	RLZ8.2B,7.78-8.19V,500mW,LL-	1	S.A	
DZ802	0403-000718	DIODE-ZENER	MTZJ6.8B,6.52-6.79V,500mW,DO	1	S.A	
DZ803	0403-000700	DIODE-ZENER	TZP33A,5%,1000mW,DO-41,TP	1	S.A	
DZ804	0403-000720	DIODE-ZENER	MTZJ9.1B,8.57-9.01V,500mW,DO	1	S.A	
DZ805	0403-001320	DIODE-ZENER	MTZJ6.2C,6.16-6.4V,500mW,DO-	1	S.A	
DZ806	0403-001321	DIODE-ZENER	MTZJ6.8C,6.7-6.97V,500mW,DO-	1	S.A	
DZ808	0403-000717	DIODE-ZENER	MTZJ5.1B,4.94-5.2V,500mW,DO-	1	S.A	
DZ809	0403-000714	DIODE-ZENER	MTZJ3.3B,3.32-3.53V,500mW,DO	1	S.A	
DZ810	0403-000717	DIODE-ZENER	MTZJ5.1B,4.94-5.2V,500mW,DO-	1	S.A	
DZ901	0403-000509	DIODE-ZENER	MTZJ5.6B,5.4-5.7V,500mW,DO-3	1	S.A	
DZ902	0403-000509	DIODE-ZENER	MTZJ5.6B,5.4-5.7V,500mW,DO-3	1	S.A	
DZD01	0403-001117	DIODE-ZENER	RLZ12B,11.44-12.03V,500mW,LL	1	S.A	
DZD02	0403-001117	DIODE-ZENER	RLZ12B,11.44-12.03V,500mW,LL	1	S.A	
DZD03	0403-001117	DIODE-ZENER	RLZ12B,11.44-12.03V,500mW,LL	1	S.A	
DZD04	0403-001117	DIODE-ZENER	RLZ12B,11.44-12.03V,500mW,LL	1	S.A	
DZD05	0403-000746	DIODE-ZENER	RLZ3.9B,3.89-4.16V,500mW,LL-	1	S.A	
DZD06	0403-000620	DIODE-ZENER	RLZ5.6B,5.45-5.73V,500mW,LL-	1	S.A	
DZD07	0403-000620	DIODE-ZENER	RLZ5.6B,5.45-5.73V,500mW,LL-	1	S.A	
DZD08	0403-000620	DIODE-ZENER	RLZ5.6B,5.45-5.73V,500mW,LL-	1	S.A	
DZD09	0403-001117	DIODE-ZENER	RLZ12B,11.44-12.03V,500mW,LL	1	S.A	
DZH01	0403-000314	DIODE-ZENER	RLZJ9.1B,8.8-9.3V,500MW,LL-3	1	S.A	
DZS01	0403-000367	DIODE-ZENER	UZ7.5BSC,7.3-7.7V,500mW,DO-3	1	S.A	
DZV201	0403-000620	DIODE-ZENER	RLZ5.6B,5.45-5.73V,500mW,LL-	1	S.A	
DZV204	0403-000620	DIODE-ZENER	RLZ5.6B,5.45-5.73V,500mW,LL-	1	S.A	
EL100	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL101	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL102	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL103	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL104	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL105	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL106	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL107	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL108	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL109	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL110	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL112	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EL401	6042-000001	EYELET	ID2.2,OD2.7,L3.1,NI+SN,BSP3-1/2H	1	S.N.A	
EY400	6042-000002	EYELET	ID1.5,OD2.L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY401	6042-000002	EYELET	ID1.5,OD2.L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY402	6042-000002	EYELET	ID1.5,OD2.L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY403	6042-000002	EYELET	ID1.5,OD2.L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY404	6042-000002	EYELET	ID1.5,OD2.L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY405	6042-000002	EYELET	ID1.5,OD2.L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY406	6042-000002	EYELET	ID1.5,OD2.L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY407	6042-000002	EYELET	ID1.5,OD2.L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY408	6042-000002	EYELET	ID1.5,OD2.L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY409	6042-000002	EYELET	ID1.5,OD2.L2.8,NI+SN,BSP3-1/2H	1	S.A	



Electrical Part List

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
EY824	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY825	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY827	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY828	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY829	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY830	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY831	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY832	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY833	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY834	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY835	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY836	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY837	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY838	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY839	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY840	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY841	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY842	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY843	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY844	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY845	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY846	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY847	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY848	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY849	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY850	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY851	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY852	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY853	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
EY854	6042-000002	EYELET	ID1.5,OD2,L2.8,NI+SN,BSP3-1/2H	1	S.A	
F101	2901-000299	FILTER-EMI ON BOARD	-.6A,UL/CSA,-,9x7.5,	1	S.A	
F103	2901-001302	FILTER-EMI SMD	20V,0.3A,-,-,2.0x1.2x1.3m	1	S.A	
F103	2901-001302	FILTER-EMI SMD	20V,0.3A,-,-,2.0x1.2x1.3m	1	S.A	
F103	2901-001302	FILTER-EMI SMD	20V,0.3A,-,-,2.0x1.2x1.3m	1	S.A	
F103	2901-001302	FILTER-EMI SMD	20V,0.3A,-,-,2.0x1.2x1.3m	1	S.A	
F801A	3602-000114	FUSE-HOLDER	-,30mohm	1	S.A	
F801B	3602-000114	FUSE-HOLDER	-,30mohm	1	S.A	
FC001	2203-000440	C-CER,CHIP	1nF,10%,50V,X7R,1608	1	S.A	
FC002	2203-000440	C-CER,CHIP	1nF,10%,50V,X7R,1608	1	S.A	
FC312	2402-001178	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A	
FC343	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
FC344	2203-005065	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,1608	1	S.A	
FC345	2203-005065	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,1608	1	S.A	
FC346	2402-001159	C-AL,SMD	3.3UF,20%,50V,WT,TP,4X5.2MM	1	S.A	
FC347	2203-000440	C-CER,CHIP	1nF,10%,50V,X7R,1608	1	S.A	
FC348	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
FC349	2203-001071	C-CER,CHIP	0.056nF,5%,50V,COG,1608	1	S.A	
FC350	2203-005065	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,1608	1	S.A	
FC351	2203-005065	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,1608	1	S.A	
FC352	2203-005065	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,1608	1	S.A	
FC353	2203-005065	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,1608	1	S.A	
FC354	2203-005065	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,1608	1	S.A	
FC355	2203-005065	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,1608	1	S.A	
FC356	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
FC357	2203-000440	C-CER,CHIP	1nF,10%,50V,X7R,1608	1	S.A	
FC358	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
FC359	2203-001071	C-CER,CHIP	0.056nF,5%,50V,COG,1608	1	S.A	
FC360	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
FC361	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
FC362	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
FC363	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
FC364	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
FC365	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
FC368	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
FC369	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
FC370	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
FC371	2203-001652	C-CER,CHIP	470nF,+80-20%,16V,Y5V,1608	1	S.A	
FC372	2203-001652	C-CER,CHIP	470nF,+80-20%,16V,Y5V,1608	1	S.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
FC373	2203-001652	C-CER,CHIP	470nF,+80-20%,16V,Y5V,1608	1	S.A	
FC374	2203-000552	C-CER,CHIP	0.02nF,5%,50V,C0G,1608	1	S.A	
FC381	2203-000552	C-CER,CHIP	0.02nF,5%,50V,C0G,1608	1	S.A	
FC388	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
FC390	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
FC392	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
FC394	2402-000179	C-AL,SMD	47uF,20%,16V,GP,TP,6.6x6.6x5.7m	1	S.A	
FC914	2402-001178	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A	
FC915	2402-001178	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A	
FC917	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
FC918	2402-001178	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A	
△ FD801S	3601-001228	FUSE-AXIAL LEAD	125V,10A,FAST-ACTING,EPO	1	S.A	
FD802	3601-000414	FUSE-CARTRIDGE	250V,5A,SLOW-BLOW,GLASS,5	1	S.A	
△ FD802S	3601-001163	FUSE-AXIAL LEAD	125V,7A,-,EPOXY,2.4X7.1M	1	S.A	
△ FD804S	3601-001163	FUSE-AXIAL LEAD	125V,7A,-,EPOXY,2.4X7.1M	1	S.A	
△ FD805S	3601-001163	FUSE-AXIAL LEAD	125V,7A,-,EPOXY,2.4X7.1M	1	S.A	
FDZ01	0403-000314	DIODE-ZENER	RLZJ9.1B,8.8-9.3V,500MW,LL-3	1	S.A	
FDZ02	0403-000314	DIODE-ZENER	RLZJ9.1B,8.8-9.3V,500MW,LL-3	1	S.A	
FDZ03	0403-000314	DIODE-ZENER	RLZJ9.1B,8.8-9.3V,500MW,LL-3	1	S.A	
FDZ05	0403-000314	DIODE-ZENER	RLZJ9.1B,8.8-9.3V,500MW,LL-3	1	S.A	
FDZ06	0403-000314	DIODE-ZENER	RLZJ9.1B,8.8-9.3V,500MW,LL-3	1	S.A	
FDZ07	0403-000314	DIODE-ZENER	RLZJ9.1B,8.8-9.3V,500MW,LL-3	1	S.A	
FDZ08	0403-000314	DIODE-ZENER	RLZJ9.1B,8.8-9.3V,500MW,LL-3	1	S.A	
FDZ09	0403-000314	DIODE-ZENER	RLZJ9.1B,8.8-9.3V,500MW,LL-3	1	S.A	
FDZ10	0403-000314	DIODE-ZENER	RLZJ9.1B,8.8-9.3V,500MW,LL-3	1	S.A	
FDZ11	0403-000314	DIODE-ZENER	RLZJ9.1B,8.8-9.3V,500MW,LL-3	1	S.A	
FDZ12	0403-000314	DIODE-ZENER	RLZJ9.1B,8.8-9.3V,500MW,LL-3	1	S.A	
FDZ13	0403-000314	DIODE-ZENER	RLZJ9.1B,8.8-9.3V,500MW,LL-3	1	S.A	
FDZ14	0403-000314	DIODE-ZENER	RLZJ9.1B,8.8-9.3V,500MW,LL-3	1	S.A	
FDZ300	0403-000620	DIODE-ZENER	RLZ5.6B,5.45-5.73V,500mW,LL-	1	S.A	
FDZ301	0403-000620	DIODE-ZENER	RLZ5.6B,5.45-5.73V,500mW,LL-	1	S.A	
FDZ302	0403-000620	DIODE-ZENER	RLZ5.6B,5.45-5.73V,500mW,LL-	1	S.A	
FDZ303	0403-000620	DIODE-ZENER	RLZ5.6B,5.45-5.73V,500mW,LL-	1	S.A	
FDZ304	0403-000620	DIODE-ZENER	RLZ5.6B,5.45-5.73V,500mW,LL-	1	S.A	
FDZ306	0403-000620	DIODE-ZENER	RLZ5.6B,5.45-5.73V,500mW,LL-	1	S.A	
FDZ309	0403-000620	DIODE-ZENER	RLZ5.6B,5.45-5.73V,500mW,LL-	1	S.A	
FDZ310	0403-000620	DIODE-ZENER	RLZ5.6B,5.45-5.73V,500mW,LL-	1	S.A	
FQ900	0501-000344	TR-SMALL SIGNAL	KSC1623-G,NPN,200mW,SOT-	1	S.A	
FQ901	0501-000344	TR-SMALL SIGNAL	KSC1623-G,NPN,200mW,SOT-	1	S.A	
FQ903	0501-000280	TR-SMALL SIGNAL	KSA1182,PNP,150MW,SOT-23	1	S.A	
FQ904	0501-000280	TR-SMALL SIGNAL	KSA1182,PNP,150MW,SOT-23	1	S.A	
FQ906	0501-000344	TR-SMALL SIGNAL	KSC1623-G,NPN,200mW,SOT-	1	S.A	
FQ907	0501-000344	TR-SMALL SIGNAL	KSC1623-G,NPN,200mW,SOT-	1	S.A	
FQS01	0501-000344	TR-SMALL SIGNAL	KSC1623-G,NPN,200mW,SOT-	1	S.A	
FQS02	0501-000344	TR-SMALL SIGNAL	KSC1623-G,NPN,200mW,SOT-	1	S.A	
FQS03	0501-000344	TR-SMALL SIGNAL	KSC1623-G,NPN,200mW,SOT-	1	S.A	
FR300	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
FR305	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	S.A	
FR306	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	S.A	
FR307	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	S.A	
FR308	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	1	S.A	
FR310	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FR311	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FR312	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FR324	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	S.A	
FR325	2007-001167	R-CHIP	75ohm,5%,1/10W,TP,1608	1	S.A	
FR329	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FR331	2007-000616	R-CHIP	24Kohm,5%,1/10W,TP,1608	1	S.A	
FR332	2007-000052	R-CHIP	10Kohm,1%,1/10W,TP,1608	1	S.A	
FR333	2007-000616	R-CHIP	24Kohm,5%,1/10W,TP,1608	1	S.A	
FR334	2007-000052	R-CHIP	10Kohm,1%,1/10W,TP,1608	1	S.A	
FR337	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FR338	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FR341	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FR342	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FR344	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FR347	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FR348	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	



Electrical Part List

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
FR349	2007-000125	R-CHIP	3.9Kohm,5%,1/10W,TP,1608	1	S.A	
FR350	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FR351	2007-000329	R-CHIP	11Kohm,5%,1/10W,TP,1608	1	S.A	
FR353	2007-000125	R-CHIP	3.9Kohm,5%,1/10W,TP,1608	1	S.A	
FR359	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FR366	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	S.A	
FR367	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,1608	1	S.A	
FR379	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FR399	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FR444	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	S.A	
FR445	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	S.A	
FR450	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	S.A	
FR451	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	S.A	
FR452	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	S.A	
FR453	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	S.A	
FR454	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	S.A	
FR455	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	S.A	
FR926	2007-000290	R-CHIP	100ohm,5%,1/8W,TP,2012	1	S.A	
FR933	2007-000097	R-CHIP	47Kohm,5%,1/10W,TP,1608	1	S.A	
FR934	2007-000093	R-CHIP	20Kohm,5%,1/10W,TP,1608	1	S.A	
FR935	2007-000097	R-CHIP	47Kohm,5%,1/10W,TP,1608	1	S.A	
FR936	2007-000093	R-CHIP	20Kohm,5%,1/10W,TP,1608	1	S.A	
FR939	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	1	S.A	
FR940	2007-000643	R-CHIP	270ohm,5%,1/10W,TP,1608	1	S.A	
FR941	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	1	S.A	
FR942	2007-000643	R-CHIP	270ohm,5%,1/10W,TP,1608	1	S.A	
FR945	2007-000643	R-CHIP	270ohm,5%,1/10W,TP,1608	1	S.A	
FR946	2007-000643	R-CHIP	270ohm,5%,1/10W,TP,1608	1	S.A	
FR948	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	S.A	
FR949	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	S.A	
FR951	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	S.A	
FR952	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	S.A	
FR958	2007-001167	R-CHIP	75ohm,5%,1/10W,TP,1608	1	S.A	
FR959	2007-001167	R-CHIP	75ohm,5%,1/10W,TP,1608	1	S.A	
FRP01	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FRP02	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FRP03	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FRP04	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FRP05	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FRP06	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FRP07	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FRP08	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FRP09	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FRP10	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FRP11	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FRP12	2007-001167	R-CHIP	75ohm,5%,1/10W,TP,1608	1	S.A	
FRP13	2007-001167	R-CHIP	75ohm,5%,1/10W,TP,1608	1	S.A	
FRP14	2007-001167	R-CHIP	75ohm,5%,1/10W,TP,1608	1	S.A	
FRP15	2007-001167	R-CHIP	75ohm,5%,1/10W,TP,1608	1	S.A	
FRP16	2007-001167	R-CHIP	75ohm,5%,1/10W,TP,1608	1	S.A	
FRP17	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	S.A	
FRP18	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	S.A	
FRP19	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	S.A	
FRP20	2007-001167	R-CHIP	75ohm,5%,1/10W,TP,1608	1	S.A	
FRP21	2007-001167	R-CHIP	75ohm,5%,1/10W,TP,1608	1	S.A	
FRP22	2007-001167	R-CHIP	75ohm,5%,1/10W,TP,1608	1	S.A	
FRP23	2007-001167	R-CHIP	75ohm,5%,1/10W,TP,1608	1	S.A	
FRP24	2007-001167	R-CHIP	75ohm,5%,1/10W,TP,1608	1	S.A	
FRP25	2007-001167	R-CHIP	75ohm,5%,1/10W,TP,1608	1	S.A	
FRS01	2007-000082	R-CHIP	3.3Kohm,5%,1/10W,TP,1608	1	S.A	
FRS02	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FRS03	2007-000043	R-CHIP	1Kohm,1%,1/10W,TP,1608	1	S.A	
FRS04	2007-000763	R-CHIP	330ohm,1%,1/10W,TP,1608	1	S.A	
FRS05	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
FRS06	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
FRS07	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	S.A	
FSW300	3404-000243	SWITCH-TACT	15V,20mA,160gf,6x3.4mm,SPST	1	S.A	
FX300	2801-004004	CRYSTAL-SMD	20.25MHz,20ppm,28-AAN,13pF,2	1	S.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
G101	3301-000316	CORE-FERRITE BEAD	120ohm,2012,TP,-,-	1	S.N.A	
G101	3301-000316	CORE-FERRITE BEAD	120ohm,2012,TP,-,-	1	S.N.A	
G101	3301-000316	CORE-FERRITE BEAD	120ohm,2012,TP,-,-	1	S.N.A	
G101	3301-000316	CORE-FERRITE BEAD	120ohm,2012,TP,-,-	1	S.N.A	
G101	3301-000316	CORE-FERRITE BEAD	120ohm,2012,TP,-,-	1	S.N.A	
G101	3301-000316	CORE-FERRITE BEAD	120ohm,2012,TP,-,-	1	S.N.A	
GT101	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
GT102	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
GT113	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
GT114	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
GT120	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
GT121	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
GT401	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
GT402	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
GT804	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
GT805	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
GT806	BH71-40300A	PIN-HINGE	BRASS,D2.36!,HEAT/SINK,SN	1	S.N.A	
HC401	AA96-04116A	ASSY HEAT SINK P	AA62-00152A,SCREW,FJL69	1	S.N.A	
HC801	BP96-00006E	ASSY HEAT SINK P	BP62-00001A,SCREW,SLA10	1	S.N.A	
IC012	1203-000162	IC-POSI.ADJUST REG.	317,TO-220,3P,-,PLAS	1	S.A	
IC012	1203-001217	IC-POSI.ADJUST REG.	431,TO-92,3P,4.58MIL	1	S.A	
IC06	1203-001211	IC-VOL. DETECTOR	7027,SOT-89,3P,-,PLASTI	1	S.A	
IC062	1203-003183	IC-MULTI REG.	SI-3002KWM-TL, DPAK,5P,6.6X	1	S.A	
IC063	AA13-00116A	IC HYBRID	STR-W6750F,6,-20 to +115,TO-3P	1	S.A	
IC063	AA13-00094A	IC HYBRID	-,DDR1001A,SIP,5P,-,TP	1	S.A	
IC07	1001-000164	IC-ANALOG MULTIPLEX	74HC4052,CMOS,SOP,16	1	S.A	
IC104	0801-000662	IC-CMOS LOGIC	74HC123,MULTIVIBATOR,SOP,1	1	S.A	
IC104	0801-002095	IC-CMOS LOGIC	74LCX245,TRANSCEIVER,TSSOP	1	S.A	
IC104	0801-002172	IC-CMOS LOGIC	74LCX16244,BUFFER/LINE DRI	1	S.A	
IC104	0801-002237	IC-CMOS LOGIC	74V(A)HC1G04,INVERTER,SC70	1	S.A	
IC104	0801-002394	IC-CMOS LOGIC	74LCX32,OR GATE,SOIC,14P,1	1	S.A	
IC104	0801-002407	IC-CMOS LOGIC	74LCX08,AND GATE,SOIC,14P,	1	S.A	
IC104	0801-002683	IC-CMOS LOGIC	74HCT245,TRANSCEIVER,TSSOP	1	S.A	
IC104	0801-002709	IC-CMOS LOGIC	74HC373,D FLIP-FLOP,TSSOP,	1	S.A	
IC104	0801-002709	IC-CMOS LOGIC	74HC373,D FLIP-FLOP,TSSOP,	1	S.A	
IC107	1002-001227	IC-D/A CONVERTER	CS4340-KSR,24BIT,SOP,16	1	S.A	
IC112	1103-000129	IC-EEPROM	24C02,2Kbit,256x8Bit,SOP,8P,5x	1	S.A	
IC112	1103-001314	IC-EEPROM	24C16,2Kx8,SOP,8P,5x4mm,2.7/5.	1	S.A	
IC113	1105-001305	IC-DRAM	4S641632,-,64MBIT,1MX16X4BIT,TSO	1	S.A	
IC113	1105-001308	IC-DRAM	K4S281632,128Mbit,8Mx16,TSOP,54P	1	S.A	
IC115	1107-001475	IC-FLASH MEMORY	29LV320,32MBIT,4MX8/2MX1	1	S.A	
IC118	1204-001989	IC-VIDEO PROCESS	CXA2165Q,QFP,64P,20X14M	1	S.A	
IC301	AA96-50381A	ASSY HEAT SINK P	,AA62-30180B,LA7845	1	S.N.A	
IC401	1202-000103	IC-VOLTAGE COMP.	393,DIP,8P,300MIL,DUAL,	1	S.A	
IC602	AA96-50398E	ASSY HEAT SINK P	AA62-30182E,TDA7297SA,S	1	S.N.A	
△ IC801S	AA96-04018B	ASSY HEAT SINK P	AA62-30181X,SCREW,STR-W	1	S.N.A	
△ IC802S	BP96-00020N	ASSY HEAT SINK P	HS TR,SCREW,278R05,OIL	1	S.N.A	
IC803	1203-003015	IC-DC/DC CONVERTER	MP1410ES,SOIC,8P,4.9x	1	S.A	
IC804S	BP96-00020N	ASSY HEAT SINK P	HS TR,SCREW,278R05,OIL	1	S.N.A	
ICH01	1205-002928	IC-RECEIVER	MST3383M-LF-80,PQFP,128P,20x	1	S.A	
ICH02	BN11-00002A	IC MASK ROM	CAT24WC08W,SOIC,0to+70,5x4mm	1	S.N.A	
ICS001	1001-001109	IC-ANALOG SWITCH	FST3125M,BUS SWITCH & C	1	S.A	
J302	2701-001040	INDUCTOR-AXIAL	10UH,10%,4514	1	S.A	
JA701	3722-001884	JACK-SCART	42P,SnPb,BLK	1	S.A	
JA702	3722-002447	JACK-PIN	5P,SN,GN/BU/RD/WT/RD,ANGLE	1	S.A	
JH001	3701-001293	CONNECTOR-DSUB	19P,2R,FEMALE,SMD-A,AU	1	S.A	
JS04	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	S.A	
L101	2701-000115	INDUCTOR-AXIAL	10UH,10%,3070	1	S.A	
L102	2701-000116	INDUCTOR-AXIAL	10UH,10%,4298	1	S.A	
L103	2701-000116	INDUCTOR-AXIAL	10UH,10%,4298	1	S.A	
L2514	3301-000287	BEAD-AXIAL	,3.5x1.0x6.0mm,3000mA,TP,,50	1	S.N.A	
L2514	3301-000287	BEAD-AXIAL	,3.5x1.0x6.0mm,3000mA,TP,,50	1	S.N.A	
L2514	3301-000287	BEAD-AXIAL	,3.5x1.0x6.0mm,3000mA,TP,,50	1	S.N.A	
L2514	3301-000287	BEAD-AXIAL	,3.5x1.0x6.0mm,3000mA,TP,,50	1	S.N.A	
L2514	3301-001223	BEAD-AXIAL	62ohm,3.5x0.8x5mm,TP,-,-	1	S.A	
L2514	3301-001223	BEAD-AXIAL	62ohm,3.5x0.8x5mm,TP,-,-	1	S.A	
L2514	3301-001223	BEAD-AXIAL	62ohm,3.5x0.8x5mm,TP,-,-	1	S.A	
L2514	3301-001223	BEAD-AXIAL	62ohm,3.5x0.8x5mm,TP,-,-	1	S.A	

