

LG

COLOR MONITOR

SERVICE MANUAL

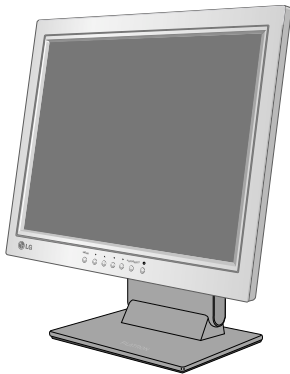
CHASSIS NO. : CL-32

FACTORY MODEL: LB500J

MODEL: FLATRON L1510S (LB500J-EL)
FLATRON L1510S (LB500J-EU)

CAUTION

BEFORE SERVICING THE UNIT,
READ THE **SAFETY PRECAUTIONS** IN THIS MANUAL.



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SPECIFICATIONS

1. LCD CHARACTERISTICS

Type	: TFT XGA LCD Module
Size	: 352.0(H) x 263.5(V) x 14.0(T)
Pixel Pitch	: 0.297mm x 0.297mm
Color Depth	: 8Bits/ 16,194,277 colors
Active Video Area	: 15.0inch (304.128 x 228.096)
Surface Treatment	: Anti-Glare, Hard Coating (3H)
Backlight Unit	: Top/Bottom edge side 2CCFL
Electrical Interface	: LVDS interface

2. OPTICAL CHARACTERISTICS

2-1. Viewing Angle by Contrast Ratio ≥ 10

Left	: 55° min.
Right	: 55° min.
Top	: 40° min.
Bottom	: 40° min.

2-2. Luminance : 150(min.), 180(typ.) at Center point

2-3. Contrast Ratio : 200(min.), 300(typ.)

3. SIGNAL (Refer to the Timing Chart)

3-1. Sync Signal

- 1) Type : Separate Sync. (Horizontal & Vertical)
- 2) Input Voltage Level: Low=0~0.8V, High=2.1~5.5V
- 3) Sync Polarity : Positive or Negative

3-2. Video Input Signal

- 1) Type : R, G, B Analog
- 2) Voltage Level : 0~0.714 V
 - a) Color 0, 0 : 0 Vp-p
 - b) Color 7, 0 : 0.467 Vp-p
 - c) Color 15, 0 : 0.714 Vp-p
- 3) Input Impedance : 75 Ω

3-3. Operating Frequency

Horizontal	: 31 ~ 61kHz
Vertical	: 56 ~ 75Hz

4. POWER SUPPLY

4-1. Power

100~240V, 50/60Hz 0.6A

4-2. Power Consumption

MODE	H/V SYNC	VIDEO	POWER CONSUMPTION	LED COLOR
POWER ON (MAX)	ON/ON	ACTIVE	less than 30 W	GREEN
POWER ON (NORMAL)	ON/ON	ACTIVE	less than 28 W	GREEN
STAND-BY	OFF/ON	OFF	less than 3 W	AMBER
SUSPEND	ON/OFF	OFF	less than 3 W	AMBER
POWER OFF	-	-	less than 3 W	OFF

5. ENVIRONMENT

5-1. Operating Temperature: 10°C~35°C (50°F~95°F)
(Ambient)

5-2. Relative Humidity : 10%~80%
(Non-condensing)

5-3. MTBF : 50,000 Hours (Min.)
Lamp Life : 30,000 Hours (min.)

6. DIMENSIONS (with TILT/SWIVEL)

Width	: 356mm (14.01")
Depth	: 151.7mm (5.97")
Height	: 359.8mm (14.16")

7. WEIGHT (with TILT/SWIVEL)

Net. Weight	: 4.0kg (8.82 lbs)
Gross Weight	: 5.5kg (12.13 lbs)

PRECAUTION

WARNING FOR THE SAFETY-RELATED COMPONENT.

- There are some special components used in LCD monitor that are important for safety. ***These parts are marked  on the schematic diagram and the replacement parts list.*** It is essential that these critical parts should be replaced with the manufacturer's specified parts to prevent electric shock, fire or other hazard.
- Do not modify original design without obtaining written permission from manufacturer or you will void the original parts and labor guarantee.

WARNING

BE CAREFUL ELECTRIC SHOCK !

- If you want to replace with the new backlight (CCFL) or inverter circuit, must disconnect the AC adapter because high voltage appears at inverter circuit about 650Vrms.
- Handle with care wires or connectors of the inverter circuit. If the wires are pressed cause short and may burn or take fire.

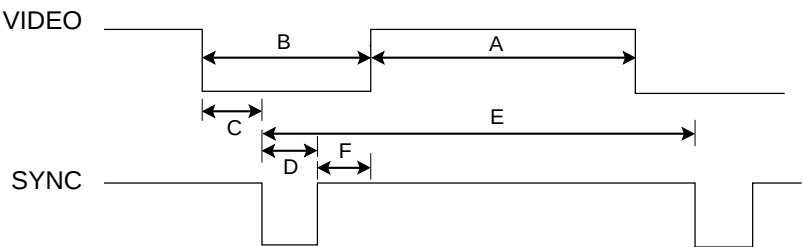
TAKE CARE DURING HANDLING THE LCD MODULE WITH BACKLIGHT UNIT.

- Must mount the module using mounting holes arranged in four corners.
- Do not press on the panel, edge of the frame strongly or electric shock as this will result in damage to the screen.
- Do not scratch or press on the panel with any sharp objects, such as pencil or pen as this may result in damage to the panel.
- Protect the module from the ESD as it may damage the electronic circuit (C-MOS).
- Make certain that treatment person's body are grounded through wrist band.
- Do not leave the module in high temperature and in areas of high humidity for a long time.
- The module not be exposed to the direct sunlight.
- Avoid contact with water as it may a short circuit within the module.
- If the surface of panel become dirty, please wipe it off with a softmaterial. (Cleaning with a dirty or rough cloth may damage the panel.)

CAUTION

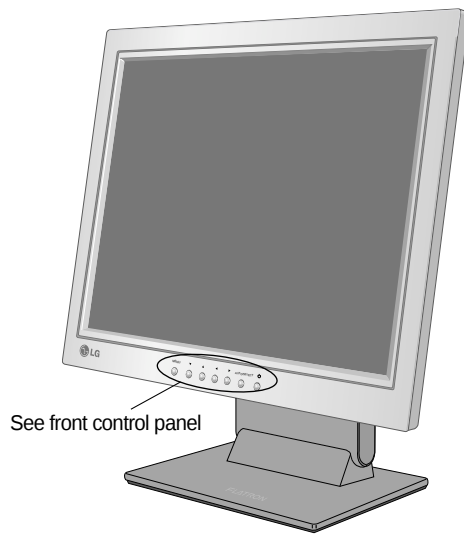
Please use only a plastic screwdriver to protect yourself from shock hazard during service operation.

TIMING CHART

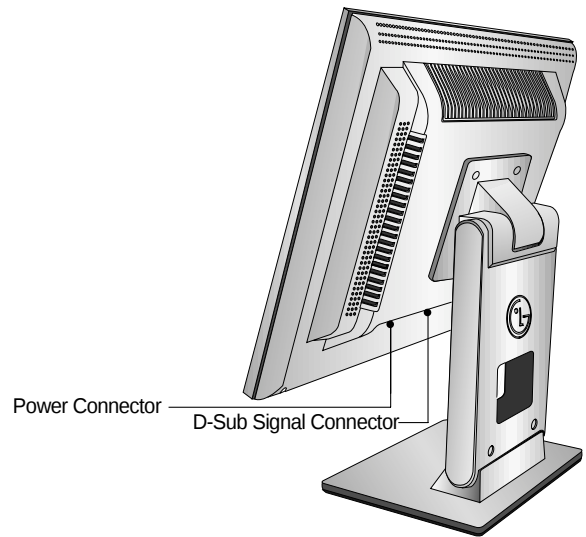


MODE	H / V	Sync Polarity	Dot Clock	Frequency	Total Period (E)	Video Active Time (A)	Blanking Time (B)	Sync Duration (D)	Back Porch (F)	Front Porch (C)	Resolution
1	H (Pixels)	+	25.175	31.468 KHz	800	640	160	96	48	16	640 x 350
	V (Lines)	-		70.0 Hz	449	350	99	2	60	37	
2	H (Pixels)	-	28.322	31.468 KHz	900	720	180	108	55	17	720 x 400 (TEXT)
	V (Lines)	+		70.0 Hz	449	400	49	2	34	13	
3	H (Pixels)	-	25.175	31.469 KHz	800	640	160	96	48	16	640 x 480
	V (Lines)	-		60.0 Hz	525	480	45	2	33	10	
4	H (Pixels)	-	30.24	35.0 KHz	864	640	224	64	96	64	640 x 480
	V (Lines)	-		66.67 Hz	525	480	45	3	39	3	
5	H (Pixels)	-	31.5	37.861 KHz	832	640	192	40	128	24	640 x 480
	V (Lines)	-		72.8 Hz	520	480	40	3	28	9	
6	H (Pixels)	-	31.5	37.50 KHz	840	640	200	64	120	16	640 x 480
	V (Lines)	-		75 Hz	500	480	20	3	16	1	
7	H (Pixels)	+	36.0	35.156KHz	1024	800	224	72	128	24	800 x 600
	V (Lines)	+		56.25 Hz	625	600	25	2	22	1	
8	H (Pixels)	+	40.0	37.879 KHz	1056	800	256	128	88	40	800 x 600
	V (Lines)	+		60.3 Hz	628	600	28	4	23	1	
9	H (Pixels)	+	50.0	48.077 KHz	1040	800	240	120	64	56	800 x 600
	V (Lines)	+		72.188 Hz	666	600	66	6	23	37	
10	H (Pixels)	+	49.5	46.875 KHz	1056	800	256	80	160	16	800 x 600
	V (Lines)	+		75.0 Hz	625	600	25	3	21	1	
11	H (Pixels)	-	57.2832	49.725 KHz	1152	832	320	64	224	32	832 x 624 (MAC)
	V (Lines)	-		74.55 Hz	667	624	43	3	39	1	
12	H (Pixels)	-	65	48.363 KHz	1344	1024	320	136	160	24	1024 x 768
	V (Lines)	-		60.0 Hz	806	768	38	6	29	3	
13	H (Pixels)	-	75	56.476 KHz	1328	1024	304	136	144	24	1024 x 768
	V (Lines)	-		70.0 Hz	806	768	38	6	29	3	
14	H (Pixels)	+	78.75	60.023 KHz	1312	1024	288	96	176	16	1024 x 768
	V (Lines)	+		75.0 Hz	800	768	32	3	28	1	

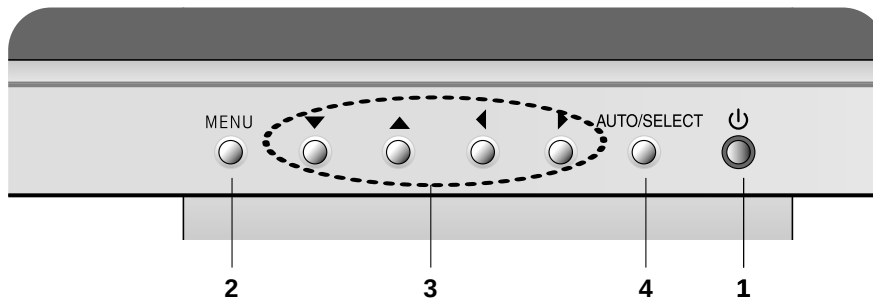
FRONT VIEW



REAR VIEW



Front Control Panel



1. Power Button

Use this button to turn the display on or off.

<Power (DPMS) Indicator>

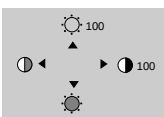
This Indicator lights up green when the display operates normally. If the display is in DPM (Energy Saving) mode, this indicator color changes to amber.

2. Menu Button

Use this button to enter or exit the On Screen Display.

3. ▲▼/◀▶ Button

Use these buttons to choose or adjust items in the On Screen Display.



Bring up Contrast and Brightness adjustment.

4. AUTO/SELECT Button

Use this button to enter a selection in the On Screen Display.

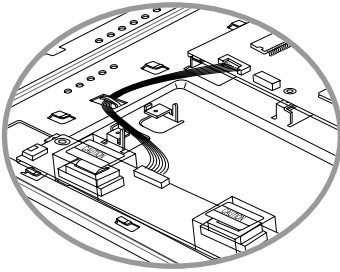


When adjusting your display settings, always press the **AUTO/SELECT** button before entering the On Screen Display(OSD). This will automatically adjust your display image to the ideal settings for the current screen resolution size (display mode).

The best display mode is **1024x768**.

WIRING DIAGRAM (LG Philips Module)

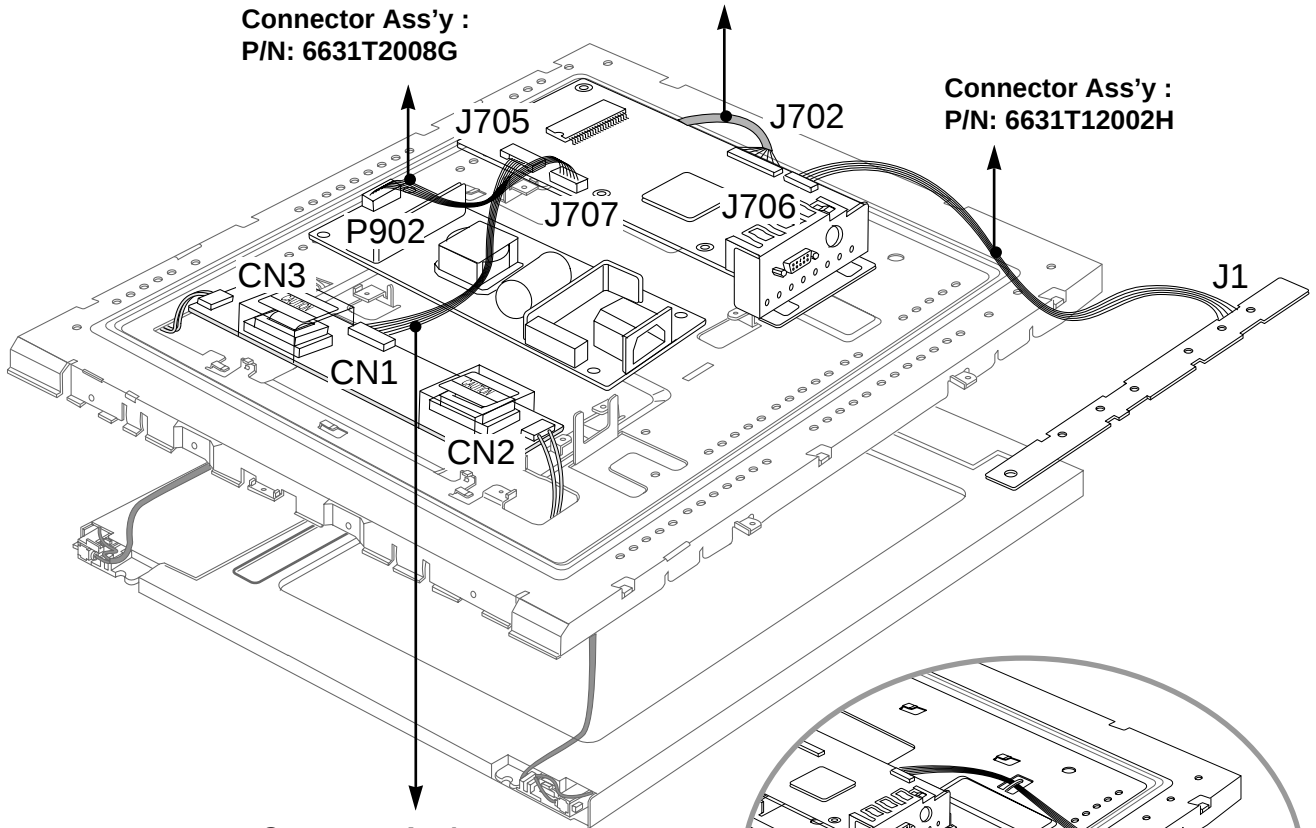
Connector the Power PCB Ass'y and Inverter.



