

CSB0127

(家M) 海外サービス技術 御中

ENGINEERING CHANGE NOTICE

(浜) (映M) 品質保証部		(浜) (映M) ディスプレイ設計部	
10.7.16 松本	10.7.15	10.6.29 藤田	10.8.28 鈴木

BULLETIN NO. YD-136
DATE: JUL, 25 1998

ITEM : Display Monitor

MODEL : CM814ET-301

OBJECT : Addition of new model. (Current Model : CM812ET-301)

CONTENT OF CHANGE :

(1) Logo on the front bezel

Current :

HITACHI

CM812

New :

HITACHI

CM814

Siemens
MCM 21P1

(2) Preset Timing : Shown in Table 1

(3) Circuit Change : Shown in Fig 1~4,11

(4) Assembly Change : Shown in Fig 5~10,12

(5) Parts Change : Shown in Table 2

Table 2

Symbol	Current Model (CM812ET-301)		New Model (CM814ET-301)	
E7T6	-	-	2974058	3pin CONNECTOR CABLE
E7T5	-	-	2974031	3pin CONNECTOR CABLE
K7T2	-	-	2784381M	Jump Wire
K7T3	-	-	2784381M	Jump Wire
K807	-	-	2784381M	Jump Wire
#20	-	-	ME01541	TCO PLATE
T750 (FBT)	BW00941	HVT-HFL1327YD-PWM (Non TCO)	BW00862	HVT-HFL1327YD-PWM (TCO)
R2TR/G/B	0195879R	RESISTOR,CHIP 150 OHM +- 5% 1/10W	0195877R	RESISTOR,CHIP 120 OHM +-5% 1/10W
R2ER/G/B	0195866R	RESISTOR,CHIP 47 OHM +-5% 1/10W	0195858R	RESISTOR,CHIP 22 OHM +-5% 1/10W
R2R/G/B1	0195891R	RESISTOR,CHIP 470 OHM +- 5% 1/10W	0195900R	RESISTOR,CHIP 1k OHM +-5% 1/10W
R2R/G/B2	0195891R	RESISTOR,CHIP 470 OHM +- 5% 1/10W		RESISTOR,CHIP 220 OHM +-5% 1/10W
R2R/G/B5	-	-	0195900R	RESISTOR,CHIP 1K OHM +-5% 1/10W
R289	0110125S	MF 150 OHM +-5% 1W	0110123S	MF 120 OHM +-5% 1W
C2DR	0258119R	EL 0.47MF 100V	0800274R	EL 0.22MF 100V
C2DG	0258119R	EL 0.47MF 100V	0800274R	EL 0.22MF 100V
C2DB	0258119R	EL 0.47MF 100V	0800274R	EL 0.22MF 100V

BULLETIN No

YD-138

CM812 → CM814ET の変更内容

の件 97.7.27

Table 2(Continued)

Symbol	Current Model (CM812ET-301)		New Model (CM814ET-301)	
R84G	0188129M	CF 820 OHM $\pm 5\%$ 1/2w	0188126M	CF 470 OHM $\pm 5\%$ 1/2w
L84G	2123404M	LAL AXIAL COIL 0.27uH	2123403M	LAL AXIAL COIL 0.22uH
Q779	-	-	CF00931U	TR 2SK2382
Q780	-	-	2326871	TR DTC124ES
C774	-	-	AN00886F	PP 0.039MF $\pm 5\%$ 250V
R779	-	-	0700054M	CF 10K OHM $\pm 5\%$ 1/16W
C771	AN01163F	PP 0.12MF $\pm 5\%$ 250V	AN01157F	PP 0.082MF $\pm 5\%$ 250V
C772	AN00896F	PP 0.091MF $\pm 5\%$ 250V	AN01163F	PP 0.12MF $\pm 5\%$ 250V
C773	AN00902F	PP 0.15MF $\pm 5\%$ 250V	AN00901F	PP 0.13MF $\pm 5\%$ 250V
R78F	0110129S	MF 220 OHM $\pm 5\%$ 1W	0110125S	MF 150 OHM $\pm 5\%$ 1W
K758	-	-	2784381M	JUMP WIRE
C395	0800316R	EL 47MF 10V	0800333R	EL 220MF 6.3V
C396	0893044R	CAPACITOR,CHIP 0.01MF $\pm 10\%$ 50V	0893072R	CAPACITOR,CHIP 0.47MF $\pm 10\%$ 25V
C310	0800325R	EL 100MF 10V	0800333R	EL 220MF 6.3V
C311	0893067R	CAPACITOR,CHIP 0.1MF $\pm 10\%$ 50V	0893072R	CAPACITOR,CHIP 0.47MF $\pm 10\%$ 25V
C323	0893044R	CAPACITOR,CHIP 0.01MF $\pm 10\%$ 50V	0893072R	CAPACITOR,CHIP 0.47MF $\pm 10\%$ 25V
R354	-	-	0195916R	RESISTOR,CHIP 4.7K OHM $\pm 5\%$ 1/10W

EFFECTIVE AS FROM (SERIAL : No.):

CM814ET-301 Serial number

G**000001 ~ Manufactured from JUL., 1998 at (GIFU)

- U**000001 ~ Manufacture plan is unsettled at (HHEE-MD)

