

## Adjustment / Inspection Signal (4)

PROGRAM No.	13	14	15	16
SIGNAL NAME	VESA 1024*768 @75Hz	MAC 1152*870	VESA 1024*768 @85Hz	VESA 1280*1024 @70Hz
RESOLUTION	1024*768	1152*870	1024*768	1280*1024
DOT CLOCK (MHz)	78.75	100	94.5	127
fh (kHz)	60.02	68.681	68.68	74.97
fv (Hz)	75.03	75.062	85.00	69.87
H CELL SIZE (DOT)	8	8	8	8
TOTAL (DOT)	1312	1456	1376	1694
(CHR)	164	182	172	212
(us)	16.66	14.560	14.560	13.339
DISP (DOT)	1024	1152	1024	1280
(CHR)	128	144	128	160
(us)	13.00	11.52	10.836	10.097
FRONT (DOT)	16	32	48	30
(us)	0.203	0.320	0.508	0.236
SYNC PULSE (DOT)	96	128	96	160
(us)	1.219	1.280	1.016	1.26
BACK (DOT)	176	144	208	224
(us)	2.235	1.440	2.201	1.764
V CELL SIZE (H)	16	15	16	16
TOTAL (H)	800	915	808	1073
(ms)	13.328	13.322	11.765	13.659
DISP (H)	768	870	768	1024
(CHR)	48	58	48	
(ms)	12.795	12.667	11.183	13.659
FRONT (H)	1	3	1	3
(ms)	0.017	0.044	0.015	0.040
SYNC PULSE (H)	3	3	3	4
(ms)	0.050	0.044	0.044	0.053
BACK (H)	28	39	36	42
(ms)	0.466	0.568	0.524	0.56
INTERLACE	NON	NON	NON	NON
POLARITY (H/V)	POS/POS	NEG/NEG	POS/POS	NEG/NEG
COMPOSITE SYNC	-	Yes	-	Yes
COMPOSITE VIDEO	-	-	-	-
CHARACTER FONT	7*9	7*9	7*9	7*9
SERRATION	OFF	ON	OFF	OFF
EQP	OFF	OFF	OFF	OFF

## Adjustment / Inspection Signal (5)

PROGRAM No.	17	18	19	20
SIGNAL NAME	VESA 1280*1024 @75Hz	VESA 1600*1200 @65Hz	VESA 1600*1200 @75Hz	VESA 1280*1024 @85Hz
RESOLUTION	1280*1024	1600*1200	1600*1200	1280*1024
DOT CLOCK (MHz)	135	175.5	202.5	157.5
fh (kHz)	79.976	81.25	93.75	91.146
fv (Hz)	75.025	65	75	85.024
H CELL SIZE (DOT)	8	8	8	8
TOTAL (DOT)	1688	2160	2160	1728
(CHR)	211	270	270	216
(us)	12.504	12.308	10.667	10.97
DISP (DOT)	1280	1600	1600	1280
(CHR)	160	200	200	160
(us)	9.481	9.117	7.901	8.13
FRONT (DOT)	16	64	64	64
(us)	0.119	0.365	0.306	0.406
SYNC PULSE (DOT)	144	192	192	160
(us)	1.067	1.094	0.948	1.016
BACK (DOT)	248	304	304	224
(us)	1.837	1.732	1.501	1.42
V CELL SIZE (H)	16	16	16	16
TOTAL (H)	1066	1250	1250	1072
(ms)	13.329	15.385	13.33	11.761
DISP (H)	1024	1200	1200	1024
(CHR)	64	75	75	64
(ms)	12.804	14.769	12.8	11.235
FRONT (H)	1	1	1	1
(ms)	0.013	0.012	0.011	0.011
SYNC PULSE (H)	3	3	3	3
(ms)	0.038	0.037	0.032	0.033
BACK (H)	38	46	46	44
(ms)	0.475	0.566	0.491	0.483
INTERLACE	NON	NON	NON	NON
POLARITY (H/V)	POS/POS	POS/POS	POS/POS	POS/POS
COMPOSITE SYNC	-	-	-	-
COMPOSITE VIDEO	-	-	-	-
CHARACTER FONT	7*9	7*9	7*9	7*9
SERRATION	OFF	OFF	OFF	OFF
EQP	OFF	OFF	OFF	OFF

## Adjustment / Inspection Signal (6)

PROGRAM No.	21	22	23	24
SIGNAL NAME	96KHz 160Hz A=68%	V.RASTER	1280*1024 @85Hz (Window)	EDID
RESOLUTION	680*446	1024*768	1280*1024	720*685
DOT CLOCK (MHz)	96	87.77	157.5	28.322
fh (kHz)	96	66.90	91.146	31.47
fv (Hz)	160	75.00	85.024	42.01
H CELL SIZE (DOT)	8	8	8	9
TOTAL (DOT)	1000	1312	1728	900
(CHR)	125	164	216	100
(us)	10.42	14.948	10.97	31.78
DISP (DOT)	680	1024	360	720
(CHR)	85	128	45	80
(us)	7.08	11.667	2.29	25.42
FRONT (DOT)	57	16	524	18
(us)	0.59	0.182	3.32	0.64
SYNC PULSE (DOT)	160	96	160	108
(us)	1.67	1.094	1.02	3.81
BACK (DOT)	103	176	684	54
(us)	1.07	2.012	4.34	1.906
V CELL SIZE (H)	16	16	16	14
TOTAL (H)	600	892	1072	749
(ms)	6.25	13.333	11.761	23.80
DISP (H)	446	768	352	685
(CHR)	27.875	48	22	48.93
(ms)	4.646	11.480	3.862	21.77
FRONT (H)	54	62	337	14
(ms)	0.563	0.927	3.697	0.44
SYNC PULSE (H)	3	3	3	3
(ms)	0.031	0.045	0.033	0.095
BACK (H)	97	59	380	47
(ms)	1.010	0.882	4.169	1.494
INTERLACE	NON	NON	NON	NON
POLARITY (H/V)	POS/POS	POS/POS	POS/POS	NEG/NEG
COMPOSITE SYNC	-	-	-	-
COMPOSITE VIDEO	-	-	-	-
CHARACTER FONT	7*9	7*9	7*9	7*9
SERRATION	OFF	OFF	OFF	OFF
EQP	OFF	OFF	OFF	OFF

## Adjustment / Inspection Signal (7)

PROGRAM No.	25	26	27	
SIGNAL NAME	VGA480 (1/2)	MAC 1152*870 (N/N+SOG)	1280*960 @85Hz	
RESOLUTION	640*240	1152*870	1280*1024	
DOT CLOCK (MHz)	25.175	100	157.5	
fh (kHz)	31.47	68.681	91.146	
fv (Hz)	59.94	75.062	85.024	
H CELL SIZE (DOT)	8	8	8	
TOTAL (DOT)	800	1456	1728	
(CHR)	100	182	216	
(us)	31.78	14.560	10.970	
DISP (DOT)	640	1152	1280	
(CHR)	80	144	160	
(us)	25.42	11.52	8.13	
FRONT (DOT)	16	32	64	
(us)	0.64	0.320	0.406	
SYNC PULSE (DOT)	96	128	160	
(us)	3.81	1.280	1.016	
BACK (DOT)	48	144	224	
(us)	1.91	1.440	1.42	
V CELL SIZE (H)	16	15	16	
TOTAL (H)	525	915	1072	
(ms)	16.683	13.322	11.762	
DISP (H)	240	870	960	
(CHR)	15	58	60	
(ms)	7.627	12.667	10.531	
FRONT (H)	10	3	33	
(ms)	0.318	0.044	0.363	
SYNC PULSE (H)	2	3	3	
(ms)	0.064	0.044	0.033	
BACK (H)	273	39	78	
(ms)	8.675	0.568	0.856	
INTERLACE	NON	NON	NON	
POLARITY (H/V)	NEG/NEG	NEG/NEG	POS/POS	
COMPOSITE SYNC	-	Yes	-	
COMPOSITE VIDEO	-	Green	-	
CHARACTER FONT	7*9	7*9	7*9	
SERRATION	OFF	ON	OFF	
EQP	OFF	OFF	OFF	

## Adjustment / Inspection Signal (8)

PROGRAM No.	101	102	103	104
SIGNAL NAME	PC98 640*400 @70Hz R	VESA 800*600 @56Hz	VESA 800*600 @60Hz	VESA 640*480 @75Hz R
RESOLUTION	640*400	800*600	800*600	640*480
DOT CLOCK (MHz)	25.175	36.000	40.000	31.5
fh (kHz)	31.469	35.16	37.88	37.5
fv (Hz)	70.086	56.25	60.32	75.00
H CELL SIZE (DOT)	8	8	8	8
TOTAL (DOT)	800	1024	1056	840
(CHR)	100	128	132	105
(us)	31.778	28.44	26.40	26.67
DISP (DOT)	640	800	800	640
(CHR)	80	100	100	80
(us)	25.422	22.22	20.00	20.32
FRONT (DOT)	17	24	40	16
(us)	0.675	0.67	1.00	0.51
SYNC PULSE (DOT)	64	72	128	64
(us)	2.542	2.00	3.20	2.03
BACK (DOT)	79	128	88	120
(us)	3.138	3.56	2.20	3.81
V CELL SIZE (H)	16	16	16	16
TOTAL (H)	449	625	628	500
(ms)	14.268	17.778	16.579	13.333
DISP (H)	400	600	600	480
(CHR)	25	37.5	37.5	30
(ms)	12.711	17.067	15.840	12.800
FRONT (H)	13	1	1	1
(ms)	0.413	0.028	0.026	0.027
SYNC PULSE (H)	2	2	4	3
(ms)	0.064	0.057	0.106	0.080
BACK (H)	34	22	23	16
(ms)	1.080	0.626	0.607	0.427
INTERLACE	NON	NON	NON	NON
POLARITY (H/V)	POS/POS	POS/POS	POS/POS	POS/POS
COMPOSITE SYNC	-	-	-	-
COMPOSITE VIDEO	-	-	-	-
CHARACTER FONT	7*9	7*9	7*9	7*9
SERRATION	OFF	OFF	OFF	OFF
EQP	OFF	OFF	OFF	OFF

## Adjustment / Inspection Signal (9)

PROGRAM NO.	105	106	107	108
SIGNAL NAME	XGA (8514A)	1024*768 @56Hz	VESA 1024*768 @60Hz	GTF 640*480 @100Hz (N/N)
RESOLUTION	1024*768	1024*768	1024*768	640*480
DOT CLOCK (MHz)	44.9	60.490	65.000	43.163
fh (kHz)	35.52	45.01	48.36	50.900
fv (Hz)	43.48	55.98	60.00	100.00
H CELL SIZE (DOT)	8	8	8	8
TOTAL (DOT)	1264	1344	1344	848
(CHR)	158	168	168	106
(us)	28.15	22.22	20.67	19.65
DISP (DOT)	1024	1024	1024	640
(CHR)	128	128	128	80
(us)	22.81	16.93	15.75	14.83
FRONT (DOT)	8	24	24	40
(us)	0.18	0.40	0.37	0.93
SYNC PULSE (DOT)	176	136	136	64
(us)	3.92	2.25	2.09	1.48
BACK (DOT)	56	160	160	104
(us)	1.25	2.65	2.46	2.41
V CELL SIZE (H)	16	16	16	16
TOTAL (H)	408	804	806	509
(ms)	11.486	17.864	16.666	10.00
DISP (H)	384	768	768	480
(CHR)	48	48	48	30
(ms)	10.810	17.064	15.880	9.430
FRONT (H)	0	1	3	1
(ms)	0.000	0.022	0.062	0.020
SYNC PULSE (H)	4	6	6	3
(ms)	0.113	0.133	0.124	0.059
BACK (H)	20	29	29	25
(ms)	0.563	0.644	0.600	0.491
INTERLACE	S&VIDEO	NON	NON	NON
POLARITY (H/V)	POS/POS	NEG/NEG	NEG/NEG	NEG/NEG
COMPOSITE SYNC	-	-	-	-
COMPOSITE VIDEO	-	-	-	-
CHARACTER FONT	7*9	7*9	7*9	7*9
SERRATION	OFF	OFF	OFF	OFF
EQP	OFF	OFF	OFF	OFF

## Adjustment / Inspection Signal (10)

PROGRAM NO.	109	110	111	112
SIGNAL NAME	800*600 @80Hz	640*480 @100Hz	VESA 1024*768 @70Hz	VESA 1024*768 @72Hz
RESOLUTION	800*600	640*480	1024*768	1024*768
DOT CLOCK (MHz)	55.41	42	75	78.43
fh (kHz)	53.28	52.49	56.48	58.09
fv (Hz)	80	100.504	70.07	72.00
H CELL SIZE (DOT)	8	8	8	8
TOTAL (DOT)	1040	800	1328	1360
(CHR)	130	100	166	170
(us)	18.77	19.05	17.71	17.34
DISP (DOT)	800	640	1024	1024
(CHR)	100	80	128	128
(us)	14.44	15.24	13.65	13.06
FRONT (DOT)	56	8	24	56
(us)	1.01	0.19	0.32	0.71
SYNC PULSE (DOT)	120	96	136	112
(us)	2.17	2.29	1.81	1.43
BACK (DOT)	64	40	144	168
(us)	1.16	0.95	1.92	2.14
V CELL SIZE (H)	16	16	16	16
TOTAL (H)	666	525	806	801
(ms)	12.501	10.001	14.272	13.89
DISP (H)	600	480	768	768
(CHR)	37.5	30	48	48
(ms)	11.262	9.144	13.599	13.32
FRONT (H)	37	10	3	1
(ms)	0.694	0.190	0.053	0.017
SYNC PULSE (H)	6	2	6	3
(ms)	0.113	0.038	0.106	0.052
BACK (H)	23	33	29	29
(ms)	0.432	0.629	0.513	0.503
INTERLACE	NON	NON	NON	NON
POLARITY (H/V)	POS/POS	NEG/NEG	NEG/NEG	POS/POS
COMPOSITE SYNC	-	-	-	-
COMPOSITE VIDEO	-	-	-	-
CHARACTER FONT	7*9	7*9	7*9	7*9
SERRATION	OFF	OFF	OFF	OFF
EQP	OFF	OFF	OFF	OFF

## Adjustment / Inspection Signal (11)

PROGRAM NO.	113	114	115	116
SIGNAL NAME	GTF 640*480 @120Hz (N/N)	VESA 1280*1024 @60Hz	640*480 @120Hz	VESA 1600*1200 @60Hz
RESOLUTION	640*480	1280*1024	640*480	1600*1200
DOT CLOCK (MHz)	52.406	108	50.408	162
fh (kHz)	61.80	63.98	63.01	75
fv (Hz)	120.00	60.02	120.02	60
H CELL SIZE (DOT)	8	8	8	8
TOTAL (DOT)	848	1688	800	2160
(CHR)	106	211	100	270
(us)	16.18	15.63	15.87	13.33
DISP (DOT)	640	1280	640	1600
(CHR)	80	160	80	200
(us)	12.21	11.85	12.70	9.88
FRONT (DOT)	40	48	8	64
(us)	0.76	0.44	0.16	0.40
SYNC PULSE (DOT)	64	112	96	192
(us)	1.22	1.04	1.90	1.19
BACK (DOT)	104	248	40	304
(us)	1.98	2.30	0.79	1.88
V CELL SIZE (H)	16	16	16	16
TOTAL (H)	515	1066	525	1250
(ms)	8.333	16.661	8.332	16.667
DISP (H)	480	1024	480	1200
(CHR)	30	64	30	75
(ms)	7.767	16.005	7.618	16.00
FRONT (H)	1	1	10	1
(ms)	0.016	0.016	0.159	0.013
SYNC PULSE (H)	3	3	2	3
(ms)	0.049	0.047	0.032	0.040
BACK (H)	31	38	35	46
(ms)	0.502	0.594	0.558	0.613
INTERLACE	NON	NON	NON	NON
POLARITY (H/V)	NEG/NEG	POS/POS	NEG/NEG	POS/POS
COMPOSITE SYNC	-	-	-	-
COMPOSITE VIDEO	-	-	-	-
CHARACTER FONT	7*9	7*9	7*9	7*9
SERRATION	OFF	OFF	OFF	OFF
EQP	OFF	OFF	OFF	OFF

## Adjustment / Inspection Signal (12)

PROGRAM NO.	117	118	119	120
SIGNAL NAME	800*600 @120Hz	VESA 1792*1344 @60Hz (N/N)	VESA 1280*960 @85Hz	640*480 @160Hz
RESOLUTION	800*600	1792*1344	1280*960	640*480
DOT CLOCK (MHz)	79.35	204.75	148.5	67.76
fh (kHz)	75.70	83.61	85.938	81.43
fv (Hz)	120	59398	85.002	160
H CELL SIZE (DOT)	8	8	8	8
TOTAL (DOT)	1048	2448	1728	832
(CHR)	132	306	216	104
(us)	13.21	11.96	11.636	12.28
DISP (DOT)	800	1792	1280	640
(CHR)	100	224	160	80
(us)	10.08	8.75	8.62	9.45
FRONT (DOT)	32	128	64	56
(us)	0.40	0.627	0.431	0.83
SYNC PULSE (DOT)	64	200	160	56
(us)	0.81	0.98	1.077	0.83
BACK (DOT)	152	328	224	80
(us)	1.91	1.60	1.508	1.18
V CELL SIZE (H)	16			16
TOTAL (H)	631	1394	1011	509
(ms)	8.335	16.672	11.764	6.25
DISP (H)	600	1344	960	480
(CHR)	37.5	84	60	30
(ms)	7.926	16.074	11.171	5.894
FRONT (H)	1	1	1	1
(ms)	0.013	0.012	0.012	0.012
SYNC PULSE (H)	3	3	3	3
(ms)	0.040	0.036	0.035	0.037
BACK (H)	27	46	47	25
(ms)	0.357	0.550	0.547	0.307
INTERLACE	NON	NON	NON	NON
POLARITY (H/V)	NEG/NEG	NEG/NEG	POS/POS	NEG/NEG
COMPOSITE SYNC	-	-	-	-
COMPOSITE VIDEO	-	-	-	-
CHARACTER FONT	7*9	7*9	7*9	7*9
SERRATION	OFF	OFF	OFF	OFF
EQP	OFF	OFF	OFF	OFF

## Adjustment / Inspection Signal (13)

PROGRAM NO.		121	122	123	124	
SIGNAL NAME		VESA 1600*1200 @70Hz	VESA 1920*1440 @60Hz (N/N)	1024*768 @120Hz	VESA 1792*1344 @75Hz (N/N)	
RESOLUTION		1600*1200	1920*1440	1024*768	1792*1344	
DOT CLOCK	(MHz)	189	234.00	125.95	261.00	
fh	(kHz)	87.5	90.01	95.97	106.27	
fv	(Hz)	70	60.01	120	75.00	
H	CELL SIZE	(DOT)	8	8	8	8
	TOTAL	(DOT)	2160	2600	1312	2456
		(CHR)	270	325	164	307
		(us)	11.429	11.11	10.42	9.41
	DISP	(DOT)	1600	1920	1024	1792
		(CHR)	200	240	128	224
		(us)	8.466	8.21	8.13	6.87
	FRONT	(DOT)	64	128	16	96
		(us)	0.339	0.55	0.13	0.368
	SYNC PULSE	(DOT)	192	208	96	216
		(us)	1.016	0.89	0.76	0.83
	BACK	(DOT)	304	344	176	352
		(us)	1.608	1.47	1.40	1.35
V	CELL SIZE	(H)	16	16	16	16
	TOTAL	(H)	1250	1500	800	1417
		(ms)	14.286	16.66	8.336	13.334
	DISP	(H)	1200	1440	768	1344
		(CHR)	75	90	48	168
		(ms)	13.714	15.56	8.002	12.647
	FRONT	(H)	1	1	1	1
		(ms)	0.011	0.004	0.010	0.009
	SYNC PULSE	(H)	3	3	3	3
		(ms)	0.034	0.033	0.031	0.028
	BACK	(H)	46	56	28	69
		(ms)	0.526	0.622	0.292	0.649
	INTERLACE		NON	NON	NON	NON
	POLARITY	(H/V)	POS/POS	NEG/NEG	POS/POS	NEG/NEG
	COMPOSITE SYNC		-	-	-	-
	COMPOSITE VIDEO		-	-	-	-
	CHARACTER FONT		7*9	7*9	7*9	7*9
	SERRATION		OFF	OFF	OFF	OFF
	EQP		OFF	OFF	OFF	OFF

## Adjustment / Inspection Signal (14)

	PROGRAM NO.	125			
	SIGNAL NAME	VESA 1280*1024 @100Hz			
	RESOLUTION	1280*1024			
	DOT CLOCK (MHz)	185.24			
	fh (kHz)	107.18			
	fv (Hz)	100			
H	CELL SIZE (DOT)	8			
	TOTAL (DOT)	1728			
	(CHR)	216			
	(us)	9.33			
	DISP (DOT)	1280			
	(CHR)	160			
	(us)	6.91			
FRONT	(DOT)	64			
	(us)	0.346			
SYNC PULSE	(DOT)	160			
	(us)	0.86			
BACK	(DOT)	224			
	(us)	1.21			
V	CELL SIZE (H)	16			
	TOTAL (H)	1072			
	(ms)	11.761			
	DISP (H)	1024			
	(CHR)	64			
	(ms)	11.235			
	FRONT	(H)	1		
(ms)		0.011			
SYNC PULSE	(H)	3			
	(ms)	0.033			
BACK	(H)	44			
	(ms)	0.483			
	INTERLACE	NON			
	POLARITY (H/V)	POS/POS			
	COMPOSITE SYNC	-			
	COMPOSITE VIDEO	-			
	CHARACTER FONT	7*9			
	SERRATION	OFF			
	EQP	OFF			

### 3. Position of Connectors and Test point for Adjustment and Inspection

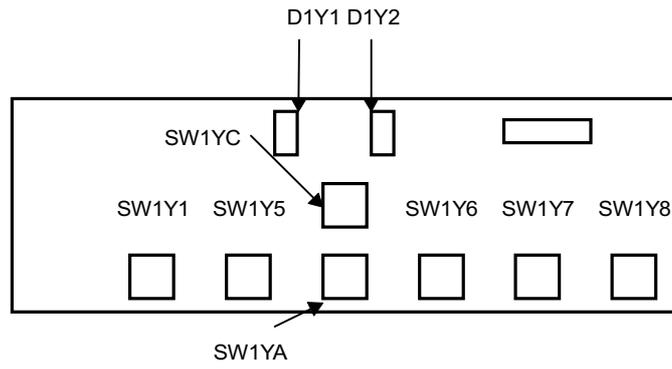


Fig. 3-1 CONT PWB

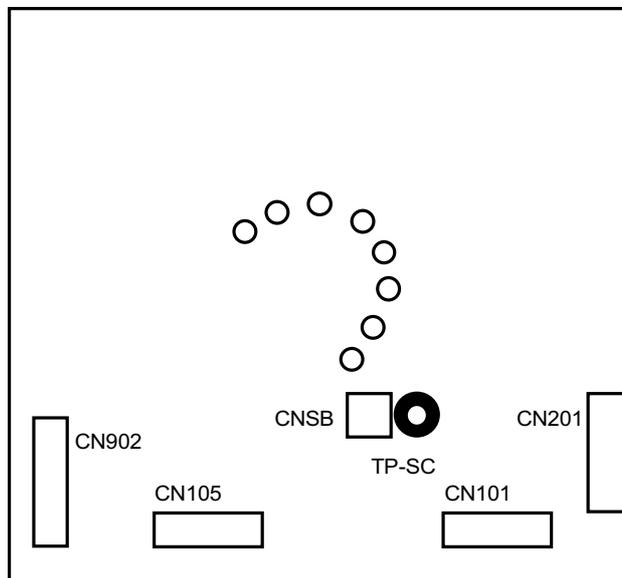


Fig. 3-2 VIDEO PWB

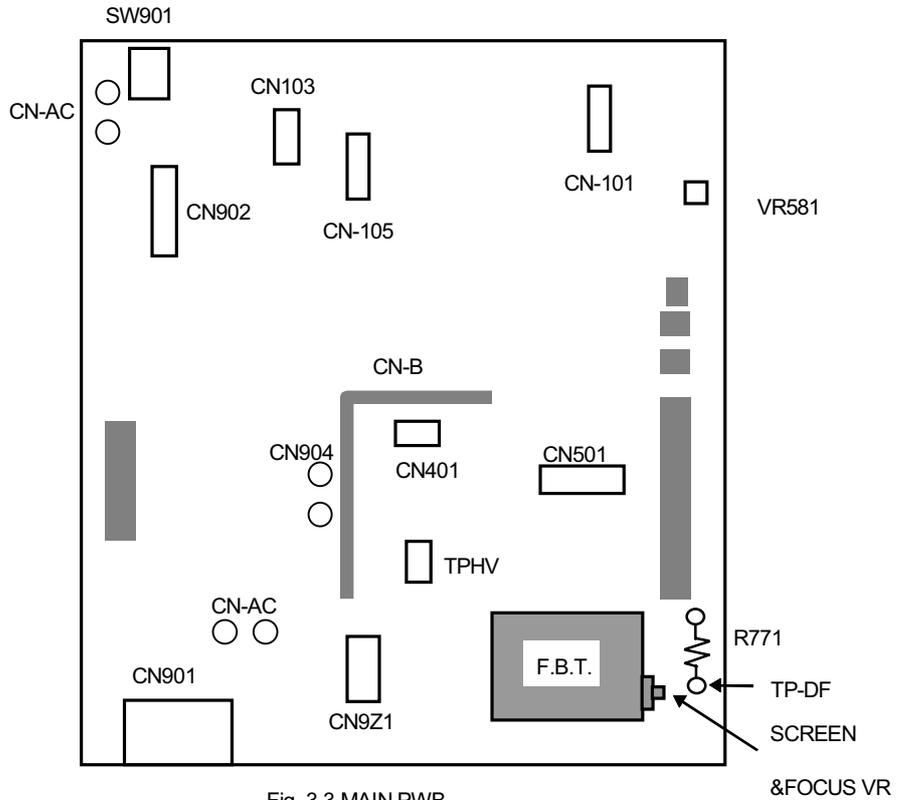


Fig. 3-3 MAIN PWB

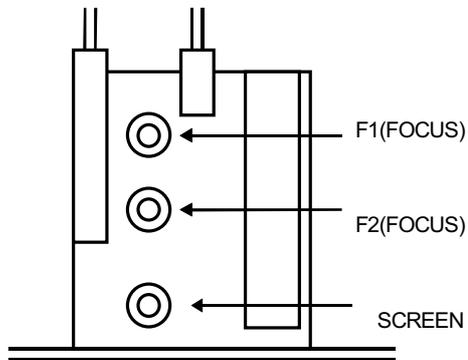


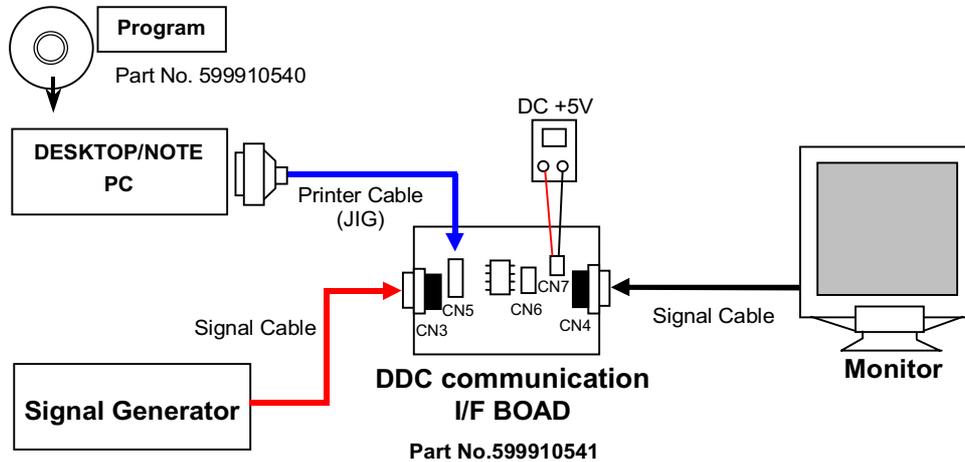
Fig. 3-4 F.B.T VR

# INSPECTION

## 1. Inspection of PLUG & PLAY communication and OSM "MONITOR INFORMATION" for model name / serial number

### 1-1. A construction of System

This system should be connected as shown below.



### 1-2. Input signal

Horizontal sync frequency: Not specified.

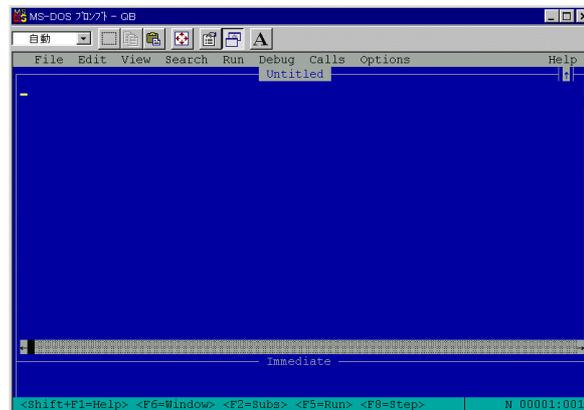
Vertical sync frequency: Not specified.

### 1-3. Programs required

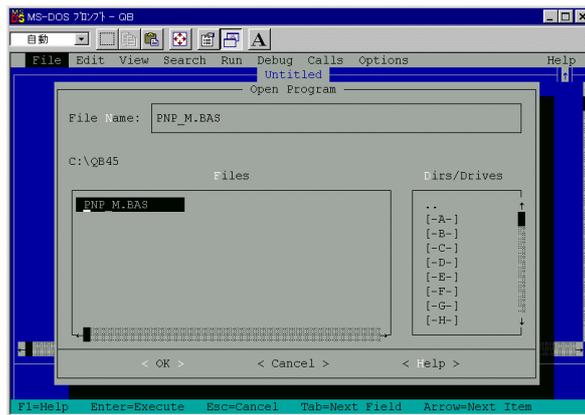
PNP WRITE & INSPECTION S/W (Part No. 599910540)

### 1-4. Inspection procedures

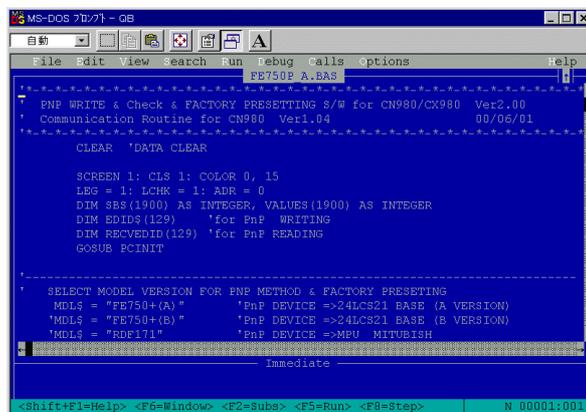
- "QB45" directory is made in the C drive.
- Copy the above-mentioned programs in a QB45 directory.
- Set up the MO-DOS mode. (DOS Prompt of Windows95/98 is also acceptable.)
- Execute the QB.EXE from the command line.



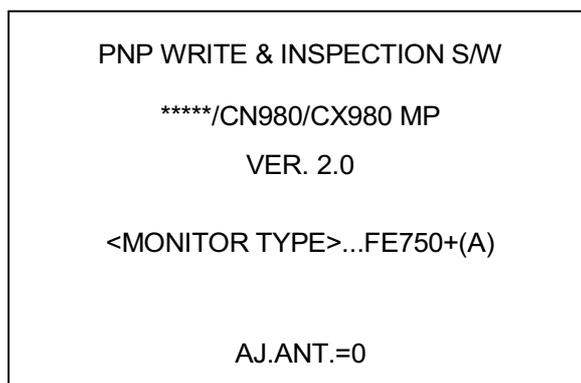
- e. To open Open program Panel, Point to File, and then click Open program... .
- f. Click the Files(A ver.: FE750P\_A or B ver.: FE750P\_B) you want to open, and then click <OK>.



- g. press on F5 key (RUN) starts a program.



- h. If the screen shown below is displayed, Enter key is pressed.



i Check the serial number of the set and enter an input of the following code from the keyboard.

<MONITOR TYPE>...FE750+(A)  
Input Serial No by Manual  
Serial = ? ■

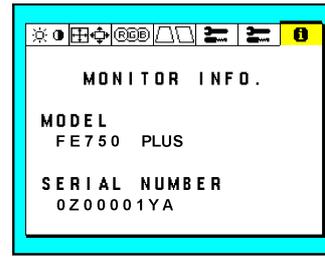
j. Press the Enter key. Then, the EDID data, OSM model name, and the serial number begin to be written in.

<<EDID WRITING OK>>  
PLEASE RESET MONITOR  
AFTER RESET => [ENTER]

k. The following screen is displayed after write is completed normally.

ADJUSTMENT COMPLETED!  
PRESS ANY KEY TO START NEXT SET  
PRESS [A] KEY TO ABORT PROGRAM

I. Display "MONITOR INFORMATION" of the OSM, and confirm that the model name and serial number have been correctly written.



1-5. EDID data file

The EDID data file text is shown below. When you write or inspect EDID for this monitor, the following table can be used.

file name : CN980

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
00	00	FF	FF	FF	FF	FF	FF	00	38	A3	B3	61	01	01	01	01
10	32 *1)	0A *2)	01	02	0C	21	18	78	EB	20	78	A0	56	48	9A	26
20	12	48	4C	FF	FF	80	31	59	45	59	61	59	71	4F	81	59
30	81	99	A9	4F	01	01	86	3D	00	C0	51	00	30	40	40	A0
40	13	00	3B	EC	10	00	00	1E	00	00	00	FD	00	37	A0	1F
50	60	15	00	0A	20	20	20	20	20	20	00	00	00	FC	00	4E
60	45	43	20	46	45	37	35	30	2B	0A	20	20	00	00	00	FF
70	00	38 *3)	36	30	30	30	30	31	52	41	0A	20	20	20	00	3B *4)

Table 1-5. Data list

- Note 1: address 10h                      Week of manufacture = Month of manufacture × 4
- Note 2: address 11h                    Year of manufacture - 1990
- Notes 3: address 71h ~ 7Dh        Serial Number (ASCII coded)  
    If less than 13 char, terminate with 0Ah and fill the rests with 20h.
- Note 4: address 7Fh                    Checksum  
    The sum of entire 128 byte shall be equal to 00h.

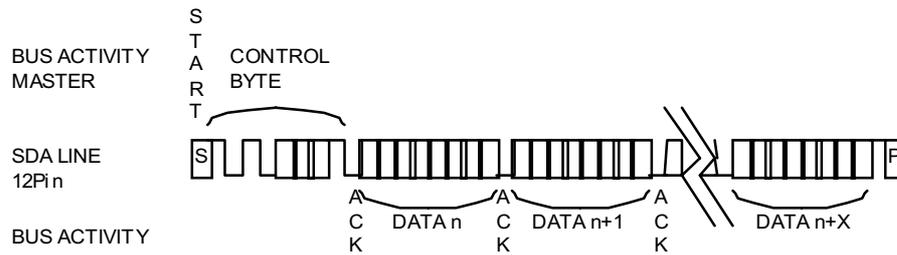


Diagram 1-5 Timing chart of DDC2B

## 2. CRT

### [A] CRT Face plate defect

#### 1. Inspection condition

1-1. In the operating condition, observe the defect on the screen under following condition:

9,300 K (x=0.283, y=0.297) white raster or the element monochrome raster which its brightness is 34 cd/m<sup>2</sup> (10 ft-L) on the screen center surrounding light is about 10 Lux.

1-2. In the non-operating condition, observe the defect of the screen under light of about 200 Lux, measured at the faceplate.

1-3. Inspection shall be made more than 45cm away from the screen.

1-4. Observe the screen on white raster and each monochrome color of red, green and blue.

#### 2. Division zone

A screen is divided into following 2 zones.

Zone A: Area inside the rectangle that its size measures H: 300mm, V: 225mm in the center of screen.

Zone B: Area outside the above rectangle.

#### 3. Limits

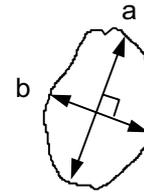
##### 3-1. CRT face defect

1) Distance (Minimum distance)



2) Average diameter

Turn of  $(a + b) / 2$  (a: length, b: width)



##### 3) Limit

a) Dark spot, Blocked aperture

Average diameter (mm)	A	B	A + B	Minimum distance
0.51 ~	0	0	0	-
0.31 ~ 0.50	0	0	0	-
0.15 ~ 0.30	6 (note 1)	6 (note 1)	10 (note 1)	10mm

b) Discoloration, Stain, Missing phosphor, etc.

Average diameter (mm)	A	B	A + B	Minimum distance
0.51 ~ 0.75	0	1	-	20mm
0.15 ~ 0.50	2	3	-	20mm

Note 1: No missing spot large than specified are allowed in Zone A.

Note 2: The spec applies to each color.

### 3-2. Face plate defect

#### 1) Blisters, opaque spots and elongated closed blisters

Average diameter (*1) (mm)	Allowable number (pcs)			Minimum Separation (mm)
	Zone A	Zone B	A + B	
0.76	0	0	0	30
0.51 ~ 0.75	0	1	1	
0.26 ~ 0.50	2	3	5	
0.11 ~ 0.25	-	-	-	(*2)

Note (\*1) Mean diameter shall be either one of the following values, which is smaller.

$(a+b)/2$  or  $a/20+2b$  (a: length, b: width)

Note (\*2) Maximum 5 pcs. In area of  $\Phi$  10mm.

#### 2) Scratch

Width (mm)	Allowable Length (mm)
0.16 ~	Rejected
0.11 ~ 0.15	3
0.06 ~ 0.10	26
~ 0.05	Unlimited

#### 3) Other glass defect

Flaw, crack and lack cannot be distinguish easily by naked eye.

Iron rust conforms to limited sample.

[B] AR-film's surface defect

1. Inspection conditions

- 1) Put a valve on an inspective stand and illuminate it from the top with white fluorescent light.
- 2) Valve surface illuminance is more than 1000Lux and less than 1000Lux.
- 3) Observe from distance of 40cm from surface, disregard flaws which can not be distinguished from this distance.

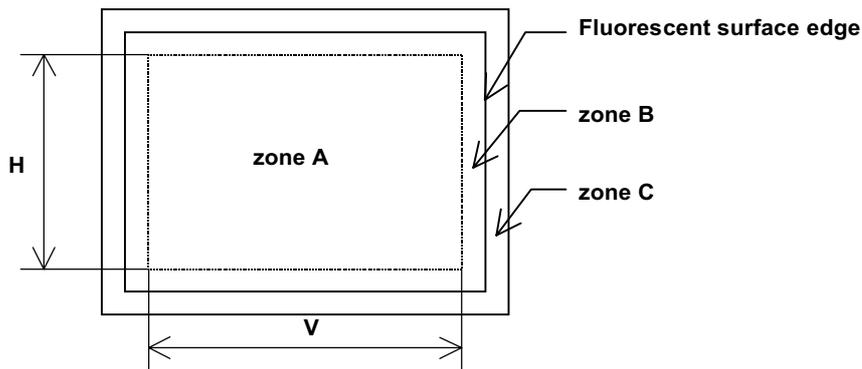
2. Division of zone

A screen is divided into following 3 zones.

Zone A: Area inside the rectangle that its size measures H : 300mm, V : 225mm in the center of screen.

Zone B: Area outside zone A and inside the fluorescent surface edge.

Zone C: Area outside the fluorescent surface edge.



3. Limits

3-1. Scratch

Width (mm)	Allowable Length(mm)(Zone A + Zone B)
0.16 ~	Reject
0.11 ~ 0.15	13
0.06 ~ 0.10	26
~ 0.05	Unlimited

Note 1: Even though width of scratch is more than 0.16mm, regard scratch whose contrast is weak extremely as stain and apply standard of 3-2.

Note 2: Do not recognize flaws which injures goods prices though it is not especially stipulated as for zone C.

3-2. Opaque flaws ( ex. Stain ) and coating peeling

Do not apply the following standard to zone C.

Classify flaws by contrast and judge it by size every the contrast.

**Definition of contrast**

High contrast : The foreign substance which shuts off light from fluorescence surface.

Middle contrast : A semitransparent foreign substance and stain.  
( ex. coating material which has been changed )

Low contrast : stain and dust which do not reflect light from fluorescence surface and can be distinguished by its appearance.

Note : Ignore the light spot with no interference color.

(However, Non of them with its size in excess of 3.75 mm is acceptable, that damages the product quality.)

Standards

Average diameter classified by a contrast (Note 1) (mm)			Allowable number		Allowable Length (mm)
High contrast	Middle contrast	Low contrast	Zone A	Zone B	
~ 0.10	~ 0.20	~ 0.50	Ignore	Ignore	-
0.11 ~ 0.25	0.21 ~ 0.50	0.51 ~ 1.25	2 [4]	4 [5]	20
0.26 ~ 0.50	0.51 ~ 1.00	1.26 ~ 2.50	1 [4]	2 [4]	40
0.51 ~ 0.75	1.01 ~ 1.50	2.51 ~ 3.75	0 [4]	1 [4]	80

Values inside [ ] represent acceptable number in low contrast.

See the table in the next page for total defect number, which is acceptable in low contrast.

Note 1: Convert  $(a+b)/2$  or  $a/20 + 2b$  small value into average diameter. (a: length, b: width)

total number of a low contrast flaws	Zone A	Zone B
Standard classified by zones	6	8
Total ( zone A + zone B )	10	

Note 1: Acceptable interval shall be larger one in the case that defects have different interval.

Note 2: There is no standard regarding zone C. Therefore, no defect is accepted that may deteriorate the value of products. Defect level by consultation. Discuss is necessary.

Note 3: Tolerance of defect size is approx. 10%.

