

SERVICE MANUAL

BX1S CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>	<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>
KV-SW212M50	RM-GA002	GE	SCC-V44G-A				
KV-SW212M50	RM-GA002	Malaysia	SCC-V37Q-A				
KV-SW212M81	RM-GA002	Middle East	SCC-V40T-A				
KV-SW212M81	RM-GA002	Russia	SCC-V13X-A				
KV-SW212M83	RM-GA002	India	SCC-V45P-A				
KV-SW212M83	RM-GA002	Saudi Arabia	SCC-V26Y-A				
KV-SW212M83/H	RM-GA002	Saudi Arabia	SCC-V64A-A				
KV-SW212N60	RM-GA002	Philippines	SCC-V41N-A				
KV-SW212P50	RM-GA002	E	SCC-V21Y-A				



(Except KV-SW212M83/M83/H)



(KV-SW212M83/M83/H)



RM-GA002

TRINITRON® COLOR TV
SONY®

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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.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK \triangle ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SELF DIAGNOSTIC FUNCTION

The units in this manual contain a self diagnostic function. If an error occurs, the STANDBY (⏻) indicator will automatically begin to flash. The number of times the STANDBY (⏻) indicator flashes translates to a probable source of the problem. 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.

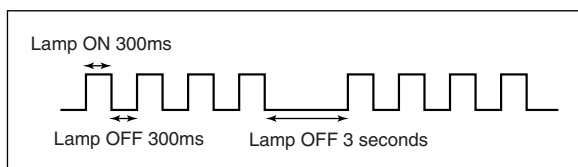
1. DIAGNOSTIC TEST INDICATORS

When an errors occurs, the STANDBY (⏻) indicator will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the indicator will identify the first of the problem areas.

Result for all of the following diagnosis items are displayed on screen. No error has occurred if the screen displays a "0".

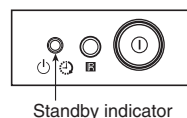
Diagnosis Item Description	No. of timer STANDBY (⏻) indicator flashes	Diagnostic Result on screen display	Probable Cause Location	Detected Symptoms
No Power	Does not light	–	<ul style="list-style-type: none"> Power cord is not plugged in. Fuse is burned out (F600) A board. 	<ul style="list-style-type: none"> Power does not turn on. No power is supplied on TV. AC Power supply is faulty.
+B overcurrent (OCP)	2 times	2:0 or 2:1 ~ 255	<ul style="list-style-type: none"> H OUT (Q805) is shorted. (A board) IC751 is shorted. (C board) 	<ul style="list-style-type: none"> Power does not turn on. Load on power line is shorted.
V-Protect (OVP)	4 times	4:0 or 4:1 ~ 255	<ul style="list-style-type: none"> +13V is not supplied. (A board) IC804 is faulty. (A board) 	<ul style="list-style-type: none"> Has entered standby state after horizontal raster. Vertical deflection pulse is stopped. Power line is shorted or power supply is shorted.
IK (AKB)	5 times	5:0 or 5:1 ~ 255	<ul style="list-style-type: none"> Video OUT (IC751) is faulty. (C board) IC001 is faulty. (A board) Screen (G2) is improperly adjusted. 	<ul style="list-style-type: none"> No raster is generated. CRT Cathode current detection reference pulse output is small.
Power supply NG (+5V) for Video Processor	8 times	8:0 or 8:1 ~ 255	<ul style="list-style-type: none"> IC604 faulty. IC602 faulty. 	<ul style="list-style-type: none"> No power supply to CRT ANODE. No RASTER is generated.

2. STANDBY INDICATOR BLINKING PROCESS



The example above represents for 4 times blink

3. STANDBY INDICATOR ON TV FRONT PANEL



Standby indicator

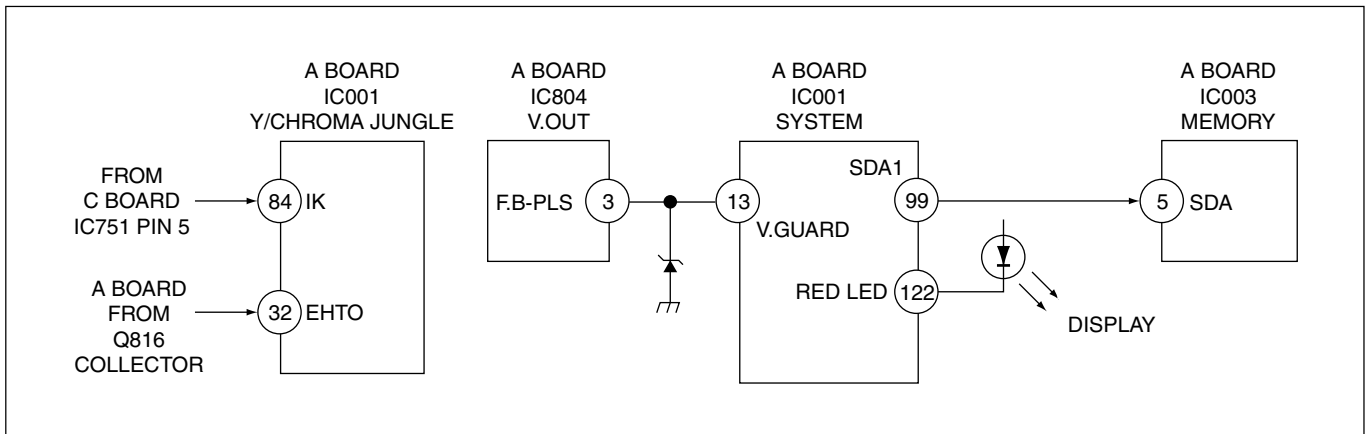
4. SELF DIAGNOSTIC SCREEN DISPLAY

SELF DIAGNOSTIC	
2 OCP : 0	← "0" means no fault has been detected.
3 OVP : N/A	
4 VSTOP : 1	← "1" means a fault has been detected.
5 AKB : 0	
8 SVP : 0	
101 WDT : N/A	← "N/A" means not available for this models.

5. HANDLING SELF DIAGNOSTIC SCREEN DISPLAY

No.	Description	Method
1.	Display self diagnostic screen	[Display] → [Channel 5] → [Volume] → [Power / TV] <i>Note: The above must be performed while TV is on standby mode.</i>
2.	Stop standby flash	i) Turn off power switch on main. ii) Unplug power cord from the outlet.
3.	Clear fault result	In self diagnostic screen, press [Channel 8] → [0] <i>Note: Diagnostic results display on screen is not automatically cleared. Therefore, clear result after completion of repair.</i>
4.	Quit self diagnostic screen	Turn off power switch of remote commander or main unit.

6. SELF-DIAGNOSTIC CIRCUIT



+B overcurrent (OCP)

Occurs when an overcurrent on the +B(135V) line is detected by pin 32 of IC001 (A board). If the voltage of pin 32 of IC001 (A board) is more than 4V, the unit will automatically go to standby.

V-PROTECT

Occurs when an absence of the vertical deflection pulse is detected by pin 13 of IC001 (A board).

IK (AKB)

If the RGB levels* do not balance within 15 sec after the power is turned on, this error will be detected by IC001 (A board). TV will stay on, but there will be 5 times LED blinking.

POWER SUPPLY NG (+5V) for VIDEO PROCESSOR

Occurs when IC001 internal HV protect detects an abnormal H-Pulse (frequency) due to improper power supply to IC001. TV cuts off high voltage power of anode CRT. No picture will be detected. eg: IC602, IC604 go faulty.

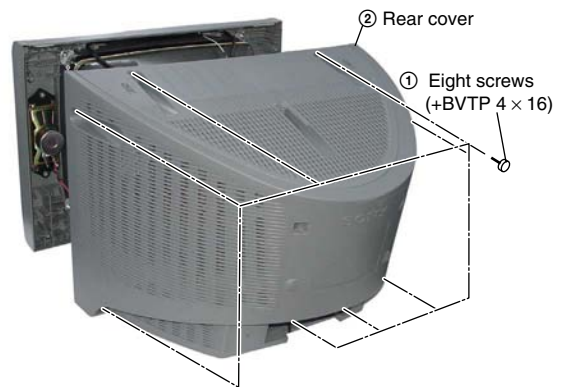
* (Refers to the RGB levels of the AKB detection Ref pulse that detects IK.)

SECTION 1 DISASSEMBLY

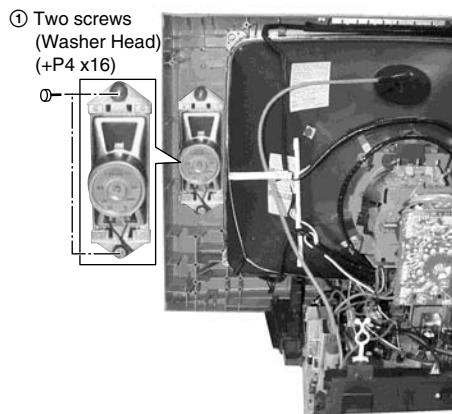
1-1. 3D BOX REMOVAL (KV-SW212M83/M83/H)



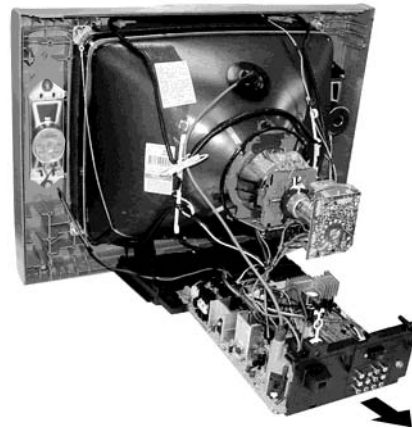
1-2. REAR COVER REMOVAL



1-3. SPEAKER REMOVAL



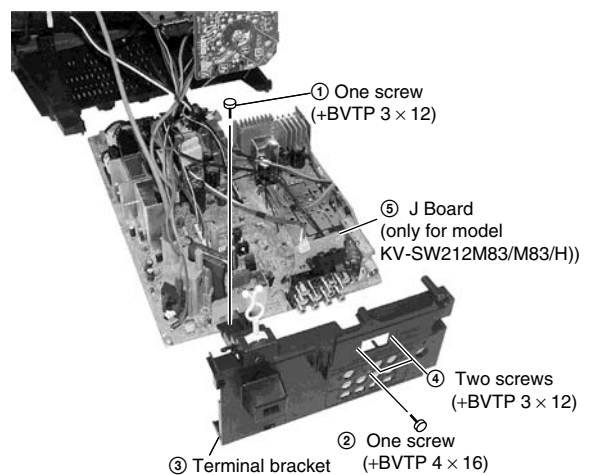
1-4. CHASSIS ASSY REMOVAL



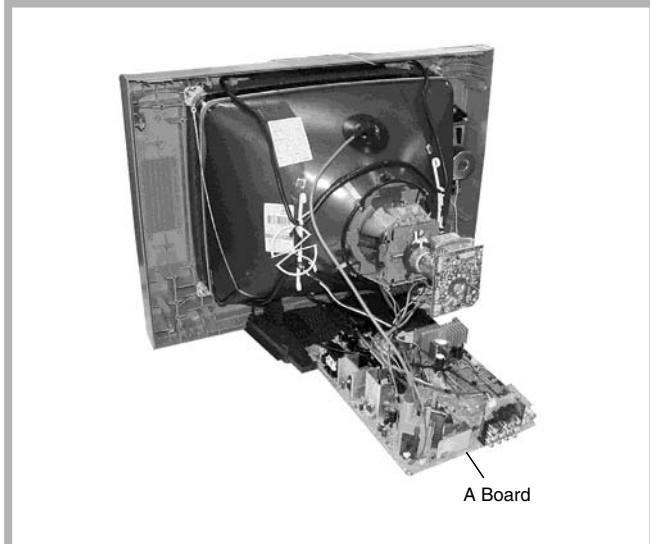
1-5. SERVICE POSITION



1-6. TERMINAL BRACKET AND J BOARD REMOVAL



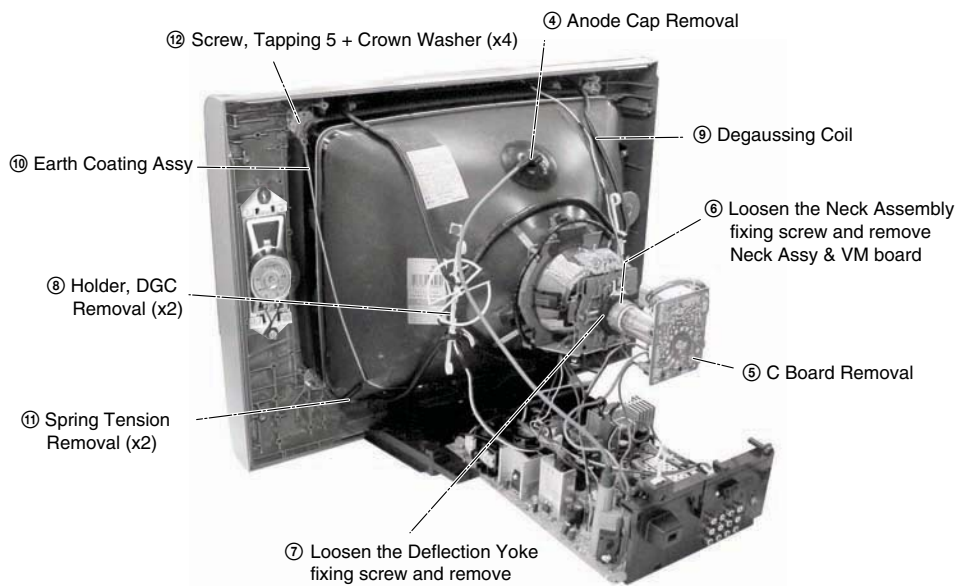
1-7. A BOARD REMOVAL



1-8. PICTURE TUBE REMOVAL

Note:

- Please make sure the TV set is not in standing position before removing necessary CRT support located on bottom right and left.
- 1) Remove the Rear Cover.
 - 2) Unplug all interconnecting leads from the Deflection Yoke, Neck Assy, Degaussing Coils and CRT grounding strap. Remove Chassis Assy.
 - 3) Place the TV set with the CRT face down on a cushion (jig).

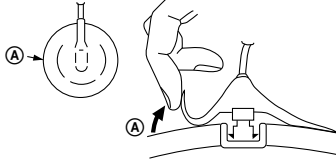


• REMOVAL OF ANODE-CAP

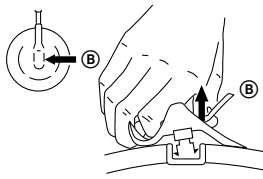
Note:

- After removing the anode, short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT.

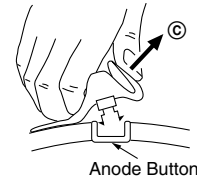
• REMOVING PROCEDURES



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



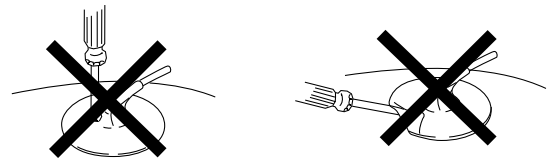
- ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow (b).



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

• HOW TO HANDLE AN ANODE-CAP

- ① Do not damage the surface of anode-caps with sharp shaped objects.
- ② Do not press the rubber too hard so as not to damage the inside of anode-cap. A metal fitting called the shatter-hook terminal is built into the rubber.
- ③ Do not turn the foot of rubber over too hard. The shatter-hook terminal will stick out or 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.

The controls and switch should be set as follows unless otherwise noted:

Picture control NORMAL
Brightness control NORMAL

Perform the adjustments in order as follows:

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

Note: Test Equipment Required

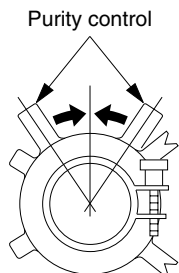
- | | |
|-----------------------|--------------------|
| 1. Pattern Generator | 5. Oscilloscope |
| 2. Degausser | 6. Landing Checker |
| 3. DC Power Supply | 7. XCV Adjuster |
| 4. Digital Multimeter | |

Preparation :

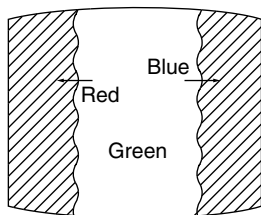
- Feed in the white pattern signal.
- Before starting, degauss the entire screen with the degausser.
- In order to reduce the geomagnetism on the set's picture tube, face it east or west.

2-1. BEAM LANDING ADJUSTMENT

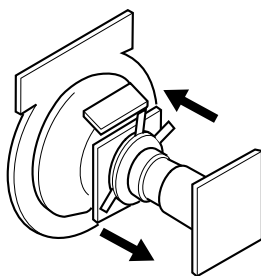
1. Input a raster signal with the pattern generator.
2. Loosen the deflection yoke mounting screw, and set the purity control to the center as shown below.



3. Set the raster signal of the pattern generator to green.
4. Move the deflection yoke (DY) backward and adjust the purity control so that green is in the center and blue and red are at the sides evenly.

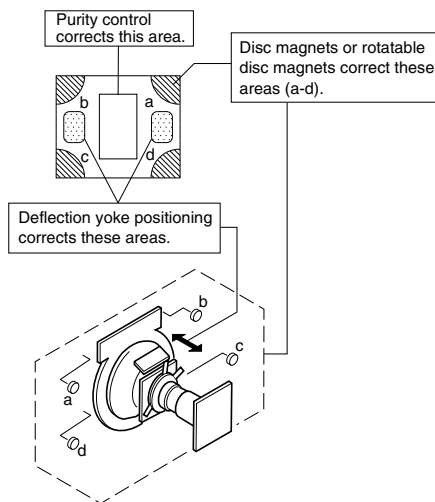


5. Then move the DY forward and adjust so that the entire screen becomes green.



6. Now switch over raster signal to red then blue and confirm the condition.

7. When the position of the DY is determined, tighten it with the DY mounting screw.
8. If the beam does not land correctly in all corners of the screen, use magnet disc to correct it.

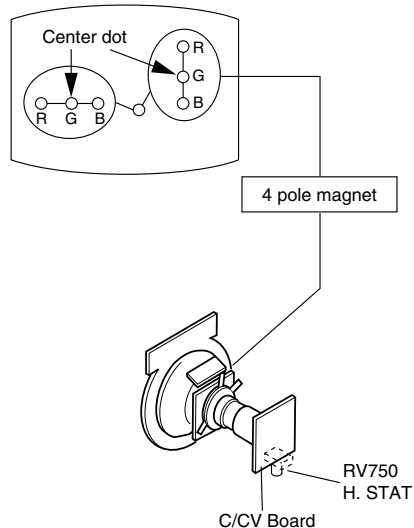


2-2. CONVERGENCE ADJUSTMENT

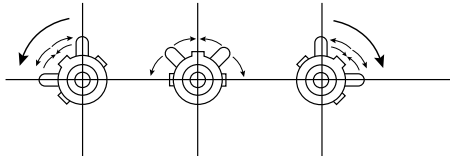
Preparation :

- Before starting, perform FOCUS adjustment.
- Picture mode STANDARD.
- Receive dot/cross hatch pattern.

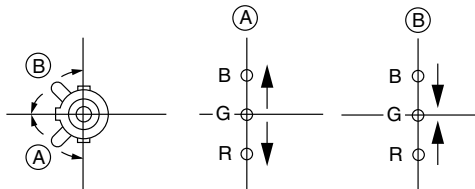
a) Vertical Static Convergence



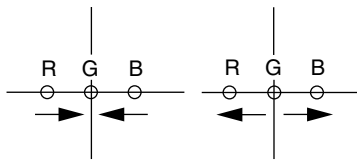
1. (Moving vertically), adjust the 4 pole magnet to converge red, green and blue dots in the center of the screen.
2. Tilt the 4 pole magnet and adjust static convergence to open or close the 4 pole magnet.



3. When the 4 pole magnet is moved in the direction of arrow (A) and (B), the red, green and blue dots moves as shown below:

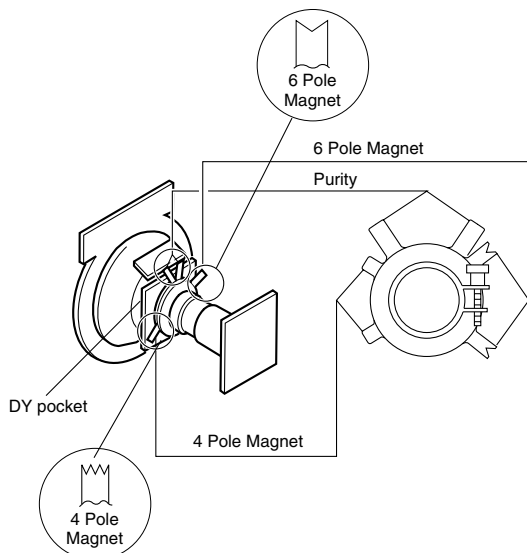
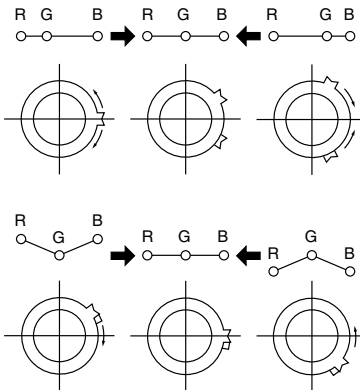


Moved RV750 (H.STAT)



b) Horizontal Static Convergence

If the blue dots does not converge with the red and green dots, use the 6 pole magnet to adjust in the manner described below.



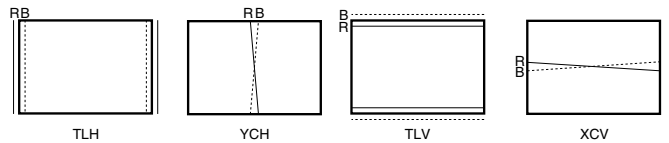
c) Convergence Rough Adjustment

Preparation :

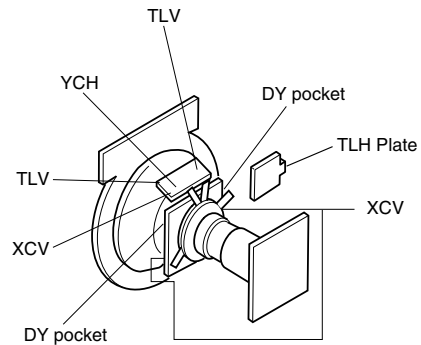
- Before starting this adjustment, adjust the horizontal and vertical static convergence.

Input cross hatch pattern.

- i) TLH
Adjust the horizontal convergence of red and blue dots by inserting TLH Correction Plate to the DY pocket (left or right).
- ii) YCH
Adjust YCH to balance Y axis.
- iii) TLV
Adjust the vertical convergence of red and blue dots.
- iv) XCV
Adjust XCV to balance X-axis.

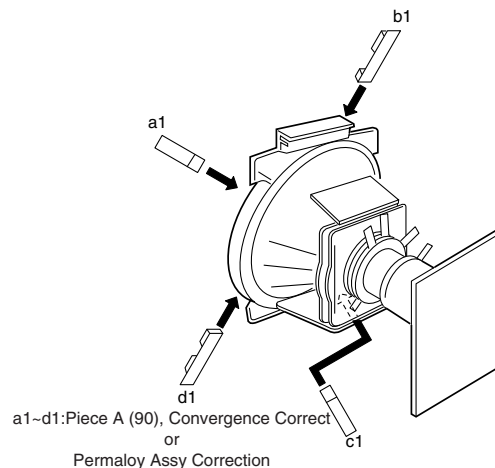
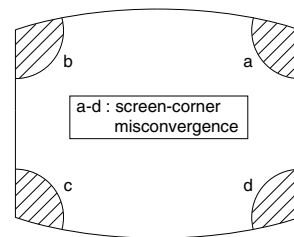


ON DY:



d) Screen Corner Convergence

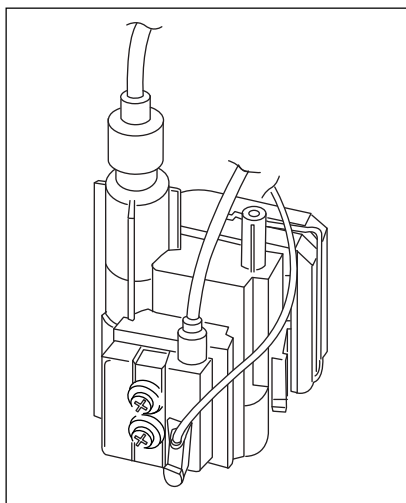
Affix a Piece A (90), Convergence Correct/Permalloy Assy Correction to the misconverged areas.



2-3. FOCUS ADJUSTMENT

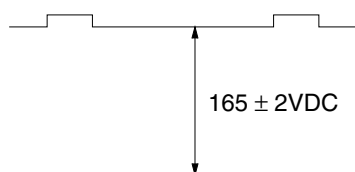
FOCUS adjustment should be completed before W/B adjustment.

1. Receive digital monoscope pattern.
2. Set Picture Mode to "DYNAMIC".
3. Adjust focus VR to obtain a just focus at the center of the screen.
4. Change the receiving signal to white pattern and blue back.
5. Confirm magenta ring is not noticeable. In case magenta ring is obvious, then adjust FOCUS VR to balance magenta ring and FOCUS.



2-4. G2 (SCREEN) ADJUSTMENT

1. Set the following condition:
 - Picture and Brightness to "STANDARD".
 - TV to Video mode.
 - WHBL 016 "RGG" to 01
2. Connect R, G, B of the C/CV board cathode to oscilloscope.
3. Adjust Brightness to obtain the cathode value to the value stated below.



4. Adjust SCREEN VR on the FBT until the scanning line disappears.
5. Finally set WHBL 016 "RGG" back to 00.

2-5. WHITE BALANCE ADJUSTMENT

1. Set to Service Mode.
2. Input white raster signal using signal generator.
3. Set the following condition:
Picture "DYNAMIC", PICT 006 "WTS" to 00.
4. At Highlight condition, select WHBL 03 "GDRV" and 04 "BDRV" with [1] and [4] button of the remote commander then adjust the data with [3] and [6] button.
5. At Cutoff, select WHBL 000 "BKOR" and 001 "BKOG" and adjust the data.
6. Perform adjustment at Highlight and Cutoff condition until it reaches its target.
7. Write data into memory by pressing [MUTING] → [0].
8. Finally set PICT 006 "WTS" back to its original data.

2-6. SUB BRIGHT ADJUSTMENT

1. Set TV to RF mode.
2. Input PAL monoscope to RF mode.
3. Set Brightness 50% and Picture to "MINIMUM".
4. Select WHBL 010 "SBRT" with [1] and [4] button of the remote commander and adjust its data with [3] and [6] so that cut-off level is 10 IRE, slightly glimmer: 20 IRE.
5. Write into the memory by pressing [MUTING] → [0].

VIVID : 4500K + 8 MPCD

Center data :

X : 0.2444

Y : 0.2466

SECTION 3 CIRCUIT ADJUSTMENTS

3-1. ADJUSTMENTS WITH COMMANDER

Service adjustments to this model can be performed using the supplied remote commander RM-GA002.

a. ENTERING SERVICE MODE

With the unit on standby

→ [DISPLAY] → [5] → [VOL (+)] → [POWER]

This operation sequence puts the unit into service mode.

This screen display is:

category	item no. in decimal	item name	service data in decimal	NVM NG	service command	field frequency	channel no./ video input name
GEOM	006	HSIZ	031	■	SERVICE	60	S VIDEO 1

release ID	software version	service data in binary	reserved for factory	color system	power on time (decimal)
SUS01	0.69U	0001 1111	FF FF	NTSC3	65535

Flash DCXO

111 11 11 1 7 11	FG	xy 111	000000	000000
------------------	----	--------	--------	--------

Status Byte
#1 SSD

Status Byte
#2 SSD

VDSP_C Flag
CO_LOCKED
VDSP
Detected Stereo Type (Direct Value from CZ_ Stereo_Mode)

S : for Sony
A : Aiwa
 US : US/Latin/Taiwan
 EU : Europe
 GA : General Area
 JP : Japan
 01 : serial no. of the M/P release
 for each destination

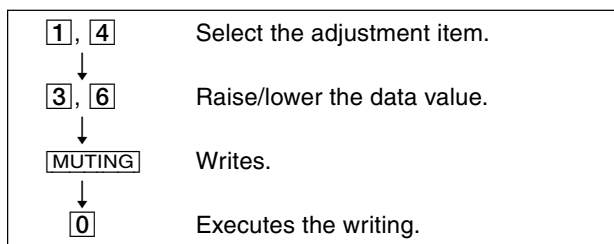
111	Needed for Nicam DCXO alignment Purpose
xy	Value of x = 0 - Unknown, 1 - BTSC, 2 - A2, 3 - NICAM, 4 - KOREAN, 5 - Japan, 6 - AV Stereo Value of y = 0 - Mono, 1 - Stereo, 2 - Bilingual, 4 - SAP/Single

b. METHOD OF CANCELLATION FROM SERVICE MODE

Set the standby condition (Press [POWER] button on the commander), then press [POWER] button again, hereupon it becomes TV mode.

c. METHOD OF WRITE INTO MEMORY

1. Set to Service Mode.
2. Press [1] (UP) and [4] (DOWN), to select the adjustment item.
3. Change item by pressing [3], [6].
4. Press [MUTING] button to indicate WRITE on the screen.
5. Press - button to write into memory.



d. MEMORY WRITE CONFIRMATION METHOD

1. After adjustment, pull out the plug from AC outlet, and then plug into AC outlet again.
2. Turn the power switch ON and set to Service Mode.

3. Call the adjusted items again to confirm adjustments were made.

e. OTHER FUNCTION VIA REMOTE COMMANDER

- [7], [0] All the data becomes the values in memory.
- [8], [0] All user control goes to the standard state.
- Display, [0] Service data initialization (Be sure not to use usually.)
- [2], [5] Select Device or Category

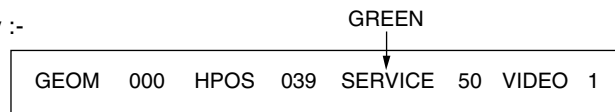
3-2. ADJUSTMENT METHOD

Item Number 000 HPOS

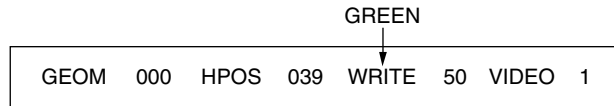
This explanation uses H POSITION as an example.

1. Select "000 HPOS" with the [1] and [4] buttons, or [2] and [5].
2. Raise/lower the data with the [3] and [6] buttons.
3. Select the optimum state. (The standard is IF for PAL reception.)
4. Write with the [MUTING] button. (The display changes to WRITE.)
5. Execute the writing with the - button. (The WRITE display will be changed to red color while excuting, and back to SERVICE.)

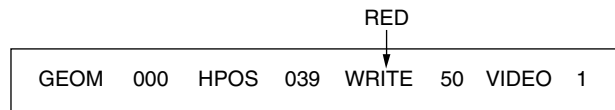
Example on screen display :-



Adjusted with [3] and [6] buttons.



write with [MUTING].



The WRITE display then returns to green SERVICE

Write executed with [0].

Use the same method for all Items. Use [1] and [4] to select the adjustment item, use [3] and [6] to adjust, write with [MUTING], then execute the write with [0].

Note : 1. In [WRITE], the data for all items are written into memory together.

2. For adjustment items that have different standard data between 50Hz or 60Hz, be sure to use the respective input signal after adjustment.

Adjustment Item Table

NOTE

- a) In the initial value (detailed) column, the data after the slash mark ("/") refers to NTSC model data.
No ("/") means data is common for Multi and NTSC model.
- b) Item remarked "n" and "n*n", please refer page 27 for the data.
- c) ■ shaded items are no data.
- d) Standard data listed on the Adjustment Item Table are reference values, therefore it may be different for each model and for each mode.
- e) Note for the Different Data those are the standard data values written on the microprocessor. Therefore, the data values of the models are stored respectively in the memory.
In the case of a device replacement, adjustment by rewriting the data value is necessary for some items.
- f) Multi ver 7.26, NTSC 7.32N.

TVJ Category	Functionality		Init.	Range		Function	Table & Note	Device Name	Common	Initial Value (Detailed)			
	No.	Name		Dec	Dec					(4:3) 50	(4:3) 60	(4:3) w50	(4:3) w60
GEOM	000	HPOS	031	063	063	Horizontal Shift (HS)	<4:3 Screen 50/60/w50/w60> <16:9 Screen (50/60)*(WZ/NF/Z)>	TV-Processor		40	45	42	42
	001	HPAR	031	063	063	Horizontal Parallelogram	<4:3 Screen 50/60/w50/w60> <16:9 Screen (50/60)*(WZ/NF/Z)>			31	31	31	31
	002	HBOW	031	063	063	Horizontal Bow	<4:3 Screen 50/60/w50/w60> <16:9 Screen (50/60)*(WZ/NF/Z)>			31	31	31	31
	003	VLIN	031	063	063	Vertical Linearity	<4:3 Screen 50/60/w50/w60> <16:9 Screen (50/60)*(WZ/NF/Z)>			31	31	31	31
	004	VSCR	031	063	063	Vertical Scroll	<4:3 Screen 50/60/w50/w60> <16:9 Screen (50/60)*(WZ/NF/Z)>			31	31	31	31
	005	HSIZ	031	063	063	EW Width (EW)	<4:3 Screen 50/60/w50/w60> <16:9 Screen (50/60)*(WZ/NF/Z)>			26	28	25	25
	006	EWPW	031	063	063	EW Paraboloid/Width (PW)	<4:3 Screen 50/60/w50/w60> <16:9 Screen (50/60)*(WZ/NF/Z)>			24	31	31	31
	007	UCOP	017	063	063	EW Upper Corner Parabola	<4:3 Screen 50/60/w50/w60> <16:9 Screen (50/60)*(WZ/NF/Z)>			31	31	31	31
	008	LCOP	017	063	063	EW Lower Corner Parabola	<4:3 Screen 50/60/w50/w60> <16:9 Screen (50/60)*(WZ/NF/Z)>			31	31	31	31
	009	EWTZ	031	063	063	EW Trapezium	<4:3 Screen 50/60/w50/w60> <16:9 Screen (50/60)*(WZ/NF/Z)>			31	31	31	31
	010	VSLP	031	063	063	Vertical Slope (VS)	<4:3 Screen 50/60/w50/w60> <16:9 Screen (50/60)*(WZ/NF/Z)>			31	31	31	31
	011	VSIZ	015	063	063	Vertical Amplitude	<4:3 Screen 50/60/w50/w60> <16:9 Screen (50/60)*(WZ/NF/Z)>			24	26	15	15
	012	SCOR	014	063	063	S-Correction (SC)	<4:3 Screen 50/60/w50/w60> <16:9 Screen (50/60)*(WZ/NF/Z)>			25	25	25	25
	013	VPOS	031	063	063	Vertical Shift (VSH)	<4:3 Screen 50/60/w50/w60> <16:9 Screen (50/60)*(WZ/NF/Z)>			39	28	31	31
	014	VZOM	031	063	063	Vertical Zoom (VZ)	<4:3 Screen 50/60/w50/w60> <16:9 Screen (50/60)*(WZ/NF/Z)>						
	015	HBL	000	001	001	RGB Blanking Mode	<4:3 Screen 50/60/w50/w60> <16:9 Screen (50/60)*(WZ/NF/Z)>			01	01	01	01
	016	WBF	007	015	015	Timing of Wide Blanking (WBF)	<4:3 Screen 50/60/w50/w60> <16:9 Screen (50/60)*(WZ/NF/Z)>			07	07	07	07
	017	WBR	007	015	015	Timing of Wide Blanking (WBR)	<4:3 Screen 50/60/w50/w60> <16:9 Screen (50/60)*(WZ/NF/Z)>			10	10	10	10
	018	SBL	000	001	001	Service Blanking	none			00			
019	COPY	000	001	001	Copy the GEO data to all 50/60Hz NVM area	none			X/00				

TVJ	Functionality		Init.	Range	Function	Table & Note	Device Name
	No.	Name					
LAND	000	LDT	063	255	Left LCC Adjustment Data	none	DAC
	001	RDT	063	255	Right LCC Adjustment Data	none	
	002	NSLC	000	063	LCC North/South Correction Gain	none	
	003	EWGN	000	063	LCC East/West Correction Gain	none	
	004	LCMX	000	127	Adjustment Data Limit	none	
	005	RTMX	000	015	Picture Rotation Limit	none	
	006	VPMX	000	007	Picture V-Position Limit	none	
007	MUTE	000	001	Output Mute	none		

(For wide screen models only -SA models)

TVJ	Functionality		Init.		Range		Function		Table & Note	Device Name	Common	Initial Value (Detailed)				Pic Mode 2	TV	Video
	No	Name	Dec	Hex	Dec	Hex	Col Temp (COOL other)	Col Temp (WARM other)				Col Temp (NEUTRAL other)	Col Temp (COOL other)	Col Temp (WARM other)	Col Temp (NEUTRAL YUV)			
WHBL	000	BKOR	031	063	Black Level Offset R (CFB = 00), Offset B (OFB = 01)				col temp (HIGH/LOW/Normal)*(U/V/R/G/B/Others)	TV-Processor		31	31	31	31			
	001	BKOG	031	063	Black Level Offset G				col temp (HIGH/LOW/Normal)*(U/V/R/G/B/Others)			31	31	31	31			
	002	RDRV	037	063	White Point R				col temp (HIGH/LOW/Normal)*(U/V/R/G/B/Others)	TV-Pro		37	37	37	37			
	003	GDRV	037	063	White Point G				col temp (HIGH/LOW/Normal)*(U/V/R/G/B/Others)			31	31	31	31			
	004	BDRV	037	063	White Point B				col temp (HIGH/LOW/Normal)*(U/V/R/G/B/Others)			31	31	31	31			
	005	LPG	000	001	RGB Gain Preset				col temp (HIGH/LOW/Normal)*(U/V/R/G/B/Others)		01							
	006	PGR	031	127	Preset Gain R (PGR)				none		55							
	007	PGG	031	127	Preset Gain G (PGG)				none		55							
	008	PGB	031	127	Preset Gain B (PGB)				none		55							
	009	GNOF	000	015	Preset Gain Offset				none	CCC loop	15							
	010	SBRT	031	063	Sub-Brightness				Others(ty) Others(video)/Paint(ty)/Paint(video)/ YUV									
	011	SBRO	000	003	Sub-Brightness Offset (Intelligent Pic)				none		00							
	012	EGL	000	001	Enable Gain Loop in CCC System				none		00							
	013	SGL	000	003	Selection of High Current in CCC System				none		00							
	014	AKB	000	001	Black Current Stabilization				none		00							
	015	CBS	000	001	Control Sequence of Beam Current Limiting				none		00							
	016	RGBB	000	003	RGB Blanking				none		00							
	017	BLRG	000	001	Blanking of Blue & Green Output				none		00							
	018	OFB	000	001	Black Level Offset Blue				none		01							
	019	NSBR	000	015	Non-Standard Brightness offset				none		00							
020	WBP	000	003	Color Temp setting (0:High, 1:Normal, 2:3Low)				Picture Mode										

TVJ	Functionality		Range		Function	Table & Note	Device Name	Initial Value (Detailed)														
	No.	Name	Init.	Dec				YUV	50 pal (TV)	50 pal (Video)	50 Secam (TV)	50 Secam (Video)	60ntsc (TV)	60ntsc (Video)	50YUV	60YUV	Pc mode 0	Pc mode 1	Pc mode 2	TV	Video	TV Wide (4:3)
SADJ	000	PMAX	003	063	Picture Maximum	(TV / Video) * (Normal / Wide / <Normal / Wide> / TV / Video)	TV-Processor															
	001	SHUE	007	015	Sub-Hue	TV / Video / YUV																
	002	SSHP	015	063	Sub-Sharpness	none																
	003	SSHO	000	007	Sub-Sharpness Offset (Intelligent Pic)	none																
	004	SCOL	031	063	Sub-Color	50pal(tv)/50pal(video)/50secam(tv)/50secam(video)/60ntsc(tv)/60ntsc(video)/50palim(video)/60ntscim(video)/50YUV/60YUV/50RGB/60RGB (US models only)																
	005	SCOO	000	003	Sub-Color Offset (Intelligent Pic)	none																
	006	PIC	031	127	Picture Control (GA:0-100(valid); >100(Invalid); Others:0-63(valid); ignore bit 6(Invalid))	Picture Mode(GA: Personal = User Reset Data)									100	68	100					
	007	COL	031	127	Color Control (GA:0-100(valid); >100(Invalid); Others:0-63(valid); ignore bit 6(Invalid))	Picture Mode(GA: Personal = User Reset Data)									56	40	50					
	008	BRT	031	127	Brightness Control (GA:0-100(valid); >100(Invalid); Others:0-63(valid); ignore bit 6(Invalid))	Picture Mode(GA: Personal = User Reset Data)									50	50	50					
	009	HUE	031	127	Hue Control (GA:0-100(valid); >100(Invalid); Others:0-63(valid); ignore bit 6(Invalid) (*send to TINT #1EH(5-0) with US model)	Picture Mode(GA: Personal = User Reset Data)									50	50	50					
010	SHP	031	127	Sharpness Control (GA:0-100(valid); >100(Invalid); Others:0-63(valid); ignore bit 6(Invalid))	Picture Mode(GA: Personal = User Reset Data)									60	50	50						

