QLS

SERVICE MANUAL

MODEL: 21F1

CHASSIS: NX56E-LA

This manual is the latest at the time of printing, and does not include the modification which may be made after the printing, by the constant improvement of product

1、CAUTION:

Use of controls, adjustments or procedures other than those specified herein may result in hazardous radiation exposure.

CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lighting flash with arrowhead symbol, with an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to the person.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT SAFETY INSTRUCTIONS

CAUTION:

Read all of these instructions. Save these instructions for later use. Follow all Warnings and Instructions marked on the audio equipment.

1. Read Instructions- All the safety and operating instructions should be read before the product is operated.
2. Retain Instructions- The safety and operating instructions should be retained for future reference.
3. Heed Warnings- All warnings on the product and in the operating instructions should be adhered to.
4. Follow Instructions- All operating and use instructions should be followed.

FOR YOUR PERSONAL SAFETY

1. When the power cord or plug is damaged or frayed, unplug this television set from the wall outlet and refer servicing to qualified service personnel.
2. Do not overload wall outlets and extension cords as this can result in fire or electric shock.
3. Do not allow anything to rest on or roll over the power cord, and do not place the TV where power cord is subject to traffic or abuse. This may result in a shock or fire hazard.
4. Do not attempt to service this television set yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
5. Never push objects of any kind into this television set through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the television set.
6. If the television set has been dropped or the cabinet has been damaged, unplug this television set from the wall outlet and refer servicing to qualified service personnel.
7. If liquid has been spilled into the television set, unplug this television set from the wall outlet and refer servicing to qualified service personnel.
8. Do not subject your television set to impact of any kind. Be particularly careful not to damage the picture tube surface.
9. Unplug this television set from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

10.1. Do not place this television set on an unstable cart, stand, or table. The television set may fall, causing serious injury to a child or an adult, and serious damage to the appliance. Use only with a cart or stand recommended by the manufacturer, or sold with the television set. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.

10.2. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

PROTECTION AND LOCATION OF YOUR SET

11. • Do not use this television set near water ... for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.
    • Never expose the set to rain or water. If the set has been exposed to rain or water, unplug the set from the wall outlet and refer servicing to qualified service personnel.

12. Choose a place where light (artificial or sunlight) does not shine directly on the screen.

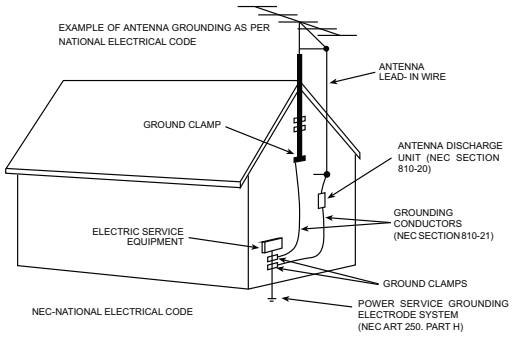
13. Avoid dusty places, since piling up of dust inside TV chassis may cause failure of the set when high humidity persists.

14. The set has slots, or openings in the cabinet for ventilation purposes, to provide reliable operation of the receiver, to protect it from overheating. These openings must not be blocked or covered.
    • Never cover the slots or openings with cloth or other material.
    • Never block the bottom ventilation slots of the set by placing it on a bed, sofa, rug, etc.
    • Never place the set near or over a radiator or heat register.
    • Never place the set in a "built-in" enclosure, unless proper ventilation is provided.

PROTECTION AND LOCATION OF YOUR SET

15.1. If an outside antenna is connected to the television set, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges, Section 810 of the National Electrical Code, NFPA No. 70-1975, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrode, and requirements for the grounding electrode.

EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE INSTRUCTIONS



15.2. Note to CATV system installer : (Only for the television set with CATV reception)

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

16. An outside antenna system should not be located in the vicinity of overhead power lines or other electric lights or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

17. For added protection for this television set during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna. This will prevent damage due to lightning and power-line surges.

OPERATION OF YOUR SET

18. This television set should be operated only from the type of power source indicated on the marking label.If you are not sure of the type of power supply at your home, consult your television dealer or local power company. For television sets designed to operate from battery power, refer to the operating instructions.

19. If the television set does not operate normally by following the operating instructions, unplug this television set from the wall outlet and refer servicing to qualified service personnel. Adjust only those controls that are covered in the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the television set to normal operation.

20. When going on a holiday : If your television set is to remain unused for a period of time, for instance, when you go on a holiday, turn the television set "off" and unplug the television set from the wall outlet.

IF THE SET DOES NOT OPERATE PROPERLY

21. If you are unable to restore normal operation by following the detailed procedure in your operating instructions, do not attempt any further adjustment. Unplug the set and call your dealer or service technician.

22. Whenever the television set is damaged or fails, or a distinct change in performance indicates a need for service, unplug the set and have it checked by a professional service technician.

23. It is normal for some TV sets to make occasional snapping or popping sounds, particularly when being turned on or off. If the snapping or popping is continuous or frequent, unplug the set and consult your dealer or service technician.

FOR SERVICE AND MODIFICATION

24. Do not use attachments not recommended by the television set manufacturer as they may cause hazards.

25. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

26. Upon completion of any service or repairs to the television set, ask the service technician to perform routine safety checks to determine that the television is in safe operating condition.

受控文件

Product Functional Specification

Chassis Name	NX56-LA	Serial No.	
Issued On	2008-5-19	Page	1 of 7
Updated On		Version	1.0

Disclosure

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- Version Information: Version states by two Arabic Numbers, which is separated by one dot, e.g. 1.2. The first number "1" means the version of approved file, the second one "2" means the version of draft.

Revision History

Model No.	Status		Date	Comment
29185	Prepared by	lipeng	2008.5.19	V1.0 03-B185SAE-SC31
	Checked by			
	Released by:			
21M63US	Prepared by	lipeng	2008.5.19	V1.0 03-DM63SAE-SC31S
	Checked by			
	Released by:			
	Revised by			
	Checked by			
	Released by:			
	Revised by			
	Checked by			
	Released by:			

Model / Item	NX56-LA 29185	NX56-LA 21M5US
Master Data		
-Version	1	1
-Customer ID	EM	EM
-Destination	EM	EM
-Brand		
-BOM NO.	03-B185SAE-SC31	03-DM63SAE-SC31S
-Chassis		
Reception		
-Tuning [Channels Amt.]	181	181
-Tuning [Technology]	PLL	PLL
-Tuning [Indication]	Channel	Channel
-Frequency Bands	Antenna AND Cable	Antenna AND Cable
-IF Frequency	45.7MHz	45.7MHz
-TV Systems (Color+ Sound)	PAL M/N NTSC M	PAL M/N NTSC M
-AV Systems	NTSC PAL	NTSC PAL
Picture-Processing		
-SCAN	Standard	Standard
-Wide Screen Switching		
-Comb filter		
-Picture Enhancement		
LTI / CTI		
Black Stretch		
Dynamic Skin		
Others		
-Picture Control [General]		
Brightness	X	X
Sharpness	X	X
Contrast	X	X
Tint	X	X
Color	X	X
-Picture Control [Special]		
Smart Pictures * modes	4 modes	4 modes
VM		
Color Temperature	3 modes	3 modes
Others		
-Picture Noise Reduction	X	X
Picture – Display		
-CRT Type		
Normal Flat		
Pure Flat	X	X
Super Flat		
-Deflection system		
1Fh	X	X
2Fh		
-Tube Technology		
Iron		
AK	X	X
Black Matrix		
Others		
-CRT Deflection (* Deg.)	110	120
-CRT Magnetic Field		
-Screen Type	4:3	4:3
-Screen Size / Vis. Size	29'	21' Super Slim
Sound		
-Audio Power Consumption	5W+5W	4W+4W
-Surround Sound		

Model / Item	NX56-LA 29185	NX56-LA 21F5US
-Nicam		
-America Stereo (MTS,BTSC,MPS)	X	X
-America SAP		
-Korea Stereo		
-Thai Bilingual		
-Super Woofer		
-AVL		
-Sound Control [General]		
Volume	X	X
Mute	X	X
-Sound Control [Special]		
Treble		
Bass		
Balance	X	X
Equalizer		
Smart Sound * modes		
Others		
-Speakers Quantity	2X1	2X1
User Interface		
-Menu Language	English/Portugal/Espanol	English/Portugal/Espanol
-Features [General]		
AT		
Biological Clock		
Calendar		
Clock		
Channel Swap	X	X
Channel Naming		
Child Lock	X	X
Favorite Channel	X	X
Game		
Hotel Mode	X	X
High Sensitive		
Notebook		
On/Off Timer		
Preset	X	X
Recall	X	X
Rotation		
Sleep	X	X
AVC		
-Features [Special]		
V-chip / CCD	X	X
Teletext *Pages		
Others		
New Features		
Smart signal		
Voltage display		
环境光检测		
Easy search		
Tuning Features		
-Auto Channel Program	X	X
-Auto/Manual Tuning	X	X
-Auto/Manual Store	X	X
-Fine Tuning	X	X
-Factory Mode	X	X
-Service Mode		
Cabinet		
-Cabinet Name		

Model / Item	NX56-LA 29185	NX56-LA 21F5US
-Front Cabinet Color		
-Middle Cabinet Color		
-Rear Cabinet Color		
-Local Controls Front		
Mains Switch	X	X
CH+ CH- VOL+ VOL-	X	X
TV/AV	X	X
Menu	X	X
Auto Search		
-Local Controls Top		
CH+ CH- VOL+ VOL-		
TV/AV		
Menu		
Auto Search		
-Indicator		
RC Received LED	X	X
Standby LED	X	X
Remote Controller		
-Type	RC166	RC166
-Batteries		
Connectors Rear		
-SCART Full w/o Y/C		
-SCART Full with Y/C		
-SCART Single (CVBS)		
-Component In (YPbPr) Cinch for 50Hz		
-In Y/C+Cinch(CVBS+ Stereo)	1 + 1	1 + 2
-In Y/C+Cinch (CVBS+ Mono)		
-In Cinch(CVBS+ Stereo)		
-In Cinch (CVBS+ Mono)		
-Out Cinch(CVBS+ Stereo)		
-Out Cinch(CVBS+ Mono)	1(follow TV)	1(follow TV)
- Y,Cb,Cr input	X	X
-Super Woofer		
-Digital Audio Out		
-Loudspeakers		
-Control Busses		
-Feature Slot		
-ITV Smart Port		
- Antenna in		
75 Ohms (F Type)	X	X
Connectors Front/Side		
-In Y/C+Cinch(CVBS+ Stereo)		
-In Y/C+Cinch (CVBS+ Mono)		
-In Cinch(CVBS+ Stereo)	X	
-In Cinch (CVBS+ Mono)		
-Out Headphone		
Mini-Jack 3.5mm		
Final Equipment		
-Packing –Methods		
2 Color Printing		
Carton Color		
-Documents and Manuals		
Instruction Book		
Screen Sticker		
Plastic Bag		
Warranty Card		

Model / Item	NX56-LA 29185	NX56-LA 21F5US
Guarantee Doc.		
Warning Label		
Approbation Label		
Others		
-Languages DFU		
-Indication on BACKOVER		
Made-in in family sheet		
FCC/Elect Shock Caution Label		
CE/Elect Shock Caution Label		
Warning Label		
Others		
Approbation	IEC65	IEC65
Miscellaneous		
-Mains Voltage	100-240V	100-240V
-Mains Frequency	50/60Hz	50/60Hz
-Type Mains Cord		
-Power Consumption TV in ON	75W	75W
-Power Consumption TV in Standby	<3W	<3W

NX56-LA Chassis Alignment Procedure

Chassis Name	NX56-LA	**Serial No.**	
Issued on	2008-05-19	**Page**	Page 1 of 15
Updated on	2010-01-27	**Version**	2.2

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29185	Prepared by	LIPENG	2008-05-15	03-B185SAE-SC31 （29185/NX56-LA）
	Checked by			
	Released by			
21M63US	Prepared by	LIPENG	2008-05-15	03-DM62SAE-SC31S （21M63US/NX56-LA）
	Checked by			
	Released by			
21M83S	Prepared by	LIPENG	2008-07-4	03-DM83SAE-SC31S （21M83S/NX56-LA）
	Checked by			
	Released by			
All NX56-LA chassis	Prepared by	LIPENG	2009-02-23	Ver2.0 Updated the description accord with the software changing.TO NX56B
14N23	Prepared by	LIPENG	2009-04-10	Ver2.1 Add AKB adjust method
	Checked by			
	Released by			
All NX56-LA chassis	Prepared by	LIPENG	2010-01-27	Ver2.2 Add background color set Add Software eliminate bright Spot when turn off switch
	Checked by			
	Released by			

1.1. The way to enter P-Mode

a) Method one

A) Switch on the TV set.

B) Press the "MENU" key on RC to show the "PICTURE" OSD menu.

C) Move the cursor to "Contrast" item then press the "9", "7", "3", "5" key continuously on RC within 3 seconds then enter P-Mode. The "P" letter will appear on the left low corner of the screen when enter P-Mode. Also the "FACTORY HOTKEY" will be set to "ON (= 1)".

b) Another method

Press the "RECALL" key on RC to enter P-mode directly.

*Notes:

1. This will be active only when the "FACTORY HOTKEY" had set to "ON (= 1)".

2. When the power on with "FACTORY HOTKEY" had set to "ON (= 1)", the set will enter the P-Mode automatically.

1.2. Exit the P-Mode

Press the "RECALL" or "MENU" key on RC to exit the P-Mode.

1.3. Keys' function on RC at the P-Mode

Use the RC to navigate in P-Mode:

Press **"0" to "9"** key to select factory adjustment page.

Press **"▲▼"** key to select option.

Press **"►◄"** key to adjust or select option.

Press **"DISPLAY"** key to display software version.

Press **"MENU"** key to exit the P-Mode.

Press **"RECALL"** key to enter or exit the P-Mode.

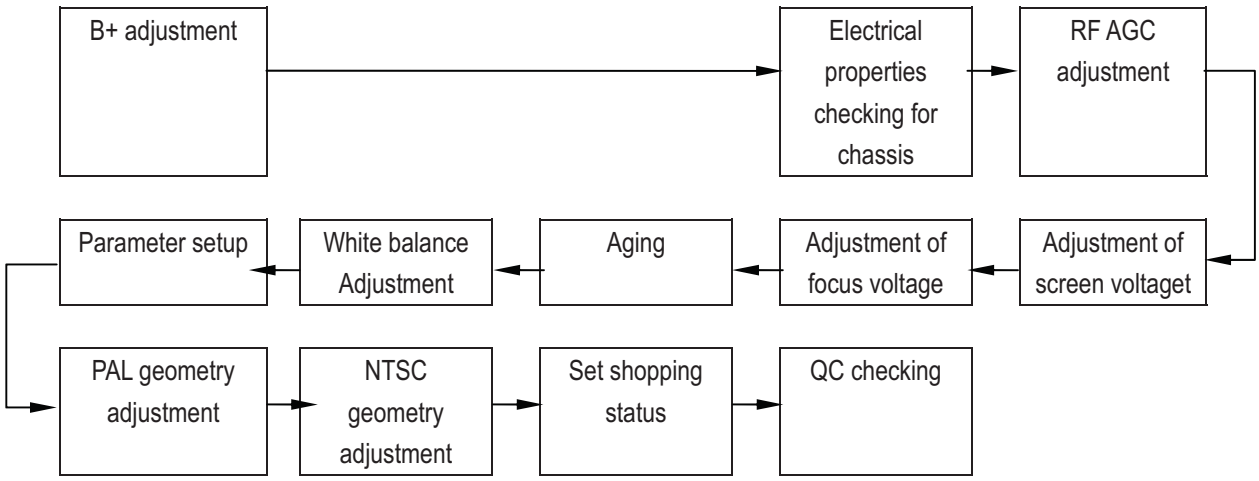
All change in P-Mode will be saved in EEPROM automatically

1.4. The adjustment page list on P-Mode:

RC key	Item	Description
0	Screen voltage adjustment	
1	Picture Geometric adjustment 1	Vertical geometry
2	Picture Geometric adjustment 2	Horizontal geometry
3	White Balance Adjustment	
4	Setup 1	
5	Setup 2	
6	Setup 3	
7	Setup 4	
8	Setup 5	

9	I2C Bus OFF	Press this key to enter or exit BUS OFF mode
AT	DISPLAY STATE SCREEN	
DISPLAY	Display software version	

2. Flowchart of alignment procedure



1) B+ Adjustment

2) RF AGC Adjustment

3) Screen & Focus adjustment

4) White balance adjustment

5) Producing parameter setup and option

6) Picture Geometry adjustment (Vertical first)

7) Set Shopping status

8) QC

3. Adjustment description

*Notes: Alignment should be done after 3 minutes warm up of TV.

3.1 B+ Voltages

1. All relevant connectors and modules must be connected and inserted.
2. Main voltage is at 220VAC, 50Hz.（voltage range:110VAC~240VAC,50Hz）
3. Connect a voltmeter to B+ (Cathode of D808) and switch on the set.
4. Input Philips test pattern signal and standard mode.
5. Adjust VR801, it should as the value in below form B+ Voltage.

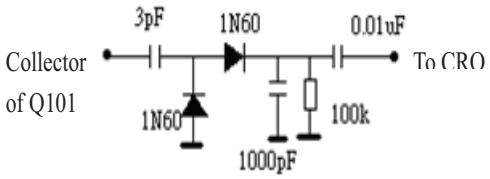
Table 3.1.1: The B+ value for vary tubes

CRT type (Part Number)	B+ Voltage
A68ERF185X013/MS (44-29RFLT-HFCA)	125V+/-0.5V
A51QGT420X34(44-21RFLS-LGDA)	108V+/-0.5V
A51ERS357X440(44-21RFLE-HF4A)	112V+/-0.5V
A51ALQ13X04(44-21RFLM-CHDA	108V+/-+0.5V
37SX110Y22-DC05(44-14OFLN-IR6A)	106V+/-+0.5V

3.2 RF AGC alignment

3.2.1 Method 1

A. Connect the detector as shown below (Picture 3.2) to collector of Q101.
B. Receive a grey scale signal with 70dBμV amplitude.
C. Enter P-Mode, press "6" key on RC to select "AGCT".
D. Adjust AGCT item until the output of the detector becomes 0.8Vpp



Picture 3.2

3.2.2 Method 2

A. Receive a grey scale signal with 60dBμV amplitude.
B. Enter P-Mode, press "6" key on RC to select "AGCT".
C. Adjust the "AGCT" value until the hint display "AGC" just change between "0" and "1".

3.3 Screen & Focus adjustment

*Notes: Alignment below should be done after 15 minutes warm up of TV.

1. Input cross hatch pattern signal to RF input.
2. Enter P-Mode.
3. Press "0" key on the RC and the screen will become a horizontal line.
4. Adjust the "SCREEN" VR of the FBT until the horizontal line can just be seen barely (minimum visible intensity). method with AKB OFF:

Note:

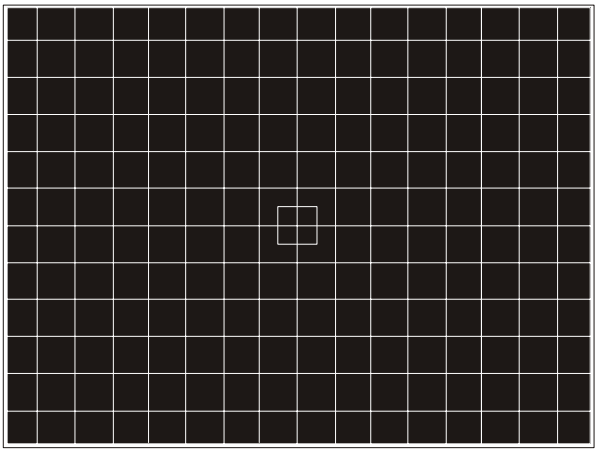
Adjust the "SCREEN" VR method with AKB ON:

Put the TV in AV source without input signal.

Enter P-Mode, press RC key "AT".

Adjust the "SCREEN" VR of the FBT until VG2 State (LOW/OK/HIGH) display "OK".

5. Press "0" key again on the RC to exit the screen voltage adjustment mode.
5. Adjust the "FCOUS" VR of the FBT until the vertical line and horizontal line becomes clear, like picture 3.3.



Picture 3.3

3.4 White Balance Adjustment

1. Input a black and white pattern to RF input.
2. Enter P-Mode, press key "3 " to select white balance adjustment menu.
3. Use the color analyzer to measure the black side of the screen. Adjust the value of "RC","GC" and "BC" to set the reading of the color analyzer to x=274, y=280. (11500 K).
4. Then measure the white side of the screen. Adjust the value of "RD", "GD" and "BD" to set the reading of the color analyzer to x=274, y=280. (11500 K).
5. Repeat step 3&4 until you can get the correct reading for both black and white sides.

*Notes:

A. The "SUBB" and "SubCON" items are used to assistant the white balance adjustment. It is the same function as the user OSD menu "Brightness" and "Contrast" items. You can adjust these items to get the expect intensity when adjusting the white balance.

B. YUV white balance black level offset setup:

It is not need to adjust the white balance for YUV mode when production, but the BLOR-Y, BLOG-Y and BLOB-Y items which locate in EEPROM address 0x0A, 0x0B and 0x0C need to write in the right values to set the YUV mode black level offset before production. These offset values should be written by the PE engineer when making the EEPROM copy for the new lot with difference tube.

Table 3.4.1: The White Balance adjustment setup and option page "3"

OSD menu	Default Value	Description	Remark
RC	32	R cut-off setting(BLOR)	Adjust to right value
GC	32	G cut-off setting(BLOG)	Adjust to right value
BC	32	B cut-off setting(BLOB)	Adjust to right value
RD	37	R drive setting(WPR)	Adjust to right value
GD	32	G drive setting(WPG)	Adjust to right value
BD	37	B drive setting(WPB)	Adjust to right value
BLOC	8	Black level offset course(BLOC)	Adjust to right valuege

			Screen background is black with No signal
BriVSD	32	Brightness of horizontal line when adjust G2	Adjust to right valuege
SUBB	32	Brightness	Same as user "Brightness" and "Contrast" adjust
SubCON	32	Contrast	
BLOR-Y	64	YUV R -OFFSET	64= offset value 0 63= offset value -1 65= offset value ＋1 Adjust to right value
BLOG-Y	62	YUV G-OFFSET	
BLOB-Y	64	YUV B -OFFSET	
BRTC	32	BRIGHT CENTET	Adjust to right value

3.5 Picture Geometry adjustment

3.5.1 Vertical geometry adjustment

1. Input a PAL crosshatch pattern signal to RF input.
2. Enter P-Mode, press key "1" to select vertical geometry adjustment. (The OSD menu for this adjustment as below table 3.5.1. For NTSC signal, the "-50" will replace with "-60".)
3. Adjust the value of the corresponding item to make the vertical geometry of the pattern look good.
4. Apply NTSC signal to adjust these value for NTSC vertical geometry.

Table 3.5.1: The vertical geometry adjustment OSD menu setup and option page "1"

OSD menu	Default Value	Description	Remark
VSLOPE-50	32	Vertical slope(VS)	Adjust to right value
VCEN-50	32	Vertical shift (VSH)	Adjust to right value
VSIZE-50	32	Vertical amplitude(VA)	Adjust to right value
VZOOM-50	25	Vertical zoom(VX)	Adjust to right value
VSC-50	32	S-correction(SC)	Adjust to right value
VSCROLL-50	32	Vertical Scroll（VCS）	Adjust to right value

*Notes:

1. For NTSC signal, the "-50" will replace with "-60".
2. For NTSC signal, only the **"VCEN-60"** and **"VSIZE-60"** items need the adjustment, the other items use the same data as PAL signal.
3. On producing, please use the **"AUTO OFFSET"** (On page "2") function to easy the geometry adjustment of NTSC signal. When finished the PAL signal geometry adjustment, press "2" key to enter page "2" to select "AUTO OFFSET" item, press "►" key to active the automatic offset function. Then the geometry adjustment of NTSC signal will finish automated. If the geometry of NTSC signal is look good, you don't need to adjust the geometry of NTSC signal any more.

3.5.2 Horizontal geometry adjustment

1. Input a PAL crosshatch pattern signal to RF input.

2. Enter P-Mode, press key "2" to select horizontal geometry adjustment. (The OSD menu for this adjustment as below table 3.5.2. For NTSC signal, the "-50" will replace with "-60".)

3. Adjust the value of the corresponding item to make the horizontal geometry of the pattern look good.

4. Apply NTSC signal to adjust these value for NTSC horizontal geometry.

Table 3.5.2: The horizontal geometry adjustment OSD menu setup and option page "2"

OSD menu	Default Value	Description	Remark
HCEN-50	32	Horizontal shift(HSH)	Adjust to right value
HSIZE-50	32	EW width(EWW)	Adjust to right value
HPARA-50	32	EW parabola width(PW)	Adjust to right value
HTRAP-50	32	EW trapezium(TC)	Adjust to right value
HCNRT-50	32	EW upper corner parabola(UCP)	Adjust to right value
HCNRB-50	32	EW lower corner parabola(LCP)	Adjust to right value
HBOW-50	32	Horizontal bow(HB)	Adjust to right value
HPARALLEL	32	Horizontal parallelogram(HP)	Adjust to right value
AUTO OFFSET	0	Automatic offset NTSC geometry	See below description

*Notes:

1. For NTSC signal, the "-50" will replace with "-60".

2. For NTSC signal, only the **"HCEN-60"** and **"HSIZE-60"** items need the adjustment, the other items use the same data as PAL signal.

3. On producing, please use the **"AUTO OFFSET"** (On page "2") function to easy the geometry adjustment of NTSC signal. When finished the PAL signal geometry adjustment, press "2" key to enter page "2" to select "AUTO OFFSET" item, press "►" key to active the automatic offset function. Then the geometry adjustment of NTSC signal will finish automated. If now the geometry of NTSC signal is look good, it not needed to adjust the geometry of NTSC signal any more.

3.6 Producing parameter setup and option

1. Enter P-Mode, press key "4" to select page "4".Set the corresponding item to require value. See below table 3.6.1 for detailed description.

Table 3.6.1: Producing parameter setup and option page "4"

OSD menu	Default Value	Description	Remark
WARM UP STATUS	0	Set aging mode	0=Aging mode off
			1=Aging mode on
SHOP INIT	0	Set the shopping status	0=>1= Set the shopping status
DCXO	2	Crystal oscillator frequency adjustment	Adjust this value to get the max color synchronization range
FACTORY HOTKEY	1	Set factory hotkey	0="FACTORY HOTKEY" off
			1="FACTORY HOTKEY" on
POWER ON MODE	LAST	Set the power on mode	ON=On when power on

			STB=Standby when power on LAST=Last power off status
EEPROM INIT	0	EEPROM initial	0=>1=Active EEPROM initial
BRI CURVE	>>>>>>	Brightness curve	Adjust this value
CONCURVE	>>>>>>	Contrast curve	Adjust this value
COL CURVE	>>>>>>	Color curve	Adjust this value
VOL CURVE	>>>>>>	Volume curve	Adjust this value
AV STANDB	0	AV no signal within 10 minutes automatic standby	1 =Enable 0=Disable
DEFALT LANGUAGE	1	SET DEFALT LANGUAGE	1=Enlish，2 =Portuguese 3= Spanish
DEFALT TUNE MODE	1	SET DEFALT TUNE MODE	DEFALT TUNE MODE 0 = cable 1 = antenna
AT ENABLE	1	AT MODE ENABLE	1 =Enable 0=Disable
VCHIP ENABLE	1	VCHIP ENABLE	1 =Enable 0=Disable

Description:

1). Set the shopping status

When trigger the "SHOP INIT" item form "0" to "1", the TV will be put on selling status.

The TV status after shopping status:

A. "FACTORY HOTKEY" had set to "OFF".

B. Picture set to "Standard" status. (Brightness=50, Contrast=50, Colour=50, White tone=Normal.)

C. Sound set normal.(Volume=30,Balance=50.)

D.

2). Set the user picture and sound curve value

A. Brightness curve:

OSD menu	Default Value	Description	Remark
BRI0	0	Set the minimal brightness when user Brightness=0	Set the value as practical requirement
BRI50	32	Set the brightness when user Brightness=50	
BRI100	63	Set the maximal brightness when user Brightness=0	

B. Contrast curve:

OSD menu	Default Value	Description	Remark
CON0	0	Set the minimal contrast when user Contrast=0	Set the value as practical requirement
CON50	32	Set the contrast when user Contrast=50	
CON100	63	Set the maximal contrast when user Contrast=0	

C. Colour curve:

OSD menu	Default Value	Description	Remark
COL0	0	Set the minimal colour when user Colour=0	Set the value as practical requirement
COL50	32	Set the colour when user Color=50	
COL100	50	Set the maximal colour when user Colour=0	

D. Volume curve:

OSD menu	Default Value	Description	Remark
VOL0	0	Set the minimal volume when user Volume=0	Set the value as practical requirement
VOL10	38	Set the minimal volume when user Volume=10	
VOL10	65	Set the minimal volume when user Volume=30	
VOL50	71	Set the volume when user Volume=50	
VOL80	77	Set the maximal volume when user Volume=80	
VOL100	81	Set the maximal volume when user Volume=100	

2. Enter P-Mode, press key "5" to select page "5". Set the corresponding item to require value. See below table 3.6.2 for detailed description.

Table 3.6.2: Producing parameter setup and option page "5"

OSD menu	Default Value	Description	Remark
Track. Mode	0	EHT tracking mode	0=EHT tracking only on vertical
			1=EHT tracking on vertical and EW
VX Normal	25	4:3 mode vertical zoom	Don't adjust, use default
VX Compr.	0	16:9 mode vertical zoom	Don't adjust, use default
HBL	1	blanking Switch	0 =OFF,1 =ON
WBF	5	Wide start	Don't adjust, use default
WBR	8	Wide blanking end	Don't adjust, use default
GET OFFSET	0	Get offset	See below description
ColdRD	61	Cold color temperature R and G drive offset	64= offset value 0 63= offset value -1 65= offset value ＋1 Adjust to right value
ColdGD	56		
ColdRC	61	Cold color temperature R and G cut-off offset t	64= offset value 0 63= offset value -1 65= offset value ＋1 Adjust to right value
ColdGC	66		
WarmRD	72	Warm color temperature R and G drive offset	64= offset value 0 63= offset value -1 65= offset value ＋1 Adjust to right value
WarmGD	71		
WarmRC	65	Warm color temperature R and G cut-off offset	64= offset value 0 63= offset value -1 65= offset value ＋1 Adjust to right value
WarmGC	64		

Description for AUTO OFFSET and GET OFFSET:

The **"GET OFFSET"** can use to make the EEPROM copy by PE engineer. When the PAL and NTSC geometry adjustment had finished, trigger the "GET OFFSET" from "0" to "1" to store the geometry offset datum between PAL and NTSC in EEPROM.

