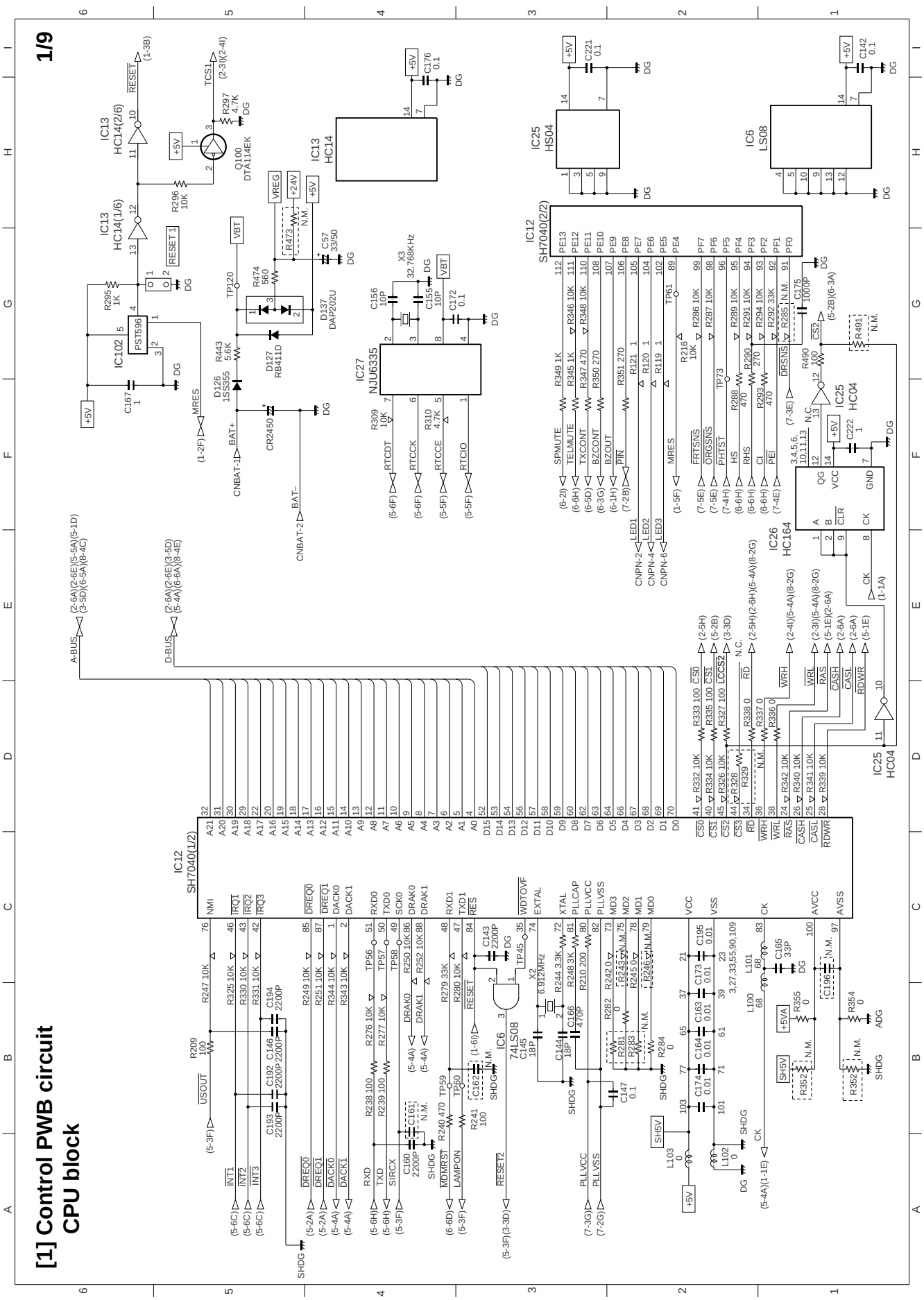
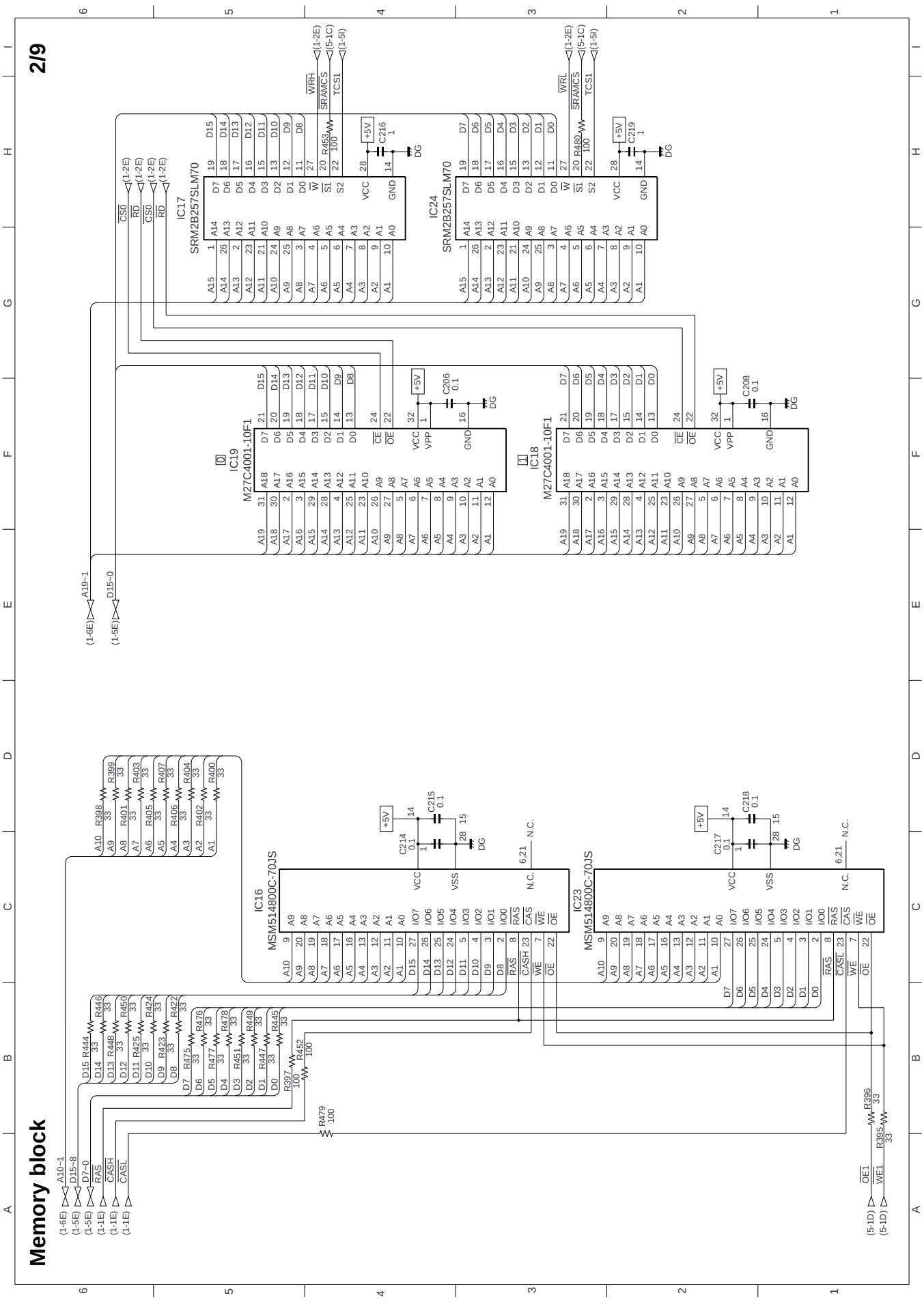
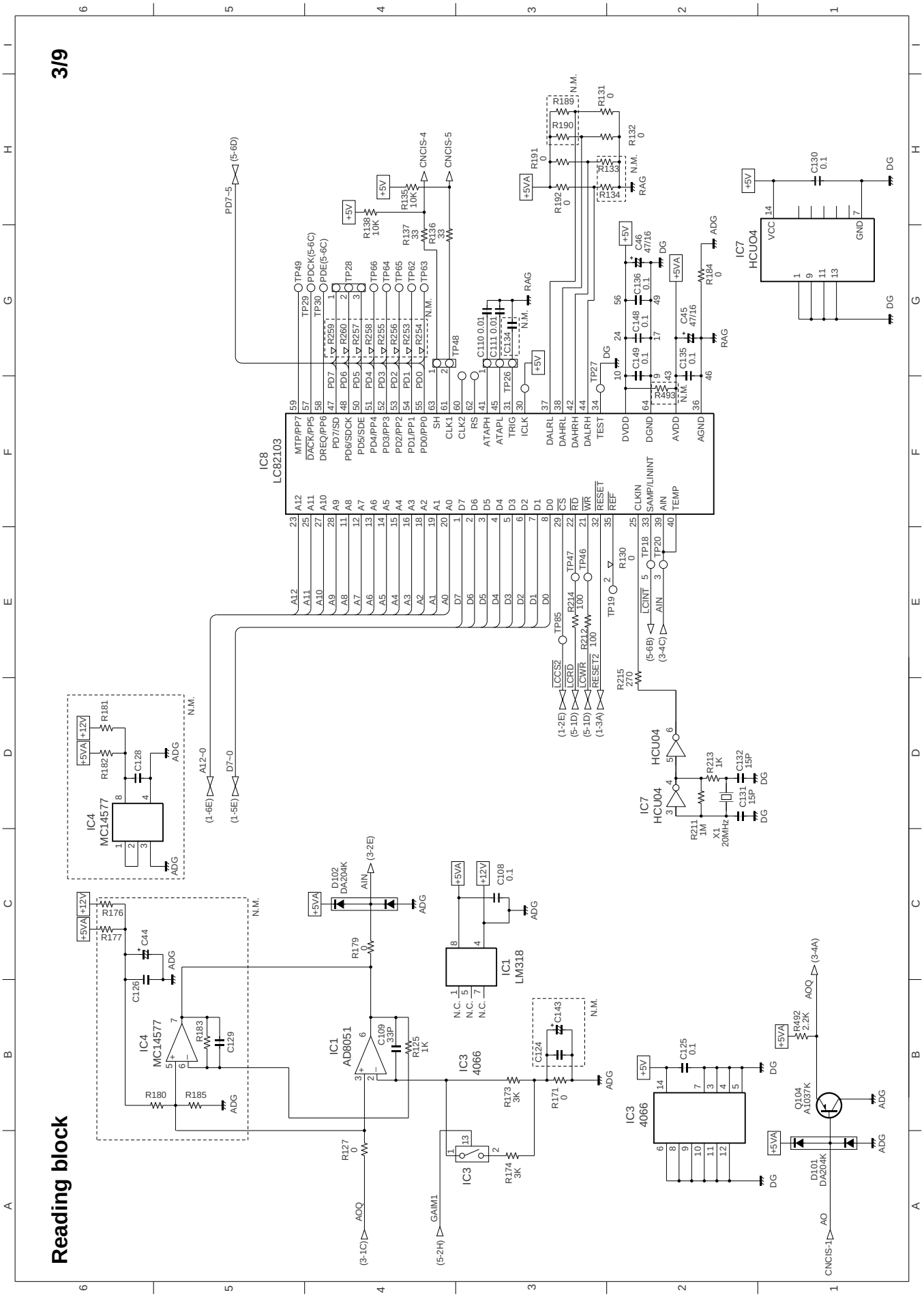
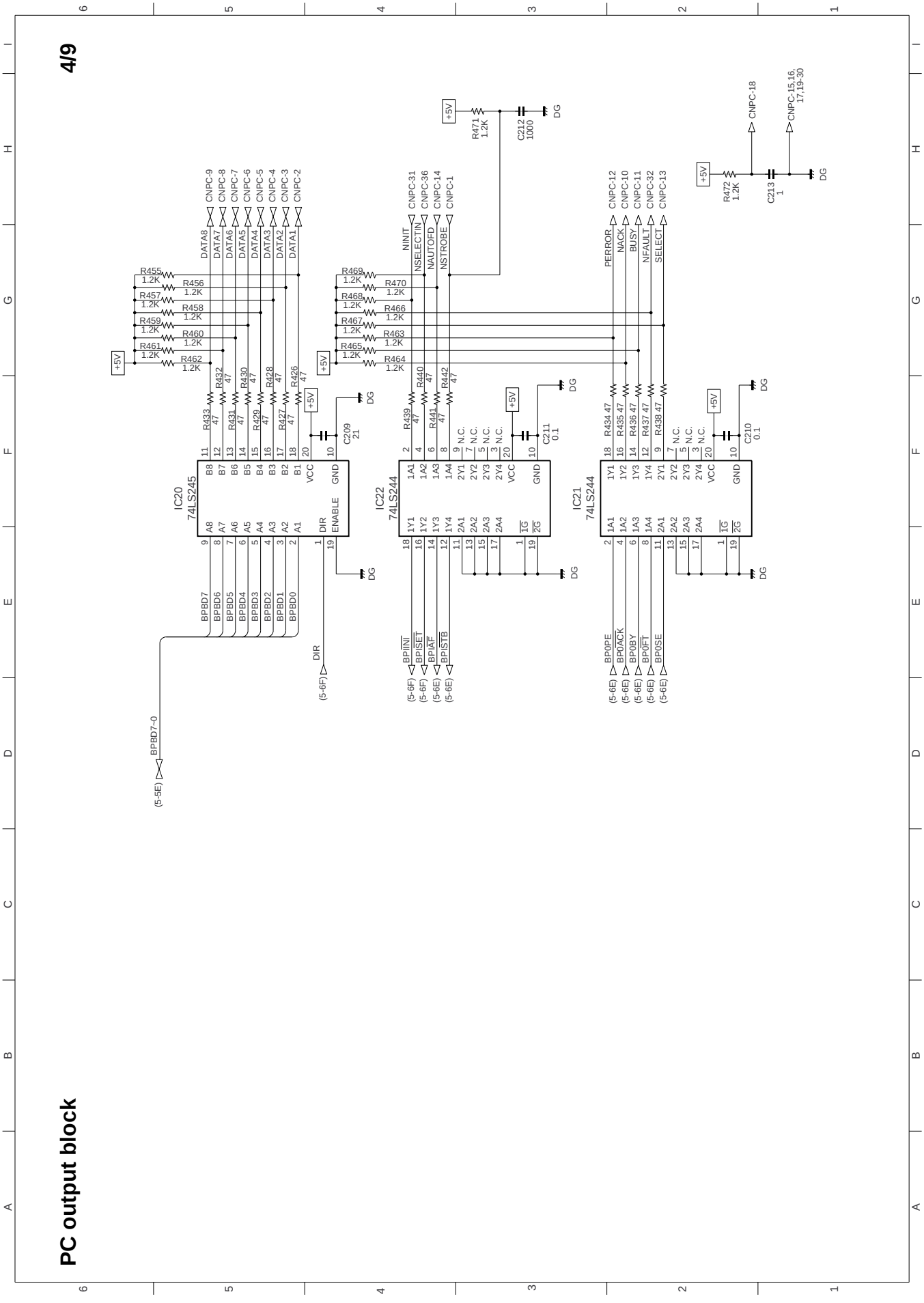
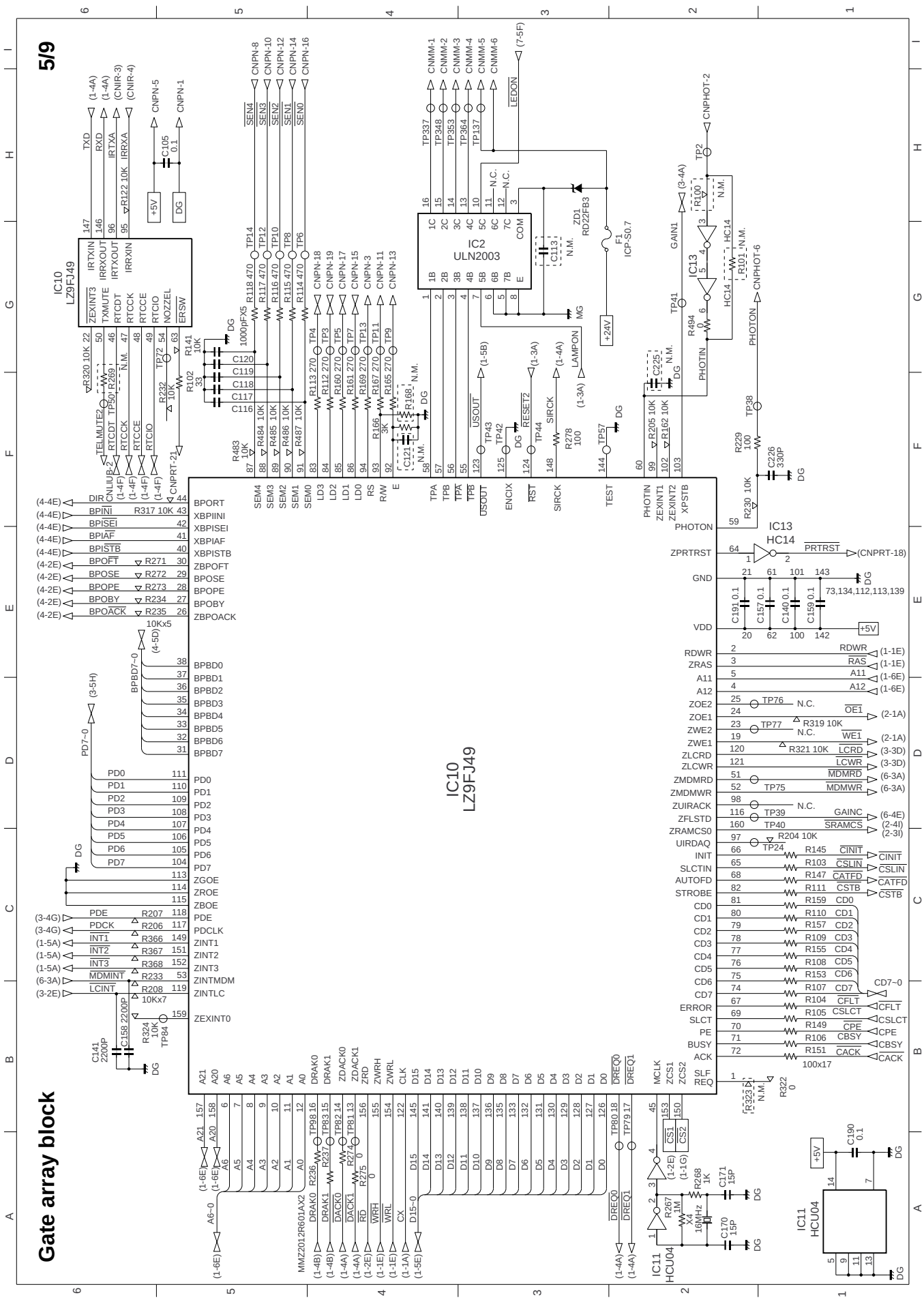
CHAPTER 6. CIRCUIT SCHEMATICS AND PARTS LAYOUT



