OKI

MICROLINE 3320/3321

Troubleshooting Manual with Components Parts List

All specifications are subject to change without notice.

PREFACE

This manual describes in detail troubleshooting of the component parts for Microline 320/321 TURBO printer and provides a parts list.

TROUBLESHOOTING MANUAL

CONTENTS

1. OUTLINE

This troubleshooting flowchart has been prepared for the repair of each board assembly of the Microline 320/321 TURBO printer. The repairmen using this manual are assumed to be familiar with certain techniques.

1.1 Items to Check Before Repair

- Check the inspection items specified in the instruction manual.
- Find out as many details of the trouble as possible from the customer.
- Inspect in the conditions as close as possible to those at the time the trouble occurred.
- Proceed with the repair as follows:

  Check the trouble status according to Table 1.1 for the details of the trouble. Then, locate the trouble position according to the detailed flowchart.

- Carry out a thorough test after the repair to check for correct functioning.

1.2 Troubleshooting

Table 1.1

Status	Trouble contents	Surmise of troublle
Trouble upon power on	Power is not supplied	Transformer, Power & Control Board, Driver Board, Operation Panel. Space motor, carriage Cable, Print Head.
	No spacing operation	
	Homing does not end normally	Space Motor, Carriage Cable, Spacing Mechanism, Driver Board
Trouble during printing	Paper jam while paper insertion	Pressure roller Mechanism, Support Protector, Pull up roller cover.
	Smearing/Missing dots	Print Head, Power & Control Board, Space Motor, Carriage Cable, Driver Board
	Faint or dark print	Print Head, Ribbon feed assembly, Power & Control Board, Driver Board
	Ribbon feed trouble	Ribbon feed assembly, Space motor, Power & Control Board, Driver Board
	Line feed trouble	LF motor, Platen assy, LF mechanism, Power & Control Board, Driver Board
	Malfunction of switch on operation panel.	Operation Panel, Power & Control Board, Driver Board
	Data receiving failure	Power & Control Board, (I/F/P.C.B), I/F Cable, Menu setting, Driver Board

Note: Refer to the Maintenance Manual for the troubleshooting flow chart of this table.

1.3 Lamp Display

(1) Printer mode display

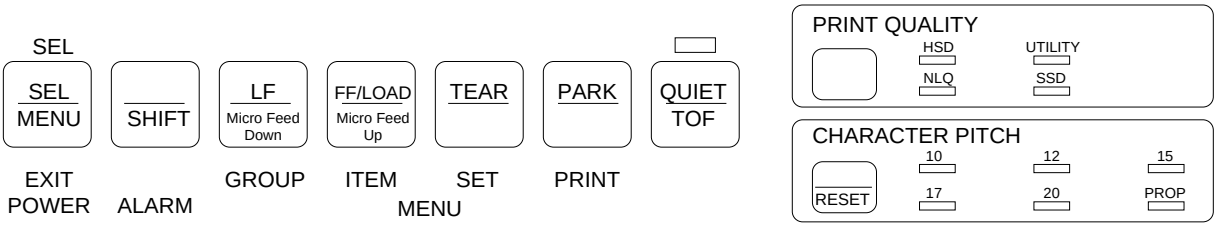
Table 1.2

ALARM CATEGORY	ALARM	ALARM	SEL	MENU	10 CPI	15 CPI	CONTENTS	TROUBLESHOOTING
OPERATOR ALARM	Paper end alarm	ON	—	—	—	—	From, cut sheet or bottom paper end	Set New paper.
	Paper change lever alarm	ON	OFF	—	BLINK 1	OFF	Change lever is set to TOP position while paper is already inserted from rear or bottom.	• Set the lever to specified position. • Check rear sensor lever. • Replace Power & Control Board.
	Paper jam alarm	ON	OFF	—	OFF	BLINK 1	• Cut sheet could not be ejected. • Cut sheet could not be fed properly.	• Remove the paper or check feed Mechanism. • Press SEL key.
	Print Head thermal alarm	OFF	—	BLINK 1	—	—	Print head temperature exceeds 119°C.	• Wait until it is cooled. • Replace P.H. or Power & Control Board.
	Space motor thermal alarm	OFF	—	BLINK 1	—	—	Temperature of space motor and driver exceeds specified value.	• It is recovered automatically. • Replace SP motor or Power &Control Board.
	LF motor temperature alarm	OFF	—	BLINK 1	—	—	Temperature of LF motor and driver exceeds specified value.	• It is recovered automatically. • Replace LF motor or Power & Control Board.
FATAL ALARM		BLINK 2	OFF	OFF			Hardware Alarm has occurred.	See Table 1.3.

Note: BLINK 1: 400 ms ON, 400 ms OFF
BLINK 2: 200 ms ON, 200 ms OFF
— : LED is kept in Current Condition (no change)

(2) Fault alarm display

When the printer detects any of the various alarm states, the information is displayed as shown below on the operation panel. The alarm is specified by lamp combination of PRINT QUALITY and CHARACTER PITCH. (See Table 1.3 for details.)



(3) Fatal Alarm

Table 1.3 (1/2)

ALARM CATEGORY	ALARM	LED DISPLAY										REMARKS	TROUBLESHOOTING
		ALARM	10	12	15	17	20	PROP	HSD	UTL	NLQ		
MAIN CONTROL ALARM	MPU internal RAM alarm	◎	○									Read/write error	Replace Power & Control Board
	Program ROM alarm	◎			○							Check sum error	Replace ROM or Power & Control Board
	RAM on Control Board alarm	◎					○					Read/write error	Replace Power & Control Board
	EEPROM alarm	◎			○						○	No reaction when MPU reads data	Replace Power & Control Board
FIRMWARE DETECTION ALARM	WDT (Watch Dog Timeout) alarm	◎				○						MPU is locked up and it is reset after 65 ms.	Turn the power OFF and ON or replace Power & Control Board
	NMI signal alarm	◎				○			○			NMI port of MPU is kept low level.	Replace Power & Control Board
	BRK instruction alarm	◎				○				○		FFFF data is detected due to MPU locked up.	Replace ROM or Power & Control Board
SERIAL INTERFACE ALARM	MPU internal RAM alarm	◎	○						○			Read/write error	Replace I/F Board
	ROM alarm	◎			○				○			Check sum error	Replace ROM on I/F Board or I/F Board
	RAM on I/F board alarm	◎					○		○			Read/write error	Replace I/F Board
	I/F not mounted	◎		○					○			No reaction from serial I/F Board	Replace I/F board or Power & Control Board

◎ : LED Blink (200 ms ON, 200ms OFF)

○ : LED Lights up.

Table 1.3 (2/2)

ALARM CATEGORY	ALARM	LED DISPLAY										REMARKS	TROUBLESHOOTING
		ALARM	10	12	15	17	20	PROP	HSD	UTL	NLQ		
SPACING ALARM	Spacing alarm	◎						○	○			Space IPT is not occurred within in specified timing.	• Replace space motor. • Replace P.H. cable. • Replace Power & Control Board. • Replace Driver Board. • Check the mechanism if load is too much.
	Print Head mounting alarm	◎						○		○		Print head does not reach to the home position.	
PRINT HEAD ALARM	PRINT HEAD A/D alarm	◎	○				○					Thermister is open, short with 0V or short with +5V.	• Check the P.H. connection. • Replace Print Head. • Replace P.H. cable. • Replace Driver Board.
	Print Head Gap AD alarm	◎	○				○		○				

◎ : LED Blink (200 ms ON, 200ms OFF)

○ : LED Lights up.

2. TOOLS

In addition to the general maintenance tools, the following are necessary:

– Oscilloscope : Approx. 100 MHz or more
– Soldering iron : Standard (A soldering iron with a thin tip is best.)

3. TROUBLESHOOTING TABLES

① The power source can not be turned on.
② Only the POWER lamp lights. (The printer does not work.)
③ The printer alarm is displayed.

- (3-1) Printer Internal RAM Alarm
- (3-2) S-I/F Internal RAM Error
- (3-3) S-I/F Connection Alarm
- (3-4) Program ROM Alarm
- (3-5) S-I/F ROM Alarm
- (3-6) EEPROM Alarm
- (3-7) WDT Alarm, BRK Command Alarm
- (3-8) NMI Alarm
- (3-9) Printer External RAM Alarm
- (3-10) S-I/F External RAM Alarm
- (3-11) SPACING Alarm, HOMING Alarm
- (3-12) Head A/D Alarm
- (3-13) Head Gap A/D Alarm

④ Wrong characters are printed or some characters are not printed.
⑤ Defective line feed.
⑥ When pressing the operation switch, it does not work.

- (6-1) The SEL switch does not work.
- (6-2) The SHIFT switch does not work.
- (6-3) The LF switch does not work.
- (6-4) The FF switch does not work.
- (6-5) The TEAR switch does not work.
- (6-6) The PARK switch does not work.
- (6-7) The QUIET switch does not work.
- (6-8) The PRINT QUALITY switch does not work.
- (6-9) The CHARACTER PITCH switch does not work.

⑦ DATA can not be received.

7-1 Parallel interface data can not be received.

7-2 When receiving with the parallel interface, printed data is skipped, or the printer does not work.

4 TROUBLESHOOTING FLOWCHART

① The power source can not be turned on. (The POWER lamp does not light.)

Check the connection between Transformer and Power & Control Board and Driver Board and Operation panel.

- No Be sure the connection.

Yes Is Fuse (F1) on Filter PCB blown out?

- Yes Replace Fuse (F1).

No Are the signal level between 1-pin and 8-pin of CN1 on Power & Control Board, 29 Vac, between 3-pin and 6-pin, 8 Vac, and between 4-pin and 5 pin, 10 Vac?

- No Replace Transformer.

Yes Is the voltage level at VCC (1-pin) of Q6 of the Power & Control Board, +8V?

- No Is fuse (F1) on Power & Control Board blown out?
  - Yes Replace Fuse (F1)?

No Replace D6, D7, D8 and D9 of the Power & Control Board.

Yes Is the voltage level between one side and the other of C25 of the Power & Control Board, +5V?

- No Replace Q6 or TR6 of the Power & Control Board.

Yes Is +5V supplied for CN3 of the Driver board?

+5V (CN3 – 3 pin)
0V (CN3 – 2 pin)

- No Check +5V supplied for the Driver board or replace Driver board?

Yes Is +5V supplied for CN1 of the operation panel board?

+5V (CN1 – 5 pin)
0V (CN1 – 6 pin)

- No Replace a cable in the operation panel or replace the operation panel.

Yes Replace D2 or R2 on the operation panel.

② Only the POWER lamp lights. (The printer does not work.)

• Does the oscillating waveform from OSC of the Power & Control Board have the form shown in Figure 1 below?

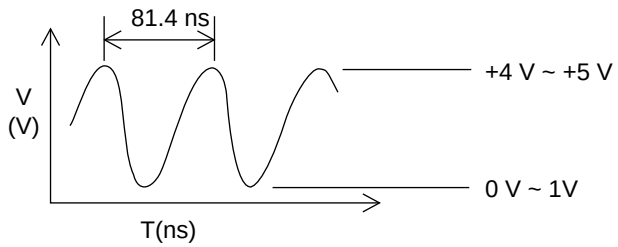


Fig. 1

• No Replace OSC of the Power & Control Board.

• Yes Does the RST-N signal have the waveform shown in Figure 2 below (with +5 V and +8V signals as reference)?

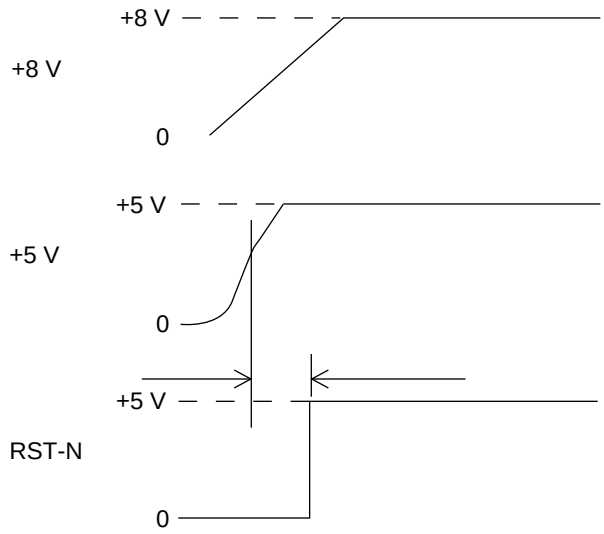


Fig. 2

• No If RS232C PCB is available, replace the RS232C PCB.
If the RS232C PCB is not available, replace the Power & Control Board.

Yes Do bus line signals of 4C (67 x 640) of the Power & Control Board such as ALE-P, PSEN-N, LSICS-N and RDN/WRL-N have waveforms as shown in Fig. 4?

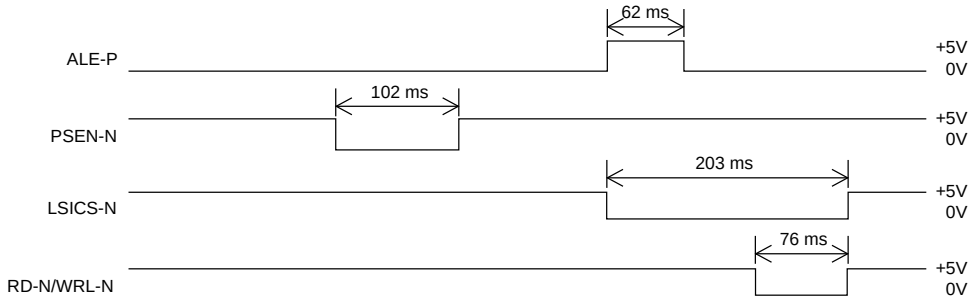


Fig. 4

At the rising edge of PSEN-N and RD-N/WRL-N, the bus line level is decisively set to “H” or “L”.

- No Replace Q501 of the Power & Control Board.

Yes Does the OPCLK-N/OPTXD signal arrive at CN1 of the operation panel? See Fig. 5.

OPCLK-N (CN1-3 pin)
OPTXQ (CN1-4 pin)

- No Is the flexible calbe of the operation panel connected without break?
  - No Replace the flexible cable.

Yes Replace CN3 of the Driver Board.

Yes Does the OPRXD signal arrive at CN1 of the operation panel? See Fig. 5.
OPRXD (CN1-2 pin)

- No Replace IC1 of the operation panel.

Yes Does the OPRXD signal arrive at CN3 of the Driver Board? See Fig. 5.

- No Is the flexible cable of the operation panel connected without break?
  - No Replace the flexible cable

Yes Replace CN3 of the Driver Board.

Yes Replace Q501 of the Power & Control Board.

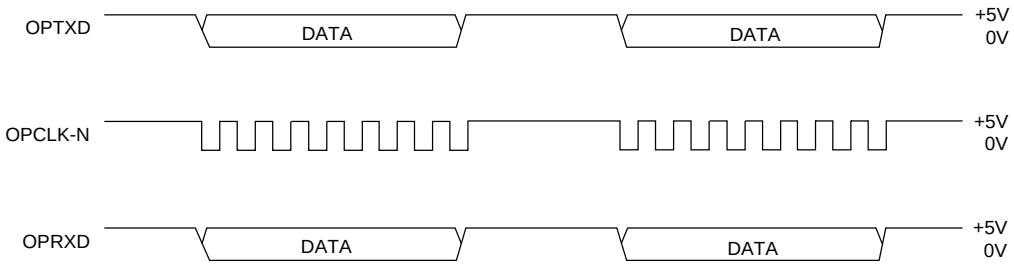


Fig. 5

③ The printer alarm is displayed.

3-1 Printer internal RAM alarm

- Replace Q501 of the Power & Control Board.

3-2 S-I/F internal RAM alarms.

- Replace Q3 of the LXHI board.

3-3 S-I/F connection alarm.

- Replace the LXHI board.

3-4 Program ROM alarm.

- Replace Q1 of the Power & Control Board (EPROM).

3-5 S-I/F ROM alarm.

- Replace Q3 of the LXHI board.

3-6 EEPROM alarm.

- Is the voltage of Q5-8pin +5V?
  - No Check TR5 and TR7 and pattern on the Power & Control Board. Correct pattern or replace parts.
- Yes Do signals of Q501 of the Power & Control Board (67 x 640) such as EECLK-P and EEDIN-P and EECS-P have the waveforms shown in Fig. 6?
  - No Replace Q501 of the Power & Control Board.
- Yes Do signals of Q5 of the Power & Control Board (EEPROM) such as EEDIN-P, EECS-P, EECLK-P and EEDOUT-P have the waveforms shown in Fig. 6?
  - No Check EEDIN-P, EECS-P and EECLK-P patterns and parts connected to the pattern. Correct pattern or replace parts.
- Yes Replace Q501 of the Power & Control Board.

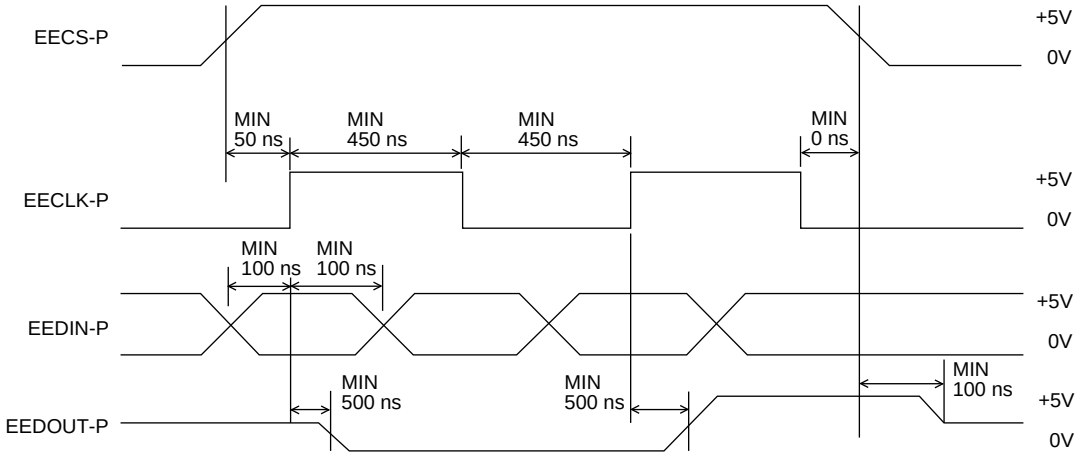


Fig. 6

3-7 WDT alarm, BRK command alarm

- Is the alarm canceled by turning on power?
  - No Replace ROM, Q1 or the Power & Control Board.

3-8 NMI alarm

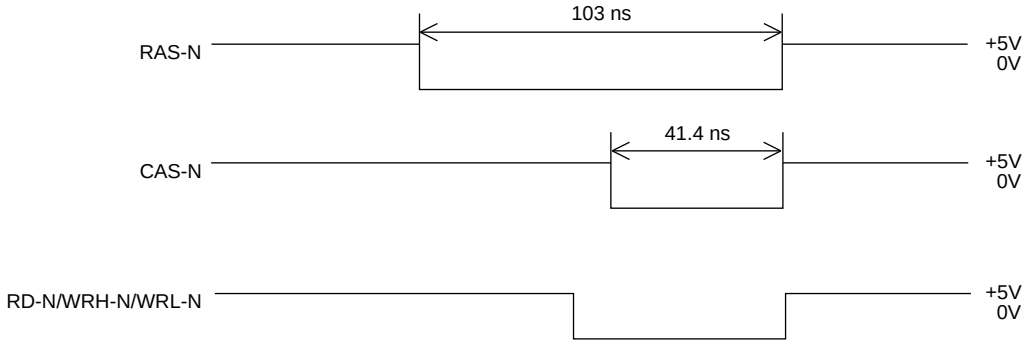
- Is the alarm canceled by turning on power?
  - No Replae Power & Control Board.

3-9 Printer external RAM alarm.

- Do signal of Q3, Q4 (DRAM) of the Power & Control Board such as RAS-N, CAS-N, OE, WE have the waveforms shown in Fig. 7?

  RAS-N (Q3, Q4-5)
  CAS-N (Q3, Q4-16)
  RD-N (Q3, Q4-1)
  WRL-N (Q3, Q4-4)

  - No Is the dumping resistance of each signal broken? Check Q502 (Power & Control Board)?
    - Yes Replace the dumping resistance or Q502
  - No
- Yes Replace Q3, Q4.



At the rising edge of OE, WE, the bus line level is decisively set to “H” or “L”.

Fig. 7

3-10 S-I/F external RAM alarm.

- Replace Q9 of the LXHI board.

3-11 SPACING alarm, HOMING alarm

- Is the fuse (F1) on the Driver board blown?
  - Yes Replace F1.
- No Is VNF of MTDV (HA13412) short-circuited to U0, V0, or W0?

  VNF (MTDV-11 pin)
  U0 (MTDV-13 pin)
  V0 (MTDV-15 pin)
  W0 (MTDV-17 pin)

  - Yes Replace MTDV
- No Do signals of SPU, SPV, SPW and SPD-A of MTDV have the wave forms shown in Fig. 10?
  - No Check patterns SPU, SPV, SPW between Q501 and MTDV. When they are OK, replace the Driver PCB Q501.
- Yes Do signals of U0, V0, and W0 of the MTDV have the wave forms shown in Fig. 10?
  - No Replace the HTDV PCB.
- Yes Do signals of PHASE A and PHASE B have the wave forms shown in Fig. 9?
  - No Is the connection between CN5 on the Driver Board, and the CN on the carriage are OK?
    - No Secure the connection.
  - Yes Is there any disconnection of cable between the Driver Board and the carriage?

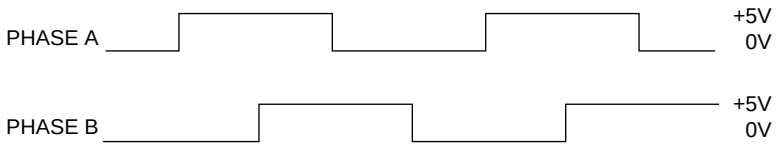
• No Replace the Carriage.

• Yes Replace the Cable.

• Yes Do signals of PHASE A, PHASE B of Q501 have the wave forms shown in Fig. 9?

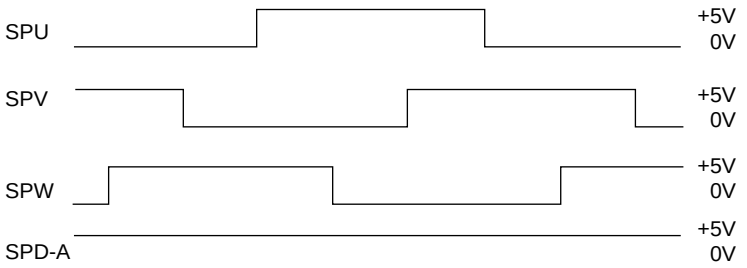
• No Check the parts and pattern between Q501 and CN6. Correct pattern or replace parts.

• Yes Replace Q501.



When the carriage is manually move.

Fig. 9



When the carriage is manually move.

Fig. 10

(3-12) Head A/D alarm

• Is the voltage of the HTEMP-N signal of Q501 of the Power & Control Board (67 X 640) +5V?

HTEMP-N (Q501-62 pin)

• No Replace Q501.

• Yes Is the connection of CN5 of the Driver Board secured?

• No Secure the connection of CN5.

• Yes Replace the head.

(3-13) Head Gap A/D alarm

- Is the voltage of HDGAP-N Signal of Driver Board CN5 22 pin +5V?
  - Yes Replace the Head cable or the carriage.
  - No Replace the Power & Control Board.

④ Wrong characters are printed or some characters are not printed.

- Do signals of Q501 of the Power & Control Board (67 X 640) such as PSEN-N, LSICS-N, RD-N, WRL-N, RAS-N and CAS-N have the wave forms shown in Figs. 4 and 7?
  - No Replace Q501.
- Yes Replace the head, Q501 of Driver board or the space motor.

⑤ Defective line feed.

• Do signals of LFDV (Driver board) such as A1, A2, B1 and B2 have the waveforms shown in Fig. 11?

A1 (LFDV-3 pin)
A2 (LFDV-7 pin)
B1 (LFDV-8 pin)
B2 (LFDV-12 pin)

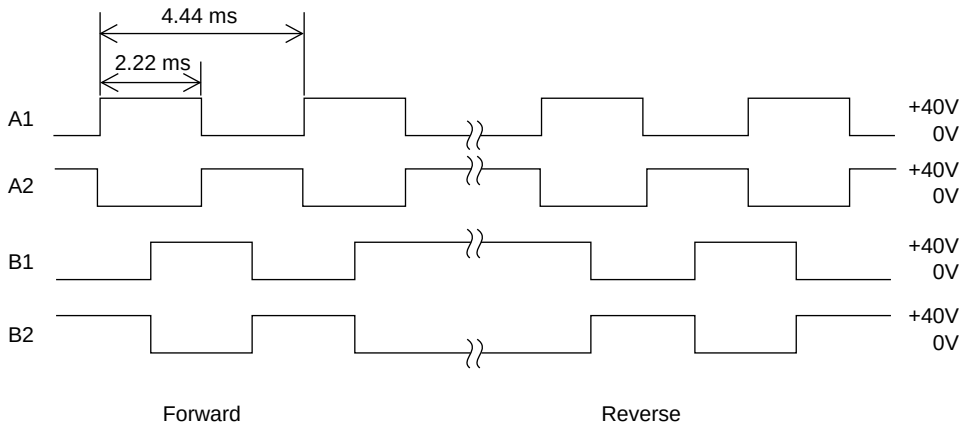


Fig. 11

• No Replace LFDV.
LFDV (Driver Board)
When it does not work properly, replace Q501 or the Driver Board.

• Yes Is the flexible cable connected without break?

• No Replace the flexible cable.

• Yes Is the CN4 of the Driver Board broken?

• No Replace CN4

• Yes Replace the LF motor.

⑥ The printer does not operate though the operation switch is pressed.

• Do the OPCLK-N and OPTXD signals arrive at CN3? See Fig. 5.

  • No Replace Q501 of the Driver board.

• Yes Do the OPCLK-N and OPTXD signals arrive at CN1 of the operation panel? See Fig. 5.

  • No Is the flexible cable of the operation panel connected without break?

    • No Replace the flexible cable.

  • Yes Replace CN3 of the Driver board.

• Yes Does the OPRXD signal arrive at CN1 of the operation panel?

  • No Replace IC1 of the operation panel.

• Yes Does the OPRXD signal arrive at CN3 of the Driver board? See Fig. 5.

  • No Is the flexible cable of the operation panel connected without break?

    • No Replace the flexible cable.

  • Yes Replace CN3 of the Driver board.

• Yes Go to steps (6-1) to (6-9).

(6-1) SEL SW does not work.

• When SWC2 of IC1 (Bu5148S) is set to “L”, is SWI4 set to “L” by pressing SEL SW?

  SWC2 (C1-7 pin)
  SWI4 (IC1-3 pin)

  • No Replace SEL SW.

• Yes Replace IC1 or Q501 of the Driver board.

(6-2) SHIFT SW does not work.

• When SWC2 of IC1 is set to “L”, is SWI3 set to “L” by pressing SHIFT SW?

  SWI3 (IC1-10 pin)

  • No Replace SHIFT SW.

• Yes Replace IC1 or Q501 of the Driver board.

(6.3) LF SW does not work.

• When SWC2 of IC1 is set to “L”, is SW1 set to “L” by pressing LF SW?

(IC1-18 pin)
SWI4 (ICI-3 pin)

• No Replace LF SW.

• Yes Does LF SW recover IC1 or Q501 of the Driver board replaced?

• No Go to step ⑤.

(6-4) FF SW does not work.

• When SWC2 of IC1 is set to “L”, is SWI2 set to “L” by pressing FF SW?

SWI2 (IC1-23 pin)

• No Replace FF SW.

• Yes Does FF SW recover with IC1 or Q501 of the Driver board replaced?

• No Go to step ⑤.

(6-5) TEAR SW does not work.

• When SWC1 of IC1 is set to “L”, is SWI4 set to “L” by pressing TEAR SW?