On producing, these geometry offset datum can use to easy the NTSC geometry adjustment. When finished the PAL geometry adjustment, trigger the "AUTO OFFSET" from "0" to "1", then the geometry adjustment of NTSC signal will finish automated. If now the geometry of NTSC signal is look good, it not needed to adjust the geometry of NTSC signal any more.

3. Enter P-Mode, press key "6" to select page "6". Set the corresponding item to require value. See below table 3.6.3 for detailed description.

Table 3.6.3: Producing parameter setup and option page "6"

OSD menu	Default Value	Description	Remark
AGCT	32	AGC take over point	See section "3.2 RF AGC alignment" for detailed.
OIF	32	IF demodulator offset	Don't adjust, use default
IF	45.7	IF frequency	Select the IF frequency
AGCS	1	AGC speed	Don't adjust, use default
AGNE	3	Audio gain	Don't adjust, use default
WATCHDOG	8		Don't adjust, use default
BLUE BLACK OPT	0	No signal background color set	0=BLUE 1=BLACK

4. Enter P-Mode, press key "7" to select page "7". Set the corresponding item to require value. See below table 3.6.4 for detailed description.

Table 3.6.4: Producing parameter setup and option page "7"

OSD menu	Default Value	Description	Remark
EVG	0	Enable vertical guard(RGB blanking)	1= RGB blanking
DFL	0	Disable flash protection from defletion timer	Don't adjust, use default
XDT	0	X-ray detection	Don't adjust, use default
AKB	1	Black current stabilization	0 AKB ON 1 AKB OFF
NBL	1	Black current loop application	
CL	10	Set the cathode drive level	Adjust to right value accord with the tube. Recommended value= "12"
CC-LINE	21	CC's line	Don't adjust
BKS	1	Black Stretch Switch 0 =OFF,1 =ON	Don't adjust, use default
BSD	0	Black Stretch depth 0－15IRE,1-30IRE	Don't adjust, use default
AAS	0	Black area to switch off the black stretch 0-12%1-20%,2-6%,3-8%	Don't adjust, use default

RPA	1	Ratio pre- and aftershoot 0-1:1, 1-1.5:1, 2-2:1	Don't adjust, use default
RPO	1	Ratio of positive and negative peaks 0-1:1 1-1:1.3, 2-1:1.7, 3-1:0.7	Don't adjust, use default
SOC	2	Vottage difference between soft clipping and pwl 0 -0% above pwl level 1-5% above pwl level 2-10% above pwl level 3- soft pwl	Don't adjust, use default
PWL	8	Peak White Limiting	Adjust to right value accord with the tube. Recommended value= "8"
COR	0	Video dependtent coring(peaking) 0-off 1-coring active 0 and 20IRE 2-coring active 0 and 40IRE 3-coring active 0 and 100IRE	Don't adjust, use default

5. Enter P-Mode, press key "8" to select page "8". Set the corresponding item to require value. See below table 3.6.5 for detailed description.

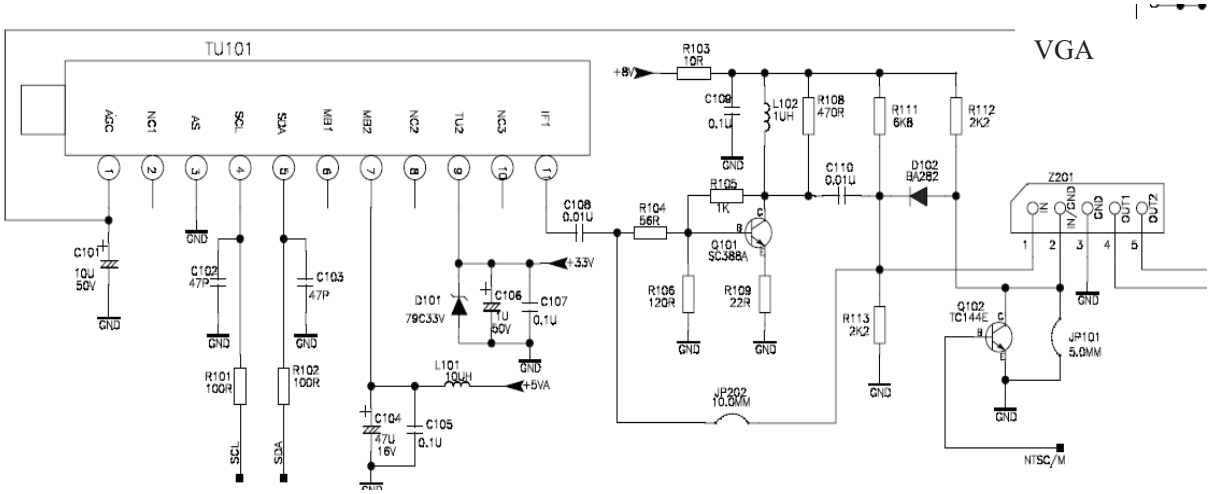
Table 3.6.5: Producing parameter setup and option page "8"

OSD menu	Default Value	Description	Remark
HOTEL	0	HOTEL MODE 1: open 0:close	according to ODF
BTSC	1	BTSC's option 1: open 0:close	according to ODF
SAP	0	SAP 's option 1: open 0:close	When BTSC ON advice SET 1
BTSC AUTO	2	BTSC AUTO Select 2: AUTO 0:Manual	Recommended value= 2
AV ALIGMENT	1	AV terminal align	0=3 x 3 1=4 x 3
AV2 ENABLE	1	AV2 terminal enable	0=Disable 1=Enable
SHVS ENABLE	1	S-Video terminal enable	
YUV ENABLE	1	YUV terminal enable	
NO COMMAND ENABLE	0	No operation within 2 hours automatic standby enable	
LANGUAGE PORTUGA	1		
LANGUAGE SPAISH	1		
AVOUT Follow	0	Avout follow signal change 1=follow 0=only tv	Recommended value= 1

KEY DETECT	1	PRESS KEY fault detect 1 =detect 0= N0 detect	Recommended value= 1
BLACK LIGHT	0	Software eliminate bright Spot when turn off	0= off 1=on
TUNER TYPE	1	SET TUNER TYPE	0 = TCL 1 = XINFA

RF Section

Tuner Tu101 receive the radio frequency signal, after inside circuit to do signal receiving, and signal amplifying. The amplified high frequency signal accompany with the high frequency oscillation voltage oscillated by set oscillator input to the mixer. The IF picture signal and sound signal formed in mixer and output from mixer, then send to picture IF processing circuit.



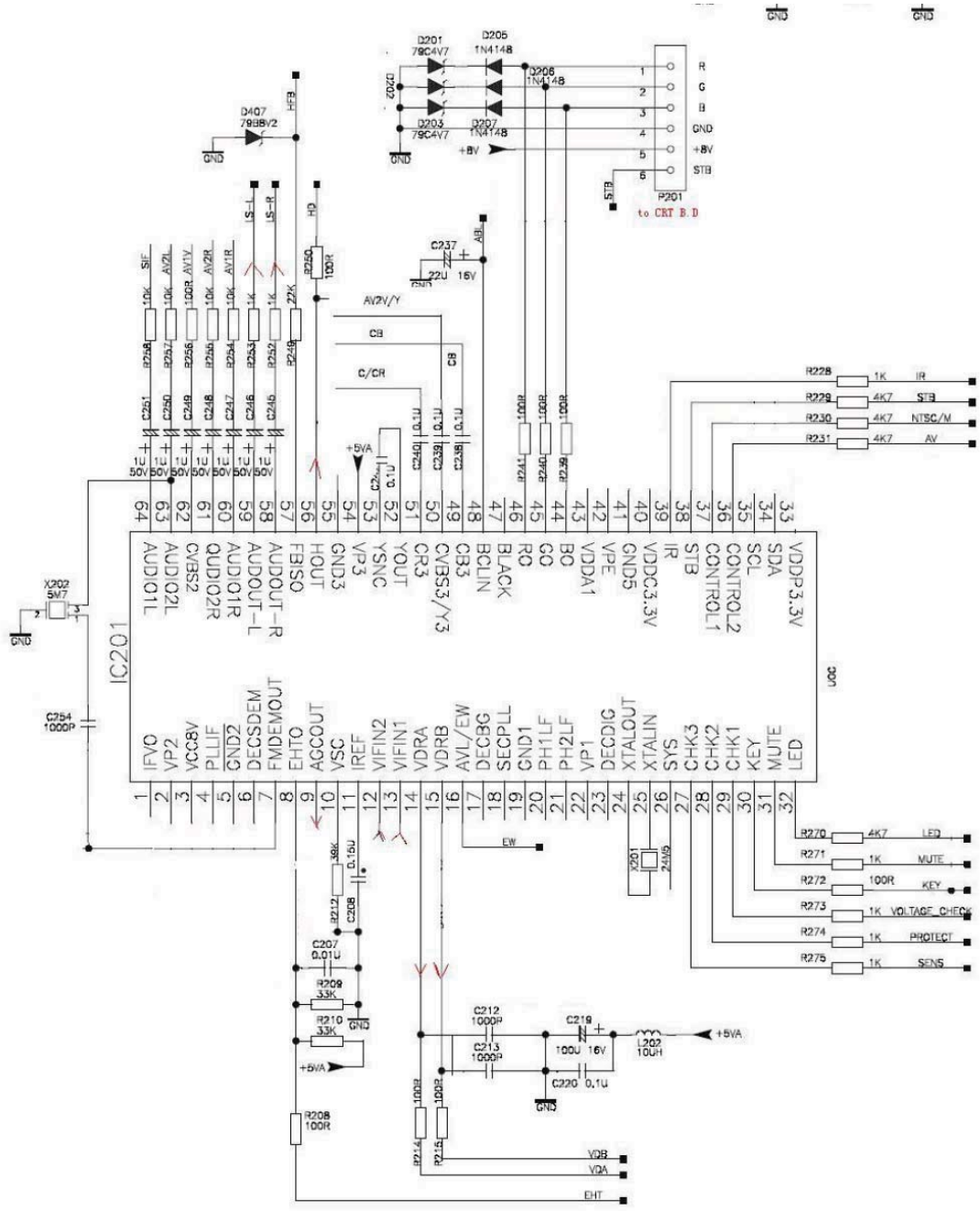
(Fig. 1. Tuner section)

Small Signal Processing Section

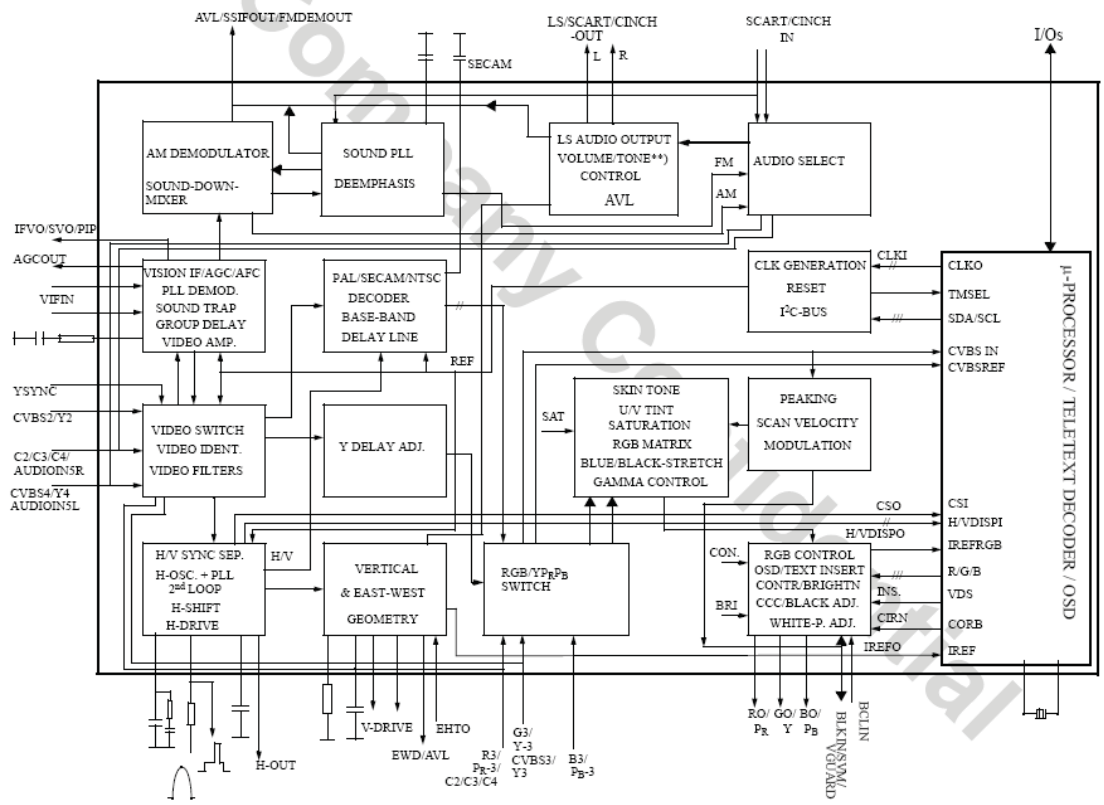
Small signal processing section is the IF (intermediate frequency) signal across saw filter send in the pin12 and pin13 of IC201. The VIFIN signal through built-in PLL DEMOD, sound trap, video amplifier and synchronous detector processing, get the color video broadcast signal and 2nd sound IF signal.

Video signal processing section is CVBS across video filter and delay line and horizontal & vertical synchronous separation circuit processing and get H-drive (pin56 of IC201)and V-drive signal (pin15/pin15 of IC201).

IF sound signal across the sound-down-mixer and AM demodulator processing, send out the AVL/ SSIF OUT signal. (Refer to Fig2 and Fig 3.)



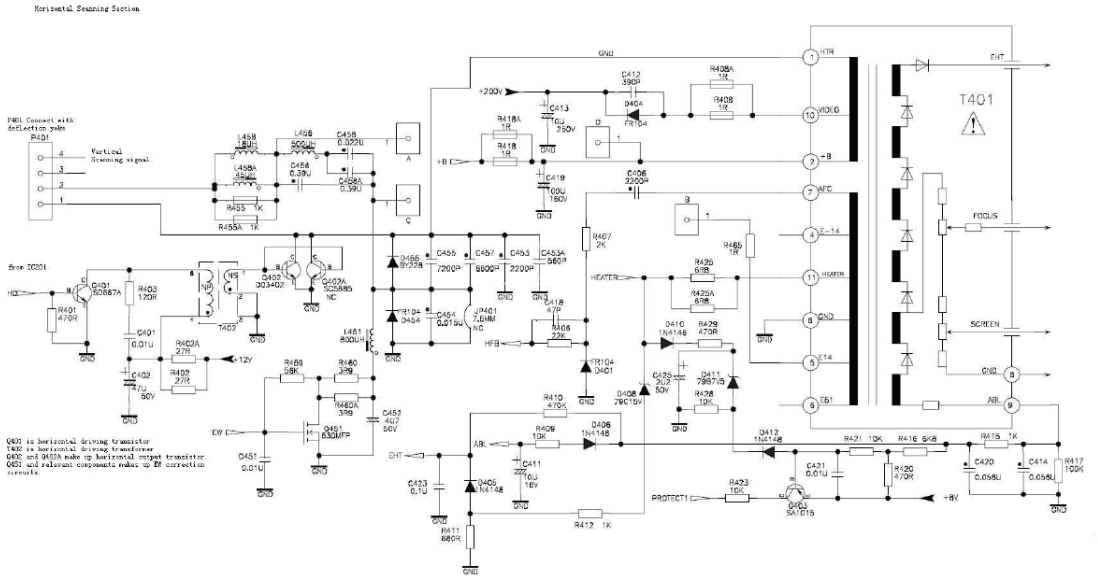
(Fig 2. Small Signal Processing Section)



(Fig3. Block Diagram of IC201.)

Horizontal Scanning Section

The horizontal drive signal send out from pin 56 of IC201, Q401 is horizontal driving transistor, coupled by horizontal driving transformer T402 , to control the horizontal output transistor working in switch on and off situation, get good linearly and enough amplitude of saw-tooth wave current to drive horizontal deflection yoke scanning. L456 is horizontal width coil and L458 is horizontal linearly coil. D455 is damping diode, C453,C455,C457 are retrace capacitors. T401 is FBT. Pin2 of T401 is B+ voltage input, Pin 10 of T401 get 200 Volt video amplifying voltage supply for CRT board. Pin11 of T401 sends out heater voltage supply for CRT heater.



Vertical Scanning Section

Vertical scanning section adopted STV8172A vertical deflection booster, we use as differential-output driver. The vertical raw-tooth wave signal sends out from pin14/15 of IC201 VDA/VDB. The two differential signal input pin 1 and 7 of STV8172A IC301. Pin2(+14v) and Pin7(-14v) of IC301 is power supply which come from the main power transformer. Pin 6 is boost voltage, rectified by D301. C309,C301 and R305 makes up a voltage feedback network, R306 is a damping resistor. C306 is correction capacitor, R308 is current feedback resistor.

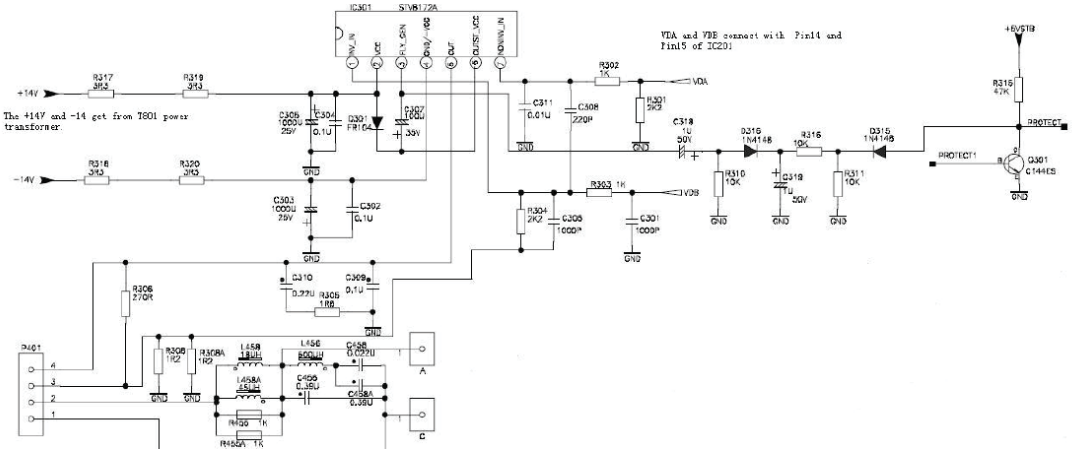
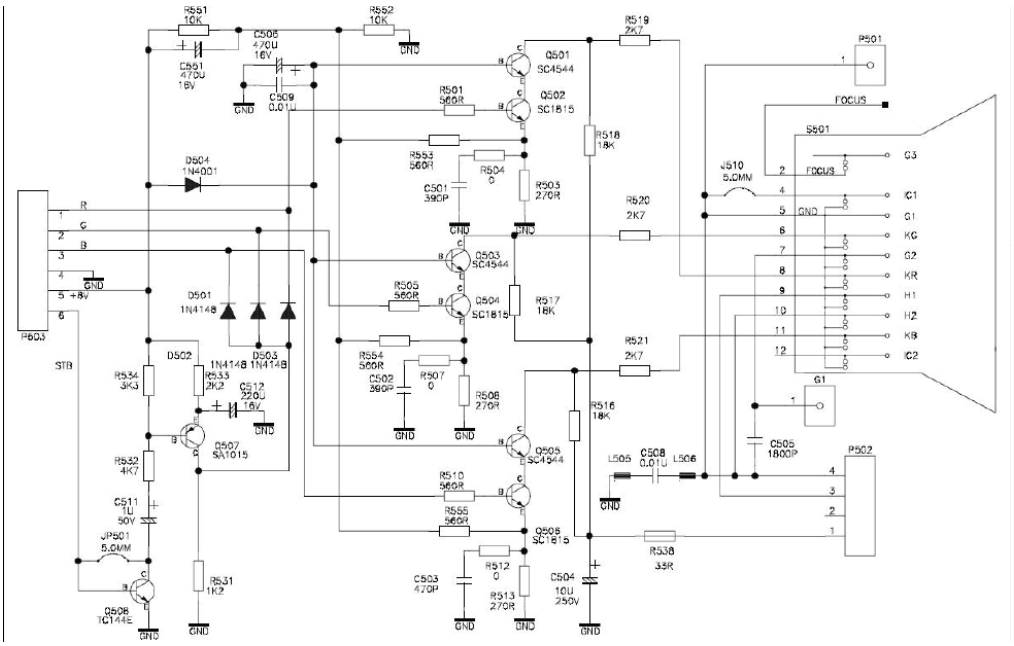


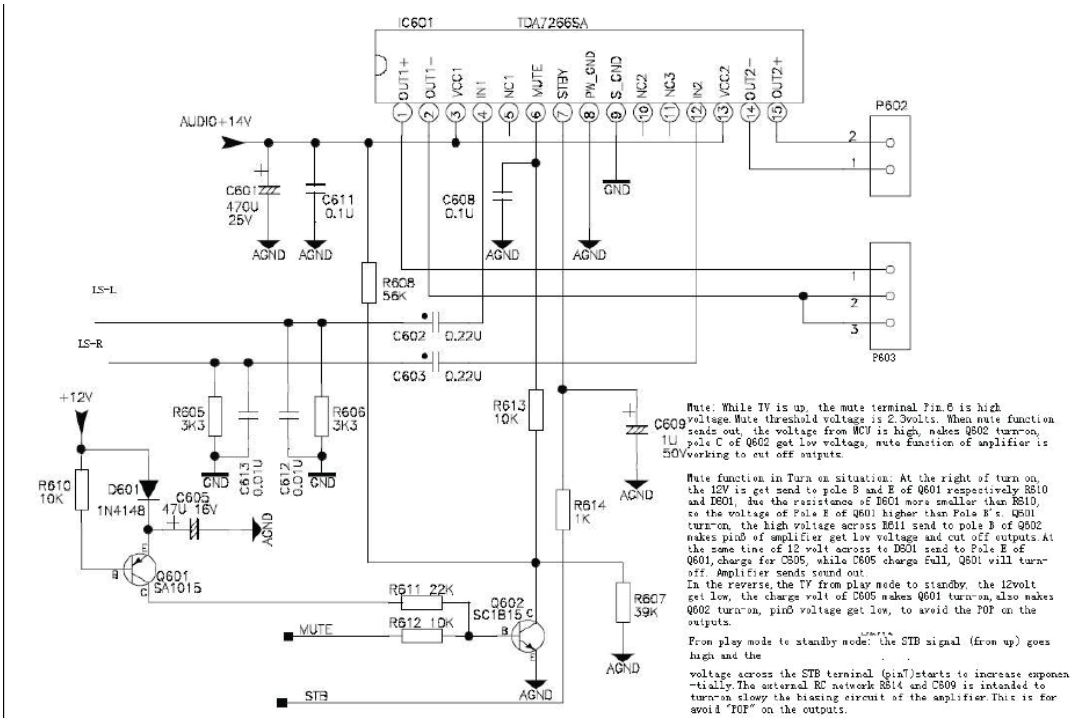
Fig 4. Vertical Scanning Processing Section

CRT Scanning Section

Q507,D501,D502 and D503 makes up a light eliminate circuit network. When the TV is playing mode, +8V voltage across R533 charge for C512, Q507 is cut off. At the right of turn off the TV, Q507 is turn-on, the current across D501, D502 and D503 send to R.G. B to discharge the electronic quickly.

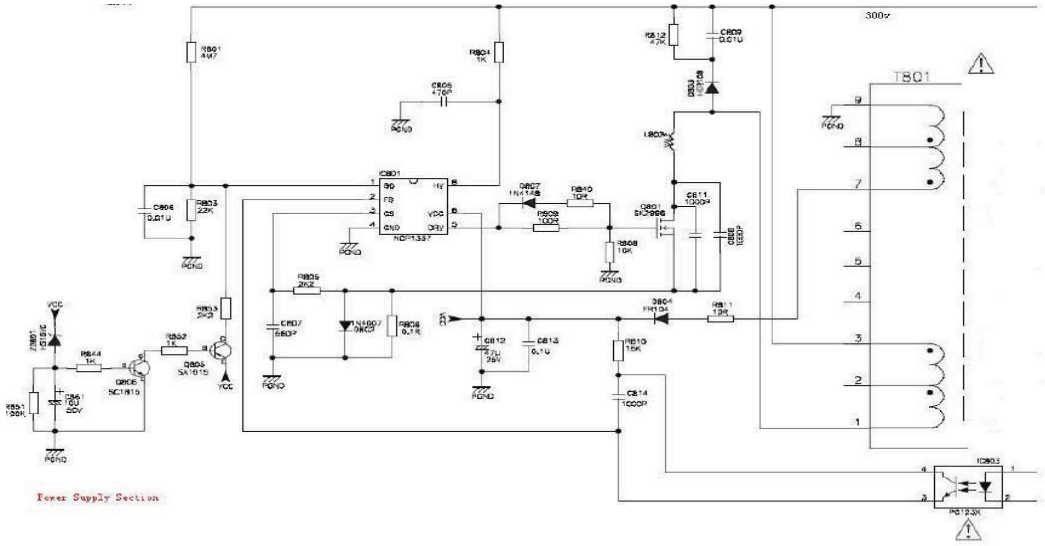


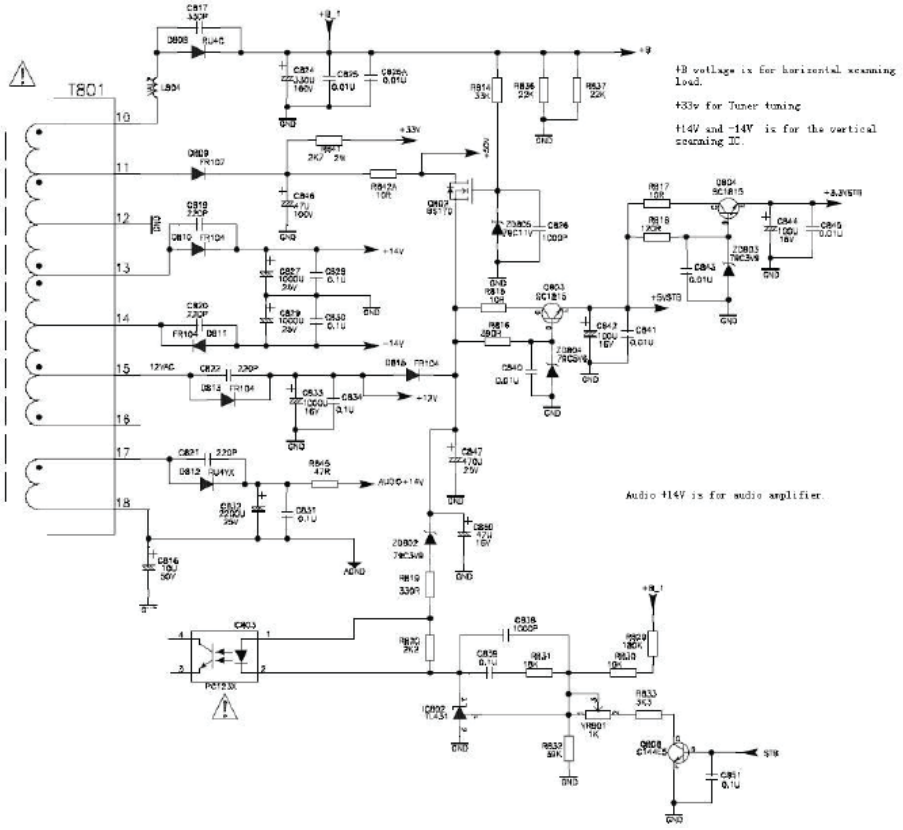
Audio Power Amplifying Section



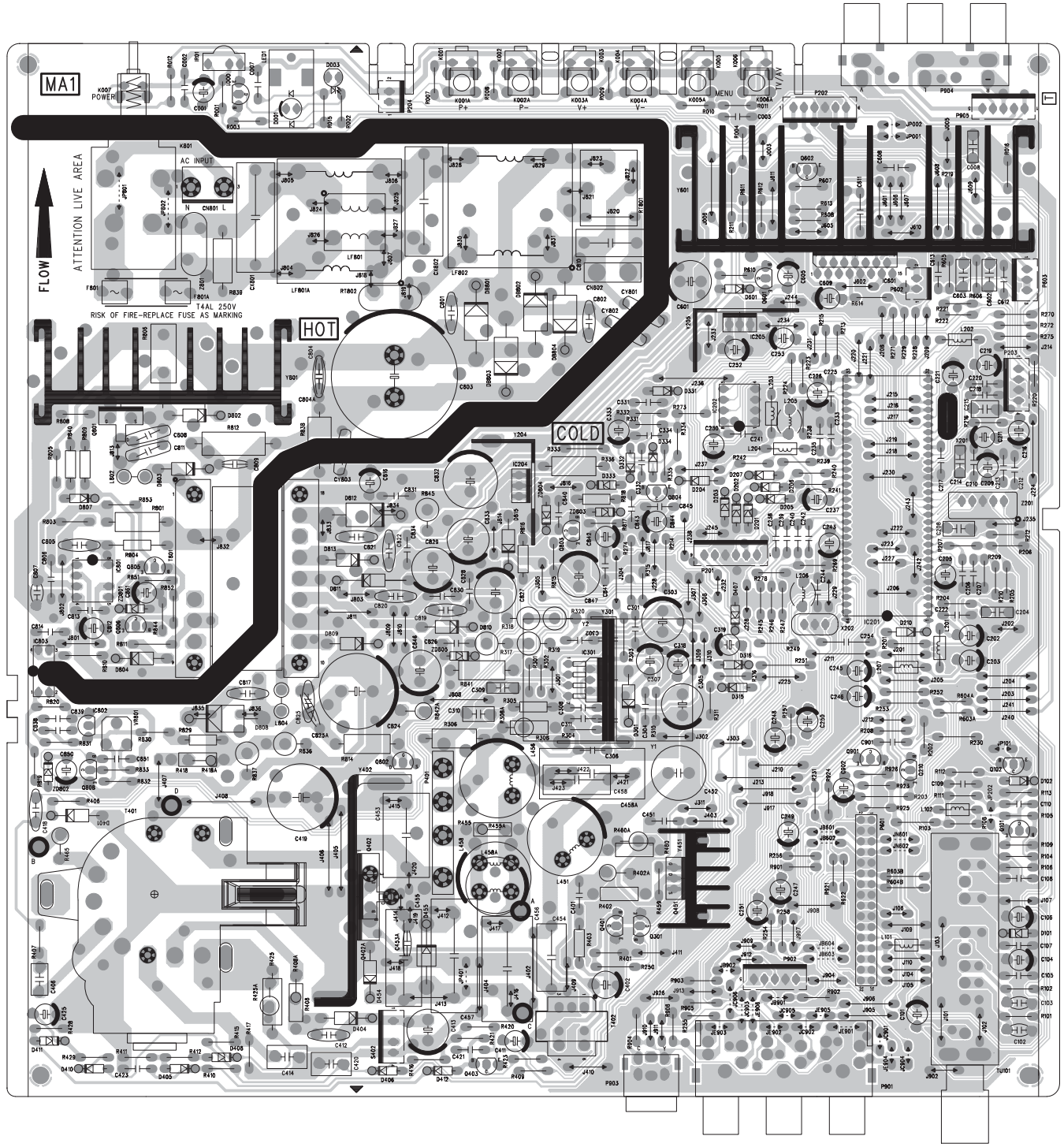
Power Supply Section

AC supply 220V/110v through filtering network and rectifying circuit and get 300Vdc voltage. LF801/LF801A and CX802 makes up a differential mode rejection, LF802 and CY801,CY802 makes up a common mode rejection network. D801-D804 is rectifying network. 300Vdc voltage supply pin3 of T801, also through R804 send to pin8 of IC801 NCP1337. Pin5 of IC801 sends out the PWM signal to control Q801 working in switch on and off situation. IC803 is optocoupler.