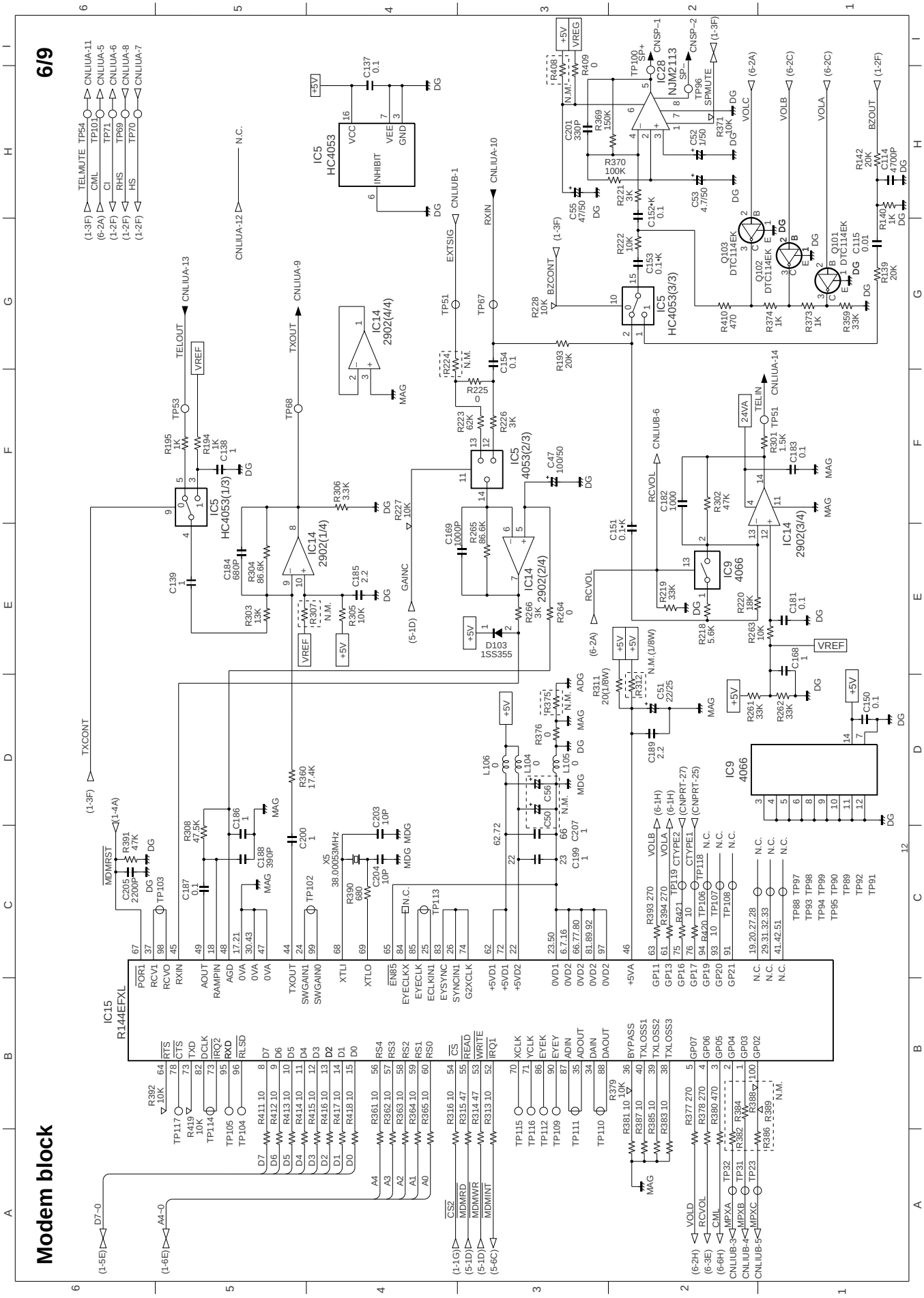

2/9
Memory block
IC17
SRM2B257SLM70
IC24
SRM2B257SLM70
IC19
M27C4001-10F1
IC18
M27C4001-10F1
IC16
MSM514800C-70JS
IC23
MSM514800C-70JS
WRH
WRL
SRAMCS
TCS1
CS0
RD
+5V
DG
A19~1
D15~0
A10~1
D15~8
D7~0
RAS
CASH
CASL
OE1
WE1

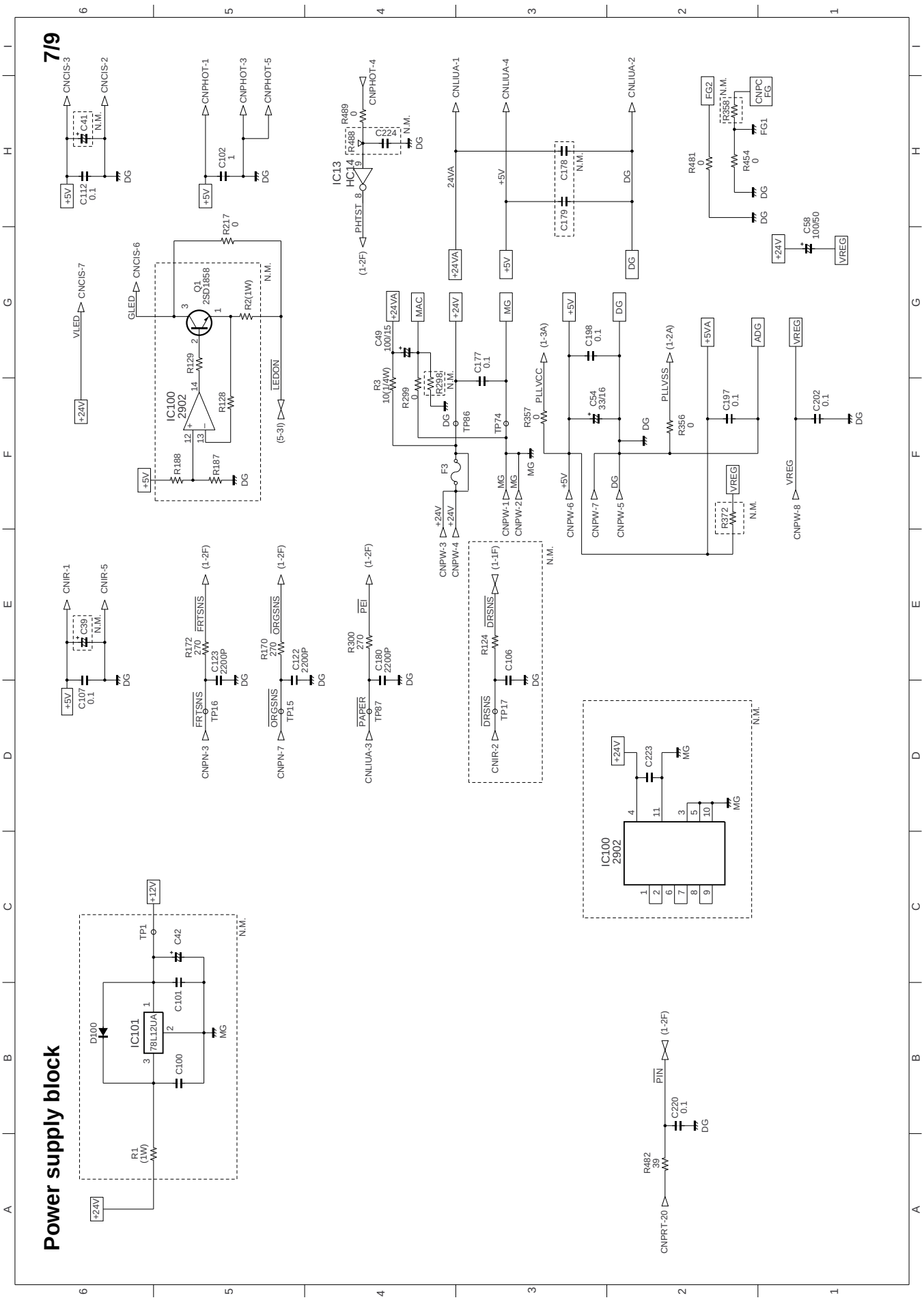

3/9
Reading block
IC8
LC82103
IC4
MC14577
IC1
AD8051
IC1
LM318
IC3
4066
IC7
HCU04
Q104
A1037K
D102
DA204K
D101
DA204K
X1
20MHz
PD7~5
(5-6D)
A12~0
D7~0
(1-6E)
(1-5E)
AIN
(3-2E)
AOQ
(3-1C)
GAIM1
(5-2H)
(3-4A)
CNCIS-1
CNCIS-4
CNCIS-5
LCINT
(5-6B)
(3-4C)
LCCS2
LCRD
LCWR
RESET2
(1-2E)
(5-1D)
(5-1D)
(1-3A)
+5V
+5VA
+12V
DG
ADG
RAG
N.M.
N.C.

