

CITIZEN

Service Manual

**DOT MATRIX PRINTER
MODEL iDP3110**

Rev. 1.00 Newly issued on Oct, 1994

Japan CBM Corporation

REVISION

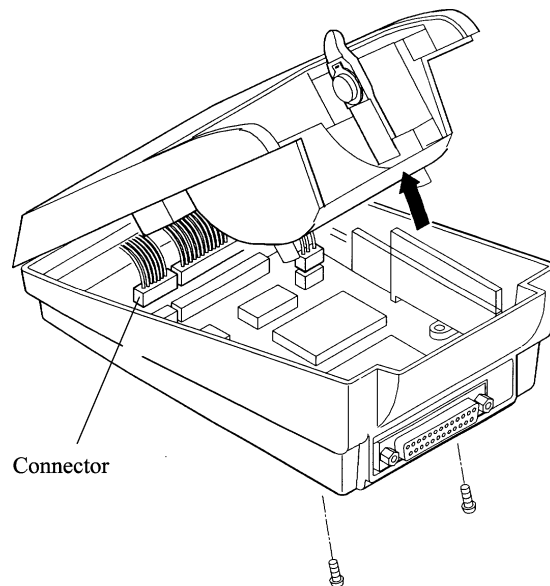
Rev.No.	Date	Comment
Rev.1.00	Oct 1994	Newly issued

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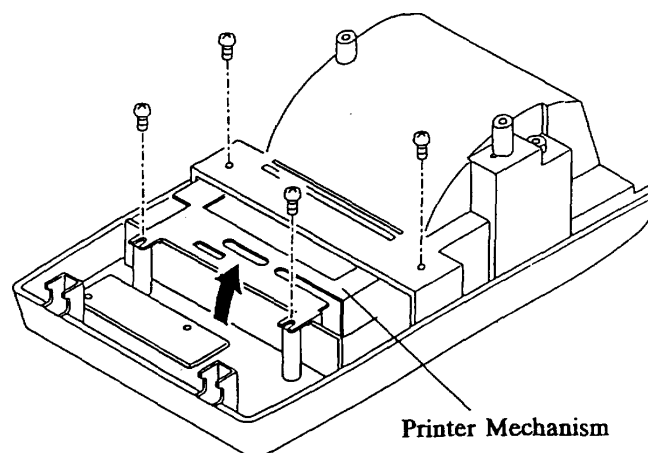
1. How to remove the Upper Cover

- (1) Unfasten 2 screws M3×8 on the Bottom Cover.
- (2) Lift the Upper Cover in the arrow direction removal.
- (3) Unfasten 2 screw, The Printer Mechanism mounting screw, Then remove the Shield Plate from the Printer Mechanism.
- (4) Disconnect the 2 Connectors from the Control Board.



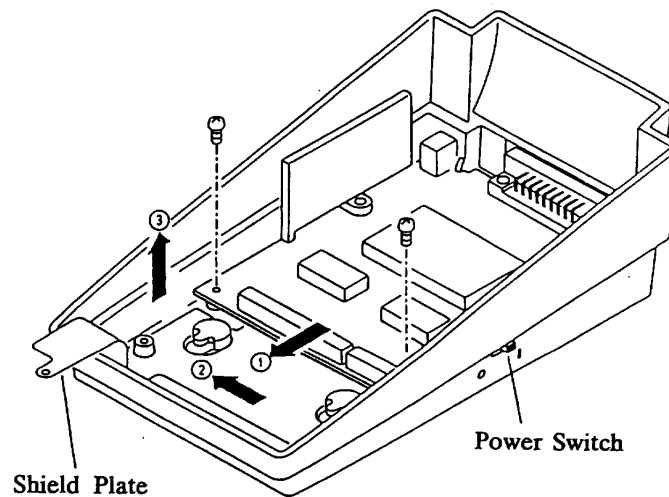
2. How to remove the Printer Mechanism

- (1) Remove the Upper Cover.
- (2) Unfasten 4 screws M2.6×8 and M2×6 as shown below.
- (3) Lift the Printer Mechanism in the arrow direction.



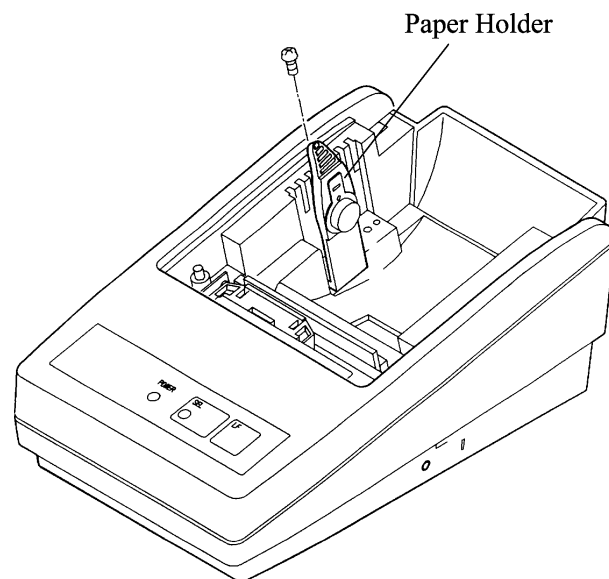
3. How to remove the Control Board

- (1) Remove the Upper Cover.
- (2) Unfasten 2 screws M3×8 as shown below.
- (3) Shift the Control Board in the arrow direction ①
- (4) Shift the Control Board in the arrow direction ② and remove the Power Switch from the Bottom Cover.
Then lift in the arrow direction ③
Remove the shield Plate together with the Control Board.