Table1

Preset Timing

Current Model:CM812ET-301

No.	Video Mode Name (with Resolution and Vertical Frequency)	Horizontal Frequency	Video Mode	CM811ET	CM812ET	CM813ET
1	VGA 640 × 400 - 70 Hz	31.47 kHz	VGA	✓	✓	✓
2	VESA 800 × 500 - 85 Hz	53.67 kHz	VESA	✓	✓	✓
3	VESA 1024 × 768 - 85 Hz	68.68 kHz	VESA	✓	✓	✓
4	Apple 1150 × 870 - 75 Hz	68.68 kHz	Macintosh 21 Color	✓	—	—
5	VESA 1280 × 1024 - 85 Hz	91.15 kHz	VESA	✓	✓	✓
6	VESA 1600 × 1200 - 75 Hz	93.75 kHz	VESA	✓	—	—
7	VESA 1600 × 1200 - 85 Hz	106.25 kHz	VESA	—	✓	—
8	VESA 1600 × 1200 - 90 Hz	112.50 kHz	VESA	—	—	✓
9	1856 × 1392 - 71 Hz	102.95 kHz		—	—	✓

New Model:CM814ET-301

	0.26 M Pixel 300	0.48 M Pixel 54A	0.78 M Pixel 68A	1.31 M Pixel 91A	2.58 M Pixel 103A	1.92 M Pixel 112C	1.92 M Pixel 126B
Signal Name	840 × 400 70	800 × 600 85	1024 × 768 85	1280 × 1024 85	1856 × 1392 72	1600 × 1200 90	1600 × 1200 100
Pixel Frequency	25.175 MHz	56.250 MHz	84.500 MHz	157.800 MHz	249.56 MHz	243.0 MHz	270.0 MHz
	38.722 ns	17.778 ns	10.682 ns	6.348 ns	4.007 ns	4.116 ns	3.704 ns
H. Frequency	31.469 kHz	63.874 kHz	68.677 kHz	91.146 kHz	102.95 kHz	112.50 kHz	125.00 kHz
Front Porch	0.535 μs(16 cl)	0.569 μs(32 cl)	0.508 μs(48 cl)	0.409 μs(64 cl)	0.289 μs(72 cl)	0.263 μs(84 cl)	0.237 μs(84 cl)
Sync. Width	3.813 μs(86 cl)	1.138 μs(64 cl)	1.016 μs(96 cl)	1.018 μs(160 cl)	0.834 μs(208 cl)	0.780 μs(192 cl)	0.711 μs(182 cl)
Back Porch	1.907 μs(48 cl)	2.702 μs(152 cl)	3.201 μs(208 cl)	1.422 μs(224 cl)	1.154 μs(288 cl)	1.251 μs(304 cl)	1.126 μs(304 cl)
Blank Time	5.356 μs(160 cl)	4.409 μs(248 cl)	3.725 μs(352 cl)	2.844 μs(448 cl)	2.278 μs(568 cl)	2.306 μs(560 cl)	2.074 μs(580 cl)
Display Time	25.422 μs(840 cl)	14.222 μs(800 cl)	0.830 μs(1024 cl)	8.127 μs(1280 cl)	7.437 μs(1856 cl)	6.584 μs(1600 cl)	5.828 μs(1600 cl)
Period	31.778 μs(800 cl)	18.831 μs(1048 cl)	4.561 μs(1378 cl)	10.971 μs(1728 cl)	9.713 μs(2424 cl)	8.889 μs(2160 cl)	8.000 μs(2160 cl)
H. Display rate	80.0%	76.3%	74.4%	74.1%	78.6%	74.1%	74.1%
V. Frequency	70.09 Hz (NON-INT)	85.06 Hz (NON-INT)	85.00 Hz (NON-INT)	86.02 Hz (NON-INT)	71.88 Hz (NON-INT)	90.00 Hz (NON-INT)	100.00 Hz (NON-INT)
Front Porch	0.381 ms(12 H)	0.019 ms(1 H)	0.015 ms(1 H)	0.011 ms(1 H)	0.019 ms(2 H)	0.009 ms(1 H)	0.008 ms(1 H)
Sync. Width	0.064 ms(2 H)	0.058 ms(3 H)	0.044 ms(3 H)	0.033 ms(3 H)	0.029 ms(3 H)	0.027 ms(3 H)	0.024 ms(3 H)
Back Porch	1.112 ms(35 H)	0.503 ms(27 H)	0.524 ms(36 H)	0.483 ms(44 H)	0.379 ms(39 H)	0.408 ms(46 H)	0.368 ms(46 H)
Blank Time	1.557 ms(49 H)	0.578 ms(31 H)	0.582 ms(40 H)	0.527 ms(48 H)	0.427 ms(44 H)	0.444 ms(50 H)	0.400 ms(50 H)
Display Time	12.711 ms(400 H)	11.179 ms(800 H)	1.183 ms(768 H)	11.235 ms(1024 H)	13.521 ms(1392 H)	10.667 ms(1200 H)	9.800 ms(1200 H)
Period	14.268 ms(449 H)	11.758 ms(831 H)	1.765 ms(808 H)	11.761 ms(1072 H)	13.949 ms(1436 H)	11.111 ms(1250 H)	10.000 ms(1250 H)
V. Display rate	89.1%	95.1%	95.0%	95.6%	86.9%	96.0%	96.0%
H. Sync. Polarity	N	P	P	P	P	P	P
V. Sync. Polarity	P	P	P	P	P	P	P
	VGA	VESA	VESA	VESA	HITACHI ORIGINAL	VESA	HITACHI ORIGINAL