# TROUBLE SHOOTING

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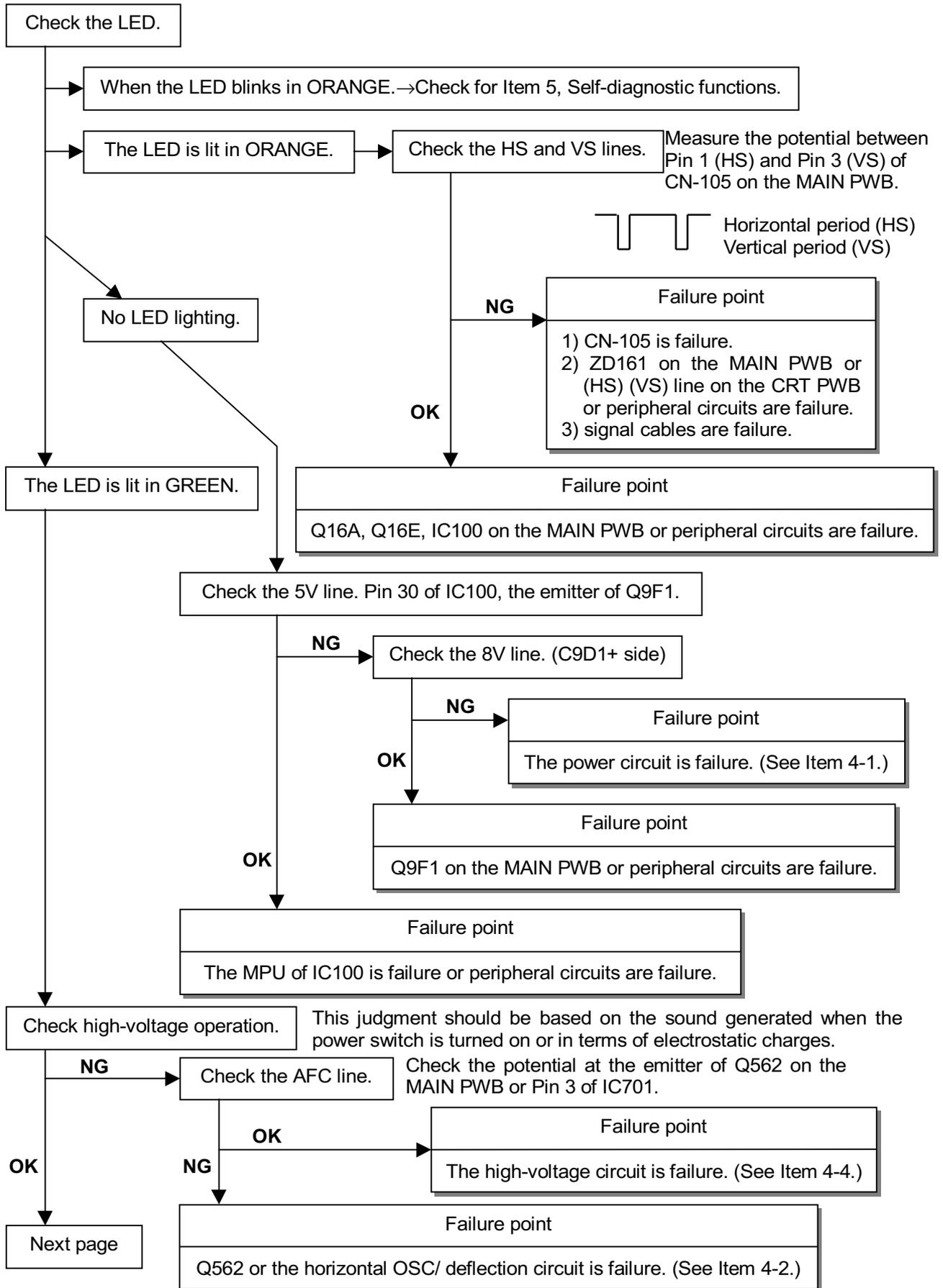
This chapter for troubleshooting is useful if any normal conditions cannot be secured even after the confirmation of “Troubleshooting” presented in the User's Manual and the completion of “Chapter 4. Adjustment procedures” presented in this Service Manual.

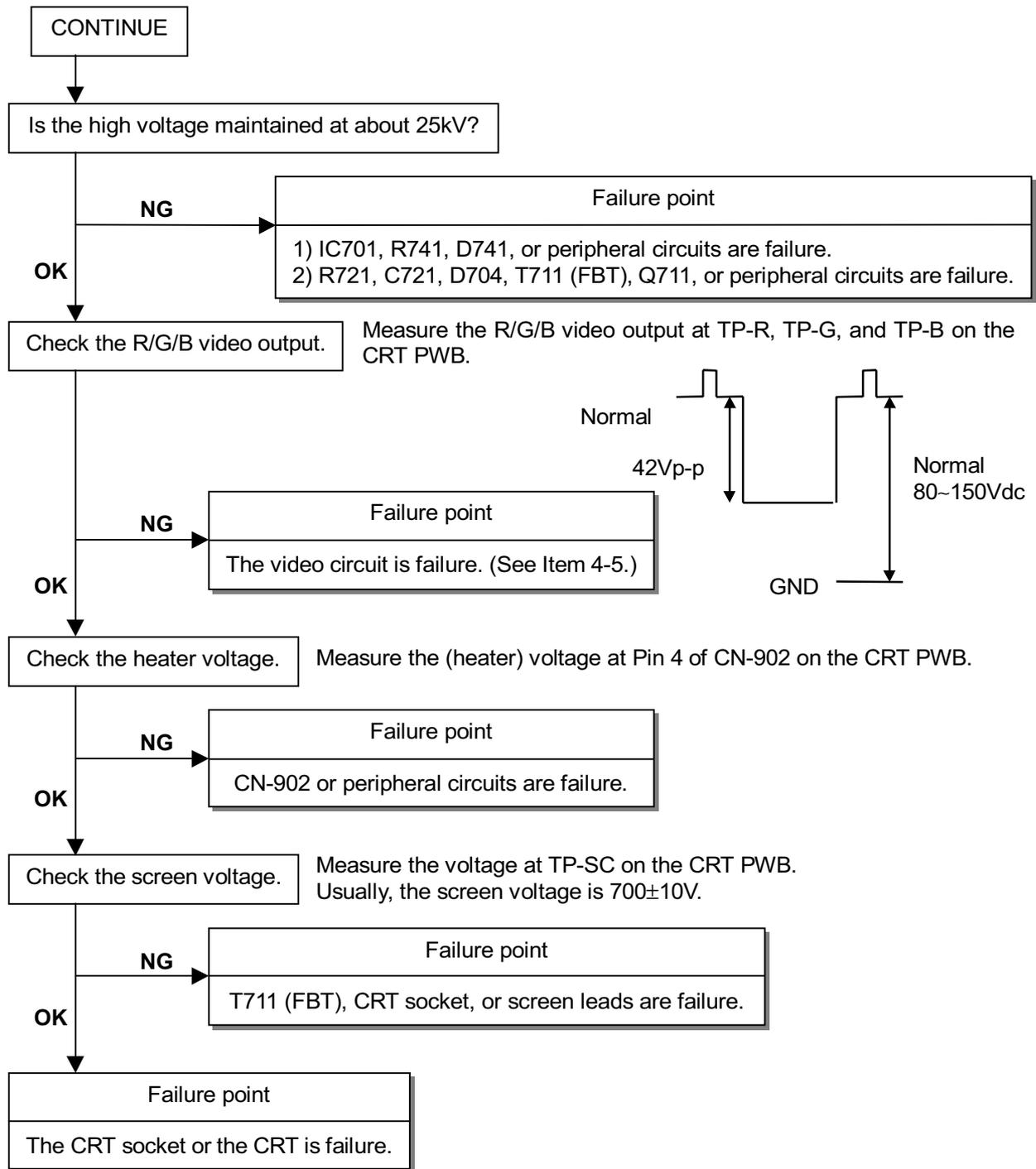
The equipment units related to the possible cause of “Picture bounces or a wavy pattern is present in the picture” described in “Troubleshooting” presented in the User's Manual include the electrical equipment such as portable telephones, etc., which may generate electromagnetic waves. Therefore, troubleshooting actions should be taken after turning off the portable telephones, etc., and such electrical equipment that may generate electromagnetic waves, or in a place distant from such equipment.

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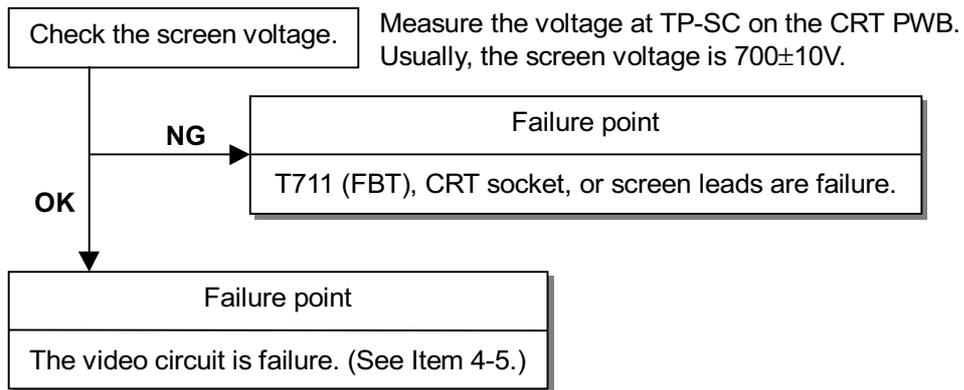
# 1. No raster generated



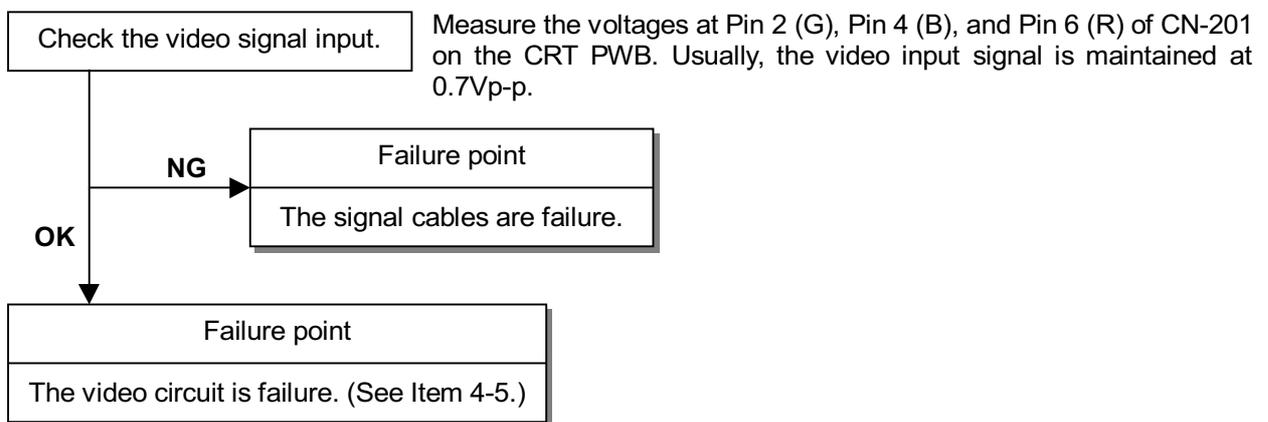


## 2. Screen errors

### 2-1. Raster brightness failure

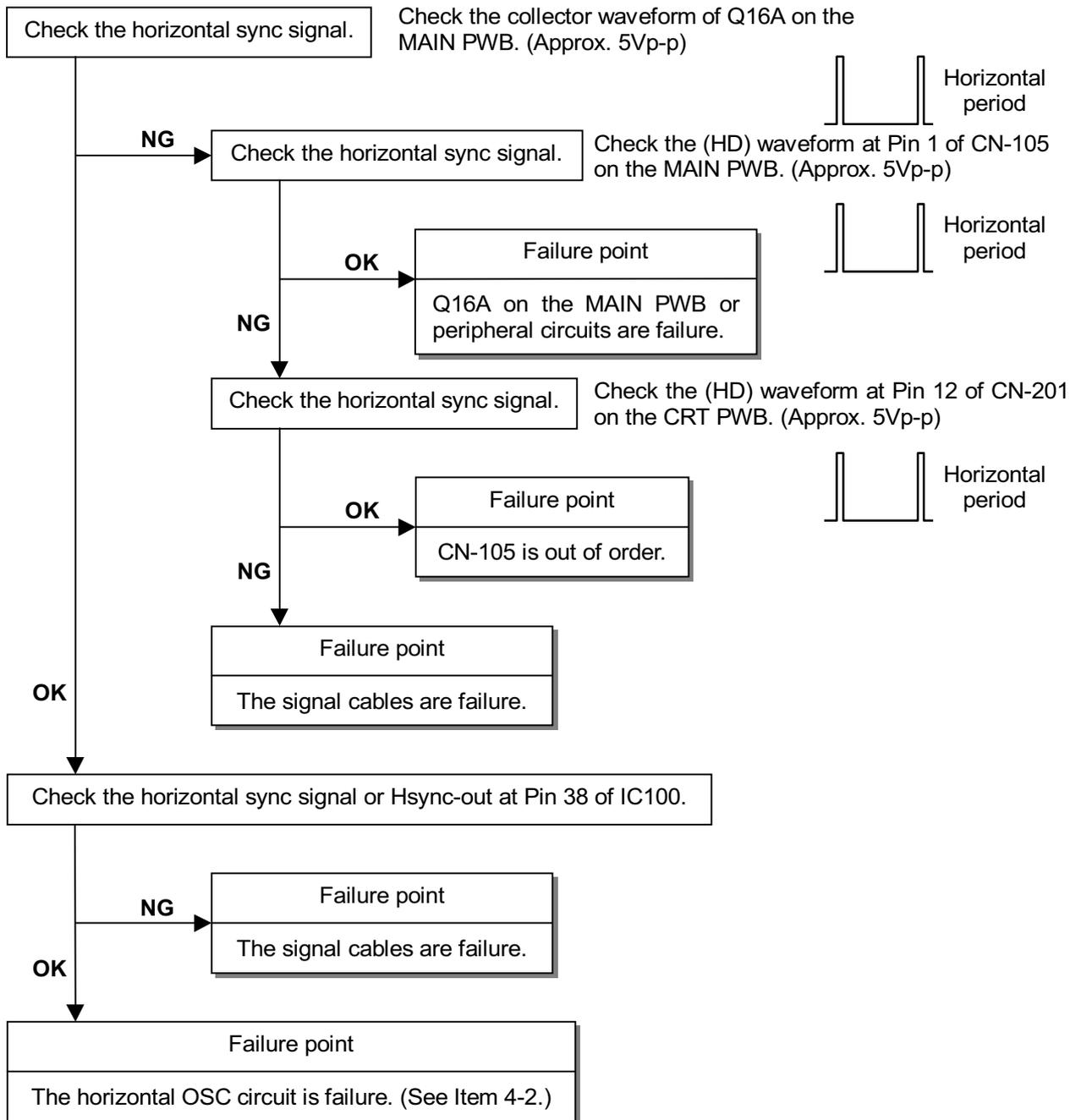


### 2-2. Image color failure or contrast failure

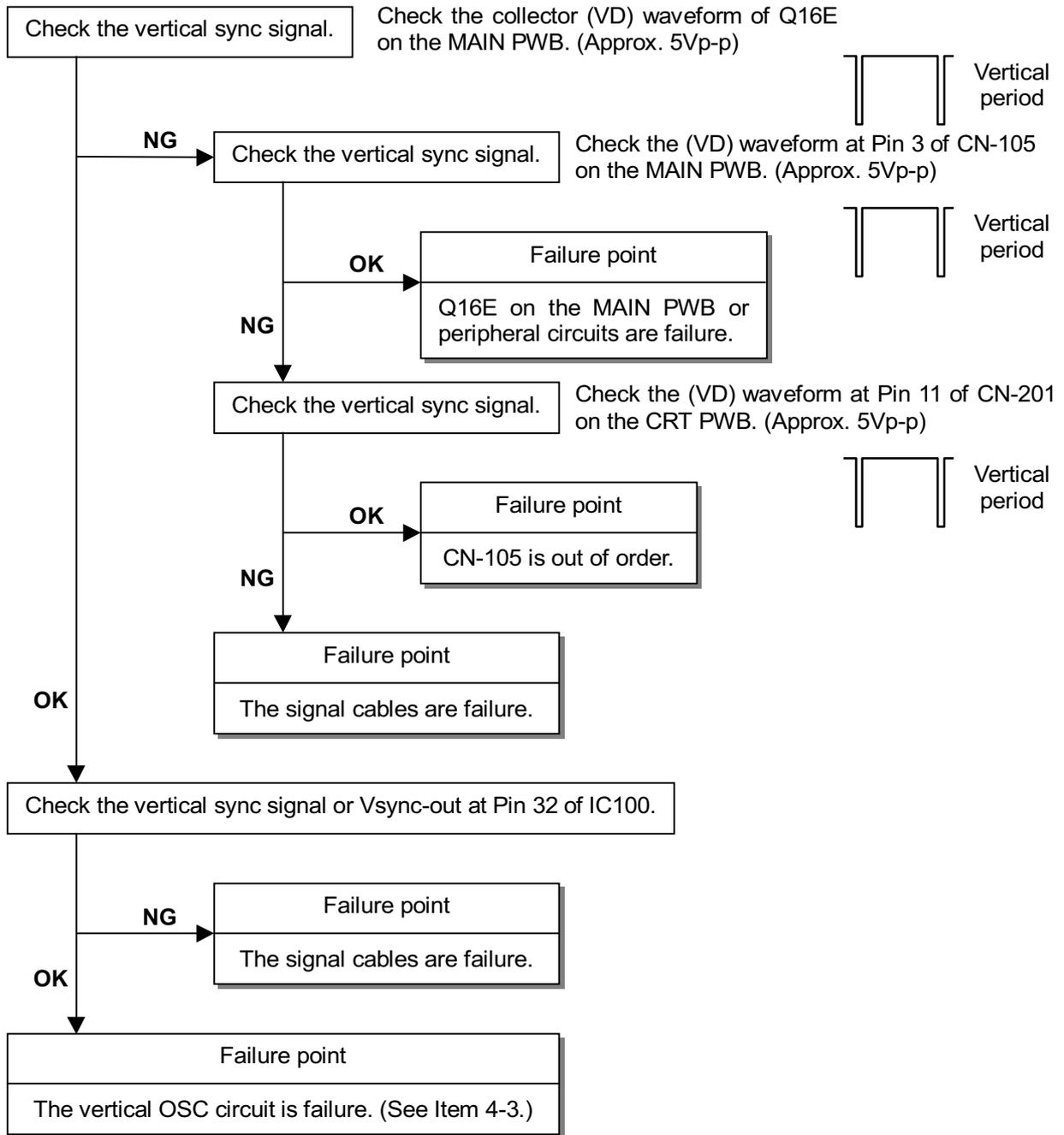


## 2-3. Sync failure

### 2-3-1. Horizontal sync unstable

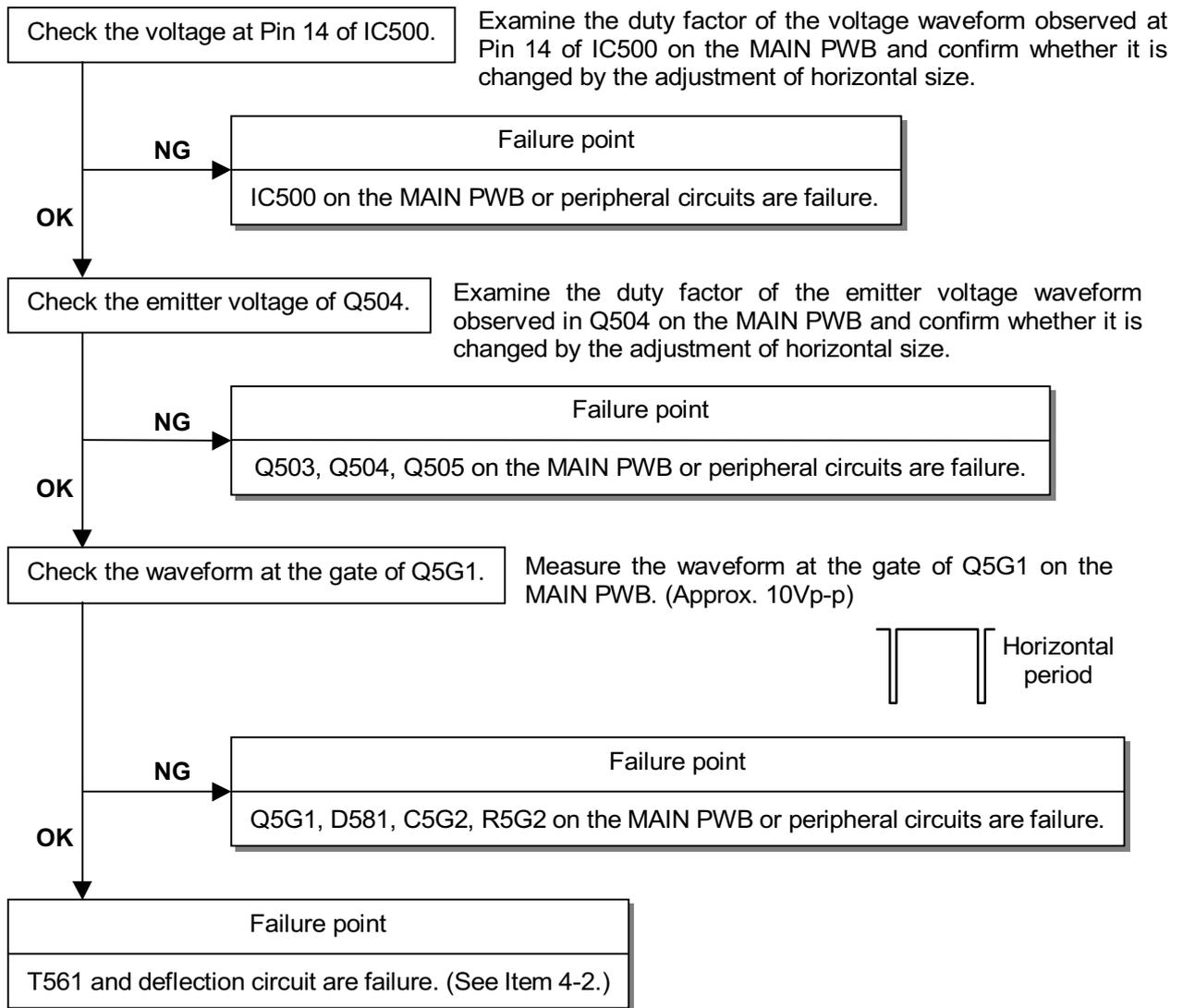


### 2-3-2. Vertical sync unstable



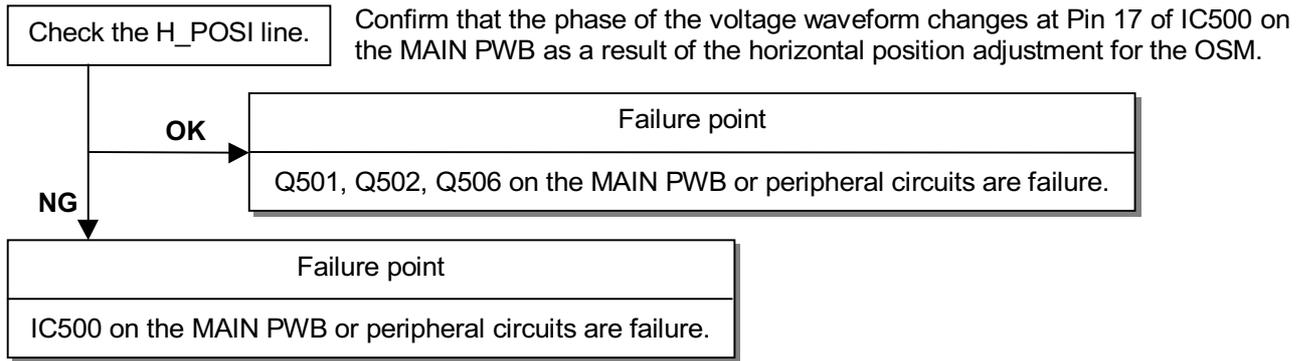
## 2-4. Screen size and screen position failure

### 2-4-1. Horizontal size failure

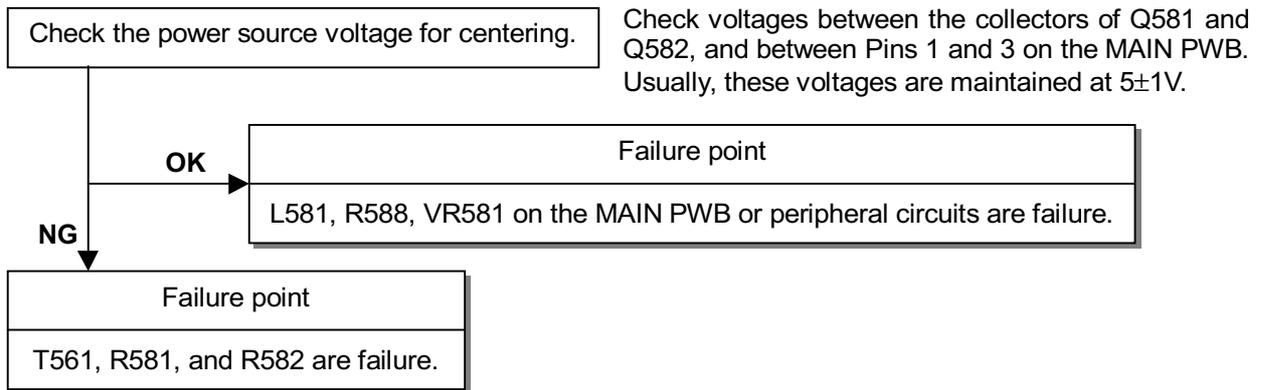


### 2-4-2. Horizontal position failure

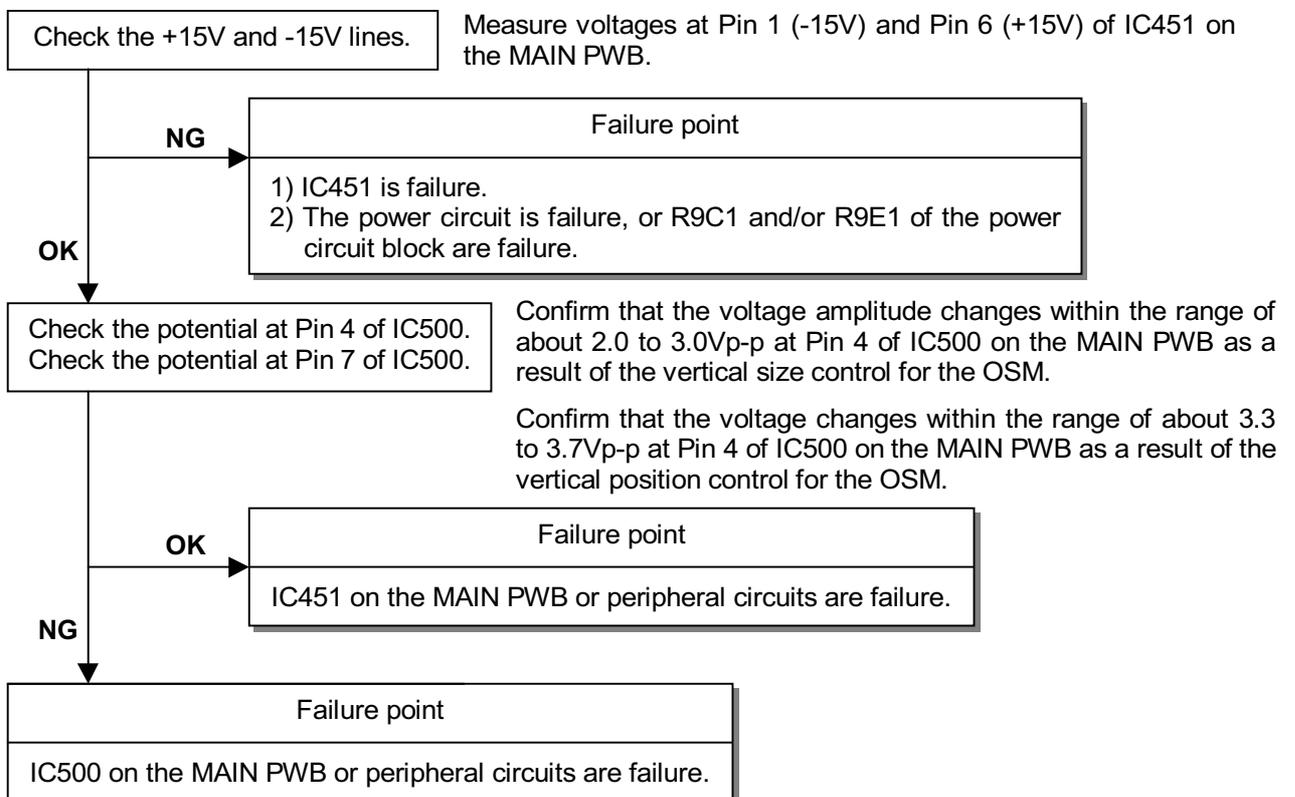
(1) Video



(2) Horizontal raster centering (VR581 and SW581) failure

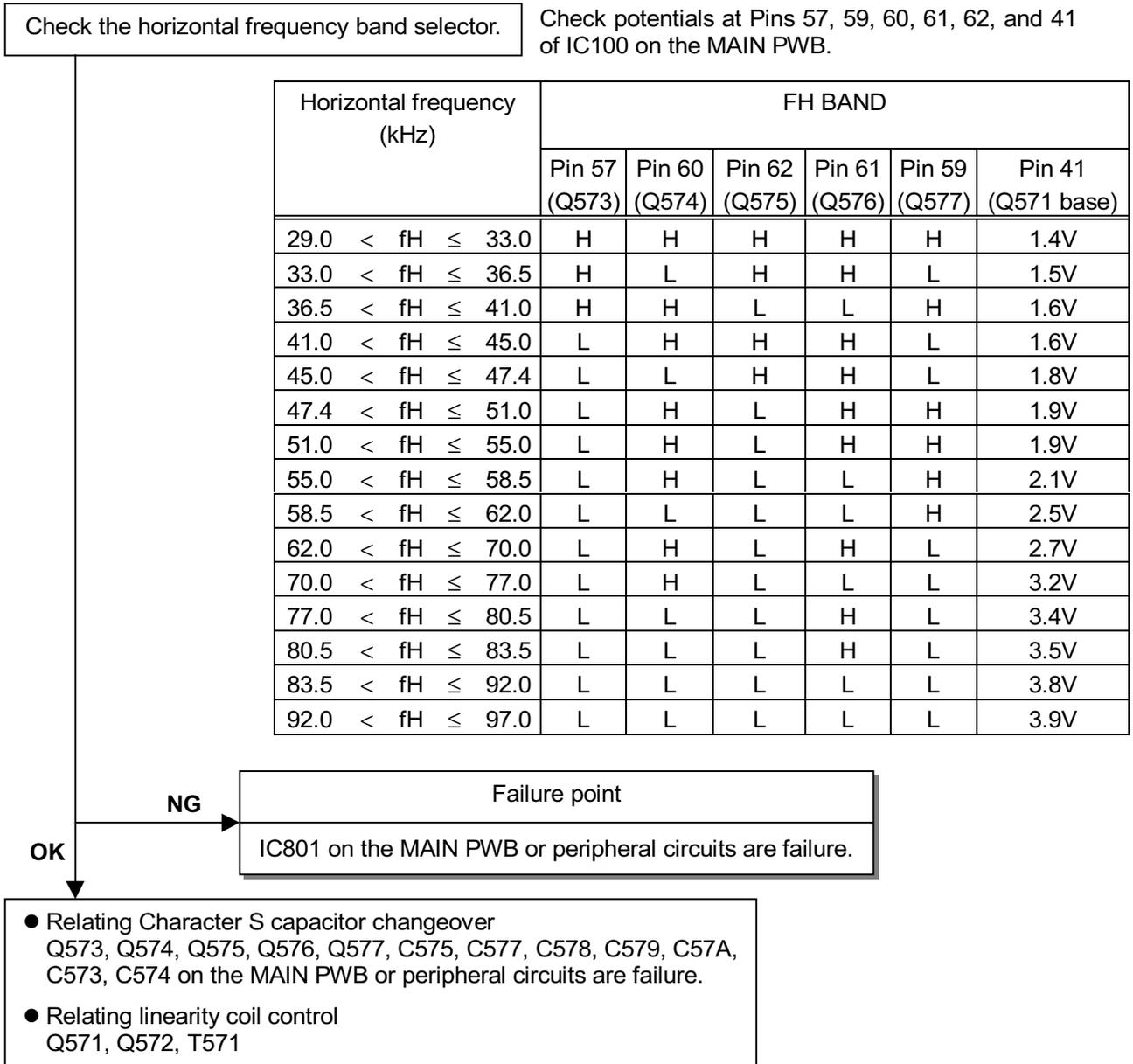


### 2-4-3. Vertical size and position failure

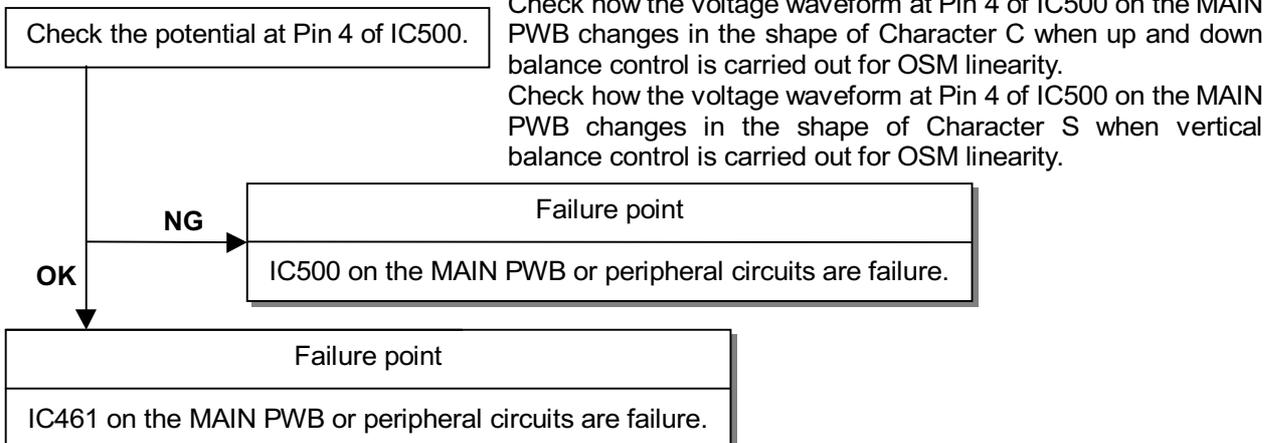


## 2-5. Linearity failure

### 2-5-1. Horizontal linearity failure

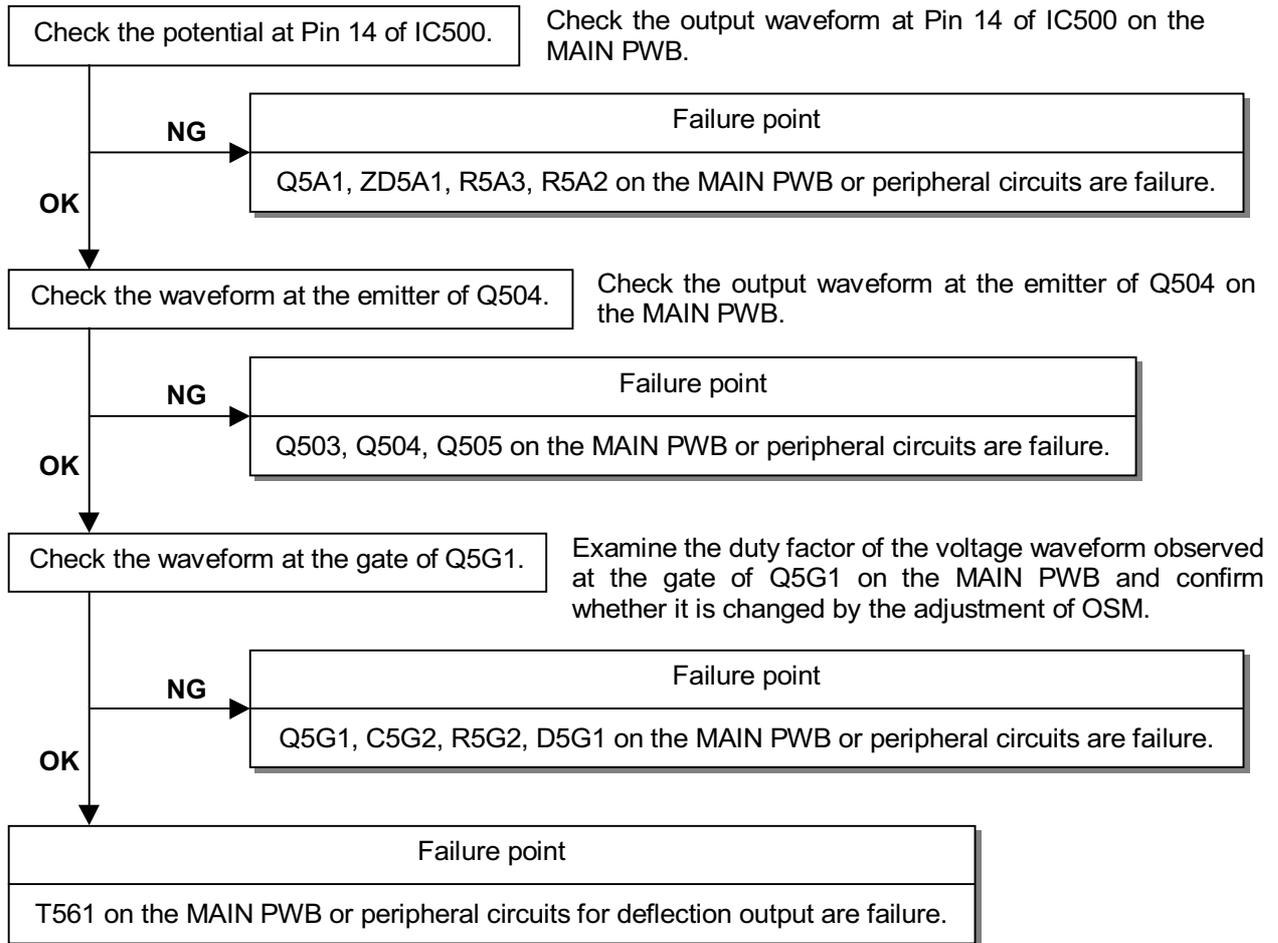


### 2-5-2. Vertical linearity failure

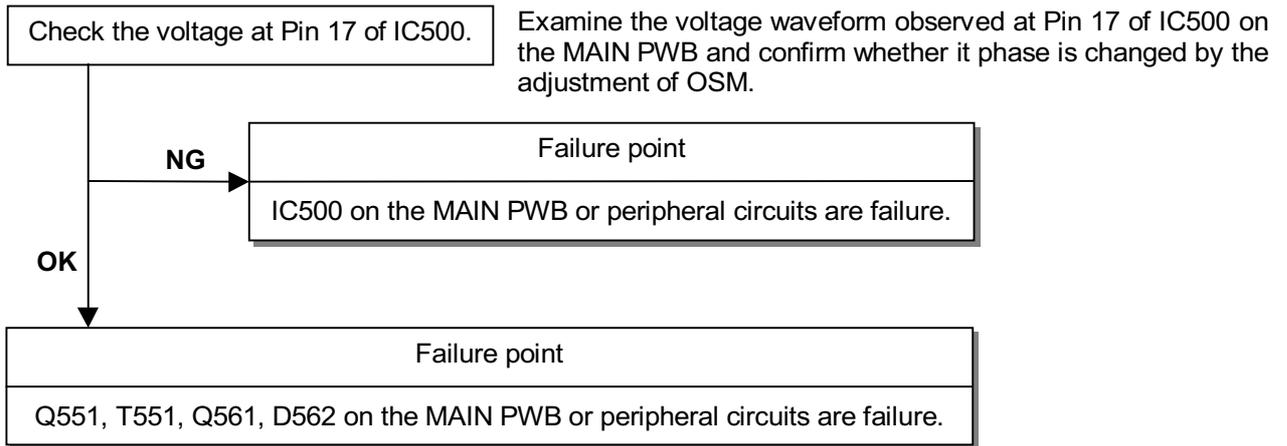


## 2-6. Distortion corrector circuit failure

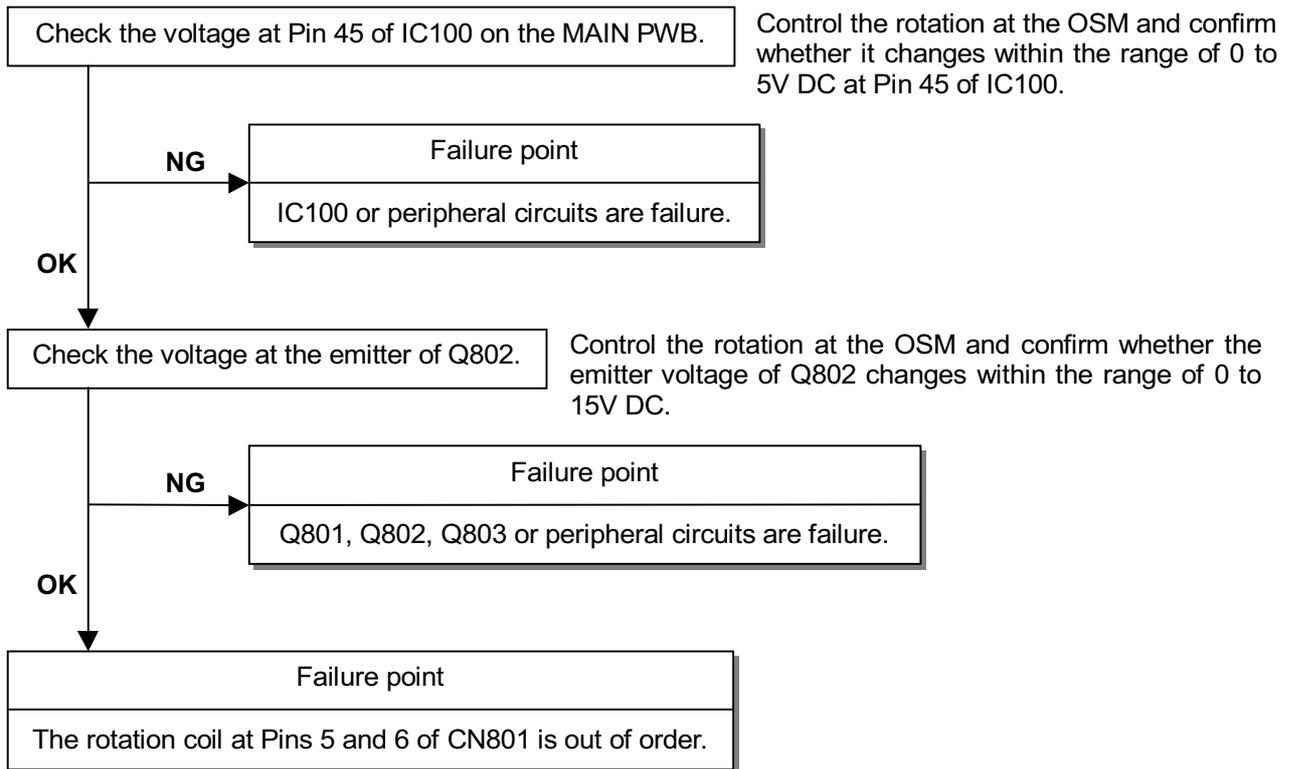
### 2-6-1. Side pin, trapezoid, and corner distortion failure



