

**TOSHIBA**

FILE NO. 060-200329

SERVICE MANUAL

# Color Television

S3ES Chassis

***25CSZ5TR***  
***25SZ5ST***  
***25SZ5VX***

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### 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 (A) kV at zero beam current (minimum brightness) under a (C) V AC power source. The high voltage must not, under any circumstances, exceed (B) 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 (A), (B) & AC voltage (C).  
(See SETTING & ADJUSTING DATA on page 15)

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

2. Mounting position of the purity magnet assembly should fit to same position as old one because slightly difference to the position depend on a kind of tube.

\* 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.

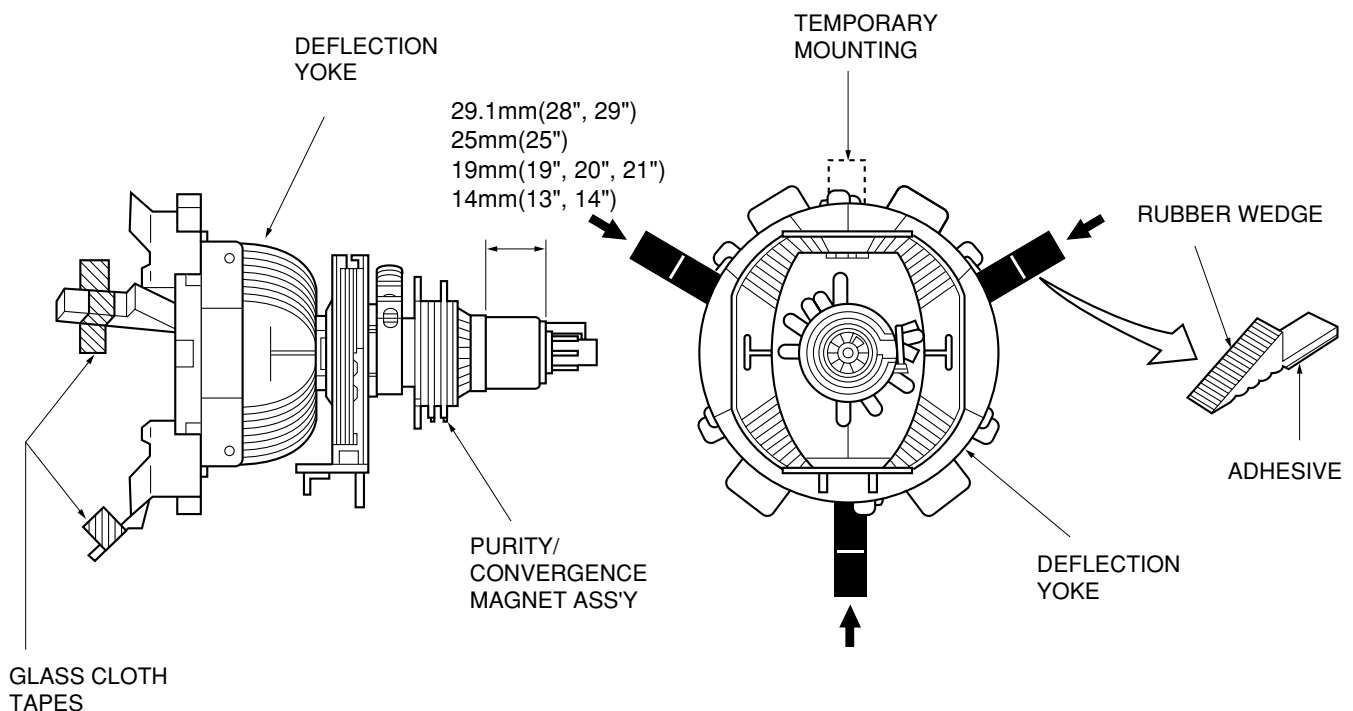


Figure 1.

**CONVERGENCE ADJUSTMENTS**

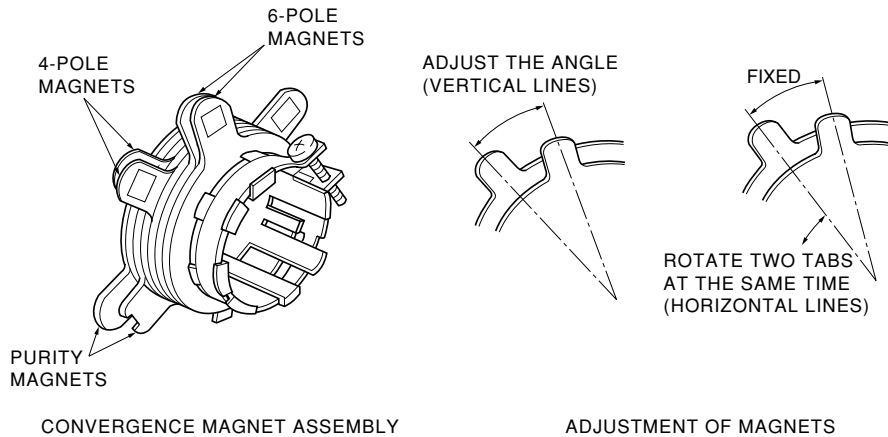
**NOTE:** Before attempting any convergence adjustments, the receiver should be operated for at least fifteen minutes.

■ **CENTER CONVERGENCE ADJUSTMENT**

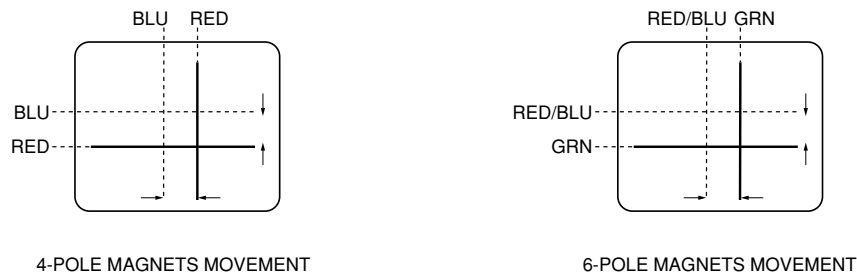
1. Use the cross-dot pattern from among the built-in test signals.
2. Set the brightness and contrast for well defined pattern.
3. Adjust two tabs of the 4-Pole Magnets to change the angle between them (See figure 2.) and superimpose red and blue vertical lines in the center area of the picture screen.
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**

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

## SET-UP ADJUSTMENT (FOR FLAT TUBE)

■ 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 :

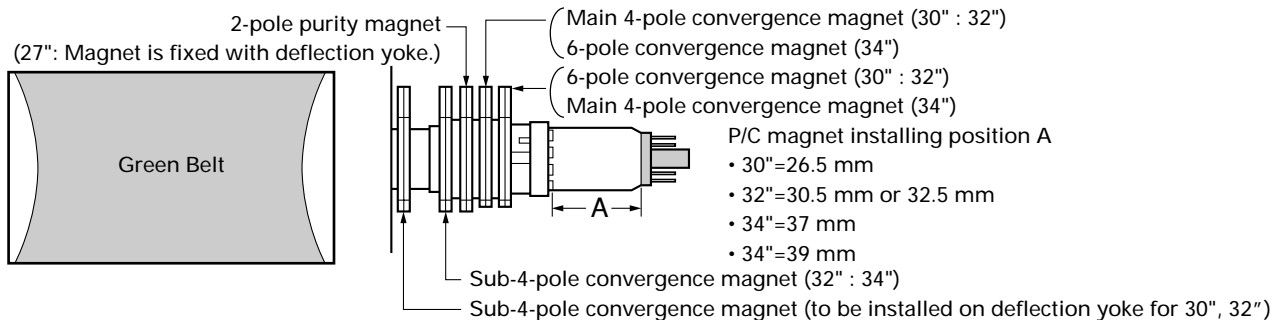
1. Color Purity
2. Convergence
3. White Balance

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

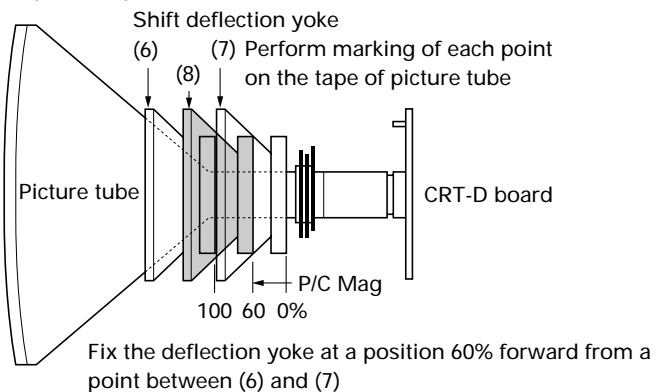
### COLOR PURITY ADJUSTMENT

- (1) Let the screen face in the installing direction or toward the east (when it is to be moved), bring up the service mode screen after demagnetizing (front, left, right, and top) with the degaussing coil, receive white signals by pressing the [TV/VIDEO] button, and then the receiver should be operated for more than 40 minutes.
- (2) Perform rough adjustment of the central convergence with the P/C magnet according to the adjustment item.
- (3) Receive built-in green signals, loosen set screws on the deflection yoke, remove rubber wedges, and shift the deflection yoke toward front.
- (4) Move alternately the two 2-pole magnets of the P/C magnets so that the green raster can come to the center of the screen.

Figure 1.



- (5) Receive built-in red and blue signals, check that there is no inclination of the single color raster toward one side, and if each color tilts to a great extent, make adjustment with the 2-pole magnet so that the 3 colors will come to the center evenly.
- (6) Receive the green raster, shift the deflection yoke from a foremost position (hitting against the picture tube) to a backward position horizontally, stop the deflection yoke at a position where it begins to become a green raster, and perform accurate marking on the picture tube.
- (7) Shift the deflection yoke further backward, and perform accurate marking at a position where the green raster begins to be off.
- (8) Fix the deflection yoke at a position 60% forward within the range marked in items (6) and (7) above.



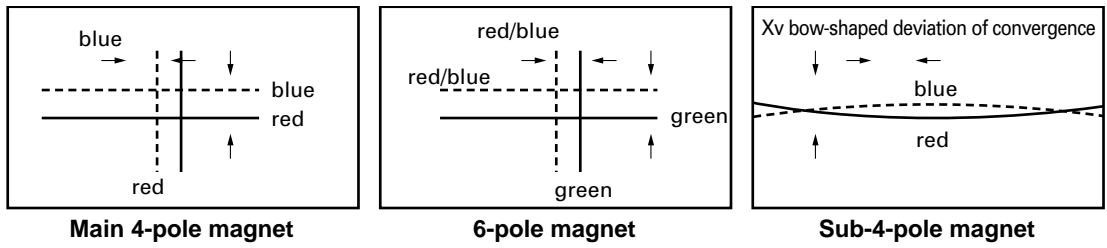
### CONVERGENCE ADJUSTMENTS

\* Adjust the convergence magnet to get vest convergence in the the order to (1) ~ (5).

#### ■ CENTER CONVERGENCE:

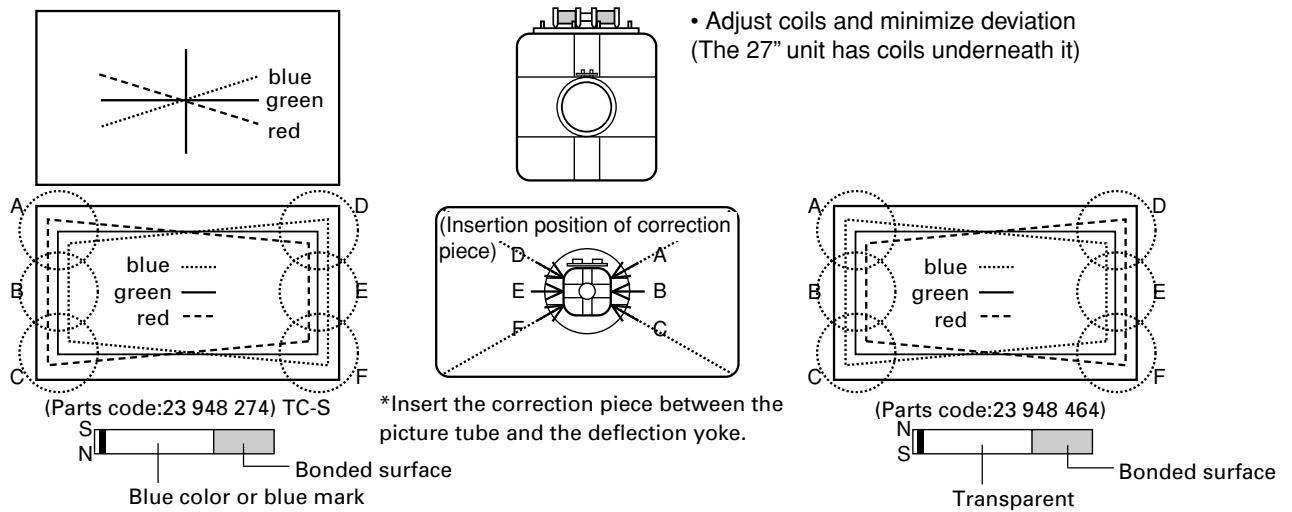
- (1) Receive the white crosshatch or dot pattern from the service signal generator.
- (2) Use the 2 pieces of main 4-pole magnets of P/C magnets, change the open angle, and align the red and blue vertical lines on the screen center.
- (3) Freeze the open angle of the main 4-pole magnets, turn them simultaneously, and align the horizontal lines.
- (4) Take the same steps for items (2) and (3) above and align red/blue with green on the screen center using two 6-pole magnets.

(5) Adjust the sub-4-pole magnets only in case there is any deviation of Xv bow-shaped convergence. (To be usually set at the initial position)  
Align both sides with the sub-4-pole magnets and minimize the deviation of blue and red with the main 4-pole magnets.

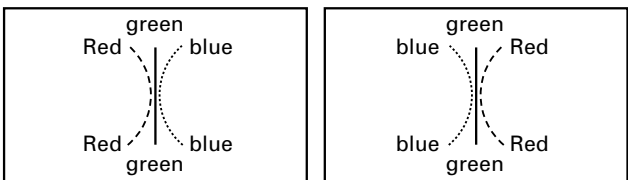


**■ CIRCUMFERENCE CONVERGENCE:**

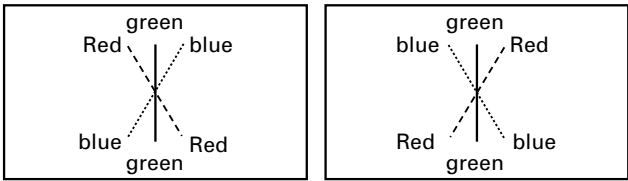
\* Perform correction in the following manner.



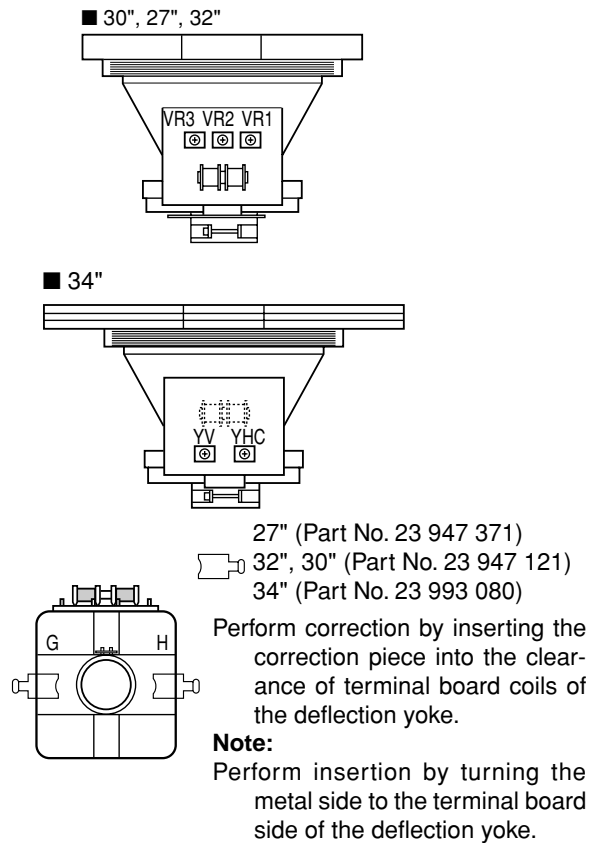
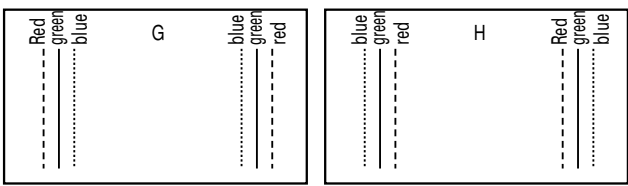
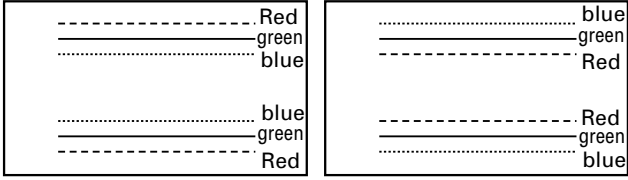
**Adjust VR 1 and minimize the deviation of YH. \*Only 27", 30" and 32".**



**Adjust VR 2 (YHC) and minimize the deviation of YH.**






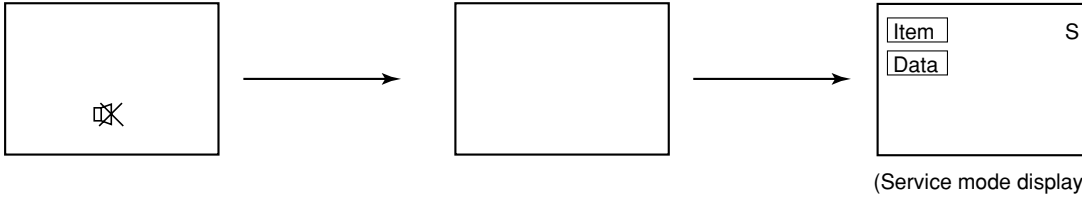
**Adjust VR 3 (YV) and minimize the deviation of YV.**



## SERVICE MODE

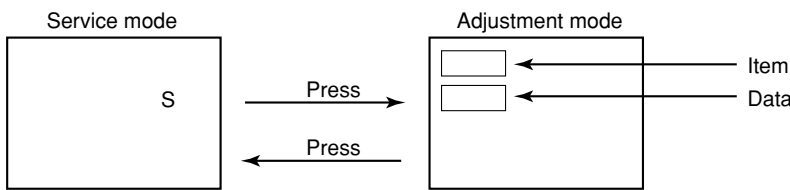
### 1. ENTERING TO SERVICE MODE

- 1) Press  button once on Remote Control.
- 2) Press  button again to keep pressing.
- 3) While pressing the  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 :	- / - button (on Remote) or  button (on TV)
Test signal selection :	 button (on Remote)
Selection of the adjustment items :	Channel  /  (on TV or Remote)
Change of the data value :	Volume  +/- (on TV or Remote)
Adjustment menu mode ON/OFF :	MENU button (on TV)
Initialization of the memory (QA02) :	CALL + Channel button on TV (  )
Reset the count of operating protect circuit to "00" :	CALL + Channel button on TV (  )
"RCUT" selection :	1 button
"GCUT" selection :	2 button
"BCUT" selection :	3 button
"CNTX" (or "SCNT") selection :	4 button
"COLC" selection :	5 button - - - - Color thickness correction
"TNTC" selection :	6 button
Test audio signal ON/OFF (1kHz) :	8 button
Self diagnostic display ON/OFF :	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.

\* The key function marked with   are not usable to control in the Test signal for some model.



#### 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 15)

#### 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

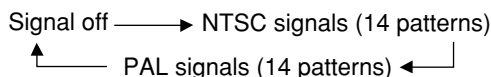
After replacing QA02, the following initialization is required.

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.

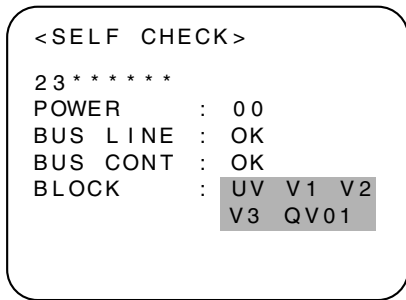


Signals	Picture
<ul style="list-style-type: none"> <li>• Red raster</li> <li>• Green raster</li> <li>• Blue raster</li> <li>• All Black</li> <li>• All White</li> </ul>	
<ul style="list-style-type: none"> <li>• Black &amp; White</li> </ul>	
<ul style="list-style-type: none"> <li>• Black cross-bar</li> <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.