SWC1 (IC1-31 pin)

• No Replace TEAR SW.

• Yes Does TEAR SW recover with IC1 or Q501 of the Driver board replaced?

• No Go to step ⑤.

(6-6) PARK SW does not work.

• When SWC1 of IC1 is set to “L”, is SW2 set to “L” by pressing PARK SW?

• No Replace PARK SW.

• Yes Does PARK SW recover with IC1 or Q501 of the Driver board replaced?

• No Go to step ⑤.

(6-7) QUIET SW does not work.

• When SWC1 of IC1 is set to “L”, is SWI1 set to “L” by pressing QUIET SW?

• No Replace QUIET SW.

• Yes Replace IC1 or Q501 of the Driver board.

(6.8) PRINT QUALITY SW does not work.

- When SWC3 of IC1 is set to “L”, is SWI1 set to “L” by pressing PRINT QUALITY SW?
  - No Replace PRINT QUALITY SW.
- Yes Replace IC1 or Q501 of the Driver board?

(6-9) CHARACTER PITCH SW does not work.

- When SWC1 of IC1 is set to “L”, is SWI3 set to “L” by pressing CHARACTER PITCH SW?
  - No Replace CHARACTER PITCH SW.
- Yes Replace IC1 or Q501 of the Driver board.

⑦ Data can not be received.

7-1 Parallel interface data can not be received.

• Do the IFDATA 1 to 8 signals of Q501 of the Driver board have the waveform shown in Figure 12 below?

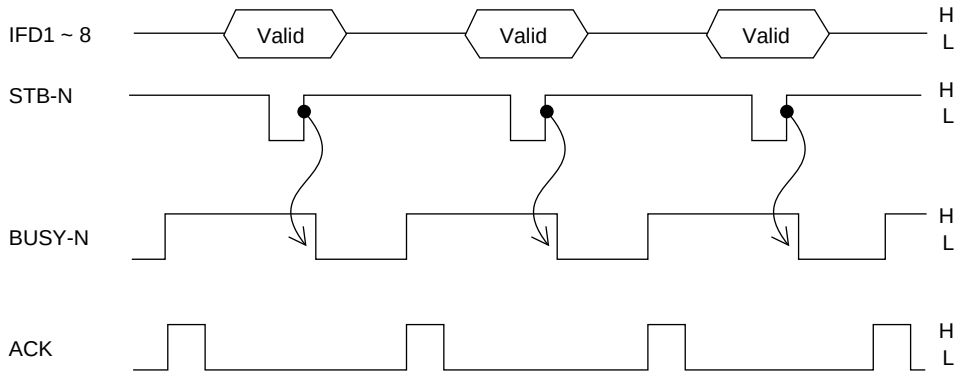


Fig. 12

• No Replace either relative electric component to the DATA 1 to 8 signals, or replace CN6 of the Driver board.

• Yes Does the STB-N signal of Q501 have the waveform shown in Fig. 12?

• No Replace either resistor or capacitor of the STB-N signal.

• Yes Do the BUSY-N and ACK signals have the waveforms shown in Fig. 12?

• No Replace Q501.

BUSY-N (Q501-64 pin)
ACK (Q501-63 pin)

• Yes Replace Q3.

7-2 When receiving with the parallel interface, printed data is skipped, or the printer does not work.

• Gap in the self-test?

• Yes To step ④.

• No Does the signal of BUSY-N or ACK of Q501 of the Driver board have the waveform shown in Figure 12?

• No Replace Q501.

• Yes Replace either relative electric component to ACK or BUSY-N signal, or replace Q3 of the Driver board.

5. CIRCUIT DIAGRAM

SDCT-PCB	(Power & Control Board)	Rev. 6 Rev. 7 Rev. 8
SDDV-PCB	(Driver Board)	Rev. 4 Rev. 5 Rev. 6 Rev. 7
LEOP-3 PCB	(Operation Panel)	Rev. 5 & 6
LXHI-PCB	(Serial I/F Board)	Rev. 7

	SW1	SW2	Voltage	AD
TOP	OFF	OFF	5V	D0 above
BOTTOM	ON	OFF	2.5V	40-CF
REAR	OFF	ON	0V	3F below
—	ON	ON	0V	—

SG on this page shall be SGL all over

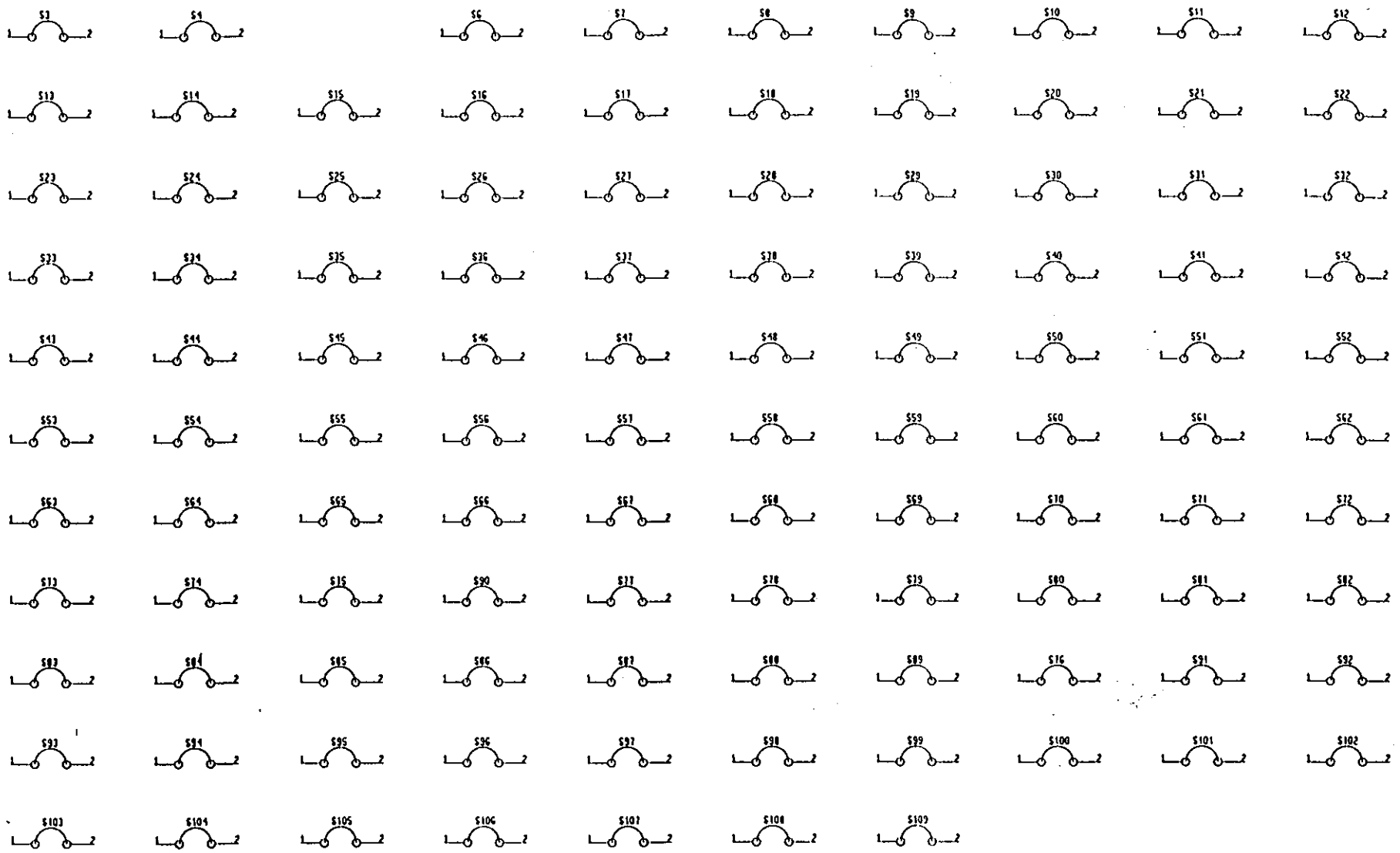
The rated power of resistors is 1/4W unless specified otherwise

SDCT-PCB
(Power & Control Board) Rev. 6
Circuit Diagram 1/3

Power connector

TR6 heat sink plate

SDCT-PCB
(Power & Control Board) Rev. 6
Circuit Diagram 2/3



SDCT-PCB
(Power & Control Board) Rev. 6
Circuit Diagram 3/3

	SW1	SW2	Voltage	AD
TOP	OFF	OFF	5V	D0 above
BOTTOM	ON	OFF	2.5V	40-CF
REAR	OFF	ON	0V	3F below
—	ON	ON	0V	—

SG on this page shall be SGL all over.

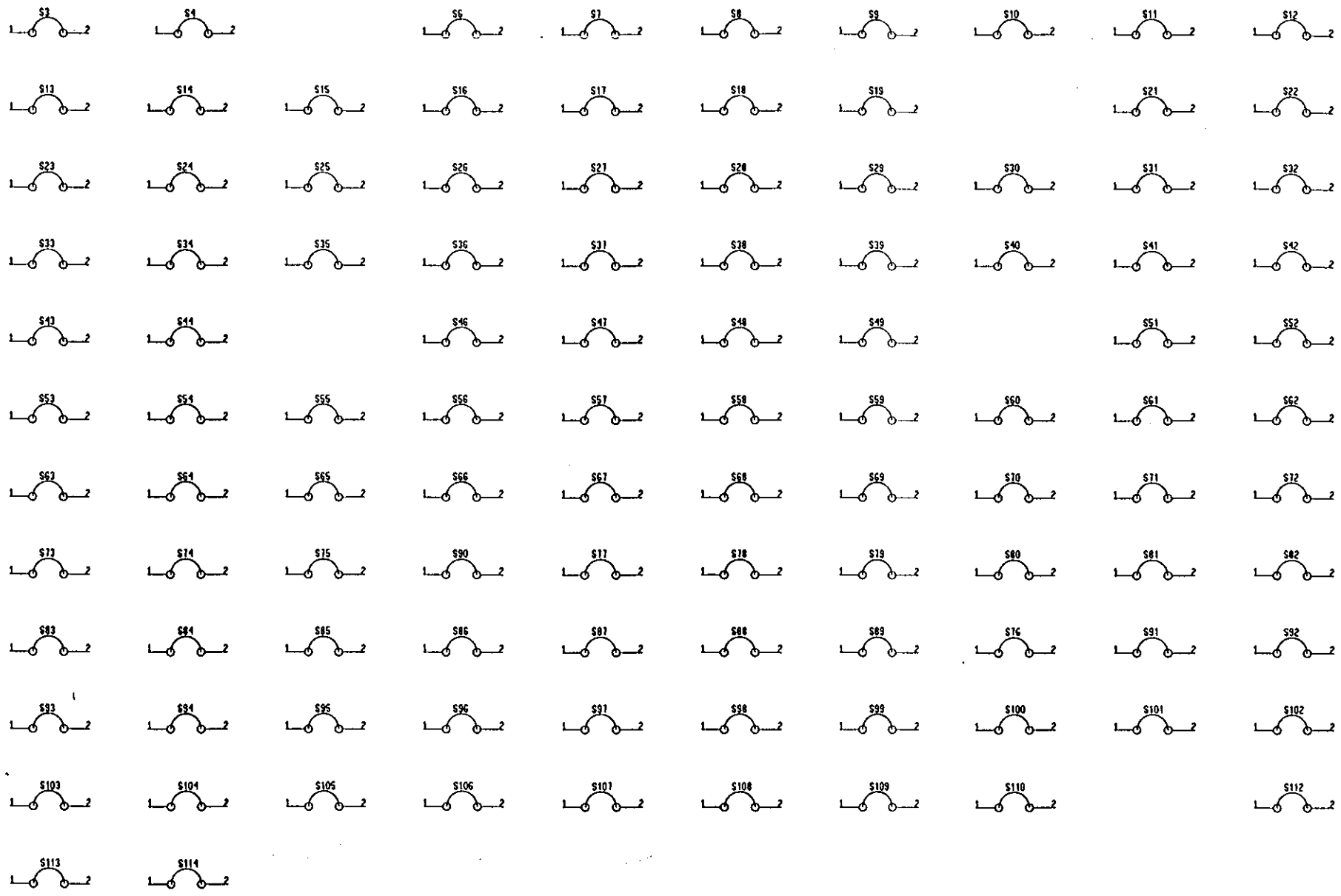
The rated power of resistors is 1/4W unless specified otherwise.

SDCT-PCB
(Power & Control Board) Rev. 7
Circuit Diagram 1/3

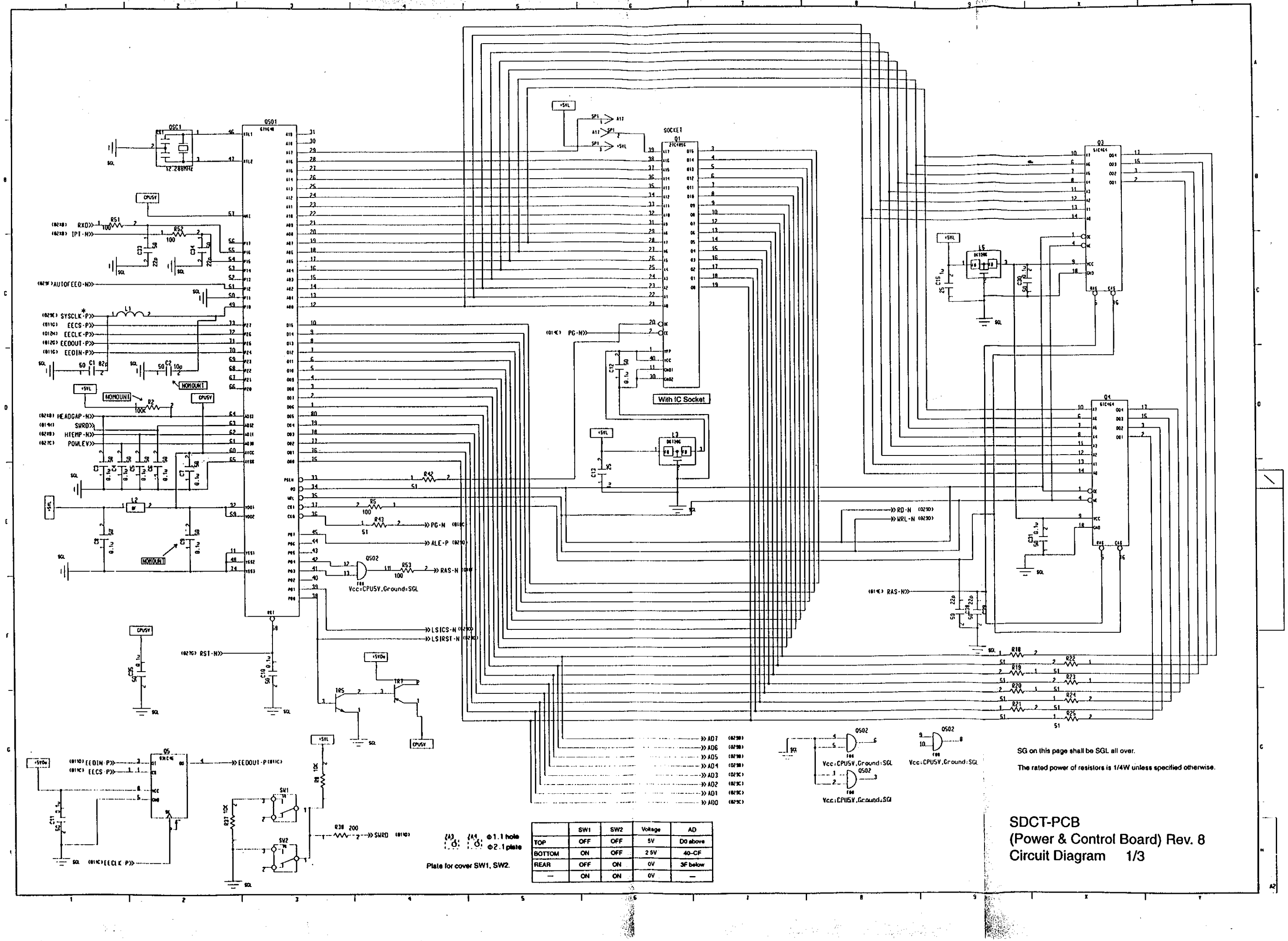
Power connector

TR6 heat sink plate

SDCT-PCB
(Power & Control Board) Rev. 7
Circuit Diagram 2/3



SDCT-PCB
(Power & Control Board) Rev. 7
Circuit Diagram 3/3



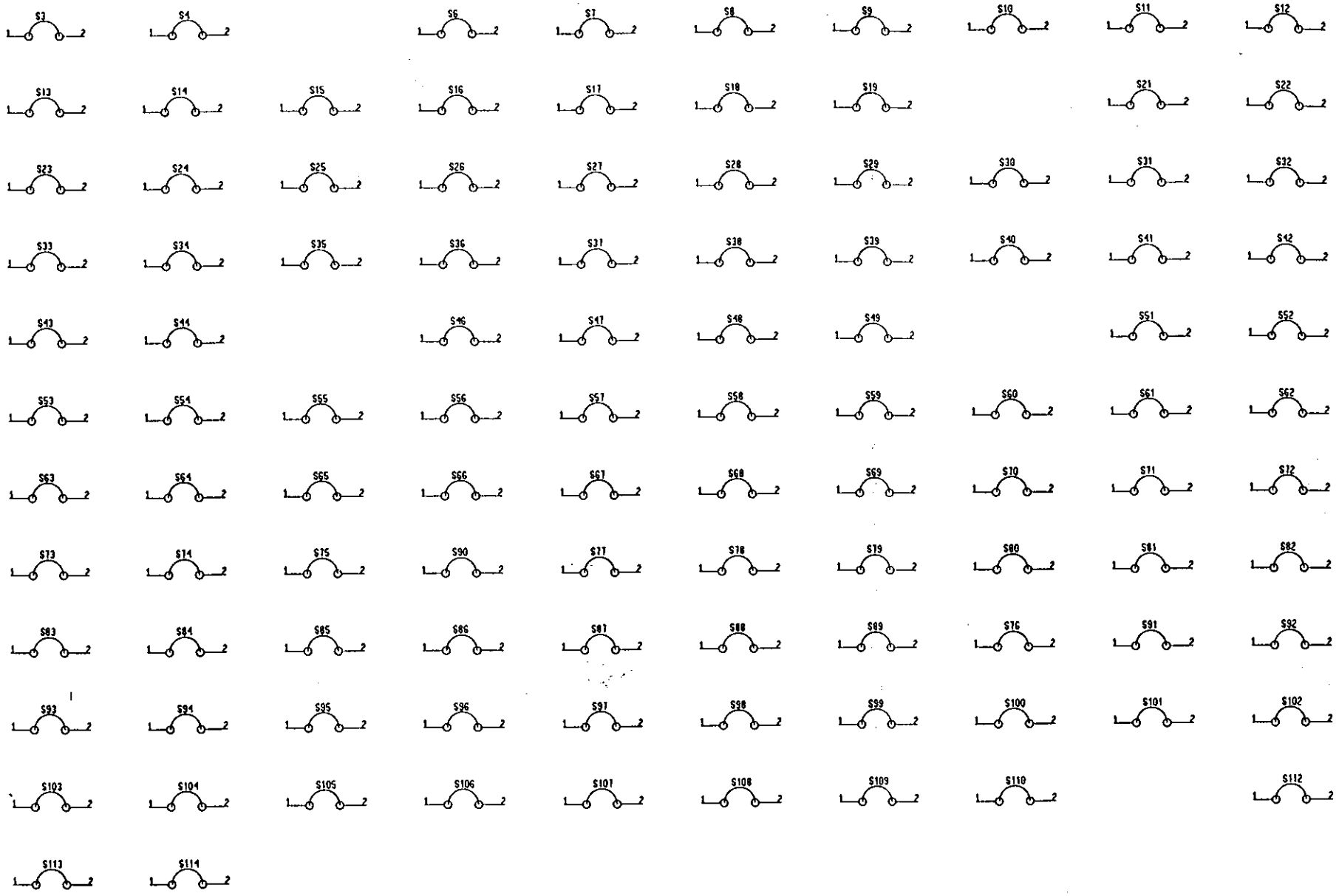
	SW1	SW2	Voltage	AD
TOP	OFF	OFF	5V	D0 above
BOTTOM	ON	OFF	2.5V	40-CF
REAR	OFF	ON	0V	3F below
—	ON	ON	0V	—

Power connector

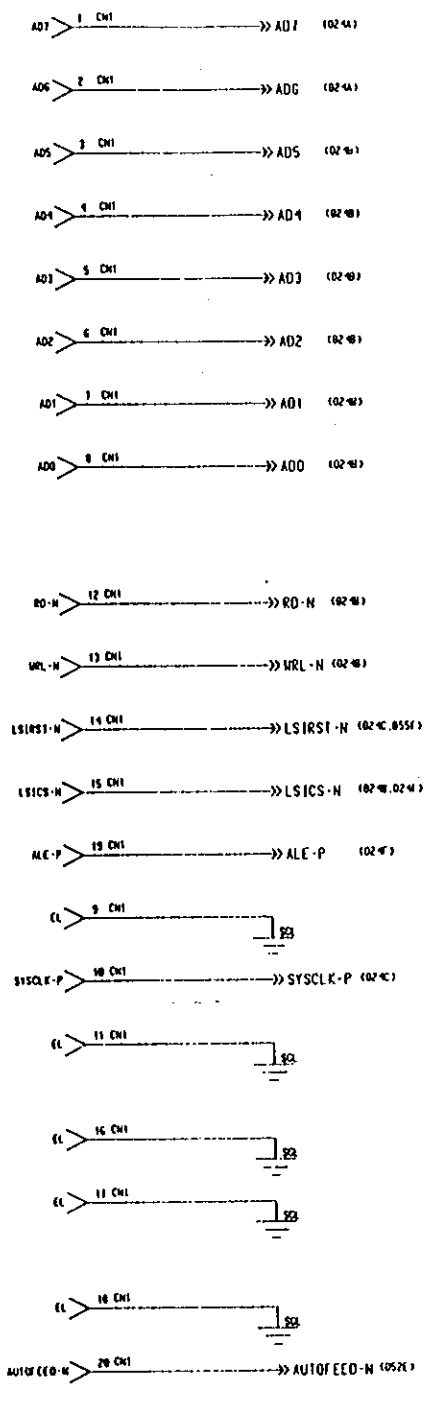
TR6 heat sink plate

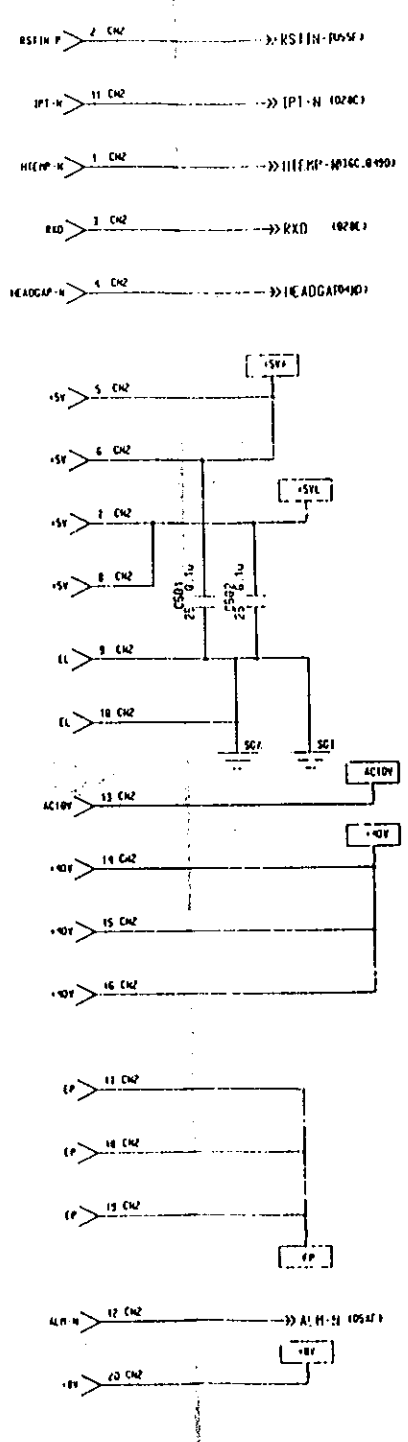
NOMOUNT

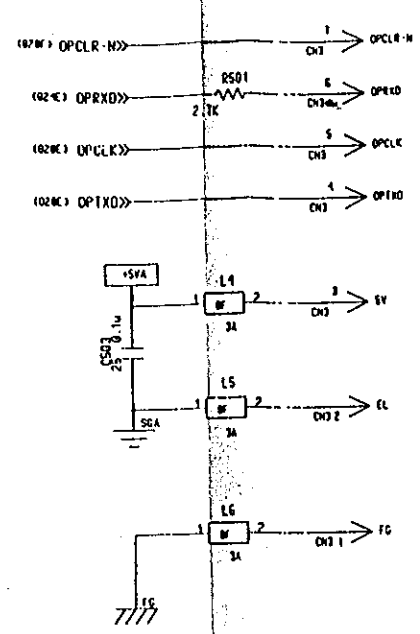
SDCT-PCB
(Power & Control Board) Rev. 8
Circuit Diagram 2/3



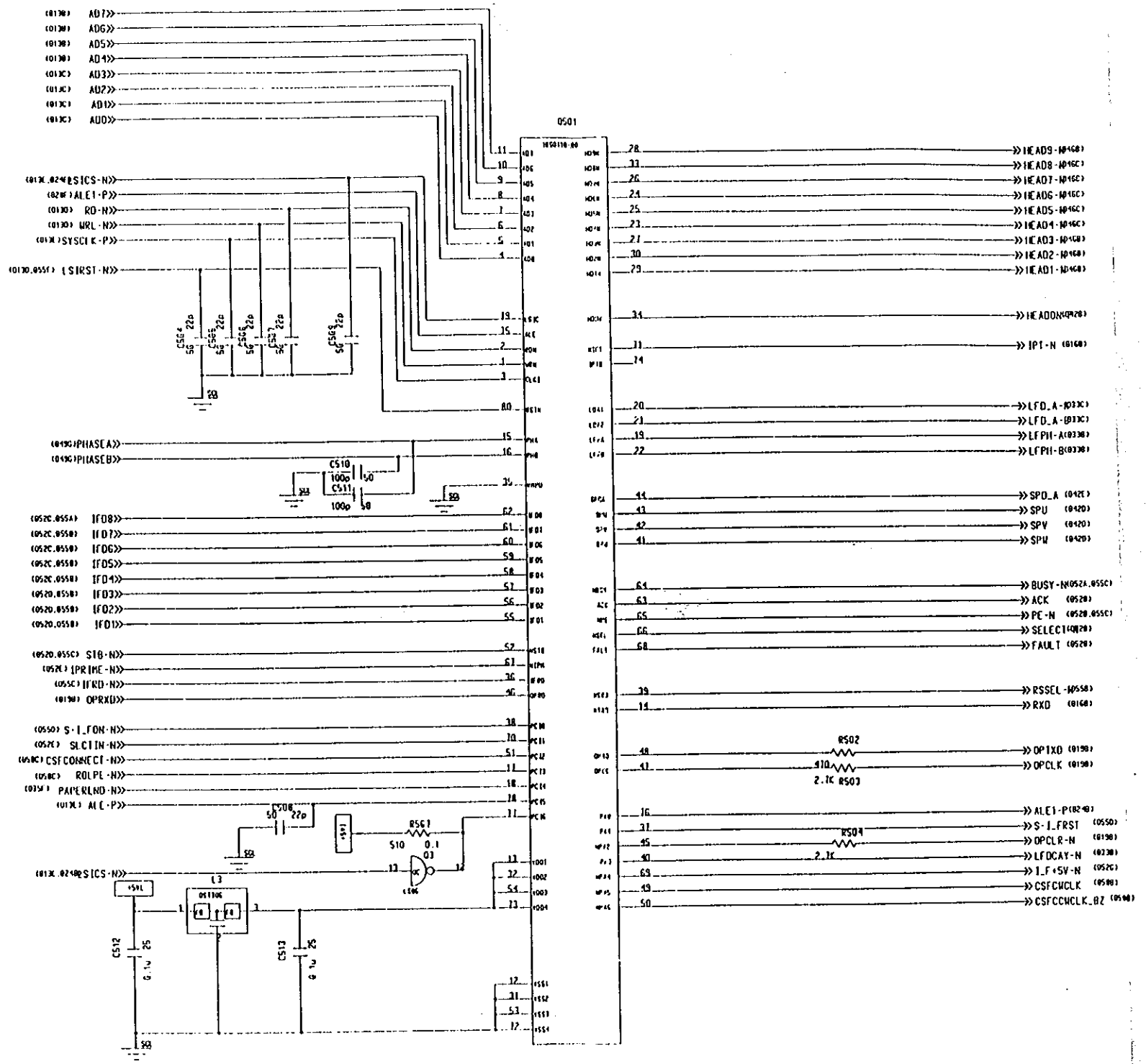
SDCT-PCB
(Power & Control Board) Rev. 8
Circuit Diagram 3/3

