

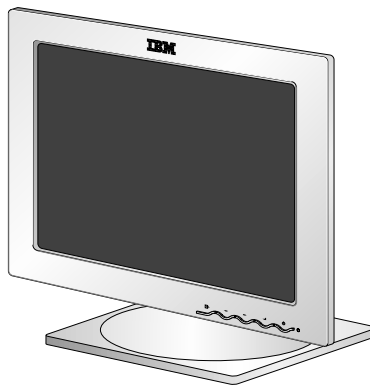


**MODEL: 9493-AW1(6bit)
9493-AG1(6bit)**

COLOR MONITOR

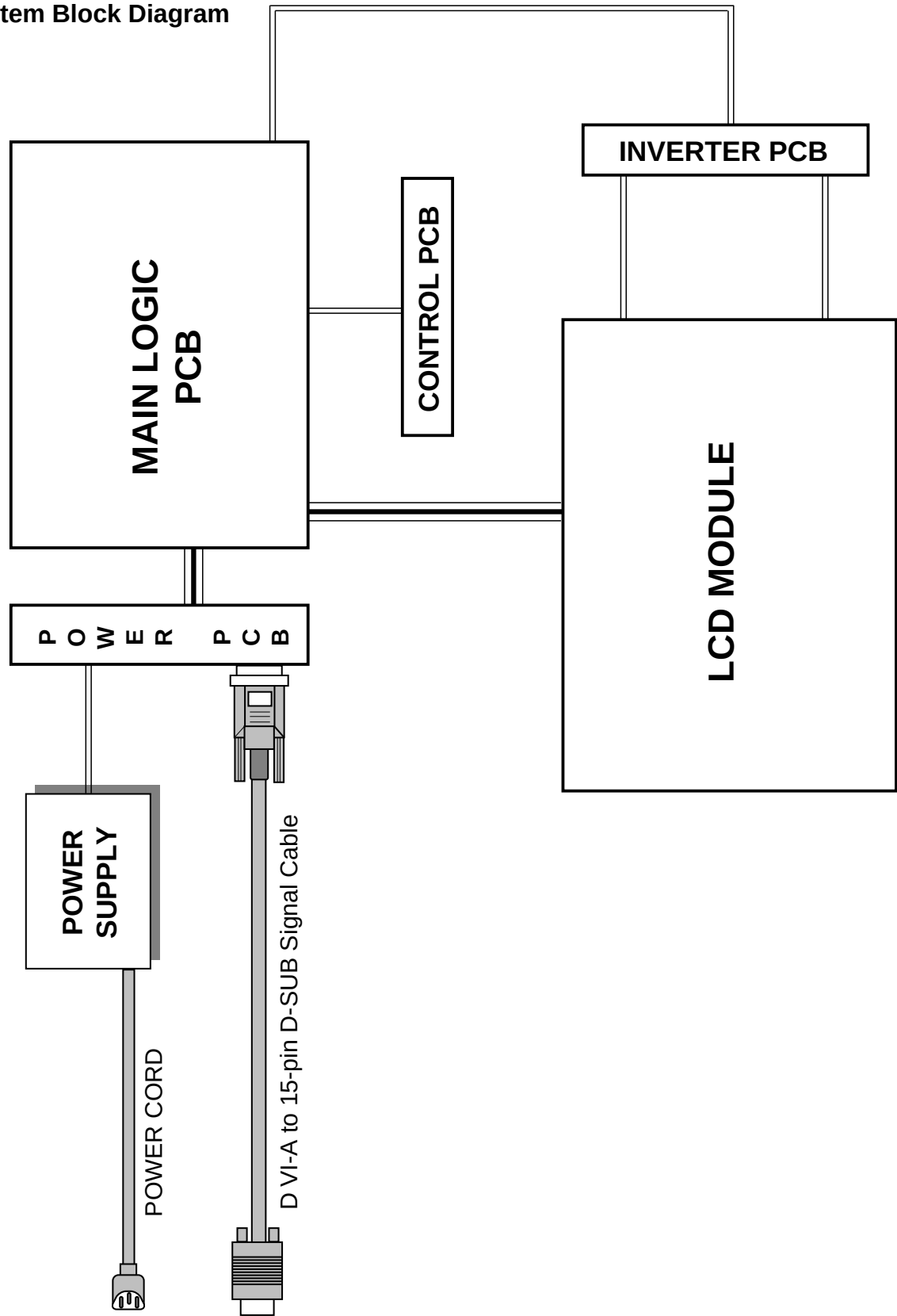
CAUTION

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

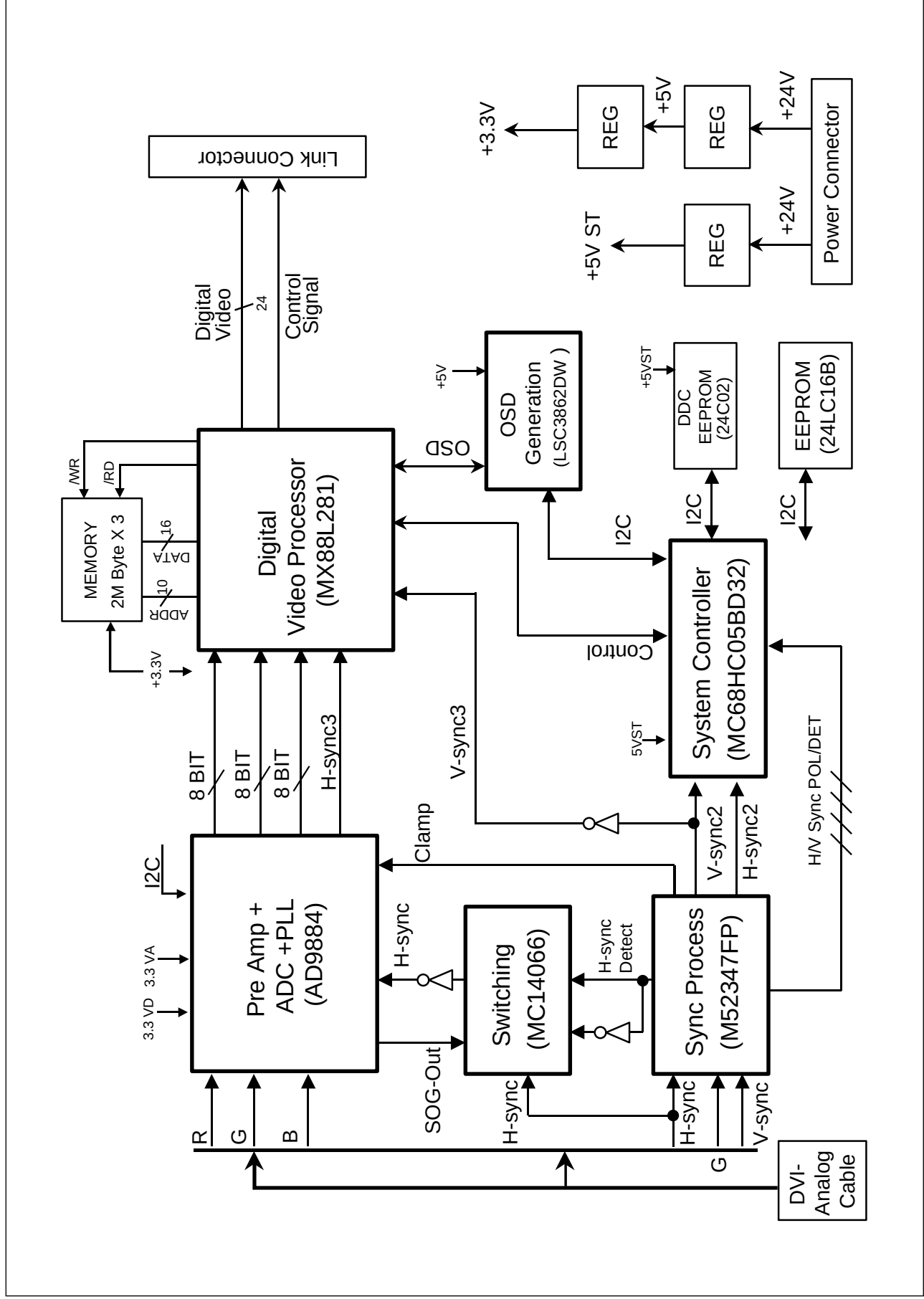


6Bit Module
Issue Date: APRIL 2000

System Block Diagram



BLOCK DIAGRAM



DESCRIPTION OF BLOCK DIAGRAM

1. Video Amp & PLL & A/D Converter Circuit

AD9884(U5) is one chip IC which it supports three function block of Video Amp, PLL and A/D converter.

Video signal (0.7Vp.p) clamped through C63, 64, 65 inputs to U5's R, G, and B pins. The signal level is 0.7Vac added 4Vdc. This signal is processed as a proper 8 bit digital signal for input of MX88L281 (U1) by U5's amplifying, phase locking, and A/D converting operation.

U5 generates clock and horizontal sync for MX88L281 (U1) with MC14066B(U11)'s output horizontal sync signal.

Sync Process (U14)'s clamp output makes U5 keep video signal's voltage from zero to AC signal's minimum level constantly regardless of various input video signals.

2. Macronix Circuit (Scaler chip)

The MX88L281 (U1) gets the video signal converted analog to digital from U18, and carries out four function of image processing that interpolates input signal less than 1024x768 resolution to that of 1024x768 resolution, displays one to one image without interpolation, mixes OSD(On Screen Display) signal by interfacing with OSD IC (U2), and controls three memories(U6, 7, 8) as frame converter.

U1 outputs signals of HSYNC-OUT, VSYNC-OUT, DEN, CLKA-ODD, and each 8 bit R, G, B to transmitter IC (U16).

3. Memory Circuit

2M byte SDRAM(U6, 7, 8) is used as a frame converter for supporting up to 85 Hz frame rate and controlled by MX88L281(U1).

