

# SERVICE MANUAL

# BA-5 CHASSIS

<u>MODEL NAME</u>	<u>REMOTE COMMANDER</u>	<u>DESTINATION</u>	<u>CHASSIS NO.</u>
<b>KV-27FS13</b>	RM-Y180	USA	SCC-S40NA
<b>KV-27FS13</b>	RM-Y180	CND	SCC-S41LA
<b>KV-27FS17</b>	RM-Y181	USA	SCC-S40PA
<b>KV-27FV17</b>	RM-Y181	USA	SCC-S40MA
<b>KV-27FV17</b>	RM-Y181	CND	SCC-S41KA
<b>KV-29FV17</b>	RM-Y181	E	SCC-S38XA
<b>KV-29FV17C</b>	RM-Y181	E	SCC-S38YA
<b>KV-32FS13</b>	RM-Y180	USA	SCC-S40QA
<b>KV-32FS13</b>	RM-Y180	CND	SCC-S41MA
<b>KV-32FS17</b>	RM-Y181	USA	SCC-S40RA
<b>KV-34FS13C</b>	RM-Y180	E	SCC-S56DA
<b>KV-34FS17</b>	RM-Y181	E	SCC-S56JA



KV-27FV17



KV-27FS17



RM-Y181

TRINITRON® COLOR TELEVISION

**SONY®**

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## SPECIFICATIONS

	KV-27FV17/ 29FV17	KV-29FV17C	KV-27FS13	KV-27FS17	KV-32FS13	KV-34FS13C	KV-32FS17/ 34FS17
<b>Power requirements</b>	120V, 60 Hz	220V, 50 Hz	120V, 60 Hz	120V, 60 Hz	120V, 60 Hz	220V, 50 Hz	120V, 60 Hz
<b>Number of inputs/outputs</b>							
Video <sup>1)</sup>	3	3	3	3	3	3	3
S Video <sup>2)</sup>	2	2	1	1	1	1	1
Audio <sup>3)</sup>	3	3	3	3	3	3	3
Audio Out <sup>4)</sup>	1	1	1	1	1	1	1
Y, P <sub>B</sub> , P <sub>R</sub> <sup>5)</sup>	1	1	1	1	1	1	1
Monitor Out	1	1	--	--	--	--	--
<b>Speaker output(W)</b>	15W x 2	15W x 2	7.5W x 2	7.5W x 2	10W x 2	10W x 2	10W x 2
<b>Power Consumption(W)</b>							
In use(Max)	220W	210W	170W	180W	195W	195W	205W
In standby	1W	1W	1W	1W	1W	1W	1W
<b>Dimensions(W/H/D)</b>							
(mm)	762 x 604 x 519 mm	762 x 604 x 519 mm	700 x 632 x 512 mm	762 x 604 x 519 mm	800 x 704 x 582 mm	700 x 632 x 512 mm	762 x 604 x 519 mm
(in)	30 x 23 <sup>7/8</sup> x 20 <sup>1/2</sup> in.	30 x 23 <sup>7/8</sup> x 20 <sup>1/2</sup> in.	27 <sup>5/8</sup> x 25 x 20 <sup>1/4</sup> in.	30 x 23 <sup>7/8</sup> x 20 <sup>1/2</sup> in.	31 <sup>1/2</sup> x 27 <sup>3/4</sup> x 23 in.	27 <sup>5/8</sup> x 25 x 20 <sup>1/4</sup>	30 x 23 <sup>7/8</sup> x 20 <sup>1/2</sup> in.
<b>Mass</b>							
(kg)	49 kg.	49 kg.	47 kg.	49 kg.	75 kg.	75 kg.	75 kg.
(lbs)	108 lbs.	108 lbs.	103 lbs. 10 oz.	108 lbs.	163 lbs.	163 lbs.	163 lbs.

### Television system

American TV Standard/NTSC

### Channel coverage

VHF: 2-13/ VHF: 14-69/ CATV: 1-125

### Picture tube

Flat Trinitron<sup>®</sup> tube

### Visible screen size

27-inch picture measured diagonally (KV-27FS13/27FS17/27FV17/29FV17/29FV17C ONLY)

32-inch picture measured diagonally (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)

### Actual screen size

29-inch measured diagonally (KV-27FS13/27FS17/27FV17/29FV17/29FV17C ONLY)

34-inch measured diagonally (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)

### Antenna

75 ohm external terminal for VHF/UHF

### Supplied Accessories

Remote Commander RM-Y180 (KV-27FS13/32FS13/34FS13C ONLY)

Remote Commander RM-Y181 (KV-27FS17/27FV17/29FV17/29FV17C/32FS17/34FS17 ONLY)

Size AA (R6) batteries (2)

### Optional Accessories

Connecting cables: VMC-810S/820S, VMC-720M,

YC-15V/30V, RK74A

UV mixer EAC-66

TV Stand: SU-27FD4 (KV-27FS13/ 27FS17/ 27FV17 ONLY)

TV Stand: SU-27FD3 (KV-29FV17/ 29FV17C ONLY)

TV Stand: SU-32FD3 (KV-34FS17/34FS13C ONLY)

TV Stand: SU-32FD4 (KV-32FS13/ 32FS17 ONLY)

1) 1 Vp-p 75 ohms unbalanced, sync negative

2) Y: 1 Vp-p 75 ohms unbalanced, sync negative

C: 0.286 Vp-p (Burst signal), 75 ohms

3) 500 mVrms (100% modulation), Impedance: 47 kilohms

4) More than 408 mVrms at the maximum volume setting (variable)

More than 408 mVrms (fix); Impedance (output): 2 kilohms

5) Y: 1.0 Vp-p, 75 ohms, sync negative; P<sub>B</sub>: 0.7 Vp-p, 75 ohms

P<sub>R</sub>: Vp-p, 75 ohms

### (●) SRS (SOUND RETRIEVAL SYSTEM)

The (●) SRS (SOUND RETRIEVAL SYSTEM) is manufactured by Sony Corporation under license from SRS Labs, Inc. It is covered by U.S. Patent No. 4,748,669. Other U.S. and foreign patents pending.

The word 'SRS' and the SRS symbol (●) are registered trademarks of SRS Labs, Inc. BBE and BBE symbol are trademarks of BBE Sound, Inc. and are licensed by BBE Sound, Inc. under U.S. Patent No. 4,638,258.

Design and specifications are subject to change without notice.

## WARNINGS AND CAUTIONS

### CAUTION

Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield, or carbon painted on the CRT, after removing the anode.

### WARNING!!

An isolation transformer should be used during any service to avoid possible shock hazard, because of live chassis. The chassis of this receiver is directly connected to the AC power line.

### SAFETY-RELATED COMPONENT WARNING!!

Components identified by shading and  mark on the schematic diagrams, exploded views, and in the parts list are critical for safe operation. Replace these components with Sony parts whose part numbers appear as shown in this manual or in supplements published by Sony. Circuit adjustments that are critical for safe operation are identified in this manual. Follow these procedures whenever critical components are replaced or improper operation is suspected.

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### ATTENTION!!

Après avoir déconnecté le cap de l'anode, court-circuiter l'anode du tube cathodique et celui de l'anode du cap au châssis métallique de l'appareil, ou la couche de carbone peinte sur le tube cathodique ou au blindage du tube cathodique.

Afin d'éviter tout risque d'électrocution provenant d'un châssis sous tension, un transformateur d'isolement doit être utilisé lors de tout dépannage. Le châssis de ce récepteur est directement raccordé à l'alimentation du secteur.

### ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

Les composants identifiés par une trame et par une marque  sur les schémas de principe, les vues explosées et les listes de pièces sont d'une importance critique pour la sécurité du fonctionnement. Ne les remplacer que par des composants Sony dont le numéro de pièce est indiqué dans le présent manuel ou dans des suppléments publiés par Sony. Les réglages de circuit dont l'importance est critique pour la sécurité du fonctionnement sont identifiés dans le présent manuel. Suivre ces procédures lors de chaque remplacement de composants critiques, ou lorsqu'un mauvais fonctionnement suspecte.

## SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or touching high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
8. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

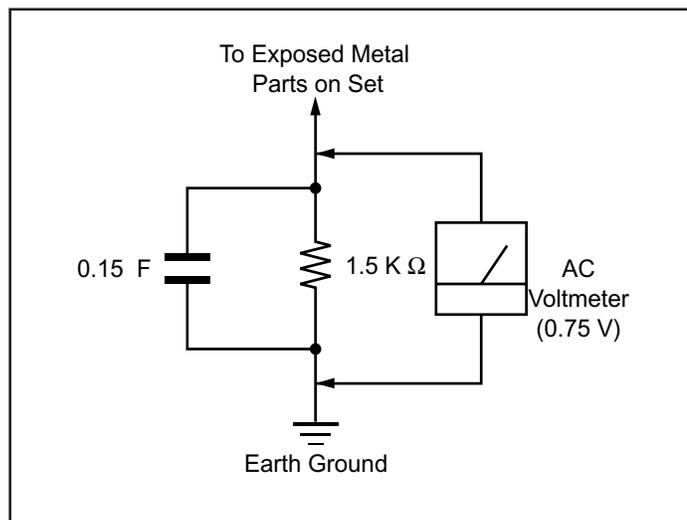


Figure A. Using an AC voltmeter to check AC leakage.

### Leakage Test

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instructions.
2. A battery-operated AC milliampmeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low voltage scale. The Simpson's 250 and Sanwa SH-63TRD are examples of passive VOMs that are suitable. Nearly all battery-operated digital multimeters that have a 2 VAC range are suitable (see Figure A).

### How to Find a Good Earth Ground

A cold-water pipe is a guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms.

If a cold-water pipe is not accessible, connect a 60- to 100-watt trouble-light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side on the line; the lamp should light at normal brilliance if the screw is at ground potential (see Figure B).

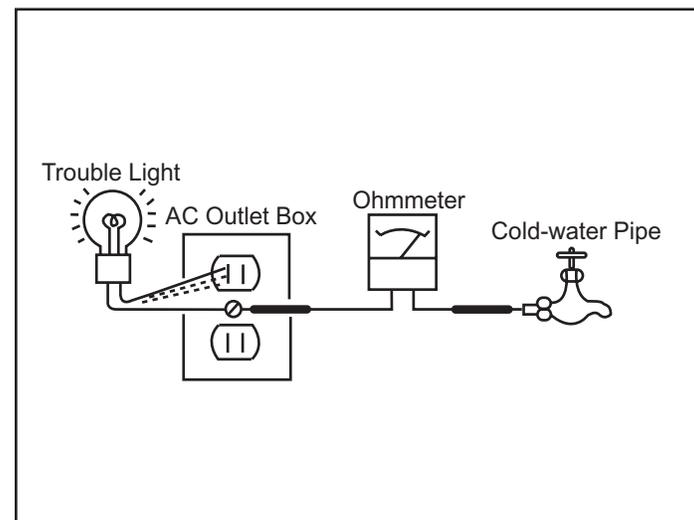


Figure B. Checking for earth ground.

## SELF-DIAGNOSTIC FUNCTION

*Self Diagnosis*  
Supported model

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER LED will automatically begin to flash. The number of times the LED flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER LED flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the Remote Commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

### Diagnostic Test Indicators

When an error occurs, the STANDBY/TIMER LED will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the LED will identify the first of the problem areas.

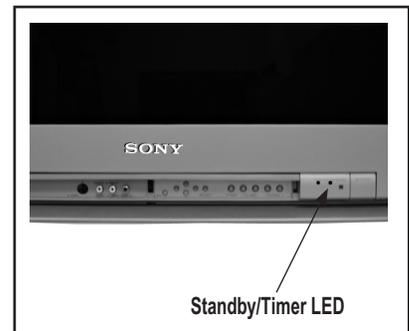
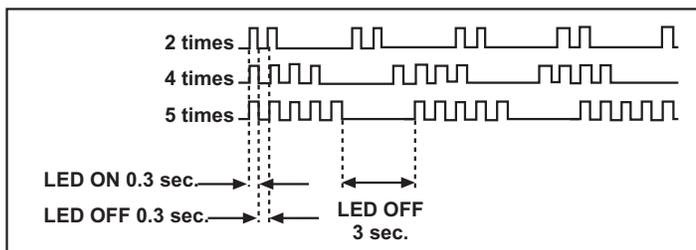
Results for all of the following diagnostic items are displayed on screen. No error has occurred if the screen displays "0".

Diagnostic Item Description	No. of times STANDBY/ TIMER lamp flashes	Self-Diagnostic Display/ Diagnostic Result	Probable Cause Location	Detected Symptoms
Power does not turn on	Does not light	—————	<ul style="list-style-type: none"> <li>Power cord is not plugged in.</li> <li>Fuse is burned out (F601). (A Board)</li> </ul>	<ul style="list-style-type: none"> <li>Power does not come on.</li> <li>No power is supplied to the TV.</li> <li>AC Power supply is faulty.</li> </ul>
+B overcurrent (OCP)*	2 times	2:0 or 2:1	<ul style="list-style-type: none"> <li>H.OUT (Q502) is shorted. (A Board)</li> <li>IC702 is shorted. (CA Board)</li> </ul>	<ul style="list-style-type: none"> <li>Power does not come on.</li> <li>Load on power line is shorted.</li> </ul>
I-Prot	4 times	4:0 or 4:1	<ul style="list-style-type: none"> <li>+13V is not supplied. (A Board)</li> <li>IC502 is faulty. (A Board)</li> </ul>	<ul style="list-style-type: none"> <li>Has entered standby state after horizontal raster.</li> <li>Vertical deflection pulse is stopped.</li> <li>Power line is shorted or power supply is stopped.</li> </ul>
IK (AKB)	5 times	5:0 or 5:1	<ul style="list-style-type: none"> <li>Viedo OUT (IC502) is faulty. (A Board)</li> <li>IC301 is faulty. (MA Board)</li> <li>Screen (G2) is improperly adjusted.**</li> </ul>	<ul style="list-style-type: none"> <li>No raster is generated.</li> <li>CRT Cathode current detection reference pulse output is small.</li> </ul>

\*If a +B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously. The symptom that is diagnosed first by the microcontroller is displayed on the screen.

\*\*Refer to Screen (G2) Adjustments in Section 2-4. of this manual.

### Display of Standby/Timer LED Flash Count



Diagnostic Item	Flash Count*
+B Overcurrent	2 times
I-Prot	4 times
IK (AKB)	5 times

\*One flash count is not used for self-diagnostic.

### Stopping the Standby/Timer LED Flash

Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER LAMP from flashing.

### Self-Diagnostic Screen Display

For errors with symptoms such as “power sometimes shuts off” or “screen sometimes goes out” that cannot be confirmed, it is possible to bring up past occurrences of failure on the screen for confirmation.

#### To Bring Up Screen Test

In standby mode, press buttons on the Remote Commander sequentially, in rapid succession, as shown below:

Display Channel Sound Volume Power ON

Note that this differs from entering the Service Mode (Sound Volume ).

### Self-Diagnostic Screen Display

SELF DIAGNOSTIC
2: 000
3: N/A
4: 000
5: 001
101: N/A

Numeral “0” means that no fault was detected.  
Numerical “1” means a fault was detected one time only.

### Handling of Self-Diagnostic Screen Display

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to “0”.

Unless the result display is cleared to “0”, the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

#### Clearing the Result Display

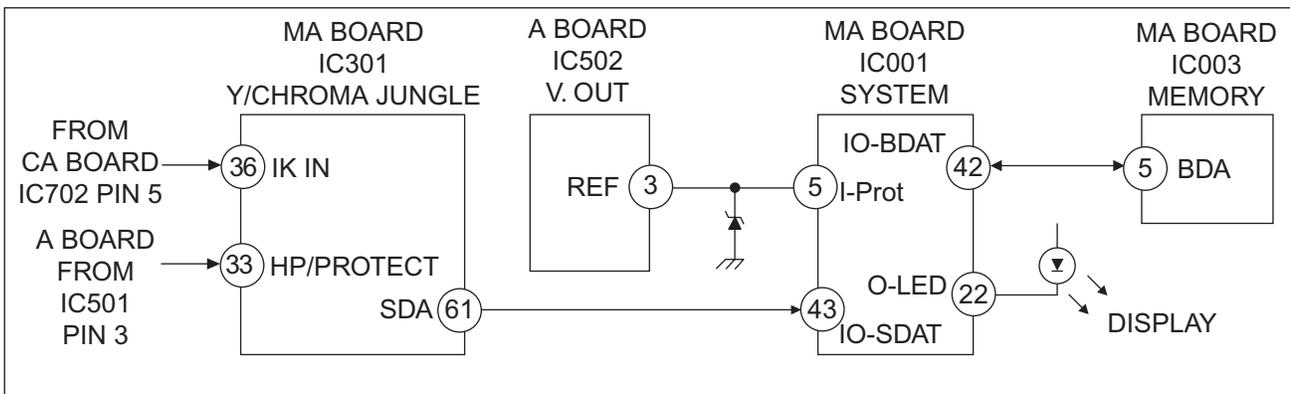
To clear the result display to “0”, press buttons on the Remote Commander sequentially when the diagnostic screen is displayed, as shown below:

Channel ENTER

#### Quitting the Self-Diagnostic Screen

To quit the entire self-diagnostic screen, turn off the power switch on the Remote Commander or the main unit.

### Self-Diagnostic Circuit



#### +B overcurrent (OCP)

Occurs when an overcurrent on the +B (135V) line is detected by pin 33 of IC301 (MA Board). If the voltage of pin 33 of IC301 (MA Board) is less than 1V when V.SYNC is more than seven verticals in a period, the unit will automatically turn off.

#### I-Prot

Occurs when an absence of the vertical deflection pulse is detected by pin 5 of IC001 (MA Board). Power supply will shut down when waveform interval exceeds 2 seconds.

#### IK (AKB)

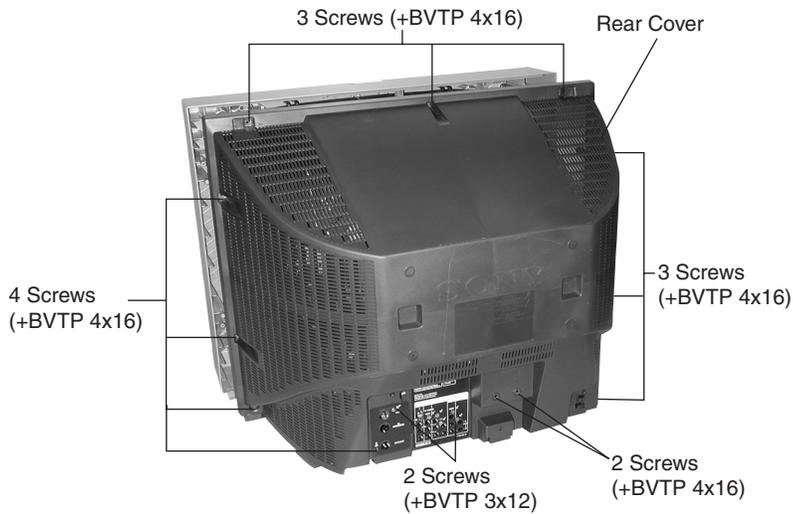
If the RGB levels\* do not balance within 2 seconds after the power is turned on, this error will be detected by IC301 (MA Board). TV will stay on, but there will be no picture.

\*(Refers to the RGB levels of the AKB detection Ref pulse that detects 1K).

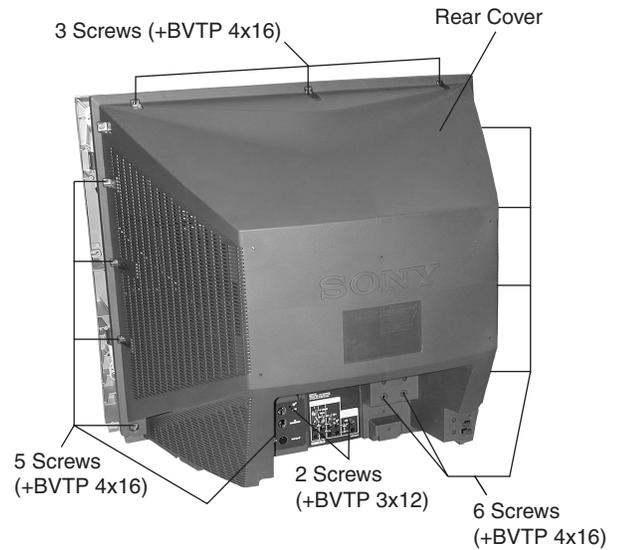
# SECTION 1: DISASSEMBLY

## 1-1. REAR COVER REMOVAL

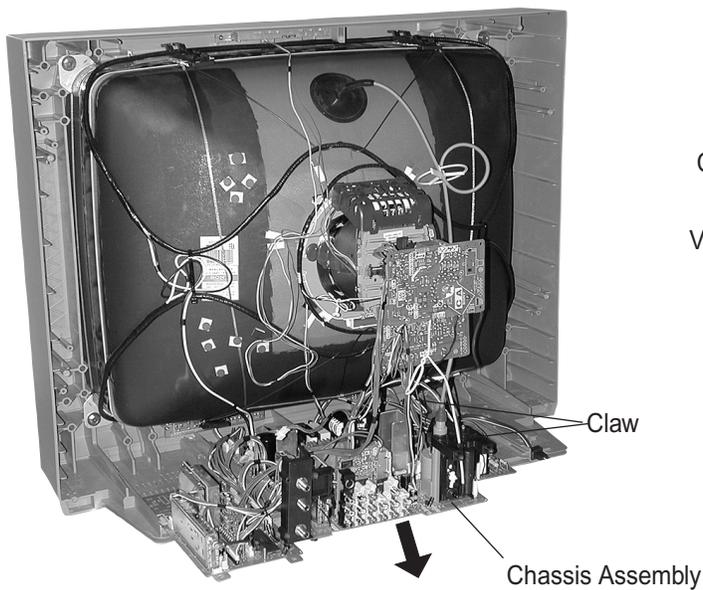
### KV-27FS13/27FS17/27FV17/29FV17/29FV17C



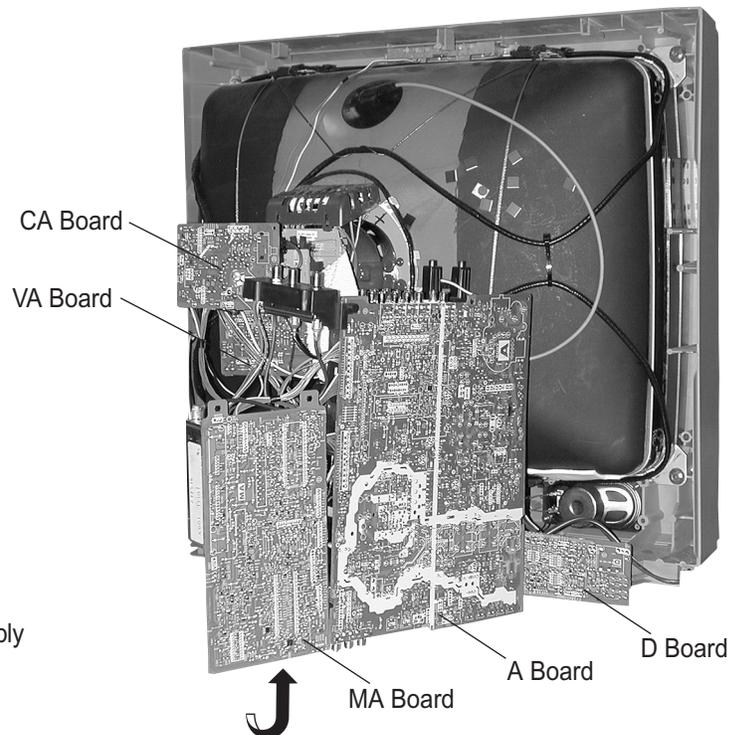
### KV-32FS13/32FS17/34FS13C/34FS17 ONLY



## 1-2. CHASSIS ASSEMBLY REMOVAL



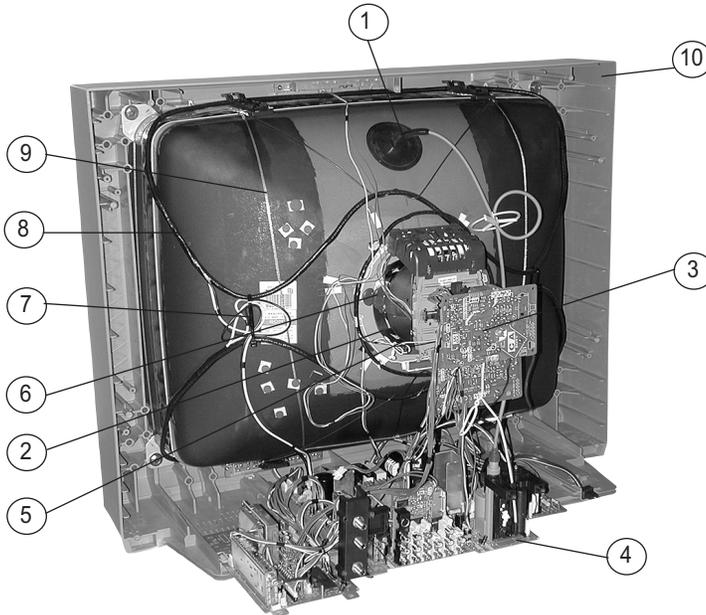
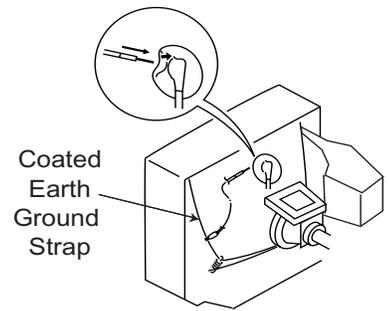
## 1-3. SERVICE POSITION



## 1-4. PICTURE TUBE REMOVAL

### WARNING: BEFORE REMOVING THE ANODE CAP

High voltage remains in the CRT even after the power is disconnected. To avoid electric shock, discharge CRT before attempting to remove the anode cap. Short between anode and CRT coated earth ground strap.

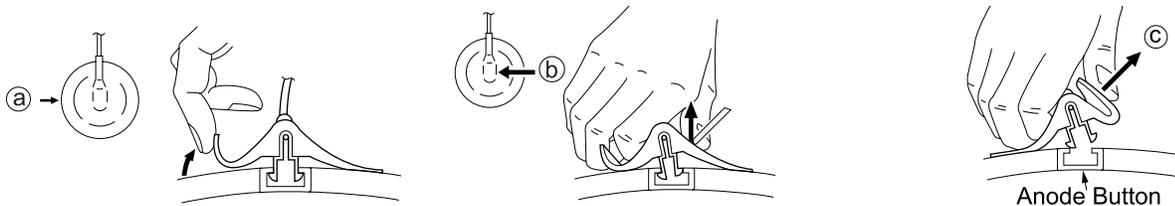


1. Discharge the anode of the CRT and remove the anode cap.
2. Unplug all interconnecting leads from the deflection yoke, neck assembly, degaussing coils and CRT grounding strap.
3. Remove the CA and VA Board from the CRT.
4. Remove the chassis assembly.
5. Loosen the neck assembly fixing screw and remove.
6. Loosen the deflection yoke fixing screw and remove.
7. Place the set with the CRT face down on a cushion and remove the degaussing coil holders.
8. Remove the degaussing coils.
9. Remove the CRT grounding strap and spring tension devices.
10. Unscrew the four CRT fixing screws [located on each CRT corner] and remove the CRT [Take care not to handle the CRT by the neck].

## ANODE CAP REMOVAL PROCEDURE

WARNING: High voltage remains in the CRT even after the power is disconnected. To avoid electric shock, discharge CRT **before** attempting to remove the anode cap. Short between anode and coated earth ground strap of CRT.

NOTE: After removing the anode cap, short circuit the anode of the picture tube and the anode cap to either the metal chassis, CRT shield, or carbon painted on the CRT.



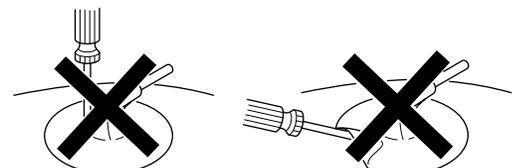
① Turn up one side of the rubber cap in the direction indicated by arrow (a) .

② Use your thumb to pull the rubber cap firmly in the direction indicated by arrow (b) .

③ When one side of the rubber cap separates from the anode button, the anode cap can be removed by turning the rubber cap and pulling it in the direction of arrow (c) .

### HOW TO HANDLE AN ANODE CAP

1. Do not use sharp objects which may cause damage to the surface of the anode cap.
2. To avoid damaging the anode cap, do not squeeze the rubber covering too hard. A material fitting called a shatter-hook terminal is built into the rubber.
3. Do not force turn the foot of the rubber cover. This may cause the shatter-hook terminal to protrude and damage the rubber.



## SECTION 2: SET-UP ADJUSTMENTS

The following adjustments should be made when a complete realignment is required or a new picture tube is installed.

These adjustments should be performed with rated power supply voltage unless otherwise noted.

Set the controls as follows unless otherwise noted:

VIDEO MODE: Standard

PICTURE CONTROL: Normal

BRIGHTNESS CONTROL: Normal

**Perform the adjustments in order as follows:**

1. Beam Landing
2. Convergence
3. Focus
4. Screen (G2)
5. White Balance

**Note Test Equipment Required:**

1. Color Bar Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital Multimeter

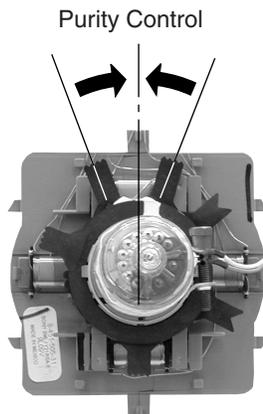
### 2-1. BEAM LANDING

Before beginning adjustment procedure:

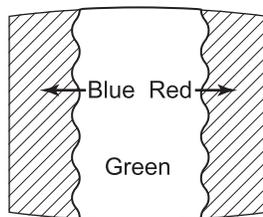
1. Degauss the entire screen.
2. Feed in the white pattern signal.

#### ADJUSTMENT PROCEDURE

1. Input a raster signal with the pattern generator.
2. Loosen the deflection yoke mounting screw, and set the purity control to the center as shown below:

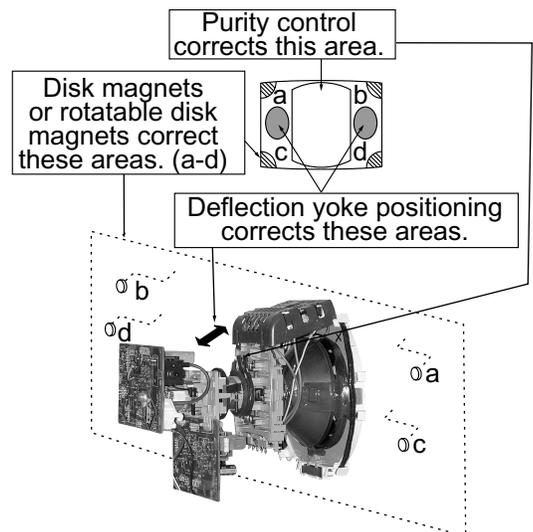
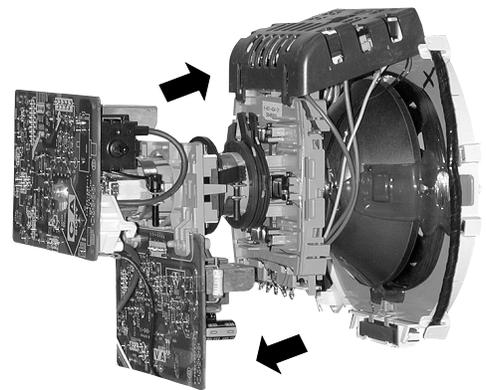


3. Turn the raster signal of the pattern generator to green.
4. Move the deflection yoke backward, and adjust with the purity control so that green is in the center and red and blue are even on both sides.



5. Move the deflection yoke forward, and adjust so that the entire screen becomes green.

6. Switch over the raster signal to red and blue and confirm the condition.
7. When the position of the deflection yoke is determined, tighten it with the deflection yoke mounting screw.
8. If landing at the corner is not right, adjust by using the disk magnets.



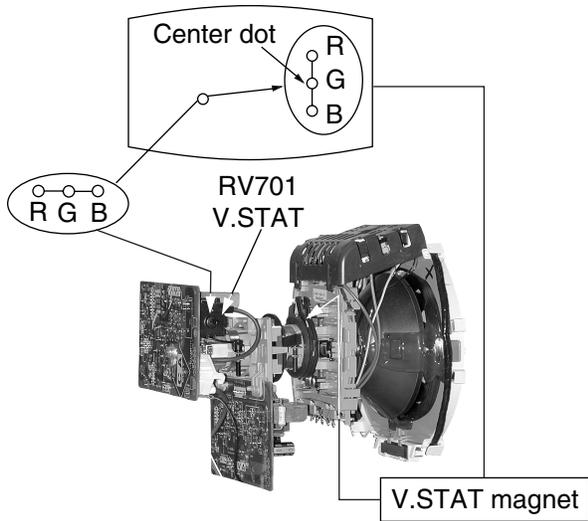
## 2-2. CONVERGENCE

Before starting convergence adjustments:

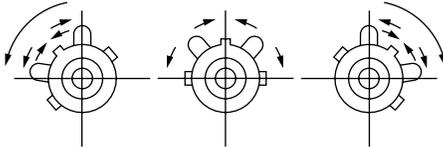
- 1 Perform FOCUS, VLIN and VSIZE adjustments.
2. Set BRIGHTNESS control to minimum.
3. Feed in dot pattern.

### VERTICAL STATIC CONVERGENCE

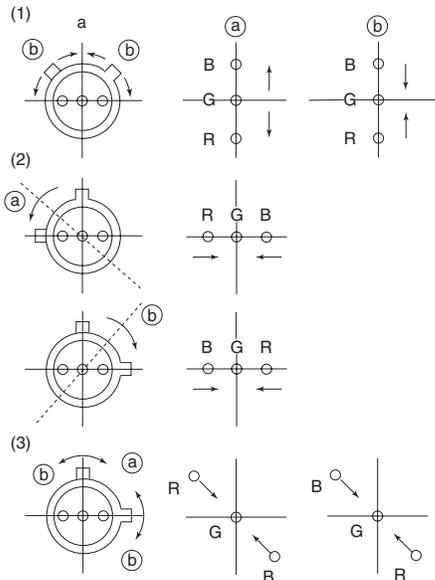
1. Adjust V. STAT magnet to converge red, green and blue dots in the center of the screen (Vertical movement adjusts V.STAT RV701 to converge).



2. Tilt the V. STAT magnet and adjust static convergence to open or close the V. STAT magnet.



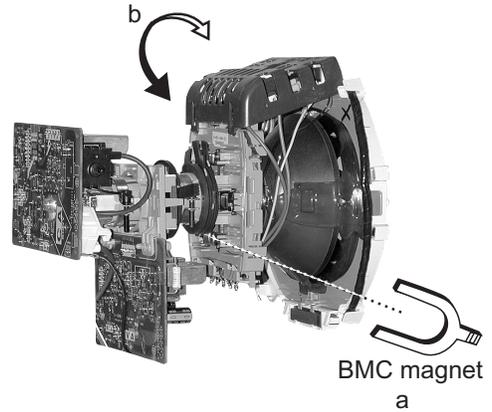
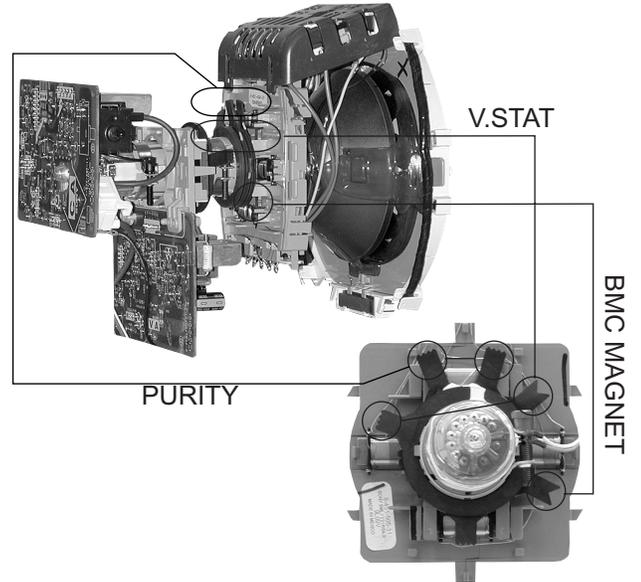
When the V. STAT magnet is moved in the direction of arrow a and b, red, green, and blue dots move as shown below:



### HORIZONTAL STATIC CONVERGENCE

If the blue dot does not converge with the red and green dots, perform the following:

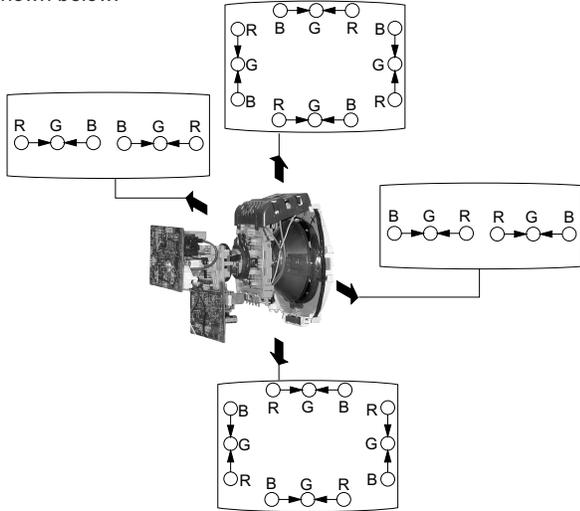
1. Move BMC magnet (a) to correct insufficient H.Static convergence.
2. Rotate BMC magnet (b) to correct insufficient V.Static convergence.
3. After adjusting the BMC magnet, repeat Beam Landing Adjustment.



## DYNAMIC CONVERGENCE ADJUSTMENT

Before performing this adjustment, perform Horizontal and Vertical Static Convergence Adjustment.

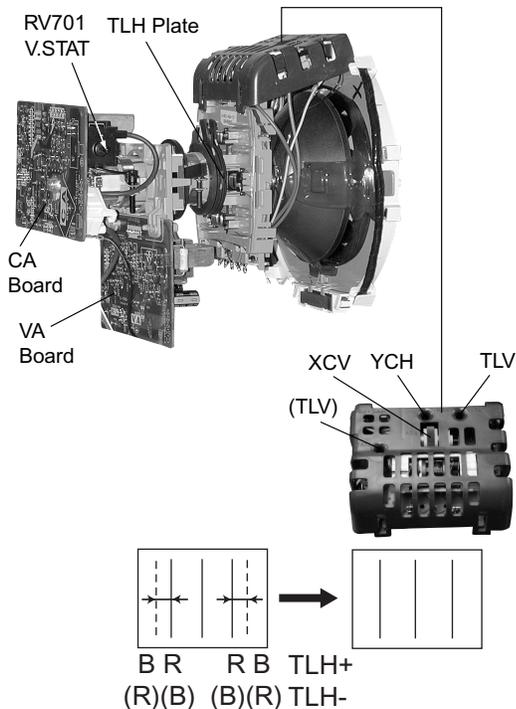
1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers.
3. Move the deflection yoke for best convergence as shown below:



4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.

## TLH PLATE ADJUSTMENT

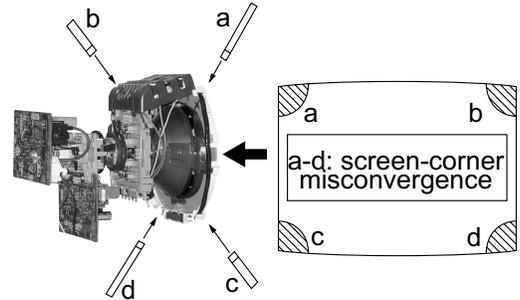
1. Input crosshatch pattern.
2. Adjust PICTURE QUALITY to standard, PICTURE and BRIGHTNESS to 50%, and OTHER to standard.
3. Adjust the Horizontal Convergence of red and blue dots by tilting the TLH plate on the deflection yoke.



4. Adjust XCV core to balance X axis.
5. Adjust YCH VR to balance Y axis.
6. Adjust vertical red and blue convergence with V.TILT (TLV VR).  
Note: Perform adjustment 3-6 while tracking items 1 and 2.

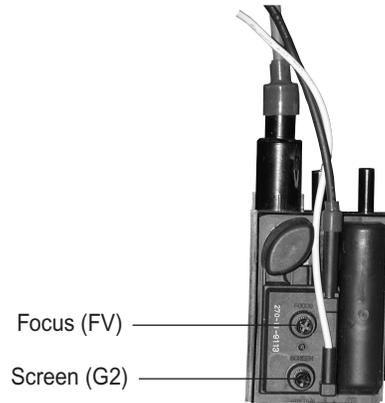
## SCREEN-CORNER CONVERGENCE

1. Affix a permalloy assembly corresponding to the misconverged areas:



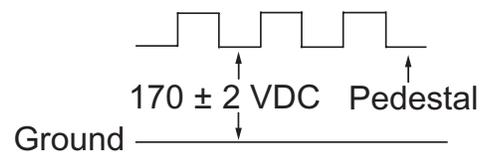
## 2-3. FOCUS

1. Adjust FOCUS control for best pictures.



## 2-4. SCREEN (G2)

1. Input a dot pattern.
2. Set the PICTURE and BRIGHTNESS controls at minimum and COLOR control at normal.
3. Adjust SBRT, GCUT, BCUT in service mode with an oscilloscope as shown below so that voltages on the red, green, and blue cathodes are  $170 \pm 2\text{VDC}$ .



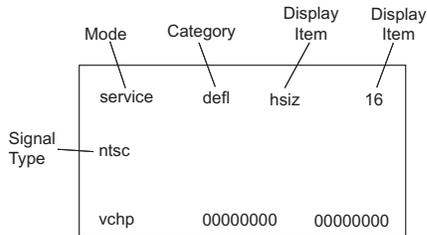
## 2-5. METHOD OF SETTING THE SERVICE ADJUSTMENT MODE

### SERVICE MODE PROCEDURE

- Standby mode (power off).
- Press **[Display]** → Channel **[5]** → Sound Volume **[+]** → Power on the Remote Commander (press each button within a second).

### SERVICE ADJUSTMENT MODE ON

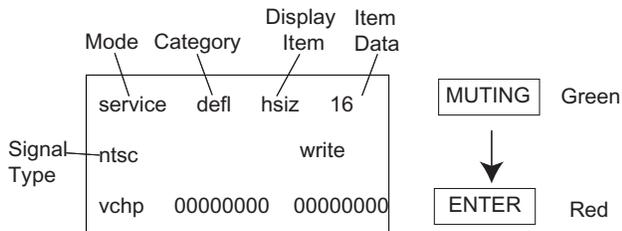
- The CRT displays the time being adjusted.



- Press **[1]** or **[4]** on the Remote Commander to select the time.
- Press **[3]** or **[6]** on the Remote Commander to change the data.
- Press **[MUTING]** then **[ENTER]** to save into the memory.

### SERVICE ADJUSTMENT MODE MEMORY

Turn the set off then on to exit Service Adjustment Mode.



## 2-6. WHITE BALANCE ADJUSTMENTS

- Input an entire white signal with burst.
- Set to Service Adjustment Mode.
- Set the PICTURE and BRIGHTNESS to minimum.
- Adjust with SBRT if necessary.
- Select GCUT and BCUT with **[1]** and **[4]**.
- Adjust with **[3]** and **[6]** for the best white balance.
- Set the PICTURE and BRIGHTNESS to maximum.
- Select GDRV and BDRV with **[1]** and **[4]**.
- Adjust with **[3]** and **[6]** for the best white balance.
- To write into memory, press **[MUTING]** then **[ENTER]**.

## SECTION 3: SAFETY RELATED ADJUSTMENTS

### 3-1. R564 CONFIRMATION METHOD (HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components which are marked with  on the schematic diagram:

Part Replaced (  )	Adjustment (  )
DY, T505, CRT, IC501 C507, C520, C505, C509, C515, T504, T503, C551, L510, C546, C537, C547, D517, D518, D519, R560, R561, R562, R563, R565, R566, R567, R525.....A Board IC301.....MA Board	HV HOLD-DOWN R564

#### PREPARATION BEFORE CONFIRMATION

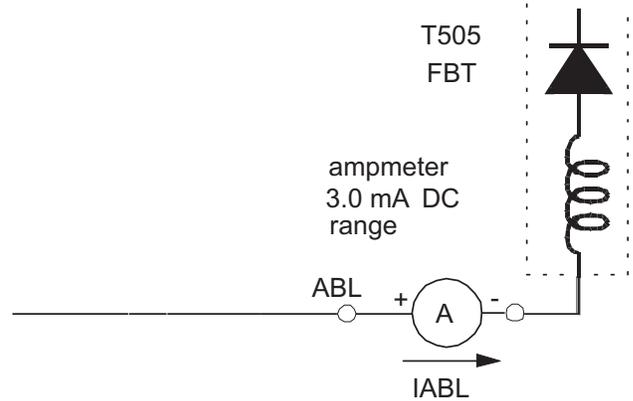
- Using a Variac, apply AC input voltage:  $120 \pm 2$  VAC.
- Turn the POWER switch ON.
- Input a white signal and set the PICTURE and BRIGHTNESS controls to maximum.
- Confirm that the voltage between C546 (+) or TP503 and ground is more than 21.0 VDC (27/29 inch) or 23.0 VDC (32/34 inch).

#### HOLD-DOWN OPERATION CONFIRMATION

- Connect the current meter between Pin 11 of the FBT (T505) and the PWB land where Pin 11 would normally attach (See Figure 1 on the next page).
- Input a dot signal and set PICTURE and BRIGHTNESS to minimum: IABL =  $1730 \pm 100\mu\text{A}$ . (27/29 inch) or  $2175 +100 - 325\mu\text{A}$  (32/34inch).
- Confirm the voltage of A Board TP-600 is  $135 \pm 1.5$  VDC.
- Connect the digital voltmeter and the DC power supply via Diode 1SS119 to C546 (+) and ground (See Figure 1 on next page).
- Increase the DC power voltage gradually until the picture blanks out.
- Turn DC power source off immediately.
- Read the digital voltmeter indication (standard  $24.78 +0/ -0.1$  VDC [27/29 inch] or  $27.24 +0/-0.1$  VDC [32/34 inch]).
- Input a white signal and set PICTURE and BRIGHTNESS to maximum: IABL =  $1730 \pm 100\mu\text{A}$  (27/29 inch) or  $2175 +100/-325 \mu\text{A}$  (32/34 inch).
- Repeat steps 4 to 7.

### HOLD-DOWN READJUSTMENT

If the setting indicated in Step 2 of Hold-Down Operation Confirmation cannot be met, readjustment should be performed by altering the resistance value of R564 component marked with .



### 3-2. B+ VOLTAGE CONFIRMATION AND ADJUSTMENT

Note: The following adjustments should always be performed when replacing the following components, which are marked with  on the schematic diagram on the A Board:

<b>A BOARD:</b>	IC601, PH601
-----------------	--------------

- Using a Variac, apply AC input voltage:  $130 + 2.0/ -0.0$  VAC
- Input a monoscope pattern.
- Set the PICTURE and the BRIGHTNESS controls to minimum.
- Confirm the voltage of A Board TP-600 is  $<136.5$  VDC.
- If step 4 is not satisfied, replace the components listed above, then repeat Steps 1 – 3.

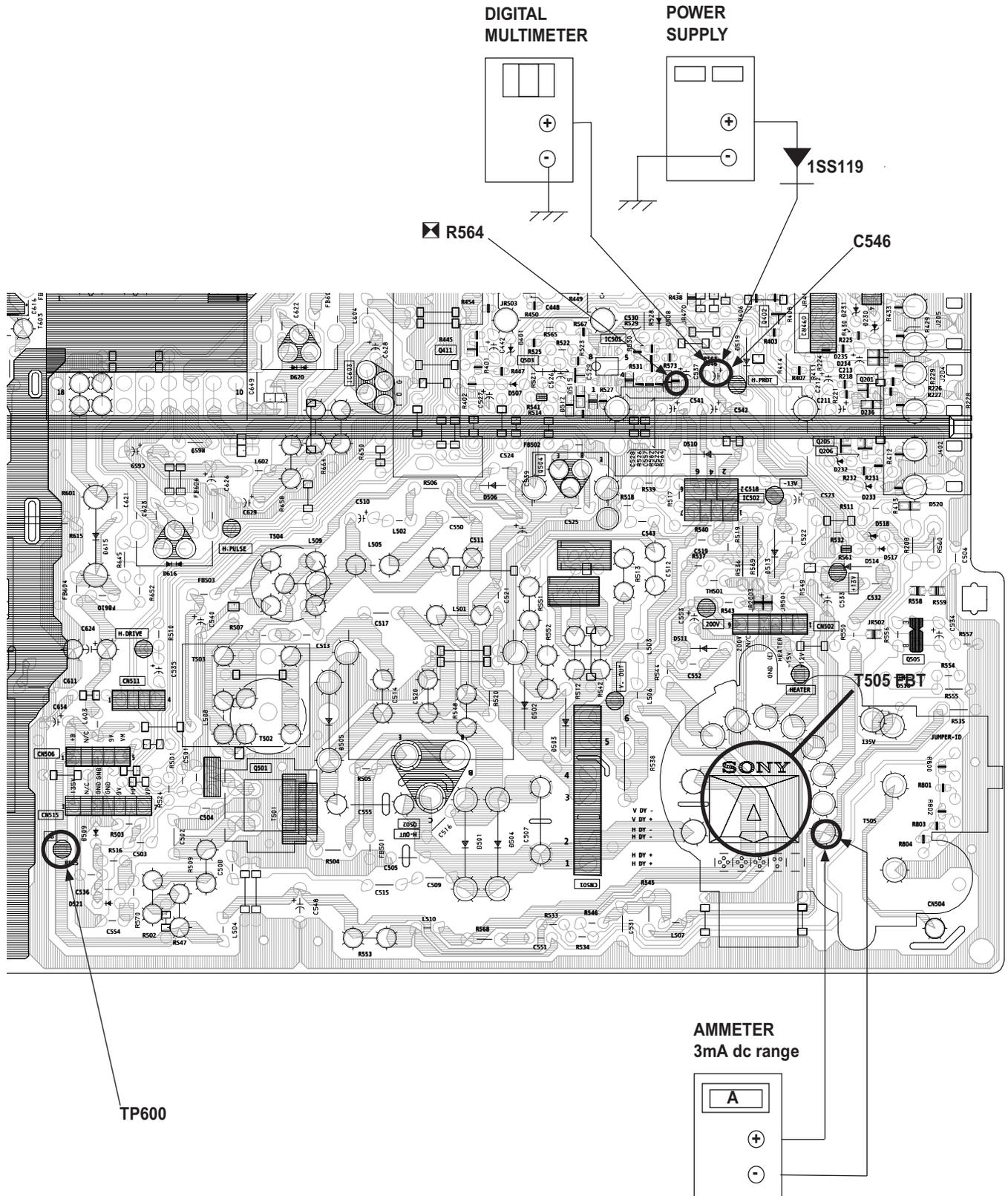


Figure 1

## SECTION 4: CIRCUIT ADJUSTMENTS

### ELECTRICAL ADJUSTMENTS BY REMOTE COMMANDER

Use the Remote Commander (RM-Y180, RM-Y181) to perform the circuit adjustments in this section.

**Test Equipment Required:** 1. Pattern generator 2. Frequency counter 3. Digital multimeter 4. Audio oscillator

#### 4-1. SETTING THE SERVICE ADJUSTMENT MODE

- Standby mode (Power off).
- Press the following buttons on the remote commander within a second of each other:

[Display] → Channel [5] → Sound Volume [+ ] → Power

#### SERVICE ADJUSTMENT MODE ON

- The CRT displays the item being adjusted.

Mode	Category	Display Item	Item Data
service	defl	hsiz	16
Signal Type	ntsc	vchp	00000000 00000000

- Press [1] or [4] on the Remote Commander to select the item.
- Press [3] or [6] on the Remote Commander to change the data.
- Press [MUTING] then [ENTER] to write into memory.

#### SERVICE ADJUSTMENT MODE MEMORY

Mode	Category	Display Item	Item Data
service	defl	hsiz	16
Signal Type	ntsc	vchp	00000000 00000000
			write

[MUTING] Green  
↓  
[ENTER] Red

- Press [8] then [ENTER] on the Remote Commander to initialize.

Mode	Category	Display Item	Item Data
service	defl	hsiz	16
Signal Type	ntsc	vchp	00000000 00000000
			write

[MUTING] Green  
↓  
[ENTER] Red

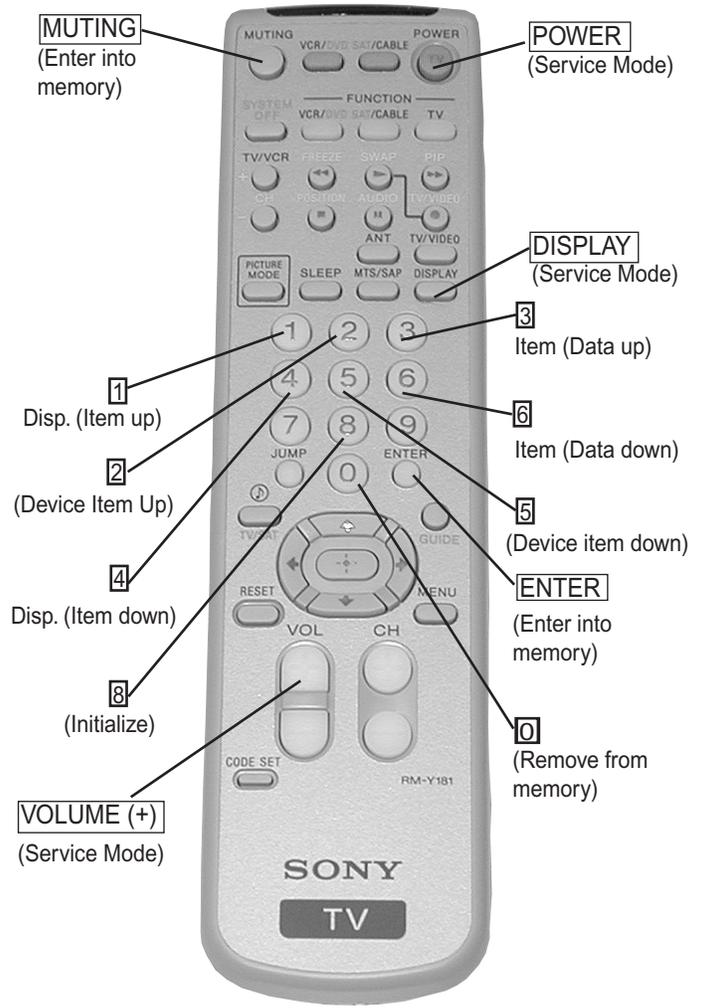
Carry out Step 1 when adjusting IDs 0-6 and when replacing and adjusting IC003

- Turn set off then on to exit service adjustment mode.

#### 4-2. MEMORY WRITE CONFIRMATION METHOD

- After adjustment, pull out the plug from the AC outlet, then replace the plug in the AC outlet again.
- Turn the power switch ON and set to Service Mode.
- Call the adjusted items again to confirm they were adjusted.

#### 4-3. REMOTE ADJUSTMENT BUTTONS AND INDICATORS



RM-Y181

## ADJUSTMENT ITEMS (1 OF 4)

Reg #	ITEM	FUNCTION	RANGE	FIX DATA	NTSC 27	VIDEO	NTSC 32	RF	AVERAGE DATA 27	AVERAGE DATA 32
1	HSIZ	Horizontal Size Adjustment	0-63		0		18		11	22
2	HPOS	Horizontal Position Adjustment	0-63		13		13		20	22
3	VBOW	Vertical Line Bowing Adj.	0-15		9		9		7	9
4	VANG	Vertical Line Bowing Slant Adj.	0-15		8		3		9	7
5	VTRP	TRAPEZIUM	0-31		19		18		21	17
6	HTRP	Horiz. Trapezoid	0-15		6		6		0	2
7	TROT	Tilt Correction	0-63		31		31		31	31
8	PAMP	Horizontal PIN distortion Adj.	0-63		19		27		20	27
9	UPIN	Upper PIN Distortion Adj.	0-63		34		41		37	38
10	LPIN	Lower PIN Distortion Adj.	0-63		32		39		33	35
11	VSIZ	Vertical Size Adjustment	0-63		32		51		33	51
12	VPOS	Vertical Position Adj.	0-63		30		42		36	39
13	VLIN	Vertical Lineality Adj.	0-15		3		5		3	4
14	SCOR	Vertical "S" Correction Adjustment	0-15		6		8		8	8
15	VZOM	16:9 CRT Z Mode on/off	0-1	0					0	0
16	EHT	Vertical High-Voltage Compensation	0-15	5					5	5
17	ASP	Aspect Ratio Control	0-63	47					47	47
18	SCRL	16:9 CRT Z Mode Trans. Scroll	0-63	31					31	31
19	HBLK	Horizontal Blanking on/off	0-1	1					1	1
20	LBLK	Left Blanking Adjustment	0-15	****					13	13
21	RBLK	Righth Blanking Adjustment	0-15	*****					7	8
22	HDW	Horizontal Drive Pulse Width	0-1	1					1	1
23	EWDC	"Parabola" EW, D.C. Adjustment	0-1	0					0	0
24	LVLN	Lower Screen BTM Vertical Line Adj.	0-15	0					0	0
25	UVLN	Upper Screen BTM Vertical Line Adj.	0-15	0					0	0
26	INTL	INTERLACE	0-3	0					0	0
27	G2SW		0-1	0					0	0
28	G2LV		0-7	0					0	0
29	HOSC	Horizontal VCO Oscillation Freq.	0-15	12					7	7
30	VSS	Vertical Sync Slice Level	0-3	0					0	0
31	HSS	Horizontal Sync Slice Level	0-1	0					0	0
32	HMSK	For Macro Vision	0-1	0					0	0
33	VTMS	Select Signal VTIM Pin	0-3	0					0	0
34	CDMD	Vertical Count Down Mode Switching	0-3			3		*	3	3
35	AFC	AFC Loop Gain Switching	0-3	0					0	0
36	FIFR	Field Frequency	0-3	3					3	3
37	VBLK	VBLKW	0-3	0					0	0
38	REFP	REFP	0-1	0					0	0
39	JPSW	JUMPSW	0-1	MENU					0	0
40	RDRV	R Output Drive control	0-63	***					31	40
41	GDRV	G Output Drive control	0-63	25					22	42
42	BDRV	B Output Drive control	0-63	25					21	31
43	RCUT	R Output Cutoff control	0-63	31					31	31
44	GCUT	G Output Cutoff control	0-63	15					13	12
45	BCUT	B Output Cutoff control	0-63	12					14	15
46	SCON	SUB CONT	0-15	8					11	11
47	SHUE	Sub HUE adjustment	0-15	16					17	16
48	SCOL	Sub COLOR adjustment	0-15		18				17	18
49	SBRT	Sub BRIGHTNESS adjustment	0-31	16					15	16
50	CHUE	SUB COLOR (RF)	0-31	7					6	6
51	CCOL	SUB COLOR (RF)	0-31		7				7	4
52	UOFS	YUV U OFFSET	0-15	7					7	7
53	VOFS	YUV V OFFSET	0-15	7					7	7
54	RON	R Output on/off	0-1	1					1	1

\* CDMD = 3 for US &amp; CND, CDMD = 0 for Other

\*\*\* RDRV = 41 for 27FS/32FS families, 31 for 27FV family

\*\*\*\*LBLK = 0 for 27FV/29FV/32FS/34FS family, 5 FOR 27FS family

\*\*\*\*\* RBLK = 3 for 27FV/29FV/32FS/34FS family, 2 for 27FS family

## ADJUSTMENT ITEMS (2 OF 4)

Reg #	ITEM	FUNCTION	RANGE	FIX DATA	NTSC 27	VIDEO	NTSC 32	RF	AVERAGE DATA 27	AVERAGE DATA 32
55	GON	G Output on/off	0-1	1					1	1
56	BON	B Output on/off	0-1	1					1	1
57	AXPL	Axis PAL	0-1	0					0	0
58	AXNT	Axis NTSC	0-1	1					1	1
59	CBPF	Chroma BPF on/off	0-1	1					1	1
60	CTRP	Y TRAP FILTER on/off	0-1	1					1	1
61	COFF	Color On/off	0-1	0					0	0
62	KOFF	Set Color Killer	0-1	0					0	0
63	SSHP	Sub SHARPNESS	0-15	5					5	5
64	SHPF	SHARPNESS Circuit Fo	0-3	Palette Mode Controls This Register					2	2
65	PREL	Pre-Shoot/ Over-Shoot	0-1	1					0	0
66	Y-DC	DC transmission Ratio Switching	0-3	Palette Mode Controls This Register					2	2
67	GAMM	Gamma Correction	0-3	Palette Mode Controls This Register					2	2
68	ABLM	ABL Mode Switch	0-1	1					1	1
69	VTH	ABL CD VHT Switching	0-1	1					1	1
70	YDEL	Y Delay Time Control	0-15	7					7	7
71	NCOL	No Color ID	0-1	1					1	1
72	FSC	FSC Out on/off	0-1	1					1	1
73	K-ID	Killer ID Control on/off	0-1	0					0	0
74	GDOF		0-31	3					3	3
75	BDOF		0-31	16					16	16
76	GCOF		0-31	16					16	16
77	BCOF		0-31	7					7	7
78	SYSC	Color System	0-7	4					4	4
79	VENH	Vertical Enhancement	0-7	Palette Mode Controls This Register					5	3
80	PDSO	PDS OFF	0-1	0					0	0
81	CK	CK	0-1	0					0	0
82	VNL	VNL	0-15	3					3	3
83	HPK	HPK	0-1	0					0	0
84	HPKO	HPK OFF	0-1	Palette Mode Controls This Register					0	0
85	CORE	CORE	0-3	2					1	1
86	TRAP	TRAP	0-1	1					1	1
87	CHTR	CH TRAP	0-1	0					0	0
88	CBPF	CBPF	0-1	1					1	1
89	ENHO	ENH OFF	0-1	0					0	0
90	NMRD	NMRD	0-3	0					0	0
91	YAPS	YAPS	0-3	3					3	3
92	CLKS	CLKS	0-3	0					0	0
93	NSTD	NSTDS	0-3	0					0	0
94	MSS	MSS	0-3	0					0	0
95	KILS	KILS	0-3	1					1	1
96	ADIN	ADIN	0-1	0					0	0
97	EXCS	EXCSS	0-3	1					1	1
98	CPP	CPP	0-3	2					2	2
99	HDP	HDP	0-7	4					4	4
100	CDL	CDL	0-7	4					4	4
101	DYCR	DYCOR	0-15	2					2	2
102	DYGN	DYGAIN	0-15	10					10	10
103	DCCR	DCCOR	0-15	3					3	3
104	DCGN	DCGAIN	0-15	6					6	6
105	YNRL	YNRLIM	0-3	1					1	1
106	CNRL	CNRLIM	0-3	1					1	1
107	WSC	WSC	0-3	1					1	1
108	VTRH	VTRH	0-3	1					1	1

## ADJUSTMENT ITEMS (3 OF 4)

Reg #	ITEM	FUNCTION	RANGE	FIX DATA	NTSC 27	VIDEO	NTSC 32	RF	AVERAGE DATA 27	AVERAGE DATA 32
109	VTRR	VTRR	0-3	1					1	1
110	LDSR	LDSR	0-3	2					2	2
111	VAPG	VAPGAIN	0-7	3					3	3
112	VAPI	VAPINV	0-31	6					6	6
113	TEST	TEST	0-1	0					0	0
114	YPFT	YPFT	0-3	3					3	3
115	YPFG	YPFG	0-15	7					7	7
116	CC3N	CC3N	0-1	0					0	0
117	SELD		0-1	1					1	1
118	D2GN	D2GAIN	0-7	4					5	5
119	YHCR	YHCOR	0-3	0					0	0
120	YPFC	YPFCOR	0-1	0					0	0
121	SHT	SHT	0-3	0					0	0
122	MVT	MVT	0-1	0					0	0
123	OTT	OTT	0-1	0					0	0
124	CL2D	CL2D	0-1	1					1	1
125	CLKG	CLKGGT	0-1	0					0	0
126	HPLL	HPLLFS	0-1	1					1	1
127	BPLL	BPLLFS	0-1	0					0	0
128	FSCF	FSCFG	0-1	0					0	0
129	PLLS	PLLS	0-1	1					1	1
130	KILR	KILR	0-15	3					3	3
131	HSSL	HSSL	0-15	12					12	12
132	VSSL	VSSL	0-15	8					8	8
133	BGPS	BGPS	0-15	4					4	4
134	BGPW	BGPW	0-15	10					10	10
135	ADCK	ADCLKS	0-3	3					3	3
136	NDSW	NSDSW	0-1	1					1	1
137	PFRN	FREE_RUN	0-1	0					0	0
138	PRVS	RVS	0-1	0					0	0
139	PCON	CONTRAST	0-127	97					45	45
140	PUCO	U-DAC	0-127	5					16	16
141	PVCO	V-DAC	0-127	5					24	24
142	PHUE		0-31	12					15	15
143	PKIL	KILLER	1	0					0	0
144	PSEP	EXT_SC_SEL	0-3	1					2	2
145	PHIM		0-1	0					0	0
146	PSUB		0-1	0					0	0
147	PBGS	BG_START	0-63	14					14	14
148	PDL0		0-15	10					6	6
149	PDL1		0-15	13					13	13
150	PBRT	Y_OFFSET	0-31	25					25	25
151	PVP1			0					0	0
152	PUP1			0					0	0
153	PVP2			0					0	0
154	PUP2			0					0	0
155	PVP3			0					0	0
156	PUP3			0					0	0
157	PACS	SET_ACC	0-1	1					1	1
158	PSDL	YUV_Color (More Significant)	0-3	2					0	0
159	PDCO	YUV_Color (Less Significant)	0-3	2					0	0

## ADJUSTMENT ITEMS (4 OF 4)

Reg #	ITEM	FUNCTION	RANGE	FIX DATA	NTSC 27	VIDEO	NTSC 32	RF	AVERAGE DATA 27	AVERAGE DATA 32
160	PCGA	C_GAIN	0-1	1					1	1
161	PAAF		0-1	0					0	0
162	PSU2		0-1	0					0	0
163	PCVF		0-1	0					0	0
164	PBIT	BITSEL	0-1	0					0	0
165	PAFC	AFCBITSEL	0-1	0					0	0
166	PACC	ACC_LEVEL	0-63	21					22	22
167	PBUR	BURST_CLK	0-1	0					0	0
168	PEVE	EVENUPRA	0-1	0					0	0
169	PINW	INV_WFF	0-1	0					0	0
170	PINR	INV_REF	0-1	0					0	0
171	PREF	RFF_FIX	0-1	0					0	0
172	PARE	AUTO_REF	0-1	1					1	1
173	PAVE	AVERAGE	0-1	0					0	0
174	PFRA	FREE_RUN_ADJ	0-15	0					0	0
175	PPAL	SUB_PALM_JUDGE	0-255	0					0	0
176	PHPO		0-31	9					7	6
177	PVPO		0-31	22					22	22
178	PHTI	HT	0-15	5					9	9
179	PHAJ	ADJ	0-15	1					1	1
180	PBGY	BGY	0-15	0					0	0
181	PCRO	CROSS_SEL	0-1	0					0	0
182	PPAR	PALRY	0-63	2					2	2
183	PHPF	HPFOFF	0-1	0					0	0
184	PFSC	FSC_OUTPUT	0-1	0					0	0
185	PVCH	SET_VCHIP	0-1	0					0	0
186	PVON	VCHIP_ONLY	0-1	1					1	1
187	PVLN	LINE_NUM	0-31	17					17	17
188	PVSB	STB_DLY	0-255	64					64	64
189	PVLV	L_LEVEL	0-255	130					130	130
190	SBAL	Sub Balance	0-7	5					5	5
191	SBAS	Sub Bass	0-7		****				0	0
192	STRE	Sub Treble	0-7		*****				3	3
193	BBEL	BBE Low	0-15	*****					0	0
194	BBEH	BBE High	0-15	*****					0	0
195	BBE	BBE	0-1	*****					0	0
196	AUX	SRS, Simulated	0-3	0					0	0
197	DISP	O.S.D Display position	0-127	20					32	34
198	HCLW	Horizontal Count Lower limit	0-255	16		16			16	16
199	HCHG	Horizontal Count High limit	0-255	64		64			64	64
200	ID0		0-255	25					See ID Map	
201	ID1		0-255	3					See ID Map	
202	ID2		0-255	91					See ID Map	
203	ID3		0-255	2					See ID Map	
204	ID4		0-255	233					See ID Map	
205	ID5		0-255	17					See ID Map	
206	ID6		0-255	0					See ID Map	

\*\*\*\*SBAS = 0 for 27FV/29FV/32FS/34FS family, 5 for 27FS family

\*\*\*\*\* STRE = 3 for 27FV/29FV/32FS/34FS family, 2 for 27FS family

\*\*\*\*\* BBEL = 5 for 27FV family; 6 for 29FV family and 0 for 27FS/29FS/32FS family

\*\*\*\*\* BBEH = 5 for 27FV family; 7 for 29FV family and 0 for 27FS/29FS/32FS family

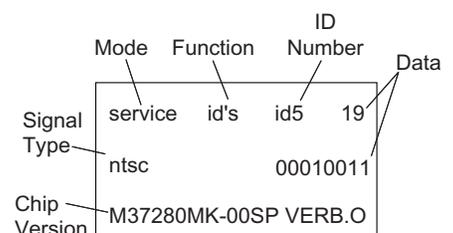
\*\*\*\*\* BBE = 1 for 27FV/29FV families and 0 for 27FS/29FS/32FS family

## Notes:

No. 1-206 show the order that each adjustment mode may be selected while in Service Mode.

