Service Manual

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1. Precautions and Safety Notices

Prior to using this service manual,please ensure that you have carefully followed all the procedures outlined in the user's manual for this product.

(1) Read all of these instructions.
(2) Save these instructions.
(3) Follow all warnings and instructions a marked on the product.
(4) Unplug this product from the wall outlet before cleaning.Do not use liquid cleaners or aerosol cleaners, use a damp cloth for cleaning.
(5) Do not use this product near water.
(6) Do not place this product on an unstable cart,stand or tablle.The product may fall,causing serious damage to the product.
(7) Do not tear up the EMI label, if the label has been destroyed,that must to past same size label on the same position.
(8) Slots and openings in the cabinet and the back or bottom are provided for ventilation,to ensure reliable operation of the product and to protect it from overheating,those openings must not be blocked or covered.The openings should never be blocked by placing the product on a bed,sofa, rug, or other similar surface.This product should not be placed in a built-in installation less proper ventilation is provided.
(9) This products should be operated from the type of power source indicated on the marketin label. If you are not sure of the type of power available, consult your dealer or local power company
(10) This product is equipped with a 3-wire grounding type plug,a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature, if you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the purpose of the grounding-type plug.
(11) Pay attention to the code which connects with apheliotropism board of inside panel.and don't hook it.
(12) Do not allow anything to rest on the power cord.Do not locate this product where persons will walk on the cord.
(13) If an extension cord is used with this product,make sure that the total of the ampere ratings on the product plugged into the extension cord to the waplugged into outlet does not exceed 15 ampere.
(14) Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock.Never spill liquid of any kind on the product.
(15) Do not attempt to service this product yourself,as opening or removing covers may expose you to dangerous voltage points or other risks.Refer all servicing to service personnel.
(16) Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions :

- **a.** When the power cord or plug is damaged or frayed.
- **b.** If liquid has been spilled into the product.
- **c.** If the product has been exposed to rain or water.
- **d.** If the product does not operate normally,when the operating instructions are followed.Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extension work by a qualified technician to restore the product to normal operation.
- **e.** If the product has been dropped or the cabinet has been damaged.
- **f.** If the product exhibits a distinct change in performance,indicating a need for service.

2. Specification

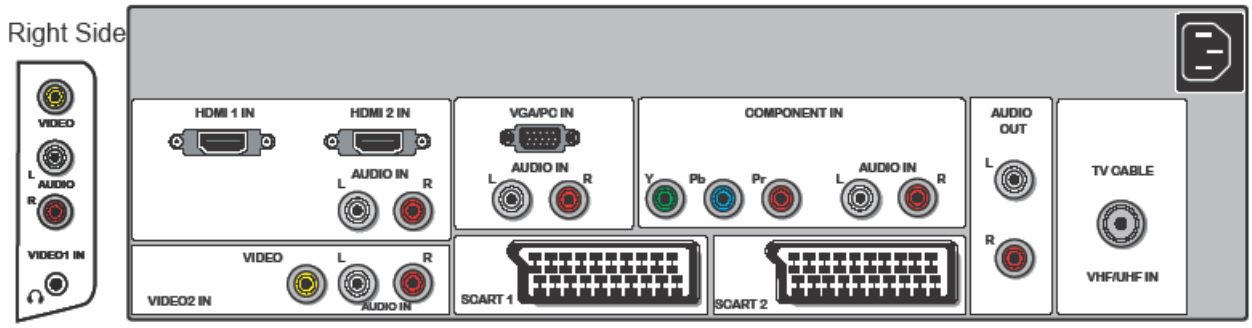
32” panel specification:

Item	Specifications
Panel Name	AUO
Display pixels	1366 (H) x 768 (V) pixels (1 pixel = 1 RGB cells)
Display Area	697.68mm (H) x 392.26mm (V)
Pixel Pitch	0.17025(H) x 0.51075(V)
Display Colors	16.77M
Pixel Arrangement	R+G+B vertical stripe
Brightness	500cd/m^2 typical
Contrast Ratio	1000:1 typical at CR ≧ 10
Viewing Angle	±88° (H), ±88°(V) Typical
Color Chromaticity (CIE)	White: X = 0.28 , Y = 0.29
Frame Rate	50/60Hz
Response Time	10ms typical
Surface Treatment	Haze 25%，3H

37” panel specification:

Item	Specifications
Panel Name	Samsung
Display pixels	1366 (H) x 768 (V) pixels (1 pixel = 1 RGB cells)
Display Area	819.36mm (H) x 460.89mm (V)
Pixel Pitch	0.6mm
Display Colors	16.7M
Pixel Arrangement	R+G+B vertical stripe
Brightness	500cd/m^2 typical
Contrast Ratio	1000:1 typical at CR ≧ 10
Viewing Angle	176 (H)/ 176(V) Typical
Color Chromaticity (CIE)	White: X = 0.280 ± 3% , Y = 0.290 ± 3%
Response Time	8ms (Gray to Gray)
Surface Treatment	Hard-Coating (3H), Anti-Glare, Reflectance < 2%

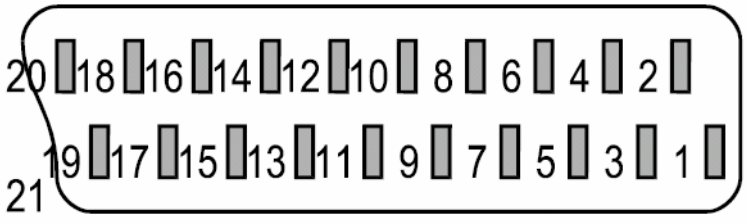
INPUT Source :



Inputs & Outputs	Signals	Video Format	Connector types	
TV	Analog TV	PAL	IEC Type	TV
VIDEO1	Video + L/R Audio + Earphone Out	CVBS	RCA	
VIDEO2	Video + L/R Audio	CVBS	RCA	
SCART1	Audio L/R in/out, CVBS in/out, S-Video, RGB	Scart 21Pin	VIDEO3 (Scart1)	SCART1
SCART2	Audio L/R in/out, CVBS in, S-Video, RGB	Scart 21Pin	VIDEO4 (Scart2)	SCART2
YPbPr	Component (Y, Pb/Cb, Pr/Cr) + L/R Audio	480i, 480p, 720p, 1080i	RCA	YPbPr
HDMI1	HDMI	Digital RGB +Digital Audio	HDMI 19 Pin	HDMI1
HDMI2	HDMI	Digital RGB +Digital Audio	HDMI 19 Pin	HDMI2
VGA	VGA+ L/R Earphone	Analog RGB	D-SUB 15 Pin	VGA
AUDIO OUT	L/R Audio		RCA	STEREO
AC IN	AC Power IN	AC 100~240V	YC14	AC IN

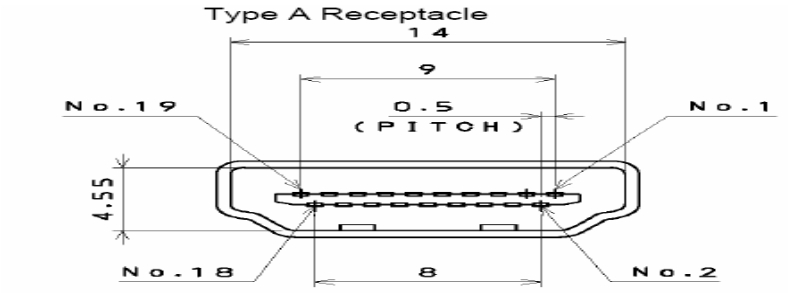
Note:

A. SCART connector



Pin Number	Pin Name	Signal Level	Impedance
1	Audio Output, Right	0.5V RMS	<1 kΩ
2	Audio Input, Right	0.5V RMS	<1 kΩ
3	Audio Output, Left	0.5V RMS	<1 kΩ
4	Ground, Audio	-	-
5	Ground, Blue	-	-
6	Audio Input, Left	0.5V RMS	<1 kΩ
7	Blue Input	0.7V	75 Ω
8	Function Select (A/V Control)	High (9.5-12V) – A/V Mode, Mid (5-8V) – Wide-screen, Low (0-2V) – TV Mode	>10 kΩ
9	Ground, Green	-	-
10	Comms Data 2	-	-
11	Green Input	0.7V	75 Ω
12	Comms Data 1	-	-
13	Ground, Red	-	-
14	Ground, blanking	-	-
15	Red Input	0.7V	75 Ω
16	RGB switching Control	High (1-3V) – RGB, Low (0-0.4) – Composite	75 Ω
17	Ground, Video input & output	-	-
18	Ground, RGB Switching control	-	-
19	Video Output, composite	1V including sync	75 Ω
20	Video Input, composite	1V including sync	75 Ω
21	Common Ground, shield	-	-

B. HMDI connector is a type A receptacle for video/audio mode.



1. TMDS Data 2+	**9.** TMDS Data 0-	**17.** CEC/GND
2. TMDS Data 2 shield	**10.** Clock +	**18.** +5V Power
3. TMDS Data 2-	**11.** Clock shield	**19.** Hot Plug Detect
4. TMDS Data 1+	**12.** Clock -	
5. TMDS Data 1 shield	**13.** CEC	
6. TMDS Data 1-	**14.** NC	
7. TMDS Data 0+	**15.** DDC CLK	
8. TMDS Data 0 shield	**16.** DDC DATA	

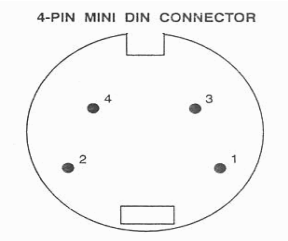
C. D-Sub Connector IN. (This function also can provides to HDTV.)

D-Sub type Connector pin assignment		
1. Red Video	6. Red Ground	11. GND
2. Green Video	7. Green Ground	12. SDA For DDC1/2B
3. Blue Video	8. Blue Ground	13. H-sync.

4. GND	9. +5V from PC	14. V-sync.
5. Vdd from PC for DDC	10. Sync. GND	15. SCL For DDC1/2B

D. RCA jacks are all female type.

E. Mini DIN CNC 4 Pins (SCN570S3NS00000) for S-video, the pin assignment is described as below:



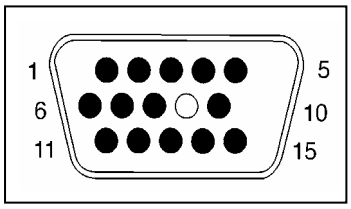
1: Ground
2: Ground
3: Y
4: C

HDMI	
Format	DVI 1.0
Level/Impedance	0.5~3.0Vp-p/100 Ohm (Differential),50 Ohm (Single ending)
TMDS Mode	Single Link
Frequency	Fh = 31~80 kHz Fv = 56~76 Hz
Maximum Pixel Clock	135 MHz
DDC 1/2B	Compliant with Revision 1.0
Connector	HDMI x 1
Analog HD15 PC Signal (RGB)	
Format	R, G, B Analog
Level/Impedance	0.7Vp-p / 75Ω
DDC 1/2B	Compliant with Revision 1.0
Sync	H/V separate 3V TTL level / 1kΩ
Frequency	Fh = 31~80 kHz Fv = 50~75 Hz
Maximum Pixel Clock	135 Mhz
Connector	Mini D-Sub 15 pin (female) x 1
Video (Composite) CVBS Signal	
Format	NTSC, 4.43NTSC, PAL_M, PAL(B,G,H,D,N), SECAM
Level / Impedance	1.0Vp-p / 75Ω
S-Video (Y/C) Signal	
Format	Y, C
Level / Impedance	Y: 1.0Vp-p / 75Ω C: ± 286 mV/ 75Ω
Analog HD15 Video Signal (YPbPr/YCbCr)	
Format	Y, Pb, Pr or Y, Cb, Cr
Level / Impedance	Y: 1.0Vp-p / 75Ω Pb/Cb, Pr/Cr: 0.7 ± 0.035Vp-p / 75Ω

HDMI Timing				
STANDARD	**RESOLUTION**	**V FREQ Hz**	**H FREQ kHz**	**CLK MHz**
ATSC, 480i	720x480	60	15.7	27
ATSC, 480p	720x480	60	31.5	27
ATSC, 1080i	1920x1080	60	33.7	74.2
ATSC, 720p	1280x720	60	45.0	74.2
ATSC, 576i	720x576	50	15.6	27
RGB PC Timing				
STANDARD	**RESOLUTION**	**V FREQ Hz**	**H FREQ kHz**	**CLK MHz**
VGA	640x480	60	31.47	25.16
VGA	640x480	75	37.5	31.5
SVGA	800x600	60	37.88	40
SVGA	800x600	75	46.9	49.5
XGA	1024x768	60	48.36	65.0
XGA	1024x768	75	60.02	78.75
SXGA	1280x1024	60	64	108
SXGA	1280x1024	75	80	135
MAC	640x480	67	35	30.24
Non-VESA	720x400	70	31.5	28
Video & S-Video AV Timing				
STANDARD	**RESOLUTION**	**V FREQ Hz**	**H FREQ kHz**	**CLK MHz**
NTSC	525	60	15.734	12.65
PAL(B,G,H,D,I)	625	50	15.625	14.50
SECAM	625	50	15.625	14.50
4.43NTSC	525	60	15.734	12.65
PAL-M	525	60	15.734	12.65
PAL-N	625	50	15.625	14.50
HDTV/Component AV Timing				
SDTV 525i	720x525	60	15.735	27
SDTV 625i	720x625	50	15.625	27
SDTV 480p	720x480	60	31.5	27
HDTV 720p	1280x720	60	50.0	74.2
HDTV 1080i	1920x1080	60	33.7	74.2

Power Source	AC100 – 240 V, 60/50 Hz
Sound Output	10W X2, 8 Ohm.

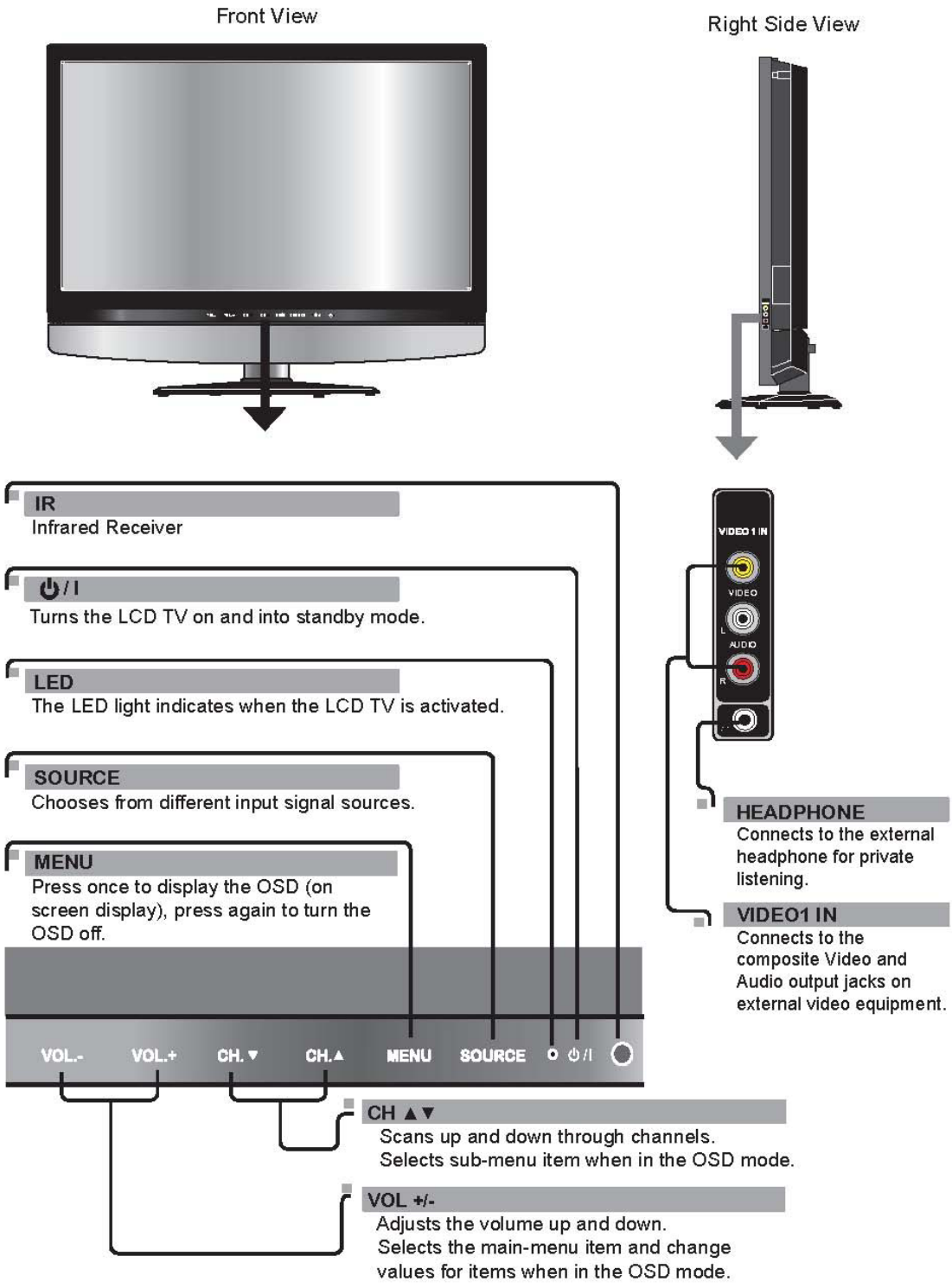
Signal Connector Pin Assignment



Pin	Assignment	Pin	Assignment	Pin	Assignmen
1.	Red	6.	Red Ground	11.	Ground
2.	Green	7.	Green Gro und	12.	SDA
3.	Blue	8.	Blue Ground	13.	Horizontal Sy
4.	Ground	9.	Not Connected	14.	Vertical Sync.
5.	Self Test	10.	Sync. Ground	15.	SCL

3. Front Panel Function Control Description

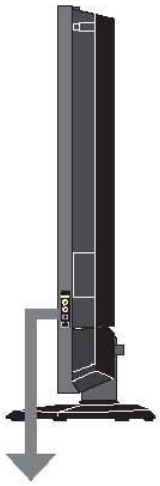
Operation, Adjust and Programming



Front View

Right Side View





IR
Infrared Receiver

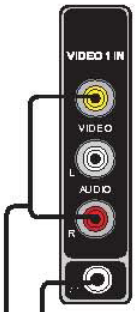
⏻/I
Turns the LCD TV on and into standby mode.

LED
The LED light indicates when the LCD TV is activated.

SOURCE
Chooses from different input signal sources.

MENU
Press once to display the OSD (on screen display), press again to turn the OSD off.



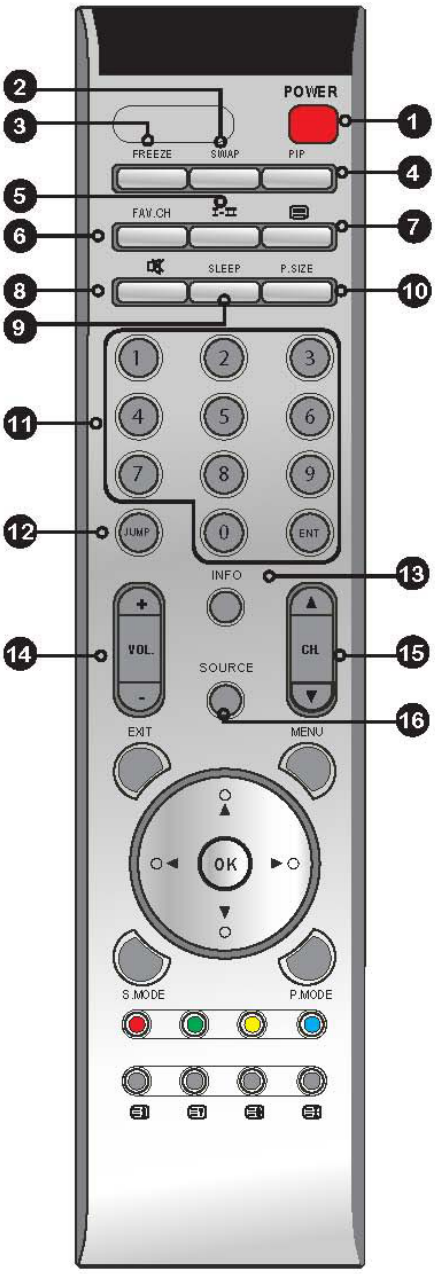


HEADPHONE
Connects to the external headphone for private listening.

