

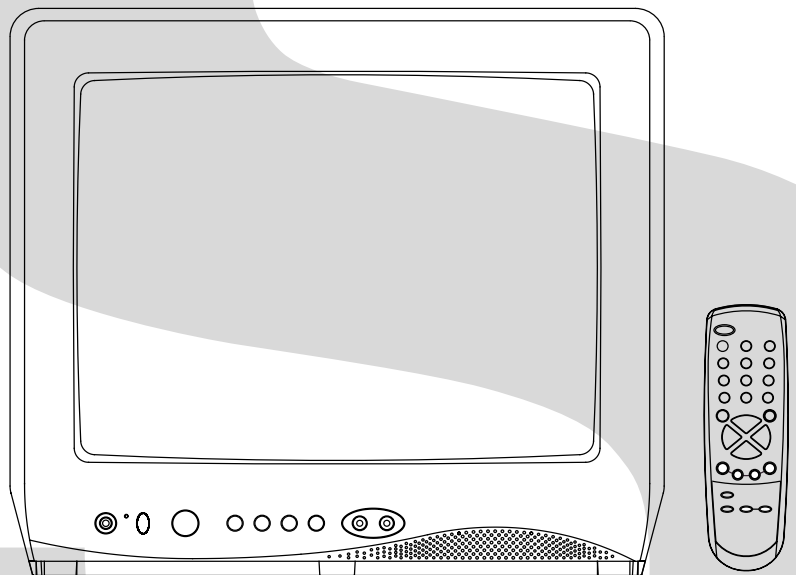
# TOSHIBA

FILE NO. 050-200503  
(MFR'S VERSION A)