- ① Part number of microprocessor (QA51)
- 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○○○ 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)  
V3 : VIDEO 3 input mode (←3)

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

- Green : Normal  
Red : The microprocessor 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.

**NOTE:** Component which controls character display on screen is QT01 (TELETEXT IC.). If this display function fails to operate due to damage in QA51, self diagnosis procedure is as follows.

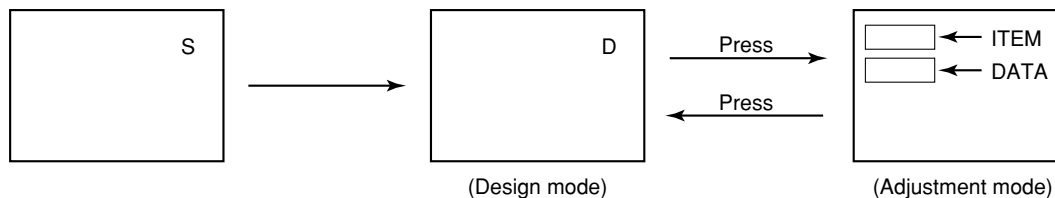
- (1) In case that power indicator is blinking with interval of 0.5 seconds; it means protecting circuit (Current limiter) is operating, and circuit components may possibly be damaged. Check related components.
- (2) In case that power indicator is blinking with interval of 1 second; Protecting circuit 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 FUNCTION for some model.

# DESIGN MODE

## 1. ENTERING TO DESIGN MODE

- 1) Select the Service mode.
- 2) While pressing  $\text{☒}$  (or CALL) button on Remote and press MENU button on TV.
- 3) Press MENU button on TV.



When QA02 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

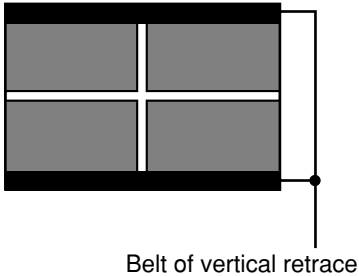
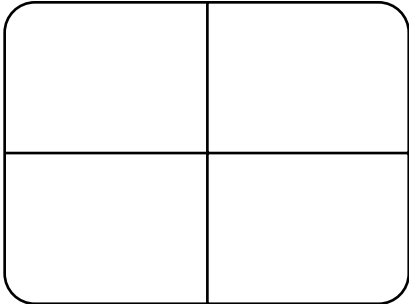
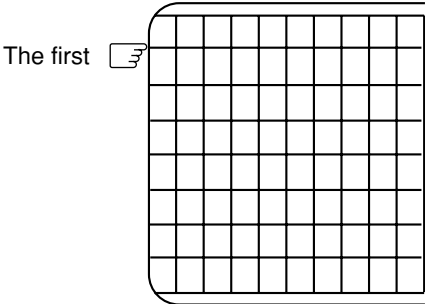
Every pressing of CHANNEL ▼ button in the design mode changes the adjustment items in the order of table-3. (▲ button for reverse order)




Refer to table-3 for data of design mode.  
(See SETTING & ADJUSTING DATA on page 15)

## 3. ADJUSTING THE DATA

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

## ELECTRICAL ADJUSTMENTS

ITEM	ADJUSTMENT PROCEDURE
<p>FOCUS VR ADJ</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>SUB-BRIGHTNESS (BRTC)</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>\triangle - / +</math> button to reduce the value so that white portion of inside pattern slightly light.</li> <li>4. Adjust <math>\triangle - / +</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.</li> </ol> <p>After that, return vertical height and contrast.</p> 
<p>HORIZONTAL POSITION ADJUSTMENT (HPOS)</p> <p>VERTICAL POSITION ADJUSTMENT (VPOS)</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, \blacktriangledown</math> buttons, and adjust horizontal or vertical picture position in the center of screen with VOLUME <math>\triangle - / +</math> buttons.</li> </ol> 
<p>VERTICAL AMPLITUDE ADJUSTMENT (HIT)</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, \blacktriangledown</math> buttons, and adjust vertical amplitude with VOLUME <math>\triangle - / +</math> buttons so that vertical amplitude lacks a little.</li> <li>3. Adjust vertical amplitude with VOLUME <math>\triangle - / +</math> buttons so that the first bar on cross-hatch signal touches edge of screen.</li> </ol> 

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  button on the remote control and rotate Screen VR to get one slight horizontal line on screen. Note: Every pressing of  button provides Horizontal line picture and Normal picture alternately.</li> <li>5. Press  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: 10px;"> <div style="border: 1px solid black; width: fit-content; margin: 0 auto; padding: 5px; text-align: center;">Light area check (to show white)</div> <div style="text-align: center; margin-top: 20px;">Dark area check (to show black)</div> </div>

NOTE: It is released built-in test pattern by changing the adjustment item for some model.

In this case, select the adjustment item with channel ▲▼ button first and then select the built-in test pattern with  button.

## 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 (B) kV.

Refer to table-1 for high voltage (B).  
(See SETTING & ADJUSTING DATA on page 15)

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 】

		25"
HIGH VOLTAGE AT ZERO BEAM:	(A)	32.8 kV
MAX HIGH VOLTAGE:	(B)	33.0 kV
AC VOLTAGE	(C)	110~240 V

Table-1

#### 【 SERVICE MODE 】

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

Item	Adjustment	Reference data
RCUT	R CUTOFF H	04H
GCUT	G CUTOFF H	04H
BCUT	B CUTOFF H	04H
RDRV	R DRIVE H	07H
GDRV	G DRIVE H	07H
BDRV	B DRIVE H	07H
BRTC	SUB BRIGHT CEN	80H
COLC	SUB COLOR CEN NTSC	80H
TNTC	SUB TINT CEN	40H
COLP	SUB COLOR CEN PAL	F6H
COLS	SUB COLOR CEN SECAM	F6H
SCNT	SUB CONTRAST	07H
HPOS	50Hz H-POSITION	12H
VPOS	V-POSITION	03H
HIT	HEIGHT	20H
VLIN	V-LINEARITY	07H
WID	PICTURE WIDTH	2CH
PARA	E-W PARABOLA	2BH
TRAP	TRAPEZIUM	0BH
BELL	SECAM BELL FILTER	01H
SRY	SECAM R-Y	08H
SBY	SECAM-B-Y	08H

Table-2

#### 【 DESIGN MODE 】

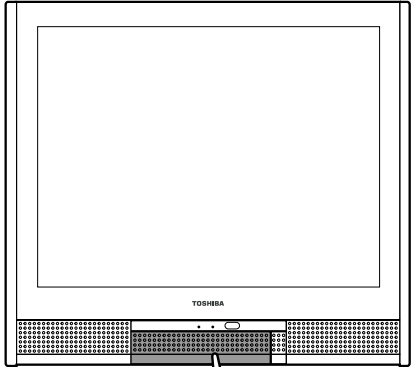
##### ADJUSTING ITEMS AND DATAS IN THE DESIGN MODE:

Item	Name of adjustment	Preset Data	Data	Remarks
OPT 1	OPTION 1	05H	22H	
OPT 2	OPTION 2	10H	1DH	

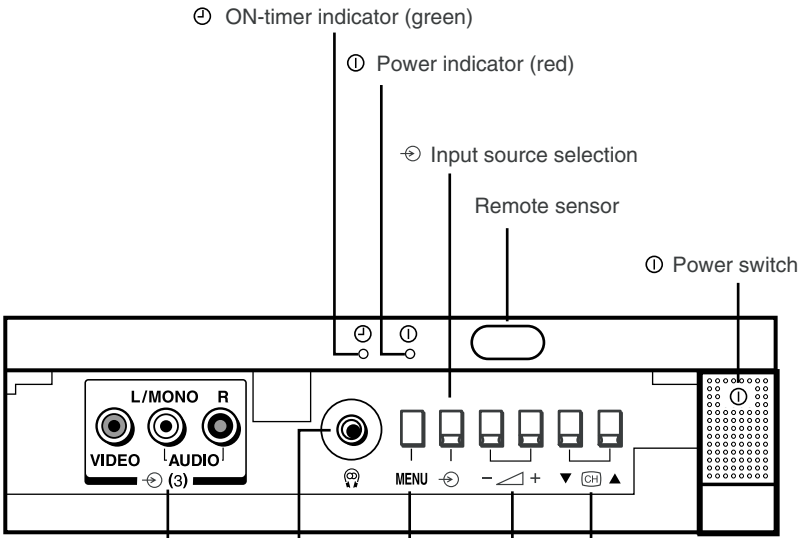
Table-3

# LOCATION OF CONTROLS

## Front



Behind the door



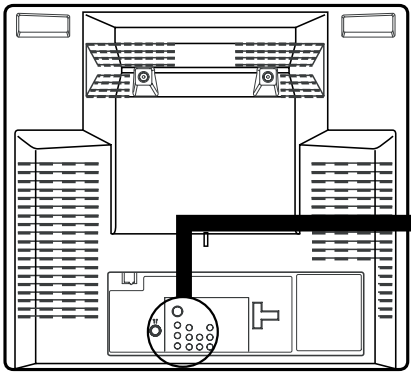
⓪ (3) Video 3 input terminals

Headphones jacks (ø3.5 mm)  
 For private listening, connect headphones. The sound from the speakers will be cut off automatically.

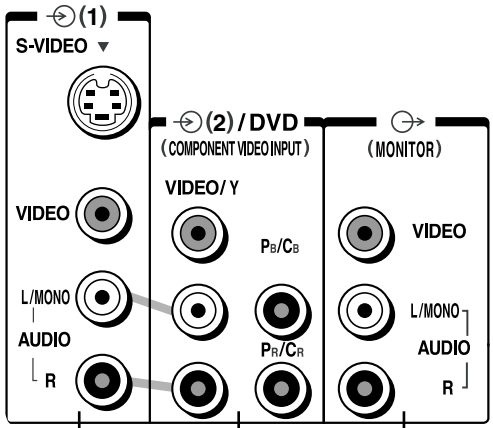
To adjust the volume, press the - / + buttons.

MENU  
 Channel select  
 Menu item select  
 - / +  
 Volume down/up  
 Menu item adjust

## Back



TΓ Aerial input



⓪ MONITOR output terminals

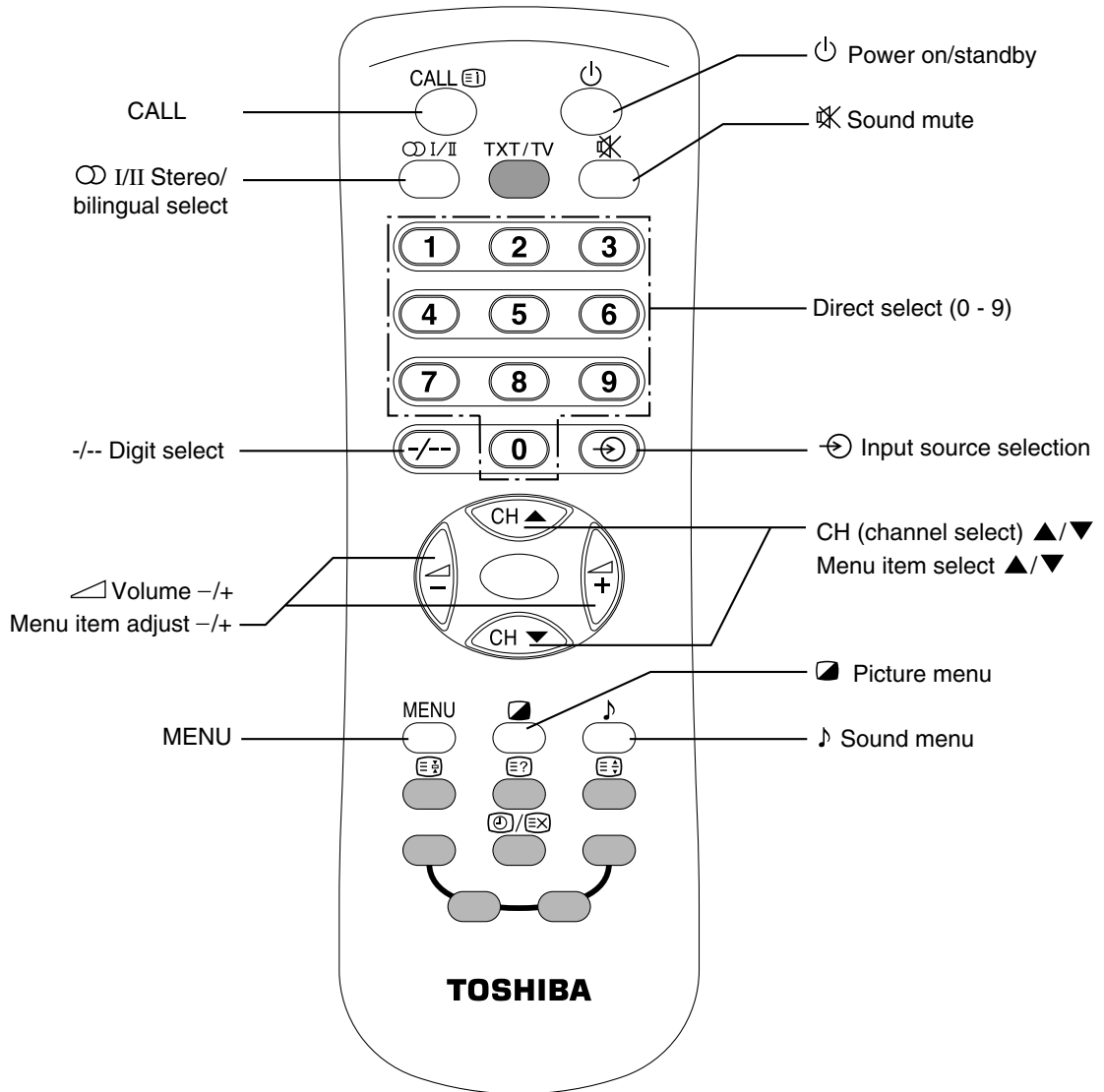
⓪ (2) DVD/Video 2 input terminals  
 COMPONENT VIDEO INPUT terminals

⓪ (1) Video 1 input terminals

SPECIFIC INFORMATIONS



## Remote control

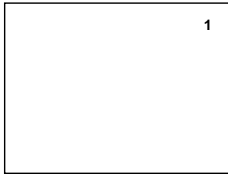
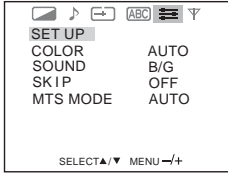
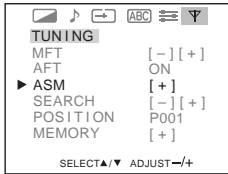
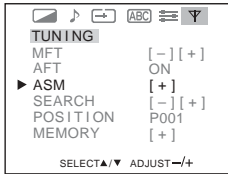
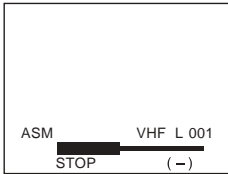


# PROGRAMMING CHANNEL MEMORY

- First, use the ASM (Automatic Search Memory) function to preset all active channels in your area automatically.  
Then, arrange the preset channels with the SEARCH, SKIP and MFT (Manual Fine Tuning) functions so that you can tune into only desired channels.
- Use the SEARCH function if desired channels cannot be preset with the ASM or if you would like to preset channels to specific position numbers one by one.

## To preset channels (ASM, SEARCH)

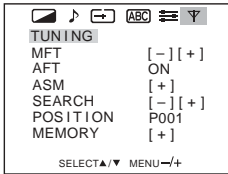
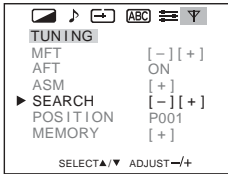
### To use the ASM function

- 1 Select the head of the position number to start the ASM with the CH ▲/▼ buttons or the digit/direct select (-/+, 0 – 9) buttons.
 
- 2 Press the **MENU** button and press the ▲ -/+ buttons to display the SET UP menu on the screen.
 
- 3 Confirm that “COLOR” is set to “AUTO” and “SOUND” is set to proper system. If not, press the CH ▲/▼ buttons to move the cursor (▶) to “COLOR” or “SOUND” and press the ▲ -/+ buttons to select each proper system.
 
- 4 Select the TUNING menu page, and move the cursor (▶) to “ASM”.
 
- 5 Press the ▲ + button to start the ASM. All active channels will be preset automatically. When presetting is complete, the initial position number will reappear. Press the ▲ - button to cancel ASM function.
 


### After presetting

- Check the preset channels by pressing the CH ▲/▼ buttons.
- If the picture or sound of a certain channel is not good, fine-tune the channel using the MFT function.
  - If the color of a certain channel is abnormal, automatic color system selection (AUTO) may malfunction, or sound system selection is wrong. In such a case, select another color and/or sound system.


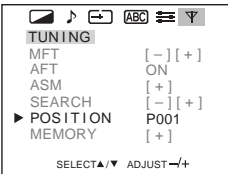
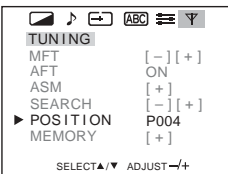
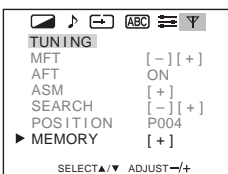
### To use the SEARCH function

- 1 Press the **MENU** button and press the ▲ -/+ buttons to display the TUNING menu on the screen.
 
- 2 Press the CH ▲/▼ buttons to move the cursor (▶) to “SEARCH”.
 
- 3 Press the ▲ -/+ buttons to start searching. The ▲ + button searches for the higher-numbered channels. Press the ▲ - button to cancel SEARCH function. The ▲ - button searches for the lower-numbered channels. Press the ▲ + button to cancel SEARCH function. Repeat this process until you can get the desired channel.
 

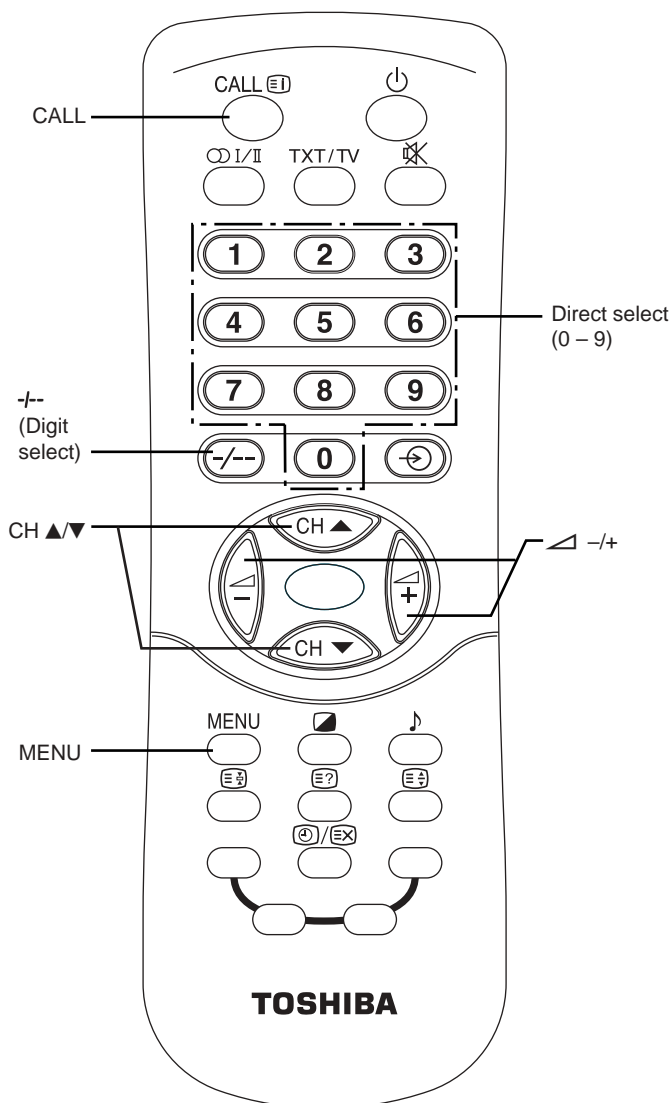
Ex. + button



Ex. - button


- 4 When the desired channel is shown, press the CH ▼ button to select “POSITION”.
 
- 5 Press the ▲ -/+ buttons repeatedly until the position number to be preset is shown.
 
- 6 When the desired program appears, press the CH ▲/▼ buttons to select “MEMORY”, then press the ▲ + button to memorize the channel at the current position.
 