VIDEO1 IN
Connects to the composite Video and Audio output jacks on external video equipment.

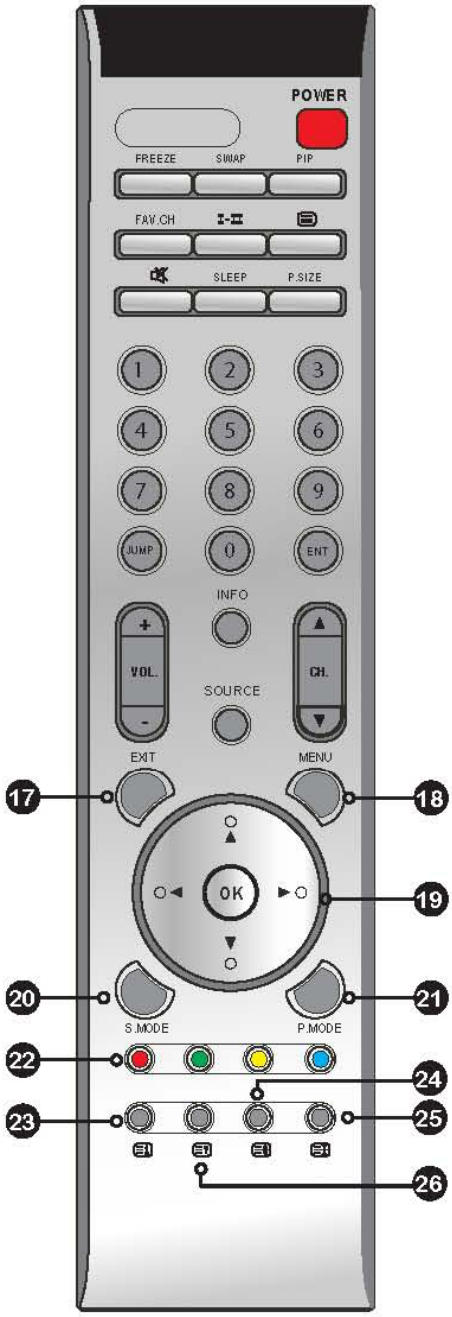
CH ▲▼
Scans up and down through channels.
Selects sub-menu item when in the OSD mode.

VOL +/-
Adjusts the volume up and down.
Selects the main-menu item and change values for items when in the OSD mode.



1	POWER	Turns the LCD TV on and off.
2	SWAP	Swaps between the main and sub window in PIP/POP mode.
3	FREEZE	Pressing **FREEZE** to freeze the current picture, press again to restore the picture.
4	PIP	Turns PIP/POP on and off.
5	I-II	Cycles through the TV sound options (NICAM) : MONO/DUAL/STEREO
6	FAV.CH	Pressing **FAV.CH** displays favorite channels.
7		Turns on and off the Teletext function.
8		Mutes and restores the audio
9	SLEEP	Cycles through the LCD TV sleep timer: OFF/30/60/90/120 mins
10	P.SIZE	Cycles through Widescreen mode settings :NORMAL /FULL/WIDE/ZOOM/ AUTO
11	0-9/ENT	Pressing a number selects a channel. Following selection, pressing **ENT** activates the channel, or channel activates automatically in 3 seconds.
12	JUMP	Returns to previously selected channel.
13	INFO	Pressing once displays a variety of information such as the current channel and the input source.
14	VOL.+-	Increases and decreases volume.
15	CH.▲▼	Scans up and down the channels.
16	SOURCE	Pressing **SOURCE** displays the source list, use ▲▼ to select the video equipment connected to the video inputs of your LCD TV : TV/VIDEO1/VIDEO2/ VIDEO3/VIDEO4/VIDEO5/VIDEO6/ VIDEO7/COMPUTER

"Not all region supports Teletext-please check with your program service provider"



17	EXIT	Exits the OSD menu.
18	MENU	Displays the OSD menu on the screen.
19	▲▼►◄ OK	Cycles through OSD options and selects individual menu items. OK confirms option settings.
20	S.MODE	Selects sound effect options: Surround/ Live/Dance/Techno/Classic/Soft/Rock/ Pop/Off.
21	P.MODE	Selects picture mode: Vivid/High-Bright/ Cinema/Sport/User
22		Accesses the TELETEXT items or corresponding pages.
23		Displays the main index in TELETEXT mode.
24		Displays the top, bottom or all of page, to easily read in TELETEXT mode.
25		Freezes a multi-page passage on screen inTELETEXT mode.
26		Reveals hidden information such as the answer to a quiz in TELETEXT mode.

Effective range:
The remote can control the LCD TV from up to 5m away, if pointed directly at the receiver.

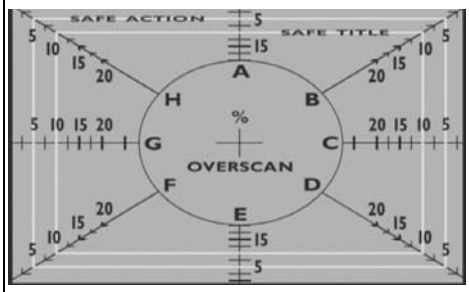
The operation of each OSD controls is described as following table:

Menu	Options	Sub-Options	Function and Description
VIDEO 	**Picture Mode**	Vivid →Standard →Cinema →Sport→User.	Press repeatedly for different picture modes: Vivid →Standard →Cinema→Sport →User.
	Contrast	0…100 **(80)**	Fine tune the contrast.
	Brightness	0…100 **(50)**	Fine tune the Bright
	Saturation	0…100 **(70)**	Fine tune the contrast.
	Hue	-30…+30 **(0)**	Fine tune the contrast.
	Sharpness	0…7 **(4)**	Fine tune the contrast.
	Color Temperature	Cool	Set the color temperature type.
		Nature	
		Warm	
		User	Red/Green/Blue: 0…255
	Noise Reduction	**Strong→Middle→Low→Off**	Strong→Middle→Low→Off
	Auto Setting (only for VGA)	**Press OK button**	Press OK button to automatically adjust the display setting to optimize performance based on the VGA mode.
	Phase (only for VGA)	0…100	Control the signal phase to improve focus clarity and image stability based on the VGA mode.
	Manual Clock (only for VGA)		Control the width of the picture based on the VGA.
	Display Adjustment (only for VGA)	**H Position**	Adjust the position of the picture left and right in the window.
		V Position	Adjust the position of the picture up and down in the window.
AUDIO 	**Bass**	0…100 **(50)**	Fine tune the bass value.
	Treble	0…100 **(50)**	Fine tune the treble value.
	Balance	-50…+50 **(0)**	Fine tune the balance value.
	Sound Effect	**Surround**	Select the preset effec mode to match your music type and achieve stunning effects.
		Live	
		Dance	
		Techno	
		Classic	
		Soft	
		Rock	
		POP	
		Off	Close this function.
TV 	**Region Selection**	Western Europe, UK	Use "Left/Right" keys to select the region
	Searching	Auto search channels.	To select and confirm this selection, it will automatically search all recievable channels and put the programs into memory in sequence from low requancy to high frequancy
	Manual Scan	Searching the channel by Manual	● Press "OK" to confirm and display a dialog for setting: ● Use "Left" and "Right" to select "PR Start"; Note that the PR before PR Start number won't be overwrote. ● EX: PR Start 5, PR 1~4 will be kept as usual.

	Update Search		● Use "up" or "down" key to highlight the item. ● Use "enter" to Start Update Search. ● Press "enter" to end the search and return.
	Program Edit	Edit the channel name.	● Use "up" or "down" to select Channel Use "enter" to confirm,and a sub menu below comes up ● Use "up" and "down" to select change property,use "enter" to confirm edit it. Select "Store" and push "enter" to exit.
	Favorite	Edit/Delete/Empty/ New	Press Ok key to display Favorite channel list and press ◄► to operate Edit/Delect/Empty/ New.
SETUP 	**Parental**	**Channel Lock**	Press ◄► buttons to select the channel you want to lock.
		Videl Lock	Press ◄► buttons to select the input video you want to lock.
		Change Password	Press OK button to display the password confirm menu. And use 0-9 keys to enter a new four-digit password, and then confirm the new password by entering it again.
	Language	**English**、Spanish、French、German、Italian、Russian、portuguese、	Set on-the-screen language.
	Osd Transparent	Off/**On**	Press Off/On to control the translucence of the OSD on-screen menus' background.
	Gamma	**On/Off/**Middle	Adjust the display gamma correction: On/Off/Middle.
	Default	Reset to default value.	Reset the items in the setup menu except the protected-items.

4. Adjusting Procedure

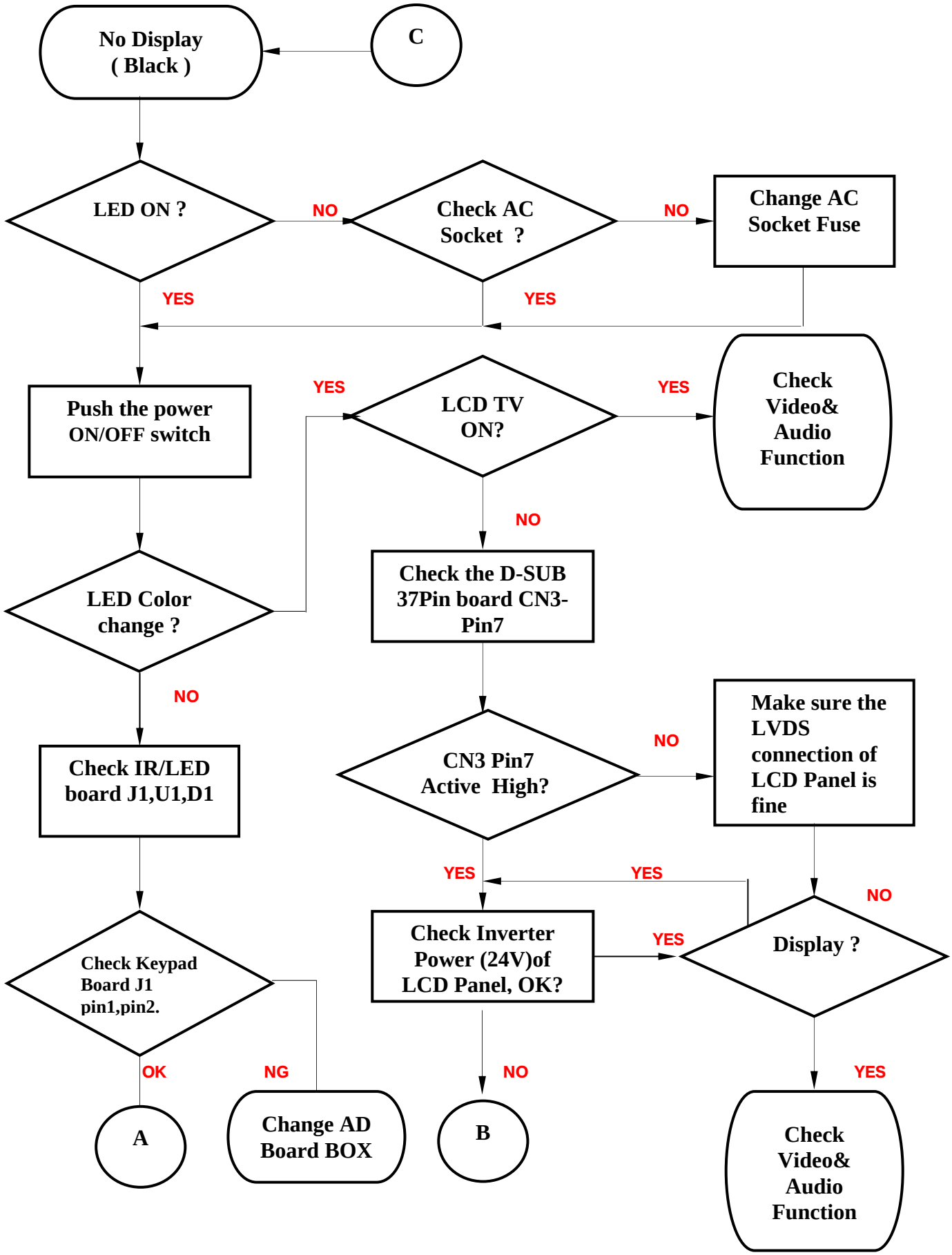
ITEM Program Menu.		Equipments	Requiremer	Procedure and SPEC
1	**VIDEO adjustment**	DVD Video Cable	Play DVD Set DVD to interlaced output	Screen is clear and fluent
2	**S-VIDEO**	DVD S-Video Cable	Play DVD Set DVD to interlaced output	Screen is clear and fluent
3	**DVD (Y,Cb,Cr) 480i**	DVD Component Cable	Play DVD(Y,Cr,Cb) Play DVD Set DVD to interlaced output	Screen is clear and fluent
4	**DVD (Y,Pb,Pr) 480p/720p/1080i**	DVD Component Cable 720p/1080i DVD Player Samsung HD-931	Play DVD(Y,Pr,Pb) Set the DVD to progressive output	Screen is clear and fluent
5	**HDTV (Y,Pb,Pr) 720p/1080i**	HDTV Receiver ATSC HDTV Tuner SAMSUNG SIR-T165 BS Tuner: **Panasonic TU-BHD300** Component Cable	Play HDTV (Y,Pr,Pb)	Screen is clear and fluent D-VHS Digital HDTV Video Cassette Recorder JVC HM-DH30000U Panasonic NV-DH2
6	**VGA/HDMI**	PC VGA Cable DVI Cable	PC Mode	**1.** Each Mode can display normally。If there is a specific Mode that is not appropriate after switching ，press Auto Adjust can automated adjust to appropriate screen. **2.** Confirm PC can automated identify the model of PDP.
7	**VGA**	TV BOX VGA Cable		Utilize external-connected TV BOX, watching the TV program; the screen is clear and fluent.

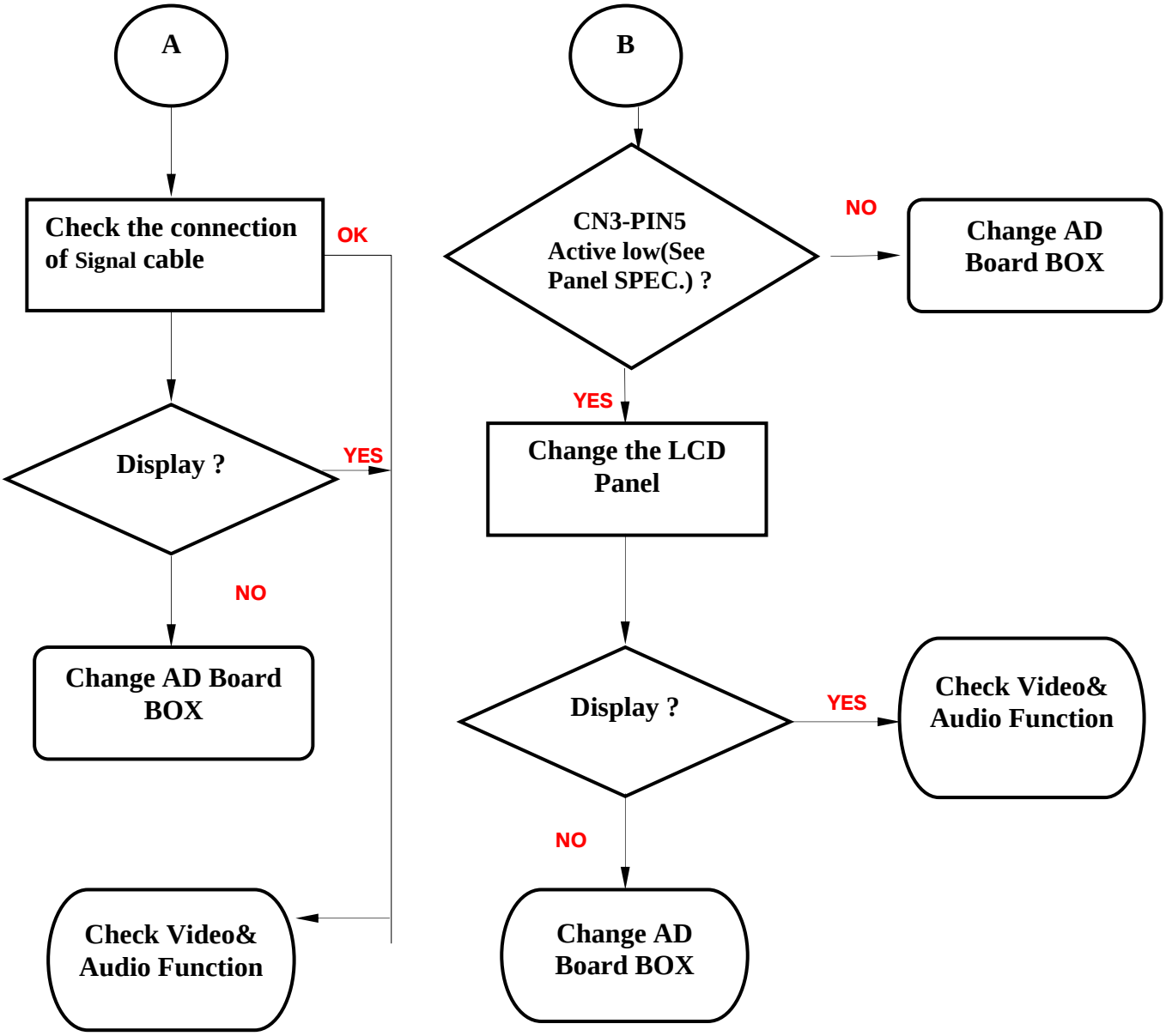
8	**WINDOWS. OVERSCAN (6%)**	DVD S-Video Cable Video Cable	Play DVD test disc VIDEO ESSENTIALS Set DVD to interlaced output	**1.** Select SOURCE then choose VIDEO or SVIDEO. **2.** Sending the signal from DVD test disc (eighth paragraph)  **3.** Watch the screen to check if sees the block screen within SAFE ACTION.
9	**NTSC/PAL switch**	DVD S-Video Cable Video Cable	Play DVD test disc VIDEO ESSENTIALS Set DVD to interlaced output	**1.** Select SOURCE then choose VIDEO or S-VIDEO. **2.** Sending the signal from DVD test disc (sixth paragraph)  **3.** Switch DVD to output mode NTSC/PAL, see if there is the action of switch
10	**480P/480i switch**	DVD Component Cable	Play DVD test disc VIDEO ESSENTIALS Set the DVD to progressive output (P-SCAN)	**1.** Select SOURCE then choose VIDEO or S-VIDEO. **2.** Sending the signal from DVD test disc (sixth paragraph)  **3.** Switch DVD output mode P-SCN ON/OFF, see if there is the action of switch mode on the screen.(480i/480p).