Data Range shows the range of possible settings for each Adjustment Mode.

Initial Data shows the standard settings for each Adjustment Mode.



## FEATURE ID MAP

Model	Destination	ID-0	ID-1	ID-2	ID-3	ID-4	ID-5	ID-6
KV-27FS13	US	89	31	79	146	137	19	0
KV-27FS13	CND	89	31	79	178	137	19	0
KV-27FS17	US	89	31	79	146	137	19	7
KV-27FV17	US	89	63	239	146	133	19	7
KV-27FV17	CND	89	63	239	178	133	19	7
KV-29FV17	E	17	63	255	130	229	19	7
KV-29FV17C	E	17	63	255	130	229	19	7
KV-32FS13	US	89	31	79	146	137	19	0
KV-32FS13	CND	89	31	79	178	137	19	0
KV-32FS17	US	89	31	79	146	137	19	7
KV-34FS13C	E	17	31	223	130	233	19	0
KV-34FS17	E	17	31	223	130	233	19	7

## 4-4. MA BOARD ADJUSTMENTS

### H. FREQUENCY (FREE RUN) CHECK

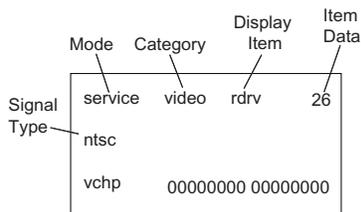
1. Input a TV mode (RF) with no signal.
2. Connect a frequency counter to base of Q501 (TP-500 H. DRIVE) on the A Board.
3. Check H. Frequency for  $15735 \pm 200$  Hz.

### V. FREQUENCY (FREE RUN) CHECK

1. Select video 1 with no signal input.
2. Set the conditions for a standard setting.
3. Connect the frequency counter to TP-508 (V OUT) or CN501 pin ⑥ (V DY+) and ground on the A Board.
4. Check that V. Frequency shows  $60 \pm 4$  Hz.

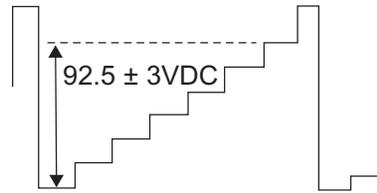
### DRIVE (RDRV)

1. Input a color-bar signal and set the level to 75%.
2. Set in Standard Mode.
3. Activate the Service Adjustment Mode.
4. Set both GON and BON items. Using **[3]** and **[6]** set each to the following values. Leave RON set to "1".



R ON: ON (1)  
G ON: OFF (0)  
B ON: OFF (0)

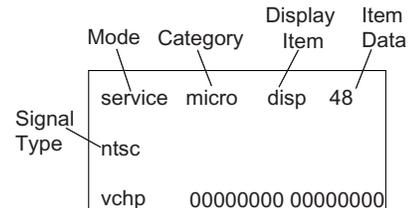
5. Connect an oscilloscope probe to CB Board, J701 Pin 12 (KR) (Red Out).
6. Select RDRV with **[1]** and **[4]**.
7. Adjust the value of RDRV with **[3]** and **[6]** for  $92.5 \pm 3$  VDC.



8. Reset GON and BON values to "1".  
R ON: ON (1)  
G ON: ON (1)  
B ON: ON (1)
9. Press **[MUTING]** then **[ENTER]** to save into the memory.

### Display Position Adjustment (DISP)

1. Input a color-bar signal.
2. Set to Service Adjustment Mode.
3. Select DISP with **[1]** and **[4]**.
4. Adjust values of DISP with **[3]** and **[6]** to adjust characters to the center.
5. Write to memory by pressing **[MUTING]** then **[ENTER]**.
6. Check to see if the text is displayed on the screen.

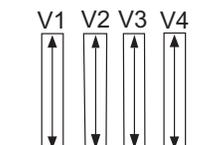


### SUB BRIGHT ADJUSTMENT (SBRT)

1. Input a monoscope signal.
2. Activate the Service Adjustment Mode.
3. Set the PICTURE and BRIGHTNESS to minimum.
4. Select the SBRT item with **[1]** and **[4]**.
5. Adjust the values of SBRT with **[3]** and **[6]** to obtain a faintly visible crosshatch.
6. Press **[MUTING]** then **[ENTER]** to save into the memory.

### SUB HUE, SUB COLOR ADJUSTMENT (SHUE, SCOL)

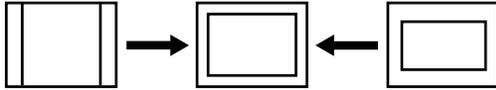
1. Input a color-bar signal.
2. Activate the Service Adjustment Mode.
3. Connect an oscilloscope probe to CB Board, CN705 Pin ④ Blue Out.
4. Select the SHUE and SCOL item with **[1]** and **[4]**.
5. While showing the SHUE item, adjust the waveform with **[1]** and **[4]** until the second and third bars show the same level ( $V2 = V3 < 0.1$  Vp-p).
6. While showing the SCOL item, adjust the waveform with **[3]** and **[6]** until the first and fourth bars show the same level ( $V1 = V4 < 0.1$  Vp-p).



7. Press **[MUTING]** then **[ENTER]** to save into the memory.

## V. SIZE ADJUSTMENT (VSIZ)

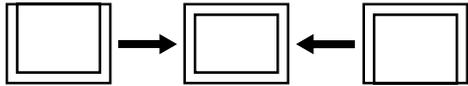
1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select the VSIZ item with **1** and **4**.
4. Adjust value of VPOS with **1** and **4** for the best vertical center.
5. Press **MUTING** then **ENTER** to save into the memory.



## V. CENTER ADJUSTMENT (VPOS)

Perform this adjustment after performing H. Frequency (Free Run) Check.

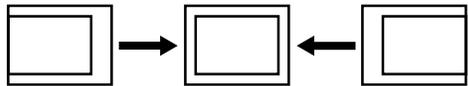
1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select the VPOS item with **1** and **4**.
4. Adjust value of VPOS with **3** and **6** for the best vertical center.
5. Press **MUTING** then **ENTER** to save into the memory.



## H. CENTER ADJUSTMENT (HPOS)

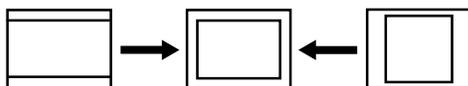
Perform this adjustment after performing H. Frequency (Free Run) Check.

1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select the HPOS item with **1** and **4**.
4. Adjust the value of HPOS with **3** and **6** for the best horizontal center.
5. Press **MUTING** then **ENTER** to save into the memory.



## H. SIZE ADJUSTMENT (HSIZ)

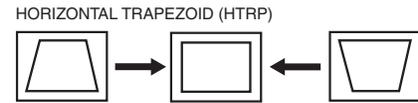
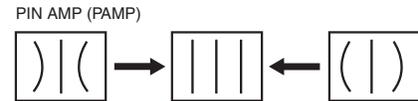
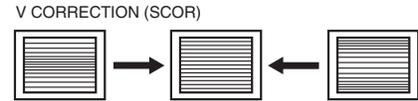
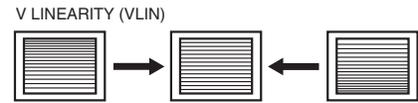
1. Input a monoscope signal.
2. Activate the Service Adjustment Mode.
3. Select HSIZ with **1** and **4**.
4. Adjust with **3** and **6** for the best horizontal size.
5. Press **MUTING** then **ENTER** to save into the memory.



## V. LINEARITY (VLIN), V. CORRECTION (SCOR), PIN AMP (PAMP), AND HORIZONTAL TRAPEZOID (HTRP) ADJUSTMENTS

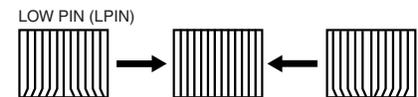
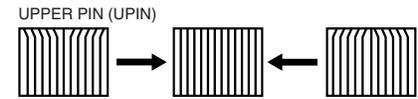
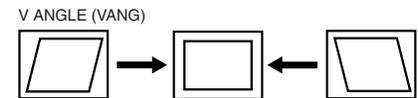
1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select VLIN, SCOR, PAMP, and HTRP with with **1** and **4**.

4. Adjust with **3** and **6** for the best horizontal size.
5. Press **MUTING** then **ENTER** to save into the memory.



## V. ANGLE (VANG), V. BOW (VBOW), UPPER PIN (UPIN) AND LOW PIN (LPIN) ADJUSTMENTS

1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select VANG, VBOW, UPIN, and LPIN with **1** and **4**.
4. Adjust with **3** and **6** for the best picture.
5. Press **MUTING** then **ENTER** to save into the memory.



## SERVICE ADJUSTMENT MODE MEMORY

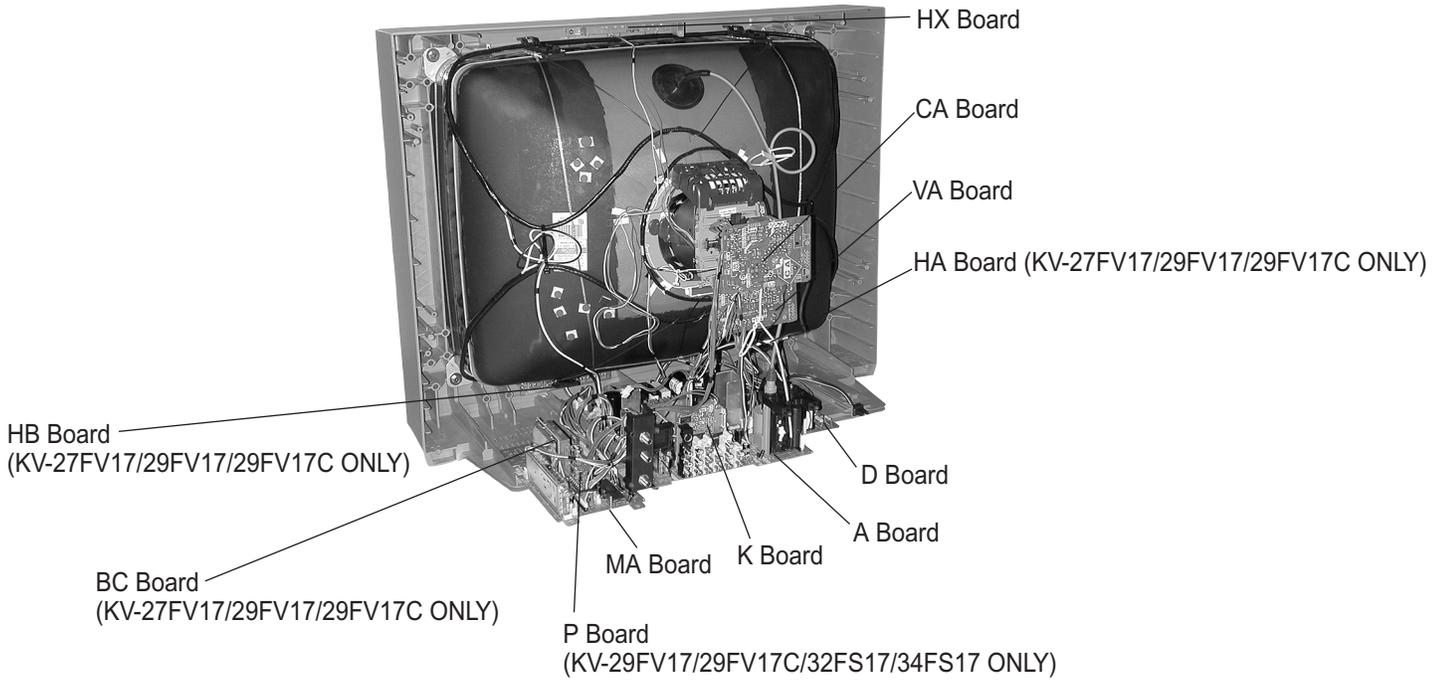
1. After completing all adjustments, press **0** then **ENTER**.  
Read From Memory

Mode	Category	Display Item	Item Data	Signal Type
service	defl	vbow	7	Green
ntsc				0
vchp	00000000	00000000		Red
				ENTER

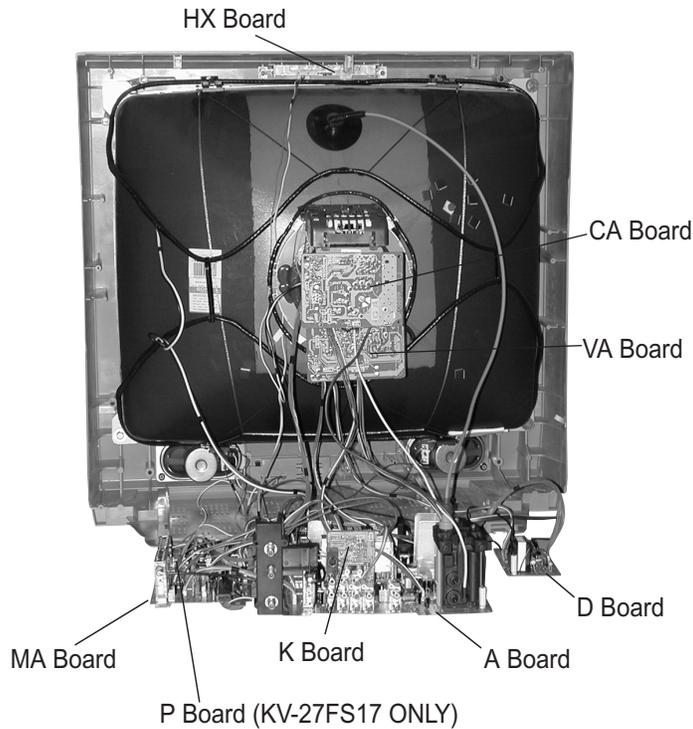
# SECTION 5: DIAGRAMS

## 5-1. CIRCUIT BOARDS LOCATION

**(KV-27FV17/29FV17/29FV17C/32FS13/32FS17/34FS13C/34FS17 ONLY)**



**(KV-27FS13/27FS17 ONLY)**



## 5-2. PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM INFORMATION

All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF :  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.

All electrolytics are in 50V unless otherwise specified.

All resistors are in ohms. K=1000, M=1000k

Indication of resistance, which does not have one for rating electrical power, is as follows:

Pitch : 5mm

Rating electrical power :  $\frac{1}{4}$  W

$\frac{1}{4}$  W in resistance,  $\frac{1}{10}$  W and  $\frac{1}{8}$  W in chip resistance.

 : nonflammable resistor.

 : fusible resistor.

 : internal component.

 : panel designation and adjustment for repair.

All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

Readings are taken with a color-bar signal input.

Readings are taken with a 10M digital multimeter.

Voltages are DC with respect to ground unless otherwise noted.

Voltage variations may be noted due to normal production tolerances.

All voltages are in V.

S : Measurement impossibility.

 : B+line.

 : B-line. (Actual measured value may be different).

 : signal path. (RF)

Circled numbers are waveform references.

The components identified by  in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be necessary, replace only with the value originally used.

When replacing components identified by , make the necessary adjustments as indicated. If the results do not meet the specified value, change the component identified by  and repeat the adjustment until the specified value is achieved. (Refer to Safety Related Adjustments on Page 14.)

When replacing the parts listed in the table below, it is important to perform the related adjustments.

Part Replaced (  )	Adjustment (  )
DY, T505, CRT, IC501 C507, C520, C505, C509, C515, T504, T503, C551, L510, C546, C537, C547, D517, D518, D519, R560, R561, R562, R563, R565, R566, R567, R525.....A Board	HV HOLD-DOWN R564
IC301.....MA Board	

## REFERENCE INFORMATION

### RESISTOR

: RN METAL FILM  
 : RC SOLID  
 : FPRD NONFLAMMABLE CARBON  
 : FUSE NONFLAMMABLE FUSIBLE  
 : RW NONFLAMMABLE WIREWOUND  
 : RS NONFLAMMABLE METAL OXIDE  
 : RB NONFLAMMABLE CEMENT  
 :  ADJUSTMENT RESISTOR

### COIL

: LF-8L MICRO INDUCTOR

### CAPACITOR

: TATANTALUM  
 : PS STYROL  
 : PP POLYPROPYLENE  
 : PT MYLAR  
 : MPS METALIZED POLYESTER  
 : MPP METALIZED POLYPROPYLENE  
 : ALB BIPOLAR  
 : ALT HIGH TEMPERATURE  
 : ALR HIGH RIPPLE

The components identified by shading and  symbol are critical for safety. Replace only with part number specified.

The symbol  indicates a fast operating fuse and is displayed on the component side of the board. Replace only with fuse of the same rating as marked.

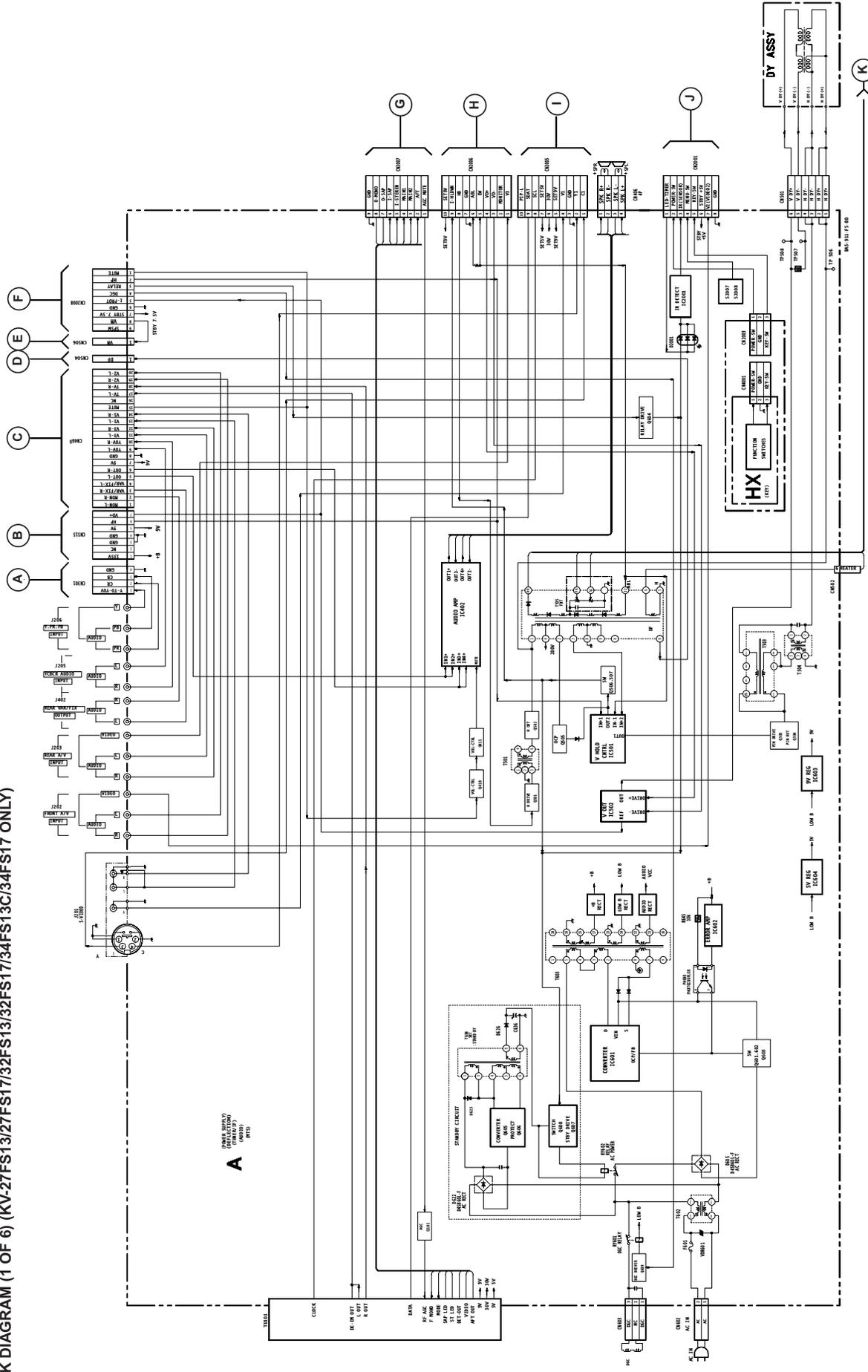
Les composants identifiés par un trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifique.

Le symbole  indique une fusible à action rapide. Doit être remplacé par une fusible de même valeur, comme marqué.

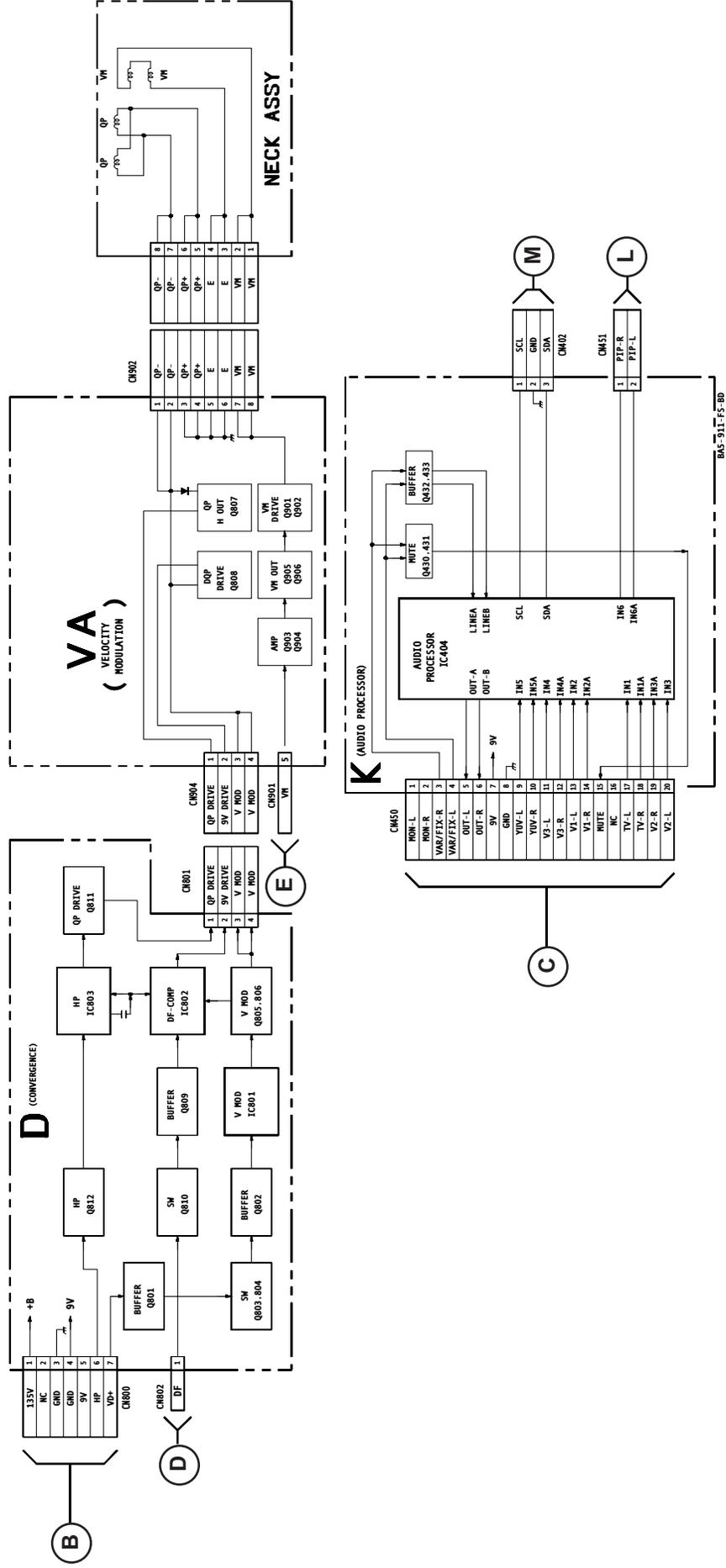
5-3. BLOCK DIAGRAM AND SCHEMATICS

BLOCK DIAGRAM (1 OF 6) (KV-27FS13/27FS17/32FS13/32FS17/34FS13C/34FS17 ONLY)

KV-27FS13/27FS17/27FS17/27FS17/29FV17/29FV17/29FV17C/32FS13/32FS17/34FS13C/34FS17

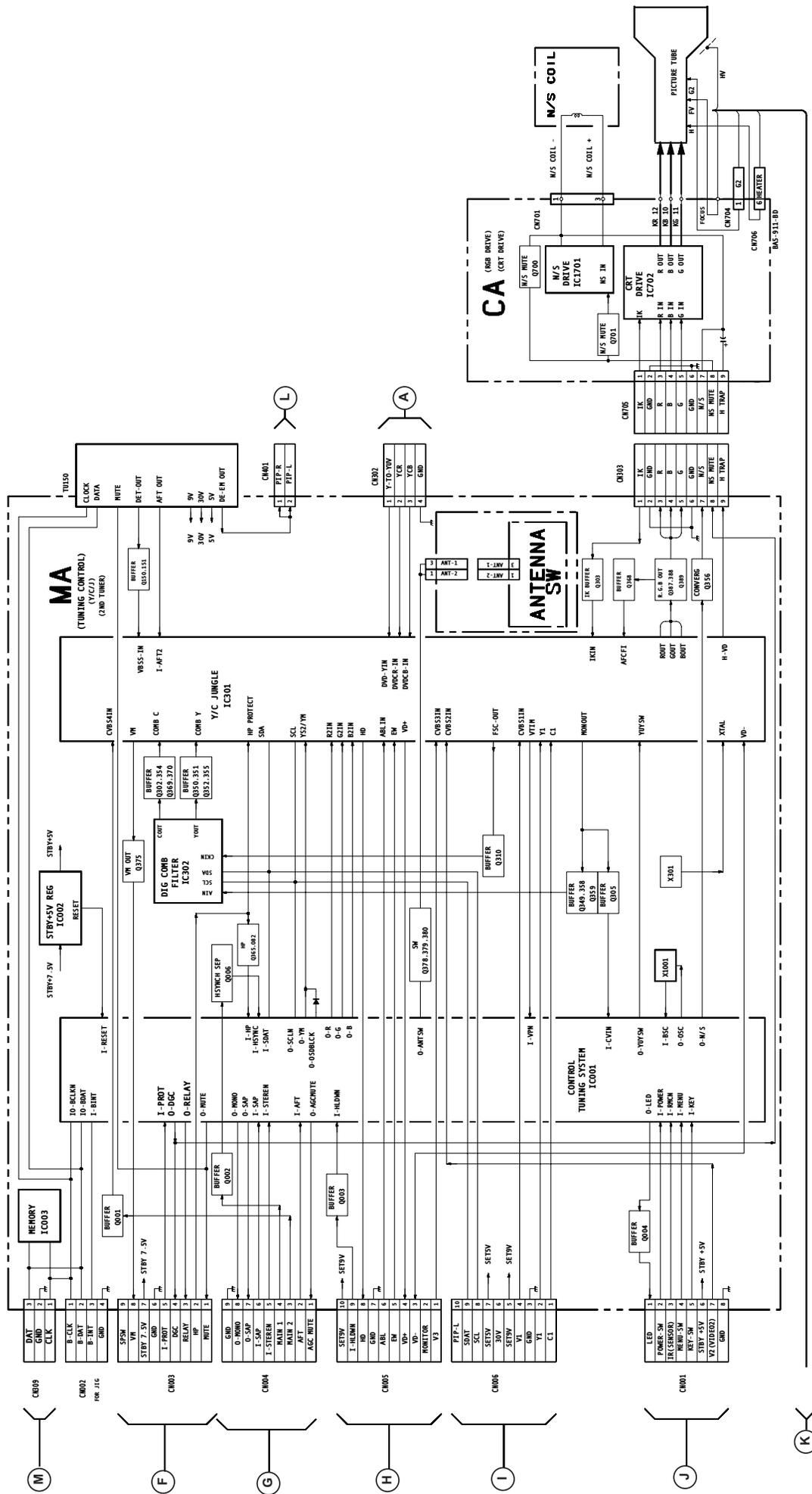


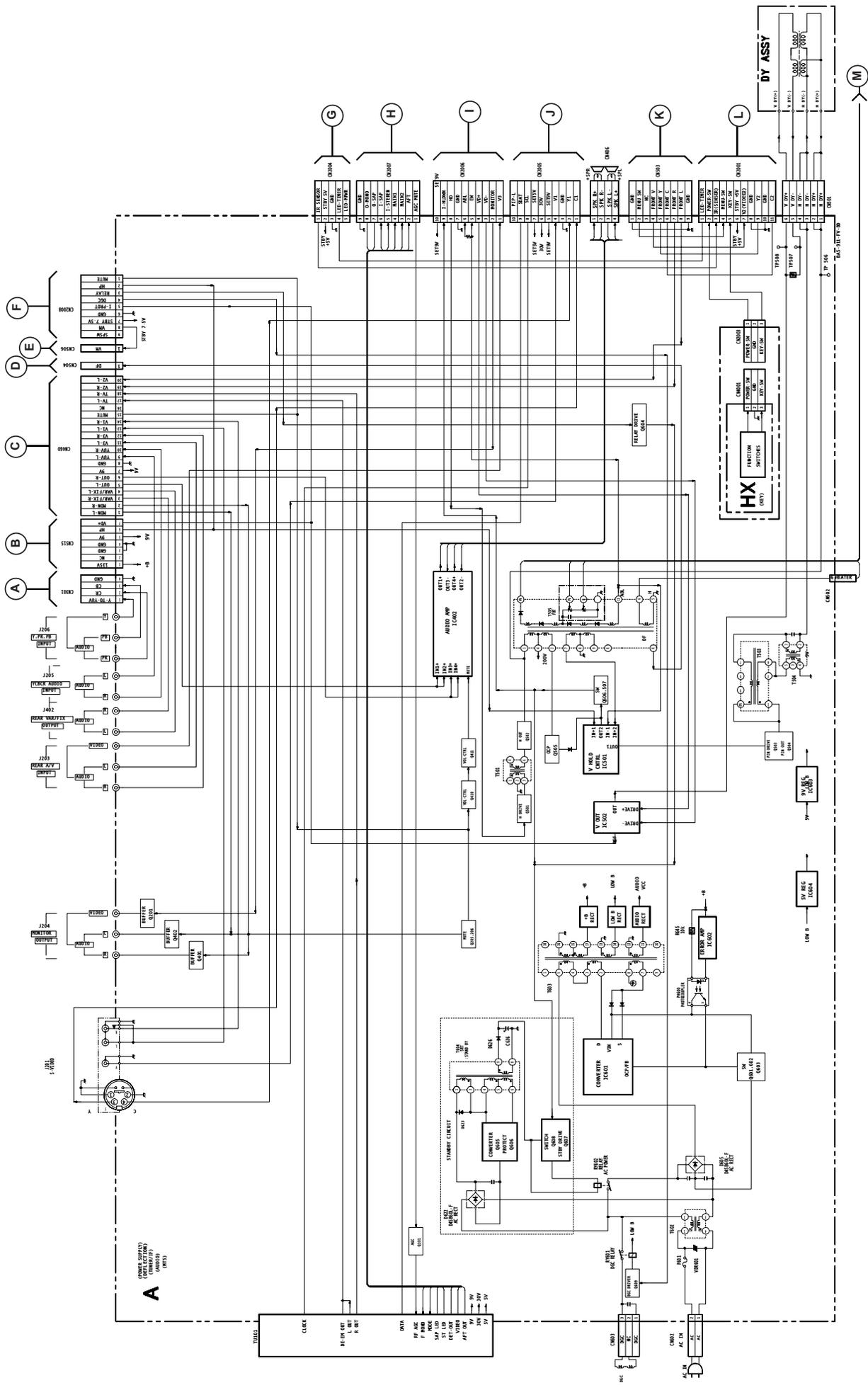
**BLOCK DIAGRAM (2 OF 6) (KV-27FS13/27FS17/32FS13/34FS17/34FS17 ONLY)**



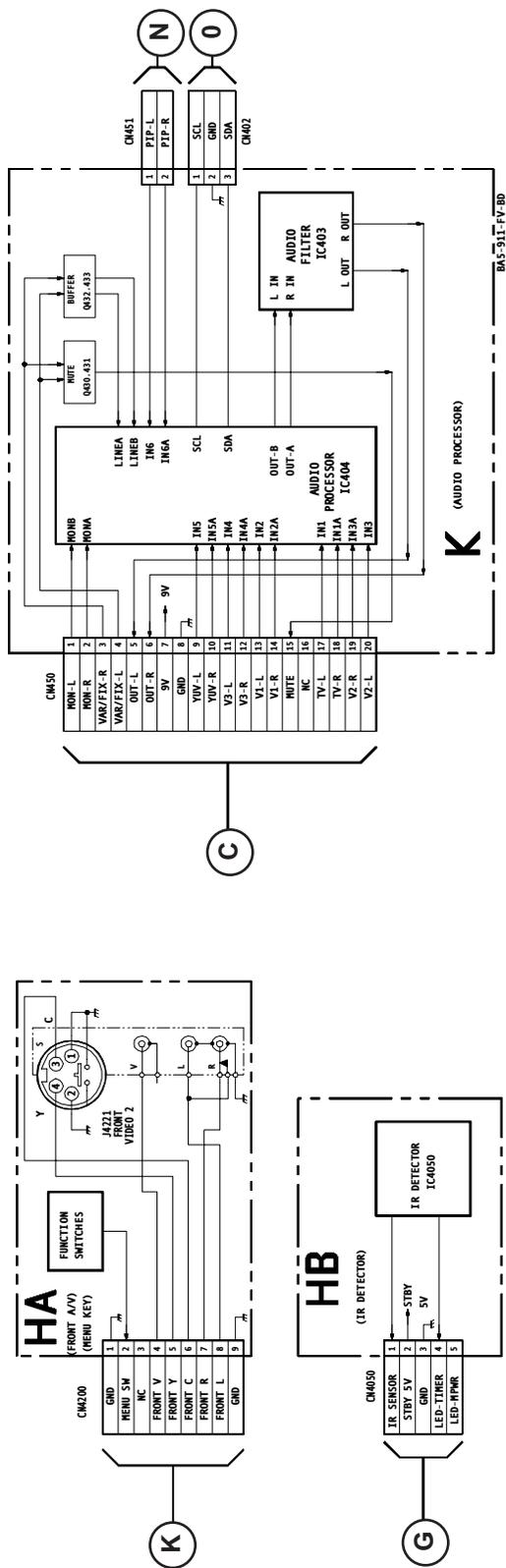
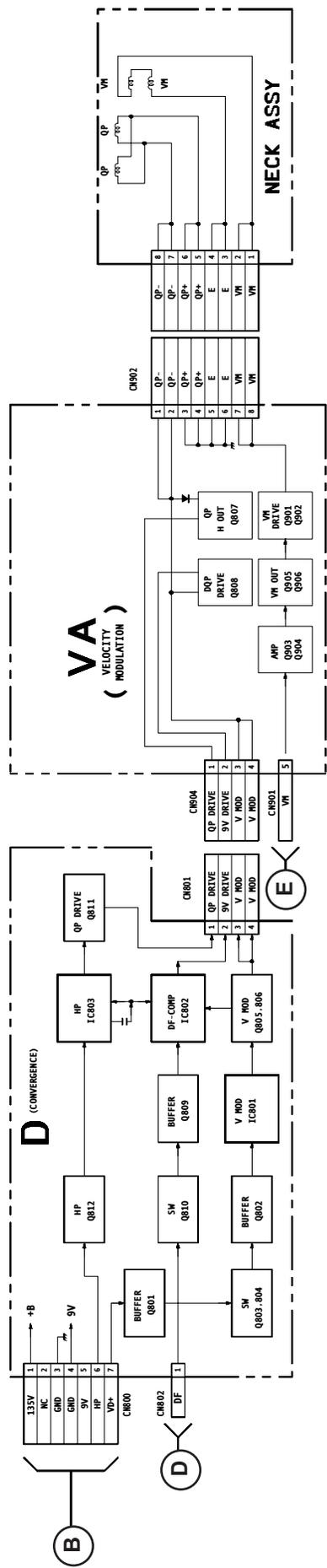
BLOCK DIAGRAM (3 OF 6) (KV-27FS13/27FS17/32FS13/32FS17/34FS13C/34FS17 ONLY)

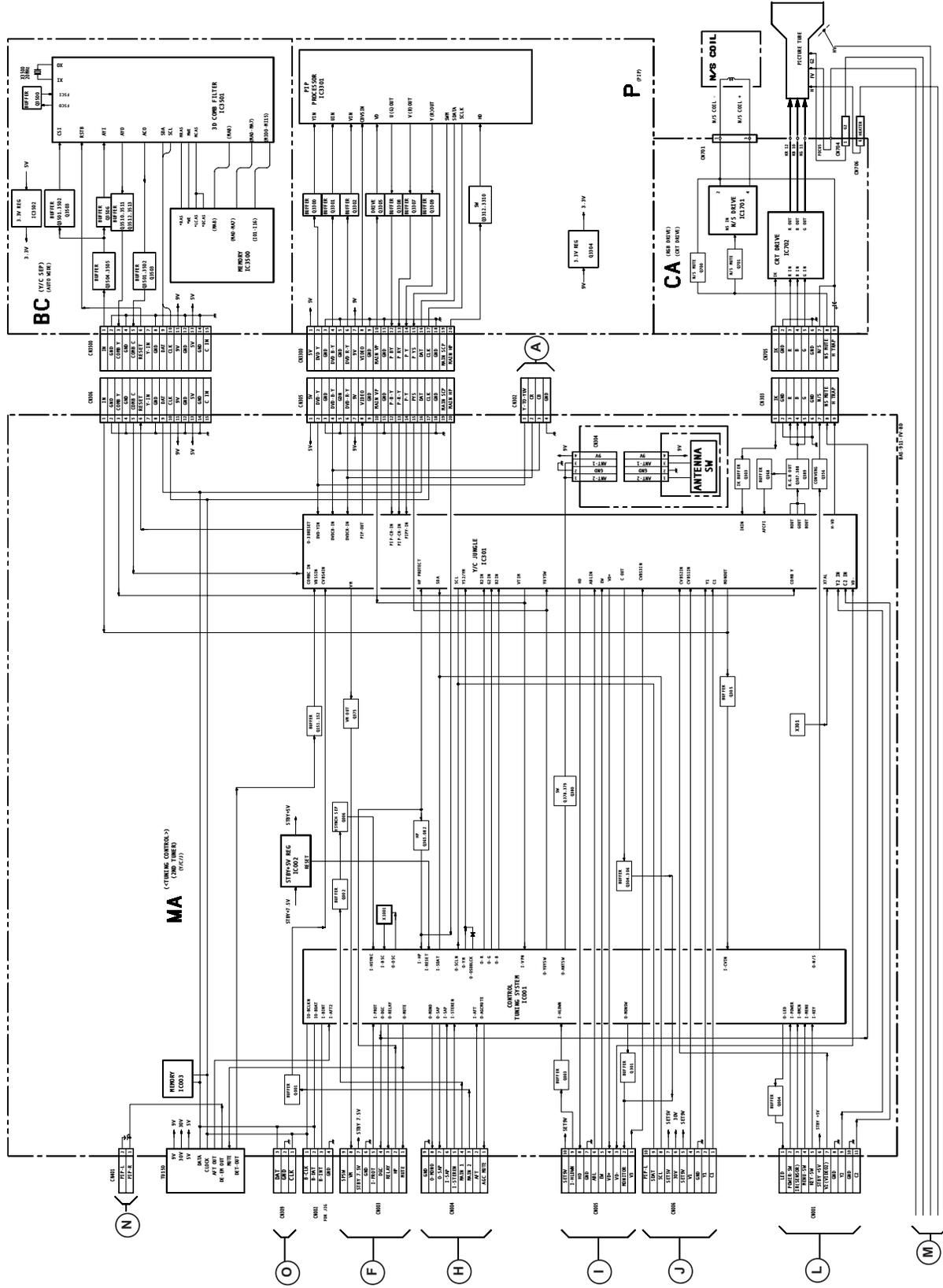
KV-27FS13/27FS17/32FS13/32FS17/34FS13C/34FS17



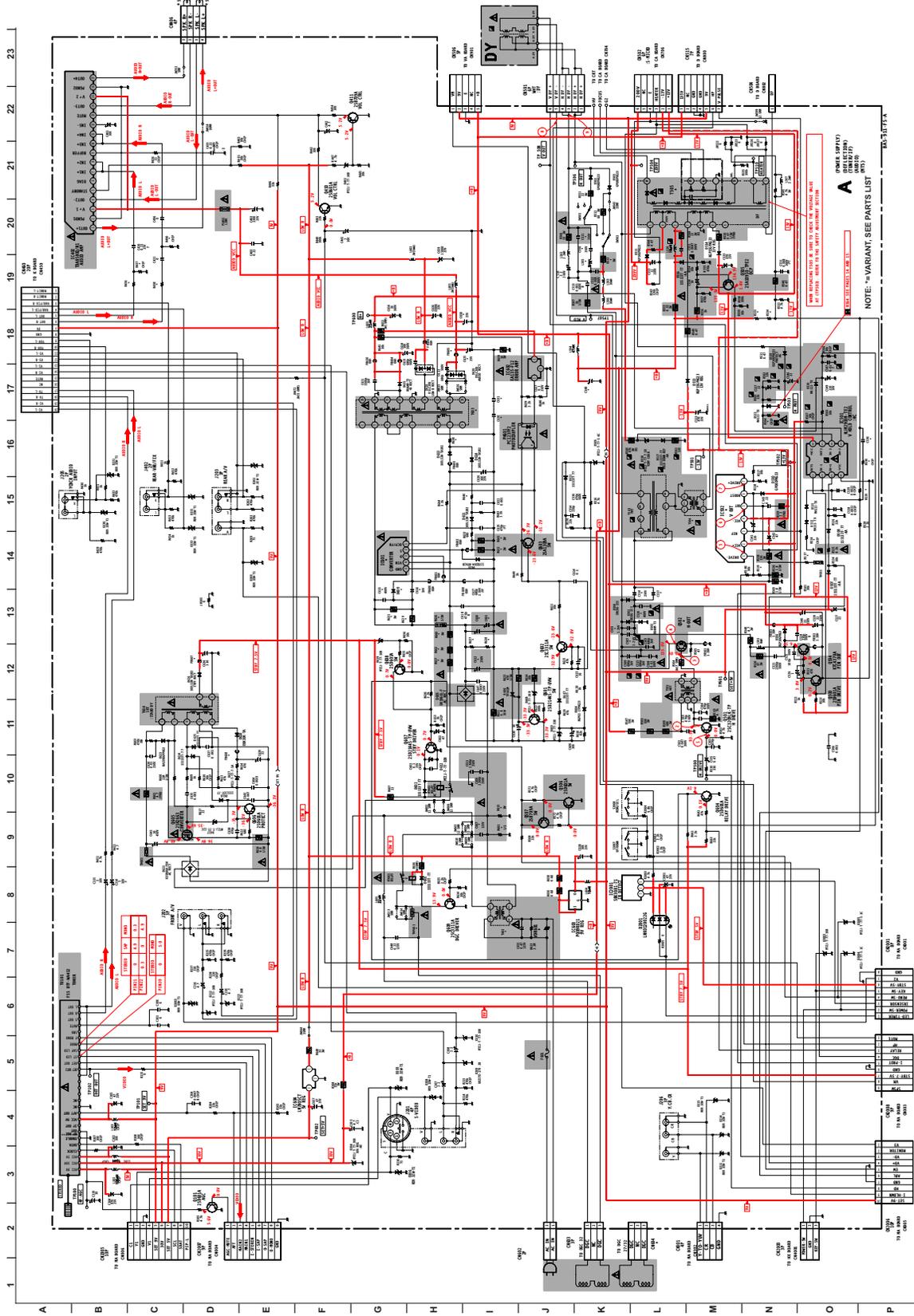


BLOCK DIAGRAM (5 OF 6) (KV-27FV17/29FV17/29FV17C ONLY)



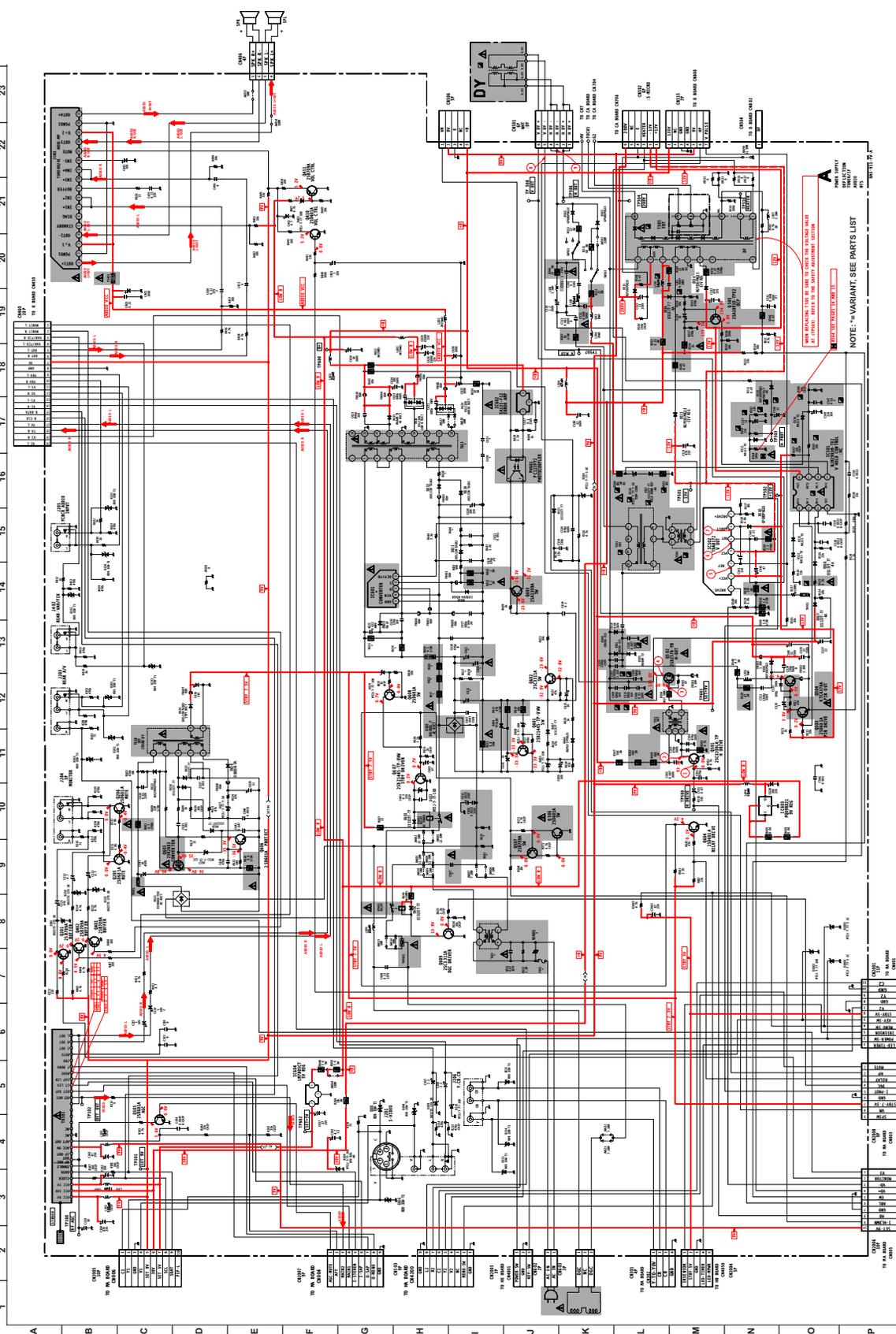


A BOARD SCHEMATIC DIAGRAM (KV2FS13/2FS17/3FS19/4FS21/5FS23/6FS25/7FS27/8FS29/9FS31/10FS33/11FS35/12FS37/13FS39/14FS41/15FS43/16FS45/17FS47/18FS49/19FS51/20FS53/21FS55/22FS57/23FS59/24FS61/25FS63/26FS65/27FS67/28FS69/29FS71/30FS73/31FS75/32FS77/33FS79/34FS81/35FS83/36FS85/37FS87/38FS89/39FS91/40FS93/41FS95/42FS97/43FS99/44FS101/45FS103/46FS105/47FS107/48FS109/49FS111/50FS113/51FS115/52FS117/53FS119/54FS121/55FS123/56FS125/57FS127/58FS129/59FS131/60FS133/61FS135/62FS137/63FS139/64FS141/65FS143/66FS145/67FS147/68FS149/69FS151/70FS153/71FS155/72FS157/73FS159/74FS161/75FS163/76FS165/77FS167/78FS169/79FS171/80FS173/81FS175/82FS177/83FS179/84FS181/85FS183/86FS185/87FS187/88FS189/89FS191/90FS193/91FS195/92FS197/93FS199/94FS201/95FS203/96FS205/97FS207/98FS209/99FS211/100FS213/101FS215/102FS217/103FS219/104FS221/105FS223/106FS225/107FS227/108FS229/109FS231/110FS233/111FS235/112FS237/113FS239/114FS241/115FS243/116FS245/117FS247/118FS249/119FS251/120FS253/121FS255/122FS257/123FS259/124FS261/125FS263/126FS265/127FS267/128FS269/129FS271/130FS273/131FS275/132FS277/133FS279/134FS281/135FS283/136FS285/137FS287/138FS289/139FS291/140FS293/141FS295/142FS297/143FS299/144FS301/145FS303/146FS305/147FS307/148FS309/149FS311/150FS313/151FS315/152FS317/153FS319/154FS321/155FS323/156FS325/157FS327/158FS329/159FS331/160FS333/161FS335/162FS337/163FS339/164FS341/165FS343/166FS345/167FS347/168FS349/169FS351/170FS353/171FS355/172FS357/173FS359/174FS361/175FS363/176FS365/177FS367/178FS369/179FS371/180FS373/181FS375/182FS377/183FS379/184FS381/185FS383/186FS385/187FS387/188FS389/189FS391/190FS393/191FS395/192FS397/193FS399/194FS401/195FS403/196FS405/197FS407/198FS409/199FS411/200FS413/201FS415/202FS417/203FS419/204FS421/205FS423/206FS425/207FS427/208FS429/209FS431/210FS433/211FS435/212FS437/213FS439/214FS441/215FS443/216FS445/217FS447/218FS449/219FS451/220FS453/221FS455/222FS457/223FS459/224FS461/225FS463/226FS465/227FS467/228FS469/229FS471/230FS473/231FS475/232FS477/233FS479/234FS481/235FS483/236FS485/237FS487/238FS489/239FS491/240FS493/241FS495/242FS497/243FS499/244FS501/245FS503/246FS505/247FS507/248FS509/249FS511/250FS513/251FS515/252FS517/253FS519/254FS521/255FS523/256FS525/257FS527/258FS529/259FS531/260FS533/261FS535/262FS537/263FS539/264FS541/265FS543/266FS545/267FS547/268FS549/269FS551/270FS553/271FS555/272FS557/273FS559/274FS561/275FS563/276FS565/277FS567/278FS569/279FS571/280FS573/281FS575/282FS577/283FS579/284FS581/285FS583/286FS585/287FS587/288FS589/289FS591/290FS593/291FS595/292FS597/293FS599/294FS601/295FS603/296FS605/297FS607/298FS609/299FS611/300FS613/301FS615/302FS617/303FS619/304FS621/305FS623/306FS625/307FS627/308FS629/309FS631/310FS633/311FS635/312FS637/313FS639/314FS641/315FS643/316FS645/317FS647/318FS649/319FS651/320FS653/321FS655/322FS657/323FS659/324FS661/325FS663/326FS665/327FS667/328FS669/329FS671/330FS673/331FS675/332FS677/333FS679/334FS681/335FS683/336FS685/337FS687/338FS689/339FS691/340FS693/341FS695/342FS697/343FS699/344FS701/345FS703/346FS705/347FS707/348FS709/349FS711/350FS713/351FS715/352FS717/353FS719/354FS721/355FS723/356FS725/357FS727/358FS729/359FS731/360FS733/361FS735/362FS737/363FS739/364FS741/365FS743/366FS745/367FS747/368FS749/369FS751/370FS753/371FS755/372FS757/373FS759/374FS761/375FS763/376FS765/377FS767/378FS769/379FS771/380FS773/381FS775/382FS777/383FS779/384FS781/385FS783/386FS785/387FS787/388FS789/389FS791/390FS793/391FS795/392FS797/393FS799/394FS801/395FS803/396FS805/397FS807/398FS809/399FS811/400FS813/401FS815/402FS817/403FS819/404FS821/405FS823/406FS825/407FS827/408FS829/409FS831/410FS833/411FS835/412FS837/413FS839/414FS841/415FS843/416FS845/417FS847/418FS849/419FS851/420FS853/421FS855/422FS857/423FS859/424FS861/425FS863/426FS865/427FS867/428FS869/429FS871/430FS873/431FS875/432FS877/433FS879/434FS881/435FS883/436FS885/437FS887/438FS889/439FS891/440FS893/441FS895/442FS897/443FS899/444FS901/445FS903/446FS905/447FS907/448FS909/449FS911/450FS913/451FS915/452FS917/453FS919/454FS921/455FS923/456FS925/457FS927/458FS929/459FS931/460FS933/461FS935/462FS937/463FS939/464FS941/465FS943/466FS945/467FS947/468FS949/469FS951/470FS953/471FS955/472FS957/473FS959/474FS961/475FS963/476FS965/477FS967/478FS969/479FS971/480FS973/481FS975/482FS977/483FS979/484FS981/485FS983/486FS985/487FS987/488FS989/489FS991/490FS993/491FS995/492FS997/493FS999/500

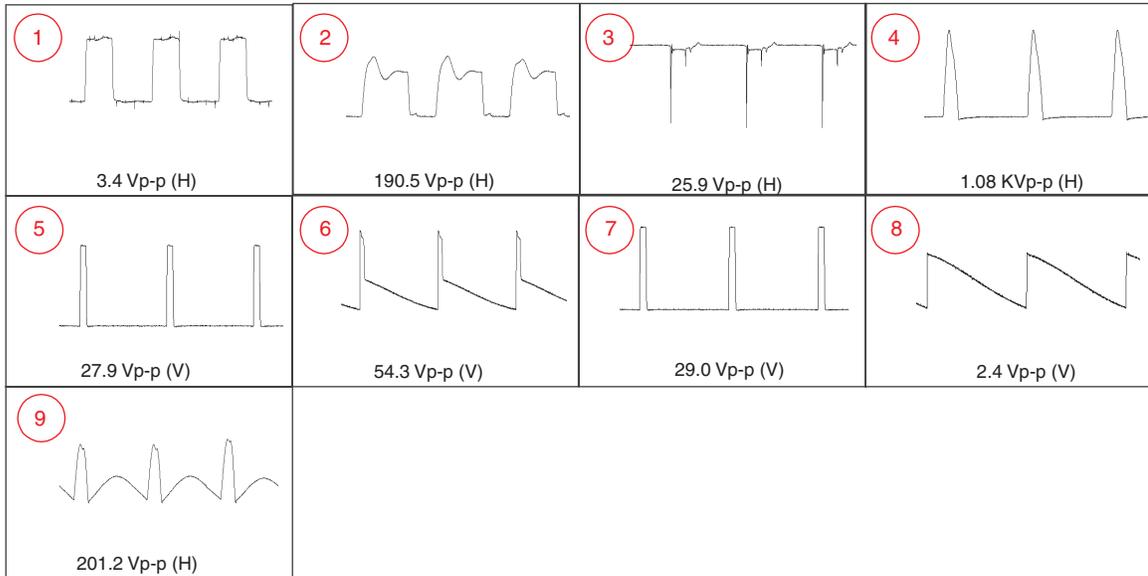


NOTE: 19 VARIANT, SEE PARTS LIST

A BOARD SCHEMATIC DIAGRAM (KV-ZFV1729F1729F17C ONLY)



## A BOARD WAVEFORMS



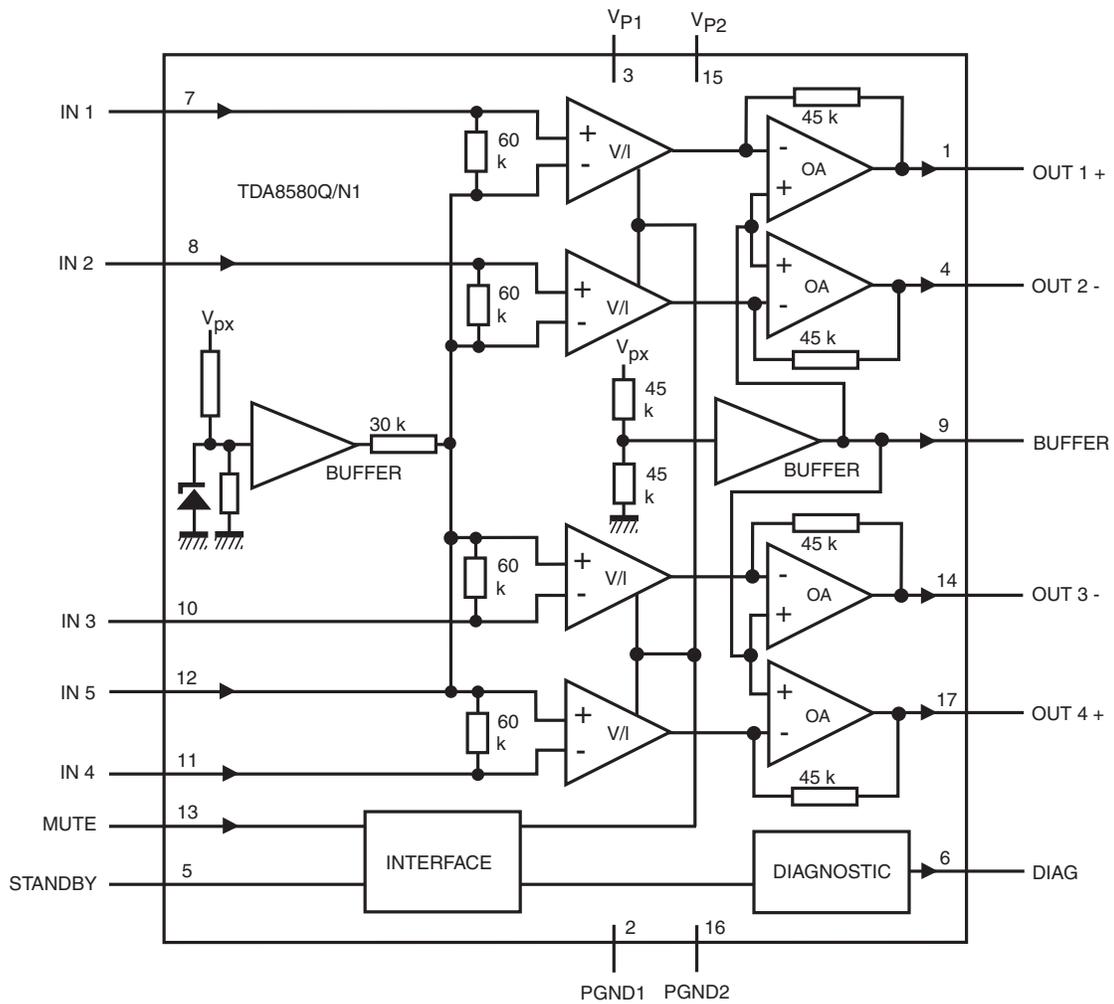
## A BOARD IC VOLTAGE LIST

<b>IC402</b>		14	6.8	<b>IC502</b>		4	-23.8	<b>IC604</b>		2	30.7	15	N/C
<b>PIN</b>	<b>VOLT</b>	15	14.1	<b>PIN</b>	<b>VOLT</b>	5	-32.7	<b>PIN</b>	<b>VOLT</b>	3	5.1	16	4.5
1	6.8	16	GND	1	2.1	<b>IC602</b>		1	13.3	4	4.9	17	4.7
2	GND	17	6.8	2	14.0	<b>PIN</b>	<b>VOLT</b>	2	5.0	5	4.9	18	4.4
3	14.1	<b>IC501</b>		3	-12.6	1	135.9	3	GND	6	GND	19	5.0
4	6.8	<b>PIN</b>	<b>VOLT</b>	4	-13.9	2	123.4	<b>IC2001</b>		7	N/C	20	5.0
5	4.3	1	0.2	5	0.2	3	GND	<b>PIN</b>	<b>VOLT</b>	8	2.1	21	0.3
6	N/C	2	3.7	6	14.3	<b>IC603</b>		1	5	9	8.9	22	0.0
7	4.1	3	2.5	7	2.1	<b>PIN</b>	<b>VOLT</b>	2	5	10	4.1	23	N/C
8	4.1	4	GND	<b>IC601</b>		I	13.3	3	GND	11	GND	24	0.0
9	6.8	5	9.5	<b>PIN</b>	<b>VOLT</b>	O	8.9	<b>TU101</b>		12	N/C	25	N/C
10	4.1	6	10.1	1	-31.8	G	GND	<b>PIN</b>	<b>VOLT</b>	13	N/C	26	4.5
11	4.1	7	0.1	2	-32.7	4	13.3	1	8.6	14	N/C	27	4.5
12	4.1	8	14.0	3	53.2								
13	5.2												