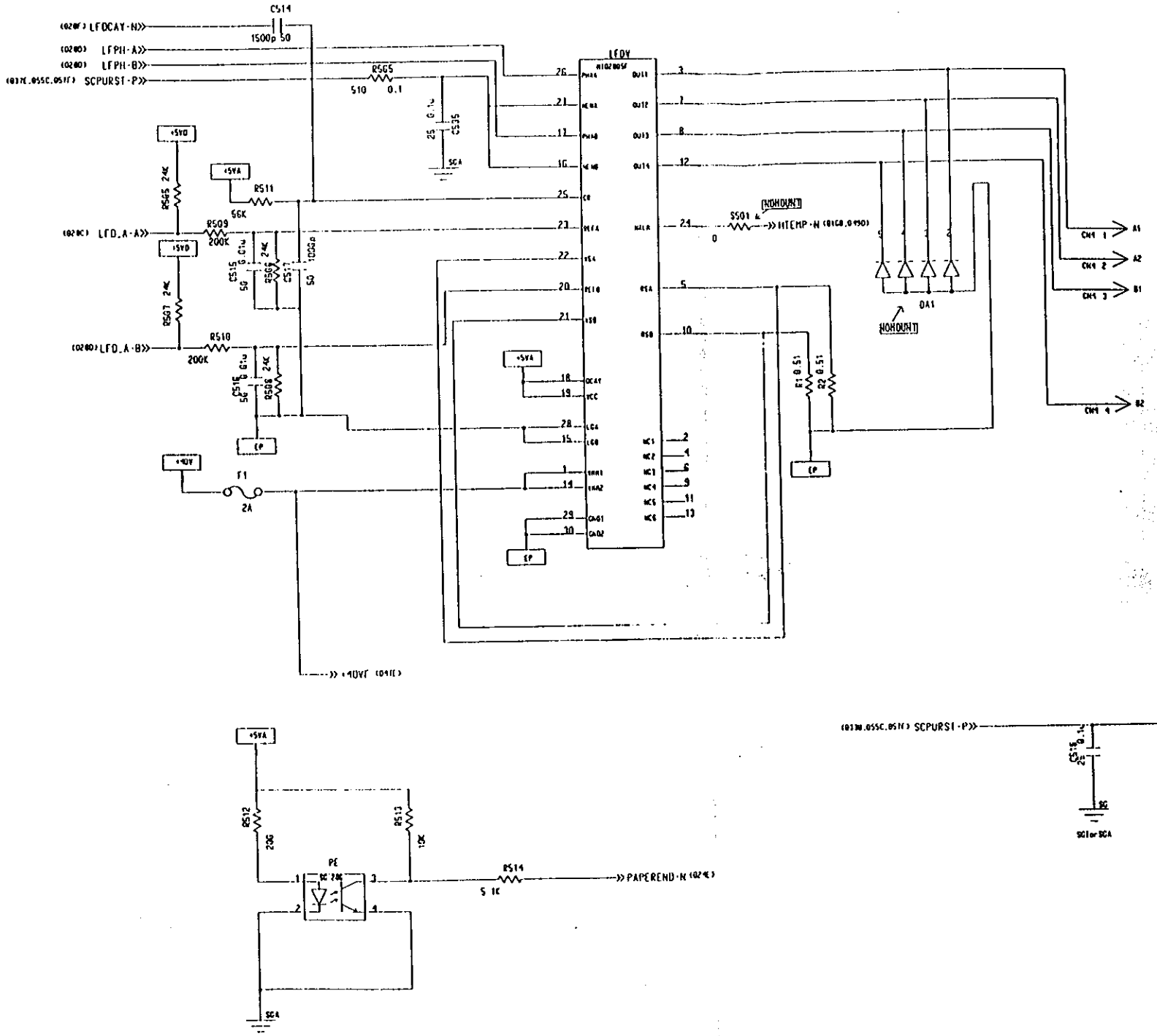






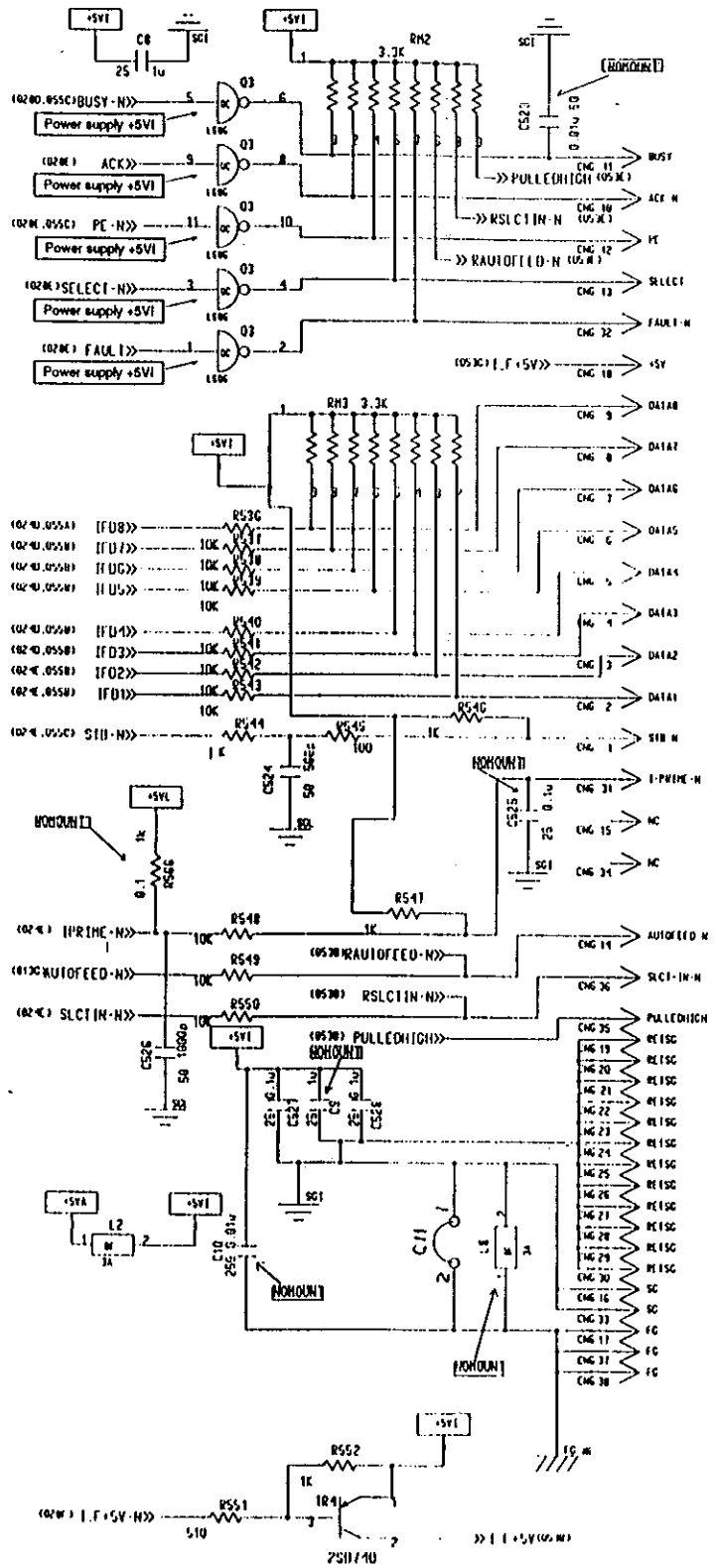
SDDV-PCB
(Driver Board) Rev. 4
Circuit Diagram 1/6

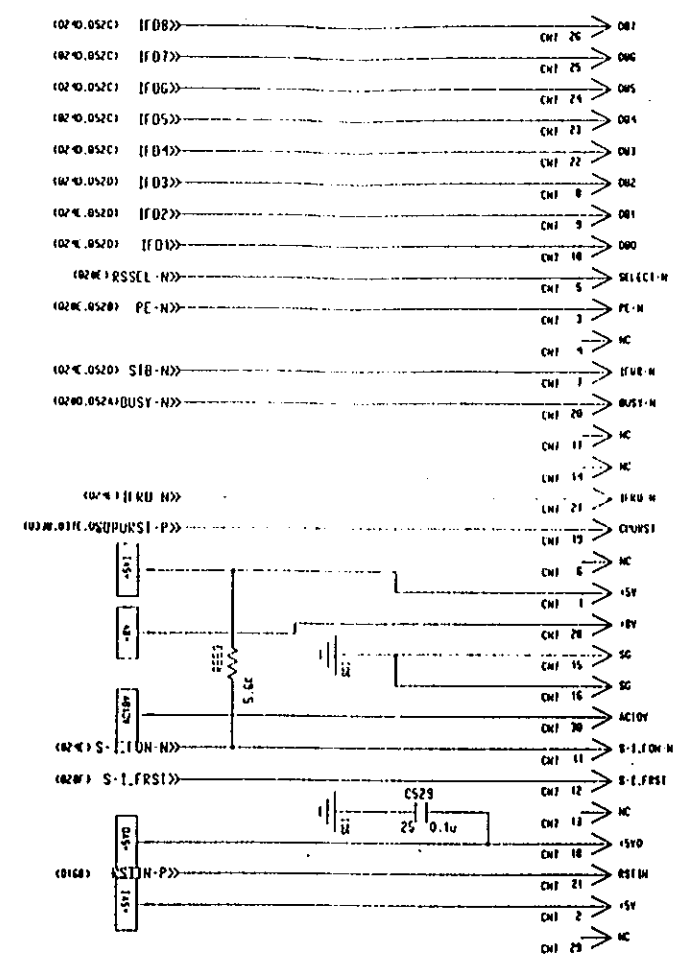

0501
AD7
AD6
AD5
AD4
AD3
AD2
AD1
AD0
RSICS-N
ALE1-P
RD-N
WRL-N
SYSCLK-P
SIRST-N
PHASEA
PHASEB
IFD8
IFD7
IFD6
IFD5
IFD4
IFD3
IFD2
IFD1
STB-N
PRIME-N
IFRD-N
OPRXD
S-I_FON-N
SLCTIN-N
CSFCONNECT-N
ROLPE-N
PAPERLND-N
ALE-P
HEAD9-M46B
HEAD8-M46C
HEAD7-M46C
HEAD6-M46C
HEAD5-M46C
HEAD4-M46C
HEAD3-M46B
HEAD2-M46B
HEAD1-M46B
HEADON
IPI-N
LFD_A-
LFD_A-
LFPH-A
LFPH-B
SPD_A
SPU
SPV
SPW
BUSY-N
ACK
PE-N
SELECT
FAULT
RSSEL-M
RXD
OPTXD
OPCLK
ALE1-P
S-I_FRST
OPCLR-N
LFDCAY-N
I_F+5V-N
CSFCVCLK
CSFCCVCLK_BZ
RS02
RS03
RS04
2.7K
SDDV-PCB
(Driver Board) Rev. 4
Circuit Diagram 2/6

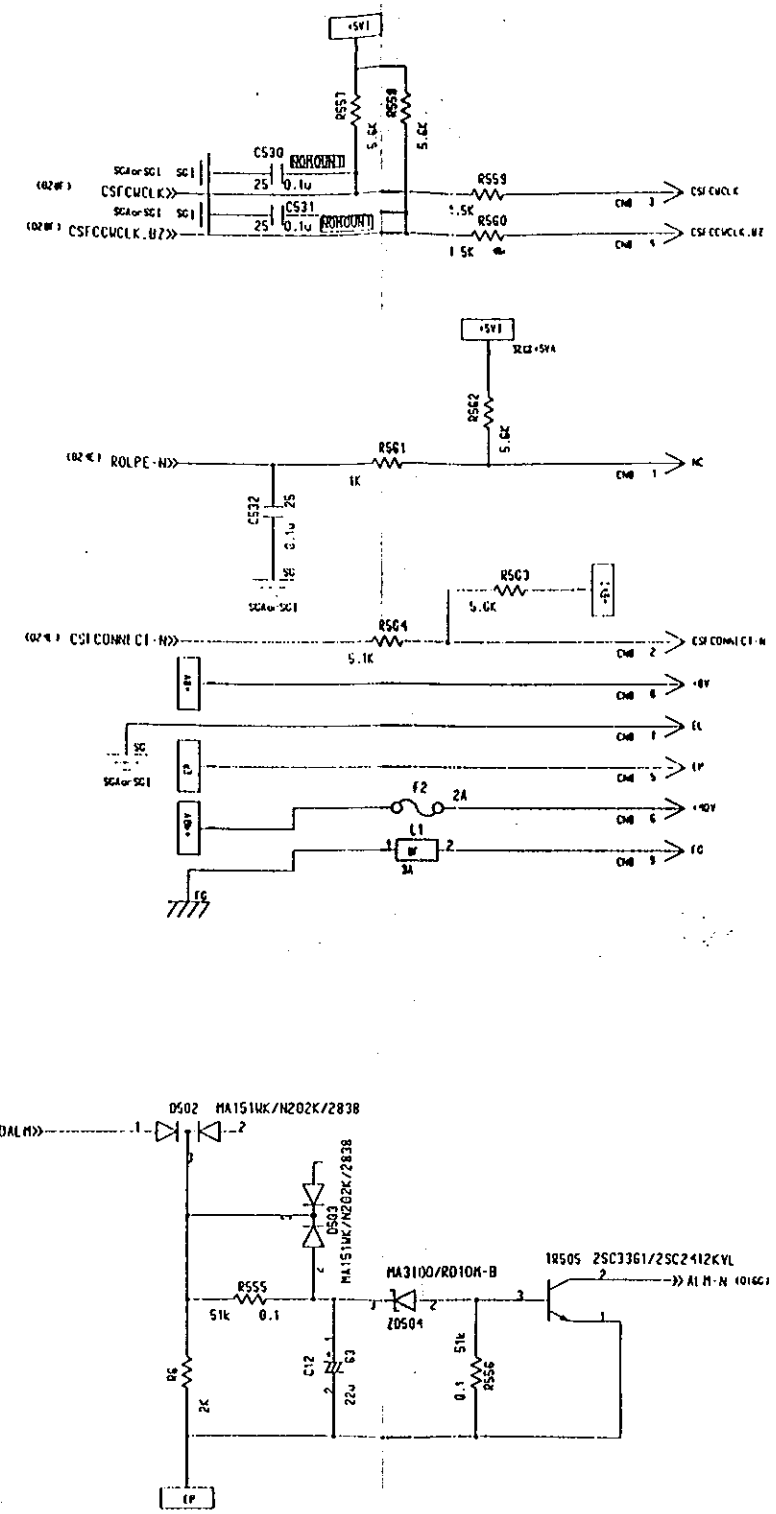


SDDV-PCB
(Driver Board) Rev. 4
Circuit Diagram 3/6

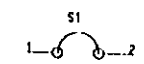
SDDV-PCB
(Driver Board) Rev. 4
Circuit Diagram 4/6

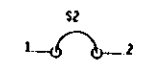


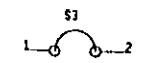


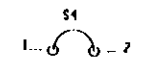


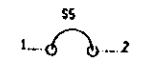
SDDV-PCB
(Driver Board) Rev. 4
Circuit Diagram 5/6

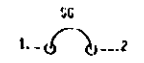


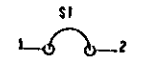


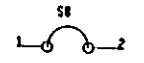


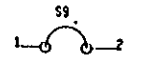


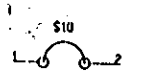


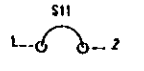


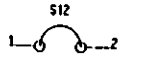


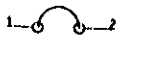


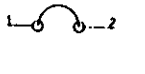


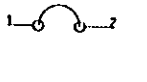


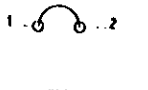




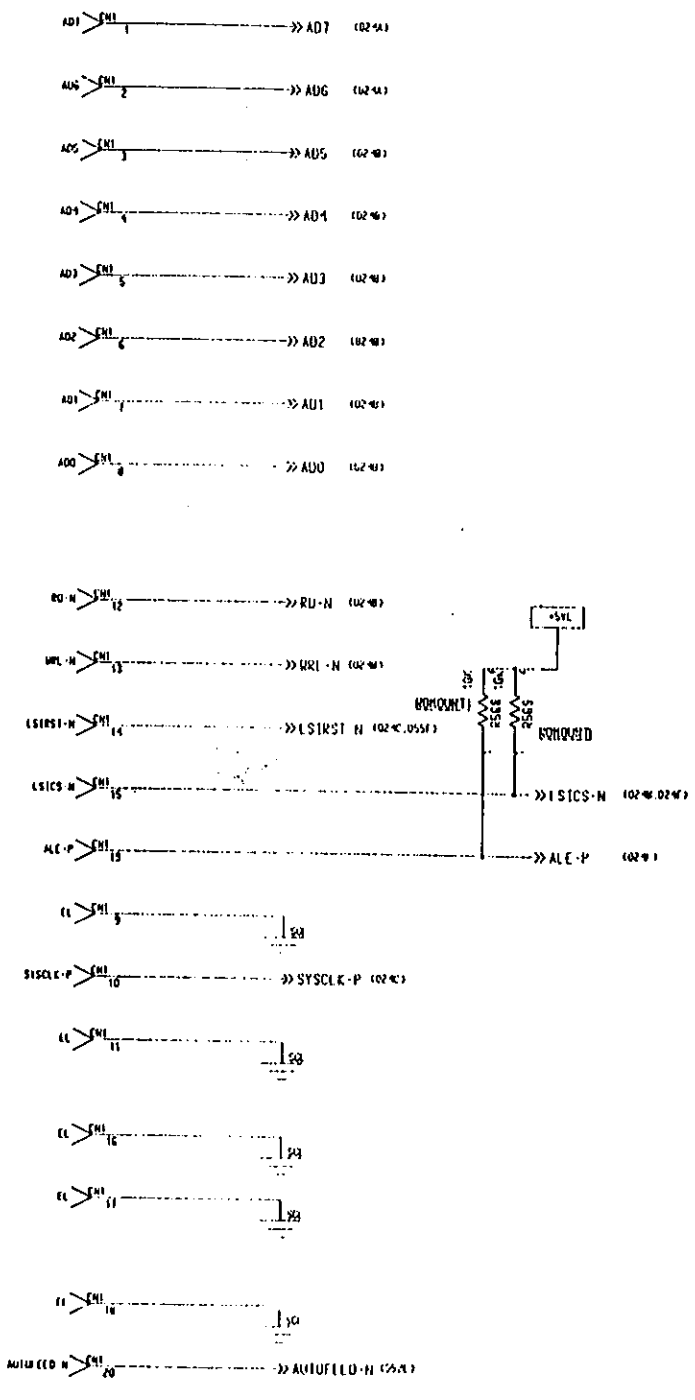




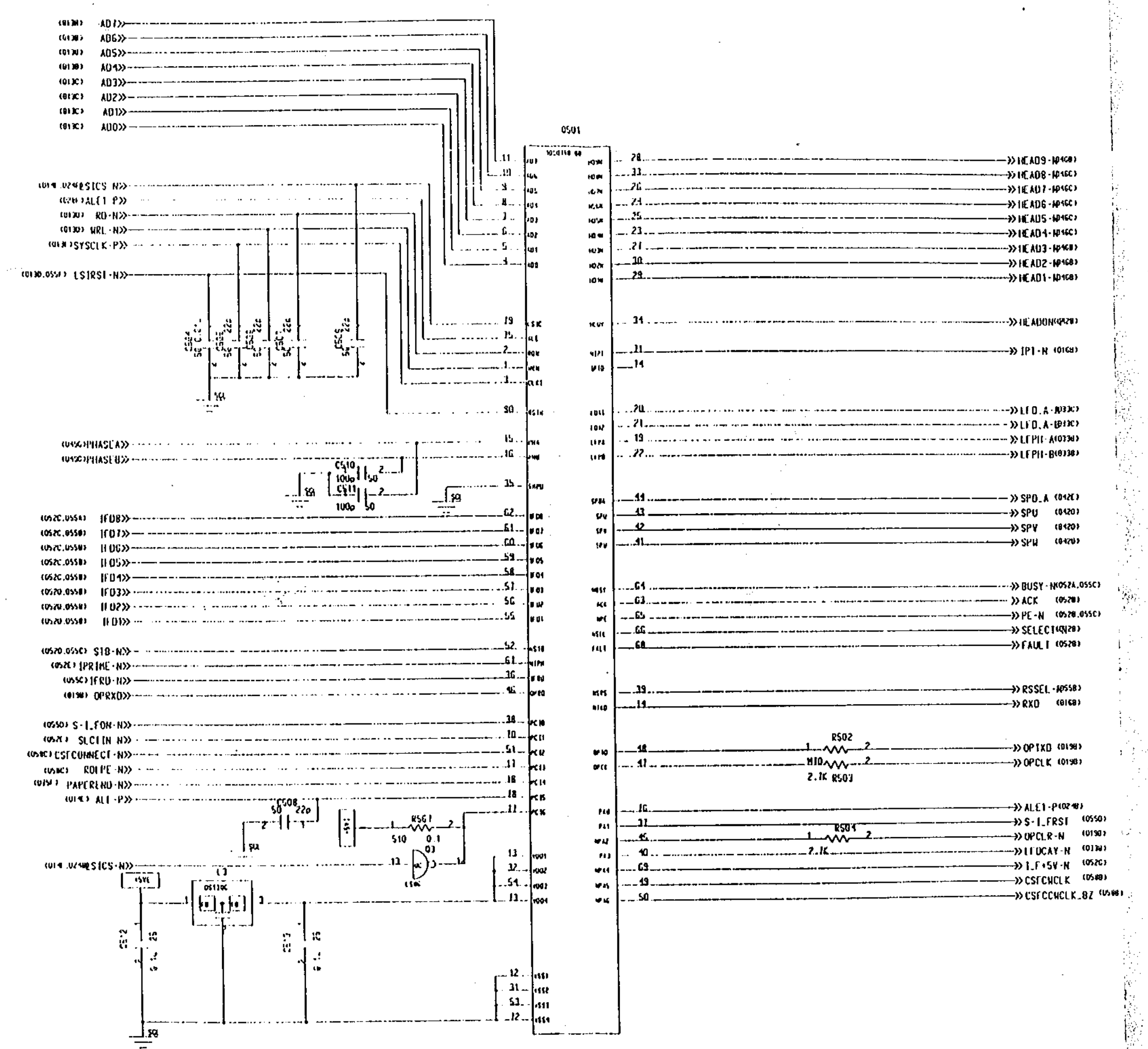




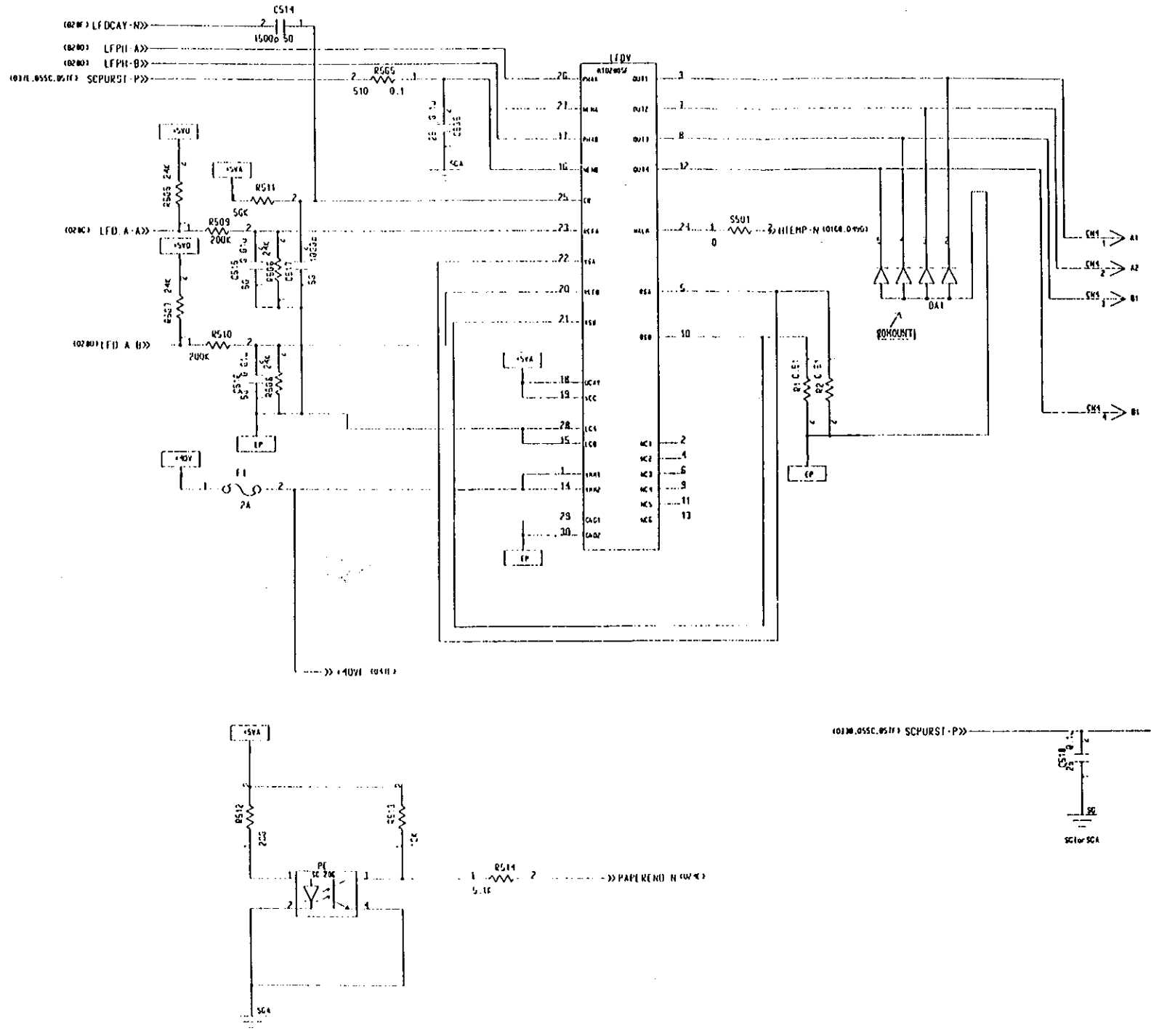
SDDV-PCB
(Driver Board) Rev. 4
Circuit Diagram 6/6