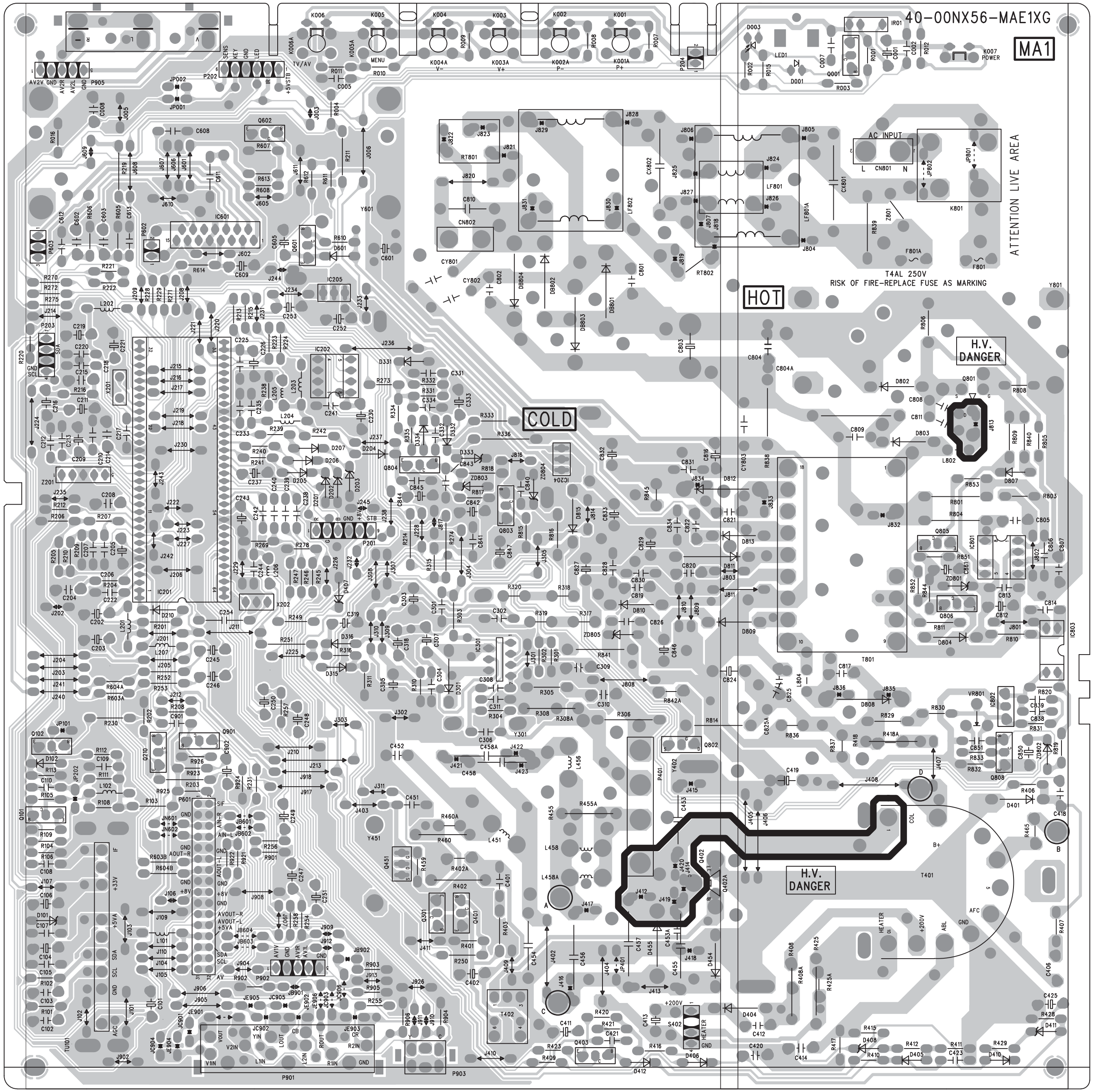


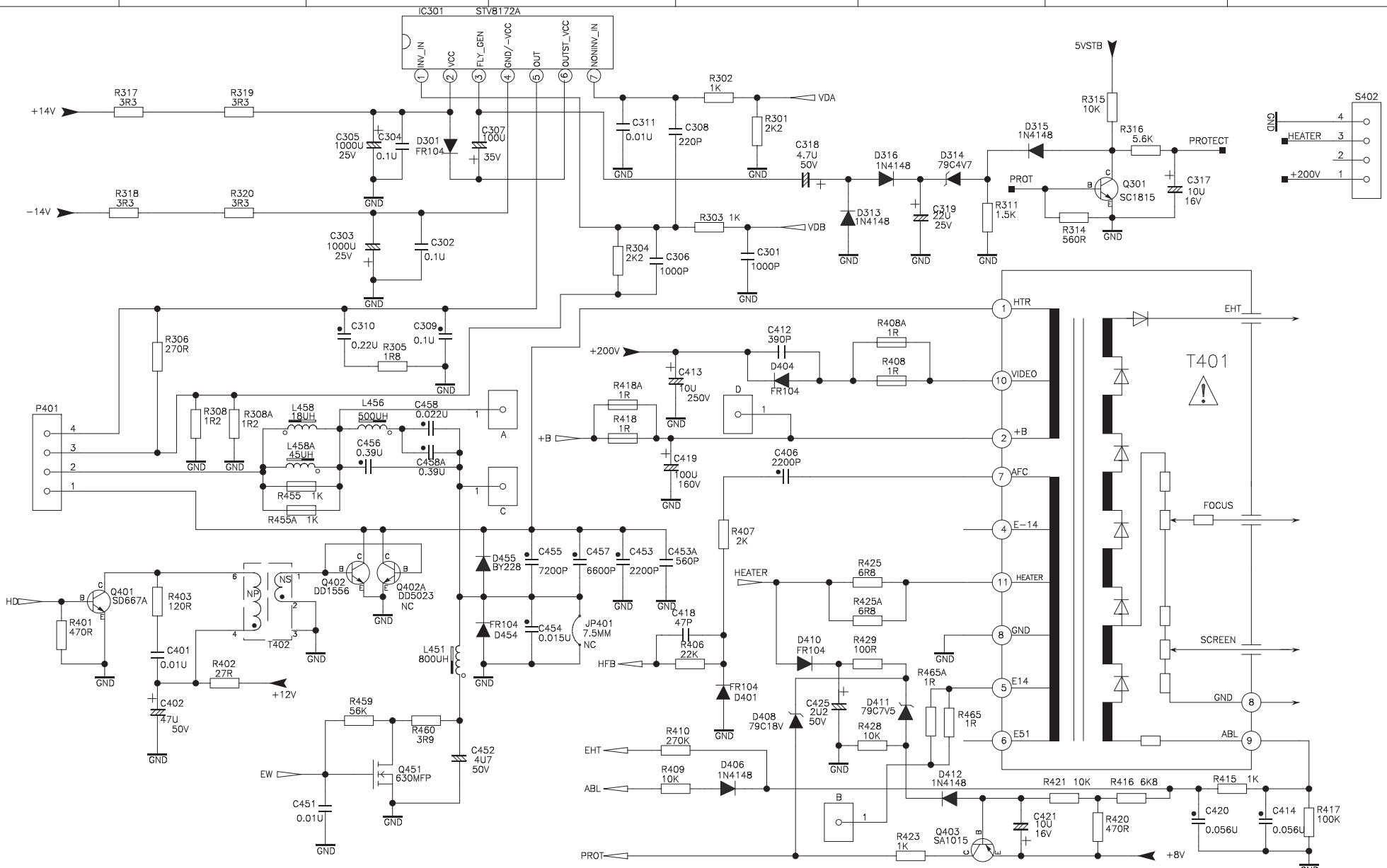

T801
+B voltage is for horizental scanning load.
+33v for Tuner tuning
+14V and -14V is for the vertical scanning IC.
Audio +14V is for audio amplifier.

PCB Material
DS1108/EC207/CCP6400S
Thickness(MM)
1.6MM
Layer
SINGLESIDE
Copper Thickness
1OZ
Surface treatment
OSP
Solder slot(C-PAD)
Other



PCB Material	DS1108/EC207/CCP6400S
Thickness(MM)	1.6MM
Layer	SINGLESIDE
Copper Thickness	1OZ
Surface treatment	OSP
Solder slot(C-PAD)	
Other	





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01-00NX56-MA1

TCL Thomson Electronics Ltd.
B Building, TCL Tower, Nanhai Road
Nanshan District, Shenzhen, Guangdong
Tel +86-755-3331xxxx Fax +86-755-3331xxxx

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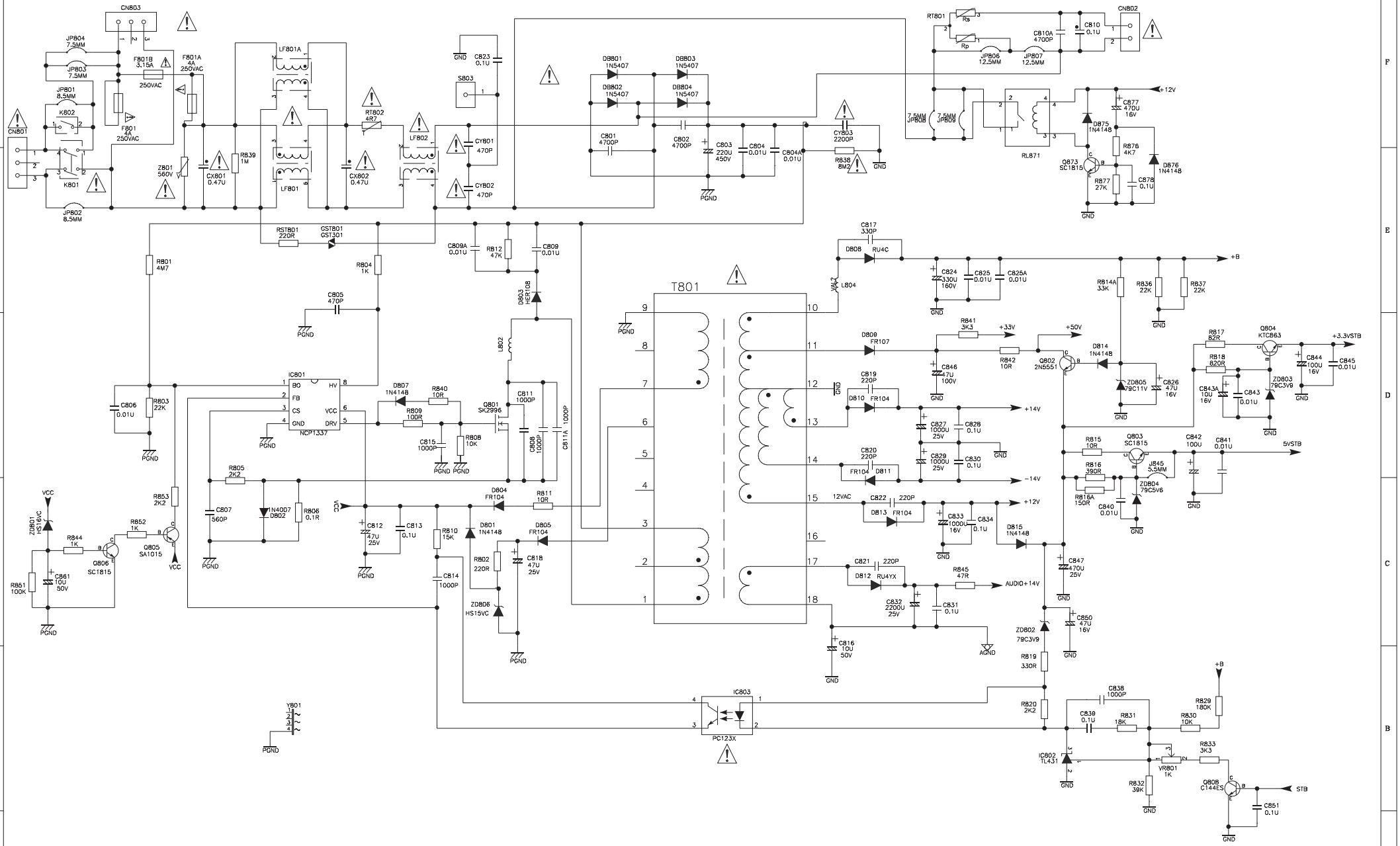

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TCL Thomson Electronics Ltd.
B Building, TCL Tower, Nanhai Road
Nanshan District, Shenzhen, Guangdong
Tel +86-755-3331xxxx Fax +86-755-3331xxxx

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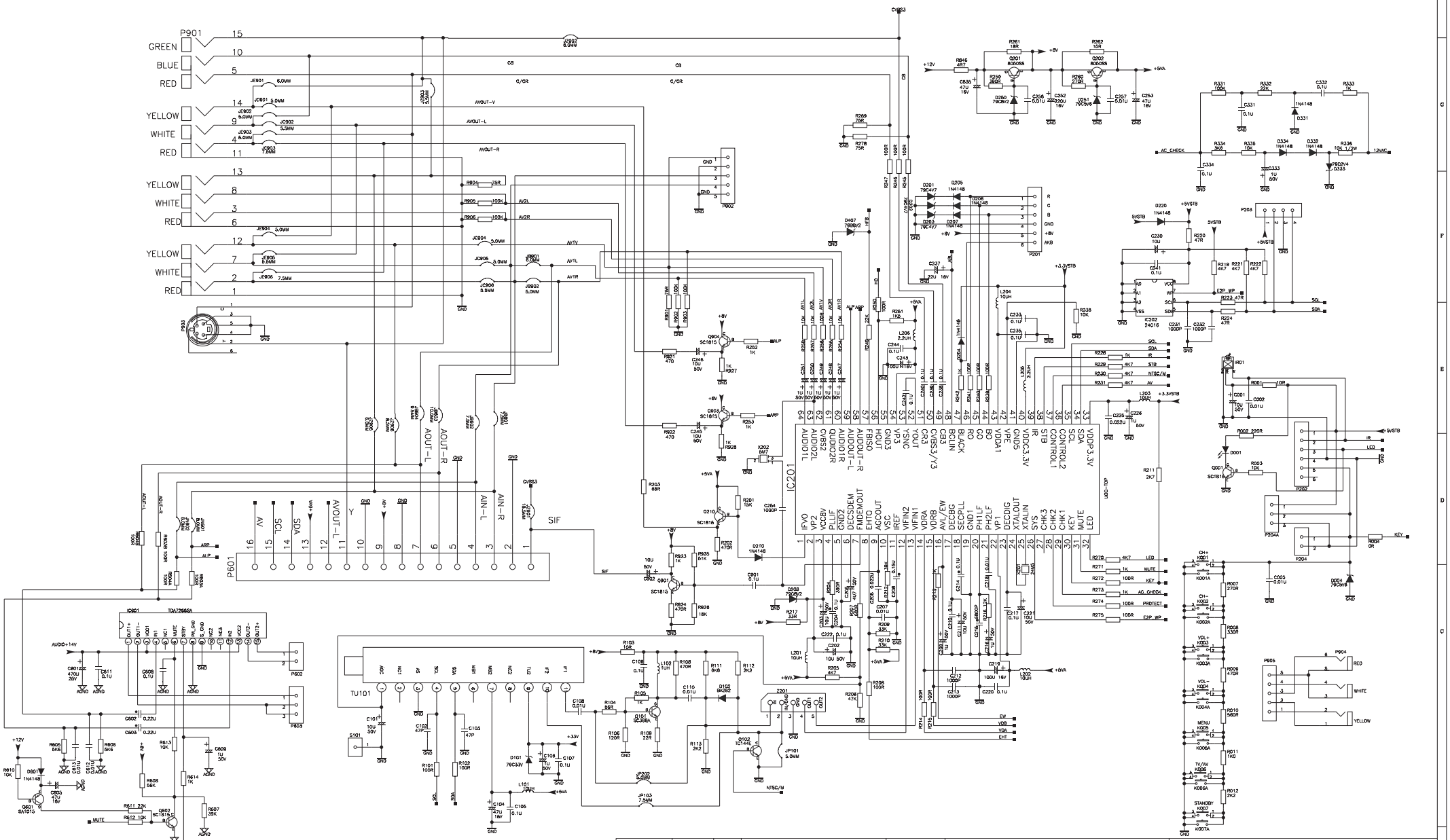

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TCL Thomson Electronics Ltd.
B Building, TCL Tower, Nanhai Road
Nanshan District, Shenzhen, Guangdong
Tel +86-755-3331xxxx Fax +86-755-3331xxxx

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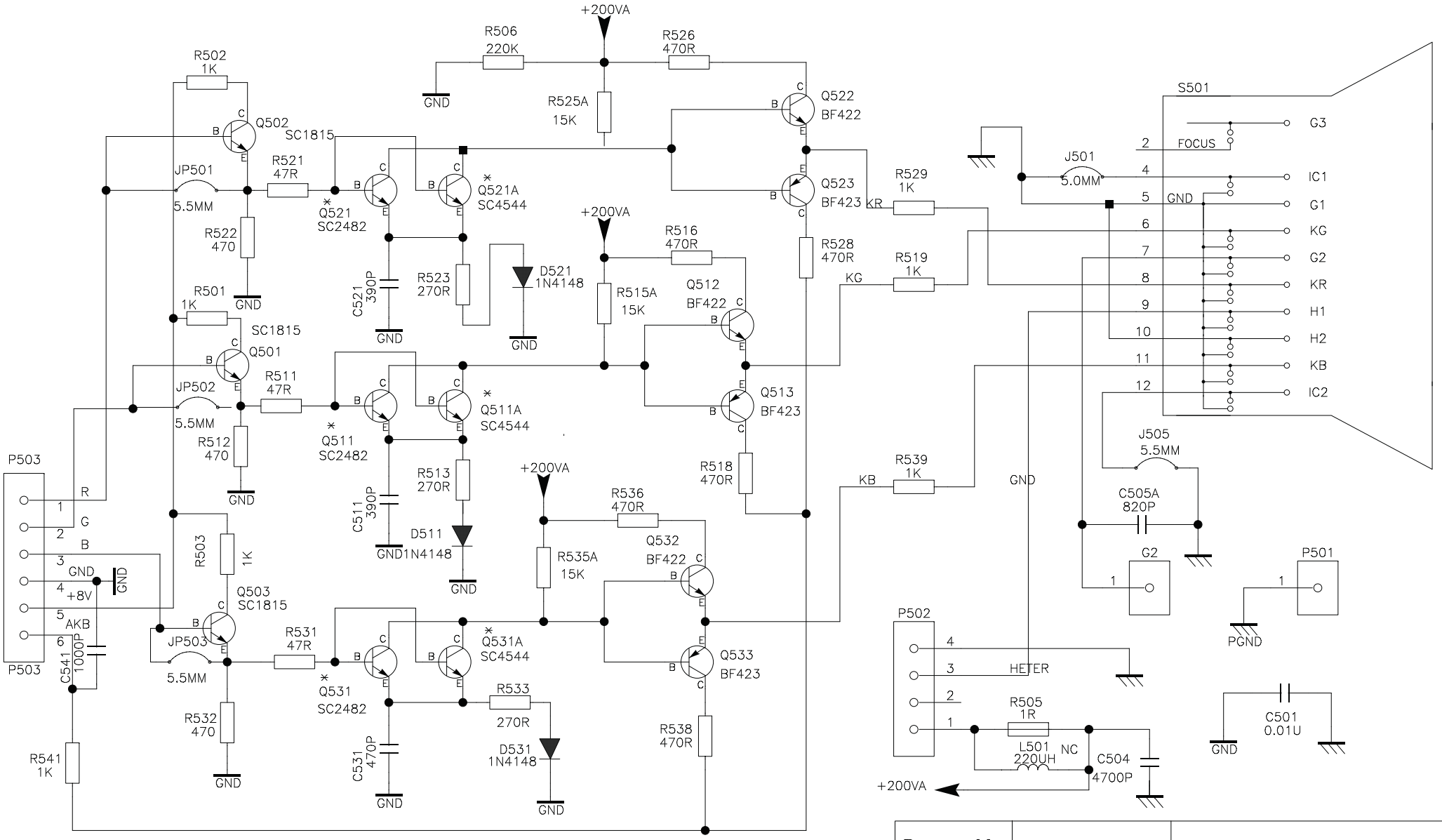


*	Q511	Q521	Q531	Q511A	Q521A	Q531A
14–21''	SC2482	SC2482	SC2482	——	——	——
29''	——	——	——	SC4544	SC4544	SC4544

Prepared by		
Checked by		
Released by		40–0NX56B–CR1

UOC-TOP-64 N1 series

Versatile signal processor for CRT TV applications

Rev. 0.11 — 25 January 2007 Product data sheet

1. General description

The UOC-TOP-64 series is a very flexible concept which offers attractive solutions for $1f_H$ TV receivers with CRTs. This new concept offers a complete range of products with the right price level to cover TV receivers from basic mono 14 inch sets up to the best featured large and/or wide screen AV-stereo TV sets. The UOC-TOP-64 concept can also be used as front-end for $2f_H$ and LCD TV receivers.

The UOC-TOP-64 concept is mounted in a SDIP64 package and is split up in the following ranges:

- AV-110 (AV-stereo) concept. It contains a video processor with many features and it has an analog audio control circuit with balance, treble, bass and loudness control. Two different micro processor are available for this concept, one with OSD and Closed Captioning or Teletext and Closed Captioning features (UOCTOP_1PTXT version), the other with (extended) OSD features (UOCTOP_OSD version). The block diagram is given in Figure 1.
- AV-90 concept. This concept is nearly identical to the AV-110 concept. The only difference that it does not contain an East-West and Scan Velocity Modulation (SVM) output. This concept is intended for 90× picture tubes.
- Mono-110 concept. The functional content of this concept is comparable with that of the AV 110 concept, however, it has just stereo input switch and no audio control circuit. The block diagram is given in Figure 1.
- Mono-90 concept. This concept is intended for 90× picture tubes. The circuit has an audio switch for mono signals but the mono inputs can also be used as a stereo input. In this range most of the video and audio processing features have been omitted. Also this concept can be supplied with one of the two micro processors (UOCTOP_1PTXT or UOCTOP_OSD version). The block diagram is given in Figure 2.

The most important features of the complete IC series are given in the following feature lists.

All packages are according to the ROHS legislation, which also means that these packages are lead-free. The ICs have supply voltages of 8V, 5V and 3.3V.

UOC-TOP-64 is supported by a comprehensive Global TV Software Development kit to enable easy programming and fast time-to-market (see also Section 20.4 “Licenses”).

2. Features

2.1 Analog Video Processing

2.1.1 Overview of available features (AV-110/90 and Mono-110 concept)

- Multi-standard vision IF circuit with alignment-free PLL demodulator
- Internal (switchable) time-constant for the IF-AGC circuit
- Switchable group delay correction and sound trap (with switchable centre frequency) for the demodulated CVBS signal
- Separate Second Sound IF output or FM demodulator output without de-emphasis available, which can be used as input for an external BTSC decoder or as input for external sound band-pass filter for second language processing.
- Separate SSIF input available as input for the FM-PLL demodulator to demodulate FM-radio with an IF frequency of 10.7 MHz, or as input from an external sound band-pass filter for second language processing.
- AM demodulator without extra reference circuit
- The mono intercarrier sound circuit has a selective FM-PLL demodulator which can be switched to the different FM sound frequencies (4.5/5.5/6.0/6.5 MHz). The quality of this system is such that the external band-pass filters can be omitted.
- The FM-PLL demodulator can be set to centre frequencies of 4.72/5.74 MHz so that a second sound channel can be demodulated. In such an application it is necessary that an external bandpass filter is inserted.
- Audio switch circuit with 2 stereo inputs (1 stereo input can also be switched into two mono sound inputs) and a stereo output which can be used for the drive of for audio power amplifiers (with volume and tone-control) or as SCART/CINCH output. The second stereo input is only available via the combined C2/C3/C4/AUDIOIN5R pin for the right channel and via the combined CVBS4/Y4/AUDIOIN5L pin for the left channel.
- Video switch with 3 external CVBS inputs. All CVBS inputs can be used as Y-input for Y/C signals. However, only 1 Y/C source can be selected because the circuit has 1 chroma input. CVBS3/Y3 input available in combination with the G/Y-3 input pin.
- 1 CVBS output, this output can be used as monitor video output or as front-end video output or as independent selectable video output.
- Automatic Y/C signal detector.
- Integrated luminance delay line with adjustable delay time
- Only one reference (24.576 MHz) crystal required for the m-Controller, Teletext- and the color decoder
- Multi-standard color decoder with automatic search system and various “forced mode” possibilities
- Internal base-band delay line
- Indication of the Signal-to-Noise ratio of the incoming CVBS signal
- Linear RGB/YP_BP_R input.
- Scan Velocity Modulation output. The SVM circuit is active for all the incoming CVBS, Y/C and RGB/YP_BP_R signals. The SVM output is combined with the black current input of the black current stabilisation circuit. By means of a small application adaptation both functions can be operational in parallel.

- Picture improvement features with peaking (with switchable centre frequency, depeaking, variable positive/negative peak ratio, variable pre-/overshoot ratio and video dependent coring), dynamic skin tone control, gamma control and blue- and black stretching. All features are available for CVBS, Y/C and RGB/YP_BP_R signals
- The effect of the various features can de demonstrated by means of a ‘split screen’ mode in which the features are activated in one half of the picture and switched off in the other half
- Switchable DC transfer ratio for the luminance signal
- Tint control for external RGB/YP_BP_R signals
- Contrast reduction possibility during mixed-mode of OSD and Text signals. Option to make a colored and in contrast reduced window.
- RGB control circuit with ‘Continuous Cathode Calibration’, white point and black level off-set adjustment so that the color temperature of the dark and the light parts of the screen can be chosen independently. When this ‘Continuous Cathode Calibration’ is not used, simple alignment of the cutoff level is possible.
- Adjustable ‘wide blanking’ of the RGB outputs
- Horizontal synchronization with two control loops and alignment-free horizontal oscillator
- Vertical count-down circuit
- Vertical driver optimized for DC-coupled vertical output stages
- Horizontal and vertical geometry processing with horizontal parallelogram and bow correction and horizontal and vertical zoom
- The IC can be used as front-end for Progressive Scan or LCD TV receivers
- Low-power start-up of the horizontal drive circuit

2.1.2 Features of the AV-110/90 concept which are not available in the Mono-110 concept

- Analog audio tone control circuit with treble, bass and loudness controls

2.1.3 Features of the AV-110 and Mono-110 concept which are not available in the AV-90 concept

- Horizontal geometry processing and Scan Velocity Modulation output

2.1.4 Differences in feature list for the MONO-90 concept compared with AV-110/90 and Mono-110 concept

- Audio switch circuit with 1 stereo input, which can also be switched into two mono sound inputs, a mono output for SCART/CINCH with the possibility to serve as front/monitor audio output.
- Stereo output (with volume and AVL) for audio power amplifiers. This stereo output can also be switched to one mono loudspeaker output and one fixed mono sound output.
- CVBS output, this output can only be used as monitor video output or as front-end video output.
- Only basic video processing. The remaining video features are peaking with coring, black stretching and gamma control.
- No horizontal geometry processing and Scan Velocity Modulation output.