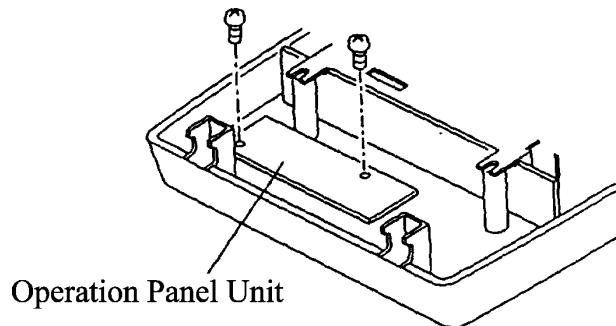
4. How to remove the Paper Holder

- (1) Remove the Printer Cover.
- (2) Unfasten a screw as shown below.



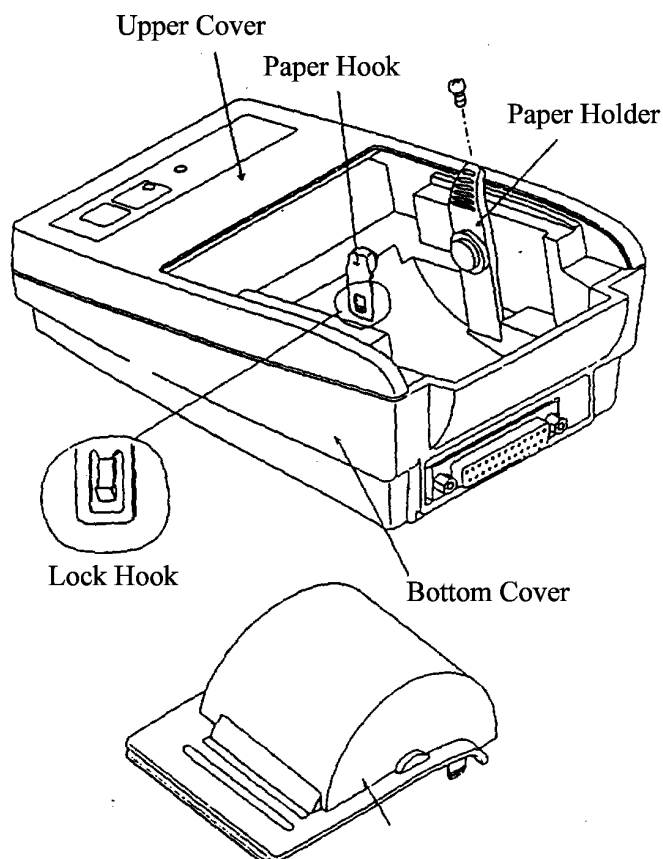
5. How to remove the Operation Panel

- (1) Remove the upper Cover.
- (2) Unfasten 2 screws M2.6×6 as shown below.



6. How to remove the Paper Hook

- (1) Remove the Printer Cover.
- (2) Release a Lock Hook as shown below and lift the Paper Hook to the upside.
- (3) When you set this Lock Hook, set the side of Hook to the Upper Cover, and according to the guide, inset the Lock Hook until this is locked completely.



7. Parts List

PARTS LIST
EXPLODED VIEW

iDP3110RF / PF

Ref. No.	Parts No.	Description	Q'ty	Remarks
1	E 62010490	Top Case	1	
2	E 5200-150	OP Sheet	1	
5	MD910	Printer	<1>	24 Col.
	MD911	Printer	<1>	40 Col.
7	E 4000-850	OP PCB Assy	1	
10	E 6611-400	Paper Holder-L	1	
11	E 6611-405	Paper Holder-R	1	
15	E 62020020	Bottom Case	1	
16	E 6302-290	Rubber Foot	4	
18	E 4019-160	Shield Sheet	1	
20	E 70010310	PCB Assy	<1>	230V ONLY
	E 70010320	PCB Assy	<1>	230V ONLY
21	E 70010330	PCB Assy	<1>	115V/230V
	E 70010340	PCB Assy	<1>	115V/230V
20	E 70010350	PCB Assy	<1>	USA only
	E 70010360	PCB Assy	<1>	USA only
24	E 6204-940	Printer Cover	1	
25	E 6204-950	Printer Cover-H	<1>	
34	76G23760	Screw	2	M2×6
35	76G22839	Screw	3	M2.6×8
36	76G22796	Screw	3	M3×8
37	76G40207	Screw	2	M3×10
38	76G42133	Screw	1	M2.6×8 / PW
39	76G22270	Screw	2	M3×8
40	E 4900-080	Harness	1	25-0263