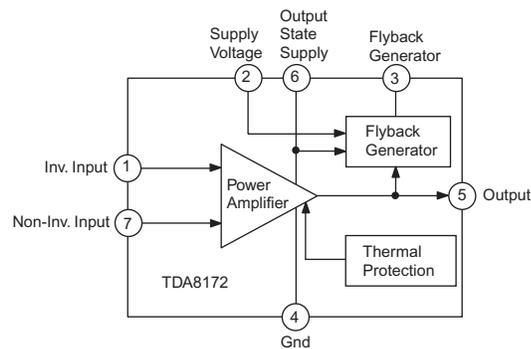
All Voltages are in V

## A BOARD IC BLOCK DIAGRAMS

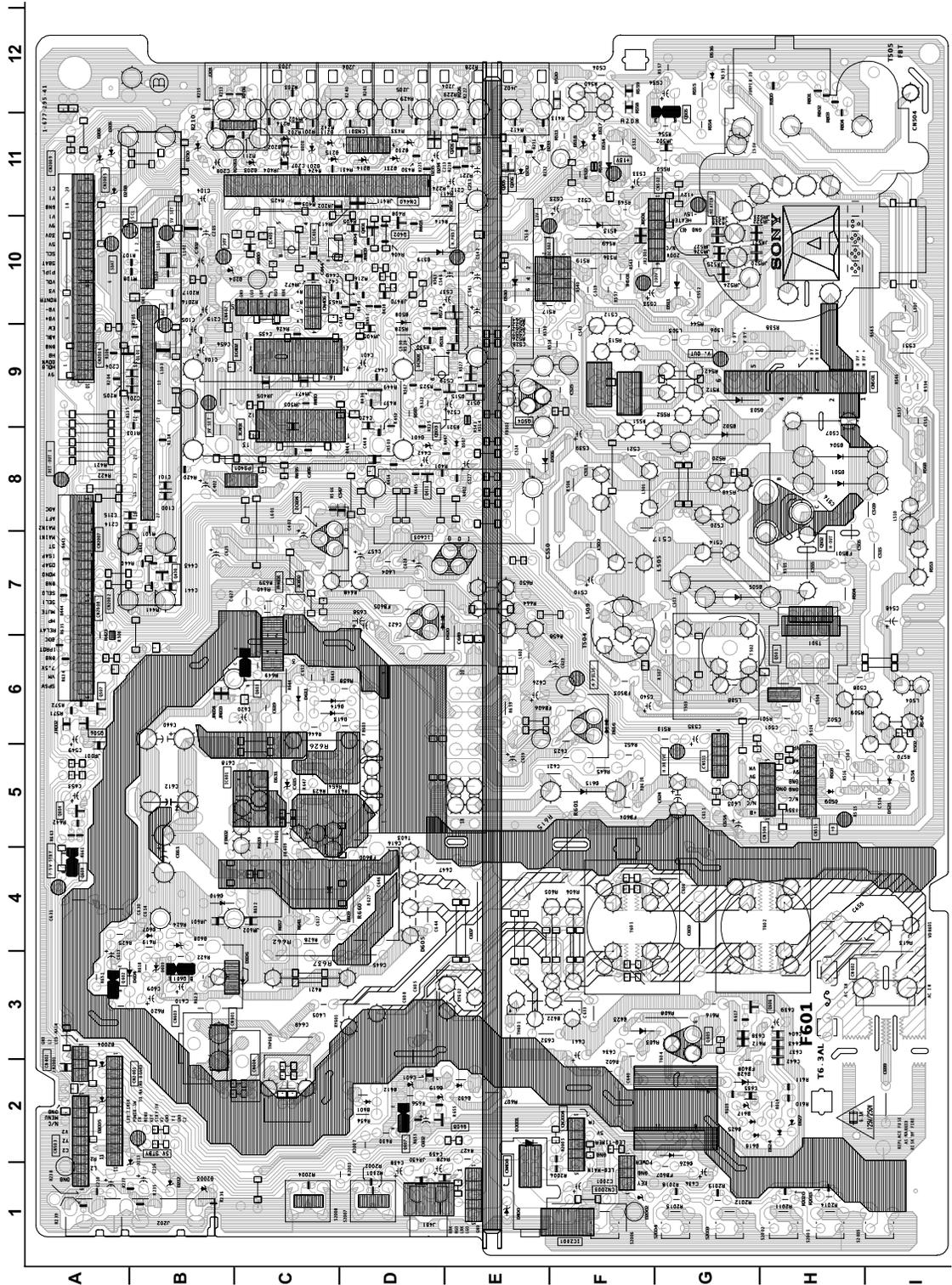
## IC402 TDA8580Q/N1



## IC502 TDA8172



**A** POWER SUPPLY, DEFLECTION, TUNER IF, AUDIO, MTS



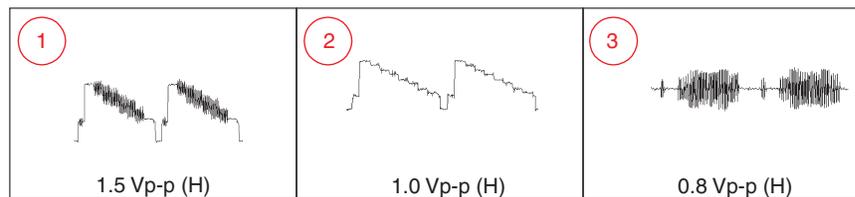
**A BOARD LOCATOR LIST**

D201	C-11	D612	D-2
D203	C-11	D613	C-6
D204	B-10	D614	C-6
D205	A-11	D615	F-5
D206	A-11	D616	F-6
D208	A-11	D617	H-2
D209	C-11	D618	H-2
D210	B-11	D619	D-2
D211	C-11	D620	D-7
D212	B-1	D622	F-3
D213	B-1	D623	G-2
D214	D-11	D624	G-5
D215	C-11	D625	H-2
D230	D-11	D626	G-1
D231	D-11	D627	H-2
D232	E-11	D2001	E-2
D233	E-11	D2002	F-1
D401	D-8	D2003	B-1
D501	H-8	D2004	A-2
D502	G-9	D2005	A2
D503	G-9	IC	
D504	H-8	IC402	B-9
D505	G-7	IC501	D-9
D506	F-8	IC502	F-10
D507	E-8	IC601	B-5
D508	D-9	IC602	C-7
D509	H-5	IC603	D-7
D510	E-10	IC604	C-8
D511	G-10	IC2001	E-1
D512	E-9	TRANSISTOR	
D513	F-10	O101	A-9
D514	F-11	Q410	B-7
D515	E-9	Q411	D-8
D516	G-11	Q501	H-7
D517	F-11	Q602	H-7
D518	F-11	Q603	D-9
D519	D-10	Q504	E-9
D520	F-12	Q505	G-12
D521	I-5	Q506	A-6
D522	E-9	Q607	A-6
D601	D-2	Q601	B-3
D602	E-2	Q602	A-3
D603	B-3	Q603	C-6
D604	B-3	Q604	A-5
D605	D-4	Q605	G-3
D606	C-3	Q606	H-3
D607	B-4	Q607	D-2
D608	B-3	Q608	D-2
D609	C-4	Q609	A-4
D610	B-4		
D611	C-6		



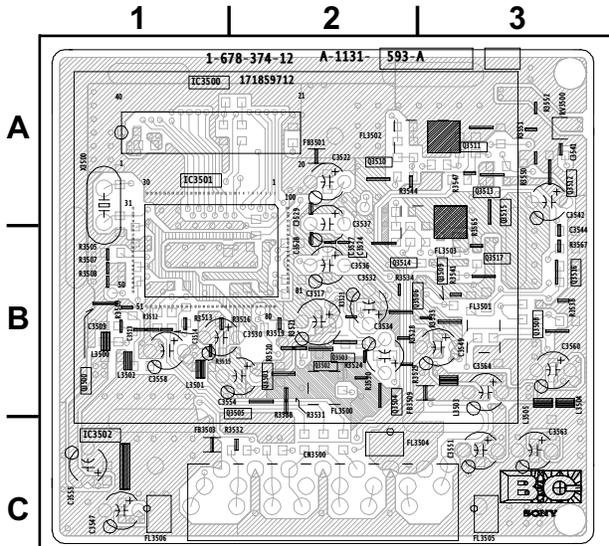
**BC BOARD IC VOLTAGE LIST**

IC3500		29	1.1	17	1.1	47	1.8	77	GND
PIN	VOLT	30	N/C	18	1.1	48	GND	78	GND
1	5.0	31	0.3	19	1.0	49	GND	79	0.0
2	0.8	32	1.1	20	0.1	50	1.5	80	GND
3	0.9	33	1.1	21	1.1	51	0.0	81	3.3
4	0.9	34	1.1	22	1.4	52	0.0	82	1.1
5	0.9	35	N/C	23	0.7	53	3.3	83	1.7
6	5.0	36	1.1	24	0.8	54	GND	84	1.4
7	0.8	37	1.1	25	0.9	55	GND	85	1.1
8	0.7	38	1.0	26	0.9	56	N/C	86	GND
9	1.4	39	0.1	27	0.9	57	3.3	87	GND
10	1.1	40	N/C	28	0.8	58	GND	88	0.9
11	N/C	IC3501		29	GND	59	4.8	89	0.9
12	N/C	PIN	VOLT	30	1.5	60	4.8	90	1.0
13	2.9	1	GND	31	1.6	61	N/C	91	1.6
14	0.5	2	1.5	32	3.3	62	N/C	92	3.3
15	N/C	3	1.5	33	N/C	63	N/C	93	3.3
16	1.5	4	1.5	34	N/C	64	3.3	94	3.3
17	1.5	5	1.5	35	N/C	65	0.7	95	2.0
18	1.5	6	1.5	36	N/C	66	1.5	96	N/C
19	1.5	7	1.5	37	N/C	67	N/C	97	GND
20	5.0	8	1.5	38	N/C	68	N/C	98	0.5
21	N/C	9	1.5	39	N/C	69	N/C	99	1.6
22	1.6	10	1.0	40	GND	70	N/C	100	3.3
23	1.5	11	2.9	41	0.0	71	N/C	IC3502	
24	1.5	12	2.4	42	0.0	72	N/C	PIN	VOLT
25	1.5	13	0.3	43	0.0	73	N/C	G	GND
26	1.5	14	1.1	44	0.0	74	N/C	I	5.0
27	2.4	15	1.1	45	3.3	75	N/C	O	3.3
28	1.1	16	1.1	46	3.3	76	3.3	All Voltages are in V	

**BC BOARD WAVEFORMS**



**COMPONENT SIDE (KV-27FV17/29FV17/29FV17C ONLY)**

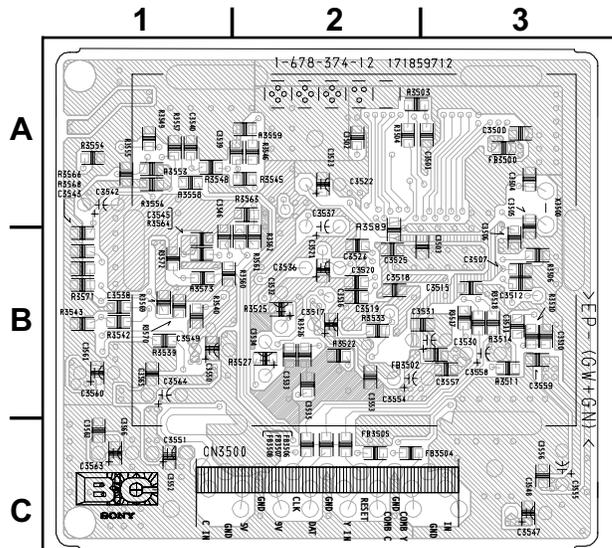


**BC BOARD LOCATOR LIST**

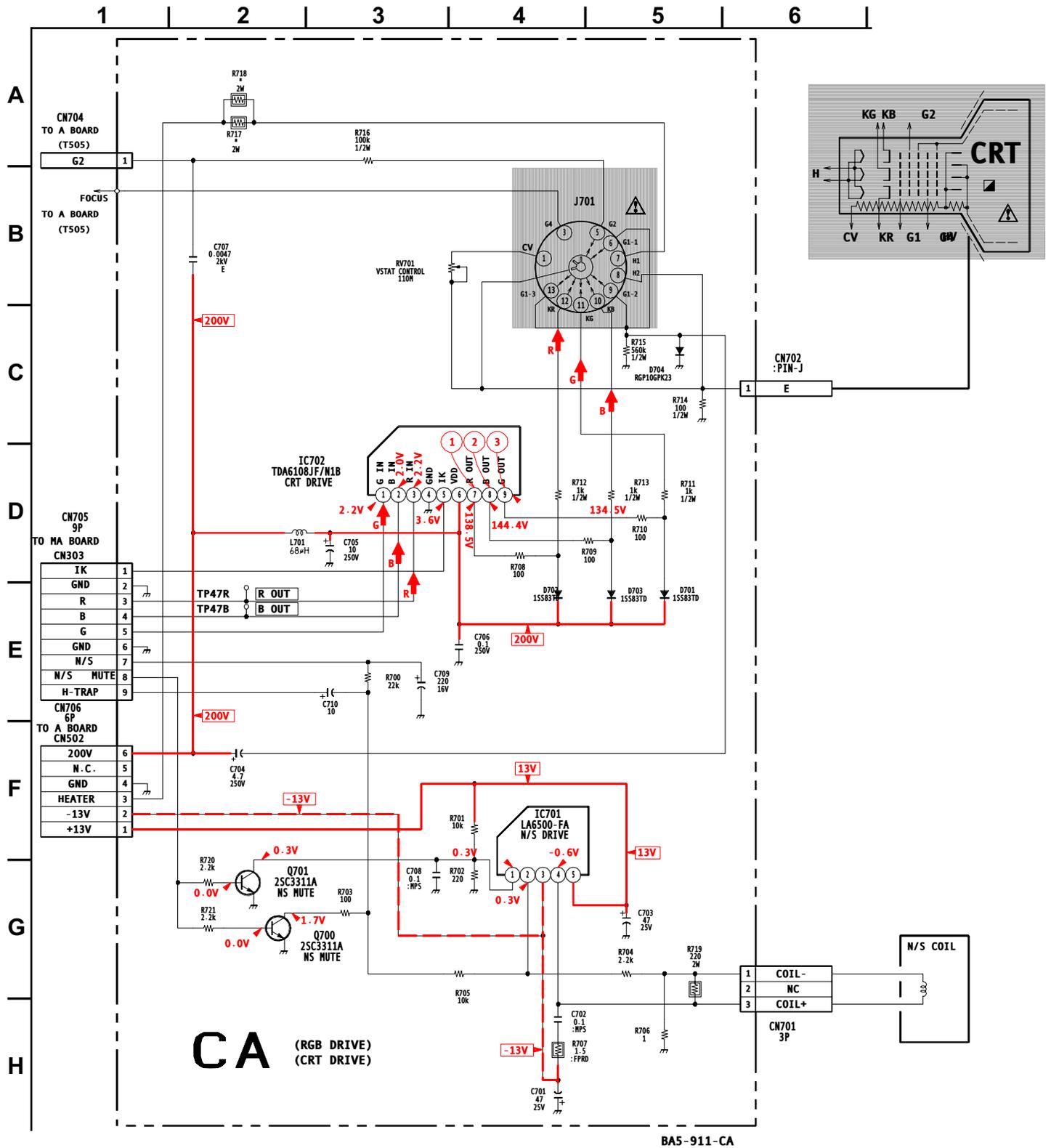
IC	Q3506	B-3	
IC3500	A-1	Q3510	A-2
IC3501	A-1	Q3511	A-3
IC3502	C-1	Q3512	A-3
<b>TRANSISTOR</b>		Q3513	A-3
Q3500	B-1	Q3514	B-2
Q3501	B-2	Q3515	A-3
Q3502	B-2	Q3516	B-3
Q3503	B-2	Q3517	B-3
Q3504	B-2		
Q3505	C-2		



**CONDUCTOR SIDE (KV-27FV17/29FV17/29FV17C ONLY)**



### CA BOARD SCHEMATIC DIAGRAM

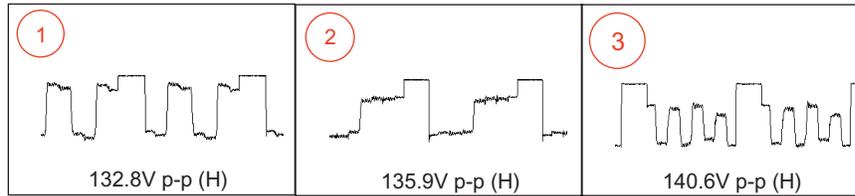


**(\*) CA BOARD VARIANT MODEL LIST**

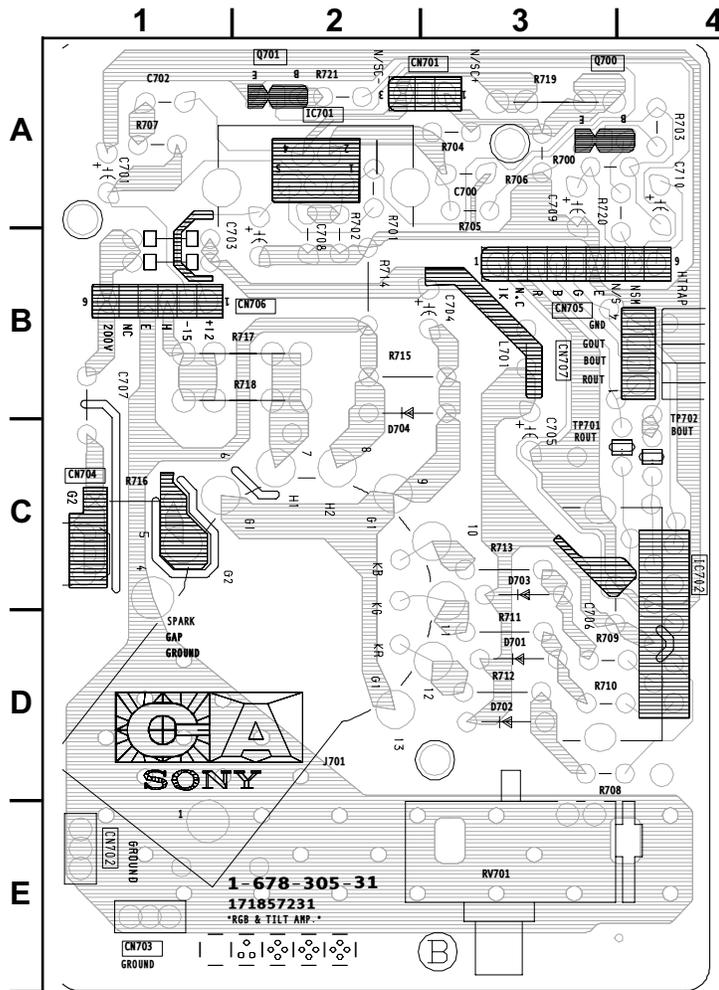
REF NO.	LOC.	KV-27FS13 KV-27FS17 KV-27FV17 KV-29FV17 KV-29FV17C	KV-32FS13 KV-32FS17 KV-34FS13C KV-34FS17
R717	B-2	2.2 2W	#
R718	B-2	#	2.2 2W

NOTE: #= Not Mounted

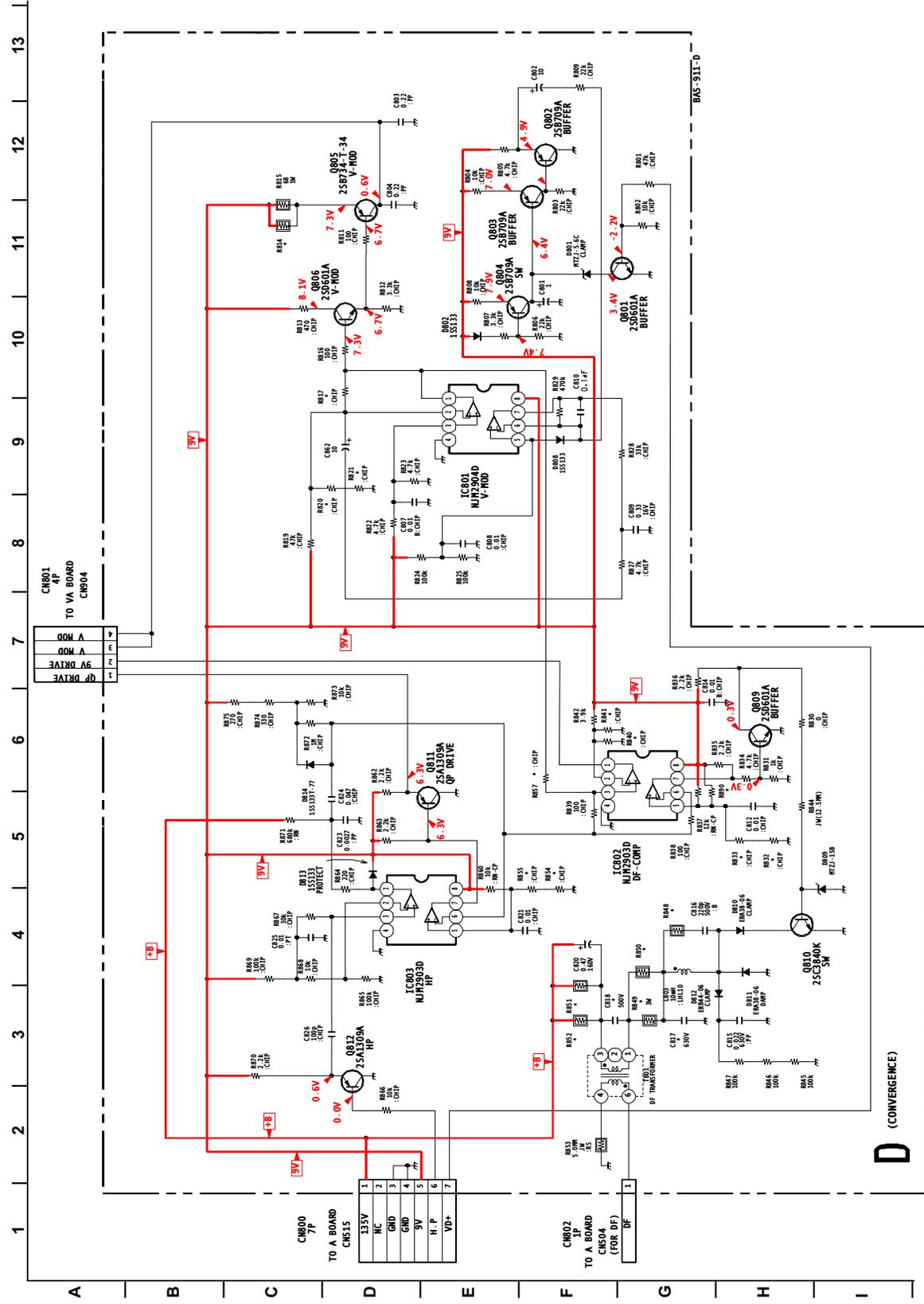
**CA BOARD WAVEFORMS**



**CA** [RGB DRIVE, CRT DRIVE]



D BOARD SCHEMATIC DIAGRAM



D (CONVERGENCE)

**(\*) D BOARD VARIANT MODEL LIST**

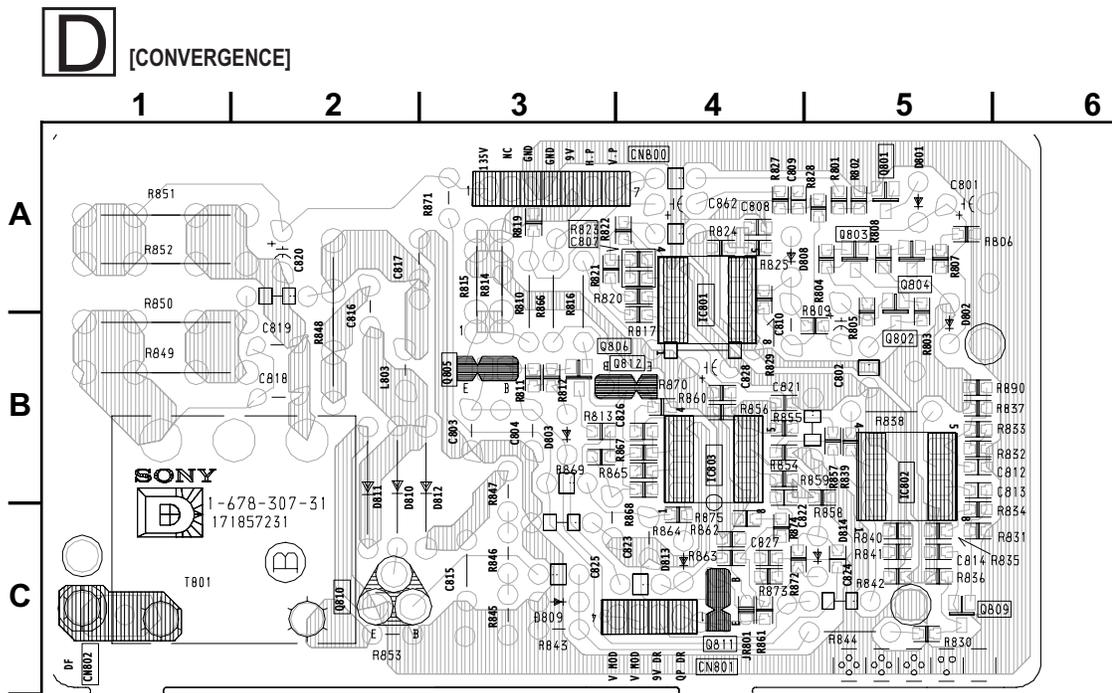
REF NO.	LOC.	KV-27FS13 KV-27FS17 KV-27FV17 KV-29FV17 KV-29FV17C	KV-32FS13 KV-32FS17 KV-34FS13C KV-34FS17
C817	G-3	0.0039μF 630V	0.0027μF 630V
C818	F-3	0.0015μF 500V	680pF 500V
R814	C-11	#	68 1W
R817	D-10	56K	47K
R820	D-8	22K	33K
R821	D-9	15K	3.3K
R832	H-5	5.6K	3.3K
R833	H-5	33K	39K
R840	G-6	68K	#
R841	F-6	6.8K	10K
R848	C-11	15K 1W	2.2K 2W
R849	G-3	3.3K 3W	8.2K 3W
R850	G-4	#	8.2K 3W
R851	F-3	2.2K 2W	6.8K 3W
R852	F-3	#	6.8K 3W
R854	F-5	6.8K	5.6K
R855	F-5	47K	56K
R857	F-6	#	33K
R890	H-5	#	100K

NOTE: #- Not Mounted

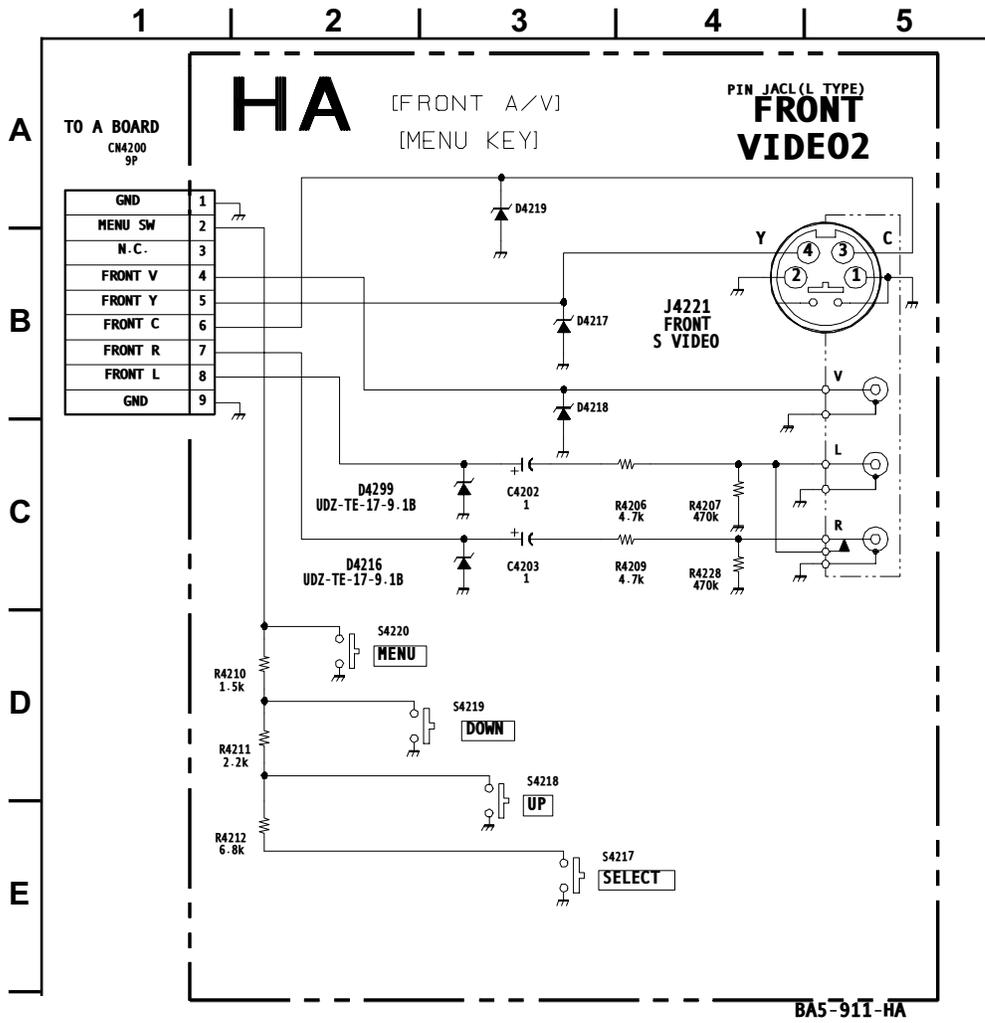
**D BOARD IC VOLTAGE LIST**

IC801		IC802		IC803	
PIN	VOLT	PIN	VOLT	PIN	VOLT
1	7.3	1	6.8	1	2.3
2	4.4	2	5.7	2	4.3
3	4.5	3	0.0	3	4.7
4	GND	4	GND	4	GND
5	4.5	5	6.8	5	7.6
6	4.5	6	6.7	6	6.7
7	4.5	7	3.2	7	6.0
8	9.0	8	9.0	8	9.0

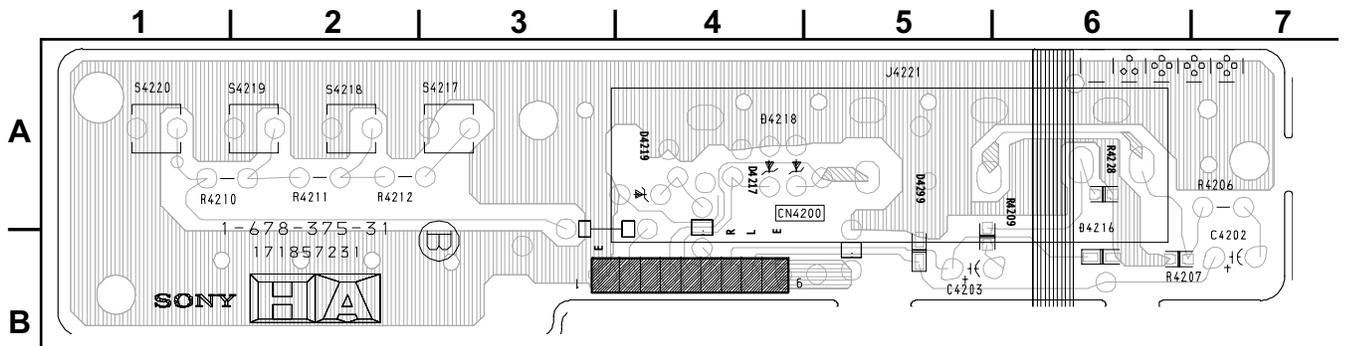
All Voltages are in V



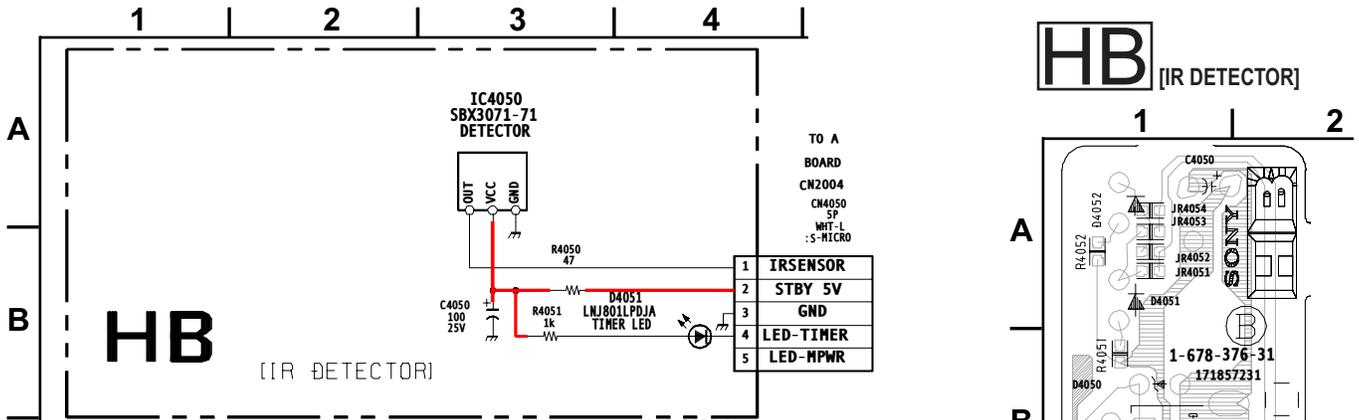
HA BOARD SCHEMATIC DIAGRAM (KV-27FV17/29FV17/29FV17C ONLY)



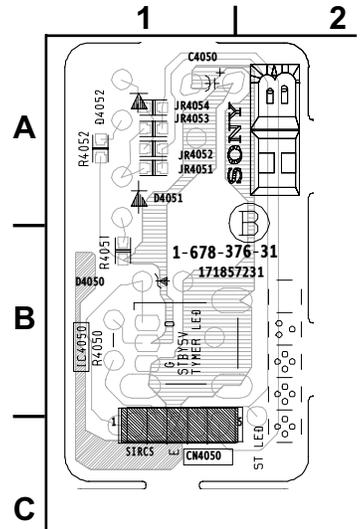
**HA** [FRONT/AV, MENU KEY]



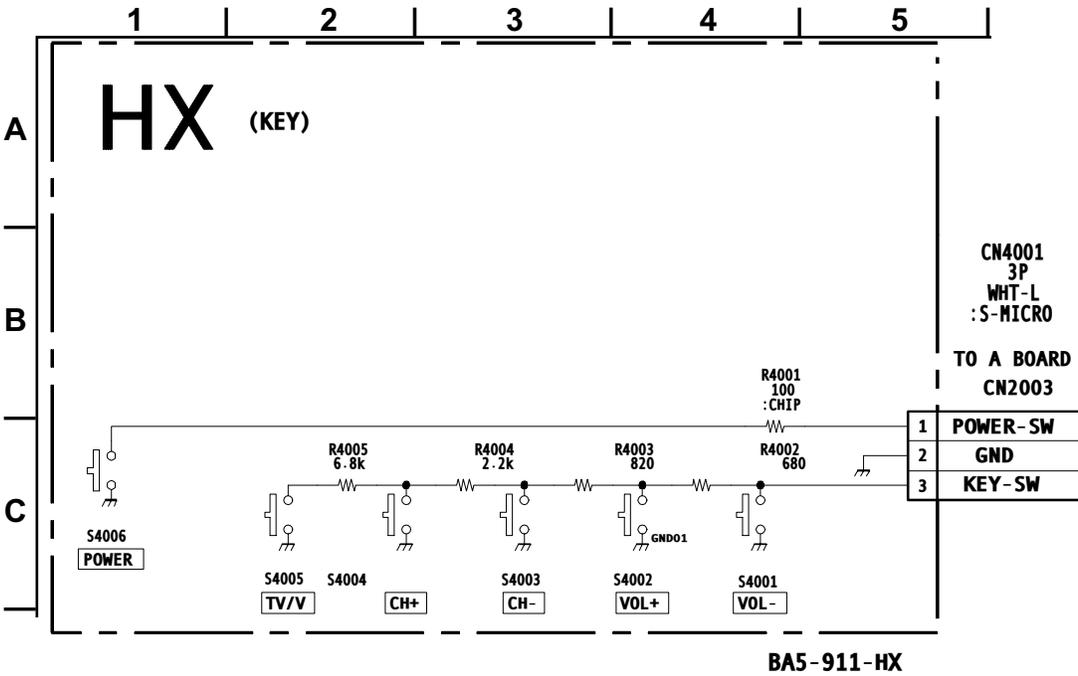
**HB BOARD SCHEMATIC DIAGRAM (KV-27FV17/9FV17/29FV17C ONLY)**



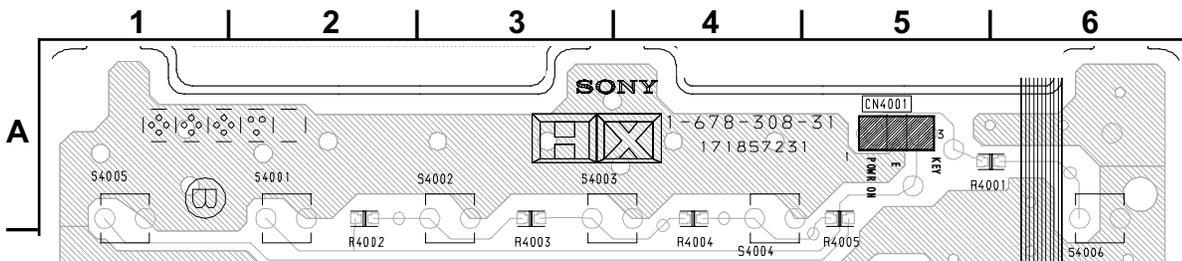
**HB** [(IR DETECTOR)]



**HX BOARD SCHEMATIC DIAGRAM**

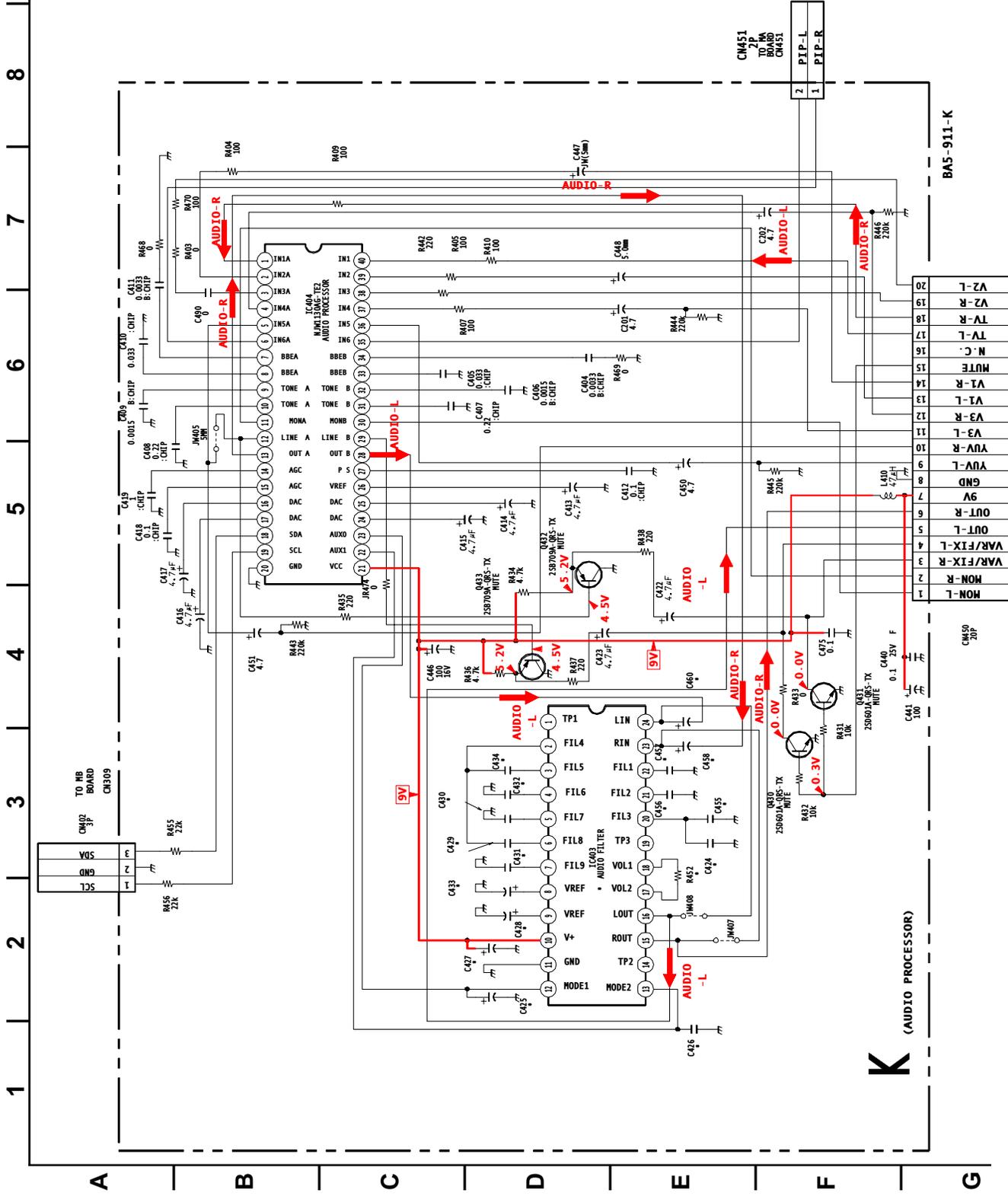


**HX** [KEY]



# K BOARD SCHEMATIC DIAGRAM

KV-27FS13/27FS17/27FV17/29FV17/29FV17C/32FS13/32FS17/29FV17C/34FS13C/34FS17



**K BOARD IC VOLTAGE LIST**

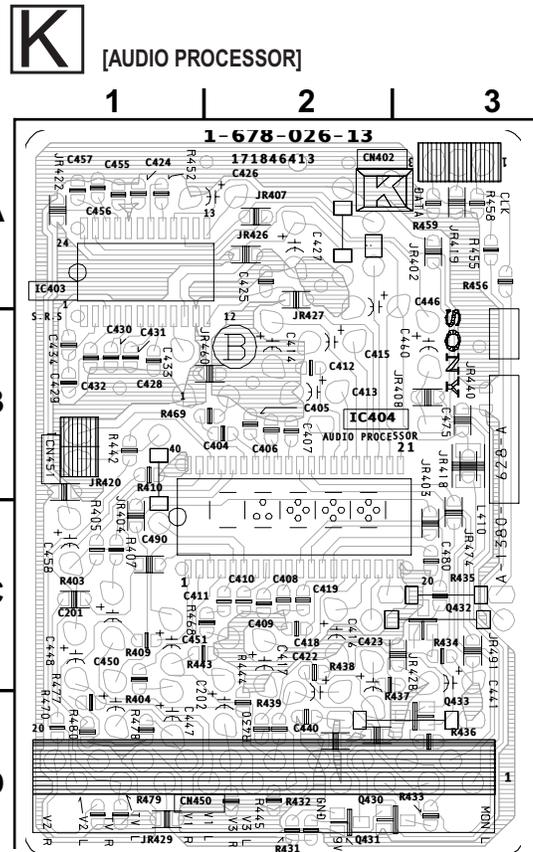
IC403		16	4.5	7	4.7	24	1.3
PIN	VOLT	17	4.5	8	4.5	25	1.3
1	N/C	18	4.5	9	4.5	26	4.4
2	4.5	19	N/C	10	4.5	27	3.9
3	4.5	20	4.5	11	4.5	28	4.5
4	4.5	21	4.5	12	4.5	29	4.5
5	4.5	22	4.5	13	4.5	30	4.5
6	4.5	23	4.5	14	1.0	31	4.5
7	4.5	24	4.5	15	4.5	32	4.5
8	4.5	IC404		16	0.9	33	4.5
9	4.5	PIN	VOLT	17	0.9	34	4.5
10	9.0	1	4.5	18	4.8	35	4.5
11	GND	2	4.5	19	4.9	36	4.5
12	0.0	3	4.5	20	GND	37	4.5
13	0.0	4	4.5	21	8.9	38	4.5
14	N/C	5	4.5	22	0.0	39	4.5
15	4.5	6	4.5	23	0.0	40	4.5

All voltages are in V

**(\*) K BOARD VARIANT MODEL LIST**

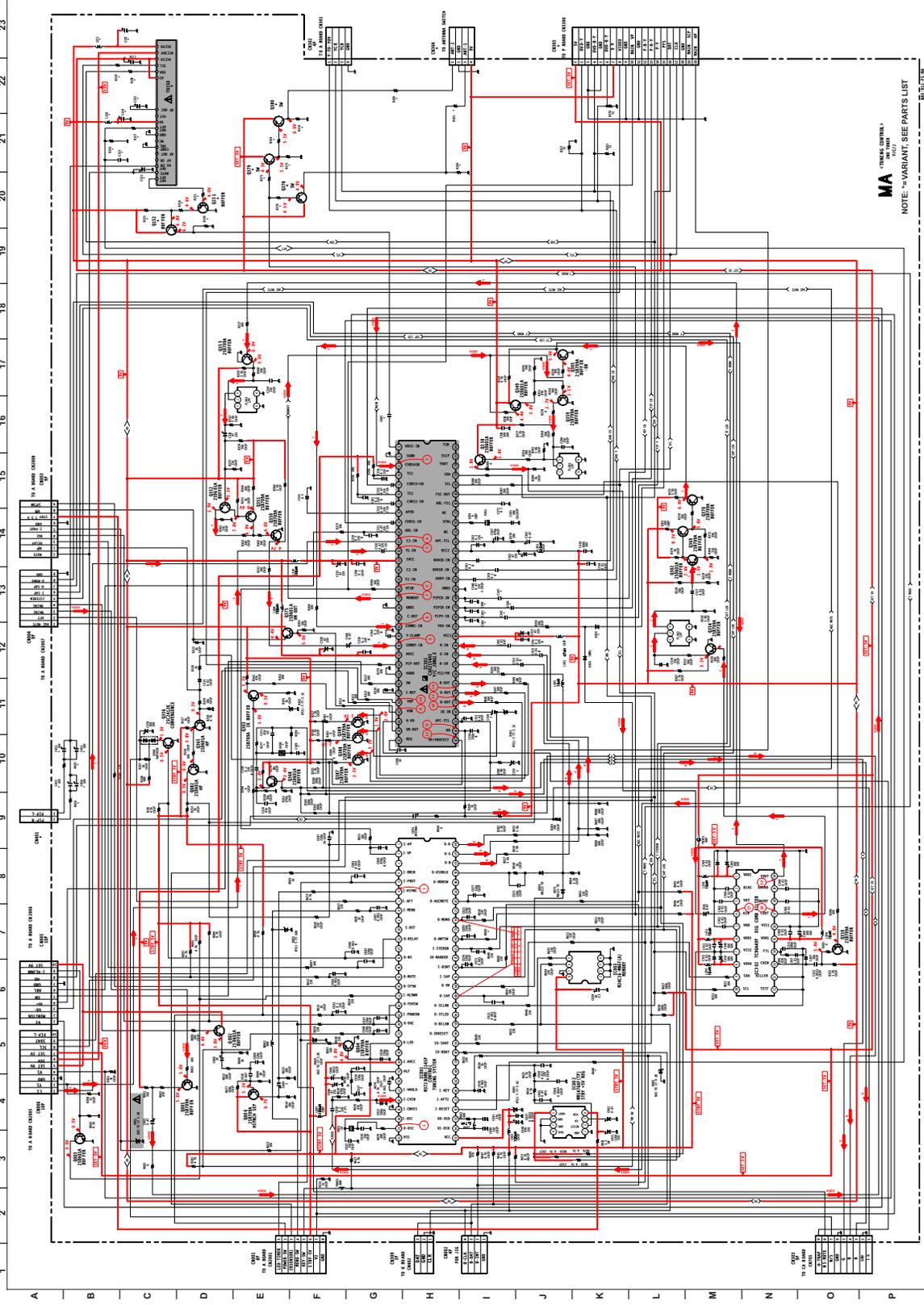
REF NO.	LOC.	KV-27FS13 KV-27FS17 KV-32FS13 KV-32FS17 KV-34FS13C KV-34FS17	KV-27FV17 KV-29FV17 KV-29FV17C
C424	E-3	#	0.47μF 25V
C425	D-2	#	1μF 16V
C426	E-2	#	1μF
C427	D-1	#	100μF
C428	D-1	#	100μF
C429	C-3	#	0.0047μF
C430	D-3	#	0.22μF 25V
C431	D-3	#	0.1μF 25V
C432	D-3	#	0.01μF
C433	D-3	#	1μF 16V
C434	D-3	#	0.1μF 25V
C455	E-3	#	0.47μF25V
C456	E-3	#	0.01μF
C457	E-4	#	0.033μF
C458	E-3	#	4.7μF
C460	E-4	#	4.7μF
IC403	D-2	#	NJM2198-TE2
R452	E-2	#	10K

NOTE: # = Not Mounted



MA BOARD SCHEMATIC DIAGRAM (KV-2FS13/2FS17/3/2FS13/2FS17/3/4FS13/3/4FS17 ONLY)

KV-2FS13/2FS17/3/2FS13/2FS17/3/4FS13/3/4FS17



**MA** (FORMER CONTROL)  
 7407  
 NOTE:™ VARIANTS, SEE PARTS LIST  
 85.11.17.00

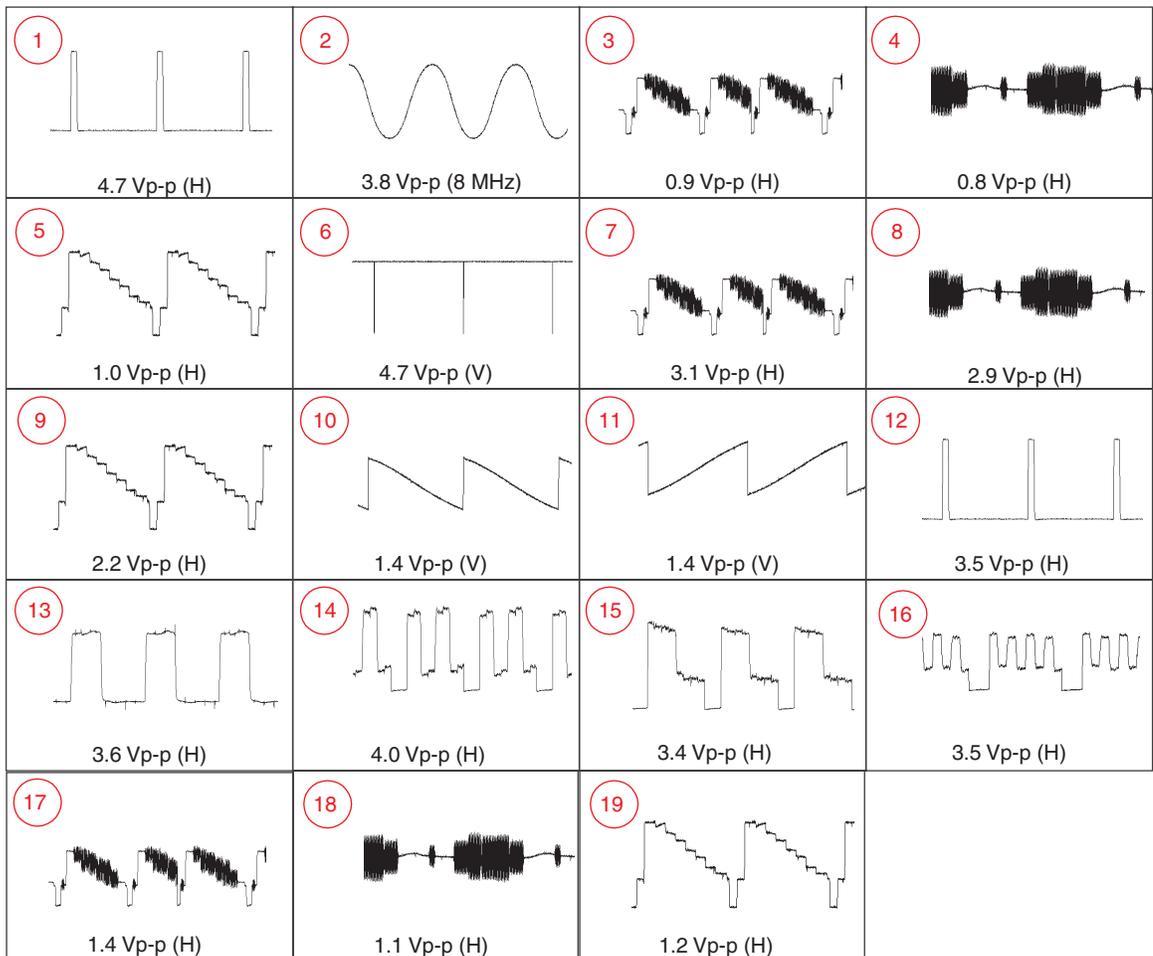


## MA BOARD IC VOLTAGE LIST

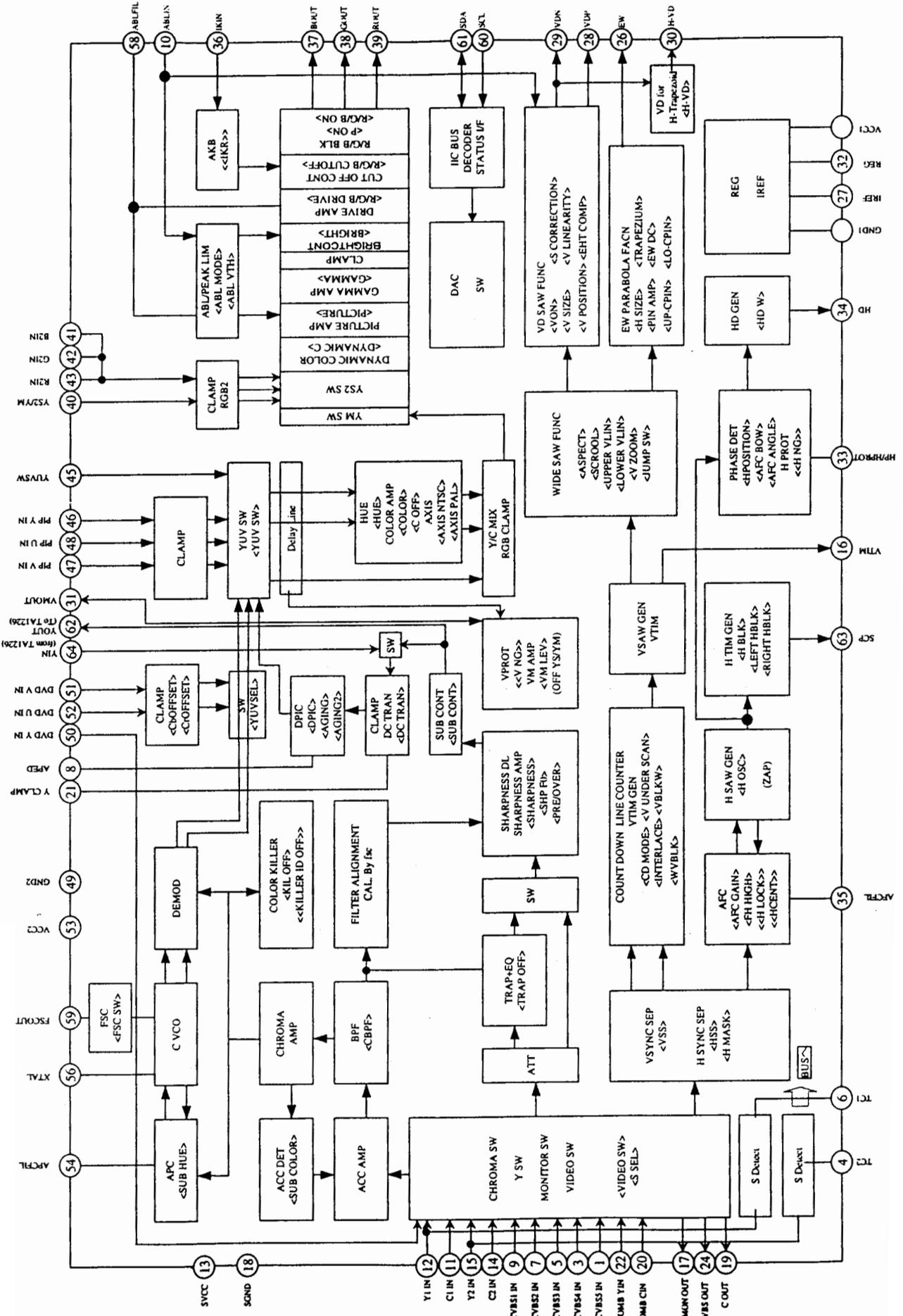
IC001		23	N/C	47	4.8	5	5.0	9	N/C	33	3.6	57	N/C	15	5.0	17	GND	
PIN	VOLT	24	5.0	48	0.1	6	GND	10	N/C	34	2.3	58	7.2	16	0.0	18	N/C	
1	0.5	25	2.1	49	0.1	7	GND	11	0.0	35	2.3	59	4.8	17	2.5	19	N/C	
2	4.8	26	N/C	50	5.0	8	N/C	12	N/C	36	3.9	60	4.8	18	3.2	20	2.0	
3	N/C	27	0.3	51	5.0	IC003			13	8.9	37	1.9	61	4.8	19	1.9	21	0.3
4	5.0	28	2.2	52	N/C	PIN	VOLT	14	N/C	38	1.9	62	N/C	20	2.4	22	4.0	
5	0.0	29	GND	53	1.0	1	GND	15	N/C	39	2.0	63	N/C	TU150				
6	0.0	30	2.2	54	0.1	2	GND	16	4.8	40	0.0	64	N/C	PIN	VOLT			
7	2.4	31	2.3	55	N/C	3	GND	17	4.4	41	4.6	IC302		1	9.0			
8	4.4	32	GND	56	1.0	4	GND	18	GND	42	4.6	PIN	VOLT	2	3.0			
9	N/C	33	5.0	57	N/C	5	4.8	19	N/C	43	4.6	1	5.0	3	5.0			
10	N/C	34	2.5	58	0.1	6	4.8	20	6.4	44	8.9	2	1.4	4	4.8			
11	0.1	35	2.5	59	N/C	7	GND	21	3.9	45	0.2	3	3.2	5	4.8			
12	N/C	36	5.0	60	N/C	8	5.0	22	5.6	46	4.3	4	2.4	6	5.1			
13	0.5	37	3.1	61	0.1	IC301			23	8.9	47	5.2	5	1.9	7	N/C		
14	N/C	38	5.0	62	0.1	PIN	VOLT	24	5.7	48	5.2	6	5.0	8	N/C			
15	0.1	39	N/C	63	0.1	1	5.9	25	GND	49	GND	7	0.0	9	N/C			
16	0.1	40	N/C	64	0.1	2	5.2	26	3.5	50	4.8	8	5.0	10	N/C			
17	0.0	41	N/C	IC002			3	N/C	27	2.4	51	5.2	9	4.9	11	7.5		
18	0.1	42	4.8	PIN	VOLT	4	5.0	28	3.5	52	5.2	10	4.9	12	N/C			
19	4.3	43	4.8	1	GND	5	4.8	29	3.5	53	9.0	11	0.0	13	9.0			
20	0.1	44	N/C	2	5.0	6	5.0	30	5.9	54	5.3	12	0.0	14	5.3			
21	N/C	45	4.8	3	4.9	7	4.8	31	5.5	55	N/C	13	2.5	15	GND			
22	5.0	46	N/C	4	7.2	8	3.4	32	7.6	56	1.7	14	2.1	16	N/C			

All Voltages are in V

## MA BOARD WAVEFORMS



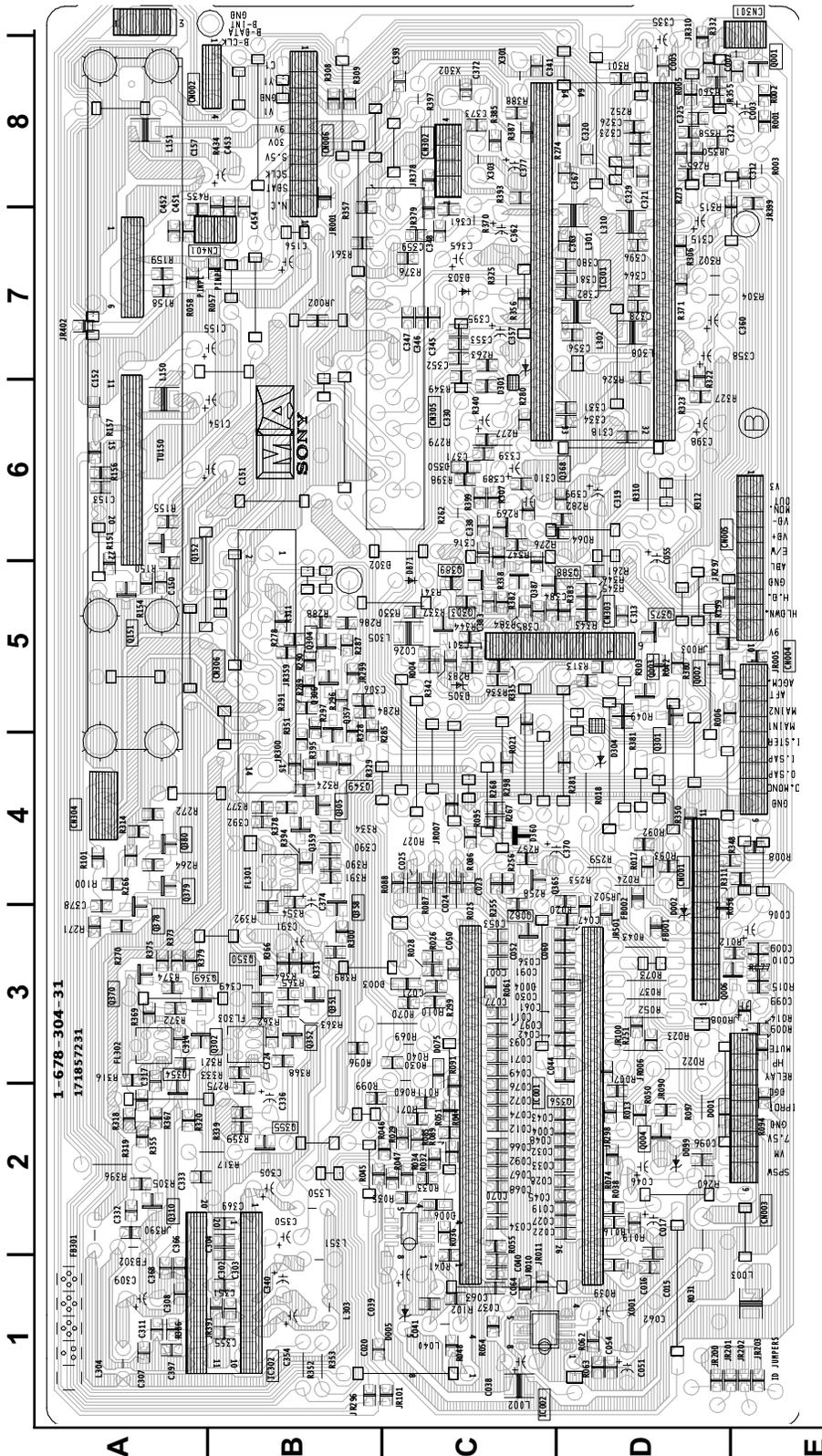
# MA BOARD IC BLOCK DIAGRAM IC301 CXA2154AS





[TUNING CONTROL, Y/C/J, 2ND TUNER]

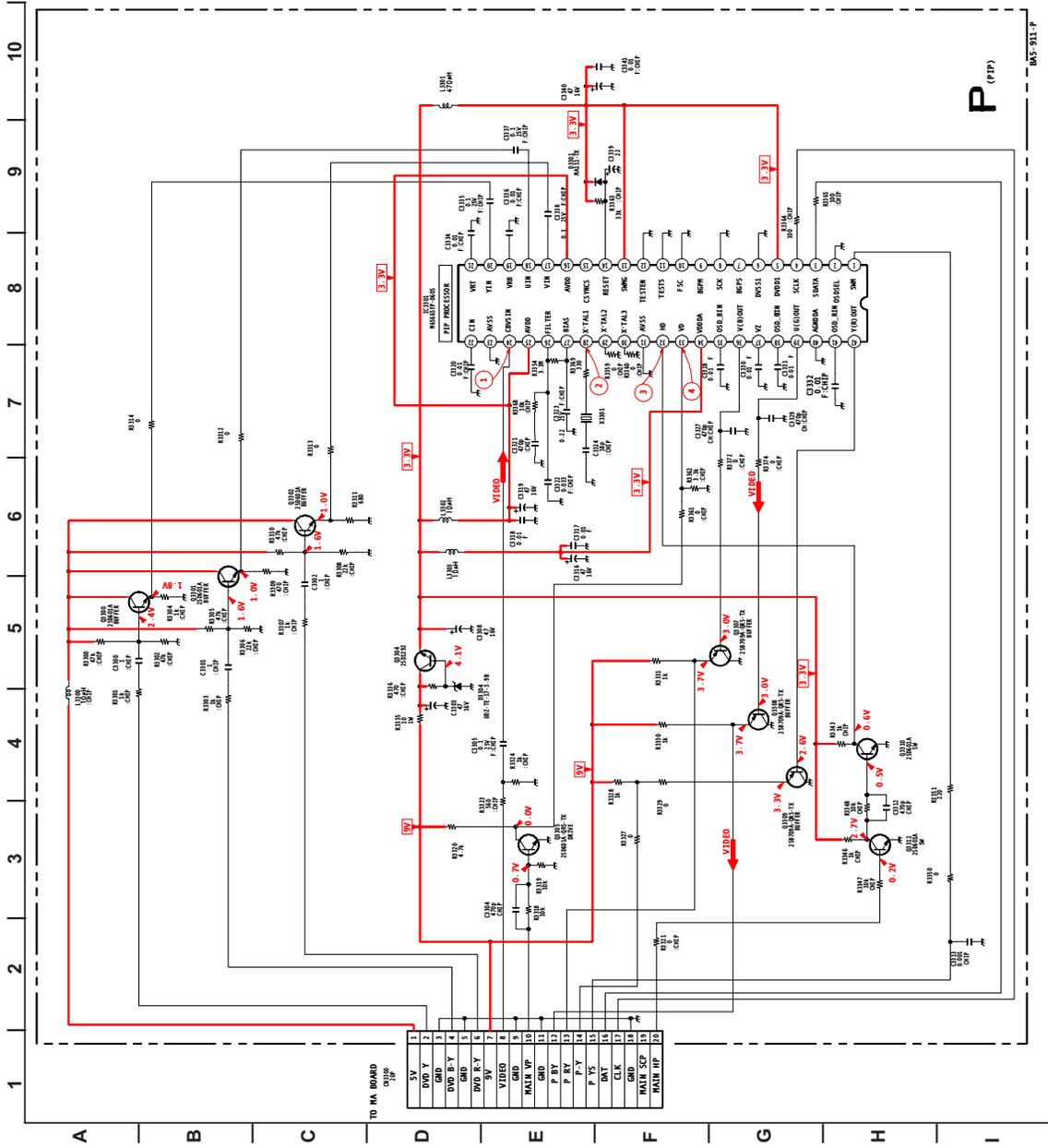
KV-27FS13/27FS17/27FV17/29FV17C/32FS13/32FS17/34FS13C/34FS17