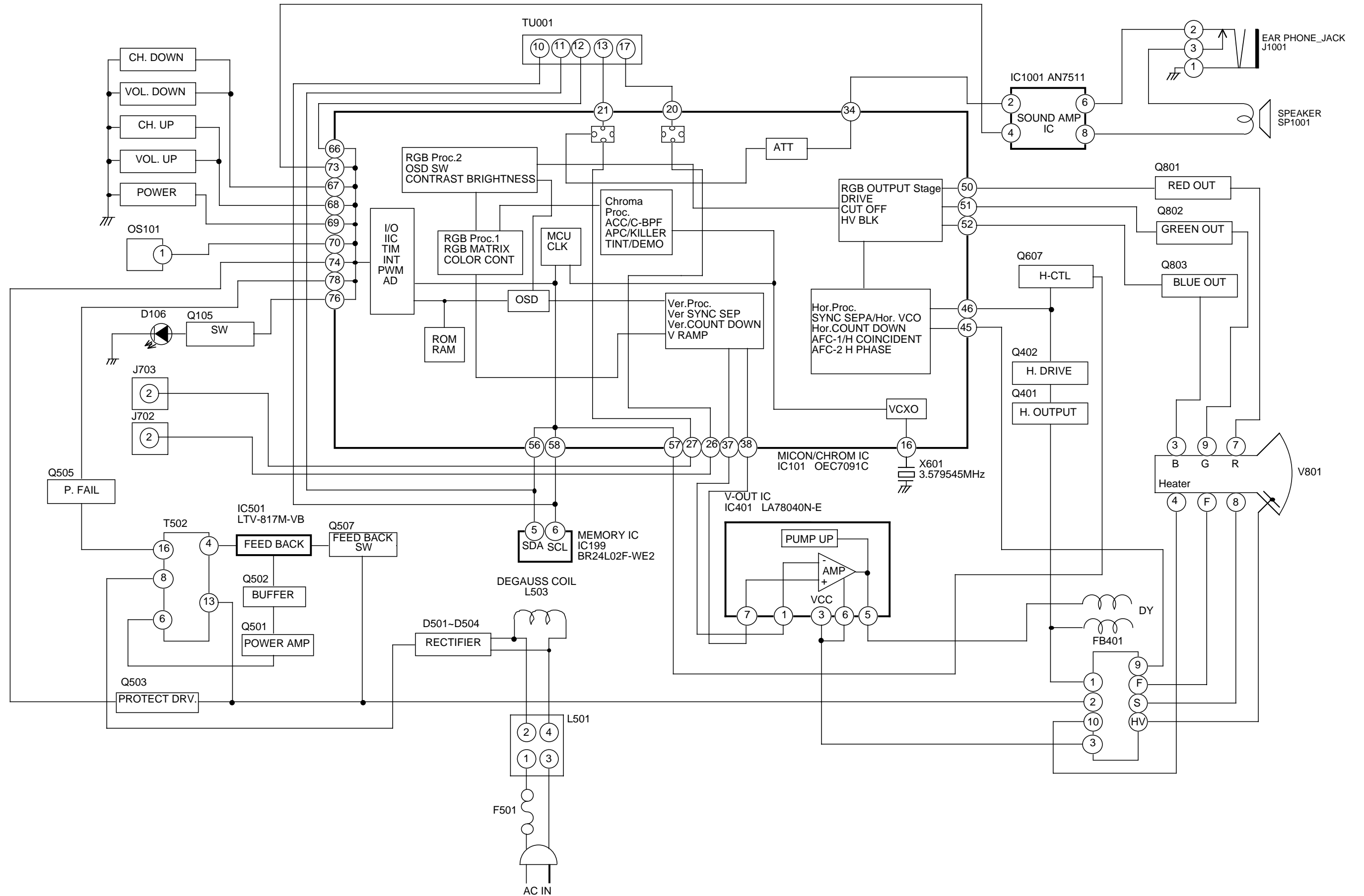
## SERVICE MANUAL

## COLOR TELEVISION

# 13A25 13A25C

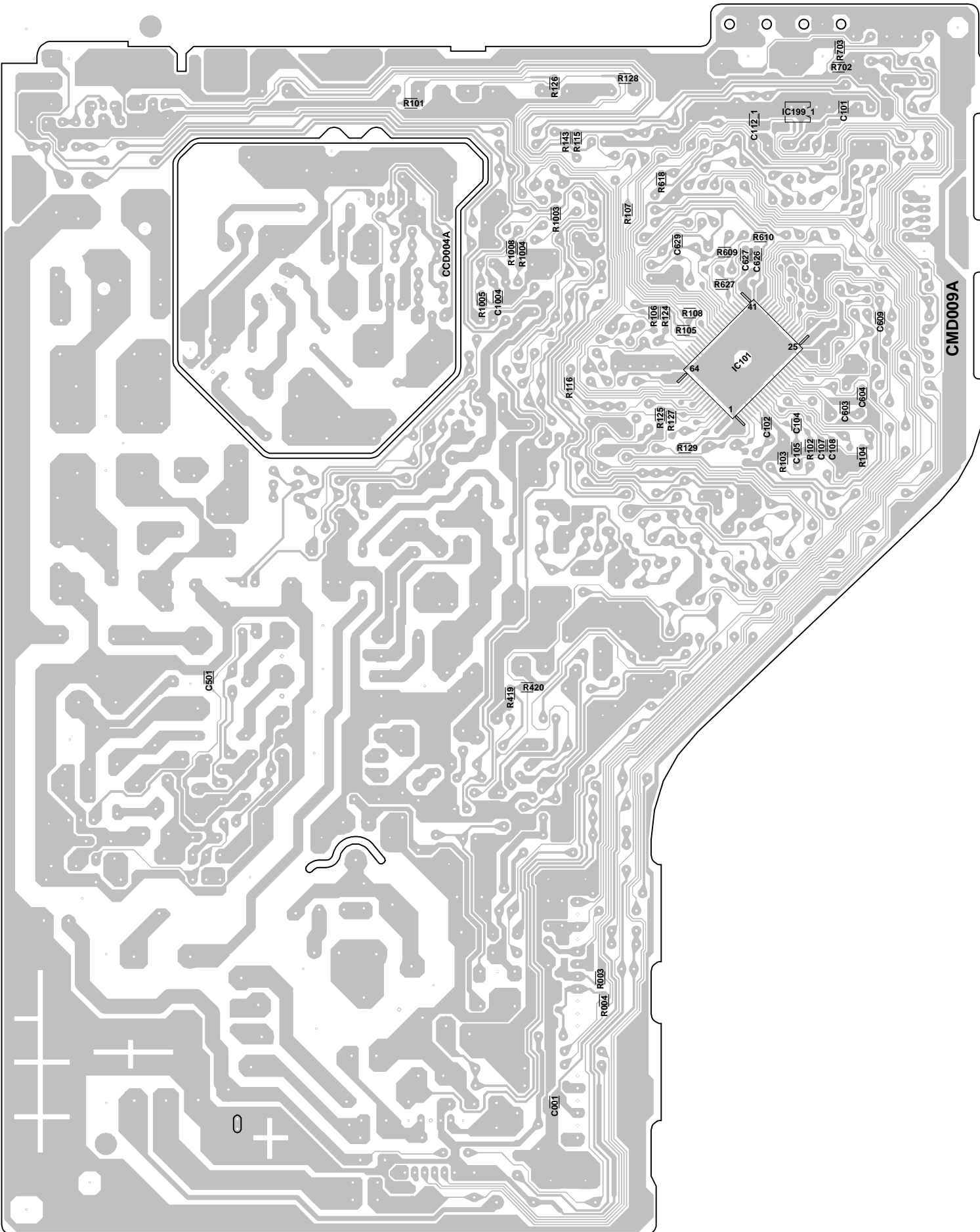


# BLOCK DIAGRAM

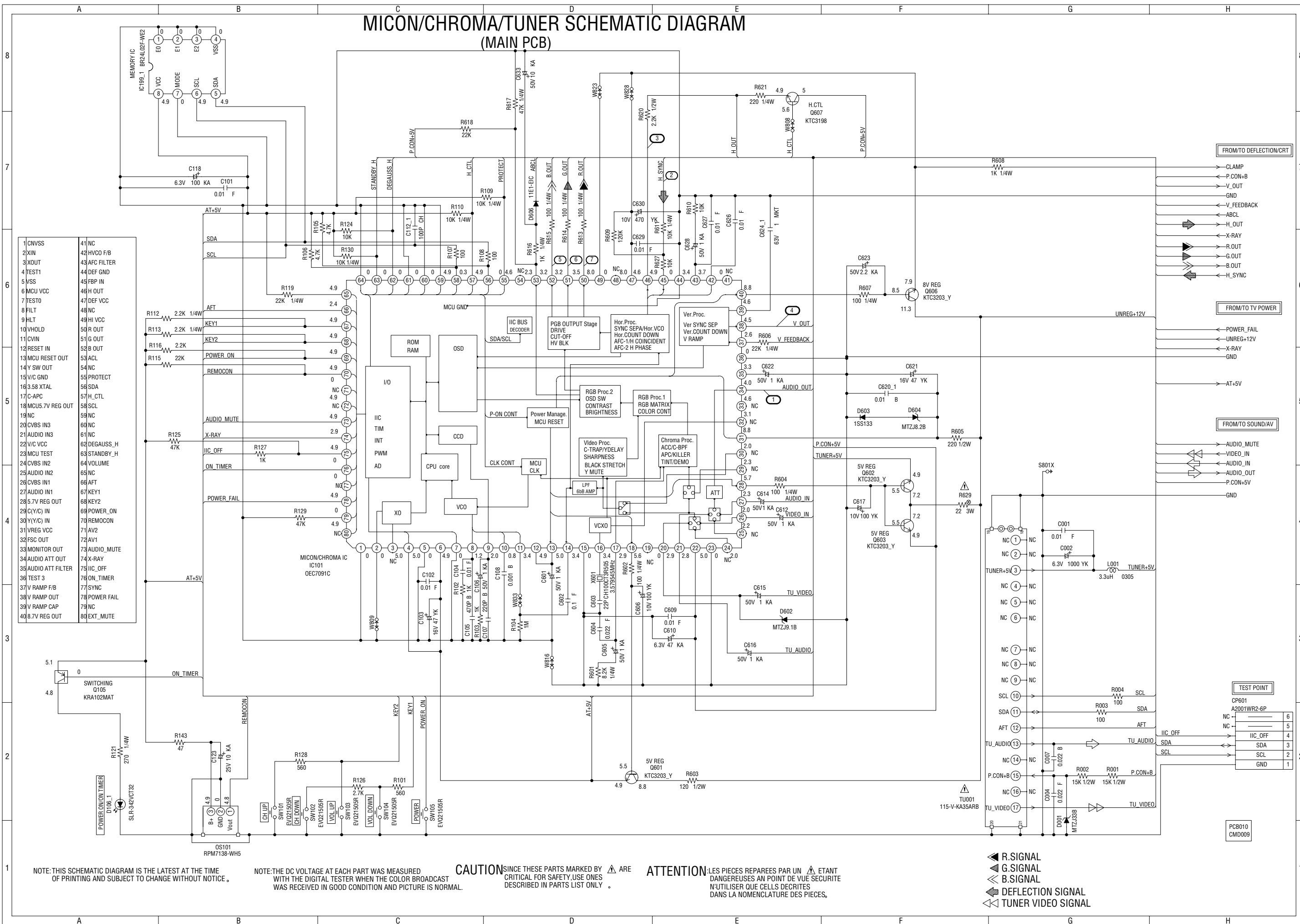




PRINTED CIRCUIT BOARDS  
MAIN (CHIP MOUNTED PARTS)  
SOLDER SIDE



# MICON/CHROMA/TUNER SCHEMATIC DIAGRAM (MAIN PCB)



1 CNVSS	41 NC
2 XIN	42 HVCO F/B
3 XOUT	43 AFC FILTER
4 TEST1	44 DEF GND