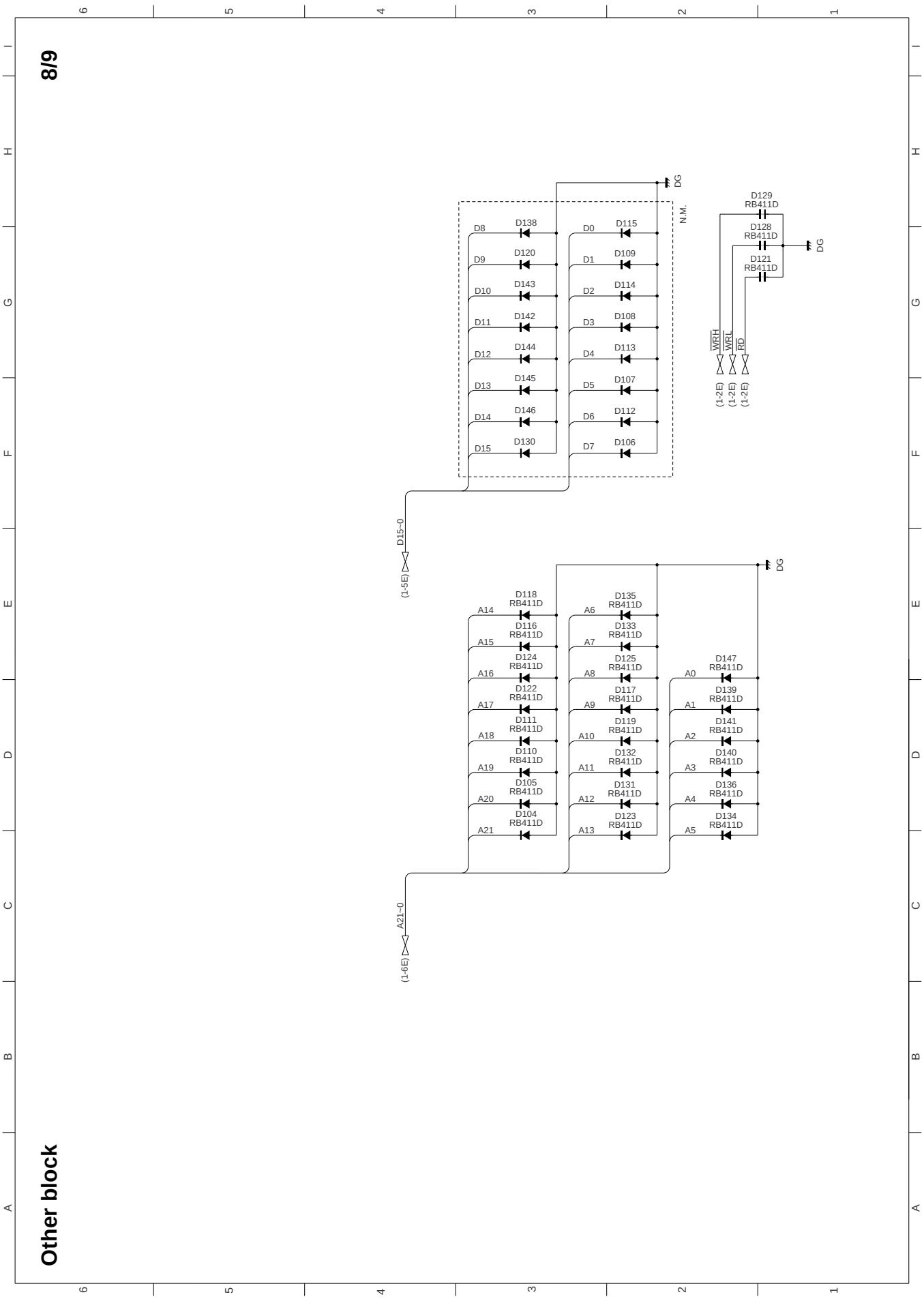

4/9
PC output block
IC20
74LS245
IC22
74LS244
IC21
74LS244
+5V
DG
R455 1.2K
R456 1.2K
R457 1.2K
R458 1.2K
R459 1.2K
R460 1.2K
R461 1.2K
R462 1.2K
R432 47
R430 47
R428 47
R426 47
R433 47
R431 47
R429 47
R427 47
C209 21
DATA8
DATA7
DATA6
DATA5
DATA4
DATA3
DATA2
DATA1
CNPC-9
CNPC-8
CNPC-7
CNPC-6
CNPC-5
CNPC-4
CNPC-3
CNPC-2
BPBD7
BPBD6
BPBD5
BPBD4
BPBD3
BPBD2
BPBD1
BPBD0
BPBD7–0
(5-5E)
DIR
(5-6F)
R469 1.2K
R468 1.2K
R467 1.2K
R465 1.2K
R470 1.2K
R466 1.2K
R463 1.2K
R464 1.2K
R439 47
R440 47
R441 47
R442 47
C211 0.1
NINIT
NSELECTIN
NAUTOFD
NSTROBE
CNPC-31
CNPC-36
CNPC-14
CNPC-1
BPIINI
BPISET
BPIAF
BPISTB
(5-6F)
(5-6E)
R471 1.2K
C212 1000
R434 47
R435 47
R436 47
R437 47
R438 47
C210 0.1
PERROR
NACK
BUSY
NFAULT
SELECT
CNPC-12
CNPC-10
CNPC-11
CNPC-32
CNPC-13
BP0PE
BP0ACK
BP0BY
BP0FT
BP0SE
(5-6E)
R472 1.2K
C213 1
CNPC-18
CNPC-15,16,
17,19-30

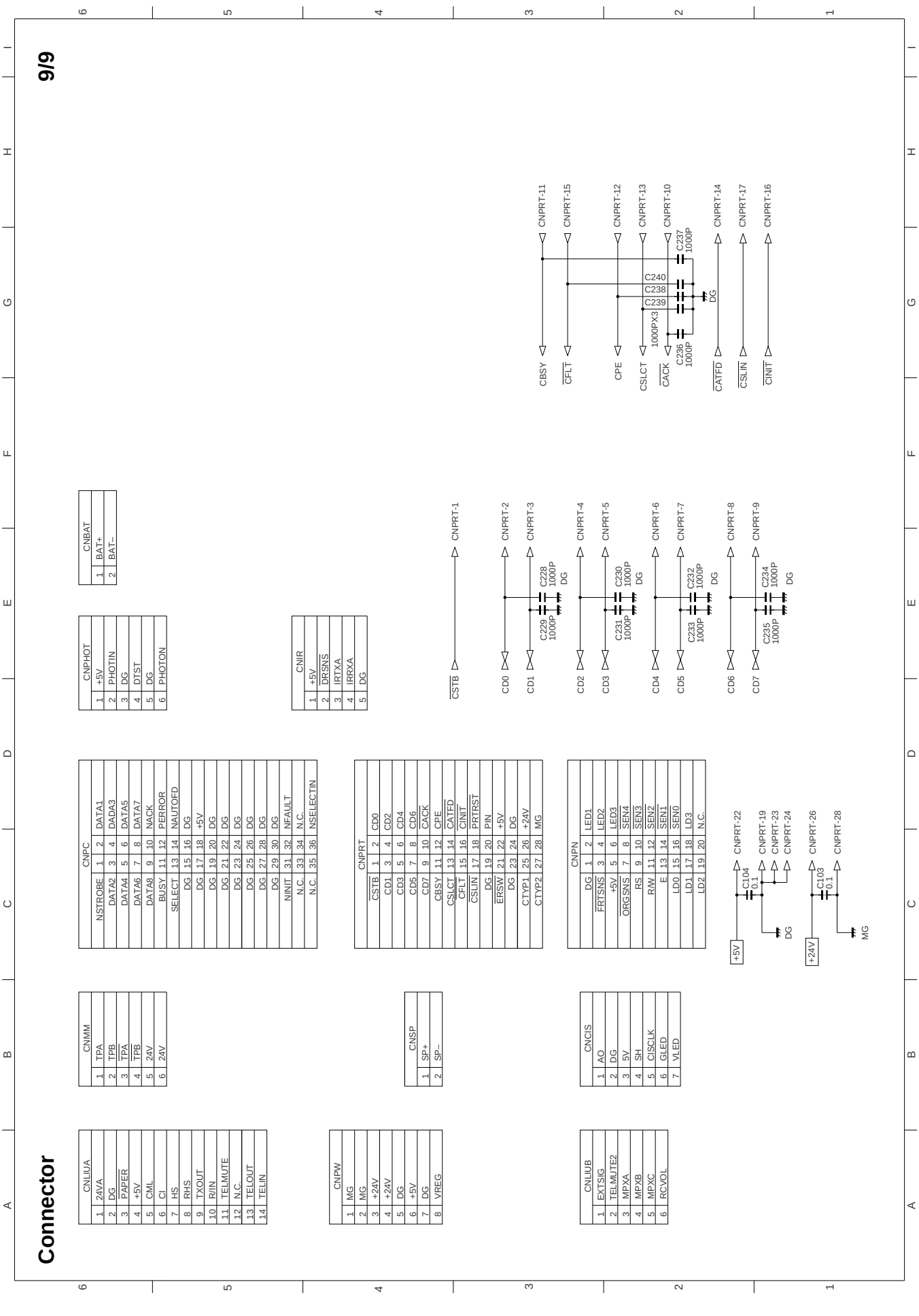

5/9
Gate array block
IC10
LZ9FJ49
IC2
ULN2003
IC11
HCU04
IC13
HC14
MMZ2012R601AX2
X4
16MHz
BPORT
XBPIINI
XBPISEI
XBPIAF
XBPISTB
ZBPOFT
BPOSE
BPOPE
BPOBY
ZBPOACK
BPBD0
BPBD1
BPBD2
BPBD3
BPBD4
BPBD5
BPBD6
BPBD7
PD0
PD1
PD2
PD3
PD4
PD5
PD6
PD7
ZGOE
ZROE
ZBOE
PDE
PDCLK
ZINT1
ZINT2
ZINT3
ZINTMDM
ZINTLC
ZEXINT0
A21
A20
A6
A5
A4
A3
A2
A1
A0
DRAK0
DRAK1
ZDACK0
ZDACK1
ZRD
ZWRH
ZWRL
CLK
D15
D14
D13
D12
D11
D10
D9
D8
D7
D6
D5
D4
D3
D2
D1
D0
DREQ0
DREQ1
MCLK
ZCS1
ZCS2
SLF REQ
SEM4
SEM3
SEM2
SEM1
SEM0
LD3
LD2
LD1
LD0
RS
R/W
E
TPA
TPB
TPA
TPB
USOUT
ENCIX
RST
SIRCK
TEST
PHOTIN
ZEXINT1
ZEXINT2
XPSTB
PHOTON
ZPRTRST
GND
VDD
RDWR
ZRAS
A11
A12
ZOE2
ZOE1
ZWE2
ZWE1
ZLCRD
ZLCWR
ZMDMRD
ZMDMWR
ZUIRACK
ZFLSTD
ZRAMCS0
UIRDAQ
INIT
SLCTIN
AUTOFD
STROBE
CD0
CD1
CD2
CD3
CD4
CD5
CD6
CD7
ERROR
SLCT
PE
BUSY
ACK
IRTXIN
IRRXOUT
IRTXOUT
IRRXIN
ZEXINT3
TXMUTE
RTCDT
RTCCK
RTCCE
RTCIO
NOZZEL
ERSW
TELMUTE2
CNLIUB-2
CNPRT-21
CNPN-1
CNPN-5
CNPN-8
CNPN-10
CNPN-12
CNPN-14
CNPN-16
CNPN-18
CNPN-19
CNPN-17
CNPN-15
CNPN-3
CNPN-11
CNPN-13
CNMM-1
CNMM-2
CNMM-3
CNMM-4
CNMM-5
CNMM-6
LEDON
ZD1
RD22FB3
F1
ICP-50.7
CNPHOT-2
CNPHOT-6
GAIN1
PHOTIN
PHOTON
LAMPON
PRTRST
RDWR
RAS
A11
A12
OE1
WE1
LCRD
LCWR
MDMRD
MDMWR
GAINC
SRAMCS
CINIT
CSLIN
CATFD
CSTB
CFLT
CSLCT
CPE
CBSY
CACK
CD7~0
PD7~0
BPBD7~0
A6~0
D15~0
SEN4
SEN3
SEN2
SEN1
SEN0
USOUT
SIRCK
RESET2
PRTRST
+5V
+24V
DG
MG
N.C.
N.M.
100x17
10Kx5
10Kx7