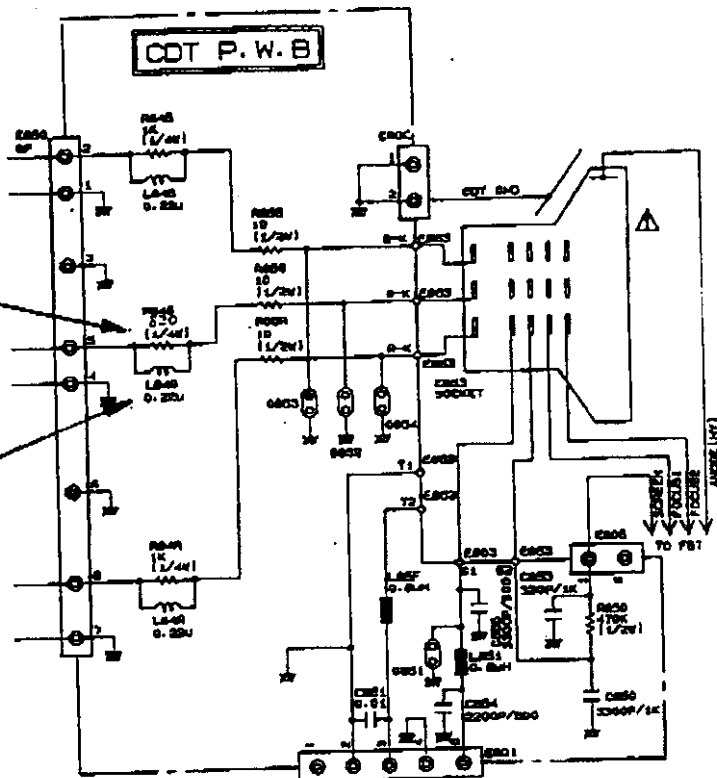
Circuit change

Change

R84G
820Ω (1/2W)
↓
470Ω (1/2W)

Change

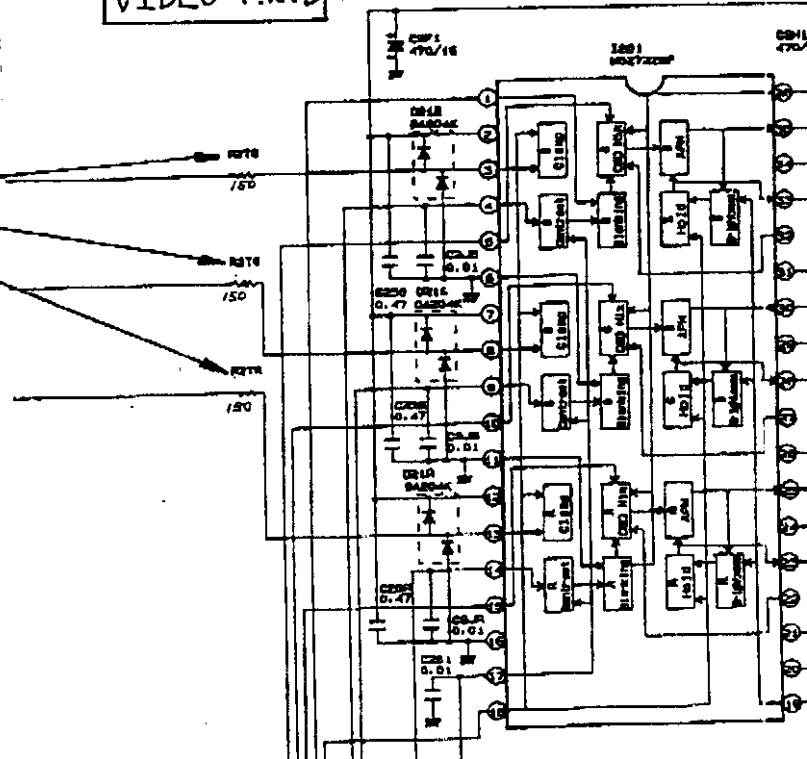
L84G
0.27μH
↓
0.22μH



VIDEO P.W.B.

Change

R2TB
R2TG
R2TR
150Ω (1/10W)
↓
120Ω (1/10W)



Circuit Change

change c395

$$47\mu\text{F}/10\text{V} \rightarrow 220\mu\text{F}/6.3\text{V}$$

Add R354

4.7 kJ (1/10 sec)

change c396

$0.01 \mu F / 50V$
 $\downarrow$
 $0.47 \mu F / 25V$

VIDEO P.W.B

change	C311
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$$\begin{array}{c} 0.1 \mu F / 50V \\ \downarrow \\ 0.47 \mu F / 25V \end{array}$$

change 1310

$$\begin{array}{c} 100\mu\text{F}/10\text{V} \\ \downarrow \\ 220\mu\text{F}/6.3\text{V} \end{array}$$