## Electrical Part List

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
L2514	3301-000374	BEAD-AXIAL	,3.5x1.0x9.0mm,3000mA,TP,,,50	1	S.A	
L301	2701-000114	INDUCTOR-AXIAL	10UH,10%,2534	1	S.A	
L403	2701-000115	INDUCTOR-AXIAL	10UH,10%,3070	1	S.A	
L410	2701-001030	INDUCTOR-AXIAL	43UH,10%,4514	1	S.A	
L611	2701-000177	INDUCTOR-AXIAL	33UH,10%,2534	1	S.A	
L612	2701-000177	INDUCTOR-AXIAL	33UH,10%,2534	1	S.A	
L613	2701-000177	INDUCTOR-AXIAL	33UH,10%,2534	1	S.A	
L614	2701-000177	INDUCTOR-AXIAL	33UH,10%,2534	1	S.A	
L615	2701-000177	INDUCTOR-AXIAL	33UH,10%,2534	1	S.A	
L616	2701-000177	INDUCTOR-AXIAL	33UH,10%,2534	1	S.A	
L617	2701-000177	INDUCTOR-AXIAL	33UH,10%,2534	1	S.A	
L618	2701-000177	INDUCTOR-AXIAL	33UH,10%,2534	1	S.A	
L805	3301-001660	BEAD-RADIAL	100ohm,3.5x9.0x0.8,50mA,TP,,	1	S.N.A	
LD901	AA96-00461A	ASSY LED GUIDE	-,SL-255D,RED/GRN	1	S.A	
LH009	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	S.A	
△ LX803S	AA29-30002N	FILTER LINE NOISE	-,16MH,1.5A,AC100~260V	1	S.A	
M0014	AA97-16531C	ASSY AUTO-MAIN	WS32Z419D8XXEU,S63A,UNLIM	1	S.N.A	
M0018	AA97-16618A	ASSY MICOM	T_ULTPUEU_0020,S64A,VCTP69xyP	1	S.A	
M0018	AA97-16567A	ASSY MICOM	T_UNLIDUK0_0012,S64A,29LV320,	1	S.A	
M0081	6003-000333	SCREW-TAPTITE	RH,+,2S,M3,L10,ZPC(YEL),SW	1	S.N.A	
M0081	6003-000333	SCREW-TAPTITE	RH,+,2S,M3,L10,ZPC(YEL),SW	1	S.N.A	
M0081	6003-000333	SCREW-TAPTITE	RH,+,2S,M3,L10,ZPC(YEL),SW	1	S.N.A	
M0081	6003-000333	SCREW-TAPTITE	RH,+,2S,M3,L10,ZPC(YEL),SW	3	S.N.A	
M0081	6003-000335	SCREW-TAPTITE	RH,+,2S,M3,L8,ZPC(YEL),SWR	1	S.N.A	
M0081	6003-000335	SCREW-TAPTITE	RH,+,2S,M3,L8,ZPC(YEL),SWR	1	S.N.A	
M0081	6003-000333	SCREW-TAPTITE	RH,+,2S,M3,L10,ZPC(YEL),SW	2	S.N.A	
M0107	AA61-10068A	BRACKET-PCB	M2160,SPT,TO.3,-,-,-,-	1	S.N.A	
M0107	AA61-10068A	BRACKET-PCB	M2160,SPT,TO.3,-,-,-,-	1	S.N.A	
M0107	AA61-10068A	BRACKET-PCB	M2160,SPT,TO.3,-,-,-,-	1	S.N.A	
M0107	AA61-10068A	BRACKET-PCB	M2160,SPT,TO.3,-,-,-,-	1	S.N.A	
OR112	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	S.A	
OR113	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	S.A	
P803T	1404-001154	THERMISTOR-PTC	4.5OHM,+30%/-20%,220V,270	1	S.A	
△ PC801S	0604-001038	PHOTO-COUPLER	TR,130-260%,200mW,DIP-4,ST	1	S.A	
PCB	AA41-01195A	PCB SUB-F/BOX	WS32Z40,FR-4,4,00,1.6,156*	1	S.N.A	
PCB	BN41-00684A	PCB-DIGITAL B/D	BORDEAUX,FR-4,6L,1.0,1.6	1	S.N.A	
△ PFC01S	AA27-00269A	COIL CHOKE-PFC	35MH,CPPTV,35MH,10%,2.0OH	1	S.A	
PU01	3722-001055	JACK-PHONE	5P/2C,AG,BLK,ANGLE	1	S.A	
Q404	BP96-00020P	ASSY HEAT SINK P	AA62-00045A,SCREW,FQP63	1	S.N.A	
Q409	0505-001116	FET-SILICON	BUZ73A,N,200V,22A,0.6ohm,40W	1	S.A	
Q409	0505-001679	FET-SILICON	FDC6301N,N,25V,0.22A,5OHM,0.	1	S.A	
Q409	0505-000109	FET-SILICON	2N7000,N,60V,200mA,5ohm,400m	1	S.A	
Q409	0505-001723	FET-SILICON	FQP630TSTU,N,200V,9A,0.4OHM,	1	S.A	
Q603	0501-000389	TR-SMALL SIGNAL	KSC815,NPN,400mW,TO-92,T	1	S.A	
Q604	0501-000389	TR-SMALL SIGNAL	KSC815,NPN,400mW,TO-92,T	1	S.A	
Q801	0501-000369	TR-SMALL SIGNAL	KSC2331-Y,NPN,1000mW,TO-	1	S.A	
Q802	0501-000389	TR-SMALL SIGNAL	KSC815,NPN,400mW,TO-92,T	1	S.A	
Q803	0501-000389	TR-SMALL SIGNAL	KSC815,NPN,400mW,TO-92,T	1	S.A	
Q804	0501-000389	TR-SMALL SIGNAL	KSC815,NPN,400mW,TO-92,T	1	S.A	
Q805	0501-000389	TR-SMALL SIGNAL	KSC815,NPN,400mW,TO-92,T	1	S.A	
QD901	0501-000344	TR-SMALL SIGNAL	KSC1623-G,NPN,200mW,SOT-	1	S.A	
QD902	0501-000280	TR-SMALL SIGNAL	KSA1182,PNP,150MW,SOT-23	1	S.A	
QD903	0501-000280	TR-SMALL SIGNAL	KSA1182,PNP,150MW,SOT-23	1	S.A	
QD904	0501-000280	TR-SMALL SIGNAL	KSA1182,PNP,150MW,SOT-23	1	S.A	
QD905	0501-000280	TR-SMALL SIGNAL	KSA1182,PNP,150MW,SOT-23	1	S.A	
QD906	0501-000280	TR-SMALL SIGNAL	KSA1182,PNP,150MW,SOT-23	1	S.A	
QD907	0501-000344	TR-SMALL SIGNAL	KSC1623-G,NPN,200mW,SOT-	1	S.A	
QD908	0501-000727	TR-SMALL SIGNAL	BC848C,NPN,310mW,SOT-23,	1	S.A	
QD909	0501-000344	TR-SMALL SIGNAL	KSC1623-G,NPN,200mW,SOT-	1	S.A	
QD910	0501-000344	TR-SMALL SIGNAL	KSC1623-G,NPN,200mW,SOT-	1	S.A	
QD911	0501-000344	TR-SMALL SIGNAL	KSC1623-G,NPN,200mW,SOT-	1	S.A	
QH001	0501-000344	TR-SMALL SIGNAL	KSC1623-G,NPN,200mW,SOT-	1	S.A	
QS01	0501-000342	TR-SMALL SIGNAL	KSC1623-Y,NPN,200mW,SOT-	1	S.A	
QS01	0501-000389	TR-SMALL SIGNAL	KSC815,NPN,400mW,TO-92,T	1	S.A	
QV201	0501-000344	TR-SMALL SIGNAL	KSC1623-G,NPN,200mW,SOT-	1	S.A	
R101	2701-000114	INDUCTOR-AXIAL	10UH,10%,2534	1	S.A	
R102	2701-000114	INDUCTOR-AXIAL	10UH,10%,2534	1	S.A	
R103	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R104	2001-000645	R-CARBON	330KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R106	2001-000449	R-CARBON	2.2KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R108	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R301	2003-000652	R-METAL OXIDE(S)	330ohm,5%,2W,AF,TP,4x12	1	S.A	
R303	2001-000016	R-CARBON(S)	1OHM,5%,1/2W,AA,TP,2.4X6.4MM	1	S.A	
R305	2003-002071	R-METAL OXIDE	560ohm,5%,2W,AF,TP,3.9x10m	1	S.A	
R306	2003-002071	R-METAL OXIDE	560ohm,5%,2W,AF,TP,3.9x10m	1	S.A	
R309	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R310	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R314	2004-001394	R-METAL(S)	2Kohm,1%,1/2W,AA,TP,2.4x6.4mm	1	S.A	
R315	2004-001394	R-METAL(S)	2Kohm,1%,1/2W,AA,TP,2.4x6.4mm	1	S.A	
R316	2001-001129	R-CARBON(S)	330KOHM,5%,1/2W,AA,TP,2.4X6.	1	S.A	
R317	2001-000066	R-CARBON(S)	10KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R319	2004-001369	R-METAL(S)	1.2Kohm,1%,1/2W,AA,TP,2.4x6.4	1	S.A	
R320	2004-001369	R-METAL(S)	1.2Kohm,1%,1/2W,AA,TP,2.4x6.4	1	S.A	
R323	2004-004087	R-METAL(S)	1.5ohm,1%,1/2W,AA,TP,2.5x6.5m	1	S.A	
R324	2004-004087	R-METAL(S)	1.5ohm,1%,1/2W,AA,TP,2.5x6.5m	1	S.A	
R343	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
R401	2001-001121	R-CARBON(S)	3.6KOHM,5%,1/2W,AA,TP,2.4X6.	1	S.A	
R402	2001-001078	R-CARBON(S)	15KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R403	2003-001035	R-METAL OXIDE(S)	27ohm,5%,2W,AF,TP,3.9x1	1	S.A	
R404	2003-000540	R-METAL OXIDE(S)	1Kohm,5%,2W,AF,TP,4x12m	1	S.A	
R405	2003-000540	R-METAL OXIDE(S)	1Kohm,5%,2W,AF,TP,4x12m	1	S.A	
R406	2001-001108	R-CARBON(S)	22KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R407	2003-000493	R-METAL OXIDE(S)	12ohm,5%,2W,AF,TP,4x12m	1	S.A	
R408	2008-000254	R-FUSIBLE(S)	0.68ohm,5%,2W,AF,TP,3.9x10m	1	S.A	
R409	2003-000998	R-METAL OXIDE	300ohm,5%,2W,AF,TP,3.9x10m	1	S.A	
R410	2003-000998	R-METAL OXIDE	300ohm,5%,2W,AF,TP,3.9x10m	1	S.A	
R411	2004-004072	R-METAL(S)	3Kohm,1%,1/2W,AA,TP,2.5x6.5mm	1	S.A	
R412	2003-000493	R-METAL OXIDE(S)	12ohm,5%,2W,AF,TP,4x12m	1	S.A	
R413	2004-001403	R-METAL(S)	7.5Kohm,1%,1/2W,AA,TP,2.4x6.4	1	S.A	
R414	2004-004072	R-METAL(S)	3Kohm,1%,1/2W,AA,TP,2.5x6.5mm	1	S.A	
R415	2001-001185	R-CARBON(S)	750OHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R416	2003-000493	R-METAL OXIDE(S)	12ohm,5%,2W,AF,TP,4x12m	1	S.A	
R418	2001-000028	R-CARBON(S)	100OHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R419	2001-001088	R-CARBON(S)	1KOHM,5%,1/2W,AA,TP,2.4X6.4M	1	S.A	
R420	2001-001070	R-CARBON(S)	120OHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R421	2001-001112	R-CARBON(S)	24KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R422	2008-001011	R-FUSIBLE(S)	0.18ohm,10%,2W,AF,TP,3.9x10	1	S.A	
R423	2004-001371	R-METAL(S)	1.5Kohm,1%,1/2W,AA,TP,2.4x6.4	1	S.A	
R424	2008-000253	R-FUSIBLE(S)	0.47ohm,5%,1W,AF,TP,3.9x10m	1	S.A	
R425	2008-000253	R-FUSIBLE(S)	0.47ohm,5%,1W,AF,TP,3.9x10m	1	S.A	
R426	2003-000652	R-METAL OXIDE(S)	330ohm,5%,2W,AF,TP,4x12	1	S.A	
R427	2003-000652	R-METAL OXIDE(S)	330ohm,5%,2W,AF,TP,4x12	1	S.A	
R428	2004-000698	R-METAL	3.3Kohm,1%,1/4W,AA,TP,2.4x6.4mm	1	S.A	
R429	2003-000652	R-METAL OXIDE(S)	330ohm,5%,2W,AF,TP,4x12	1	S.A	
R430	2004-002016	R-METAL(S)	15Kohm,1%,1/2W,AA,TP,2.5x6.5m	1	S.A	
R431	2004-000531	R-METAL	20Kohm,1%,1/2W,AA,TP,2.3x6.5mm	1	S.A	
R433	2001-001194	R-CARBON(S)	82KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R436	2001-001088	R-CARBON(S)	1KOHM,5%,1/2W,AA,TP,2.4X6.4M	1	S.A	
R437	2008-000253	R-FUSIBLE(S)	0.47ohm,5%,1W,AF,TP,3.9x10m	1	S.A	
R438	2001-001054	R-CARBON(S)	1.6KOHM,5%,1/2W,AA,TP,2.4X6.	1	S.A	
R440	2004-000531	R-METAL	20Kohm,1%,1/2W,AA,TP,2.3x6.5mm	1	S.A	
R442	2003-000652	R-METAL OXIDE(S)	330ohm,5%,2W,AF,TP,4x12	1	S.A	
R444	2003-000586	R-METAL OXIDE(S)	22Kohm,5%,2W,AF,TP,4x12	1	S.A	
R445	2003-000586	R-METAL OXIDE(S)	22Kohm,5%,2W,AF,TP,4x12	1	S.A	
R446	2003-002102	R-METAL OXIDE(S)	68Kohm,5%,2W,AF,TP,4x12	1	S.A	
R448	2008-000284	R-FUSIBLE(S)	0.1OHM,10%,2W,AF,TP,3.9X10M	1	S.A	
R450	2003-000493	R-METAL OXIDE(S)	12ohm,5%,2W,AF,TP,4x12m	1	S.A	
R453	2004-000612	R-METAL	243ohm,1%,1/4W,AA,TP,2.4x6.4mm	1	S.A	
R454	2004-001394	R-METAL(S)	2Kohm,1%,1/2W,AA,TP,2.4x6.4mm	1	S.A	
R455	2001-000534	R-CARBON	240OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R456	2004-000612	R-METAL	243ohm,1%,1/4W,AA,TP,2.4x6.4mm	1	S.A	
R618	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R621	2001-000258	R-CARBON	1.8KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R622	2001-000258	R-CARBON	1.8KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R623	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R626	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	

## Electrical Part List

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
R627	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R633	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R636	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R646	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R647	2001-000290	R-CARBON	10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R670	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R671	2001-000281	R-CARBON	100OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R801	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R802	2001-000780	R-CARBON	470OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R803	2001-001153	R-CARBON(S)	47ohm,5%,1/2W,AA,TP,2.4x6.4m	1	S.A	
R804	2004-001983	R-METAL(S)	2.49Kohm,1%,1/2W,AA,TP,2.4x6.4	1	S.A	
R805	2001-001088	R-CARBON(S)	1KOHM,5%,1/2W,AA,TP,2.4X6.4M	1	S.A	
R806	2009-001012	R-METAL PLATE	0.27OHM,10%,5W,CL,TP,5X14X	1	S.A	
R807	2001-000037	R-CARBON(S)	330OHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R810	2001-001097	R-CARBON(S)	2.4KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R811	2009-001012	R-METAL PLATE	0.27OHM,10%,5W,CL,TP,5X14X	1	S.A	
R812	2001-000522	R-CARBON	22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R813	2001-000924	R-CARBON	680OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R814	2001-000429	R-CARBON	1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R815	2001-001131	R-CARBON(S)	33KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R817	2001-001088	R-CARBON(S)	1KOHM,5%,1/2W,AA,TP,2.4X6.4M	1	S.A	
R818	2004-001891	R-METAL(S)	133Kohm,1%,1/2W,AA,TP,2.5x6.5	1	S.A	
R819	2004-004048	R-METAL(S)	3.9Kohm,1%,1/2W,AA,TP,2.5x6.5	1	S.A	
R820	2001-001131	R-CARBON(S)	33KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R821	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R823	2003-000586	R-METAL OXIDE(S)	22Kohm,5%,2W,AF,TP,4x12	1	S.A	
R824	2003-000586	R-METAL OXIDE(S)	22Kohm,5%,2W,AF,TP,4x12	1	S.A	
R825	2003-000586	R-METAL OXIDE(S)	22Kohm,5%,2W,AF,TP,4x12	1	S.A	
R832	2001-000273	R-CARBON	100KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R833	2001-000734	R-CARBON	4.7KOHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R834	2001-000037	R-CARBON(S)	330OHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R835	2001-000780	R-CARBON	470OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R901	2001-000924	R-CARBON	680OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R902	2001-000924	R-CARBON	680OHM,5%,1/8W,AA,TP,1.8X3.2MM	1	S.A	
R903	2001-000028	R-CARBON(S)	100OHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
R904	2001-000028	R-CARBON(S)	100OHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
RA713	2007-000102	R-CHIP	100Kohm,5%,1/10W,TP,1608	1	S.A	
RA714	2007-000102	R-CHIP	100Kohm,5%,1/10W,TP,1608	1	S.A	
RA715	2007-000102	R-CHIP	100Kohm,5%,1/10W,TP,1608	1	S.A	
RA716	2007-000102	R-CHIP	100Kohm,5%,1/10W,TP,1608	1	S.A	
RA717	2007-000102	R-CHIP	100Kohm,5%,1/10W,TP,1608	1	S.A	
RA718	2007-000102	R-CHIP	100Kohm,5%,1/10W,TP,1608	1	S.A	
RA719	2007-000102	R-CHIP	100Kohm,5%,1/10W,TP,1608	1	S.A	
RA720	2007-000102	R-CHIP	100Kohm,5%,1/10W,TP,1608	1	S.A	
RA721	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
RA801	2007-000092	R-CHIP	15Kohm,5%,1/10W,TP,1608	1	S.A	
RA802	2007-000965	R-CHIP	5.1Kohm,5%,1/10W,TP,1608	1	S.A	
RA803	2007-000083	R-CHIP	3Kohm,5%,1/10W,TP,1608	1	S.A	
RA804	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
RA805	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
RA806	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
RD899	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD900	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD901	2007-000211	R-CHIP	1.1Kohm,5%,1/10W,TP,1608	1	S.A	
RD902	2007-000211	R-CHIP	1.1Kohm,5%,1/10W,TP,1608	1	S.A	
RD903	2007-000211	R-CHIP	1.1Kohm,5%,1/10W,TP,1608	1	S.A	
RD904	2007-000211	R-CHIP	1.1Kohm,5%,1/10W,TP,1608	1	S.A	
RD905	2007-000211	R-CHIP	1.1Kohm,5%,1/10W,TP,1608	1	S.A	
RD906	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	S.A	
RD907	2007-000211	R-CHIP	1.1Kohm,5%,1/10W,TP,1608	1	S.A	
RD908	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	S.A	
RD909	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD910	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	S.A	
RD911	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	1	S.A	
RD912	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD913	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD914	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD915	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	S.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
RD916	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	S.A	
RD917	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
RD918	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD919	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD920	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD921	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	S.A	
RD922	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
RD923	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
RD924	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
RD925	2007-000124	R-CHIP	2.2Kohm,5%,1/10W,TP,1608	1	S.A	
RD926	2007-000124	R-CHIP	2.2Kohm,5%,1/10W,TP,1608	1	S.A	
RD927	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD928	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD929	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD930	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD931	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD932	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD933	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD934	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD935	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
RD936	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD937	2007-000691	R-CHIP	3.3Mohm,5%,1/10W,TP,1608	1	S.A	
RD938	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD939	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD941	2007-000086	R-CHIP	5.6Kohm,5%,1/10W,TP,1608	1	S.A	
RD942	2007-000086	R-CHIP	5.6Kohm,5%,1/10W,TP,1608	1	S.A	
RD943	2007-000869	R-CHIP	4.7Kohm,1%,1/10W,TP,1608	1	S.A	
RD944	2007-000691	R-CHIP	3.3Mohm,5%,1/10W,TP,1608	1	S.A	
RD945	2007-000107	R-CHIP	470Kohm,5%,1/10W,TP,1608	1	S.A	
RD946	2007-000081	R-CHIP	2.7Kohm,5%,1/10W,TP,1608	1	S.A	
RD947	2007-000082	R-CHIP	3.3Kohm,5%,1/10W,TP,1608	1	S.A	
RD948	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD949	2007-000124	R-CHIP	2.2Kohm,5%,1/10W,TP,1608	1	S.A	
RD950	2007-000821	R-CHIP	390ohm,1%,1/10W,TP,1608	1	S.A	
RD951	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD952	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD953	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD954	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD955	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD957	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	1	S.A	
RD958	2007-000092	R-CHIP	15Kohm,5%,1/10W,TP,1608	1	S.A	
RD959	2007-000052	R-CHIP	10Kohm,1%,1/10W,TP,1608	1	S.A	
RD960	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RD961	2007-000088	R-CHIP	7.5Kohm,5%,1/10W,TP,1608	1	S.A	
RD963	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
RD964	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
RD965	2007-000097	R-CHIP	47Kohm,5%,1/10W,TP,1608	1	S.A	
RD966	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
RD967	2007-000094	R-CHIP	22Kohm,5%,1/10W,TP,1608	1	S.A	
RD968	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
RD969	2007-000259	R-CHIP	1.6Kohm,5%,1/10W,TP,1608	1	S.A	
RD970	2007-000087	R-CHIP	6.8Kohm,5%,1/10W,TP,1608	1	S.A	
RD971	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	1	S.A	
RD972	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	S.A	
RD973	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	S.A	
RD974	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	S.A	
RD975	2007-000075	R-CHIP	220ohm,5%,1/10W,TP,1608	1	S.A	
RD976	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
RD977	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
RF001	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
RH001	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	S.A	
RH002	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
RH003	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
RH005	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
RH006	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
RH007	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
RH008	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	S.A	
RH009	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	1	S.A	
RH010	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	

Electrical Part List

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
RH011	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
RH012	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
RH014	2007-000118	R-CHIP	390ohm,5%,1/10W,TP,1608	1	S.A	
RH015	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RH016	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
RH018	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RH019	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RH020	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
RH021	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
RH022	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	1	S.A	
RH023	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	1	S.A	
RH024	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	1	S.A	
RH025	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	1	S.A	
RH032	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
RH033	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	1	S.A	
RH036	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	1	S.A	
RH037	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	1	S.A	
RH038	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	1	S.A	
RH039	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	1	S.A	
RH040	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	1	S.A	
RH041	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	1	S.A	
RH042	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	1	S.A	
RH043	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	1	S.A	
RH28	2008-001149	R-FUSIBLE(S)	0.22OHM,5%,2W,AF,TP,3.8X11M	1	S.A	
RHN03	2011-000002	R-NET	22ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A	
RHN04	2011-000002	R-NET	22ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A	
RHN05	2011-000002	R-NET	22ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A	
RHN06	2011-000002	R-NET	22ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A	
RHN07	2011-000002	R-NET	22ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A	
RHN08	2011-000002	R-NET	22ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A	
RHN09	2011-000002	R-NET	22ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A	
RL801S	3501-001053	RELAY-POWER	5Vdc,530mW,10000mA,1FormA,15	1	S.A	
RM901	AA32-00015A	Module Remocon	FRP-3521H31,38KHZ,940MM,M	1	S.A	
△RR430S	2004-001390	R-METAL(S)	1Kohm,2%,1/2W,AA,TP,2.4x6.4mm	1	S.A	
RS01	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
RS01	2001-001103	R-CARBON(S)	20KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
RS02	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	1	S.A	
RS02	2001-000002	R-CARBON(S)	200KOHM,5%,1/2W,AA,TP,2.4X6.	1	S.A	
RS03	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RS03	2004-001382	R-METAL(S)	13Kohm,1%,1/2W,AA,TP,2.4x6.4m	1	S.A	
RS04	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RS04	2001-001168	R-CARBON(S)	6.8KOHM,5%,1/2W,AA,TP,2.4X6.	1	S.A	
RS05	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	S.A	
RS05	2001-001108	R-CARBON(S)	22KOHM,5%,1/2W,AA,TP,2.4X6.4	1	S.A	
RS06	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RS07	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RV201	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	1	S.A	
RV202	2007-000081	R-CHIP	2.7Kohm,5%,1/10W,TP,1608	1	S.A	
RV203	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	1	S.A	
RV204	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RV205	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RV206	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RV207	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RV208	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RV209	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	1	S.A	
RV210	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	1	S.A	
RV215	2007-000121	R-CHIP	820ohm,5%,1/10W,TP,1608	1	S.A	
RV229	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RV230	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RV243	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RV246	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RV258	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RV270	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RV271	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RV272	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RV273	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RV274	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	
RV275	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	1	S.A	





Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
T0568	3301-001526	BEAD-SMD	10ohm,1.6x0.8x0.8mm,1000mA,TP,,	1	S.N.A	
T0568	3301-001526	BEAD-SMD	10ohm,1.6x0.8x0.8mm,1000mA,TP,,	1	S.N.A	
T0568	3301-001526	BEAD-SMD	10ohm,1.6x0.8x0.8mm,1000mA,TP,,	1	S.N.A	
T0568	3301-001526	BEAD-SMD	10ohm,1.6x0.8x0.8mm,1000mA,TP,,	1	S.N.A	
T0568	3301-001526	BEAD-SMD	10ohm,1.6x0.8x0.8mm,1000mA,TP,,	1	S.N.A	
T0568	3301-001569	BEAD-SMD	600ohm,2012,1000mA,TP,520ohm/90	1	S.N.A	
T0568	3301-001569	BEAD-SMD	600ohm,2012,1000mA,TP,520ohm/90	1	S.N.A	
T0568	3301-001569	BEAD-SMD	600ohm,2012,1000mA,TP,520ohm/90	1	S.N.A	
T0568	3301-001569	BEAD-SMD	600ohm,2012,1000mA,TP,520ohm/90	1	S.N.A	
T0568	3301-001569	BEAD-SMD	600ohm,2012,1000mA,TP,520ohm/90	1	S.N.A	
T0568	3301-001569	BEAD-SMD	600ohm,2012,1000mA,TP,520ohm/90	1	S.N.A	
T0568	3301-001569	BEAD-SMD	600ohm,2012,1000mA,TP,520ohm/90	1	S.N.A	
T0568	3301-001569	BEAD-SMD	600ohm,2012,1000mA,TP,520ohm/90	1	S.N.A	
T0607	AA61-01390A	BRACKET-IC	CT-29A20HR,SECC,T1.0	1	S.N.A	
T0900	1404-001045	THERMISTOR-NTC	4.7ohm,4.565A,2900K,-,-,-	1	S.A	
T401	AA26-00255A	TRANS-H.DRIVE	EI2218,P60A,4,6.0 mH,12V,4	1	S.A	
T444	AA26-00269A	TRANS FBT	FUH32V001B,CATCH ME,2.5mH,FUR5	1	S.A	
△ T801S	AA26-00200B	TRANS SWITCHING	53B135-SC,WS32A20HE,AC16	1	S.A	
TH01	AA26-00227A	TRANS-FOCUS	EI-2820,TXP3067WHD,6P,7.0 mH	1	S.A	
△ VP801S	1405-000187	VARISTOR	615Vdc,1250A,12.5x7mm,TP	1	S.A	
△ VX801S	1405-000187	VARISTOR	615Vdc,1250A,12.5x7mm,TP	1	S.A	
XH001	2801-003667	CRYSTAL-SMD	14.31818MHz,30ppm,28-AAN,16,	1	S.A	
	AA97-16532C	ASSY SMD-F/BOX	iDTV WITH Component,WITH	1	S.N.A	
	AA97-16533A	ASSY SMD-DTV MODULE	S64A,UNLIMITED	1	S.N.A	
	0402-001230	DIODE-RECTIFIER	FMG-G2CS,1000V,3A,DO-41,	1	S.A	
	0402-001596	DIODE-RECTIFIER	SLA1004,200/700,3.5A,-,S	1	S.A	
	0402-001296	DIODE-RECTIFIER	FMP-3FU,1.5KV,5A,DO-201A	1	S.A	
	0502-001230	TR-POWER	FJL6920YDTU,N,200000MW,TO-264 F	1	S.A	

**ASSY COVER FRONT**

M0001	AA90-05504P	ASSY COVER FRONT	WS32Z419D8XXEU	1	S.N.A	
M0081	6003-001026	SCREW-TAPTITE	RH,+,B,M4,L15,ZPC(BLK),SWR	10	S.A	
M0081	6003-001026	SCREW-TAPTITE	RH,+,B,M4,L15,ZPC(BLK),SWR	2	S.A	
M0081	6003-001268	SCREW-TAPTITE	TH,+,B,M4,L12,ZPC(YEL),SWR	2	S.N.A	
M0081	6003-001268	SCREW-TAPTITE	TH,+,B,M4,L12,ZPC(YEL),SWR	1	S.N.A	
T0238	AA60-10050V	BOLT-HEX	-,SWRCH18A,M6,L30,HH,+,WC,-,Z	4	S.N.A	
T0569	AA61-01433A	SUPPORT-CRT	Z40,HIPS V0,GR503	2	S.A	
T0609	AA63-60004Z	SPACER-GUM,CRT	ALL MODEL,NTR RUBBER,-,-,	4	S.N.A	
T0003	AA96-04064C	ASSY COVER P-FRONT	32Z41,XEU,HIPS HB,BLK	1	S.A	
M0081	6003-001268	SCREW-TAPTITE	TH,+,B,M4,L12,ZPC(YEL),SWR	1	S.N.A	
M0081	6006-001096	SCREW-TAPTITE	BH,+,WP,B,M4.0,L12,ZPC(BLK	4	S.N.A	
T0069	AA60-00091J	SPACER-FELT	-,FELT,330X10,-,-,BLK,TO.5,-	1	S.N.A	
T0069	AA60-00091R	SPACER-FELT	,FELT,250X10,,BLK,TO.5,,	2	S.N.A	
CIS7	AA61-60003J	SPRING ETC-CS	-,SUS304,-,-,OD6,N7,OD6,-,	1	S.N.A	
M0112	AA63-01364C	COVER-FRONT	32Z41,SEH,HIPS,HB,BLK,BKN157	1	S.A	
T0057	AA64-01062B	BADGE-BRAND	ALL,AL,T1.5,10.6,L65,BLK.SIL	1	S.N.A	
T0023	AA64-04328B	KNOB POWER	Z40,ABS,HB,BKN1576	1	S.N.A	
CIS3	AA64-04333A	DECORATION-POWER	Z40,ABS,HB,GR515,AL	1	S.N.A	
T0238	AA64-04340A	WINDOW REMOCON-LED	Z40(SEH,TSE),PC,CLEAR	1	S.N.A	
T0175	AA96-03164A	ASSY SPEAKER P	8ohm,6*13cm,Z31,10W,SPK+W	1	S.A	
T0382	BP61-00509C	HOLDER-CARE	PJT,ACRYL-FOAM,TO.25,W20.0mm	0.28	S.N.A	
CIS1	AA65-00011C	CLAMPER CORE-WIRE	ALL MODEL,NYLON 66,V2,	1	S.N.A	
CIS1	AA65-30105A	CLAMPER CORE-WIRE	ALL MODEL,NYLON 66,V2,	1	S.N.A	
T0245	AA61-00711D	HOLDER-PCB	29U1,U2,HIPS VO,BK502(HB-PROP	1	S.N.A	
T0607	AA61-40113A	STOPPER-PCB	501H,HIPS,-,-,HB,NTR,-	1	S.A	
T0382	BP61-00495C	HOLDER-CARE	PJT,ACRYL-FOAM,TO.25,W30.0mm	0.2	S.N.A	

**ASSY COVER REAR**

M0002	AA90-05505C	ASSY COVER REAR	32Z40(SEH)	1	S.N.A	
T0066	AA64-04344A	INLAY-BACK	Z40,PAL,PS SHEET,TO.5,S64A,SC	1	S.N.A	

Loc.No.	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
T0522	AA65-30008A	CLAMPER CORE-CORD	-,PE,HB,-,BLK,-	1	S.N.A	
T0578	AA64-04297P	INLAY AV	Z30,32,40,PS,SHEET,T0.5,BLK,S14	1	S.N.A	
M0006	AA63-01369B	COVER-REAR	32Z40(SEH),HIPS,FV2,BK500,S64	1	S.A	
T0069	AA60-00091K	SPACER-FELT	-,FELT,330X10,-,-,BLK,T0.35,	3	S.N.A	
<b>ASSY FIXING</b>						
T0892	AA91-09847A	ASSY FIXING	WS32Z409D8XXEU,S64A,UNLIMITE	1	S.N.A	
△T0268	AA39-10007X	CBF-POWER CORD	-,EP3/YES(HK),H03VVH2-F,2	1	S.A	
T0010	AA61-20284A	HOLDER	P-CORD,PP,-,-,-,BLK,VO,KE-002	1	S.N.A	
CIS1	AA65-00011C	CLAMPER CORE-WIRE	ALL MODEL,NYLON 66,V2,	1	S.N.A	
CIS1	AA65-00029A	CLAMPER CORE-WIRE	PJTV,NYLON66,OD24,DONG	1	S.N.A	
CIS1	AA65-30104B	CLAMPER CORE-WIRE	ALL MODEL,NYLON 66,V2,	1	S.N.A	
<b>ASSY BOX</b>						
M0003	AA92-11528P	ASSY BOX	WS32Z419D8XXEU	1	S.N.A	
T0130	AA69-03357G	BOX-00,SET	32Z40(SEH),DY-07,AB,YEL,A1,EU	1.01	S.N.A	
<b>ASSY P/MATERIAL</b>						
M0113	AA92-11529C	ASSY P/MATERIAL	32Z40(SEH)	1	S.N.A	
T0376	6902-000001	BAG AIR	LDPE,T0.2,L1800,W1000,TRP,,,LDPE	0.015	S.N.A	
T0524	6902-000007	BAG PE	HDPE/NITRON/HDPE,T0.015/T0.5/T0.0	1	S.N.A	
T0376	6902-000061	BAG AIR	LDPE,T0.2,L1000,W500,TRP,,,	0.08	S.N.A	
T0214	AA60-40006A	PIN-STAPLE	AUTO,33X17.8X2.4,H18,33X17.8X	6	S.N.A	
T0172	AA69-02609A	BAND-PP	W18,CLEA,1G	6.2	S.N.A	
<b>ASSY ACCESSORY</b>						
M0045	AA92-11539A	ASSY ACCESSORY	WS32Z409D8XXEU,S64A,UNLIM	1	S.N.A	
M0045	AA96-04155A	ASSY ACCESSORY	WS32Z419D8XXEU,S64A,UNLIM	1	S.N.A	
T0524	6902-000009	BAG PE	HDPE,T0.03,L400,W240,TRP,8,2,PE M	1	S.N.A	
	AA68-03575A	MANUAL FLYER-01,REGISTRATION C	XEU,ENG,U	1	S.N.A	
M0596	AA68-03776A	MANUAL USERS-00	Comm,Samsung,English,UK,	1	S.N.A	
2	BN68-00514B	MANUAL FLYER-02,WARRANTY CARD	PDP/LCD TV	1	S.N.A	
T0074	AA59-00379A	REMOCON	WS32Z40,TM86,44,PAL,S59B,IDTV/TV	1	S.A	
	AA68-03242E	MANUAL FLYER-01,SAFETY GUIDE	All Model,S	1	S.N.A	
<b>ASSY CPT</b>						
T0521	AA91-09865H	ASSY CPT	W76QFV891X302,+380MG,32 INCH,32	1	S.N.A	
T0089	AA27-00343B	COIL DEGAUSSING	CORE(K62A),23.40mH,70TS,	1	S.A	
T0090	AA27-00345A	COIL DEGAUSSING-TILT	32,51.0mH,300Turns,	1	S.A	
CIS1	AA65-00056A	CLAMPER CORE-WIRE	32Z30,NYLON-66,V0,NTR	4	S.N.A	
T0527	AA65-00061A	CLAMPER CORE-D,COIL	NYLON-66,VO,NTR	5	S.N.A	
M0909	AA72-00030B	SPONGE	29Z30,CR VO BLK,T2.0,10,680	2	S.N.A	
T0603	AA96-02967A	ASSY TBC WIRE P	K62A,32,NTSC,4P	1	S.N.A	
△T0063	AA03-00482A	CRT COLOR	W76QFV891X302,+380mG,0.245,14.	1	S.A	

# MEMO

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## 6. Troubleshooting

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### 6-1 Checkpoints by Error Mode

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- Power LED: Check that the LED works when turning the Master Switch ON/OFF
- LED Indicators: See table 6-2-1 Basic Troubleshooting: LED Diagnosis on the Front Panel.
- In case of a power failure or abnormal screen, check the following items.
  - 1) Check that the power cord is correctly connected to a 220V wall outlet.
  - 2) Check that the Master Switch has been pressed.
  - 3) Check that the transmitter is turned on.
  - 4) Check that transmitter device selection is set to TV.
  - 5) Check that the signal cable is properly connected.
  - 6) Check that channel setting has been set.

## 6-1-1 Basic Approaches for Troubleshooting

### ■ Troubleshooting Mechanism :

- The Main Board has Power part which supplies power to Deflection and Feature Box.
- The Feature Box receives all signal inputs, the signal-processed signal is sent to CRT Ass'y.
- Deflection and Focus are controlled by the Main Board.

