

**TOSHIBA**

FILE NO. 030-9712

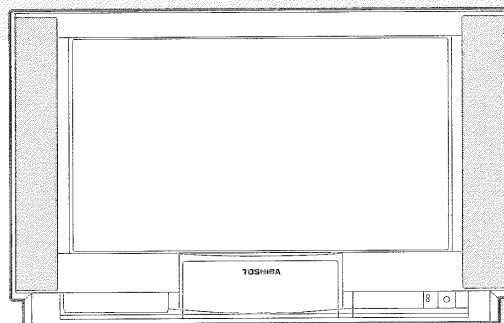
SERVICE MANUAL

# COLOUR TELEVISION

C7SS Chassis

**28MW7DB**

**28MW7DG**



PRINTED IN JAPAN, Aug., 1997 (S)

# TABLE OF CONTENTS

## CHAPTER 1: GENERAL ADJUSTMENTS

SAFETY INSTRUCTIONS .....	3
SET-UP ADJUSTMENT .....	4
SERVICE MODE .....	6
DESIGN MODE .....	9
ELECTRICAL ADJUSTMENTS .....	10
CIRCUIT CHECK .....	18

## CHAPTER 2: SPECIFIC INFORMATIONS

SETTING & ADJUSTING DATA .....	19
LOCATION OF CONTROLS (TV SET) .....	21
LOCATION OF CONTROLS (REMOTE CONTROL) .....	22
SERVICE POSITION .....	23
CIRCUIT BLOCK DIAGRAM .....	24
CABINET REPLACEMENT PARTS LIST .....	25
CHASSIS REPLACEMENT PARTS LIST .....	26
PC BOARDS BOTTOM VIEW .....	45
TERMINAL VIEW OF TRANSISTORS .....	56
SPECIFICATIONS .....	59

### APPENDIX:

CIRCUIT DIAGRAM

## SAFETY INSTRUCTIONS

**WARNING:** BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.

### X-RAY RADIATION PRECAUTION

1. Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not be above the specified limit. The nominal value of the high voltage of this receiver is Ⓐ kV at zero beam current (minimum brightness) under a Ⓒ V AC power source. The high voltage must not, under any circumstances, exceed Ⓑ kV.
2. The only source of X-RAY RADIATION in this TV receiver is the picture tube. For continued X-RAY RADIATION protection, the replacement tube must be exactly the same type tube as specified in the parts list.
3. Some part in this receiver have special safety-related characteristics for X-RAY RADIATION protection. For continued safety, parts replacement should be undertaken only after referring to the PRODUCT SAFETY NOTICE below.

Refer to table-1 for high voltage Ⓐ, Ⓑ & AC voltage Ⓒ.  
(See SETTING & ADJUSTING DATA on page 19)

Each time a receiver requires servicing, the high voltage should be checked following the HIGH VOLTAGE CHECK procedure in this manual. It is recommended that the reading of the high voltage be recorded as a part of the service record. It is important to use an accurate and reliable high voltage meter.

### SAFETY PRECAUTION

**WARNING :** Service should not be attempted by anyone unfamiliar with the necessary precautions on this receiver. The following are the necessary precautions to be observed before servicing this chassis.

1. An isolation transformer should be connected in the power line between the receiver and the AC line before any service is performed on the receiver.
2. Always discharge the picture tube anode to the CRT conductive coating before handling the picture tube. The picture tube is highly evacuated and if broken, glass fragments will be violently expelled. Use shatter proof goggles and keep picture tube away from the unprotected body while handling.
3. When replacing a chassis in the cabinet, always be certain that all the protective devices are put back in place, such as; non-metallic control knobs, insulating covers, shields, isolation resistor-capacitor network etc.

### PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the international hazard symbols on the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire, X-ray radiation or other hazards.

**WARNING:** BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 3 OF THIS MANUAL.

## SET-UP ADJUSTMENT

■ The following adjustments should be made when a complete realignment is required or a new picture tube is installed. Perform the adjustments in order as follows :

1. Color Purity
2. Convergence
3. White Balance

Note: The PURITY/CONVERGENCE MAGNET assembly and rubber wedges need mechanical positioning. Refer to figure 1.

\* There are no adjustment of purity and convergence in some picture tube (Unified with purity magnet)

### COLOR PURITY ADJUSTMENT

NOTE : Before attempting any purity adjustments, the receiver should be operated for at least fifteen minutes.

1. Demagnetize the picture tube and cabinet using a degaussing coil.
2. Set the brightness and contrast to maximum.
3. Use a green raster from among the built-in test signals.
4. Loosen the clamp screw holding the yoke and slide the yoke backward or forward to provide vertical green belt (zone) in the picture screen.

5. Remove the Rubber Wedges.

6. Rotate and spread the tabs of the purity magnet (See figure 2.) around the neck of the picture tube until the green belt is in the center of the screen. At the same time, enter the raster vertically.

7. Slowly move the yoke forward or backward until a uniform green screen is obtained. Tighten the clamp screw of the yoke temporarily.

8. Check the purity of the red and blue raster.

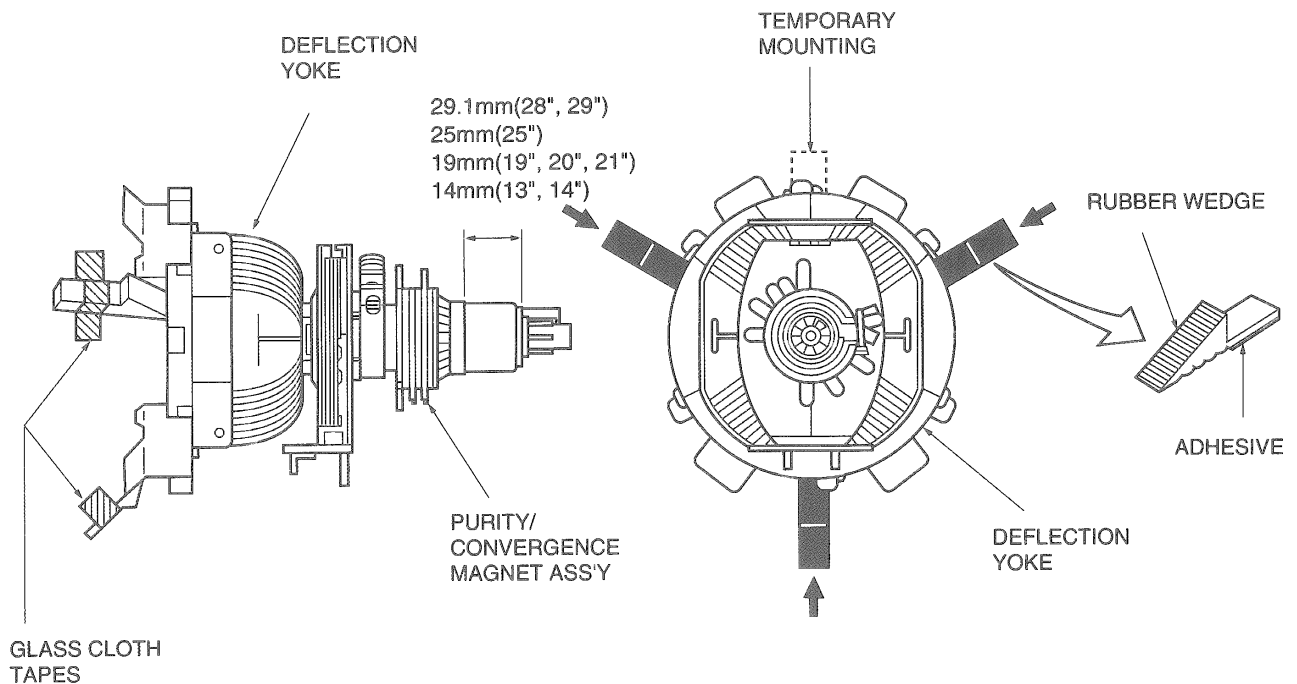


Figure 1.

**CONVERGENCE ADJUSTMENTS**

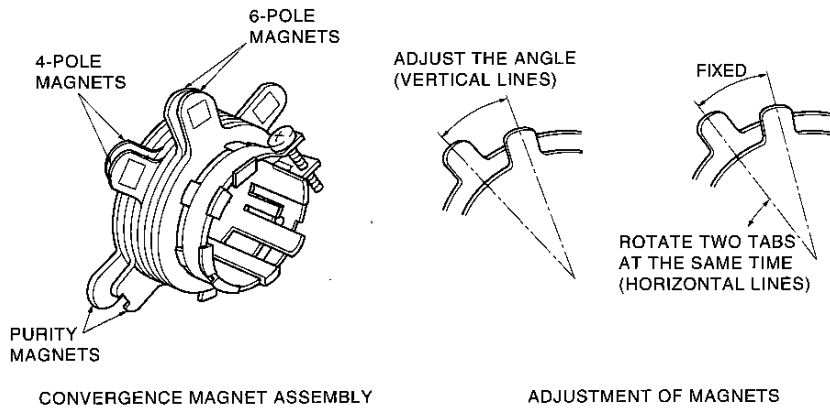
**NOTE:** Before attempting any convergence adjustments, the receiver should be operated for at least fifteen minutes.

**■ CENTER CONVERGENCE ADJUSTMENT**

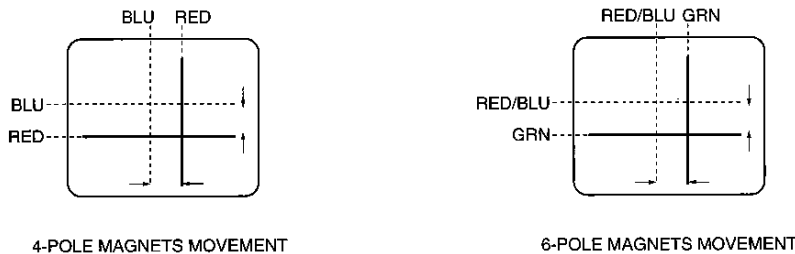
1. Use the cross-dot pattern from among the built-in test signals.
2. Set the brightness and contrast for well defined pattern.
3. Adjust two tabs of the 4-Pole Magnets to change the angle between them (See figure 2.) and superimpose red and blue vertical lines in the center area of the picture screen.
4. Turn the both tabs at the same time keeping the angle constant to superimpose red and blue horizontal lines at the center of the screen.
5. Adjust two tabs of 6-Pole Magnets to superimpose red/blue line and green one. Adjusting the angle affects the vertical lines and rotating both magnets affects the horizontal lines.
6. Repeat adjustments 3, 4, 5 keeping in mind red, green and blue movement, because 4-Pole Magnets and 6-Pole Magnets have mutual interaction and make dot movement complex.

**■ CIRCUMFERENCE CONVERGENCE ADJUSTMENT**

1. Loosen the clamping screw of deflection yoke slightly to allow the yoke to tilt.
2. Temporarily put a wedge as shown in figure 1. (Do not remove cover paper on adhesive part of the wedge.)
3. Tilt front of the deflection yoke up or down to obtain better convergence in circumference. (See figure 3.) Push the mounted wedge into the space between picture tube and the yoke to fix the yoke temporarily.
4. Put other wedge into bottom space and remove the cover paper to stick.
5. Tilt front of the yoke right or left to obtain better convergence in circumference. (See figure 3.)
6. Keep the yoke position and put another wedge in either upper space. Remove cover paper and stick the wedge on picture tube to fix the yoke.
7. Detach the temporarily mounted wedge and put it in another upper space. Stick it on picture tube to fix the yoke.
8. After fixing three wedges, recheck overall convergence. Tighten the screw firmly to fix the yoke and check the yoke is firm.
9. Stick three adhesive tapes on wedges as shown in figure 1.



**Figure 2.**



Center Convergence by Convergence Magnets



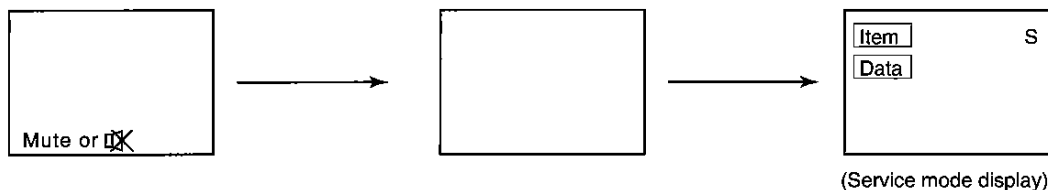
Circumference Convergence by DEF Yoke

**Figure 3. Dot Movement Pattern**

## SERVICE MODE

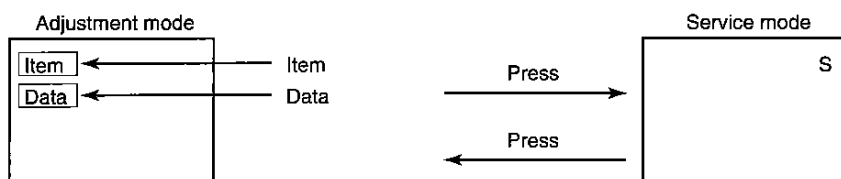
### 1. ENTERING TO SERVICE MODE

- 1) Press **Mute** button once on Remote Control.
- 2) Press **Mute** button again to keep pressing.
- 3) While pressing the **Mute** button, press **MENU** button on TV set.



### 2. DISPLAYING THE ADJUSTMENT MENU

- 1) Press **MENU** button on TV.



### 3. KEY FUNCTION IN THE SERVICE MODE

The following key entry during display of adjustment menu provides special functions.

A single horizontal line ON/OFF:

Test signal selection :

Selection of the adjustment items :

Change of the data value :

Adjustment menu mode ON/OFF :

Initialization of the memory (QA02) :

Reset the count of operating protect circuit to "00":

"RCUT" selection :

"GCUT" selection :

"BCUT" selection :

"CNTX" (or "SCNT") selection :

"COLC" selection :

"TNTC" selection :

Test audio signal ON/OFF (1kHz) :

Self diagnostic display ON/OFF :

- / - - button (on Remote) or  $\ominus$  button (on TV)

$\ominus$  button (on Remote)

Channel  $\blacktriangle/\blacktriangledown$  (on TV & Remote)

Volume  $\blacktriangle/\blacktriangledown$  +/- (on TV & Remote)

MENU button (on TV)

CALL + Channel button on TV ( $\blacktriangle$ )

CALL + Channel button on TV ( $\blacktriangledown$ )

1 button

2 button

3 button

4 button

5 button - - - Color thickness correction

6 button

8 button

9 button

note: Displayed differently as shown below, depending on the setting of the receiving color system.

COLP (PAL)

COLC (NTSC)

COLS (SECAM)

**CAUTION :** Never try to perform initialization unless you have changed the memory IC.

**4. SELECTING THE ADJUSTING ITEMS**

- 1) Every pressing of CHANNEL ▲ button in the service mode changes the adjustment items in the order of table-2. (▼ button for reverse order)

Refer to table-2 for preset data of adjustment mode.  
(See SETTING & ADJUSTING DATA on page 19)

**5. ADJUSTING THE DATA**

- 1) Pressing of VOLUME ▲/▼ button will change the value of data in the range from 00H to FFH. The variable range depends on the adjusting item.

**6. EXIT FROM SERVICE MODE**

- 1) Pressing POWER button to turn off the TV once.

**■ INITIALIZATION OF MEMORY DATA OF QA02**

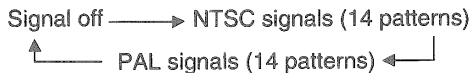
After replacing QA02, the following initialization is required.

1. Enter the service mode, then select any register item.
2. Press and hold the CALL button on the Remote, then press the CHANNEL ▲ button on the TV. The initialization of QA02 has been completed.
3. Check the picture carefully. If necessary, adjust any adjustment item above. Perform "Auto search Memory" on the owner's manual.

CAUTION: Never attempt to initialize the data unless QA02 has been replaced.

**7. TEST SIGNAL SELECTION**

- 1) Every pressing of -⊖ button on the Remote Control changes the built-in test patterns on screen as described below in SERVICE MODE.

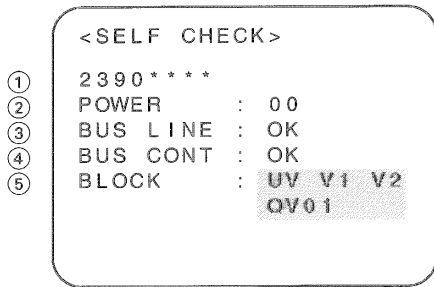


Signals	Picture
<ul style="list-style-type: none"> <li>• Red raster</li> <li>• Green raster</li> <li>• Blue raster</li> <li>• All Black</li> <li>• All White</li> </ul>	
<ul style="list-style-type: none"> <li>• Black &amp; White</li> </ul>	
<ul style="list-style-type: none"> <li>• Black cross-bar</li> <li>• White cross-bar</li> <li>• Black cross-bar on green raster</li> </ul>	
<ul style="list-style-type: none"> <li>• Black cross-hatch</li> <li>• White cross-hatch</li> </ul>	
<ul style="list-style-type: none"> <li>• Black cross-dot</li> <li>• White cross-dot</li> </ul>	
<ul style="list-style-type: none"> <li>• H signal (white)</li> <li>• H signal (black)</li> </ul>	

\* The signals marked with are not usable to display in the Test signal for some model.

**8. SELF DIAGNOSTIC FUNCTION**

- 1) Press "9" button on Remote Control during display of adjustment menu in the service mode.  
The diagnosis will begin to check if interface among IC's are executed properly.
- 2) During diagnosis, the following displays are shown.



Indicated color of mode now selected : Green and Red  
 Indicated color of other modes : White

Green : Normal

Red : The microcomputer operates to provide judgement of no video signal. The red color is still indicated though the signal is input, failure may exist in input signal line including QV01.

QV01 : In case of indication green ---Normal  
 In case of indication red with input signal---  
 Failure may exist in output line including QV01.

- ① Part number of microcomputer (QA01)
- ② Operation number of protecting circuit ----"00" is normal.  
When indication is other than "00", overcurrent apt to flow, and circuit parts may possibly be damaged.
- ③ BUS LINE CHECK ----"OK" is normal.  
"SDA1-GND" ----- SDA-GND short circuit.  
"SCL1-GND" ----- SCL-GND short circuit.  
"SCL1-SDA1" ----- SCL-SDA short circuit.
- ④ BUS CONT ----"OK" is normal.  
When indication shows "Q OOO NG", the device with the number may possibly be damaged.
- ⑤ BLOCK  
 UV : TV reception mode  
 V1 : VIDEO 1 input mode (-⊖1)  
 V2 : VIDEO 2 input mode (-⊖2)

**NOTE:** Component which controls character display on screen is ICF01 (TELETEXT IC.). If this display function fails to operate due to damage in ICF01, self diagnosis procedure is as follows.

- (1) In case that power indicator is blinking with interval of 0.5 seconds; it means protecting circuit (Current limiter) is operating, and circuit components may possibly be damaged. Check related components.
- (2) In case that power indicator is blinking with interval of 1 second; Protecting circuit does not operate, but a part of Bus line does not operate normally. Check Bus line.

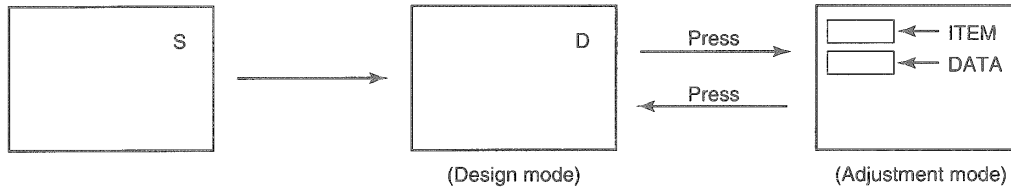
\* The items marked with are not usable to display in the SELF DIAGNOSTIC FUCTION for some model.



# DESIGN MODE

## 1. ENTERING TO DESIGN MODE

- 1) Select the Service mode.
- 2) While pressing **X** or CALL button on Remote and press MENU button on TV.
- 3) Press MENU button on TV.



When QA01 is initialized, items "OPT0" and "OPT1" of DESIGN MODE are set to the data of the representative model of this chassis family.

Therefore, because ON-SCREEN specification remains in the state of the representative of model. This model is required to reset the data of items "OPT0" and "OPT1".

## 2. SELECTING THE ADJUSTING ITEMS

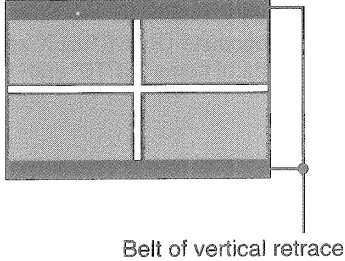
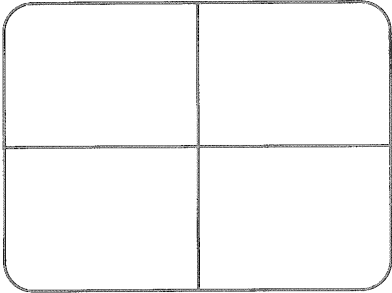
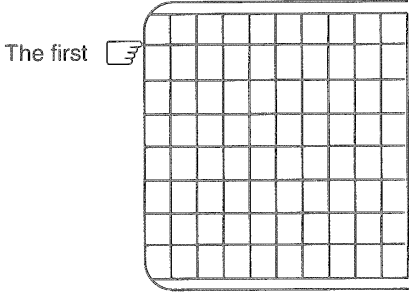
Every pressing of CHANNEL **▼** button in the design mode changes the adjustment items in the order of table-3. (**▲** button for reverse order)

Refer to table-3 for data of design mode.  
(See SETTING & ADJUSTING DATA on page 20)

## 3. ADJUSTING THE DATA

Pressing of VOLUME **▲** or **▼** button will change the value of data.

## ELECTRICAL ADJUSTMENTS

ITEM	ADJUSTMENT PROCEDURE
<p><b>FOCUS VR ADJ</b></p>	<ol style="list-style-type: none"> <li>1. Enter the service mode, then select any register item.</li> <li>2. Press the TV/VIDEO button on the Remote until the black cross-bar pattern appears on the screen.</li> <li>3. Adjust the FOCUS control (on T461) for well defined scanning lines on the picture screen.</li> </ol>
<p><b>SUB-BRIGHTNESS (BRTC)</b></p> <p>Note: Constrict the picture height until the vertical retrace line appears adjusting the item HIT (HEIGHT).</p>	<ol style="list-style-type: none"> <li>1. Set CONTRAST to minimum, and BRIGHTNESS to center by adjusting user controls.</li> <li>2. Set the TV in service mode to get white cross-bar of inside pattern.</li> <li>3. Select BRTC (brightness correction), and adjust the <math>\blacktriangle</math> - /+ button to reduce the value so that white portion of inside pattern slightly light.</li> <li>4. Adjust <math>\blacktriangle</math> - /+ button to increase the data value of BRTC, and set it just before the difference between the belt of vertical retrace and the border of black portion of inside pattern is visible. After that, return vertical height and contrast.</li> </ol> <div style="text-align: right;">  </div>
<p><b>HORIZONTAL POSITION ADJUSTMENT (HPOS)</b></p> <p><b>VERTICAL POSITION ADJUSTMENT (VPOS)</b></p>	<ol style="list-style-type: none"> <li>1. Set the TV in service mode, and get black or white cross-bar signal with VIDEO button on remote hand unit.</li> <li>2. Select either HPOS (Horizontal picture phase) or VPOS (Vertical picture phase) with CHANNEL <math>\blacktriangle</math>, <math>\blacktriangledown</math> buttons, and adjust horizontal or vertical picture position in the center of screen with VOLUME <math>\blacktriangle</math> - /+ buttons.</li> </ol> <div style="text-align: right;">  </div>
<p><b>VERTICAL AMPLITUDE ADJUSTMENT (HIT)</b></p>	<ol style="list-style-type: none"> <li>1. Set the TV in service mode, and get black or white cross-hatch signal with VIDEO button on remote hand unit.</li> <li>2. Select HIT (Vertical amplitude) with CHANNEL <math>\blacktriangle</math>, <math>\blacktriangledown</math> buttons, and adjust vertical amplitude with VOLUME <math>\blacktriangle</math> - /+ buttons so that vertical amplitude lacks a little.</li> <li>3. Adjust vertical amplitude with VOLUME <math>\blacktriangle</math> - /+ buttons so that the first bar on cross-hatch signal touches edge of screen.</li> </ol> <div style="text-align: right;">  </div>

ITEM	ADJUSTMENT PROCEDURE
<p>WHITE BALANCE ADJUSTMENT</p> <ul style="list-style-type: none"> <li>● CUTOFF ADJUSTMENT (RCUT) (GCUT) (BCUT)</li> <li>● DRIVE ADJUSTMENT (GDRV) (BDRV)</li> </ul>	<ol style="list-style-type: none"> <li>1. Set Contrast to 40, and brightness to +20 by picture control.</li> <li>2. Set the TV in service mode, and get the inside W/B adjusting signal with VIDEO button.</li> <li>3. Select RCUT, GCUT and BCUT with CHANNEL ▲, ▼ buttons, to set individual values to Initial reference data, and to set GDRV and BDRV to Initial reference data with VOLUME ▲ - /+ buttons (See page 19).</li> <li>4. Press [F/-] button on the remote control and rotate Screen VR to get one slight horizontal line on screen.            Note: Every pressing of [F/-] button provides Horizontal line picture and Normal picture alternately.</li> <li>5. Press [F/-] button to release horizontal line picture, and select the two other colors which did not light in the above step with CHANNEL ▲, ▼ buttons. Then tap VOLUME ▲ - /+ buttons so that three colors slightly light in the same level.</li> </ol> <p>※ To correct white balance in light area, select GDRV and BDRV with CHANNEL ▲, ▼ buttons to adjust.</p> <p>※ To correct white balance in dark area, perform fine adjustment of RCUT, GCUT and BCUT.</p> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; margin-top: 20px;"> <div style="border: 1px solid black; width: fit-content; margin: 0 auto; padding: 5px;">Light area check (to show white)</div> <div style="text-align: center; margin-top: 20px;">Dark area check (to show black)</div> </div>

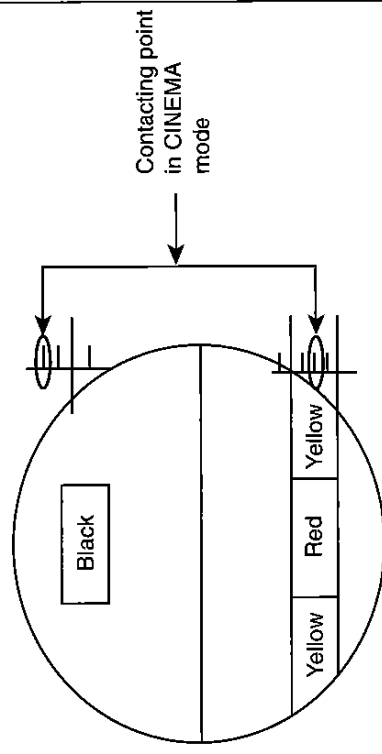
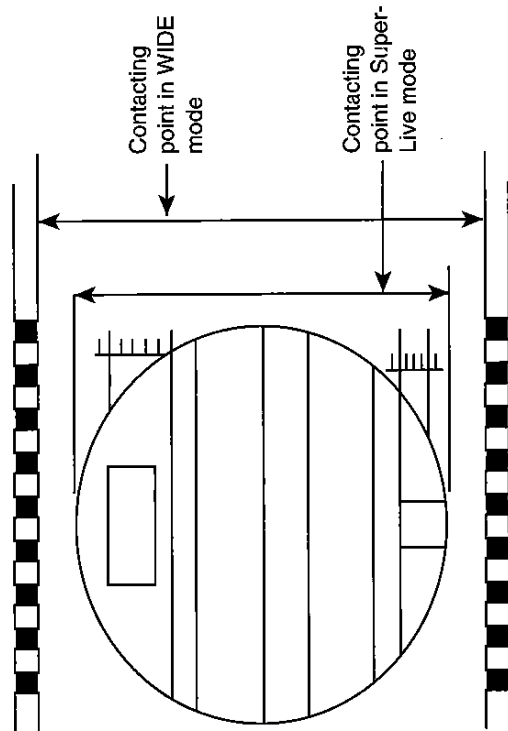
MODEL NAME : C7SS (PAL--100Hz WIDE) (Reference factory adjustments)

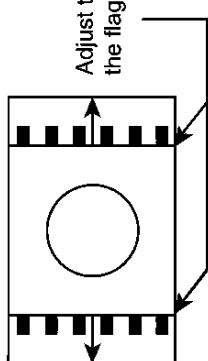
Item	Name	Setting (User control)	Input signal	Measurement point	Adjustment procedure	Adjustment standard				
[SCNT]	Sub-contrast	Dynamic mode	Sub-bright signal (PAL-I signal)	Q501#55 (TP501)	① Adjust the amplitude from the pedestal level to the white peak.	28W7DD 28MW7DG 32MW7DG  28MW7DB 32MW7DB  2.3 ± 0.2 Vp-p  2.5 ± 0.2 Vp-p				
[BRTC]	Sub-bright center	Dynamic mode	Sub-bright signal	Screen adjustment	① Adjust the number of black collapsed lines in the sub-bright signal. ② This adjustment shall be done after the W/B and [SCNT] adjustments.	4 ± 1.5 lines Screen adjustment				
[COLP]	Sub-color center PAL	Dynamic mode	Sub-bright signal (PAL)	Q501#55 (TP501)	① Adjust the B-Y amplitude.	1.4 ± 0.2 Vp-p				
[RCUT] [GCUT] [BCUT] Screen VR  [GDRV] [BDRV]	R cut-off G cut-off B cut-off  G drive B drive	[RCUT] : 40 [GCUT] : 40 [BCUT] : 40 Horizontal straight-line mode [GDRV] : 40 [BDRV] : 40		Screen adjustment	① Set each control as shown in the left column. ② Gradually increase the screen VR until either R, G or B line starts to light up slightly. ③ Determine the screen VR adjustment position here. ④ Gradually increase remaining two screen VRs until respective line starts to light up slightly. (Adjust until the screen becomes almost white.) ⑤ Exit from the horizontal straight-line mode. ⑥ Using CA100, repeat this adjustment until correct value is set to both the dark and bright parts.	<table border="1"> <tr> <td>Bright part (103cd/m<sup>2</sup>)</td> <td>Dark part (17cd/m<sup>2</sup>)</td> </tr> <tr> <td>8750K- 0.002<math>\mu</math>v</td> <td>8750K- 0.002<math>\mu</math>v</td> </tr> </table> Bright part (CA100)	Bright part (103cd/m <sup>2</sup> )	Dark part (17cd/m <sup>2</sup> )	8750K- 0.002 $\mu$ v	8750K- 0.002 $\mu$ v
Bright part (103cd/m <sup>2</sup> )	Dark part (17cd/m <sup>2</sup> )									
8750K- 0.002 $\mu$ v	8750K- 0.002 $\mu$ v									

Item	Name	Setting (User control)	Input signal	Measurement point	Adjustment procedure	Adjustment standard
[BELL]	BELL filter		SECAM color bar	Q001#21 (TPM01)	① Vary the [BELL] until the waveform on the synchroscope becomes flat.	100 ± 10%
[SRY]	SECAM R-Y black level	Dynamic mode	SECAM color bar	Q501#55 (TP501)	① Vary the [SRY] until the level of the B/W signal becomes equal to the H. BLK level.	0 ± 40 mV
[SBY]	SECAM R-Y black level	Dynamic mode	SECAM color bar	Q501#55 (TP501)	① Vary the [SBY] until the level of the B/W signal becomes equal to the H. BLK level.	0 ± 40 mV
[COLS]	Sub-color center SECAM	Dynamic mode	SECAM color bar	Q501#55 (TP501)	① Adjust the R-Y amplitude. (During this adjustment apply the picture mute.)	1.9 ± 0.2 op * (Pedestal to Peak)

Adjustment parts	Input point / Output point	Adjustment signal	Adjustment conditions and procedures
Vertical synchronizing VR adjustment R4350	DEF UNIT	_____ _____ _____	① Supply +12.0V to the HVCC terminal (P813B#57). ② Using a frequency counter, adjust the VR so that the frequency at the Q420#24 terminal becomes 80.0 +2.0/-1.0Hz.  ※ When supplying power, connect the power supply to GND of negative side of C4311.
Horizontal synchronizing VR adjustment. R4450	DEF UNIT	_____ _____ _____	① Supply +12.0V to the HVCC terminal (P813B#57). ② Using a frequency counter, adjust the VR so that the frequency at the Q420#16 terminal becomes 31.36 ±0.15Hz.  ※ When supplying power, connect the power supply to GND of negative side of C4311.