2.2 Micro-Controller

- 80C51 m-controller core standard instruction set and timing
- 0.9766 ms machine cycle
- maximum of 80 k x 8-bit late programmed ROM
- maximum of 3 k x 8-bit Auxiliary RAM
- I^2C byte level bus interface.
- Interrupt controller for individual enable/disable with two level priority
- Two 16-bit Timer/Counter registers
- One 24-bit Timer (16-bit timer with 8-bit Pre-scaler)
- 16-bit Data pointer
- WatchDog timer
- Auxiliary RAM page pointer
- Stand-by, Idle and Power Down modes
- Up to 13 general-purpose I/O pins
- 14 bits PWM for Voltage Synthesis Tuning
- 8-bit A/D converter with 4 multiplexed inputs
- 4 PWM (6-bits) outputs for analogue control functions

2.3 Data Capture (Teletext and Closed Caption devices)

- Text memory for 1 page
- Inventory of transmitted Teletext pages stored in the Transmitted Page Table (TPT) and Subtitle Page Table (SPT)
- Data Capture for US Closed Caption
- Data Capture for 525/625 line WST, VPS (PDC system A) and 625 line Wide Screen Signalling (WSS) bit decoding
- Automatic selection between 525 WST/625 WST
- Automatic selection between 625 WST/VPS on line 16 of VBI
- Real-time capture and decoding for WST Teletext in Hardware, to enable optimized m-processor throughput
- Automatic detection of FASTEXT transmission
- Real-time packet 26 engine in Hardware for processing accented, G2 and G3 characters
- Signal quality detector for video and WST/VPS data types
- Comprehensive teletext language coverage
- Vertical Blanking Interval (VBI) data capture of WST data

2.4 Display

2.4.1 Features of the OSD-only devices

- Up to 4 character sets with 256 characters each (size 16 pixels x 18 lines)
- Enhanced OSD modes
- 50Hz/60Hz display timing modes
- Serial and Parallel Display Attributes
- Single/Double Width and Height for characters
- Scrolling of display region
- Variable flash rate controlled by software
- Enhanced display features including overlining, underlining and italics
- Soft colors using CLUT with 4096 color palette
- Global selectable matrix: (12/16)
- By attribute selectable: 1.5x characters (18/24)
- Globally selectable character spacing
- Fringing (Shadow) selectable from N-S-E-W direction
- Fringe color selectable
- Contrast reduction of defined area with option of coloration
- Programmable Cursor
- Special Graphics Characters with two planes, allowing four colors per character

2.4.2 Features of the Teletext and Closed Caption devices

- Four character sets
- Up to 576 characters with a size of 12 pixels x 16 lines are supported
- Teletext and Enhanced OSD modes
- 50Hz/60Hz display timing modes
- Serial and Parallel Display Attributes
- Scrolling of display region
- Variable flash rate controlled by software
- Soft colors using CLUT with 4096 color palette
- Global selectable matrix: (12)
- Features of level 1.5 WST and US Close Caption
- Single/Double/Quadruple Width and Height for characters
- 64 software redefinable On-Screen display characters
- G1 Mosaic graphics, Limited G3 Line drawing characters
- WST Character sets and Closed Caption Character set in single device
- Curtaining effect via software
- Fringing (Shadow) selectable from N-S-E-W direction
- Fringe color selectable
- Contrast reduction of defined area with option of coloration
- Programmable Cursor
- Special Graphics Characters with two planes, allowing four colors per character

3. Quick reference data

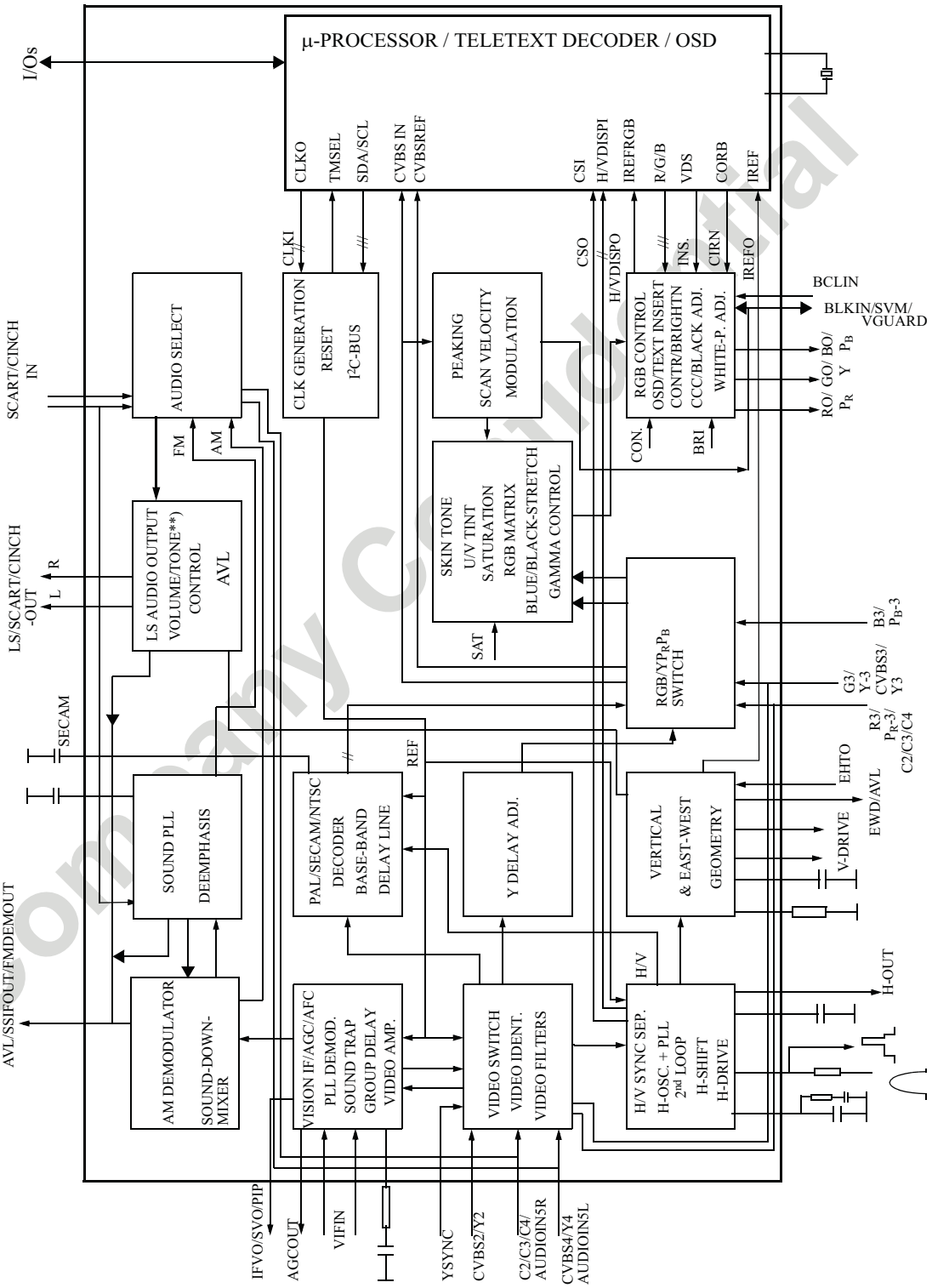
Table 1: Quick reference data

SYMBOL	PARAMETER	MIN.	TYP.	MAX.	UNIT
Supply					
V_P	analogue supply voltage VSP	4.7	5.0	5.3	V
I_P	supply current (5.0 V)	–	160	–	mA
V_{DDA}	digital supply VSP / analogue supply periphery	3.0	3.3	3.6	V
I_{DDA}	supply current (3.3 V); Mono90 version	–	50	–	mA
I_{DDA}	supply current (3.3 V); AV110/90 and Mono110 versions	–	70	–	mA
V_{PAudio}[1]	audio supply voltage	4.7	8.0	8.4	V
I_{PAudio}[1]	supply current (5.0/8.0 V); mono-90 version	–	0.5	–	mA
I_{PAudio}	supply current (8.0 V); AV-110/90 and mono-110 version	–	10	–	mA
P_{tot}	total power dissipation	–	–	1.1	W
Input voltages					
$V_{iVIFrms)}$	video IF amplifier sensitivity (RMS value)	–	75	150	µV
$V_{iSSIF(rms)}$	sound IF amplifier sensitivity (RMS value)	–	1.0	–	mV
$V_{iAUDIO(rms)}$	external audio input (RMS value)	–	1.0	1.3	V
$V_{iCVBS(p-p)}$	external CVBS/Y input (peak-to-peak value)	–	1.0	1.4	V
$V_{iCHROMA(p-p)}$	external chroma input voltage (burst amplitude) (peak-to-peak value)	–	0.3	1.0	V
$V_{iRGB(p-p)}$	RGB inputs (peak-to-peak value)	–	0.7	0.8	V
$V_{iY(p-p)}$	luminance input signal (peak-to-peak value)	–	1.0	–	V
$V_{iPB(p-p)}$	P_B input signal (peak-to-peak value)[2]	–	0.7	–	V
$V_{iPR(p-p)}$	P_R input signal (peak-to-peak value)[2]	–	0.7	–	V
Output signals					
$V_{o(IFVO)(p-p)}$	demodulated CVBS output (peak-to-peak value)	–	2.0	–	V
$V_{o(QSSO)(rms)}$	sound IF intercarrier output (RMS value)	–	100	–	mV
$V_{o(AMOUT)(rms)}$	demodulated AM sound output (RMS value)	–	250	–	mV
$V_{o(AUDIO)(rms)}$[1]	non-controlled audio output signals (RMS value)	1.0	–	–	V
$V_{o(CVBSO)(p-p)}$	selected CVBS output (peak-to-peak value)	–	2.0	–	V
$I_{o(AGCOUT)}$	tuner AGC output current range	0	–	1	mA
$V_{oRGB(p-p)}$	RGB output signal amplitudes (peak-to-peak value)	–	1.2	–	V
I_{oHOUT}	horizontal output current	10	–	–	mA
I_{oVERT}	vertical output current (peak-to-peak value)	–	1	–	mA
I_{oEWD}	EW drive output current	–	–	1.2	mA

[1] The supply voltage for the analogue audio part of the mono-90 version can be 5V or 8V. For a supply voltage of 5V the maximum signal amplitudes at in and outputs are $1V_{rms}$. For a supply voltage of 8V the maximum output signal amplitude is 2 V_{rms}. The AV-110/90 and Mono-110 versions need a supply voltage of 8 V.

[2] The YP_BP_R input signal amplitudes are based on a color bar signal with 100% saturation.

5. Block diagram



**) The mono-110 version has only volume control and no tone control functions

Fig 1. Block diagram of the "AV-110/90" and "MONO-110" TV processor

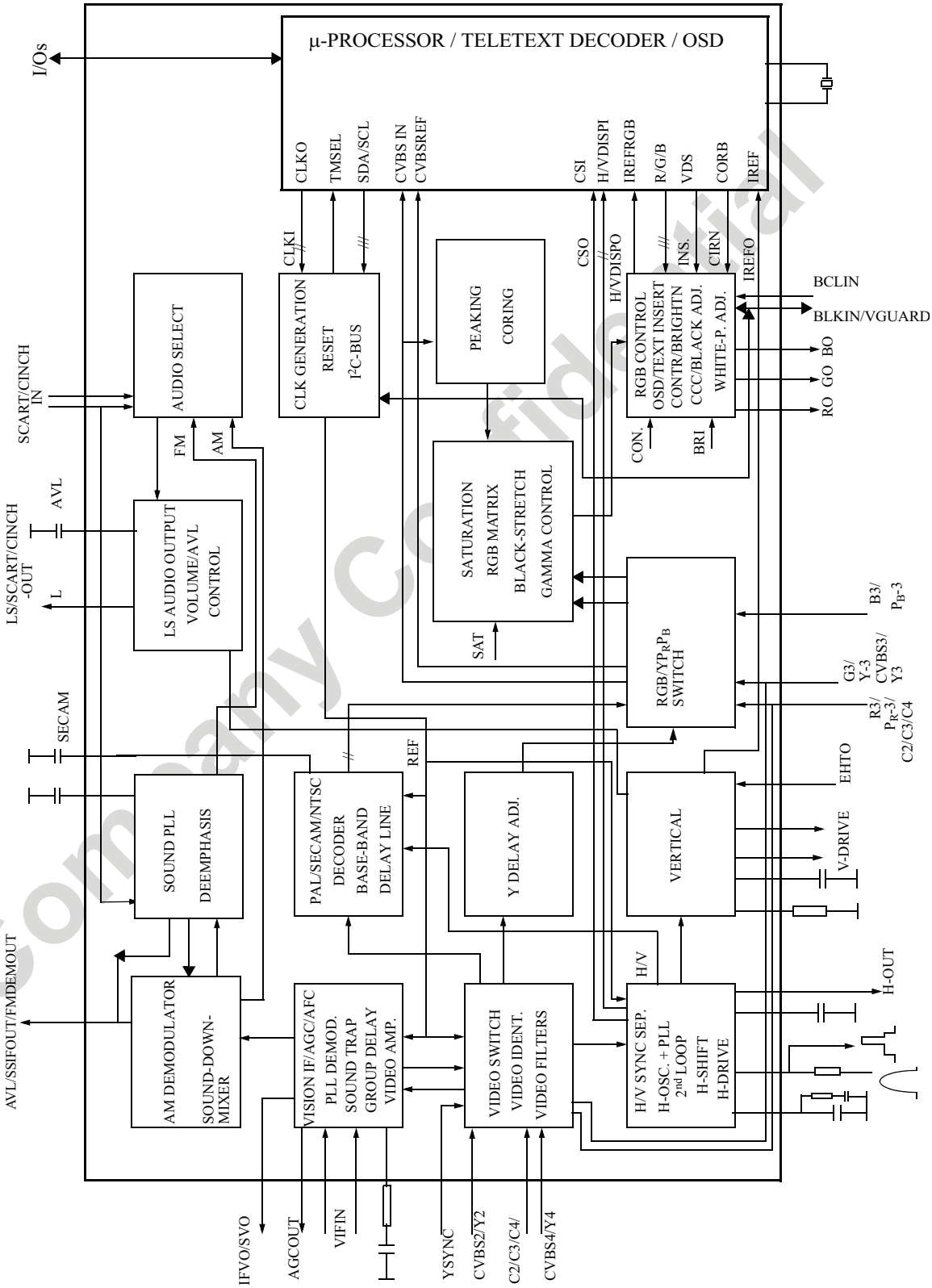


Fig 2. Block diagram of the "MONO-90" TV processor

6. Pinning information

Table 6: Pinning information

SYMBOL	SDIP64			DESCRIPTION
	AV-110 Mono-110	AV-90	Mono-90	
IFVO/SVO/PIP [3]	1	1	–	IF video output / selected CVBS output / PIP output
IFVO/SVO [3]	–	–	1	IF video output / selected CVBS output
VP2	2	2	2	2nd supply voltage TV processor (+5 V)
VCC8V	3	3	3	8 Volt supply for audio switches
PLLIF	4	4	4	IF-PLL loop filter
GND2	5	5	5	ground 2 for TV processor
DECSDEM	6	6	6	decoupling sound demodulator
AVL/SSIFOUT/SNDDEMOUT[2]	7	7	7	AVL / Second sound IF output / sound demodulator output
EHTO	8	8	8	EHT/overvoltage protection input
AGCOUT	9	9	9	tuner AGC output
IREF	10	10	10	reference current input
VSC	11	11	11	vertical sawtooth capacitor
VIFIN2	12	12	12	IF input 2
VIFIN1	13	13	13	IF input 1
VDRA	14	14	14	vertical drive A output
VDRB	15	15	15	vertical drive B output
EWD/AVL	16	–	–	East-West drive output / AVL capacitor
AVL	–	16	16	AVL capacitor
DECBG	17	17	17	bandgap decoupling
SECPLL	18	18	18	SECAM PLL decoupling
GND1	19	19	19	ground 1 for TV-processor
PH1LF	20	20	20	phase-1 filter
PH2LF	21	21	21	phase-2 filter
VP1	22	22	22	1st supply voltage TV-processor (+5 V)
DECDIG	23	23	23	decoupling digital supply
XTALOUT	24	24	24	crystal oscillator output
XTALIN	25	25	25	crystal oscillator input
P1.5	26	26	26	port 1.5
P3.3/ADC3/PWM3	27	27	27	port 3.3 or ADC3 input or PWM3 output
P3.2/ADC2/PWM2	28	28	28	port 3.2 or ADC2 input or PWM2 output
P3.1/ADC1/PWM1	29	29	29	port 3.1 or ADC1 input or PWM1 output
P3.0/ADC0/PWM0	30	30	30	port 3.0 or ADC0 input or PWM0 output
P2.1/PWM0	31	31	31	port 2.1 or PWM0 output
P2.0/TPWM	32	32	32	port 2.0 or Tuning PWM output
VDDP(3.3V)	33	33	33	supply to periphery (3.3V)
P1.7/SDA	34	34	34	port 1.7 or I2C-bus data line
P1.6/SCL	35	35	35	port 1.6 or I2C-bus clock line
P1.3/T1	36	36	36	port 1.3 or Counter/Timer 1 input
P1.1/T0	37	37	37	port 1.1 or Counter/Timer 0 input
P1.0/INT1	38	38	38	port 1.0 or external interrupt 1
INT0/P0.5	39	39	39	external interrupt 0 or port 0.5 (4 mA current sinking capability for direct drive of LEDs)
VDDC(3.3V)	40	40	40	supply

Table 6: Pinning information

SYMBOL	SDIP64			DESCRIPTION
	AV-110 Mono-110	AV-90	Mono-90	
GND5	41	41	41	ground
VPE	42	42	42	OTP Programming Voltage
VDDA1(3.3V)	43	43	43	supply voltage
BO/PBOUT	44	44	–	Blue output / P_B output
BO	–	–	44	Blue output
GO/YOUT	45	45	–	Green output / Y output
GO	–	–	45	Green output
RO/PROUT	46	46	–	Red output / P_R output
RO	–	–	46	Red output
BLKIN/VGUARD/SVM [1][6]	47	–	–	black current input / vertical guard / scan velocity modulation output
BLKIN/VGUARD [1][6]	–	47	47	black current input / vertical guard
BCLIN	48	48	48	beam current limiter input
B3/P_B3	49	49	49	3rd B input / P_B input
G3/Y3/CVBS3/Y3 [1]	50	50	50	3rd G input / Y input / CVBS input / Y input
R3/P_R3/C2/C3/C4 [1]	51	51	51	3rd R input / P_R input / C2/3/4 input
YOUT	52	52	52	Y-output (for YUV interface)
YSYNC	53	53	53	Y-input for sync separator
VP3	54	54	54	supply voltage (5 V)
GND3	55	55	55	ground connection
HOUT	56	56	56	horizontal output
FBISO/SANDCA	57	57	57	flyback input/sandcastle output
AUDOUTSM2/LSR	58	58	58	audio output for audio power amplifier (right signal) or fixed audio output for mono applications
AUDOUTLSM1/LSL	59	59	59	audio output for audio power amplifier (left signal) or speaker output for mono applications
C2/C3/C4/AUDIOIN5R [1]	60	60	-	chroma-2/3/4 input / audio 5 right input
C2/C3/C4	–	–	60	chroma-2/3/4 input
AUDIOIN3/IN1R [5]	61	61	61	audio 3 input / right stereo input
CVBS2/Y2	62	62	62	CVBS2/Y2 input
AUDIOIN2/IN1L/SSIF [4][5]	63	63	63	audio 2 input / left stereo input / sound IF input
CVBS4/Y4/AUDIOIN5L [1]	64	64	–	CVBS4/Y4 input / audio 5 left input
CVBS4/Y4	–	–	64	CVBS4/Y4 input

[1] The function of these pins is dependent on some I^2C-bus control bits. More details are given in Table 7.

[2] The function of this pin is selected by means of the CMB2-0 bits

[3] The function of this pin is selected by means of the SVO1-0 bits

[4] The SSIF input is selected by means of the SSIFM bit

[5] The choice between two mono inputs or one stereo input is realized by means of the bits SAS3-0

[6] The black current input, vertical guard input and SVM output (AV-110/90 and Mono-110 versions) have been combined on this pin. For a reliable operation of the protection system and the black current stabilization system or SVM system, the end of the vertical guard protection pulse during normal operation should not overlap the measuring pulses. Therefore this pulse must end before line 14.

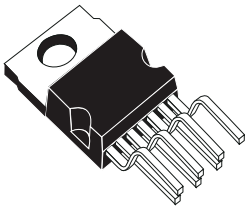
STV8172A

Vertical Deflection Booster for 3-A_{PP}TV/Monitor Applications with 75-V Flyback Generator

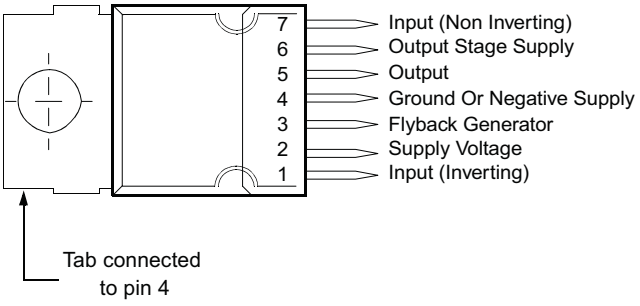
PRODUCT PREVIEW

Main Features

- **Power Amplifier**
- **Flyback Generator**
- **Stand-by Control**
- **Output Current up to 3 App**
- **Thermal Protection**



HEPTAWATT
(Plastic Package)
ORDER CODE: STV8172A



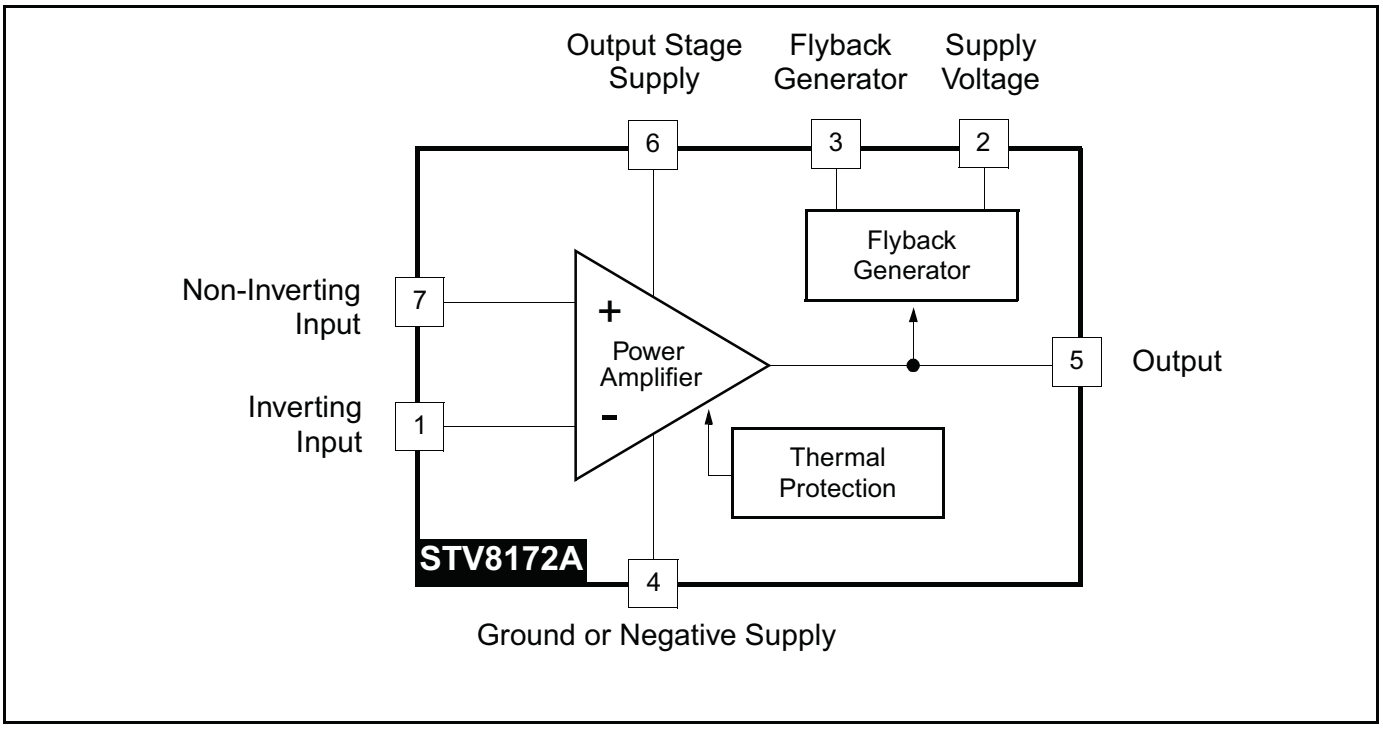
Description

The STV8172A is a vertical deflection booster designed for TV and monitor applications.

This device, supplied with up to 35 V, provides up to 2.5 App output current to drive the vertical deflection yoke.

The internal flyback generator delivers flyback voltages up to 75 V.

In double-supply applications, a stand-by state will be reached by stopping the (+) supply alone.



1 Absolute Maximum Ratings

Symbol	Parameter	Value	Unit
Voltage			
V_S	Supply Voltage (pin 2) - Note 1 and Note 2	40	V
V_5, V_6	Flyback Peak Voltage - Note 2	70	V
V_3	Voltage at Pin 3 - Note 2, Note 3 and Note 6	-0.4 to (V_S + 3)	V
V_1, V_7	Amplifier Input Voltage - Note 2, Note 6 and Note 7	- 0.4 to (V_S + 2) or +40	V
Current			
I_0 (1)	Output Peak Current at f = 50 to 200 Hz, t ≤ 10µs - Note 4	±5	A
I_0 (2)	Output Peak Current non-repetitive - Note 5	±2	A
I_3 Sink	Sink Current, t<1ms - Note 3	2	A
I_3 Source	Source Current, t < 1ms	2	A
I_3	Flyback pulse current at f=50 to 200 Hz, t≤10µs - Note 4	±5	A
ESD Susceptibility			
ESD1	Human body model (100 pF discharged through 1.5 kΩ)	2	kV
ESD2	EIAJ Standard (200 pF discharged through 0 Ω)	300	V
Temperature			
T_s	Storage Temperature	-40 to 150	°C
T_j	Junction Temperature	+150	°C

Note:1. Usually the flyback voltage is slightly more than 2 x V_S. This must be taken into consideration when setting V_S.

2. *Versus pin 4*
3. *V3 is higher than V_S during the first half of the flyback pulse.*
4. *Such repetitive output peak currents are usually observed just before and after the flyback pulse.*
5. *This non-repetitive output peak current can be observed, for example, during the Switch-On/Switch-Off phases. This peak current is acceptable providing the SOA is respected (Figure 8 and Figure 9).*
6. *All pins have a reverse diode towards pin 4, these diodes should never be forward-biased.*
7. *Input voltages must not exceed the lower value of either V_S + 2 or 40 volts.*

2 Thermal Data

Symbol	Parameter	Value	Unit
R_{thJC}	Junction-to-Case Thermal Resistance	3	°C/W
T_T	Temperature for Thermal Shutdown	150	°C
T_J	Recommended Max. Junction Temperature	120	°C

3 Electrical Characteristics

(V_S = 34 V, T_{AMB} = 25°C, unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit	Fig.
Supply							
V_S	Operating Supply Voltage Range (V_2-V_4)	Note 8	10		35	V	
I_2	Pin 2 Quiescent Current	I_3 = 0, I_5 = 0		5	20	mA	1
I_6	Pin 6 Quiescent Current	I_3 = 0, I_5 = 0, V_6 =35v	8	19	50	mA	1
Input							
I_1	Input Bias Current	V_1 = 1 V, V_7 = 2.2 V		- 0.6	-1.5	µA	1
I_7	Input Bias Current	V_1 = 2.2 V, V_7 = 1 V		- 0.6	-1.5	µA	
V_{IR}	Operating Input Voltage Range		0		V_S - 2	V	
V_{I0}	Offset Voltage			2		mV	
$\Delta V_{I0}/dt$	Offset Drift versus Temperature			10		µV/°C	
Output							
I_0	Operating Peak Output Current	0^o<Tcase<125^oC			±1.5	A	
V_{5L}	Output Saturation Voltage to pin 4	I_5 = 1.5 A		1	1.7	V	3
V_{5H}	Output Saturation Voltage to pin 6	I_5 = -1.5 A		1.8	2.3	V	2
Stand-by							
V_{5STBY}	Output Voltage in Stand-by	V_1 = V_7 = V_S = 0 See Note 9	V_S - 2			V	
Miscellaneous							
G	Voltage Gain		80			dB	
V_{D5-6}	Diode Forward Voltage Between pins 5-6	I_5 = 1.5 A		1.8	2.3	V	
V_{D3-2}	Diode Forward Voltage between pins 3-2	I_3 = 1.5 A		1.6	2.2	V	
V_{3SL}	Saturation Voltage on pin 3	I_3 = 20 mA		0.4	1	V	3
V_{3SH}	Saturation Voltage to pin 2 (2nd part of flyback)	I_3 = -1.5 A		2.1	2.8	V	

8. *In normal applications, the peak flyback voltage is slightly greater than 2 x (V_S - V_4). Therefore, (V_S - V_4) = 35 V is not allowed without special circuitry.*
9. *Refer to Figure 4, Stand-by condition.*