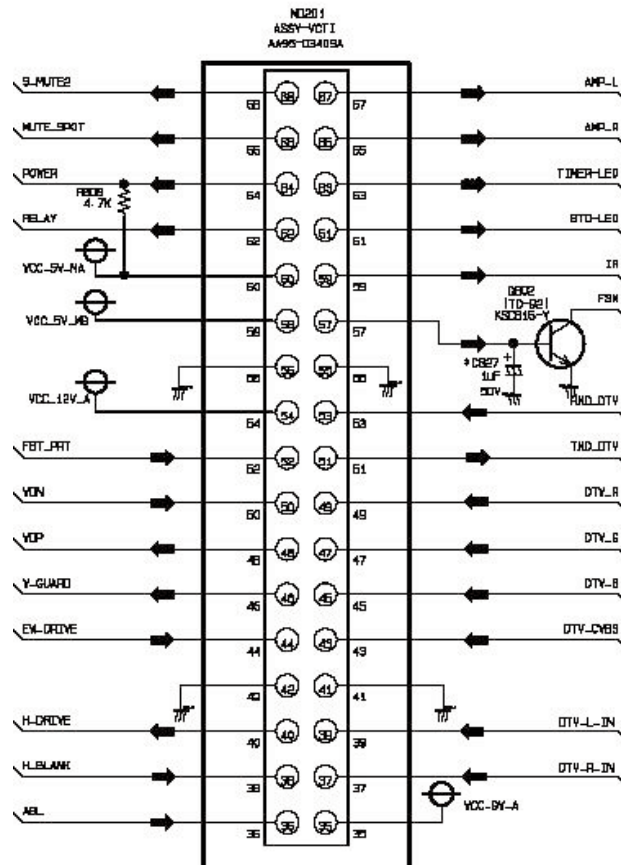
### ■ Troubleshooting by Modules

#### 1) Enter Service Mode

(In SET Stand-By Status, if you press "Info" → "Menu" → "Mute" and "Power" button in sequence on the remote control, the screen is turned on and the Service Mode screen appears.)

#### 2) Check if the Power part of the Main Board Board, which supplies power to Feature Box, is out of order.

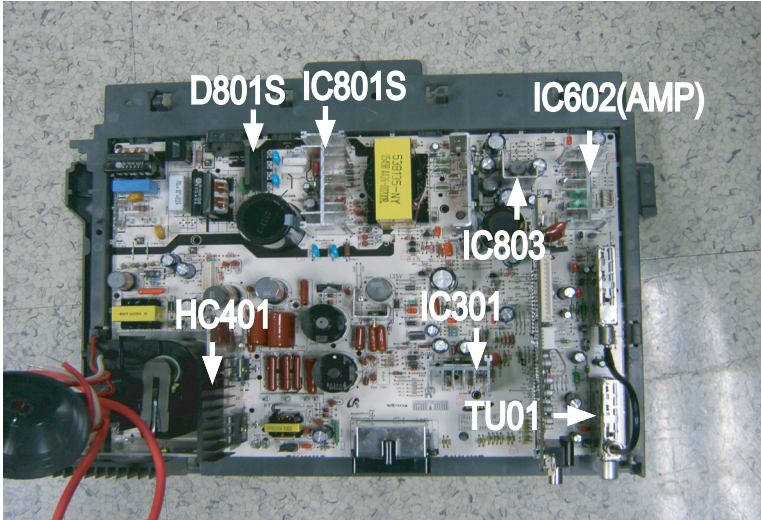
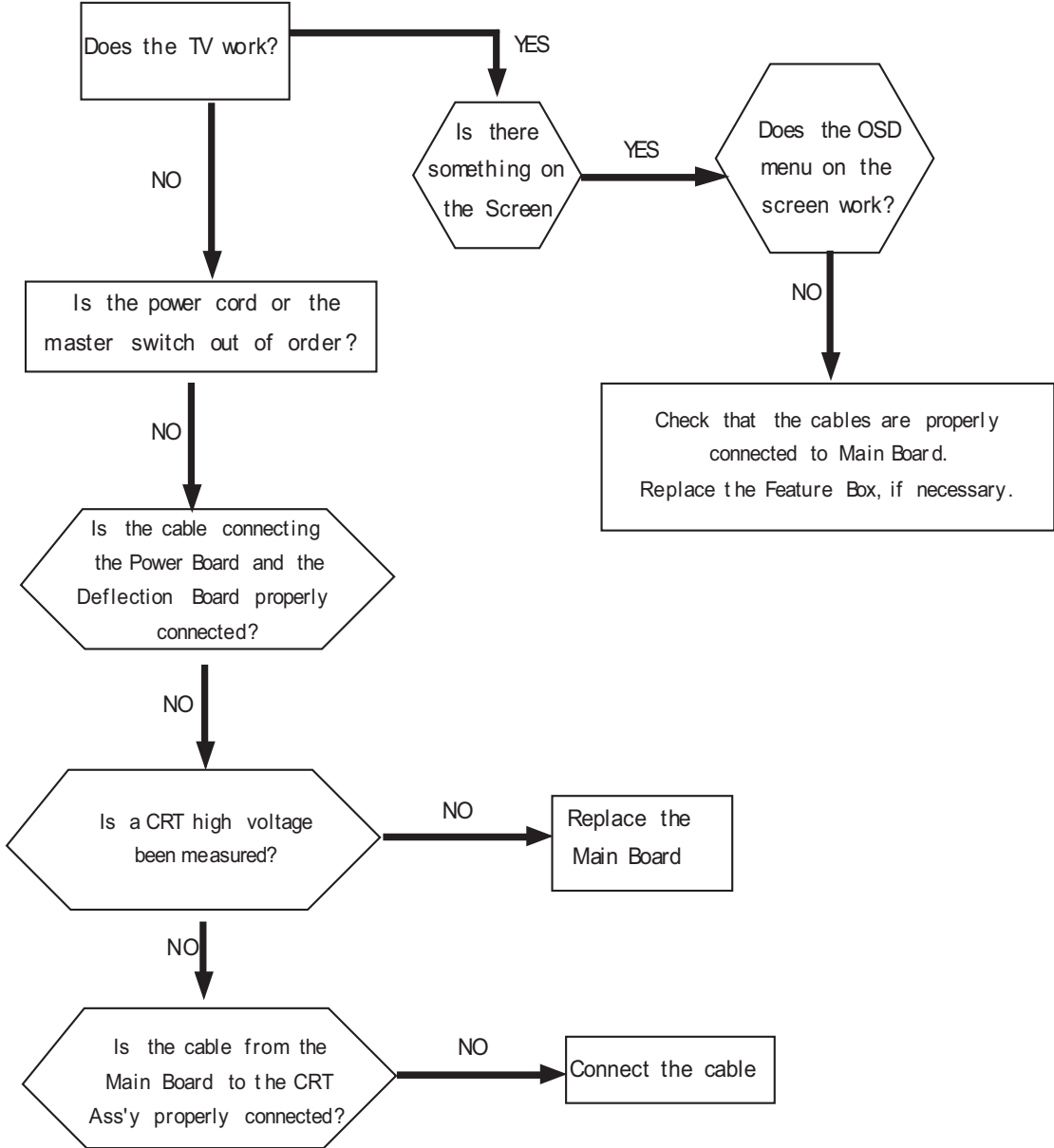
If you cannot turn the screen on by pressing the POWER ON/OFF button or the screen repeatedly turns on and off when pressing the POWER ON/Off button, check if the Power part of the Main Board is out of order. (Refer to the circuit diagram)



#### 4) Check if the Deflection part of the Main Board is out of order.

When the screen is not properly displayed and the left or right side of the picture is shrunk, or the top or bottom of the screen is expanded or shrunk, check if the Deflection Board is out of order.

6-1-2 Flow Chart for Malfunction



## 6-2 Trouble-shooting with New Features

### 6-2-1 Installation & Connection

Problem	Solution
The power does not turn on.	Check if the power cord is properly connected.
Air broadcasting does not work.	Check if the antenna is properly installed.
Cable broadcasting does not work.	Subscribe to a local cable broadcasting firm and get support.
Satellite broadcasting does not work.	Install a satellite antenna (Parabola) and connect it to the TV.

### 6-2-2 Menu & Remote Control

Problem	Solution
The remote control does not work.	<ul style="list-style-type: none"> <li>■ Press the Select Device button to select the TV or external device.</li> <li>■ Replace the battery of the remote control with a new one.</li> <li>■ Insert the battery making sure the polarity (+,-) is correct.</li> <li>■ Check if the angle or the distance is sufficient, or if there is any interference between the product and the remote control.</li> <li>■ Make sure the user has pressed the correct button.</li> <li>■ To avoid direct sunlight to the receiving panel of the TV, remove any indoor lighting or change the location of the TV.</li> <li>■ Check if the power switch at the back left of the TV is turned on.</li> </ul>
Cannot change the channel with the remote control.	<ul style="list-style-type: none"> <li>■ Press the Select Device button to select the TV.</li> <li>■ Change the channel using the remote control of the cable or satellite receiver.</li> </ul>
Cannot select an A/V channel.	Press the TV/AV button and check if the AV item is grayed out. When the AV item is grayed out, you cannot select an A/V channel. Check if the connector is properly connected.
Cannot select a menu.	Check if the menu is grayed out. If a menu is grayed out, it cannot be selected.

### 6-2-3 Screen

Problem	Solution
The screen is black and there is no sound.	<ul style="list-style-type: none"> <li>■ Check if the power cord is properly connected.</li> <li>■ Turn on the power.</li> <li>■ Select an AV channel that corresponds to the external device.</li> </ul>
Only the screen is blank/it is dark or too bright.	Adjust the screen brightness.
The screen is blue/the external channel is not displayed.	<ul style="list-style-type: none"> <li>■ Check if the connector is properly installed.</li> <li>■ Select an AV channel that corresponds to the external device.</li> </ul>
The screen overlaps (double/triple).	<ul style="list-style-type: none"> <li>■ Check if the antenna is properly installed.</li> <li>■ Adjust the position, angle or direction of the antenna.</li> </ul>
The screen is snowy or unclear. The picture quality gets worse when it is windy	<ul style="list-style-type: none"> <li>■ Check if the antenna has been bent or moved by the wind.</li> <li>■ Check the antenna for its lifetime. (Normally 3 - 5 years, 1-2 years near the coast)</li> </ul>
Dotted or semi-dotted lines are displayed on the screen.	Install the antenna as far away from the road as possible.
The screen is black and white.	<ul style="list-style-type: none"> <li>■ Adjust the color density.</li> <li>■ Check if the connector is properly installed.</li> </ul>
The colors of the screen are odd/strange.	Adjust the color tones.
Unusual lines appear on the screen.	Keep the antenna away from the power cord or connectors if possible.
Unusual lines appear on the screen when watching or recording to video.	Keep the video player as far away from the TV as possible.

### 6-2-4 Sound

Problem	Solution
There is no sound.	<ul style="list-style-type: none"> <li>■ Increase the volume.</li> <li>■ Press the Mute button.</li> </ul>
The sound is very low.	<ul style="list-style-type: none"> <li>■ Increase the volume.</li> <li>■ Set the auto volume control to ON.</li> </ul>
There is a lot of noise.	Keep the antenna away from the power cord or connectors if possible.
The selected language does not appear.	Press the Multiplex button to select the TV.



### 6-2-5 Channel

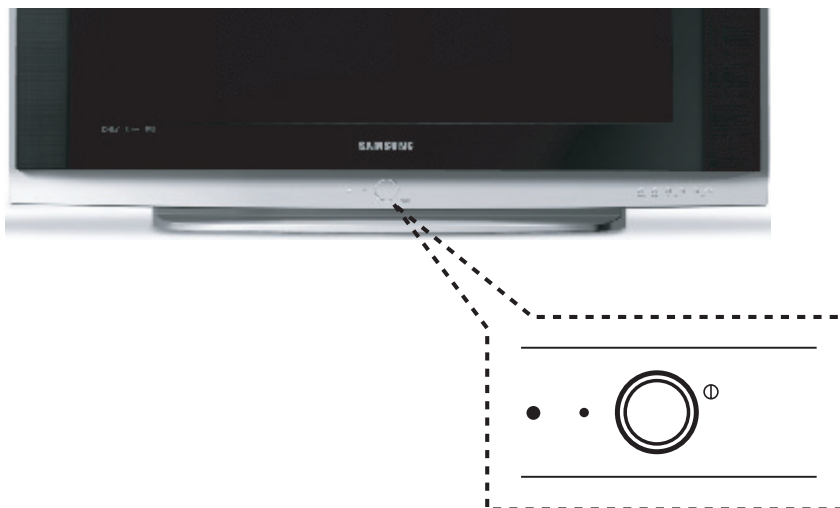
Problem	Solution
There are no channels available.	<ul style="list-style-type: none"> <li>■ Check if the antenna is properly installed.</li> <li>■ Press the Auto Channel button to store channels.</li> <li>■ Contact your local broadcasting service station.</li> </ul>
Some channels are not available.	<ul style="list-style-type: none"> <li>■ Adjust the position, angle or direction of the antenna.</li> <li>■ Activate the Reception Sensitivity Boost feature.</li> <li>■ Contact your local broadcasting service station.</li> <li>■ Use the number keys to select a specific channel and press Store/Clear to memorize it.</li> </ul>
Only the UHF (14-69) channels are not available.	Check if the antenna is able to receive UHF signals.

### 6-2-6 Others

Problem	Solution
The TV makes a noise as if something is dropping inside.	This noise may occur when the plastic material inside the TV expands or contracts according to the seasonal temperature or humidity. This is like the noise from a furniture/cabinet/sink unit, and there is no need for concern.

## 6-3 Troubleshooting Procedures by Error Modes

### 6-3-1 Basic Troubleshooting: Diagnosis of LED on the Front Panel



- : Light is On
- ⦿ : Light is Blinking
- : Light is Off

Power	Description
○	This happens when the Master Switch is not pressed or the power cord is disconnected.
●	This happens when the power cord is connected and the power switch is pressed. If you cannot set the power switch on by pressing it, check the power switch Ass'y.
○ → ⦿ → ●	If you press the power switch of the transmitter or the channel key on the remote control when in St-BY status, the screen will be turned on. If the LED blinks and the screen is not displayed, check the connection between the Power and the System Board.

### 6-3-2 Troubleshooting by the Checksum

- Diagnosis of trouble by the checksum is neither reliable nor convenient.  
You can only use the checksum of the current direct-view TV to determine whether the software is corrupted or not.  
The Checksum value is determined according to the version of the software loaded on the set.  
Therefore, you can determine whether the software has been properly downloaded, if you know the correct checksum for that version of the software.

You can check the checksum according in the following order.

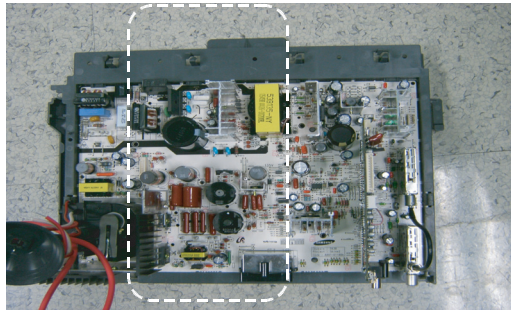
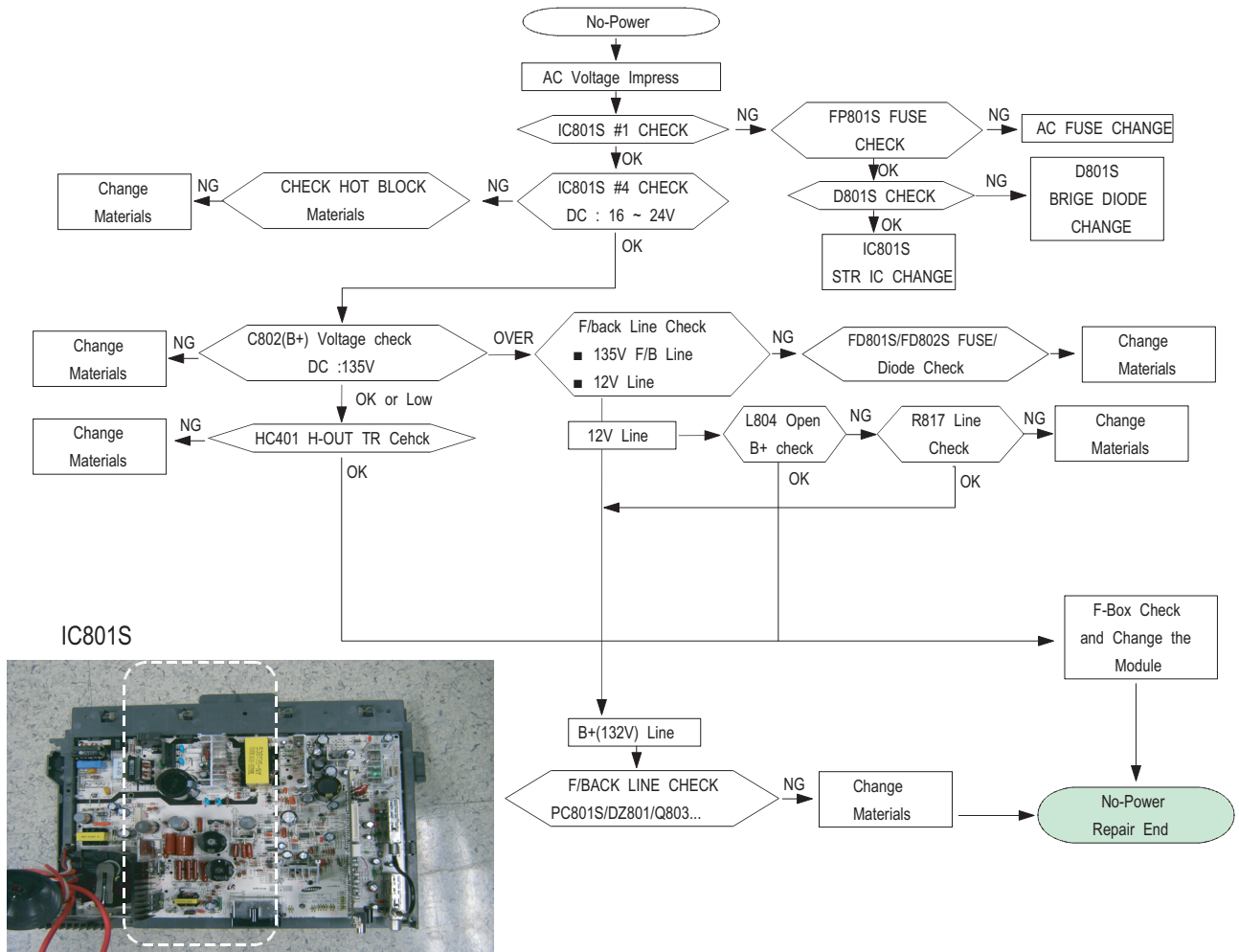
Factory Mode → Checksum → Right Button → Calculate Checksum → Output Checksum (e.g. 0xab2b)

- Checksum Examples  
T\_ULTP EU\_1002 : Checksum = 0x4faa

## 6-4 Troubleshooting Procedures by ASS'Y

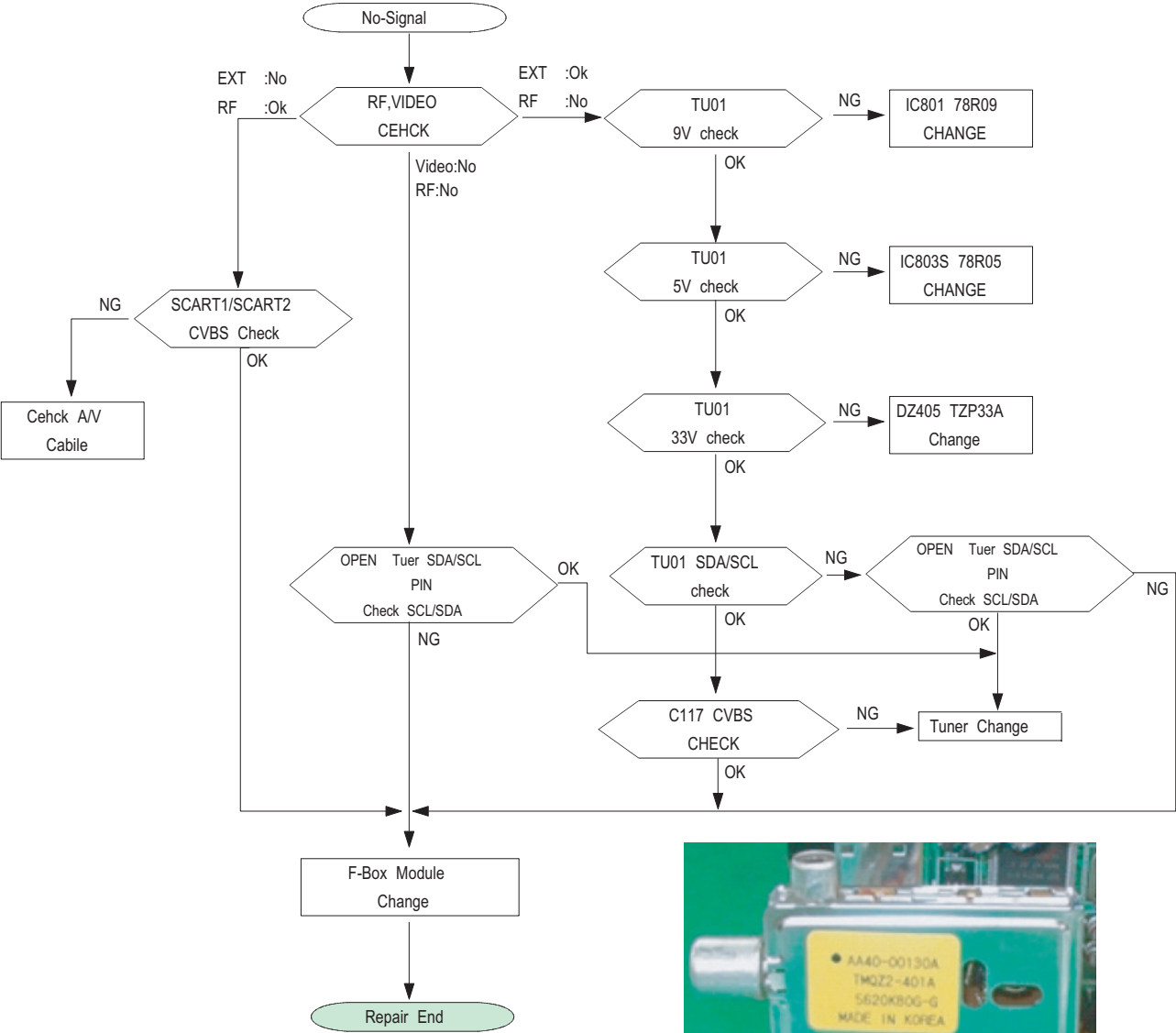
### 6-4-1 NO Power

#### 1. Power part of the Main Board Check



### 6-4-2 NO Video

1. when the power is normal

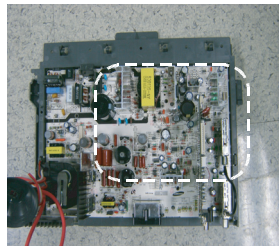
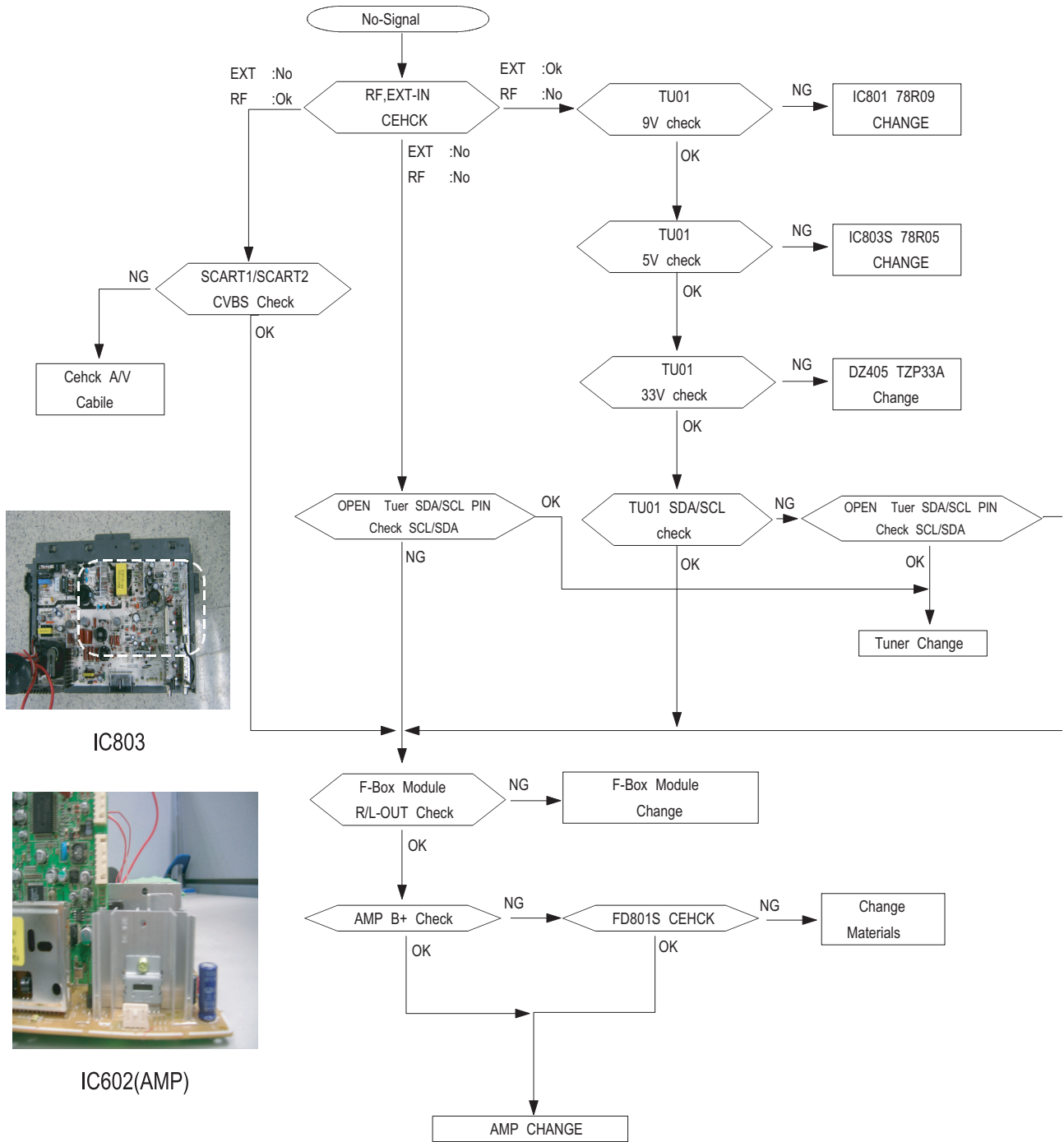


TU01

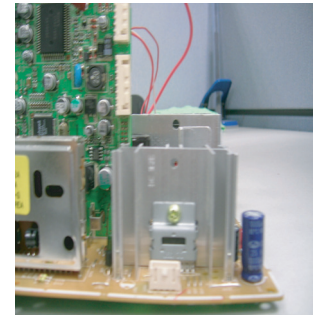


### 6-4-3 No Sound

1. when the power is normal



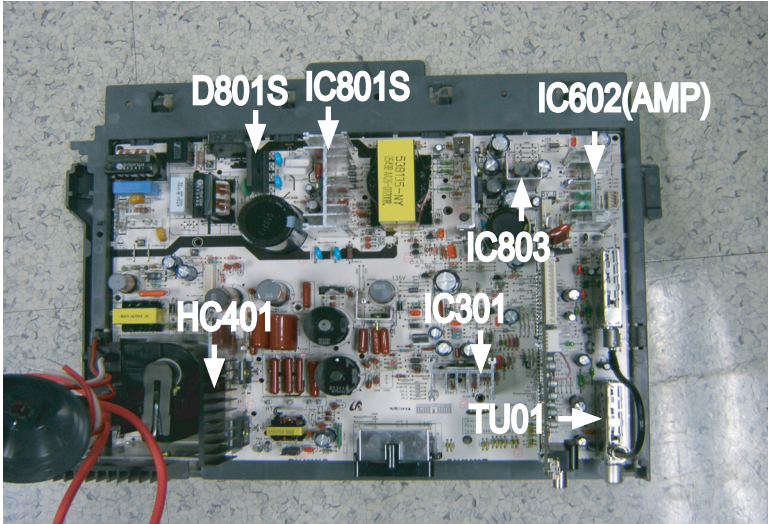
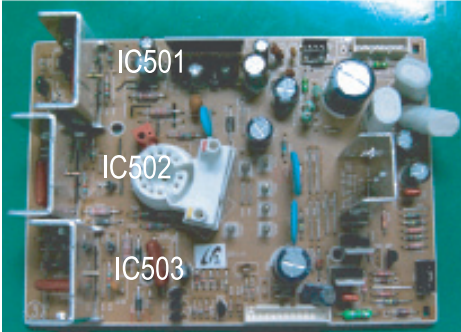
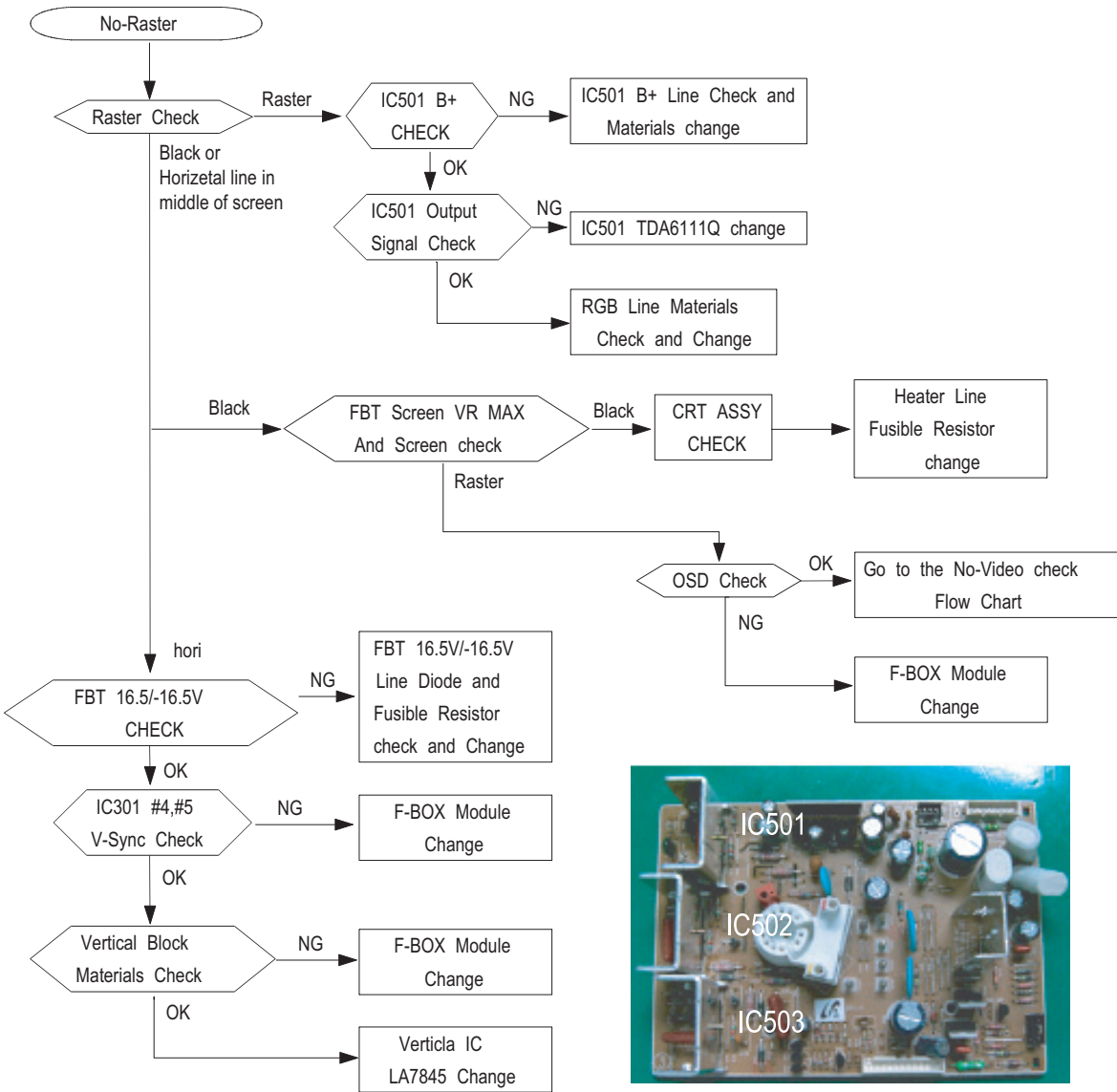
IC803



IC602(AMP)

### 6-4-4 No Raster

1. when the H/V is normal



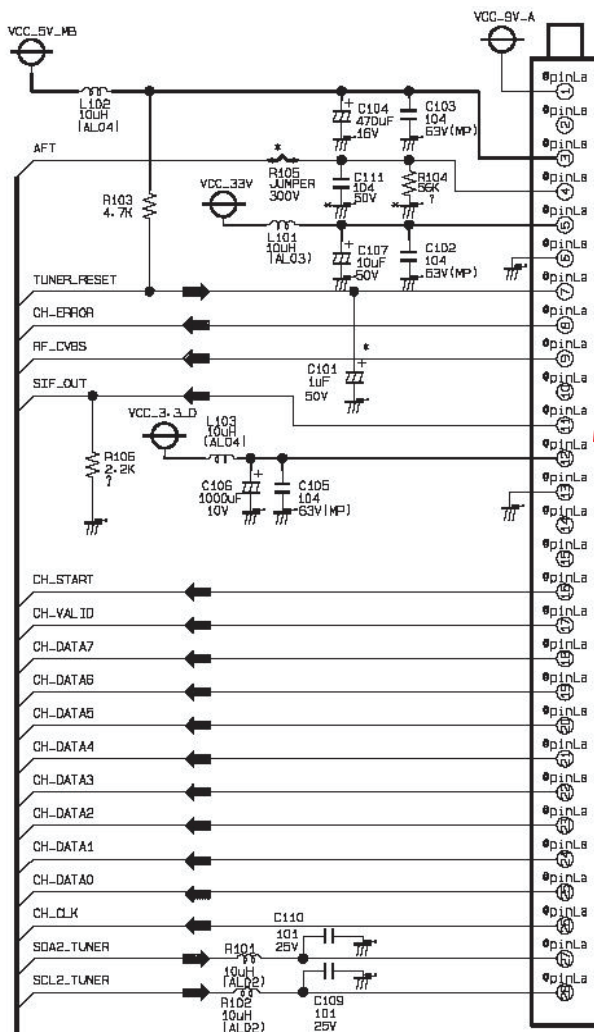
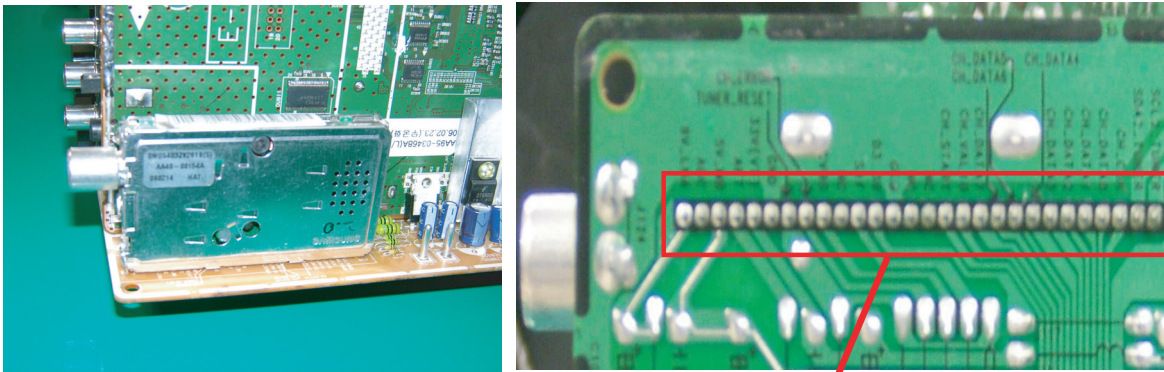
## 6-5 Troubleshooting by Blocks

### 6-5-1 Troubleshooting System Boards

#### 1. Tuner Diagnosis

If no signal is received even though the RF signal from the external aerial is connected to the MAIN Board Tuner, check the following items.