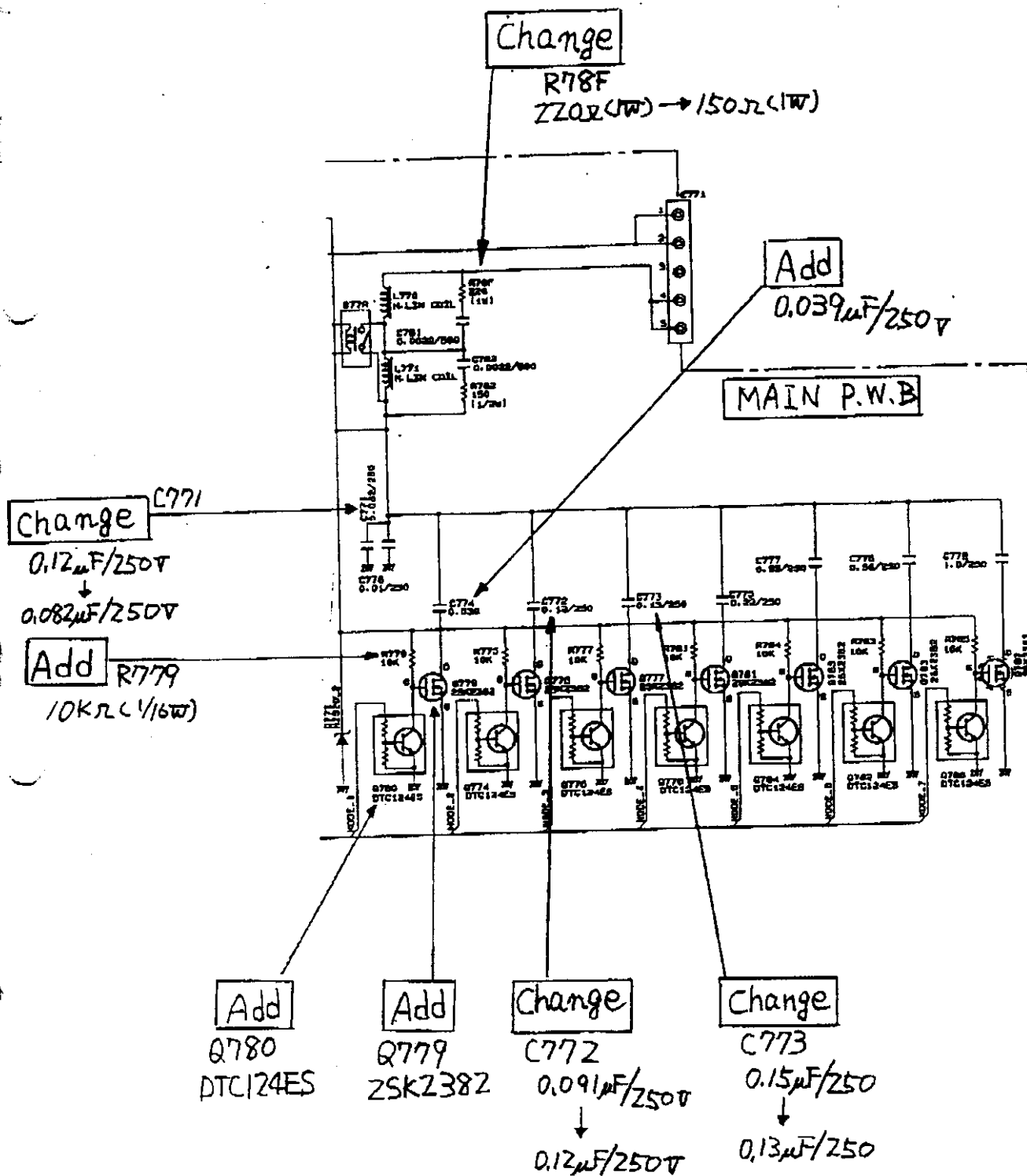
Change

$$\begin{array}{c} 150\Omega (1W) \\ \downarrow \\ 120\Omega (1W) \end{array}$$

Change c323

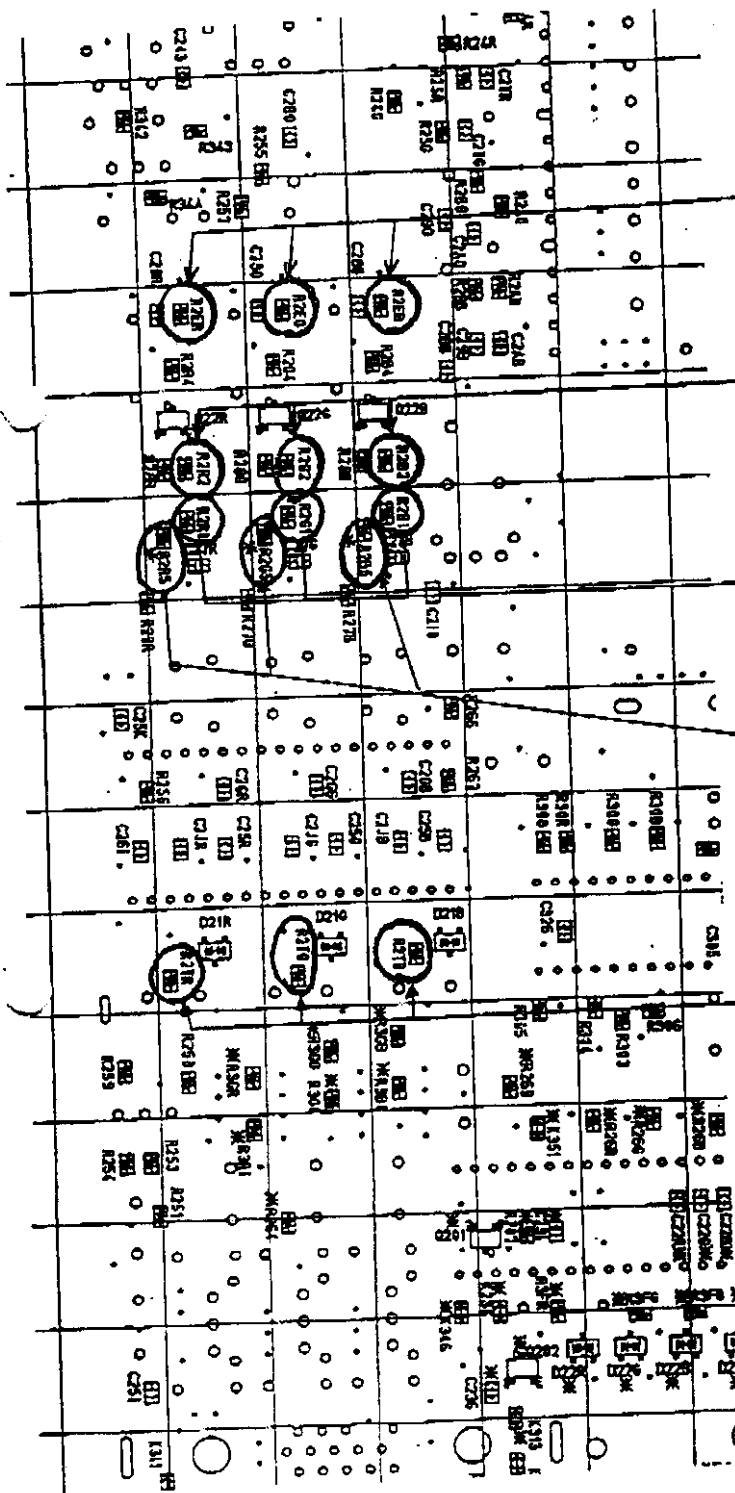
$$0,01 \mu F / 50V \rightarrow 0,47 \mu F / 25V$$

Circuit Change



Assembly Change

Video P.W.B



change R2ER, R2EG, R2EB
47 Ω (1/10W) $\rightarrow$ 22 Ω (1/10W)

change R2R2, R2G2, R2B2
470 Ω (1/10W) $\rightarrow$ 220 Ω (1/10W)

change R2R1, R2G1, R2B1
470 Ω (1/10W) $\rightarrow$ 1K Ω (1/10W)

Add R2R5, R2G5, R2B5
1K Ω (1/10W)

change R2TR, R2TG, R2TB
150 Ω (1/10W) $\rightarrow$ 120 Ω (1/10W)