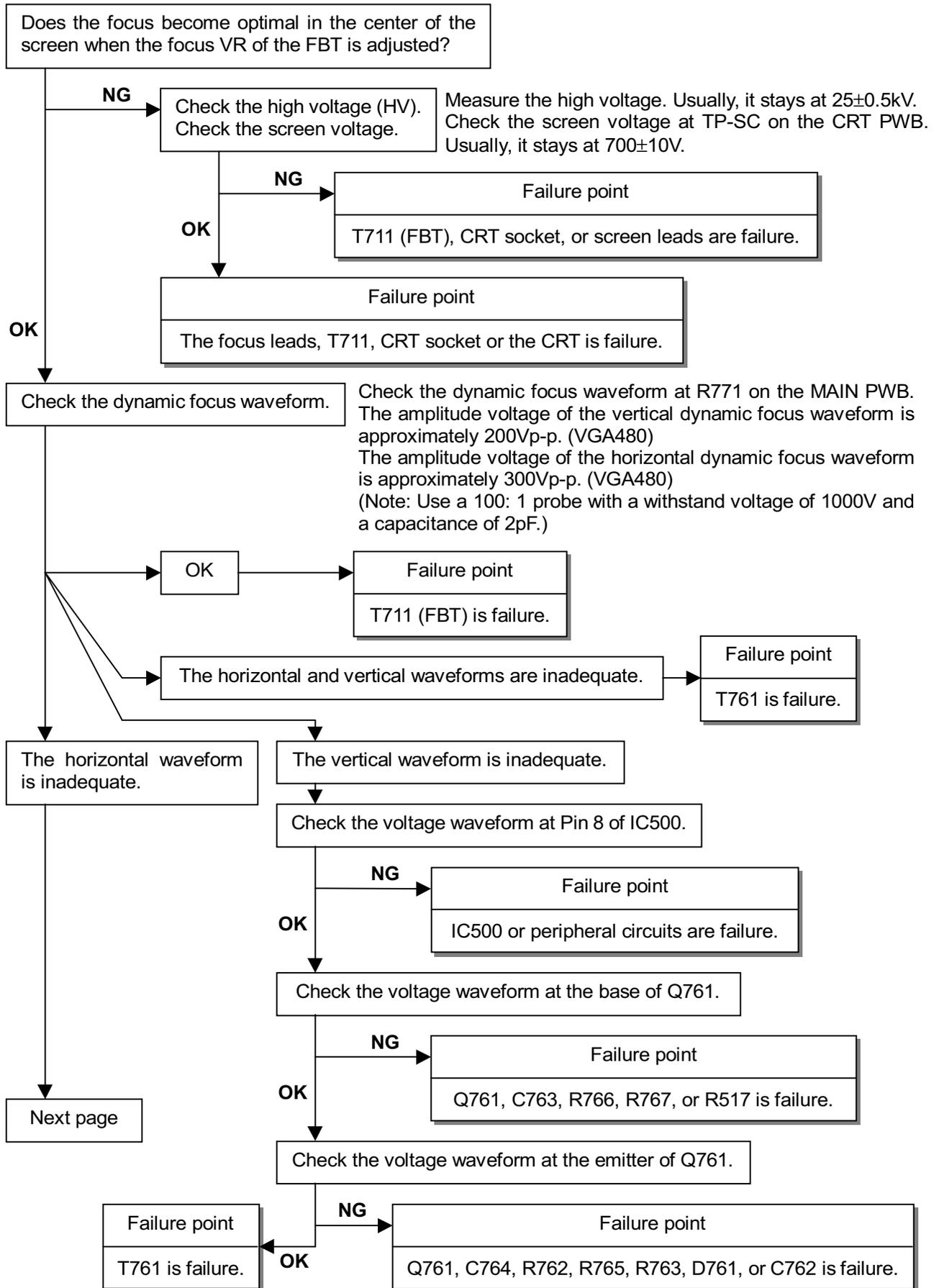
### 2-6-2. Side pin balance, parallelogram distortion, and corner balance failure

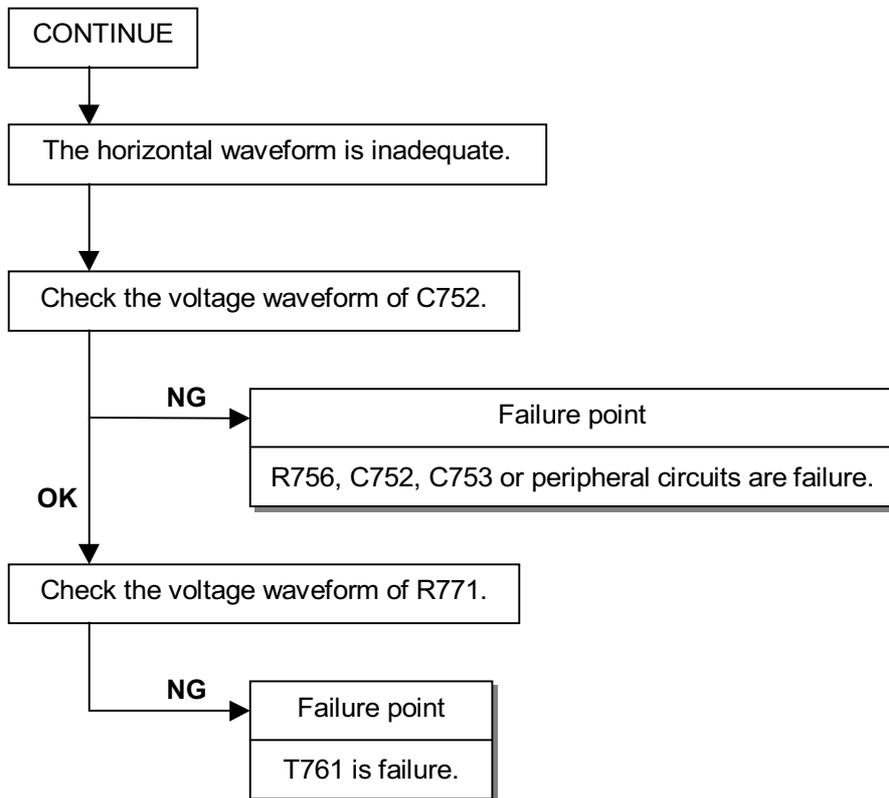


### 2-6-3. Screen rotation failure



## 2-7. Focus failure

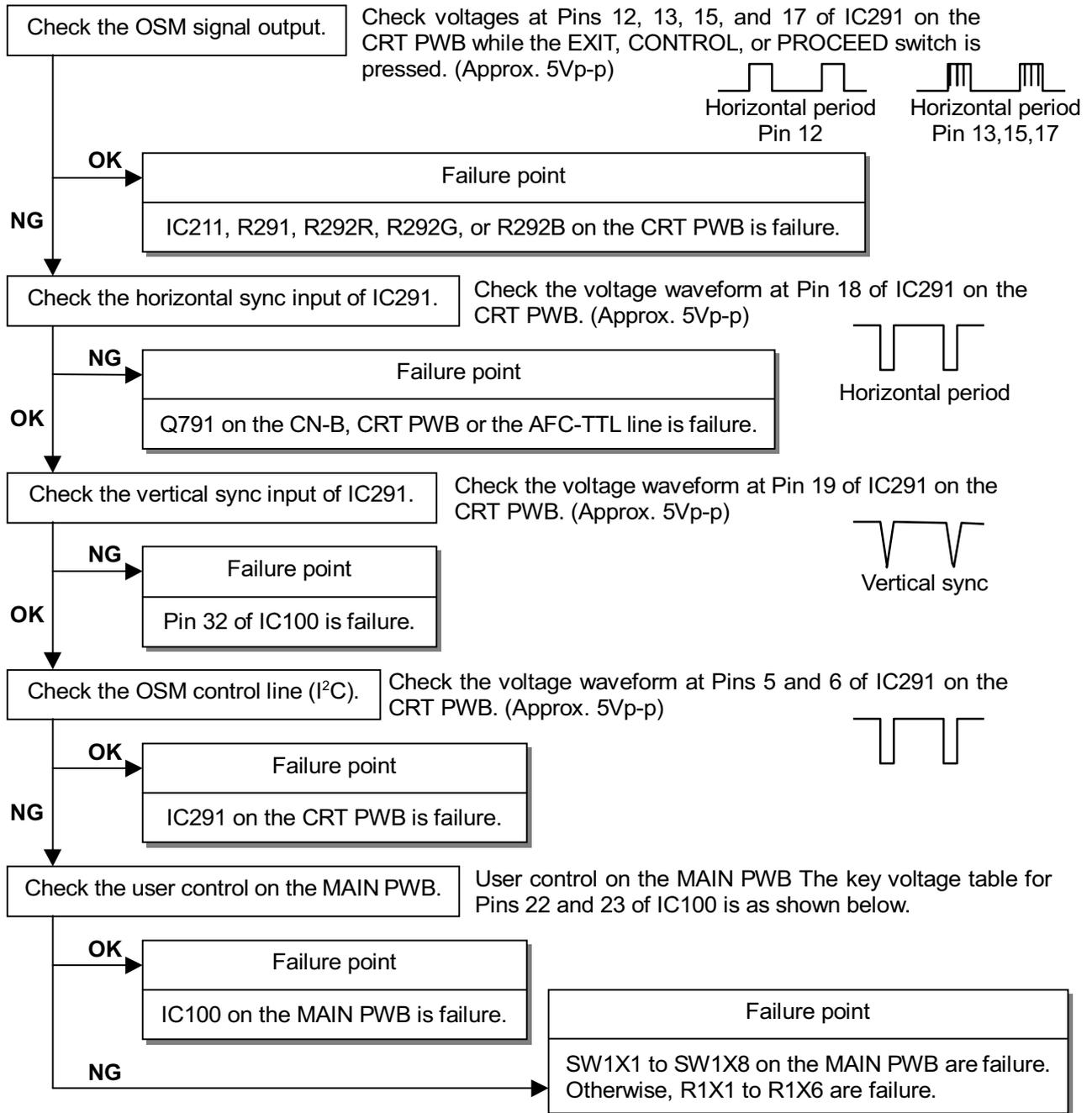




### 3. Functional errors

#### 3-1. OSM failure

Note: See Item 2 if a screen is not available even though a video signal input is entered.



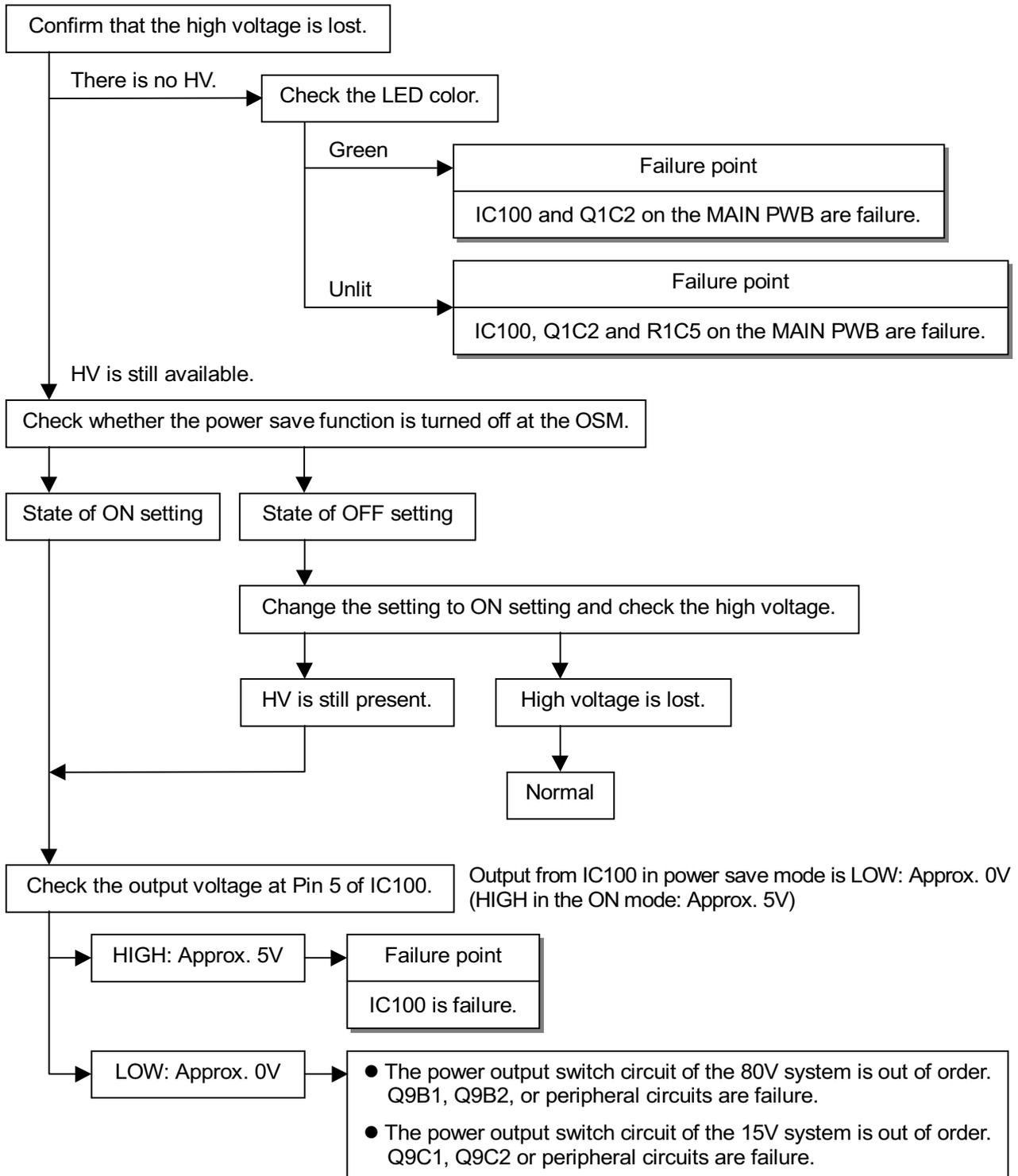
Voltages at Pins 22 and 23 of IC100 for key operation

Pin No./Terminal name	23pin/KEY1	22pin/KEY2
FPM (SW1X1) ON	0V	5V
◀ (SW1X3) ON	1.25V	5V
▶ (SW1X4) ON	5V	1.25V
▼ (SW1X5) ON	2.5V	5V
▲ (SW1X6) ON	5V	2.5V
- (SW1X7) ON	3.75V	5V
+ (SW1X8) ON	5V	3.75V

### 3-2. Power management functional operation error

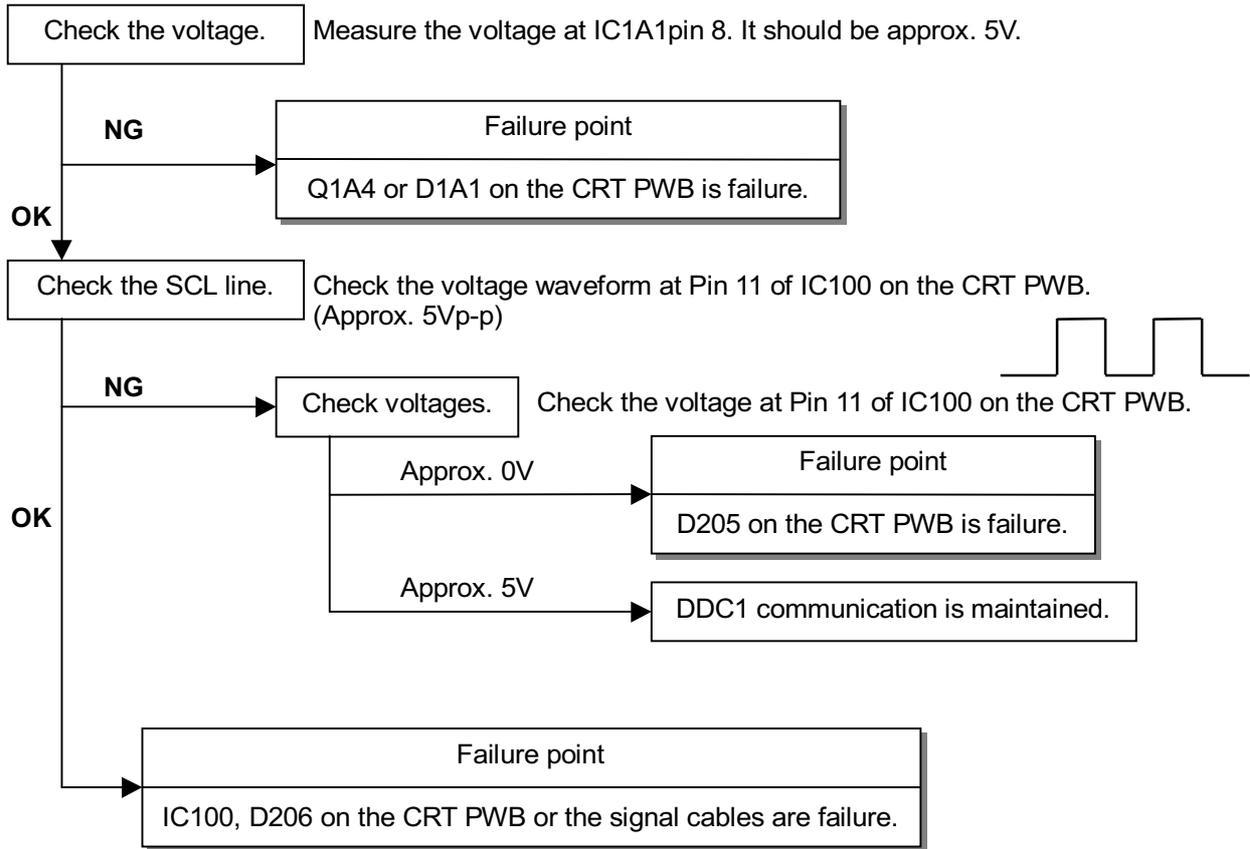
First of all, disconnect the signal cables from the signal source.

(If a signal input is removed, the high voltage (HV) is generally lost and the LED is turned orange.)

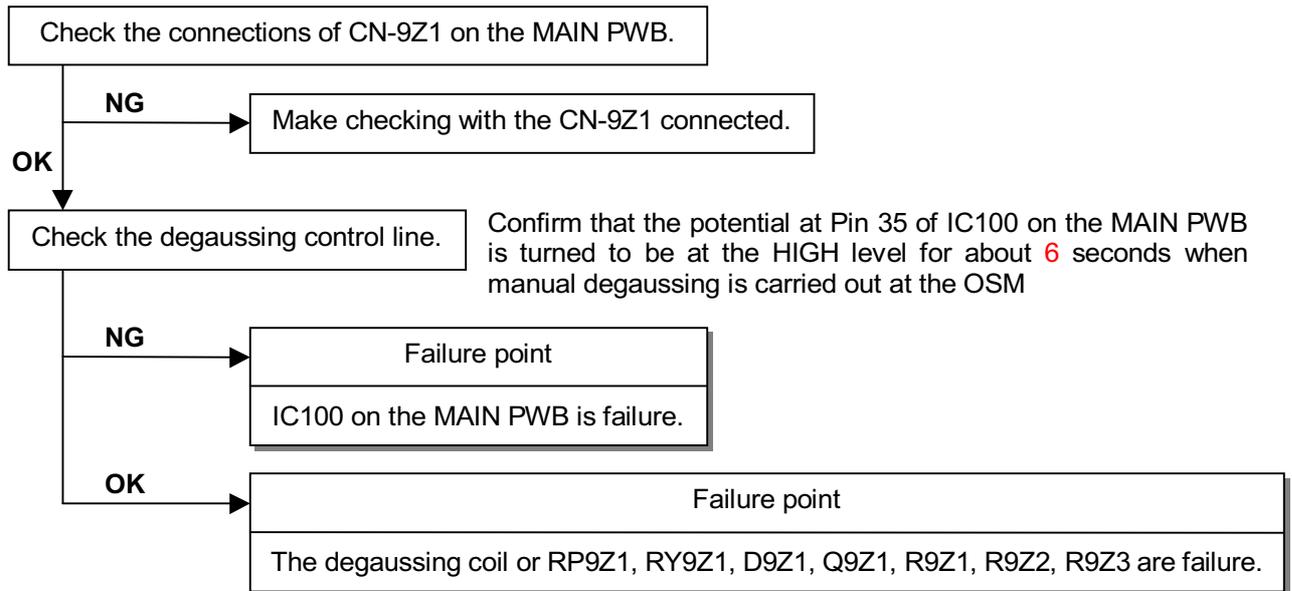


### 3-3. Plug & play operation error

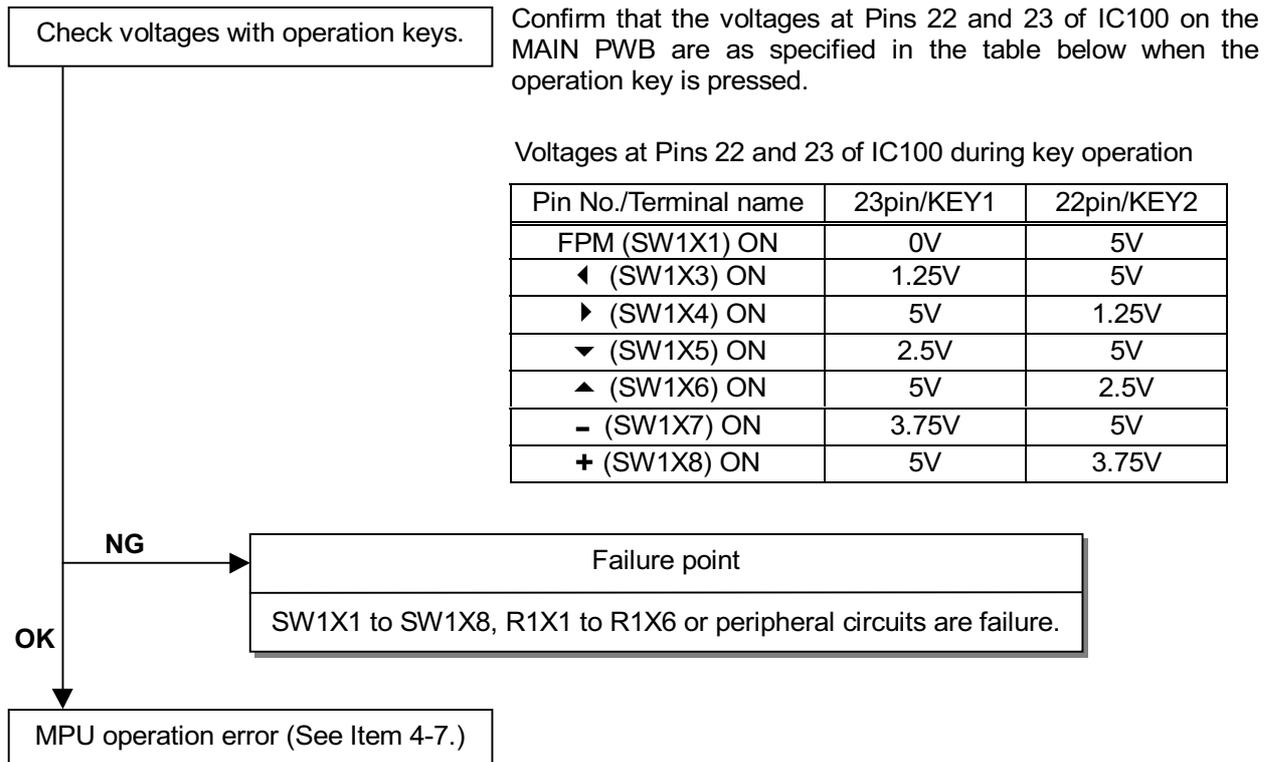
#### 3-3-1. DDC2B output error



### 3-4. Degaussing functional operation error



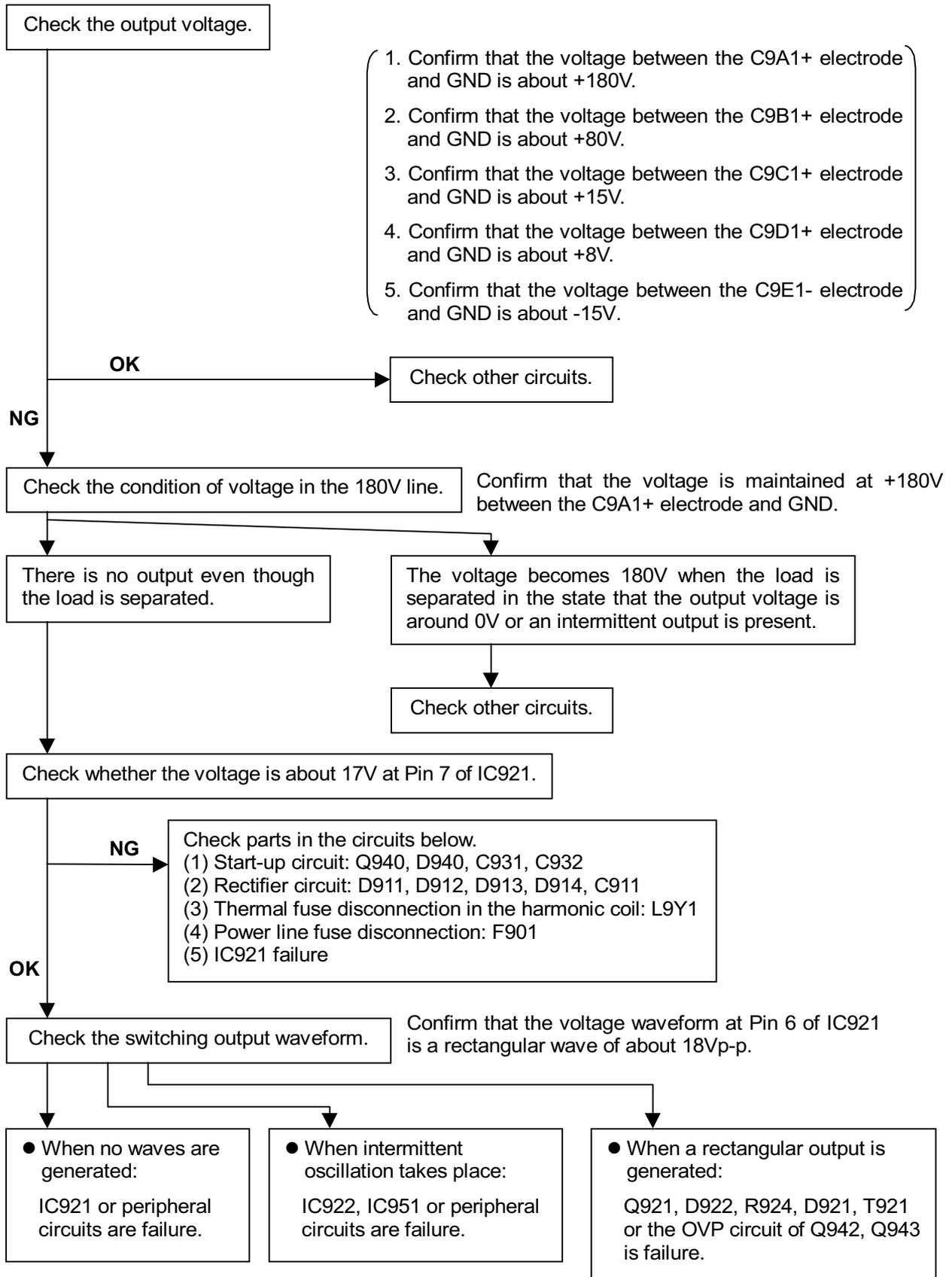
### 3-5. Key operation error



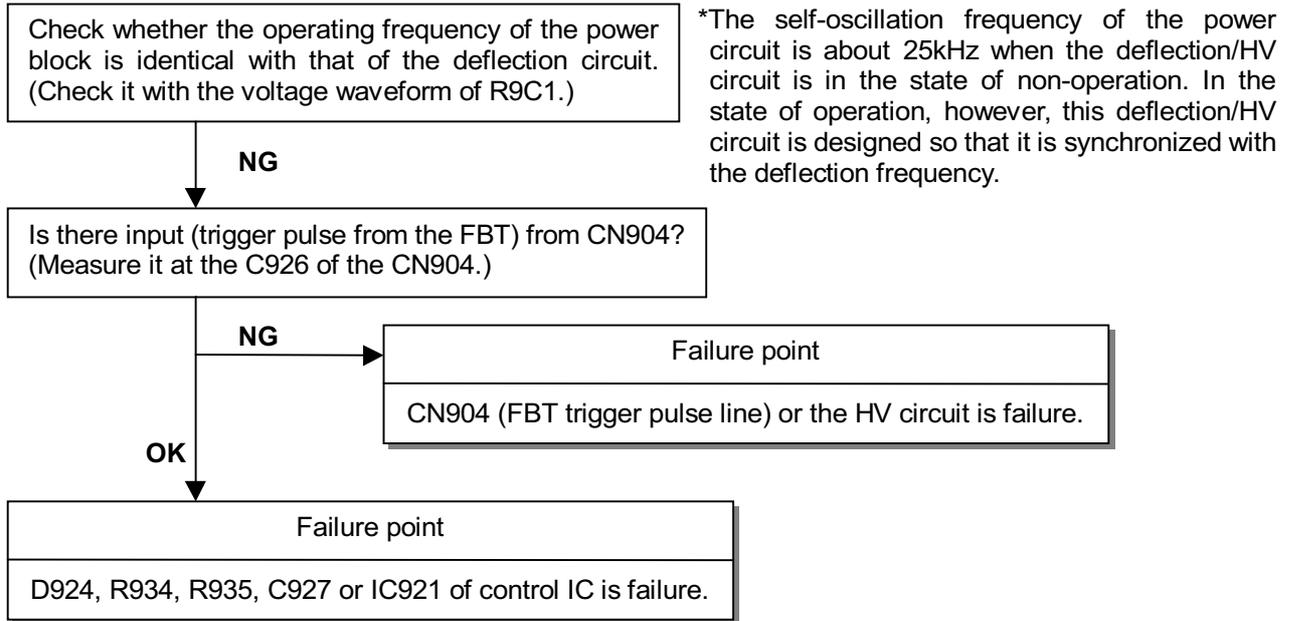
## 4. Circuit errors

### 4-1. Power circuit failure

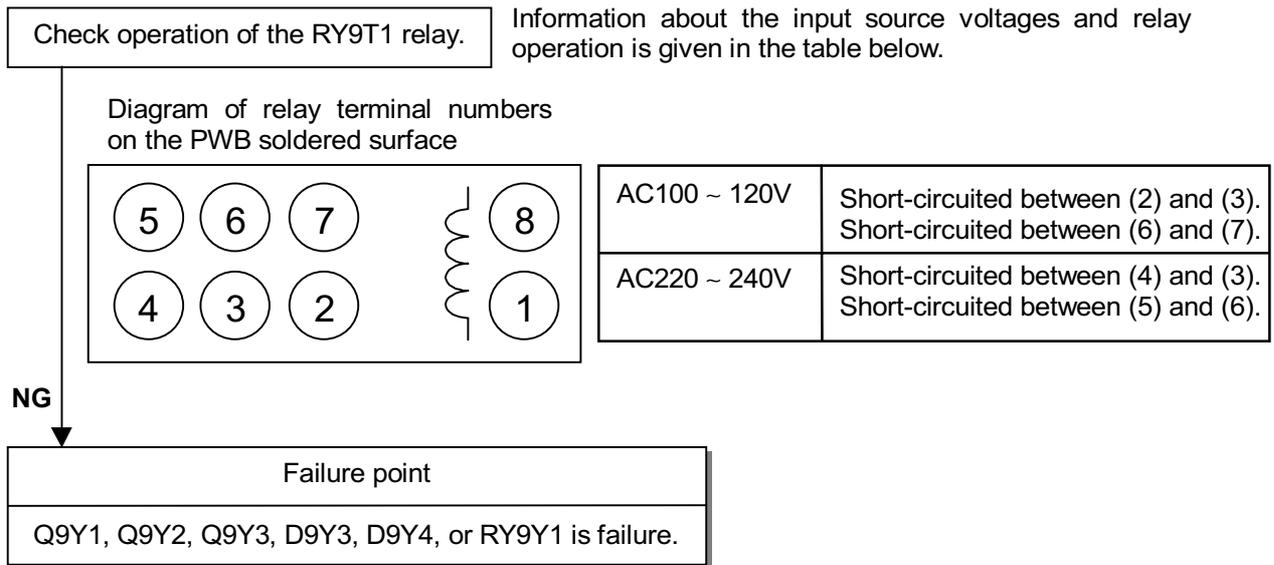
#### 4-1-1. Switching operation error



#### 4-1-2. Power OSC frequency error

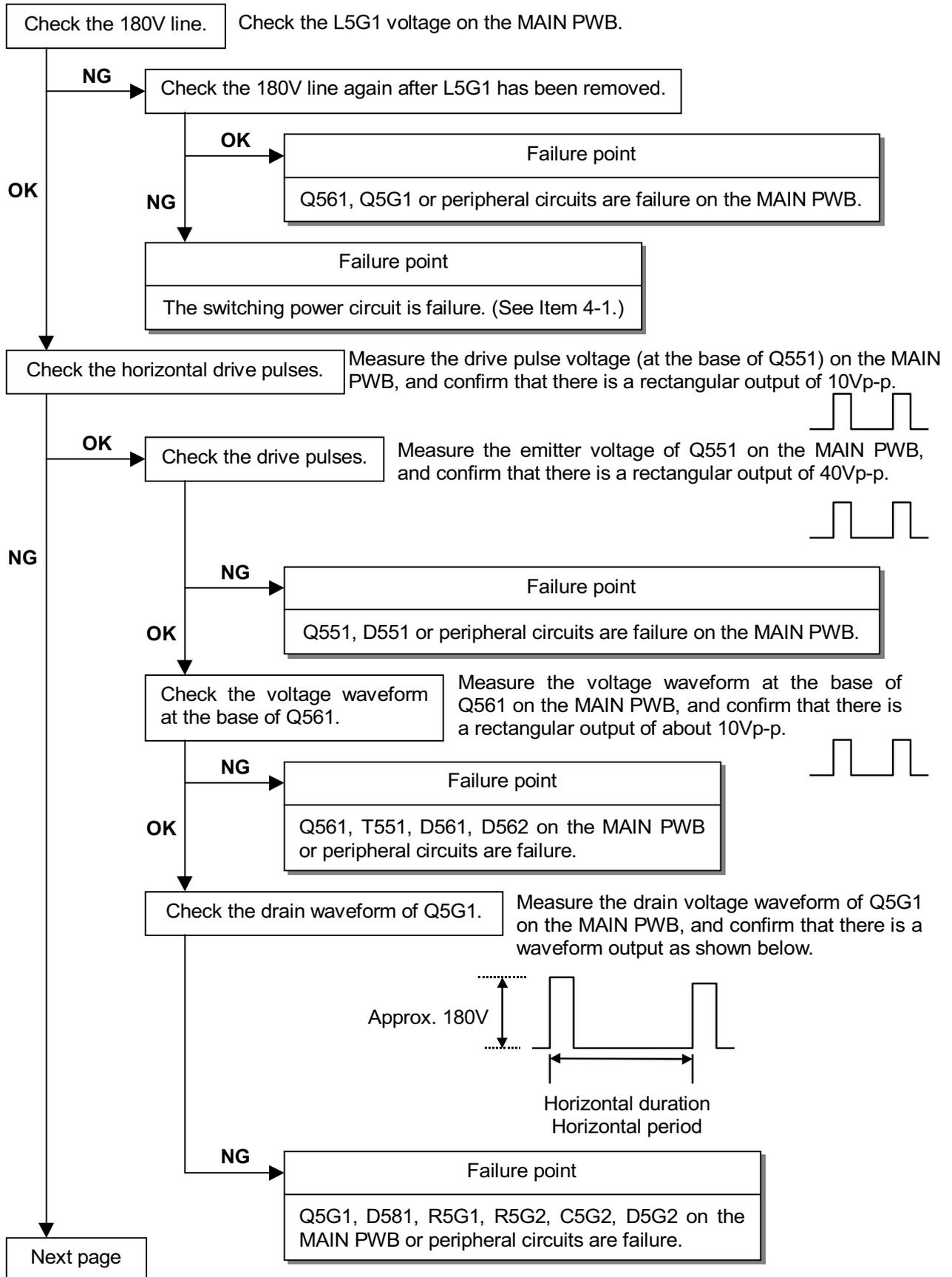


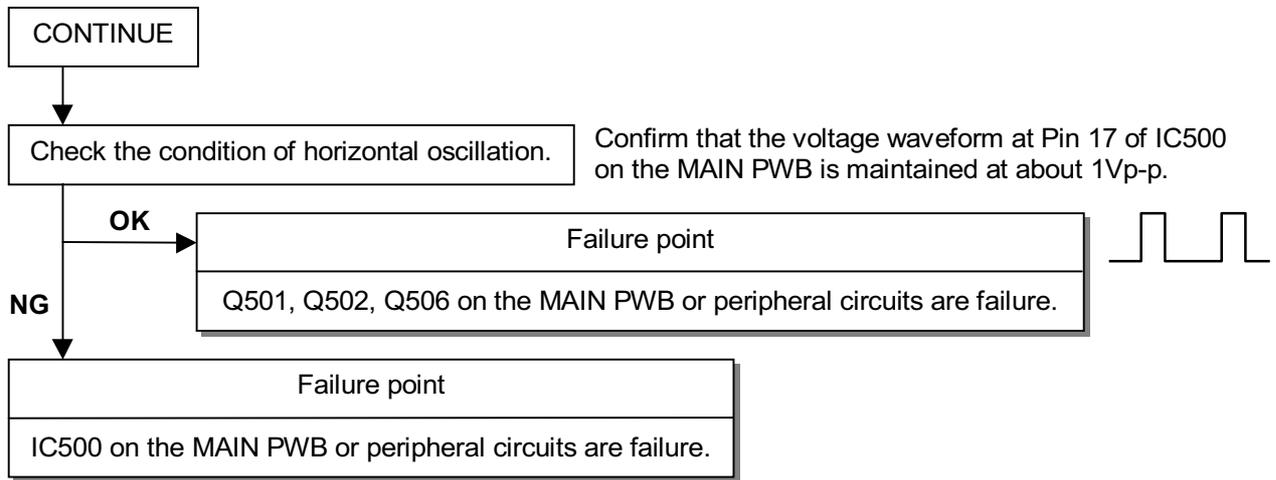
#### 4-1-3. Harmonic coil changeover circuit error



## 4-2. Horizontal OSC/ deflection circuit failure

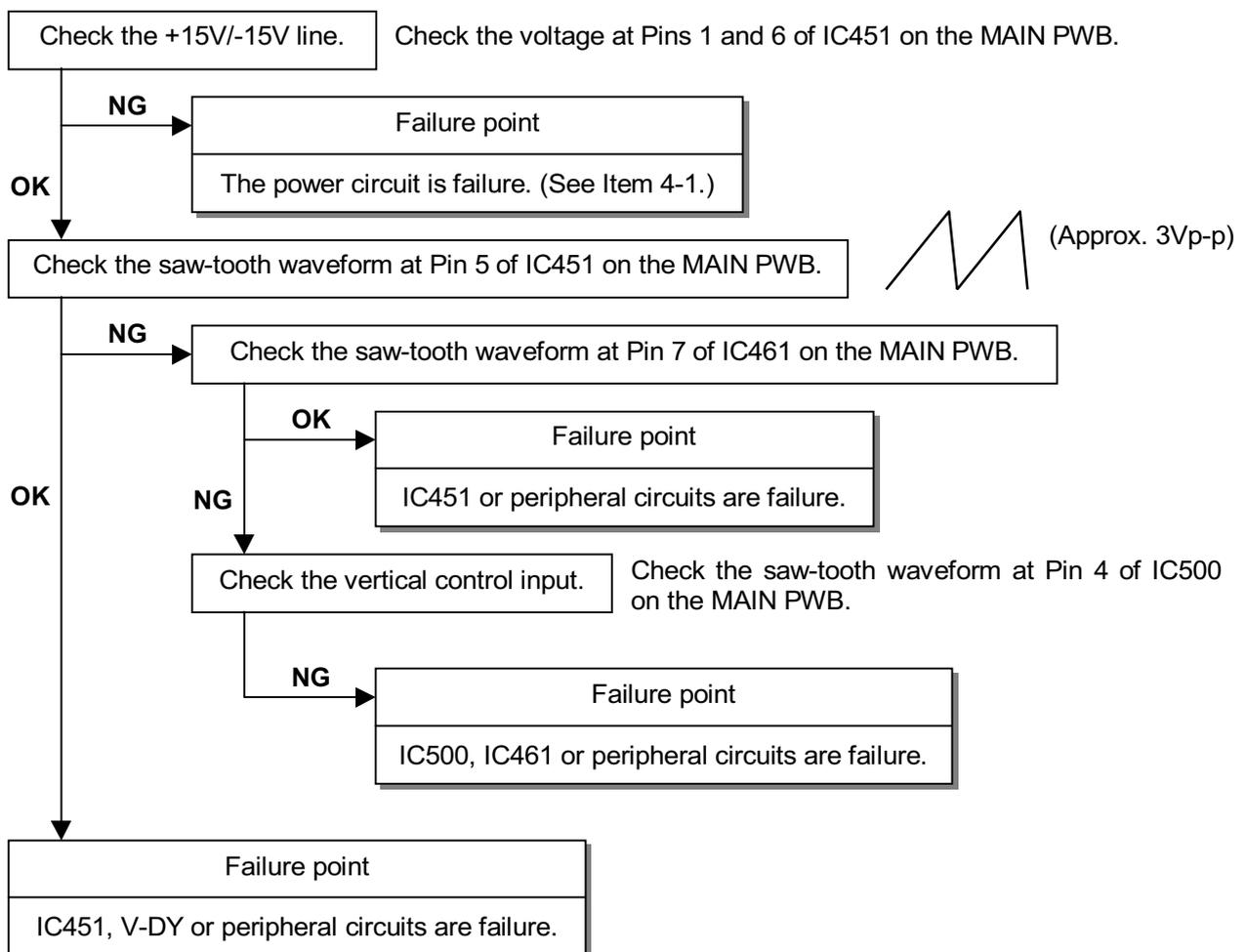
(Prior to following this item, confirm Item 1 and Item 2-3-1.)





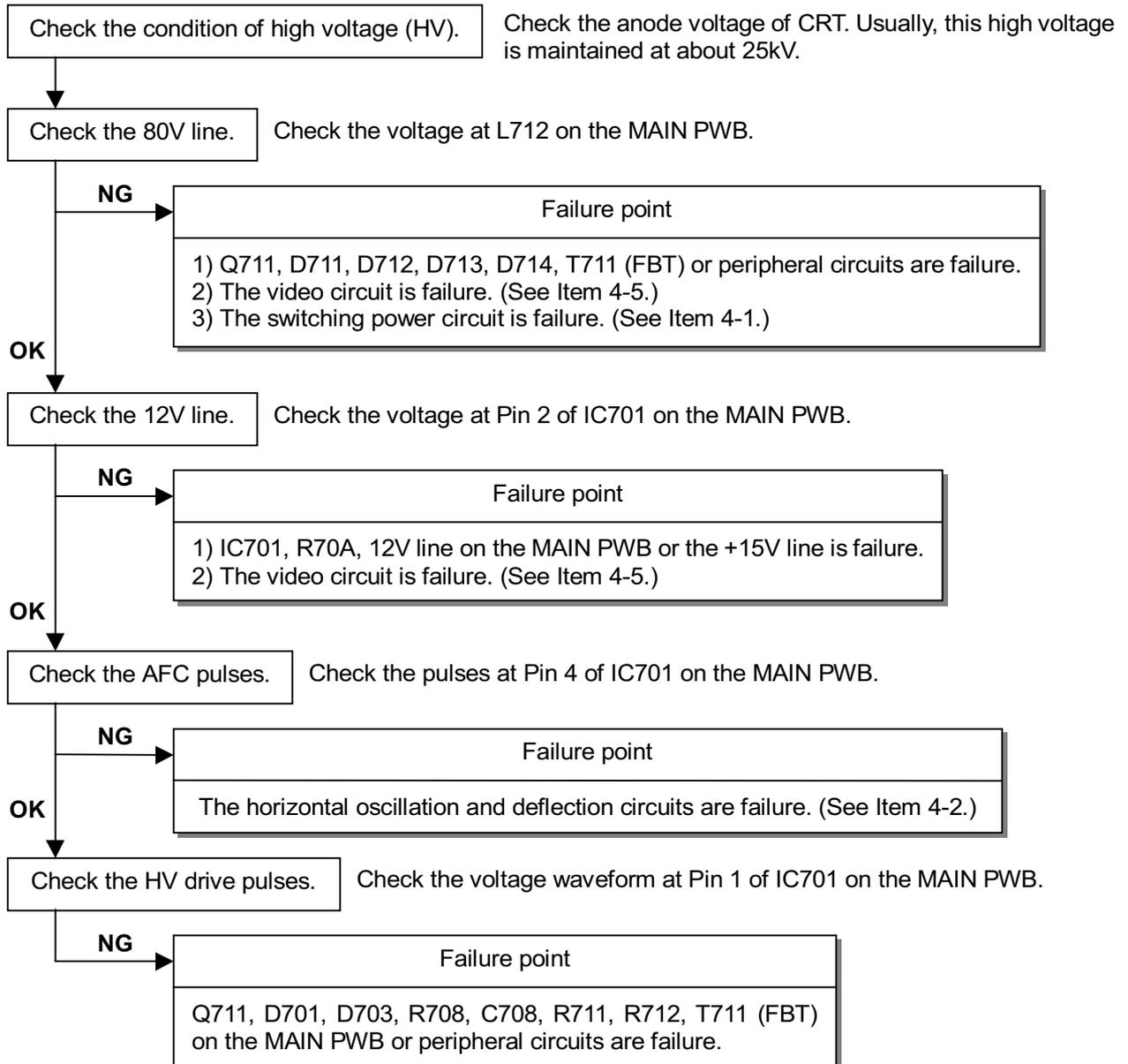
### 4-3. Vertical OSC/ deflection circuit failure

(Prior to following this item, confirm Item 2-3-2.)