- Supply Power: 5V, 3.3V, 33V
- Check for an RF defect: Check the CVBS output
- Check for an AUDIO defect: Check the SiF Signal output

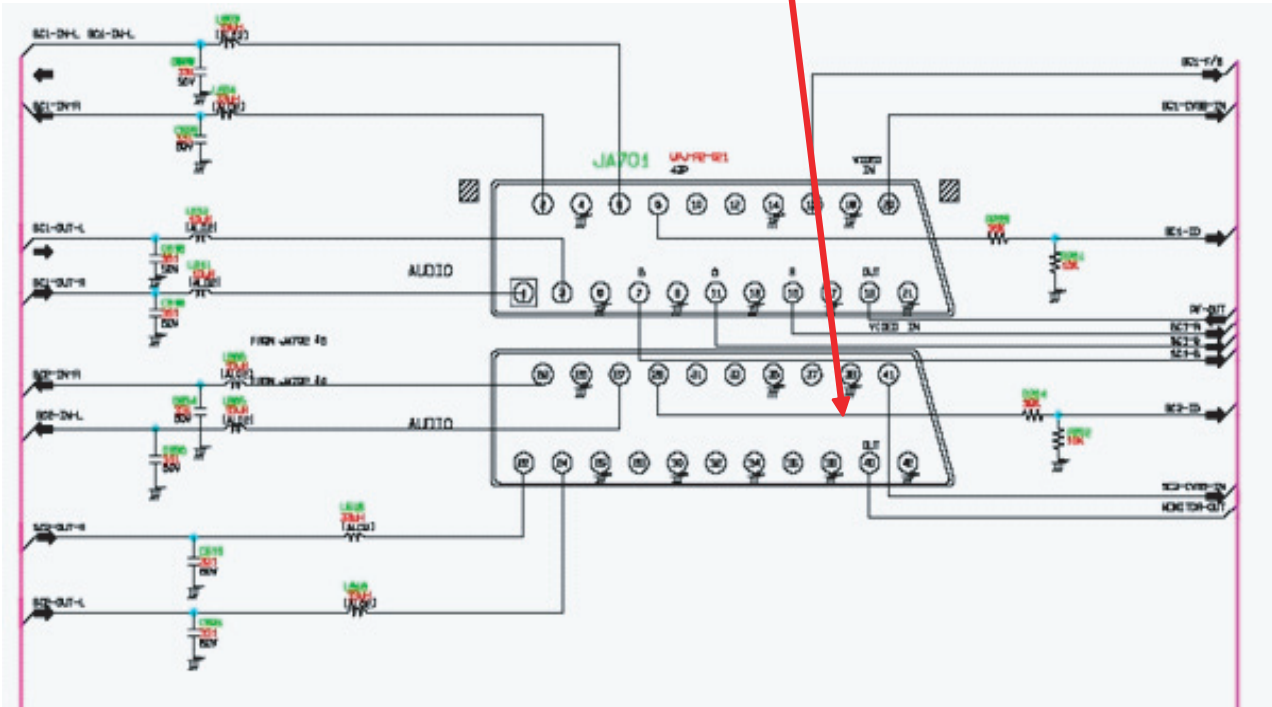
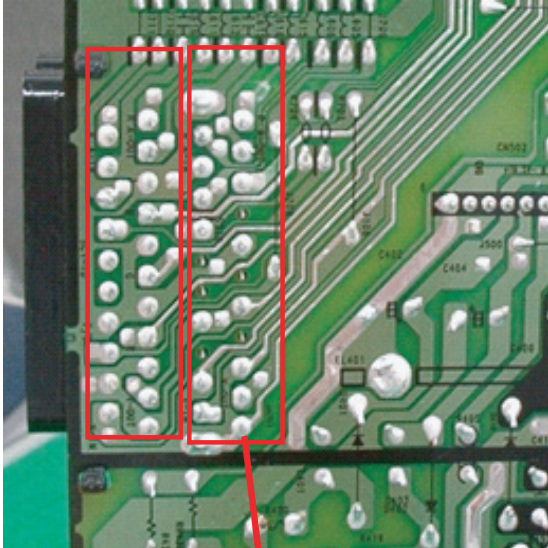
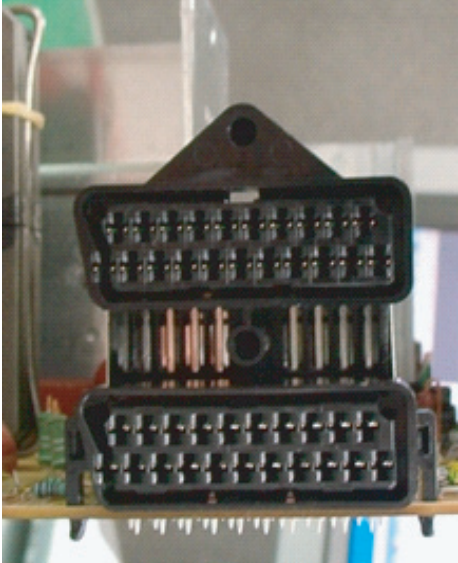


2. External Input Diagnosis

It receives the EXT1/EXT2/signal and consists of monitor output (video and audio).

The signal is input to VSP9402 through the port. If no signal input/output is detected, check the following items.

- Power supply : VSP9402(3.3V,1.8V) , CXA2180(5V)
- Check if the input and output jacks are defective.

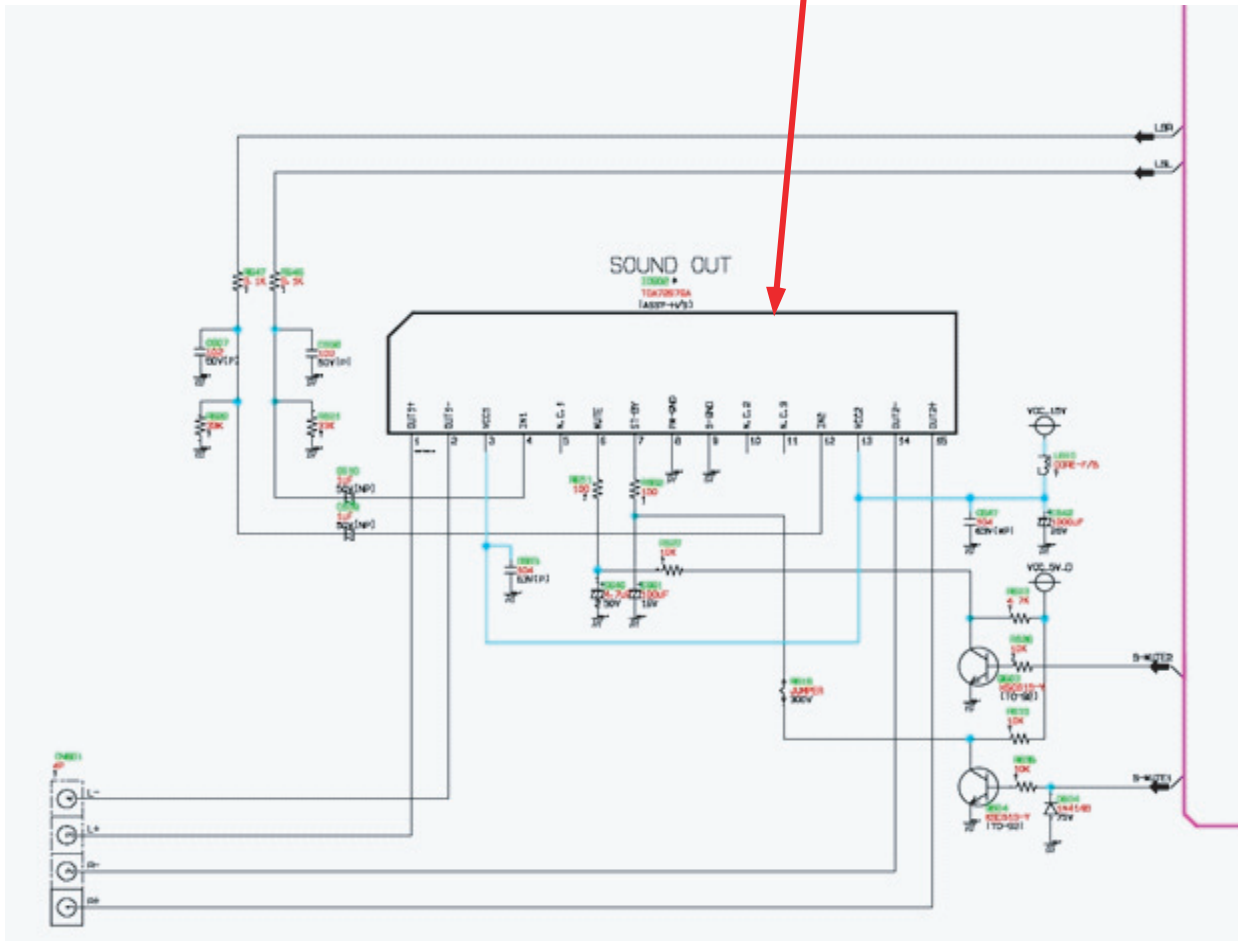
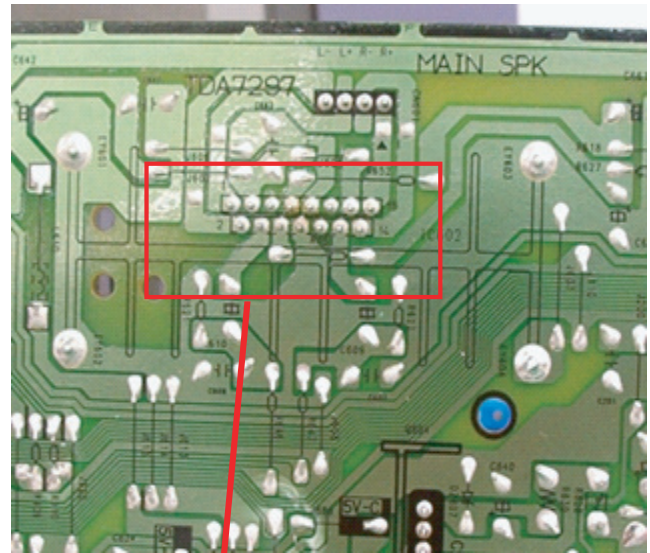
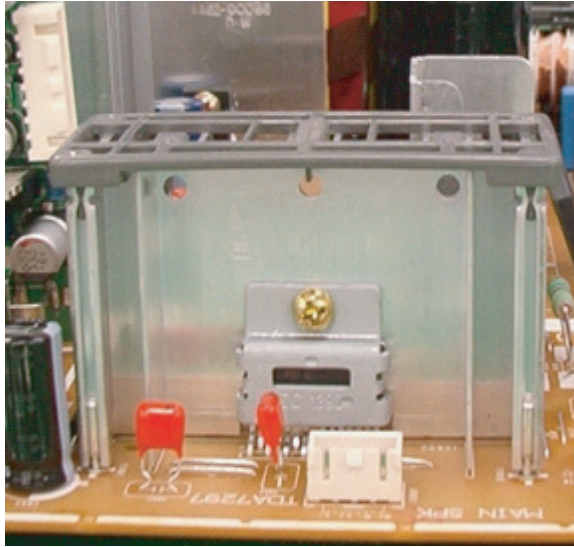




### 3. TDA7297(Audio AMP) Diagnosis

The signal is received from the Audio Processor (VCT69xyP) and sound is output at 10W + 10W power.

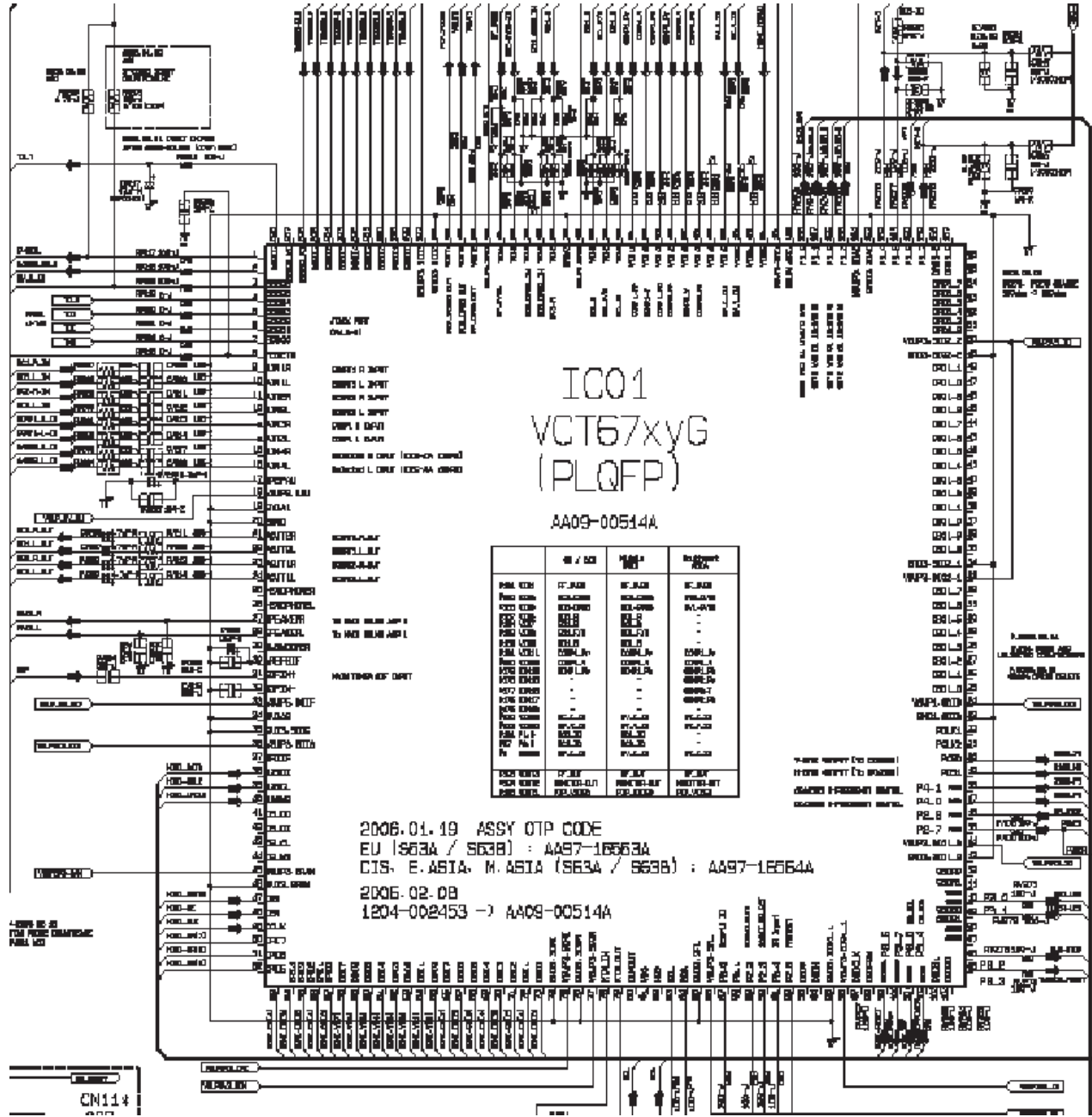
- Power supply :15V
- Check for input defects : L/R
- Check for output defects : L+, L-, R+, R-



4. VCT67xyG Diagnosis

It processes the one chip that Micom, Switching, Decoder

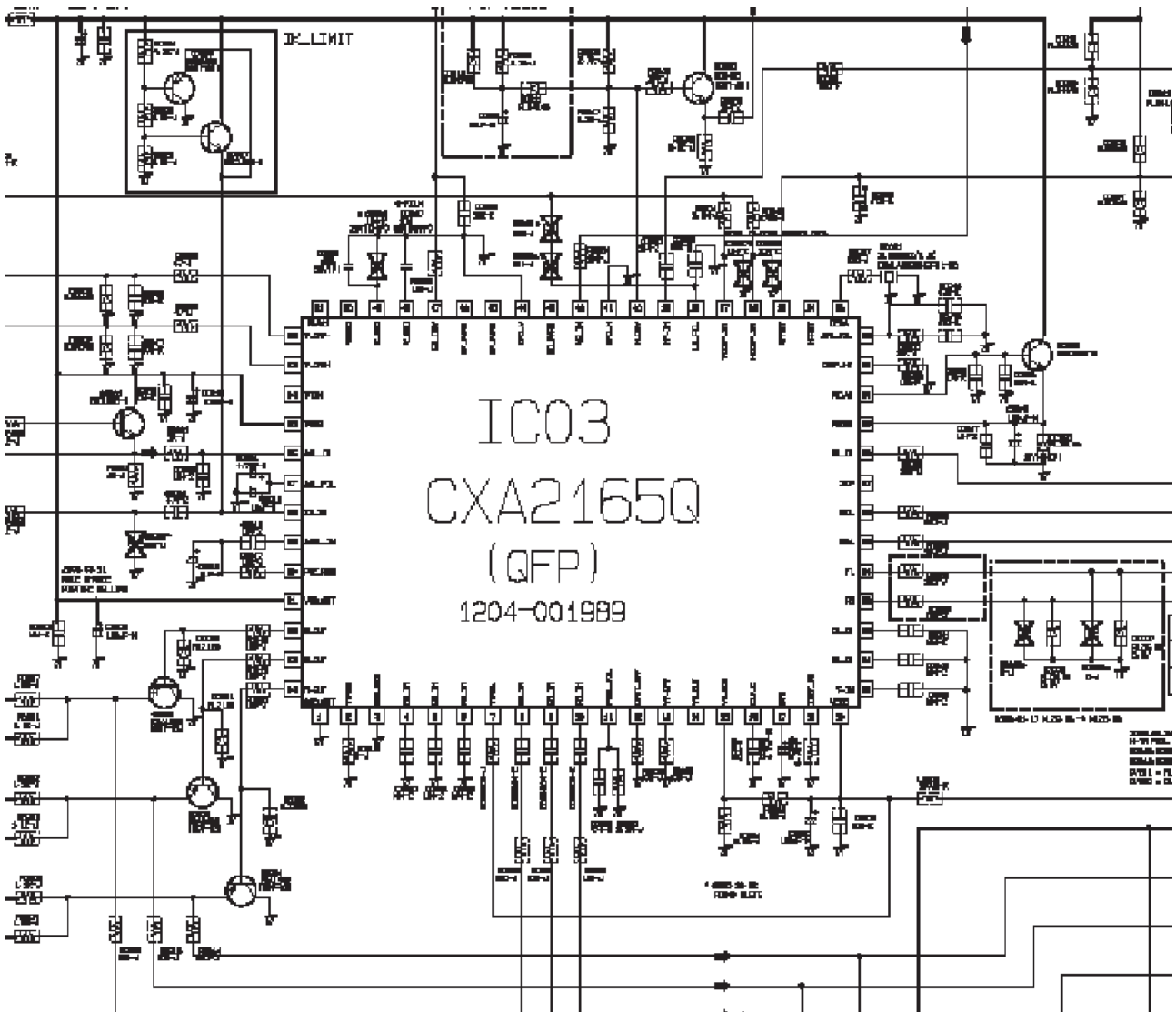
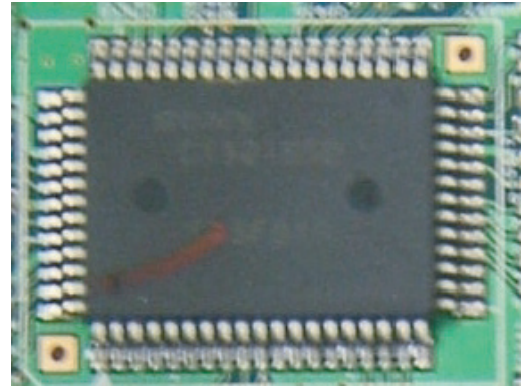
- Power supply : 8V, 5V, 3.3V, 1.8V
- Check for input defects : RF, SCL, SDA, S-Video(Y,C), SIF, Scart 1/2, Component 1/2, HDMI
- Check for output defects : RF, Monitor out, R/G/B Sound L/R



### 5. CX2165 Diagnosis

The Y/Pb/Pr signal is received from VCT69xyP and the signal is output as R/G/B. It also outputs the V/H Drive, E/W and performs the ABL and EHT operation. If V-Drive output is not detected, check for an IC defect.

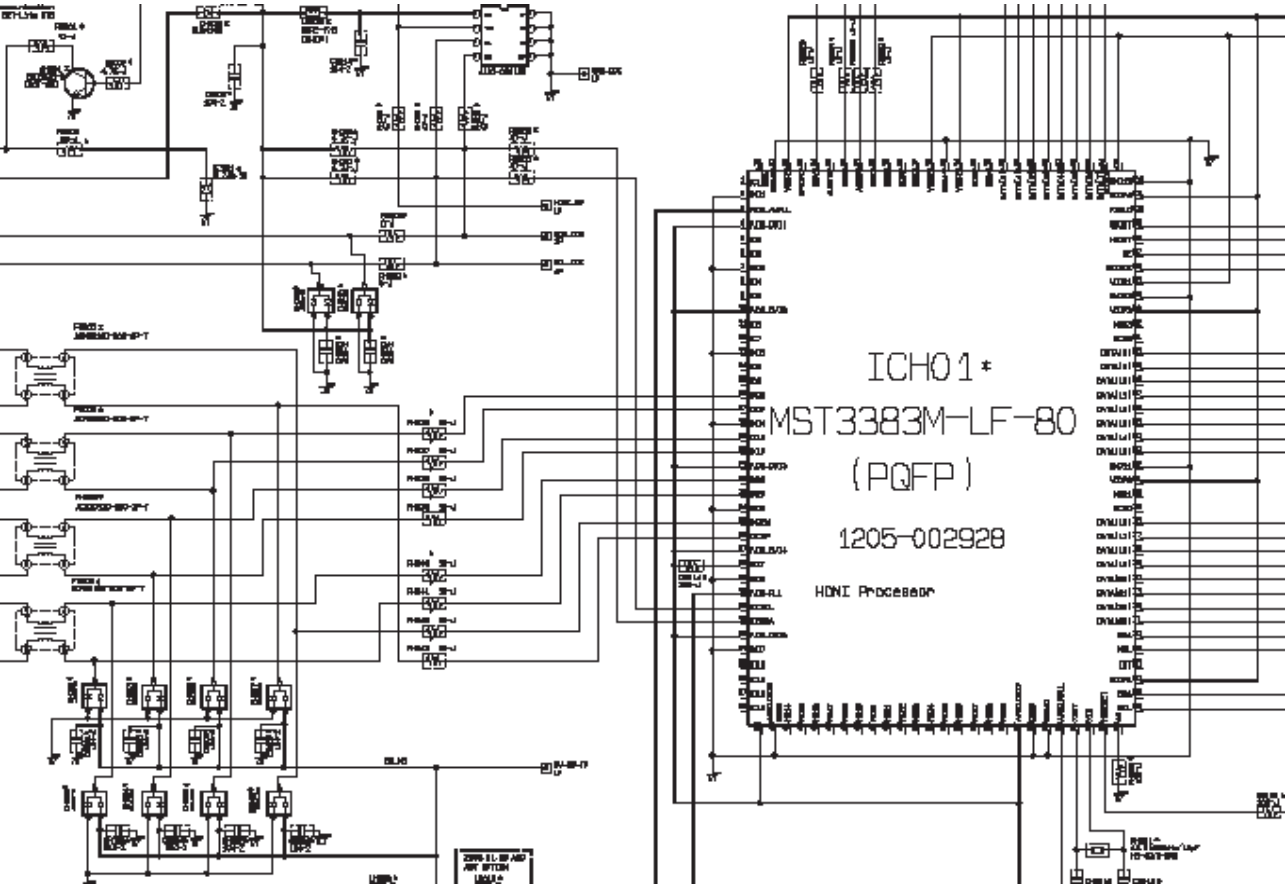
- Power supply : 5V, 9V
- Check for input defects : R/G/B, H/V
- Check for output defects :



6. MST3383M Diagnosis

HDMI Decoder

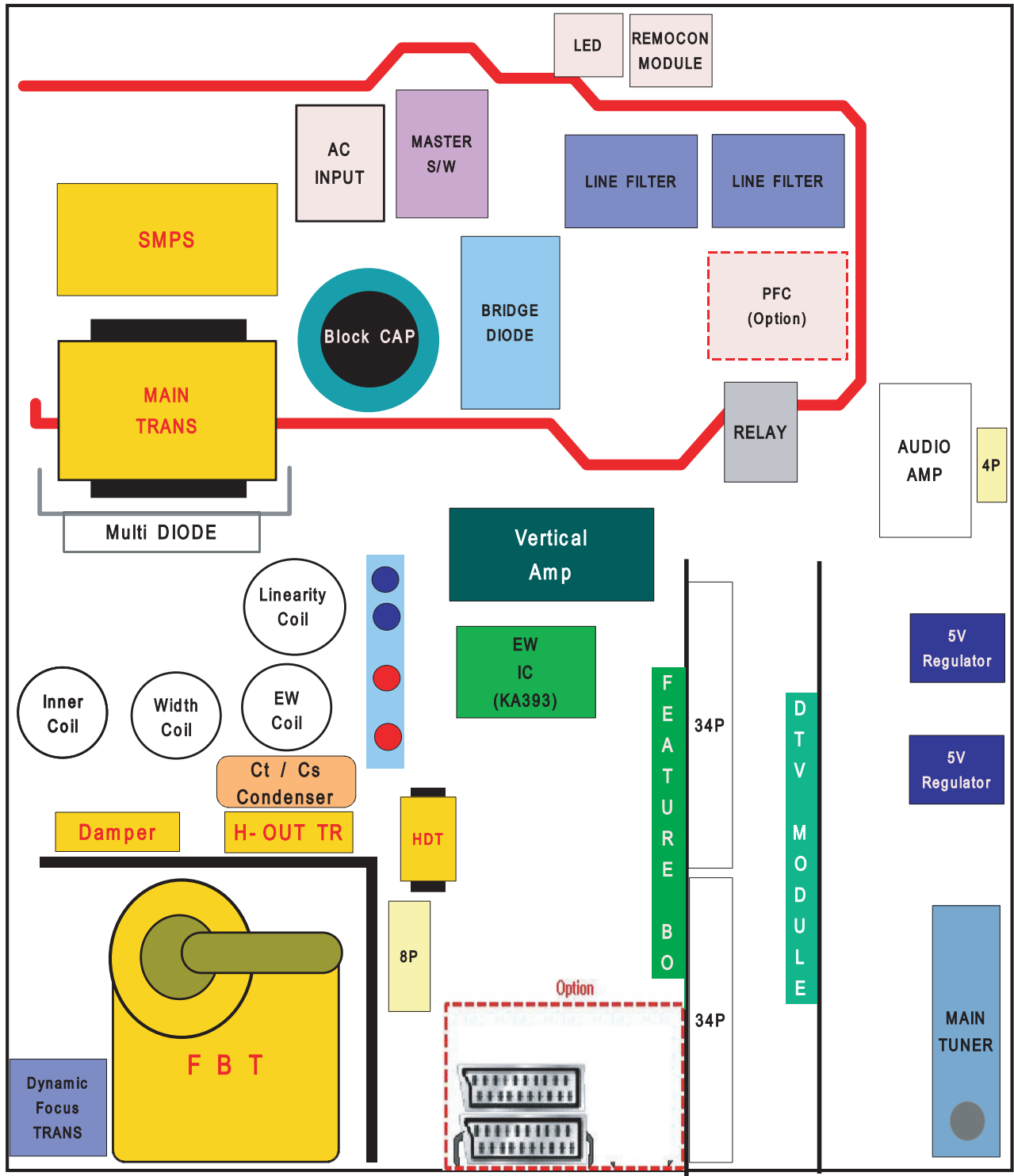
- Power supply : 5V, 3.3V, 2.5V
- Check for input defects : SCL, SDA, Reset
- Check for output defects : HDMI 24bit Data, I2S, HV