The control signals are CKA, CLK, UDOM, LDOM, /WE, /CAS, /RAS, /CS, /BA.

4. Panel-Link Circuit

Panel link transmitter (U16) delivers digital signal to the receiver inside LCD module by method of abstraction.

The abstracted signals are pairs of TX0+-, TX1+-, TX2+-, TXC+- of which voltage swing is 0.5V each.

Its swing is similar to LVDS (Low Voltage Differential Signal).

Transmitter (U16) gets signals of HSYNC-OUT, VSYNC-OUT, DEN, CLKA-ODD from U4, and outputs LVDS through TX pin. When PD pin's input is low, transmitter goes to power down mode.

5. System Controller (Microprocessor) Circuit

1) Microprocessor (U4) distinguishes polarity and frequency by calculating horizontal and vertical sync input from signal source.

2) Microprocessor (U4) carries out power control by sending power-down trigger signal to each IC.

U1, U5, and U16 has PD(Power-down) pin which operates at active-low each.

3) Microprocessor (U4) communicates with EEPROM (U10), AD9884 (U5), MX88L281 (U1), and OSD IC (U2) through SCL and SDA or 8 bit bus line. It makes all devices with communication channel operated properly.

4) Microprocessor (U4) let User adjust screen by each OSD function.

6. DC/ DC Converter

This circuit supplies DC power for each device needing DC voltage of 3.3VD, 3.3VD1, 3.3VA, PVD_ADC, 5VA and 5VSTD.

LM2674(U13)and LM2596(U15) , the DC/DC controller IC converts input 24Vdc into each voltage to be needed with peripheral circuit composed of Choke Coil (L8, 9), condensing components (ZD5, ZD6) and Regulators (U22, 19, 20, 23, 24).

5VSTD is supplied for Microprocessor through regulators (U22).