11	**Audio adjustment**	Pattern Generator Sound input External connect left-right trumpet(10~15W/4Ω)	Any Pattern	**1.** Select SOURCE **2.** Then press MENU KEY enter AUDIO adjustment item.
12	**a. Volume**			**1.** ←,→Key Set the sound volume. **2.** Check if the action is normal.
13	**b. Treble**			**1.** Press←,→Key Set the high pitch volume **2.** Check if the action is normal. **3.** The initial value is ”16”
	c. Bass			**1.** Press←,→Key Set the low pitch volume. **2.** Check if the action is normal. **3.** The initial value is ”16”
	d. Balance			**1.** Press←,→Key Set the balance between left-right trumpet. **2.** Check if the action is normal. **3.** The initial value is located at middle.
14	**Language adjustment**			1. Select required language. 2. Initial value is set to English or set upon clients’ requirement.

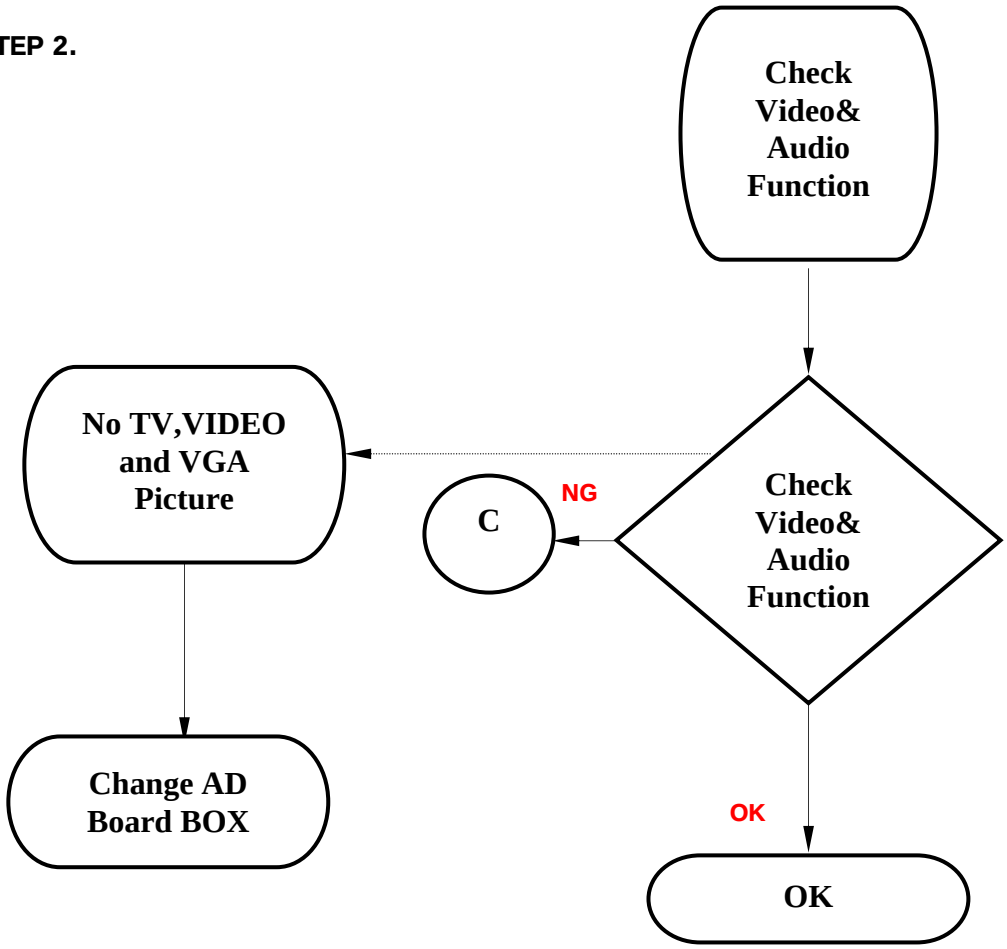
5. Trouble Shooting Flow Chart

STEP 1.

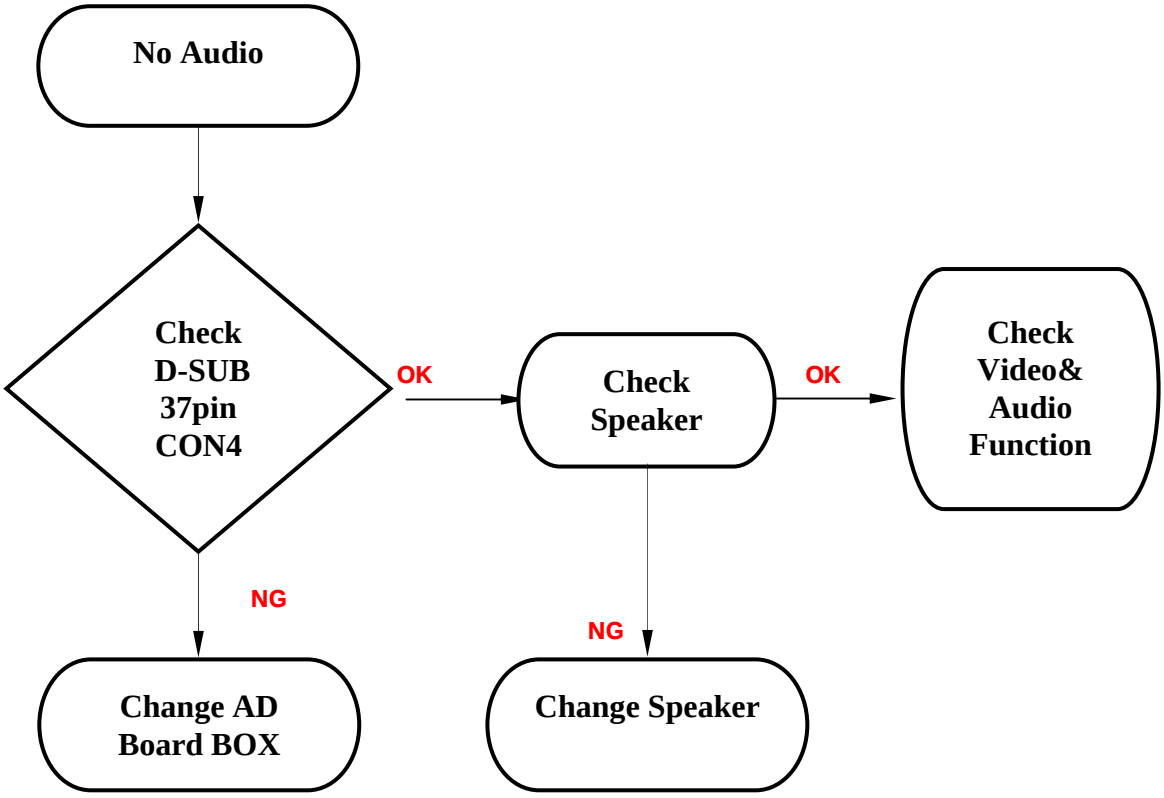



A
Check the connection of Signal cable
OK
Display ?
YES
NO
Change AD Board BOX
Check Video& Audio Function
B
CN3-PIN5 Active low(See Panel SPEC.) ?
NO
Change AD Board BOX
YES
Change the LCD Panel
Display ?
YES
Check Video& Audio Function
NO
Change AD Board BOX

STEP 2.

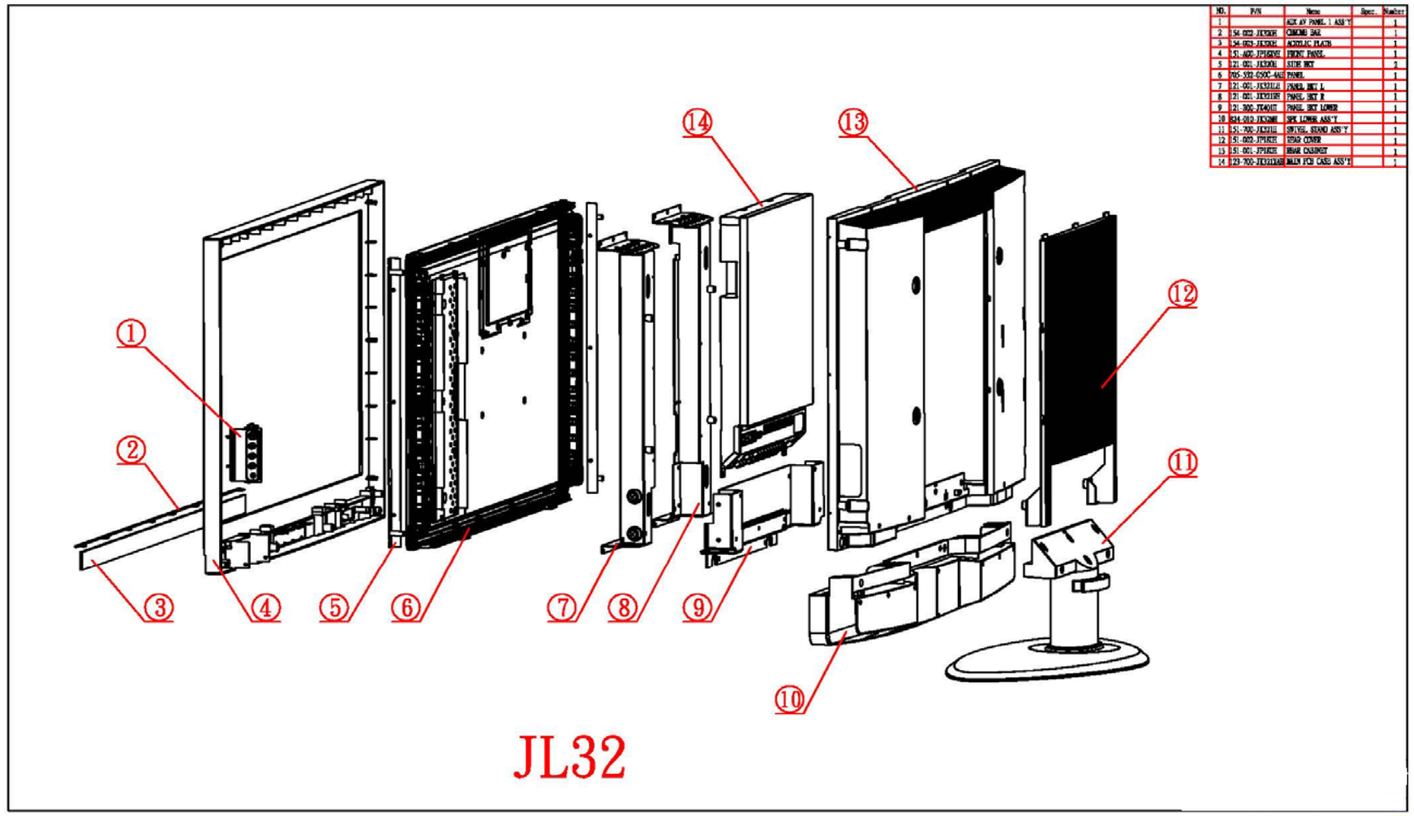

Check Video& Audio Function
Check Video& Audio Function
NG
C
No TV,VIDEO and VGA Picture
Change AD Board BOX
OK
OK

STEP 3.


No Audio
Check D-SUB 37pin CON4
OK
Check Speaker
OK
Check Video& Audio Function
NG
NG
Change AD Board BOX
Change Speaker

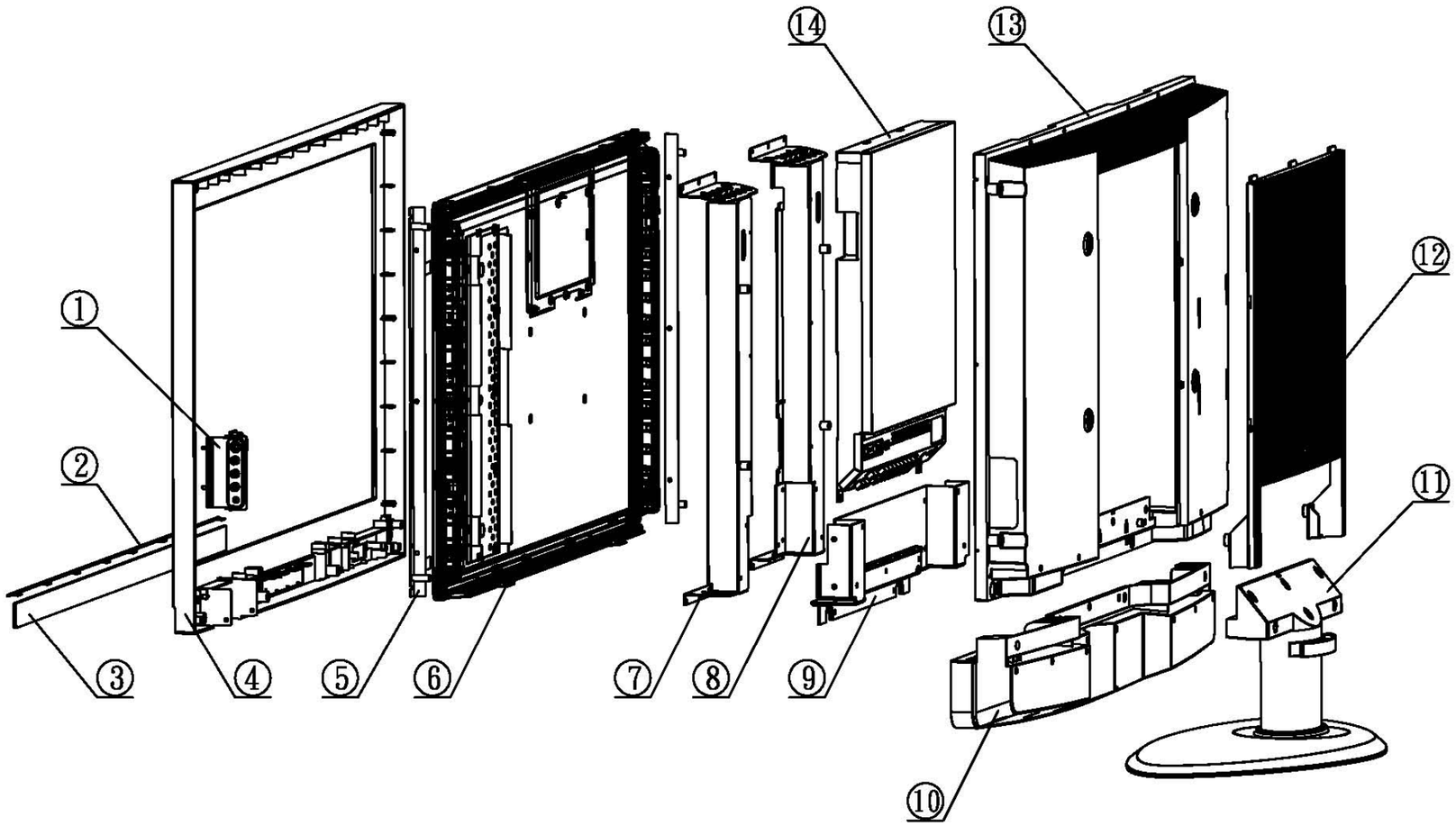
6. Exploded Diagram and Spare Parts List

32”



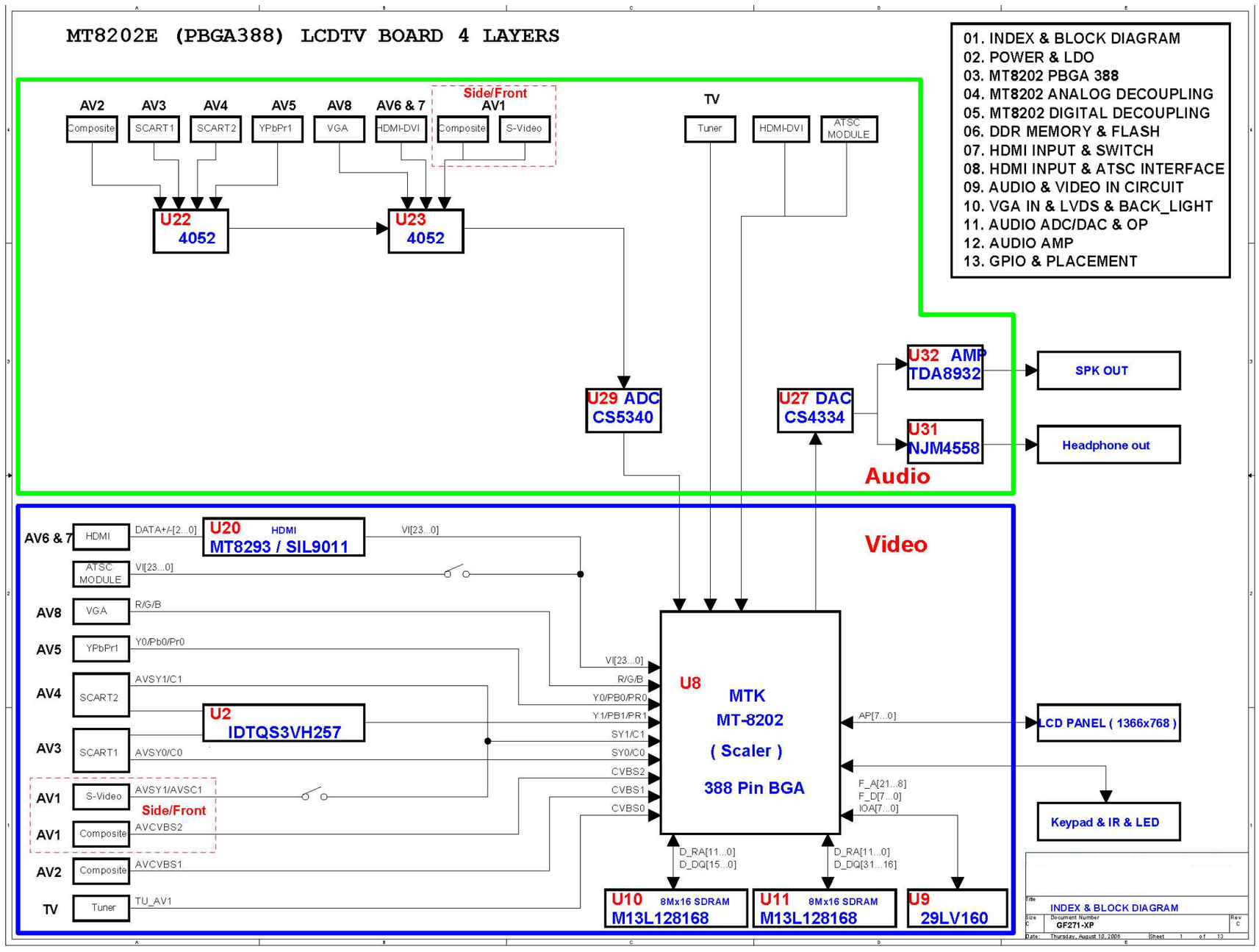
40”

NO.	P/N	Name	Spec.	Number
1	54-003-JK371H	AUX AV PANEL 1		1
2	54-002-JK370WH	CHROME BAR		1
3	54-003-JK370WH	ACRYLIC PLATE		1
4	51-A00-JC680H	FRONT PANEL		1
5	21-500-JK370W	SIDE BKT		2
6	705-537-401AXH	PANEL		1
7	21-001-JK371LH	PANEL BKT L		1
8	21-001-JK371RH	PANEL BKT R		1
9	21-B00-JK401H	PANEL BKT LOWER		1
10	824-010-JK371MH	SPK LOWER ASS'Y		1
11	51-700-JK401H	SWIVEL STAND ASS'Y		1
12	51-002-JP180H	REAR COVER		1
13	51-001-JC680H	REAR CABINET		1
14	723-700-JK401XAH	MAIN PCB CASE ASS'Y		1