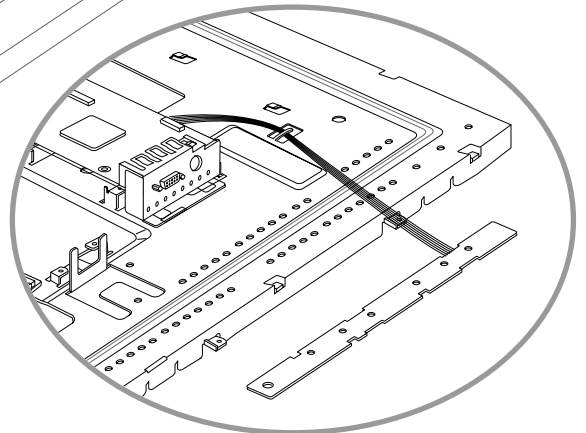
Connector Ass'y :
P/N: 6631T11012V

Connector Ass'y :
P/N: 6631T2008G

Connector Ass'y :
P/N: 6631T12002H

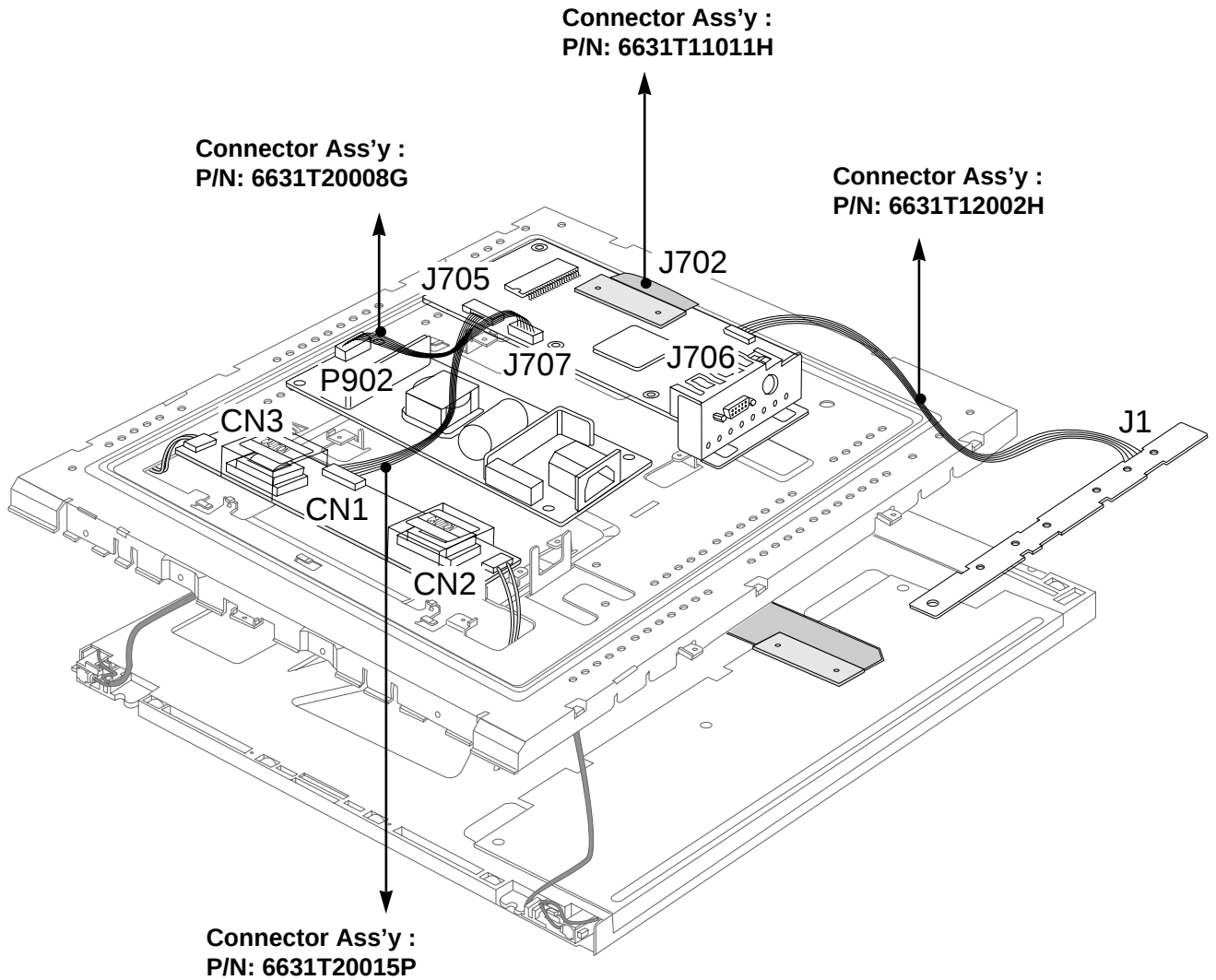


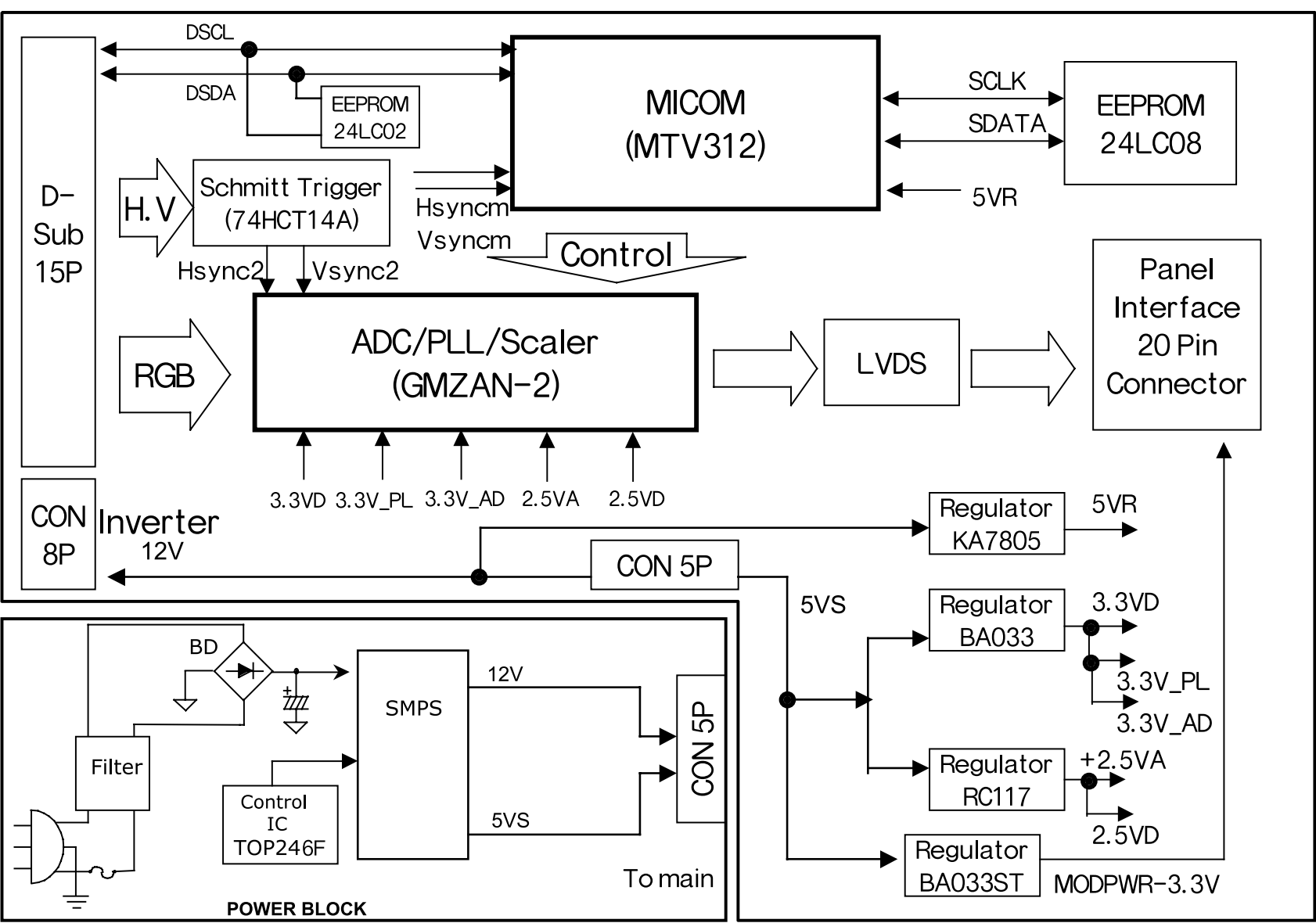
Connector Ass'y :
P/N: 6631T20015P



Connector the Control PCB Ass'y and Power PCB Ass'y.

WIRING DIAGRAM (AUO Module)





DESCRIPTION OF BLOCK DIAGRAM (LG Philips Module)

1. Scaler One chip IC(GMZAN-2, U201)

GMZAN-2 (U201) is one chip IC which it supports four internal function blocks of Video Amp, PLL, A/D converter and Video processor.

Video signal (0.7Vp.p) clamped through C207, 208, 209 with matching IC's proper cut off voltage.

This signal is processed as a proper 8 bit digital signal by U201's amplifying, phase locking, A/D converting, and scaling operations.

Also, U201 generates Clock, Horizontal and Vertical sync, Data Enable signals as LVDS IC's input signals.

2. System Controller (Microprocessor) Circuit

- 1) Microprocessor (U501) distinguishes polarity and frequency by calculating horizontal and vertical sync input from signal source.
- 2) Microprocessor (U501) carries out power control by sending power-down trigger signal to each IC.
- 3) Microprocessor (U501) communicates with EEPROM (U502), and GMZAN-2 (U201) through IIC(2 lines) or 4 bit bus line. It makes all devices operated properly.
- 4) Microprocessor (U501) let User adjust screen by OSD function.

3. LVDS(Low Voltage Differential Signal, U411)

LVDS transmitter (U411) delivers digital signal to the receiver inside LCD module by method of abstraction. The abstracted signals are pairs of RIN0+-, RIN1+-, RIN2+-, RIN3+-, and RCLKIN+- of which voltage swing is 0.5V each.

When SHUTON pin's input is High, transmitter goes to power down mode.

4. DC/DC block

This block is composed of regulators which supplies 2.5V, 3.3V, and 5V.

Each regulator's source power is 5VS and 12V from power block.

U806 supplies 2.5VD and 2.5VA and U802 supplies 3.3VD, 3.3V_AD, and 3.3V_PL powers to GMZAN-2's internal PLL, ADC, Pre-amp, and scaler by dropping down 5VS from power block.

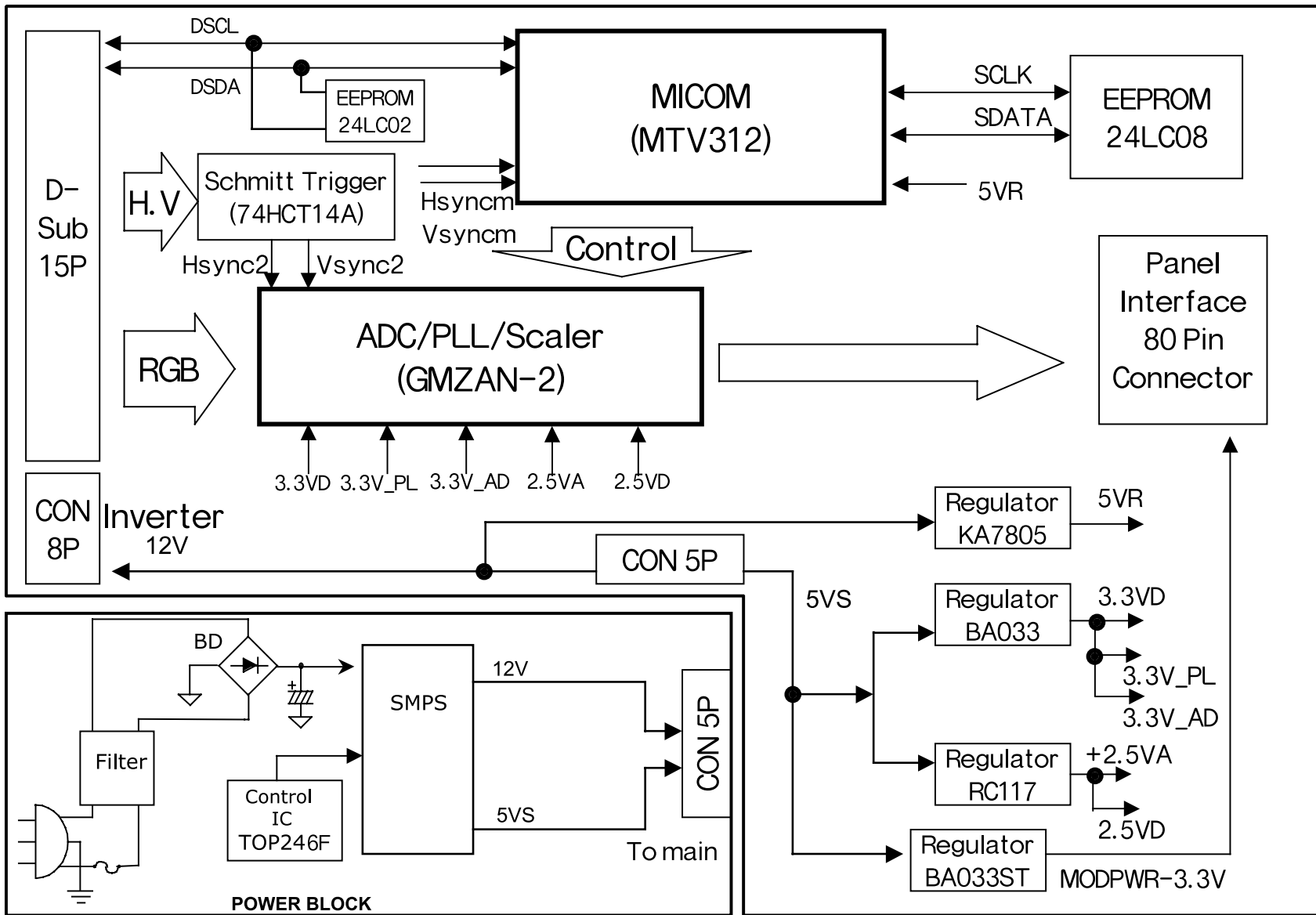
U805 supplies MODPWR-3.3V for LCD module's operation by dropping down 5VS from power block.