Assembly Change

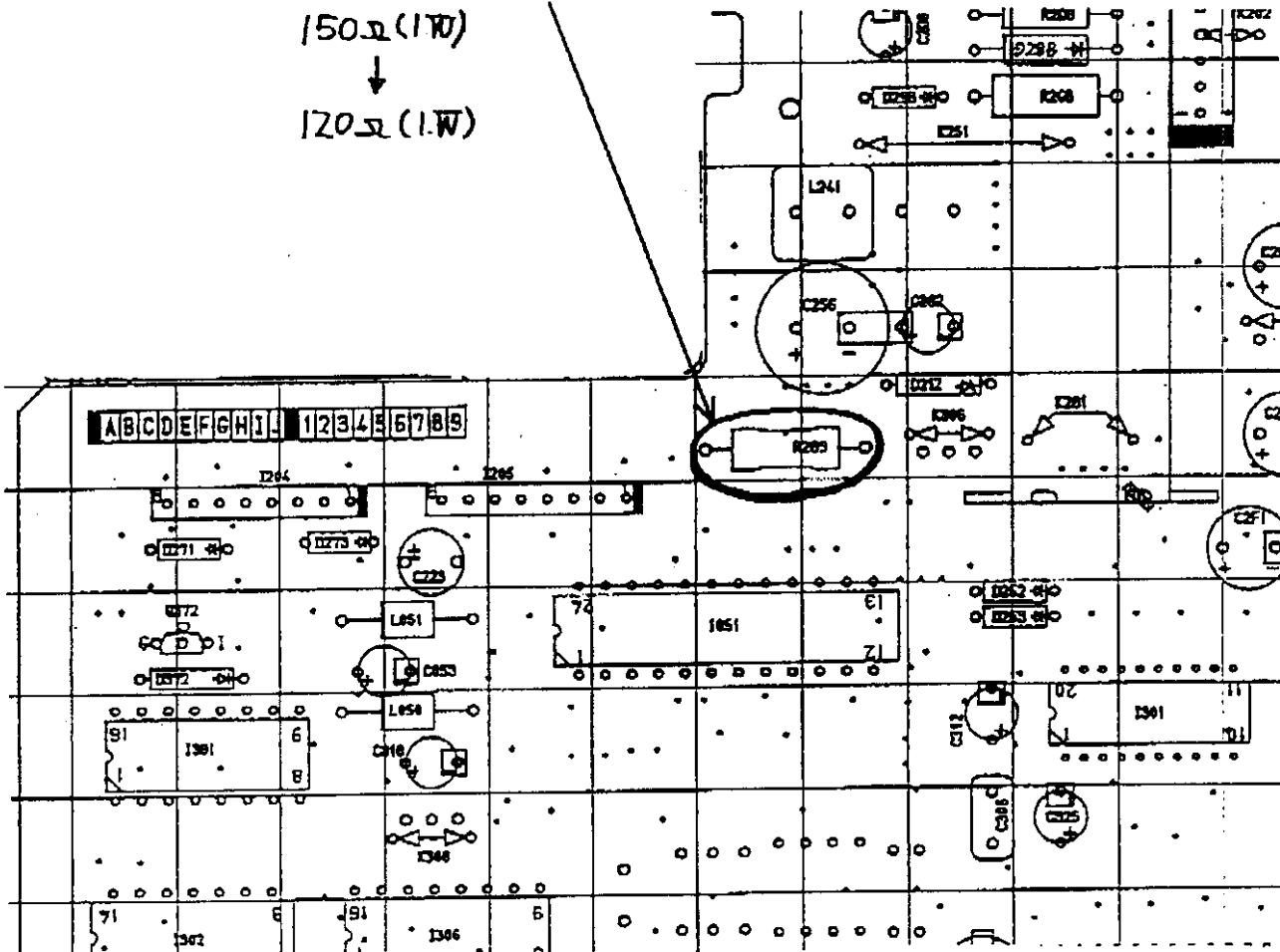
Video P.W.B

Change R289

150Ω (1W)



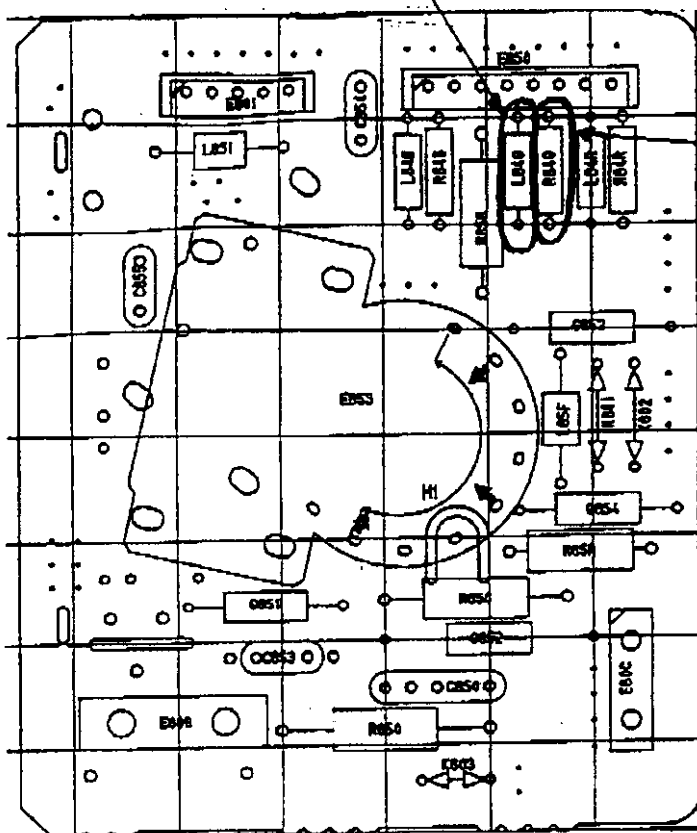