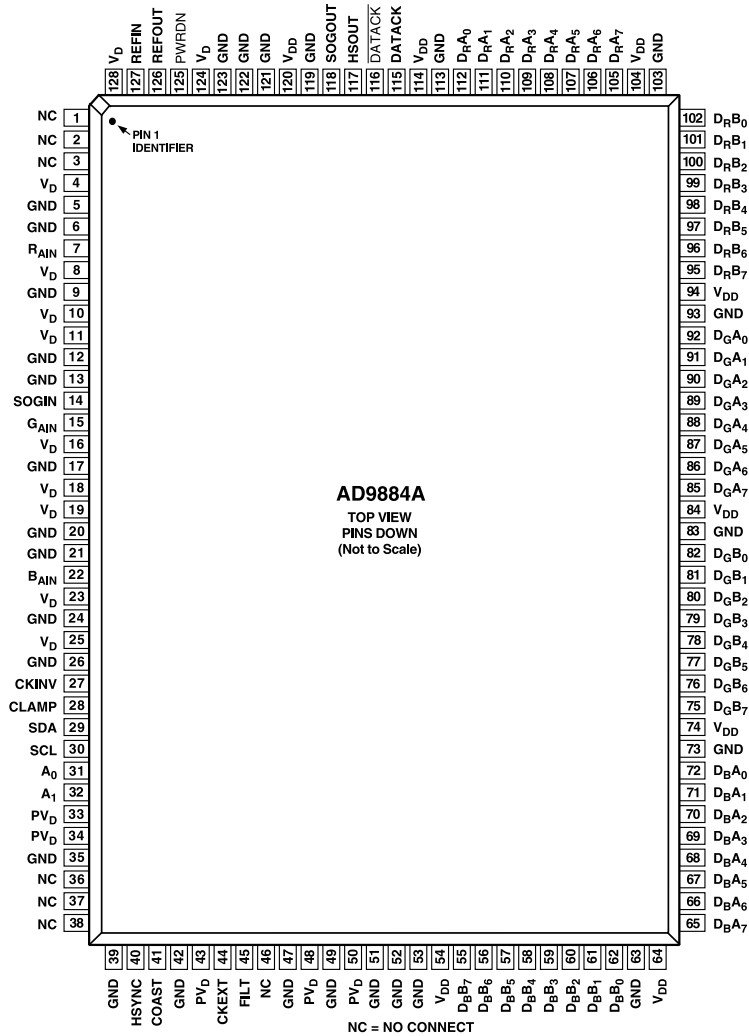
MODPWR for LCD module power are supplied by switching FET(U12) and regulator(U16), controlled by Microprocessor's triggering signal (M-PWR ON).