U803 supplies 5VR for Microprocessor and Logic IC(U701)'s operation by dropping down 12V from power block.

5. Power Block

This block supplies DC voltages of 5VS and 12V by converting AC input voltage of 100~240Vac.

Converting method is SMPS(Switching Mode Power Supply).



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ADJUSTMENT

All adjustment are thoroughly checked and corrected when the monitor leaves the factory, but sometimes several minor adjustment may be required. Adjustment should be following procedure and after warming up for a minimum of 10 minutes. Alignment appliances and tools.

- IBM Compatible PC
- Programmable Signal Generator.
(eg. VG-819 made by Astrodesign Co.)
- E(E)PROM with each mode data saved.
- Alignment Adapter and Software.

1. Adjustment for Factory Preset Mode

- 1) Run alignment program for LB500J on the IBM compatible PC.
- 2) Select EEPROM All Init. command and Enter.
- 3) Display cross hatch pattern at Mode 1.
- 4) Select COMMAND PRESET START command.
- 5) Select EDID WRITE command and Enter.

2. Adjustment for White Balance

- 1) Display color 0,0 pattern at Mode 13.
- 2) Set External Bright to MAX position and Contrast to MAX Position.
- 3) Select PRESET START → BIAS CAL command and Enter.
- 4) No attempt to manually adjust, BIAS data is automatically adjusted and saved to the EEPROM.
- 5) Display color 15,0 pattern at Mode 13.
- 6) Select DRIVE CAL command and Enter.
- 7) Color 1 (9300K) and Color 2 (6500K) are automatically adjusted and saved to the EEPROM.
- 8) Select PRESET EXIT command and Enter.

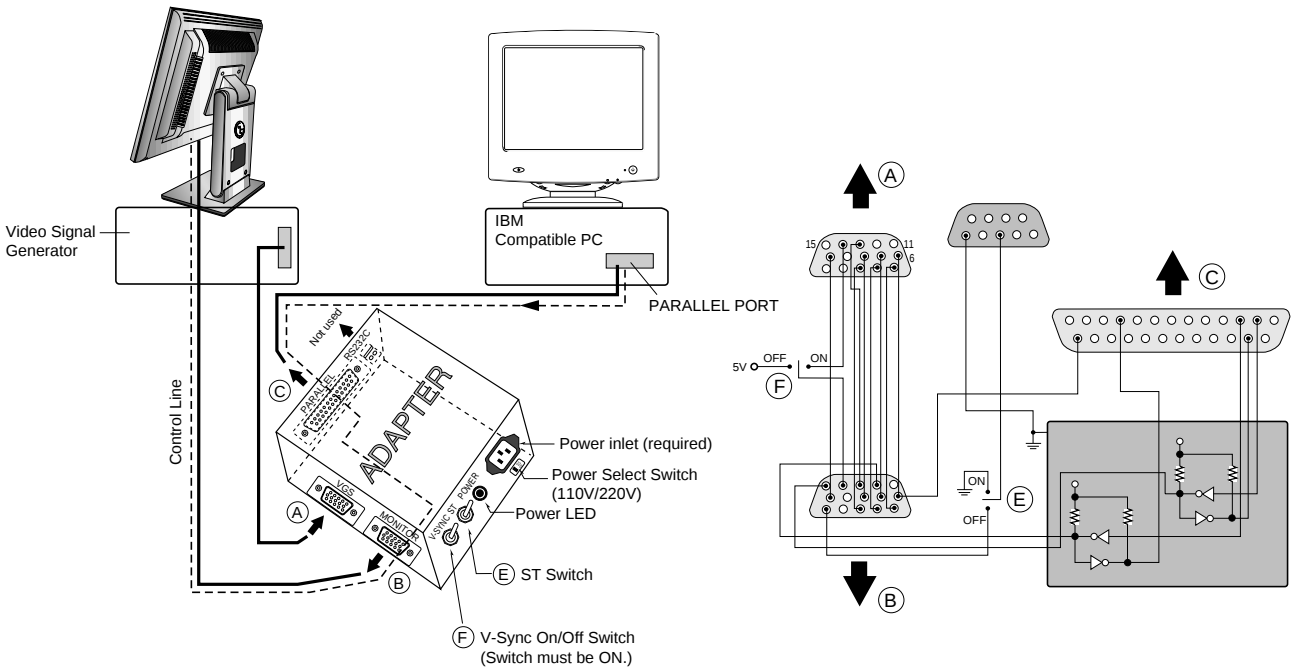
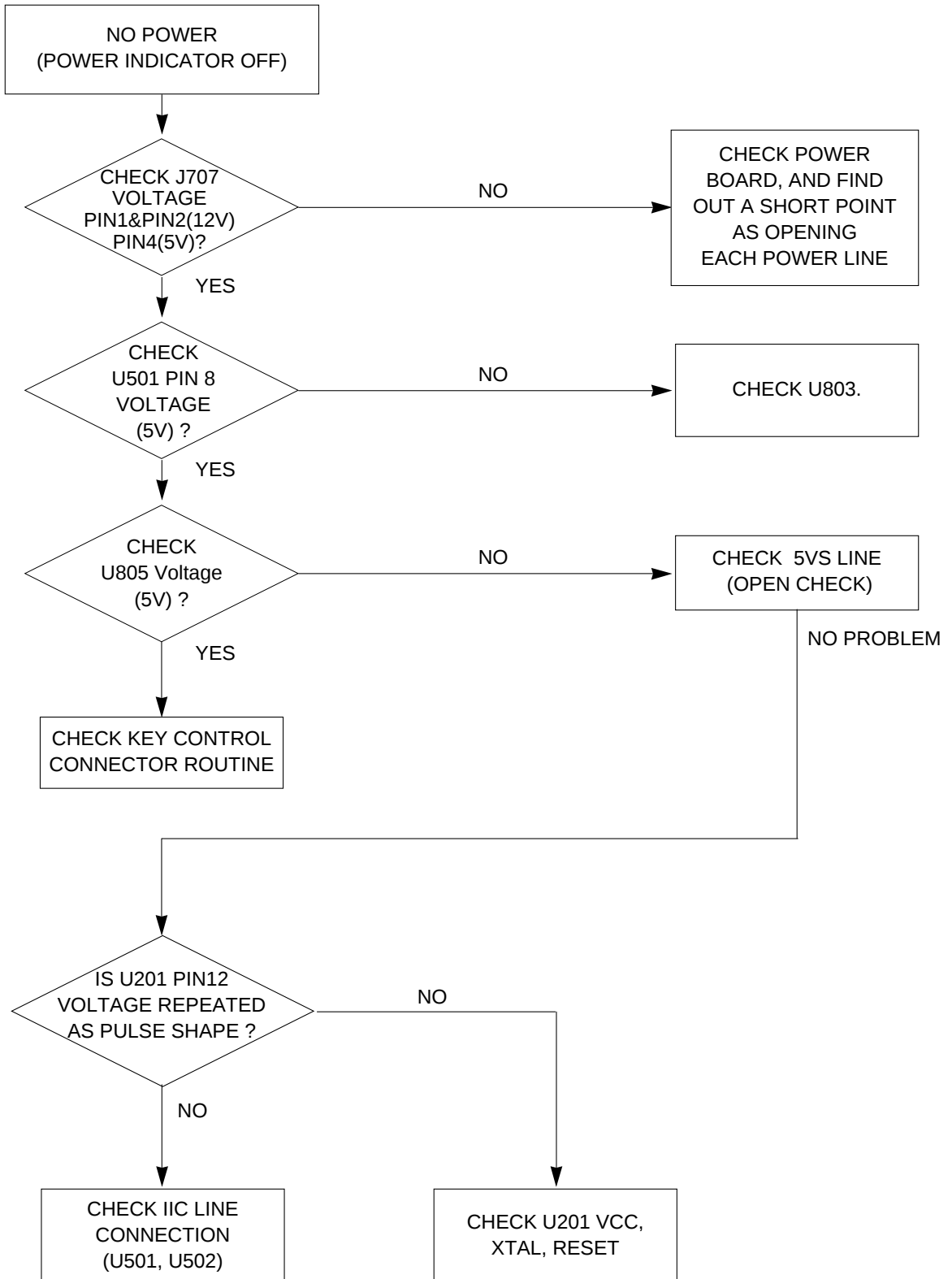