120Ω (1W)



Assembly Change

CPT P.W.B

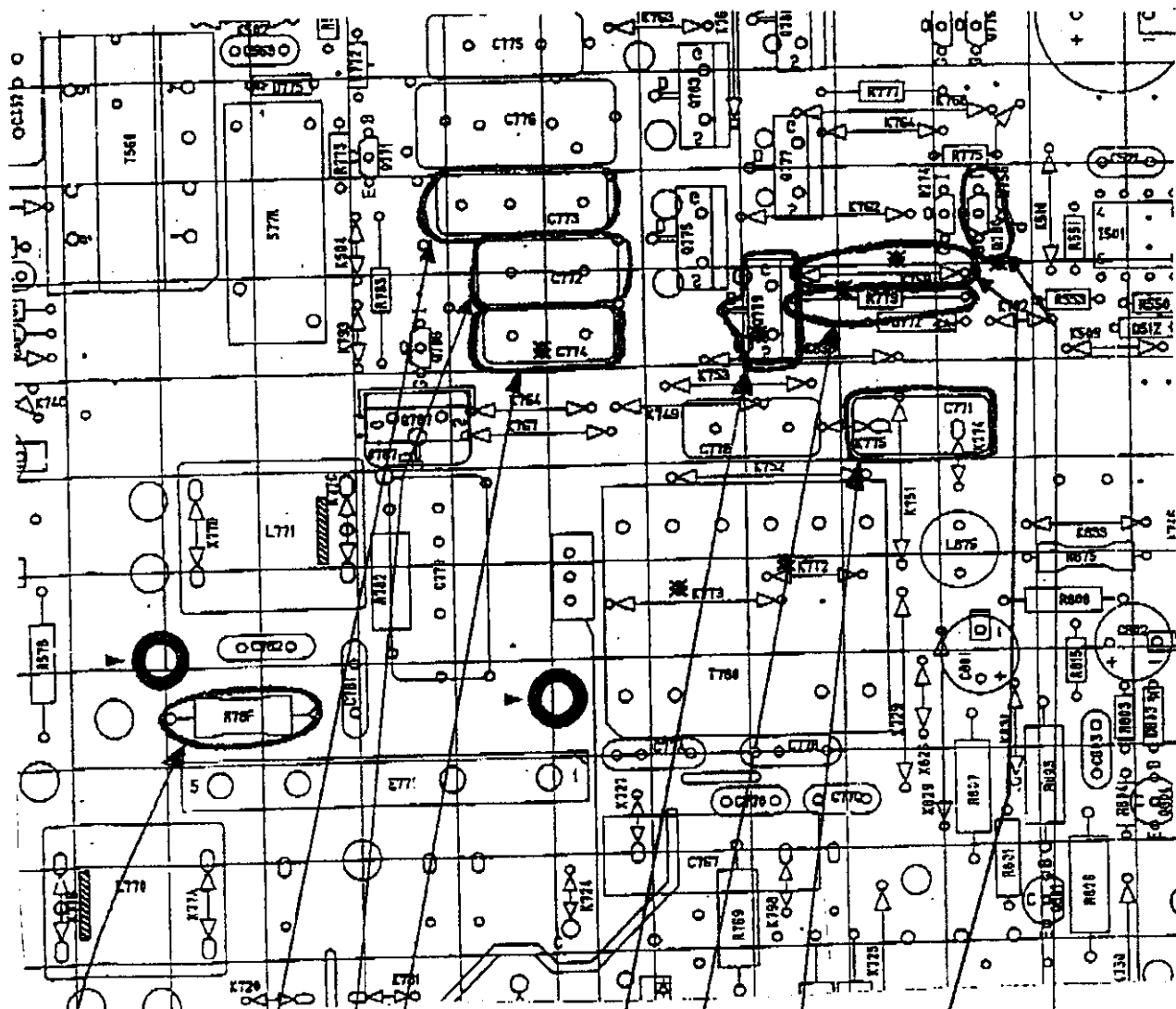
Change L84G
0.27 μ H $\rightarrow$ 0.22 μ H