PIN CONFIGURATION

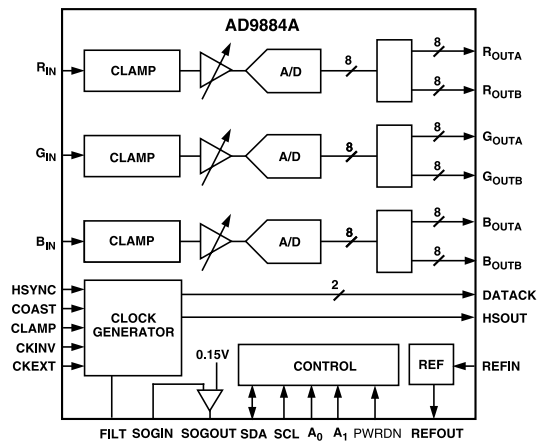
AD9884A

100MSPS/140MSPS Analog Flat Panel Interface

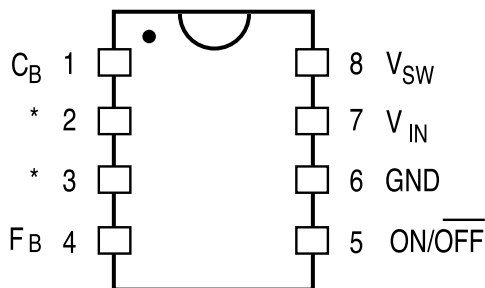
Pin Configurations



Functional Block Diagram

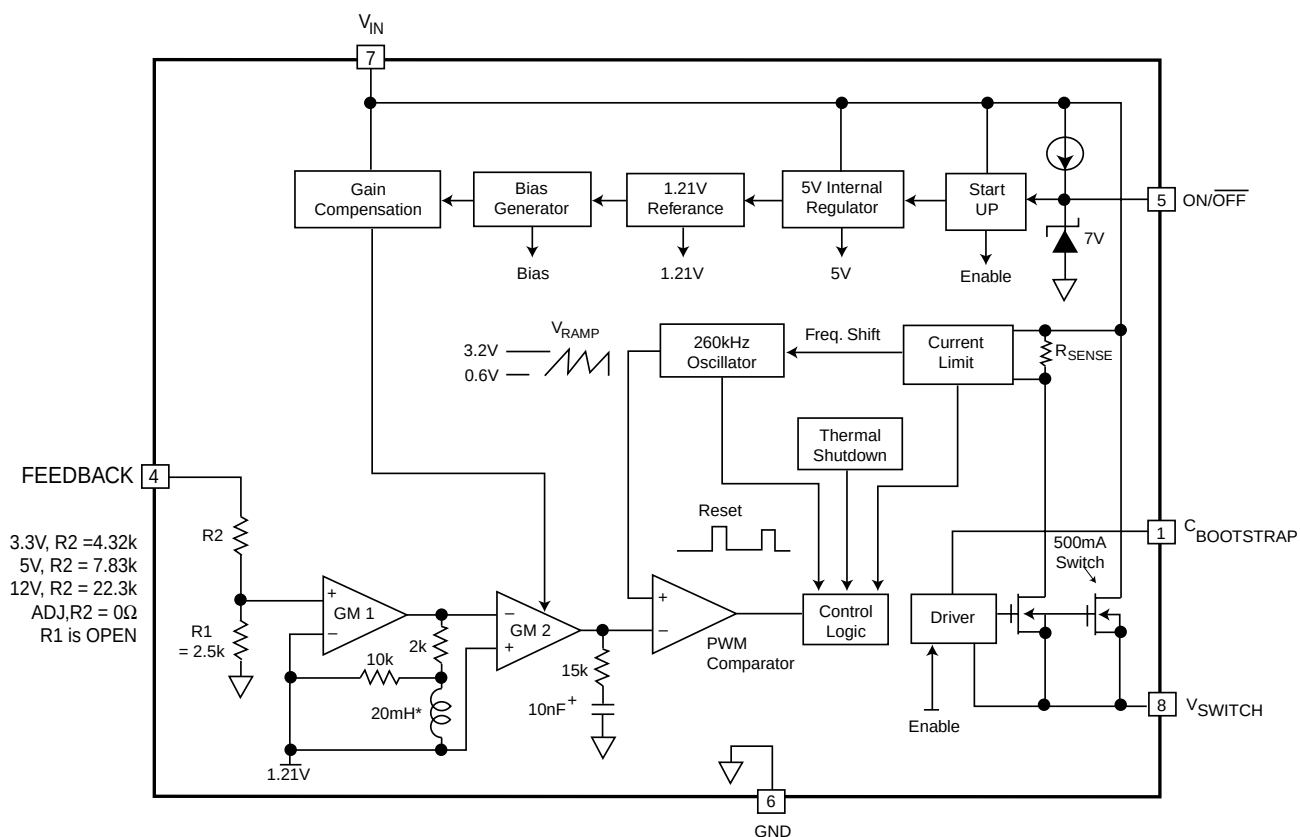


Pin Configuration



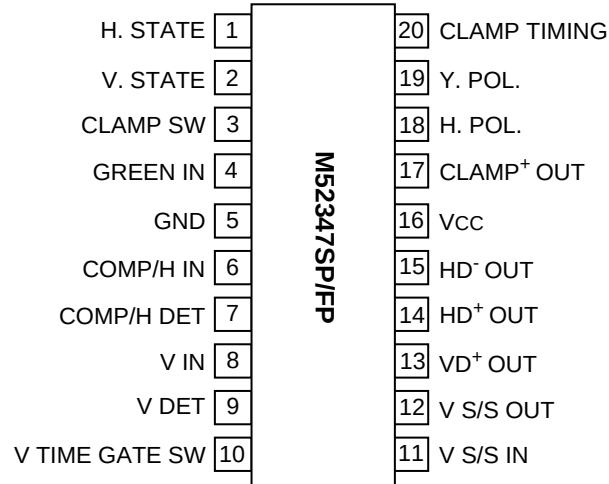
Top View

Block Diagram

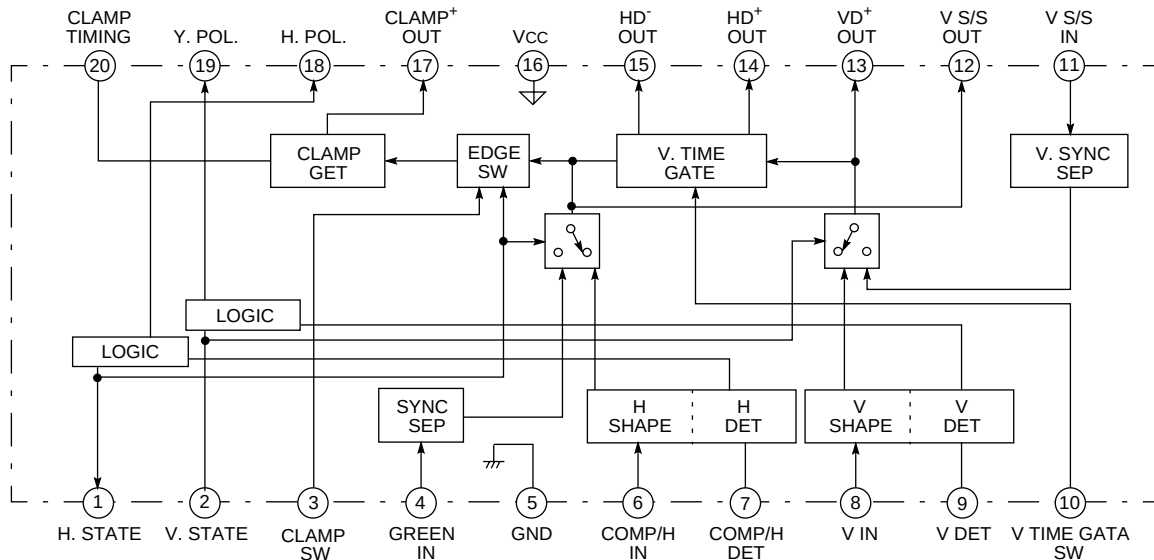


M52347 SYNC SIGNAL PROCESSOR

Pin Configuration



Block Diagram

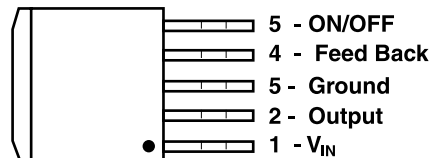


LM2596 Simple Switcher® Power Converter 150kHz 3A Step-Down Voltage Regulator

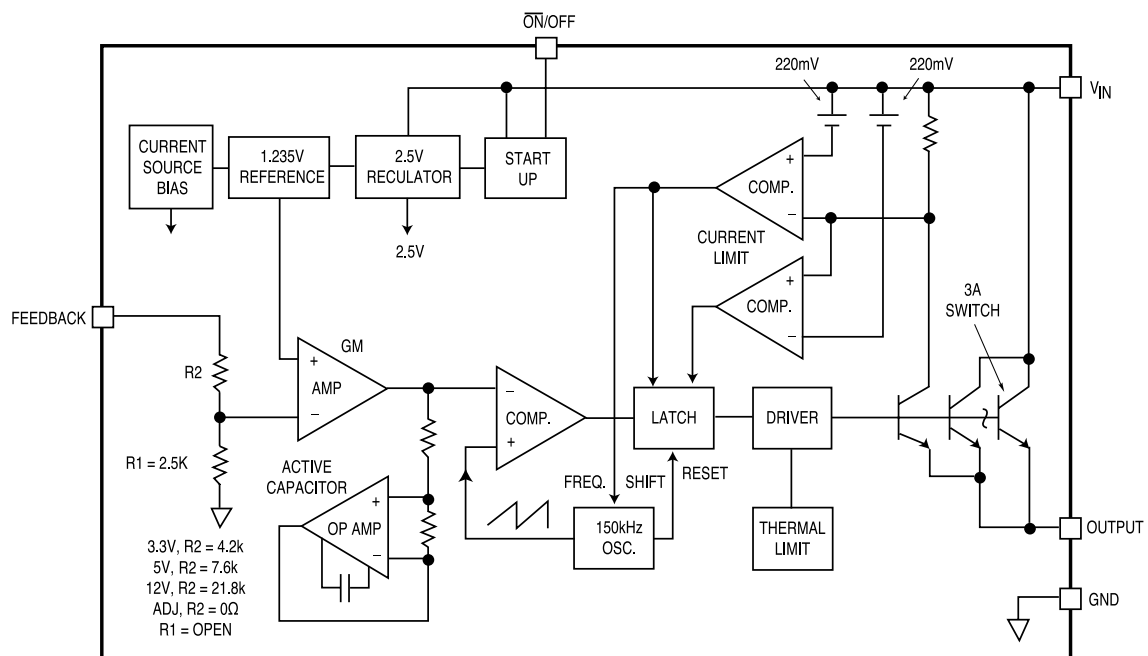
Side View

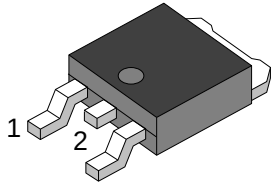
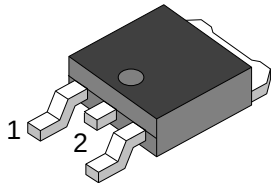
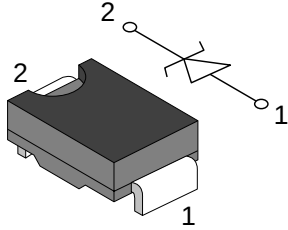