MA BOARD LOCATOR LIST

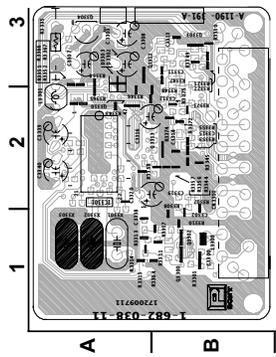
DIODE	IC	Q151	A-5	Q358	B-4	CRYSTAL			
D001	D-2	IC001	C-2	Q152	A-6	Q359	B-4	X001	D-1
D002	D-4	IC002	C-1	Q302	A-3	Q365	C-4	X301	C-8
D003	C-3	IC003	C-2	Q303	C-5	Q368	C-6		
D004	D-3	IC301	D-7	Q305	B-4	Q369	B-3		
D005	C-1	IC302	B-1	Q310	B-3	Q370	A-3		
D006	C-2	TRANSISTOR	Q349	C-4	Q375	B-5			
D075	C-3	Q001	D-8	Q350	B-3	Q378	A-3		
D301	C-7	Q002	D-5	Q351	B-3	Q379	A-4		
D302	C-5	Q003	D-5	Q352	B-3	Q380	A-4		
D303	C-7	Q004	D-2	Q354	A-3	Q387	C-5		
D305	B-5	Q006	D-3	Q355	B-2	Q388	B-5		
D360	B-4	Q082	B-3	Q356	D-3	Q389	C-5		

P BOARD SCHEMATIC DIAGRAM (KV-27FS17/27FV17/29FV17/29FV17C/32FS17/34FS17 ONLY)



**P** [PIP]

COMPONENT SIDE

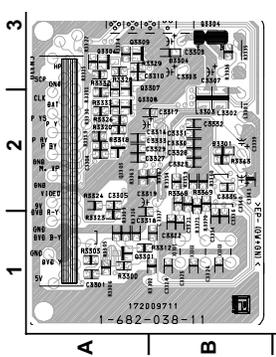


P BOARD IC VOLTAGE LIST

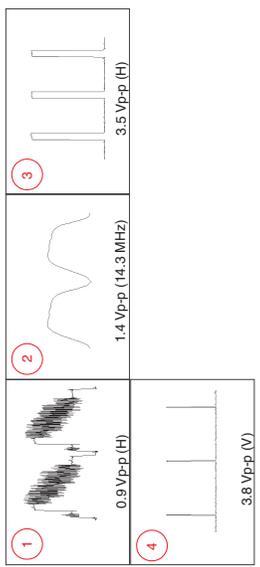
IC3301	PIN	VOLT	
	24	3.4	
	25	3.4	
	1	0.2	GND
	2	GND	27 1.7
	3	4.7	28 2.0
	4	4.8	29 0.0
	5	3.2	30 0.0
	6	GND	31 0.0
	7	0.0	32 0.5
	8	GND	33 0.0
	9	N/C	34 GND
	10	N/C	35 3.1
	11	GND	36 1.1
	12	GND	37 3.0
	13	3.2	38 1.2
	14	3.2	39 2.6
	15	3.2	40 3.5
	16	GND	41 1.0
	17	GND	42 GND
	18	0.3	
	19	GND	
	20	0.5	
	21	1.6	
	22	1.0	
	23	0.6	

All voltages are in V

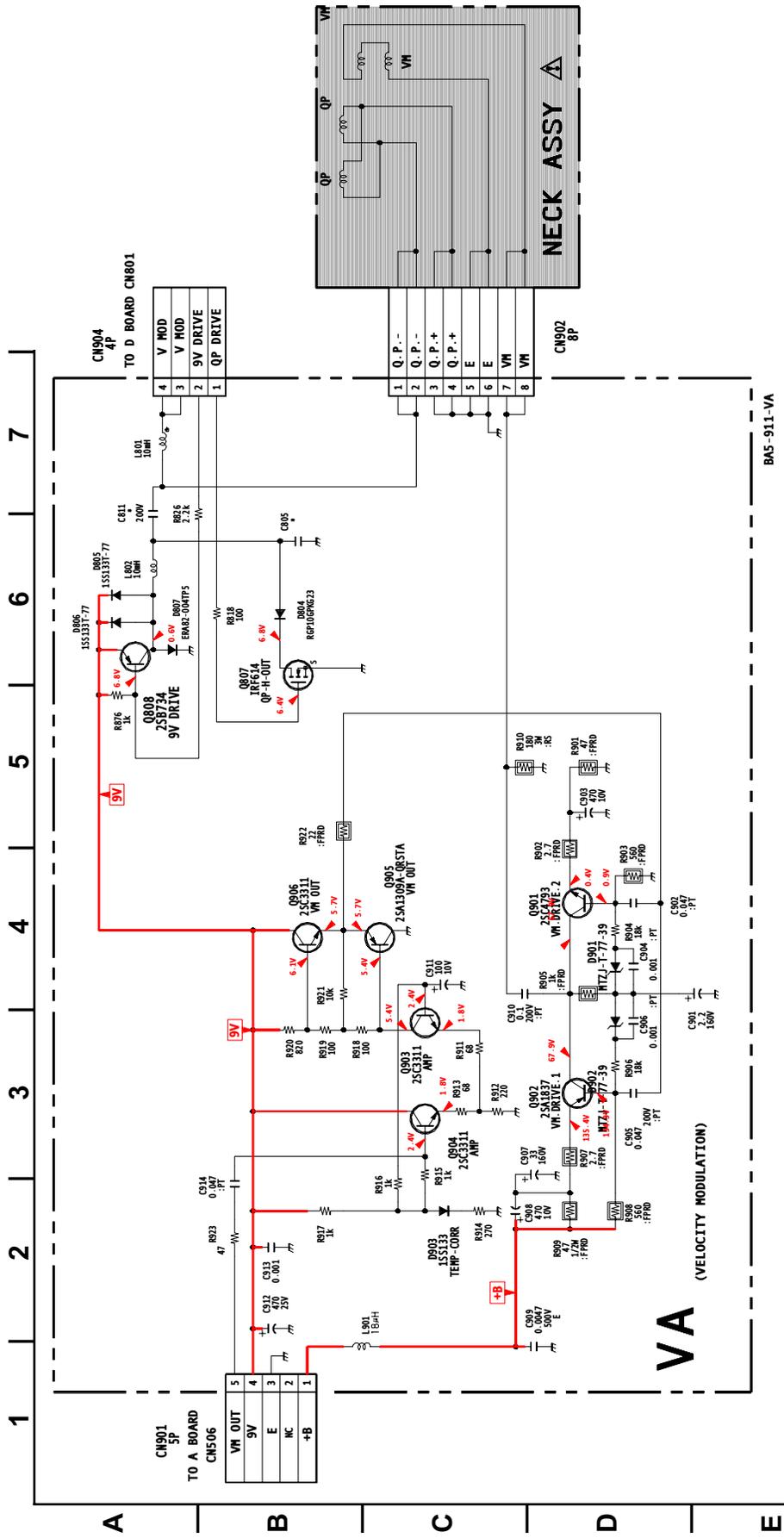
CONDUCTOR SIDE



P BOARD WAVEFORMS



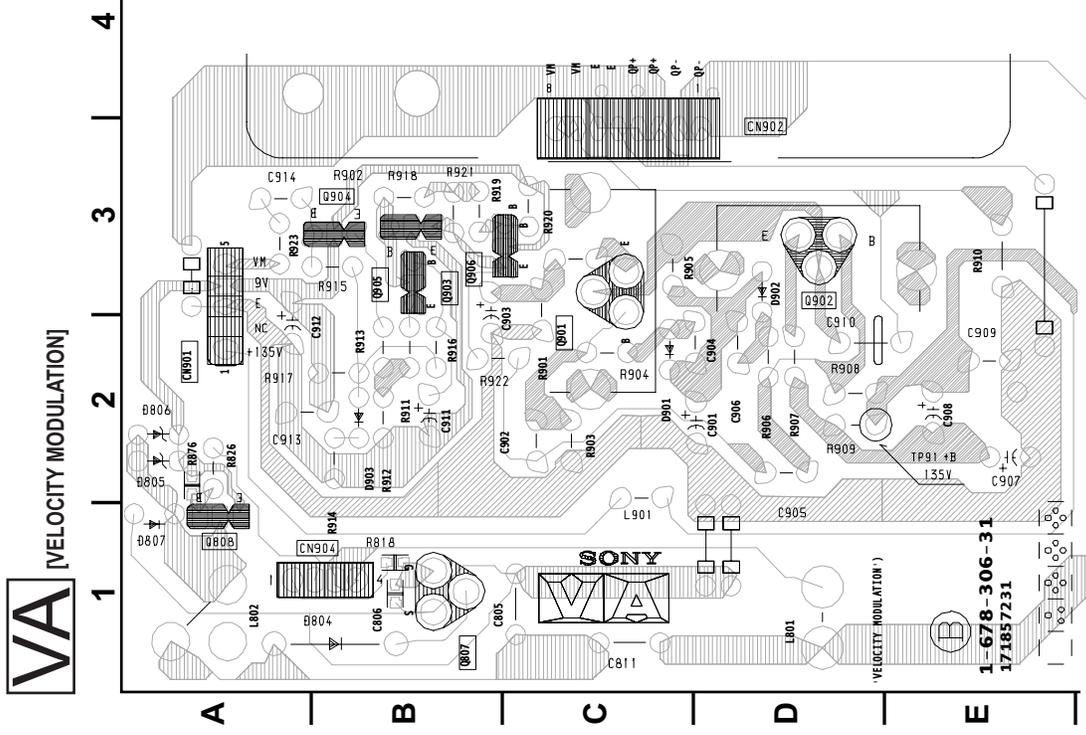
VA BOARD SCHEMATIC DIAGRAM



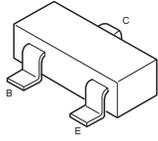
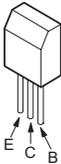
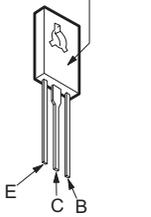
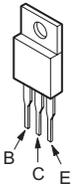
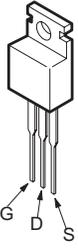
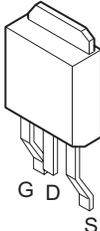
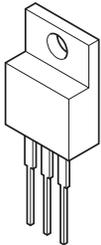
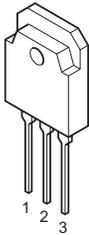
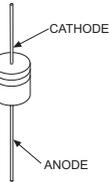
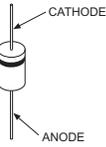
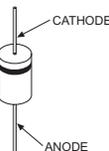
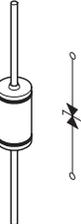
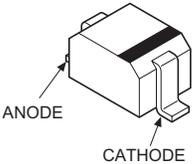
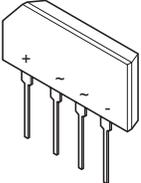
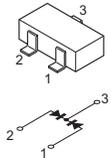
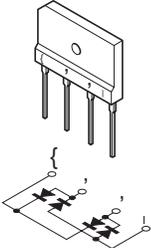
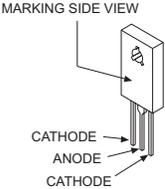
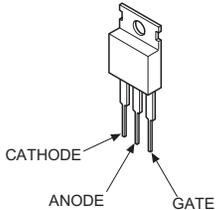
(\*) VA BOARD VARIANT MODEL LIST

	KV-27FS13	KV-27FS13
	KV-27FS17	KV-27FS17
	KV-27FV17	KV-27FV17
	KV-29FV17	KV-29FV17
	KV-29FV17C	KV-29FV17C
REF NO.	LOC.	
C805	B-6	0.033µF_200V
C811	A-6	0.047µF_200V
		0.01µF_630V
		0.082µF_200V

NOTE: #= Not Mounted



5-4. SEMICONDUCTORS

<p>2SB709A-QRS-TX 2SD601A-QRS-TX</p> 	<p>2SB734-T-34 2SC3209LK-TP</p> 	<p>2SA1309A-QRSTA 2SC3311A-QRSTA 2SD2144S-TP-UVV</p> 	<p>2SC3840K</p> <p>LETTER SIDE</p> 	<p>2SA1837</p> 
<p>2SA10910-TPE2</p> 	<p>IRF614</p> 	<p>2SK2663</p> 	<p>2SC4793</p> 	<p>2SD2578-YB</p> 
<p>ERA38-06TP1 ERA82-004TP5 1SS133T-77 D1NS0R-TA MTZJ-T-77-12C MTZJ-T-77-15B MTZJ-T-77-33B MTZJ-T-77-39</p> 	<p>RU-1P ERC06-15S EGP20DPKG23 MTZJ-T-77-5.1C MTZJ-T-77-5.6C MTZJ-T-77-7.5A MTZJ-T-77-10B MTZJ-T-77-30D RGP10-GPKG3 RGP02-17PKG23 RGP15GPKG23</p> 	<p>ERB44-06TP1 1SS83TD GP08DPKG23 RGP10GPKG23 RU4AM-T3</p> 	<p>RD9.1EW-T1</p> 	<p>MA111-TX UDZ-TE-17.5.1B UDZ-TE-17.91B</p> 
<p>D2SB60A-F04</p> 	<p>DAP202K-T-146</p> 	<p>D4SB60L-F</p> 		
<p>D5LC20U</p> <p>MARKING SIDE VIEW</p> 	<p>TF541M</p> 			

## SECTION 6: EXPLODED VIEWS

Components not identified by a part number or description are not stocked because they are seldom required for routine service.

The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

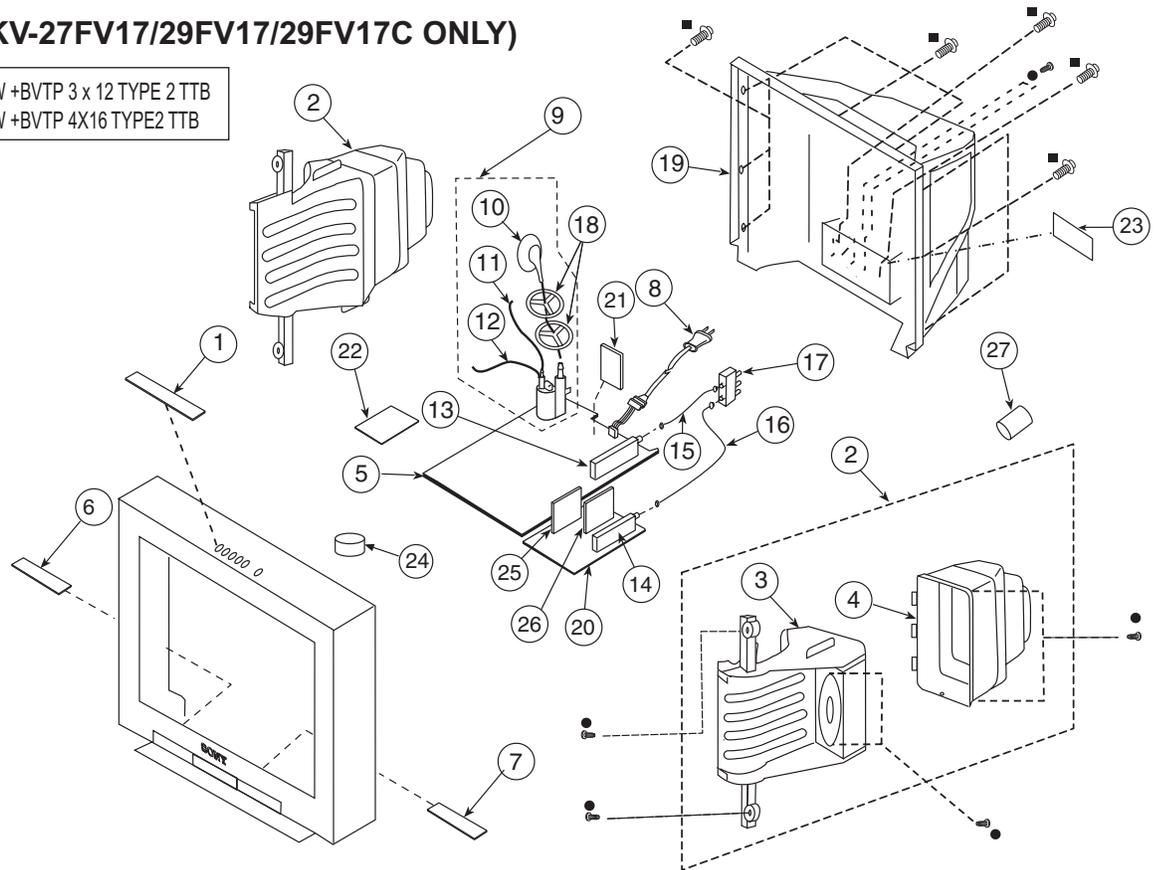
\* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

## 6-1. CHASSIS (KV-27FV17/29FV17/29FV17C ONLY)

- 7-685-648-91 SCREW +BVTP 3 x 12 TYPE 2 TTB
- 7-685-663-91 SCREW +BVTP 4X16 TYPE2 TTB



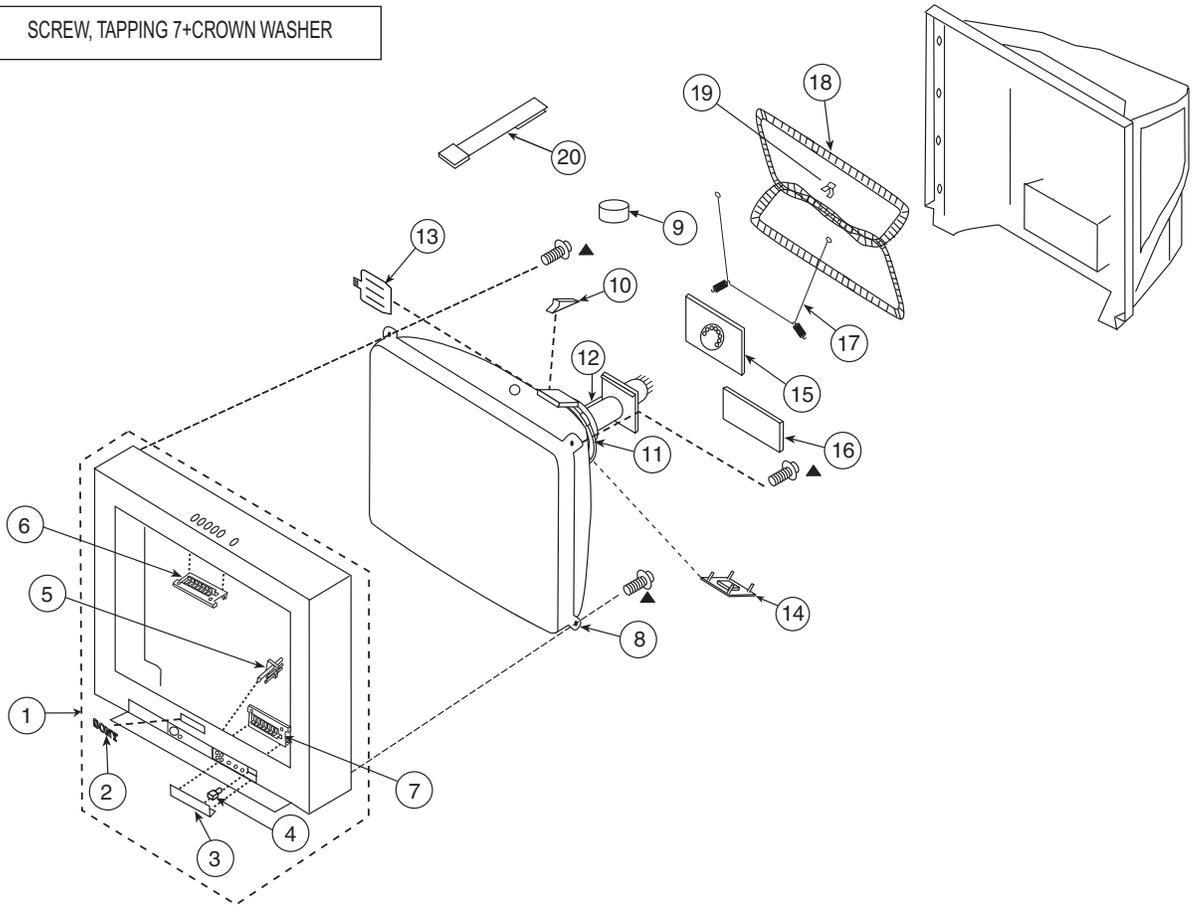
REF. NO.	PART NO.	DESCRIPTION	[Assembly Includes]	REF. NO.	PART NO.	DESCRIPTION
* 1	A-1372-817-A	HX MOUNTED PC BOARD		⚠ 12	1-900-803-22	G2 LEAD
* 2	1-544-780-11	SPEAKER, BOX TYPE (5.10CM)	[3-4]	⚠ 13	8-598-542-20	TUNER, FSS BTF-WA412
3	4-068-988-01	BAFFLE, SPEAKER		⚠ 14	8-598-501-30	TUNER, FSS BTF-FA402
* 4	4-068-987-01	COVER, SPEAKER		* 15	1-557-056-31	CABLE, P-P
* 5	A-1299-243-A	A COMPLETE PC BOARD (KV-27FV17 ONLY)		* 16	1-783-800-11	CABLE, PIN
5	A-1299-498-A	A COMPLETE PC BOARD (KV-29FV17 ONLY)		17	8-598-414-20	CHANGER, ANTENNA AS-2F
5	A-1299-244-A	A COMPLETE PC BOARD (KV-29FV17C ONLY)		18	3-704-372-71	HOLDER, HV CABLE
		The high-voltage leads associated with the FBT on this board are not included and must be ordered separately (See 10-12).		19	4-076-875-01	COVER, REAR
* 6	A-1372-825-A	HA MOUNTED PC BOARD				The labels associated with the rear cover are not included and must be ordered separately (See 23).
* 7	A-1372-826-A	HB (VAR) MOUNTED PC BOARD		* 20	A-1304-202-A	MA (VAR) MOUNTED PC BOARD
⚠ 8	1-769-796-31	CORD, POWER (WITH CONNECTOR) (KV-29FV17C ONLY)		* 21	A-1380-633-A	K (VAR) MOUNTED PC BOARD
⚠ 8	1-792-874-11	CORD, AC POWER(WITH CONNECTOR) (KV-27FV17/29FV17 ONLY)		* 22	A-1343-875-A	D (VAR) MOUNTED PC BOARD
⚠ 9	1-453-310-11	FBT ASSY NX-4521//X4J4	[10-12]	23	4-075-666-01	LABEL, 2-TUNER ANTENNA
⚠ 10	1-251-374-13	HV CAP ASSY		24	1-452-094-00	CIRCULAR DISC MAGNET B
⚠ 11	1-900-800-82	FOCUS LEAD		25	A-1190-391A	P MOUNTED PC BOARD
				* 26	A-1131-593-A	BC MOUNTED PC BOARD
				27	1-500-586-11	FILTER, CLAMP (FERRITE CORE) (KV-27FV17/29FV17 ONLY)

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

## 6-2. PICTURE TUBE REMOVAL (KV-27FV17/29FV17/29FV17C ONLY)

▲ 4-046-765-12 SCREW, TAPPING 7+CROWN WASHER



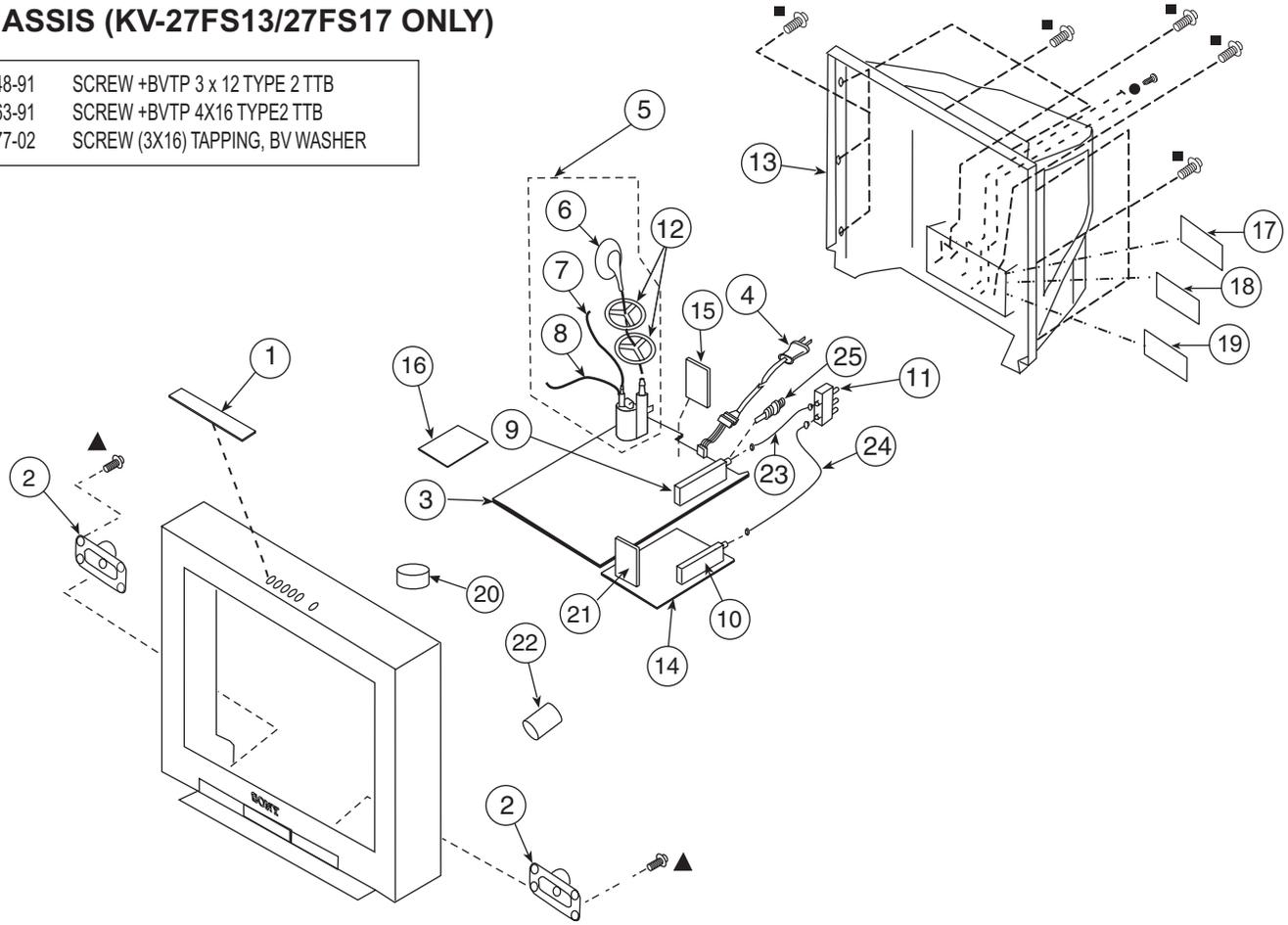
REF. NO.	PART NO.	DESCRIPTION	[Assembly Includes]	REF. NO.	PART NO.	DESCRIPTION
1	X-4038-944-1	BEZNET ASSY (KV-27FV17 ONLY)	[2-4]	*	15	A-1332-063-A CA (VAR) MOUNTED PC BOARD
1	X-4037-842-2	BEZNET ASSY (KV-29FV17/29FV17C ONLY)	[2-4]	*	16	A-1342-550-A VA (VAR) MOUNTED PC BOARD
2	3-704-179-31	EMBLEM (NO.9), SONY		17	4-036-329-01	SPRING (B), TENSION
3	X-4037-631-3	DOOR		⚠ 18	1-419-156-21	COIL, DEGAUSSING (KV-27FV17/29FV17 ONLY)
4	3-703-574-00	RETAINER, DOOR		⚠ 18	1-419-523-21	COIL, DEGAUSSING (KV-29FV17C ONLY)
5	4-068-986-11	GUIDE, LED		*	19	4-062-970-12 CLIP (29RSN), DGC
6	4-068-982-11	MULTI-BUTTON (TOP)		20	4-062-047-02	PIECE A(110), CONV CORRECT
7	4-068-984-01	MULTI-BUTTON (BOTTOM)				
⚠ 8	8-735-082-05	CRT 29RSN(SDP) (KV-27FV17/29FV17 ONLY)				
⚠ 8	8-735-083-05	CRT 29RSN(SDP)(SOUTH) (KV-29FV17C ONLY)				
9	1-452-032-00	MAGNET,DISC				
10	4-053-005-01	SPACER, DY				
⚠ 11	8-451-494-41	DY Y29RSA-V				
⚠ 12	8-453-011-11	NA299-M (NECK ASSEMBLY)				
13	4-081-170-01	PLATE, TLH CORRECTION				
14	1-452-896-11	COIL, NA ROTATION (RT200)				

**NOTE:** The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

**NOTE:** Les composants identifiés par un trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifique.

### 6-3. CHASSIS (KV-27FS13/27FS17 ONLY)

- 7-685-648-91 SCREW +BVTP 3 x 12 TYPE 2 TTB
- 7-685-663-91 SCREW +BVTP 4X16 TYPE2 TTB
- ▲ 4-388-477-02 SCREW (3X16) TAPPING, BV WASHER



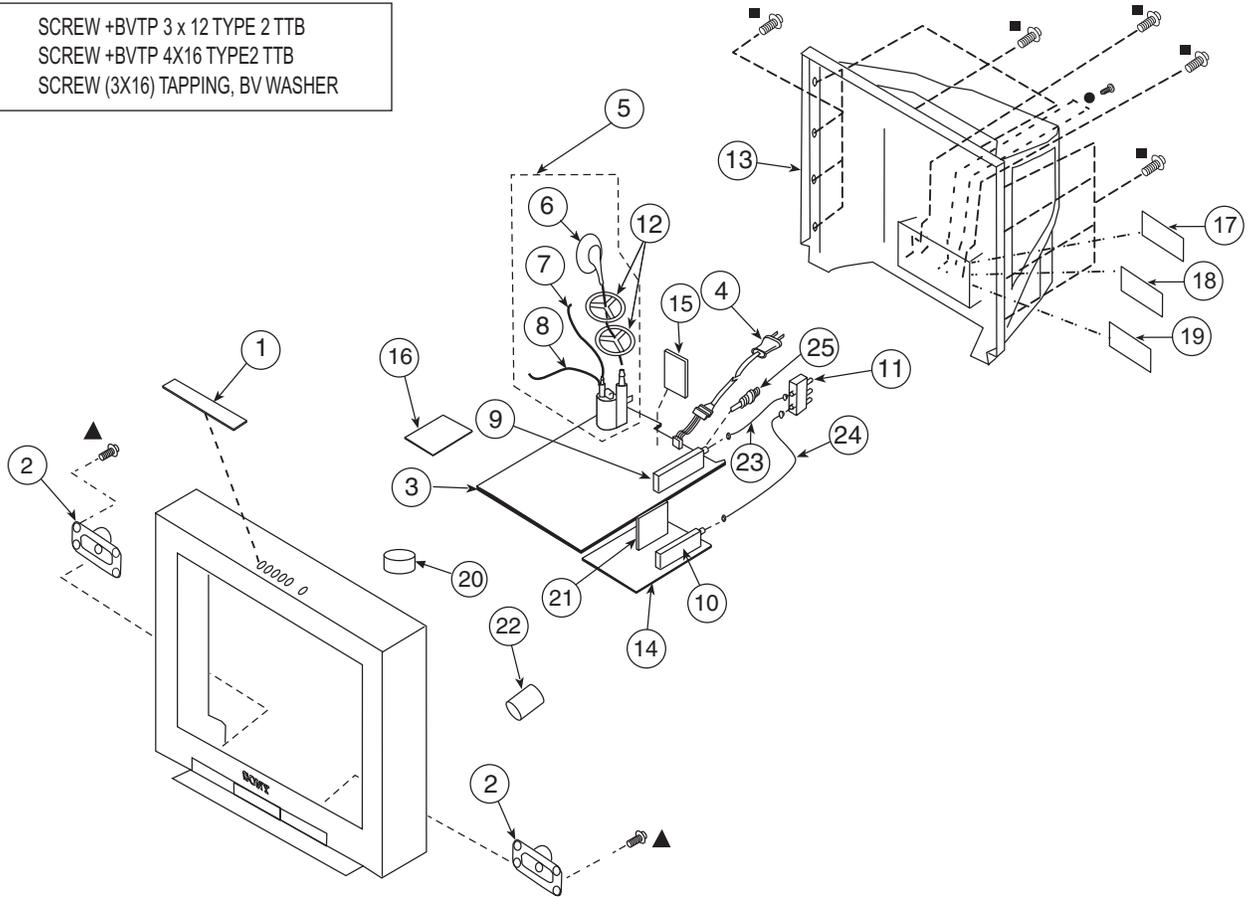
REF. NO.	PART NO.	DESCRIPTION	[Assembly Includes]	REF. NO.	PART NO.	DESCRIPTION
* 1	A-1372-817-A	HX MOUNTED PC BOARD		* 14	A-1304-198-A	MA (VAR) MOUNTED PC BOARD (KV-27FS17 ONLY)
2	1-529-638-11	SPEAKER (6X12CM)		* 15	A-1380-632-A	K (VAR) MOUNTED PC BOARD
* 3	A-1299-502-A	A COMPLETE PC BOARD (KV-27FS13 ONLY)		* 16	A-1343-875-A	D (VAR) MOUNTED PC BOARD
* 3	A-1299-503-A	A COMPLETE PC BOARD (KV-27FS17 ONLY)		17	4-075-666-01	LABEL, 2-TUNER ANTENNA (KV-27FS17 ONLY)
		The high-voltage leads associated with the FBT on this board are not included and must be ordered separately. (See 6-8.)		18	4-075-664-01	LABEL, 1-TUNER ANTENNA (KV-27FS13 ONLY)
⚠ 4	1-792-874-11	CORD, AC POWER (WITH CONNECTOR)		19	4-075-665-01	LABEL, TERMINAL
⚠ 5	1-453-310-11	FBT ASSY NX-4521//X4J4	[6-8]	20	1-452-094-00	CIRCULAR DISC MAGNET B
⚠ 6	1-251-374-13	HV CAP ASSY		* 21	A-1190-391-A	P MOUNTED PC BOARD (KV-27FS17 ONLY)
⚠ 7	1-900-800-82	FOCUS LEAD		22	1-500-586-11	FILTER, CLAMP (FERRITE CORE)
⚠ 8	1-900-803-22	G2 LEAD		23	1-557-056-31	CABLE, P-P (KV-27FS17 ONLY)
⚠ 9	8-598-542-20	TUNER, FSS BTF-WA412		24	1-783-800-11	CABLE, PIN (KV-27FS17 ONLY)
⚠ 10	8-598-501-30	TUNER, FSS BTF-FA402 (KV-27FS17 ONLY)		25	1-766-374-11	PLUG, F-PIN (KV-27FS13 ONLY)
11	8-598-414-20	CHANGER, ANTENNA AS-2F (KV-27FS17 ONLY)				
12	3-704-372-71	HOLDER, HV CABLE				
13	4-075-652-11	COVER, REAR				
		The labels associated with the rear cover are not included and must be ordered separately (See 17-19).				
* 14	A-1304-200-A	MA (VAR) MOUNTED PC BOARD (KV-27FS13 ONLY)				

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

#### 6-4. CHASSIS (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)

- 7-685-648-91 SCREW +BVTP 3 x 12 TYPE 2 TTB
- 7-685-663-91 SCREW +BVTP 4X16 TYPE2 TTB
- ▲ 4-388-477-02 SCREW (3X16) TAPPING, BV WASHER



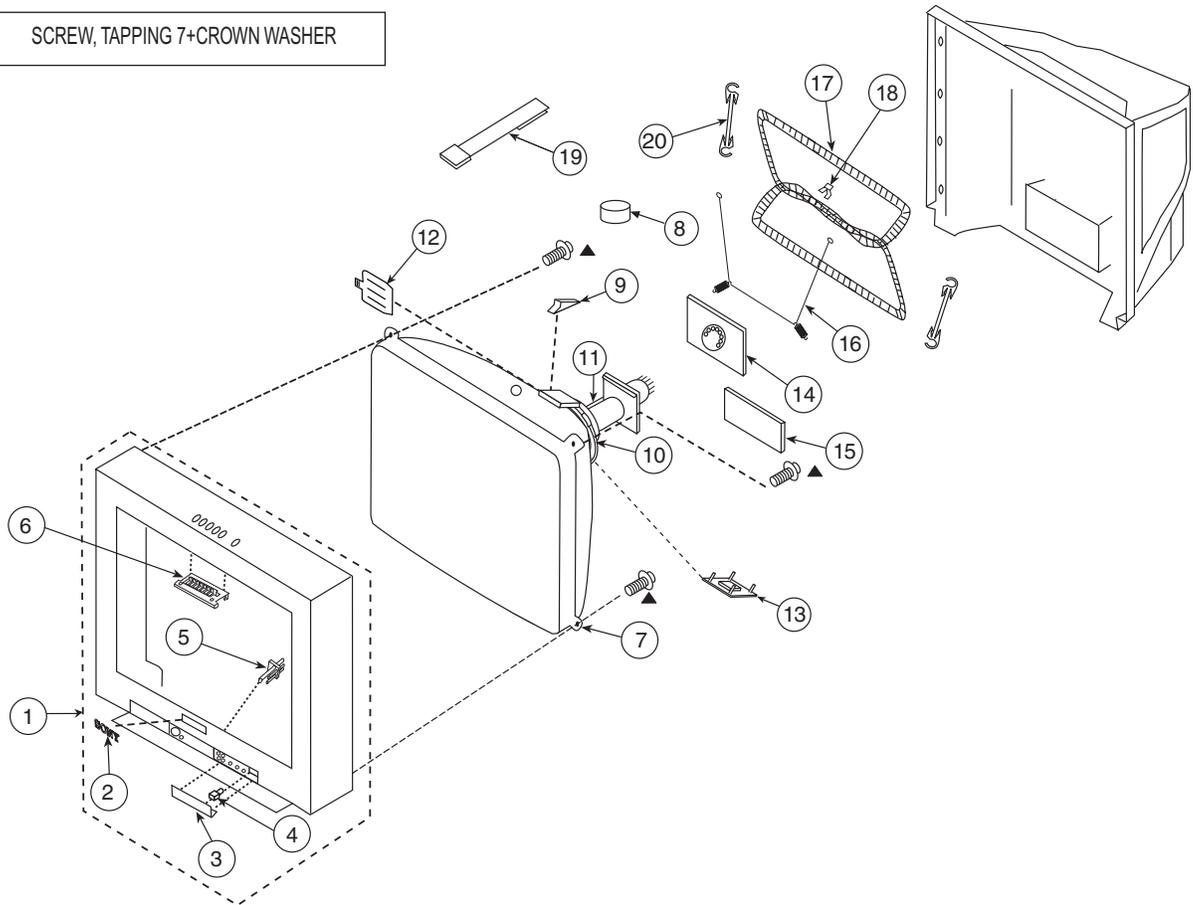
REF. NO.	PART NO.	DESCRIPTION	[Assembly Includes]	REF. NO.	PART NO.	DESCRIPTION
* 1	A-1372-817-A	HX MOUNTED PC BOARD		13	4-075-654-01	COVER, REAR
2	1-529-638-11	SPEAKER (6X12CM)		The labels associated with the rear cover are not included and must be ordered separately (See 17-19).		
* 3	A-1299-516-A	A COMPLETE PC BOARD (KV-32FS13 ONLY)		* 14	A-1304-196-A	MA (VAR) MOUNTED PC BOARD (KV-32FS17/34FS17 ONLY)
* 3	A-1299-504-A	A COMPLETE PC BOARD (KV-32FS17/34FS17 ONLY)		* 14	A-1304-203-A	MA (VAR) MOUNTED PC BOARD (KV-32FS13/34FS13C ONLY)
* 3	A-1299-506-A	A COMPLETE PC BOARD (KV-34FS13C ONLY)		* 15	A-1380-632-A	K (VAR) MOUNTED PC BOARD
The high-voltage leads associated with the FBT on this board are not included and must be ordered separately (See 6-8).						
⚠ 4	1-792-874-11	CORD, AC POWER (WITH CONNECTOR) (KV-32FS13/32FS17/34FS17 ONLY)		* 16	A-1343-874-A	D (VAR) MOUNTED PC BOARD
⚠ 4	1-769-796-31	CORD, POWER (WITH CONNECTOR) (KV-34FS13C ONLY)		17	4-075-666-01	LABEL, 2-TUNER ANTENNA (KV-32FS17/34FS17 ONLY)
⚠ 5	1-453-338-11	FBT ASSY NX-4600//X4J4	[6-8]	18	4-075-664-01	LABEL, 1-TUNER ANTENNA (KV-32FS13/34FS13C ONLY)
⚠ 6	1-251-374-13	HV CAP ASSY		19	4-075-665-01	LABEL, TERMINAL
⚠ 7	1-900-800-82	FOCUS LEAD		20	1-452-094-00	CIRCULAR DISC MAGNET B
⚠ 8	1-900-803-50	G2 LEAD		* 21	A-1190-391-A	P MOUNTED PC BOARD (KV-32FS17/34FS17 ONLY)
⚠ 9	8-598-542-20	TUNER, FSS BTF-WA412		22	1-500-586-11	FILTER, CLAMP (FERRITE CORE) (KV-32FS13/32FS17 ONLY)
⚠ 10	8-598-501-30	TUNER, FSS BTF-FA402 (KV-32FS17/34FS17 ONLY)		23	1-557-056-31	CABLE, P-P (KV-32FS17/34FS17 ONLY)
11	8-598-414-20	CHANGER, ANTENNA AS-2F (KV-32FS17/34FS17 ONLY)		24	1-783-800-11	CABLE, PIN (KV-32FS17/34FS17 ONLY)
12	3-704-372-71	HOLDER, HV CABLE		25	1-766-374-11	PLUG, F-PIN (KV-32FS13/34FS13C ONLY)

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

## 6-5. PICTURE TUBE REMOVAL (KV-27FS13/27FS17/32FS13/32FS17/34FS13C/34FS17 ONLY)

▲ 4-046-765-12 SCREW, TAPPING 7+CROWN WASHER



REF. NO.	PART NO.	DESCRIPTION	[Assembly Includes]	REF. NO.	PART NO.	DESCRIPTION
1	X-4038-955-1	BEZNET ASSY (KV-27FS13/27FS17 ONLY)	[2-5]	⚠ 11	8-453-011-11	NA299-M (NECK ASSEMBLY) (KV-27FS13/27FS17 ONLY)
1	X-4039-003-1	BEZNET ASSY (KV-32FS13/32FS17 ONLY)	[2-5]	⚠ 11	8-453-007-41	NA324-M4 (NECK ASSEMBLY) (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)
1	X-4037-664-3	BEZNET ASSY (KV-34FS13/34FS17 ONLY)	[2-5]	12	4-081-170-01	PLATE, TLH CORRECTION
2	3-704-179-31	EMBLEM (NO.9), SONY		13	1-452-896-11	COIL, NA ROTATION (RT200)
3	4-075-658-21	DOOR (KV-34FS13C/34FS17 ONLY)		* 14	A-1332-063-A	CA (VAR) MOUNTED PC BOARD (KV-27FS13/27FS17 ONLY)
3	4-075-658-31	DOOR (KV-27FS13/27FS17/32FS13/32FS17 ONLY)		* 14	A-1332-061-A	CA (VAR) MOUNTED PC BOARD (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)
4	4-047-464-01	CATCHER, PUSH		* 15	A-1342-550-A	VA (VAR) MOUNTED PC BOARD (KV-27FS13/27FS17 ONLY)
5	4-075-657-01	GUIDE, LED		* 15	A-1342-549-A	VA (VAR) MOUNTED PC BOARD (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)
6	4-068-982-11	MULTI-BUTTON (TOP)		16	4-036-329-01	SPRING (B), TENSION
⚠ 7	8-735-082-05	CRT 29RSN(SDP) (KV-27FS13/27FS17 ONLY)		⚠ 17	1-419-156-21	COIL, DEGAUSSING (KV-27FS13/27FS17 ONLY)
⚠ 7	8-735-066-05	CRT 34RSN(SDP) (KV-32FS13/32FS17/34FS17 ONLY)		⚠ 17	1-416-827-21	COIL, DEGAUSSING (KV-32FS13/32FS17/34FS17 ONLY)
⚠ 7	8-735-084-05	CRT 34RSN(SDP)(SOUTH) (KV-34FS13C ONLY)		⚠ 17	1-416-866-11	COIL, DEGAUSSING (KV-34FS13C ONLY)
8	1-452-032-00	MAGNET,DISC		* 18	4-062-970-12	CLIP (29RSN), DGC (KV-27FS13/27FS17 ONLY)
9	4-053-005-01	SPACER, DY		19	4-062-047-02	PIECE A(110), CONV CORRECT
⚠ 10	8-451-494-41	DY Y29RSA-V (KV-27FS13/27FS17 ONLY)		20	4-065-895-11	HOLDER, DGC (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)
⚠ 10	8-451-499-41	DY Y34RSA-V (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)				

## SECTION 7: ELECTRICAL PARTS LIST

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Refer to the designated variant parts list when seeking a part indicated by an asterick (\*) on the MA Board Schematic or by the phrase "VARIANT (SEE VARIANT PARTS LIST)" on the Common Parts Listing

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## COMMON PARTS LISTING FS SERIES



NOTE: The components identified by shading and  $\triangle$  mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components in this manual identified by the following symbol:  $\boxtimes$  indicate parts that have been carefully factory-selected to satisfy regulations regarding X-ray radiation for each set.

Should replacement be required for one of these components, replace only with the value originally used.

\* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

## RESISTORS

- All resistors are in ohms
- F : nonflammable
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

When ordering parts by reference number, please include the board name.

REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
<b>A BOARD COMMON PARTS LISTING FS SERIES</b>							
*	A-1299-502-A	A COMPLETE PC BOARD (KV-27FS13 ONLY)		C219	1-126-964-11	ELECT	10 $\mu$ F 20% 50V
*	A-1299-503-A	A COMPLETE PC BOARD (KV-27FS17 ONLY)		C401	1-126-968-11	ELECT	100 $\mu$ F 20% 50V
*	A-1299-516-A	A COMPLETE PC BOARD (KV-32FS13 ONLY)		C402	1-126-943-11	ELECT	2200 $\mu$ F 20% 25V
*	A-1299-504-A	A COMPLETE PC BOARD (KV-32FS17/34FS17 ONLY)		C403	1-126-957-11	ELECT	0.22 $\mu$ F 20% 50V
*	A-1299-506-A	A COMPLETE PC BOARD (KV-34FS13C ONLY)		C420	1-164-222-91	CERAMIC	0.22 $\mu$ F 25V
		The high-voltage leads associated with the FBT on the A board are not included and must be ordered separately. Order the following leads when requesting this A board:		C421	1-216-295-91	SHORT	
$\triangle$	1-251-374-13	HV CAP ASSY		C435	1-164-222-91	CERAMIC	0.22 $\mu$ F 25V
$\triangle$	1-900-800-82	FOCUS LEAD		C441	1-164-346-11	CERAMIC	1 $\mu$ F 16V
$\triangle$	1-900-803-22	G2 LEAD (KV-27FS13/ 27FS17 ONLY)		C442	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V
$\triangle$	1-900-803-50	G2 LEAD (KV-32FS13/32FS17/34FS17/ 34FS13C ONLY)		C496	1-216-295-91	SHORT	
*	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P		C501	1-102-114-00	CERAMIC	470pF 10% 50V
	1-533-223-11	HOLDER, FUSE		C502	1-106-383-00	MYLAR	0.047 $\mu$ F 10% 200V
*	4-374-846-11	COVER, CAPACITOR, CAP TYPE		C503	1-102-228-00	CERAMIC	470pF 10% 500V
	4-382-854-11	SCREW (M3X10), P, SW (+)		C504	1-102-228-00	CERAMIC	470pF 10% 500V
	<b>CAPACITOR</b>			$\triangle$ C505	1-162-116-00	CERAMIC	680pF 10% 2KV
C100	1-216-295-91	SHORT		C506	1-162-318-11	CERAMIC	0.001 $\mu$ F 10% 500V
C101	1-216-295-91	SHORT		C507		VARIANT (SEE VARIANT PARTS LIST)	
C102	1-126-933-11	ELECT	100 $\mu$ F 20% 16V	$\triangle$ C508	1-137-150-11	MYLAR	0.01 $\mu$ F 10% 100V
C104	1-126-941-11	ELECT	470 $\mu$ F 20% 25V	$\triangle$ C509	1-162-116-00	CERAMIC	680pF 10% 2KV
C105	1-104-664-11	ELECT	47 $\mu$ F 20% 25V	C510	1-107-649-11	ELECT	2.2 $\mu$ F 20% 250V
C204	1-163-017-00	CERAMIC	0.0047 $\mu$ F 10% 50V	C511		VARIANT (SEE VARIANT PARTS LIST)	
C205	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V	$\triangle$ C512	1-106-387-00	MYLAR	0.068 $\mu$ F 10% 200V
C207	1-126-961-11	ELECT	2.2 $\mu$ F 20% 50V	C513	1-104-987-11	MYLAR	0.001 $\mu$ F 10% 100V
C208	1-126-961-11	ELECT	2.2 $\mu$ F 20% 50V	C514		VARIANT (SEE VARIANT PARTS LIST)	
C210	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V	$\triangle$ C515	1-162-116-00	CERAMIC	680pF 10% 2KV
C214	1-164-346-11	CERAMIC	1 $\mu$ F 16V	C517		VARIANT (SEE VARIANT PARTS LIST)	
C215	1-164-346-11	CERAMIC	1 $\mu$ F 16V	C520		VARIANT (SEE VARIANT PARTS LIST)	
C216	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V	C521	1-164-646-11	CERAMIC	2200pF 10% 500V
				C523	1-126-941-11	ELECT	470 $\mu$ F 20% 25V
				C524	1-102-244-00	CERAMIC	220pF 10% 500V
				C525	1-107-612-11	CERAMIC	100pF 5% 500V
				C526	1-126-960-11	ELECT	1 $\mu$ F 20% 50V
				C527	1-126-965-91	ELECT	22 $\mu$ F 20% 50V
				C528	1-164-161-11	CERAMIC	0.0022 $\mu$ F 10% 50V
				C529	1-164-161-11	CERAMIC	0.0022 $\mu$ F 10% 50V
				C530		VARIANT (SEE VARIANT PARTS LIST)	
				C531	1-106-387-00	MYLAR	0.068 $\mu$ F 10% 200V
				C533	1-126-941-11	ELECT	470 $\mu$ F 20% 25V

NOTE: The components identified by shading and  $\triangle$  mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifique.



## COMMON PARTS LISTING FS SERIES

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
$\triangle$ C534	1-126-964-11	ELECT	10 $\mu$ F	20%	50V	C636	1-126-970-11	ELECT	330 $\mu$ F	20%	50V
C535	1-126-959-11	ELECT	0.47 $\mu$ F	20%	50V	C637	1-163-009-91	CERAMIC	0.001 $\mu$ F	10%	50V
C536	1-102-228-00	CERAMIC	470pF	10%	500V	C638	1-163-005-91	CERAMIC	470pF	10%	50V
$\triangle$ C537	1-126-965-91	ELECT	22 $\mu$ F	20%	50V	C639	1-126-965-91	ELECT	22 $\mu$ F	20%	50V
C539	1-107-662-11	ELECT	22 $\mu$ F	20%	250V	C641	1-107-679-91	ELECT	10 $\mu$ F	20%	450V
C540	1-107-645-11	ELECT	22 $\mu$ F	20%	160V	C643	1-104-760-11	CERAMIC	0.047 $\mu$ F	10%	50V
C541	1-126-969-11	ELECT	220 $\mu$ F	20%	50V	C647	1-161-964-91	CERAMIC	0.0047 $\mu$ F		250V
C542	1-126-967-11	ELECT	47 $\mu$ F	20%	50V	C648	1-136-346-21	MYLAR	0.22 $\mu$ F	20%	125V
C543	1-136-169-00	FILM	0.22 $\mu$ F	5%	50V	C652	1-130-471-00	MYLAR	0.001 $\mu$ F	5%	50V
$\triangle$ C546	1-126-965-91	ELECT	22 $\mu$ F	20%	50V	C654	1-107-636-11	ELECT	10 $\mu$ F	20%	160V
$\triangle$ C547	1-163-031-91	CERAMIC	0.01 $\mu$ F		50V	$\triangle$ C655	1-136-311-11	MYLAR	0.47 $\mu$ F	20%	125V
C548		VARIANT (SEE VARIANT PARTS LIST)				C657	1-104-664-11	ELECT	47 $\mu$ F	20%	25V
C549	1-126-934-11	ELECT	220 $\mu$ F	20%	16V	C658		VARIANT (SEE VARIANT PARTS LIST)			
C550		VARIANT (SEE VARIANT PARTS LIST)				C659	1-135-573-51	ELECT	15000 $\mu$ F	20%	25V
$\triangle$ C551	1-137-417-11	MYLAR	0.0047 $\mu$ F	10%	200V	C660		VARIANT (SEE VARIANT PARTS LIST)			
C553	1-107-662-11	ELECT	22 $\mu$ F	20%	250V	C661		VARIANT (SEE VARIANT PARTS LIST)			
C554	1-102-110-00	CERAMIC	220pF	10%	50V	C2001	1-104-664-11	ELECT	47 $\mu$ F	20%	25V
C555		VARIANT (SEE VARIANT PARTS LIST)				<b>CONNECTOR</b>					
C601	1-164-004-11	CERAMIC	0.1 $\mu$ F	10%	25V	* CN301	1-564-507-11	PLUG,CONNECTOR 4P			
C602	1-126-967-11	ELECT	47 $\mu$ F	20%	50V	* CN406	1-564-507-11	PLUG,CONNECTOR 4P			
C604	1-164-182-11	CERAMIC	0.0033 $\mu$ F	10%	50V	CN460	1-573-298-21	CONNECTOR, BOARD TO BOARD 20P			
$\triangle$ C606	1-127-793-51	CERAMIC	2200pF	20%	250V	* CN501	1-580-798-11	CONNECTOR PIN (DY) 6P			
C607		VARIANT (SEE VARIANT PARTS LIST)				CN502	1-564-509-11	PLUG,CONNECTOR 6P			
C609	1-126-968-11	ELECT	100 $\mu$ F	20%	50V	* CN504	1-508-784-21	PIN,CONNECTOR (5MM PITCH) 1P			
C610	1-126-964-11	ELECT	10 $\mu$ F	20%	50V	* CN506	1-564-508-11	PLUG,CONNECTOR 5P			
$\triangle$ C611	1-164-182-11	CERAMIC	2200pF	20%	250V	* CN515	1-564-510-11	PLUG,CONNECTOR 7P			
C612		VARIANT (SEE VARIANT PARTS LIST)				CN602	1-580-843-11	PIN,CONNECTOR (POWER)			
C613	1-126-964-11	ELECT	10 $\mu$ F	20%	50V	* CN603	1-573-963-11	PIN,CONNECTOR (PC BOARD) 3P			
C614	1-130-495-00	MYLAR	0.1 $\mu$ F	5%	50V	* CN604		VARIANT (SEE VARIANT PARTS LIST)			
C615		VARIANT (SEE VARIANT PARTS LIST)				* CN2001	1-564-511-11	PLUG,CONNECTOR 8P			
C616		VARIANT (SEE VARIANT PARTS LIST)				* CN2003	1-564-506-11	PLUG,CONNECTOR 3P			
C617	1-125-893-11	FILM	680pF	3%	1.5KV	* CN2005	1-764-333-11	PLUG,CONNECTOR 10P			
C618	1-164-081-11	CERAMIC	470pF	10%	50V	* CN2006	1-764-333-11	PLUG,CONNECTOR 10P			
C619	1-136-356-11	MYLAR	470pF	5%	50V	* CN2007	1-564-512-11	PLUG,CONNECTOR 9P			
C620	1-104-665-11	ELECT	100 $\mu$ F	20%	25V	* CN2008	1-564-512-11	PLUG,CONNECTOR 9P			
C621	1-125-772-91	CERAMIC	1500pF	10%	2KV	<b>DIODE</b>					
C622	1-164-625-11	CERAMIC	680pF	10%	500V	D201	8-719-108-12	DIODE RD9.1EW-T1			
C623	1-164-625-11	CERAMIC	680pF	10%	500V	D203	8-719-108-12	DIODE RD9.1EW-T1			
C624	1-131-867-51	ELECT	100 $\mu$ F		160V	D204	8-719-982-22	DIODE MTZJ-T-77-30D			
C625		VARIANT (SEE VARIANT PARTS LIST)				D205	8-719-108-12	DIODE RD9.1EW-T1			
C626	1-135-573-51	ELECT	15000 $\mu$ F	20%	25V	D206	8-719-108-12	DIODE RD9.1EW-T1			
C627	1-136-189-00	MYLAR	0.1 $\mu$ F	10%	250V	D208	8-719-108-12	DIODE RD9.1EW-T1			
C628	1-104-665-11	ELECT	100 $\mu$ F	20%	25V	D209	8-719-069-60	DIODE UDZSTE-179.1B			
C630		VARIANT (SEE VARIANT PARTS LIST)				D210	8-719-110-17	DIODE MTZJ-T-77-10B			
C631		VARIANT (SEE VARIANT PARTS LIST)				D211	8-719-108-12	DIODE RD9.1EW-T1			
C634	1-137-605-11	MYLAR	0.01 $\mu$ F	10%	250V	D212	8-719-110-17	DIODE MTZJ-T-77-10B			
C635	1-163-009-91	CERAMIC	0.001 $\mu$ F	10%	50V	D213	8-719-110-17	DIODE MTZJ-T-77-10B			

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### COMMON PARTS LISTING FS SERIES

REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
D214	8-719-108-12	DIODE RD9.1EW-T1		D620	8-719-510-37	DIODE D5LC20U	
D215	8-719-108-12	DIODE RD9.1EW-T1		D622	8-719-077-76	DIODE D2SB60A-F04	
D230	8-719-108-12	DIODE RD9.1EW-T1		D623	8-719-081-70	DIODE BA159DGPPKG3	
D231	8-719-108-12	DIODE RD9.1EW-T1		D624	8-719-991-33	DIODE 1SS133T-77	
D232	8-719-108-12	DIODE RD9.1EW-T1		D625	8-719-991-33	DIODE 1SS133T-77	
D233	8-719-108-12	DIODE RD9.1EW-T1		D626	8-719-046-74	DIODE 10ELS2N-TA1B2	
D401	8-719-110-17	DIODE MTZJ-T-77-10B		D627	8-719-110-03	DIODE MTZJ-T-77-7.5A	
$\triangle$ D501	8-719-945-80	DIODE ERC06-15S		D628	8-719-510-48	DIODE D1N20R-TA	
D502	8-719-908-03	DIODE GP08DPKG23		D2001	8-719-070-80	DIODE LNK0120022G	
D503	8-719-908-03	DIODE GP08DPKG23		D2002	8-719-110-17	DIODE MTZJ-T-77-10B	
$\triangle$ D504	8-719-945-80	DIODE ERC06-15S		D2003	8-719-108-12	DIODE RD9.1EW-T1	
D505	8-719-312-10	DIODE RU4AM-T3		D2004	8-719-921-44	DIODE MTZJ-T-77-5.1C	
D506	8-719-302-43	DIODE RGP10GPKG3		D2005	8-719-921-44	DIODE MTZJ-T-77-5.1C	
D507	8-719-991-33	DIODE 1SS133T-77		<b>FUSE</b>			
D508	8-719-991-33	DIODE 1SS133T-77		$\triangle$ F601	1-576-193-11	FUSE 6.3A/125V	
D509	8-719-109-89	DIODE MTZJ-T-77-5.6C		<b>FERRITE BEAD</b>			
D510	8-719-908-03	DIODE GP08DPKG23		FB501	1-410-397-21	FERRITE	1.1 $\mu$ H
D511	8-719-302-43	DIODE RGP10GPKG23		FB502	1-410-397-21	FERRITE	1.1 $\mu$ H
D512	8-719-404-50	DIODE MA111-TX		FB503	1-410-397-21	FERRITE	1.1 $\mu$ H
D513	8-719-979-85	DIODE RGP15GPKG23		FB600	1-412-911-11	FERRITE	0 $\mu$ H
D514	8-719-979-85	DIODE RGP15GPKG23		FB601	1-412-911-11	FERRITE	0 $\mu$ H
D515	8-719-404-50	DIODE MA111-TX		FB602	1-412-911-11	FERRITE	0 $\mu$ H
$\triangle$ D516	8-719-991-33	DIODE 1SS133T-77		FB603	1-412-911-11	FERRITE	0 $\mu$ H
$\triangle$ D517	8-719-991-33	DIODE 1SS133T-77		FB604	1-412-911-11	FERRITE	0 $\mu$ H
$\triangle$ D518	8-719-921-63	DIODE MTZJ-T-77-7.5X		FB605		VARIANT (SEE VARIANT PARTS LIST)	
$\triangle$ D519	8-719-979-84	DIODE EGP20DPKG23		FB606	1-412-911-11	FERRITE	0 $\mu$ H
$\triangle$ D520	8-719-404-50	DIODE MA111-TX		FB607		VARIANT (SEE VARIANT PARTS LIST)	
D521	8-719-991-33	DIODE 1SS133T-77		FB608		VARIANT (SEE VARIANT PARTS LIST)	
D522	8-719-404-50	DIODE MA111-TX		FB609	1-412-911-11	FERRITE	0 $\mu$ H
D601	8-719-991-33	DIODE 1SS133T-77		FB610	1-412-911-11	FERRITE	0 $\mu$ H
D602	8-719-991-33	DIODE 1SS133T-77		<b>IC</b>			
D603	8-719-982-26	DIODE MTZJ-T-77-33B		$\triangle$ IC402	8-759-573-40	IC TDA8580Q/N1	
D604	8-719-028-72	DIODE RGP02-17PKG23		$\triangle$ IC501	8-759-700-07	IC NJM2903M-TE2	
$\triangle$ D605	8-719-510-53	DIODE D4SB60L-F		IC502		VARIANT (SEE VARIANT PARTS LIST)	
$\triangle$ D606	8-719-108-18	DIODE TF541M		IC601		VARIANT (SEE VARIANT PARTS LIST)	
D607	8-719-991-33	DIODE 1SS133T-77		$\triangle$ IC602	8-749-016-47	IC EA135-F12	
D608	8-719-110-53	DIODE MTZJ-T-77-20B		IC603	8-759-653-07	IC PQ09RD21	
D609		VARIANT (SEE VARIANT PARTS LIST)		IC604	8-759-924-12	IC LM7805CT	
D610	8-719-210-21	DIODE 11EQS04-NTA1B		IC2001	8-742-212-20	HYB IC SBX3081-71	
D611	8-719-046-74	DIODE 10ELS2N-TA1B2		<b>JACK</b>			
D612	8-719-110-17	DIODE MTZJ-T-77-10B		J201	1-794-119-11	TERMINAL BLOCK, S 4P	
D613	8-719-046-74	DIODE 10ELS2N-TA1B2		J202	1-794-267-11	JACK, PIN 3P	
D614	8-719-046-74	DIODE 10ELS2N-TA1B2		J203	1-794-118-11	JACK BLOCK, PIN 3P	
D615	8-719-312-10	DIODE RU4AM-T3		J205	1-794-116-11	JACK BLOCK, PIN 2P	
D616	8-719-510-37	DIODE D5LC20U					
D617	8-719-110-31	DIODE MTZJ-T-77-12C					
D618	8-719-991-33	DIODE 1SS133T-77					
D619	8-719-110-17	DIODE MTZJ-T-77-10B					

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## COMMON PARTS LISTING FS SERIES