Change R84G
820 Ω (1/2W)
 $\downarrow$
470 Ω (1/2W)

Assembly Change

Main P.W.B



Change

R78F
220 Ω (1W)
↓
150 Ω (1W)

Change

C773
0.15 μ F/250V
↓
0.13 μ F/250V

Add

C774
0.039 μ F/250V

Add

Q779
25K2382

Add

R779
10k Ω
(1/6W)

Add K758
Jump Wire

Change

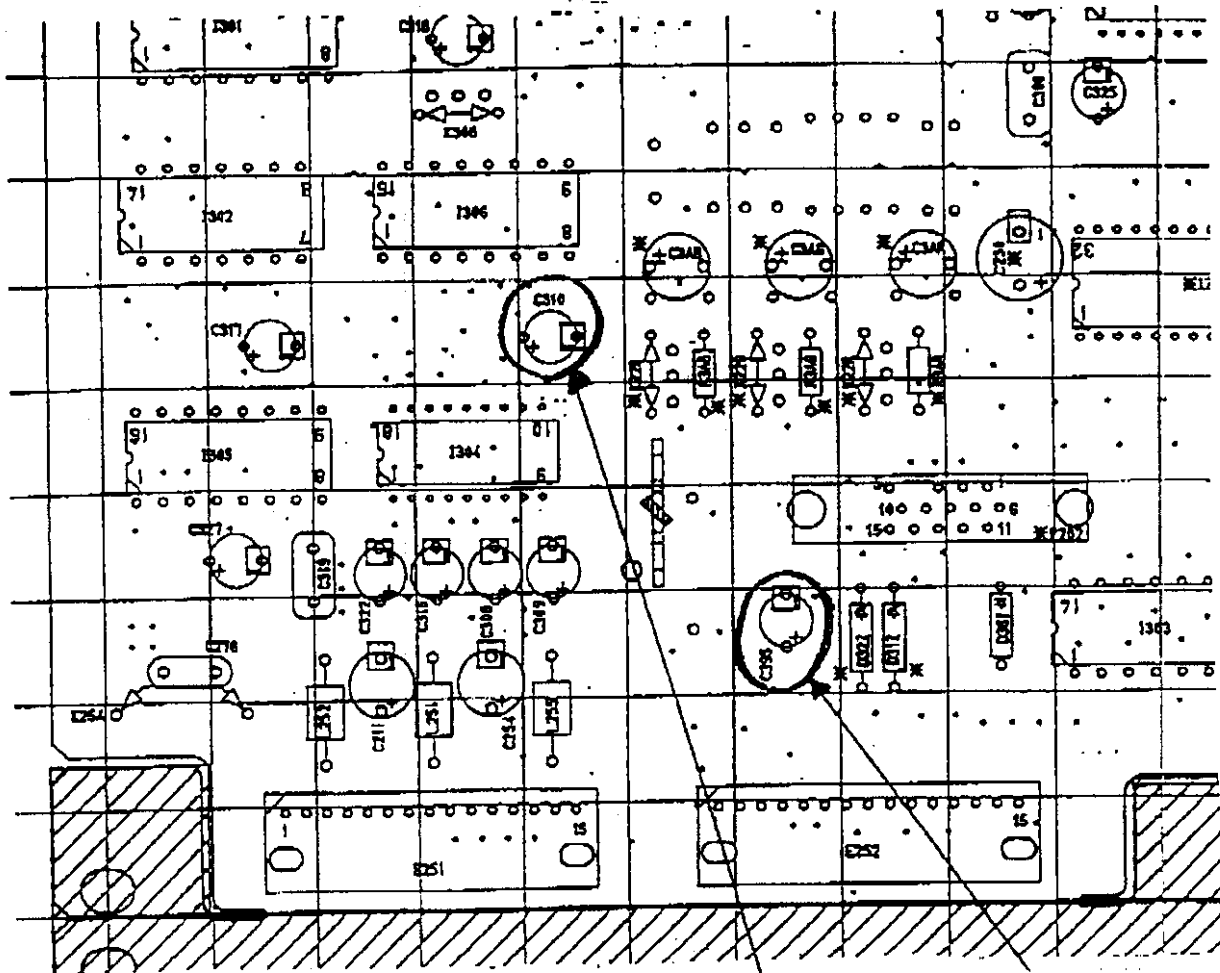
C771
0.12 μ F/250V
↓
0.082 μ F/250V

Add

Q780
DTC124ES

Change

C772
0.091 μ F/250V