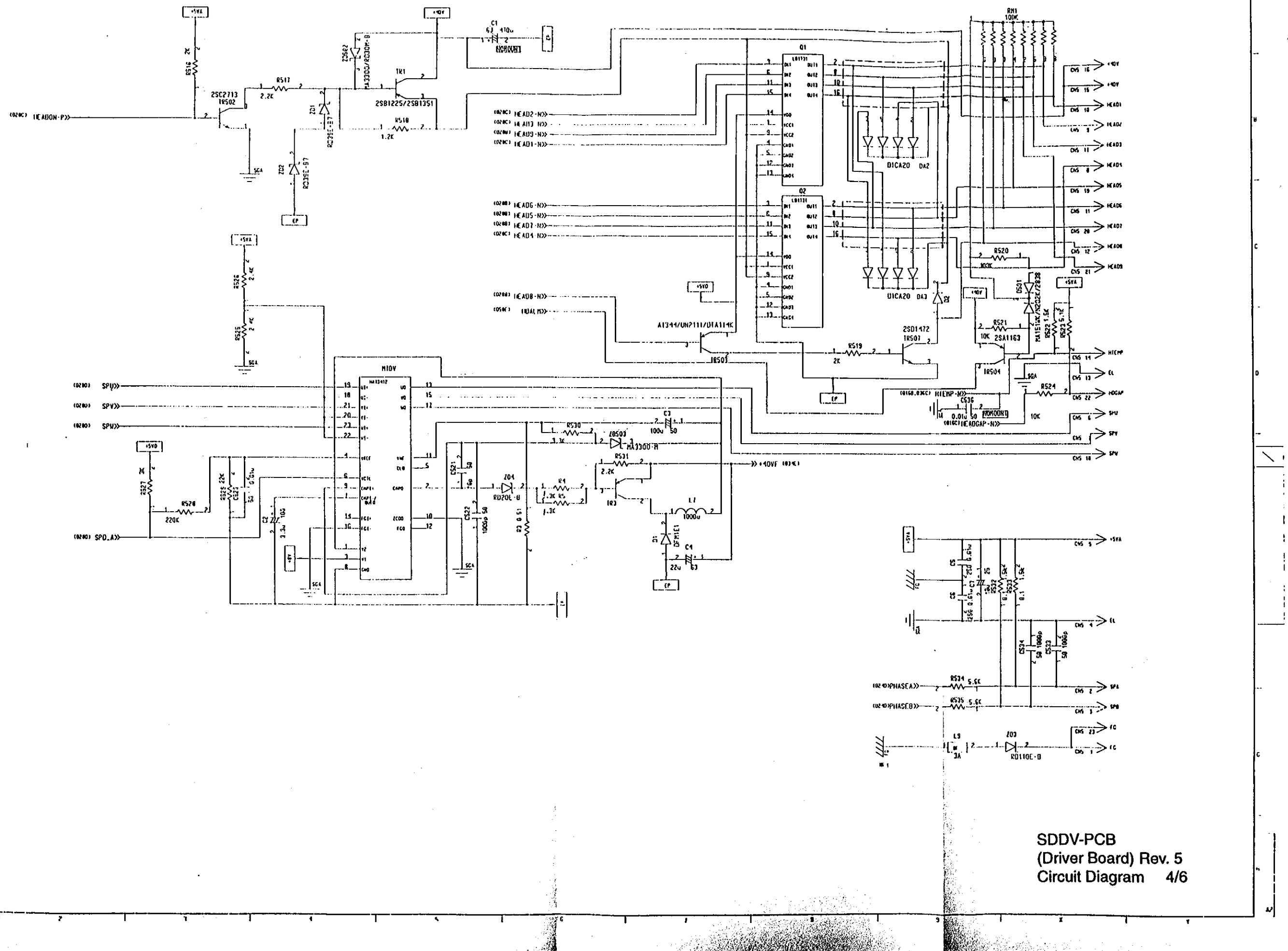
SDDV-PCB
(Driver Board) Rev. 5
Circuit Diagram 1/6



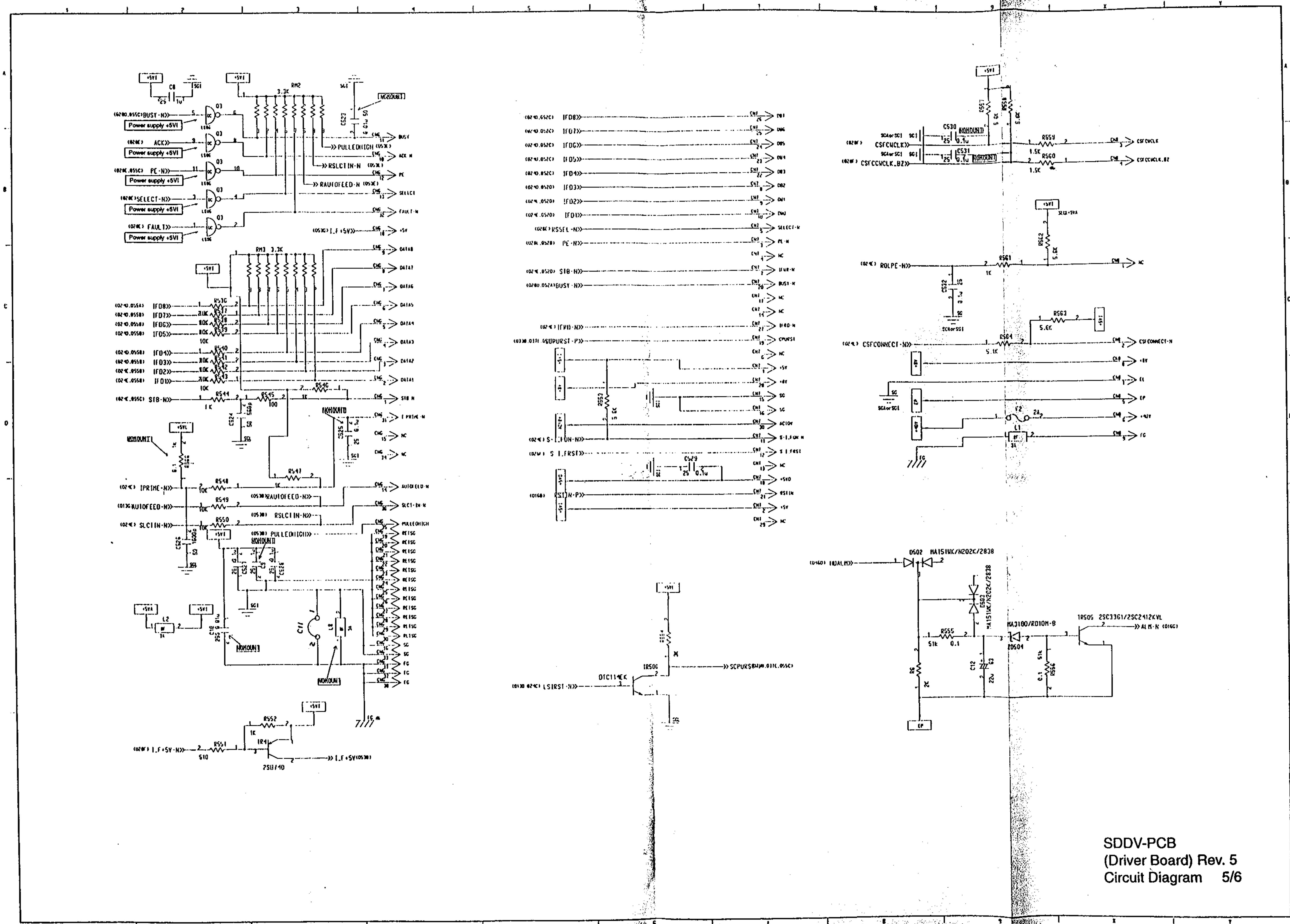
SDDV-PCB
(Driver Board) Rev. 5
Circuit Diagram 2/6



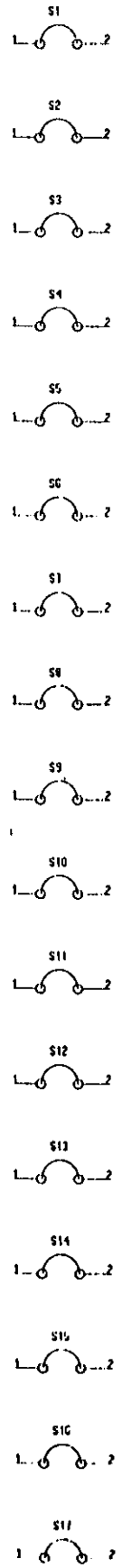
SDDV-PCB
(Driver Board) Rev. 5
Circuit Diagram 3/6



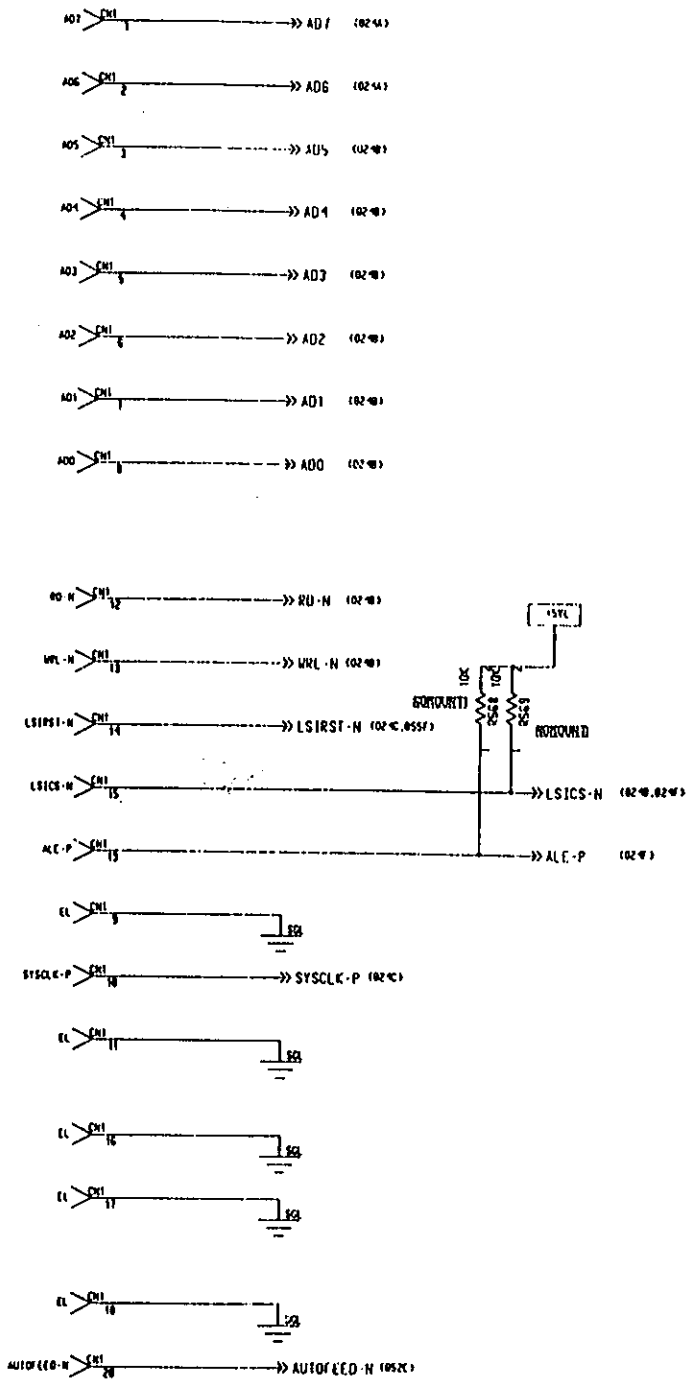
SDDV-PCB
(Driver Board) Rev. 5
Circuit Diagram 4/6

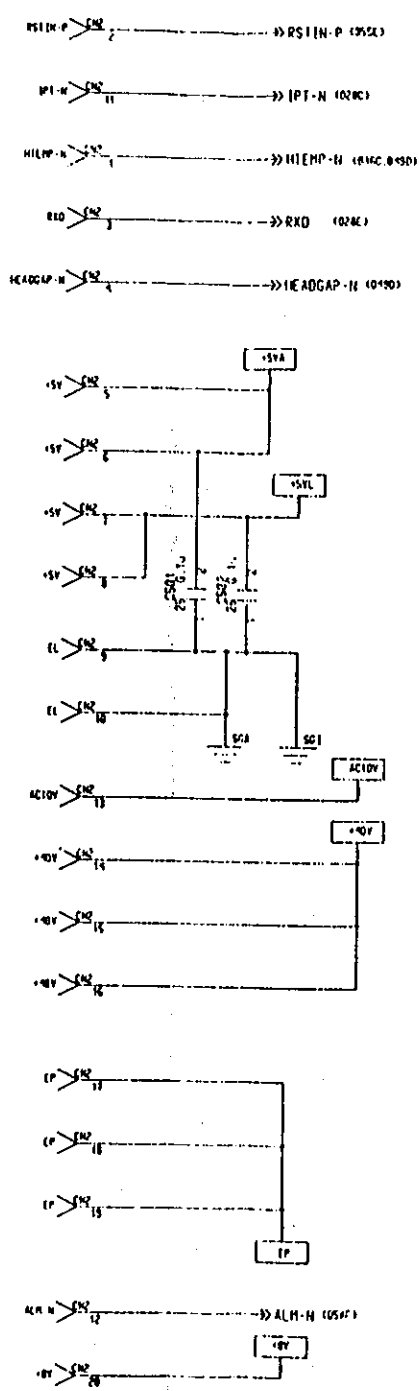


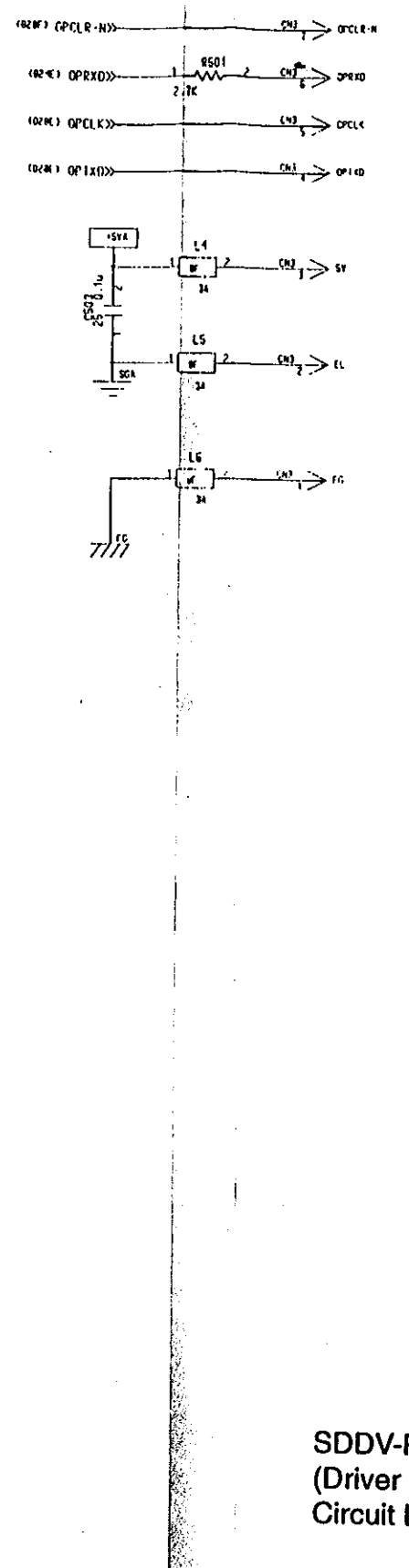
SDDV-PCB
(Driver Board) Rev. 5
Circuit Diagram 5/6



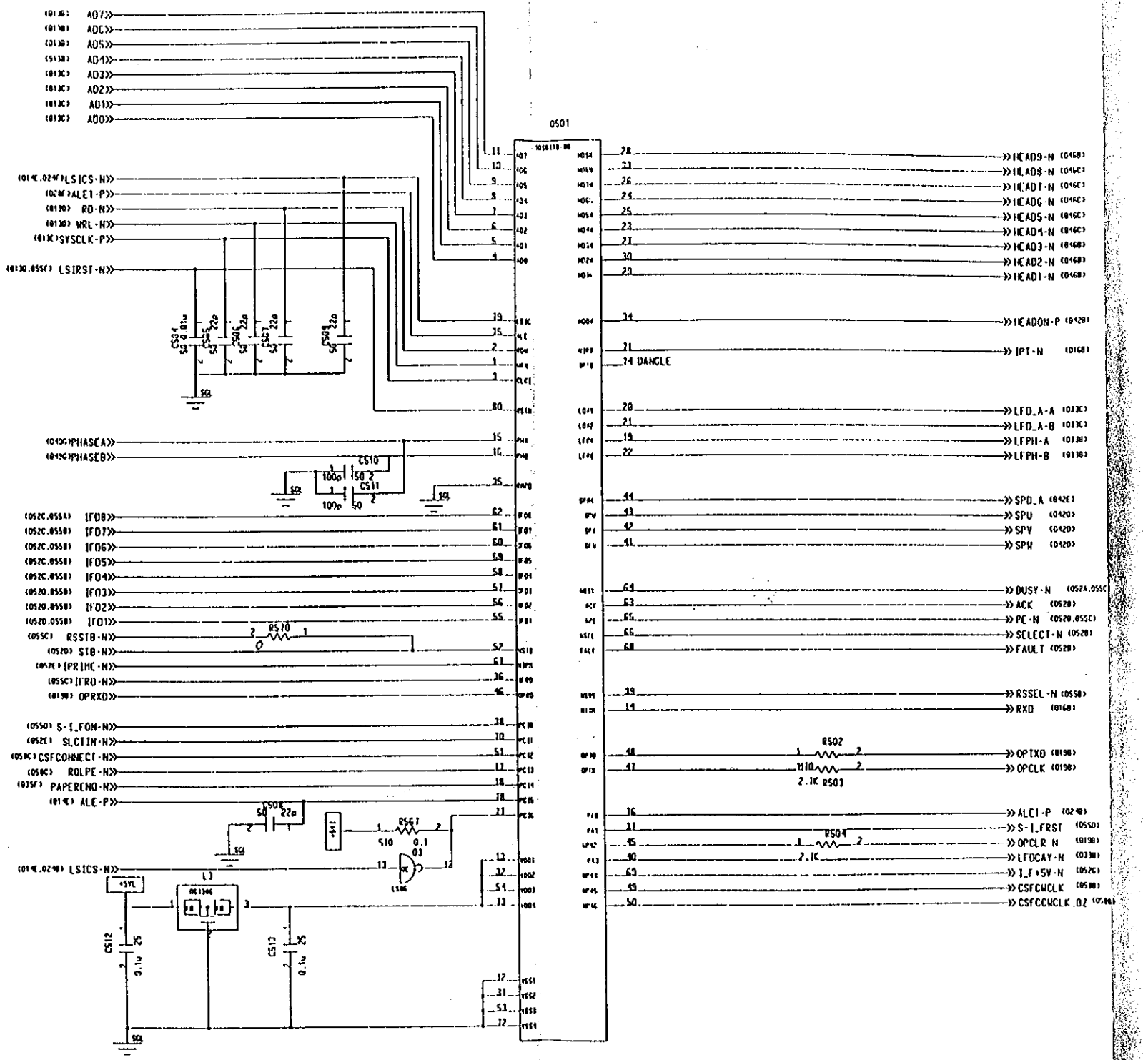
SDDV-PCB
(Driver Board) Rev. 5
Circuit Diagram 6/6



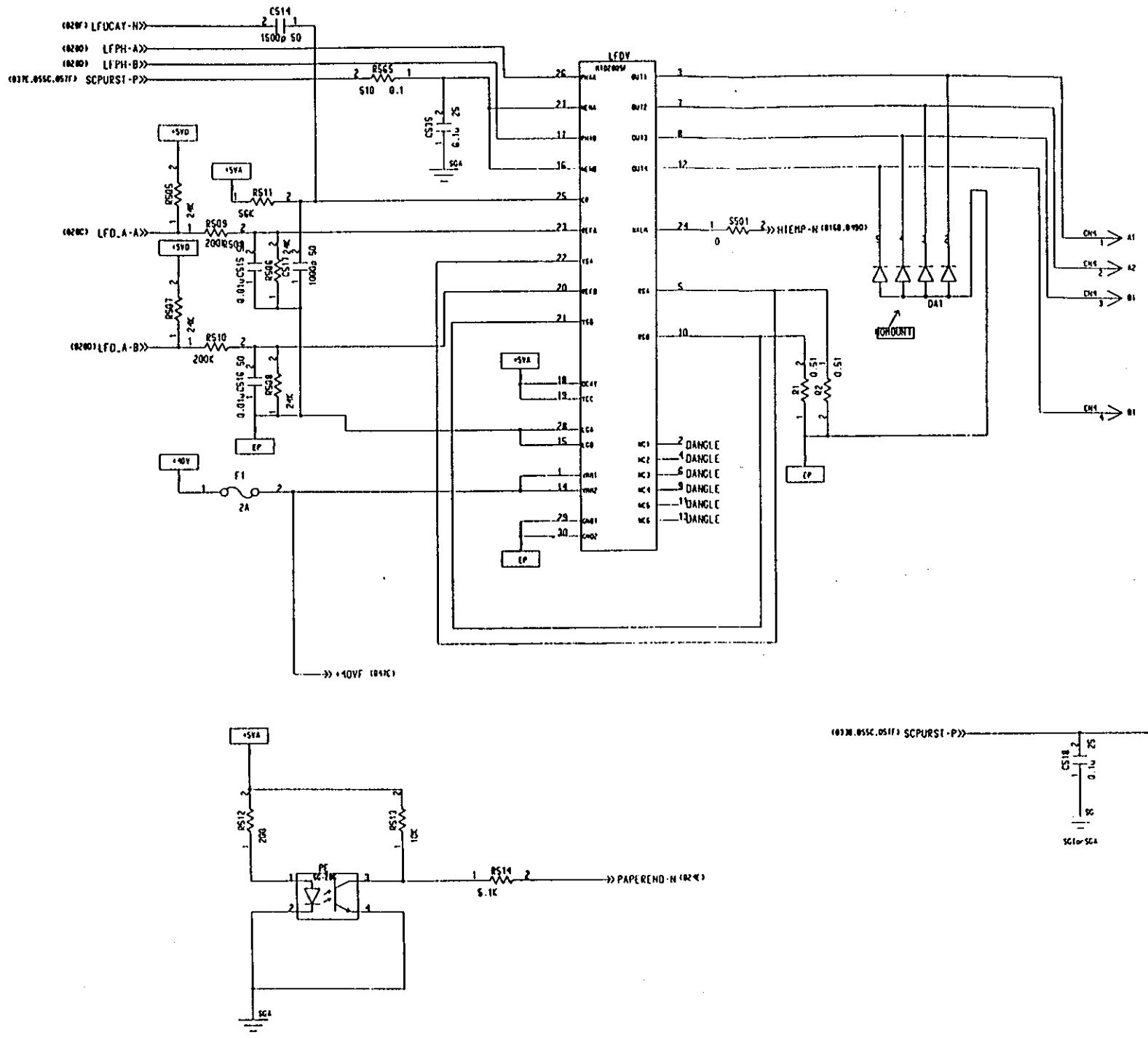




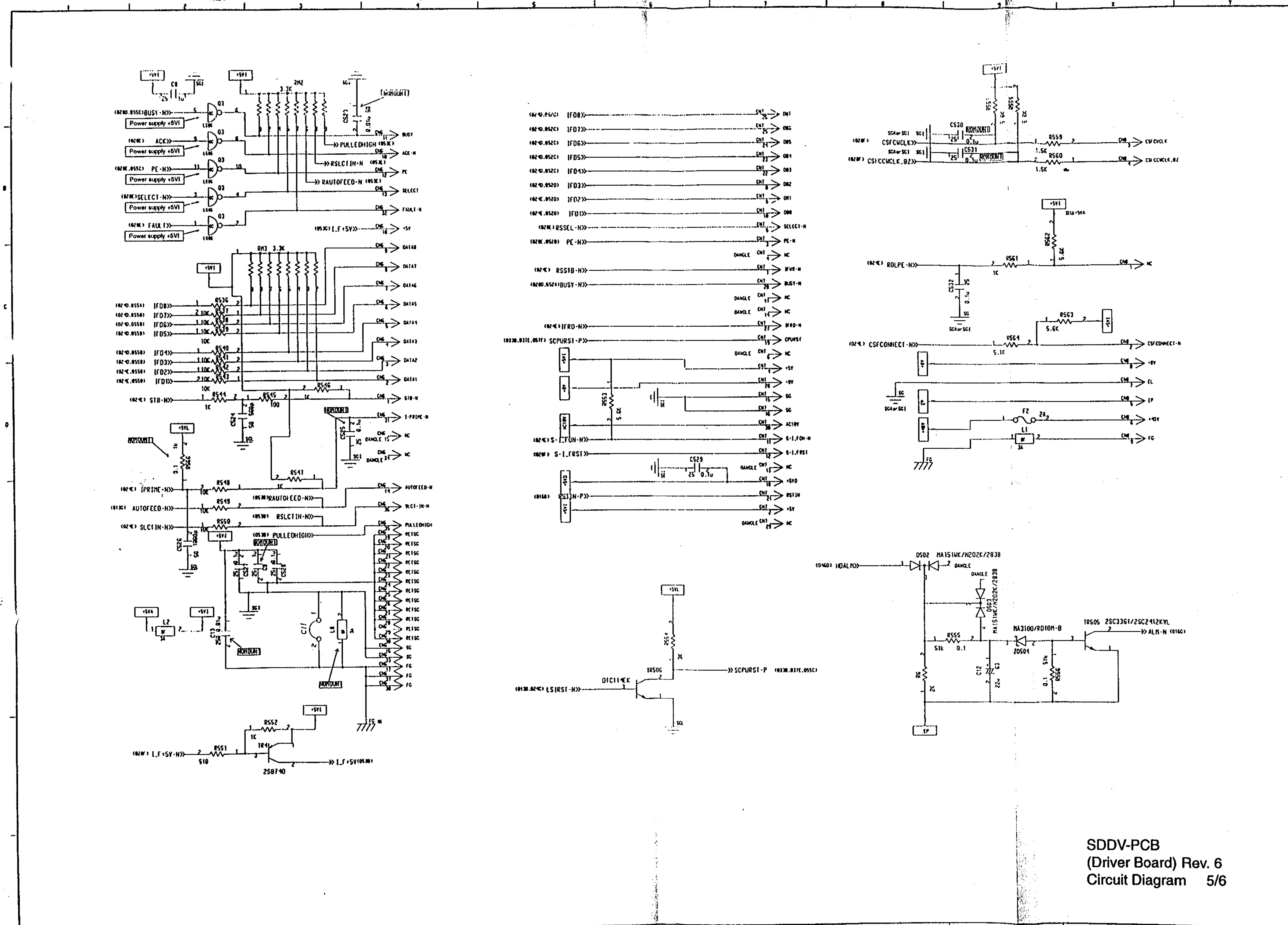
SDDV-PCB
(Driver Board) Rev. 6
Circuit Diagram 1/6



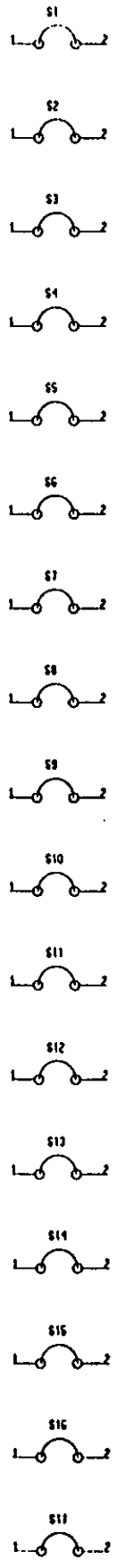
SDDV-PCB
(Driver Board) Rev. 6
Circuit Diagram 2/6


LFDV
SCPURST-P
LFD_A-A
LFD_A-B
HIEMP-N
PAPEREND-N
DANGLE
DA1
SDDV-PCB
(Driver Board) Rev. 6
Circuit Diagram 3/6