Modem block

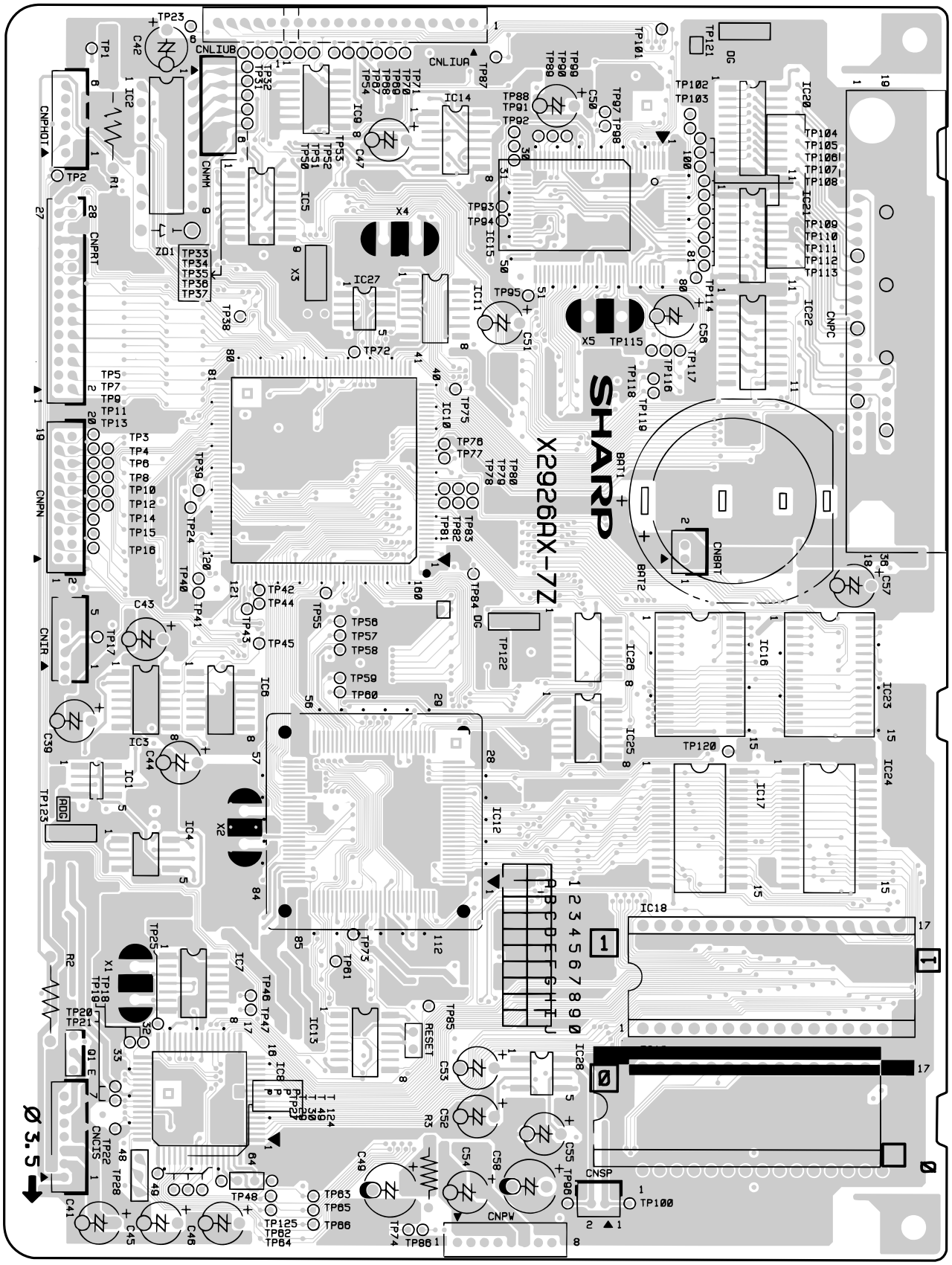

6/9
IC15
R144EFXL
IC5
HC4053(1/3)
IC5
HC4053(2/3)
IC5
HC4053(3/3)
IC5
HC4053
IC14
2902(1/4)
IC14
2902(2/4)
IC14
2902(3/4)
IC14
2902(4/4)
IC28
NJM2113
IC9
4066
IC9
4066
D103
1SS355
Q103
DTC114EK
Q102
DTC114EK
Q101
DTC114EK
X5
38.00052MHz
TELMUTE
CML
CI
RHS
HS
CNLIUA-11
CNLIUA-5
CNLIUA-6
CNLIUA-8
CNLIUA-7
CNLIUA-12
N.C.
TXCONT
MDMRST
TELOUT
VREF
TXOUT
CNLIUA-9
CNLIUA-13
EXTSIG
CNLIUB-1
RXIN
CNLIUA-10
GAINC
MAG
RCVOL
CNLIUB-6
TELIN
CNLIUA-14
BZCONT
SP+
SP–
SPMUTE
VOLC
VOLB
VOLA
BZOUT
TXCONT
VOLD
RCVOL
CML
MPXA
MPXB
MPXC
D7–0
A4–0
+5V
DG
MAG
N.M.


7/9
Power supply block
CNCIS-3
CNCIS-2
C41
N.M.
C112
0.1
+5V
DG
CNPHOT-1
CNPHOT-3
CNPHOT-5
C102
1
R217
0
CNCIS-6
GLED
Q1
2SD1858
R2(1W)
N.M.
LEDON
(5-3I)
CNCIS-7
VLED
+24V
IC100
2902
R129
R128
R188
R187
IC13
HC14
R489
R488
C224
CNPHOT-4
PHTST
(1-2F)
CNLIUA-1
CNLIUA-4
CNLIUA-2
24VA
C178
C179
FG2
R358
CNPC
FG
FG1
R481
R454
C58
100/50
VREG
C49
100/15
MAC
R3
10(1/4W)
R299
R298
C177
0.1
TP86
TP74
F3
MG
R357
PLLVCC
(1-3A)
C198
0.1
C54
33/16
PLLVSS
(1-2A)
R356
C197
0.1
ADG
C202
R372
CNPW-1
CNPW-2
CNPW-3
CNPW-4
CNPW-5
CNPW-6
CNPW-7
CNPW-8
CNIR-1
CNIR-5
C39
C107
0.1
R172
270
FRTSNS
C123
2200P
TP16
CNPN-3
R170
ORGSNS
C122
TP15
CNPN-7
R300
PEI
C180
TP87
CNLIUA-3
R124
DRSNS
C106
TP17
CNIR-2
(1-1F)
N.M.
C223
IC100
2902
D100
IC101
78L12UA
C101
C100
C42
TP1
+12V
R1
(1W)
R482
39
PIN
C220
0.1
CNPRT-20

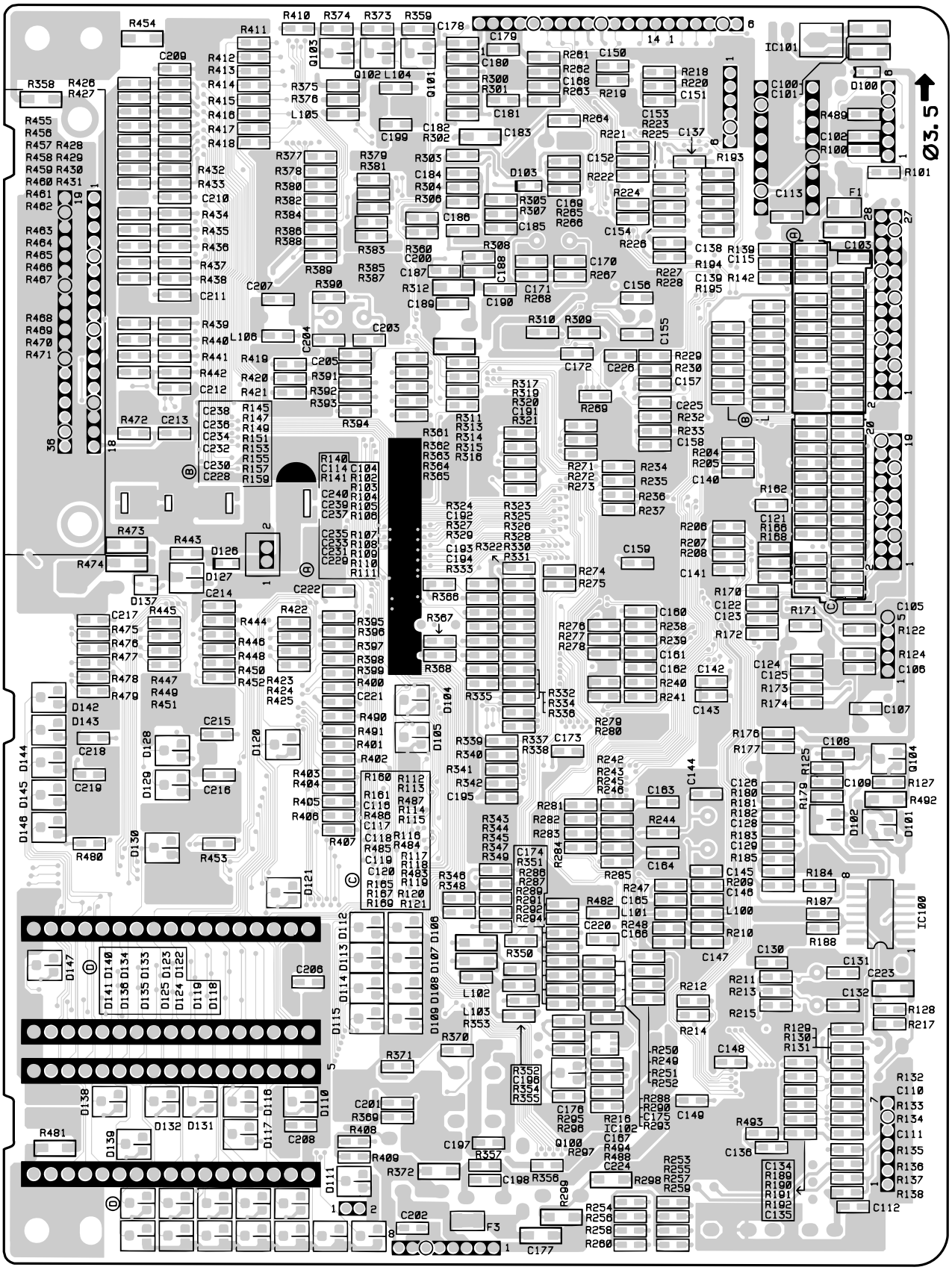

8/9
Other block
N.M.
DG
D8 D138
D9 D120
D10 D143
D11 D142
D12 D144
D13 D145
D14 D146
D15 D130
D0 D115
D1 D109
D2 D114
D3 D108
D4 D113
D5 D107
D6 D112
D7 D106
D15~0
(1-5E)
D129 RB411D
D128 RB411D
D121 RB411D
WRH
WRL
RD
(1-2E)
(1-2E)
(1-2E)
A14 D118 RB411D
A15 D116 RB411D
A16 D124 RB411D
A17 D122 RB411D
A18 D111 RB411D
A19 D110 RB411D
A20 D105 RB411D
A21 D104 RB411D
A6 D135 RB411D
A7 D133 RB411D
A8 D125 RB411D
A9 D117 RB411D
A10 D119 RB411D
A11 D132 RB411D
A12 D131 RB411D
A13 D123 RB411D
A0 D147 RB411D
A1 D139 RB411D
A2 D141 RB411D
A3 D140 RB411D
A4 D136 RB411D
A5 D134 RB411D
A21~0
(1-6E)


9/9
Connector
CNLIUA
1 24VA
2 DG
3 PAPER
4 +5V
5 CML
6 CI
7 HS
8 RHS
9 TXOUT
10 R/IN
11 TELMUTE
12 N.C.
13 TELOUT
14 TELIN
CNPW
1 MG
2 MG
3 +24V
4 +24V
5 DG
6 +5V
7 DG
8 VREG
CNLIUB
1 EXTSIG
2 TELMUTE2
3 MPXA
4 MPXB
5 MPXC
6 RCVOL
CNMM
1 TPA
2 TPB
3 TPA
4 TPB
5 24V
6 24V
CNSP
1 SP+
2 SP–
CNPC
NSTROBE 1 2 DATA1
DATA2 3 4 DADA3
DATA4 5 6 DATA5
DATA6 7 8 DATA7
DATA8 9 10 NACK
BUSY 11 12 PERROR
SELECT 13 14 NAUTOFD
DG 15 16 DG
DG 17 18 +5V
DG 19 20 DG
DG 21 22 DG
DG 23 24 DG
DG 25 26 DG
DG 27 28 DG
DG 29 30 DG
NINIT 31 32 NFAULT
N.C. 33 34 N.C.
N.C. 35 36 NSELECTIN
CNPRT
CSTB 1 2 CD0
CD1 3 4 CD2
CD3 5 6 CD4
CD5 7 8 CD6
CD7 9 10 CACK
CBSY 11 12 CPE
CSLCT 13 14 CATFD
CFLT 15 16 CINIT
CSLIN 17 18 PRTRST
DG 19 20 PIN
ERSW 21 22 +5V
DG 23 24 DG
CTYP1 25 26 +24V
CTYP2 27 28 MG
CNPN
DG 1 2 LED1
FRTSNS 3 4 LED2
+5V 5 6 LED3
ORGSNS 7 8 SEN4
RS 9 10 SEN3
R/W 11 12 SEN2
E 13 14 SEN1
LD0 15 16 SEN0
LD1 17 18 LD3
LD2 19 20 N.C.
CNPHOT
1 +5V
2 PHOTIN
3 DG
4 DTST
5 DG
6 PHOTON
CNBAT
1 BAT+
2 BAT–
CNIR
1 +5V
2 DRSNS
3 IRTXA
4 IRRXA
5 DG
CSTB
CD0
CD1
CD2
CD3
CD4
CD5
CD6
CD7
CBSY
CFLT
CSLIN
CPE
CSLCT
CACK
CATFD
CSLIN
CINIT
CNPRT-1
CNPRT-2
CNPRT-3
CNPRT-4
CNPRT-5
CNPRT-6
CNPRT-7
CNPRT-8
CNPRT-9
CNPRT-10
CNPRT-11
CNPRT-12
CNPRT-13
CNPRT-14
CNPRT-15
CNPRT-16
CNPRT-17
C228 1000P
C229 1000P
C230 1000P
C231 1000P
C232 1000P
C233 1000P
C234 1000P
C235 1000P
C236 1000P
C237 1000P
C238
C239
C240
1000PX3
DG
+5V
+24V
C104 0.1
C103 0.1
CNPRT-19
CNPRT-22
CNPRT-23
CNPRT-24
CNPRT-26
CNPRT-28
MG

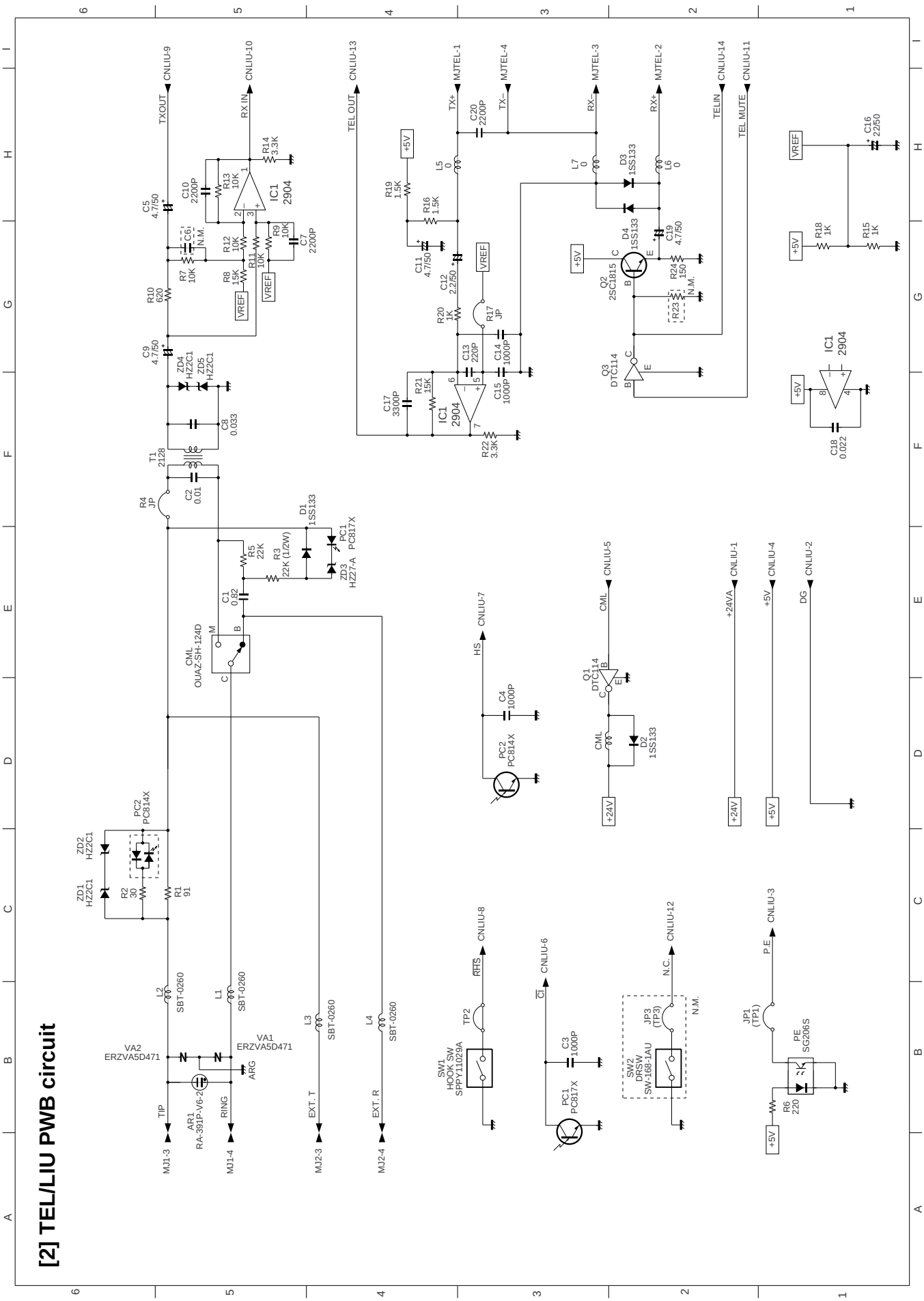
Control PWB parts layout (Top side)