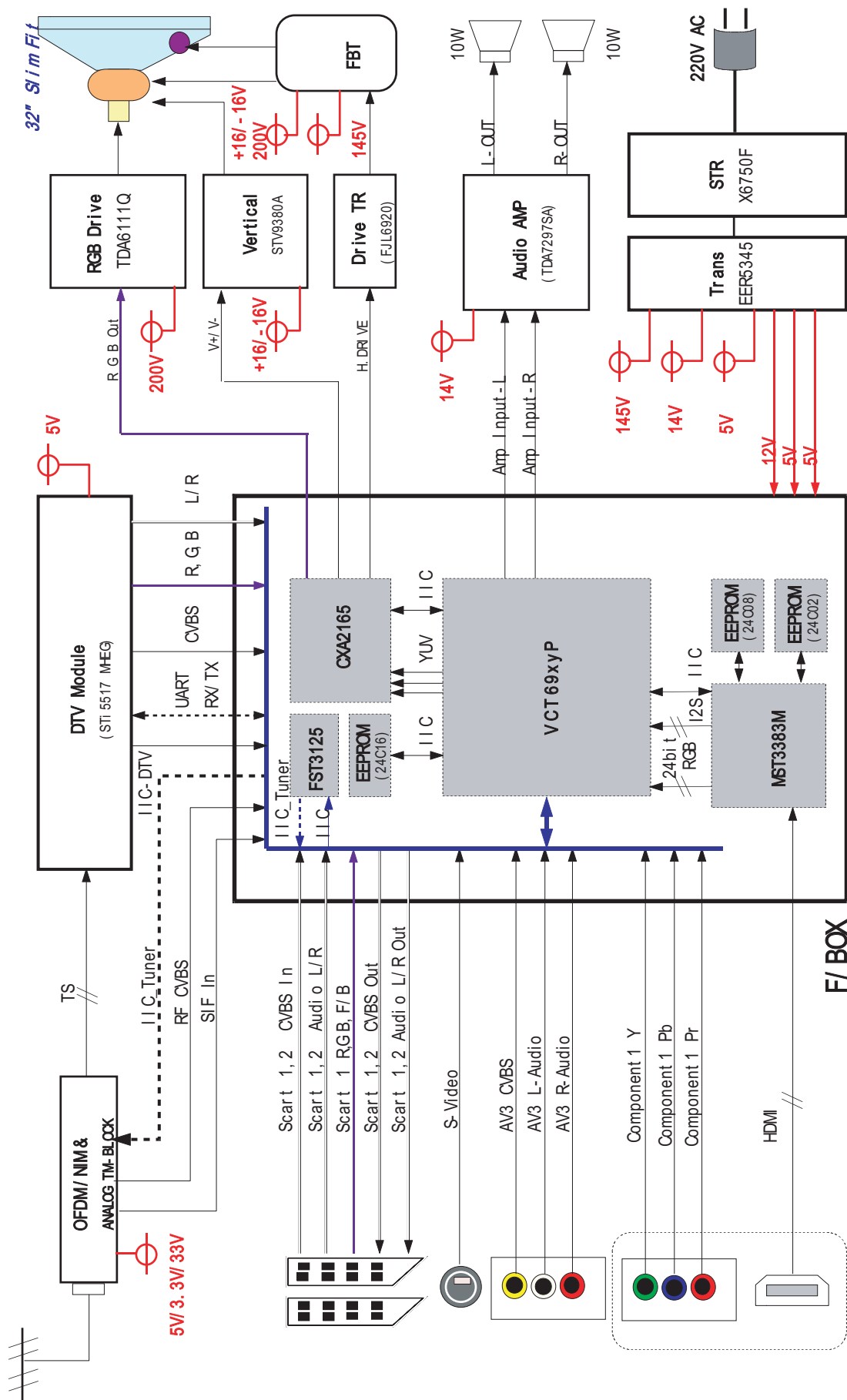


# MEMO

# 7. Block Diagram

## 7-1 Overall Block Diagram

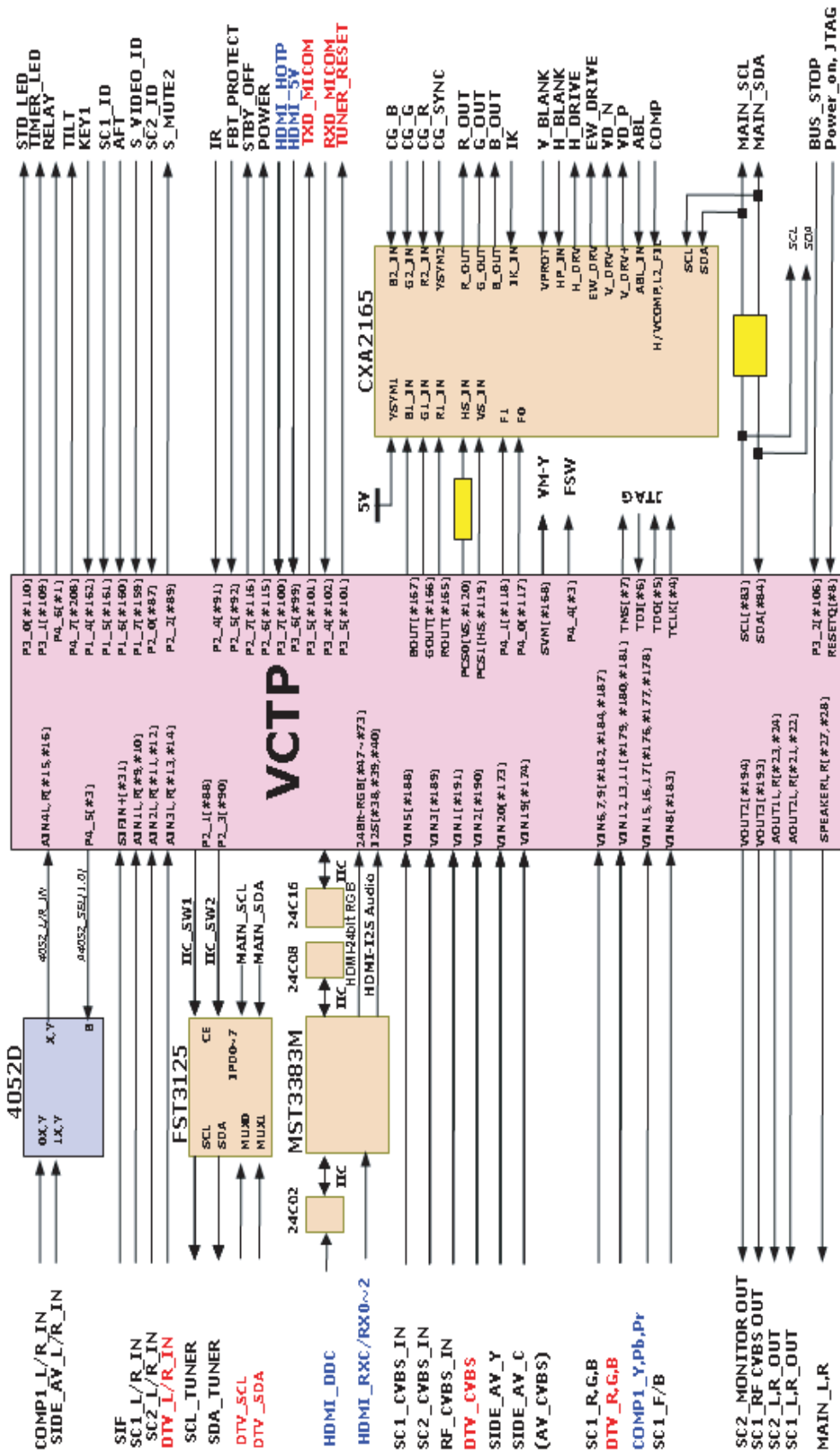




## 7-2 Partial Block Diagram

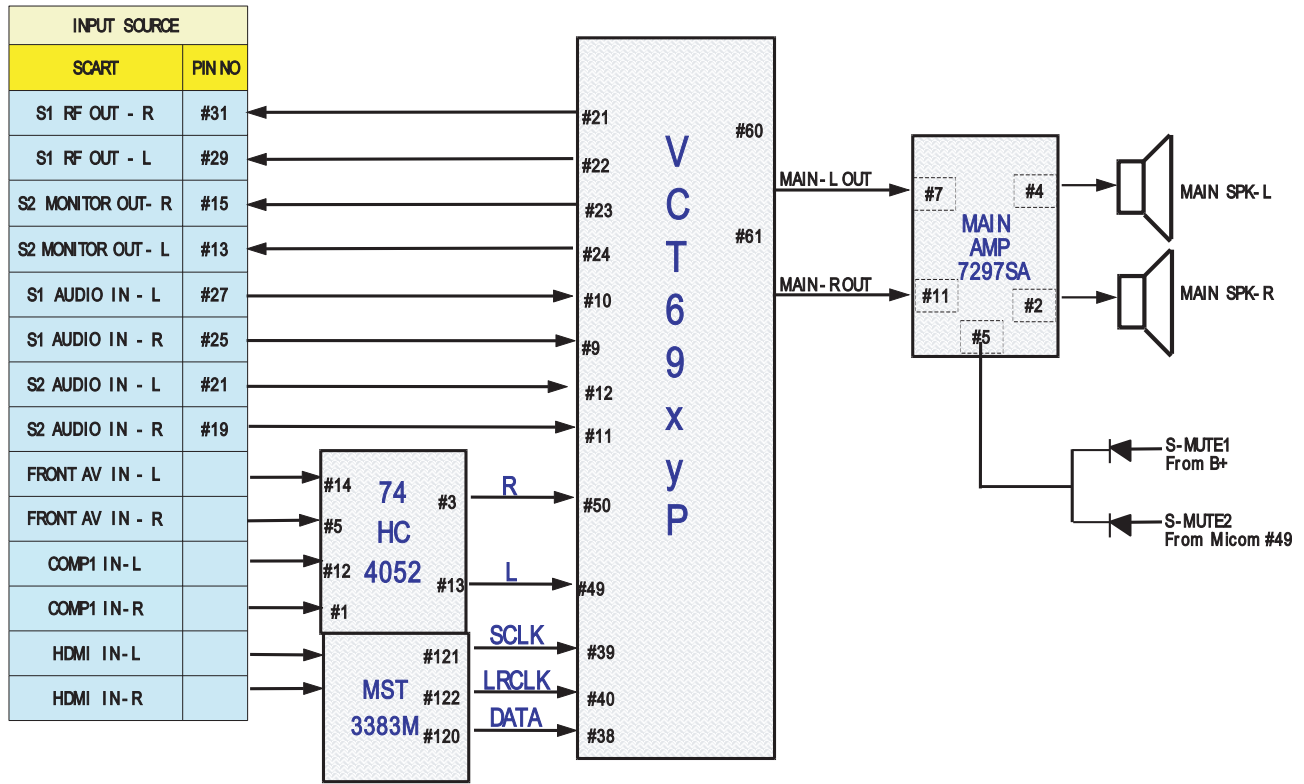
### 7-2-1 F-Box Block Diagram

# Unlimited VCTP F-Box : Signal Flow

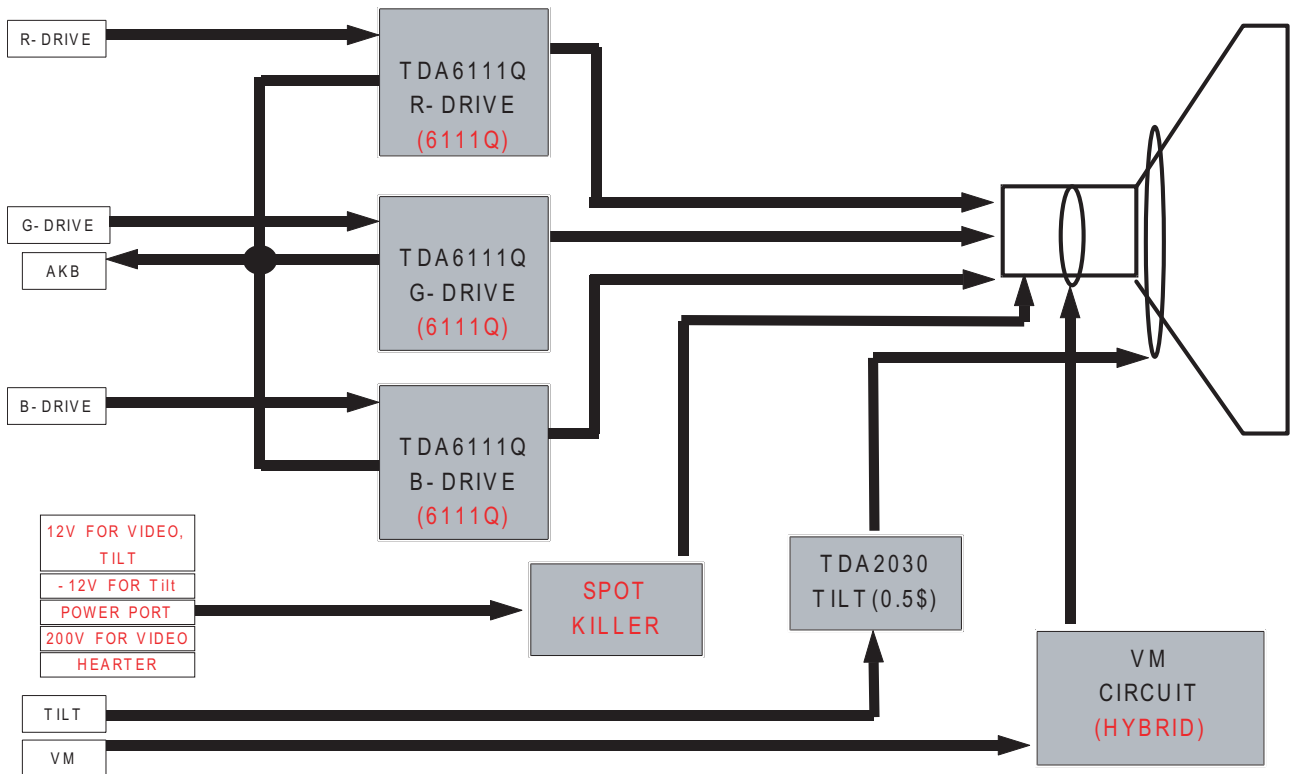




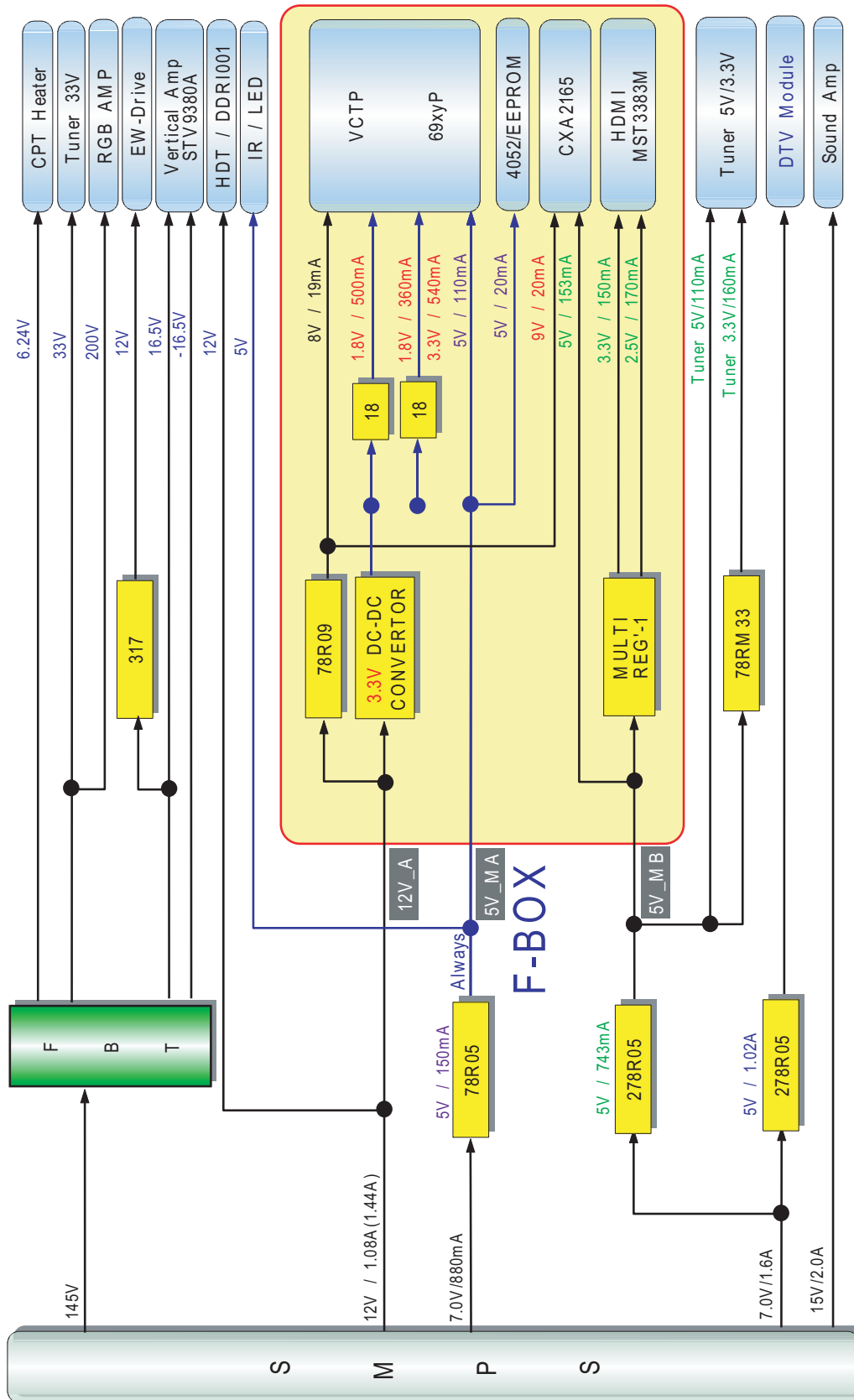
### 7-2-2 Sound Block Diagram



### 7-2-3 CRT Diagram



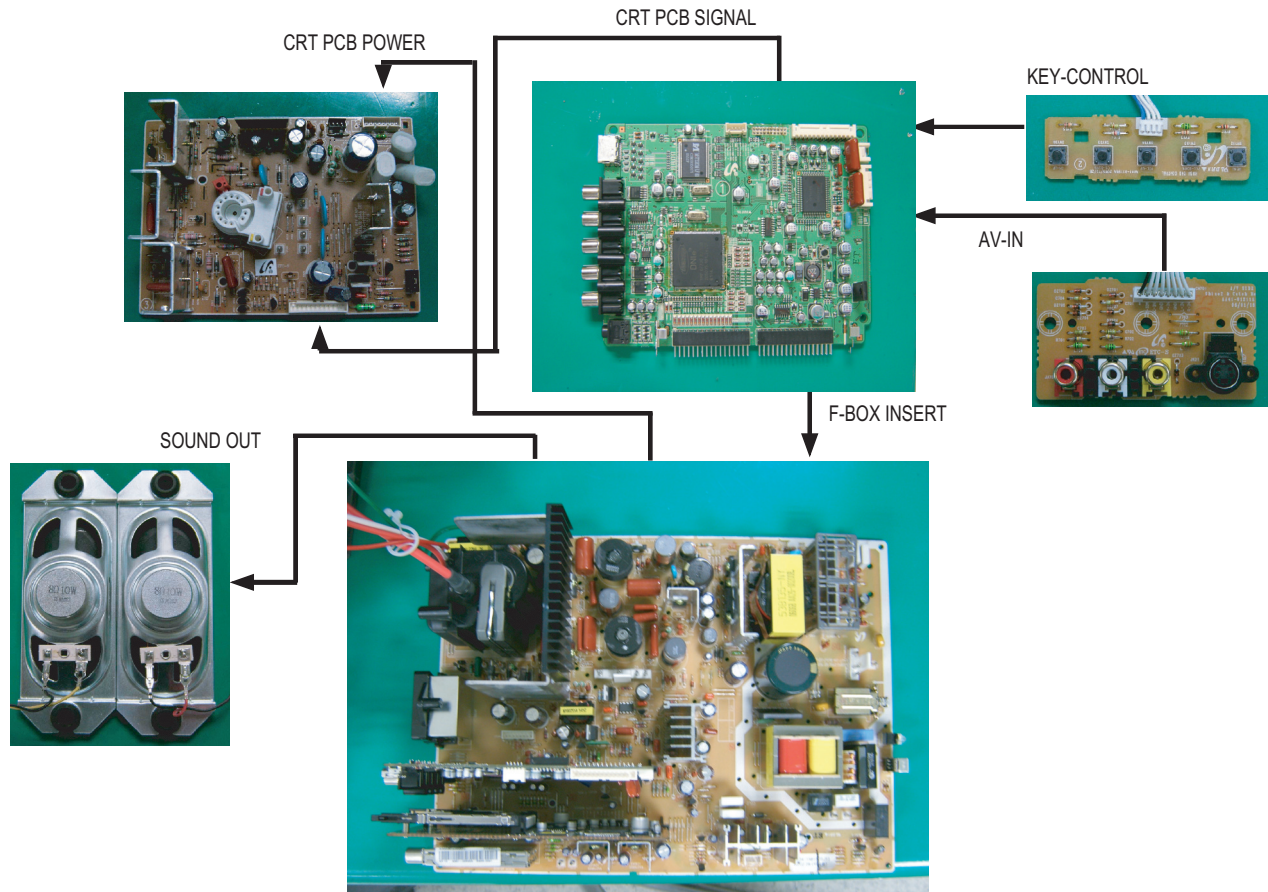
### 7-3 Power current block diagram



# MEMO

## 8. Wiring Diagram

### 8-1 Overall Wiring



## 8-2 Pin Connection

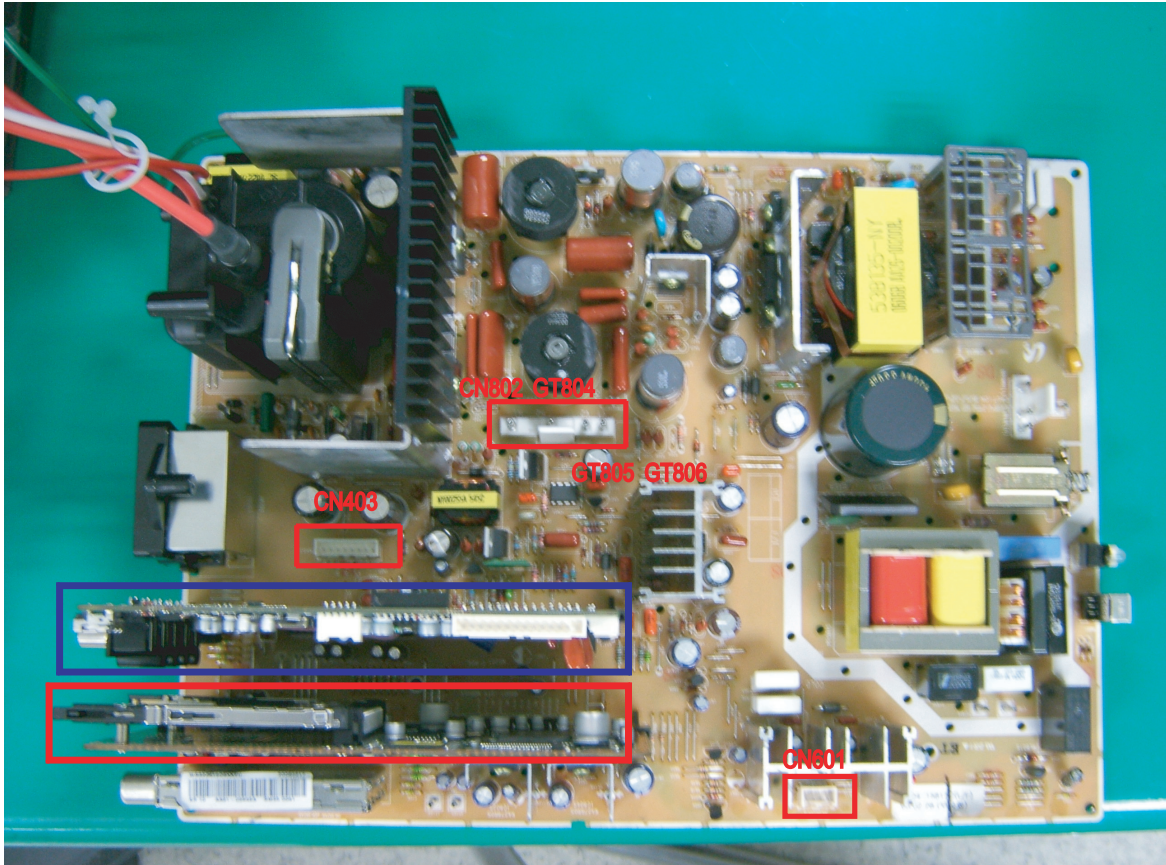
( Front )		( CN02 )			( CN01 )					
68	VCT1 Module	67			SDA2( Tuner )	34	33	GND		
..		...	S-Mute 2(Amp)	68	67	Amp- L	SCL2( Tuner )	32	31	Scart 1 R-out
..		...	Mute( Spot Killer )	66	65	Amp- R	CH-SDA( DTV I2C )	30	29	Scart 1 L-out
..		...	Power CTL	64	63	Timer- LED	CH-SCL( DTV I2C )	28	27	Scart 1 R-in
..		...	Relay	62	61	STD- LED	GND	26	25	Scart 1 L-in
..		...	5V_MA	60	59	I R	Scart 1- CVBS	24	23	GND
36		35	5V_MB	58	57	FSW	GND	22	21	Scart 2 R-in
..		...	GND	56	55	GND	Scart 2- CVBS	20	19	Scart 2 L-in
..		...	12V_A	54	53	RXD( Mi com)	GND	18	17	GND
34		33	FBT- Prt	52	51	TXD( Mi com)	Monitor Out	16	15	Scart2 R-out
..		...	V- Guard	50	49	DTV- R/Pr	GND	14	13	Scart2 L-out
..		...	V- Drive -	48	47	DTV- G/Y	RF- out	12	11	Tuner Reset
..		...	V- Drive +	46	45	DTV- B/ Pb	GND	10	9	RF- CVBS
..		...	EW Drive	44	43	DTV- CVBS	Scart 1- R	8	7	AFT
..		...	GND	42	41	DTV L-in	Scart 1- G	6	5	SIF
..		...	H- Drive	40	39	DTV R-in	Scart 1- B	4	3	Scart2- ID
..		...	H- Blank	38	37	GND	Scart1- F/ B	2	1	Scart 1- ID
2		1	ABL	36	35	SP_DIF				

PCB Top Reference

## 9. PCB Diagram

### 9-1 Main Board

#### 9-1-1 Assy Main Board



■ The System Board that Controls Various Signals for Video Signal Processing and Product Operations

#### 9-1-2 Names & Roles of Key Parts

- \* CN601 : This is a 4 pin port connected to the Speaker, and sends the signal from the AMP to the speakers.
- \* CN403 : This is a 8 pin port connected to the CRT Board and supplies 200V, +16V, -16V and Heater voltage.
- \* GT804 : This is a ground port to prevent high voltage due to lighting.
- \* CN802 : This is a 3 pin port connected to the AC power cable. It is connected to the power cable socket.
- \* GT805, GT806 : This is a port connected to the D-Coil surrounding the CRT.

### 9-1-3 Main Board Connector Pin

CN401

Connected to the CRT Board

PIN No.	Pin Name
1	200V
2	NC
3	Heater
4	GND
5	-16.5V
6	+16.5V
7	GND
8	NC

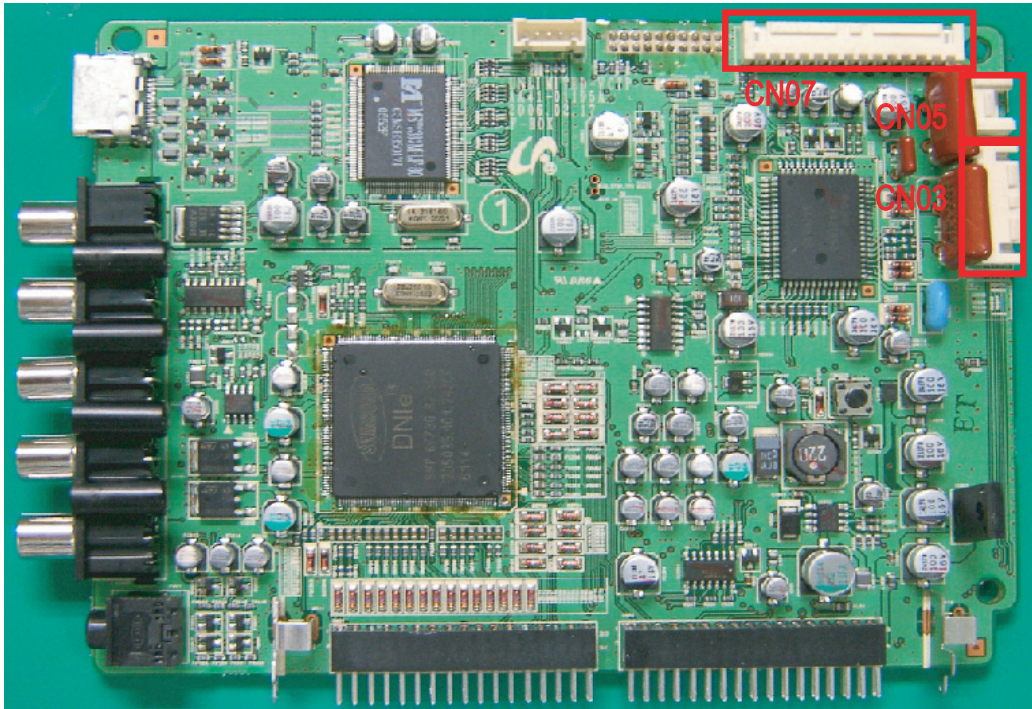
CN601

Connected to the Speaker Port

PIN No.	Pin Name
1	R+
2	R-
3	L+
4	L-

## 9-2 Feature Box Board

### 9-2-1 Assy Feature Box Board



■ This controls the path of the electron beams from the CRT electron guns using the deflection coil.

### 9-2-2 Names & Roles of Key Parts

- \* CN07 : This is a 14 pin port connected to the CRT Assy's, and outputs final R/G/B signals to the CRT Ass'y.  
In addition, it outputs the Tilt, VM, and Power signals for the CRT Drive.
- \* CN05 : This is a 4 pin port connected to the Control Ass'y, and receives TV/Video, Menu, Ch Up/Down and Vol +/- signals.
- \* CN03 : This is a 8 pin port connected to the Side AV, and receives S-Video2 and AV4 external inputs.