TVJ	Functionality		Range		Function	Table & Note	Device Name	Initial Value (Detailed)															
	No.	Name	Init.	Dec				Others	YUV	PAL(TV)	SECAM(TV)	SECAM(Video)	S-INPUT	SECAM	NTSC	TV							
YC	000	PFREQ	000	003	Peaking Center Frequency and Delay	TV / other	TV-Processor	00														00	
	001	RPA	001	003	Ratio Pre & Over-Shoot	TV / other		02															02/03
	002	RPO	002	003	Ratio of Positive & Negative Peaks	TV / other		02															02/01
	003	YDLY	012	015	Y-Delay	(PAL/NTSC/SECAM) (TV/VIDEO)+YUV/S-INPUT																	
	004	CMAT	000	003	PAL-SECAM or NTSC (Japan/USA) Matrix																		
	005	ACL	001	001	Automatic Color Limiting																		
	006	CB	000	001	Chroma Bandpass Center Frequency	valid only with TV (*Video: 0 fix)																	
	007	SBO	001	003	SECAM Black Offset																		
	008	CHSE	001	003	PAL/NTSC Ident Sensitivity																		
	009	CLO	000	001	Center Frequency of Cloche(Bell) Filter																		
	010	CTRP	000	001	Chroma Trap Mode																		
	011	QDT	000	001	Second Chroma Trap																		
	012	BPS	000	001	Bypass of Chroma Base-band Delay Line																		
	013	FCO	000	001	Forced Color On																		
	014	TINT	031	063	Base-Band Tint Control																		
015	TUV	000	001	Tint Control on UV Signals																			

TVJ	Functionality		Range		Function	Table & Note	Device Name	Common	Initial Value (Detailed)															
	No.	Name	Init.	Dec					(4:3) 50	(4:3) 60	Others	YUV	TV	Video	Teletext	TV-ip	No signal							
SYNC	000	SYS	000	001	Synchronization on YSYNC Input		TV Processor	00																
	001	FO	000	003	Phase 1 Time Constant	TV IP ON/TV IP OFF/Video/Teletext/Auto Tuning or No signal(RF)																		
	002	VID	000	001	Video Ident Mode	50 / 60																		
	003	FSL	000	001	Forced Slicing Level for Vertical Sync																			
	004	SSL	000	001	Slicing Level Sync Separator	50 / 60																		
	005	SVID	001	007	Source Selection for Video Identification	YUV / Others																		
	006	FORF	000	003	Forced Field Frequency																			
007	MVK	000	001	Macro Vision Keying																				

TVJ Category	Functionality		Range		Function	Table & Note	Device Name	Common	Initial Value (Detailed)							
	No.	Name	Init. Dec	Range Dec					Others	Live	TV (Dyn)	TV (Others)	Video (Dyn)	Video (Others)	ColorTemp (HIGH)	ColorTemp (Others)
PICT	000	CADL	007	015	Cathode Drive Level			00								
	001	CFA	000	003	Comb Filter Mode			00								
	002	SOC	002	003	Soft Clipping Level			00								
	003	PWL	001	001	Peak White Limiting Switch			01								
	004	WHTL	006	015	Peak White Limiting			01								
	005	GAM	001	001	Gamma			00								
	006	WTS	001	003	Gamma Control and White Stretch	Live / Others			02	02						
	007	TFR	000	001	DC Transfer Ratio of Luminance Signal	Live / Others				01	01					
	008	COR	003	003	Coring	(TV / Video)*(Dyna / others)					00	00				
	009	COFO	000	003	Coring Offset (Intelligent Pic)											
	010	BKS	003	003	Black Stretch	RGB / others				02						
	011	AAS	001	001	Black Area to Switch off the Black Stretch					01						
	012	DSK	000	001	Dynamic Skin Control					00						
	013	BLS	000	001	Blue Stretch	col temp (HIGH/OTHERS)						00	00			
	014	NBLS	000	001	Operation Blue Stretch Circuit											
015	NRR	000	001	Non Red Reduction	col temp (HIGH/LOW/NORMAL)								01		01	

TVJ Category	Functionality		Range		Function	Table & Note	Device Name	Common	Initial Value (Detailed)			
	No.	Name	Init. Dec	Range Dec					YUV	Video	TV	
SW	000	CV2	000	001	CVBS2 Input Signal Selection			00				
	001	SVO	001	003	Function of IFVO/SVO/CVBSI Pin @ 48	TV / Video / YUV			02	01	01	
	002	DFL	000	001	Flash Protection			01				

TVJ Category	Functionality		Initial	Range		Function	Table & Note	Device Name	Common
	No.	Name		Dec	Dec				
VIF	000	OIFD	036	063	063	Offset IF Demodulator		TV-Processor	36
	001	AGCT	031	063	063	AGC Take-over			31
	002	STM	000	001	001	Search Tuning Mode			01
	003	GD	000	001	001	Group Delay on CVBS1 Signal			00
	004	AGCS	001	003	003	IF AGC Speed			01
	005	FFI	000	001	001	Fast Filter IF PLL			00
	006	LNAI	000	001	001	RF Amp LNA bit initial value			00
	007	LNAT	195	255	255	RF Amp Threshold Level			195
	008	LNSN	004	007	007	RF Amp SN Level Threshold			03
	009	LNSD	002	007	007	RF Amp SN Level Drop Threshold			01
	010	LNEX	016	063	063	RF Amp check SN Drop Timing			30
	011	CHTR	048	127	127	Channel Threshold after Auto Prg to set RF Amp User Mode			25
012	TUSO	000	001	001	Sony Tuner Used			*/01	

TVJ Category	Functionality		Init.	Range		Function	Table & Note	Device Name	Common	Initial Value(Detailed)		
	No.	Name		Dec	Dec					Pic mode 0	Pic mode 1	Pic mode 2
VM	000	RGBD	003	007	007	Delay of RGB Output to VM Output	none	TV-Processor	04			
	001	VMA	003	003	003	Amplitude of VM Output	none		00/03			
	002	VMAP	002	003	003	VM setting (0:High, 1:Low, 2,3:OFF)	Picture Mode			00	01	00
	003	VMMO	003	003	003	VM Mode			01			
	004	FVMA	004	004	004	Amplitude of VM Output (Full Software)	SECAM / others					
005	CRAO	000	001	001	Corring on SVM	TV / others						

TVJ Category	Functionality		Init. Dec	Range Dec	Function	Table & Note	Device Name	Common
	No.	Name						
SDEM	000	FMWS	000	003	Window Selection for FM Demodulator		TV-Processor	02
	001	QSS	001	001	Quasi Split Sound (QSS) Amplifier Mode (N/A for GA multi M system)			*
	002	BPB	000	001	Bypass of Sound Bandpass Filter			00
	003	AMLO	000	001	Audio Output Signal for AM Sound			00
	004	HPVC	000	001	Head Phone Volume Control			00
	005	CMCA	000	001	Activate Mono Channel			*

TVJ Category	Functionality		Init. Dec	Range Dec	Function	Table & Note	Device Name	Common
	No.	Name						
TXT	000	TXV	039	063	Teletext Vertical Position for Philips		Text Decoder	39/00
	001	THD	010	127	Teletext H-sync Active Edge Shift			10/00
	002	TBR	015	031	Teletext RGB Brightness			14/00
	003	ACQ	000	001	Teletext Acquisition (Auto-0, PAL-1)		SFR (Txt17)	00
	004	TBRM	003	031	Teletext Mix Mode Brightness			07/00

TVJ Category	Functionality		Init. Dec	Range Dec	Function	Table & Note	Device Name	Common	Initial Value (Detailed)									
	No.	Name							TV	Video	RF Sub	Video Sub	Off	SRS/WOW	Trusurround	Istereo	Imono	
SDSP	000	BBL	000	015	BBE Contour		SSD	00										
	001	BBH	000	015	BBE Process			00										
	002	BBLW	000	015	BBE Contour Offset			06										
	003	SVOF	000	015	Surround / Effect Mode Volume Offset	Off(SRS/WOW)/Trusurround/ Istereo/Imono				04	11	04	06	04				
	004	LAD	000	031	Decoder Level Adjust				05									
	005	LAM	000	031	Mono Level Adjust				05									
	006	LAIN	000	031	Nicam Level Adjust				*/22									
	007	LAS	000	031	SAP Level Adjust				08/05									
	008	LAA	000	031	ADC Level Adjust	RF/Video/CenterSpk/RFSUB/ VideoSub				00	00	00/-	00/-					
	009	SEF	003	007	Incredible Mono/Stereo Effect	Istereo/Imono										05		03
	010	BAS	000	015	Main Bass Offset				*									
	011	TRE	000	015	Main Treble Offset				*									
	012	EQ1	000	015	Equalizer Main Channel Band (100 Hz) Offset				*									
	013	EQ2	000	015	Equalizer Main Channel Band (300Hz) Offset				*									
	014	EQ3	000	015	Equalizer Main Channel Band (1000 Hz) Offset				00 / *									
	015	EQ4	000	015	Equalizer Main Channel Band (3000 Hz) Offset				*									
	016	EQ5	000	015	Equalizer Main Channel Band (8000 Hz) Offset				*									
	017	BFACT	005	007	DBE, DUB and BBE Control				00 / *									
	018	SCEN	001	015	SRS3D Center Control				04									
	019	SSPA	000	015	SRS3D Space Control				01									
	020	BBHW	000	015	BBE process offset in WOW mode				00 / *									
	021	STRE	002	007	Treble Offset for surround mode				01									
	022	BBHT	000	015	BBE Offset in TV mode				00									
	023	TTRE	002	007	Treble Offset in TV mode				02									
	024	KVOF	006	021	Karaoke master volume offset	Other / Vocal Reducer On												
	025	VBAS	000	003	Bass Offset depend on user volume				00									
	026	VTRE	000	003	Treble Offset depend on user name				00									
	027	CEQ1	008	015	Center-In Equalizer Band Data (100Hz)													
	028	CEQ2	008	015	Center-In Equalizer Band Data (300Hz)													
	029	CEQ3	008	015	Center-In Equalizer Band Data (1000Hz)													
	030	CEQ4	008	015	Center-In Equalizer Band Data (3000Hz)													
	031	CEQ5	008	015	Center-In Equalizer Band Data (8000Hz)													
032	TBAS	002	007	Bass Offset for TV				00										

(not used for these models)

TVJ Category	Functionality		Init.	Range		Function	Table & Note	Device Name	Common
	No.	Name		Dec	Dec				
SDEC	000	SPTU	003	015	015	Upper Threshold for SAP carrier detection		SSD	08/05
	001	SPTL	006	015	015	Lower Threshold for SAP carrier detection			15
	002	SPTH	000	031	031	Noise Threshold for automute of SAP			00/05
	003	SPHY	004	015	015	Hysteresis size for automute of SAP			03
	004	FMTH	000	031	031	Noise Threshold for automute of SC2 in FM A2 standard			18/00
	005	FMHY	004	015	015	Hysteresis size for automute of SC2 in FM A2 standard			07/04
	006	NILE	100	255	255	NICAM lower error limit (DDEP)			50
	007	NIUE	200	255	255	NICAM upper error limit (DDEP)			200
	008	EPMD	001	003	003	DEMDEC Easy Programming (DDEP)			02/01
	009	STDS	019	031	031	Bits multiplexed for ASD and SSS modes	If EPMD = 0 and STDS = 0 and OP3 Bit 1 = 1 SDEC category is Disable and SDKC category will take over		31/*
	010	OVMA	001	001	001	FM overmodulation adaption			00
	011	FLBW	000	003	003	FM/AM demodulator filter bandwidth			03/*
	012	IDMD	000	003	003	FM ident speed in SSS mode			00/01
	013	OVMT	001	002	002	Overmodulation level threshold relative to nominal			03
	014	DCXI	000	001	001	NICAM DCXO Scaling Control Inverter			*/00
	015	DCXG	000	007	007	NICAM DCXO Scaling Control Gain			*/00
	016	DCLL	011	015	015	NICAM DCXO Scaling Control Limit (L)			00
	017	DCLH	000	031	031	NICAM DCXO Scaling Control Limit (H)			*/00
018	IDKR	001	003	003	IDMOD setting for Korean M STD			00	

TVJ Category	Functionality		Init.	Range		Function	Table & Note	Device Name	Common
	No.	Name		Dec	Dec				
SDKC	000	KNLL	000	255	255	Korean Noise Det Lower Threshold Lower Byte			
	001	KNLH	012	255	255	Korean Noise Det Lower Threshold Higher Byte	If EPMD = 0 and STDS = 0 and OP3 Bit 1 = 1 SDEC category is Disable and SDKC category will take over		
	002	KNHL	000	255	255	Korean Noise Det Upper Threshold Lower Byte			
	003	KNHH	020	255	255	Korean Noise Det Upper Threshold Higher Byte			
	004	KLIC	060	255	255	Korean Lost Pilot ID maintaining count			
	005	KLIM	001	127	127	Korean Lost Pilot ID maintaining count multiplier			
006	KSDC	006	255	255	Korean Stereo Detect Count				

TVJ	Functionality		Init.	Range	Function	Table & Note	Device Name
	No.	Name					
3NR	000	3DET	000	007	3D DET		
	001	3COR	000	001	3DNR CORR		
	002	AFC	000	003	AFC GAIN		
	003	HEG	000	003	H ENHA GAIN		
	004	2CNR	000	015	2D-CNR K & 2D CNR LIM		
	005	YNC	000	007	Y NOISE CANCELLER ; Y-NC LIM		
	006	2YNR	000	015	2D YNRK ; 2D YNR GAIN		
	007	2YNL	000	003	2D YNR LIM		
	008	BLK	000	003	BLK EXP		
	009	3CNR	000	007	3D CNR LIM		
	010	3CNK	000	003	3D CNR K		
	011	3CNG	000	007	3D CNR GAIN		
	012	3YNR	000	007	3D YNR LIM		
	013	3YNK	000	003	3D YNR K		
	014	3YNG	000	007	3D YNR GAIN		
	015	YDLY	000	128	Y OUTPUT DELAY		
	016	ICA	000	001	INT CLAMP AUTO		
	017	ICM	000	001	INT CLAMP MANUAL		
	018	CENH	000	001	C ENHA		
	019	ICK	000	001	INPUT CLAMP KEY		
	020	BGK	000	001	BURST GATE KEY		
021	SSL	000	001	SYNC SEP LPF			

(For BXIL model only)

TVJ Category	Functionality		Init.		Range		Function	Table & Note	Device Name
	No.	Name	Dec	Dec	Dec	Dec			
3NR	022	VECR	000	003	V ENHA CORE				
	023	VEG	000	003	V ENHA GAIN				
	024	VEN	000	003	V ENHA NL				
	025	AMP1	000	007	HD AMP1				
	026	HDGV	000	031	HD GAIN V				
	027	AMP2	000	007	HD AMP2				
	028	HDG1	000	031	HD GAIN 1				
	029	AMP3	000	007	HD AMP3				
	030	HDG2	000	031	HD GAIN 2				
	031	CSLP	000	015	ACMSLP & ACSSLP				
	032	YSLP	000	015	AYMSLP & AYSSLP				
	033	ACMS	000	015	ACMESET & ACMFSET				
	034	ACSS	000	015	ACSESET & ACSFSET				
	035	AYMS	000	015	AYMESET & AYMFSET				
	036	AYSS	000	015	AYSESET & AYSFSET				
	037	BCSL	000	015	BCMSLP & BCSSLP				
	038	BYSL	000	015	BYMSLP BYSSLP				
	039	BCMS	000	015	BCMESET & BCMFSET				
	040	BCSS	000	015	BCSESET & BCXFSET				
	041	BYMS	000	015	BYMESET BYMFSET				
	042	BYSS	000	015	BYSESET BYSFSET				
	043	CECM	000	007	CECMP				
	044	CSCM	000	015	CSCMP				
	045	F1HV	000	015	F1HER & F1 VER				
	046	MREF	000	015	MREF				
	047	CDEY	000	003	CDEYE				
	048	YDEY	000	003	YDEYE				
	049	HMAS	000	007	H-MASK OUT				
	050	VMAS	000	031	V-MASK OUT				

TVJ Category	Functionality		Range	Function		Table & Note	Device Name	Common	Initial Value (Detailed)		Others	YUV
	No.	Name		Dec	Dec				(4:3) 50	(4:3) 60		
HTV	000	VMAX	000	063	Maximum Volume Level (MAX = 35+VMAX)			00/07				
	001	VINI	025	031	Initial Volume Level at power on		MMFR/Micro 60h	12				
	002	STBY	000	001	Last Power Status (0 = follow the last power status, 1 = always STBY)		XDATA/Micro 60h	08				
	003	IPRG	001	127	Initial Program Number at power on (only for Multi Models)		MMFR/Micro 60h		63	31/39		

TVJ Category	Functionality No.	Name	Init. Dec	Range Dec	Function	Table & Note	Device Name	Common	Initial Value (Detailed)		Others	YUV	
									(4:3) 50	(4:3) 60			
OPTM	000	ASHT	006	007	Auto shut off timer (data * 5 min)								
	001	OSDB	015	031	OSD brightness		MMFR/Micro 60h	12					
	002	OSDH	008	015	OSD Horizontal Position		XDATA/Micro 60h	08					
	003	OSDV	037	063	OSD Vertical Position	<4:3 50/60> <16:9 (50/60) (Wide)/Wide Zoom>(Normal Full)>	MMFR/Micro 60h			63	31/39		
	004	MUTE	000	001	No Signal Mute Switch (1=enabled)				00/01				
	005	RFUL	015	015	RF Signal Change Counter after Unlocked (Disable when 0fh)				04/01				
	006	RFLK	015	015	RF Signal Change Counter after Locked (Disable when 0fh)				00/04				
	007	LANG	000	003	OSD language shipping condition			*					
	008	HTXT	000	001	Sync separator sw	YUV / Others	TV-Processor		00/-			-/00	-/00
	009	CMSS	000	001	Sync sw		TV-Processor		01				
	010	DCXO	060	127	DCXO Value		SFR/Micro 60h/DSP	*					
	011	DISC	128	255	target DISCO data for DCXO adjust by color dec								
	012	EXBL	000	015	Extended Blanking Timer to Eliminate White Noise				10/05				
	013	TSYS	000	003	Memorize TV Sys in NVM at Test Reset [0:B/G, 1:1, 2:D/K, 3:M] (GA Mode)								
	014	LNSW	001	001	Signal Booster Shipping/Test Reset condition (1:Auto, 0:Off)								
	015	LBL	001	001	Brightness Reduction At No Signal condition								
	016	HPRO	001	001	Hpara Offset for Picture Rotation								
	017	AVUL	015	015	Av Signal Change Counter after Unlocked (Disable when 0Fh)				04				
	018	AVLK	015	015	Av Signal Change Counter after locked (Disable when 0Fh)				00				
	019	PFGR	031	031	DF Phase Gradient								
	020	PQGR	031	031	DQP Phase Gradient								
	021	YINF	031	031	DF Y-Intersect								
	022	YINQ	031	031	DQP Y-Intersect								
	023	DSTM	000	001	Disable stop mode in Standby (0: Stop mode, 1:disable Stop mode)				01				
	024	CSPM	000	001	Enable Center Speaker Last Memory (0:disable, 1:enable)								
025	NIF	001	001	UOCIII Micro selection (0:N1E, 1:N1F)				/01					

TVJ Category	Functionality		Init. Dec	Range		Function	Table & Note	Device Name	Common	Initial Value (Detailed)	
	No.	Name		Dec	Dec					Others	YUV
OPUS	000	SOFF	000	/ 01		Stay off(0:follow last memory with AC on, 1:standby with AC on			-/00		
	001	SPCH	001	127		Channel Number after Shipping Condition			-/07		
	002	SPCA	001	001		able Selection after Shipping Condition (1 = Cable On			-/01		
	003	CCBR	015	031		CC Brightness (only for US)			-/20		
	004	CCHP	008	015		CC H position (only for US)			-/13		
	005	OUV	000	001		Offset Control on UV Input Signals (only for NTSC model)	Others/YUV			-/00	-/00
	006	CFA2	000	001		Forced Comb Filter On (only for NTSC model)	none		-/00		
	007	HSYC	000	007		H Sync Selection for Tuning (SL, LOCK or SID) only for US			-/01		
	008	CLK	125	255		US clock offset (1step: 8ms/15min) only for US			-/122		
009	CLKS	125	255		US clock offset in Standby (1step: 8ms/15min) only for US			-/138			

(For US and NTSC model only)

TVJ Category	Functionality		Init. Dec	Range		Function	Table & Note	Device Name	Common	Initial Value (Detailed)		
	No.	Name		Dec	Dec					Others	NTSC	SECAM
OPVP	000	BPBS	000	001		Bypass of sound bandpass filter at stereo mode (BPBS)		TV-Processor	*/00			
	001	BWYC	000	001		Bandwidth at YC mode for 3.58 MHz color system (BWYC)			00			
	002	OSB	000	001		Width of internal burstkey pulse of chroma demodulator (OSB)			00			
003	BKC	000	001		Burst Key Position	NTSC/SECAM/others (PAL)			00	00	00/01	

TVJ Category	Functionality		Init. Dec	Range		Function	Table & Note	Device Name	Common
	No.	Name		Dec	Dec				
OPFM	000	FMCT	001	003		FM Radio Auto Scan Carrier Threshold			20/15
	001	RPST	003	127		Waiting time for each frequency step during radio preset			10
	002	MPTU	003	015		Upper Threshold for MPX pilot detection (FM_RADIO)		SSD	12
	003	DCOU	133	255		Upper Threshold for DC offset from FM demodulator			*/140
	004	DCOL	117	255		Lower Threshold for DC offset from FM demodulator			*/114
	005	OVMA	001	001		FM overmodulation adaption (FM_RADIO)		SSD	00
	006	FMBR	000	031		OSD Brightness during FM Mode		MMR/Micro 60h	12
	007	RTRE	000	007		Treble Offset in FM Radio Mode		SSD	03
	008	RBAS	002	008		Bass Offset in FM Radio Mode		SSD	02
	009	AGCT	045	063		ACG takeover in FM Radio Mode		TV-Processor	*/32
010	FLBW	003	003		FM/AM demodulator filter bandwidth		SSD	01	

TVJ Category	Functionality		Init. Dec	Range		Function	Table & Note	Device Name	Common
	No.	Name		Dec	Dec				
OPTB	000	IALL	000	001		Standard Write Switch (not memorized in NVM)			X
	001	OPB1	000	255		Option 1 (System related)			refer page 28
	002	OPB2	000	255		Option 2 (Video Signal related)			refer page 29
	003	OPB3	000	255		Option 3 (Stereo Decoding related)			refer page 30
	004	OPB4	000	255		Option 4 (Miscellaneous)			refer page 31
	005	OPB5	000	255		Option 5 (Miscellaneous)			refer page 32
006	OPB6	000	255		Option 6 (OSD Language related)			refer page 33	

Data Variant depend on models

Category	No	Name	Sony Tuner (KV-SW212M83(India))	Alps Tuner (Except KV-SW212M83(India))
OPFM	003	DCOU	140	144
	004	DCOL	114	118
	009	AGCT	VIF 001 AGCT + 15	VIF 001 AGCT + 2

Category	No	Name	Mono & AV Stereo models	Stereo,China & India models	NTSC models
SDEM	001	QSS	00	01	01

Category	No	Name	SW212-3D models	SW212-non 3D model
SDSP	010	BAS	18	22
	011	TRE	18	21
	012	EQ1	23	20
	013	EQ2	02	03
	015	EQ4	20	00
	016	EQ5	21	00

Category	No	Name	Russia/HK/stereo model	Other models
SDSP	006	LAN	17	22

Category	No	Name	Stereo models	Non-Stereo models	NTSC models
SDEC	014	DCXI	00	01	00
	015	DCXG	03	00	00
	017	DCLH	06	00	00

Category	No	Name	Russia	Other models	Philippines	Taiwan
OPTM	007	LANG	01	00	00	01

Category	No	Name	GA Stereo	GA AV Stereo	GA Mono	GA NTSC Stereo	GA NTSC MONO	GA NTSC AV STEREO
OPTM	010	DCXO	24	50	50	53	50	50

Category	No	Name	NICAM Stereo	AV Stereo & Mono
OPTM	011	DISC	128	134

Category	No	Name	Other Country	Russia model
OPTM	013	TSYS	00	02

Category	No	Name	Description	Other models	21" Mono/AV Stereo
YC	007	SBO	-	00	02
	010	CTRP	OTHER	00	01
			SECAM	00	01
	011	QDT	OTHER	00	00
			SECAM	00	00

Category	No	Name	Sony Tuner (KV-SW212M83(India))	Alps Tuner (Except KV-SW212M83(India))
VIF	012	TUSO	01	00

Category	No	Name	Other Models	21" Mono/AV Stereo
SDEM	005	CMCA	00	01

Category	No	Name	Other Models	21" Mono/AV Stereo
OPVP	000	BPBS	01	00

Category	No	Name	NTSC Stereo	NTSC AV Stereo	NTSC Mono
SDEC	009	STDS	13	13	13
	011	FLBW	01	00	00

ITEM INFORMATION

No. OPB1

Item	Speed Search		Home Theatre	Wide Screen	M	B/G	I	D/K	DEC
	0	1							
KV-SW212M50 (GE)	0	1	0	0	1	1	1	1	79
KV-SW212M50 (Malaysia)	0	1	0	0	1	1	1	1	79
KV-SW212M81 (Middle East)	0	1	0	0	1	1	1	1	79
KV-SW212M81 (Russia)	0	1	0	0	1	1	1	1	79
KV-SW212M83 (India)	0	1	0	0	1	1	1	1	79
KV-SW212M83 (Saudi Arabia)	0	1	0	0	1	1	1	1	79
KV-SW212M83/H (Saudi Arabia)	0	1	0	0	1	1	1	1	79
KV-SW212N60	1	1	0	0	1	0	0	0	200
KV-SW212P50	0	1	0	0	0	1	0	0	68

SPEED SEARCH (Time of speed search)

Home Theatre

Wide Screen

TV System Selection (M,B/G, I, D/K)

00 = disabled (original cycle speed)

01 = 4 time speed from the original

10 = 6 time speed from the original

11 = 8 time speed from the original

1 = Home Theatre mode available

1 = Wide Screen model

0 = disabled, 1 = enabled

No. OPB2

Item	Party Mode	FM Radio	Component	Composite (SCART)		SECAM	Color Decoding		DEC
KV-SW212M50 (GE)	0	0	1	0	1	1	0	0	44
KV-SW212M50 (Malaysia)	0	0	1	0	1	1	0	0	44
KV-SW212M81 (Middle East)	0	0	1	0	1	1	0	0	44
KV-SW212M81 (Russia)	0	0	1	0	1	1	0	0	44
KV-SW212M83 (India)	0	0	1	0	1	1	0	0	44
KV-SW212M83 (Saudi Arabia)	0	0	1	0	1	1	0	0	44
KV-SW212M83/H (Saudi Arabia)	0	0	1	0	1	1	0	0	44
KV-SW212N60	0	1	1	0	1	1	0	0	108
KV-SW212P50	0	0	1	0	1	0	0	0	40

Party Mode	Party Mode Function	0 = not available, 1 = available
FM Radio	FM Radio Function	0 = not available, 1 = available
Component	(Component [YCbCr] Terminals)	0 = not available, 1 = available
Composite	(No. of Composite Terminals)	00 = 1 composite terminal 01 = 2 composite terminal 10 = 3 composite terminals (prohibited in FY06) 11 = 4 composite terminals (prohibited in FY06)
SECAM	(SECAM Color System)	0 = disabled, 1 = enabled
Color decoding	(Color Crystal Selection)	00 = PAL/NTSC (Multi) 01 = NTSC (3.58MHz) 10 = PAL/NTSC (4.43MHz) 11 = PAL/NTSC (Tri-Norma)

No. OPB3

Item	Reserved	NICAM ST	NICAM BI	A2 ST	Thai Bilingual	US ST	Korean ST	MONO	DEC
KV-SW212M50 (GE)	0	0	0	0	0	0	0	0	0
KV-SW212M50 (Malaysia)	0	0	0	0	0	0	0	0	0
KV-SW212M81 (Middle East)	0	0	0	0	0	0	0	0	0
KV-SW212M81 (Russia)	0	0	0	0	0	0	0	0	0
KV-SW212M83 (India)	0	0	0	0	0	0	0	0	0
KV-SW212M83 (Saudi Arabia)	0	0	0	0	0	0	0	0	0
KV-SW212M83/H (Saudi Arabia)	0	0	0	0	0	0	0	0	0
KV-SW212N60	0	0	0	0	0	1	0	0	4
KV-SW212P50	0	0	0	0	0	0	0	0	0

Reserved	Not used	
NICAM ST	(NICAM Stereo)	0 = disabled, 1 = enabled
NICAM BI	(NICAM Bilingual)	0 = disabled, 1 = enabled
A2 ST/BI	(A2 [West German] Stereo/Bilingual)	0 = disabled, 1 = enabled
Thai Bilingual	(A2 [Thai] Bilingual) or Force SAP if US ST is active	0 = disabled, 1 = enabled
US ST	(US Stereo)	0 = disabled, 1 = enabled
Korean ST	(Korean Stereo)	0 = disabled, 1 = enabled
MONO	(Monaural Model)	0 = Stereo (SSD) Model 1 = Monaural Model

No. OPB4

Item	Sound Special	1spk Models	VM	WSS-RF	Surround		Top	Text	DEC
KV-SW212M50 (GE)	0	0	0	0	0	0	0	0	0
KV-SW212M50 (Malaysia)	0	0	0	0	0	0	0	0	0
KV-SW212M81 (Middle East)	0	0	0	0	0	0	0	1	01
KV-SW212M81 (Russia)	0	0	0	0	0	0	0	1	01
KV-SW212M83 (India)	0	0	0	0	0	0	0	0	0
KV-SW212M83 (Saudi Arabia)	0	0	0	0	0	0	0	0	0
KV-SW212M83/H (Saudi Arabia)	0	0	0	0	0	0	0	0	0
KV-SW212N60	0	0	0	0	0	0	0	0	0
KV-SW212P50	0	0	0	0	0	0	0	0	0

Sound Special	Sound Special Feature	0 = disabled	1 = enabled
1 spk Models	1 Speaker Models	0 = 2 or 3 Speaker Models,	
		1 = 1 speaker Models	
VM	(Velocity Modulation)	0 = disabled, 1 = enabled	
WSS-RF	WSS detection in RF mode	0 = disabled, 1 = enabled	
Surround	Surround Selection	00 = Off/Simulated/Surround	
		01 = Off/Simulated/SRS (3D) Surround	
		10 = Off/Simulated/WOW/TruSurround	
		11 = No Surround	
TOP	(Forced TOP)	0 = Auto Mode (TOP/FLOF), 1 = Forced TOP	
TEXT	(Teletext Model)	0 = Non-Teletext Model, 1 = Teletext Model	

No. OPB5

Item	Signal Booster	MSYS ASD	COSMIC_ ASD	ASD	Tilt	Band Edge	IP	Wide	DEC
KV-SW212M50 (GE)	1	0	1	0	0	0	1	1	163
KV-SW212M50 (Malaysia)	1	0	1	0	1	0	1	1	171
KV-SW212M81 (Middle East)	1	0	1	0	1	0	1	1	171
KV-SW212M81 (Russia)	1	0	1	0	1	0	1	1	171
KV-SW212M83 (India)	1	0	0	0	0	0	1	1	131
KV-SW212M83 (Saudi Arabia)	1	0	1	0	0	0	1	1	163
KV-SW212M83/H (Saudi Arabia)	1	0	1	0	0	0	1	1	163
KV-SW212N60	1	0	0	0	1	0	1	1	8B
KV-SW212P50	1	0	0	0	0	0	1	1	131

Signal Booster	Signal Booster feature	0 = disabled, 1 = enabled
MSYS ASD	(ASD Improvement for M System channels) *Only applicable when ASD = 1	0 = disabled, 1 = enabled
COSMIC ASD	Automatic Standard Detection Using COSMIC (Non-Stereo)	0 = disabled, 1 = enabled
ASD	(Automatic Standard Detection)	0 = disabled, 1 = enabled
Tilt	(Tilt Correction/PIC Rotation)	0 = disabled, 1 = enabled
Band Edge	(VHF-H band Limit Position)	0 = 427.25MHz, 1 = 429.25MHz
IP	(Intelligent Picture & Intelligent Picture Plus)	0 = disabled, 1 = enabled
Wide	(Wide Mode/V-Compressed)	0 = disabled, 1 = enabled

No. OPB6

Item	AVST Mono	3D OSD	3D Comb	PiP	OSD Language Selection				DEC
KV-SW212M50 (GE)	0	0	0	0	1	0	0	0	8
KV-SW212M50 (Malaysia)	0	0	0	0	1	0	0	0	8
KV-SW212M81 (Middle East)	0	0	0	0	0	1	0	0	4
KV-SW212M81 (Russia)	0	0	0	0	0	1	0	0	4
KV-SW212M83 (India)	0	0	0	0	0	1	0	0	4
KV-SW212M83 (Saudi Arabia)	0	0	0	0	0	1	0	0	4
KV-SW212M83/H (Saudi Arabia)	0	0	0	0	0	1	0	0	4
KV-SW212N60	0	0	0	0	1	0	1	0	10
KV-SW212P50	0	0	0	0	1	0	0	0	8

AVST Mono (AV stereo Monochip Model) 0 = Mono model
1 = AV stereo model (valid only mono option bit OPB3 bit 0 = 1)

3D OSD (BX1L Full version GA Multi Destination ONLY) 0 = Normal with 3D Intelligent Picture OSD
1 = Disable 3D Intelligent Picture OSD

3D Comb 3D comb feature 0 = Comb Not available
1 = Comb available

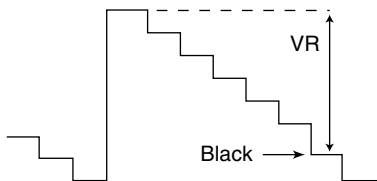
PiP PiP feature 0 = PiP Not Available
1 = PiP available

OSD Language Selection GA NTSC 1x1x = Complicated Chinese
GA 1xxx = Simplified Chinese
x1xx = Arabic/Russian
xx1x = Thai
xxx1 = Persian/Vietnamese
x1xx = Portuguese
GA xx1x = French
xxx1 = Spanish
* English is always available

3-3. PICTURE QUALITY ADJUSTMENT

3-3-1. P MAX/CONTRAST ADJUSTMENT

1. Set TV to Video mode.
2. Set Picture mode to "CUSTOM".
3. Input PAL 100% CB to TV set (OTHERS), NTSC 75% CB (NTSC model).
4. Set PICT 002 "SOC" to 03, PICT 003 "PWL" to 00h and WHBL 017 "BLBG" to 01h.
5. Set the following condition:
PICTURE 100%, COLOR 0%, BRIGHTNESS 50%
6. Connect an oscilloscope to pin ④ (R Output) of CN004.
7. Select SADJ 000 "PMAX" with [1] and [4] button of the commander then adjust VR with spec with [3] and [6] until reach the spec below:

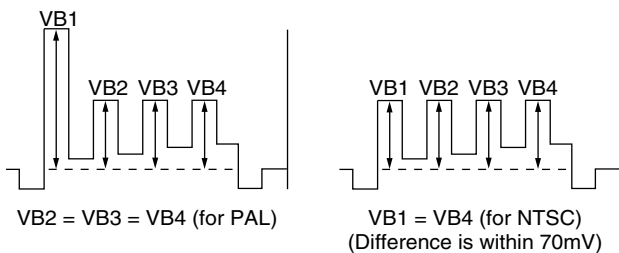


1.90 ± 0.03 Vpp = For 21" multi without VM
1.40 ± 0.03 Vpp = For 21" NTSC without VM

8. Select Wide Mode to "ON" in TV and Video mode and write "PMAX" data - 8 steps (for models with V-Compression features only).
9. Then press [MUTING] → [0] to write the data.
10. Set "SOC", "PWL" and "BLBG" back to initial data. ("SOC": 00h, "PWL": 01h, "BLBG": 00h)
11. Then press [MUTING] → [0] again to write the data.

3-3-2. SUB COLOR ADJUSTMENT

1. Set TV to Video mode.
2. Set Picture mode to "Custom".
3. Input PAL 100% Color Bar(CB) to TV set (OTHER MODEL).
4. INPUT NTSC 75% CB to TV set (NTSC MODEL).
5. Set PICT 006 "WTS" to 00h and Intelligent Picture to "OFF".
6. Set the following condition:
PICTURE 100%, COLOR 50%, BRIGHTNESS 50%,
HUE 50%, SHARPNESS 50%
7. Connect an oscilloscope to pin ② (B Output) of CN004.
8. Select SADJ 004 "SCOL" with [1] and [4] button of the commander then adjust with [3] and [6] so that VB2=VB3=VB4 (for PAL), and VB1=VB4 (for NTSC) then write in the data +9 step offset (for comb model) and +13 step offset (for no comb model).

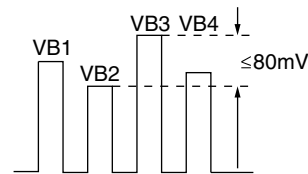


9. Copy "SCOL 50 PAL (Video)" data to "SCOL 50 SECAM (Video)" data to "SCOL 50 PAL (TV)" and "SCOL 50 SECAM (TV)".

10. Copy "SCOL 60 NTSC (Video)" data to "SCOL 60 NTSC (TV)" and +1 step offset (for GA NTSC only).
11. Copy "SADJ SCOL 50 PAL" data to "SCOL 50 YUV" table and "SCOL 60 NTSC" data to "SCOL 60 YUV" table.
12. Then press [MUTING] → [0] to write the data.
13. Set "WTS" back to original data and Intelligent Picture to "ON".
14. Copy no.12 data to PAL TV & DVD mode (OTHER MODEL) and NTSC TV & DVD mode (NTSC MODEL).

3-3-3. SUB HUE ADJUSTMENT

1. Set TV to Video mode.
2. Set Picture mode to "CUSTOM".
3. Input NTSC 3.58 CB to TV set.
4. Set the following condition:
PICTURE 100%, COLOR 50%, BRIGHTNESS 50%,
HUE 50%, SHARPNESS 50%
5. Select service mode and - 9 steps (for video) and -10 steps (for TV) offset from SADJ 004 "SCOL" using [1] and [3] button of the remote commander.
6. Connect oscilloscope to pin ② (B output) of CN004.
7. Set to service mode and select SADJ 001 "SHUE" with [1] and [4] button then adjust to VB1=VB2=VB3=VB4 with [3] and [6] button.
8. Press [MUTING] → [0] to write the data.
9. Select service mode SADJ 004 "SCOL" and +9 step offset and write the data using [MUTING] → [0].
10. Select TV channel with 3.58 and repeat item (3) to (7) and +1 step data offset.(NTSC model)
11. Press [MUTING] → [0] to write the data.
12. For single system model with NTSC 4.43, select TV channel with NTSC 4.43 and repeat item (3) to (8).



The highest level of VB1, VB2, VB3, VB4 must be aligned at the same time.
The ideal difference between VB2 and VB3 is within ± 80mV

13. Once adjustment is completed in Video mode, carry out adjustment in DVD mode. Set TV to DVD mode. Input NTSC 3.58 CB to DVD set and perform step 4 to 9 and 11.

3-4. GEOMETRY ADJUSTMENT

Geometry adjustment must be done for both color systems PAL and NTSC.