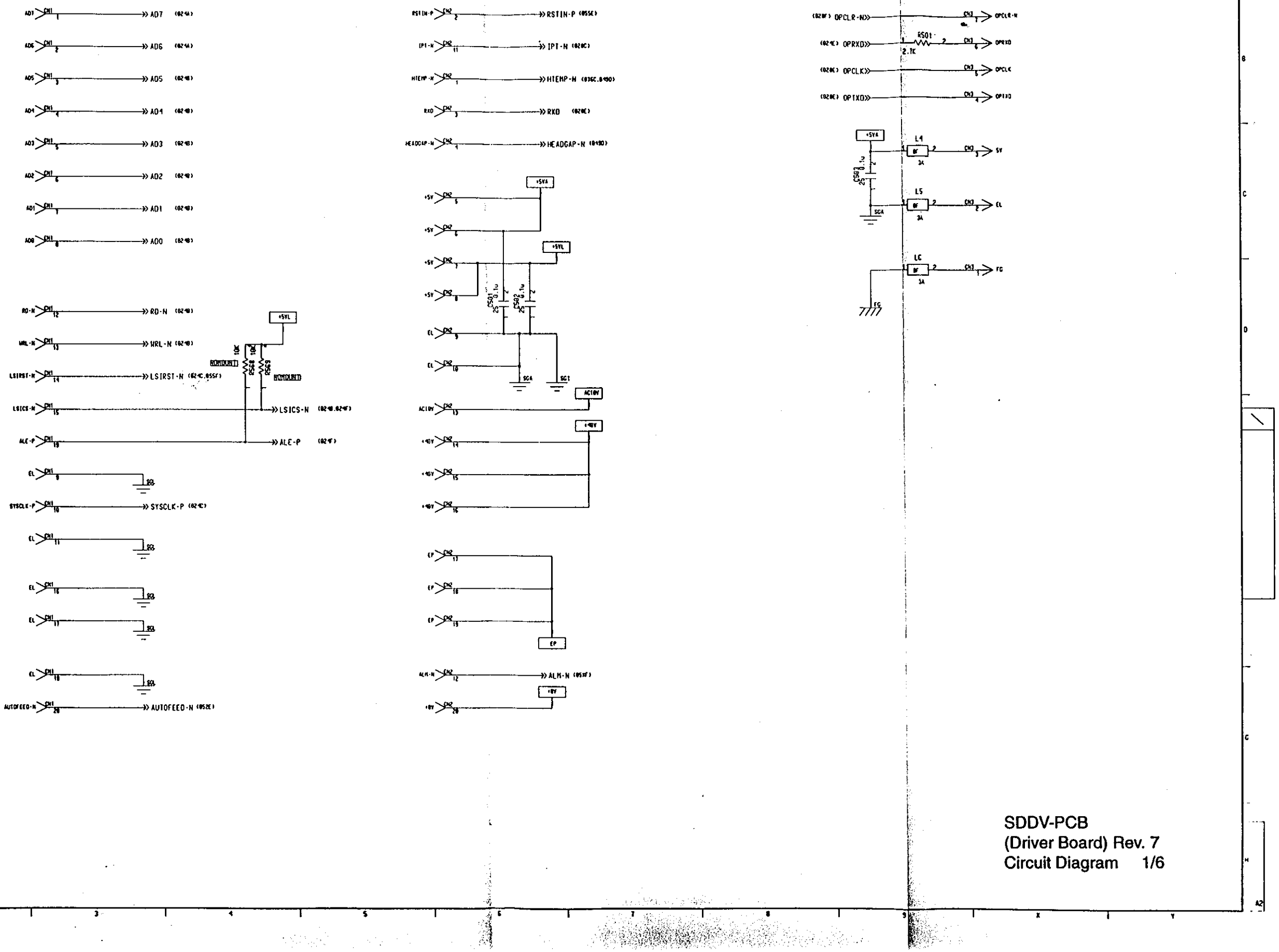
SDDV-PCB
(Driver Board) Rev. 6
Circuit Diagram 4/6

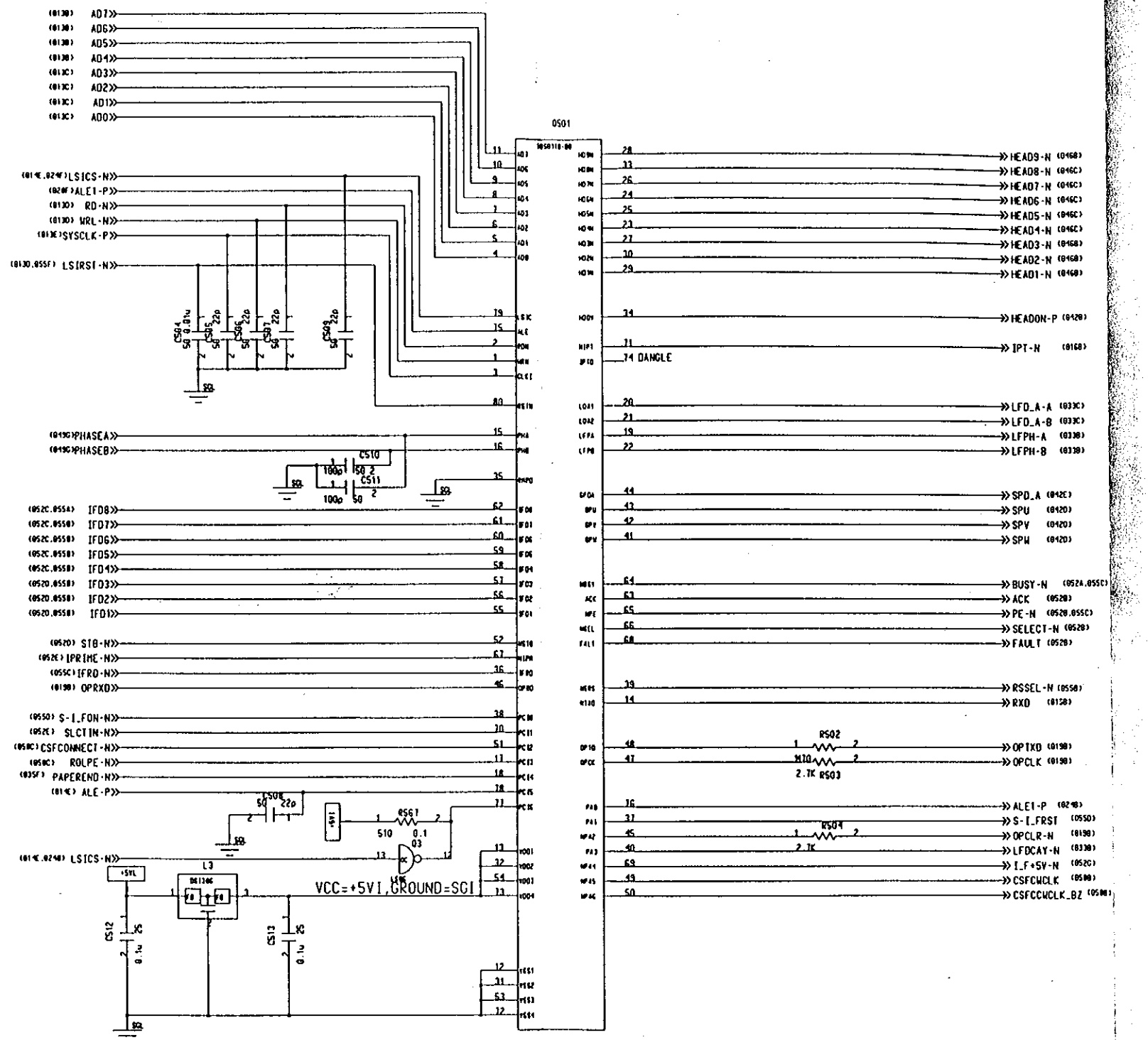


SDDV-PCB
(Driver Board) Rev. 6
Circuit Diagram 5/6

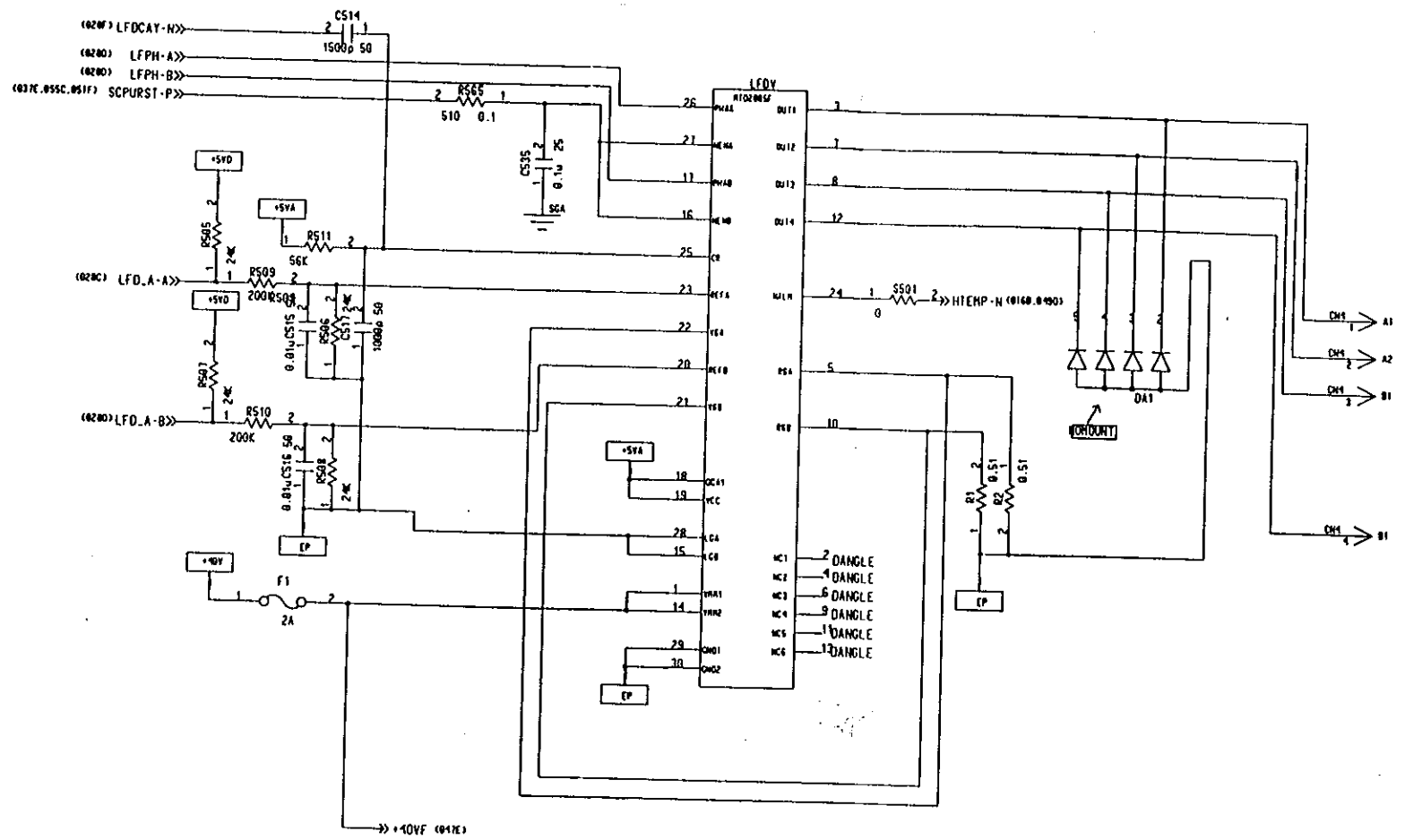


SDDV-PCB
(Driver Board) Rev. 6
Circuit Diagram 6/6

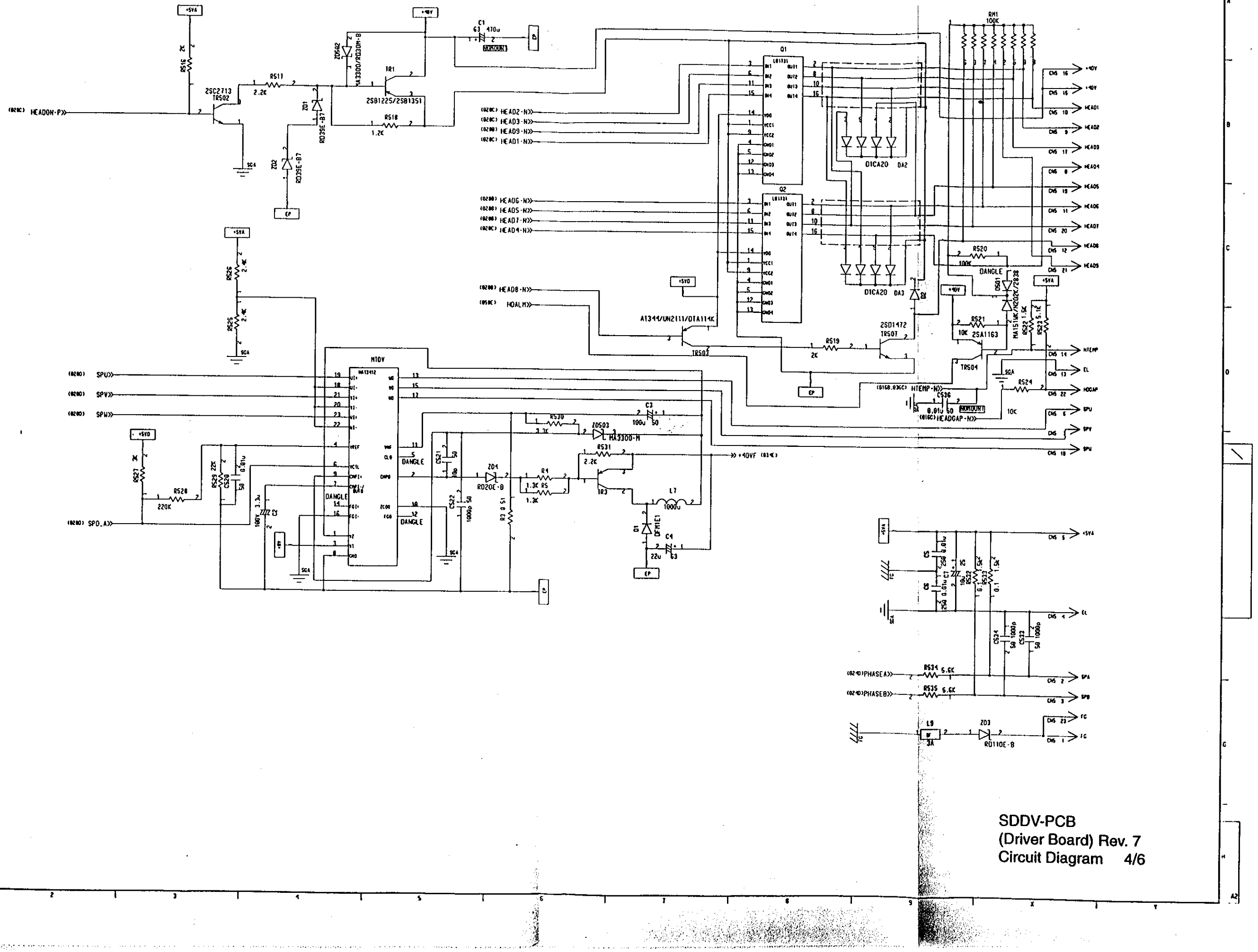

AD7
AD6
AD5
AD4
AD3
AD2
AD1
AD0
RD-N
WRL-N
LSIRST-N
LSICS-N
ALE-P
SYSCLK-P
AUTOFEED-N
RSTIN-P
IPT-N
HTEMP-N
RXD
HEADGAP-N
+5VA
+5V
+5VL
EL
SG
SG1
AC10V
+10V
EP
ALM-N
+8V
OPCLR-N
OPRXD
OPCLK
OPTXD
RSQ1
2.7K
L4
L5
L6
3A
SY
CL
FG
SDDV-PCB
(Driver Board) Rev. 7
Circuit Diagram 1/6

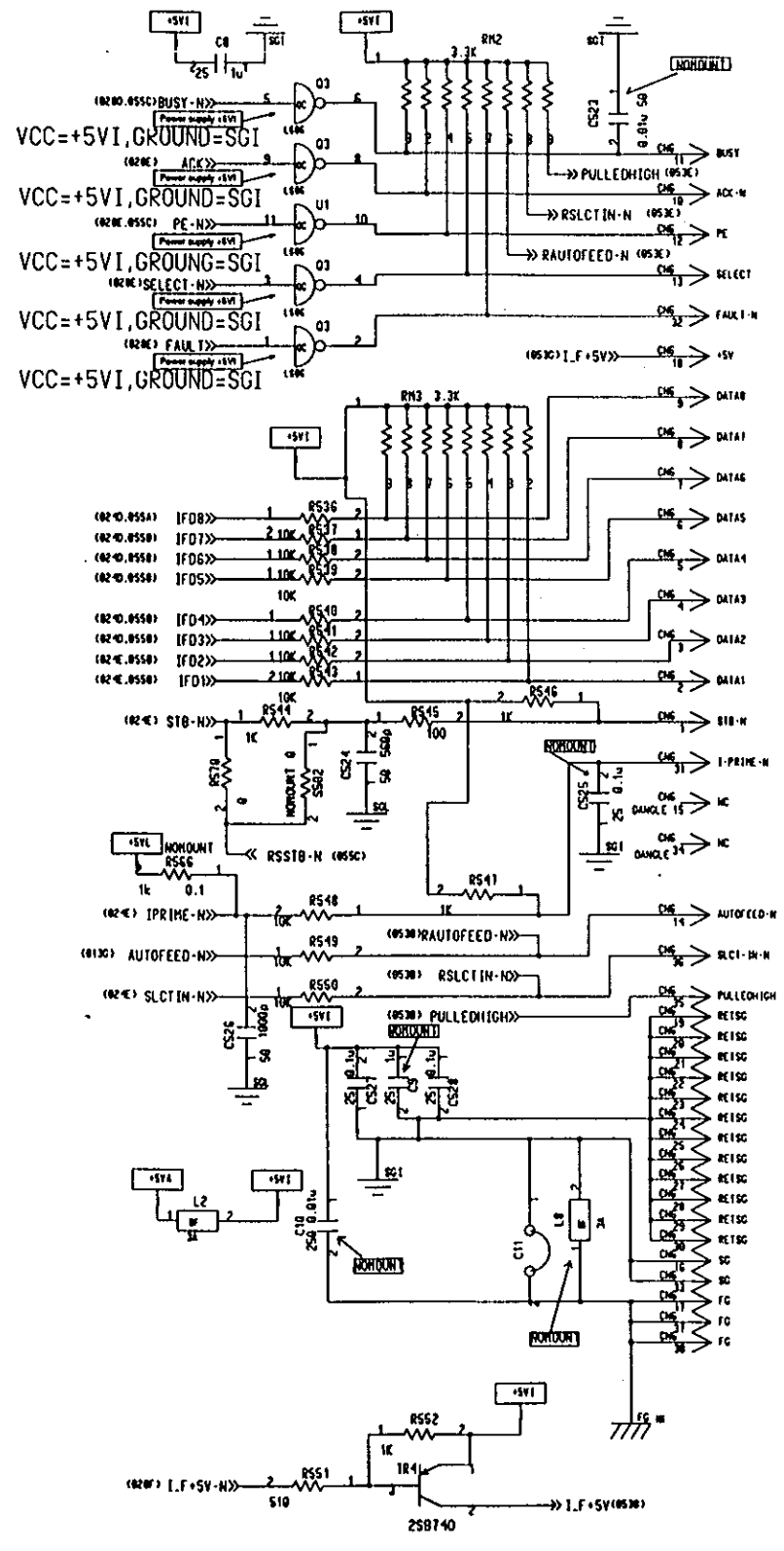


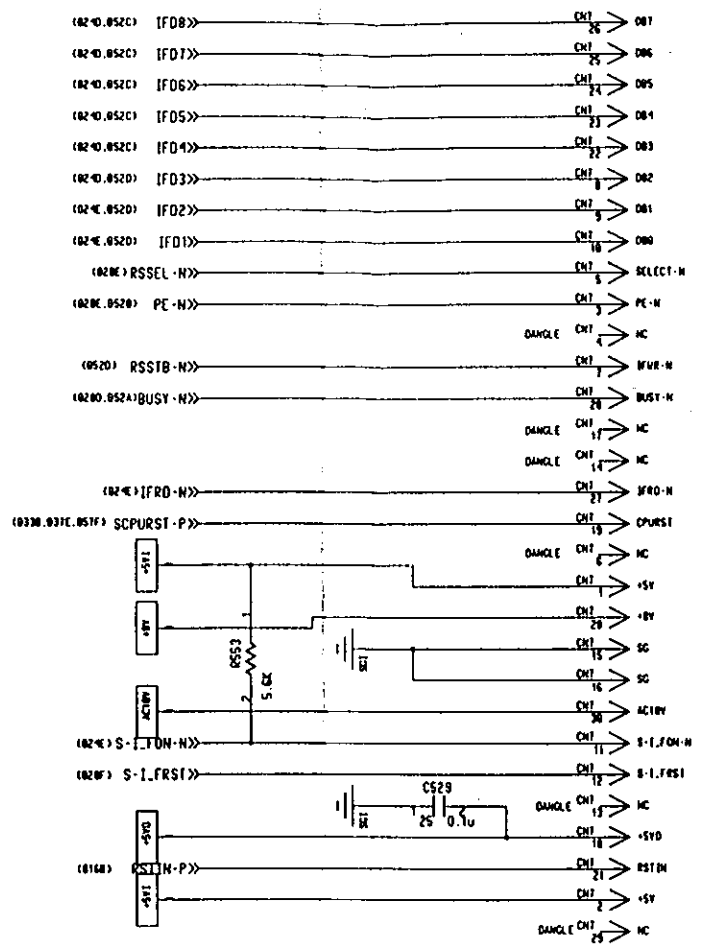
SDDV-PCB
(Driver Board) Rev. 7
Circuit Diagram 2/6

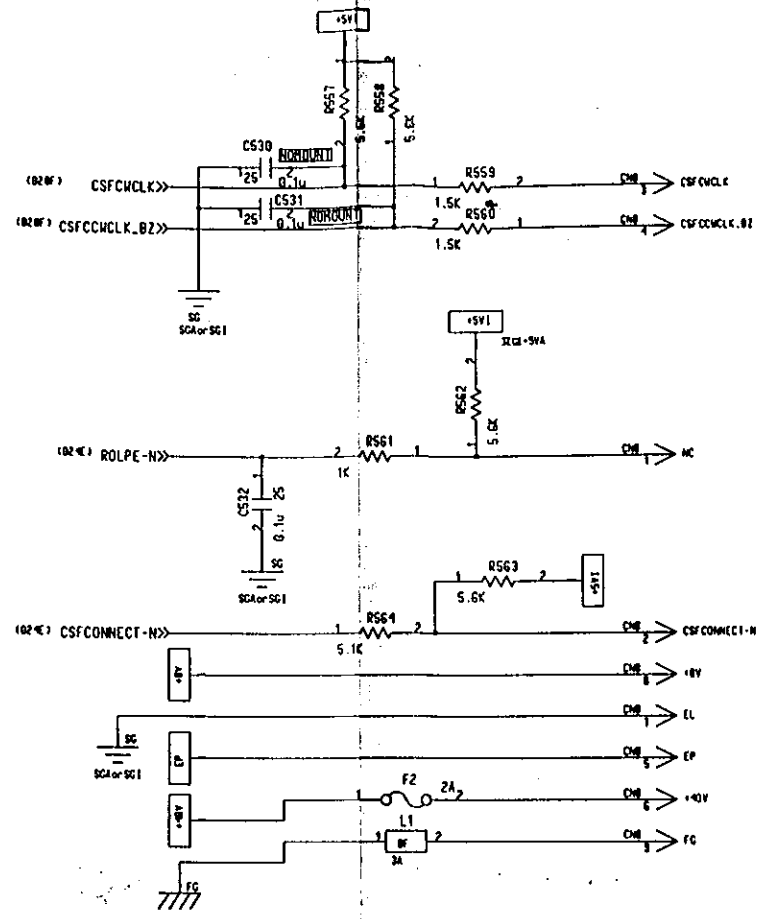


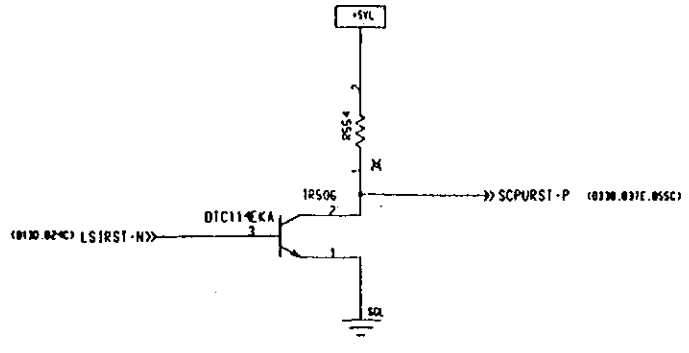
SDDV-PCB
(Driver Board) Rev. 7
Circuit Diagram 3/6

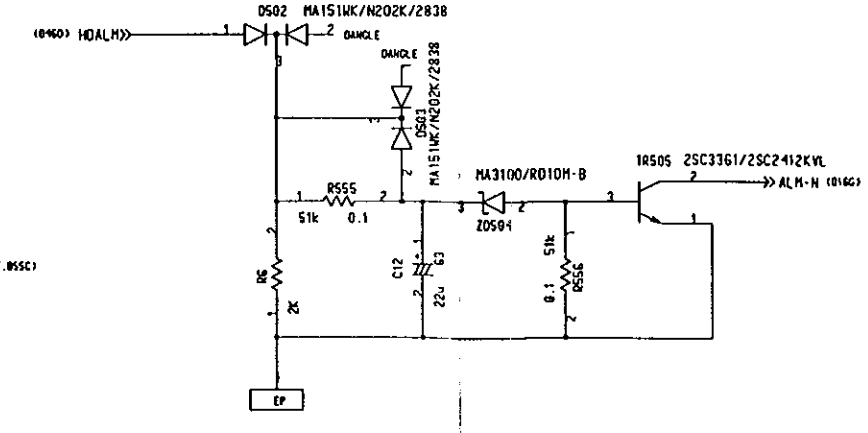

+5VA
RS16 2K
RS11 2.2K
ZD2SC2713 TRS02
(02BC) HEADON-P
2SB1225/2SB1351
RS18 1.2K
ZD1 RD35E-B7
ZD2 RD35E-B7
EP
SGA
C1 G3 470u
RMHDON1
ZD502 HA3300/RD10M-B
TR1
RM1 100K
Q1
Q2
DICA20 DA2
DICA20 DA3
(02BC) HEAD2-N
(02BC) HEAD3-N
(02BD) HEAD9-N
(02BC) HEAD1-N
(02BD) HEAD6-N
(02BD) HEAD5-N
(02BD) HEAD7-N
(02BC) HEAD4-N
(02BD) HEAD8-N
(05BC) HOALM
+5VD
A1344/UN2111/DTA114K
TRS03
2SD1472 TRS07
RS19 2K
RS20 100K
DANGLE
DS01 MA151WK/MA2QK/2SC
RS21 10K
2SA1163 TRS04
RS22 1.5K
RS23 5.1K
+10V
(0160,036C) HTEMP-N
CS36 0.01u 50
RMHDON1
(01BC) HEADGAP-N
RS24 10K
HTEMP
EL
HDGAP
SPU
SPV
SPW
(02BD) SPU
(02BD) SPV
(02BD) SPW
M10V
MA13412
C3 100u 50
ZD503 HA3300-M
RS30 3.3K
RS31 2.2K
R4 1.3K
R5 1.3K
IR3
L7 1000u
D1 DFM1E1
C4 22u 63
ZD4 RD20E-B
CS21 50 10u
CS22 50 1000u
R2 0.51
RS27 3K
RS28 220K
RS29 22K
CS28 50 6.8u
C2 100V 3.3u
(02BD) SPD_A
+40VF (03BC)
(02BD)PHASEA
(02BD)PHASEB
RS34 6.6K
RS35 6.6K
L8 3A
ZD3 RD110E-B
CS5 CS6 CS24 CS33
RS31 RS32 RS33
SDDV-PCB
(Driver Board) Rev. 7
Circuit Diagram 4/6