5 VSS	45 FBP IN
6 MCU VCC	46 H OUT
7 TEST0	47 DEF VCC
8 FILL	48 NC
9 HLT	49 HI VCC
10 V HOLD	50 R OUT
11 CVIN	51 G OUT
12 RESET IN	52 B OUT
13 MCU RESET OUT	53 ACL
14 Y SW OUT	54 NC
15 V/C GND	55 PROTECT
16 3.58 XTAL	56 SDA
17 C-APC	57 H_CTL
18 MCUS.7V REG OUT	58 SCL
19 NC	59 NC
20 CVBS IN3	60 NC
21 AUDIO IN3	61 NC
22 V/C VCC	62 DEGAUSS_H
23 MCU TEST	63 STANDBY_H
24 CVBS IN2	64 VOLUME
25 AUDIO IN2	65 NC
26 CVBS IN1	66 AFT
27 AUDIO IN1	67 KEY1
28 5.7V REG OUT	68 KEY2
29 C(Y/C) IN	69 POWER_ON
30 Y(Y/C) IN	70 REMOCON
31 VREG VCC	71 AV2
32 FSC OUT	72 AV1
33 MONITOR OUT	73 AUDIO_MUTE
34 AUDIO ATT OUT	74 X-RAY
35 AUDIO ATT FILTER	75 IIC_OFF
36 TEST 3	76 ON_TIMER
37 V RAMP F/B	77 SYNC
38 V RAMP OUT	78 POWER FAIL
39 V RAMP CAP	79 NC
40 8.7V REG OUT	80 EXT_MUTE