- 7 When you program other channels, repeat steps 2 to 6.

## To preset channels (SKIP)



### To skip a position number

After presetting the channels, you may skip unnecessary position numbers so that only the channels you want to watch are selected.

**1** Select the position number to be skipped with the CH ▲/▼ buttons or the digit/direct select (-/-, 0 – 9) buttons.

**2** Press the **MENU** button and press the ▲ -/+ buttons to display the SET UP menu on the screen.

**3** Press the CH ▲/▼ buttons to move the cursor (▶) to "SKIP".

**4** Press the ▲ -/+ buttons to select "SKIP ON".

**5** Press the **CALL** button to turn off the SET UP menu display. Select the position number to be skipped with the digit/direct select (-/-, 0 – 9) buttons. The "\*" mark appears to the left of the position number. The position number will then be skipped when you select the position with the CH ▲/▼ buttons.


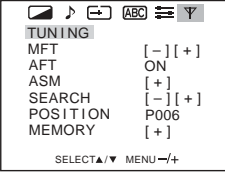
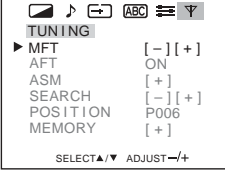
### To restore a skipped position number

- 1 Select the position number you want to restore with the digit/direct select (-/-, 0 – 9) buttons.
- 2 Press the **MENU** button, then press the ▲ -/+ buttons to display the SET UP menu and press the CH ▲/▼ buttons to select "SKIP".
- 3 Press the ▲ -/+ buttons to select "SKIP OFF".

- The adjustments below are not necessary under normal conditions. However, in areas of inferior broadcast conditions where adjustment is necessary for a better picture, adjust the tuning with the MFT (Manual Fine Tuning). The AFT OFF status automatically keeps the condition adjusted with the MFT function.
- The AFT (Automatic Fine Tuning) function automatically corrects slight fluctuations when receiving signals.
- When using Manual Search to preset the channel, the AFT will automatically turn ON and SKIP to OFF.

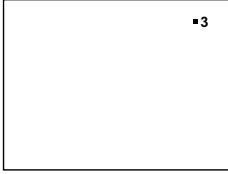
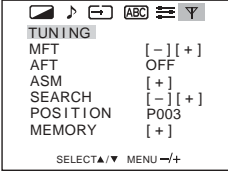
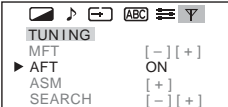
## To preset channels (MFT, AFT)

### MFT (Manual Fine Tuning)

- 1 Select the position number where the channel you want to fine-tune with the CH ▲/▼ buttons or the digit/direct select (-/+, 0 – 9) buttons.
 
- 2 Press the **MENU** button and press the ▲/–/+ buttons to display the TUNING menu on the screen.
 
- 3 Press the CH ▲/▼ buttons to select “MFT”.
 
- 4 Press the ▲/–/+ buttons repeatedly until the best possible picture and sound are obtained.

**Note**  
When operating the MFT function, the AFT status is automatically set to OFF.


### AFT (Automatic Fine Tuning)

- 1 Select the position number where the channel you want to fine-tune with the CH ▲/▼ buttons or the digit/direct select (-/+, 0 – 9) buttons.
 
- 2 Press the **MENU** button and press the ▲/–/+ buttons to display the TUNING menu on the screen.
 
- 3 Press the CH ▲/▼ buttons to move the cursor (▶) to “AFT”. Press the ▲/–/+ buttons to select the “ON” indication.
 

**Note**  
When the position is set to AFT OFF status, the “■” mark appears to the left of the position number. When the channel is set to AFT ON status, the position number is displayed without the “■” mark.

# CHASSIS AND CABINET 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 " " 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.

**Model : 25CSZ5TR/25SZ5ST/25SZ5VX**

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 ±5%, 50V and all resistors, ±5%, 1/6W unless otherwise noted.)

Location No.	Parts No.	Description
#1 :	[25CSZ5TR]	
#2 :	[25SZ5ST]	
#3 :	[25SZ5VX]	
<b>CAPACITORS</b>		
C101	#1 24206479	ELECTROLYTIC, 50V 4.7UF M 7L 3A
	#2 24206479	ELECTROLYTIC, 50V 4.7UF M 7L 3A
	#3 24797479	ELECTROLYTIC, 50V 4.7UF M
C103	24797221	ELECTROLYTIC, 50V 220UF M
C105	24109102	CERAMIC CHIP, 50V B 1000PF K
C106	24797100	ELECTROLYTIC, 50V 10UF M
C110	24797221	ELECTROLYTIC, 50V 220UF M
C200	24793101	ELECTROLYTIC, 10V 100UF M
C201	24092538	CERAMIC CHIP, 10V F 1UF Z
C202	24092538	CERAMIC CHIP, 10V F 1UF Z
C203	24092538	CERAMIC CHIP, 10V F 1UF Z
C204	24793470	ELECTROLYTIC CE04G 10V 47UF M
C205	24092538	CERAMIC CHIP, 10V F 1UF Z
C206	24109103	CERAMIC CHIP, 50V B 0.01UF K
C207	24092538	CERAMIC CHIP, 10V F 1UF Z
C208	#1 24203220	ELECTROLYTIC, 16V 22UF M 7L 3A
	#2 24203220	ELECTROLYTIC, 16V 22UF M 7L 3A
	#3 24794220	ELECTROLYTIC, 16V 22UF M
C209	#1 24203220	ELECTROLYTIC, 16V 22UF M 7L 3A
	#2 24203220	ELECTROLYTIC, 16V 22UF M 7L 3A
	#3 24794220	ELECTROLYTIC, 16V 22UF M
C210	24085949	ELEC. NONPOLAR CE04J 25V 10UF M 11L NP
C211	24092538	CERAMIC CHIP, 10V F 1UF Z
C212	24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
C213	24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
C220	24085944	ELECTROLYTIC, NONPOLAR, 50V 2.2UF M 11L
C221	24092538	CERAMIC CHIP, 10V F 1UF Z
C303	24214471	CERAMIC DISC, 500V B 470PF K
C306	24073059	ELECTROLYTIC, 25V 3300UF M 3A
C308	#1 24766101	ELECTROLYTIC, 50V 100UF M
	#2 24766101	ELECTROLYTIC, 50V 100UF M
	#3 24669101	ELECTROLYTIC, 50V 100UF M 3A
C309	#1 24766331	ELECTROLYTIC CE04G 50V 330UF M
	#2 24766331	ELECTROLYTIC CE04G 50V 330UF M
	#3 24669331	ELECTROLYTIC, 50V 330UF M 3A
C310	#1 24766222	ELECTROLYTIC CE04G 50V 2200UF M
	#2 24766222	ELECTROLYTIC CE04G 50V 2200UF M
	#3 24669222	ELECTROLYTIC, 50V 2200UF M 3A
C311	24435560	CERAMIC DISC, 500V SL 56PF J
C313	24082061	PLASTIC FILM, 100V 0.47UF J
C314	24693472	PLASTIC FILM, 100V 4700PF J

Location No.	Parts No.	Description
C315	24109102	CERAMIC CHIP, 50V B 1000PF K
C320	24503052	MT PLA CAP 63V 0.82UF J
C321	24591183	PLASTIC FILM, 50V 0.018UF J
C323	#1 24765101	ELECTROLYTIC, 35V 100UF M
	#2 24765101	ELECTROLYTIC, 35V 100UF M
	#3 24668101	ELECTROLYTIC, 35V 100UF M 3A
C325	#1 24206479	ELECTROLYTIC, 50V 4.7UF M 7L 3A
	#2 24206479	ELECTROLYTIC, 50V 4.7UF M 7L 3A
	#3 24797479	ELECTROLYTIC, 50V 4.7UF M
C341	24794101	ELECTROLYTIC, 16V 100UF M
C342	24795100	ELECTROLYTIC, 25V 10UF M
C363	24693104	PLASTIC FILM, 100V 0.1UF J
C401	24108680	CERAMIC CHIP, 50V SL 68PF J
C402	24693393	PLASTIC FILM, 100V 0.039UF J
C406	24109221	CERAMIC CHIP, 50V B 220PF K
C407	24092730	CERAMIC CHIP, 16V B 0.1UF K
C408	24108330	CERAMIC CHIP, 50V SL 33PF J
C409	24109103	CERAMIC CHIP, 50V B 0.01UF K
C410	#1 24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
	#2 24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
	#3 24794100	ELECTROLYTIC, 16V 10UF M
C413	24214821	CERAMIC DISC, 500V B 820PF K
C415	24109103	CERAMIC CHIP, 50V B 0.01UF K
C416	24678229	ELECTROLYTIC, 200V 2.2UF M 3A
C417	24214391	CERAMIC DISC, 500V B 390PF K
C418	24109221	CERAMIC CHIP, 50V B 220PF K
C419	#1 24765221	ELECTROLYTIC, 35V 220UF M
	#2 24765221	ELECTROLYTIC, 35V 220UF M
	#3 24668221	ELECTROLYTIC, 35V 220UF M 3A
C430	24092730	CERAMIC CHIP, 16V B 0.1UF K
C431	24794101	ELECTROLYTIC, 16V 100UF M
C439	24503125	PLASTIC FILM, 400V 0.075UF J
C440	24503193	PLASTIC FILM, 1500VH 1000PF H
C442	24503299	PLASTIC FILM, 315V 0.33UF J
C443	24503220	PLASTIC FILM CF92 T 1500VH 5100PF H
C444	24503147	PLASTIC FILM CF92 T 1500VH 8200PF H
C445	24828563	PLASTIC FILM, 200V 56000PF J
C447	24679220	ELECTROLYTIC, 250V 22UF M 3A
C448	#1 24073118	ELECTROLYTIC, 160V 33UF M
	#2 24073118	ELECTROLYTIC, 160V 33UF M
	#3 24640908	ELECTROLYTIC, 160V 33UF M 3A LI
C449	#1 24764102	ELECTROLYTIC, 25V 1000UF M
	#2 24764102	ELECTROLYTIC, 25V 1000UF M
	#3 24667102	ELECTROLYTIC, 25V 1000UF M 3A
C462	24092729	CERAMIC CHIP CK73B 16V 68000PFK
C463	24212222	CERAMIC DISC, 50V B 2200PF K

Location No.	Parts No.	Description
C464	#1 24073124	100V 10U TOKUSHU 100YXG10MCA10X20
	#2 24073124	100V 10U TOKUSHU 100YXG10MCA10X20
	#3 24640872	ELECTROLYTIC, 100V 10UF M 3A
C466	24693102	PLASTIC FILM, 100V 1000PF J
C467	24503158	PLASTIC FILM, 630V 0.036UF J
C470	24797101	ELECTROLYTIC, 50V 100UF M
C472	#1 24503049	PLASTIC FILM, 63V 0.47UF J
	#2 24503049	PLASTIC FILM, 63V 0.47UF J
	#3 24539474	PLASTIC FILM, 50V 0.47UF J
C475	24092730	CERAMIC CHIP, 16V B 0.1UF K
C476	24105100	CERAMIC CHIP, 50V CH 10PF D
C498	24591182	PLASTIC FILM, 50V 1800PF J
C500	24092730	CERAMIC CHIP, 16V B 0.1UF K
C501	24109103	CERAMIC CHIP, 50V B 0.01UF K
C502	24793102	ELECTROLYTIC, 10V 1000UF M
C503	24109103	CERAMIC CHIP, 50V B 0.01UF K
C510	24105390	CERAMIC CHIP, 50V CH 39PF J
C511	24105390	CERAMIC CHIP, 50V CH 39PF J
C512	24105390	CERAMIC CHIP, 50V CH 39PF J
C543	#1 24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
	#2 24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
	#3 24794100	ELECTROLYTIC, 16V 10UF M
C547	24793101	ELECTROLYTIC, 10V 100UF M
C560	24794101	ELECTROLYTIC, 16V 100UF M
C561	24109103	CERAMIC CHIP, 50V B 0.01UF K
C620	#1 24206100	ELECTROLYTIC, 50V 10UF M 7L 3A
	#3 24206100	ELECTROLYTIC, 50V 10UF M 7L 3A
C621	#1 24206479	ELECTROLYTIC, 50V 4.7UF M 7L 3A
	#3 24797479	ELECTROLYTIC, 50V 4.7UF M
C622	#1 24109273	CERAMIC CHIP, 25V B 0.027UF K
	#3 24109273	CERAMIC CHIP, 25V B 0.027UF K
C623	#1 24109822	CERAMIC CHIP, 50V B 8200PF K
	#3 24109822	CERAMIC CHIP, 50V B 8200PF K
C624	#1 24206478	ELECTROLYTIC, 50V 0.47UF M 7L 3A @U902
	#1 24109103	CERAMIC CHIP, 50V B 0.01UF K @U903
	#2 24206478	ELECTROLYTIC, 50V 0.47UF M 7L 3A
	#3 24797478	ELECTROLYTIC, 50V 0.47UF M @U902
	#3 24109103	CERAMIC CHIP, 50V B 0.01UF K @U903
C625	#1 24109103	CERAMIC CHIP, 50V B 0.01UF K
	#3 24109103	CERAMIC CHIP, 50V B 0.01UF K
C626	#1 24109822	CERAMIC CHIP, 50V B 8200PF K
	#3 24109822	CERAMIC CHIP, 50V B 8200PF K
C627	#1 24109273	CERAMIC CHIP, 25V B 0.027UF K
	#3 24109273	CERAMIC CHIP, 25V B 0.027UF K
C628	#1 24109103	CERAMIC CHIP, 50V B 0.01UF K
	#3 24109103	CERAMIC CHIP, 50V B 0.01UF K
C630	#1 24503038	PLASTIC FILM, 63V 0.056UF J
	#3 24503038	PLASTIC FILM, 63V 0.056UF J
C631	#1 24092729	CERAMIC CHIP CK73B 16V 68000PFK
	#3 24092729	CERAMIC CHIP CK73B 16V 68000PFK
C633	#1 24109153	CERAMIC CHIP, 50V B 0.015UF K
	#3 24109153	CERAMIC CHIP, 50V B 0.015UF K
C635	#1 24109333	CERAMIC CHIP CK73B 25V 33000PFK
	#3 24109333	CERAMIC CHIP CK73B 25V 33000PFK
C636	#1 24206339	ELECTROLYTIC, 50V 3.3UF M 7L 3A
	#3 24206339	ELECTROLYTIC, 50V 3.3UF M 7L 3A
C640	#1 24794100	ELECTROLYTIC, 16V 10UF M
	#3 24794100	ELECTROLYTIC, 16V 10UF M
C641	#1 24085981	ELEC. NONPOLAR CE04J 16V 10UF M 11L NP
	#3 24085981	ELEC. NONPOLAR CE04J 16V 10UF M 11L NP
C642	#1 24085981	ELEC. NONPOLAR CE04J 16V 10UF M 11L NP
	#3 24085981	ELEC. NONPOLAR CE04J 16V 10UF M 11L NP
C660	#1 24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
	#2 24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
	#3 24797010	ELECTROLYTIC, 50V 1UF M
C661	24591183	PLASTIC FILM, 50V 0.018UF J
C662	#1 24591102	PLASTIC FILM, 50V 1000PF J
C663	24766229	ELECTROLYTIC, 50V 2.2UF M
C664	#1 24206478	ELECTROLYTIC, 50V 0.47UF M 7L 3A
	#2 24206478	ELECTROLYTIC, 50V 0.47UF M 7L 3A
	#3 24797010	ELECTROLYTIC, 50V 1UF M
C665	24591183	PLASTIC FILM, 50V 0.018UF J
C666	#1 24591102	PLASTIC FILM, 50V 1000PF J
C667	24766229	ELECTROLYTIC, 50V 2.2UF M
C668	24797100	ELECTROLYTIC, 50V 10UF M
C670	24797470	ELECTROLYTIC, 50V 47UF M

Location No.	Parts No.	Description
C671	24797471	ELECTROLYTIC, 50V 470UF M
C672	#1 24206229	ELECTROLYTIC, 50V 2.2UF M 7L 3A
	#2 24206229	ELECTROLYTIC, 50V 2.2UF M 7L 3A
	#3 24797229	ELECTROLYTIC, 50V 2.2UF M
C681	24765102	ELECTROLYTIC CE04G 35V 1000UF M
C682	24765221	ELECTROLYTIC, 35V 220UF M
C683	24765102	ELECTROLYTIC CE04G 35V 1000UF M
C686	24591104	PLASTIC FILM, 50V 0.1UF J
C687	24591104	PLASTIC FILM, 50V 0.1UF J
C690	24766101	ELECTROLYTIC, 50V 100UF M
C739	#1 24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
	#2 24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
	#3 24794100	ELECTROLYTIC, 16V 10UF M
C801	24503507	PLASTIC FILM, AC275V 0.22UF K
C802	24503507	PLASTIC FILM, AC275V 0.22UF K
C805	24092281	CERAMIC DISC, AC250V E 4700PF
C806	24092281	CERAMIC DISC, AC250V E 4700PF
C808	24795101	ELECTROLYTIC, 25V 100UF M
C809	24503049	PLASTIC FILM, 63V 0.47UF J
C810	#1 24086857	ELECTROLYTIC, 400V 560UF
	#2 24086857	ELECTROLYTIC, 400V 560UF
	#3 24086934	ELECTROLYTIC, 450V 560UF M 35F
C811	24092555	CERAMIC DISC, AC250V E 1000PF M
C813	24092555	CERAMIC DISC, AC250V E 1000PF M
C814	24092555	CERAMIC DISC, AC250V E 1000PF M
C815	24092555	CERAMIC DISC, AC250V E 1000PF M
C816	24766479	ELECTROLYTIC, 50V 4.7UF M
C817	24092339	CERAMIC DISC, 2KV 330PF K
C819	24676220	ELECTROLYTIC, 100V 22UF M 3A
C821	24214471	CERAMIC DISC, 500V B 470PF K
C822	24503049	PLASTIC FILM, 63V 0.47UF J
C823	24214471	CERAMIC DISC, 500V B 470PF K
C830	24503047	PLASTIC FILM, 63V 0.33UF J
C831	24503047	PLASTIC FILM, 63V 0.33UF J
C832	24503047	PLASTIC FILM, 63V 0.33UF J
C833	24678010	ELECTROLYTIC, 200V 1UF M 3A
C834	24503047	PLASTIC FILM, 63V 0.33UF J
C840	#1 24763470	16MV47HC +T 16MV47HC +T
	#2 24763470	16MV47HC +T 16MV47HC +T
	#3 24666470	ELECTROLYTIC, 16V 47UF M 3A
C841	24503047	PLASTIC FILM, 63V 0.33UF J
C842	24503047	PLASTIC FILM, 63V 0.33UF J
C884	24086052	ELECTROLYTIC, 200V 220UF M 22A
C885	24214471	CERAMIC DISC, 500V B 470PF K
C889	#1 24765222	ELECTROLYTIC CE04G 35V 2200UF M
	#2 24765222	ELECTROLYTIC CE04G 35V 2200UF M
	#3 24668222	ELECTROLYTIC, 35V 2200UF M 3A
C891	#1 24763102	ELECTROLYTIC, 16V 1000UF M
	#2 24763102	ELECTROLYTIC, 16V 1000UF M
	#3 24666102	ELECTROLYTIC, 16V 1000UF M 3A
C893	24092337	CERAMIC DISC, 2KV 220PF K
C898	24503045	PLASTIC FILM, 63V 0.22UF J
C899	24214471	CERAMIC DISC, 500V B 470PF K
C902	#1 24092353	CERAMIC DISC, 2KV 4700PF K
	#2 24092353	CERAMIC DISC, 2KV 4700PF K
	#3 24092353	CERAMIC DISC, 2KV 4700PF K
C904	24436391	CERAMIC DISC, 50V SL 390PF J
C905	24436471	CERAMIC DISC, 50V SL 470PF J
C907	24436471	CERAMIC DISC, 50V SL 470PF J
C909	24679330	ELECTROLYTIC, 250V 33UF M 3A
C910	#1 24206478	ELECTROLYTIC, 50V 0.47UF M 7L 3A
	#2 24206478	ELECTROLYTIC, 50V 0.47UF M 7L 3A
	#3 24797478	ELECTROLYTIC, 50V 0.47UF M
C911	24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
C912	#1 24073044	ELECTROLYTIC, 16V 3300UF M 3A
	#2 24073044	ELECTROLYTIC, 16V 3300UF M 3A
	#3 24073044	ELECTROLYTIC, 16V 3300UF M 3A
C913	#1 24203220	ELECTROLYTIC, 16V 22UF M 7L 3A
	#2 24203220	ELECTROLYTIC, 16V 22UF M 7L 3A
	#3 24794220	ELECTROLYTIC, 16V 22UF M
C914	24212103	CERAMIC DISC, 50V B 10000PF K
C930	24214101	CERAMIC DISC, 500V B 100PF K
C931	24214101	CERAMIC DISC, 500V B 100PF K
C4200	24109221	CERAMIC CHIP, 50V B 220PF K
C4300	24109103	CERAMIC CHIP, 50V B 0.01UF K
C4700	24109153	CERAMIC CHIP, 50V B 0.015UF K