↓
0.12 μ F/250V

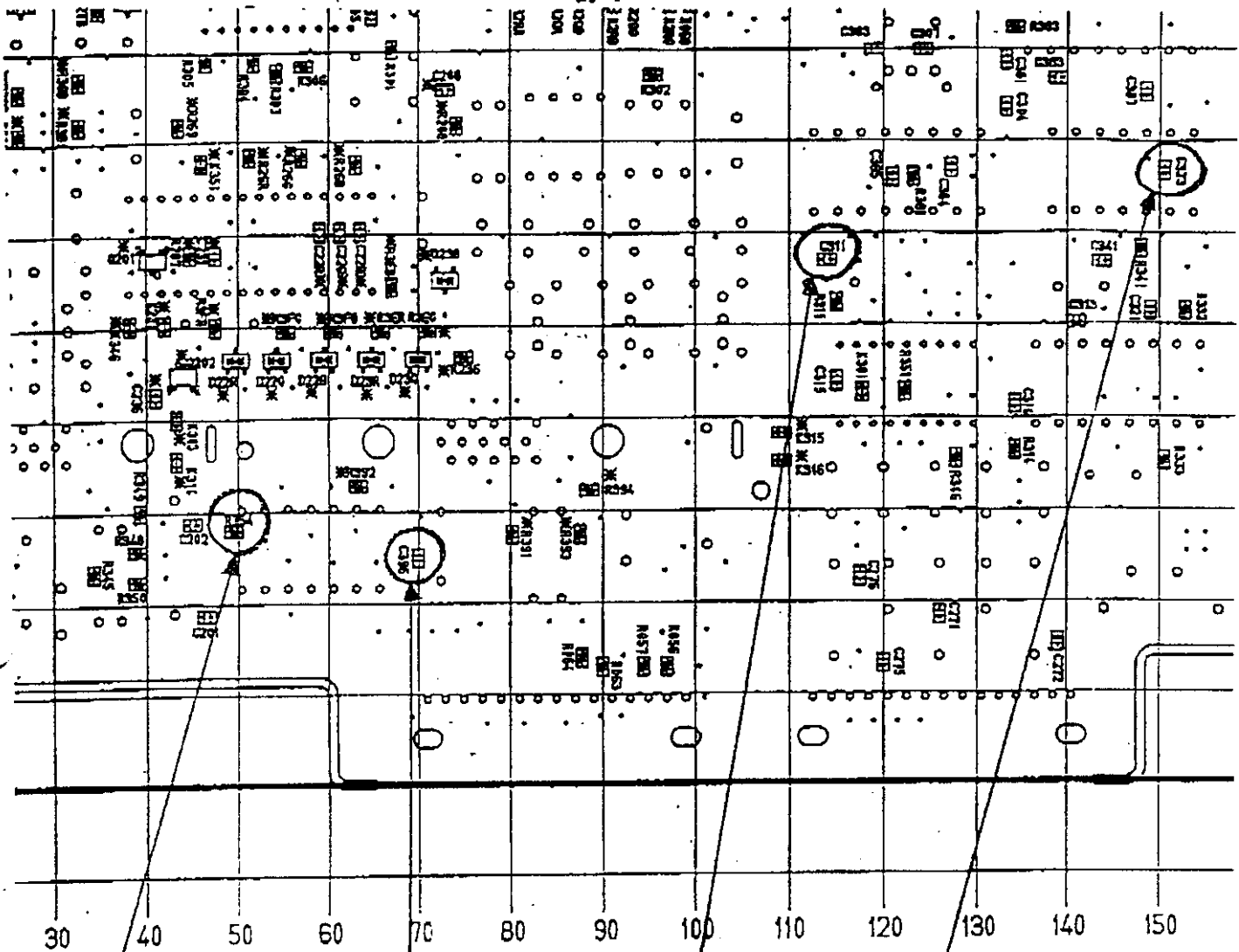


Assembly Change

Video P.W.B

Change C310
 $100\mu F/10V$
 $\downarrow$
 $220\mu F/6.3V$

Change C395
 $47\mu F/10V$
 $\downarrow$
 $220\mu F/6.3V$



Add R354
4.7K Ω (1/10W)

Change C396
0.01 μ F/50V
↓
0.47 μ F/25V

Change C311
0.1 μ F/50V
↓
0.47 μ F/25V

Change C323
0.01 μ F/50V
↓
0.47 μ F/25V

Assembly Change

Video P.W.B