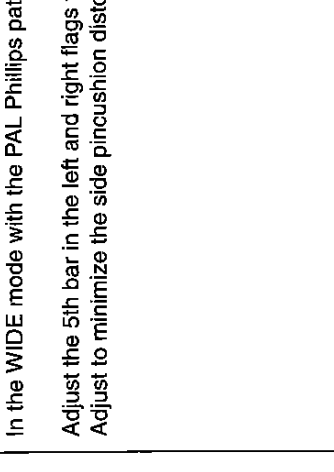
Adjustment Procedure	
<p>Vertical</p> <p>WIDE mode Vertical amplitude <b>[HIT]</b></p> <p>Vertical position <b>[GMPO]</b></p>	<p>PAL WG Phillips pattern, User adjustment standard. Adjust the vertical amplitude so that both upper and lower flags disappear from the screen.</p> <p>PAL Phillips pattern, User adjustment standard. Adjust the vertical position [GMPO] so that the vertical screen position of the Phillips pattern comes to the center of the screen (see the right sketch).</p> <p>Super-Live mode Vertical amplitude <b>[HIT]</b></p>
<p>Super-Live mode Vertical amplitude <b>[HIT]</b></p>	<p>PAL Phillips pattern, User adjustment standard. Adjust the vertical amplitude by [HIT] so that the top and bottom of the circle of the Phillips pattern touch the CRT mask (see the right sketch).</p>
<p>CINEMA mode Vertical amplitude <b>[HIT]</b></p>	<p>Phillips pattern, User adjustment standard. Adjust the vertical amplitude by [HIT] so that the points shown in the right bottom sketch touch the CRT mask (see the right sketch).</p>



No	Applicable Models	Adjustment Item	Adjustment Procedures
1	32MW7DB 32MW7DG	Focus adjustment (1) HOR. FOCUS	Conditions) PAL, RETMA signal WIDE mode, User adjustment standard Adjustment) With the center of the screen being the best focus, set the focus volume (F1) of the focus pack (Z410) to the fully counterclockwise position.
		Focus adjustment (2) VERT. FOCUS	Conditions) PAL, RETMA signal WIDE mode, User adjustment standard Adjustment) With the center of the screen being the best focus, set the focus volume (F2) of the focus pack (Z410) to the fully counterclockwise position.
	28W7DD 28MW7DB 28MW7DG	Focus adjustment	Conditions) PAL, RETMA signal WIDE mode, User adjustment standard Adjustment) With the center of the screen being the best focus, set the focus volume of the flyback transformer (T461) to the fully counterclockwise position.
2	All models	Vertical position adjustment	Conditions) PAL, WG Phillips pattern WIDE mode, User adjustment standard Adjustment) Adjust [GMPO] so that both top and bottom positions touch the mask. (This adjustment shall be done with the CPT facing south or north. If this cannot be done, offset the deviation.)
3	All models	Horizontal position adjustment	Conditions) PAL, WG Phillips pattern WIDE mode, User adjustment standard Adjustment) With the VR (R451), adjust the frame of both left and right flags to the mask. (If necessary, also adjust the horizontal amplitude.)  



	Adjustment Item	Adjustment Procedures
Horizontal	<p>WIDE mode (4:3 mode)</p> <p>Horizontal position (R451) Horizontal amplitude [WIDE] Side DPC [PARA] Trapezoidal distortion [TRAP]</p>	<p>With the PAL, WG Phillips pattern, in the WIDE mode, adjust the horizontal amplitude so that the mask comes to the frames of left and right flags.</p> <p>With the PAL, WG Phillips pattern, in the WIDE mode, adjust the horizontal position to minimize the side pincushion distortion and trapezoidal distortion.            Note) This adjustment shall be done at the same time as the horizontal position adjustment item in the volume adjustment.            If the horizontal position cannot be adjusted to the center by the volume, adjust the horizontal amplitude until the flag frame touches the mask.</p> <p>Confirm the side pincushion distortion in the 4:3 mode.            (If necessary, reconfirm it with observing the quality of the side panel in 4:3 mode.)</p> <p>In the WIDE mode with the PAL Phillips pattern :</p> <p>Adjust the 5th bar in the left and right flags to the mask.            Adjust to minimize the side pincushion distortion and trapezoidal distortion.</p>
	<p>Super-Live mode Horizontal amplitude Side DPC Trapezoidal distortion</p>	<p>In the CINEMA mode with the PAL Phillips pattern :</p> <p>Adjust the horizontal amplitude so that mask comes to the frames of the left and right flags.            Adjust to minimize the side pincushion distortion and trapezoidal distortion.</p>



## CIRCUIT CHECK

### HIGH VOLTAGE CHECK

**CAUTION:** There is no HIGH VOLTAGE ADJUSTMENT on this chassis. Checking should be done following the steps below.

1. Connect an accurate high voltage meter to the second anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST controls to minimum (zero beam current).
3. High voltage must be measured below ③ kV.

Refer to table-1 for high voltage ③.  
(See SETTING & ADJUSTING DATA on page 19)

4. Vary the BRIGHTNESS control to both extremes to be sure the high voltage does not exceed the limit under any conditions.

## CHAPTER 2 SPECIFIC INFORMATIONS

### SETTING & ADJUSTING DATA

#### 【SAFETY INSTRUCTIONS】

		28"
HIGH VOLTAGE AT ZERO BEAM:	Ⓐ	33.9 kV
MAX HIGH VOLTAGE:	Ⓑ	34.0 kV
AV VOLTAGE	Ⓒ	220-240 V

Table-1

#### 【SERVICE MODE】

#### ADJUSTING ITEMS AND DATAS IN THE SERVICE MODE:

Item	Adjustment	Preset data	Reference data
RCUT	R CUTOFF (B/W)	40H	←
GCUT	G CUTOFF (B/W)	40H	←
BCUT	B CUTOFF (B/W)	40H	←
GDRV	G DRIVE	40H	←
BDRV	B DRIVE	40H	←
BRTC	SUB BRIGHT CEN	80H	←
COLC	SUB COLOR CEN NTSC	00H	←
TNTC	SUB TINT CEN	48H	←
COLP	SUB COLOR CEN PAL	39H	←
COLS	SUB COLOR CEN SECAM	00H	←
SCNT	SUB CONTRAST	19H	←
HIT	HEIGHT	3AH	32H
HIT	(SUPER LIVE)	42H	3BH
HIT	(CINEMA)	5BH	52H
VLIN	V-LINEARITY	1AH	16H
VLIN	(SUPER LIVE)	19H	14H
VLIN	(CINEMA)	1DH	16H
VSC	V-S CORRECTION	26H	2BH
VPS	V-SHIFT	03H	04H
VCP	V-COMPENSATION	07H	05H
WID	PICTURE WIDTH (SUPER LIVE)	1FH	2BH
WIDE	(CINEMA)	25H	2AH
PARA	E-W PARABOLA	1CH	←
PARA	(SUPER LIVE)	1FH	1EH
PARA	(CINEMA)	2EH	31H
CNR	E-W CORNER	12H	0FH
TRAP	TRAPEZIUM	60H	48H
TRAP	(SUPER LIVE)	60H	48H
TRAP	(CINEMA)	60H	45H
HCP	H-COMPENSATION	05H	02H
VFC	V-F CORRECTION	0FH	←
GMPO	GMPO	34H	42H
GMPO	(SUPER LIVE)	34H	42H
GMPO	(CINEMA)	1BH	3FH

Table-2

**【 DESIGN MODE 】**

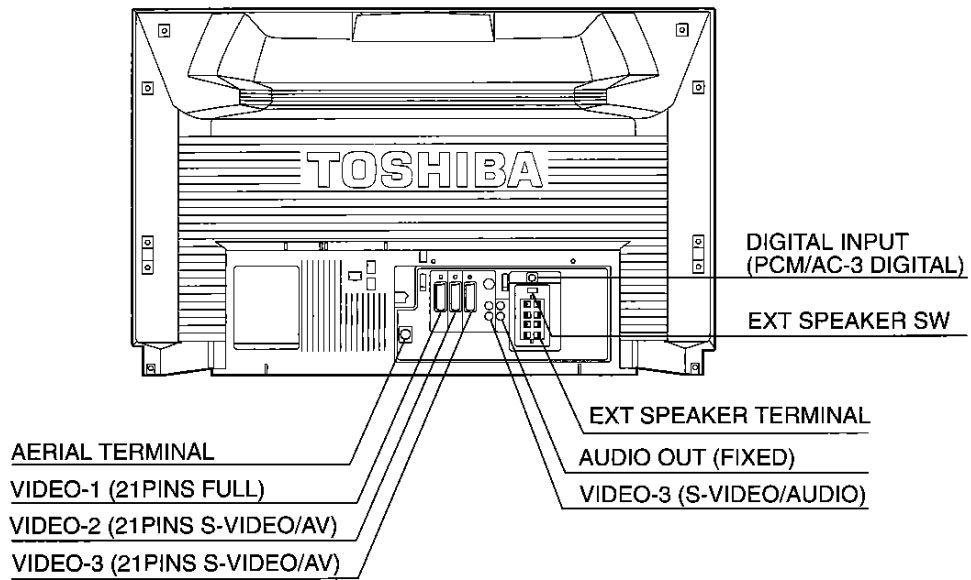
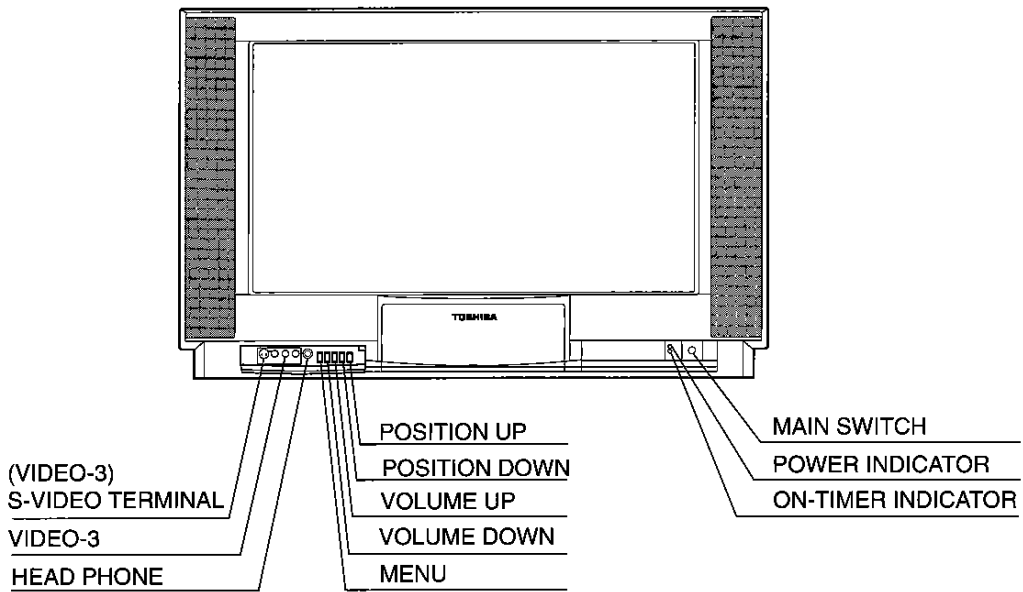
**ADJUSTING ITEMS AND DATAS IN THE DESIGN MODE:**

Item	Name of adjustment	Data		Remarks
		Preset Data		
				* There are no adjusting item in the DESIGN MODE.

**Table-3**

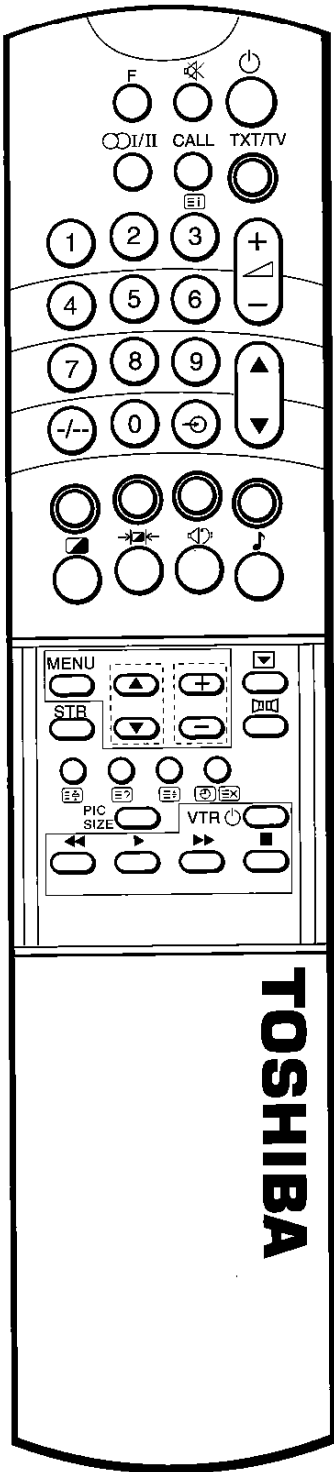
SPECIFIC INFORMATIONS

# LOCATION OF CONTROLS (TV SET)



SPECIFIC INFORMATIONS

# LOCATION OF CONTROLS (REMOTE CONTROL)



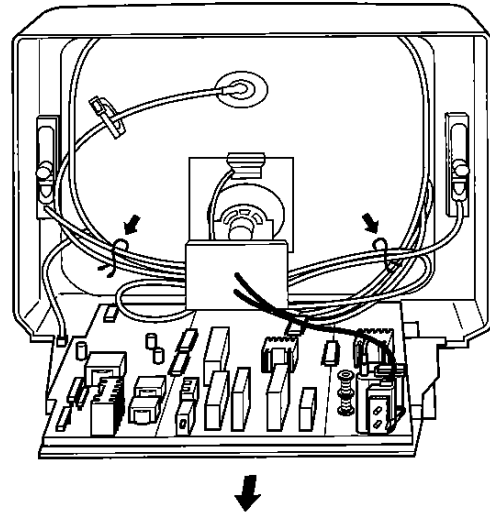
## KEY ASSIGNMENT

- ⏻ ..... ON/STAND-BY
- 🔇 ..... Sound mute
- F ..... (Quick/advanced operation)
- CALL (On-screen call)/☐ (index, initial) ..... TELETEXT MODE
- 🖼️ ..... PICTURE MENU
- 🔊 ..... SOUND MENU
- 🔄 ..... <TV MODE> ..... STEREO BILINGUAL
- 1-9, 0 ..... TEN KEY
- / - ..... 1 or 2 place
- 📺 ..... VIDEO INPUT (EXTERNAL INPUT SOURCE SW.)
- 🔊 ..... VOLUME
- + ..... LEVEL PLUS (VOLUME, MENU)
- ..... LEVEL MINUS (VOLUME, MENU)
- ▲ ..... UP (POS., CH., TEXT PAGE)
- ▼ ..... DOWN (POS., CH., TEXT PAGE)
- TXT/TV ... TEXT, MIX, TV MODE SW.
- 🕒 ..... HOLD
- ☐ ..... <TEXT MODE> ..... REVEAL / CONCEAL
- ☐ ..... <TEXT MODE> ..... F-T-B  
(FULL, TOP, BOTTOM)
- 🕒/🕒 ..... TIME DISPLAY (TV MODE)  
TEXT CLEAR (TEXT MODE)
- FLOF COLOUR KEY (4 key used)  
Red/Green/Yellow/Blue
- 🔊 ..... Super woofer
- 📺 ..... Still
- 🔊 ..... DSP/Surround
- 🔊 ..... Selectable picture
- MENU ..... TUNING & OTHER MENU
- 🔊 / 🔊 ..... Menu select
- 🔊 / 🔊 ..... Level down/up
- PIC SIZE ..... PIC SIZE (Picture size select)
- STR ..... Store
- ▲/▼ ..... Menu Select
- +/- ..... Level up/down
- VTR control
- ⏻ ..... Power on/standby
- ▶ ..... Play
- ..... Stop
- ⏮ ..... Rewind
- ⏭ ..... Fast forward

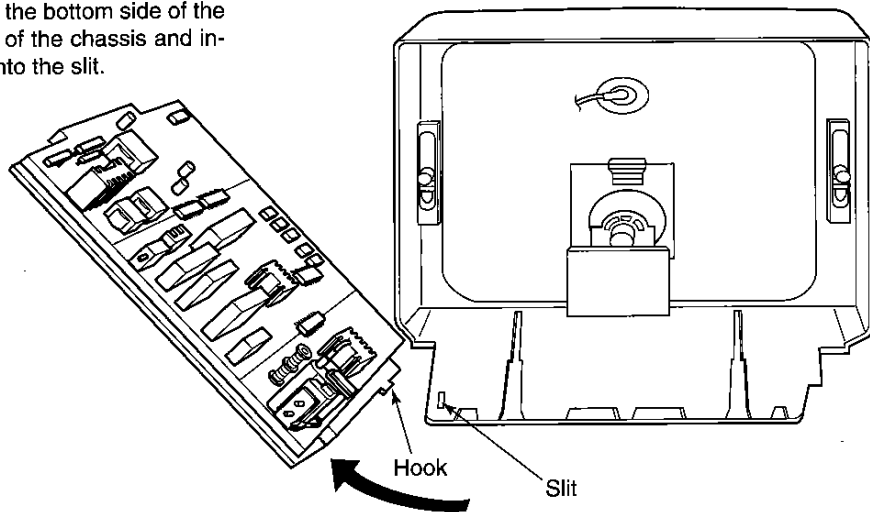
SPECIFIC INFORMATION

## SERVICE POSITION

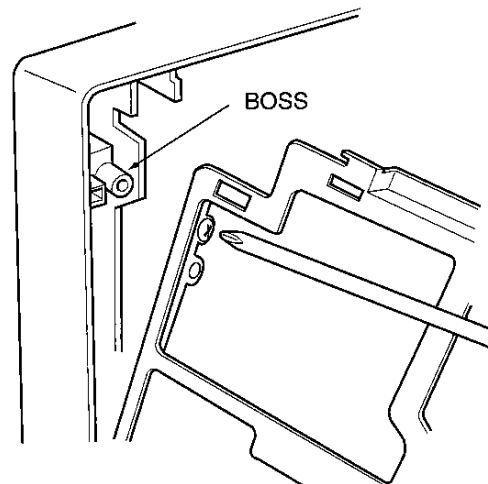
1. Disconnect the lead wires for the speaker fixed to the degausser coil with three omega clips. And lifting up slightly, pull out the chassis from the front mask.



2. There is a slit at the left front of the bottom side of the front mask. Lift up the left side of the chassis and insert the hook at the right side into the slit.

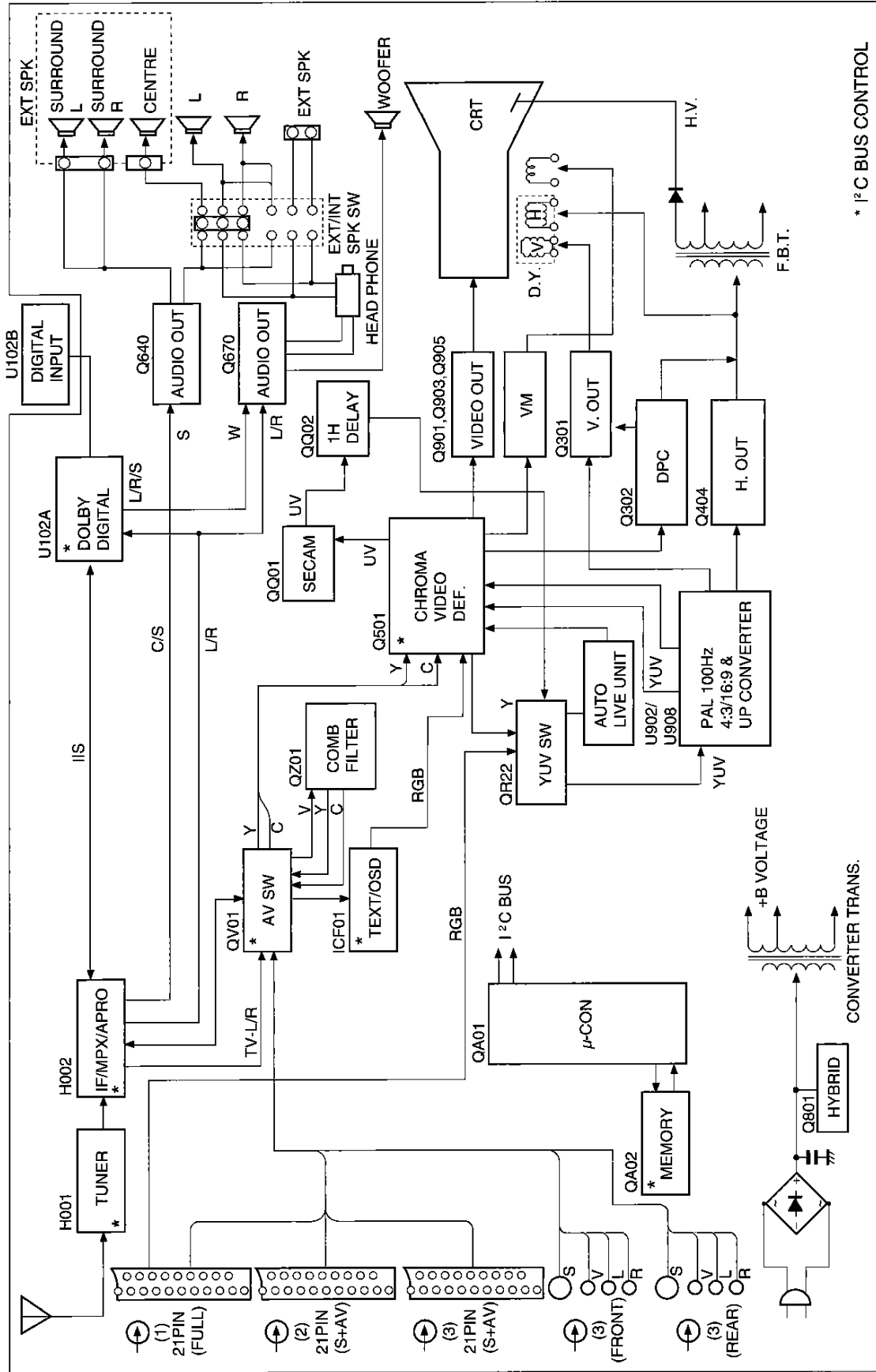


3. To retain the chassis, use the upper left boss (highest boss). And fix it with screws for back cover fixing. Upper hole of the chassis frame.



4. After repair works, restore the unit by reversing the above steps.

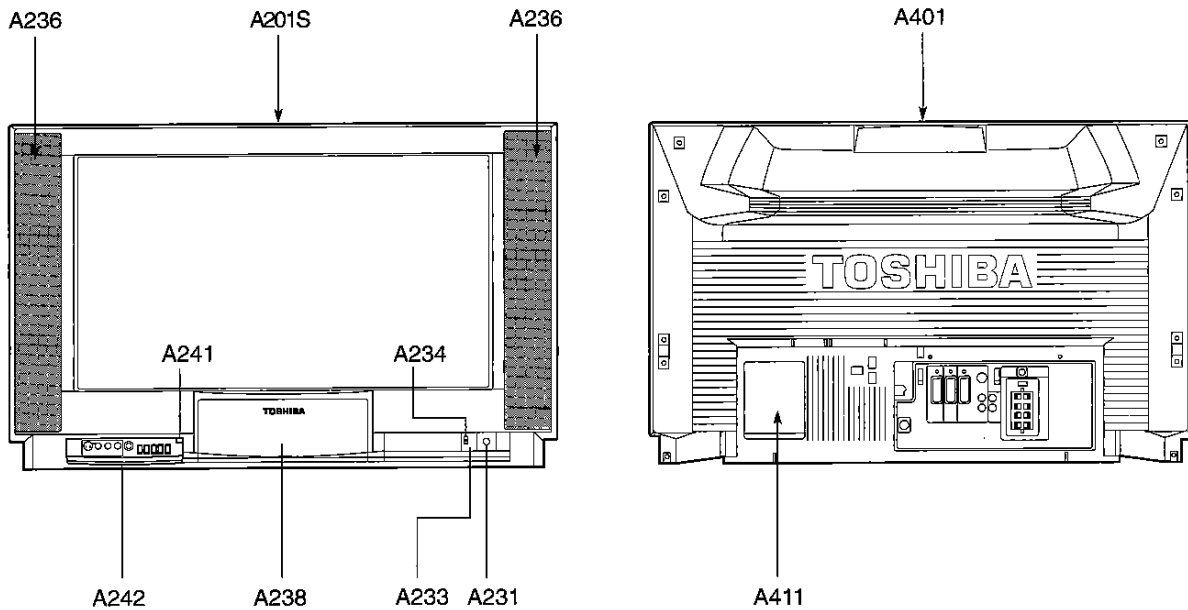
# CIRCUIT BLOCK DIAGRAM



\* I<sup>2</sup>C BUS CONTROL



## CABINET REPLACEMENT PARTS LIST



SPECIFIC INFORMATIONS

Location No.	Part No.	Description
A201S	23510137	Front Cover
A231	23444970	Button, Power
A233	23430394	Lens, Remote
A234	23430395	Piece, LED
A236	23519689	Speaker Grille
A238	23519694	Speaker Grille, Center
A241	70368125	Push Catch for Door
A242	23427092	Door
△A401	23427107	Back Cover
A411	23560563	Label, Model No. 28MW7DB
A411	23560565	Label, Model No. 28MW7DG
A420	23460899	Trim, Back Term.
Z101	23436597	Stand Assembly



# CHASSIS REPLACEMENT PARTS LIST

**WARNING:** BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 3 OF THIS MANUAL.

**CAUTION:** The international hazard symbols " $\triangle$ " in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE. Do not degrade the safety of the receiver through improper servicing.

**NOTICE:**

- The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.
- The PC board assembly with \* mark is no longer available after the end of the production.

**Models : 28MW7DB/28MW7DG**

Capacitors ..... CD : Ceramic Disk      PF : Plastic Film      EL : Electrolytic  
 Resistors ..... CF : Carbon Film      CC : Carbon Composition      MF : Metal Film  
                          OMF : Oxide Metal Film      VR : Variable Resistor      FR : Fusible Resistor

(All CD and PF capacitors are  $\pm 5\%$ , 50V and all resistors,  $\pm 5\%$ , 1/6W unless otherwise noted.)

Location No.	Part No.	Description
<b>CAPACITORS</b>		
C101	24797229	EL, 2.2 $\mu$ F, $\pm 10\%$ (28MW7DG)
C103	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C104	24794470	EL, 47 $\mu$ F, $\pm 20\%$ , 16V
C105	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C106	24797100	EL, 10 $\mu$ F, $\pm 20\%$ , 50V
C107	24794221	EL, 220 $\mu$ F, $\pm 20\%$ , 16V
C108	24794101	EL, 100 $\mu$ F, $\pm 20\%$ , 16V
C109	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C116	24794221	EL, 220 $\mu$ F, $\pm 20\%$ , 16V
C117	24232103	CD, 0.01 $\mu$ F, +80%, -20% (28MW7DG)
C183	24797229	EL, 2.2 $\mu$ F, $\pm 20\%$ , 50V (28MW7DB)
C183	24797479	EL, 4.7 $\mu$ F, $\pm 20\%$ , 50V (28MW7DG)
C198	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C199	24794221	EL, 220 $\mu$ F, $\pm 20\%$ , 16V
C201	24206100	EL, 10 $\mu$ F, 50V
C203	24538104	PF, 0.1 $\mu$ F
C204	24206010	EL, 1 $\mu$ F, 50V
C205	24206229	EL, 2.2 $\mu$ F, 50V
C206	24794220	EL, 22 $\mu$ F, $\pm 20\%$ , 16V
C207	24436100	CD, 10pF, $\pm 0.25$ pF
C208	24436100	CD, 10pF, $\pm 0.25$ pF
C209	24436100	CD, 10pF, $\pm 0.25$ pF
C212	24794100	EL, 10 $\mu$ F, $\pm 20\%$ , 16V
C213	24436100	CD, 10pF, $\pm 0.25$ pF
C214	24538334	PF, 0.33 $\mu$ F
C215	24474101	CD, 100pF, $\pm 10\%$
C216	24436101	CD, 100pF
C218	24436390	CD, 39pF
C231	24436330	CD, 33pF
C303	24214471	CD, 470pF, $\pm 10\%$ , 500V
C304	24693473	PF, 0.047 $\mu$ F, 100V
C305	24617912	EL, 2.2 $\mu$ F, $\pm 10\%$ , 50V
C306	24795332	EL, 3300 $\mu$ F, 25V
C307	24793101	EL, 100 $\mu$ F, $\pm 20\%$ , 10V
C308	24797221	EL, 220 $\mu$ F, $\pm 20\%$ , 50V
C309	24797101	EL, 100 $\mu$ F, $\pm 20\%$ , 50V
C310	24796222	EL, 2200 $\mu$ F, $\pm 20\%$ , 35V

Location No.	Part No.	Description
C311	24590473	PF, 0.047 $\mu$ F
C312	24590273	PF, 0.027 $\mu$ F
C313	24082058	PF, 0.27 $\mu$ F, 100V
C315	24797229	EL, 2.2 $\mu$ F, $\pm 20\%$ , 50V
C316	24212102	CD, 1000pF, $\pm 10\%$
C331	24797101	EL, 100 $\mu$ F, $\pm 20\%$ , 50V
C366	24693473	PF, 0.047 $\mu$ F, 100V
C370	24794101	EL, 100 $\mu$ F, $\pm 20\%$ , 16V
C371	24794100	EL, 10 $\mu$ F, $\pm 20\%$ , 16V
C401	24538104	PF, 0.1 $\mu$ F
C403	24591393	PF, 0.039 $\mu$ F
C404	24797229	EL, 2.2 $\mu$ F, $\pm 20\%$ , 50V
C410	24092341	CD, 470pF, $\pm 10\%$ , 2kV
C413	24214332	CD, 3300pF, $\pm 10\%$ , 500V
C416	24668101	EL, 100 $\mu$ F, $\pm 20\%$ , 35V
C417	24214391	CD, 390pF, $\pm 10\%$ , 500V
C419	24212102	CD, 1000pF, $\pm 10\%$
C420	24666101	EL, 100 $\mu$ F, $\pm 20\%$ , 16V
C421	24538104	PF, 0.1 $\mu$ F
C423	24829393	PF, 0.039 $\mu$ F, 400V
C430	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C431	24794102	EL, 1000 $\mu$ F, $\pm 20\%$ , 16V
C431	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C439	24082830	PF, 3000pF, $\pm 3\%$ , 1800V
C440	24082830	PF, 3000pF, $\pm 3\%$ , 1800V
C442	24082643	PF, 0.18 $\mu$ F
C443	24082644	PF, 0.2 $\mu$ F, 400V
C444	24082828	PF, 2400pF, $\pm 3\%$ , 1800V
C445	24828473	PF, 0.047 $\mu$ F, 200V
C446	24679330	EL, 33 $\mu$ F, $\pm 20\%$ , 250V
C448	24640908	EL, 33 $\mu$ F, $\pm 20\%$ , 160V
C460	24796331	EL, 330 $\mu$ F, $\pm 20\%$ , 35V
C461	24082828	PF, 2400pF, $\pm 3\%$ , 1800V
C462	24795222	EL, 2200 $\mu$ F, $\pm 20\%$ , 25V
C463	24212392	CD, 3900pF, $\pm 10\%$
C464	24640900	EL, 4.7 $\mu$ F, $\pm 20\%$ , 100V
C465	24590683	PF, 0.068 $\mu$ F
C466	24820822	PF, 8200pF, 630V
C470	24794220	EL, 22 $\mu$ F, $\pm 20\%$ , 16V
C472	24538474	PF, 0.47 $\mu$ F
C473	24669010	EL, 1 $\mu$ F, $\pm 20\%$ , 50V
C475	24095887	PF, 0.01 $\mu$ F, $\pm 3\%$ , 630V

SPECIFIC INFORMATIONS

Location No.	Part No.	Description
C477	24591563	PF, 0.056 $\mu$ F
C478	24591473	PF, 0.047 $\mu$ F
C479	24214471	CD, 470pF, $\pm$ 10%, 500V
C481	24538104	PF, 0.1 $\mu$ F
C483	24591152	PF, 1500pF
C491	24082749	PF, 1.5 $\mu$ F, 250V
C492	24082645	PF, 0.22 $\mu$ F, 400V
C494	24082644	PF, 0.2 $\mu$ F, 400V
C495	24092343	CD, 680pF, $\pm$ 10%, 2kV
C496	24092343	CD, 680pF, $\pm$ 10%, 2kV
C501	24212101	CD, 100pF, $\pm$ 10%
C502	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C503	24794101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
C504	24590222	PF, 2200pF
C505	24353120	CD, 12pF
C507	24353120	CD, 12pF
C508	24206100	EL, 10 $\mu$ F, 50V
C509	24794101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
C510	24794101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
C511	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C512	24206228	EL, 0.22 $\mu$ F, 50V
C513	24092398	CD, 0.1 $\mu$ F, +80%, -20%
C514	24538104	PF, 0.1 $\mu$ F
C515	24538104	PF, 0.1 $\mu$ F
C516	24212102	CD, 1000pF, $\pm$ 10%
C517	24353010	CD, 1pF, $\pm$ 0.25pF
C519	24353010	CD, 1pF, $\pm$ 0.25pF
C520	24474102	CD, 1000pF, $\pm$ 10%
C521	24212102	CD, 1000pF, $\pm$ 10%
C522	24473470	CD, 47pF
C523	24473470	CD, 47pF
C524	24436561	CD, 560pF
C525	24353181	CD, 180pF
C526	24474101	CD, 100pF, $\pm$ 10%
C613	24794470	EL, 47 $\mu$ F, $\pm$ 20%, 16V
C630	24590102	PF, 1000pF
C631	24206010	EL, 1 $\mu$ F, 50V
C632	24797479	EL, 4.7 $\mu$ F, $\pm$ 20%, 50V
C633	24538124	PF, 0.12 $\mu$ F
C634	24796471	EL, 470 $\mu$ F, $\pm$ 20%, 35V
C641	24206010	EL, 1 $\mu$ F, 50V
C644	24206010	EL, 1 $\mu$ F, 50V
C645	24795470	EL, 47 $\mu$ F, $\pm$ 20%, 25V
C647	24591102	PF, 1000pF
C648	24590682	PF, 6800pF
C649	24206229	EL, 2.2 $\mu$ F, 50V
C650	24796102	EL, 1000 $\mu$ F, $\pm$ 20%, 35V
C651	24668471	EL, 470 $\mu$ F, $\pm$ 20%, 35V
C652	24668471	EL, 470 $\mu$ F, $\pm$ 20%, 35V
C654	24591124	PF, 0.12 $\mu$ F
C655	24591124	PF, 0.12 $\mu$ F
C656	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C660	24206229	EL, 2.2 $\mu$ F, 50V
C661	24538104	PF, 0.1 $\mu$ F
C663	24797229	EL, 2.2 $\mu$ F, $\pm$ 20%, 50V
C664	24203100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
C665	24206229	EL, 2.2 $\mu$ F, 50V
C666	24206229	EL, 2.2 $\mu$ F, 50V
C667	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C667	24797229	EL, 2.2 $\mu$ F, $\pm$ 20%, 50V
C668	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C668	24794100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
C669	24668330	EL, 33 $\mu$ F, $\pm$ 20%, 35V
C670	24668330	EL, 33 $\mu$ F, $\pm$ 20%, 35V