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
J206	1-794-117-11	JACK BLOCK, PIN 3P				Q502		VARIANT (SEE VARIANT PARTS LIST)			
J402	1-794-116-11	JACK BLOCK, PIN 2P				$\triangle$ Q503	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
<b>CHIP CONDUCTOR</b>						$\triangle$ Q504	8-729-053-87	TRANSISTOR KTC4370A			
JR001	1-216-295-91	SHORT				$\triangle$ Q505	8-729-200-17	TRANSISTOR 2SA10910-TPE2			
JR002	1-216-295-91	SHORT				$\triangle$ Q506	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
JR402	1-216-295-91	SHORT				$\triangle$ Q507	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
JR403	1-216-295-91	SHORT				Q601	8-729-922-37	TRANSISTOR 2SD2144S-TP-UVV			
JR404	1-216-295-91	SHORT				Q602	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA			
JR405	1-216-295-91	SHORT				$\triangle$ Q603	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA			
JR410	1-216-295-91	SHORT				Q604	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
JR411	1-216-295-91	SHORT				$\triangle$ Q605	8-729-046-40	TRANSISTOR 2SK2663			
JR471	1-164-222-91	CERAMIC	0.22 $\mu$ F	25V		Q606	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
JR472	1-216-295-91	SHORT				Q607	8-729-922-37	TRANSISTOR 2SD2144S-TP-UVV			
JR501	1-216-295-91	SHORT				Q608	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
JR502	1-216-295-91	SHORT				Q609	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA			
JR503	1-216-295-91	SHORT				<b>RESISTOR</b>					
JR505	1-216-295-91	SHORT				R105	1-208-798-11	METAL	4.7K	0.50%	1/10W
JR522	1-216-295-91	SHORT				R107	1-216-025-11	RES-CHIP	100	5%	1/10W
JR523	1-216-295-91	SHORT				R108	1-216-025-11	RES-CHIP	100	5%	1/10W
JR526	1-216-295-91	SHORT				R115	1-216-295-91	SHORT			
JR527	1-216-295-91	SHORT				R201	1-216-113-00	RES-CHIP	470K	5%	1/10W
JR2003	1-216-295-91	SHORT				R202	1-216-113-00	RES-CHIP	470K	5%	1/10W
<b>COIL</b>						R203	1-216-022-00	RES-CHIP	75	5%	1/10W
L101	1-412-029-11	INDUCTOR	10 $\mu$ H			R204	1-216-081-00	RES-CHIP	22K	5%	1/10W
L102	1-412-032-11	INDUCTOR	100 $\mu$ H			R205	1-216-085-91	RES-CHIP	33K	5%	1/10W
L103	1-412-029-11	INDUCTOR	10 $\mu$ H			R208	1-215-924-00	METAL	15K	5%	3W
L501	1-409-955-11	INDUCTOR	8mH			R210	1-216-022-00	RES-CHIP	75	5%	1/10W
L502	1-412-552-11	INDUCTOR	2.2mH			R214	1-216-113-00	RES-CHIP	470K	5%	1/10W
L503	1-406-677-11	INDUCTOR	10mH			R215	1-216-113-00	RES-CHIP	470K	5%	1/10W
L504	1-412-533-21	INDUCTOR	47 $\mu$ H			R235	1-216-113-00	RES-CHIP	470K	5%	1/10W
L505		VARIANT (SEE VARIANT PARTS LIST)				R237	1-216-033-00	RES-CHIP	220	5%	1/10W
L506	1-406-677-11	INDUCTOR	10mH			R238	1-216-033-00	RES-CHIP	220	5%	1/10W
L507	1-412-552-11	INDUCTOR	2.2mH			R239	1-216-113-00	RES-CHIP	470K	5%	1/10W
$\triangle$ L510	1-412-528-11	INDUCTOR	18 $\mu$ H			R401	1-216-080-00	RES-CHIP	20K	5%	1/10W
L603	1-412-529-11	INDUCTOR	22 $\mu$ H			R402	1-216-073-91	RES-CHIP	10K	5%	1/10W
L604	1-412-525-31	INDUCTOR	10 $\mu$ H			R411	1-249-417-11	CARBON	1K	5%	1/4W
L605	1-412-529-11	INDUCTOR	22 $\mu$ H			R412	1-216-113-00	RES-CHIP	470K	5%	1/10W
<b>PHOTO COUPLER</b>						R413	1-216-113-00	RES-CHIP	470K	5%	1/10W
$\triangle$ PH601	8-749-010-64	PHOTO COUPLER PC123FY2				R414	1-249-417-11	CARBON	1K	5%	1/4W
<b>IC LINK</b>						R421	1-249-425-11	CARBON	4.7K	5%	1/4W
$\triangle$ PS401	1-532-686-21	LINK, IC 2.7A/150V				R422	1-249-389-11	CARBON	4.7	5%	1/4W
<b>TRANSISTOR</b>						R426	1-216-009-91	RES-CHIP	22	5%	1/10W
Q101	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX				R429	1-216-113-00	RES-CHIP	470K	5%	1/10W
Q410	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX				R430	1-216-049-11	RES-CHIP	1K	5%	1/10W
Q411	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX				R431	1-216-049-11	RES-CHIP	1K	5%	1/10W
Q501	8-729-140-50	TRANSISTOR 2SC3209LK-TP				R433	1-216-113-00	RES-CHIP	470K	5%	1/10W
						R436		VARIANT (SEE VARIANT PARTS LIST)			
						R437		VARIANT (SEE VARIANT PARTS LIST)			

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## COMMON PARTS LISTING FS SERIES

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R438		VARIANT (SEE VARIANT PARTS LIST)				 R544	1-249-377-11	CARBON	0.47	5%	1/4W
R440	1-216-097-11	RES-CHIP	100K	5%	1/10W	R545	1-215-873-00	METAL	4.7K	5%	1W
R441	1-216-081-00	RES-CHIP	22K	5%	1/10W	 R546	1-249-377-11	CARBON	0.47	5%	1/4W
R442	1-208-758-11	METAL	100	0.50%	1/10W	R547	1-216-455-21	METAL	560	5%	2W
R445	1-216-073-91	RES-CHIP	10K	5%	1/10W	R548	1-216-377-11	METAL	4.7	5%	2W
R446	1-215-457-00	METAL	33K	1%	1/4W	 R549	1-260-288-11	CARBON	0.47	5%	1/2W
R447	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	 R550	1-260-288-11	CARBON	0.47	5%	1/2W
R454	1-216-025-11	RES-CHIP	100	5%	1/10W	R551	1-215-907-11	METAL	22	5%	3W
R490		VARIANT (SEE VARIANT PARTS LIST)				 R553	1-216-363-00	METAL	0.33	5%	2W
R501	1-249-425-11	CARBON	4.7K	5%	1/4W	 R554	1-249-429-11	CARBON	10K	5%	1/4W
 R502	1-216-455-21	METAL	560	5%	2W	 R555	1-247-895-91	CARBON	470K	5%	1/4W
 R503	1-249-425-11	CARBON	4.7K	5%	1/4W	 R556	1-249-417-11	CARBON	1K	5%	1/4W
R505	1-249-401-11	CARBON	47	5%	1/4W	 R557	1-247-895-91	CARBON	470K	5%	1/4W
 R506	1-215-883-11	METAL	33	5%	2W	 R558	1-216-097-11	RES-CHIP	100K	5%	1/10W
 R507	1-260-328-11	CARBON	1K	5%	1/2W	 R559	1-216-073-91	RES-CHIP	10K	5%	1/10W
R508	1-249-433-11	CARBON	22K	5%	1/4W	 R560	1-215-879-11	METAL	47K	5%	1W
 R509	1-215-891-11	METAL	680	5%	2W	 R561	1-249-406-11	CARBON	120	5%	1/4W
R510	1-249-411-11	CARBON	330	5%	1/4W	R562	1-208-808-11	METAL	12K	0.50%	1/10W
R511	1-249-377-11	CARBON	0.47	5%	1/4W	 R563	1-249-433-11	CARBON	22K	5%	1/4W
R512	1-215-910-00	METAL	68	5%	3W	R564		VARIANT (SEE VARIANT PARTS LIST)			
R513		VARIANT (SEE VARIANT PARTS LIST)				 R565	1-249-429-11	CARBON	10K	5%	1/4W
R514		VARIANT (SEE VARIANT PARTS LIST)				 R566	1-216-073-91	RES-CHIP	10K	5%	1/10W
R516	1-249-425-11	CARBON	4.7K	5%	1/4W	 R567	1-216-073-91	RES-CHIP	10K	5%	1/10W
R517	1-215-445-00	METAL	10K	1%	1/4W	 R568	1-215-882-00	METAL	22	5%	2W
R518		VARIANT (SEE VARIANT PARTS LIST)				R569	1-214-798-21	METAL	1.8	1%	1/2W
R519		VARIANT (SEE VARIANT PARTS LIST)				R570	1-249-433-11	CARBON	22K	5%	1/4W
 R520	1-215-884-11	METAL	47	5%	2W	R571	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
 R521	1-249-413-11	CARBON	470	5%	1/4W	R572	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R522	1-249-417-11	CARBON	1K	5%	1/4W	R601		VARIANT (SEE VARIANT PARTS LIST)			
R523	1-216-073-91	RES-CHIP	10K	5%	1/10W	 R602	1-249-389-11	CARBON	4.7	5%	1/4W
R524	1-249-429-11	CARBON	10K	5%	1/4W	R603	1-215-485-00	METAL	470K	1%	1/4W
 R525	1-208-804-11	METAL	8.2K	0.50%	1/10W	R607	1-215-859-00	METAL	22	5%	1W
R526	1-208-814-91	METAL	22K	0.50%	1/10W	R608	1-240-205-11	CARBON	22M	5%	1/2W
R528	1-215-429-00	METAL	2.2K	1%	1/4W	R609	1-216-049-11	RES-CHIP	1K	5%	1/10W
R529		VARIANT (SEE VARIANT PARTS LIST)				R610	1-216-073-91	RES-CHIP	10K	5%	1/10W
R530		VARIANT (SEE VARIANT PARTS LIST)				R611	1-216-089-91	RES-CHIP	47K	5%	1/10W
R532	1-215-437-00	METAL	4.7K	1%	1/4W	R612	1-216-045-00	RES-CHIP	680	5%	1/10W
R533		VARIANT (SEE VARIANT PARTS LIST)				 R613	1-219-512-11	CARBON	2.2M	5%	1/2W
R534		VARIANT (SEE VARIANT PARTS LIST)				R614	1-249-413-11	CARBON	470	5%	1/4W
R535	1-249-441-11	CARBON	100K	5%	1/4W	R615		VARIANT (SEE VARIANT PARTS LIST)			
 R536	1-214-798-21	METAL	1.8	1%	1/2W	 R616	1-260-302-51	CARBON	6.8	5%	1/2W
R537		VARIANT (SEE VARIANT PARTS LIST)				R617	1-216-009-91	RES-CHIP	22	5%	1/10W
 R538	1-215-889-00	METAL	330	5%	2W	R618	1-249-440-11	CARBON	82K	5%	1/4W
 R539	1-249-385-11	CARBON	2.2	5%	1/4W	R619	1-249-437-11	CARBON	47K	5%	1/4W
R540	1-215-445-00	METAL	10K	1%	1/4W	R620	1-249-417-11	CARBON	1K	5%	1/4W
R541	1-249-429-11	CARBON	10K	5%	1/4W	 R621	1-240-251-11	CEMENTED	6.8	5%	10W
R543	1-247-887-00	CARBON	220K	5%	1/4W	R622	1-249-441-11	CARBON	100K	5%	1/4W

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## COMMON PARTS LISTING FS SERIES

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES	
	R623	1-260-324-11	CARBON	470	5%	1/2W	<b>SWITCH</b>			
	R624	1-249-429-11	CARBON	10K	5%	1/4W	SW501	1-572-707-11	SWITCH LEVER	
	R625	1-249-437-11	CARBON	47K	5%	1/4W	SW502	1-572-707-11	SWITCH LEVER	
	R626	VARIANT (SEE VARIANT PARTS LIST)				<b>TRANSFORMER</b>				
	R627	VARIANT (SEE VARIANT PARTS LIST)					T501	1-437-195-11	TRANSFORMER, HORIZONTAL DRIVE	
	R628	VARIANT (SEE VARIANT PARTS LIST)					T503	1-426-981-11	TRANSFORMER, FERRITE (PMT)	
	R629	VARIANT (SEE VARIANT PARTS LIST)					T504	VARIANT (SEE VARIANT PARTS LIST)		
	R630	1-249-421-11	CARBON	2.2K	5%	1/4W		T505	VARIANT (SEE VARIANT PARTS LIST)	
	R631	VARIANT (SEE VARIANT PARTS LIST)					T602	VARIANT (SEE VARIANT PARTS LIST)		
	R632	VARIANT (SEE VARIANT PARTS LIST)					T603	VARIANT (SEE VARIANT PARTS LIST)		
	R633	1-249-415-11	CARBON	680	5%	1/4W		T604	1-431-852-11	TRANSFORMER, CONVERTER (SRT)
	R634	1-216-073-91	RES-CHIP	10K	5%	1/10W	<b>THERMISTOR</b>			
	R635	1-216-057-00	RES-CHIP	2.2K	5%	1/10W		TH501	1-800-193-00	THERMISTOR
	R637	VARIANT (SEE VARIANT PARTS LIST)					TH601	1-803-586-11	THERMISTOR, NTC	
	R638	VARIANT (SEE VARIANT PARTS LIST)				<b>THERMISTOR</b>				
	R639	1-249-421-11	CARBON	2.2K	5%	1/4W		THP601	VARIANT (SEE VARIANT PARTS LIST)	
	R640	1-249-417-11	CARBON	1K	5%	1/4W	<b>TUNER</b>			
	R641	VARIANT (SEE VARIANT PARTS LIST)					TU101	8-598-542-20	TUNER, FSS BTF-WA412	
	R642	1-216-089-91	RES-CHIP	47K	5%	1/10W	<b>VARISTOR</b>			
	R643	1-249-419-11	CARBON	1.5K	5%	1/4W		VDR601	VARIANT (SEE VARIANT PARTS LIST)	
	R644	1-247-843-11	CARBON	3.3K	5%	1/4W				
	R645	1-215-898-11	METAL	10K	5%	2W				
	R646	VARIANT (SEE VARIANT PARTS LIST)								
	R648	1-215-908-00	METAL	33	5%	3W				
	R649	1-249-417-11	CARBON	1K	5%	1/4W				
	R650	1-216-387-11	METAL	0.68	5%	3W				
	R651	1-249-429-11	CARBON	10K	5%	1/4W				
	R653	1-216-049-11	RES-CHIP	1K	5%	1/10W				
	R655	1-216-049-11	RES-CHIP	1K	5%	1/10W				
	R656	1-249-429-11	CARBON	10K	5%	1/4W				
	R658	1-216-387-11	METAL	0.68	5%	3W				
	R659	1-215-857-71	METAL	10	5%	1W				
	R660	VARIANT (SEE VARIANT PARTS LIST)								
	R661	1-216-057-00	RES-CHIP	2.2K	5%	1/10W				
	R662	VARIANT (SEE VARIANT PARTS LIST)								
	R663	1-216-081-00	RES-CHIP	22K	5%	1/10W				
	R2001	1-216-057-00	RES-CHIP	2.2K	5%	1/10W				
	R2002	1-216-053-00	RES-CHIP	1.5K	5%	1/10W				
	R2003	1-249-425-11	CARBON	4.7K	5%	1/4W				
	R2004	1-216-069-00	RES-CHIP	6.8K	5%	1/10W				
	R2005	1-216-295-91	SHORT							
<b>RELAY</b>										
	RY601	1-755-198-11	RELAY							
	RY602	1-755-266-11	RELAY, AC POWER							
<b>SWITCH</b>										
	S2007	1-762-816-11	SWITCH TACTILE							
	S2008	1-762-816-11	SWITCH TACTILE							

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## COMMON PARTS LISTING FV SERIES

**A BOARD COMMON PARTS LISTING FV SERIES**


- \* **A-1299-243-A** A COMPLETE PC BOARD (KV-27FV17 ONLY)
- \* **A-1299-498-A** A COMPLETE PC BOARD (KV-29FV17 ONLY)
- \* **A-1299-244-A** A COMPLETE PC BOARD (KV-27FV17C ONLY)

The high-voltage leads associated with the FBT on the A board are not included and must be ordered separately. Order the following leads when requesting this A board:

REF. NO.	PART NO.	DESCRIPTION	VALUES
$\triangle$	1-251-374-13	HV CAP ASSY	
$\triangle$	1-900-800-82	FOCUS LEAD	
$\triangle$	1-900-803-22	G2 LEAD	
*	1-508-784-21	PIN, CONNECTOR (5MM PITCH)	1P
	1-533-223-11	HOLDER, FUSE	
*	4-374-846-11	COVER, CAPACITOR, CAP TYPE	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
<b>CAPACITOR</b>			
C100	1-216-295-91	SHORT	
C101	1-216-295-91	SHORT	
C102	1-126-933-11	ELECT	100 $\mu$ F 20% 16V
C104	1-126-941-11	ELECT	470 $\mu$ F 20% 25V
C105	1-104-664-11	ELECT	47 $\mu$ F 20% 25V
C204	1-163-017-00	CERAMIC CHIP	0.0047 $\mu$ F 10% 50V
C205	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V
C207	1-126-961-11	ELECT	2.2 $\mu$ F 20% 50V
C208	1-126-961-11	ELECT	2.2 $\mu$ F 20% 50V
C211	1-126-935-11	ELECT	470 $\mu$ F 20% 16V
C212	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V
C213	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V
C214	1-164-346-11	CERAMIC CHIP	1 $\mu$ F 16V
C215	1-164-346-11	CERAMIC CHIP	1 $\mu$ F 16V
C219	1-126-964-11	ELECT	10 $\mu$ F 20% 50V
C401	1-126-968-11	ELECT	100 $\mu$ F 20% 50V
C402	1-126-972-11	ELECT	1000 $\mu$ F 20% 50V
C403	1-126-957-11	ELECT	0.22 $\mu$ F 20% 50V
C420	1-164-222-91	CERAMIC CHIP	0.22 $\mu$ F 25V
C421	1-216-295-91	SHORT	
C435	1-164-222-91	CERAMIC CHIP	0.22 $\mu$ F 25V
C441	1-164-346-11	CERAMIC CHIP	1 $\mu$ F 16V
C442	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V
C496	1-216-295-91	SHORT	
C501	1-102-114-00	CERAMIC	470pF 10% 50V
C502	1-106-383-00	MYLAR	0.047 $\mu$ F 10% 200V
C503	1-102-228-00	CERAMIC	470pF 10% 500V

REF. NO.	PART NO.	DESCRIPTION	VALUES
C504	1-102-228-00	CERAMIC	470pF 10% 500V
$\triangle$	C505	1-162-116-00	CERAMIC 680pF 10% 2KV
C506	1-162-318-11	CERAMIC	0.001 $\mu$ F 10% 500V
$\triangle$	C507	1-117-717-11	FILM 17000pF 3% 1.2KV
$\triangle$	C508	1-137-150-11	MYLAR 0.01 $\mu$ F 10% 100V
$\triangle$	C509	1-162-116-00	CERAMIC 680pF 10% 2KV
C510	1-107-649-11	ELECT	2.2 $\mu$ F 20% 250V
$\triangle$	C511	1-115-522-11	FILM 1 $\mu$ F 5% 250V
$\triangle$	C512	1-106-387-00	MYLAR 0.068 $\mu$ F 10% 200V
C513	1-104-987-11	MYLAR	0.001 $\mu$ F 10% 100V
C514	1-109-844-11	FILM	0.68 $\mu$ F 5% 250V
$\triangle$	C515	1-162-116-00	CERAMIC 680pF 10% 2KV
$\triangle$	C520	1-129-722-00	FILM 0.047 $\mu$ F 5% 630V
C521	1-164-646-11	CERAMIC	2200pF 10% 500V
C523	1-126-941-11	ELECT	470 $\mu$ F 20% 25V
C524	1-102-244-00	CERAMIC	220pF 10% 500V
C525	1-107-612-11	CERAMIC	100pF 5% 500V
C526	1-126-960-11	ELECT	1 $\mu$ F 20% 50V
C527	1-126-965-91	ELECT	22 $\mu$ F 20% 50V
C528	1-164-161-11	CERAMIC CHIP	0.0022 $\mu$ F 10% 50V
C529	1-164-161-11	CERAMIC CHIP	0.0022 $\mu$ F 10% 50V
C530	1-164-161-11	CERAMIC CHIP	0.0022 $\mu$ F 10% 50V
C531	1-106-387-00	MYLAR	0.068 $\mu$ F 10% 200V
C533	1-126-941-11	ELECT	470 $\mu$ F 20% 25V
$\triangle$	C534	1-126-964-11	ELECT 10 $\mu$ F 20% 50V
C535	1-126-959-11	ELECT	0.47 $\mu$ F 20% 50V
C536	1-102-228-00	CERAMIC	470pF 10% 500V
$\triangle$	C537	1-126-965-91	ELECT 22 $\mu$ F 20% 50V
C539	1-107-662-11	ELECT	22 $\mu$ F 20% 250V
C540	1-107-645-11	ELECT	22 $\mu$ F 20% 160V
C541	1-126-969-11	ELECT	220 $\mu$ F 20% 50V
C542	1-126-967-11	ELECT	47 $\mu$ F 20% 50V
C543	1-136-169-00	FILM	0.22 $\mu$ F 5% 50V
$\triangle$	C546	1-126-965-91	ELECT 22 $\mu$ F 20% 50V
$\triangle$	C547	1-163-031-91	CERAMIC CHIP 0.01 $\mu$ F 50V
C548	1-104-710-11	ELECT	22 $\mu$ F 160V
C549	1-126-934-11	ELECT	220 $\mu$ F 20% 16V
C550	1-107-846-11	FILM	0.1 $\mu$ F 5% 250V
$\triangle$	C551	1-137-417-11	MYLAR 0.0047 $\mu$ F 10% 200V
C553	1-107-662-11	ELECT	22 $\mu$ F 20% 250V
C554	1-102-110-00	CERAMIC	220pF 10% 50V
$\triangle$	C555	1-117-629-11	FILM 2700pF 3% 1.2KV
C601	1-164-004-11	CERAMIC CHIP	0.1 $\mu$ F 10% 25V
C602	1-126-967-11	ELECT	47 $\mu$ F 20% 50V
C604	1-164-182-11	CERAMIC CHIP	0.0033 $\mu$ F 10% 50V
$\triangle$	C606	1-113-920-11	CERAMIC 0.0022 $\mu$ F 20% 250V
C607		VARIANT (SEE VARIANT PARTS LIST)	
C609	1-126-968-11	ELECT	100 $\mu$ F 20% 50V

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## COMMON PARTS LISTING FV SERIES

REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
C610	1-126-964-11	ELECT	10 $\mu$ F 20% 50V	* CN506	1-564-508-11	PLUG,CONNECTOR 5P	
$\triangle$ C611	1-113-920-11	CERAMIC	0.0022 $\mu$ F 20% 250V	* CN515	1-564-510-11	PLUG,CONNECTOR 7P	
C612		VARIANT (SEE VARIANT PARTS LIST)		CN602	1-580-843-11	PIN,CONNECTOR (POWER)	
C613	1-126-964-11	ELECT	10 $\mu$ F 20% 50V	* CN603	1-573-963-11	PIN,CONNECTOR (PC BOARD) 3P	
C614	1-130-495-00	MYLAR	0.1 $\mu$ F 5% 50V	CN2001	1-764-334-11	PLUG,CONNECTOR 11P	
				* CN2003	1-564-506-11	PLUG,CONNECTOR 3P	
C615	1-130-202-00	FILM	0.022 $\mu$ F 10% 400V	* CN2004	1-564-508-11	PLUG,CONNECTOR 5P	
C616	1-107-824-11	CERAMIC	220pF 5% 1KV	* CN2005	1-764-333-11	PLUG,CONNECTOR 10P	
C617	1-125-893-11	FILM	680pF 3% 1.5KV	* CN2006	1-764-333-11	PLUG,CONNECTOR 10P	
C618	1-164-081-11	CERAMIC	470pF 10% 50V	* CN2007	1-564-512-11	PLUG,CONNECTOR 9P	
C619	1-136-356-11	MYLAR	470pF 5% 50V	* CN2008	1-564-512-11	PLUG,CONNECTOR 9P	
C620	1-104-665-11	ELECT	100 $\mu$ F 20% 25V			<b>DIODE</b>	
C621	1-125-772-91	CERAMIC	1500pF 10% 2KV	D201	8-719-108-12	DIODE RD9.1EW-T1	
C622	1-164-625-11	CERAMIC	680pF 10% 500V	D202	8-719-108-12	DIODE RD9.1EW-T1	
				D203	8-719-108-12	DIODE RD9.1EW-T1	
C623	1-164-625-11	CERAMIC	680pF 10% 500V	D204	8-719-982-22	DIODE MTZJ-T-77-30D	
C624	1-131-867-51	ELECT	100 $\mu$ F 160V	D205	8-719-108-12	DIODE RD9.1EW-T1	
C625	1-135-572-51	ELECT	1000 $\mu$ F 20% 50V				
C626	1-135-573-51	ELECT	15000 $\mu$ F 20% 25V	D206	8-719-108-12	DIODE RD9.1EW-T1	
C627	1-136-189-00	MYLAR	0.1 $\mu$ F 10% 250V	D208	8-719-108-12	DIODE RD9.1EW-T1	
				D209	8-719-069-60	DIODE UDZSTE-179.1B	
C628	1-104-665-11	ELECT	100 $\mu$ F 20% 25V	D210	8-719-110-17	DIODE MTZJ-T-77-10B	
C630		VARIANT (SEE VARIANT PARTS LIST)		D211	8-719-108-12	DIODE RD9.1EW-T1	
C631		VARIANT (SEE VARIANT PARTS LIST)					
C634	1-137-605-11	MYLAR	0.01 $\mu$ F 10% 250V	D214	8-719-108-12	DIODE RD9.1EW-T1	
C635	1-163-009-91	CERAMIC CHIP	0.001 $\mu$ F 10% 50V	D215	8-719-108-12	DIODE RD9.1EW-T1	
C636	1-126-970-11	ELECT	330 $\mu$ F 20% 50V	D230	8-719-108-12	DIODE RD9.1EW-T1	
C637	1-163-009-91	CERAMIC CHIP	0.001 $\mu$ F 10% 50V	D231	8-719-108-12	DIODE RD9.1EW-T1	
				D232	8-719-108-12	DIODE RD9.1EW-T1	
C638	1-163-005-91	CERAMIC CHIP	470pF 10% 50V				
C639	1-126-965-91	ELECT	22 $\mu$ F 20% 50V	D233	8-719-108-12	DIODE RD9.1EW-T1	
C641	1-107-679-91	ELECT	10 $\mu$ F 20% 450V	D234	8-719-069-60	DIODE UDZSTE-179.1B	
C643	1-104-760-11	CERAMIC CHIP	0.047 $\mu$ F 10% 50V	D235	8-719-069-60	DIODE UDZSTE-179.1B	
C647	1-161-964-91	CERAMIC	0.0047 $\mu$ F 250V	D236	8-719-069-60	DIODE UDZSTE-179.1B	
				D401	8-719-110-17	DIODE MTZJ-T-77-10B	
C648	1-136-346-21	MYLAR	0.22 $\mu$ F 20% 125V				
C652	1-130-471-00	MYLAR	0.001 $\mu$ F 5% 50V	$\triangle$ D501	8-719-945-80	DIODE ERC06-15S	
C654	1-107-636-11	ELECT	10 $\mu$ F 20% 160V	D502	8-719-908-03	DIODE GP08DPKG23	
$\triangle$ C655	1-136-311-11	MYLAR	0.47 $\mu$ F 20% 125V	D503	8-719-908-03	DIODE GP08DPKG23	
C657	1-104-664-11	ELECT	47 $\mu$ F 20% 25V	$\triangle$ D504	8-719-945-80	DIODE ERC06-15S	
				D505	8-719-312-10	DIODE RU4AM-T3	
C658	1-135-572-51	ELECT	1000 $\mu$ F 20% 50V				
C659	1-135-573-51	ELECT	15000 $\mu$ F 20% 25V	D506	8-719-302-43	DIODE RGP10GPKG3	
C660		VARIANT (SEE VARIANT PARTS LIST)		D507	8-719-991-33	DIODE 1SS133T-77	
C661		VARIANT (SEE VARIANT PARTS LIST)		D508	8-719-991-33	DIODE 1SS133T-77	
C2001	1-104-664-11	ELECT	47 $\mu$ F 20% 25V	D509	8-719-109-89	DIODE MTZJ-T-77-5.6C	
				D510	8-719-908-03	DIODE GP08DPKG23	
	<b>CONNECTOR</b>			D511	8-719-302-43	DIODE RGP10GPKG3	
* CN301	1-564-507-11	PLUG,CONNECTOR 4P		D512	8-719-404-50	DIODE MA111-TX	
* CN406	1-564-507-11	PLUG,CONNECTOR 4P		D513	8-719-979-85	DIODE RGP15GPKG23	
CN460	1-573-298-21	CONNECTOR, BOARD TO BOARD 20P		D514	8-719-979-85	DIODE RGP15GPKG23	
* CN501	1-580-798-11	CONNECTOR PIN (DY) 6P		D515	8-719-404-50	DIODE MA111-TX	
CN502	1-564-509-11	PLUG,CONNECTOR 6P		$\triangle$ D516	8-719-991-33	DIODE 1SS133T-77	
* CN503	1-564-512-11	PLUG,CONNECTOR 9P					
* CN504	1-508-784-21	PIN,CONNECTOR (5MM PITCH) 1P					

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## COMMON PARTS LISTING FV SERIES

REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
$\triangle$ D517	8-719-991-33	DIODE 1SS133T-77		FB605	1-412-911-11	FERRITE	0 $\mu$ H
$\triangle$ D518	8-719-921-63	DIODE MTZJ-T-77-7.5X		FB606	1-412-911-11	FERRITE	0 $\mu$ H
$\triangle$ D519	8-719-979-84	DIODE EGP20DPKG23		FB607	1-412-911-11	FERRITE	0 $\mu$ H
$\triangle$ D520	8-719-404-50	DIODE MA111-TX		FB608	1-412-911-11	FERRITE	0 $\mu$ H
D521	8-719-991-33	DIODE 1SS133T-77		FB609	1-412-911-11	FERRITE	0 $\mu$ H
D522	8-719-404-50	DIODE MA111-TX		FB610	1-412-911-11	FERRITE	0 $\mu$ H
D601	8-719-991-33	DIODE 1SS133T-77		<b>IC</b>			
D602	8-719-991-33	DIODE 1SS133T-77		$\triangle$ IC402	8-759-573-40	IC TDA8580Q/N1	
D603	8-719-982-26	DIODE MTZJ-T-77-33B		$\triangle$ IC501	8-759-700-07	IC NJM2903M-TE2	
D604	8-719-028-72	DIODE RGP02-17PKG23		IC502	8-759-980-58	IC TDA8172	
$\triangle$ D605	8-719-510-53	DIODE D4SB60L-F		IC601		VARIANT (SEE VARIANT PARTS LIST)	
$\triangle$ D606	8-719-108-18	DIODE TF541M		$\triangle$ IC602	8-749-016-47	IC EA135-F12	
D607	8-719-991-33	DIODE 1SS133T-77		IC603	8-759-653-07	IC PQ09RD21	
D608	8-719-110-53	DIODE MTZJ-T-77-20B		IC604	8-759-924-12	IC LM7805CT	
D609	8-719-311-31	DIODE RU-1P		<b>JACK</b>			
D610	8-719-210-21	DIODE 11EQS04-NTA1B		J201	1-794-119-11	TERMINAL BLOCK, S 4P	
D611	8-719-046-74	DIODE 10ELS2N-TA1B2		J203	1-794-118-11	JACK BLOCK, PIN 3P	
D612	8-719-110-17	DIODE MTZJ-T-77-10B		J204	1-794-118-11	JACK BLOCK, PIN 3P	
D613	8-719-046-74	DIODE 10ELS2N-TA1B2		J205	1-794-116-11	JACK BLOCK, PIN 2P	
D614	8-719-046-74	DIODE 10ELS2N-TA1B2		J206	1-794-117-11	JACK BLOCK, PIN 3P	
D615	8-719-312-10	DIODE RU4AM-T3		J402	1-794-116-11	JACK BLOCK, PIN 2P	
D616	8-719-510-37	DIODE D5LC20U		<b>CHIP CONDUCTOR</b>			
D617	8-719-110-31	DIODE MTZJ-T-77-12C		JR001	1-216-295-91	SHORT	
D618	8-719-991-33	DIODE 1SS133T-77		JR002	1-216-295-91	SHORT	
D619	8-719-110-17	DIODE MTZJ-T-77-10B		JR402	1-216-295-91	SHORT	
D620	8-719-510-37	DIODE D5LC20U		JR403	1-216-295-91	SHORT	
D622	8-719-077-76	DIODE D2SB60A-F04		JR404	1-216-295-91	SHORT	
D623	8-719-081-70	DIODE BA159DGPPKG3		JR405	1-216-295-91	SHORT	
D624	8-719-991-33	DIODE 1SS133T-77		JR410	1-216-295-91	SHORT	
D625	8-719-991-33	DIODE 1SS133T-77		JR411	1-216-295-91	SHORT	
D626	8-719-046-74	DIODE 10ELS2N-TA1B2		JR471	1-164-222-91	CERAMIC CHIP	0.22 $\mu$ F 25V
D627	8-719-110-03	DIODE MTZJ-T-77-7.5A		JR472	1-216-295-91	SHORT	
D628	8-719-510-48	DIODE D1N20R-TA		JR501	1-216-295-91	SHORT	
D2002	8-719-110-17	DIODE MTZJ-T-77-10B		JR502	1-216-295-91	SHORT	
D2004	8-719-921-44	DIODE MTZJ-T-77-5.1C		JR503	1-216-295-91	SHORT	
D2005	8-719-921-44	DIODE MTZJ-T-77-5.1C		JR505	1-216-295-91	SHORT	
				JR522	1-216-295-91	SHORT	
<b>FUSE</b>				JR523	1-216-295-91	SHORT	
F601		VARIANT (SEE VARIANT PARTS LIST)		JR526	1-216-295-91	SHORT	
<b>FERRITE BEAD</b>				JR527	1-216-295-91	SHORT	
FB501	1-410-397-21	FERRITE	1.1 $\mu$ H	JR2003	1-216-295-91	SHORT	
FB502	1-410-397-21	FERRITE	1.1 $\mu$ H	<b>COIL</b>			
FB503	1-410-397-21	FERRITE	1.1 $\mu$ H	L101	1-412-029-11	INDUCTOR	10 $\mu$ H
FB600	1-412-911-11	FERRITE	0 $\mu$ H	L102	1-412-032-11	INDUCTOR	100 $\mu$ H
FB601	1-412-911-11	FERRITE	0 $\mu$ H	L103	1-412-029-11	INDUCTOR	10 $\mu$ H
FB602	1-412-911-11	FERRITE	0 $\mu$ H	L501	1-409-955-11	INDUCTOR	8mH
FB603	1-412-911-11	FERRITE	0 $\mu$ H	L502	1-412-552-11	INDUCTOR	2.2mH
FB604	1-412-911-11	FERRITE	0 $\mu$ H				

**NOTE:** The components identified by shading and  $\triangle$  mark are critical for safety. Replace only with part number specified.

**NOTE:** Les composants identifiés par un trame et une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifique.



### COMMON PARTS LISTING FV SERIES

REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
L503	1-406-677-11	INDUCTOR	10mH	R204	1-216-081-00	RES-CHIP	22K 5% 1/10W
L504	1-412-533-21	INDUCTOR	47 $\mu$ H	R205	1-216-085-91	RES-CHIP	33K 5% 1/10W
L505	1-406-978-11	INDUCTOR	150 $\mu$ H	R208	1-215-924-00	METAL OXIDE	15K 5% 3W
L506	1-406-677-11	INDUCTOR	10mH	R210	1-216-022-00	RES-CHIP	75 5% 1/10W
L507	1-412-552-11	INDUCTOR	2.2mH	R214	1-216-113-00	RES-CHIP	470K 5% 1/10W
$\triangle$ L510	1-412-528-11	INDUCTOR	18 $\mu$ H	R215	1-216-113-00	RES-CHIP	470K 5% 1/10W
L603	1-412-529-11	INDUCTOR	22 $\mu$ H	R218		VARIANT (SEE VARIANT PARTS LIST)	
L604	1-412-525-31	INDUCTOR	10 $\mu$ H	R221	1-216-033-00	RES-CHIP	220 5% 1/10W
L605	1-412-529-11	INDUCTOR	22 $\mu$ H	R224	1-208-798-11	METAL CHIP	4.7K 0.50% 1/10W
<b>PHOTO COUPLER</b>				R225	1-208-798-11	METAL CHIP	4.7K 0.50% 1/10W
$\triangle$ PH601	8-749-010-64	PHOTO COUPLER PC123FY2		R226	1-216-022-00	RES-CHIP	75 5% 1/10W
<b>IC LINK</b>				R227	1-216-113-00	RES-CHIP	470K 5% 1/10W
$\triangle$ PS401	1-532-686-21	LINK, IC 2.7A/150V		R228	1-216-113-00	RES-CHIP	470K 5% 1/10W
<b>TRANSISTOR</b>				R229	1-216-113-00	RES-CHIP	470K 5% 1/10W
Q101	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R231	1-216-069-00	RES-CHIP	6.8K 5% 1/10W
Q201	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R232	1-216-069-00	RES-CHIP	6.8K 5% 1/10W
Q205	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R401	1-216-080-00	RES-CHIP	20K 5% 1/10W
Q206	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R402	1-216-073-91	RES-CHIP	10K 5% 1/10W
Q401	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R403	1-208-798-11	METAL CHIP	4.7K 0.50% 1/10W
Q402	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R404	1-208-798-11	METAL CHIP	4.7K 0.50% 1/10W
Q410	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R407	1-208-758-11	METAL CHIP	100 0.50% 1/10W
Q411	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R408	1-208-758-11	METAL CHIP	100 0.50% 1/10W
Q501	8-729-140-50	TRANSISTOR 2SC3209LK-TP		R411	1-249-417-11	CARBON	1K 5% 1/4W
$\triangle$ Q502	8-729-046-07	TRANSISTOR 2SD2578-YB		R412	1-216-113-00	RES-CHIP	470K 5% 1/10W
$\triangle$ Q503	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R413	1-216-113-00	RES-CHIP	470K 5% 1/10W
$\triangle$ Q504	8-729-053-87	TRANSISTOR KTC4370A		R414	1-249-417-11	CARBON	1K 5% 1/4W
$\triangle$ Q505	8-729-200-17	TRANSISTOR 2SA10910-TPE2		R421	1-249-425-11	CARBON	4.7K 5% 1/4W
$\triangle$ Q506	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R422	1-249-389-11	CARBON	4.7 5% 1/4W
$\triangle$ Q507	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R426	1-216-009-91	RES-CHIP	22 5% 1/10W
Q601	8-729-922-37	TRANSISTOR 2SD2144S-TP-UVV		R429	1-216-113-00	RES-CHIP	470K 5% 1/10W
Q602	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA		R430	1-216-049-11	RES-CHIP	1K 5% 1/10W
$\triangle$ Q603	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA		R431	1-216-049-11	RES-CHIP	1K 5% 1/10W
Q604	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R433	1-216-113-00	RES-CHIP	470K 5% 1/10W
$\triangle$ Q605	8-729-046-40	TRANSISTOR 2SK2663		R436	1-208-798-11	METAL CHIP	4.7K 0.50% 1/10W
Q606	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R437	1-216-073-91	RES-CHIP	10K 5% 1/10W
Q607	8-729-922-37	TRANSISTOR 2SD2144S-TP-UVV		R438	1-208-798-11	METAL CHIP	4.7K 0.50% 1/10W
Q608	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R440	1-216-097-11	RES-CHIP	100K 5% 1/10W
Q609	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA		R441	1-216-081-00	RES-CHIP	22K 5% 1/10W
<b>RESISTOR</b>				R442	1-208-758-11	METAL CHIP	100 0.50% 1/10W
R105	1-208-798-11	METAL CHIP	4.7K 0.50% 1/10W	R445	1-216-073-91	RES-CHIP	10K 5% 1/10W
R107	1-216-025-11	RES-CHIP	100 5% 1/10W	R446	1-215-457-00	METAL	33K 1% 1/4W
R108	1-216-025-11	RES-CHIP	100 5% 1/10W	R447	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
R115	1-216-295-91	SHORT		R454	1-216-025-11	RES-CHIP	100 5% 1/10W
R201	1-216-113-00	RES-CHIP	470K 5% 1/10W	R490	1-216-073-91	RES-CHIP	10K 5% 1/10W
R202	1-216-113-00	RES-CHIP	470K 5% 1/10W	R501	1-249-425-11	CARBON	4.7K 5% 1/4W
R203	1-216-022-00	RES-CHIP	75 5% 1/10W	$\triangle$ R502	1-216-455-21	METAL OXIDE	560 5% 2W
				$\triangle$ R503	1-249-425-11	CARBON	4.7K 5% 1/4W

NOTE: The components identified by shading and  $\triangle$  mark are critical for safety. Replace only with part number specified.

A component identified by this  $\boxtimes$  symbol indicates that it has been carefully factory-selected to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.



## COMMON PARTS LISTING FV SERIES

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES				
	R505	1-249-401-11	CARBON	47	5%	1/4W							
$\triangle$	R506	1-215-883-11	METAL OXIDE	33	5%	2W	$\triangle$	R560	1-215-879-11	METAL OXIDE	47K	5%	1W
$\triangle$	R507	1-260-328-11	CARBON	1K	5%	1/2W	$\triangle$	R561	1-249-406-11	CARBON	120	5%	1/4W
	R508	1-249-433-11	CARBON	22K	5%	1/4W	$\triangle$	R562	1-208-808-11	METAL CHIP	12K	0.50%	1/10W
$\triangle$	R509	1-215-891-11	METAL OXIDE	680	5%	2W							
	R510	1-249-411-11	CARBON	330	5%	1/4W	$\triangle$	R563	1-249-433-11	CARBON	22K	5%	1/4W
	R511	1-249-377-11	CARBON	0.47	5%	1/4W	$\triangle$	$\boxtimes$ R564	1-208-836-11	METAL CHIP	180K	0.50%	1/10W
	R512	1-215-910-00	METAL OXIDE	68	5%	3W	$\triangle$	R565	1-249-429-11	CARBON	10K	5%	1/4W
$\triangle$	R513	1-215-907-11	METAL OXIDE	22	5%	3W	$\triangle$	R566	1-216-073-91	RES-CHIP	10K	5%	1/10W
	R514	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	$\triangle$	R567	1-216-073-91	RES-CHIP	10K	5%	1/10W
	R516	1-249-425-11	CARBON	4.7K	5%	1/4W	$\triangle$	R568	1-215-882-00	METAL OXIDE	22	5%	2W
	R517	1-215-445-00	METAL	10K	1%	1/4W							
	R518	1-249-427-11	CARBON	6.8K	5%	1/4W		R569	1-214-798-21	METAL	1.8	1%	1/2W
	R519	1-249-427-11	CARBON	6.8K	5%	1/4W		R570	1-249-433-11	CARBON	22K	5%	1/4W
$\triangle$	R520	1-215-884-11	METAL OXIDE	47	5%	2W		R571	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
$\triangle$	R521	1-249-413-11	CARBON	470	5%	1/4W		R572	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
	R522	1-249-417-11	CARBON	1K	5%	1/4W		R601		VARIANT (SEE VARIANT PARTS LIST)			
	R523	1-216-073-91	RES-CHIP	10K	5%	1/10W	$\triangle$	R602	1-249-389-11	CARBON	4.7	5%	1/4W
	R524	1-249-429-11	CARBON	10K	5%	1/4W		R603	1-215-485-00	METAL	470K	1%	1/4W
$\triangle$	R525	1-208-804-11	METAL CHIP	8.2K	0.50%	1/10W		R607	1-215-859-00	METAL OXIDE	22	5%	1W
	R526	1-208-814-91	METAL CHIP	22K	0.50%	1/10W		R608	1-240-205-11	CARBON	22M	5%	1/2W
	R528	1-215-429-00	METAL	2.2K	1%	1/4W		R609	1-216-049-11	RES-CHIP	1K	5%	1/10W
	R529	1-216-109-00	RES-CHIP	330K	5%	1/10W		R610	1-216-073-91	RES-CHIP	10K	5%	1/10W
	R530	1-216-077-91	RES-CHIP	15K	5%	1/10W		R611	1-216-089-91	RES-CHIP	47K	5%	1/10W
	R532	1-215-437-00	METAL	4.7K	1%	1/4W		R612	1-216-045-00	RES-CHIP	680	5%	1/10W
	R533	1-215-457-00	METAL	33K	1%	1/4W	$\triangle$	R613	1-219-512-11	CARBON	2.2M	5%	1/2W
	R534	1-215-458-00	METAL	36K	1%	1/4W		R614	1-249-413-11	CARBON	470	5%	1/4W
	R535	1-249-441-11	CARBON	100K	5%	1/4W		R615		VARIANT (SEE VARIANT PARTS LIST)			
$\triangle$	R536	1-214-798-21	METAL	1.8	1%	1/2W	$\triangle$	R616	1-260-302-51	CARBON	6.8	5%	1/2W
$\triangle$	R538	1-215-889-00	METAL OXIDE	330	5%	2W		R617	1-216-009-91	RES-CHIP	22	5%	1/10W
$\triangle$	R539	1-249-385-11	CARBON	2.2	5%	1/4W		R618	1-249-440-11	CARBON	82K	5%	1/4W
	R540	1-215-445-00	METAL	10K	1%	1/4W		R619	1-249-437-11	CARBON	47K	5%	1/4W
	R541	1-249-429-11	CARBON	10K	5%	1/4W		R620	1-249-417-11	CARBON	1K	5%	1/4W
	R543	1-247-887-00	CARBON	220K	5%	1/4W	$\triangle$	R621	1-240-251-11	CEMENTED	6.8	5%	10W
$\triangle$	R544	1-249-377-11	CARBON	0.47	5%	1/4W		R622	1-249-441-11	CARBON	100K	5%	1/4W
	R545	1-215-873-00	METAL OXIDE	4.7K	5%	1W	$\triangle$	R623	1-260-324-11	CARBON	470	5%	1/2W
$\triangle$	R546	1-249-377-11	CARBON	0.47	5%	1/4W							
	R547	1-216-455-21	METAL OXIDE	560	5%	2W	$\triangle$	R624	1-249-429-11	CARBON	10K	5%	1/4W
	R548	1-216-377-11	METAL OXIDE	4.7	5%	2W		R625	1-249-437-11	CARBON	47K	5%	1/4W
$\triangle$	R549	1-260-288-11	CARBON	0.47	5%	1/2W	$\triangle$	R626	1-202-933-61	FUSIBLE	0.1	10%	1/2W
$\triangle$	R550	1-260-288-11	CARBON	0.47	5%	1/2W		R627		VARIANT (SEE VARIANT PARTS LIST)			
	R551	1-215-907-11	METAL OXIDE	22	5%	3W		R628		VARIANT (SEE VARIANT PARTS LIST)			
$\triangle$	R553	1-216-363-00	METAL OXIDE	0.33	5%	2W		R629		VARIANT (SEE VARIANT PARTS LIST)			
$\triangle$	R554	1-249-429-11	CARBON	10K	5%	1/4W		R630	1-249-421-11	CARBON	2.2K	5%	1/4W
$\triangle$	R555	1-247-895-91	CARBON	470K	5%	1/4W		R631		VARIANT (SEE VARIANT PARTS LIST)			
$\triangle$	R556	1-249-417-11	CARBON	1K	5%	1/4W	$\triangle$	R632	1-217-611-00	METAL	0.1	10%	2W
$\triangle$	R557	1-247-895-91	CARBON	470K	5%	1/4W		R633	1-249-415-11	CARBON	680	5%	1/4W
$\triangle$	R558	1-216-097-11	RES-CHIP	100K	5%	1/10W		R634	1-216-073-91	RES-CHIP	10K	5%	1/10W
$\triangle$	R559	1-216-073-91	RES-CHIP	10K	5%	1/10W		R635	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
								R637		VARIANT (SEE VARIANT PARTS LIST)			
								R638		VARIANT (SEE VARIANT PARTS LIST)			

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## COMMON PARTS LISTING FV SERIES

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES
R639	1-249-421-11	CARBON	2.2K	5%	1/4W				
R640	1-249-417-11	CARBON	1K	5%	1/4W				
$\triangle$ R641	1-216-369-00	METAL OXIDE	1	5%	2W				
R642	1-216-089-91	RES-CHIP	47K	5%	1/10W				
R643	1-249-419-11	CARBON	1.5K	5%	1/4W				
R644	1-247-843-11	CARBON	3.3K	5%	1/4W				
R645	1-215-898-11	METAL OXIDE	10K	5%	2W				
R646		VARIANT (SEE VARIANT PARTS LIST)							
R648	1-216-398-11	METAL OXIDE	5.6	5%	3W				
R649	1-249-417-11	CARBON	1K	5%	1/4W				
R650	1-216-387-11	METAL OXIDE	0.68	5%	3W				
R651	1-249-429-11	CARBON	10K	5%	1/4W				
R653	1-216-049-11	RES-CHIP	1K	5%	1/10W				
R655	1-216-049-11	RES-CHIP	1K	5%	1/10W				
R656	1-249-429-11	CARBON	10K	5%	1/4W				
R658	1-216-387-11	METAL OXIDE	0.68	5%	3W				
R659	1-215-857-71	METAL OXIDE	10	5%	1W				
R660		VARIANT (SEE VARIANT PARTS LIST)							
R661	1-216-057-00	RES-CHIP	2.2K	5%	1/10W				
R662		VARIANT (SEE VARIANT PARTS LIST)							
R663	1-216-081-00	RES-CHIP	22K	5%	1/10W				
R664	1-216-398-11	METAL OXIDE	5.6	5%	3W				
R2003	1-249-425-11	CARBON	4.7K	5%	1/4W				
<b>RELAY</b>									
$\triangle$ RY601	1-755-198-11	RELAY							
$\triangle$ RY602	1-755-266-11	RELAY, AC POWER							
<b>SWITCH</b>									
SW501	1-572-707-11	SWITCH LEVER							
SW502	1-572-707-11	SWITCH LEVER							
<b>TRANSFORMER</b>									
$\triangle$ T501	1-437-195-11	TRANSFORMER, HORIZONTAL DRIVE							
$\triangle$ T503	1-426-981-11	TRANSFORMER, FERRITE (PMT)							
$\triangle$ T504	1-431-693-11	TRANSFORMER, HORIZONTAL LINEAR							
$\triangle$ T505	1-453-310-11	FBT ASSY NX-4521//X4J4							
T602		VARIANT (SEE VARIANT PARTS LIST)							
T603		VARIANT (SEE VARIANT PARTS LIST)							
$\triangle$ T604	1-431-852-11	TRANSFORMER, CONVERTER (SRT)							
<b>THERMISTOR</b>									
TH501	1-800-193-00	THERMISTOR							
$\triangle$ TH601	1-803-586-11	THERMISTOR, NTC							
<b>THERMISTOR</b>									
$\triangle$ THP601	1-803-540-11	THERMISTOR							
<b>TUNER</b>									
$\triangle$ TU101	8-598-542-20	TUNER, FSS BTF-WA412							

**VARISTOR**

VDR601 VARIANT (SEE VARIANT PARTS LIST)

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## VARIANT PARTS LISTING



The parts on this page belong to the following model(s) only:  
**KV-27FS13**

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
<b>A BOARD VARIANT PARTS LIST (KV-27FS13)</b>											
*	A-1299-502-A	A COMPLETE PC BOARD									
<b>CAPACITOR</b>											
$\triangle$	C507	1-117-717-11	FILM	17000pF	3%	1.2KV					
$\triangle$	C511	1-115-522-11	FILM	1 $\mu$ F	5%	250V					
	C514	1-109-844-11	FILM	0.68 $\mu$ F	5%	250V					
$\triangle$	C520	1-129-722-00	FILM	0.047 $\mu$ F	5%	630V					
	C530	1-164-161-11	CERAMIC CHIP	0.0022 $\mu$ F	10%	50V					
	C548	1-104-710-11	ELECT	22 $\mu$ F		160V					
	C550	1-107-846-11	FILM	0.1 $\mu$ F	5%	250V					
$\triangle$	C555	1-117-629-11	FILM	2700pF	3%	1.2KV					
$\triangle$	C607	1-136-311-11	MYLAR	0.47 $\mu$ F	20%	125V					
$\triangle$	C612	1-128-717-11	ELECT	680 $\mu$ F	20%	250V					
	C625	1-135-412-51	ELECT	1000 $\mu$ F	20%	25V					
	C630	1-127-795-51	CERAMIC	3300pF	20%	250V					
	C631	1-113-924-11	CERAMIC	4700pF	20%	250V					
	C658	1-135-412-51	ELECT	1000 $\mu$ F	20%	25V					
<b>FERRITE BEAD</b>											
	FB605	1-412-911-11	FERRITE	0 $\mu$ H							
<b>IC</b>											
	IC502	8-759-980-58	IC TDA8172								
$\triangle$	IC601	8-749-018-43	IC STR-F6426								
<b>COIL</b>											
	L505	1-406-978-11	INDUCTOR	150 $\mu$ H							
<b>TRANSISTOR</b>											
$\triangle$	Q502	8-729-046-07	TRANSISTOR 2SD2578-YB								
<b>RESISTOR</b>											
	R436	1-216-069-00	RES-CHIP	6.8K	5%	1/10W					
	R437	1-216-065-91	RES-CHIP	4.7K	5%	1/10W					
	R438	1-216-069-00	RES-CHIP	6.8K	5%	1/10W					
	R490	1-208-798-11	METAL CHIP	4.7K	1%	1/10W					
$\triangle$	R513	1-215-907-11	METAL OXIDE	22	5%	3W					
	R514	1-216-683-11	METAL CHIP	22K	1%	1/10W					
	R518	1-249-427-11	CARBON	6.8K	5%	1/4W					
	R519	1-249-427-11	CARBON	6.8K	5%	1/4W					
	R529	1-216-109-00	RES-CHIP	330K	5%	1/10W					
	R530	1-216-077-91	RES-CHIP	15K	5%	1/10W					
	R533	1-215-457-00	METAL	33K	1%	1/4W					
	R534	1-215-458-00	METAL	36K	1%	1/4W					
$\triangle$	$\boxtimes$ R564	1-208-836-11	METAL CHIP	180K	1%	1/10W					
$\triangle$	R601	1-219-513-11	CARBON	4.7M	5%	1/2W					
$\triangle$	R626	1-220-926-11	FUSIBLE	0.47	10%	1/2W					
	R627	1-215-483-00	METAL	390K	1%	1/4W					
$\triangle$	R632	1-216-361-00	METAL OXIDE	0.22	5%	2W					
	R638	1-249-399-11	CARBON	33	5%	1/4W					
$\triangle$	R641	1-216-362-11	METAL OXIDE	0.27	5%	2W					
	R646	1-249-419-11	CARBON	1.5K	5%	1/4W					
$\triangle$	R660	1-215-924-00	METAL OXIDE	15K	5%	3W					
<b>TRANSFORMER</b>											
$\triangle$	T504	1-431-693-11	TRANSFORMER, HORIZONTAL LINEAR								
$\triangle$	T505	1-453-310-11	FBT ASSY NX-4521//X4J4								
$\triangle$	T602	1-435-617-11	TRANSFORMER, LINE FILTER								
$\triangle$	T603	1-433-806-21	TRANSFORMER, REGULAT								
<b>THERMISTOR</b>											
$\triangle$	THP601	1-803-540-11	THERMISTOR								
<b>VARISTOR</b>											
$\triangle$	VDR601	1-803-585-11	VARISTOR ENE271D-10A								

NOTE: The components identified by shading and  $\triangle$  mark are critical for safety. Replace only with part number specified.

A component identified by this  $\boxtimes$  symbol indicates that it has been carefully factory-selected to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

## VARIANT PARTS LISTING



The parts on this page belong to the following model(s) only:  
**KV-27FS17**

REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
<b>A BOARD VARIANT PARTS LIST (KV-27FS17)</b>							
*	<b>A-1299-503-A</b>	<b>A COMPLETE PC BOARD</b>					
<b>CAPACITOR</b>							
$\triangle$	C507	1-117-717-11	FILM	17000pF	3%	1.2KV	
$\triangle$	C511	1-115-522-11	FILM	1 $\mu$ F	5%	250V	
	C514	1-109-844-11	FILM	0.68 $\mu$ F	5%	250V	
$\triangle$	C520	1-129-722-00	FILM	0.047 $\mu$ F	5%	630V	
	C530	1-164-161-11	CERAMIC CHIP	0.0022 $\mu$ F	10%	50V	
	C548	1-104-710-11	ELECT	22 $\mu$ F		160V	
	C550	1-107-846-11	FILM	0.1 $\mu$ F	5%	250V	
$\triangle$	C555	1-117-629-11	FILM	2700pF	3%	1.2KV	
$\triangle$	C607	1-136-311-11	MYLAR	0.47 $\mu$ F	20%	125V	
$\triangle$	C612	1-128-717-11	ELECT	680 $\mu$ F	20%	250V	
	C615	1-130-202-00	FILM	0.022 $\mu$ F	10%	400V	
	C616	1-107-824-11	CERAMIC	220pF	5%	1KV	
	C625	1-135-412-51	ELECT	1000 $\mu$ F	20%	25V	
	C630	1-127-795-51	CERAMIC	3300pF	20%	250V	
	C631	1-113-924-11	CERAMIC	4700pF	20%	250V	
	C658	1-135-412-51	ELECT	1000 $\mu$ F	20%	25V	
<b>DIODE</b>							
	D609	8-719-311-31	DIODE RU-1P				
<b>FERRITE BEAD</b>							
	FB605	1-412-911-11	FERRITE	0 $\mu$ H			
	FB607	1-412-911-11	FERRITE	0 $\mu$ H			
	FB608	1-412-911-11	FERRITE	0 $\mu$ H			
<b>IC</b>							
	IC502	8-759-980-58	IC TDA8172				
$\triangle$	IC601	8-749-018-43	IC STR-F6426				
<b>COIL</b>							
	L505	1-406-978-11	INDUCTOR	150 $\mu$ H			
<b>TRANSISTOR</b>							
$\triangle$	Q502	8-729-046-07	TRANSISTOR 2SD2578-YB				
<b>RESISTOR</b>							
	R436	1-216-069-00	RES-CHIP	6.8K	5%	1/10W	
	R437	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	
	R438	1-216-069-00	RES-CHIP	6.8K	5%	1/10W	
	R490	1-208-798-11	METAL CHIP	4.7K	1%	1/10W	
$\triangle$	R513	1-215-907-11	METAL OXIDE	22	5%	3W	
	R514	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	
	R518	1-249-427-11	CARBON	6.8K	5%	1/4W	
	R519	1-249-427-11	CARBON	6.8K	5%	1/4W	
	R529	1-216-109-00	RES-CHIP	330K	5%	1/10W	
	R530	1-216-077-91	RES-CHIP	15K	5%	1/10W	
	R533	1-215-457-00	METAL	33K	1%	1/4W	
	R534	1-215-458-00	METAL	36K	1%	1/4W	
$\triangle$	$\boxtimes$ R564	1-208-836-11	METAL CHIP	180K	0.50%	1/10W	
$\triangle$	R601	1-219-513-11	CARBON	4.7M	5%	1/2W	
$\triangle$	R626	1-220-926-11	FUSIBLE	0.47	10%	1/2W	
	R627	1-215-483-00	METAL	390K	1%	1/4W	
	R631	1-215-929-11	METAL OXIDE	100K	5%	3W	
$\triangle$	R632	1-216-361-00	METAL OXIDE	0.22	5%	2W	
	R638	1-249-399-11	CARBON	33	5%	1/4W	
$\triangle$	R641	1-216-362-11	METAL OXIDE	0.27	5%	2W	
	R646	1-249-419-11	CARBON	1.5K	5%	1/4W	
$\triangle$	R660	1-215-924-00	METAL OXIDE	15K	5%	3W	
<b>TRANSFORMER</b>							
$\triangle$	T504	1-431-693-11	TRANSFORMER, HORIZONTAL LINEAR				
$\triangle$	T505	1-453-310-11	FBT ASSY NX-4521//X4J4				
$\triangle$	T602	1-435-617-11	TRANSFORMER, LINE FILTER				
$\triangle$	T603	1-433-806-21	TRANSFORMER, REGULAT				
<b>THERMISTOR</b>							
$\triangle$	THP601	1-803-540-11	THERMISTOR				
<b>VARISTOR</b>							
$\triangle$	VDR601	1-803-585-11	VARISTOR ENE271D-10A				

NOTE: The components identified by shading and  $\triangle$  mark are critical for safety. Replace only with part number specified.

A component identified by this  $\boxtimes$  symbol indicates that it has been carefully factory-selected to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

## VARIANT PARTS LISTING

**A**

The parts on this page belong to the following model(s) only:  
**KV-32FS13**

REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
<b>A BOARD VARIANT PARTS LIST (KV-32FS13)</b>							
*	<b>A-1299-516-A</b>	<b>A COMPLETE PC BOARD</b>					
<b><u>CAPACITOR</u></b>							
$\triangle$	C507	1-117-652-11	FILM	22000pF	3%	1.2KV	
$\triangle$	C511	1-115-521-11	FILM	0.82 $\mu$ F	5%	250V	
	C514	1-115-521-11	FILM	0.82 $\mu$ F	5%	250V	
	C517	1-107-846-11	FILM	0.1 $\mu$ F	5%	250V	
$\triangle$	C520	1-130-118-91	FILM	0.051 $\mu$ F	5%	400V	
	C530	1-163-009-91	CERAMIC CHIP	0.001 $\mu$ F	10%	50V	
	C548	1-107-995-11	ELECT	100 $\mu$ F		160V	
	C550	1-117-667-11	FILM	0.47 $\mu$ F	5%	250V	
$\triangle$	C555	1-117-635-11	FILM	4700pF	3%	1.2KV	
$\triangle$	C607	1-136-311-11	MYLAR	0.47 $\mu$ F	20%	125V	
$\triangle$	C612	1-113-611-11	ELECT(BLOCK)	820 $\mu$ F	20%	250V	
	C625	1-135-412-51	ELECT	1000 $\mu$ F	20%	25V	
	C630	1-127-795-51	CERAMIC	3300pF	20%	250V	
	C631	1-113-924-11	CERAMIC	4700pF	20%	250V	
	C658	1-135-412-51	ELECT	1000 $\mu$ F	20%	25V	
<b><u>CONNECTOR</u></b>							
*	CN604	1-573-963-11	PIN,CONNECTOR (PC BOARD)	3P			
<b><u>FERRITE BEAD</u></b>							
	FB605	1-412-911-11	FERRITE	0 $\mu$ H			
<b><u>IC</u></b>							
	IC502	8-759-192-71	IC STV9379				
$\triangle$	IC601	8-749-018-43	IC STR-F6426				
<b><u>COIL</u></b>							
	L505	1-406-976-11	INDUCTOR	68 $\mu$ H			
<b><u>TRANSISTOR</u></b>							
$\triangle$	Q502	8-729-045-26	TRANSISTOR 2SD2580-YB				
<b><u>RESISTOR</u></b>							
	R436	1-216-073-91	RES-CHIP	10K	5%	1/10W	
	R437	1-216-073-91	RES-CHIP	10K	5%	1/10W	
	R438	1-216-073-91	RES-CHIP	10K	5%	1/10W	
	R490	1-216-073-91	RES-CHIP	10K	5%	1/10W	
$\triangle$	R513	1-215-905-11	METAL OXIDE	10	5%	3W	
	R514	1-216-071-00	RES-CHIP	8.2K	5%	1/10W	
	R518	1-215-439-00	METAL	5.6K	1%	1/4W	
	R519	1-215-439-00	METAL	5.6K	1%	1/4W	
	R529	1-216-107-00	RES-CHIP	270K	5%	1/10W	
	R530	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
	R533	1-215-453-00	METAL	22K	1%	1/4W	
	R534	1-215-457-00	METAL	33K	1%	1/4W	
	R537	1-215-373-31	METAL	10	1%	1/4W	
$\triangle$	$\boxtimes$ R564	1-208-824-11	METAL CHIP	56K	1%	1/10W	
$\triangle$	R601	1-219-513-11	CARBON	4.7M	5%	1/2W	
$\triangle$	R626	1-202-933-61	FUSIBLE	0.1	10%	1/2W	
	R627	1-215-483-00	METAL	390K	1%	1/4W	
$\triangle$	R632	1-217-611-00	METAL	0.1	10%	2W	
	R638	1-249-399-11	CARBON	33	5%	1/4W	
$\triangle$	R641	1-216-369-00	METAL OXIDE	1	5%	2W	
	R646	1-249-419-11	CARBON	1.5K	5%	1/4W	
$\triangle$	R660	1-215-924-00	METAL OXIDE	15K	5%	3W	
<b><u>TRANSFORMER</u></b>							
$\triangle$	T504	1-435-098-11	TRANSFORMER, HORIZONTAL LINEAR				
$\triangle$	T505	1-453-338-11	FBT ASSY, NX-4600//X4J4				
$\triangle$	T602	1-435-617-11	TRANSFORMER, LINE FILTER				
$\triangle$	T603	1-435-403-11	TRANSFORMER, CONVERTER (S.R.T)				
<b><u>THERMISTOR</u></b>							
$\triangle$	THP601	1-803-629-11	THERMISTOR, POSITIVE				
<b><u>VARISTOR</u></b>							
$\triangle$	VDR601	1-803-585-11	VARISTOR ENE271D-10A				

NOTE: The components identified by shading and  $\triangle$  mark are critical for safety. Replace only with part number specified.