PARTS LIST
CONTROL BOARD

iDP3110RF / PF

Ref. No.	Parts No.	Description	-RF	-PF		
IC	1	E 104-390	IC	CBM909PC-2DU(24 Col.)	<1>	<1>
		E 104-400	IC	CBM909PC-4DU(40 Col.)	<1>	<1>
	2	E 2010100	IC	TC74HC00P	1	1
	3	E 2010130	IC	TC74HC04P	1	1
	4	E 2010070	IC	TC74HC14P	1	1
	5	E 2010040	IC	MAX232CPE	1	
		E 202-811	IC	TC7407		1
	6	E 2010321	IC	TC74HC74P	1	
		E 201-930	IC	TC74HC373P		1
	7	E 202-860	IC	PST520E	1	
		E 2010321	IC	TC74HC74P		1
	8	E 202-860	IC	PST520E		1
	TA	1, 2	E 390-220	Tr. Array	LB1235	2
TR	1	E 319-117	Transistor	2SA1175HF	1	1
	2, 12	E 379-060	Transistor	2SD1802ST	2	
	2, 10	E 379-060	Transistor	2SD1802ST		2
	3, 5	E 359-090	Transistor	2SC2785SR	7	
	7-11					
	3, 5	E 359-090	Transistor	2SC2785SR		5
	7-9					
	4	E 327-070	Transistor	2SB1202ST	1	1
	6	E 379-070	Transistor	2SD1817	1	1
	12	E 359-100	Transistor	2SC4685		1
14	E 359-100	Transistor	2SC4685	1		
D	1,2	E 400-220	Diode	1S1554	2	2
	3	E 400-270	Diode	1S1588	1	1
	4	E 400-041	Diode	1S2076	1	1
ZD	1	E 413-033	Zener Diode	RD13EB2	1	1
	2, 3	E 405-130	Zener Diode	RD5.6EB2	2	2
OSC	1	E 501-280	OSC	CSA4.19MG	1	1
R	1-3	E 3473-041	Resistor	1 / 4W	47K Ω	8
	13-15					
	17, 20					
R	1-3	E 3473-041	Resistor	1 / 4W	47K Ω	8
	13-15					
	17, 18					

PARTS LIST
CONTROL BOARD

iDP3110RF / PF

Ref. No.	Parts No.	Description	-RF	-PF
R 4, 22 24, 25	E 3103-041	Resistor 1 / 4W 10K Ω	4	
R 4, 16, 21 23, 24	E 3103-041	Resistor 1 / 4W 10K Ω		5
R 5, 6, 9 27, 30	E 3471-041	Resistor 1 / 4W 470 Ω	5	
R 5, 6, 9 26, 30	E 3471-041	Resistor 1 / 4W 470 Ω		5
R 7, 8, 16 19	E 3222-041	Resistor 1 / 4W 2.2K Ω	4	
R 7, 8	E 3222-041	Resistor 1 / 4W 2.2K Ω		2
R 10, 18, 21	E 3331-041	Resistor 1 / 4W 330 Ω	3	
R 10, 19 20	E 3331-041	Resistor 1 / 4W 330 Ω		3
R 11	E 3332-041	Resistor 1 / 4W 3.3K Ω	1	
R 11, 27	E 3102-041	Resistor 1 / 4W 1K Ω		2
R 12, 28	E 3102-041	Resistor 1 / 4W 1K Ω	2	
R 12	E 3332-041	Resistor 1 / 4W 3.3K Ω		1
R 22	E 3472-041	Resistor 1 / 4W 4.7K Ω		1
R 23	E 3472-041	Resistor 1 / 4W 4.7K Ω	1	
R 25	E 3152-041	Resistor 1 / 4W 1.5K Ω		1
R 26	E 3152-041	Resistor 1 / 4W 1.5K Ω	1	
C 1	E 2010-080	El. Cap. 50MR-1	1	1
C 2, 3, 5 7, 21	E 2110-040	C. Cap. F26Y5R1H102M0	5	
C 2, 3, 5 7, 8, 19	E 2110-040	C. Cap. F26Y5R1H102M0		6
C 4	E 2147-160	C. Cap. F26SL1H471K0	1	1
C 6	E 2110-060	C. Cap. F26Y5V1H103Z0	1	1
C 8, 9	E 2130-010	C. Cap. F26SL1H300K0	2	
C 9, 10	E 2130-010	C. Cap. F26SL1H300K0		2
C 10	E 2010-615	El. Cap. 25MR-10	1	
C 11, 12	E 2022-625	El. Cap. 25MR-22	2	
C 11	E 2010-615	El. Cap. 25MR-10		1
C 12, 13	E 2022-625	El. Cap. 25MR-22		2
C 13, 14	E 2010-615	El. Cap. 25MR-10	2	
C 14, 15	E 2010-615	El. Cap. 25MR-10		2
C 15, 16	E 2047-525	El. Cap. 25JS-4.7	2	
C 16, 18	E 2110-460	C. Cap. F26Y5V1B104Z0		3
C 17, 18	E 2010-605	El. Cap. 25JS-10	2	

PARTS LIST
CONTROL BOARD

iDP3110RF / PF

Ref. No.	Parts No.	Description	-RF	-PF
C 19, 20	E 2110-460	C. Cap. F26Y5V1H104Z0	2	
RA 1	E 3473-180	Re. Array M9-1-473J	1	1
RA 2, 3	E 3681-060	Re. Array M8-3-681J	2	2
RA 4	E 3332-200	Re. Array M5-1-332J	1	
RA 4, 5	E 3332-200	Re. Array M5-1-332J		2
DS 1	E 5103-390	Dip Switch KSD-04	1	1
CN 1	E 48000490	Connector MOJ-D14	1	1
CN 2	E 4800-925	Connector 5267-17AX	1	1
CN 3	E 48000470	Conn. 17LE-13250-27 (D3AD) (for Eur. Meter)	1	
	E 48000455	Conn. 17LE-13250-27 (D3CD) (for USA. Meter)	1	
	E 48000460	Connector 57LE-40360-730B		1
CN 4	E 4800-825	Connector 5267-06A	1	1
F 1	E 4005-590	Fuse 5ST2A	1	1
	E 4006-220	Fuse Holder UF-0033#01	2	2
SW 1	E 5105-330	Slide Switch SN20202-1218	1	1
	E 4010-410	Heat Sink 50-0079	1	1
	76G42141	Screw M3×8B	1	1