Location No.	Part No.	Description
C671	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C671	24797010	EL, 1 $\mu$ F, $\pm$ 20%, 50V
C672	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C673	24797010	EL, 1 $\mu$ F, $\pm$ 20%, 50V
C673	24474102	CD, 1000pF, $\pm$ 10%
C674	24474102	CD, 1000pF, $\pm$ 10%
C674	24797010	EL, 1 $\mu$ F, $\pm$ 20%, 50V
C675	24474102	CD, 1000pF, $\pm$ 10%
C675	24795470	EL, 47 $\mu$ F, $\pm$ 20%, 25V
C676	24474102	CD, 1000pF, $\pm$ 10%
C676	24797479	EL, 4.7 $\mu$ F, $\pm$ 20%, 50V
C677	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C677	24590102	PF, 1000pF
C678	24474102	CD, 1000pF, $\pm$ 10%
C678	24590102	PF, 1000pF
C679	24538104	PF, 0.1 $\mu$ F
C679	24474102	CD, 1000pF, $\pm$ 10%
C680	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C680	24668102	EL, 1000 $\mu$ F, $\pm$ 20%, 35V
C681	24668471	EL, 470 $\mu$ F, $\pm$ 20%, 35V
C681	24474102	CD, 1000pF, $\pm$ 10%
C682	24474102	CD, 1000pF, $\pm$ 10%
C682	24668471	EL, 470 $\mu$ F, $\pm$ 20%, 35V
C683	24212102	CD, 1000pF, $\pm$ 10%
C683	24668102	EL, 1000 $\mu$ F, $\pm$ 20%, 35V
C684	24212102	CD, 1000pF, $\pm$ 10%
C684	24590124	PF, 0.12 $\mu$ F
C685	24590124	PF, 0.12 $\mu$ F
C685	24212102	CD, 1000pF, $\pm$ 10%
C686	24212102	CD, 1000pF, $\pm$ 10%
C686	24590124	PF, 0.12 $\mu$ F
C687	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C688	24203220	EL, 22 $\mu$ F, $\pm$ 20%, 16V
C689	24797010	EL, 1 $\mu$ F, $\pm$ 20%, 50V
C704	24232103	CD, 0.01 $\mu$ F, +80%, -20%
C705	24797229	EL, 2.2 $\mu$ F, $\pm$ 20%, 50V
C707	24794470	EL, 47 $\mu$ F, $\pm$ 20%, 16V
C712	24666470	EL, 47 $\mu$ F, $\pm$ 20%, 16V
C713	24790100	EL, 10 $\mu$ F, $\pm$ 20%, 160V
C714	24436101	CD, 100pF
C715	24214472	CD, 4700pF, $\pm$ 10%, 500V
C716	24436101	CD, 100pF
C717	24214472	CD, 4700pF, $\pm$ 10%, 500V
C718	24794470	EL, 47 $\mu$ F, $\pm$ 20%, 16V
C719	24435151	CD, 150pF, 500V
C720	24790100	EL, 10 $\mu$ F, $\pm$ 20%, 160V
C721	24794470	EL, 47 $\mu$ F, $\pm$ 20%, 16V
$\Delta$ C801	24082927	PF, 0.22 $\mu$ F, $\pm$ 20%, AC275V (28MW7DB)
C802	24082927	PF, 0.22 $\mu$ F, $\pm$ 20%, AC275V (28MW7DB)
C805	24092281	CD, 4700pF, $\pm$ 20%, AC250V
C806	24092281	CD, 4700pF, $\pm$ 20%, AC250V
C808	24667331	EL, 330 $\mu$ F, $\pm$ 20%, 25V
C809	24214471	CD, 470pF, $\pm$ 10%, 500V
C810	24086063	EL, 330 $\mu$ F, $\pm$ 20%, 400V
$\Delta$ C811	24092557	CD, 2200pF, $\pm$ 20%, AV250V
$\Delta$ C813	24092555	CD, 1000pF, $\pm$ 10%, AC250V
$\Delta$ C814	24092555	CD, 1000pF, $\pm$ 10%, AC250V
$\Delta$ C815	24092553	CD, 470pF, $\pm$ 10%, AC250V
C816	24669221	EL, 220 $\mu$ F, $\pm$ 20%, 50V
C817	24092341	CD, 470pF, $\pm$ 10%, 2kV
C818	24095931	PF, 2200pF, 1250V
C819	24676220	EL, 22 $\mu$ F, $\pm$ 20%, 100V

Location No.	Part No.	Description
C820	24092343	CD, 680pF, ±10%, 2kV
C821	24214471	CD, 470pF, ±10%, 500V
C822	24538474	PF, 0.47μF
C829	24590182	PF, 1800pF
C831	24794470	EL, 47μF, ±20%, 16V
C832	24794470	EL, 47μF, ±20%, 16V
C833	24669100	EL, 10μF, ±20%, 50V
C834	24797100	EL, 10μF, ±20%, 50V
C835	24794470	EL, 47μF, ±20%, 16V
C841	24669100	EL, 10μF, ±20%, 50V
C842	24669100	EL, 10μF, ±20%, 50V
C843	24538104	PF, 0.1μF
C846	24538104	PF, 0.1μF
C847	24538474	PF, 0.47μF
C871	24214471	CD, 470pF, ±10%, 500V
C872	24669221	EL, 220μF, ±20%, 50V
C874	24667330	EL, 33μF
C876	24666101	EL, 100μF, ±20%, 16V
C884	24086916	EL, 330μF, ±20%, 160V
C885	24214471	CD, 470pF, ±10%, 500V
C887	24214471	CD, 470pF, ±10%, 500V
C889	24668222	EL, 2200μF, ±20%, 35V
C892	24668222	EL, 2200μF, ±20%, 35V
C893	24092337	CD, 220pF, ±10%, 2kV
C894	24668222	EL, 2200μF, ±20%, 35V
C895	24669470	EL, 47μF, ±20%, 50V
C896	24214471	CD, 470pF, ±10%, 500V
C897	24668332	EL, 3300μF, ±20%, 35V
C898	24538224	PF, 0.22μF
C899	24214471	CD, 470pF, ±10%, 500V
C902	24092353	CD, 4700pF, ±10%, 2kV
C904	24436471	CD, 470pF
C905	24436471	CD, 470pF
C907	24436471	CD, 470pF
C909	24679220	EL, 22μF, ±20%, 250V
C910	24797478	EL, 0.47μF, ±20%, 50V
C911	24203100	EL, 10μF, ±20%, 16V
C912	24794102	EL, 1000μF, ±20%, 16V
C913	24763102	EL, 1000μF, ±20%, 16V
C914	24212103	CD, 0.01μF, ±10%
C915	24092398	CD, 0.1μF, +80%, -20%
C920	24591104	PF, 0.1μF
C921	24591104	PF, 0.1μF
C930	24214101	CD, 100pF, ±10%, 500V
C931	24214101	CD, 100pF, ±10%, 500V
C4031	24591562	PF, 5600pF
C4041	24797229	EL, 2.2μF, ±20%, 50V
C4301	24797010	EL, 1μF, ±20%, 50V
C4303	24591433	PF, 0.043μF
C4304	24591153	PF, 0.015μF
C4305	24794101	EL, 100μF, ±20%, 16V
C4306	24232103	CD, 0.01μF, +80%, -20%
C4307	24232103	CD, 0.01μF, +80%, -20%
C4311	24794471	EL, 470μF, ±20%, 16V
C4371	24591393	PF, 0.039μF
C4373	24539474	PF, 0.47μF
C4374	24617915	EL, 1μF, ±10%, 50V
C4375	24590203	PF, 0.02μF
C4377	24590102	PF, 1000pF
C4378	24617787	EL, 470μF, ±20%, 16V
C4379	24794101	EL, 100μF, ±20%, 16V
C4380	24212102	CD, 1000pF, ±10%
C4381	24797478	EL, 0.47μF, ±20%, 50V
C4382	24539684	PF, 0.68μF

Location No.	Part No.	Description
C4401	24232103	CD, 0.01μF, +80%, -20%
C4402	24232103	CD, 0.01μF, +80%, -20%
C4403	24501561	PF, 560pF
C4404	24501132	PF, 1300pF
C4405	24797479	EL, 4.7μF, ±20%, 50V
C4406	24232103	CD, 0.01μF, +80%, -20%
C4408	24766229	EL, 2.2μF, ±20%, 50V
C4412	24501132	PF, 1300pF
C4413	24501102	PF, 1000pF
C4414	24232103	CD, 0.01μF, +80%, -20%
C4415	24567474	PF, 0.47μF
C4416	24501161	PF, 160pF
C4417	24590332	PF, 3300pF
C4421	24353330	CD, 33pF
C4466	24820472	PF, 4700pF, 630V
C4490	24082646	PF, 0.24μF, 400V
C4491	24082646	PF, 0.24μF, 400V
CA13	24212101	CD, 100pF, ±10%
CA30	24212101	CD, 100pF, ±10%
CA33	24232103	CD, 0.01μF, +80%, -20%
CA42	24794100	EL, 10μF, ±20%, 16V
CA43	24232103	CD, 0.01μF, +80%, -20%
CA44	24232103	CD, 0.01μF, +80%, -20%
CA68	24794100	EL, 10μF, ±20%, 16V
CA69	24232103	CD, 0.01μF, +80%, -20%
CB01	24794470	EL, 47μF, ±20%, 16V
CB90	24232103	CD, 0.01μF, +80%, -20%
CC10	24212101	CD, 100pF, ±10%
CC20	24212102	CD, 1000pF, ±10%
CC21	24436470	CD, 47pF
CC22	24436470	CD, 47pF
CC30	24475222	CD, 2200pF, 16V
CC36	24232103	CD, 0.01μF, +80%, -20%
CD01	24092293	Chip, 0.1μF, +80%, -20%, 25V
CD02	24092293	Chip, 0.1μF, +80%, -20%, 25V
CD03	24092293	Chip, 0.1μF, +80%, -20%, 25V
CD04	24092293	Chip, 0.1μF, +80%, -20%, 25V
CD05	24092293	Chip, 0.1μF, +80%, -20%, 25V
CD06	24092293	Chip, 0.1μF, +80%, -20%, 25V
CD07	24092293	Chip, 0.1μF, +80%, -20%, 25V
CD08	24092293	Chip, 0.1μF, +80%, -20%, 25V
CD11	24092293	Chip, 0.1μF, +80%, -20%, 25V
CD12	24814473	Chip, 0.047μF, +80%, -20%
CD13	24092293	Chip, 0.1μF, +80%, -20%, 25V
CD14	24092293	Chip, 0.1μF, +80%, -20%, 25V
CD15	24092293	Chip, 0.1μF, +80%, -20%, 25V
CD16	24092293	Chip, 0.1μF, +80%, -20%, 25V
CD20	24815222	Chip, 2200pF, ±10%
CD23	24203100	EL, 10μF, ±20%, 16V
CD24	24092293	Chip, 0.1μF, +80%, -20%, 25V
CD25	24815222	Chip, 2200pF, ±10%
CD26	24203100	EL, 10μF, ±20%, 16V
CD27	24203100	EL, 10μF, ±20%, 16V
CD28	24202101	EL, 100μF, 10V
CD29	24092293	Chip, 0.1μF, +80%, -20%, 25V
CD30	24203100	EL, 10μF, ±20%, 16V
CD31	24203220	EL, 22μF, ±20%, 16V
CD32	24206010	EL, 1μF, 50V
CD33	24590823	PF, 0.082μF
CD34	24538104	PF, 0.1μF
CD35	24567124	PF, 0.12μF
CD36	24781102	Chip, 1000pF, SL
CD38	24206010	EL, 1μF, 50V
CD39	24206010	EL, 1μF, 50V

Location No.	Part No.	Description
CD40	24206010	EL, 1 $\mu$ F, 50V
CD41	24814103	Chip, 0.01 $\mu$ F, +80%, -20%
CD42	24203101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CD43	24206010	EL, 1 $\mu$ F, 50V
CD44	24590273	PF, 0.027 $\mu$ F
CD45	24590822	PF, 8200pF
CD46	24567273	PF, 0.027 $\mu$ F
CD47	24206010	EL, 1 $\mu$ F, 50V
CD48	24567273	PF, 0.027 $\mu$ F
CD49	24567823	PF, 0.082 $\mu$ F
CD50	24567823	PF, 0.082 $\mu$ F
CD51	24203100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CD52	24203100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CD53	24203100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CD54	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CD55	24815222	Chip, 2200pF, $\pm$ 10%
CD56	24814103	Chip, 0.01 $\mu$ F, +80%, -20%
CD57	24814103	Chip, 0.01 $\mu$ F, +80%, -20%
CD58	24202101	EL, 100 $\mu$ F, 10V
CD59	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CD60	24815222	Chip, 2200pF, $\pm$ 10%
CD63	24203100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CD64	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CD65	24815222	Chip, 2200pF, $\pm$ 10%
CD66	24203100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CD67	24203100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CD68	24202101	EL, 100 $\mu$ F, 10V
CD69	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CD70	24815222	Chip, 2200pF, $\pm$ 10%
CD72	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CD73	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CD74	24203100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CD75	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CD76	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CD77	24203100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CD78	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CD79	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CD80	24203100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CD81	24202221	EL, 220 $\mu$ F, $\pm$ 20%, 10V
CD82	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CD83	24202221	EL, 220 $\mu$ F, $\pm$ 20%, 10V
CD84	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CD85	24202221	EL, 220 $\mu$ F, $\pm$ 20%, 10V
CD86	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CD88	24794100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CD89	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CD91	24814103	Chip, 0.01 $\mu$ F, +80%, -20%
CD92	24203220	EL, 22 $\mu$ F, $\pm$ 20%, 16V
CD93	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CD94	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CD101	24814103	Chip, 0.01 $\mu$ F, +80%, -20%
CD102	24814103	Chip, 0.01 $\mu$ F, +80%, -20%
CD103	24781330	Chip, 33pF, SL
CD104	24781330	Chip, 33pF, SL
CD105	24814103	Chip, 0.01 $\mu$ F, +80%, -20%
CD106	24203100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CD107	24287103	Chip, 0.01 $\mu$ F, +80%, -20%
CF03	24567104	PF, 0.1 $\mu$ F
CF04	24766101	PF, 0.1 $\mu$ F
CF05	24766101	PF, 0.1 $\mu$ F
CF06	24353220	CD, 22pF
CF07	24353220	CD, 22pF
CF08	24567104	PF, 0.1 $\mu$ F
CF09	24567104	PF, 0.1 $\mu$ F

Location No.	Part No.	Description
CF10	24206100	EL, 10 $\mu$ F, 50V
CF11	24567104	PF, 0.1 $\mu$ F
CF12	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CF14	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CF17	24794101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CF18	24794101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CF19	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CK01	24203220	EL, 22 $\mu$ F, $\pm$ 20%, 16V
CK02	24085981	EL, 10 $\mu$ F, $\pm$ 20%, 16V, NP
CK03	24815103	Chip, 0.01 $\mu$ F, $\pm$ 10%, B
CK04	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CK05	24781101	Chip, 100pF, SL
CK06	24781681	Chip, 680pF, SL
CK09	24815103	Chip, 0.01 $\mu$ F, $\pm$ 10%, B
CK10	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CK11	24814103	Chip, 0.01 $\mu$ F, +80%, -20%
CK12	24815103	Chip, 0.01 $\mu$ F, $\pm$ 10%, B
CK13	24815103	Chip, 0.01 $\mu$ F, $\pm$ 10%, B
CK14	24815103	Chip, 0.01 $\mu$ F, $\pm$ 10%, B
CK16	24815103	Chip, 0.01 $\mu$ F, $\pm$ 10%, B
CK18	24203101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CK19	24814103	Chip, 0.01 $\mu$ F, +80%, -20%
CK21	24781101	Chip, 100pF, SL
CK23	24665101	EL, 100 $\mu$ F, $\pm$ 20%, 10V
CK24	24781101	Chip, 100pF, SL
CK25	24781101	Chip, 100pF, SL
CK26	24781101	Chip, 100pF, SL
CK27	24781101	Chip, 100pF, SL
CK28	24781101	Chip, 100pF, SL
CK29	24781101	Chip, 100pF, SL
CK30	24795330	EL, 33 $\mu$ F, $\pm$ 20%, 25V
CK31	24206479	EL, 4.7 $\mu$ F, 50V
CK32	24781471	Chip, 470pF, SL
CK35	24781101	Chip, 100pF, SL
CK36	24781101	Chip, 100pF, SL
CK37	24781101	Chip, 100pF, SL
CK38	24781101	Chip, 100pF, SL
CK39	24781330	Chip, 33pF, SL
CK40	24781330	Chip, 33pF, SL
CK41	24781391	Chip, 390pF, SL
CK42	24781102	Chip, 1000pF, SL
CK43	24814103	Chip, 0.01 $\mu$ F, +80%, -20%
CK44	24814103	Chip, 0.01 $\mu$ F, +80%, -20%
CK45	24781391	Chip, 390pF, SL
CK46	24781101	Chip, 100pF, SL
CK47	24781330	Chip, 33pF, SL
CK48	24781330	Chip, 33pF, SL
CK49	24814103	Chip, 0.01 $\mu$ F, +80%, -20%
CK50	24203100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CK51	24814103	Chip, 0.01 $\mu$ F, +80%, -20%
CK53	24781101	Chip, 100pF, SL
CK57	24781330	Chip, 33pF, SL
CK58	24781330	Chip, 33pF, SL
CK59	24794100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CK60	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CK62	24781101	Chip, 100pF, SL
CK65	24781330	Chip, 33pF, SL
CK66	24794220	EL, 22 $\mu$ F, $\pm$ 20%, 16V
CK67	24794220	EL, 22 $\mu$ F, $\pm$ 20%, 16V
CK68	24794100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CK69	24794100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CK70	24794220	EL, 22 $\mu$ F, $\pm$ 20%, 16V
CK71	24794220	EL, 22 $\mu$ F, $\pm$ 20%, 16V
CK72	24794100	EL, 10 $\mu$ F, $\pm$ 20%, 16V

Location No.	Part No.	Description
CK73	24815103	Chip, 0.01 $\mu$ F, $\pm$ 10%, B
CK74	24794100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CK82	24206010	EL, 1 $\mu$ F, 50V
CK83	24781330	Chip, 33pF, SL
CK84	24781100	Chip, 10pF, $\pm$ 0.5%, SL
CK85	24781330	Chip, 33pF, SL
CK87	24092293	Chip, 0.1 $\mu$ F, +80%, -20%, 25V
CK89	24781102	Chip, 1000pF, SL
CK90	24781102	Chip, 1000pF, SL
CK181	24781152	Chip, 1500pF, SL
CK190	24794100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CK191	24794100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CQ01	24436102	CD, 1000pF (28MW7DG)
CQ02	24353820	CD, 82pF (28MW7DG)
CQ03	24212102	CD, 1000pF (28MW7DG)
CQ04	24794100	EL, 10 $\mu$ F, $\pm$ 20% (28MW7DG)
CQ05	24590563	PF, 0.056 $\mu$ F (28MW7DG)
CQ07	24590203	PF, 0.02 $\mu$ F (28MW7DG)
CQ08	24590683	PF, 0.068 $\mu$ F (28MW7DG)
CQ09	24797229	EL, 2.2 $\mu$ F, $\pm$ 20%, 50V (28MW7DG)
CQ10	24590223	PF, 0.022 $\mu$ F (28MW7DG)
CQ11	24797229	EL, 2.2 $\mu$ F, $\pm$ 20%, 50V (28MW7DG)
CQ12	24436910	CD, 91pF (28MW7DG)
CQ13	24797010	EL, 1 $\mu$ F, $\pm$ 20%, 50V (28MW7DG)
CQ14	24797010	EL, 1 $\mu$ F, $\pm$ 20%, 50V (28MW7DG)
CQ15	24794101	EL, 100 $\mu$ F, $\pm$ 20% (28MW7DG)
CQ16	24232103	CD, 0.01 $\mu$ F, +80%, -20% (28MW7DG)
CQ17	24353150	CD, 15pF (28MW7DG)
CQ18	24436910	CD, 91pF (28MW7DG)
CQ19	24590103	PF, 0.01 $\mu$ F
CQ20	24538104	PF, 0.1 $\mu$ F
CQ21	24794470	EL, 47 $\mu$ F, $\pm$ 20%, 16V
CQ22	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CQ23	24538104	PF, 0.1 $\mu$ F
CQ24	24538104	PF, 0.1 $\mu$ F
CQ25	24797100	EL, 10 $\mu$ F, $\pm$ 20%, 50V
CQ26	24538104	PF, 0.1 $\mu$ F
CQ27	24538104	PF, 0.1 $\mu$ F
CQ28	24797478	EL, 0.47 $\mu$ F, $\pm$ 20%, 50V
CQ29	24794101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CQ30	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CQ31	24797478	EL, 0.47 $\mu$ F, $\pm$ 20%, 50V
CQ32	24590103	PF, 0.01 $\mu$ F
CQ33	24538104	PF, 0.1 $\mu$ F
CQ34	24538104	PF, 0.1 $\mu$ F
CQ35	24206478	EL, 0.47 $\mu$ F, 50V
CQ36	24206478	EL, 0.47 $\mu$ F, 50V
CQ37	24797010	EL, 1 $\mu$ F, $\pm$ 20%, 50V
CQ38	24797010	EL, 1 $\mu$ F, $\pm$ 20%, 50V
CQ39	24797010	EL, 1 $\mu$ F, $\pm$ 20%, 50V
CQ40	24436910	CD, 91pF (28MW7DG)
CQ45	24212102	CD, 1000pF (28MW7DG)
CQ46	24212102	CD, 1000pF (28MW7DG)
CQ60	24797229	EL, 2.2 $\mu$ F, $\pm$ 20%, 50V (28MW7DB)
CR12	24538104	PF, 0.1 $\mu$ F
CR13	24538104	PF, 0.1 $\mu$ F
CR14	24538104	PF, 0.1 $\mu$ F
CR21	24232103	CD, 0.01 $\mu$ F, +80%, -20%

Location No.	Part No.	Description
CR22	24203470	EL, 47 $\mu$ F, $\pm$ 20%, 16V
CR23	24794101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CR24	24794101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CR25	24794101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CR26	24590223	PF, 0.022 $\mu$ F
CR27	24590223	PF, 0.022 $\mu$ F
CR28	24590223	PF, 0.022 $\mu$ F
CR29	24794100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CR30	24591223	PF, 0.022 $\mu$ F
CR31	24797229	EL, 2.2 $\mu$ F, $\pm$ 20%, 50V
CR32	24591223	PF, 0.022 $\mu$ F
CR33	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CR35	24794331	EL, 330 $\mu$ F, $\pm$ 20%, 16V
CR36	24092398	CD, 0.1 $\mu$ F, +80%, -20%
CR40	24794470	EL, 47 $\mu$ F, $\pm$ 20%, 16V
CR41	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CR42	24794101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CR43	24794101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CR44	24794101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CS01	24085944	EL, 2.2 $\mu$ F, $\pm$ 20%, 50V, NP
CS02	24085944	EL, 2.2 $\mu$ F, $\pm$ 20%, 50V, NP
CS03	24206229	EL, 2.2 $\mu$ F, 50V
CS04	24206229	EL, 2.2 $\mu$ F, 50V
CS05	24206229	EL, 2.2 $\mu$ F, 50V
CS06	24206229	EL, 2.2 $\mu$ F, 50V
CS07	24206229	EL, 2.2 $\mu$ F, 50V
CS08	24206229	EL, 2.2 $\mu$ F, 50V
CS09	24206010	EL, 1 $\mu$ F, 50V
CS12	24474102	CD, 1000pF, $\pm$ 10%
CS13	24474102	CD, 1000pF, $\pm$ 10%
CS14	24206100	EL, 10 $\mu$ F, 50V
CS15	24206100	EL, 10 $\mu$ F, 50V
CS17	24203100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CS18	24203100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CS19	24206478	EL, 0.47 $\mu$ F, 50V
CS22	24666100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CS23	24666100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CV01	24590103	PF, 0.01 $\mu$ F
CV02	24085970	EL, 10 $\mu$ F, $\pm$ 20%, 16V, NP
CV03	24666100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CV04	24666100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CV05	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CV06	24666100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CV07	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CV08	24763102	EL, 1000 $\mu$ F, $\pm$ 20%, 16V
CV09	24666100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CV10	24085970	EL, 10 $\mu$ F, $\pm$ 20%, 16V, NP
CV11	24436331	CD, 330pF
CV12	24092398	CD, 0.1 $\mu$ F, +80%, -20%
CV13	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CV14	24474102	CD, 1000pF, $\pm$ 10%
CV15	24474102	CD, 1000pF, $\pm$ 10%
CV16	24474102	CD, 1000pF, $\pm$ 10%
CV17	24474102	CD, 1000pF, $\pm$ 10%
CV18	24474102	CD, 1000pF, $\pm$ 10%
CV19	24474102	CD, 1000pF, $\pm$ 10%
CV20	24353330	CD, 33pF
CV23	24666101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CV24	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CV25	24763471	EL, 470 $\mu$ F, $\pm$ 20%, 16V
CV34	24474102	CD, 1000pF, $\pm$ 10%
CV35	24212102	CD, 1000pF, $\pm$ 10%
CV37	24474102	CD, 1000pF, $\pm$ 10%
CV39	24666101	EL, 100 $\mu$ F, $\pm$ 20%, 16V

Location No.	Part No.	Description
CV40	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CV42	24085944	EL, 2.2 $\mu$ F, $\pm$ 20%, 50V, NP
CV46	24212332	CD, 3300pF, $\pm$ 10%
CV47	24212332	CD, 3300pF, $\pm$ 10%
CV48	24212102	CD, 1000pF, $\pm$ 10%
CV65	24666101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CV66	24666101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CV67	24763471	EL, 470 $\mu$ F, $\pm$ 20%, 16V
CV68	24763471	EL, 470 $\mu$ F, $\pm$ 20%, 16V
CV77	24666100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CV80	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CX102	24085939	EL, 4.7 $\mu$ F, $\pm$ 20%, 25V, NP
CX103	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX104	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX105	24105330	Chip, 33pF
CX106	24105680	Chip, 68pF
CX107	24105330	Chip, 33pF
CX108	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX109	24085945	EL, 2.2 $\mu$ F, $\pm$ 20%, 50V, NP
CX110	24665471	EL, 470 $\mu$ F, $\pm$ 20%, 10V
CX111	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX112	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX113	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX114	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX115	24203470	EL, 47 $\mu$ F, $\pm$ 20%, 16V
CX116	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX117	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX118	24794101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CX119	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX120	24105470	Chip, 47pF
CX125	24105101	Chip, 100pF
CX126	24105271	Chip, 270pF
CX127	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX128	24085971	EL 3.3 $\mu$ F, $\pm$ 20%, 50V, NP
CX129	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX130	24794101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CX131	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX132	24794101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CX133	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX134	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX136	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX137	24665101	EL, 100 $\mu$ F, $\pm$ 20%, 10V
CX138	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX139	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX140	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX141	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX146	24105470	Chip, 47pF
CX147	24105101	Chip, 100pF
CX148	24105271	Chip, 270pF
CX149	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX150	24085971	EL 3.3 $\mu$ F, $\pm$ 20%, 50V, NP
CX151	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX152	24203470	EL, 47 $\mu$ F, $\pm$ 20%, 16V
CX153	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX154	24794101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CX155	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX156	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX157	24105150	Chip, 15pF
CX158	24105330	Chip, 33pF
CX201	24203470	EL, 47 $\mu$ F, $\pm$ 20%, 16V
CX202	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX203	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX204	24203220	EL, 22 $\mu$ F, $\pm$ 20%, 16V
CX205	24665101	EL, 100 $\mu$ F, $\pm$ 20%, 10V

Location No.	Part No.	Description
CX206	24203101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CX207	24665101	EL, 100 $\mu$ F, $\pm$ 20%, 10V
CX208	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX209	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX210	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX211	24203100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CX212	24665101	EL, 100 $\mu$ F, $\pm$ 20%, 10V
CX220	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX221	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX222	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX223	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX224	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX226	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX227	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX228	24092441	Chip, 1 $\mu$ F, +80%, -20%, 16V
CX229	24092441	Chip, 1 $\mu$ F, +80%, -20%, 16V
CX230	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX232	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX233	24762102	EL, 1000 $\mu$ F, $\pm$ 20%, 10V
CX234	24762102	EL, 1000 $\mu$ F, $\pm$ 20%, 10V
CX242	24105330	Chip, 33pF
CX301	24665101	EL, 100 $\mu$ F, $\pm$ 20%, 10V
CX302	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX303	24665101	EL, 100 $\mu$ F, $\pm$ 20%, 10V
CX304	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX305	24092441	Chip, 1 $\mu$ F, +80%, -20%, 16V
CX306	24105330	Chip, 33pF
CX307	24105330	Chip, 33pF
CX308	24105101	Chip, 100pF
CX309	24105680	Chip, 68pF
CX310	24105101	Chip, 100pF
CX311	24105680	Chip, 68pF
CX312	24105100	Chip, 10pF
CX312	24105100	Chip, 10pF
CX313	24105100	Chip, 10pF
CX313	24105100	Chip, 10pF
CX314	24105100	Chip, 10pF
CX314	24105100	Chip, 10pF
CX400	24108221	Chip, 220pF
CX401	24108330	Chip, 33pF
CX402	24108330	Chip, 33pF
CX403	24108221	Chip, 220pF
CX404	24108221	Chip, 220pF
CX405	24108221	Chip, 220pF
CX406	24108221	Chip, 220pF
CX407	24108331	Chip, 330pF
CX408	24108221	Chip, 220pF
CX409	24105120	Chip, 12pF
CX410	24105220	Chip, 22pF
CX411	24105220	Chip, 22pF
CX412	24105220	Chip, 22pF
CX413	24105220	Chip, 22pF
CX414	24105220	Chip, 22pF
CX415	24108221	Chip, 220pF
CX801	24763471	EL, 470 $\mu$ F, $\pm$ 20%, 16V
CX802	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX803	24665471	EL, 470 $\mu$ F, $\pm$ 20%, 10V
CX804	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX805	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CX806	24092399	Chip, 0.1 $\mu$ F, +80%, -20%, 16V
CZ08	24203100	EL, 10 $\mu$ F, $\pm$ 20%, 16V
CZ09	24436220	CD, 22pF
CZ10	24473180	CD, 18pF
CZ11	24473100	CD, 10pF

SPECIFIC INFORMATIONS

Location No.	Part No.	Description
CZ12	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CZ13	24092398	CD, 0.1 $\mu$ F, +80%, -20%
CZ14	24617816	EL, 10 $\mu$ F, $\pm$ 20%, 50V
CZ15	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CZ16	24206478	EL, 0.47 $\mu$ F, 50V
CZ17	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CZ19	24436181	CD, 180pF
CZ20	24538103	PF, 0.01 $\mu$ F
CZ21	24436390	CD, 39pF
CZ22	24617816	EL, 10 $\mu$ F, $\pm$ 20%, 50V
CZ23	24092398	CD, 0.1 $\mu$ F, +80%, -20%
CZ24	24092398	CD, 0.1 $\mu$ F, +80%, -20%
CZ25	24203101	EL, 100 $\mu$ F, $\pm$ 20%, 16V
CZ26	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CZ28	24232103	CD, 0.01 $\mu$ F, +80%, -20%
CZ29	24092398	CD, 0.1 $\mu$ F, +80%, -20%
CZ30	24617816	EL, 10 $\mu$ F, $\pm$ 20%, 50V
CZ32	24436120	CD, 12pF
CZ33	24436120	CD, 12pF
CZ34	24473120	CD, 12pF
CZ35	24473120	CD, 12pF
CZ37	24092398	CD, 0.1 $\mu$ F, +80%, -20%
CZ38	24092398	CD, 0.1 $\mu$ F, +80%, -20%
CZ45	24436100	CD, 10pF, $\pm$ 0.25pF
CZ48	24203470	EL, 47 $\mu$ F, $\pm$ 20%, 16V