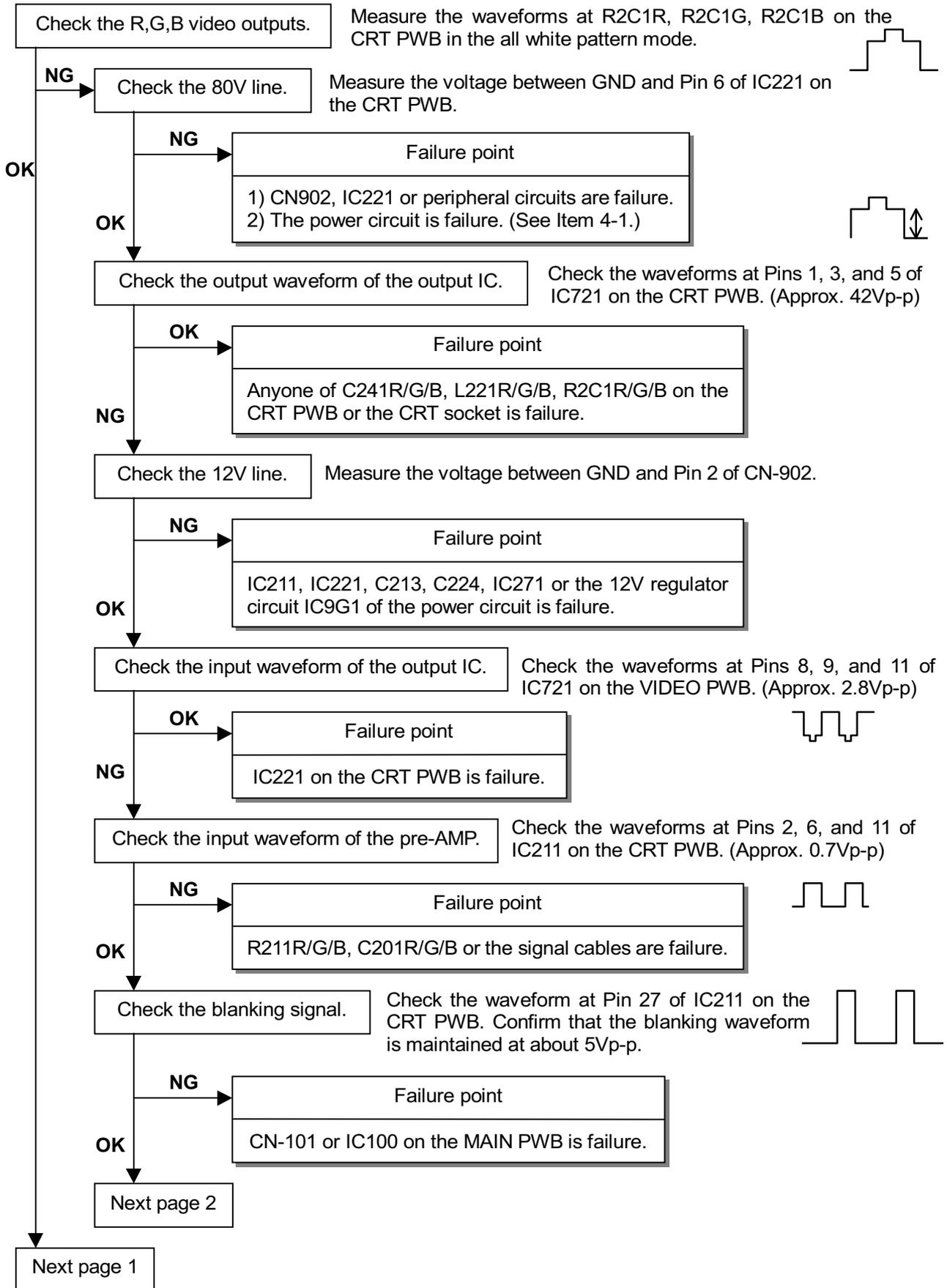
#### 4-4. HV circuit failure

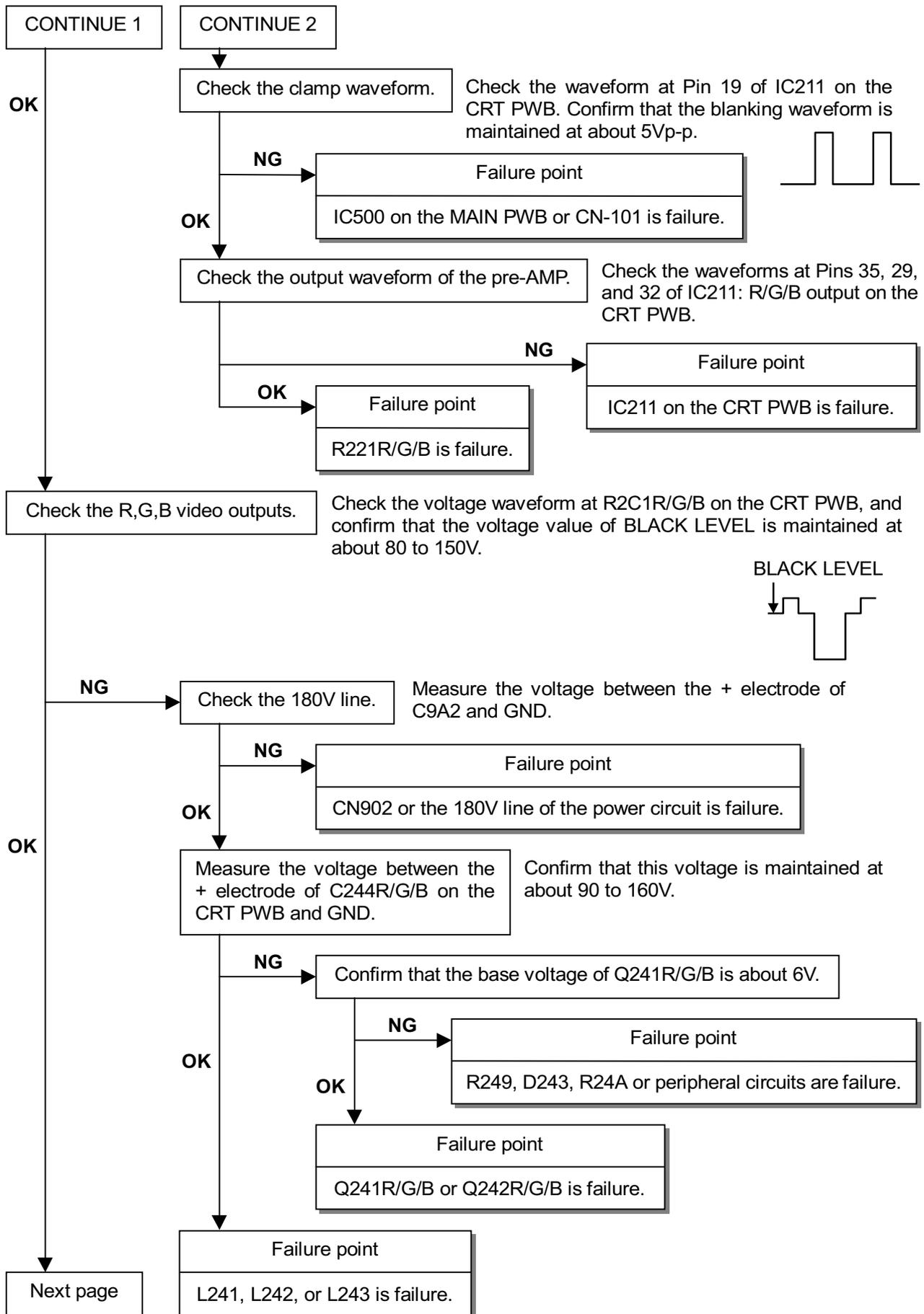
(Check Item 1 before this item.)

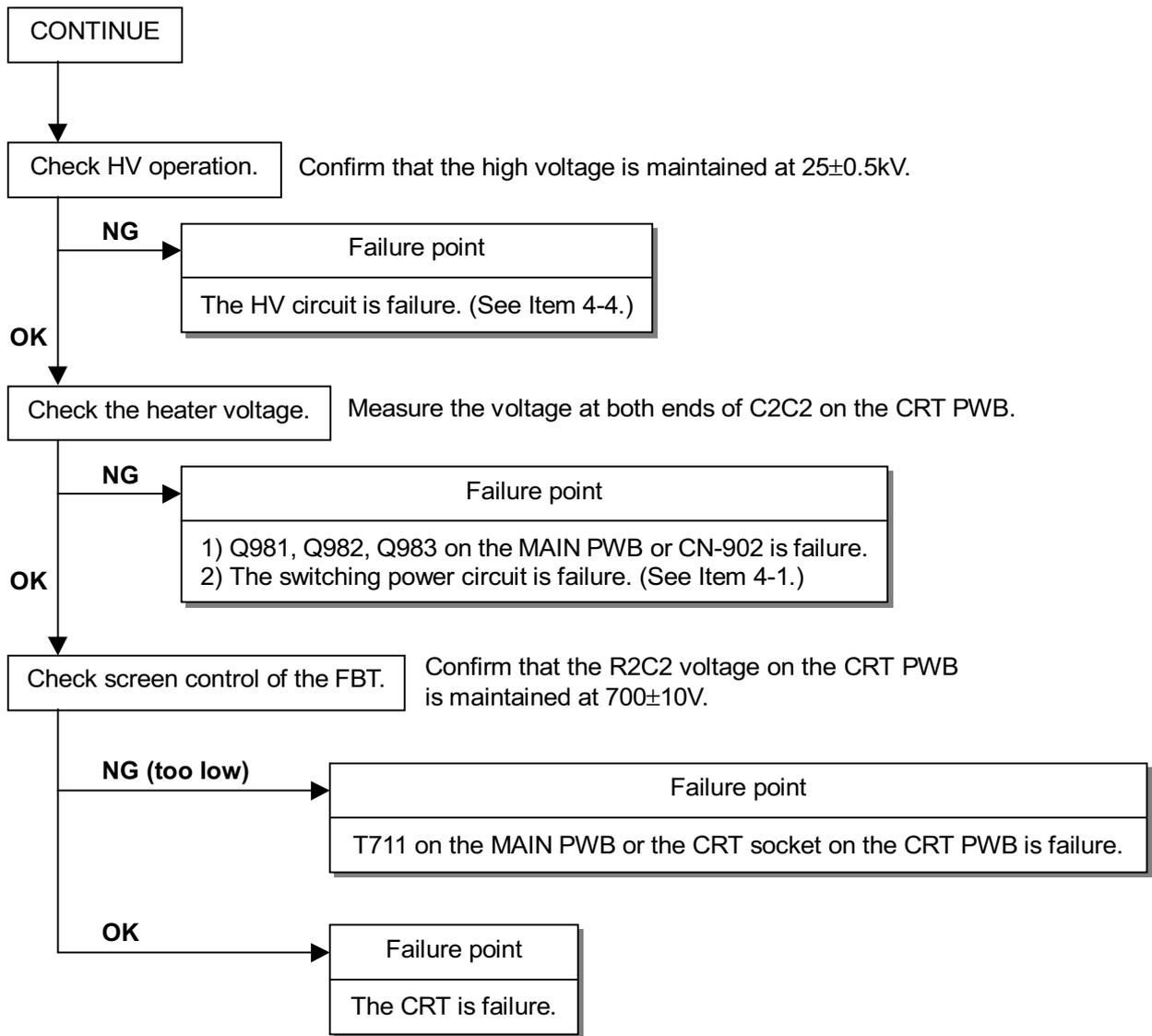


### 4-5. Video circuit failure

(Check Item 2-2 before this item.)

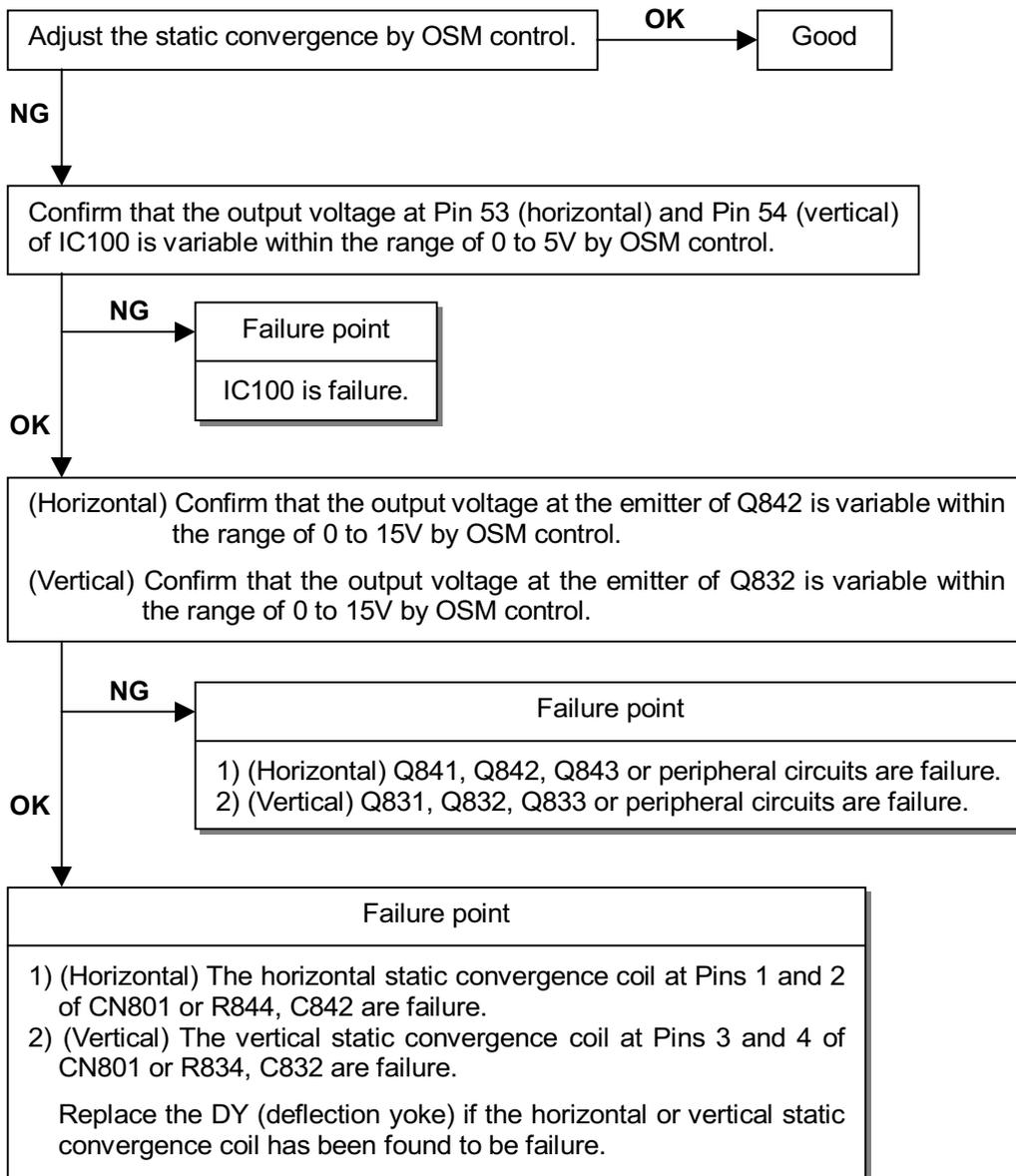




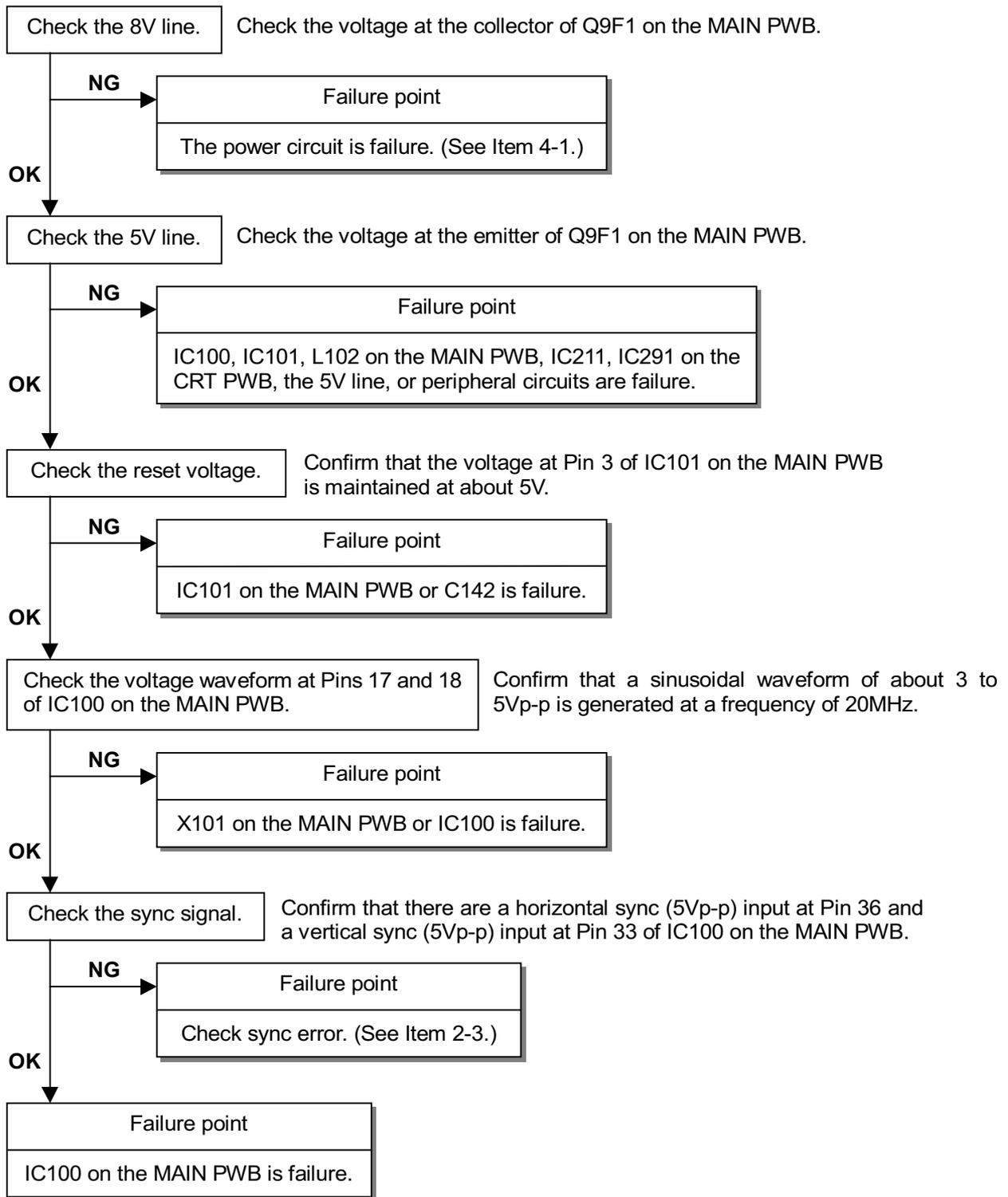


#### 4-6. Static convergence corrector circuit failure

The static convergence circuit consists of the two circuits; the horizontal static convergence circuit and the vertical static convergence circuit.



#### 4-7. MPU operation error



#### 4-8. Self-diagnostic functions

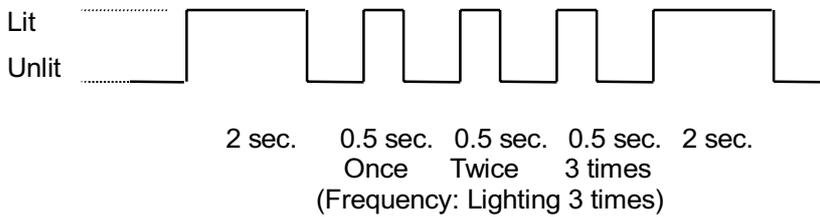
This model is provided with the functions that a circuit error is detected by the MPU and this error is indicated by the LED blinking frequency.

When the protector is in operation, the LED is made to blink as shown below in order to indicate the factor of protector operation.

LED Blinking Patterns for Each Protector Operation (List of Protector Indicators)

Protector condition	LED condition	
	Short (0.5s) lighting frequency	Long (2s) lighting frequency
HV data error	3	1
Deflection circuit stop	4	1
Beam protector	5	1
Heater power error	6	1

(1) How to count the LED lighting frequency [Example: HV data error (3 times)]



(2) Diagnostic mode and error circuit

- 3 times — HV data error ————— Power OFF/ON and data recovery
- 4 times — Deflection circuit stop ——— Check Items 4-2 and 4-3.
- 5 times — Beam protector ————— Check Item 4-4.
- 6 times — Heater power error ————— Check Items 1 and 4-1.

# CIRCUIT DESCRIPTION

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This monitor is composed mainly of the following five circuits and two PWBs:

- a) Power circuit (Main PWB)
- b) Horizontal and vertical deflection circuit (Main PWB)
- c) High voltage circuit (Main PWB)
- d) Microcomputer and control circuit (Main PWB)
- e) Video circuit (CRT PWB)
- f) CRT drive circuit (CRT PWB)

This monitor is provided with the auto-tracking function of the digital control type. It performs the automatic follow-up (auto-tracking) of input signals, ranging from 31 to 96kHz for the horizontal frequencies and 55 to 160Hz for the vertical frequencies.

Through the circuit changeover with the aid of the horizontal frequency, circuit operation is performed in an optimal state. In the control circuit, the input frequency discrimination is carried out to generate a control signal output that matches the input frequency. Control of each IC is effected through the I<sup>2</sup>C bus.

## 1. Power circuit

The maximum power consumption of this monitor is 96W. With the power in the range of 100 to 120V-AC 220V to 240V, 50/60Hz, automatic support is conducted for the monitor.

The power block is composed of the switching regulator by the use of the current mode PWM (pulse width Modulation).

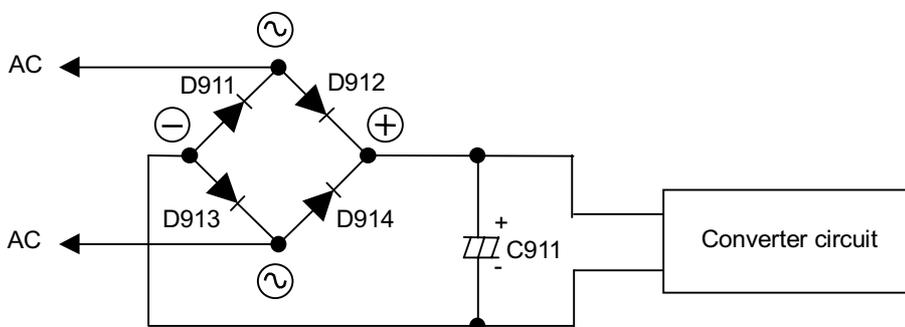
The switching frequency is synchronized with the horizontal frequency and the stabilized output is assured on the secondary side.

The secondary outputs from the POWER block are as specified in the table below.

Output	Major loads
8V	Microcomputer, OSM, heater, rotation, convergence
15V	Vertical deflection, high voltage control, VIDEO pre-AMP, rotation, convergence
-15V	Vertical deflection, horizontal drive
80V	High voltage output, video output circuit
180V	Horizontal deflection, video cutoff circuit

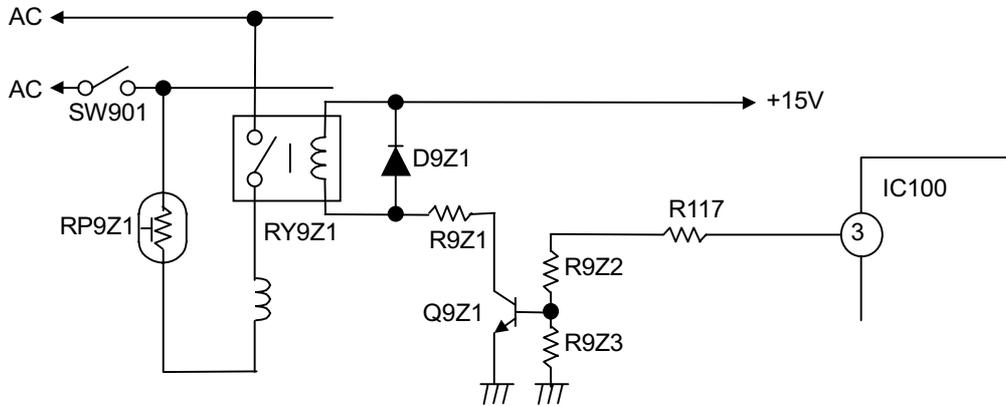
### 1-1. Rectifier smoothing circuit

The AC input voltage is applied to the diode circuit of the bridge rectifier, consisting of D911, D912, D913, and D914. The rectified voltage is smoothed at C911 and converted into a DC voltage, which is then supplied to the converter circuit.



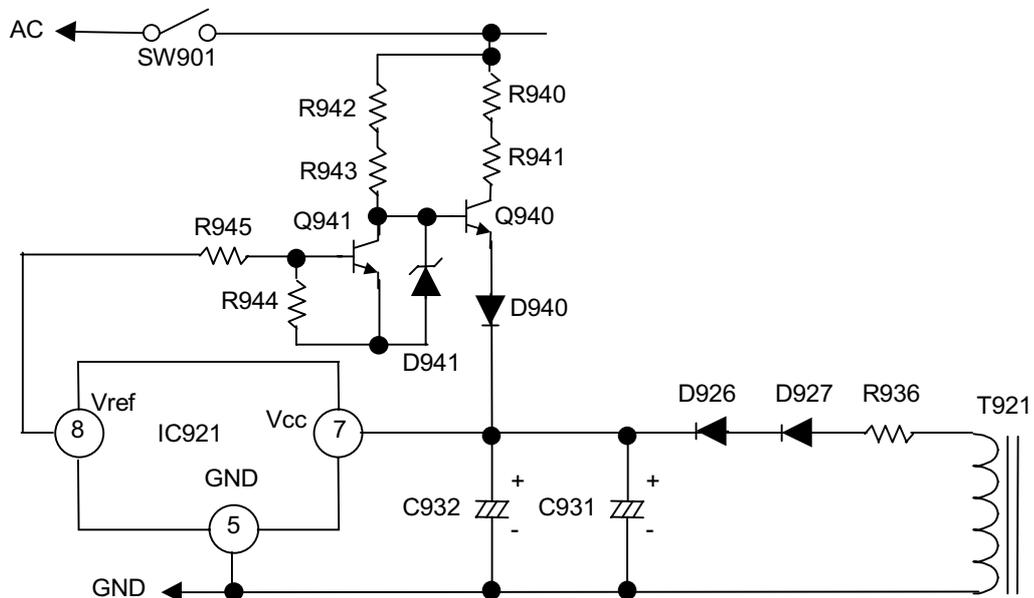
### 1-2. Demagnetizer circuit

When the POWER switch SW901 of this monitor is turned on or manual degaussing is turned on for the OSM menu, a current from Pin 35 of IC100 begins to flow into the base of Q9Z1. Then, Q9Z1 and RY9Z1 are turned on for about 6 seconds. Due to the effect of self-heat generation in the posistor, the degaussing current decreases gradually and the degaussing operation is automatically carried out.



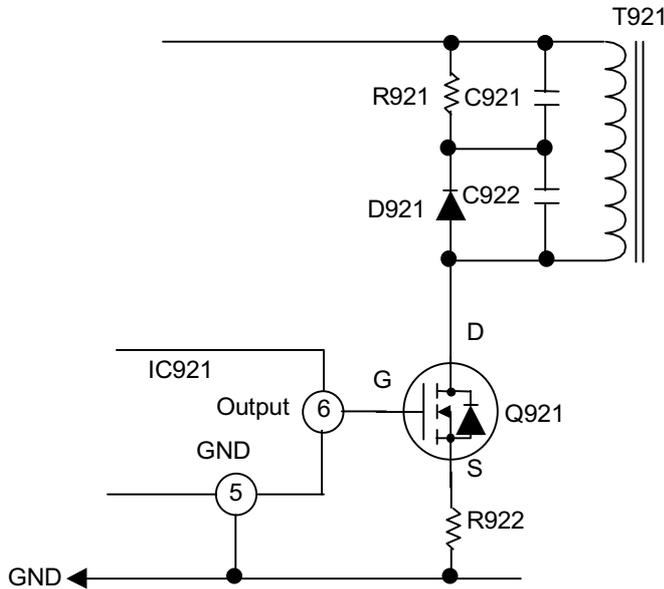
### 1-3. Auxiliary power supply circuit

The auxiliary power supply circuit is indispensable for the starting and operation of IC921. When the POWER switch is turned on, a charging current flows into C931 and C932 through R940, R941, and D940. When the voltage at Pin 7 of IC921 attains about 17V with this charging current, the oscillator circuit begins to operate in IC921. Since then, the flyback voltage at the auxiliary winding of T921 is rectified and smoothed by D926, D927, C931, and C932, and the DC voltage is applied to Pin 7 of IC921.



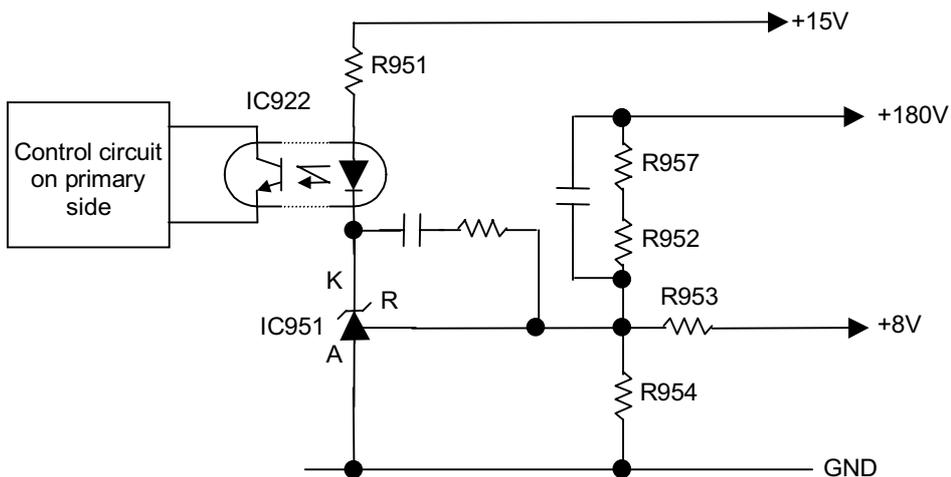
### 1-4. Converter circuit

The converter circuit is composed of the primary winding of T921, the switching element of Q921, and the snubber circuit (of C921, C922, D921, and R921) that is connected to the primary winding of the T921. When the pulse signal output from Pin 6 of IC921 is applied to the gate circuit of Q921, the section between drain and source is turned on and off in Q921. As a result, the pulse voltage is applied to the primary winding of the T921.



### 1-5. Error detector and amplifier circuit

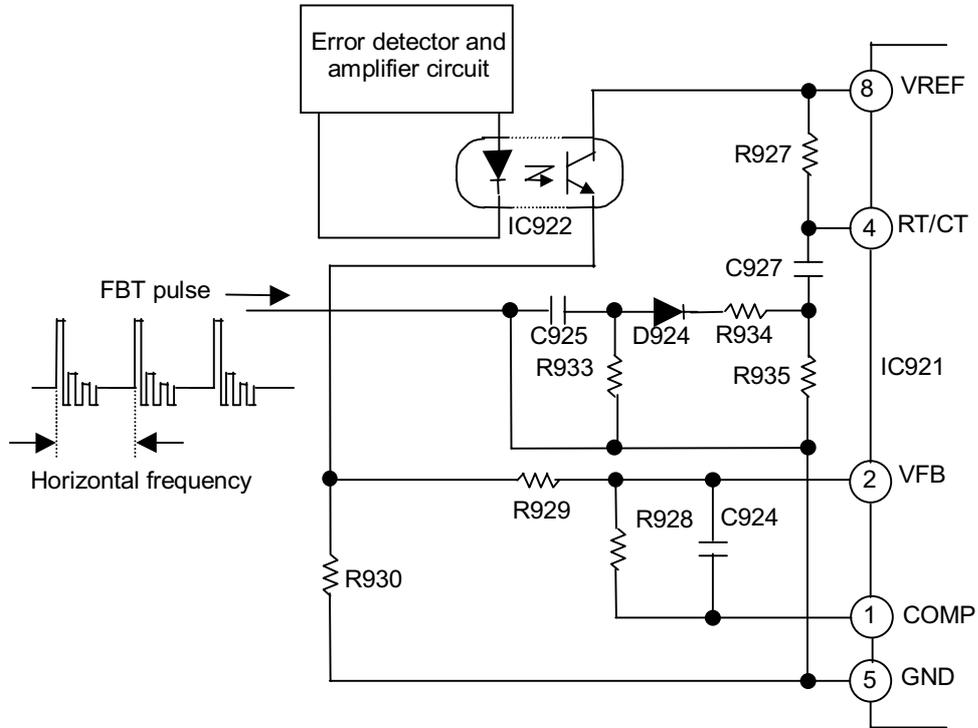
The outputs of +180V and +8V are compared with the detected voltages at the shunt regulator IC951. The error signal is fed back to the control circuit on the primary side via IC922. The feedback operation of the secondary side voltage is effected in the two lines of 180V and 8V, for the purposes of 180V stabilization of the cutoff voltage for the video and for the 5V stabilization in the normal mode and during the functional operation for power management.



### 1-6. Oscillator and primary-side control circuit

The oscillator and the primary-side control circuit are incorporated in IC921. The oscillator operates on the basis of the free-run frequency that is dependent on C927 and R927, and the horizontal sync signal that is generated by the FBT pulses.

The output of the error detector and amplifier circuit is fed back to the primary side by IC922 and the input is entered in Pin 2 of IC921. Using the entered data input, IC921 controls the duty period for Q921 and the resultant signal is transmitted to the converter circuit. As a result, the output voltage on the secondary side is maintained at a constant level.



### 1-7. Power management circuit

This monitor is provided with the power management function. This function is available only if the monitor is connected with a personal computer where the power management function is loaded.

Mode	H-SYNC	V-SYNC	Status	CRT display
Normal	ON	ON	Video display	Video display
Stop mode	OFF	ON	No video	No raster
	ON	OFF	Reduced voltage at the CRT heater	
	OFF	OFF	Mode (Approx. 2.0V)	

The power consumption and the indication of POWER lamp in each mode are as specified below.

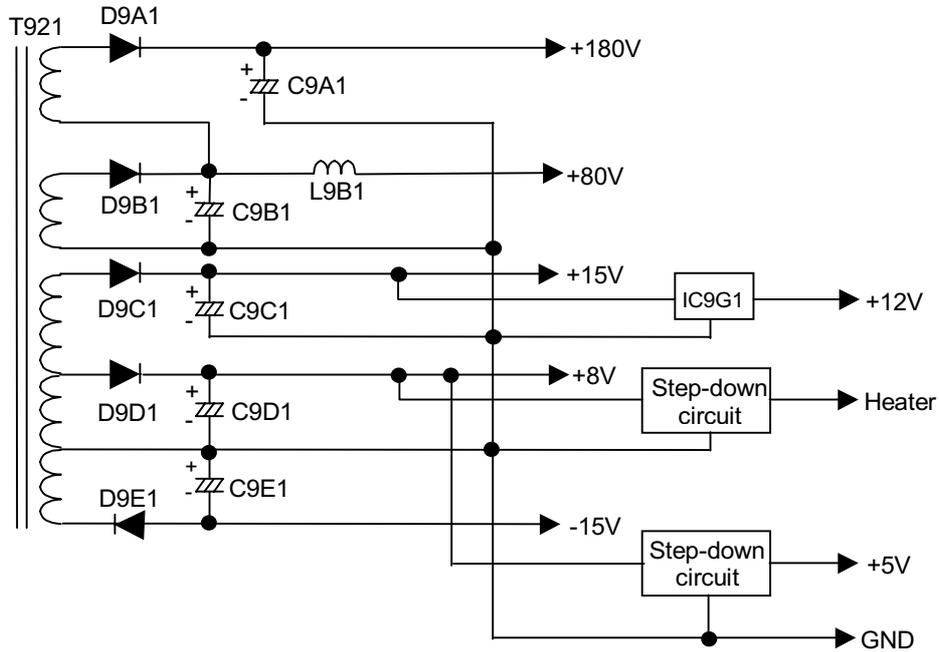
Mode	Power consumption	LED display
Normal	96W	Green
Stop mode	5W max.	Orange

The control signals intended for the execution of the power management function are output from the microcomputer IC100. These control signals come in the three signals of SUSPEND, HEATEROFF, and BRIGHT together with the respective signals of contrast control through the IIC bus. The operational conditions of the respective signals are as specified in the table below.

Control signal name	PIN of IC100	Normal	Stop
SUSPEND	5pin	H	L
HEATER OFF	42pin	PWM	PWM
BRIGHT	C126+ side	Approx. 2.5V	H

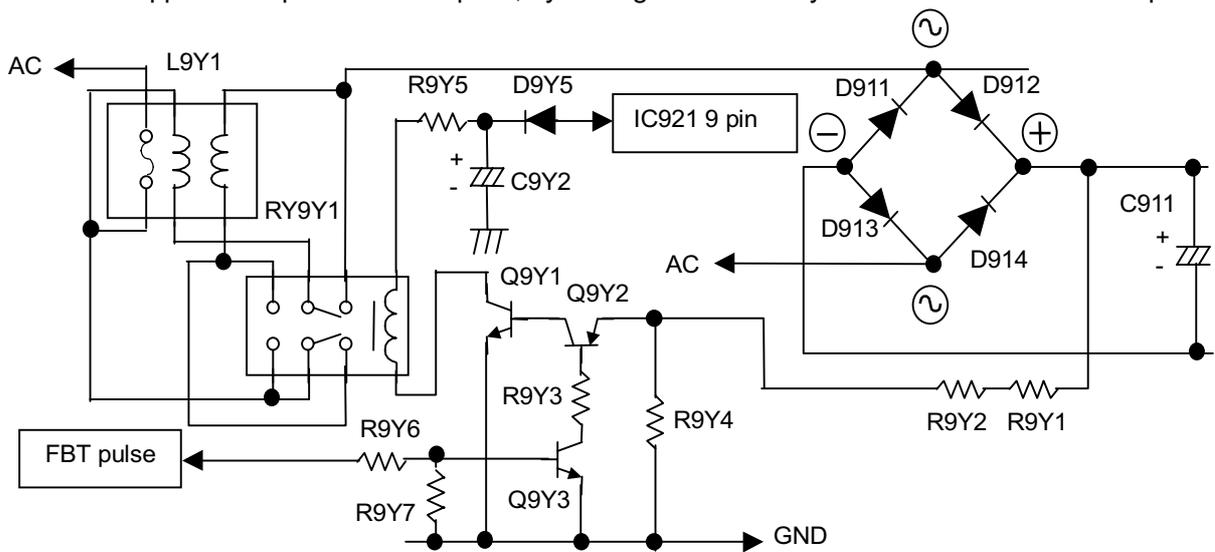
### 1-8. Secondary rectifier and smoothing circuit

The power output line on the secondary side is provided with a half-wave rectifier circuit. The flyback voltage generated in the secondary winding of T921 is rectified at D9A1, D9B1, D9C1, D9D1, and D9E1. The rectified voltage is smoothed at C9A1, C9B1, C9C1, C9D1, and C9E1, and a DC voltage is obtained. The DC voltage is maintained at a constant level by controlling the ON period of Q921 in the converter circuit.



### 1-9. POWER harmonic suppressor circuit

This monitor is provided with a POWER harmonic suppressor circuit that is available for worldwide AC inputs. In this system, a choke coil is connected to the AC line. The charging current into C911 is limited by an impedance component of the choke coil and the harmonic current is suppressed by spreading the conducting angle. When the voltage stays within the range of AC100V to 120V, the inductance is lowered and the current density is decreased by making a parallel connection of RY9Y1 with a coil in L9Y1. If the voltage is within the range of AC220V to 240V, the inductance is raised and the current density is increased by making a series connection of RY9Y1 with the coil in L9Y1. As a result, the inductance is set at a value suitable for the AC input. While the power management function is effective, the operating voltage of RY9Y1 is cut off to suppress the power consumption, by turning off Q9Y3 in synchronization with the FBT pulses.



## **2. HV deflection circuit**

### **2-1. Horizontal deflection (IC500)**

IC500 is in charge of the horizontal width control and the generation of vertical pre-AMP output. This IC performs automatic frequency follow-up operation to generate a proper output of horizontal drive pulses. For the control of screen size also, the output of B+ drive pulses is also generated.

In addition, the parallelogram distortion, pin balance, and the horizontal position are controlled with the control signal from the microcomputer of IC100.

The horizontal and vertical parabolic waveform outputs for focusing are also generated.

The pre-AMP functions are available for vertical screen width, position, and vertical linearity.

### **2-2. Step-down type horizontal deflection power circuit**

During the time period when Q5G1 is turned on with the B+ driver pulse that has been output from Pin 14 of IC500, the energy from the 180V line is stored in T561. During the time period when Q5G1 is turned off, the stored energy is discharged and integrated by this T561 and the Character S compensation capacitor.

The duty rate of this B+ driver pulse is determined by the horizontal width control circuit.

### **2-3. Horizontal width control circuit**

Q561 is controlled by the horizontal drive pulse that is sent from IC500. While this Q561 is turned on, the energy is stored in the horizontal deflection yoke. While it is turned off, the energy flows into C561. The horizontal deflection is effected through the repetition of this operation. The collector pulse of Q561 is voltage-divided by the capacitors C562 and C563. The resultant pulses are used for the synchronization of switching at the high voltage control IC701 and the generation of horizontal blanking pulses.

The horizontal width is controlled by changing the duty rate of the B+ drive pulse that has been output from Pin 14 of IC500. When the duty rate is changed, the rectifying voltage for D5G2 and the Character S compensation capacitor is changed. Then, the horizontal width is also changed. The vertical parabolic waveform is generated inside the IC500 and its output is generated from Pin 5 of IC500. This output is applied to the B+ drive pulse generator circuit through R518. With this parabolic output, various controls are carried out for the compensation for the bobbin distortion, barrel distortion, trapezoid distortion, top corner distortion, and bottom corner distortion.