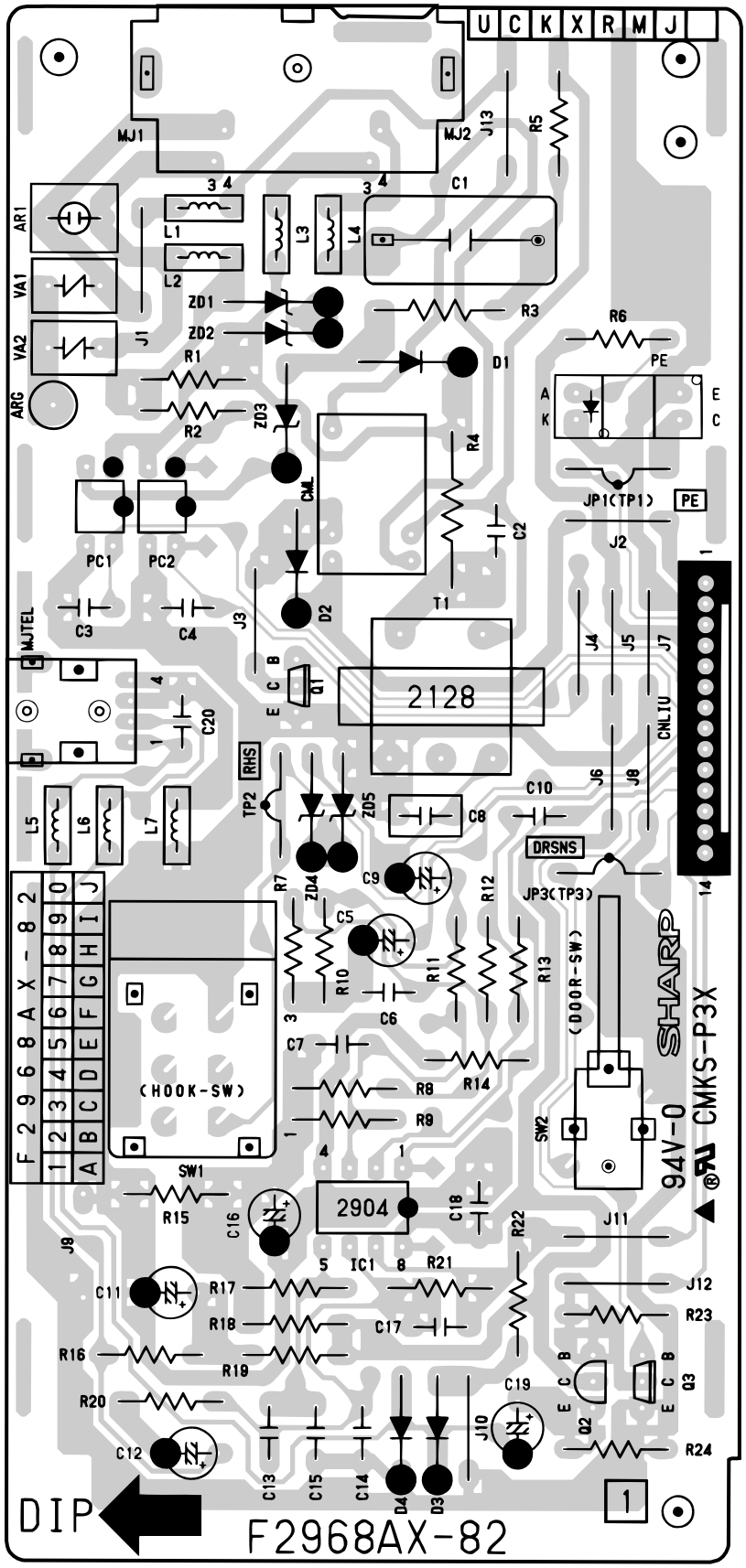
Control PWB parts layout (Bottom side)



