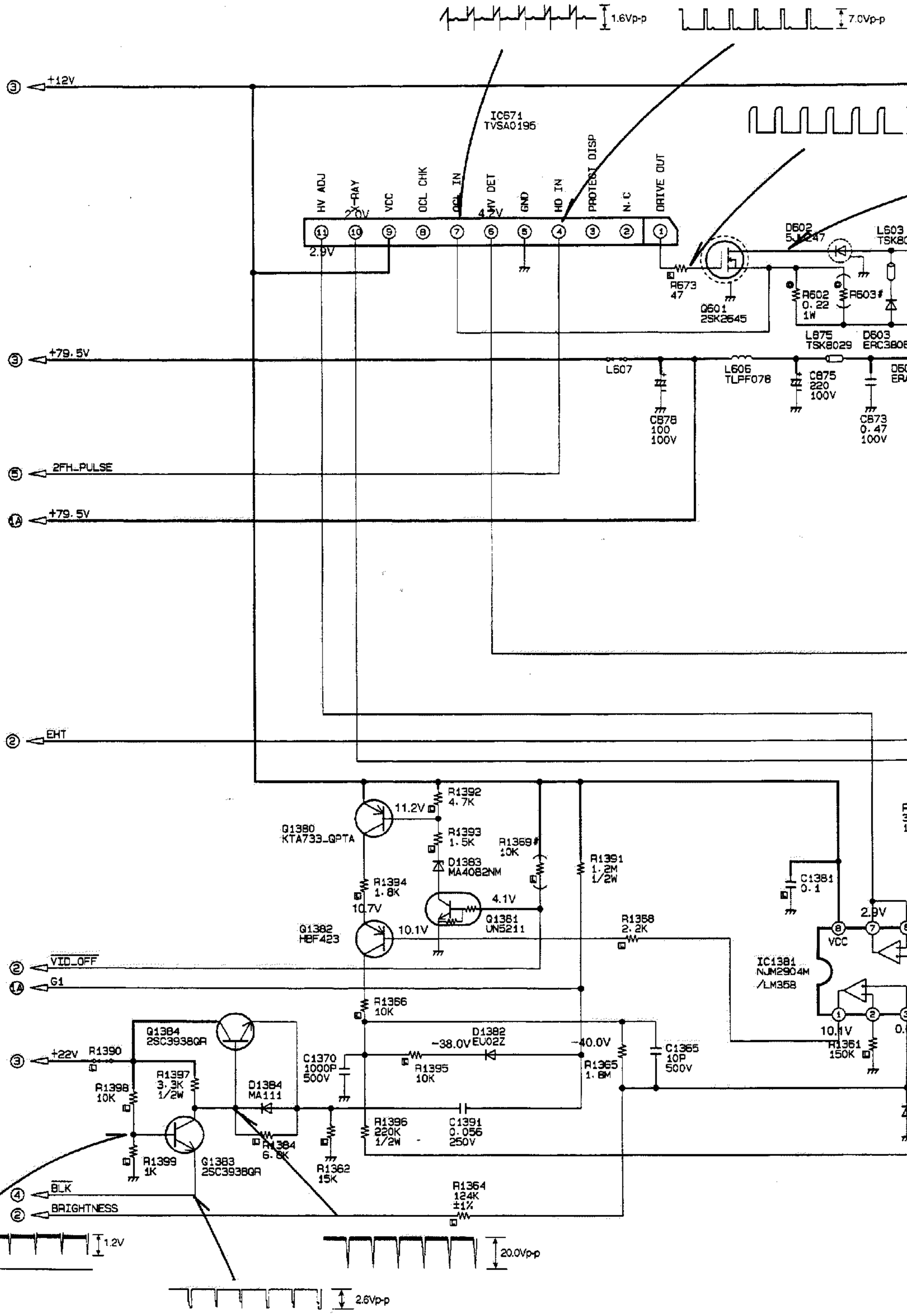
	fH
MODE-1	60.0KHz
MODE-2	31.5KHz
MODE-3	37.5KHz
MODE-4	46.9KHz
MODE-5	49.7KHz
MODE-6	56.5KHz
MODE-7	60.2KHz
MODE-8	80.0KHz

	fH	Vo
MODE-1	60.0KHz	14.6
MODE-2	31.5KHz	15.5
MODE-3	37.5KHz	15.8
MODE-4	46.9KHz	15.3
MODE-5	49.7KHz	15.6
MODE-6	56.5KHz	14.7
MODE-7	60.2KHz	14.7
MODE-8	80.0KHz	13.7