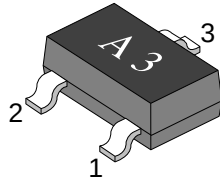
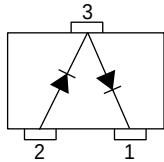
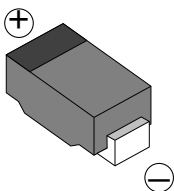
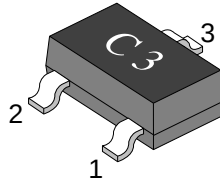
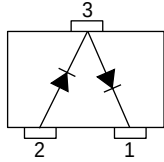
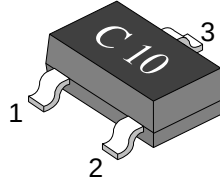


Top View



BLOCK DIAGRAM



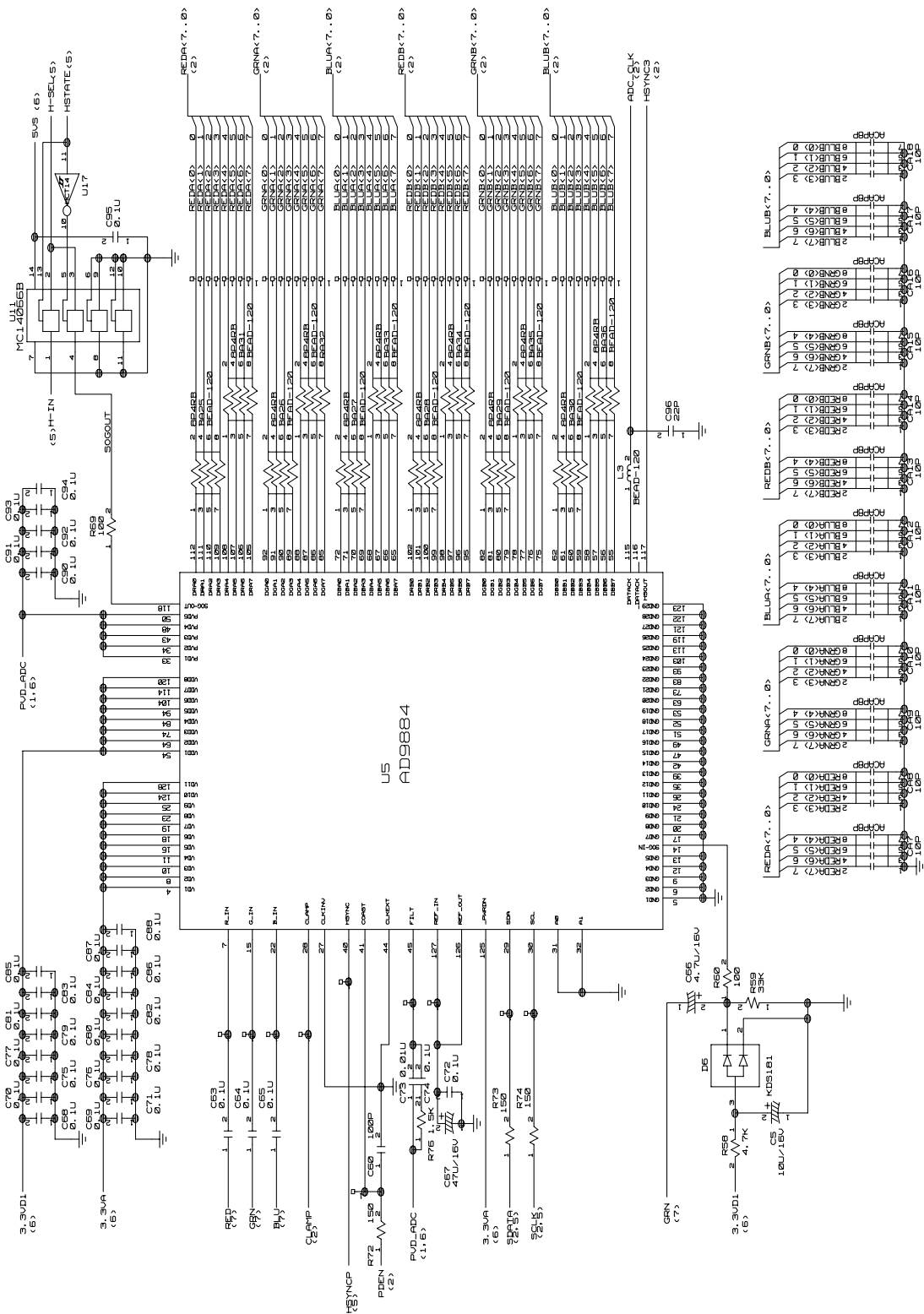
TYPE	PARTS	TYPE	PARTS
 1. INPUT 2. GND 3. OUTPUT  1. Vcc 2. GND 3. OUT	Regulator KA78M05R KA78M12R		Schottky Diode MBRS130T3 MBRS190T3
	BA033FP	 1. CATHODE 1 2. CATHODE 2 3. ANODE	Diode KDS181 
	Tantalum Capacitor 0CH7106F621 10uF/16V 0CH7227F661 220uF/6.3V 0CH7476F661 47uF/10V	 1. CATHODE 1 2. ANODE 2 3. ANODE 1 / CATHODE 2	Diode KDS226 
		 1. BASE 2. EMITTER 3. COLLECTOR	Transistor KSC1623