**RESISTORS**

R001J	24000576	Chip, Jumper, 3216 type
R002J	24000824	Chip, Jumper, 2125 type
R003J	24000824	Chip, Jumper, 2125 type
R004J	24000824	Chip, Jumper, 2125 type
R005J	24000824	Chip, Jumper, 2125 type
R006J	24000576	Chip, Jumper, 3216 type
R007J	24000576	Chip, Jumper, 3216 type
R008J	24000576	Chip, Jumper, 3216 type
R009J	24000576	Chip, Jumper, 3216 type
R010J	24000576	Chip, Jumper, 3216 type
R011J	24000576	Chip, Jumper, 3216 type
R012J	24000576	Chip, Jumper, 3216 type
R013J	24000576	Chip, Jumper, 3216 type
R014J	24000576	Chip, Jumper, 3216 type
R017J	24000576	Chip, Jumper, 3216 type
R018J	24000576	Chip, Jumper, 3216 type
R019J	24000576	Chip, Jumper, 3216 type
R020J	24000576	Chip, Jumper, 3216 type
R021J	24000824	Chip, Jumper, 2125 type
R022J	24000576	Chip, Jumper, 3216 type
R023J	24000576	Chip, Jumper, 3216 type
R024J	24000824	Chip, Jumper, 2125 type
R025J	24000824	Chip, Jumper, 2125 type
R026J	24000824	Chip, Jumper, 2125 type
R027J	24000576	Chip, Jumper, 3216 type
R028J	24000576	Chip, Jumper, 3216 type
R029J	24000824	Chip, Jumper, 2125 type
R030J	24000824	Chip, Jumper, 2125 type
R031J	24000824	Chip, Jumper, 2125 type
R032J	24000576	Chip, Jumper, 3216 type
R033J	24000576	Chip, Jumper, 3216 type
R034J	24000576	Chip, Jumper, 3216 type
R035J	24000824	Chip, Jumper, 2125 type
R101	24382223	OMF, 22k ohm, 1W
R201	24366681	CF, 680 ohm
R202	24366821	CF, 820 ohm
R204	24366104	CF, 100k ohm

Location No.	Part No.	Description
R205	24366101	CF, 100 ohm
R206	24366222	CF, 2200 ohm
R207	24366101	CF, 100 ohm
R208	24366103	CF, 10k ohm
R208	24366101	CF, 100 ohm
R209	24366103	CF, 10k ohm
R209	24366101	CF, 100 ohm
R211	24366563	CF, 56k ohm
R212	24366472	CF, 4700 ohm
R213	24366472	CF, 4700 ohm
R214	24366222	CF, 2200 ohm
R215	24366102	CF, 1k ohm
R216	24366103	CF, 10k ohm
R217	24366332	CF, 3300 ohm
R217	24366101	CF, 100 ohm
R218	24366513	CF, 51k ohm
R220	24366102	CF, 1k ohm
R221	24366102	CF, 1k ohm
R223	24366102	CF, 1k ohm
R226	24366101	CF, 100 ohm
R227	24367223	CF, 22k ohm, $\pm$ 2%
R229	24366472	CF, 4700 ohm
R231	24366100	CF, 10 ohm
R232	24366103	CF, 10k ohm
R233	24366104	CF, 100k ohm
R234	24366271	CF, 270 ohm
R235	24366472	CF, 4700 ohm
R236	24366102	CF, 1k ohm
R237	24366103	CF, 10k ohm
R299	24366103	CF, 10k ohm
R303	24321109	MF, 1 ohm, 1/2W
R304	24366153	CF, 15k ohm
R305	24322159	OMF, 1.5 ohm, 1W
R306	24366222	CF, 2200 ohm
R307	24366621	CF, 620 ohm
R308	24366472	CF, 4700 ohm
R309	24366303	CF, 30k ohm
R310	24366102	CF, 1k ohm
R311	24366472	CF, 4700 ohm
R312	24366103	CF, 10k ohm
R313	24366243	CF, 24k ohm
R317	24366472	CF, 4700 ohm
R321	24366183	CF, 18k ohm
R322	24366102	CF, 1k ohm
R323	24366103	CF, 10k ohm
R324	24366681	CF, 680 ohm
R325	24366103	CF, 10k ohm
R325	24366103	CF, 10k ohm
R327	24339159	MF, 1.5 ohm, 2W
R328	24366471	CF, 470 ohm
R330	24366123	CF, 12k ohm
R336	24383391	OMF, 390 ohm, 2W
R344	24383331	OMF, 330 ohm, 2W
R360	24366103	CF, 10k ohm
R370	24322129	MF, 1.2 ohm, 1W
R371	24366562	CF, 5600 ohm
R372	24366392	CF, 3900 ohm
R373	24366182	CF, 1800 ohm
R374	24366153	CF, 15k ohm
R380	24366103	CF, 10k ohm
R381	24366103	CF, 10k ohm
R382	24366302	CF, 3k ohm
R383	24366272	CF, 2700 ohm
R384	24366102	CF, 1k ohm



Location No.	Part No.	Description
R387	24382121	OMF, 120 ohm, 1W
R388	24382121	OMF, 120 ohm, 1W
R389	24383121	OMF, 120 ohm, 2W
R397	24382121	OMF, 120 ohm, 1W
R398	24382121	OMF, 120 ohm, 1W
R399	24366684	CF, 680k ohm
R401	24366391	CF, 390 ohm
R402	24366103	CF, 10k ohm
R402	24366103	CF, 10k ohm
R403	24366242	CF, 2400 ohm
R405	24553682	OMF, 6800 ohm, 1W
R407	24366103	CF, 10k ohm
R411	24366560	CF, 56 ohm
R415	24553561	OMF, 560 ohm, 1W
R416	24381563	OMF, 56k ohm, 1/2W
R417	24510101	Cement, 100 ohm, 5W
R422	24366101	CF, 100 ohm
R424	24366152	CF, 1500 ohm
R425	24366182	CF, 1800 ohm
R426	24366202	CF, 2k ohm
R427	24366392	CF, 3900 ohm
R428	24366561	CF, 560 ohm
R429	24552560	OMF, 56 ohm, 1/2W
R435	24366184	CF, 180k ohm
R436	24366101	CF, 100 ohm
R437	24366471	CF, 470 ohm
R438	24552102	OMF, 1k ohm, 1/2W
R441	24383561	OMF, 560 ohm, 2W
R443	24381150	OMF, 15 ohm, 1/2W
R451	24061546	VR, 100 ohm, 3W
R460	24552332	OMF, 3300 ohm, 1/2W
R461	24552182	OMF, 1800 ohm, 1/2W
R463	24323229	MF, 2.2 ohm, 2W
R464	24366273	CF, 27k ohm
R465	24366101	CF, 100 ohm
R466	24366562	CF, 5600 ohm
R467	24327224	MF, 220k ohm, $\pm 1\%$ , 1/4W
R468	24366163	CF, 16k ohm
R469	24531150	FR, 15 ohm, 1/2W
R470	24339568	OMF, 0.56 ohm, 2W
R471	24531271	FR, 270 ohm, 1/2W
R473	24366473	CF, 47k ohm
R474	24366473	CF, 47k ohm
R478	24381333	OMF, 33k ohm, 1/2W
R479	24531680	FR, 68 ohm, 1/2W
R481	24366223	CF, 22k ohm
R482	24366103	CF, 10k ohm
R487	24366474	CF, 470k ohm
R488	24366154	CF, 150k ohm
R490	24366101	CF, 100 ohm
R491	24366101	CF, 100 ohm
R492	24366272	CF, 2700 ohm
R501	24366223	CF, 22k ohm
R502	24366101	CF, 100 ohm
R503	24366101	CF, 100 ohm
R505	24366102	CF, 1k ohm
R506	24366103	CF, 10k ohm
R508	24366102	CF, 1k ohm
R509	24366102	CF, 1k ohm
R510	24366102	CF, 1k ohm
R511	24366101	CF, 100 ohm
R512	24366101	CF, 100 ohm
R513	24366472	CF, 4700 ohm
R514	24366472	CF, 4700 ohm

Location No.	Part No.	Description
R515	24366472	CF, 4700 ohm
R518	24366472	CF, 4700 ohm
R519	24366101	CF, 100 ohm
R520	24366103	CF, 10k ohm
R521	24366223	CF, 22k ohm
R522	24366473	CF, 47k ohm
R609	24366563	CF, 56k ohm
R610	24366103	CF, 10k ohm
R611	24366103	CF, 10k ohm
R612	24366103	CF, 10k ohm
R630	24366102	CF, 1k ohm
R631	24366562	CF, 5600 ohm
R632	24366223	CF, 22k ohm
R633	24366223	CF, 22k ohm
R634	24366229	CF, 2.2 ohm
R640	24366102	CF, 1k ohm
R641	24366392	CF, 3900 ohm
R642	24366222	CF, 2200 ohm
R643	24366562	CF, 5600 ohm
R644	24366473	CF, 47k ohm
R645	24366229	CF, 2.2 ohm
R646	24366223	CF, 22k ohm
R648	24366229	CF, 2.2 ohm
R661	24510159	Cement, 1.5 ohm, 5W
R661	24552221	OMF, 220 ohm, 1/2W
R662	24552221	OMF, 220 ohm, 1/2W
R670	24366272	CF, 2700 ohm
R671	24366102	CF, 1k ohm
R671	24366392	CF, 3900 ohm
R672	24366102	CF, 1k ohm
R672	24366272	CF, 2700 ohm
R673	24366102	CF, 1k ohm
R673	24366392	CF, 3900 ohm
R674	24366332	CF, 3300 ohm
R675	24366272	CF, 2700 ohm
R675	24366102	CF, 1k ohm
R676	24366223	CF, 22k ohm
R676	24366223	CF, 22k ohm
R677	24366223	CF, 22k ohm
R677	24366223	CF, 22k ohm
R677	24366223	CF, 22k ohm
R678	24366223	CF, 22k ohm
R678	24366223	CF, 22k ohm
R680	24366223	CF, 22k ohm
R680	24366473	CF, 47k ohm
R681	24366223	CF, 22k ohm
R682	24366104	CF, 100k ohm
R683	24366273	CF, 27k ohm
R684	24366229	CF, 2.2 ohm
R685	24366229	CF, 2.2 ohm
R686	24366229	CF, 2.2 ohm
R687	24366222	CF, 2200 ohm
R688	24366222	CF, 2200 ohm
R689	24366104	CF, 100k ohm
R690	24366681	CF, 680 ohm
R691	24366681	CF, 680 ohm
R692	24366681	CF, 680 ohm
R693	24366681	CF, 680 ohm
R702	24552221	OMF, 220 ohm, 1/2W
R712	24366101	CF, 100 ohm
R715	24366223	CF, 22k ohm
R716	24366273	CF, 27k ohm
R717	24366333	CF, 33k ohm
R718	24366102	CF, 1k ohm
R722	24552471	OMF, 470 ohm, 1/2W

SPECIFIC INFORMATION

Location No.	Part No.	Description
R723	24366151	CF, 150 ohm
R724	24366680	CF, 68 ohm
R725	24366182	CF, 1800 ohm
R730	24552100	OMF, 10 ohm, 1/2W
R731	24553331	OMF, 330 ohm, 1W
R732	24366220	CF, 22 ohm
R733	24366683	CF, 68k ohm
R734	24366220	CF, 22 ohm
R735	24366683	CF, 68k ohm
R736	24366560	CF, 56 ohm
R737	24366152	CF, 1500 ohm
R738	24366123	CF, 12k ohm
R739	24366152	CF, 1500 ohm
R740	24366560	CF, 56 ohm
R741	24366279	CF, 2.7 ohm
R742	24366279	CF, 2.7 ohm
R743	24554101	OMF, 100 ohm, 2W
R744	24366122	CF, 1200 ohm
R745	24366122	CF, 1200 ohm
△ R801	24009954	Metal-Glazed Resistor, 2.2M ohm, 1/2W
R802	24321568	MF, 0.56 ohm, 1/2W
R803	24382683	OMF, 68k ohm, 1W
R805	24552101	OMF, 100 ohm, 1/2W
R806	24552392	OMF, 3900 ohm, 1/2W
R808	24019340	PTC Thermistor, 18 ohm, 290V
R810	24007864	Cement, 3 ohm, 15W
R811	24568271	Cement, 270 ohm, 7W
R813	24322278	MF, 0.27 ohm, 1W
R814	24366122	CF, 1200 ohm
R815	24552102	OMF, 1k ohm, 1/2W
R816	24323689	MF, 6.8 ohm, 2W
R818	24322278	MF, 0.27 ohm, 1W
R819	24321209	MF, 2 ohm, 1/2W
R821	24366101	CF, 100 ohm
R822	24552103	OMF, 10k ohm, 1/2W
R823	24366272	CF, 2700 ohm
R824	24569101	Cement, 100 ohm, 10W
R825	24569100	Cement, 10 ohm, 10W
R827	24366681	CF, 680 ohm
R828	24366821	CF, 820 ohm
R829	24322278	MF, 0.27 ohm, 1W
R831	24366471	CF, 470 ohm
R832	24366472	CF, 4700 ohm
R833	24366222	CF, 2200 ohm
R841	24531120	FR, 12 ohm, 1/2W
R842	24552392	OMF, 3900 ohm, 1/2W
R846	24366561	CF, 560 ohm
R847	24366472	CF, 4700 ohm
R849	24366471	CF, 470 ohm
R890	24553333	OMF, 33k ohm, 1W
△ R899	24005007	Metal-Glazed Resistor, 8.2M ohm, 1W
R901	24376821	CF, 820 ohm, 1/2W
R902	24376821	CF, 820 ohm, 1/2W
R903	24376821	CF, 820 ohm, 1/2W
R904	24366472	CF, 4700 ohm
R905	24366150	CF, 15 ohm
R906	24366102	CF, 1k ohm
R907	24366102	CF, 1k ohm
R908	24366102	CF, 1k ohm
R909	24366222	CF, 2200 ohm
R914	24366101	CF, 100 ohm

Location No.	Part No.	Description
R915	24366101	CF, 100 ohm
R916	24366330	CF, 33 ohm
R917	24366181	CF, 180 ohm
R918	24366100	CF, 10 ohm
R920	24000880	FR, 5.1 ohm, 1W
R921	24366101	CF, 100 ohm
R922	24366101	CF, 100 ohm
R924	24366100	CF, 10 ohm
R925	24366181	CF, 180 ohm
R928	24366101	CF, 100 ohm
R929	24366101	CF, 100 ohm
R930	24366100	CF, 10 ohm
R932	24366332	CF, 3300 ohm
R933	24366750	CF, 75 ohm
R934	24366391	CF, 390 ohm
R935	24366821	CF, 820 ohm
R936	24366750	CF, 75 ohm
R937	24366181	CF, 180 ohm
R939	24366101	CF, 100 ohm
R942	24366392	CF, 3900 ohm
R943	24366392	CF, 3900 ohm
R944	24366392	CF, 3900 ohm
R945	24366330	CF, 33 ohm
R946	24366330	CF, 33 ohm
R960	24383153	OMF, 15k ohm, 2W
R961	24383153	OMF, 15k ohm, 2W
R962	24383153	OMF, 15k ohm, 2W
R963	24383153	OMF, 15k ohm, 2W
R964	24383153	OMF, 15k ohm, 2W
R965	24383153	OMF, 15k ohm, 2W
R966	24383153	OMF, 15k ohm, 2W
R967	24383153	OMF, 15k ohm, 2W
R968	24383153	OMF, 15k ohm, 2W
R969	24366101	CF, 100 ohm
R970	24366101	CF, 100 ohm
R971	24366101	CF, 100 ohm
R977	24366681	CF, 680 ohm
R980	24366471	CF, 470 ohm
R981	24366821	CF, 820 ohm
R982	24366103	CF, 10k ohm
R983	24366222	CF, 2200 ohm
R984	24366152	CF, 1500 ohm
R985	24366471	CF, 470 ohm
R986	24366681	CF, 680 ohm
R987	24366681	CF, 680 ohm
R988	24366472	CF, 4700 ohm
R989	24366332	CF, 3300 ohm
R990	24366222	CF, 2200 ohm
R991	24366681	CF, 680 ohm
R992	24366150	CF, 15 ohm
R4034	24366332	CF, 3300 ohm
R4301	24366222	CF, 2200 ohm
R4302	24366103	CF, 10k ohm
R4303	24019090	MF, 330k ohm, 1/4W
R4305	24366331	CF, 330 ohm
R4306	24366472	CF, 4700 ohm
R4350	24066873	VR, 100k ohm, 0.3W
R4371	24366684	CF, 680k ohm
R4372	24366153	CF, 15k ohm
R4373	24366101	CF, 100 ohm
R4374	24366101	CF, 100 ohm
R4375	24366101	CF, 100 ohm
R4378	24366154	CF, 150k ohm
R4379	24366104	CF, 100k ohm

Location No.	Part No.	Description
R4380	24366114	CF, 110k ohm
R4381	24366822	CF, 8200 ohm
R4382	24366153	CF, 15k ohm
R4383	24366105	CF, 1M ohm
R4384	24552222	OMF, 2200 ohm, 1/2W
R4401	24366103	CF, 10k ohm
R4402	24366222	CF, 2200 ohm
R4403	24000639	MF, 22k ohm, 1/4W
R4404	24000364	MF, 1800 ohm, 1/4W
R4405	24000247	MF, 39k ohm, 1/4W
R4406	24000220	MF, 390 ohm, 1/4W
R4408	24000637	MF, 15k ohm, ±1%, 1/4W
R4409	24000361	MF, 1300 ohm, 1/4W
R4410	24552470	OMF, 47 ohm, 1/2W
R4411	24366472	CF, 4700 ohm
R4412	24366103	CF, 10k ohm
R4413	24366132	CF, 1300 ohm
R4420	24000639	MF, 22k ohm, 1/4W
R4421	24366103	CF, 10k ohm
R4422	24366473	CF, 47k ohm
R4423	24366223	CF, 22k ohm
R4450	24066878	VR, 2k ohm, 0.3W
R4490	24382222	OMF, 2200 ohm, 1W
R4491	24366392	CF, 3900 ohm
R4492	24366103	CF, 10k ohm
R4493	24382104	OMF, 100k ohm, 1W
RA04	24366102	CF, 1k ohm
RA05	24366102	CF, 1k ohm
RA07	24366102	CF, 1k ohm
RA08	24366102	CF, 1k ohm
RA09	24366102	CF, 1k ohm
RA10	24366102	CF, 1k ohm
RA11	24366102	CF, 1k ohm
RA12	24366473	CF, 47k ohm
RA13	24366153	CF, 15k ohm
RA16	24366102	CF, 1k ohm
RA17	24366102	CF, 1k ohm
RA18	24366102	CF, 1k ohm
RA27	24366102	CF, 1k ohm
RA33	24366102	CF, 1k ohm
RA35	24366102	CF, 1k ohm
RA36	24366472	CF, 4700 ohm
RA37	24366101	CF, 100 ohm
RA38	24366101	CF, 100 ohm
RA61	24366103	CF, 10k ohm
RA62	24366103	CF, 10k ohm
RA63	24366103	CF, 10k ohm
RA64	24366103	CF, 10k ohm
RA69	24366470	CF, 47 ohm
RA70	24366333	CF, 33k ohm
RA71	24366683	CF, 68k ohm
RA72	24366223	CF, 22k ohm
RA73	24366103	CF, 10k ohm
RA74	24366103	CF, 10k ohm
RA75	24366333	CF, 33k ohm
RA76	24366103	CF, 10k ohm
RA77	24366472	CF, 4700 ohm
RA78	24366472	CF, 4700 ohm
RA79	24366103	CF, 10k ohm
RB01	24366271	CF, 270 ohm
RB02	24366271	CF, 270 ohm
RB09	24366470	CF, 47 ohm
RB10	24366101	CF, 100 ohm
RB11	24366103	CF, 10k ohm

Location No.	Part No.	Description
RB30	24366103	CF, 10k ohm
RB40	24366103	CF, 10k ohm
RB41	24366182	CF, 1800 ohm
RB42	24366102	CF, 1k ohm
RB43	24366103	CF, 10k ohm
RB44	24366103	CF, 10k ohm
RB45	24366101	CF, 100 ohm
RB81	24366122	CF, 1200 ohm
RB82	24366123	CF, 12k ohm
RB83	24366123	CF, 12k ohm
RB84	24366562	CF, 5600 ohm
RB90	24366392	CF, 3900 ohm
RB91	24366473	CF, 47k ohm
RB92	24366271	CF, 270 ohm
RB93	24366271	CF, 270 ohm
RB94	24366222	CF, 2200 ohm
RB95	24366222	CF, 2200 ohm
RB96	24366273	CF, 27k ohm
RB97	24366273	CF, 27k ohm
RB98	24366102	CF, 1k ohm
RD01	24872101	Chip, 100 ohm, 1/16W
RD03	24871101	Chip, 100 ohm, 1/8W
RD04	24871101	Chip, 100 ohm, 1/8W
RD05	24872101	Chip, 100 ohm, 1/16W
RD06	24872101	Chip, 100 ohm, 1/16W
RD09	24872101	Chip, 100 ohm, 1/16W
RD10	24872101	Chip, 100 ohm, 1/16W
RD11	24872222	Chip, 2200 ohm, 1/16W
RD12	24872103	Chip, 10k ohm, 1/16W
RD13	24872472	Chip, 4700 ohm, 1/16W
RD21	24872221	Chip, 220 ohm, 1/16W
RD22	24872273	Chip, 27k ohm, 1/16W
RD23	24872221	Chip, 220 ohm, 1/16W
RD24	24872273	Chip, 27k ohm, 1/16W
RD27	24872101	Chip, 100 ohm, 1/16W
RD28	24872101	Chip, 100 ohm, 1/16W
RD29	24872101	Chip, 100 ohm, 1/16W
RD30	24872223	Chip, 22k ohm, 1/16W
RD31	24872223	Chip, 22k ohm, 1/16W
RD32	24872223	Chip, 22k ohm, 1/16W
RD33	24872101	Chip, 100 ohm, 1/16W
RD34	24872102	Chip, 1k ohm, 1/16W
RD35	24872102	Chip, 1k ohm, 1/16W
RD36	24872101	Chip, 100 ohm, 1/16W
RD39	24872101	Chip, 100 ohm, 1/16W
RD40	24872101	Chip, 100 ohm, 1/16W
RD41	24872223	Chip, 22k ohm, 1/16W
RD42	24872101	Chip, 100 ohm, 1/16W
RD43	24872101	Chip, 100 ohm, 1/16W
RD44	24872101	Chip, 100 ohm, 1/16W
RD51	24872221	Chip, 220 ohm, 1/16W
RD53	24872221	Chip, 220 ohm, 1/16W
RD61	24872221	Chip, 220 ohm, 1/16W
RD63	24872221	Chip, 220 ohm, 1/16W
RD71	24366100	CF, 10 ohm
RD75	24366100	CF, 10 ohm
RD79	24366100	CF, 10 ohm
RD81	24321109	MF, 1 ohm, 1/2W
RD82	24871151	Chip, 150 ohm, 1/8W
RD87	24872750	Chip, 75 ohm, 1/16W
RD88	24872222	Chip, 2200 ohm, 1/16W
RD89	24872151	Chip, 150 ohm, 1/16W
RD92	24872473	Chip, 47k ohm, 1/16W
RD93	24872222	Chip, 2200 ohm, 1/16W

SPECIFIC INFORMATIONS

**SPECIFIC INFORMATIONS**

Location No.	Part No.	Description
RD94	24872101	Chip, 100 ohm, 1/16W
RD101	24872331	Chip, 330 ohm, 1/16W
RD102	24872331	Chip, 330 ohm, 1/16W
RD103	24872331	Chip, 330 ohm, 1/16W
RD104	24872331	Chip, 330 ohm, 1/16W
RD105	24872472	Chip, 4700 ohm, 1/16W
RD106	24872472	Chip, 4700 ohm, 1/16W
RD107	24872472	Chip, 4700 ohm, 1/16W
RD108	24872472	Chip, 4700 ohm, 1/16W
RD109	24872472	Chip, 4700 ohm, 1/16W
RD110	24872472	Chip, 4700 ohm, 1/16W
RD111	24872101	Chip, 100 ohm, 1/16W
RD112	24872101	Chip, 100 ohm, 1/16W
RD113	24872472	Chip, 4700 ohm, 1/16W
RF01	24366222	CF, 2200 ohm
RF03	24366472	CF, 4700 ohm
RF04	24366472	CF, 4700 ohm
RF06	24366102	CF, 1k ohm
RF08	24366100	CF, 10 ohm
RF09	24366100	CF, 10 ohm
RF10	24366100	CF, 10 ohm
RF11	24366103	CF, 10k ohm
RF12	24366101	CF, 100 ohm
RF13	24366101	CF, 100 ohm
RF14	24366101	CF, 100 ohm
RF15	24366103	CF, 10k ohm
RF16	24366471	CF, 470 ohm
RF20	24366472	CF, 4700 ohm
RF21	24366561	CF, 560 ohm
RF22	24366561	CF, 560 ohm
RF26	24366102	CF, 1k ohm
RK01	24872153	Chip, 15k ohm, 1/16W
RK02	24872471	Chip, 470 ohm, 1/16W
RK03	24872333	Chip, 33k ohm, 1/16W
RK04	24872122	Chip, 1200 ohm, 1/16W
RK05	24872561	Chip, 560 ohm, 1/16W
RK06	24872822	Chip, 8200 ohm, 1/16W
RK07	24872273	Chip, 27k ohm, 1/16W
RK08	24872222	Chip, 2200 ohm, 1/16W
RK09	24872122	Chip, 1200 ohm, 1/16W
RK10	24872821	Chip, 820 ohm, 1/16W
RK11	24872222	Chip, 2200 ohm, 1/16W
RK12	24872222	Chip, 2200 ohm, 1/16W
RK13	24872222	Chip, 2200 ohm, 1/16W
RK14	24872332	Chip, 3300 ohm, 1/16W
RK15	24872222	Chip, 2200 ohm, 1/16W
RK16	24872471	Chip, 470 ohm, 1/16W
RK17	24000450	Chip, 100 ohm, $\pm 1\%$ , 1/16W
RK23	24872472	Chip, 4700 ohm, 1/16W
RK29	24871103	Chip, 10k ohm, 1/8W
RK30	24871103	Chip, 10k ohm, 1/8W
RK31	24871103	Chip, 10k ohm, 1/8W
RK32	24871103	Chip, 10k ohm, 1/8W
RK33	24871103	Chip, 10k ohm, 1/8W
RK34	24871103	Chip, 10k ohm, 1/8W
RK35	24871103	Chip, 10k ohm, 1/8W
RK38	24872103	Chip, 10k ohm, 1/16W
RK39	24872103	Chip, 10k ohm, 1/16W
RK40	24872103	Chip, 10k ohm, 1/16W
RK41	24872103	Chip, 10k ohm, 1/16W
RK43	24871102	Chip, 1k ohm, 1/8W
RK44	24872102	Chip, 1k ohm, 1/16W
RK45	24872102	Chip, 1k ohm, 1/16W
RK46	24872102	Chip, 1k ohm, 1/16W

Location No.	Part No.	Description
RK48	24871102	Chip, 1k ohm, 1/8W
RK49	24872102	Chip, 1k ohm, 1/16W
RK50	24871102	Chip, 1k ohm, 1/8W
RK51	24872472	Chip, 4700 ohm, 1/16W
RK52	24872472	Chip, 4700 ohm, 1/16W
RK53	24871102	Chip, 1k ohm, 1/8W
RK54	24871103	Chip, 10k ohm, 1/8W
RK55	24872101	Chip, 100 ohm, 1/16W
RK56	24872101	Chip, 100 ohm, 1/16W
RK60	24872103	Chip, 10k ohm, 1/16W
RK62	24872102	Chip, 1k ohm, 1/16W
RK63	24872222	Chip, 2200 ohm, 1/16W
RK64	24872152	Chip, 1500 ohm, 1/16W
RK65	24872332	Chip, 3300 ohm, 1/16W
RK66	24872472	Chip, 4700 ohm, 1/16W
RK72	24872102	Chip, 1k ohm, 1/16W
RK74	24872102	Chip, 1k ohm, 1/16W
RK76	24872101	Chip, 100 ohm, 1/16W
RK77	24872101	Chip, 100 ohm, 1/16W
RK79	24872102	Chip, 1k ohm, 1/16W
RK80	24872223	Chip, 22k ohm, 1/16W
RK81	24872102	Chip, 1k ohm, 1/16W
RK82	24872683	Chip, 68k ohm, 1/16W
RK83	24872682	Chip, 6800 ohm, 1/16W
RK84	24872222	Chip, 2200 ohm, 1/16W
RK85	24872272	Chip, 2700 ohm, 1/16W
RK86	24872223	Chip, 22k ohm, 1/16W
RK87	24872682	Chip, 6800 ohm, 1/16W
RK91	24872122	Chip, 1200 ohm, 1/16W
RK92	24872101	Chip, 100 ohm, 1/16W
RK94	24871101	Chip, 100 ohm, 1/8W
RK98	24872101	Chip, 100 ohm, 1/16W
RK99	24872393	Chip, 39k ohm, 1/16W
RK100	24871222	Chip, 2200 ohm, 1/8W
RK101	24872103	Chip, 10k ohm, 1/16W
RK102	24872392	Chip, 3900 ohm, 1/16W
RK103	24872393	Chip, 39k ohm, 1/16W
RK104	24872392	Chip, 3900 ohm, 1/16W
RK105	24872122	Chip, 1200 ohm, 1/16W
RK106	24872103	Chip, 10k ohm, 1/16W
RK107	24872122	Chip, 1200 ohm, 1/16W
RK108	24872152	Chip, 1500 ohm, 1/16W
RK109	24872471	Chip, 470 ohm, 1/16W
RK110	24872471	Chip, 470 ohm, 1/16W
RK111	24872152	Chip, 1500 ohm, 1/16W
RK112	24872152	Chip, 1500 ohm, 1/16W
RK113	24871471	Chip, 470 ohm, 1/8W
RK114	24872471	Chip, 470 ohm, 1/16W
RK115	24872152	Chip, 1500 ohm, 1/16W
RK116	24872152	Chip, 1500 ohm, 1/16W
RK117	24872471	Chip, 470 ohm, 1/16W
RK118	24871152	Chip, 1500 ohm, 1/8W
RK119	24872393	Chip, 39k ohm, 1/16W
RK120	24871222	Chip, 2200 ohm, 1/8W
RK121	24872392	Chip, 3900 ohm, 1/16W
RK122	24872393	Chip, 39k ohm, 1/16W
RK123	24872392	Chip, 3900 ohm, 1/16W
RK124	24872122	Chip, 1200 ohm, 1/16W
RK125	24872103	Chip, 10k ohm, 1/16W
RK126	24872122	Chip, 1200 ohm, 1/16W
RK127	24872152	Chip, 1500 ohm, 1/16W
RK128	24871122	Chip, 1200 ohm, 1/8W
RK129	24871473	Chip, 47k ohm, 1/8W
RK130	24872102	Chip, 1k ohm, 1/16W

Location No.	Part No.	Description
RK131	24872473	Chip, 47k ohm, 1/16W
RK132	24872393	Chip, 39k ohm, 1/16W
RK133	24872562	Chip, 5600 ohm, 1/16W
RK134	24872471	Chip, 470 ohm, 1/16W
RK135	24872152	Chip, 1500 ohm, 1/16W
RK136	24872562	Chip, 5600 ohm, 1/16W
RK137	24872471	Chip, 470 ohm, 1/16W
RK138	24872392	Chip, 3900 ohm, 1/16W
RK139	24872103	Chip, 10k ohm, 1/16W
RK143	24872102	Chip, 1k ohm, 1/16W
RK144	24872473	Chip, 47k ohm, 1/16W
RK150	24872472	Chip, 4700 ohm, 1/16W
RK151	24872473	Chip, 47k ohm, 1/16W
RK156	24872101	Chip, 100 ohm, 1/16W
RK157	24872102	Chip, 1k ohm, 1/16W
RK158	24872102	Chip, 1k ohm, 1/16W
RK159	24872103	Chip, 10k ohm, 1/16W
RK160	24871103	Chip, 10k ohm, 1/8W
RK161	24871103	Chip, 10k ohm, 1/8W
RK162	24871102	Chip, 1k ohm, 1/8W
RK163	24872101	Chip, 100 ohm, 1/16W
RK164	24872101	Chip, 100 ohm, 1/16W
RK165	24871103	Chip, 10k ohm, 1/8W
RK179	24871223	Chip, 22k ohm, 1/8W
RK181	24872224	Chip, 220k ohm, 1/16W
RK182	24871102	Chip, 1k ohm, 1/8W
RK190	24366223	CF, 22k ohm
RK191	24366822	CF, 8200 ohm
RK192	24366332	CF, 3300 ohm
RK193	24366103	CF, 10k ohm
RK194	24366103	CF, 10k ohm
RK195	24366222	CF, 2200 ohm
RQ01	24366102	CF, 1k ohm (28MW7DG)
RQ03	24366102	CF, 1k ohm (28MW7DG)
RQ04	24366511	CF, 510 ohm (28MW7DG)
RQ05	24366471	CF, 470 ohm (28MW7DG)
RQ06	24366471	CF, 470 ohm (28MW7DG)
RQ07	24366103	CF, 10k ohm
RQ08	24366102	CF, 1k ohm
RQ09	24366102	CF, 1k ohm
RQ10	24366102	CF, 1k ohm
RQ11	24366561	CF, 560 ohm
RQ12	24366561	CF, 560 ohm
RQ13	24366203	CF, 20k ohm (28MW7DG)
RQ14	24366273	CF, 27k ohm (28MW7DG)
RQ20	24366563	CF, 56k ohm (28MW7DG)
RQ60	24366101	CF, 100 ohm (28MW7DB)
RQ61	24366103	CF, 10k ohm (28MW7DB)
RQ62	24366103	CF, 10k ohm (28MW7DB)
RQ63	24366103	CF, 10k ohm (28MW7DB)
RQ64	24366104	CF, 100k ohm (28MW7DB)
RR12	24366151	CF, 150 ohm
RR13	24366151	CF, 150 ohm
RR14	24366151	CF, 150 ohm
RR21	24366102	CF, 1k ohm
RR22	24366102	CF, 1k ohm
RR23	24366562	CF, 5600 ohm
RR24	24366332	CF, 3300 ohm
RR25	24366302	CF, 3k ohm
RR27	24366162	CF, 1600 ohm
RR29	24366101	CF, 100 ohm
RR30	24366101	CF, 100 ohm
RR33	24366101	CF, 100 ohm
RR34	24366102	CF, 1k ohm