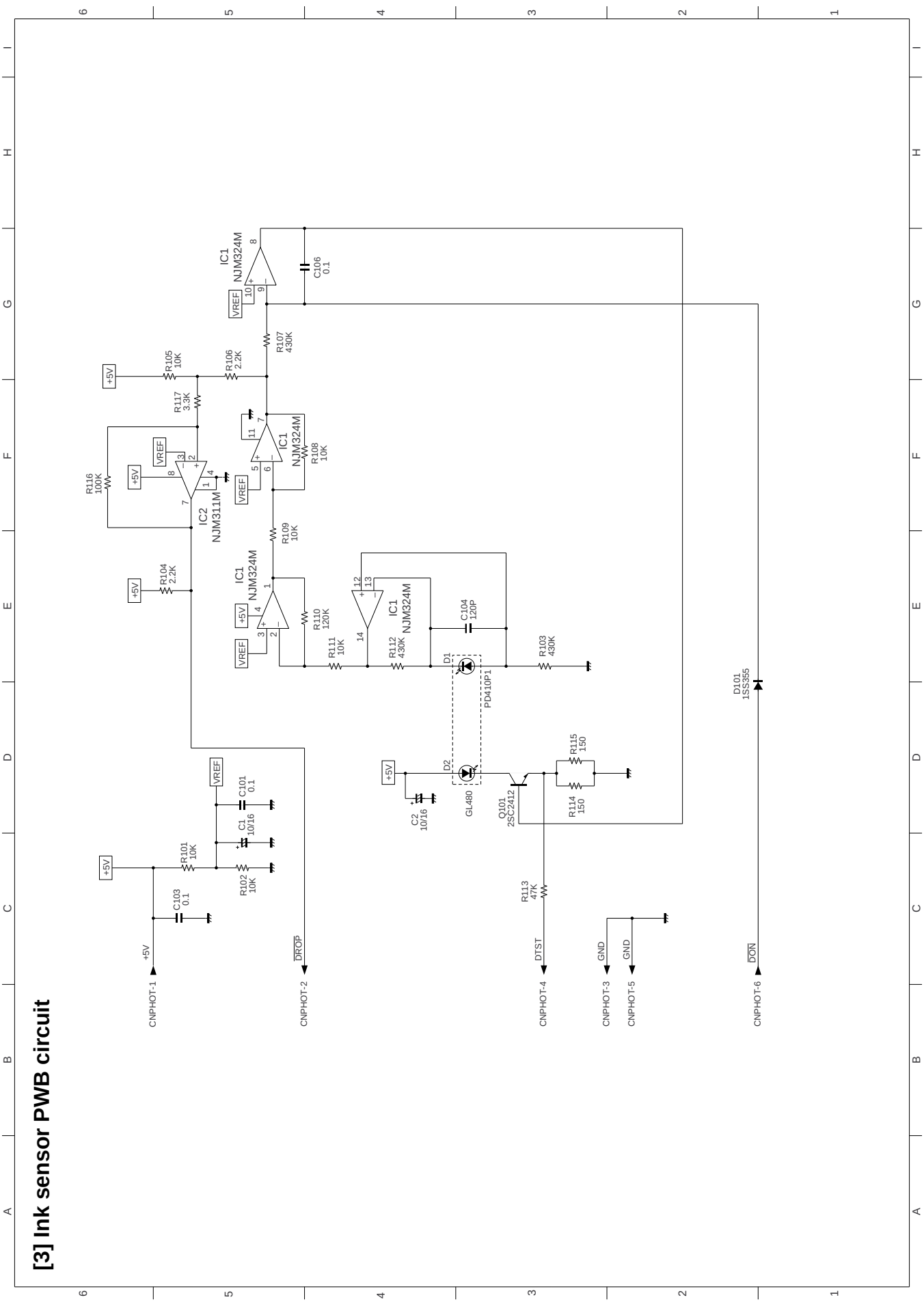
[2] TEL/LIU PWB circuit



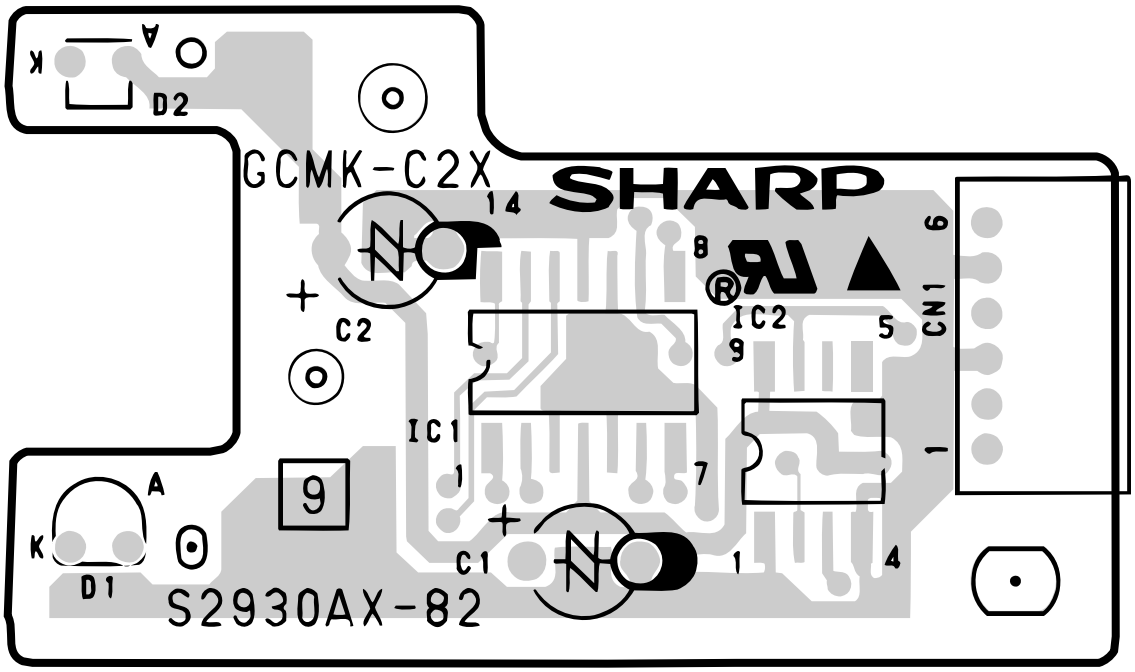
TEL/LIU PWB parts layout



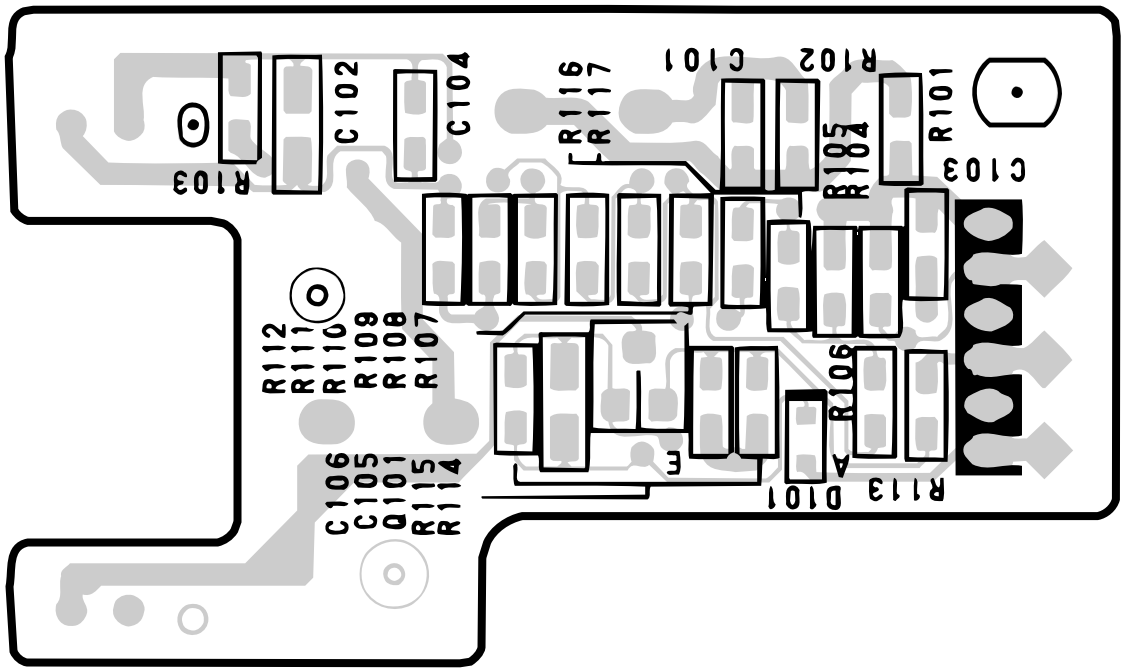
[3] Ink sensor PWB circuit

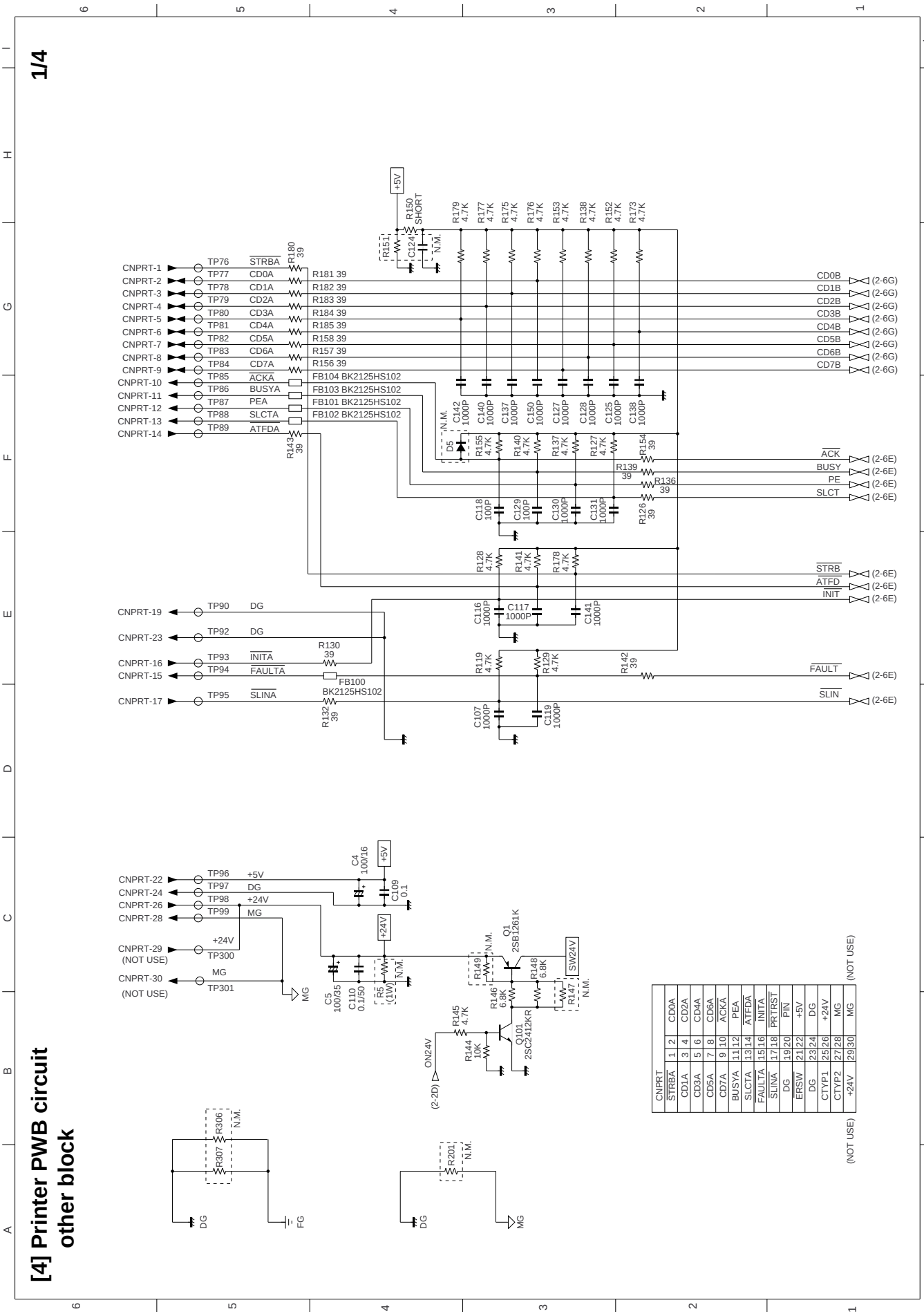


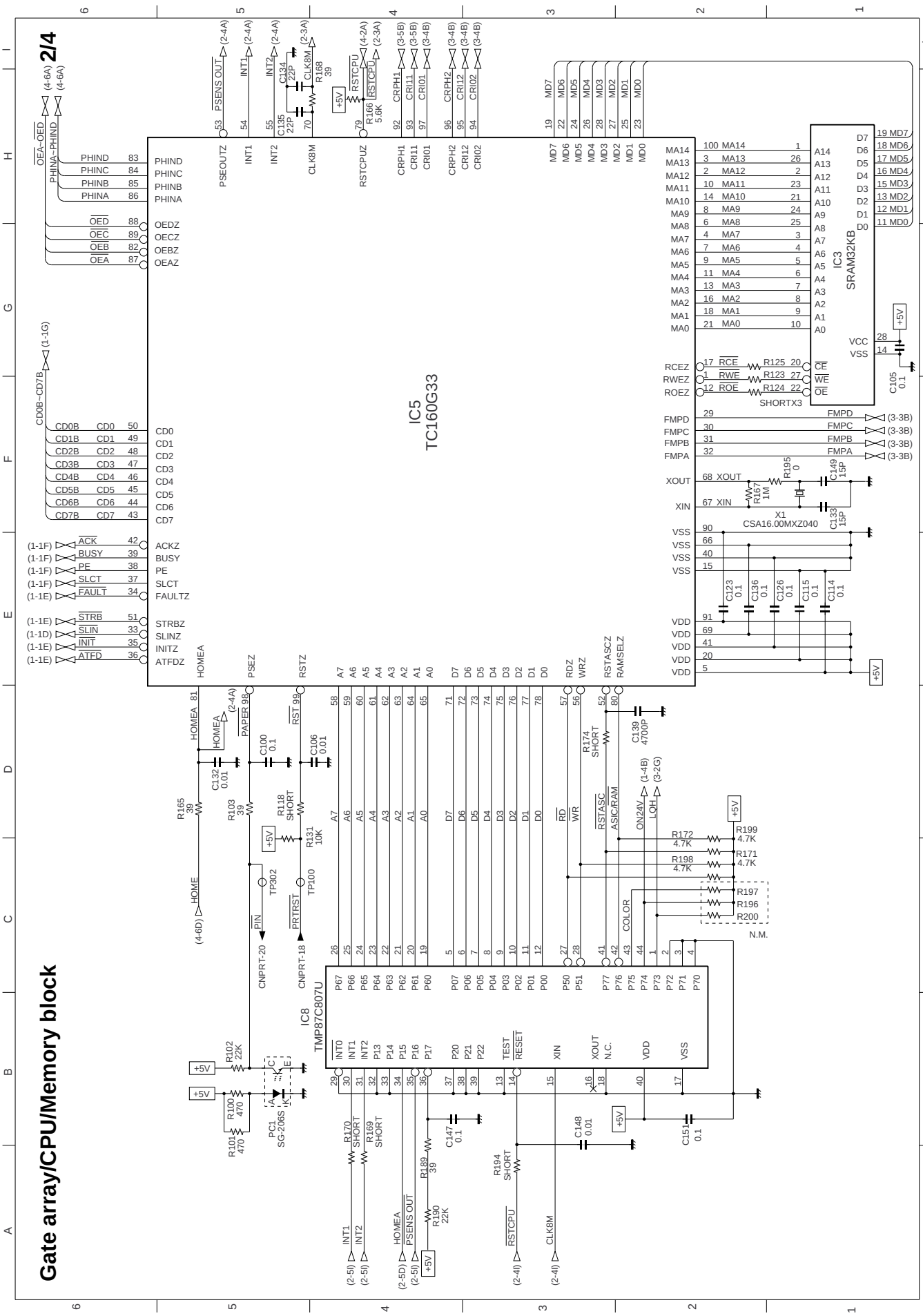
Ink sensor PWB parts layout (Top side)



Ink sensor PWB parts layout (Bottom side)