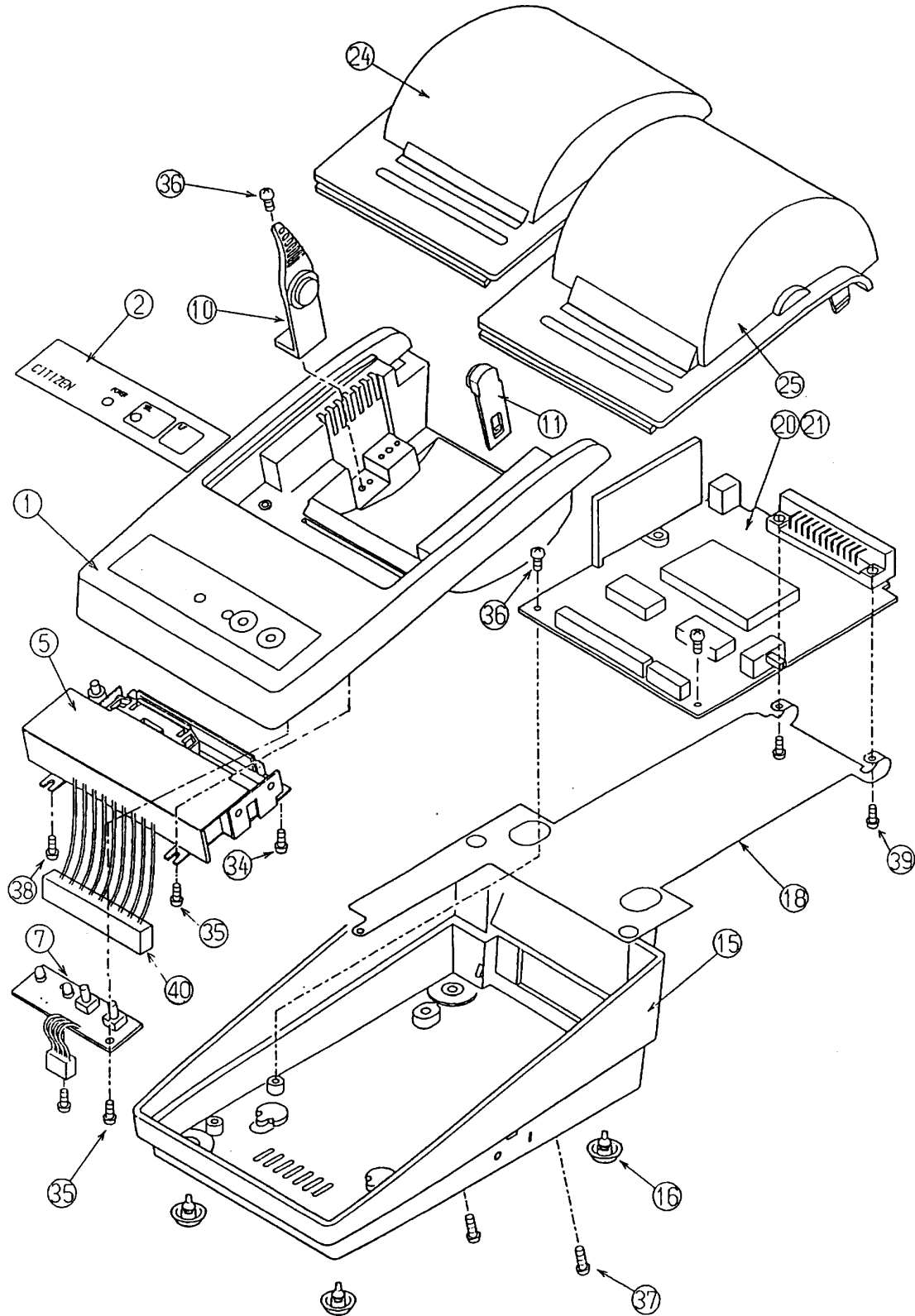
PARTS LIST
OPERATION PANEL

iDP3110RF / PF

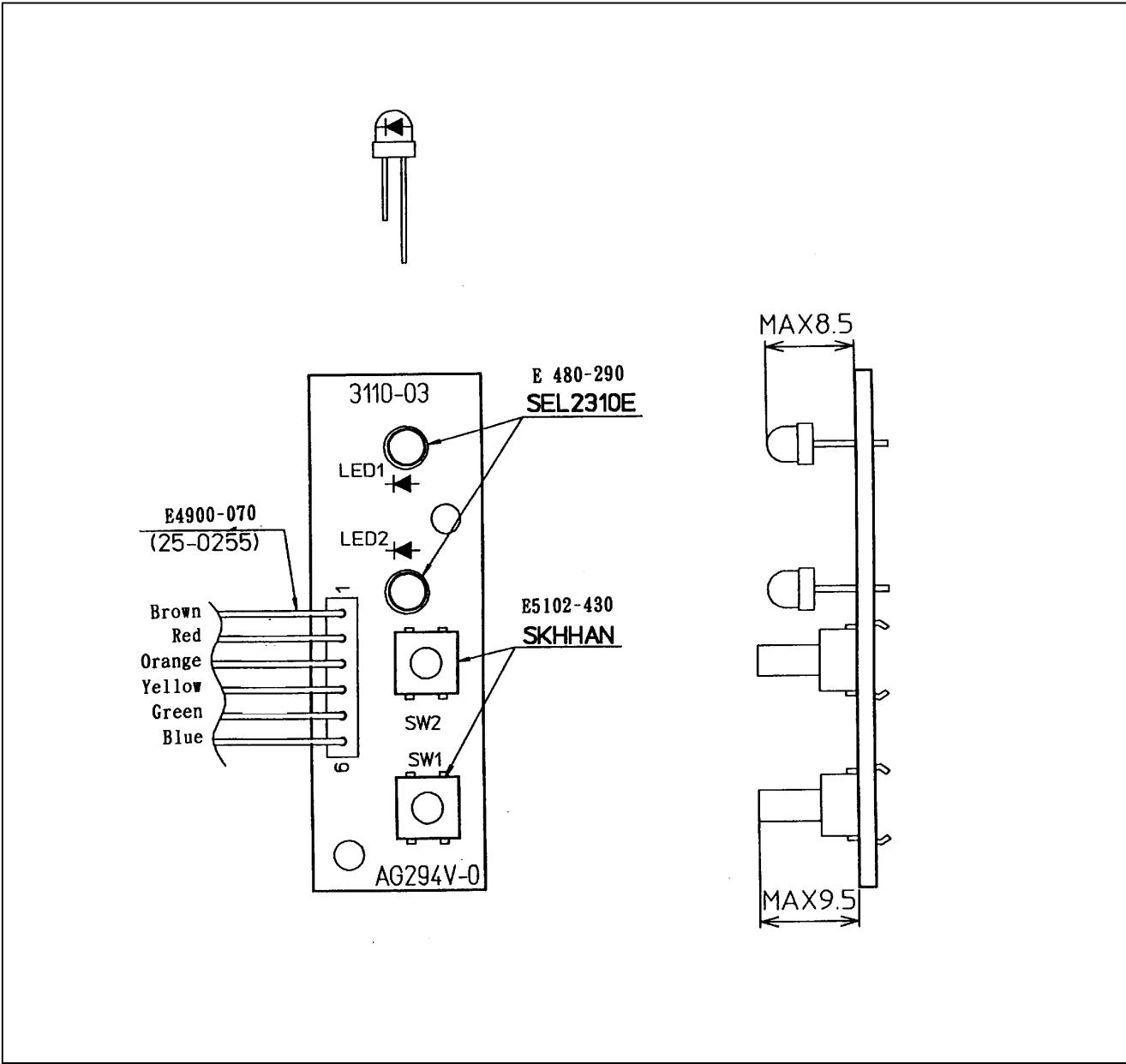
Ref. No.	Parts No.	Description	Q'ty	Remarks
LED 1, 2	E 480-290	LED SEL2310E	2	
SW 1, 2	E 5102-430	SWITCH SKHHAN	2	
	E 4900-070	Harness 25-0255	1	