Location No.	Part No.	Description
RR35	24366102	CF, 1k ohm
RR36	24366103	CF, 10k ohm
RR38	24366222	CF, 2200 ohm
RR39	24366222	CF, 2200 ohm
RR40	24366471	CF, 470 ohm
RR41	24366473	CF, 47k ohm
RR42	24366101	CF, 100 ohm
RR43	24366101	CF, 100 ohm
RR44	24366101	CF, 100 ohm
RR50	24366101	CF, 100 ohm
RR51	24366101	CF, 100 ohm
RR52	24366101	CF, 100 ohm
RR60	24366472	CF, 4700 ohm
RR61	24366392	CF, 3900 ohm
RR62	24366302	CF, 3k ohm
RR63	24366102	CF, 1k ohm
RR64	24366162	CF, 1600 ohm
RR65	24366102	CF, 1k ohm
RR66	24366101	CF, 100 ohm
RR67	24366101	CF, 100 ohm
RS01	24366681	CF, 680 ohm
RS02	24366681	CF, 680 ohm
RS03	24366101	CF, 100 ohm
RS04	24366101	CF, 100 ohm
RS05	24366472	CF, 4700 ohm
RS06	24366472	CF, 4700 ohm
RS07	24366472	CF, 4700 ohm
RS08	24366472	CF, 4700 ohm
RS09	24366472	CF, 4700 ohm
RS10	24366472	CF, 4700 ohm
RS11	24366101	CF, 100 ohm
RS13	24366101	CF, 100 ohm
RS14	24366101	CF, 100 ohm
RS15	24366104	CF, 100k ohm
RS16	24366104	CF, 100k ohm
RS17	24366223	CF, 22k ohm
RS18	24366223	CF, 22k ohm
RS19	24366102	CF, 1k ohm
RS20	24366102	CF, 1k ohm
RS21	24366222	CF, 2200 ohm
RS22	24366222	CF, 2200 ohm
RS23	24366101	CF, 100 ohm
RS24	24366101	CF, 100 ohm
RS27	24366104	CF, 100k ohm
RS28	24366104	CF, 100k ohm
RS29	24366223	CF, 22k ohm
RS30	24366223	CF, 22k ohm
RS31	24366103	CF, 10k ohm
RS32	24366104	CF, 100k ohm
RS35	24366223	CF, 22k ohm
RS36	24366223	CF, 22k ohm
RS37	24366104	CF, 100k ohm
RS38	24366104	CF, 100k ohm
RS43	24366681	CF, 680 ohm
RS44	24366681	CF, 680 ohm
RS45	24366681	CF, 680 ohm
RS46	24366681	CF, 680 ohm
RV01	24366101	CF, 100 ohm
RV02	24366101	CF, 100 ohm
RV03	24366101	CF, 100 ohm
RV04	24366101	CF, 100 ohm
RV05	24366101	CF, 100 ohm
RV06	24366101	CF, 100 ohm
RV07	24366162	CF, 1600 ohm

SPECIFIC INFORMATIONS

Location No.	Part No.	Description
RV08	24366162	CF, 1600 ohm
RV09	24366101	CF, 100 ohm
RV10	24366101	CF, 100 ohm
RV12	24366681	CF, 680 ohm
RV13	24366681	CF, 680 ohm
RV16	24366471	CF, 470 ohm
RV18	24366123	CF, 12k ohm
RV19	24366101	CF, 100 ohm
RV22	24366102	CF, 1k ohm
RV23	24552101	OMF, 100 ohm, 1/2W
RV25	24366101	CF, 100 ohm
RV26	24366181	CF, 180 ohm
RV27	24366750	CF, 75 ohm
RV28	24366683	CF, 68k ohm
RV29	24366273	CF, 27k ohm
RV30	24366750	CF, 75 ohm
RV32	24366750	CF, 75 ohm
RV33	24366123	CF, 12k ohm
RV34	24366123	CF, 12k ohm
RV35	24366103	CF, 10k ohm
RV36	24366101	CF, 100 ohm
RV38	24366750	CF, 75 ohm
RV40	24366471	CF, 470 ohm
RV41	24366104	CF, 100k ohm
RV42	24366471	CF, 470 ohm
RV43	24366471	CF, 470 ohm
RV44	24366471	CF, 470 ohm
RV45	24366100	CF, 10 ohm
RV46	24366112	CF, 1100 ohm
RV47	24366102	CF, 1k ohm
RV48	24366102	CF, 1k ohm
RV49	24366102	CF, 1k ohm
RV60	24366471	CF, 470 ohm
RV61	24552101	OMF, 100 ohm, 1/2W
RV62	24366101	CF, 100 ohm
RV63	24552820	OMF, 82 ohm, 1/2W
RV64	24366750	CF, 75 ohm
RV65	24552101	OMF, 100 ohm, 1/2W
RV66	24366101	CF, 100 ohm
RV67	24552820	OMF, 82 ohm, 1/2W
RV68	24366750	CF, 75 ohm
RV69	24366101	CF, 100 ohm
RV70	24366101	CF, 100 ohm
RV71	24366472	CF, 4700 ohm
RV75	24366332	CF, 3300 ohm
RV76	24366220	CF, 22 ohm
RV77	24366182	CF, 1800 ohm
RV78	24366221	CF, 220 ohm
RV79	24366680	CF, 68 ohm
RV80	24366102	CF, 1k ohm
RV81	24366472	CF, 4700 ohm
RV81	24366750	CF, 75 ohm
RV82	24366153	CF, 15k ohm
RV83	24366103	CF, 10k ohm
RV85	24366750	CF, 75 ohm
RV86	24366750	CF, 75 ohm
RV87	24366750	CF, 75 ohm
RV89	24366750	CF, 75 ohm
RV90	24366681	CF, 680 ohm
RV91	24366681	CF, 680 ohm
RV92	24366100	CF, 10 ohm
RV93	24366104	CF, 100k ohm
RV94	24366103	CF, 10k ohm
RV95	24366222	CF, 2200 ohm

Location No.	Part No.	Description
RV96	24366391	CF, 390 ohm
RV97	24366101	CF, 100 ohm
RV98	24366750	CF, 75 ohm
RX103	24871471	Chip, 470 ohm, 1/8W
RX104	24011105	Chip, 1M ohm, 1/20W
RX105	24011271	Chip, 270 ohm, 1/20W
RX106	24011102	Chip, 1k ohm, 1/20W
RX108	24011331	Chip, 330 ohm, 1/20W
RX109	24871221	Chip, 220 ohm, 1/8W
RX110	24011680	Chip, 68 ohm, 1/20W
RX111	24011561	Chip, 560 ohm, 1/20W
RX112	24871221	Chip, 220 ohm, 1/8W
RX120	24011470	Chip, 47 ohm, 1/20W
RX121	24011152	Chip, 1500 ohm, 1/20W
RX123	24011331	Chip, 330 ohm, 1/20W
RX125	24011102	Chip, 1k ohm, 1/20W
RX126	24871471	Chip, 470 ohm, 1/8W
RX127	24011471	Chip, 470 ohm, 1/20W
RX128	24871471	Chip, 470 ohm, 1/8W
RX136	24011470	Chip, 47 ohm, 1/20W
RX137	24011152	Chip, 1500 ohm, 1/20W
RX140	24011102	Chip, 1k ohm, 1/20W
RX141	24871471	Chip, 470 ohm, 1/8W
RX142	24011120	Chip, 12 ohm, 1/20W
RX143	24011561	Chip, 560 ohm, 1/20W
RX144	24871221	Chip, 220 ohm, 1/8W
RX145	24011331	Chip, 330 ohm, 1/20W
RX146	24011470	Chip, 47 ohm, 1/20W
RX201	24011103	Chip, 10k ohm, 1/20W
RX202	24011681	Chip, 680 ohm, 1/20W
RX203	24011151	Chip, 150 ohm, 1/20W
RX204	24011472	Chip, 4700 ohm, 1/20W
RX205	24011332	Chip, 3300 ohm, 1/20W
RX206	24011331	Chip, 330 ohm, 1/20W
RX207	24011102	Chip, 1k ohm, 1/20W
RX208	24011332	Chip, 3300 ohm, 1/20W
RX209	24011681	Chip, 680 ohm, 1/20W
RX223	24011220	Chip, 22 ohm, 1/20W
RX225	24011220	Chip, 22 ohm, 1/20W
RX230	24011220	Chip, 22 ohm, 1/20W
RX231	24011220	Chip, 22 ohm, 1/20W
RX301	24011151	Chip, 150 ohm, 1/20W
RX301	24011151	Chip, 150 ohm, 1/20W
RX302	24011102	Chip, 1k ohm, 1/20W
RX302	24011102	Chip, 1k ohm, 1/20W
RX303	24011220	Chip, 22 ohm, 1/20W
RX303	24011220	Chip, 22 ohm, 1/20W
RX304	24871331	Chip, 330 ohm, 1/8W
RX304	24871331	Chip, 330 ohm, 1/8W
RX305	24011221	Chip, 220 ohm, 1/20W
RX306	24011821	Chip, 820 ohm, 1/20W
RX307	24011220	Chip, 22 ohm, 1/20W
RX308	24871331	Chip, 330 ohm, 1/8W
RX309	24011221	Chip, 220 ohm, 1/20W
RX310	24011821	Chip, 820 ohm, 1/20W
RX311	24011220	Chip, 22 ohm, 1/20W
RX312	24871331	Chip, 330 ohm, 1/8W
RX313	24871331	Chip, 330 ohm, 1/8W
RX314	24871331	Chip, 330 ohm, 1/8W
RX315	24871471	Chip, 470 ohm, 1/8W
RX400	24011102	Chip, 1k ohm, 1/20W
RX401	24011471	Chip, 470 ohm, 1/20W
RX402	24011471	Chip, 470 ohm, 1/20W
RX403	24011471	Chip, 470 ohm, 1/20W

Location No.	Part No.	Description
RX404	24011102	Chip, 1k ohm, 1/20W
RX405	24011221	Chip, 220 ohm, 1/20W
RX406	24011221	Chip, 220 ohm, 1/20W
RX407	24011221	Chip, 220 ohm, 1/20W
RX408	24011221	Chip, 220 ohm, 1/20W
RX409	24011221	Chip, 220 ohm, 1/20W
RZ01	24366471	CF, 470 ohm
RZ02	24366152	CF, 1500 ohm
RZ04	24366332	CF, 3300 ohm
RZ05	24366332	CF, 3300 ohm
RZ06	24366821	CF, 820 ohm
RZ07	24366272	CF, 2700 ohm
RZ08	24366302	CF, 3k ohm
RZ12	24366471	CF, 470 ohm
RZ18	24366821	CF, 820 ohm
RZ19	24366471	CF, 470 ohm
RZ20	24366122	CF, 1200 ohm
RZ21	24366680	CF, 68 ohm
RZ22	24366101	CF, 100 ohm
RZ23	24366821	CF, 820 ohm
RZ24	24366821	CF, 820 ohm
RZ25	24366101	CF, 100 ohm
RZ26	24366101	CF, 100 ohm
RZ28	24366821	CF, 820 ohm
RZ29	24366331	CF, 330 ohm
RZ30	24366331	CF, 330 ohm
RZ31	24366102	CF, 1k ohm

#### COILS & TRANSFORMERS

L101	23221803	Coil, Choke, TLN3040D
L201	23238710	Coil, Peaking, TRF4220AJ
L202	23238708	Coil, Peaking, TRF4330AJ
L301	23103859	Coil (Ferrite Bead), TEM2011
L400	23221886	Coil, Choke, TLN3073
L400	23289101	Coil, Peaking, TRF4101AF
L410	23103859	Coil (Ferrite Bead), TEM2011
L441	23233966	Coil, Linearity, TLN2158AY
L442	23248164	Coil, Choke, TLN3437AD
L443	23248199	Coil, Choke, TLN3467AD
L444	23248186	Coil, Choke, TLN3346AD
L449	23103859	Coil (Ferrite Bead), TEM2011
L461	23248111	Coil, Choke, TLN3349D
L470	23103859	Coil (Ferrite Bead), TEM2011
L491	23211923	Coil, Choke, AT4043/100
L501	23289479	Coil, Peaking, TRF4477AF
L502	23103824	Coil, TEM2028K
L503	23289470	Coil, Peaking, TRF4470AF
L504	23103824	Coil, TEM2028K
L507	23103824	Coil, TEM2028K
L508	23103824	Coil, TEM2028K
L509	23103824	Coil, TEM2028K
L510	23238718	Coil, Peaking, TRF4479AJ
L643	23103859	Coil (Ferrite Bead), TEM2011
L645	23103859	Coil (Ferrite Bead), TEM2011
L671	23103859	Coil (Ferrite Bead), TEM2011
L672	23103859	Coil (Ferrite Bead), TEM2011
L676	23238562	Coil, Peaking, TRF4109AJ
L677	23238720	Coil, Peaking, TRF4339AJ
L682	23238562	Coil, Peaking, TRF4109AJ
L683	23238562	Coil, Peaking, TRF4109AJ
L684	23238562	Coil, Peaking, TRF4109AJ
L685	23238562	Coil, Peaking, TRF4109AJ
L701	23289100	Coil, Peaking, TRF4100AF
L702	23261974	Coil, Choke, HC5-035

Location No.	Part No.	Description
L704	23103859	Coil (Ferrite Bead), TEM2011
L705	23103859	Coil (Ferrite Bead), TEM2011
L801	23217382	Coil, Choke, TPW2011AZ
L811	23103859	Coil (Ferrite Bead), TEM2011
L814	23221747	Coil, Choke, TRF9253D
L815	23103937	Coil (Ferrite Bead), TEM2004
L836	23280016	Coil, Peaking, TRF4100AZ
L871	23103859	Coil (Ferrite Bead), TEM2011
L875	23280016	Coil, Peaking, TRF4100AZ
L876	23289100	Coil, Peaking, TRF4100AF
L883	23221747	Coil, Choke, TRF9253D
L885	23248073	Coil, Choke, TLN3299D
L886	23103859	Coil (Ferrite Bead), TEM2011
L889	23222694	Coil, Width, TLN2026
L891	23103859	Coil (Ferrite Bead), TEM2011
L892	23103859	Coil (Ferrite Bead), TEM2011
L893	23280016	Coil, Peaking, TRF4100AZ
L894	23289100	Coil, Peaking, TRF4100AF
L896	23103859	Coil (Ferrite Bead), TEM2011
L897	23222694	Coil, Width, TLN2026
△L901	23200309	Coil, Degaussing, TSB-2374AR
L902	23289101	Coil, Peaking, TRF4101AF
L903	23289101	Coil, Peaking, TRF4101AF
L904	23289101	Coil, Peaking, TRF4101AF
L905	23289220	Coil, Peaking, TRF4220AF
L906	23289220	Coil, Peaking, TRF4220AF
L907	23289220	Coil, Peaking, TRF4220AF
L908	23289100	Coil, Peaking, TRF4100AF
L910	23289109	Coil, Peaking, TRF41R0AF
L911	23289101	Coil, Peaking, TRF4101AF
L912	23289150	Coil, Peaking, TRF4150AF
L913	23289150	Coil, Peaking, TRF4150AF
L914	23289150	Coil, Peaking, TRF4150AF
L4370	23289101	Coil, Peaking, TRF4101AF
L4430	23289680	Coil, Peaking, TRF4680AF
LA01	23289100	Coil, Peaking, TRF4100AF
LC05	23238562	Coil, Peaking, TRF4109AJ
LC06	23103859	Coil (Ferrite Bead), TEM2011
LC07	23238562	Coil, Peaking, TRF4109AJ
LC08	23238562	Coil, Peaking, TRF4109AJ
LD81	23238714	Coil, Peaking, TRF4100AJ
LD82	23103859	Coil (Ferrite Bead), TEM2011
LD83	23103859	Coil (Ferrite Bead), TEM2011
LD89	23289470	Coil, Peaking, TRF4470AF
LD101	23238714	Coil, Peaking, TRF4100AJ
LF01	23238506	Coil, Peaking, TRF4229AJ
LF02	23238506	Coil, Peaking, TRF4229AJ
LF03	23238506	Coil, Peaking, TRF4229AJ
LF04	23238506	Coil, Peaking, TRF4229AJ
LF06	23238562	Coil, Peaking, TRF4109AJ
LF07	23238562	Coil, Peaking, TRF4109AJ
LF08	23238506	Coil, Peaking, TRF4229AJ
LF09	23238506	Coil, Peaking, TRF4229AJ
LF10	23238562	Coil, Peaking, TRF4109AJ
LF11	23289109	Coil, Peaking, TRF41R0AF
LF13	23289100	Coil, Peaking, TRF4100AF
LF17	23289100	Coil, Peaking, TRF4100AF
LK01	23289100	Coil, Peaking, TRF4100AF
LK02	23289101	Coil, Peaking, TRF4101AF
LK03	23237975	Coil, Peaking, TRF4101AC
LK04	23289100	Coil, Peaking, TRF4100AF
LK05	23289100	Coil, Peaking, TRF4100AF
LQ01	23238709	Coil, Peaking, TRF4270AJ (28MW7DG)

Location No.	Part No.	Description
LQ02	23238718	Coil, Peaking, TRF4479AJ
LQ03	23238718	Coil, Peaking, TRF4479AJ
LQ04	23238718	Coil, Peaking, TRF4479AJ
LR03	23237969	Coil, Peaking, TRF4331AC
LV06	23238562	Coil, Peaking, TRF4109AJ
LV07	23238562	Coil, Peaking, TRF4109AJ
LV08	23289330	Coil, Peaking, TRF4330AF
LV09	23289100	Coil, Peaking, TRF4100AF
LV10	23103824	Coil, TEM2028K
LV11	23103824	Coil, TEM2028K
LV12	23103824	Coil, TEM2028K
LV42	23289100	Coil, Peaking, TRF4100AF
LV43	23289100	Coil, Peaking, TRF4100AF
LV49	23103824	Coil, TEM2028K
LX101	23103822	Chip (Ferrite Bead), TEM2117T
LX102	23103822	Chip (Ferrite Bead), TEM2117T
LX103	23103822	Chip (Ferrite Bead), TEM2117T
LX105	23103822	Chip (Ferrite Bead), TEM2117T
LX106	23103822	Chip (Ferrite Bead), TEM2117T
LX107	23289270	Coil, Peaking, TRF4270AF
LX108	23103822	Chip (Ferrite Bead), TEM2117T
LX109	23103822	Chip (Ferrite Bead), TEM2117T
LX110	23103822	Chip (Ferrite Bead), TEM2117T
LX111	23289270	Coil, Peaking, TRF4270AF
LX112	24000824	Chip, Jumper, 2125 type
LX113	23103822	Chip (Ferrite Bead), TEM2117T
LX114	23245828	Chip, Inductor, TRF46R8CB
LX201	23103822	Chip (Ferrite Bead), TEM2117T
LX202	23103822	Chip (Ferrite Bead), TEM2117T
LX203	23103822	Chip (Ferrite Bead), TEM2117T
LX209	23103822	Chip (Ferrite Bead), TEM2117T
LX210	23103822	Chip (Ferrite Bead), TEM2117T
LX212	23103822	Chip (Ferrite Bead), TEM2117T
LX214	23103822	Chip (Ferrite Bead), TEM2117T
LX215	23103822	Chip (Ferrite Bead), TEM2117T
LX216	23103822	Chip (Ferrite Bead), TEM2117T
LX217	23103822	Chip (Ferrite Bead), TEM2117T
LX218	24000824	Chip, Jumper, 2125 type
LX301	23103822	Chip (Ferrite Bead), TEM2117T
LX302	23103822	Chip (Ferrite Bead), TEM2117T
LX303	24000824	Chip, Jumper, 2125 type
LX306	23103822	Chip (Ferrite Bead), TEM2117T
LX307	23289229	Coil, Peaking, TRF42R2AF
LX308	23289100	Coil, Peaking, TRF4100AF
LX309	23289100	Coil, Peaking, TRF4100AF
LX400	23289109	Coil, Peaking, TRF41R0AF
LX401	23289109	Coil, Peaking, TRF41R0AF
LX402	23289109	Coil, Peaking, TRF41R0AF
LX403	23289109	Coil, Peaking, TRF41R0AF
LX404	23289109	Coil, Peaking, TRF41R0AF
LX405	23289109	Coil, Peaking, TRF41R0AF
LX406	23289109	Coil, Peaking, TRF41R0AF
LX407	23289109	Coil, Peaking, TRF41R0AF
LX408	23289109	Coil, Peaking, TRF41R0AF
LX409	23289109	Coil, Peaking, TRF41R0AF
LZ01	23238712	Coil, Peaking, TRF4150AJ
LZ02	23238716	Coil, Peaking, TRF4689AJ
LZ03	23238716	Coil, Peaking, TRF4689AJ
LZ04	23238709	Coil, Peaking, TRF4270AJ
LZ05	23238716	Coil, Peaking, TRF4689AJ
LZ06	23238709	Coil, Peaking, TRF4270AJ
LZ07	23238709	Coil, Peaking, TRF4270AJ
LZ08	23238707	Coil, Peaking, TRF4390AJ
LZ09	70131060	Filter, ZBF253D-00

Location No.	Part No.	Description
LZ10	70131060	Filter, ZBF253D-00
LZ11	23289270	Coil, Peaking, TRF4270AF
T401	23224371	Transformer, Horiz Drive, TLN1080AH
△T461	23236537	Transformer, Flyback, TFB4142AR
T801	23211670	Line Filter, TRF3164G
T802	23211670	Line Filter, TRF3164G
T804	23211670	Line Filter, TRF3164G
△T863	23217359	Transformer, Converter, TPW3374AG

**SEMICONDUCTORS**

Q200	A6330059	Transistor, 2SC2482(C)
Q201	A6534053	Transistor, 2SA1015-Y(TE
Q203	A6734590	Transistor, 2SC752(G)TM-Y
Q204	A6317440	Transistor, 2SC1815-Y
Q205	A6317440	Transistor, 2SC1815-Y
Q207	A6342206	Transistor, 2SC2878-A(TE
Q301	23905610	IC, LA7846N
Q303	A6534053	Transistor, 2SA1015-Y(TE
Q304	A6317440	Transistor, 2SC1815-Y
Q331	A6534053	Transistor, 2SA1015-Y(TE
Q332	A6317440	Transistor, 2SC1815-Y
Q334	A6319576	Transistor, 2SC2073 FA-4
Q360	A6002040	Transistor, RN1204
Q361	A6002040	Transistor, RN1204
Q362	A6002050	Transistor, RN1205
Q370	A6534053	Transistor, 2SA1015-Y(TE
Q402	A6325419	Transistor, 2SC2235-O(FA
Q404	23314939	Transistor, 2SC5243001TH
Q418	23314141	Transistor, 2SC3852
Q420	23316816	IC, LA7860
Q420	23314141	Transistor, 2SC3852
Q421	A6317440	Transistor, 2SC1815-Y
Q430	23314141	Transistor, 2SC3852
Q460	23314850	Transistor, 2SA1788-E
Q462	A6317440	Transistor, 2SC1815-Y
Q470	A6317440	Transistor, 2SC1815-Y
Q487	A6317440	Transistor, 2SC1815-Y
Q488	A6002040	Transistor, RN1204
Q489	A6012020	Transistor, RN2202
Q501	B0385990	IC, TA1259N
Q502	A6317440	Transistor, 2SC1815-Y
Q503	A6317440	Transistor, 2SC1815-Y
Q510	A6317440	Transistor, 2SC1815-Y
Q518	A6317440	Transistor, 2SC1815-Y
Q519	A6534053	Transistor, 2SA1015-Y(TE
Q611	A6534053	Transistor, 2SA1015-Y(TE
Q612	A6534053	Transistor, 2SA1015-Y(TE
Q640	B0377341	IC, TA8256H(V31
Q641	A6342206	Transistor, 2SC2878-A(TE
Q642	A6342206	Transistor, 2SC2878-A(TE
Q643	A6342206	Transistor, 2SC2878-A(TE
Q670	B0377341	IC, TA8256H(V31
Q671	A6342206	Transistor, 2SC2878-A(TE
Q672	A6342206	Transistor, 2SC2878-A(TE
Q673	A6342206	Transistor, 2SC2878-A(TE
Q688	A6002040	Transistor, RN1204
Q705	A6317440	Transistor, 2SC1815-Y
Q706	A6317440	Transistor, 2SC1815-Y
Q707	A6734590	Transistor, 2SC752(G)TM-Y
Q709	A6317440	Transistor, 2SC1815-Y
Q710	A6534053	Transistor, 2SA1015-Y(TE



Location No.	Part No.	Description
Q711	23314911	Transistor, 2SB1569A
Q712	23314914	Transistor, 2SD2400A
Q719	A6319311	Transistor, 2SC1959-Y(TE)
Q801	23905084	IC, STR-S6709
Q802	23314141	Transistor, 2SC3852
△ Q826	A8643108	Photo Coupler, TLP621(GR-LF)
Q830	23314141	Transistor, 2SC3852
Q831	23314141	Transistor, 2SC3852
Q832	23905977	IC, PQ09RD11
Q840	23318299	IC, L78MR05
Q901	A6368700	Transistor, 2SC4544
Q902	A6317440	Transistor, 2SC1815-Y
Q903	A6368700	Transistor, 2SC4544
Q904	A6317440	Transistor, 2SC1815-Y
Q905	A6368700	Transistor, 2SC4544
Q906	A6317440	Transistor, 2SC1815-Y
Q907	A6509154	Transistor, 2SA562TM-Y(T)
Q908	A6321265	Transistor, 2SC2120-Y(TE)
Q910	A6317440	Transistor, 2SC1815-Y
Q911	A6317440	Transistor, 2SC1815-Y
Q912	A6534053	Transistor, 2SA1015-Y(TE)
Q913	A6534053	Transistor, 2SA1015-Y(TE)
Q914	A6317440	Transistor, 2SC1815-Y
Q4321	A6002040	Transistor, RN1204
Q4370	B0385853	IC, TA1241AN
Q4371	A6317440	Transistor, 2SC1815-Y
Q4421	A6002040	Transistor, RN1204
Q4423	A6325419	Transistor, 2SC2235-O(FA)
Q4490	A8641063	Photo Coupler, TLP521-1
Q4491	23314917	Transformer, 2SK2003-01MR
Q4493	A6317440	Transistor, 2SC1815-Y
QA01	23906035	IC, TMP87CS38N-3478
QA02	23905320	IC, NM24C16EN
QA04	A6002040	Transistor, RN1204
QA05	A6734590	Transistor, 2SC752(G)TM-Y
QB01	A6317440	Transistor, 2SC1815-Y
QB30	A6317440	Transistor, 2SC1815-Y
QB81	A6342206	Transistor, 2SC2878-A(TE)
QB82	A6342206	Transistor, 2SC2878-A(TE)
QB83	A6534053	Transistor, 2SA1015-Y(TE)
QB92	A6317440	Transistor, 2SC1815-Y
QB93	A6534053	Transistor, 2SA1015-Y(TE)
QB94	A6534053	Transistor, 2SA1015-Y(TE)
QB95	A6534053	Transistor, 2SA1015-Y(TE)
QB96	A6534053	Transistor, 2SA1015-Y(TE)
QD01	23906068	IC, ZR38600PQC
QD02	23906069	IC, AK4309AVM-E2
QD04	A6030620	IC, TC7S04F
QD05	A6030620	IC, TC7S04F
QD06	23906069	IC, AK4309AVM-E2
QD07	23906069	IC, AK4309AVM-E2
QD10	70119743	IC, PST523D
QD30	B0385647	IC, TA1217AN
QD80	23314141	Transistor, 2SC3852
QD89	A6335470	Transistor, 2SC2712-Y
QD103	23314314	Transistor, XN4501
QF01	23905948	IC, SDA5273SC134
QF03	A6317440	Transistor, 2SC1815-Y
QF04	A6734590	Transistor, 2SC752(G)TM-Y
QF10	B0460424	IC, TC514400AZ-6
QK01	B0470662	IC, TC4066BP
QK02	23904807	IC, MC14577CP
QK03	B0485576	IC, TC74HC08AP
QK04	23904823	IC, LC89066D

Location No.	Part No.	Description
QK05	B0485615	IC, TC74HC04AP
QK07	70119743	IC, PST523D
QK08	23314527	Transistor, XN4401
QK10	A6335470	Transistor, 2SC2712-Y
QK11	B0486068	IC, TC74HC74AP
QK12	23314527	Transistor, XN4401
QK15	23314314	Transistor, XN4501
QK16	23314314	Transistor, XN4501
QK17	23314314	Transistor, XN4501
QK18	23314527	Transistor, XN4401
QK19	23314527	Transistor, XN4401
QK20	A6335470	Transistor, 2SC2712-Y
QK21	A6541130	Transistor, 2SA1162-Y
QK22	A6541130	Transistor, 2SA1162-Y
QK23	A6335470	Transistor, 2SC2712-Y
QK24	A6361770	Transistor, 2SC3437-Y
QK25	A6361770	Transistor, 2SC3437-Y
QK26	A6335470	Transistor, 2SC2712-Y
QK27	A6335470	Transistor, 2SC2712-Y
QK29	A6541130	Transistor, 2SA1162-Y
QK32	A6335470	Transistor, 2SC2712-Y
QK33	A6335470	Transistor, 2SC2712-Y
QK34	A6335470	Transistor, 2SC2712-Y
QK37	A6541130	Transistor, 2SA1162-Y
QK39	A6335470	Transistor, 2SC2712-Y
QK40	A6335470	Transistor, 2SC2712-Y
QK41	A6335470	Transistor, 2SC2712-Y
QK43	A6335470	Transistor, 2SC2712-Y
QK44	A6335470	Transistor, 2SC2712-Y
QK45	A6541130	Transistor, 2SA1162-Y
QK46	A6335470	Transistor, 2SC2712-Y
QK47	A6335470	Transistor, 2SC2712-Y
QK48	A6335470	Transistor, 2SC2712-Y
QK49	23314314	Transistor, XN4501
QK50	23314527	Transistor, XN4401
QK51	B0470662	IC, TC4066BP
QK52	23314314	Transistor, XN4501
QK61	A6335470	Transistor, 2SC2712-Y
QK64	A6541130	Transistor, 2SA1162-Y
QK65	A6335470	Transistor, 2SC2712-Y
QK190	A6317440	Transistor, 2SC1815-Y
QK191	A6317440	Transistor, 2SC1815-Y
QQ01	23904991	IC, TA1229N (28MW7DG)
QQ02	B0383881	IC, TA8772AN
QQ03	A6317440	Transistor, 2SC1815-Y
QQ04	A6317440	Transistor, 2SC1815-Y
QQ05	A6317440	Transistor, 2SC1815-Y (28MW7DB)
QQ06	A6002030	Transistor, RN1203 (28MW7DB)
QQ07	A6317440	Transistor, 2SC1815-Y (28MW7DB)
QQ08	A6317440	Transistor, 2SC1815-Y (28MW7DB)
QR21	23904807	IC, MC14577CP
QR22	23905603	IC, TDA8443B
QR23	A6534053	Transistor, 2SA1015-Y(TE)
QR24	A6534053	Transistor, 2SA1015-Y(TE)
QR25	23904807	IC, MC14577CP
QS01	A6342206	Transistor, 2SC2878-A(TE)
QS02	A6342206	Transistor, 2SC2878-A(TE)
QS03	A6342206	Transistor, 2SC2878-A(TE)
QS04	A6342206	Transistor, 2SC2878-A(TE)
QS05	A6342206	Transistor, 2SC2878-A(TE)