### **2-4. High voltage circuit**

The high voltage circuit uses the ON/OFF time PWM control system for the high voltage generating circuit. IC701 is used as the PWM control IC. The pulse voltage generated at Q711 is stepped up at T711 (F.B.T) that generates a high voltage of 25kV. The feedback voltage is obtained from Pin 11 of T711, and is added to the voltage that has been gained from a control voltage at Pin 55 of the microcomputer through the voltage division at the resistors R704 and R705. The voltage sum is fed back to Pin 12 of IC701 to control the pulse width of the PWM output at Pin 1. In this manner, a high voltage is maintained at a constant level. PWM is synchronized with the horizontal sync frequency. The trigger pulse for synchronization is obtained from the horizontal deflection output transistor Q561 through voltage division of the Q561 collector pulses. The output pulse is entered in Pin 3 of IC701. In the high voltage circuit of this PWM system, unlike the B+ control system, the waveform at Pin 1 of T711 continues to maintain the resonance waveform until the FET is turned on after the placement of a retrace pulse.

After the adjustment of high voltage, the voltage is controlled at Pin 55 of IC100.

### **2-5. Dynamic focusing circuit**

The primary winding of T751 is driven by the parabolic voltage that is generated at the both ends of the Character S compensation capacitors C573 and C574. As a result, the secondary winding of T751 generates a horizontal parabolic wave stepped up to about 5.5 times. On the other hand, an output of the vertical parabolic waves is generated from Pin 9 of IC500, and amplified at Q761. Since then, the amplified output is superposed on the vertical parabolic waves on the secondary side of T751. For the power supply for Q761, the collector pulse voltage is utilized from the transistor (Q711) of the HV output rectified at D761 and C762.

## **2-6. Safety protection and X-ray protection circuits**

### **2-6-1. X-ray protection circuit**

This is a protection circuit to avoid the condition that the X-ray radiation exceeds a specified dangerous level due to the abnormal rise of high voltage.

The high voltage circuit and the safety protection circuit must not be modified.

The upper limit high voltage value and the beam current value are determined based on the upper limit curve of the CRT X-ray radiation.

The X-ray protection circuit operates at 28kV. The pulse voltage rise at Pin 6 of T711 is rectified at D741 and C741, and the rectified voltage is detected at Pin 9 of IC701. When the specified voltage is exceeded, the supply of high voltage FET drive pulse output is suspended at Pin 1 and the generation of high voltage is stopped. In this fashion, the X-ray protection is effective.

This circuit operation is sustained until the AC power circuit is turned off.

### **2-6-2. Beam current protection circuit**

This protection circuit begins to function when the incoming current in the high voltage generator windings of the FBT exceeds 1.7mA. The detection of the beam current is carried out by sensing the voltage drop at R731 and R737 connected to the section between 12V and Pin 9 of T711. When the incoming current to Pin 9 exceeds 1.7mA, the voltage at Pin 9 of T711 is lowered. Then D731 is turned ON and Q731 is also turned ON. Then, the collector voltage at Q731 is turned high (H) and the potential at Pin 10 of IC100 is turned high. At this stage, high voltage deflection stops and the complete stop mode is assumed. If the horizontal frequency is low, the overcurrent protection circuit of IC701 operates first, prior to the operation of the above-mentioned overcurrent protection circuit. With an increase in the beam current, the peak voltage increases in the section between DRAIN and SOURCE of Q711. This current is converted into a voltage at R712 and the converted voltage is detected at Pin 6 of IC701. When the voltage exceeds the specified level, the supply of high voltage drive pulses is suspended at Pin 1 of IC701, and the generation of a high voltage is stopped as a result. Also in this case, the foregoing stoppage of high voltage is sensed by IC100 and the complete stop mode is assumed.

### **2-6-3. Power line short-circuit protection circuit**

As a safety measure to be taken against power line short-circuiting, the fuse resistors (R9E1, R9C1) are inserted in series with each secondary winding.

## 2-7. Vertical deflection circuit

### 2-7-1. Saw-teeth wave generator, vertical size and position control, and linearity control circuits

When a vertical sync signal input is applied to Pin 27 of IC500 and a horizontal sync signal input is applied to Pin 26 of IC500, an output of sawtooth waves is generated from Pin 4 of IC500, the frequency of which is the same as that of the input. When the respective correction data of vertical size, vertical position, vertical raster position, vertical linearity, and vertical linearity balance are received from the MPU (IC100), IC500 generates an output of sawtooth waves from Pin 4 after the completion of each correction. At that time, a DC voltage of 5V is output from Pin 7 of IC500. Both the sawtooth waves output from Pin 4 of IC500 and the DC voltage of 5V output from Pin 7 of IC500 are entered in Pin 2 and Pin 3 of IC461, respectively. For the sawtooth wave input entered in Pin 3 of IC461, the mid-point voltage is shifted from about 5.0V to about 0V, and the output is generated from Pin 1 of IC461. When the mid-point voltage is almost zero, the sawtooth wave output is generated from Pin 7 of IC461 after its noise has been removed at the low-pass filter consisting of R464 and C461. This output is then sent to the vertical output IC (IC451).

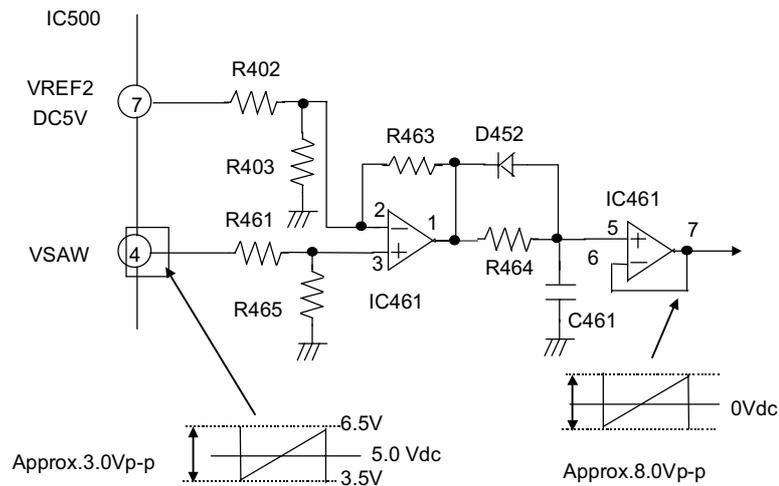


Fig. 2-7-1. Vertical wave output circuit

### 2-7-2. Vertical output amplifier circuit

A current, which is in proportion to the input voltage waveform to IC451, is led to the vertical deflection coil (V-DY). The vertical deflection current is picked up as a voltage waveform by R455, and is fed back to IC451.

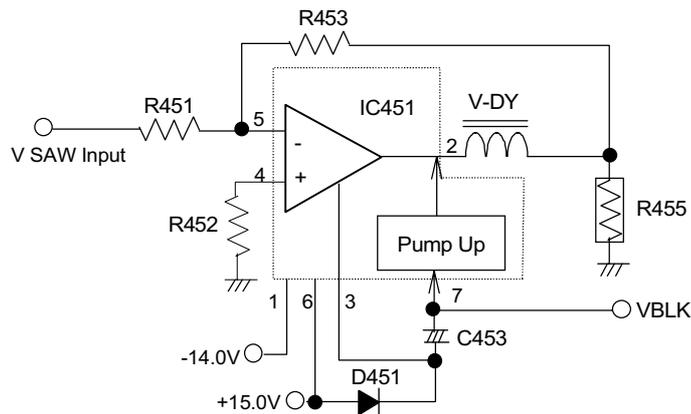


Fig. 2-7-2. Vertical output amplifier circuit

### 3. Video circuit

#### 3-1. Video pre-AMP

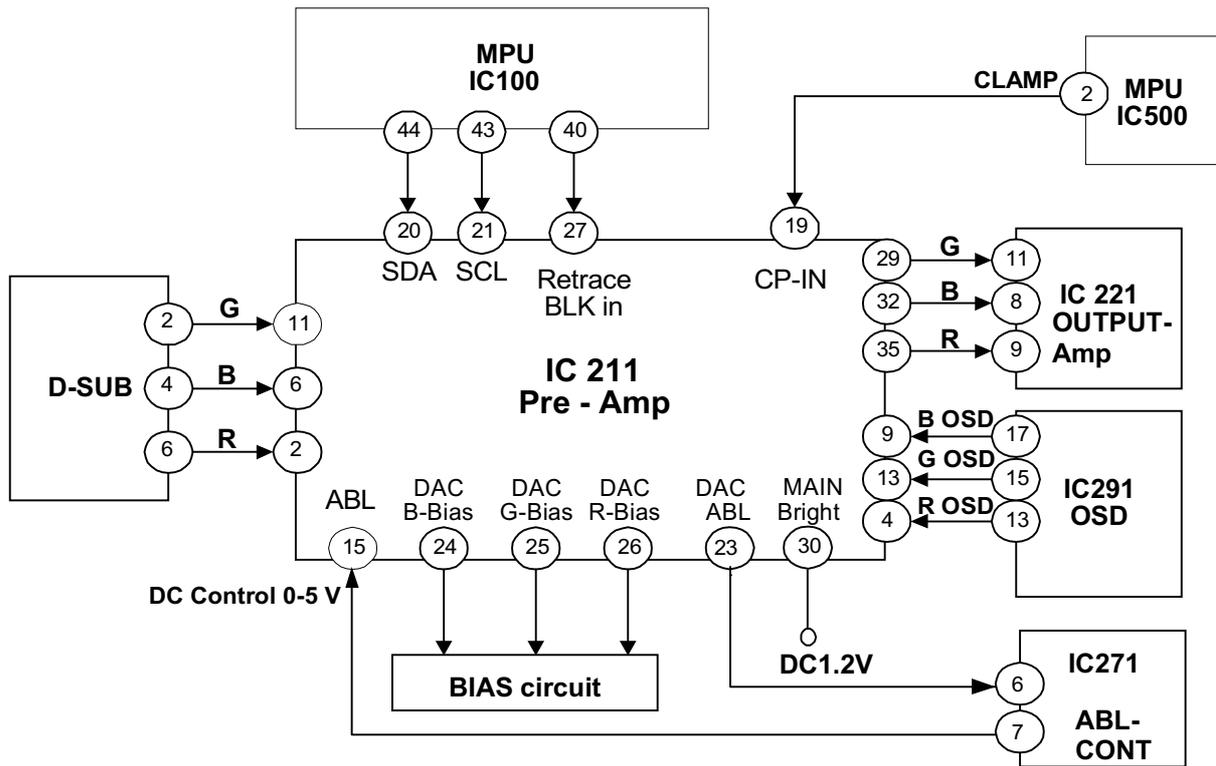


Fig. 3-1. Video pre-AMP

IC211 is a video pre-AMP IC. It is in charge of controlling the following functions.

##### 3-1-1. Video signal mixing

The video signal is mixed with the OSM signal (at Pins 9, 13, 4 for B,G,R, respectively) by IC211. The black level is fixed at 1.2V by the main brightness that is a DC voltage at Pin 30. Since then, the signal is mixed with the horizontal blanking waveform and output from Pins 29, 32, and 35 for G, B, and R, respectively.

##### 3-1-2. Video clamp

The clamped wave signal in positive polarity is output from Pin 28 of the oscillator IC (IC500), and is entered in Pin 19 of IC211.

##### 3-1-3. Horizontal blanking

The blanking waveform in positive polarity is output from Pin 40 of the microcomputer (IC100) and entered in Pin 27 of IC211. During the periods of horizontal blanking and vertical blanking, a high level (TTL level) is maintained at Pin 27 and the video output of IC211 drops to 0.4V.

##### 3-1-4. Video wink

At the moment when the received signal is switched over to another, the video output is used for blanking by the aid of a blanking signal (Wink) from Pin 40 of the microcomputer (IC100) to Pin 27 of IC211. By virtue of this function, no unstable pictures are displayed.

##### 3-1-5. Contrast, white balance, and brightness controls

The MPU (IC100) sends out the control data of contrast, white balance, and brightness to IC211 in the 8-bit mode through the I<sup>2</sup>C bus (SCL and SDA lines). The contrast data are used to control the cathode voltages of R, G, and B for the three channels at the same time. The white balance data are used for the gain control of R, G, and B, respectively. The brightness data are used for the simultaneous control of bias levels for R, G, and B, respectively. Since then, the brightness data are converted from digital to analog (DC voltage 0 to 5V) in IC211. The D/A output (B\_bias, G\_bias, and R\_bias at Pins 24, 25, and 26, respectively) is transferred to the bias circuit.

### 3-2. Video bias control circuit

The video signal is amplified to approximately 42Vp-p by IC221, and is then output from IC100. The BRIGHT voltage is amplified at the bias circuit so that the brightness can be controlled.

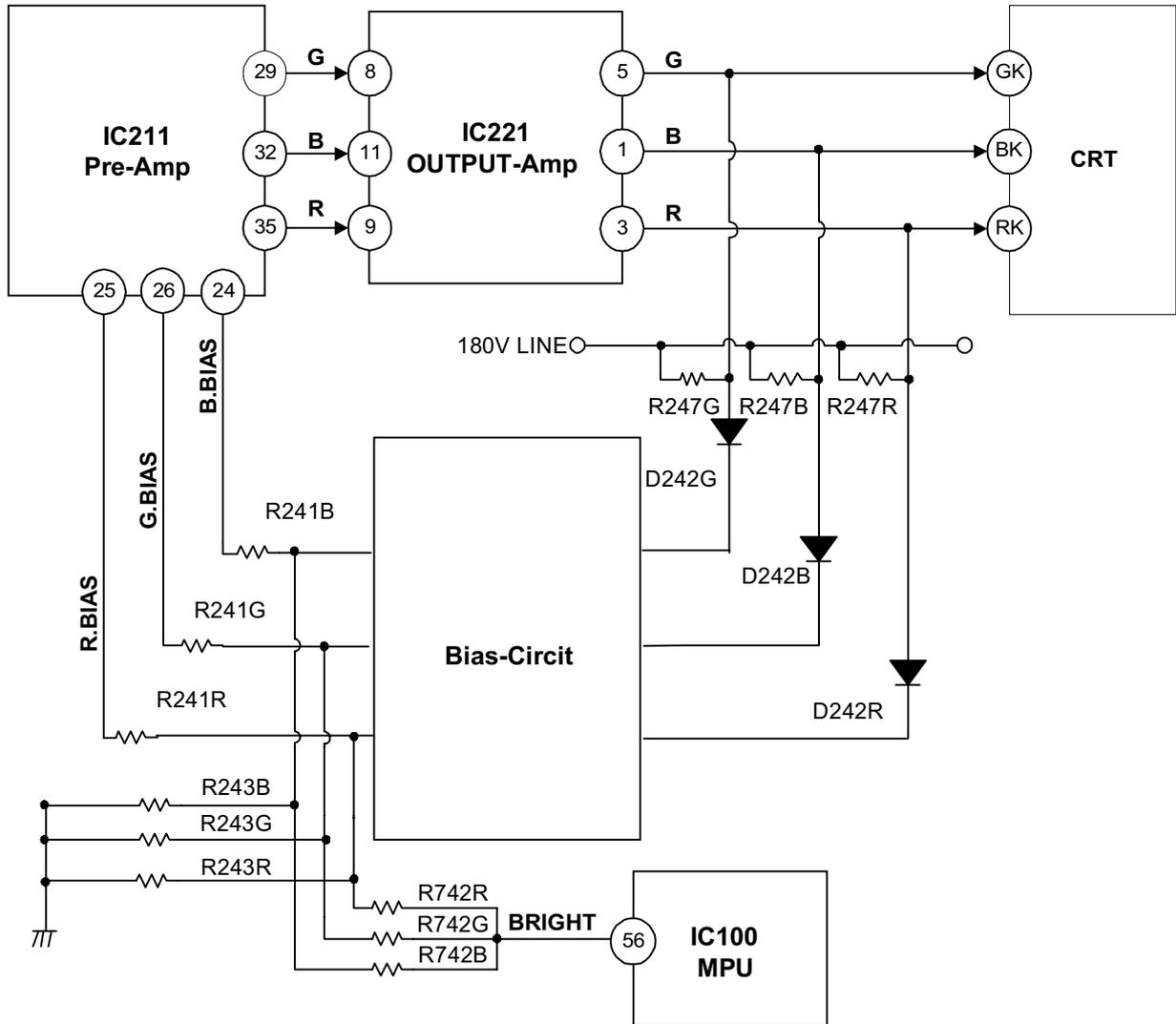


Fig. 3-2. Video bias control circuit

The brightness of the back raster is maintained at the DC clamp level of the output from the bias circuit. The black level is controlled at the CRT cathode. The brightness of the back raster is adjusted to  $+4\text{cd/m}^2$  with the BRIGHT voltage. The output of the bias circuit is determined based on the bias and brightness of R, G, and B. The R/G/B bias is independently controlled from IC100, by controlling the D/A output from Pins 24, 25, and 26 of IC211, respectively, through the I<sup>2</sup>C bus. The brightness signal used for the simultaneous control of the three R/G/B channels is obtained from the D/A output at Pin 56 of IC100. This signal is used to control the bias circuit via IC271.

### **3-3. Blanking circuit**

The horizontal and vertical blanking pulses synthesized at the microcomputer are applied to Pin 27 of IC211. These pulses are used for the blanking operation during the retrace period for both horizontal and vertical.

During the periods of signal mode changeover and power ON/OFF, the video blanking operation is effected by setting at the minimum levels the blanking pulses, contrast, and the brightness, which are output from the microcomputer.

### **3-4. Cutoff and ABL circuits**

The cutoff circuit is composed of Q242R, Q242G, Q242B, Q241R, Q241G, and Q241B. Adjustments are possible for the three colors at the same time and for each color independently. In any case, control is effected by the microcomputer. For the adjustment of cutoff voltage for each color, the DAC output voltages at Pins 24, 25, and 26 of IC211 are controlled through the IIC bus by the microcomputer. Using these voltages, the emitter currents of Q241R, Q241G, and Q241B are controlled to determine the base voltages of Q242R, Q242G, and Q242B. In this manner, the cutoff voltage for each color can be adjusted. For the adjustment of bias voltage for the three colors in common, the DAC voltage at Pin 56 of the microcomputer is applied to the emitters of Q241R, Q241G, and Q241B through IC271. Thus, the collector currents of the three transistors are simultaneously controlled to adjust the brightness. Also for the ABL circuit, the ABL level adjustment is effected by the microcomputer. The detection of the beam current is conducted with the voltage at Pin 9 of T711. The divided voltage input is applied to Pin 5 of IC271. The differential output with the DAC voltage at Pin 23 of IC211 under the control from the microcomputer is generated from Pin 7 of IC271, and its output is entered in the ABL terminal of Pin 15 of IC211. For the adjustment of the ABL level by the microcomputer, the adjustment is carried out in terms of the brightness on the CRT tube. Therefore, the ABL circuit functions so that the brightness is maintained as constant on the all-white screen.

## 4. Control circuit

### 4-1. Functions of the control circuit

The control circuit is mainly allocated in the MAIN PWB. This circuit is provided with the following functions:

- Auto-tracking
- Screen size, distortion, and position control
- Adjusting data storage
- Sync signal detection
- OSM control
- Video pre-AMP control and clamp pulse position control
- Power ON/OFF control
- Heater voltage control
- DDC 2B/ (2Bi:Factory adjust only)
- Work time display

The control block is composed mainly of the four components specified below.

Microcomputer	: IC100 (MAIN PWB)
OSM IC	: IC291 (CRT PWB)
E <sup>2</sup> PROM	: IC102 (MAIN PWB)
Sync signal input Tr	: Q16A,Q16E (MAIN PWB)
DDC IC	: IC1A1(CRT PWB)

### 4-2. Auto-tracking processing

The microcomputer (IC100) measures the frequency of the input sync signal and generates the distortion compensation data output to the deflection IC (IC500), in compliance with the timing of the input signal.

Control of IC500 is effected via the I<sup>2</sup>C bus.

### 4-3. E<sup>2</sup>PROM

The E<sup>2</sup>PROM (IC102) has a capacity of 16k bits (2k bytes). This memory keeps the factory adjustment data and user adjustment data.

The number of presets is a maximum of 9 for the factory presets and a maximum of 16 for the user presets. In regard to the factory preset timing, the user calls the factory adjustment data when the user makes the memory reset operation.

### 4-4. ON-screen manager (OSM)

The ON-screen manager (OSM) of IC291 performs screen display for the purposes of screen adjustments, etc. The OSM display data are sent from the microcomputer (IC100) via the I<sup>2</sup>C bus.

#### 4-5. Heater voltage control

To enable the control of heater voltage according to the status of power save, etc., the heater voltage is controlled according to the PWM output (at Pin 42) of the microcomputer IC100. Based on the PWM pulses output from Pin 42 of the microcomputer, the voltage of 8V is lowered by the ON/OFF PWM operation of Q983, Q981, and Q982, the PWM pulses of Q981 are integrated at L981 and C982, the resultant voltage is divided at R111 and R112, and the divided voltage is fed back to Pin 27 (A/D input) of the microcomputer. The microcomputer supervises this feedback voltage in order to perform PWM control. In ordinary cases, therefore, the voltage is kept at 6.3V (typ). In the power save mode, the voltage is kept at 2.9V (typ).

For the overheat protection of the heater in the case of Q981 destruction, the power save mode is assumed when the feedback voltage at Pin 27 of the microcomputer exceeds the setting voltage level or higher. In this case, the screen display goes out to indicate that an abnormal mode is presently assumed.

#### 4-6. Protection circuit operation

This monitor detects the condition of the abnormality shown below. The monitor has a function of stopping its operation if such an abnormal state is discovered. When the protector functions, the power LED flashes to indicate which protector is presently in operation.

To disable this protector for the purpose of repair services, etc., the factory mode should be assumed.

##### 4-6-1. High voltage data error detection

The control values of high voltage, X-ray protector operating voltage, and such important data for safety protection are stored in the E<sup>2</sup>PROM. These data have the backup data, respectively. If there is no coincidence between both data, the monitor is made to assume the power save mode. (High voltage is not built up.)

##### 4-6-2. Deflection circuit stop detection

If there are no deflection pulse inputs at Pins 34 and 31 of the microcomputer (IC100), the microcomputer identifies such a condition as the stoppage of the deflection circuit. In this case, the monitor is made to assume the power save mode.

##### 4-6-3. Beam current protector

If there is a flow of too much beam current (2mA or more), an input of "H" is applied to Pin 10 of the microcomputer (IC100). At this terminal, the microcomputer detects a flow of too much beam current and the monitor is made to assume the power save mode.

##### 4-6-4. Heater voltage control error detection

When the heater voltage cannot be controlled due to the destruction of heater voltage controlling transistors Q981, Q982, Q983, etc., the monitor is made to assume the power save mode.

##### 4-6-5. LED blinking patterns when each protector is in operation

When the protector operates, the following LEDs are made to flash to indicate the factor of protector operation.

##### LED Flash Patterns for Each Protector Operation (List of Protector Indicators)

Protector status	LED status	
	Short (0.5s) flash frequency	Long (2s) flash frequency
High voltage data error	3	1
Deflection circuit stop	4	1
Beam protector	5	1
Heater power error	6	1

#### 4-6-6. Work time

When "DIAGNOSIS" of the menu is selected in the factory mode, the work time of the monitor is displayed.

This value gains an additional time of 0.5 hours every 30 minutes.

P: Indicates the time when the power is turned on. (Including the time for the power save mode)

K: The current carry time for the heater is displayed.

#### 4-6-7. DDC communication

The DDC communication is conducted by the microcomputer. The EDID data are stored to IC1A1, and an output is generated from Pins 8 and 11 according to the request from the PC.

#### 4-6-8. Microcomputer pin allocations

#	PORT	ASSIGN	I/O	FUNCTION	#	PORT	ASSIGN	I/O	FUNCTION
1	H_LOCK	IRQ2/P40	INT	H_UNLOCKdetection	64	LED_GREEN	P37	O	LED green
2	P41	IRQ1/P41	I	For flash writing	63	LED_RED	P36	O	LED red
3	P_DOWN	IRQ0/P42	INT	Service interruption detect	62	CS6	P35	O	CS changeover 6
4	SOA	RD/P43	O	SOA output	61	CS5	P34	O	CS changeover 5
5	SUSPEND	WR/P44	O	Suspend	60	CS4	P33	O	CS changeover 4
6	OPTION1	IOS/AS/P45	O		59	CS3	P32	O	CS changeover 3
7	OPTION2	EXCL/o/P46	I	(Used as an input port)	58	CS2	P31	O	CS changeover 2
8	DDC_DATA	SDA0/WAIT	I/O	DDC data	57	CS1	P30	O	CS changeover 1
9	FLASH_TX	TxD0/P50	O	Beam protector	56	BRIGHTNESS	P10/PWMX0	PX	Brightness
10	BEAM/SHORT	RxD0/P50	I	DDC clock	55	HV_ADJ	P11/PWMX1	O	High voltage adjustment
11	DDC_CLK	SCL0/SCK0	I	Reset	54	V_STATIC	P12/PW2	P	V_STATIC_CONVERTER
12	RESET	RES	I	NMI	53	H_STATIC	P13/PW3	P	H_STATIC_CONVERTER
13	NMI	MNI	I		52	CP_BL	P14/PW4	P	Corner purity bottom left
14	(+) 5V	Vcc	S		51	CP_BR	P15/PW5	P	Corner purity bottom right
15	STBY	STBY	I		50	CP_TL	P16/PW6	P	Corner purity top left
16	GND	GND	S		49	CP_TR	P17/PW7	P	Corner purity top right
17	X'TAL	XTAL	S		48	GND	Vss		
18	X'TAL	EXTAL	S		47	H_CANCEL	P20/PW8	P	Horizontal field cancel output
19	MD1	MD1	S	Modal setting	46	V_CANCEL	P21/PW9	P	Vertical field cancel output
20	MD0	MD0	S	Modal setting	45	ROTATION	P22/PW10	O	Rotation
21	GND	AVss	S		44	IIC_DATA	SDA1	I/O	Internal IIC data
22	KEY2	AN0/P70	A/D	Key input	43	IIC_CLK	SCL1	I/O	Internal IIC clock
23	KEY1	AN1/P71	A/D	Key input	42	HEATER_OFF	P25/PW13	P	Heater source
24	X RAY PRO	AN2/P72	A/D	X-ray protector	41	LIN	P26/PW14	O	Horizontal linearity
25	TEMP	AN3/P73	A/D	Temperature detection	40	BLANKING	P27/PW15	O	Blanking output
26	TIME	AN4/P74	I	Time detection	39	Vcc	Vcc		
27	HEATER	AN4/P75	I	Heater voltage detection	38	H_SYNCO	P67/HSYNCO	O	Horizontal sync output
28	X_SENSE	AN6/P76	I	Horizontal field detection	37	C_SYNCI	P66/CSYNCI	I	SYNC ON G input
29	Y_SENSE	AN7/P77	I	Vertical field detection	36	H_SYNCI	P65/HSYNCI	I	Horizontal sync input
30	Vcc	AVcc	S		35	DEGAUSS	P64/CLAMPO	O	Degauss
31	HFBACK	HFBACK/P60	I	Horizontal deflection pulse input	34	VFBACKI	P63/VFBACKI	I	Vertical deflection pulse input
32	VSYNCO	VSYNCO/P61	O	Vertical sync output	33	V_SYNCI	V_SYNCI	I	Vertical sync input

## 5. Adjustments

### 5-1. Adjusting modes

This monitor is provided with the following adjusting modes:

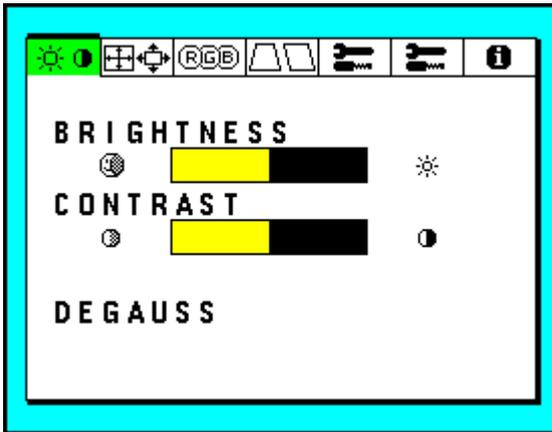
- User mode (Normal mode)
- Factory mode (Factory adjusting mode)

### 5-2. User mode (Normal mode)

This mode is used for the adjustment and setting to be made by the user. When any of the buttons EXIT, ▼, ▲, +, - and PROCEED is pressed at the front panel, the following menu screen is displayed.

The data adjusted in the user mode are automatically stored in the E<sup>2</sup>PROM.

(For AUTO SAVE ON)



Using the buttons of ▼, ▲, + and - the adjusting group and the adjusting item can be selected.

The buttons of + and - are used to change the adjusting values.

The items, which can be adjusted in the user mode, are as specified in the table below.

### 5-3. Factory mode

In this mode, adjustments are possible for all items. Modification is also carried out for the factory shipment adjustment data (reset data).

#### 5-3-1. Method of factory mode setting

The factory mode is set in the following procedures:

Turn on the POWER supply with the FPM button kept pressed.

Press the [-] button once. Then, the OSM with the contents below is displayed.

JC-17W41
FACT DATA 255

Press the [+] button to move the DATA to 5.

JC-17W41
FACT DATA 5

Press the ▶ button to move the mode to the factory mode.

As shown below, the adjusting data (hexadecimal) and the adjustment groups of FAC1 and FAC2 are displayed.

<b>BR I G H T - C E N T</b>		
		<b>720</b>
BTCEN	BTMAX	BTRAS
G-BS1	B-BS1	R-BS1
G-BS2	B-BS2	R-BS2
G-BS3	B-BS3	R-BS3
G-GN1	B-GN1	R-GN1
G-GN2	B-GN2	R-GN2
G-GN3	B-GN3	R-GN3
G-GNM	B-GNM	R-GNM
ABLAJ		

#### 5-3-2. Factory mode canceling

The factory mode is canceled in the following procedures:

Select the FAC2 group with the ▶ button and press this ▶ button again. Then, the OSM below is displayed.

JC-17W41
FACT DATA 5

Press the [+] button to move the DATA to 10.

Press the ▶ button to cancel the factory mode. The items, which are adjustable in the factory mode, are as shown in the table below. (It is also possible to adjust the items that can be adjusted in the user mode.)

	Items	Operation with the (-) button pressed	Operation with the (+) button pressed	
FAC1	BTCEN	Bright-Center	Darkened	Brightened
	BTMAX	Bright-MAX	Darkened	Brightened
	BTRAS	Bright-RASTER	Darkened	Brightened
	G-BS1	Green-BIAS (@9300K)	Green weakened	Green intensified
	B-BS1	Blue-BIAS (@9300K)	Blue weakened	Blue intensified
	R-BS1	Red-BIAS (@9300K)	Red weakened	Red intensified
	G-BS2	Green-BIAS (@6500K)	Green weakened	Green intensified
	B-BS2	Blue-BIAS (@6500K)	Blue weakened	Blue intensified
	R-BS2	Red-BIAS (@6500K)	Red weakened	Red intensified
	G-BS3	Green-BIAS (@5000K)	Green weakened	Green intensified
	B-BS3	Blue-BIAS (@5000K)	Blue weakened	Blue intensified
	R-BS3	Red-BIAS (@5000K)	Red weakened	Red intensified
	G-GN1	Green-GAIN (@9300K)	Green weakened	Green intensified
	B-GN1	Blue-GAIN (@9300K)	Blue weakened	Blue intensified
	R-GN1	Red-GAIN (@9300K)	Red weakened	Red intensified
	G-GN2	Green-GAIN (@6500K)	Green weakened	Green intensified
	B-GN2	Blue-GAIN (@6500K)	Blue weakened	Blue intensified
	R-GN2	Red-GAIN (@6500K)	Red weakened	Red intensified
	G-GN3	Green-GAIN (@5000K)	Green weakened	Green intensified
	B-GN3	Blue-GAIN (@5000K)	Blue weakened	Blue intensified
	R-GN3	Red-GAIN (@5000K)	Red weakened	Red intensified
	G-GNM	Green-GAIN-MAX	Green weakened	Green intensified
	B-GNM	Blue-GAIN-MAX	Blue weakened	Blue intensified
	R-GNM	Red-GAIN-MAX	Red weakened	Red intensified
ABL-ADJ	ABL adjust	Setting value lowered	Setting value raised	
FAC2	PRDIS	Corner purity disable	Purity compensation enabled	Purity compensation disabled
	* HVZER	HV-ZERO	Zero point compensation disabled	Zero point compensation enabled
	* H-PUR	H-Purity	Counterclockwise rotation	Clockwise rotation
	* V-PUR	V-Purity	Shifted to the left	Shifted to the right
	SOG-E	Sync on Green enable	Sync On Green disabled	Sync On Green enabled
	WPDDC	White Protect DDC	Write protect disabled	Write protect enabled
	HVADJ	High-Voltage Adjust	High voltage lowered	High voltage raised
	X-ADJ	X-Prot. level adjust	High voltage lowered	High voltage raised
	XPROT	X-Prot. Test	High voltage lowered	High voltage raised
	HFOCS	H focus amplitude	Amplitude narrowed	Amplitude expanded
	VFOCS	V focus amplitude	Amplitude narrowed	Amplitude expanded
	HFOCD	H focus phase	Phase delayed	Phase advanced
	V-BAL	V linearity balance	Top shortened	Bottom shortened
	V-LIN	V linearity	Moved upwards	Moved downwards
	HDUTY	H-DUTY	ON period of H drive pulse shortened	ON period of H drive pulse extended
	GTFHS	GTF-H SIZE	Horizontal width narrowed	Horizontal width widened
	GTFHP	GTF-H PHASE	Horizontal position moved to the left	Horizontal position moved to the right
	GTFVS	GTF-V SIZE	Vertical width narrowed	Vertical width widened
	GTFVP	GTF-V PHASE	Vertical position moved to the bottom	Vertical position moved to the top
	TPBAL	TOP-PIN-BALANCE	The top moved to the left	The top moved to the right
	BPBAL	BOTTOM-PIN-BALANCE	The bottom moved to the left	The bottom moved to the right

\* : Operation is disabled for the 19K chassis.

# REPLACEMENT PARTS LIST

The components specified for Model FE750+(A)

SYMBOL	Part No. of NEC-MITSUBISHI	Part No. of NPG	DESCRIPTION
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\*\*\* PWB ASSYS \*\*\*

	7A940041		MAIN/CRT PWB ASSY(CN980)
	7A940061		CONT PWB ASSY(CN980)

\*\*\* KNOBS & PUSH BUTTONS \*\*\*

A4501	2E458101		PUSH BUTTON(CONTROL)
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\*\*\* APPEARANCE PARTS \*\*\*

A3001	2E324611		CABINET FRONT ASSY
A3002	2E324971		CABINET BACK
A4001	2E432901		REVOLVING STAND (T)
A4002	2E432581		TILT-BOTTOM
A4003	2Z432501		LENS-LOGO
A6001	2E618811		PAD

\*\*\* PRINTED & PACKING MATERIALS \*\*\*

A7001	2E791621		NAME PLATE,INSTRUCTION
A7501	2E791631		LABEL,WARNING
A8001	2E838391		CARTON BOX(FE750+A)
A8002	2E838371		FILLER(T),CARTON
A8003	2E838381		FILLER(B),CARTON
A8004	2E835071		SHEET,PROTECTION
MANUAL	7A811042		MANUAL CN980 A USA

\*\*\* ICS \*\*\*

IC100		80010591	OTP MCU HD6473577P20-CN980
IC101		80009611	IC PST 600DMT
IC102		80009681	IC CAT24WC16J
IC1A1		80002741	IC 24LCS21A-I/P
IC211		80005341	IC M52743BSP
IC221		80001821	VIDEO DRIVE IC LM2407
IC271		80009621	IC M5223AL
IC291		80009671	IC M35071-068SP(OSD)
IC451		80007691	IC LA7841
IC461		80007761	IC BA4558F-E2(OP-AMP)
IC500		80009631	IC uPC1888BCT
IC701		80009641	IC AN5751
IC921		80011401	IC UC3842AM(LINFINITY)
IC922		80000321	IC PHOTO COUBLE TLP721F 4P
IC951		80009651	IC uPC1093J
IC9G1		80010651	IC KIA7812API(TO-220)

SYMBOL	Part No. of NEC-MITSUBISHI	Part No. of NPG	DESCRIPTION
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\*\*\* TRANSISTORS \*\*\*

Q16A		EAA23690	TR NPN KSC PH2369 TO-92(T)
Q16E		EAA09456	TR NPN 2SC945 TO-92(T)
Q1A4		EBA07336	TR PNP 2SA733P TO-92(T)
Q1A5		EAA09456	TR NPN 2SC945 TO-92(T)
Q1A6		EAA09456	TR NPN 2SC945 TO-92(T)
Q1A7		EAA09456	TR NPN 2SC945 TO-92(T)
Q1C1		EBA07336	TR PNP 2SA733P TO-92(T)
Q1C2		EBA07336	TR PNP 2SA733P TO-92(T)
Q241B		EAA04220	TR NPN BF422 TO-92(T)
Q241G		EAA04220	TR NPN BF422 TO-92(T)
Q241R		EAA04220	TR NPN BF422 TO-92(T)
Q242B		EBA04230	TR PNP BF423 TO-92(T)
Q242G		EBA04230	TR PNP BF423 TO-92(T)
Q242R		EBA04230	TR PNP BF423 TO-92(T)
Q501		80003231	TR NPN KTC945-P TO-92(T)
Q502		EBA07336	TR PNP 2SA733P TO-92(T)
Q504		80010091	TR NPN KTC3875-YGL CHIP
Q505		80010101	TR PNP KTA1504-YG CHIP
Q506		80003231	TR NPN KTC945-P TO-92(T)
Q551		80010081	TR NPN 2SD1815-ST-TP
Q561		80004401	TR NPN 2SC5440 TO-3P
Q562		80003231	TR NPN KTC945-P TO-92(T)
Q571		80003231	TR NPN KTC945-P TO-92(T)
Q572		EAA12070	TR NPN 2SC945 TO-92(T)
Q573		EF206301	FET N YTAF630 TO-220F
Q574		EF206301	FET N YTAF630 TO-220F
Q575		EF20630A	FET N IRF630 TO-220F(SAMSUNG)
Q576		EF20630A	FET N IRF630 TO-220F(SAMSUNG)
Q577		EF206301	FET N YTAF630 TO-220F
Q581		EAA22355	TR NPN 2SC2235Y TO-92(T)(TOSHIBA)
Q582		EBA09655	TR PNP 2SA965Y TO-92(T)
Q5G1		80009511	FET N 2SJ584/A
Q711		80000981	FET N 2SK2645-01 MR600V/9A
Q731		EBA07336	TR PNP 2SA733P TO-92(T)
Q761		80008211	TR NPN2SC4620 P-TV2
Q761		EAA40020	TR NPN 2SC4002 TO-92(T)(SANYO)
Q801		80003231	TR NPN KTC945-P TO-92(T)
Q802		EAA09456	TR NPN 2SC945 TO-92(T)
Q803		EBA07336	TR PNP 2SA733P TO-92(T)
Q831		80003231	TR NPN KTC945-P TO-92(T)
Q832		EAA09456	TR NPN 2SC945 TO-92(T)
Q833		EBA07336	TR PNP 2SA733P TO-92(T)
Q841		80003231	TR NPN KTC945-P TO-92(T)
Q842		EAA09456	TR NPN 2SC945 TO-92(T)
Q843		EBA07336	TR PNP 2SA733P TO-92(T)
Q921		80000981	FET N 2SK2645-01 MR600V/9A

SYMBOL	Part No. of NEC-MITSUBISHI	Part No. of NPG	DESCRIPTION
Q940		EAA00440	TR NPN KSP44 TO 92(T)
Q941		EAA09456	TR NPN 2SC945 TO-92(T)
Q942		EBA07336	TR PNP 2SA733P TO-92(T)
Q943		EAA09456	TR NPN 2SC945 TO-92(T)
Q981		80010111	TR PNP KTB1151-OY TO-126
Q982		EBA07336	TR PNP 2SA733P TO-92(T)
Q983		80009901	TR NPN DTC114WSA SPT(T)
Q9B1		EB20861A	TR PNP 2SB861C TO-220F
Q9B2		80010231	TR NPN KTC3200 TO-92(T)
Q9C1		EB307720	TR PNP KSB772 TO-126
Q9C2		EAA09456	TR NPN 2SC945 TO-92(T)
Q9F1		EAA12133	TR NPN 2SC1213AC TO-92(T)
Q9Y1		80009881	TR NPN 2SC1740S SPT(T)
Q9Y2		EBA07336	TR PNP 2SA733P TO-92(T)
Q9Y3		EAA09456	TR NPN 2SC945 TO-92(T)
Q9Z1		80003231	TR NPN KTC945-P TO-92(T)

\*\*\* DIODES \*\*\*

AG721		EJ044148	DIODE "T" 1N4148
D104		EKA00707	ZEN DIODE 1/2W(T)HZ7C2 (HITACHI)
D143		EJ044148	DIODE "T" 1N4148
D144		EJ044148	DIODE "T" 1N4148
D161		EKA00707	ZEN DIODE 1/2W(T)HZ7C2 (HITACHI)
D1A1		80009701	DIODE/T RB441Q
D1A2		EJ044148	DIODE "T" 1N4148
D1A3		EKA00707	ZEN DIODE 1/2W(T)HZ7C2 (HITACHI)
D1Y1		80006481	LED SMLS79723C
D1Y2		80006481	LED SMLS79723C
D205		EKA00707	ZEN DIODE 1/2W(T)HZ7C2 (HITACHI)
D206		EKA00707	ZEN DIODE 1/2W(T)HZ7C2 (HITACHI)
D211		EJ044148	DIODE "T" 1N4148
D212		EJ044148	DIODE "T" 1N4148
D221		80009721	DIODE/T 1N4005
D222B		80004711	ROHM DIODE 1SS244
D222G		80004711	ROHM DIODE 1SS244
D222R		80004711	ROHM DIODE 1SS244
D241B		80004711	ROHM DIODE 1SS244
D241G		80004711	ROHM DIODE 1SS244
D241R		80004711	ROHM DIODE 1SS244
D242B		80004711	ROHM DIODE 1SS244
D242G		80004711	ROHM DIODE 1SS244
D242R		80004711	ROHM DIODE 1SS244
D243		EJ044148	DIODE "T" 1N4148
D271		EJ044148	DIODE "T" 1N4148
D291		EJ044148	DIODE "T" 1N4148
D292		EKA00508	ZEN DIODE 1/2W(T)HZ5C3 (HITACHI)
D430		EKA00506	ZEN DIODE 1/2W(T)HZ5C1 (HITACHI)
D451		80009721	DIODE/T 1N4005