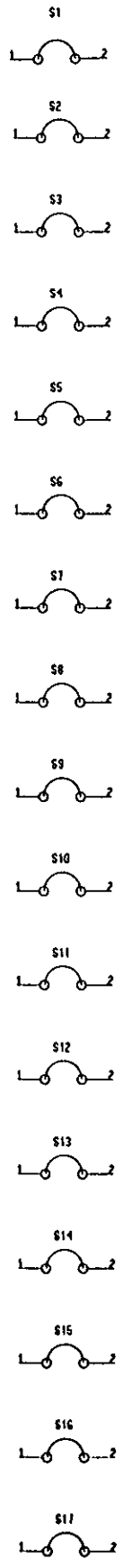




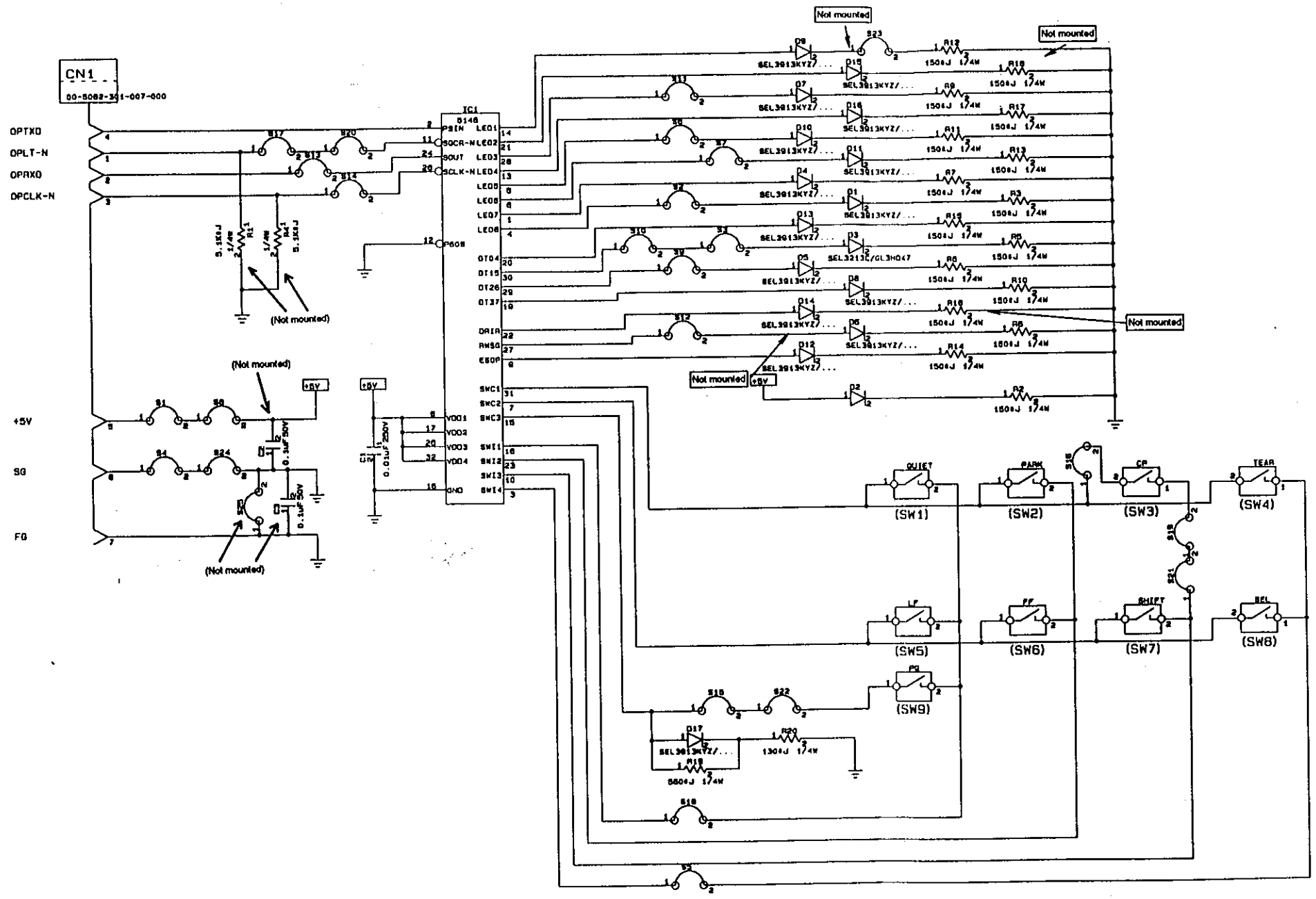




SDDV-PCB
(Driver Board) Rev. 7
Circuit Diagram 5/6



SDDV-PCB
(Driver Board) Rev. 7
Circuit Diagram 6/6

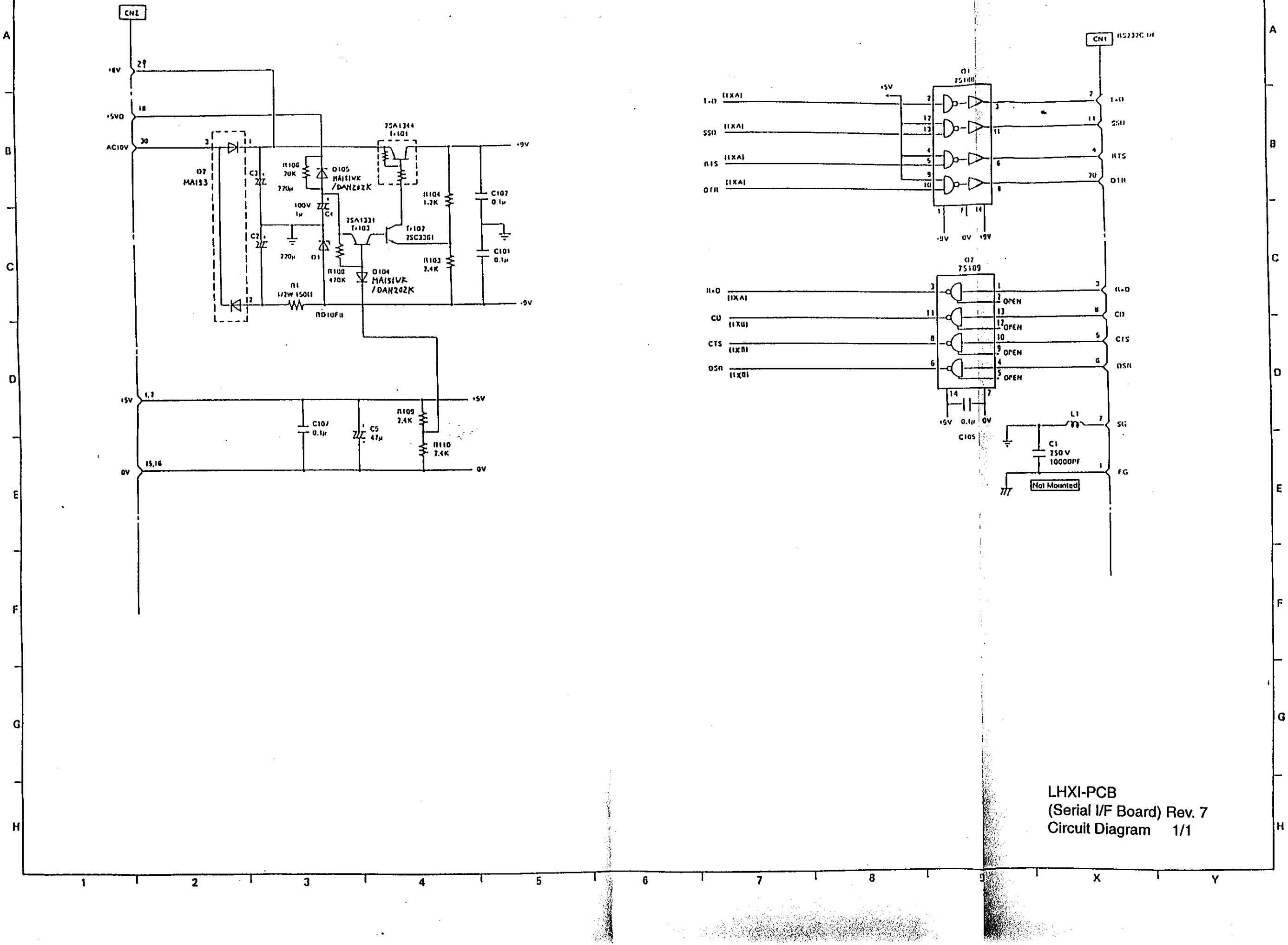


D1	SEL
D2	POW
D3	ALM
D4	MENU
D5	QUIET
D6	LQ(—)
D7	UTILITY (HSD)
D8	10
D9	17
D10	COURIER(—)
D11	PRESTIGE (UTY)
D12	12
D13	20
D14	GOTHIC(—)
D15	ORATOR (NLQ)
D16	15
D17	PROP

BU5148S Input

SW1	QUIET
SW2	PARK
SW3	CHA.P
SW4	TEAR
SW5	LF
SW6	FF/LOAD
SW7	SHIFT
SW8	SEL
SW9	PQ
SW10	—
SW11	—
SW12	—

LEOP-3 PCB
(Operation Panel) Rev. 5 & 6
Circuit Diagram 1/1



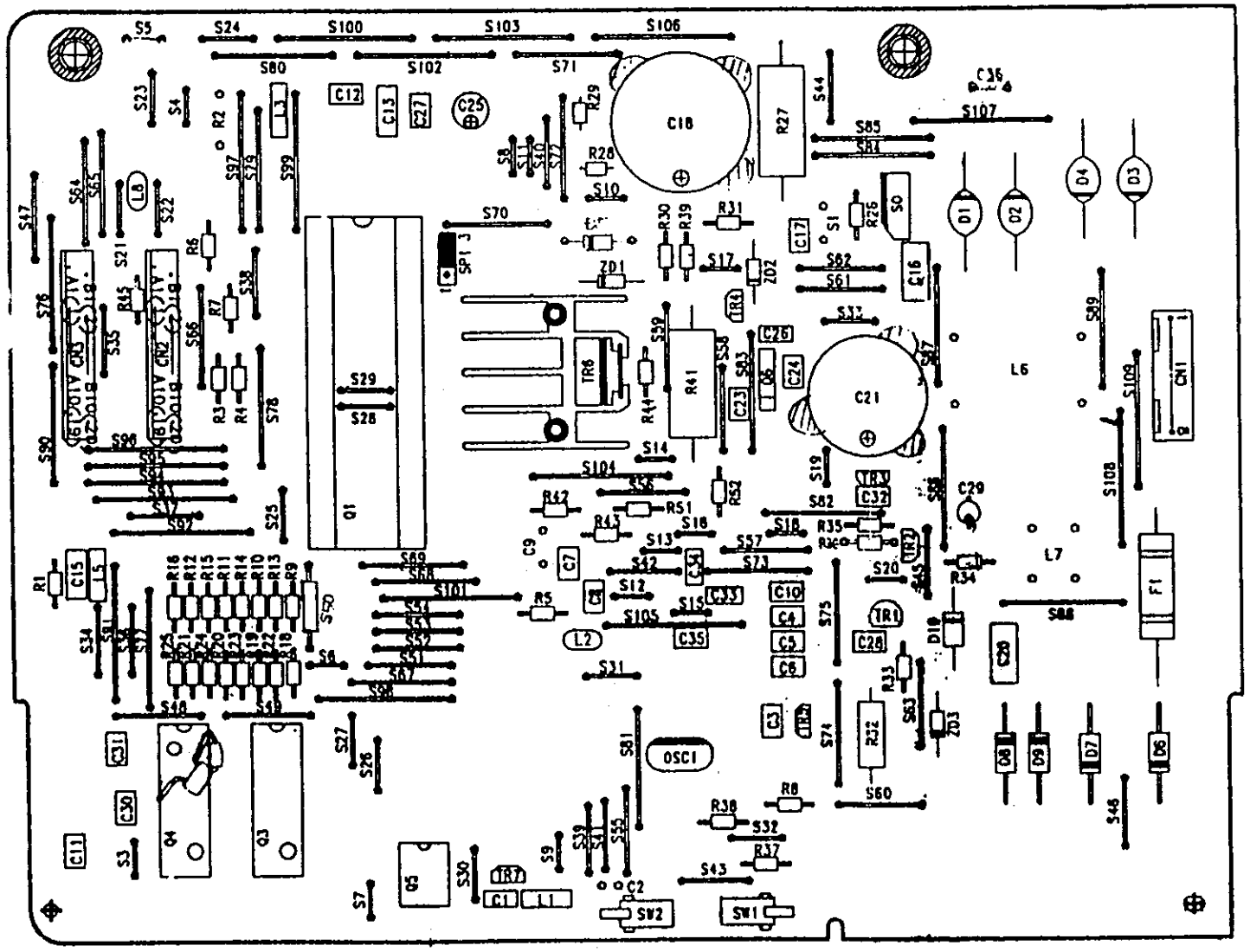
LHXI-PCB
(Serial I/F Board) Rev. 7
Circuit Diagram 1/1

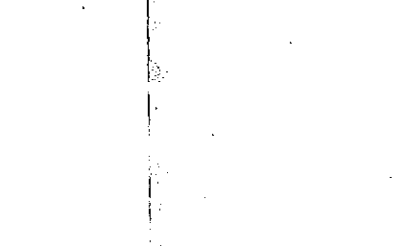
COMPONENT PARTS LIST

6. COMPONENT PARTS LIST

Drawing List

SDCT-PCB	(Power & Control Board)	Rev. 6 Rev. 7 Rev. 8	4YA4042-1543 Gxxx (ODA, OEL, OKI-INT)
SDDV-PCB	(Driver Board)	Rev. 4 Rev. 5 Rev. 6 Rev. 7	4YA4042-1549 G001
LEOP-3 PCB	(Operation Panel)	Rev. 5 & 6	4YA4042-1516 G003
LXHI-PCB	(Serial I/F Board)	Rev. 7	4YA4021-1050 G001





SDCT-PCB (Power & Control Board) Rev. 6
(4YA4042-1543Gxxx -1/6)

SDCT-PCB (Power & Control Board) Rev. 6
(4YA4042-1543Gxxx -2/6)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
1	D6-D9	EM01Z/SM1XN02/DSM1D2 Rectifier DI	610A0003M0001	4	
2	D1-D4	DSA3A2 Rectifier DI	610A0021L0092A	4	
3	D10	1SR004-40 Rectifier DI	610A0303M0004	1	
4	D5	1S953/1S2075K/1S2473 Signal DI	611A0003L0001	1	
5	ZD3	RD6.8E-B2 Zener DI	613A1231L0142B	1	
6	ZD1, ZD2	RD20E-B Zener-DI	613A1231L0252	2	
7	R26	RD14DX2E-1.2KΩJ RD Resistor	321A1023J0122	1	
8	R35, R51, R52, R5	RD14DX2E-100ΩJ RD Resistor	321A1023J0101	4	
9	R8, R37	RD14DX2E-10KΩJ RD Resistor	321A1023J0103	2	
10	R34, R38	RD14DX2E-200ΩJ RD Resistor	321A1023J0201	2	
11	R30, R31	RD14DX2E-2KΩJ RD Resistor	321A1023J0202	2	
12	R36	RD14DX2E-27KΩJ RD Resistor	321A1023J0273	1	
13	R39	RD14DX2E-430ΩJ RD Resistor	321A1023J0431	1	
14	R33	RD14DX2E-470ΩJ RD Resistor	321A1023J0471	1	
15	R1, R3, R4, R5, R7, R9-R16, R18-R25, R42, R43, R45	RD14DX2E-51ΩJ RD Resistor	321A1023J0510	24	
16	R44	RD14DX2E-18ΩJ RD Resistor	321A1023J0180	1	

SDCT-PCB (Power & Control Board) Rev. 6
(4YA4042-1543Gxxx -3/6)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
17	R32	RD1/2Y110ΩJ RD Resistor	321A1431J0111	1	
18	R29	RNM1/4C2-3.3KΩJ RD Resistor	323A4024F0332	1	
19	R28	RNM1/4C2-39KΩJ RD Resistor	323A4024F0393	1	
20	R27	MOR2B3.3KΩJ RS Resistor	324A1121J0332	1	
21	R41	MOR2B56ΩJ RS Resistor	324A1121J0560	1	
22	S50	RD1/4Y100ΩJ RD Resistor	321A1421J0101	1	
23	C16, C20	TCK45F2E103ZYA 250V CK Capacitor 10000PF	302A4027Z5103	4	
24	C3-C8, C10, C12, C17, C27, C28, C30-C32, C35	CK92F1H104ZY 50V CKCapacitor 0.1UF	303A0420Z3104	15	
25	C1	FK16C0G1H820J 50V CC Capacitor 82PF	303A1014C3820	1	
26	C13, C15	CK92F1E105ZS 25V CK Capacitor 1UP	303A4117Z2105	2	
27	C23, C24	CK92C1H103MS 50V CK Capacitor 0.01UF	303A4115M3103	2	
28	C33, C34, C38, C39	CC122CH1H220K 50V CC Capacitor 22PF	303A1006C9220	4	
29	C26	FK16C0G1H221J 50V CC Capacitor 220PF	303A1014C3221	1	
30	C25	SME10VB-100-OA 10V CE Capacitor 100UP	304A1123A1101	1	
31	C21	16VBSN-8200 (M) 16V CE Capacitor 8200UF	304A1037C9822	1	
32	C29	50MS5-1M 50V CE Capacitor 1UF	304A1046H1109	1	
33	C18	UVX1J222MRAY-1CA 63V CE Capacitor 2200UF	304A1086J1222	1	

SDCT-PCB (Power & Control Board) Rev. 6
(4YA4042-1543Gxxx -4/6)

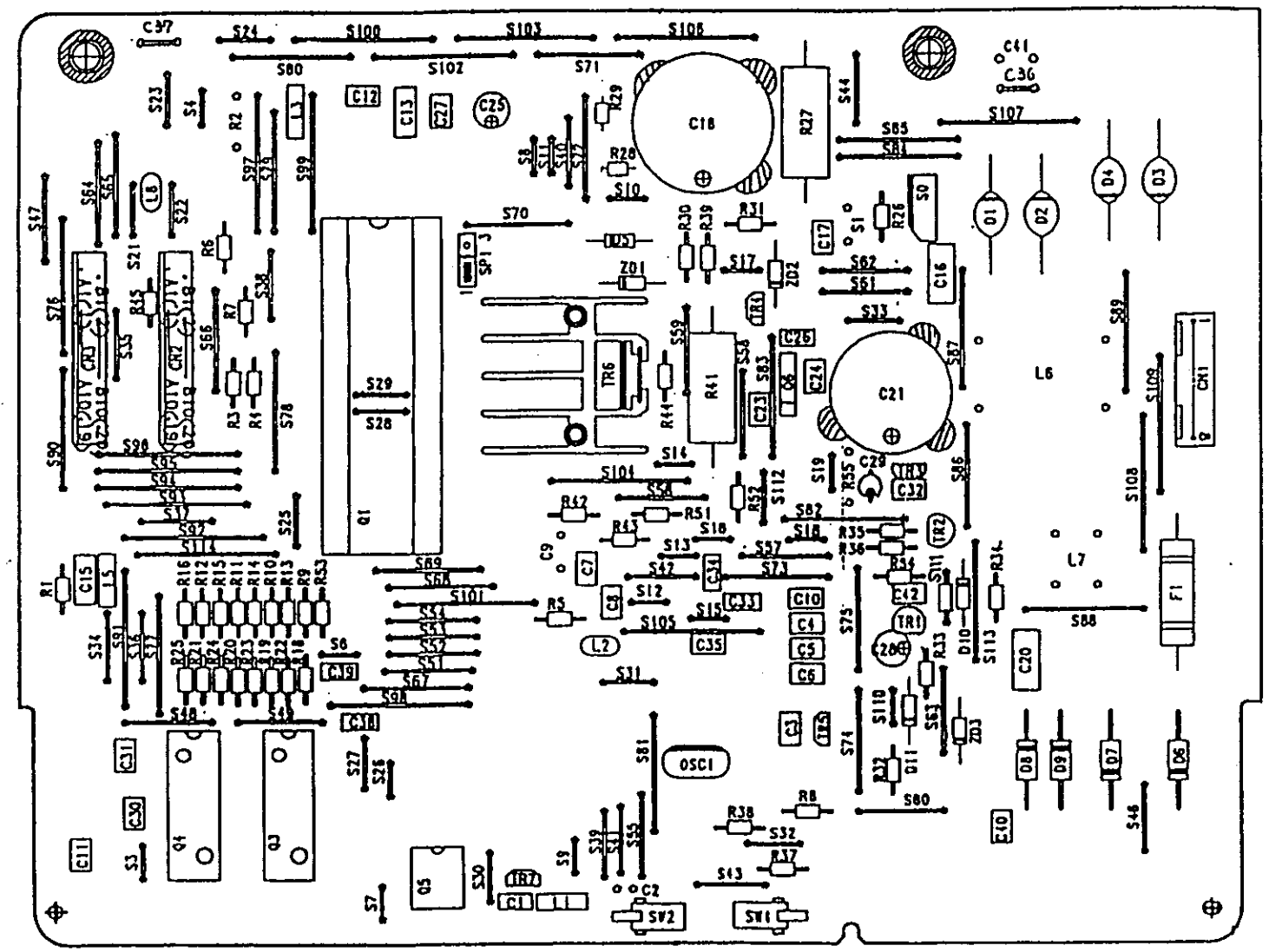
REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
34	C11	CK92C1H102MS 50V CK Capacitor 0.001UF	303A4115M3102	1	
35	Q6	LA5005 BIP Linear IC	720A1033M0001	1	
36	Q3, Q4	MSM51C464A-80RS MOS-D-RAM	802A0024F8301	2	
37	Q5	93LC46A-NW MOS-EEPROM	816A0303M0000	1	
38	Q501	MSM67X640GS-BK MOS-CPU (FP)	851A0324N0007	1	
39	Q502	74F08FP BIP Digital IC (SO)	700A9703N0008	1	
40	Q1	DICF-40CS-E IC Socket	245A1221P0400	1	
41	L3, L5	DST306-55F103Z EMI Filter	342A1004P2103	2	
42	L1	SBT-0210 Noise Filter	377A1108P0005	1	
43	L2, L8	ZBF253D-01 Beads Filter	377A1115P1309	2	
44	S3-S20, C36	0.65 Tin-plated Annealed Copper Wire	TA-0.65	19	
45	S21-S33	0.65 Tin-plated Annealed Copper Wire	TA-0.65	13	
46	S34-S46	0.65 Tin-plated Annealed Copper Wire	TA-0.65	13	
47	S47-S49, S51-S63	0.65 Tin-plated Annealed Copper Wire	TA-0.65	16	
48	S64-S75	0.65 Tin-plated Annealed Copper Wire	TA-0.65	12	

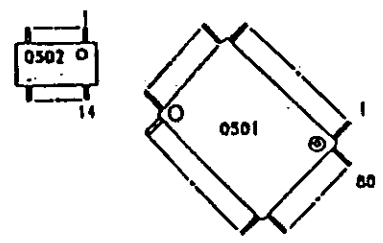
SDCT-PCB (Power & Control Board) Rev. 6
(4YA4042-1543Gxxx -5/6)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
49	S77-S90	0.65 Tin-plated Annealed Copper Wire	TA-0.65	14	
50	S76, S90-S109	0.65 Tin-plated Annealed Copper Wire	TA-0.65	20	
51	F1	230002 Glass Tube Fuse	540A5013T2104	1	
52	TR2, TR4, TR7	DTA114S PNP-HF-TR	600A1035M0005	3	
53	TR1	2SC458/458K NPN-HF-TR	602A1003M0003	1	
54	TR3, TR5	DTC114ESA NPN-HF-TR	602A1035M0007	2	
55	TR6	2SB1274 PNP-LF-TR	601A1232M0004	1	
56	SO	CR3CM-8 Gate Thyristor OFF	620A0022M0006E	1	
57	SW1, SW2	D2A-1220 Microswitch	207A1041P0001	2	
58	CN1	00-8263-0812-00-000 PC Connector	224A3357P0080	1	
59	CN2, CN3	20FE-BT-VK-N PC Connector	224A4134P0200	2	
60	TP1	IMSA-9206H-GF PC Connector	224A4080P0020	1	
61	SP1	IMSA9202B-1-03Z013GF PC Connector	224A4082P0030	1	

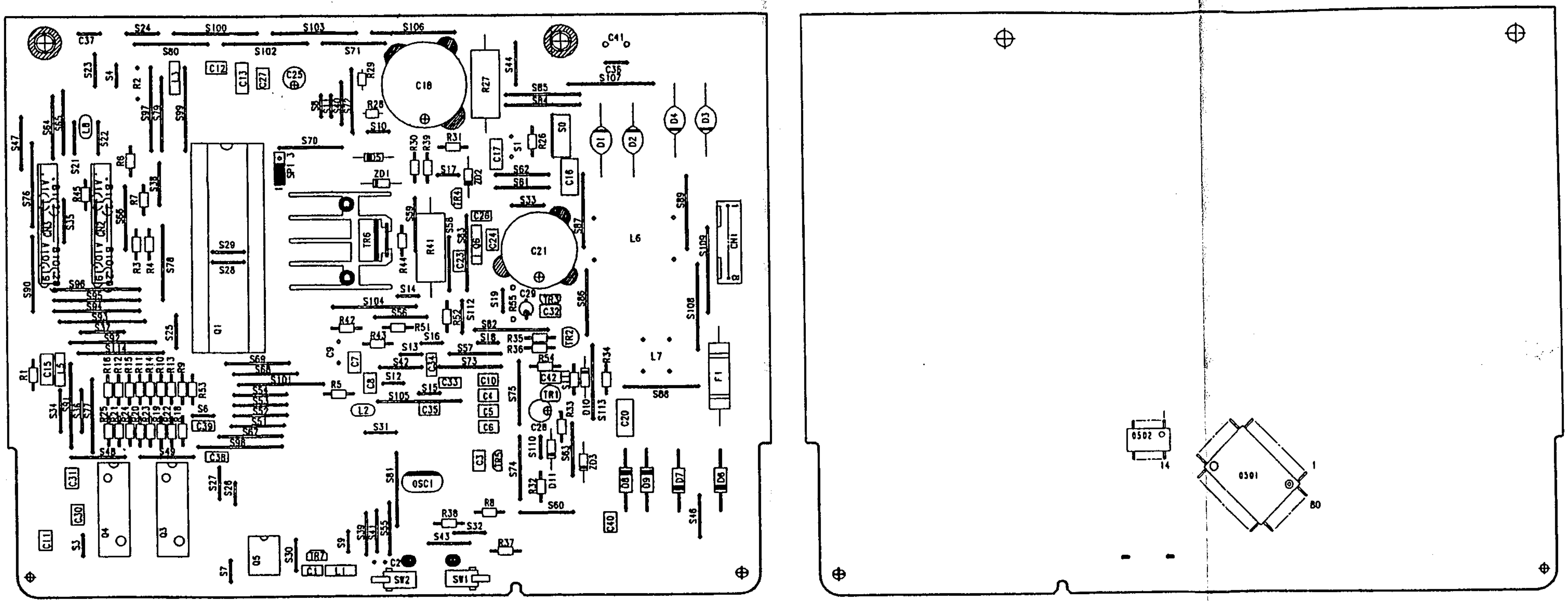
SDCT-PCB (Power & Control Board) Rev. 6
(4YA4042-1543Gxxx -6/6)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
62	OSC1	CST12.288MTW Ceramic Oscillator	381A1045B0017	1	
63	2	Heat Sink (GOT-2325-SPL)	PB4042-1548P001	1	





SDCT-PCB (Power & Control Board) Rev. 7
(4YA4042-1543Gxxx -1/6)



SDCT-PCB (Power & Control Board) Rev. 8
(4YA4042-1543Gxxx-2/6)