Location No.	Parts No.	Descriptiopn
C4710	24503042	PLASTIC FILM, 63V 0.12UF J
C4712	24109103	CERAMIC CHIP, 50V B 0.01UF K
CA09	24109103	CERAMIC CHIP, 50V B 0.01UF K
CA14	24105680	CERAMIC CHIP, 50V CH 68PF J
CA15	24105680	CERAMIC CHIP, 50V CH 68PF J
CA48	24105221	CERAMIC CHIP, 50V CH 220PF J
CA49	#1 24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
	#2 24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
	#3 24794100	ELECTROLYTIC, 16V 10UF M
CA50	24105270	CERAMIC CHIP, 50V CH 27PF J
CA51	24105270	CERAMIC CHIP, 50V CH 27PF J
CA54	24092730	CERAMIC CHIP, 16V B 0.1UF K
CA55	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CA56	24100103	CERAMIC CHIP, 50V F 0.01UF Z
CA60	24092538	CERAMIC CHIP, 10V F 1UF Z
CA61	24793101	ELECTROLYTIC, 10V 100UF M
CA65	24092729	CERAMIC CHIP CK73B 16V 68000PFK
CA72	24105680	CERAMIC CHIP, 50V CH 68PF J
CA73	24105680	CERAMIC CHIP, 50V CH 68PF J
CA77	24092538	CERAMIC CHIP, 10V F 1UF Z
CA82	24793470	ELECTROLYTIC CE04G 10V 47UF M
CA99	24353101	CERAMIC DISC, 50V CH 100PF J
CB01	#1 24203470	ELECTROLYTIC, 16V 47UF M 7L 3A
	#2 24203470	ELECTROLYTIC, 16V 47UF M 7L 3A
	#3 24794470	ELECTROLYTIC, 16V 47UF M
CB05	24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
CC01	24109103	CERAMIC CHIP, 50V B 0.01UF K
CC07	#1 24109102	CERAMIC CHIP, 50V B 1000PF K
CC08	#1 24109102	CERAMIC CHIP, 50V B 1000PF K
CC09	#1 24109102	CERAMIC CHIP, 50V B 1000PF K
CC10	#1 24109102	CERAMIC CHIP, 50V B 1000PF K
CC14	24232103	CERAMIC DISC, 50V F 0.01UF Z
CC20	24105100	CERAMIC CHIP, 50V CH 10PF D
CC25	#1 24109102	CERAMIC CHIP, 50V B 1000PF K
CC26	#1 24109102	CERAMIC CHIP, 50V B 1000PF K
CC28	24105100	CERAMIC CHIP, 50V CH 10PF D
CC32	#1 24232103	CERAMIC DISC, 50V F 0.01UF Z
CC33	#1 24232103	CERAMIC DISC, 50V F 0.01UF Z
CD01	#2 24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
CD02	#2 24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
CD03	#2 24109152	CERAMIC CHIP, 50V B 1500PF K
CD04	#2 24105471	CERAMIC CHIP, 50V CH 470PF J
CD05	#2 24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
CD06	#2 24092730	CERAMIC CHIP, 16V B 0.1UF K
CD07	#2 24797339	ELECTROLYTIC, 50V 3.3UF M
CD08	#2 24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
CD09	#2 24085944	ELECTROLYTIC, NONPOLAR, 50V 2.2UF M 11L
CD10	#2 24085944	ELECTROLYTIC, NONPOLAR, 50V 2.2UF M 11L
CD11	#2 24109103	CERAMIC CHIP, 50V B 0.01UF K
CD12	#2 24105560	CERAMIC CHIP, 50V CH 56PF J
CD13	#2 24109152	CERAMIC CHIP, 50V B 1500PF K
CD14	#2 24105471	CERAMIC CHIP, 50V CH 470PF J
CD15	#2 24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
CD16	#2 24206229	ELECTROLYTIC, 50V 2.2UF M 7L 3A
CD17	#2 24109152	CERAMIC CHIP, 50V B 1500PF K
CD18	#2 24105471	CERAMIC CHIP, 50V CH 470PF J
CD19	#2 24105221	CERAMIC CHIP, 50V CH 220PF J
CD20	#2 24109222	CERAMIC CHIP, 50V B 2200PF K
CD21	#2 24105220	CERAMIC CHIP, 50V CH 22PF J
CD22	#2 24105220	CERAMIC CHIP, 50V CH 22PF J
CD23	#2 24092730	CERAMIC CHIP, 16V B 0.1UF K
CD24	#2 24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
CD25	#2 24092743	CERAMIC CHIP, 10V F 0.47UF Z
CD26	#2 24105560	CERAMIC CHIP, 50V CH 56PF J
CD27	#2 24105560	CERAMIC CHIP, 50V CH 56PF J
CD28	#2 24109102	CERAMIC CHIP, 50V B 1000PF K
CD29	#2 24109102	CERAMIC CHIP, 50V B 1000PF K
CD30	#2 24109102	CERAMIC CHIP, 50V B 1000PF K
CD31	#2 24109102	CERAMIC CHIP, 50V B 1000PF K
CD32	#2 24109222	CERAMIC CHIP, 50V B 2200PF K
CD33	#2 24109222	CERAMIC CHIP, 50V B 2200PF K
CD34	#2 24092743	CERAMIC CHIP, 10V F 0.47UF Z
CD35	#2 24092743	CERAMIC CHIP, 10V F 0.47UF Z
CD36	#2 24109103	CERAMIC CHIP, 50V B 0.01UF K
CD37	#2 24105010	CERAMIC CHIP CC73CK 50V 1PF C
CD38	#2 24105050	CERAMIC CHIP, 50V CH 5PF C

Location No.	Parts No.	Descriptiopn
CD39	#2 24109103	CERAMIC CHIP, 50V B 0.01UF K
CI01	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI02	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI03	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI04	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI05	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI06	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI08	#1 24797010	ELECTROLYTIC, 50V 1UF M
	#2 24206229	ELECTROLYTIC, 50V 2.2UF M 7L 3A
	#3 24797010	ELECTROLYTIC, 50V 1UF M
CI09	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI10	#1 24794101	ELECTROLYTIC, 16V 100UF M
	#2 24797101	ELECTROLYTIC, 50V 100UF M
	#3 24794101	ELECTROLYTIC, 16V 100UF M
CI12	24092573	CERAMIC CHIP, 16V B 0.47UF K
CI13	24109102	CERAMIC CHIP, 50V B 1000PF K
CI14	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI15	#2 24105150	CERAMIC CHIP, 50V CH 15PF J
CI16	#1 24105150	CERAMIC CHIP, 50V CH 15PF J
	#3 24105150	CERAMIC CHIP, 50V CH 15PF J
CI17	#1 24797229	ELECTROLYTIC, 50V 2.2UF M
	#2 24206229	ELECTROLYTIC, 50V 2.2UF M 7L 3A
	#3 24797229	ELECTROLYTIC, 50V 2.2UF M
CI18	#1 24794220	ELECTROLYTIC, 16V 22UF M
	#2 24203220	ELECTROLYTIC, 16V 22UF M 7L 3A
	#3 24794220	ELECTROLYTIC, 16V 22UF M
CI20	24105560	CERAMIC CHIP, 50V CH 56PF J
CI21	24105430	CERAMIC CHIP CC73CH 50V 43PF J
CI30	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI31	#1 24797479	ELECTROLYTIC, 50V 4.7UF M
	#2 24206479	ELECTROLYTIC, 50V 4.7UF M 7L 3A
	#3 24797479	ELECTROLYTIC, 50V 4.7UF M
CI56	24105120	CERAMIC CHIP, 50V CH 12PF J
CI57	24105510	CERAMIC CHIP, 50V CH 51PF J
CI60	24105470	CERAMIC CHIP, 50V CH 47PF J
CI61	24105470	CERAMIC CHIP, 50V CH 47PF J
CI62	#1 24109103	CERAMIC CHIP, 50V B 0.01UF K
	#3 24109103	CERAMIC CHIP, 50V B 0.01UF K
CI63	#1 24109103	CERAMIC CHIP, 50V B 0.01UF K
	#3 24109103	CERAMIC CHIP, 50V B 0.01UF K
CI65	#1 24109153	CERAMIC CHIP, 50V B 0.015UF K
	#3 24109153	CERAMIC CHIP, 50V B 0.015UF K
CI71	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI81	24109103	CERAMIC CHIP, 50V B 0.01UF K
CI90	#1 24105470	CERAMIC CHIP, 50V CH 47PF J
	#3 24105470	CERAMIC CHIP, 50V CH 47PF J
CI91	#1 24105470	CERAMIC CHIP, 50V CH 47PF J
	#3 24105470	CERAMIC CHIP, 50V CH 47PF J
CI92	#1 24109103	CERAMIC CHIP, 50V B 0.01UF K
	#3 24109103	CERAMIC CHIP, 50V B 0.01UF K
CI93	#1 24109103	CERAMIC CHIP, 50V B 0.01UF K
	#3 24109103	CERAMIC CHIP, 50V B 0.01UF K
CS02	#1 24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
	#2 24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
	#3 24797010	ELECTROLYTIC, 50V 1UF M
CS03	#1 24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
	#2 24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
	#3 24797010	ELECTROLYTIC, 50V 1UF M
CS04	#1 24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
	#2 24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
	#3 24797010	ELECTROLYTIC, 50V 1UF M
CS05	#1 24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
	#2 24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
	#3 24797010	ELECTROLYTIC, 50V 1UF M
CS06	#1 24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
	#2 24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
	#3 24797010	ELECTROLYTIC, 50V 1UF M
CS07	#1 24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
	#2 24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
	#3 24797010	ELECTROLYTIC, 50V 1UF M
CS10	#1 24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
	#2 24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
	#3 24794100	ELECTROLYTIC, 16V 10UF M
CS11	#1 24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
	#2 24203100	ELECTROLYTIC, 16V 10UF M 7L 3A
	#3 24794100	ELECTROLYTIC, 16V 10UF M

Location No.	Parts No.	Description
CS12	#1 24203220	ELECTROLYTIC, 16V 22UF M 7L 3A
	#2 24203220	ELECTROLYTIC, 16V 22UF M 7L 3A
	#3 24797010	ELECTROLYTIC, 50V 1UF M
CS13	#1 24203220	ELECTROLYTIC, 16V 22UF M 7L 3A
	#2 24203220	ELECTROLYTIC, 16V 22UF M 7L 3A
	#3 24797010	ELECTROLYTIC, 50V 1UF M
CS15	24109103	CERAMIC CHIP, 50V B 0.01UF K
CS29	#1 24203220	ELECTROLYTIC, 16V 22UF M 7L 3A
	#2 24203220	ELECTROLYTIC, 16V 22UF M 7L 3A
	#3 24794220	ELECTROLYTIC, 16V 22UF M
CV01	24794101	ELECTROLYTIC, 16V 100UF M
CV02	24092730	CERAMIC CHIP, 16V B 0.1UF K
CV03	24092730	CERAMIC CHIP, 16V B 0.1UF K
CV04	#1 24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
	#2 24206010	ELECTROLYTIC, 50V 1.0UF M 7L 3A
	#3 24797010	ELECTROLYTIC, 50V 1UF M
CV05	#1 24203220	ELECTROLYTIC, 16V 22UF M 7L 3A
	#2 24203220	ELECTROLYTIC, 16V 22UF M 7L 3A
	#3 24794220	ELECTROLYTIC, 16V 22UF M
CV06	24591473	PLASTIC FILM, 50V 0.047UF J
CV07	#1 24212102	CERAMIC DISC, 50V B 1000PF K
CV08	#1 24212102	CERAMIC DISC, 50V B 1000PF K
CV11	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV19	24092730	CERAMIC CHIP, 16V B 0.1UF K
CV20	24092730	CERAMIC CHIP, 16V B 0.1UF K
CV22	24092730	CERAMIC CHIP, 16V B 0.1UF K
CV33	24109103	CERAMIC CHIP, 50V B 0.01UF K
CV34	24762471	ELECTROLYTIC, 10V 470UF M
CV36	24794221	ELECTROLYTIC, 16V 220UF M
R463	24092731	CERAMIC CHIP, 16V B 1UF K
<b>RESISTORS</b>		
R101	24553183	OXIDE METAL FILM, 1W 18K OHM J
R121	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R200	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R201	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R202	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R203	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R204	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R205	24011821	CHIP, METAL FILM, 1/20W 820 OHM J
R206	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R207	24011821	CHIP, METAL FILM, 1/20W 820 OHM J
R208	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R210	24011272	CHIP, 1/20W 2.7K OHM J
R212	24011273	CHIP, METAL FILM, 1/20W 27K OHM J
R215	24011362	CHIP, 1/20W 3.6K OHM J
R216	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R217	24366103	CARBON FILM, 1/6W 10K OHM J
R218	24367472	CARBON FILM, 1/6W 4.7K OHM G
R219	24011682	CHIP, METAL FILM, 1/20W 6.8K OHM J
R220	24011822	CHIP, METAL FILM, 1/20W 8.2K OHM J
R221	24011183	CHIP, METAL FILM, 1/20W 18K OHM J
R222	24011681	CHIP, METAL FILM, 1/20W 680 OHM J
R225	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R227	24367912	CARBON FILM, 1/6W 9.1K OHM G
R231	24011622	CHIP, METAL FILM, 1/20W 6.2K OHM J
R232	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
R233	24367273	CARBON FILM, 1/6W 27K OHM G
R303	24321229	OXIDE METAL FILM, 1/2W 2.2 OHM J
R305	24322109	OXIDE METAL FILM, 1W 1 OHM J
R314	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
R319	24000445	CHIP JUMPER, 1608TYPE
R320	24000445	CHIP JUMPER, 1608TYPE
R321	24011183	CHIP, METAL FILM, 1/20W 18K OHM J
R322	24011243	CHIP, METAL FILM, 1/20W 24K OHM J
R324	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
R325	24011752	CHIP, METAL FILM, 1/20W 7.5K OHM J
R327	24339569	OXIDE METAL FILM, 2W 5.6 OHM J
R328	24367562	CARBON FILM, 1/6W 5.6K OHM G
R329	24000633	METAL FILM, 1/4W 10K OHM F
R330	24000245	METAL FILM, 1/4W 33K OHM F
R331	24000637	METAL FILM, 1/4W 15K OHM F
R336	24383101	OXIDE METAL FILM, 2W 100 OHM J
R341	24011182	CHIP, METAL FILM, 1/20W 1.8K OHM J
R342	24366562	CARBON FILM, 1/6W 5.6K OHM J
R343	24310159	OXIDE METAL FILM, 1/2W 1.5 OHM J

Location No.	Parts No.	Description
R344	24366392	CARBON FILM, 1/6W 3.9K OHM J
R345	24383102	OXIDE METAL FILM, 2W 1K OHM J
R349	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
R363	24552181	OXIDE METAL FILM, 1/2W 180 OHM J
R401	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
R402	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
R403	24382472	OXIDE METAL FILM, 1W 4.7K OHM J
R404	24011680	CHIP, METAL FILM, 1/20W 68 OHM J
R405	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R406	24011682	CHIP, METAL FILM, 1/20W 6.8K OHM J
R407	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R408	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
R409	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R410	24872102	CHIP, METAL FILM, 1/16W 1K OHM J
R411	24011470	CHIP, METAL FILM, 1/20W 47 OHM J
R415	24553272	OXIDE METAL FILM, 1W 2.7K OHM J
R416	24019329	OXIDE FILM 5W 3R3K J
R417	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
R418	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R420	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R424	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R425	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R429	#3 24552560	OXIDE METAL FILM, 1/2W 56 OHM J
R431	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R432	24366332	CARBON FILM, 1/6W 3.3K OHM J
R433	24531680	FUSIBLE, 1/2W 68 OHM J
R434	24366101	CARBON FILM, 1/6W 100 OHM J
R441	24532102	FUSIBLE, 1W 1K OHM J
R448	24338398	OXIDE METAL FILM, 1W 0.39 OHM J
R460	24366513	CARBON FILM, 1/6W 51K OHM J
R461	24366272	CARBON FILM, 1/6W 2.7K OHM J
R462	24322689	OXIDE METAL FILM, 1W 6.8 OHM J
R465	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R466	24000445	CHIP JUMPER, 1608TYPE
R469	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R470	24338568	OXIDE METAL FILM, 1W 0.56 OHM J
R471	24381680	OXIDE METAL FILM, 1/2W 68 OHM J
R473	24000242	METAL FILM, 1/4W 18K OHM F
R479	24381271	OXIDE METAL FILM, 1/2W 270 OHM J
R501	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
R502	24011152	CHIP, METAL FILM, 1/20W 1.5K OHM J
R512	24011121	CHIP, METAL FILM, 1/20W 120 OHM J
R513	24011121	CHIP, METAL FILM, 1/20W 120 OHM J
R515	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
R520	24011271	CHIP, METAL FILM, 1/20W 270 OHM J
R521	24011271	CHIP, METAL FILM, 1/20W 270 OHM J
R522	24011271	CHIP, METAL FILM, 1/20W 270 OHM J
R544	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
R545	24011121	CHIP, METAL FILM, 1/20W 120 OHM J
R623	#1 24011103	CHIP, METAL FILM, 1/20W 10K OHM J @U902
	#1 24011103	CHIP, METAL FILM, 1/20W 10K OHM J @U903
	#2 24011103	CHIP, METAL FILM, 1/20W 10K OHM J
	#3 24011103	CHIP, METAL FILM, 1/20W 10K OHM J @U902
	#3 24011103	CHIP, METAL FILM, 1/20W 10K OHM J @U903
R624	#1 24011104	CHIP, METAL FILM, 1/20W 100K OHM J @U902
	#1 24011101	CHIP, METAL FILM, 1/20W 100 OHM J @U903
	#2 24011104	CHIP, METAL FILM, 1/20W 100K OHM J
	#3 24011104	CHIP, METAL FILM, 1/20W 100K OHM J @U902
	#3 24011101	CHIP, METAL FILM, 1/20W 100 OHM J @U903
R625	#1 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
	#3 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R626	#1 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
	#3 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R627	#1 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
	#3 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R628	#1 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
	#3 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R629	#1 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
	#3 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R630	#1 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
	#3 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
R660	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
R661	24000445	CHIP JUMPER, 1608TYPE
R662	24011272	CHIP, 1/20W 2.7K OHM J
R663	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R664	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J