SYMBOL	Part No. of NEC-MITSUBISHI	Part No. of NPG	DESCRIPTION
D452		EJ044148	DIODE "T"1N4148
D501		EKA0150A	ZEN DIODE 1/2W(T)HZ 151 (HITACHI)
D502		EKA0150A	ZEN DIODE 1/2W(T)HZ 151 (HITACHI)
D551		EJ044148	DIODE "T"1N4148
D561		80009731	DIODE/A SR560(DO-201ADM21)
D562		80005371	DIODE FMQ-G2FS TO220
D563		EKA00506	ZEN DIODE 1/2W(T)HZ5C1 (HITACHI)
D564		EJ044148	DIODE "T"1N4148
D581		EJAC0017	DIODE/T 1A 1N4936
D582		EJAC0017	DIODE/T 1A 1N4936
D5G1		EJ044148	DIODE "T"1N4148
D5G2		80009761	DIODE/T UF4004
D701		EKA00903	ZEN DIODE 1/2W(T)HZ9B1 (HITACHI)
D703		EJ044148	DIODE "T"1N4148
D705		EJ044148	DIODE "T"1N4148
D711		80009771	DIODE/A UF5408
D712		80009771	DIODE/A UF5408
D713		80009761	DIODE/T UF4004
D714		80009761	DIODE/T UF4004
D731		EKA0150A	ZEN DIODE 1/2W(T)HZ 151 (HITACHI)
D741		80009721	DIODE/T 1N4005
D742		EKA00906	ZEN DIODE 1/2W(T)HZ9C1 (HITACHI)
D761		80009741	DIODE/T UF4005
D893		EJ044148	DIODE "T"1N4148
D911		EJB20001	DIODE/A 3A 1N5406
D912		EJB20001	DIODE/A 3A 1N5406
D913		EJB20001	DIODE/A 3A 1N5406
D914		EJB20001	DIODE/A 3A 1N5406
D921		EJA20003	DIODE/T 1A BA159
D922		EKA0240C	ZEN DIODE 1/2W(T)HZ243(HITACHI)
D923		EJ044148	DIODE "T"1N4148
D924		EJ044148	DIODE "T"1N4148
D926		EJAC0017	DIODE/T 1A 1N4936
D927		EJAC0017	DIODE/T 1A 1N4936
D940		EJ044148	DIODE "T"1N4148
D941		EKA0200B	ZEN DIODE 1/2W(T)HZ 20.2 (HITACHI)
D942		EKA0270A	ZEN DIODE 1/2W(T)HZ 271 (HITACHI)
D943		80004711	ROHM DIODE 1SS244
D981		80009751	DIODE/T HER103
D9A1		80003561	DIODE 600V/1.6A RG2A(LFA1)SANKEN
D9A2		80009721	DIODE/T 1N4005
D9B1		80011151	DIODE ,3A 600V RL4A
D9C1		80002981	DIODE 3A/200V RG4Z
D9D1		80001401	DIODE 3A/200V RG4Z SANKEN
D9E1		80002981	DIODE 3A/200V RG4Z
D9F1		EJ044148	DIODE "T"1N4148
D9F2		EKA00506	ZEN DIODE 1/2W(T)HZ5C1 (HITACHI)
D9F3		EJ044148	DIODE "T"1N4148

SYMBOL	Part No. of NEC-MITSUBISHI	Part No. of NPG	DESCRIPTION
D9Y3		80000451	DIODE/T 1/2W 1SS83
D9Y4		EKA00607	ZEN DIODE 1/2W(T)HZ6C2 (HITACHI)
D9Y5		80009751	DIODE/T HER103
D9Z1		EJ044148	DIODE "T"1N4148

\*\*\* TRANSFORMERS \*\*\*

T551		80009551	H.DRIVE X'FM EE19
T561		80009561	H.OUT X'FM EE22
T711		80009581	FBT CN980(MURATA)
T751		80009591	DF X'FM EE19
T921		80009601	POWER X'FM ERL39 500uH

\*\*\* VARIABLE RESISTORS \*\*\*

VR581		FF300103	VR CARBON 6MM10K B
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\*\*\* RELAYS & SWITCHES \*\*\*

SW1Y2		80010911	TACT SW SKQNAED010
SW1Y3		80010911	TACT SW SKQNAED010
SW1Y4		80010911	TACT SW SKQNAED010
SW1Y5		80010911	TACT SW SKQNAED010
SW1Y6		80010911	TACT SW SKQNAED010
SW1Y7		80010911	TACT SW SKQNAED010
SW1Y8		80010911	TACT SW SKQNAED010
SW901		80006061	SW SDKLA 10200

\*\*\* COILS & FILTERS \*\*\*

L101		HB012100	PACKING COIL/T5 10uH K (EC22)
L212		HB012151	PACKING COIL/T5 150uH K (EC22)
L221B		HB012478	PACKING COIL/T5 0.47uH M (EC22)
L221G		HB012478	PACKING COIL/T5 0.47uH M (EC22)
L221R		HB012478	PACKING COIL/T5 0.47uH M (EC22)
L241		80010611	BEAD WBRH-3.5*6*0.8*2-TF7(5mm)
L242		80010611	BEAD WBRH-3.5*6*0.8*2-TF7(5mm)
L243		80010611	BEAD WBRH-3.5*6*0.8*2-TF7(5mm)
L291		HB012470	PACKING COIL/T5 47uH K (EC22)
L2C1		80010611	BEAD WBRH-3.5*6*0.8*2-TF7(5mm)
L2F1		80010611	BEAD WBRH-3.5*6*0.8*2-TF7(5mm)
L2F2		80010611	BEAD WBRH-3.5*6*0.8*2-TF7(5mm)
L2F5		HB012100	PACKING COIL/T5 10uH K (EC22)
L452		HB020100	PACKING COIL/A 10uH K (PK0810)
L562		80007671	BEAD 2.3*7.5*7.3/T
L581		80011001	CHOKE COIL 10mH DR10*16
L5A1		80011001	CHOKE COIL 10mH DR10*16
L5A2		HB020821	PACKING COIL/A 820uH K (PK0810)
L5A3		HB020821	PACKING COIL/A 820uH K (PK0810)
L5G1		HB020101	PACKING COIL/A 100uH K (PK0810)
L5G2		80007671	BEAD 2.3*7.5*7.3/T
L711		HB020339	PACKING COIL/A 3.3uH K (PK0810)

SYMBOL	Part No. of NEC-MITSUBISHI	Part No. of NPG	DESCRIPTION
L712		HB020330	PACKING COIL/A 33uH K (PK0810)
L713		80010611	BEAD WBRH-3.5*6*0.8*2-TF7(5mm)
L771		80010611	BEAD WBRH-3.5*6*0.8*2-TF7(5mm)
L901		80000111	LINE FILTER ET24 11mH
L902		HB000015	LINE FILTER UU10.5 1mH
L921		80007671	BEAD 2.3*7.5*7.3/T
L922		80000991	BEAD WBR6H-3T-R7K-B5
L981		HB020330	PACKING COIL/A 33uH K (PK0810)
L9A1		HC006002	BEAD 3.5*4.7/T
L9A2		80000991	BEAD WBR6H-3T-R7K-B5
L9B1		80000991	BEAD WBR6H-3T-R7K-B5
L9B2		HC006002	BEAD 3.5*4.7/T
L9B3		HC006002	BEAD 3.5*4.7/T
L9C1		HC006002	BEAD 3.5*4.7/T
L9D1		HC006002	BEAD 3.5*4.7/T
L9E1		HC006002	BEAD 3.5*4.7/T
L9Y1		80009501	HARMONIC COIL EE35 88uH
T571		80009571	LINEARITY COIL CN980

\*\*\* ELECTRICAL PARTS & MISCELLANEOUS PARTS \*\*\*

CN202		80007601	CRT SOCKET CVT3280-5101
CN901		JD512001	AC SOCKET 3P
D1Y1		80006481	LED SMLS79723C
D1Y2		80006481	LED SMLS79723C
DEG	6A131703		DEGAUSSING COIL CN980
F901		80001521	FUSE 3.15A/250V 50T
RP9Z1		80005821	THERMISTOR PTCR 4.5OHM
RY9Y1		80005831	RELAY 12V 8 P MI-SS-212D
RY9Z1		80009521	RELAY STD-S-112LMR
CORD	7A081009		POWER CORD U3 L1.8 HG
TH901		80000801	THERMISTOR NTCR 5 OOHM 4A
X101		EM020004	X'TAL 49U 20MHZ +/-30PPM

\*\*\* RESISTORS \*\*\*

R102		FM100101	CHIP 1/8W(T)5%100ohm
R106		FA040101	CARBON 1/8W(T)5%100ohm
R107		FA040101	CARBON 1/8W(T)5%100ohm
R109		FM100103	CHIP 1/8W(T)5%10Kohm
R10A		FM100103	CHIP 1/8W(T)5%10Kohm
R10D		FA040103	CARBON 1/8W(T)5%10Kohm
R10F		FM100103	CHIP 1/8W(T)5%10Kohm
R10G		FM100101	CHIP 1/8W(T)5%100ohm
R10H		FM100101	CHIP 1/8W(T)5%100ohm
R10J		FM100101	CHIP 1/8W(T)5%100ohm
R10K		FM100000	CHIP 1/8W(T)5%0ohm
R10L		FM100000	CHIP 1/8W(T)5%0ohm
R10N		FM100103	CHIP 1/8W(T)5%10Kohm
R10P		FM100101	CHIP 1/8W(T)5%100ohm

SYMBOL	Part No. of NEC-MITSUBISHI	Part No. of NPG	DESCRIPTION
R10Q		FM100102	CHIP 1/8W(T)5%1Kohm
R10R		FM100101	CHIP 1/8W(T)5%100ohm
R10S		FM100102	CHIP 1/8W(T)5%1Kohm
R10T		FM100101	CHIP 1/8W(T)5%100ohm
R10U		FM100103	CHIP 1/8W(T)5%10Kohm
R10Y		FM100103	CHIP 1/8W(T)5%10Kohm
R111		FA040472	CARBON 1/8W(T)5%4.7Kohm
R112		FA040472	CARBON 1/8W(T)5%4.7Kohm
R115		FM100102	CHIP 1/8W(T)5%1Kohm
R116		FA040101	CARBON 1/8W(T)5%100ohm
R119		FM100101	CHIP 1/8W(T)5%100ohm
R11A		FM100101	CHIP 1/8W(T)5%100ohm
R11C		FA040103	CARBON 1/8W(T)5%10Kohm
R11D		F1000221	X'TAL 49U 20MHz +/-30PPM
R11E		FM100392	CHIP 1/8W(T)5%3.9Kohm
R11F		FM100221	CHIP 1/8W(T)5%220ohm
R11G		FM100182	CHIP 1/8W(T)5%1.8Kohm
R11H		FA040472	CARBON 1/8W(T)5%4.7Kohm
R11Q		FM100103	CHIP 1/8W(T)5%10Kohm
R11R		FM100103	CHIP 1/8W(T)5%10Kohm
R11S		FM100103	CHIP 1/8W(T)5%10Kohm
R11T		FM100103	CHIP 1/8W(T)5%10Kohm
R11U		FM100103	CHIP 1/8W(T)5%10Kohm
R11V		FM100103	CHIP 1/8W(T)5%10Kohm
R11W		FM100103	CHIP 1/8W(T)5%10Kohm
R121		FM100103	CHIP 1/8W(T)5%10Kohm
R122		FM100103	CHIP 1/8W(T)5%10Kohm
R123		FM100103	CHIP 1/8W(T)5%10Kohm
R125		FM100101	CHIP 1/8W(T)5%100ohm
R141		FM100101	CHIP 1/8W(T)5%100ohm
R142		FA040101	CARBON 1/8W(T)5%100ohm
R14A		FM100101	CHIP 1/8W(T)5%100ohm
R14C		FM100472	CHIP 1/8W(T)5%4.7Kohm
R14D		FA040101	CARBON 1/8W(T)5%100ohm
R14E		FM100101	CHIP 1/8W(T)5%100ohm
R14G		FM100000	CHIP 1/8W(T)5%0ohm
R14J		FM100392	CHIP 1/8W(T)5%3.9Kohm
R14M		FA040103	CARBON 1/8W(T)5%10Kohm
R14N		FA040103	CARBON 1/8W(T)5%10Kohm
R14P		FA040103	CARBON 1/8W(T)5%10Kohm
R14Q		FM100000	CHIP 1/8W(T)5%0ohm
R14T		FM100103	CHIP 1/8W(T)5%10Kohm
R165		FM100472	CHIP 1/8W(T)5%4.7Kohm
R166		FM100472	CHIP 1/8W(T)5%4.7Kohm
R16A		FA040102	CARBON 1/8W(T)5%1Kohm
R16C		FA040103	CARBON 1/8W(T)5%10Kohm
R16E		FA040102	CARBON 1/8W(T)5%1Kohm
R181		FA040101	CARBON 1/8W(T)5%100ohm

SYMBOL	Part No. of NEC-MITSUBISHI	Part No. of NPG	DESCRIPTION
R182		FM100103	CHIP 1/8W(T)5%10Kohm
R184		FM100101	CHIP 1/8W(T)5%100ohm
R185		FM100562	CHIP 1/8W(T)5%5.6Kohm
R1A1		FA040223	CARBON 1/8W(T)5%22Kohm
R1A2		FA040223	CARBON 1/8W(T)5%22Kohm
R1A3		FA040333	CARBON 1/8W(T)5%33Kohm
R1A4		FA360121	CARBON 1/2W/M(T)5%120ohm
R1A5		FA040470	CARBON 1/8W(T)5%47ohm
R1A6		FA040470	CARBON 1/8W(T)5%47ohm
R1A7		FA040473	CARBON 1/8W(T)5%47Kohm
R1A8		FA040103	CARBON 1/8W(T)5%10Kohm
R1A9		FA040470	CARBON 1/8W(T)5%47ohm
R1AC		FA040333	CARBON 1/8W(T)5%33Kohm
R1AE		FA040223	CARBON 1/8W(T)5%22Kohm
R1C3		FA040682	CARBON 1/8W(T)5%6.8Kohm
R1C5		FA040682	CARBON 1/8W(T)5%6.8Kohm
R1Y1		FA040331	CARBON 1/8W(T)5%330ohm
R1Y2		FA040681	CARBON 1/8W(T)5%680ohm
R1Y3		FA040202	CARBON 1/8W(T)5%2Kohm
R1Y4		FA040331	CARBON 1/8W(T)5%330ohm
R1Y5		FA040681	CARBON 1/8W(T)5%680ohm
R1Y6		FA040202	CARBON 1/8W(T)5%2Kohm
R1Y7		FA040181	CARBON 1/8W(T)5%180ohm
R1Y8		FA040561	CARBON 1/8W(T)5%560ohm
R1Y9		FA040181	CARBON 1/8W(T)5%180ohm
R1YA		FA040561	CARBON 1/8W(T)5%560ohm
R201B		FB277509	METAL 1/4W/M(T)1%75ohm
R201G		FB277509	METAL 1/4W/M(T)1%75ohm
R201R		FB277509	METAL 1/4W/M(T)1%75ohm
R202		FA040222	CARBON 1/8W(T)5%2.2Kohm
R203		FA040222	CARBON 1/8W(T)5%2.2Kohm
R211B		FA040331	CARBON 1/8W(T)5%330ohm
R211G		FA040331	CARBON 1/8W(T)5%330ohm
R211R		FA040331	CARBON 1/8W(T)5%330ohm
R212B		FA040102	CARBON 1/8W(T)5%1Kohm
R212G		FA040102	CARBON 1/8W(T)5%1Kohm
R212R		FA040102	CARBON 1/8W(T)5%1Kohm
R214		FA360101	CARBON 1/2W/M(T)5%100ohm
R215		FB273302	METAL 1/4W/M(T)1%33Kohm
R216		FB272001	METAL 1/4W/M(T)1%2Kohm
R217		FB271802	METAL 1/4W/M(T)1%18Kohm
R218		FA040101	CARBON 1/8W(T)5%100ohm
R219		FA270101	CARBON 1/4W/M(T)5%100ohm
R21A		FA270101	CARBON 1/4W/M(T)5%100ohm
R21C		FA270682	CARBON 1/4W/M(T)5%6.8Kohm
R21E		FA270222	CARBON 1/4W/M(T)5%2.2Kohm
R21F		FA270182	CARBON 1/4W/M(T)5%1.8Kohm
R221B		FA040470	CARBON 1/8W(T)5%47ohm

SYMBOL	Part No. of NEC-MITSUBISHI	Part No. of NPG	DESCRIPTION
R221G		FA040470	CARBON 1/8W(T)5%47ohm
R221R		FA040470	CARBON 1/8W(T)5%47ohm
R222B		80009801	FUSEBLE Res 1/2W(A)M 100ohm J
R222G		80009801	FUSEBLE Res 1/2W(A)M 100ohm J
R222R		80009801	FUSEBLE Res 1/2W(A)M 100ohm J
R241B		FA040273	CARBON 1/8W(T)5%27Kohm
R241G		FA040273	CARBON 1/8W(T)5%27Kohm
R241R		FA040273	CARBON 1/8W(T)5%27Kohm
R242B		FA040103	CARBON 1/8W(T)5%10Kohm
R242G		FA040103	CARBON 1/8W(T)5%10Kohm
R242R		FA040103	CARBON 1/8W(T)5%10Kohm
R243B		FA040683	CARBON 1/8W(T)5%68Kohm
R243G		FA040683	CARBON 1/8W(T)5%68Kohm
R243R		FA040683	CARBON 1/8W(T)5%68Kohm
R244B		FA040683	CARBON 1/8W(T)5%68Kohm
R244G		FA040683	CARBON 1/8W(T)5%68Kohm
R244R		FA040683	CARBON 1/8W(T)5%68Kohm
R245B		FA040154	CARBON 1/8W(T)5%150Kohm
R245G		FA040154	CARBON 1/8W(T)5%150Kohm
R245R		FA040154	CARBON 1/8W(T)5%150Kohm
R247B		FA040224	CARBON 1/8W(T)5%220Kohm
R247G		FA040224	CARBON 1/8W(T)5%220Kohm
R247R		FA040224	CARBON 1/8W(T)5%220Kohm
R249		FA040103	CARBON 1/8W(T)5%10Kohm
R249		FA270103	CARBON 1/4W/M(T)5%10Kohm
R24A		FA040822	CARBON 1/8W(T)5%8.2Kohm
R24A		FA270822	CARBON 1/4W/M(T)5%8.2Kohm
R24C		FA040470	CARBON 1/8W(T)5%47ohm
R24C		FA270470	CARBON 1/4W/M(T)5%47ohm
R24E		FA040101	CARBON 1/8W(T)5%100ohm
R24E		FA270101	CARBON 1/4W/M(T)5%100ohm
R271		FA040102	CARBON 1/8W(T)5%1Kohm
R271		FA270102	CARBON 1/4W/M(T)5%1Kohm
R272		FA040223	CARBON 1/8W(T)5%22Kohm
R272		FA270223	CARBON 1/4W/M(T)5%22Kohm
R273		FA040103	CARBON 1/8W(T)5%10Kohm
R273		FA270103	CARBON 1/4W/M(T)5%10Kohm
R274		FA040101	CARBON 1/8W(T)5%100ohm
R274		FA270101	CARBON 1/4W/M(T)5%100ohm
R276		FA040273	CARBON 1/8W(T)5%27Kohm
R276		FA270273	CARBON 1/4W/M(T)5%27Kohm
R291		FA040101	CARBON 1/8W(T)5%100ohm
R291		FA270101	CARBON 1/4W/M(T)5%100ohm
R292B		FA040101	CARBON 1/8W(T)5%100ohm
R292B		FA270101	CARBON 1/4W/M(T)5%100ohm
R292G		FA040101	CARBON 1/8W(T)5%100ohm
R292G		FA270101	CARBON 1/4W/M(T)5%100ohm
R292R		FA040101	CARBON 1/8W(T)5%100ohm

SYMBOL	Part No. of NEC-MITSUBISHI	Part No. of NPG	DESCRIPTION
R292R		FA270101	CARBON 1/4W/M(T)5%100ohm
R293		FA040102	CARBON 1/8W(T)5%1Kohm
R293		FA270102	CARBON 1/4W/M(T)5%1Kohm
R294		FA040152	CARBON 1/8W(T)5%1.5Kohm
R294		FA270152	CARBON 1/4W/M(T)5%1.5Kohm
R295		FA040101	CARBON 1/8W(T)5%100ohm
R295		FA270101	CARBON 1/4W/M(T)5%100ohm
R296		FA040101	CARBON 1/8W(T)5%100ohm
R296		FA270101	CARBON 1/4W/M(T)5%100ohm
R297		FB271001	METAL 1/4W/M(T)1%1Kohm
R298		FA040102	CARBON 1/8W(T)5%1Kohm
R298		FA270102	CARBON 1/4W/M(T)5%1Kohm
R2A5		R0319110	JUMPER WIRE Al/T 7.5mm
R2C1B		FA360680	CARBON 1/2W/M(T)5%68ohm
R2C1G		FA360680	CARBON 1/2W/M(T)5%68ohm
R2C1R		FA360680	CARBON 1/2W/M(T)5%68ohm
R2C2		FA360221	CARBON 1/2W/M(T)5%220ohm
R400		FN104702	CHIP 1/8W(T)1%47Kohm
R401		FA040101	CARBON 1/8W(T)5%100ohm
R402		FB271302	METAL 1/4W/M(T)1%13Kohm
R403		FN103302	CHIP 1/8W(T)1%33Kohm
R430		FA040101	CARBON 1/8W(T)5%100ohm
R431		FA040392	CARBON 1/8W(T)5%3.9Kohm
R432		FA040103	CARBON 1/8W(T)5%10Kohm
R451		FN101302	CHIP 1/8W(T)1%13Kohm
R452		FB272401	METAL 1/4W/M(T)1%2.4Kohm
R453		FB273001	METAL 1/4W/M(T)1%3Kohm
R454		FB470221	MOF 1W/M(A)5%220ohm
R455		FB470109	MOF 1W/M(A)5%1ohm
R456		FA270109	CARBON 1/4W/M(T)5%1ohm
R461		FB248201	METAL 1/4W(T)1%8.2Kohm
R463		FN102702	CHIP 1/8W(T)1%27Kohm
R464		FN101002	CHIP 1/8W(T)1%10Kohm
R465		FN102702	CHIP 1/8W(T)1%27Kohm
R500		FA040101	CARBON 1/8W(T)5%100ohm
R501		FA040101	CARBON 1/8W(T)5%100ohm
R502		FA040102	CARBON 1/8W(T)5%1Kohm
R503		FA040102	CARBON 1/8W(T)5%1Kohm
R504		FA040101	CARBON 1/8W(T)5%100ohm
R505		FN101801	CHIP 1/8W(T)1%1.8Kohm
R506		FN101801	CHIP 1/8W(T)1%1.8Kohm
R507		FM100101	CHIP 1/8W(T)5%100ohm
R508		FA040101	CARBON 1/8W(T)5%100ohm
R509		FM100223	CHIP 1/8W(T)5%22Kohm
R510		FA040101	CARBON 1/8W(T)5%100ohm
R511		FA040101	CARBON 1/8W(T)5%100ohm
R512		FM100101	CHIP 1/8W(T)5%100ohm
R514		FN102202	CHIP 1/8W(T)1%22Kohm

SYMBOL	Part No. of NEC-MITSUBISHI	Part No. of NPG	DESCRIPTION
R515		FN101002	CHIP 1/8W(T)1%10Kohm
R517		FA040101	CARBON 1/8W(T)5%100ohm
R518		FN105601	CHIP 1/8W(T)1%5.6Kohm
R519		FN101002	CHIP 1/8W(T)1%10Kohm
R522		FM100152	CHIP 1/8W(T)5%1.5Kohm
R523		FN103601	CHIP 1/8W(T)1%3.6Kohm
R524		FM100822	CHIP 1/8W(T)5%8.2Kohm
R525		FM100000	CHIP 1/8W(T)5%0ohm
R551		80009811	FUSEBLE Res 1/2W(A)M 1ohm J
R552		FA040100	CARBON 1/8W(T)5%10ohm
R553		FA270471	CARBON 1/4W/M(T)5%470ohm
R554		FA040222	CARBON 1/8W(T)5%2.2Kohm
R555		FB470390	MOF 1W/M(A)5%39ohm
R561		FB710279	MOF 3W/M(A)5%2.7ohm
R562		FB710279	MOF 3W/M(A)5%2.7ohm
R564		FA360270	CARBON 1/2W/M(T)5%27ohm
R567		FA360392	CARBON 1/2W/M(T)5%3.9Kohm
R568		FA270471	CARBON 1/4W/M(T)5%470ohm
R569		80009821	FUSEBLE Res 1/2W(A)M 1.2ohm J
R571		FA040682	CARBON 1/8W(T)5%6.8Kohm
R575		FB560150	MOF 2W/M(A)5%15ohm
R576		FA040221	CARBON 1/8W(T)5%220ohm
R577		FB560271	MOF 2W/M(A)5%270ohm
R578		FA040221	CARBON 1/8W(T)5%220ohm
R579		FA270684	CARBON 1/4W/M(T)5%680Kohm
R57E		FA040221	CARBON 1/8W(T)5%220ohm
R57F		FA270104	CARBON 1/4W/M(T)5%100Kohm
R57G		FA040221	CARBON 1/8W(T)5%220ohm
R57H		FA270104	CARBON 1/4W/M(T)5%100Kohm
R57J		FA040221	CARBON 1/8W(T)5%220ohm
R57K		FA270474	CARBON 1/4W/M(T)5%470Kohm
R57L		FA040221	CARBON 1/8W(T)5%220ohm
R57M		FA270474	CARBON 1/4W/M(T)5%470Kohm
R57R		FB470150	MOF 1W/M(A)5%15ohm
R581		FB470229	MOF 1W/M(A)5%2.2ohm
R582		FB470229	MOF 1W/M(A)5%2.2ohm
R583		FA040472	CARBON 1/8W(T)5%4.7Kohm
R58B		FA360479	CARBON 1/2W/M(T)5%4.7ohm
R5A1		FB560150	MOF 2W/M(A)5%15ohm
R5A2		FA270680	CARBON 1/4W/M(T)5%68ohm
R5A3		80009841	FUSEBLE Res 1/2W(A)M 68ohm J
R5G1		FA270392	CARBON 1/4W/M(T)5%3.9Kohm
R5G2		FA270330	CARBON 1/4W/M(T)5%33ohm
R5G3		FB470109	MOF 1W/M(A)5%1ohm
R702		FA040473	CARBON 1/8W(T)5%47Kohm
R703		FA040472	CARBON 1/8W(T)5%4.7Kohm
R704		FB275601	METAL 1/4W/M(T)1%5.6Kohm
R705		FB271501	METAL 1/4W/M(T)1%1.5Kohm

SYMBOL	Part No. of NEC-MITSUBISHI	Part No. of NPG	DESCRIPTION
R706		FA040103	CARBON 1/8W(T)5%10Kohm
R708		FA040121	CARBON 1/8W(T)5%120ohm
R709		FA040472	CARBON 1/8W(T)5%4.7Kohm
R70A		80009861	FUSEBLE Res 1/4W(A)M 10ohm J
R711		FA360109	CARBON 1/2W/M(T)5%1ohm
R712		FB470278	MOF 1W/M(A)5%0.27ohm
R714		FB710330	MOF 3W/M(A)5%33ohm
R715		FB710390	MOF 3W/M(A)5%39ohm
R716		FA270563	CARBON 1/4W/M(T)5%56Kohm
R721		FB274702	METAL 1/4W/M(T)1%47Kohm
R731		FA040223	CARBON 1/8W(T)5%22Kohm
R732		FA040103	CARBON 1/8W(T)5%10Kohm
R733		FA040103	CARBON 1/8W(T)5%10Kohm
R734		FA040682	CARBON 1/8W(T)5%6.8Kohm
R735		FA040102	CARBON 1/8W(T)5%1Kohm
R736		FA040102	CARBON 1/8W(T)5%1Kohm
R737		FA040223	CARBON 1/8W(T)5%22Kohm
R741		80009851	FUSEBLE Res 1/4W(A)0.47ohm J
R742		FB274301	METAL 1/4W/M(T)1%4.3Kohm
R743		FB276801	METAL 1/4W/M(T)1%6.8Kohm
R744		FB271802	METAL 1/4W/M(T)1%18Kohm
R745		FB271002	METAL 1/4W/M(T)1%10Kohm
R756		80009961	FUSEABLE RES.3W(A)M 3.3ohm J
R762		FB273301	METAL 1/4W/M(T)1%3.3Kohm
R763		FA270154	CARBON 1/4W/M(T)5%150Kohm
R764		80009811	FUSEBLE Res 1/2W(A)M 1ohm J
R765		FA270184	CARBON 1/4W/M(T)5%180Kohm
R766		FA040103	CARBON 1/8W(T)5%10Kohm
R767		FA040222	CARBON 1/8W(T)5%2.2Kohm
R771		FA330332	CARBON 1/2W(T)5%3.3Kohm
R800		FA040102	CARBON 1/8W(T)5%1Kohm
R801		FA270122	CARBON 1/4W/M(T)5%1.2Kohm
R802		FA040102	CARBON 1/8W(T)5%1Kohm
R803		FA040331	CARBON 1/8W(T)5%330ohm
R804		FB480479	MOF 1W/M(B)5%4.7ohm
R830		FA040102	CARBON 1/8W(T)5%1Kohm
R831		FA270122	CARBON 1/4W/M(T)5%1.2Kohm
R832		FA040331	CARBON 1/8W(T)5%330ohm
R833		FA040102	CARBON 1/8W(T)5%1Kohm
R834		FB480151	MOF 1W/M(B)5%150ohm
R840		FA040102	CARBON 1/8W(T)5%1Kohm
R841		FA270122	CARBON 1/4W/M(T)5%1.2Kohm
R842		FA040331	CARBON 1/8W(T)5%330ohm
R843		FA040102	CARBON 1/8W(T)5%1Kohm
R844		FB480151	MOF 1W/M(B)5%150ohm
R898		FA040103	CARBON 1/8W(T)5%10Kohm
R901		FA360105	CARBON 1/2W/M(T)5%1Mohm
R910		FA270564	CARBON 1/4W/M(T)5%560Kohm

SYMBOL	Part No. of NEC-MITSUBISHI	Part No. of NPG	DESCRIPTION
R911		FA270304	CARBON 1/4W/M(T)5%300Kohm
R921		FB710104	MOF 3W/M(A)5%100Kohm
R922		FB560278	MOF 2W/M(A)5%0.27ohm
R923		FA040102	CARBON 1/8W(T)5%1Kohm
R924		FA040103	CARBON 1/8W(T)5%10Kohm
R925		FA040100	CARBON 1/8W(T)5%10ohm
R926		FA040682	CARBON 1/8W(T)5%6.8Kohm
R927		FB274701	METAL 1/4W/M(T)1%4.7Kohm
R928		FA040334	CARBON 1/8W(T)5%330Kohm
R929		FA040682	CARBON 1/8W(T)5%6.8Kohm
R930		FA040102	CARBON 1/8W(T)5%1Kohm
R933		FA270271	CARBON 1/4W/M(T)5%270ohm
R934		FA040390	CARBON 1/8W(T)5%39ohm
R935		FA040390	CARBON 1/8W(T)5%39ohm
R936		80009811	FUSEBLE Res 1/2W(A)M 1ohm J
R940		FB470103	MOF 1W/M(A)5%10Kohm
R941		FB470103	MOF 1W/M(A)5%10Kohm
R942		FA040154	CARBON 1/8W(T)5%150Kohm
R943		FA040154	CARBON 1/8W(T)5%150Kohm
R944		FA040473	CARBON 1/8W(T)5%47Kohm
R945		FA040223	CARBON 1/8W(T)5%22Kohm
R946		FA040121	CARBON 1/8W(T)5%120ohm
R947		FA040562	CARBON 1/8W(T)5%5.6Kohm
R948		FA380272	CARBON 1/2W/M(B)5%2.7Kohm
R949		FA040103	CARBON 1/8W(T)5%10Kohm
R951		FA040471	CARBON 1/8W(T)5%470ohm
R952		FB276802	METAL 1/4W/M(T)1%68Kohm
R953		FB272203	METAL 1/4W/M(T)1%220Kohm
R954		FB272201	METAL 1/4W/M(T)1%2Kohm
R955		FB276803	METAL 1/4W/M(T)1%680Kohm
R957		FB279102	METAL 1/4W/M(T)1%91Kohm
R981		FA040153	CARBON 1/8W(T)5%15Kohm
R982		FA040101	CARBON 1/8W(T)5%100ohm
R983		FA040153	CARBON 1/8W(T)5%15Kohm
R9A2		FA040105	CARBON 1/8W(T)5%1Mohm
R9B4		FA040103	CARBON 1/8W(T)5%10Kohm
R9B5		FB560562	MOF 2W/M(A)5%5.6Kohm
R9B6		FA040103	CARBON 1/8W(T)5%10Kohm
R9C1		80002031	FUSEBLE Res 1/2W(A)M 0.22ohm J
R9C2		FA040103	CARBON 1/8W(T)5%10Kohm
R9C3		FA360102	CARBON 1/2W/M(T)5%1Kohm
R9C4		FA040103	CARBON 1/8W(T)5%10Kohm
R9C5		FA040472	CARBON 1/8W(T)5%4.7Kohm
R9E1		80002031	FUSEBLE Res 1/2W(A)M 0.22ohm J
R9F2		FA040122	CARBON 1/8W(T)5%1.2Kohm
R9G1		80009831	FUSEBLE Res 1/2W(A)M 1.5ohm J
R9Y1		FA330184	CARBON 1/2W(T)5%180Kohm
R9Y2		FA360224	CARBON 1/2W/M(T)5%220Kohm

SYMBOL	Part No. of NEC-MITSUBISHI	Part No. of NPG	DESCRIPTION
R9Y3		FA040333	CARBON 1/8W(T)5%33Kohm
R9Y4		FA040333	CARBON 1/8W(T)5%33Kohm
R9Y5		FA360820	CARBON 1/2W/M(T)5%68ohm
R9Y6		FA040103	CARBON 1/8W(T)5%10Kohm
R9Y7		FA040103	CARBON 1/8W(T)5%10Kohm
R9Z1		FA040390	CARBON 1/8W(T)5%39ohm
R9Z2		FA040562	CARBON 1/8W(T)5%5.6Kohm
R9Z3		FA040223	CARBON 1/8W(T)5%22Kohm

\*\*\* CAPACITORS \*\*\*

C101		GA347705	ELECT 85oC/T 470u/6.3V M
C102		GM010353	CHIP MONO 10000p/50V K
C104		GM010353	CHIP MONO 10000p/50V K
C105		GM010353	CHIP MONO 10000p/50V K
C106		GM010353	CHIP MONO 10000p/50V K
C107		GM00705B	CHIP MONO 7p/50V C
C108		GM00705B	CHIP MONO 7p/50V C
C109		GM010353	CHIP MONO 10000p/50V K
C111		GM010353	CHIP MONO 10000p/50V K
C112		GA310655	ELECT 85oC/T 10u/50V M
C114		GA310655	ELECT 85oC/T 10u/50V M
C115		GA310655	ELECT 85oC/T 10u/50V M
C123		GA310655	ELECT 85oC/T 10u/50V M
C124		GA310655	ELECT 85oC/T 10u/50V M
C125		GA310655	ELECT 85oC/T 10u/50V M
C126		GA310655	ELECT 85oC/T 10u/50V M
C142		GA310555	ELECT 85oC/T 1u/50V M
C143		GM010353	CHIP MONO 10000p/50V K
C1A1		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C1A2		GA247625	ELECT 105oC/T 47u/16V M
C201B		GA247555	ELECT 105oC/T 4.7u/50V M
C201G		GA247555	ELECT 105oC/T 4.7u/50V M
C201R		GA247555	ELECT 105oC/T 4.7u/50V M
C202		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C203		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C211B		GA247555	ELECT 105oC/T 4.7u/50V M
C211G		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C211R		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C213		GA233725	ELECT 105oC/T 330u/16V M
C214		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C215		GA210655	ELECT 105oC/T 10u/50V M
C216		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C217		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C218		GA247625	ELECT 105oC/T 47u/16V M
C221		GB7472F3	CERAMIC Y5P(B)/T 4700P/500V K
C222		GA222675	ELECT 105oC/T 22u/100V M
C223		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C224		GA210725	ELECT 105oC/T 100u/16V M

SYMBOL	Part No. of NEC-MITSUBISHI	Part No. of NPG	DESCRIPTION
C226		GB7472F3	CERAMIC Y5P(B)/T 4700P/500V K
C241B		80008481	PLASTIC MM/A 0.22u/250V J
C241G		80008481	PLASTIC MM/A 0.22u/250V J
C241R		80008481	PLASTIC MM/A 0.22u/250V J
C242		GB7472F3	CERAMIC Y5P(B)/T 4700P/500V K
C243		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C244		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C244B		GA247485	ELECT 105oC/T 0.47u/250V M
C244G		GA247485	ELECT 105oC/T 0.47u/250V M
C244R		GA247485	ELECT 105oC/T 0.47u/250V M
C271		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C272		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C273		GA347625	ELECT 85oC/T 47u/16V M
C291		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C292		GA222725	ELECT 105oC/T 220u/16V M
C293		GF210452	PLASTIC MEF CAP BOX 0.1uF/50V J
C294		GB647152	CERAMIC SL/T 470p/50V J
C295		GA210555	ELECT 105oC/T 1u/50V M
C296		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C297		GB722253	CERAMIC Y5P(B)/T 2200P/50V K
C2C1		GB7332H3	CERAMIC Y5P(B)/T 3300p/1KV K
C2C2		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C2C3		GB7331H3	CERAMIC Y5P(B)/T 330p/1KV K LDF
C2F1		GB7472F3	CERAMIC Y5P(B)/T 4700P/500V K
C2F2		GB7472F3	CERAMIC Y5P(B)/T 4700P/500V K
C2F6		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C2F7		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C2F8		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C401		GA333625	ELECT 85oC/T 33u/16V M
C402		GF233352	MEF BOX/T 0.033u/50V J
C430		GF268452	PLASTIC MEF BOX/T 0.47u/50V J
C431		GE322352	PLASTIC CAP PEN/T 0.022uF/50V
C451		GA333735	ELECT 85oC/T 330u/25V M
C452		GA310745	ELECT 85oC/T 100u/35V M
C453		GA210745	ELECT 105oC/T 100u/35V M
C454		GF222472	MEF CAP BOX 0.22u/100V J
C461		GF247262	MEF CAP BOX 4700pF/63V J
C462		GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C463		GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C500		GE210352	PLASTIC PEI/T 0.01u/50V J
C501		GM010252	CHIP MONO 1000p/50V J
C502		GA310555	ELECT 85oC/T 1u/50V M
C503		GM039152	CHIP MONO 390p/50V J
C504		GA310555	ELECT 85oC/T 1u/50V M
C505		GA310725	ELECT 85oC/T 100u/16V M
C506		GM010433	CHIP MONO 0.1u/25V K
C507		GA347725	ELECT 85oC/T 470u/16V M
C508		GM010152	CHIP MONO 100p/50V J

SYMBOL	Part No. of NEC-MITSUBISHI	Part No. of NPG	DESCRIPTION
C509		GE310252	PLASTIC CAP PEN/T 1000P/50V
C510		GF233352	MEF BOX/T 0.033u/50V J
C511		GA310655	ELECT 85oC/T 10u/50V M
C512		GA310655	ELECT 85oC/T 10u/50V M
C515		GE415272	PLASTIC PPN/T 1500p/100V J
C516		GM047152	CHIP MONO 470p/50V J
C551		GF247452	PLASTIC MEF BOX/T 0.47u/50V J
C552		GB722253	CERAMIC Y5P(B)/T 2200P/50V K
C553		GF247452	PLASTIC MEF BOX/T 0.47u/50V J
C554		GA247735	ELECT 105oC/T 470u/25V M
C555		GB7332F3	CERAMIC Y5P(B)/T 3300p/500V K
C561		80010121	DKRG (390)1.5KHP 402H-FC
C562		GBD221J3	CERAMIC Y5P(B)/A 220p/2KV K P=7.5mm
C563		GF282262	MEF CAP BOX 8200pF/63V J
C564		GB610152	CERAMIC SL/T 100p/50V J
C571		GA210745	ELECT 105oC/T 100u/35V M
C572		GB7182F3	CERAMIC Y5P(B)/T 1800P/500V K P=7.5mm
C573		80010141	DHSM (204)250V 913J-FC 7.5mm
C574		80010151	DHSM (204)250V 104J-FC 7.5mm
C575		80010161	DHSM (204)250V 824J-FC 7.5mm
C577		80010171	DHSM (204)250V 304J-FC 7.5mm
C578		80010181	DHSM (204)250V 753J-FC 7.5mm
C579		80010191	DHSM (204)250V 124J-FC 7.5mm
C57A		80010201	DHSM (204)250V 564J-FC 7.5mm
C57E		GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C57F		GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C57G		GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C57H		GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C57J		GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C581		GA233715	ELECT 105oC/T 330u/10V M
C582		GA233715	ELECT 105oC/T 330u/10V M
C583		GF210452	PLASTIC MEF CAP BOX 0.1uF/50V J
C584		GF247452	PLASTIC MEF BOX/T 0.47u/50V J
C5A2		GA222585	ELECT 105oC/T 2.2u/250V M
C5A3		GA222585	ELECT 105oC/T 2.2u/250V M
C5G1		GAB10785	ELECT 105oC/A 100u/250V M
C5G2		GFA104C3	PLASTIC MPE/A 0.1u/200V K P=7.5mm
C701		GA233625	ELECT 105oC/T 33u/16V M
C702		GF210452	PLASTIC MEF CAP BOX 0.1uF/50V J
C703		GB639052	CERAMIC SL/T 39p/50V J
C704		GA310655	ELECT 85oC/T 10u/50V M
C705		GF247452	PLASTIC MEF BOX/T 0.47u/50V J
C706		GB647052	CERAMIC SL/T 47p/50V J
C707		GF210452	PLASTIC MEF CAP BOX 0.1uF/50V J
C708		GF215452	PLASTIC MEF BOX/T 0.15u/50V J
C709		GA310725	ELECT 85oC/T 100u/16V M
C70A		GA233625	ELECT 105oC/T 33u/16V M
C70E		GF247452	PLASTIC MEF BOX/T 0.47u/50V J

SYMBOL	Part No. of NEC-MITSUBISHI	Part No. of NPG	DESCRIPTION
C70F		GA322625	ELECT 85oC/T 22u/16V M
C711		80010131	DKRG (390)800HP 222J-FC
C712		GED822E2	PLASTIC PPN/A 8200p/400V J p=10mm
C713		GAB22775	ELECT 105oC/A 220u/100V M
C721		GF247452	PLASTIC MEF BOX/T 0.47u/50V J
C731		GA422555	ELECT NP/T 2.2u/50V M
C741		GA322555	ELECT 85oC/T 2.2u/50V M
C742		GA210555	ELECT 105oC/T 1u/50V M
C752		GFB47482	PLASTIC MPP/A 0.47u/250V J
C753		GF215472	PLASTIC MEF BOX/T 0.15u/100V J
C761		GB7102F3	CERAMIC Y5P(B)/T 1000p/500V K
C762		80009421	ELECT 105oC/T 1u/450V M
C763		GA447625	ELECT NP/T 47u/16V M
C764		GF215452	PLASTIC MEF BOX/T 0.15u/50V J
C800		GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C801		GA310655	ELECT 85oC/T 10u/50V M
C802		GA310555	ELECT 85oC/T 1u/50V M
C830		GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C831		GA310655	ELECT 85oC/T 10u/50V M
C832		GA310555	ELECT 85oC/T 1u/50V M
C840		GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C841		GA310655	ELECT 85oC/T 10u/50V M
C842		GA310555	ELECT 85oC/T 1u/50V M
C901		GJ047405	SAFETY X-CAP 0.47u/275V M(PHILIPS)
C902		GJD222E5	SAFETY Y-CAP/S 2200P/400V M TDK/S
C903		GJD222E5	SAFETY Y-CAP/S 2200P/400V M TDK/S
C906		GJC222E5	SAFETY Y-CAP/D 2200P/400V M
C911		GKA337E5	POWER ELECT 85oC 330u/400V M
C921		GFA333E3	PLASTIC MPE/A 0.033u/400V K
C922		80005551	CERAMIC Y5P(B)/T 220p/1KV K LDF
C923		GF233262	PLASTIC MEF CAP BOX 0.0033u/63V J
C924		GE268252	PLASTIC PEI/T 0.0068u/50V J
C925		GA333625	ELECT 85oC/T 33u/16V M
C926		GF222462	PLASTIC MEF BOX 0.22u/63V J
C927		GE215352	PLASTIC PEI/T 0.015u/50V J
C928		GF233262	PLASTIC MEF CAP BOX 0.0033u/63V J
C931		GA310735	ELECT 85oC/T 100u/25V M
C932		GA347635	ELECT 85oC/T 47u/25V M
C933		GB682052	CERAMIC SL/T 82p/50V K
C940		GA310555	ELECT 85oC/T 1u/50V M
C951		GM068253	CHIP MONO 6800p/50V K
C952		GB7680F3	CERAMIC Y5P(B)/T 68P/500V K
C981		GE210352	PLASTIC PEI/T 0.01u/50V J
C982		GA333735	ELECT 85oC/T 330u/25V M
C9A1		GAB10785	ELECT 105oC/A 100u/250V M
C9A2		GAB22685	ELECT 105oC/A 22u/250V M
C9B1		GAB107B5	ELECT 105oC/A 100u/160V M
C9C1		GAB33835	ELECT 105oC/A 3300u/25V M