Figure 1: Measurement of I_1, I_2 and I_6

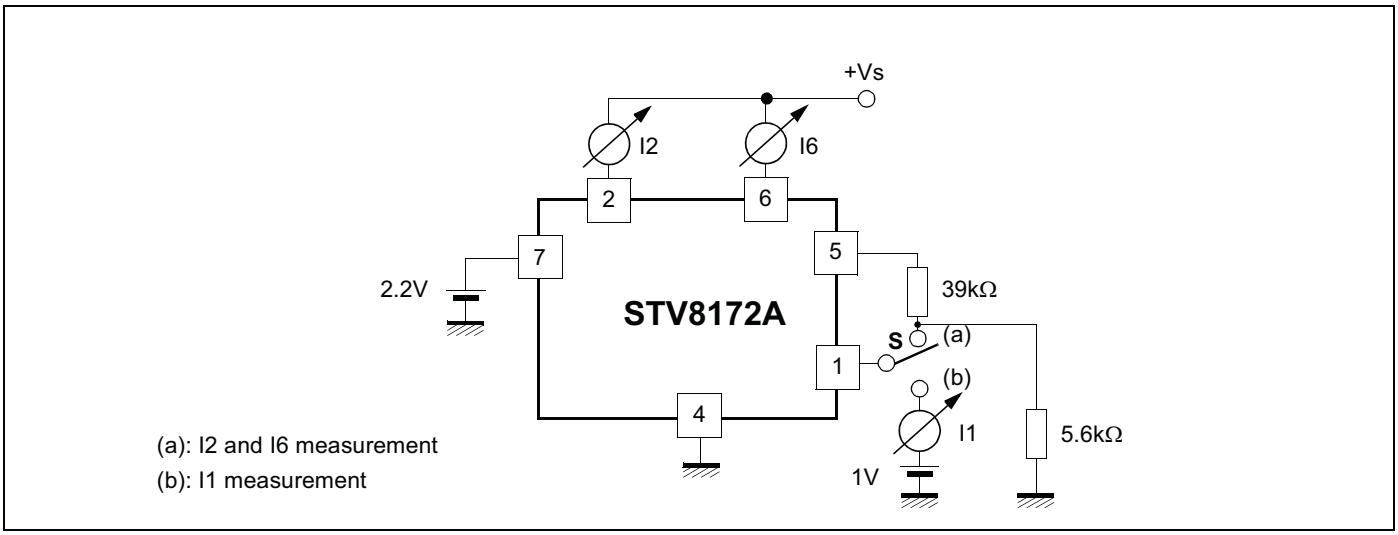


Figure 2: Measurement of V_{5H}

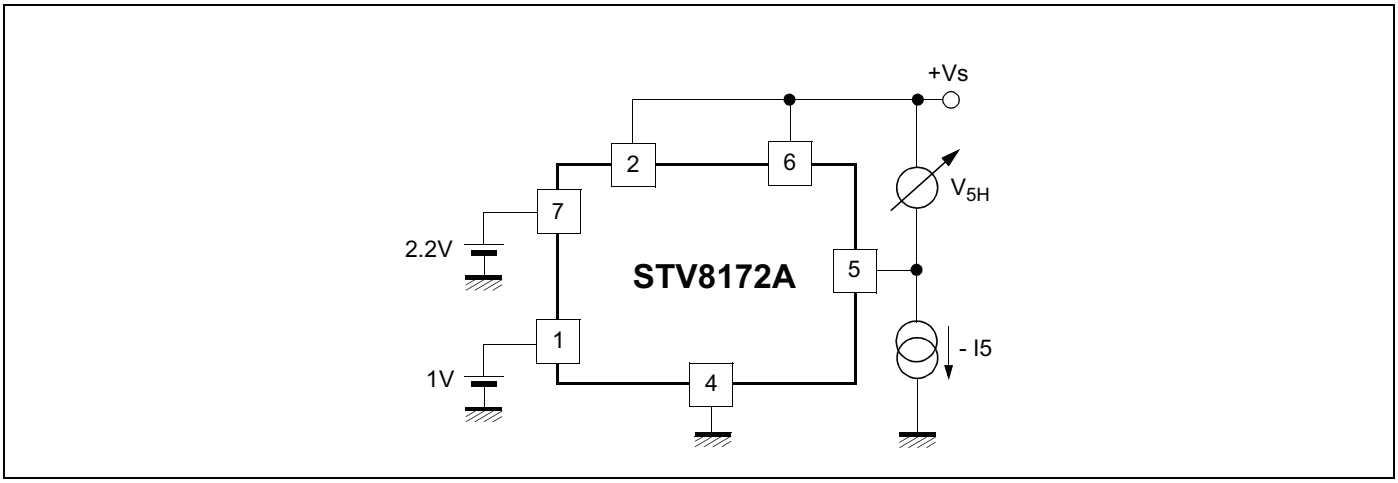
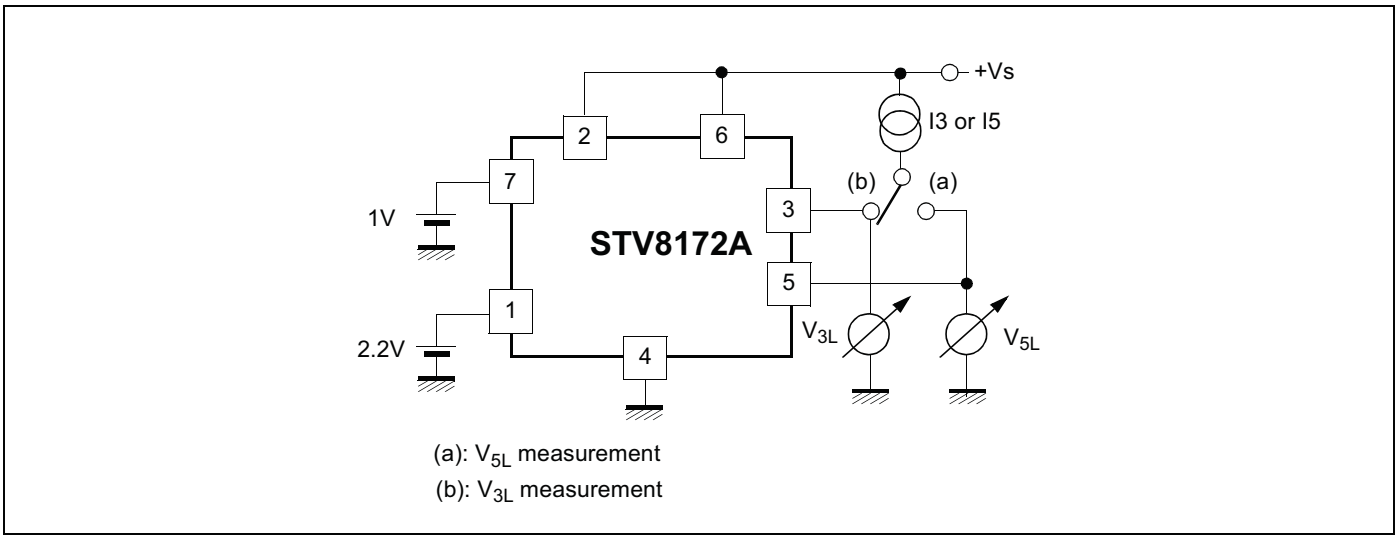


Figure 3: Measurement of V_{3L} and V_{5L}



4 Application Hints

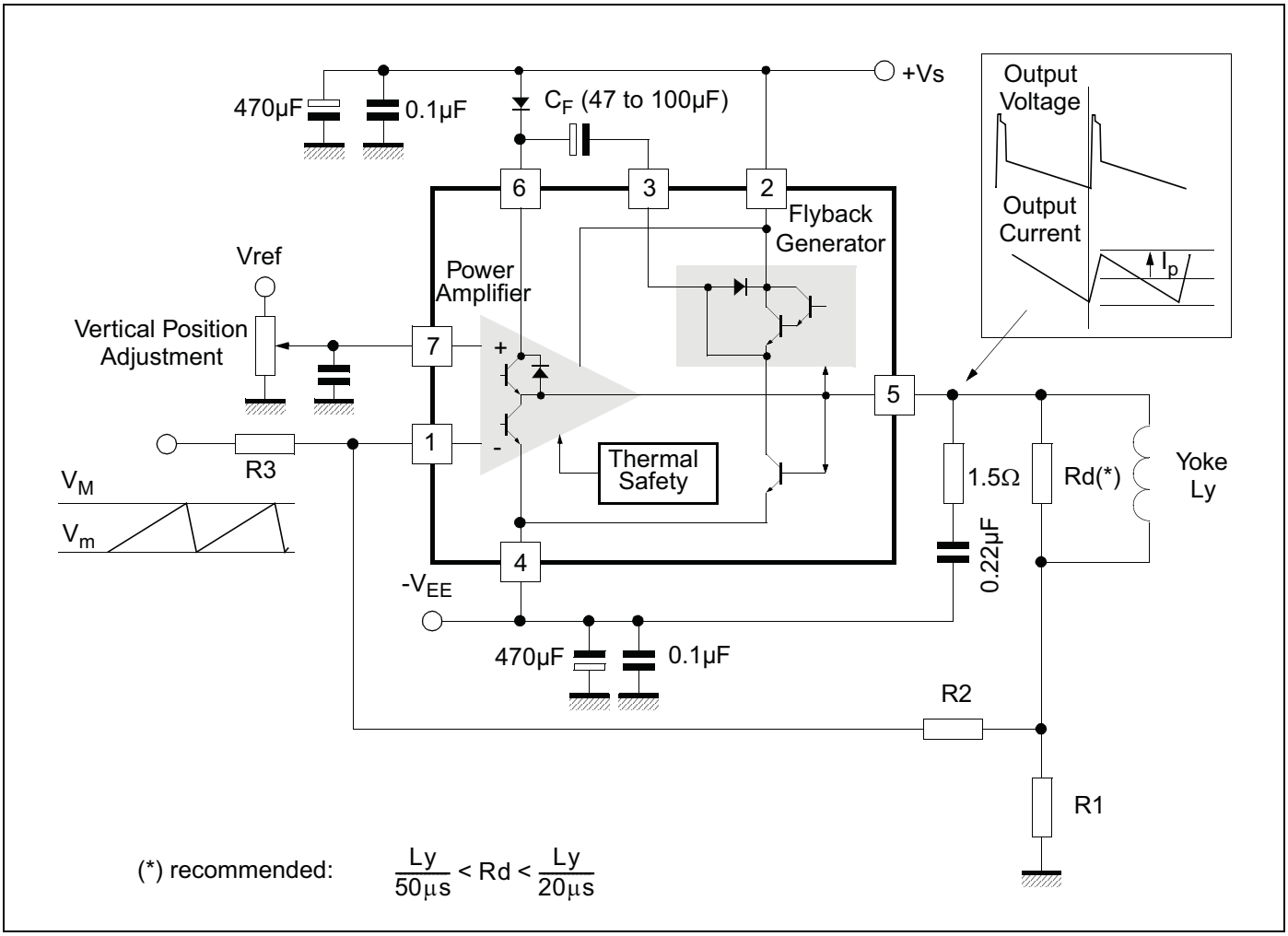
The yoke can be coupled either in AC or DC.

4.1 DC-coupled Application

When DC coupled (see Figure 4), the display vertical position can be adjusted with input bias. On the other hand, 2 supply sources (V_S and $-V_{EE}$) are required.

A Stand-by state will be reached by switching OFF the positive supply alone. In this state, where both inputs are the same voltage as pin 2 or higher, the output will sink negligible current from the deviation coil.

Figure 4: DC-coupled Application



4.1.1 Application Hints

For calculations, treat the IC as an op-amp, where the feedback loop maintains $V_1 = V_7$.

4.1.1.1 Centering

Display will be centered (null mean current in yoke) when voltage on pin 7 is (R_1 is negligible):

$$V_7 = \frac{V_M + V_m}{2} \times \left(\frac{R_2}{R_2 + R_3} \right)$$

4.1.1.2 Peak Current

$$I_P = \frac{(V_M - V_m)}{2} \times \frac{R_2}{R_1 x R_3}$$

Example: for V_m = 2 V, V_M = 5 V and I_P = 1 A

Choose R_1 in the1 Ω range, for instance R_1=1 Ω

From equation of peak current: $\frac{R_2}{R_3} = \frac{2 \times I_P \times R_1}{V_M - V_m} = \frac{2}{3}$

Then choose R_2 or R_3. For instance, if R_2 = 10 kΩ, then R_3 = 15 kΩ

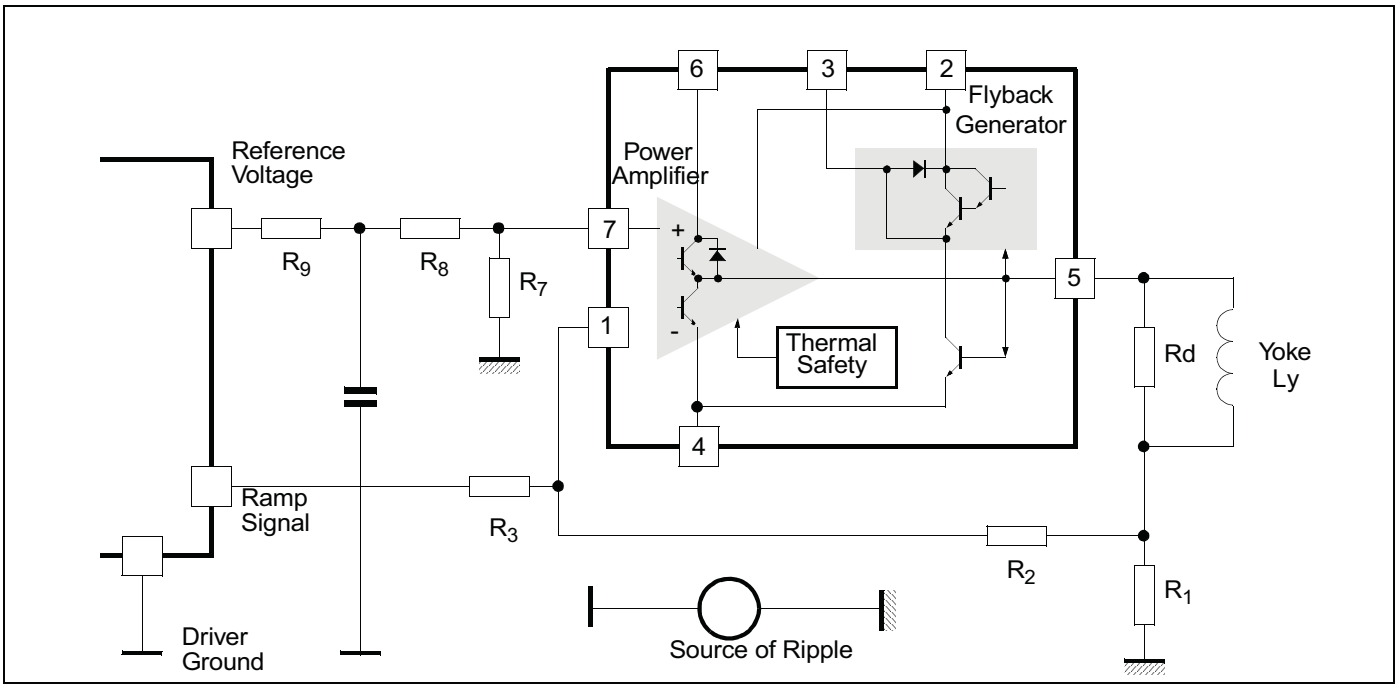
Finally, the bias voltage on pin 7 should be:

$$V_7 = \frac{V_M + V_m}{2} \times \frac{1}{1 + \frac{R_3}{R_2}} = \frac{7}{2} \times \frac{1}{2.5} = 1.4V$$

4.1.2 Ripple Rejection

When both ramp signal and bias are provided by the same driver IC, you can gain natural rejection of any ripple caused by a voltage drop in the ground (see Figure 5), if you manage to apply the same fraction of ripple voltage to both booster inputs. For that purpose, arrange an intermediate point in the bias resistor bridge, such that (R_8 / R_7) = (R_3 / R_2), and connect the bias filtering capacitor between the intermediate point and the local driver ground. Of course, R_7 should be connected to the booster reference point, which is the ground side of R_1.

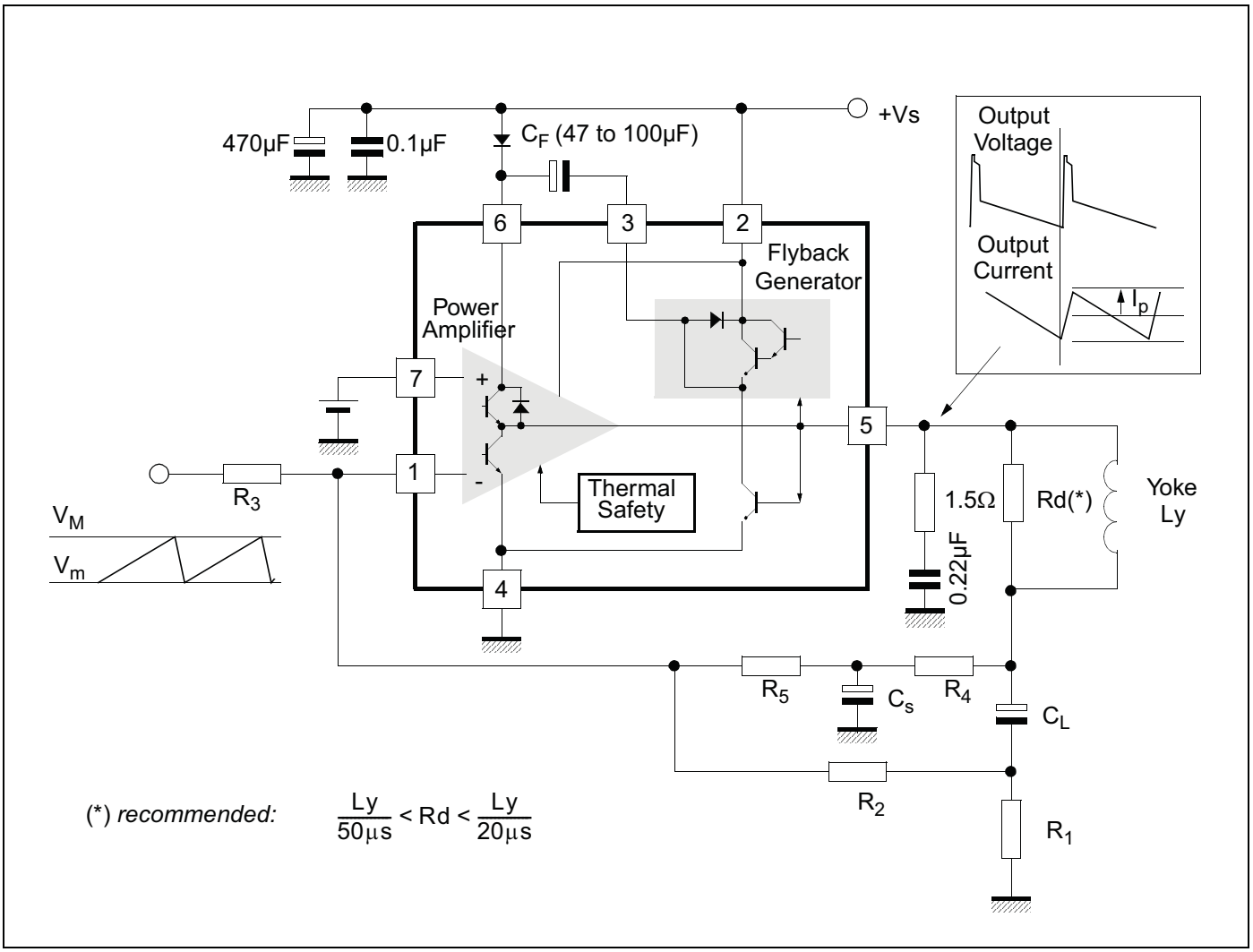
Figure 5: Ripple Rejection



4.2 AC-Coupled Applications

In AC-coupled applications (See Figure 6), only one supply (V_S) is needed. The vertical position of the scanning cannot be adjusted with input bias (for that purpose, usually some current is injected or sunk with a resistor in the low side of the yoke).

Figure 6: AC-coupled Application



4.2.1 Application Hints

Gain is defined as in the previous case:

$$I_p = \frac{V_M - V_m}{2} \times \frac{R_2}{R_1 \times R_3}$$

Choose R_1 then either R_2 or R_3. For good output centering, V_7 must fulfill the following equation:

$$\frac{\frac{V_S}{2} - V_7}{R_4 + R_5} = \frac{V_7 - \frac{V_M + V_m}{2}}{R_3} + \frac{V_7}{R_2}$$

or

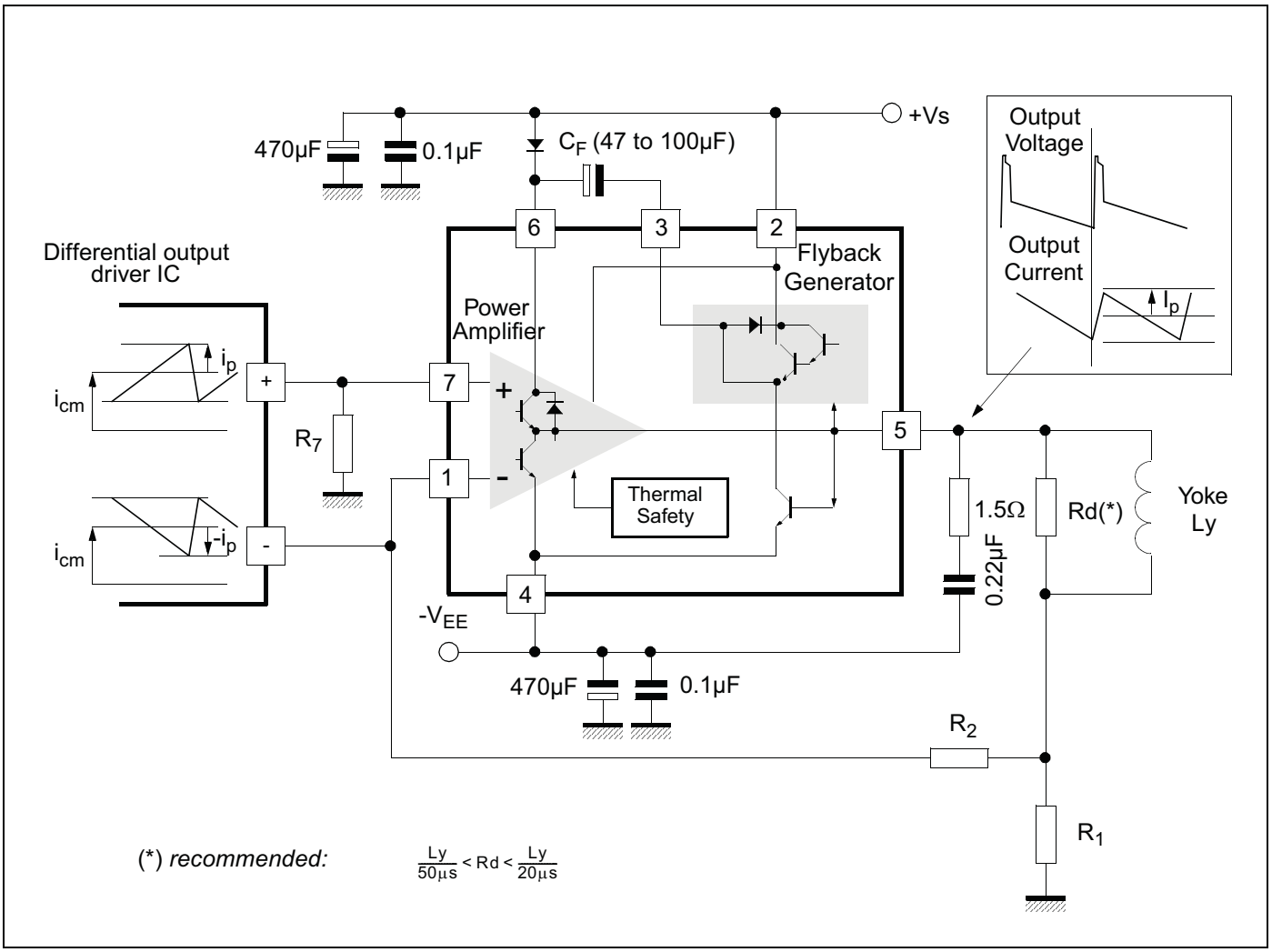
$$V_7 \times \left(\frac{1}{R_3} + \frac{1}{R_2} + \frac{1}{R_4 + R_5}\right) = \left(\frac{V_S}{2(R_4 + R_5)} + \frac{V_M + V_m}{2 \times R_3}\right)$$

C_S performs an integration of the parabolic signal on C_L, therefore the amount of S correction is set by the combination of C_L and C_s.

4.3 Application with Differential-output Drivers

Certain driver ICs provide the ramp signal in differential form, as two current sources i_+ and i_- with opposite variations.

Figure 7: Using a Differential-output Driver



Let us set some definitions:

- i_{cm} is the common-mode current: $i_{cm} = \frac{1}{2}(i_+ + i_-)$
- at peak of signal, $i_+ = i_{cm} + i_p$ and $i_- = i_{cm} - i_p$, therefore the peak differential signal is i_p - (-i_p) = 2 i_p, and the peak-peak differential signal, 4i_p.

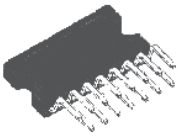
The application is described in Figure 7 with DC yoke coupling. The calculations still rely on the fact that V_1 remains equal to V_7.

TDA7266SA

7W+7W DUAL BRIDGE AMPLIFIER

- WIDE SUPPLY VOLTAGE RANGE (3.5-18V)
- MINIMUM EXTERNAL COMPONENTS
  - NO SWR CAPACITOR
  - NO BOOTSTRAP
  - NO BOUCHEROT CELLS
  - INTERNALLY FIXED GAIN
- STAND-BY & MUTE FUNCTIONS
- SHORT CIRCUIT PROTECTION
- THERMAL OVERLOAD PROTECTION

TECHNOLOGY BI20II



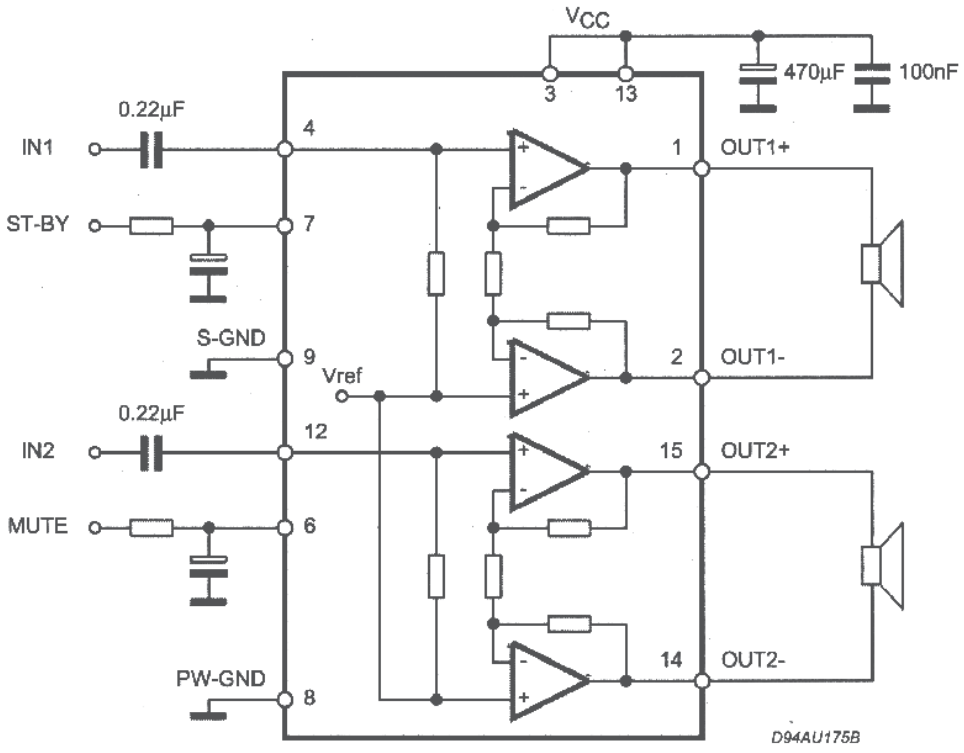
CLIPWATT15
ORDERING NUMBER: TDA7266SA

DESCRIPTION

The TDA7266SA is a dual bridge amplifier specially designed for LCD Monitor, PC Motherboard, TV and Portable Radio applications.

Pin to pin compatible with: TDA7266S, TDA7266, TDA7266M, TDA7266MA, TDA7266B, TDA7297SA & TDA7297.

BLOCK AND APPLICATION DIAGRAM



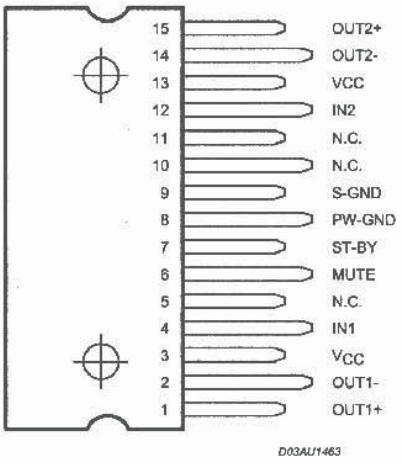
ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_s	Supply Voltage	20	V
I_O	Output Peak Current (internally limited)	2	A
T_{op}	Operating Temperature	0 to 70	°C
T_{stg}, T_j	Storage and Junction Temperature	-40 to 150	°C

THERMAL DATA

Symbol	Parameter	Value	Unit
$R_{th\ j\text{-}case}$	Thermal Resistance Junction-case	3	°C/W

PIN CONNECTION (Top view)



ELECTRICAL CHARACTERISTCS

(V_{CC} = 11V, R_L = 8Ω, f = 1KHz, T_{amb} = 25°C unless otherwise specified)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
V_{CC}	Supply Range		3	11	18	V
I_q	Total Quiescent Current			50	65	mA
V_{OS}	Output Offset Voltage				120	mV
P_O	Output Power	THD 10%	6.3	6		W
THD	Total Harmonic Distortion	P_O = 1W		0.05	0.2	%
		P_O = 0.1W to 2W f = 100Hz to 15KHz			1	%
SVR	Supply Voltage Rejection	f = 100Hz, VR =0.5V	40	56		dB
CT	Crosstalk		46	60		dB
A_{MUTE}	Mute Attenuation		60	80		dB
T_w	Thermal Threshold			150		°C
G_V	Closed Loop Voltage Gain		25	26	27	dB
ΔG_V	Voltage Gain Matching				0.5	dB

ELECTRICAL CHARACTERISTCS (continued)
(V_{CC} = 11V, R_L = 8Ω, f = 1KHz, T_{amb} = 25°C unless otherwise specified)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
R_i	Input Resistance		25	30		KΩ
VT_{MUTE}	Mute Threshold	for V_{CC} > 6.4V; Vo = -30dB	2.3	2.9	4.1	V
		for V_{CC} < 6.4V; Vo = -30dB	$V_{CC}/2$ -1	$V_{CC}/2$ -075	$V_{CC}/2$ -0.5	V
VT_{ST-BY}	St-by Threshold		0.8	1.3	1.8	V
I_{ST-BY}	St-by Current V6 = GND				100	µA
e_N	Total Output Voltage	A Curve; f = 20Hzto 20KHz		150		µV

APPLICATION SUGGESTION

STAND-BY AND MUTE FUNCTIONS

(A) Microprocessor Application

In order to avoid annoying "Pop-Noise" during Turn-On/Off transients, it is necessary to guarantee the right St-by and mute signals sequence. It is quite simple to obtain this function using a microprocessor (Fig. 1 and 2).
At first St-by signal (from µP) goes high and the voltage across the St-by terminal (Pin 7) starts to increase exponentially. The external RC network is intended to turn-on slowly the biasing circuits of the amplifier, this to avoid "POP" and "CLICK" on the outputs.
When this voltage reaches the St-by threshold level, the amplifier is switched-on and the external capacitors in series to the input terminals (C3, C53) start to charge.
It's necessary to mantain the mute signal low until the capacitors are fully charged, this to avoid that the device goes in play mode causing a loud "Pop Noise" on the speakers.
A delay of 100-200ms between St-by and mute signals is suitable for a proper operation.