SDCT-PCB (Power & Control Board) Rev. 7 & 8
(4YA4042-1543Gxxx-3/6)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
1	D6-D9	EM01Z/SM1XN02/DSM1D2 Rectifier DI	610A0003M0001	4	
2	D1-D4	DSA3A2 Rectifier DI	610A0021L0092A	4	
3	D5, D10, D11	1S953/1S2075K/1S2473 Signal DI	611A0003L0001	3	
4	ZD3	RD5.6E-B Zener DI	613A1231L0122	1	
5	ZD1, ZD2	RD20E-B Zener DI	613A1231L0252	2	
6	R26	RD14DX2E-1.2KΩJ RD resistor	321A1023J0122	1	
7	R35, R51-R53, R5	RD14DX2E-100ΩJ RD resistor	321A1023J0101	5	
8	R8, R37	RD14DX2E-10KΩJ RD resistor	321A1023J0103	2	
9	R38	RD14DX2E-200ΩJ RD resistor	321A1023J0201	1	
10	R30, R31, R34	RD14DX2E-2KΩJ RD resistor	321A1023J0202	3	
11	R36	RD14DX2E-27KΩJ RD resistor	321A1023J0273	1	
12	R39	RD14DX2E-430ΩJ RD resistor	321A1023J0431	1	
13	R33	RD14DX2E-4.3KΩJ RD resistor	321A1023J0432	1	
14	R1, R3, R4, R6, R7, R9-R16, R18-R25, R42, R43, R45, S111	RD14DX2E-51ΩJ RD resistor	321A1023J0510	25	
15	R54	RD14DX2E-5.6KΩJ RD resistor	321A1023J0562	1	
16	R44	RD14DX2E-18ΩJ RD resistor	321A1023J0180	1	

SDCT-PCB (Power & Control Board) Rev. 7 & 8
(4YA4042-1543Gxxx-4/6)

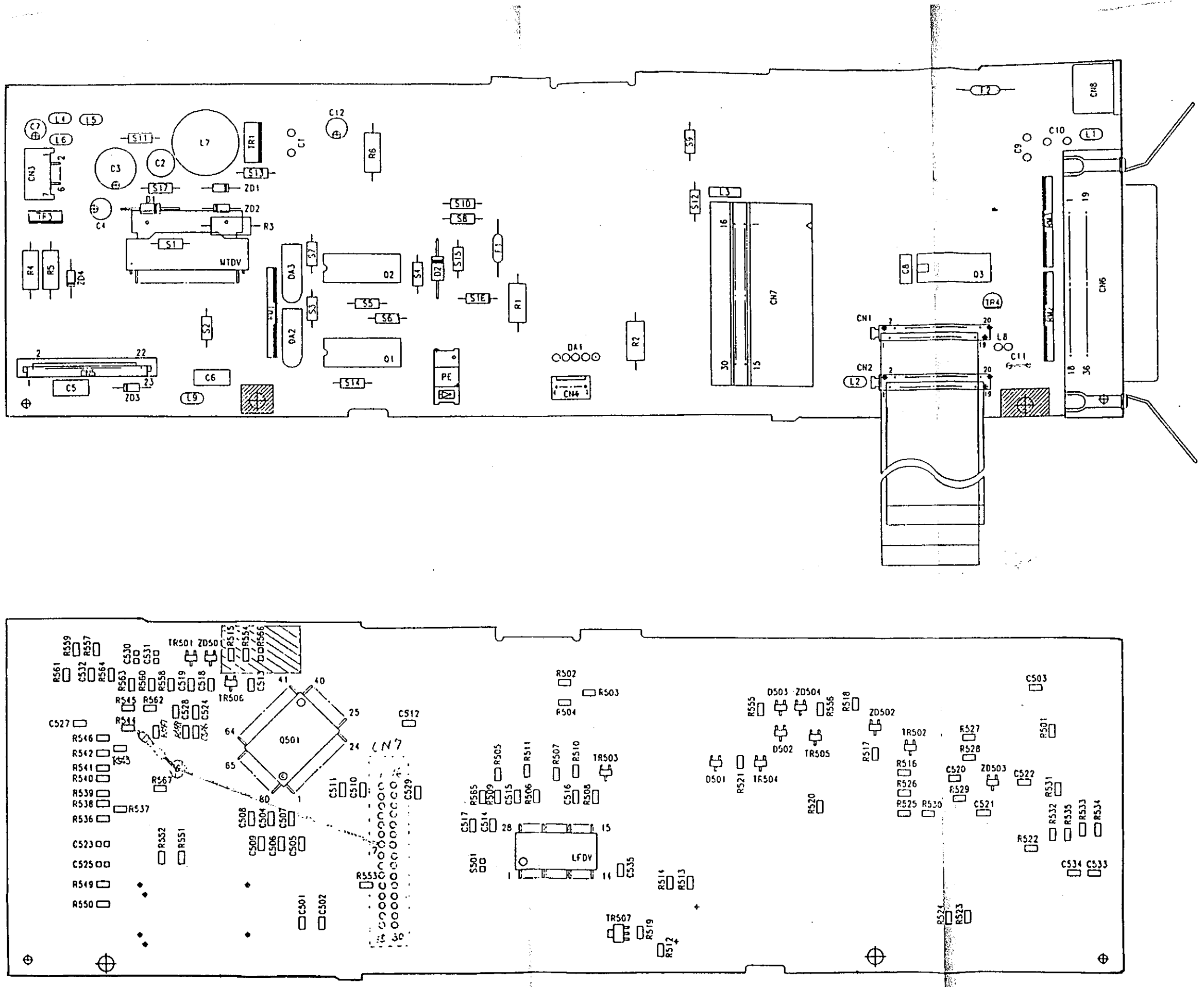
REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
17	R32	RD14DX2E-510ΩJ RD resistor	321A1023J0511	1	
18	R29	RNM1/4C2-3.3KΩF RN resistor	323A4024F0332	1	
19	R28	RNMI/4C2-39KΩF RN resistor	323A4024F0393	1	
20	R27	MOR2B3.3KΩJ RS resistor	324A1121J0332	1	
21	R41	MOR2B56ΩJ RS resistor	324A1121J0560	1	
22	C28	SME16VB-10-0A16V CE capacitor 10μF	304A1123C1100	1	
24	C16, C20	TCK45F2E103ZYA 250V CK capacitor 10000pF	302A4027Z5103	2	
25	C3-C8, C10-C12, C27, C30-C32, C35, C40	CK92F1H104ZY 50V CK capacitor 0.1μF	303A0420Z3104	15	
26	C1	FK16C0G1H820J 50V CC capacitor 82pF	303A1014C3820	1	
27	C13, C15, C17	CK92F1E105ZS 25V CK capacitor 1μF	303A4117Z2105	3	
28	C23, C24	CK92C1H103MS 50V CK capacitor 0.01μF	303A4115M3103	2	
29	C33, C34, C38, C39	CC122CH1H220K 50V CC capacitor 22pF	303A1006C9220	4	
30	C26	FK16C0G1H221J 50V CC capacitor 220pF	303A1014C3221	1	
31	C25	SME10VB-100-0A 10V CE capacitor 100μF	304A1123A1101	1	
32	C21	16VBSN-8200(M) 16V CE capacitor 8200μF	304A1037C9822	1	
33	C29	50MS5-1M 50V CE capacitor 1μF	304A1046H1109	1	
34	C18	UVX1J222MRAY-1CA 63V CE capacitor 2200μF	304A1086J1222	1	

SDCT-PCB (Power & Control Board) Rev. 7 & 8
(4YA4042-1543Gxxx-5/6)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
35	C42	CK92C1H102MS 50V CK capacitor 0.001μF	303A4115M3102	1	
36	Q6	LA5005 BIP linear IC	720A1033M0001	1	
37	Q3, Q4	MSM51C464A-80RS MOS-D-RAM	802A0024F8301	2	
38	Q5	93LC46A-NW MOS-EEPROM	816A0303M0000	1	
39	Q501	MSM67X640GS-BK MOS-CPU (FP)	851A0324N0007	1	
40	Q502	74F08FP BIP digital IC (SO)	700A9703N0008	1	
41	3	DICF-40CS-E IC socket	245A1221P0400	1	
42	L3, L5	DST306-55F103Z EMI filter	342A1004P2103	2	
43	L1	SBT-0210 Noise filter	377A1108P0005	1	
44	L2, L8	ZBF253D-01 Beads filter	377A1115P1309	2	
45	S3, S4, S6-S19, S110, C36, C37, S26	0.65 Tin-plated annealed copper wire	TA-0.65	20	
46	S21, S25, S27-S33, S112	0.65 Tin-plated annealed copper wire	TA-0.65	13	
47	S34-S44, S46	0.65 Tin-plated annealed copper wire	TA-0.65	12	
48	S47-S49, S51-S63	0.65 Tin-plated annealed copper wire	TA-0.65	16	
49	S64-S75, S86	0.65 Tin-plated annealed copper wire	TA-0.65	13	
50	S77-S85, S87-S90, S113	0.65 Tin-plated annealed copper wire	TA-0.65	14	
51	S76, S91-S109, S114	0.65 Tin-plated annealed copper wire	TA-0.65	21	

SDCT-PCB (Power & Control Board) Rev. 7 & 8
(4YA4042-1543Gxxx-6/6)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
52	F1	230002 Glass tube fuse	540A5013T2104	1	
53	TR4, TR7	DTA114S PNP-HF-TR	600A1035M0005	2	
54	TR1, TR2	2SC458/458K NPN-HF-TR	602A1003M0003	2	
55	TR3, TR5	DTC114ESA NPN-HF-TR	602A1035M0007	2	
56	TR6	2SB1274 PNP-LF-TR	601A1232M0004	1	
57	S0	CR6CM-8 Gate thyristor OFF	620A0022M0007	1	
58	SW1, SW2	D2A-1220 Microswitch	207A1041P0001	2	
59	CN1	00-8263-0812-00-000 PC connector	224A3357P0080	1	
60	CN2, CN3	20FE-BT-VK-N PC connector	224A4134P0200	2	
61	TP1	IMSA-9206H-GF PC connector	224A4080P0020	1	
62	SP1	IMSA9202B-1-03Z013GF PC connector	224A4082P0030	1	
63	OSC1	CST12.288MTW Ceramic oscillator	381A1045B0017	1	
64	2	Heat Sink (GOT-2325-SPL)	PB4042-1548P001	1	



SDDV-PCB (Driver Board) Rev. 4
(4YA4042-1549G001-1/7)

SDDV-PCB (Driver Board) Rev. 4
(4YA4042-1549G001 -2/7)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
1	D501-D503	MA151WK/N202K/2838 Signal DI (CP)	611A0003N0003	3	
2	D2	EM01Z/SM1XN02/DSM1D2 Rectifier DI	610A0003M0001	1	
3	D1	DFM1E1 Rectifier DI	610A0221M0001	1	
4	ZD504	MA3100/RD10M-B Zener DI (CP)	613A0103M0182	1	
5	ZD502	MA3300/RD30M-B Zener DI (CP)	613A0103M0292	1	
6	ZD501	RD2.7M-B1 Zener DI (CP)	613A0233M0042A	1	
7	ZD503	MA3300-M Zener DI (CP)	613A0291M0292M	1	
8	ZD4	RD20E-B Zener DI	613A1231L0252	1	
9	ZD1, ZD2	RD39E-B7 Zener DI	613A1231L0322G	2	
10	ZD3	RD110E-B Zener DI	613A1231L0432	1	
11	DA2, DA3	D1CA20 Diode Ary	761A2232M0401	2	
12	R545	RM73B2A101J RN Resistor (CP)	32A5003J0101	1	
13	R512	RM73B2A201J RN Resistor (CP)	323A5330J0201	1	
14	R502	RM73B2A471J RN Resistor (CP)	323A5003J0471	1	
15	R551, R565, R567	RM73B2A511J RN Resistor (CP)	323A5003J0511	3	
16	R544, R546, R547, R552, R561	RM73B2A102J RN Resistor (CP)	323A5003J0102	4	

SDDV-PCB (Driver Board) Rev. 4
(4YA4042-1549G001 -3/7)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
17	R518	RM73B2A122J RN Resistor (CP)	323A5003J0122	1	
18	R522, R532, R533, R559, R560	M73B2A152J RN Resistor (CP)	323A5003J0152	5	
19	R516, R519	RM73B2A202J RN Resistor (CP)	323A5003J0202	2	
20	R517, R531	RM73B2A222J RN Resistor (CP)	323A5003J0222	2	
21	R501, R503, R504	RM73B2A272J RN Resistor (CP)	323A5003J0272	4	
22	R527, R554	RM73B2A302J RN Resistor (CP)	323A5003J0302	2	
23	R530	RM73B2A332J RN Resistor (CP)	323A5003J0332	1	
24	R514, R523, R564	RM73B2A512J RN Resistor (CP)	323A5003J0512	3	
25	R534, R535, R553, R557, R558, R562, R563	RM73B2A562J RN Resistor (CP)	323A5003J0562	7	
26	R513, R515, R521, R524, R536-R543, R548-R550	RM73B2A103J RN Resistor (CP)	323A5003J0103	15	
27	R529	RM73B2A223J RN Resistor (CP)	323A5003J0223	1	
28	R555, R556	RM73B2A513J RN Resistor (CP)	323A5003J0513	2	
29	R520	RM73B2A104J RN Resistor (CP)	323A5003J0104	1	
30	R528	RM73B2A224J RN Resistor (CP)	323A5003J0224	1	
31	R525, R526	RM73B2A242F RN Resistor (CP)	323A5003F0242	2	
32	R505-R508	RM73B2A243F RN Resistor (CP)	323A5003F0243	4	
33	R511	RM73B2A563F RN Resistor (CP)	323A5003F0563	1	

SDDV-PCB (Driver Board) Rev. 4
(4YA4042-1549G001 -4/7)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
34	R509, R510	RM73B2A204F RN Resistor (CP)	323A5003F0204	2	
35	R6	RD1/2Y2KΩJ RD Resistor	321A1431J0202	1	
36	R4, R5	RD1/2Y1.3KΩJ RD Resistor	321A1431J0132	2	
37	R1-R3	MSF1/2B0.51ΩJ RS Resistor	324A1001J0518	3	
38	RM2, RM3	MRM-8-332JA Block Resistor	334A3268J0332	2	
39	RM1	MRM-8-104JA Block Resistor	334A3268J0104	1	
40	C521	CC2012CH1H100D 50V CC Capacitor (CP)	303A3007C0100	1	
41	C505-C509	CC2012CH1H220J 50V CC Capacitor (CP)	303A3007C0220	5	
42	C510, C511	CC2012CH1H101J 50V CC Capacitor (CP)	303A3007C0101	2	
43	C524	CC2012SL1H561J 50V CC Capacitor (CP)	303A3007K0561	1	
44	C517, C526, C533, C534	CC2012SL1H102J 50V CC Capacitor (CP)	303A3007K0102	4	
45	C522	CK2012B1H102K 50V CK Capacitor (CP)	303A6008K3102	1	
46	C514	CK2012B1H152K 50V CK Capacitor (CP)	303A6008K3152	1	
47	C515, C516, C520, C504	CK2012B1H103K 50V CK Capacitor (CP)	303A6008K3103	4	
48	C501-C503, C512, C513, C518, C519, C527-C529, C532, C535	CK2012F1E104Z 25V CK Capacitor (CP)	303A6008Z2104	12	
49	C5, C6	TCK45F2E103ZYA 250V CK Capacitor 10000PF	302A4027Z5103	3	

SDDV-PCB (Driver Board) Rev. 4
(4YA4042-1549G001 -5/7)

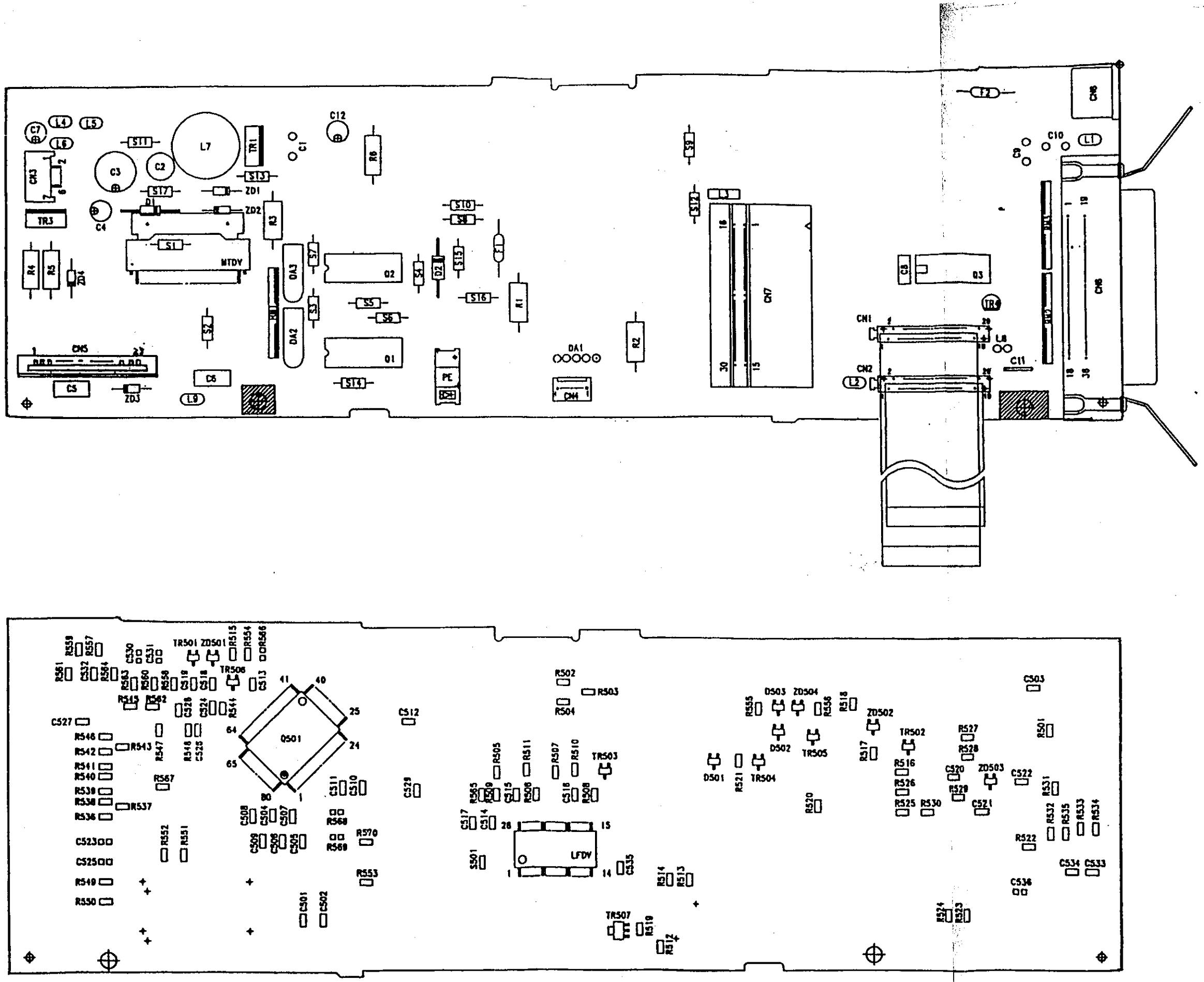
REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
50	C8	CK92F1E105ZS 25V CK Capacitor 1UF	303A4117Z2105	1	
51	C3	SXE50VB-100 50V CE Capacitor 100UF	304A1034H1101	1	
52	C2	SME100VB-3R3BP-OA CE Capacitor 2.2UF	304A1122A2339	1	
53	C7	SME25VB-10-OA 25V CE Capacitor 10UF	304A1123E1100	1	
54	C4, C12	KMG63VB-22M 63V CE Capacitor 22UF	304A1164J1220	2	
55	Q501	MSM10S0110-080GS-BK MOS Digital IC (FP)	702A4524N1082	1	
56	Q3	74LS06P BIP Digital IC	700A0503M0006	1	
57	Q1, Q2	LB1731-H BIP-INF-IC	710A2031M0002	2	
58	LFDV	MTD2005F BIP Linear IC (SO)	720A1816N0001	1	
59	MTDV	HA13412 BIP Linear IC	720A4021E0004	1	
60	L3	DST306-55F103Z EMI Filter	342A1004P2103	1	
61	L7	RSL1513N102K/OL1614 H Coil	353A3040K0102	1	
62	L1, L2, L4-L6, L9	ZBF253D-01 Beads Filter	377A1115P1309	6	
63	S1-S17	JPW02 Short Wire	321A1520P0001	17	

SDDV-PCB (Driver Board) Rev. 4
(4YA4042-1549G001 -6/7)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
64	F1, F2	251-002 Fuse	540A2208S1202	2	
65	TR501, TR503	A1344/UN2111/DTA114K PNP-HF-TR (CP)	600A1003N0003	2	
66	TR504	2SA1163 PNP-HF-TR (CP)	600A1025N0033	1	
67	TR505	2SC3361/2SC2412KVL NPN-HF-TR (CP)	602A1003N0002	1	
68	TR502	2SC2713 NPN-HF-TR (CP)	602A1025N0050	1	
69	TR506	DTC114EKA NPN-HF-TR (CP)	602A1035N0005	1	
70	TR507	2SD1472 NPN-LF-TR (CP)	603A1121N0007	1	
71	TR4	2SB740 PNP-LF-TR	601A1121M0004	1	
72	TR1	2SB1225/2SB1351 PNP-LF-TR	601A1203M0003	1	
73	TR3	2SB1274 PNP-LF-TR	601A1232M0004	1	
74	PE	SG-206 Photo Coupler	652A0114M0003	1	
75	CN6	57RE-40360-730B-D29A Square-shaped Connector	220A1783P0360	1	
76	CN8	TCS7588-01-201 Round-shaped Connector	221A1525P0080	1	
77	CN7	MCR69-30D-2.54DS PC Connector	224A1052P0300	1	

SDDV-PCB (Driver Board) Rev. 4
(4YA4042-1549G001 -7/7)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
78	CN4	00-8263-0412-00-000 PC Connector	224A3357P0040	1	
79	CN3	07FE-ST-M PC Connector	224A4135P0070	1	
80	CN5	23FE-BT-VK-N PC Connector	224A4134P0230	1	
81	CN1, CN2	00-5062-301-020-000 PC Connector	224A5114P0200	2	
82	3	TW-VFM-20-100-B Fuji Card	238A1122P0001	1	
83	2	TW-VFM-20-130-B Fuji Card	238A1122P0002	1	
84	C11	Short wire (U-shape) 0.65 P=5.0	KH-31036-50	1	
85	6	Wire (green)	LY-6507	1	
86	5	Acetate cloth tape (white)	YC4061-1004P001	1	
87	4	RD14DX2E-100ΩJ RD Resistor	321A1023J0101	1	



SDDV-PCB (Driver Board) Rev. 5 & 6
(4YA4042-1549G001 -1/7)

SDDV-PCB (Driver Board) Rev. 5 & 6
(4YA4042-1549G001 -2/7)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
1	D501-D503	MA151WK/N202K/2838 Signal DI (CP)	611A0003N0003	3	
2	D2	EM01Z/SM1XN02/DSM1D2 Rectifier DI	610A0003M0001	1	
3	D1	DFM1E1 Rectifier DI	610A0221M0001	1	
4	ZD504	MA3100/RD10M-B Zener-DI (CP)	613A0103M0182	1	
5	ZD502	MA3300/RD30M-B Zener DI (CP)	613A0103M0292	1	
6	ZD501	RD2.7M-B1 Zener DI (CP)	613A0233M0042A	1	
7	ZD503	MA3300-M Zener DI (CP)	613A0291M0292M	1	
8	ZD4	RD20E-B Zener DI	613A1231L0252	1	
9	ZD1, ZD2	RD39E-B7 Zener DI	613A1231L0322G	2	
10	ZD3	RD110E-B Zener DI	613A1231L0432	1	
11	DA2, DA3	D1CA20 Diode array	761A2232M0401	2	
12	R545	RM73B2A101J RN resistor (CP)	323A5003J0101	1	
13	R512	RM73B2A201J RN resistor (CP)	323A5003J0201	1	
14	R502	RM73B2A471J RN resistor (CP)	323A5003J0471	1	
15	R551, R565, R567	RM73B2A511J RN resistor (CP)	323A5003J0511	3	
16	R544, R546, R547, R552, R561	RM73B2A102J RN resistor (CP)	323A5003J0102	5	

SDDV-PCB (Driver Board) Rev. 5 & 6
(4YA4042-1549G001 -3/7)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
17	R518	RM73B2A122J RN resistor (CP)	323A5003J0122	1	
18	R522, R532, R533, R559, R560	RM73B2A152J RN resistor (CP)	323A5003J0152	5	
19	R516, R519	RM73B2A202J RN resistor (CP)	323A5003J0202	2	
20	R517, R531	RM73B2A222J RN resistor (CP)	323A5003J0222	2	
21	R501, R503, R504	RM73B2A272J RN resistor (CP)	323A5003J0272	3	
22	R527, R554	RM73B2A302J RN resistor (CP)	323A5003J0302	2	
23	R530	RM73B2A332J RN resistor (CP)	323A5003J0332	1	
24	R514, R523, R564	RM73B2A512J RN resistor (CP)	323A5003J0512	3	
25	R534, R535, R553, R557, R558, R562, R563	RM73B2A562J RN resistor (CP)	323A5003J0562	7	
26	R513, R515, R521, R524, R536-R543, R548-R550	RM73B2A103J RN resistor (CP)	323A5003J0103	15	
27	R529	RM73B2A223J RN resistor (CP)	323A5003J0223	1	
28	R555, R556	RM73B2A513J RN resistor (CP)	323A5003J0513	2	
29	R520	RM73B2A104J RN resistor (CP)	323A5003J0104	1	
30	R528	RM73B2A224J RN resistor (CP)	323A5003J0224	1	
31	R525, R526	RM73B2A242F RN resistor (CP)	323A5003F0242	2	
32	R505-R508	RM73B2A243F RN resistor (CP)	323A5003F0243	4	
33	R511	RM73B2A563F RN resistor (CP)	323A5003F0563	1	

SDDV-PCB (Driver Board) Rev. 5 & 6
(4YA4042-1549G001 -4/7)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
34	R509, R510	RM73B2A204F RN resistor (CP)	323A5003F0204	2	
35	R6	RD1/2Y2KΩJ RD resistor	321A1431J0202	1	
36	R4, R5	RD1/2Y1.3KΩJ RD resistor	321A1431J0132	2	
37	R1-R3	MSF1/2B0.51ΩJ RS resistor	3234A1001J0518	3	
38	RM2, RM3	MRM-8-332JA Block resistor	334A3268J0332	2	
39	RM1	MRM-8-104JA Block resistor	334A3268J0104	1	
40	C521	CC2012CH1H100D 50V CC capacitor (CP)	303A3007C0100	1	
41	C505-C509	CC2012CH1H220J 50V CC capacitor (CP)	303A3007C0220	5	
42	C510, C511	CC2012CH1H101J 50V CC capacitor (CP)	303A3007C0101	2	
43	C524	CC2012SL1H561J 50V CC capacitor (CP)	303A3007K0561	1	
44	C517, C526, C533, C534	CC2012SL1H102J 50V CC capacitor (CP)	303A3007K0102	4	
45	C522	CK2012B1H102K 50V CK capacitor (CP)	303A6008K3102	1	
46	C514	CK2012B1H152K 50V CK capacitor (CP)	303A6008K3152	1	
47	C515, C516, C520, C504	CK2012B1H103K 50V CK capacitor (CP)	303A6008K3103	4	
48	C501-C503, C512, C513, C518, C519, C527-C529, C532, C535	CK2012F1E104Z 25V CK capacitor (CP)	303A6008Z2104	12	
49	C5, C6	TCK45F2E103ZYA 250V CK capacitor 10000pF	302A4027Z5103	2	

SDDV-PCB (Driver Board) Rev. 5 & 6
(4YA4042-1549G001 -5/7)