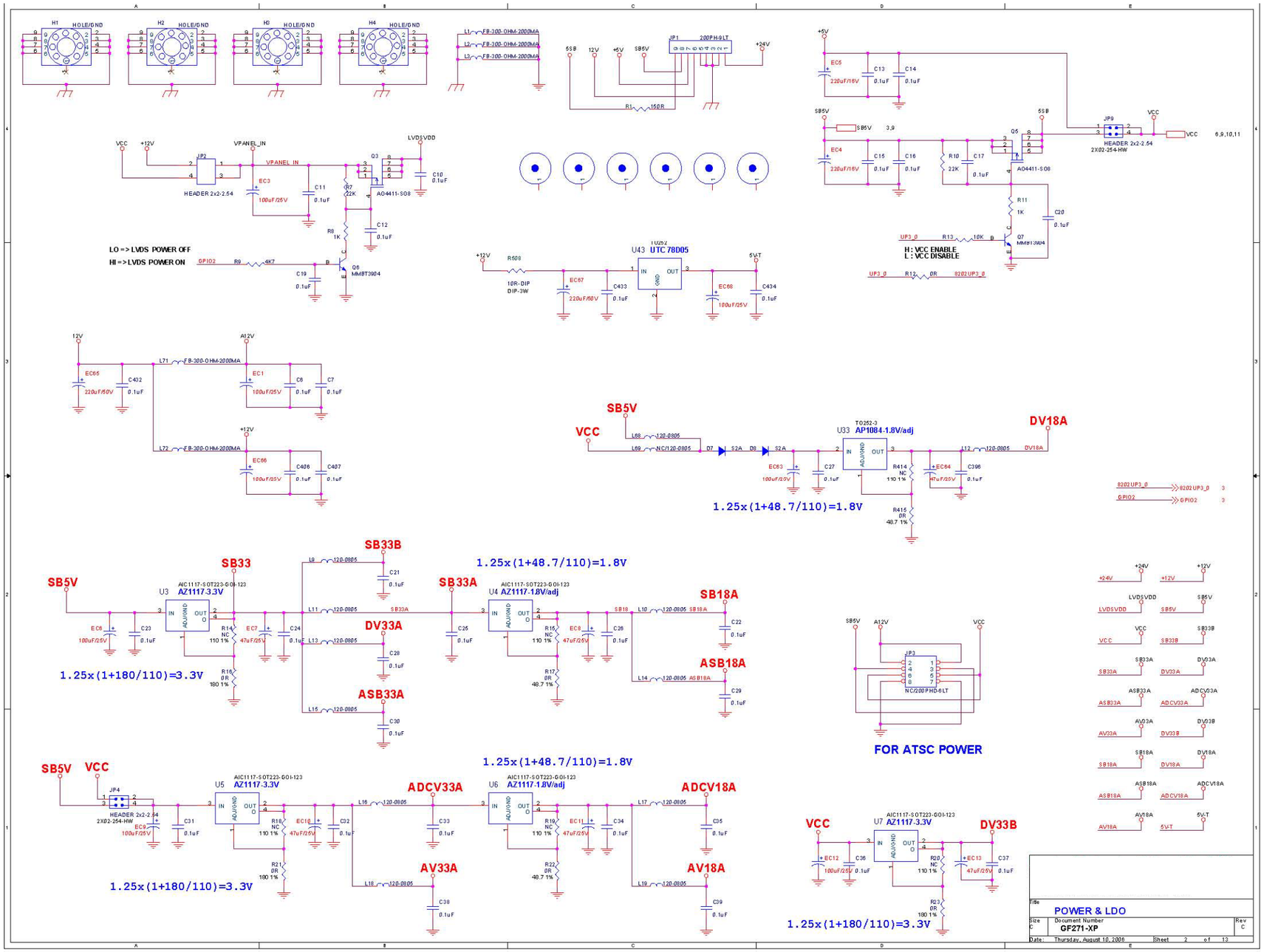
JL37

7. Block Diagram

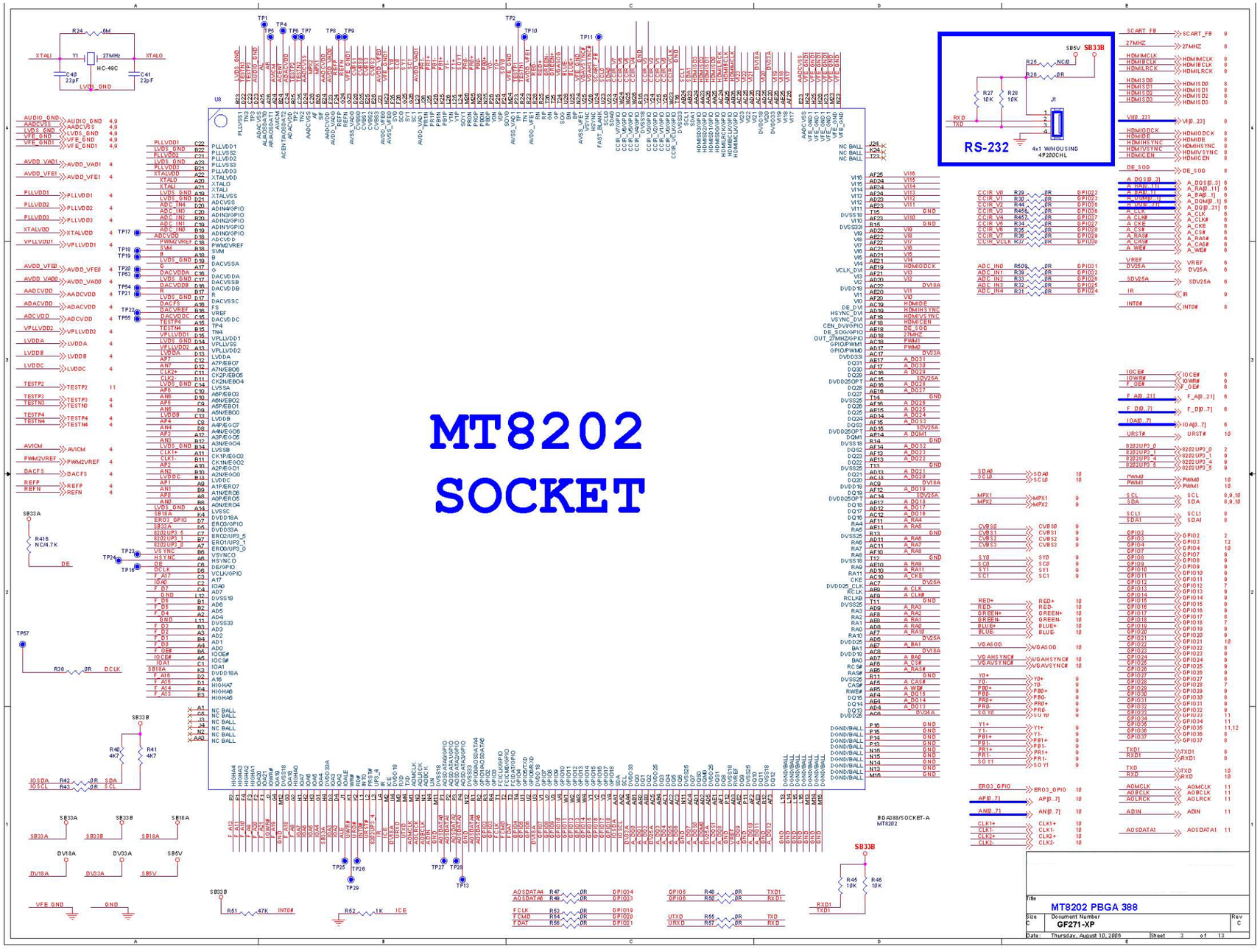


8. Schematic Diagram

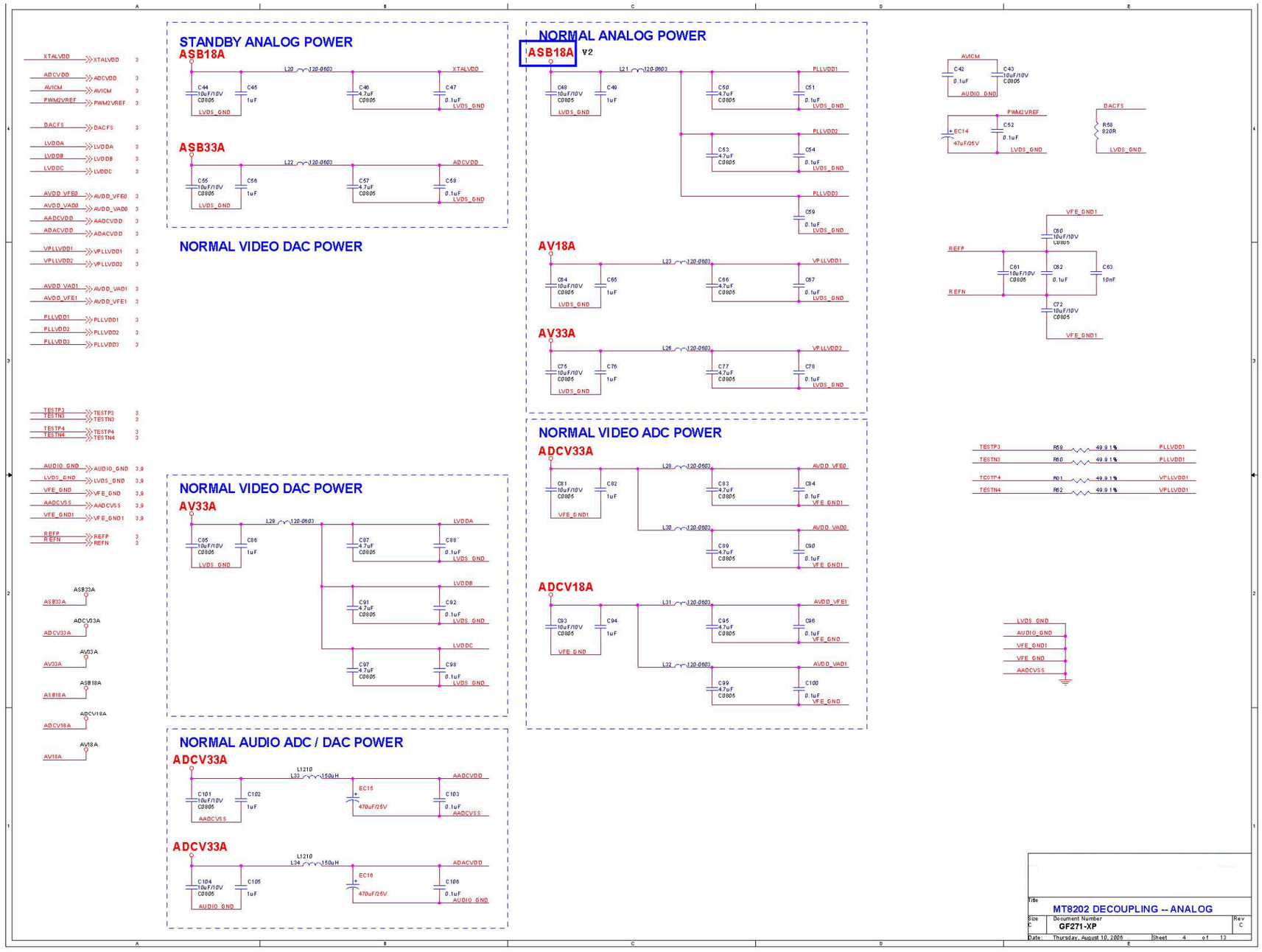
POWER & LDO



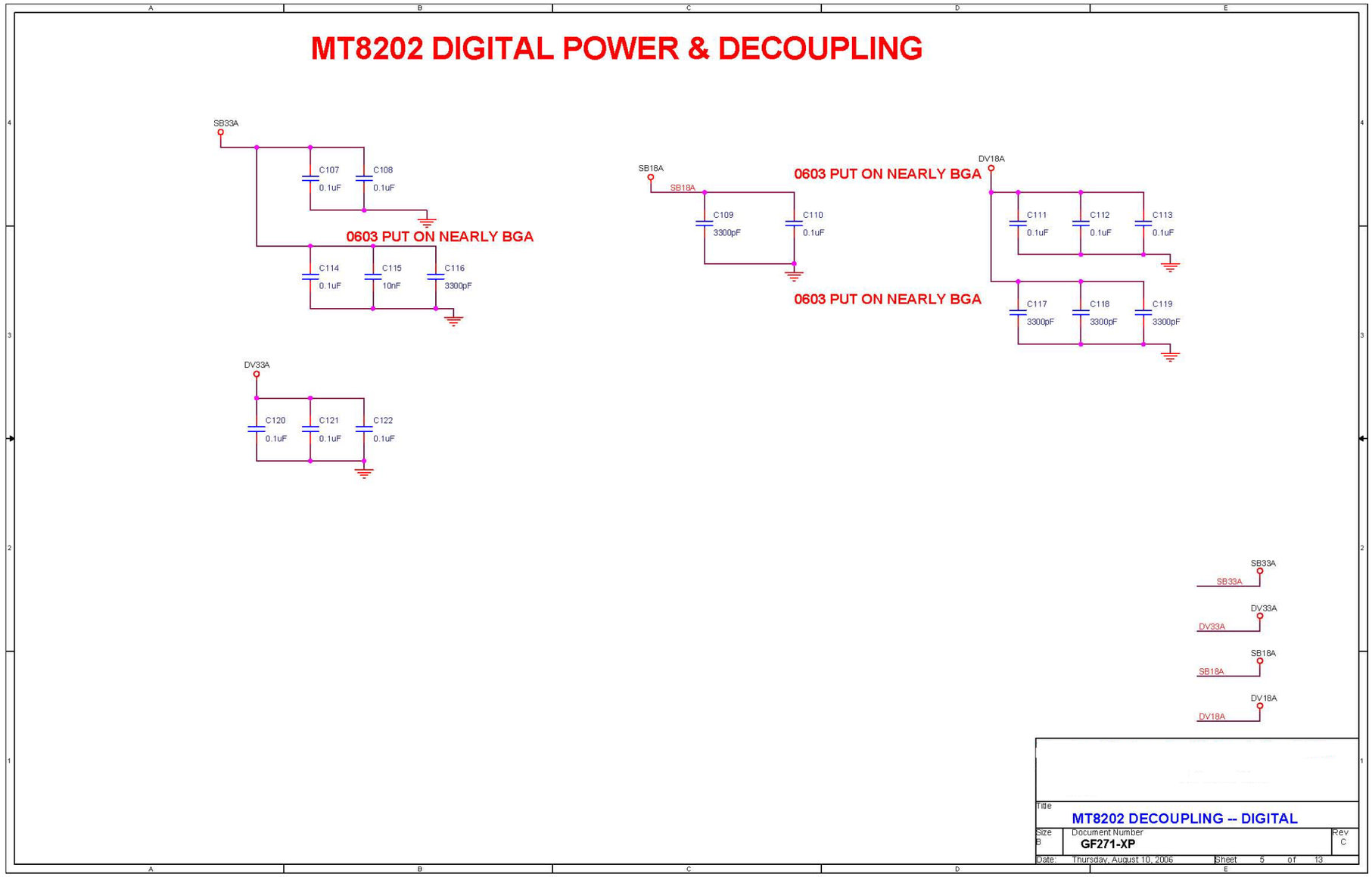
MT8202 PBGA 388



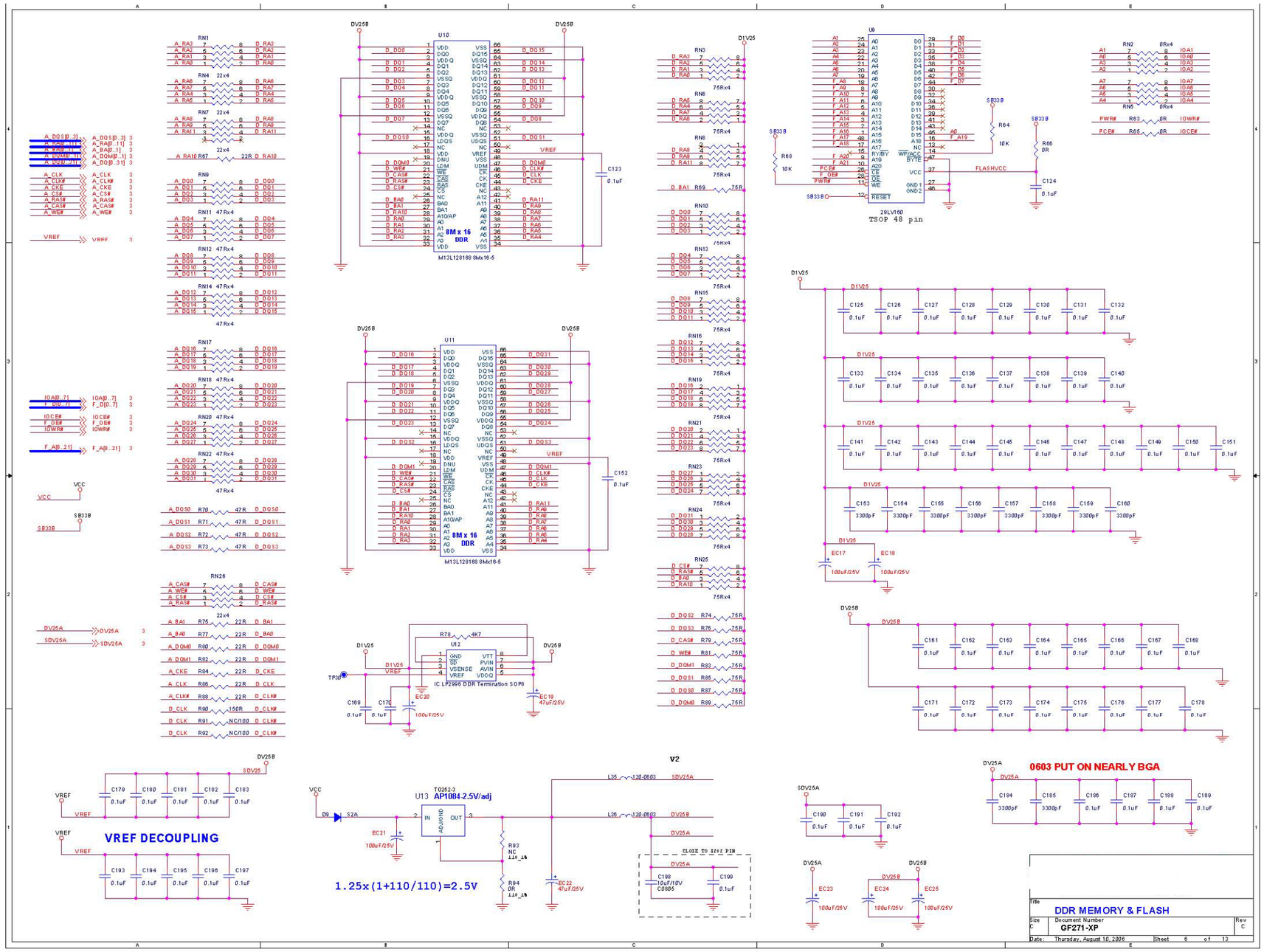
MT8202 DECOUPLING -- ANALOG



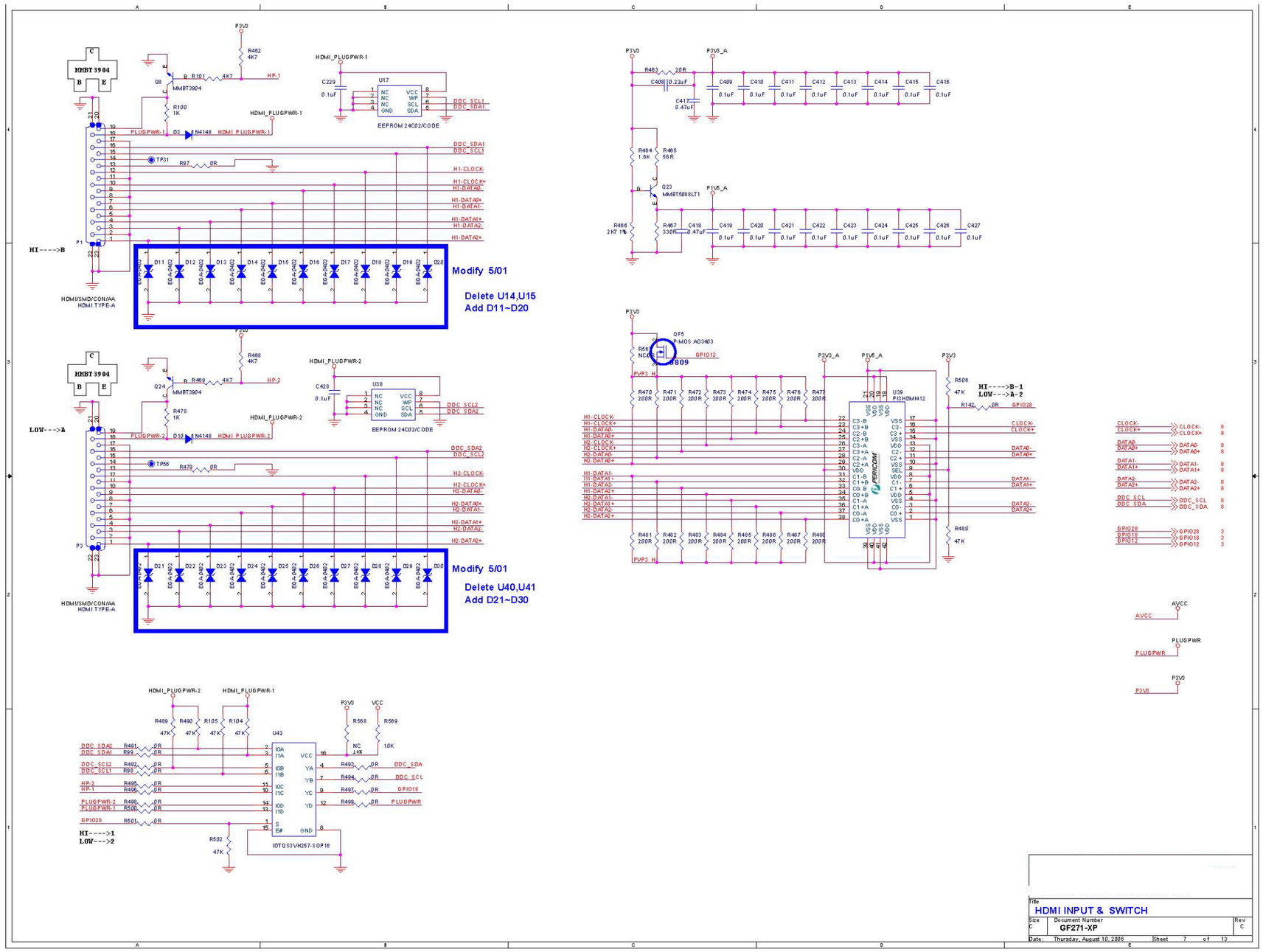
MT8202 DECOUPLING -- DIGITAL



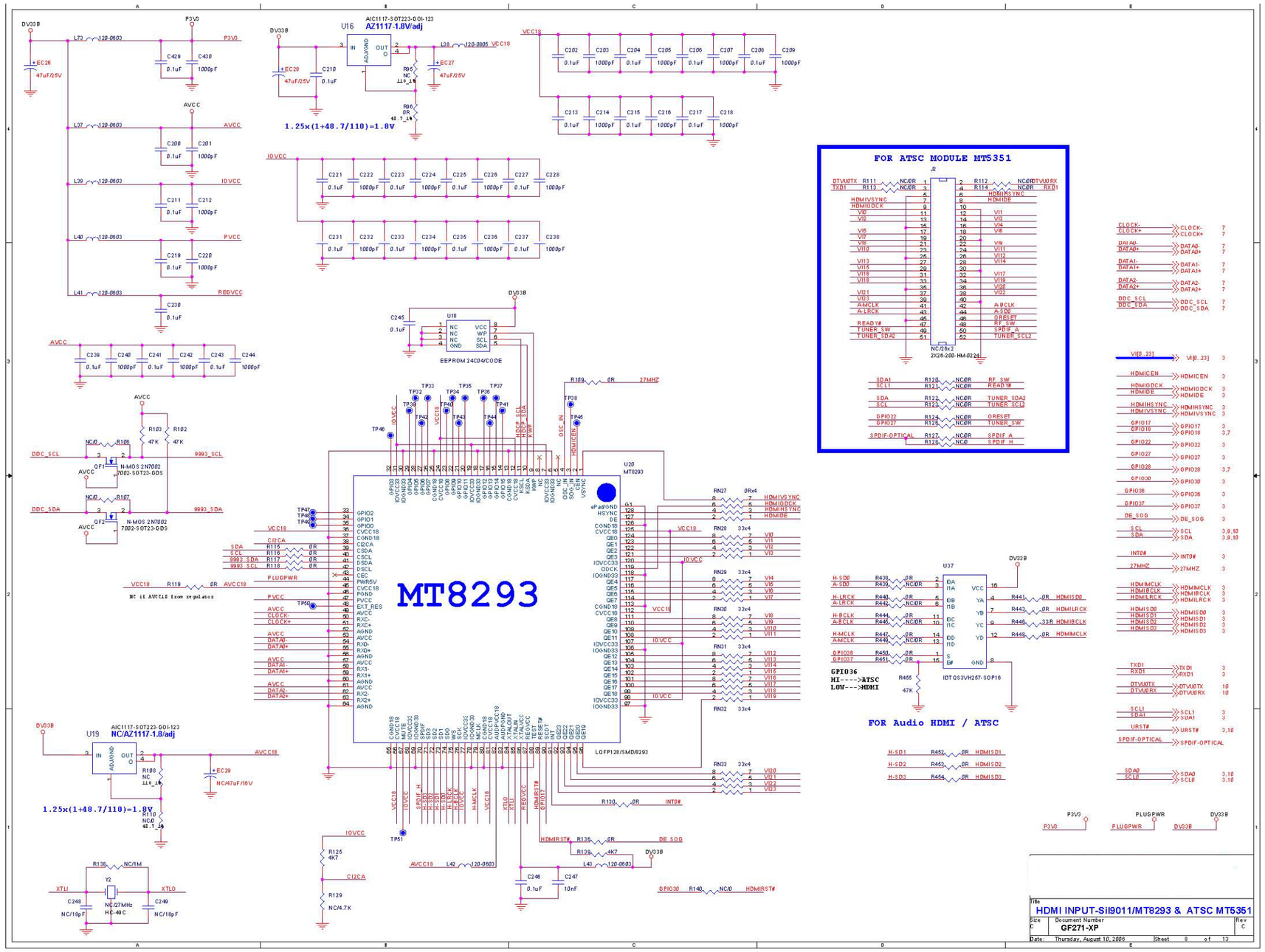