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## VARIANT PARTS LISTING



The parts on this page belong to the following model(s) only:  
**KV-32FS17/34FS17**

REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
<b>A BOARD VARIANT PARTS LIST (KV-32FS17/34FS17)</b>							
*	<b>A-1299-504-A</b>	<b>A COMPLETE PC BOARD</b>					
<b>CAPACITOR</b>							
$\triangle$	C507	1-117-652-11	FILM 22000pF 3% 1.2KV				
$\triangle$	C511	1-115-521-11	FILM 0.82 $\mu$ F 5% 250V				
	C514	1-115-521-11	FILM 0.82 $\mu$ F 5% 250V				
	C517	1-107-846-11	FILM 0.1 $\mu$ F 5% 250V				
$\triangle$	C520	1-130-118-91	FILM 0.051 $\mu$ F 5% 400V				
	C530	1-163-009-91	CERAMIC CHIP 0.001 $\mu$ F 10% 50V				
	C548	1-107-995-11	ELECT 100 $\mu$ F 160V				
	C550	1-117-667-11	FILM 0.47 $\mu$ F 5% 250V				
$\triangle$	C555	1-117-635-11	FILM 4700pF 3% 1.2KV				
$\triangle$	C607	1-136-311-11	MYLAR 0.47 $\mu$ F 20% 125V				
$\triangle$	C612	1-113-611-11	ELECT(BLOCK) 820 $\mu$ F 20% 250V				
	C625	1-135-412-51	ELECT 1000 $\mu$ F 20% 25V				
	C630	1-127-795-51	CERAMIC 3300pF 20% 250V				
	C631	1-113-924-11	CERAMIC 4700pF 20% 250V				
	C658	1-135-412-51	ELECT 1000 $\mu$ F 20% 25V				
<b>CONNECTOR</b>							
*	CN604	1-573-963-11	PIN,CONNECTOR (PC BOARD) 3P				
<b>FERRITE BEAD</b>							
	FB605	1-412-911-11	FERRITE 0 $\mu$ H				
	FB607	1-412-911-11	FERRITE 0 $\mu$ H				
	FB608	1-412-911-11	FERRITE 0 $\mu$ H				
<b>IC</b>							
	IC502	8-759-192-71	IC STV9379				
$\triangle$	IC601	8-749-018-43	IC STR-F6426				
<b>COIL</b>							
	L505	1-406-976-11	INDUCTOR 68 $\mu$ H				
<b>TRANSISTOR</b>							
$\triangle$	Q502	8-729-045-26	TRANSISTOR 2SD2580-YB				
<b>RESISTOR</b>							
	R436	1-216-073-91	RES-CHIP 10K 5% 1/10W				
	R437	1-216-073-91	RES-CHIP 10K 5% 1/10W				
	R438	1-216-073-91	RES-CHIP 10K 5% 1/10W				
	R490	1-216-073-91	RES-CHIP 10K 5% 1/10W				
$\triangle$	R513	1-215-905-11	METAL OXIDE 10 5% 3W				
	R514	1-216-071-00	RES-CHIP 8.2K 5% 1/10W				
	R518	1-215-439-00	METAL 5.6K 1% 1/4W				
	R519	1-215-439-00	METAL 5.6K 1% 1/4W				
	R529	1-216-107-00	RES-CHIP 270K 5% 1/10W				
	R530	1-208-812-11	METAL CHIP 18K 0.50% 1/10W				
	R533	1-215-453-00	METAL 22K 1% 1/4W				
	R534	1-215-457-00	METAL 33K 1% 1/4W				
	R537	1-215-373-31	METAL 10 1% 1/4W				
$\triangle$	$\boxtimes$ R564	1-208-824-11	METAL CHIP 56K 0.50% 1/10W				
$\triangle$	R601	1-219-513-11	CARBON 4.7M 5% 1/2W				
$\triangle$	R626	1-202-933-61	FUSIBLE 0.1 10% 1/2W				
	R627	1-215-483-00	METAL 390K 1% 1/4W				
$\triangle$	R632	1-217-611-00	METAL 0.1 10% 2W				
	R638	1-249-399-11	CARBON 33 5% 1/4W				
$\triangle$	R641	1-216-369-00	METAL OXIDE 1 5% 2W				
	R646	1-249-419-11	CARBON 1.5K 5% 1/4W				
$\triangle$	R660	1-215-924-00	METAL OXIDE 15K 5% 3W				
<b>TRANSFORMER</b>							
$\triangle$	T504	1-435-098-11	TRANSFORMER, HORIZONTAL LINEAR				
$\triangle$	T505	1-453-338-11	FBT ASSY, NX-4600//X4J4				
$\triangle$	T602	1-435-617-11	TRANSFORMER, LINE FILTER				
$\triangle$	T603	1-435-403-11	TRANSFORMER, CONVERTER (S.R.T)				
<b>THERMISTOR</b>							
$\triangle$	THP601	1-803-629-11	THERMISTOR, POSITIVE				
<b>VARISTOR</b>							
$\triangle$	VDR601	1-803-585-11	VARISTOR ENE271D-10A				

NOTE: The components identified by shading and  $\triangle$  mark are critical for safety. Replace only with part number specified.

A component identified by this  $\boxtimes$  symbol indicates that it has been carefully factory-selected to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

## VARIANT PARTS LISTING



The parts on this page belong to the following model(s) only:  
**KV-34FS13C**

REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
<b>A BOARD VARIANT PARTS LIST (KV-34FS13C)</b>							
*	<b>A-1299-506-A</b>	<b>A COMPLETE PC BOARD</b>		R530	1-208-812-11	METAL CHIP	18K 0.50% 1/10W
<b>CAPACITOR</b>				R533	1-215-453-00	METAL	22K 1% 1/4W
$\triangle$	C507	1-117-652-11	FILM 22000pF 3% 1.2KV	R534	1-215-457-00	METAL	33K 1% 1/4W
$\triangle$	C511	1-115-521-11	FILM 0.82 $\mu$ F 5% 250V	R537	1-215-373-31	METAL	10 1% 1/4W
	C514	1-115-521-11	FILM 0.82 $\mu$ F 5% 250V	$\triangle$ $\boxtimes$ R564	1-208-824-11	METAL CHIP	56K 0.50% 1/10W
	C517	1-107-846-11	FILM 0.1 $\mu$ F 5% 250V	$\triangle$	R615	1-218-265-11	METAL 8.2M 5% 1W
$\triangle$	C520	1-130-118-91	FILM 0.051 $\mu$ F 5% 400V	$\triangle$	R626	1-202-933-61	FUSIBLE 0.1 10% 1/2W
	C530	1-163-009-91	CERAMIC CHIP 0.001 $\mu$ F 10% 50V	R627	1-215-479-00	METAL	270K 1% 1/4W
	C548	1-107-995-11	ELECT 100 $\mu$ F 160V	R628	1-215-479-00	METAL	270K 1% 1/4W
	C550	1-117-667-11	FILM 0.47 $\mu$ F 5% 250V	R629	1-215-929-11	METAL OXIDE	100K 5% 3W
$\triangle$	C555	1-117-635-11	FILM 4700pF 3% 1.2KV	$\triangle$	R632	1-217-611-00	METAL 0.1 10% 2W
	C615	1-130-202-00	FILM 0.022 $\mu$ F 10% 400V	$\triangle$	R637	1-216-485-11	METAL OXIDE 5.6K 5% 3W
	C616	1-107-824-11	CERAMIC 220pF 5% 1KV	R638	1-249-402-11	CARBON	56 5% 1/4W
	C625	1-135-572-51	ELECT 1000 $\mu$ F 20% 50V	$\triangle$	R641	1-216-369-00	METAL OXIDE 1 5% 2W
	C658	1-135-572-51	ELECT 1000 $\mu$ F 20% 50V	R646	1-249-418-11	CARBON	1.2K 5% 1/4W
$\triangle$	C660	1-128-714-11	ELECT 330 $\mu$ F 20% 400V	$\triangle$	R660	1-216-485-11	METAL OXIDE 5.6K 5% 3W
$\triangle$	C661	1-128-714-11	ELECT 330 $\mu$ F 20% 400V	$\triangle$	R662	1-216-485-11	METAL OXIDE 5.6K 5% 3W
<b>CONNECTOR</b>				<b>TRANSFORMER</b>			
*	CN604	1-573-963-11	PIN,CONNECTOR (PC BOARD) 3P	$\triangle$	T504	1-435-098-11	TRANSFORMER, HORIZONTAL LINEAR
<b>DIODE</b>				$\triangle$	T505	1-453-338-11	FBT ASSY, NX-4600//X4J4
	D609	8-719-311-31	DIODE RU-1P	$\triangle$	T602	1-426-717-11	TRANSFORMER, LINE FILTER (LFT)
<b>FERRITE BEAD</b>				$\triangle$	T603	1-435-402-11	TRANSFORMER, CONVERTER (SRT)
	FB605	1-410-397-21	FERRITE 1.1 $\mu$ H	<b>THERMISTOR</b>			
<b>IC</b>				$\triangle$	THP601	1-803-540-11	THERMISTOR
	IC502	8-759-192-71	IC STV9379	<b>VARISTOR</b>			
$\triangle$	IC601	8-749-014-48	IC STR-F6656	$\triangle$	VDR601	1-803-967-11	VARISTOR (ENE621D-14A)
<b>COIL</b>							
	L505	1-406-976-11	INDUCTOR 68 $\mu$ H				
<b>TRANSISTOR</b>							
$\triangle$	Q502	8-729-045-26	TRANSISTOR 2SD2580-YB				
<b>RESISTOR</b>							
	R436	1-216-073-91	RES-CHIP 10K 5% 1/10W				
	R437	1-216-073-91	RES-CHIP 10K 5% 1/10W				
	R438	1-216-073-91	RES-CHIP 10K 5% 1/10W				
	R490	1-216-073-91	RES-CHIP 10K 5% 1/10W				
$\triangle$	R513	1-215-905-11	METAL OXIDE 10 5% 3W				
	R514	1-216-071-00	RES-CHIP 8.2K 5% 1/10W				
	R518	1-215-439-00	METAL 5.6K 1% 1/4W				
	R519	1-215-439-00	METAL 5.6K 1% 1/4W				
	R529	1-216-107-00	RES-CHIP 270K 5% 1/10W				

NOTE: The components identified by shading and  $\triangle$  mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque  $\triangle$  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

## VARIANT PARTS LISTING



The parts on this page belong to the following model(s) only:  
**KV-27FV17**

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
<b>A BOARD VARIANT PARTS LIST (KV-27FV17)</b>											
*	A-1299-243-A	A COMPLETE PC BOARD									
<b><u>CAPACITOR</u></b>											
$\triangle$	C607	1-136-311-11	MYLAR	0.47 $\mu$ F	20%	125V					
$\triangle$	C612	1-113-611-11	ELECT(BLOCK)	820 $\mu$ F	20%	250V					
	C630	1-113-923-11	CERAMIC	0.0033 $\mu$ F	20%	250V					
	C631	1-113-924-11	CERAMIC	0.0047 $\mu$ F	20%	250V					
<b><u>FUSE</u></b>											
$\triangle$	F601	1-576-193-11	FUSE	6.3A/125V							
<b><u>IC</u></b>											
$\triangle$	IC601	8-749-018-43	IC STR-F6426								
<b><u>RESISTOR</u></b>											
	R218	1-216-049-11	RES-CHIP	1K	5%	1/10W					
$\triangle$	R601	1-219-513-11	CARBON	4.7M	5%	1/2W					
	R627	1-215-483-00	METAL	390K	1%	1/4W					
	R631	1-215-929-11	METAL OXIDE	100K	5%	3W					
	R638	1-249-399-11	CARBON	33	5%	1/4W					
	R646	1-249-419-11	CARBON	1.5K	5%	1/4W					
$\triangle$	R660	1-215-924-00	METAL OXIDE	15K	5%	3W					
<b><u>TRANSFORMER</u></b>											
$\triangle$	T602	1-435-617-11	TRANSFORMER, LINE FILTER								
$\triangle$	T603	1-435-403-11	TRANSFORMER, CONVERTER (S.R.T)								
<b><u>VARISTOR</u></b>											
$\triangle$	VDR601	1-803-585-11	VARISTOR ENE271D-10A								

NOTE: The components identified by shading and  mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

## VARIANT PARTS LISTING



The parts on this page belong to the following model(s) only:  
**KV-29FV17**

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
<b>A BOARD VARIANT PARTS LIST (KV-29FV17)</b>											
*	A-1299-498-A	A COMPLETE PC BOARD									
<b><u>CAPACITOR</u></b>											
	C607	1-136-311-11	MYLAR	0.47μF	20%	125V					
	C612	1-113-611-11	ELECT(BLOCK)	820μF	20%	250V					
<b><u>FUSE</u></b>											
	F601	1-576-193-11	FUSE 6.3A/125V								
<b><u>IC</u></b>											
	IC601	8-749-018-43	IC STR-F6426								
<b><u>RESISTOR</u></b>											
	R218	1-208-758-11	METAL CHIP	100	0.50%	1/10W					
	R601	1-219-513-11	CARBON	4.7M	5%	1/2W					
	R627	1-215-483-00	METAL	390K	1%	1/4W					
	R631	1-215-929-11	METAL OXIDE	100K	5%	3W					
	R638	1-249-399-11	CARBON	33	5%	1/4W					
	R646	1-249-419-11	CARBON	1.5K	5%	1/4W					
	R660	1-215-924-00	METAL OXIDE	15K	5%	3W					
<b><u>TRANSFORMER</u></b>											
	T602	1-426-717-11	TRANSFORMER, LINE FILTER (LFT)								
	T603	1-435-403-11	TRANSFORMER, CONVERTER (S.R.T)								
<b><u>VARISTOR</u></b>											
	VDR601	1-803-585-11	VARISTOR ENE271D-10A								

NOTE: The components identified by shading and  mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifique.

## VARIANT PARTS LISTING



The parts on this page belong to the following model(s) only:  
**KV-29FV17C**

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
<b>A BOARD VARIANT PARTS LIST (KV-29FV17C)</b>											
*	A-1299-244-A	A COMPLETE PC BOARD									
<b><u>CAPACITOR</u></b>											
	C660	1-128-714-11	ELECT	330µF	20%	400V					
	C661	1-128-714-11	ELECT	330µF	20%	400V					
<b><u>FUSE</u></b>											
	F601	1-532-506-51	FUSE 6.3A/250V								
<b><u>IC</u></b>											
	IC601	8-749-018-44	IC STR-F6456								
<b><u>RESISTOR</u></b>											
	R218	1-216-049-11	RES-CHIP	1K	5%	1/10W					
	R615	1-218-265-11	METAL	8.2M	5%	1W					
	R627	1-215-479-00	METAL	270K	1%	1/4W					
	R637	1-216-485-11	METAL OXIDE	5.6K	5%	3W					
	R638	1-249-402-11	CARBON	56	5%	1/4W					
	R646	1-249-418-11	CARBON	1.2K	5%	1/4W					
	R660	1-216-485-11	METAL OXIDE	5.6K	5%	3W					
	R662	1-216-485-11	METAL OXIDE	5.6K	5%	3W					
<b><u>TRANSFORMER</u></b>											
	T602	1-426-717-11	TRANSFORMER, LINE FILTER (LFT)								
	T603	1-435-402-11	TRANSFORMER, CONVERTER (SRT)								
<b><u>VARISTOR</u></b>											
	VDR601	1-803-967-11	VARISTOR (ENE621D-14A)								



COMMON PARTS LISTING FS SERIES

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
						C076	1-163-259-91	CERAMIC	220pF	5%	50V
						C077	1-163-259-91	CERAMIC	220pF	5%	50V
						C091	1-115-185-11	CERAMIC	0.033µF	10%	50V
						C093	1-163-259-91	CERAMIC	220pF	5%	50V
						C097	1-163-009-91	CERAMIC	0.001µF	10%	50V
*	A-1304-200-A	MA (VAR) MOUNTED PC BOARD (KV-27FS13 ONLY)									
*	A-1304-198-A	MA (VAR) MOUNTED PC BOARD (KV-27FS17 ONLY)									
*	A-1304-203-A	MA (VAR) MOUNTED PC BOARD (KV-32FS13/34FS13C ONLY)									
*	A-1304-196-A	MA (VAR) MOUNTED PC BOARD (KV-32FS17/34FS17 ONLY)									
<b>CAPACITOR</b>											
C003	1-126-959-11	ELECT	0.47µF	20%	50V	C099	1-126-960-11	ELECT	1µF	20%	50V
C005		VARIANT (SEE VARIANT PARTS LIST)									
C006	1-126-964-11	ELECT	10µF	20%	50V	C151		VARIANT (SEE VARIANT PARTS LIST)			
C009	1-163-259-91	CERAMIC	220pF	5%	50V	C153		VARIANT (SEE VARIANT PARTS LIST)			
C010	1-163-035-00	CERAMIC	0.047µF		50V	C154		VARIANT (SEE VARIANT PARTS LIST)			
C011	1-163-259-91	CERAMIC	220pF	5%	50V	C155		VARIANT (SEE VARIANT PARTS LIST)			
C012	1-163-009-91	CERAMIC	0.001µF	10%	50V	C156		VARIANT (SEE VARIANT PARTS LIST)			
C015	1-163-231-11	CERAMIC	15pF	5%	50V	C157		VARIANT (SEE VARIANT PARTS LIST)			
C016	1-163-231-11	CERAMIC	15pF	5%	50V	C302	1-163-021-91	CERAMIC	0.01µF	10%	50V
C017	1-126-960-11	ELECT	1µF	20%	50V	C303	1-163-021-91	CERAMIC	0.01µF	10%	50V
C019	1-163-259-91	CERAMIC	220pF	5%	50V	C304	1-163-021-91	CERAMIC	0.01µF	10%	50V
C020	1-163-038-91	CERAMIC	0.1µF		25V	C305	1-126-933-11	ELECT	100µF	20%	16V
C021	1-163-259-91	CERAMIC	220pF	5%	50V	C307	1-163-227-11	CERAMIC	10pF	0.50pF	50V
C022	1-163-135-00	CERAMIC	560pF	5%	50V	C308	1-163-021-91	CERAMIC	0.01µF	10%	50V
C027	1-163-009-91	CERAMIC	0.001µF	10%	50V	C309	1-126-933-11	ELECT	100µF	20%	16V
C028	1-163-259-91	CERAMIC	220pF	5%	50V	C311	1-163-123-00	CERAMIC	180pF	5%	50V
C032	1-164-004-11	CERAMIC	0.1µF	10%	25V	C313	1-163-021-91	CERAMIC	0.01µF	10%	50V
C033	1-163-259-91	CERAMIC	220pF	5%	50V	C314	1-163-231-11	CERAMIC	15pF	5%	50V
C034	1-163-037-11	CERAMIC	0.022µF	10%	50V	C315	1-104-664-11	ELECT	47µF	20%	25V
C037	1-164-161-11	CERAMIC	0.0022µF	10%	50V	C316	1-163-243-11	CERAMIC	47pF	5%	50V
C038	1-126-935-11	ELECT	470µF	20%	16V	C317	1-163-021-91	CERAMIC	0.01µF	10%	50V
C039	1-126-964-11	ELECT	10µF	20%	50V	C318	1-163-021-91	CERAMIC	0.01µF	10%	50V
C040	1-163-229-11	CERAMIC	12pF	5%	50V	C319	1-126-767-11	ELECT	1000µF	20%	16V
C041	1-163-237-11	CERAMIC	27pF	5%	50V	C320	1-164-005-11	CERAMIC	0.47µF		25V
C042	1-163-259-91	CERAMIC	220pF	5%	50V	C321	1-164-005-11	CERAMIC	0.47µF		25V
C043	1-163-009-91	CERAMIC	0.001µF	10%	50V	C322	1-164-005-11	CERAMIC	0.47µF		25V
C044	1-163-009-91	CERAMIC	0.001µF	10%	50V	C323	1-164-004-11	CERAMIC	0.1µF	10%	25V
C045	1-164-161-11	CERAMIC	0.0022µF	10%	50V	C324	1-163-231-11	CERAMIC	15pF	5%	50V
C046	1-104-664-11	ELECT	47µF	20%	25V	C325	1-164-005-11	CERAMIC	0.47µF		25V
C047	1-163-259-91	CERAMIC	220pF	5%	50V	C326	1-164-004-11	CERAMIC	0.1µF	10%	25V
C048	1-163-259-91	CERAMIC	220pF	5%	50V	C328	1-164-004-11	CERAMIC	0.1µF	10%	25V
C051	1-126-943-11	ELECT	2200µF	20%	25V	C329	1-164-004-11	CERAMIC	0.1µF	10%	25V
C060	1-163-005-91	CERAMIC	470pF	10%	50V	C330	1-126-960-11	ELECT	1µF	20%	50V
C062	1-126-959-11	ELECT	0.47µF	20%	50V	C331	1-163-021-91	CERAMIC	0.01µF	10%	50V
C063	1-137-194-81	FILM	0.47µF	5%	50V	C332	1-163-010-11	CERAMIC	0.0012µF	10%	50V
C064	1-163-017-00	CERAMIC	0.0047µF	10%	50V	C334	1-163-003-11	CERAMIC	330pF	10%	50V
C070	1-163-009-91	CERAMIC	0.001µF	10%	50V	C335	1-126-963-11	ELECT	4.7µF	20%	50V
C071	1-163-009-91	CERAMIC	0.001µF	10%	50V	C336	1-104-664-11	ELECT	47µF	20%	25V
						C338	1-164-004-11	CERAMIC	0.1µF	10%	25V
						C339	1-126-960-11	ELECT	1µF	20%	50V
						C340	1-126-933-11	ELECT	100µF	20%	16V
						C341	1-163-233-91	CERAMIC	18pF	5%	50V
						C345		VARIANT (SEE VARIANT PARTS LIST)			
						C346		VARIANT (SEE VARIANT PARTS LIST)			



NOTE: The components identified by shading and  $\triangle$  mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifique.

## COMMON PARTS LISTING FS SERIES

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
C347		VARIANT (SEE VARIANT PARTS LIST)				*	CN305	VARIANT (SEE VARIANT PARTS LIST)			
C348	1-164-005-11	CERAMIC	0.47 $\mu$ F		25V	*	CN309	1-564-506-11	PLUG,CONNECTOR 3P		
C350	1-126-959-11	ELECT	0.47 $\mu$ F	20%	50V	*	CN401		VARIANT (SEE VARIANT PARTS LIST)		
C351	1-163-021-91	CERAMIC	0.01 $\mu$ F	10%	50V			<b>DIODE</b>			
C352	1-163-021-91	CERAMIC	0.01 $\mu$ F	10%	50V	$\triangle$	D001	8-719-069-54	DIODE UDZSTE-175.1B		
C353	1-163-021-91	CERAMIC	0.01 $\mu$ F	10%	50V		D002	8-719-110-17	DIODE MTZJ-T-77-10B		
C354	1-126-933-11	ELECT	100 $\mu$ F	20%	16V		D003	8-719-404-50	DIODE MA111-TX		
C355	1-163-021-91	CERAMIC	0.01 $\mu$ F	10%	50V		D004	8-719-069-54	DIODE UDZSTE-175.1B		
C356	1-164-004-11	CERAMIC	0.1 $\mu$ F	10%	25V		D005	8-719-109-89	DIODE MTZJ-T-77-5.6C		
C357	1-104-664-11	ELECT	47 $\mu$ F	20%	25V		D006	8-719-069-60	DIODE UDZSTE-179.1B		
C358	1-104-664-11	ELECT	47 $\mu$ F	20%	25V		D075	8-719-404-50	DIODE MA111-TX		
C359	1-163-038-91	CERAMIC	0.1 $\mu$ F		25V		D301	8-719-921-44	DIODE MTZJ-T-77-5.1C		
C360	1-126-959-11	ELECT	0.47 $\mu$ F	20%	50V		D303		VARIANT (SEE VARIANT PARTS LIST)		
C361	1-163-038-91	CERAMIC	0.1 $\mu$ F		25V		D305	8-719-921-44	DIODE MTZJ-T-77-5.1C		
C362	1-104-664-11	ELECT	47 $\mu$ F	20%	25V		D360	8-719-914-44	DIODE DAP202K-T-146		
C363	1-163-038-91	CERAMIC	0.1 $\mu$ F		25V			<b>FERRITE BEAD</b>			
C364	1-164-004-11	CERAMIC CHIP	0.1 $\mu$ F	10%	25V		FB001	1-414-234-22	FERRITE	0 $\mu$ H	
C365	1-137-194-81	FILM	0.47 $\mu$ F	5%	50V		FB002	1-414-234-22	FERRITE	0 $\mu$ H	
C366	1-163-021-91	CERAMIC	0.01 $\mu$ F	10%	50V		FB301	1-412-911-11	FERRITE	0 $\mu$ H	
C367	1-163-005-91	CERAMIC	470pF	10%	50V			<b>FILTER</b>			
C368	1-163-021-91	CERAMIC	0.01 $\mu$ F	10%	50V		FL301	1-239-847-11	FILTER, LOW PASS		
C369	1-163-021-91	CERAMIC	0.01 $\mu$ F	10%	50V		FL302	1-239-847-11	FILTER, LOW PASS		
C370	1-126-933-11	ELECT	100 $\mu$ F	20%	16V		FL303	1-239-847-11	FILTER, LOW PASS		
C371	1-163-243-11	CERAMIC	47pF	5%	50V			<b>IC</b>			
C377	1-126-963-11	ELECT	4.7 $\mu$ F	20%	50V		IC001	8-759-827-83	IC M37280MK-114SP		
C380		VARIANT (SEE VARIANT PARTS LIST)					IC002	8-759-663-29	IC MM1476AF(TP)		
C381		VARIANT (SEE VARIANT PARTS LIST)					IC003	8-759-699-33	IC M24C16-MN6T(A)		
C382		VARIANT (SEE VARIANT PARTS LIST)					$\triangle$	IC301	8-752-100-49	IC CXA2154AS	
C389		VARIANT (SEE VARIANT PARTS LIST)					IC302	8-759-655-75	IC TC90A49P		
C390	1-163-231-11	CERAMIC	15pF	5%	50V			<b>JACK</b>			
C391	1-126-933-11	ELECT	100 $\mu$ F	20%	16V		JR001	1-216-295-91	SHORT		
C395	1-163-021-91	CERAMIC	0.01 $\mu$ F	10%	50V		JR002	1-216-295-91	SHORT		
C396	1-164-004-11	CERAMIC	0.1 $\mu$ F	10%	25V		JR003	1-216-295-91	SHORT		
C397	1-163-021-91	CERAMIC	0.01 $\mu$ F	10%	50V		JR005	1-216-295-91	SHORT		
C398	1-126-964-11	ELECT	10 $\mu$ F	20%	50V		JR006	1-216-295-91	SHORT		
C451		VARIANT (SEE VARIANT PARTS LIST)					JR007	1-216-295-91	SHORT		
C452		VARIANT (SEE VARIANT PARTS LIST)					JR008	1-216-295-91	SHORT		
C453		VARIANT (SEE VARIANT PARTS LIST)					JR010	1-216-295-91	SHORT		
C454		VARIANT (SEE VARIANT PARTS LIST)					JR011	1-216-295-91	SHORT		
		<b>CONNECTOR</b>					JR090	1-216-295-91	SHORT		
*	CN001	1-564-511-11	PLUG,CONNECTOR 8P				JR100	1-216-295-91	SHORT		
*	CN002	1-560-124-00	PLUG,CONNECTOR (2.5MM) 4P				JR101	1-216-295-91	SHORT		
*	CN003	1-564-512-11	PLUG,CONNECTOR 9P				JR296	1-216-295-91	SHORT		
*	CN004	1-564-512-11	PLUG,CONNECTOR 9P				JR297	1-216-295-91	SHORT		
*	CN005	1-764-333-11	PLUG,CONNECTOR 10P				JR298	1-216-295-91	SHORT		
*	CN006	1-764-333-11	PLUG,CONNECTOR 10P				JR310	1-216-295-91	SHORT		
*	CN302	1-564-507-11	PLUG,CONNECTOR 4P				JR311	1-216-295-91	SHORT		
*	CN304		VARIANT (SEE VARIANT PARTS LIST)								



## COMMON PARTS LISTING FS SERIES

REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
JR355	1-216-295-91	SHORT		Q369	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
JR378	1-216-295-91	SHORT		Q370	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
JR379	1-216-295-91	SHORT		Q375	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
JR391	1-216-295-91	SHORT		Q378		VARIANT (SEE VARIANT PARTS LIST)	
JR399	1-216-295-91	SHORT		Q379		VARIANT (SEE VARIANT PARTS LIST)	
JR402	1-216-295-91	SHORT		Q380		VARIANT (SEE VARIANT PARTS LIST)	
JR501	1-216-295-91	SHORT		Q387	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
JR502	1-216-295-91	SHORT		Q388	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
	<b>COIL</b>			Q389	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
L002	1-412-064-11	INDUCTOR	100μH		<b>RESISTOR</b>		
L003	1-412-064-11	INDUCTOR	100μH	R001	1-216-043-91	RES-CHIP	560 5% 1/10W
L040	1-408-963-11	INDUCTOR	2.7μH	R002	1-216-041-00	RES-CHIP	470 5% 1/10W
L150		VARIANT (SEE VARIANT PARTS LIST)		R003	1-247-807-31	CARBON	100 5% 1/4W
L151		VARIANT (SEE VARIANT PARTS LIST)		R004	1-216-061-91	RES-CHIP	3.3K 5% 1/10W
L301	1-412-029-11	INDUCTOR	10μH	R005	1-216-295-91	SHORT	
L302	1-412-031-11	INDUCTOR	47μH	R006	1-216-025-11	RES-CHIP	100 5% 1/10W
L303	1-414-856-11	INDUCTOR	10μH	R007	1-216-025-11	RES-CHIP	100 5% 1/10W
L304	1-414-856-11	INDUCTOR	10μH	R008	1-216-049-11	RES-CHIP	1K 5% 1/10W
L305	1-412-029-11	INDUCTOR	10μH	R009	1-216-121-11	RES-CHIP	1M 5% 1/10W
L308	1-412-064-11	INDUCTOR	100μH	R010	1-216-033-00	RES-CHIP	220 5% 1/10W
L310	1-412-064-11	INDUCTOR	100μH	R011	1-216-033-00	RES-CHIP	220 5% 1/10W
L350	1-414-856-11	INDUCTOR	10μH	R012	1-216-045-00	RES-CHIP	680 5% 1/10W
L351	1-414-856-11	INDUCTOR	10μH	R013	1-249-417-11	CARBON	1K 5% 1/4W
	<b>TRANSISTOR</b>			R014	1-216-073-91	RES-CHIP	10K 5% 1/10W
Q001	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R015	1-216-073-91	RES-CHIP	10K 5% 1/10W
Q002	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R016	1-216-041-00	RES-CHIP	470 5% 1/10W
Q003	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R017	1-208-798-11	METAL	4.7K 0.50% 1/10W
Q004	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R018	1-249-409-11	CARBON	220 5% 1/4W
Q006	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R019	1-216-113-00	RES-CHIP	470K 5% 1/10W
Q082	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R020	1-216-033-00	RES-CHIP	220 5% 1/10W
Q151		VARIANT (SEE VARIANT PARTS LIST)		R021	1-216-073-91	RES-CHIP	10K 5% 1/10W
Q152		VARIANT (SEE VARIANT PARTS LIST)		R022	1-249-409-11	CARBON	220 5% 1/4W
Q302	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R023	1-249-429-11	CARBON	10K 5% 1/4W
Q303	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R024	1-249-409-11	CARBON	220 5% 1/4W
Q305	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R025	1-249-426-11	CARBON	5.6K 5% 1/4W
Q310	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R026	1-249-426-11	CARBON	5.6K 5% 1/4W
Q349	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R027	1-249-426-11	CARBON	5.6K 5% 1/4W
Q350	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R028	1-216-049-11	RES-CHIP	1K 5% 1/10W
Q351	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R029	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
Q352	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R030	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
Q354	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R031	1-216-355-11	METAL	3.3 5% 1W
Q355	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R032	1-216-033-00	RES-CHIP	220 5% 1/10W
Q356	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R033	1-216-033-00	RES-CHIP	220 5% 1/10W
Q358	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R034	1-216-033-00	RES-CHIP	220 5% 1/10W
Q359	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R035	1-216-033-00	RES-CHIP	220 5% 1/10W
Q365	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R036	1-216-049-11	RES-CHIP	1K 5% 1/10W
Q368	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R037	1-249-409-11	CARBON	220 5% 1/4W
				R038	1-216-049-11	RES-CHIP	1K 5% 1/10W



## COMMON PARTS LISTING FS SERIES

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R039	1-216-045-00	RES-CHIP	680	5%	1/10W	R159		VARIANT (SEE VARIANT PARTS LIST)			
R040	1-249-409-11	CARBON	220	5%	1/4W	R251	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R041	1-216-045-00	RES-CHIP	680	5%	1/10W	R253	1-216-049-11	RES-CHIP	1K	5%	1/10W
R042	1-216-071-00	RES-CHIP	8.2K	5%	1/10W	R256	1-216-073-91	RES-CHIP	10K	5%	1/10W
R043	1-249-417-11	CARBON	1K	5%	1/4W	R257	1-216-049-11	RES-CHIP	1K	5%	1/10W
R044	1-216-033-00	RES-CHIP	220	5%	1/10W	R258	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R045	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R259	1-249-429-11	CARBON	10K	5%	1/4W
R046	1-216-033-00	RES-CHIP	220	5%	1/10W	R260	1-249-409-11	CARBON	220	5%	1/4W
R047	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R261	1-216-113-00	RES-CHIP	470K	5%	1/10W
R048		VARIANT (SEE VARIANT PARTS LIST)				R262	1-247-807-31	CARBON	100	5%	1/4W
R050	1-216-033-00	RES-CHIP	220	5%	1/10W	R263	1-216-025-11	RES-CHIP	100	5%	1/10W
R051	1-216-033-00	RES-CHIP	220	5%	1/10W	R264		VARIANT (SEE VARIANT PARTS LIST)			
R052	1-249-417-11	CARBON	1K	5%	1/4W	R266		VARIANT (SEE VARIANT PARTS LIST)			
R054	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R267	1-216-049-11	RES-CHIP	1K	5%	1/10W
R055	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R268	1-216-045-00	RES-CHIP	680	5%	1/10W
R056	1-208-798-11	METAL	4.7K	0.50%	1/10W	R269	1-216-049-11	RES-CHIP	1K	5%	1/10W
R057	1-216-097-11	RES-CHIP	100K	5%	1/10W	R270		VARIANT (SEE VARIANT PARTS LIST)			
R058	1-216-097-11	RES-CHIP	100K	5%	1/10W	R271		VARIANT (SEE VARIANT PARTS LIST)			
R060	1-249-409-11	CARBON	220	5%	1/4W	R272		VARIANT (SEE VARIANT PARTS LIST)			
R061	1-216-033-00	RES-CHIP	220	5%	1/10W	R273	1-216-073-91	RES-CHIP	10K	5%	1/10W
R064	1-216-295-91	SHORT				R274	1-216-295-91	SHORT			
R069		VARIANT (SEE VARIANT PARTS LIST)				R275	1-216-081-00	RES-CHIP	22K	5%	1/10W
R070	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R276	1-216-085-91	RES-CHIP	33K	5%	1/10W
R071	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R277		VARIANT (SEE VARIANT PARTS LIST)			
R073	1-249-425-11	CARBON	4.7K	5%	1/4W	R279	1-247-807-31	CARBON	100	5%	1/4W
R074	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R280	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R077	1-216-097-11	RES-CHIP	100K	5%	1/10W	R281	1-208-798-11	METAL	4.7K	0.50%	1/10W
R086	1-216-045-00	RES-CHIP	680	5%	1/10W	R282	1-208-790-11	METAL	2.2K	0.50%	1/10W
R087	1-216-045-00	RES-CHIP	680	5%	1/10W	R283	1-216-689-11	RES-CHIP	39K	5%	1/10W
R088	1-216-045-00	RES-CHIP	680	5%	1/10W	R300	1-216-295-91	SHORT			
R091	1-216-073-91	RES-CHIP	10K	5%	1/10W	R301	1-216-022-00	RES-CHIP	75	5%	1/10W
R092	1-208-798-11	METAL	4.7K	0.50%	1/10W	R303	1-216-073-91	RES-CHIP	10K	5%	1/10W
R093	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R304	1-247-807-31	CARBON	100	5%	1/4W
R094	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R305	1-216-295-91	SHORT			
R095	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R306	1-216-025-11	RES-CHIP	100	5%	1/10W
R096	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R308	1-216-022-00	RES-CHIP	75	5%	1/10W
R097	1-249-414-11	CARBON	560	5%	1/4W	R310	1-249-417-11	CARBON	1K	5%	1/4W
R099	1-216-089-91	RES-CHIP	47K	5%	1/10W	R311	1-216-025-11	RES-CHIP	100	5%	1/10W
R100		VARIANT (SEE VARIANT PARTS LIST)				R312	1-249-417-11	CARBON	1K	5%	1/4W
R101		VARIANT (SEE VARIANT PARTS LIST)				R313	1-216-049-11	RES-CHIP	1K	5%	1/10W
R150		VARIANT (SEE VARIANT PARTS LIST)				R314		VARIANT (SEE VARIANT PARTS LIST)			
R151		VARIANT (SEE VARIANT PARTS LIST)				R316	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R154		VARIANT (SEE VARIANT PARTS LIST)				R317	1-247-807-31	CARBON	100	5%	1/4W
R155		VARIANT (SEE VARIANT PARTS LIST)				R318	1-216-091-00	RES-CHIP	56K	5%	1/10W
R156		VARIANT (SEE VARIANT PARTS LIST)				R319	1-216-081-00	RES-CHIP	22K	5%	1/10W
R157		VARIANT (SEE VARIANT PARTS LIST)				R320	1-216-025-11	RES-CHIP	100	5%	1/10W
R158		VARIANT (SEE VARIANT PARTS LIST)				R321	1-216-043-91	RES-CHIP	560	5%	1/10W



## COMMON PARTS LISTING FS SERIES

REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
R322	1-216-025-11	RES-CHIP	100 5% 1/10W	R375	1-216-053-00	RES-CHIP	1.5K 5% 1/10W
R323	1-216-025-11	RES-CHIP	100 5% 1/10W	R376	1-216-022-00	RES-CHIP	75 5% 1/10W
R324	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	R377	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
R326	1-208-806-11	METAL	10K 0.50% 1/10W	R378	1-216-295-91	SHORT	
R327	1-216-025-11	RES-CHIP	100 5% 1/10W	R379	1-216-049-11	RES-CHIP	1K 5% 1/10W
R328	1-216-025-11	RES-CHIP	100 5% 1/10W	R382	1-216-295-91	SHORT	
R329	1-216-025-11	RES-CHIP	100 5% 1/10W	R383	1-216-295-91	SHORT	
R331	1-216-049-11	RES-CHIP	1K 5% 1/10W	R384	1-216-295-91	SHORT	
R332	1-216-022-00	RES-CHIP	75 5% 1/10W	R386	1-216-047-91	RES-CHIP	820 5% 1/10W
R333	1-216-067-00	RES-CHIP	5.6K 5% 1/10W	R387	1-216-025-11	RES-CHIP	100 5% 1/10W
R334	1-216-025-11	RES-CHIP	100 5% 1/10W	R388	1-216-025-11	RES-CHIP	100 5% 1/10W
R335	1-216-057-00	RES-CHIP	2.2K 5% 1/10W	R389	1-216-049-11	RES-CHIP	1K 5% 1/10W
R336	1-216-057-00	RES-CHIP	2.2K 5% 1/10W	R392	1-216-067-00	RES-CHIP	5.6K 5% 1/10W
R337	1-216-057-00	RES-CHIP	2.2K 5% 1/10W	R394	1-216-043-91	RES-CHIP	560 5% 1/10W
R338	1-216-073-91	RES-CHIP	10K 5% 1/10W	R395	1-216-043-91	RES-CHIP	560 5% 1/10W
R339	1-216-091-00	RES-CHIP	56K 5% 1/10W	R396	1-247-807-31	CARBON	100 5% 1/4W
R340	1-216-025-11	RES-CHIP	100 5% 1/10W	R398		VARIANT (SEE VARIANT PARTS LIST)	
R341	1-216-089-91	RES-CHIP	47K 5% 1/10W	R399		VARIANT (SEE VARIANT PARTS LIST)	
R342	1-216-049-11	RES-CHIP	1K 5% 1/10W	R434		VARIANT (SEE VARIANT PARTS LIST)	
R343	1-216-097-11	RES-CHIP	100K 5% 1/10W	R435		VARIANT (SEE VARIANT PARTS LIST)	
R344	1-216-295-91	SHORT				<b>TUNER</b>	
R345	1-216-097-11	RES-CHIP	100K 5% 1/10W	TU150		VARIANT (SEE VARIANT PARTS LIST)	
R346	1-216-097-11	RES-CHIP	100K 5% 1/10W			<b>CRYSTAL</b>	
R347	1-216-025-11	RES-CHIP	100 5% 1/10W	X001	1-767-487-11	VIBRATOR, CRYSTAL	
R349	1-216-025-11	RES-CHIP	100 5% 1/10W	X301	1-567-505-11	OSCILLATOR, CRYSTAL	
R351	1-216-041-00	RES-CHIP	470 5% 1/10W				
R352	1-247-807-31	CARBON	100 5% 1/4W				
R353	1-247-807-31	CARBON	100 5% 1/4W				
R354	1-216-025-11	RES-CHIP	100 5% 1/10W				
R355	1-216-053-00	RES-CHIP	1.5K 5% 1/10W				
R356	1-216-025-11	RES-CHIP	100 5% 1/10W				
R357	1-216-022-00	RES-CHIP	75 5% 1/10W				
R358	1-216-093-91	RES-CHIP	68K 5% 1/10W				
R359	1-216-057-00	RES-CHIP	2.2K 5% 1/10W				
R360	1-216-093-91	RES-CHIP	68K 5% 1/10W				
R361	1-216-022-00	RES-CHIP	75 5% 1/10W				
R362	1-216-035-00	RES-CHIP	270 5% 1/10W				
R363	1-216-039-00	RES-CHIP	390 5% 1/10W				
R364	1-216-025-11	RES-CHIP	100 5% 1/10W				
R365	1-216-025-11	RES-CHIP	100 5% 1/10W				
R366	1-216-053-00	RES-CHIP	1.5K 5% 1/10W				
R367	1-216-057-00	RES-CHIP	2.2K 5% 1/10W				
R368	1-216-043-91	RES-CHIP	560 5% 1/10W				
R369	1-216-033-00	RES-CHIP	220 5% 1/10W				
R370	1-249-429-11	CARBON	10K 5% 1/4W				
R372	1-216-039-00	RES-CHIP	390 5% 1/10W				
R373	1-216-025-11	RES-CHIP	100 5% 1/10W				
R374	1-216-025-11	RES-CHIP	100 5% 1/10W				

## VARIANT PARTS LISTING

**MA**

The parts on this page belong to the following model(s) only: <b>KV-27FS13</b>
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REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
<b>MA BOARD VARIANT PARTS LIST (KV-27FS13)</b>							
*	A-1304-200-A	MA (VAR) MOUNTED PC BOARD					
		<u>CAPACITOR</u>					
C380	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V				
C381	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V				
C382	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F 10% 50V				
C389	1-115-185-11	CERAMIC CHIP	0.033 $\mu$ F 10% 50V				
		<u>RESISTOR</u>					
R277	1-216-129-00	RES-CHIP	2.2M 5% 1/10W				
R398	1-216-091-00	RES-CHIP	56K 5% 1/10W				
R399	1-216-109-00	RES-CHIP	330K 5% 1/10W				

NOTE: The components identified by shading and  $\triangle$  mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifique.

## VARIANT PARTS LISTING

**MA**

The parts on this page belong to the following model(s) only:  
**KV-27FS17**

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
<b>MA BOARD VARIANT PARTS LIST (KV-27FS17)</b>						R158	1-216-025-11	RES-CHIP	100	5%	1/10W
	<b>A-1304-198-A</b>	<b>MA (VAR) MOUNTED PC BOARD</b>				R159	1-216-025-11	RES-CHIP	100	5%	1/10W
	<b>CAPACITOR</b>					R264	1-216-081-00	RES-CHIP	22K	5%	1/10W
C005	1-164-005-11	CERAMIC CHIP	0.47 $\mu$ F		25V	R266	1-216-081-00	RES-CHIP	22K	5%	1/10W
C151	1-126-960-11	ELECT	1 $\mu$ F	20%	50V	R270	1-216-081-00	RES-CHIP	22K	5%	1/10W
C153	1-163-017-00	CERAMIC CHIP	0.0047 $\mu$ F	10%	50V	R271	1-216-081-00	RES-CHIP	22K	5%	1/10W
C154	1-126-967-11	ELECT	47 $\mu$ F	20%	50V	R272	1-216-081-00	RES-CHIP	22K	5%	1/10W
C155	1-126-964-11	ELECT	10 $\mu$ F	20%	50V	R277	1-216-129-00	RES-CHIP	2.2M	5%	1/10W
C156	1-104-664-11	ELECT	47 $\mu$ F	20%	25V	R314	1-216-081-00	RES-CHIP	22K	5%	1/10W
C157	1-126-968-11	ELECT	100 $\mu$ F	20%	50V	R398	1-216-091-00	RES-CHIP	56K	5%	1/10W
C345	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	R399	1-216-109-00	RES-CHIP	330K	5%	1/10W
C346	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	R434	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
C347	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	R435	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
C364	1-164-004-11	CERAMIC CHIP	0.1 $\mu$ F	10%	25V	<b>TUNER</b>					
C389	1-115-185-11	CERAMIC CHIP	0.033 $\mu$ F	10%	50V	$\triangle$ TU150	8-598-501-30	TUNER, FSS BTF-FA402			
C451	1-163-038-91	CERAMIC CHIP	0.1 $\mu$ F		25V						
C452	1-163-038-91	CERAMIC CHIP	0.1 $\mu$ F		25V						
C453	1-163-038-91	CERAMIC CHIP	0.1 $\mu$ F		25V						
C454	1-163-038-91	CERAMIC CHIP	0.1 $\mu$ F		25V						
<b>CONNECTOR</b>											
* CN304	1-564-507-11	PLUG,CONNECTOR 4P									
* CN305	1-573-298-21	CONNECTOR, BOARD TO BOARD 20P									
* CN401	1-564-505-11	PLUG,CONNECTOR 2P									
<b>DIODE</b>											
D303	8-719-991-33	DIODE 1SS133T-77									
<b>COIL</b>											
L150	1-412-058-11	INDUCTOR	10 $\mu$ H								
L151	1-412-064-11	INDUCTOR	100 $\mu$ H								
<b>TRANSISTOR</b>											
Q151	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX									
Q152	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX									
Q378	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX									
Q379	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX									
Q380	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX									
<b>RESISTOR</b>											
R048	1-216-025-11	RES-CHIP	100	5%	1/10W						
R069	1-249-409-11	CARBON	220	5%	1/4W						
R100	1-216-295-91	SHORT									
R101	1-216-295-91	SHORT									
R150	1-216-053-00	RES-CHIP	1.5K	5%	1/10W						
R151	1-216-025-11	RES-CHIP	100	5%	1/10W						
R154	1-216-043-91	RES-CHIP	560	5%	1/10W						
R155	1-216-043-91	RES-CHIP	560	5%	1/10W						
R156	1-216-085-91	RES-CHIP	33K	5%	1/10W						
R157	1-216-081-00	RES-CHIP	22K	5%	1/10W						

## VARIANT PARTS LISTING

**MA**

The parts on this page belong to the following model(s) only: <b>KV-32FS13/34FS13C</b>
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REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
<b>MA BOARD VARIANT PARTS LIST (KV-32FS13/34FS13C)</b>							
*	A-1304-203-A	MA (VAR) MOUNTED PC BOARD					
<b><u>CAPACITOR</u></b>							
C380	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V		
C381	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V		
C382	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V		
C389	1-104-760-11	CERAMIC CHIP	0.047 $\mu$ F	10%	50V		
<b><u>RESISTOR</u></b>							
R277	1-216-133-91	RES-CHIP	3.3M	5%	1/10W		
R398	1-216-109-00	RES-CHIP	330K	5%	1/10W		
R399	1-216-689-11	RES-CHIP	39K	5%	1/10W		

NOTE: The components identified by shading and  $\triangle$  mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifique.

## VARIANT PARTS LISTING

The parts on this page belong to the following model(s) only:  
**KV-32FS17/34FS17**

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
<b>MA BOARD VARIANT PARTS LIST (KV-32FS17/34FS17)</b>						R157	1-216-081-00	RES-CHIP	22K	5%	1/10W
	<b>A-1304-196-A</b>	<b>MA (VAR) MOUNTED PC BOARD</b>				R158	1-216-025-11	RES-CHIP	100	5%	1/10W
	<b>CAPACITOR</b>					R159	1-216-025-11	RES-CHIP	100	5%	1/10W
C005	1-164-005-11	CERAMIC CHIP	0.47 $\mu$ F		25V	R264	1-216-081-00	RES-CHIP	22K	5%	1/10W
C151	1-126-960-11	ELECT	1 $\mu$ F	20%	50V	R266	1-216-081-00	RES-CHIP	22K	5%	1/10W
C153	1-163-017-00	CERAMIC CHIP	0.0047 $\mu$ F	10%	50V	R270	1-216-081-00	RES-CHIP	22K	5%	1/10W
C154	1-126-967-11	ELECT	47 $\mu$ F	20%	50V	R271	1-216-081-00	RES-CHIP	22K	5%	1/10W
C155	1-126-964-11	ELECT	10 $\mu$ F	20%	50V	R272	1-216-081-00	RES-CHIP	22K	5%	1/10W
C156	1-104-664-11	ELECT	47 $\mu$ F	20%	25V	R277	1-216-133-91	RES-CHIP	3.3M	5%	1/10W
C157	1-126-968-11	ELECT	100 $\mu$ F	20%	50V	R314	1-216-081-00	RES-CHIP	22K	5%	1/10W
C345	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	R398	1-216-109-00	RES-CHIP	330K	5%	1/10W
C346	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	R399	1-216-689-11	RES-CHIP	39K	5%	1/10W
C347	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	R434	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
C389	1-104-760-11	CERAMIC CHIP	0.047 $\mu$ F	10%	50V	R435	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
C451	1-163-038-91	CERAMIC CHIP	0.1 $\mu$ F		25V	<b>TUNER</b>					
C452	1-163-038-91	CERAMIC CHIP	0.1 $\mu$ F		25V	$\triangle$ TU150	8-598-501-30	TUNER, FSS BTF-FA402			
C453	1-163-038-91	CERAMIC CHIP	0.1 $\mu$ F		25V						
C454	1-163-038-91	CERAMIC CHIP	0.1 $\mu$ F		25V						
<b>CONNECTOR</b>											
* CN304	1-564-507-11	PLUG,CONNECTOR 4P									
* CN305	1-573-298-21	CONNECTOR, BOARD TO BOARD 20P									
* CN401	1-564-505-11	PLUG,CONNECTOR 2P									
<b>DIODE</b>											
D303	8-719-991-33	DIODE 1SS133T-77									
<b>COIL</b>											
L150	1-412-058-11	INDUCTOR	10 $\mu$ H								
L151	1-412-064-11	INDUCTOR	100 $\mu$ H								
<b>TRANSISTOR</b>											
Q151	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX									
Q152	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX									
Q378	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX									
Q379	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX									
Q380	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX									
<b>RESISTOR</b>											
R048	1-216-025-11	RES-CHIP	100	5%	1/10W						
R069	1-249-409-11	CARBON	220	5%	1/4W						
R100	1-216-295-91	SHORT									
R101	1-216-295-91	SHORT									
R150	1-216-053-00	RES-CHIP	1.5K	5%	1/10W						
R151	1-216-025-11	RES-CHIP	100	5%	1/10W						
R154	1-216-043-91	RES-CHIP	560	5%	1/10W						
R155	1-216-043-91	RES-CHIP	560	5%	1/10W						
R156	1-216-085-91	RES-CHIP	33K	5%	1/10W						



## COMPLETE PARTS LISTING FV SERIES

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
 * <b>A-1304-202-A MA (VAR) MOUNTED PC BOARD</b> <b>(KV-27FV17/29FV17/29FV17C ONLY)</b>					<b>CAPACITOR</b>						
					C003	1-126-959-11	ELECT	0.47μF	20%	50V	C097
C005	1-164-005-11	CERAMIC CHIP	0.47μF		25V	C099	1-126-960-11	ELECT	1μF	20%	50V
C006	1-126-964-11	ELECT	10μF	20%	50V	C151	1-126-960-11	ELECT	1μF	20%	50V
C009	1-163-259-91	CERAMIC CHIP	220pF	5%	50V	C153	1-163-017-00	CERAMIC CHIP	0.0047μF	10%	50V
C010	1-163-035-00	CERAMIC CHIP	0.047μF		50V	C154	1-126-967-11	ELECT	47μF	20%	50V
C011	1-163-259-91	CERAMIC CHIP	220pF	5%	50V	C155	1-126-964-11	ELECT	10μF	20%	50V
C012	1-163-009-91	CERAMIC CHIP	0.001μF	10%	50V	C156	1-104-664-11	ELECT	47μF	20%	25V
C015	1-163-231-11	CERAMIC CHIP	15pF	5%	50V	C157	1-126-968-11	ELECT	100μF	20%	50V
C016	1-163-231-11	CERAMIC CHIP	15pF	5%	50V	C306	1-164-346-11	CERAMIC CHIP	1μF		16V
C017	1-126-960-11	ELECT	1μF	20%	50V	C312	1-164-005-11	CERAMIC CHIP	0.47μF		25V
C019	1-163-259-91	CERAMIC CHIP	220pF	5%	50V	C313	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C020	1-163-038-91	CERAMIC CHIP	0.1μF		25V	C315	1-104-664-11	ELECT	47μF	20%	25V
C021	1-163-259-91	CERAMIC CHIP	220pF	5%	50V	C316	1-163-243-11	CERAMIC CHIP	47pF	5%	50V
C022	1-163-135-00	CERAMIC CHIP	560pF	5%	50V	C318	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C027	1-163-009-91	CERAMIC CHIP	0.001μF	10%	50V	C319	1-126-767-11	ELECT	1000μF	20%	16V
C028	1-163-259-91	CERAMIC CHIP	220pF	5%	50V	C320	1-164-005-11	CERAMIC CHIP	0.47μF		25V
C032	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V	C321	1-164-005-11	CERAMIC CHIP	0.47μF		25V
C033	1-163-259-91	CERAMIC CHIP	220pF	5%	50V	C322	1-164-005-11	CERAMIC CHIP	0.47μF		25V
C034	1-163-037-11	CERAMIC CHIP	0.022μF	10%	50V	C323	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C037	1-164-161-11	CERAMIC CHIP	0.0022μF	10%	50V	C325	1-164-005-11	CERAMIC CHIP	0.47μF		25V
C038	1-126-935-11	ELECT	470μF	20%	16V	C326	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C039	1-126-964-11	ELECT	10μF	20%	50V	C328	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C040	1-163-229-11	CERAMIC CHIP	12pF	5%	50V	C329	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C041	1-163-237-11	CERAMIC CHIP	27pF	5%	50V	C330	1-126-960-11	ELECT	1μF	20%	50V
C042	1-163-259-91	CERAMIC CHIP	220pF	5%	50V	C331	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C043	1-163-009-91	CERAMIC CHIP	0.001μF	10%	50V	C334	1-163-003-11	CERAMIC CHIP	330pF	10%	50V
C044	1-163-009-91	CERAMIC CHIP	0.001μF	10%	50V	C335	1-126-963-11	ELECT	4.7μF	20%	50V
C045	1-164-161-11	CERAMIC CHIP	0.0022μF	10%	50V	C338	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C046	1-104-664-11	ELECT	47μF	20%	25V	C339	1-126-960-11	ELECT	1μF	20%	50V
C047	1-163-259-91	CERAMIC CHIP	220pF	5%	50V	C341	1-163-233-91	CERAMIC CHIP	18pF	5%	50V
C048	1-163-259-91	CERAMIC CHIP	220pF	5%	50V	C345	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C051	1-126-943-11	ELECT	2200μF	20%	25V	C346	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C060	1-163-005-91	CERAMIC CHIP	470pF	10%	50V	C347	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C062	1-126-959-11	ELECT	0.47μF	20%	50V	C348	1-164-005-11	CERAMIC CHIP	0.47μF		25V
C063	1-137-194-81	FILM	0.47μF	5%	50V	C352	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C064	1-163-017-00	CERAMIC CHIP	0.0047μF	10%	50V	C353	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C070	1-163-009-91	CERAMIC CHIP	0.001μF	10%	50V	C356	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C071	1-163-009-91	CERAMIC CHIP	0.001μF	10%	50V	C357	1-104-664-11	ELECT	47μF	20%	25V
C076	1-163-259-91	CERAMIC CHIP	220pF	5%	50V	C358	1-104-664-11	ELECT	47μF	20%	25V
C077	1-163-259-91	CERAMIC CHIP	220pF	5%	50V	C359	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C091	1-115-185-11	CERAMIC CHIP	0.033μF	10%	50V	C360	1-126-959-11	ELECT	0.47μF	20%	50V
C093	1-163-259-91	CERAMIC CHIP	220pF	5%	50V	C361	1-163-038-91	CERAMIC CHIP	0.1μF		25V
						C362	1-104-664-11	ELECT	47μF	20%	25V
						C363	1-163-038-91	CERAMIC CHIP	0.1μF		25V
						C364	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
						C365	1-137-194-81	FILM	0.47μF	5%	50V
						C367	1-163-005-91	CERAMIC CHIP	470pF	10%	50V
						C370	1-126-933-11	ELECT	100μF	20%	16V



NOTE: The components identified by shading and  $\triangle$  mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifique.

## COMPLETE PARTS LISTING FV SERIES

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
C371	1-163-243-11	CERAMIC CHIP	47pF	5%	50V	JR003	1-216-295-91	SHORT			
C377	1-126-963-11	ELECT	4.7 $\mu$ F	20%	50V	JR005	1-216-295-91	SHORT			
C389	1-115-185-11	CERAMIC CHIP	0.033 $\mu$ F	10%	50V	JR006	1-216-295-91	SHORT			
C395	1-163-021-91	CERAMIC CHIP	0.01 $\mu$ F	10%	50V	JR007	1-216-295-91	SHORT			
C396	1-164-004-11	CERAMIC CHIP	0.1 $\mu$ F	10%	25V	JR008	1-216-295-91	SHORT			
C398	1-126-964-11	ELECT	10 $\mu$ F	20%	50V	JR010	1-216-295-91	SHORT			
C451	1-163-038-91	CERAMIC CHIP	0.1 $\mu$ F		25V	JR011	1-216-295-91	SHORT			
C452	1-163-038-91	CERAMIC CHIP	0.1 $\mu$ F		25V	JR090	1-216-295-91	SHORT			
C453	1-163-038-91	CERAMIC CHIP	0.1 $\mu$ F		25V	JR100	1-216-295-91	SHORT			
C454	1-163-038-91	CERAMIC CHIP	0.1 $\mu$ F		25V	JR101	1-216-295-91	SHORT			
<b>CONNECTOR</b>						JR296	1-216-295-91	SHORT			
CN001	1-764-334-11	PLUG,CONNECTOR 11P				JR297	1-216-295-91	SHORT			
* CN002	1-560-124-00	PLUG,CONNECTOR (2.5MM) 4P				JR298	1-216-295-91	SHORT			
* CN003	1-564-512-11	PLUG,CONNECTOR 9P				JR299	1-216-295-91	SHORT			
* CN004	1-564-512-11	PLUG,CONNECTOR 9P				JR300	1-216-295-91	SHORT			
* CN005	1-764-333-11	PLUG,CONNECTOR 10P				JR310	1-216-295-91	SHORT			
* CN006	1-764-333-11	PLUG,CONNECTOR 10P				JR311	1-216-295-91	SHORT			
* CN302	1-564-507-11	PLUG,CONNECTOR 4P				JR355	1-216-295-91	SHORT			
* CN304	1-564-507-11	PLUG,CONNECTOR 4P				JR359	1-216-295-91	SHORT			
CN305	1-573-298-21	CONNECTOR, BOARD TO BOARD 20P				JR378	1-216-295-91	SHORT			
* CN306	1-691-616-21	CONNECTOR, BOARD TO BOARD 15P				JR379	1-216-295-91	SHORT			
* CN309	1-564-506-11	PLUG,CONNECTOR 3P				JR399	1-216-295-91	SHORT			
CN401	1-564-505-11	PLUG,CONNECTOR 2P				JR402	1-216-295-91	SHORT			
<b>DIODE</b>						JR501	1-216-295-91	SHORT			
$\triangle$ D001	8-719-069-54	DIODE UDZSTE-175.1B				JR502	1-216-295-91	SHORT			
D002	8-719-110-17	DIODE MTZJ-T-77-10B				<b>COIL</b>					
D003	8-719-404-50	DIODE MA111-TX				L002	1-412-064-11	INDUCTOR	100 $\mu$ H		
D004	8-719-069-54	DIODE UDZSTE-175.1B				L003	1-412-064-11	INDUCTOR	100 $\mu$ H		
D005	8-719-109-89	DIODE MTZJ-T-77-5.6C				L040	1-408-963-11	INDUCTOR	2.7 $\mu$ H		
D006	8-719-069-60	DIODE UDZSTE-179.1B				L150	1-412-058-11	INDUCTOR	10 $\mu$ H		
D075	8-719-404-50	DIODE MA111-TX				L151	1-412-064-11	INDUCTOR	100 $\mu$ H		
D301	8-719-921-44	DIODE MTZJ-T-77-5.1C				L301	1-412-029-11	INDUCTOR	10 $\mu$ H		
D303	8-719-991-33	DIODE 1SS133T-77				L302	1-412-031-11	INDUCTOR	47 $\mu$ H		
D304	8-719-981-99	DIODE MTZJ-T-77-3.3				L305	1-412-029-11	INDUCTOR	10 $\mu$ H		
D305	8-719-921-44	DIODE MTZJ-T-77-5.1C				L308	1-412-064-11	INDUCTOR	100 $\mu$ H		
D360	8-719-914-44	DIODE DAP202K-T-146				L310	1-412-064-11	INDUCTOR	100 $\mu$ H		
<b>FERRITE BEAD</b>						<b>TRANSISTOR</b>					
FB001	1-414-234-22	FERRITE	0 $\mu$ H			Q001	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
FB002	1-414-234-22	FERRITE	0 $\mu$ H			Q002	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
<b>IC</b>						Q003	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
IC001	8-759-827-83	IC M37280MK-114SP				Q004	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
IC002	8-759-663-29	IC MM1476AF(TP)				Q006	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
IC003	8-759-699-33	IC M24C16-MN6T(A)				Q082	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
$\triangle$ IC301	8-752-100-49	IC CXA2154AS				Q151	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
<b>CHIP CONDUCTOR</b>						Q152	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
JR001	1-216-295-91	SHORT				Q301	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			
JR002	1-216-295-91	SHORT				Q303	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
						Q304	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX			



## COMPLETE PARTS LISTING FV SERIES

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
Q305	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX				R035	1-216-033-00	RES-CHIP	220	5%	1/10W
Q306	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX				R036	1-216-049-11	RES-CHIP	1K	5%	1/10W
Q356	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX				R037	1-249-409-11	CARBON	220	5%	1/4W
Q357	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX				R038	1-216-049-11	RES-CHIP	1K	5%	1/10W
Q365	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX				R039	1-216-045-00	RES-CHIP	680	5%	1/10W
Q368	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX				R040	1-249-409-11	CARBON	220	5%	1/4W
Q375	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX				R041	1-216-045-00	RES-CHIP	680	5%	1/10W
Q378	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX				R042	1-216-071-00	RES-CHIP	8.2K	5%	1/10W
Q379	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX				R043	1-249-417-11	CARBON	1K	5%	1/4W
Q380	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX				R044	1-216-033-00	RES-CHIP	220	5%	1/10W
Q387	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX				R045	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
Q388	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX				R046	1-216-033-00	RES-CHIP	220	5%	1/10W
Q389	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX				R047	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
		<b>RESISTOR</b>				R048	1-216-025-11	RES-CHIP	100	5%	1/10W
R001	1-216-043-91	RES-CHIP	560	5%	1/10W	R050	1-216-033-00	RES-CHIP	220	5%	1/10W
R002	1-216-041-00	RES-CHIP	470	5%	1/10W	R051	1-216-033-00	RES-CHIP	220	5%	1/10W
R003	1-247-807-31	CARBON	100	5%	1/4W	R052	1-249-417-11	CARBON	1K	5%	1/4W
R004	1-216-061-91	RES-CHIP	3.3K	5%	1/10W	R054	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R005	1-216-295-91	SHORT				R055	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R006	1-216-025-11	RES-CHIP	100	5%	1/10W	R056	1-208-798-11	METAL CHIP	4.7K	0.50%	1/10W
R007	1-216-025-11	RES-CHIP	100	5%	1/10W	R057	1-216-097-11	RES-CHIP	100K	5%	1/10W
R008	1-216-049-11	RES-CHIP	1K	5%	1/10W	R058	1-216-097-11	RES-CHIP	100K	5%	1/10W
R009	1-216-121-11	RES-CHIP	1M	5%	1/10W	R060	1-249-409-11	CARBON	220	5%	1/4W
R010	1-216-033-00	RES-CHIP	220	5%	1/10W	R061	1-216-033-00	RES-CHIP	220	5%	1/10W
R011	1-216-033-00	RES-CHIP	220	5%	1/10W	R064	1-216-295-91	SHORT			
R012	1-216-045-00	RES-CHIP	680	5%	1/10W	R069	1-249-409-11	CARBON	220	5%	1/4W
R013	1-249-417-11	CARBON	1K	5%	1/4W	R070	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R014	1-216-073-91	RES-CHIP	10K	5%	1/10W	R071	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R015	1-216-073-91	RES-CHIP	10K	5%	1/10W	R073	1-249-425-11	CARBON	4.7K	5%	1/4W
R016	1-216-041-00	RES-CHIP	470	5%	1/10W	R074	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R017	1-208-798-11	METAL CHIP	4.7K	0.50%	1/10W	R077	1-216-097-11	RES-CHIP	100K	5%	1/10W
R018	1-249-409-11	CARBON	220	5%	1/4W	R085	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R019	1-216-113-00	RES-CHIP	470K	5%	1/10W	R086	1-216-045-00	RES-CHIP	680	5%	1/10W
R020	1-216-033-00	RES-CHIP	220	5%	1/10W	R087	1-216-045-00	RES-CHIP	680	5%	1/10W
R021	1-216-073-91	RES-CHIP	10K	5%	1/10W	R088	1-216-045-00	RES-CHIP	680	5%	1/10W
R022	1-249-409-11	CARBON	220	5%	1/4W	R089	1-216-033-00	RES-CHIP	220	5%	1/10W
R023	1-249-429-11	CARBON	10K	5%	1/4W	R091	1-216-073-91	RES-CHIP	10K	5%	1/10W
R024	1-249-409-11	CARBON	220	5%	1/4W	R092	1-208-798-11	METAL CHIP	4.7K	0.50%	1/10W
R025	1-249-426-11	CARBON	5.6K	5%	1/4W	R093	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R026	1-249-426-11	CARBON	5.6K	5%	1/4W	R094	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R027	1-249-426-11	CARBON	5.6K	5%	1/4W	R095	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R028	1-216-049-11	RES-CHIP	1K	5%	1/10W	R096	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R029	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R097	1-249-414-11	CARBON	560	5%	1/4W
R030	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R099	1-216-089-91	RES-CHIP	47K	5%	1/10W
R031	1-216-355-11	METAL OXIDE	3.3	5%	1W	R100	1-216-295-91	SHORT			
R032	1-216-033-00	RES-CHIP	220	5%	1/10W	R101	1-216-295-91	SHORT			
R033	1-216-033-00	RES-CHIP	220	5%	1/10W	R150	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R034	1-216-033-00	RES-CHIP	220	5%	1/10W	R151	1-216-025-11	RES-CHIP	100	5%	1/10W



## COMPLETE PARTS LISTING FV SERIES

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R154	1-216-043-91	RES-CHIP	560	5%	1/10W	R303	1-216-073-91	RES-CHIP	10K	5%	1/10W
R155	1-216-043-91	RES-CHIP	560	5%	1/10W	R304	1-247-807-31	CARBON	100	5%	1/4W
R156	1-216-085-91	RES-CHIP	33K	5%	1/10W	R306	1-216-025-11	RES-CHIP	100	5%	1/10W
R157	1-216-081-00	RES-CHIP	22K	5%	1/10W	R308	1-216-022-00	RES-CHIP	75	5%	1/10W
R158	1-216-025-11	RES-CHIP	100	5%	1/10W	R310	1-249-417-11	CARBON	1K	5%	1/4W
R159	1-216-025-11	RES-CHIP	100	5%	1/10W	R312	1-249-417-11	CARBON	1K	5%	1/4W
R199	1-216-295-91	SHORT				R313	1-216-049-11	RES-CHIP	1K	5%	1/10W
R251	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R314	1-216-081-00	RES-CHIP	22K	5%	1/10W
R253	1-216-049-11	RES-CHIP	1K	5%	1/10W	R322	1-216-025-11	RES-CHIP	100	5%	1/10W
R256	1-216-073-91	RES-CHIP	10K	5%	1/10W	R323	1-216-025-11	RES-CHIP	100	5%	1/10W
R257	1-216-049-11	RES-CHIP	1K	5%	1/10W	R324	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R258	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R326	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R259	1-249-429-11	CARBON	10K	5%	1/4W	R327	1-216-025-11	RES-CHIP	100	5%	1/10W
R260	1-249-409-11	CARBON	220	5%	1/4W	R329	1-216-025-11	RES-CHIP	100	5%	1/10W
R261	1-216-113-00	RES-CHIP	470K	5%	1/10W	R332	1-216-022-00	RES-CHIP	75	5%	1/10W
R262	1-247-807-31	CARBON	100	5%	1/4W	R335	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R263	1-216-025-11	RES-CHIP	100	5%	1/10W	R336	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R264	1-216-081-00	RES-CHIP	22K	5%	1/10W	R337	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R266	1-216-081-00	RES-CHIP	22K	5%	1/10W	R338	1-216-073-91	RES-CHIP	10K	5%	1/10W
R267	1-216-049-11	RES-CHIP	1K	5%	1/10W	R340	1-216-025-11	RES-CHIP	100	5%	1/10W
R268	1-216-045-00	RES-CHIP	680	5%	1/10W	R341	1-216-089-91	RES-CHIP	47K	5%	1/10W
R269	1-216-049-11	RES-CHIP	1K	5%	1/10W	R342	1-216-049-11	RES-CHIP	1K	5%	1/10W
R270	1-216-081-00	RES-CHIP	22K	5%	1/10W	R343	1-216-097-11	RES-CHIP	100K	5%	1/10W
R271	1-216-081-00	RES-CHIP	22K	5%	1/10W	R344	1-216-295-91	SHORT			
R272	1-216-081-00	RES-CHIP	22K	5%	1/10W	R345	1-216-097-11	RES-CHIP	100K	5%	1/10W
R273	1-216-073-91	RES-CHIP	10K	5%	1/10W	R346	1-216-097-11	RES-CHIP	100K	5%	1/10W
R274	1-216-295-91	SHORT				R347	1-216-025-11	RES-CHIP	100	5%	1/10W
R276	1-216-085-91	RES-CHIP	33K	5%	1/10W	R348	1-216-022-00	RES-CHIP	75	5%	1/10W
R277	1-216-129-00	RES-CHIP	2.2M	5%	1/10W	R349	1-216-025-11	RES-CHIP	100	5%	1/10W
R278	1-216-295-91	SHORT				R350	1-216-022-00	RES-CHIP	75	5%	1/10W
R279	1-247-807-31	CARBON	100	5%	1/4W	R356	1-216-025-11	RES-CHIP	100	5%	1/10W
R280	1-216-069-00	RES-CHIP	6.8K	5%	1/10W	R357	1-216-022-00	RES-CHIP	75	5%	1/10W
R281	1-208-798-11	METAL CHIP	4.7K	0.50%	1/10W	R358	1-216-093-91	RES-CHIP	68K	5%	1/10W
R282	1-208-790-11	METAL CHIP	2.2K	0.50%	1/10W	R360	1-216-093-91	RES-CHIP	68K	5%	1/10W
R283	1-216-689-11	RES-CHIP	39K	5%	1/10W	R361	1-216-022-00	RES-CHIP	75	5%	1/10W
R284	1-216-049-11	RES-CHIP	1K	5%	1/10W	R370	1-249-429-11	CARBON	10K	5%	1/4W
R285	1-216-049-11	RES-CHIP	1K	5%	1/10W	R376	1-216-022-00	RES-CHIP	75	5%	1/10W
R286	1-216-089-91	RES-CHIP	47K	5%	1/10W	R380	1-216-295-91	SHORT			
R287	1-216-097-11	RES-CHIP	100K	5%	1/10W	R381	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R288	1-216-041-00	RES-CHIP	470	5%	1/10W	R382	1-216-295-91	SHORT			
R289	1-216-041-00	RES-CHIP	470	5%	1/10W	R383	1-216-295-91	SHORT			
R290	1-216-043-91	RES-CHIP	560	5%	1/10W	R384	1-216-295-91	SHORT			
R291	1-216-025-11	RES-CHIP	100	5%	1/10W	R387	1-216-025-11	RES-CHIP	100	5%	1/10W
R296	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	R388	1-216-025-11	RES-CHIP	100	5%	1/10W
R297	1-216-025-11	RES-CHIP	100	5%	1/10W	R398	1-216-091-00	RES-CHIP	56K	5%	1/10W
R298	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R399	1-216-109-00	RES-CHIP	330K	5%	1/10W
R299	1-216-033-00	RES-CHIP	220	5%	1/10W	R434	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R301	1-216-022-00	RES-CHIP	75	5%	1/10W	R435	1-216-065-91	RES-CHIP	4.7K	5%	1/10W

NOTE: The components identified by shading and  $\triangle$  mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifique.