SPECIFIC INFORMATION

Location No.	Part No.	Description
QS06	A6342206	Transistor, 2SC2878-A(TE
QS07	A6010040	Transistor, RN2004
QS08	A6342206	Transistor, 2SC2878-A(TE
QS09	A6342206	Transistor, 2SC2878-A(TE
QV01	B0385650	IC, TA1218N
QV02	A6317440	Transistor, 2SC1815-Y
QV03	A6317440	Transistor, 2SC1815-Y
QV04	A6317440	Transistor, 2SC1815-Y
QV05	A6534053	Transistor, 2SA1015-Y(TE
QV06	A6534053	Transistor, 2SA1015-Y(TE
QV07	A6342206	Transistor, 2SC2878-A(TE
QV08	A6317440	Transistor, 2SC1815-Y
QV09	A6317440	Transistor, 2SC1815-Y
QV10	A6317440	Transistor, 2SC1815-Y
QV11	A6534053	Transistor, 2SA1015-Y(TE
QV12	A6317440	Transistor, 2SC1815-Y
QV14	A6317440	Transistor, 2SC1815-Y
QV80	A6534053	Transistor, 2SA1015-Y(TE
QX10	70128490	IC, MM1031XMR
QX20	B0370000	IC, TA78L05F
QX21	A6030640	IC, TC7S32F
QX21	B0488966	IC, TC74AC74F
QX30	23319052	IC, MB40978PFQ
QX101	23314204	Transistor, 2SC2412K,Q
QX103	23314345	Transistor, IMZ1
QX104	23314204	Transistor, 2SC2412K,Q
QX105	A6030670	IC, TC7S66F
QX106	23905190	IC, TLC5510INS
QX108	23314204	Transistor, 2SC2412K,Q
QX109	23314344	Transistor, IMX1
QX110	A6030670	IC, TC7S66F
QX111	23314204	Transistor, 2SC2412K,Q
QX112	A6030670	IC, TC7S66F
QX114	23905190	IC, TLC5510INS
QX116	23314204	Transistor, 2SC2412K,Q
QX117	23314344	Transistor, IMX1
QX118	A6030670	IC, TC7S66F
QX119	23314204	Transistor, 2SC2412K,Q
QX120	A6030670	IC, TC7S66F
QX201	A6361770	Transistor, 2SC3437-Y
QX202	A6030871	IC, TC7W04F(BRA)
QX203	23905013	IC, TLC2932IPW
QX205	23905013	IC, TLC2932IPW
QX211	B0508717	IC, TC190G04AF-0
QX212	23904272	IC, M518221-30ZS
QX213	23904272	IC, M518221-30ZS
QX302	23314204	Transistor, 2SC2412K,Q
QX303	23314204	Transistor, 2SC2412K,Q
QX304	23314204	Transistor, 2SC2412K,Q
QX305	23314204	Transistor, 2SC2412K,Q
QX306	23314204	Transistor, 2SC2412K,Q
QX307	23314204	Transistor, 2SC2412K,Q
QZ01	B0410688	IC, TC9090AN
QZ02	A6317440	Transistor, 2SC1815-Y
QZ03	A6317440	Transistor, 2SC1815-Y
QZ04	A6317440	Transistor, 2SC1815-Y
QZ06	A6317440	Transistor, 2SC1815-Y
D101	23316411	Diode, 1SS184
D201	23115599	Diode, 1N4148
D240	23316554	Diode, 1SS146
D301	23118479	Diode, BYD33J
D302	23118479	Diode, BYD33J
D303	23316794	Diode, SC570A
D312	23115599	Diode, 1N4148

Location No.	Part No.	Description
D370	23316658	Diode, Zener, MTZJ3.6A
D371	23115599	Diode, 1N4148
D404	A7680591	Diode, 5VUZ52
D406	23118479	Diode, BYD33J
D419	23316716	Diode, Zener, MTZJ11B
D420	23316716	Diode, Zener, MTZJ11B
D421	23316672	Diode, Zener, MTZJ5.6B
D422	23316726	Diode, Zener, MTZJ15C
D422	23316743	Diode, Zener, MTZJ24C
D4301	23316726	Diode, Zener, MTZJ15C
D431	23316678	Diode, Zener, MTZJ6.8B
D432	23316678	Diode, Zener, MTZJ6.8B
D436	23115599	Diode, 1N4148
D441	23316687	Diode, Zener, MTZJ9.1B
D444	23118479	Diode, BYD33J
D445	23118479	Diode, BYD33J
D460	23118479	Diode, BYD33J
D461	23316803	Diode, FMU-G16S
D463	23115599	Diode, 1N4148
D464	23316718	Diode, Zener, MTZJ12A
D466	23316672	Diode, Zener, MTZJ5.6B
D467	23118479	Diode, BYD33J
D474	23316719	Diode, Zener, MTZJ12B
D486	23316731	Diode, Zener, MTZJ18B
D490	23115599	Diode, 1N4148
D501	23115599	Diode, 1N4148
D502	23115599	Diode, 1N4148
D611	23115599	Diode, 1N4148
D612	23115599	Diode, 1N4148
D613	23115599	Diode, 1N4148
D615	23115599	Diode, 1N4148
D617	23115599	Diode, 1N4148
D618	23115599	Diode, 1N4148
D620	23115599	Diode, 1N4148
D621	23115599	Diode, 1N4148
D622	23115599	Diode, 1N4148
D640	23115599	Diode, 1N4148
D641	23115599	Diode, 1N4148
D642	23115599	Diode, 1N4148
D643	23115599	Diode, 1N4148
D647	23115599	Diode, 1N4148
D648	23115599	Diode, 1N4148
D670	23115599	Diode, 1N4148
D671	23115599	Diode, 1N4148
D674	23115599	Diode, 1N4148
D675	23115599	Diode, 1N4148
D683	23115599	Diode, 1N4148
D684	23115599	Diode, 1N4148
D685	23115599	Diode, 1N4148
D704	23115599	Diode, 1N4148
D705	23115599	Diode, 1N4148
D715	23115599	Diode, 1N4148
D721	23115599	Diode, 1N4148
D801	23316795	Diode, D6SB60L, F05
D803	23118479	Diode, BYD33J
D804	23316678	Diode, Zener, MTZJ6.8B
D805	23115599	Diode, 1N4148
D806	23118479	Diode, BYD33J
D808	23118479	Diode, BYD33J
D809	23316672	Diode, Zener, MTZJ5.6B
D810	23115599	Diode, 1N4148
D811	23115599	Diode, 1N4148
D812	23118451	Diode, RU-4A
D815	23316725	Diode, Zener, MTZJ15B

Location No.	Part No.	Description
D828	23115599	Diode, 1N4148
D836	23316673	Diode, Zener, MTZJ5.6C
D871	23118479	Diode, BYD33J
D883	23316406	Diode, FML-G16S
D885	23316184	Diode, FML-G12S
D891	23316184	Diode, FML-G12S
D892	23316184	Diode, FML-G12S
D893	23316673	Diode, Zener, MTZJ5.6C
D896	23118479	Diode, BYD33J
D901	23115599	Diode, 1N4148
D903	23115599	Diode, 1N4148
D904	23115599	Diode, 1N4148
D905	23115599	Diode, 1N4148
D906	23115599	Diode, 1N4148
D907	23115599	Diode, 1N4148
D908	23115599	Diode, 1N4148
D909	23115599	Diode, 1N4148
D910	23115599	Diode, 1N4148
D911	23118479	Diode, BYD33J
D4371	23115599	Diode, 1N4148
D4386	23316718	Diode, Zener, MTZJ12A
D4387	23316718	Diode, Zener, MTZJ12A
D4388	23316718	Diode, Zener, MTZJ12A
D4399	23115599	Diode, 1N4148
DB01	23358505	LED, SLR56VC196F
DB02	23358503	LED, SCL003MC3FX
DB30	23115599	Diode, 1N4148
DD81	23316661	Diode, Zener, MTZJ3.9B
DD91	23316661	Diode, Zener, MTZJ3.9B
DF01	23316654	Diode, Zener, MTZJ3.0A
DK01	23316820	Diode, 1SS353
DK02	23118041	Diode, MA111-(TX)
DK08	23316820	Diode, 1SS353
DK10	23316820	Diode, 1SS353
DK11	23316820	Diode, 1SS353
DK12	23316820	Diode, 1SS353
DK13	23316820	Diode, 1SS353
DQ01	23115599	Diode, 1N4148 (28MW7DB)
DR01	23316719	Diode, Zener, MTZJ12B
DR02	23316719	Diode, Zener, MTZJ12B
DR03	23316719	Diode, Zener, MTZJ12B
DR04	23316719	Diode, Zener, MTZJ12B
DV01	23316687	Diode, Zener, MTZJ9.1B
DV02	23316687	Diode, Zener, MTZJ9.1B
DV03	23316687	Diode, Zener, MTZJ9.1B
DV04	23316687	Diode, Zener, MTZJ9.1B
DV05	23316687	Diode, Zener, MTZJ9.1B
DV06	23316687	Diode, Zener, MTZJ9.1B
DV07	23316687	Diode, Zener, MTZJ9.1B
DV09	23115599	Diode, 1N4148
DV10	23115599	Diode, 1N4148
DV11	23115599	Diode, 1N4148
DV12	23316687	Diode, Zener, MTZJ9.1B
DV80	23115599	Diode, 1N4148
DZ01	23316690	Diode, Zener, MTZJ10B
<b>MISCELLANEOUS</b>		
B202	23470484	Frame, Terminal
△F470	23144503	Fuse, 1.25A, 250V
F470A	23165433	Holder, Fuse
△F801	23144507	Fuse, 3.15A
F801A	23165433	Holder, Fuse
△F802	23144506	Fuse, 2.5A, 250V
F802A	23165433	Holder, Fuse

Location No.	Part No.	Description
△F889	23144458	Fuse, 5.0A
F889A	23165433	Holder, Fuse
G224	24366271	CF, 270 ohm
G401	23103859	Ferrite Choke, TEM2011
G402	23103859	Ferrite Choke, TEM2011
G403	23103859	Ferrite Choke, TEM2011
G404	23103859	Ferrite Choke, TEM2011
G430	A7568460	Diode, TVR-1B
G465	23316672	Diode, MTZJ5.6B
G510	23289470	Coil, Peaking, TRF4470AF
G516	24366101	CF, 100 ohm
G517	24366101	CF, 100 ohm
G601	23238714	Coil, Peaking, TRF4100AJ
G602	23238714	Coil, Peaking, TRF4100AJ
GC30	23238562	Coil, Peaking, TRF4109AJ (28MW7DG)
GC31	23238562	Coil, Peaking, TRF4109AJ (28MW7DG)
GF01	23238562	Coil, Peaking, TRF4109AJ
GR41	23237969	Coil, Peaking, TRF4331AC
GR42	23237969	Coil, Peaking, TRF4331AC
GV05	23238562	Coil, Peaking, TRF4109AJ
GV13	24366681	CF, 680 ohm
GV80	24366681	CF, 680 ohm
GV81	24366681	CF, 680 ohm
H002	23148275	Module, MVGS48 (28MW7DB)
H002	23148276	Module, MVGS49 (28MW7DG)
KB01	23904946	Remote Sensor, RPM-676CBB-S
P004	23161702	Terminal, 8P
P661	23363607	Headphone Jack, 3.5mm
P801	23372012	Power Cord (28MW7DB)
P801	23372014	Power Cord (28MW7DG)
PV03	23365515	Jack, 4P, SVHS
PV04	23363252	Pin Jack, Yellow
PV05	23365508	Jack, Phono
S601	23145355	Switch, Slide, 4C-2P
△S801	23344395	Switch, Power
SA01	23145430	Switch, Push, 1C1P
SA02	23145430	Switch, Push, 1C1P
SA03	23145430	Switch, Push, 1C1P
SA04	23145430	Switch, Push, 1C1P
SA06	23145430	Switch, Push, 1C1P
△V901A	23902891	Socket, CRT, 10P
W661	23351116	Speaker, SPK-1382, 60x120mm, 8 ohm
W662	23351116	Speaker, SPK-1382, 60x120mm, 8 ohm
W663	23351107	Speaker, SPK-1374, 60x120mm, 8 ohm
W664	23351107	Speaker, SPK-1374, 60x120mm, 8 ohm
W664	23351107	Speaker, SPK-1374, 60x120mm, 8 ohm
W664	23351107	Speaker, SPK-1374, 60x120mm, 8 ohm
W665	23351080	Speaker, SPK-1352, 100x100mm, 6 ohm
X401	23153721	Ceramic Resonator, 503kHz, TCR1023
X501	23153961	Crystal, 3.58MHz
X503	23153979	Crystal, 4.43MHz
XA01	23153325	Ceramic Resonator, 8.00M, TCR1056
XF01	23153421	Crystal, 20.48MHz
XQ01	23153969	Crystal (28MW7DG)
Z201	23107519	Ceramic Video Trap, 4.43MHz

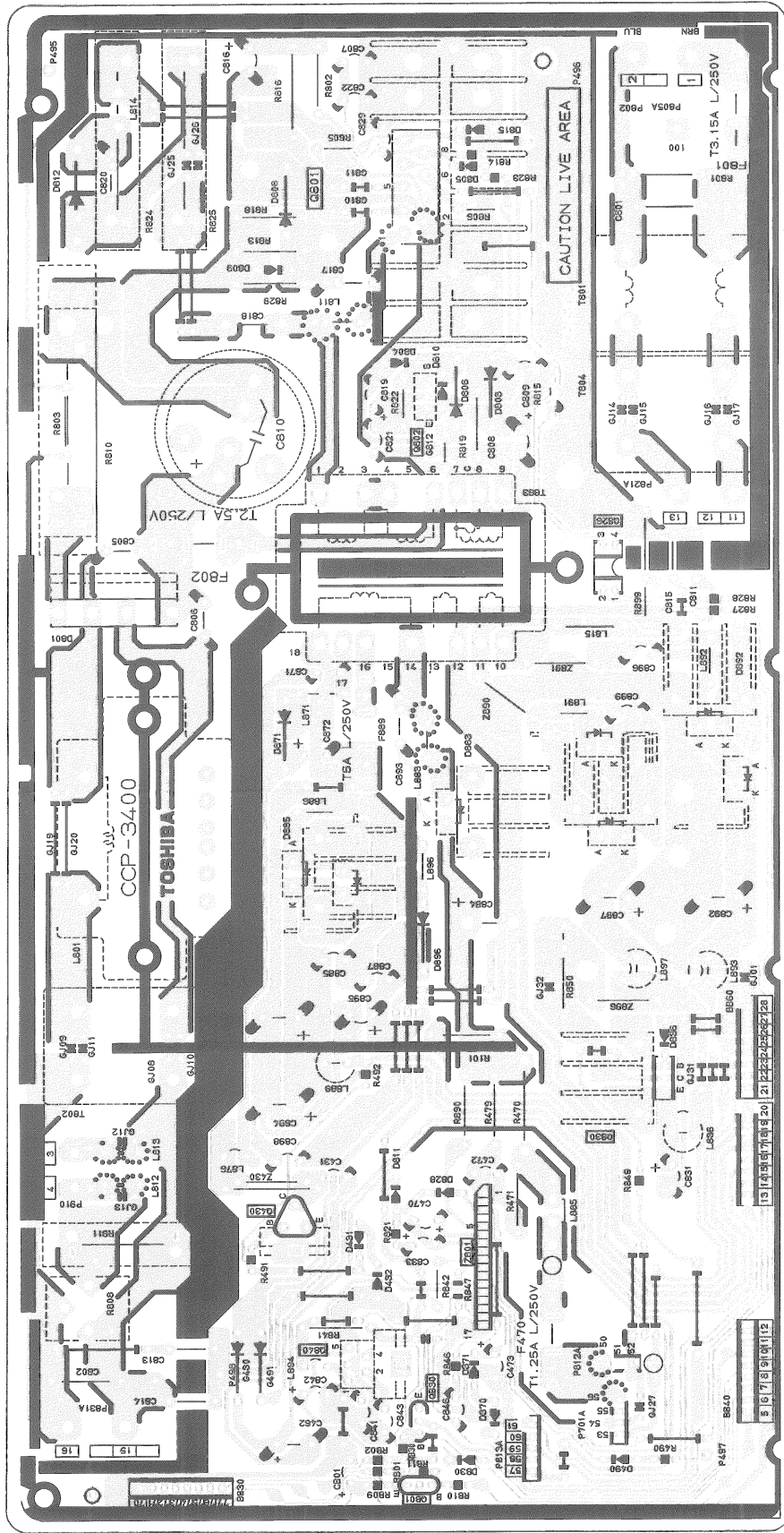
SPECIFIC INFORMATIONS

Location No.	Part No.	Description
Z420	23144539	Protector, PRF20005491, 125V, 2A
△Z430	23144536	Protector, PRF10005491, 125V, 1A
Z501	23103844	Filter, TEM2029AD
Z801	23904998	IC, HIC1016
△Z890	23144543	Protector, PRF50005491, 125V, 5A
△Z891	23144543	Protector, PRF50005491, 125V, 5A
Z896	23144539	Protector, PRF20005491, 125V, 2A
Z897	23144539	Protector, PRF20005491, 125V, 2A
Z902	23103839	Ferrite Core, TFE1012
ZC01	23107626	Filter, TEM1022
ZD101	23153325	Ceramic Resonator, 8.00M, TCR1056
ZK01	23262661	Coil, IF, TRF1155D
ZK02	23153325	Ceramic Resonator, 8.00M, TCR1056
ZX101	23103823	Filter, TEM2027D
ZX102	23103823	Filter, TEM2027D
ZX103	23103823	Filter, TEM2027D
ZX104	23103823	Filter, TEM2027D
ZX201	23103823	Filter, TEM2027D
ZX202	23103823	Filter, TEM2027D
ZX203	23103823	Filter, TEM2027D
ZX801	23303181	Filter, TEM1012N
ZX802	23303181	Filter, TEM1012N
<b>PC BOARD ASSEMBLIES</b>		
* U101A	23706673	Dolby Board, PB7325X-1
* U101B	23781062	Digital-IN Board, PB7325X-2
* U901	23706659	CRT Drive Board, PB7212Z
* U902A	23706620	Signal Board, PB7273A-1 (28MW7DB)
* U902A	23706854	Signal Board, PB7273H-1 (28MW7DG)
* U903	23706618	Power Board, PB7274A (28MW7DB)
* U903	23706853	Power Board, PB7274H (28MW7DG)
* U904A	23706622	Def Board, PB7275X-1
* U904B	23706623	Cont-1 Board, PB7275X-2
* U904C	23706624	Cont-2 Board, PB7275X-3
* U905	23706619	Back Term. Board, PB7276X
* U906A	23706625	1H-Delay Board, PB7213Z-1 (28MW7DB)
* U906A	23706798	1H-Delay Board, PB7213Y-1 (28MW7DG)
* U906B	23706626	Digi-Comb Board, PB7213Z-2 (28MW7DB)
* U906B	23706799	Digi-Comb Board, PB7213Y-2 (28MW7DG)
* U906C	23706621	YUV-SW Board, PB7213Z-3 (28MW7DB)
* U906C	23706787	YUV-SW Board, PB7213Y-3 (28MW7DG)
* U907	23705945	Text Board, PB6598Y
* U908A	23706825	UP-Converter Board, PB7366X
* UG01	23705942	A. Live Board PB6704

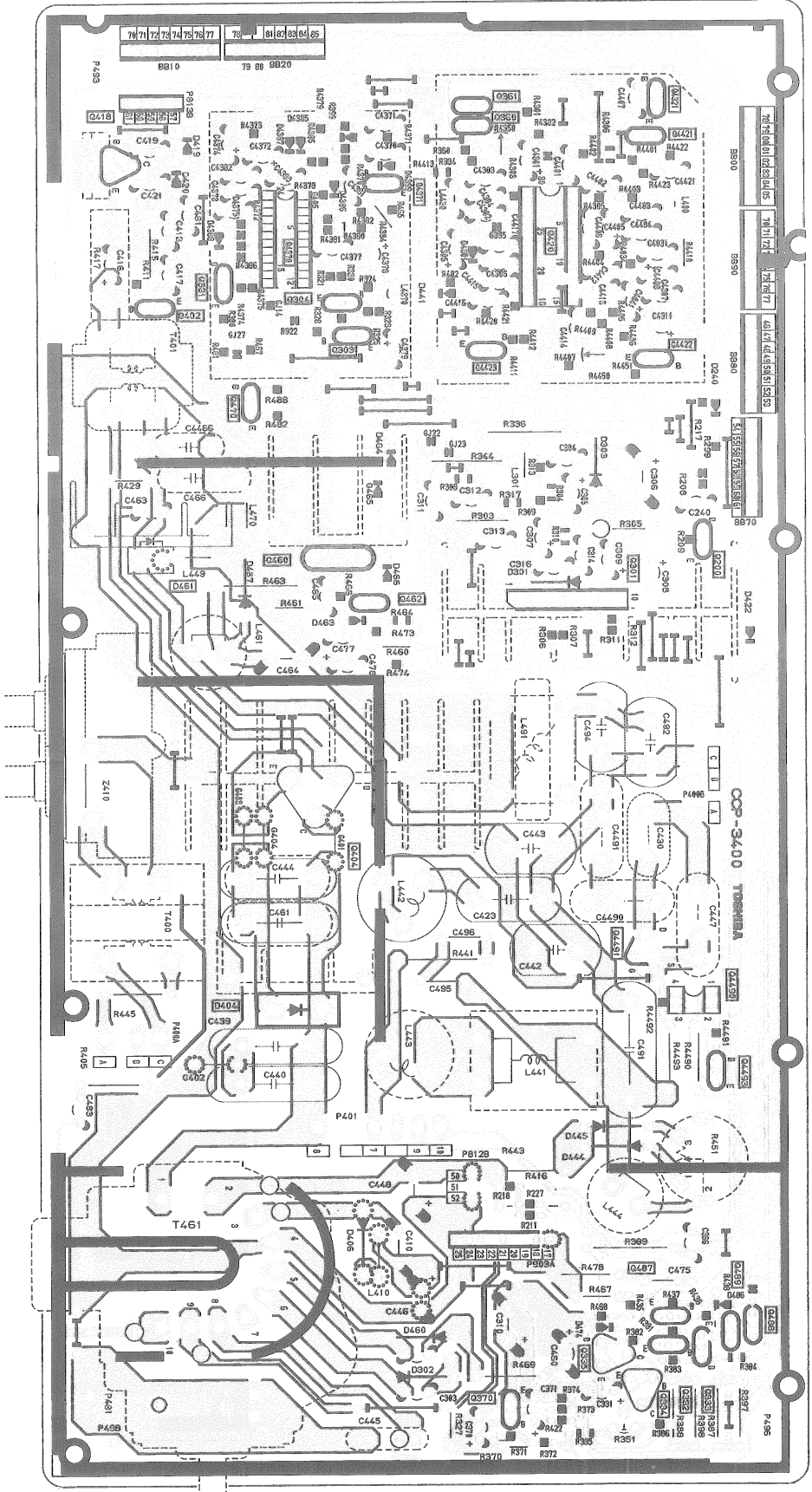
Location No.	Part No.	Description
<b>PICTURE TUBE</b>		
△V901	23312727	Picture Tube, W66ESF002X44
<b>TUNER</b>		
H001	23321238	Tuner, UF812BLX2 (28MW7DB)
H001	23148278	Tuner, EGA12LX3 (28MW7DG)
<b>ACCESSORIES</b>		
K902	23306176	Remote Hand Unit, CT-9868
Y101	23562999	Owner's Manual, English, 28MW7DB
Y101	23563100	Owner's Manual, French, 28MW7DG
Y102	23563101	Owner's Manual, German, 28MW7DG
Y103	23563102	Owner's Manual, Italian, 28MW7DG
Y104	23563104	Owner's Manual, Spanish, 28MW7DG



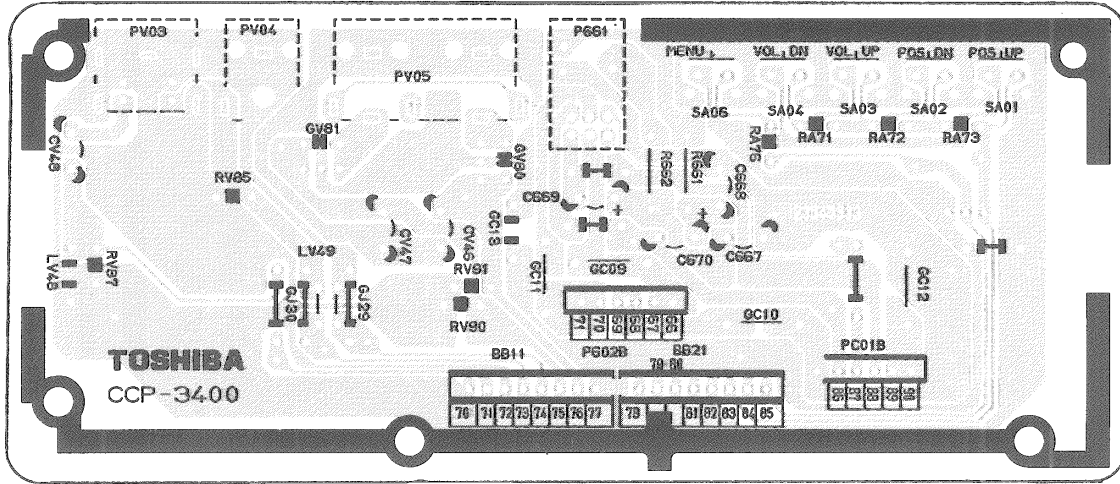
POWER BOARD PB7274A/PB7274H  
BOTTOM (FOIL) SIDE



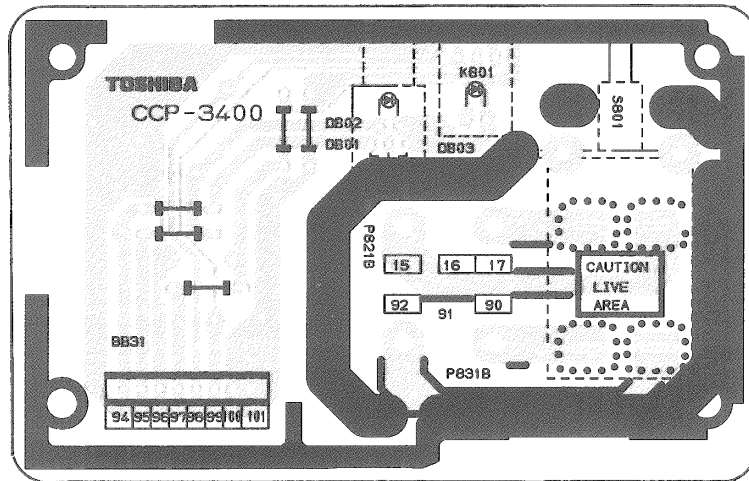
DEF BOARD PB7275X-1  
BOTTOM (FOIL) SIDE



**CONT-1 BOARD PB7275X-2**  
**BOTTOM (FOIL) SIDE**



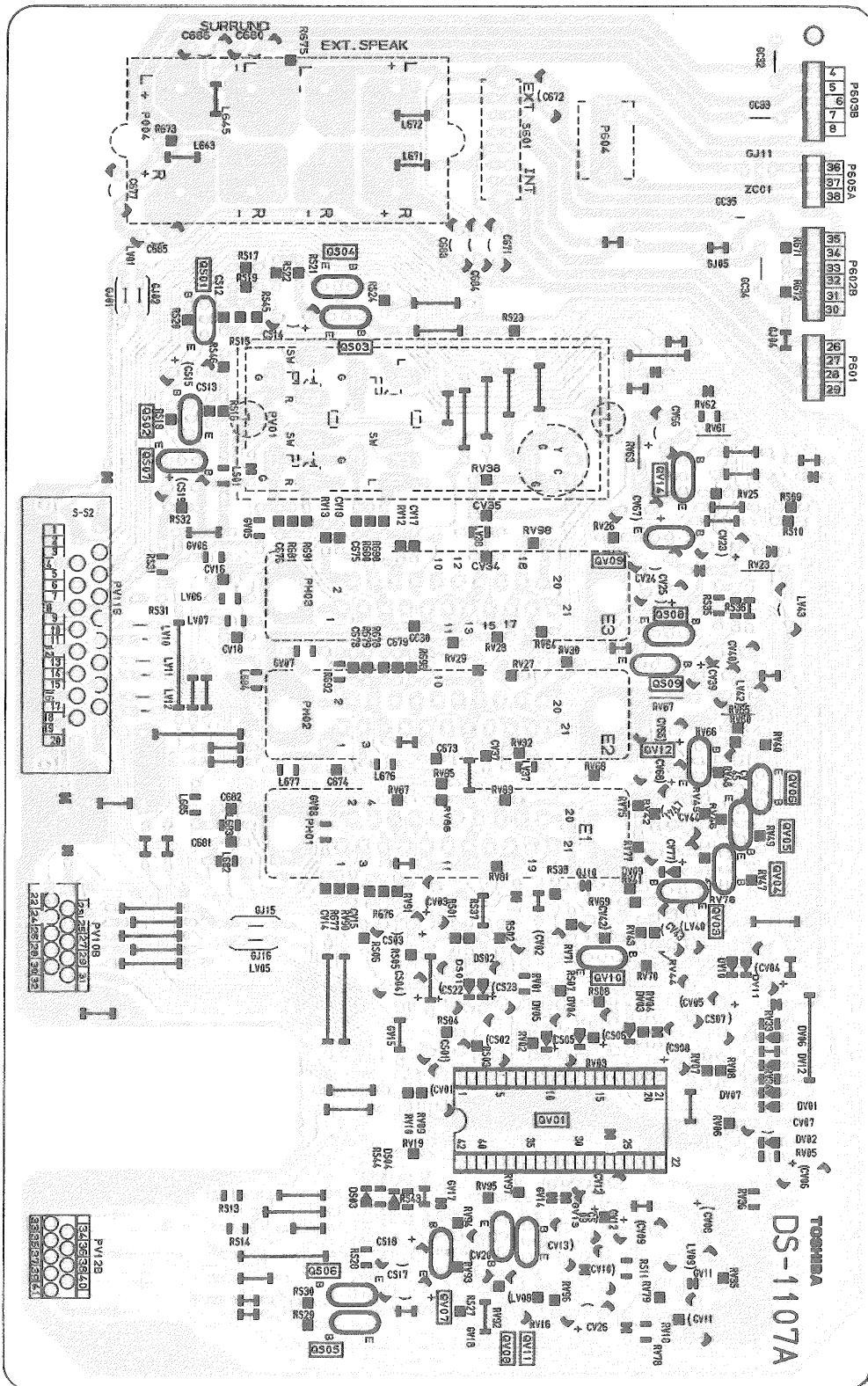
**CONT-2 BOARD PB7275X-3**  
**BOTTOM (FOIL) SIDE**





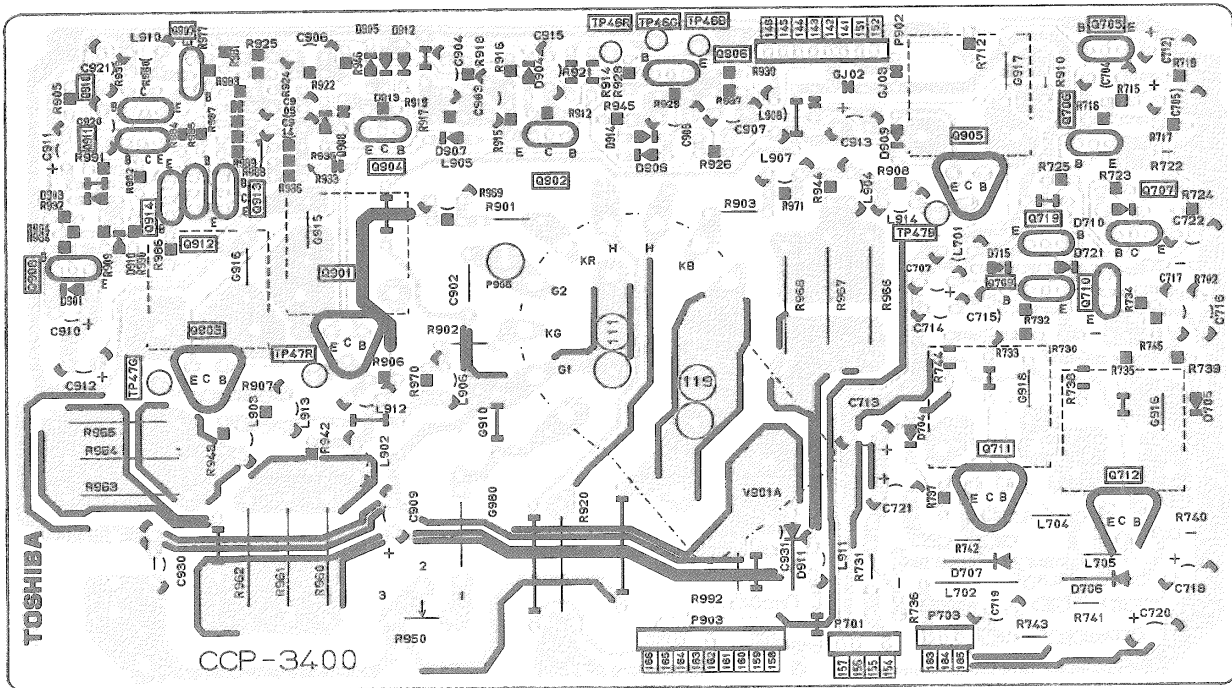
# BACK TERMINAL/AV BOARD PB7276X

## BOTTOM (FOIL) SIDE



# CRT DRIVE/DSM BOARD PB7212Z

## BOTTOM (FOIL) SIDE

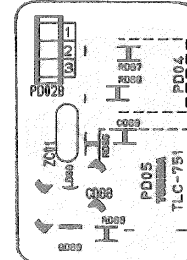
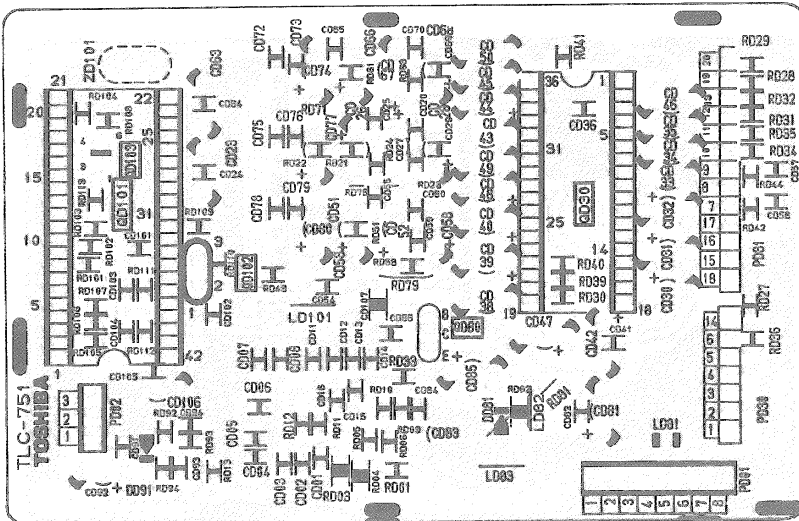