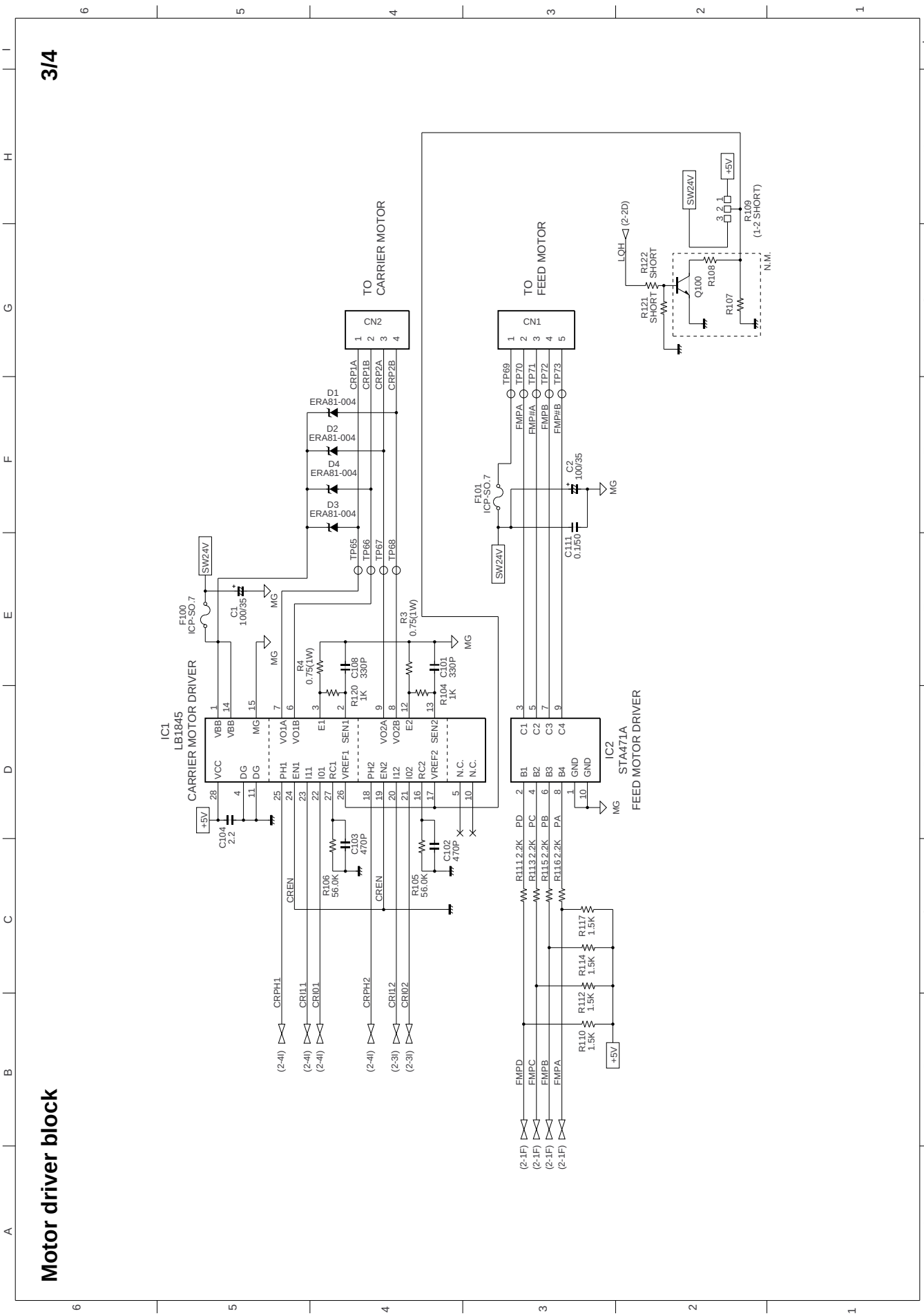


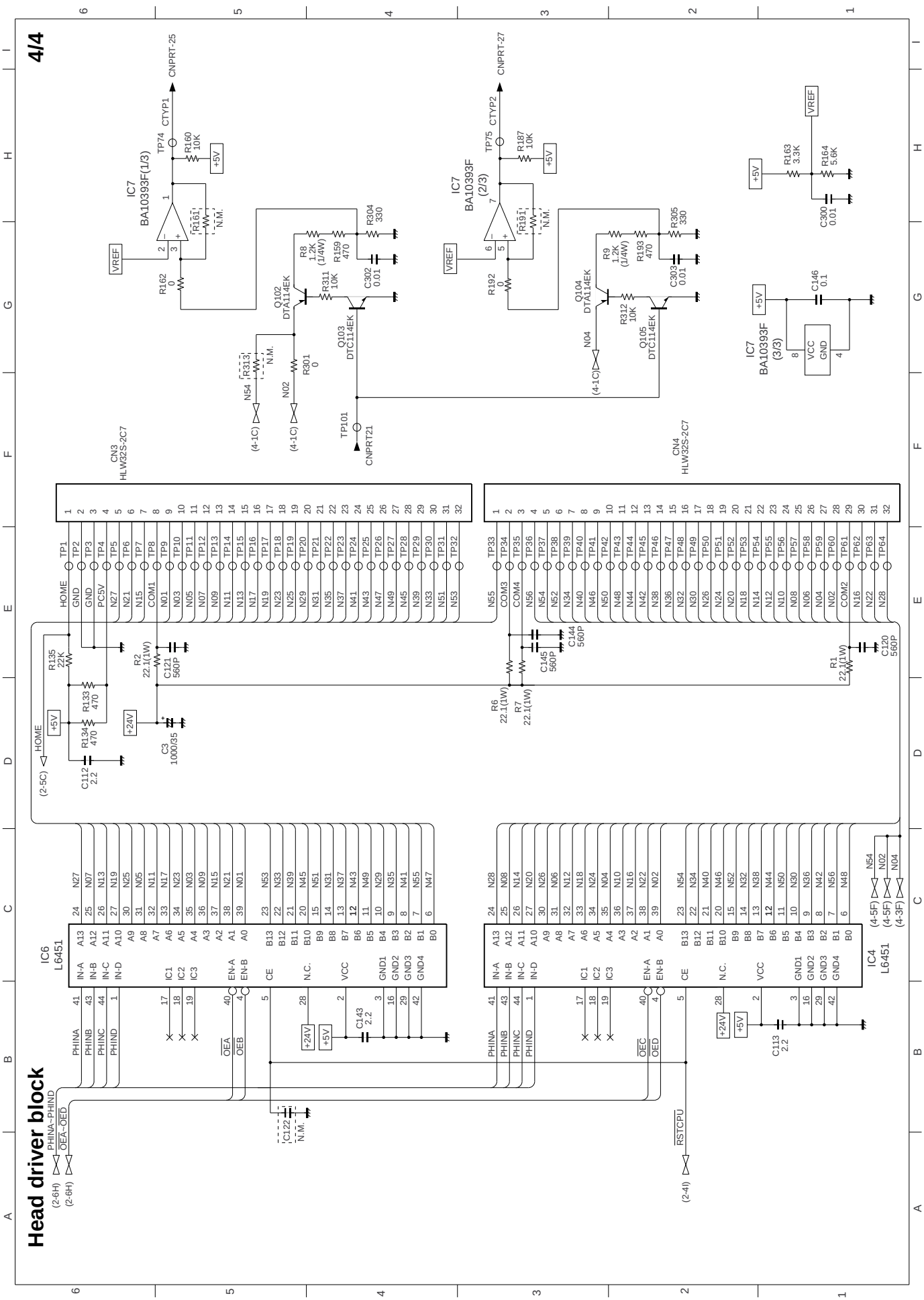

1/4
[4] Printer PWB circuit
other block
CNPRT-1
CNPRT-2
CNPRT-3
CNPRT-4
CNPRT-5
CNPRT-6
CNPRT-7
CNPRT-8
CNPRT-9
CNPRT-10
CNPRT-11
CNPRT-12
CNPRT-13
CNPRT-14
CNPRT-19
CNPRT-23
CNPRT-16
CNPRT-15
CNPRT-17
CNPRT-22
CNPRT-24
CNPRT-26
CNPRT-28
CNPRT-29
(NOT USE)
CNPRT-30
(NOT USE)
TP76 STRBA
TP77 CD0A
TP78 CD1A
TP79 CD2A
TP80 CD3A
TP81 CD4A
TP82 CD5A
TP83 CD6A
TP84 CD7A
TP85 ACKA
TP86 BUSYA
TP87 PEA
TP88 SLCTA
TP89 ATFDA
TP90 DG
TP92 DG
TP93 INITA
TP94 FAULTA
TP95 SLINA
TP96 +5V
TP97 DG
TP98 +24V
TP99 MG
TP300
TP301
R180 39
R181 39
R182 39
R183 39
R184 39
R185 39
R158 39
R157 39
R156 39
FB104 BK2125HS102
FB103 BK2125HS102
FB101 BK2125HS102
FB102 BK2125HS102
R143 39
R130 39
FB100 BK2125HS102
R132 39
+5V
R150 SHORT
R151
C124
N.M.
R179 4.7K
R177 4.7K
R175 4.7K
R176 4.7K
R153 4.7K
R138 4.7K
R152 4.7K
R173 4.7K
C142 1000P
C140 1000P
C137 1000P
C150 1000P
C127 1000P
C128 1000P
C125 100P
C138 1000P
D5
R155 4.7K
R140 4.7K
R137 4.7K
R127 4.7K
R154 39
R139 39
R136 39
R126 39
C118 100P
C129 100P
C130 100P
C131 100P
R128 4.7K
R141 4.7K
R178 4.7K
C116 1000P
C117 1000P
C141 1000P
R119 4.7K
R129 4.7K
R142 39
C107 1000P
C119 1000P
C4 100/16
C109 0.1
+24V
C5 100/35
C110 0.1/50
R5 (1W)
R149
Q1 2SB1261K
R148 6.8K
SW24V
R146 6.8K
R147
R145 4.7K
R144 10K
Q101 2SC2412KR
ON24V
(2-2D)
R306
R307
R201
CD0B
CD1B
CD2B
CD3B
CD4B
CD5B
CD6B
CD7B
ACK
BUSY
PE
SLCT
STRB
ATFD
INIT
FAULT
SLIN
(2-6G)
(2-6E)
CNPRT
STRBA 1 2 CD0A
CD1A 3 4 CD2A
CD3A 5 6 CD4A
CD5A 7 8 CD6A
CD7A 9 10 ACKA
BUSYA 11 12 PEA
SLCTA 13 14 ATFDA
FAULTA 15 16 INITA
SLINA 17 18 PRTRST
DG 19 20 PIN
ERSW 21 22 +5V
DG 23 24 DG
CTYP1 25 26 +24V
CTYP2 27 28 MG
+24V 29 30 MG
(NOT USE)
(NOT USE)


2/4
Gate array/CPU/Memory block
IC5
TC160G33
IC3
SRAM32KB
IC8
TMP87C807U
X1
CSA16.00MXZ040
SHORTX3
N.M.

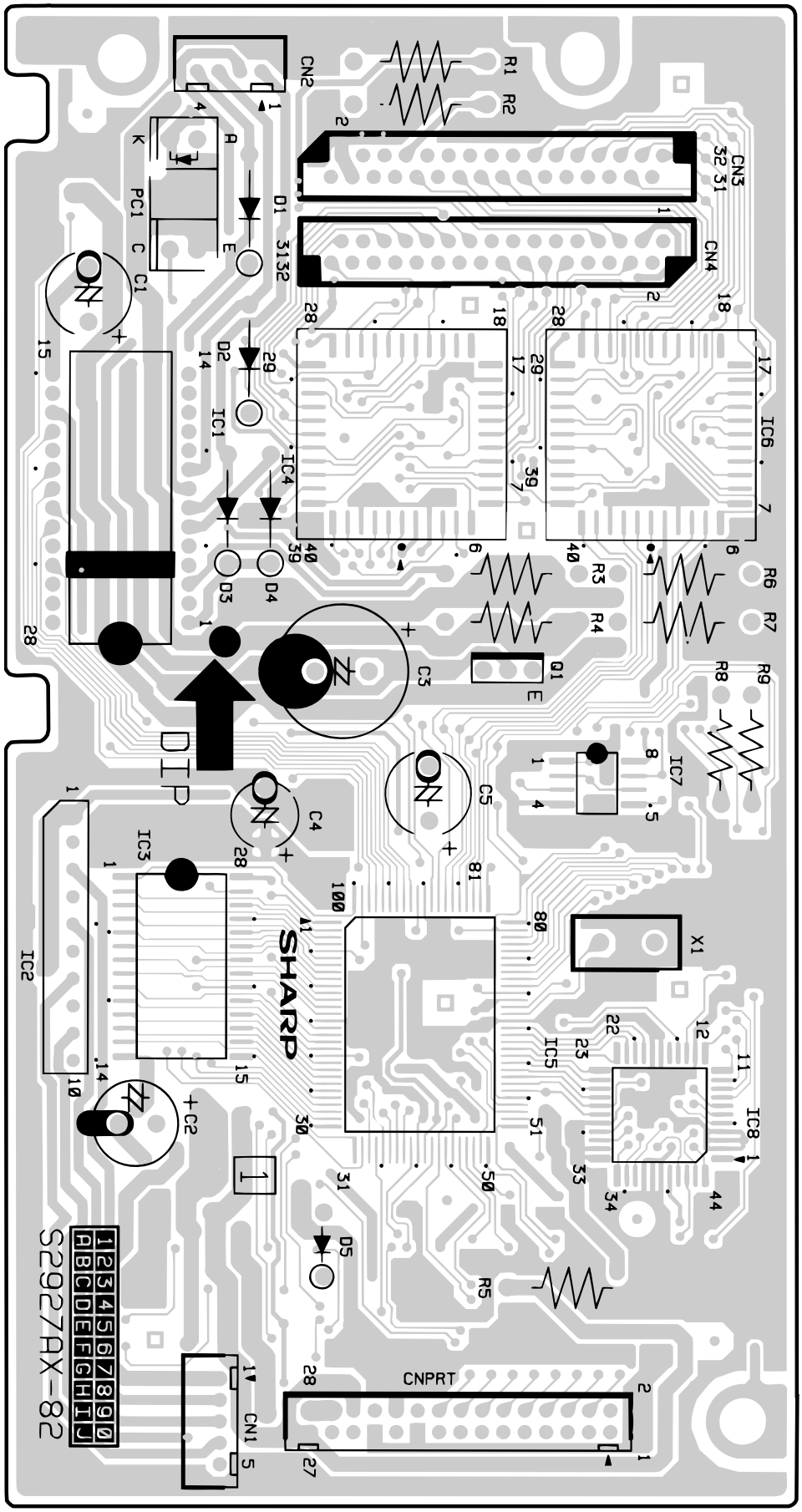
Motor driver block

3/4

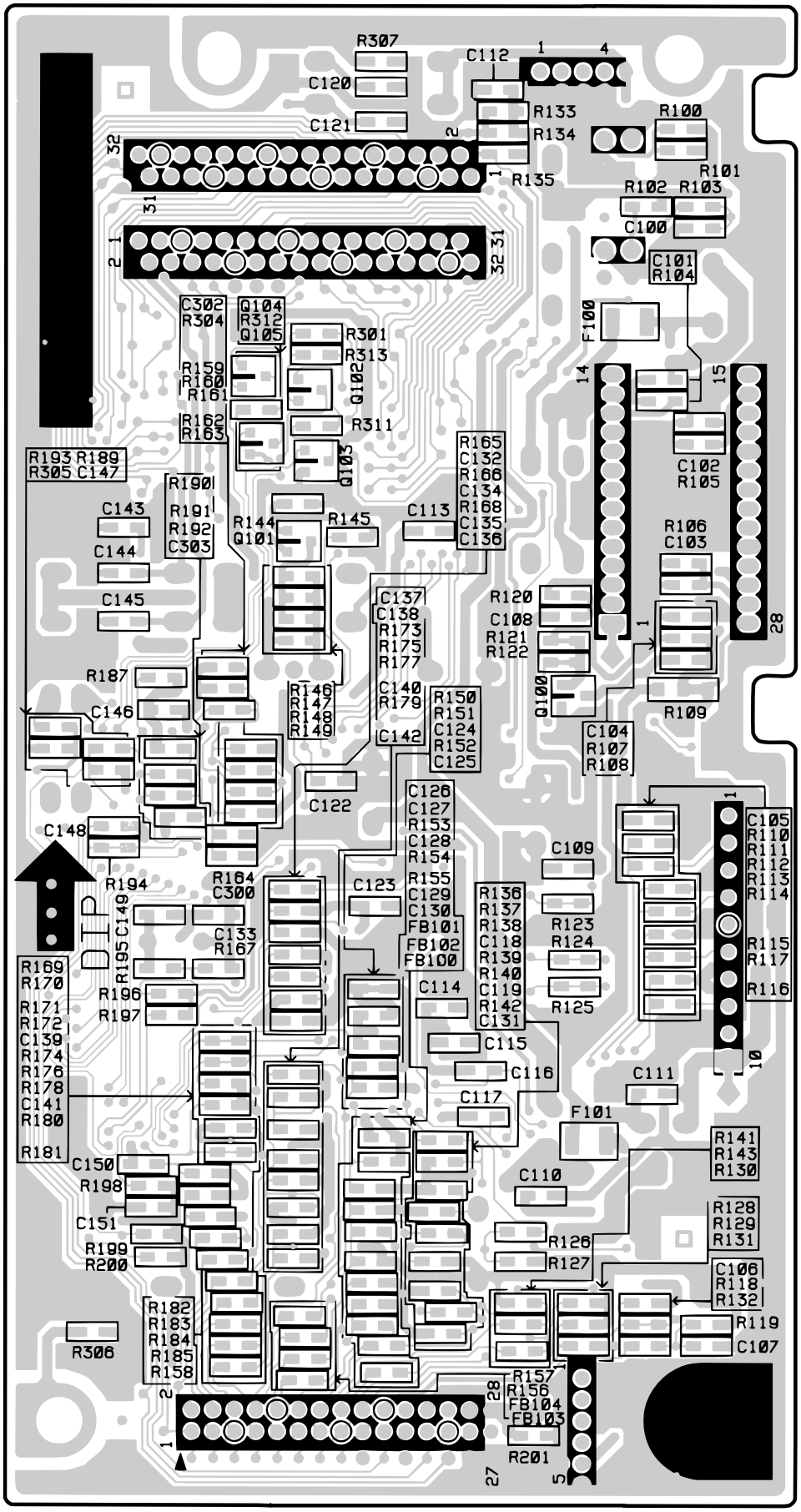



4/4
Head driver block
IC6
L6451
IC4
L6451
IC7
BA10393F(1/3)
IC7
BA10393F
(2/3)
IC7
BA10393F
(3/3)
CN3
HLW32S-2C7
CN4
HLW32S-2C7
CNPRT-25
CNPRT-27
CNPRT21
CTYP1
CTYP2
TP74
TP75
TP101
R160 10K
R187 10K
R161 N.M.
R191 N.M.
R162 0
R192 0
R8 1.2K (1/4W)
R9 1.2K (1/4W)
R159 470
R193 470
R311 10K
R312 10K
R304 330
R305 330
R301 0
R313 N.M.
Q102 DTA114EK
Q103 DTC114EK
Q104 DTA114EK
Q105 DTC114EK
C302 0.01
C303 0.01
R163 3.3K
R164 5.6K
C300 0.01
C146 0.1
R135 22K
R133 470
R134 470
C112 2.2
R2 22.1(1W)
C121 560P
C3 1000/35
R6 22.1(1W)
R7 22.1(1W)
C144 560P
C145 560P
R1 22.1(1W)
C120 560P
C113 2.2
C122 N.M.
C143 2.2
+5V
+24V
VREF
HOME
RSTCPU
PHINA–PHIND
OEA–OED
(2-5C)
(2-6H)
(2-41)
(4-1C)
(4-5F)
(4-3F)