TNPH0151


1.6Vp-p
7.0Vp-p
+12V
IC671
TVSA0195
HV ADJ
X-RAY
VCC
OCL CHK
OCL IN
HV DET
GND
HD IN
PROTECT DISP
N.C
DRIVE OUT
2.0V
4.2V
2.9V
R673
47
Q601
2SK2645
D602
L603
TSK80
R602
0.22
1W
R603#
L605
TSK8029
D603
ERC380
+79.5V
L607
L606
TLPF078
C875
220
100V
C878
100
100V
C873
0.47
100V
2FH_PULSE
+79.5V
EHT
R1392
4.7K
11.2V
Q1380
KTA733_QPTA
R1393
1.5K
R1369#
10K
D1383
MA4082NM
R1394
1.8K
10.7V
4.1V
Q1381
UN5211
Q1382
HBF423
10.1V
R1391
1.2M
1/2W
R1358
2.2K
C1381
0.1
2.9V
VCC
IC1381
NJM2904M
/LM358
VID_OFF
G1
R1366
10K
Q1384
2SC3938QR
+22V
R1390
R1397
3.3K
1/2W
R1398
10K
D1384
MA111
C1370
1000P
500V
D1382
EU02Z
-38.0V
-40.0V
R1395
10K
R1365
1.8M
C1365
10P
500V
R1361
150K
R1396
220K
1/2W
C1391
0.056
250V
R1384
6.8K
R1362
15K
R1399
1K
Q1383
2SC3938QR
BLK
BRIGHTNESS
R1364
124K
±1%
2.2V0-p
0V
1.2V
20.0Vp-p
2.6Vp-p

12V

L870

+12V ⑭

+350V ⑦

R661 100 1/4W

D661 ERA34_10

C661 0.01 500V

1.7Vp-p

390Vp-p

T601 ETF39L99AZ ⚠

TLFN02290

EHT ⑭

TCO ⑦

S10 TAGDSP201

L605 TSK8029

C601 1500P 630V

D604 ERA92_02

L601 TLPF075

R604 68 3W

R605 68 3W

C602 3300P 630V

1500P

1500P

C10 0.022 250V

C11 0.022 250V

R19 100K ±1%

TSXX064-1 (WHITE)

S_FOCUS ⑭

TSXX065-1 (RED)