DDR MEMORY & FLASH



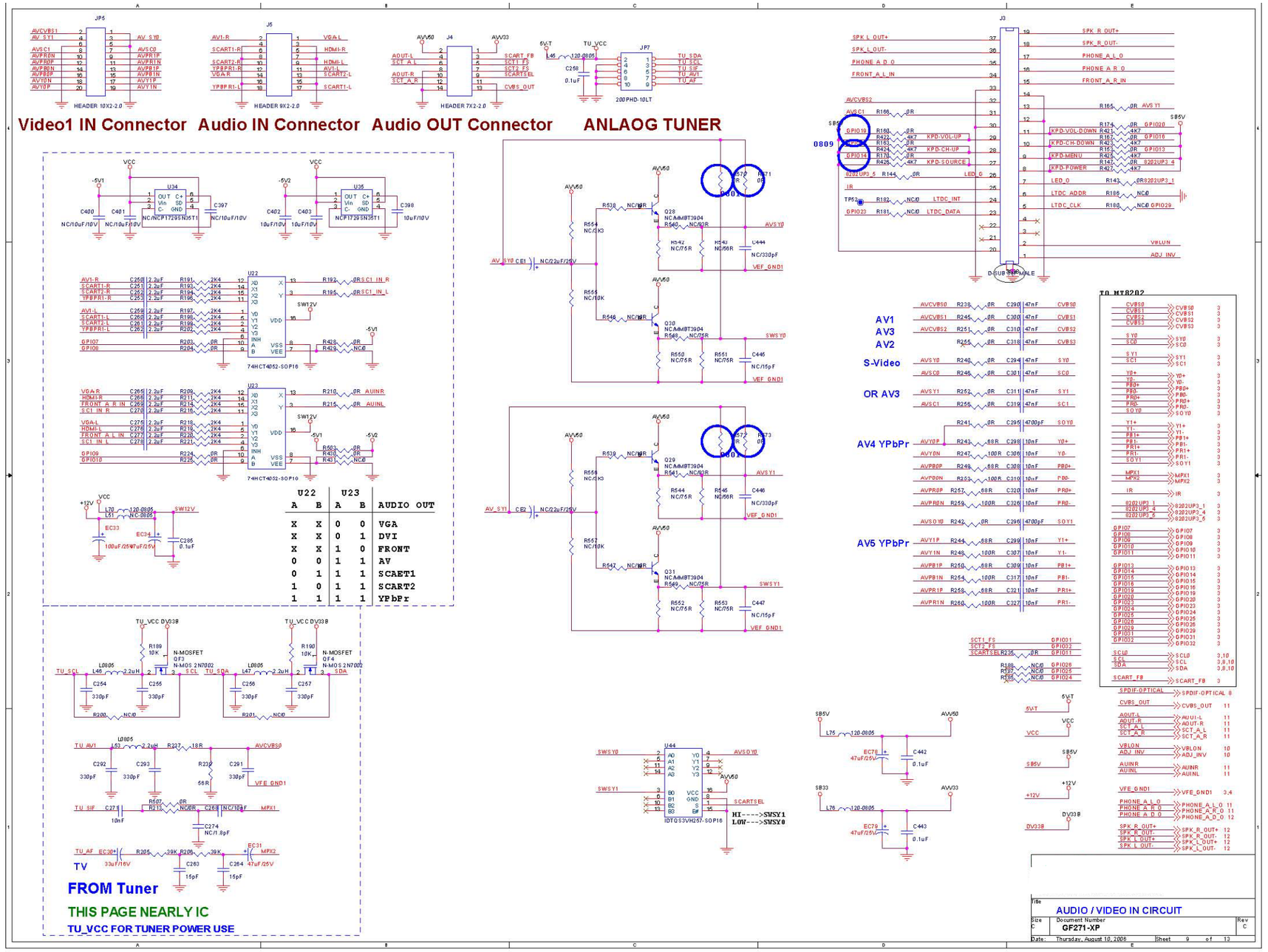
HDMI INPUT & SWITCH



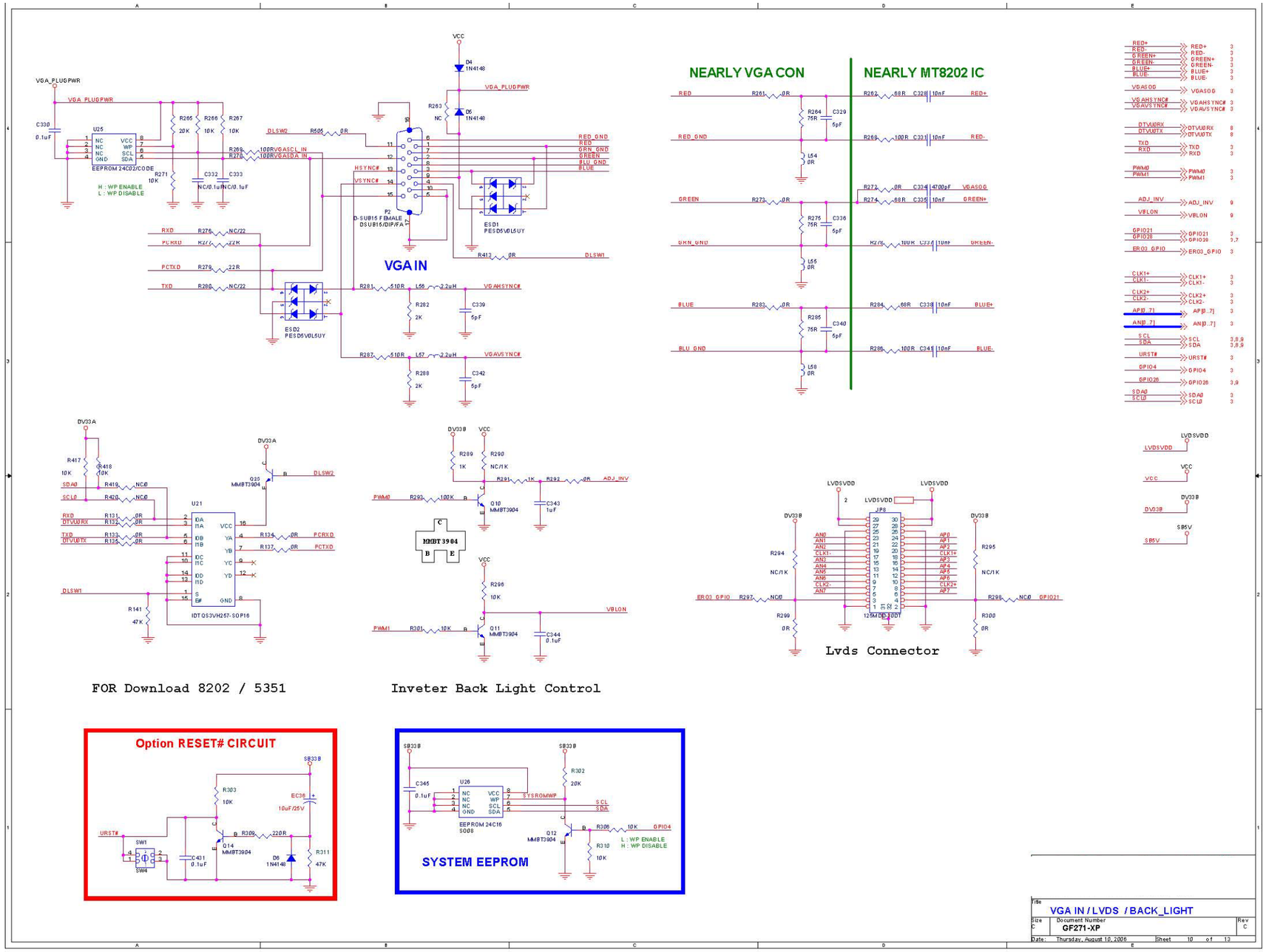
HDMI INPUT-Sil9011/MT8293 & ATSC MT5351



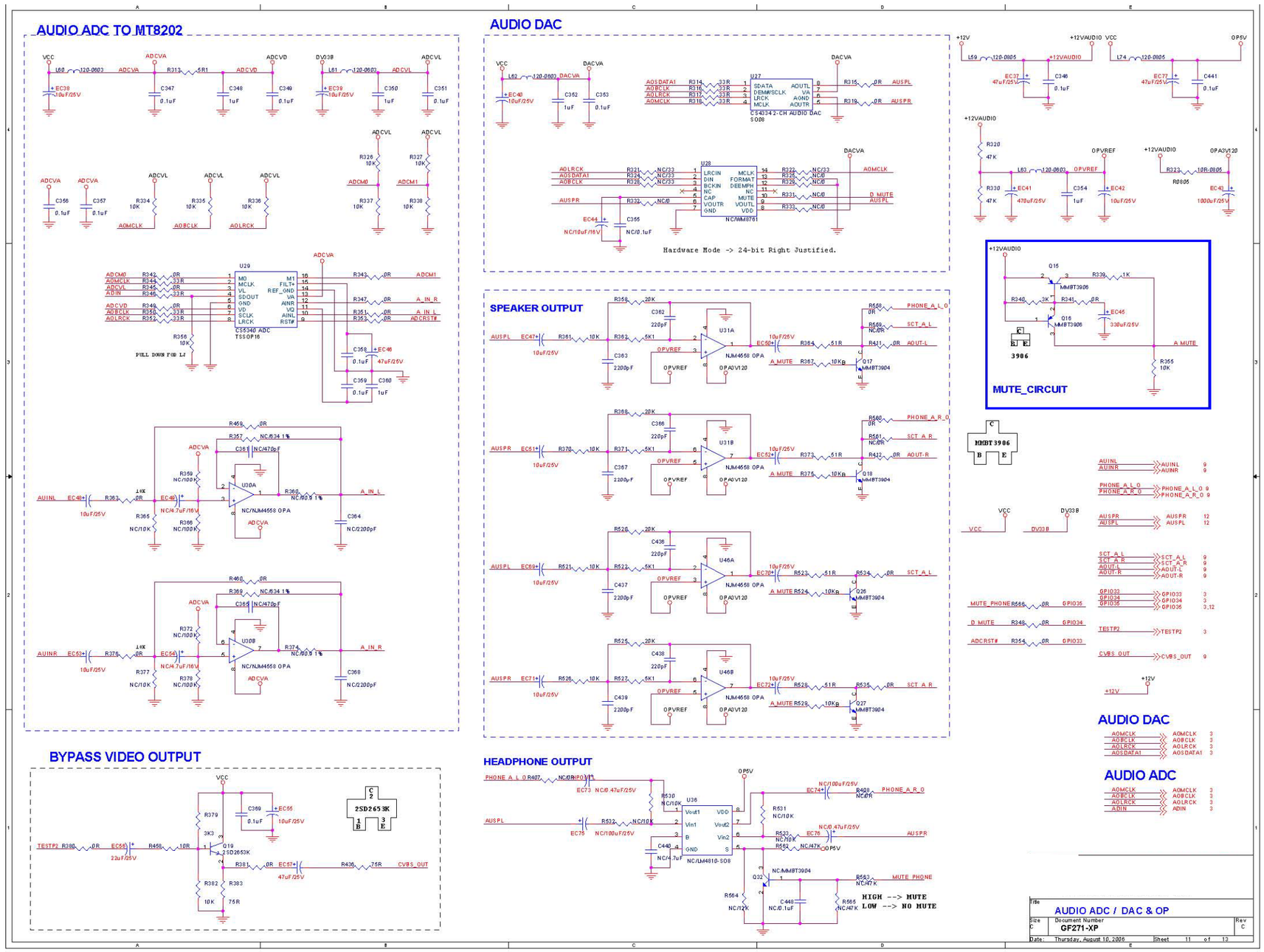
AUDIO / VIDEO IN CIRCUIT



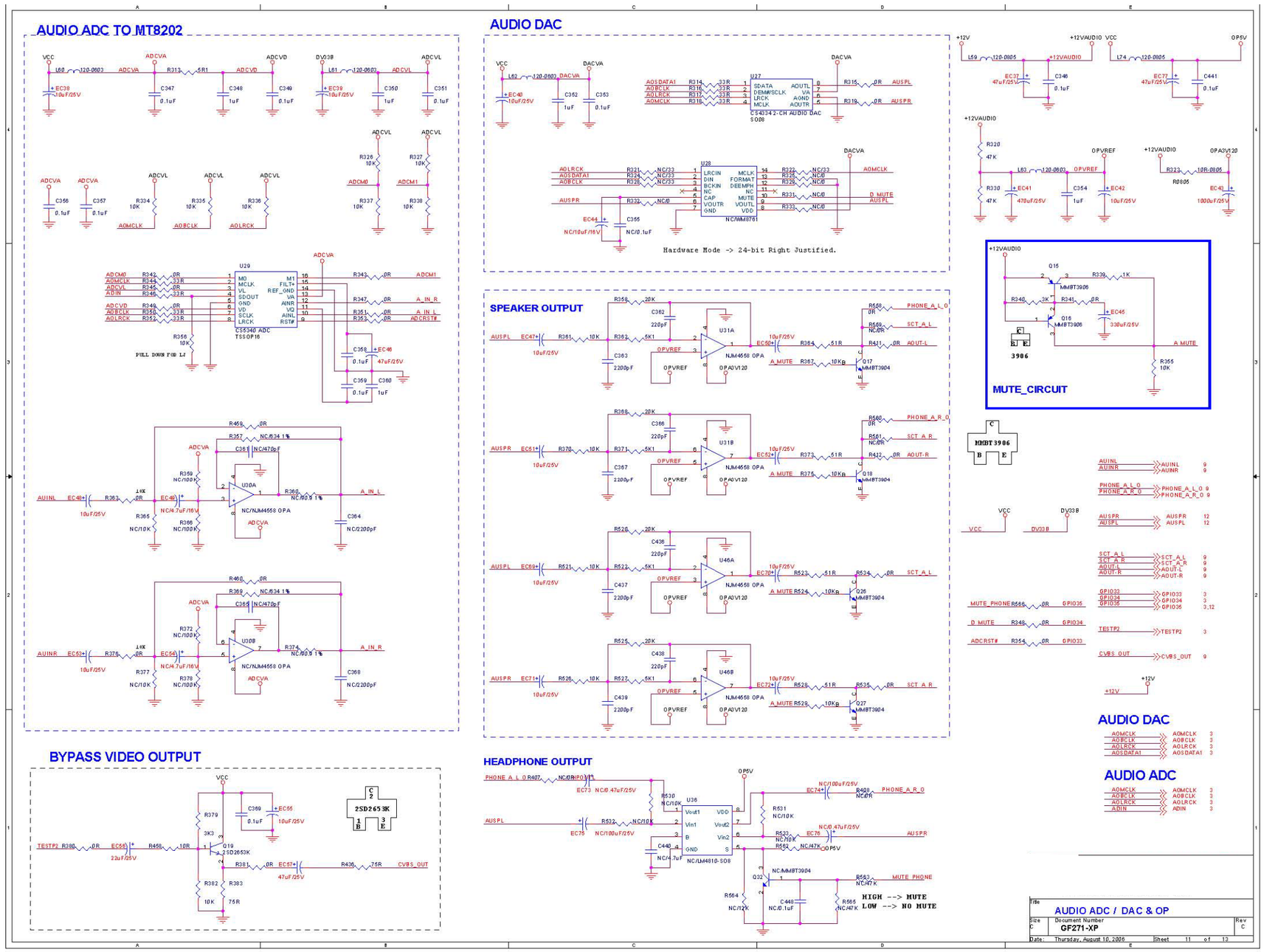
VGA IN / LVDS / BACK_LIGHT



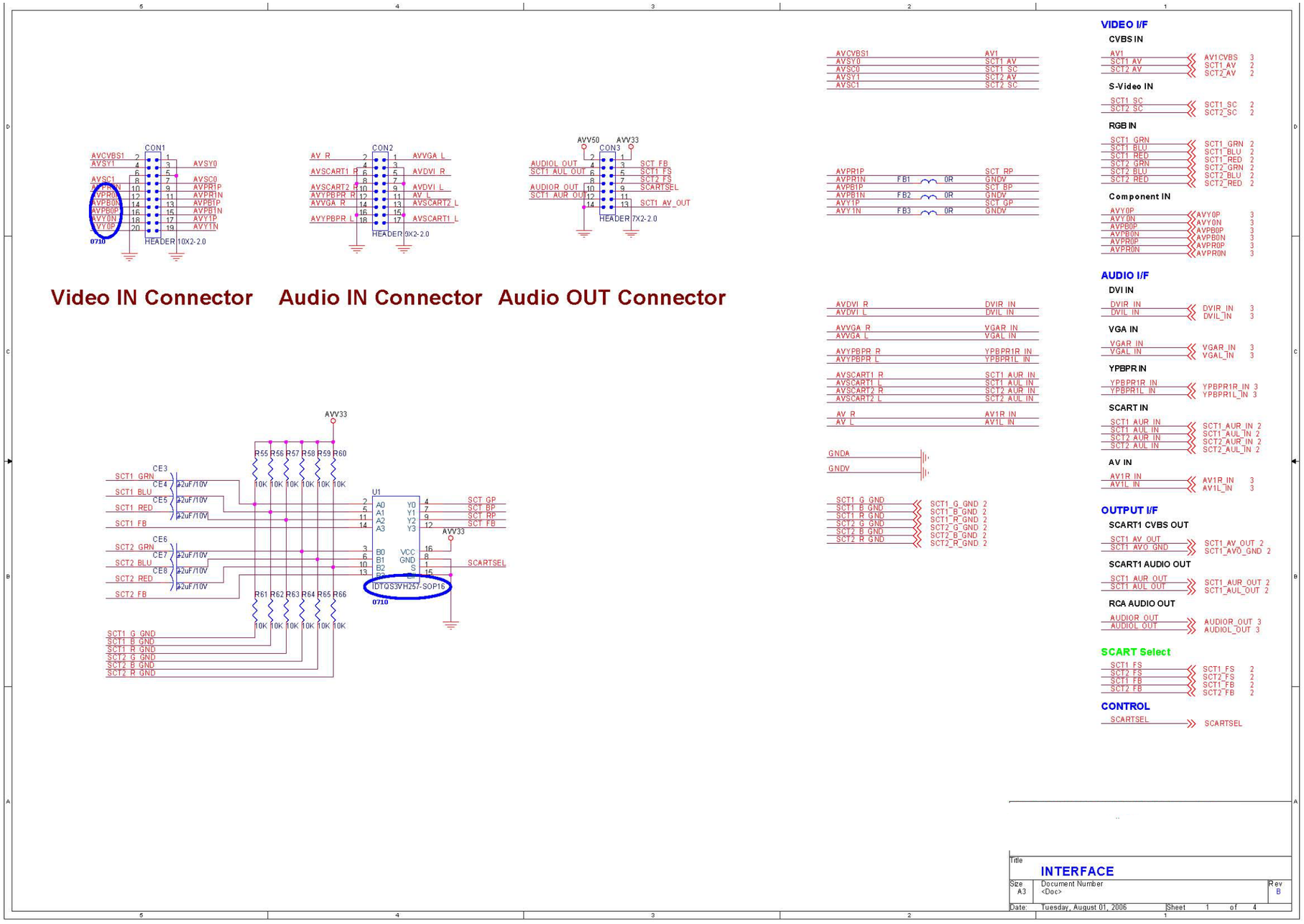
AUDIO ADC / DAC & OP


AUDIO ADC TO MT8202
AUDIO DAC
SPEAKER OUTPUT
MUTE_CIRCUIT
