SHARP **SERVICE MANUAL**

No. 00ZFO3MKCUSME

FACSIMILE OPTION MEMORY UPGRADE PWB

MODEL FO-3MK

This machine is an option memory unit applicable to the machines FO-5700 (100V series).

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Parts marked with "⚠" is important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

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The contents are subject to change without notice.

[1] General description

This machine is an option memory unit applicable to the machines FO-5700 (100V series). It enhances the memory-aided functions such as sequential simultaneous sending and through-memory sub-stitute reception of facsimile.

[2] Installation procedure (pay attention to static electricity)

To install the option memory unit, check the following in advance.

1) Make sure that the remaining memory capacity is 0%.
   If the remaining memory capacity is not 0%, this implies that any data remains in the image memory on the control PWB.
2) Check that a sufficient quantity of paper exists. If there is no paper or paper is lacking, replenish the machine with paper, and print the data received and stored in the memory.
3) Then, check whether there is any confidentially received information, seeing the confidential reception data list ("FUNK" + "2" + "1" + "0"). If any confidentially received information is found, input the ID No. of specific reception box, and print the confidentially received information.
4) After that, check whether there is timer sending information, seeing the timer sending information list ("FUNK" + "2" + "0" + "2"). It is required to teach users that any timer sending information, if exists, is cleared after the option memory unit is installed and, accordingly, users have to set again the timer sending and do the timer sending.

Install the option memory unit in the following procedure.

1) Remove the ROM cover of facsimile.
2) Insert two spacers to control PWB, and then connect it to the connector CNOP of control PWB.
   (Fig. 1)
3) Mount the control PWB to which the option memory has been connected in the machine.
   (Tighten the screws, and connect the connector without fail.)
4) Mount the ROM cover.
5) After installation turn on the power switch.

```
PLEASE WAIT A MOMENT
```

appears.
Then, after several seconds,

```
JUN–10 MON 10:00AM
M:00%  STAND–BY AUTO
```

appears.

[3] Diagnostic mode

Successively input "FUNK" + "9" + "✳" + "8" + "#" + "7". Then,

```
ROM:FAB0✳
```

(✳ is ROM version.)

appears.
After that, press the "START" key.
Then,

```
01:SOFT SWITCH MODE
PRESS START KEY
```

appears.
Select MEMORY CLEAR, using the one-touch key "11".

```
11:MEMORY CLEAR
PRESS START KEY
```

After completion of MEMORY CLEAR,
the following indication appears.

```
12:FLASH MEMORY
PRESS START KEY
```

Select ROM/RAM test, using the one-touch key "03".

```
03:ROM & RAM CHECK
PRESS START KEY
```

(This model is provided not only with flash memory for image but also SRAM to enhance the function to store the number of transmissions and receptions.)
When the "START" key is pressed again, the memory of machine (control PWB) and memory of memory unit (excepting the flash memory) are checked.
An example of indication

```
ROM  CPU  SRAM  DRM
P    P    P     P
```

(Upon occurrence of error "E" appears.)

After that, the indication shown below appears, and the result table (Fig. 2) is printed.

After completion of ROM/RAM test the following indication appears.

```
04:AUTO FEEDER MODE
PRESS START KEY
```

Then, select the flash memory test, using the one-touch key "12".

```
12:FLASH MEMORY
PRESS START KEY
```

In the diagnostic mode perform the image memory (standard, option) write/read test, as well as complete erase test.
When the "START" key is pressed,

```
S––E
TEST EXECUTING
```

appears, and the indication changes from "–" to "■" whenever data is written in the flash memory.

After completion of writing of data in all flash memories, the following indication appears.

```
S■■E
TEST EXECUTING
```

After that the long-tone buzzer (normal end) sounds, and at the same time the following indication appears.

```
13:ALL FAX/TEL ENTRY
PRESS START KEY
```

Then, the result table (Fig. 3) is printed.
In case of mismatch, the buzzer emits 9 short tones .
After that, the result table (Fig. 4) is output.

1) If any error occurred, check connection of connector CNOP (check for bending and breakage of pin of connector), check that the option memory unit has been mounted as specified, and then turn on again the power supply, and check.
2) If the same error occurs persistently after the measures stated in item 1 above were taken, replace the option memory unit, and check.
3) If the same error occurs again after the measures stated in item 2) were taken, check the control PWB.

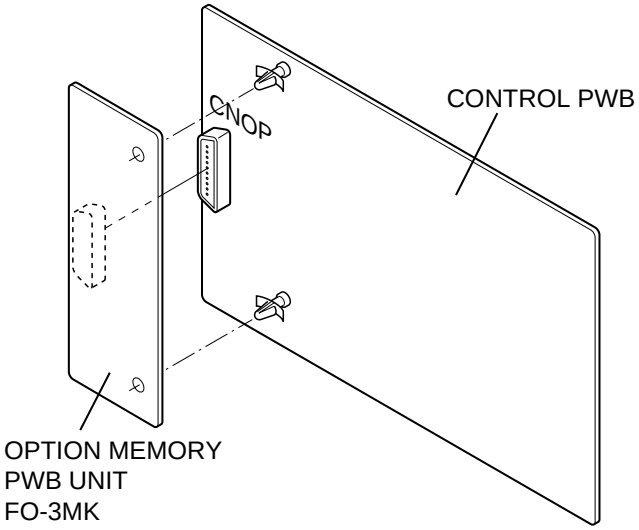


Fig. 1

```
                        ROM/RAM CHECK LIST          OCT–19–1999 TUE 10:43 AM

MAIN:     ROM  = OK     VER.=FAB0X     SUM =DE0E
          CPU  = OK     VER.=FAB0A     SUM =1C86
          SRAM = OK
          DRAM = OK

PCU:                    M/C = 00       F/W = 412250G001J0
```

Fig. 2

```
                        FLASH MEMORY CHECK REPORT   OCT–19–1999 TUE 10:45 AM

          SIZE = 5MB (With Option Flash memory)
FLASH MEMORY      = OK  (15S, 24S, 27S)
BANK CHANGEOVER = OK
          BANK = OK
```

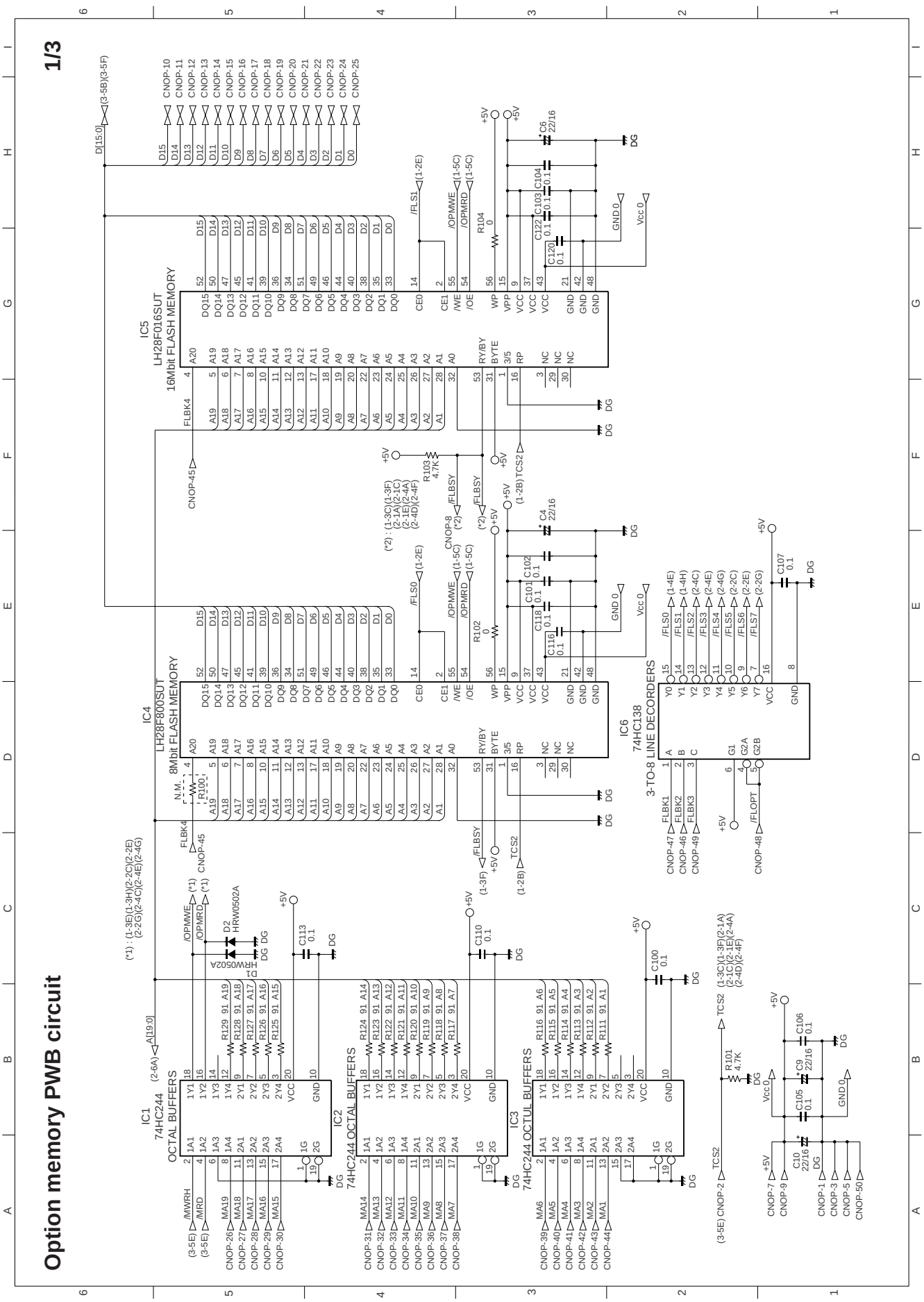
Fig. 3

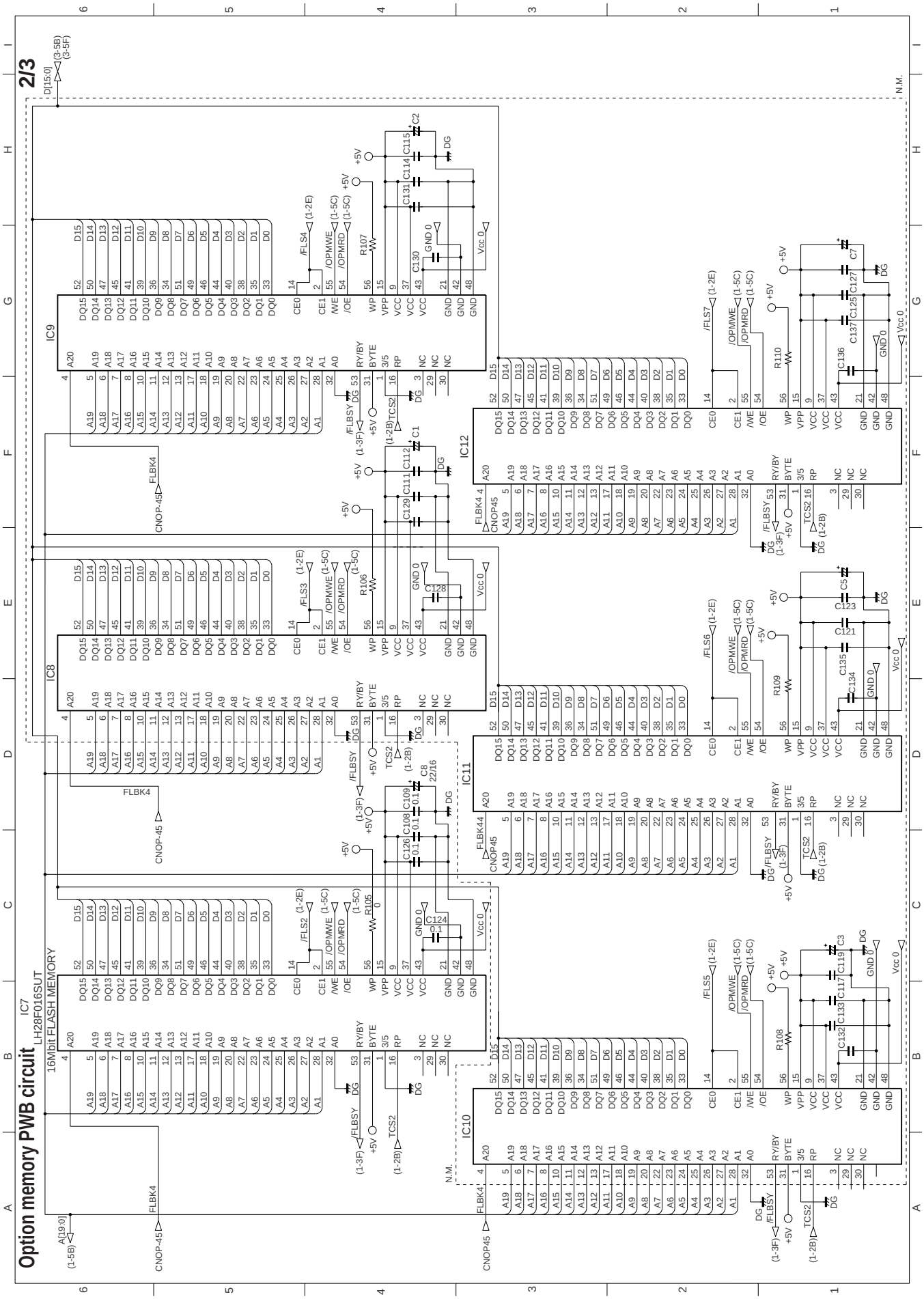
```
                        FLASH MEMORY CHECK REPORT   OCT–19–1999 TUE 10:45 AM

          SIZE = 5MB (With Option Flash memory)
FLASH MEMORY      = NG  (15S, 24S, 27S)
BANK CHANGEOVER = NG
          BANK = NG
```

Fig. 4

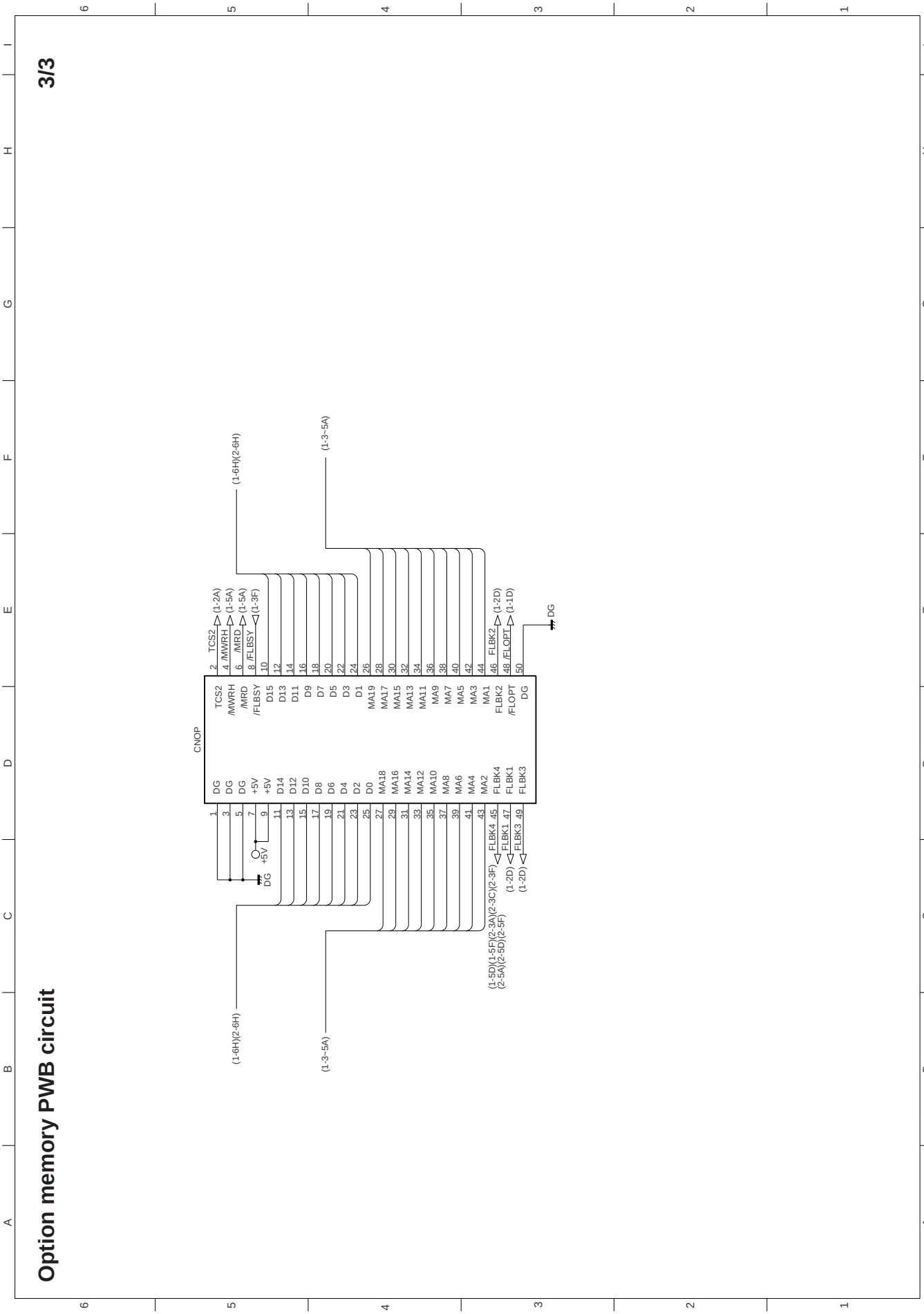
[4] Circuit schematics and parts layout



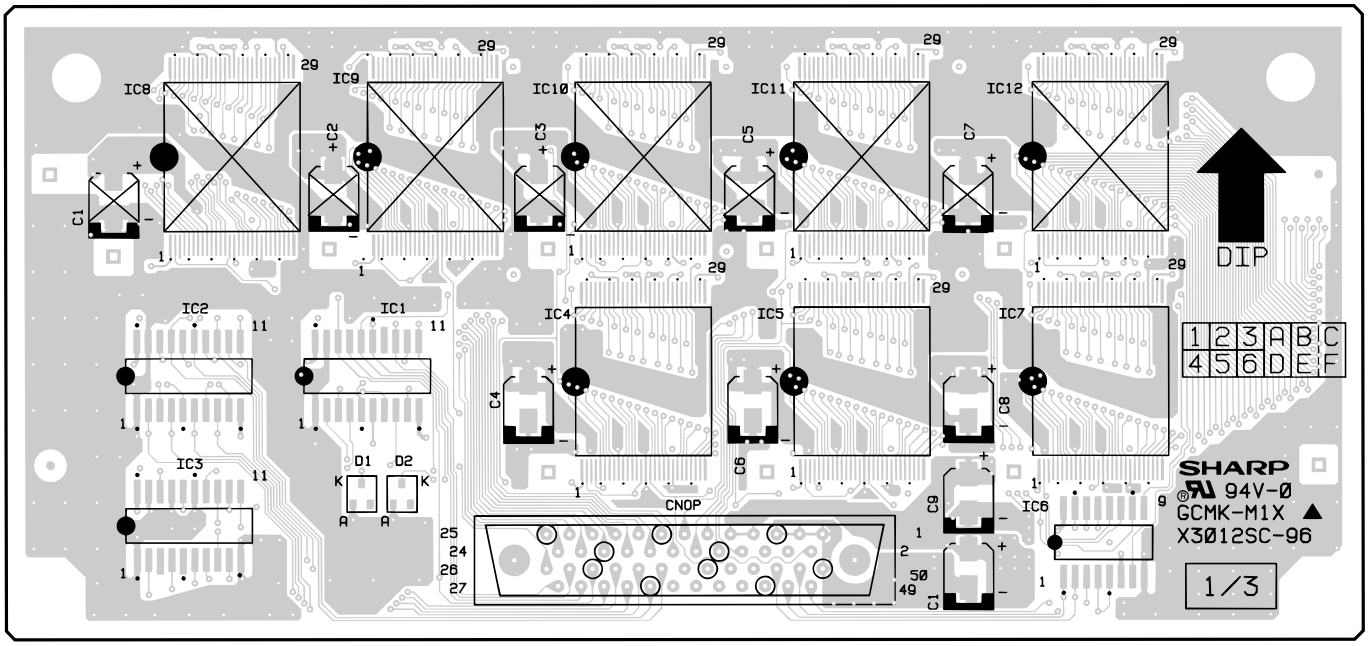

Option memory PWB circuit
2/3
IC7
LH28F016SUT
16Mbit FLASH MEMORY
IC8
IC9
IC10
IC11
IC12
N.M.