Location No.	Parts No.	Descriptiopn
R665	24000445	CHIP JUMPER, 1608TYPE
R666	24011272	CHIP, 1/20W 2.7K OHM J
R667	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R671	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R672	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R673	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
R674	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
R675	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
R686	24011229	CHIP, METAL FILM, 1/16W 2.2 OHM J
R687	24011229	CHIP, METAL FILM, 1/16W 2.2 OHM J
R801	24009954	METAL FILN, 1/2W 2.2M OHM J
R803	24553683	OXIDE METAL FILM, 1W 68K OHM J
R805	24366221	CARBON FILM, 1/6W 220 OHM J
R807	24366104	CARBON FILM, 1/6W 100K OHM J
R808	24019503	THERMISTOR, PTC, AC290V 4.5 OHM M
R811	24366225	CARBON FILM, 1/6W 2.2M OHM J
R812	24510479	CERAMIC COVERED, 5W 4.7 OHM J
R813	24007061	CERAMIC COVERED, 2W 1.8 OHM K
R815	24381102	OXIDE METAL FILM, 1/2W 1K OHM J
R818	24019459	METAL PLATE, 2W 0.12 OHM J
R819	24310829	OXIDE METAL FILM, 1/2W 8.2 OHM J
R821	24366101	CARBON FILM, 1/6W 100 OHM J
R822	24552103	OXIDE METAL FILM, 1/2W 10K OHM J
R823	24552103	OXIDE METAL FILM, 1/2W 10K OHM J
R827	24366681	CARBON FILM, 1/6W 680 OHM J
R828	24381223	OXIDE METAL FILM, 1/2W 22K OHM J
R829	24310109	OXIDE METAL FILM, 1/2W 1 OHM J
R840	24366471	CARBON FILM, 1/6W 470 OHM J
R842	24366332	CARBON FILM, 1/6W 3.3K OHM J
R843	24366471	CARBON FILM, 1/6W 470 OHM J
R844	24321478	OXIDE METAL FILM, 1/2W 0.47 OHM J
R865	24366332	CARBON FILM, 1/6W 3.3K OHM J
R868	24366472	CARBON FILM, 1/6W 4.7K OHM J
R898	24321228	OXIDE METAL FILM, 1/2W 0.22 OHM J
R899	24004718	METAL GLAZE 1/2W 8R2M J
R901	24376102	CARBON FILM, 1/2W 1K OHM J
R902	24376102	CARBON FILM, 1/2W 1K OHM J
R903	24376102	CARBON FILM, 1/2W 1K OHM J
R904	24366472	CARBON FILM, 1/6W 4.7K OHM J
R905	24366150	CARBON FILM, 1/6W 15 OHM J
R912	24366681	CARBON FILM, 1/6W 680 OHM J
R914	24366561	CARBON FILM, 1/6W 560 OHM J
R915	24366101	CARBON FILM, 1/6W 100 OHM J
R916	24366680	CARBON FILM, 1/6W 68 OHM J
R917	24366561	CARBON FILM, 1/6W 560 OHM J
R918	24366820	CARBON FILM, 1/6W 82 OHM J
R919	24366681	CARBON FILM, 1/6W 680 OHM J
R920	24000874	RESISTOR FUSE 1W 439J
R921	24366561	CARBON FILM, 1/6W 560 OHM J
R922	24366101	CARBON FILM, 1/6W 100 OHM J
R924	24366820	CARBON FILM, 1/6W 82 OHM J
R925	24366561	CARBON FILM, 1/6W 560 OHM J
R926	24366681	CARBON FILM, 1/6W 680 OHM J
R928	24366561	CARBON FILM, 1/6W 560 OHM J
R929	24366101	CARBON FILM, 1/6W 100 OHM J
R930	24366820	CARBON FILM, 1/6W 82 OHM J
R932	24366102	CARBON FILM, 1/6W 1K OHM J
R934	24366471	CARBON FILM, 1/6W 470 OHM J
R935	24366392	CARBON FILM, 1/6W 3.9K OHM J
R936	24545150	FUSIBLE, 1/4W 15 OHM J
R937	24366561	CARBON FILM, 1/6W 560 OHM J
R942	24366562	CARBON FILM, 1/6W 5.6K OHM J
R943	24366562	CARBON FILM, 1/6W 5.6K OHM J
R944	24366562	CARBON FILM, 1/6W 5.6K OHM J
R945	24366680	CARBON FILM, 1/6W 68 OHM J
R946	24366680	CARBON FILM, 1/6W 68 OHM J
R960	24383153	OXIDE METAL FILM, 2W 15K OHM J
R961	24383153	OXIDE METAL FILM, 2W 15K OHM J
R962	24383153	OXIDE METAL FILM, 2W 15K OHM J
R963	24383153	OXIDE METAL FILM, 2W 15K OHM J
R964	24383153	OXIDE METAL FILM, 2W 15K OHM J
R965	24383153	OXIDE METAL FILM, 2W 15K OHM J
R977	24366122	CARBON FILM, 1/6W 1.2K OHM J
R992	24366150	CARBON FILM, 1/6W 15 OHM J
R4200	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
R4601	24011123	CHIP, METAL FILM, 1/20W 12K OHM J

Location No.	Parts No.	Descriptiopn
R4602	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R4603	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R4604	24011820	CHIP, 1/20W 82 OHM J
R4605	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
R4606	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
R4704	24011824	CHIP, METAL FILM, 1/20W 820K OHM J
R4711	24011684	CHIP, METAL FILM, 1/20W 680K OHM J
R4712	24011224	CHIP, METAL FILM, 1/20W 220K OHM J
R4714	24011154	CHIP, METAL FILM, 1/20W 150K OHM J
R4715	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
R4716	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
R4760	24000247	METAL FILM, 1/4W 39K OHM F
R4770	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA01	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA03	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA04	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA05	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA11	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RA12	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RA49	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RA50	24011680	CHIP, METAL FILM, 1/20W 68 OHM J
RA54	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA55	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA56	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA59	#2 24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RA61	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA65	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
RA66	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
RA69	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA70	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RA71	24366683	CARBON FILM, 1/6W 68K OHM J
RA72	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RA73	24366103	CARBON FILM, 1/6W 10K OHM J
RA74	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RA76	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RA77	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
RA78	24366683	CARBON FILM, 1/6W 68K OHM J
RA79	#2 24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RA80	#2 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA81	#2 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RA82	24366223	CARBON FILM, 1/6W 22K OHM J
RA83	24366103	CARBON FILM, 1/6W 10K OHM J
RA84	24366223	CARBON FILM, 1/6W 22K OHM J
RB01	24366271	CARBON FILM, 1/6W 270 OHM J
RB02	24366221	CARBON FILM, 1/6W 220 OHM J
RB03	24366103	CARBON FILM, 1/6W 10K OHM J
RB04	24366223	CARBON FILM, 1/6W 22K OHM J
RB05	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RB09	24366470	CARBON FILM, 1/6W 47 OHM J
RB48	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RB49	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RC12	#1 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
	#2 24000445	CHIP JUMPER, 1608TYPE
	#3 24000445	CHIP JUMPER, 1608TYPE
RC13	#1 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
	#2 24000445	CHIP JUMPER, 1608TYPE
	#3 24000445	CHIP JUMPER, 1608TYPE
RC14	#1 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
	#2 24000445	CHIP JUMPER, 1608TYPE
	#3 24000445	CHIP JUMPER, 1608TYPE
RC15	#1 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
	#2 24000445	CHIP JUMPER, 1608TYPE
	#3 24000445	CHIP JUMPER, 1608TYPE
RC16	#1 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
	#2 24000445	CHIP JUMPER, 1608TYPE
	#3 24000445	CHIP JUMPER, 1608TYPE
RC17	#1 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
	#2 24000445	CHIP JUMPER, 1608TYPE
	#3 24000445	CHIP JUMPER, 1608TYPE
RD01	#2 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RD02	#2 24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RD04	#2 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RD05	#2 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RD06	#2 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RD07	#2 24000445	CHIP JUMPER, 1608TYPE
RD08	#2 24000445	CHIP JUMPER, 1608TYPE

Location No.	Parts No.	Descriptiopn
RD09	#2 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RD10	#2 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RD11	#2 24011563	CHIP, METAL FILM, 1/20W 56K OHM J
RD12	#2 24011823	CHIP, METAL FILM, 1/20W 82K OHM J
RD13	#2 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RD14	#2 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RD15	#2 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RD16	#2 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RD17	#2 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RD18	#2 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RD19	#2 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RD20	#2 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RD21	#2 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RD22	#2 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RD23	#2 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RD24	#2 24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RD25	#2 24011563	CHIP, METAL FILM, 1/20W 56K OHM J
RD26	#2 24011823	CHIP, METAL FILM, 1/20W 82K OHM J
RD27	#2 24011563	CHIP, METAL FILM, 1/20W 56K OHM J
RD28	#2 24011823	CHIP, METAL FILM, 1/20W 82K OHM J
RI01	24011330	CHIP, 1/20W 33 OHM J
RI02	24011682	CHIP, METAL FILM, 1/20W 6.8K OHM J
RI03	24011272	CHIP, 1/20W 2.7K OHM J
RI04	24011330	CHIP, 1/20W 33 OHM J
RI05	24011751	CHIP, METAL FILM, 1/20W 750 OHM J
RI06	24011330	CHIP, 1/20W 33 OHM J
RI07	24871390	CHIP, 1/8W 39 OHM J
RI08	24011821	CHIP, METAL FILM, 1/20W 820 OHM J
RI09	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RI10	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RI11	24011302	CHIP, METAL FILM, 1/20W 3K OHM J
RI12	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RI13	24011332	CHIP, METAL FILM, 1/20W 3.3K OHM J
RI14	24000445	CHIP JUMPER, 1608TYPE
RI15	#1 24011103	CHIP, METAL FILM, 1/20W 10K OHM J
	#2 24011105	CHIP, METAL FILM, 1/20W 1M OHM J
	#3 24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RI16	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RI17	24011271	CHIP, METAL FILM, 1/20W 270 OHM J
RI18	24011331	CHIP, METAL FILM, 1/20W 330 OHM J
RI19	#1 24011105	CHIP, METAL FILM, 1/20W 1M OHM J
	#2 24011103	CHIP, METAL FILM, 1/20W 10K OHM J
	#3 24011105	CHIP, METAL FILM, 1/20W 1M OHM J
RI20	24011821	CHIP, METAL FILM, 1/20W 820 OHM J
RI21	#1 24011271	CHIP, METAL FILM, 1/20W 270 OHM J
	#2 24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
	#3 24011271	CHIP, METAL FILM, 1/20W 270 OHM J
RI30	24011473	CHIP, METAL FILM, 1/20W 47K OHM J
RI31	24011433	CHIP, METAL FILM, 1/20W 43K OHM J
RI32	24011123	CHIP, METAL FILM, 1/20W 12K OHM J
RI33	#1 24011272	CHIP, 1/20W 2.7K OHM J
	#2 24011272	CHIP, 1/20W 2.7K OHM J
	#3 24011302	CHIP, METAL FILM, 1/20W 3K OHM J
RI40	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RI41	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RI42	24011112	CHIP, METAL FILM, 1/20W 1.1K OHM J
RI43	24011561	CHIP, METAL FILM, 1/20W 560 OHM J
RI44	24011471	CHIP, METAL FILM, 1/20W 470 OHM J
RI45	24011561	CHIP, METAL FILM, 1/20W 560 OHM J
RI46	24011122	CHIP, METAL FILM, 1/20W 1.2K OHM J
RI47	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RI51	24066046	VARIABLE. CARBON, 0.1W 20K N
RI52	24011331	CHIP, METAL FILM, 1/20W 330 OHM J
RI61	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RI62	#1 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
	#3 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RI63	#1 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
	#3 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RI65	#1 24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
	#3 24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RI67	24011563	CHIP, METAL FILM, 1/20W 56K OHM J
RI68	24011563	CHIP, METAL FILM, 1/20W 56K OHM J
RI69	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RI71	24011134	CHIP, METAL FILM, 1/20W 130K OHM J
RI72	24011134	CHIP, METAL FILM, 1/20W 130K OHM J
RI73	24011303	CHIP, METAL FILM, 1/20W 30K OHM J

Location No.	Parts No.	Descriptiopn
RI74	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
RI77	#1 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
	#3 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RI78	#1 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
	#3 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RI79	24011333	CHIP, METAL FILM, 1/20W 33K OHM J
RI80	24011183	CHIP, METAL FILM, 1/20W 18K OHM J
RI81	24011301	CHIP, METAL FILM, 1/20W 300 OHM J
RI82	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RI83	#1 24011103	CHIP, METAL FILM, 1/20W 10K OHM J
	#3 24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RI84	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RI85	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RI87	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RI88	24011203	CHIP, METAL FILM, 1/20W 20K OHM J
RI91	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RI97	#1 24011563	CHIP, METAL FILM, 1/20W 56K OHM J
	#3 24011563	CHIP, METAL FILM, 1/20W 56K OHM J
RI98	#1 24011563	CHIP, METAL FILM, 1/20W 56K OHM J
	#3 24011563	CHIP, METAL FILM, 1/20W 56K OHM J
RI99	#1 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
	#3 24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RJ01	#1 24000445	CHIP JUMPER, 1608TYPE
	#3 24000445	CHIP JUMPER, 1608TYPE
RJ02	#1 24000445	CHIP JUMPER, 1608TYPE
	#3 24000445	CHIP JUMPER, 1608TYPE
RJ05	#1 24000445	CHIP JUMPER, 1608TYPE
RS01	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RS02	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RS03	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RS04	24011104	CHIP, METAL FILM, 1/20W 100K OHM J
RS10	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS11	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS14	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS15	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS17	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS18	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RS19	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RS20	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RS21	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RS22	24011222	CHIP, METAL FILM, 1/20W 2.2K OHM J
RS23	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RS24	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RS27	24011561	CHIP, METAL FILM, 1/20W 560 OHM J
RS61	24552271	OXIDE METAL FILM, 1/2W 270 OHM J
RS62	24552271	OXIDE METAL FILM, 1/2W 270 OHM J
RV01	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RV02	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RV03	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
RV04	24011102	CHIP, METAL FILM, 1/20W 1K OHM J
RV05	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
RV06	24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
RV07	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RV10	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV11	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RV12	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV13	24011562	CHIP, METAL FILM, 1/20W 5.6K OHM J
RV14	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV15	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV16	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV17	24366750	CARBON FILM, 1/6W 75 OHM J
RV18	24366104	CARBON FILM, 1/6W 100K OHM J
RV19	24366104	CARBON FILM, 1/6W 100K OHM J
RV20	#1 24366102	CARBON FILM, 1/6W 1K OHM J
RV21	24366151	CARBON FILM, 1/6W 150 OHM J
RV22	#1 24366102	CARBON FILM, 1/6W 1K OHM J
RV24	24552101	OXIDE METAL FILM, 1/2W 100 OHM J
RV25	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
RV26	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV29	24011223	CHIP, METAL FILM, 1/20W 22K OHM J
RV30	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
RV31	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
RV33	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
RV34	24011750	CHIP, METAL FILM, 1/20W 75 OHM J
RV90	24011101	CHIP, METAL FILM, 1/20W 100 OHM J
RV91	24011101	CHIP, METAL FILM, 1/20W 100 OHM J

Location No.	Parts No.	Description
RV92	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
RV93	24011103	CHIP, METAL FILM, 1/20W 10K OHM J
GJ04	#1 24000445	CHIP JUMPER, 1608TYPE
	#3 24000445	CHIP JUMPER, 1608TYPE
GJ06	#2 24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
GJ07	#2 24011472	CHIP, METAL FILM, 1/20W 4.7K OHM J
	#3 24000445	CHIP JUMPER, 1608TYPE
GJ16	24000445	CHIP JUMPER, 1608TYPE
GJ48	24000445	CHIP JUMPER, 1608TYPE
GJ49	24000445	CHIP JUMPER, 1608TYPE
GJ50	24000445	CHIP JUMPER, 1608TYPE
GJ51	24000445	CHIP JUMPER, 1608TYPE
GJ331	24000445	CHIP JUMPER, 1608TYPE
GJ401	24000445	CHIP JUMPER, 1608TYPE
GJ404	24000445	CHIP JUMPER, 1608TYPE
GR30	24000445	CHIP JUMPER, 1608TYPE
GR45	24000445	CHIP JUMPER, 1608TYPE
GR301	24000445	CHIP JUMPER, 1608TYPE
GR601	#1 24000445	CHIP JUMPER, 1608TYPE
	#3 24000445	CHIP JUMPER, 1608TYPE
GR602	#1 24000445	CHIP JUMPER, 1608TYPE
	#3 24000445	CHIP JUMPER, 1608TYPE
GRI01	24000445	CHIP JUMPER, 1608TYPE
GRI02	24000445	CHIP JUMPER, 1608TYPE
GRI04	#2 24000445	CHIP JUMPER, 1608TYPE
GRI06	#2 24000445	CHIP JUMPER, 1608TYPE
JR001	24000445	CHIP JUMPER, 1608TYPE
JR002	24000445	CHIP JUMPER, 1608TYPE
JR003	24000445	CHIP JUMPER, 1608TYPE
JR004	24000445	CHIP JUMPER, 1608TYPE
JR007	24000445	CHIP JUMPER, 1608TYPE
JR008	24000445	CHIP JUMPER, 1608TYPE
JR009	24000445	CHIP JUMPER, 1608TYPE
JR010	24000445	CHIP JUMPER, 1608TYPE
JR011	24000445	CHIP JUMPER, 1608TYPE
<b>COILS &amp; TRANSFORMERS</b>		
L101	23248367	COIL, CHOKE 9X13H 221MMH 0.6A TLN3278AC
L301	23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
L320	23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
L441	23233037	COIL, HOLIZ LINEARITY, TLN2131AT
L442	#1 23248121	COIL, CHOKE, TLN3383D
	#2 23248121	COIL, CHOKE, TLN3383D
	#3 23248299	COIL, CHOKE, TLN3383GH
L461	23248362	COIL, CHOKE 19X30H 470MMH 1.5A TLN3335AC
L462A	#1 23993087	METAL SHEET, XH4*25*0.5 HOSEIHEN XH(50H470)
	#2 23993087	METAL SHEET, XH4*25*0.5 HOSEIHEN XH(50H470)
L462B	#1 23993163	METAL SHEET, YH 4*30*O.4 HOSEIHEN YH
	#2 23993163	METAL SHEET, YH 4*30*O.4 HOSEIHEN YH
L462C	#1 23993088	METAL SHEET, YV7*12*2.5*O.5 HOSEIHEN YV
	#2 23993088	METAL SHEET, YV7*12*2.5*O.5 HOSEIHEN YV
L462D	#1 23948536	SHEET, MAGNETIC FERRITE
	#2 23948536	SHEET, MAGNETIC FERRITE
L462E	#1 23948535	SHEET, MAGNETIC FERRITE
	#2 23948535	SHEET, MAGNETIC FERRITE
L462F	#1 23960101	SILICONE RUBBER, TSE-382 RTV
	#2 23960101	SILICONE RUBBER, TSE-382 RTV
L501	23289912	COIL, PEAKING COIL 3.3MMH TRF4339AU
L502	23289924	COIL, PEAKING COIL 33MMH TRF4330AU
L503	23289924	COIL, PEAKING COIL 33MMH TRF4330AU
L505	23289924	COIL, PEAKING COIL 33MMH TRF4330AU
L506	23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
L507	23289924	COIL, PEAKING COIL 33MMH TRF4330AU
L805	23248234	COIL, CHOKE, TLN3481AC
L806	23248234	COIL, CHOKE, TLN3481AC
L811	23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
L883	23221747	COIL, CHOKE, TRF9253D
L885	#1 23248327	COIL, CHOKE 10X13.3H 100MMH TLN3299AC
	#2 23248327	COIL, CHOKE 10X13.3H 100MMH TLN3299AC
	#3 23248288	COIL, CHOKE, TLN3299GH
L886	23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
L888	23280016	COIL, PEAKING, TRF4100AZ
L889	23280016	COIL, PEAKING, TRF4100AZ
L891	23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
L893	23280016	COIL, PEAKING, TRF4100AZ
L901	#1 23200569	COIL, TSB-2400BH PAL 25INCH