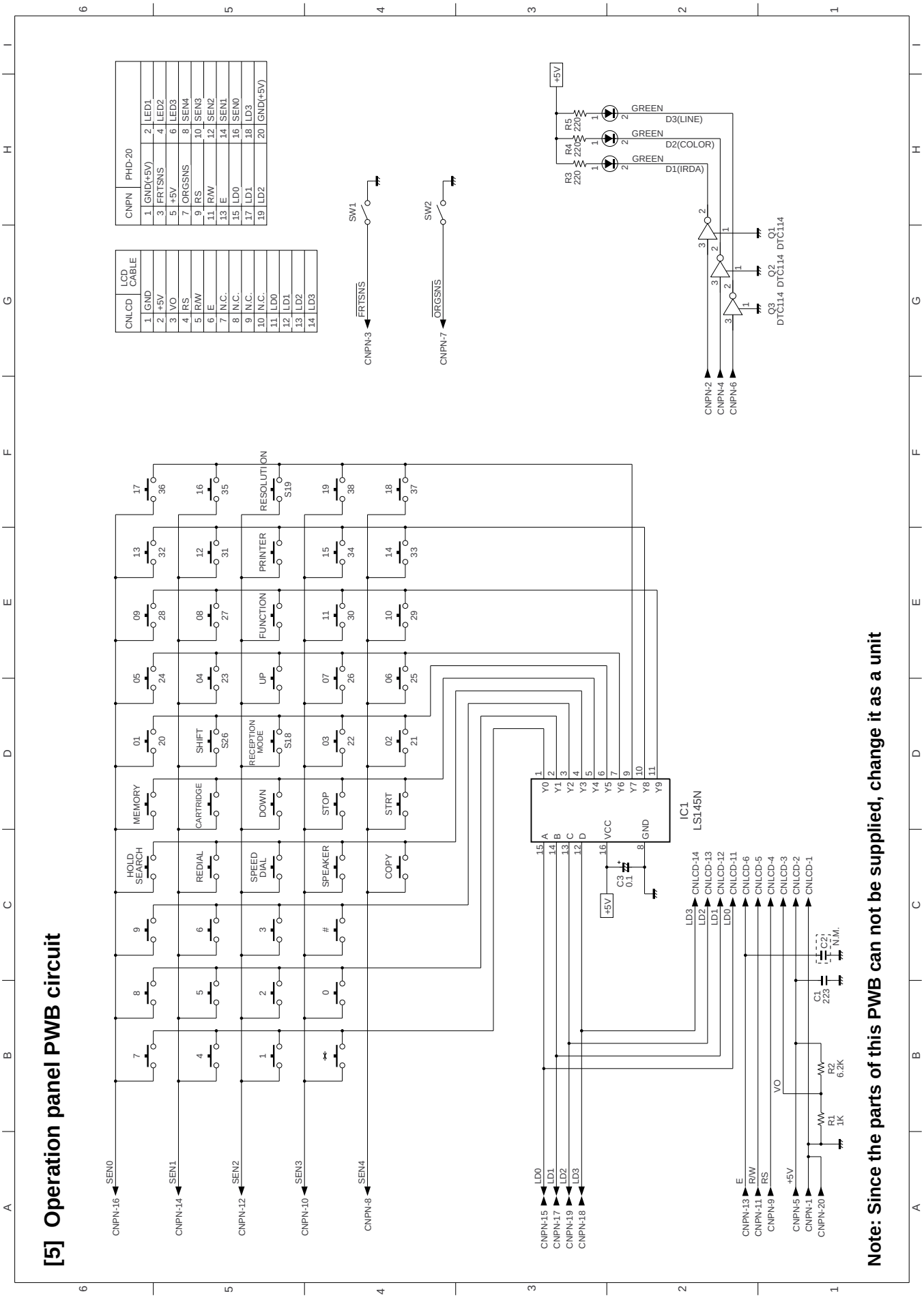
Printer PWB parts layout (Top side)



Printer PWB parts layout (Bottom side)

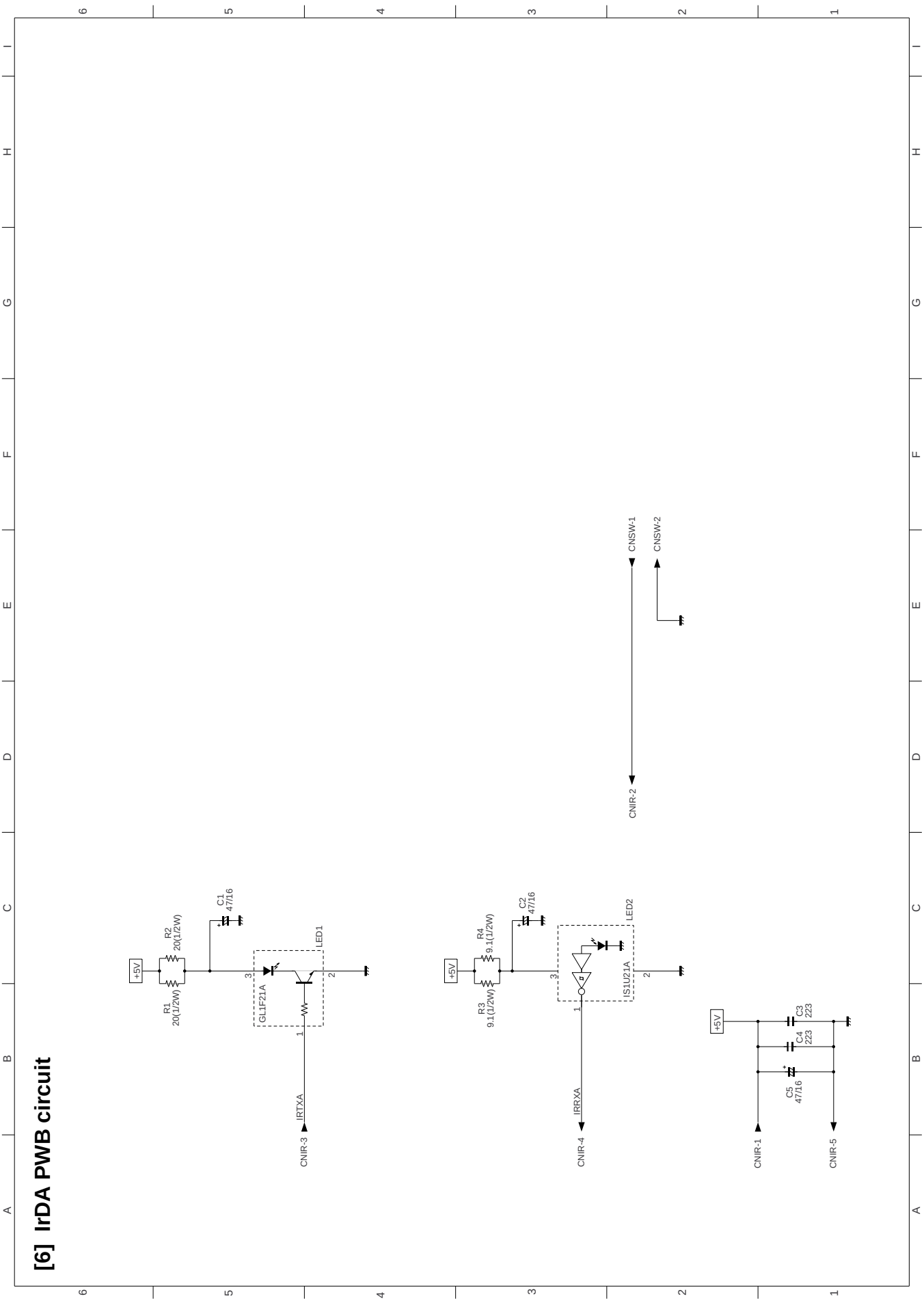


[5] Operation panel PWB circuit

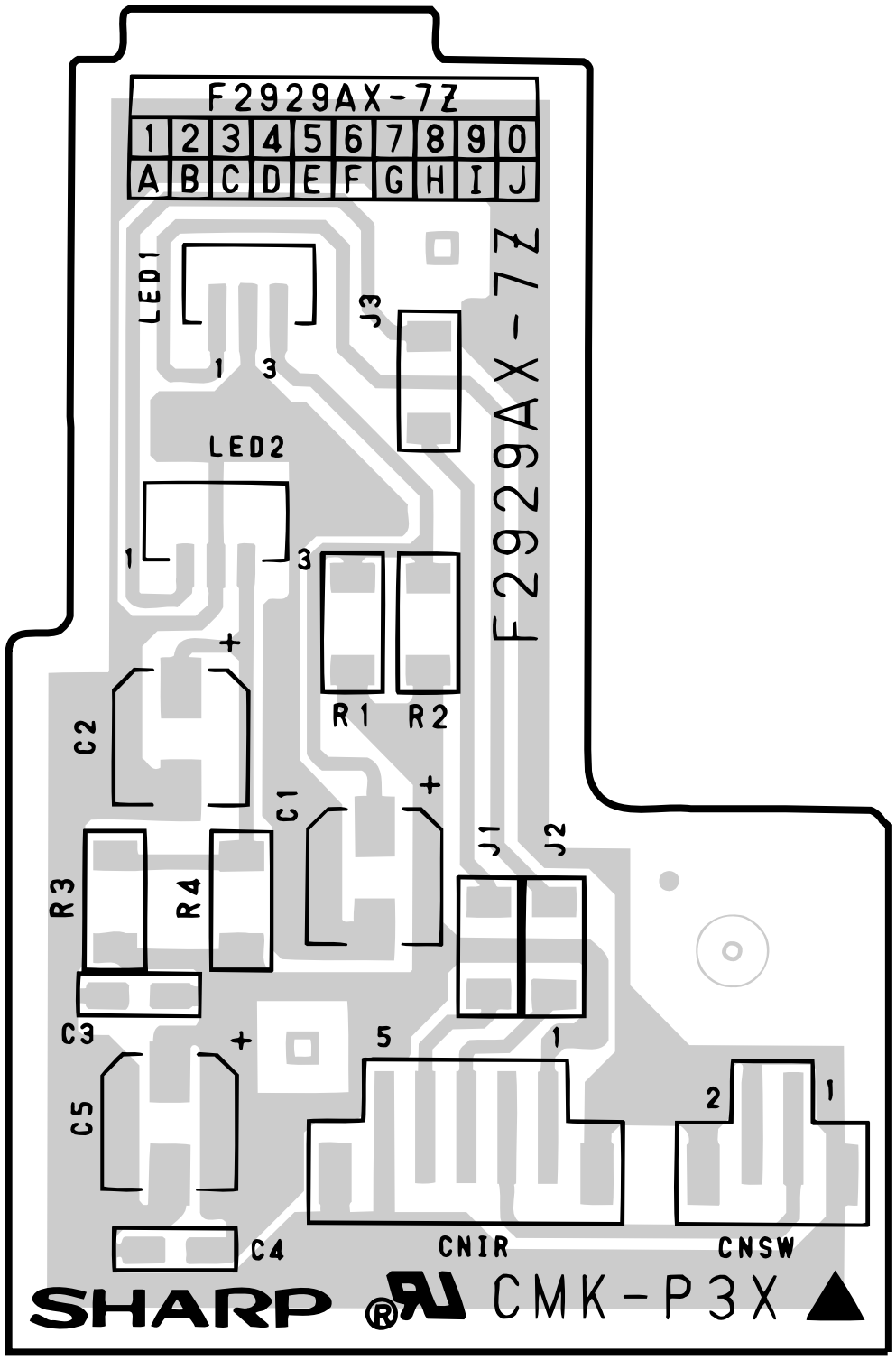


Note: Since the parts of this PWB can not be supplied, change it as a unit

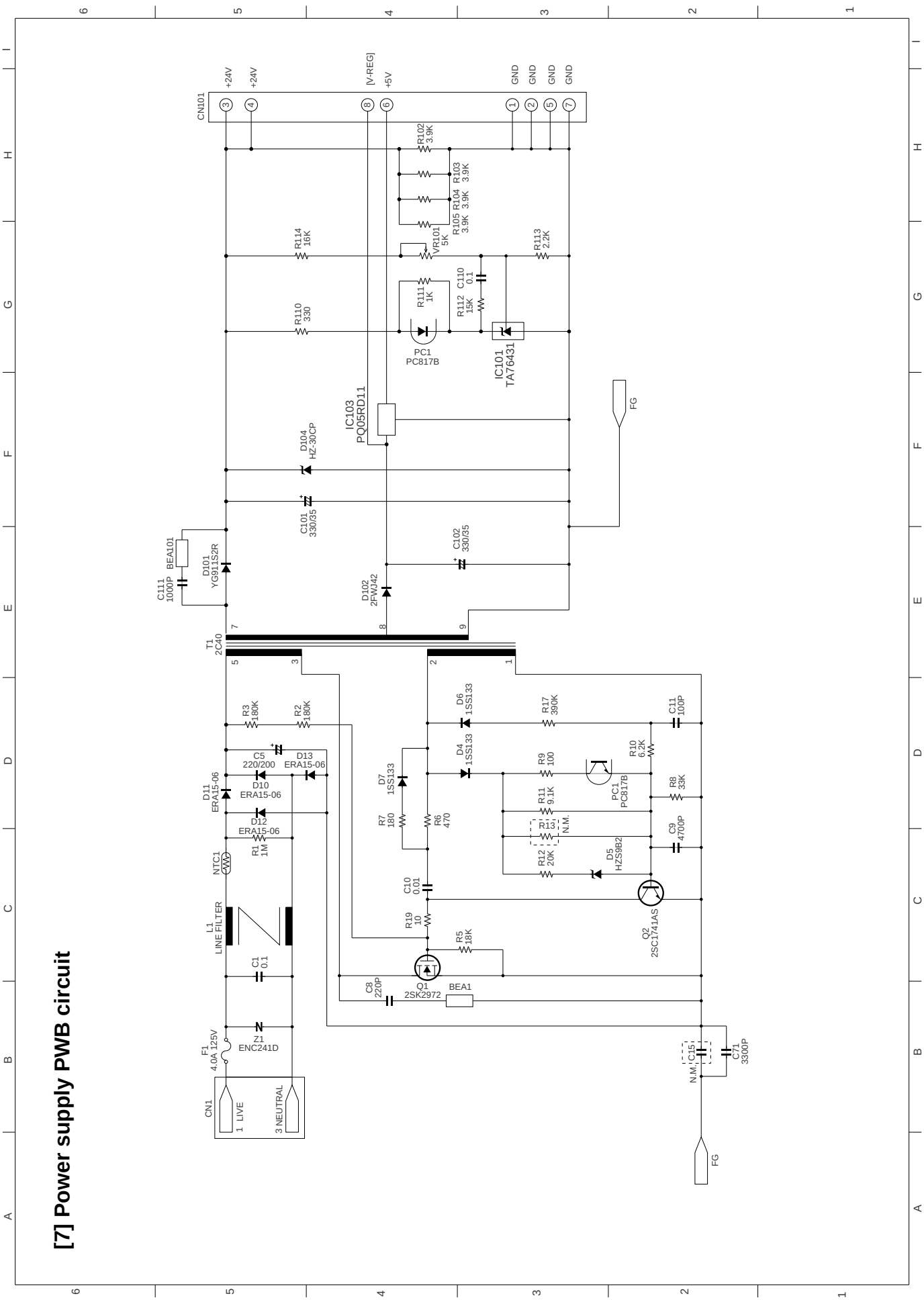
[6] IrDA PWB circuit



IrDA PWB parts layout



[7] Power supply PWB circuit



Power supply PWB parts layout