SCHEMATIC DIAGRAM

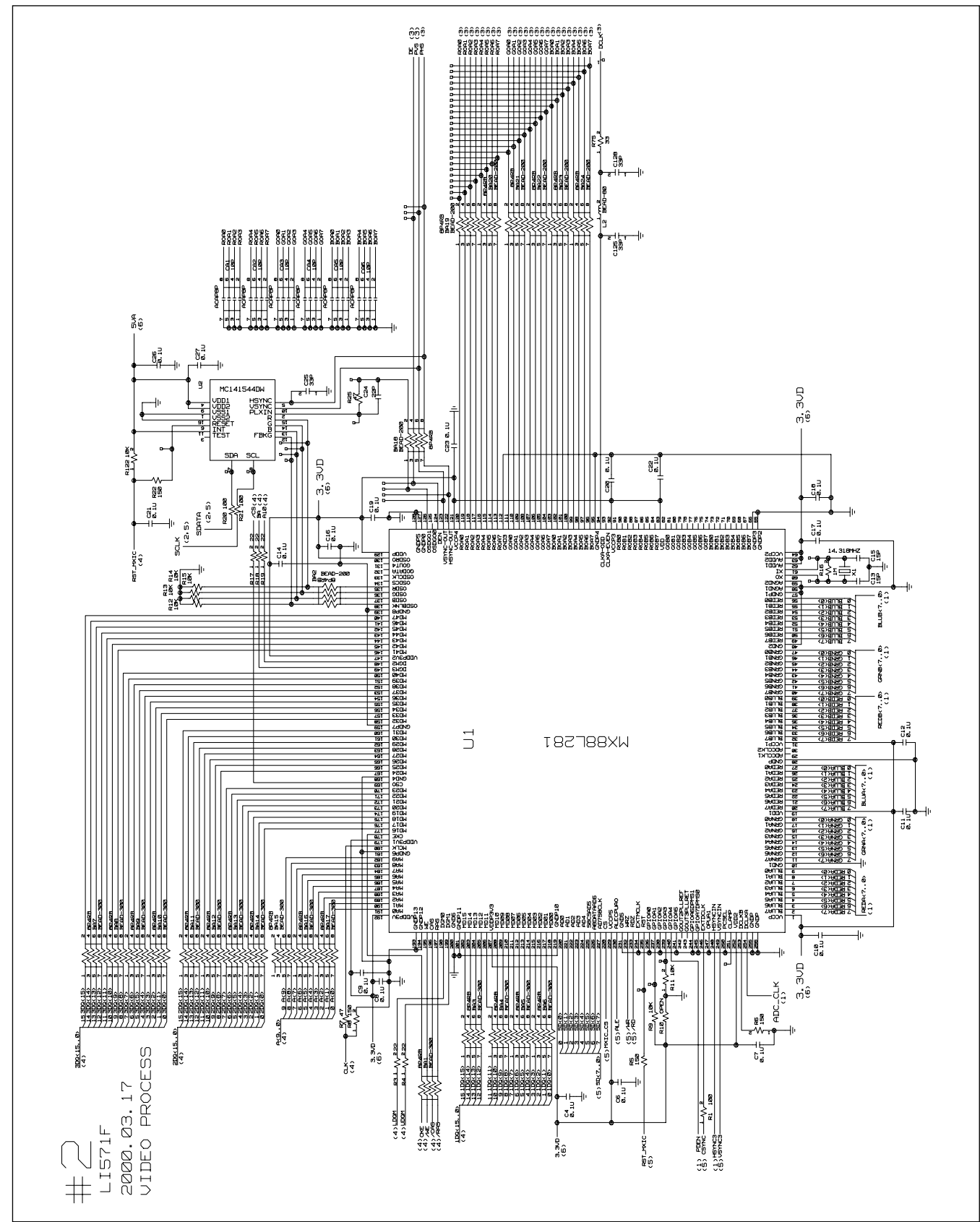
1. AD9884 (PRE-AMP/PLL/ADC)

1 2000.03.17
L1571F

AD9884 (PRE-AMP/PLL/ADC)