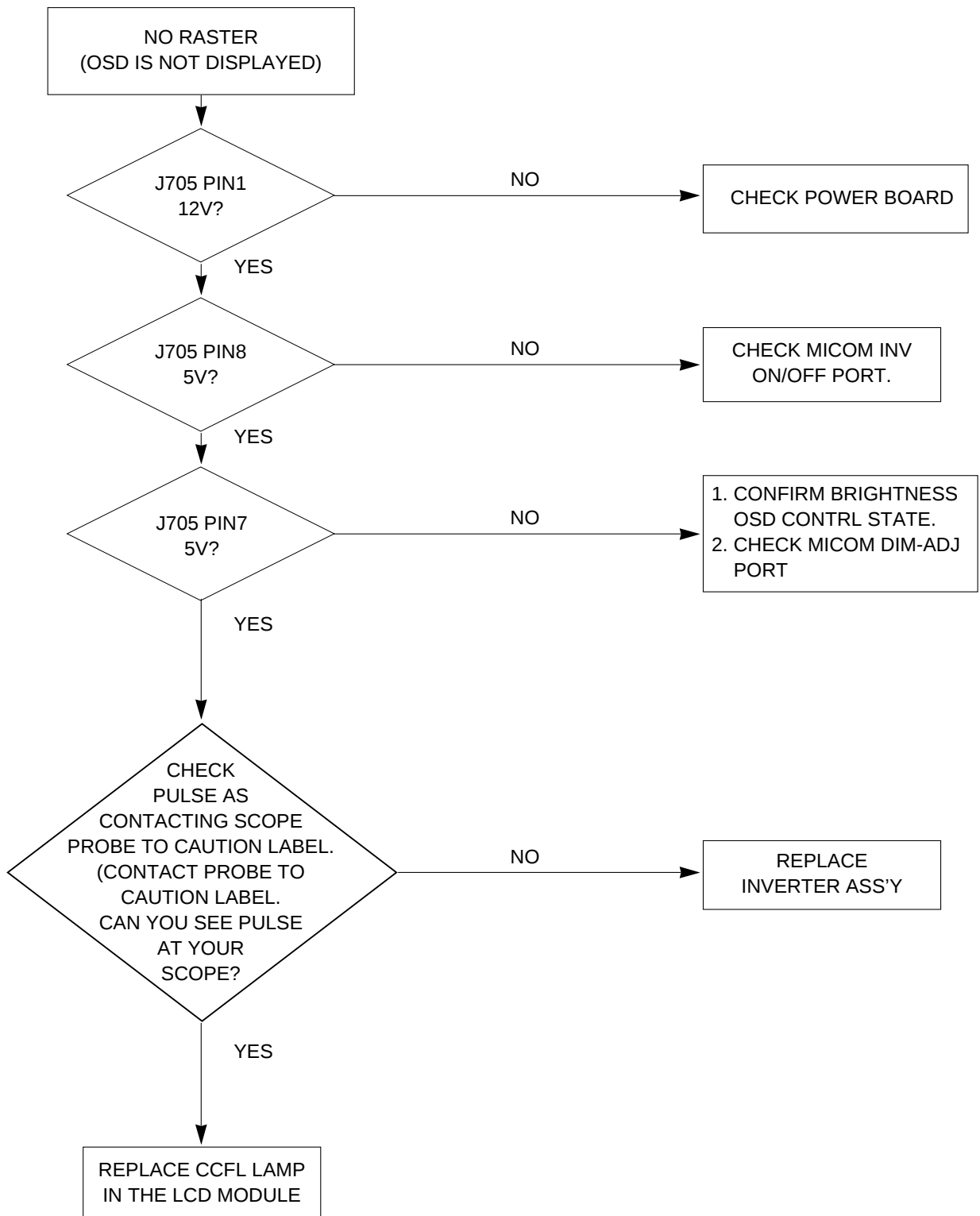
Figure 1. Cable Connection

TROUBLESHOOTING GUIDE

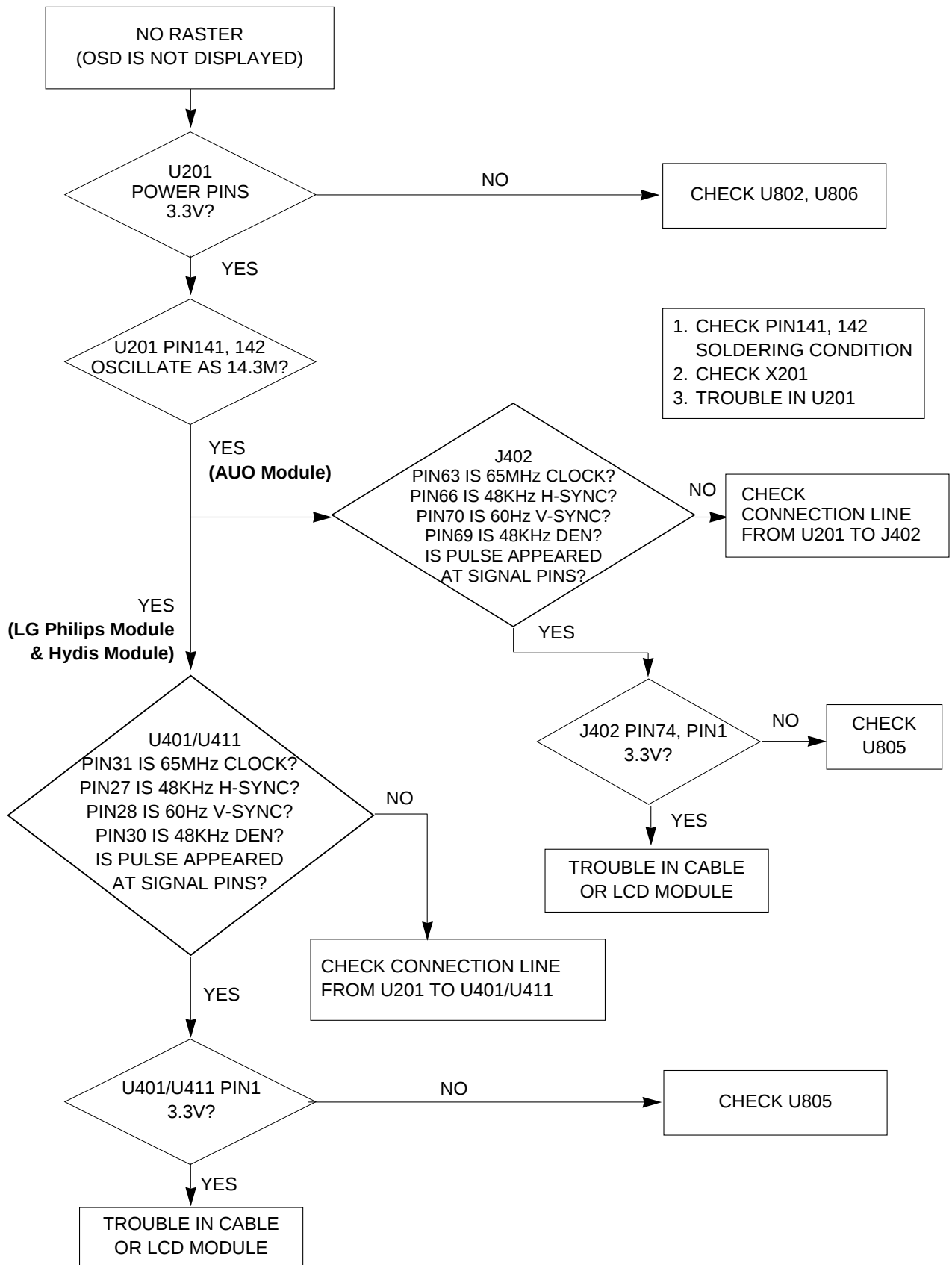
1. NO POWER



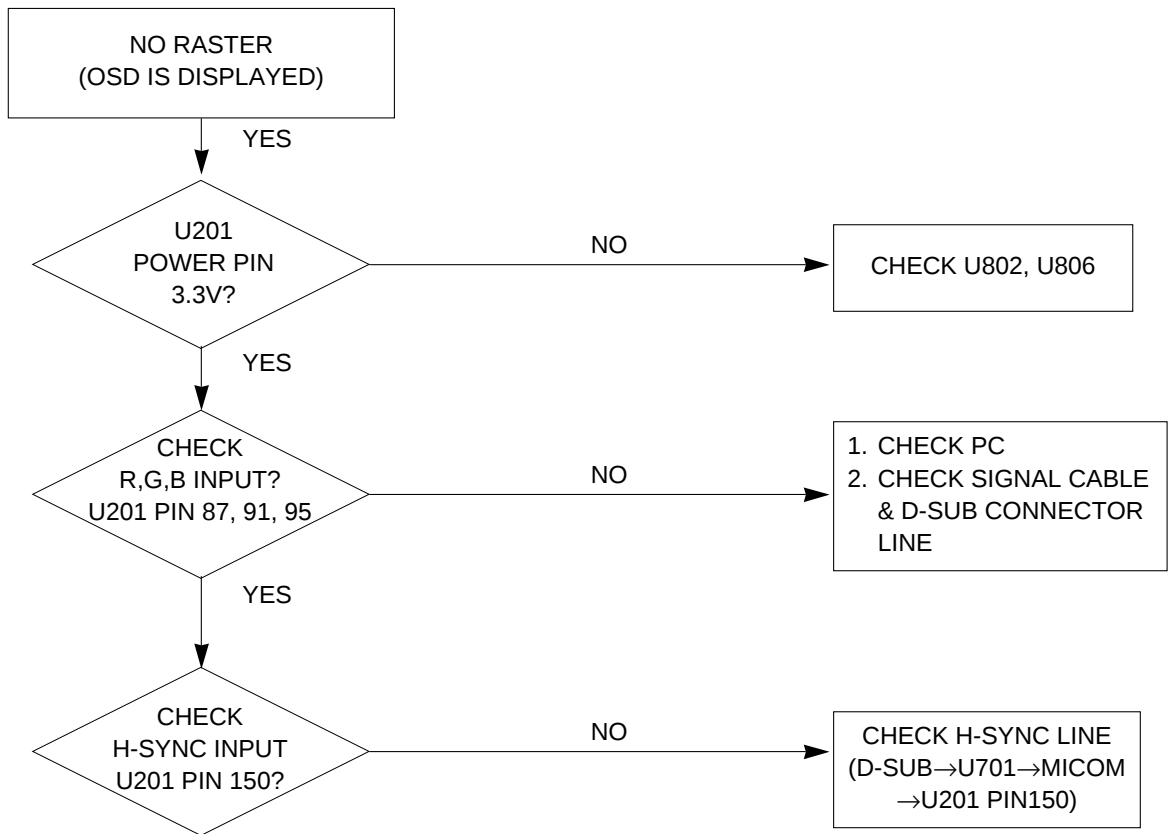
2. NO RASTER (OSD IS NOT DISPLAYED) – INVERTER



3. NO RASTER (OSD IS NOT DISPLAYED) – gmZAN2

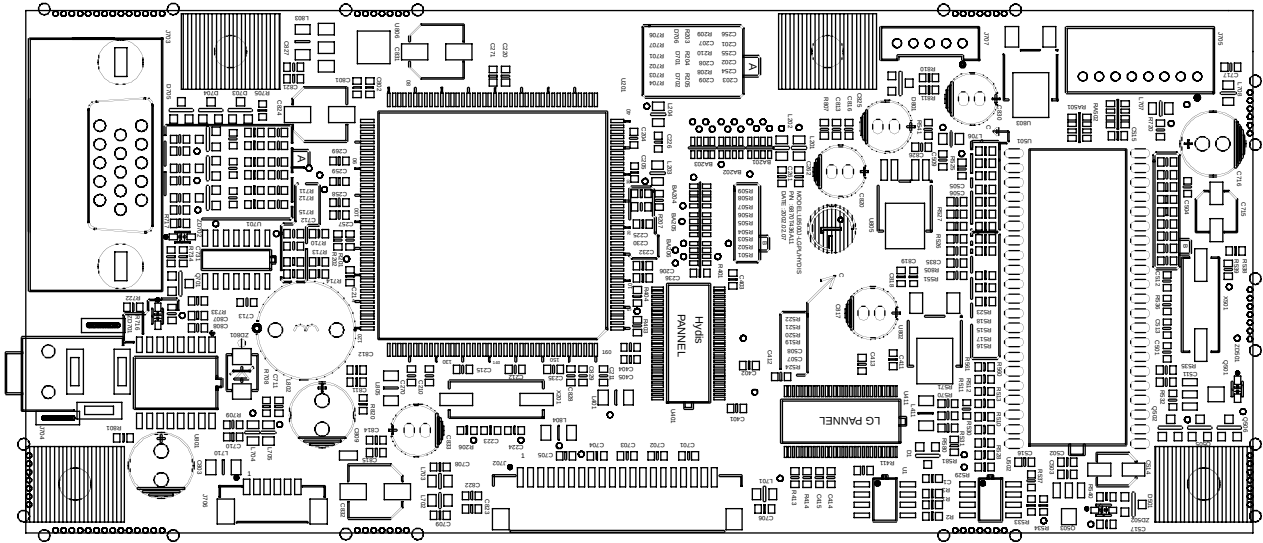


4. NO RASTER (OSD IS DISPLAYED) – gmZAN2

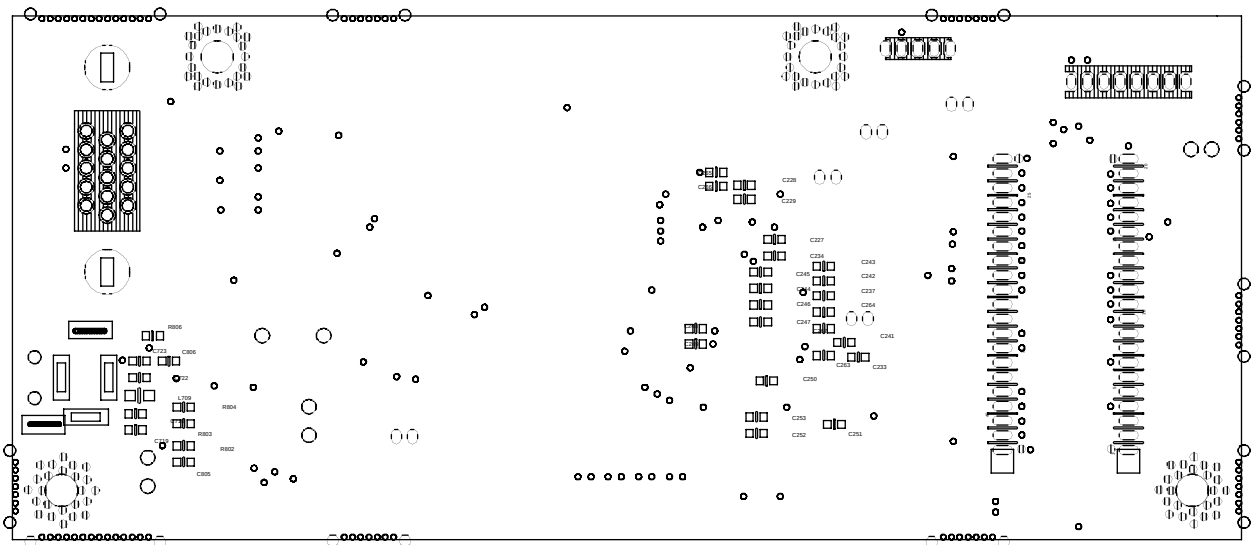


LG Philips Module

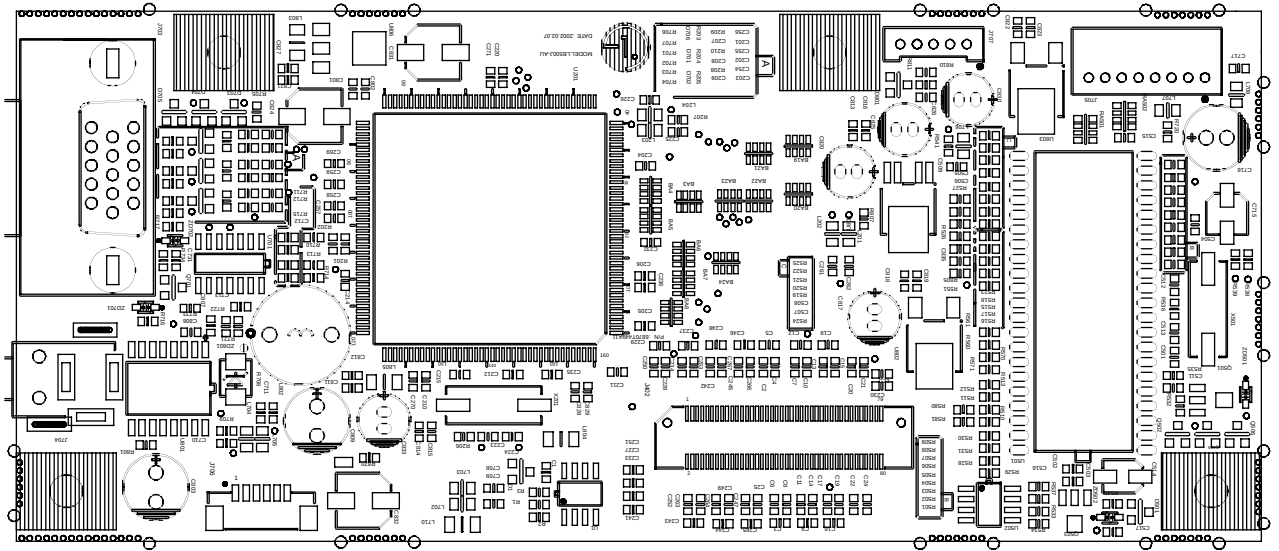
1. MAIN BOARD (Component Side)



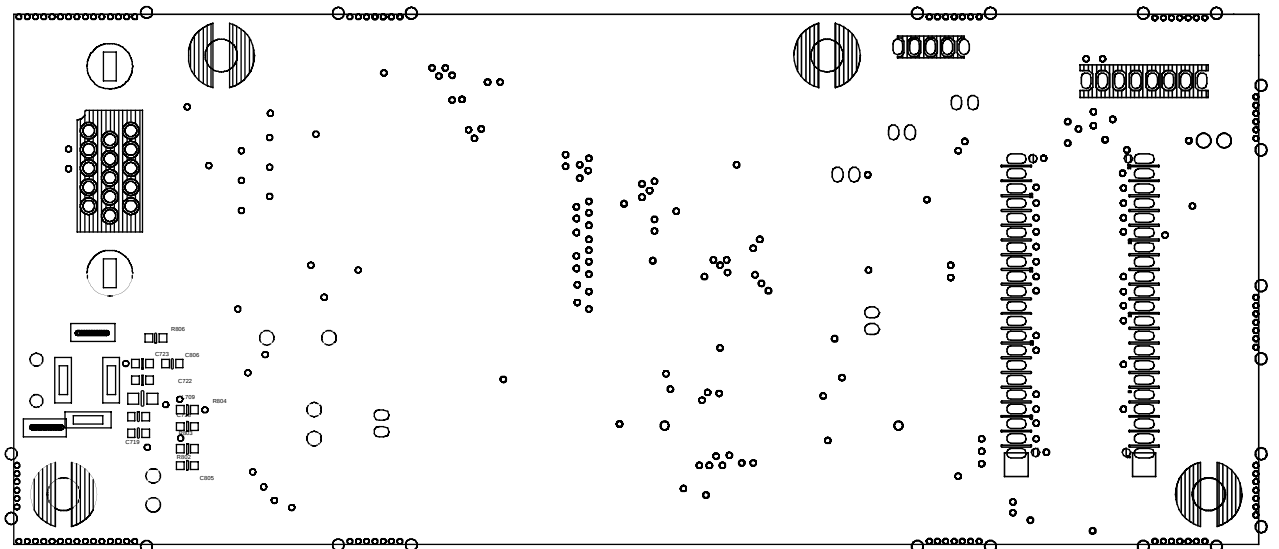
2. MAIN BOARD (Solder Side)