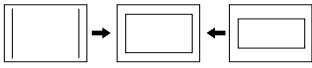


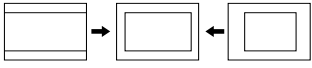
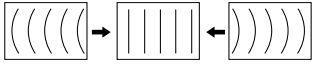

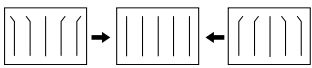

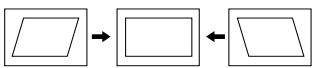



3-4-1. GENERAL SETTING

- Input Monoscope or Special Color Bar(SPCB) signal using a pattern generator.
- Set to Service Mode.
- Select Category/Functionally Name (as in the service list) using [1] and [4] button on the remote commander. Eg. GEOM
- Raise or Lower the data value using [3] and [6] button.
- Press [MUTING] → [0] to save the data into memory.

Note 1: Geometry Adjustment must be performed for 4 different modes: PAL 50Hz NORMAL MODE, PAL 50Hz WIDE MODE, NTSC 60Hz NORMAL MODE, NTSC 60Hz WIDE MODE.

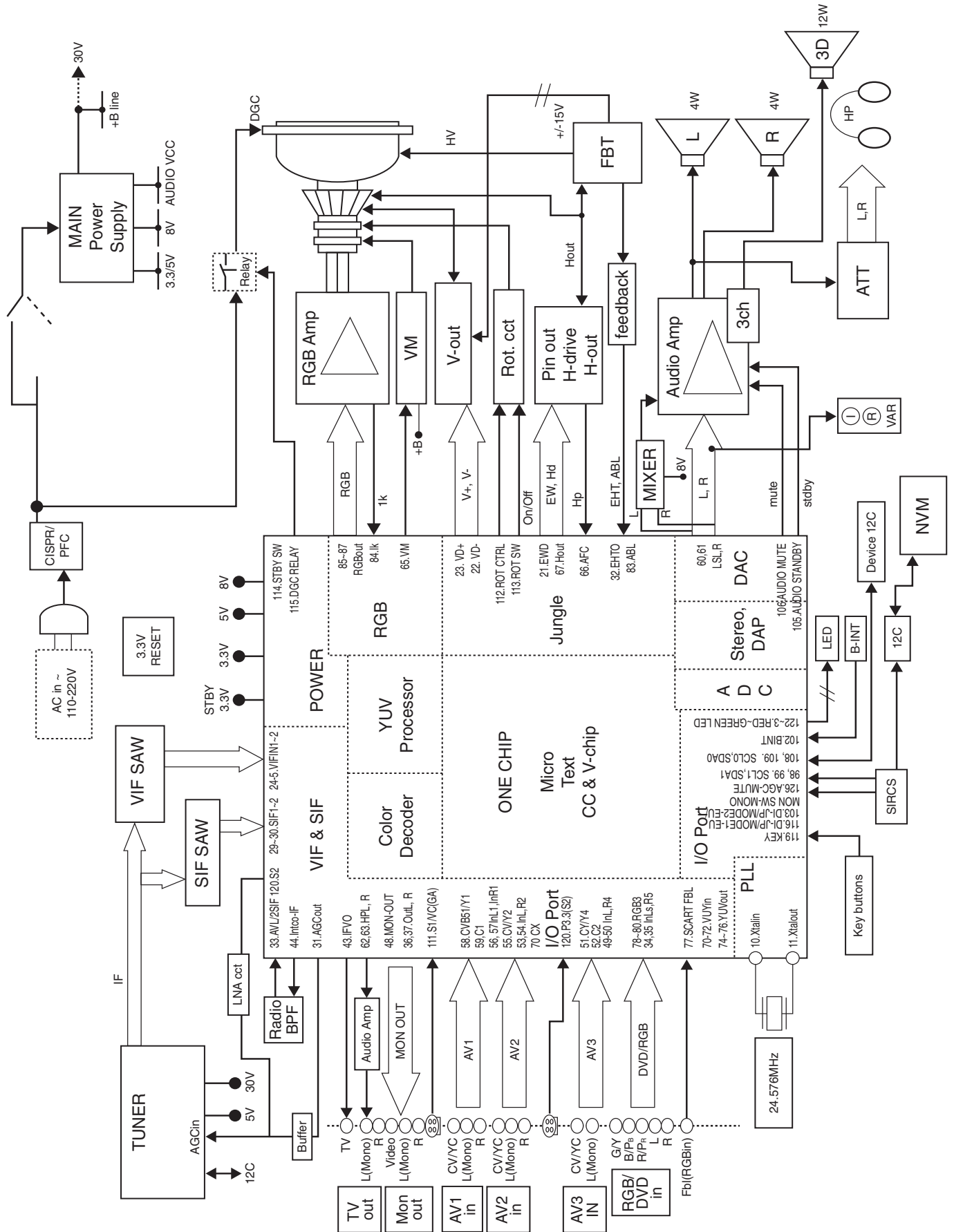
3-4-2. PAL 50Hz NORMAL MODE

- Input PAL signal 50Hz in the Service Mode.
- Set Wide Mode to "OFF".
- Perform the below adjustments using the "GENERAL SETTING" sequence (Refer 3-4-1)
- Once adjustment is done for PAL 50Hz NORMAL MODE, set Wide mode to "ON", and copy all PAL 50Hz NORMAL MODE adjusted data to PAL 50Hz WIDE MODE except VSCR.
- Now, perform adjustment for NTSC 60Hz NORMAL MODE.
- Set Wide mode to "OFF".
- Perform adjustment items listed in the above table using the "GENERAL SETTING" sequence (refer 3-4-1).
- Once adjustment is completed, set Wide mode to "ON" and copy all NTSC 60Hz NORMAL MODE adjusted data to NTSC 60Hz WIDE MODE except VSCR.
- Upon completing adjustment for all modes, reconfirm VSIZ and VPOS.

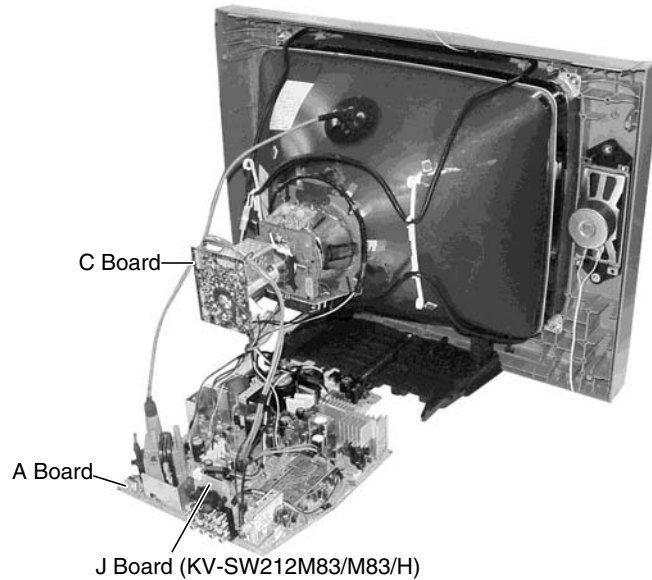
Item No.	Function	Illustration
GEOM 013 (VPOS)	Vertical Shift	
GEOM 011 (VSIZ)	Vertical Amplitude	 Note: Adjust VSIZ to 12.4±(SPCB) 11.3±(PAL Monoscope) 11.5±(NTSC Monoscope)
GEOM 000 (HPOS)	Horizontal Shift	
GEOM 009 (EW TZ)	EW Trapezoid	
GEOM 005 (HSIZ)	EW Width (EW)	 Note: Adjust HSIZ to 16.4±(SPCB) 14.6±(PAL Monoscope) 15.3±(NTSC Monoscope)
GEOM 002 (HBOW)	Horizontal Bow	
GEOM 006 (EWPW)	EW Parabola/Width (PW)	
GEOM 007 (UCOP)	EW Upper Corner Parabola	
GEOM 008 (LCOP)	EW Lower Corner Parabola	
GEOM 001 (HPAR)	Horizontal Parallelogram	
GEOM 012 (SCOR)	S-Correction(SC)	
GEOM 003 (VLIN)	Vertical Linearity	
GEOM 004 (VSCR)	Vertical Scroll	

SECTION 4 DIAGRAMS

4-1. BLOCK DIAGRAM



4-2. CIRCUIT BOARDS LOCATION









4-3. SCHEMATIC DIAGRAM INFORMATION

Note:

- All capacitors are in μF unless otherwise noted.
- All electrolytic capacitors are rated at 50V unless otherwise noted.
- All resistors are in ohms.
 $\text{k}\Omega = 1000\Omega$, $\text{M}\Omega = 1000\text{k}\Omega$
- Indication of resistance which does not have rating electrical power is as follows.

Pitch: 5 mm
Rating electrical power 1/4W (CHIP: 1/10W)

-  : nonflammable resistor.
-  : fusible resistor
- Δ : internal component.
-  : panel designation or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B unless otherwise noted.
- **Readings are taken with a color-bar signal input.**
no mark : Common
() : PAL
[] : NTSC 3.58
- **Readings are taken with a 10 M Ω digital multimeter.**
- **Voltage are dc with respect to ground unless otherwise noted.**
- **Voltage variations may be noted due to normal production tolerances.**
- **All voltage are in Volt.**
- * : Cannot be measured.
- **Circled numbers are waveform references.**
-  : B +bus.
-  : B -bus.
-  : signal path.

Note: The reference number which starts with Wxxx (eg: W003) indicates a wire to wire connection.

Note: Components marked as XX are not fitted on this model.

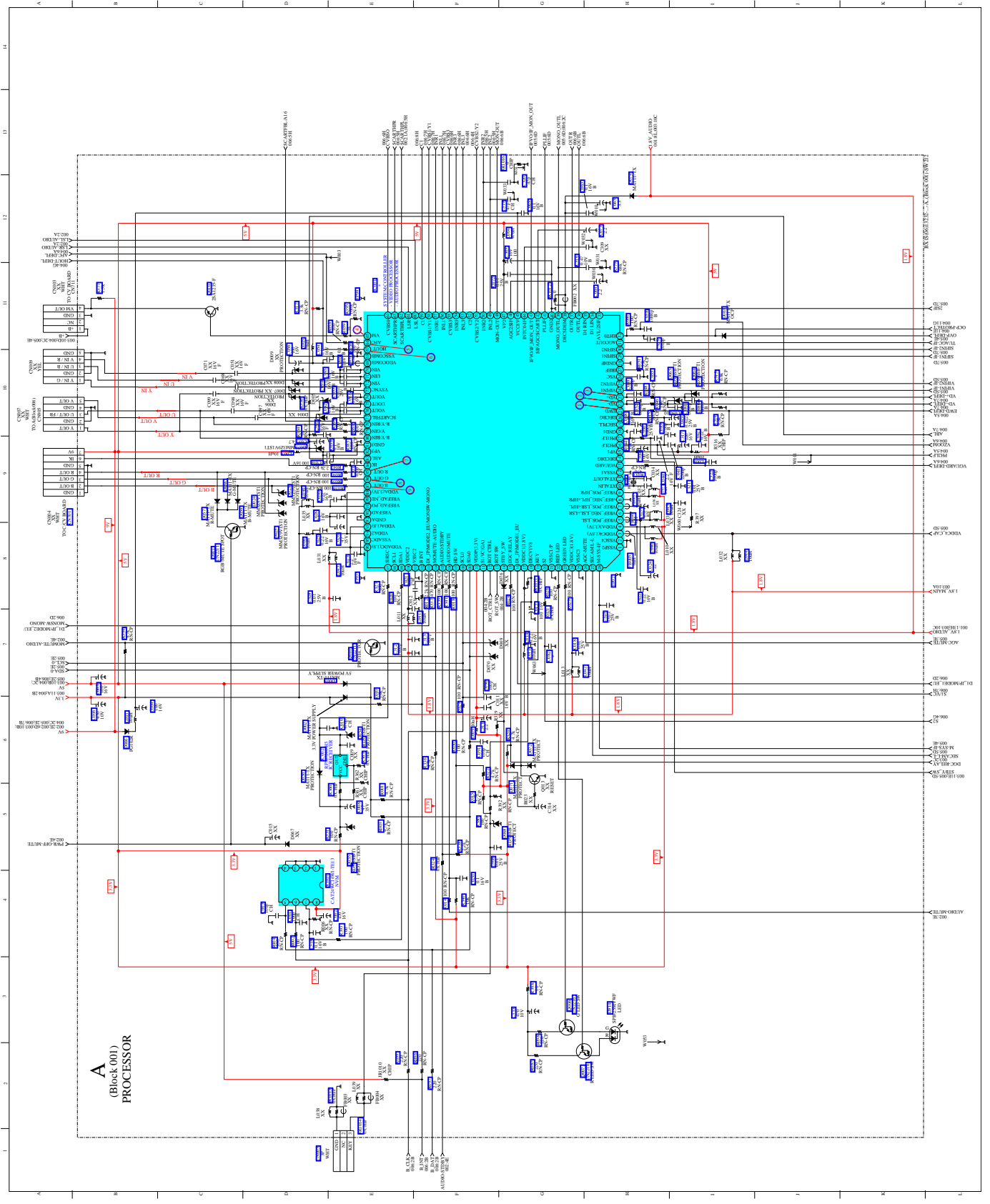
Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: *	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

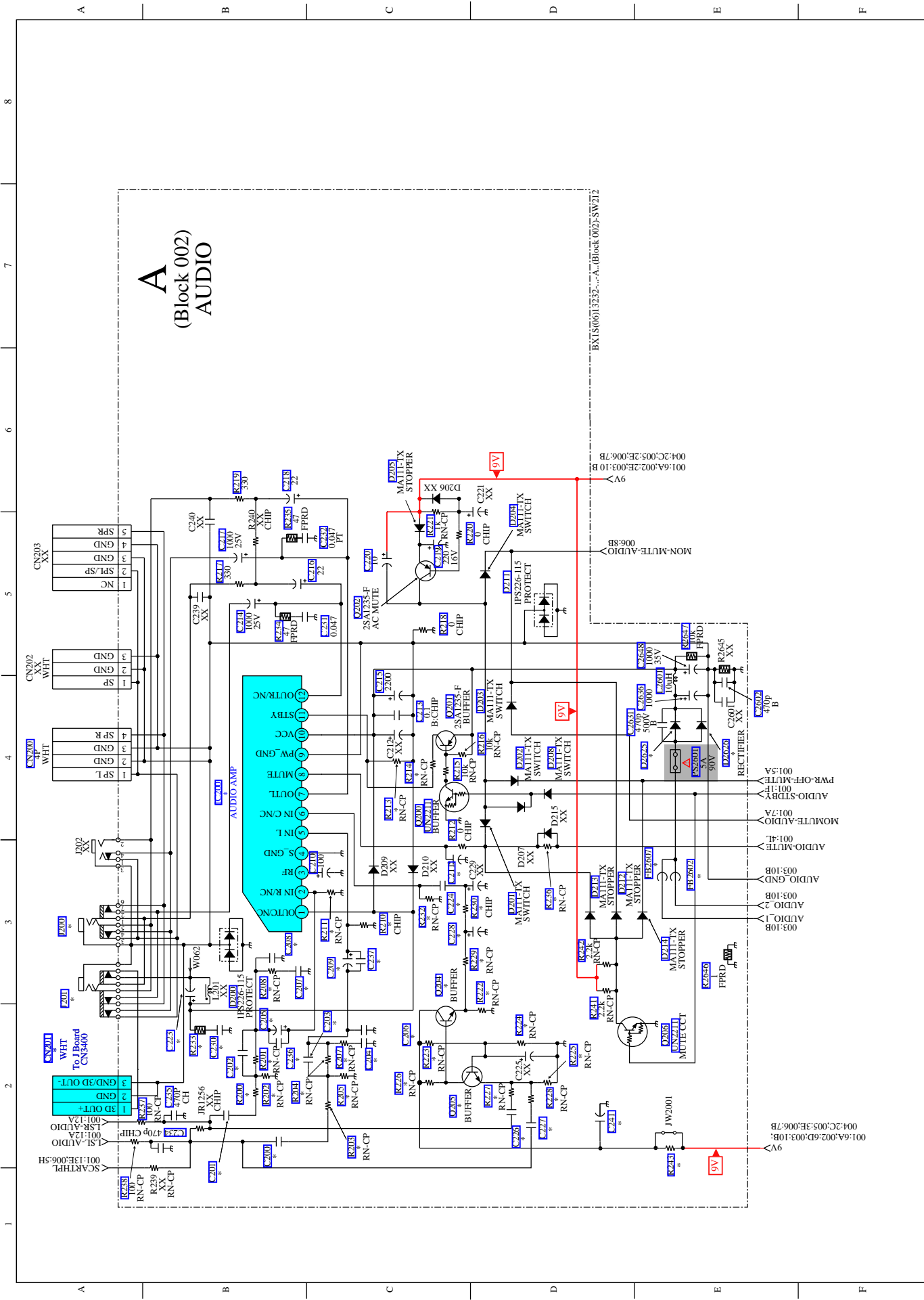
Note: The component identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Note: "A" board schematic diagram is divided into 7 blocks. Each block is named by its function and block "number".
eg: Processor (Block 001)
Joint connection between boards can be identified using the block number followed by the grid's guide.
eg: -<PWR-OFF MUTE
002 : 4E
Meaning: Block 001 joint "PWR-OFF MUTE" is connected to Block 002 joint "PWR-OFF MUTE" located at grid 4E.

4-3-1. A Board — (Block 001)



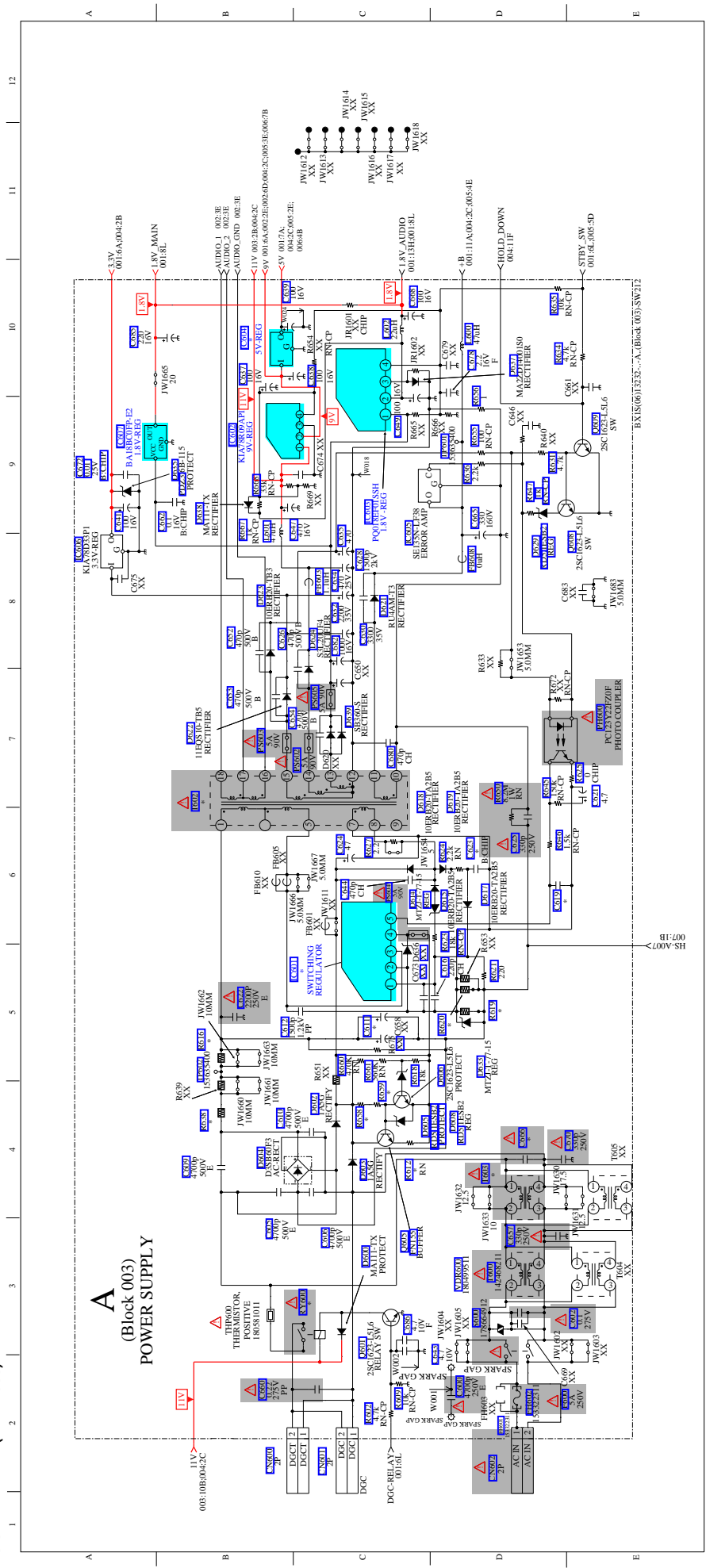
4-3-2. A Board — (Block 002)



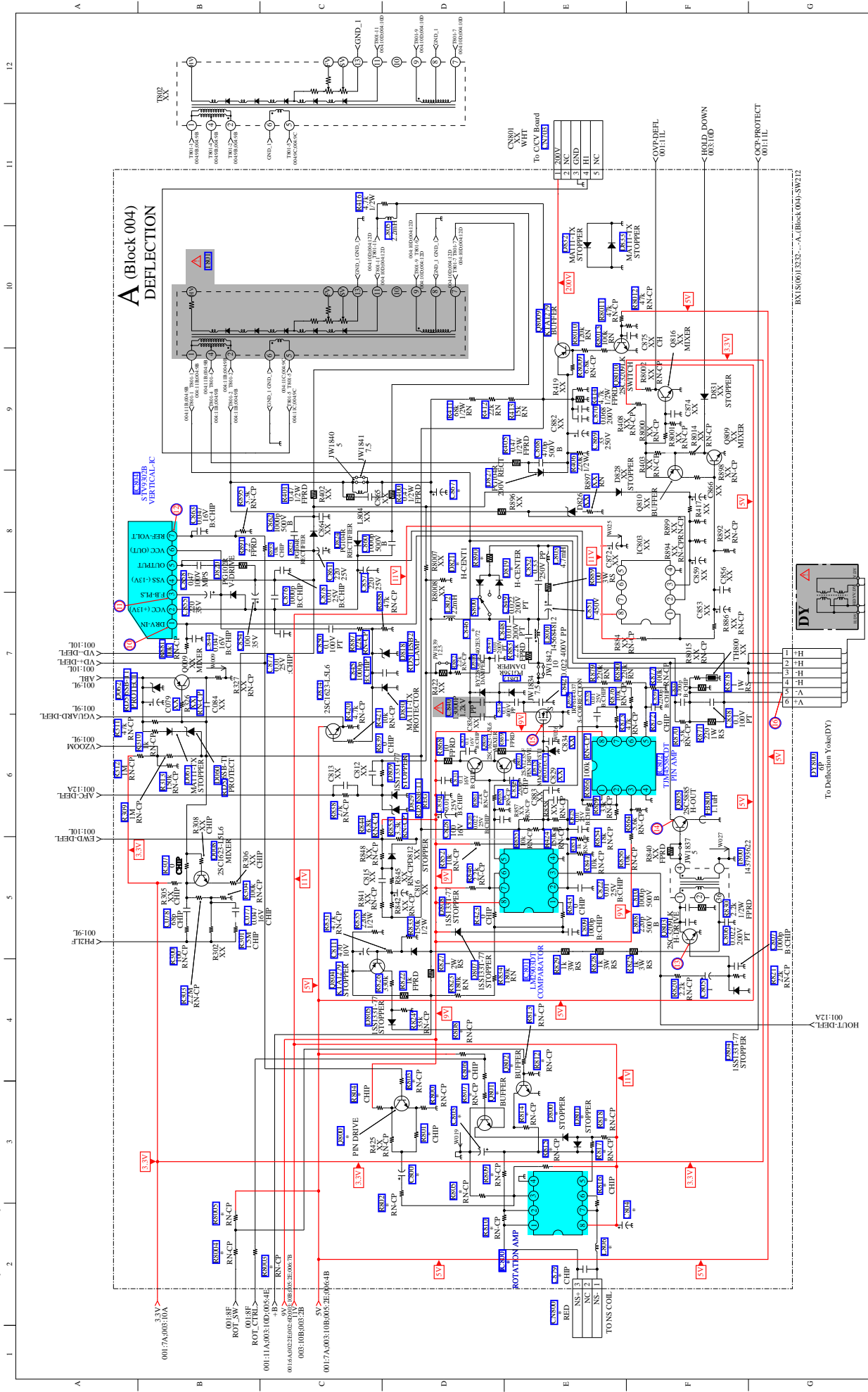
A
 (Block 002)
 AUDIO

4-3-3. A Board — (Block 003)

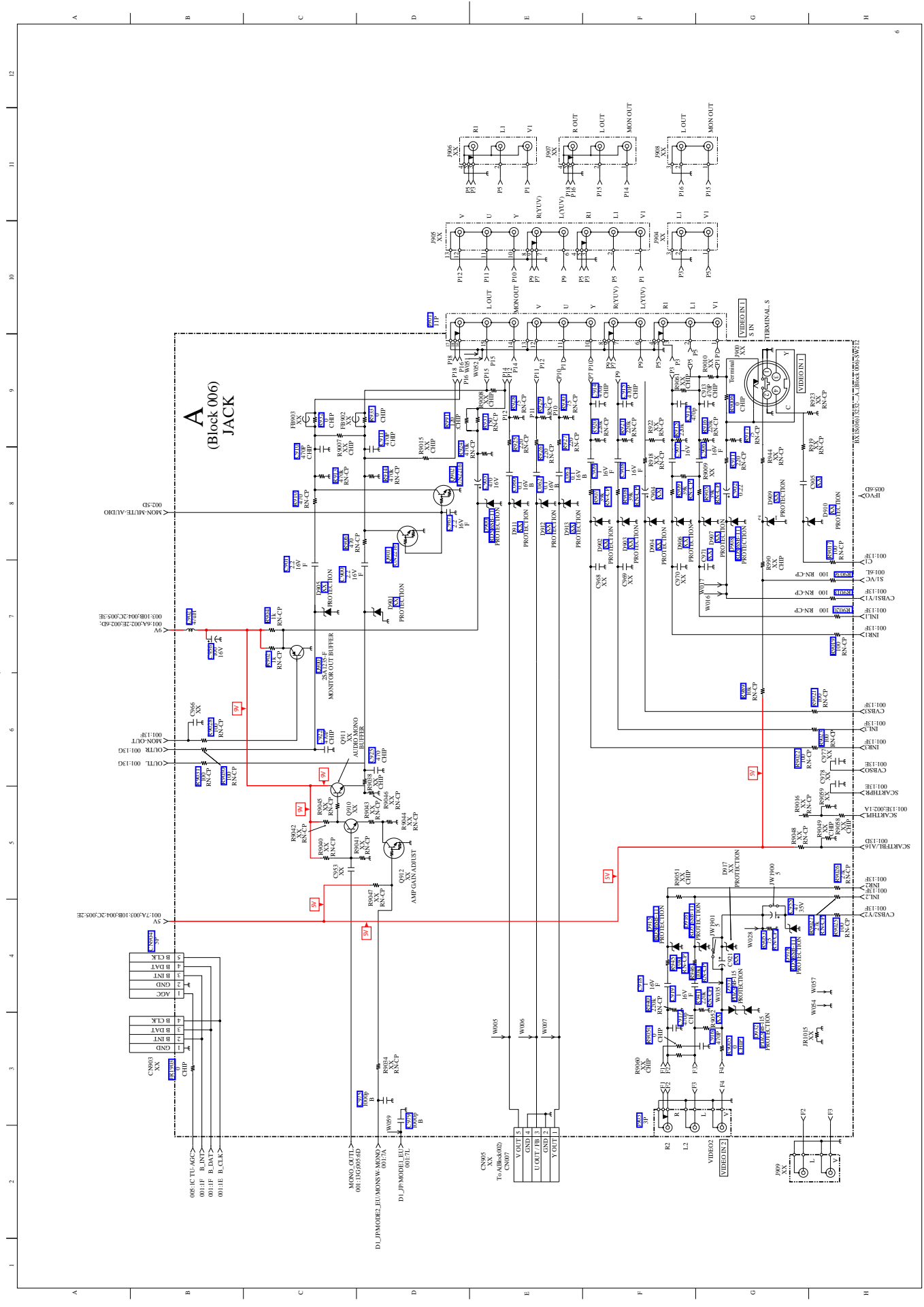
A
(Block 003)
POWER SUPPLY



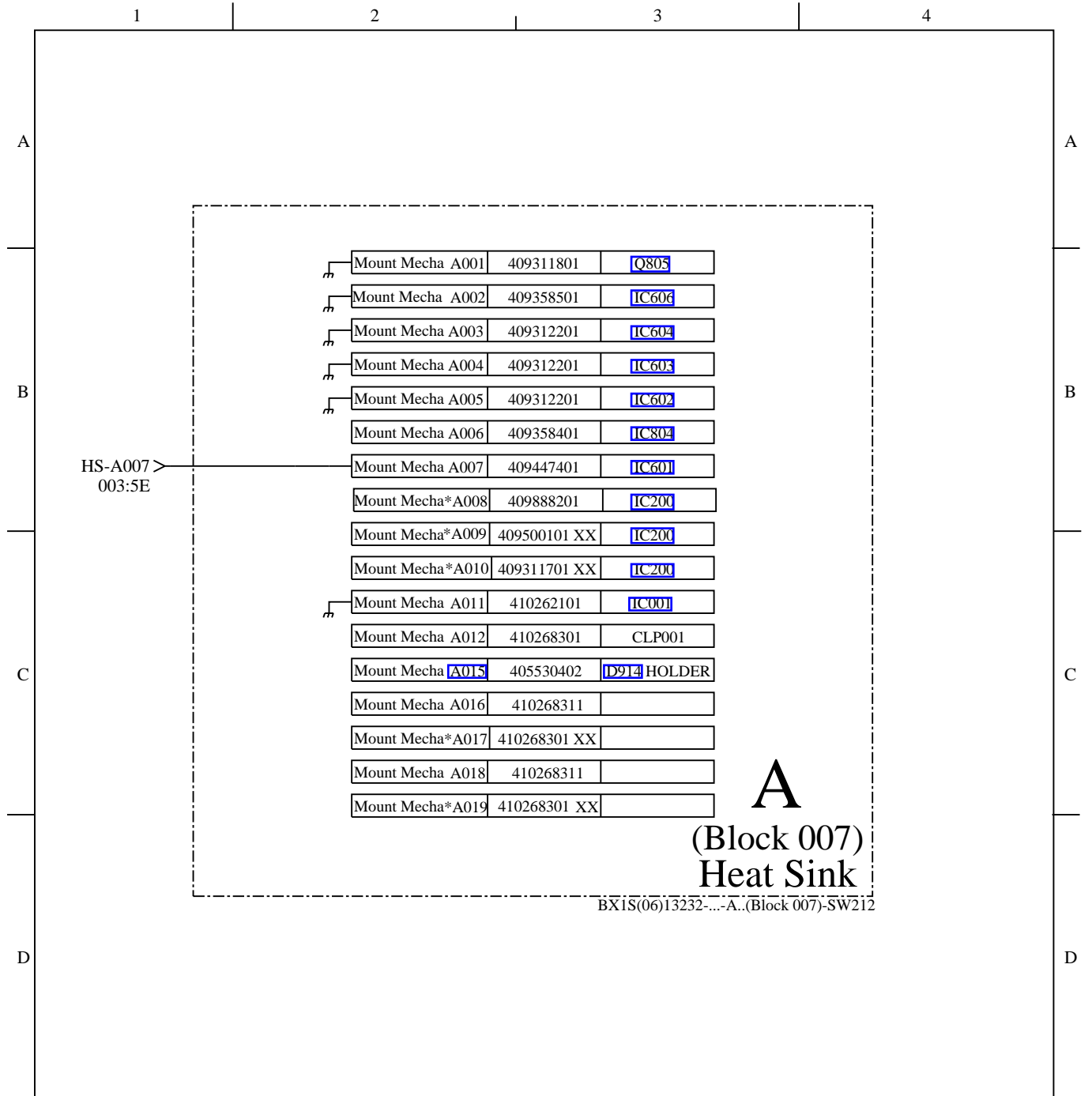
4-3-4. A Board — (Block 004)



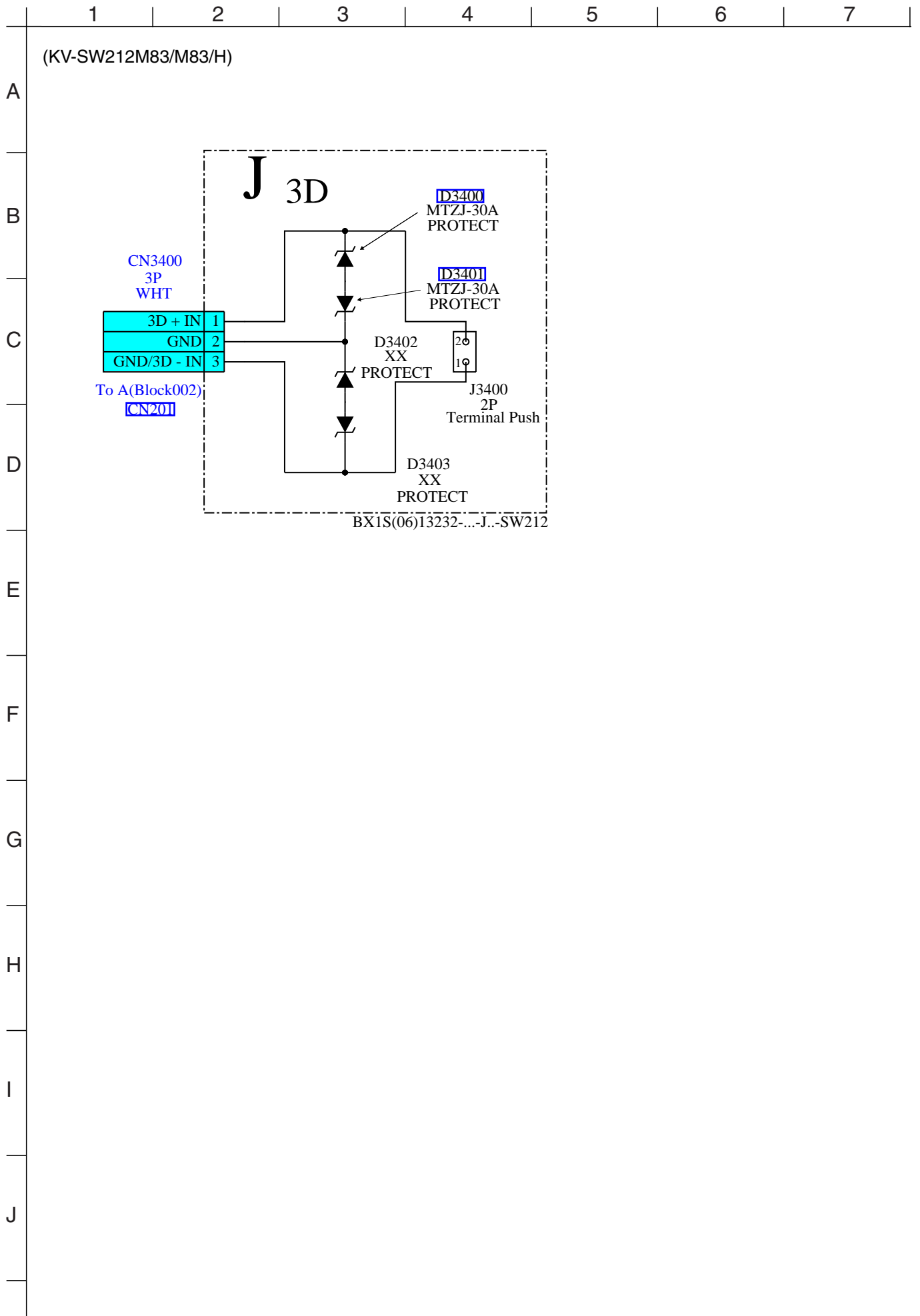
4-3-6. A Board — (Block 006)



4-3-7. A Board — (Block 007)

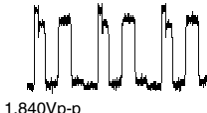
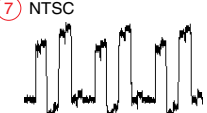
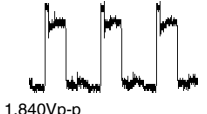
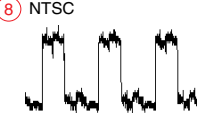
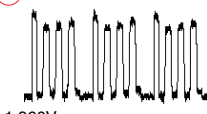
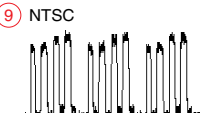
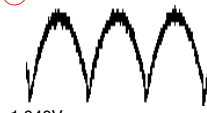
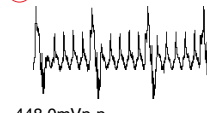

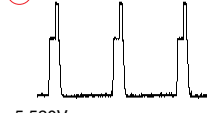
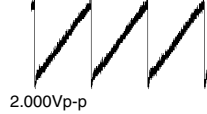


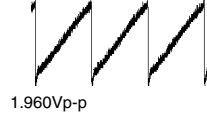
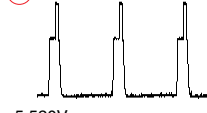
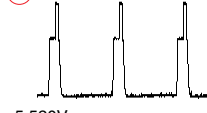
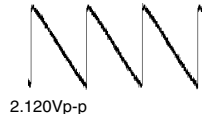




4-3-9. J Board Schematic Diagram



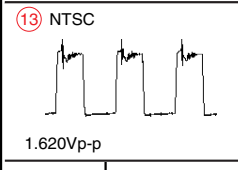
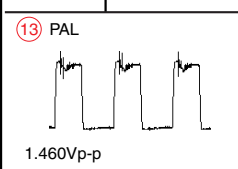
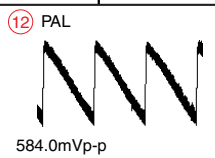
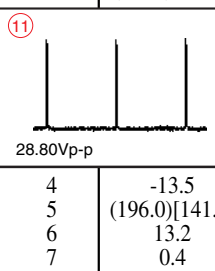
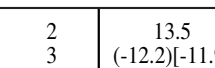
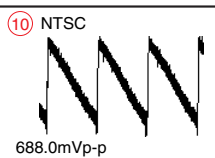
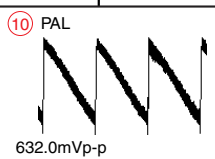
4-4. VOLTAGE MEASUREMENT AND WAVEFORMS

A BOARD VOLTAGE LIST AND WAVEFORMS



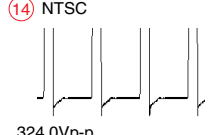
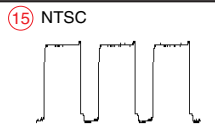
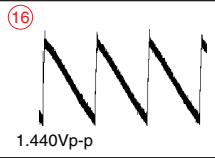
Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC001	1	0		44	(0.6)[0.4]		82	4.9
	2	0		45	8.4		83	(2.4)[2.3]
	3	1.7		46	1.8		84	3.2
	4	3.2		47	(4.7)[4.8]		85	1.4
	5	3.2		48	1.4		⑦ PAL  1.840Vp-p	
	6	0		49	2.1			
	7	3.2		50	0.1		⑦ NTSC  2.400Vp-p	
	8	0		51	1.3			
	9	3.2		52	0		86	1.7
	10	*		53	2.1		⑧ PAL  1.840Vp-p	
	11	*		54	2.1			
	12	0		55	1.3		⑧ NTSC  1.680Vp-p	
	13	0.1		56	2.1			
	14	2.4		57	2.1		87	(1.2)[1.3]
	15	4.9		58	1.3		⑨ PAL  1.960Vp-p	
	16	1.8		59	1.5			
	17	2.2		60	3.4		⑨ NTSC  2.040Vp-p	
	18	0		61	3.4			
	19	2.2		62	(3.4)[3.3]		88	3.2
	20	2.2		63	3.4		89	0
	21	3.2		64	(1.5)[1.4]		90	3.2
①  1.040Vp-p	22	1.5	④ PAL  448.0mVp-p	④ NTSC  392.0mVp-p	66	0.3	⑤  5.520Vp-p	
								67
② PAL  2.000Vp-p	23	1.6	⑥ PAL  3.520Vp-p	⑥ NTSC  3.440Vp-p	68	0	88	3.2
② NTSC  1.960Vp-p	24	1.8	⑤  5.520Vp-p	⑤  5.520Vp-p	70	1.2	90	3.2
③  2.120Vp-p	25	1.8	⑥ PAL  3.520Vp-p	⑥ NTSC  3.440Vp-p	72	1.2	92	0
26	2.3	74	1.6	94	3.2			
27	1.8	75	0.1	95	0			
28	0	76	0	96	1.8			
29	1.8	77	0.1	97	2.9			
30	1.8	78	1.2	98	0.5			
31	4.6	79	1.2	99	3.2			
32	0.4	80	1.2	100	1.7			
33	(0.3)[0.4]	81	0	101	0			
34	0			102	3.2			
35	0			103	0			
36	3.4			104	(2.4)[2.3]			
37	3.4			105	2.5			
38	2.2			106	0			
39	2.4			107	3.2			
40	0			108	(3.7)[3.5]			
41	1.9			109	(3.5)[3.2]			
42	(1.6)[1.4]			110	3.2			
43	0.6			111	4.9			
				112	0.4			
				113	0			