BYPASS VIDEO OUTPUT
HEADPHONE OUTPUT
AUDIO DAC
AUDIO ADC
AUDIO ADC / DAC & OP
GF271-XP
HIGH --> MUTE
LOW --> NO MUTE
Hardware Mode -> 24-bit Right Justified.

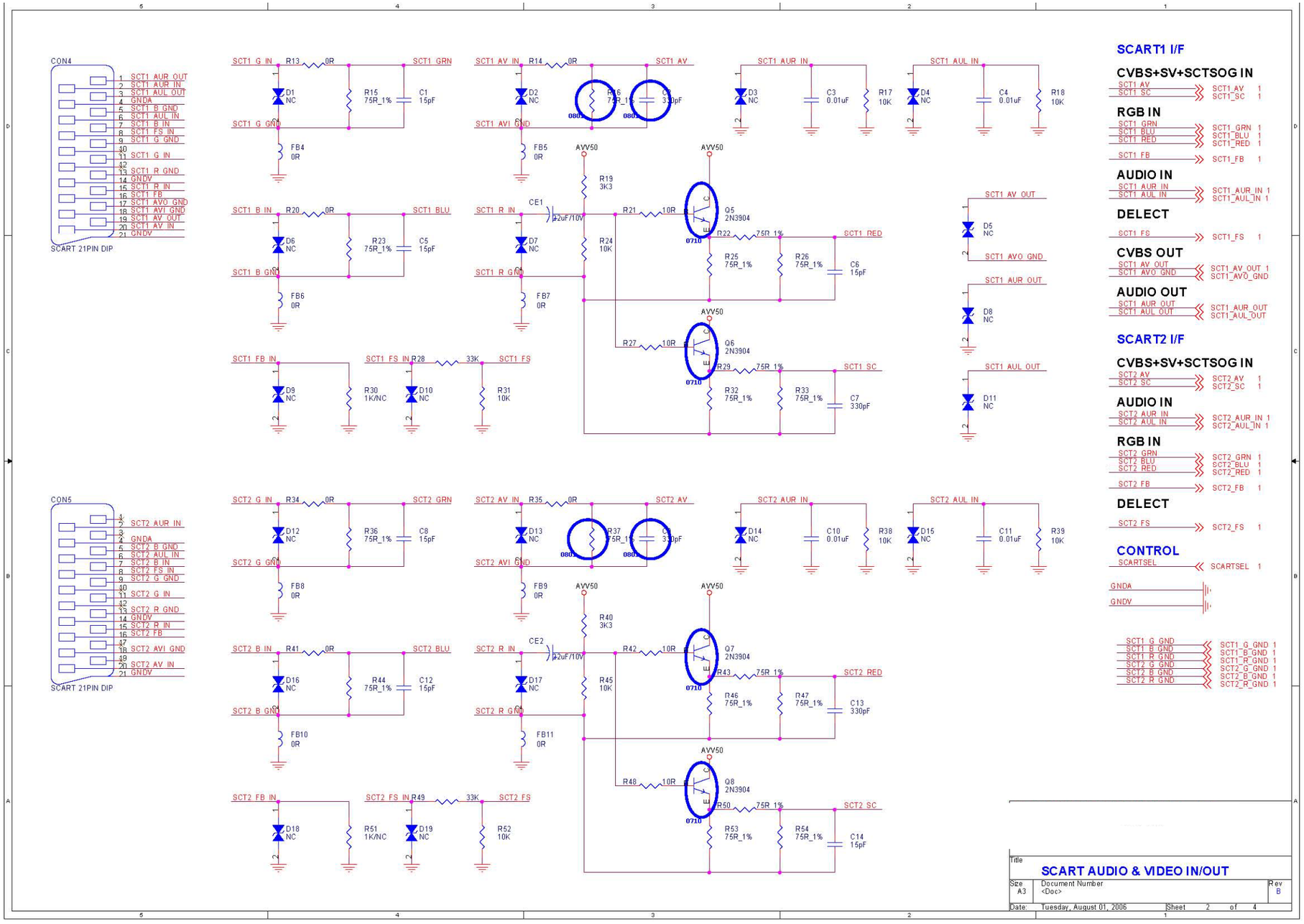
AUDIO AMP


AUDIO ADC TO MT8202
AUDIO DAC
SPEAKER OUTPUT
MUTE_CIRCUIT
BYPASS VIDEO OUTPUT
HEADPHONE OUTPUT
AUDIO DAC
AUDIO ADC
Hardware Mode -> 24-bit Right Justified.
HIGH --> MUTE
LOW --> NO MUTE
AUDIO ADC / DAC & OP
GF271-XP