Figure 1. Microprocessor Application

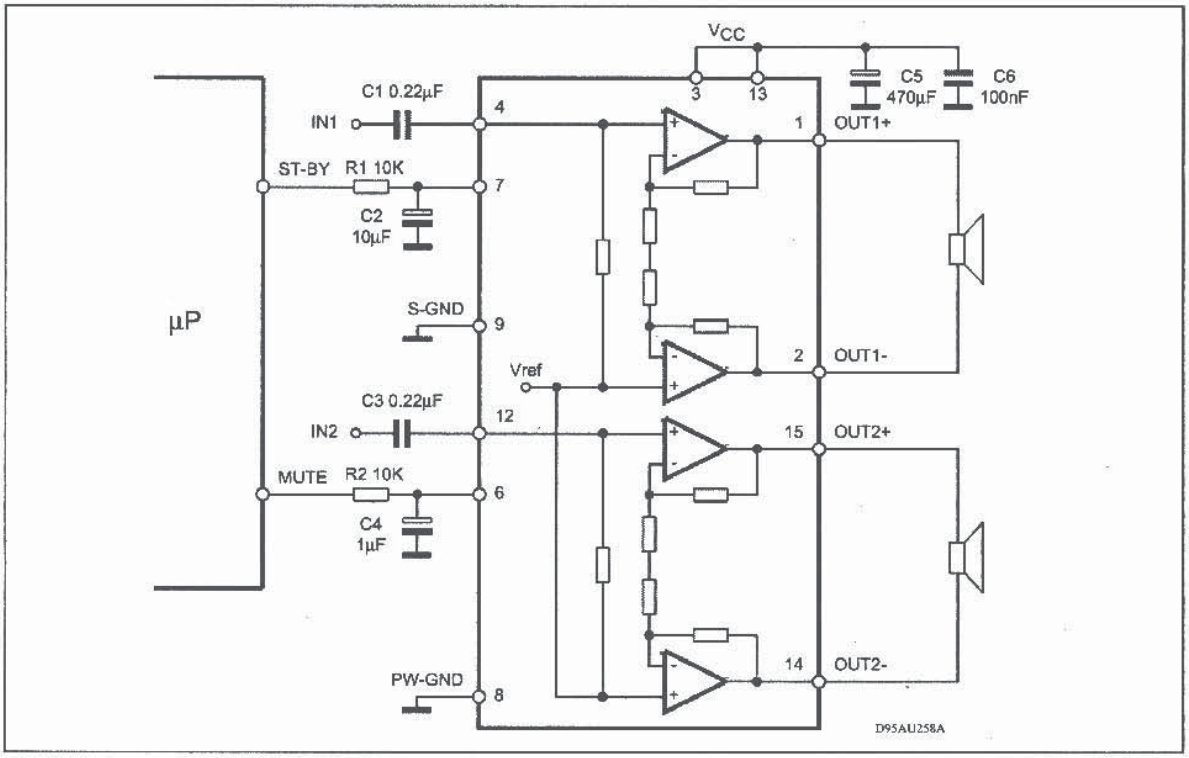


Figure 1 Fuse Blown

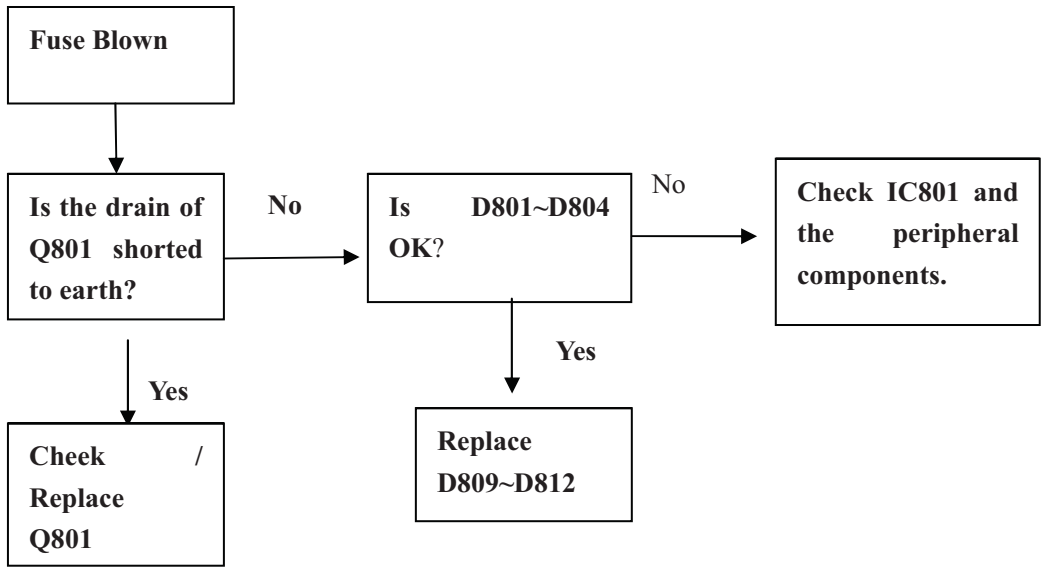


Figure2 No Raster Abnormal +B

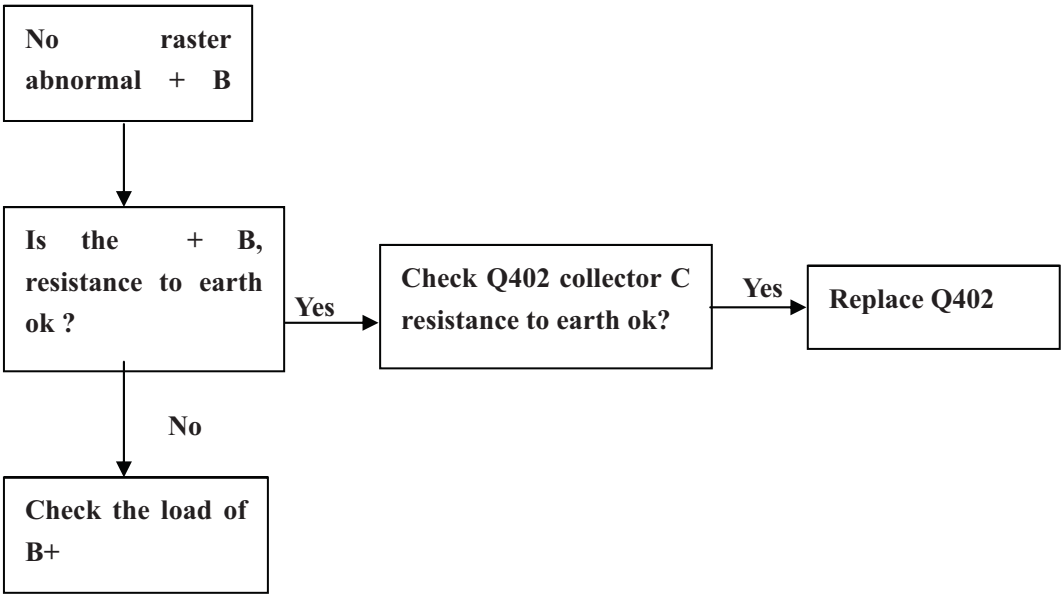


Figure3 No Raster, +B OK

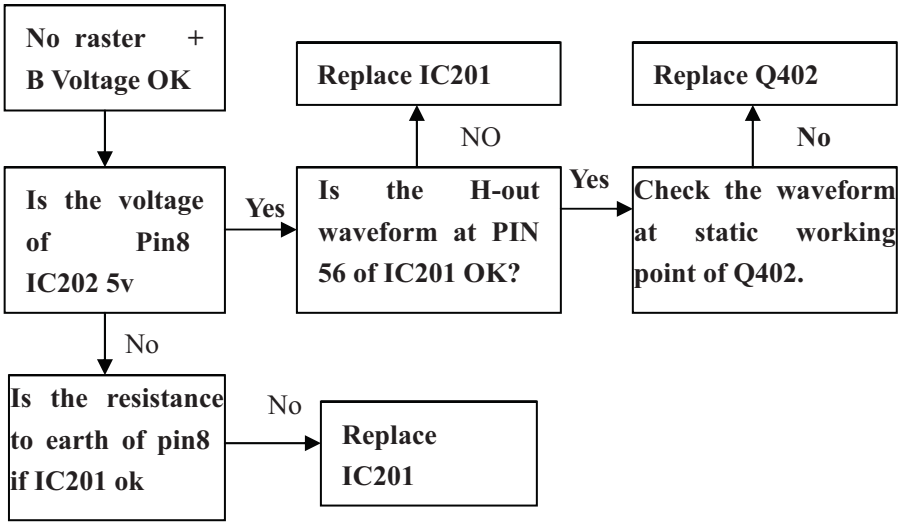


Figure 4 No Sound

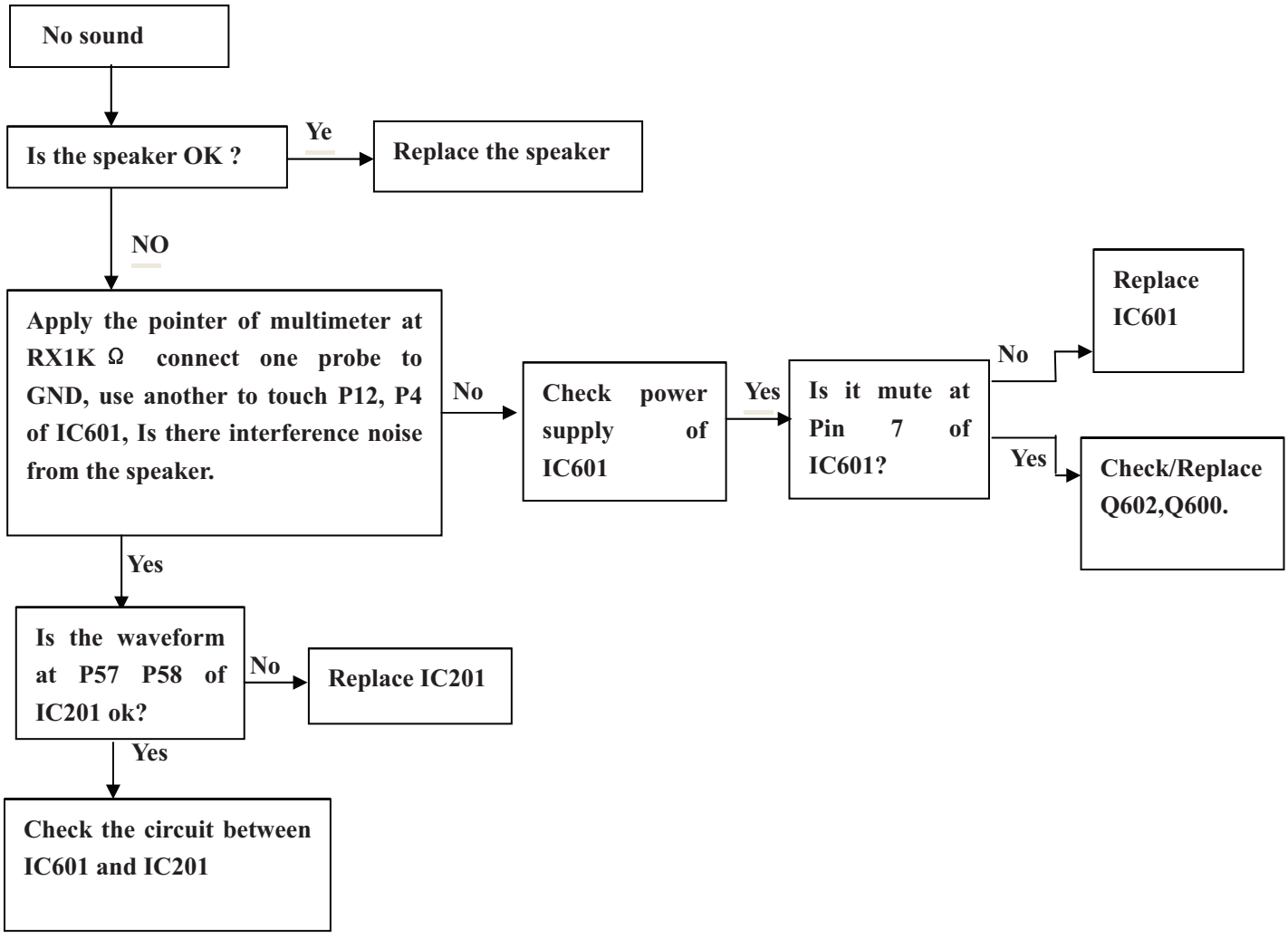


Figure 5 No Vertical Scanning

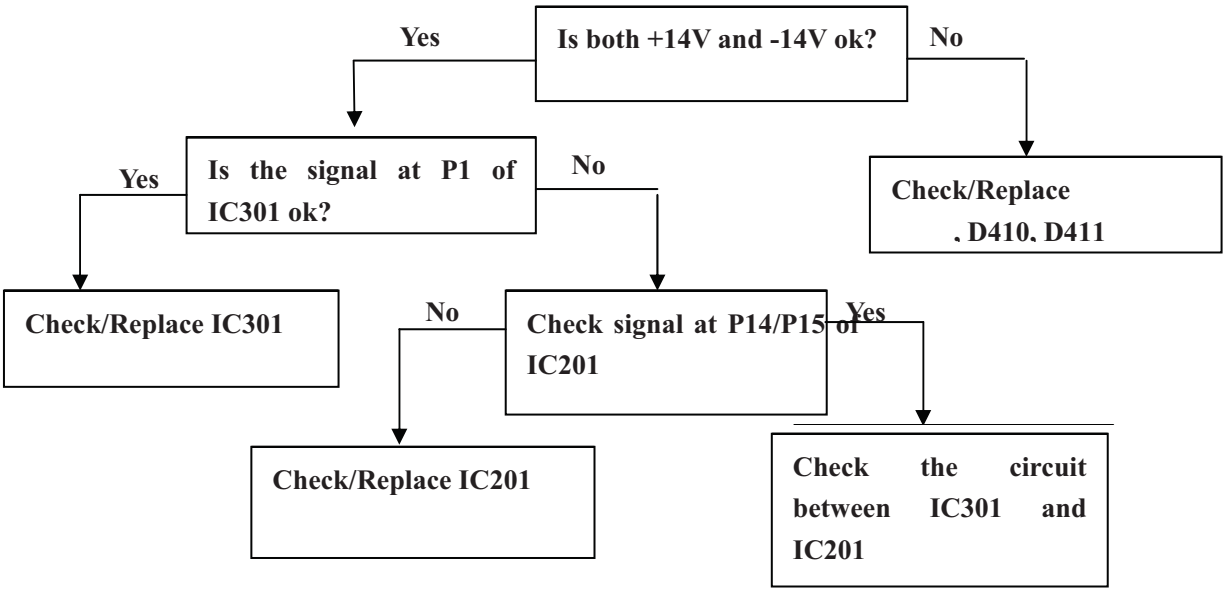
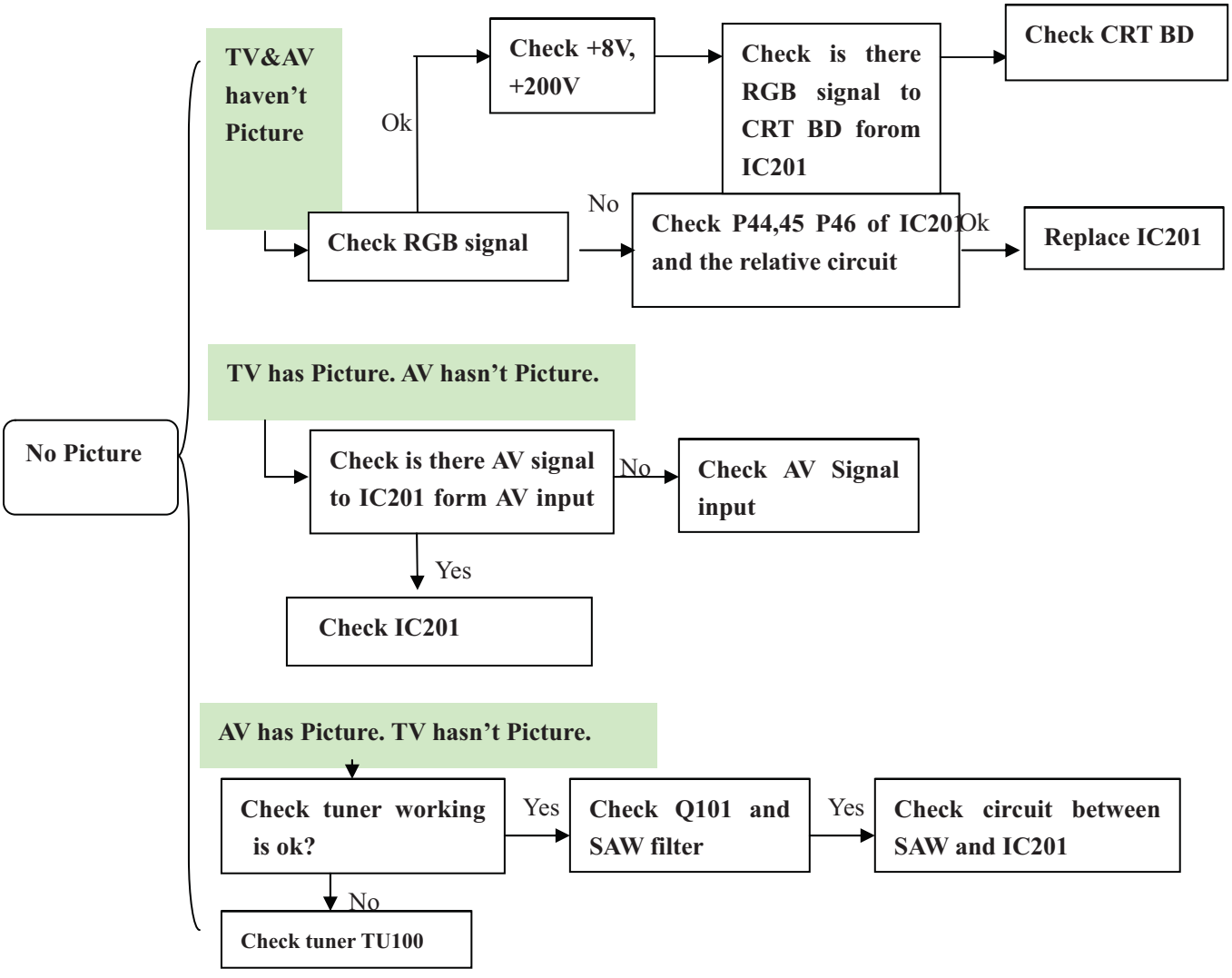


Figure 6 No Picture



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T6-NR0002-ABS0X	06-NR0002-A000X	RCT NX56C JY-T03203-004	
03-21F1SAK-B012S	T8-21RFLM-HF4AK	ASS'Y - MATCH TUBEKIT	
T8-21RFLM-HF4AK	T8-21RFLM-FHF4AK	ASS'Y - MATCH TUBE (F.CAB)KIT	
T8-21RFLM-FHF4AK	44-21RFLM-HF4A	21SLIM CRT A51ERS357X440E	
T8-21RFLM-FHF4AK	46-26514H-04XG	HS 4P A/B 500/13 RBGW TJC1-4Y	FOR DY TO M.BD P401
T8-21RFLM-HF4AK	T8-21RFLM-MHF4AK	ASS'Y - MATCH TUBE (MAIN BD)KIT	
T8-21RFLM-MHF4AK	27-AHQ223-JSX	CAP. M.PP 0.022 UF 400V +/-5%	C454
T8-21RFLM-MHF4AK	36-WID801-XX1	TCL36-WID801-XX1= COIL WIDTH 800 UH R=N	L451
T8-21RFLM-MHF4AK	18-FG0109-JSX	RMOF 1OHM +/-5% 2W R=Y	R308A
T8-21RFLM-MHF4AK	18-CB0563-JNX	RES. C.F. 56K OHM 1/6W +/-5%	R459
T8-21RFLM-MHF4AK	18-CE0221-JNX	TCL18-CE0221-JNX= RES. C.F. 220 OHM 1/2W	R306
T8-21RFLM-MHF4AK	27-PBC222-J0X	CAP. P.E 0.0022UF 63V +/-5%	C406
T8-21RFLM-MHF4AK	18-DB0512-FNX	RES. M.F. 5.1K OHM 1/6W +/-1%	R833
T8-21RFLM-MHF4AK	18-FF0220-JSX	RES.M.O.F 22 OHM 1W +/-5%	R402
T8-21RFLM-MHF4AK	41-WJ0065-B00	1 R=N	R420
T8-21RFLM-MHF4AK	18-EF0122-JSX	FR 1.2KOHM 1W 立式编带 5-25S Y RF10X-1W	R455A
T8-21RFLM-MHF4AK	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J816
T8-21RFLM-MHF4AK	36-LIN210-XX1	COIL LINEARITY 21 UH	L458
T8-21RFLM-MHF4AK	37-NR0002-CAA7A	FBT NX56E BSC25-0233S R=N	T401
T8-21RFLM-MHF4AK	27-AHR394-JSX	CAP. M.PP 0.39 UF 400V +/-5%	C456
T8-21RFLM-MHF4AK	18-FF0109-JSX	RMOF 1OHM +/-5% 1W R=Y	R317
T8-21RFLM-MHF4AK	18-FF0109-JSX	RMOF 1OHM +/-5% 1W R=Y	R318
T8-21RFLM-MHF4AK	18-FF0109-JSX	RMOF 1OHM +/-5% 1W R=Y	R319
T8-21RFLM-MHF4AK	18-FF0109-JSX	RMOF 1OHM +/-5% 1W R=Y	R320
T8-21RFLM-MHF4AK	27-ALQ472-J0X	TCL27-ALQ472-J0X= CAP. M.PP 4700PF 1.6KV	C453
T8-21RFLM-MHF4AK	27-ALR133-J0X	CAP. M.PP 0.013 UF 1.6KV +/-5%	C457
T8-21RFLM-MHF4AK	18-FG0399-JSX	RMOF 3.9OHM +/-5% 2W R=Y	R425A
T8-21RFLM-MHF4AK	18-CB0682-JNX	RES. C.F. 6.8K OHM 1/6W +/-5%	R416
T8-21RFLM-HF4AK	T8-NX56AK-CR1	ASS'Y - CRT BDEQU	
T8-NX56AK-CR1	11-0BF422-0BX	TRANSISTOR BF422 (NPN) 126	Q512
T8-NX56AK-CR1	11-0BF422-0BX	TRANSISTOR BF422 (NPN) 126	Q522
T8-NX56AK-CR1	11-0BF422-0BX	TRANSISTOR BF422 (NPN) 126	Q532
T8-NX56AK-CR1	11-0BF423-0BX	TRANSISTOR BF423 (PNP) 126	Q513
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T8-NX56AK-CR1	11-0BF423-0BX	TRANSISTOR BF423 (PNP) 126	Q533
T8-NX56AK-CR1	11-SC2482-0BX	TRANSISTOR 2SC2482	Q531
T8-NX56AK-CR1	11-SC2482-0BX	TRANSISTOR 2SC2482	Q521
T8-NX56AK-CR1	11-SC2482-0BX	TRANSISTOR 2SC2482	Q511
T8-NX56AK-CR1	18-CB0271-JNX	RES. C.F. 270 OHM 1/6W +/-5%	R513
T8-NX56AK-CR1	18-CB0271-JNX	RES. C.F. 270 OHM 1/6W +/-5%	R523
T8-NX56AK-CR1	18-CB0271-JNX	RES. C.F. 270 OHM 1/6W +/-5%	R533
T8-NX56AK-CR1	18-CB0470-JNX	RES. C.F. 47 OHM 1/6W +/-5%	R511
T8-NX56AK-CR1	18-CB0470-JNX	RES. C.F. 47 OHM 1/6W +/-5%	R521
T8-NX56AK-CR1	18-CB0470-JNX	RES. C.F. 47 OHM 1/6W +/-5%	R531
T8-NX56AK-CR1	18-CD0102-JNX	RES. C.F. 1K OHM 1/4W +/-5%	R541
T8-NX56AK-CR1	18-CD0471-JNX	RES. C.F. 470 OHM 1/4W +/-5%	R538
T8-NX56AK-CR1	18-CD0471-JNX	RES. C.F. 470 OHM 1/4W +/-5%	R536
T8-NX56AK-CR1	18-CD0471-JNX	RES. C.F. 470 OHM 1/4W +/-5%	R528
T8-NX56AK-CR1	18-CD0471-JNX	RES. C.F. 470 OHM 1/4W +/-5%	R526
T8-NX56AK-CR1	18-CD0471-JNX	RES. C.F. 470 OHM 1/4W +/-5%	R518
T8-NX56AK-CR1	18-CD0471-JNX	RES. C.F. 470 OHM 1/4W +/-5%	R516
T8-NX56AK-CR1	18-CE0224-JNX	RES. C.F. 220K OHM 1/2W +/-5%	R506

T8-NX56AK-CR1	18-FE0272-JNX	RESISTOR METAL OXIDE FILM 2K7OHM 5% 1/2W	R539
T8-NX56AK-CR1	18-FE0272-JNX	RESISTOR METAL OXIDE FILM 2K7OHM 5% 1/2W	R529
T8-NX56AK-CR1	18-FE0272-JNX	RESISTOR METAL OXIDE FILM 2K7OHM 5% 1/2W	R519
T8-NX56AK-CR1	26-AMM102-KRX	CAP.CER 1NOF 2KVV -	C505
T8-NX56AK-CR1	26-EBP391-JCS	CAP. CER 39OPF 50V +/-5%	C521
T8-NX56AK-CR1	26-EBP391-JCS	CAP. CER 39OPF 50V +/-5%	C531
T8-NX56AK-CR1	26-EBP391-JCS	CAP. CER 39OPF 50V +/-5%	C511
T8-NX56AK-CR1	41-WJ0065-B00	1 R=N	D531
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T8-NX56AK-CR1	41-WJ0065-B00	1 R=N	D511
T8-NX56AK-CR1	41-WJ0090-B00	WIREBAREJUMPER9MM	J502
T8-NX56AK-CR1	41-WJ0100-B00	WIREBAREJUMPER10MM	J503
T8-NX56AK-CR1	46-10967W-01XG	SMD PIN BASE *1 TJC1-1A	P503
T8-NX56AK-CR1	46-33079W-06XG	PIN BASE *6 TJC3-6A	P501
T8-NX56AK-CR1	46-35179W-04XG	PIN BASE TJC3-4A	P502
T8-NX56AK-CR1	34-A470K2-1IX	COIL CHOKE 47 UH +/-10% (5MM)	L501
T8-NX56AK-CR1	18-FG0153-JSX	RMOF 15KOHM +/-5% 2W R=Y	R515A
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T8-NX56AK-CR1	18-CB0222-JNX	RES. C.F. 2.2K OHM 1/6W +/-5%	R512
T8-NX56AK-CR1	18-CB0222-JNX	RES. C.F. 2.2K OHM 1/6W +/-5%	R522
T8-NX56AK-CR1	18-CB0222-JNX	RES. C.F. 2.2K OHM 1/6W +/-5%	R532
T8-NX56AK-CR1	47-CRT022-NX0G	CRT SOCKET GZS10-2-DD2 (DQ5)	S501A
T8-NX56AK-CR1	26-EBP561-JCS	CAP. CEP 56OPF 50V +/-5%	C541
T8-NX56AK-CR1	40-0NX56B-CRE1XG	TV PCB CR BD R=Y	
03-21F1SAK-B012S	T8-21F1AK-FC6	ASS'Y - FRONT CABINETASY	
T8-21F1AK-FC6	41-GND021-LX0T	BEAIDED GROUND WIRE 770MM AL-MG R=Y	
T8-21F1AK-FC6	42-45108D-XT1G	SPEAKER YDP4510-8a	SP601
T8-21F1AK-FC6	42-45108D-XT1G	SPEAKER YDP4510-8a	SP602
T8-21F1AK-FC6	46-CT057T-02K01G	WIRE CONNECT 570MM 2 TJC3 PH 2.5MM UL246	P602 TO R_SPK
T8-21F1AK-FC6	46-CT048T-03K01G	WIRE CONNECT 480MM 3 TJC3 PH 2.5MM UL246	P603 TO L_SPK
T8-21F1AK-FC6	54-113970-0U0	TV RAW INSULATOR SLEEVE AWG#5 -- 00 00 R	FOR SPK HOUSING
T8-21F1AK-FC6	54-114000-00X	TV RAW FELT PAPER 150MMX19MMX0.3MM BK 01	
T8-21F1AK-FC6	54-205140-000	SPACER CRT MOUNTING T=2MM	MTG CRT & F.CAB
T8-21F1AK-FC6	54-314740-0X0	CRT FIBRE SHEET (22MMX22MMX0.8MM)	MTG CHASSIN & CRT
T8-21F1AK-FC6	57-10654X-00F	TWIST TIE NY66	
T8-21F1AK-FC6	59-130460-00X	RUBBER PAD (25MMX7MM)	FOR FRONT CABINT FOOT
T8-21F1AK-FC6	63-S40120-BT4G	MACHINE SCREW	MTG SPK & F.CAB
T8-21F1AK-FC6	63-W30100-AB4G	S/T SCREW W 3 X 10 AB	MTG LENS & F.CAB
T8-21F1AK-FC6	63-Z60300-AB4G	S/T SCREW HA 6X30	MTG CRT & F.CAB
T8-21F1AK-FC6	67-X12668-0E0	SPRING CRT 6MMX40MMX0.5MM	
T8-21F1AK-FC6	67-X36004-0E2	SPRING	
T8-21F1AK-FC6	T8-21F1AK-FC6Z	ASS'Y - FRONT CABINET(ART)ASY	
T8-21F1AK-FC6Z	55-453950-0CL	RAW FRONTPANEL 21F1 -- 00 00 00 R=N	
T8-21F1AK-FC6Z	56-453970-0HA	TV RAW KEY ON OFF BR 21F1 -- 00 00 00 R=	
T8-21F1AK-FC6Z	56-453980-0HC	TV RAW LENS IR -- 00 00 00 R=N	
T8-21F1AK-FC6Z	56-453990-0HA	TV RAW KEY FUNCTION BUTTON -- 02 00 00 R	
T8-21F1AK-FC6	62-454920-0CL	TV RAW HOLDER POWER -- 00 00 R=N	
T8-21F1AK-FC6	62-454040-0CL	TV RAW STAND BASE -- 00 00 00 R=N	