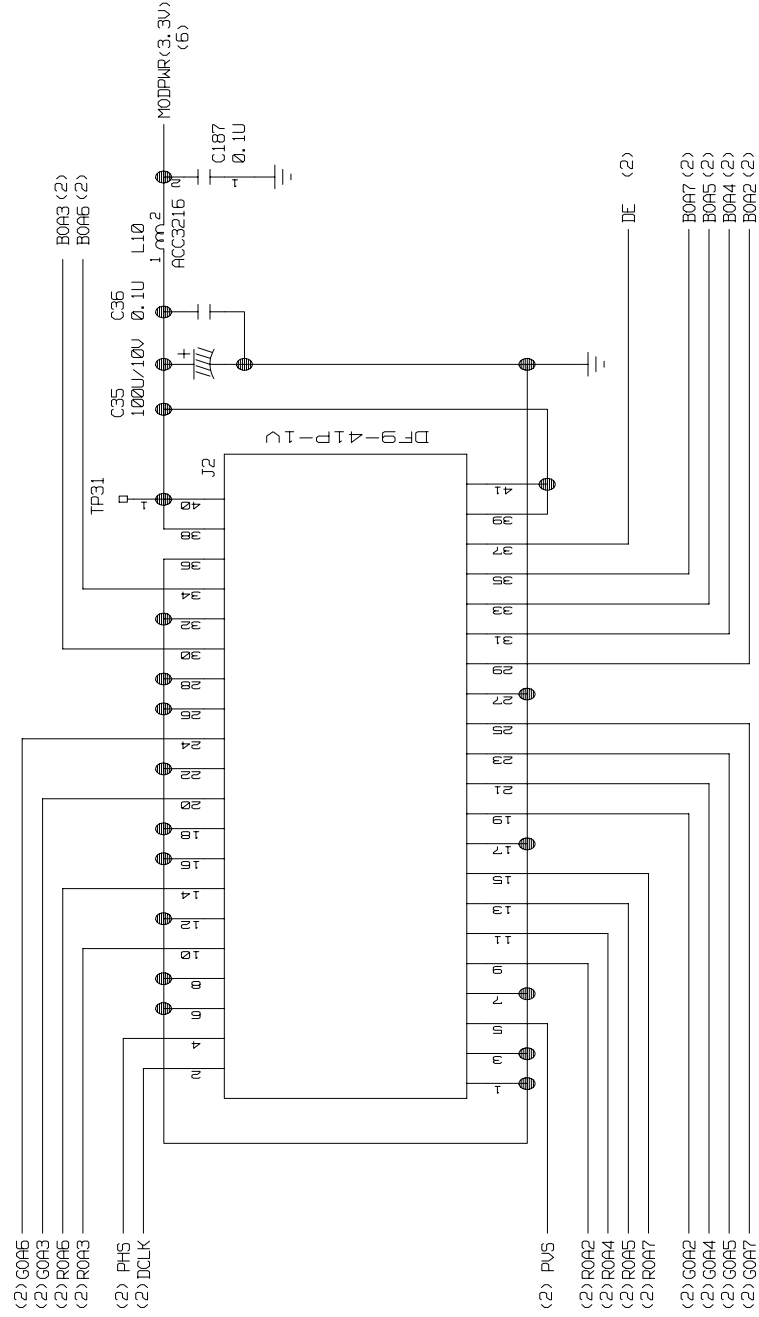


2. VIDEO PROCESS

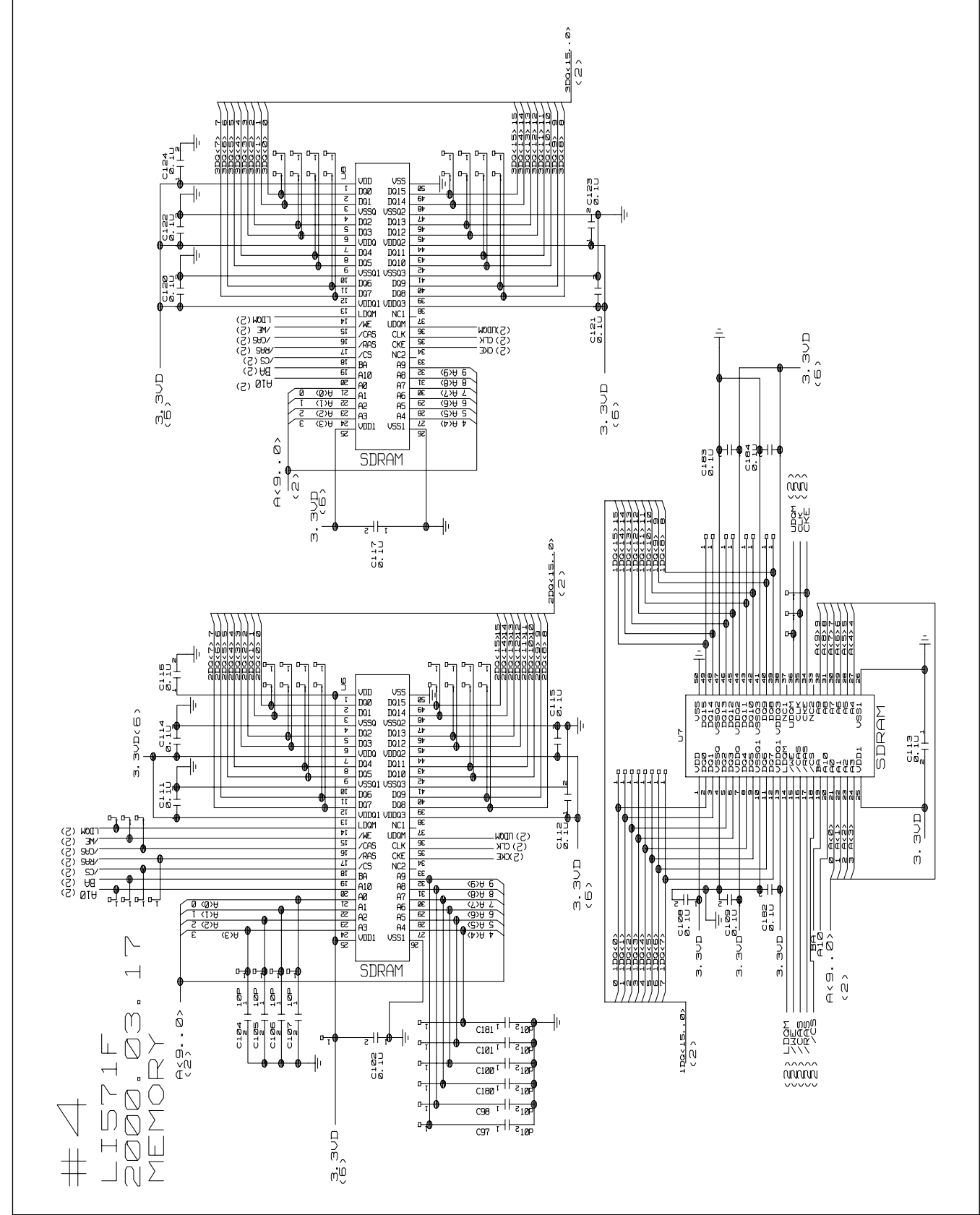


3. OUTPUT CONNECTOR

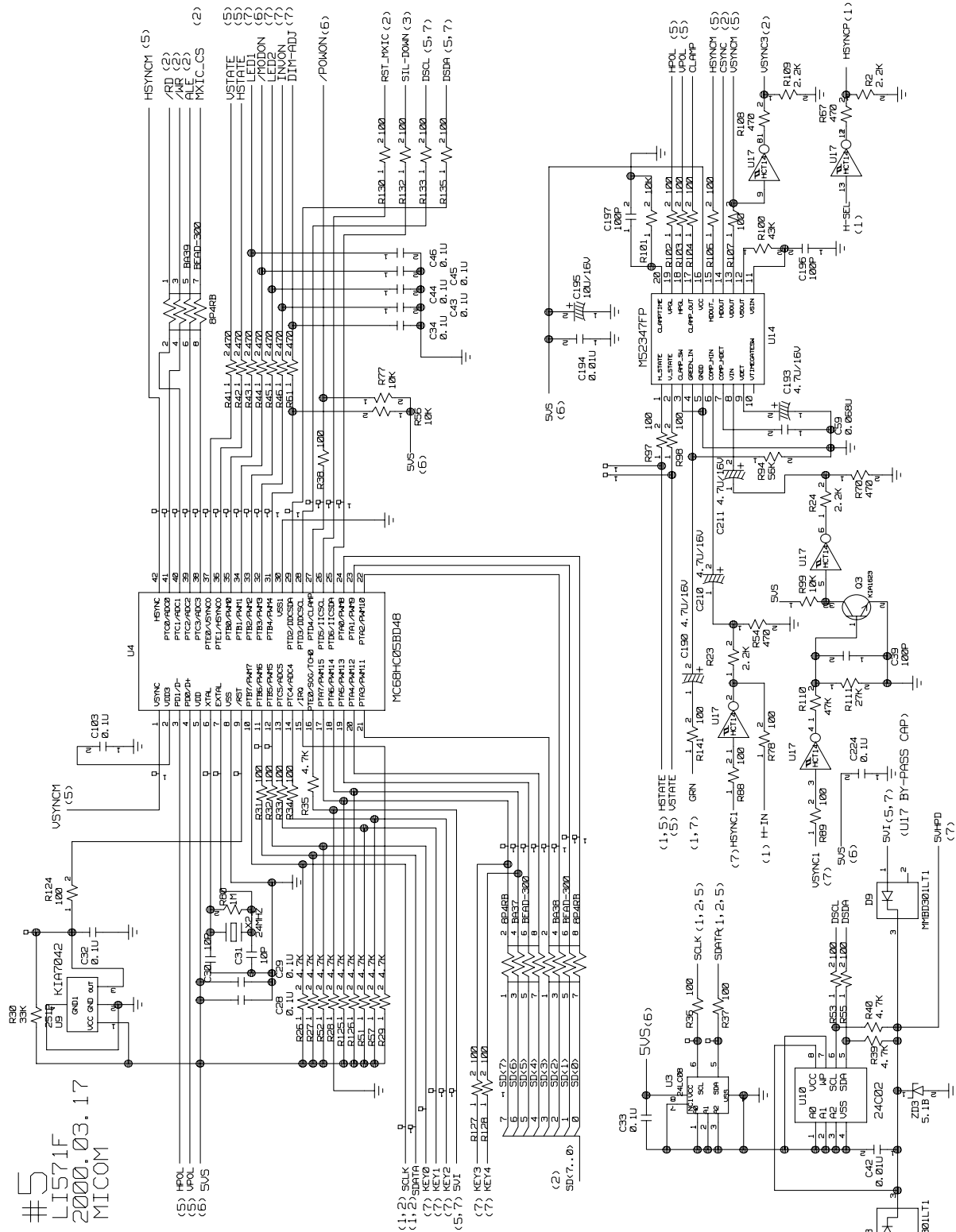
#3 LI571F