A BOARD VOLTAGE LIST AND WAVEFORMS

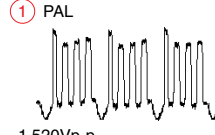
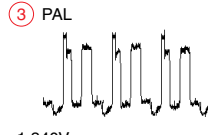
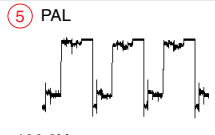
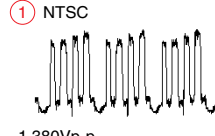
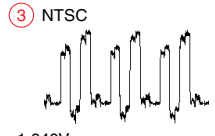
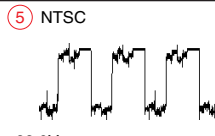
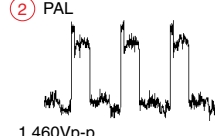

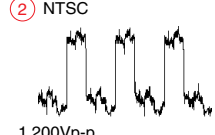
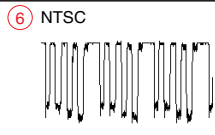
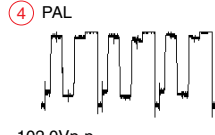
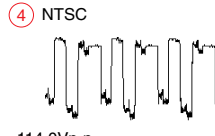
Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]	
	114	0		5	3.1	Q016	B	2.4	
	115	0		6	(2.3)[2.2]		C	0	
	116	0.1		7	6.0		E	0	
	117	(1.8)[1.7]		8	9.0	Q100	B	4.5	
	118	1.7	IC802	1	(2.7)[2.8]		C	8.9	
	119	3.2			2	3.2		E	3.9
	120	2.9			3	3.2	Q102	B	3.0
	121	0			4	0		C	2.3
	122	0			5	(3.0)[3.1]		E	8.9
	123	3.2			6	(3.0)[3.1]	Q103	B	(0)[3.1]
	124	1.7			7	4.5		C	(3.0)[0.1]
	125	0			8	8.9		E	0
	126	3.2	IC804	1	0.3	Q104	B	3.0	
	127	(0.5)[0.4]						C	5.5
	128	0						E	0
IC002	I	3.2					Q111	B	0
	G	0						C	0
	O	2.9						E	0
IC003	1	0					Q200	B	2.0
	2	0						C	0.1
	3	0					E	0	
	4	0				Q201	B	26.1	
	5	3.3					C	26.9	
	6	3.7					E	26.9	
	7	3.2				Q202	B	(8.9)[9.0]	
	8	(3.2)[3.3]					C	0	
IC200	1	(12.6)[12.7]		2	13.5	Q204	B	5.3	
	2	0		3	(-12.2)[-11.9]		C	9.0	
	3	25.9					E	0	
	4	0				Q205	B	2.8	
	5	0					C	5.3	
	6	0					E	2.3	
	7	(12.6)[12.7]				Q206	B	2.5	
	8	0.4					C	0.1	
	9	0					E	0	
	10	26.8				Q601	B	0	
	11	11.3					C	11.9	
	12	12.8					E	0	
IC601	1	(1.5)[1.4]		4	-13.5	Q608	B	0	
	2	10.5		5	(196.0)[141.6]		C	22.8	
	3	167.9		6	13.2		E	0.1	
	4	0		7	0.4	Q609	B	0.6	
	5	0.3					C	0.1	
IC602	1	11.9					E	0	
	2	8.9				Q800	B	1.6	
	3	0					C	9.0	
	4	2.2					E	1.0	
IC603	I	4.0				Q801	B	0.3	
	G	0					C	2.8	
	O	1.9					E	0	
	V	2.4				Q802	B	0	
IC604	I	9.0	Q001	B	0		C	5.8	
	G	0		C	(2.1)[2.2]		E	0	
	O	4.9	Q006	B	3.2	Q803	B	2.5	
				C	1.9				
IC607	I	4.0		E	1.9				
	G	0							
	O	1.7	Q007	B	0				
				C	5.2				
IC800	1	6.1		E	0.1				
	2	6.0	Q008	B	0.1				
	3	5.9		C	(1.0)[0.4]				
	4	0		E	0				
	5	5.8	Q010	B	0.3				
	6	5.8		C	0				
	7	5.8		E	0.9				
	8	11.9	Q013	B	0				
IC801	1	2.2		C	1.7	Q804	B	(133.4)[133.5]	
	2	0.7		E	0		C	0.1	
	3	0					E	133.9	
	4	0							



A BOARD VOLTAGE LIST AND WAVEFORMS

Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
Q805	B	0	Q808	S	0	Q901	B	0
	C	137.6		G	(5.6)[5.7]		C	0.1
	⑭ PAL  326.0Vp-p			⑮ PAL  9.60Vp-p		Q902	B	0
	⑭ NTSC  324.0Vp-p			⑮ NTSC  9.40Vp-p			C	0.1
				Q8010	E	0		
E		0	D		(9.3)[9.9]	DY800	V-	
Q806	B	6.0	Q814	B	0		⑯  1.440Vp-p	
	C	8.9		C	4.9			
	E	5.7		E	0.1			
Q807	B	6.0	Q900	B	(1.5)[1.4]			
	C	0		C	0			
	E	5.7		E	(2.2)[2.1]			

C BOARD VOLTAGE LIST AND WAVEFORMS

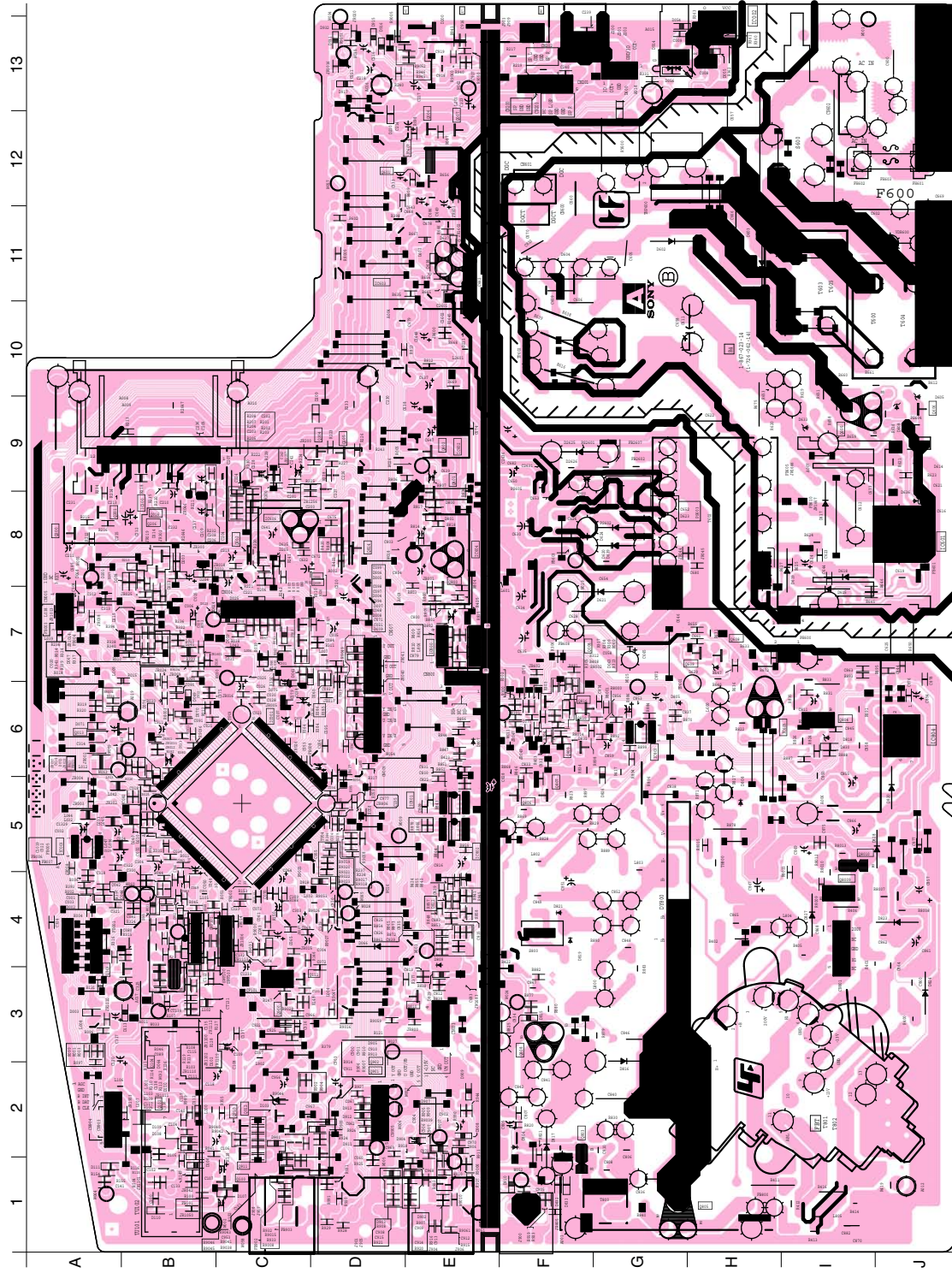
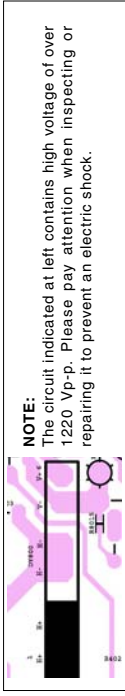
Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]	Ref	Pin No.	Voltage[v]
IC751	1	(1.5)[1.6]		3	(1.6)[1.7]		8	(149.1)[148.8]
	① PAL  1.520Vp-p			③ PAL  1.340Vp-p			⑤ PAL  106.0Vp-p	
	① NTSC  1.380Vp-p			③ NTSC  1.640Vp-p			⑤ NTSC  92.0Vp-p	
	2	1.6		4	0		9	(156.9)[156.4]
	② PAL  1.460Vp-p			5	(4.5)[4.6]		⑥ PAL  108.0Vp-p	
	② NTSC  1.200Vp-p			6	(198.6)[198.3]		⑥ NTSC  96.0Vp-p	
				7	(148.7)[148.3]			
				④ PAL  102.0Vp-p				
				④ NTSC  114.0Vp-p				
							J751	H1
					H2	0		
					KB	(158.1)[157.0]		
					KG	(150.5)[149.6]		
					KR	(149.7)[149.1]		

4-5. PRINTED WIRING BOARDS

A

[PROCESSOR, AUDIO, POWER SUPPLY, DEFLECTION, TUNER, JACK, HEAT SINK]

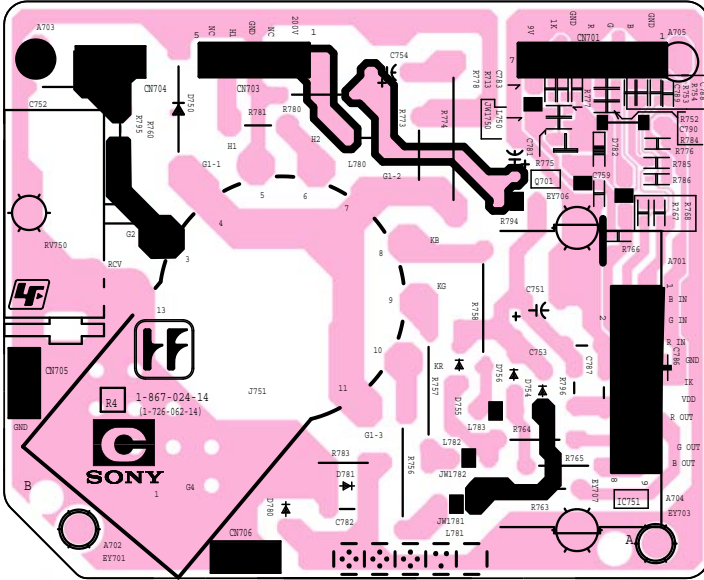
- A Board -



Note: The part number stated in the above A PWB is for all models except KV-SW212M83(India). The part number for model KV-SW212M83(India), is 1-867-023-23 (1-726-062-23). However, the pattern information is same for both part numbers.

C [VIDEO AMP]

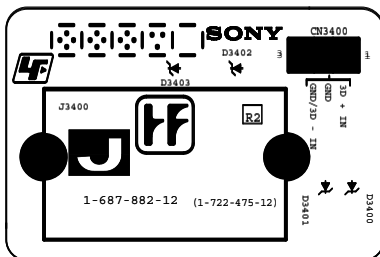
– C Board –



Note: The part number stated in the above C PWB is for all models except KV-SW212M83(India). The part number for model KV-SW212M83(India) is 1-867-024-23 (1-726-062-23). However, the pattern information is same for both part numbers.

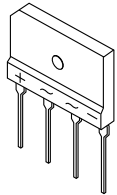
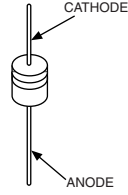

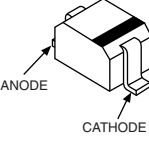
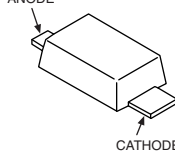
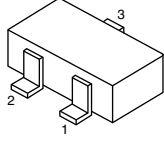
J [3D]

– J Board –
(KV-SW212M83/M83/H)

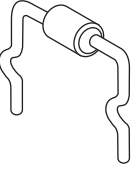
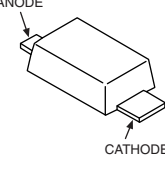
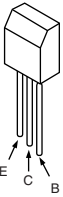
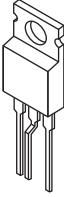
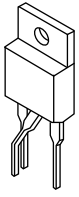
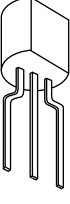


4-6. SEMICONDUCTORS

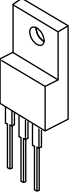
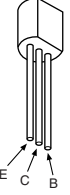
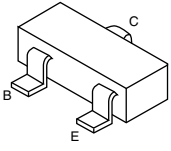
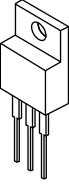
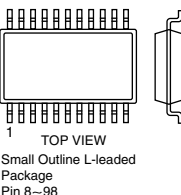
DIODE

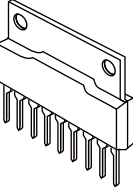
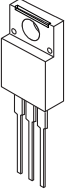
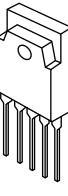
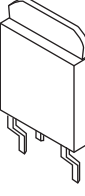
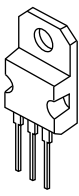
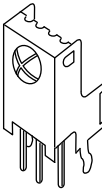
					
D3SB60F3	1SS133T-77 MTZJ-33B MTZJ-T-77-15 RD5.1ESB2	10ERB20-TA2B5 10ERB20-TB3 11EQS10-TB5 PG102R PG104R PG156R SB360-S 1A5G RU4AM-T3	MA111-TX PDZ3.6B-115 RD5.6SB-T1 RD3.3SB	KDS114-RTK MA2ZD14001S0 MM3Z9V1ST1	1PS226-115

TRANSISTOR

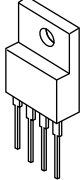

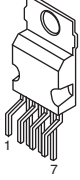
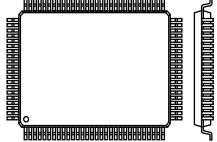
					
SPB-25MVWF	MM3Z9V1ST1	2SC3209LK	IRF614-037	FN155	2SC3779C,D-AA

IC

					
2SC5885	KTA1279	2SA1235-F 2SC1623-L5L6 UN2211 UN2216	KIA78R09API SE135N-LF38	SOP Small Outline L-leaded Package Pin 8-98	CAT24WC16WI-TE13 TJM4558CDT LM2903DT

					
AN17803A AN17808A	KIA78D33PI	STR-F6267S LF1357 STR-F6264S LF1357	BA18BC0FP-E2	KIA7805API TA7805S	RPM7240-H5

IC

	<p>DIP</p>  <p>1 TOP VIEW</p> <p>Dual In-line Package Pin 6~98</p>		 <p>TOP VIEW</p>		
<p>PQ018EF01SSH</p>	<p>NJM4556AD</p>		<p>STV9302S</p>	<p>TDA12063H/N1F0B</p>	

SECTION 5 EXPLODED VIEWS

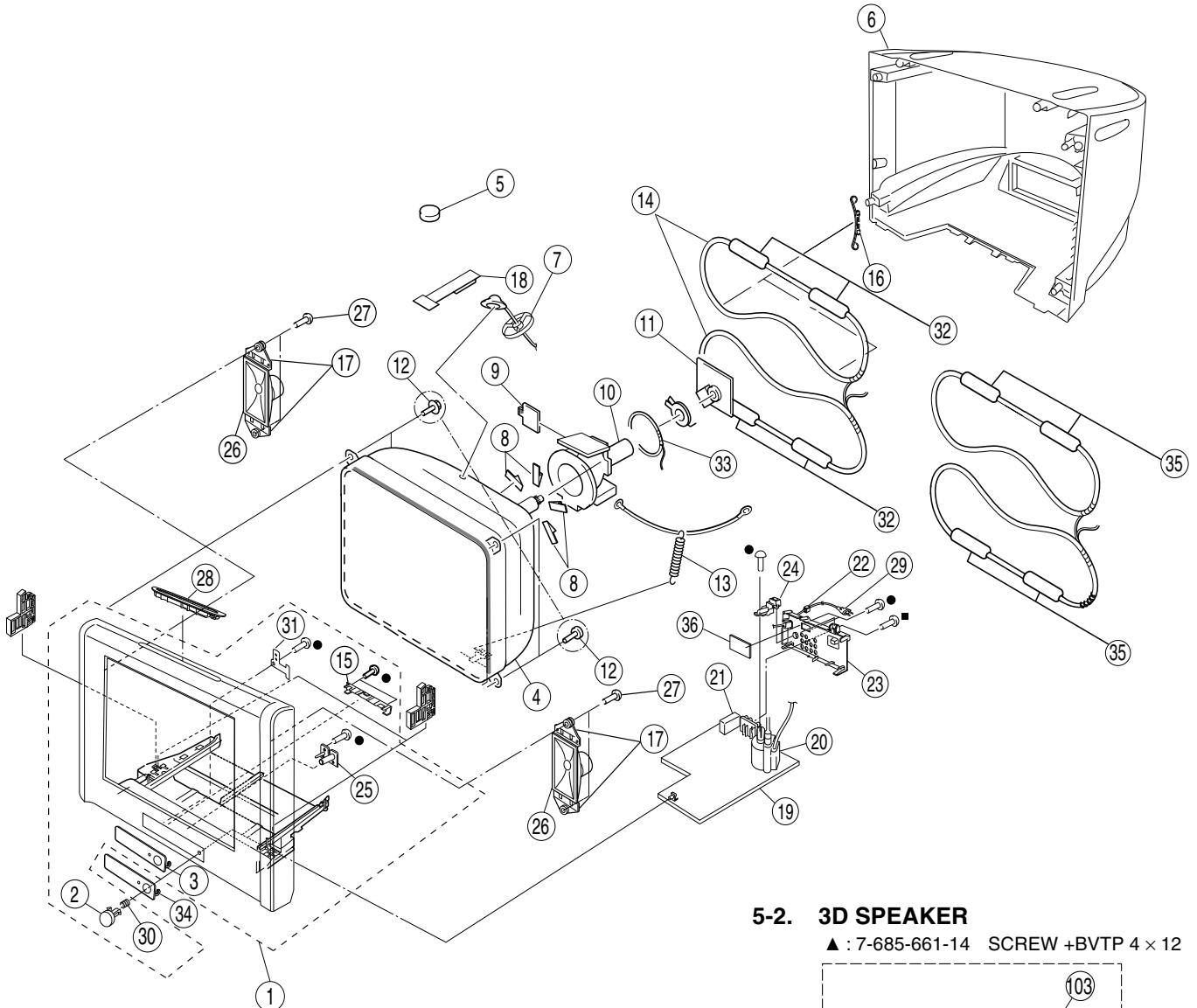
NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

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

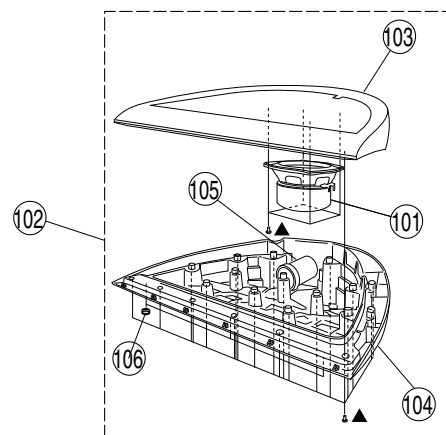
5-1. PICTURE TUBE AND SPEAKER

- : 7-685-648-79 SCREW +BVTP 3 × 12
- : 7-685-663-71 SCREW +BVTP 4 × 16



5-2. 3D SPEAKER

- ▲ : 7-685-661-14 SCREW +BVTP 4 × 12



REF. NO.	PART NO.	DESCRIPTION	REMARK
1	X-2055-723-2	BEZNET ASSY (Except KV-SW212M83(India)/M83/H) 2,15,25,30,31	
	△ X-2059-948-2	BEZNET ASSY(KV-SW212M83(India)) 2,3,25,30,31	
	X-2067-151-2	BEZNET ASSY (KV-SW212M83/H) 2,15,25,30,31	
2	2-584-668-01	BUTTON POWER	
3	2-633-772-41	DOOR PRINTING(SW) (KV-SW212M83(India))	
4	△ 8-738-812-05	PICTURE TUBE (A51LPT70X) (KV-SW212M50/P50)	
	△ 8-738-809-05	PICTURE TUBE (A51LPT70X) (Except KV-SW212M50/P50)	
5	1-452-032-00	MAGNET DISC	
6	△ 2-596-724-02	COVER REAR (KV-SW212M83(India))(■ 8 screws)	
	2-583-862-02	COVER REAR(21) (Except KV-SW212M83/H/M83(India)) (■ 8 screws)	
	2-583-862-12	COVER REAR(21) (KV-SW212M83/H) (■ 8 screws)	
7	* 2-656-888-01	HOLDER HV CABLE COMBI	
8	4-046-600-01	SPACER DY	
9	4-057-714-01	PIECE TLH CONVERGENCE	
10	△ 8-451-505-61	DEFLECTION YOKE (Y21RSA-S3) (Except KV-SW212M83(India))	
	△ 8-451-505-81	DEFLECTION YOKE (Y21RSA-03) (KV-SW212M83(India))	
11	* A-1185-952-A	MOUNTED PWB(VAR) C (Except KV-SW212M83(India))	
	* A-1186-428-A	MOUNTED PWB (VAR) C (KV-SW212M83(India))	
12	4-057-862-01	SCREW, TAPPING 5 + CROWN WASHER (Except KV-SW212M83(India))	
	4-057-862-11	SCREW, TAPPING 5 + CROWN WASHER (KV-SW212M83(India))	
13	4-095-706-01	SPRING EXTENSION	
14	△ 1-456-280-11	DEGAUSSING COIL	
15	* 4-093-771-01	COVER, FRONT PANEL (Except KV-SW212M83(India))	
16	4-093-607-01	HOLDER, DGC	
17	* 4-046-981-04	BRACKET, SPEAKER	
18	4-094-690-01	PIECE A(90), CONV.CORRECT	
19	* A-1173-258-A	COMPLETE PWB, A (KV-SW212M50(GE))	
	* A-1189-363-A	COMPLETE PWB, A (KV-SW212M50(Malaysia))	
	* A-1188-888-A	COMPLETE PWB, A (KV-SW212M81(Middle East))	
	* A-1192-351-A	COMPLETE PWB, A (KV-SW212M81(Russia))	
	* A-1184-019-A	COMPLETE PWB, A (KV-SW212M83(India))	
	* A-1192-114-A	COMPLETE PWB, A (KV-SW212M83(Saudi Arabia)/M83/H)	
	* A-1184-738-A	COMPLETE PWB, A (KV-SW212N60)	
	* A-1189-493-A	COMPLETE PWB, A (KV-SW212P50)	
20	△ 1-453-482-11	TRANSFORMER ASSY FLYBACK (NX-4800//M3A4) (Except KV-SW212M83(India))	
	△ 1-453-329-41	TRANSFORMER ASSY FLYBACK (NX-4751//M3A4) (KV-SW212M83(India))	
21	1-693-714-11	TUNER (TEQE3-901A) (Except KV-SW212M83(India)/N60)	
	8-597-962-00	TUNER, FSS BTP-AG411 (KV-SW212M83(India))	
	8-597-518-00	TUNER, FSS BTP-AA411 (KV-SW212N60)	
22	4-022-115-00	HOLDER, AC CORD (Except KV-SW212M83(India))	
	△ 4-022-115-12	HOLDER, AC CORD (KV-SW212M83(India))	

REF. NO.	PART NO.	DESCRIPTION	REMARK
23	* 4-095-890-21	BRACKET, TERMINAL(ICON) (KV-SW212M50/M81/P50)	
	△* 2-683-436-01	BRACKET, TERMINAL(ICON) (KV-SW212M83(India))	
	* 2-631-637-01	BRACKET, TERMINAL(NTSC-ICON) (KV-SW212N60)	
	* 4-095-890-01	BRACKET, TERMINAL(ICON) (KV-SW212M83(Saudi Arabia)/M83/H)	
24	* 4-092-370-02	BRACKET, FBT (Except KV-SW212M83(India))	
	△* 4-092-370-03	BRACKET, FBT(KV-SW212M83(India))	
25	* 2-584-669-01	GUIDE LIGHT	
26	1-825-691-12	SPEAKER (15x6.5CM)	
27	4-095-941-01	SCREW(WH DIA.16)(+P 4x16)	
28	1-479-380-11	TOP SWITCH BLOCK (Except KV-SW212N60)	
	1-479-380-31	TOP SWITCH BLOCK (KV-SW212N60)	
29	△ 1-824-968-11	POWER CORD(WITH CONNECTOR) (Except KV-SW212M83(India)/N60)	
	△ 1-824-968-51	POWER CORD(WITH CONNECTOR) (KV-SW212M83(India))	
	△ 1-575-023-11	CORD, POWER(WITH CONNECTOR) (KV-SW212N60)	
30	4-036-405-11	SPRING COMPRESSION	
31	4-093-704-01	SPRING DOOR	
32	2-629-888-01	TUBE, DGC (Except KV-SW212M83(India))	
33	1-437-572-11	COIL, NA ROTATION (KV-SW212M50(Malaysia)/M81/N60)	
34	2-632-306-01	DOOR PRINTING(SW) (KV-SW212M50)	
	2-632-306-21	DOOR PRINTING(SW) (KV-SW212M81)	
	2-632-306-11	DOOR PRINTING(SW) (KV-SW212M83(Saudi Arabia))	
	2-632-306-91	DOOR PRINTING(SW) (KV-SW212M83/H)	
	2-632-306-31	DOOR PRINTING(SW) (KV-SW212N60)	
	2-633-086-01	DOOR PRINTING(SW) (KV-SW212P50)	
35	2-655-083-01	CUSHION (60x60), DGC (KV-SW212M83(India))	
36	* A-1146-422-A	MOUNTED PWB, J (KV-SW212M83(India))	
	* A-1119-145-A	MOUNTED PWB, J (KV-SW212M83(Saudi Arabia)/M83/H)	

5-2 3D SPEAKER (KV-SW212M83/M83/H)

101	1-825-971-21	LOUD SPEAKER(12CM) (KV-SW212M83/M83/H)	
102	A-1127-366-A	3D BOX, ASSY (KV-SW212M83(India))	
	A-1119-148-A	3D BOX, ASSY (KV-SW212M83(Saudi Arabia))	
	A-1132-622-A	3D BOX, ASSY (KV-SW212M83/H)	
103	* 2-631-845-01	3D BOX, TOP (KV-SW212M83(India))	
	* 2-589-456-01	3D BOX, TOP (KV-SW212M83(Saudi Arabia))	
	* 2-589-456-11	3D BOX, TOP (KV-SW212M83/H)	
104	* 2-631-846-01	3D BOX, BOTTOM (KV-SW212M83(India))	
	* 2-589-457-01	3D BOX, BOTTOM (KV-SW212M83(Saudi Arabia))	
	* 2-589-457-11	3D BOX, BOTTOM (KV-SW212M83/H)	
105	* 2-631-847-01	SPEAKER DUCT (KV-SW212M83(India))	
	* 2-589-458-01	SPEAKER DUCT (KV-SW212M83(Saudi Arabia))	
	* 2-589-458-11	SPEAKER DUCT (KV-SW212M83/H)	
106	* 4-068-528-01	FOOT (KV-SW212M83/M83/H)	

SECTION 6 ELECTRICAL PARTS LIST

NOTE:

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

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

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

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

- All resistors are in ohms
- F : nonflammable

CAPACITORS

- MF : μ F, PF : $\mu\mu$ F

COILS

- MMH : mH, UH : μ H

REF NO.	PART NO.	DESCRIPTION	REMARK	REF NO.	PART NO.	DESCRIPTION	REMARK
* A-1173-258-A		COMPLETE PWB, A (KV-SW212M50(GE))		C055	1-100-829-11	FILM 0.15UF 5%	250V
* A-1189-363-A		COMPLETE PWB, A (SW212M50(Middle East))		C055		(Except KV-SW212M83(India))	
* A-1188-888-A		COMPLETE PWB, A (SW212M81(Middle East))		C056	1-126-933-11	ELECT 100UF 20.00%	16V
* A-1192-351-A		COMPLETE PWB, A (SW212M81(RUSS))		C057	1-162-970-11	CERAMIC CHIP 0.01UF 10.00%	25V
* A-1184-019-A		COMPLETE PWB, A (SW212M83(India))		C058	1-162-964-11	CERAMIC CHIP 0.001UF 10.00%	50V
* A-1192-114-A		COMPLETE PWB, A (SW212M83(Saudi Arabia)/M83/H)		C060	1-107-826-11	CERAMIC CHIP 0.1UF 10.00%	16V
* A-1184-738-A		COMPLETE PWB, A (SW212N60(Philippines))		C061	1-162-967-11	CERAMIC CHIP 0.0033UF 10.00%	50V
* A-1189-493-A		COMPLETE PWB, A (SW212P50) *****		C061	1-162-968-11	CERAMIC CHIP 0.0047UF 10.00%	50V
				C061		(Except KV-SW212N60)	
	4-382-854-01	SCREW (M3X8), P, SW (+)		C062	1-107-826-11	CERAMIC CHIP 0.1UF 10.00%	16V
	4-382-854-21	SCREW (M3X14), P, SW (+)		C063	1-107-826-11	CERAMIC CHIP 0.1UF 10.00%	16V
* A015	4-055-304-01	HOLDER, LED		C064	1-126-961-11	ELECT 2.2UF 20.00%	50V
		<CAPACITOR>		C065	1-126-962-11	ELECT 3.3UF 20.00%	50V
				C067	1-107-826-11	CERAMIC CHIP 0.1UF 10.00%	16V
C001	1-162-927-11	CERAMIC CHIP 100PF 5.00%	50V	C069	1-107-826-11	CERAMIC CHIP 0.1UF 10.00%	16V
C002	1-126-935-11	ELECT 470UF 20.00%	16V	C070	1-107-826-11	CERAMIC CHIP 0.1UF 10.00%	16V
C003	1-162-927-11	CERAMIC CHIP 100PF 5.00%	50V	C072	1-162-970-11	CERAMIC CHIP 0.01UF 10.00%	25V
C004	1-126-933-11	ELECT 100UF 20.00%	16V	C073	1-126-961-11	ELECT 2.2UF 20.00%	50V
C005	1-126-933-11	ELECT 100UF 20.00%	16V	C077	1-165-176-11	CERAMIC CHIP 0.047UF 10.00%	16V
C006	1-126-925-91	ELECT 470UF 20.00%	10V	C078	1-162-925-11	CERAMIC CHIP 68PF 5.00%	50V
C008	1-126-947-11	ELECT 47UF 20.00%	35V	C080	1-162-964-11	CERAMIC CHIP 0.001UF 10.00%	50V
C010	1-164-315-11	CERAMIC CHIP 470PF 5.00%	50V	C081	1-162-964-11	CERAMIC CHIP 0.001UF 10.00%	50V
C013	1-126-933-11	ELECT 100UF 20.00%	16V	C082	1-162-964-11	CERAMIC CHIP 0.001UF 10.00%	50V
C014	1-127-715-91	CERAMIC CHIP 0.22UF 10%	16V	C082		(Except KV-SW212N60)	
C018	1-162-970-11	CERAMIC CHIP 0.01UF 10.00%	25V	C083	1-162-979-11	CERAMIC CHIP 0.0027UF 10.00%	50V
C020	1-107-826-11	CERAMIC CHIP 0.1UF 10.00%	16V	C089	1-162-964-11	CERAMIC CHIP 0.001UF 10.00%	50V
C021	1-162-927-11	CERAMIC CHIP 100PF 5.00%	50V	C090	1-162-927-11	CERAMIC CHIP 100PF 5.00%	50V
C022	1-127-715-91	CERAMIC CHIP 0.22UF 10%	16V	C091	1-162-927-11	CERAMIC CHIP 100PF 5.00%	50V
C023	1-164-505-11	CERAMIC CHIP 2.2UF 16V		C092	1-107-826-11	CERAMIC CHIP 0.1UF 10.00%	16V
C024	1-126-965-91	ELECT 22UF 20.00%	50V	C093	1-107-826-11	CERAMIC CHIP 0.1UF 10.00%	16V
C025	1-127-715-91	CERAMIC CHIP 0.22UF 10%	16V	C094	1-107-826-11	CERAMIC CHIP 0.1UF 10.00%	16V
C026	1-126-947-11	ELECT 47UF 20.00%	35V	C095	1-107-826-11	CERAMIC CHIP 0.1UF 10.00%	16V
C028	1-107-826-11	CERAMIC CHIP 0.1UF 10.00%	16V	C096	1-107-826-11	CERAMIC CHIP 0.1UF 10.00%	16V
C029	1-126-925-91	ELECT 470UF 20.00%	10V	C100	1-162-964-11	CERAMIC CHIP 0.001UF 10.00%	50V
C030	1-127-715-91	CERAMIC CHIP 0.22UF 10%	16V	C101	1-126-964-11	ELECT 10UF 20.00%	50V
C036	1-126-933-11	ELECT 100UF 20.00%	16V	C102	1-162-927-11	CERAMIC CHIP 100PF 5.00%	50V
C037	1-126-963-11	ELECT 4.7UF 20.00%	50V	C104	1-162-927-11	CERAMIC CHIP 100PF 5.00%	50V
C038	1-107-826-11	CERAMIC CHIP 0.1UF 10.00%	16V	C106	1-126-964-11	ELECT 10UF 20.00%	50V
C041	1-162-966-11	CERAMIC CHIP 0.0022UF 10.00%	50V	C106		(KV-SW212N60)	
C042	1-127-715-91	CERAMIC CHIP 0.22UF 10%	16V	C106	1-126-963-11	ELECT 4.7UF 20.00%	50V
C044	1-164-505-11	CERAMIC CHIP 2.2UF 16V		C106		(Except KV-SW212N60)	
C046	1-162-969-11	CERAMIC CHIP 0.0068UF 10.00%	25V	C107	1-126-935-11	ELECT 470UF 20.00%	16V
C048	1-127-715-91	CERAMIC CHIP 0.22UF 10%	16V	C108	1-126-935-11	ELECT 470UF 20.00%	16V
C049	1-164-227-11	CERAMIC CHIP 0.022UF 10.00%	25V	C109	1-162-968-11	CERAMIC CHIP 0.0047UF 10.00%	50V
C050	1-126-964-11	ELECT 10UF 20.00%	50V	C111	1-162-970-11	CERAMIC CHIP 0.01UF 10.00%	25V
C052	1-162-964-11	CERAMIC CHIP 0.001UF 10.00%	50V	C112	1-162-910-11	CERAMIC CHIP 5PF 0.25PF	50V
C053	1-164-227-11	CERAMIC CHIP 0.022UF 10.00%	25V	C112		(KV-SW212M83(India)/N60)	
C054	1-107-826-11	CERAMIC CHIP 0.1UF 10.00%	16V	C115	1-162-970-11	CERAMIC CHIP 0.01UF 10.00%	25V
C055	1-100-829-31	FILM 0.15UF 5%	250V	C115		(KV-SW212N60)	
C055		(KV-SW212M83(India))					