T8-21F1AK-FC6	63-B40150-AB4G	SCREW-ST 4MM 15MM ISO 62 R=Y	FOR CHASSIS
T8-21F1AK-FC6	36-DEG210-AX0L	DEGAUSSING COIL ALXC-54	
03-21F1SAK-B012S	T8-21F1AK-RC5	ASS'Y - REAR CABINETASY	
T8-21F1AK-RC5	63-B40150-AB4G	SCREW-ST 4MM 15MM ISO 62 R=Y	MTG FBT
T8-21F1AK-RC5	63-B40200-AB3G	SCREW-ST 4MM 20MM JIS B 1122 12 R=Y	MTG R.CAB & F.CAB
T8-21F1AK-RC5	63-F30100-BT3G	SCREW-ST 3MM 10MM ISO 65 0 0 R=Y	MTG RCA JACK TO R.CAB
T8-21F1AK-RC5	T8-21F1AK-RC5Z	ASS'Y - REAR CABINET(ART)ASY	
T8-21F1AK-RC5Z	55-459190-1CL	RAW BACKCOVER 21F SHORT TUBE -- 01 00 0	
T8-21F1AK-RC5Z	58-21F1MP-0UI	TV RAW OVERLAY 80X50 BK 01 00 R=N	
03-21F1SAK-B012S	T8-21F1AK-PA9	ASS'Y - PACKINGASY	
T8-21F1AK-PA9	49-R03P80-BAT	BATTERY 1.5V	
T8-21F1AK-PA9	75-459400-EC0	TV RAW POLYFOAM LL -- 00 00 R=N	
T8-21F1AK-PA9	75-459410-EC0	TV RAW POLYFOAM LR -- 00 00 R=N	
T8-21F1AK-PA9	75-459420-EC0	TV RAW POLYFOAM UL -- 00 00 R=N	
T8-21F1AK-PA9	75-459430-EC0	TV RAW POLYFOAM UR -- 00 00 R=N	
T8-21F1AK-PA9	T8-21F1AK-PA9Z	ASS'Y - PACKING(ART)ASY	
T8-21F1AK-PA9Z	72-21F1AP-E129A	TV IB INSTRUCTION BOOK TCL CHS R=Y	
T8-21F1AK-PA9Z	74-022032-6WE	RAW BAG PE 220X320X0.06MM -- 00 00 R=N	
T8-21F1AK-PA9Z	74-120120-80HAA	POLYBAG W/SUFFOCATION WARNING	
T8-21F1AK-PA9Z	76-459440-0AT	TV RAW CARTON-BOX 21F1-F6 00 00 00 R=N	
T8-21F1AK-PA9	47-ANT010-XX0	ANTENNA CYI-001B	
03-21F1SAK-B012S	T8-21F1SAK-MA3SM	ASS'Y - CHASSIS BDKIT	
T8-21F1SAK-MA3SM	T8-21F1SAK-MA3HM	ASS'Y - MAIN BDKIT	
T8-21F1SAK-MA3HM	T8-21LAAK-MA2	ASS'Y - MAIN BDEQU	
T8-21LAAK-MA2	10-0FR104-FBX	DIODE FR104 (FAST RECTIFIER)	D404
T8-21LAAK-MA2	10-0FR104-FBX	DIODE FR104 (FAST RECTIFIER)	D401
T8-21LAAK-MA2	10-0FR104-FBX	DIODE FR104 (FAST RECTIFIER)	D301
T8-21LAAK-MA2	10-1N4148-ABX	DIODE 1N4148 (SWITCHING)	D601
T8-21LAAK-MA2	10-1N4148-ABX	DIODE 1N4148 (SWITCHING)	D406
T8-21LAAK-MA2	10-1N4148-ABX	DIODE 1N4148 (SWITCHING)	D316
T8-21LAAK-MA2	10-1N4148-ABX	DIODE 1N4148 (SWITCHING)	D315
T8-21LAAK-MA2	10-1N4148-ABX	DIODE 1N4148 (SWITCHING)	D204
T8-21LAAK-MA2	10-1N4148-ABX	DIODE 1N4148 (SWITCHING)	D210
T8-21LAAK-MA2	10-1N4148-ABX	DIODE 1N4148 (SWITCHING)	D313
T8-21LAAK-MA2	10-79C8V2-DBX	D-ZENER BZX55C8V2 8.2V 500MI0W R=N	D407
T8-21LAAK-MA2	10-79C33V-DBX	DIODE ZENER 33V 1/2W 5%	D101
T8-21LAAK-MA2	10-79C4V7-DBX	D-PR /A /_V 4.7V BZX79C4V7	D314
T8-21LAAK-MA2	10-79C5V6-DBX	DIODE ZENER 5V6 1/2W 5%	D203
T8-21LAAK-MA2	10-79C5V6-DBX	DIODE ZENER 5V6 1/2W 5%	D202
T8-21LAAK-MA2	10-79C5V6-DBX	DIODE ZENER 5V6 1/2W 5%	D201
T8-21LAAK-MA2	10-79C5V6-DBX	DIODE ZENER 5V6 1/2W 5%	D251
T8-21LAAK-MA2	11-DD5024-0CX	TR 600V 8_A NPN 35W 1.7MHZ TO-220F 3DD50	Q402A
T8-21LAAK-MA2	11-KTD863-0BX	TRANSISTOR KTD863	Q401
T8-21LAAK-MA2	11-SA1015-YBX	TR 50VV 150MA_A PNP 0.4W 80MHZ TO-92 ST2	Q601
T8-21LAAK-MA2	11-SC1815-YBX	TR 50VV 150MA_A NPN 0.4W 80MHZ TO-92 2SC	Q602
T8-21LAAK-MA2	11-SC1815-YBX	TR 50VV 150MA_A NPN 0.4W 80MHZ TO-92 2SC	Q210
T8-21LAAK-MA2	11-SC1815-YBX	TR 50VV 150MA_A NPN 0.4W 80MHZ TO-92 2SC	Q904
T8-21LAAK-MA2	11-SC1815-YBX	TR 50VV 150MA_A NPN 0.4W 80MHZ TO-92 2SC	Q903
T8-21LAAK-MA2	13-00M24C-16P	IC-EEPROM M24C16-WBN6 R=N	IC202(CP)
T8-21LAAK-MA2	13-DA7266-SAS	TCL13-DA7266-SAS= IC TDA7266SA R=N	IC601
T8-21LAAK-MA2	18-CB0100-JNX	RES. C.F. 10 OHM 1/6W +/-5%	R217
T8-21LAAK-MA2	18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	R272
T8-21LAAK-MA2	18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	R101
T8-21LAAK-MA2	18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	R250

T8-21LAAK-MA2	18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	R256
T8-21LAAK-MA2	18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	R214
T8-21LAAK-MA2	18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	R274
T8-21LAAK-MA2	18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	R246
T8-21LAAK-MA2	18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	R215
T8-21LAAK-MA2	18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	R239
T8-21LAAK-MA2	18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	R240
T8-21LAAK-MA2	18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	R241
T8-21LAAK-MA2	18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	R208
T8-21LAAK-MA2	18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	R275
T8-21LAAK-MA2	18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	R604A
T8-21LAAK-MA2	18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	R603A
T8-21LAAK-MA2	18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	R245
T8-21LAAK-MA2	18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	R247
T8-21LAAK-MA2	18-CB0101-JNX	RES. C.F. 100 OHM 1/6W +/-5%	R102
T8-21LAAK-MA2	18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	R302
T8-21LAAK-MA2	18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	R303
T8-21LAAK-MA2	18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	R415
T8-21LAAK-MA2	18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	R614
T8-21LAAK-MA2	18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	R228
T8-21LAAK-MA2	18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	R242
T8-21LAAK-MA2	18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	R271
T8-21LAAK-MA2	18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	R409
T8-21LAAK-MA2	18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	R253
T8-21LAAK-MA2	18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	R252
T8-21LAAK-MA2	18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	R927
T8-21LAAK-MA2	18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	R928
T8-21LAAK-MA2	18-CB0103-JNX	RES. C.F. 10K OHM 1/6W +/-5%	R613
T8-21LAAK-MA2	18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	R258
T8-21LAAK-MA2	18-CB0103-JNX	RES. C.F. 10K OHM 1/6W +/-5%	R612
T8-21LAAK-MA2	18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	R257
T8-21LAAK-MA2	18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	R255
T8-21LAAK-MA2	18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	R254
T8-21LAAK-MA2	18-CB0103-JNX	RES. C.F. 10K OHM 1/6W +/-5%	R238
T8-21LAAK-MA2	18-CB0103-JNX	RES. C.F. 10K OHM 1/6W +/-5%	R610
T8-21LAAK-MA2	18-CB0103-JNX	RES. C.F. 10K OHM 1/6W +/-5%	R315
T8-21LAAK-MA2	18-CB0104-JNX	RES. C.F. 100K OHM 1/6W +/-5%	R417
T8-21LAAK-MA2	18-CB0122-JNX	RES. C.F. 1.2K OHM 1/6W +/-5%	R251
T8-21LAAK-MA2	18-CB0123-JNX	RES. C.F. 12K OHM 1/6W +/-5%	R216
T8-21LAAK-MA2	18-CB0152-JNX	RES. C.F. 1.5K OHM 1/6W +/-5%	R311
T8-21LAAK-MA2	18-CB0153-JNX	RES. C.F. 15K OHM 1/6W +/-5%	R201
T8-21LAAK-MA2	18-CB0202-JNX	RES. C.F. 2K OHM 1/6W +/-5%	R407
T8-21LAAK-MA2	18-CB0222-JNX	RES. C.F. 2.2K OHM 1/6W +/-5%	R301
T8-21LAAK-MA2	18-CB0222-JNX	RES. C.F. 2.2K OHM 1/6W +/-5%	R304
T8-21LAAK-MA2	18-CB0223-JNX	RES. C.F. 22K OHM 1/6W +/-5%	R906
T8-21LAAK-MA2	18-CB0223-JNX	RES. C.F. 22K OHM 1/6W +/-5%	R903
T8-21LAAK-MA2	18-CB0223-JNX	RES. C.F. 22K OHM 1/6W +/-5%	R406
T8-21LAAK-MA2	18-CB0223-JNX	RES. C.F. 22K OHM 1/6W +/-5%	R249
T8-21LAAK-MA2	18-CB0223-JNX	RES. C.F. 22K OHM 1/6W +/-5%	R902
T8-21LAAK-MA2	18-CB0223-JNX	RES. C.F. 22K OHM 1/6W +/-5%	R611
T8-21LAAK-MA2	18-CB0223-JNX	RES. C.F. 22K OHM 1/6W +/-5%	R905
T8-21LAAK-MA2	18-CB0272-JNX	RES. C.F. 2.7K OHM 1/6W +/-5%	R211
T8-21LAAK-MA2	18-CB0274-JNX	TCL18-CB0274-JNX= RES. C.F. 270K OHM 1/6	R410
T8-21LAAK-MA2	18-CB0331-JNX	RES. C.F. 330 OHM 1/6W +/-5%	R260

T8-21LAAK-MA2	18-CB0332-JNX	RES. C.F. 3.3K OHM 1/6W +/-5%	R221
T8-21LAAK-MA2	18-CB0332-JNX	RES. C.F. 3.3K OHM 1/6W +/-5%	R222
T8-21LAAK-MA2	18-CB0333-JNX	RES. C.F. 33K OHM 1/6W +/-5%	R209
T8-21LAAK-MA2	18-CB0333-JNX	RES. C.F. 33K OHM 1/6W +/-5%	R210
T8-21LAAK-MA2	18-CB0391-JNX	RES. C.F. 390 OHM 1/6W +/-5%	R204
T8-21LAAK-MA2	18-CB0393-JNX	RES. C.F. 39K OHM 1/6W +/-5%	R212
T8-21LAAK-MA2	18-CB0393-JNX	RES. C.F. 39K OHM 1/6W +/-5%	R608
T8-21LAAK-MA2	18-CB0470-JNX	RES. C.F. 47 OHM 1/6W +/-5%	R224
T8-21LAAK-MA2	18-CB0470-JNX	RES. C.F. 47 OHM 1/6W +/-5%	R220
T8-21LAAK-MA2	18-CB0470-JNX	RES. C.F. 47 OHM 1/6W +/-5%	R223
T8-21LAAK-MA2	18-CB0471-JNX	RES. C.F. 470 OHM 1/6W +/-5%	R202
T8-21LAAK-MA2	18-CB0471-JNX	RES. C.F. 470 OHM 1/6W +/-5%	R401
T8-21LAAK-MA2	18-CB0472-JNX	CARBON RES. C.F. 4.7K OHM 1/6W +/-5%	R219
T8-21LAAK-MA2	18-CB0472-JNX	CARBON RES. C.F. 4.7K OHM 1/6W +/-5%	R270
T8-21LAAK-MA2	18-CB0472-JNX	CARBON RES. C.F. 4.7K OHM 1/6W +/-5%	R229
T8-21LAAK-MA2	18-CB0473-JNX	RES. C.F. 47K OHM 1/6W +/-5%	R206
T8-21LAAK-MA2	18-CB0562-JNX	RES. C.F. 5.6K OHM 1/6W +/-5%	R605
T8-21LAAK-MA2	18-CB0562-JNX	RES. C.F. 5.6K OHM 1/6W +/-5%	R316
T8-21LAAK-MA2	18-CB0562-JNX	RES. C.F. 5.6K OHM 1/6W +/-5%	R606
T8-21LAAK-MA2	18-CB0563-JNX	RES. C.F. 56K OHM 1/6W +/-5%	R607
T8-21LAAK-MA2	18-CB0680-JNX	RES. C.F. 68 OHM 1/6W +/-5%	R203
T8-21LAAK-MA2	18-CB0681-JNX	RES. C.F. 680 OHM 1/6W +/-5%	R207
T8-21LAAK-MA2	18-CB0820-JNX	RES. C.F. 82 OHM 1/6W +/-5%	R901
T8-21LAAK-MA2	18-CB0820-JNX	RES. C.F. 82 OHM 1/6W +/-5%	R269
T8-21LAAK-MA2	18-CB0820-JNX	RES. C.F. 82 OHM 1/6W +/-5%	R278
T8-21LAAK-MA2	18-CB0820-JNX	RES. C.F. 82 OHM 1/6W +/-5%	R904
T8-21LAAK-MA2	18-CD0100-JNX	RES. C.F. 10 OHM 1/4W +/-5%	J410
T8-21LAAK-MA2	18-CD0121-JNX	RES. C.F. 120 OHM 1/4W +/-5%	R403
T8-21LAAK-MA2	18-CD0189-JNX	RES. C.F 1.8 OHM 1/4W +/-5%	R305
T8-21LAAK-MA2	18-FG0180-JSX	RMOF 18OHM +/-5% 2W R=Y	R262
T8-21LAAK-MA2	25-BCB101-M1X	CAP.ELE 5MM 100UF 16VV 5X11 85 /	C219
T8-21LAAK-MA2	25-BCB101-M1X	CAP.ELE 5MM 100UF 16VV 5X11 85 /	C243
T8-21LAAK-MA2	25-BCB101-M1X	CAP.ELE 5MM 100UF 16VV 5X11 85 /	C252
T8-21LAAK-MA2	25-BCB101-M1X	CAP.ELE 5MM 100UF 16VV 5X11 85 /	C253
T8-21LAAK-MA2	25-BDB102-M1X	CAP.ELE 5MM 1000UF 25V 10*20 85 CD110	C305
T8-21LAAK-MA2	25-BDB102-M1X	CAP.ELE 5MM 1000UF 25V 10*20 85 CD110	C303
T8-21LAAK-MA2	25-BDB470-M1X	CAP.ELE 5MM 47UF 25VV 5X11 85 /	C402
T8-21LAAK-MA2	25-BDB470-M1X	CAP.ELE 5MM 47UF 25VV 5X11 85 /	C605
T8-21LAAK-MA2	25-BDB470-M1X	CAP.ELE 5MM 47UF 25VV 5X11 85 /	C104
T8-21LAAK-MA2	25-BDB471-M1X	CAP. ELEC 470 UF 25V +/-20%	C601
T8-21LAAK-MA2	25-BEB101-M1X	CAP. ELEC 100 UF 35V +/-20%	C307
T8-21LAAK-MA2	25-BFB100-M1X	CAP. ELEC 10 UF 50V +/-20%	C101
T8-21LAAK-MA2	25-BFB100-M1X	CAP. ELEC 10 UF 50V +/-20%	C237
T8-21LAAK-MA2	25-BFB100-M1X	CAP. ELEC 10 UF 50V +/-20%	C221
T8-21LAAK-MA2	25-BFB100-M1X	CAP. ELEC 10 UF 50V +/-20%	C203
T8-21LAAK-MA2	25-BFB100-M1X	CAP. ELEC 10 UF 50V +/-20%	C211
T8-21LAAK-MA2	25-BFB100-M1X	CAP. ELEC 10 UF 50V +/-20%	C202
T8-21LAAK-MA2	25-BFB100-M1X	CAP. ELEC 10 UF 50V +/-20%	C230
T8-21LAAK-MA2	25-BFB109-M1X	CAP. ELEC 1 UF 50V +/-20%	C250
T8-21LAAK-MA2	25-BFB109-M1X	CAP. ELEC 1 UF 50V +/-20%	C246
T8-21LAAK-MA2	25-BFB109-M1X	CAP. ELEC 1 UF 50V +/-20%	C249
T8-21LAAK-MA2	25-BFB109-M1X	CAP. ELEC 1 UF 50V +/-20%	C251
T8-21LAAK-MA2	25-BFB109-M1X	CAP. ELEC 1 UF 50V +/-20%	C245
T8-21LAAK-MA2	25-BFB109-M1X	CAP. ELEC 1 UF 50V +/-20%	C248

T8-21LAAK-MA2	25-BFB109-M1X	CAP. ELEC 1 UF 50V +/-20%	C247
T8-21LAAK-MA2	25-BFB109-M1X	CAP. ELEC 1 UF 50V +/-20%	C216
T8-21LAAK-MA2	25-BFB109-M1X	CAP. ELEC 1 UF 50V +/-20%	C106
T8-21LAAK-MA2	25-BFB109-M1X	CAP. ELEC 1 UF 50V +/-20%	C226
T8-21LAAK-MA2	25-BFB109-M1X	CAP. ELEC 1 UF 50V +/-20%	C609
T8-21LAAK-MA2	25-BFB220-M1X	CAP. ELEC 22 UF 50V +/-20%	C319
T8-21LAAK-MA2	25-BFB220-M1X	CAP. ELEC 22 UF 50V +/-20%	C317
T8-21LAAK-MA2	25-BFB479-M1X	CAP. ELEC 4.7 UF 50V +/-20%	C205
T8-21LAAK-MA2	25-BFB479-M1X	CAP. ELEC 4.7 UF 50V +/-20%	C318
T8-21LAAK-MA2	25-BLB100-M1X	CAP. ELEC 10 UF 250V +/-20%	C413
T8-21LAAK-MA2	25-PJA470-M1X	TCL25-PJA470-M1X= CAP.CELE 47UF/160V/+/-	C419
T8-21LAAK-MA2	26-AIC391-KBX	CAP. CER 390 PF 500V +/-10% B	C412
T8-21LAAK-MA2	26-EBP102-KBS	CAP.CER 1NF 50V - +/-10% B%	C306
T8-21LAAK-MA2	26-EBP102-KBS	CAP.CER 1NF 50V - +/-10% B%	C213
T8-21LAAK-MA2	26-EBP102-KBS	CAP.CER 1NF 50V - +/-10% B%	C212
T8-21LAAK-MA2	26-EBP103-ZFS	CAP.CER 10NF 50V +80% -20%	C207
T8-21LAAK-MA2	26-EBP103-ZFS	CAP.CER 10NF 50V +80% -20%	C005
T8-21LAAK-MA2	26-EBP103-ZFS	CAP.CER 10NF 50V +80% -20%	C218
T8-21LAAK-MA2	26-EBP103-ZFS	CAP.CER 10NF 50V +80% -20%	C311
T8-21LAAK-MA2	26-EBP103-ZFS	CAP.CER 10NF 50V +80% -20%	C108
T8-21LAAK-MA2	26-EBP104-ZFS	CAP. CER 0.1UF 50V +80%/-20%	C244
T8-21LAAK-MA2	26-EBP104-ZFS	CAP. CER 0.1UF 50V +80%/-20%	C242
T8-21LAAK-MA2	26-EBP104-ZFS	CAP. CER 0.1UF 50V +80%/-20%	C241
T8-21LAAK-MA2	26-EBP104-ZFS	CAP. CER 0.1UF 50V +80%/-20%	C240
T8-21LAAK-MA2	26-EBP104-ZFS	CAP. CER 0.1UF 50V +80%/-20%	C239
T8-21LAAK-MA2	26-EBP104-ZFS	CAP. CER 0.1UF 50V +80%/-20%	C238
T8-21LAAK-MA2	26-EBP104-ZFS	CAP. CER 0.1UF 50V +80%/-20%	C217
T8-21LAAK-MA2	26-EBP104-ZFS	CAP. CER 0.1UF 50V +80%/-20%	C210
T8-21LAAK-MA2	26-EBP104-ZFS	CAP. CER 0.1UF 50V +80%/-20%	C608
T8-21LAAK-MA2	26-EBP104-ZFS	CAP. CER 0.1UF 50V +80%/-20%	C611
T8-21LAAK-MA2	26-EBP104-ZFS	CAP. CER 0.1UF 50V +80%/-20%	C220
T8-21LAAK-MA2	26-EBP223-ZFS	CAP. CER 22NF 50V +80%/-20%	C206
T8-21LAAK-MA2	26-EBP470-JCS	CAP. CER 47 PF 50V +/-5%	C103
T8-21LAAK-MA2	26-EBP470-JCS	CAP. CER 47 PF 50V +/-5%	C102
T8-21LAAK-MA2	26-EBP472-KBS	CAP. CER 4700PF 50V +/-10%	C301
T8-21LAAK-MA2	27-MBC224-J0X	CAP. M.P.E 0.22UF 63V +/-5%	C310
T8-21LAAK-MA2	27-MBC224-J0X	CAP. M.P.E 0.22UF 63V +/-5%	C602
T8-21LAAK-MA2	27-MBC224-J0X	CAP. M.P.E 0.22UF 63V +/-5%	C603
T8-21LAAK-MA2	27-PBC104-J0X	CAP. P.E 0.1UF 63V +/-5%	C204
T8-21LAAK-MA2	27-PBC104-J0X	CAP. P.E 0.1UF 63V +/-5%	C214
T8-21LAAK-MA2	27-PBC103-J0X	CAP. P.E. 0.01UF 63V +/-5%	C401
T8-21LAAK-MA2	27-PBC154-J0X	CAP. P.E. 0.15 UF 63V +/-5%	C208
T8-21LAAK-MA2	27-PBC222-J0X	CAP. P.E 0.0022UF 63V +/-5%	C309
T8-21LAAK-MA2	27-PBC563-J0X	CAP. P.E 0.056 UF 63V +/-5%	C420
T8-21LAAK-MA2	27-PBC563-J0X	CAP. P.E 0.056 UF 63V +/-5%	C414
T8-21LAAK-MA2	27-PBC682-J0X	CAP. P.E 0.0068UF 63V +/-5%	C215
T8-21LAAK-MA2	34-A100K2-1IX	IND-F 10UH 50 265MA 1.4OHM 52MM AL0203-1	L204
T8-21LAAK-MA2	34-A100K2-1IX	IND-F 10UH 50 265MA 1.4OHM 52MM AL0203-1	L203
T8-21LAAK-MA2	34-A100K2-1IX	IND-F 10UH 50 265MA 1.4OHM 52MM AL0203-1	L202
T8-21LAAK-MA2	34-A100K2-1IX	IND-F 10UH 50 265MA 1.4OHM 52MM AL0203-1	L101
T8-21LAAK-MA2	34-A100K2-1IX	IND-F 10UH 50 265MA 1.4OHM 52MM AL0203-1	L201
T8-21LAAK-MA2	34-R100J2-0EX	COIL PL - 10 UH +/-5%	L206
T8-21LAAK-MA2	34-R100J2-0EX	COIL PL - 10 UH +/-5%	L205
T8-21LAAK-MA2	36-HDR020-XX0	TRANSFORMER HORIZ DRIVE BCT-1621	T402

T8-21LAAK-MA2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J415
T8-21LAAK-MA2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J416
T8-21LAAK-MA2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	R418A
T8-21LAAK-MA2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J412
T8-21LAAK-MA2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J417
T8-21LAAK-MA2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	R408A
T8-21LAAK-MA2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	JP202
T8-21LAAK-MA2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	JP101
T8-21LAAK-MA2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J420
T8-21LAAK-MA2	41-WJ0055-B00	WIREBAREJUMPER5.5MM	J425
T8-21LAAK-MA2	41-WJ0055-B00	WIREBAREJUMPER5.5MM	JZ903
T8-21LAAK-MA2	41-WJ0055-B00	WIREBAREJUMPER5.5MM	J232
T8-21LAAK-MA2	41-WJ0060-B00	WIRE-BARE	J609
T8-21LAAK-MA2	41-WJ0060-B00	WIRE-BARE	J202
T8-21LAAK-MA2	41-WJ0060-B00	WIRE-BARE	J244
T8-21LAAK-MA2	41-WJ0065-B00	1 R=N	J249
T8-21LAAK-MA2	41-WJ0065-B00	1 R=N	J008
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	D207
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	D206
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	D205
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J229
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J208
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J222
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J107
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J102
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J411
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J227
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J231
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J605
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J301
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J303
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J307
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J902
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J610
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J409
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J223
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J243
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J242
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J235
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J311
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J907
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J245
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	D220
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J426
T8-21LAAK-MA2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J212
T8-21LAAK-MA2	41-WJ0080-B00	WIREBAREJUMPER8MM	J007
T8-21LAAK-MA2	41-WJ0085-B00	WIREBAREJUMPER8.5MM	J914
T8-21LAAK-MA2	41-WJ0085-B00	WIREBAREJUMPER8.5MM	J915
T8-21LAAK-MA2	41-WJ0085-B00	WIREBAREJUMPER8.5MM	J913
T8-21LAAK-MA2	41-WJ0085-B00	WIREBAREJUMPER8.5MM	J904
T8-21LAAK-MA2	41-WJ0085-B00	WIREBAREJUMPER8.5MM	J228
T8-21LAAK-MA2	41-WJ0085-B00	WIREBAREJUMPER8.5MM	J309
T8-21LAAK-MA2	41-WJ0085-B00	WIREBAREJUMPER8.5MM	J310
T8-21LAAK-MA2	41-WJ0085-B00	WIREBAREJUMPER8.5MM	J214

T8-21LAAK-MA2	41-WJ0085-B00	WIREBAREJUMPER8.5MM	J305
T8-21LAAK-MA2	41-WJ0085-B00	WIREBAREJUMPER8.5MM	J602
T8-21LAAK-MA2	41-WJ0090-B00	WIREBAREJUMPER9MM	J234
T8-21LAAK-MA2	41-WJ0090-B00	WIREBAREJUMPER9MM	J221
T8-21LAAK-MA2	41-WJ0095-B00	WIREBAREJUMPER9.5MM	J403
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J601
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J238
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	R004
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J220
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J225
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J911
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J110
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J226
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J248
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J247
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J207
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J108
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J002
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J001
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J246
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J607
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J205
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J206
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J308
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J201
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J101
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J237
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J230
T8-21LAAK-MA2	41-WJ0100-B00	WIREBAREJUMPER10MM	J606
T8-21LAAK-MA2	41-WJ0105-B00	WIREBAREJUMPER10.5MM	J413
T8-21LAAK-MA2	41-WJ0110-B00	WIREBAREJUMPER11MM	J407
T8-21LAAK-MA2	41-WJ0110-B00	WIREBAREJUMPER11MM	J908
T8-21LAAK-MA2	41-WJ0115-B00	WIREBAREJUMPER11.5MM	J916
T8-21LAAK-MA2	41-WJ0115-B00	WIREBAREJUMPER11.5MM	J215
T8-21LAAK-MA2	41-WJ0115-B00	WIREBAREJUMPER11.5MM	J216
T8-21LAAK-MA2	41-WJ0115-B00	WIREBAREJUMPER11.5MM	J217
T8-21LAAK-MA2	41-WJ0115-B00	WIREBAREJUMPER11.5MM	J218
T8-21LAAK-MA2	41-WJ0115-B00	WIREBAREJUMPER11.5MM	J219
T8-21LAAK-MA2	41-WJ0120-B00	WIREBAREJUMPER12MM	J917
T8-21LAAK-MA2	41-WJ0125-B00	WIREBAREJUMPER12.5MM	J608
T8-21LAAK-MA2	41-WJ0125-B00	WIREBAREJUMPER12.5MM	J404
T8-21LAAK-MA2	41-WJ0125-B00	WIREBAREJUMPER12.5MM	J204
T8-21LAAK-MA2	41-WJ0125-B00	WIREBAREJUMPER12.5MM	J210
T8-21LAAK-MA2	41-WJ0125-B00	WIREBAREJUMPER12.5MM	J304
T8-21LAAK-MA2	41-WJ0125-B00	WIREBAREJUMPER12.5MM	J241
T8-21LAAK-MA2	41-WJ0125-B00	WIREBAREJUMPER12.5MM	J240
T8-21LAAK-MA2	41-WJ0125-B00	WIREBAREJUMPER12.5MM	J203
T8-21LAAK-MA2	41-WJ0125-B00	WIREBAREJUMPER12.5MM	J811
T8-21LAAK-MA2	41-WJ0125-B00	WIREBAREJUMPER12.5MM	J906
T8-21LAAK-MA2	41-WJ0150-B00	WIREBAREJUMPER15MM	J006
T8-21LAAK-MA2	41-WJ0150-B00	WIREBAREJUMPER15MM	J211
T8-21LAAK-MA2	41-WJ0150-B00	WIREBAREJUMPER15MM	J224
T8-21LAAK-MA2	41-WJ0150-B00	WIREBAREJUMPER15MM	J918
T8-21LAAK-MA2	41-WJ0170-B00	WIREBAREJUMPER17MM	J905