Location No.	Parts No.	Description
	#2 23200569	COIL, TSB-2400BH PAL 25INCH
	#3 23200579	COIL, TSB-2400BV TSB-2400BV
L902	23289934	COIL, PEAKING, TRF4221AU
L903	23289934	COIL, PEAKING, TRF4221AU
L904	23289934	COIL, PEAKING, TRF4221AU
L905	23289925	COIL, PEAKING, TRF4390AU
L906	23289925	COIL, PEAKING, TRF4390AU
L907	23289925	COIL, PEAKING, TRF4390AU
LA01	23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
LC01	#1 23221129	CHOKE COIL , TRF9240AC TRF9240AC
LC02	#1 23221129	CHOKE COIL , TRF9240AC TRF9240AC
LC03	#1 23221129	CHOKE COIL , TRF9240AC TRF9240AC
LC04	#1 23103279	FILTER, FERRITR CHOKE 3.5X5X2 TEM2014AO
	#2 23289910	COIL, PEAKING COIL 2.2MMH TRF4229AU
LC05	#1 23103279	FILTER, FERRITR CHOKE 3.5X5X2 TEM2014AO
	#2 23289910	COIL, PEAKING COIL 2.2MMH TRF4229AU
LD01	#2 23103825	INDUCTOR, BEAD, TEM2118M
LD02	#2 23103825	INDUCTOR, BEAD, TEM2118M
LI01	23238554	COIL, PEAKING, TRF4R22AJ
LI03	23238503	COIL, PEAKING, TRF4129AJ
LI04	23238706	COIL, PEAKING, TRF4470AJ
LI06	23238719	COIL, PEAKING, TRF4399AJ
LI07	23238712	COIL, PEAKING, TRF4150AJ
LI10	23289923	COIL, PEAKING COIL 27MMH TRF4270AU
LI51	#1 23232032	COIL, VARIABLE TRF3546D
	#3 23232032	COIL, VARIABLE TRF3546D
LI54	#2 23232032	COIL, VARIABLE TRF3546D
LI56	23238562	COIL, PEAKING, TRF4109AJ
LI57	23238562	COIL, PEAKING, TRF4109AJ
LI61	23238710	COIL, PEAKING, TRF4220AJ
LI91	#1 23238713	COIL, PEAKING, TRF4120AJ
	#3 23238713	COIL, PEAKING, TRF4120AJ
T401	23224380	TRANSFORMER, HORIZ DRIVE, TLN1098GH
T461	23236697	TRANSFORMER, HORIZ OUTPUT, TFB4186AS
T801	23211787	COIL, LINE FILTER TRF3247AM
T802	23211777	COIL, LINE FILTER 37X40H 4.7MH TRF3202AR
T862	23217640	TRANSFORMER, TPW3536AM
G103	#1 23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
G104	#1 23248234	COIL, CHOKE, TLN3481AC
G105	#1 23248234	COIL, CHOKE, TLN3481AC
G106	#1 23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
G107	#1 23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
G108	#1 23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
G109	#1 23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
G402	23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
G461	23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
G815	23103249	CORE, FERRITE BEAD 3.5X4.5, TEM2011AO
G900	23289918	COIL, PEAKING, TRF4100AU
<b>SEMICONDUCTORS</b>		
Q104	70200934	IC, IC RESET PST9129N PST9126NR
Q201	23314475	TRANSISTOR, 2SC2712-Y
Q202	23314475	TRANSISTOR, 2SC2712-Y
Q205	23314475	TRANSISTOR, 2SC2712-Y
Q208	#1 23314475	TRANSISTOR, 2SC2712-Y
	#2 23314475	TRANSISTOR, 2SC2712-Y
	#3 23314204	TRANSISTOR, 2SC2412K,Q
Q210	#1 23314475	TRANSISTOR, 2SC2712-Y
	#2 23314475	TRANSISTOR, 2SC2712-Y
	#3 23314204	TRANSISTOR, 2SC2412K,Q
Q211	#1 23314475	TRANSISTOR, 2SC2712-Y
	#2 23314475	TRANSISTOR, 2SC2712-Y
	#3 23314204	TRANSISTOR, 2SC2412K,Q
Q301	23009353	IC, VERTICAL AN5523 MATSUSHITA AN5523
Q321	#1 23314475	TRANSISTOR, 2SC2712-Y
	#2 23314475	TRANSISTOR, 2SC2712-Y
	#3 23314204	TRANSISTOR, 2SC2412K,Q
Q340	#1 23314163	TRANSISTOR, 2SA1162-Y
	#2 23314163	TRANSISTOR, 2SA1162-Y
	#3 23205045	TRANSISTOR, 2SA1037AKQ
Q402	23114755	TRANSISTOR, 2SC2482FA-1
Q403	70114402	TRANSISTOR, 2SC3437-Y
Q404	#1 23314970	TRANSISTOR, 2SD2539(FA)
	#2 23314970	TRANSISTOR, 2SD2539(FA)
	#3 23314375	TRANSISTOR, ON4409
Q430	23114733	TRANSISTOR, 2SC2655-Y

Location No.	Parts No.	Descriptiopn
Q431	#1 23314475	TRANSISTOR, 2SC2712-Y
	#2 23314475	TRANSISTOR, 2SC2712-Y
	#3 23314204	TRANSISTOR, 2SC2412K,Q
Q460	23205160	TRANSISTOR, NPN VCBO=100V KTD2092
Q461	23314163	TRANSISTOR, 2SA1162-Y
Q462	23314163	TRANSISTOR, 2SA1162-Y
Q463	23314163	TRANSISTOR, 2SA1162-Y
Q465	23314163	TRANSISTOR, 2SA1162-Y
Q471	23205257	TRANSISTOR, PNP VCBO=-150V KTA1024-Y
Q502	23009508	IC, RGB AMP MATSUSHITA AN15931A
Q610	23906582	IC, AN5277
Q620	#1 23906919	IC, TA1304F
	#3 23906919	IC, TA1304F
Q623	#1 23205222	TRANSISTOR, PNP R1=R2=47KOHM SRA2204S (SOT-23)
	#2 23205222	TRANSISTOR, PNP R1=R2=47KOHM SRA2204S (SOT-23)
	#3 23114493	TRANSISTOR, RN2404
Q670	23205005	TRANSISTOR, KTA2014Y
Q671	70114396	TRANSISTOR, 2SC3326B
Q672	70114396	TRANSISTOR, 2SC3326B
Q801	23135037	IC, STR-F6268S
Q802	23205160	TRANSISTOR, NPN VCBO=100V KTD2092
Q805	23205229	TRANSISTOR, NPN R1=2.2K R2=47K SRC1205M
Q826	23906937	IC, PHOTO COUPLER, ON3171-R
Q830	#1 23009843	IC, REGULATOR +5V 4% S7805PI
	#2 23009843	IC, REGULATOR +5V 4% S7805PI
	#3 23009188	IC, KIA7805API
Q835	#1 23009844	IC, REGULATOR +9V 4% S7809PI
	#2 23009844	IC, REGULATOR +9V 4% S7809PI
	#3 23009187	IC, REGULATOR +9V 4% KIA7809API
Q840	#1 23205160	TRANSISTOR, NPN VCBO=100V KTD2092
	#2 23205160	TRANSISTOR, NPN VCBO=100V KTD2092
	#3 23314141	TRANSISTOR, 2SC3852
Q841	23114879	TRANSISTOR, 2SC2230A-Y(C)
Q842	#1 23205085	TRANSISTOR, 2SC5343-Y
	#2 23205085	TRANSISTOR, 2SC5343-Y
	#3 23314965	TRANSISTOR, KTC3198 Y
Q843	23009512	IC, REGULATOR, +3.3V 2% TO-220F NJU7223F33
Q883	23319692	IC, SE130N, LF4
Q901	23314780	TRANSISTOR, 2SC4544
Q902	23205085	TRANSISTOR, 2SC5343-Y
Q903	23314780	TRANSISTOR, 2SC4544
Q904	23205085	TRANSISTOR, 2SC5343-Y
Q905	23314780	TRANSISTOR, 2SC4544
Q906	23205085	TRANSISTOR, 2SC5343-Y
Q907	23205081	TRANSISTOR, 2SA1980-Y
Q908	23205202	TRANSISTOR, 2SC5344Y 2SC5344Y
Q4030	#1 23314475	TRANSISTOR, 2SC2712-Y
	#2 23314475	TRANSISTOR, 2SC2712-Y
	#3 23314204	TRANSISTOR, 2SC2412K,Q
Q4710	#1 23314163	TRANSISTOR, 2SA1162-Y
	#2 23314163	TRANSISTOR, 2SA1162-Y
	#3 23205045	TRANSISTOR, 2SA1037AKQ
QA10	23009648	IC, AT24C32A-10PI-2.7
QA51	#1 23009746	IC, PANA MICRO VCD COMB TEXT MN101E02GMC
	#2 23009859	IC, PANA MICRO VCD COMB TEXT MN101E04GAD
	#3 23009859	IC, PANA MICRO VCD COMB TEXT MN101E04GAD
QA71	#1 23314163	TRANSISTOR, 2SA1162-Y
	#2 23314163	TRANSISTOR, 2SA1162-Y
	#3 23205045	TRANSISTOR, 2SA1037AKQ
QB02	23314965	TRANSISTOR, KTC3198 Y
QB05	#1 23314475	TRANSISTOR, 2SC2712-Y
	#2 23314475	TRANSISTOR, 2SC2712-Y
	#3 23314204	TRANSISTOR, 2SC2412K,Q
QD01	#2 23009522	IC, NICAM DECODER PLQFP64 MSP3410G
QD02	#2 23009278	IC, RESET 4.2V SMP5 BD4742G-TR
QD03	#2 23205006	TRANSISTOR, KTC4075Y
QD04	#2 23205006	TRANSISTOR, KTC4075Y
QD05	#2 23205006	TRANSISTOR, KTC4075Y
QD06	#2 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)
QI01	23906820	IC, VIF/SIF SSOP 24PIN TA1267AF(FA02,EL)
QI02	23114611	TRANSISTOR, 2SC3357
QI04	23205005	TRANSISTOR, KTA2014Y
QI05	23205006	TRANSISTOR, KTC4075Y
QI06	23205005	TRANSISTOR, KTA2014Y
QI07	#1 23205140	TRANSISTOR, DTC114EUAT106
	#2 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)

Location No.	Parts No.	Descriptiopn
	#3 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)
QI08	#1 23205140	TRANSISTOR, DTC114EUAT106
	#2 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)
	#3 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)
QI09	#1 23205140	TRANSISTOR, DTC114EUAT106
	#2 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)
	#3 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)
QI12	23314926	TRANSISTOR, FET, 2SK880-Y
QI15	#1 23205140	TRANSISTOR, DTC114EUAT106
	#2 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)
	#3 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)
QI16	#1 23205140	TRANSISTOR, DTC114EUAT106
	#2 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)
	#3 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)
QI17	#1 23205140	TRANSISTOR, DTC114EUAT106
	#2 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)
	#3 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)
QI60	#2 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)
QI61	23205006	TRANSISTOR, KTC4075Y
QI63	#1 23205140	TRANSISTOR, DTC114EUAT106
	#3 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)
QI64	#1 23205140	TRANSISTOR, DTC114EUAT106
	#3 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)
QI65	#1 23205006	TRANSISTOR, KTC4075Y
	#3 23205006	TRANSISTOR, KTC4075Y
QI71	23205006	TRANSISTOR, KTC4075Y
QI81	#1 23205140	TRANSISTOR, DTC114EUAT106
	#2 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)
	#3 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)
QI91	#1 23205006	TRANSISTOR, KTC4075Y
	#3 23205006	TRANSISTOR, KTC4075Y
QI92	#1 23205140	TRANSISTOR, DTC114EUAT106
	#2 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)
	#3 23205214	TRANSISTOR, NPN R1=R2=10KOHM SRC1202U (SOT-323)
QS01	23205006	TRANSISTOR, KTC4075Y
QS02	23205006	TRANSISTOR, KTC4075Y
QS03	23205204	TRANSISTOR, NPN VEBO=25V KTC2875B-RTK
QS04	23205204	TRANSISTOR, NPN VEBO=25V KTC2875B-RTK
QV01	23000368	IC, MM1495XF
QV02	23205085	TRANSISTOR, 2SC5343-Y
QV03	23205006	TRANSISTOR, KTC4075Y
QV04	23205006	TRANSISTOR, KTC4075Y
D101	23118607	DIODE, ZENER, RD33ESA B3
D210	23357447	DIODE, SWITCH SILICON KDS160-RTK/USC
D211	23357447	DIODE, SWITCH SILICON KDS160-RTK/USC
D301	23357448	DIODE, DIODE IF=1.0A GP10D
D302	23357372	DIODE, AXIAL EU2JGF-41U2
D303	23316794	DIODE, SC570A
D340	23118529	DIODE, ZENER, RD5.6ES B2
D406	23357372	DIODE, AXIAL EU2JGF-41U2
D408	23357375	DIODE, 3JHJGR-M2
D431	23118530	DIODE, ZENER, RD5.6ESA B1
D432	23316231	DIODE, 1SS355
D441	23118531	DIODE, ZENER, RD5.1ESA B3
D442	23357372	DIODE, AXIAL EU2JGF-41U2
D444	23316254	DIODE, ERC06-15
D461	23357364	DIODE, RU4JGF- M2 RU4JGF- M2
D462	23316231	DIODE, 1SS355
D463	23316231	DIODE, 1SS355
D467	23357372	DIODE, AXIAL EU2JGF-41U2
D470	23118604	DIODE, ZENER, RD36ESA B2
D473	23118635	DIODE, ZENER, RD2.7ESA B2
D474	23118635	DIODE, ZENER, RD2.7ESA B2
D670	23316231	DIODE, 1SS355
D671	23316231	DIODE, 1SS355
D672	23316231	DIODE, 1SS355
D673	23316231	DIODE, 1SS355
D674	23316231	DIODE, 1SS355
D680	23316231	DIODE, 1SS355
D681	23316231	DIODE, 1SS355
D682	23316231	DIODE, 1SS355
D683	23316231	DIODE, 1SS355
D801	23357041	DIODE, LN6SB60-F05
D804	23118505	DIODE, ZENER, RD15ESA B2
D805	23357012	DIODE, 1SS244
D806	23357372	DIODE, AXIAL EU2JGF-41U2

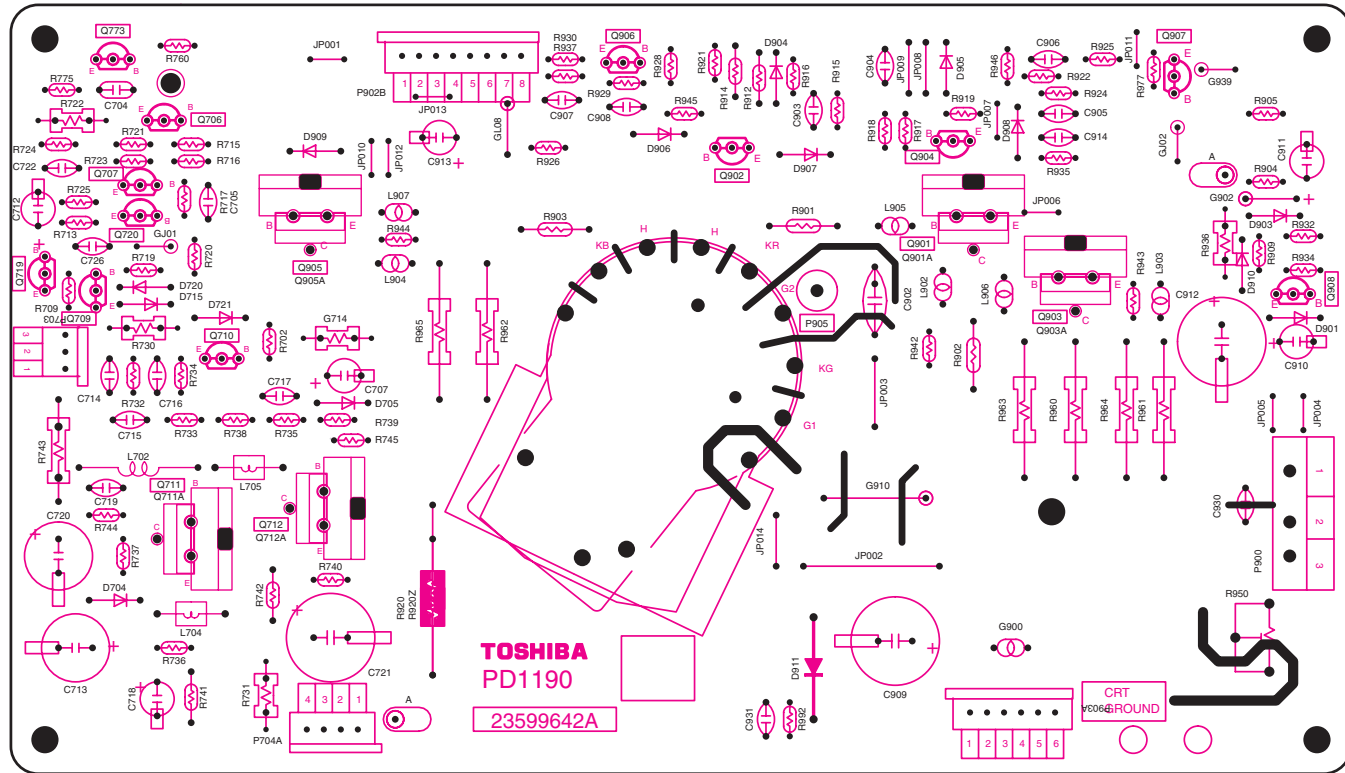
Location No.	Parts No.	Descriptiopl
D810	23118496	DIODE, ZENER, RD22ESA B2
D811	23357341	DIODE, 1SS133
D815	23118608	DIODE, ZENER, RD33ES B2
D818	23118496	DIODE, ZENER, RD22ESA B2
D828	23357341	DIODE, 1SS133
D840	23118528	DIODE, ZENER, RD5.6ESA B3
D845	23357341	DIODE, 1SS133
D848	23118531	DIODE, ZENER, RD5.1ESA B3
D882	23118632	DIODE, ZENER, RD3.3ESA B1
D883	23357364	DIODE, RU4JGF- M2 RU4JGF- M2
D885	23118052	DIODE, RU4Z LF-L1
D891	23357372	DIODE, AXIAL EU2JGF-41U2
D901	23357341	DIODE, 1SS133
D903	23357341	DIODE, 1SS133
D904	23357341	DIODE, 1SS133
D905	23357341	DIODE, 1SS133
D906	23357341	DIODE, 1SS133
D907	23357341	DIODE, 1SS133
D908	23357341	DIODE, 1SS133
D909	23357341	DIODE, 1SS133
D910	23357341	DIODE, 1SS133
D911	23357372	DIODE, AXIAL EU2JGF-41U2
D4710	23316231	DIODE, 1SS355
DA78	23357447	DIODE, SWITCH SILICON KDS160-RTK/USC
DB01	23358571	DIODE, LED, BT-H254N-31-SH
DB02	23358572	LED, LED L-2523SGT
DD01 #2	23118138	DIODE, MA77
DI01 #1	23314428	DIODE, SILICON BAND SWICHING 1SS312(TE85L)
#2	23357446	DIODE, VR=30V IF=50MA KDS112-RTK/USM
#3	23357446	DIODE, VR=30V IF=50MA KDS112-RTK/USM
DI02 #1	23118043	DIODE, CHIP VRM80V 100MA A-C US DAP202U T106
#2	23357212	DIODE, CHIP VRM=85V IO=200MA KC KDS120-RTK
#3	23357212	DIODE, CHIP VRM=85V IO=200MA KC KDS120-RTK
DI03 #1	23118138	DIODE, MA77
#2	23357445	DIODE, KDS114-RTK/USC KDS114-RTK/USC
#3	23357445	DIODE, KDS114-RTK/USC KDS114-RTK/USC
DV01	23316588	DIODE, ZENER, MA8091-M
DV02	23316588	DIODE, ZENER, MA8091-M
DV04	23316588	DIODE, ZENER, MA8091-M
KB01	23000852	IC, REMOTE PHOTO RECEIVER, PIC-37043TE2
<b>MISCELLANEOUS</b>		
B212	23845859	HOLDER, WIRE, PVC-C0AT, L=70MM
F470	23144647	FUSE, CARTRIDGE 5X20 250V 1.0A
F470A	23165433	FUSE HOLDER, 5.2 SOC
F470B	23165433	FUSE HOLDER, 5.2 SOC
F801	23144508	FUSE, CARTRIDGE 5.2X20, 250V 4.0A
F801A	23165433	FUSE HOLDER, 5.2 SOC
F801B	23165433	FUSE HOLDER, 5.2 SOC
F802	23144652	FUSE, CARTRIDGE 5X20 250V 3.15A
F802A	23165433	FUSE HOLDER, 5.2 SOC
F802B	23165433	FUSE HOLDER, 5.2 SOC
M461A	23192950	ANODE CAP ASSY, TCC5600BD
M461B	23504358	CABLE, FOCUS
M461C	23509371	CABLE ASSY, SCREEN
N728 #1	23960101	SILICONE RUBBER, TSE-382 RTV
#2	23960101	SILICONE RUBBER, TSE-382 RTV
P501A	23902062	CONNECTOR, SOCKET, B-B
P501B	23368004	CONNECTOR, PLUG B-B 5P 2.5MM JST
P661	23023116	PLUG, HEAD PHONE JACK 3.5MM PJ3-14-7
P801 #1	23372052	POWER CORD, 250V2.5A
#2	23372199	POWER CORD, THAI THAI
#3	23372224	POWER CORD, CEE 250V 2.5A VIET M4206N
P802 #1	23368249	POWER CORD, 2P 11.88MM VH-JST
#2	23368249	POWER CORD, 2P 11.88MM VH-JST
P803B	23164729	CONNECTOR, PLUG, 3P 5MM B JALCO YKF21-0027
P910	23164725	CONNECTOR, PLUG 2P
PI01A	23023145	PLUG, B15PS-TB-2 B15PS-TB-2
PI02A	23023145	PLUG, B15PS-TB-2 B15PS-TB-2
PV02	23023199	JACK, 8P (4SW) DAV8-31B01114S01
PV03	23023050	JACK, 1S+3P JACK KUNMING ELECT. KM04016GP
PV60	23023197	JACK, 3P ,2SW DAV3-23B01112S01
Q301B	70391355	SCREW, BIND HEAD TAP-TITE B, BITTB 3X8 SZN
Q610B	70391355	SCREW, BIND HEAD TAP-TITE B, BITTB 3X8 SZN
Q830B	70391355	SCREW, BIND HEAD TAP-TITE B, BITTB 3X8 SZN
Q840B	70391355	SCREW, BIND HEAD TAP-TITE B, BITTB 3X8 SZN