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REF NO.	PART NO.	DESCRIPTION	REMARK	REF NO.	PART NO.	DESCRIPTION	REMARK
C115	1-162-968-11	CERAMIC CHIP	0.0047UF 10.00% 50V	C213	1-115-339-11	CERAMIC CHIP	0.1UF 10.00% 50V
C115		(Except KV-SW212N60)		C214	1-126-942-61	ELECT	1000UF 20.00% 25V
C116	1-162-968-11	CERAMIC CHIP	0.0047UF 10.00% 50V	C215	1-128-550-11	ELECT	2200UF 20.00% 50V
C117	1-164-381-91	CERAMIC CHIP	62PF 5.00% 50V	C216	1-126-965-91	ELECT	22UF 20.00% 50V
C117		(Except KV-SW212M83(India)/N60)		C217	1-126-942-61	ELECT	1000UF 20.00% 25V
C117	1-164-380-11	CERAMIC CHIP	51PF 5.00% 50V	C218	1-126-965-91	ELECT	22UF 20.00% 50V
C117		(KV-SW212M83(India))		C219	1-126-934-11	ELECT	220UF 20.00% 16V
C117	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V	C220	1-126-964-11	ELECT	10UF 20.00% 50V
C117		(KV-SW212N60)		C223	1-128-550-11	ELECT	2200UF 20.00% 50V
C118	1-126-965-91	ELECT	22UF 20.00% 50V	C223		(KV-SW212M83/M83/H)	
C119	1-163-021-91	CERAMIC CHIP	0.01UF 10.00% 50V	C224	1-125-837-91	CERAMIC CHIP	1UF 10% 6.3V
C120	1-126-935-11	ELECT	470UF 20.00% 16V	C224		(KV-SW212M83/M83/H)	
C131	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V	C226	1-165-908-11	CERAMIC CHIP	1UF 10% 10V
C131		(KV-SW212N60)		C226		(KV-SW212M83/M83/H)	
C133	1-162-927-11	CERAMIC CHIP	100PF 5.00% 50V	C227	1-165-908-11	CERAMIC CHIP	1UF 10% 10V
C133		(KV-SW212N60)		C227		(KV-SW212M83/M83/H)	
C133	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V	C228	1-126-961-11	ELECT	2.2UF 20.00% 50V
C133		(Except KV-SW212N60)		C228		(KV-SW212M83/M83/H)	
C135	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V	C230	1-137-374-11	MYLAR	0.047UF 5.00% 50V
C137	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V	C230		(KV-SW212M83/M83/H)	
C138	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V	C231	1-137-374-11	MYLAR	0.047UF 5.00% 50V
C140	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V	C232	1-137-374-11	MYLAR	0.047UF 5.00% 50V
C200	1-125-837-91	CERAMIC CHIP	1UF 10% 6.3V	C234	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V
C200		(KV-SW212M83/M83/H)		C235	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V
C200	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V	C236	1-130-495-00	MYLAR	0.1UF 5.00% 50V
C200		(Except KV-SW212M83/M83/H)		C236		(KV-SW212M83/M83/H)	
C201	1-125-837-91	CERAMIC CHIP	1UF 10% 6.3V	C237	1-130-495-00	MYLAR	0.1UF 5.00% 50V
C201		(KV-SW212M83/M83/H)		C237		(KV-SW212M83/M83/H)	
C201	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V	C241	1-126-935-11	ELECT	470UF 20.00% 16V
C201		(Except KV-SW212M83/M83/H)		C241		(KV-SW212M83/M83/H)	
C202	1-110-563-11	CERAMIC CHIP	0.068UF 10.00% 16V	C300	1-127-715-91	CERAMIC CHIP	0.22UF 10% 16V
C202		(KV-SW212M83/M83/H)		C300		(Except KV-SW212N60)	
C202	1-165-176-11	CERAMIC CHIP	0.047UF 10.00% 16V	C301	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V
C202		(Except KV-SW212M83/M83/H)		C302	1-164-505-11	CERAMIC CHIP	2.2UF 16V
C203	1-110-563-11	CERAMIC CHIP	0.068UF 10.00% 16V	C303	1-126-933-11	ELECT	100UF 20.00% 16V
C203		(KV-SW212M83/M83/H)		C304	1-126-933-11	ELECT	100UF 20.00% 16V
C203	1-165-176-11	CERAMIC CHIP	0.047UF 10.00% 16V	C308	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V
C203		(Except KV-SW212M83/M83/H)		C311	1-126-961-11	ELECT	2.2UF 20.00% 50V
C204	1-137-374-11	MYLAR	0.047UF 5.00% 50V	C312	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V
C204		(KV-SW212M83/M83/H)		C313	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V
C204	1-130-495-00	MYLAR	0.1UF 5.00% 50V	C316	1-125-891-11	CERAMIC CHIP	0.47UF 10.00% 10V
C204		(Except KV-SW212M83/M83/H)		C317	1-126-934-11	ELECT	220UF 20.00% 16V
C205	1-126-959-11	ELECT	0.47UF 20.00% 50V	C318	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V
C205		(Except KV-SW212M83/M83/H)		C319	1-162-923-11	CERAMIC CHIP	47PF 5.00% 50V
C206	1-162-969-11	CERAMIC CHIP	0.0068UF 10.00% 25V	C320	1-162-923-11	CERAMIC CHIP	47PF 5.00% 50V
C206		(Except KV-SW212M83/M83/H)		C321	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V
C206	1-131-664-91	CERAMIC CHIP	0.15UF 10% 10V	C322	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V
C206		(KV-SW212M83/M83/H)		C323	1-112-034-91	CERAMIC CHIP	0.01UF 5% 50V
C207	1-137-374-11	MYLAR	0.047UF 5.00% 50V	C325	1-164-227-11	CERAMIC CHIP	0.022UF 10.00% 25V
C207		(KV-SW212M83/M83/H)		C328	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V
C207	1-130-495-00	MYLAR	0.1UF 5.00% 50V	C333	1-126-925-91	ELECT	470UF 20.00% 10V
C207		(Except KV-SW212M83/M83/H)		C600	Δ 1-119-895-51	CERAMIC	4700PF 20.00% 250V
C208	1-131-664-91	CERAMIC CHIP	0.15UF 10% 10V	C602	Δ 1-165-538-31	FILM	0.1UF 10% 275V
C208		(KV-SW212M83/M83/H)		C605	1-161-830-00	CERAMIC	0.0047UF 99% 500V
C208	1-162-969-11	CERAMIC CHIP	0.0068UF 10.00% 25V	C606	1-161-830-00	CERAMIC	0.0047UF 99% 500V
C208		(Except KV-SW212M83/M83/H)		C609	1-161-830-00	CERAMIC	0.0047UF 99% 500V
C209	1-126-959-11	ELECT	0.47UF 20.00% 50V	C610	1-161-830-00	CERAMIC	0.0047UF 99% 500V
C209		(Except KV-SW212M83/M83/H)		C611	1-117-751-11	ELECT(BLOCK)	220UF 20% 450V
C210	1-126-968-11	ELECT	100UF 20.00% 50V	C611		(KV-SW212M50(Malaysia))	
C211	1-126-964-11	ELECT	10UF 20.00% 50V	C611	1-117-752-11	ELECT(BLOCK)	330UF 20% 450V
C211		(KV-SW212M83/M83/H)		C611		(Except KV-SW212M50(Malaysia))	
C211	1-126-963-11	ELECT	4.7UF 20.00% 50V	C612	1-117-623-11	FILM	1500PF 3.00% 1.2KV
C211		(Except KV-SW212M83/M83/H)					

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REF NO.	PART NO.	DESCRIPTION	REMARK	REF NO.	PART NO.	DESCRIPTION	REMARK
C616	1-164-230-11	CERAMIC CHIP	220PF 5.00% 50V	C830	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V
C619	1-130-491-00	MYLAR	0.047UF 5.00% 50V	C831	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V
C619		(KV-SW212M50(Malaysia))		C832	1-164-230-11	CERAMIC CHIP	220PF 5.00% 50V
C619	1-136-167-00	FILM	0.15UF 5.00% 50V	C833	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V
C619		(Except KV-SW212M50(Malaysia))		C835	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V
C621	1-126-963-11	ELECT	4.7UF 20.00% 50V	C837	1-162-968-11	CERAMIC CHIP	0.0047UF 10.00% 50V
C622	Δ 1-119-888-51	CERAMIC	2200PF 20.00% 250V	C838	1-106-220-00	MYLAR	0.1UF 10.00% 100V
C623	1-162-966-11	CERAMIC CHIP	0.0022UF 10.00% 50V	C839	1-162-966-11	CERAMIC CHIP	0.0022UF 10.00% 50V
C623		(KV-SW212M50(Malaysia))		C840	Δ 1-117-647-21	FILM	13000PF 3.00% 1.2KV
C623	1-162-967-11	CERAMIC CHIP	0.0033UF 10.00% 50V	C841	1-107-846-11	FILM	0.1UF 5.00% 400V
C623		(Except KV-SW212M50(Malaysia))		C842	1-100-122-21	FILM	0.022UF 5% 400V
C624	1-126-967-11	ELECT	47UF 20.00% 50V	C844	1-165-176-11	CERAMIC CHIP	0.047UF 10.00% 16V
C625	Δ 1-127-943-51	CERAMIC	330PF 10% 250V	C845	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V
C626	1-102-228-00	CERAMIC	470PF 10.00% 500V	C846	1-117-767-91	CERAMIC	330PF 10.00% 2KV
C628	1-125-772-91	CERAMIC	1500PF 10.00% 2KV	C846		(KV-SW212M83(India))	
C630	1-128-549-11	ELECT	3300UF 20.00% 35V	C846	1-162-115-00	CERAMIC	330PF 10.00% 2KV
C632	1-126-953-11	ELECT	2200UF 20.00% 35V	C846		(Except KV-SW212M83(India))	
C634	1-126-941-11	ELECT	470UF 20.00% 25V	C847	1-107-364-11	MYLAR	0.01UF 10.00% 200V
C635	1-126-971-11	ELECT	470UF 20.00% 50V	C848	1-107-364-11	MYLAR	0.01UF 10.00% 200V
C637	1-126-933-11	ELECT	100UF 20.00% 16V	C849	1-106-375-12	MYLAR	0.022UF 5.00% 200V
C638	1-126-933-11	ELECT	100UF 20.00% 16V	C850	1-106-220-00	MYLAR	0.1UF 10.00% 100V
C639	1-126-933-11	ELECT	100UF 20.00% 16V	C851	1-107-675-11	ELECT	1UF 20.00% 450V
C641	1-126-933-11	ELECT	100UF 20.00% 16V	C852	1-117-665-11	FILM	0.33UF 5.00% 250V
C643	1-117-720-11	CERAMIC CHIP	4.7UF 10V	C854	1-126-948-11	ELECT	100UF 20.00% 35V
C644	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V	C855	1-107-894-11	ELECT	220UF 20% 35V
C647	1-126-935-11	ELECT	470UF 20.00% 16V	C857	1-104-666-11	ELECT	220UF 20.00% 25V
C649	1-126-933-11	ELECT	100UF 20.00% 16V	C858	1-137-959-91	MYLAR	0.47UF 5% 100V
C652	1-102-228-00	CERAMIC	470PF 10.00% 500V	C860	1-162-318-11	CERAMIC	0.001UF 10.00% 500V
C653	1-102-228-00	CERAMIC	470PF 10.00% 500V	C861	1-104-666-11	ELECT	220UF 20.00% 25V
C654	1-102-228-00	CERAMIC	470PF 10.00% 500V	C862	1-162-318-11	CERAMIC	0.001UF 10.00% 500V
C657	Δ 1-127-943-51	CERAMIC	330PF 10% 250V	C863	1-165-176-11	CERAMIC CHIP	0.047UF 10.00% 16V
C660	Δ 1-165-539-31	FILM	0.22UF 10% 275V	C867	1-165-441-51	ELECT	33UF 20% 160V
C662	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V	C867		(KV-SW212M83(India))	
C665	1-110-626-11	ELECT	330UF 20.00% 160V	C867	1-165-441-81	ELECT	33UF 20% 160V
C666	Δ 1-165-538-31	FILM	0.1UF 10% 275V	C867		(Except KV-SW212M83(India))	
C666		(KV-SW212M81(Russia)/M83(Saudi Arabia)/M83(H))		C868	1-102-228-00	CERAMIC	470PF 10.00% 500V
C668	1-126-933-11	ELECT	100UF 20.00% 16V	C869	1-107-654-11	ELECT	33UF 20.00% 250V
C670	Δ 1-127-943-51	CERAMIC	330PF 10% 250V	C870	1-106-387-00	MYLAR	0.068UF 10.00% 200V
C672	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V	C876	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V
C678	1-164-505-11	CERAMIC CHIP	2.2UF 16V	C877	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V
C680	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V	C878	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V
C682	1-115-466-91	ELECT	1000UF 20.00% 16V	C879	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V
C685	1-126-934-11	ELECT	220UF 20.00% 16V	C879		(KV-SW212M50(Malaysia)/M81/N60)	
C686	1-117-720-11	CERAMIC CHIP	4.7UF 10V	C900	1-164-505-11	CERAMIC CHIP	2.2UF 16V
C800	1-126-963-11	ELECT	4.7UF 20.00% 50V	C901	1-164-505-11	CERAMIC CHIP	2.2UF 16V
C800		(KV-SW212M50(Malaysia)/M81/N60)		C902	1-126-957-11	ELECT	0.22UF 20.00% 50V
C803	1-126-947-11	ELECT	47UF 20.00% 35V	C903	1-126-935-11	ELECT	470UF 20.00% 16V
C803		(KV-SW212M50(Malaysia)/M81/N60)		C906	1-164-346-11	CERAMIC CHIP	1UF 16V
C804	1-126-964-11	ELECT	10UF 20.00% 50V	C907	1-164-346-11	CERAMIC CHIP	1UF 16V
C804		(KV-SW212M50(Malaysia)/M81/N60)		C908	1-164-346-11	CERAMIC CHIP	1UF 16V
C805	1-126-960-11	ELECT	1UF 20.00% 50V	C909	1-164-346-11	CERAMIC CHIP	1UF 16V
C806	1-106-375-12	MYLAR	0.022UF 5.00% 200V	C910	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V
C807	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V	C911	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V
C808	1-102-244-00	CERAMIC	220PF 10.00% 500V	C912	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V
C809	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V	C913	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V
C810	1-162-318-11	CERAMIC	0.001UF 10.00% 500V	C914	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V
C811	1-126-925-91	ELECT	470UF 20.00% 10V	C915	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V
C822	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V	C916	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V
C825	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V	C917	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V
C826	1-164-227-11	CERAMIC CHIP	0.022UF 10.00% 25V	C918	1-164-346-11	CERAMIC CHIP	1UF 16V
C828	1-126-933-11	ELECT	100UF 20.00% 16V	C919	1-164-346-11	CERAMIC CHIP	1UF 16V
				C922	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V

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REF NO.	PART NO.	DESCRIPTION	REMARK	REF NO.	PART NO.	DESCRIPTION	REMARK
C925	1-164-315-11	CERAMIC CHIP	470PF 5.00%	D110	8-719-404-50	DIODE MA111-TX	
C955	1-126-947-11	ELECT	47UF 20.00%	D111	8-719-404-50	DIODE MA111-TX	
C956	1-126-933-11	ELECT	100UF 20.00%	D112	8-719-036-94	DIODE RD5.6SB-T1	
C967	1-164-505-11	CERAMIC CHIP	2.2UF 16V	D113	8-719-036-94	DIODE RD5.6SB-T1	
C975	1-162-964-11	CERAMIC CHIP	0.001UF 10.00%	D200	8-719-062-51	DIODE 1PS226-115	
C979	1-162-964-11	CERAMIC CHIP	0.001UF 10.00%	D201	8-719-404-50	DIODE MA111-TX	
C1019	1-125-891-11	CERAMIC CHIP	0.47UF 10.00%	D202	8-719-404-50	DIODE MA111-TX	
C1233	1-126-961-11	ELECT	2.2UF 20.00%	D203	8-719-404-50	DIODE MA111-TX	
C1233		(Except KV-SW212N60)		D204	8-719-404-50	DIODE MA111-TX	
C2602	1-102-114-00	CERAMIC	470PF 10.00%	D205	8-719-404-50	DIODE MA111-TX	
C2631	1-102-228-00	CERAMIC	470PF 10.00%	D208	8-719-404-50	DIODE MA111-TX	
C2636	1-126-972-11	ELECT	1000UF 20.00%	D211	8-719-062-51	DIODE 1PS226-115	
C2648	1-126-952-11	ELECT	1000UF 20.00%	D212	8-719-404-50	DIODE MA111-TX	
		<CONNECTOR>		D213	8-719-404-50	DIODE MA111-TX	
* CN005	1-564-506-11	PLUG, CONNECTOR 3P		D214	8-719-404-50	DIODE MA111-TX	
* CN200	1-564-507-11	PLUG, CONNECTOR 4P		D600	8-719-404-50	DIODE MA111-TX	
* CN201	1-564-506-11	PLUG, CONNECTOR 3P		D602	6-501-301-01	DIODE 1A5G	
* CN201		(KV-SW212M83/M83/H)		D603	6-501-301-01	DIODE 1A5G	
* CN600	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		D604	8-719-077-77	DIODE D3SB60F3	
* CN601	1-691-134-11	PIN, CONNECTOR (PC BOARD) 2P		D605	8-719-109-85	DIODE RD5.1ESB2	
* CN602 Δ	1-580-843-11	PIN, CONNECTOR (POWER)		D608	8-719-109-85	DIODE RD5.1ESB2	
CN800	1-564-506-11	PLUG, CONNECTOR 3P		D614	8-719-923-86	DIODE MTZJ-T-77-15	
CN800		(KV-SW212M50(Malaysia)/M81/N60)		D615	6-500-567-11	DIODE 10ERB20-TA2B5	
* CN904	1-508-743-00	PIN, CONNECTOR 5P		D617	6-500-567-11	DIODE 10ERB20-TA2B5	
CT131	1-813-732-21	TRAP, CERAMIC (Except KV-SW212N60)		D618	6-500-567-11	DIODE 10ERB20-TA2B5	
CT139	1-813-754-21	TRAP, CERAMIC (KV-SW212N60)		D619	6-500-567-11	DIODE 10ERB20-TA2B5	
CT139	1-813-731-21	TRAP, CERAMIC (Except KV-SW212N60)		D621	8-719-312-10	DIODE RU4AM-T3	
		<DIODE>		D622	8-719-085-37	DIODE 11EQS10-TB5	
D002	8-719-404-50	DIODE MA111-TX		D623	6-500-567-31	DIODE 10ERB20-TB3	
D003	8-719-404-50	DIODE MA111-TX		D624	8-719-510-73	DIODE S3L20UF4	
D023	6-500-028-01	DIODE MM3Z9V1ST1		D629	8-719-109-85	DIODE RD5.1ESB2	
D024	6-500-028-01	DIODE MM3Z9V1ST1		D633	8-719-923-86	DIODE MTZJ-T-77-15	
D025	6-500-028-01	DIODE MM3Z9V1ST1		D635	8-719-072-63	DIODE PDZ3.6B-115	
D054	8-719-036-94	DIODE RD5.6SB-T1		D637	8-719-072-70	DIODE MA2ZD14001S0	
D055	8-719-036-94	DIODE RD5.6SB-T1		D638	8-719-404-50	DIODE MA111-TX	
D056	8-719-404-50	DIODE MA111-TX		D639	6-501-311-01	DIODE SB360-S	
D057	8-719-404-50	DIODE MA111-TX		D800	8-719-404-50	DIODE MA111-TX	
D058	8-719-404-50	DIODE MA111-TX		D800		(KV-SW212M50(Malaysia)/M81/N60)	
D059	8-719-404-50	DIODE MA111-TX		D801	8-719-404-50	DIODE MA111-TX	
D060	8-719-036-94	DIODE RD5.6SB-T1		D801		(KV-SW212M50(Malaysia)/M81/N60)	
D061	8-719-404-50	DIODE MA111-TX		D804	8-719-991-33	DIODE 1SS133T-77	
D062	8-719-036-94	DIODE RD5.6SB-T1		D805	8-719-991-33	DIODE 1SS133T-77	
D063	8-719-404-50	DIODE MA111-TX		D807	8-719-991-33	DIODE 1SS133T-77	
D064	8-719-036-94	DIODE RD5.6SB-T1		D808	8-719-991-33	DIODE 1SS133T-77	
D065	8-719-036-94	DIODE RD5.6SB-T1		D809	8-719-991-33	DIODE 1SS133T-77	
D066	8-719-083-20	DIODE PG102R		D815	6-500-028-01	DIODE MM3Z9V1ST1	
D068	8-719-036-94	DIODE RD5.6SB-T1		D816	6-501-402-01	DIODE BY228GPL-5402E3/72	
D071	8-719-404-50	DIODE MA111-TX		D817	6-501-302-01	DIODE PG156R	
D072	8-719-404-50	DIODE MA111-TX		D818	8-719-109-85	DIODE RD5.1ESB2	
D074	8-719-404-50	DIODE MA111-TX		D819	6-500-567-31	DIODE 10ERB20-TB3 (Except KV-SW212M83(India))	
D075	6-500-028-01	DIODE MM3Z9V1ST1		D820	8-719-083-20	DIODE PG102R	
D100	8-719-082-22	DIODE KDS114-RTK		D821	6-500-567-31	DIODE 10ERB20-TB3 (Except KV-SW212M83(India))	
D100		(Except KV-SW212N60/P50)		D823	8-719-074-25	DIODE PG104R	
D103	8-719-982-26	DIODE MTZJ-33B		D824	8-719-074-25	DIODE PG104R	
D105	8-719-404-50	DIODE MA111-TX (KV-SW212N60)		D827	8-719-074-25	DIODE PG104R	
D106	8-719-157-94	DIODE RD3.3SB (KV-SW212N60)		D829	8-719-036-94	DIODE RD5.6SB-T1	
D108	8-719-036-94	DIODE RD5.6SB-T1		D830	8-719-404-50	DIODE MA111-TX	
D109	8-719-036-94	DIODE RD5.6SB-T1		D832	8-719-404-50	DIODE MA111-TX	
				D833	8-719-404-50	DIODE MA111-TX	
				D900	8-719-036-94	DIODE RD5.6SB-T1	
				D908	8-719-036-94	DIODE RD5.6SB-T1	
				D914	8-719-083-18	DIODE SPB-25MVWF	

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REF NO.	PART NO.	DESCRIPTION	REMARK	REF NO.	PART NO.	DESCRIPTION	REMARK
D915	8-719-036-94	DIODE RD5.6SB-T1		IC606	6-706-886-01	IC KIA78D33PI	
D916	8-719-036-94	DIODE RD5.6SB-T1		IC607	8-759-832-05	IC BA18BC0FP-E2	
D918	8-719-036-94	DIODE RD5.6SB-T1		IC800	8-759-356-16	IC NJM4556AD	
D931	8-719-072-63	DIODE PDZ3.6B-115		IC800		(KV-SW212M50(Malaysia)/M81/N60)	
D932	8-719-072-63	DIODE PDZ3.6B-115		IC801	6-703-708-01	IC LM2903DT	
D2625	8-719-510-73	DIODE S3L20UF4		IC802	6-701-937-01	IC TJM4558CDT	
D2625		(Except KV-SW212M83/M83/H)		IC804	6-708-756-01	IC STV9302B	
D2626	8-719-067-18	DIODE RN4Z				<JACK>	
D2626		(Except KV-SW212M83/M83/H)		J200	1-770-786-31	JACK (Except KV-SW212M83/M83/H)	
		<DY CONNECTOR>		J201	1-817-294-21	JACK (KV-SW212M83/M83/H)	
* DY800	1-580-798-11	CONNECTOR PIN (DY) 6P		J901	1-817-299-22	PHONO JACK 11P	
		<FUSE>		J903	1-770-329-13	JACK, PIN 3P	
F600	Δ 1-576-232-51	FUSE 5A	250V			<CHIP CONDUCTOR>	
		<FERRITE BEAD>		JR001	1-216-864-11	SHORT CHIP	0
FB001	1-469-578-11	FERRITE	1.1UH	JR002	1-216-864-11	SHORT CHIP	0
FB001		(Except KV-SW212N60)		JR003	1-216-864-11	SHORT CHIP	0
FB005	1-469-981-21	FERRITE	0UH	JR004	1-216-864-11	SHORT CHIP	0
FB006	1-469-981-21	FERRITE	0UH	JR005	1-216-864-11	SHORT CHIP	0
FB007	1-469-981-21	FERRITE	0UH	JR007	1-216-864-11	SHORT CHIP	0
FB008	1-469-981-21	FERRITE	0UH	JR008	1-216-864-11	SHORT CHIP	0
FB101	1-414-229-11	FERRITE	0UH	JR009	1-216-864-11	SHORT CHIP	0
FB603	1-469-578-11	FERRITE	1.1UH	JR012	1-216-864-11	SHORT CHIP	0
FB608	1-412-911-11	FERRITE	0UH	JR013	1-216-864-11	SHORT CHIP	0
FB800	1-469-578-11	FERRITE	1.1UH	JR014	1-216-864-11	SHORT CHIP	0
FB2602	1-469-578-11	FERRITE	1.1UH	JR015	1-216-864-11	SHORT CHIP	0
FB2602		(KV-SW212M83/M83/H)		JR016	1-216-864-11	SHORT CHIP	0
FB2607	1-469-578-11	FERRITE	1.1UH	JR017	1-216-864-11	SHORT CHIP	0
FB2607		(Except KV-SW212M83/M83/H)		JR018	1-216-864-11	SHORT CHIP	0
		<FUSE HOLDER>		JR019	1-216-864-11	SHORT CHIP	0
FH601	1-533-223-11	FUSE HOLDER	0A 0V	JR020	1-216-864-11	SHORT CHIP	0
FH602	1-533-223-11	FUSE HOLDER	0A 0V	JR024	1-216-864-11	SHORT CHIP	0
		<IC>		JR025	1-216-864-11	SHORT CHIP	0
IC001	6-709-203-01	IC TDA12063H/N1F0B		JR026	1-216-864-11	SHORT CHIP	0
IC001		(KV-SW212M50/M83/M83/H/P50)		JR027	1-216-864-11	SHORT CHIP	0
IC001	6-709-200-01	IC TDA12063H/N1F0B		JR037	1-216-864-11	SHORT CHIP	0
IC001		(KV-SW212M81)		JR038	1-216-864-11	SHORT CHIP	0
IC001	6-709-202-01	IC TDA12011H/N1F4B (KV-SW212N60)		JR040	1-216-864-11	SHORT CHIP	0
IC002	6-704-532-01	IC RPM7240-H5		JR041	1-216-864-11	SHORT CHIP	0
IC003	6-705-864-01	IC CAT24WC16WI-TE13		JR042	1-216-864-11	SHORT CHIP	0
IC200	6-703-476-01	IC AN17803A		JR043	1-216-864-11	SHORT CHIP	0
IC200		(KV-SW212M83/M83/H)		JR046	1-216-864-11	SHORT CHIP	0
IC200	6-706-985-01	IC AN17808A (Except KV-SW212M83/M83/H)		JR047	1-216-864-11	SHORT CHIP	0
IC601	6-703-472-11	IC STR-F6264S LF1357 (KV-SW212M50(Malaysia))		JR049	1-216-864-11	SHORT CHIP	0
IC601	6-704-263-01	IC STR-F6267S LF1357		JR051	1-216-864-11	SHORT CHIP	0
IC601		(Except SW212M50(Malaysia))		JR200	1-216-864-11	SHORT CHIP	0
IC602	6-706-789-01	IC KIA78R09API		JR200		(KV-SW212M83/M83/H)	
IC603	6-703-478-01	IC PQ018EF01SSH		JR300	1-216-864-11	SHORT CHIP	0
IC604	8-759-231-53	IC TA7805S (KV-SW212M83(India))		JR301	1-216-864-11	SHORT CHIP	0
IC604	8-759-646-52	IC KIA7805API (Except KV-SW212M83(India))		JR302	1-216-864-11	SHORT CHIP	0
IC605	6-705-063-01	IC SE135N-LF38		JR600	1-216-864-11	SHORT CHIP	0
				JR601	1-216-864-11	SHORT CHIP	0
				JR602	1-216-864-11	SHORT CHIP	0
				JR806	1-216-864-11	SHORT CHIP	0
				JR1006	1-216-864-11	SHORT CHIP	0
				JR1011	1-216-864-11	SHORT CHIP	0
				JR1012	1-216-864-11	SHORT CHIP	0
				JR1013	1-216-864-11	SHORT CHIP	0
				JR1014	1-216-864-11	SHORT CHIP	0

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REF NO.	PART NO.	DESCRIPTION	REMARK
JR1016	1-216-864-11	SHORT CHIP	0
JR1100	1-216-864-11	SHORT CHIP	0
JR1100		(KV-SW212N60/P50)	
JR1101	1-216-864-11	SHORT CHIP	0
JR1110	1-216-864-11	SHORT CHIP	0
JR1113	1-216-864-11	SHORT CHIP	0
JR1113		(KV-SW212N60)	
JR1903	1-216-864-11	SHORT CHIP	0
		<COIL>	
L003	1-414-856-11	INDUCTOR	10UH
L004	1-414-187-11	INDUCTOR	47UH
L005	1-414-856-11	INDUCTOR	10UH
L006	1-414-856-11	INDUCTOR	10UH
L007	1-414-856-11	INDUCTOR	10UH
L008	1-414-856-11	INDUCTOR	10UH
L009	1-414-856-11	INDUCTOR	10UH
L012	1-412-058-11	INDUCTOR	10UH
L040	1-469-555-21	INDUCTOR	10UH
L041	1-469-555-21	INDUCTOR	10UH
L042	1-469-555-21	INDUCTOR	10UH
L043	1-469-555-21	INDUCTOR	10UH
L044	1-469-555-21	INDUCTOR	10UH
L045	1-469-555-21	INDUCTOR	10UH
L046	1-469-555-21	INDUCTOR	10UH
L047	1-469-555-21	INDUCTOR	10UH
L100	1-414-857-11	INDUCTOR	100UH
L101	1-410-498-11	INDUCTOR	1.2UH
L101		(Except KV-SW212N60)	
L101	1-414-138-11	INDUCTOR	0.33UH
L101		(KV-SW212N60)	
L103	1-410-985-42	INDUCTOR	0.22UH
L103		(KV-SW212M50/M81/M83(Saudi Arabia)/M83/H/P50)	
L103	1-410-987-42	INDUCTOR	0.33UH
L103		(KV-SW212M83(India))	
L103	1-216-295-91	SHORT CHIP	0
L103		(KV-SW212N60)	
L105	1-400-561-21	FERRITE	1UH
L105		(KV-SW212P50)	
L106	1-414-857-11	INDUCTOR	100UH
L106		(KV-SW212N60)	
L106	1-414-187-11	INDUCTOR	47UH
L106		(Except KV-SW212N60)	
L107	1-216-296-11	SHORT CHIP	0
L107		(KV-SW212N60)	
L107	1-412-062-11	INDUCTOR	47UH
L107		(Except KV-SW212N60)	
L600	1-412-533-21	INDUCTOR	47UH
L601	1-412-533-21	INDUCTOR	47UH
L602	1-412-529-11	INDUCTOR	22UH
L800	1-456-848-12	COIL, HORIZONTAL LINEARITY	
L802	1-406-679-11	INDUCTOR	22MH
L803	1-414-493-41	INDUCTOR	4.7MH
L805	1-408-947-00	INDUCTOR	2.2MH
L806	1-469-555-21	INDUCTOR	10UH
L806		(KV-SW212M50(Malaysia)/M81/N60)	
L902	1-414-187-11	INDUCTOR	47UH
L2601	1-412-525-31	INDUCTOR	10UH

REF NO.	PART NO.	DESCRIPTION	REMARK
		<PHOTO COUPLER>	
PH600	\triangle 6-600-187-01	PHOTO COUPLER	PC123Y22JOOF
		<IC LINK>	
PS602	\triangle 1-533-597-42	IC LINK	5A 90V
PS603	\triangle 1-533-597-42	IC LINK	5A 90V
PS604	\triangle 1-533-597-42	IC LINK	5A 90V
PS605	\triangle 1-533-597-42	IC LINK	5A 90V
PS2601	\triangle 1-533-597-42	IC LINK	5A 90V
		<TRANSISTOR>	
Q001	8-729-421-22	TRANSISTOR UN2211	
Q006	8-729-424-67	TRANSISTOR UN2216	
Q007	8-729-424-67	TRANSISTOR UN2216	
Q008	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q010	8-729-600-22	TRANSISTOR 2SA1235-F	
Q016	8-729-421-22	TRANSISTOR UN2211	
Q100	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q102	8-729-022-54	TRANSISTOR 2SC3779C.D-AA	
Q103	8-729-424-67	TRANSISTOR UN2216	(Except KV-SW212N60/P50)
Q103			
Q104	8-729-424-67	TRANSISTOR UN2216	(Except KV-SW212N60/P50)
Q104			
Q111	8-729-120-28	TRANSISTOR 2SC1623-L5L6	(KV-SW212N60)
Q111			
Q200	8-729-421-22	TRANSISTOR UN2211	
Q201	8-729-600-22	TRANSISTOR 2SA1235-F	
Q202	8-729-600-22	TRANSISTOR 2SA1235-F	
Q204	8-729-120-28	TRANSISTOR 2SC1623-L5L6	(KV-SW212M83/M83/H)
Q204			
Q205	8-729-120-28	TRANSISTOR 2SC1623-L5L6	(KV-SW212M83/M83/H)
Q205			
Q206	8-729-421-22	TRANSISTOR UN2211	
Q601	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q605	6-550-572-01	TRANSISTOR FN155	
Q606	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q608	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q609	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q800	8-729-120-28	TRANSISTOR 2SC1623-L5L6	(KV-SW212M50(Malaysia)/M81/N60)
Q800			
Q801	8-729-120-28	TRANSISTOR 2SC1623-L5L6	(KV-SW212M50(Malaysia)/M81/N60)
Q801			
Q802	8-729-120-28	TRANSISTOR 2SC1623-L5L6	(KV-SW212M50(Malaysia)/M81/N60)
Q802			
Q803	8-729-140-50	TRANSISTOR 2SC3209LK	
Q804	6-550-362-01	TRANSISTOR KTA1279	
Q805	6-550-410-01	TRANSISTOR 2SC5885	
Q806	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q807	8-729-600-22	TRANSISTOR 2SA1235-F	
Q808	8-729-053-33	TRANSISTOR IRF614-037	
Q814	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q900	8-729-600-22	TRANSISTOR 2SA1235-F	
Q901	8-729-424-67	TRANSISTOR UN2216	
Q902	8-729-424-67	TRANSISTOR UN2216	
Q8009	6-550-362-01	TRANSISTOR KTA1279	
Q8010	8-729-140-50	TRANSISTOR 2SC3209LK	



REF NO.	PART NO.	DESCRIPTION	REMARK	REF NO.	PART NO.	DESCRIPTION	REMARK
		<RESISTOR>					
R001	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R111	1-216-833-11	METAL CHIP 10K 5% 1/10W (Except KV-SW212N60/P50)	
R002	1-216-809-11	METAL CHIP	100 5% 1/10W	R111			
R003	1-216-829-11	METAL CHIP	4.7K 5% 1/10	R112	1-218-867-11	METAL CHIP 6.8K 0.50% 1/10W (Except KV-SW212N60/P50)	
R004	1-216-809-11	METAL CHIP	100 5% 1/10W	R112			
R010	1-216-833-11	METAL CHIP	10K 5% 1/10W	R113	1-216-825-11	METAL CHIP 2.2K 5% 1/10W (Except KV-SW212N60/P50)	
R011	1-216-817-11	METAL CHIP	470 5% 1/10W	R113			
R012	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R114	1-216-825-11	METAL CHIP 2.2K 5% 1/10W (Except KV-SW212N60/P50)	
R014	1-216-809-11	METAL CHIP	100 5% 1/10W	R114			
R015	1-216-823-11	METAL CHIP	1.5K 5% 1/10W	R115	1-216-809-11	METAL CHIP 100 5% 1/10	
R018	1-216-809-11	METAL CHIP	100 5% 1/10W	R116	1-216-809-11	METAL CHIP 100 5% 1/10W	
R020	1-216-809-11	METAL CHIP	100 5% 1/10W	R118	1-216-809-11	METAL CHIP 100 5% 1/10W	
R021	1-216-295-91	SHORT CHIP	0	R119	1-211-981-11	METAL CHIP 33 0.50% 1/10W	
R024	1-216-809-11	METAL CHIP	100 5% 1/10W	R121	1-215-925-11	METAL OXIDE 22K 5% 3W	
R025	1-216-809-11	METAL CHIP	100 5% 1/10W	R128	1-216-864-11	SHORT CHIP 0 (KV-SW212M83(India)/N60)	
R026	1-216-809-11	METAL CHIP	100 5% 1/10W	R128			
R029	1-216-809-11	METAL CHIP	100 5% 1/10W	R131	1-216-809-11	METAL CHIP 100 5% 1/10W (Except KV-SW212N60/P50)	
R030	1-216-809-11	METAL CHIP	100 5% 1/10W	R131			
R038	1-216-809-11	METAL CHIP	100 5% 1/10W	R146	1-216-821-11	METAL CHIP 1K 5% 1/10W (KV-SW212N60)	
R039	1-216-809-11	METAL CHIP	100 5% 1/10W	R146			
R041	1-216-809-11	METAL CHIP	100 5% 1/10W	R147	1-216-813-11	METAL CHIP 220 5% 1/10W (KV-SW212N60)	
R042	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R147			
R044	1-216-834-11	METAL CHIP	12K 5% 1/10W	R148	1-211-969-11	METAL CHIP 10 0.50% 1/10W (KV-SW212N60)	
R045	1-216-809-11	METAL CHIP	100 5% 1/10W	R148			
R046	1-216-809-11	METAL CHIP	100 5% 1/10W	R149	1-218-839-11	METAL CHIP 470 0.50% 1/10W (KV-SW212N60)	
R048	1-216-809-11	METAL CHIP	100 5% 1/10W	R149	1-216-864-11	SHORT CHIP 0 (Except KV-SW212N60)	
R051	1-218-885-11	METAL CHIP	39K 0.50% 1/10W	R149			
R056	1-216-809-11	METAL CHIP	100 5% 1/10W	R150	1-216-809-11	METAL CHIP 100 5% 1/10W (KV-SW212N60)	
R058	1-216-809-11	METAL CHIP	100 5% 1/10W	R150			
R059	1-216-821-11	METAL CHIP	1K 5% 1/10W	R152	1-216-864-11	SHORT CHIP 0	
R060	1-216-809-11	METAL CHIP	100 5% 1/10W	R153	1-218-839-11	METAL CHIP 470 0.50% 1/10W (KV-SW212N60)	
R061	1-216-819-11	METAL CHIP	680 5% 1/10W	R153			
R087	1-216-813-11	METAL CHIP	220 5% 1/10W	R153	1-216-853-11	METAL CHIP 470K 5% 1/10W (Except KV-SW212N60)	
R088	1-216-816-11	METAL CHIP	390 5% 1/10W	R153			
R088		(KV-SW212M50(Malaysia)/N60)		R154	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R088	1-216-823-11	METAL CHIP	1.5K 5% 1/10W	R155	1-216-837-11	METAL CHIP 22K 5% 1/10W	
R088		(Except KV-SW212M50(Malaysia)/N60)		R200	1-216-864-11	SHORT CHIP 0 (KV-SW212M83/M83/H)	
R096	1-216-813-11	METAL CHIP	220 5% 1/10W	R200			
R097	1-216-813-11	METAL CHIP	220 5% 1/10W	R200	1-216-832-11	METAL CHIP 8.2K 5% 1/10W (Except KV-SW212M83/M83/H)	
R098	1-216-813-11	METAL CHIP	220 5% 1/10W	R200			
R099	1-216-813-11	METAL CHIP	220 5% 1/10W	R201	1-216-829-11	METAL CHIP 4.7K 5% 1/10W (KV-SW212M83/M83/H)	
R100	1-216-821-11	METAL CHIP	1K 5% 1/10W	R201	1-216-827-11	METAL CHIP 3.3K 5% 1/10W (Except KV-SW212M83/M83/H)	
R103	1-211-981-11	METAL CHIP	33 0.50% 1/10W	R201			
R106	1-216-832-11	METAL CHIP	8.2K 5% 1/10W	R202	1-216-839-11	METAL CHIP 33K 5% 1/10W (KV-SW212M83/M83/H)	
R106		(KV-SW212N60)		R202			
R106	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R202	1-216-830-11	METAL CHIP 5.6K 5% 1/10W (Except KV-SW212M83/M83/H)	
R106		(Except KV-SW212N60)		R202			
R107	1-216-826-11	METAL CHIP	2.7K 5% 1/10W	R203	1-216-864-11	SHORT CHIP 0 (KV-SW212M83/M83/H)	
R107		(KV-SW212N60)		R203			
R107	1-216-828-11	METAL CHIP	3.9K 5% 1/10W	R203	1-216-832-11	METAL CHIP 8.2K 5% 1/10W (Except KV-SW212M83/M83/H)	
R107		(Except KV-SW212N60)		R203			
R108	1-216-820-11	METAL CHIP	820 5% 1/10W	R204	1-216-829-11	METAL CHIP 4.7K 5% 1/10W (KV-SW212M83/M83/H)	
R108		(KV-SW212N60)		R204	1-216-827-11	METAL CHIP 3.3K 5% 1/10W (Except KV-SW212M83/M83/H)	
R108	1-216-821-11	METAL CHIP	1K 5% 1/10W	R204			
R108		(Except KV-SW212N60)		R205	1-216-839-11	METAL CHIP 33K 5% 1/10W (KV-SW212M83/M83/H)	
R109	1-216-021-00	RES-CHIP	68 5% 1/10W	R205			
R109		(KV-SW212N60)		R205	1-216-830-11	METAL CHIP 5.6K 5% 1/10W (Except KV-SW212M83/M83/H)	
R109	1-216-019-00	RES-CHIP	56 5% 1/10W	R205			
R109		(Except KV-SW212N60)		R207	1-216-823-11	METAL CHIP 1.5K 5% 1/10W (KV-SW212M83/M83/H)	
R110	1-216-821-11	METAL CHIP	1K 5% 1/10W	R207			
R110		(Except KV-SW212N60)					