**9-2-3 Feature Box Board Connector Pin****CN07**

Connected to the CRT Ass'y

PIN No.	Pin Name
1	AKB
2	GND
3	B-OUT
4	GND
5	G-OUT
6	GND
7	R-OUT
8	GND
9	12V_A
10	SVM
11	POWER
12	TILT
13	SVM
14	GND

**CN05**

Connected to the Control Ass'y

PIN No.	Pin Name
1	GND
2	KEY-1
3	NC
4	KEY-2

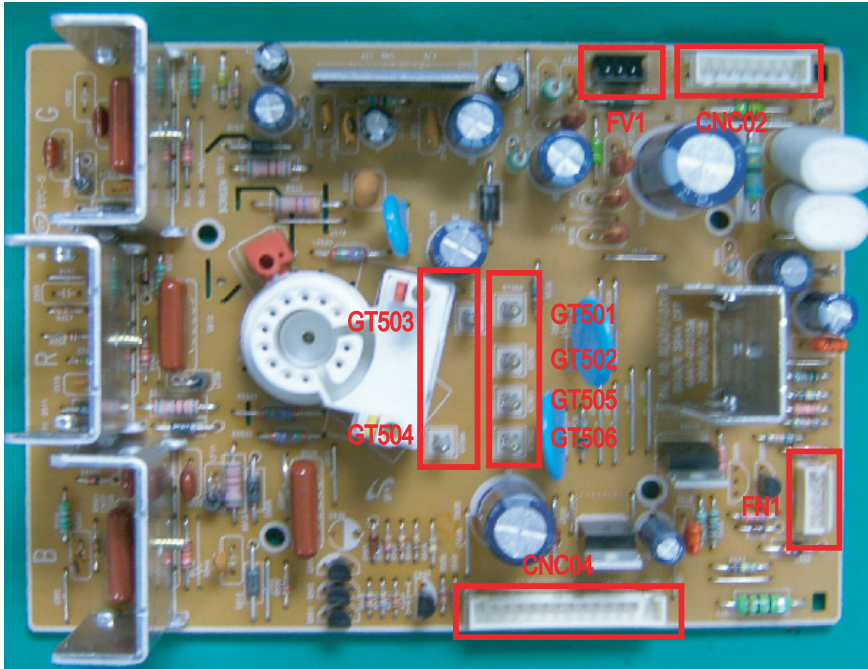
**CN03**

Connected to the Side AV Port

PIN No.	Pin Name
1	SV-C-IN
2	SV-C-ID
3	F-CVBS IN
4	GND
5	FAV-L-IN
6	GND
7	FAV-R-IN
8	GND

## 9-3 CRT Board

### 9-3-1 Assy CRT Board



#### ■ CRT Drive

This supplies the final R/G/B signal from the F-Box and the CRT deflection signal to the CRT

### 9-3-2 Names & Roles of Key Parts

- \* GT501, GT502, GT505, GT506 : This is a port connected to the TBC-Wire and plays the role of CRT ground.
- \* GT503, GT504 : This is a port for countermeasures against compulsory discharges and is connected to the Main Board.
- \* CNC04 : This is a port to receive the R/G/B output signals from the Feature Box.
- \* CNC02 : This is a port that receives power for the CRT and AMP from the Main Board.
- \* FV1 : A port to connect the VM signal to the DY Ass'y.
- \* FN1 : A port to connect signals to the Tilt Coil and is required for the screen slant adjustment.

### 9-3-3 CRT Board Connector Pin

#### CNC04

Connected to R/G/B signal from the Feature Box

PIN No.	Pin Name
1	AKB
2	GND
3	B-OUT
4	GND
5	G-OUT
6	GND
7	R-OUT
8	GND
9	12V_A
10	SVM
11	POWER
12	TILT
13	SVM
14	GND

#### CNC02

Connects the power from the Main Board

PIN No.	Pin Name
1	200V
2	NC
3	Heater
4	GND
5	-16.5V
6	+16.5V
7	GND
8	NC

#### FV1

Connected the VM signal to the DY Ass'y

PIN No.	Pin Name
1	VM
2	NC
3	VM

#### FN1

Connects the signal to the Tilt Coil

PIN No.	Pin Name
1	GND
2	GND
3	TILT
4	TILT

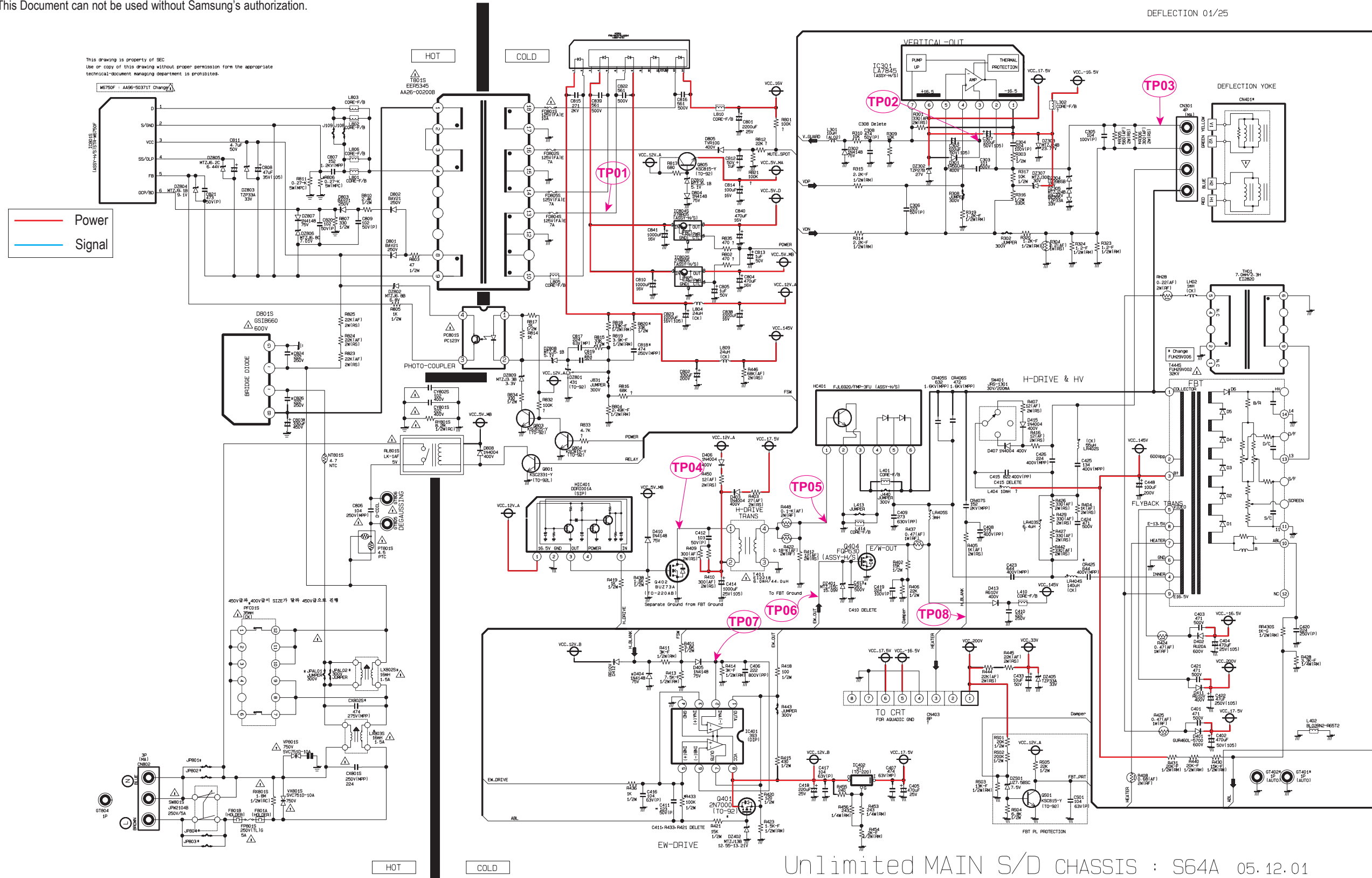
# 10. Schematic Diagram

## 10-1 MAIN

### 10-1-1 POWER & DEF

This Document can not be used without Samsung's authorization.

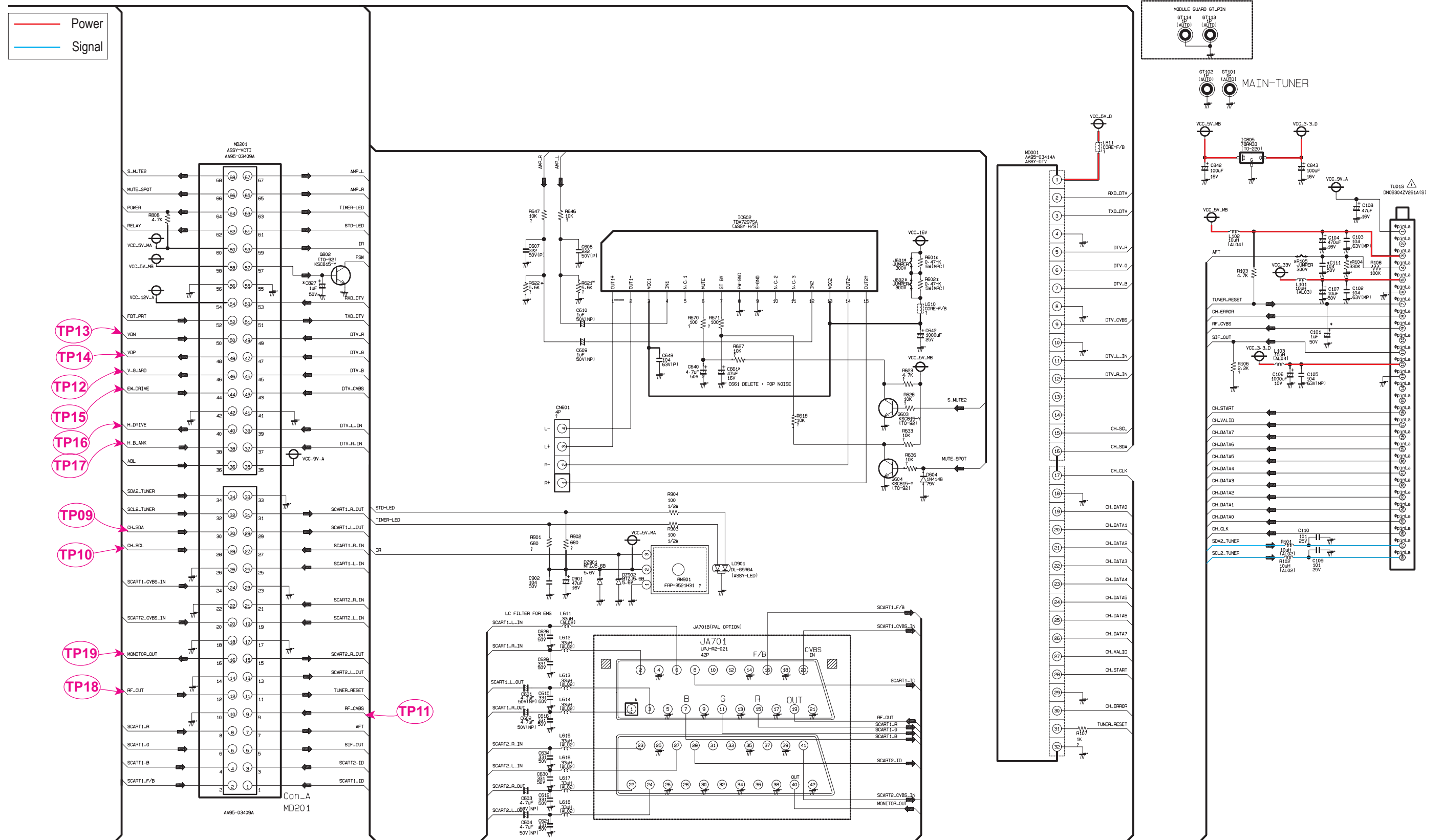
DEFLECTION 01/25



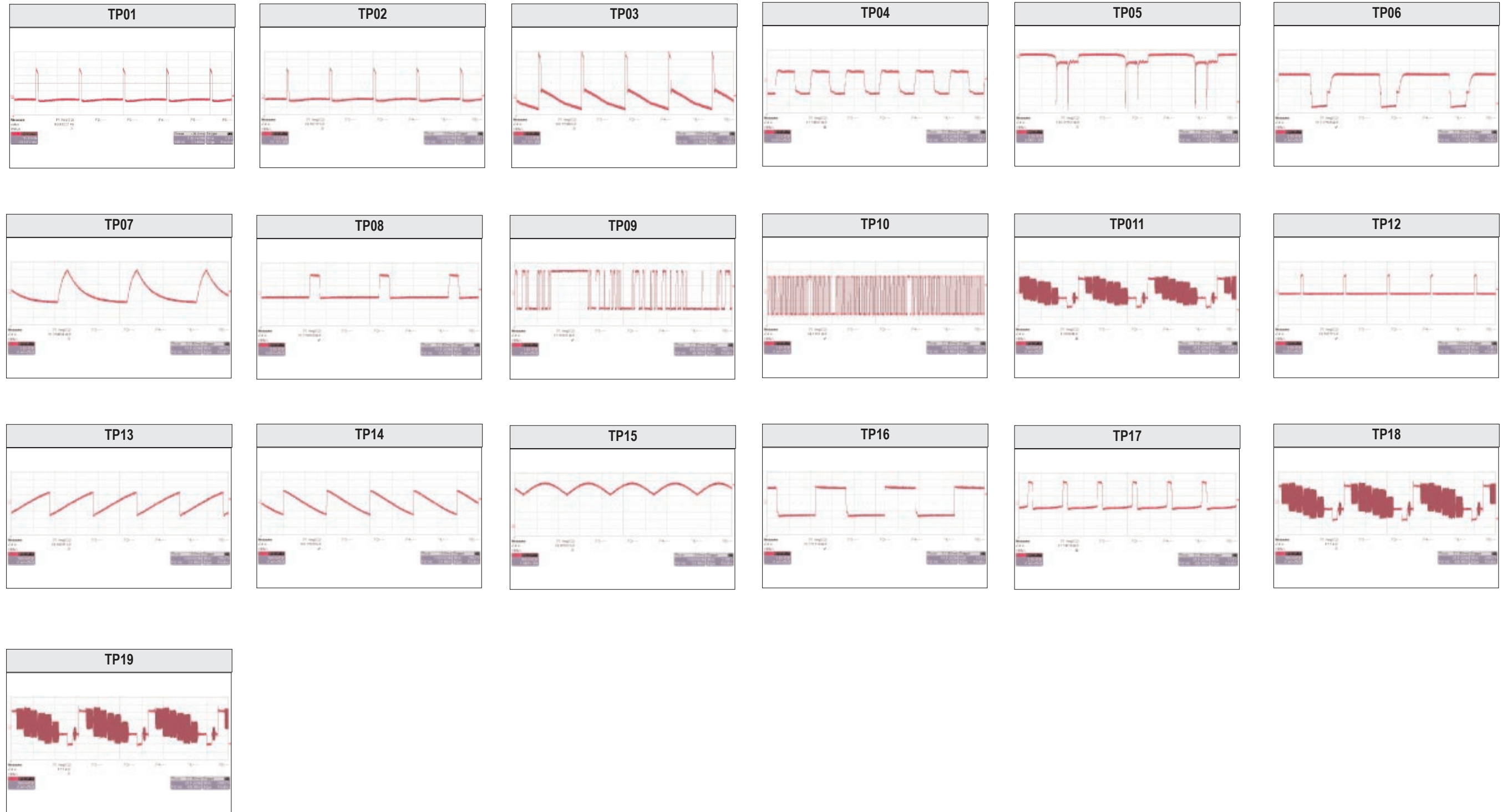
Unlimited MAIN S/D CHASSIS : S64A 05.12.01

### 10-1-2 Tuner

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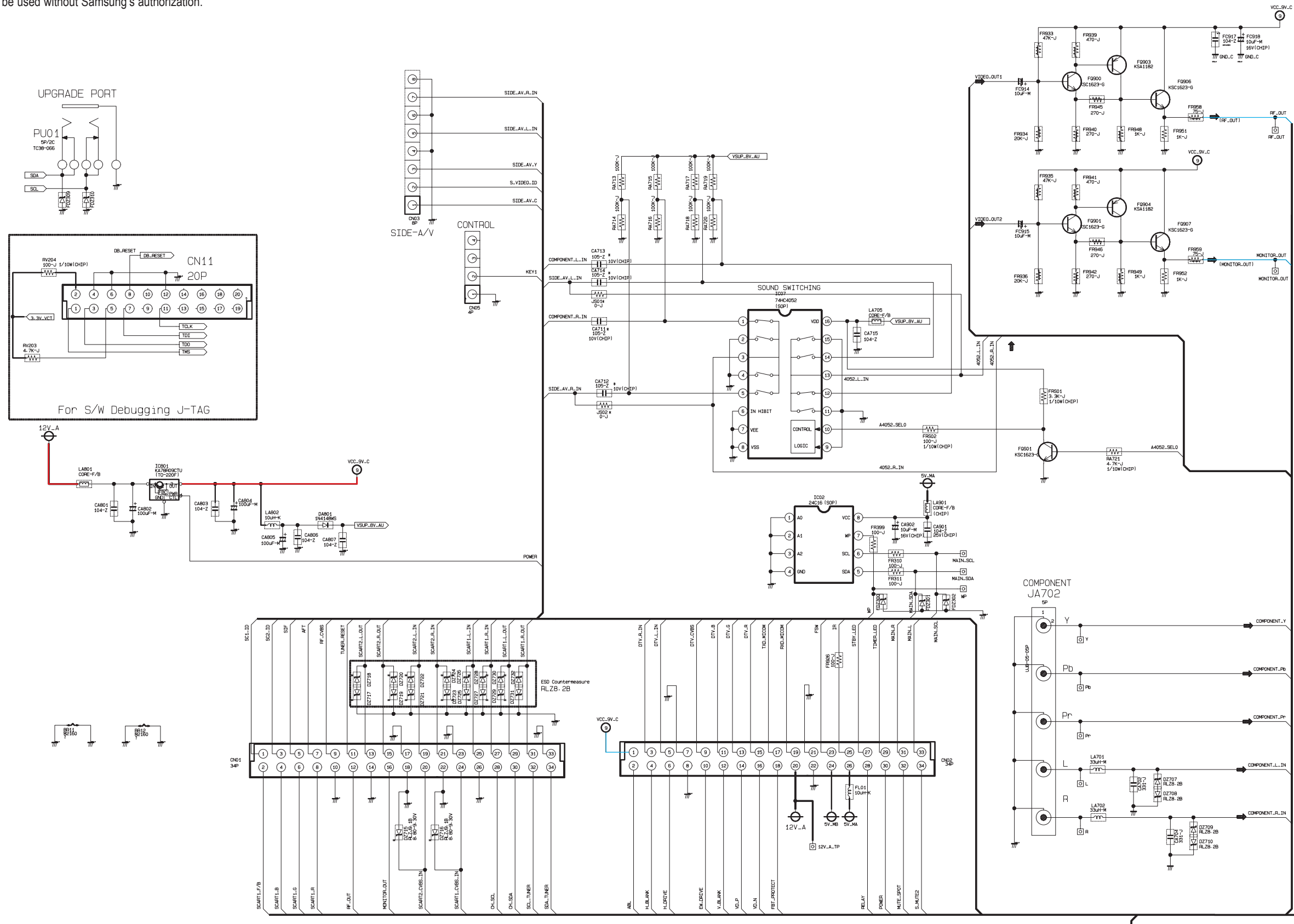
# WAVEFORM



# 10-2 Feature Box

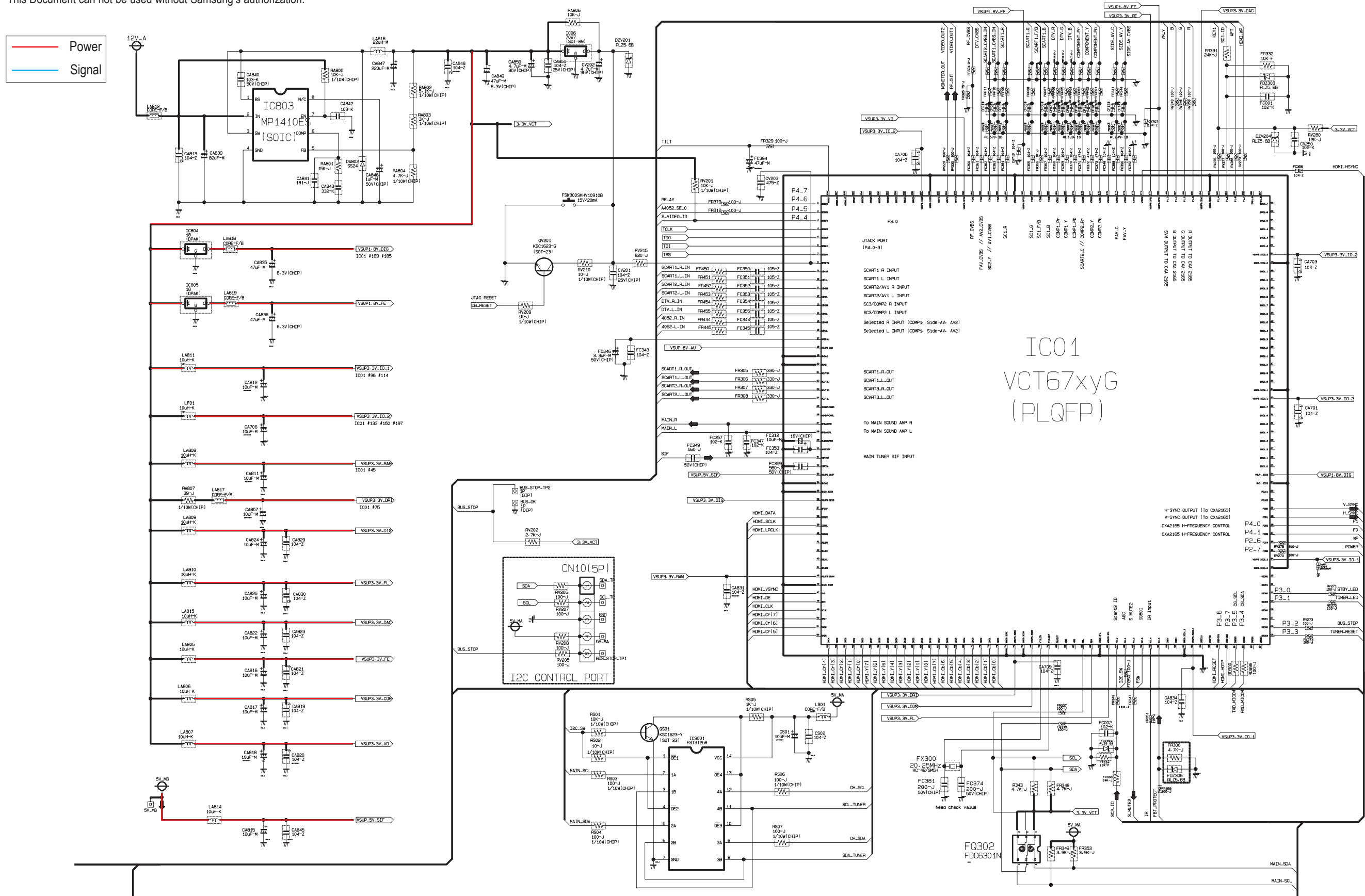
## 10-2-1 Signal Input

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### 10-2-2 VCTP

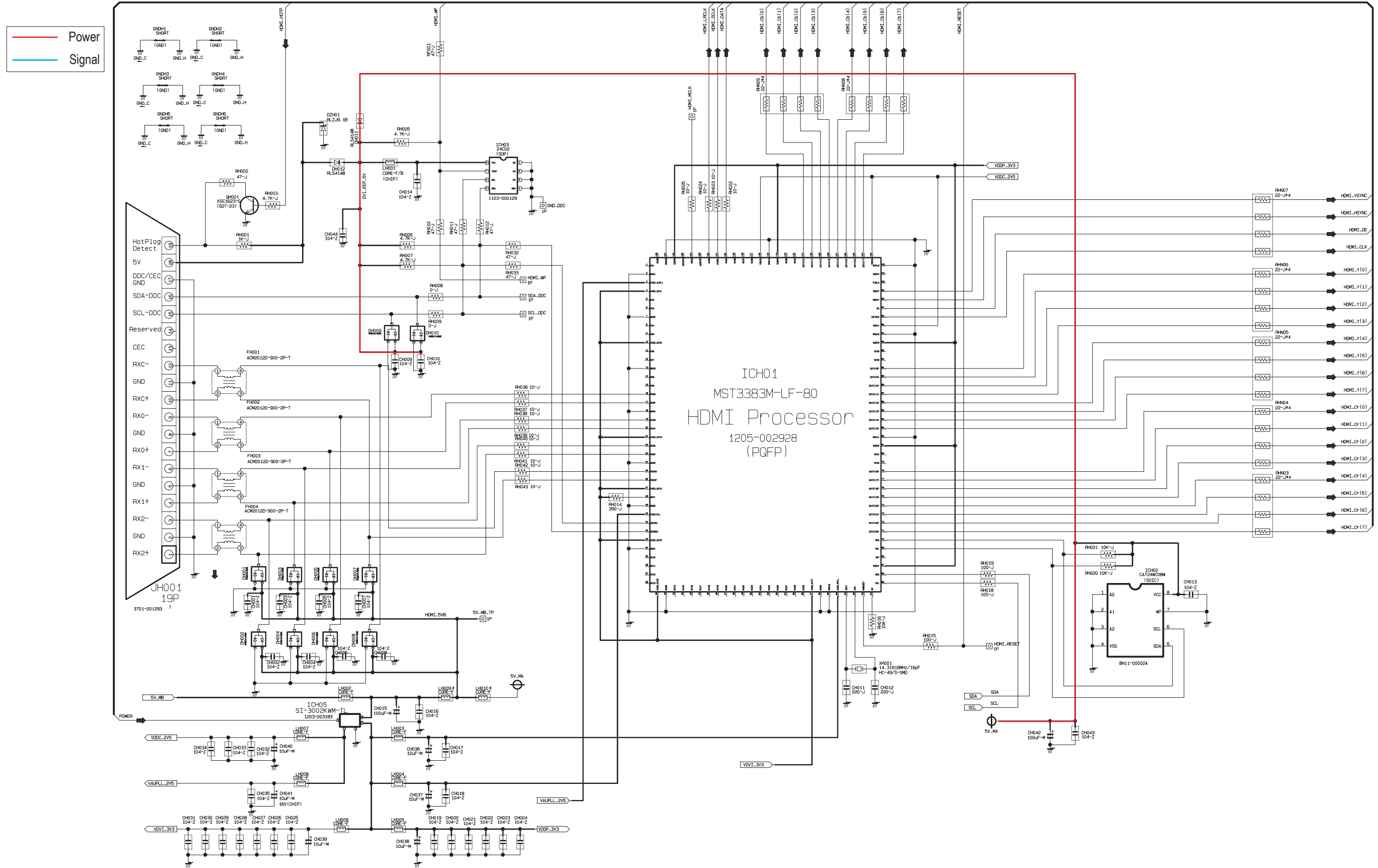
This Document can not be used without Samsung's authorization.





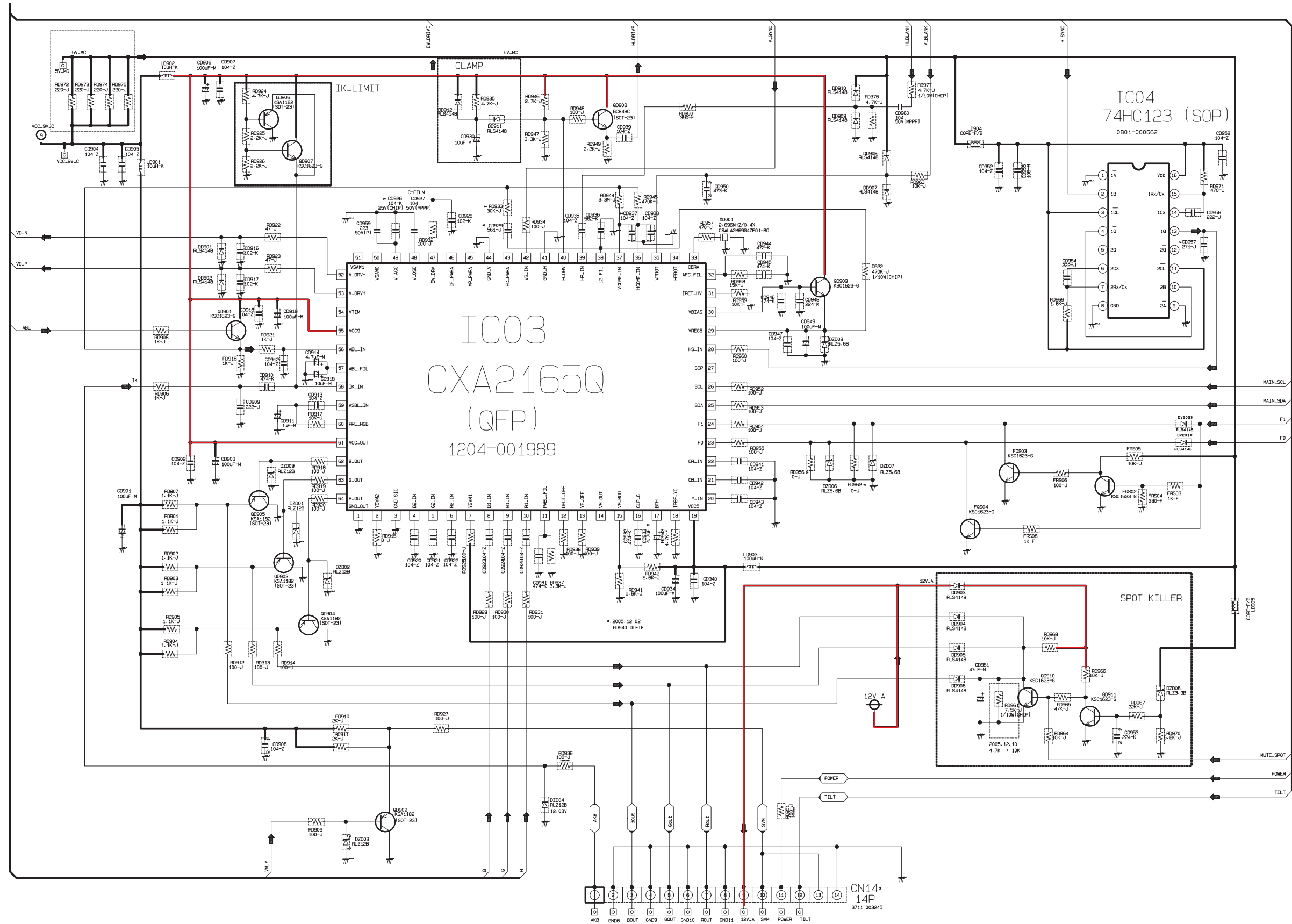
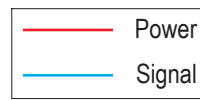
### 10-2-3 HDMI

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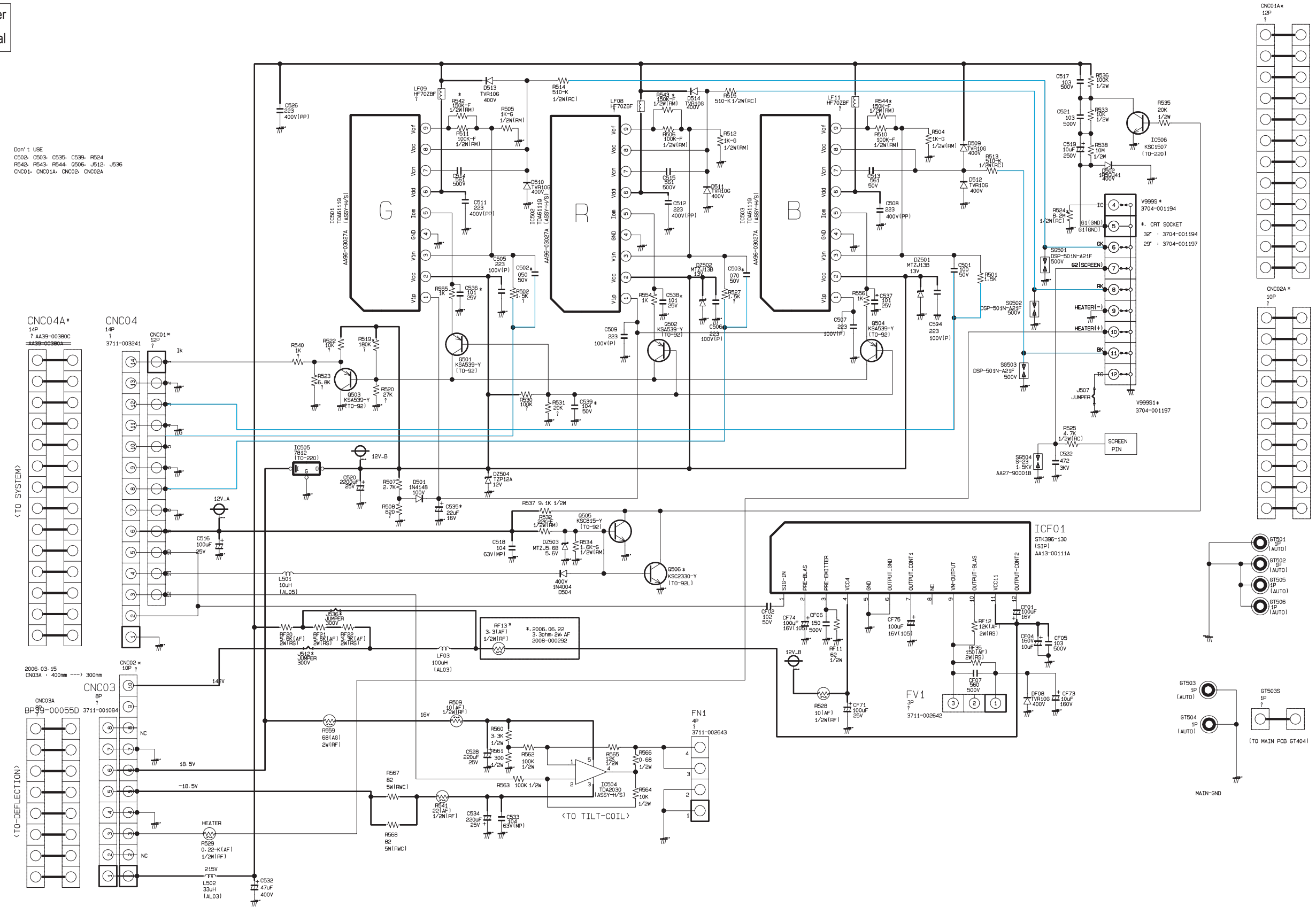
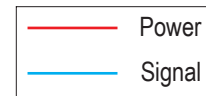
10-2-4 CXA2165

This Document can not be used without Samsung's authorization.