8. Exploded View

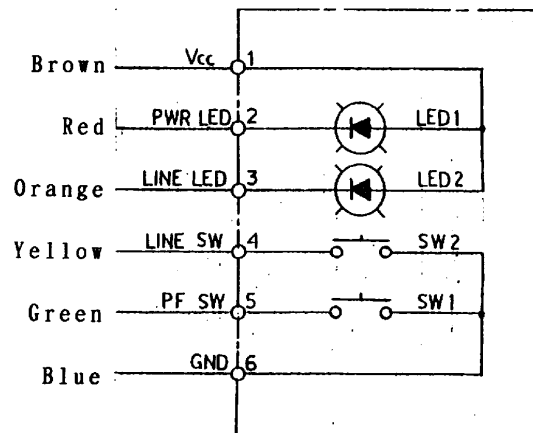
iDP3110



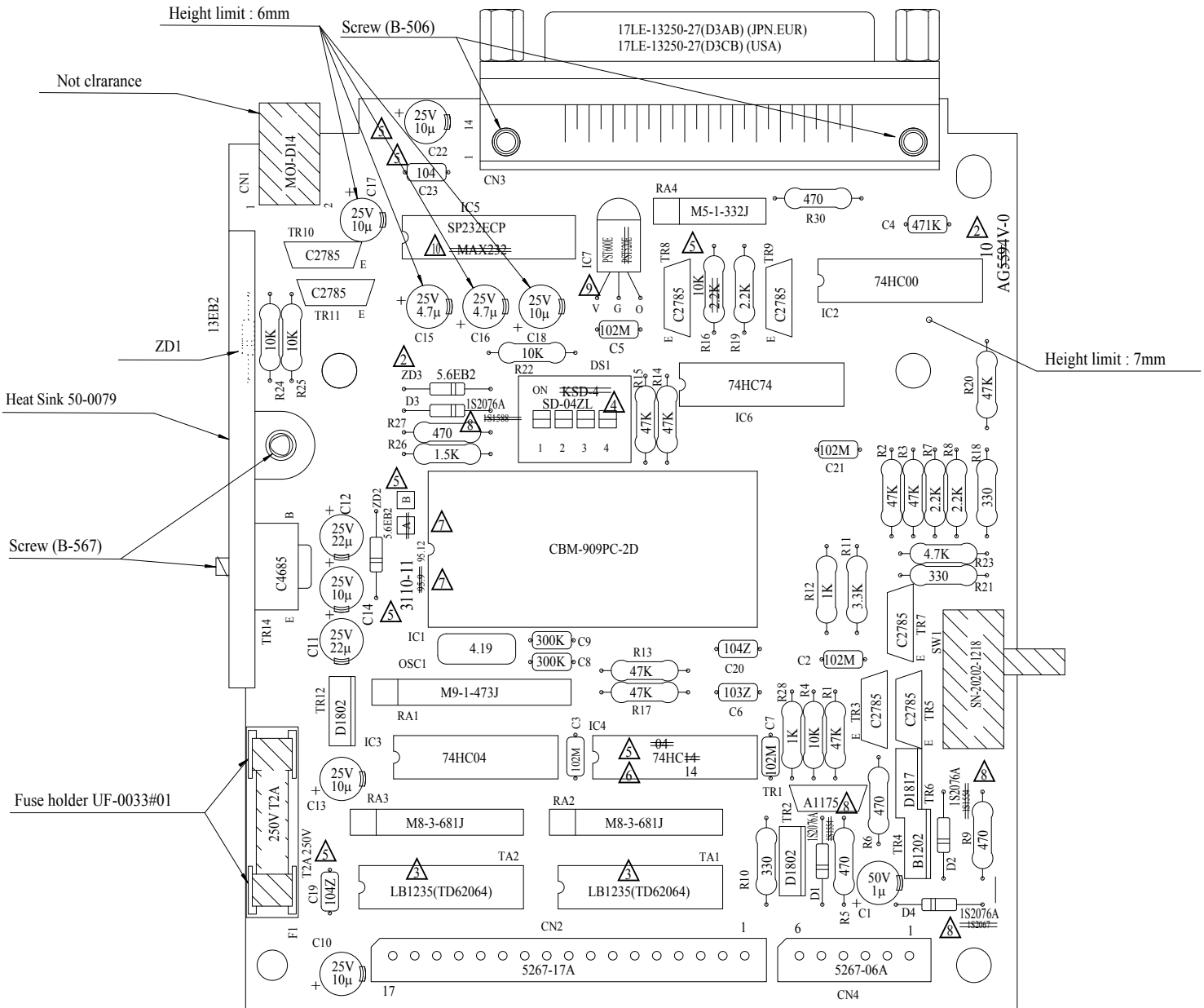
9. OP PCB Parts Position



10. OP PCB Unit Schematic Diagram



11. Control Board Parts position (iDP3110-RF)



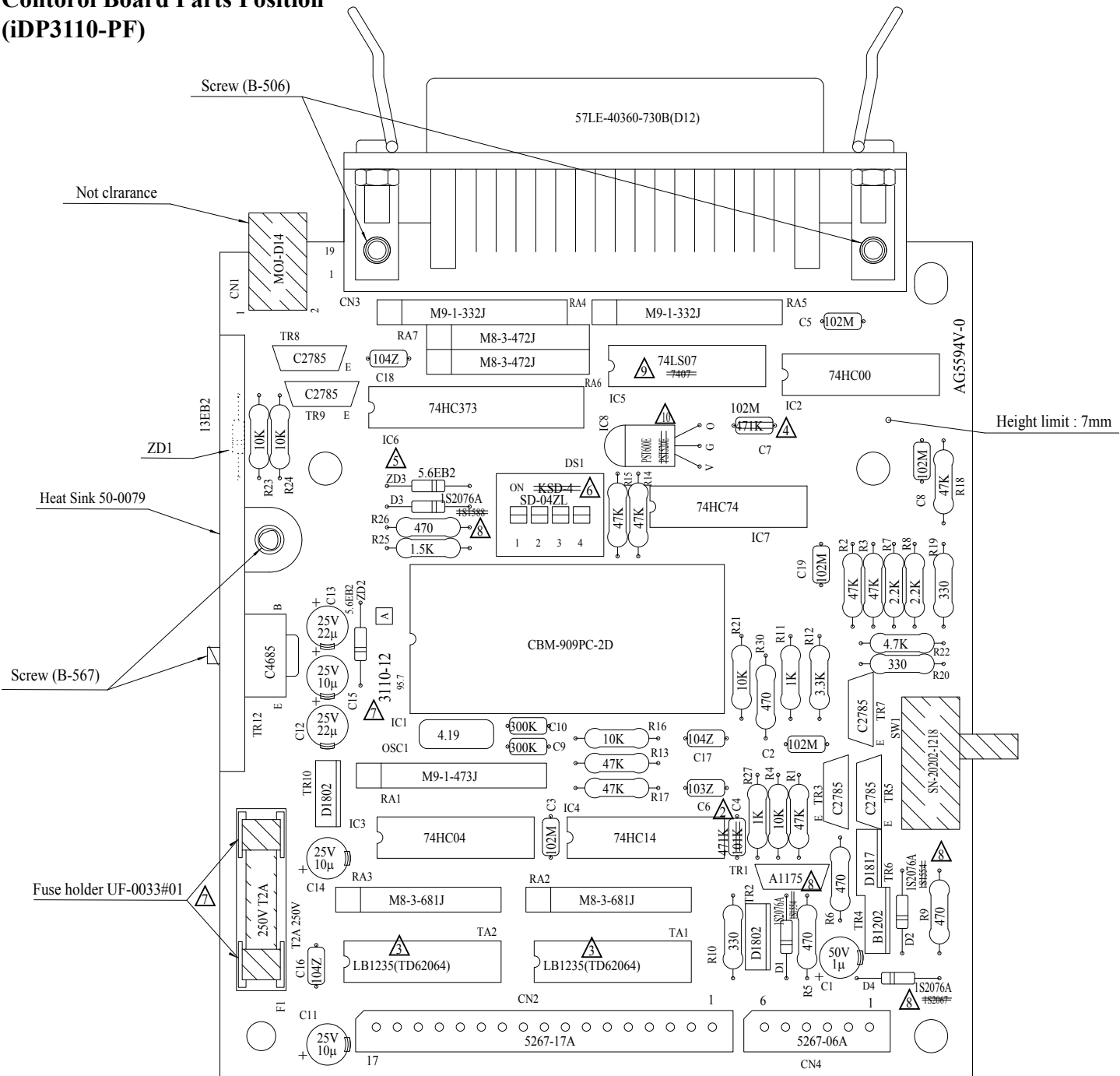
△×1	'00.06.23	I/F-IC change	C-0840
△×1	'98.06.24	For part change	C-0608
△×4	'96.05.29	For diode change	C-0390
△×2	'96.02.21	For changing circuit board silk	C-0351
△×1	'95.11.27	Part change	C-0322
△×6	'95.10.30	Circuit part/silk change due to CE mark compatibility	C-0304
△×1	'94.11.08	Part change	C-0205
△×2	'94.08.17	Part change	C-0153
△×2	'94.08.09	Correct mis-marking	
△	'93.06.19	To version 2 due to design board change	C-0135
MARK	DATE	REVISION	REV.No.