REF NO.	PART NO.	DESCRIPTION	REMARK	REF NO.	PART NO.	DESCRIPTION	REMARK
R207	1-218-867-11	METAL CHIP 6.8K (Except KV-SW212M83/M83/H)	0.50% 1/10W	R243	1-247-791-91	CARBON 22 (KV-SW212M83/M83/H)	5% 1/4W
R208	1-218-867-11	METAL CHIP 6.8K (Except KV-SW212M83/M83/H)	0.50% 1/10W	R300	1-216-809-11	METAL CHIP 100	5% 1/10W
R208	1-216-823-11	METAL CHIP 1.5K (KV-SW212M83/M83/H)	5% 1/10W	R301	1-216-859-11	METAL CHIP 1.5M	5% 1/10W
R210	1-216-829-11	METAL CHIP 4.7K (KV-SW212M83/M83/H)	5% 1/10W	R303	1-216-861-11	METAL CHIP 2.2M	5% 1/10W
R210	1-216-835-11	METAL CHIP 15K (Except KV-SW212M83/M83/H)	5% 1/10W	R304	1-216-845-11	METAL CHIP 100K	5% 1/10W
R211	1-216-829-11	METAL CHIP 4.7K (KV-SW212M83/M83/H)	5% 1/10W	R307	1-216-864-11	SHORT CHIP 0	
R211	1-216-835-11	METAL CHIP 15K (Except KV-SW212M83/M83/H)	5% 1/10W	R309	1-216-857-11	METAL CHIP 1M	5% 1/10W
R212	1-216-864-11	SHORT CHIP 0		R310	1-216-821-11	METAL CHIP 1K	5% 1/10W
R213	1-216-835-11	METAL CHIP 15K (KV-SW212M83/M83/H)	5% 1/10W	R311	1-216-841-11	METAL CHIP 47K	5% 1/10W
R213	1-216-833-11	METAL CHIP 10K (Except KV-SW212M83/M83/H)	5% 1/10W	R312	1-216-857-11	METAL CHIP 1M	5% 1/10W
R214	1-216-835-11	METAL CHIP 15K (KV-SW212M83/M83/H)	5% 1/10W	R313	1-216-847-11	METAL CHIP 150K	5% 1/10W
R214	1-216-839-11	METAL CHIP 33K (Except KV-SW212M83/M83/H)	5% 1/10W	R314	1-218-867-11	METAL CHIP 6.8K	0.50% 1/10W
R215	1-216-833-11	METAL CHIP 10K	5% 1/10W	R315	1-218-867-11	METAL CHIP 6.8K	0.50% 1/10W
R216	1-216-833-11	METAL CHIP 10K	5% 1/10W	R317	1-216-827-11	METAL CHIP 3.3K	5% 1/10W
R217	1-249-411-11	CARBON 330	5% 1/4W	R320	1-218-863-11	METAL CHIP 4.7K	0.50% 1/10W
R218	1-216-295-91	SHORT CHIP 0		R322	1-218-863-11	METAL CHIP 4.7K	0.50% 1/10W
R219	1-249-411-11	CARBON 330	5% 1/4W	R323	1-216-809-11	METAL CHIP 100	5% 1/10W
R220	1-216-864-11	SHORT CHIP 0		R324	1-216-864-11	SHORT CHIP 0	
R221	1-216-821-11	METAL CHIP 1K	5% 1/10W	R331	1-216-809-11	METAL CHIP 100	5% 1/10W
R222	1-216-817-11	METAL CHIP 470 (KV-SW212M83/M83/H)	5% 1/10W	R336	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
R223	1-216-833-11	METAL CHIP 10K (KV-SW212M83/M83/H)	5% 1/10W	R337	1-216-817-11	METAL CHIP 470	5% 1/10W
R224	1-216-829-11	METAL CHIP 4.7K (KV-SW212M83/M83/H)	5% 1/10W	R338	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
R225	1-216-829-11	METAL CHIP 4.7K (KV-SW212M83/M83/H)	5% 1/10W	R339	1-216-809-11	METAL CHIP 100	5% 1/10W
R226	1-218-867-11	METAL CHIP 6.8K (KV-SW212M83/M83/H)	0.50% 1/10W	R340	1-216-833-11	METAL CHIP 10K	5% 1/10W
R227	1-216-834-11	METAL CHIP 12K (KV-SW212M83/M83/H)	5% 1/10W	R341	1-216-809-11	METAL CHIP 100	5% 1/10W
R228	1-216-834-11	METAL CHIP 12K (KV-SW212M83/M83/H)	5% 1/10W	R355	1-216-837-11	METAL CHIP 22K	5% 1/10W
R229	1-216-823-11	METAL CHIP 1.5K (KV-SW212M83/M83/H)	5% 1/10W	R356	1-216-864-11	SHORT CHIP 0	
R230	1-216-864-11	SHORT CHIP 0 (KV-SW212M83/M83/H)		R360	1-216-864-11	SHORT CHIP 0	
R232	1-216-827-11	METAL CHIP 3.3K (KV-SW212M83/M83/H)	5% 1/10W	R363	1-216-864-11	SHORT CHIP 0	
R233	1-249-401-11	CARBON 47 (KV-SW212M83/M83/H)	5% 1/4W	R364	1-216-821-11	METAL CHIP 1K	5% 1/10W
R234	1-249-401-11	CARBON 47	5% 1/4W	R377	1-216-823-11	METAL CHIP 1.5K	5% 1/10W
R235	1-249-401-11	CARBON 47	5% 1/4W	R379	1-216-843-11	METAL CHIP 68K	5% 1/10W
R236	1-216-827-11	METAL CHIP 3.3K (KV-SW212M83/M83/H)	5% 1/10W	R380	1-216-809-11	METAL CHIP 100	5% 1/10W
R236	1-216-833-11	METAL CHIP 10K (Except KV-SW212M83/M83/H)	5% 1/10W	R384	1-216-809-11	METAL CHIP 100	5% 1/10W
R237	1-216-809-11	METAL CHIP 100	5% 1/10W	R385	1-216-809-11	METAL CHIP 100	5% 1/10W
R238	1-216-809-11	METAL CHIP 100	5% 1/10W	R386	1-216-809-11	METAL CHIP 100	5% 1/10W
R241	1-216-825-11	METAL CHIP 2.2K	5% 1/10W	R393	1-216-809-11	METAL CHIP 100	5% 1/10W
R242	1-216-825-11	METAL CHIP 2.2K	5% 1/10W	R394	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
				R395	1-216-845-11	METAL CHIP 100K	5% 1/10W
				R398	1-216-797-11	METAL CHIP 10	5% 1/10W
				R400	1-260-288-11	CARBON 0.47	5% 1/2W
				R401	1-260-288-11	CARBON 0.47	5% 1/2W
				R405	1-260-288-11	CARBON 0.47	5% 1/2W
				R406	1-260-127-11	CARBON 220K	5% 1/2W
				R411	1-214-909-00	METAL 68K	1% 1/2W
				R412	1-215-453-00	METAL 22K	1% 1/4W
				R413	1-215-449-00	METAL 15K	1% 1/4W
				R414	1-260-336-11	CARBON 4.7K	5% 1/2W
				R416	1-260-107-11	CARBON 4.7K	5% 1/2W
				R420	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
				R421	1-216-833-11	METAL CHIP 10K	5% 1/10W
				R423	1-216-864-11	SHORT CHIP 0	
				R424	1-218-899-11	METAL CHIP 150K	0.50% 1/16W
				R602	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
				R609	1-216-833-11	METAL CHIP 10K	5% 1/10W
				R612	1-215-429-00	METAL 1.5K (KV-SW212M50(Malaysia))	1% 1/4W
				R612	1-215-425-00	METAL 1.5K (Except KV-SW212M50(Malaysia))	1% 1/4W
				R616	1-205-998-11	METAL 1	5% 10W
				R616		(Except KV-SW212M50(Malaysia))	

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

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REF NO.	PART NO.	DESCRIPTION	REMARK	REF NO.	PART NO.	DESCRIPTION	REMARK
R616	1-220-820-31	METAL 1.5	5% 10W	R810	1-216-833-11	METAL CHIP 10K	5% 1/10W
R616		(KV-SW212M50(Malaysia))		R810		(KV-SW212M50(Malaysia)/M81/N60)	
R618	1-249-432-11	CARBON 18K	5% 1/4W	R812	1-216-837-11	METAL CHIP 22K	5% 1/10W
R619	1-216-361-00	METAL OXIDE 0.22	5% 2W	R812		(KV-SW212M50(Malaysia)/M81/N60)	
R619		(Except KV-SW212M50(Malaysia))		R813	1-216-837-11	METAL CHIP 22K	5% 1/10W
R619	1-216-363-21	METAL OXIDE 0.33	5% 2W	R813		(KV-SW212M50(Malaysia)/M81/N60)	
R619		(KV-SW212M50(Malaysia))		R814	1-216-809-11	METAL CHIP 100	5% 1/10W
R620	1-216-363-21	METAL OXIDE 0.33	5% 2W	R814		(KV-SW212M50(Malaysia)/M81/N60)	
R620		(KV-SW212M50(Malaysia))		R815	1-216-837-11	METAL CHIP 22K	5% 1/10W
R620	1-216-362-21	METAL OXIDE 0.27	5% 2W	R815		(KV-SW212M50(Malaysia)/M81/N60)	
R620		(Except KV-SW212M50(Malaysia))		R816	1-216-864-11	SHORT CHIP 0	
R621	1-249-409-11	CARBON 220	5% 1/4W	R816		(KV-SW212M50(Malaysia)/M81/N60)	
R623	1-218-877-11	METAL CHIP 18K	0.50% 1/10W	R817	1-216-833-11	METAL CHIP 10K	5% 1/10W
R624	1-215-429-00	METAL 2.2K	1% 1/4W	R817		(KV-SW212M50(Malaysia)/M81/N60)	
R625	1-216-864-11	SHORT CHIP 0		R818	1-216-833-11	METAL CHIP 10K	5% 1/10W
R627	1-249-385-11	CARBON 2.2	5% 1/4W	R818		(KV-SW212M50(Malaysia)/M81/N60)	
R631	1-249-425-11	CARBON 4.7K	5% 1/4W	R820	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
R634	1-216-829-11	METAL CHIP 4.7K	5% 1/10W	R821	1-216-837-11	METAL CHIP 22K	5% 1/10W
R635	1-216-833-11	METAL CHIP 10K	5% 1/10W	R822	1-249-417-11	CARBON 1K	5% 1/4W
R636	1-249-421-11	CARBON 2.2K	5% 1/4W	R823	1-245-468-21	METAL 180K	1% 1/4W
R638	1-220-820-31	METAL 1.5	5% 10W	R824	1-216-839-11	METAL CHIP 33K	5% 1/10W
R638		(KV-SW212M50(Malaysia))		R825	1-243-606-71	METAL OXIDE 1K	5% 3W
R638	1-240-262-11	METAL 0.68	5% 10W	R826	1-247-891-00	CARBON 330K	5% 1/4W
R638		(Except KV-SW212M50(Malaysia))		R827	1-216-369-00	METAL OXIDE 1	5% 2W
R645	1-218-899-11	METAL CHIP 150K	0.50% 1/16W	R828	1-243-606-71	METAL OXIDE 1K	5% 3W
R646	1-218-851-11	METAL CHIP 1.5K	0.50% 1/10W	R829	1-243-606-71	METAL OXIDE 1K	5% 3W
R647	1-216-821-11	METAL CHIP 1K	5% 1/10W	R830	1-260-332-51	CARBON 2.2K	5% 1/2W
R650	Δ 1-240-917-91	METAL 8.2M	5% 1W	R831	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
R655	1-216-809-11	METAL CHIP 100	5% 1/10W	R833	1-260-125-11	CARBON 150K	5% 1/2W
R656	1-249-381-11	CARBON 1	5% 1/4W	R834	1-245-468-21	METAL 180K	1% 1/4W
R658	1-245-480-21	METAL 560K	1% 1/4W	R835	1-260-127-11	CARBON 220K	5% 1/2W
R658		(KV-SW212M50(Malaysia))		R838	1-216-838-11	METAL CHIP 27K	5% 1/10W
R658	1-245-464-21	METAL 120K	1% 1/4W	R839	1-216-864-11	SHORT CHIP 0	
R658		(Except KV-SW212M50(Malaysia))		R843	1-216-864-11	SHORT CHIP 0	
R659	1-245-482-21	METAL 680K	1% 1/4W	R844	1-218-867-11	METAL CHIP 6.8K	0.50% 1/10W
R659		(KV-SW212M50(Malaysia))		R846	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
R659	1-245-470-21	METAL 220K	1% 1/4W	R847	1-216-833-11	METAL CHIP 10K	5% 1/10W
R659		(Except KV-SW212M50(Malaysia))		R851	1-216-821-11	METAL CHIP 1K	5% 1/10W
R660	1-245-478-21	METAL 470K	1% 1/4W	R852	1-218-871-11	METAL CHIP 10K	0.50% 1/10W
R661	1-245-480-21	METAL 560K	1% 1/4W	R853	1-218-859-11	METAL CHIP 3.3K	0.50% 1/10W
R667	1-216-821-11	METAL CHIP 1K	5% 1/10W	R854	1-218-877-11	METAL CHIP 18K	0.50% 1/10W
R668	1-216-839-11	METAL CHIP 33K	5% 1/10W	R855	1-218-871-11	METAL CHIP 10K	0.50% 1/10W
R800	1-216-825-11	METAL CHIP 2.2K	5% 1/10W	R856	1-218-871-11	METAL CHIP 10K	0.50% 1/10W
R800		(KV-SW212M50(Malaysia)/M81/N60)		R859	1-218-883-11	METAL CHIP 33K	0.50% 1/10W
R801	1-216-864-11	SHORT CHIP 0		R861	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
R801		(KV-SW212M50(Malaysia)/M81/N60)		R864	1-218-865-11	METAL CHIP 5.6K	0.50% 1/10W
R802	1-216-833-11	METAL CHIP 10K	5% 1/10W	R865	1-216-821-11	METAL CHIP 1K	5% 1/10W
R802		(KV-SW212M50(Malaysia)/M81/N60)		R866	1-218-895-11	METAL CHIP 100K	0.50% 1/10W
R803	1-216-833-11	METAL CHIP 10K	5% 1/10W	R868	1-249-393-11	CARBON 10	5% 1/4W
R803		(KV-SW212M50(Malaysia)/M81/N60)		R869	1-249-381-11	CARBON 1	5% 1/4W
R804	1-216-864-11	SHORT CHIP 0		R870	1-218-859-11	METAL CHIP 3.3K	0.50% 1/10W
R804		(KV-SW212M50(Malaysia)/M81/N60)		R871	1-243-692-71	METAL OXIDE 220	5% 1W
R805	1-216-837-11	METAL CHIP 22K	5% 1/10W	R872	1-216-864-11	SHORT CHIP 0	
R805		(KV-SW212M50(Malaysia)/M81/N60)		R873	1-216-841-11	METAL CHIP 47K	5% 1/10W
R806	1-216-864-11	SHORT CHIP 0		R876	1-216-833-11	METAL CHIP 10K	5% 1/10W
R806		(KV-SW212M50(Malaysia)/M81/N60)		R877	1-218-895-11	METAL CHIP 100K	0.50% 1/10W
R807	1-216-819-11	METAL CHIP 680	5% 1/10W	R878	1-216-349-00	METAL OXIDE 1	5% 1W
R807		(KV-SW212M50(Malaysia)/M81/N60)		R879	1-245-470-21	METAL 220K	1% 1/4W
R808	1-216-833-11	METAL CHIP 10K	5% 1/10W	R880	1-245-470-21	METAL 220K	1% 1/4W
R808		(KV-SW212M50(Malaysia)/M81/N60)		R881	1-218-871-11	METAL CHIP 10K	0.50% 1/10W
R809	1-216-833-11	METAL CHIP 10K	5% 1/10W	R882	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
R809		(KV-SW212M50(Malaysia)/M81/N60)					

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



REF NO.	PART NO.	DESCRIPTION	REMARK
R883	1-249-421-11	CARBON	2.2K 5% 1/4W
R887	1-216-837-11	METAL CHIP	22K 5% 1/10W
R888	1-218-887-11	METAL CHIP	47K 0.50% 1/10W
R889	1-243-531-71	METAL OXIDE	100 5% 3W
R890	1-215-910-00	METAL OXIDE	68 5% 3W
R890		(Except KV-SW212M83(India))	
R891	1-249-385-11	CARBON	2.2 5% 1/4W
R893	1-218-871-11	METAL CHIP	10K 0.50% 1/10W
R895	1-218-859-11	METAL CHIP	3.3K 0.50% 1/10W
R902	1-216-821-11	METAL CHIP	1K 5% 1/10W
R904	1-216-821-11	METAL CHIP	1K 5% 1/10W
R905	1-216-840-11	METAL CHIP	39K 5% 1/10W
R906	1-216-817-11	METAL CHIP	470 5% 1/10W
R907	1-216-840-11	METAL CHIP	39K 5% 1/10W
R908	1-216-840-11	METAL CHIP	39K 5% 1/10W
R909	1-216-840-11	METAL CHIP	39K 5% 1/10W
R910	1-216-817-11	METAL CHIP	470 5% 1/10W
R911	1-216-813-11	METAL CHIP	220 5% 1/10W
R913	1-216-853-11	METAL CHIP	470K 5% 1/10W
R914	1-216-853-11	METAL CHIP	470K 5% 1/10W
R915	1-216-849-11	METAL CHIP	220K 5% 1/10W
R916	1-216-849-11	METAL CHIP	220K 5% 1/10W
R917	1-218-285-11	METAL CHIP	75 5% 1/10W
R920	1-216-849-11	METAL CHIP	220K 5% 1/10W
R921	1-216-849-11	METAL CHIP	220K 5% 1/10W
R924	1-216-853-11	METAL CHIP	470K 5% 1/10W
R925	1-216-813-11	METAL CHIP	220 5% 1/10W
R926	1-216-813-11	METAL CHIP	220 5% 1/10W
R927	1-216-813-11	METAL CHIP	220 5% 1/10W
R928	1-218-285-11	METAL CHIP	75 5% 1/10W
R929	1-218-285-11	METAL CHIP	75 5% 1/10W
R930	1-218-285-11	METAL CHIP	75 5% 1/10W
R931	1-216-811-11	METAL CHIP	150 5% 1/10W
R932	1-216-864-11	SHORT CHIP	0
R933	1-216-864-11	SHORT CHIP	0
R940	1-216-849-11	METAL CHIP	220K 5% 1/10W
R941	1-216-849-11	METAL CHIP	220K 5% 1/10W
R945	1-216-833-11	METAL CHIP	10K 5% 1/10W
R946	1-216-833-11	METAL CHIP	10K 5% 1/10W
R989	1-216-833-11	METAL CHIP	10K 5% 1/10W
R991	1-216-810-11	METAL CHIP	120 5% 1/10W
R2646	1-249-381-11	CARBON	1 5% 1/4W
R2647	1-249-429-11	CARBON	10K 5% 1/4W
R8003	1-216-809-11	METAL CHIP	100 5% 1/10W
R8003		(KV-SW212M50(Malaysia)/M81/N60)	
R8004	1-216-809-11	METAL CHIP	100 5% 1/10W
R8004		(KV-SW212M50(Malaysia)/M81/N60)	
R8005	1-218-871-11	METAL CHIP	10K 0.50% 1/10W
R8005		(KV-SW212M50(Malaysia)/M81/N60)	
R8009	1-218-867-11	METAL CHIP	6.8K 0.50% 1/10W
R8010	1-245-464-21	METAL	120K 1% 1/4W
R8011	1-216-841-11	METAL CHIP	47K 5% 1/10W
R8012	1-216-841-11	METAL CHIP	47K 5% 1/10W
R8013	1-245-462-21	METAL	100K 1% 1/4W
R9005	1-216-864-11	SHORT CHIP	0
R9006	1-216-864-11	SHORT CHIP	0
R9017	1-216-809-11	METAL CHIP	100 5% 1/10W
R9018	1-216-809-11	METAL CHIP	100 5% 1/10W
R9019	1-216-809-11	METAL CHIP	100 5% 1/10W
R9020	1-216-809-11	METAL CHIP	100 5% 1/10W
R9021	1-216-809-11	METAL CHIP	100 5% 1/10W

REF NO.	PART NO.	DESCRIPTION	REMARK
R9022	1-216-809-11	METAL CHIP	100 5% 1/10W
R9023	1-216-809-11	METAL CHIP	100 5% 1/10W
R9025	1-216-809-11	METAL CHIP	100 5% 1/10W
R9026	1-216-838-11	METAL CHIP	27K 5% 1/10W
R9027	1-216-838-11	METAL CHIP	27K 5% 1/10W
R9028	1-216-809-11	METAL CHIP	100 5% 1/10W
R9030	1-216-809-11	METAL CHIP	100 5% 1/10W
R9031	1-216-809-11	METAL CHIP	100 5% 1/10W
R9036	1-216-809-11	METAL CHIP	100 5% 1/10W
R9050	1-216-864-11	SHORT CHIP	0
R9053	1-218-285-11	METAL CHIP	75 5% 1/10W
<RELAY>			
RY600	Δ 1-755-198-12	RELAY, AC POWER (Except KV-SW212M83(India))	
RY600	Δ 1-755-318-11	RELAY, POWER (KV-SW212M83(India))	
<SWITCH>			
S600	Δ 1-786-649-12	SWITCH, AC POWER PUSH	
S800	1-572-707-11	SWITCH, LEVER (Except KV-SW212M83(India))	
SWF100	1-781-042-11	FILTER, SURFACE WAVE	
SWF100		(KV-SW212M50/M81/M83(Saudi Arabia)/M83(H))	
SWF100	1-781-040-11	FILTER, SURFACE WAVE	
SWF100		(KV-SW212M83(India))	
SWF100	1-795-929-12	SAW FILTER (KV-SW212N60)	
SWF100	1-577-169-12	SAWF (KV-SW212P50)	
SWF101	1-813-391-11	FILTER,SURFACE WAVE (41.25MHZ)	
SWF101		(KV-SW212N60)	
SWF101	1-767-302-11	FILTER, SURFACE WAVE	
SWF101		(KV-SW212M83(India))	
<TRANSFORMER>			
T600	Δ 1-435-212-11	TRANSFORMER, LINE FILTER	
T602	Δ 1-439-695-21	CONVERTER TRANSFORMER (SRT)	
T602		(KV-SW212M50(GE)/M81/N60/P50)	
T602	Δ 1-439-698-21	CONVERTER TRANSFORMER (SRT)	
T602		(KV-SW212M50(Malaysia))	
T602	Δ 1-439-694-11	CONVERTER TRANSFORMER (SRT)	
T602		(KV-SW212M83/M83(H))	
T603	Δ 1-435-212-11	TRANSFORMER, LINE FILTER	
T603		(KV-SW212M81(Russia)/M83(Saudi Arabia)/M83(H))	
T800	1-437-936-22	FERRITE TRANSFORMER (HDT)	
T801	Δ 1-453-482-11	TRANSFORMER ASSY FLYBACK	
T801		(NX-4800/M3A4)(Except KV-SW212M83(India))	
T801	Δ 1-453-329-41	TRANSFORMER ASSY FLYBACK	
T801		(NX-4751/M3A4)(KV-SW212M83(India))	
<THERMISTOR>			
THP600	Δ 1-805-810-11	THERMISTOR, PTC	
TP02	1-536-354-00	POST PIN	
TP03	1-536-354-00	POST PIN	
TP04	1-536-354-00	POST PIN	
TP601	1-536-354-00	POST PIN	
TP602	1-536-354-00	POST PIN	

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

A **C** **J**

REF NO.	PART NO.	DESCRIPTION	REMARK
		<TUNER>	
TU101	8-597-518-00	TUNER (FSS BTP-AA411)(KV-SW212N60)	
TU102	1-693-714-11	TUNER (TEQE3-901A)	
TU102		(Except KV-SW212M83(India)/N60)	
TU102	8-597-962-00	TUNER, FSS BTP-AG411 (KV-SW212M83(India))	
		<VARISTOR>	
VDR600	1-804-995-11	VARISTOR	
		<CRYSTAL>	
X001	1-813-311-21	QUARTS CRYSTAL UNIT	

	* A-1186-428-A	MOUNTED PWB (VAR), C (KV-SW212M83(India))	
	* A-1185-952-A	MOUNTED PWB (VAR), C (Except KV-SW212M83(India)) *****	
	4-382-854-01	SCREW (M3X8), P, SW (+)	
		<CAPACITOR>	
C751	1-107-961-91	ELECT 10UF 20% 250V	
C752	1-115-350-51	CERAMIC 0.0047UF 2KV	
C753	1-162-318-11	CERAMIC 0.001UF 10.00% 500V	
C754	1-107-651-11	ELECT 4.7UF 20.00% 250V	
C781	1-107-651-11	ELECT 4.7UF 20.00% 250V	
C782	1-102-121-00	CERAMIC 0.0022UF 10.00% 50V	
C783	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C786	1-162-964-11	CERAMIC CHIP 0.001UF 10.00% 50V	
C787	1-164-645-11	CERAMIC 1000PF 10.00% 500V	
		<CONNECTOR>	
* CN701	1-564-510-11	PLUG, CONNECTOR 7P	
* CN703	1-564-508-11	PLUG, CONNECTOR 5P	
CN704	1-695-915-11	TAB (CONTACT)	
CN705	1-695-915-11	TAB (CONTACT)	
CN706	1-695-915-11	TAB (CONTACT)	
		<DIODE>	
D750	8-719-083-20	DIODE PG102R	
D754	8-719-970-83	DIODE HSS82-TJ	
D755	8-719-970-83	DIODE HSS82-TJ	
D756	8-719-970-83	DIODE HSS82-TJ	
D780	8-719-991-33	DIODE 1SS133T-77	
D781	8-719-991-33	DIODE 1SS133T-77	
D782	8-719-036-94	DIODE RD5.6SB-T1	
		<IC>	
IC751	6-709-352-01	IC TDA6108AJF/N2	
		<JACK>	
J751	Δ 1-451-544-11	SOCKET, CRT	

REF NO.	PART NO.	DESCRIPTION	REMARK
		<COIL>	
L780	1-414-742-21	INDUCTOR 22UH	
		<RESISTOR>	
R713	1-216-864-11	SHORT CHIP 0	
R752	1-216-819-11	METAL CHIP 680 5% 1/10W	
R753	1-216-819-11	METAL CHIP 680 5% 1/10W	
R754	1-216-819-11	METAL CHIP 680 5% 1/10W	
R756	1-219-746-11	METAL 1K 5% 1/2W	
R757	1-219-746-11	METAL 1K 5% 1/2W	
R758	1-219-746-11	METAL 1K 5% 1/2W	
R763	1-260-087-11	CARBON 100 5% 1/2W	
R764	1-260-087-11	CARBON 100 5% 1/2W	
R765	1-260-087-11	CARBON 100 5% 1/2W	
R773	1-260-132-11	CARBON 560K 5% 1/2W	
R774	1-215-912-11	METAL OXIDE 150 5% 3W	
R780	1-260-131-11	CARBON 470K 5% 1/2W	
R781	1-243-950-71	METAL OXIDE 0.56 5% 2W	
R783	1-260-087-11	CARBON 100 5% 1/2W	
R794	1-249-377-11	CARBON 0.47 5% 1/4W	
R795	1-260-352-11	CARBON 100K 5% 1/2W	
R796	1-249-397-11	CARBON 22 5% 1/4W	
		<VARIABLE RESISTOR>	
RV750	1-241-656-21	RES, ADJ, METAL FILM 110M	

	* A-1146-422-A	MOUNTED PWB, J (KV-SW212M83(India))	
	* A-1119-145-A	MOUNTED PWB, J (KV-SW212M83(Saudi Arabia)/M83/H) *****	
	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3 (KV-SW212M83(India))	
		<CONNECTOR>	
*CN3400	1-564-518-11	PLUG, CONNECTOR 3P	
		<DIODE>	
D3400	8-719-982-19	DIODE MTZJ-30A	
D3401	8-719-982-19	DIODE MTZJ-30A	

		<ACCESSORIES AND PACKING MATERIALS> *****	
	2-651-491-01	SCREW, SPECIAL (Except KV-SW212M83(India))	
	* 2-591-334-03	INDIVIDUAL CARTON (Except KV-SW212M83/M83/H)	
	* 2-678-530-01	INDIVIDUAL CARTON (KV-SW212M83(India))	
	* 2-594-164-03	INDIVIDUAL CARTON (KV-SW212M83(Saudi Arabia)/M83/H)	
	2-637-162-01	BAND, HOLD (Except KV-SW212M83(India))	
	4-392-003-21	BAND, HOLDING (KV-SW212M83(India))	
	* 2-681-523-01	CUSHION, UPPER (Except KV-SW212M83/M83/H)	

<u>REF NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>	<u>REF NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>
*	2-594-165-01	CUSHION, UPPER (REAR) (KV-SW212M83/M83/H)					
*	2-594-166-01	CUSHION, UPPER (FRONT) (KV-SW212M83/M83/H)					
	3-701-910-00	SCREW, SPECIAL (DIA. 3.8X20) (KV-SW212M83(India))					
*	2-681-524-01	CUSHION, LOWER (Except KV-SW212M83/M83/H)					
*	2-589-731-01	CUSHION, LOWER (KV-SW212M83/M83/H)					
	2-683-570-11	MANUAL, INSTRUCTION (KV-SW212M50(GE)/P50)					
	2-682-380-11	MANUAL, INSTRUCTION (KV-SW212M50(Malaysia))					
	2-682-383-11	MANUAL, INSTRUCTION (KV-SW212M8(Russia))					
	2-677-386-11	MANUAL (FOLDING), INSTRUCTION (KV-SW212M83(India))					
	2-671-044-11	MANUAL, INSTRUCTION (KV-SW212M81(Middle East)/ M83(Saudi Arabia)/M83/H)					
	2-680-254-11	MANUAL (FOLDING), INSTRUCTION (KV-SW212N60)					
*	4-039-372-01	BAG, PROTECTION (Except KV-SW212M83(India))					
*	2-067-522-21	BAG, PROTECTION (KV-SW212M83(India))					
	4-059-705-01	CLIP (KV-SW212M83(India))					
*	1-501-730-11	ANTENNA, TELESCOPIC (KV-SW212M50(GE)/M83(Saudi Arabia)/M83/H/P50)					
*	1-417-151-61	MATCHING TRANSFORMER ANTENNA (KV-SW212M50(GE)/M83(Saudi Arabia)/M83/H/P50)					

		<REMOTE COMMANDER> *****					
	1-479-379-11	REMOTE COMMANDER (RM-GA002)					
	4-084-290-01	BATTERY COVER REMOTE COMMANDER					

SUPPLEMENT-1

BX1S CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>	<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>
KV-SW212M50	RM-GA002	GE	SCC-V44G-A				
KV-SW212M50	RM-GA002	Malaysia	SCC-V37Q-A				
KV-SW212M81	RM-GA002	Middle East	SCC-V40T-A				
KV-SW212M81	RM-GA002	Russia	SCC-V13X-A				
KV-SW212M83	RM-GA002	India	SCC-V45P-A				
KV-SW212M83	RM-GA002	Saudi Arabia	SCC-V26Y-A				
KV-SW212M83/H	RM-GA002	Saudi Arabia	SCC-V64A-A				
KV-SW212N60	RM-GA002	Philippines	SCC-V41N-A				
KV-SW212P50	RM-GA002	E	SCC-V21Y-A				

Subject : Add new model KV-SW212M81(Russia) Made in Russia

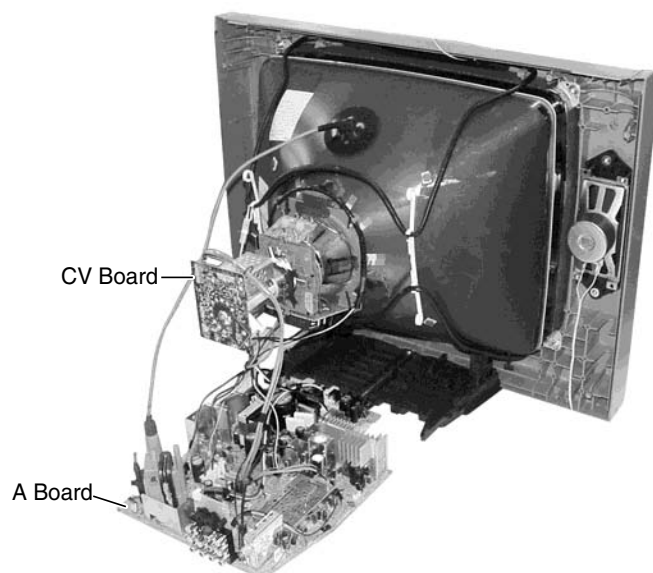
<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>	<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>
KV-SW212M50	RM-GA002	GE	SCC-V44G-A				
KV-SW212M50	RM-GA002	Malaysia	SCC-V37Q-A				
KV-SW212M81	RM-GA002	Middle East	SCC-V40T-A				
KV-SW212M81	RM-GA002	Russia	SCC-V13X-A				
KV-SW212M81	RM-GA002	Russia	SCC----- (Made in Russia)				
KV-SW212M83	RM-GA002	India	SCC-V45P-A				
KV-SW212M83	RM-GA002	Saudi Arabia	SCC-V26Y-A				
KV-SW212M83/H	RM-GA002	Saudi Arabia	SCC-V64A-A				
KV-SW212N60	RM-GA002	Philippines	SCC-V41N-A				
KV-SW212P50	RM-GA002	E	SCC-V21Y-A				

Note: Please take note that all information in this supplement is applicable for model KV-SW212M81(Russia)
Made in Russia only.

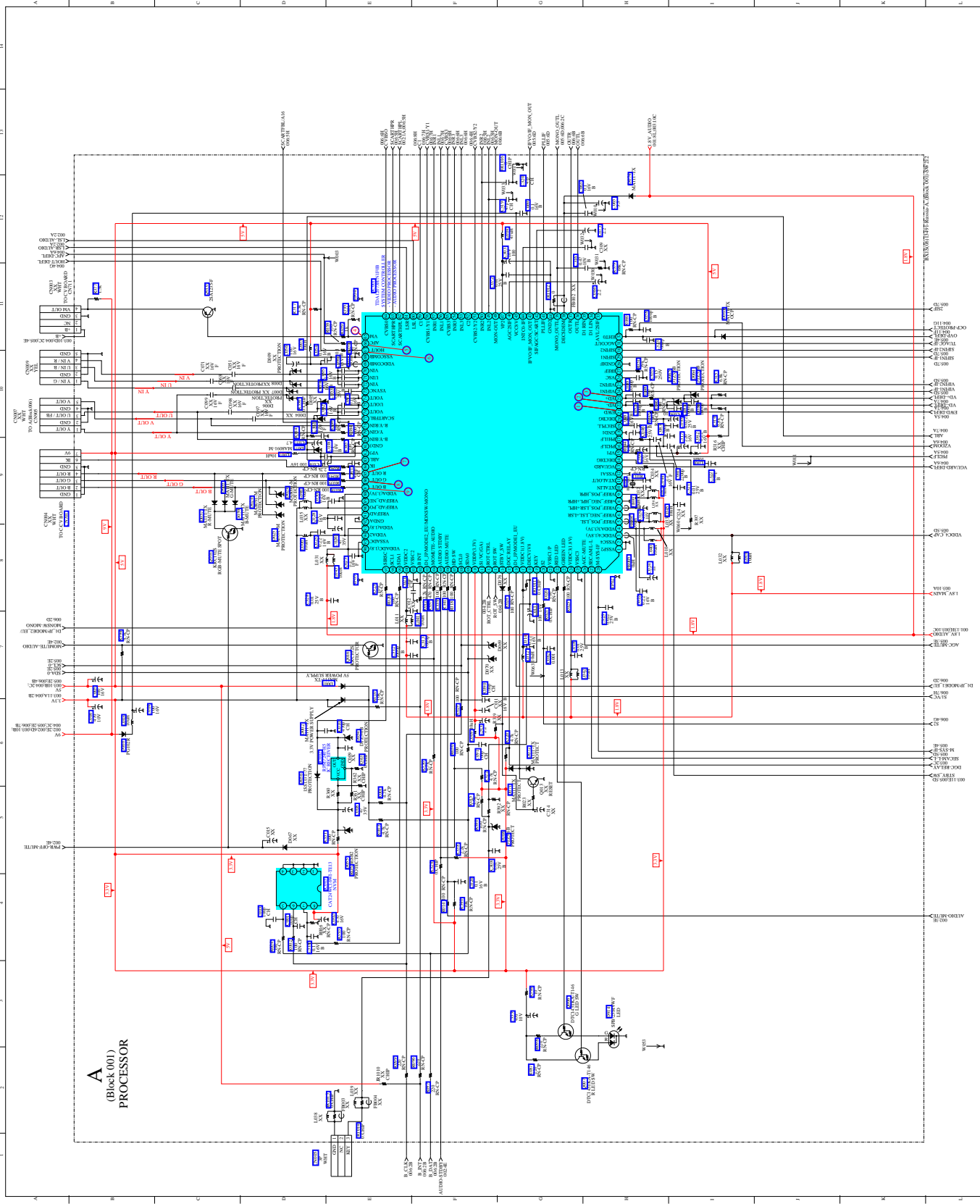
SECTION 4

DIAGRAMS

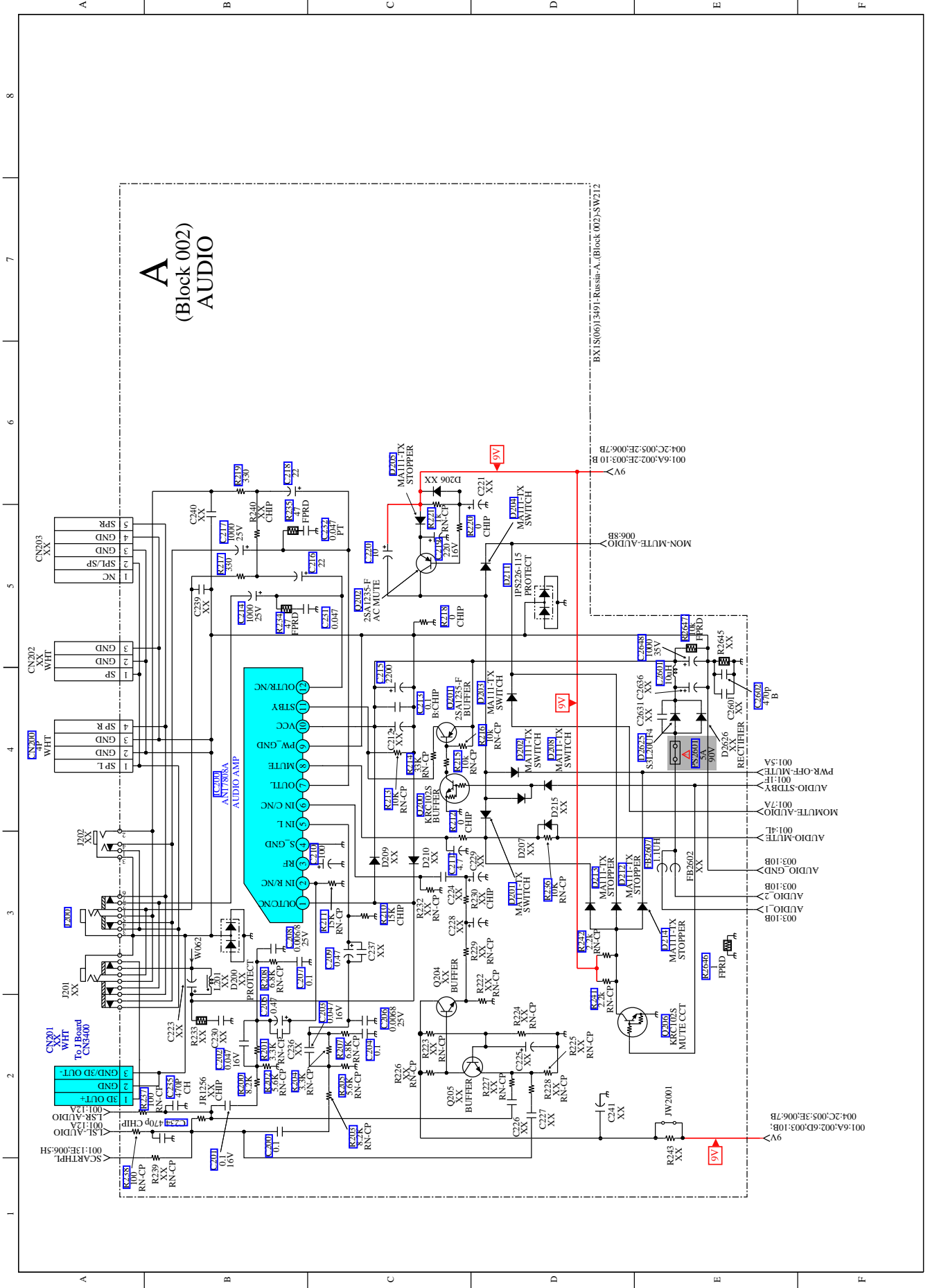
4-2. CIRCUIT BOARDS LOCATION



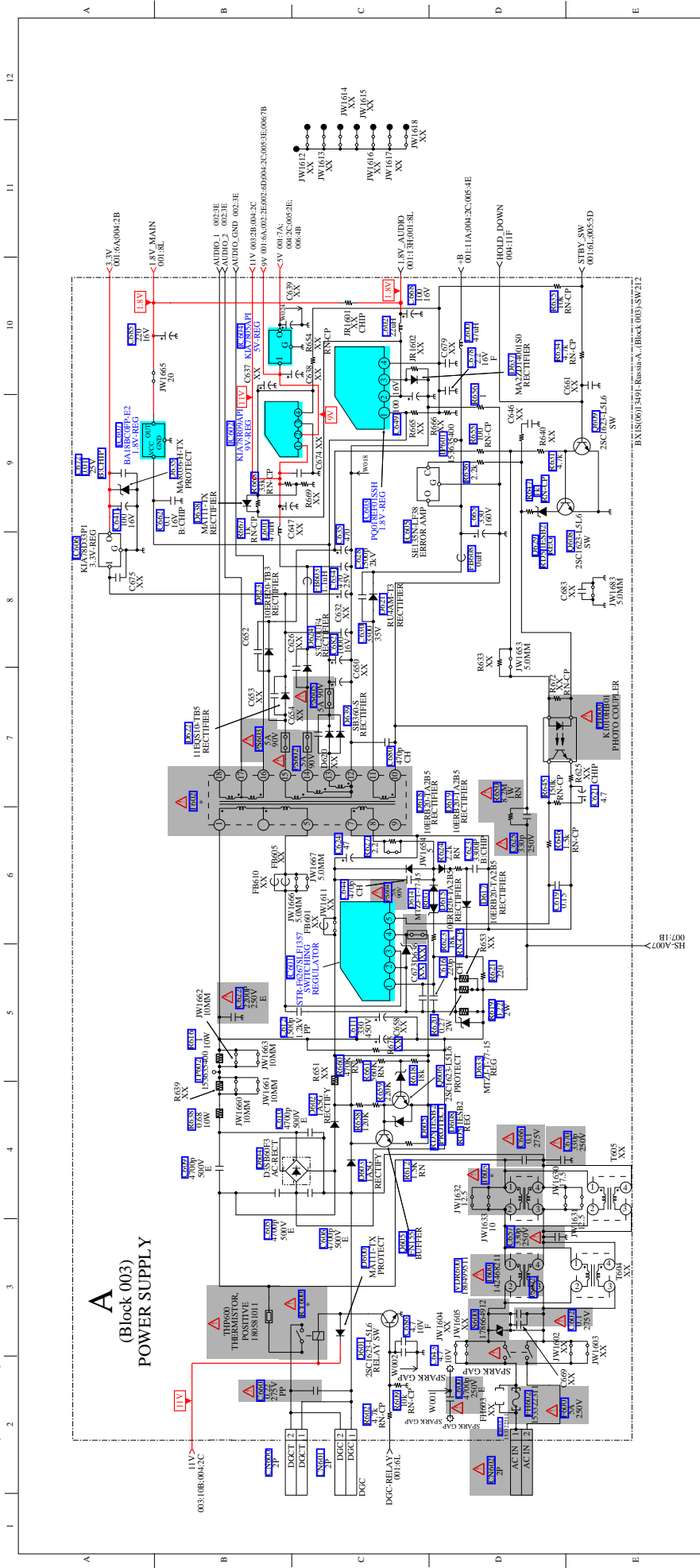
4-3-1. A Board — (Block 001)



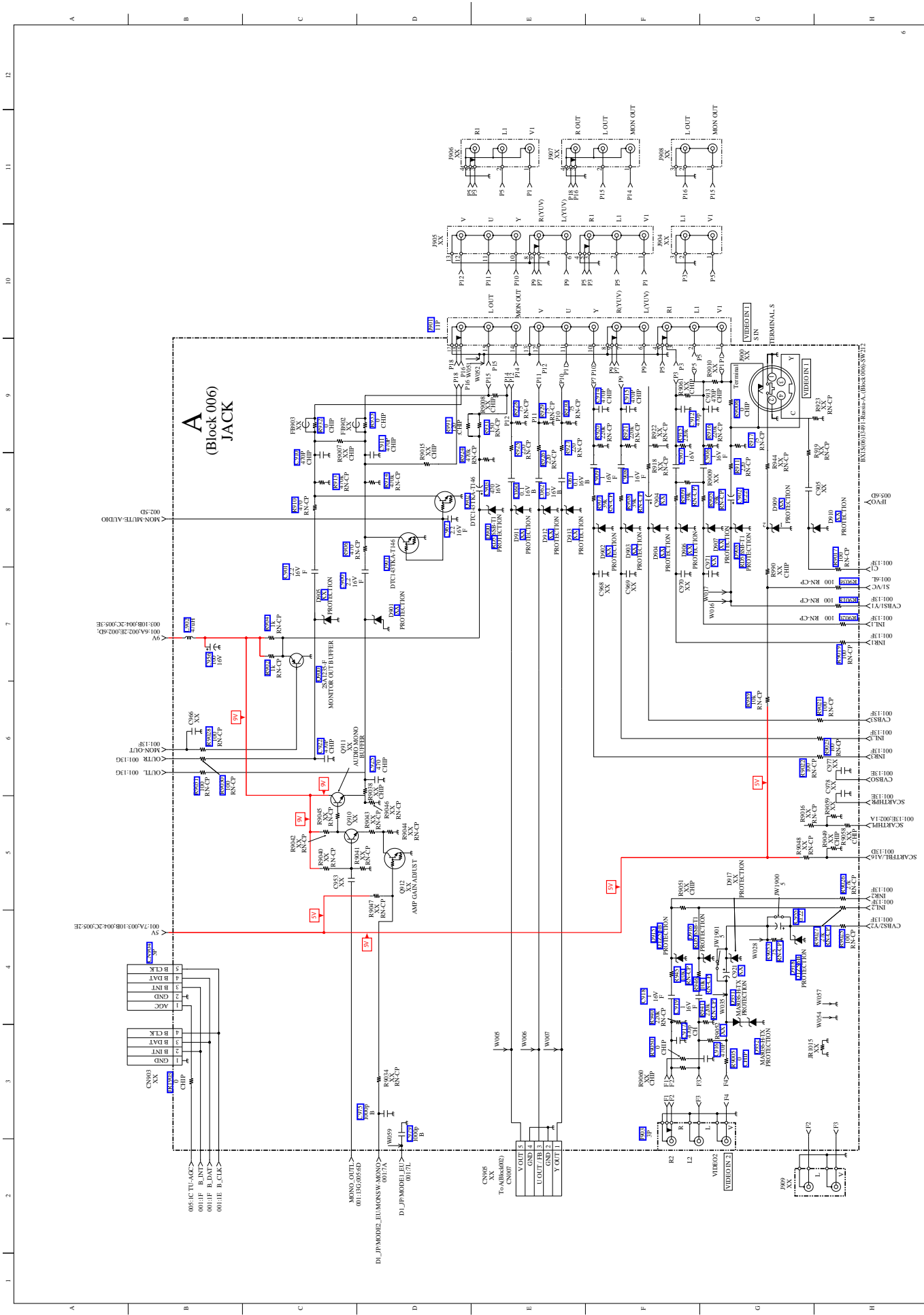
4-3-2. A Board — (Block 002)



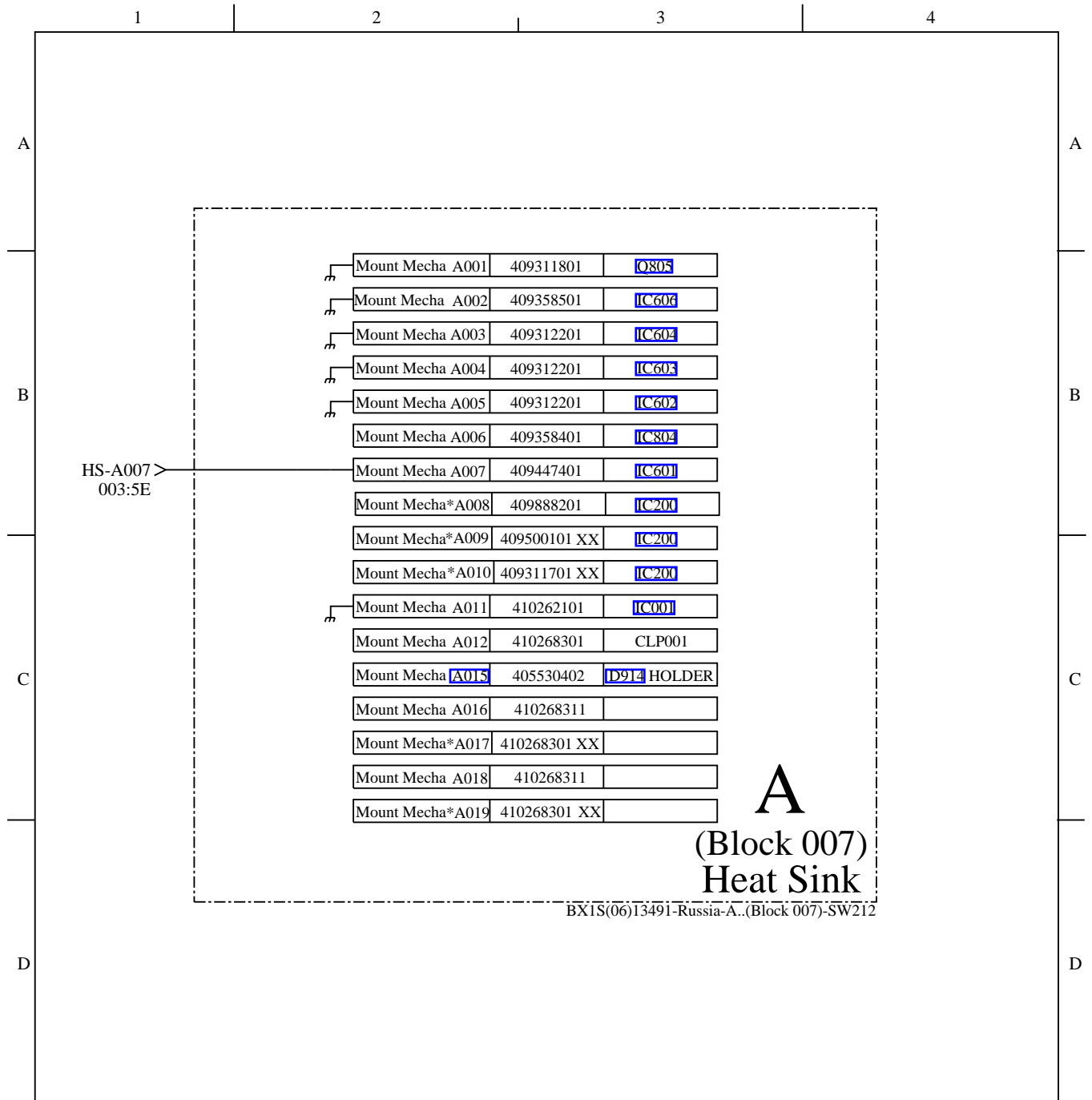
4-3-3. A Board — (Block 003)



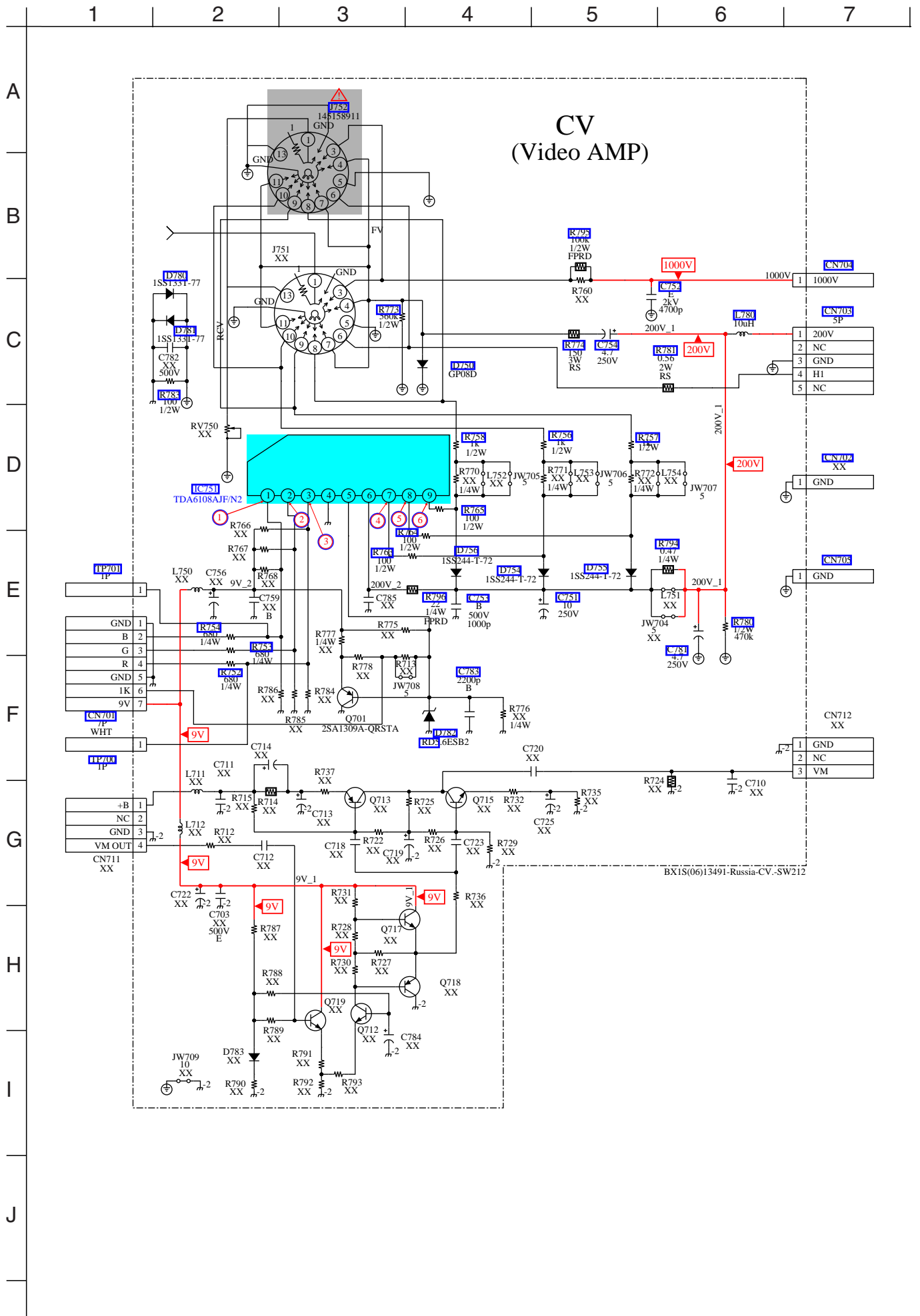
4-3-6. A Board — (Block 006)



4-3-7. A Board — (Block 007)



4-3-8. CV Board Schematic Diagram



KV-SW212M50/M81/M83/M83/H/N60/P50
RM-GA002

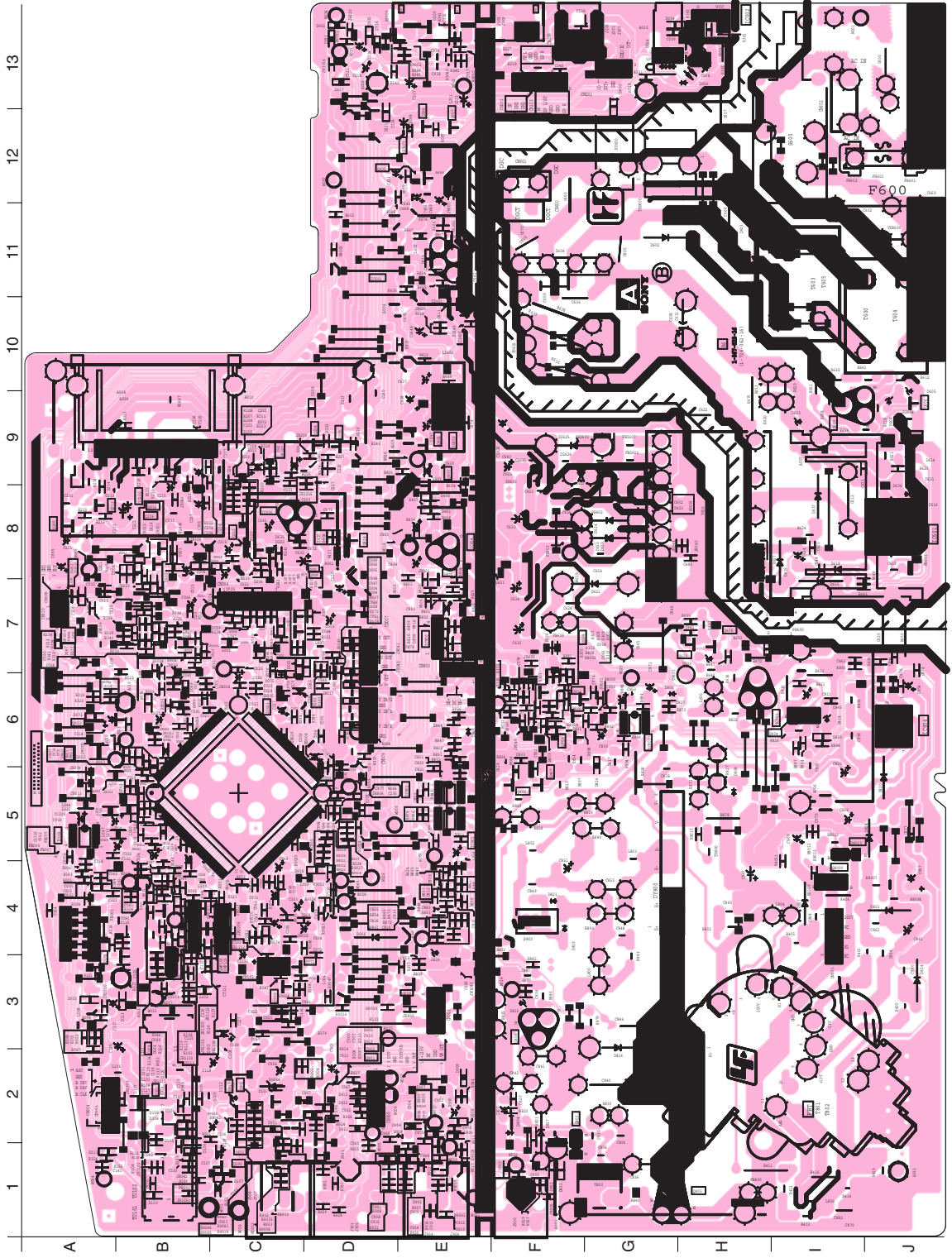
KV-SW212M50/M81/M83/M83/H/N60/P50
RM-GA002

4-5. PRINTED WIRING BOARDS

A [PROCESSOR, AUDIO, POWER SUPPLY, DEFLECTION, TUNER, JACK, HEAT SINK]

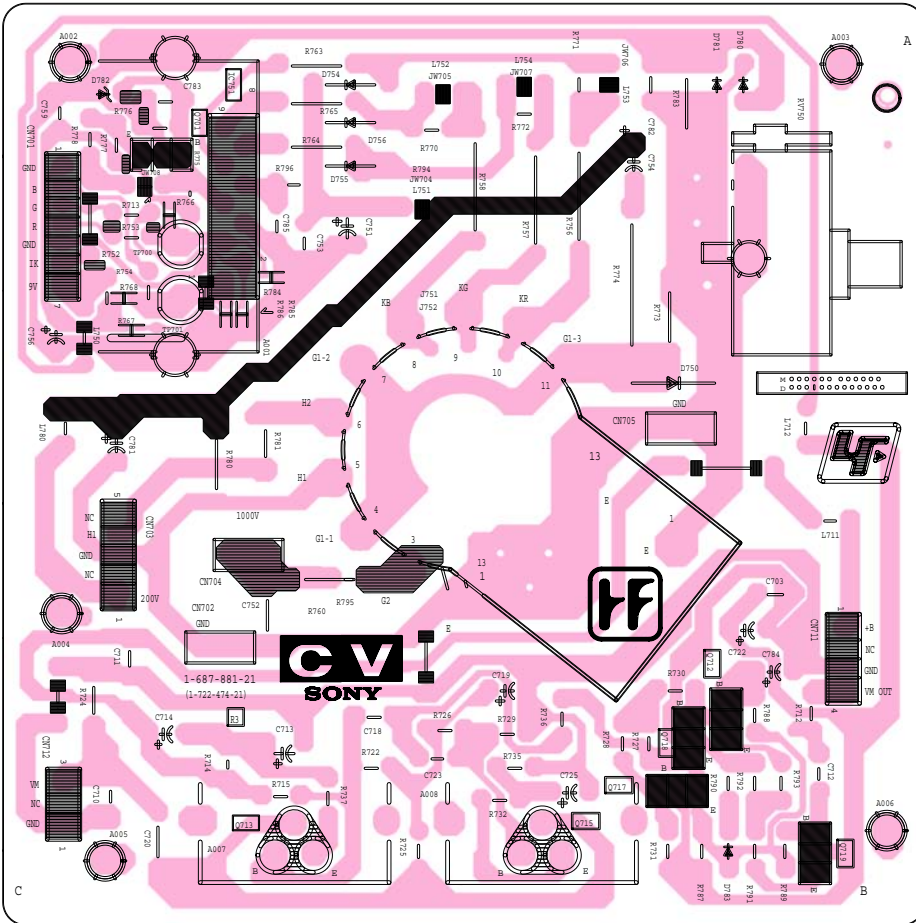
- A Board -

NOTE:
The circuit indicated at left contains high voltage of over 1220 Vp-p. Please pay attention when inspecting or repairing it to prevent an electric shock.





- CV Board -



SECTION 5 EXPLODED VIEWS

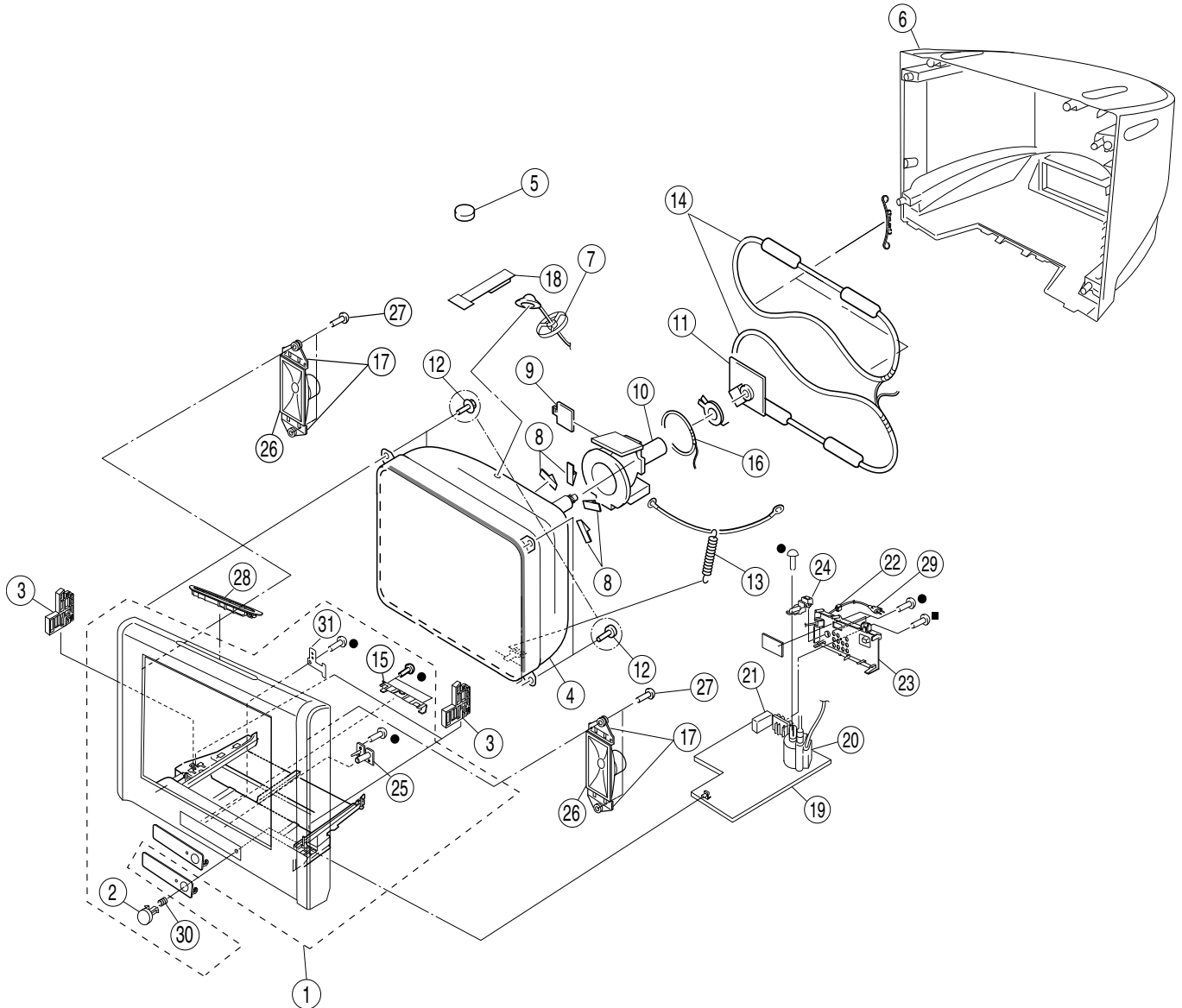
NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

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

5-1. PICTURE TUBE, SPEAKER BRACKET, CHASSIS

- : 7-685-648-79 SCREW +BVTP 3 × 12
- : 7-685-663-71 SCREW +BVTP 4 × 16



<u>REF. NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>
1	X-2149-457-1	BEZNET ASSY	2,15,25,30,31
2	2-584-668-01	BUTTON POWER	
3	* 4-092-371-31	SUPPORT, CRT(21)	
4	△ 8-738-870-05	PICTURE TUBE (A51LPT70X)	
5	1-452-032-00	MAGNET DISC	
6	△ 2-583-862-03	COVER REAR(21) (■ 8 screws)	
7	* 2-656-888-02	HOLDER HV CABLE COMBI	
8	4-046-600-01	SPACER DY	
9	4-057-714-01	PIECE TLH CONVERGENCE	
10	△ 8-451-505-61	DEFLECTION YOKE (Y21RSA-S3)	
11	* A-1197-870-A	MOUNTED PWB(VAR) CV	
12	4-057-862-01	SCREW, TAPPING 5 + CROWN WASHER	
13	4-095-706-01	SPRING EXTENSION	
14	△ 1-457-281-11	DEGAUSSING COIL	
15	* 4-093-771-01	COVER, FRONT PANEL	
16	1-437-572-11	COIL, NA ROTATION	
17	* 4-046-981-04	BRACKET, SPEAKER	
18	4-094-690-01	PIECE A(90), CONV.CORRECT	
19	* A-1209-838-A	COMPLETE PWB, A	
20	△ 1-453-482-11	TRANSFORMER ASSY FLYBACK (NX-4800/M3A4)	
21	1-693-714-11	TUNER (TEQE3-901A)	
22	4-022-115-00	HOLDER, AC CORD	
23	* 4-095-890-21	BRACKET, TERMINAL(ICON)	
24	* 4-092-370-03	BRACKET, FBT	
25	* 2-584-669-01	GUIDE LIGHT	
26	1-825-691-12	SPEAKER (15x6.5CM)	
27	4-095-941-01	SCREW(WH DIA.16)(+P 4x16)	
28	1-479-380-11	TOP SWITCH BLOCK	
29	△ 1-824-968-11	POWER CORD(WITH CONNECTOR)	
30	4-036-405-11	SPRING COMPRESSION	
31	4-093-704-01	SPRING DOOR	

<u>REF. NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>
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SECTION 6 ELECTRICAL PARTS LIST

NOTE:

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

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

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

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

- All resistors are in ohms
- F : nonflammable

CAPACITORS

- MF : μ F, PF : $\mu\mu$ F

COILS

- MMH : mH, UH : μ H

REF NO.	PART NO.	DESCRIPTION	REMARK	REF NO.	PART NO.	DESCRIPTION	REMARK
	* A-1209-838-A	COMPLETE PWB, A *****		C065	1-126-962-11	ELECT	3.3UF 20.00% 50V
	4-382-854-01	SCREW (M3X8), P, SW (+)		C067	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V
	4-382-854-21	SCREW (M3X14), P, SW (+)		C069	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V
* A015	4-055-304-01	HOLDER, LED		C070	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V
		<CAPACITOR>		C072	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V
C001	1-162-927-11	CERAMIC CHIP	100PF 5.00% 50V	C073	1-126-961-11	ELECT	2.2UF 20.00% 50V
C002	1-126-935-11	ELECT	470UF 20.00% 16V	C077	1-165-176-11	CERAMIC CHIP	0.047UF 10.00% 16V
C003	1-162-927-11	CERAMIC CHIP	100PF 5.00% 50V	C078	1-162-925-11	CERAMIC CHIP	68PF 5.00% 50V
C004	1-126-933-11	ELECT	100UF 20.00% 16V	C080	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V
C005	1-126-933-11	ELECT	100UF 20.00% 16V	C081	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V
C006	1-126-925-91	ELECT	470UF 20.00% 10V	C082	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V
C008	1-126-947-11	ELECT	47UF 20.00% 35V	C083	1-162-979-11	CERAMIC CHIP	0.0027UF 10.00% 50V
C010	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V	C089	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V
C013	1-126-933-11	ELECT	100UF 20.00% 16V	C090	1-162-927-11	CERAMIC CHIP	100PF 5.00% 50V
C014	1-127-715-91	CERAMIC CHIP	0.22UF 10% 16V	C091	1-162-927-11	CERAMIC CHIP	100PF 5.00% 50V
C018	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V	C092	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V
C020	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V	C093	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V
C021	1-162-927-11	CERAMIC CHIP	100PF 5.00% 50V	C094	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V
C022	1-127-715-91	CERAMIC CHIP	0.22UF 10% 16V	C095	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V
C023	1-164-505-11	CERAMIC CHIP	2.2UF 16V	C096	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V
C024	1-126-965-91	ELECT	22UF 20.00% 50V	C100	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V
C025	1-127-715-91	CERAMIC CHIP	0.22UF 10% 16V	C101	1-126-964-11	ELECT	10UF 20.00% 50V
C026	1-126-947-11	ELECT	47UF 20.00% 35V	C102	1-162-927-11	CERAMIC CHIP	100PF 5.00% 50V
C028	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V	C104	1-162-927-11	CERAMIC CHIP	100PF 5.00% 50V
C029	1-126-925-91	ELECT	470UF 20.00% 10V	C106	1-126-963-11	ELECT	4.7UF 20.00% 50V
C030	1-127-715-91	CERAMIC CHIP	0.22UF 10% 16V	C107	1-126-935-11	ELECT	470UF 20.00% 16V
C036	1-126-933-11	ELECT	100UF 20.00% 16V	C108	1-126-935-11	ELECT	470UF 20.00% 16V
C037	1-126-963-11	ELECT	4.7UF 20.00% 50V	C109	1-162-968-11	CERAMIC CHIP	0.0047UF 10.00% 50V
C038	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V	C111	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V
C041	1-162-966-11	CERAMIC CHIP	0.0022UF 10.00% 50V	C115	1-162-968-11	CERAMIC CHIP	0.0047UF 10.00% 50V
C042	1-127-715-91	CERAMIC CHIP	0.22UF 10% 16V	C116	1-162-968-11	CERAMIC CHIP	0.0047UF 10.00% 50V
C044	1-164-505-11	CERAMIC CHIP	2.2UF 16V	C117	1-164-381-91	CERAMIC CHIP	62PF 5.00% 50V
C046	1-162-969-11	CERAMIC CHIP	0.0068UF 10.00% 25V	C118	1-126-965-91	ELECT	22UF 20.00% 50V
C048	1-127-715-91	CERAMIC CHIP	0.22UF 10% 16V	C119	1-163-021-91	CERAMIC CHIP	0.01UF 10.00% 50V
C049	1-164-227-11	CERAMIC CHIP	0.022UF 10.00% 25V	C120	1-126-935-11	ELECT	470UF 20.00% 16V
C050	1-126-964-11	ELECT	10UF 20.00% 50V	C133	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V
C052	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V	C135	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V
C053	1-164-227-11	CERAMIC CHIP	0.022UF 10.00% 25V	C137	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V
C054	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V	C138	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V
C055	1-100-829-11	FILM	0.15UF 5% 250V	C140	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V
C056	1-126-933-11	ELECT	100UF 20.00% 16V	C200	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V
C057	1-162-970-11	CERAMIC CHIP	0.01UF 10.00% 25V	C201	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V
C058	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V	C202	1-165-176-11	CERAMIC CHIP	0.047UF 10.00% 16V
C060	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V	C203	1-165-176-11	CERAMIC CHIP	0.047UF 10.00% 16V
C061	1-162-968-11	CERAMIC CHIP	0.0047UF 10.00% 50V	C204	1-130-495-00	MYLAR	0.1UF 5.00% 50V
C062	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V	C205	1-126-959-11	ELECT	0.47UF 20.00% 50V
C063	1-107-826-11	CERAMIC CHIP	0.1UF 10.00% 16V	C206	1-162-969-11	CERAMIC CHIP	0.0068UF 10.00% 25V
C064	1-126-961-11	ELECT	2.2UF 20.00% 50V	C207	1-130-495-00	MYLAR	0.1UF 5.00% 50V
				C208	1-162-969-11	CERAMIC CHIP	0.0068UF 10.00% 25V
				C209	1-126-959-11	ELECT	0.47UF 20.00% 50V

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

A

REF NO.	PART NO.	DESCRIPTION	REMARK			REF NO.	PART NO.	DESCRIPTION	REMARK		
C210	1-126-968-11	ELECT	100UF	20.00%	50V	C665	1-110-626-11	ELECT	330UF	20.00%	160V
C211	1-126-963-11	ELECT	4.7UF	20.00%	50V	C666	Δ 1-165-538-31	FILM	0.1UF	10%	275V
C213	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V	C668	1-126-933-11	ELECT	100UF	20.00%	16V
C214	1-126-942-61	ELECT	1000UF	20.00%	25V	C670	Δ 1-127-943-51	CERAMIC	330PF	10%	250V
C215	1-128-550-11	ELECT	2200UF	20.00%	50V	C672	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C216	1-126-965-91	ELECT	22UF	20.00%	50V	C678	1-164-505-11	CERAMIC CHIP	2.2UF		16V
C217	1-126-942-61	ELECT	1000UF	20.00%	25V	C680	1-164-315-11	CERAMIC CHIP	470PF	5.00%	50V
C218	1-126-965-91	ELECT	22UF	20.00%	50V	C682	1-115-466-91	ELECT	1000UF	20.00%	16V
C219	1-126-934-11	ELECT	220UF	20.00%	16V	C685	1-126-934-11	ELECT	220UF	20.00%	16V
C220	1-126-964-11	ELECT	10UF	20.00%	50V	C686	1-117-720-11	CERAMIC CHIP	4.7UF		10V
C231	1-137-374-11	MYLAR	0.047UF	5.00%	50V	C800	1-126-963-11	ELECT	4.7UF	20.00%	50V
C232	1-137-374-11	MYLAR	0.047UF	5.00%	50V	C803	1-126-947-11	ELECT	47UF	20.00%	35V
C234	1-164-315-11	CERAMIC CHIP	470PF	5.00%	50V	C804	1-126-964-11	ELECT	10UF	20.00%	50V
C235	1-164-315-11	CERAMIC CHIP	470PF	5.00%	50V	C805	1-126-960-11	ELECT	1UF	20.00%	50V
C300	1-127-715-91	CERAMIC CHIP	0.22UF	10%	16V	C806	1-106-375-12	MYLAR	0.022UF	5.00%	200V
C301	1-164-315-11	CERAMIC CHIP	470PF	5.00%	50V	C807	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C302	1-164-505-11	CERAMIC CHIP	2.2UF		16V	C808	1-102-244-00	CERAMIC	220PF	10.00%	500V
C303	1-126-933-11	ELECT	100UF	20.00%	16V	C809	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C304	1-126-933-11	ELECT	100UF	20.00%	16V	C810	1-162-318-11	CERAMIC	0.001UF	10.00%	500V
C308	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V	C811	1-126-925-91	ELECT	470UF	20.00%	10V
C311	1-126-961-11	ELECT	2.2UF	20.00%	50V	C822	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C312	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V	C825	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C313	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V	C826	1-164-227-11	CERAMIC CHIP	0.022UF	10.00%	25V
C316	1-125-891-11	CERAMIC CHIP	0.47UF	10.00%	10V	C828	1-126-933-11	ELECT	100UF	20.00%	16V
C317	1-126-934-11	ELECT	220UF	20.00%	16V	C830	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C318	1-107-826-11	CERAMIC CHIP	0.1UF	10.00%	16V	C831	1-107-826-11	CERAMIC CHIP	0.1UF	10.00%	16V
C319	1-162-923-11	CERAMIC CHIP	47PF	5.00%	50V	C832	1-164-230-11	CERAMIC CHIP	220PF	5.00%	50V
C320	1-162-923-11	CERAMIC CHIP	47PF	5.00%	50V	C833	1-107-826-11	CERAMIC CHIP	0.1UF	10.00%	16V
C321	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V	C835	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C322	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V	C837	1-162-968-11	CERAMIC CHIP	0.0047UF	10.00%	50V
C323	1-112-034-91	CERAMIC CHIP	0.01UF	5%	50V	C838	1-106-220-00	MYLAR	0.1UF	10.00%	100V
C325	1-164-227-11	CERAMIC CHIP	0.022UF	10.00%	25V	C839	1-162-966-11	CERAMIC CHIP	0.0022UF	10.00%	50V
C328	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V	C840	Δ 1-117-647-21	FILM	13000PF	3.00%	1.2KV
C333	1-126-925-91	ELECT	470UF	20.00%	10V	C841	1-107-846-11	FILM	0.1UF	5.00%	400V
C600	Δ 1-119-895-51	CERAMIC	4700PF	20.00%	250V	C842	1-100-122-21	FILM	0.022UF	5%	400V
C602	Δ 1-165-538-31	FILM	0.1UF	10%	275V	C844	1-165-176-11	CERAMIC CHIP	0.047UF	10.00%	16V
C605	1-161-830-00	CERAMIC	0.0047UF	99%	500V	C845	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C606	1-161-830-00	CERAMIC	0.0047UF	99%	500V	C846	1-162-115-00	CERAMIC	330PF	10.00%	2KV
C609	1-161-830-00	CERAMIC	0.0047UF	99%	500V	C847	1-107-364-11	MYLAR	0.01UF	10.00%	200V
C610	1-161-830-00	CERAMIC	0.0047UF	99%	500V	C848	1-107-364-11	MYLAR	0.01UF	10.00%	200V
C611	1-117-752-11	ELECT (BLOCK)	330UF	20%	450V	C849	1-106-375-12	MYLAR	0.022UF	5.00%	200V
C612	1-117-623-11	FILM	1500PF	3.00%	1.2KV	C850	1-106-220-00	MYLAR	0.1UF	10.00%	100V
C616	1-164-230-11	CERAMIC CHIP	220PF	5.00%	50V	C851	1-107-675-11	ELECT	1UF	20.00%	450V
C619	1-136-167-00	FILM	0.15UF	5.00%	50V	C852	1-117-665-11	FILM	0.33UF	5.00%	250V
C621	1-126-963-11	ELECT	4.7UF	20.00%	50V	C854	1-126-948-11	ELECT	100UF	20.00%	35V
C622	Δ 1-119-888-51	CERAMIC	2200PF	20.00%	250V	C855	1-107-894-11	ELECT	220UF	20%	35V
C623	1-162-967-11	CERAMIC CHIP	0.0033UF	10.00%	50V	C857	1-104-666-11	ELECT	220UF	20.00%	25V
C624	1-126-967-11	ELECT	47UF	20.00%	50V	C858	1-137-959-91	MYLAR	0.47UF	5%	100V
C625	Δ 1-127-943-51	CERAMIC	330PF	10%	250V	C860	1-162-318-11	CERAMIC	0.001UF	10.00%	500V
C628	1-125-772-91	CERAMIC	1500PF	10.00%	2KV	C861	1-104-666-11	ELECT	220UF	20.00%	25V
C630	1-128-549-11	ELECT	3300UF	20.00%	35V	C862	1-162-318-11	CERAMIC	0.001UF	10.00%	500V
C634	1-126-941-11	ELECT	470UF	20.00%	25V	C863	1-165-176-11	CERAMIC CHIP	0.047UF	10.00%	16V
C635	1-126-971-11	ELECT	470UF	20.00%	50V	C867	1-165-441-81	ELECT	33UF	20%	160V
C641	1-126-933-11	ELECT	100UF	20.00%	16V	C868	1-102-228-00	CERAMIC	470PF	10.00%	500V
C643	1-117-720-11	CERAMIC CHIP	4.7UF		10V	C869	1-107-654-11	ELECT	33UF	20.00%	250V
C644	1-164-315-11	CERAMIC CHIP	470PF	5.00%	50V	C870	1-106-387-00	MYLAR	0.068UF	10.00%	200V
C649	1-126-933-11	ELECT	100UF	20.00%	16V	C876	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V
C657	Δ 1-127-943-51	CERAMIC	330PF	10%	250V	C877	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C660	Δ 1-165-539-31	FILM	0.22UF	10%	275V	C878	1-162-970-11	CERAMIC CHIP	0.01UF	10.00%	25V
C662	1-107-826-11	CERAMIC CHIP	0.1UF	10.00%	16V	C879	1-162-964-11	CERAMIC CHIP	0.001UF	10.00%	50V

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



REF NO.	PART NO.	DESCRIPTION	REMARK	REF NO.	PART NO.	DESCRIPTION	REMARK
C900	1-164-505-11	CERAMIC CHIP	2.2UF 16V	D068	8-719-977-03	DIODE DTZ5.6B	
C901	1-164-505-11	CERAMIC CHIP	2.2UF 16V	D071	8-719-404-50	DIODE MA111-TX	
C902	1-126-957-11	ELECT	0.22UF 20.00% 50V	D072	8-719-404-50	DIODE MA111-TX	
C903	1-126-935-11	ELECT	470UF 20.00% 16V	D074	8-719-404-50	DIODE MA111-TX	
C906	1-164-346-11	CERAMIC CHIP	1UF 16V	D075	8-719-422-97	DIODE MA8091-M	
C907	1-164-346-11	CERAMIC CHIP	1UF 16V	D100	8-719-082-22	DIODE KDS114-RTK	
C908	1-164-346-11	CERAMIC CHIP	1UF 16V	D103	8-719-036-43	DIODE MA4300-H(TA)	
C909	1-164-346-11	CERAMIC CHIP	1UF 16V	D108	8-719-977-03	DIODE DTZ5.6B	
C910	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V	D109	8-719-977-03	DIODE DTZ5.6B	
C911	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V	D110	8-719-404-50	DIODE MA111-TX	
C912	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V	D111	8-719-404-50	DIODE MA111-TX	
C913	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V	D112	8-719-109-89	DIODE RD5.6ESB2	
C914	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V	D113	8-719-977-03	DIODE DTZ5.6B	
C915	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V	D201	8-719-404-50	DIODE MA111-TX	
C916	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V	D202	8-719-404-50	DIODE MA111-TX	
C917	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V	D203	8-719-404-50	DIODE MA111-TX	
C918	1-164-346-11	CERAMIC CHIP	1UF 16V	D204	8-719-404-50	DIODE MA111-TX	
C919	1-164-346-11	CERAMIC CHIP	1UF 16V	D205	8-719-404-50	DIODE MA111-TX	
C922	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V	D208	8-719-404-50	DIODE MA111-TX	
C925	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V	D211	8-719-062-51	DIODE 1PS226-115	
C955	1-126-957-11	ELECT	0.22UF 20.00% 50V	D212	8-719-404-50	DIODE MA111-TX	
C956	1-126-933-11	ELECT	100UF 20.00% 16V	D213	8-719-404-50	DIODE MA111-TX	
C967	1-164-505-11	CERAMIC CHIP	2.2UF 16V	D214	8-719-404-50	DIODE MA111-TX	
C975	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V	D600	8-719-404-50	DIODE MA111-TX	
C979	1-162-964-11	CERAMIC CHIP	0.001UF 10.00% 50V	D602	6-501-301-01	DIODE 1A5G	
C1019	1-125-891-11	CERAMIC CHIP	0.47UF 10.00% 10V	D603	6-501-301-01	DIODE 1A5G	
C1233	1-126-961-11	ELECT	2.2UF 20.00% 50V	D604	8-719-077-77	DIODE D3SB60F3	
C2602	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V	D605	8-719-109-85	DIODE RD5.1ESB2	
C2648	1-126-952-11	ELECT	1000UF 20.00% 35V	D608	8-719-109-85	DIODE RD5.1ESB2	
		<CONNECTOR>		D614	8-719-923-86	DIODE MTZJ-T-77-15	
* CN005	1-564-506-11	PLUG, CONNECTOR 3P		D615	6-500-567-11	DIODE 10ERB20-TA2B5	
* CN200	1-564-507-11	PLUG, CONNECTOR 4P		D617	6-500-567-11	DIODE 10ERB20-TA2B5	
* CN600	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		D618	6-500-567-11	DIODE 10ERB20-TA2B5	
* CN601	1-691-134-11	PIN, CONNECTOR (PC BOARD) 2P		D619	6-500-567-11	DIODE 10ERB20-TA2B5	
CN602	Δ 1-580-843-11	PIN, CONNECTOR (POWER)		D621	8-719-312-10	DIODE RU4AM-T3	
* CN800	1-564-506-11	PLUG, CONNECTOR 3P		D622	8-719-085-37	DIODE 11EQS10-TB5	
* CN904	1-508-743-00	PIN, CONNECTOR 5P		D623	6-500-567-31	DIODE 10ERB20-TB3	
CT131	1-813-732-21	TRAP, CERAMIC		D624	8-719-510-73	DIODE S3L20UF4	
CT139	1-813-731-21	TRAP, CERAMIC		D629	8-719-109-85	DIODE RD5.1ESB2	
		<DIODE>		D633	8-719-923-86	DIODE MTZJ-T-77-15	
D002	8-719-404-50	DIODE MA111-TX		D635	6-501-588-01	DIODE MA8036-H-TX	
D003	8-719-404-50	DIODE MA111-TX		D637	8-719-072-70	DIODE MA2ZD14001S0	
D023	8-719-422-97	DIODE MA8091-M		D638	8-719-404-50	DIODE MA111-TX	
D024	8-719-422-97	DIODE MA8091-M		D639	6-501-311-01	DIODE SB360-S	
D025	8-719-422-97	DIODE MA8091-M		D800	8-719-404-50	DIODE MA111-TX	
D054	8-719-977-03	DIODE DTZ5.6B		D801	8-719-404-50	DIODE MA111-TX	
D055	8-719-109-89	DIODE RD5.6ESB2		D804	8-719-991-33	DIODE 1SS133T-77	
D056	8-719-991-33	DIODE 1SS133T-77		D805	8-719-991-33	DIODE 1SS133T-77	
D057	8-719-404-50	DIODE MA111-TX		D807	8-719-991-33	DIODE 1SS133T-77	
D058	8-719-404-50	DIODE MA111-TX		D808	8-719-991-33	DIODE 1SS133T-77	
D059	8-719-404-50	DIODE MA111-TX		D815	8-719-923-60	DIODE MTZJ-T-77-9.1A	
D060	8-719-036-94	DIODE RD5.6SB-T1		D816	6-501-402-01	DIODE BY228GPL-5402E3/72	
D061	8-719-404-50	DIODE MA111-TX		D817	6-501-302-01	DIODE PG156R	
D062	8-719-977-03	DIODE DTZ5.6B		D818	8-719-109-85	DIODE RD5.1ESB2	
D063	8-719-404-50	DIODE MA111-TX		D820	8-719-083-20	DIODE PG102R	
D064	8-719-977-03	DIODE DTZ5.6B		D823	8-719-074-25	DIODE PG104R	
D065	8-719-977-03	DIODE DTZ5.6B		D824	8-719-074-25	DIODE PG104R	
D066	8-719-083-20	DIODE PG102R		D827	8-719-074-25	DIODE PG104R	
				D829	8-719-109-89	DIODE RD5.6ESB2	
				D830	8-719-404-50	DIODE MA111-TX	
				D832	8-719-404-50	DIODE MA111-TX	
				D833	8-719-404-50	DIODE MA111-TX	

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REF NO.	PART NO.	DESCRIPTION	REMARK	REF NO.	PART NO.	DESCRIPTION	REMARK
D900	8-719-036-94	DIODE RD5.6SB-T1				<CHIP CONDUCTOR>	
D908	8-719-036-94	DIODE RD5.6SB-T1					
D914	8-719-083-18	DIODE SPB-25MVWF		JR001	1-216-864-11	SHORT CHIP	0
D915	8-719-977-03	DIODE DTZ5.6B		JR002	1-216-864-11	SHORT CHIP	0
D916	8-719-036-94	DIODE RD5.6SB-T1		JR003	1-216-864-11	SHORT CHIP	0
				JR004	1-216-864-11	SHORT CHIP	0
D918	8-719-977-03	DIODE DTZ5.6B		JR005	1-216-864-11	SHORT CHIP	0
D931	6-501-588-01	DIODE MA8036-H-TX					
D932	6-501-588-01	DIODE MA8036-H-TX		JR007	1-216-864-11	SHORT CHIP	0
D2625	8-719-510-73	DIODE S3L20UF4		JR008	1-216-864-11	SHORT CHIP	0
		<DY CONNECTOR>		JR009	1-216-864-11	SHORT CHIP	0
* DY800	1-580-798-11	CONNECTOR PIN (DY) 6P		JR012	1-216-864-11	SHORT CHIP	0
		<FUSE>		JR013	1-216-864-11	SHORT CHIP	0
F600	Δ 1-576-232-51	FUSE	5A 250V	JR014	1-216-864-11	SHORT CHIP	0
		<FERRITE BEAD>		JR015	1-216-864-11	SHORT CHIP	0
FB001	1-469-578-11	FERRITE	1.1UH	JR016	1-216-864-11	SHORT CHIP	0
FB005	1-469-981-21	FERRITE	0UH	JR017	1-216-864-11	SHORT CHIP	0
FB006	1-469-981-21	FERRITE	0UH	JR018	1-216-864-11	SHORT CHIP	0
FB007	1-469-981-21	FERRITE	0UH				
FB008	1-469-981-21	FERRITE	0UH	JR019	1-216-864-11	SHORT CHIP	0
				JR020	1-216-864-11	SHORT CHIP	0
FB101	1-414-229-11	FERRITE	0UH	JR024	1-216-864-11	SHORT CHIP	0
FB603	1-469-578-11	FERRITE	1.1UH	JR025	1-216-864-11	SHORT CHIP	0
FB608	1-412-911-11	FERRITE	0UH	JR026	1-216-864-11	SHORT CHIP	0
FB800	1-469-578-11	FERRITE	1.1UH	JR027	1-216-864-11	SHORT CHIP	0
FB2607	1-469-578-11	FERRITE	1.1UH	JR037	1-216-864-11	SHORT CHIP	0
		<FUSE HOLDER>		JR038	1-216-864-11	SHORT CHIP	0
FH601	1-533-223-11	FUSE HOLDER	0A 0V	JR040	1-216-864-11	SHORT CHIP	0
FH602	1-533-223-11	FUSE HOLDER	0A 0V	JR041	1-216-864-11	SHORT CHIP	0
		<IC>		JR042	1-216-864-11	SHORT CHIP	0
IC001	6-709-200-01	IC TDA12073H/N1F0B		JR043	1-216-864-11	SHORT CHIP	0
IC002	6-704-532-01	IC RPM7240-H5		JR046	1-216-864-11	SHORT CHIP	0
IC003	6-705-864-01	IC CAT24WC16WI-TE13		JR047	1-216-864-11	SHORT CHIP	0
IC200	6-706-985-01	IC AN17808A		JR049	1-216-864-11	SHORT CHIP	0
IC601	6-704-263-01	IC STR-F6267S LF1357		JR051	1-216-864-11	SHORT CHIP	0
				JR300	1-216-864-11	SHORT CHIP	0
IC602	6-706-789-01	IC KIA78R09API		JR301	1-216-864-11	SHORT CHIP	0
IC603	6-703-478-01	IC PQ018EF01SSH		JR302	1-216-864-11	SHORT CHIP	0
IC604	8-759-646-52	IC KIA7805API		JR600	1-216-864-11	SHORT CHIP	0
IC605	6-705-063-01	IC SE135N-LF38					
IC606	6-706-886-01	IC KIA78D33PI		JR601	1-216-864-11	SHORT CHIP	0
				JR602	1-216-864-11	SHORT CHIP	0
IC607	8-759-832-05	IC BA18BC0FP-E2		JR806	1-216-864-11	SHORT CHIP	0
IC800	8-759-356-16	IC NJM4556AD		JR807	1-216-864-11	SHORT CHIP	0
IC801	6-703-708-01	IC LM2903DT		JR1006	1-216-864-11	SHORT CHIP	0
IC802	6-701-937-01	IC TJM4558CDT					
IC804	6-708-756-01	IC STV9302B		JR1011	1-216-864-11	SHORT CHIP	0
		<JACK>		JR1012	1-216-864-11	SHORT CHIP	0
J200	1-770-786-31	JACK		JR1013	1-216-864-11	SHORT CHIP	0
J901	1-817-299-22	PHONO JACK 11P		JR1014	1-216-864-11	SHORT CHIP	0
J903	1-770-329-13	JACK, PIN 3P		JR1016	1-216-864-11	SHORT CHIP	0
						<COIL>	
				L003	1-414-856-11	INDUCTOR	10UH
				L004	1-414-187-11	INDUCTOR	47UH
				L005	1-414-856-11	INDUCTOR	10UH
				L006	1-414-856-11	INDUCTOR	10UH
				L007	1-414-856-11	INDUCTOR	10UH
				L008	1-414-856-11	INDUCTOR	10UH
				L009	1-414-856-11	INDUCTOR	10UH
				L012	1-412-058-11	INDUCTOR	10UH
				L040	1-469-555-21	INDUCTOR	10UH
				L041	1-469-555-21	INDUCTOR	10UH

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REF NO.	PART NO.	DESCRIPTION	REMARK	REF NO.	PART NO.	DESCRIPTION	REMARK
L042	1-469-555-21	INDUCTOR	10UH	Q806	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
L043	1-469-555-21	INDUCTOR	10UH	Q807	8-729-600-22	TRANSISTOR 2SA1235-F	
L044	1-469-555-21	INDUCTOR	10UH	Q808	6-551-406-01	TRANSISTOR IRFS614BYDTU	
L045	1-469-555-21	INDUCTOR	10UH	Q814	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
L046	1-469-555-21	INDUCTOR	10UH	Q900	8-729-600-22	TRANSISTOR 2SA1235-F	
L047	1-469-555-21	INDUCTOR	10UH	Q901	8-729-027-56	TRANSISTOR DTC143TKA-T146	
L100	1-414-857-11	INDUCTOR	100UH	Q902	8-729-027-56	TRANSISTOR DTC143TKA-T146	
L101	1-410-498-11	INDUCTOR	1.2UH	Q8009	6-550-362-01	TRANSISTOR KTA1279	
L103	1-410-985-42	INDUCTOR	0.22UH	Q8010	8-729-140-50	TRANSISTOR 2SC3209LK	
L106	1-414-187-11	INDUCTOR	47UH				
L107	1-412-062-11	INDUCTOR	47UH			<RESISTOR>	
L600	1-412-533-21	INDUCTOR	47UH	R001	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
L601	1-412-533-21	INDUCTOR	47UH	R002	1-216-809-11	METAL CHIP	100 5% 1/10W
L602	1-412-529-11	INDUCTOR	22UH	R003	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
L800	1-456-848-21	COIL, HORIZONTAL LINEARITY		R004	1-216-809-11	METAL CHIP	100 5% 1/10W
				R010	1-216-833-11	METAL CHIP	10K 5% 1/10W
L802	1-406-679-11	INDUCTOR	22MH	R011	1-216-817-11	METAL CHIP	470 5% 1/10W
L803	1-414-493-41	INDUCTOR	4.7MH	R012	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
L805	1-408-947-00	INDUCTOR	2.2MH	R014	1-216-809-11	METAL CHIP	100 5% 1/10W
L806	1-469-555-21	INDUCTOR	10UH	R015	1-216-823-11	METAL CHIP	1.5K 5% 1/10W
L902	1-414-187-11	INDUCTOR	47UH	R018	1-216-809-11	METAL CHIP	100 5% 1/10W
L2601	1-412-525-31	INDUCTOR	10UH	R020	1-216-809-11	METAL CHIP	100 5% 1/10W
		<PHOTO COUPLER>		R021	1-216-295-91	SHORT CHIP	0 5% 1/10W
PH600 \triangle	8-749-019-60	IC K1010HB01		R024	1-216-809-11	METAL CHIP	100 5% 1/10W
		<IC LINK>		R025	1-216-809-11	METAL CHIP	100 5% 1/10W
PS602 \triangle	1-533-597-42	IC LINK	5A 90V	R026	1-216-809-11	METAL CHIP	100 5% 1/10W
PS603 \triangle	1-533-597-42	IC LINK	5A 90V	R029	1-216-809-11	METAL CHIP	100 5% 1/10W
PS604 \triangle	1-533-597-42	IC LINK	5A 90V	R030	1-216-809-11	METAL CHIP	100 5% 1/10W
PS605 \triangle	1-533-597-42	IC LINK	5A 90V	R038	1-216-809-11	METAL CHIP	100 5% 1/10W
PS2601 \triangle	1-533-597-42	IC LINK	5A 90V	R039	1-216-809-11	METAL CHIP	100 5% 1/10W
		<TRANSISTOR>		R041	1-216-809-11	METAL CHIP	100 5% 1/10W
Q001	8-729-038-67	TRANSISTOR KRC102S		R042	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
Q006	8-729-027-56	TRANSISTOR DTC143TKA-T146		R044	1-216-834-11	METAL CHIP	12K 5% 1/10W
Q007	8-729-027-56	TRANSISTOR DTC143TKA-T146		R045	1-216-809-11	METAL CHIP	100 5% 1/10W
Q008	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R046	1-216-809-11	METAL CHIP	100 5% 1/10W
Q010	8-729-600-22	TRANSISTOR 2SA1235-F		R048	1-216-809-11	METAL CHIP	100 5% 1/10W
Q016	8-729-038-67	TRANSISTOR KRC102S		R051	1-218-885-11	METAL CHIP	39K 0.50% 1/10W
Q100	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R056	1-216-809-11	METAL CHIP	100 5% 1/10W
Q102	8-729-022-54	TRANSISTOR 2SC3779C,D-AA		R058	1-216-809-11	METAL CHIP	100 5% 1/10W
Q103	8-729-424-67	TRANSISTOR UN2216		R059	1-216-821-11	METAL CHIP	1K 5% 1/10W
Q104	8-729-424-67	TRANSISTOR UN2216		R060	1-216-809-11	METAL CHIP	100 5% 1/10W
Q200	8-729-038-67	TRANSISTOR KRC102S		R061	1-216-819-11	METAL CHIP	680 5% 1/10W
Q201	8-729-600-22	TRANSISTOR 2SA1235-F		R087	1-216-813-11	METAL CHIP	220 5% 1/10W
Q202	8-729-600-22	TRANSISTOR 2SA1235-F		R088	1-216-823-11	METAL CHIP	1.5K 5% 1/10W
Q206	8-729-038-67	TRANSISTOR KRC102S		R096	1-216-813-11	METAL CHIP	220 5% 1/10W
Q601	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R097	1-216-813-11	METAL CHIP	220 5% 1/10W
Q605	6-550-572-01	TRANSISTOR FN155		R098	1-216-813-11	METAL CHIP	220 5% 1/10W
Q606	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R099	1-216-813-11	METAL CHIP	220 5% 1/10W
Q608	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R100	1-216-821-11	METAL CHIP	1K 5% 1/10W
Q609	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R103	1-211-981-11	METAL CHIP	33 0.50% 1/10W
Q800	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R106	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
Q801	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R107	1-216-828-11	METAL CHIP	3.9K 5% 1/10W
Q802	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R108	1-216-821-11	METAL CHIP	1K 5% 1/10W
Q803	8-729-140-50	TRANSISTOR 2SC3209LK		R109	1-216-019-00	RES-CHIP	56 5% 1/10W
Q804	6-550-362-01	TRANSISTOR KTA1279		R110	1-216-821-11	METAL CHIP	1K 5% 1/10W
Q805	6-550-410-01	TRANSISTOR 2SC5885		R111	1-216-833-11	METAL CHIP	10K 5% 1/10W
				R112	1-218-867-11	METAL CHIP	6.8K 0.50% 1/10W
				R113	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
				R114	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
				R115	1-216-809-11	METAL CHIP	100 5% 1/10W
				R116	1-216-809-11	METAL CHIP	100 5% 1/10W

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REF NO.	PART NO.	DESCRIPTION	REMARK	REF NO.	PART NO.	DESCRIPTION	REMARK
R118	1-216-809-11	METAL CHIP	100 5%	R363	1-216-864-11	SHORT CHIP	0
R119	1-211-981-11	METAL CHIP	33 0.50%	R364	1-216-821-11	METAL CHIP	1K 5%
R121	1-215-925-11	METAL OXIDE	22K 5%	R377	1-216-823-11	METAL CHIP	1.5K 5%
R131	1-216-809-11	METAL CHIP	100 5%	R379	1-216-843-11	METAL CHIP	68K 5%
R149	1-216-864-11	SHORT CHIP	0	R380	1-216-809-11	METAL CHIP	100 5%
R152	1-216-864-11	SHORT CHIP	0	R384	1-216-809-11	METAL CHIP	100 5%
R153	1-216-853-11	METAL CHIP	470K 5%	R385	1-216-809-11	METAL CHIP	100 5%
R154	1-216-821-11	METAL CHIP	1K 5%	R386	1-216-809-11	METAL CHIP	100 5%
R155	1-216-837-11	METAL CHIP	22K 5%	R393	1-216-809-11	METAL CHIP	100 5%
R200	1-216-832-11	METAL CHIP	8.2K 5%	R394	1-216-829-11	METAL CHIP	4.7K 5%
R201	1-216-827-11	METAL CHIP	3.3K 5%	R395	1-216-845-11	METAL CHIP	100K 5%
R202	1-216-830-11	METAL CHIP	5.6K 5%	R398	1-216-797-11	METAL CHIP	10 5%
R203	1-216-832-11	METAL CHIP	8.2K 5%	R400	1-260-288-11	CARBON	0.47 5%
R204	1-216-827-11	METAL CHIP	3.3K 5%	R401	1-260-288-11	CARBON	0.47 5%
R205	1-216-830-11	METAL CHIP	5.6K 5%	R405	1-260-288-11	CARBON	0.47 5%
R207	1-218-867-11	METAL CHIP	6.8K 0.50%	R406	1-260-127-11	CARBON	220K 5%
R208	1-218-867-11	METAL CHIP	6.8K 0.50%	R411	1-214-909-00	METAL	68K 1%
R210	1-216-835-11	METAL CHIP	15K 5%	R412	1-215-453-00	METAL	22K 1%
R211	1-216-835-11	METAL CHIP	15K 5%	R413	1-215-449-00	METAL	15K 1%
R212	1-216-864-11	SHORT CHIP	0	R414	1-260-336-11	CARBON	4.7K 5%
R213	1-216-833-11	METAL CHIP	10K 5%	R416	1-260-107-11	CARBON	4.7K 5%
R214	1-216-839-11	METAL CHIP	33K 5%	R420	1-216-829-11	METAL CHIP	4.7K 5%
R215	1-216-833-11	METAL CHIP	10K 5%	R421	1-216-833-11	METAL CHIP	10K 5%
R216	1-216-833-11	METAL CHIP	10K 5%	R423	1-216-864-11	SHORT CHIP	0
R217	1-249-411-11	CARBON	330 5%	R424	1-218-899-11	METAL CHIP	150K 0.50%
R218	1-216-295-91	SHORT CHIP	0	R602	1-216-829-11	METAL CHIP	4.7K 5%
R219	1-249-411-11	CARBON	330 5%	R609	1-216-833-11	METAL CHIP	10K 5%
R220	1-216-864-11	SHORT CHIP	0	R612	1-215-425-00	METAL	1.5K 1%
R221	1-216-821-11	METAL CHIP	1K 5%	R616	1-205-998-11	METAL	1 5%
R234	1-249-401-11	CARBON	47 5%	R618	1-249-432-11	CARBON	18K 5%
R235	1-249-401-11	CARBON	47 5%	R619	1-216-361-00	METAL OXIDE	0.22 5%
R236	1-216-833-11	METAL CHIP	10K 5%	R620	1-216-362-21	METAL OXIDE	0.27 5%
R237	1-216-809-11	METAL CHIP	100 5%	R621	1-249-409-11	CARBON	220 5%
R238	1-216-809-11	METAL CHIP	100 5%	R623	1-218-877-11	METAL CHIP	18K 0.50%
R241	1-216-825-11	METAL CHIP	2.2K 5%	R624	1-215-429-00	METAL	2.2K 1%
R242	1-216-825-11	METAL CHIP	2.2K 5%	R627	1-249-385-11	CARBON	2.2 5%
R300	1-216-809-11	METAL CHIP	100 5%	R631	1-249-425-11	CARBON	4.7K 5%
R301	1-216-859-11	METAL CHIP	1.5M 5%	R634	1-216-829-11	METAL CHIP	4.7K 5%
R303	1-216-861-11	METAL CHIP	2.2M 5%	R635	1-216-833-11	METAL CHIP	10K 5%
R304	1-216-845-11	METAL CHIP	100K 5%	R636	1-249-421-11	CARBON	2.2K 5%
R307	1-216-864-11	SHORT CHIP	0	R638	1-240-262-11	METAL	0.68 5%
R309	1-216-857-11	METAL CHIP	1M 5%	R645	1-218-899-11	METAL CHIP	150K 0.50%
R310	1-216-821-11	METAL CHIP	1K 5%	R646	1-218-851-11	METAL CHIP	1.5K 0.50%
R311	1-216-841-11	METAL CHIP	47K 5%	R647	1-216-821-11	METAL CHIP	1K 5%
R312	1-216-857-11	METAL CHIP	1M 5%	R650 Δ	1-240-917-91	METAL	8.2M 5%
R313	1-216-847-11	METAL CHIP	150K 5%	R655	1-216-809-11	METAL CHIP	100 5%
R314	1-218-867-11	METAL CHIP	6.8K 0.50%	R656	1-249-381-11	CARBON	1 5%
R315	1-218-867-11	METAL CHIP	6.8K 0.50%	R658	1-245-464-21	METAL	120K 1%
R317	1-216-827-11	METAL CHIP	3.3K 5%	R659	1-245-470-21	METAL	220K 1%
R320	1-218-863-11	METAL CHIP	4.7K 0.50%	R660	1-245-478-21	METAL	470K 1%
R322	1-218-863-11	METAL CHIP	4.7K 0.50%	R661	1-245-480-21	METAL	560K 1%
R323	1-216-809-11	METAL CHIP	100 5%	R667	1-216-821-11	METAL CHIP	1K 5%
R324	1-216-864-11	SHORT CHIP	0	R668	1-216-839-11	METAL CHIP	33K 5%
R331	1-216-809-11	METAL CHIP	100 5%	R800	1-216-825-11	METAL CHIP	2.2K 5%
R336	1-216-829-11	METAL CHIP	4.7K 5%	R801	1-216-864-11	SHORT CHIP	0
R337	1-216-817-11	METAL CHIP	470 5%	R802	1-216-833-11	METAL CHIP	10K 5%
R338	1-216-825-11	METAL CHIP	2.2K 5%	R803	1-216-833-11	METAL CHIP	10K 5%
R339	1-216-809-11	METAL CHIP	100 5%	R804	1-216-864-11	SHORT CHIP	0
R340	1-216-833-11	METAL CHIP	10K 5%	R805	1-216-837-11	METAL CHIP	22K 5%
R341	1-216-809-11	METAL CHIP	100 5%	R806	1-216-864-11	SHORT CHIP	0
R355	1-216-837-11	METAL CHIP	22K 5%	R807	1-216-819-11	METAL CHIP	680 5%
R356	1-216-864-11	SHORT CHIP	0				

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REF NO.	PART NO.	DESCRIPTION	REMARK	REF NO.	PART NO.	DESCRIPTION	REMARK
R808	1-216-833-11	METAL CHIP	10K 5%	R904	1-216-821-11	METAL CHIP	1K 5%
R809	1-216-833-11	METAL CHIP	10K 5%	R905	1-216-840-11	METAL CHIP	39K 5%
R810	1-216-833-11	METAL CHIP	10K 5%	R906	1-216-817-11	METAL CHIP	470 5%
R812	1-216-837-11	METAL CHIP	22K 5%	R907	1-216-840-11	METAL CHIP	39K 5%
R813	1-216-837-11	METAL CHIP	22K 5%	R908	1-216-840-11	METAL CHIP	39K 5%
R814	1-216-809-11	METAL CHIP	100 5%	R909	1-216-840-11	METAL CHIP	39K 5%
R815	1-216-837-11	METAL CHIP	22K 5%	R910	1-216-817-11	METAL CHIP	470 5%
R816	1-216-864-11	SHORT CHIP	0	R911	1-216-813-11	METAL CHIP	220 5%
R817	1-216-833-11	METAL CHIP	10K 5%	R913	1-216-853-11	METAL CHIP	470K 5%
R818	1-216-833-11	METAL CHIP	10K 5%	R914	1-216-853-11	METAL CHIP	470K 5%
R820	1-216-825-11	METAL CHIP	2.2K 5%	R915	1-216-849-11	METAL CHIP	220K 5%
R821	1-216-837-11	METAL CHIP	22K 5%	R916	1-216-849-11	METAL CHIP	220K 5%
R822	1-249-417-11	CARBON	1K 5%	R917	1-218-285-11	METAL CHIP	75 5%
R823	1-245-468-21	METAL	180K 1%	R920	1-216-849-11	METAL CHIP	220K 5%
R824	1-216-839-11	METAL CHIP	33K 5%	R921	1-216-849-11	METAL CHIP	220K 5%
R825	1-243-606-71	METAL OXIDE	1K 5%	R924	1-216-853-11	METAL CHIP	470K 5%
R826	1-247-891-00	CARBON	330K 5%	R925	1-216-813-11	METAL CHIP	220 5%
R827	1-216-369-00	METAL OXIDE	1 5%	R926	1-216-813-11	METAL CHIP	220 5%
R828	1-243-606-71	METAL OXIDE	1K 5%	R927	1-216-813-11	METAL CHIP	220 5%
R829	1-243-606-71	METAL OXIDE	1K 5%	R928	1-218-285-11	METAL CHIP	75 5%
R830	1-260-332-51	CARBON	2.2K 5%	R929	1-218-285-11	METAL CHIP	75 5%
R831	1-216-829-11	METAL CHIP	4.7K 5%	R930	1-218-285-11	METAL CHIP	75 5%
R833	1-260-125-11	CARBON	150K 5%	R931	1-216-811-11	METAL CHIP	150 5%
R834	1-245-468-21	METAL	180K 1%	R932	1-216-864-11	SHORT CHIP	0
R835	1-260-127-11	CARBON	220K 5%	R933	1-216-864-11	SHORT CHIP	0
R838	1-216-838-11	METAL CHIP	27K 5%	R940	1-216-849-11	METAL CHIP	220K 5%
R843	1-216-864-11	SHORT CHIP	0	R941	1-216-849-11	METAL CHIP	220K 5%
R844	1-218-867-11	METAL CHIP	6.8K 0.50%	R945	1-216-833-11	METAL CHIP	10K 5%
R846	1-216-825-11	METAL CHIP	2.2K 5%	R946	1-216-833-11	METAL CHIP	10K 5%
R847	1-216-833-11	METAL CHIP	10K 5%	R989	1-216-833-11	METAL CHIP	10K 5%
R851	1-216-821-11	METAL CHIP	1K 5%	R991	1-216-810-11	METAL CHIP	120 5%
R852	1-218-871-11	METAL CHIP	10K 0.50%	R2646	1-249-381-11	CARBON	1 5%
R853	1-218-859-11	METAL CHIP	3.3K 0.50%	R2647	1-249-429-11	CARBON	10K 5%
R854	1-218-877-11	METAL CHIP	18K 0.50%	R8003	1-216-809-11	METAL CHIP	100 5%
R855	1-218-871-11	METAL CHIP	10K 0.50%	R8004	1-216-809-11	METAL CHIP	100 5%
R856	1-218-871-11	METAL CHIP	10K 0.50%	R8005	1-218-871-11	METAL CHIP	10K 0.50%
R859	1-218-883-11	METAL CHIP	33K 0.50%	R8009	1-218-867-11	METAL CHIP	6.8K 0.50%
R861	1-216-825-11	METAL CHIP	2.2K 5%	R8010	1-245-464-21	METAL	120K 1%
R864	1-218-867-11	METAL CHIP	6.8K 0.50%	R8011	1-216-841-11	METAL CHIP	47K 5%
R865	1-216-821-11	METAL CHIP	1K 5%	R8012	1-216-841-11	METAL CHIP	47K 5%
R866	1-218-895-11	METAL CHIP	100K 0.50%	R8013	1-245-462-21	METAL	100K 1%
R868	1-249-393-11	CARBON	10 5%	R9005	1-216-864-11	SHORT CHIP	0
R869	1-249-381-11	CARBON	1 5%	R9006	1-216-864-11	SHORT CHIP	0
R870	1-218-859-11	METAL CHIP	3.3K 0.50%	R9017	1-216-809-11	METAL CHIP	100 5%
R871	1-243-692-71	METAL OXIDE	220 5%	R9018	1-216-809-11	METAL CHIP	100 5%
R872	1-216-864-11	SHORT CHIP	0	R9019	1-216-809-11	METAL CHIP	100 5%
R873	1-216-841-11	METAL CHIP	47K 5%	R9020	1-216-809-11	METAL CHIP	100 5%
R876	1-216-833-11	METAL CHIP	10K 5%	R9021	1-216-809-11	METAL CHIP	100 5%
R877	1-218-895-11	METAL CHIP	100K 0.50%	R9022	1-216-809-11	METAL CHIP	100 5%
R878	1-216-349-00	METAL OXIDE	1 5%	R9023	1-216-809-11	METAL CHIP	100 5%
R879	1-245-470-21	METAL	220K 1%	R9025	1-216-809-11	METAL CHIP	100 5%
R880	1-245-470-21	METAL	220K 1%	R9026	1-216-838-11	METAL CHIP	27K 5%
R881	1-218-871-11	METAL CHIP	10K 0.50%	R9027	1-216-838-11	METAL CHIP	27K 5%
R882	1-216-825-11	METAL CHIP	2.2K 5%	R9028	1-216-809-11	METAL CHIP	100 5%
R883	1-249-421-11	CARBON	2.2K 5%	R9030	1-216-809-11	METAL CHIP	100 5%
R887	1-216-837-11	METAL CHIP	22K 5%	R9031	1-216-809-11	METAL CHIP	100 5%
R888	1-218-887-11	METAL CHIP	47K 0.50%	R9036	1-216-809-11	METAL CHIP	100 5%
R889	1-243-531-71	METAL OXIDE	100 5%	R9050	1-216-864-11	SHORT CHIP	0
R891	1-249-385-11	CARBON	2.2 5%	R9053	1-218-285-11	METAL CHIP	75 5%
R893	1-218-871-11	METAL CHIP	10K 0.50%				
R895	1-218-859-11	METAL CHIP	3.3K 0.50%				
R902	1-216-821-11	METAL CHIP	1K 5%				



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

REF NO.	PART NO.	DESCRIPTION	REMARK
		<RELAY>	
R600	Δ 1-755-198-12	RELAY, AC POWER	
		<SWITCH>	
S600	Δ 1-786-649-12	SWITCH, AC POWER PUSH	
SWF100	1-781-042-11	FILTER, SURFACE WAVE	
		<TRANSFORMER>	
T600	Δ 1-453-212-11	TRANSFORMER, LINE FILTER	
T602	Δ 1-439-695-31	CONVERTER TRANSFORMER (SRT)	
T603	Δ 1-453-212-11	TRANSFORMER, LINE FILTER	
T800	1-437-936-22	FERRITE TRANSFORMER (HDT)	
T801	Δ 1-453-482-11	TRANSFORMER ASSY FLYBACK (NX-4800/M3A4)	
		<THERMISTOR>	
THP600	Δ 1-805-810-11	THERMISTOR, PTC	
TP02	1-536-354-00	POST PIN	
TP03	1-536-354-00	POST PIN	
TP04	1-536-354-00	POST PIN	
TP601	1-536-354-00	POST PIN	
TP602	1-536-354-00	POST PIN	
		<TUNER>	
TU102	1-693-714-11	TUNER (TEQE3-901A)	
		<VARISTOR>	
VDR600	1-804-995-11	VARISTOR	
		<CRYSTAL>	
X001	1-813-311-21	QUARTS CRYSTAL UNIT	

	* A-1197-870-A	MOUNTED PWB, CV	

	4-382-854-01	SCREW (M3X8), P, SW (+)	
		<CAPACITOR>	
C751	1-107-652-11	ELECT	10UF 20.00% 250V
C752	1-115-350-51	CERAMIC	0.0047UF 2KV
C753	1-162-318-11	CERAMIC	0.001UF 10.00% 500V
C754	1-107-651-11	ELECT	4.7UF 20.00% 250V
C781	1-107-651-11	ELECT	4.7UF 20.00% 250V
C783	1-102-121-00	CERAMIC	0.0022UF 10.00% 50V
		<CONNECTOR>	
* CN701	1-564-510-11	PLUG, CONNECTOR 7P	
CN702	1-695-915-11	TAB (CONTACT)	
* CN703	1-564-508-11	PLUG, CONNECTOR 5P	

REF NO.	PART NO.	DESCRIPTION	REMARK
CN704	1-695-915-11	TAB (CONTACT)	
CN705	1-695-915-11	TAB (CONTACT)	
		<DIODE>	
D750	8-719-908-03	DIODE GP08D	
D754	6-500-949-01	DIODE 1SS244-T-72	
D755	6-500-949-01	DIODE 1SS244-T-72	
D756	6-500-949-01	DIODE 1SS244-T-72	
D780	8-719-991-33	DIODE 1SS133T-77	
D781	8-719-991-33	DIODE 1SS133T-77	
D782	8-719-109-89	DIODE RD5.6ESB2	
		<IC>	
IC751	6-709-352-01	IC TDA6108AJF/N2	
		<JACK>	
* J752	Δ 1-451-589-11	SOCKET, CRT	
		<COIL>	
L780	1-414-856-11	INDUCTOR	10UH
		<RESISTOR>	
R752	1-249-415-11	CARBON	680 5% 1/4W
R753	1-249-415-11	CARBON	680 5% 1/4W
R754	1-249-415-11	CARBON	680 5% 1/4W
R756	1-219-746-11	METAL	1K 5% 1/2W
R757	1-219-746-11	METAL	1K 5% 1/2W
R758	1-219-746-11	METAL	1K 5% 1/2W
R763	1-260-316-51	CARBON	100 5% 1/2W
R764	1-260-316-51	CARBON	100 5% 1/2W
R765	1-260-316-51	CARBON	100 5% 1/2W
R773	1-260-132-11	CARBON	560K 5% 1/2W
R774	1-215-912-11	METAL OXIDE	150 5% 3W
R780	1-260-131-11	CARBON	470K 5% 1/2W
R781	1-243-950-21	METAL OXIDE	0.56 5% 2W
R783	1-260-316-51	CARBON	100 5% 1/2W
R794	1-249-377-11	CARBON	0.47 5% 1/4W
R795	1-260-352-11	CARBON	100K 5% 1/2W
R796	1-249-397-11	CARBON	22 5% 1/4W
		<TRANSFORMER>	
* TP700	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	
* TP701	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P	

<u>REF NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>	<u>REF NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>
		<ACCESSORIES AND PACKING MATERIALS>					

	2-651-491-01	SCREW, SPECIAL					
*	2-887-323-01	INDIVIDUAL CARTON					
	2-637-162-01	BAND, HOLD					
*	2-681-523-11	CUSHION, UPPER					
*	2-681-524-11	CUSHION, LOWER					
	2-887-676-11	MANUAL, INSTRUCTION					
*	4-039-372-01	BAG, PROTECTION					
	2-635-703-01	CLIP					

		<REMOTE COMMANDER>					

	1-479-379-11	REMOTE COMMANDER (RM-GA002)					
	4-084-290-01	BATTERY COVER REMOTE COMMANDER					