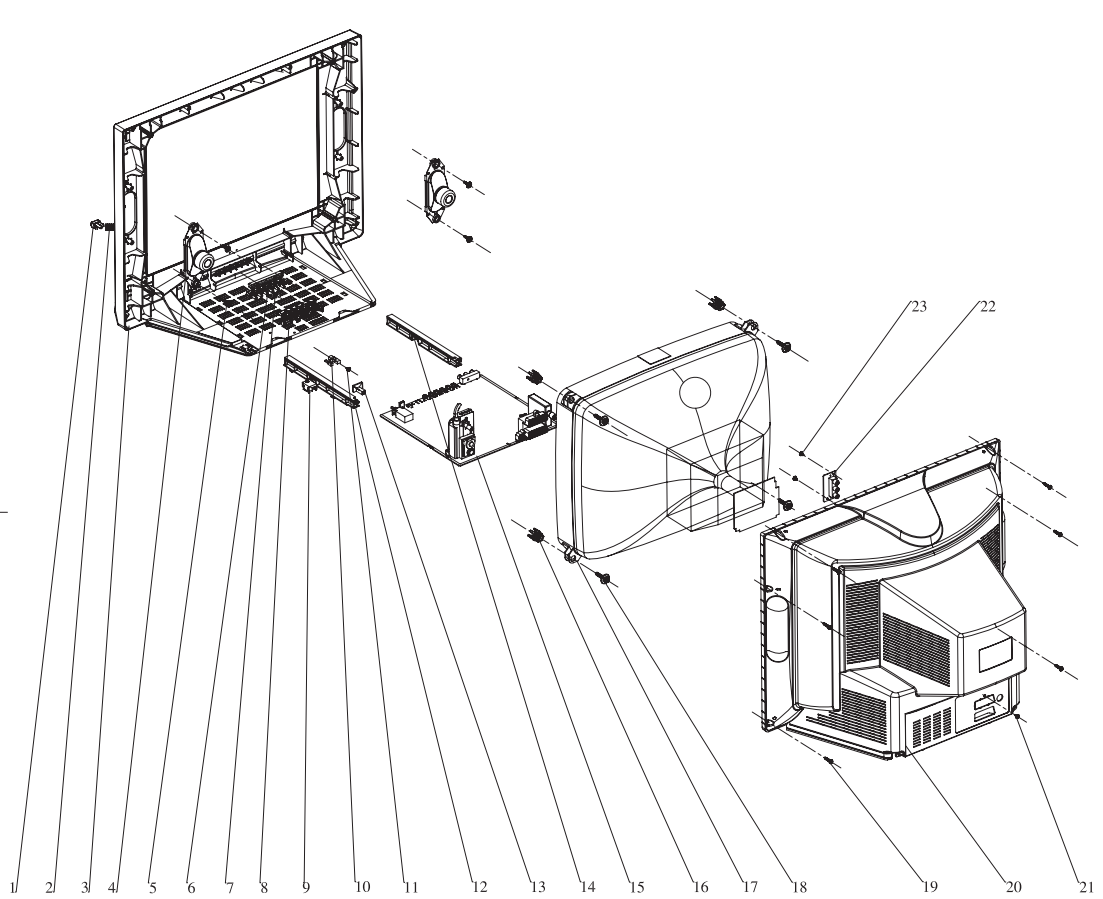
T8-21LAAK-MA2	41-WJ0175-B00	WIREBAREJUMPER17.5MM	J408
T8-21LAAK-MA2	41-WJ0175-B00	WIREBAREJUMPER17.5MM	J406
T8-21LAAK-MA2	41-WJ0175-B00	WIREBAREJUMPER17.5MM	J402
T8-21LAAK-MA2	41-WJ0185-B00	WIREBAREJUMPER18.5MM	J213
T8-21LAAK-MA2	41-WJ0200-B00	WIREBAREJUMPER20MM	J405
T8-21LAAK-MA2	45-OSC24M-5N6BR	CRYSTAL 24.576MHZ 30PPM R=Y	X201
T8-21LAAK-MA2	46-33079W-02XG	PIN BASE *2 TJC3-2A	P602
T8-21LAAK-MA2	46-33079W-03XG	PIN BASE *3 TJC3-3A	P603
T8-21LAAK-MA2	46-33079W-04XG	PIN BASE *4 TJC3-4A	P203
T8-21LAAK-MA2	46-39402W-04XG	BASE	P401
T8-21LAAK-MA2	62-227680-0UA	TV RAW SUPPORT CABLE CHASSIS -- 00 00 00	
T8-21LAAK-MA2	62-227680-1UA	TV RAW SUPPORT CABLE FBT -- 01 00 00 R=N	
T8-21LAAK-MA2	63-B30080-BT4G	S/T SCREW B 3 X 8 BT	FOR Q402
T8-21LAAK-MA2	63-B30100-AB4G	SCREW-ST 3MM 10MM JIS B 1122 53 0 0 R=Y	FOR IC301
T8-21LAAK-MA2	64-P30080-104G	M/C SCREW P 3 X 8	FOR Q451
T8-21LAAK-MA2	64-P30080-104G	M/C SCREW P 3 X 8	FOR IC601
T8-21LAAK-MA2	66-343730-0B0	HOLLOW RIVET 1.6MMX3.0MMX3.2MM	FOR Q402A
T8-21LAAK-MA2	66-343730-0B0	HOLLOW RIVET 1.6MMX3.0MMX3.2MM	FOR T401
T8-21LAAK-MA2	66-343730-0B0	HOLLOW RIVET 1.6MMX3.0MMX3.2MM	FOR L451
T8-21LAAK-MA2	66-343740-0B0	HOLLOW RIVET (2.3MMX4.0MMX3.5MM)	FOR P401
T8-21LAAK-MA2	67-H27292-2A0	HEAT SINK	Y451
T8-21LAAK-MA2	67-H30752-GA0	RAW HEATSINK -- GA0 00 R=N	Y402
T8-21LAAK-MA2	67-H82981-6A0	RAW HEATSINK -- 05 00 R=N	Y601
T8-21LAAK-MA2	67-M40068-2E4	TV RAW SUPPORT -- -- 00 00 00 R=N	Y301
T8-21LAAK-MA2	11-DA8050-CBS	TR 25V 1.5_A NPN 1W 100MHZ TO-92C 3DA805	Q201
T8-21LAAK-MA2	11-DA8050-CBS	TR 25V 1.5_A NPN 1W 100MHZ TO-92C 3DA805	Q202
T8-21LAAK-MA2	26-EBP221-JCS	CAP. CER 220 PF 50V +/-5%	C308
T8-21LAAK-MA2	66-343730-0B0	HOLLOW RIVET 1.6MMX3.0MMX3.2MM	FOR L458
T8-21LAAK-MA2	10-0FR104-FBX	DIODE FR104 (FAST RECTIFIER)	D454
T8-21LAAK-MA2	10-GBY228-FPX	D-FSR GBY228 1500V 2.5A R=Y	D455
T8-21LAAK-MA2	11-RFS630-0CXB	N-CHANNEL MOSFET IRFS630B	Q451
T8-21LAAK-MA2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	R460
T8-21LAAK-MA2	18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	R213
T8-21LAAK-MA2	25-DFA479-M1XR	CAP.ELEC 4.7UF 50V +/-20%	C452
T8-21LAAK-MA2	18-CB0471-JNX	RES. C.F. 470 OHM 1/6W +/-5%	R921
T8-21LAAK-MA2	18-CB0471-JNX	RES. C.F. 470 OHM 1/6W +/-5%	R922
T8-21LAAK-MA2	10-79C9V1-DBX	D-PR /A /_V 9.1V BZX79C9V1	D250
T8-21LAAK-MA2	18-FG0180-JSX	RMOF 18OHM +/-5% 2W R=Y	R261
T8-21LAAK-MA2	18-CB0103-JNX	RES. C.F. 10K OHM 1/6W +/-5%	R205
T8-21LAAK-MA2	26-EBP221-JCS	CAP. CER 220 PF 50V +/-5%	C002
T8-21LAAK-MA2	26-EBP333-KBS	CAP.CER 33NF 50V +/-10%	C612
T8-21LAAK-MA2	26-EBP333-KBS	CAP.CER 33NF 50V +/-10%	C613
T8-21LAAK-MA2	18-CE0109-JNX	RES. C.F. 1 OHM 1/2W +/-5%	J233
T8-21LAAK-MA2	18-CB0221-JNX	RES. C.F. 220 OHM 1/6W +/-5%	R259
T8-21LAAK-MA2	40-00NX56-MAP1XG	TV PCB MA BD R=Y	
T8-21LAAK-MA2	26-EBP103-ZFS	CAP.CER 10NF 50V +80% -20%	C451
T8-21LAAK-MA2	41-WJ0055-B00	WIREBAREJUMPER5.5MM	J427
T8-21F1SAK-MA3HM	T8-21LAAK-PW2	ASS'Y - POWER PARTASY	
T8-21LAAK-PW2	10-00RU3C-FPX	D-PIN 2.5V 1.5_A 1000V 0.0001 0W DO-15 R	D808
T8-21LAAK-PW2	10-0FR104-FBX	DIODE FR104 (FAST RECTIFIER)	D813
T8-21LAAK-PW2	10-0FR104-FBX	DIODE FR104 (FAST RECTIFIER)	D811
T8-21LAAK-PW2	10-0FR104-FBX	DIODE FR104 (FAST RECTIFIER)	D810
T8-21LAAK-PW2	10-0FR104-FBX	DIODE FR104 (FAST RECTIFIER)	D804
T8-21LAAK-PW2	10-0FR107-FBX	D-PIN 1.3V 1_A 1000VV 500NS /W DO-15 FR1	D809

T8-21LAAK-PW2	10-0RL255-EBX	D-PIN 1.1V 2_A 800V / /W DO-15 RL255	DB804
T8-21LAAK-PW2	10-0RL255-EBX	D-PIN 1.1V 2_A 800V / /W DO-15 RL255	DB803
T8-21LAAK-PW2	10-0RL255-EBX	D-PIN 1.1V 2_A 800V / /W DO-15 RL255	DB802
T8-21LAAK-PW2	10-0RL255-EBX	D-PIN 1.1V 2_A 800V / /W DO-15 RL255	DB801
T8-21LAAK-PW2	10-0RU4YX-FPX	D-FSR GRU4YX 100V 4A R=Y	D812
T8-21LAAK-PW2	10-1N4007-EBX	D-PIN 1.1V 1_A 1000V / /W DO-41 1N4007	D802
T8-21LAAK-PW2	10-1N4148-ABX	DIODE 1N4148 (SWITCHING)	D814
T8-21LAAK-PW2	10-79C3V9-DBX	D-PR /A /_V 3.9V BZX79C3V9	ZD802
T8-21LAAK-PW2	10-79C3V9-DBX	D-PR /A /_V 3.9V BZX79C3V9	ZD803
T8-21LAAK-PW2	10-79C4V7-DBX	D-PR /A /_V 4.7V BZX79C4V7	ZD804
T8-21LAAK-PW2	10-79C8V2-DBX	D-ZENER BZX55C8V2 8.2V 500MI0W R=N	ZD805
T8-21LAAK-PW2	10-HER108-FBX	DIODE HER108	D803
T8-21LAAK-PW2	11-2N5551-CBX	TR 160V 0.6_A NPN 0.625W 100MHZ TO-92 2N	Q802
T8-21LAAK-PW2	11-S7N60F-0CX	MOSFET N 600V 7A 48W TO-220F JCS7N60F	Q801
T8-21LAAK-PW2	11-TC144E-0BX	TRANSISTOR DTC144ESA	Q808
T8-21LAAK-PW2	13-NCP133-7PP	OPTICOUP NCP1337P	IC801
T8-21LAAK-PW2	13-PC123X-9YP	TCL13-PC123X-9YP= PHOTOCOUPLER PC123X9YF	IC803
T8-21LAAK-PW2	18-CB0103-JNX	RES. C.F. 10K OHM 1/6W +/-5%	R808
T8-21LAAK-PW2	18-CB0122-JNX	RES. C.F. 1.2K OHM 1/6W +/-5%	R805
T8-21LAAK-PW2	18-CB0153-JNX	RES. C.F. 15K OHM 1/6W +/-5%	R810
T8-21LAAK-PW2	18-CB0183-JNX	RES. C.F. 18K OHM 1/6W +/-5%	R831
T8-21LAAK-PW2	18-CB0222-JNX	RES. C.F. 2.2K OHM 1/6W +/-5%	R820
T8-21LAAK-PW2	18-CB0331-JNX	RES. C.F. 330 OHM 1/6W +/-5%	R819
T8-21LAAK-PW2	18-CB0470-JNX	RES. C.F. 47 OHM 1/6W +/-5%	R811
T8-21LAAK-PW2	18-CB0821-JNX	RES. C.F. 820 OHM 1/6W +/-5%	R818
T8-21LAAK-PW2	18-FE0100-JNX	RESISTOR METAL OXIDE FILM 10R00HM 5% 1/2	R842
T8-21LAAK-PW2	18-CD0470-JNX	RES. C.F. 47 OHM 1/4W +/-5%	R809
T8-21LAAK-PW2	18-CE0332-JNX	RES. C.F. 3.3K OHM 1/2W +/-5%	R841
T8-21LAAK-PW2	18-DB0223-FNX	TCL18-DB0223-FNX= RES. M.F. 22K OHM 1/6W	R803
T8-21LAAK-PW2	18-DD0184-FNX	RES. M.F. 180K OHM 1/4W +/-1%	R829
T8-21LAAK-PW2	18-FE0102-JNX	RESISTOR METAL OXIDE FILM 1K00HM 5% 1/2W	R804
T8-21LAAK-PW2	18-FF0271-JSX	RES.M.O.F 1.0W 270 OHM +/-5%	R816A
T8-21LAAK-PW2	18-FF0680-JSX	RESISTOR 金属氧化膜 680HM +/-5% 1W RS1FS	R817
T8-21LAAK-PW2	18-FG0183-JSX	RMOF 18KOHM +/-5% 2W R=Y	R814
T8-21LAAK-PW2	18-FG0223-JSX	RMOF 2W +-5%22KΩ	R837
T8-21LAAK-PW2	18-FG0569-JSX	RMOF 5.6OHM +/-5% 2W R=Y	R846
T8-21LAAK-PW2	18-FH0473-JLX	RESISTOR METAL OXIDE FILM 47K00HM 5% 3WW	R812
T8-21LAAK-PW2	18-KE0105-JNX	RES. GLASS GLAZE 1M OHM 1/2W +/-5%	R839
T8-21LAAK-PW2	18-KE0475-JNX	RES. GLASS GLAZE 4.7M OHM 1/2W +/-5%	R801
T8-21LAAK-PW2	18-KF0825-JH3	RES. H.VOLT.CC 8.2M OHM 1W +/-5%	R838
T8-21LAAK-PW2	18-MJ0108-JDX	RESISTOR CEMENTED 0R1OHM 5% 5WW -	R806
T8-21LAAK-PW2	22-NTC509-XX2T	NTC 5OHM 4.25_A	RT802
T8-21LAAK-PW2	22-PTC909-3A5	PTC MZ73BHL-9Ω±20%	RT801
T8-21LAAK-PW2	25-BCB101-M1X	CAP.ELE 5MM 100UF 16VV 5X11 85 /	C842
T8-21LAAK-PW2	25-BCB101-M1X	CAP.ELE 5MM 100UF 16VV 5X11 85 /	C844
T8-21LAAK-PW2	25-BDB102-M1X	CAP.ELE 5MM 1000UF 25V 10*20 85 CD110	C832
T8-21LAAK-PW2	25-BDB102-M1X	CAP.ELE 5MM 1000UF 25V 10*20 85 CD110	C827
T8-21LAAK-PW2	25-BDB102-M1X	CAP.ELE 5MM 1000UF 25V 10*20 85 CD110	C829
T8-21LAAK-PW2	25-BDB470-M1X	CAP.ELE 5MM 47UF 25VV 5X11 85 /	C850
T8-21LAAK-PW2	25-BDB470-M1X	CAP.ELE 5MM 47UF 25VV 5X11 85 /	C812
T8-21LAAK-PW2	25-BDB470-M1X	CAP.ELE 5MM 47UF 25VV 5X11 85 /	C847
T8-21LAAK-PW2	25-BDB470-M1X	CAP.ELE 5MM 47UF 25VV 5X11 85 /	C843A
T8-21LAAK-PW2	25-BFB100-M1X	CAP. ELEC 10 UF 50V +/-20%	C816
T8-21LAAK-PW2	25-BJG101-M1X	CAP. ELEC 100 UF 160V +/-20%	C824

T8-21LAAK-PW2	26-AIC221-KBX	CAP.CER 220P0F 500VV -	C820
T8-21LAAK-PW2	26-AIC221-KBX	CAP.CER 220P0F 500VV -	C822
T8-21LAAK-PW2	26-AIC221-KBX	CAP.CER 220P0F 500VV -	C819
T8-21LAAK-PW2	26-AKC152-KRX	CAP. CER 1500 pF 1KV +/-10%	C811A
T8-21LAAK-PW2	26-AKC331-KBX	CAP.CER 330P0F 1K0V -	C817
T8-21LAAK-PW2	26-AKC471-KRX	CAP.CER 470P0F 1KVV -	C805
T8-21LAAK-PW2	26-AKC472-MEX	CAP. CER 4700 pF 1KV +/-20%	C810A
T8-21LAAK-PW2	26-AKL103-MFX	CAP. CER 10 NF 1KVDC +/-20%	C809
T8-21LAAK-PW2	26-EBP102-KBS	CAP.CER 1NF 50V - +/-10% B%	C814
T8-21LAAK-PW2	26-EBP102-KBS	CAP.CER 1NF 50V - +/-10% B%	C838
T8-21LAAK-PW2	26-EBP104-ZFS	CAP. CER 0.1UF 50V +80%/-20%	C813
T8-21LAAK-PW2	26-EBP104-ZFS	CAP. CER 0.1UF 50V +80%/-20%	C839
T8-21LAAK-PW2	26-EBP104-ZFS	CAP. CER 0.1UF 50V +80%/-20%	C851
T8-21LAAK-PW2	26-EBP473-ZFS	TCL26-EBP473-ZFS= CAP. CER 47NF 50V +80/	C806
T8-21LAAK-PW2	26-EBP561-JCS	CAP. CEP 560PF 50V +/-5%	C807
T8-21LAAK-PW2	36-LIF010-XX0	LINE FILTER LCL-2821A	LF802
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J828
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J813
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J819
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J821
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J836
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J835
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J834
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J823
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J829
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J830
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J831
T8-21LAAK-PW2	35-392170-0IX	FERR BEAD BF-I35050R-730	L802
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	L804
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	R845
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J832
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J833
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J840
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J839
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J844
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J841
T8-21LAAK-PW2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	J842
T8-21LAAK-PW2	41-WJ0055-B00	WIREBAREJUMPER5.5MM	J845
T8-21LAAK-PW2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	R830
T8-21LAAK-PW2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J814
T8-21LAAK-PW2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J803
T8-21LAAK-PW2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	J822
T8-21LAAK-PW2	41-WJ0085-B00	WIREBAREJUMPER8.5MM	J837
T8-21LAAK-PW2	41-WJ0095-B00	WIREBAREJUMPER9.5MM	J810
T8-21LAAK-PW2	41-WJ0095-B00	WIREBAREJUMPER9.5MM	J809
T8-21LAAK-PW2	41-WJ0100-B00	WIREBAREJUMPER10MM	J801
T8-21LAAK-PW2	41-WJ0100-B00	WIREBAREJUMPER10MM	JP805
T8-21LAAK-PW2	41-WJ0100-B00	WIREBAREJUMPER10MM	J802
T8-21LAAK-PW2	41-WJ0100-B00	WIREBAREJUMPER10MM	JP810
T8-21LAAK-PW2	41-WJ0100-B00	WIREBAREJUMPER10MM	JP807
T8-21LAAK-PW2	41-WJ0100-B00	WIREBAREJUMPER10MM	JP808
T8-21LAAK-PW2	41-WJ0100-B00	WIREBAREJUMPER10MM	JP809
T8-21LAAK-PW2	41-WJ0125-B00	WIREBAREJUMPER12.5MM	J820
T8-21LAAK-PW2	46-10962W-02XG	PIN BASE *2 TJC2-2A	CN802

T8-21LAAK-PW2	50-04000D-1GS1G	FUSE T4AL/250V	F801
T8-21LAAK-PW2	64-P30080-104G	M/C SCREW P 3 X 8	FOR Q801
T8-21LAAK-PW2	66-20517X-0B7	FUSE HOLDER	FOR F801
T8-21LAAK-PW2	66-343730-0B0	HOLLOW RIVET 1.6MMX3.0MMX3.2MM	FOR T801
T8-21LAAK-PW2	66-343730-0B0	HOLLOW RIVET 1.6MMX3.0MMX3.2MM	FOR C824
T8-21LAAK-PW2	66-343740-0B0	HOLLOW RIVET (2.3MMX4.0MMX3.5MM)	FOR C803
T8-21LAAK-PW2	67-H38013-2A0	RAW HEATSINK -- 02 00 R=Y	Y801
T8-21LAAK-PW2	71-DYP000-WX1	LABEL	FOR Y801
T8-21LAAK-PW2	26-EBP681-JCS	CAP. CER 680 PF 50V +/-5%	IC801 PIN5 TO PIN4
T8-21LAAK-PW2	18-DB0273-FNX	RES. M.F. 27K OHM 1/6W +/-1%	R832
T8-21LAAK-PW2	25-BDB470-M1X	CAP.ELE 5MM 47UF 25VV 5X11 85 /	C835
T8-21LAAK-PW2	11-DA8050-CBS	TR 25V 1.5_A NPN 1W 100MHZ TO-92C 3DA805	Q804
T8-21LAAK-PW2	27-AQT224-MV3	FILM CAPACITOR 220NOF 22.5MMMM 250VACV -	CX802
T8-21LAAK-PW2	10-79C18V-DBX	D-PR /A /_V 18V BZX79C18	'-' TO C847'+','+' TO C847 '-'
T8-21LAAK-PW2	25-BDB470-M1X	CAP.ELE 5MM 47UF 25VV 5X11 85 /	C826
T8-21LAAK-PW2	10-1N4001-EBX	DIODE 1N4001 (RECTIFIER)	D815
T8-21LAAK-PW2	25-BHB470-M1X	CAP.ELE 5MM 47UF 100V 10*16 85 B41827系	C846
T8-21LAAK-PW2	25-GCB102-M1X	CAP.ELE 5MM 1000UF 16V 10*20 105 ZT	C833
T8-21LAAK-PW2	26-APL222-ME7	CAP.CER 2200PF 250V CT7-Y1-250V-10C-E-22	CY803
T8-21LAAK-PW2	13-AZ431A-ZAT	IC AZ431AZ-ATRE1	IC802
T8-21F1SAK-MA3HM	T8-21F1AK-KE1	ASS'Y - KEY BDKIT	
T8-21F1AK-KE1	48-TAC001-XX0	TACT SWITCH	K006
T8-21F1AK-KE1	48-TAC001-XX0	TACT SWITCH	K005
T8-21F1AK-KE1	48-TAC001-XX0	TACT SWITCH	K004
T8-21F1AK-KE1	48-TAC001-XX0	TACT SWITCH	K003
T8-21F1AK-KE1	48-TAC001-XX0	TACT SWITCH	K002
T8-21F1AK-KE1	48-TAC001-XX0	TACT SWITCH	K001
T8-21F1AK-KE1	62-226920-0HA	TV RAW HOLDER LED -- 01 00 R=N	FOR LED1
T8-21F1AK-KE1	02-IRR001-XX1T	IR RECEIVER 37.9KHZ 5V N HM338A	IR01
T8-21F1AK-KE1	11-SC1815-YBX	TR 50VV 150MA_A NPN 0.4W 80MHZ TO-92 2SC	Q001
T8-21F1AK-KE1	14-LED05R-XX1	LED RED FB205	D001
T8-21F1AK-KE1	18-CB0100-JNX	RES. C.F. 10 OHM 1/6W +/-5%	R001
T8-21F1AK-KE1	18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	R002
T8-21F1AK-KE1	18-CB0103-JNX	RES. C.F. 10K OHM 1/6W +/-5%	R003
T8-21F1AK-KE1	18-CB0471-JNX	RES. C.F. 470 OHM 1/6W +/-5%	R009
T8-21F1AK-KE1	18-CB0561-JNX	RES. C.F. 560 OHM 1/6W +/-5%	R010
T8-21F1AK-KE1	18-CB0102-JNX	RES. C.F. 1K OHM 1/6W +/-5%	R011
T8-21F1AK-KE1	18-CB0271-JNX	RES. C.F. 270 OHM 1/6W +/-5%	R007
T8-21F1AK-KE1	18-CB0331-JNX	RES. C.F. 330 OHM 1/6W +/-5%	R008
T8-21F1AK-KE1	25-BDB470-M1X	CAP.ELE 5MM 47UF 25VV 5X11 85 /	C001
T8-21F1SAK-MA3HM	T8-NX56LA-AV2	ASS'Y - AV PARTSKIT	
T8-NX56LA-AV2	47-RCA254-XX0G	SOCKET-RCA 1 RD-BU-GN-RD-WH-YW R	P901
T8-NX56LA-AV2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	JC901
T8-NX56LA-AV2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	JC902
T8-NX56LA-AV2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	JC904
T8-NX56LA-AV2	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	JC905
T8-NX56LA-AV2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	JC903
T8-NX56LA-AV2	41-WJ0075-B00	WIREBAREJUMPER7.5MM	JC906
T8-21F1SAK-MA3HM	T8-21F1SAK-OT3	ASS'Y - OTHER PARTSKIT	
T8-21F1SAK-OT3	07-457FF5-NF9T	TUNER A% 散装 NTSC 45.75MHZ F CONNECTOR	TU101
T8-21F1SAK-OT3	45-SAWD15-39C0D	SAW FILTER 45.75MHZ D1539C	Z201
T8-21F1SAK-OT3	70-271510-00A	SERVICE CARD	FOR PRODUCTION USE
T8-21F1SAK-OT3	71-270870-0A9	LABEL	
T8-21F1SAK-OT3	90-0DSTG1-SR1U	HEAT SINK DSTG-1	

T8-21F1SAK-0T3	46-CD030T-04K01G	WIRE 四芯灯丝排线 300MM 4 TJC3 SCN 2.5MM	S402
T8-21F1SAK-0T3	46-CD035T-06K01G	WIRE CRT RGB 6排线 350MM 6 TJC3 SCN 2.5M	P201
T8-21F1SAK-0T3	25-BMJ221-M1S	CAP.ELE 10MM 220UF 400V 30*30 85 \	C803
T8-21F1SAK-0T3	46-35063W-03XG	PIN BASE *3 VH-3A	CN803
T8-21F1SAK-0T3	66-343740-0B0	HOLLOW RIVET (2.3MMX4.0MMX3.5MM)	FOR CN803
T8-21F1SAK-0T3	41-WJ0050-B00	TCL41-WJ0050-B00= WIRE BARE JUMPER 5MM R	JB902
T8-21F1SAK-0T3	41-WJ0060-B00	WIRE-BARE	JB901
T8-21F1SAK-0T3	41-WJ0075-B00	WIREBAREJUMPER7.5MM	JP804
T8-21F1SAK-0T3	41-WJ0075-B00	WIREBAREJUMPER7.5MM	JP803
T8-21F1SAK-0T3	18-CB0222-JNX	RES. C.F. 2.2K OHM 1/6W +/-5%	R012
T8-21F1SAK-0T3	48-TAC001-XX0	TACT SWITCH	K007
T8-21F1SAK-0T3	51-DC0180-0CN0HG	POWER CORD 1800MM Y DTIII-2P-03	
T8-21F1SAK-0T3	67-H46157-0A0	RAW HEATSINK HEAT SINK 00 00 R=Y	Y1;Y2
T8-21F1SAK-0T3	36-TRF326-BX2	TRANSFORMER SWITCHING TRANSFORMEN 12V 10	T801
T8-21F1SAK-0T3	13-LA7814-10P	IC LA78141	IC301
T8-21F1SAK-0T3	13-TDA111-45P	IC MCU(WRITE) TDA11145PS/N3/3	IC201(CP)
03-21F1SAK-B012S	V8-NX56BLA-TM4V512	SOFTWARE SOFTWARE CODE	FOR IC201



序号	物料编码	名称	数量	备注
1	56-453970-0HA	电源钮	1	
2	67-X36004-0E2	弹簧	1	
3	55-455700-2CL	前壳	1	
4	42-45108D-XT1G	中音扬声器	2	
5	63-S40120-BT4G	自攻螺钉	4	固定喇叭
6	56-455600-0HA	排钮	1	ETC009机芯专用
7	63-B30080-AB4G	自攻螺钉W3X8AB	2	ETC009机芯专用
8	56-458760-0HA	排钮	1	其它机芯
9	62-455500-0UN	电源线扣	1	
10	56-453980-0HC	透镜	1	
11	63-W30100-AB4G	自攻螺钉	1	固定透镜
12	62-450570-0UN	导轨L	1	
13	62-312090-0HA	电源制套	1	
14	62-450560-0UN	导轨R	1	
15	XX-XXXXX-XXXX	机芯	1	
16	62-455430-0CN	塑胶码胆柱	4	21″纯平高管使用
17	XX-XXXXX-XXXX	21″CRT纯平SLIM	1	
18	63-Z60450-AB4G or 63-Z60300-AB4G	组合自攻螺钉	4	固定CRT管，高管使用45mm，矮管使用30mm
19	55-459190-0CL	后壳	1	
20	63-B40200-AB2G	自攻螺丝	6	固定后壳
21	63-F30100-BT3G	螺丝3X10BT3		固定后AV
22	XX-XXXXX-XXXX	侧AV板	1	
23	63-B30080-AB4G	自攻螺钉W3X8AB	2	固定侧AV

REV Nb	Initiator	Source release/Tool release dispatch/Modification description	Date	Designer

Plastic Injection Technology	Compact Technology: <=100 ¡À0.2mm >100 NF58000 Reduce & See INE005 normal	Gaz Assisted Technology:	<=100 ¡À0.1mm >100 <=200 ¡À0.2mm >200 ¡À0.1%
Metallic Technology	Length <=1000 ¡À0.2mm ; >1000 ¡À0.4mm Internal cut punching ¡À0.1mm (1 time); ¡À0.5mm (>1 time)	Cutting Tool:	with blades ¡À0.3mm(Dim <=300mm) swiss ¡À0.1mm (Dim<=300mm)

PJO Name: 21F1S	PJO Nb:	Draw.Nb:	TCL Nb:
PART NAME: 爆炸图		Designer: 王 平 2008.12.05	Project
TCL Mechanical Department		Check:	Material: / Scale: 1:1
		Approve:	Weight(g): / Sheet: 1/1