D_FOCUS ⑭

DAF ⑦

470P

220P

N652

SCREEN TSXX066 ⑭

4.2V

R655 7.32K ±1%

R654 1.78K ±1%

D654 MA111

ABL ⑭

R655 27K

C654 2.2 160V

16.9V

D651 MA167

R651 0.47 1/4W

N651 TJEA013

GND ⑭

C890 4.7 50V

D890 MA111

FLASH_DET ③

R670 470K 1/4W

D671 MA165

R671 133K ±1%

R672 133K ±1%

C671 4.7 50V

C672 1

C670 6.8 50V

S671 TAGDSP141NT

R657 31.6K ±1%

16.4V

R650 6.8K

C655 0.47

R658 5.62K ±1%

C651 3.3 50V

D650 MA8043M

C650 0.1

R659 100K

Q650 2SB1218AQR

R20 100

J261

D13

TCD_5 ⑦

C17 22 100V

J220#

R653 0.47 1/4W

D653 EG01Z

J643#

+120V ⑭

C653 10 160V

R652 0.47 1/4W

D652 AG01

-198.0V

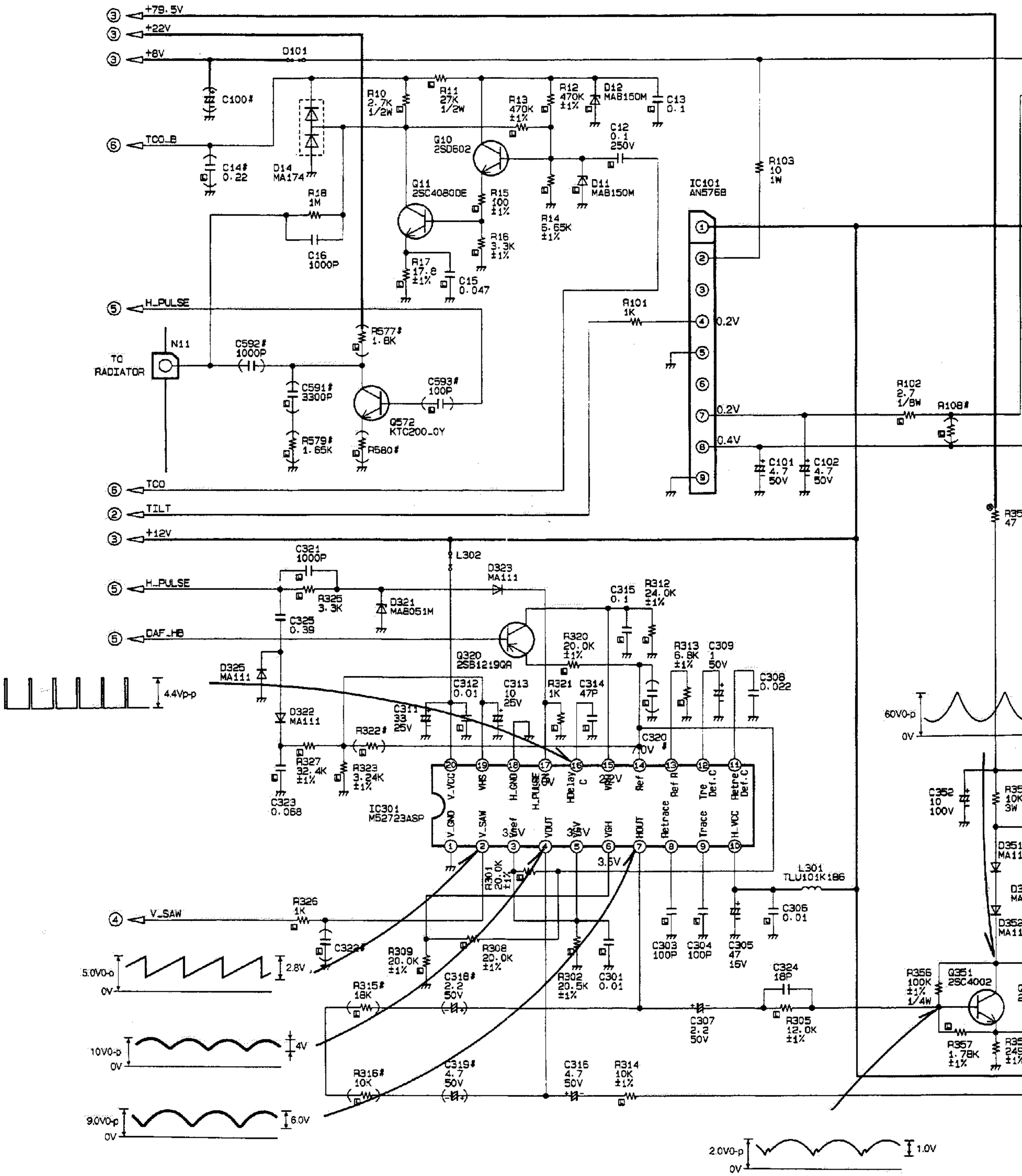
C652 10 250V

2.8V ⑤

GND ④

C1382 0.1

TNPH0151 ⚠


+79.5V
+22V
+8V
D101
C100#
R10 2.7K 1/2W
R11 27K 1/2W
R12 470K ±1%
D12 MAB150M
C13 0.1
R13 470K ±1%
C12 0.1 250V
TCO_B
C14# 0.22
D14 MA174
Q10 2SD602
R103 10 1W
IC101 AN5768
Q11 2SC4080DE
R15 100 ±1%
D11 MAB150M
R14 6.65K ±1%
R18 1M
C16 1000P
R16 3.3K ±1%
R17 17.8 ±1%
C15 0.047
H_PULSE
R101 1K
0.2V
R577# 1.8K
N11
TO RADIATOR
C592# 1000P
C591# 3300P
C593# 100P
Q572 KTC200_0Y
R579# 1.65K
R580#
R102 2.7 1/8W
R108#
0.4V
C101 4.7 50V
C102 4.7 50V
TCO
TILT
+12V
L302
C321 1000P
D323 MA111
R325 3.3K
D321 MA8051M
C325 0.39
DAF_HB
C315 0.1
R312 24.0K ±1%
Q320 2SB1219QR
R320 20.0K ±1%
R313 6.8K ±1%
C309 1 50V
C308 0.022
D325 MA111
4.4Vp-p
C312 0.01
C313 10 25V
R321 1K
C314 47P
C311 33 25V
R322#
C320 #
D322 MA111
R327 32.4K ±1%
R323 3.24K ±1%
C323 0.068
IC301 M52723ASP
V_VCC
VHS
H_GND
H_PULSE
H Delay C
Ref
Ref Adj
Tre Def.C
Retre Def.C
V_GND
V_SAW
3.5V
VOUT
VGH
HOUT
Retrace
Trace
H_VCC
3.5V
L301 TLU101K186
R326 1K
V_SAW
C322#
R309 20.0K ±1%
R308 20.0K ±1%
R301 20.0K ±1%
R302 20.5K ±1%
C301 0.01
C303 100P
C304 100P
C305 47 16V
C306 0.01
C324 18P
R356 100K ±1% 1/4W
Q351 2SC4002
R357 1.78K ±1%
C352 10 100V
R315# 18K
C318# 2.2 50V
C307 2.2 50V
R305 12.0K ±1%
R316# 10K
C319# 4.7 50V
C316 4.7 50V
R314 10K ±1%
5.0V0-p
0V
2.8V
10V0-p
4V
9.0V0-p
6.0V
60V0-p
2.0V0-p
1.0V

SHEET ⑦

N101
TILT COIL
TSPF003
N102#
IC462
BX8318A
or
AN5767K
IC102#
AN5769
D448#
R104#
10
1/4W
C104#
0.1
R105#
10
1/4W
(V_MOIRE_OFF)
R420
8.2K
R454
10K
(V_CONV)
V_MOI_G
R421
4.7K
(H_CONV)
H_MOI_G
R452
4.7K
R451
2.2K
R456
6.8K
VS
Q462
UN5211
R106#
22
1/2W
C105#
HS
R466
2.2K
H_MOI_OFF
C106#
R107#
33
1/2W
R458
8.2K
C107#
V_MOI_D
R459
121K
±1%
H_MOI_D
R450#
20K
±1%
C108#
N103#
V_CONV
40V
60V0-p
40V
0V
H_CONV
(H/V CONV. COIL)
240V0-p
205V
0V
N104#
Q352
2SC3902T
+350V
C353
0.22
100V
T351
TLHG010
R371
390K
1/2W
DAF
R353
R354
47
1/4W
R372
2.2M
S371
TAGA0003
C371
470P
500V
R355#
Q371
2SC4002
240V0-p
180V
0V
R374
4.32K
±1%
R373
47K
3.6V0-p
2.8V
0V
R356
120
2W
C354
820P

TNPH0151 ⚠

TROUBLE SHOOTING HINTS

• NO CHARACTERS
• MISSING ONE COLOR

EXAMPLE : GREEN MISSING

CRT KG 70V 0-p ? — YES → NO RASTER
NO
IC1303 (12) 2.4V 0-p ? — YES → CHECK IC1303
NO
IC1302 (35) 4.9V 0-p ? — YES → CHECK Q1135
NO
IC1302 (2) 3.0V 0-p ? — YES → CHECK IC1302
NO
IC1301 (28) 2.3V 0-p ? — YES → CHECK Q1121
NO
IC1301 (4 or 12) 2.0V p-p ? — YES → CHECK
- IC1301
- Signal Select

NO
CHECK Input Signal

OSD DOES NOT WORK

EXAMPLE : GREEN MISSING
CONDITION : OSD ON

YES ← IC1302 (4) 4.4V p-p ?
NO
IC1401 (5) 4.4V p-p ? — NO → CHECK
- Q1402
- H PULSE line