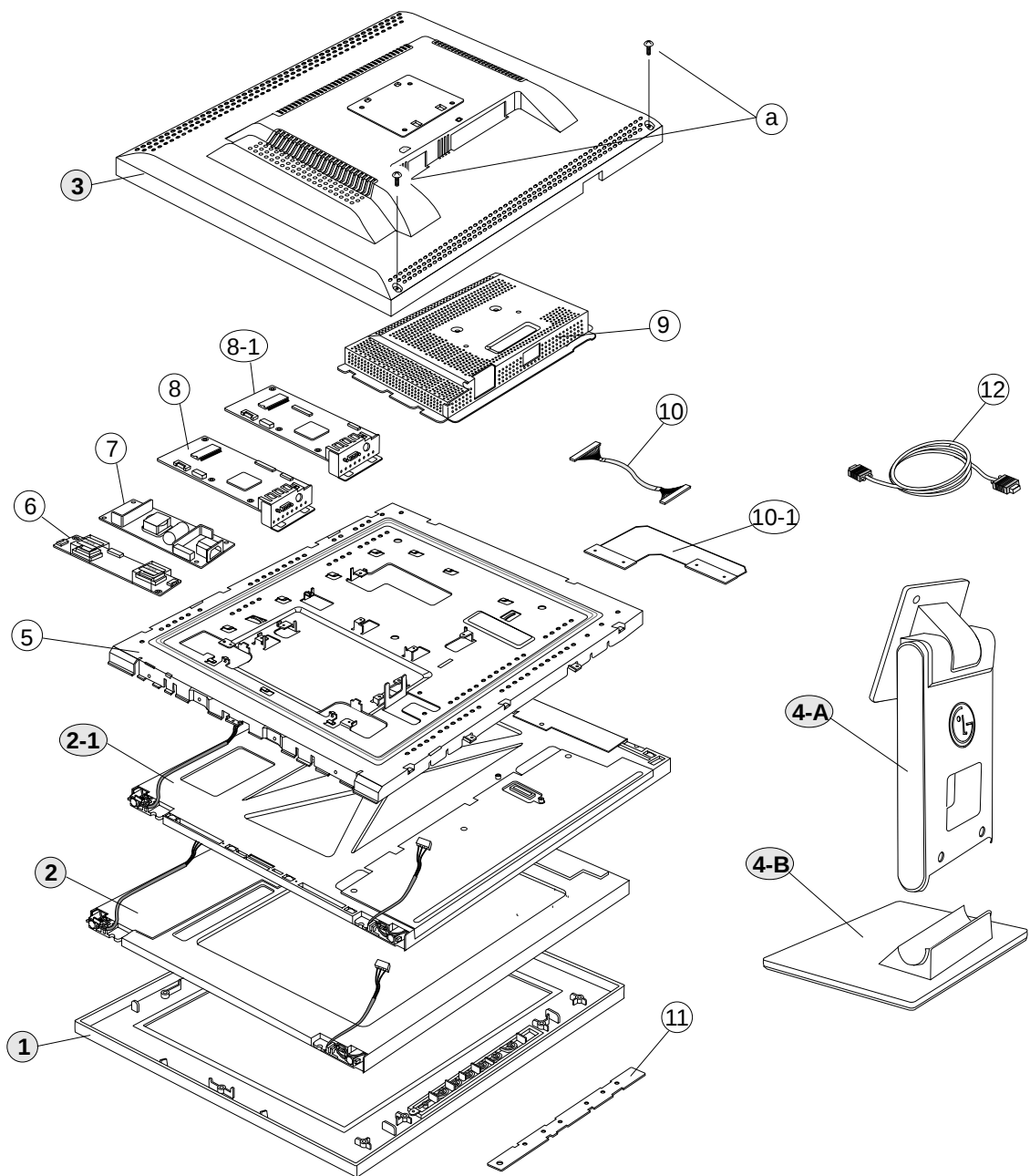
3. MAIN BOARD (Component Side)



4. MAIN BOARD (Solder Side)



EXPLODED VIEW



EXPLODED VIEW PARTS LIST

Ref. No.	Part No.	Description
1	3091TKL039B	CABINET ASSEMBLY, LB500J BRAND 3090TKL038
2	6304FLP016A	LCD(LIQUID CRYSTAL DISPLAY), LM150X05 C3 LG PHILPS TFT COLOR (LB500J-EL)
2-1	6304FAU004A	LCD(LIQUID CRYSTAL DISPLAY), L150X3M AU TFT COLOR (LB500J-EU)
3	3809TKL026A	BACK COVER ASSEMBLY, LB500J 3808TKL029A
4-A	3043TKK097A	TILT SWIVEL ASSEMBLY, LB500J . (BASE)
4-B	3043TKK092A	TILT SWIVEL ASSEMBLY, LB500J
5	4951TKS085A	METAL ASSEMBLY, FRAME (LB500J) (LB500J-EL)
	4951TKS085B	METAL ASSEMBLY, FRAME MAIN(LB500J) (LB500J-EU)
6	6633TZA003H	INVERTER ASSEMBLY SAMSUNG LG1510 LG56AH
	or 6632Z-1507C	INVERTER ASSEMBLY NMC 1507 15.1 12V (CHOI JEONG GYU)
7	6871TPT223C	PWB(PCB) ASSEMBLY,POWER LB500J POWER TOTAL BRAND CL-32
8	3313TL5040A	MAIN TOTAL ASSEMBLY, LB500J LG.PHILIPS BRAND CL-32 (LB500J-EL)
8-1	3313TL5040B	MAIN TOTAL ASSEMBLY, LB500J AUO BRAND CL-32 (LB500J-EU)
9	4950TKK424A	METAL REAR LB500J
10	6631T11012V	CONNECTOR ASSEMBLY, 20P H-H 140MM UL20276 UNIXSTAR LB500J (LB500J-EL)
10-1	6631T11011H	CONNECTOR ASSEMBLY, 80P H-H 133MM FPC F219-017 LB500J (LB500J-EU)
11	6871TST285A	PWB(PCB) ASSEMBLY,SUB, LB500J CONTROL TOTAL BRAND CL-32
12	6850TD9001A	CABLE,D-SUB UL 2990-9C(7.5) DT 1870MM GRAY(85964) BRAND DM
a	332-068U	SCREW, PPB+3*8 (MSWR/FZMW1)

REPLACEMENT PARTS LIST

CAUTION: BEFORE REPLACING ANY OF THESE COMPONENTS,
READ CAREFULLY THE **SAFETY PRECAUTIONS** IN THIS MANUAL.

* NOTE : **S** SAFETY Mark 
AL ALTERNATIVE PARTS

DATE: 2002. 2. 23.

*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
MAIN BOARD				
CAPACITORS				
		C1	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C201	0CC100CK41A	10PF 1608 50V 5% R/TP NP0
		C202	0CC100CK41A	10PF 1608 50V 5% R/TP NP0
		C203	0CC100CK41A	10PF 1608 50V 5% R/TP NP0
		C205	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C207	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C208	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C209	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C210	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C211	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C212	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C215	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C223	0CC150CK41A	15PF 1608 50V 5% R/TP NP0
		C224	0CC150CK41A	15PF 1608 50V 5% R/TP NP0
		C225	0CC100CK41A	10PF 1608 50V 5% R/TP NP0
		C226	0CC680CK41A	68PF 1608 50V 5% R/TP NP0
		C230	0CC150CK41A	15PF 1608 50V 5% R/TP NP0
		C254	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C255	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C256	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C257	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C258	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C259	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C261	0CC680CK41A	68PF 1608 50V 5% R/TP NP0
		C262	0CC680CK41A	68PF 1608 50V 5% R/TP NP0
		C269	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C270	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C271	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P
		C401	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C402	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C403	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C404	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C405	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C411	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C412	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C413	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C414	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C415	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C501	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C502	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C503	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C504	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C505	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C506	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C507	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C508	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C509	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C512	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C513	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C514	0CH8106F611	10UF 16V M 85STD(CYL) R/TP
		C515	0CC680CK41A	68PF 1608 50V 5% R/TP NP0
		C516	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C706	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C712	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C713	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C715	0CH8106J611	10UF 35V M 85STD(CYL) R/TP
		C716	0CE107CH610	100UF SHL,SD 25V 20% BULK FL
		C717	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C731	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C801	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C802	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C813	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C814	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C815	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C816	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C817	0CE107CF610	100UF SHL,SD 16V 20% BULK FL
		C818	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C819	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C820	0CE107CF610	100UF SHL,SD 16V 20% BULK FL
		C821	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C822	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C823	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C824	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C825	0CE107CF610	100UF SHL,SD 16V 20% BULK FL
		C826	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C827	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C828	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C829	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C830	0CE107CF610	100UF SHL,SD 16V 20% BULK FL
		C831	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C832	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C833	0CE107CF610	100UF SHL,SD 16V 20% BULK FL
		C835	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
DIODES				
		D1	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT23 3
		D701	0DS226009AA	KDS226 TP KEC SOT-23 80V 300M
		D702	0DS226009AA	KDS226 TP KEC SOT-23 80V 300M
		D703	0DS226009AA	KDS226 TP KEC SOT-23 80V 300M
		D704	0DS226009AA	KDS226 TP KEC SOT-23 80V 300M
		D705	0DS226009AA	KDS226 TP KEC SOT-23 80V 300M
		D706	0DS226009AA	KDS226 TP KEC SOT-23 80V 300M
		D801	0DS181009AA	KDS181 TP KEC SOT-23 80V 300
		ZD501	0DZ910009FE	UDZS 9.1B TP ROHM - - 9.1V - -
		ZD701	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 20
		ZD702	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 20
ICs				
		U1	0ICS240213A	CAT24WC02J-TE13 8P SOP TP 2K I
		U201	0I0PRPGA002A	GMZAN2-160P GENESIS MICROCHIP
		U411	0ITH638300B	THC63LVDM83R THINE 56P,TSSOP R
		U502	0ISG240860B	M24C08W6 SGS-THOMSON 8SOP R/TP
		U701	0IMO741420B	MC74HCT14ADR2 14P,SOIC TP LEVE
		U802	0I0PMGKE011A	KIA78D33F KEC DPAK R/TP 3.3V L

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		U803	0ISS780500H	KA78M05-R 3P,D-PAK TP 5V 0.5A
		U805	0IRH033000A	BA0335FP P/MOLD-5 TP REGULATOR
		U806	0IPMGON007A	NCP1117ST25T3 ON SEMI SOT223 R
COILS & COREs				
		L201	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L202	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L203	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L204	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L401	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
		L411	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
		L701	6210TCE001S	HU-1M2012-121 CERATECH 2012MM
		L702	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L703	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L704	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L705	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L706	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L707	6210TCE001P	HB-1S2012-121JT CERATECH 2012M
		L708	6210TCE001S	HU-1M2012-121 CERATECH 2012MM
		L710	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
		L803	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
		L804	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
		L805	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R
TRANSISTOR				
		Q501	0IKE704200J	KIA7042AF SOT-89 TP 4.2V VOLTA
		Q502	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP S
		Q505	0TR162309CA	KSC1623 TP SAMSUNG SOT23 NPN
		Q506	0TR162309CA	KSC1623 TP SAMSUNG SOT23 NPN
		Q701	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP S
RESISTORS				
		R1	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R2	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R3	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R201	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R202	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R203	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R204	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R205	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R206	0RJ2701D677	2.7K OHM 1/10 W 5% 1608 R/TP
		R207	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R208	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R209	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R210	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R401	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R403	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R404	0RJ5601D477	5.6K OHM 1/10 W 1% 1608 R/TP
		R411	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R413	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R414	0RJ5601D477	5.6K OHM 1/10 W 1% 1608 R/TP
		R501	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R502	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R503	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R504	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R505	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R506	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R507	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R508	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP

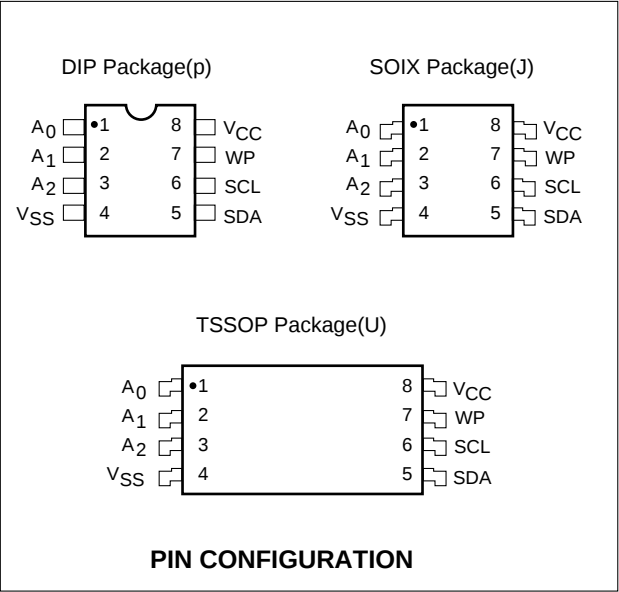
DATE: 2002. 2. 23.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R509	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R510	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R511	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R512	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R513	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R515	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R516	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R517	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R518	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R519	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R520	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R521	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R522	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R523	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R524	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R525	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R526	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R527	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R528	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R529	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R530	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R531	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R532	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/TP
		R533	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R534	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R535	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/TP
		R536	0RJ1004D677	1000000 OHM 1/10 W 5% 1608 R/T
		R537	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R538	0RJ2202D677	22K OHM 1/10 W 5% 1608 R/TP
		R539	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R541	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R551	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R560	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R561	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R571	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R581	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R701	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R702	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R703	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R704	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R705	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R706	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R707	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R708	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R709	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R711	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R712	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R713	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R714	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R715	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R716	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R717	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R720	0RJ2202D677	22K OHM 1/10 W 5% 1608 R/TP
		R721	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R722	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP (LB500J-EL)
		R722	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP (LB500J-EU)
		R733	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP
		R734	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R805	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R807	0RJ1003D677	100K OHM 1/10 W 5% 1608 R/TP
		R810	0RJ0221D677	2.2 OHM 1/10 W 5% 1608 R/TP
		R811	0RJ0221D677	2.2 OHM 1/10 W 5% 1608 R/TP

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		RA501	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CH
		RA502	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CH
OTHERs				
		X201	6202TST001A	SX-1 SUNNY ,SMS, 14.31818MHZ ,
		X501	6202TST003D	HC-49/SM5H KONY CHIP 12 MHZ 30
POWER BOARD				
		BD901	0DD260000BE	D2SB60 SHINDENKEN
		C901	0CBZTBU002D	0.33UF D 275V K M/PP NI FM22.5
		C902	0CKZTBU003D	SC SAMWHA 250V 1000PF M BULK 7
		C903	0CKZTBU003D	SC SAMWHA 250V 1000PF M BULK 7
		C905	0CZZTAB004B	KMG SYE / SWE 400V 68UF 20% BU
		C906	0CK10201515	1000P 1KV K B TS
		C907	0CE105EK638	1UF KMG 50V M FM5 TP 5
		C908	0CE476EH638	47UF KMG 25V M FM5 TP 5
		C909	181-288B	MKT 100V 104JTR PHS26104
		C911	0CE108EF630	1000UF KMG 16V M FM5 BULK
		C914	0CE335EK638	3.3UF KMG 50V M FM5 TP 5
		C916	181-288L	MKT 100V 823JTR PHS26823
		C918	0CE108EF630	1000UF KMG 16V M FM5 BULK
		C920	0CKZTBU003C	SC E 472M 14.0BW7 250V BK7.5 S
		C922	0CK10201515	1000P 1KV K B TS
		C923	0CK10201515	1000P 1KV K B TS
		D901	0DD400709CB	UF4007 TP G.I DO204AL 1000V 1
		D903	0DRGS00281A	MBRF10H100CT GENERAL SEMICONDU
		D906	0DR206000AA	MBRF2060CT BK G.I ITO220 60V 2
		D904	0DR400409AB	UF4004 TP G.I DO204AL 400V 1A
		D908	0DZ620009AG	P6KE200 TP G.I D015 5W 200V 1M
		F901	0FZZTTH001E	TIME LAG HBC 2153.15MXE(LEAD),
		IC901	0IPMGPF004A	TOP246F POWER INTEGRATION TO26
		IC904	0ISS431000A	KA431AZ (LM431AZ)
		LF901	6200TZZ001B	- 0 BK L/FILTER, 9MH,LG56BP
		P901	6620TKB002C	BCP031S-A,BAE EUN AC UNIVERSAL
		P902	6631T20008G	5P H-B 100MM UL1061 AWG 26 TWI
		PC901	0IL1817000E	LTV-817M B 4P BK PHOTO COUPLER
		R901	0RD6803A609	680K OHM 1/2 W (7.0) 5% TA52
		R902	0RD1004Q609	1M OHM 1/4 W (3.4) 5% TA52
		R903	0RD1004Q609	1M OHM 1/4 W (3.4) 5% TA52
		R904	0RD4704Q609	4.7M OHM 1/4 W (3.4) 5% TA52
		R905	0RD4704Q609	4.7M OHM 1/4 W (3.4) 5% TA52
		R906	0RX4702J609	47K OHM 1 W 5% TA52
		R907	0RD0471Q609	4.70 1/4W(3 5% TA52
		R908	0RD0681Q609	6.8 OHM 1/4 W (3.4) 5% TA52
		R909	0RD1001Q609	1K 1/4W(3 5% TA52
		R913	0RN1302F409	13K 1/6W 1% TA52
		R917	0RD1201Q609	1.20K 1/4W(3 5% TA52
		R918	0RD1000Q609	100 1/4W(3 5% TA52
		R920	0RN1302F409	13K 1/6W 1% TA52
		R921	0RN2701F409	2.70K 1/6W 1% TA52
		R923	0RD1202Q609	12K 1/4W(3 5% TA52
		T901	6170TMZ133A	EER3016 1200 UH V-10PIN LG500J
		TH901	6322A00002B	SCK-102L THINKING 10OHM 20% 25
CONTROL BOARD				
		R1	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R2	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R3	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP
		R4	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R5	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/TP
		R6	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/TP
		R7	0RJ9101D677	9.1K OHM 1/10 W 5% 1608 R/TP
		SW1	140-058E	SKHV10910B LGEC NON 12V 20A HO
		SW2	140-058E	SKHV10910B LGEC NON 12V 20A HO
		SW3	140-058E	SKHV10910B LGEC NON 12V 20A HO
		SW4	140-058E	SKHV10910B LGEC NON 12V 20A HO
		SW5	140-058E	SKHV10910B LGEC NON 12V 20A HO
		SW6	140-058E	SKHV10910B LGEC NON 12V 20A HO
		SW7	140-058E	SKHV10910B LGEC NON 12V 20A HO
		ZD1	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 20
		ZD2	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 20

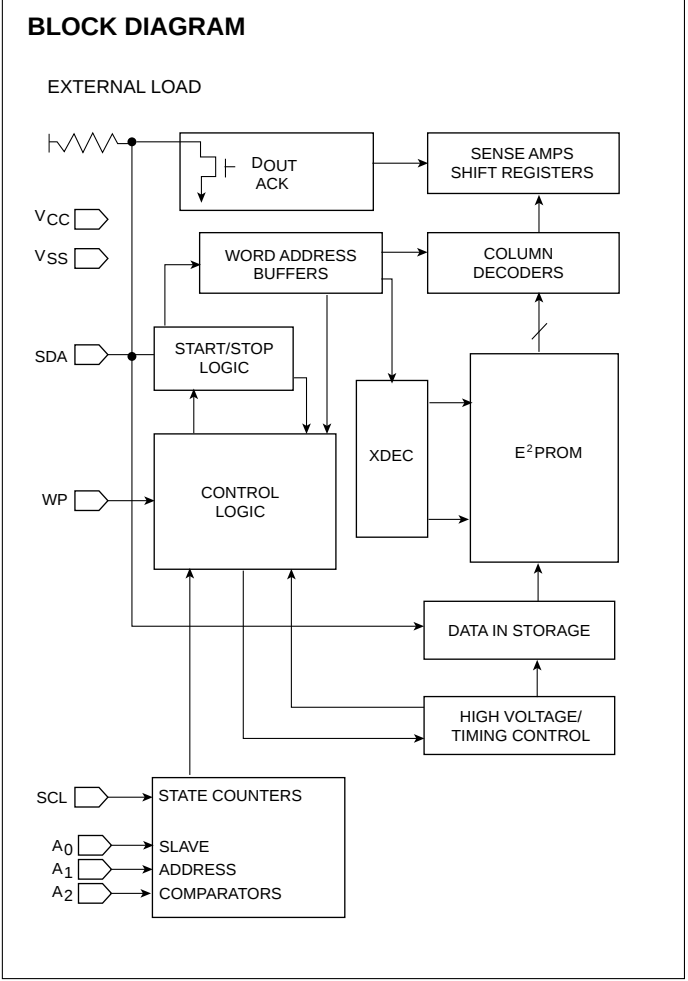
PIN CONFIGURATION

CAT24WC08J-TE13 8P

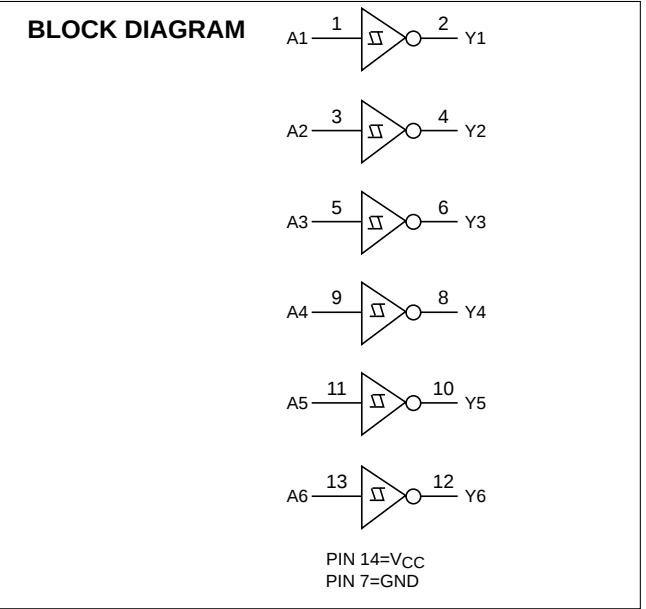
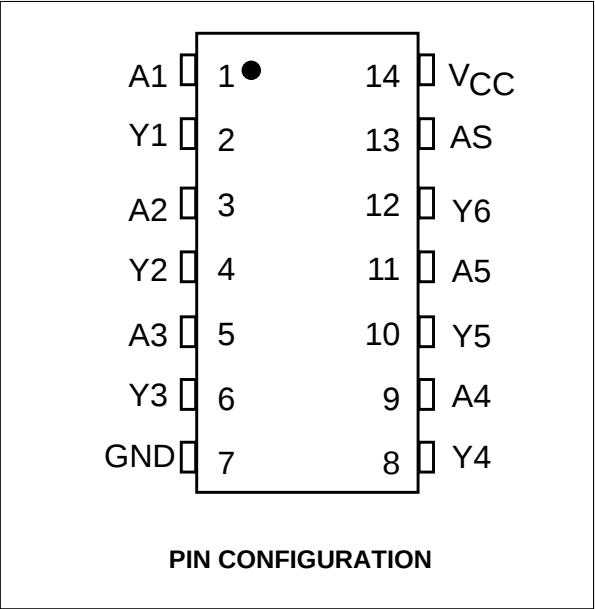


PIN FUNCTION

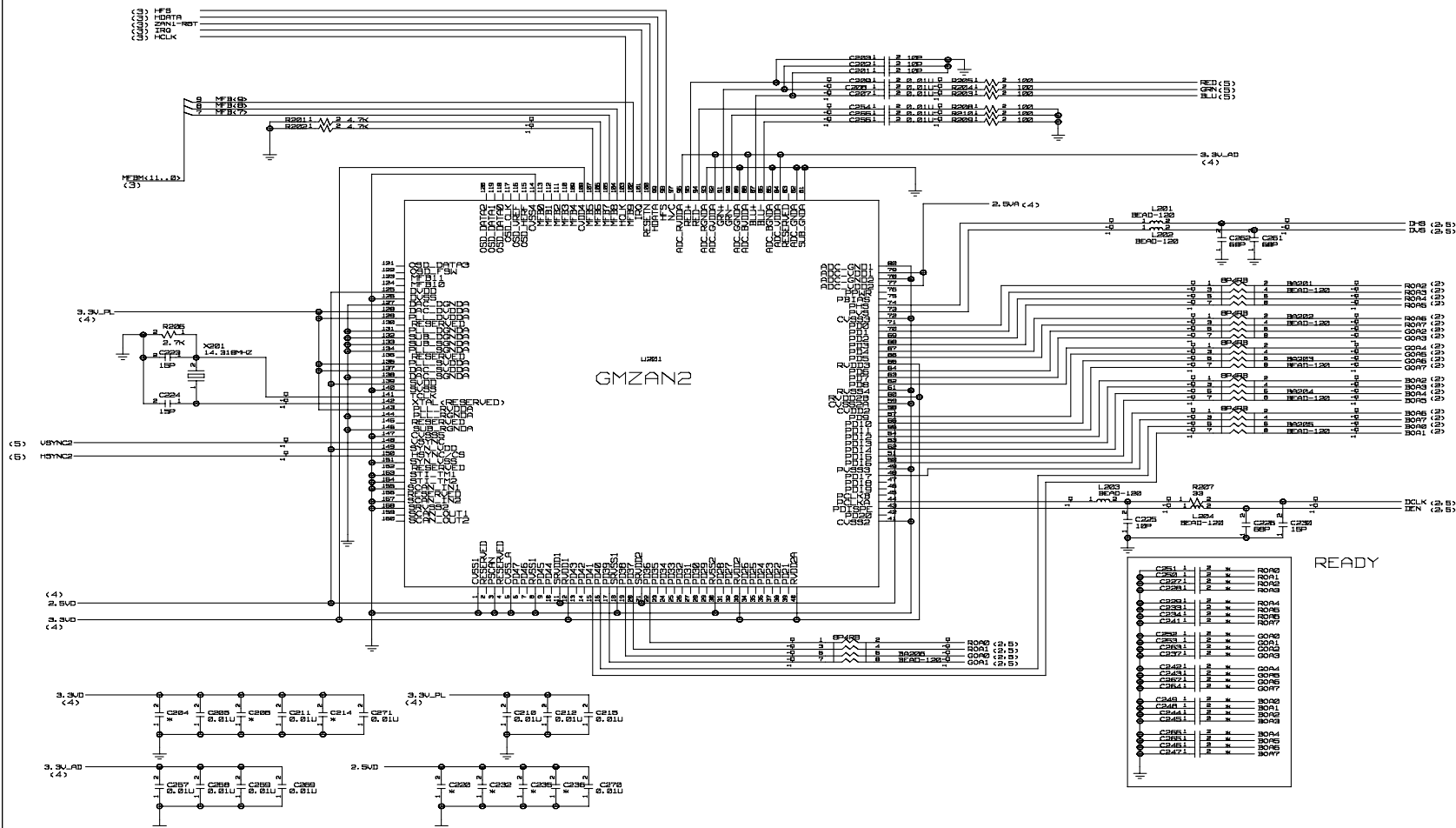
Pin Name	Function
A0, A1, A2	Device Address Inputs
SDA	Serial Data/Address
SCL	Serial Clock
WP	Write Protect
Vcc	+1.8V to + 6.0V power Supply
Vss	Ground



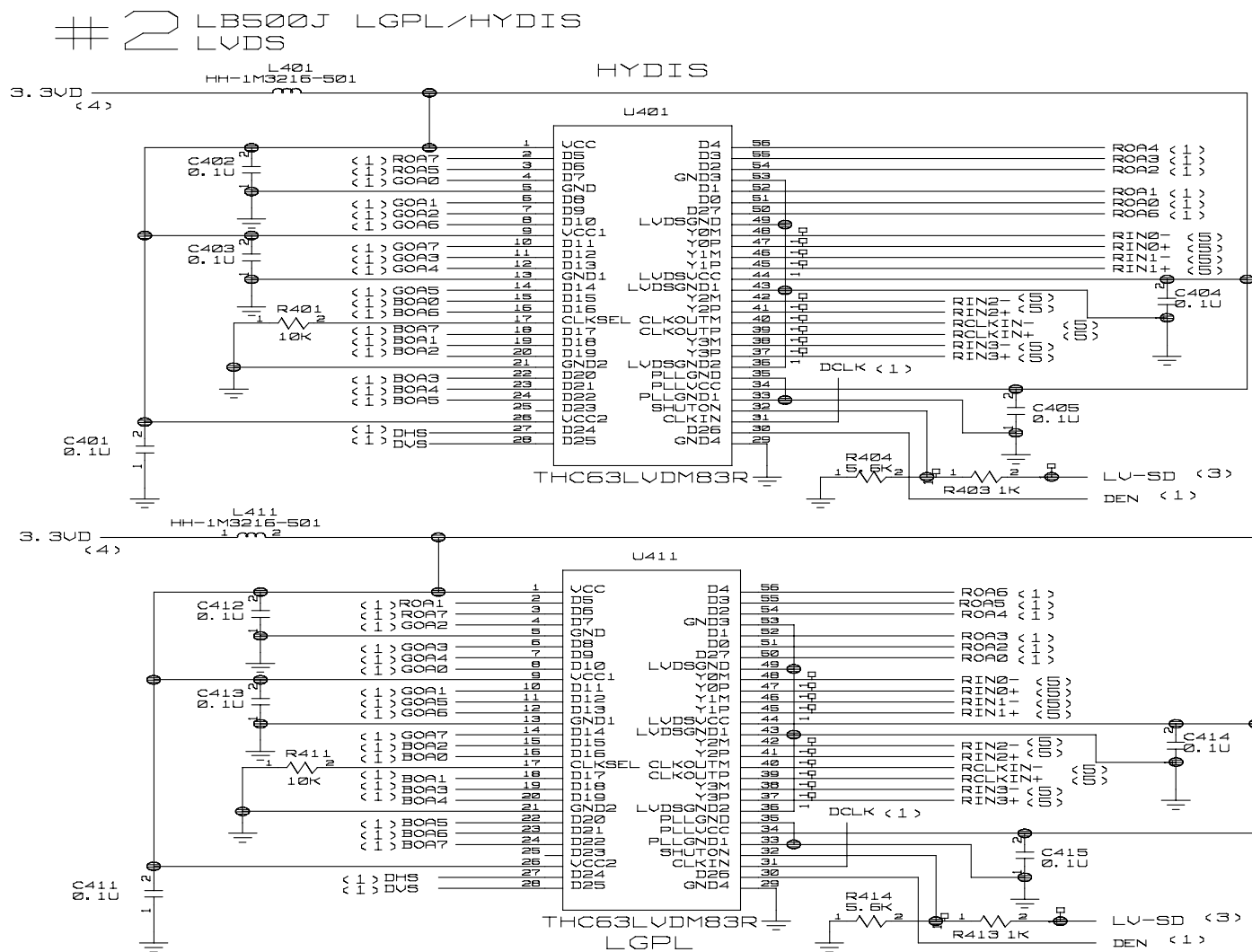
MC74HCT14ADR2 14P



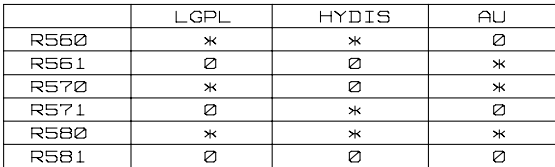
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# 1 LB500J LGPL/HYDIS
#  GMZAN2
```



2. LVDS

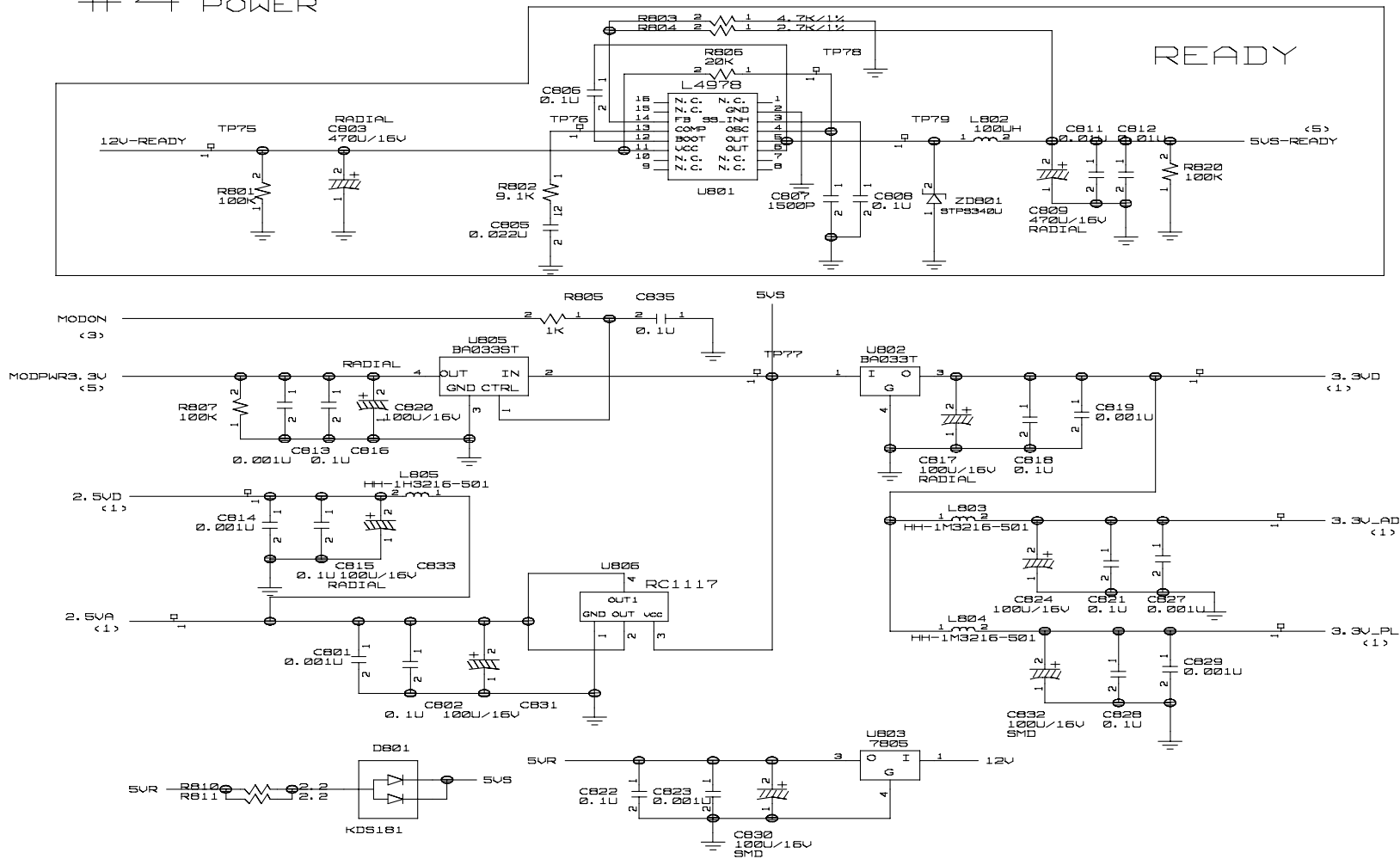


3. MICOM

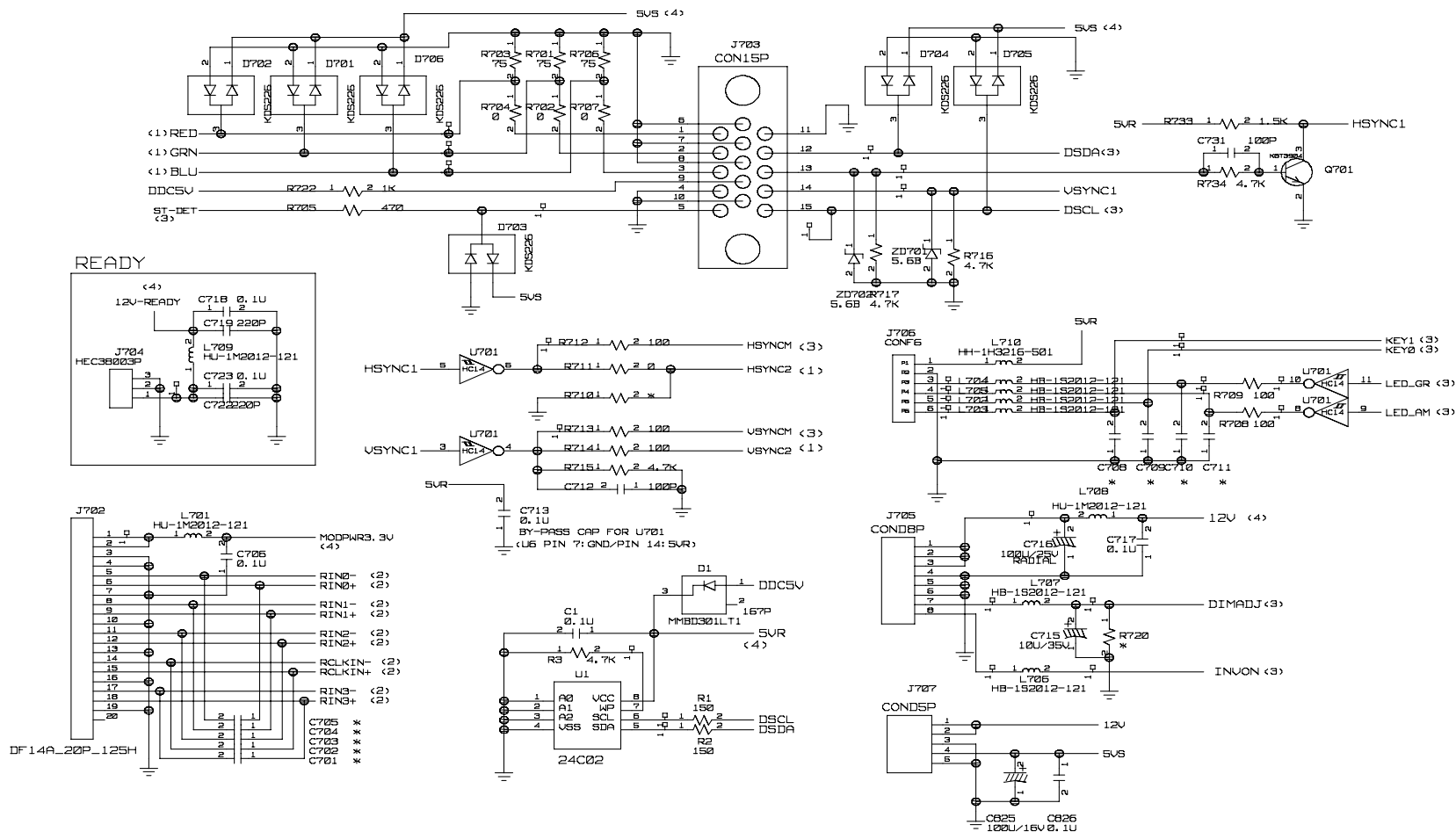


READY

4 LB500J LGPL/HYDIS POWER



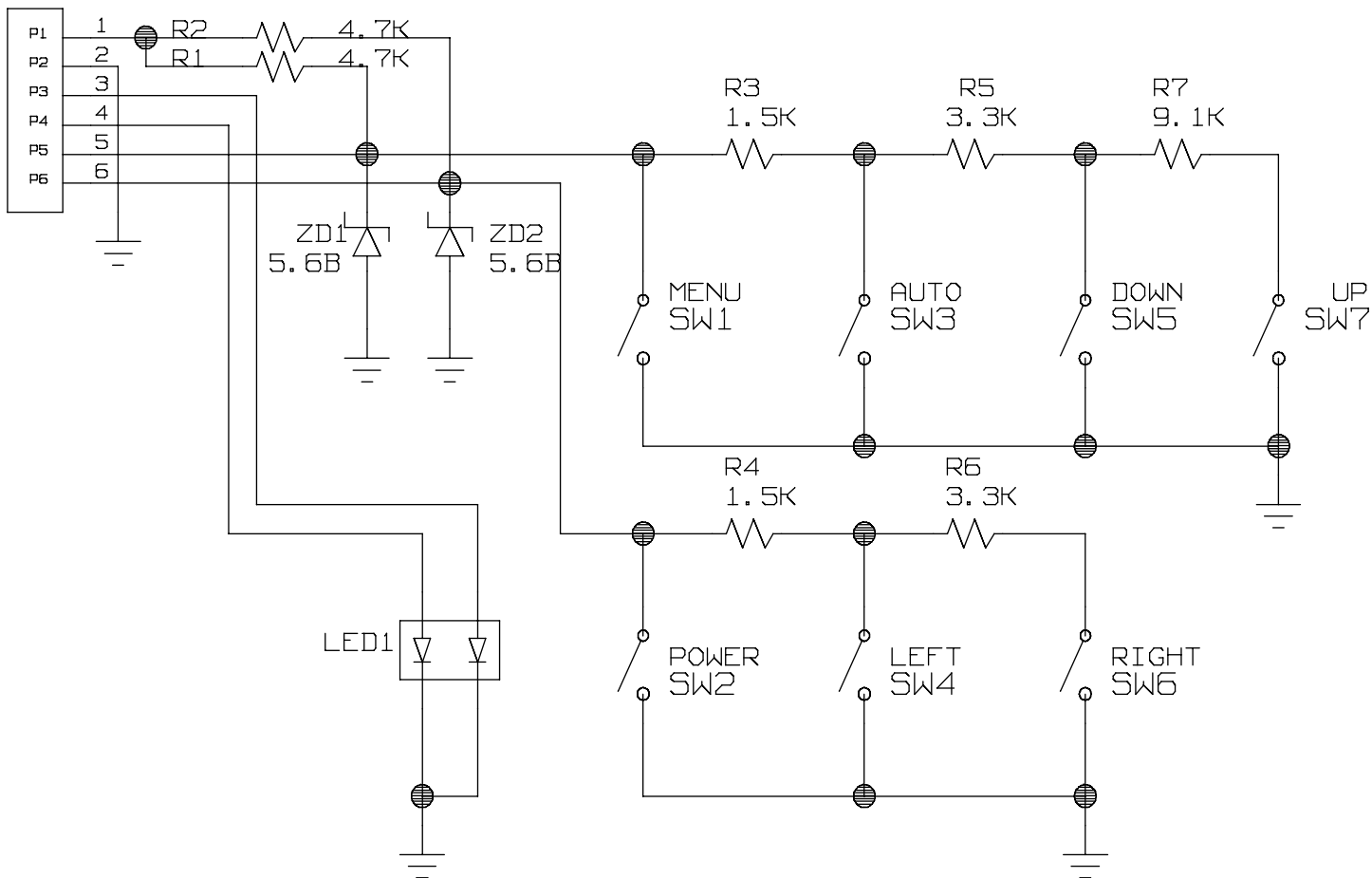
#5 LB500J LGPL/HYDIS CONNECTOR & JACKS



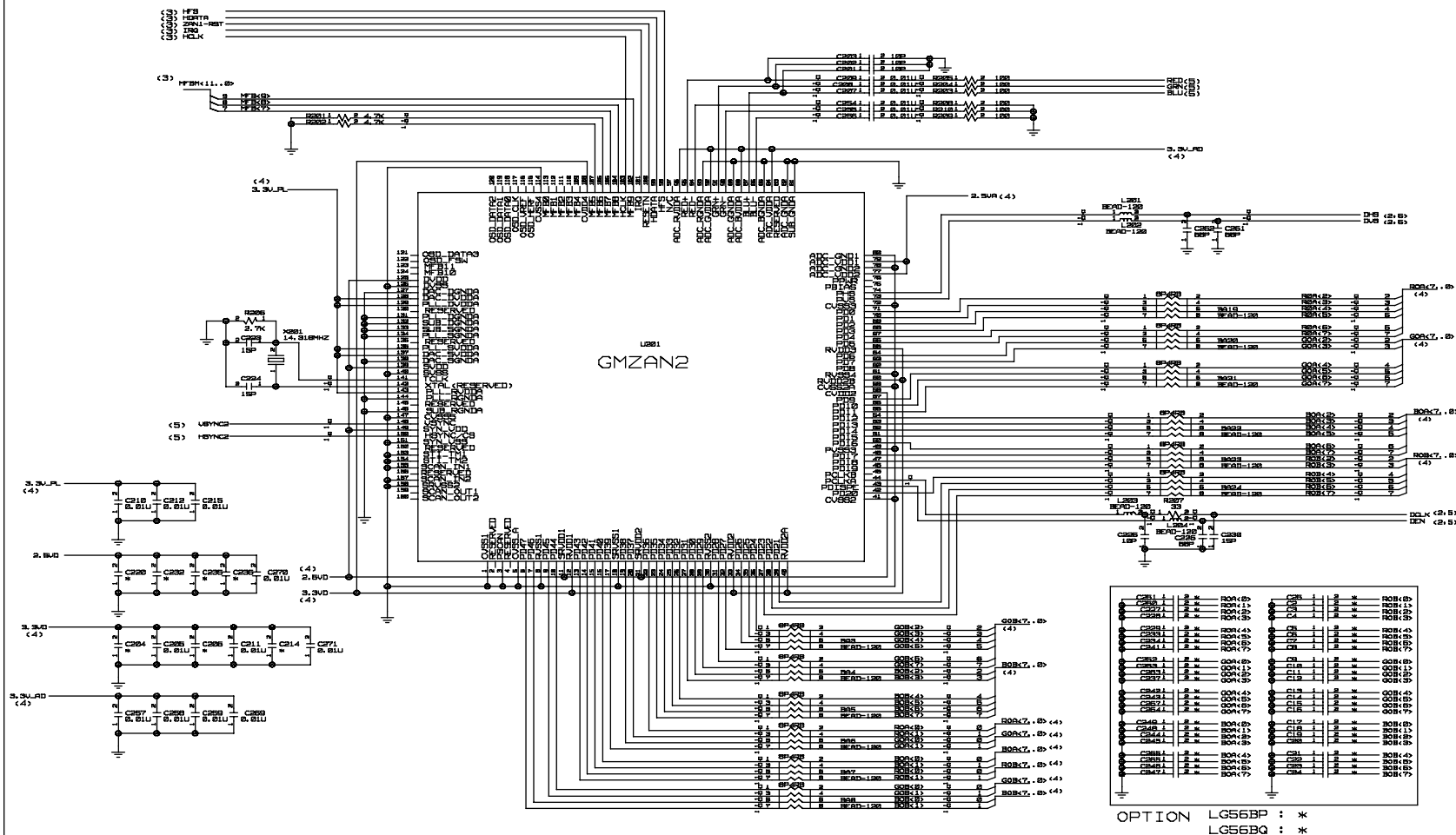
J1
CONF6

KEY PART LB500J

5VS
GND
LED-GRN
LED-AM
KEY1
KEY2

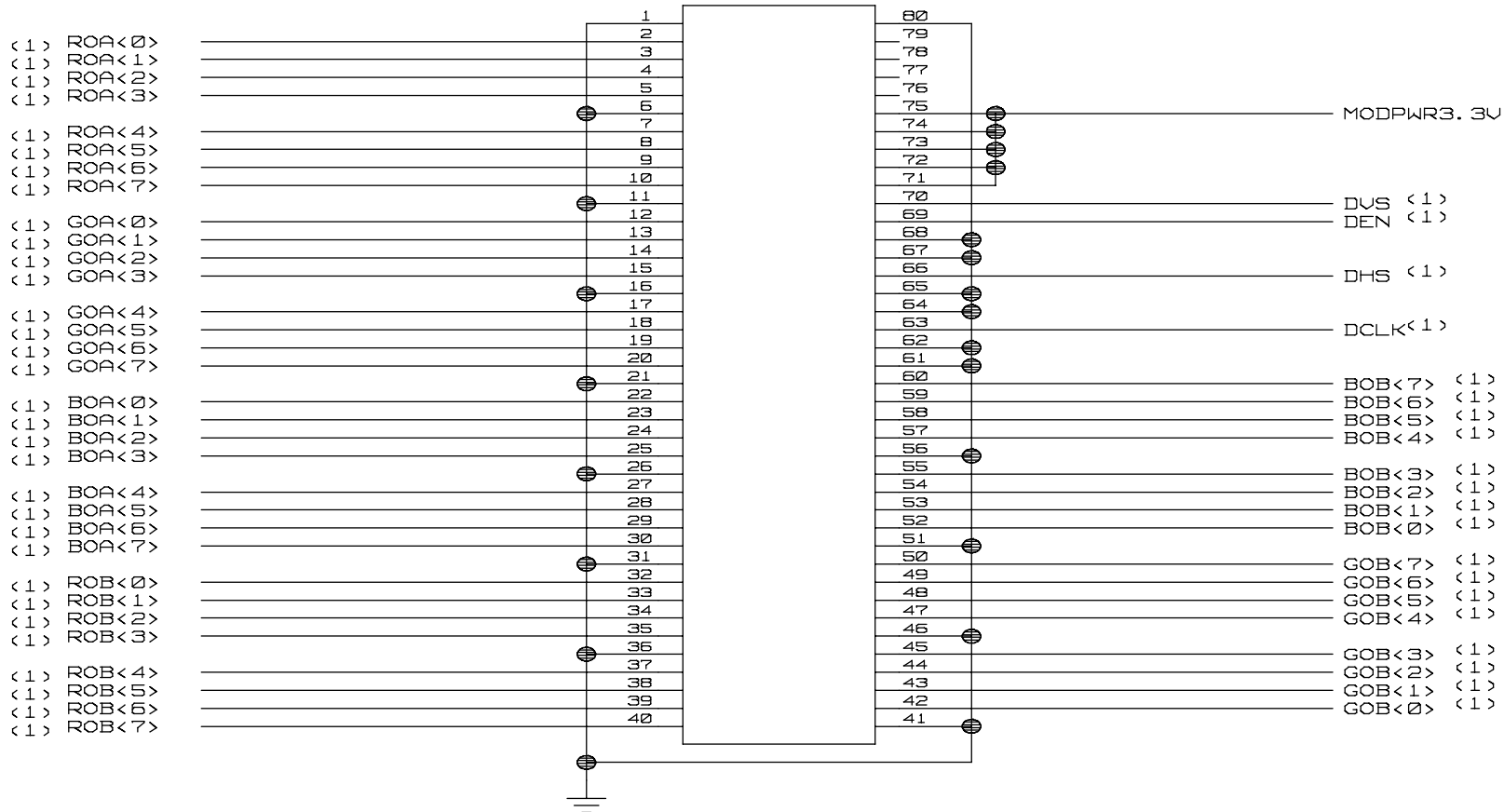


1 LB500J AU
GMZAN2



2 LB500J AU OUTPUT (LVDS/CONNECTOR)

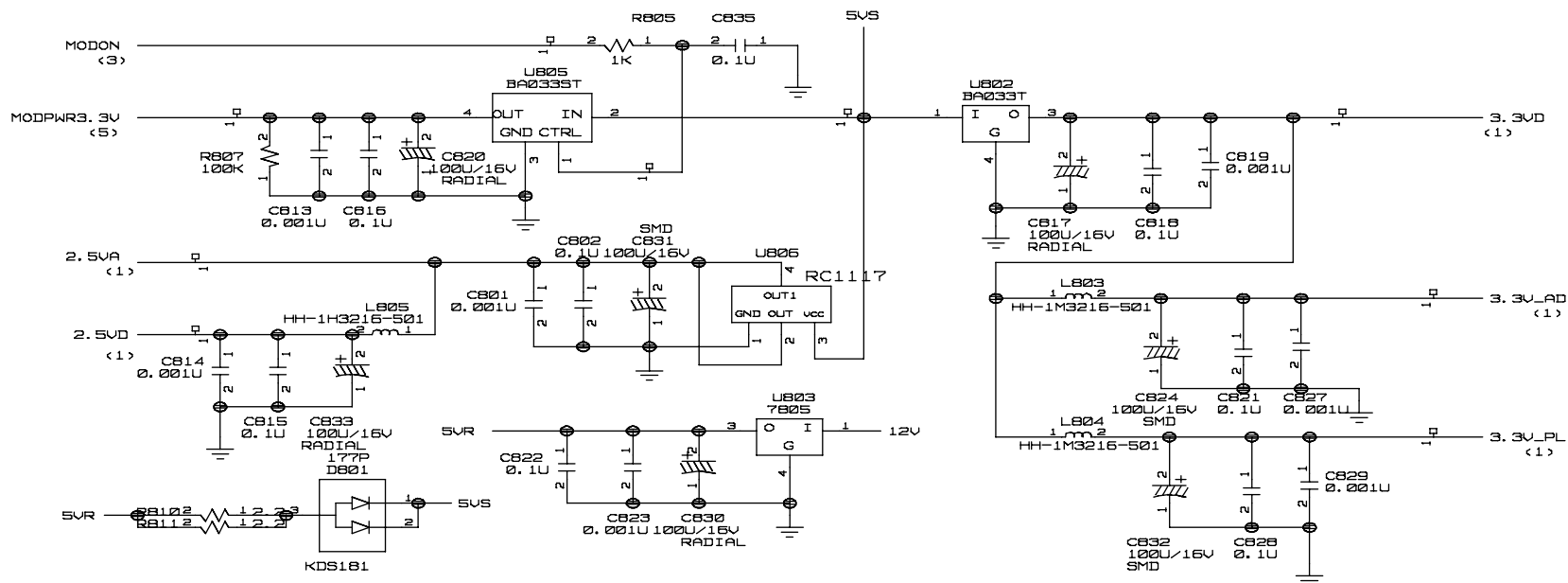
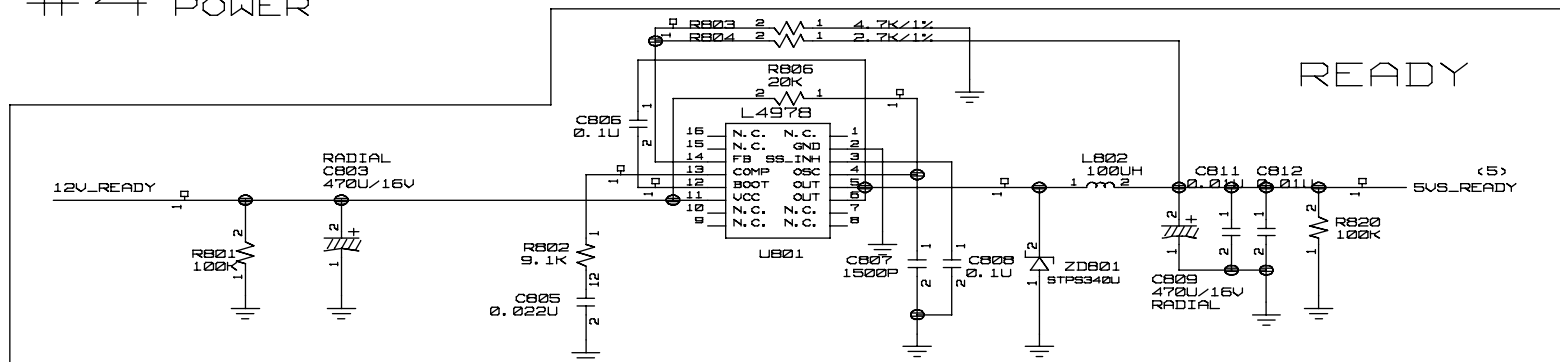
J402
COND80P



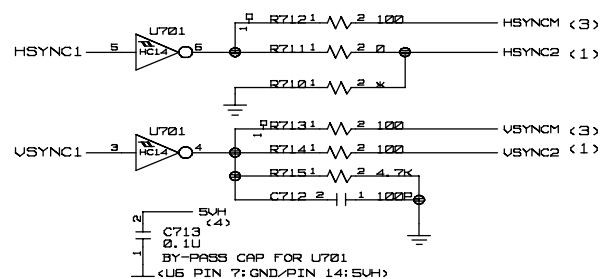
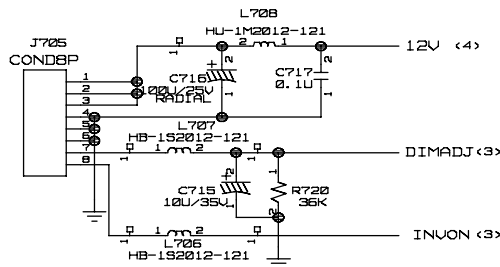
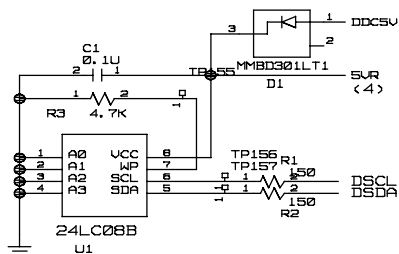
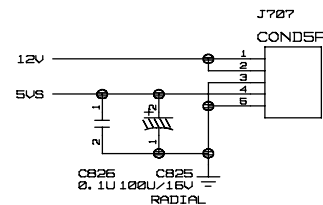
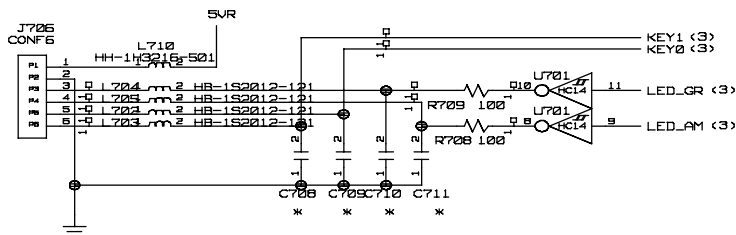
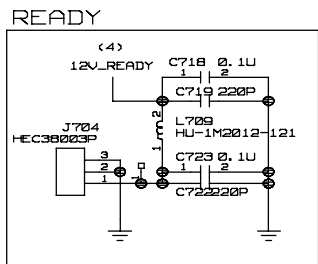
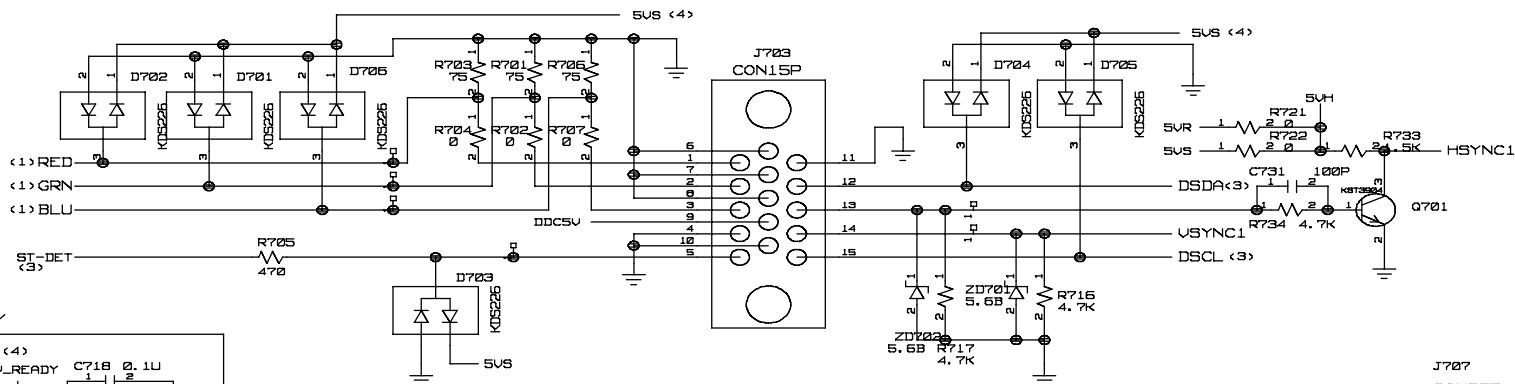


READY

4 LB500J AU
POWER



#5 LB500J AU CONNECTOR & JACKS



BY-PASS CAP FOR U701
(U5 PIN 7: GND/PIN 14: 5VH)

J1
CONF6

KEY PART LB500J

5VS
GND
LED-GRN
LED-AM
KEY1
KEY2