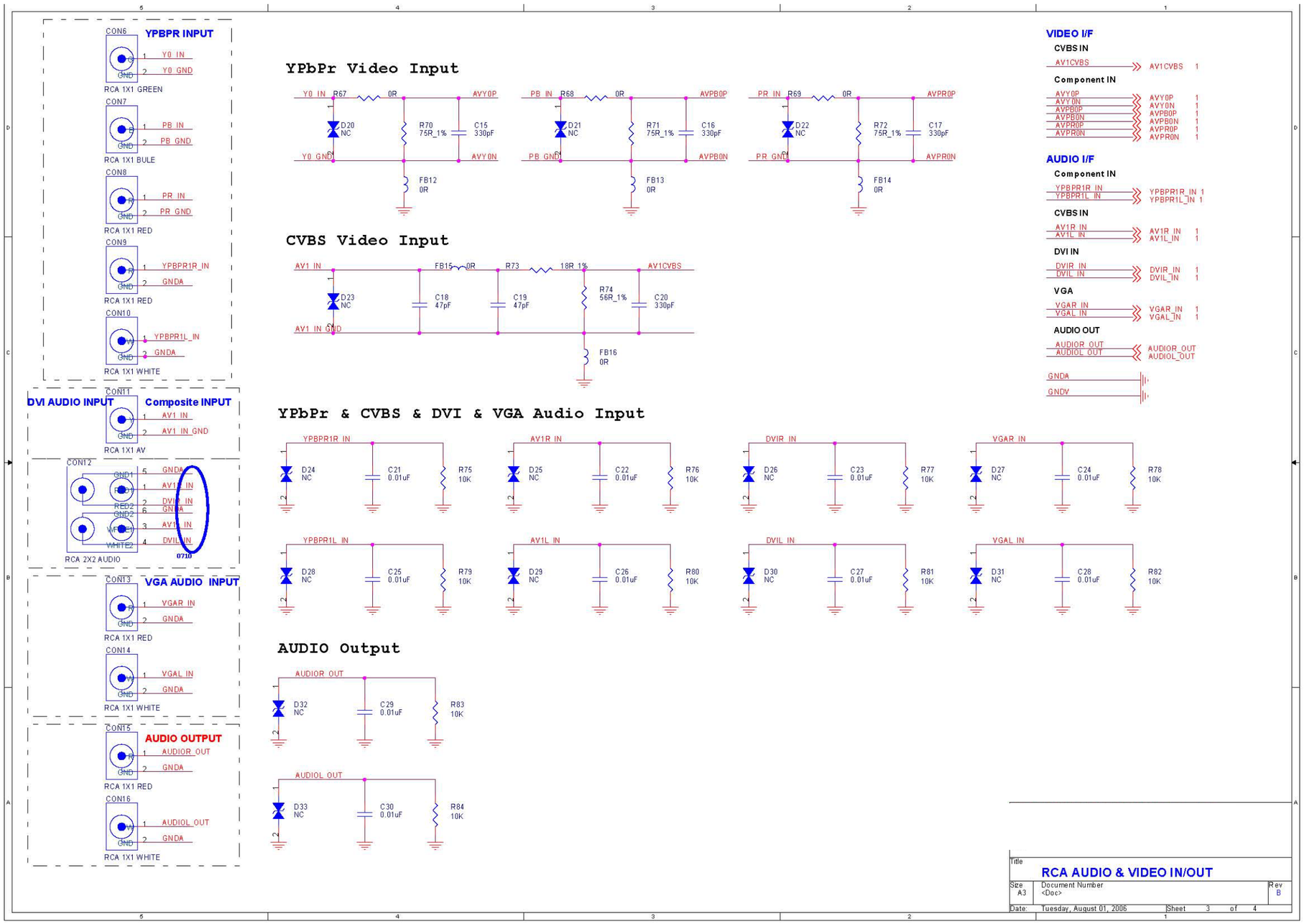
INTERFACE



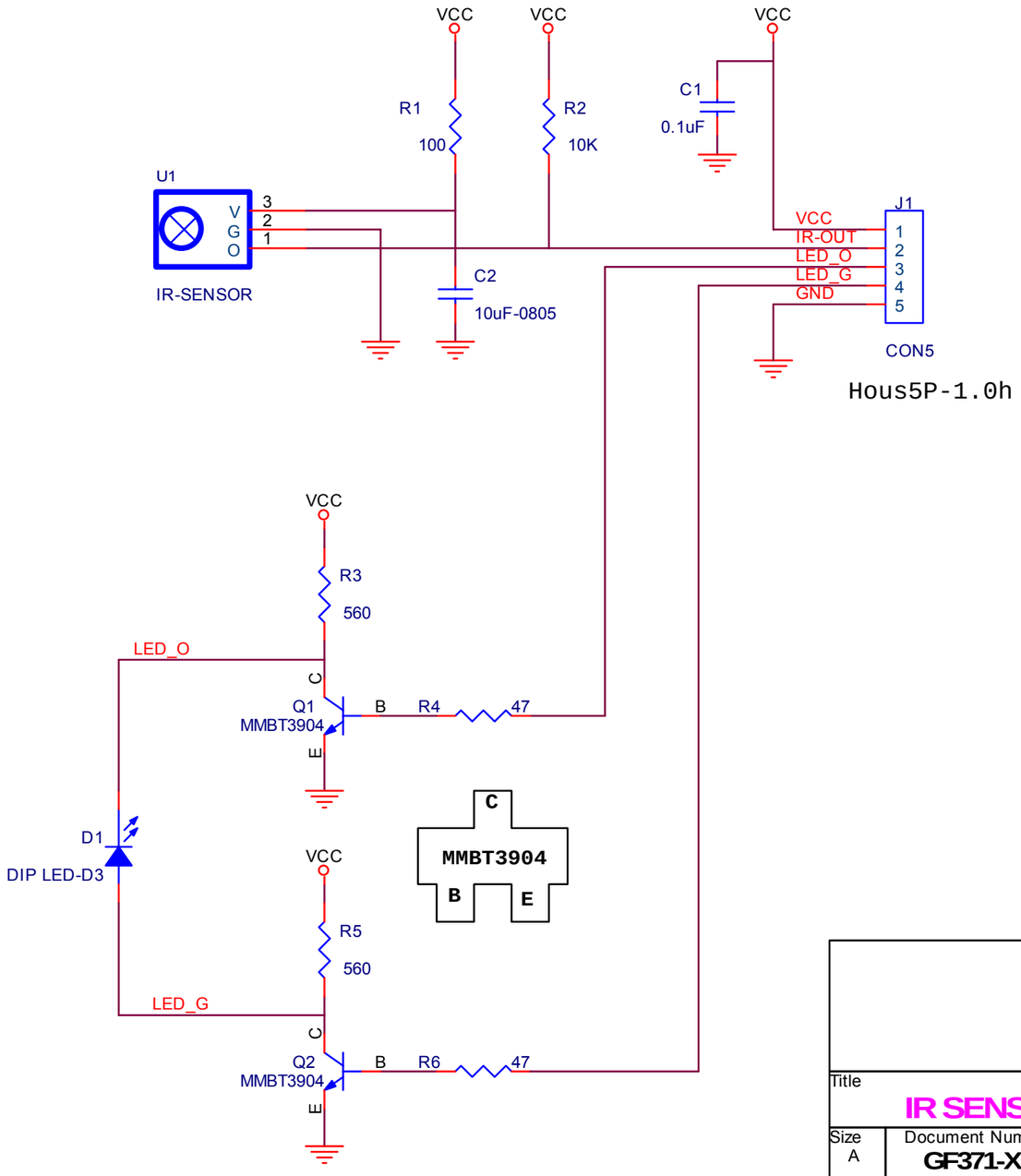
SCART AUDIO & VIDEO IN/OUT



RCA AUDIO & VIDEO IN/OUT

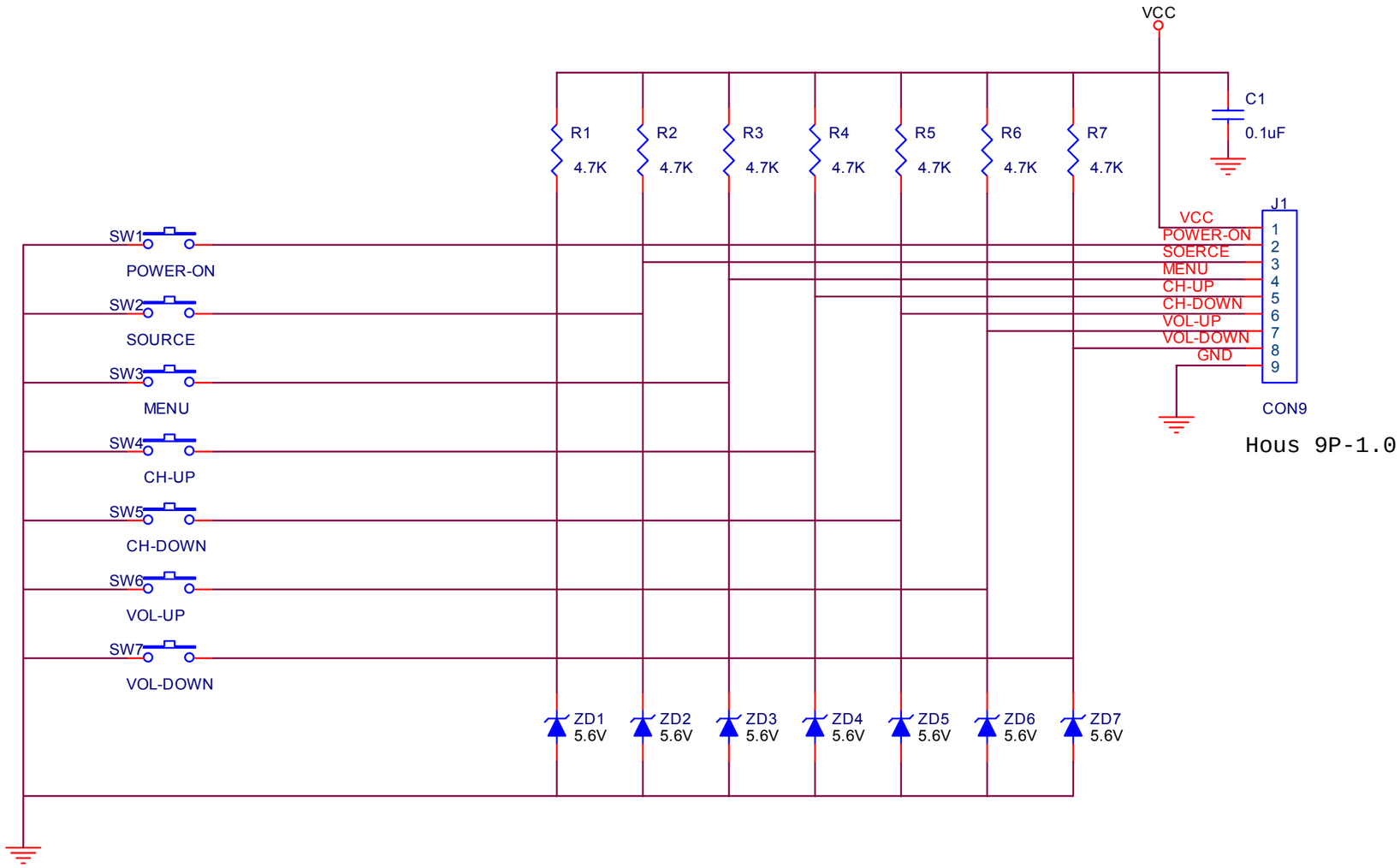

YPBPR INPUT
CON6
Y0 IN
Y0 GND
RCA 1X1 GREEN
CON7
PB IN
PB GND
RCA 1X1 BULE
CON8
PR IN
PR GND
RCA 1X1 RED
CON9
YPBPR1R_IN
GNDA
RCA 1X1 RED
CON10
YPBPR1L_IN
GNDA
RCA 1X1 WHITE
DVI AUDIO INPUT
Composite INPUT
CON11
AV1 IN
AV1 IN GND
RCA 1X1 AV
CON12
GNDA
AV1L_IN
DVIR_IN
GNDA
AV1R_IN
DVIL_IN
RCA 2X2 AUDIO
0710
VGA AUDIO INPUT
CON13
VGAR_IN
GNDA
RCA 1X1 RED
CON14
VGAL_IN
GNDA
RCA 1X1 WHITE
AUDIO OUTPUT
CON15
AUDIOR_OUT
GNDA
RCA 1X1 RED
CON16
AUDIOL_OUT
GNDA
RCA 1X1 WHITE
YPbPr Video Input
Y0_IN R67 0R AVY0P
D20 NC
R70 75R_1% C15 330pF
Y0_GND AVY0N
FB12 0R
PB_IN R68 0R AVPB0P
D21 NC
R71 75R_1% C16 330pF
PB_GND AVPB0N
FB13 0R
PR_IN R69 0R AVPR0P
D22 NC
R72 75R_1% C17 330pF
PR_GND AVPR0N
FB14 0R
CVBS Video Input
AV1_IN FB15 0R R73 18R_1% AV1CVBS
D23 NC
C18 47pF
C19 47pF
R74 56R_1% C20 330pF
AV1_IN_GND
FB16 0R
YPbPr & CVBS & DVI & VGA Audio Input
YPBPR1R_IN
D24 NC
C21 0.01uF
R75 10K
AV1R_IN
D25 NC
C22 0.01uF
R76 10K
DVIR_IN
D26 NC
C23 0.01uF
R77 10K
VGAR_IN
D27 NC
C24 0.01uF
R78 10K
YPBPR1L_IN
D28 NC
C25 0.01uF
R79 10K
AV1L_IN
D29 NC
C26 0.01uF
R80 10K
DVIL_IN
D30 NC
C27 0.01uF
R81 10K
VGAL_IN
D31 NC
C28 0.01uF
R82 10K
AUDIO Output
AUDIOR_OUT
D32 NC
C29 0.01uF
R83 10K
AUDIOL_OUT
D33 NC
C30 0.01uF
R84 10K
VIDEO I/F
CVBS IN
AV1CVBS
Component IN
AVY0P
AVY0N
AVPB0P
AVPB0N
AVPR0P
AVPR0N
AUDIO I/F
Component IN
YPBPR1R_IN
YPBPR1L_IN
CVBS IN
AV1R_IN
AV1L_IN
DVI IN
DVIR_IN
DVIL_IN
VGA
VGAR_IN
VGAL_IN
AUDIO OUT
AUDIOR_OUT
AUDIOL_OUT
GNDA
GNDV
Title
RCA AUDIO & VIDEO IN/OUT
Size A3
Document Number <Doc>
Rev B
Date: Tuesday, August 01, 2006
Sheet 3 of 4

IR/LED Board



Title	IR SENSOR PCB		
Size A	Document Number GF371-XU		Rev A
Date: Tuesday, December 20, 2005		Sheet 1 of 1	

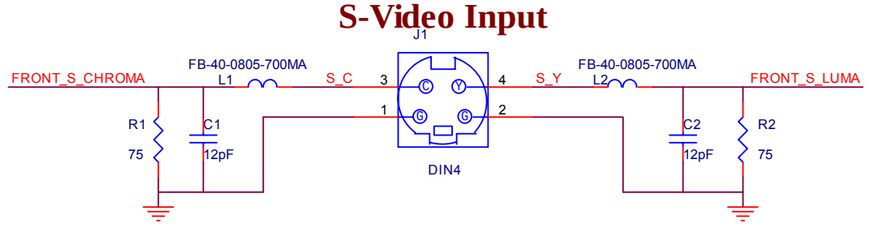
Keypad Board

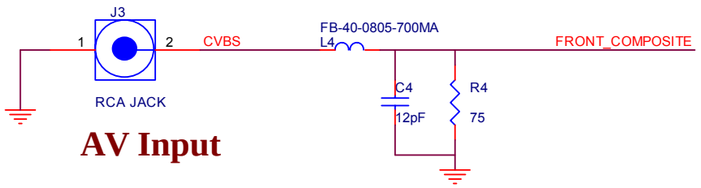


Title	KEYPAD PCB		
Size A	Document Number GF371-XU		Rev A
Date: Friday, September 30, 2005		Sheet 1 of 1	

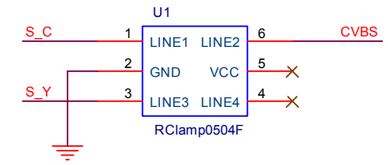
AV AUX Board

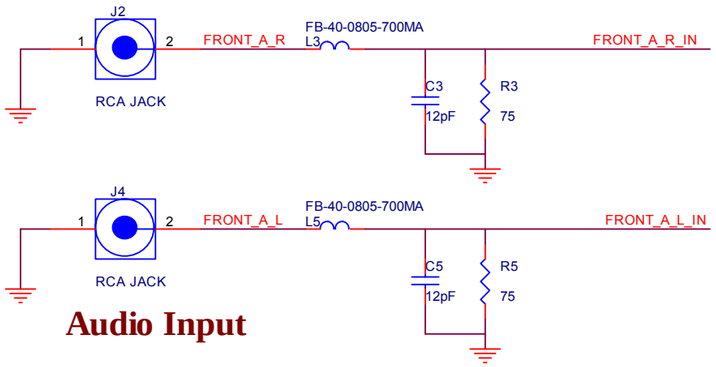
S-Video Input



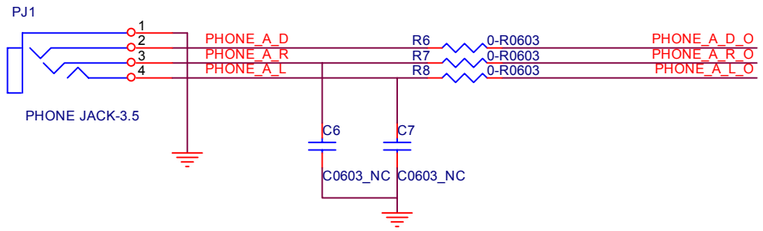


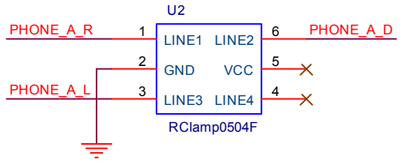
AV Input

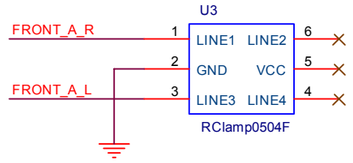




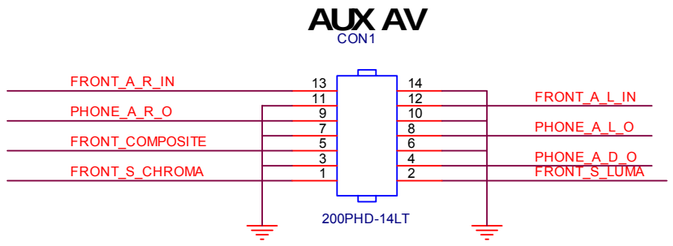
Audio Input







CON1 : FRONT AV INPUT/OUTPUT 200PHD Series 2X8 (16pin)

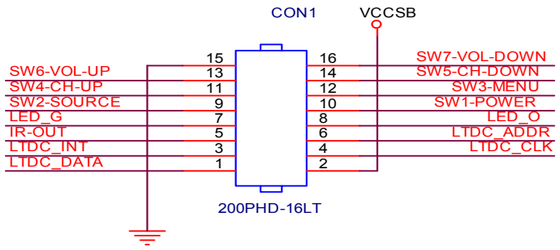


LINK TO AUX AV PCB 1

Title	AUX AV PCB	
Size B	Document Number GF371-XU	Rev A
Date: Thursday, November 24, 2005	Sheet 1 of 1	

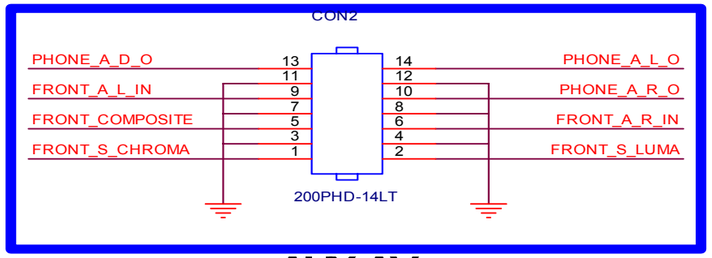
D-SUB 37 PIN Board

200PHD Series 2X8 (16pin)



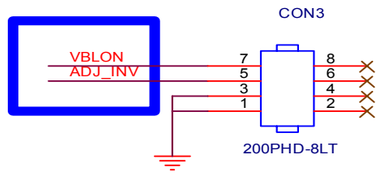
CTRL Key

200PHD Series 2X7 (14pin)



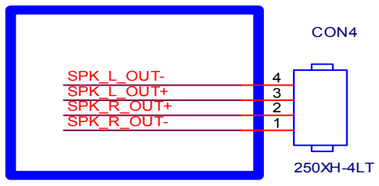
AUX AV

200PHD Series 2X4 (8pin)

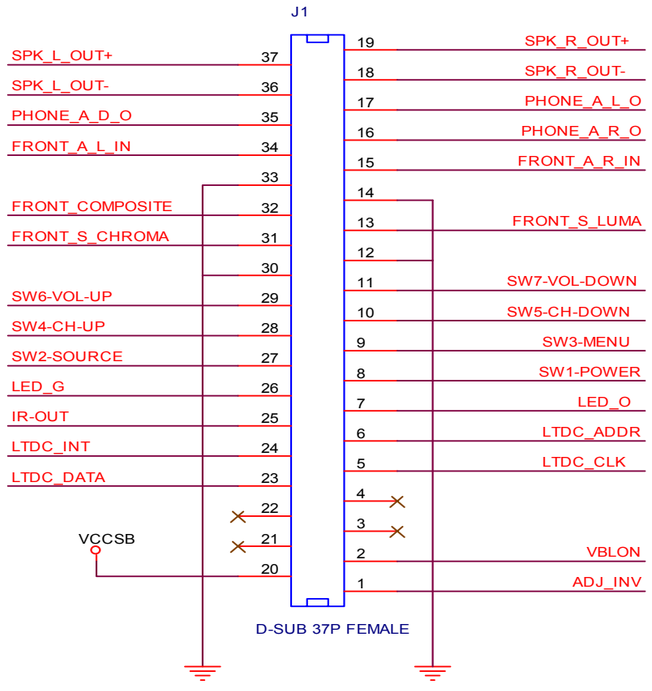


INVERTER CTRL

250XH Series 1X4 (4pin)



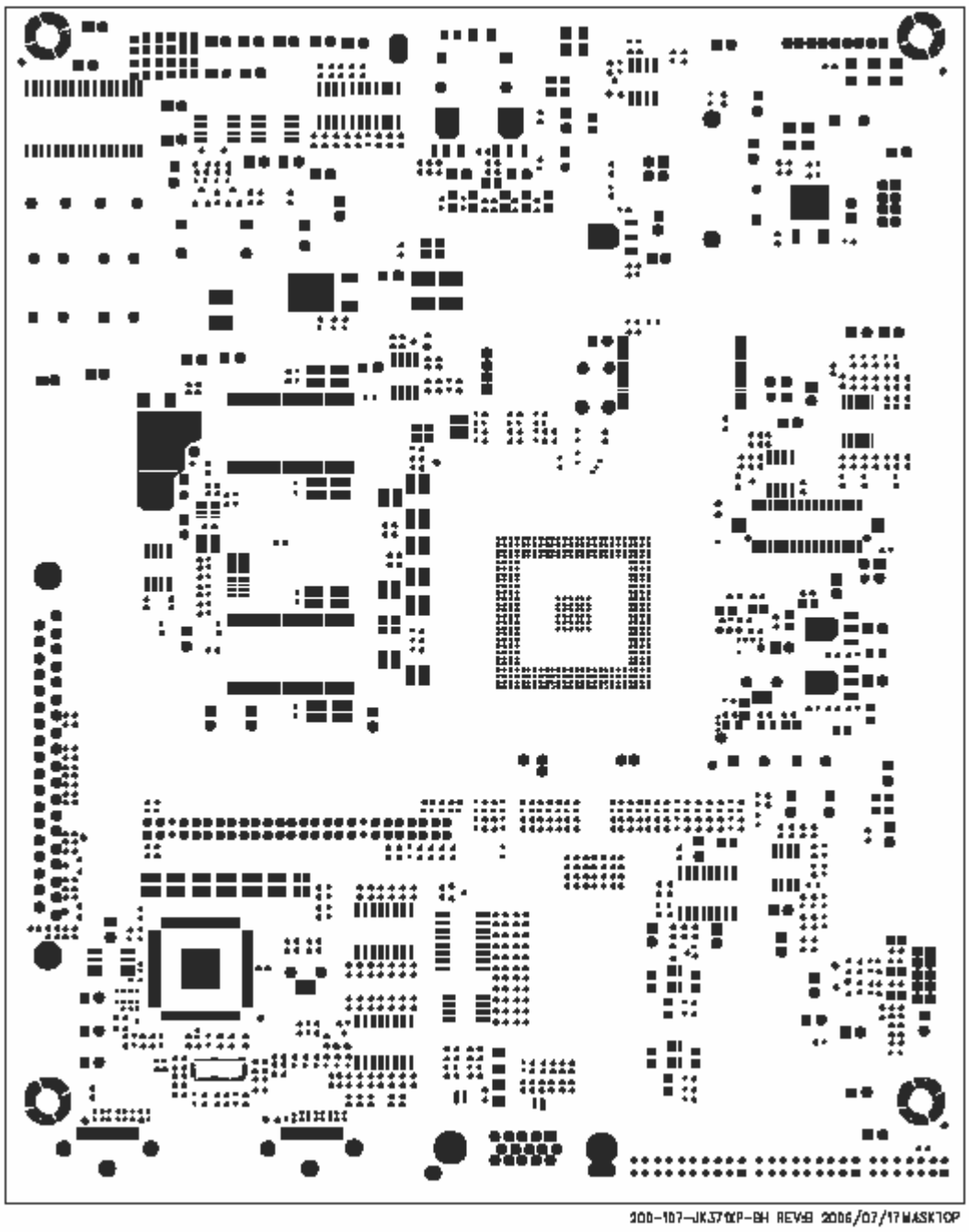
SPK OUT



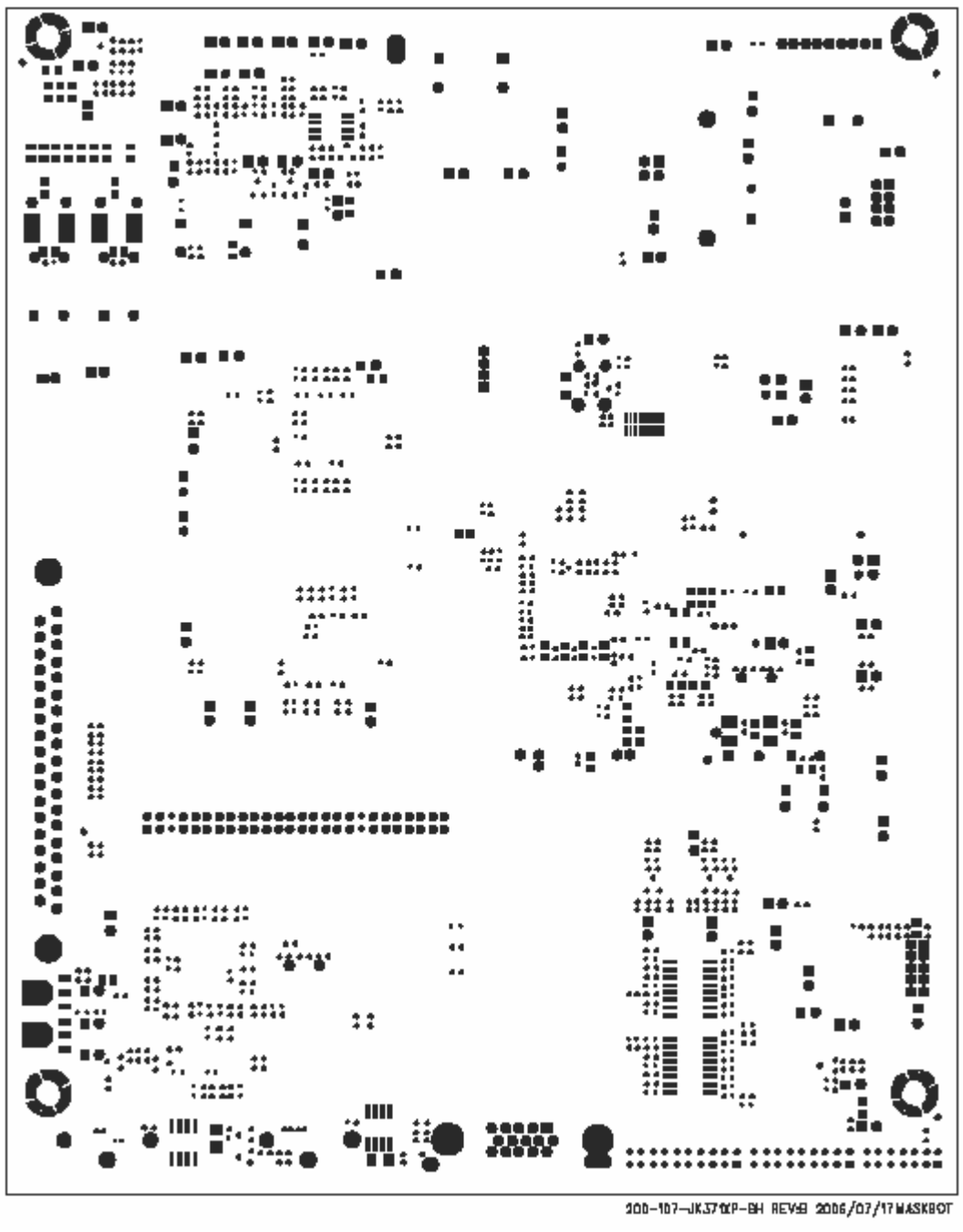
Title	CON JUNCT D-SUB 37Pin	
Size: Custom	Document Number: JK379-UD	Rev: A
Date: Friday, September 09, 2005	Sheet 1 of 1	