# DOLBY BOARD PB7325X-1

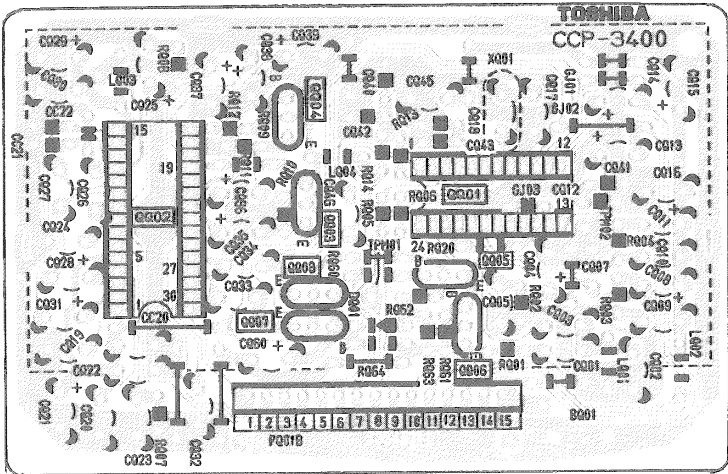
## BOTTOM (FOIL) SIDE

# DIGITAL-IN BOARD PB7325X-2

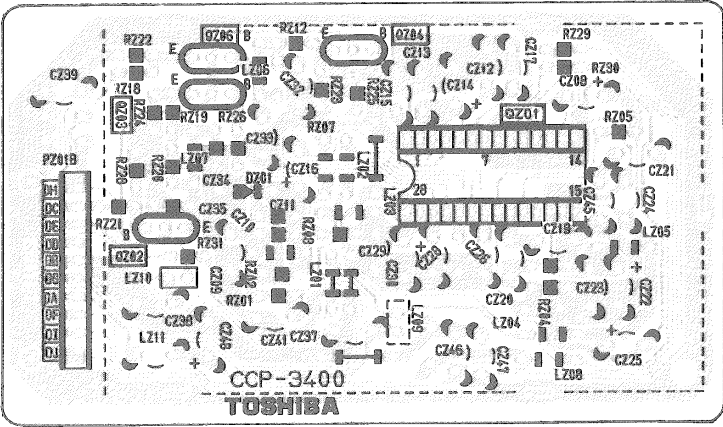
## BOTTOM (FOIL) SIDE



SECAM BOARD PB7213Z-1 (28MW7DD)  
 PB7213Y-1 (28MW7DG)  
 BOTTOM (FOIL) SIDE



COMB BOARD PB7213Z-2 (28MW7DB)  
 PB7213Y-2 (28MW7DG)  
 BOTTOM (FOIL) SIDE

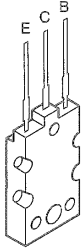




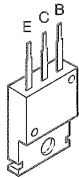
# TERMINAL VIEW OF TRANSISTORS

SPECIFIC INFORMATIONS

- ① 2SD2253  
(old)  
2SC5243



- ② 2SC3852  
2SD1763A  
2SC1569  
2SC4544  
2SA1788  
2SA1306  
2SA1186A



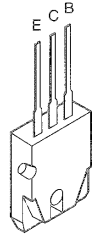
- ③ 2SC752GTM  
2SC2482  
2SC2655  
2SC4721P



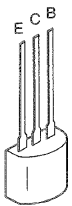
- ④ 2SC752  
2SA562TM  
2SA1015  
2SC1815  
2SC2878  
2SC1740S  
2SC2120  
2SA9335



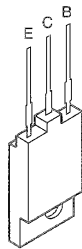
- ⑤ 2SA1788



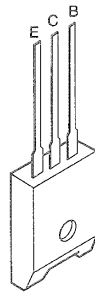
- ⑥ RN2203  
RN2201  
RN2004  
RN1203  
RN1204  
RN2204  
RN1205  
RN1202  
RN1201



- ⑦ 2SD1554  
2SD2253  
2SD1556  
2SC5143



- ⑧ ON4409



SPECIFICATIONS (28MW7DB)											
<b>Input Power Rating:</b>	195 Watts (Normal), AC 220 ~ 240 Volts, 50 Hz										
<b>Aerial Input Impedance:</b>	75 ohm unbalanced type for VHF, UHF and CATV										
<b>Receiving Channels:</b>	<table border="0"> <thead> <tr> <th>System</th> <th>Channel</th> <th>VHF</th> <th>UHF</th> <th>CATV</th> </tr> </thead> <tbody> <tr> <td>PAL I</td> <td>UK</td> <td>—</td> <td>21 ~ 69</td> <td>—</td> </tr> </tbody> </table> <p>PAL, 50 Hz/60 Hz (For Video Disk play back) 4.43 NTSC (For VCR playback), 3.58 NTSC (For VCR playback)</p>	System	Channel	VHF	UHF	CATV	PAL I	UK	—	21 ~ 69	—
System	Channel	VHF	UHF	CATV							
PAL I	UK	—	21 ~ 69	—							
<b>Intermediate Frequencies:</b>	<p>Picture I-F carrier frequency ..... 38.9 MHz (L VL) Sound I-F carrier frequency I System ..... 32.9 MHz</p>										
<b>Picture Tube:</b>	28 inches, W66ESF002X44, 660 mm (measured on diagonal of viewable picture area) 110° deflection										
<b>Sound Output:</b>	10 W + 10W (at 10% Distortion, Main), 5W + 5W (at 10% Distortion, Center) 13W (at 10% Distortion, Woofer), 10W + 10W (at 10% Distortion, Surround)										
<b>Speakers:</b>	60 mm x 120 mm oval, 2 pcs (Main) 100 mm, round, 1 pc (Woofer) 60mm x 120 mm oval, 2 pcs (Center)										
<b>Aux. Terminals:</b>	21 pin socket (FULL), 21 pin socket (S-VIDEO/AV), MONITOR OUTPUT, STEREO HEADPHONE JACK (3.5mm).										
<b>Cabinet:</b>	Table type										
<b>Dimensions:</b>	Height ..... 514 mm Width ..... 812 mm Depth ..... 518.5 mm										
<b>Mass:</b>	35.8 kg										

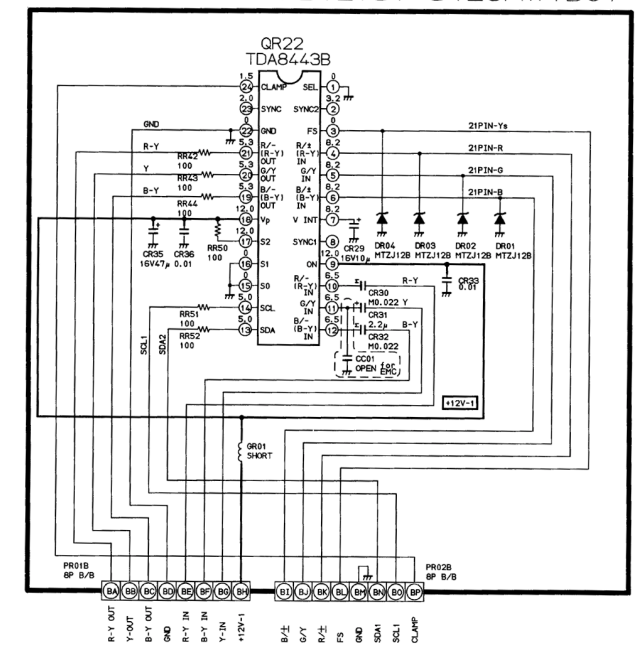
SPECIFICATIONS (28MW7DG)																																											
<b>Input Power Rating:</b>	165 Watts (Normal), AC 220 ~ 240 Volts, 50 Hz																																										
<b>Aerial Input Impedance:</b>	75 ohm unbalanced type for VHF, UHF and CATV																																										
<b>Receiving Channels:</b>	<table border="0"> <thead> <tr> <th>System</th> <th>Channel</th> <th>VHF</th> <th>UHF</th> <th>CATV</th> <th></th> </tr> </thead> <tbody> <tr> <td>PAL B/G</td> <td>CCIR</td> <td>2 ~ 12</td> <td>21 ~ 69</td> <td>S1 ~ S41</td> <td>X ~ Z + 2,</td> </tr> <tr> <td>SECAM B/G</td> <td>CCIR</td> <td>2 ~ 12</td> <td>21 ~ 69</td> <td>S1 ~ S41</td> <td>X ~ Z + 2,</td> </tr> <tr> <td>PAL D/K</td> <td>CHINA</td> <td>1 ~ 12</td> <td>13 ~ 57</td> <td>Z-1 ~ Z-35</td> <td></td> </tr> <tr> <td>PAL I</td> <td>UK</td> <td></td> <td>21 ~ 69</td> <td></td> <td></td> </tr> <tr> <td>SECAM D/K</td> <td>OIRT</td> <td>1 ~ 12</td> <td>21 ~ 69</td> <td>X-1 ~ X-19</td> <td></td> </tr> <tr> <td>SECAM L FRANCE/CCIR</td> <td>FB ~ F6</td> <td></td> <td>21 ~ 69</td> <td>X ~ Z + 2</td> <td>S1 ~ S41</td> </tr> </tbody> </table> <p>PAL, SECAM 50 Hz/60 Hz (For Video Disk play back) 4.43 NTSC (For VCR playback), 3.58 NTSC (For VCR playback)</p>	System	Channel	VHF	UHF	CATV		PAL B/G	CCIR	2 ~ 12	21 ~ 69	S1 ~ S41	X ~ Z + 2,	SECAM B/G	CCIR	2 ~ 12	21 ~ 69	S1 ~ S41	X ~ Z + 2,	PAL D/K	CHINA	1 ~ 12	13 ~ 57	Z-1 ~ Z-35		PAL I	UK		21 ~ 69			SECAM D/K	OIRT	1 ~ 12	21 ~ 69	X-1 ~ X-19		SECAM L FRANCE/CCIR	FB ~ F6		21 ~ 69	X ~ Z + 2	S1 ~ S41
System	Channel	VHF	UHF	CATV																																							
PAL B/G	CCIR	2 ~ 12	21 ~ 69	S1 ~ S41	X ~ Z + 2,																																						
SECAM B/G	CCIR	2 ~ 12	21 ~ 69	S1 ~ S41	X ~ Z + 2,																																						
PAL D/K	CHINA	1 ~ 12	13 ~ 57	Z-1 ~ Z-35																																							
PAL I	UK		21 ~ 69																																								
SECAM D/K	OIRT	1 ~ 12	21 ~ 69	X-1 ~ X-19																																							
SECAM L FRANCE/CCIR	FB ~ F6		21 ~ 69	X ~ Z + 2	S1 ~ S41																																						
<b>Intermediate Frequencies:</b>	<p>Picture I-F carrier frequency ..... 38.9 MHz (L VL) Sound I-F carrier frequency B/G System ..... 33.4 MHz D/K System ..... 32.4 MHz</p>																																										
<b>Picture Tube:</b>	28 inches, W66ESF002X44, 660 mm (measured on diagonal of viewable picture area) 110° deflection																																										
<b>Sound Output:</b>	10 W + 10W (at 10% Distortion, Main), 5 W + 5W (at 10% Distortion, Center) 13W (at 10% Distortion, Woofer), 10 W + 10W (at 10% Distortion, Surround)																																										
<b>Speakers:</b>	60 mm x 120 mm oval, 2 pcs (Main) 100 mm, round, 1 pc (Woofer) 60mm x 120 mm oval, 2 pcs (Center)																																										
<b>Aux. Terminals:</b>	21 pin socket (FULL), 21 pin socket (S-VIDEO/AV), MONITOR OUTPUT, STEREO HEADPHONE JACK (3.5mm).																																										
<b>Cabinet:</b>	Table type																																										
<b>Dimensions:</b>	Height ..... 514 mm Width ..... 812 mm Depth ..... 518.5 mm																																										
<b>Mass:</b>	35.8 kg																																										

Specifications are subject to change without notice.

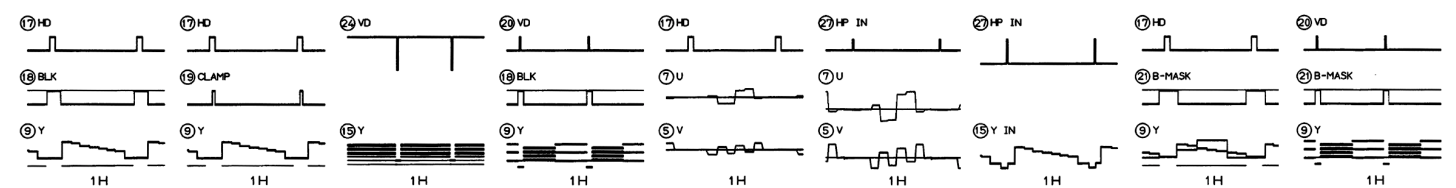


## YUV-SW Diagram

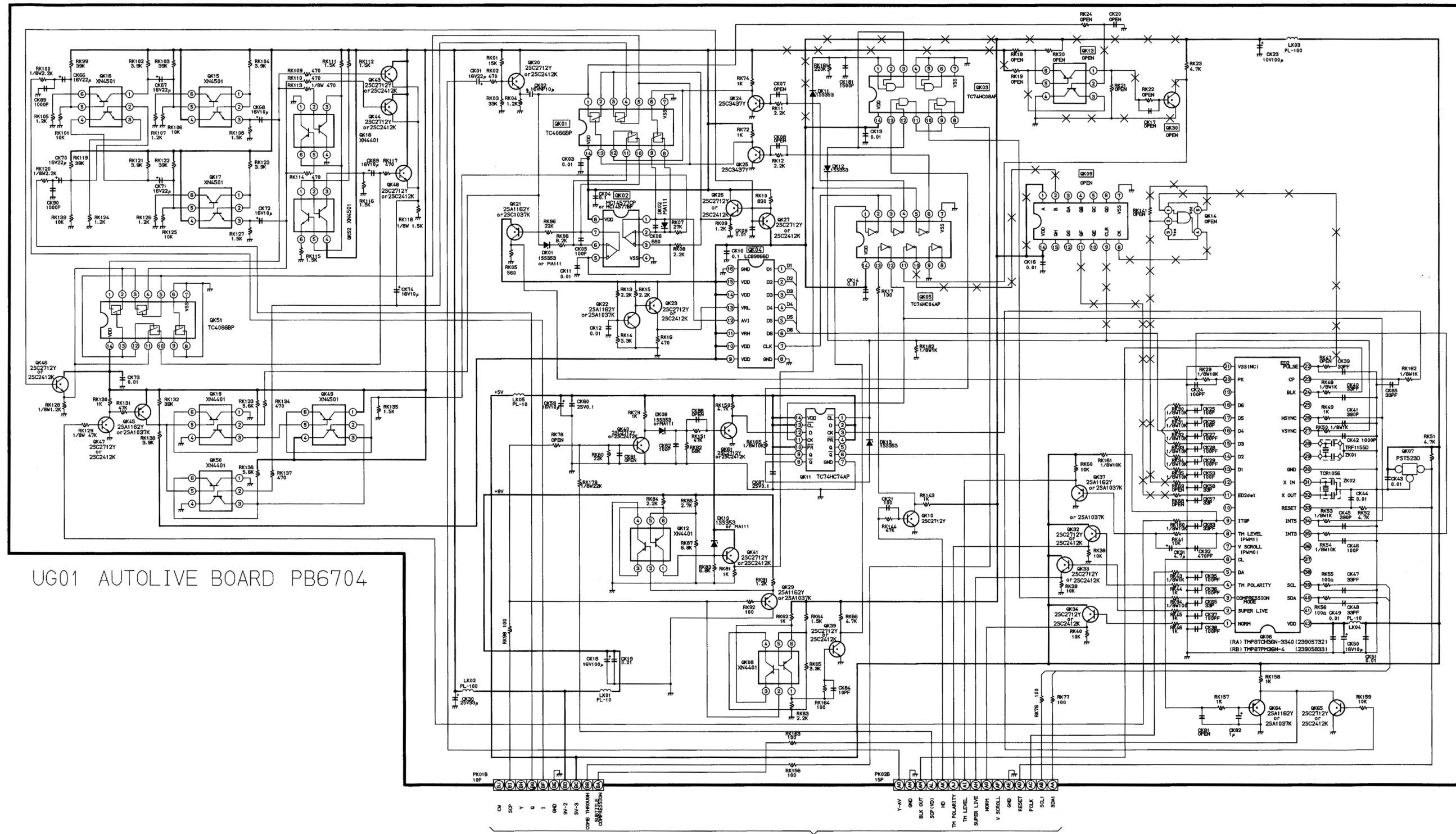
U906C YUV-SW PB7213Z-3 (28MW7DB)  
PB7213Y-3 (28MW7DG)



## Waveforms



## Autolive Diagram



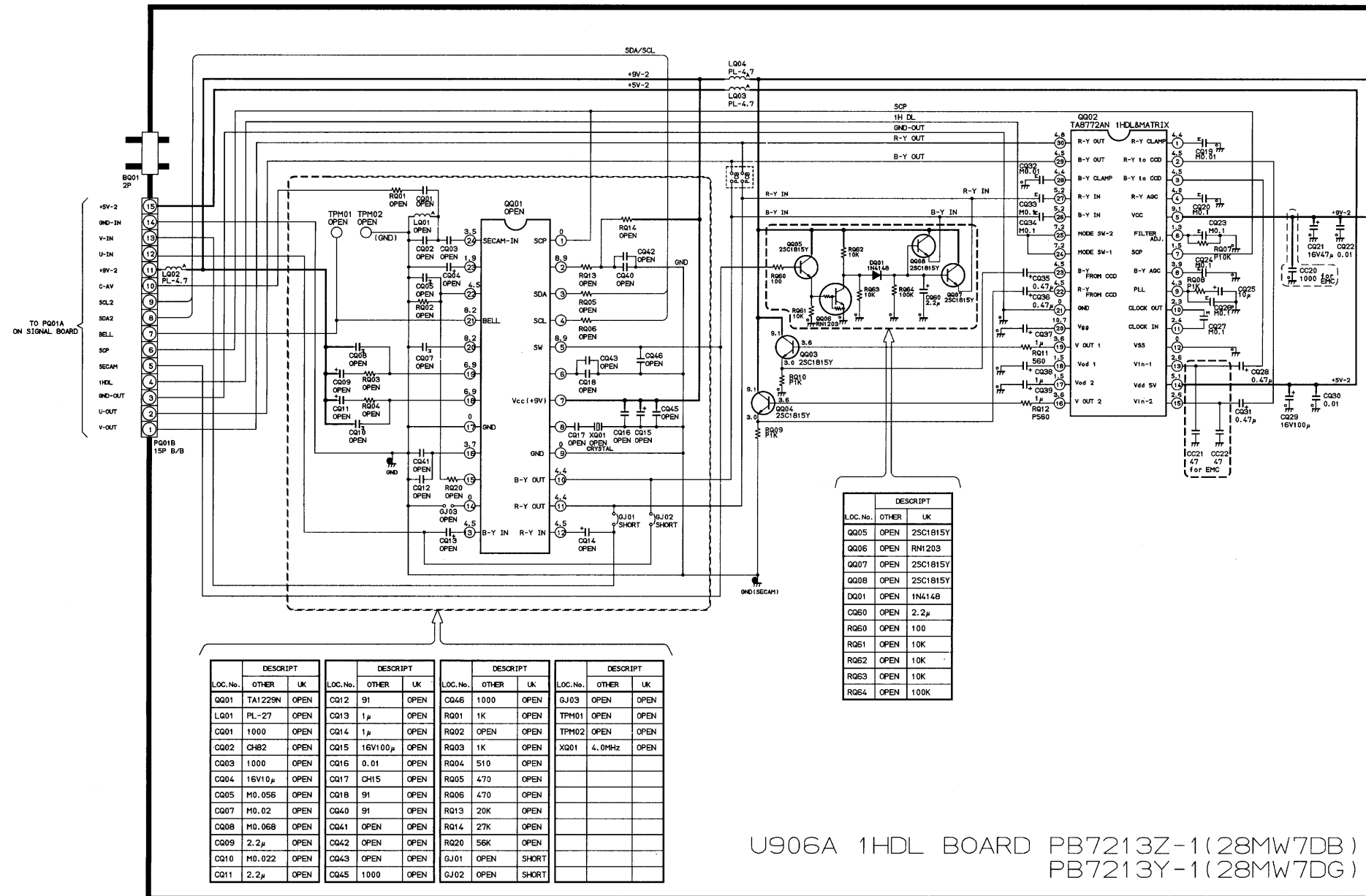
UG01 AUTOLIVE BOARD PB6704

PK010 10P  
 COM SUP GND IN-2 IN-3  
 COM THROUGH CONNECTION  
 PK020 13P  
 TH LEVEL SUPP LIVE INRNR V SERIAL GND RESET POLK SCL1 SDA1

TO PK01A/PK02A  
AL CIRCUITO SIGNAL



## 1HDL Board Diagram

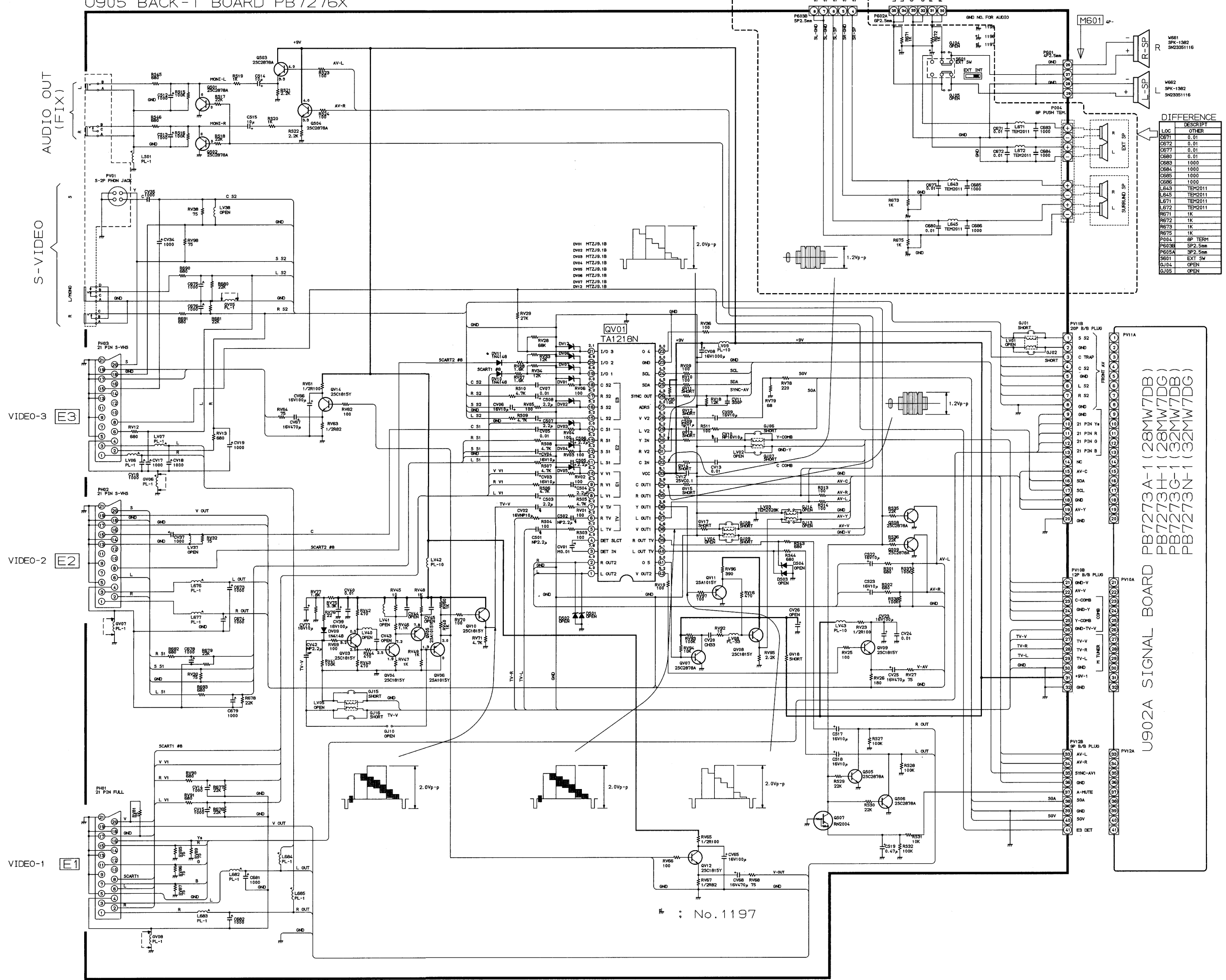


U906A 1HDL BOARD PB7213Z-1(28MW7DB)  
PB7213Y-1(28MW7DG)

# TOSHIBA 28MW7 DB

## Back-T Board Diagram

U905 BACK-T BOARD PB7276X

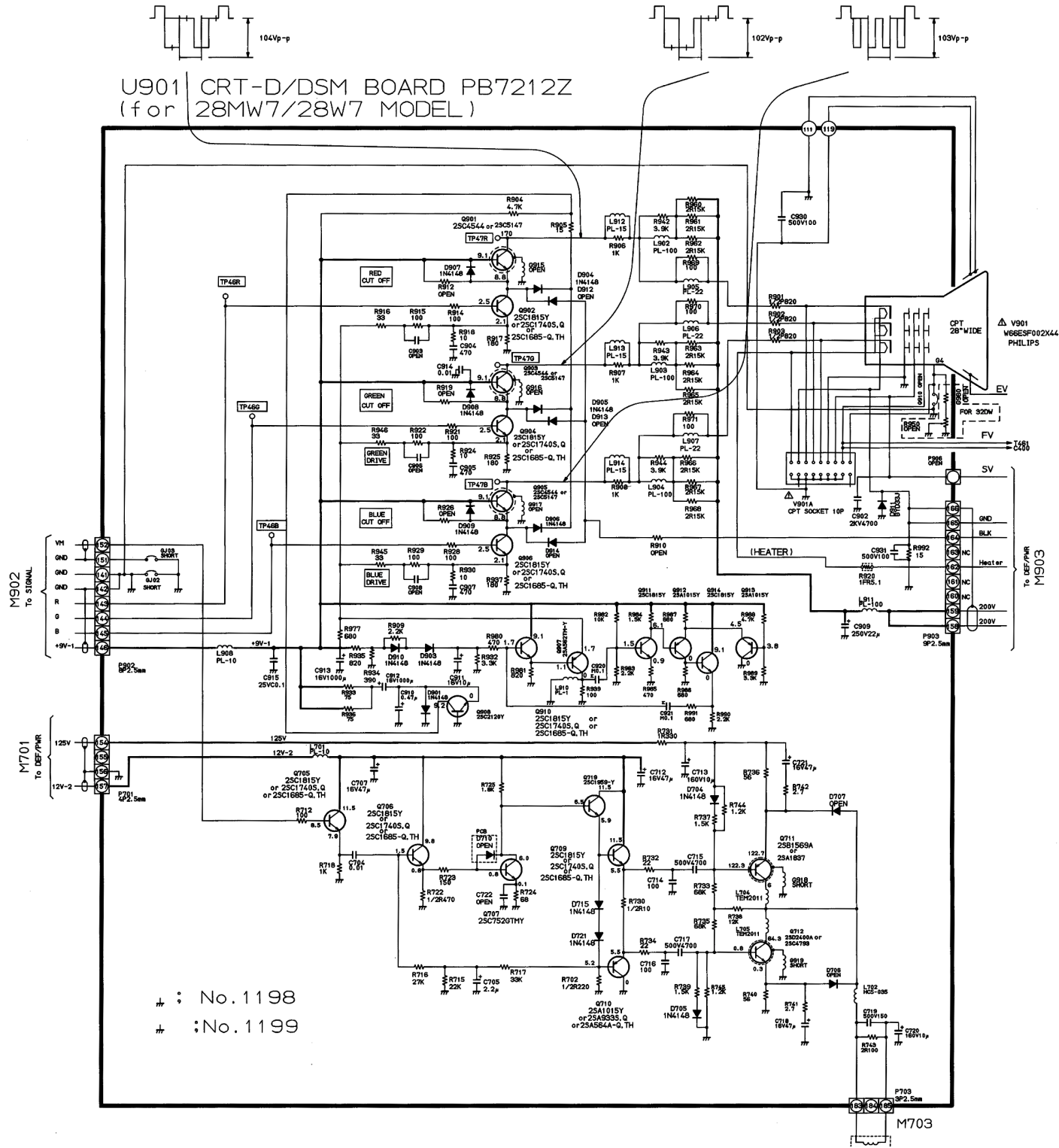


DIFFERENCE

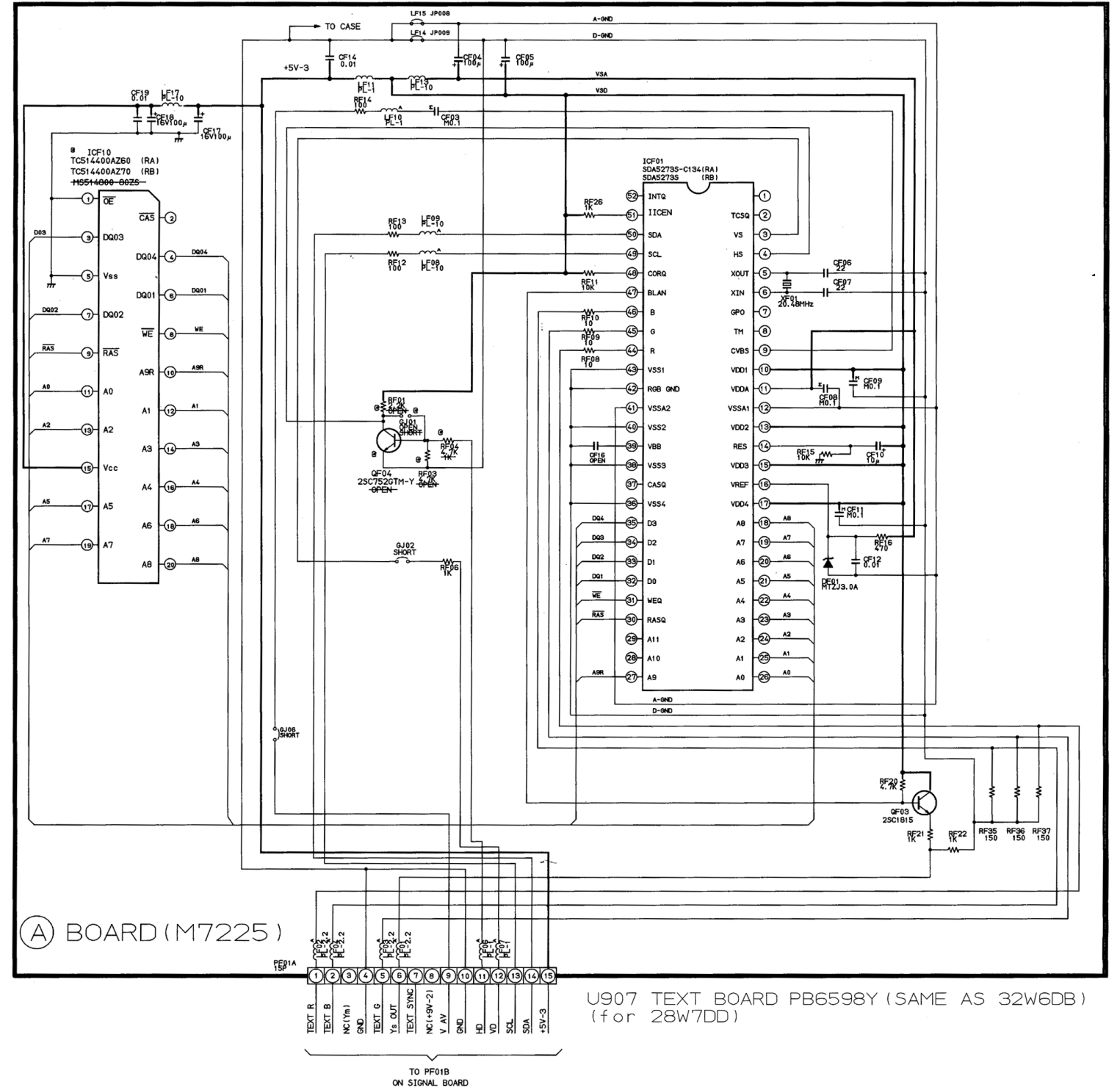
LOC	DESCRIPTION
C871	0.01
C872	0.01
C877	0.01
C880	0.01
C883	1000
C884	1000
C885	1000
C886	1000
L843	TEH2011
L845	TEH2011
L871	TEH2011
L872	TEH2011
R871	1K
R872	1K
R873	1K
R875	1K
P004	6P TERM
P605A	SP2.5mm
S601	EXT SW
GJ04	OPEN
GJ05	OPEN

U902A SIGNAL BOARD  
 PB7273A-1 (28MW7DB)  
 PB7273H-1 (28MW7DG)  
 PB7273G-1 (32MW7DB)  
 PB7273N-1 (32MW7DG)