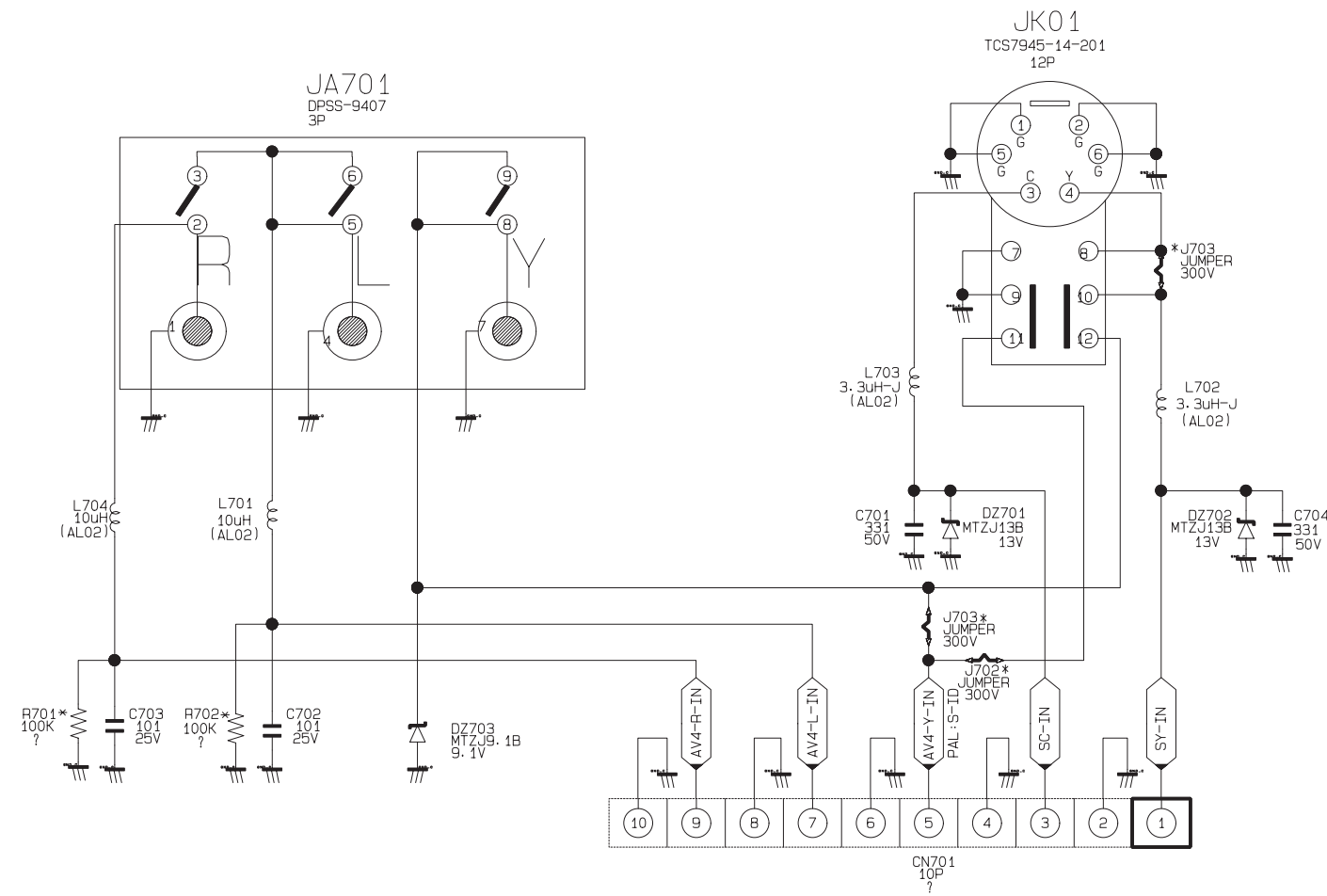
# 10-3 CRT

This Document can not be used without Samsung's authorization.



# 10-4 AV

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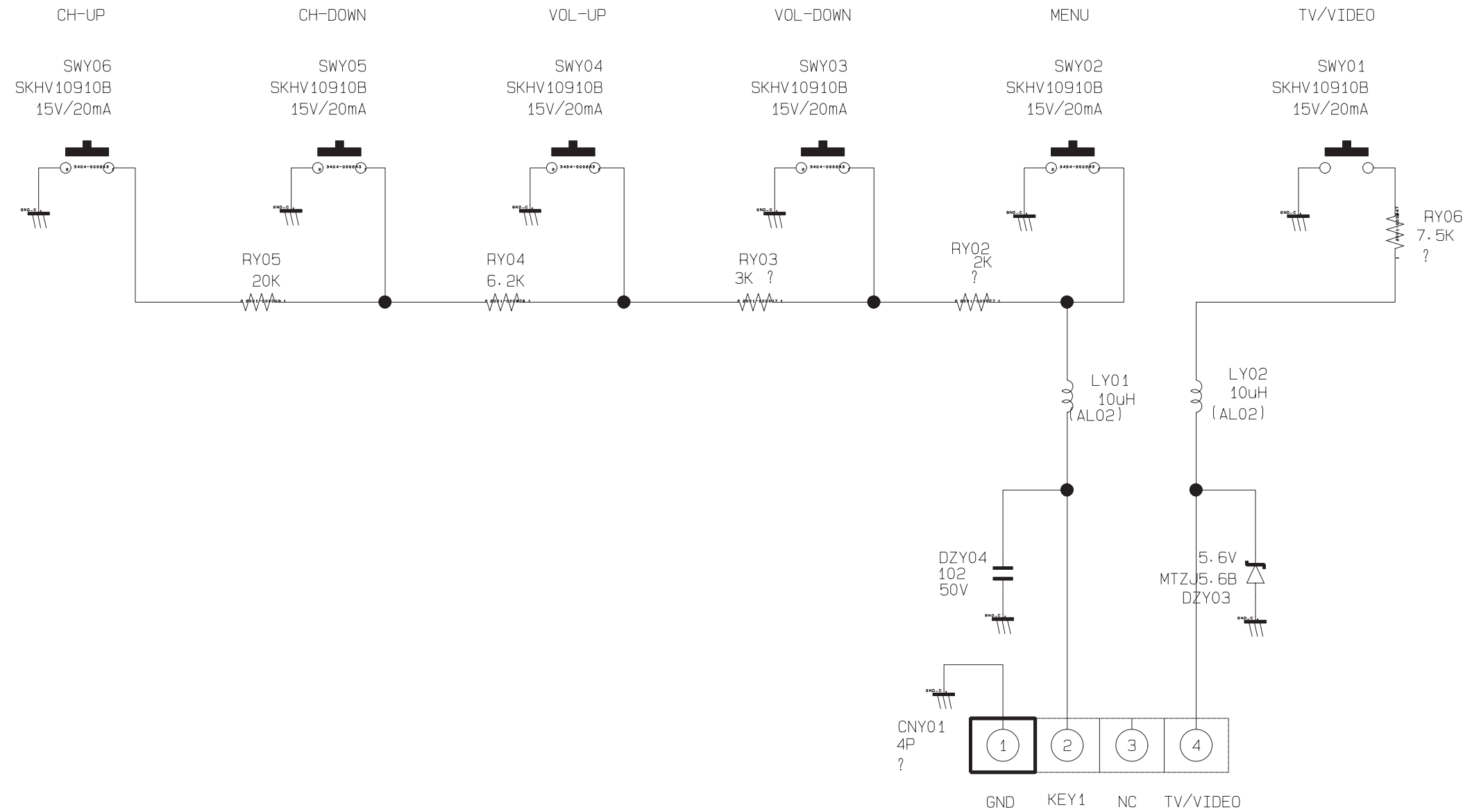


## OPTION

LOC	NT	PAL
J701	DELETE	JUMPER
J702	DELETE	JUMPER
J703	JUMPER	DELETE
R701	DELETE	1/BW 100K
R702	DELETE	1/BW 100K

## 10-5 CONTROL

This Document can not be used without Samsung's authorization.

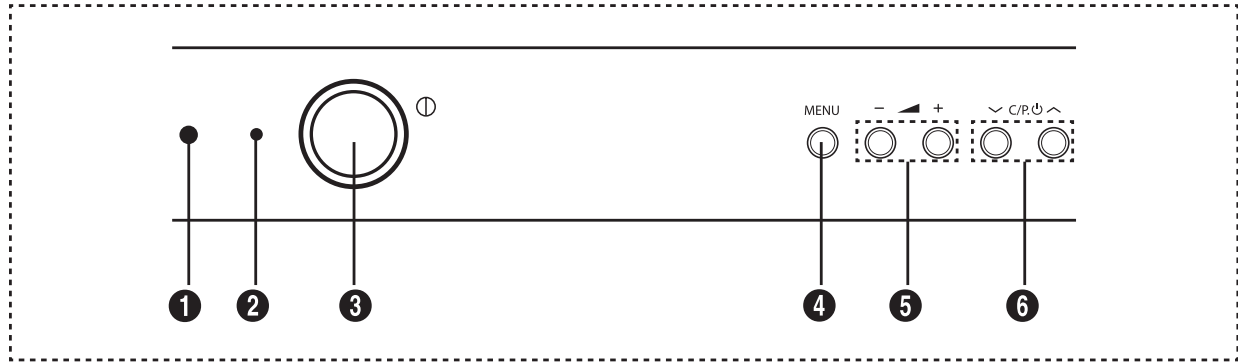


# 11. Operation Instruction & Installation

## 11-1 Product Features and Functions

### 11-1-1 Control Buttons

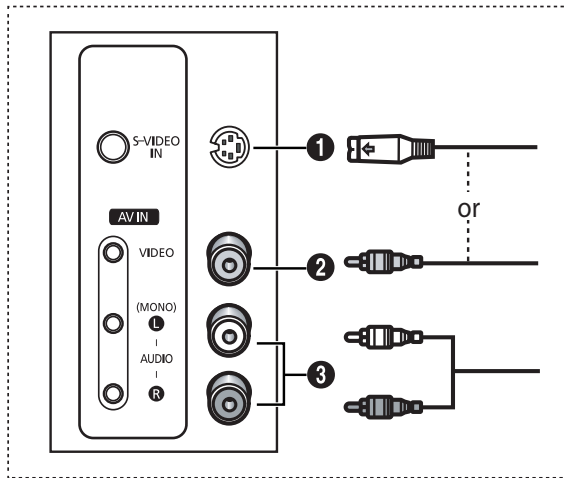
You can control your TV's basic features, including the on-screen menu.  
To use the more advanced features, you must use the remote control.



- 1** Remote control sensor  
Aim the remote control towards this spot on the TV.
  - 2** Standby indicator  
Blinks and turns off when the power is on and lights up in stand-by mode.
  - 3** Power On/Off  
Press to turn the TV on and off.  
If the TV was turned off by using the POWER button on the front panel, you will not be able to turn on the TV by using a remote control.
  - 4** MENU  
Press to see an on-screen menu of your TV's features.
  - 5** - / +  
Press to decrease or increase the volume.  
In the on-screen menu, use the - / + buttons as you use the ◀ and ▶ buttons on the remote control.
  - 6** ∨ C/P, ⊕, ∧  
Press to change channels.  
In the on-screen menu, use the ∨ C/P, ⊕, ∧ buttons as you use the ▲ and ▼ buttons on the remote control.
- Press the MENU button in DTV mode to display the DTV menu.  
The analog menu appears when you press the MENU button again.  
To dismiss the menu, press the MENU button once again.

### 11-1-2 Side Panel Jacks

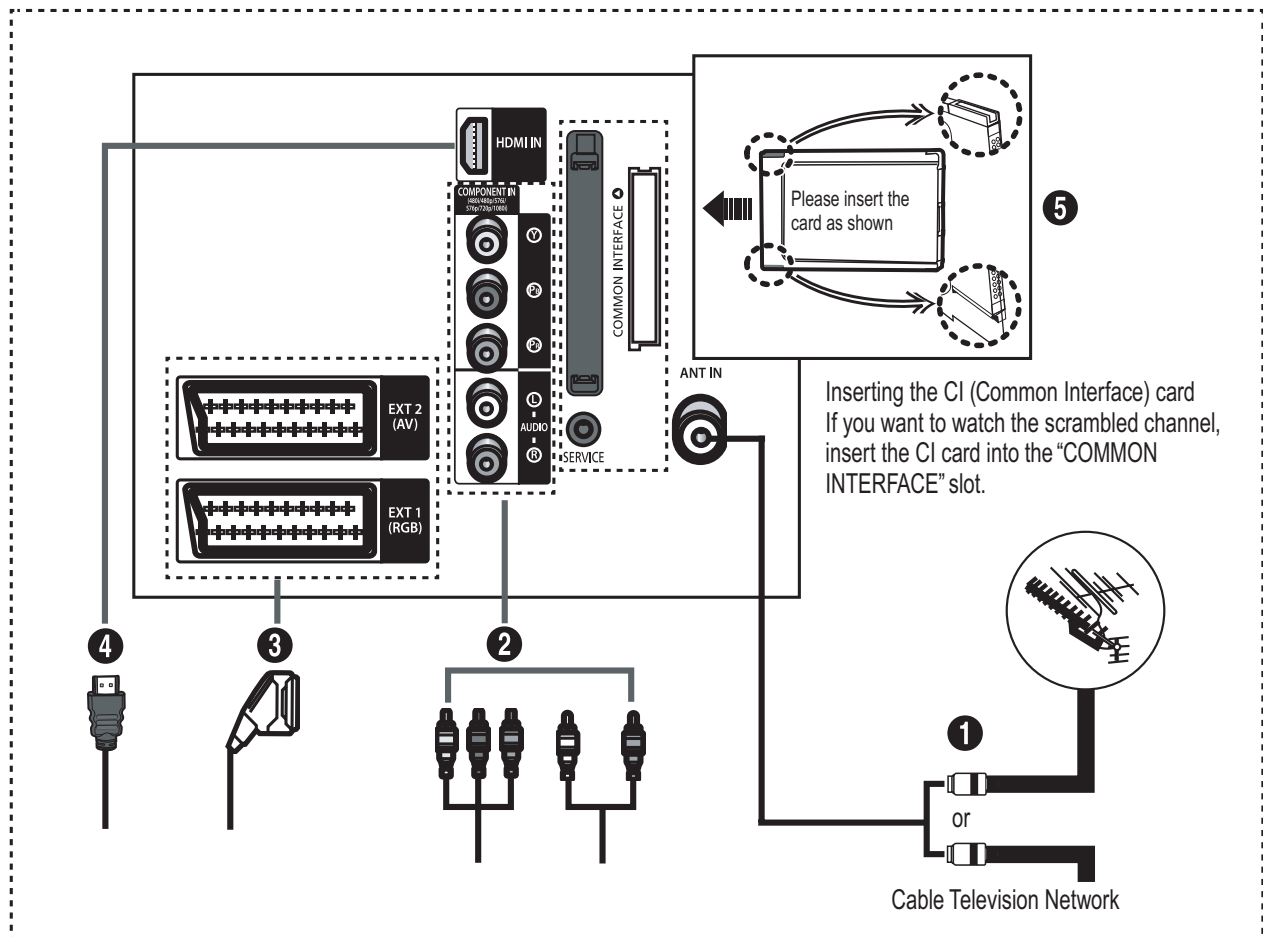
You can use the side panel jacks to connect an A/V component that is used only occasionally, such as a camcorder or video game.



- ① **S-VIDEO INPUT**  
Connect a S-video signal from a camcorder or video game.
- ② **VIDEO INPUT**  
Used to connect a video signal from a camcorder or video game.
- ③ **AUDIO INPUT**  
Connect the audio signals from a camcorder or video game.

### 11-1-3 Connection Jacks (Rear)

Use the rear panel jacks to connect an A/V component that will be connected continuously, such as a VCR or a DVD player. Because there are three sets of input jacks, you can connect three different A/V components (i.e., a VCR and a DVD, 2 VCRs, etc.)



**1** Connecting to an Aerial or Cable Television Network

Connect the aerial or network input cable to the 75 Ω coaxial socket.

To view television channels correctly, a signal must be received by the set from one of the sources: an outdoor aerial, cable television network, or satellite network. If you are using an indoor aerial, you may need to adjust it when tuning your television until you obtain a picture that is both sharp and clear.

**2** Connecting to the COMPONENT Input

- ◆ Connect component video cables to component connector ( Y , P<sub>B</sub>, P<sub>R</sub>) on the rear of your television and the other ends to corresponding component video out connectors on the DTV receiver or DVD player.
- ◆ The Y, P<sub>B</sub> and P<sub>R</sub> connectors on your component devices (DTV receiver or DVD player) are sometimes labeled Y, B-Y and R-Y or Y, Cb and Cr.
- ◆ Connect RCA audio cables to AUDIO (L/R) IN on the rear of your television and the other ends to corresponding audio out connectors on the DTV receiver or DVD player.

**3** Connecting to the SCART Input/Output

Connect SCART cable to an appropriate external A/V device such as a VCR, DVD player, decoder, satellite receiver, video game device, or video disc player.

- The EXT1 (RGB) connector is used for equipment with an RGB output, such as a video game device or video disc player.
- The EXT2 (AV) connector is used for the audio/video output of current television programme.

Input/Output Specification

Connector	Input				Output	
	Video	Audio(L/R)	S-Video	RGB	Video	Audio(L/R)
EXT 1	0	0	X	0	0	0
EXT 2	0	0	X	X	0	0

**4** Connecting to the HDMI

- ◆ Supports connections between HDMI-connection-enabled AV devices (Set-Top Boxes, DVD players, AV receivers and digital TVs).
- ◆ No additional Audio connection is needed for an HDMI to HDMI connection.

What is HDMI?

- ◆ “High Definition Multimedia interface” allows the transmission of high definition digital video data and multiple channels of digital audio (5.1 channels).  
The HDMI/DVI terminal supports DVI connection to an extended device with the appropriate cable (not supplied). The difference between HDMI and DVI is that the HDMI device is smaller in size, has the HDCP (High Bandwidth Digital Copy Protection) coding feature installed, and supports multi - channel digital audio.
- ◆ You should use the DVI-to-HDMI cable or DVI-HDMI Adapter for the connection, and the AUDIO (L/R) connector on DVI for sound output.  
When connecting this product via HDMI or DVI to a Set Top Box, DVD Player or Games Console etc, make sure that it has been set to a compatible video output mode as shown in the table below. Failure to observe this may result in picture distortion, image breakup or no picture.

Supported modes for DVI or HDMI Component

	480i	480p	576i	576p	720p	1080i-50Hz	1080i-60Hz
HDMI-50Hz	X	X	X	0	0	0	X
HDMI-60Hz	X	0	X	X	0	X	0
Component	0	0	0	0	0	0	0

Do not attempt to connect the HDMI connector to a PC or Laptop Graphics Card.  
(This will result in a blank screen being displayed)

**5** COMMON INTERFACE

PCMCIA Slot supports the DVB Common Interface (DVB-CI) standard. This connection is provided for future expansion of your Samsung DTV set allowing the installation of DVB-CI compatible peripherals, for example a DVB-CI module to support pay TV services. The availability of DVB-CI peripherals varies country by country. Please contact your retailer for information about the availability of DVB-CI peripherals in your region.



## 11-1-4 Remote Control

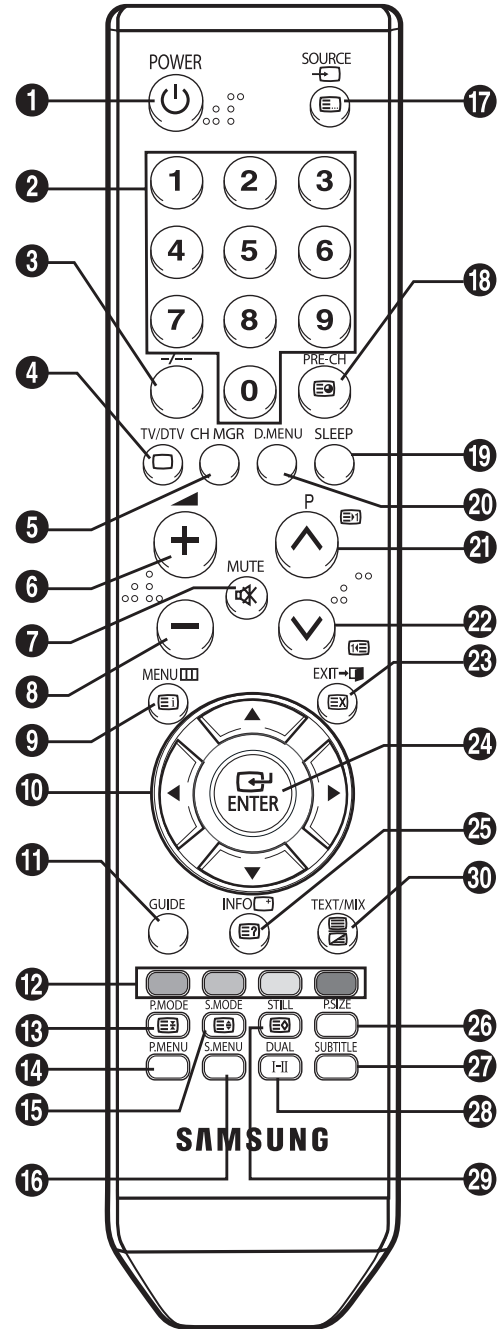
You can use the remote control up to about 23 feet from the TV. When using the remote, always point it directly at the TV. You can also use your remote control to operate your VCR, DVD, Cable box, and Samsung Set-top Boxes.

- ❶ Television stand-by
- ❷ Direct channel selection
- ❸ One/Two-digit channel selection
- ❹ Switch between TV and DTV mode selection
- ❺ Channel control
- ❻ Volume increase
- ❼ Temporary sound switch-off
- ❽ Volume decrease
- ❾ Menu display
- ❿ Move to the required menu option / Adjust an option value respectively
- ⓫ Electronic Program Guide (EPG) display
- ⓬ EPG Display/ favourite channel edition
- ⓭ Picture effect selection
- ⓮ Picture menu display
- ⓯ Sound effect selection
- ⓰ Sound menu display
- ⓱ External input selection
- ⓲ Switch repeatedly between the last two channels displayed
- ⓳ Automatic switch-off
- ⓴ DTV Menu Display
- ⓵ Next channel
- ⓶ Previous channel
- ⓷ Exit from any display
- ⓸ Change confirmation
- ⓹ Information display

- ⓺ Picture size selection
- ⓻ Digital subtitle display
- ⓼ Sound mode selection
- ⓽ Still picture

### Teletext Functions


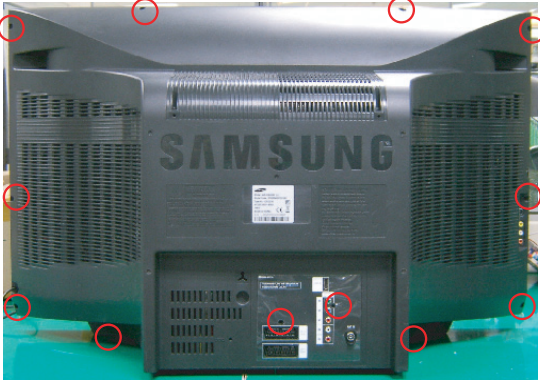
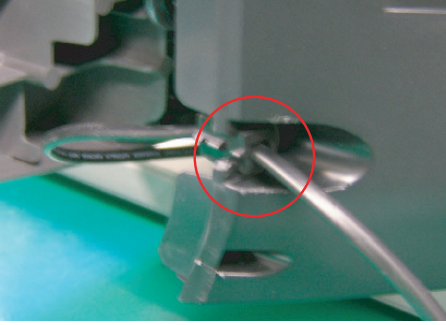
- ❹ Exit from the teletext display
- ❾ Teletext index
- ⓫ Teletext page hold
- ⓬ Teletext size selection
- ⓱ Teletext mode selection (LIST/ FLOF)
- ⓲ Teletext sub-page
- ⓳ Teletext next page
- ⓴ Teletext previous page
- ⓷ Teletext cancel
- ⓸ Teletext reveal
- ⓽ Teletext store
- ⓫ Teletext display / Mix both  
Pressing TEXT/MIX selects Teletext, Double, or Mix mode in sequence.
- ⓬ Fasttext topic selection



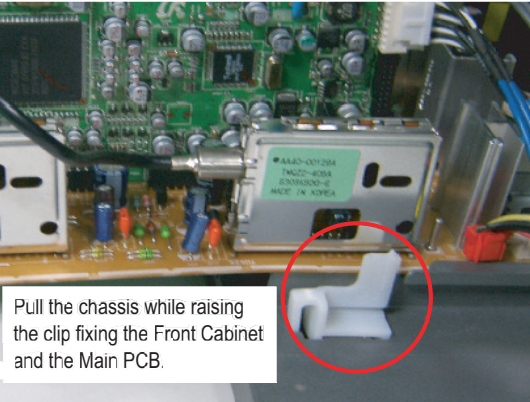

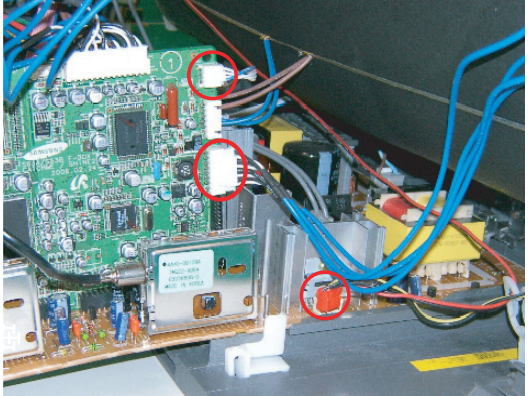
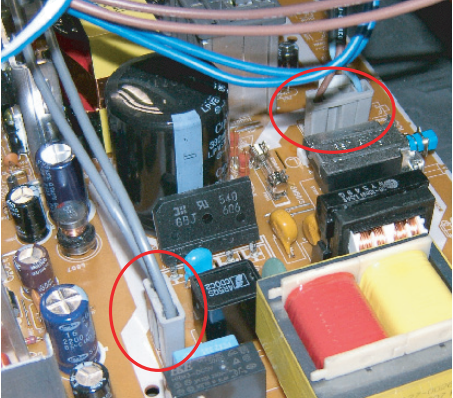
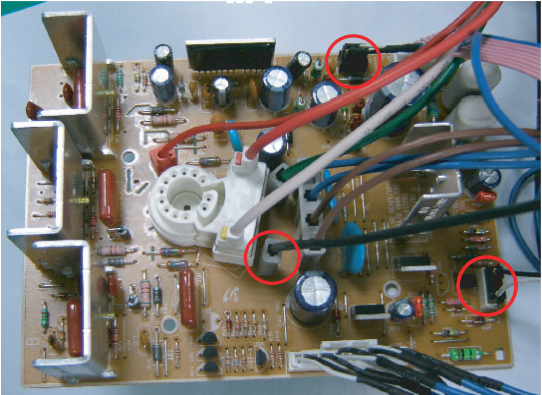
## 12. Disassembly & Reassembly

### 12-1 Overhaul Disassembly & Reassembly

#### 12-1-1 Disassembling the Cabinet

Part Name	Description	Description Photo
Back Cover	<p>① Remove the 12 screws fixing the Back Cover. : RH, +, B, M4, L15, ZPC(BLK), SWRCH18A</p> <p>② Tap the upper part of the Back Cover 2 or 3 times and pull the Back Cover to separate it from the unit.</p> <p>③ Lift the fixing Chassis up at  and pull the Back Cabinet to separate it from the unit.</p> <p>⚠ Notice: Disassemble the product after disconnecting the power cord and discharge the unit to prevent an electric shock and damage to the product due to static electricity.</p>	
Power Cord	<p>① Remove the power cord fixing the Back Cover</p>	