SYMBOL	Part No. of NEC-MITSUBISHI	Part No. of NPG	DESCRIPTION
C9C2		GA347625	ELECT 85oC/T 47u/16V M
C9D1		GAB10825	ELECT 105oC/A 1000u/16V M
C9E1		GAB22835	ELECT 105oC/A 2200u/25V M
C9F1		GA347625	ELECT 85oC/T 47u/16V M
C9F2		GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C9G1		GA210735	ELECT 105oC/T 100u/25V M
C9G2		GAB10825	ELECT 105oC/A 1000u/16V M
C9Y2		GA347635	ELECT 85oC/T 47u/25V M
C9Y3		GA347635	ELECT 85oC/T 47u/25V M

# REPLACEMENT PARTS LIST

The components specified for Model FE750+(B)

SYMBOL	Part No. of NPG	DESCRIPTION
*** ICS ***		
IC100	80010591	OTP MCU HD6473577P20-CN980
IC101	80009611	IC PST 600DMT
IC102	80009681	IC CAT24WC16J
IC1A1	80002741	IC 24LCS21A-I/P
IC211	80005341	IC M52743BSP
IC221	80001821	VIDEO DRIVE IC LM2407
IC271	80009621	IC M5223AL
IC291	80009671	IC M35071-068SP(OSD)
IC451	80007691	IC LA7841
IC461	80007761	IC BA4558F-E2(OP-AMP)
IC500	80009631	IC uPC1888BCT
IC701	80009641	IC AN5751
IC921	80011401	IC UC3842AM(LINFINITY)
IC922	80000321	IC PHOTO COUPLE TLP721F 4P
IC951	80009651	IC uPC1093J
IC9G1	80010651	IC KIA7812API(TO-220)

*** TRANSISTORS ***		
Q16A	EAA23690	TR NPN KSC PH2369 TO-92(T)
Q16E	EAA09456	TR NPN 2SC945 TO-92(T)
Q1A4	EBA07336	TR PNP 2SA733P TO-92(T)
Q1A5	EAA09456	TR NPN 2SC945 TO-92(T)
Q1A6	EAA09456	TR NPN 2SC945 TO-92(T)
Q1A7	EAA09456	TR NPN 2SC945 TO-92(T)
Q1C1	EBA07336	TR PNP 2SA733P TO-92(T)
Q1C2	EBA07336	TR PNP 2SA733P TO-92(T)
Q241B	EAA04220	TR NPN BF422 TO-92(T)
Q241G	EAA04220	TR NPN BF422 TO-92(T)
Q241R	EAA04220	TR NPN BF422 TO-92(T)
Q242B	EBA04230	TR PNP BF423 TO-92(T)
Q242G	EBA04230	TR PNP BF423 TO-92(T)
Q242R	EBA04230	TR PNP BF423 TO-92(T)
Q501	80003231	TR NPN KTC945-P TO-92(T)
Q502	EBA07336	TR PNP 2SA733P TO-92(T)
Q504	80010091	TR NPN KTC3875-YGL CHIP
Q505	80010101	TR PNP KTA1504-YG CHIP
Q506	80003231	TR NPN KTC945-P TO-92(T)
Q551	80010081	TR NPN 2SD1815-ST-TP
Q561	80004401	TR NPN 2SC5440 TO-3P
Q562	80003231	TR NPN KTC945-P TO-92(T)
Q571	80003231	TR NPN KTC945-P TO-92(T)

SYMBOL	Part No. of NPG	DESCRIPTION
Q572	EAA12070	TR NPN 2SC945 TO-92(T)
Q573	EF206301	FET N YTAF630 TO-220F
Q574	EF206301	FET N YTAF630 TO-220F
Q575	EF20630A	FET N IRF630 TO-220F(SAMSUNG)
Q576	EF20630A	FET N IRF630 TO-220F(SAMSUNG)
Q577	EF206301	FET N YTAF630 TO-220F
Q581	EAA22355	TR NPN 2SC2235Y TO-92(T)(TOSHIBA)
Q582	EBA09655	TR PNP 2SA965Y TO-92(T)
Q5G1	80009511	FET N 2SJ584/A
Q711	80000981	FET N 2SK2645-01 MR600V/9A
Q731	EBA07336	TR PNP 2SA733P TO-92(T)
Q761	80008211	TR NPN2SC4620 P-TV2
Q761	EAA40020	TR NPN 2SC4002 TO-92(T)(SANYO)
Q801	80003231	TR NPN KTC945-P TO-92(T)
Q802	EAA09456	TR NPN 2SC945 TO-92(T)
Q803	EBA07336	TR PNP 2SA733P TO-92(T)
Q831	80003231	TR NPN KTC945-P TO-92(T)
Q832	EAA09456	TR NPN 2SC945 TO-92(T)
Q833	EBA07336	TR PNP 2SA733P TO-92(T)
Q841	80003231	TR NPN KTC945-P TO-92(T)
Q842	EAA09456	TR NPN 2SC945 TO-92(T)
Q843	EBA07336	TR PNP 2SA733P TO-92(T)
Q921	80000981	FET N 2SK2645-01 MR600V/9A
Q940	EAA00440	TR NPN KSP44 TO 92(T)
Q941	EAA09456	TR NPN 2SC945 TO-92(T)
Q942	EBA07336	TR PNP 2SA733P TO-92(T)
Q943	EAA09456	TR NPN 2SC945 TO-92(T)
Q981	80010111	TR PNP KTB1151-OY TO-126
Q982	EBA07336	TR PNP 2SA733P TO-92(T)
Q983	80009901	TR NPN DTC114WSA SPT(T)
Q9B1	EB20861A	TR PNP 2SB861C TO-220F
Q9B2	80010231	TR NPN KTC3200 TO-92(T)
Q9C1	EB307720	TR PNP KSB772 TO-126
Q9C2	EAA09456	TR NPN 2SC945 TO-92(T)
Q9F1	EAA12133	TR NPN 2SC1213AC TO-92(T)
Q9Y1	80009881	TR NPN 2SC1740S SPT(T)
Q9Y2	EBA07336	TR PNP 2SA733P TO-92(T)
Q9Y3	EAA09456	TR NPN 2SC945 TO-92(T)
Q9Z1	80003231	TR NPN KTC945-P TO-92(T)

\*\*\* DIODES \*\*\*

AG721	EJ044148	DIODE "T" 1N4148
D104	EKA00707	ZEN DIODE 1/2W(T)HZ7C2 (HITACHI)
D143	EJ044148	DIODE "T" 1N4148
D144	EJ044148	DIODE "T" 1N4148
D161	EKA00707	ZEN DIODE 1/2W(T)HZ7C2 (HITACHI)
D1A1	80009701	DIODE/T RB441Q
D1A2	EJ044148	DIODE "T" 1N4148

SYMBOL	Part No. of NPG	DESCRIPTION
D1A3	EKA00707	ZEN DIODE 1/2W(T)HZ7C2 (HITACHI)
D1Y1	80006481	LED SMLS79723C
D1Y2	80006481	LED SMLS79723C
D205	EKA00707	ZEN DIODE 1/2W(T)HZ7C2 (HITACHI)
D206	EKA00707	ZEN DIODE 1/2W(T)HZ7C2 (HITACHI)
D211	EJ044148	DIODE "T"1N4148
D212	EJ044148	DIODE "T"1N4148
D221	80009721	DIODE/T 1N4005
D222B	80004711	ROHM DIODE 1SS244
D222G	80004711	ROHM DIODE 1SS244
D222R	80004711	ROHM DIODE 1SS244
D241B	80004711	ROHM DIODE 1SS244
D241G	80004711	ROHM DIODE 1SS244
D241R	80004711	ROHM DIODE 1SS244
D242B	80004711	ROHM DIODE 1SS244
D242G	80004711	ROHM DIODE 1SS244
D242R	80004711	ROHM DIODE 1SS244
D243	EJ044148	DIODE "T"1N4148
D271	EJ044148	DIODE "T"1N4148
D291	EJ044148	DIODE "T"1N4148
D292	EKA00508	ZEN DIODE 1/2W(T)HZ5C3 (HITACHI)
D430	EKA00506	ZEN DIODE 1/2W(T)HZ5C1 (HITACHI)
D451	80009721	DIODE/T 1N4005
D452	EJ044148	DIODE "T"1N4148
D501	EKA0150A	ZEN DIODE 1/2W(T)HZ 151 (HITACHI)
D502	EKA0150A	ZEN DIODE 1/2W(T)HZ 151 (HITACHI)
D551	EJ044148	DIODE "T"1N4148
D561	80009731	DIODE/A SR560(DO-201ADM21)
D562	80005371	DIODE FMQ-G2FS TO220
D563	EKA00506	ZEN DIODE 1/2W(T)HZ5C1 (HITACHI)
D564	EJ044148	DIODE "T"1N4148
D581	EJAC0017	DIODE/T 1A 1N4936
D582	EJAC0017	DIODE/T 1A 1N4936
D5G1	EJ044148	DIODE "T"1N4148
D5G2	80009761	DIODE/T UF4004
D701	EKA00903	ZEN DIODE 1/2W(T)HZ9B1 (HITACHI)
D703	EJ044148	DIODE "T"1N4148
D705	EJ044148	DIODE "T"1N4148
D711	80009771	DIODE/A UF5408
D712	80009771	DIODE/A UF5408
D713	80009761	DIODE/T UF4004
D714	80009761	DIODE/T UF4004
D731	EKA0150A	ZEN DIODE 1/2W(T)HZ 151 (HITACHI)
D741	80009721	DIODE/T 1N4005
D742	EKA00906	ZEN DIODE 1/2W(T)HZ9C1 (HITACHI)
D761	80009741	DIODE/T UF4005
D893	EJ044148	DIODE "T"1N4148
D911	EJB20001	DIODE/A 3A 1N5406

SYMBOL	Part No. of NPG	DESCRIPTION
D912	EJB20001	DIODE/A 3A 1N5406
D913	EJB20001	DIODE/A 3A 1N5406
D914	EJB20001	DIODE/A 3A 1N5406
D921	EJA20003	DIODE/T 1A BA159
D922	EKA0240C	ZEN DIODE 1/2W(T)HZ243(HITACHI)
D923	EJ044148	DIODE "T"1N4148
D924	EJ044148	DIODE "T"1N4148
D926	EJAC0017	DIODE/T 1A 1N4936
D927	EJAC0017	DIODE/T 1A 1N4936
D940	EJ044148	DIODE "T"1N4148
D941	EKA0200B	ZEN DIODE 1/2W(T)HZ 20.2 (HITACHI)
D942	EKA0270A	ZEN DIODE 1/2W(T)HZ 271 (HITACHI)
D943	80004711	ROHM DIODE 1SS244
D981	80009751	DIODE/T HER103
D9A1	80003561	DIODE 600V/1.6A RG2A(LFA1)SANKEN
D9A2	80009721	DIODE/T 1N4005
D9B1	80011151	DIODE ,3A 600V RL4A
D9C1	80002981	DIODE 3A/200V RG4Z
D9D1	80001401	DIODE 3A/200V RG4Z SANKEN
D9E1	80002981	DIODE 3A/200V RG4Z
D9F1	EJ044148	DIODE "T"1N4148
D9F2	EKA00506	ZEN DIODE 1/2W(T)HZ5C1 (HITACHI)
D9F3	EJ044148	DIODE "T"1N4148
D9Y3	80000451	DIODE/T 1/2W 1SS83
D9Y4	EKA00607	ZEN DIODE 1/2W(T)HZ6C2 (HITACHI)
D9Y5	80009751	DIODE/T HER103
D9Z1	EJ044148	DIODE "T"1N4148

\*\*\* TRANSFORMERS \*\*\*

T551	80009551	H.DRIVE X'FM EE19
T561	80009561	H.OUT X'FM EE22
T711	80009581	FBT CN980(MURATA)
T751	80009591	DF X'FM EE19
T921	80009601	POWER X'FM ERL39 500uH

\*\*\* VARIABLE RESISTORS \*\*\*

VR581	FF300103	VR CARBON 6MM10K B
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\*\*\* RELAYS & SWITCHES \*\*\*

SW1Y2	80010911	TACT SW SKQNAED010
SW1Y3	80010911	TACT SW SKQNAED010
SW1Y4	80010911	TACT SW SKQNAED010
SW1Y5	80010911	TACT SW SKQNAED010
SW1Y6	80010911	TACT SW SKQNAED010
SW1Y7	80010911	TACT SW SKQNAED010
SW1Y8	80010911	TACT SW SKQNAED010
SW901	80006061	SW SDKLA 10200

SYMBOL	Part No. of NPG	DESCRIPTION
*** PWB ASSYS ***		
A09	7C0071MM	CRT BD ASSY
A10	7M0071MM	MAIN BD ASSY
*** COILS & FILTERS ***		
L101	HB012100	PACKING COIL/T5 10uH K (EC22)
L212	HB012151	PACKING COIL/T5 150uH K (EC22)
L221B	HB012478	PACKING COIL/T5 0.47uH M (EC22)
L221G	HB012478	PACKING COIL/T5 0.47uH M (EC22)
L221R	HB012478	PACKING COIL/T5 0.47uH M (EC22)
L241	80010611	BEAD WBRH-3.5*6*0.8*2-TF7(5mm)
L242	80010611	BEAD WBRH-3.5*6*0.8*2-TF7(5mm)
L243	80010611	BEAD WBRH-3.5*6*0.8*2-TF7(5mm)
L291	HB012470	PACKING COIL/T5 47uH K (EC22)
L2C1	80010611	BEAD WBRH-3.5*6*0.8*2-TF7(5mm)
L2F1	80010611	BEAD WBRH-3.5*6*0.8*2-TF7(5mm)
L2F2	80010611	BEAD WBRH-3.5*6*0.8*2-TF7(5mm)
L2F5	HB012100	PACKING COIL/T5 10uH K (EC22)
L452	HB020100	PACKING COIL/A 10uH K (PK0810)
L562	80007671	BEAD 2.3*7.5*7.3/T
L581	80011001	CHOKER COIL 10mH DR10*16
L5A1	80011001	CHOKER COIL 10mH DR10*16
L5A2	HB020821	PACKING COIL/A 820uH K (PK0810)
L5A3	HB020821	PACKING COIL/A 820uH K (PK0810)
L5G1	HB020101	PACKING COIL/A 100uH K (PK0810)
L5G2	80007671	BEAD 2.3*7.5*7.3/T
L711	HB020339	PACKING COIL/A 3.3uH K (PK0810)
L712	HB020330	PACKING COIL/A 33uH K (PK0810)
L713	80010611	BEAD WBRH-3.5*6*0.8*2-TF7(5mm)
L771	80010611	BEAD WBRH-3.5*6*0.8*2-TF7(5mm)
L901	80000111	LINE FILTER ET24 11mH
L902	HB000015	LINE FILTER UU10.5 1mH
L921	80007671	BEAD 2.3*7.5*7.3/T
L922	80000991	BEAD WBR6H-3T-R7K-B5
L981	HB020330	PACKING COIL/A 33uH K (PK0810)
L9A1	HC006002	BEAD 3.5*4.7/T
L9A2	80000991	BEAD WBR6H-3T-R7K-B5
L9B1	80000991	BEAD WBR6H-3T-R7K-B5
L9B2	HC006002	BEAD 3.5*4.7/T
L9B3	HC006002	BEAD 3.5*4.7/T
L9C1	HC006002	BEAD 3.5*4.7/T
L9D1	HC006002	BEAD 3.5*4.7/T
L9E1	HC006002	BEAD 3.5*4.7/T
L9Y1	80009501	HARMONIC COIL EE35 88uH
T571	80009571	LINEARITY COIL CN980
*** ELECTRICAL PARTS & MISCELLANEOUS PARTS ***		
CN202	80007601	CRT SOCKET CVT3280-5101

SYMBOL	Part No. of NPG	DESCRIPTION
CN901	JD512001	AC SOCKET 3P
D1Y1	80006481	LED SMLS79723C
D1Y2	80006481	LED SMLS79723C
DEG	80009531	DEGAUSSING COIL CN980
F901	80001521	FUSE 3.15A/250V 50T
P-CORD	80001651	POWER CORD 3P 1.8M EUROPE
RP9Z1	80005821	THERMISTOR PTCR 4.5OHM
RY9Y1	80005831	RELAY 12V 8 P MI-SS-212D
RY9Z1	80009521	RELAY STD-S-112LMR
S/C	80010261	SIGNAL CABLE CN980
TH901	80000801	THERMISTOR NTCR 5 0OHM 4A
X101	EM020004	X'TAL 49U 20MHZ +/-30PPM

\*\*\* APPEARANCE PARTS \*\*\*

A01	10101451	CABINET FRONT ASSY
A02	10101501	CABINET BACK
A03	11000481	REVOLVING STAND ASSY
CHASSI	12000561	CHASSIS BASE

\*\*\* PRINTED & PACKING MATERIALS \*\*\*

A04	13200791	CARTON BOX(FE750+)
A05	13400451	POLYLON(T)
A06	13400461	POLYLON(B)
A08	15000831	NAME PLATE INSTRUCTION
MANU	15500611	OWNERS MANUAL FE750+
A07	13700051	BAG,POLYETHYLENE

\*\*\* RESISTORS \*\*\*

R102	FM100101	CHIP 1/8W(T)5%100ohm
R106	FA040101	CARBON 1/8W(T)5%100ohm
R107	FA040101	CARBON 1/8W(T)5%100ohm
R109	FM100103	CHIP 1/8W(T)5%10Kohm
R10A	FM100103	CHIP 1/8W(T)5%10Kohm
R10D	FA040103	CARBON 1/8W(T)5%10Kohm
R10F	FM100103	CHIP 1/8W(T)5%10Kohm
R10G	FM100101	CHIP 1/8W(T)5%100ohm
R10H	FM100101	CHIP 1/8W(T)5%100ohm
R10J	FM100101	CHIP 1/8W(T)5%100ohm
R10K	FM100000	CHIP 1/8W(T)5%0ohm
R10L	FM100000	CHIP 1/8W(T)5%0ohm
R10N	FM100103	CHIP 1/8W(T)5%10Kohm
R10P	FM100101	CHIP 1/8W(T)5%100ohm
R10Q	FM100102	CHIP 1/8W(T)5%1Kohm
R10R	FM100101	CHIP 1/8W(T)5%100ohm
R10S	FM100102	CHIP 1/8W(T)5%1Kohm
R10T	FM100101	CHIP 1/8W(T)5%100ohm
R10U	FM100103	CHIP 1/8W(T)5%10Kohm
R10Y	FM100103	CHIP 1/8W(T)5%10Kohm

SYMBOL	Part No. of NPG	DESCRIPTION
R111	FA040472	CARBON 1/8W(T)5%4.7Kohm
R112	FA040472	CARBON 1/8W(T)5%4.7Kohm
R115	FM100102	CHIP 1/8W(T)5%1Kohm
R116	FA040101	CARBON 1/8W(T)5%100ohm
R119	FM100101	CHIP 1/8W(T)5%100ohm
R11A	FM100101	CHIP 1/8W(T)5%100ohm
R11C	FA040103	CARBON 1/8W(T)5%10Kohm
R11D	F1000221	X'TAL 49U 20MHz +/-30PPM
R11E	FM100392	CHIP 1/8W(T)5%3.9Kohm
R11F	FM100221	CHIP 1/8W(T)5%220ohm
R11G	FM100182	CHIP 1/8W(T)5%1.8Kohm
R11H	FA040472	CARBON 1/8W(T)5%4.7Kohm
R11Q	FM100103	CHIP 1/8W(T)5%10Kohm
R11R	FM100103	CHIP 1/8W(T)5%10Kohm
R11S	FM100103	CHIP 1/8W(T)5%10Kohm
R11T	FM100103	CHIP 1/8W(T)5%10Kohm
R11U	FM100103	CHIP 1/8W(T)5%10Kohm
R11V	FM100103	CHIP 1/8W(T)5%10Kohm
R11W	FM100103	CHIP 1/8W(T)5%10Kohm
R121	FM100103	CHIP 1/8W(T)5%10Kohm
R122	FM100103	CHIP 1/8W(T)5%10Kohm
R123	FM100103	CHIP 1/8W(T)5%10Kohm
R125	FM100101	CHIP 1/8W(T)5%100ohm
R141	FM100101	CHIP 1/8W(T)5%100ohm
R142	FA040101	CARBON 1/8W(T)5%100ohm
R14A	FM100101	CHIP 1/8W(T)5%100ohm
R14C	FM100472	CHIP 1/8W(T)5%4.7Kohm
R14D	FA040101	CARBON 1/8W(T)5%100ohm
R14E	FM100101	CHIP 1/8W(T)5%100ohm
R14G	FM100000	CHIP 1/8W(T)5%0ohm
R14J	FM100392	CHIP 1/8W(T)5%3.9Kohm
R14M	FA040103	CARBON 1/8W(T)5%10Kohm
R14N	FA040103	CARBON 1/8W(T)5%10Kohm
R14P	FA040103	CARBON 1/8W(T)5%10Kohm
R14Q	FM100000	CHIP 1/8W(T)5%0ohm
R14T	FM100103	CHIP 1/8W(T)5%10Kohm
R165	FM100472	CHIP 1/8W(T)5%4.7Kohm
R166	FM100472	CHIP 1/8W(T)5%4.7Kohm
R16A	FA040102	CARBON 1/8W(T)5%1Kohm
R16C	FA040103	CARBON 1/8W(T)5%10Kohm
R16E	FA040102	CARBON 1/8W(T)5%1Kohm
R181	FA040101	CARBON 1/8W(T)5%100ohm
R182	FM100103	CHIP 1/8W(T)5%10Kohm
R184	FM100101	CHIP 1/8W(T)5%100ohm
R185	FM100562	CHIP 1/8W(T)5%5.6Kohm
R1A1	FA040223	CARBON 1/8W(T)5%22Kohm
R1A2	FA040223	CARBON 1/8W(T)5%22Kohm
R1A3	FA040333	CARBON 1/8W(T)5%33Kohm

SYMBOL	Part No. of NPG	DESCRIPTION
R1A4	FA360121	CARBON 1/2W/M(T)5%120ohm
R1A5	FA040470	CARBON 1/8W(T)5%47ohm
R1A6	FA040470	CARBON 1/8W(T)5%47ohm
R1A7	FA040473	CARBON 1/8W(T)5%47Kohm
R1A8	FA040103	CARBON 1/8W(T)5%10Kohm
R1A9	FA040470	CARBON 1/8W(T)5%47ohm
R1AC	FA040333	CARBON 1/8W(T)5%33Kohm
R1AE	FA040223	CARBON 1/8W(T)5%22Kohm
R1C3	FA040682	CARBON 1/8W(T)5%6.8Kohm
R1C5	FA040682	CARBON 1/8W(T)5%6.8Kohm
R1Y1	FA040331	CARBON 1/8W(T)5%330ohm
R1Y2	FA040681	CARBON 1/8W(T)5%680ohm
R1Y3	FA040202	CARBON 1/8W(T)5%2Kohm
R1Y4	FA040331	CARBON 1/8W(T)5%330ohm
R1Y5	FA040681	CARBON 1/8W(T)5%680ohm
R1Y6	FA040202	CARBON 1/8W(T)5%2Kohm
R1Y7	FA040181	CARBON 1/8W(T)5%180ohm
R1Y8	FA040561	CARBON 1/8W(T)5%560ohm
R1Y9	FA040181	CARBON 1/8W(T)5%180ohm
R1YA	FA040561	CARBON 1/8W(T)5%560ohm
R201B	FB277509	METAL 1/4W/M(T)1%75ohm
R201G	FB277509	METAL 1/4W/M(T)1%75ohm
R201R	FB277509	METAL 1/4W/M(T)1%75ohm
R202	FA040222	CARBON 1/8W(T)5%2.2Kohm
R203	FA040222	CARBON 1/8W(T)5%2.2Kohm
R211B	FA040331	CARBON 1/8W(T)5%330ohm
R211G	FA040331	CARBON 1/8W(T)5%330ohm
R211R	FA040331	CARBON 1/8W(T)5%330ohm
R212B	FA040102	CARBON 1/8W(T)5%1Kohm
R212G	FA040102	CARBON 1/8W(T)5%1Kohm
R212R	FA040102	CARBON 1/8W(T)5%1Kohm
R214	FA360101	CARBON 1/2W/M(T)5%100ohm
R215	FB273302	METAL 1/4W/M(T)1%33Kohm
R216	FB272001	METAL 1/4W/M(T)1%2Kohm
R217	FB271802	METAL 1/4W/M(T)1%18Kohm
R218	FA040101	CARBON 1/8W(T)5%100ohm
R219	FA270101	CARBON 1/4W/M(T)5%100ohm
R21A	FA270101	CARBON 1/4W/M(T)5%100ohm
R21C	FA270682	CARBON 1/4W/M(T)5%6.8Kohm
R21E	FA270222	CARBON 1/4W/M(T)5%2.2Kohm
R21F	FA270182	CARBON 1/4W/M(T)5%1.8Kohm
R221B	FA040470	CARBON 1/8W(T)5%47ohm
R221G	FA040470	CARBON 1/8W(T)5%47ohm
R221R	FA040470	CARBON 1/8W(T)5%47ohm
R222B	80009801	FUSEBLE Res 1/2W(A)M 100ohm J
R222G	80009801	FUSEBLE Res 1/2W(A)M 100ohm J
R222R	80009801	FUSEBLE Res 1/2W(A)M 100ohm J
R241B	FA040273	CARBON 1/8W(T)5%27Kohm

SYMBOL	Part No. of NPG	DESCRIPTION
R241G	FA040273	CARBON 1/8W(T)5%27Kohm
R241R	FA040273	CARBON 1/8W(T)5%27Kohm
R242B	FA040103	CARBON 1/8W(T)5%10Kohm
R242G	FA040103	CARBON 1/8W(T)5%10Kohm
R242R	FA040103	CARBON 1/8W(T)5%10Kohm
R243B	FA040683	CARBON 1/8W(T)5%68Kohm
R243G	FA040683	CARBON 1/8W(T)5%68Kohm
R243R	FA040683	CARBON 1/8W(T)5%68Kohm
R244B	FA040683	CARBON 1/8W(T)5%68Kohm
R244G	FA040683	CARBON 1/8W(T)5%68Kohm
R244R	FA040683	CARBON 1/8W(T)5%68Kohm
R245B	FA040154	CARBON 1/8W(T)5%150Kohm
R245G	FA040154	CARBON 1/8W(T)5%150Kohm
R245R	FA040154	CARBON 1/8W(T)5%150Kohm
R247B	FA040224	CARBON 1/8W(T)5%220Kohm
R247G	FA040224	CARBON 1/8W(T)5%220Kohm
R247R	FA040224	CARBON 1/8W(T)5%220Kohm
R249	FA040103	CARBON 1/8W(T)5%10Kohm
R249	FA270103	CARBON 1/4W/M(T)5%10Kohm
R24A	FA040822	CARBON 1/8W(T)5%8.2Kohm
R24A	FA270822	CARBON 1/4W/M(T)5%8.2Kohm
R24C	FA040470	CARBON 1/8W(T)5%47ohm
R24C	FA270470	CARBON 1/4W/M(T)5%47ohm
R24E	FA040101	CARBON 1/8W(T)5%100ohm
R24E	FA270101	CARBON 1/4W/M(T)5%100ohm
R271	FA040102	CARBON 1/8W(T)5%1Kohm
R271	FA270102	CARBON 1/4W/M(T)5%1Kohm
R272	FA040223	CARBON 1/8W(T)5%22Kohm
R272	FA270223	CARBON 1/4W/M(T)5%22Kohm
R273	FA040103	CARBON 1/8W(T)5%10Kohm
R273	FA270103	CARBON 1/4W/M(T)5%10Kohm
R274	FA040101	CARBON 1/8W(T)5%100ohm
R274	FA270101	CARBON 1/4W/M(T)5%100ohm
R276	FA040273	CARBON 1/8W(T)5%27Kohm
R276	FA270273	CARBON 1/4W/M(T)5%27Kohm
R291	FA040101	CARBON 1/8W(T)5%100ohm
R291	FA270101	CARBON 1/4W/M(T)5%100ohm
R292B	FA040101	CARBON 1/8W(T)5%100ohm
R292B	FA270101	CARBON 1/4W/M(T)5%100ohm
R292G	FA040101	CARBON 1/8W(T)5%100ohm
R292G	FA270101	CARBON 1/4W/M(T)5%100ohm
R292R	FA040101	CARBON 1/8W(T)5%100ohm
R292R	FA270101	CARBON 1/4W/M(T)5%100ohm
R293	FA040102	CARBON 1/8W(T)5%1Kohm
R293	FA270102	CARBON 1/4W/M(T)5%1Kohm
R294	FA040152	CARBON 1/8W(T)5%1.5Kohm
R294	FA270152	CARBON 1/4W/M(T)5%1.5Kohm
R295	FA040101	CARBON 1/8W(T)5%100ohm

SYMBOL	Part No. of NPG	DESCRIPTION
R295	FA270101	CARBON 1/4W/M(T)5%100ohm
R296	FA040101	CARBON 1/8W(T)5%100ohm
R296	FA270101	CARBON 1/4W/M(T)5%100ohm
R297	FB271001	METAL 1/4W/M(T)1%1Kohm
R298	FA040102	CARBON 1/8W(T)5%1Kohm
R298	FA270102	CARBON 1/4W/M(T)5%1Kohm
R2A5	R0319110	JUMPER WIRE Al/T 7.5mm
R2C1B	FA360680	CARBON 1/2W/M(T)5%68ohm
R2C1G	FA360680	CARBON 1/2W/M(T)5%68ohm
R2C1R	FA360680	CARBON 1/2W/M(T)5%68ohm
R2C2	FA360221	CARBON 1/2W/M(T)5%220ohm
R400	FN104702	CHIP 1/8W(T)1%47Kohm
R401	FA040101	CARBON 1/8W(T)5%100ohm
R402	FB271302	METAL 1/4W/M(T)1%13Kohm
R403	FN103302	CHIP 1/8W(T)1%33Kohm
R430	FA040101	CARBON 1/8W(T)5%100ohm
R431	FA040392	CARBON 1/8W(T)5%3.9Kohm
R432	FA040103	CARBON 1/8W(T)5%10Kohm
R451	FN101302	CHIP 1/8W(T)1%13Kohm
R452	FB272401	METAL 1/4W/M(T)1%2.4Kohm
R453	FB273001	METAL 1/4W/M(T)1%3Kohm
R454	FB470221	MOF 1W/M(A)5%220ohm
R455	FB470109	MOF 1W/M(A)5%1ohm
R456	FA270109	CARBON 1/4W/M(T)5%1ohm
R461	FB248201	METAL 1/4W(T)1%8.2Kohm
R463	FN102702	CHIP 1/8W(T)1%27Kohm
R464	FN101002	CHIP 1/8W(T)1%10Kohm
R465	FN102702	CHIP 1/8W(T)1%27Kohm
R500	FA040101	CARBON 1/8W(T)5%100ohm
R501	FA040101	CARBON 1/8W(T)5%100ohm
R502	FA040102	CARBON 1/8W(T)5%1Kohm
R503	FA040102	CARBON 1/8W(T)5%1Kohm
R504	FA040101	CARBON 1/8W(T)5%100ohm
R505	FN101801	CHIP 1/8W(T)1%1.8Kohm
R506	FN101801	CHIP 1/8W(T)1%1.8Kohm
R507	FM100101	CHIP 1/8W(T)5%100ohm
R508	FA040101	CARBON 1/8W(T)5%100ohm
R509	FM100223	CHIP 1/8W(T)5%22Kohm
R510	FA040101	CARBON 1/8W(T)5%100ohm
R511	FA040101	CARBON 1/8W(T)5%100ohm
R512	FM100101	CHIP 1/8W(T)5%100ohm
R514	FN102202	CHIP 1/8W(T)1%22Kohm
R515	FN101002	CHIP 1/8W(T)1%10Kohm
R517	FA040101	CARBON 1/8W(T)5%100ohm
R518	FN105601	CHIP 1/8W(T)1%5.6Kohm
R519	FN101002	CHIP 1/8W(T)1%10Kohm
R522	FM100152	CHIP 1/8W(T)5%1.5Kohm
R523	FN103601	CHIP 1/8W(T)1%3.6Kohm

SYMBOL	Part No. of NPG	DESCRIPTION
R524	FM100822	CHIP 1/8W(T)5%8.2Kohm
R525	FM100000	CHIP 1/8W(T)5%0ohm
R551	80009811	FUSEBLE Res 1/2W(A)M 1ohm J
R552	FA040100	CARBON 1/8W(T)5%10ohm
R553	FA270471	CARBON 1/4W/M(T)5%470ohm
R554	FA040222	CARBON 1/8W(T)5%2.2Kohm
R555	FB470390	MOF 1W/M(A)5%39ohm
R561	FB710279	MOF 3W/M(A)5%2.7ohm
R562	FB710279	MOF 3W/M(A)5%2.7ohm
R564	FA360270	CARBON 1/2W/M(T)5%27ohm
R567	FA360392	CARBON 1/2W/M(T)5%3.9Kohm
R568	FA270471	CARBON 1/4W/M(T)5%470ohm
R569	80009821	FUSEBLE Res 1/2W(A)M 1.2ohm J
R571	FA040682	CARBON 1/8W(T)5%6.8Kohm
R575	FB560150	MOF 2W/M(A)5%15ohm
R576	FA040221	CARBON 1/8W(T)5%220ohm
R577	FB560271	MOF 2W/M(A)5%270ohm
R578	FA040221	CARBON 1/8W(T)5%220ohm
R579	FA270684	CARBON 1/4W/M(T)5%680Kohm
R57E	FA040221	CARBON 1/8W(T)5%220ohm
R57F	FA270104	CARBON 1/4W/M(T)5%100Kohm
R57G	FA040221	CARBON 1/8W(T)5%220ohm
R57H	FA270104	CARBON 1/4W/M(T)5%100Kohm
R57J	FA040221	CARBON 1/8W(T)5%220ohm
R57K	FA270474	CARBON 1/4W/M(T)5%470Kohm
R57L	FA040221	CARBON 1/8W(T)5%220ohm
R57M	FA270474	CARBON 1/4W/M(T)5%470Kohm
R57R	FB470150	MOF 1W/M(A)5%15ohm
R581	FB470229	MOF 1W/M(A)5%2.2ohm
R582	FB470229	MOF 1W/M(A)5%2.2ohm
R583	FA040472	CARBON 1/8W(T)5%4.7Kohm
R58B	FA360479	CARBON 1/2W/M(T)5%4.7ohm
R5A1	FB560150	MOF 2W/M(A)5%15ohm
R5A2	FA270680	CARBON 1/4W/M(T)5%68ohm
R5A3	80009841	FUSEBLE Res 1/2W(A)M 68ohm J
R5G1	FA270392	CARBON 1/4W/M(T)5%3.9Kohm
R5G2	FA270330	CARBON 1/4W/M(T)5%33ohm
R5G3	FB470109	MOF 1W/M(A)5%1ohm
R702	FA040473	CARBON 1/8W(T)5%47Kohm
R703	FA040472	CARBON 1/8W(T)5%4.7Kohm
R704	FB275601	METAL 1/4W/M(T)1%5.6Kohm
R705	FB271501	METAL 1/4W/M(T)1%1.5Kohm
R706	FA040103	CARBON 1/8W(T)5%10Kohm
R708	FA040121	CARBON 1/8W(T)5%120ohm
R709	FA040472	CARBON 1/8W(T)5%4.7Kohm
R70A	80009861	FUSEBLE Res 1/4W(A)M 10ohm J
R711	FA360109	CARBON 1/2W/M(T)5%1ohm
R712	FB470278	MOF 1W/M(A)5%0.27ohm

SYMBOL	Part No. of NPG	DESCRIPTION
R714	FB710330	MOF 3W/M(A)5%33ohm
R715	FB710390	MOF 3W/M(A)5%39ohm
R716	FA270563	CARBON 1/4W/M(T)5%56Kohm
R721	FB274702	METAL 1/4W/M(T)1%47Kohm
R731	FA040223	CARBON 1/8W(T)5%22Kohm
R732	FA040103	CARBON 1/8W(T)5%10Kohm
R733	FA040103	CARBON 1/8W(T)5%10Kohm
R734	FA040682	CARBON 1/8W(T)5%6.8Kohm
R735	FA040102	CARBON 1/8W(T)5%1Kohm
R736	FA040102	CARBON 1/8W(T)5%1Kohm
R737	FA040223	CARBON 1/8W(T)5%22Kohm
R741	80009851	FUSEBLE Res 1/4W(A)0.47ohm J
R742	FB274301	METAL 1/4W/M(T)1%4.3Kohm
R743	FB276801	METAL 1/4W/M(T)1%6.8Kohm
R744	FB271802	METAL 1/4W/M(T)1%18Kohm
R745	FB271002	METAL 1/4W/M(T)1%10Kohm
R756	80009961	FUSEABLE RES.3W(A)M 3.3ohm J
R762	FB273301	METAL 1/4W/M(T)1%3.3Kohm
R763	FA270154	CARBON 1/4W/M(T)5%150Kohm
R764	80009811	FUSEBLE Res 1/2W(A)M 1ohm J
R765	FA270184	CARBON 1/4W/M(T)5%180Kohm
R766	FA040103	CARBON 1/8W(T)5%10Kohm
R767	FA040222	CARBON 1/8W(T)5%2.2Kohm
R771	FA330332	CARBON 1/2W(T)5%3.3Kohm
R800	FA040102	CARBON 1/8W(T)5%1Kohm
R801	FA270122	CARBON 1/4W/M(T)5%1.2Kohm
R802	FA040102	CARBON 1/8W(T)5%1Kohm
R803	FA040331	CARBON 1/8W(T)5%330ohm
R804	FB480479	MOF 1W/M(B)5%4.7ohm
R830	FA040102	CARBON 1/8W(T)5%1Kohm
R831	FA270122	CARBON 1/4W/M(T)5%1.2Kohm
R832	FA040331	CARBON 1/8W(T)5%330ohm
R833	FA040102	CARBON 1/8W(T)5%1Kohm
R834	FB480151	MOF 1W/M(B)5%150ohm
R840	FA040102	CARBON 1/8W(T)5%1Kohm
R841	FA270122	CARBON 1/4W/M(T)5%1.2Kohm
R842	FA040331	CARBON 1/8W(T)5%330ohm
R843	FA040102	CARBON 1/8W(T)5%1Kohm
R844	FB480151	MOF 1W/M(B)5%150ohm
R898	FA040103	CARBON 1/8W(T)5%10Kohm
R901	FA360105	CARBON 1/2W/M(T)5%1Mohm
R910	FA270564	CARBON 1/4W/M(T)5%560Kohm
R911	FA270304	CARBON 1/4W/M(T)5%300Kohm
R921	FB710104	MOF 3W/M(A)5%100Kohm
R922	FB560278	MOF 2W/M(A)5%0.27ohm
R923	FA040102	CARBON 1/8W(T)5%1Kohm
R924	FA040103	CARBON 1/8W(T)5%10Kohm
R925	FA040100	CARBON 1/8W(T)5%10ohm

SYMBOL	Part No. of NPG	DESCRIPTION
R926	FA040682	CARBON 1/8W(T)5%6.8Kohm
R927	FB274701	METAL 1/4W/M(T)1%4.7Kohm
R928	FA040334	CARBON 1/8W(T)5%330Kohm
R929	FA040682	CARBON 1/8W(T)5%6.8Kohm
R930	FA040102	CARBON 1/8W(T)5%1Kohm
R933	FA270271	CARBON 1/4W/M(T)5%270ohm
R934	FA040390	CARBON 1/8W(T)5%39ohm
R935	FA040390	CARBON 1/8W(T)5%39ohm
R936	80009811	FUSEBLE Res 1/2W(A)M 1ohm J
R940	FB470103	MOF 1W/M(A)5%10Kohm
R941	FB470103	MOF 1W/M(A)5%10Kohm
R942	FA040154	CARBON 1/8W(T)5%150Kohm
R943	FA040154	CARBON 1/8W(T)5%150Kohm
R944	FA040473	CARBON 1/8W(T)5%47Kohm
R945	FA040223	CARBON 1/8W(T)5%22Kohm
R946	FA040121	CARBON 1/8W(T)5%120ohm
R947	FA040562	CARBON 1/8W(T)5%5.6Kohm
R948	FA380272	CARBON 1/2W/M(B)5%2.7Kohm
R949	FA040103	CARBON 1/8W(T)5%10Kohm
R951	FA040471	CARBON 1/8W(T)5%470ohm
R952	FB276802	METAL 1/4W/M(T)1%68Kohm
R953	FB272203	METAL 1/4W/M(T)1%220Kohm
R954	FB272201	METAL 1/4W/M(T)1%2Kohm
R955	FB276803	METAL 1/4W/M(T)1%680Kohm
R957	FB279102	METAL 1/4W/M(T)1%91Kohm
R981	FA040153	CARBON 1/8W(T)5%15Kohm
R982	FA040101	CARBON 1/8W(T)5%100ohm
R983	FA040153	CARBON 1/8W(T)5%15Kohm
R9A2	FA040105	CARBON 1/8W(T)5%1Mohm
R9B4	FA040103	CARBON 1/8W(T)5%10Kohm
R9B5	FB560562	MOF 2W/M(A)5%5.6Kohm
R9B6	FA040103	CARBON 1/8W(T)5%10Kohm
R9C1	80002031	FUSEBLE Res 1/2W(A)M 0.22ohm J
R9C2	FA040103	CARBON 1/8W(T)5%10Kohm
R9C3	FA360102	CARBON 1/2W/M(T)5%1Kohm
R9C4	FA040103	CARBON 1/8W(T)5%10Kohm
R9C5	FA040472	CARBON 1/8W(T)5%4.7Kohm
R9E1	80002031	FUSEBLE Res 1/2W(A)M 0.22ohm J
R9F2	FA040122	CARBON 1/8W(T)5%1.2Kohm
R9G1	80009831	FUSEBLE Res 1/2W(A)M 1.5ohm J
R9Y1	FA330184	CARBON 1/2W(T)5%180Kohm
R9Y2	FA360224	CARBON 1/2W/M(T)5%220Kohm
R9Y3	FA040333	CARBON 1/8W(T)5%33Kohm
R9Y4	FA040333	CARBON 1/8W(T)5%33Kohm
R9Y5	FA360820	CARBON 1/2W/M(T)5%68ohm
R9Y6	FA040103	CARBON 1/8W(T)5%10Kohm
R9Y7	FA040103	CARBON 1/8W(T)5%10Kohm
R9Z1	FA040390	CARBON 1/8W(T)5%39ohm