Location No.	Parts No.	Descriptiopl
S801	23344481	SWITCH, POWER, AAPY2211
SA01	23344443	SWITCH, TACTING SWITCH TSV TYP TSVB-1
SA02	23344443	SWITCH, TACTING SWITCH TSV TYP TSVB-1
SA03	23344443	SWITCH, TACTING SWITCH TSV TYP TSVB-1
SA04	23344443	SWITCH, TACTING SWITCH TSV TYP TSVB-1
SA06	23344443	SWITCH, TACTING SWITCH TSV TYP TSVB-1
SA07	23344443	SWITCH, TACTING SWITCH TSV TYP TSVB-1
SR81	23146573	RELAY, DC12V 0.53W, OMR G5PA-1-M
SR83	23146570	RELAY, DC12V, 2M OMR, G5PA-2 DC12
V901A	23903147	SOCKET, ISH46S-E ICE 29MM
V901B #1	23102456	FUKA MAGNET, CHEVRON TAKECHI MAG4006
#2	23102456	FUKA MAGNET, CHEVRON TAKECHI MAG4006
W661	23351235	SPEAKER, 60X90 4-OHM 10W FOSTER SPK-1450AF
W662	23351235	SPEAKER, 60X90 4-OHM 10W FOSTER SPK-1450AF
XA03	23153759	CRYSTAL RESONATOR, 10MHZ
XD01 #2	23153490	CRYSTAL, 18.432 20PPM CL=13PF
Z891	23144542	PROTECTOR, 491SERIES, 125V 4A
Z902 #1	23103154	FERRITE CORE, 24X36X13
#3	23103840	FERRITE CORE, TFE1013
ZI01	23303223	SAW FILTER, PIF
ZI02	23303210	SAW FILTER, SIF
ZI05	23303085	CERAMIC TRAP, TCF1092
ZI06	23303136	CERAMIC TRAP, TCF1097
ZI07	23303290	FILTER, FIL-CTRAP-4.5MHZ TCF1142AM
ZI54	23303166	CERAMIC TRAP, 39.5MHZ TCF1107
ZI55	23303224	CERAMIC TRAP, TCF1120AM
ZI61 #1	23303294	FILTER, FIL CFILT 5.5MHZ TCF1146AM
#3	23303294	FILTER, FIL CFILT 5.5MHZ TCF1146AM
ZI62 #1	23303269	FILTER, FIL CFILT 6.0MHZ TCF1136AM
#3	23303269	FILTER, FIL CFILT 6.0MHZ TCF1136AM
ZI63 #1	23303270	FILTER, CFILT 6.5MHZ, TCF1137AM
#3	23303270	FILTER, CFILT 6.5MHZ, TCF1137AM
ZI64	23303289	FILTER, TCF1141AM
<b>PC BOARD ASSEMBLIES</b>		
* U901 #1	23761439	PC BOARD ASSY, CRT/D PD1190F TSP2003052626
#2	23761439	PC BOARD ASSY, CRT/D PD1190F TSP2003052626
#3	23761603	PC BOARD ASSY, CRT/D PD1190H TSP2003063048
* U902 #1	23761600	PC BOARD ASSY, PD1525 SIG 21SZ TSP2003063045
#2	23761440	PC BOARD ASSY, SIGNAL PD1526C TSP2003052627
#3	23761705	PC BOARD ASSY, PD1526Y SIG 25S TSP2003072913
* U903 #1	23761818	PC BOARD ASSY, PD1346K, IF/MONO, 25S25TR
#2	23761366	PC BRD ASSY, IF STEREO PD1474A TSP2002050268
#3	23761750	PC BOARD ASSY, PD1346G IF/MONO TSP2003080802
* U904A #1	23761601	PC BOARD ASSY, PD1575A-1 FRONT TSP2003063046
#2	23761441	PC BOARD ASSY, FRONT PD1575-1 TSP2003052628
#3	23761605	PC BOARD ASSY, PD1575B-1 FRNT TSP2003063050
* U904B #1	23761602	PC BOARD ASSY, RMT PD1575A-2 TSP2003063047
#2	23761442	PC BOARD ASSY, RMT PD1575-2 TSP2003052629
#3	23761606	PC BOARD ASSY, RMT PD1575B-2 TSP2003063051
<b>PICTURE TUBE</b>		
V901 #1	23324081	PICTURE TUBE, A60LVX197X-DY 25" PRE-ITC
#2	23324081	PICTURE TUBE, A60LVX197X-DY 25" PRE-ITC
#3	23324074	PICTURE TUBE, 24VDFEXV2 ITC A60LVX197X01
<b>TUNER</b>		
H001 #1	23321450	TUNER, ASIA HYPER FS D-J, ENV59DA7G3
#2	23321473	TUNER, ASIA MLT IICPLL SANYO ECA33LXC
#2	23321452	TUNER, ASIA MLT IICPLL SAMSUNG ECA33LX8
#2	23321417	TUNER, ASIA MLT IICPLL D-J LG ECA33LX6
#2	23321428	TUNER, ASIA MLT IICPLL SANYO ECA33LX8
#3	23321450	TUNER, ASIA HYPER FS D-J, ENV59DA7G3
#3	23321357	TUNER, ECA33LX1, ASIA MLT IICPLL D-J MATU
<b>ACCESSORIES</b>		
K902	23306459	REMOCON HAND UNIT IR, CTVPAL CT-90119
Y101A #1	23566093	OWNER'S MANUAL
#2	23566092	OWNER'S MANUAL
#3	23566094	OWNER'S MANUAL
Y120	23943846	BAG, POLY
<b>CABINET PARTS</b>		
A201 #1	23532305	COVER, FRONT COVER
#2	23532305	COVER, FRONT COVER
#3	23532402	COVER, FRONT

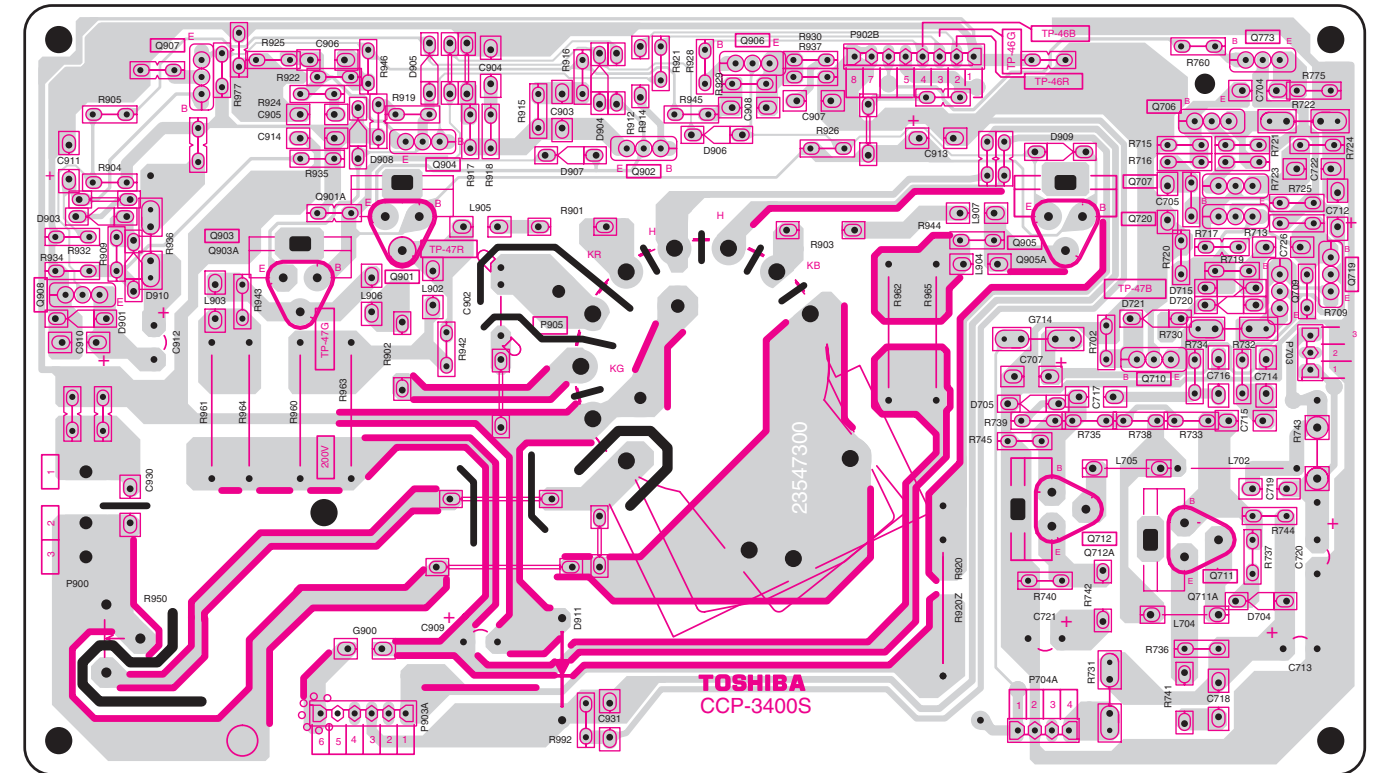
Location No.	Parts No.	Descriptiopn
A303	23929758	HOLDER, BUTTON
A401	#1 23532308	COVER, BACK COVER ASSY
	#2 23532308	COVER, BACK COVER ASSY
	#3 23532403	COVER, BACK PROPER
A425	23929456	PIECE, WASHER T=0.5 ZP50 36ZP50D;D000221
A426	23929457	PIECE, WASHER T=1.0 ZP50 36ZP50D;D000221
A427	23929458	PIECE, WASHER T=1.5 ZP50 36ZP50D;D000221
A428	23929459	PIECE, WASHER T=2.0 ZP50 36ZP50D;D000221
A701	#1 23067317	CARTON, BOX
	#2 23067316	CARTON, BOX
	#3 23067318	CARTON, BOX
A702A	#1 23946654	PACKING, TOP PACKING
	#2 23946654	PACKING, TOP PACKING
	#3 23946691	PACKING, TOP
A702B	#1 23946655	PACKING, BOTTOM PACKING 5SZ5ST TSP2003053002
	#2 23946655	PACKING, BOTTOM PACKING 5SZ5ST TSP2003053002
	#3 23946692	PACKING, BOTTOM
A901	23428247	DOOR, PROPER
A903	23451976	PUSH CATCH, CLICK
A904A	23445781	BUTTON, POWER
AT03	23588765	REMOCON PART, BATTERY COVER, CT-90119
E505	23845564	CLAMPER
E912	#1 23848729	WEDGE, YOKE HOLDING, 3 REQUIRED
	#2 23848729	WEDGE, YOKE HOLDING, 3 REQUIRED

Location No.	Parts No.	Descriptiopn
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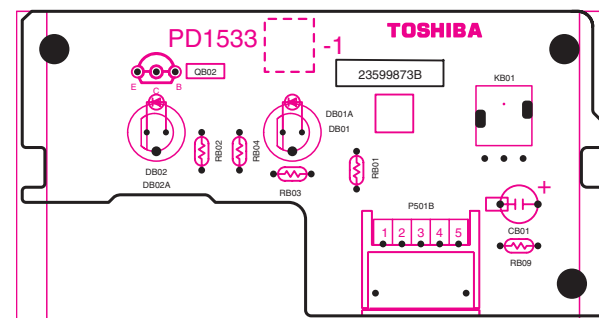
**CRT/D BOARD PD1190F (25CSZ5TR/25SZ5ST)  
 CRT/D BOARD PD1190H (25SZ5VX)  
 TOP (COMPONENT) SIDE**



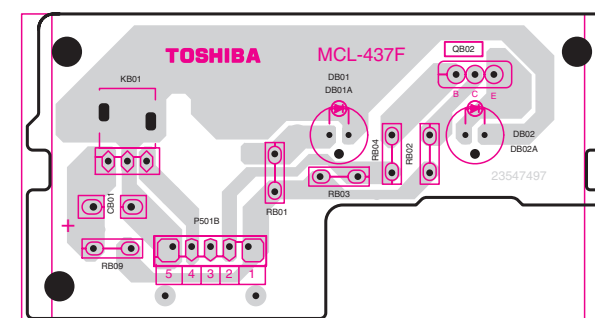
**CRT/D BOARD PD1190F (25CSZ5TR/25SZ5ST)  
 CRT/D BOARD PD1190H (25SZ5VX)  
 BOTTOM (FOIL) SIDE**



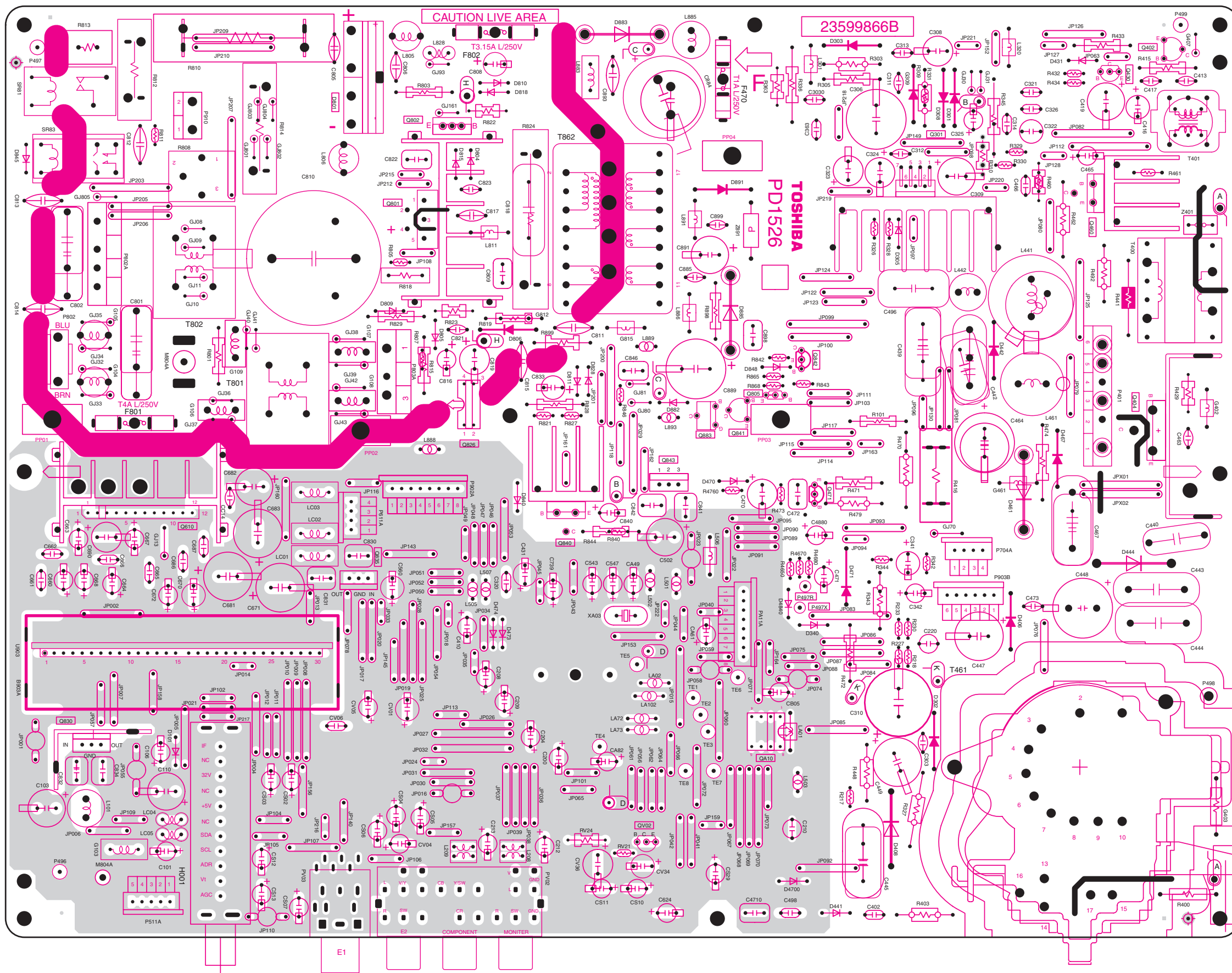
**FRONT BOARD PD1575A-1 (25CSZ5TR)  
 FRONT BOARD PD1575-1 (25SZ5ST)  
 FRONT BOARD PD1575B-1 (25SZ5VX)  
 TOP (COMPONENT) SIDE**



**FRONT BOARD PD1575A-1 (25CSZ5TR)  
 FRONT BOARD PD1575-1 (25SZ5ST)  
 FRONT BOARD PD1575B-1 (25SZ5VX)  
 BOTTOM (FOIL) SIDE**

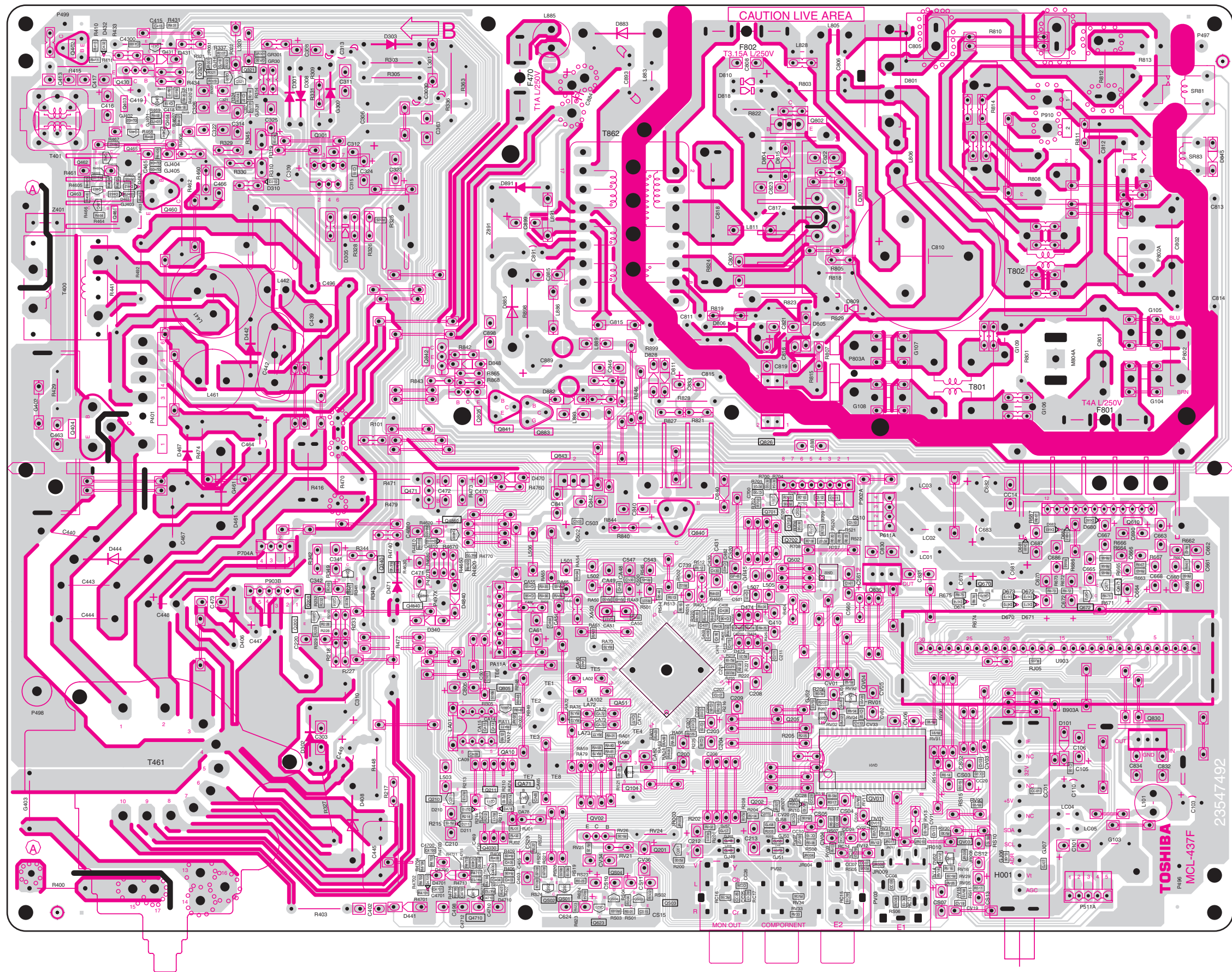


**SIGNAL BOARD PD1525 (25CSZ5TR)**  
**SIGNAL BOARD PD1526C (25SZ5ST)**  
**SIGNAL BOARD PD1526Y (25SZ5VX)**  
 TOP (COMPONENT) SIDE

