



SAMSUNG

COLOR TELEVISION RECEIVER

Chassis : KS3A (REV. 1)
Model: CS29A5WT8X/XSG
CS29A6WT8X/BWT

SERVICE Manual

COLOR TELEVISION RECEIVER



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1. Precautions

Follow these safety, servicing and ESD precautions to prevent damage and protect against potential hazards such as electrical shock and X-rays.

1-1 Safety Precautions

1. Be sure that all of the built-in protective devices are replaced. Restore any missing protective shields.
2. When reinstalling the chassis and its assemblies, be sure to restore all protective devices, including: nonmetallic control knobs and compartment covers.
3. Make sure that there are no cabinet openings through which people—particularly children—might insert fingers and contact dangerous voltages. Such openings include the spacing between the picture tube and the cabinet mask, excessively wide cabinet ventilation slots, and improperly fitted back covers.

If the measured resistance is less than 1.0 megohm or greater than 5.2 megohms, an abnormality exists that must be corrected before the unit is returned to the customer.

4. Leakage Current Hot Check (Figure 1-1):
Warning: Do not use an isolation transformer during this test. Use a leakage-current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, Leakage Current for Appliances), and Underwriters Laboratories (UL Publication UL1410, 59.7).
5. With the unit completely reassembled, plug the AC line cord directly into the power outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: antennas, handle brackets, metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.

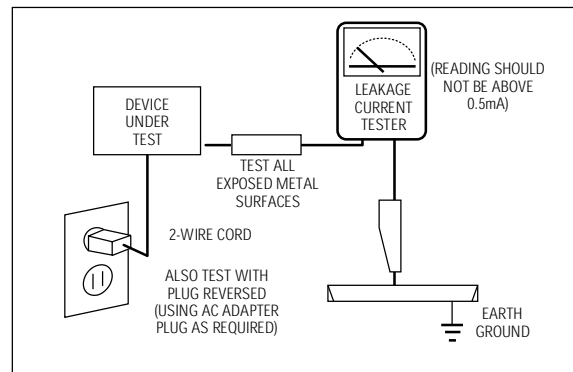


Fig. 1-1 AC Leakage Test



6. Antenna Cold Check:
With the unit's AC plug disconnected from the AC source, connect an electrical jumper across the two AC prongs. Connect one lead of the ohmmeter to an AC prong. Connect the other lead to the coaxial connector.
7. X-ray Limits:
The picture tube is especially designed to prohibit X-ray emissions. To ensure continued X-ray protection, replace the picture tube only with one that is the same type as the original. Carefully reinstall the picture tube shields and mounting hardware; these also provide X-ray protection.
8. High Voltage Limits:
High voltage must be measured each time servicing is done on the B+, horizontal deflection or high voltage circuits. Correct operation of the X-ray protection circuits must be reconfirmed whenever they are serviced.
(X-ray protection circuits also may be called "horizontal disable" or "hold-down".)

Heed the high voltage limits. These include the X-ray Protection Specifications Label, and the Product Safety and X-ray Warning Note on the service data schematic.

1-1 Safety Precautions (Continued)

9. High voltage is maintained within specified limits by close-tolerance, safety-related components and adjustments. If the high voltage exceeds the specified limits, check each of the special components.
10. Design Alteration Warning:
Never alter or add to the mechanical or electrical design of this unit. Example: Do not add auxiliary audio or video connectors. Such alterations might create a safety hazard. Also, any design changes or additions will void the manufacturer's warranty.
11. Hot Chassis Warning:
Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord. If an isolation transformer is not used, these units may be safely serviced only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC source.

To confirm that the AC power plug is inserted correctly, do the following: Using an AC voltmeter, measure the voltage between the chassis and a known earth ground. If the reading is greater than 1.0V, remove the AC power plug, reverse its polarity and reinsert. Re-measure the voltage between the chassis and ground.
12. Some TV chassis are designed to operate with 85 volts AC between chassis and ground, regardless of the AC plug polarity. These units can be safely serviced only if an isolation transformer inserted between the receiver and the power source.
13. Some TV chassis have a secondary ground system in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground systems are electrically separated by insulating material that must not be defeated or altered.
14. Components, parts and wiring that appear to have overheated or that are otherwise damaged should be replaced with parts that meet the original specifications. Always determine the cause of damage or overheating, and correct any potential hazards.
15. Observe the original lead dress, especially near the following areas: Antenna wiring, sharp edges, and especially the AC and high voltage power supplies. Always inspect for pinched, out-of-place, or frayed wiring. Do not change the spacing between components and the printed circuit board. Check the AC power cord for damage. Make sure that leads and components do not touch thermally hot parts.
16. Picture Tube Implosion Warning:
The picture tube in this receiver employs "integral implosion" protection. To ensure continued implosion protection, make sure that the replacement picture tube is the same as the original.
17. Do not remove, install or handle the picture tube without first putting on shatterproof goggles equipped with side shields. Never handle the picture tube by its neck. Some "in-line" picture tubes are equipped with a permanently attached deflection yoke; do not try to remove such "permanently attached" yokes from the picture tube.
18. Product Safety Notice:
Some electrical and mechanical parts have special safety-related characteristics which might not be obvious from visual inspection. These safety features and the protection they give might be lost if the replacement component differs from the original—even if the replacement is rated for higher voltage, wattage, etc.

Components that are critical for safety are indicated in the circuit diagram by shading, () or (). Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications. A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

1-2 Servicing Precautions

Warning1: First read the "Safety Precautions" section of this manual. If some unforeseen circumstance creates a conflict between the servicing and safety precautions, always follow the safety precautions.

Warning2: An electrolytic capacitor installed with the wrong polarity might explode.

1. Servicing precautions are printed on the cabinet. Follow them.
2. Always unplug the unit's AC power cord from the AC power source before attempting to:
(a) Remove or reinstall any component or assembly, (b) Disconnect an electrical plug or connector, (c) Connect a test component in parallel with an electrolytic capacitor.
3. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
4. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the portion around the serviced part has not been damaged.
5. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
6. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500V) to the blades of the AC plug.

The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.
7. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.
8. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

1-3 Precautions for Electrostatically Sensitive Devices (ESDs)

1. Some semiconductor (“solid state”) devices are easily damaged by static electricity. Such components are called Electrostatically Sensitive Devices (ESDs); examples include integrated circuits and some field-effect transistors. The following techniques will reduce the occurrence of component damage caused by static electricity.
2. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. (Be sure to remove it prior to applying power—this is an electric shock precaution.)
3. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of electrostatic charge.
4. Do not use freon-propelled chemicals. These can generate electrical charges that damage ESDs.
5. Use only a grounded-tip soldering iron when soldering or unsoldering ESDs.
6. Use only an anti-static solder removal device. Many solder removal devices are not rated as “anti-static”; these can accumulate sufficient electrical charge to damage ESDs.
7. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
8. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.
9. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting a foot from a carpeted floor can generate enough static electricity to damage an ESD.

2. Reference Information

2-1 Tables of Abbreviations and Acronyms

Table 2-1 Abbreviations

A	Ampere	MV	Megavolt
Ah	Ampere-hour	MW	Megawatt
Å	Angstrom	MΩ	Megohm
dB	Decibel	m	Meter
dBm	Decibel Referenced to One Milliwatt	μA	Microampere
°C	Degree Celsius	μF	Microfarad
°F	Degree Fahrenheit	μH	Microhenry
°K	degree Kelvin	μm	Micrometer
F	Farad	μs	Microsecond
G	Gauss	μW	Microwatt
GHz	Gigahertz	mA	Milliampere
g	Gram	mg	Milligram
H	Henry	mH	Millihenry
Hz	Hertz	ml	Milliliter
h	Hour	mm	Millimeter
ips	Inches Per Second	ms	Millisecond
kWh	Kilowatt-hour	mV	Millivolt
kg	Kilogram	nF	Nanofarad
kHz	Kilohertz	Ω	Ohm
kΩ	Kilohm	pF	Picofarad
km	Kilometer	lb	Pound
km/h	Kilometer Per Hour	rpm	Revolutions Per Minute
kV	Kilovolt	rps	Revolutions Per Second
kVA	Kilovolt-ampere	s	Second (Time)
kW	Kilowatt	V	Volt
l	Liter	VA	Volt-ampere
MHz	Megahertz	W	Watt
		Wh	Watt-hour

Table 2-2 Table of Acronyms

ABL	Automatic Brightness Limiter	I/O	Input/output
AC	Alternating Current	L	Left
ACC	Automatic Chroma Control	L	Low
AF	Audio Frequency	LED	Light Emitting Diode
AFC	Automatic Frequency Control	LF	Low Frequency
AFT	Automatic Fine Tuning	MOSFET	Metal-Oxide-Semiconductor-Field-Effect-Tr
AGC	Automatic Gain Control	MTS	Multi-channel Television Sound
AM	Amplitude Modulation	NAB	National Association of Broadcasters
ANSI	American National Standards Institute	NEC	National Electric Code
APC	Automatic Phase Control	NTSC	National Television Systems Committee
APC	Automatic Picture Control	OSD	On Screen Display
A/V	Audio-Video	PCB	Printed Circuit Board
AVC	Automatic Volume Control	PLL	Phase-Locked Loop
BAL	Balance	PWM	Pulse Width Modulation
BPF	Bandpass Filter	QIF	Quadrature Intermediate Frequency
B-Y	Blue-Y	R	Right
CATV	Community Antenna Television (Cable TV)	RC	Resistor & Capacitor
CB	Citizens Band	RF	Radio Frequency
CCD	Charge Coupled Device	R-Y	Red-Y
CCTV	Closed Circuit Television	SAP	Second Audio Program
Ch	Channel	SAW	Surface Acoustic Wave(Filter)
CRT	Cathode Ray Tube	SIF	Sound Intermediate Frequency
CW	Continuous Wave	SMPS	Switching Mode Power Supply
DC	Direct Current	S/N	Signal/Noise
DVM	Digital Volt Meter	SW	Switch
EIA	Electronics Industries Association	TP	Test Point
ESD	Electrostatic Discharge	TTL	Transistor Transistor Logic
ESD	Electrostatically Sensitive Device	TV	Television
FBP	Feedback Pulse	UHF	Ultra High Frequency
FBT	Flyback Transformer	UL	Underwriters Laboratories
FF	Flip-Flop	UV	Ultraviolet
FM	Frequency Modulation	VCD	Variable-Capacitance Diode
FS	Fail Safe	VCO	Voltage Controlled Oscillator
GND	Ground	VCXO	Voltage Controlled Crystal Oscillator
G-Y	Green-Y	VHF	Very High Frequency
H	High	VIF	Video Intermediate Frequency
HF	High-Frequency	VR	Variable Resistor
HI-FI	High Fidelity	VTR	Video Tape Recorder
IC	Inductance-Capacitance	VTVM	Vacuum Tube Voltmeter
IC	Integrated Circuit	TR	Transistor
IF	Intermediate Frequency		


2-2 IC Line Up

Table 2 - 3 IC Line - Up					
NO	BOARD	LOC. NO	SPEC	DESCRIPTION	REMARK
1	MAIN	IC201S	VDP3112B	Video Processor	Refer to Table 2-3-1
		IC601	MSP3411G	Multistandard Sound Processor	Refer to Table 2-3-2
		IC901	SDA555X	MICOM, TTX(MTP)	
		IC902	KS24L161	EEPROM	
		IC602	TDA7297	Audio AMP	Refer to Table 2-3-3
		HIC201	DRGB001	RGB Drive AMP Hybrid IC	VM Option
		HIC202			
		HIC203			
		HIC204			
		HIC401	DDR1001	100Hz Horizontal Pulse AMP	Option
		IC301	LA7845	Vertical IC	
		Q402	KSC2073-H2	Horizontal Drive IC	HC401
		Q401	KSD5703		
		D414	FMP-3FU		
		IC401	KA393	E/W Drive IC	
		Q404	IRF620		
		IC801S	3S1265R	SPS Controllor	
		D801S	RBV606	Bridge Diode	
		PC801S	PC123Y	Photo Coupler	
		IC802	KA78R05	5V Controlled Regulator	HC801
		D805	FML-G12S	Rectifier Diode	
		D806			
		D807			
		D802	FMG-G2CS		
		IC201	KA78RM33	3.3V Regulator	VDPY
		IC804	KA7806	6V Regulator	
		IC803	KA78R08	8V Controlled Regulator	
		IC903	KA78RM33	3.3V Regulator	
		IC904	KIA7025AP	MICOM Reset IC	
		Q909	2N7000	IIC Level Shifter	
Q910					
TU01S	TCLS3101PD09A9(S)	Main Tuner with IF Block	Refer to Table 2-3-4		
TU02S	TCPN3081PD09A(S)	Sub Tuner with IF Block	Refer to Table 2-3-5		

Table 2 - 3 IC Line - Up						
NO	BOARD	LOC. NO	SPEC	DESCRIPTION	REMARK	
2	CRT	IC501	TDA6111Q	Video Output AMP R.G.B Drive		
		IC502				
		IC503				
		QF04	2SC2344	Push-Pull (VM)	Option	
		QF05	2SA1011			
		QG02	KSA940	TR-Power (TILT)		
		QG03	KSD2073-H2			
		ICG01	KA4558	OP-AMP (TILT)		
3	DOUBLE FOCUS	ICH01	KA4558	OP-AMP		Option
		QH01	2SC4636RB	TR-Power		
4	V-S/W	ICS01	TEA6425	Video Switching IC with Adder Output		Option
5	PIP	ICP01	SDA9489X	High-end Picture-In Picture IC	Option	
		ICP02	EZ1086CM	3.3V Regulator		

 **Table 2-3-1 VIDEO IC (IC201S)**

SPEC	FUNCTION	REMARK
VDP3108B	50Hz Basic	
VDP3112B	50Hz, 2H Comb Filtr	
VDP3120B	50Hz, 2H Comb Filter, Horizontal Scaler	
VDP3132Y	50Hz, 2H Comb Filter, DVD Input	
VDP3140D	100Hz	

 **Table 2-3-2 SOUND IC (IC601)**

SPEC	FUNCTION	REMARK
MSP3400D	Multistandard, A2 Stereo	
MSP3410D	Multistandard, A2 Stereo, Nicam	
MSP3411G	Multistandard, A2 Stereo, Nicam, Virtual Dolby	

 **Table 2-3-3 SOUND AMP (IC602)**

SPEC	FUNCTION	REMARK
TDA7297	15W x 2CH, 10W x 2CH	

 **Table 2-3-4 1'st TUNER (TU01S)**

SPEC	FUNCTION	REMARK
TCLS3101PD09A(S)	CS with LNA Function	Main
TCPS3001PD09D(S)	CS	
TCPS3001PD09E(S)	CS	India

Note TCPS3001PD09A(S) is out-of-date, TCPS3001PD09D(S) which is up-to-date has the same function.

 **Table 2-3-5 2'nd TUNER (TU02S)**

SPEC	FUNCTION	REMARK
TCPS3000PC09B(S)	CS	Sub

MEMO

3. Specifications

Television System	CS	PAL/SECAM-B/G,D/K,L,I, NTSC-M	
Antena Input		75ohms, Coaxial Cable	
Power	Consumption	100W (Applied When 29" Flat)	
	Requirements	220V Only	
		Free Voltage	Not Present R815
Frequency	50/60Hz		
Sound	Output	15W x 2CH	
		10W x 2CH	
		5W x 2CH	
	Effect	Virtual Dolby	Option
		Turbo Sound	
Pseudo Stereo			
Jacks	Front (AV2)	RCA Input	
		S-VHS	Option
		Head-Phone	
	Back	2Scart Input/Output	AV1 : Scart I/O, RGB Input, RF Out AV2 : Scart I/O, Monitor Out
		DVD Input(YPbPr)	Option
		AV2 Monitor Audio Output	Option
		S-VHS	Option

Specifications are subject to change.



Specifications for Model Name (Ex. CS29A6??8X/HAC)

	Function	NOTE
N	NICAM	"NICAM" means that A2 STEREO + NICAM
P	2 TUNER PIP	
PF	2 TUNER PIP, NICAM, TTX	
PT	2 TUNER PIP, A2 STEREO, TTX	
PW	2 TUNER PIP, A2 STEREO	
MT	2 TUNER MULTI PIP, A2 STEREO,	
NT	NICAM, TTX	
WT	A2 STEREO, TTX	
GW	1 TUNER PIP, A2 STEREO, TTX	

MEMO

4. Alignment and Adjustments

4-1 General Alignment Instructions

1. Usually, a color TV-VCR needs only slight touch-up adjustment upon installation. Check the basic characteristics such as height, horizontal and vertical sync and focus.
2. Observe the picture for good black and white details. There should be objectionable color shading; if color shading is present, demagnetize, perform purity and convergence adjustments described below.
3. Use the specified test equipment or its equivalent.
4. Correct impedance matching is essential.
5. Avoid overload. Excessive signal from a sweep generator might overload the front-end of the TV. When inserting signal markers, do not allow the marker generator to distort test results.
6. Connect the TV only to an AC power source with voltage and frequency as specified on the backcover nameplate.
7. Do not attempt to connect or disconnect any wires while the TV is turned on. Make sure that the power cord is disconnected before replacing any parts.
8. To protect against shock hazard, use an isolation transformer.

4-2 Automatic Degaussing

A degaussing coil is mounted around the picture tube, so that external degaussing after moving the TV should be unnecessary. But the receiver must be properly degaussed upon installation.

The degaussing coil operates for about 1 second after the power is switched ON. If the set is moved or turned in a different direction, the power should be OFF for at least 10 minutes.

If the chassis or parts of the cabinet become magnetized, poor color purity will result. If this happens, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube and the sides and front of the receiver. Slowly withdraw the coil to a distance of about 6 feet before turning power OFF.

If color shading persists, perform the following Color purity and Convergence adjustments.

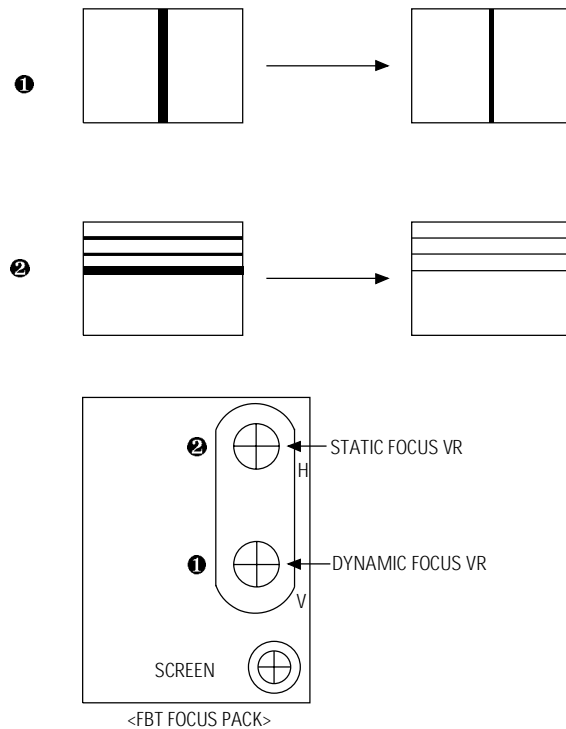
4-3 High voltage Check

CAUTION : There is no high voltage adjustment on this chassis. The B+ power supply should be +135 volts (with full color- bar input and normal picture level).

1. Connect a digital voltmeter to the second anode of the picture tube.
2. Turn on the TV. Set the Brightness and Contrast controls to minimum (zero beam current).
3. Adjust the Brightness and contrast controls to both extremes. Ensure that the high voltage does not exceed 32 KV under any conditions.

4-4 Dynamic Focus Adjustment

1. A dynamic focus adjustment should be done after replacing the CRT PCB, FBT or CRT.
2. Input a crosshatch pattern.
3. Enter "STANDARD" in video mode.
4. Turn the Dynamic focus VR fully clockwise (maximum). (❶)
5. Turn the Static focus VR fully counterclockwise (maximum). (❷)
6. Slowly turn the static focus VR counterclockwise. Adjust until the vertical line in the middle of the screen has maximum clarity. (❶)
7. Slowly turn the dynamic focus VR (clockwise) and adjust the 3rd horizontal line for maximum clarity. (❷)
8. Repeat 4-7, if necessary.



4-5 SCREEN Adjustment

1. Input Toshiba Pattern
2. Enter "Service Mode". (Refer to "Service Mode")
3. Select "G2-Adjust".
4. Set the values as below.

IBRM = 220
WDRV = 35
CDL = 220
COLR G B = 150 150 150

- Turn the SCREEN VR until "MRCR G B" and "MRWDG" are green and those value are about 100.
(The incorrect SCREEN Voltage may result that "MRCR G B" and "MRWDG" should be red)

Note 1. When you do not have Toshiba Pattern, follow this method.

- Set the TV on the condition that AV mode no signal(black)
- Enter the "Menu" and set the mode to blue screen off.
- Enter the "Service Mode".
- Select " G2-Adjust".
- Set the values as below.

IBRM = 220
WDRV = 35
CDL = 220
COLR G B = 150 150 150

- Turn the SCREEN VR until the value of " MRCR G B" is about 120. Do not mind that the "OSD" Color is red.

■ After completing G2-Adjust, follow this procedure.

- Enter the "Video Adjust 1".
- Choose any item in menu. (ex. Select "Red Cutoff")
- Change the value of item you select, and recover the value.

For example, when the value of "Red Cutoff" is 127, change the value to 128 and restore the value to 127.

If you do not follow this procedure, the picture may be abnormal.

For example, when the TV set is on, the picture becomes brighter gradually.

4-6 E²PROM (IC902) Replacement

1. When IC902 is replaced, all adjustment data revert to the initial values.
So, all adjustment values when servicing should be readjusted.
2. After IC902 is replaced, connect the AC power supply cord.
3. Turn the power switch ON.
4. In stand-by, warm up the TV for at least 10 seconds.
5. Power on the TV.

4-7 White Balance Adjustment

■ Equipment : Color-Analyzer (CA-100)

■ Input Signal : Pattern signal (Toshiba pattern)

1. Select STANDARD from the menu.
2. Input an 100% White pattern.
3. Enter the "Service Mode". (Refer to "4-8 Service Mode")
4. Warm up the TV set at least for 30 minutes.
5. Input a Toshiba pattern signal.
6. Enter the "Video Adjust1".
 - Adjust "Sub Contrast" so that Y (luminance) becomes $40 \text{ ft} \pm 3$.
 - Use "Red Drive" and "Blue Drive" to adjust High-Light (x : 290, y : 300)
 - Adjust "Sub Bright" so that Y (luminance) becomes $1.3 \text{ ft} \pm 0.3$.
 - Use "Red Cutoff" and "Blue Cutoff" to adjust Low-Light (x : 290, y : 300).
7. Adjust CA-100 so that the final adjustment value can be fixed.
8. Use the Channel Up/Down (▲/▼) buttons to move the cursor on the adjustment modes.
9. Use the Volume +/- buttons to change the adjustment value.

4-8 Factory Adjustment

4-8-1 Service Mode

1. To enter the "Service Mode", Press the remote-control keys in this sequence :

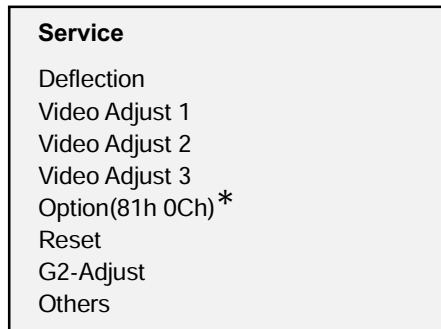
- If you do not have Factory remote-control



- If you have Factory remote-control



2. After the Service Mode is entered, the initial screen is as shown in the figure below.



* These hexa digits are check sum value which depends on the MICOM.
If check sum value is changed, the value of E²PROM Data newly initialed.

3. Use the Channel Up/Down buttons to move the cursor in the adjustment parameters.

Note 2.

- When CRT, CRT PCB, FBT, E²PROM (sometimes MICOM) is replaced, the adjustment values should be controlled.
- After the Service adjustment is completed, Do not select "Reset" in the service mode menu. (After above procedure is done, power is on initially and the "Plug and Play" will be operated.)

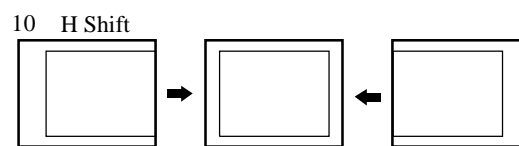
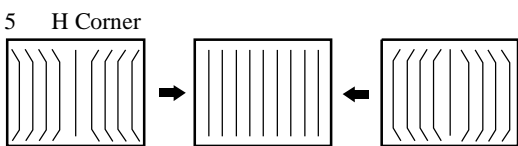
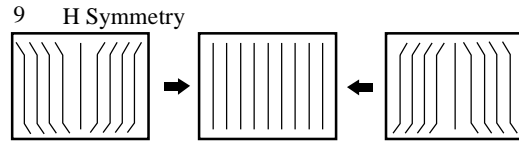
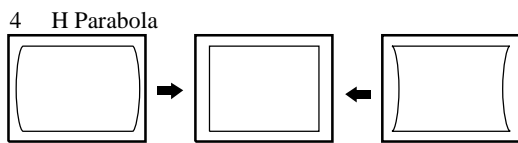
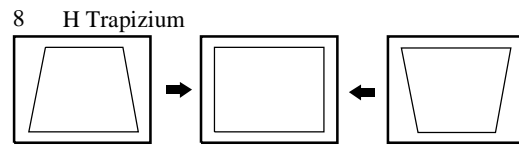
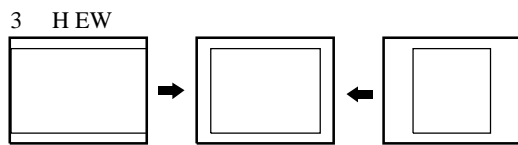
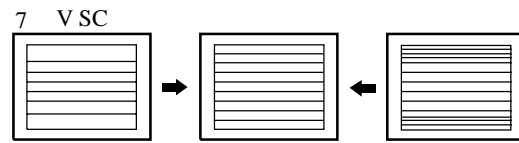
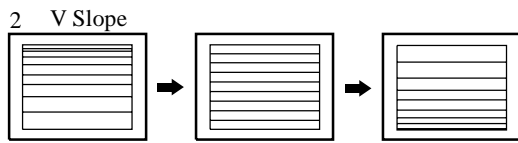
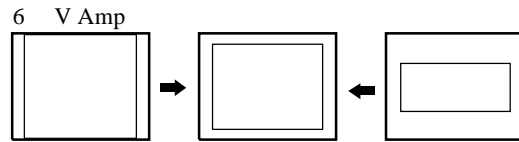
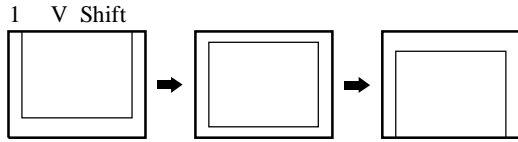
4-8-2 Memory Data

4-8-2(A) DEFLECTION (GEOMETRIC ADJUSTMENT VALUE)

	Fixed Value
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No.	OSD	Range	Initial Value	Function	Remark
1	V Shift	-128 ~127	-30	Adjust Vertical Picture Position	
2	V Amp	-128 ~127	-7	Adjust Vertical Picture Size	
3	V Slope	-128 ~127	-3	Adjust Vertical Slope Correction	
4	V SC	-128 ~127	-17	Adjust Vertical S-Correction	Not to be adjusted
5	H EW	-128 ~127	73	Adjust Horizontal Picture Size	
6	H Trapezium	-128 ~127	-47	Adjust Horizontal Trapeziod	
7	H Parabola	-128 ~127	-7	Adjust Horizontal Parabola Wave	
8	H Symmetry	-128 ~127	13	Adjust Horizontal Symmetry	Not to be adjusted
9	H Corner	-128 ~127	23	Adjust Horizontal Corner	
10	H Shift	-128 ~127	13	Adjust Horizontal Position	
11	PIP Contrast	0 ~ 15	8	Adjust PIP Contrast	
12	PIP Tint	0 ~ 63	0	Adjust PIP Tinit	
13	PIP PAL V Pos	0 ~ 255	26	Adjust PIP Vertical Position (Main Picture is PAL)	
14	PIP NTSC V Pos	0 ~ 255	23	Adjust PIP Vertical Position (Main Picture is NTSC)	
15	PIP H Pos	0 ~ 255	30	Adjust PIP Horizontal Position	
16	PIP BLKLG	0 ~ 15	6	Adjust PIP Green Cutoff Level	

4-8-2(B) SCREEN CHANGE (I2C BUS GEOMETRIC ADJUSTMENT)



4-8-2(C) VIDEO ADJUST 1

 Fixed Value

No.	OSD	Range	Initial Value	Function	Remark
1	Red Cutoff	0 ~255	127	Adjust Red Cutoff Level	Low Light
2	Green Cutoff	0 ~255	127	Adjust Green Cutoff Level	
3	Blue Cutoff	0 ~255	127	Adjust Blue Cutoff Level	
4	Red Drive	0 ~255	127	Adjust Red Output Gain	High Light
5	Green Drive	0 ~255	127	Adjust Green Output Gain	
6	Blue Drive	0 ~255	127	Adjust Blue Output Gain	
7	Sub Bright	0 ~ 200	100	Adjust Brightness Level	Low Light
8	Sub Contrast	0 ~ 13	50	Adjust Contrast Level	High Light
9	Sub Color	0 ~ 27	27	Adjust Color Level	Not to be adjusted
10	Sub Tint	0 ~ 100	80	Adjust Tint	
11	BCL Threshold	0 ~ 255	65	Adjust Beam Control Limit Refer to Note 3	
12	BCL Gain	0 ~ 15	8		
13	BCL Time	0 ~ 15	9		
14	TTX Contrast	0 ~ 255	90	Adjust OSD/TTX Contrast	
15	YC Delay	0 ~ 8	*	Refer to Table 1	

Note 3. Beam Control Limit Characteristic

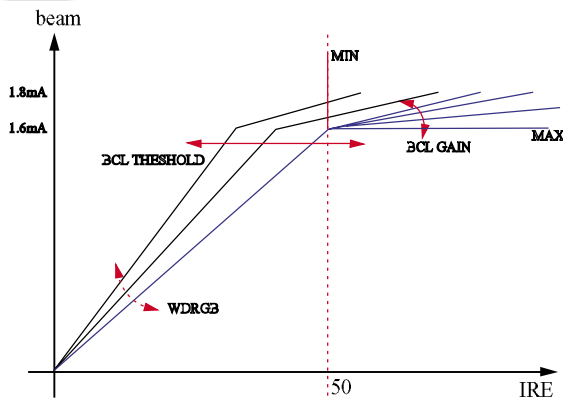



Table 1. YC Delay Adjustment Table

YC Delay	PAL					SECAM					NTSC	
	Def.	BG	DK	I	L	Def.	BG	DK	I	L	Def.	M
Value	4	3	6	6	7	1	1	5	8	5	4	3

The "Def." means that TV is in AV mode.

4-8-2(D) VIDEO 2 ADJUST

Fixed Value

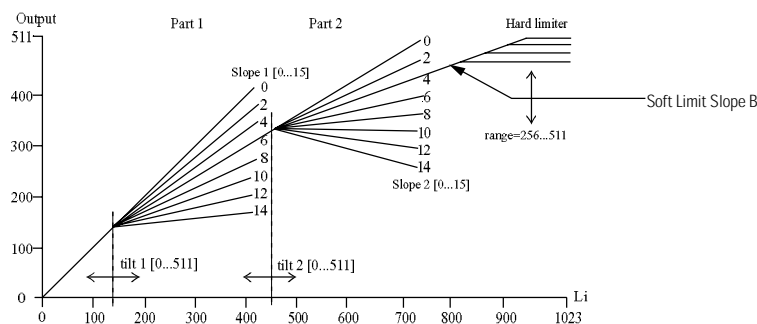
No.	OSD	Range	Initial Value	Function	Remark
1	B stretch-BTHR	0 ~ 55	50	Black Stretch Threshold	
2	B stretch-BTLT	0 ~ 15	8	Black Stretch Tilt Position	
3	B stretch-BAM	0 ~ 31	4	Black Stretch Amount	
4	Coring 	10 ~ 31	20	Luma Peaking Filter Coring	
5	RGB Bright	0 ~ 255	45	OSD/TTX RGB Bright	
6	RGB Contrast	0 ~ 255	15	OSD/TTX RGB Contrast	
7	EHT Time	0 ~ 15	0	Electronic High Tension Response Time	
8	EHT Compensation	0 ~ 255	90	Electronic High Tension Coefficient	


 Coring : The Value of Center Frequency for the active bandwidth.

4-8-2(E) VIDEO 3 ADJUST

No.	OSD	Range	Initial Value	Function	Remark
1	Peak Threshold	0 ~ 255	185	White Peak Level Threshold	Refer to Note Below
2	Soft Limit Slope B	0 ~ 15	4	Refer to Picture Below	
3	Hard Limit	0 ~ 255	255		
4	Peak Video Ref	0 ~ 4	0	White Peak Level Threshold Reference	
5	Peak Video Gain	0 ~ 5	0	White Peak Level Threshold Gain	
6	ACC-REF(PAL/NTSC)	0 ~ 40	33	Auto Color Control	
7	ACCR(SECAM)	0 ~ 39	39		


Note 4. Soft Limit & Hard Limit




 "Soft Limit" is that Limiting the peak white without feed-back, but "Peak Limit" is that with feed-back for white peak level

4-8-2(E) OPTION

 Fixed Value

No.	OSD	Initial Value 	Function	Remark
1	Language		Arab, Iran, Lybya, CIS	OSD Language
2	Sound		A2/NICAM, V-Dolby, Mono, L-Stereo	Depending on IC601 Refer to Note 5
3	CRT		4:3, Wide, Q(12.8:9), 4:3-16:9, Q-16:9	S:S-VHS, D:DVD
4	AV Mode		2Scart, 2Scart+S, 1RCA, 2RCA, 2RCA+S, 2RCA+D, 2RCA+S+D, 1Scart	
5	X-Ray		Off, On	
6	Tilt Control		Off, On	
7	Auto FM		Off, On	
8	PIP		2-Tuner, 1-Tuner, Off	
9	Txt Language		Arabic, Farsi, Arab-Hebrew, West Europe, East Europe, Russian, Greek-Turkey	
10	LNA		Off, On	When PIP is "2-Tuner", set to "ON"
11	Equalizer		Off, On	
12	High Deviate		Off, On	
13	TTX On/Off		Off, On	
14	AV by CH key		Off, On	Without "TV/VIDEO" key in the front panel, set to "On"

 Initial Value : Refer to Note 6 on the next page.

Note 5.

Sound	IC601
A2/NICAM	MSP3400D, MSP3410D
V-DOLBY	MSP3411G
Mono	Not used this mode for KS3A Chassis
L-Stereo	

Note 6. Option.

	CS29A5WT8X/UMG	CS29A6PF8X/HAC	CS29A6WT8X/BWT	CS29A5MT9X/BWT
Description	Initial Vaue	Initial Vaue	Initial Vaue	Initial Vaue
LANGUAGE	Arab	Arab	CIS	CIS
SOUND	V-Dolby	V-Dolby	A2/Nicam	A2/Nicam
CRT	4:3	4:3	4:3	4:3
AV MODE	2 RCA + S	2 RCA + S	2 SCART + S	2 SCART + S
X-RAY	OFF	OFF	OFF	OFF
TILT CONTROL	ON	ON	ON	ON
AUTO FM	ON	ON	ON	ON
PIP	OFF	2-Tuner	OFF	2-Tuner
TEXT LANGUAGE	Arabic	Farsi	RUSSIAN	RUSSIAN
LNA	OFF	ON	OFF	ON
EQUALIZER	ON	ON	ON	ON
HIGH DEVIATE	ON	ON	ON	ON
TTX ON/OFF	ON	ON	ON	ON
AV BY CH KEY	ON	OFF	OFF	ON
OPTION BYTE	84 CC D8	85 DC 5E	83 AC 28	83 AC AE

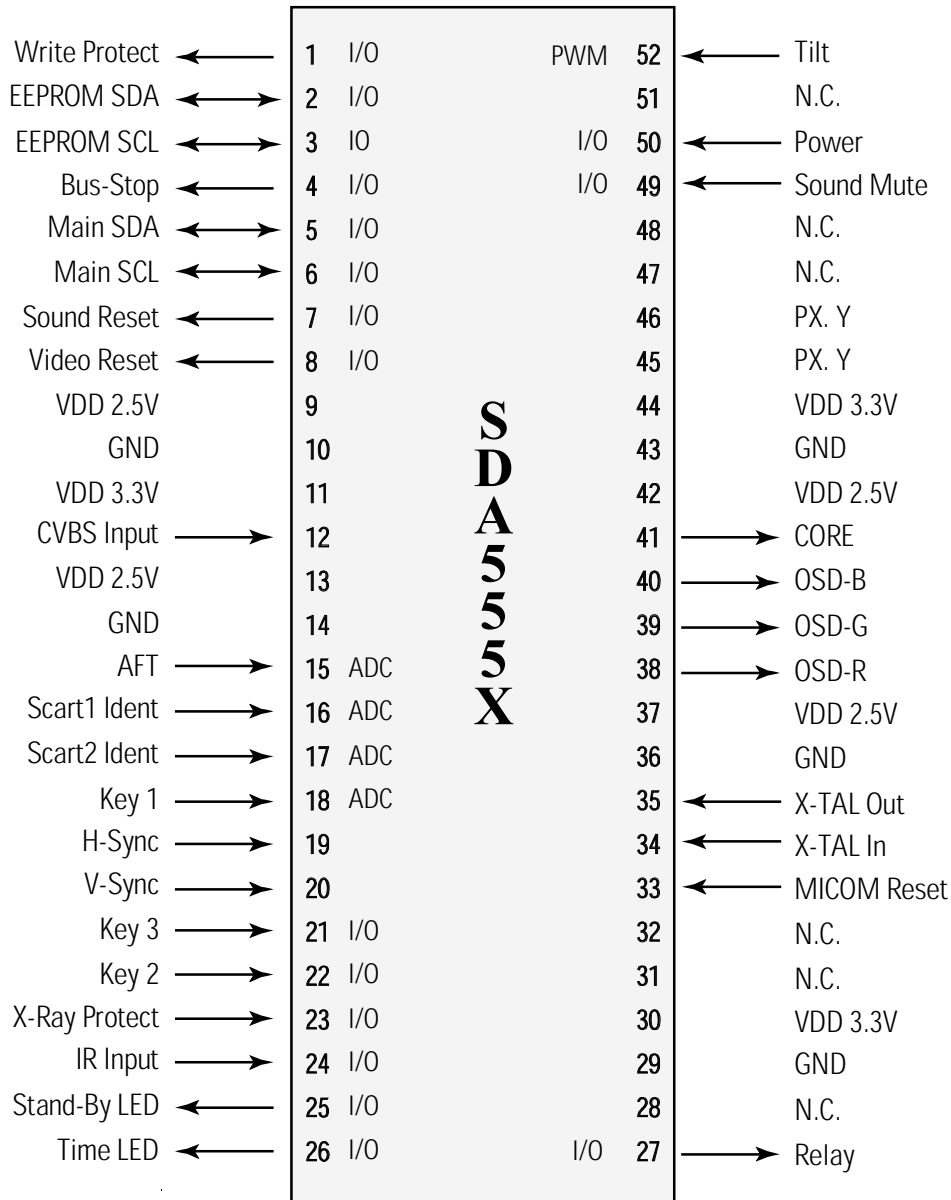
4-8-2(F) OTHERS

	Fixed Value
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No.	OSD	Range	Initial Value	Function	Remark
1	VSU	96 ~ 111	98	Vertical Set Up Time	
2	H QEW	-30 ~ 30	0		
3	H ZOOM Parabola	-30 ~ 30	8	Adjust Horizontal Parabola in Zoom Mode	
4	H 16:9 Parabola	-30 ~ 30	-15	Adjust Horizontal Parabola in 16:9 Mode	
5	TTX H Shift	-30 ~ 30	6	Adjust Horizontal OSD/TTX Position	
6	Mono Sound System	BG/DK/I/M	BG		
7	V Slice Level	0 ~ 3	2		
8	Melody Volumn	0 ~ 20	8	Adjust Melody Volumn	

4-9 MICOM

4-9-1 Pin Layout

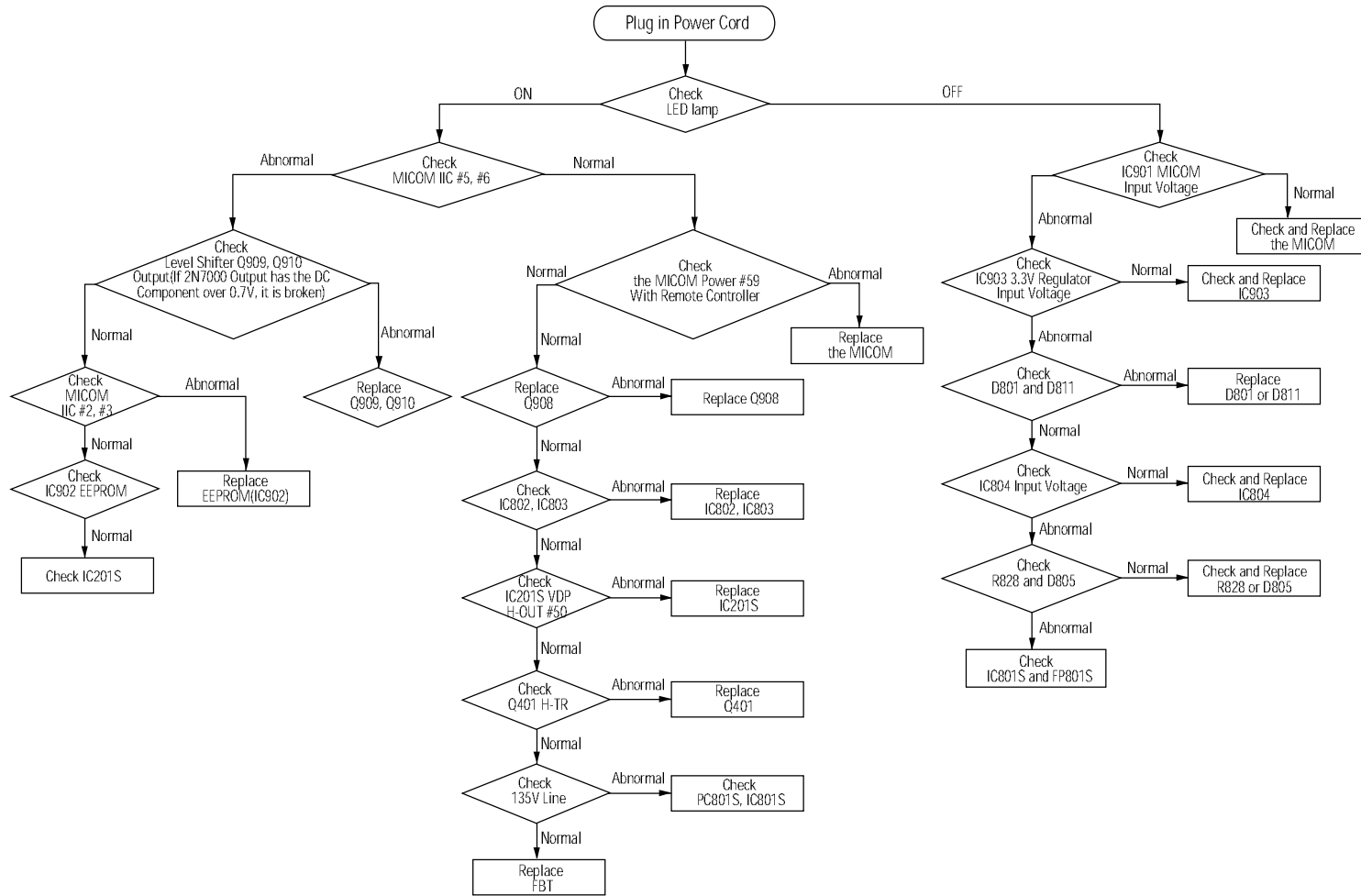


4-9-2 Pin Assignment Specification

PIN NO	FUNCTION	ASSIGN	IN/OUT	ACTIVE H/L	DESCRIPTION
1	I/O	Write Protect	Out	Low	EEPROM Write Protection
2	I/O	ROM SDA	I/O		EEPROM Serial Data Line
3	I/O	ROM SCL	I/O		EEPROM Serial Clock Line
4	I/O	Bus Stop	In	Low	Disable Micom IIC
5	I/O	Main SDA	I/O		Peripheral IC Serial Data Line
6	I/O	Main SCL	I/O	Low	Peripheral IC Serial Clock Line
7	I/O	Sound Reset	Out	Low	MSP IC Initial Control
8	I/O	Video Reset	Out		VDP IC Initial Control
9	Vdd	VDD 2.5V			
10	GND				
11	Vdd	VDD 3.3V			
12	CVBS	CVBS Input	In		TTX CVBS Input
13	Vdd	VDD 2.5V			Analog B+
14	GND				Analog Ground
15	ADC	AFT	In		Auto Fine Tuning Control
16	ADC	SC1-ID	In		Scart1 Ident
17	ADC	SC2-ID	In		Scart2 Ident
18	ADC	Key1	In		Key1 Input
19	HS	H-Sync	In		Horizontal Sync Input
20	VS	V-Sync	In		Vertical Sync Input
21	I/O	Key3	In		Key3 Input
22	I/O	Key2	In		Key2 Input
23	I/O	X-Ray	In		X-Ray Protection
24	I/O	IR-In	In		Remocon Signal Input
25	I/O	STD-LED	Out		LED Drive Output(Red)
26	I/O	TIM-LED	Out		LED Drive Output(Green)

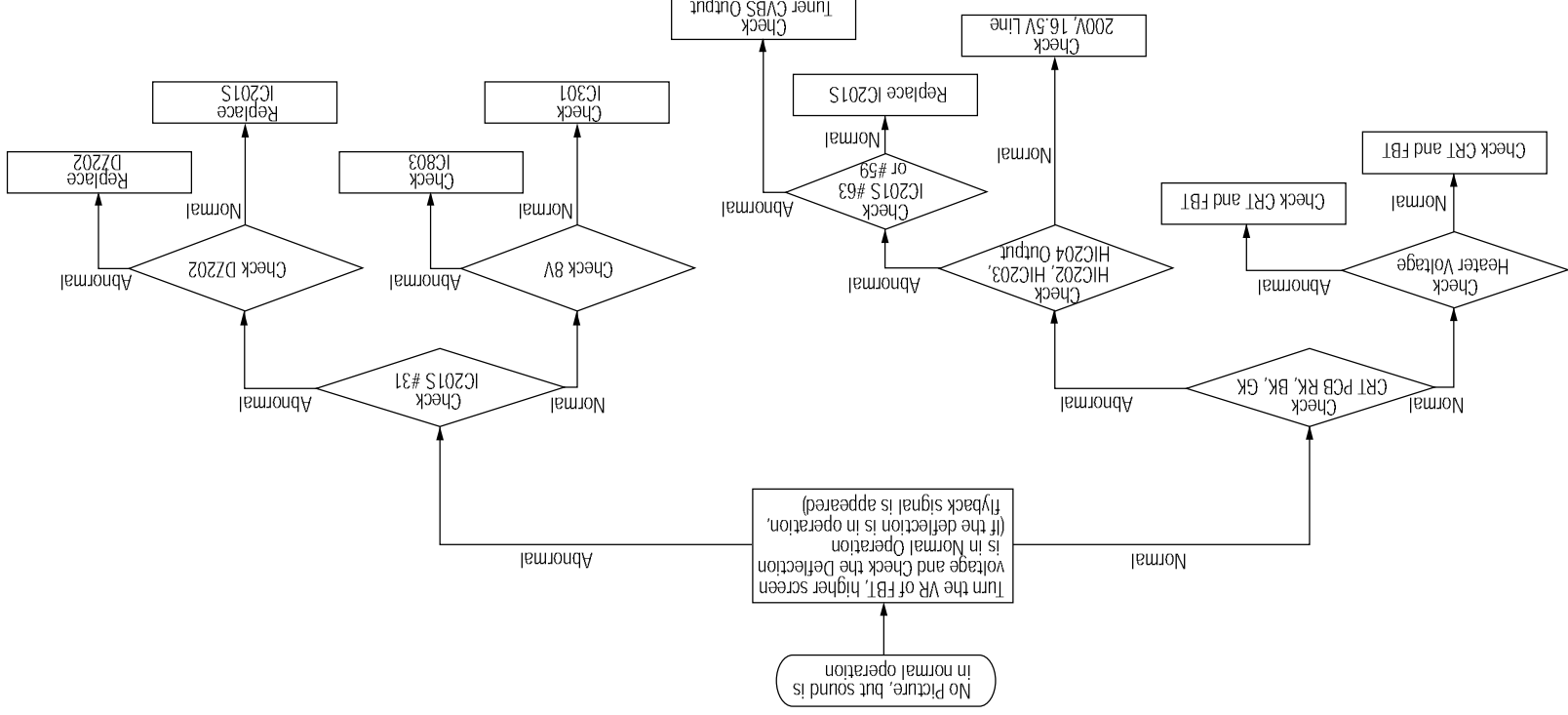
4-9-2 Pin Assignment Specification (Continued)

PIN NO	FUNCTION	ASSIGN	IN/OUT	ACTIVE H/L	DESCRIPTION
27	I/O	Relay	Out	Low	Activate Degaussing Coil
28	N.C.				Not Used (Programmed Gound Level)
29	GND				Analog Ground
30	Vdd	VDD 3.3V			Not Used (Programmed Gound Level)
31	N.C.				Not Used (Programmed Gound Level)
32	N.C.				Micom Hardware Reset
33	Reset	Reset	In	Low	Crystal Oscillation Input
34	X-In	X-TAL In	In	6MHz	Crystal Oscillation Output
35	X-Out	X-TAL Out	Out	6MHz	Analog Ground
36	GND				Analog B+
37	Vdd	VDD 2.5V			OSD/TTX Output (Red)
38	R	OSD-R	Out		OSD/TTX Output (Green)
39	G	OSD-G	Out		OSD/TTX Output (Blue)
40	B	OSD-B	Out		Fast Blank/Half Contrast Output
41	COR	CORE	Out		
42	Vdd	VDD 2.5V			
43	GND				
44	Vdd	VDD 3.3V			
45	I/O	PX.Y	In		When The Caption Function Adopted, Used.
46	I/O	PX.Y	Out		
47	N.C.				Not Used (Programmed Gound Level)
48	N.C.				
49	I/O	S-Mute	Out	High	Sound Amp Mute
50	I/O	Power	Out	Low	Picture On/Off Control
51	N.C.				Not Used (Programmed Gound Level)
52	I/O	Tilt	Out	PWM	Tilt Control Output

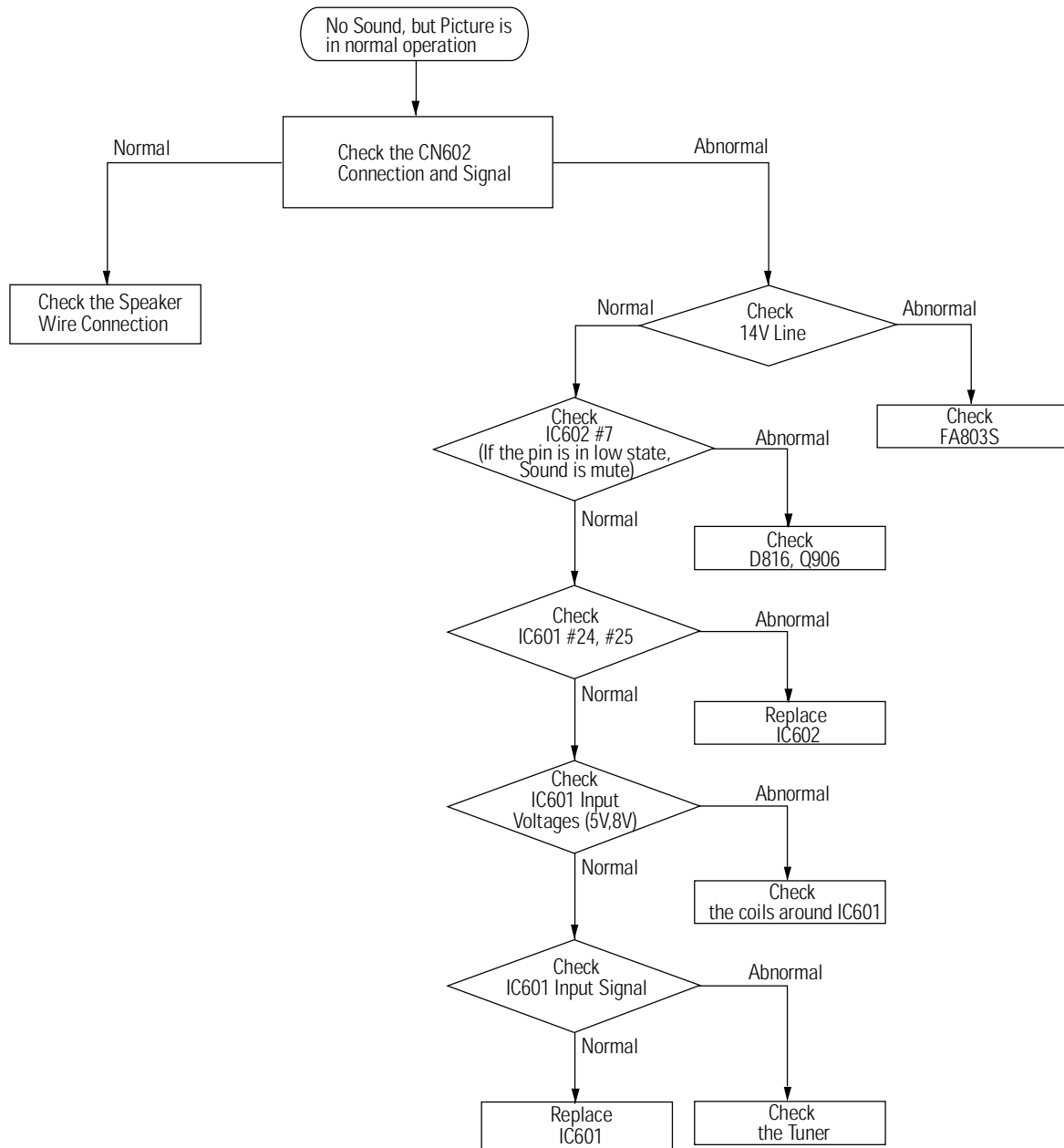


Note : When you check whether any component is normal, you must let the output pin be open in order not to be affected by the side of output.

5-2 No Picture

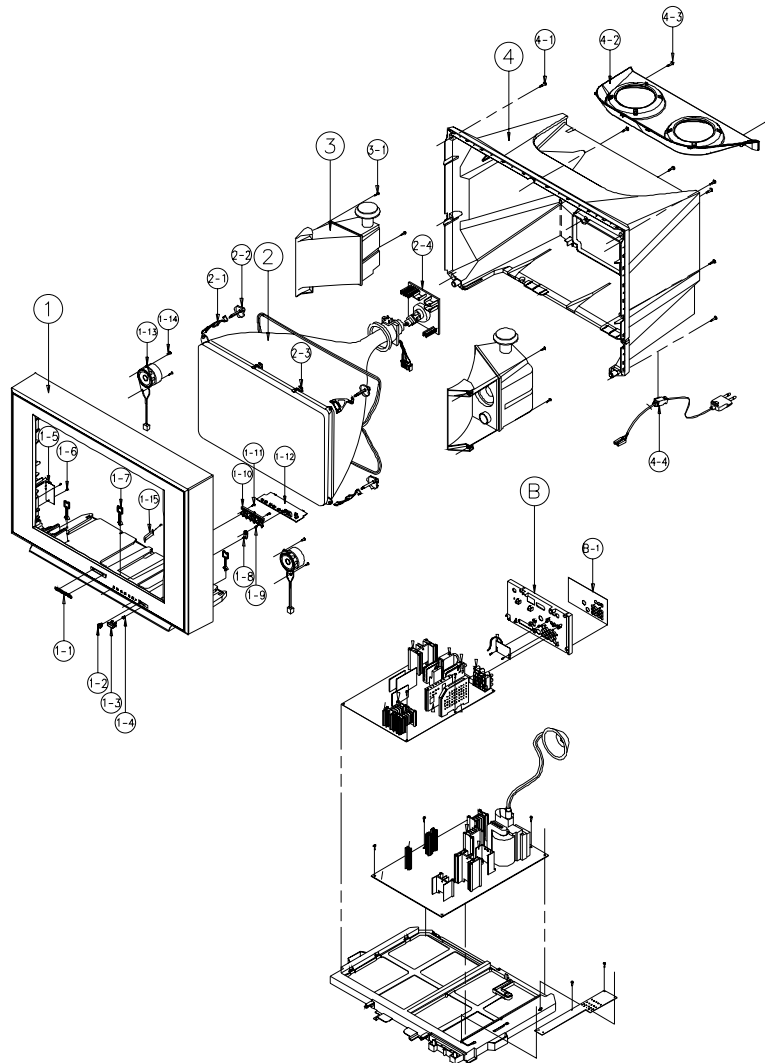


5-3 No Sound



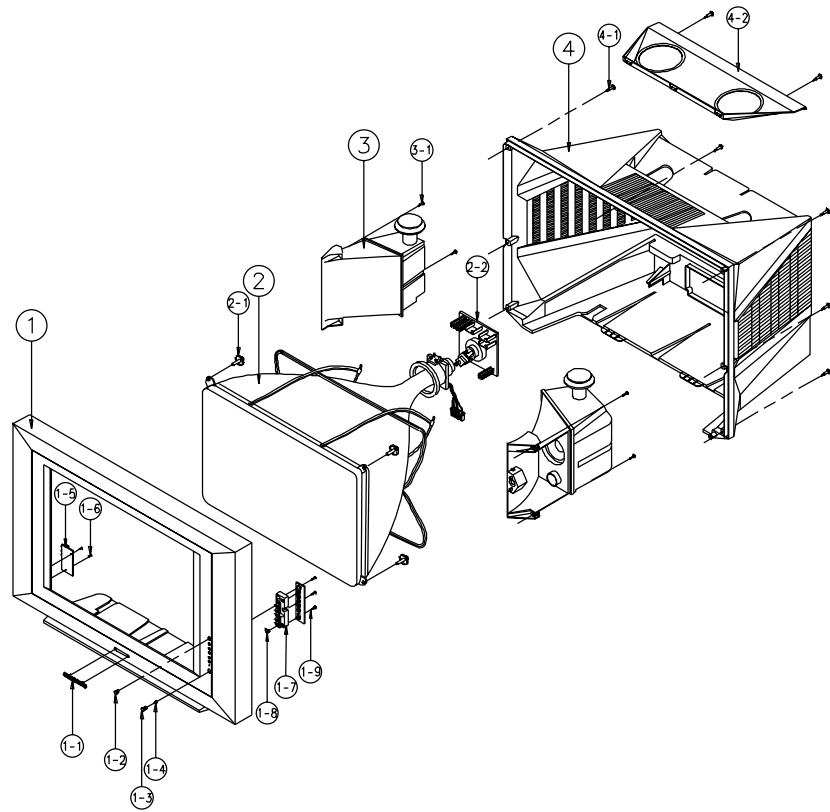
6. Exploded View & Parts List

6-1 CS29A6WT8X/BWT



No	Code No	Description	Specification	Q'ty	Remark
1	AA64-01222C	CABINET FRONT	;29A6 KS3A PLANO,S704+B702	1	
1-1	AA64-70117B	BADGE-BRAND	;AL,SS,SILVER,L65,R2000,-,-	1	
1-2	AA64-40516B	WINDOW-REMOCON	;-,29A6,-,PC,V0,VIOLET,-	1	
1-3	AA64-10792B	KNOB-POWER	;-,29A6,NO-SILK SV704P+W971 ,A	1	
1-4	AA61-60003J	SPRING-CS	;-,SUS304,0.5,OD6,H12,N7,-,-,-	1	
1-5	AA95-00682A	ASSY-PCB,A/V SIDE	;-,29A6,29A5,KS3A,PAL,-	1	
1-6	6002-00052C	SCREW-TAPPING	;TH,+2,M4,L15,ZPC(BLK),SWR	2	
1-7	AA65-00011C	CLAMP-WIRE	;ALL MODEL,NYLON 66,V2,NTR,25M	3	
1-8	AA64-40517B	INDICATOR-LED	;-,,-,ACRYL,-,CLEAR,-	1	
1-9	6003-001019	SCREW-TAPTITE	;RH,+B,M4,L12,ZPC(BLK),SWR	1	
1-10	AA64-00028A	KNOB-CONTROL	;-,29A6,SV808P+W971,ABS,HB,G	1	
1-11	6003-001019	SCREW-TAPTITE	;RH,+B,M4,L12,ZPC(BLK),SWR	2	
1-12	AA95-00558A	ASSY PCB CONTROL	;-,KS3A,29A6,-	1	
1-13	AA91-00335A	ASSY HOLDER SPK	;-,PP,8ohm/15W,blk,housin	2	
1-14	6003-001019	SCREW-TAPTITE	;RH,+B,M4,L12,ZPC(BLK),SWR	4	
1-15	AA61-10054A	BRACKET-CRATER	;-,6277,STS304,TO.5,-,-,-	1	
2	AA03-00075A	CRT-COLOR	;-,A680CP891XD03(C),+380MG,29IN	1	
2-1	AA65-30113A	CLAMP-D.COIL	;NYLON 66,V2,BLK,TVI 25-29,-	4	
2-2	AA60-10050A	SCREW-ASSY	;WP,RH,+M4,L25,SWRCH18A,-,ZPC	4	
2-3	AA65-30113A	CLAMP-D.COIL	;NYLON 66,V2,BLK,TVI 25-29,-	4	
2-4	AA95-00700A	ASSY PCB CRT	;-,KS3A,29A6,-,PAL	1	
3	AA91-00334B	ASSY HOLDER SPK	;-,PP,8ohm/15W,BLK,AA91-0	1	
3-1	AA60-10050A	SCREW-ASSY	;WP,RH,+M4,L25,SWRCH18A,-,ZPC	4	
4	AA64-00027C	CABINET-BACK	;-,72A6,-,HIPS,V2,BLK,-,-	1	
4-1	6003-001025	SCREW-TAPTITE	;RH,+B,M4,L20,ZPC(BLK),SWR	7	
4-2	AA63-00005C	COVER-TOP,SPEAKER	;-,72A6,-,HIPS,V2,BLK,-	1	
4-3	6003-001025	SCREW-TAPTITE	;RH,+B,M4,L20,ZPC(BLK),SWR	2	
4-4	AA96-20130C	ASSY-POWER,CORD	;-,CP2/NO(4.0R),H/C300MM,	1	
B	AA63-00164B	TERMINAL-BOARD,ANT	;-,HIPS VO BLK,-,D3,32	1	
B-1	AA64-00894B	INLAY BACK	;D2,D3,SCART(2),PS SHEET,TO.3,	1	

6-2 CS29A5WT8X/XSG



No	Code No	Description	Specification	Q'ty	Remark
1	AA64-31106J	CABINET FRONT	;CS-29A5WT KS3A PLANO,S704P	1	
1-1	AA64-70117B	BADGE-BRAND	;AL,SS,SILVER,L65,R2000,-,-	1	
1-2	AA64-40455A	WINDOW-REMOCON	;-,725A,-,PC,-,VIOLET,-	1	
1-3	AA64-10709A	KNOB-MASTER	;-,295A,VT803M MASTER,ABS,HB,	1	
1-4	AA61-60005D	SPRING-CS	;-,SUS304,0.4,OD5.5,H9,N4,-,-,-	1	
1-5	AA41-00155A	PCB-SIDE AV	;KS3A,1L,FR-1,245x245x1.6T,8A	1	
1-6	6002-000522	SCREW-TAPPING	;TH,+2,M4,L15,ZPC(BLK),SWR	2	
1-7	AA64-10710A	KNOB-CONTROL	;-,725A,-,ABS,HB,GRAY	1	
1-8	AA64-40456B	INDICATOR-LED	;-,295A,-,ACRYL,-,CLR,-	1	
1-9	6002-000514	SCREW-TAPPING	;RH,+2,M4,L15,ZPC(BLK),SWR	3	
2	AA03-00075A	CRT-COLOR	;-,A68QCP891X003(C),+380MG,29IN	1	
2-1	AA60-10050V	SCREW-ASSY	;WC,HH,+M6,L30,SWRCH18A,ZPC(S	4	
2-2	3704-001032	SOCKET-CRT	;8P,29PI,35.5PI,AU30U	1	
3	* AA91-00333B	ASSY HOLDER SPK	;-,PP,8ohm/15W,BLK,AA91-0	1	
3-1	AA60-10050V	SCREW-ASSY	;WC,HH,+M6,L30,SWRCH18A,ZPC(S	4	
4	AA64-31107D	CABINET-BACK	;-,29A5,-,HIPS,HB,BLK,-,-	1	
4-1	AA60-10050T	SCREW-TAPPING	;RH,+2S,M4,L20,ZPC(BLK),SW	7	
4-2	AA63-30213D	COVER-TOP,SPK	;-,29A5,-,HIPS,HB,BLK,-,-	1	

Loc. No.	Code No.	Description ; Specification	Remark
L711	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
L907	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
L103	2701-000115	INDUCTOR-AXIAL;10uH,10%,3x7mm	
L208	2701-000168	INDUCTOR-AXIAL;3.3uH,5%,2.5x3.4mm	
L209	2701-000168	INDUCTOR-AXIAL;3.3uH,5%,2.5x3.4mm	
L210	2701-000168	INDUCTOR-AXIAL;3.3uH,5%,2.5x3.4mm	
L212	2701-000168	INDUCTOR-AXIAL;3.3uH,5%,2.5x3.4mm	
L709	2701-000168	INDUCTOR-AXIAL;3.3uH,5%,2.5x3.4mm	
L710	2701-000168	INDUCTOR-AXIAL;3.3uH,5%,2.5x3.4mm	
L604	2701-000169	INDUCTOR-AXIAL;3.9uH,10%,2.5x3.4mm	
L605	2701-000177	INDUCTOR-AXIAL;33uH,10%,2.5x3.4mm	
L606	2701-000177	INDUCTOR-AXIAL;33uH,10%,2.5x3.4mm	
L607	2701-000177	INDUCTOR-AXIAL;33uH,10%,2.5x3.4mm	
L608	2701-000177	INDUCTOR-AXIAL;33uH,10%,2.5x3.4mm	
L701	2701-000177	INDUCTOR-AXIAL;33uH,10%,2.5x3.4mm	
L702	2701-000177	INDUCTOR-AXIAL;33uH,10%,2.5x3.4mm	
L705	2701-000177	INDUCTOR-AXIAL;33uH,10%,2.5x3.4mm	
L706	2701-000177	INDUCTOR-AXIAL;33uH,10%,2.5x3.4mm	
L204	2701-000184	INDUCTOR-AXIAL;4.7uH,10%,2.5x3.4mm	
L902	2701-000184	INDUCTOR-AXIAL;4.7uH,10%,2.5x3.4mm	
L908	2701-000191	INDUCTOR-AXIAL;47uH,10%,2.5x3.4mm	
L909	2701-000191	INDUCTOR-AXIAL;47uH,10%,2.5x3.4mm	
L102	2701-000200	INDUCTOR-AXIAL;5.6uH,10%,4.2x9.8mm	
L901	2702-001094	INDUCTOR-RADIAL;10uH,10%,6x4mm	
L903	2702-001094	INDUCTOR-RADIAL;10uH,10%,6x4mm	
L904	2702-001094	INDUCTOR-RADIAL;10uH,10%,6x4mm	
X201	2801-003432	CRYSTAL-UNIT;20.25MHZ,30PPM,28-AAM,13PF,	
X901	2801-003728	CRYSTAL-UNIT;6MHz,30ppm,28-AAM,20pF,40oh	
X601	2801-003903	CRYSTAL-UNIT;18.432MHZ,25ppm,28-AAM,12pf	
L407	2901-000297	FILTER-EMI ON BOARD;-,3A,-,-,3.5x5,TP,-	
L601	2901-000297	FILTER-EMI ON BOARD;-,3A,-,-,3.5x5,TP,-	
L609	2901-000297	FILTER-EMI ON BOARD;-,3A,-,-,3.5x5,TP,-	
L807	2901-000297	FILTER-EMI ON BOARD;-,3A,-,-,3.5x5,TP,-	
J901	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	
L207	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	
L302	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	
L303	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	
L410	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	
L412	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	
L802	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	
L803	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	
L804	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	
L809	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	
L801	3301-001223	CORE-FERRITE BEAD;AA,62ohm,3.5x0.8x5mm,-	
L806	3301-001223	CORE-FERRITE BEAD;AA,62ohm,3.5x0.8x5mm,-	
FA802S	3601-001086	FUSE-AXIAL LEAD;125V,5A,FAST-ACTING,GLAS	
FA803S	3601-001228	FUSE-AXIAL LEAD;125V,10A,FAST-ACTING,EPO	
F801A	3602-000114	FUSE-HOLDER;-,30mohm	
F801B	3602-000114	FUSE-HOLDER;-,30mohm	
CN602	3711-002644	CONNECTOR-HEADER;BOX,5P,1R,2.5mm,STRAIGH	
CN901	3711-002644	CONNECTOR-HEADER;BOX,5P,1R,2.5mm,STRAIGH	
CN302	3711-002645	CONNECTOR-HEADER;BOX,6P,1R,2.5MM,STRAIGH	
CN502	3711-002646	CONNECTOR-HEADER;BOX,7P,1R,2.5mm,STRAIGH	
CN704	3711-002646	CONNECTOR-HEADER;BOX,7P,1R,2.5mm,STRAIGH	
CN702	3711-002647	CONNECTOR-HEADER;BOX,8P,1R,2.5mm,STRAIGH	
HIC201	AA13-00093A	IC HYBRID;-,DRGB001A,SIP,5P,-,TP	
HIC202	AA13-00093A	IC HYBRID;-,DRGB001A,SIP,5P,-,TP	
HIC203	AA13-00093A	IC HYBRID;-,DRGB001A,SIP,5P,-,TP	
HIC204	AA13-00093A	IC HYBRID;-,DRGB001A,SIP,5P,-,TP	
PCB	AA41-00168C	PCB-MAIN;KS3A,FR-1,1L,C,1.6T,330x245,-,	
R212	2004-000218	R-METAL;10Kohm,1%,1/8W,AA,TP,1.8x3.2mm	
C803	2401-003576	C-AL;470uF,20%,450V,GP,ST,35x45mm,1	

ASSY CHASSIS PART

* AA90-30213DASSY CHASSIS PART,KS3A,295A

D-FOCU	6003-001023	SCREW-TAPTITE;RWH,+,B,M3,L10,ZPC(YEL),SW
TB+HC	6003-001023	SCREW-TAPTITE;RWH,+,B,M3,L10,ZPC(YEL),SW
AV	AA61-20254A	HOLDER-CHASSIS;-,CS-622A,HIPS,VO,BLK,-
	AA65-00011C	CLAMP-WIRE;ALL MODEL,NYLON 66,V2,NTR,25M

Loc. No.	Code No.	Description ; Specification	Remark
ASSY CABINET FRONT			
		* AA91-00113HASSY CABINET FRONT;-,CS-29A5WT KS3A PLAN	
		* AA90-70133WASSY CABINET;29A5,CS29A5WT8X/XSG	
BRK+CF	6002-000514	SCREW-TAPPING;RH,+,2,M4,L15,ZPC(BLK),SWR	
CP+CF	6002-000514	SCREW-TAPPING;RH,+,2,M4,L15,ZPC(BLK),SWR	
TER+RJ	6002-000514	SCREW-TAPPING;RH,+,2,M4,L15,ZPC(BLK),SWR	
CF+AV	6002-000522	SCREW-TAPPING;TH,+,2,M4,L15,ZPC(BLK),SWR	
DOME	AA60-10050A	SCREW-ASSY;WP,RH,+,M4,L25,SWRCH18A,-,ZPC	
CB+TER	AA60-10050T	SCREW-TAPPING;RH,+,2S,M4,L20,ZPC(BLK),SW	
CF+CB	AA60-10050T	SCREW-TAPPING;RH,+,2S,M4,L20,ZPC(BLK),SW	
CTS+CB	AA60-10050T	SCREW-TAPPING;RH,+,2S,M4,L20,ZPC(BLK),SW	
CRT+CF	AA60-10050V	SCREW-ASSY;WC,HH,+,M6,L30,SWRCH18A,ZPC(S	
	AA61-10054A	BRACKET-CRATER;-,6277,STS304,TO.5,-,-,-	
	AA63-30213D	COVER-TOP;SPK;-,29A5,-,HIPS,HB,BLK,-,-	
CABBAC	AA63-60001X	SPACER-FELT;FELT,TO.5,BLK,330X15,-,-	
CRT	AA63-60004G	SPACER-GUM,CRT,NTR RUBBER,T3.0,GRY,-,-,-	
	AA64-01230B	INLAY-COVER;D2,D3,PVC-SHEET,TO.4,94V0,-,-	
	AA64-31107D	CABINET-BACK;-,29A5,-,HIPS,HB,BLK,-,-	
	AA65-30008A	CLAMP-CORD;PE,HB,BLK,-,-,-	
	AA65-30017A	CLAMP-D,COIL;NYLON-66,VO,NTR,DADH300,25	
D-COIL	AA65-30113A	CLAMP-D,COIL;NYLON 66,V2,BLK,TVI 25-29,-	
KNOPOW	AA61-60005D	SPRING-CS;-,SUS304,0.4,OD5.5,H9,N4,-,-,-	
	AA64-10709A	KNOB-MASTER;-,295A,VT803M MASTER,ABS,HB,	
	AA64-10710A	KNOB-CONTROL;-,725A,-,ABS,HB,GRAY	
	AA64-31106J	CABINET FRONT;CS-29A5WT KS3A PLANO,S704P	
	AA64-40455A	WINDOW-REMOCON;-,725A,-,PC,-,VIOLET,-	
	AA64-40456B	INDICATOR-LED;-,295A,-,ACRYL,-,CLR,-	
	AA64-60445V	INLAY AV;29A5,PS SHEET,-,-,BLK,-,KS3A E	
	AA64-60446C	INLAY —PC,JACK;29A6,L/GRAY,PS SHEET,TO.5	
	AA64-70117B	BADGE-BRAND;AL,SS,SILVER,L65,R2000,-,-	
	AA65-00011C	CLAMP-WIRE;ALL MODEL,NYLON 66,V2,NTR,25M	

ASSY HOLDER SPK

* AA91-00333BASSY HOLDER SPK;-,PP8ohm/15W,BLK,AA91-0

ASSY TERMINAL BOARD

* AA91-00368BASSY TERMINAL BOARD;-,HIPS,VO,BLK,KS3A R

AA63-40254B	TERMINAL-BOARD,ANT;-,HIPS HB,BLK KCT55A,
AA64-01036C	INLAY BACK;29A5,PS SHEET,TO.5,-,BLK,-,PC

ASSY ACCESSORY

* AA94-02704AASSY ACCESSORY;CS29A5WT8X/XSG,KS2A,U.A.E

AA39-40001B	CABLE-RCA;-,RCA,1500mm,0.12/10,RED/WHIT/Y
AA68-01013A	MANUAL USERS;-,ARB,-,W/P100G,ALL1,-,B
AA68-01016A	MANUAL USERS;-,ENG,-,W/P100G,ALL1,-,B5

ASSY-CRT

* AA94-50022DASSY-CRT;A68QCP891X001,+380MG,29,ITC,C

AA03-00075A CRT-COLOR;-,A68QCP891X003(C),+380MG,29IN

ASSY PCB CONTROL

* AA95-00681AASSY PCB CONTROL;-,KS3A,29A5,PAL

LDY01	0601-000198	LED;ROUND,RED/GRN,5.0mm,630/565nm
CY01	2401-002144	C-AL;47uf,20%,16V,GP,TP,5x11,5
SW811S	3403-000179	SWITCH-PUSH;250V,5A,DPST,-,JPW-2104B
SWY02	3404-000176	SWITCH-TACT;12V,50mA,120gf,6x6mm,SPST
SWY03	3404-000176	SWITCH-TACT;12V,50mA,120gf,6x6mm,SPST

Loc. No.	Code No.	Description ; Specification	Remark	Loc. No.	Code No.	Description ; Specification	Remark
SWY04	3404-000176	SWITCH-TACT;12V,50mA,120gf,6x6mm,SPST					
SWY05	3404-000176	SWITCH-TACT;12V,50mA,120gf,6x6mm,SPST					
SWY06	3404-000176	SWITCH-TACT;12V,50mA,120gf,6x6mm,SPST					
SCREW	6001-000057	SCREW-MACHINE;RH,+M3,L6,ZPC(BLK),SWRCH1					
PCB	AA41-00299A	PCB-CONTROL;CS29A5WT,FR-1,1L,A,1.6T,245x					
RMY01	AA59-60002B	MODULE-REMOCON;-ORC-50HF,38KHZ,940MM,ME					
DZY01	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500					
RY03	2001-000007	R-CARBON;3KOHM,5%,1/8W,AA,TP,1.8X3.2MM					
RY05	2001-000009	R-CARBON;20KOHM,5%,1/8W,AA,TP,1.8X3.2MM					
RY01	2001-000020	R-CARBON(S);220HM,5%,1/2W,AA,TP,2.4X6.4MM					
RY02	2001-000577	R-CARBON;2KOHM,5%,1/8W,AA,TP,1.8X3.2MM					
RY04	2001-000878	R-CARBON;6.2KOHM,5%,1/8W,AA,TP,1.8X3.2M					
CN811	AA39-20179F	LEAD CONNECTOR-ASSY;-,-,3(2)P;-,-,YF					
CNY01	AA39-20546E	LEAD CONNECTOR-ASSY;-,-,5P;-,-,YBNH2					
CNY02	AA39-00106B	LEAD CONNECTOR-ASSY;-,-,4P;-,-,YBNH2					

ASSY-PCB,A/V SIDE

* AA95-00682A ASSY-PCB,A/V SIDE;-,-29A6,29A5,KS3A,PAL,-

JH701	3722-000143	JACK-PHONE;1P(VER),3.4mm,AG,BLK,NO
JA701	3722-001031	JACK-RCA;3P,3.6MM,#18,AU
JS701	3722-001163	JACK-VHS;4P,12mm,AU,BLK,N
CN704	AA39-00070A	LEAD CONNECTOR-ASSY;-,-,-,-,-,-,-,-,YB
CN705	AA39-20009E	LEAD CONNECTOR-ASSY;-,-,YFH800-01,-,1P,600
CN701	AA39-20068G	LEAD CONNECTOR-ASSY;-,-,YBNH025-08,67096-0
CN703	AA39-20069A	LEAD CONNECTOR-ASSY;-,-,YBNH025-05,67096-0
PCB	AA41-00155A	PCB-SIDE AV;KS3A,1L,FR-1,245x245x1.6T,8A
R701	2001-000028	R-CARBON(S);100OHM,5%,1/2W,AA,TP,2.4X6.4
R702	2001-000028	R-CARBON(S);100OHM,5%,1/2W,AA,TP,2.4X6.4
R703	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM
R704	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM
C701	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP
C702	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP
C703	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP
C704	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP
C707	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP
C708	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP
C705	2401-002009	C-AL;100uF,20%,16V,GP,TP,6.3x7.5
C706	2401-002009	C-AL;100uF,20%,16V,GP,TP,6.3x7.5
L701	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
L702	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
L703	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
L704	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
L707	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,
L708	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,
L705	2701-000168	INDUCTOR-AXIAL;3.3uH,5%,2.5x3.4mm
L706	2701-000168	INDUCTOR-AXIAL;3.3uH,5%,2.5x3.4mm
CN702	AA39-20070J	LEAD CONNECTOR-ASSY;-,-,-,7P;-,-,YBNH2

ASSY-POWER,CORD

* AA96-20109C ASSY-POWER,CORD;-,-,CP2/NO(4.0),H/C300,KKP

AA39-10006X POWER-CORD;-,-,KKP419C,KLCE-2F,2.286MT,3P,
AA61-20284A HOLDER;-,-,P-CORD,PP,VO,BLK,KE-002

REMOCON

* AA59-00104A REMOCON;-,-,TM59,DREAM,29,L/GRAY,-,EX,PA

Loc. No.	Code No.	Description ; Specification	Remark	Loc. No.	Code No.	Description ; Specification	Remark
C234	2305-000412	C-FILM,MPEF;470nF,5%,63V,TP,-,5mm		C621	2401-002458	C-AL;1000uF,20%,35V,GP,TP,16x25,7.5	
C235	2305-000412	C-FILM,MPEF;470nF,5%,63V,TP,-,5mm		C622	2401-001989	C-AL;4.7uF,20%,50V,BP,TP,5x11,5	
C236	2305-000412	C-FILM,MPEF;470nF,5%,63V,TP,-,5mm		C623	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP	
C237	2401-000914	C-AL;22uF,20%,16V,GP,TP,5x11,5		C624	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP	
C244	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP		C625	2401-001989	C-AL;4.7uF,20%,50V,BP,TP,5x11,5	
C245	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP		C626	2401-001989	C-AL;4.7uF,20%,50V,BP,TP,5x11,5	
C248	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP		C627	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP	
C250	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP		C628	2401-001989	C-AL;4.7uF,20%,50V,BP,TP,5x11,5	
C301	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5		C629	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP	
C302	2401-000360	C-AL;100uF,20%,50V,GP,TP,8x11,5,5		C630	2401-002235	C-AL;10uF,20%,16V,GP,TP,5x11mm,5mm	
C303	2201-002103	C-CERAMIC,DISC;0.015nF,5%,500V,NPO,TP,6,		C631	2401-002235	C-AL;10uF,20%,16V,GP,TP,5x11mm,5mm	
C304	2305-000285	C-FILM,MPEF;220nF,5%,100V,TP,10.5x5.5x15		C632	2202-000806	C-CERAMIC,MLC-AXIAL;220pF,10%,50V,Y5P,TP	
C305	2305-000149	C-FILM,MPEF;100nF,5%,100V,TP,12x12.5x6.5		C634	2401-001840	C-AL;100uF,20%,16V,GP,TP,6.3x11,5	
C306	2301-000342	C-FILM,PEF;2.2nF,5%,50V,TP,7.4x3.9x13mm,		C635	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m	
C307	2401-000360	C-AL;100uF,20%,50V,GP,TP,8x11,5,5		C636	2401-001026	C-AL;3.3UF,20%,50V,GP,TP,5x11,5	
C308	2305-000412	C-FILM,MPEF;470nF,5%,63V,TP,-,5mm		C637	2401-000027	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	
C401	2201-000556	C-CERAMIC,DISC;0.47nF,10%,500V,Y5P,TP,5.		C638	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP	
C402	2401-001397	C-AL;470uF,20%,25V,GP,TP,10x16,5		C639	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP	
C403	2201-000556	C-CERAMIC,DISC;0.47nF,10%,500V,Y5P,TP,5.		C640	2401-000027	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	
C404	2401-001397	C-AL;470uF,20%,25V,GP,TP,10x16,5		C641	2401-000027	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	
C405	2306-000330	C-FILM,MPPF;7.7nF,3%,1.6KV,TP,28.5x18.5x		C642	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP	
C406	2306-000330	C-FILM,MPPF;7.7nF,3%,1.6KV,TP,28.5x18.5x		C643	2401-000027	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	
C407	2301-001338	C-FILM,MPE-PPF;0.68nF,5%,1.6KV,TP,28x7x1		C644	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP	
C408	2305-000382	C-FILM,MPEF;4.7nF,5%,400V,TP,-,5mm		C645	2401-002235	C-AL;10uF,20%,16V,GP,TP,5x11mm,5mm	
C409	2301-001268	C-FILM,PPF;33nF,5%,630V,TP,20x11x17,7.5		C646	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m	
C410	2301-000213	C-FILM,PEF;220nF,5%,250V,TP,21.5x11,7,5		C647	2202-000286	C-CERAMIC,MLC-AXIAL;56pF,5%,50V,SL,TP,1.	
C411	2301-000104	C-FILM,PEF;1.2nF,5%,50V,TP,6.5x3.0x5,5mm		C649	2301-000108	C-FILM,PEF;1.5nF,5%,50V,TP,6.5x3.0x5,5mm	
C412	2301-000313	C-FILM,PEF;8.2nF,5%,100V,TP,7x3.2x7mm,5m		C652	2401-002235	C-AL;10uF,20%,16V,GP,TP,5x11mm,5mm	
C413	2401-000493	C-AL;10uF,20%,50V,LZ,TP,5x11mm,5mm		C654	2201-000611	C-CERAMIC,DISC;0.056nF,5%,50V,NPO,TP,7x3	
C414	2401-002597	C-AL;220uF,20%,35V,GP,TP,10x12,5,5		C656	2201-000304	C-CERAMIC,DISC;0.001nF,0.25pF,50V,NPO,TP	
C415	2301-000445	C-FILM,PEF;4.7nF,5%,50V,TP,5.5x7x3mm,5mm		C657	2201-000304	C-CERAMIC,DISC;0.001nF,0.25pF,50V,NPO,TP	
C416	2301-000224	C-FILM,PEF;22nF,5%,50V,TP,7.4x3.9x13mm,5		C701	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP	
C418	2401-002597	C-AL;220uF,20%,35V,GP,TP,10x12,5,5		C702	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP	
C419	2201-000599	C-CERAMIC,DISC;0.56nF,10%,500V,Y5P,TP,5.		C703	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP	
C420	2301-001065	C-FILM,MPPF;47nF,5%,630V,TP,19x15.5x7,7.		C707	2401-001989	C-AL;4.7uF,20%,50V,BP,TP,5x11,5	
C421	2201-000556	C-CERAMIC,DISC;0.47nF,10%,500V,Y5P,TP,5.		C708	2401-002235	C-AL;10uF,20%,16V,GP,TP,5x11mm,5mm	
C422	2401-001527	C-AL;47uF,20%,250V,HR,TP,13x25mm,5m		C803	2401-003576	C-AL;470uF,20%,450V,GP,ST,35x45mm,1.	
C423	2301-001192	C-FILM,MPPF;820nF,5%,400V,TP,29x18.5x25.		C804	2201-000332	C-CERAMIC,DISC;2.2nF,20%,250V,Y5U,TP,9x4	
C424	2201-000132	C-CERAMIC,DISC;0.1nF,10%,500V,Y5P,TP,6.5		C805	2201-000332	C-CERAMIC,DISC;2.2nF,20%,250V,Y5U,TP,9x4	
C425	2301-001259	C-FILM,MPPF;100nF,5%,400V,TP,19x8x16,7,5		C807	2303-000163	C-FILM,PPF;2.2nF,5%,800V,TP,15x13x8,5,7.	
C426	2306-000204	C-FILM,MPPF;430nF,5%,400V,TP,26x20.5x12.		C808	2401-003046	C-AL;47uF,20%,50V,WT,TP,6.3x11,2.5	
C427	2401-002267	C-AL;2.2uF,20%,250V,GP,TP,8x11,5,5		C809	2301-000356	C-FILM,PEF;47nF,5%,50V,TP,7.5x4.0x6.5,5m	
C429	2303-000163	C-FILM,PPF;2.2nF,5%,800V,TP,15x13x8,5,7.		C810	2301-000356	C-FILM,PEF;47nF,5%,50V,TP,7.5x4.0x6.5,5m	
C501	2201-000247	C-CERAMIC,DISC;0.015nF,5%,50V,NPO,TP,5x3		C811	2301-000310	C-FILM,PEF;68nF,5%,50V,TP,8.0x8.5x4.0x5.	
C502	2305-000704	C-FILM,MPEF;100nF,5%,250V,TP,16.5x10.3x5		C814	2201-000406	C-CERAMIC,DISC;0.27nF,10%,2kV,Y5P,TP,6.3	
C503	2201-000599	C-CERAMIC,DISC;0.56nF,10%,500V,Y5P,TP,5.		C815	2401-003026	C-AL;330uF,20%,25V,WT,TP,6.3x11,2.5	
C505	2305-000704	C-FILM,MPEF;100nF,5%,250V,TP,16.5x10.3x5		C816	2401-000293	C-AL;100uF,+30-10%,200V,GP,TP,16x25	
C506	2201-000599	C-CERAMIC,DISC;0.56nF,10%,500V,Y5P,TP,5.		C817	2201-000599	C-CERAMIC,DISC;0.56nF,10%,500V,Y5P,TP,5.	
C507	2201-000247	C-CERAMIC,DISC;0.015nF,5%,50V,NPO,TP,5x3		C818	2401-000722	C-AL;2200uF,20%,25V,WT,TP,16x25,7.5	
C508	2305-000704	C-FILM,MPEF;100nF,5%,250V,TP,16.5x10.3x5		C819	2201-000599	C-CERAMIC,DISC;0.56nF,10%,500V,Y5P,TP,5.	
C509	2201-000599	C-CERAMIC,DISC;0.56nF,10%,500V,Y5P,TP,5.		C821	2301-000192	C-FILM,PEF;1nF,5%,50V,TP,5.3x10mm,5mm	
C510	2401-001563	C-AL;47uF,20%,250V,GP,TP,16x25,7,5		C822	2201-000599	C-CERAMIC,DISC;0.56nF,10%,500V,Y5P,TP,5.	
C511	2401-001232	C-AL;4.7uF,20%,250V,GP,TP,10x12,5,5		C823	2401-003046	C-AL;47uF,20%,50V,WT,TP,6.3x11,2.5	
C512	2401-000914	C-AL;22uF,20%,16V,GP,TP,5x11,5		C824	2401-003046	C-AL;47uF,20%,50V,WT,TP,6.3x11,2.5	
C513	2201-002063	C-CERAMIC,DISC;10nF,+80-20%,3KV,Y5V,TP,1		C825	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m	
C514	2401-000430	C-AL;10uF,20%,250V,GP,TP,10x16mm,5m		C826	2401-000287	C-AL;100uF,20%,16V,WT,TP,6.3x11,5	
C515	2401-000914	C-AL;22uF,20%,16V,GP,TP,5x11,5		C827	2401-002212	C-AL;10uF,20%,25V,WT,TP,5x11,5	
C516	2301-000192	C-FILM,PEF;1nF,5%,50V,TP,5.3x10mm,5mm		C829	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m	
C518	2301-000224	C-FILM,PEF;22nF,5%,50V,TP,7.4x3.9x13mm,5		C831	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m	
C519	2301-000224	C-FILM,PEF;22nF,5%,50V,TP,7.4x3.9x13mm,5		C832	2401-001840	C-AL;100uF,20%,16V,GP,TP,6.3x11,5	
C520	2301-000224	C-FILM,PEF;22nF,5%,50V,TP,7.4x3.9x13mm,5		C833	2401-002619	C-AL;47uF,20%,25V,GP,TP,5x11,5	
C521	2301-000224	C-FILM,PEF;22nF,5%,50V,TP,7.4x3.9x13mm,5		C835	2401-002289	C-AL;470uF,20%,35V,WT,TP,10x20,5	
C522	2301-000224	C-FILM,PEF;22nF,5%,50V,TP,7.4x3.9x13mm,5		C837	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m	
C523	2301-000224	C-FILM,PEF;22nF,5%,50V,TP,7.4x3.9x13mm,5		C838	2401-001840	C-AL;100uF,20%,16V,GP,TP,6.3x11,5	
C526	2401-000914	C-AL;22uF,20%,16V,GP,TP,5x11,5		C839	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m	
C601	2201-000558	C-CERAMIC,DISC;0.47nF,10%,50V,Y5P,TP,5x3		C840	2401-002212	C-AL;10uF,20%,25V,WT,TP,5x11,5	
C603	2401-002235	C-AL;10uF,20%,16V,GP,TP,5x11mm,5mm		C841	2401-000611	C-AL;1uF,20%,50V,WT,TP,5x11,5	
C604	2401-000603	C-AL;1uF,20%,50V,GP,TP,5x11,5		C901	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C605	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m		C902	2301-000192	C-FILM,PEF;1nF,5%,50V,TP,5.3x10mm,5mm	
C607	2202-000796	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,3		C905	2202-000796	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,3	
C608	2202-000796	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,3		C907	2305-000412	C-FILM,MPEF;470nF,5%,63V,TP,-,5mm	
C610	2301-000445	C-FILM,PEF;4.7nF,5%,50V,TP,5.5x7x3mm,5mm		C908	2202-000863	C-CERAMIC,MLC-AXIAL;560pF,10%,50V,Y5P,TP	
C611	2301-000445	C-FILM,PEF;4.7nF,5%,50V,TP,5.5x7x3mm,5mm		C909	2301-000383	C-FILM,PEF;10nF,5%,50V,TP,6x7x3.2mm,5mm	
C612	2401-001914	C-AL;1uF,20%,50V,BP,TP,5x11,5		C910	2201-000980	C-CERAMIC,DISC;0.03nF,5%,50V,NPO,TP,5x3,	
C613	2401-001914	C-AL;1uF,20%,50V,BP,TP,5x11,5		C911	2201-000980	C-CERAMIC,DISC;0.03nF,5%,50V,NPO,TP,5x3,	
C617	2401-000493	C-AL;10uF,20%,50V,LZ,TP,5x11mm,5mm		C912	2401-000027	C-AL;4.7uF,20%,50V,GP,TP,5x11,5	
C620	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m		C913	2401-001840	C-AL;100uF,20%,16V,GP,TP,6.3x11,5	

Electrical Parts List

Loc. No.	Code No.	Description ; Specification	Remark	Loc. No.	Code No.	Description ; Specification	Remark
C914	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0mm		D804	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,	
C915	2401-001840	C-AL;100uF,20%,16V,GP,TP,6.3x11.5		D808	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
C916	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0mm		D810	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
C917	2401-000493	C-AL;10uF,20%,50V,LZ,TP,5x11mm,5mm		D811	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
C918	2401-001840	C-AL;100uF,20%,16V,GP,TP,6.3x11.5		D816	0402-000546	DIODE-RECTIFIER;TVR10G,400V,1.0A,DO-41,T	
C919	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V		D901	0404-000156	DIODE-SCHOTTKY;RB441Q,10V,100mA,DO-34,TP	
C920	2401-002235	C-AL;10uF,20%,16V,GP,TP,5x11mm,5mm		D902	0404-000156	DIODE-SCHOTTKY;RB441Q,10V,100mA,DO-34,TP	
C921	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V		D903	0404-000156	DIODE-SCHOTTKY;RB441Q,10V,100mA,DO-34,TP	
C922	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V		D904	0404-000156	DIODE-SCHOTTKY;RB441Q,10V,100mA,DO-34,TP	
C923	2202-000263	C-CERAMIC,MLC-AXIAL;470pF,10%,50V,Y5P,TP		D905	0404-000156	DIODE-SCHOTTKY;RB441Q,10V,100mA,DO-34,TP	
CF01	2201-000179	C-CERAMIC,DISC;10nF,10%,50V,Y5V,TP,6.5x3		D906	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,	
CF02	2301-000192	C-FILM,PEF;1nF,5%,50V,TP,5.3x10mm,5mm		D907	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP	
CF03	2201-000376	C-CERAMIC,DISC;0.22nF,5%,50V,SL,TP,6.3x3		D909	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,	
CF04	2201-000653	C-CERAMIC,DISC;0.068nF,5%,50V,SL,TP,5x3,		DF01	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,	
CF05	2301-000261	C-FILM,PEF;4.7nF,5%,100V,TP,10.5x12.5x6.		DF02	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,	
CF06	2201-000516	C-CERAMIC,DISC;4.7nF,+100-0%,500V,Y5U,TP		DF03	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,	
CF07	2305-000704	C-FILM,MPEF;100nF,5%,250V,TP,16.5x10.3x5		DF04	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,	
CF08	2201-000604	C-CERAMIC,DISC;0.056nF,+100-0%,500V,SL,T		DG01	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,	
CF10	2401-001840	C-AL;100uF,20%,16V,GP,TP,6.3x11.5		DZ201	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500	
CF11	2401-000927	C-AL;22uF,20%,250V,GP,TP,1.3x20.5		DZ202	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500	
CF12	2401-001840	C-AL;100uF,20%,16V,GP,TP,6.3x11.5		DZ203	0403-001321	DIODE-ZENER;MTZJ6.8C,6.6V,7.0V,500mW,DO	
CF14	2401-000832	C-AL;220uF,20%,25V,GP,TP,8x11.5,5		DZ302	0403-001329	DIODE-ZENER;MTZJ24B,22.61-23.77V,500mW,D	
CG01	2401-000832	C-AL;220uF,20%,25V,GP,TP,8x11.5,5		DZ303	0403-001329	DIODE-ZENER;MTZJ24B,22.61-23.77V,500mW,D	
CG02	2305-000149	C-FILM,MPEF;100nF,5%,100V,TP,12x12.5x6.5		DZ304	0403-001329	DIODE-ZENER;MTZJ24B,22.61-23.77V,500mW,D	
CG03	2401-000493	C-AL;10uF,20%,50V,LZ,TP,5x11mm,5mm		DZ305	0403-001221	DIODE-ZENER;UZ39BSB,35.36-37.19V,500mW,D	
CG04	2401-000832	C-AL;220uF,20%,25V,GP,TP,8x11.5,5		DZ306	0403-000700	DIODE-ZENER;TZP33A,33V,31-35V,1W,DO-41,T	
CN302	3711-002645	CONNECTOR-HEADER;BOX,6P,1R,2.5MM,STRAIGH		DZ401	0403-001325	DIODE-ZENER;MTZJ15C,14.35-15.09V,500mW,D	
CN501	3711-002641	CONNECTOR-HEADER;BOX,10P,1R,2.54mm,STRAI		DZ402	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,	
CN502	3711-002646	CONNECTOR-HEADER;BOX,7P,1R,2.5mm,STRAIGH		DZ503	0403-001211	DIODE-ZENER;MTZJ12B,11.44-12.03V,500mW,D	
CN502A	3711-002646	CONNECTOR-HEADER;BOX,7P,1R,2.5mm,STRAIGH		DZ504	0403-001325	DIODE-ZENER;MTZJ15C,14.35-15.09V,500mW,D	
CN602	3711-002644	CONNECTOR-HEADER;BOX,5P,1R,2.5mm,STRAIGH		DZ505	0403-001325	DIODE-ZENER;MTZJ15C,14.35-15.09V,500mW,D	
CN702	3711-002647	CONNECTOR-HEADER;BOX,8P,1R,2.5mm,STRAIGH		DZ601	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500	
CN704	3711-002646	CONNECTOR-HEADER;BOX,7P,1R,2.5mm,STRAIGH		DZ602	0403-000720	DIODE-ZENER;MTZJ9.1B,9.1V,8.57-9.01V,500	
CN901	3711-002644	CONNECTOR-HEADER;BOX,5P,1R,2.5mm,STRAIGH		DZ603	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500	
CN902	3711-003043	CONNECTOR-HEADER;BOX,4P,1R,2.5mm,STRAIGH		DZ801	0403-001322	DIODE-ZENER;MTZJ8.2B,7.78-8.19V,500mW,DO	
CNF01	3711-002642	CONNECTOR-HEADER;BOX,3P,1R,2.5MM,STRAIGH		DZ802	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500	
CNG01	3711-002643	CONNECTOR-HEADER;BOX,4P,1R,2.5MM,STRAIGH		DZ803	0403-001167	DIODE-ZENER;MTZJ30D,30V,29.02-30.51V,500	
CW901	2503-000156	C-NETWORK;100pF,20%,50V		DZ804	0403-000700	DIODE-ZENER;TZP33A,33V,31-35V,1W,DO-41,T	
△CX801S	2306-000318	C-FILM,MPPF;220nF,20%,250V,TP,-,22.5mm		DZ805	1203-001217	IC-POSITIVE ADJUST REG.;431,TO-92,3P4.58MIL	
△CX802S	2306-000318	C-FILM,MPPF;220nF,20%,250V,TP,-,22.5mm		DZ806	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500	
△CY802S	2201-002002	C-CERAMIC,DISC;4.7nF,20%,400V,Y5U,TP,16x		DZ808	0403-000719	DIODE-ZENER;MTZJ7.5B,7.5V,7.07-7.45V,500	
D201	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,		DZ902	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500	
D202	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,		DZ903	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500	
D203	0404-000156	DIODE-SCHOTTKY;RB441Q,10V,100mA,DO-34,TP		DZ904	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500	
D204	0404-000156	DIODE-SCHOTTKY;RB441Q,10V,100mA,DO-34,TP		DZ905	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500	
D205	0404-000156	DIODE-SCHOTTKY;RB441Q,10V,100mA,DO-34,TP		DZ906	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500	
D206	0404-000156	DIODE-SCHOTTKY;RB441Q,10V,100mA,DO-34,TP		DZ907	0403-000508	DIODE-ZENER;MTZJ5.6B,5.6V,5.45-5.73V,500	
D207	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,		DZF01	0403-001039	DIODE-ZENER;MA2560,56V,52-60V,1W,DO-41,T	
D208	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,		DF202	0403-001039	DIODE-ZENER;MA2560,56V,52-60V,1W,DO-41,T	
D209	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,		F801A	3602-000114	FUSE-HOLDER;-,30mohm	
D210	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,		F801B	3602-000114	FUSE-HOLDER;-,30mohm	
D211	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,		△FA802S	3601-001086	FUSE-AXIAL LEAD;125V,5A,FAST-ACTING,GLAS	
D301	0402-000546	DIODE-RECTIFIER;TVR10G,400V,1.0A,DO-41,T		△FA803S	3601-001228	FUSE-AXIAL LEAD;125V,10A,FAST-ACTING,EPO	
D401	0402-000540	DIODE-RECTIFIER;RU20A,600V,1.5A,-,TP		△FP801S	3601-000297	FUSE-CARTRIDGE;250V,5A,TIME-LAG,GLASS,5.	
D402	0402-000534	DIODE-RECTIFIER;RG10V,400V,1.2A,DO-201,T		HC401	0402-001296	DIODE-RECTIFIER;FMP-3FU,1.5KV,5A,TO-3PF,	H/SINK
D403	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP		HC401	0502-001136	TR-POWER;KSD5703,NPN,70W,TO-3PF,ST,8-	H/SINK
D404	0402-000540	DIODE-RECTIFIER;RU20A,600V,1.5A,-,TP		HC801	0402-000233	DIODE-RECTIFIER;FML-G12S,200V,5A,-,	H/SINK
D405	0402-000493	DIODE-RECTIFIER;1R5GU41,400V,1.5A,DO-15L		HC801	0402-001230	DIODE-RECTIFIER;FMG-G2CS,1000V,3A,TO-220	H/SINK
D406	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP		HC801	1203-001006	IC-VOLTAGE REGULATOR;78R05,TO-220F,4P,-,	H/SINK
D407	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP		HIC201	AA13-00093AIC HYBRID;- ,DRGB001A,SIP,5P,-,TP		
D408	0402-000493	DIODE-RECTIFIER;1R5GU41,400V,1.5A,DO-15L		HIC202	AA13-00093AIC HYBRID;- ,DRGB001A,SIP,5P,-,TP		
D409	0402-000540	DIODE-RECTIFIER;RU20A,600V,1.5A,-,TP		HIC203	AA13-00093AIC HYBRID;- ,DRGB001A,SIP,5P,-,TP		
D411	0402-000546	DIODE-RECTIFIER;TVR10G,400V,1.0A,DO-41,T		HIC204	AA13-00093AIC HYBRID;- ,DRGB001A,SIP,5P,-,TP		
D412	0402-000010	DIODE-RECTIFIER;RGP15G,400V,1.5A,DO-204A		△IC201S	1204-001633	IC-VIDEO PROCESS;VDP3112B-C3,DIP,64P,709	
D413	0402-000537	DIODE-RECTIFIER;RH1A,600V,0.6A,DO-204AC		△IC301	1204-000517	IC-VERTICAL DEF.;LA7845,SIP,7P,-,PLASTIC	H/SINK
D502	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41,TP		△IC401	1202-000103	IC-VOLTAGE COMP.;393,DIP,8P,300MIL,DUAL	
D507	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,		△IC601	1204-001596	IC-SOUND PROCESSOR;MSP3400D-B4,SIP,52P,	
D508	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,		△IC602	1201-001064	IC-POWER AMP;7297,ZIP,15P,-,DUAL,32DB,PL	H/SINK
D509	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,		△IC801S	1203-001482	IC-PWM CONTROLLER;S1265R,TO-3P,5P,210,P	H/SINK
D510	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,		△IC803	1203-001697	IC-VOLTAGE REGULATOR;78R08,TO-220,4P,-,P	
D511	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,		△IC804	1203-000284	IC-POSITIVE FIXED REG.;7806,TO-220,3P,-,PLAS	H/SINK
D512	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,		△IC902	1103-001171	IC-EEPROM;24L161,16KBIT,DIP,8P,300MIL,10	
D601	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,		△IC904	1203-001943	IC-VOL. DETECTOR;7025,TO-92,3P,-,PLASTIC	
D602	0401-000005	DIODE-SWITCHING;1N4148,100V,200MA,DO-35,		J706	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
D801	0402-001111	DIODE-RECTIFIER;1N5397GP,600V,1.5A,DO-20		J718	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
△D801S	0402-000549	DIODE-BRIDGE;RBV606,600V,6A,-,BK	H/SINK	J901	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,	
D803	0402-000546	DIODE-RECTIFIER;TVR10G,400V,1.0A,DO-41,T		J904	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	

Loc. No.	Code No.	Description ; Specification	Remark	Loc. No.	Code No.	Description ; Specification	Remark
JA501	3722-001503	JACK-PIN;1P,1PI,NI,RED,SCR-JACK		Q903	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
L102	2701-000200	INDUCTOR-AXIAL;5.6uH,10%,4.2x9.8mm		Q904	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
L103	2701-000115	INDUCTOR-AXIAL;10uH,10%,3x7mm		Q905	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
L201	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm		Q906	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
L202	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm		Q908	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
L204	2701-000184	INDUCTOR-AXIAL;4.7uH,10%,2.5x3.4mm		Q909	0505-000109	FET-SILICON;2N7000,N,60V,200mA,5ohm,400m	
L207	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,		Q910	0505-000109	FET-SILICON;2N7000,N,60V,200mA,5ohm,400m	
L208	2701-000168	INDUCTOR-AXIAL;3.3uH,5%,2.5x3.4mm		0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T		
L209	2701-000168	INDUCTOR-AXIAL;3.3uH,5%,2.5x3.4mm		QF02	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
L210	2701-000168	INDUCTOR-AXIAL;3.3uH,5%,2.5x3.4mm		QF03	0501-000369	TR-SMALL SIGNAL;KSC2331-Y,NPN,1W,TO-92L,	
L212	2701-000168	INDUCTOR-AXIAL;3.3uH,5%,2.5x3.4mm		QG01	0501-000283	TR-SMALL SIGNAL;KSA539,PNP,400mW,TO-92,T	
L301	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm		QG02	0502-000244	TR-POWER;KSA940,PNP1.5W,TO-220,-,40-14	
L302	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,		QG03	0502-001007	TR-POWER;KSC2073-H2,NPN,25W,TO-220,ST,6	
L303	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,		R102	2001-000281	R-CARBON;1000HM,5%,1/8W,AA,TP,1.8X3.2MM	
L401	2001-001038	R-CARBON(S);0.56OHM,5%,1/2W,AA,TP,2.4X6.		R103	2001-000281	R-CARBON;1000HM,5%,1/8W,AA,TP,1.8X3.2MM	
L406	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm		R105	2001-000702	R-CARBON;39KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
L407	2901-000297	FILTER-EMI ON BOARD;-3A,-,-,3.5x5,TP,-		R106	2001-000864	R-CARBON;56KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
L410	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,		R202	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
L412	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,		R203	2001-000281	R-CARBON;1000HM,5%,1/8W,AA,TP,1.8X3.2MM	
L501	2701-000178	INDUCTOR-AXIAL;33uH,10%,3x7mm		R204	2001-000281	R-CARBON;1000HM,5%,1/8W,AA,TP,1.8X3.2MM	
L503	2901-000297	FILTER-EMI ON BOARD;-3A,-,-,3.5x5,TP,-		R205	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
L504	2901-000297	FILTER-EMI ON BOARD;-3A,-,-,3.5x5,TP,-		R206	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
L505	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,		R207	2001-000221	R-CARBON;1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
L601	2901-000297	FILTER-EMI ON BOARD;-3A,-,-,3.5x5,TP,-		R208	2001-000405	R-CARBON;1800HM,5%,1/8W,AA,TP,1.8X3.2MM	
L604	2701-000169	INDUCTOR-AXIAL;3.9uH,10%,2.5x3.4mm		R209	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
L605	2701-000177	INDUCTOR-AXIAL;33uH,10%,2.5x3.4mm		R210	2001-000812	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
L606	2701-000177	INDUCTOR-AXIAL;33uH,10%,2.5x3.4mm		R212	2004-000218	R-METAL;10Kohm,1%,1/8W,AA,TP,1.8x3.2mm	
L607	2701-000177	INDUCTOR-AXIAL;33uH,10%,2.5x3.4mm		R213	2001-000232	R-CARBON;1.3KOHM,5%,1/8W,AA,TP,1.8X3.2M	
L608	2701-000177	INDUCTOR-AXIAL;33uH,10%,2.5x3.4mm		R214	2001-000411	R-CARBON;18KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
L609	2901-000297	FILTER-EMI ON BOARD;-3A,-,-,3.5x5,TP,-		R215	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
L701	2701-000177	INDUCTOR-AXIAL;33uH,10%,2.5x3.4mm		R216	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
L702	2701-000177	INDUCTOR-AXIAL;33uH,10%,2.5x3.4mm		R223	2001-000003	R-CARBON;330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
L705	2701-000177	INDUCTOR-AXIAL;33uH,10%,2.5x3.4mm		R224	2001-000780	R-CARBON;4700HM,5%,1/8W,AA,TP,1.8X3.2MM	
L706	2701-000177	INDUCTOR-AXIAL;33uH,10%,2.5x3.4mm		R225	2001-000780	R-CARBON;4700HM,5%,1/8W,AA,TP,1.8X3.2MM	
L709	2701-000168	INDUCTOR-AXIAL;3.3uH,5%,2.5x3.4mm		R226	2001-000780	R-CARBON;4700HM,5%,1/8W,AA,TP,1.8X3.2MM	
L710	2701-000168	INDUCTOR-AXIAL;3.3uH,5%,2.5x3.4mm		R228	2001-000117	R-CARBON(S);68OHM,5%,1/2W,AA,TP,2.4X6.4M	
L711	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm		R231	2001-000281	R-CARBON;1000HM,5%,1/8W,AA,TP,1.8X3.2MM	
L801	3301-001223	CORE-FERRITE BEAD;AA,6.2ohm,3.5x0.8x5mm,-		R232	2001-000281	R-CARBON;1000HM,5%,1/8W,AA,TP,1.8X3.2MM	
L802	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,		R234	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
L803	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,		R235	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
L804	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,		R236	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
L806	3301-001223	CORE-FERRITE BEAD;AA,6.2ohm,3.5x0.8x5mm,-		R237	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
L807	2901-000297	FILTER-EMI ON BOARD;-3A,-,-,3.5x5,TP,-		R238	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
L809	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,		R241	2001-000362	R-CARBON;150OHM,5%,1/8W,AA,TP,1.8X3.2MM	
L901	2702-001094	INDUCTOR-RADIAL;10uH,10%,6x4mm		R242	2001-000405	R-CARBON;1800HM,5%,1/8W,AA,TP,1.8X3.2MM	
L902	2701-000184	INDUCTOR-AXIAL;4.7uH,10%,2.5x3.4mm		R243	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
L903	2702-001094	INDUCTOR-RADIAL;10uH,10%,6x4mm		R244	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
L904	2702-001094	INDUCTOR-RADIAL;10uH,10%,6x4mm		R245	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
L905	2001-000995	R-CARBON;820OHM,5%,1/8W,AA,TP,1.8X3.2MM		R246	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
L907	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm		R247	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
L908	2701-000191	INDUCTOR-AXIAL;47uH,10%,2.5x3.4mm		R248	2001-000003	R-CARBON;330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
L909	2701-000191	INDUCTOR-AXIAL;47uH,10%,2.5x3.4mm		R249	2001-000003	R-CARBON;330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
LF01	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,		R250	2001-000003	R-CARBON;330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
LF02	2701-000112	INDUCTOR-AXIAL;100uH,10%,3x7mm		R251	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
LF04	2901-000297	FILTER-EMI ON BOARD;-3A,-,-,3.5x5,TP,-		R252	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
LF05	2901-000297	FILTER-EMI ON BOARD;-3A,-,-,3.5x5,TP,-		R301	2004-001397	R-METAL(S);4.7Kohm,1%,1/2W,AA,TP,2.4x6.4	
△ LX801S	AA29-00011A	FILTER LINE NOISE;CZ32WB,-,0.20MAX,1.5KV		R302	2004-001984	R-METAL(S);26.7Kohm,1%,1/2W,AA,TP,2.4x6.	
△ LX802S	AA29-00011A	FILTER LINE NOISE;CZ32WB,-,0.20MAX,1.5KV		R303	2001-000016	R-CARBON(S);10HM,5%,1/2W,AA,TP,2.4X6.4MM	
△ NT802S	1404-001045	THERMISTOR-NTC;4.7OHM,15%,2900K,35.0MW,T		R304	2008-000254	R-FUSIBLE(S);0.68ohm,5%,2W,AF,TP,3.9x10m	
△ PCB801S	0604-001038	PHOTO-COUPLER;TR,130-260%,200mW,DIP-4,ST		R305	2003-002157	R-METAL OXIDE;220OHM,5%,2W,AG,TP,6X16MM	
PCB	AA41-00210C	PCB-CRT;CS29A6,FR-1,1L,C,1.6T,330x245,		R306	2003-002157	R-METAL OXIDE;220OHM,5%,2W,AG,TP,6X16MM	
PCB	AA41-00168C	PCB-MAIN;K3SA,FR-1,1L,C,1.6T,330x245,-,		R309	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
△ PT801S	1404-000002	THERMISTOR-PTC;9ohm,20%,-,-,TR,RECT,-		R310	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
Q201	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T		R313	2004-001137	R-METAL;6.8Kohm,1%,1/8W,AA,TP,1.8x3.2m	
Q202	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T		R314	2004-001986	R-METAL(S);35.7Kohm,1%,1/2W,AA,TP,2.4x6.	
Q203	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T		R315	2004-004970	R-METAL(S);62Kohm,1%,1/8W,AA,TP,1.8x3.2m	
Q204	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T		R401	2003-002008	R-METAL OXIDE(S);18Kohm,5%,2W,AF,TP,3.9x	
Q402	0502-001007	TR-POWER;KSC2073-H2,NPN,25W,TO-220,ST,6		R402	2003-002008	R-METAL OXIDE(S);18Kohm,5%,2W,AF,TP,3.9x	
Q404	0505-000156	FET-SILICON;IRF620,N,200V,5A,0.8ohm,50W,		R403	2003-001091	R-METAL OXIDE(S);10ohm,5%,2W,AF,TP,4x12m	
Q502	0501-000283	TR-SMALL SIGNAL;KSA539,PNP,400mW,TO-92,T		R404	2001-001038	R-CARBON(S);0.56OHM,5%,1/2W,AA,TP,2.4X6.	
Q503	0501-000283	TR-SMALL SIGNAL;KSA539,PNP,400mW,TO-92,T		R405	2008-000253	R-FUSIBLE(S);0.47ohm,5%,1W,AF,TP,3.9x10m	
Q504	0501-000283	TR-SMALL SIGNAL;KSA539,PNP,400mW,TO-92,T		2003-002009	R-METAL OXIDE(S);390ohm,5%,2W,AF,TP,3.9x		
Q601	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T		R410	2003-002009	R-METAL OXIDE(S);390ohm,5%,2W,AF,TP,3.9x	
Q701	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T		R411	2001-000028	R-CARBON(S);1000HM,5%,1/2W,AA,TP,2.4X6.4	
Q802	0501-000369	TR-SMALL SIGNAL;KSC2331-Y,NPN,1W,TO-92L,		R412	2001-000020	R-CARBON(S);22OHM,5%,1/2W,AA,TP,2.4X6.4M	
Q901	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T		R413	2008-001018	R-FUSIBLE(S);0.47ohm,10%,2W,AF,TP,3.9x10	
Q902	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T		R414	2008-000253	R-FUSIBLE(S);0.47ohm,5%,1W,AF,TP,3.9x10m	

Electrical Parts List

Loc. No.	Code No.	Description ; Specification	Remark	Loc. No.	Code No.	Description ; Specification	Remark
R415	2004-001402	R-METAL(S);6.8Kohm,1%,1/2W,AA,TP,2.4x6.4		R716	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R417	2004-001382	R-METAL(S);13Kohm,1%,1/2W,AA,TP,2.4x6.4m		R717	2001-000702	R-CARBON;39KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R418	2001-001088	R-CARBON(S);1KOHM,5%,1/2W,AA,TP,2.4X6.4MM		R718	2001-000702	R-CARBON;39KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R420	2004-001402	R-METAL(S);6.8Kohm,1%,1/2W,AA,TP,2.4x6.4		R719	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R421	2001-001093	R-CARBON(S);2.2KOHM,5%,1/2W,AA,TP,2.4X6.		R723	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R422	2003-000649	R-METAL OXIDE(S);330ohm,5%,1W,AF,TP,3.3x		R724	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R423	2003-001042	R-METAL OXIDE(S);5.6Kohm,5%,2W,AF,TP,3.9		R725	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R424	2008-001018	R-FUSIBLE(S);0.47ohm,10%,2W,AF,TP,3.9x10		R726	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R425	2008-001018	R-FUSIBLE(S);0.47ohm,10%,2W,AF,TP,3.9x10		R802	2003-001025	R-METAL OXIDE(S);15Kohm,5%,2W,AF,TP,3.9x	
R426	2003-000540	R-METAL OXIDE(S);1Kohm,5%,2W,AF,TP,4x12m		R803	2003-001025	R-METAL OXIDE(S);15Kohm,5%,2W,AF,TP,3.9x	
R428	2001-001150	R-CARBON(S);470KOHM,5%,1/2W,AA,TP,2.4X6.		R804	2003-001025	R-METAL OXIDE(S);15Kohm,5%,2W,AF,TP,3.9x	
R429	2001-001139	R-CARBON(S);39KOHM,5%,1/2W,AA,TP,2.4X6.4		R805	2001-001150	R-CARBON(S);470KOHM,5%,1/2W,AA,TP,2.4X6.	
R432	2001-001122	R-CARBON(S);3.9KOHM,5%,1/2W,AA,TP,2.4X6.		R806	2001-001150	R-CARBON(S);470KOHM,5%,1/2W,AA,TP,2.4X6.	
R433	2003-001042	R-METAL OXIDE(S);5.6Kohm,5%,2W,AF,TP,3.9x10		R807	2006-001083	R-CEMENT;120ohm,5%,5W,CJ,TP,14x10x27mm	
R434	2003-000664	R-METAL OXIDE(S);33ohm,5%,2W,AF,TP,4x12m		R808	2001-001079	R-CARBON(S);15OHM,5%,1/2W,AA,TP,2.4X6.4M	
R436	2003-002008	R-METAL OXIDE(S);18Kohm,5%,2W,AF,TP,3.9x		R809	2001-000022	R-CARBON(S);33OHM,5%,1/2W,AA,TP,2.4X6.4M	
R501	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM		R810	2001-001178	R-CARBON(S);680OHM,5%,1/2W,AA,TP,2.4X6.4	
R502	2001-001093	R-CARBON(S);2.2KOHM,5%,1/2W,AA,TP,2.4X6.		R811	2004-001408	R-METAL(S);91Kohm,1%,1/2W,AA,TP,2.4x6.4m	
R503	2001-000085	R-CARBON(S);100KOHM,5%,1/2W,AA,TP,2.4X6.		R812	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R504	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM		R813	2001-001153	R-CARBON(S);47OHM,5%,1/2W,AA,TP,2.4X6.4M	
R505	2002-001008	R-COMPOSITION;1.8Kohm,10%,1/2W,AA,TP,3.7		R816	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R506	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM		R817	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R507	2001-001093	R-CARBON(S);2.2KOHM,5%,1/2W,AA,TP,2.4X6.		R818	2001-001113	R-CARBON(S);270KOHM,5%,1/2W,AA,TP,2.4X6.	
R508	2001-000085	R-CARBON(S);100KOHM,5%,1/2W,AA,TP,2.4X6.		R819	2004-001983	R-METAL(S);2.49Kohm,1%,1/2W,AA,TP,2.4x6.	
R509	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM		R820	2001-001096	R-CARBON(S);2.2OHM,5%,1/8W,AA,TP,2.4X6.4	
R510	2002-001008	R-COMPOSITION;1.8Kohm,10%,1/2W,AA,TP,3.7		R821	2004-001891	R-METAL(S);133Kohm,1%,1/2W,AA,TP,2.5x6.5	
R511	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM		R822	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R512	2001-001093	R-CARBON(S);2.2KOHM,5%,1/2W,AA,TP,2.4X6.		R823	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R513	2001-000085	R-CARBON(S);100KOHM,5%,1/2W,AA,TP,2.4X6.		R824	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R515	2002-001008	R-COMPOSITION;1.8Kohm,10%,1/2W,AA,TP,3.7		R825	2001-000066	R-CARBON(S);10KOHM,5%,1/2W,AA,TP,2.4X6.4	
R517	2001-001062	R-CARBON(S);10MOHM,5%,1/2W,AA,TP,2.4X6.4		R827	2008-000284	R-FUSIBLE(S);0.1OHM,10%,2W,AF,TP,3.9x10M	
R518	2003-002171	R-METAL OXIDE(S);150ohm,5%,2W,AG,TP,3.9x		R828	2008-000266	R-FUSIBLE(S);1ohm,5%,2W,AF,TP,3.9x10mm	
R519	2002-001009	R-COMPOSITION;2.7Kohm,10%,1/2W,AA,TP,3.7		R829	2008-001029	R-FUSIBLE(S);5.6OHM,5%,2W,AF,TP,3.9x10MM	
R521	2004-000433	R-METAL;1Kohm,1%,1/8W,AA,TP,1.8x3.2mm		R831	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R522	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M		R832	2001-001153	R-CARBON(S);47OHM,5%,1/2W,AA,TP,2.4X6.4M	
R526	2004-000500	R-METAL;2.7Kohm,1%,1/8W,AA,TP,1.8x3.2m		R833	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R527	2004-000433	R-METAL;1Kohm,1%,1/8W,AA,TP,1.8x3.2mm		R835	2003-002181	R-METAL OXIDE(S);68Kohm,5%,2W,AG,TP,3.9x	
R539	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM		R836	2003-002181	R-METAL OXIDE(S);68Kohm,5%,2W,AG,TP,3.9x	
R542	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM		R901	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R543	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM		R903	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R544	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM		R904	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R546	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM		R905	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R601	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM		R906	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R602	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM		R907	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R603	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM		R908	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R604	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM		R909	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R605	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM		R910	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R606	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM		R911	2001-000003	R-CARBON;330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R607	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM		R912	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R608	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM		R913	2001-000947	R-CARBON;7.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R610	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM		R914	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R611	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM		R919	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R612	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM		R920	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R613	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM		R921	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R614	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM		R922	2001-000924	R-CARBON;680OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R615	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM		R923	2001-000924	R-CARBON;680OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R616	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM		R924	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R617	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM		R925	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R620	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM		R927	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R621	2001-000577	R-CARBON;2KOHM,5%,1/8W,AA,TP,1.8X3.2MM		R928	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R622	2001-000577	R-CARBON;2KOHM,5%,1/8W,AA,TP,1.8X3.2MM		R929	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R627	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM		R930	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R628	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM		R931	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R629	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM		R932	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R701	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM		R933	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R702	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM		R934	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R703	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM		R935	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R704	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM		R936	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R705	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM		R937	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R706	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM		R938	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R707	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM		R940	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R708	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM		R941	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R709	2001-000938	R-CARBON;68OHM,5%,1/8W,AA,TP,1.8X3.2MM		R942	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R710	2001-000938	R-CARBON;68OHM,5%,1/8W,AA,TP,1.8X3.2MM		R943	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R711	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM		R945	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R712	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM		R946	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R715	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM		R947	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	

Loc. No.	Code No.	Description ; Specification	Remark	Loc. No.	Code No.	Description ; Specification	Remark
R948	2001-000281	R-CARBON;1000HM,5%,1/8W,AA,TP,1.8X3.2MM		AA65-30113A	CLAMP-D,COIL,NYLON 66,V2,BLK,TVI 25-29,-		
RF02	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M		AA61-60003J	SPRING-CS,-,SUS304,0.5,OD6,H12,N7,-,-		
RF03	2001-000362	R-CARBON;1500HM,5%,1/8W,AA,TP,1.8X3.2MM		AA64-00028A	KNOB-CONTROL,-,29A6,SV808P+W971,ABS,HB,G		
RF04	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M		AA64-01222C	CABINET FRONT;29A6 KS3A PLANO,S704+B702		
RF05	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM		AA64-10792B	KNOB-POWER,-,29A6,NO-SILK SV704P+W971 ,A		
RF06	2001-000989	R-CARBON;820KOHM,5%,1/8W,AA,TP,1.8X3.2M		AA64-40516B	WINDOW-REMOCON,-,29A6,-,PC,VO,VIOLET,-		
RF07	2001-000904	R-CARBON;6200HM,5%,1/8W,AA,TP,1.8X3.2MM		AA64-40517B	INDICATOR-LED,-,---,ACRYL,-,CLEAR,-		
RF08	2001-000313	R-CARBON;11KOHM,5%,1/8W,AA,TP,1.8X3.2MM		AA64-60445R	INLAY AV;72A6,KS3A 100HZ,PS SHEET,-,BLK		
RF09	2001-000221	R-CARBON;1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M		AA64-60446C	INLAY—PC,JACK;29A6,L/GRAY,PS SHEET,T0.5		
RF10	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M		AA64-70117B	BADGE-BRAND;AL,SS,SILVER,L65,R2000,-		
RF11	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M		AA65-00011C	CLAMP-WIRE;ALL MODEL,NYLON 66,V2,NTR,25M		
RF12	2001-000221	R-CARBON;1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M		AA91-00335A	ASSY HOLDER SPK,-,PP,8ohm/15W,blk,housin		
RF13	2001-001179	R-CARBON(S);68KOHM,5%,1/2W,AA,TP,2.4X6.4					
RF14	2001-001071	R-CARBON(S);12KOHM,5%,1/2W,AA,TP,2.4X6.4					
RF15	2001-001100	R-CARBON(S);2.7OHM,5%,1/2W,AA,TP,2.4X6.4					
RF16	2001-001179	R-CARBON(S);68KOHM,5%,1/2W,AA,TP,2.4X6.4					
RF17	2001-001100	R-CARBON(S);2.7OHM,5%,1/2W,AA,TP,2.4X6.4					
RF18	2003-000458	R-METAL OXIDE(S);100ohm,5%,2W,AF,TP,4x12					
RF19	2003-001023	R-METAL OXIDE(S);120ohm,5%,2W,AF,TP,3.9x					
RF20	2003-002214	R-METAL OXIDE(S);680ohm,5%,2W,AG,TP,3.9x					
RF21	2003-002214	R-METAL OXIDE(S);680ohm,5%,2W,AG,TP,3.9x					
RF22	2003-002214	R-METAL OXIDE(S);680ohm,5%,2W,AG,TP,3.9x					
RF23	2003-000746	R-METAL OXIDE(S);56ohm,5%,2W,AF,TP,4x12m					
RF24	2003-000746	R-METAL OXIDE(S);56ohm,5%,2W,AF,TP,4x12m					
RF25	2003-002009	R-METAL OXIDE(S);390ohm,5%,2W,AF,TP,3.9x					
RG01	2004-001397	R-METAL(S);4.7Kohm,1%,1/2W,AA,TP,2.4x6.4					
RG02	2004-002022	R-METAL(S);5.1Kohm,1%,1/2W,AA,TP,2.4x6.4m					
RG03	2004-001987	R-METAL(S);4.3Kohm,1%,1/2W,AA,TP,2.4x6.4					
RG04	2004-002022	R-METAL(S);5.1Kohm,1%,1/2W,AA,TP,2.4x6.4m					
RG05	2001-001163	R-CARBON(S);5600HM,5%,1/2W,AA,TP,2.4X6.4					
RG06	2001-001100	R-CARBON(S);2.7OHM,5%,1/2W,AA,TP,2.4X6.4					
RG07	2001-001100	R-CARBON(S);2.7OHM,5%,1/2W,AA,TP,2.4X6.4					
RG08	2001-001163	R-CARBON(S);5600HM,5%,1/2W,AA,TP,2.4X6.4					
△ RL801S	3501-001040	RELAY-POWER;12VDC,500mW,10A,1FormA,15mS,					
△ RR430S	2001-001088	R-CARBON(S);1KOHM,5%,1/2W,AA,TP,2.4X6.4M					
△ RX801S	2002-001010	R-COMPOSITION;1.8Mohm,5%,1/2W,AA,TP,3.7x					
△ RY801S	2002-001011	R-COMPOSITION;3.3Mohm,5%,1/2W,AA,TP,3.7x					
△ RY802S	2002-001013	R-COMPOSITION;4.7Mohm,5%,1/2W,AA,TP,3.7x					
SG501	AA27-00084A	COIL;S-23,-,-,-,-,-,S-23,5000Mohm					
SG502	AA27-00084A	COIL;S-23,-,-,-,-,-,S-23,5000Mohm					
SG503	AA27-00084A	COIL;S-23,-,-,-,-,-,S-23,5000Mohm					
SG504	AA27-00084A	COIL;S-23,-,-,-,-,-,S-23,5000Mohm					
△ T401	AA26-50001L	TRANS-HORIZ.DRIVE,-,29mh,133uH,4.5uH,EI2					
△ TU01S	AA40-00060A	TUNER-F/S;TCPS3001PD09D(S)-,PAL-M(NTSC)					
△ VP801S	1405-000187	VARIATOR;750V,1250A,12.5x7mm,TP					
△ VX801S	1405-000187	VARIATOR;750V,1250A,12.5x7mm,TP					
X201	2801-003432	CRYSTAL-UNIT;20.25MHZ,30PPM,28-AAAM,13PF					
X601	2801-003903	CRYSTAL-UNIT;18.432MHZ,25ppm,28-AAAM,12pF					
X901	2801-003728	CRYSTAL-UNIT;6MHz,30ppm,28-AAAM,20pF,40oh					

ASSY CABINET FRONT

- * AA90-00228X ASSY CABINET;29A6,CS29A6WT8X/BWT
- * AA91-00420G ASSY CABINET FRONT,-,29A6 KS3A,(SPK)S704

AV+CF	6002-000522	SCREW-TAPPING;TH,+2,M4,L15,ZPC(BLK),SWR
BRAC+C	6003-001026	SCREW-TAPTITE;RH,+B,M4,L15,ZPC(BLK),SWR
CABBAC	AA63-60001X	SPACER-FELT;FELT,T0.5,BLK,330X15,-,-
CB+CF	6003-001025	SCREW-TAPTITE;RH,+B,M4,L20,ZPC(BLK),SWR
CB+TER	6003-001025	SCREW-TAPTITE;RH,+B,M4,L20,ZPC(BLK),SWR
CRT+CF	AA60-10050V	SCREW-ASSY;WC,HH,+M6,L30,SWRCH18A,ZPC(S)
CTS+CB	6003-001025	SCREW-TAPTITE;RH,+B,M4,L20,ZPC(BLK),SWR
DOMESP	AA60-10050A	SCREW-ASSY;WP,RH,+M4,L25,SWRCH18A,-,ZPC
KCON+C	6003-001019	SCREW-TAPTITE;RH,+B,M4,L12,ZPC(BLK),SWR
LED+CF	6003-001019	SCREW-TAPTITE;RH,+B,M4,L12,ZPC(BLK),SWR
PCB+CF	6006-001095	SCREW-ASSY TAPT;WP,BH,+M4,L12,ZPC(YEL)
SPKR+C	6003-001019	SCREW-TAPTITE;RH,+B,M4,L12,ZPC(BLK),SWR
TER+RJ	6003-001026	SCREW-TAPTITE;RH,+B,M4,L15,ZPC(BLK),SWR
	AA61-10054A	BRACKET-CRATER,-,6277,STS304,T0.5,-,-
	AA63-00005C	COVER-TOPSPEAKER,-,72A6,-,HIPS,V2,BLK,-
	AA63-60004G	SPACER-GUM,CRT;NTR RUBBER,T3,0,GRY,-,-,-
	AA64-00027C	CABINET-BACK,-,72A6,-,HIPS,V2,BLK,-
	AA64-01230B	INLAY COVER;D2,D3,PVC-SHEET,T0.4,94VO,-,
	AA65-30008A	CLAMP-CORD;PE,HB,BLK,-,-,-
	AA65-30017A	CLAMP-D,COIL,NYLON-66,VO,NTR,DADH300,25

ASSY TERMINAL BOARD

- * AA91-00303A ASSY TERMINAL BOARD,-,HIPS,VO,BLK,KS3A S
- AA63-00164B
- AA64-000894B

ASSY HOLDER SPK

- * AA91-00334B ASSY HOLDER SPK,-,PP,8ohm/15W,BLK,AA91-0

ASSY CHASSIS PART

- * AA90-00063C ASSY CHASSIS PART;KS3A,29A6
- AA61-20270A
- 6003-001023
- 6003-001023
- 6003-001023
- 6006-001095
- AA65-00011C

MAIN
HOLDER
D-FOCU
TER+HC
AV

ASSY ACCESSORY

- * AA94-02493A ASSY ACCESSORY,-,KS1A,-
- AA39-40001B
- AA68-01011A
- AA68-01120A

ASSY-CRT

- * AA94-50022D ASSY-CRT;A68QCP891X001,-,380MG,29,ITC,C
- AA03-00075A

ASSY PCB CONTROL

- * AA95-00558A ASSY PCB CONTROL,-,KS3A,29A6,-
- CN811
- CNY01
- CNY02
- CY01
- DZY01
- LDY01
- PCB
- RMV01
- RY01
- RY02
- RY03
- RY04
- RY05
- RY06

Electrical Parts List

Loc. No.	Code No.	Description ; Specification	Remark	Loc. No.	Code No.	Description ; Specification	Remark
SW811S	3403-000179	SWITCH-PUSH;250V,5A,DPST,-,JPW-2104B					
SWY01	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP					
SWY02	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP					
SWY03	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP					
SWY04	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP					
SWY05	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP					
SWY06	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP					

ASSY-PCB,A/V SIDE

* AA95-00682AASSY-PCB,A/V SIDE;-;29A6,29A5,KS3A,PAL,-

C701	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP
C702	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,TP
C703	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP
C704	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP
C705	2401-002009	C-AL;100uF,20%,16V,GP,TP,6.3x7.5
C706	2401-002009	C-AL;100uF,20%,16V,GP,TP,6.3x7.5
C707	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP
C708	2202-000231	C-CERAMIC,MLC-AXIAL;330pF,10%,50V,Y5P,TP
CN701	AA39-20068GLEAD CONNECTOR-ASSY;-;YBNH025-08.67096-0	
CN702	AA39-20070J LEAD CONNECTOR-ASSY;-;-;-;7P;-;-;-;YBNH2	
CN703	AA39-20069ALEAD CONNECTOR-ASSY;-;YBNH025-05.67096-0	
CN704	AA39-00070ALEAD CONNECTOR-ASSY;-;-;-;-;-;-;-;YB	
CN705	AA39-20009E LEAD CONNECTOR-ASSY;-;YFH800-01;-;-;1P,600	
JA701	3722-001031	JACK-RCA;3P;3.6MM,#18,AU
JH701	3722-000143	JACK-PHONE;1P(VER);3.4mm,AG,BLK,NO
JS701	3722-001163	JACK-VHS;4P;12mm,AU,BLK,N
L701	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
L702	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
L703	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
L704	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm
L705	2701-000168	INDUCTOR-AXIAL;3.3uH,5%,2.5x3.4mm
L706	2701-000168	INDUCTOR-AXIAL;3.3uH,5%,2.5x3.4mm
L707	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,
L708	3301-000287	CORE-FERRITE BEAD;AA,3.5x1.0x6.0mm,1500,
PCB	AA41-00155APCB-SIDE AV;KS3A,1L,FR-1,245x245x1.6T,8A	
R701	2001-000028	R-CARBON(S);100OHM,5%,1/2W,AA,TP,2.4X6.4
R702	2001-000028	R-CARBON(S);100OHM,5%,1/2W,AA,TP,2.4X6.4
R703	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM
R704	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM

ASSY-POWER,CORD

* AA96-20130CASSY-POWER,CORD;-;CP2/NO(4.0R),H/C300MM,

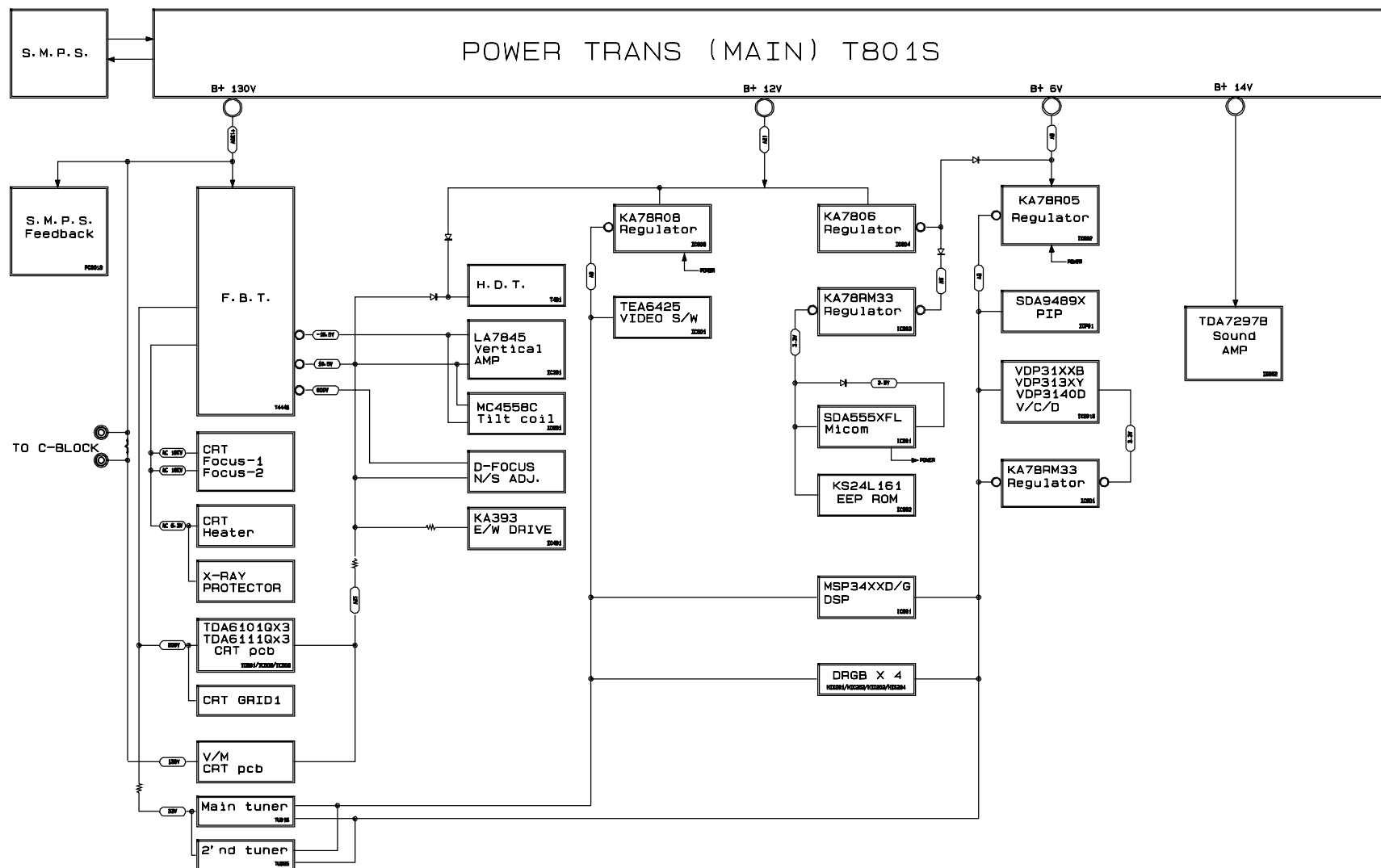
AA61-20284A HOLDER;-;P-CORD,PP,VO,BLK,KE-002
AA39-10003B POWER-CORD;-;KJP-140,KLCE-2F,2.4m,HOUS,S

REMOCON

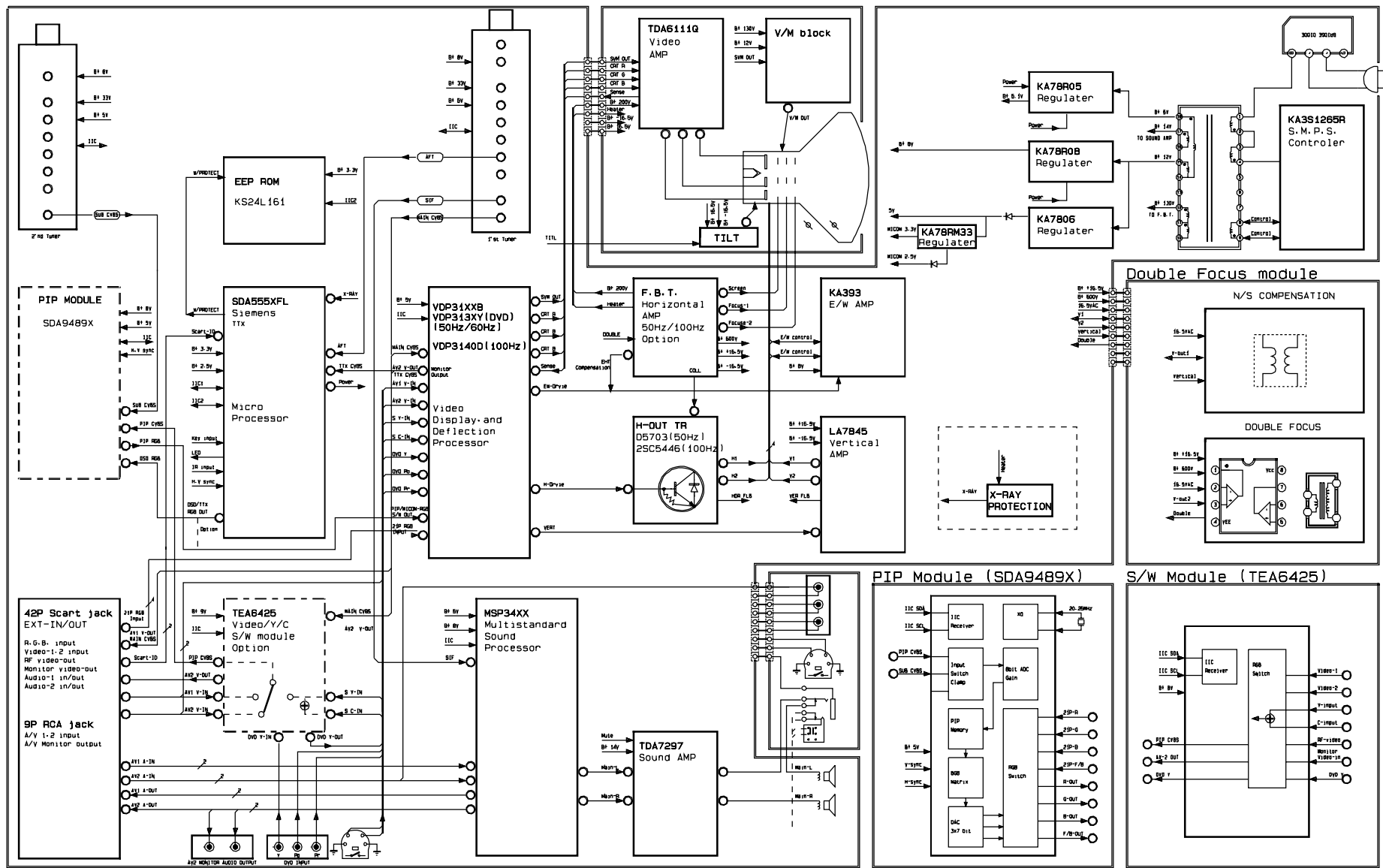
* AA59-00104AREMOCON;-;TM59,DREAM,29,L/GRAY;-;EX,PA

8. Block Diagrams

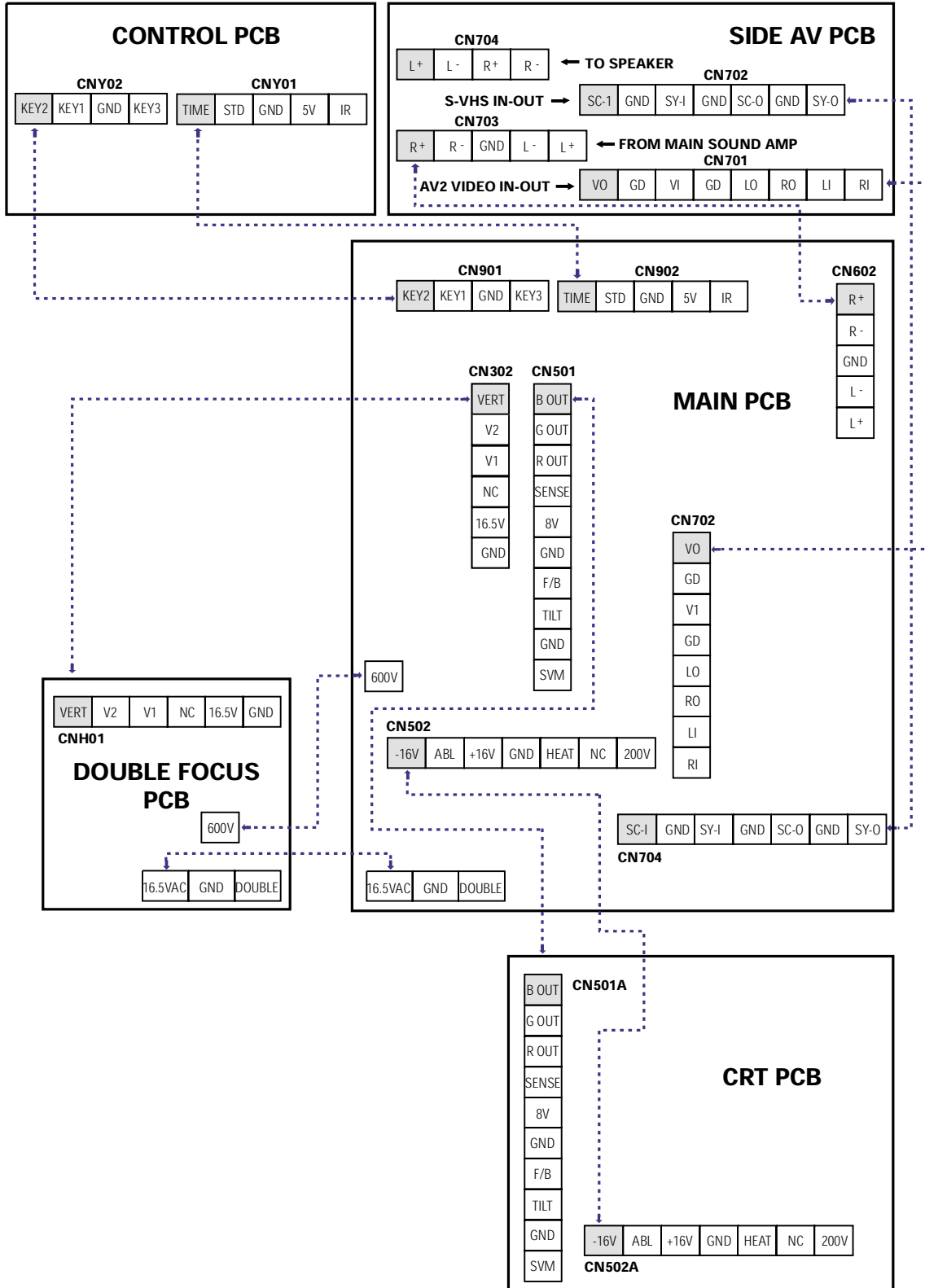
8-1 Power Diagram



8-2 Block Diagram

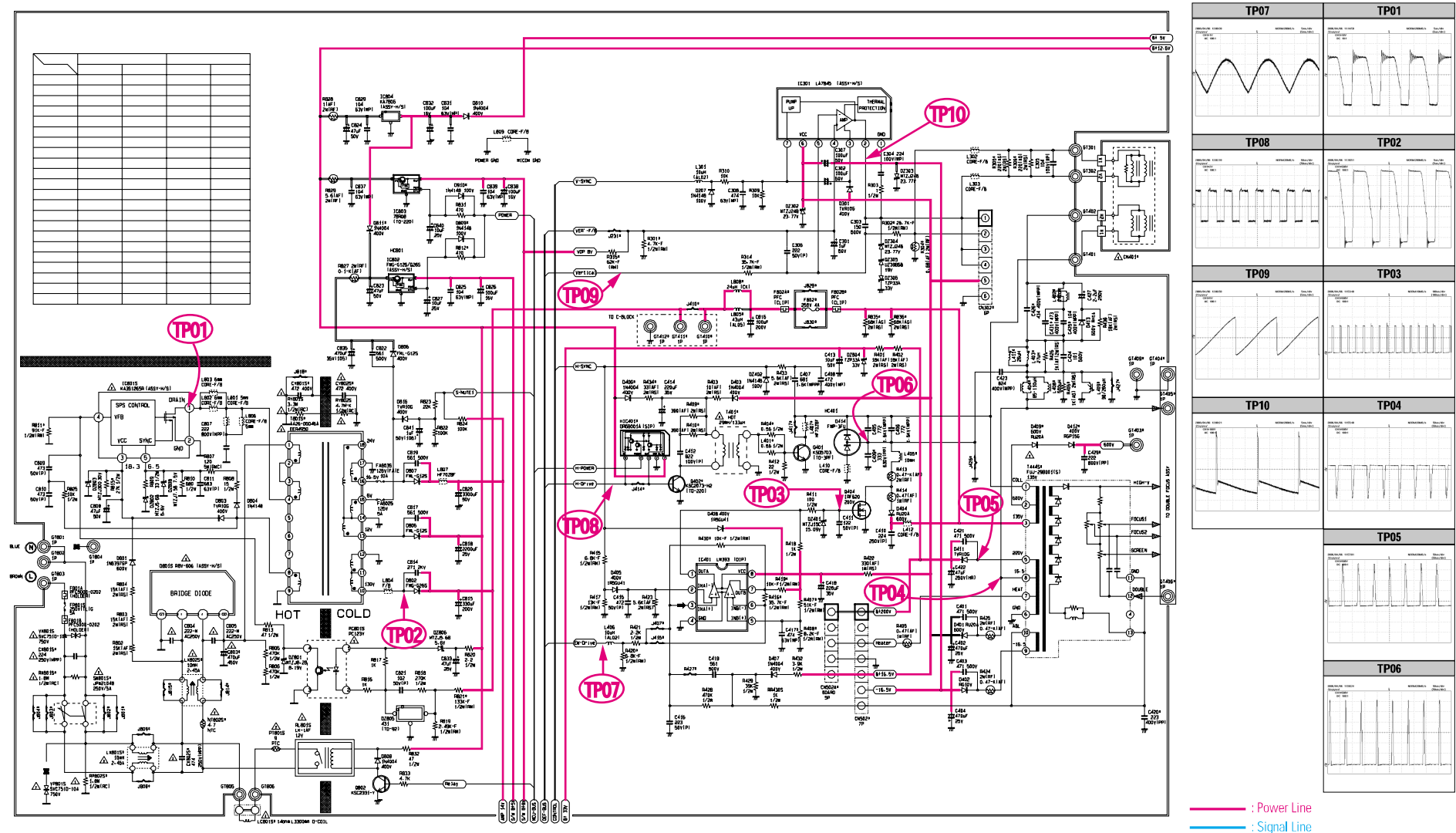


9. Wiring Diagram

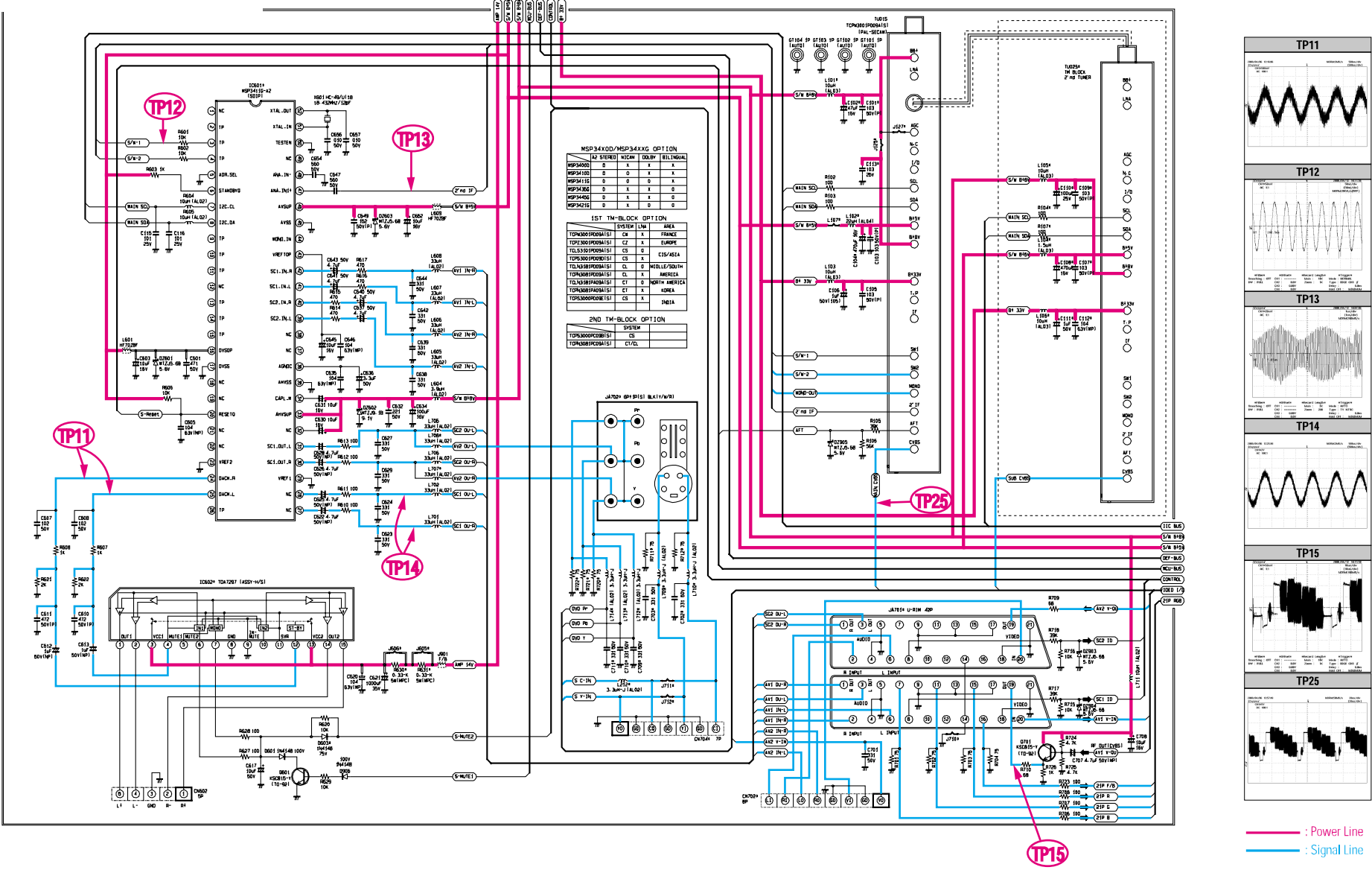


10. Schematic Diagrams

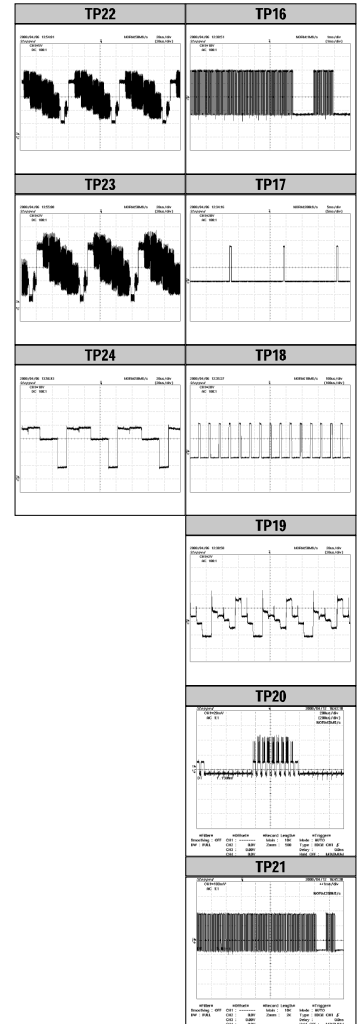
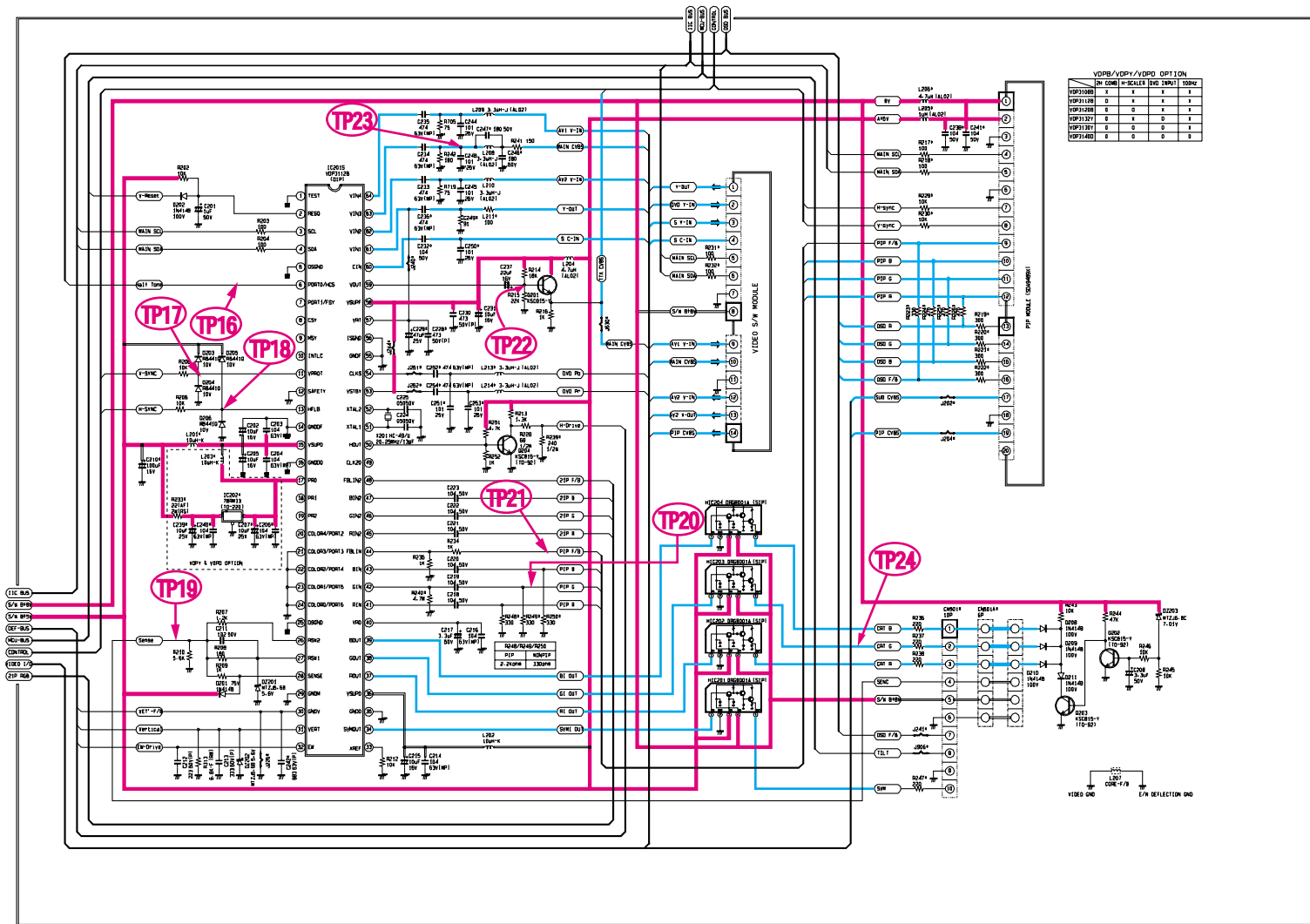
10-1 MAIN



10-2 MAIN 2

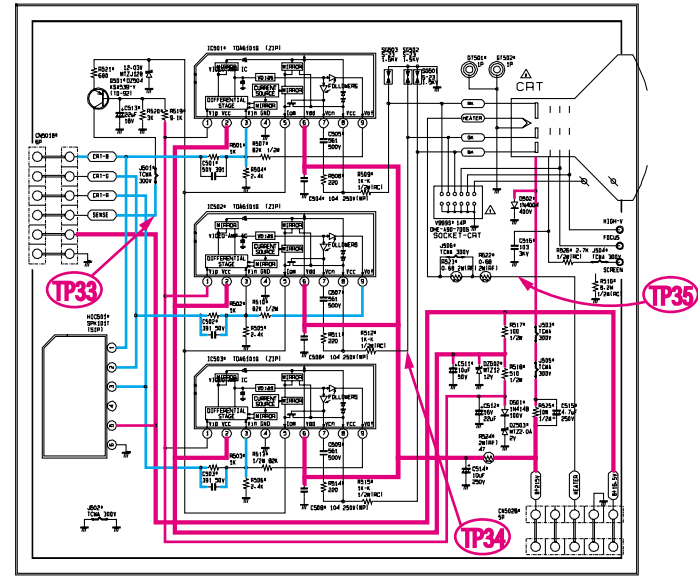
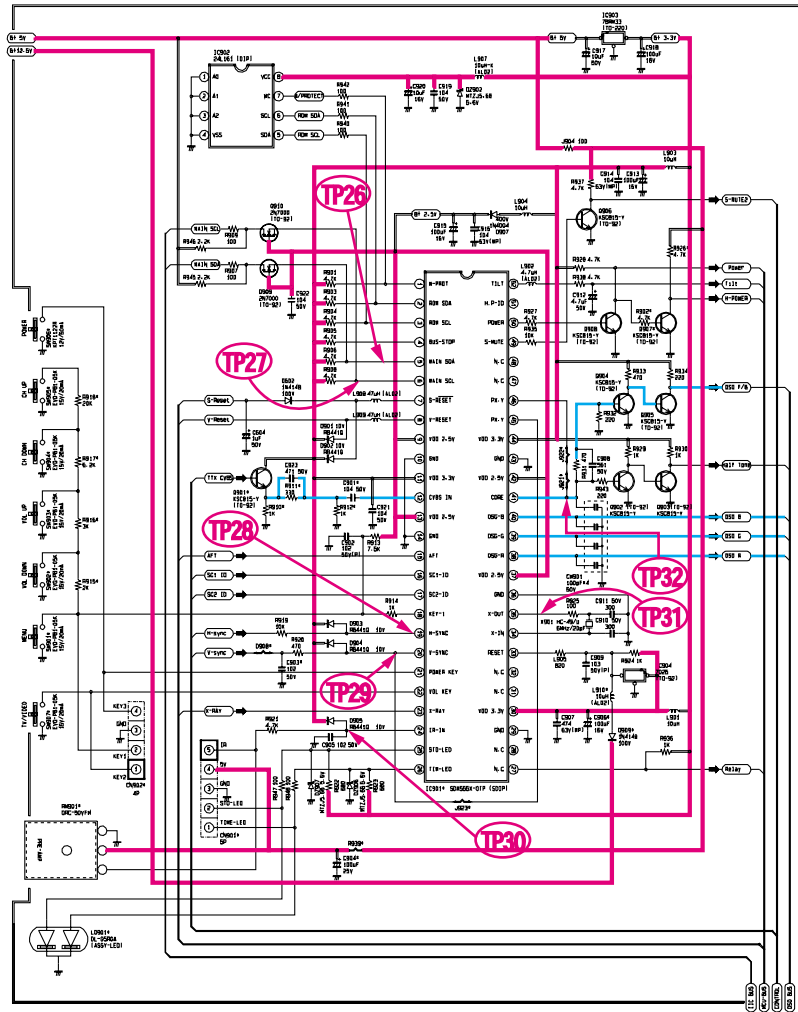


10-3 MAIN3



— : Power Line
 — : Signal Line

10-4 MAIN 4



K53A MAIN SCHEMATIC DIAGRAM

CAPACITOR	
Ceramic - SL	1000
Ceramic - RH	1000
Ceramic - CH	1000
Polyester product 1	1000
Polyester/Noninocul	1000
Polypropylene	1000
Metal Polyester	1000
M.P. Polypropylene	1000
Tantalum	1000
Non Polar	1000

- NOTE
1. Capacitors in values in one (1)-1000 (1000.000)
 2. Unless otherwise noted in schematic all capacitor values less than 1 are expressed in pF, and values more than 1 are expressed in μF.
 3. Unless otherwise noted in schematic all resistor values less than 1 are expressed in Ω, 1 to 999 (999.999) are expressed in Ω, 1 k to 999 k (999.999 k) are expressed in kΩ, and 1 M to 999 M (999.999 M) are expressed in MΩ.
 4. Values for capacitors are normal values and may vary 10% (10% tolerance).
 5. Values for resistors are normal values and may vary 10% (10% tolerance).
 6. Values for resistors are normal values and may vary 10% (10% tolerance).
 7. Values for resistors are normal values and may vary 10% (10% tolerance).
 8. Values for resistors are normal values and may vary 10% (10% tolerance).
 9. The capacitor values in this schematic are optional parts.

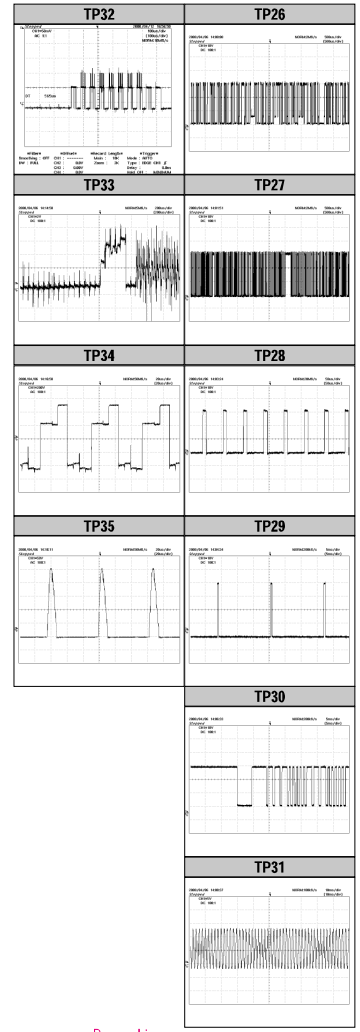
RESISTOR	
Carbon	1000
Composition	1000
Metal Oxide	1000
Metal Film	1000
Fusible	1000
Cement-wire	1000
Network	1000

WARNING: Before servicing this chassis read the "CAUTION" PRECAUTION, SAFETY PRECAUTION, and PRODUCT SAFETY NOTICE in manual.

CAUTION: The chassis shown in the schematic diagram and the parts listed in this diagram are not intended for use in safety-critical applications. For safety-critical applications, the user must consult the manufacturer's literature for the most current information on the product's safety features and use of these components. Read carefully the PRODUCT SAFETY NOTICE in this manual. Do not upgrade the safety of the chassis without proper servicing.

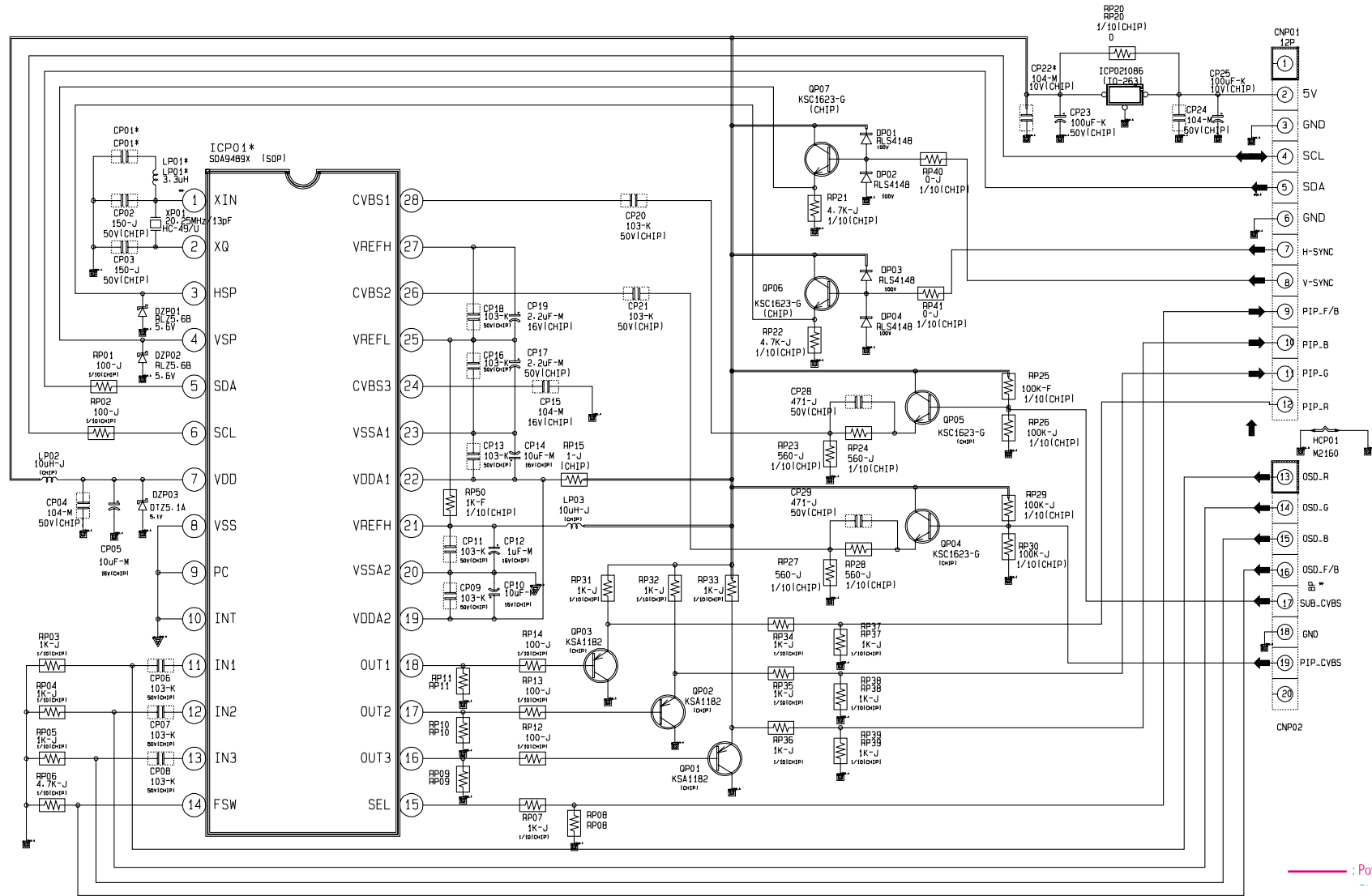
FILE NAME : MAIN

JOB-NO	TEAM	MODE	DESIGN	DPE	EDIT
Drpam	K53A	NC7	Y-K	K14	2000/04/22



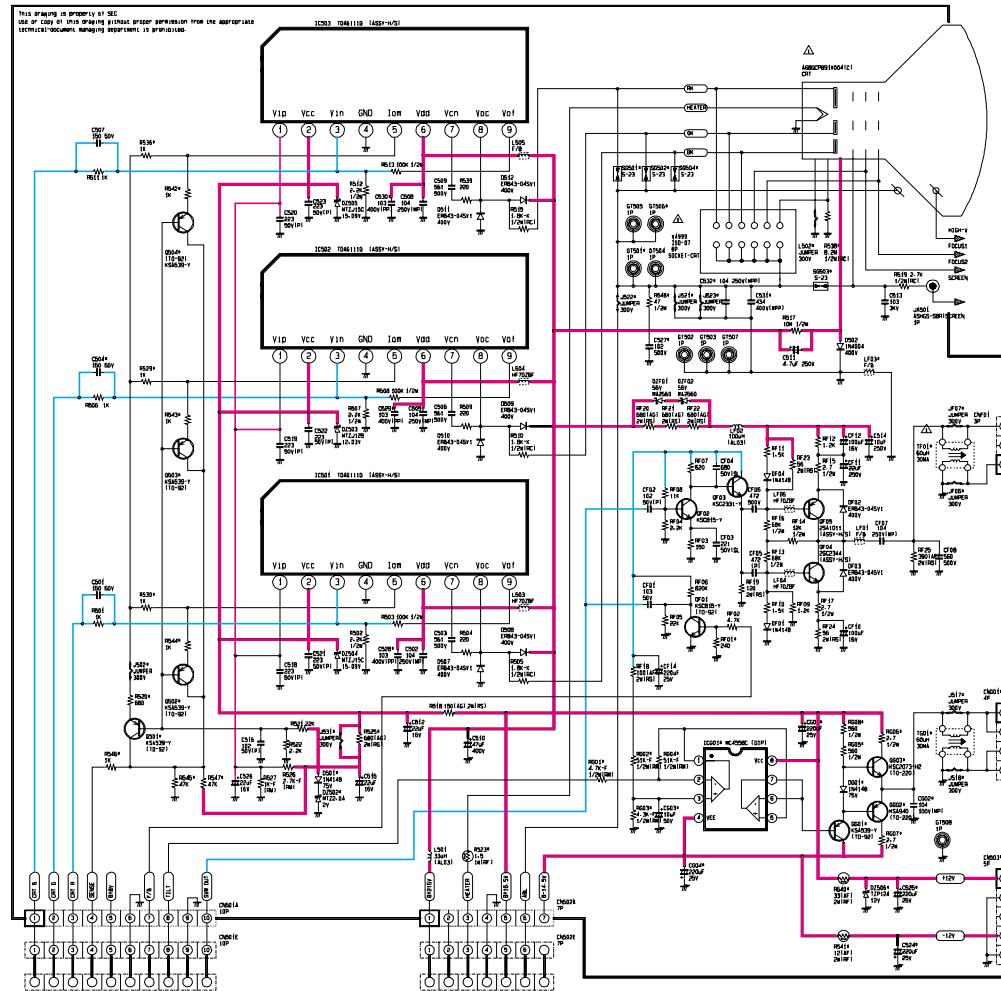
Power Line
Signal Line

10-5 PIP

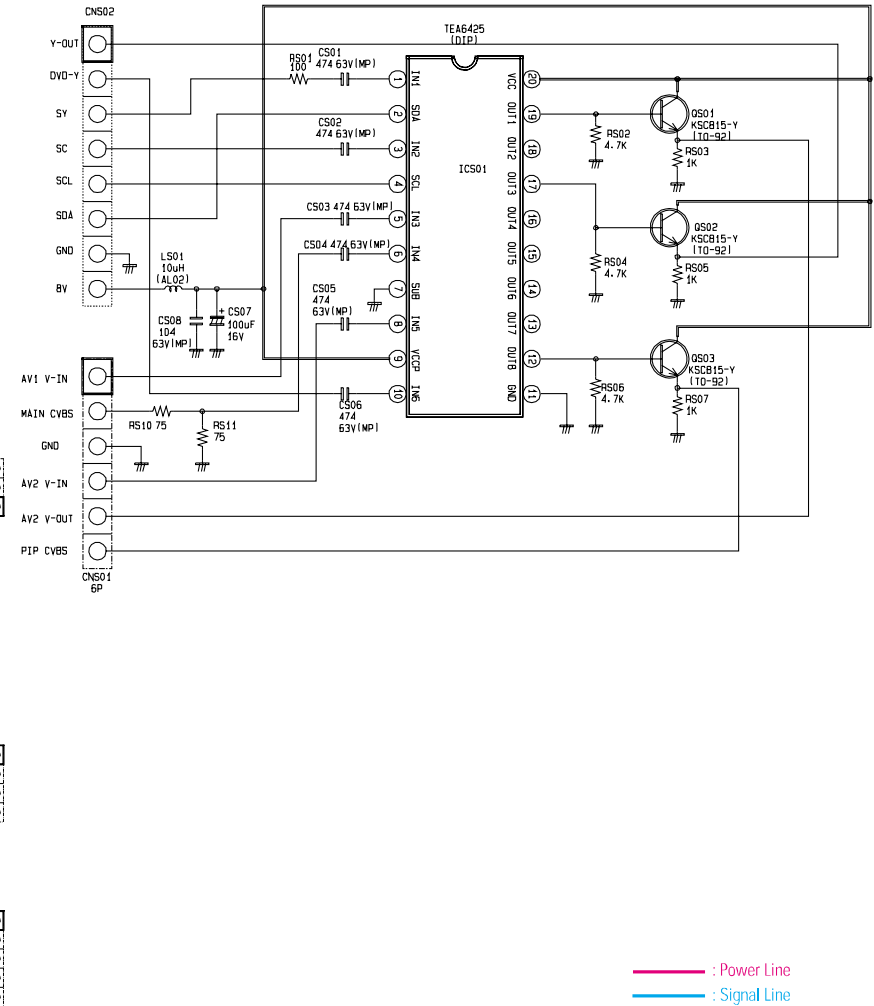


10-6 CRT, SWITCH

CRT



SWITCH





ELECTRONICS