YES
IC1401 (10) 5.0V p-p ? — NO → CHECK
- Q1401
- V FBP line

YES
IC1401 (7)(8) 4.4V p-p ? — NO → CHECK IC901 (53) SCL (54) SDA
YES
CHECK IC1401

IC1302 (1) 4.5V p-p ? — NO → (back to IC1401)
YES
CHECK IC1302

NO POWER

D851 (C) 8V ? — NO (SUB & MAIN P/S OFF) → T823 (3) CORRECT ? — YES → CHECK
- IC841
- T823

NO
D821 (2)(3) AC OK ? — NO → CHECK AC line
YES
CHECK D821

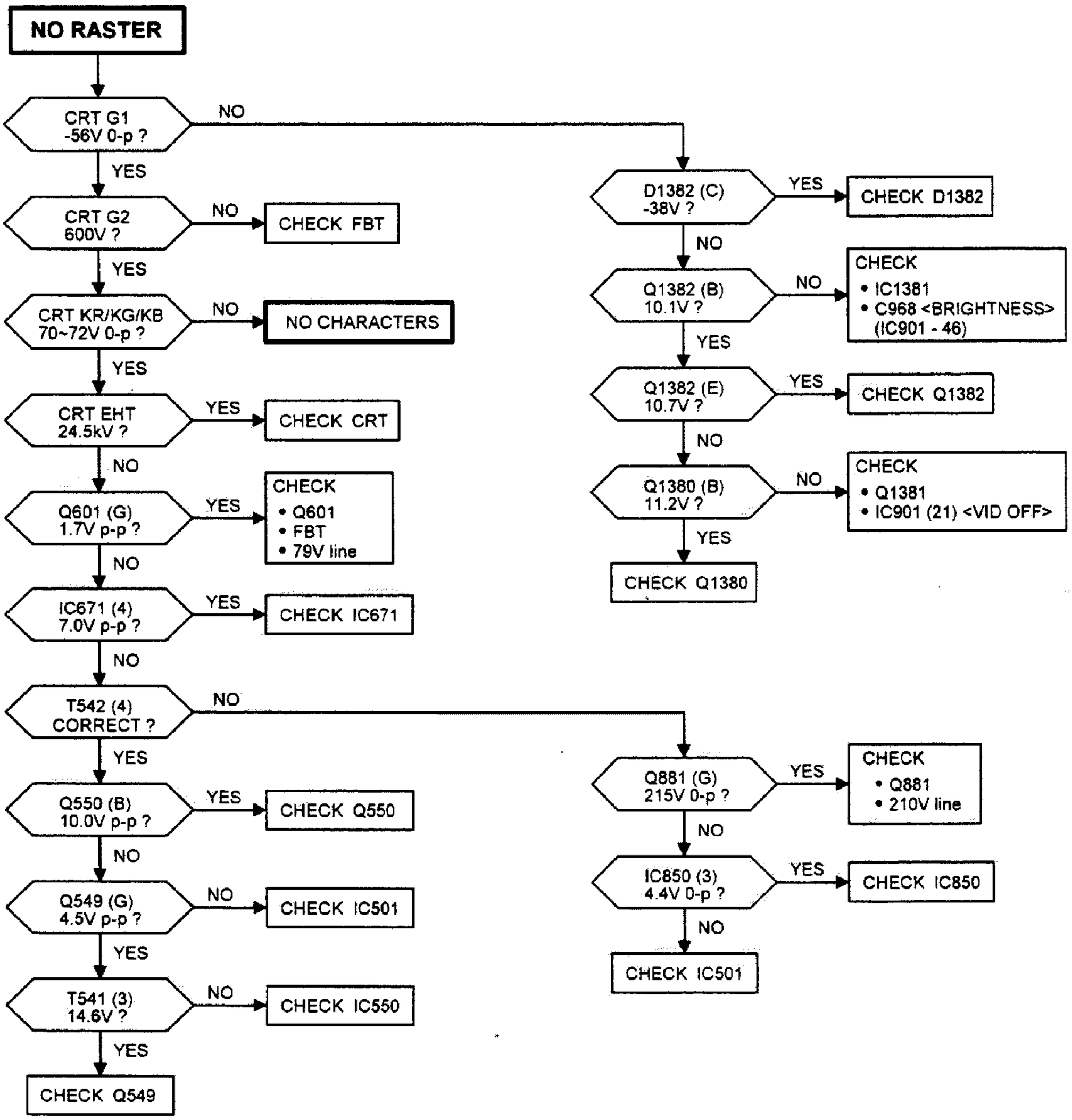
YES (MAIN P/S OFF)
IC821 (8) LOW ? — YES (POWE SAVE ACTIVE) → Q853 (B) 0V ? — YES → CHECK
- IC901 (16) <SUSPEND>
- INPUT SYNC SIGNAL