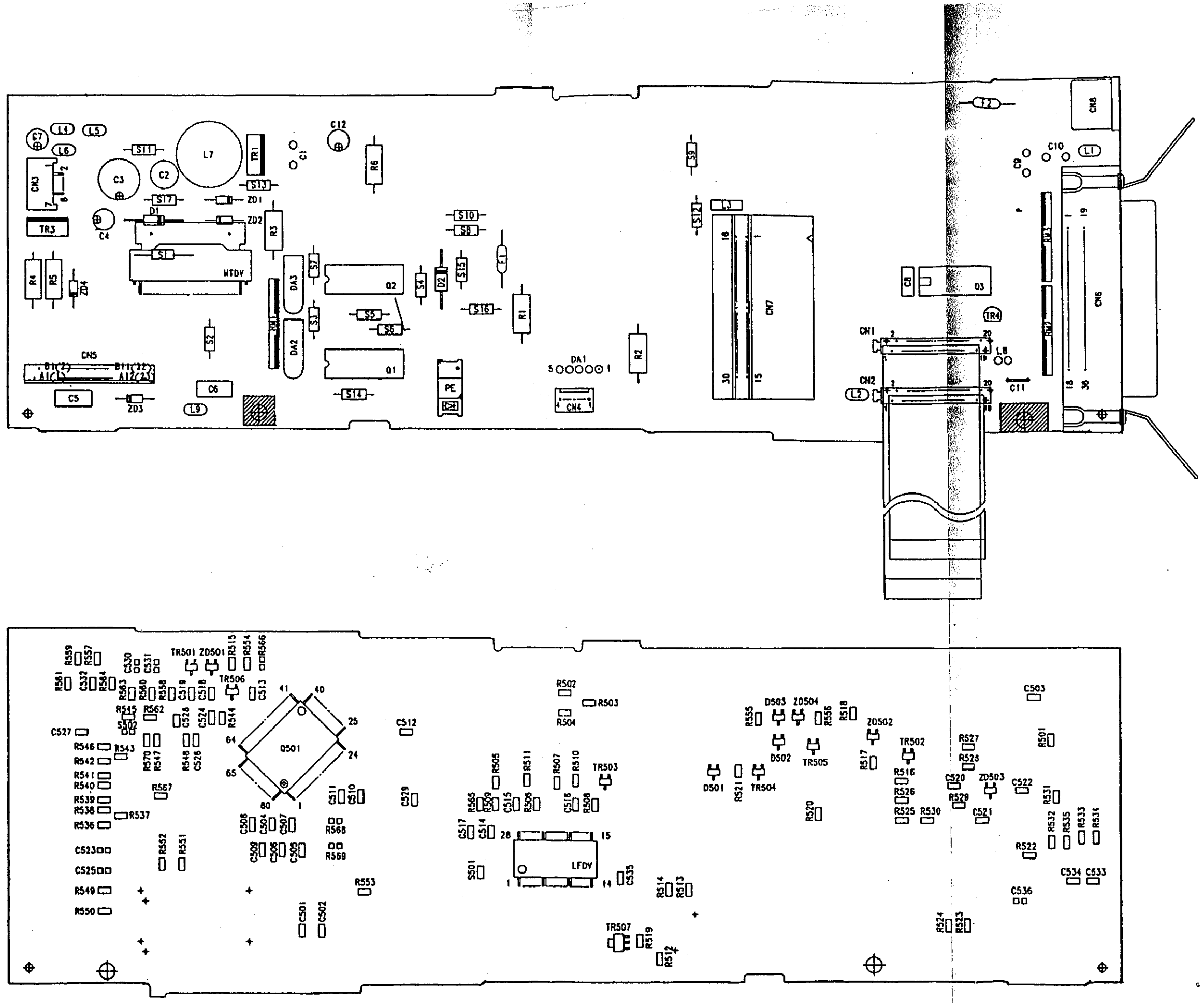
REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
50	C8	CK92F1E105ZS 25V CK capacitor 1μF	303A4117Z2105	1	
51	C3	SXE50VB-100 50V CE capacitor 100μF	304A1034H1101	1	
52	C2	SME100VB-3R3BP-0A CE capacitor 3.3μF	304A1122A2339	1	
53	C7	SME25VB-10-0A 25V CE capacitor 10μF	304A1123E1100	1	
54	C4, C12	KMG63VB-22M 63V CE capacitor 22μF	304A1164J1220	2	
55	Q501	MSM10S0110-080GS-BK MOS digital IC (FP)	702A4524N1082	1	
56	Q3	74LS06P BIP digital IC	700A0503M0006	1	
57	Q1, Q2	LB1731-H BIP-INF-IC	710A2031M0002	2	
58	LFDV	MTD2005F BIP linear IC (SO)	720A1816N0001	1	
59	MTDV	HA13412 BIP linear IC	720A4021E0004	1	
60	L3	DST306-55F103Z EMI filter	342A1004P2103	1	
61	L7	RSL1513N102K/OL1614 H Coil	353A3040K0102	1	
62	L1,L2, L4-L6, L9	ZBF253D-01 Beads filter	377A1115P1309	6	
63	S501, R570	2125JPW Chip jumper (CP)	323A5003P0001	2	Rev. 5: R570 NOT MOUNTED
64	S1-S17	JPW02 Jumper wire	321A1520P0001	17	
65	C11	Short wire (U-shape) 0.65 P=5.0	KH-31036-50	1	
66	F1, F2	251-002 Fuse	540A2208S1202	2	

SDDV-PCB (Driver Board) Rev. 5 & 6
(4YA4042-1549G001 -6/7)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
67	TR501, TR503	A1344/UN2111/DTA114K PNP-HF-TR (CP)	600A1003N0003	2	
68	TR504	2SA1163 PNP-HF-TR (CP)	600A1025N0033	1	
69	TR505	2SC3361/2SC2412KVL NPN-HF-TR (CP)	602A1003N0002	1	
70	TR502	2SC2713 NPN-HF-TR (CP)	602A1025N0050	1	
71	TR506	DTC114EKA NPN-HF-TR (CP)	602A1035N0005	1	
72	TR507	2SD1472 NPN-LF-TR (CP)	603A1121N0007	1	
73	TR4	2SB740 PNP-LF-TR	601A1121M0004	1	
74	TR1	2SB1225/2SB1351 PNP-LF-TR	601A1203M0003	1	
75	TR3	2SB1274 PNP-LF-TR	601A1232M0004	1	
76	PE	SG-206 Photo coupler	652A0114M0003	1	
77	CN6	57RE-40360-730B-D29A Square-shaped connector	220A1783P0360	1	
78	CN8	TCS7588-01-201 Round-shaped connector	221A1525P0080	1	
79	CN7	MCR69-30D-2.54DS PC connector	224A1052P0300	1	
80	CN4	00-8263-0412-00-000 PC connector	224A3357P0040	1	
81	CN3	07FE-ST-M PC connector	224A4135P0070	1	
82	CN5	23FE-BT-VK-N PC connector	224A4134P0230	1	
83	CN1, CN2	00-5062-301-020-000 PC connector	224A5114P0200	2	

SDDV-PCB (Driver Board) Rev. 5 & 6
(4YA4042-1549G001 -7/7)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
84	3	TW-VFM-20-100-B Fuji card	238A1122P0001	1	
85	2	TW-VFM-20-130-B Fuji card	238A1122P0002	1	



SDDV-PCB (Driver Board) Rev. 7
(4YA4042-1549G001 -1/7)

SDDV-PCB (Driver Board) Rev. 7
(4YA4042-1549G001 -2/7)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
1	D501-D503	MA151WK/N202K/2838 Signal DI (CP)	611A0003N0003	3	
2	D2	EM01Z/SM1XN02/DSM1D2 Rectifier DI	610A0003M0001	1	
3	D1	DFM1E1 Rectifier DI	610A0221M0001	1	
4	ZD504	MA3100/RD10M-B Zener DI (CP)	613A0103M0182	1	
5	ZD502	MA3300/RD30M-B Zener DI (CP)	613A0103M0292	1	
6	ZD501	RD2.7M-B1 Zener DI (CP)	613A0233M0042A	1	
7	ZD503	MA3300-M Zener DI (CP)	613A0291M0292M	1	
8	ZD4	RD20E-B Zener DI	613A1231L0252	1	
9	ZD1, ZD2	RD39E-B7 Zener DI	613A1231L0322G	2	
10	ZD3	RD110E-B Zener DI	613A1231L0432	1	
11	DA2, DA3	D1CA20 Diode array	761A2232M0401	2	
12	R545	RM73B2A101J RN resistor (CP)	323A5003J0101	1	
13	R512	RM73B2A201J RN resistor (CP)	323A5003J0201	1	
14	R502	RM73B2A471J RN resistor (CP)	323A5003J0471	1	
15	R551, R565, R567	RM73B2A511J RN resistor (CP)	323A5003J0511	3	
16	R544, R546, R547, R552, R561	RM73B2A102J RN resistor (CP)	323A5003J0102	5	

SDDV-PCB (Driver Board) Rev. 7
(4YA4042-1549G001 -3/7)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
17	R518	RM73B2A122J RN resistor (CP)	323A5003J0122	1	
18	R522, R532, R533, R559, R560	RM73B2A152J RN resistor (CP)	323A5003J0152	5	
19	R516, R519	RM73B2A202J RN resistor (CP)	323A5003J0202	2	
20	R517, R531	RM73B2A222J RN resistor (CP)	323A5003J0222	2	
21	R501, R503, R504	RM73B2A272J RN resistor (CP)	323A5003J0272	3	
22	R527, R554	RM73B2A302J RN resistor (CP)	323A5003J0302	2	
23	R530	RM73B2A332J RN resistor (CP)	323A5003J0332	1	
24	R514, R523, R564	RM73B2A512J RN resistor (CP)	323A5003J0512	3	
25	R534, R535, R553, R557, R558, R562, R563	RM73B2A562J RN resistor (CP)	323A5003J0562	7	
26	R513, R515, R521, R524, R536-R543, R548-R550	RM73B2A103J RN resistor (CP)	323A5003J0103	15	
27	R529	RM73B2A223J RN resistor (CP)	323A5003J0223	1	
28	R555, R556	RM73B2A513J RN resistor (CP)	323A5003J0513	2	
29	R520	RM73B2A104J RN resistor (CP)	323A5003J0104	1	
30	R528	RM73B2A224J RN resistor (CP)	323A5003J0224	1	
31	R525, R526	RM73B2A242F RN resistor (CP)	323A5003F0242	2	
32	R505-R508	RM73B2A243F RN resistor (CP)	323A5003F0243	4	
33	R511	RM73B2A563F RN resistor (CP)	323A5003F0563	1	

SDDV-PCB (Driver Board) Rev. 7
(4YA4042-1549G001 -4/7)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
34	R509, R510	RM73B2A204F RN resistor (CP)	323A5003F0204	2	
35	R6	RD1/2Y2KΩJ RD resistor	321A1431J0202	1	
36	R4, R5	RD1/2Y1.3KΩJ RD resistor	321A1431J0132	2	
37	R1-R3	MSF1/2B0.51ΩJ RS resistor	324A1001J0518	3	
38	RM2, RM3	MRM-8-332JA Block resistor	334A3268J0332	2	
39	RM1	MRM-8-104JA Block resistor	334A3268J0104	1	
40	C521	CC2012CH1H100D 50V CC capacitor (CP)	303A3007C0100	1	
41	C505-C509	CC2012CH1H220J 50V CC capacitor (CP)	303A3007C0220	5	
42	C510, C511	CC2012CH1H101J 50V CC capacitor (CP)	303A3007C0101	2	
43	C524	CC2012SL1H561J 50V CC capacitor (CP)	303A3007K0561	1	
44	C517, C526, C533, C534	CC2012SL1H102J 50V CC capacitor (CP)	303A3007K0102	4	
45	C522	CK2012B1H102K 50V CK capacitor (CP)	303A6008K3102	1	
46	C514	CK2012B1H152K 50V CK capacitor (CP)	303A6008K3152	1	
47	C515, C516, C520, C504	CK2012B1H103K 50V CK capacitor (CP)	303A6008K3103	4	
48	C501-C503, C512, C513, C518, C519, C527-C529, C532, C535	CK2012F1E104Z 25V CK capacitor (CP)	303A6008Z2104	12	
49	C5, C6	TCK45F2E03ZYA 250V CK capacitor 10000pF	302A4027Z5103	2	

SDDV-PCB (Driver Board) Rev. 7
(4YA4042-1549G001 -5/7)

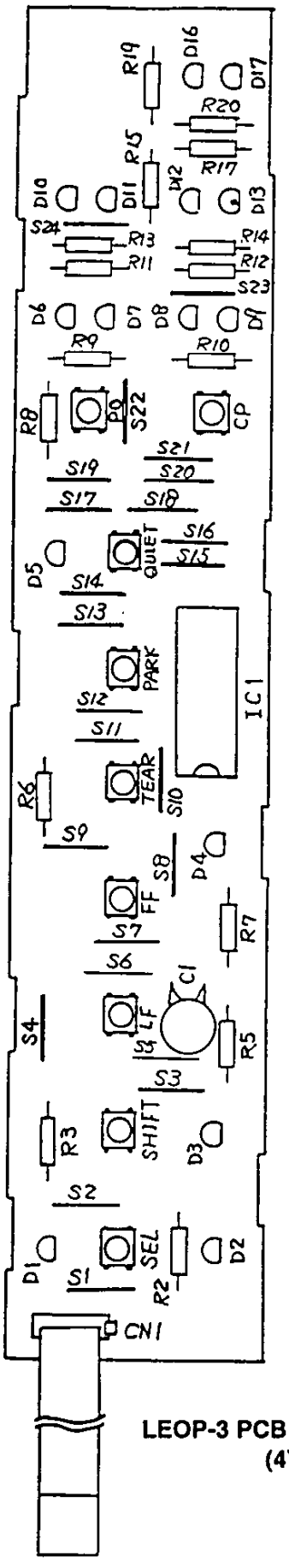
REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
50	C8	CK92F1E105ZS 25V CK capacitor 1μF	303A4117Z2105	1	
51	C3	SXE50VB-100 50V CE capacitor 100μF	304A1034H1101	1	
52	C2	SME100VB-3R3BP-0A CE capacitor 3.3μF	304A1122A2339	1	
53	C7	SME25VB-10-0A 25V CE capacitor 10μF	304A1123E1100	1	
54	C4, C12	KMG63VB-22M 63V CE capacitor 22μF	304A1164J1220	2	
55	Q501	MSM10S0110-080GS-BK MOS digital IC (FP)	702A4524N1082	1	
56	Q3	74LS06P BIP digital IC	700A0503M0006	1	
57	Q1, Q2	LB1731-H BIP-INF-IC	710A2031M0002	2	
58	LFDV	MTD2005F BIP linear IC (SO)	720A1816N0001	1	
59	MTDV	HA13412 BIP linear IC	720A4021E0004	1	
60	L3	DST306-55F103Z EMI filter	342A1004P2103	1	
61	L7	RSL1513N102K/OL1614 H Coil	353A3040K0102	1	
62	L1,L2, L4-L6, L9	ZBF253D-01 Beads filter	377A1115P1309	6	
63	S501, R570	2125JPW Chip jumper (CP)	323A5003P0001	2	
64	S1-S17	J1/4Z Jumper wire	3211520P0001	17	
65	C11	Short wire (U-shape) 0.65 P=5.0	KH-31036-50	1	
66	F1, F2	251-002 Fuse	540A2208S1202	2	

SDDV-PCB (Driver Board) Rev. 7
(4YA4042-1549G001 -6/7)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
67	TR501, TR503	A1344/UN2111/DTA114K PNP-HF-TR (CP)	600A1003N0003	2	
68	TR504	2SA1163 PNP-HF-TR (CP)	600A1025N0033	1	
69	TR505	2SC3361/2SC2412KVL NPN-HF-TR (CP)	602A1003N0002	1	
70	TR502	2SC2713 NPN-HF-TR (CP)	602A1025N0050	1	
71	TR506	DTC114EKA NPN-HF-TR (CP)	602A1035N0005	1	
72	TR507	2SD1472 NPN-LF-TR (CP)	603A1121N0007	1	
73	TR4	2SB740 PNP-LF-TR	601A1121M0004	1	
74	TR1	2SB1225/2SB1351 PNP-LF-TR	601A1203M0003	1	
75	TR3	2SB1274 PNP-LF-TR	601A1232M0004	1	
76	PE	SG-206 Photo coupler	652A0114M0003	1	
77	CN6	57RE-40360-730B-D29A Square-shaped connector	220A1783P0360	1	
78	CN8	TCS7588-01-201 Round-shaped connector	221A1525P0080	1	
79	CN7	MCR69-30D-2.54DS PC connector	224A1052P0300	1	
80	CN4	00-8263-0412-00-000 PC connector	224A3357P0040	1	
81	CN3	07FE-ST-M PC connector	224A4135P0070	1	
82	CN5	23FE-BT-VK-N PC connector	224A4134P0230	1	

SDDV-PCB (Driver Board) Rev. 7
(4YA4042-1549G001 -7/7)

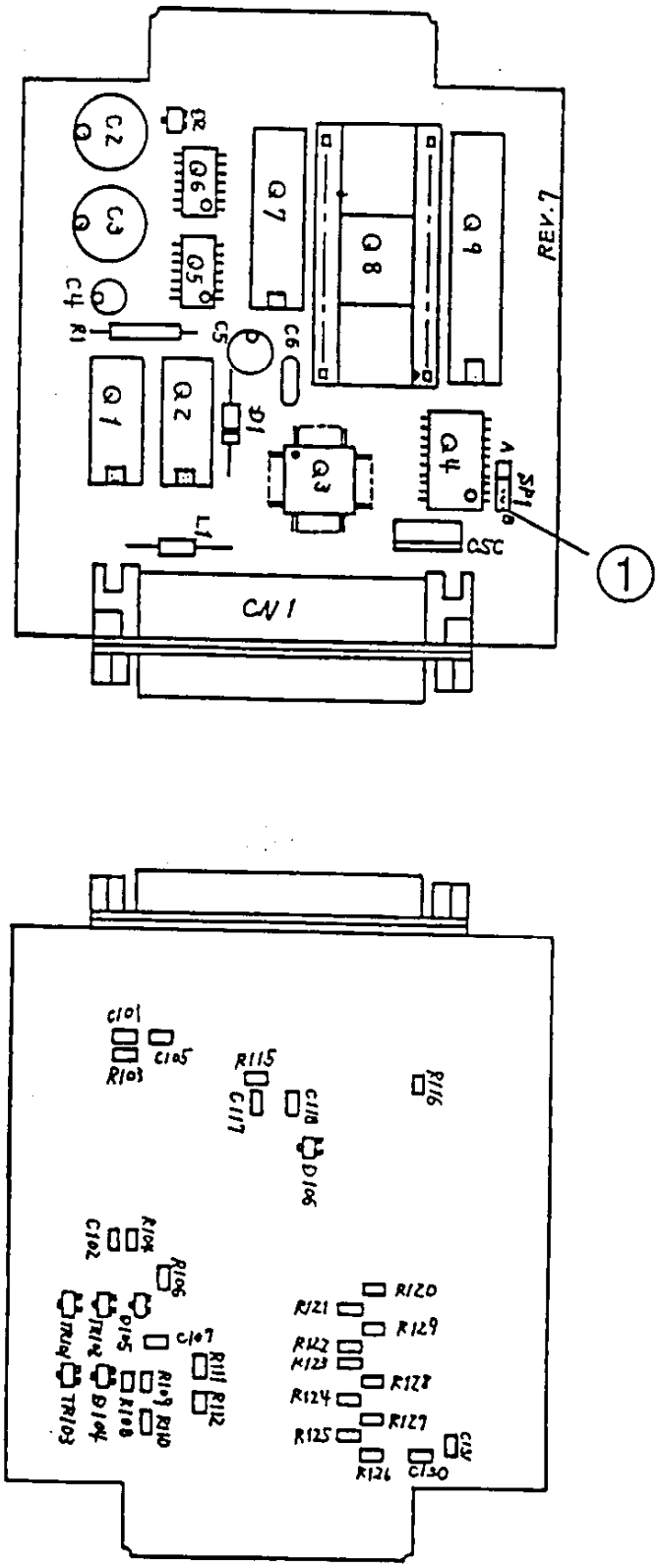
REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
83	CN1, CN2	00-5062-301-020-000 PC connector	224A5114P0200	2	
84	3	TW-VFM-20-100-B Fuji card	238A1122P0001	1	
85	2	TW-VFM-20-130-B Fuji card	238A1122P0002	1	



LEOP-3 PCB (Operation panel) Rev. 5 & Rev. 6
(4YA4042-1516G003 -1/2)

LEOP-3PCB (Operation panel) Rev. 5 & Rev. 6
(4YA4042-1516G003 -2/2)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
1	R2, 3, 4-15, 17	RD1/4Y150ΩJ RD Resistor	321A1421J0151	14	
2	R20	RD1/4Y130ΩJ RD Resistor	321A1421J0131	1	
3	R19	RD1/4Y560ΩJ RD Resistor	321A1421J0561	1	
4	SEL, SHIFT, LF, FF, TEAR, PARK, QUIET, PQ, CP	SOA-113HS Push-button Switch	205A1162P1001	9	
5	C1	TCK45F2E103ZYA 250V CK Capacitor 10000PF	302A4027Z5103	1	
6	D1, D2, D3-D13, D16, D17	SEL3913KYZ/GL3HY47BC LED	650A0203M0001	14	
7	D3	SEL3213C/GL3HD47/LED	650A0103M0001	1	
8	IC1	BU5148S MOS Digital IC	702A4733M0001	1	
9	S1-S24	0.65 Tin-plated annealed Copper Wire	TA-0.65	24	
10	CN1	00-5062-301-007-000 PC Connector	224A5114P0070	1	
11	2	TW-VF-7-70-B-R Toku-Juji Card	238A1120P0001	1	



LXHI-PCB (Serial I/F Board, Option) Rev. 7
(4YA4021-1050G001 -1/3)

LXHI-PCB (Serial I/F Board, Option) Rev. 7
(4YA4021-1050G001 -2/3)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
1	D2	MA153 Signal Diode (CP)	611A0029N0004	1	
2	D104, D105, D106	MA151WK/N202K/2838 signal Diode (CP)	611A0003N0003	3	
3	D1	RD10F-B Zener Diode	613A2232L0182	1	
4	R115	RM73B2B102J RN Resistor(CP)	323A5015J0102	1	
5	R104	RM73B2B122J RN Resistor (CP)	323A5015J0122	1	
6	R103, R109, R110	RM73B2B242J RN Resistor (CP)	323A5015J0242	3	
7	R111, R112, R116, R120-R129	RM73B2B103J RN Resistor (CP	323A5015J0103	13	
8	R106	RM73B2B203J RN Resistor (CP)	323A5015J0203	1	
9	R108	RM73B2B474J RN Resistor (CP)	323A5015J0474	1	
10	R1	RD1/2Y150ΩJ RD Resistor	321A1431K0151	1	
11	C101, C102, C105, C107, C117, C118, C130, C131	CK3216F1H104Z 50V CK Capacitor (CP)	303A6009Z3104	8	
12	C6	CK92F1E105ZS 25V CK Capacitor (CP) 1μF	303A4117Z2105	1	
13	C5	CEUSM1E470 25V CE Capacitor 47μF	304A1041E1470	1	
14	C2, C3	CEUSM1E221 25V CE Capacitor 220μF	304A1041E1221	2	
15	C4	CEUSM2A010 100V CE Capacitor 1.0μF	304A1041A2109	1	
16	Q6	SN74LS05NS BIP Digital IC (SO)	700A0550N0005	1	
17	Q5	74LS32FP BIP Digital IC (SO)	700A0503N0032	1	

LXHI-PCB (Serial I/F Board, Option) Rev. 7
(4YA4021-1050G001 -3/3)

REF. NO.	SYMBOL	TYPE/NAME	PART NO.	Q'TY	REMARKS
18	Q4	SN74LS373NS BIP Digital IC (SO)	700A0550N0373	1	
19	Q7	74LS245P BIP Digital IC	700A0503M0245	1	
20	Q2	75189P BIP-INF-IC	710A0003M0189	1	
21	Q1	75188P BIP-INF-IC	710A0003M0188	1	
22	Q3	MSM80C51FV-568GS-V1K MOS-CPU (ROM) (FP)	853A0150N0568	1	
23	Q9	HM6264ALSP-15 MOS-S-RAM	804A0021N6335	1	
24	Q8	DICF-28CS-E IC Socket	245A1221P0280	1	
25	TR101	A1344/UN2111/DTA114K PNP-HF-TR (CP)	600A1003N0003	1	
26	TR103	2SA1331/2SA1037K PNP-HF-TR (CP)	600A1003N0002	1	
27	TR102	2SC3361/2SC2412KVL NPN-HF-TR (CP)	602A1003N0002	1	
28	OSC	FAR-C4SB11059000-M02 Oscillator	4LP-12186-1	1	
29	SP1	FFC-3AMEP1 FC Connector	225A3123P0030	1	
30	CN1	D25S-LLD-6 angles (#4-40) Square-shape Connector	220A0121P0250	1	
31	L1	FBA04HA900KF-00 Beads Coore	105A1222C0110	1	
32	1	DIC-252 PC Connector	224A3181P0020	1	

Oki Systems (Danmark) a.s.

Park Alle 382
DK-2625 Vallensbaek
Denmark
Tel : 436 66500
Fax : 436 66590

Oki Systems (Deutschland) GmbH

Hansaallee 187
40549 Dusseldorf
Germany
Tel : 0211 5266-0
Fax : 0211 593345

Oki Systems (España) S.A.

C/Goya 9
28001 Madrid
Spain
Tel : 91 5777336
Fax : 91 5762420

Oki Systems (France) S.A.

44-50 Avenue du General de Gaulle
94240 L'Hay les Roses
France
Tel : 0146 158000
Fax : 0141 240040

Oki Systems (Holland) b.v.

Kruisweg 765
Postbus 690
NL-2132 NG (2130AR)
Hoofddorp
The Netherlands
Tel : 020 6531531
Fax : 020 6531301

Oki Systems (Ireland) Ltd

The Square Industrial Complex
Tallaght
Dublin 24
Ireland
Tel : 01 459 8666
Fax : 01 459 8840

Oki Systems (Italia) S.p.A.

Centro Commerciale "II Girasole"
PAT. Cellini-Lotto 3. 05/B
20084 Lacchiarella (Milano)
Italy
Tel : 02 900 261
Fax : 02 900 7549

Oki Systems (Norway) A/S

Hvamsvingen 9
P O Box 174
N-2013 Skjetten
Norway
Tel : 0638 93600
Fax : 0638 93601

Oki Systems (Sweden) AB

Box 131
S-163 55 Spanga
Stormbyväegen 2-4
Sweden
Tel : 08 7955880
Fax : 08 7956527

Oki Systems (UK) Ltd

550 Dundee Road
Slough
Berkshire SL1 4JY
United Kingdom
Tel : 01753 819819
Fax : 01753 819899

Oki Europe Ltd

Branch Office
International Bussiness Centre
Pobrezni 3
186 00 Praha 8
The Czech Republic
Tel : 02 232 6641
Fax : 02 232 6621

Oki Europe Képviselet

International Trade Center
H-1075 Budapest
Bajcsy-Zsilinsszky út 12. 11. em. 204
Hungary
Tel : 361 266 6225
Fax : 361 266 0152

Oki Europe Ltd

Branch Office
ul Grzybowska 80-82
PL-00840 Warsaw
Poland
Tel : 02 6615407
Fax : 02 6615451

Oki (Europe) Ltd

Central House
Balfour Road
Hounslow
Middlesex TW3 1HY
United Kingdom
Tel : 0181 577 9000
Fax : 0181 572 7444

Oki (UK) Ltd

3 Castkecary Road
Wardpark North
Cumbemauld G68 0DA
Scotland
Tel : 01236 727777
Fax : 01236 451972

OKI

People to People Technology

Oki Data Corporation

4-11-22, Shibaura, Minato-ku,
Tokyo 108, Japan
Tel: (03) 5445-6162 Fax: (03) 5445-6189

M-521428 6-96 Printed in Japan