## CRT Diagram



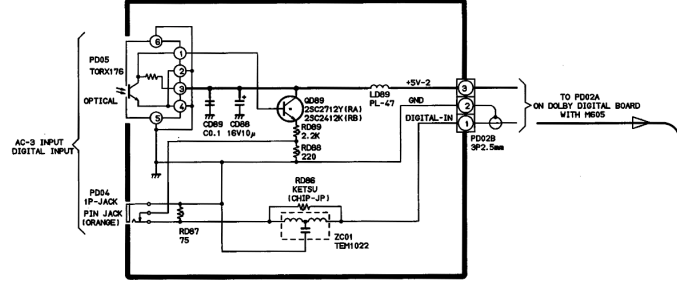
## Text Diagram



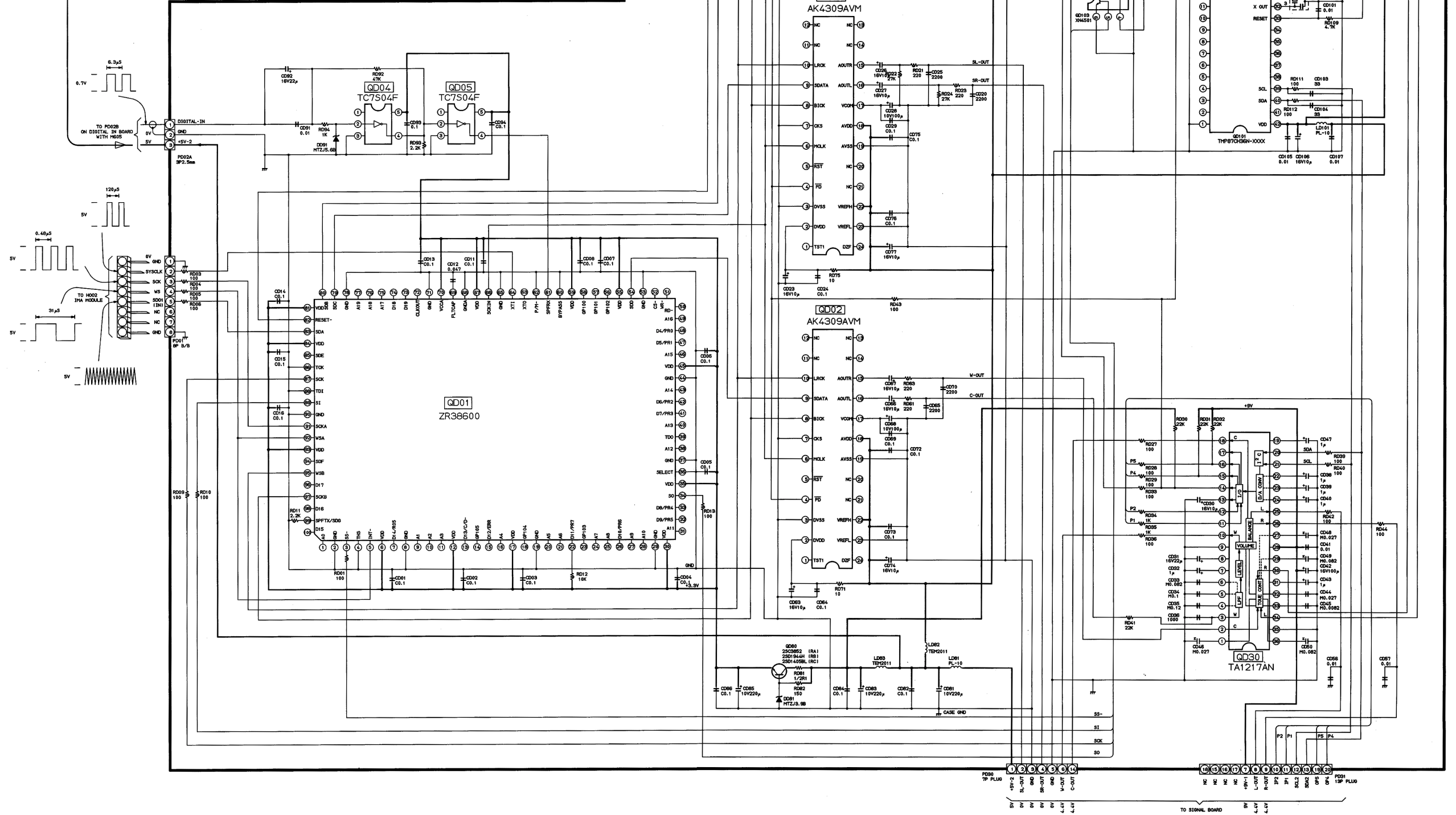
# TOSHIBA 28MW7 DB

## Dolby Diagram

U102B DIGITAL-INPUT BOARD PB7325X-2  
(for 28MW7DB/DG and 32MW7DB/DG)



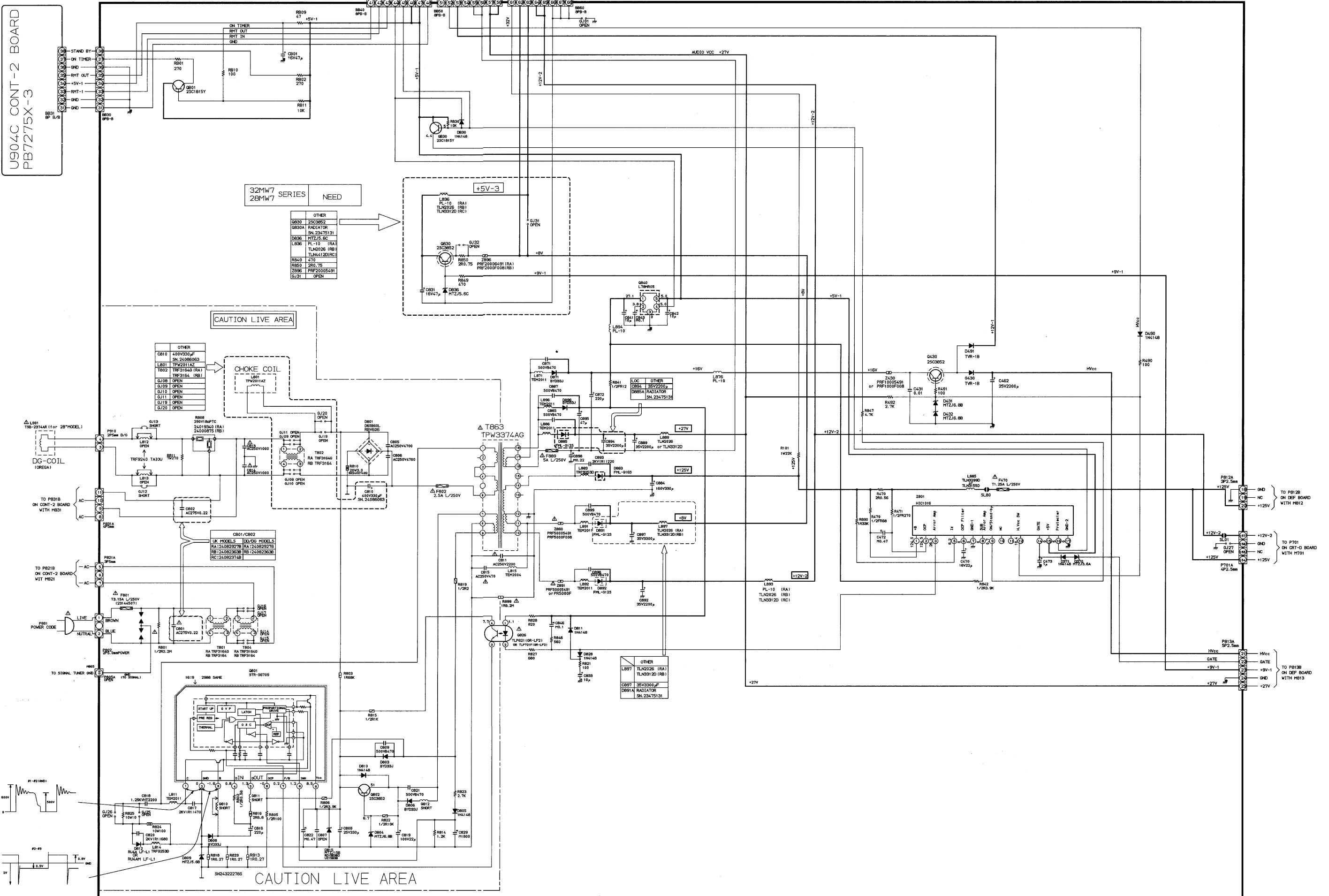
U102A DOLBY-DIGITAL (AC-3) PB7325X-1  
(for 28MW7DB/DG and 32MW7DB/DG)



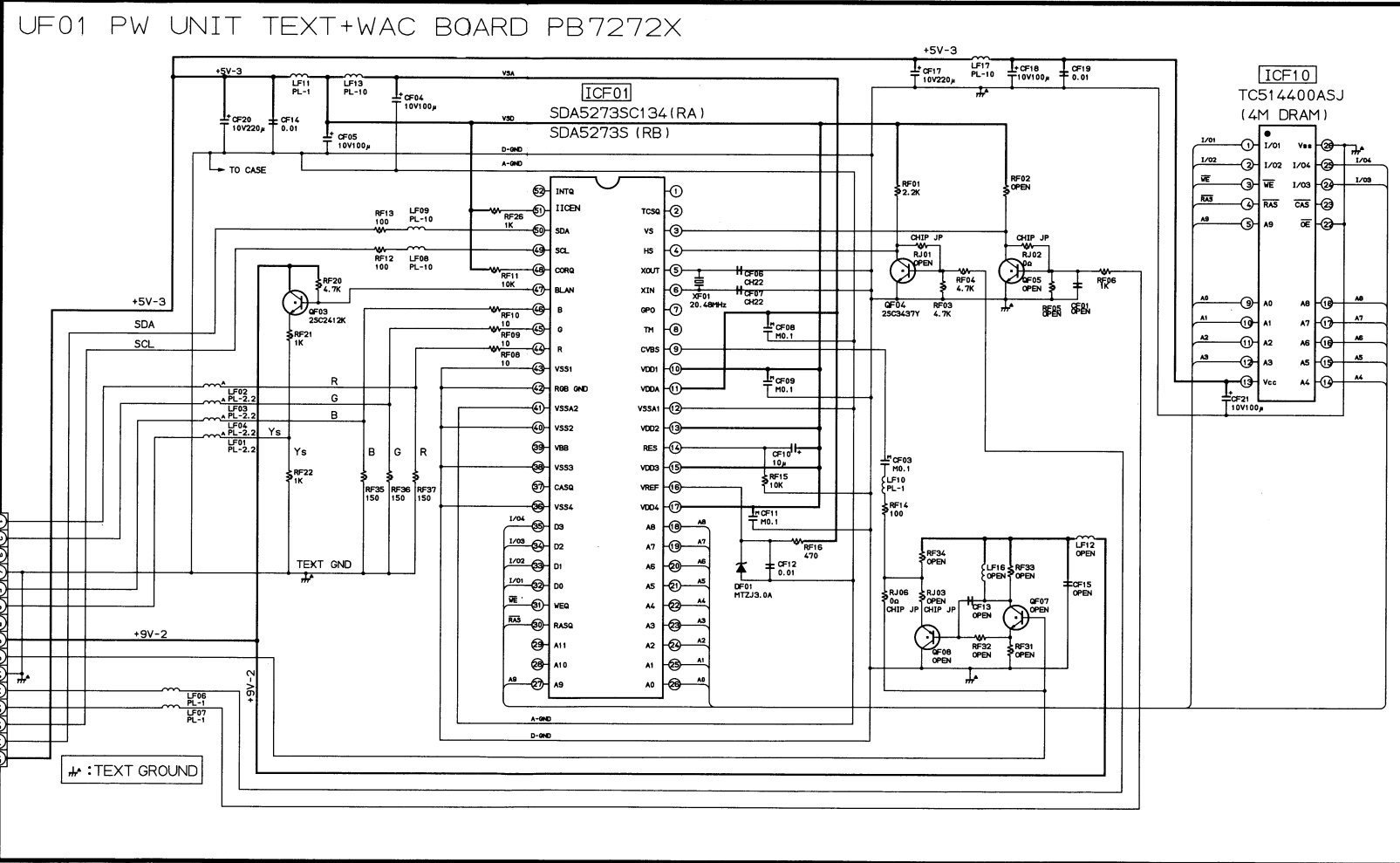
U903 POWER BOARD  
PB7274A (28MW7DB)  
PB7274H (28MW7DG)

U902A SIGNAL BOARD  
PB7273A-1 (28MW7DB)  
PB7273H-1 (28MW7DG)

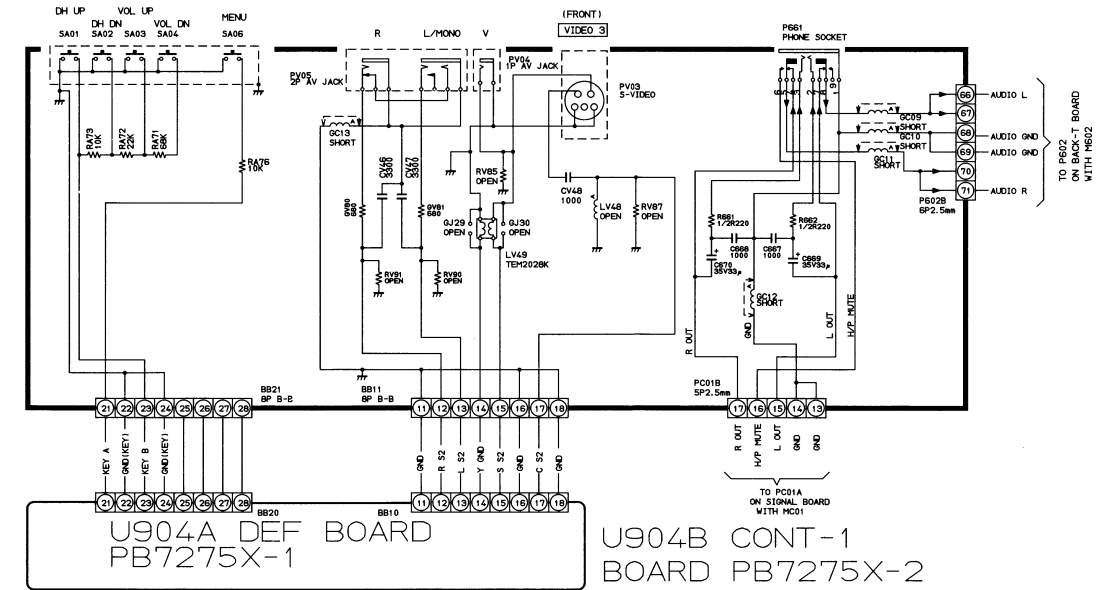
U904C CONT-2 BOARD  
PB7275X-3



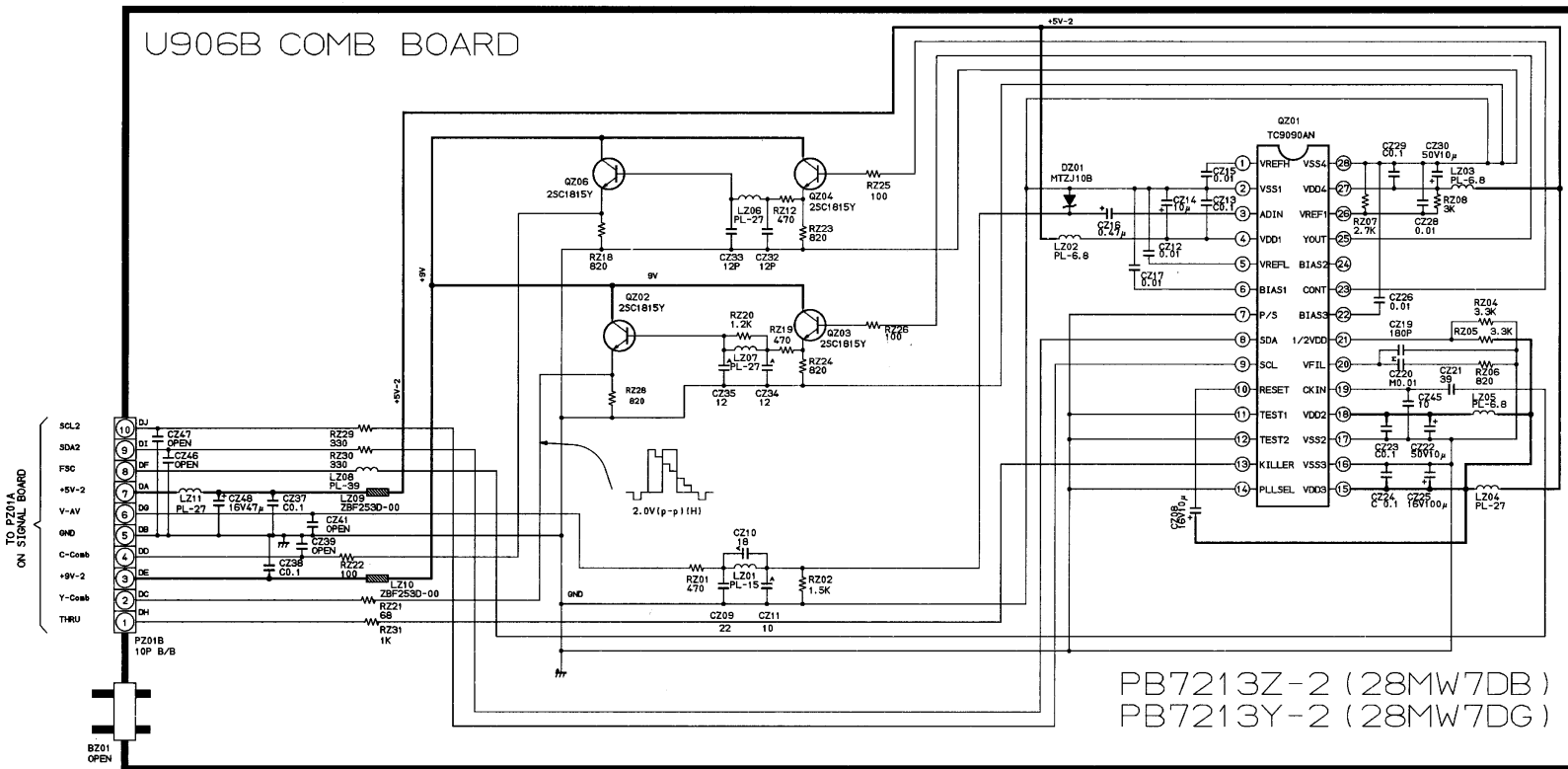
## Text WAC Diagram



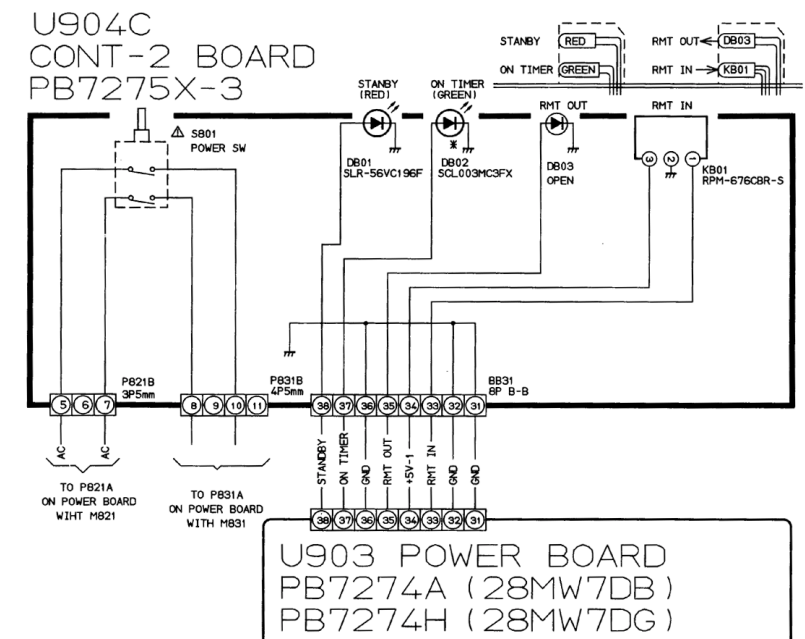
## Cont-1 Board Diagram



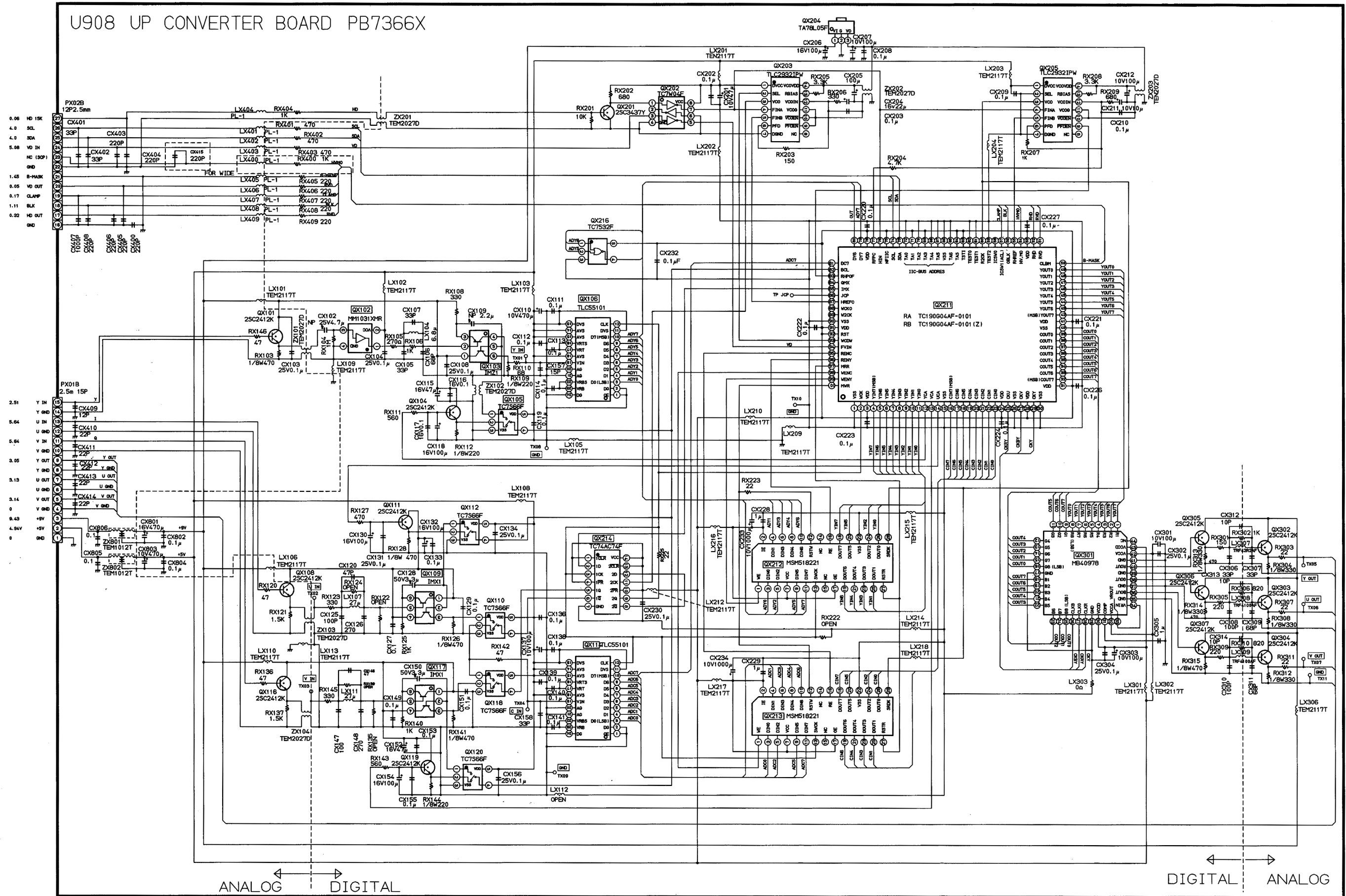
## Comb Board Diagram



## Cont-2 Board Diagram



## Up Converter Diagram

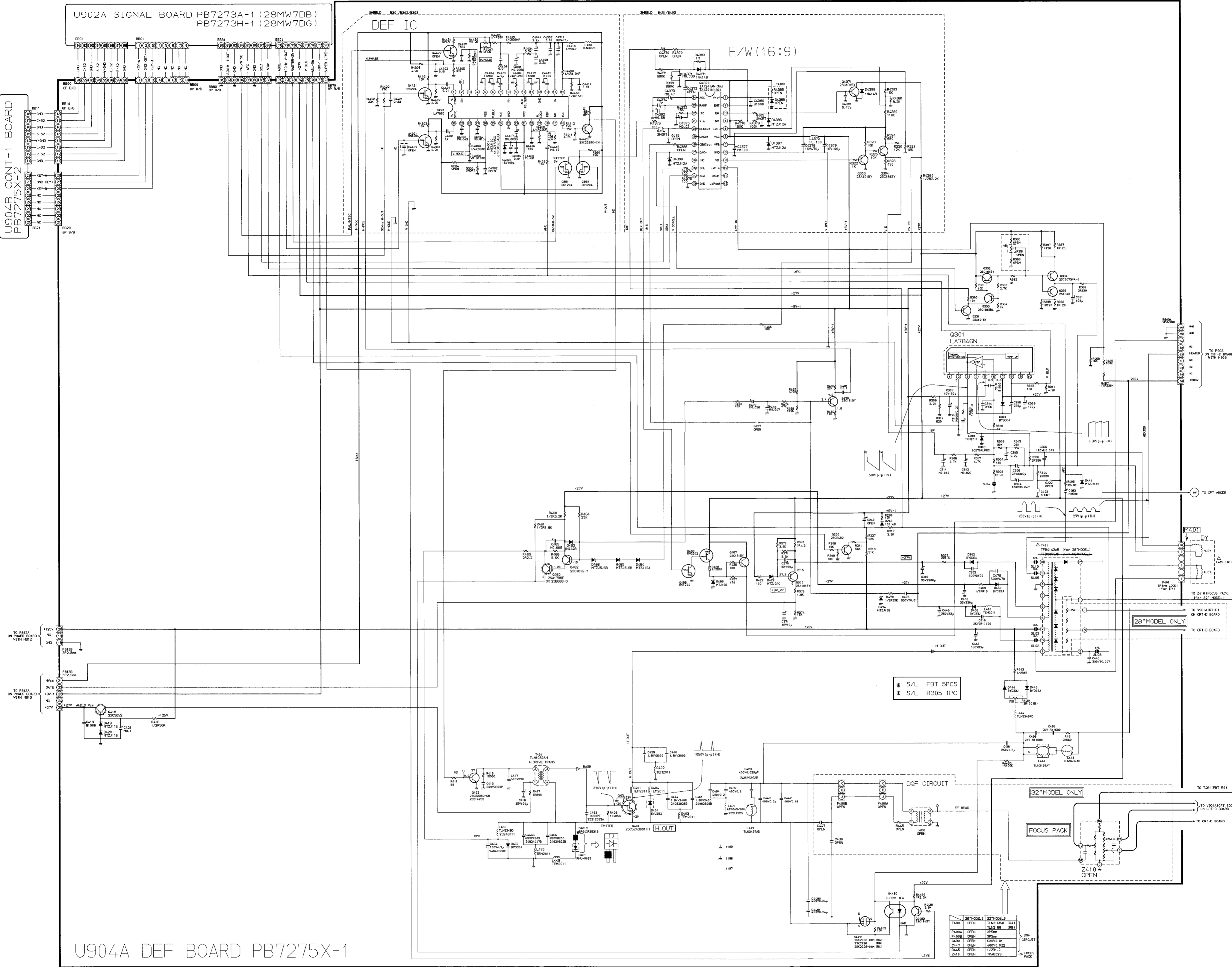


U902A SIGNAL BOARD PB7273A-1 (28M7DB)  
PB7273H-1 (28M7DG)

U904B CONT-1 BOARD  
PB7275X-2

DEF IC

E/W (16:9)



\* S/L FBT 5PCS  
\* S/L R305 1PC

28" MODEL S	32" MODEL S	Notes
T400	OPEN	TL4218H (R1)
F400A	OPEN	TL4218H (R1)
F400B	OPEN	3P5mm
C430	OPEN	830V 0.1
C447	OPEN	450V 0.22
R445	OPEN	1/2W 1.2
Z410	OPEN	TP48229

TO OPT ANODE  
TO P805 HEATER ON CRT-D BOARD WITH H003  
TO P805 HEATER ON CRT-D BOARD WITH H003  
TO Z410 FOCUS PACK (IF 32" MODEL)  
TO V901A (RT-D) ON CRT-D BOARD  
TO CRT-D BOARD  
TO T451 (FBT 5P)  
TO V911A (RT-SOCKET) ON CRT-D BOARD  
TO CRT-D BOARD  
TO FOCUS PACK

U904A DEF BOARD PB7275X-1



U902A SIGNAL BOARD  
PB7273A-1 (28MW7DB)  
PB7273H-1 (28MW7DG)

U906B D-COMB UNIT PB7213Z-2

U905A SECAM+HDL UNIT PB7213Z-1

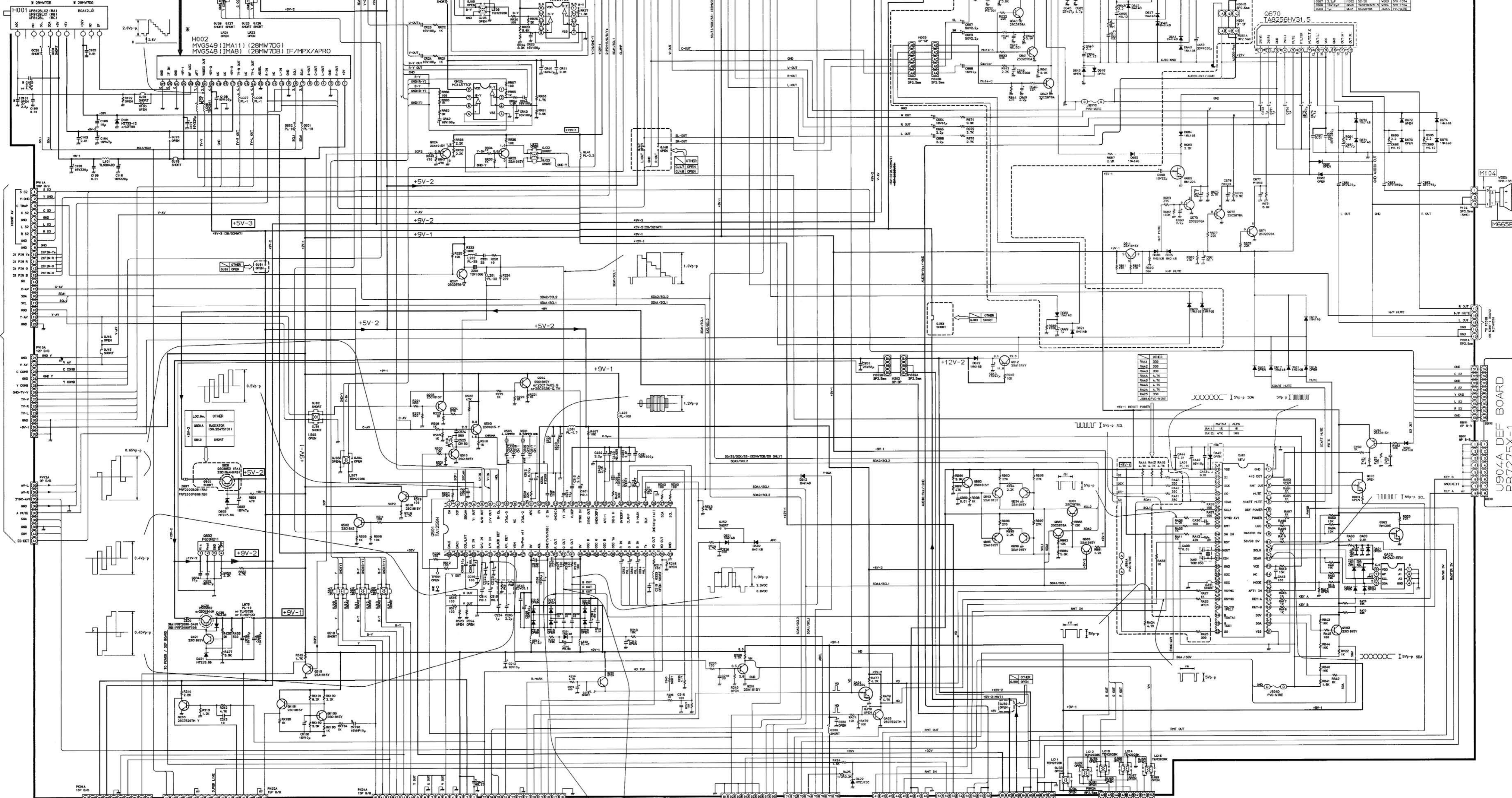
U906C YUV-SW BOARD PB7213Z-3

U102 DOLBY-DIGITAL (AC-3) UNIT PB7325X

U907 TEXT BOARD PB659BY (SAME AS 32W6DB)

U905 BACK-T PB7276X

	28MW7DB	28MW7DG	28MW7DB	28MW7DG
H002	SHRT	SHRT	SHRT	SHRT
H011	SHRT	SHRT	SHRT	SHRT
AC-3/PRO	AC-3	AC-3	AC-3	AC-3
OC2	SHORT	FL-1	SHORT	FL-1
OC3	SHORT	FL-1	SHORT	FL-1
OC4	OPEN	2.2p	OPEN	2.2p
CH3	2.2p	4.7p	2.2p	4.7p



1196  
1197

TO BACK TERMINAL BOARD

U904A DEF BOARD  
PB7275X-1

UG01 AUTO LIVE UNIT PB6704

U101 (SAME AS 2878DG)  
UP CONVERTER UNIT PB7103X

U904A DEF BOARD PB7275X-1

U903 POWER BOARD PB7274H (28MW7DG)  
PB7274A (28MW7DB)

TO PWB ON CRT-2 BOARD WITH INDEX