**MA BC**

**COMPLETE PARTS LISTING FV SERIES**

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
<b>TUNER</b>											
$\triangle$	TU150	8-598-501-30	TUNER, FSS BTF-FA402			C3539	1-163-231-11	CERAMIC CHIP	15pF	5%	50V
<b>CRYSTAL</b>											
X001	1-767-487-11	VIBRATOR, CRYSTAL			C3541	1-163-106-00	CERAMIC CHIP	36pF	5%	50V	
X301	1-567-505-11	OSCILLATOR, CRYSTAL			C3542	1-126-964-11	ELECT	10 $\mu$ F	20%	50V	
<b>BC</b>											
*	A-1131-593-A	<b>BC BOARD, MOUNTED (KV-27FV17/29FV17/29FV17C ONLY)</b>			C3543	1-164-505-11	CERAMIC CHIP	2.2 $\mu$ F		16V	
<b>CAPACITOR</b>											
C3500	1-165-319-11	CERAMIC CHIP	0.1 $\mu$ F		50V	C3546	1-163-231-11	CERAMIC CHIP	15pF	5%	50V
C3501	1-163-231-11	CERAMIC CHIP	15pF	5%	50V	C3547	1-126-934-11	ELECT	220 $\mu$ F	20%	10V
C3502	1-165-319-11	CERAMIC CHIP	0.1 $\mu$ F		50V	C3548	1-164-004-11	CERAMIC CHIP	0.1 $\mu$ F	10%	25V
C3504	1-163-102-00	CERAMIC CHIP	24pF	5%	50V	C3549	1-104-660-91	ELECT	47 $\mu$ F	20%	16V
C3505	1-163-102-00	CERAMIC CHIP	24pF	5%	50V	C3550	1-163-031-91	CERAMIC CHIP	0.01 $\mu$ F		50V
C3506	1-165-319-11	CERAMIC CHIP	0.1 $\mu$ F		50V	C3551	1-104-660-91	ELECT	47 $\mu$ F	20%	16V
C3507	1-165-319-11	CERAMIC CHIP	0.1 $\mu$ F		50V	C3552	1-163-031-91	CERAMIC CHIP	0.01 $\mu$ F		50V
C3509	1-163-038-91	CERAMIC CHIP	0.1 $\mu$ F		25V	C3553	1-163-031-91	CERAMIC CHIP	0.01 $\mu$ F		50V
C3510	1-163-131-00	CERAMIC CHIP	390pF	5%	50V	C3554	1-104-660-91	ELECT	47 $\mu$ F	20%	16V
C3511	1-163-038-91	CERAMIC CHIP	0.1 $\mu$ F		25V	C3555	1-126-934-11	ELECT	220 $\mu$ F	20%	10V
C3512	1-165-319-11	CERAMIC CHIP	0.1 $\mu$ F		50V	C3556	1-164-004-11	CERAMIC CHIP	0.1 $\mu$ F	10%	25V
C3513	1-216-295-91	SHORT			C3557	1-163-031-91	CERAMIC CHIP	0.01 $\mu$ F		50V	
C3514	1-163-031-91	CERAMIC CHIP	0.01 $\mu$ F		50V	C3558	1-104-660-91	ELECT	47 $\mu$ F	20%	16V
C3515	1-165-319-11	CERAMIC CHIP	0.1 $\mu$ F		50V	C3559	1-163-031-91	CERAMIC CHIP	0.01 $\mu$ F		50V
C3516	1-165-319-11	CERAMIC CHIP	0.1 $\mu$ F		50V	C3560	1-104-660-91	ELECT	47 $\mu$ F	20%	16V
C3517	1-126-924-11	ELECT	330 $\mu$ F	20%	6.3V	C3561	1-163-031-91	CERAMIC CHIP	0.01 $\mu$ F		50V
C3518	1-163-038-91	CERAMIC CHIP	0.1 $\mu$ F		25V	C3562	1-163-031-91	CERAMIC CHIP	0.01 $\mu$ F		50V
C3519	1-165-319-11	CERAMIC CHIP	0.1 $\mu$ F		50V	C3563	1-104-660-91	ELECT	47 $\mu$ F	20%	16V
C3520	1-165-319-11	CERAMIC CHIP	0.1 $\mu$ F		50V	C3564	1-104-660-91	ELECT	47 $\mu$ F	20%	16V
C3521	1-163-237-11	CERAMIC CHIP	27pF	5%	50V	C3565	1-163-031-91	CERAMIC CHIP	0.01 $\mu$ F		50V
C3522	1-104-660-91	ELECT	47 $\mu$ F	20%	16V	C3566	1-163-031-91	CERAMIC CHIP	0.01 $\mu$ F		50V
C3523	1-165-319-11	CERAMIC CHIP	0.1 $\mu$ F		50V	<b>CONNECTOR</b>					
C3524	1-165-319-11	CERAMIC CHIP	0.1 $\mu$ F		50V	*	CN3500	1-691-632-21	CONNECTOR, BOARD TO BOARD 15P		
C3525	1-163-038-91	CERAMIC CHIP	0.1 $\mu$ F		25V	<b>FERRITE BEAD</b>					
C3526	1-165-319-11	CERAMIC CHIP	0.1 $\mu$ F		50V	FB3500	1-414-234-22	FERRITE		0 $\mu$ H	
C3527	1-165-319-11	CERAMIC CHIP	0.1 $\mu$ F		50V	FB3501	1-414-234-22	FERRITE		0 $\mu$ H	
C3528	1-165-319-11	CERAMIC CHIP	0.1 $\mu$ F		50V	FB3502	1-414-234-22	FERRITE		0 $\mu$ H	
C3529	1-165-319-11	CERAMIC CHIP	0.1 $\mu$ F		50V	FB3503	1-414-234-22	FERRITE		0 $\mu$ H	
C3530	1-104-660-91	ELECT	47 $\mu$ F	20%	16V	FB3504	1-414-234-22	FERRITE		0 $\mu$ H	
C3531	1-165-319-11	CERAMIC CHIP	0.1 $\mu$ F		50V	FB3505	1-414-234-22	FERRITE		0 $\mu$ H	
C3532	1-126-964-11	ELECT	10 $\mu$ F	20%	50V	FB3506	1-414-234-22	FERRITE		0 $\mu$ H	
C3533	1-163-133-00	CERAMIC CHIP	470pF	5%	50V	FB3507	1-414-234-22	FERRITE		0 $\mu$ H	
C3534	1-126-960-11	ELECT	1 $\mu$ F	20%	50V	FB3508	1-414-234-22	FERRITE		0 $\mu$ H	
C3535	1-163-231-11	CERAMIC CHIP	15pF	5%	50V	<b>FILTER</b>					
C3536	1-126-960-11	ELECT	1 $\mu$ F	20%	50V	FL3500	1-239-848-21	FILTER, LOW PASS			
						FL3502	1-239-848-21	FILTER, LOW PASS			
						FL3503	1-239-848-21	FILTER, LOW PASS			
						FL3504	1-233-512-21	FERRITE		37 $\mu$ H	
						FL3505	1-233-512-21	FERRITE		37 $\mu$ H	
						FL3506	1-233-512-21	FERRITE		37 $\mu$ H	



## COMPLETE PARTS LISTING

REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
	<b>IC</b>			R3523	1-216-049-11	RES-CHIP	1K 5% 1/10W
IC3500	8-759-568-27	IC UPD424210LE-60-E2		R3524	1-216-089-91	RES-CHIP	47K 5% 1/10W
IC3501	8-759-594-44	IC UPD64082GF-3BA		R3525	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
IC3502	8-759-583-47	IC UPC2933T-E1		R3526	1-216-105-91	RES-CHIP	220K 5% 1/10W
	<b>COIL</b>			R3527	1-216-033-00	RES-CHIP	220 5% 1/10W
L3500	1-412-028-11	INDUCTOR	4.7μH	R3528	1-208-776-11	METAL CHIP	560 0.50% 1/10W
L3501	1-412-058-11	INDUCTOR	10μH	R3529	1-208-772-11	METAL CHIP	390 0.50% 1/10W
L3502	1-412-058-11	INDUCTOR	10μH	R3530	1-216-067-00	RES-CHIP	5.6K 5% 1/10W
L3503	1-412-058-11	INDUCTOR	10μH	R3531	1-216-049-11	RES-CHIP	1K 5% 1/10W
L3504	1-412-058-11	INDUCTOR	10μH	R3532	1-216-025-11	RES-CHIP	100 5% 1/10W
L3505	1-412-058-11	INDUCTOR	10μH	R3534	1-216-049-11	RES-CHIP	1K 5% 1/10W
	<b>TRANSISTOR</b>			R3535	1-216-025-11	RES-CHIP	100 5% 1/10W
Q3500	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R3544	1-216-049-11	RES-CHIP	1K 5% 1/10W
Q3501	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R3545	1-216-043-91	RES-CHIP	560 5% 1/10W
Q3502	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R3547	1-216-067-00	RES-CHIP	5.6K 5% 1/10W
Q3503	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R3548	1-216-295-91	SHORT	
Q3504	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R3549	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
Q3505	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R3550	1-208-780-11	METAL CHIP	820 0.50% 1/10W
Q3506	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R3551	1-208-776-11	METAL CHIP	560 0.50% 1/10W
Q3510	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R3552	1-208-764-11	METAL CHIP	180 0.50% 1/10W
Q3511	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R3553	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
Q3512	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R3554	1-216-047-91	RES-CHIP	820 5% 1/10W
Q3513	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R3555	1-216-075-00	RES-CHIP	12K 5% 1/10W
Q3514	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX		R3556	1-216-085-91	RES-CHIP	33K 5% 1/10W
Q3515	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R3557	1-216-049-11	RES-CHIP	1K 5% 1/10W
Q3516	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R3558	1-216-017-91	RES-CHIP	47 5% 1/10W
Q3517	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R3559	1-216-295-91	SHORT	
	<b>RESISTOR</b>			R3560	1-216-049-11	RES-CHIP	1K 5% 1/10W
R3503	1-216-017-91	RES-CHIP	47 5% 1/10W	R3561	1-216-043-91	RES-CHIP	560 5% 1/10W
R3504	1-216-295-91	SHORT		R3563	1-216-295-91	SHORT	
R3505	1-216-295-91	SHORT		R3564	1-216-295-91	SHORT	
R3506	1-216-295-91	SHORT		R3565	1-216-067-00	RES-CHIP	5.6K 5% 1/10W
R3507	1-216-295-91	SHORT		R3566	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
R3508	1-216-295-91	SHORT		R3567	1-216-043-91	RES-CHIP	560 5% 1/10W
R3509	1-216-049-11	RES-CHIP	1K 5% 1/10W	R3568	1-216-047-91	RES-CHIP	820 5% 1/10W
R3510	1-216-041-00	RES-CHIP	470 5% 1/10W	R3569	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
R3511	1-216-041-00	RES-CHIP	470 5% 1/10W	R3570	1-216-085-91	RES-CHIP	33K 5% 1/10W
R3512	1-216-295-91	SHORT		R3571	1-216-075-00	RES-CHIP	12K 5% 1/10W
R3514	1-216-025-11	RES-CHIP	100 5% 1/10W	R3572	1-216-049-11	RES-CHIP	1K 5% 1/10W
R3515	1-216-055-00	RES-CHIP	1.8K 5% 1/10W	R3573	1-216-017-91	RES-CHIP	47 5% 1/10W
R3516	1-216-055-00	RES-CHIP	1.8K 5% 1/10W	R3588	1-216-043-91	RES-CHIP	560 5% 1/10W
R3517	1-216-025-11	RES-CHIP	100 5% 1/10W		<b>CRYSTAL</b>		
R3518	1-216-025-11	RES-CHIP	100 5% 1/10W	X3500	1-767-606-11	VIBRATOR, CRYSTAL	
R3519	1-216-295-91	SHORT					
R3520	1-216-065-91	RES-CHIP	4.7K 5% 1/10W				
R3521	1-216-041-00	RES-CHIP	470 5% 1/10W				
R3522	1-216-041-00	RES-CHIP	470 5% 1/10W				



## COMPLETE PARTS LISTING

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES			
					<b>P</b>							
*	A-1190-391-A	P BOARD, MOUNTED (KV-27FS17/27FV17/29FV17/29FV17C/32FS17/ 34FS17 ONLY)										
					<b>CAPACITOR</b>							
C3300	1-164-346-11	CERAMIC CHIP	1μF		16V							
C3301	1-164-346-11	CERAMIC CHIP	1μF		16V							
C3302	1-164-346-11	CERAMIC CHIP	1μF		16V							
C3303	1-104-660-91	ELECT	47μF	20%	16V							
C3304	1-163-133-00	CERAMIC CHIP	470pF	5%	50V							
C3305	1-163-038-91	CERAMIC CHIP	0.1μF		25V							
C3308	1-104-660-91	ELECT	47μF	20%	16V							
C3312	1-163-005-91	CERAMIC CHIP	470pF	10%	50V							
C3313	1-163-009-91	CERAMIC CHIP	0.001μF	10%	50V							
C3316	1-104-660-91	ELECT	47μF	20%	16V							
C3317	1-163-031-91	CERAMIC CHIP	0.01μF		50V							
C3318	1-163-031-91	CERAMIC CHIP	0.01μF		50V							
C3319	1-104-660-91	ELECT	47μF	20%	16V							
C3320	1-163-031-91	CERAMIC CHIP	0.01μF		50V							
C3321	1-163-005-91	CERAMIC CHIP	470pF	10%	50V							
C3322	1-163-034-91	CERAMIC CHIP	0.033μF		50V							
C3323	1-164-222-91	CERAMIC CHIP	0.22μF		25V							
C3324	1-163-233-91	CERAMIC CHIP	18pF	5%	50V							
C3327	1-163-133-00	CERAMIC CHIP	470pF	5%	50V							
C3328	1-163-031-91	CERAMIC CHIP	0.01μF		50V							
C3329	1-163-133-00	CERAMIC CHIP	470pF	5%	50V							
C3330	1-163-031-91	CERAMIC CHIP	0.01μF		50V							
C3331	1-163-031-91	CERAMIC CHIP	0.01μF		50V							
C3332	1-163-031-91	CERAMIC CHIP	0.01μF		50V							
C3334	1-163-031-91	CERAMIC CHIP	0.01μF		50V							
C3335	1-163-038-91	CERAMIC CHIP	0.1μF		25V							
C3336	1-163-031-91	CERAMIC CHIP	0.01μF		50V							
C3337	1-163-038-91	CERAMIC CHIP	0.1μF		25V							
C3338	1-163-038-91	CERAMIC CHIP	0.1μF		25V							
C3339	1-126-965-91	ELECT	22μF	20%	50V							
C3340	1-104-660-91	ELECT	47μF	20%	16V							
C3341	1-163-031-91	CERAMIC CHIP	0.01μF		50V							
					<b>CONNECTOR</b>							
CN3300	1-573-301-21	CONNECTOR, BOARD TO BOARD 20P										
					<b>DIODE</b>							
D3301	8-719-404-50	DIODE MA111-TX										
D3304	8-719-056-77	DIODE UDZ-TE-17-3.9B										
					<b>IC</b>							
IC3301	6-700-200-01	IC M65665FP-D60S										
					<b>COIL</b>							
L3300	1-412-058-11	INDUCTOR				10μH						
L3301	1-410-682-31	INDUCTOR				470μH						
L3302	1-412-058-11	INDUCTOR				10μH						
L3303	1-412-058-11	INDUCTOR				10μH						
					<b>TRANSISTOR</b>							
Q3300	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX										
Q3301	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX										
Q3302	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX										
Q3304	8-729-926-14	TRANSISTOR 2SD1292										
Q3305	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX										
Q3307	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX										
Q3308	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX										
Q3309	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX										
Q3310	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX										
Q3312	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX										
					<b>RESISTOR</b>							
R3300	1-216-089-91	RES-CHIP	47K	5%	1/10W							
R3301	1-216-049-11	RES-CHIP	1K	5%	1/10W							
R3302	1-216-089-91	RES-CHIP	47K	5%	1/10W							
R3303	1-216-049-11	RES-CHIP	1K	5%	1/10W							
R3304	1-216-049-11	RES-CHIP	1K	5%	1/10W							
R3305	1-216-089-91	RES-CHIP	47K	5%	1/10W							
R3306	1-216-081-00	RES-CHIP	22K	5%	1/10W							
R3307	1-216-049-11	RES-CHIP	1K	5%	1/10W							
R3308	1-216-081-00	RES-CHIP	22K	5%	1/10W							
R3309	1-216-041-00	RES-CHIP	470	5%	1/10W							
R3310	1-216-089-91	RES-CHIP	47K	5%	1/10W							
R3311	1-216-045-00	RES-CHIP	680	5%	1/10W							
R3312	1-216-295-91	SHORT										
R3313	1-216-295-91	SHORT										
R3314	1-216-295-91	SHORT										
R3318	1-216-073-91	RES-CHIP	10K	5%	1/10W							
R3319	1-216-073-91	RES-CHIP	10K	5%	1/10W							
R3320	1-216-065-91	RES-CHIP	4.7K	5%	1/10W							
R3321	1-216-295-91	SHORT										
R3323	1-216-043-91	RES-CHIP	560	5%	1/10W							
R3324	1-216-049-11	RES-CHIP	1K	5%	1/10W							
R3327	1-216-295-91	SHORT										
R3328	1-216-049-11	RES-CHIP	1K	5%	1/10W							
R3329	1-216-295-91	SHORT										
R3330	1-216-049-11	RES-CHIP	1K	5%	1/10W							
R3331	1-216-049-11	RES-CHIP	1K	5%	1/10W							
R3335	1-215-857-71	METAL OXIDE	10	5%	1W							

NOTE: The components identified by shading and  $\triangle$  mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifiés par un trame et une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifique.



## COMPLETE PARTS LISTING

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES			
R3336	1-216-041-00	RES-CHIP	470	5%	1/10W	<b>DIODE</b>						
R3343	1-216-049-11	RES-CHIP	1K	5%	1/10W	D701	8-719-901-83	DIODE 1SS83TD				
R3346	1-216-049-11	RES-CHIP	1K	5%	1/10W	D702	8-719-901-83	DIODE 1SS83TD				
R3347	1-216-073-91	RES-CHIP	10K	5%	1/10W	D703	8-719-901-83	DIODE 1SS83TD				
R3348	1-216-073-91	RES-CHIP	10K	5%	1/10W	D704	8-719-302-43	DIODE RGP10GPKG23				
R3350	1-216-295-91	SHORT				<b>IC</b>						
R3351	1-216-033-00	RES-CHIP	220	5%	1/10W	IC701	8-759-803-42	IC LA6500-FA				
R3354	1-216-133-91	RES-CHIP	3.3M	5%	1/10W	IC702	8-759-562-43	IC TDA6108JF/N1B				
R3359	1-216-295-91	SHORT				<b>JACK</b>						
R3360	1-216-295-91	SHORT				$\triangle$ J701	1-451-470-21	SOCKET, CRT				
R3361	1-216-295-91	SHORT				<b>COIL</b>						
R3362	1-216-061-91	RES-CHIP	3.3K	5%	1/10W	L701	1-408-613-31	INDUCTOR	68 $\mu$ H			
R3363	1-216-085-91	RES-CHIP	33K	5%	1/10W	<b>TRANSISTOR</b>						
R3364	1-216-025-11	RES-CHIP	100	5%	1/10W	Q700	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA				
R3365	1-216-025-11	RES-CHIP	100	5%	1/10W	Q701	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA				
R3368	1-216-073-91	RES-CHIP	10K	5%	1/10W	<b>RESISTOR</b>						
R3369	1-216-037-00	RES-CHIP	330	5%	1/10W	R700	1-249-433-11	CARBON	22K	5%	1/4W	
R3372	1-216-295-91	SHORT				R701	1-249-429-11	CARBON	10K	5%	1/4W	
R3374	1-216-295-91	SHORT				R702	1-249-409-11	CARBON	220	5%	1/4W	
<b>CRYSTAL</b>						R703	1-247-807-31	CARBON	100	5%	1/4W	
X3301	1-781-377-11	VIBRATOR, CRYSTAL				R704	1-249-421-11	CARBON	2.2K	5%	1/4W	
<b>CA</b>						R705	1-249-429-11	CARBON	10K	5%	1/4W	
*	A-1332-063-A	CA (VAR) BOARD, MOUNTED (KV-27FS13/27FS17/27FV17/29FV17/29FV17C ONLY)				R706	1-249-381-11	CARBON	1	5%	1/4W	
*	A-1332-061-A	CA (VAR) BOARD, MOUNTED (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)				R707	1-249-383-11	CARBON	1.5	5%	1/4W	
*	4-382-854-11	SCREW (M3X10), P, SW (+)				R708	1-247-807-31	CARBON	100	5%	1/4W	
<b>CAPACITOR</b>						R709	1-247-807-31	CARBON	100	5%	1/4W	
C701	1-104-664-11	ELECT	47 $\mu$ F	20%	25V	R710	1-247-807-31	CARBON	100	5%	1/4W	
C702	1-136-165-00	FILM	0.1 $\mu$ F	5%	50V	R711	1-260-328-11	CARBON	1K	5%	1/2W	
C703	1-104-664-11	ELECT	47 $\mu$ F	20%	25V	R712	1-260-328-11	CARBON	1K	5%	1/2W	
C704	1-107-651-11	ELECT	4.7 $\mu$ F	20%	250V	R713	1-260-328-11	CARBON	1K	5%	1/2W	
C705	1-107-652-11	ELECT	10 $\mu$ F	20%	250V	R714	1-260-087-11	CARBON	100	5%	1/2W	
C706	1-137-528-11	MYLAR	0.1 $\mu$ F	10%	250V	R715	1-260-132-11	CARBON	560K	5%	1/2W	
C707	1-162-114-00	CERAMIC	0.0047 $\mu$ F		2KV	R716	1-260-123-11	CARBON	100K	5%	1/2W	
C708	1-136-165-00	FILM	0.1 $\mu$ F	5%	50V	R717	1-216-373-11	METAL OXIDE	2.2	5%	2W	
C709	1-126-934-11	ELECT	220 $\mu$ F	20%	16V	R718	1-216-373-11	METAL OXIDE	2.2	5%	2W	
C710	1-126-964-11	ELECT	10 $\mu$ F	20%	50V			(KV-32FS13/32FS17/34FS13C/34FS17 ONLY)				
<b>CONNECTOR</b>						R719	1-215-888-00	METAL OXIDE	220	5%	2W	
*	CN701	1-564-506-11	PLUG,CONNECTOR 3P				R720	1-249-421-11	CARBON	2.2K	5%	1/4W
	CN702	1-695-915-11	TAB (CONTACT)				R721	1-249-421-11	CARBON	2.2K	5%	1/4W
	CN704	1-785-879-11	CONNECTOR, ONE TOUCH				<b>VARIABLE RESISTOR</b>					
*	CN706	1-564-509-11	PLUG,CONNECTOR 6P				RV701	1-241-656-11	RES, ADJ, METAL FILM 110M			



## COMPLETE PARTS LISTING

REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES	
				<u>TRANSISTOR</u>				
				Q807	8-729-931-45	TRANSISTOR IRF614		
				Q808	8-729-140-97	TRANSISTOR 2SB734-T-34		
				Q901	8-729-017-06	TRANSISTOR 2SC4793		
* A-1342-550-A	VA (VAR) BOARD, MOUNTED (KV-27FS13/27FS17/27FV17/29FV17/29FV17C ONLY)		Q902	8-729-017-05	TRANSISTOR 2SA1837			
* A-1342-549-A	VA (VAR) BOARD, MOUNTED (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)		Q903	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA			
4-382-854-11	SCREW (M3X10), P, SW (+)		Q904	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA			
<u>CAPACITOR</u>				<u>RESISTOR</u>				
C805	1-129-763-61	FILM	0.033μF 5% 200V (KV-27FS13/27FS17/27FV17/29FV17/29FV17C ONLY)	R818	1-216-025-11	RES-CHIP	100 5% 1/10W	
C805	1-130-338-91	FILM	0.01μF 5% 630V (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)	R826	1-249-421-11	CARBON	2.2K 5% 1/4W	
C811	1-129-765-00	FILM	0.047μF 5% 200V (KV-27FS13/27FS17/27FV17/29FV17/29FV17C ONLY)	R876	1-216-049-11	RES-CHIP	1K 5% 1/10W	
C811	1-129-768-61	FILM	0.082μF 5% 200V (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)	R901	1-249-401-11	CARBON	47 5% 1/4W	
C901	1-107-667-11	ELECT	2.2μF 20% 160V	R902	1-249-386-11	CARBON	2.7 5% 1/4W	
C902	1-130-491-00	MYLAR	0.047μF 5% 50V	R903	1-249-414-11	CARBON	560 5% 1/4W	
C903	1-126-935-11	ELECT	470μF 20% 10V	R904	1-249-432-11	CARBON	18K 5% 1/4W	
C904	1-130-471-00	MYLAR	0.001μF 5% 50V	R905	1-249-417-11	CARBON	1K 5% 1/4W	
C905	1-106-383-00	MYLAR	0.047μF 10% 200V	R906	1-249-432-11	CARBON	18K 5% 1/4W	
C906	1-130-471-00	MYLAR	0.001μF 5% 50V	R907	1-249-386-11	CARBON	2.7 5% 1/4W	
C907	1-107-638-11	ELECT	33μF 20% 160V	R908	1-249-414-11	CARBON	560 5% 1/4W	
C908	1-126-935-11	ELECT	470μF 20% 10V	R909	1-260-312-11	CARBON	47 5% 1/2W	
C909	1-161-830-00	CERAMIC	0.0047μF 500V	R910	1-216-476-11	METAL OXIDE	180 5% 3W	
C910	1-104-999-11	MYLAR	0.1μF 10% 200V	R911	1-249-403-11	CARBON	68 5% 1/4W	
C911	1-104-665-11	ELECT	100μF 20% 10V	R912	1-249-409-11	CARBON	220 5% 1/4W	
C912	1-126-941-11	ELECT	470μF 20% 25V	R913	1-249-403-11	CARBON	68 5% 1/4W	
C913	1-102-074-00	CERAMIC	0.001μF 10% 50V	R914	1-249-410-11	CARBON	270 5% 1/4W	
C914	1-130-491-00	MYLAR	0.047μF 5% 50V	R915	1-249-417-11	CARBON	1K 5% 1/4W	
<u>CONNECTOR</u>				R916	1-249-417-11	CARBON	1K 5% 1/4W	
* CN901	1-564-508-11	PLUG,CONNECTOR 5P		R917	1-249-417-11	CARBON	1K 5% 1/4W	
* CN902	1-770-723-11	CONNECTOR, BOARD TO BOARD 8P		R918	1-247-807-31	CARBON	100 5% 1/4W	
* CN904	1-564-507-11	PLUG,CONNECTOR 4P		R919	1-247-807-31	CARBON	100 5% 1/4W	
<u>DIODE</u>				R920	1-249-416-11	CARBON	820 5% 1/4W	
D804	8-719-302-43	DIODE RGP10GPKG23		R921	1-249-429-11	CARBON	10K 5% 1/4W	
D805	8-719-991-33	DIODE 1SS133T-77		R922	1-249-397-11	CARBON	22 5% 1/4W	
D806	8-719-991-33	DIODE 1SS133T-77		R923	1-249-401-11	CARBON	47 5% 1/4W	
D807	8-719-210-21	DIODE ERA82-004TP5						
D901	8-719-110-88	DIODE MTZJ-T-77-39						
D902	8-719-110-88	DIODE MTZJ-T-77-39						
D903	8-719-991-33	DIODE 1SS133T-77						
<u>COIL</u>				<u>CAPACITOR</u>				
L801	1-406-989-21	INDUCTOR	10mH	C801	1-126-960-11	ELECT	1μF 20% 50V	
L802	1-459-111-00	INDUCTOR	10mH	C802	1-126-964-11	ELECT	10μF 20% 50V	
L901	1-412-528-11	INDUCTOR	18μH	C803	1-136-191-11	MYLAR	0.22μF 5% 63V	



## COMPLETE PARTS LISTING

REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
C804	1-136-191-11	MYLAR	0.22μF 5% 63V	<b>TRANSISTOR</b>			
C807	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V	Q801	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
C808	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V	Q802	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
C809	1-110-501-11	CERAMIC CHIP	0.33μF 10% 16V	Q803	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
C810	1-130-495-00	MYLAR	0.1μF 5% 50V	Q804	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
C812	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V	Q805	8-729-140-97	TRANSISTOR 2SB734-T-34	
C814	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V	Q806	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
C815	1-129-718-00	FILM	0.022μF 5% 630V	Q809	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
C816	1-102-244-00	CERAMIC	220pF 10% 500V	Q810	8-729-043-95	TRANSISTOR 2SC3840K	
C817	1-129-709-91	FILM	0.0039μF 5% 630V (KV-27FS13/27FS17/27FV17/29FV17/29FV17C ONLY)	Q811	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA	
C817	1-129-928-00	FILM	0.0027μF 10% 630V (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)	Q812	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA	
C818	1-164-735-51	CERAMIC	0.0015μF 10% 500V (KV-27FS13/27FS17/27FV17/29FV17/29FV17C ONLY)	<b>RESISTOR</b>			
C818	1-164-625-11	CERAMIC	680pF 10% 500V (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)	R801	1-216-089-91	RES-CHIP	47K 5% 1/10W
C820	1-109-954-11	ELECT	0.47μF 20% 160V	R802	1-216-073-91	RES-CHIP	10K 5% 1/10W
C821	1-163-021-91	CERAMIC CHIP	0.01μF 10% 50V	R803	1-216-081-00	RES-CHIP	22K 5% 1/10W
C823	1-130-967-00	FILM	0.0027μF 5% 50V	R804	1-216-073-91	RES-CHIP	10K 5% 1/10W
C824	1-104-760-11	CERAMIC CHIP	0.047μF 10% 50V	R805	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
C825	1-137-150-11	MYLAR	0.01μF 5% 50V	R806	1-216-081-00	RES-CHIP	22K 5% 1/10W
C826	1-163-251-11	CERAMIC CHIP	100pF 5% 50V	R807	1-216-061-91	RES-CHIP	3.3K 5% 1/10W
C862	1-126-964-11	ELECT	10μF 20% 50V	R808	1-216-073-91	RES-CHIP	10K 5% 1/10W
<b>CONNECTOR</b>				R809	1-216-081-00	RES-CHIP	22K 5% 1/10W
* CN800	1-564-510-11	PLUG,CONNECTOR 7P		R811	1-216-025-11	RES-CHIP	100 5% 1/10W
* CN801	1-564-507-11	PLUG,CONNECTOR 4P		R812	1-216-061-91	RES-CHIP	3.3K 5% 1/10W
* CN802	1-508-784-21	PIN,CONNECTOR (5MM PITCH) 1P		R813	1-216-041-00	RES-CHIP	470 5% 1/10W
<b>DIODE</b>				R814	1-215-862-11	METAL OXIDE	68 5% 1W (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)
D801	8-719-109-89	DIODE MTZJ-T-77-5.6C		R815	1-215-862-11	METAL OXIDE	68 5% 1W
D802	8-719-991-33	DIODE 1SS133T-77		R816	1-247-807-31	CARBON	100 5% 1/4W
D808	8-719-991-33	DIODE 1SS133T-77		R817	1-216-091-00	RES-CHIP	56K 5% 1/10W (KV-27FS13/27FS17/27FV17/29FV17/29FV17C ONLY)
D809	8-719-110-41	DIODE MTZJ-T-77-15B		R817	1-208-822-11	METAL CHIP	47K 0.50% 1/10W (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)
D810	8-719-970-87	DIODE ERA38-06TP1		R819	1-216-089-91	RES-CHIP	47K 5% 1/10W
D811	8-719-970-87	DIODE ERA38-06TP1		R820	1-216-683-11	METAL CHIP	22K 0.50% 1/10W (KV-27FS13/32FS17/27FV17/29FV17/29FV17C ONLY)
D812	8-719-300-33	DIODE ERB44-06TP1		R820	1-208-818-11	METAL CHIP	33K 0.50% 1/10W (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)
D813	8-719-991-33	DIODE 1SS133T-77		R821	1-216-077-91	RES-CHIP	15K 5% 1/10W (KV-27FS13/27FS17/27FV17/29FV17/29FV17C ONLY)
D814	8-719-991-33	DIODE 1SS133T-77		R821	1-216-061-91	RES-CHIP	3.3K 5% 1/10W (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)
<b>IC</b>				R822	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
IC801	8-759-700-42	IC NJM2904D		R823	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
IC802	8-759-659-67	IC NJM2903D		R824	1-208-830-11	METAL CHIP	100K 0.50% 1/10W
IC803	8-759-659-67	IC NJM2903D		R825	1-208-830-11	METAL CHIP	100K 0.50% 1/10W
<b>CHIP CONDUCTOR</b>				R827	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
JR801	1-216-295-91	SHORT		R828	1-216-085-91	RES-CHIP	33K 5% 1/10W
<b>COIL</b>				R829	1-208-846-11	METAL CHIP	470K 0.50% 1/10W
L803	1-406-677-11	INDUCTOR	10mH	R830	1-216-295-91	SHORT	



**COMPLETE PARTS LISTING**

REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
R831	1-216-049-11	RES-CHIP	1K 5% 1/10W	R890	1-216-097-11	RES-CHIP (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)	100K 5% 1/10W
R832	1-216-067-00	RES-CHIP (KV-27FS13/27FS17/27FV17/29FV17/29FV17C ONLY)	5.6K 5% 1/10W	R860	1-208-806-11	METAL CHIP	10K 0.50% 1/10W
R832	1-216-061-91	RES-CHIP (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)	3.3K 5% 1/10W	R862	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
R833	1-216-687-11	METAL CHIP (KV-27FS13/27FS17/27FV17/29FV17/29FV17C ONLY)	33K 0.50% 1/10W	R863	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
R833	1-216-689-11	RES-CHIP (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)	39K 5% 1/10W	R864	1-216-033-00	RES-CHIP	220 5% 1/10W
R834	1-216-065-91	RES-CHIP	4.7K 5% 1/10W	R865	1-216-097-11	RES-CHIP	100K 5% 1/10W
R835	1-216-057-00	RES-CHIP	2.2K 5% 1/10W	R866	1-249-429-11	CARBON	10K 5% 1/4W
R836	1-216-057-00	RES-CHIP	2.2K 5% 1/10W	R867	1-216-073-91	RES-CHIP	10K 5% 1/10W
R837	1-208-808-11	METAL CHIP	12K 0.50% 1/10W	R868	1-216-073-91	RES-CHIP	10K 5% 1/10W
R838	1-247-807-31	CARBON	100 5% 1/4W	R869	1-216-097-11	RES-CHIP	100K 5% 1/10W
R839	1-216-025-11	RES-CHIP	100 5% 1/10W	R870	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
R840	1-216-093-91	RES-CHIP (KV-27FS13/27FS17/27FV17/29FV17/29FV17C ONLY)	68K 5% 1/10W	R871	1-215-489-00	METAL	680K 1% 1/4W
R841	1-208-802-11	METAL CHIP (KV-27FS13/27FS17/27FV17/29FV17/29FV17C ONLY)	6.8K 0.50% 1/10W	R872	1-216-121-11	RES-CHIP	1M 5% 1/10W
R841	1-208-806-11	METAL CHIP (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)	10K 0.50% 1/10W	R873	1-216-073-91	RES-CHIP	10K 5% 1/10W
R842	1-208-796-11	METAL CHIP	3.9K 0.50% 1/10W	R874	1-216-037-00	RES-CHIP	330 5% 1/10W
R845	1-249-441-11	CARBON	100K 5% 1/4W	R875	1-216-035-00	RES-CHIP	270 5% 1/10W
R846	1-249-441-11	CARBON	100K 5% 1/4W	<b>TRANSFORMER</b>			
R847	1-249-441-11	CARBON	100K 5% 1/4W	T801	1-424-584-11	TRANSFORMER, DYNAMIC FOCUS	
R848	1-215-876-00	METAL OXIDE (KV-27FS13/27FS17/27FV17/29FV17/29FV17C ONLY)	15K 5% 1W				
R848	1-215-894-11	METAL OXIDE (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)	2.2K 5% 2W	* <b>A-1372-817-A</b> HX BOARD, MOUNTED			
R849	1-215-920-11	METAL OXIDE (KV-27FS13/27FS17/27FV17/29FV17/29FV17C ONLY)	3.3K 5% 3W	<b>CONNECTOR</b>			
R849	1-216-486-21	METAL OXIDE (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)	8.2K 5% 3W	* CN4001	1-564-518-11	PLUG,CONNECTOR	3P
R850	1-216-486-21	METAL OXIDE (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)	8.2K 5% 3W	<b>RESISTOR</b>			
R851	1-215-894-11	METAL OXIDE (KV-27FS13/27FS17/27FV17/29FV17/29FV17C ONLY)	2.2K 5% 2W	R4001	1-216-025-11	RES-CHIP	100 5% 1/10W
R851	1-215-922-11	METAL OXIDE (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)	6.8K 5% 3W	R4002	1-216-045-00	RES-CHIP	680 5% 1/10W
R852	1-215-922-11	METAL OXIDE (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)	6.8K 5% 3W	R4003	1-216-047-91	RES-CHIP	820 5% 1/10W
R854	1-216-069-00	RES-CHIP (KV-27FS13/27FS17/27FV17/29FV17/29FV17C ONLY)	6.8K 5% 1/10W	R4004	1-216-057-00	RES-CHIP	2.2K 5% 1/10W
R854	1-216-067-00	RES-CHIP (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)	5.6K 5% 1/10W	R4005	1-216-069-00	RES-CHIP	6.8K 5% 1/10W
R855	1-216-089-91	RES-CHIP (KV-27FS13/27FS17/27FV17/29FV17/29FV17C ONLY)	47K 5% 1/10W	<b>SWITCH</b>			
R855	1-216-091-00	RES-CHIP (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)	56K 5% 1/10W	S4001	1-762-196-21	SWITCH TACTILE	
R857	1-208-818-11	METAL CHIP (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)	33K 0.50% 1/10W	S4002	1-762-196-21	SWITCH TACTILE	
				S4003	1-762-196-21	SWITCH TACTILE	
				S4004	1-762-196-21	SWITCH TACTILE	
				S4005	1-762-196-21	SWITCH TACTILE	
				S4006	1-762-196-21	SWITCH TACTILE	



## COMPLETE PARTS LISTING

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
						<b>HA</b>					
*	A-1372-825-A	HA BOARD, MOUNTED (KV-27FV17/29FV17/29FV17C ONLY)									
						<b>IC</b>					
						IC4050	8-742-211-20	HYB IC SBX3071-71			
						<b>CHIP CONDUCTOR</b>					
						JR4051	1-216-295-91	SHORT			
						<b>RESISTOR</b>					
						R4050	1-249-401-11	CARBON	47	5%	1/4W
						R4051	1-216-049-11	RES-CHIP	1K	5%	1/10W
						<b>K</b>					
*	A-1380-633-A	K (VAR) BOARD, MOUNTED (KV-27FV17/29FV17/29FV17C ONLY)									
*	A-1380-632-A	K (VAR) BOARD, MOUNTED (KV-27FS13/27FV17/32FS13/32FS17/34FS13C/ 34FS17 ONLY)									
						<b>CAPACITOR</b>					
						C201	1-126-963-11	ELECT	4.7µF	20%	50V
						C202	1-126-963-11	ELECT	4.7µF	20%	50V
						C404	1-164-182-11	CERAMIC CHIP	0.0033µF	10%	50V
						C405	1-163-034-91	CERAMIC CHIP	0.033µF		50V
						C406	1-163-011-11	CERAMIC CHIP	0.0015µF	10%	50V
						C407	1-164-222-91	CERAMIC CHIP	0.22µF		25V
						C408	1-164-222-91	CERAMIC CHIP	0.22µF		25V
						C409	1-163-011-11	CERAMIC CHIP	0.0015µF	10%	50V
						C410	1-163-034-91	CERAMIC CHIP	0.033µF		50V
						C411	1-164-182-11	CERAMIC CHIP	0.0033µF	10%	50V
						C412	1-163-038-91	CERAMIC CHIP	0.1µF		25V
						C413	1-126-963-11	ELECT	4.7µF	20%	50V
						C414	1-126-963-11	ELECT	4.7µF	20%	50V
						C415	1-126-963-11	ELECT	4.7µF	20%	50V
						C416	1-126-963-11	ELECT	4.7µF	20%	50V
						C417	1-126-963-11	ELECT	4.7µF	20%	50V
						C418	1-163-038-91	CERAMIC CHIP	0.1µF		25V
						C419	1-164-346-11	CERAMIC CHIP	1µF		16V
						C422	1-126-963-11	ELECT	4.7µF	20%	50V
						C423	1-126-963-11	ELECT	4.7µF	20%	50V
						C424	1-164-005-11	CERAMIC CHIP (KV-27FV17/29FV17/29FV17C ONLY)	0.47µF		25V
						C425	1-164-346-11	CERAMIC CHIP (KV-27FV17/29FV17/29FV17C ONLY)	1µF		16V
						C426	1-126-960-11	ELECT (KV-27FV17/29FV17/29FV17C ONLY)	1µF	20%	50V
						C427	1-126-968-11	ELECT (KV-27FV17/29FV17/29FV17C ONLY)	100µF	20%	50V
						C428	1-126-968-11	ELECT (KV-27FV17/29FV17/29FV17C ONLY)	100µF	20%	50V
						<b>HA</b>					
*	A-1372-825-A	HA BOARD, MOUNTED (KV-27FV17/29FV17/29FV17C ONLY)									
						<b>CAPACITOR</b>					
						C4202	1-117-534-91	ELECT	1µF	20%	100V
						C4203	1-117-534-91	ELECT	1µF	20%	100V
						<b>CONNECTOR</b>					
*	CN4200	1-564-512-11	PLUG,CONNECTOR 9P								
						<b>DIODE</b>					
						D4216	8-719-069-60	DIODE UDZSTE-179.1B			
						D4217	8-719-108-12	DIODE RD9.1EW-T1			
						D4218	8-719-108-12	DIODE RD9.1EW-T1			
						D4219	8-719-108-12	DIODE RD9.1EW-T1			
						D4299	8-719-069-60	DIODE UDZSTE-179.1B			
						<b>JACK</b>					
						J4221	1-770-361-11	TERMINAL BLOCK, S			
						<b>RESISTOR</b>					
						R4206	1-249-425-11	CARBON	4.7K	5%	1/4W
						R4207	1-216-113-00	RES-CHIP	470K	5%	1/10W
						R4209	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
						R4210	1-249-419-11	CARBON	1.5K	5%	1/4W
						R4211	1-249-421-11	CARBON	2.2K	5%	1/4W
						R4212	1-249-427-11	CARBON	6.8K	5%	1/4W
						R4228	1-216-113-00	RES-CHIP	470K	5%	1/10W
						<b>SWITCH</b>					
						S4217	1-762-196-21	SWITCH TACTILE			
						S4218	1-762-196-21	SWITCH TACTILE			
						S4219	1-762-196-21	SWITCH TACTILE			
						S4220	1-762-196-21	SWITCH TACTILE			
						<b>HB</b>					
*	A-1372-826-A	HB (VAR) BOARD, MOUNTED (KV-27FV17/29FV17/29FV17C ONLY)									
						<b>CAPACITOR</b>					
						C4050	1-104-665-11	ELECT	100µF	20%	25V
						<b>CONNECTOR</b>					
*	CN4050	1-564-520-11	PLUG,CONNECTOR 5P								
						<b>DIODE</b>					
						D4051	8-719-057-09	DIODE LNJ801LPDJA			



## COMPLETE PARTS LISTING

REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
C429	1-163-017-00	CERAMIC CHIP (KV-27FV17/29FV17/29FV17C ONLY)	0.0047μF 10% 50V	JR419	1-216-295-91	SHORT (KV-27FV13/27FS17/32FS13/32FS17/34FS13C/ 34FS17 ONLY)	
C430	1-164-222-91	CERAMIC CHIP (KV-27FV17/29FV17/29FV17C ONLY)	0.22μF 25V	JR440	1-216-295-91	SHORT (KV-27FV13/27FS17/32FS13/32FS17/34FS13C/ 34FS17 ONLY)	
C431	1-163-038-91	CERAMIC CHIP (KV-27FV17/29FV17/29FV17C ONLY)	0.1μF 25V	JR460	1-216-295-91	SHORT (KV-27FV13/27FS17/32FS13/32FS17/34FS13C/ 34FS17 ONLY)	
C432	1-163-021-91	CERAMIC CHIP (KV-27FV17/29FV17/29FV17C ONLY)	0.01μF 10% 50V	JR420	1-216-295-91	SHORT	
C433	1-164-346-11	CERAMIC CHIP (KV-27FV17/29FV17/29FV17C ONLY)	1μF 16V	JR421	1-216-295-91	SHORT	
C434	1-163-038-91	CERAMIC CHIP (KV-27FV17/29FV17/29FV17C ONLY)	0.1μF 25V	JR422	1-216-295-91	SHORT	
C440	1-163-038-91	CERAMIC CHIP	0.1μF 25V	JR425	1-216-295-91	SHORT	
C441	1-126-933-11	ELECT	100μF 20% 16V	JR426	1-216-295-91	SHORT	
C446	1-126-933-11	ELECT	100μF 20% 16V	JR427	1-216-295-91	SHORT	
C450	1-126-963-11	ELECT	4.7μF 20% 50V	JR428	1-216-295-91	SHORT	
C451	1-126-963-11	ELECT	4.7μF 20% 50V	JR429	1-216-295-91	SHORT	
C455	1-164-005-11	CERAMIC CHIP (KV-27FV17/29FV17/29FV17C ONLY)	0.47μF 25V	JR474	1-216-295-91	SHORT	
C456	1-163-021-91	CERAMIC CHIP (KV-27FV17/29FV17/29FV17C ONLY)	0.01μF 10% 50V	JR491	1-216-295-91	SHORT	
C457	1-163-034-91	CERAMIC CHIP (KV-27FV17/29FV17/29FV17C ONLY)	0.033μF 50V			<b>COIL</b>	
C458	1-126-963-11	ELECT (KV-27FV17/29FV17/29FV17C ONLY)	4.7μF 20% 50V	L410	1-412-062-11	INDUCTOR	47μH
C460	1-126-963-11	ELECT (KV-27FV17/29FV17/29FV17C ONLY)	4.7μF 20% 50V			<b>TRANSISTOR</b>	
C475	1-163-038-91	CERAMIC CHIP	0.1μF 25V	Q430	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
C490	1-216-295-91	SHORT		Q431	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
		<b>CONNECTOR</b>		Q432	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
* CN402	1-564-506-11	PLUG,CONNECTOR 3P		Q433	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	
CN450	1-573-301-21	CONNECTOR, BOARD TO BOARD 20P				<b>RESISTOR</b>	
CN451	1-564-505-11	PLUG,CONNECTOR 2P		R403	1-216-295-91	SHORT	
		<b>IC</b>		R404	1-216-025-11	RES-CHIP	100 5% 1/10W
IC403	8-759-658-19	IC NJM2198-TE2 (KV-27FV17/29FV17/29FV17C ONLY)		R405	1-216-025-11	RES-CHIP	100 5% 1/10W
IC404	8-759-697-77	IC NJW1130AG-TE2		R407	1-216-025-11	RES-CHIP	100 5% 1/10W
		<b>CHIP CONDUCTOR</b>		R409	1-216-025-11	RES-CHIP	100 5% 1/10W
JR402	1-216-295-91	SHORT (KV-27FV17/29FV17/29FV17C ONLY)		R410	1-216-025-11	RES-CHIP	100 5% 1/10W
JR403	1-216-295-91	SHORT		R431	1-216-073-91	RES-CHIP	10K 5% 1/10W
JR404	1-216-295-91	SHORT		R432	1-216-073-91	RES-CHIP	10K 5% 1/10W
JR407	1-216-295-91	SHORT (KV-27FV13/27FS17/32FS13/32FS17/34FS13C/ 34FS17 ONLY)		R433	1-216-295-91	SHORT	
JR408	1-216-295-91	SHORT (KV-27FV13/27FS17/32FS13/32FS17/34FS13C/ 34FS17 ONLY)		R434	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
				R435	1-216-033-00	RES-CHIP	220 5% 1/10W
				R436	1-216-065-91	RES-CHIP	4.7K 5% 1/10W
				R437	1-216-033-00	RES-CHIP	220 5% 1/10W
				R438	1-216-033-00	RES-CHIP	220 5% 1/10W
				R442	1-216-033-00	RES-CHIP	220 5% 1/10W
				R443	1-216-105-91	RES-CHIP	220K 5% 1/10W
				R444	1-216-105-91	RES-CHIP	220K 5% 1/10W
				R445	1-216-105-91	RES-CHIP	220K 5% 1/10W
				R446	1-216-105-91	RES-CHIP	220K 5% 1/10W
				R452	1-216-073-91	RES-CHIP	10K 5% 1/10W
						(KV-27FV17/29FV17/29FV17C ONLY)	
				R455	1-216-081-00	RES-CHIP	22K 5% 1/10W

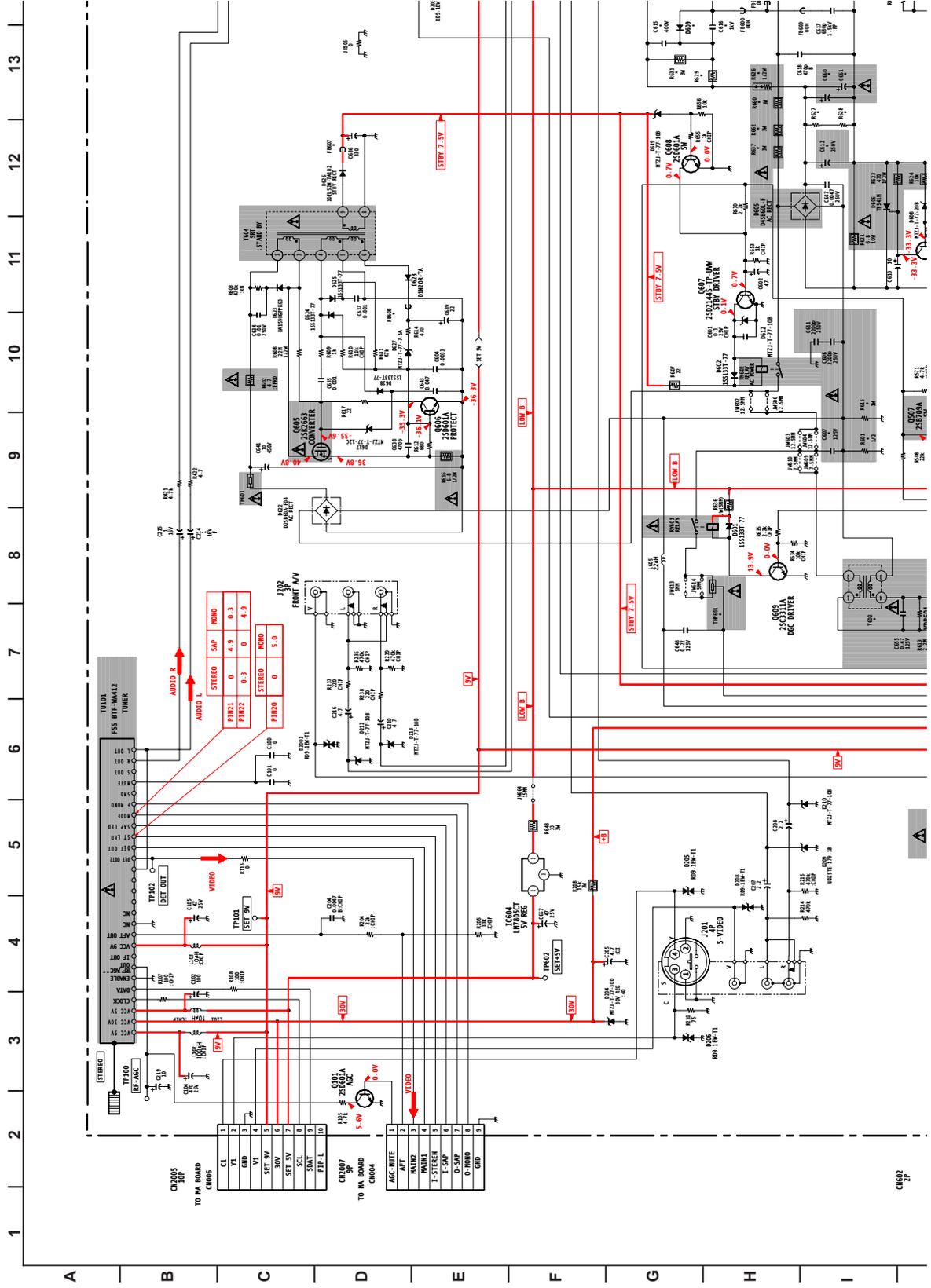


REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
R456	1-216-081-00	RES-CHIP	22K 5% 1/10W	<b>REMOTE COMMANDER</b>			
R468	1-216-295-91	SHORT		1-476-680-11		REMOTE COMMANDER (RM-Y180)	
R469	1-216-295-91	SHORT				(KV-27FS13/32FS13/34FS13C ONLY)	
R470	1-216-025-11	RES-CHIP	100 5% 1/10W	1-476-681-11		REMOTE COMMANDER (RM-Y181)	
						(KV-27FS17/32FS17/34FS17/27FV17/29FV17/29FV17C ONLY)	
				4-978-977-11		BATTERY COVER (RM-Y180, RM-Y181)	
<b>ACCESSORIES AND PACKAGING</b>							
*	4-041-255-01	BAG, PROTECTION (KV-27FS13/27FS17/ 27FV17/ 29FV17/29FV17C ONLY)					
*	4-041-259-01	BAG, PROTECTION (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)					
*	4-075-517-01	CARTON, INDIVIDUAL (KV-27FV17 ONLY)					
*	4-075-524-01	CARTON, INDIVIDUAL (KV-29FV17/29FV17C ONLY)					
*	4-074-568-05	CARTON, INDIVIDUAL (KV-27FS13/27FS17 ONLY)					
*	4-083-277-01	CARTON, INDIVIDUAL (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)					
	4-081-082-01	CUSHION, UPPER (KV-27FS13/27FS17 ONLY)					
	4-081-083-01	CUSHION, LOWER (KV-27FS13/27FS17 ONLY)					
*	4-073-715-02	CUSHION ASSY, UPPER (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)					
*	4-073-716-02	CUSHION ASSY, LOWER (KV-32FS13/32FS17/34FS13C/34FS17 ONLY)					
	4-075-515-01	CUSHION ASSY, UPPER (KV-27FV17/29FV17/29FV17C ONLY)					
	4-075-516-01	CUSHION ASSY, LOWER (KV-27FV17/29FV17/29FV17C ONLY)					
	4-081-737-21	MANUAL, INSTRUCTION (KV-27FS13/27FS17/27FV17/32FS13/32FS17 ONLY)					
	4-081-738-41	MANUAL, INSTRUCTION (KV-29FV17/29FV17C ONLY)					
	4-081-737-31	MANUAL, INSTRUCTION (KV-27FS13CND/27FV17CND/32FS13CND ONLY)					
	4-081-739-41	MANUAL, INSTRUCTION (KV-34FS13C/34FS17 ONLY)					

**Sony Corporation**  
**Sony Technology Center**  
**Technical Services**  
**Service Promotion Department**

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A BOARD SCHEMATIC DIAGRAM (KV-27FS13/27FS13/32FS13/32FS17/34FS13C/34FS17 ONLY)



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A B C D E F G H I

CH105  
TO HA BOARD  
CH106

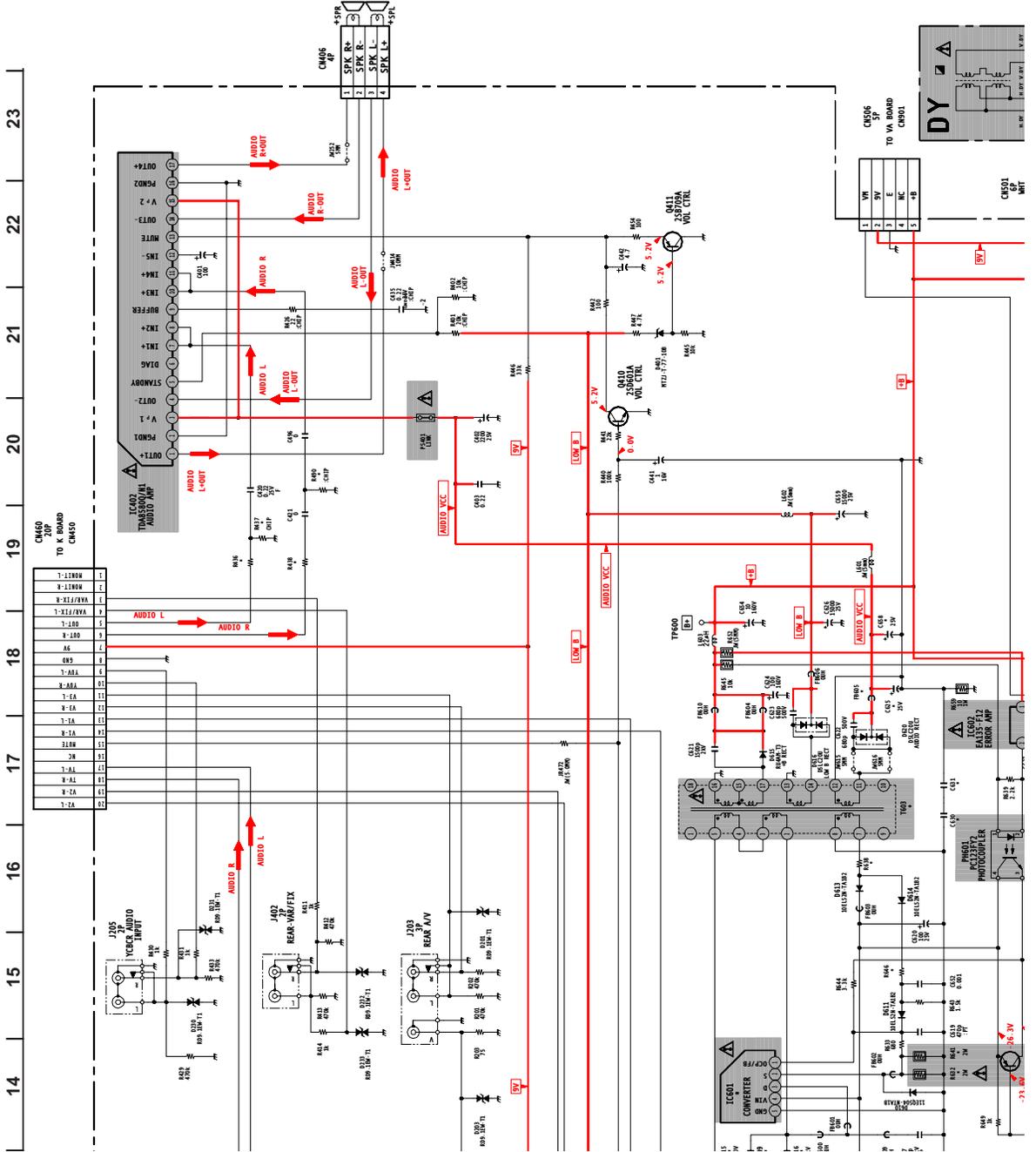
1	CL
2	GRD
3	VA
4	SET SW
5	SET SW
6	SCL
7	SXRT
8	P37-L
9	DB

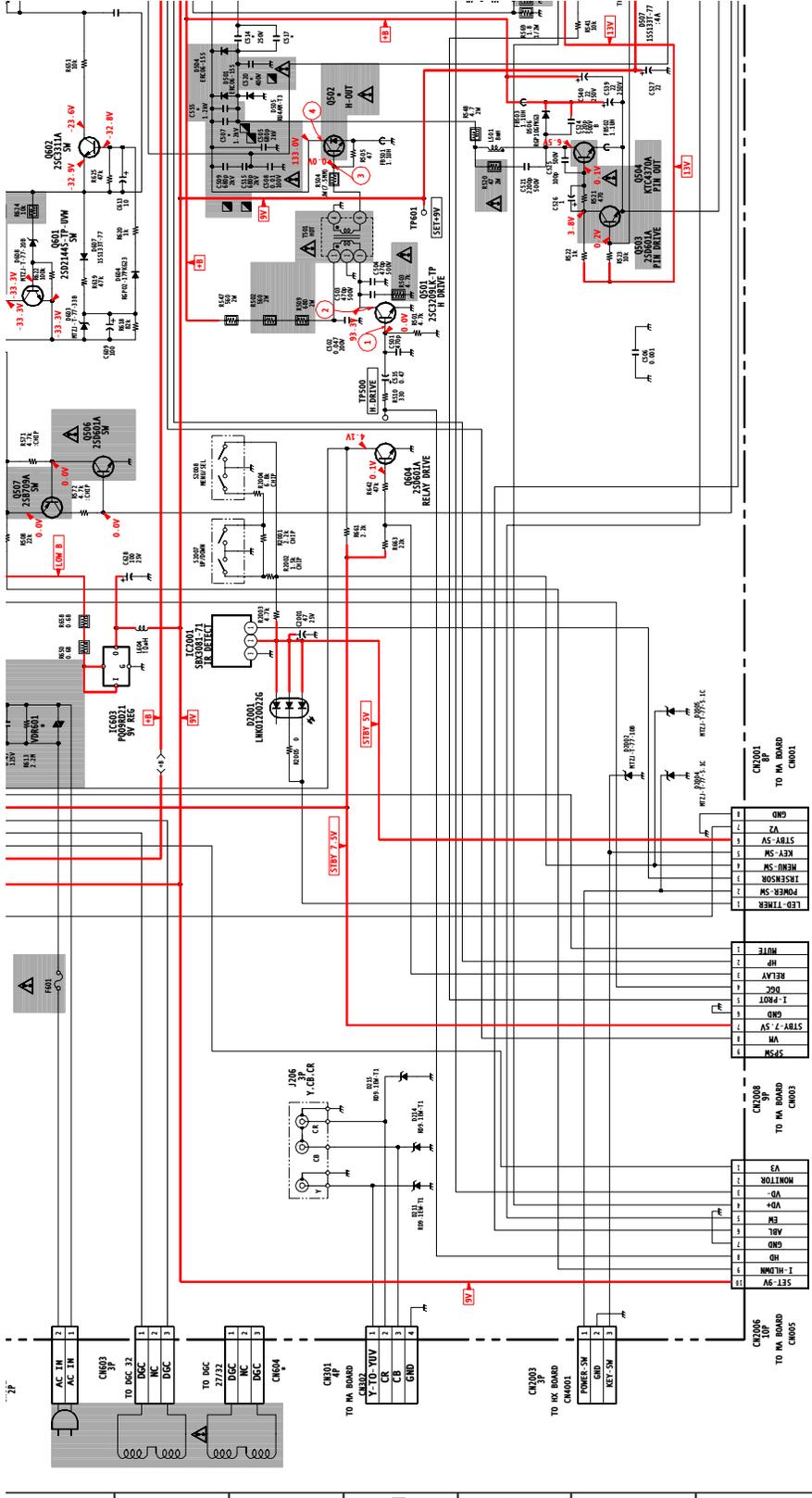
CR2007  
TO HA BOARD  
SP  
CH104

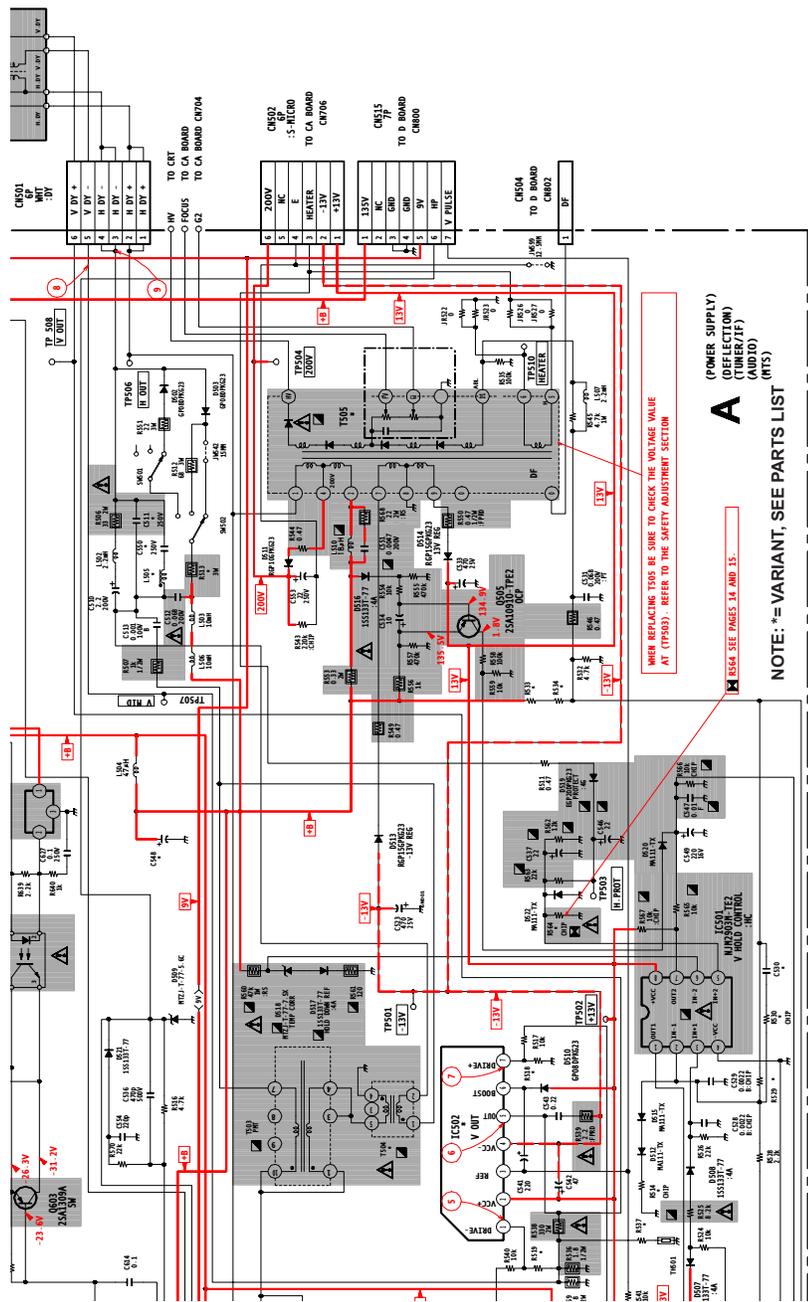
1	AGC-WRITE
2	AKT
3	MATH2
4	MATH1
5	P-STEER
6	LSX
7	O-SWP
8	O-HOOD
9	GRD

STEREO

STEREO	SAP	MONO
PIN21	0	4.9
PIN22	0.3	0
PIN20	0	5.0







WHEN REPLACING TUBES BE SURE TO CHECK THE VOLTAGE VALUE AT (TP502). REFER TO THE SAFETY ADJUSTMENT SECTION.