PARTS LAYOUT

iDP3110-RF (3110-11)

3SEC-0614

**Control Board Parts Position
(iDP3110-PF)**



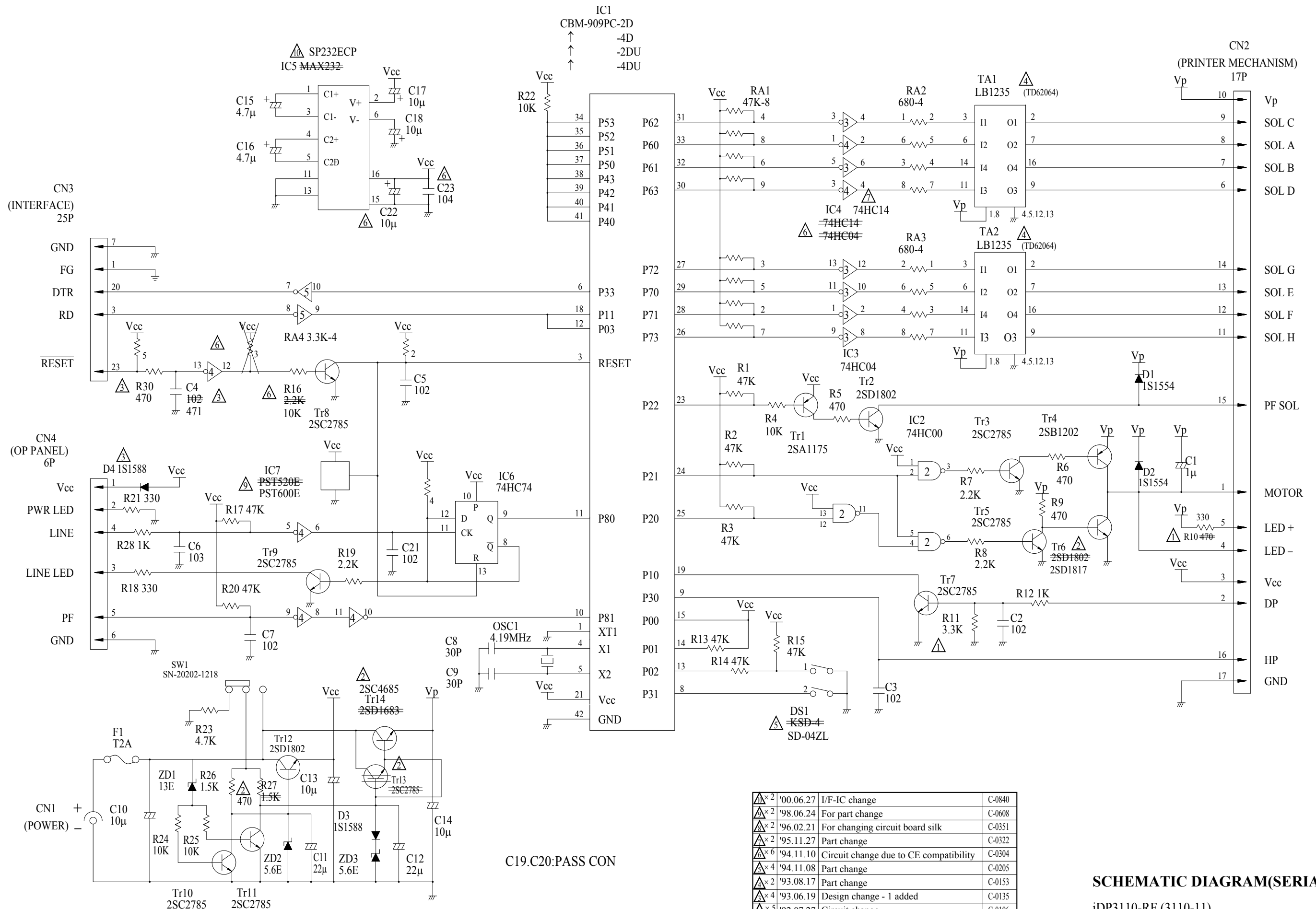
△×1	'98.06.24	For part change	C-0608
△×1	'97.04.21	For alternative part	C-0495
△×4	'96.05.30	For diode change	C-0390
△×2	'95.10.30	Silk change due to CE mark compatibility	C-0304
△×1	'94.11.08	Part change	C-0205
△×1	'94.08.09	Correct mis-marking	
△×1	'94.06.06	Correct mis-marking	
△×2	'93.08.17	Part change	C-0153
△×1	'93.08.11	Capacitor change	C-0152
△	'93.06.19	To version 2 due to design change	C-0135
MARK	DATE	REVISION	REV.No.