9. PCB Layout Diagram

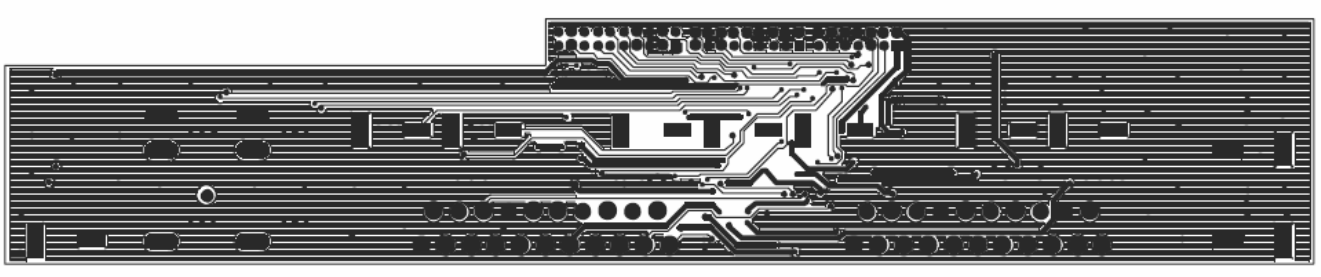
Main Board (Component Side Top)



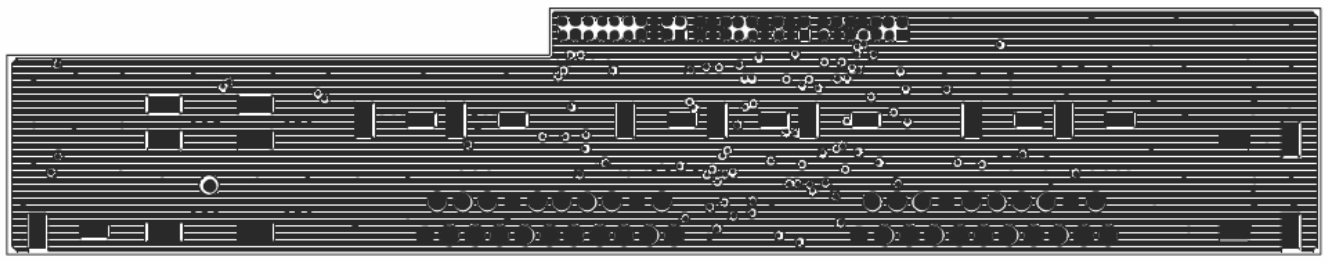
Main Board (Component Side Bottom)



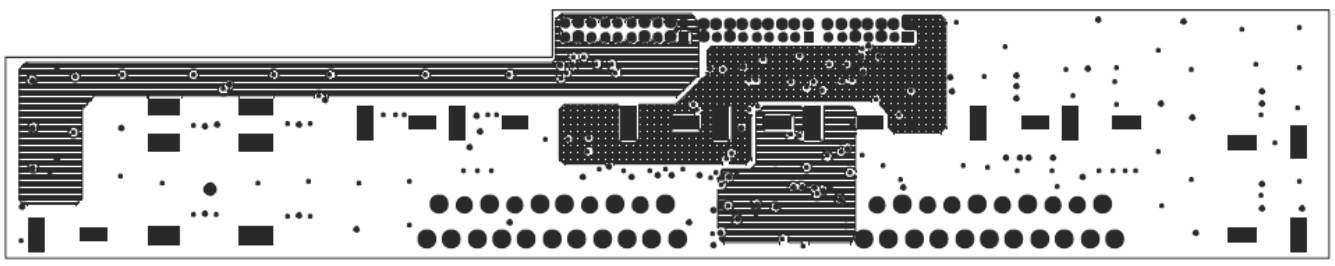
IO Board L1 component side



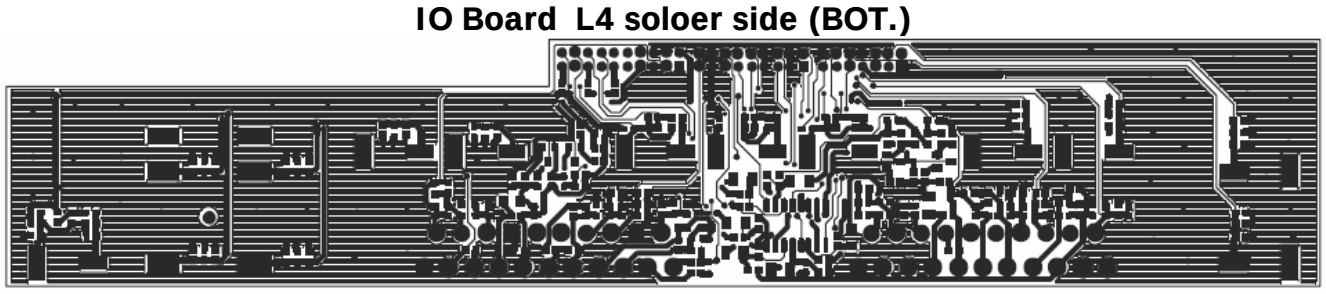
IO Board L2 GND (COMP.)



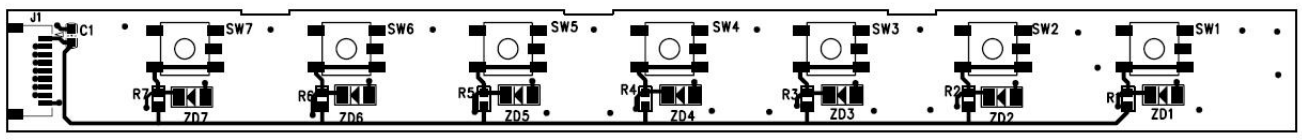
IO Board L3 VCC (COMP.)



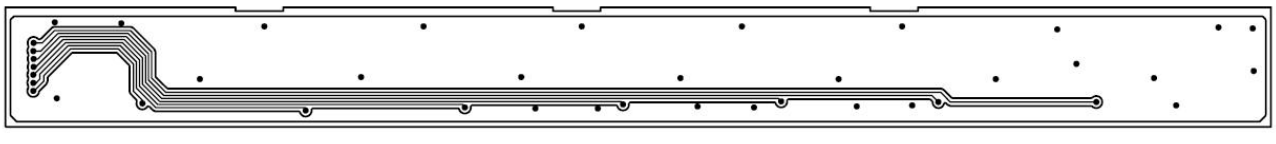
IO Board L4 soloer side (BOT.)



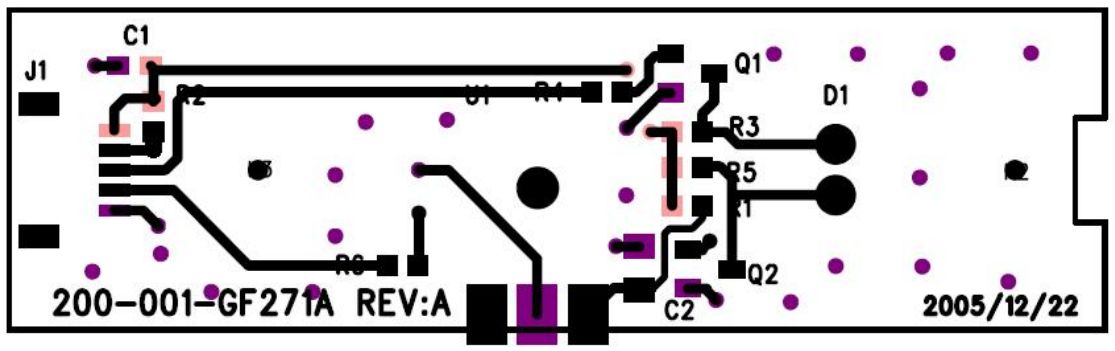
Keypad Board (Component Side Top)



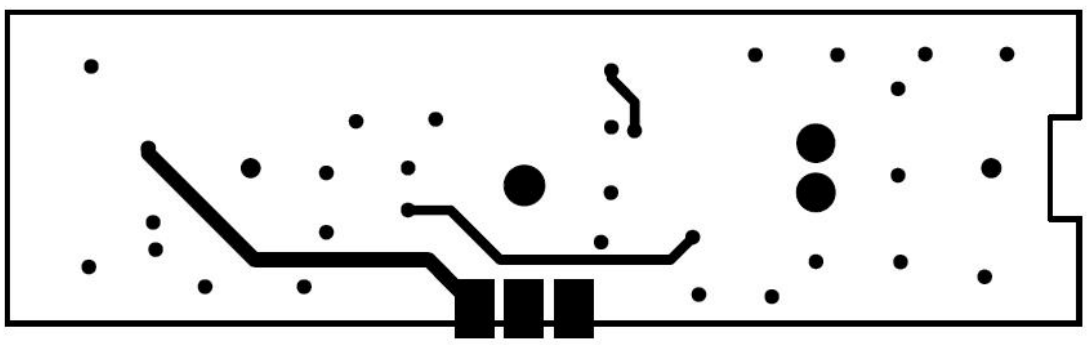
Keypad Board (Component Side Bottom)



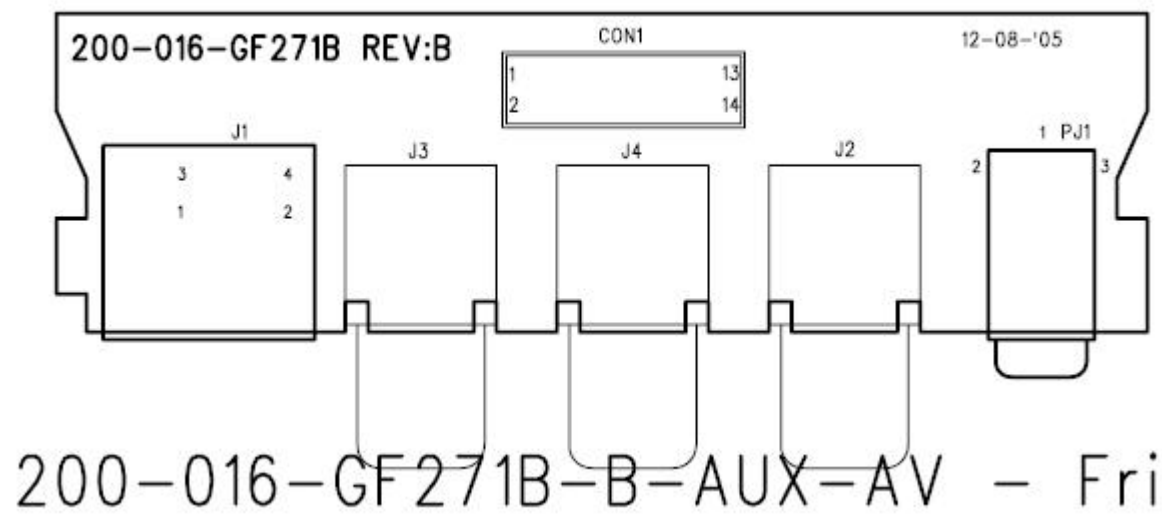
IR/LED Board (Component Side Top)

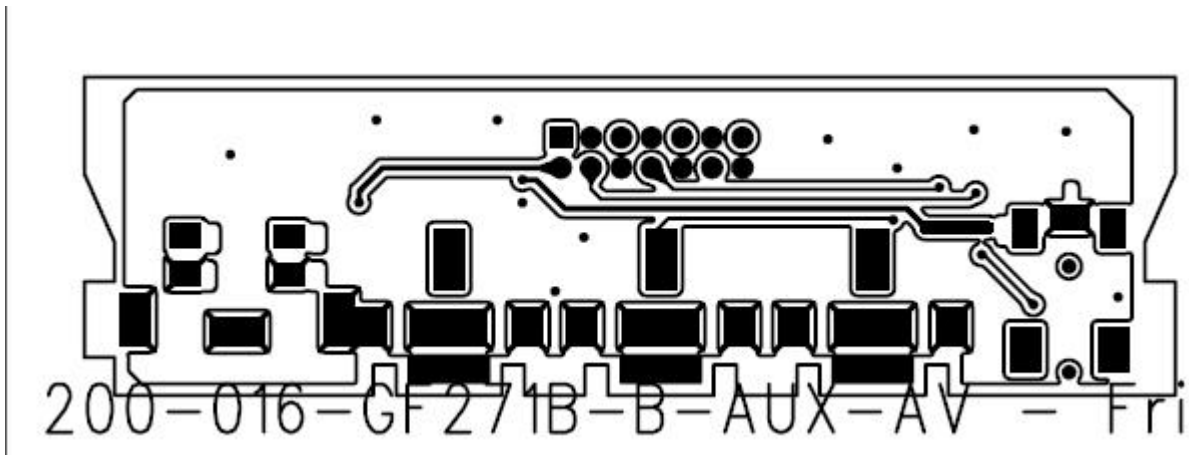


IR/LED Board (Component Side Bottom)

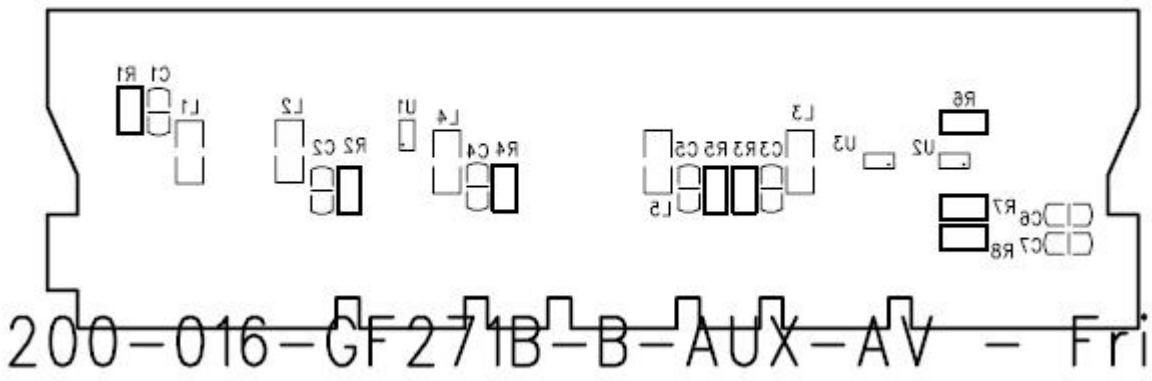


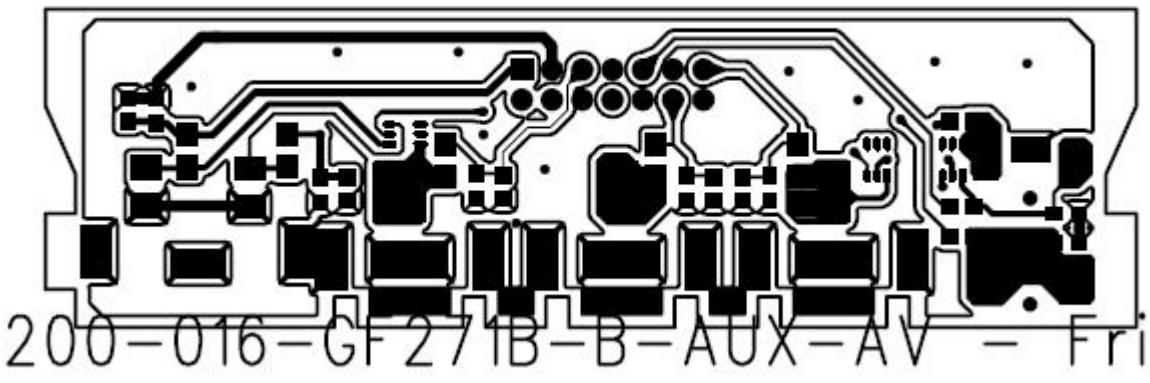
AUX AV Board (Component Side Top)



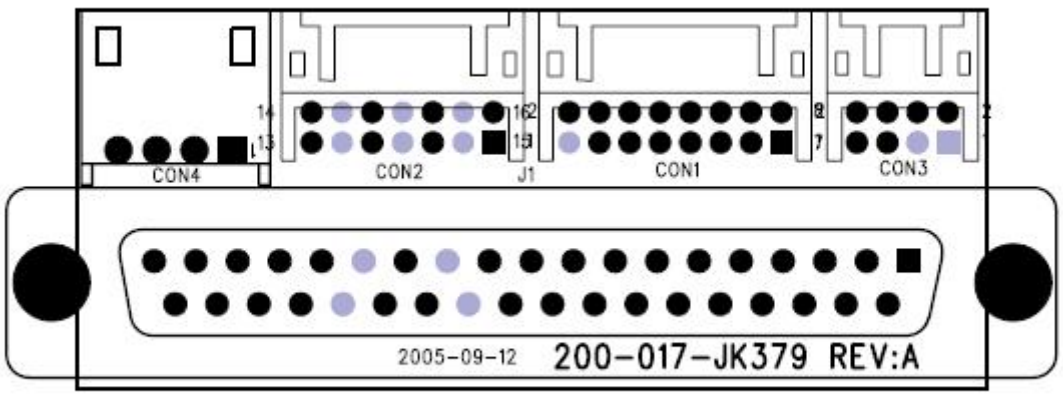


AUX AV Board (Component Side Bottom)





D-SUB 37 Pin Board (Component Side Top)



D-SUB 37 Pin Board (Component Side Bottom)