SYMBOL	Part No. of NPG	DESCRIPTION
R9Z2	FA040562	CARBON 1/8W(T)5%5.6Kohm
R9Z3	FA040223	CARBON 1/8W(T)5%22Kohm

\*\*\* CAPACITORS \*\*\*

C101	GA347705	ELECT 85oC/T 470u/6.3V M
C102	GM010353	CHIP MONO 10000p/50V K
C104	GM010353	CHIP MONO 10000p/50V K
C105	GM010353	CHIP MONO 10000p/50V K
C106	GM010353	CHIP MONO 10000p/50V K
C107	GM00705B	CHIP MONO 7p/50V C
C108	GM00705B	CHIP MONO 7p/50V C
C109	GM010353	CHIP MONO 10000p/50V K
C111	GM010353	CHIP MONO 10000p/50V K
C112	GA310655	ELECT 85oC/T 10u/50V M
C114	GA310655	ELECT 85oC/T 10u/50V M
C115	GA310655	ELECT 85oC/T 10u/50V M
C123	GA310655	ELECT 85oC/T 10u/50V M
C124	GA310655	ELECT 85oC/T 10u/50V M
C125	GA310655	ELECT 85oC/T 10u/50V M
C126	GA310655	ELECT 85oC/T 10u/50V M
C142	GA310555	ELECT 85oC/T 1u/50V M
C143	GM010353	CHIP MONO 10000p/50V K
C1A1	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C1A2	GA247625	ELECT 105oC/T 47u/16V M
C201B	GA247555	ELECT 105oC/T 4.7u/50V M
C201G	GA247555	ELECT 105oC/T 4.7u/50V M
C201R	GA247555	ELECT 105oC/T 4.7u/50V M
C202	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C203	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C211B	GA247555	ELECT 105oC/T 4.7u/50V M
C211G	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C211R	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C213	GA233725	ELECT 105oC/T 330u/16V M
C214	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C215	GA210655	ELECT 105oC/T 10u/50V M
C216	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C217	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C218	GA247625	ELECT 105oC/T 47u/16V M
C221	GB7472F3	CERAMIC Y5P(B)/T 4700P/500V K
C222	GA222675	ELECT 105oC/T 22u/100V M
C223	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C224	GA210725	ELECT 105oC/T 100u/16V M
C226	GB7472F3	CERAMIC Y5P(B)/T 4700P/500V K
C241B	80008481	PLASTIC MM/A 0.22u/250V J
C241G	80008481	PLASTIC MM/A 0.22u/250V J
C241R	80008481	PLASTIC MM/A 0.22u/250V J
C242	GB7472F3	CERAMIC Y5P(B)/T 4700P/500V K
C243	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z

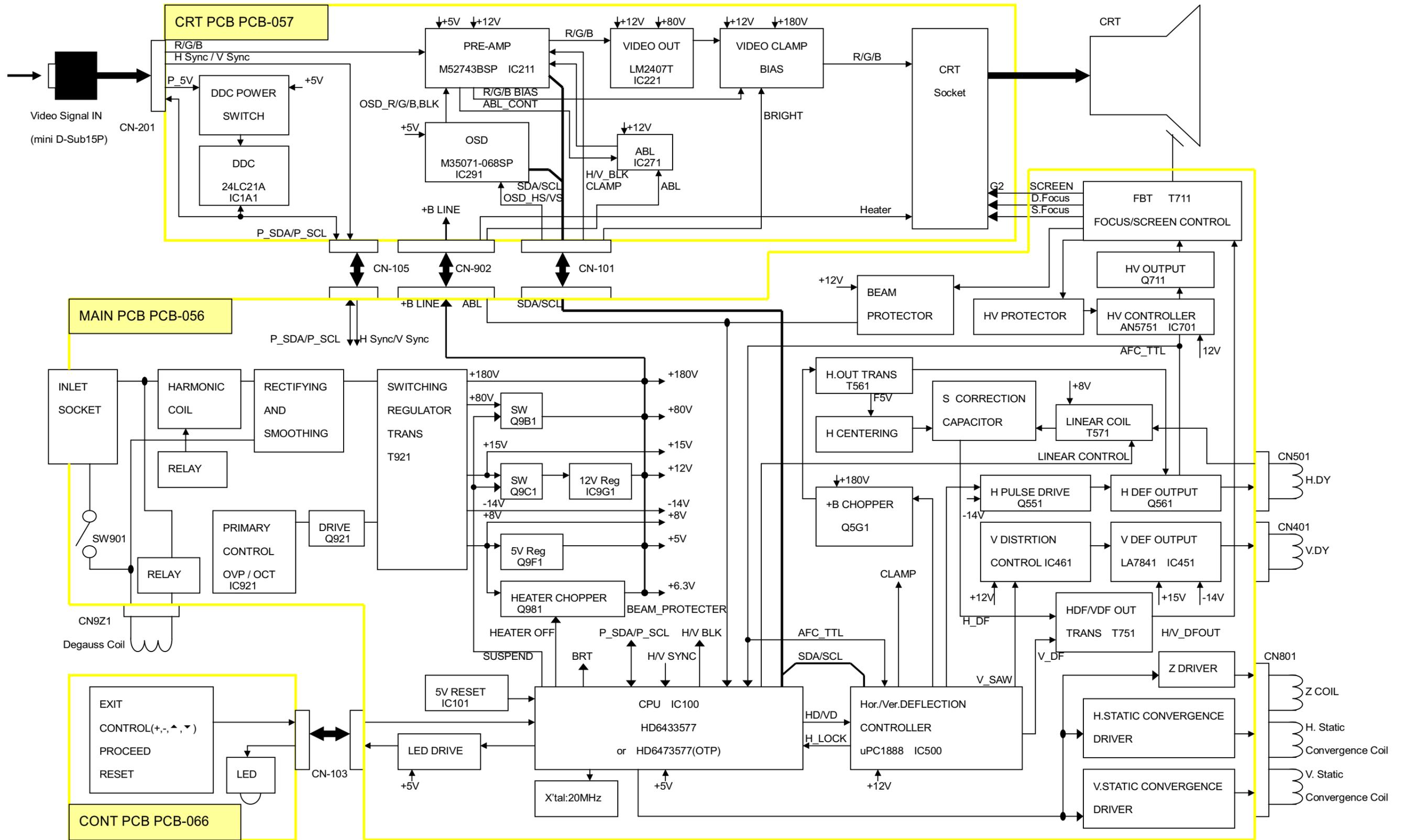
SYMBOL	Part No. of NPG	DESCRIPTION
C244	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C244B	GA247485	ELECT 105oC/T 0.47u/250V M
C244G	GA247485	ELECT 105oC/T 0.47u/250V M
C244R	GA247485	ELECT 105oC/T 0.47u/250V M
C271	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C272	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C273	GA347625	ELECT 85oC/T 47u/16V M
C291	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C292	GA222725	ELECT 105oC/T 220u/16V M
C293	GF210452	PLASTIC MEF CAP BOX 0.1uF/50V J
C294	GB647152	CERAMIC SL/T 470p/50V J
C295	GA210555	ELECT 105oC/T 1u/50V M
C296	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C297	GB722253	CERAMIC Y5P(B)/T 2200P/50V K
C2C1	GB7332H3	CERAMIC Y5P(B)/T 3300p/1KV K
C2C2	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C2C3	GB7331H3	CERAMIC Y5P(B)/T 330p/1KV K LDF
C2F1	GB7472F3	CERAMIC Y5P(B)/T 4700P/500V K
C2F2	GB7472F3	CERAMIC Y5P(B)/T 4700P/500V K
C2F6	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C2F7	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C2F8	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C401	GA333625	ELECT 85oC/T 33u/16V M
C402	GF233352	MEF BOX/T 0.033u/50V J
C430	GF268452	PLASTIC MEF BOX/T 0.47u/50V J
C431	GE322352	PLASTIC CAP PEN/T 0.022uF/50V
C451	GA333735	ELECT 85oC/T 330u/25V M
C452	GA310745	ELECT 85oC/T 100u/35V M
C453	GA210745	ELECT 105oC/T 100u/35V M
C454	GF222472	MEF CAP BOX 0.22u/100V J
C461	GF247262	MEF CAP BOX 4700pF/63V J
C462	GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C463	GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C500	GE210352	PLASTIC PEI/T 0.01u/50V J
C501	GM010252	CHIP MONO 1000p/50V J
C502	GA310555	ELECT 85oC/T 1u/50V M
C503	GM039152	CHIP MONO 390p/50V J
C504	GA310555	ELECT 85oC/T 1u/50V M
C505	GA310725	ELECT 85oC/T 100u/16V M
C506	GM010433	CHIP MONO 0.1u/25V K
C507	GA347725	ELECT 85oC/T 470u/16V M
C508	GM010152	CHIP MONO 100p/50V J
C509	GE310252	PLASTIC CAP PEN/T 1000P/50V
C510	GF233352	MEF BOX/T 0.033u/50V J
C511	GA310655	ELECT 85oC/T 10u/50V M
C512	GA310655	ELECT 85oC/T 10u/50V M
C515	GE415272	PLASTIC PPN/T 1500p/100V J
C516	GM047152	CHIP MONO 470p/50V J

SYMBOL	Part No. of NPG	DESCRIPTION
C551	GF247452	PLASTIC MEF BOX/T 0.47u/50V J
C552	GB722253	CERAMIC Y5P(B)/T 2200P/50V K
C553	GF247452	PLASTIC MEF BOX/T 0.47u/50V J
C554	GA247735	ELECT 105oC/T 470u/25V M
C555	GB7332F3	CERAMIC Y5P(B)/T 3300p/500V K
C561	80010121	DKRG (390)1.5KHP 402H-FC
C562	GBD221J3	CERAMIC Y5P(B)/A 220p/2KV K P=7.5mm
C563	GF282262	MEF CAP BOX 8200pF/63V J
C564	GB610152	CERAMIC SL/T 100p/50V J
C571	GA210745	ELECT 105oC/T 100u/35V M
C572	GB7182F3	CERAMIC Y5P(B)/T 1800P/500V K P=7.5mm
C573	80010141	DHSM (204)250V 913J-FC 7.5mm
C574	80010151	DHSM (204)250V 104J-FC 7.5mm
C575	80010161	DHSM (204)250V 824J-FC 7.5mm
C577	80010171	DHSM (204)250V 304J-FC 7.5mm
C578	80010181	DHSM (204)250V 753J-FC 7.5mm
C579	80010191	DHSM (204)250V 124J-FC 7.5mm
C57A	80010201	DHSM (204)250V 564J-FC 7.5mm
C57E	GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C57F	GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C57G	GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C57H	GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C57J	GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C581	GA233715	ELECT 105oC/T 330u/10V M
C582	GA233715	ELECT 105oC/T 330u/10V M
C583	GF210452	PLASTIC MEF CAP BOX 0.1uF/50V J
C584	GF247452	PLASTIC MEF BOX/T 0.47u/50V J
C5A2	GA222585	ELECT 105oC/T 2.2u/250V M
C5A3	GA222585	ELECT 105oC/T 2.2u/250V M
C5G1	GAB10785	ELECT 105oC/A 100u/250V M
C5G2	GFA104C3	PLASTIC MPE/A 0.1u/200V K P=7.5mm
C701	GA233625	ELECT 105oC/T 33u/16V M
C702	GF210452	PLASTIC MEF CAP BOX 0.1uF/50V J
C703	GB639052	CERAMIC SL/T 39p/50V J
C704	GA310655	ELECT 85oC/T 10u/50V M
C705	GF247452	PLASTIC MEF BOX/T 0.47u/50V J
C706	GB647052	CERAMIC SL/T 47p/50V J
C707	GF210452	PLASTIC MEF CAP BOX 0.1uF/50V J
C708	GF215452	PLASTIC MEF BOX/T 0.15u/50V J
C709	GA310725	ELECT 85oC/T 100u/16V M
C70A	GA233625	ELECT 105oC/T 33u/16V M
C70E	GF247452	PLASTIC MEF BOX/T 0.47u/50V J
C70F	GA322625	ELECT 85oC/T 22u/16V M
C711	80010131	DKRG (390)800HP 222J-FC
C712	GED822E2	PLASTIC PPN/A 8200p/400V J p=10mm
C713	GAB22775	ELECT 105oC/A 220u/100V M
C721	GF247452	PLASTIC MEF BOX/T 0.47u/50V J
C731	GA422555	ELECT NP/T 2.2u/50V M

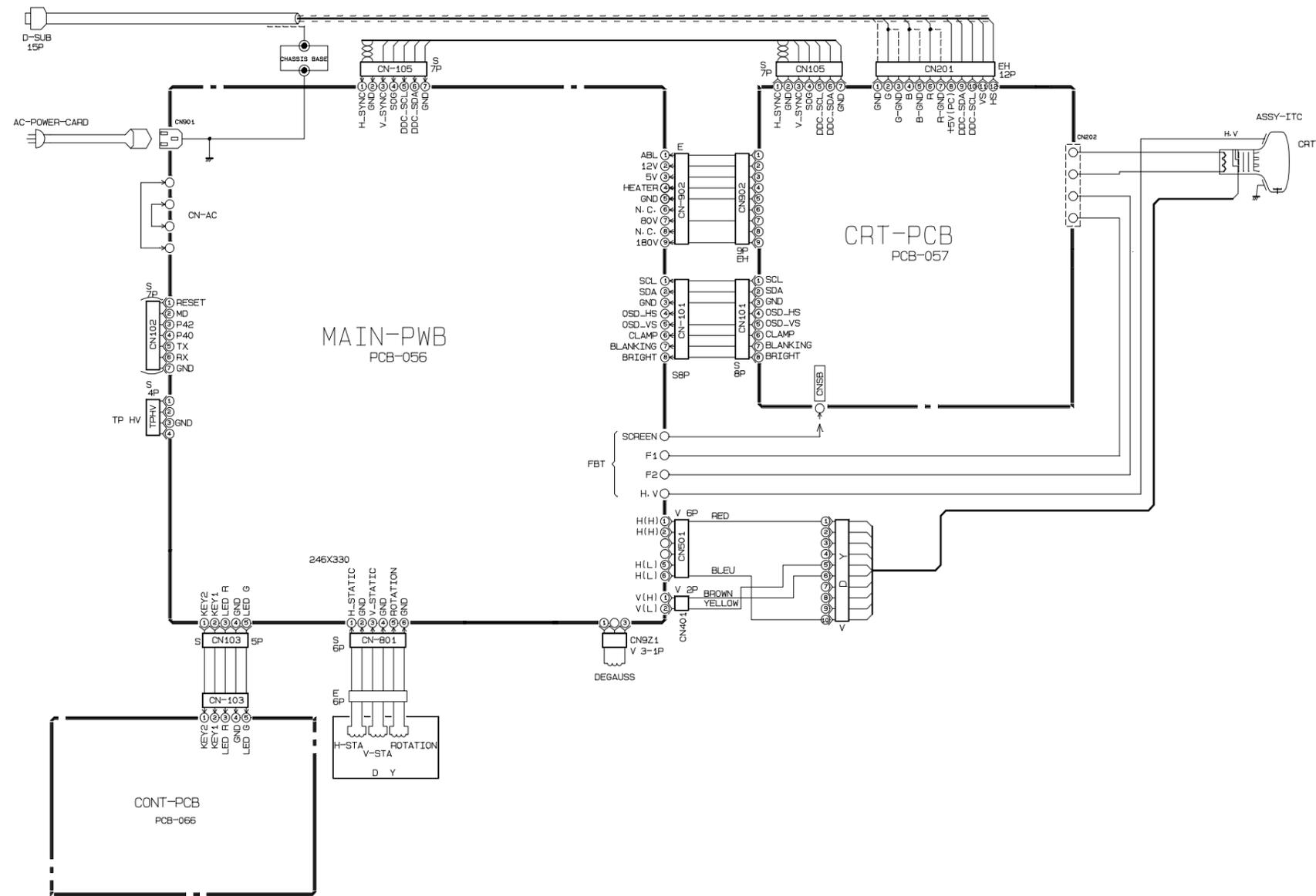
SYMBOL	Part No. of NPG	DESCRIPTION
C741	GA322555	ELECT 85oC/T 2.2u/50V M
C742	GA210555	ELECT 105oC/T 1u/50V M
C752	GFB47482	PLASTIC MPP/A 0.47u/250V J
C753	GF215472	PLASTIC MEF BOX/T 0.15u/100V J
C761	GB7102F3	CERAMIC Y5P(B)/T 1000p/500V K
C762	80009421	ELECT 105oC/T 1u/450V M
C763	GA447625	ELECT NP/T 47u/16V M
C764	GF215452	PLASTIC MEF BOX/T 0.15u/50V J
C800	GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C801	GA310655	ELECT 85oC/T 10u/50V M
C802	GA310555	ELECT 85oC/T 1u/50V M
C830	GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C831	GA310655	ELECT 85oC/T 10u/50V M
C832	GA310555	ELECT 85oC/T 1u/50V M
C840	GB910458	CERAMIC Z5V(F)/T 0.1u/50V Z
C841	GA310655	ELECT 85oC/T 10u/50V M
C842	GA310555	ELECT 85oC/T 1u/50V M
C901	GJ047405	SAFETY X-CAP 0.47u/275V M(PHILIPS)
C902	GJD222E5	SAFETY Y-CAP/S 2200P/400V M TDK/S
C903	GJD222E5	SAFETY Y-CAP/S 2200P/400V M TDK/S
C906	GJC222E5	SAFETY Y-CAP/D 2200P/400V M
C911	GKA337E5	POWER ELECT 85oC 330u/400V M
C921	GFA333E3	PLASTIC MPE/A 0.033u/400V K
C922	80005551	CERAMIC Y5P(B)/T 220p/1KV K LDF
C923	GF233262	PLASTIC MEF CAP BOX 0.0033u/63V J
C924	GE268252	PLASTIC PEI/T 0.0068u/50V J
C925	GA333625	ELECT 85oC/T 33u/16V M
C926	GF222462	PLASTIC MEF BOX 0.22u/63V J
C927	GE215352	PLASTIC PEI/T 0.015u/50V J
C928	GF233262	PLASTIC MEF CAP BOX 0.0033u/63V J
C931	GA310735	ELECT 85oC/T 100u/25V M
C932	GA347635	ELECT 85oC/T 47u/25V M
C933	GB682052	CERAMIC SL/T 82p/50V K
C940	GA310555	ELECT 85oC/T 1u/50V M
C951	GM068253	CHIP MONO 6800p/50V K
C952	GB7680F3	CERAMIC Y5P(B)/T 68P/500V K
C981	GE210352	PLASTIC PEI/T 0.01u/50V J
C982	GA333735	ELECT 85oC/T 330u/25V M
C9A1	GAB10785	ELECT 105oC/A 100u/250V M
C9A2	GAB22685	ELECT 105oC/A 22u/250V M
C9B1	GAB107B5	ELECT 105oC/A 100u/160V M
C9C1	GAB33835	ELECT 105oC/A 3300u/25V M
C9C2	GA347625	ELECT 85oC/T 47u/16V M
C9D1	GAB10825	ELECT 105oC/A 1000u/16V M
C9E1	GAB22835	ELECT 105oC/A 2200u/25V M
C9F1	GA347625	ELECT 85oC/T 47u/16V M
C9F2	GB910358	CERAMIC Z5V(F)/T 0.01u/50V Z
C9G1	GA210735	ELECT 105oC/T 100u/25V M

SYMBOL	Part No. of NPG	DESCRIPTION
C9G2	GAB10825	ELECT 105oC/A 1000u/16V M
C9Y2	GA347635	ELECT 85oC/T 47u/25V M
C9Y3	GA347635	ELECT 85oC/T 47u/25V M

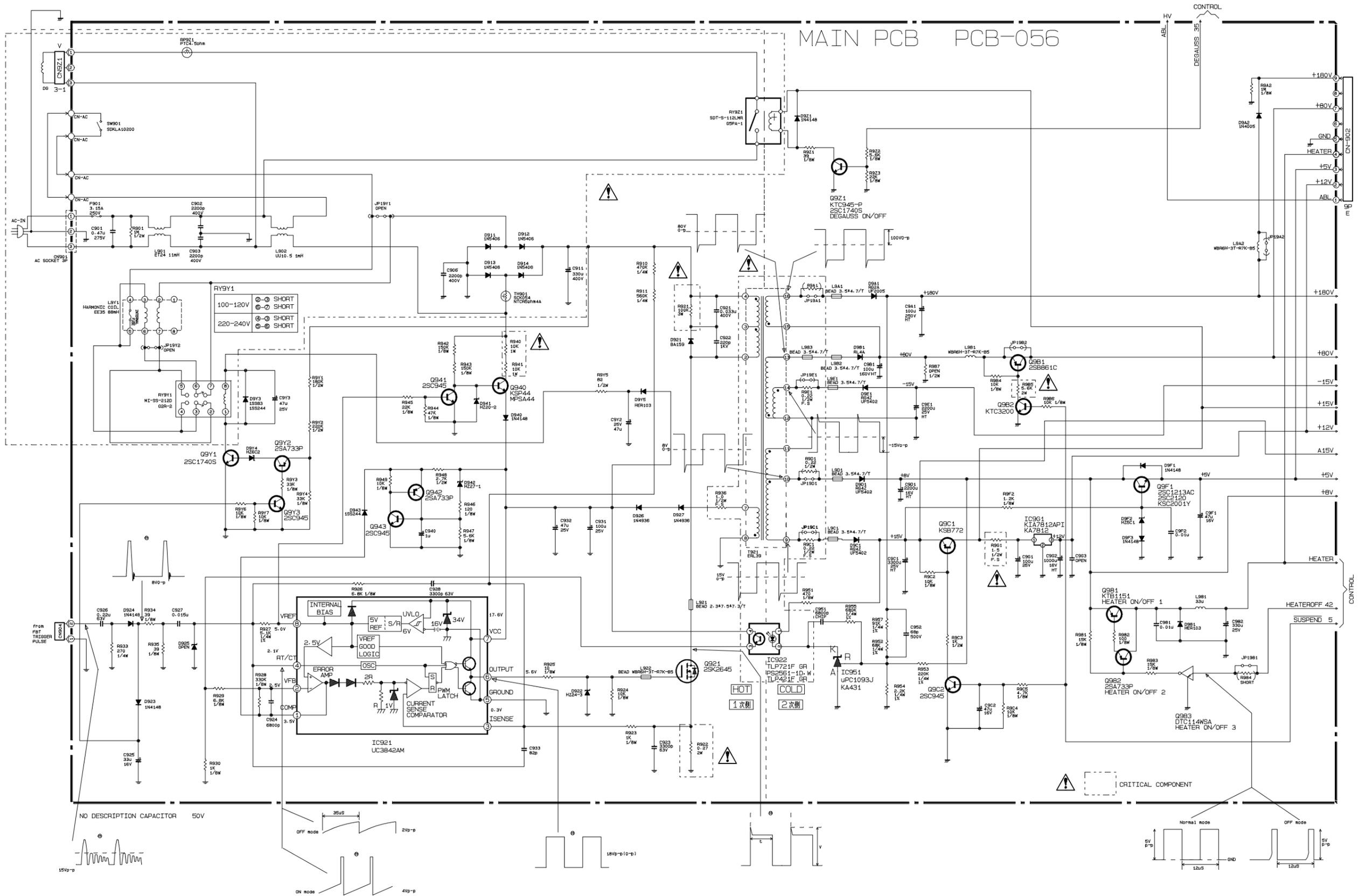
# BLOCK DIAGRAM MODEL FE750+



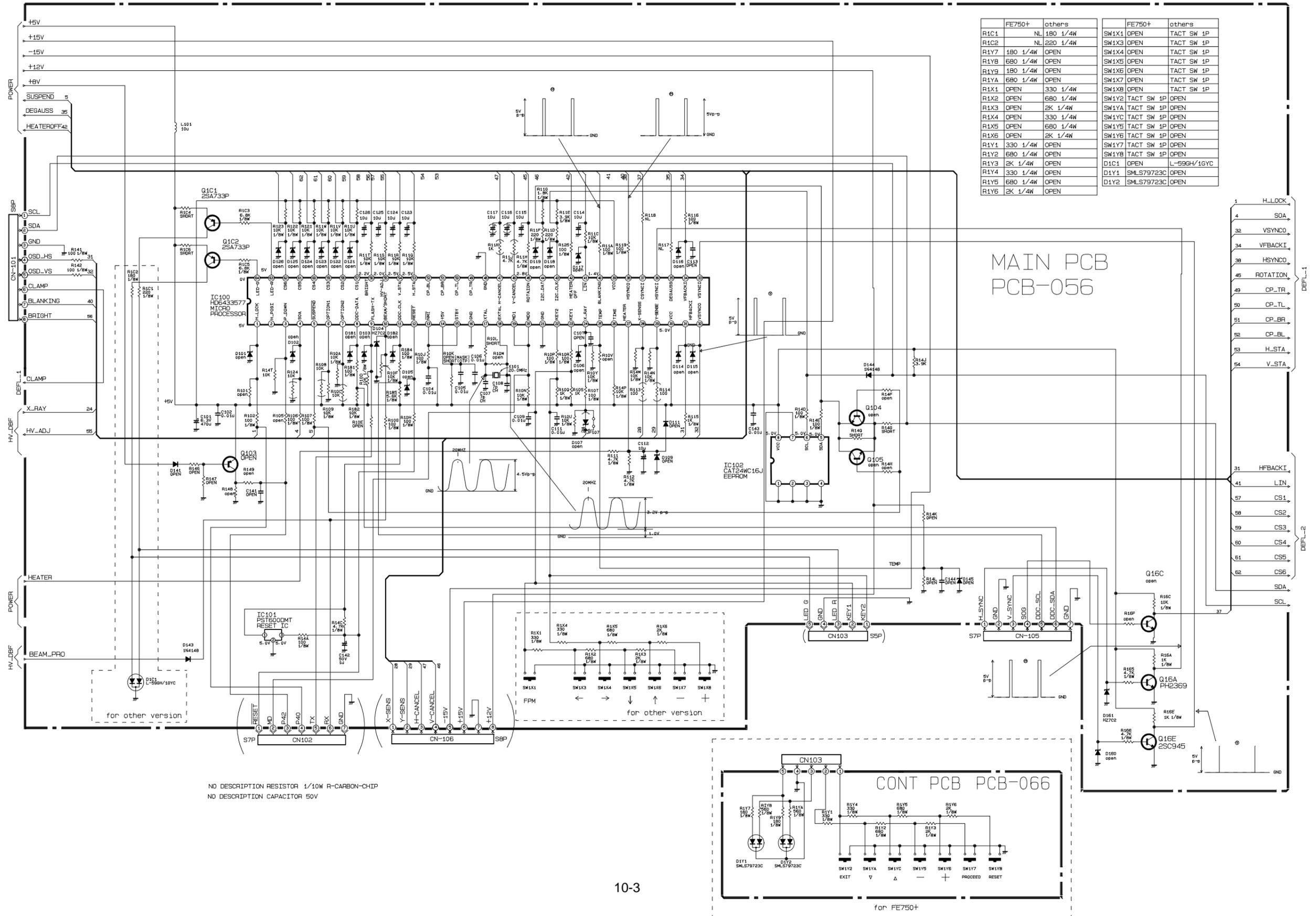
# MODEL JC17W41 SCHEMATIC DIAGRAM



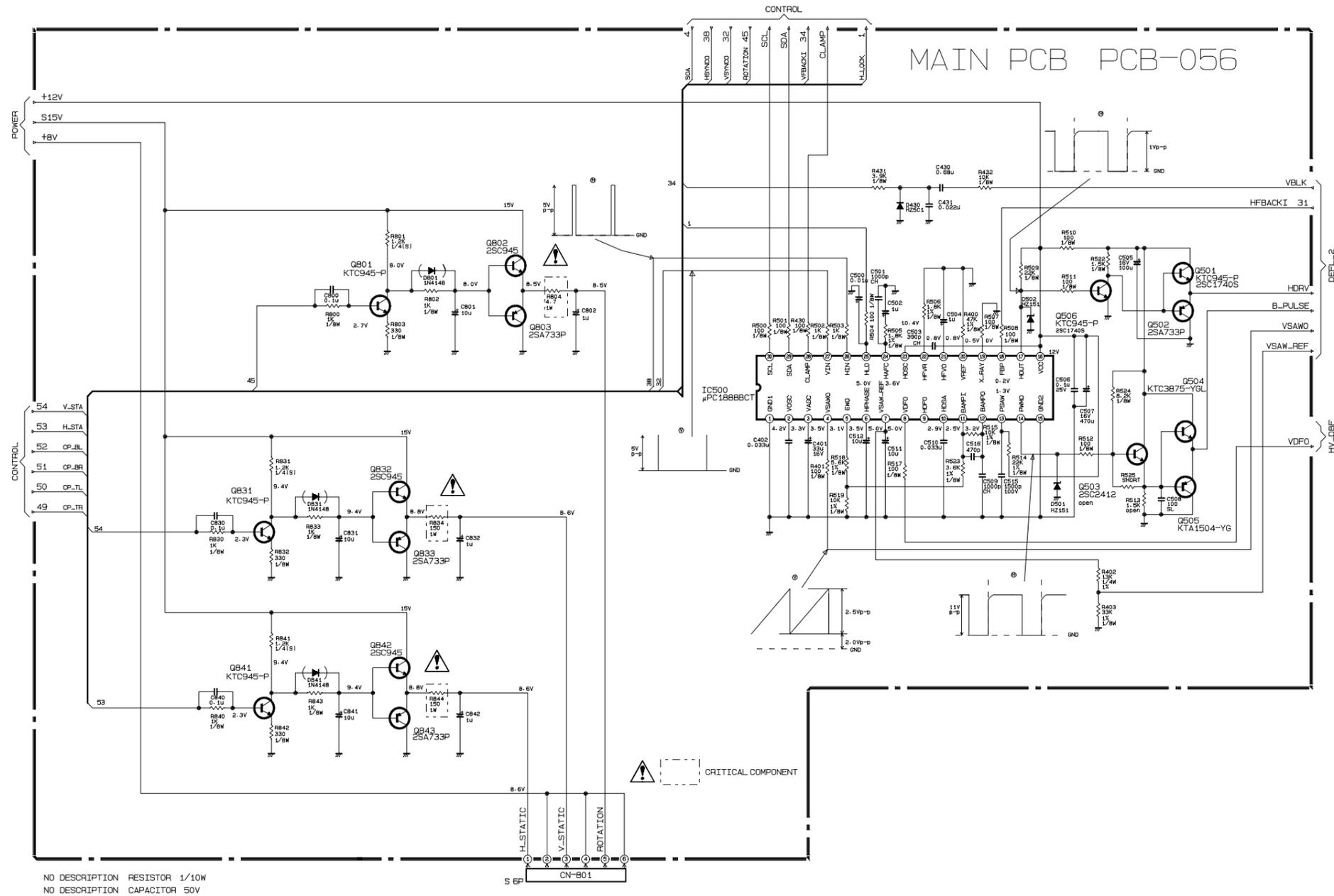
# MODEL JC-17W41 MAIN PWB SCHEMATIC DIAGRAM (1/5)



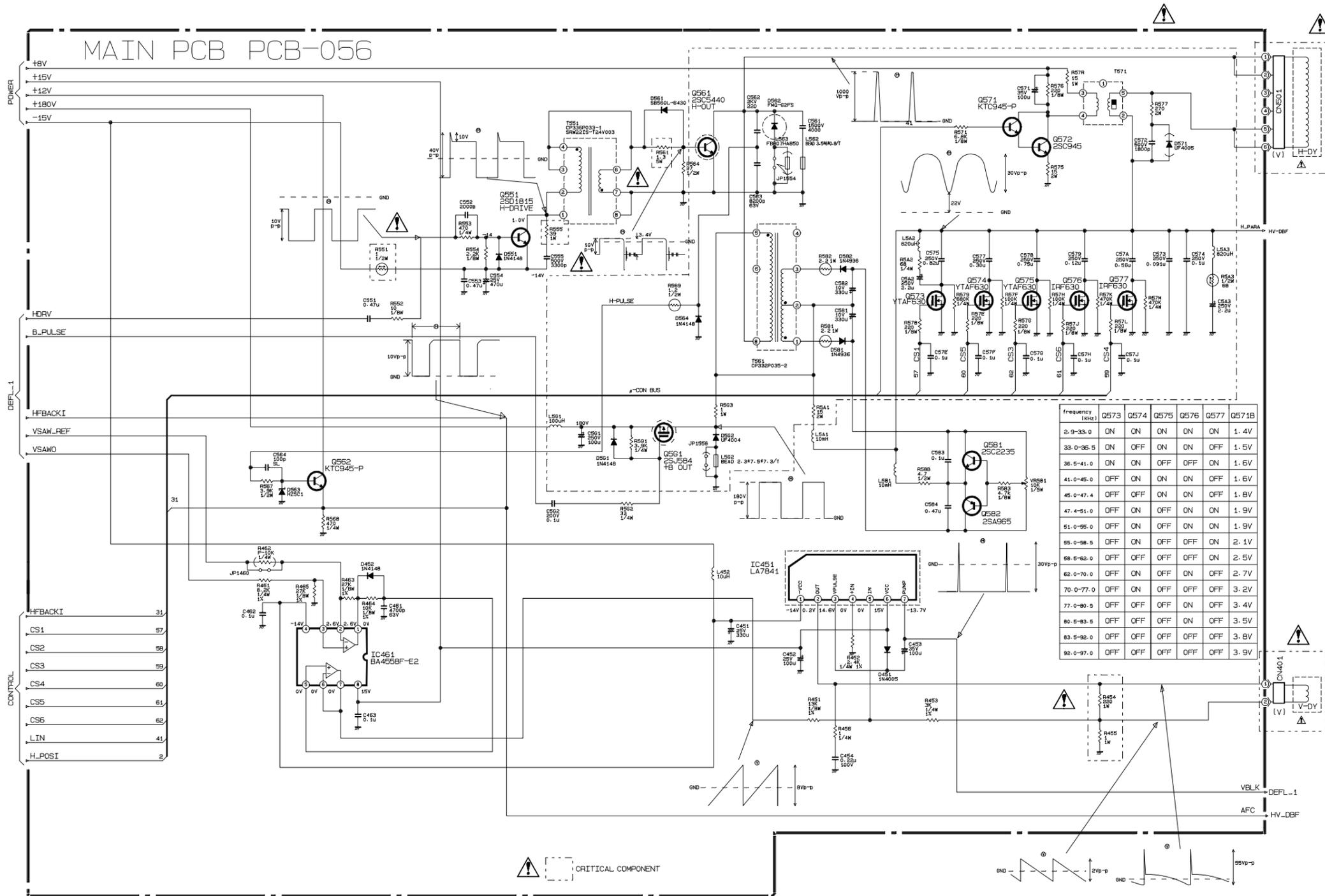
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# MODEL JC-17W41 MAIN PWB SCHEMATIC DIAGRAM (3/5)

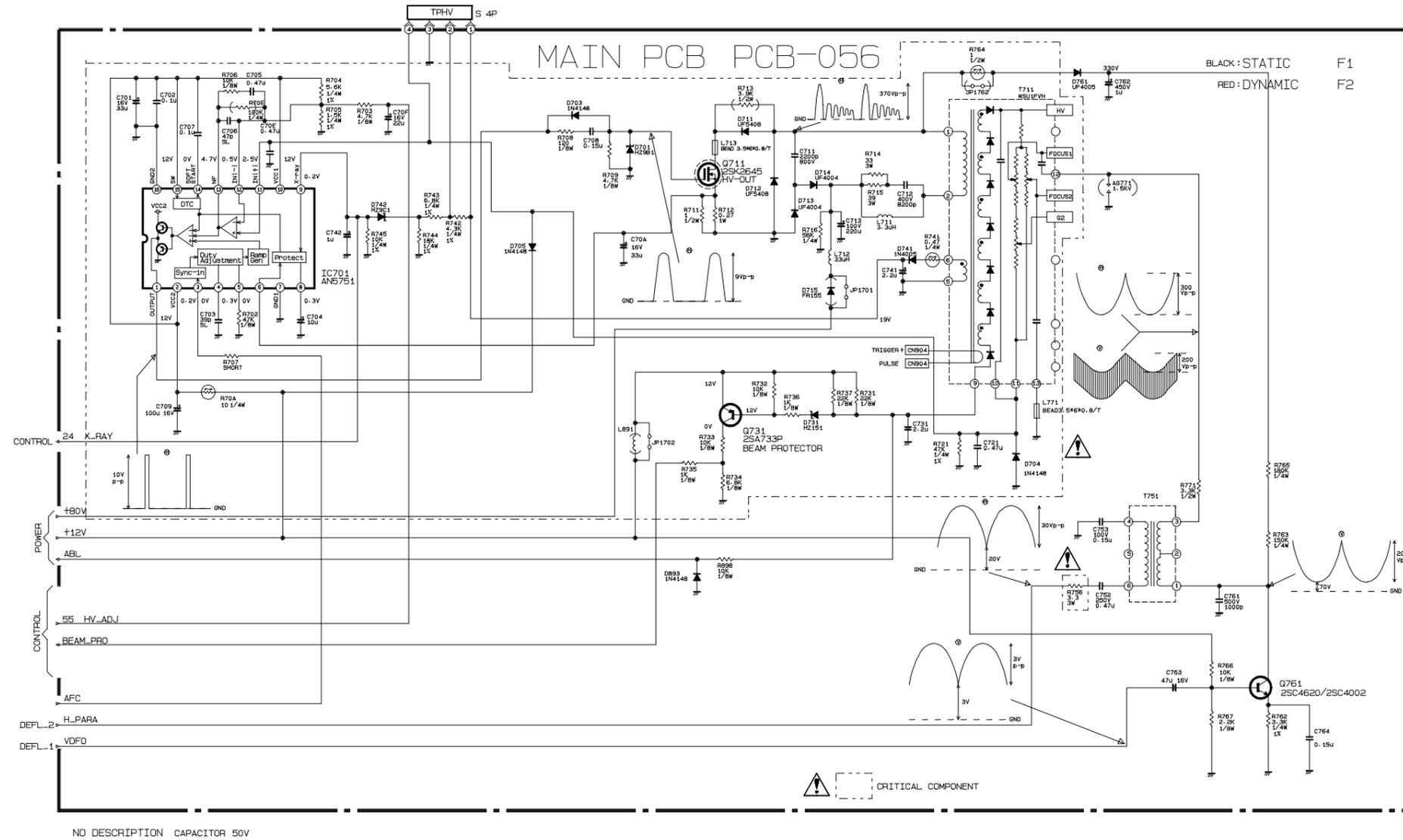


# MODEL JC-17W41 MAIN PWB SCHEMATIC DIAGRAM (4/5)



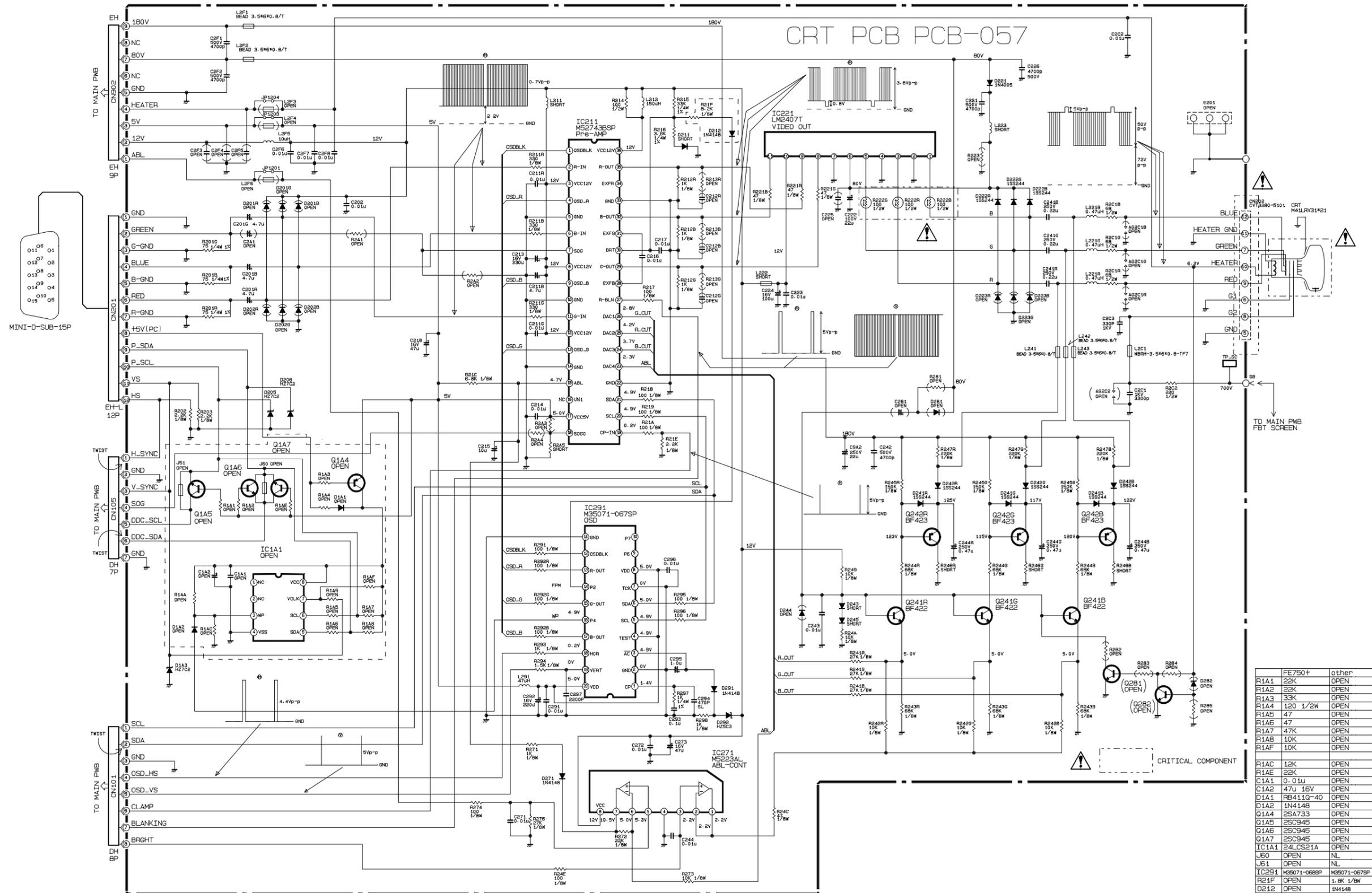
NO DESCRIPTION CAPACITOR 50V

# MODEL JC-17W41 MAIN PWB SCHEMATIC DIAGRAM (5/5)



# MODEL JC-17W41 CRT PWB SCHEMATIC DIAGRAM (1/1)

RUN No.1



NO DESCRIPTION CAPACITOR 50V

VIDEO/CRT