NO
IC821 (1) 18.0V p-p ? — YES → CHECK Q821
NO
CHECK IC821
OK
CHECK
- D861 • D862 • D863
- D864 • D868 • D866
- SECOND. POWER line

NO
CHECK
- Q853 • PC821

Voltage of T823 (3)

AC Input	IC841 (D)
100V	121V
120V	149V
220V	275V
240V	309V

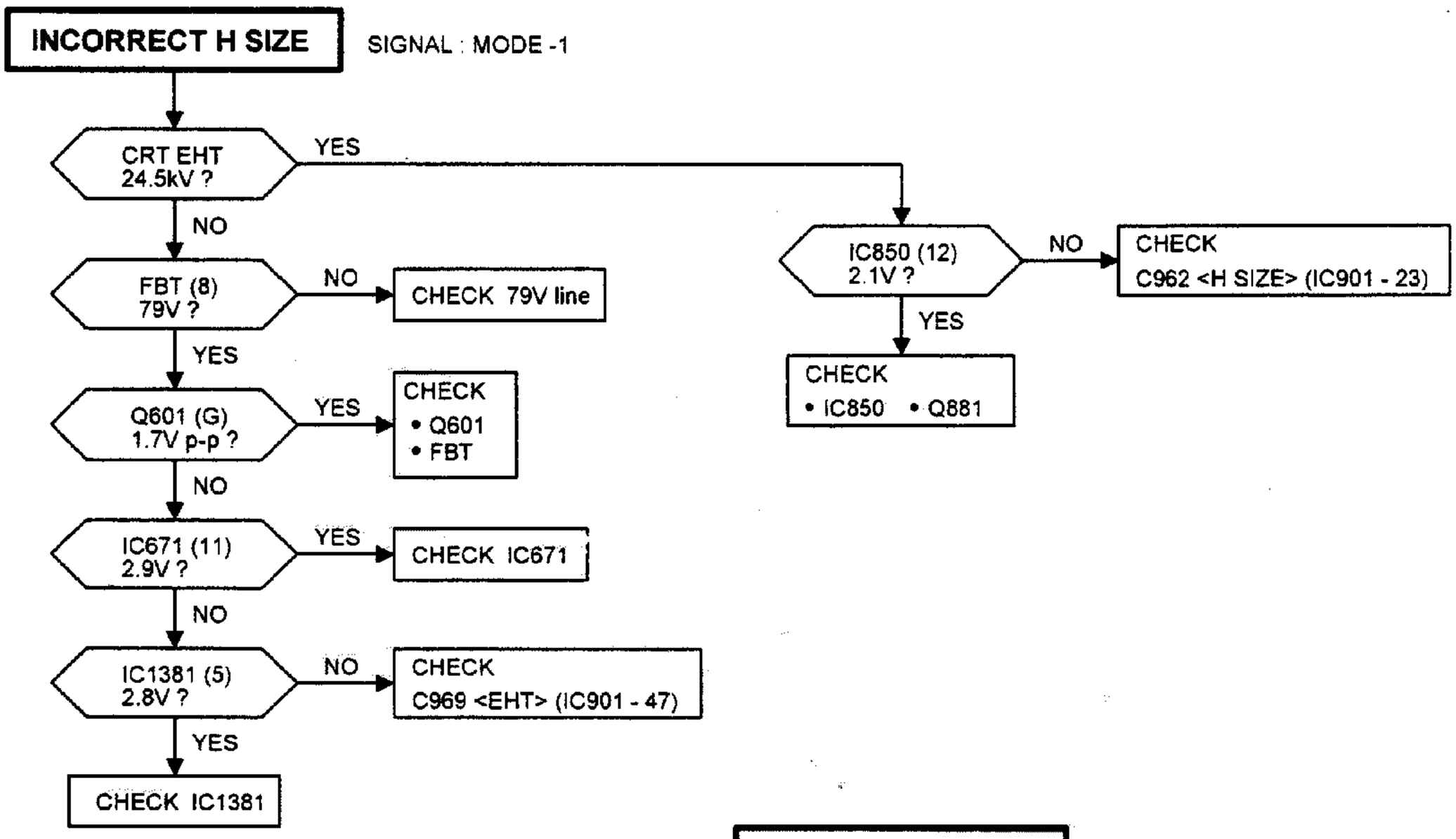


Voltage of T542 (4)

	f H	Value
MODE - 1	60.0 kHz	84.3V
MODE - 2	31.5 kHz	44.2V
MODE - 3	37.5 kHz	54.3V
MODE - 4	46.9 kHz	67.1V
MODE - 5	49.7 kHz	73.5V
MODE - 6	56.5 kHz	79.5V
MODE - 7	60.2 kHz	85.2V
MODE - 8	80.0 kHz	109.9V

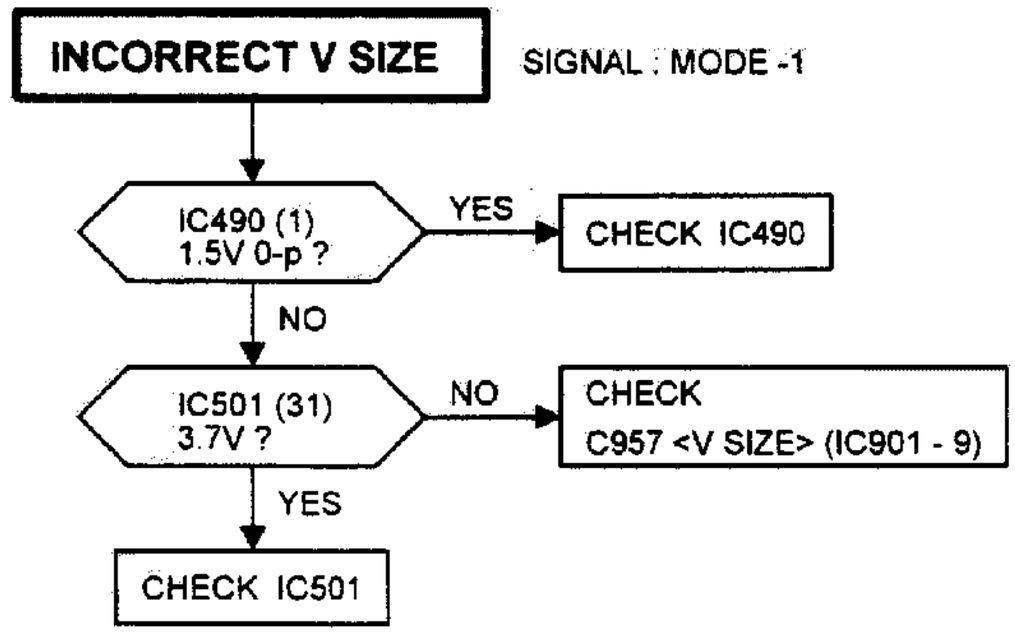
INCORRECT H SIZE

SIGNAL : MODE -1



INCORRECT V SIZE

SIGNAL : MODE -1



Important Technical Notice

The microcontroller (IC901) will be changed beginning with August 1997 production.

Spare parts to be supplied will be those for the new microcontroller. It may be noted that some of the peripheral parts have been changed incidental to the renewal of the microcontrollor.

The changes are as follows.

Ref.NO.	original	New	Description
IC901	TVRB031	TVSA0207	Micro Controller
C910	ECUV1H472KBN	-	Capacitor 4700PF → Delete
R909	ERJ6GEYJ153V	ERJ6GEYJ222V	Resistor 15kΩ → 2.2kΩ 1/10W
R914	ERJ6GEYJ153V	ERJ6GEYJ222V	Resistor 15kΩ → 2.2kΩ 1/10W

Take the following steps only when replacing the original microcontroller with the new one.

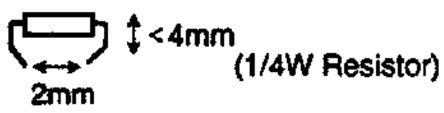
1. C910: Remove
2. R909: Replace it with a resistor of 2.2 kΩ.
3. R914: Replace it with a resistor of 2.2 kΩ.

Note:

Only spare parts for the microcontroller will be supplied. The resistors mentioned above will not be supplied.

Use general-purpose resistors of 2.2 kΩ.

If chips are not available, process discrete parts as shown below.



The Parts Location for C910, R909 and R914