PARTS LAYOUT

iDP3110-PF (3110-12)
3SEC-0616

12. Control Board Circuit Diagram

iDP3110-RF



C19.C20:PASS CON

MARK	DATE	REVISION	REV.No.
△x2	'00.06.27	I/F-IC change	C-0840
△x2	'98.06.24	For part change	C-0608
△x2	'96.02.21	For changing circuit board silk	C-0351
△x2	'95.11.27	Part change	C-0322
△x6	'94.11.10	Circuit change due to CE compatibility	C-0304
△x4	'94.11.08	Part change	C-0205
△x2	'93.08.17	Part change	C-0153
△x4	'93.06.19	Design change - 1 added	C-0135
△x5	'92.07.27	Circuit change	C-0106
△x2	'92.04.13	Resistor value change	C-0089

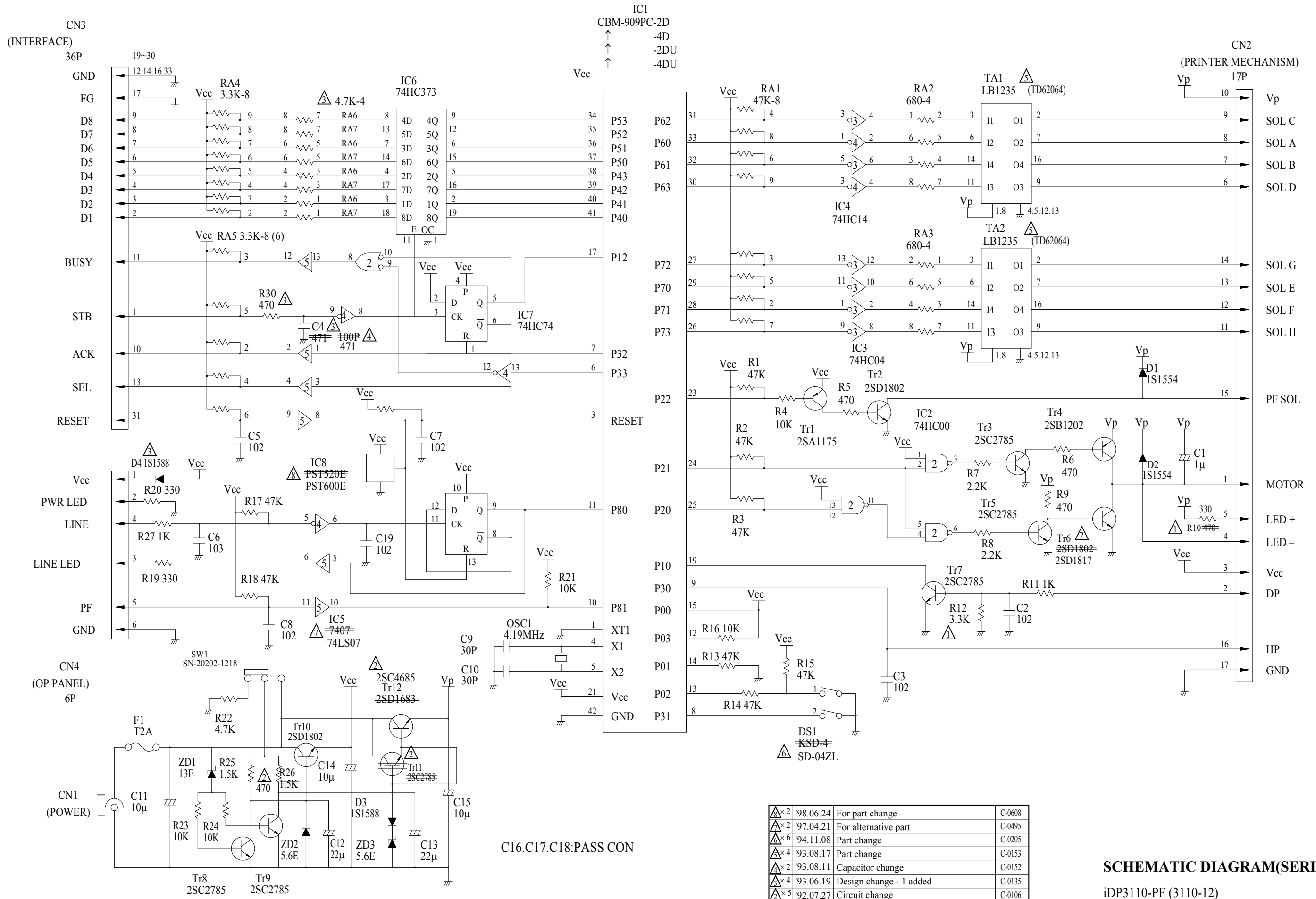
SCHEMATIC DIAGRAM(SERIAL)

iDP3110-RF (3110-11)

3SEC-0613

Contorol Board Circuit Daigram

iDP3110-PF



C16.C17.C18:PASS CON

MARK	DATE	REVISION	REV.No.
△x2	'98.06.24	For part change	C-0608
△x2	'97.04.21	For alternative part	C-0495
△x6	'94.11.08	Part change	C-0205
△x4	'93.08.17	Part change	C-0153
△x2	'93.08.11	Capacitor change	C-0152
△x4	'93.06.19	Design change - 1 added	C-0135
△x5	'92.07.27	Circuit change	C-0106
△x2	'92.04.13	Resistor value change	C-0089

SCHEMATIC DIAGRAM(SERIAL)

iDP3110-PF (3110-12)

3SEC-0615