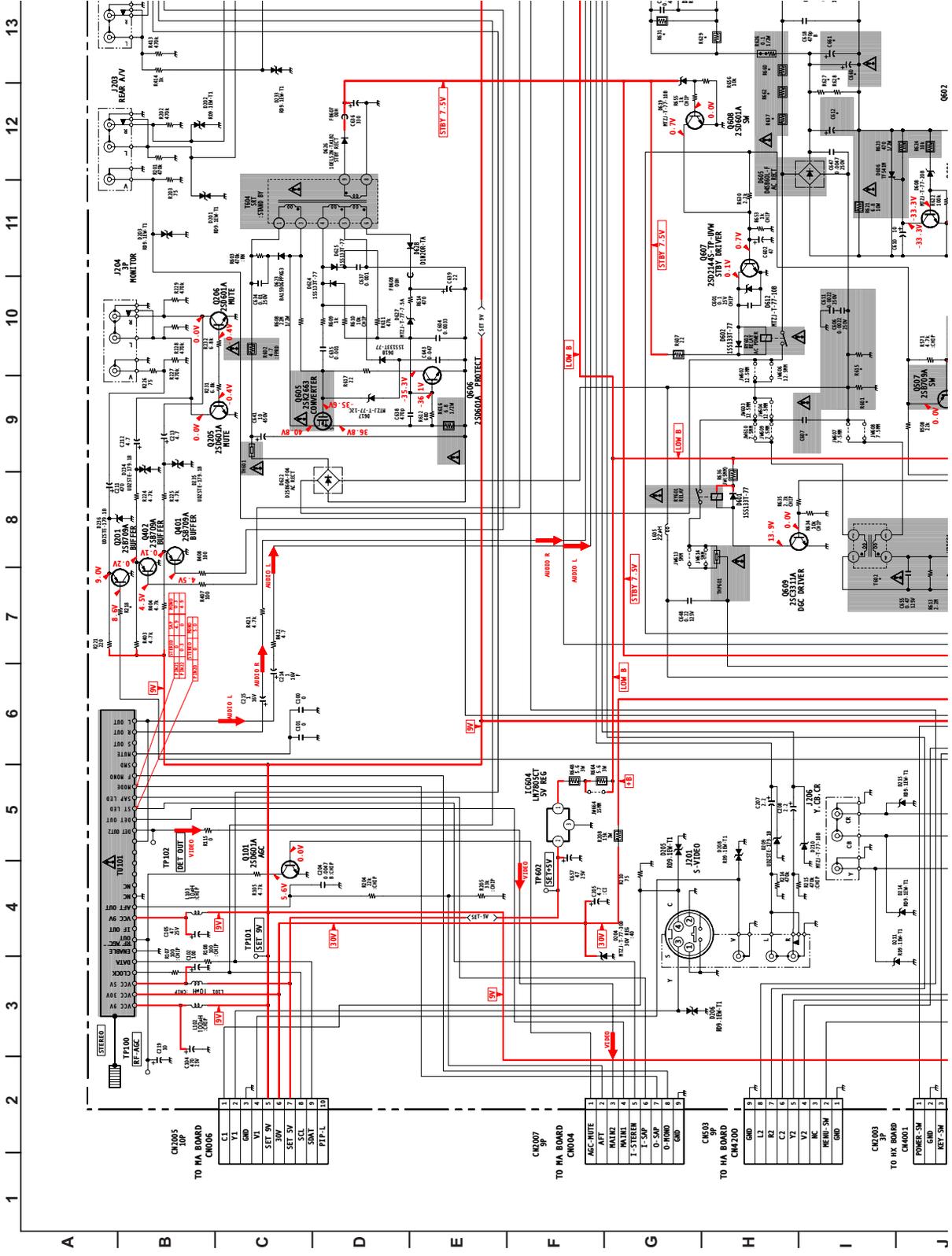
(POWER SUPPLY)  
(DEFLECTION)  
(TUNER/IF)  
(AOD/D)

**A**

NOTE: \* = VARIANT, SEE PARTS LIST

BMS-911-TFS-A

A BOARD SCHEMATIC DIAGRAM (KV-27FV17/29FV17/29FV17C ONLY)



1 2 3 4 5 6 7 8 9 10 11 12 13

A B C D E F G H I J

CH005  
10P  
CH006

1	C1
2	Y1
3	GND
4	V1
5	SET SW
6	SET SW
7	SET SW
8	SCL
9	SMART
10	PTF-L

CH007  
3P  
TO HA BOARD  
CH004

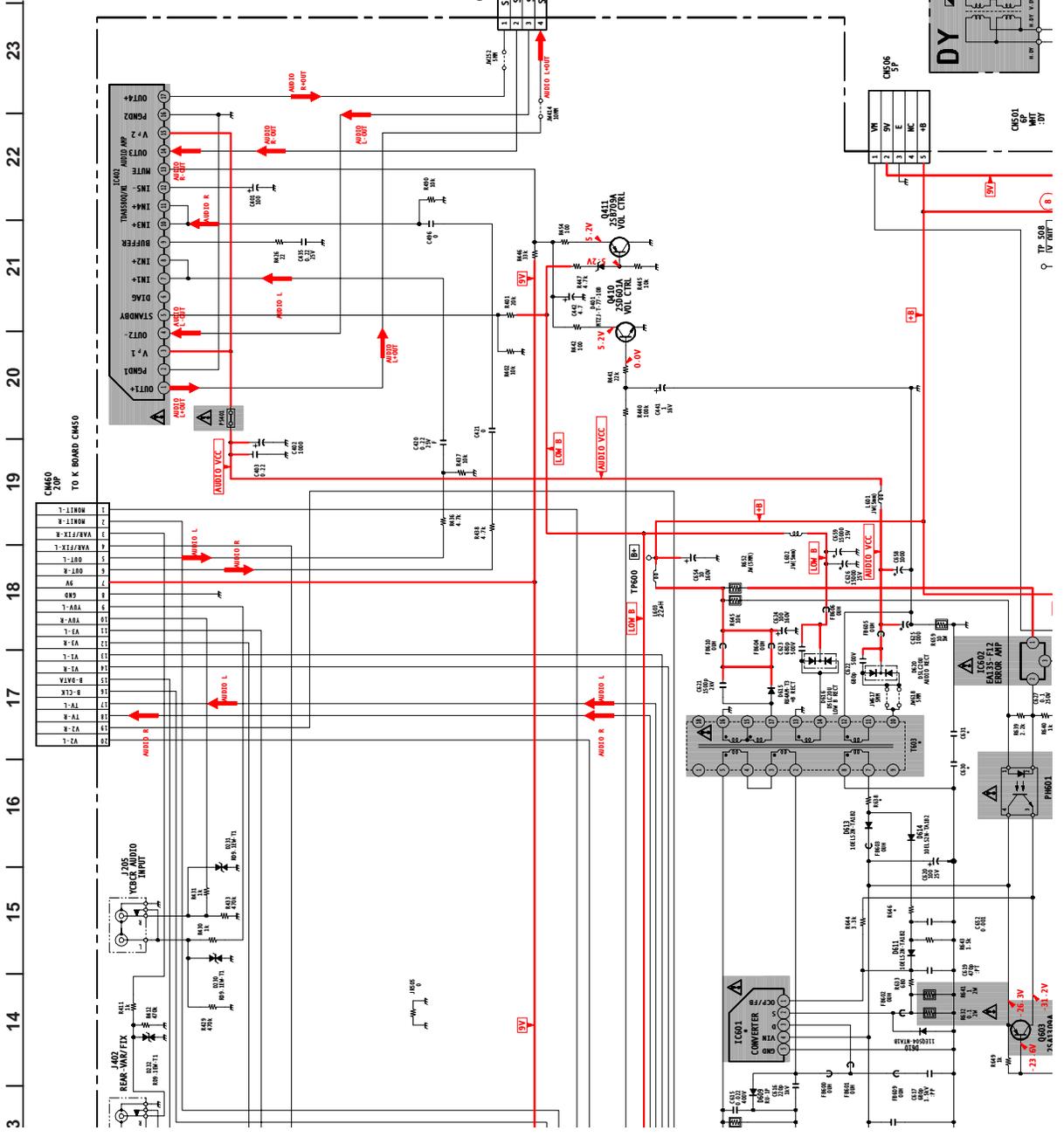
1	AGC-MUTE
2	AFT
3	PAIR2
4	PAIR1
5	I-STERE
6	T-SAP
7	O-SAP
8	GND
9	GND

CH008  
5P  
TO HA BOARD  
CH4200

1	GND
2	L2
3	R2
4	C2
5	V2
6	VI
7	VI
8	NC
9	NC
10	REF-SW
11	REF-SW

CH008  
3P  
TO HA BOARD  
CH001

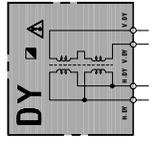
1	POWER-SW
2	REF-SW
3	REF-SW

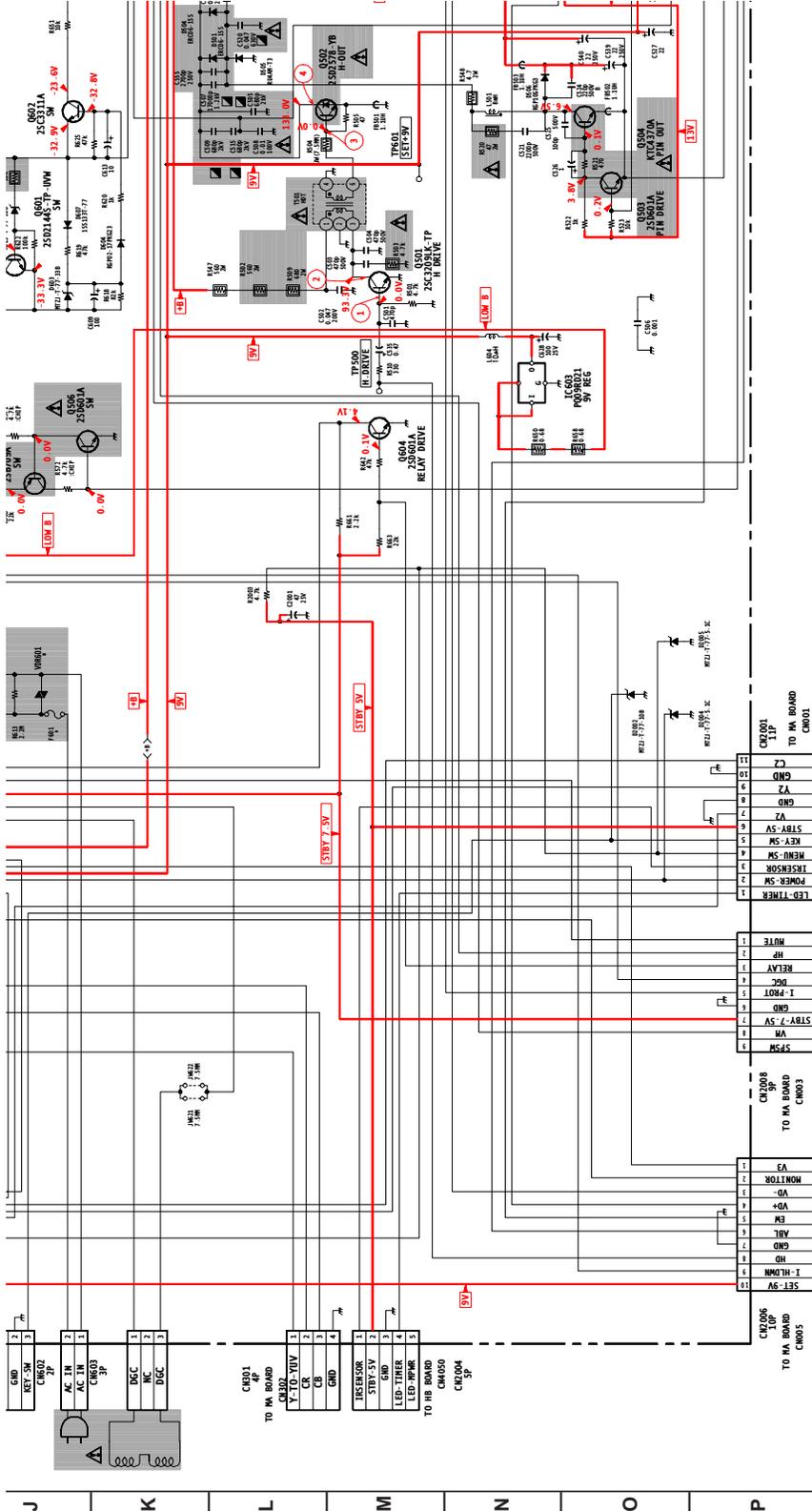


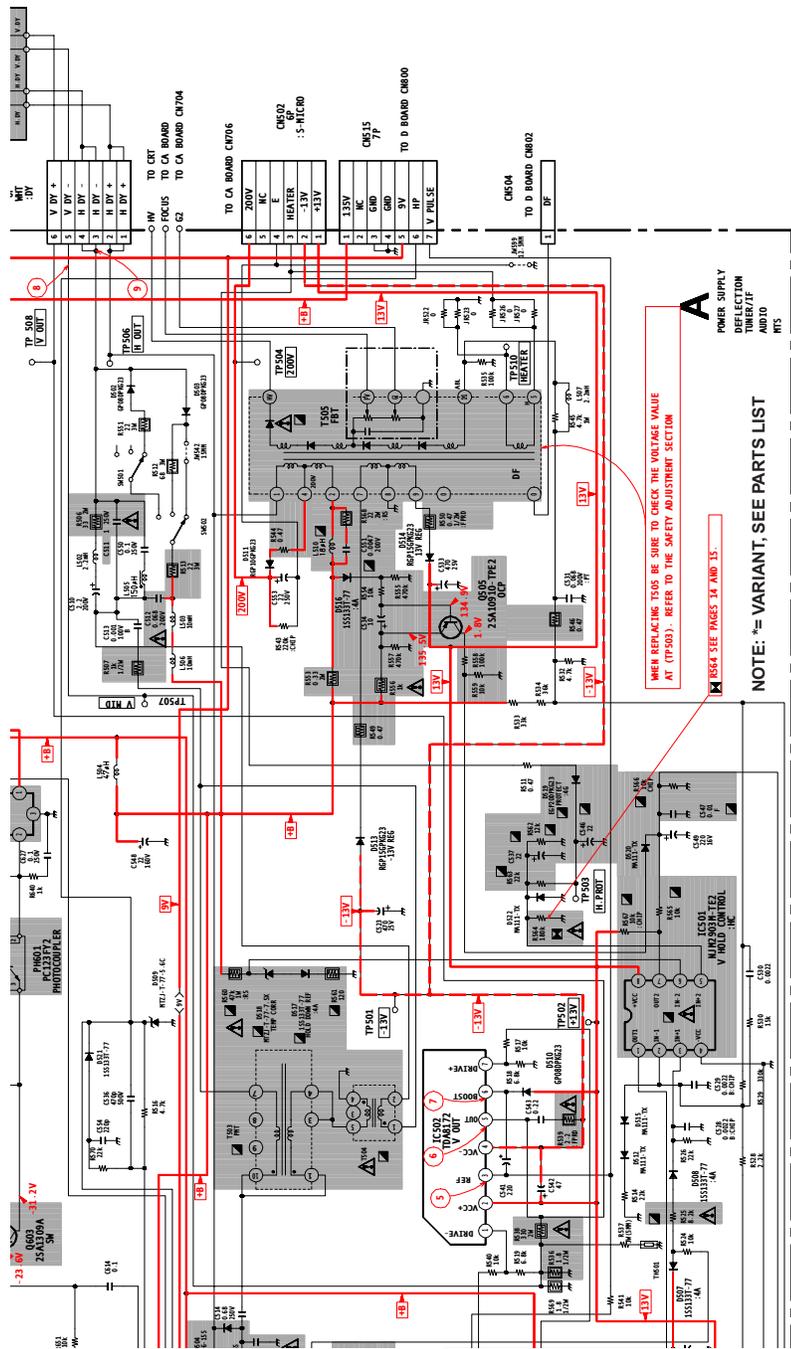
3 14 15 16 17 18 19 20 21 22 23

CM506 5P TO K BOARD CM506

1	MONIT. L
2	MONIT. R
3	VAK/FEIX L
4	VAK/FEIX R
5	OUT L
6	OUT R
7	AS
8	GR
9	VER L
10	VER R
11	T L
12	T R
13	EA L
14	EA R
15	VA L
16	VA R
17	B-VAK
18	B-CLK
19	T L
20	T R
21	EA L
22	EA R
23	VA L
24	VA R







NOTE: \* = VARIANT, SEE PARTS LIST

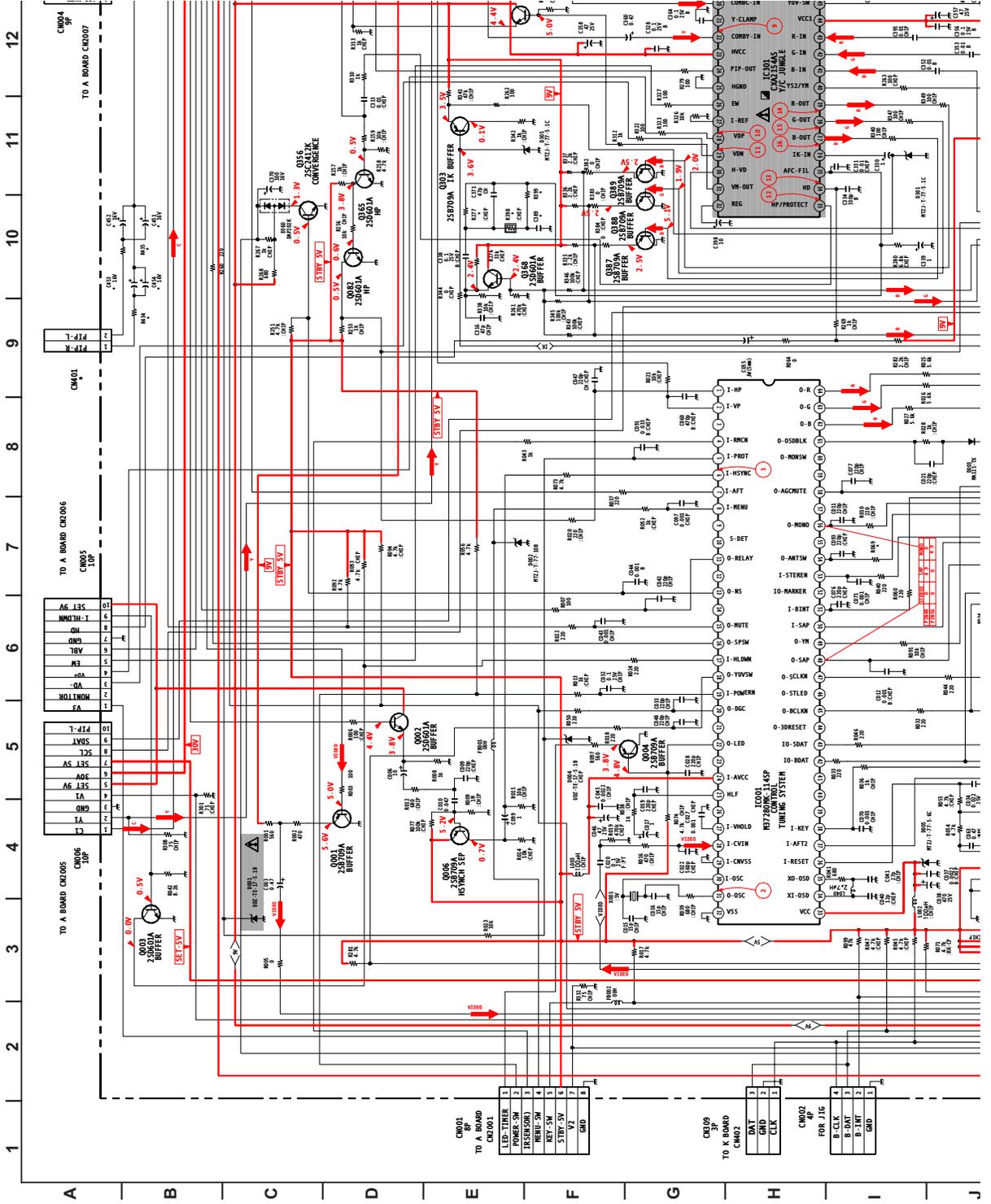
WHEN REPLACING TUBS BE SURE TO CHECK THE VOLTAGE VALUE AT (TP503). REFER TO THE SAFETY ADJUSTMENT SECTION

8564 SEE PAGES 14 AND 15.

POWER SUPPLY  
DEFLECTION  
CONTROL  
AUDIO  
MIS

BAG-311-P4-A

MA BOARD SCHEMATIC DIAGRAM (KV-27FS13/32FS17/34FS17/34FS17/34FS17 ONLY)



CH001  
TO A BOARD  
CH001

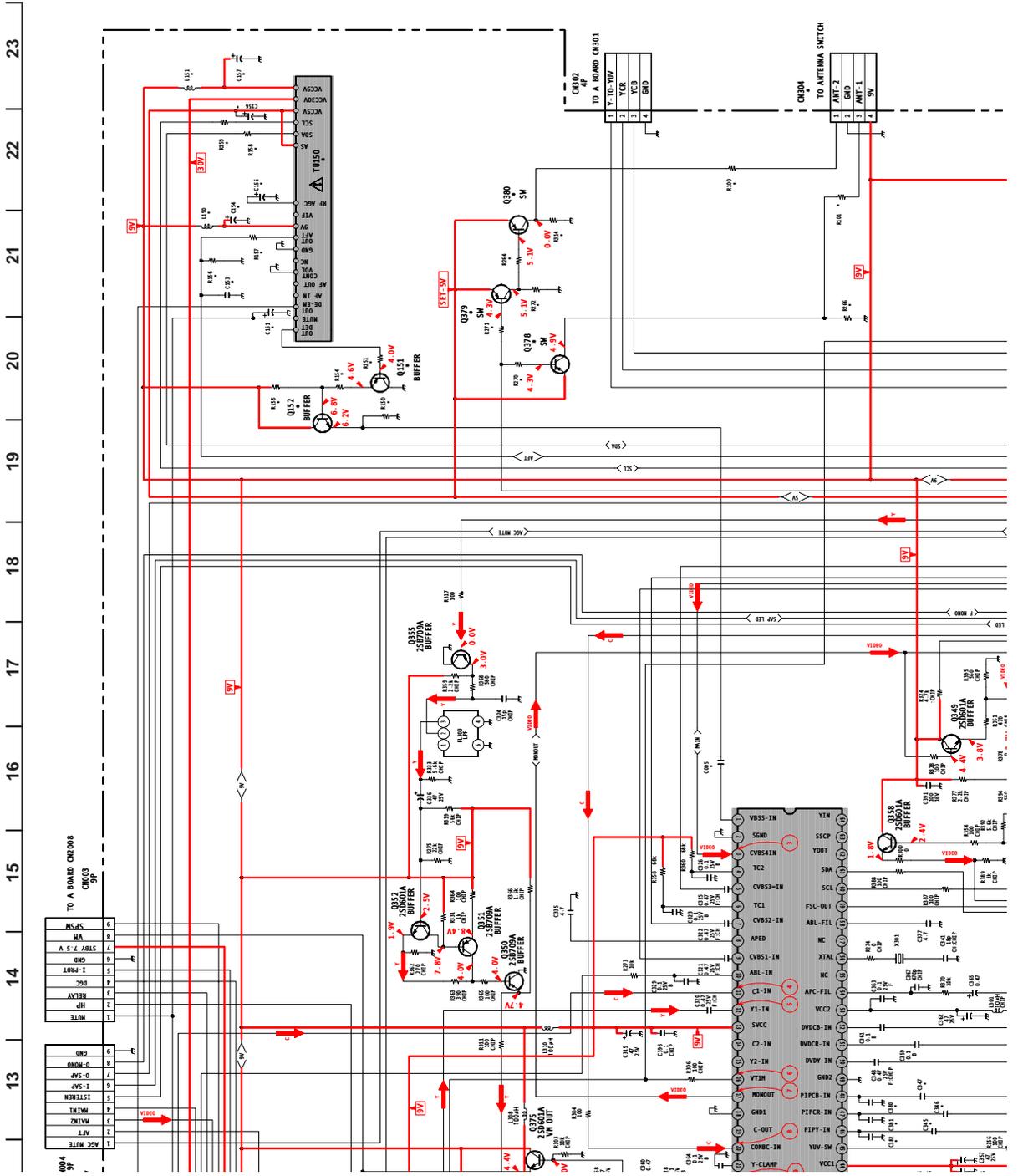
1	LED-TIMER
2	POWER-SW
3	TRNSNSOR
4	RENU-SW
5	REU-SW
6	STP-SW
7	V1
8	GROUND

CH009  
TO K BOARD  
CH002

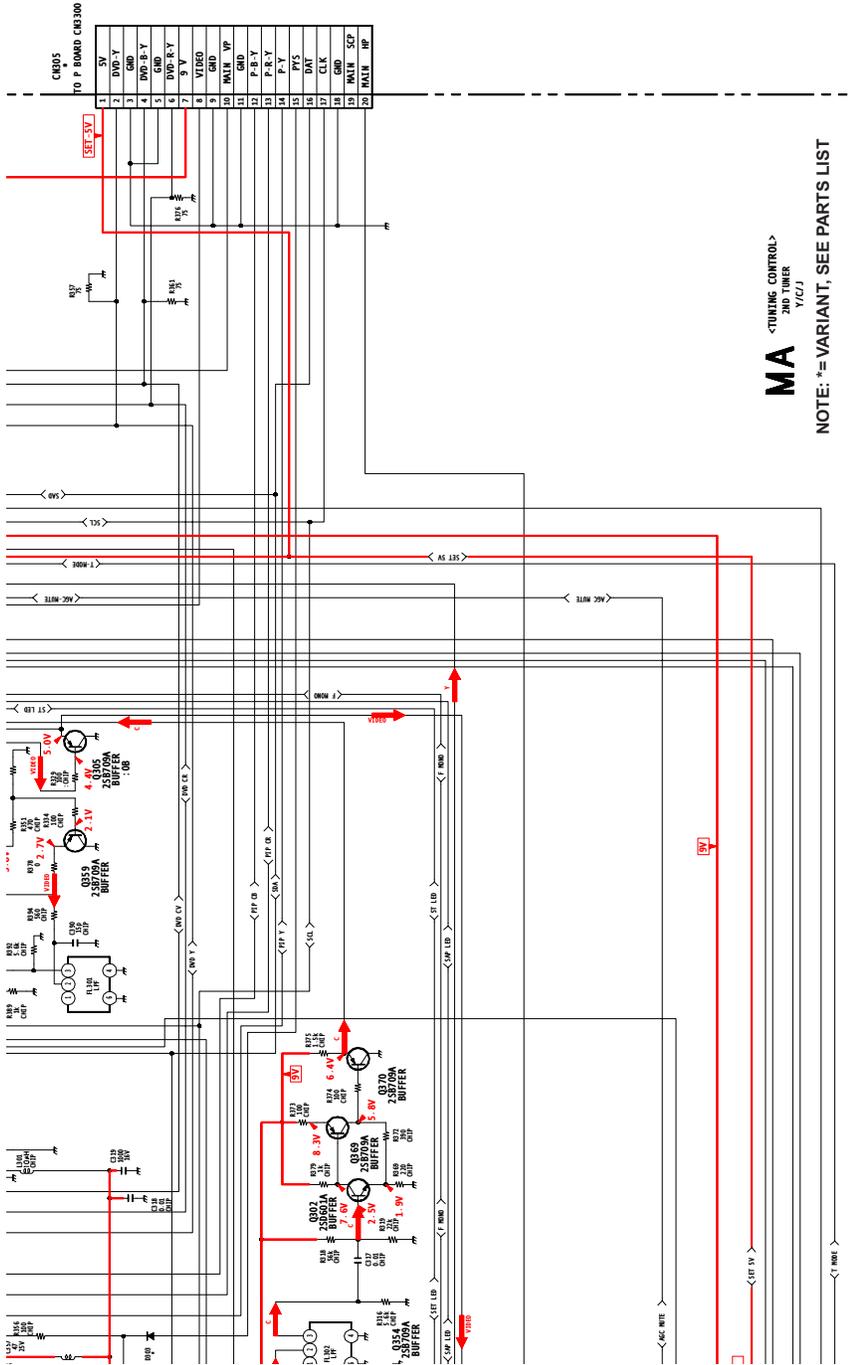
1	DAT
2	GROUND
3	CLK

CH002  
FOR J16

1	B-CLK
2	B-DAT
3	B-V1
4	GROUND







CR300  
TO P BOARD CR300

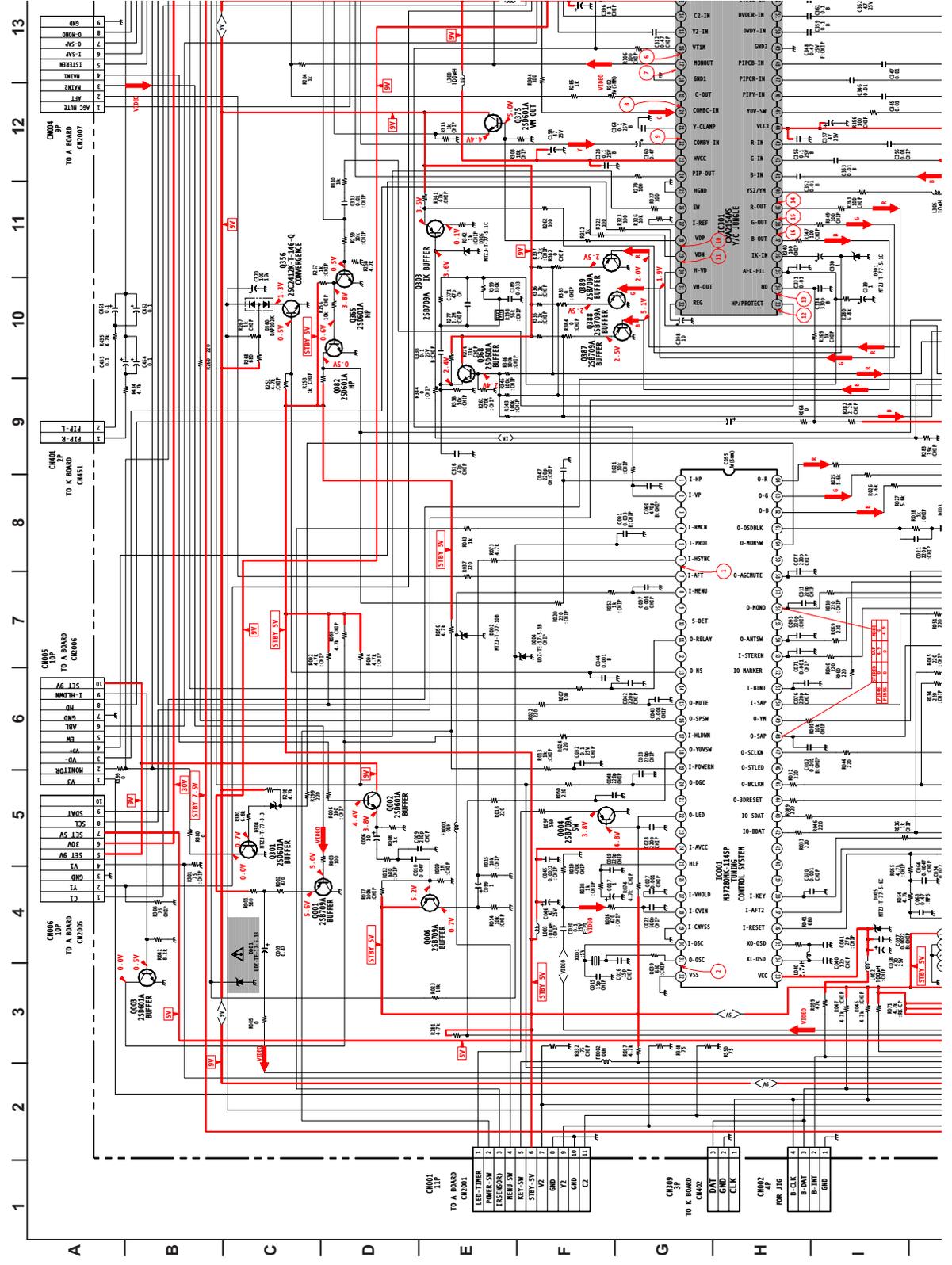
1	5V
2	DVI-Y
3	GND
4	DVI-B-Y
5	DVI-B-Y
6	DVI-R-Y
7	5 V
8	VIDEO
9	GND
10	MAIN VP
11	GND
12	P-S-Y
13	P-Y
14	P-TS
15	DAT
16	CLK
17	GND
18	MAIN SCP
19	GND
20	MAIN RP

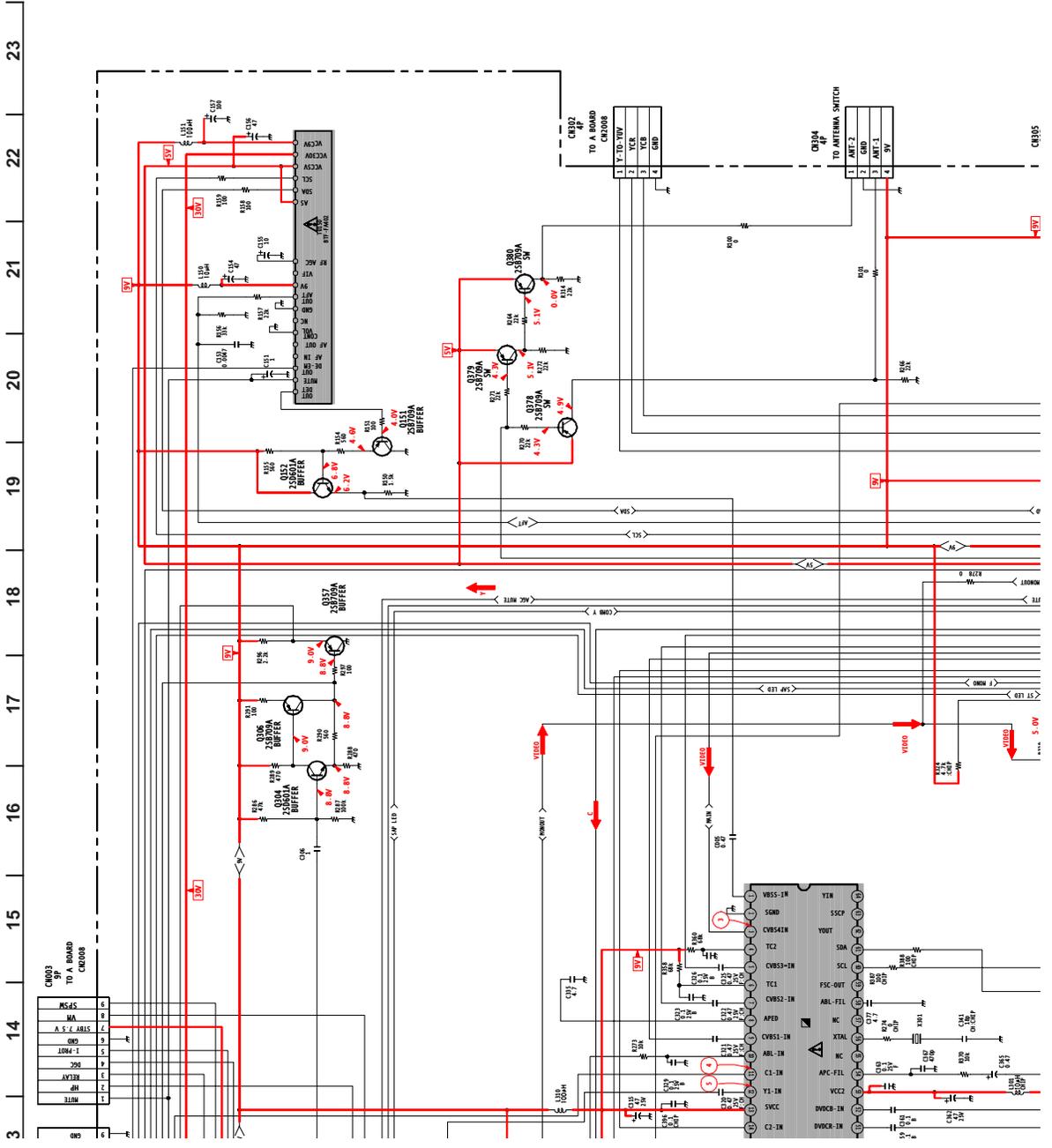
**MA** <TUNING CONTROL>  
2ND TUNER  
Y/C/J

NOTE: \* = VARIANT, SEE PARTS LIST

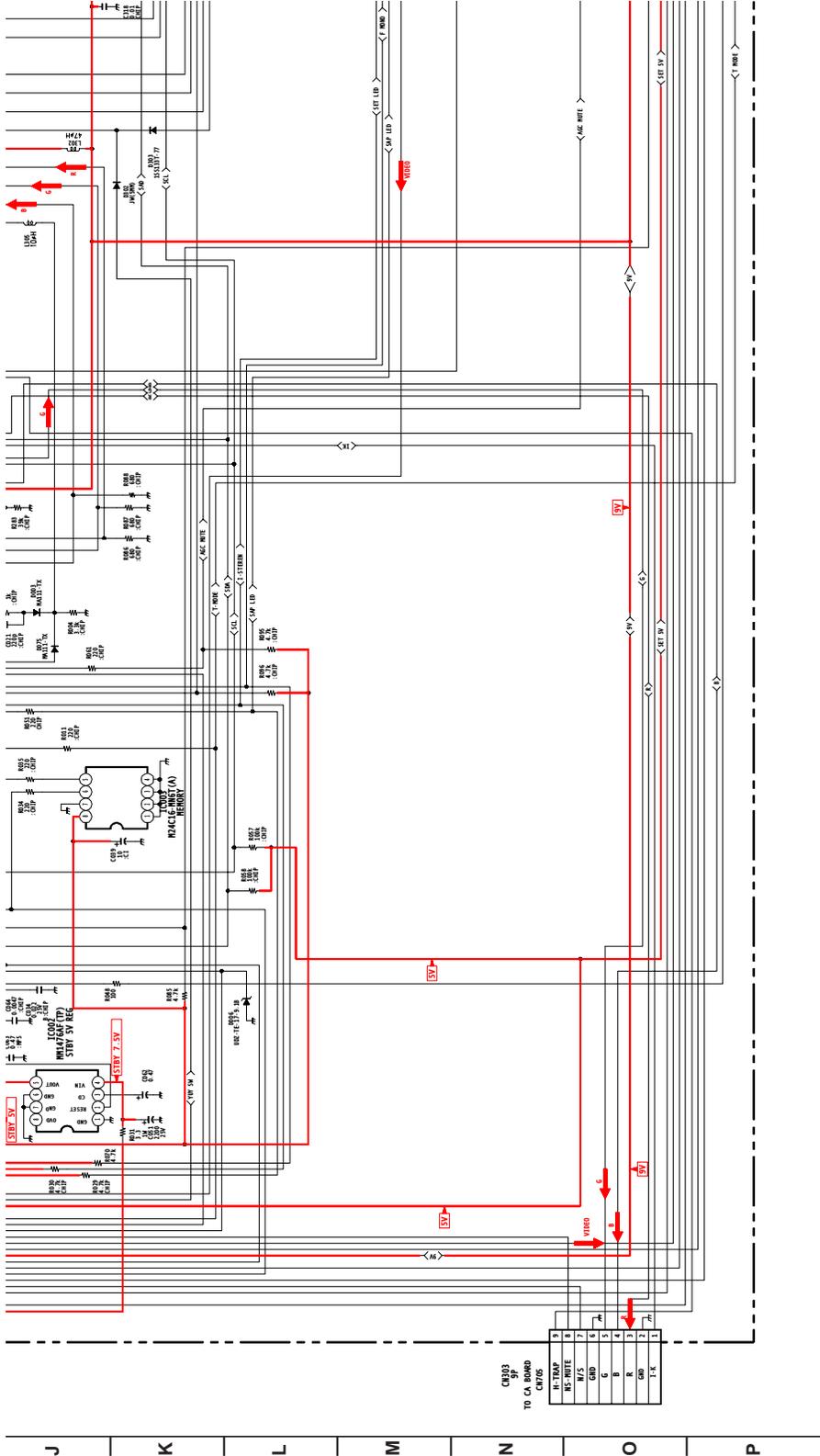
BAG-311FS-MA

MA BOARD SCHEMATIC DIAGRAM (KV-27FV17/29FV17/29FV17C ONLY)





3 14 15 16 17 18 19 20 21 22 23

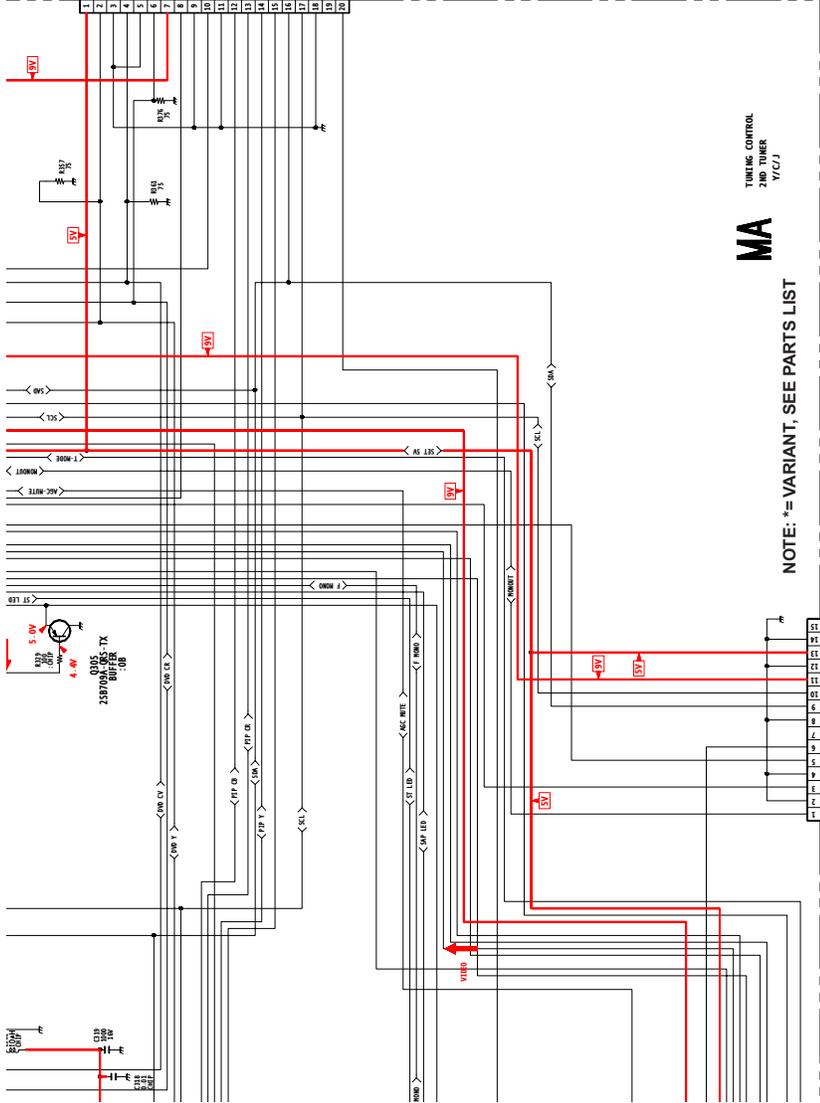


CR303  
 TO CA BOARD  
 CR305

1	5V
2	5V7
3	V10B0
4	V10B1
5	5V
6	5V7
7	V10B0
8	V10B1
9	5V
10	5V7
11	V10B0
12	V10B1
13	5V
14	5V7
15	V10B0
16	V10B1
17	5V
18	5V7
19	V10B0
20	V10B1
21	5V
22	5V7
23	V10B0
24	V10B1
25	5V
26	5V7
27	V10B0
28	V10B1
29	5V
30	5V7
31	V10B0
32	V10B1

CR306  
15P  
TO P BOARD  
CR3300

1	SV
2	DIP-Y
3	GRD
4	DIP-E-Y
5	GRD
6	DIP-E-Y
7	SV
8	VIDEO
9	GRD
10	MAIN WP
11	GRD
12	P-R-Y
13	P-R-Y
14	P-Y
15	P-Y
16	CLK
17	CLK
18	MAIN SOP
19	GRD
20	MAIN HP



**MA**  
TIMING CONTROL  
AND DRIVER  
17C17

NOTE: \* = VARIANT, SEE PARTS LIST

1	CVIN
2	GND
3	COMB C
4	COMB C
5	RESET
6	YIN
7	YIN
8	GND
9	CLK
10	CLK
11	SV
12	GND
13	SV
14	GND
15	CIN

CR306  
15P  
TO B BOARD  
CR3300

BA5-311-PP10A

# PRINTING THE SERVICE MANUAL

The PDF of this service manual is not designed to be printed from cover to cover. The pages vary in size, and must therefore be printed in sections based on page dimensions.

## NON-SCHEMATIC PAGES

Data that does NOT INCLUDE schematic diagrams are formatted to 8.5 x 11 inches and can be printed on standard letter-size and/or A4-sized paper.

## SCHEMATIC DIAGRAMS

The schematic diagram pages are provided in two ways, full size and tiled. The full-sized schematic diagrams are formatted on paper sizes between 8.5" x 11" and 18" x 30" depending upon each individual diagram size. Those diagrams that are LARGER than 11" x 17" in full-size mode have been tiled for your convenience and can be printed on standard 11" x 17" (tabloid-size) paper, and reassembled.

### TO PRINT FULL SIZE SCHEMATIC DIAGRAMS

---

If you have access to a large paper plotter or printer capable of outputting the full-sized diagrams, output as follows:

- 1) Note the page size(s) of the schematics you want to output as indicated in the middle window at the bottom of the viewing screen.
- 2) Go to the File menu and select Print Set-up. Choose the printer name and driver for your large format printer. Confirm that the printer settings are set to output the indicated page size or larger.
- 3) Close the Print Set Up screen and return to the File menu. Select "Print..." Input the page number of the schematic(s) you want to print in the print range window. Choose OK.

### TO PRINT TILED VERSION OF SCHEMATICS

---

Schematic pages that are larger than 11" x 17" full-size are provided in a 11" x 17" printable tiled format near the end of the document. These can be printed to tabloid-sized paper and assembled to full-size for easy viewing.

If you have access to a printer capable of outputting the tabloid size (11" x 17") paper, then output the tiled version of the diagram as follows:

- 1) Note the page number(s) of the schematics you want to output as indicated in the middle window at the bottom of the viewing screen.
- 2) Go to the File menu and select Print Set-up. Choose the printer name and driver for your printer. Confirm that the plotter settings are set to output 11" x 17", or tabloid size paper in landscape (  ) mode.
- 3) Close the Print Set Up screen and return to the File menu. Select "Print..." Input the page number of the schematic(s) you want to print in the print range window. Choose OK.

### TO PRINT SPECIFIC SECTIONS OF A SCHEMATIC

---

To print just a particular section of a PDF, rather than a full page, access the Graphics Select tool in the Acrobat Reader tool bar.

- 1) To view the Graphics Select Tool, press and HOLD the mouse button over the Text Select Tool which looks like:  This tool will expand to reveal to additional tools. Choose the Graphics Select tool by placing the cursor over the button on of the far right that looks like: 
- 2) After selecting the Graphics Select Tool, place your cursor in the document window and the cursor will change to a plus (+) symbol. Click and drag the cursor over the area you want to print. When you release the mouse button, a marquee (or dotted lined box) will be displayed outlining the area you selected.
- 3) With the marquee in place, go to the file menu and select the "Print..." option. When the print window appears, choose the option under the section called "Print Range" which says "Selected Graphic".

Select OK and the output will print only the area that you outlined with the marquee. 

(continued >)

## ON-SCREEN SEARCH OPTION

All of the text within the service manual PDF is content searchable. This means that you can enter any text, word, phrase or reference number that appears in the manual, and the PDF software will search, find and move the cursor to the location where you requested text first appears. This feature can be particularly useful in locating components on a specific schematic or printed wire circuit board (PWB) diagrams.

Follow these steps to effectively locate a component on a schematic diagram:

- 1) Locate the schematic you want to search by clicking on the corresponding bookmark on the left side of the screen. The view on the right of the screen will then jump to the desired schematic page.
- 2) Magnify the diagram to at least 400% before conducting a component search. This will enable you to easily view the reference number when it is highlighted on screen. To do this, click on the magnifying glass button on the tool bar at the top of the screen. Move the cursor over the diagram and RIGHT click you mouse. Select the 400% magnification option on the pop-up menu. Click on the button with the icon of the open hand to deactivate the magnification tool
- 3) Search the diagram (or the entire manual) by clicking on the binocular button tool at the top of the screen. The "Find" window will appear and allow you to type in your desired text. Type in a reference designator, such as R502, and click on the "Find" button. If the component is not on the diagram, but is listed anywhere else in the manual, the cursor will jump to the first location the text is found in the file. To find another instance of that same text, click on the binocular button again and select "Find Again."

# HISTORY INFORMATION FOR THE FOLLOWING MANUAL:

## SERVICE MANUAL

## BA-5 CHASSIS

<u>MODEL NAME</u>	<u>REMOTE COMMANDER</u>	<u>DESTINATION</u>	<u>CHASSIS NO.</u>
<b>KV-27FS13</b>	RM-Y180	USA	SCC-S40NA
<b>KV-27FS13</b>	RM-Y180	CND	SCC-S41LA
<b>KV-27FS17</b>	RM-Y181	USA	SCC-S40PA
<b>KV-27FV17</b>	RM-Y181	USA	SCC-S40MA
<b>KV-27FV17</b>	RM-Y181	CND	SCC-S41KA
<b>KV-29FV17</b>	RM-Y181	E	SCC-S38XA
<b>KV-29FV17C</b>	RM-Y181	E	SCC-S38YA
<b>KV-32FS13</b>	RM-Y180	USA	SCC-S40QA
<b>KV-32FS13</b>	RM-Y180	CND	SCC-S41MA
<b>KV-32FS17</b>	RM-Y181	USA	SCC-S40RA
<b>KV-34FS13C</b>	RM-Y180	E	SCC-S56DA
<b>KV-34FS17</b>	RM-Y181	E	SCC-S56JA

**ORIGINAL MANUAL ISSUE DATE: 3/2001**

**ALL REVISIONS AND UPDATES TO THE ORIGINAL MANUAL ARE APPENDED TO THE END OF THE PDF FILE.**

<u>REVISION DATE</u>	<u>REVISION TYPE</u>	<u>SUBJECT</u>
3/2001		No revisions or updates are applicable at this time.
9/2002	CORRECTION-1	Exploded View part number correction for Door.
10/2002	CORRECTION-2	New 2 Pin THP601

TRINITRON® COLOR TELEVISION  
**SONY®**

<u>MODEL NAME</u>	<u>REMOTE COMMANDER</u>	<u>DESTINATION</u>	<u>CHASSIS NO.</u>
<b>KV-27FS13</b>	RM-Y180	USA	SCC-S40NA
<b>KV-27FS13</b>	RM-Y180	CND	SCC-S41LA
<b>KV-27FS17</b>	RM-Y181	USA	SCC-S40PA
<b>KV-27FV17</b>	RM-Y181	USA	SCC-S40MA
<b>KV-27FV17</b>	RM-Y181	CND	SCC-S41KA
<b>KV-29FV17</b>	RM-Y181	E	SCC-S38XA
<b>KV-29FV17C</b>	RM-Y181	E	SCC-S38YA
<b>KV-32FS13</b>	RM-Y180	USA	SCC-S40QA
<b>KV-32FS13</b>	RM-Y180	CND	SCC-S41MA
<b>KV-32FS17</b>	RM-Y181	USA	SCC-S40RA
<b>KV-34FS13C</b>	RM-Y180	E	SCC-S56DA
<b>KV-34FS17</b>	RM-Y181	E	SCC-S56JA

## CORRECTION - 1

SUBJECT: EXPLODED VIEW PARTS NUMBER CORRECTION

Correct the service manual as shown.  
File this Correction with the service manual.

 : Corrected Item

Section 6: Exploded View (Page 57 & 60)

6-2. Picture Tube Removal (KV-27FV17/29FV17/29FV17C ONLY)

6-5. Picture Tube Removal

(KV-27FS13/27FS17/32FS13/32FS17/34FS13C/34FS17 ONLY)

TRINITRON® COLOR TELEVISION

# SONY®

 : Corrected Item

## Section 6: Exploded View (Page 57 & 60)

### 6-2. Picture Tube Removal (KV-27FV17/29FV17/29FV17C ONLY)

#### INCORRECT

REF. NO.	PART NO.	DESCRIPTION
3	X-4037-631-3	DOOR

#### CORRECT

REF. NO.	PART NO.	DESCRIPTION
 3	X-4037-631-4	DOOR (KP-27FV17 ONLY)
 3	X-4037-631-1	DOOR (KP-29FV17/29FV17C ONLY)

### 6-5. Picture Tube Removal

(KV-27FS13/27FS17/32FS13/32FS17/34FS13C/34FS17 ONLY)

#### INCORRECT

REF. NO.	PART NO.	DESCRIPTION
3	4-075-658-21	DOOR (KV-34FS13C/34FS17 ONLY)
3	4-075-658-31	DOOR (KP-27FS13/27FS17/32FS13/32FS17 ONLY)

#### CORRECT

REF. NO.	PART NO.	DESCRIPTION
 3	4-075-658-11	DOOR (KV-34FS13C/34FS17 ONLY)
 3	4-075-658-21	DOOR (KP-27FS13/27FS17/32FS13/32FS17 ONLY)

# SERVICE MANUAL

# BA-5 CHASSIS

<u>MODEL NAME</u>	<u>REMOTE COMMANDER</u>	<u>DESTINATION</u>	<u>CHASSIS NO.</u>
<b>KV-27FS13</b>	RM-Y180	USA	SCC-S40NA
<b>KV-27FS13</b>	RM-Y180	CND	SCC-S41LA
<b>KV-27FS17</b>	RM-Y181	USA	SCC-S40PA
<b>KV-27FV17</b>	RM-Y181	USA	SCC-S40MA
<b>KV-27FV17</b>	RM-Y181	CND	SCC-S41KA
<b>KV-29FV17</b>	RM-Y181	E	SCC-S38XA
<b>KV-29FV17C</b>	RM-Y181	E	SCC-S38YA
<b>KV-32FS13</b>	RM-Y180	USA	SCC-S40QA
<b>KV-32FS13</b>	RM-Y180	CND	SCC-S41MA
<b>KV-32FS17</b>	RM-Y181	USA	SCC-S40RA
<b>KV-34FS13C</b>	RM-Y180	E	SCC-S56DA

## CORRECTION - 2

SUBJECT: NEW 2 PIN THP601

Correct the service manual as shown.  
File this Correction with the service manual.

SECTION 6: DIAGRAMS

6-3. A Board Schematic Diagram (Page 32, 33)

SECTION 8: ELECTRICAL PARTS LIST (Page 67, 73, 74-78)

TRINITRON® COLOR TELEVISION

**SONY®**

 : Corrected Item

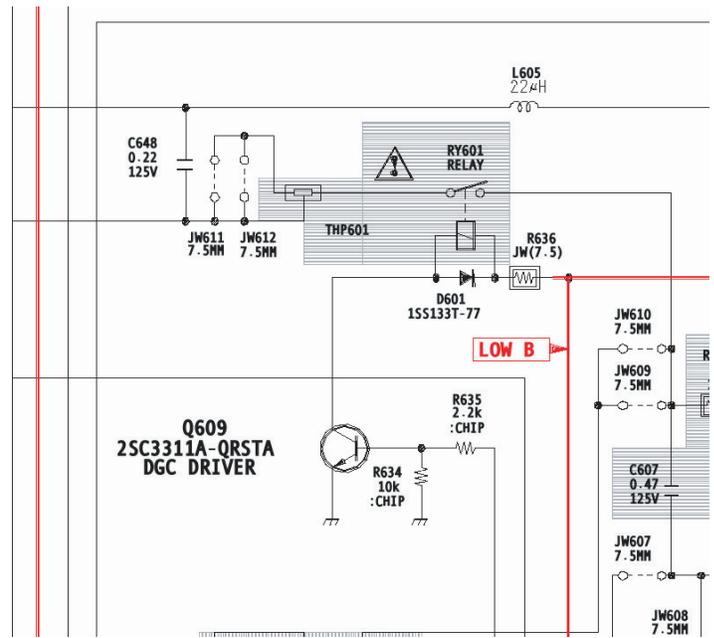
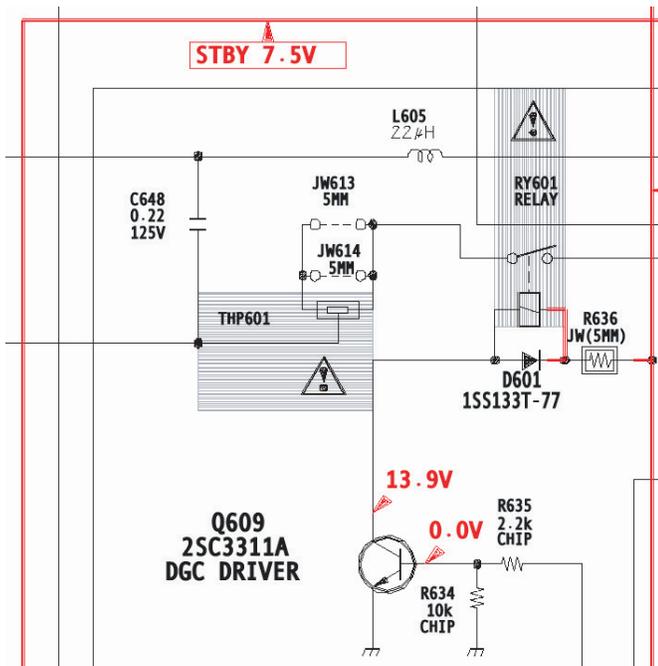
SECTION 6: DIAGRAMS

6-3.A Board Schematic Diagram (Page 32, 33,)

If a set requires a 3 pin (THP601) thermistor it may still be ordered using the existing part number. If a set requires a 2 pin (THP601) thermistor the new part number must be used.

For 3 Pin Configuration

For 2 Pin Configuration



SECTION 8: ELECTRICAL PARTS LIST (Page 67, 73, 74-78)

OLD

NEW

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION		
	THP601	1-803-540-11	THERMISTOR (3 PIN)		THP601	1-803-540-11	THERMISTOR (3 PIN)
		[OR]			[OR]		
	THP601	1-803-629-11	THERMISTOR (3 PIN)		THP601	1-803-629-11	THERMISTOR (3 PIN)
					THP601	1-804-313-11	THERMISTOR (2 PIN)



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