### 12-1-2 Disassembling the CRT and Chassis

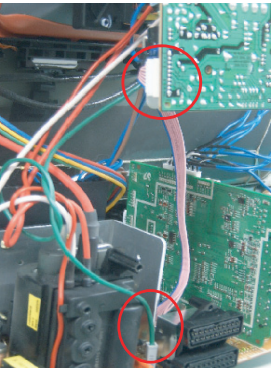
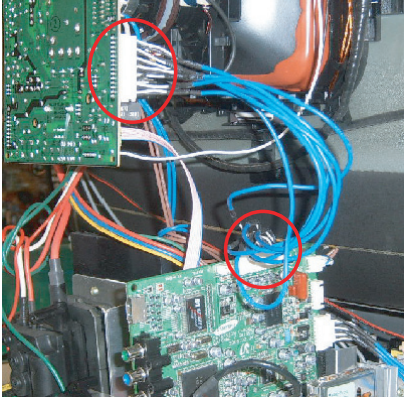
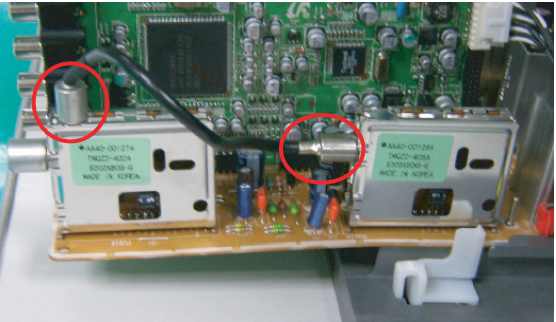
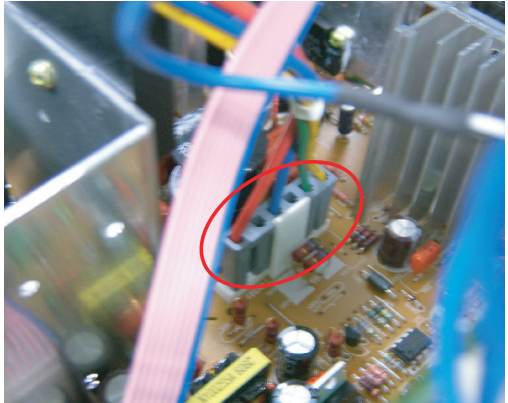
Part Name	Description	Description Photo
Chassis	<p>① Separate the Main chassis from the Front Cabinet.</p> <p>② Pull the Chassis lifting the fixing clip up.</p> <p>⚠ Notice: Pulling the Chassis by force may damage the clip or the connector. Pull the Chassis just until the clip comes off the hole.</p>	 <p>Pull the chassis while raising the clip fixing the Front Cabinet and the Main PCB.</p>
	<p>① Separate the Speakers, the Side AV Wire, the Front Control from the Feature Box Board.</p> <p>② Separate the wire from the Wire fixing holder at .</p> <p>⚠ Notice: Since there is a clip to connect the Connector Header in the Wire Connector, pulling it by force may damage the clip or the connector. Press the clip down completely and pull the connector.</p>	
	<p>① Separate the D-Coil and power cable from the Front Cabinet and Power Board.</p> <p>② To separate the power cord, slide the fixing clip and lift the cable up.</p>	
	<p>① Separate the CRT Ass'y from the CRT</p> <p>② Separate the TBC wire, GND, VM and Tilt cables from the CRT Ass'y sequentially.</p>	

Part Name	Description	Description Photo
Chassis Holder	<p>① Separate the cables connecting the FBT and the CRT.</p> <p>⚠ Notice: Since there may be a remaining high-voltage current within the CRT, take care not to touch the CRT hole with metal or a part of yourself when separating the cables.</p>	

### 12-1-3 Disassembling the CRT Ass'y

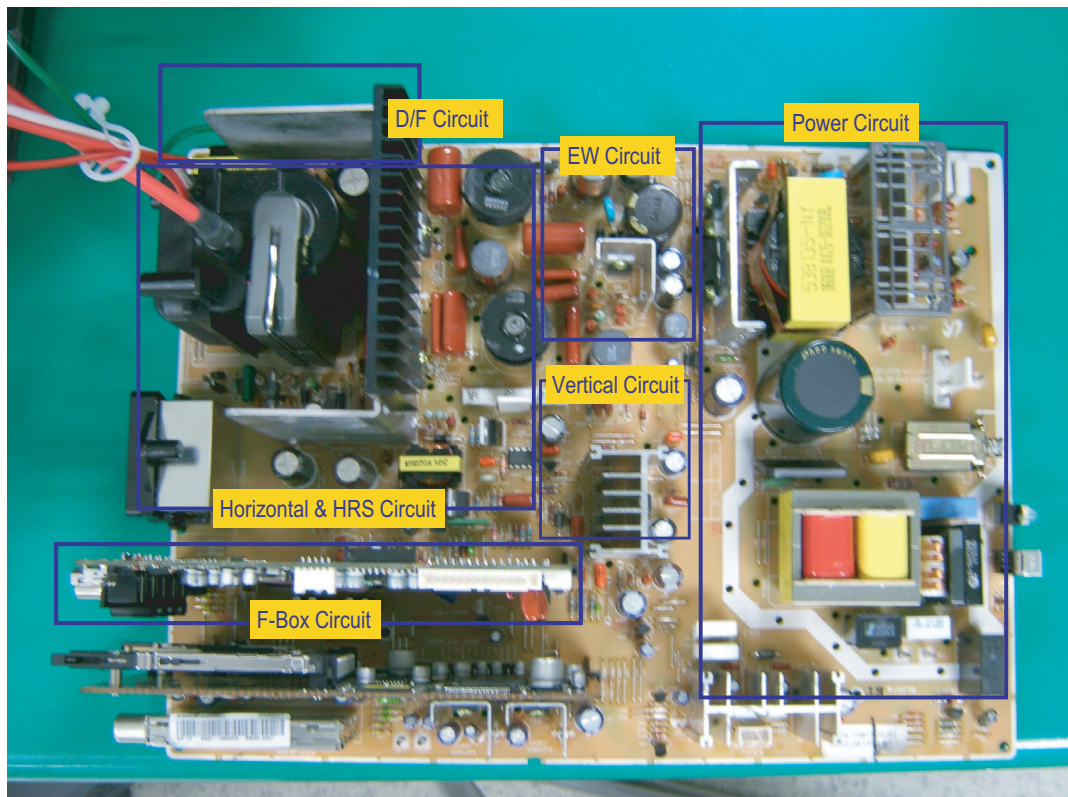
Part Name	Description	Description Photo
CRT Ass'y	<p>① Separate the cables from the Feature Box/Main Board and CRT Ass'y.</p>	
	<p>① Separate the wires from the FBT of the Deflection Board and the CRT Ass'y.</p> <p>② To separate the thick red and white wires, pull the wires while pressing the push-type clip at the connector.</p> <p>③ To separate the thin red wire, insert a pin in the small hold next to the hole and pull the wire.</p> <p>⚠ Notice: Take care when separating the wires because pulling the wires by force may damage the socket. In addition, separate the wires on a flat and clean surface so as to prevent scratching of the material and the PCB.</p>	

### 12-1-4 Disassembling the Deflection Board

Part Name	Description	Description Photo
Deflection Board	<p>① Separate the 8 pin cable from the CRT Assy's.</p>	
	<p>① Separate the 14 pin cable from the Feature Box.</p>	
	<p>① Separate the cable from the Splitter and the Tuner.</p> <p>② First separate the cable from the Splitter using a tool such as nippers.</p> <p>⚠ Notice: Since pulling the wire by force may damage the coating of the wire, separate the wire holding the metal part with the tool.</p>	
	<p>① Remove the DY Connector from the Main Board.</p>	

## 13. Circuit Description

### 13-1 Overall Block Description



※ Bias Circuit structure of S64A is the same as the existing S62A Circuit.

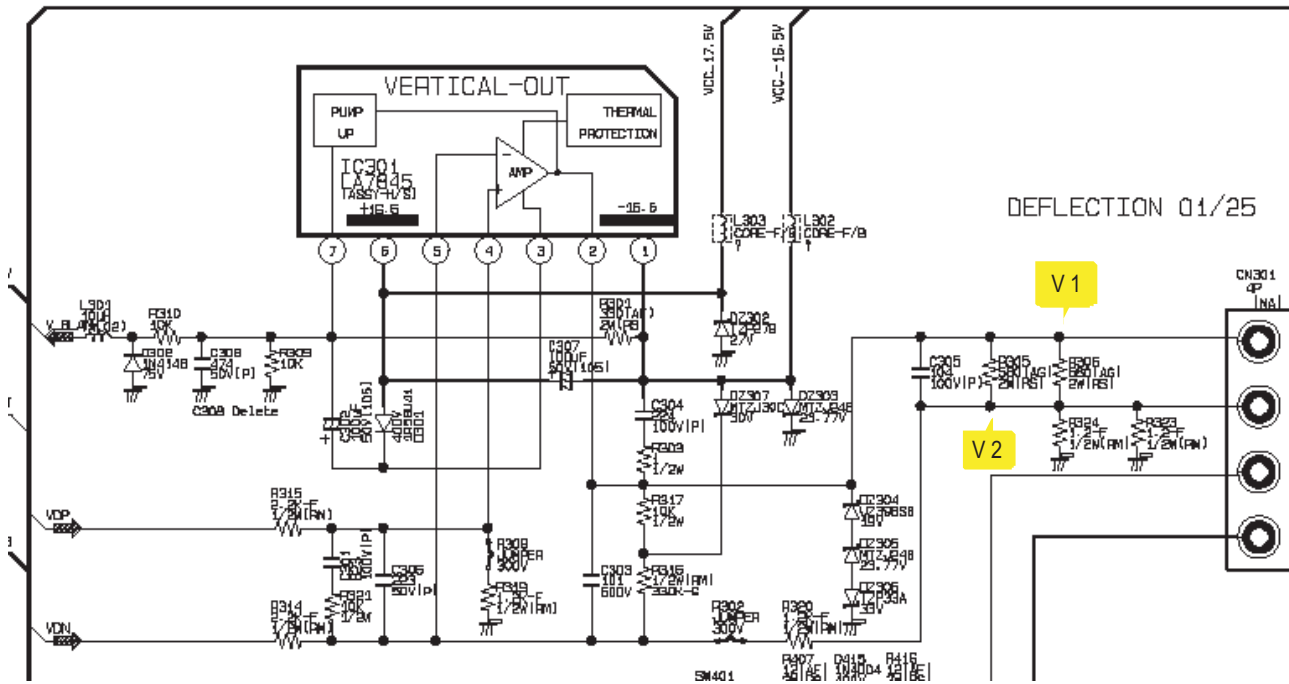
#### ■ Circuit Constitution.

1. Horizontal Bias Part
  - Controls the high voltage generation and horizontal bias.. FBT, HDT, CT condenser etc.
2. Vertical Bias & Vertical (North / South) Correction Circuit
  - While mostly controlling the vertical bias, also corrects the picture lowering of top and bottom. ..LA7845, Vertical TRANS, etc.
3. HRS (Horizontal Raster Shift) Correction Circuit
  - A correction circuit of Linearity distortion on the left and right side of a picture which is caused by awry electron beam from an electron gun.. Correction S/W and surrounding circuits.
4. D/F (Dynamic Focus) Correction Circuit.
  - Improved Focus feature circuit due to the widened angle of a picture;!.D/F Trans, Vertical/Horizontal circuit
5. E/W (East / West) Correction Circuit.
  - A circuit for correcting the spool shape which appears on the left and right part of a picture. This is caused by the difference between the distances from the center of a picture to each corner. KA393, FQP630 etc. (Adopt PWM circuit)



## 13-2 Partial Block Description

### 13-2-1 Vertical & Vertical Correction Circuit



#### Ⓐ Understanding of Vertical Circuit and Operation Principle.

##### ► What is a Vertical correction circuit?

- If the bias angle of a picture widens, the distance from the center of a picture to each corner becomes farther as it moves to periphery. This causes the picture being distorted (Picture Lowering) vertically in a shape of a spool because of the strong bias at four corners which are the farthest from the center.

Correction effect to the amount of a correction signal can be made by crossing Parabolic current of a vertical period over the vertical bias current and applying it.

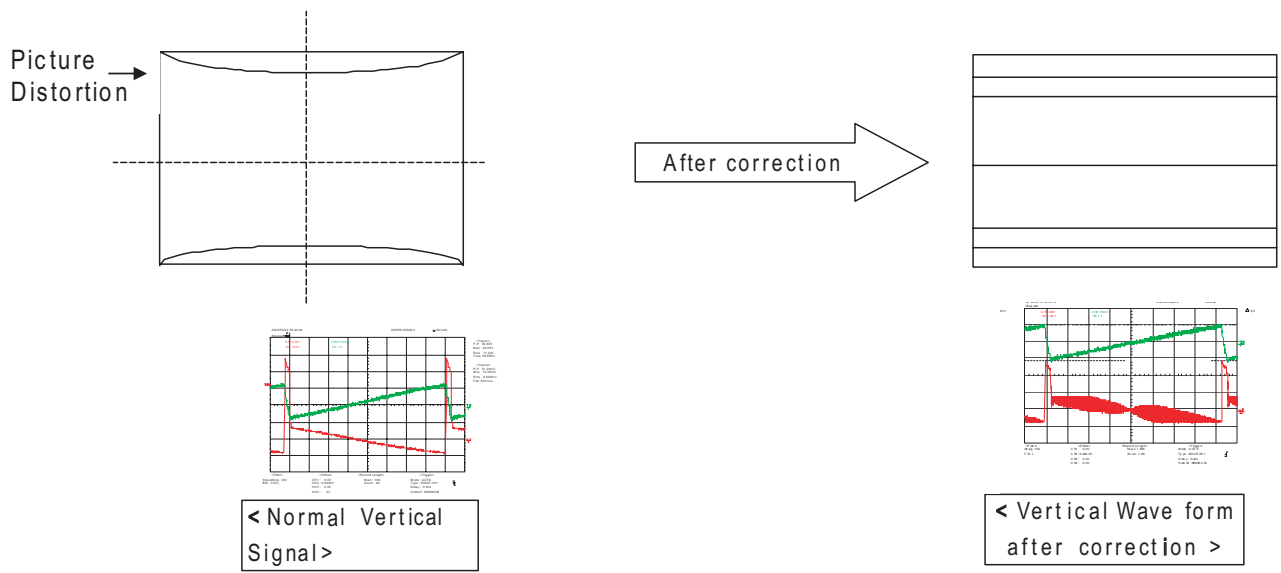
##### ► Vertical Circuit Constitution and Operation Principle.

- Consists of L304, C305, C439, R312. Symmetrize the up and down amplitude using the saturable reactor of L304 and adjust Vertical Gain by controlling the capacity value of C305 and C439

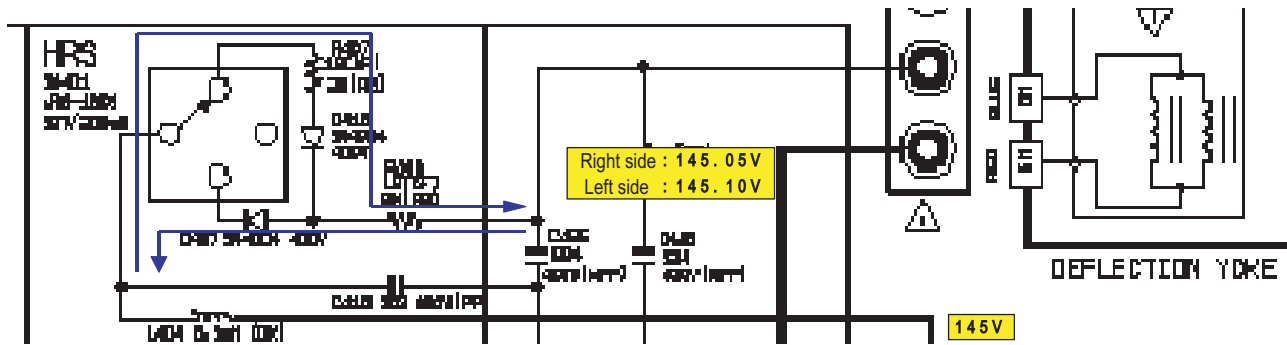
If the correction vector is excessive, one can slightly reduce the resistance of R312



② Comparison before and after of Vertical signal correction



## 13-2-2 HRS Correction



Ⓐ Understanding and Constitution of HRS Correction

▶ What is HRS (Horizontal Raster Shift) circuit?

- When electron BEAM emanates from CRT, it must form the image evenly on the center of a screen. However, the left-right linearity can be awry due to the micro-distortion of horizontal angle while producing CRT. HRS is a compensatory circuit which crosses DC voltage over CS condenser on horizontal output board to correct the distortion.

Ⓑ HRS Circuit Operation and Picture Movement

▶ Operational Principle.

- HRS circuit consists of R407, D415, D407, SW401, C415, L404. If switch SW401 (Service S/W) to the direction of R407, it raises the C426 CS condenser voltage through D415 and the picture moves to right. If switch SW401 to the direction of D417, the picture moves to left.

C415 is functioning as a condenser which stops generating current. It can control the left-right movement since the rechargeable voltage varies as the condenser capacity value varies.

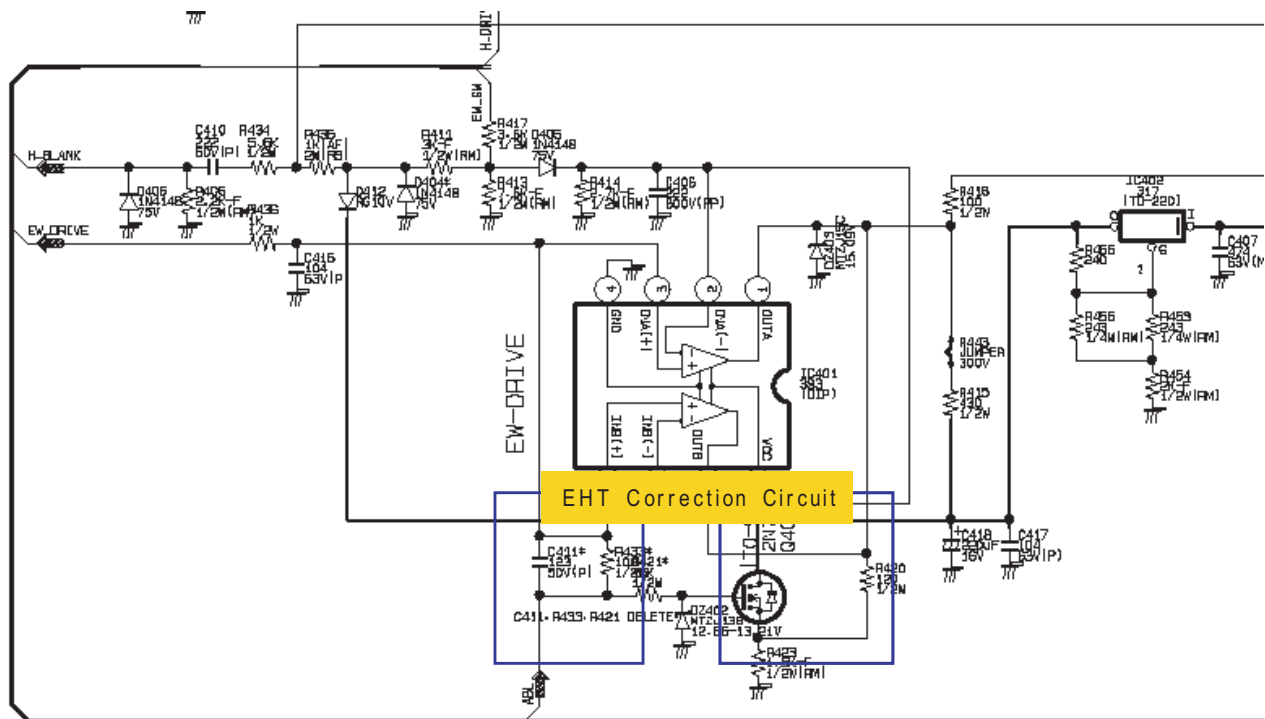
That is, the larger the C415 capacity value becomes, the bigger the left-right movement will be.

▶ Picture Movement during 0HRS Connection

- \* Direction of SW407 Switch .... Center : Not corrected.
- .... D415 : moves to the right of a picture
- .... D417 : moves to the left of a picture

Condition	Total Length of a Picture Moved (m/m)					
	Left		Center		Right	
	To Left	To Right	To Left	To Right	To Left	To Right
After	5.5	6.5	1.5	2	6.5	6

## 13-2-3 E/W Circuit Block



Ⓐ Understanding of E/W Circuit

▶ What is an E/W (East / West) Correction Circuit?

- If the bias angle of a picture widens, the distance from the center of a picture to each corner becomes farther as it moves to periphery. This causes the picture being distorted (Picture Lowering) horizontally in a shape of a spool because of the strong bias at four corners where are the farthest from the center. E/W is a circuit which corrects the spool-shape on the left and right part by crossing Parabolic wave form over the horizontal output board and controls the current which flows through terminal no.47. Parabolic wave comes out from terminal no.47 of CXA2165 CHROMA IC(IC31)  
It also controls the horizontal-related factors of Factory data such as picture size, size change and Parabola gain change. It has an essential role of minimizing the picture swaying (High Voltage Regulation)

Ⓑ E/W Circuit Constitution and Operation

▶ E/W Circuit Constitution and Operation Principles.

- E/W circuit consists of KA393(comparator), FQP630(output TR), and other parts. This uses a method in which PWM controls the circuit using a comparator. The advantage of this PWM Control method is that POWER Loss hardly occurs and generates little heat when using low H/S.  
Input E/W signal to terminal no 3,5 of IC401(KA393) and carrier wave to terminal no 2,6. Carrier wave can be made by reducing the horizontal collector voltage and integrating the wave form using D405,R414 and C406.  
Then the carrier wave is compared with E/W signal in IC401 and outputs PWM(Pulse Width Modulation) wave form. Bias current shall be controlled using Q404.  
Picture swaying occurs as the picture brightness varies. To correct this, control the high voltage regulation using Q401(1N7000), R433 and C411 That is, Q401 is a circuit for correcting Static Regulation and used to prevent the picture size changing as the picture brightness varies.  
It detects the ABL voltage and inputs to Q401 Gate through R423 resistance. Then the ABL voltage change is sent to IC401(KA393) output and controls the DC of Q404(FQP630) Gate terminal, to keep the picture size from changing.

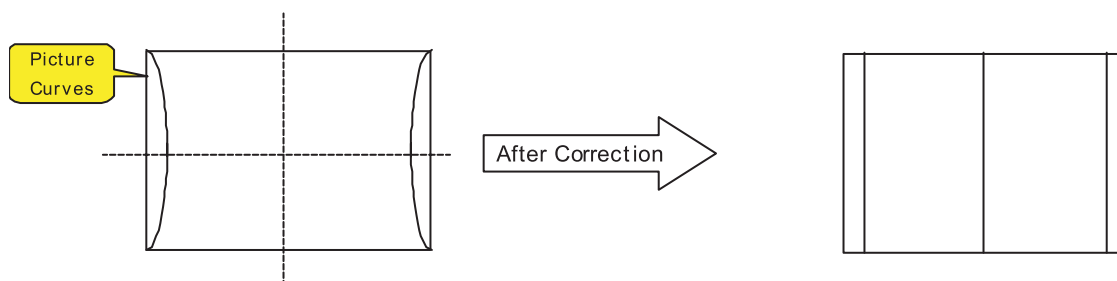
▶ E/W Circuit Constitution and Operation Principle.

Also, E/W circuit functions as a compensatory circuit against the picture shaking by reversely compensating the picture swaying. This is possible by inputting ABL voltage to E/W using R433 as the picture brightness varies.

There are H,V, PIN-COMP as well in Factory data and these correct the high voltage regulation. If the H-COMP capacity value increases, correction vector increases too and this causes a strong picture swaying. On the other hand, if the H-COMP capacity value decreases, correction vector decreases causing extensive picture size change. V-COMP, likewise, controls the vertical correction vector and operates in the same mechanism as H-COMP.

PIN-COMP is a function which corrects the movement of four corners of a picture. If the capacity value is excessive, a picture curves outwards when the picture is bright. COMP capacity value, therefore, should be varied +/- 1step from the factory-adjusted condition, since a gain widely varies dependant on the SET distribution.

▶ Before and After of E/W Circuit Correction



## 13-3 IC Line up

### ■ F-Box Board

Items	Descriptions	Remarks
Micom, Scaler, Switching, Sound Processor	VCT69xyP	
Deflection Processor	CX2165	
PIP Processor	TW9906	
HDMI IC	MST3383	
DC/DC Converter	MP1410ES	
EEPROM	24C02	2Kbit
EEPROM	24C16	16Kbit
Regulator	SI-3002KWM-TL	Multi Regulator
Regulator	KA78R09CTU	9V Regulator
Regulator	78D05	5V Regulator

### ■ Main Board

Items	Descriptions	Remarks
BRIDGE DIODE	GSIB660	
Didode	SLA1004L	
Trans Switching	53B135-SC	
Trans Switching-ST BY	EE2020	
STR	STR-6759 (Asia)	
STR	STR-6750 (Europe/CIS)	
EW Driver	KA393	
Vertical Focus	MC4558C	
FET	FQP630	
Vertical DEF	LA7845	
Horizontal DEF	FJ6920, FMP3FU	

### ■ CRT Board

Items	Descriptions	Remarks
DRIVE IC	TDA6111Q	
IC HYBRID	STK396-130	
AMP	TDA2030	

## 14. Reference Information

### 14-1 Other issues related to other products

#### ■ SD/HD broadcasts and the TV's display capability are related

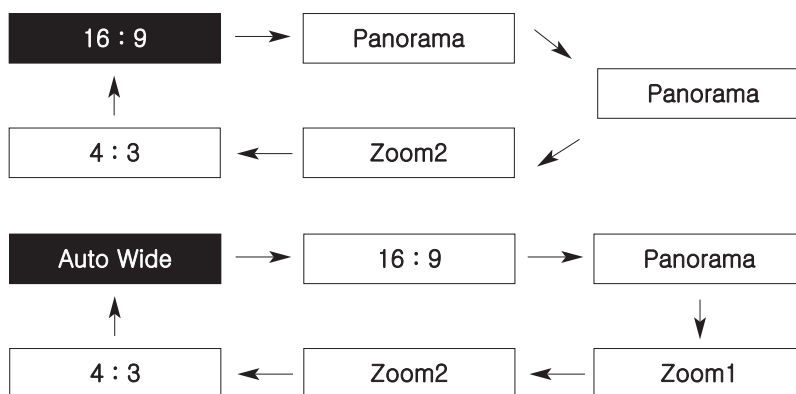
1. A digital broadcast should be transmitted in wide screen (an aspect ratio of 16:9) HD. If the broadcasting station converts a conventional program created in normal screen (aspect ratio of 4:3) into a digital signal and broadcasts the signal, the left and right of the picture will not be displayed.

This symptom also appears in other manufacturer's TV's. The three appliance companies are trying to resolve the problem through the Ministry of Information and Communication.

- \* When watching an SD (normal) broadcast through a Digital (Wide) TV (480P normal broadcast)
  - \* When watching an SD (normal) broadcast through a Digital Ready (Wide) TV (Using a set-top-box)
  - \* When watching an analog (normal) broadcast through a wide TV  
(When watching a broadcast after changing the aspect ratio of the TV from 16:9 (wide screen) to 4:3)
2. When watching a DVD title or video tape in wide screen (21:9) through a wide (16:9) TV, watching video from a computer or game console by selecting the aspect ratio to 4:3, or watching video from a DVD, VCR, computer or game console through a wide TV by selecting the aspect ratio to normal (4:3) or wide (21:9), the left and right, or top and bottom of the picture will not be displayed.

This symptom appears in other manufacturer's TV's. The three appliance companies are trying to resolve the problem through the Ministry of Information and Communication.

#### ■ Changing the Order of the Picture Size for 16:9 Display Devices



#### ■ Changing the Order of the Picture Size for DTV 1080i/720p Sources



#### ■ Restrictions

1. When you want to change the picture size in PIP 'ON', you must turn the PIP off before changing the size.  
However, you can change the main picture size even in PIP ON for products with no restrictions.
2. When the picture size is not Normal (4:3 for 4:3 display devices, 16:9 for 16:9 display devices) and you turn PIP on, the picture size is changed to Normal.  
However, you can turn PIP on without changing the picture size for products with no restrictions.
3. In the OSD notation for the picture size, 16:9 is represented as "Wide" instead of "16:9" for devices other than with 16:9 displays.  
Ex: For LCD 15:9 devices, "Wide" is displayed on the OSD instead of "16:9".
4. The picture size can be changed even in the blue screen.  
However, the picture size should be controlled by the product specifications if the change is impossible due to hardware restrictions.

## 14-2 Technical Terms

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### **Analog Broadcast**

Analog Broadcast is a television broadcasting signal transmitted according to the NTSC standard.

### **Anynet**

Anynet is an AV network system that enables the easy-to-use AV interface for users by controlling connected AV devices through the Anynet menu when AV devices of Samsung Electronics are connected.

### **ANTENNA Terminal**

A port to connect the TV aerial using a coaxial cable. It is generally used to watch public broadcast programs.

### **Audio Multimix**

Audio Multimix provides 2 languages for audio when broadcasting a foreign movie, drama, news, etc. You can select and listen to one of the supported languages or you can select and listen to both languages simultaneously.

### **Cable Broadcast**

Cable Broadcast transmits programs via cable instead of radio wave. To view a cable broadcast, you need to subscribe to your local cable broadcast service provider and install an additional receiver.

### **Component Terminal (Green, Blue, Red)**

The Component Port separately transmits the luminance signal and provides the best quality of all video connection types.

### **Digital Broadcast**

Digital Broadcast is a television broadcasting signal digitized and transmitted according to the United States' terrestrial digital broadcast standard, or ATSC.

### **DVD (Digital Versatile Disc)**

DVD is a large capacity media that can save multimedia content such as video, game, audio applications, etc. using MPEG-2 video compression technology on a CD-sized disc.

### **English Caption**

A function that shows English caption or text information included in the broadcasting signal or video tape. You can use this function to study English by watching AFKN or CC marked video tapes.

### **External Source**

External Input is connecting video devices such as a VCR, camcorder, DTV receiver, DVD, etc. as a video source.

### **HDMI (High Definition Multimedia Interface)**

An interface into which the digital signals as well as the high quality image data can be connected with one cable. There is no need to compress the bit rate.

### **Mono**

A type of audio interface that transmits audio signals through a single channel.

Through a mono interface, it is hard to experience stereophonic sound and sound is played only by one speaker.

### **Reception Sensitivity Amplification**

A signal amplification technique that amplifies weak broadcasting signals by applying satellite technology to provide a better visual quality even for users in regions where only weak broadcasting signals are available.

### **Satellite Broadcast**

Satellite Broadcast transmits programs via satellite so that the broadcast is viable in all areas at a high visual and sound quality. It provides approximately 100 channels including public broadcast channels. To view satellite broadcast, you have to install an additional receiver.

### **S-VIDEO Terminal**

This is called super video. S-Video is a type of video signal which has the video luminance and color signals separated in order to provide a better visual quality.

### **Stereo**

A type of audio interface that transmits audio signals through 2 channels.

Stereo transmits audio signals for the right and left channels so that you can experience stereophonic sound, and the sound is played with 2 speakers.

### **Tuner**

A device that enables selecting a specific frequency for a channel on a TV or radio.

### **VHF/UHF**

VHF refers to TV channels 2 to 13, and UHF refers to TV channels 14 to 69.

### **Video/Audio Terminal**

You may experience poor visual and audio quality when watching a video tape on channel 3 or 4 through the antenna cable. You can experience better visual and audio quality connecting the TV and VCR through the Video/Audio ports. The video port is distinguished by the color yellow, and the audio ports are distinguished by the white (left) and red colors (right).

### **Wired Broadcast**

Satellite Broadcast refers to movie, entertainment and educational programs transmitted by the broadcasting station in a hotel or school.