Option memory PWB circuit

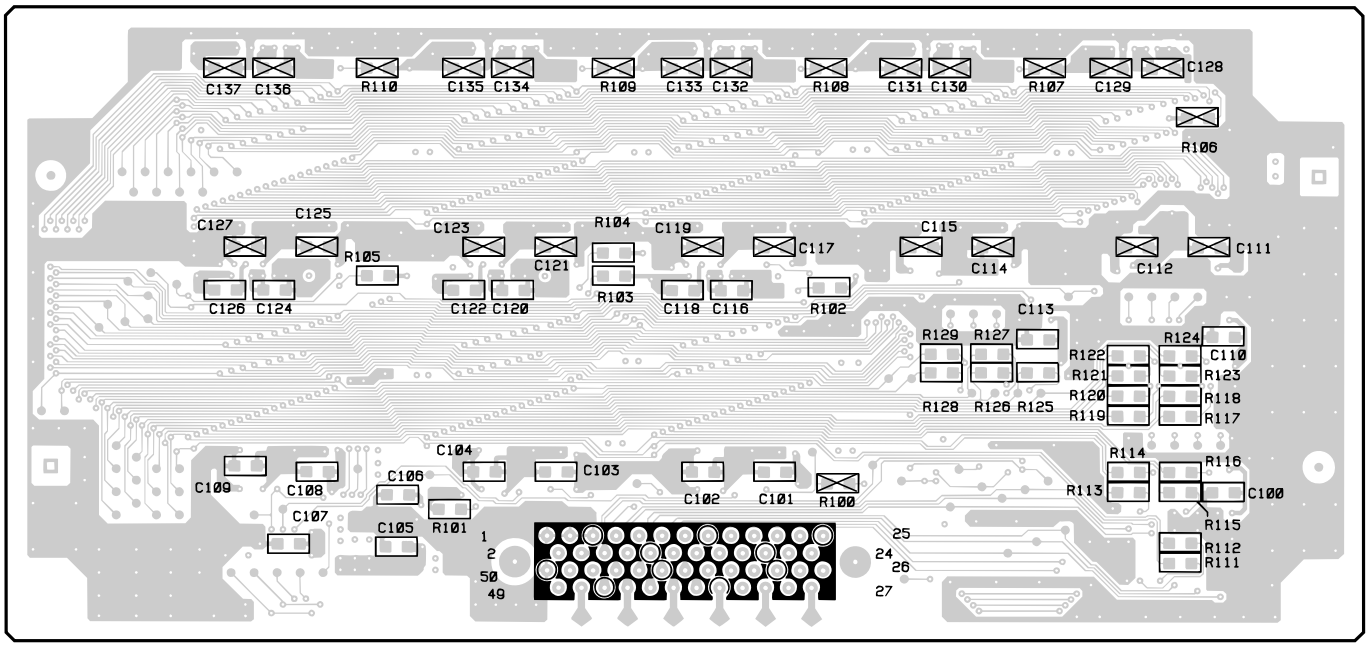
3/3



Option memory PWB parts layout (Top side)



Option memory PWB parts layout (Bottom side)



[5] Parts guide

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
[1] Packing parts						
1	SPAKA110BXHZZ	AB		D	Vinyl bag	
2	SSAKA0006UCZZ	AA		D	Vinyl bag	
3	LSTY-0057AFZZ	AC		C	Spacer	
4	SPAKC285BXHZZ	AD	N	D	Packing case	
5	PSHEM3490XHZZ	AC		D	Aluminum foil	
[2] Option memory PWB unit						
1	VCEAPS226AF1C	AC		C	Capacitor(16WV 22µF)	[C4]
2	VCEAPS226AF1C	AC		C	Capacitor(16WV 22µF)	[C6]
3	VCEAPS226AF1C	AC		C	Capacitor(16WV 22µF)	[C8]
4	VCEAPS226AF1C	AC		C	Capacitor(16WV 22µF)	[C9]
5	VCEAPS226AF1C	AC		C	Capacitor(16WV 22µF)	[C10]
6	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C100]
7	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C101]
8	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C102]
9	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C103]
10	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C104]
11	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C105]
12	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C106]
13	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C107]
14	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C108]
15	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C109]
16	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C110]
17	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C113]
18	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C116]
19	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C118]
20	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C120]
21	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C122]
22	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C124]
23	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.1µF)	[C126]
24	QCNCW2590SC5J	AM		C	Connector(50pin)	[CNOP]
25	VHDHRW0502A-1	AD		B	Diode(HRW0502A)	[D1]
26	VHDHRW0502A-1	AD		B	Diode(HRW0502A)	[D2]
27	VHIHD74HC244F	AE		B	IC(HD74HC244), OCTAL BUFFERS	[IC1]
28	VHIHD74HC244F	AE		B	IC(HD74HC244), OCTAL BUFFERS	[IC2]
29	VHIHD74HC244F	AE		B	IC(HD74HC244), OCTAL BUFFERS	[IC3]
30	VHILH28F80S10	BH		B	IC(LH28F800SUT), 8Mbit FLASH MEMORY	[IC4]
31	VHILH28F016SU	BR		B	IC(LH28F016SUT), 16Mbit FLASH MEMORY	[IC5]
32	VHIHD74HC138F	AE		B	IC(HD74HC138), 3–TO–8 LINE DECORDERS	[IC6]
33	VHILH28F016SU	BR		B	IC(LH28F016SUT), 16Mbit FLASH MEMORY	[IC7]
34	VRS-TS2AD472J	AA		C	Resistor(1/10W 4.7KΩ ±5%)	[R101]
35	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R102]
36	VRS-TS2AD472J	AA		C	Resistor(1/10W 4.7KΩ ±5%)	[R103]
37	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R104]
38	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%)	[R105]
39	VRS-TS2AD910J	AA		C	Resistor(1/10W 91Ω ±5%)	[R111]~[R129]
		(Unit)				
901	DCEKM473BXH03	BR	N	E	Option memory PWB unit	

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