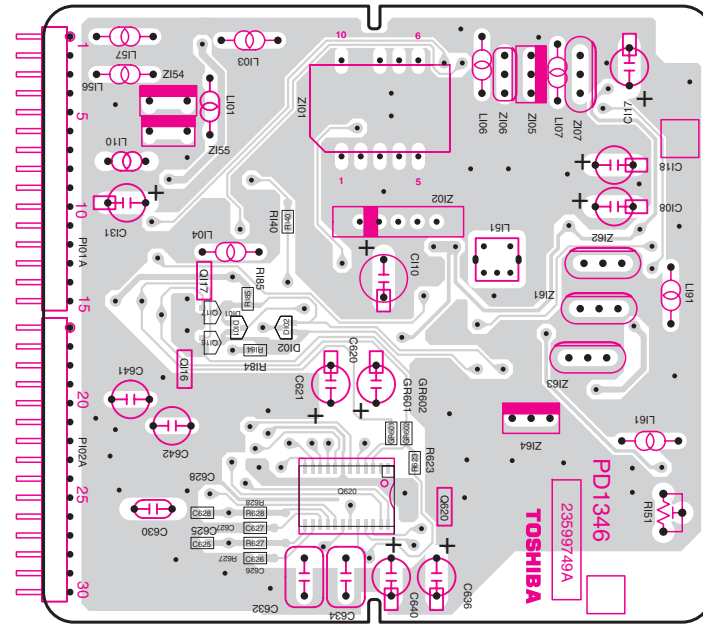




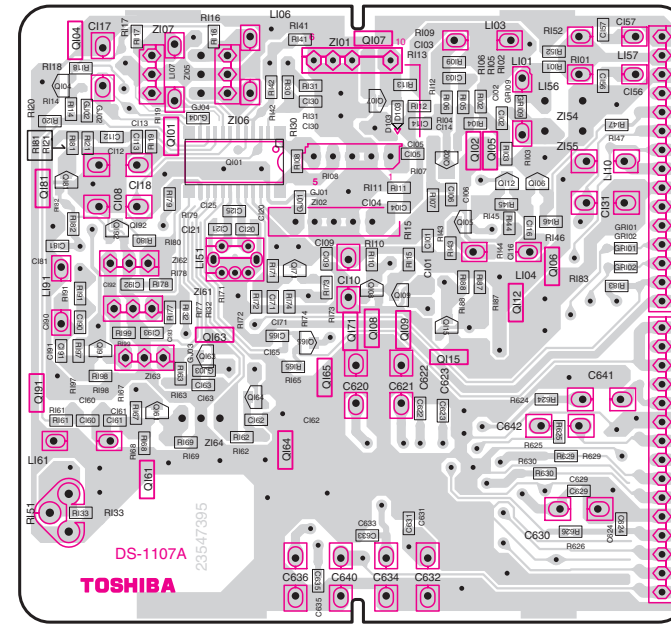
**SIGNAL BOARD PD1525 (25CSZ5TR)**  
**SIGNAL BOARD PD1526C (25SZ5ST)**  
**SIGNAL BOARD PD1526Y (25SZ5VX)**  
**BOTTOM (FOIL) SIDE**



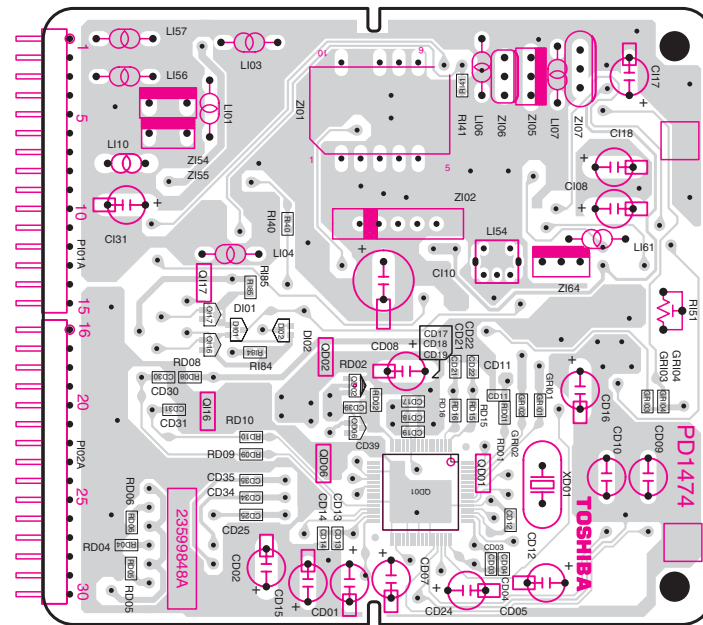
**IF/MONO BOARD PD1346K (25CSZ5TR/25SZ5VX)**  
TOP (COMPONENT) SIDE



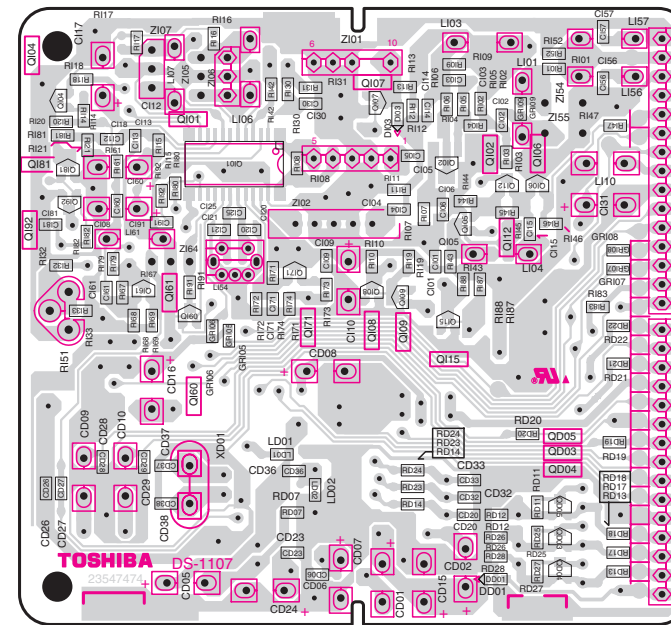
**IF/MONO BOARD PD1346K (25CSZ5TR/25SZ5VX)**  
BOTTOM (FOIL) SIDE



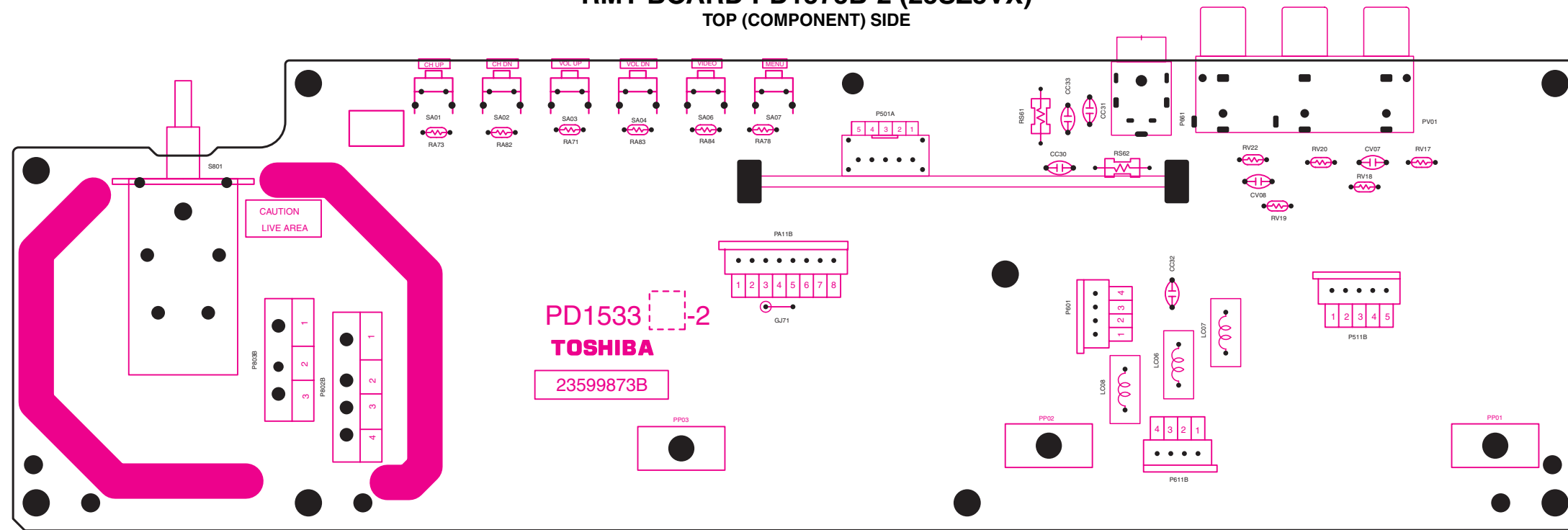
**IF STEREO BOARD PD1474A (25SZ5ST)**  
TOP (COMPONENT) SIDE



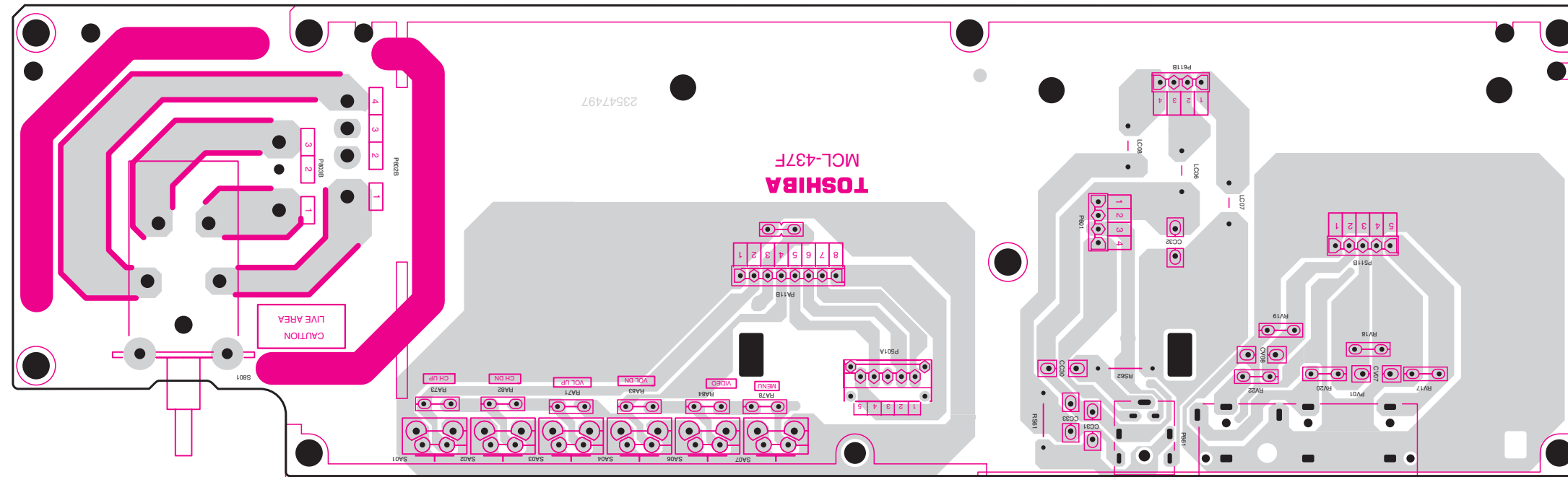
**IF STEREO BOARD PD1474A (25SZ5ST)**  
BOTTOM (FOIL) SIDE



**RMT BOARD PD1575A-2 (25CSZ5TR)  
RMT BOARD PD1575-2 (25SZ5ST)  
RMT BOARD PD1575B-2 (25SZ5VX)  
TOP (COMPONENT) SIDE**



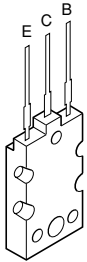
**RMT BOARD PD1575A-2 (25CSZ5TR)  
RMT BOARD PD1575-2 (25SZ5ST)  
RMT BOARD PD1575B-2 (25SZ5VX)  
BOTTOM (FOIL) SIDE**



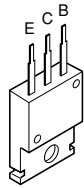
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## TERMINAL VIEW OF TRANSISTORS

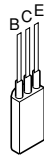
① 2SD2253  
(old)  
2SC5243



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



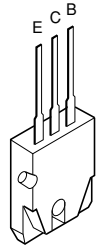
③ 2SC752GTM  
2SC2482  
2SC2655  
2SC4721P



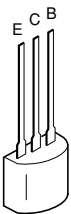
④ 2SC752  
2SA562TM  
2SA1015  
2SC1815  
2SC2878  
2SC1740S  
2SC2120  
2SA9335



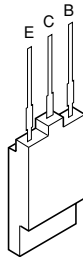
⑤ 2SA1788



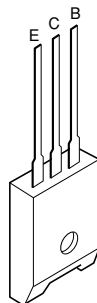
⑥ RN2203  
RN2201  
RN2004  
RN1203  
RN1204  
RN2204  
RN1205  
RN1202  
RN1201



⑦ 2SD1554  
2SD2253  
2SD1556  
2SC5143

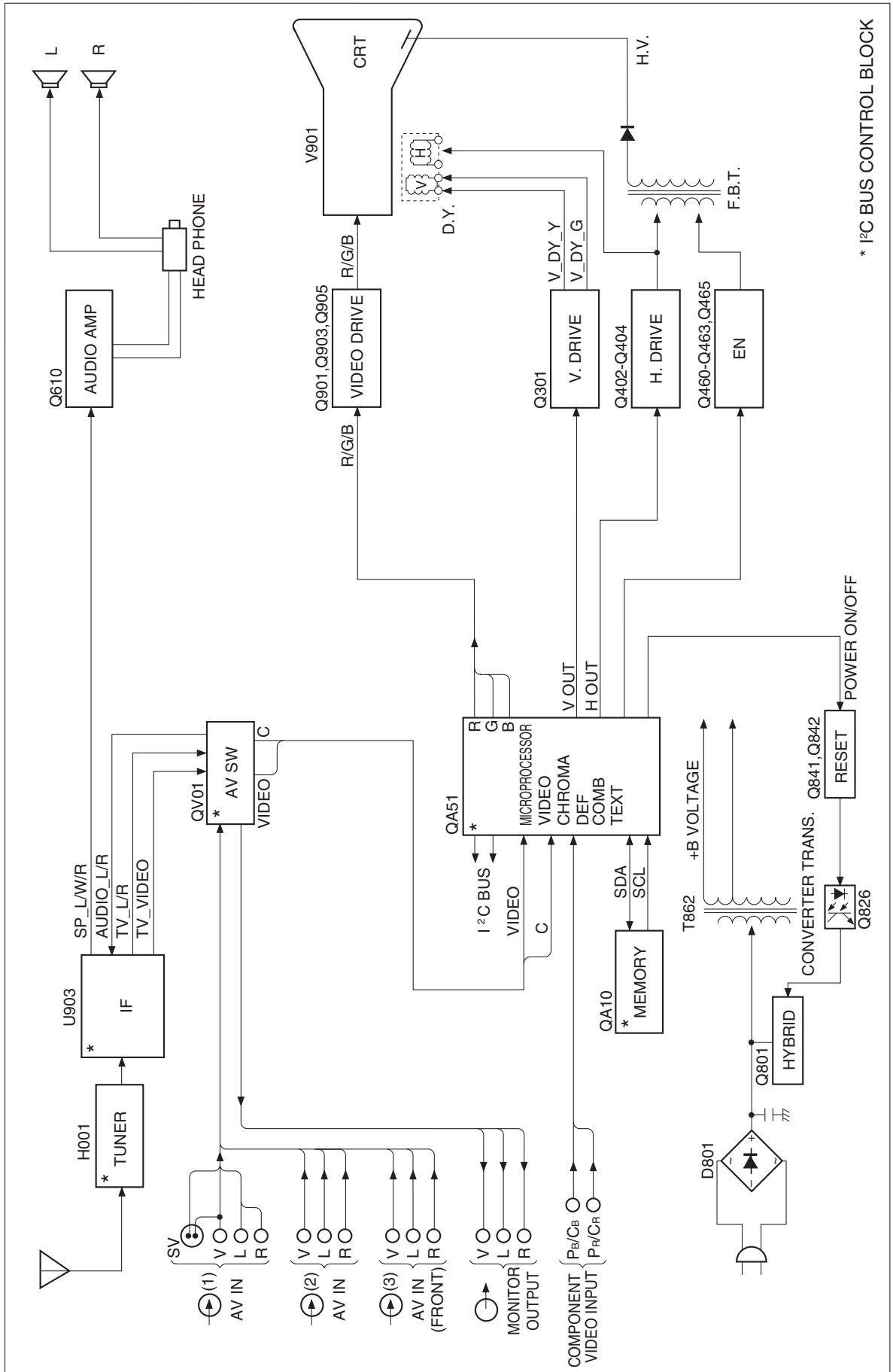


⑧ ON4409





# CIRCUIT BLOCK DIAGRAM



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

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SPECIFICATIONS (Representative: 25SZ5ST)																																										
Rated voltage	~ 110 V – 240 V, 50/60 Hz																																									
Power consumption (at ~ 220 V, 50 Hz)	125 W																																									
Dimensions (Width × Depth × Height)	585 mm × 466 mm × 531 mm																																									
Mass	33 kg																																									
Picture tube	Type25 Flat square picture tube (649.0mm) Overall picture measured diagonally (597.0mm) viewable picture measured diagonally 101° deflection																																									
Television system (Aerial input)	Channel coverage	<table border="1"> <thead> <tr> <th>System</th> <th>Channel</th> <th>VHF</th> <th>UHF</th> <th>CATV</th> </tr> </thead> <tbody> <tr> <td>PAL B/G</td> <td>CCIR</td> <td>2 – 12</td> <td>21 – 69</td> <td>X ~ Z+2, S1 ~ S41</td> </tr> <tr> <td>PAL I</td> <td>UK</td> <td>—</td> <td>21 – 69</td> <td>—</td> </tr> <tr> <td>PAL D/K</td> <td>CHINA</td> <td>1 – 12</td> <td>13 – 57</td> <td>Z-1 ~ Z-38</td> </tr> <tr> <td>SECAM B/G</td> <td>CCIR</td> <td>2 – 12</td> <td>21 – 69</td> <td>X ~ Z+2, S1 ~ S41</td> </tr> <tr> <td>SECAM D/K</td> <td>OIRT</td> <td>1 – 12</td> <td>21 – 69</td> <td>X1 ~ X19</td> </tr> <tr> <td>NTSC M</td> <td>US</td> <td>2 – 13</td> <td>14 – 69</td> <td>A-6 ~ A-1, A ~ W, AA ~ ZZ, AAA, BBB</td> </tr> <tr> <td>NTSC M</td> <td>JAPAN</td> <td>1 – 12</td> <td>13 – 62</td> <td>M1 ~ M10, S1 ~ S41</td> </tr> </tbody> </table>	System	Channel	VHF	UHF	CATV	PAL B/G	CCIR	2 – 12	21 – 69	X ~ Z+2, S1 ~ S41	PAL I	UK	—	21 – 69	—	PAL D/K	CHINA	1 – 12	13 – 57	Z-1 ~ Z-38	SECAM B/G	CCIR	2 – 12	21 – 69	X ~ Z+2, S1 ~ S41	SECAM D/K	OIRT	1 – 12	21 – 69	X1 ~ X19	NTSC M	US	2 – 13	14 – 69	A-6 ~ A-1, A ~ W, AA ~ ZZ, AAA, BBB	NTSC M	JAPAN	1 – 12	13 – 62	M1 ~ M10, S1 ~ S41
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Special RF signal	<b>Color system:</b> NTSC4.43 <b>Sound system:</b> 5.5/6.0/6.5 MHz																																									
Color system	PAL/SECAM/NTSC4.43/NTSC3.58																																									
Sound output	10 W × 2																																									

\* Please refer to owner's manual in detail.

**TOSHIBA CORPORATION**  
1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN