



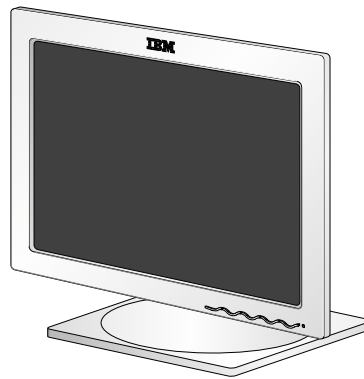
MODEL: L200P

COLOR MONITOR SERVICE MANUAL

Chassis No. : CL-35

CAUTION

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



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SPECIFICATIONS

1. LCD CHARACTERISTICS

Type	: TFT Color LCD Module
Size	: 20.1inch
Pixel Pitch	: 0.255(H) x 0.255(V)
Color Depth	: 8-bit, 16,777,216 colors
Electrical Interface	: LVDS
Surface Treatment	: Anti-Glare, Hard Coating(3H)
Operating Mode	: Normally Black
Backlight Unit	: Six-CCFL (Cold Cathode Fluorescent Lamp)

2. OPTICAL CHARACTERISTICS

2-1. Viewing Angle by Contrast Ratio ≥ 10

Left	: -80° min., -88°(Typ)
Right	: +80° min., +88°(Typ)
Top	: +80° min., +88°(Typ)
Bottom	: -80° min., -88°(Typ)

2-2. Luminance : 200(min), 250(Typ) **-6500K**

2-3. Contrast Ratio : 350(Typ)

3. SIGNAL (Refer to the Timing Chart)

3-1. Sync Signal	
• Type	: Separate, Positive/Negative Composite, SOG (Sync On Green) Digital

3-2. Video Input Signal

1) Type	: R, G, B Analog
2) Voltage Level	: 0~0.71 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 ~ 94kHz (Analog) : 31 ~ 75kHz (Digital)
Vertical	: 56 ~ 85Hz

4. MAX. RESOLUTION

Analog	: 1600 x 1200@75Hz
Digital	: 1600 x 1200@60Hz

5. POWER SUPPLY

5-1. Power Adaptor(Built-in Power)

Input : AC 100~240V, 50/60Hz , 1.2A

5-2. Power Consumption

MODE	H/V SYNC	VIDEO	POWER CONSUMPTION	LED COLOR
POWER ON (NORMAL)	ON/ON	ACTIVE	less than 65 W	GREEN
STAND-BY	OFF/ON	OFF	less than 5 W	AMBER
SUSPEND	ON/OFF	OFF	less than 5 W	AMBER
DPM OFF	OFF/OFF	OFF	less than 3 W	AMBER
POWER SWITCH OFF	-	-	less than 3 W	OFF
POWER CUTOFF SWITCH OFF	-	-	less than 1 W	OFF

6. ENVIRONMENT

6-1. Operating Temperature: 10°C~35°C (50°F~95°F)

6-2. Relative Humidity : 10%~80%
(Non-condensing)

6-3. MTBF : 50,000 Hours(Min)

7. DIMENSIONS (with TILT/SWIVEL)

Width	: 467 mm (18.38")
Depth	: 259 mm (10.20")
Height	: 471. mm (18.57")-MAX

8. WEIGHT (with TILT/SWIVEL)

Net. Weight	: 9.5kg (20.95 lbs)
Gross Weight	: 13.5kg (29.77 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.

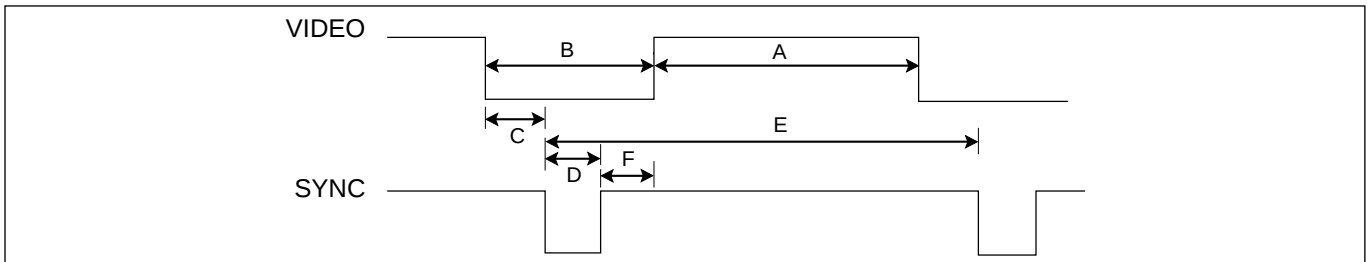
TAKE CARE DURING HANDLING THE LCD MODULE WITH BACKLIGHT UNIT.

- 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

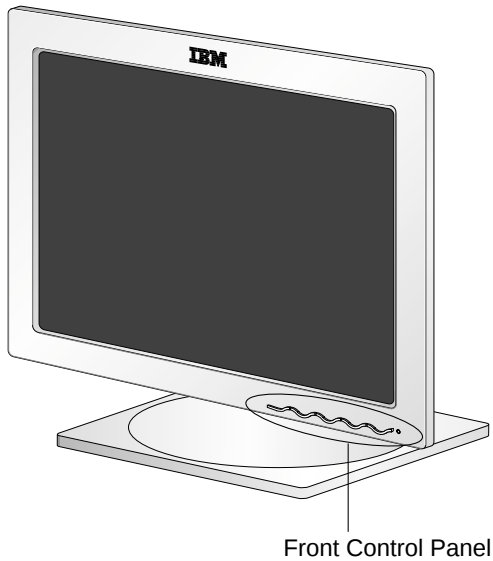


<< Dot Clock (MHz), Horizontal Frequency (kHz), Vertical Frequency (Hz), Horizontal etc... (μs), Vertical etc... (ms) >>

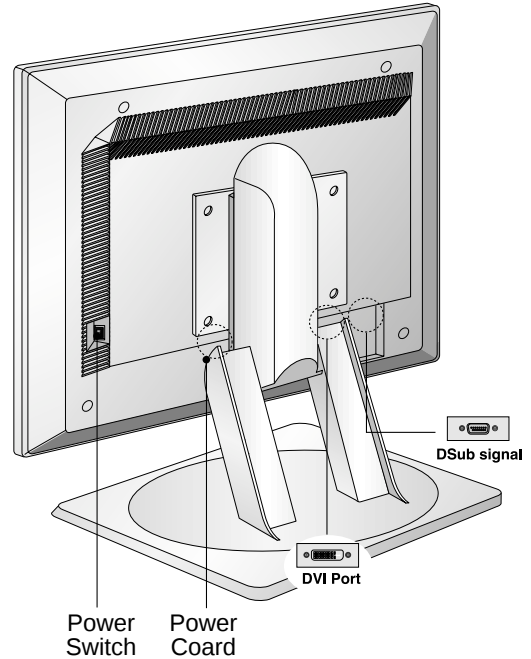
Mode	H/V Sort	Sync Polarity	Dot Clock	Frequency	Total Period (E)	Video Active Time (A)	Front Porch (C)	Sync Duration (D)	Back Porch (F)	Resolution
1	H	+	25.175	31.47	800	640	16	96	48	640x350
	V	-		70.09	449	350	38	2	60	70Hz
2	H	-	25.175	31.47	800	640	16	96	48	640x480
	V	-		59.94	525	480	10	2	33	60Hz
3	H	-	31.5	37.5	840	640	16	64	120	640x480
	V	-		75	500	480	1	3	16	75Hz
4	H	-	36.0	43.27	832	640	56	56	80	640x480
	V	-		85.01	509	480	1	3	25	85Hz
5	H	-	28.324	31.47	900	720	18	108	54	720x400
	V	+		70.08	449	400	13	2	34	70Hz
6	H	+	40.0	37.88	1056	800	40	128	88	800x600
	V	+		60.32	628	600	1	4	23	60Hz
7	H	+	49.5	46.88	1056	800	16	80	160	800x600
	V	+		75.0	625	600	1	3	21	75Hz
8	H	+	56.25	53.67	1048	800	32	64	152	800x600
	V	+		85.06	631	600	1	3	27	85Hz
9	H	-	57.283	49.72	1152	832	32	64	224	832x624
	V	-		74.55	667	624	1	3	39	75Hz
10	H	-	65.0	48.36	1344	1024	24	136	160	1024x768
	V	-		60.0	806	768	3	6	29	60Hz
11	H	+	78.75	60.02	1312	1024	16	96	176	1024x768
	V	+		75.03	800	768	1	3	28	75Hz
12	H	+	94.5	68.68	1376	1024	48	96	208	1024x768
	V	+		85.0	808	768	1	3	36	85Hz
13	H	-	100.0	68.68	1456	1152	32	128	144	1152x870
	V	-		75.06	915	870	3	3	39	75Hz
14	H	+/-	92.978	61.80	1504	1152	18	134	200	1152x900
	V	+/-		65.96	937	900	2	4	31	65Hz
15	H	+	108.0	63.98	1688	1280	48	112	248	1280x1024
	V	+		60.02	1066	1024	1	3	38	60Hz
16	H	+	135.0	79.98	1688	1280	16	144	248	1280x1024
	V	+		75.02	1066	1024	1	3	38	75Hz
17	H	+	162 (Analog only)	75.0	2160	1600	64	192	304	1600x1200
	V	+		60.00	1250	1200	1	3	46	60Hz
18	H	+	202.50 (Analog only)	93.75	2160	1600	64	192	304	1600x1200
	V	+		75.00	1250	1200	1	3	46	75Hz
19	H	+	130 (Digital only)	74.97	1734	1600	20	90	24	1600x1200
	V	+		61.2	1225	1200	1	3	21	60Hz

OPERATING INSTRUCTIONS

FRONT VIEW



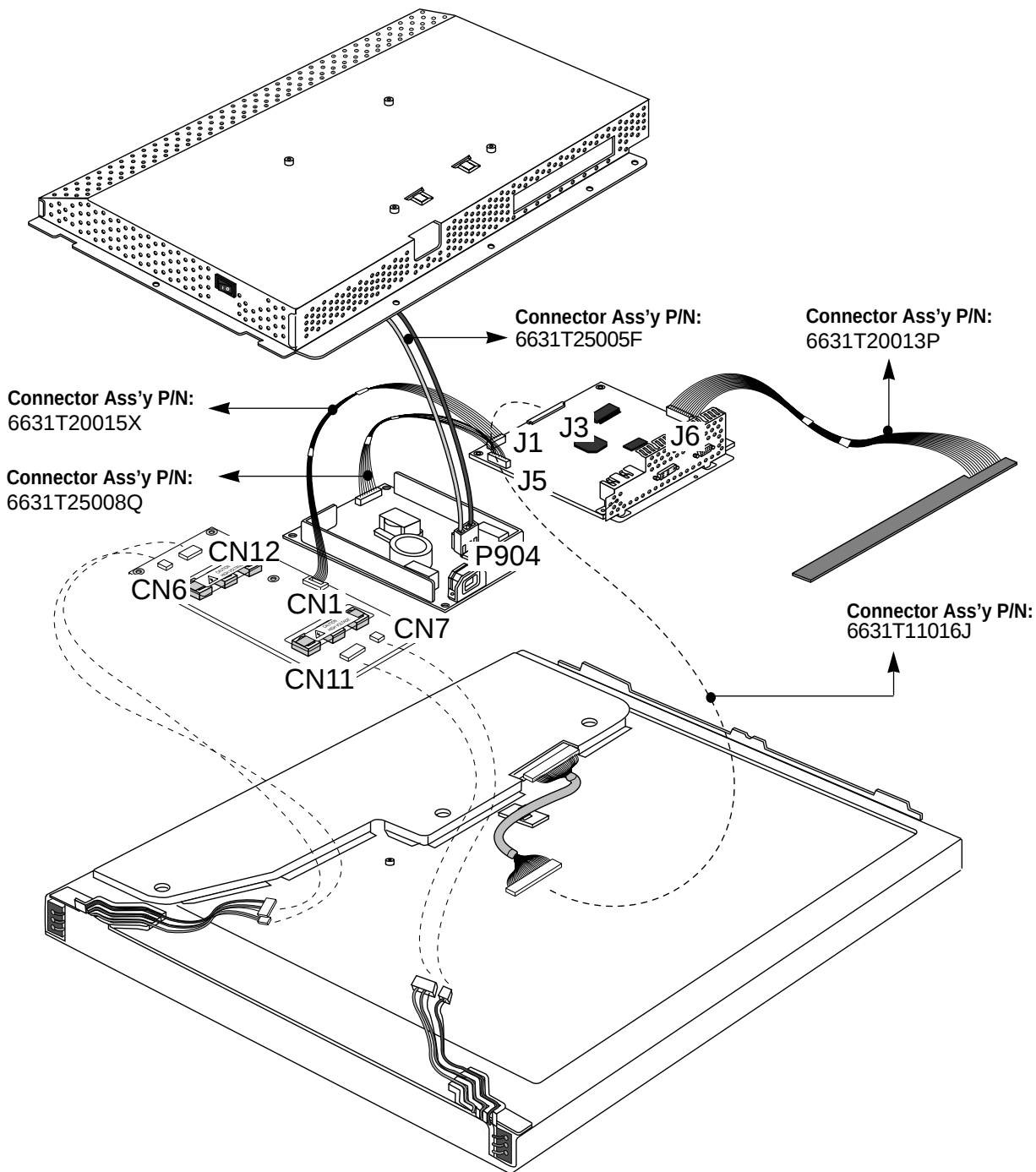
REAR VIEW

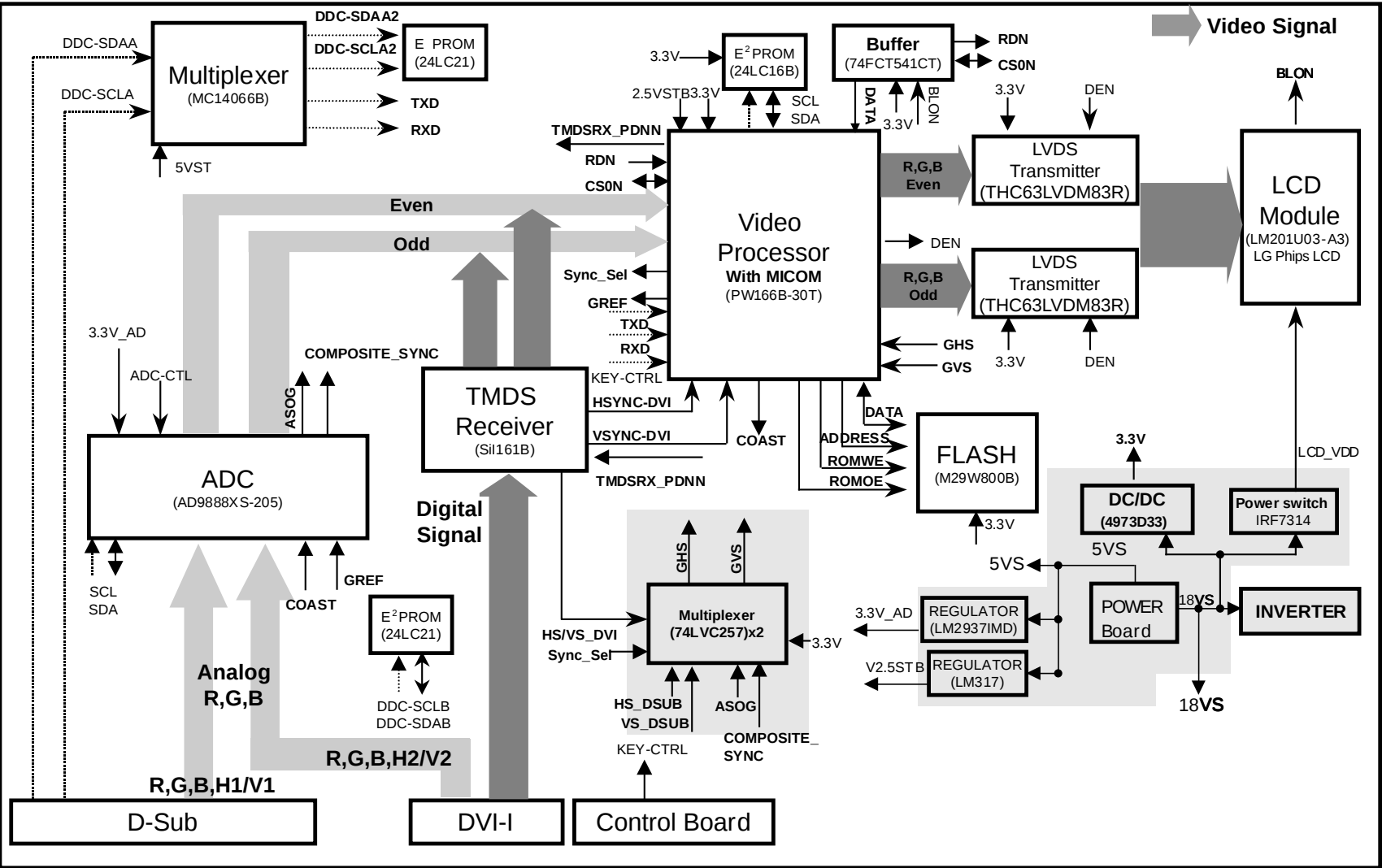


Front Control Panel



	Switches the monitors on and off.		Executes automatic image setup.
	Display main OSD menu and selects highlighted menu item.	CONTROLS LOCK / UNLOCK This feature allows you to secure the current control settings, while allowing the user to adjust Brightness, so that they cannot be inadvertently changed. Push and hold the enter button[↵] for 10 seconds; the message "Menu is Locked" appears. You can unlock the OSD controls at any time by pushing the enter button[↵] for 10 seconds; the message "Menu is Unlocked" will appear.	
	Moved the cursor to highlight icons or make adjustments.		
	Exits from current OSD menu.		
	Bring up Brightness adjustment.		Switch between input signals.





DESCRIPTION OF BLOCK DIAGRAM

1. Input Selection Circuit

This block is composed of 74LVC257(U1) and peripheral devices.

There are two input, Analog and Digital H/V Sync. LVC257 IC chooses one input and outputs selected input through sync selection pin (Pin 1).

2. A/D Converter

This block is composed of AD9888 (U4) and passive devices.

Input video signal is amplified, Phase locked, A/D converted in this IC.

And send the Digital video signal to PW166B.

3. TMDS Receiver

This Block is composed of Si161B (U201) and Peripheral devices.

This IC decodes CompositeInput signal from DVI-I Pin (J10) and make 8bit digital signal to send Digital signal to PW166B.

4. Format Converter

This block is composed of PW166B (U8), M29W800AT (U9) and passive devices.

Micom in PW166B(Scaler)(U8) processes A/D Converter output, output of TMDS Receiver,

PW166B is Format Converter IC that receive Digital signal and output proper frame signal to LCD Module (1600x1200).

5. Panel-Link Circuit

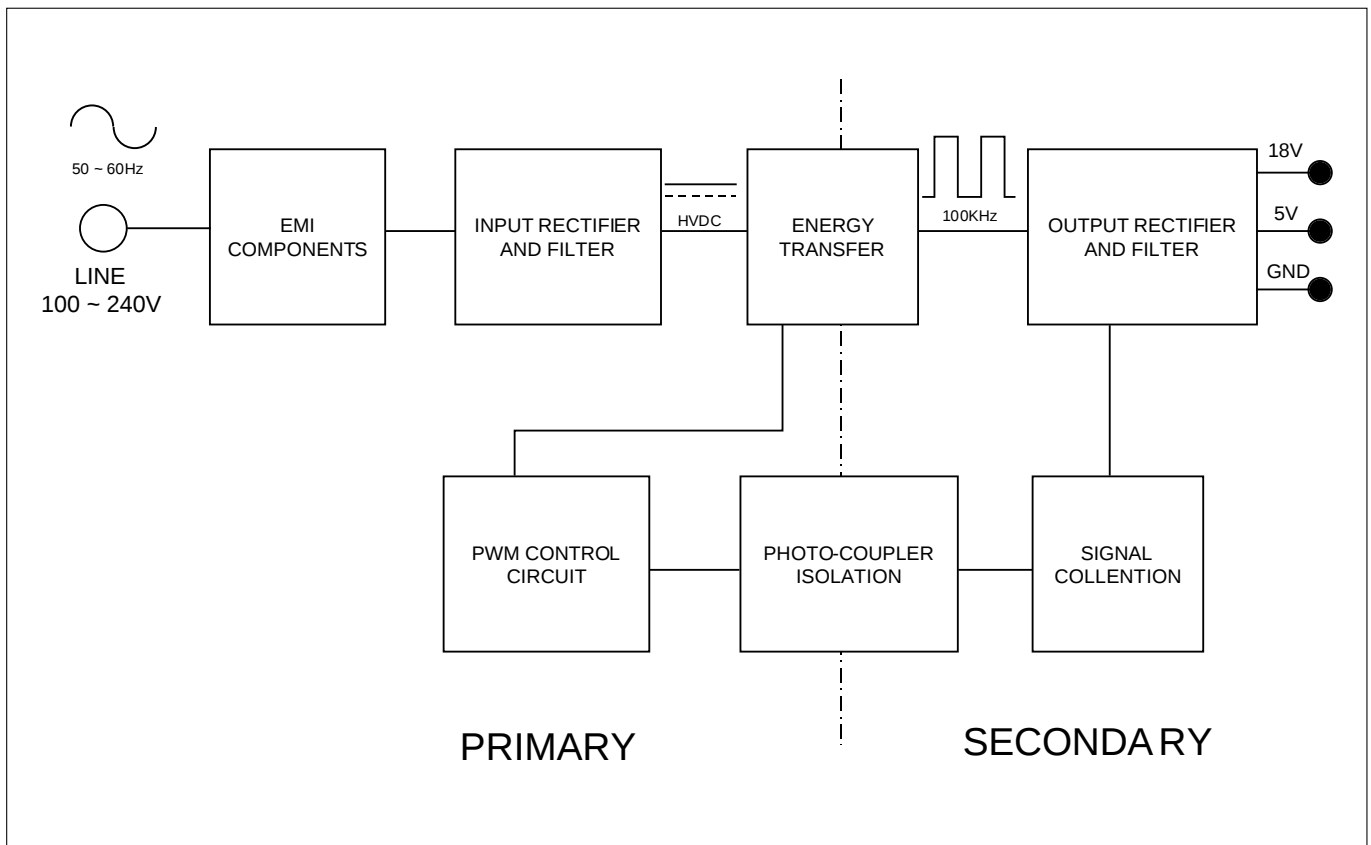
LVDS Transmitter(U401) is the IC that receives output digital signal of PW166B(U8) and output composite signal to LCD Module.

Composite signal is the standard format for LCD Panel.

6. DC/DC Converter block

DC/DC Converters convert the input 18V to proper 2.5V, 3.3V, 5V, 18V for main board.

For shooting heat trouble, we use the DC/DC converting IC.



Operation description_Power

1. EMI components.

This part contains of EMI components to comply with global marketing EMI standards like FCC, VCCI CISPR, the circuit included a line-filter, across line capacitor and of course the primary protection fuse.

2. Input rectifier and filter.

This part function is for transfer the input AC voltage to a DC voltage through a bridge rectifier and a bulk capacitor.

3. Energy Transfer.

This part function is transfer the primary energy to secondary through a power transformer.

4. Output rectifier and filter.

This part function is to make a pulse width modulation control and to provide the driver signal to power switch, to adjust the duty cycle during different AC input and output loading condition to achive the dc output stablize, and also the over power protection is also monitor by this part.

5. Photo-Coupler isolation.

This part function is to feed back the dc output changing status through a photo transistor to primary controller to achive the stablized dc output voltage.

6. Signal collection.

This part function is to collect the any change from the dc output and feed back to the primary through photo transistor

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 30 minutes.

- Alignment appliances and tools.
 - IBM compatible PC
 - Programmable Signal Generator.
(eg. VG-819 made by Astrodesign Co.)
 - Oscilloscope.
 - White Balance Meter. (CA-110)

1. Adjustment for Factory Preset Mode

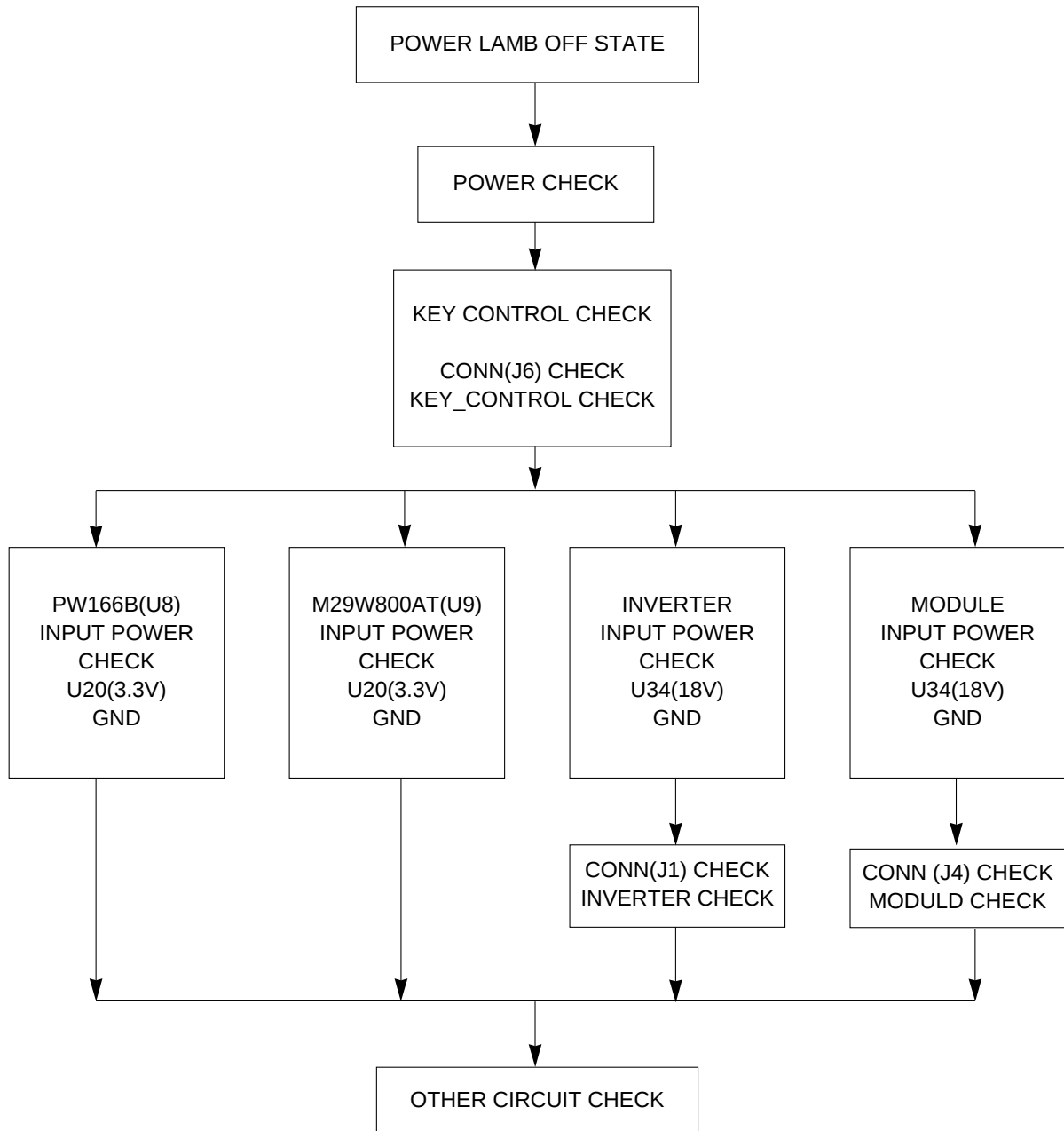
No read to adjust FOS data for Factory Preset Mode.

2. Adjustment for White Balance

- 1) Set External Bright to MAX position and Contrast to MAX position.
- 2) Display Color 0,0 pattern at Mode 18.
- 3) Press Menu key, Right key, Left key, Power key in sequence.
- 4) Select "WHITE BALANCE ADJUST" and press Right KEY.
- 5) After "INPUT WHITE PATTERN" message, Display Color 15, 0 pattern at Mode 18.
- 6) No attempt to manually adjust, BIAS and Drive data is automatically adjusted and saved to the EEPROM.
- 7) Select "SERVICE MODE EXIT" and Press Right KEY.

TROUBLESHOOTING GUIDE

1. OUT OF ORDER ON POWER



(REF)
U20 (L4973) : INPUT(18V), OUTPUT(3.3V)
U34 (IRF7814) : PIN OUTPUT (18V_MOD)
PIN OUTPUT (18V_INV)

2. NO RASTER ON ANALOG SIGNAL

NO RASTER ON ANALOG
SIGNAL

POWER CHECK OF 74LVC257(U1) : CHECK IN FRONT OF U20(3.3V)
PW166B CHECK OF AD9888(U4) : IN FRONT OF PW166B
POWER CHECK OF TMDS TRANSMITTER_SIL161(U201) : IN FRONT OF SIL161

CHECK I/O SYNC OF
74LVC257 (U1)

CHECK AD9888(U4)
I/O SIGNAL

NO INPUT SIGNAL
OUTPUT

CHECK THE PERIPHERAL IC OF
D-SUB(J17)

CHECK PW166B(U8)
I/O SIGNAL

NO INPUT SIGNAL
OUTPUT

CHECK THE PERIPHERAL IC OF
AD9888(U4)

CHECK TMDS TRNSMITTER
SIL 161B(U201) I/O SIGNAL

INPUT
NO INPUT SIGNAL

CHECK THE PERIPHERAL IC OF
PW166B(U8)

CHECK THE PERIPHERAL IC OF
TMDS TRNSMITTER
SIL161B(U201)

CONN CHECK

3. NO RASTER STATE - DIGITAL SIGNAL INPUT

NO RASTER ON DIGITAL INPUT

74LVC257(U1) POWER CHECK : CHECK NODE IN FRONT OF U20(3.3V)

PW166B POWER : POWER CHECK

TMDS TRANSMITTER_SIL161B(U201) POWER CHECK : IN FRONT OF SIL161B(U201)

74LVC257(U1)
IN/OUT SYNC CHECK

TMDS RECEIVER
SIL161(U201)
IN/OUT SIGNAL CHECK

PW166B(U8)
IN/OUT SIGNAL CHECK

LVDS TRNSMITTER
LVDS83R(U401)
IN/OUT SIGNAL CHECK

CONN(J1) CHECK

NO INPUT SIGNAL

OUTPUT

DVI-D(J10) PERIPHERAL
CIRCUIT CHECK

NO SIGNAL

SIL161(U201) PERIPHERAL
CIRCUIT CHECK

INPUT

OUTPUT

NO SIGNAL

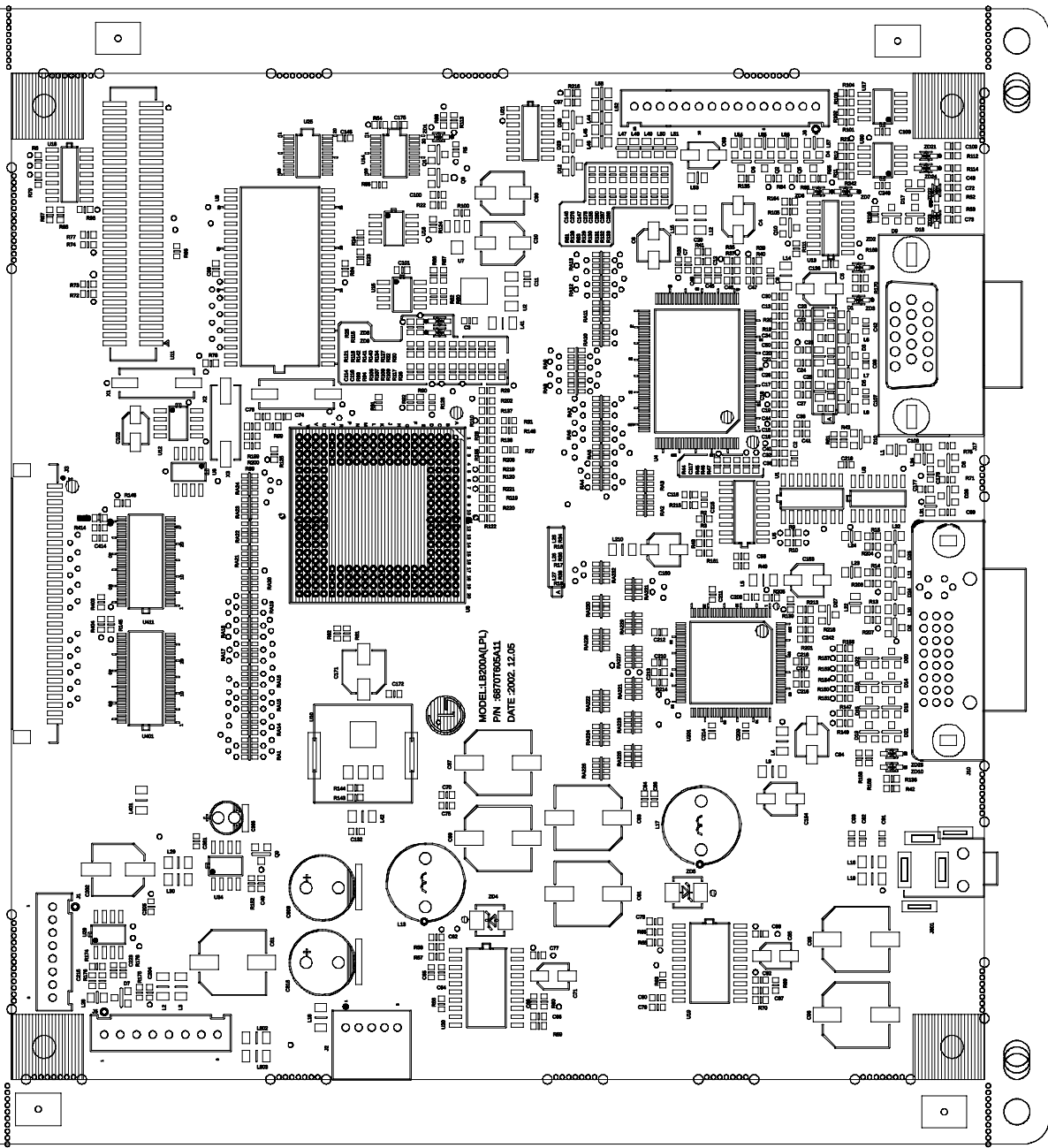
PW166B(U8) PERIPHERAL
CIRCUIT CHECK

INPUT

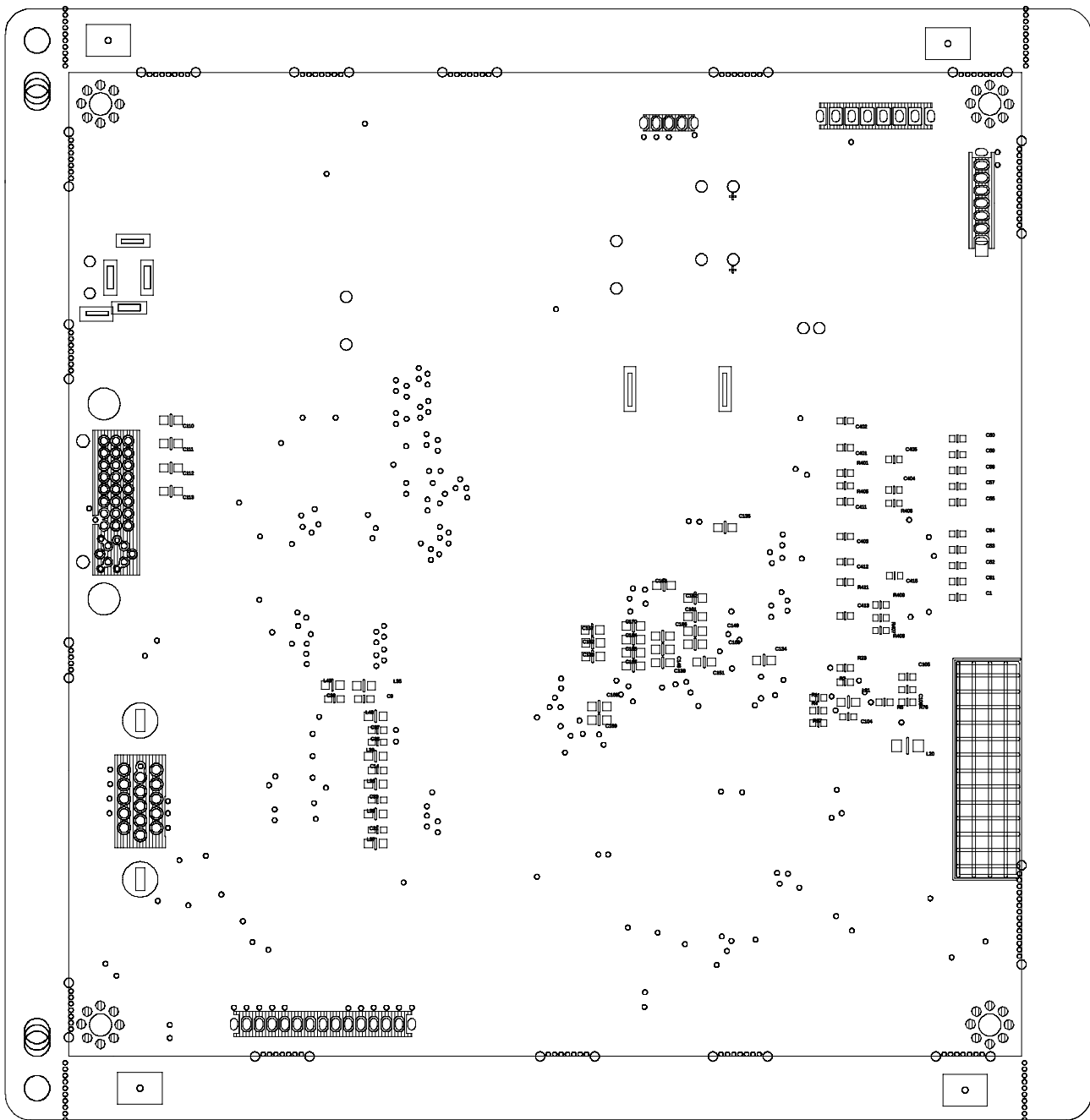
NO INPUT SIGNAL

TMDS TRNSMITTER
LVDS83R(U401) PERIPHERAL
CIRCUIT CHECK

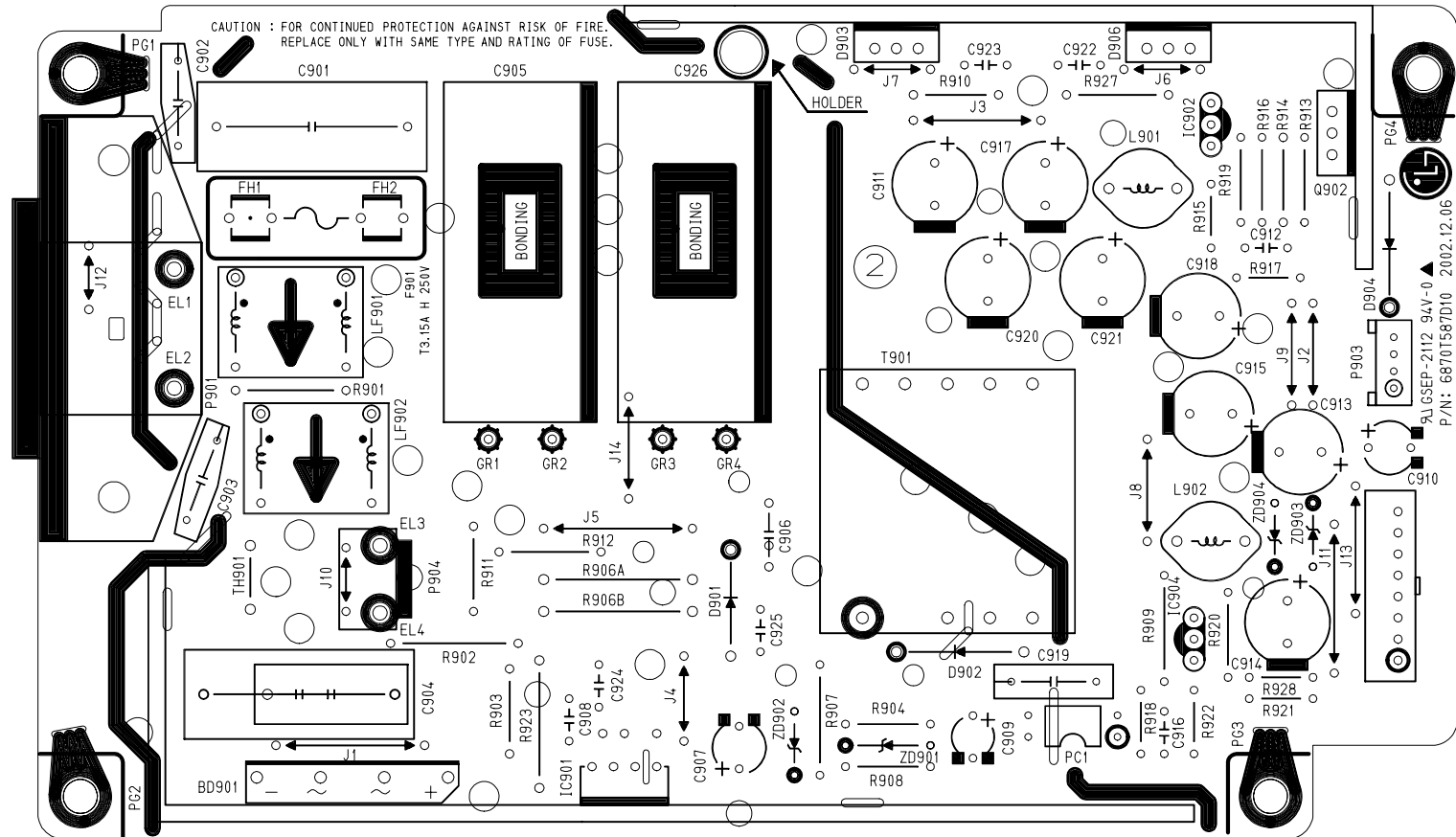
SOLDERING DIRECTION



MODEL R200ALPU
PIN - 8870762A11
DATE - 2002.12.05

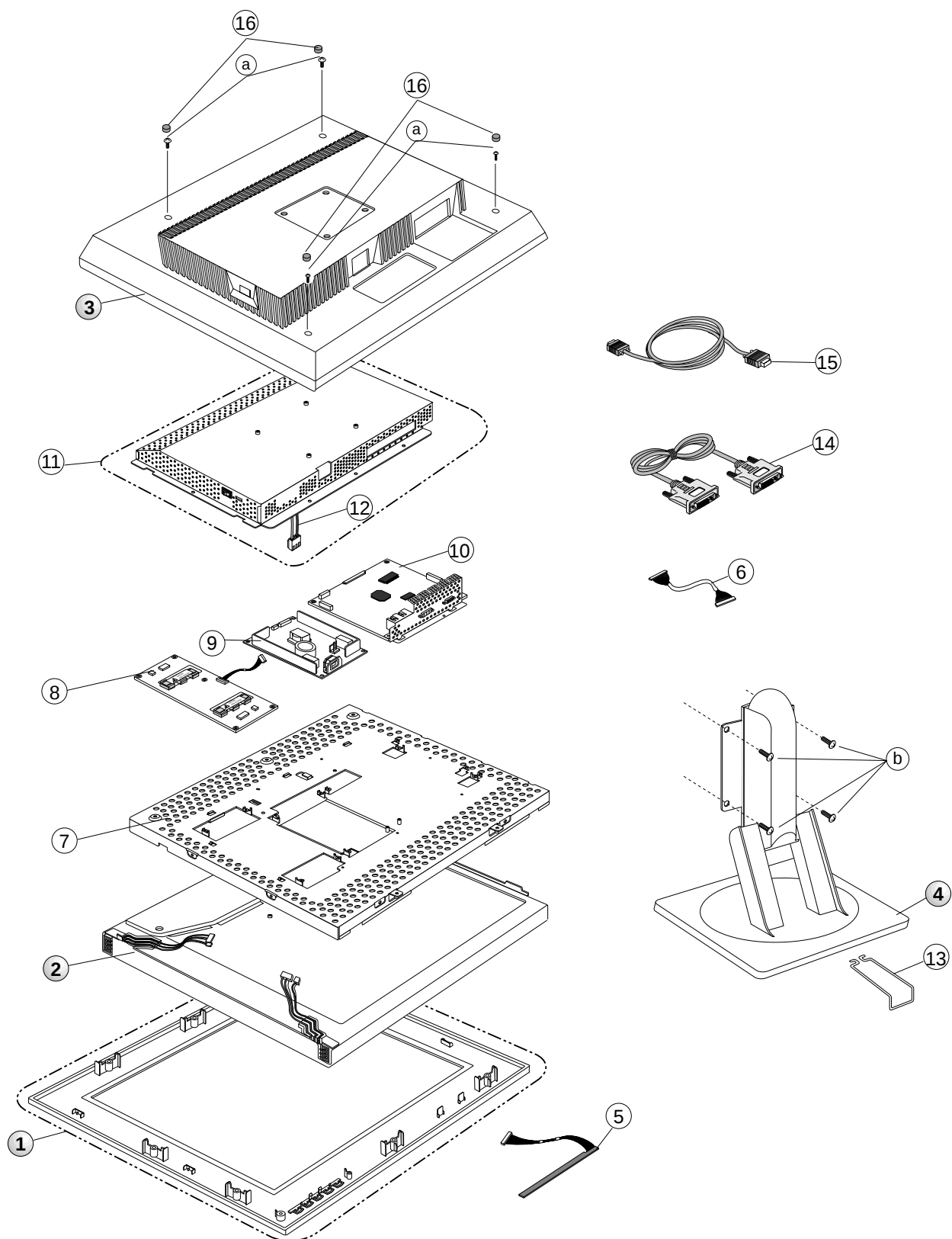


CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE.
REPLACE ONLY WITH SAME TYPE AND RATING OF FUSE.



94 GSEP-2112 94V-0
P/N: 6870T587D10 2002.12.06

EXPLODED VIEW



EXPLODED VIEW PARTS LIST

* Note: Safety mark 

Ref. No.	Part No.		Description
1	3091TKL064B		CABINET ASSEMBLY, LL20PA IBM . STEALTH BLACK
2	6304FLP062A		LCD(LIQUID CRYSTAL DISPLAY), LM201U03 -A3M1 LG PHILPS TFT COLOR 8BIT LVDS
3	3809TKL044B		BACK COVER ASSEMBLY, LL20PA . STEALTH BK.
4	3043TKK050X		TILT SWIVEL ASSEMBLY LL20PA . (GE RESIN)
5	6871TST362A		PWB(PCB) ASSEMBLY, SUB, LT20PA CONTROL TOTAL IBM .
6	6631T11016J		CONNECTOR ASSEMBLY, 30P H-H 100MM UL20276 AWG30 LB200A LPL
7	4951TKK100D		METAL ASSEMBLY, FRAME MAIN(LL20PA LPL)
8	6633TZA014B		INVERTER ASSEMBLY, ALPS KUBNKM055A 6-LAMPS, LB200A(LPL MO)
9	6871TPT229B		PWB(PCB) ASSEMBLY, POWER, LB200A FOR LPL POWER TOTAL BRAND .
10	6871TMT385A		PWB(PCB) ASSEMBLY, MAIN, LT20PA ALRDW IBM CL-35 TOTAL
11	4951TKK098C		METAL ASSEMBLY, REAR .LL20PA
12	6631T25005F		CONNECTOR ASSEMBLY, SWITCH(GY)+CONN ASSYP H-W 260MM UL 1617 AWG 22
13	4970TKK007A		SPRING COIL, NO DIM. FOR STAND CLIP(LI571D)
14	6866TDV004J		CABLE, DVI-D
15	6850TD9001K		CABLE, D-SUB UL 2990-9C(7.5) DT 1870MM STEALTH BK T541 DM
16	5040TKM051A		RUBBER, COVER, MOLDING IBM LT20PA
a	1SZZTER001G		SCREW, DRAWING, D3.0 L6.0 MSWR/BK .
b	1MCC0402416		SCREW MACHINE, COUNTER SUNK HEAD

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: 2003. 02. 10.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
MAIN BOARD				
CAPACITORS				
		C2	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C3	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C4	0CH8226F611	22UF 16V M 85STD(CYL) R/TP
		C5	0CH8226F611	22UF 16V M 85STD(CYL) R/TP
		C6	0CH8226F611	22UF 16V M 85STD(CYL) R/TP
		C7	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C8	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C9	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C10	0CH8476F611	47UF 16V 20% 85STD (CYL) R/
		C11	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C12	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C13	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C14	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C16	0CK473CK56A	47000PF 1608 50V 10% R/TP X
		C18	0CK473CK56A	47000PF 1608 50V 10% R/TP X
		C19	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C21	0CK473CK56A	47000PF 1608 50V 10% R/TP X
		C23	0CK473CK56A	47000PF 1608 50V 10% R/TP X
		C25	0CK473CK56A	47000PF 1608 50V 10% R/TP X
		C26	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C28	0CK473CK56A	47000PF 1608 50V 10% R/TP X
		C29	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C30	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C31	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C32	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C33	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C34	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C35	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C36	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C37	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C38	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C39	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C40	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C41	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C42	0CC100CK41A	10PF 1608 50V 5% R/TP NP0
		C43	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C44	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C45	0CK392CK56A	3900PF 1608 50V 10% R/TP X7
		C48	0CK393CK56A	39000PF 1608 50V 10% R/TP X
		C49	0CH3105H946	"1UF 25V 80%,-20% F(Y5V) 201"
		C50	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C56	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C61	0CH8477F611	470UF 16V M 85STD(CYL) R/TP
		C62	0CK152CK51A	1500PF 1608 50V 10% R/TP B(
		C63	0CH8106F611	10UF 16V M 85STD(CYL) R/TP
		C64	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C65	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C66	0CK222CK51A	2200PF 1608 50V 10% R/TP B(
		C67	0CZZTAT002D	SVP SANYO 10V 270UF M REEL
		C68	0CK223CK51A	0.022UF 1608 50V 10% R/TP B
		C69	0CZZTAT002D	SVP SANYO 10V 270UF M REEL
		C70	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R

DATE: 2003. 02. 10.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C71	0CH8105K611	1UF 50V M 85STD(CYL) R/TP
		C72	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C73	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C74	0CC180CK41A	18PF 1608 50V 5% R/TP NP0
		C75	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C76	0CC180CK41A	18PF 1608 50V 5% R/TP NP0
		C77	0CK474CH94A	"0.47UF 1608 25V 80%,-20% R/"
		C89	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C90	0CH8476F611	47UF 16V 20% 85STD (CYL) R/
		C94	0CH8226F611	22UF 16V M 85STD(CYL) R/TP
		C97	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C98	0CC100CK41A	10PF 1608 50V 5% R/TP NP0
		C99	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C101	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C103	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C107	0CC100CK41A	10PF 1608 50V 5% R/TP NP0
		C108	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C109	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C110	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C111	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C112	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C113	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C132	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C133	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C134	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C135	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C136	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C139	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C145	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C146	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C147	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C148	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C149	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C150	0CH8226F611	22UF 16V M 85STD(CYL) R/TP
		C151	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C152	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C153	0CH8226F611	22UF 16V M 85STD(CYL) R/TP
		C154	0CH8226F611	22UF 16V M 85STD(CYL) R/TP
		C155	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C157	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C160	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C161	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C162	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C163	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C164	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C165	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C166	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C167	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C168	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C169	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C170	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C171	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C172	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C175	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R

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		C202	0CH8107H611	100UF 25V M 85STD(CYL) R/TP
		C204	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C205	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C208	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C209	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C210	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C211	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C212	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C213	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C214	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C215	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C216	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C217	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C218	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C219	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C223	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C242	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C248	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C276	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C278	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C280	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C287	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C288	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(
		C381	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C385	0CE226EK610	"22UF KMG,RD 50V 20% FL BULK"
		C401	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C402	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C403	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C404	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C405	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C411	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C412	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C413	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C414	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C415	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C808	0CE477EH618	470UF KMG 25V M FL TP 5
		C816	0CE477EH618	470UF KMG 25V M FL TP 5
DIODEs				
		D1	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D2	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D3	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D4	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D5	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D6	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D7	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D8	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D9	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT2
		D10	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D12	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D13	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D14	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D15	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D16	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D17	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT2
		D18	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT2
		D19	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D20	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D21	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D22	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D23	0DS226009AA	KDS226 TP KEC SOT-23 80V 3

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		D24	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D25	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D26	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D27	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		D28	0DS226009AA	KDS226 TP KEC SOT-23 80V 3
		ZD2	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD3	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD4	0DRSG00028A	STPS340U SGS-THOMSON R/TP S
		ZD6	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD7	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD8	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD9	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD10	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD21	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD22	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD23	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD24	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD25	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
ICs				
		U1	0ISTLPH002A	74LVC257A PHILIPS SO16 R/TP
		U2	0IPMGNS003A	LM2937IMP-3.3 NATIONAL SEMI
		U3	0ISTLFA058A	"74F14SCX FAIRCHILD 14P,SOIC"
		U4	0IPRPAD011A	AD9888KS-205 ANALOG DEVICE
		U5	0ISTLPH002A	74LVC257A PHILIPS SO16 R/TP
		U7	0IKE704200J	KIA7042AF SOT-89 TP 4.2V VO
		U8	0IPRPPW002B	"PW166B-30T PIXELWORKS 256P,"
		U9	0IZZTSZ238A	IC 44PIN PSOP TRAY FLASH ME
		U10	0INS317000E	LM317EMPX SOT-223 TP REGULA
		U13	0IMO140662A	"MC14066BDR2 14P,SOIC TP BIL"
		U14	0ISTLPH004B	"74LVC273(PW) PHILIPS 16P,TS"
		U15	0IMMRSS040C	S524A60X51(SCT0) SAMSUNG EL
		U16	0IDS170800A	DS1708S 8P SOIC ST MICROMON
		U17	0ISS524202B	S524A40X21(SCT0) SAMSUNG EL
		U18	0ITI743200P	"SN74HC32DR 14P,SOIC TP QUAD"
		U20	0IMCRSG002A	L4973D3.3 SGS-THOMSON 20P S
		U25	0ISTLPH003B	"74LVC541A(PW) PHILIPS 16P,T"
		U29	0IKE358000P	KIA358F 8P FLP-8 TP OP-AMP
		U30	0ISS524202B	S524A40X21(SCT0) SAMSUNG EL
		U34	0TFIR80009B	IRF7316 INTERNATIONAL RECTI
		U201	0IS5161000B	SIL161BCT100 SILICON IMAGE
		U401	0ITH638300B	"THC63LVDM83R THINE 56P,TSSO"
		U411	0ITH638300B	"THC63LVDM83R THINE 56P,TSSO"
COILs & COREs				
		L1	6210TCE001A	HB-1S2012-080JT CERATEC 201
		L2	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L3	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L4	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L5	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L6	6210TCE001R	HB-1S2012-400JT CERATECH 20
		L7	6210TCE001R	HB-1S2012-400JT CERATECH 20
		L8	6210TCE001R	HB-1S2012-400JT CERATECH 20
		L9	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L10	6210TCE001Y	HB-1H2012-320JT CERATEC 201
		L11	6210TCE001Y	HB-1H2012-320JT CERATEC 201
		L12	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L13	6140TBZ016C	DR10*5 33UH 0.4MM 27T LM285
		L14	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L15	6210TCE001G	HH-1M3216-501 CERATEC 3216M

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		L22	6210TCE001P	HB-1S2012-121JT CERATECH 20
		L23	6210TCE001P	HB-1S2012-121JT CERATECH 20
		L24	6210TCE001P	HB-1S2012-121JT CERATECH 20
		L25	6210TCE001P	HB-1S2012-121JT CERATECH 20
		L26	6210TCE001P	HB-1S2012-121JT CERATECH 20
		L27	6210TCE001P	HB-1S2012-121JT CERATECH 20
		L28	6210TCT002B	"ACB2012M-300-T TDK , CHIP B"
		L29	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L30	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L31	6210TCE001D	HB-1M2012-601JT CERATEC 201
		L32	6210TCE001Y	HB-1H2012-320JT CERATEC 201
		L34	6210TCE001D	HB-1M2012-601JT CERATEC 201
		L35	0RH0000D622	0 1/10W P-TYPE TAPPING
		L36	0RH0000D622	0 1/10W P-TYPE TAPPING
		L37	0RH0000D622	0 1/10W P-TYPE TAPPING
		L38	0RH0000D622	0 1/10W P-TYPE TAPPING
		L39	0RH0000D622	0 1/10W P-TYPE TAPPING
		L40	0RH0000D622	0 1/10W P-TYPE TAPPING
		L41	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L42	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L43	0RH0000D622	0 1/10W P-TYPE TAPPING
		L44	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L45	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L46	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L47	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L48	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L49	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L50	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L51	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L52	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L53	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L54	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L55	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L56	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L57	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L58	6210TCE001H	HB-1T2012-301JT CERATEC 201
		L210	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L401	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L802	6210TCE001G	HH-1M3216-501 CERATEC 3216M
		L803	6210TCE001G	HH-1M3216-501 CERATEC 3216M
TRANSISTOR				
		Q2	0TR162309CA	KSC1623 TP SAMSUNG SOT23 N
		Q5	0TR162309CA	KSC1623 TP SAMSUNG SOT23 N
		Q9	0TR162309CA	KSC1623 TP SAMSUNG SOT23 N
		Q10	0TR162309CA	KSC1623 TP SAMSUNG SOT23 N
RESISTORS				
		R2	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R3	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R8	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R9	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R10	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R11	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R12	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R13	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R14	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R15	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R16	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R17	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP

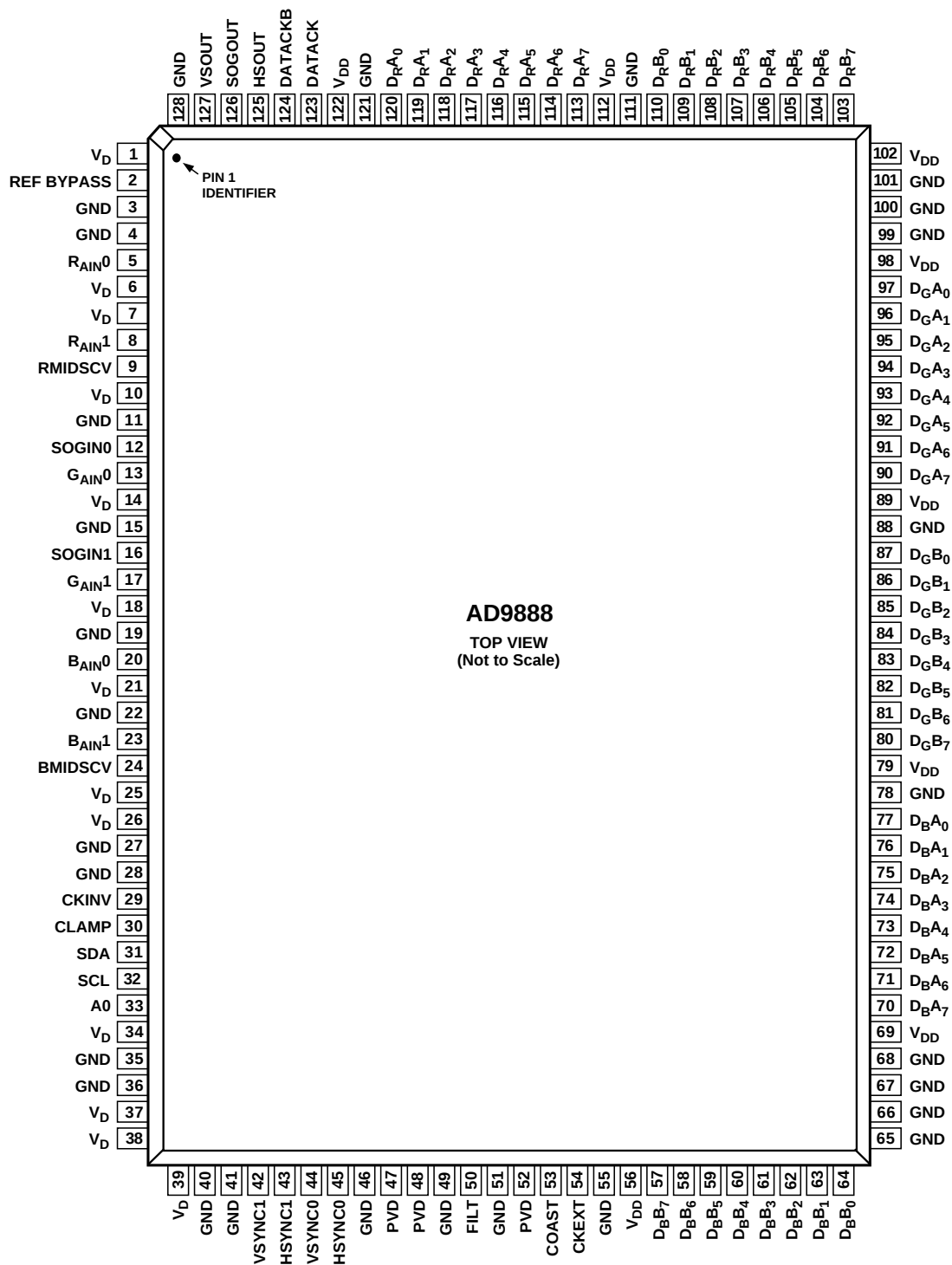
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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R18	0RJ1500D677	150 OHM 1/10 W 5% 1608 R/TP
		R19	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R20	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R21	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R24	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/T
		R25	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R26	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R28	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R29	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R30	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R31	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R32	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R33	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R34	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R36	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R37	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R38	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R40	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R41	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/T
		R42	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R43	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R44	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R45	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R46	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R47	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R48	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R49	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R51	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R52	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R53	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R54	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R55	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R56	0RJ1003D677	100K OHM 1/10 W 5% 1608 R/T
		R57	0RJ3602D677	36K OHM 1/10 W 5% 1608 R/TP
		R58	0RJ3602D677	36K OHM 1/10 W 5% 1608 R/TP
		R59	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R60	0RJ9101D677	9.1K OHM 1/10 W 5% 1608 R/T
		R61	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R62	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R64	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/T
		R66	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/T
		R67	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R71	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T
		R72	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/T
		R73	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/T
		R74	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/T
		R75	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T
		R77	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/T
		R78	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/T
		R79	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/T
		R80	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R81	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R82	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R83	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R84	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R85	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R89	0RJ0272D677	27 OHM 1/10 W 5% 1608 R/TP
		R90	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R91	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T
		R92	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R93	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R94	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP

DATE: 2003. 02. 10.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R95	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R96	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R98	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R99	0RJ3303D677	330K OHM 1/10 W 5% 1608 R/T
		R100	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/T
		R101	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R102	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R103	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R104	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R105	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R106	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R107	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R108	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R109	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R110	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R111	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R112	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R113	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R114	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R115	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R116	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R117	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R118	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T
		R119	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T
		R120	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T
		R121	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R123	0RJ2701D677	2.7K OHM 1/10 W 5% 1608 R/T
		R124	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R125	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T
		R126	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R127	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R128	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R129	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R130	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R131	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R132	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R133	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R134	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R136	0RJ8200D677	820 OHM 1/10 W 5% 1608 R/TP
		R137	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R138	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R139	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R140	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R141	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R142	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R143	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R144	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R145	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R146	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R147	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R148	0RJ3301D677	3.3K OHM 1/10 W 5% 1608 R/T
		R149	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R150	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R151	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R152	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R153	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R154	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R156	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R157	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R159	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R161	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R164	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP

DATE: 2003. 02. 10.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R169	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R170	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R174	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R175	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R176	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R178	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R199	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R201	0RJ3900D677	390 OHM 1/10 W 5% 1608 R/TP
		R204	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R205	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R206	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R207	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R208	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R213	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R214	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R215	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R216	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R218	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R219	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R220	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/T
		R342	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R401	0RH0000D622	0 1/10W P-TYPE TAPPING
		R403	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R407	0RH0000D622	0 1/10W P-TYPE TAPPING
		R408	0RH0000D622	0 1/10W P-TYPE TAPPING
		R411	0RH0000D622	0 1/10W P-TYPE TAPPING
		R413	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		RA1	0RHZTCZ001C	220 OHM 1/16 W 5% 3215 R/TP
		RA2	0RHZTCZ001E	RCA SMART 47OHM 1/16 W 5% 3
		RA3	0RHZTCZ001E	RCA SMART 47OHM 1/16 W 5% 3
		RA4	0RHZTCZ001E	RCA SMART 47OHM 1/16 W 5% 3
		RA5	0RHZTCZ001E	RCA SMART 47OHM 1/16 W 5% 3
		RA6	0RHZTCZ001E	RCA SMART 47OHM 1/16 W 5% 3
		RA7	0RHZTCZ001E	RCA SMART 47OHM 1/16 W 5% 3
		RA8	0RHZTCZ001E	RCA SMART 47OHM 1/16 W 5% 3
		RA9	0RHZTCZ001E	RCA SMART 47OHM 1/16 W 5% 3
		RA10	0RHZTCZ001E	RCA SMART 47OHM 1/16 W 5% 3
		RA11	0RHZTCZ001E	RCA SMART 47OHM 1/16 W 5% 3
		RA12	0RHZTCZ001E	RCA SMART 47OHM 1/16 W 5% 3
		RA13	0RHZTCZ001E	RCA SMART 47OHM 1/16 W 5% 3
		RA14	0RHZTCZ001C	220 OHM 1/16 W 5% 3215 R/TP
		RA15	0RHZTCZ001C	220 OHM 1/16 W 5% 3215 R/TP
		RA16	0RHZTCZ001C	220 OHM 1/16 W 5% 3215 R/TP
		RA17	0RHZTCZ001C	220 OHM 1/16 W 5% 3215 R/TP
		RA18	0RHZTCZ001C	220 OHM 1/16 W 5% 3215 R/TP
		RA19	0RHZTCZ001C	220 OHM 1/16 W 5% 3215 R/TP
		RA20	0RHZTCZ001C	220 OHM 1/16 W 5% 3215 R/TP
		RA21	0RHZTCZ001C	220 OHM 1/16 W 5% 3215 R/TP
		RA22	0RHZTCZ001C	220 OHM 1/16 W 5% 3215 R/TP
		RA23	0RHZTCZ001C	220 OHM 1/16 W 5% 3215 R/TP
		RA24	0RHZTCZ001C	220 OHM 1/16 W 5% 3215 R/TP
		RA221	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP
		RA222	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP
		RA223	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP
		RA224	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP
		RA225	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP
		RA226	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP
		RA227	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP
		RA228	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP
		RA229	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP
		RA230	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP
		RA231	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP

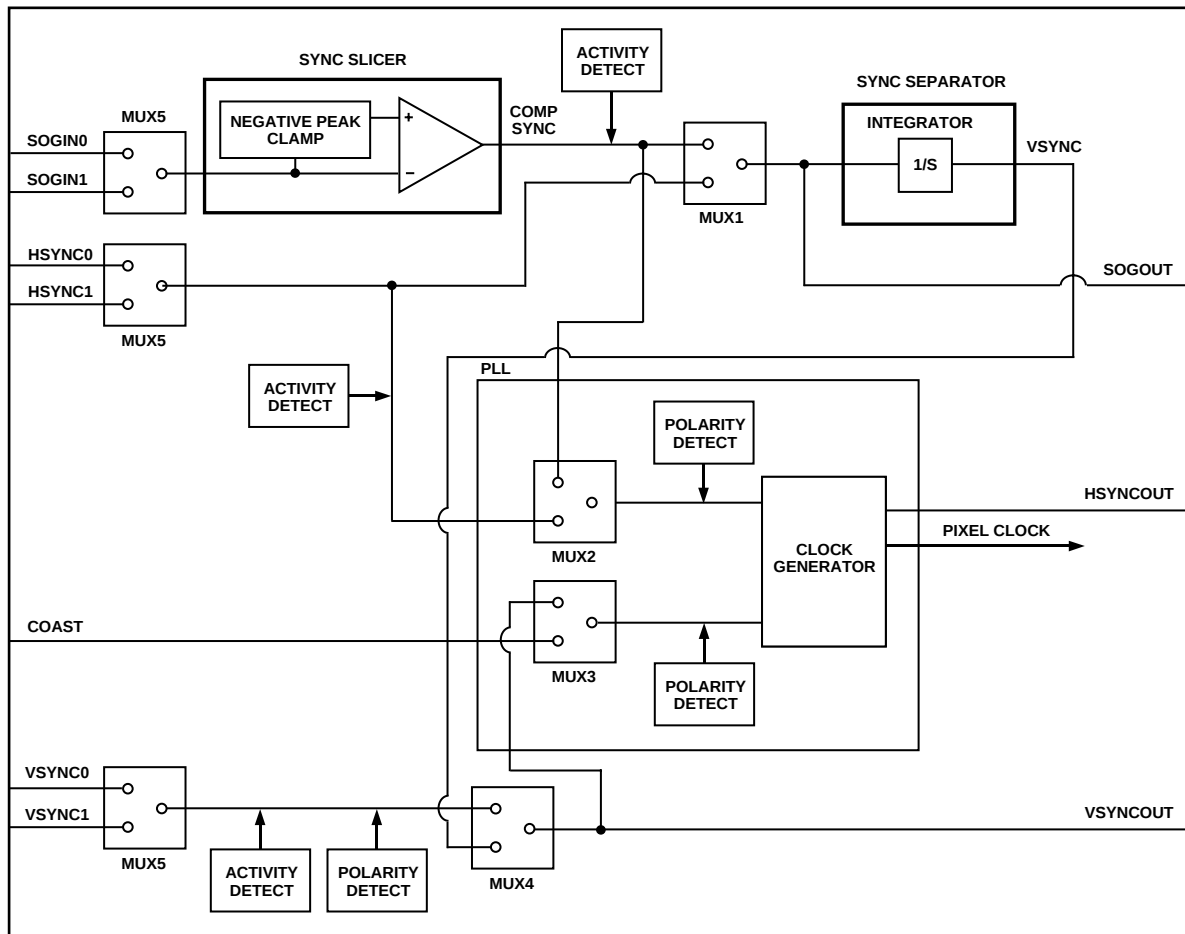
DATE: 2003. 02. 10.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		RA232	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP
OTHERS				
		X2	6202TST001A	"SX-1 SUNNY ,SMS, 14.31818MH"
POWER BOARD				
		BD901	0DD360000DA	D3SBA60 BK SHINDENGEN 600V
△		C901	0CBZTBU002B	BULK PCX2 335 474K
△		C902	0CKZTBU006B	NK E 332M 250V BK10.0 DA2GY
△		C903	0CKZTBU006B	NK E 332M 250V BK10.0 DA2GY
△		C904	0CBZTBU002A	BULK PCX2 335 224K
		C905	0CZZTAB002C	KMF 18*40 SYE / SWE 400V 12
		C906	0CK10302945	0.01UF 2KV Z F TR
		C907	0CE476EK638	47UF KMG 50V M FM5 TP 5
		C908	181-288K	MKT 100V 683JTR PHS26683
		C909	0CE476EF638	47UF KMG 16V M FM5 TP 5
		C910	0CE336BH638	33UF KME 25V M FM5 TP5
		C911	0CE108EH630	1000UF KMG 25V M FM5 BULK
		C912	181-288B	MKT 100V 104JTR PHS26104
		C913	0CE108EH630	1000UF KMG 25V M FM5 BULK
		C914	0CE228ED630	"2200UF KMG,RD 10V 20% BULK"
		C915	0CE228ED630	"2200UF KMG,RD 10V 20% BULK"
		C916	181-288L	MKT 100V 823JTR PHS26823
		C917	0CE108EH630	1000UF KMG 25V M FM5 BULK
		C918	0CE228ED630	"2200UF KMG,RD 10V 20% BULK"
		C919	0CKZTBU006B	NK E 332M 250V BK10.0 DA2GY
		C920	0CE108EH630	1000UF KMG 25V M FM5 BULK
		C921	0CE108EH630	1000UF KMG 25V M FM5 BULK
		C922	0CKZTTA002E	EKR3A102K09FK5 SAMWHA 1KV 1
		C923	0CKZTTA002E	EKR3A102K09FK5 SAMWHA 1KV 1
		C924	0CK1020K515	1000PF 50V K B TR
		C925	0CK22101515	220P 1KV K B TP5
		C926	0CZZTAB002C	KMF 18*40 SYE / SWE 400V 12
		D901	0DD400709CB	UF4007 TP G.I DO204AL 1000
		D902	0DR400409AB	UF4004 TP G.I DO204AL 400V
		D903	0DRNH00101A	FCH20A10 NIHON INTER ST TO2
		D904	0DR400409AB	UF4004 TP G.I DO204AL 400V
		D906	0DR206000AA	MBRF2060CT BK G.I ITO220 60
△		F901	0FZZTTH001D	"TIME LAG HBC 3.15A/250V,215"
		FH1	430-858C	AFC-520 BAE EUN TA
		FH2	430-858C	AFC-520 BAE EUN TA
		IC901	0IPMGIH003A	"ICE2B765P INFINEON 6P,TO220"
		IC902	0ISS431000A	KA431AZ (LM431AZ)
		IC904	0ISS431000A	KA431AZ (LM431AZ)
		L901	150-A85F	"LX31 GET BAR CHOKE,3.3UH,LB"
		L902	150-A85F	"LX31 GET BAR CHOKE,3.3UH,LB"
△		LF901	6200TZ001A	"- GO BK L/FILTER,9MH,LB886F"
△		LF902	6200TZ001A	"- GO BK L/FILTER,9MH,LB886F"
△		P901	6620TKB002A	BAE EUN AC UNIVERSAL 3PIN B
		P904	366-164A	YW396-03AV YEONHO 3P 3.96MM
△		PC1	0ILI817000E	LTV-817M-V(B) 4P BK PHOTO
		Q902	0TR104600AB	KTA1046YU BK KEC TO220I S P
		R901	0RD6803A609	680K OHM 1/2 W (7.0) 5% TA5
		R902	0RD6802A609	68K OHM 1/2 W (7.0) 5% TA52
		R903	0RD6802A609	68K OHM 1/2 W (7.0) 5% TA52
		R904	0RD1002Q609	10K 1/4W(3 5% TA52
		R906A	0RX7502J609	75K OHM 1 W 5% TA52
		R906B	0RX7502J609	75K OHM 1 W 5% TA52
		R907	0RD0302Q609	30 OHM 1/4 W (3.4) 5% TA52
		R908	0RD0222Q609	22 1/4W(3 5% TA52

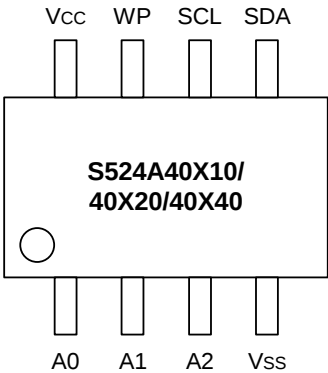
DATE: 2003. 02. 10.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R909	0RD1001Q609	1K 1/4W(3 5% TA52
		R910	0RD0272A609	27 OHM 1/2 W (7.0) 5% TA52
		R911	0RD1004A609	1.0M OHM 1/2 W (7.0) 5% TA5
		R912	0RD1004A609	1.0M OHM 1/2 W (7.0) 5% TA5
		R913	0RD1001Q609	1K 1/4W(3 5% TA52
		R914	0RD3300A609	330 OHM 1/2 W (7.0) 5% TA52
		R915	0RN1802F409	18K 1/6W 1% TA52
		R916	0RN2701F409	2.7K OHM 1/6 W 1.00% TA52
		R917	0RD3001Q609	3K 1/4W(3 5% TA52
		R918	0RD1000Q609	100 1/4W(3 5% TA52
		R920	0RN3301F409	3.30K 1/6W 1% TA52
		R921	0RN2401F409	2.40K 1/6W 1% TA52
		R922	0RD2402Q509	24K OHM 1/4 W (3.4) 2% TA52
		R923	180-496E	0.39 OHM 1W 5% TA52
		R927	0RD0102A609	10 OHM 1/2 W (7.0) 5% TA52
		R928	0RN6202F409	62KOHM 1/6 W 1% TA52
△		T901	6170TMZ145A	EER3016 500UH V-10PIN IBM 2
		TH901	6322TA080AA	TP8D13 DAEWOO +/- 15% 110/
		ZD901	0DZ470009BC	GDZ4.7B TP GRANDE DO34 0.5W
		ZD902	0DZ220009BC	MTZJ22C TP ROHM-K - 0.5W 22
		ZD903	0DZ200009AD	MTZJ20B TP ROHM-K DO34 500
		ZD904	0DZ620009BB	MTZJ6.2B TP ROHM-K DO34 0.5
CONTROL BOARD				
		C2	0CH3105H946	"1UF 25V 80%,-20% F(Y5V) 201"
		C3	0CH3105H946	"1UF 25V 80%,-20% F(Y5V) 201"
		L1	6210TCE001H	HB-1T2012-301JT CERATEC 201
		LED1	0DLLT0089AA	LITEON LTL-1BEDJ-0C2 TP GRE
		Q9	0TR102009AJ	KRC102S NPN SOT-23 TP KEC
		Q10	0TR102009AJ	KRC102S NPN SOT-23 TP KEC
		Q13	0TR102009AJ	KRC102S NPN SOT-23 TP KEC
		Q14	0TR102009AJ	KRC102S NPN SOT-23 TP KEC
		Q17	0TR102009AJ	KRC102S NPN SOT-23 TP KEC
		R1	0RJ0562D677	56 OHM 1/10 W 5% 1608 R/TP
		R2	0RJ0562D677	56 OHM 1/10 W 5% 1608 R/TP
		R12	0RJ2001D677	2K OHM 1/10 W 5% 1608 R/TP
		R13	0RJ2001D677	2K OHM 1/10 W 5% 1608 R/TP
		R14	0RJ2001D677	2K OHM 1/10 W 5% 1608 R/TP
		R15	0RJ2001D677	2K OHM 1/10 W 5% 1608 R/TP
		R18	0RJ2001D677	2K OHM 1/10 W 5% 1608 R/TP
		R19	0RJ2001D677	2K OHM 1/10 W 5% 1608 R/TP
		R20	0RJ2001D677	2K OHM 1/10 W 5% 1608 R/TP
		R21	0RJ2001D677	2K OHM 1/10 W 5% 1608 R/TP
		R24	0RJ2001D677	2K OHM 1/10 W 5% 1608 R/TP
		R25	0RJ2001D677	2K OHM 1/10 W 5% 1608 R/TP
		SW1	140-058E	SKHV10910B LGEC NON 12V 20A
		SW2	140-058E	SKHV10910B LGEC NON 12V 20A
		SW3	140-058E	SKHV10910B LGEC NON 12V 20A
		SW4	140-058E	SKHV10910B LGEC NON 12V 20A
		SW5	140-058E	SKHV10910B LGEC NON 12V 20A
		ZD1	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD2	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD5	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD6	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD7	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD8	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD9	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD10	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323
		ZD11	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323



PIN CONFIGURATION

BLOCK DIAGRAM





NOTE: The S524A40X10/40X20/40X40 is available in 8-pin DIP, SOP, and TSSOP package.

Figure 2-2. Pin Assignment Diagram

Table 2-1. S524A40X10/40X20/40X40 Pin Descriptions

Name	Type	Description	Circuit Type
A0, A1, A2	Input	Input pins for device address selection. To configure a device address, these pins should be connected to the V_{CC} or V_{SS} of the device. These pins are internally pulled down to V_{SS} .	1
V_{SS}	—	Ground pin.	—
SDA	I/O	Bi-directional data pin for the I ² C-bus serial data interface. Schmitt trigger input and open-drain output. An external pull-up resistor must be connected to V_{CC} . Typical values for this pull-up resistor are 4.7 k Ω (100 kHz) and 1 k Ω (400 kHz).	3
SCL	Input	Schmitt trigger input pin for serial clock input.	2
WP	Input	Input pin for hardware write protection control. If you tie this pin to V_{CC} , the write function is disabled to protect previously written data in the entire memory; if you tie it to V_{SS} , the write function is enabled. This pin is internally pulled down to V_{SS} .	1
V_{CC}	—	Single power supply.	—

NOTE: See the following page for diagrams of pin circuit types 1, 2, and 3.

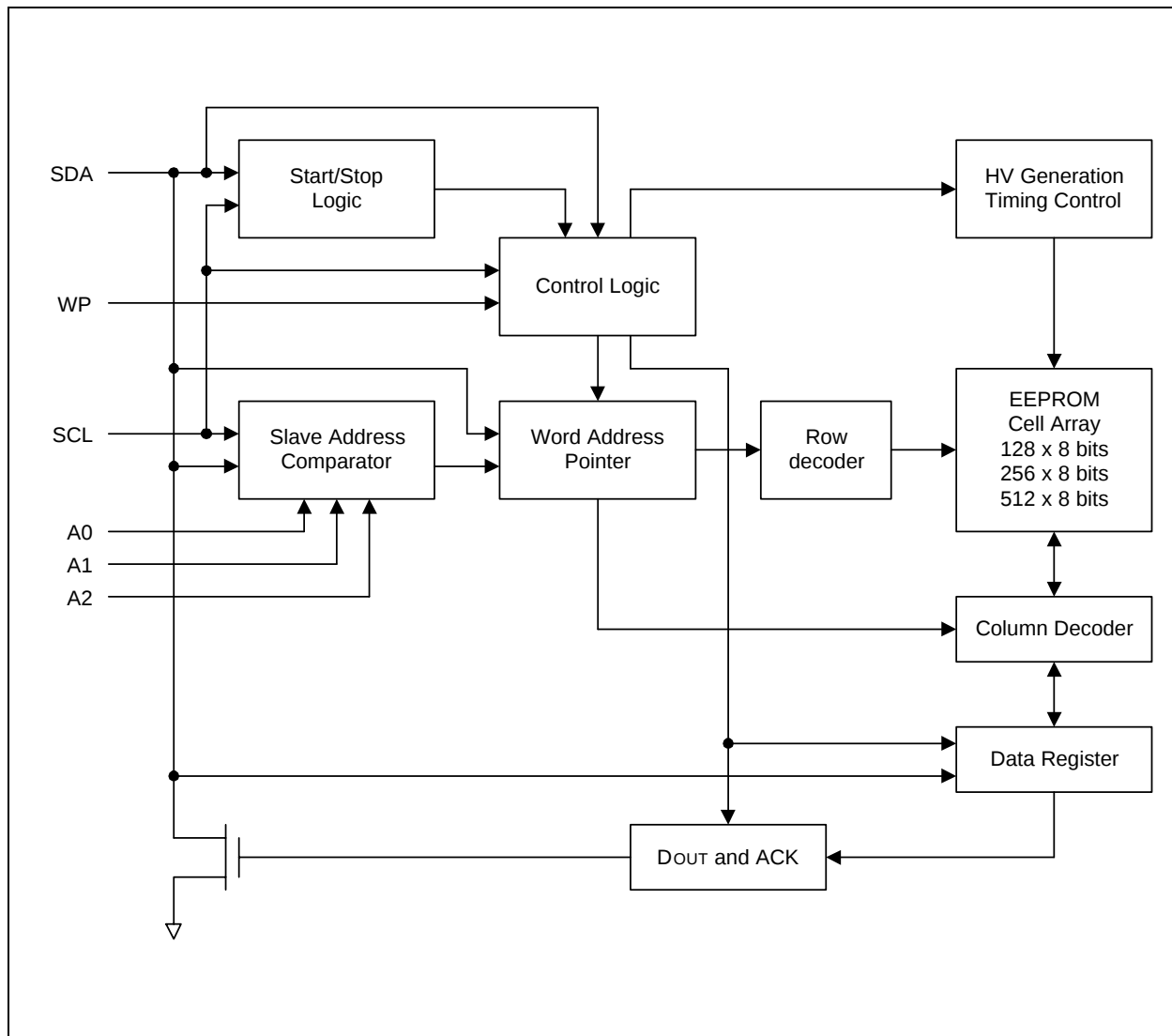
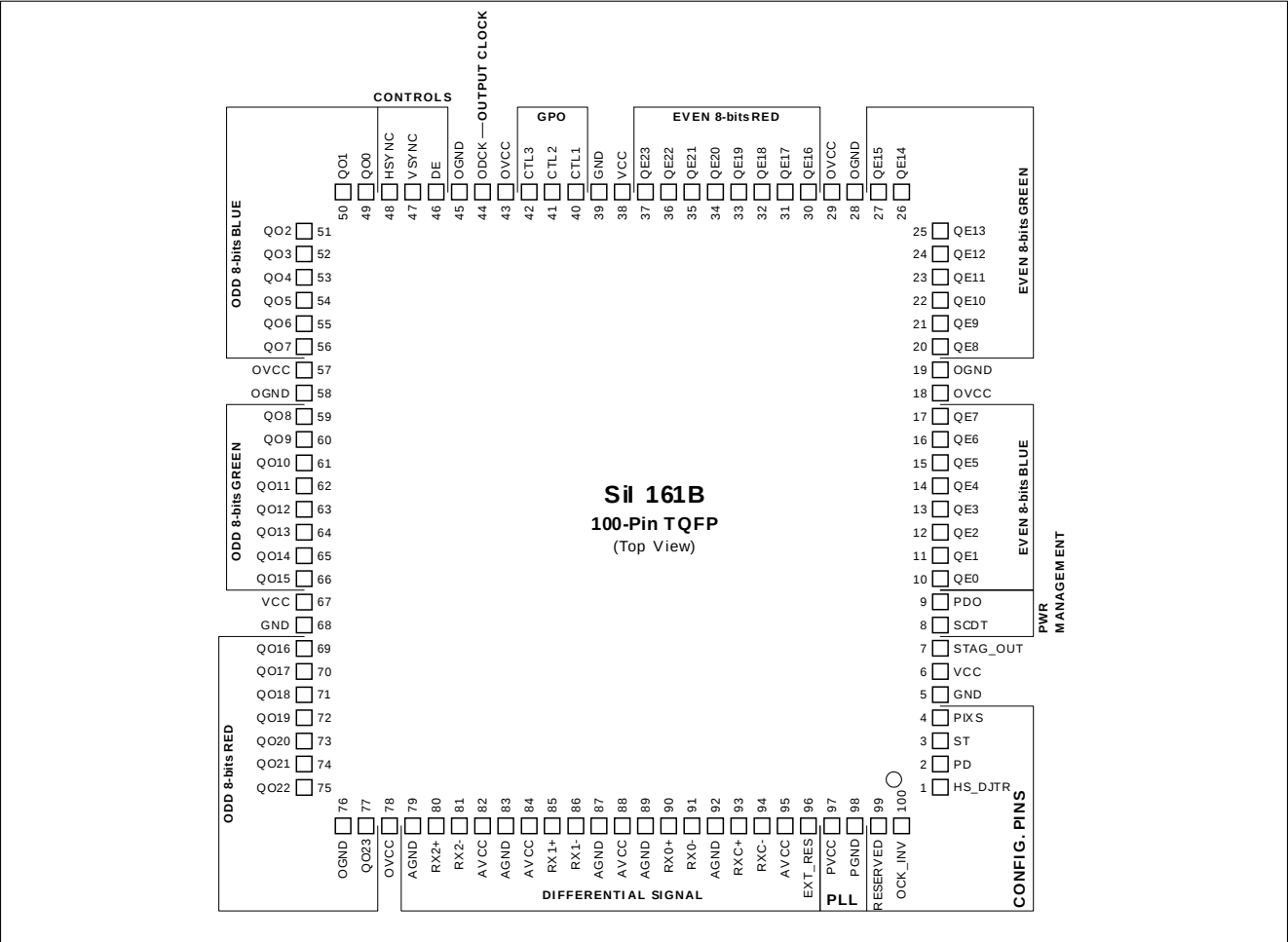
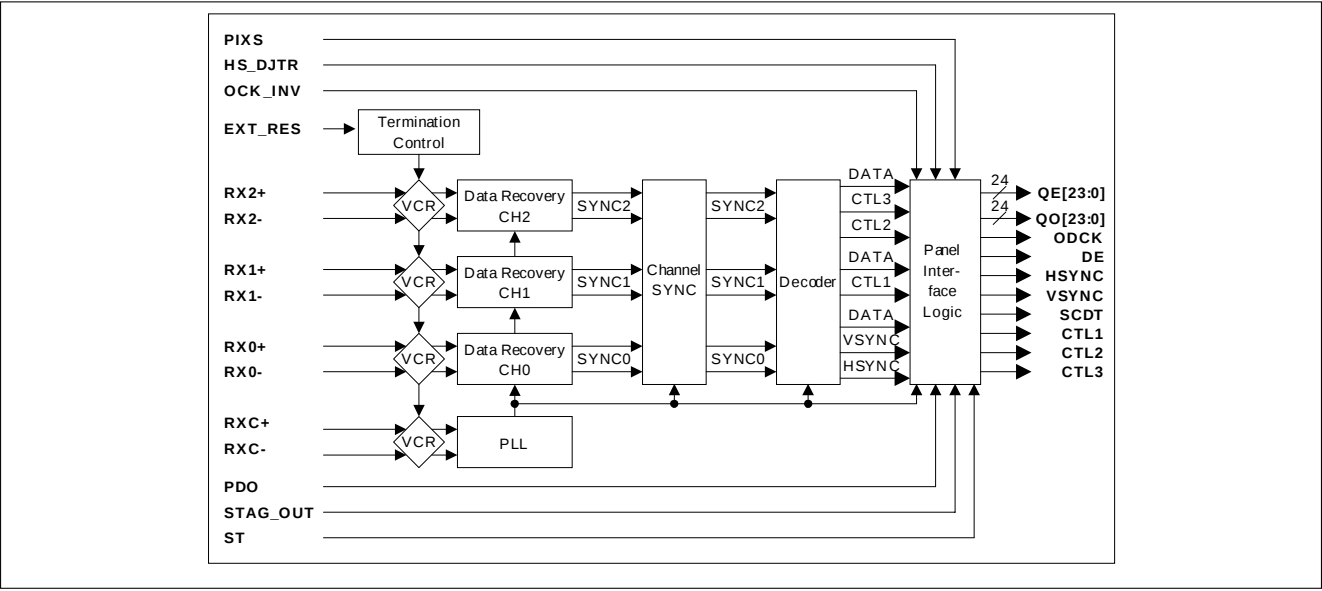


Figure 2-1. S524A40X10/40X20/40X40 Block Diagram



PIN CONFIGURATION



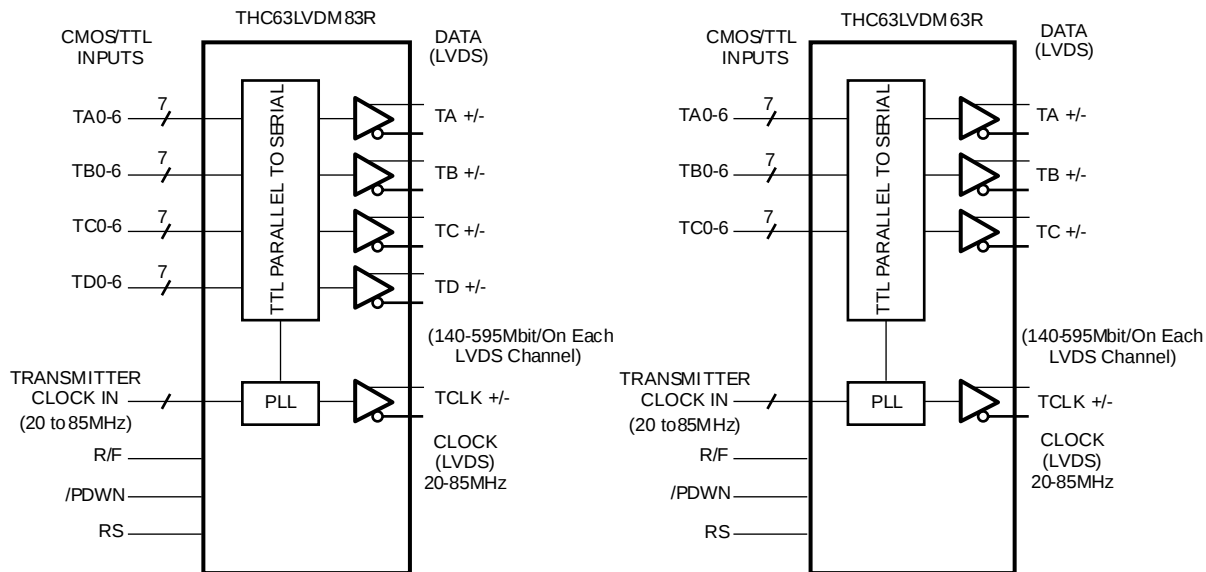
BLOCK DIAGRAM

THC63LVDM83R

THC63LVDM83R			
RS	1	56	TA4
TD1	2	55	TA3
TA5	3	54	TA2
TA6	4	53	GND
GND	5	52	TA1
TB0	6	51	TA0
TB1	7	50	TD0
TD2	8	49	LVDS GND
VCC	9	48	TA-
TD3	10	47	TA+
TB2	11	46	TB-
TB3	12	45	TB+
GND	13	44	LVDS VCC
TB4	14	43	LVDS GND
TB5	15	42	TC-
TD4	16	41	TC+
R/F	17	40	TCLK-
TD5	18	39	TCLK+
TB6	19	38	TD-
TC0	20	37	TD+
GND	21	36	LVDS GND
TC1	22	35	PLL GND
TC2	23	34	PLL VCC
TC3	24	33	PLL GND
TD6	25	32	/PDWN
VCC	26	31	CLK IN
TC4	27	30	TC6
TC5	28	29	GND

THC63LVDM63R			
TA4	1	48	TA3
RS	2	47	TA2
TA5	3	46	GND
TA6	4	45	TA1
GND	5	44	TA0
TB0	6	43	N/C
TB1	7	42	LVDS GND
VCC	8	41	TA-
TB2	9	40	TA+
TB3	10	39	TB-
GND	11	38	TB+
TB4	12	37	LVDS VCC
TB5	13	36	LVDS GND
R/F	14	35	TC-
TB6	15	34	TC+
TC0	16	33	TCLK-
GND	17	32	TCLK+
TC1	18	31	LVDS GND
TC2	19	30	PLL GND
TC3	20	29	PLL VCC
VCC	21	28	PLL GND
TC4	22	27	/PDWN
TC5	23	26	CLK IN
GND	24	25	TC6

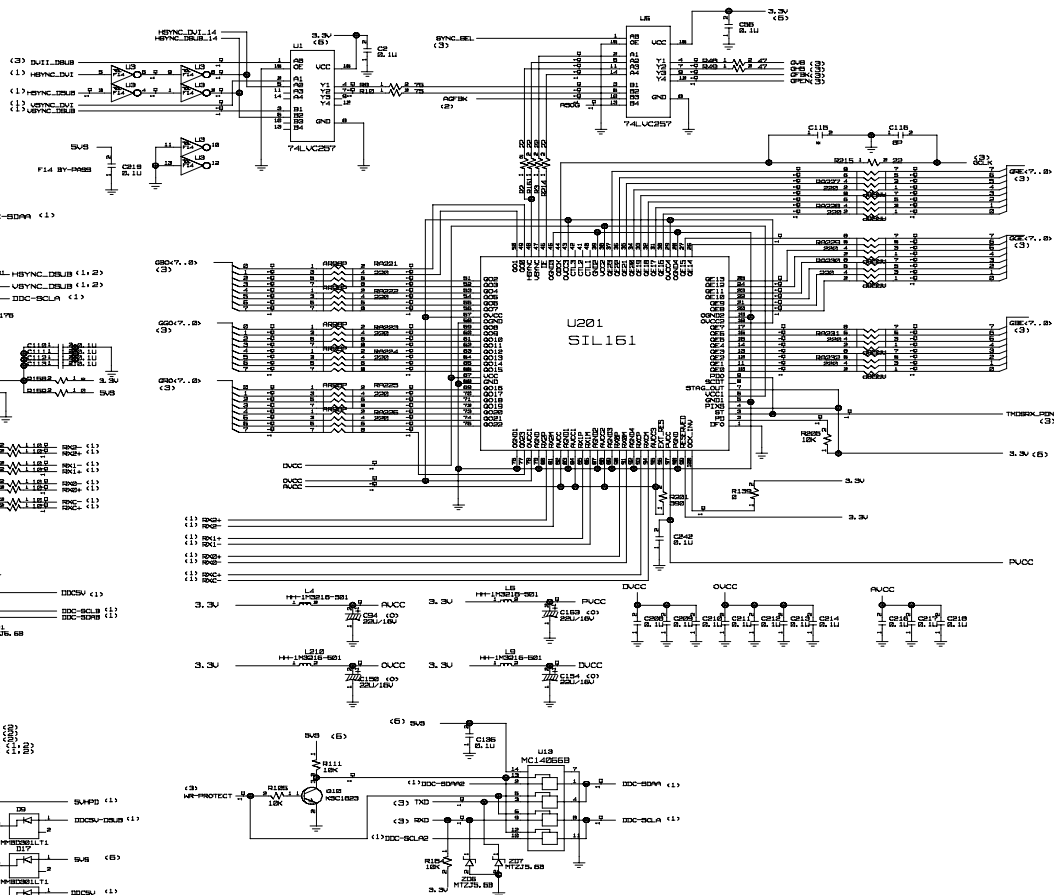
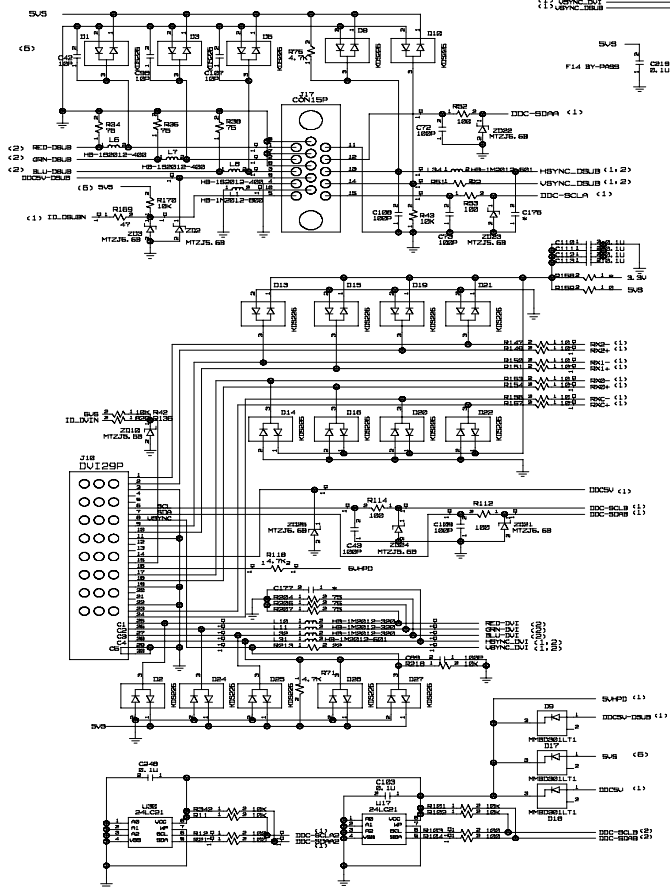
PIN CONFIGURATION



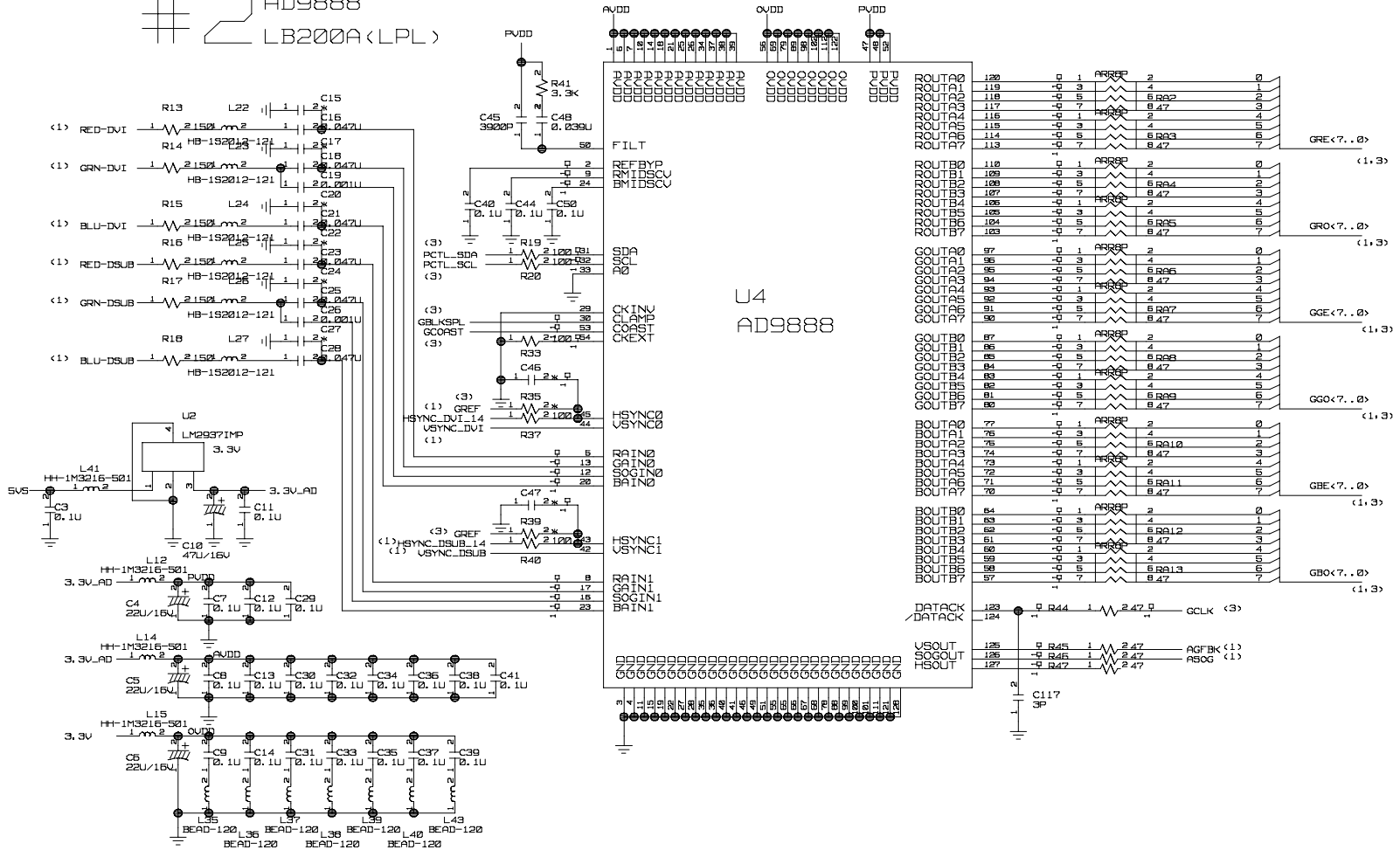
BLOCK DIAGRAM

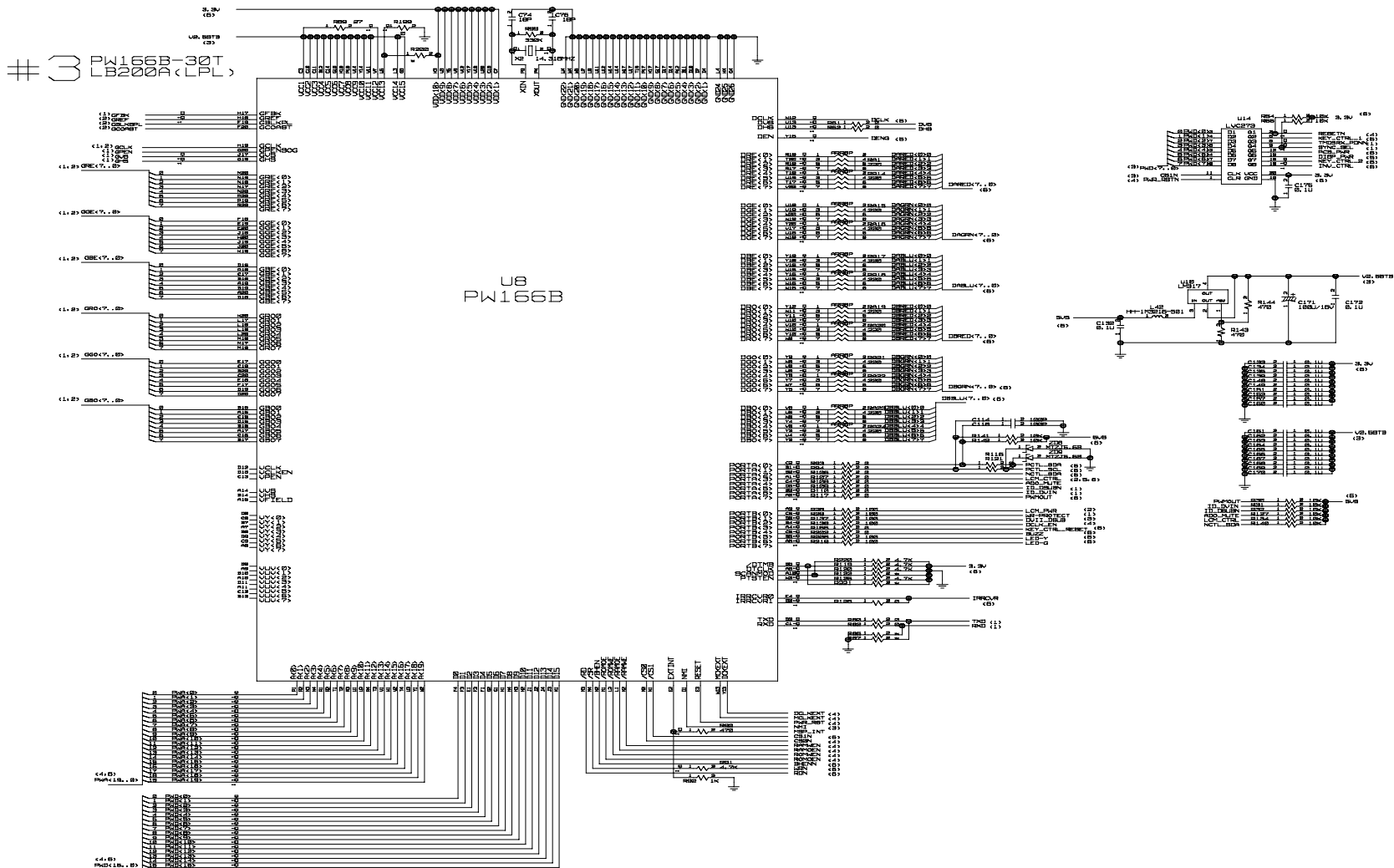
1. D-AUB/DVI/SIL161

1 DSUB/DVI/SIL161
LB200A(LPL)

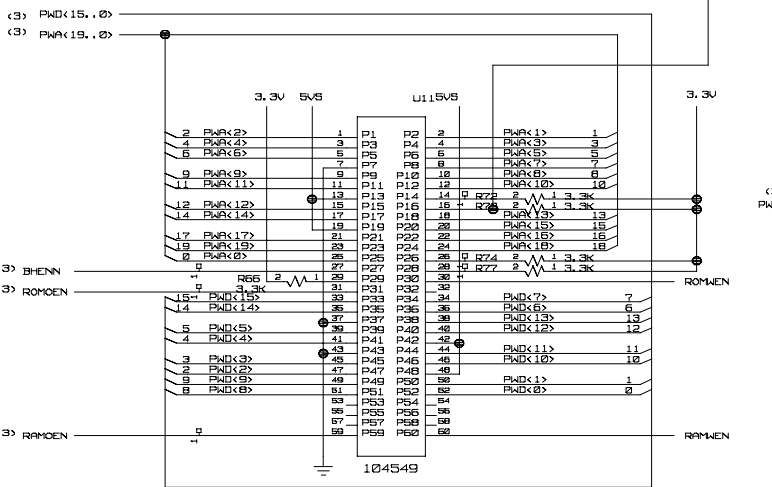
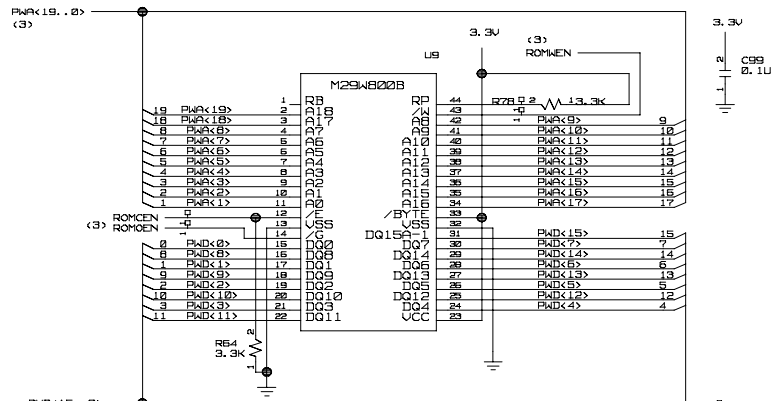


#2 AD9888
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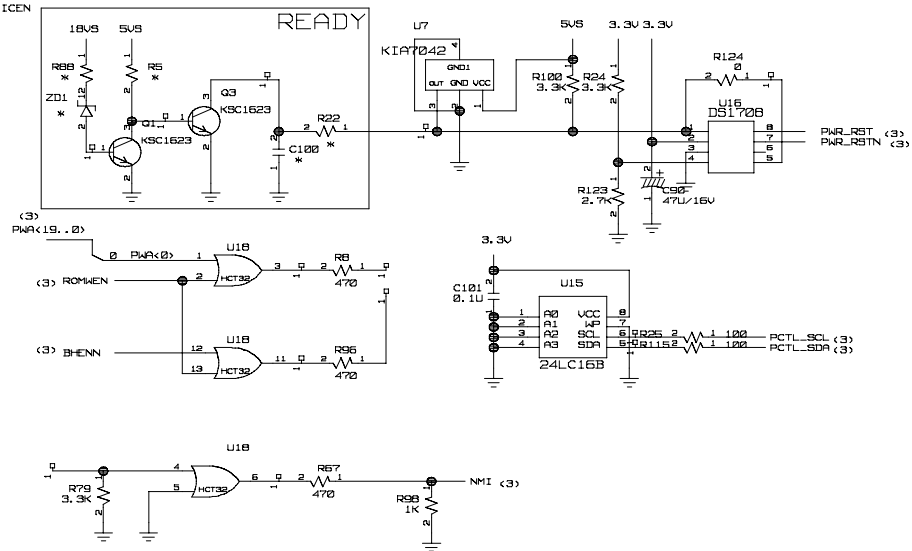
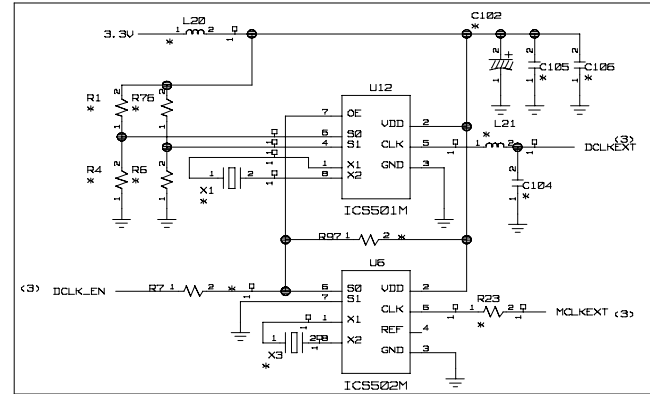




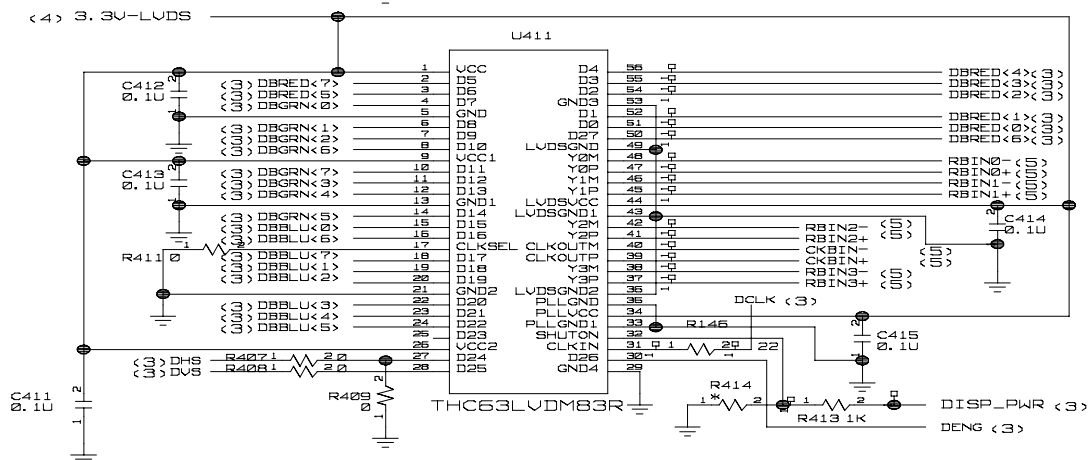
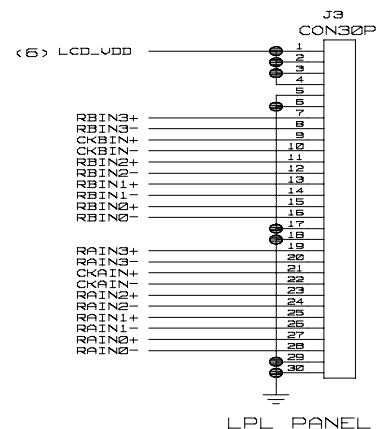
#4 MEMORY LB200A(LPL)



READY

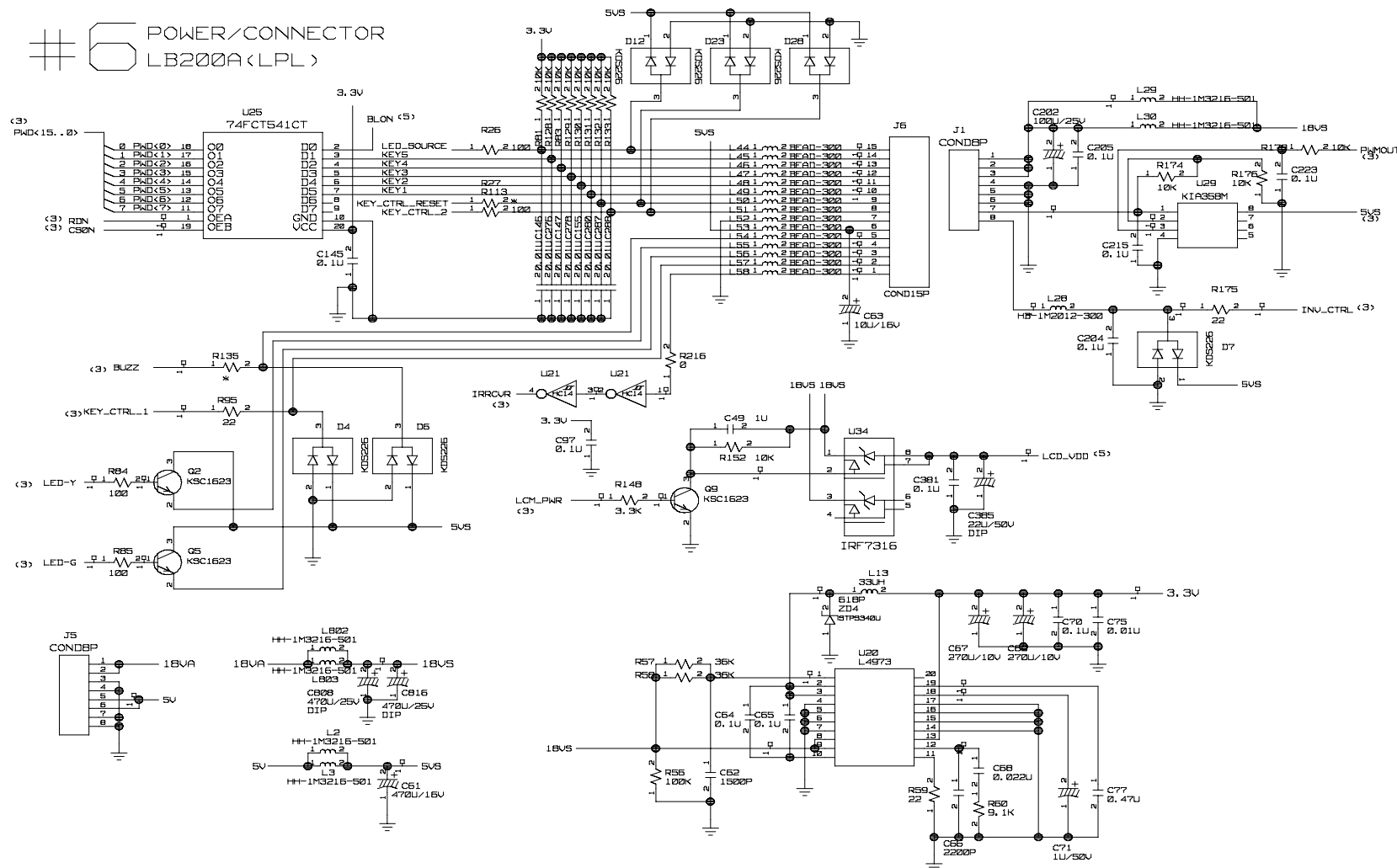


5 LVDS<THC63LVDM83R>
LB200A<LPL>



RBIN3+	C1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
RBIN3+	C1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

#6 POWER/CONNECTOR LB200A(LPL)



7 POWER
LB200A(LPL)