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OUTPUT CONNECTOR



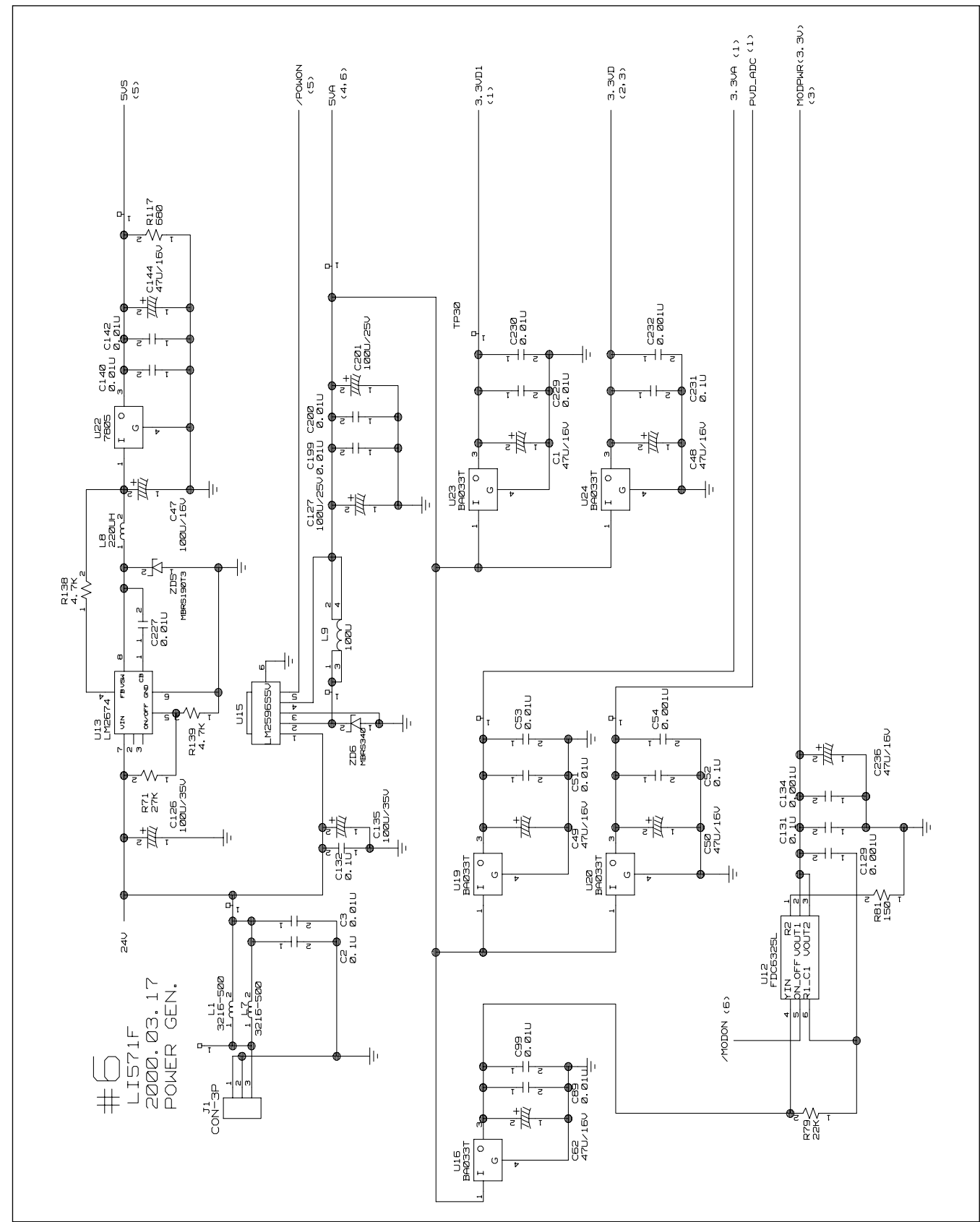
4. MEMORY



5. MICOM



6. POWER GEN.



7. CONNECTOR & JACKS