FROM/TO DEFLECTION/CRT

CLAMP
P.CON+B
V_OUT
GND
V_FEEDBACK
ABCL
H_OUT
X-RAY
R_OUT
G_OUT
B_OUT
H_SYNC

FROM/TO TV POWER

POWER_FAIL
UNREG+12V
X-RAY
GND
AT+5V

FROM/TO SOUND/AV

AUDIO_MUTE
VIDEO_IN
AUDIO_IN
AUDIO_OUT
P.CON+5V
GND

TEST POINT

CP601	6
A2001WR2-6P	5
NC	4
NC	3
IIC_OFF	2
SDA	1
SCL	1
GND	1

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

**CAUTION** SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

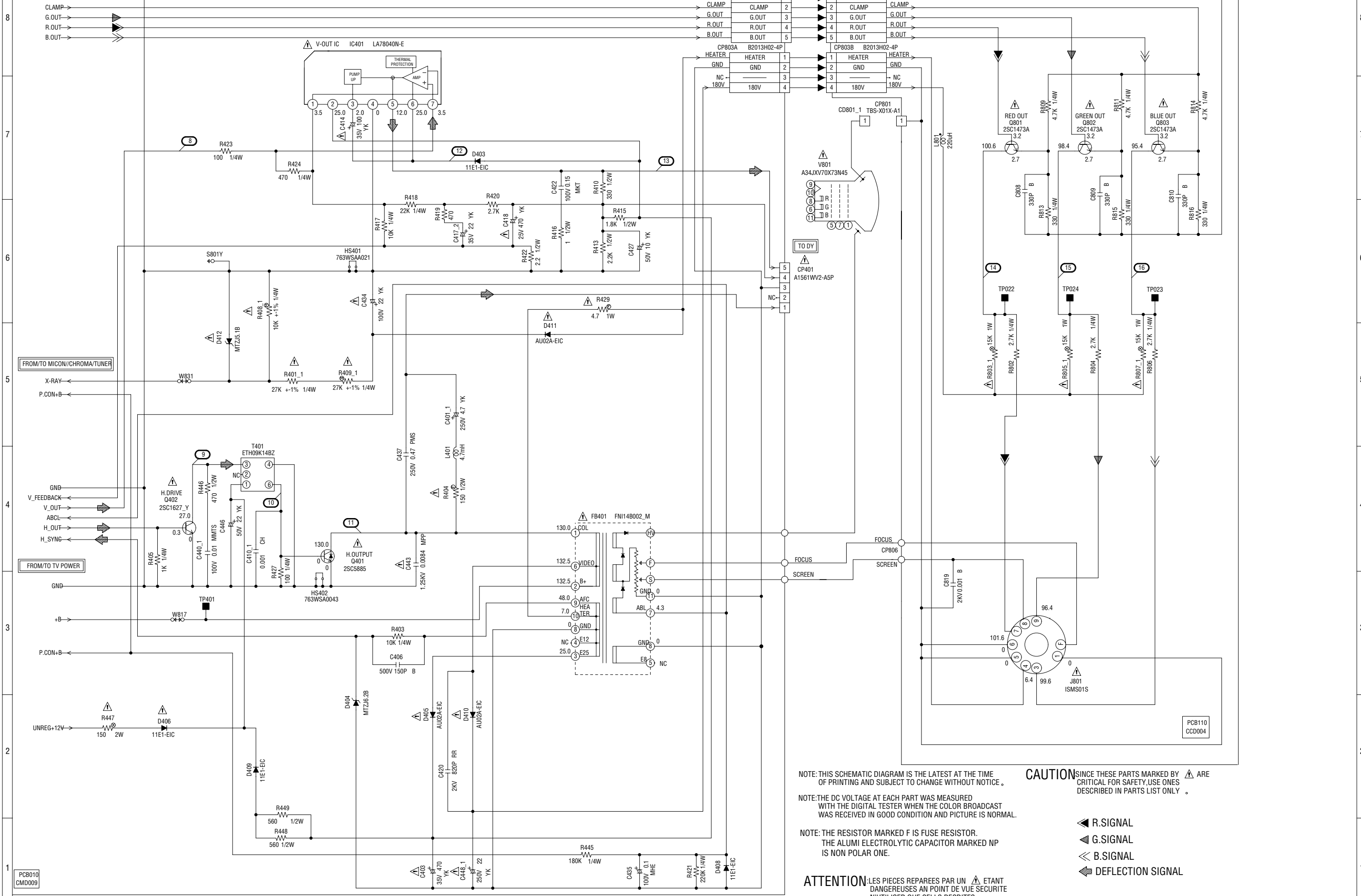
**ATTENTION** LES PIECES REPAREES PAR UN ETANT DANGEREUSES AU POINT DE VUE SECURITE N'UTILISER QUE CELLES DECRITES DANS LA NOMENCLATURE DES PIECES.

- R.SIGNAL
- G.SIGNAL
- B.SIGNAL
- DEFLECTION SIGNAL
- TUNER VIDEO SIGNAL



# DEFLECTION/CRT SCHEMATIC DIAGRAM (MAIN PCB)

# (CRT PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

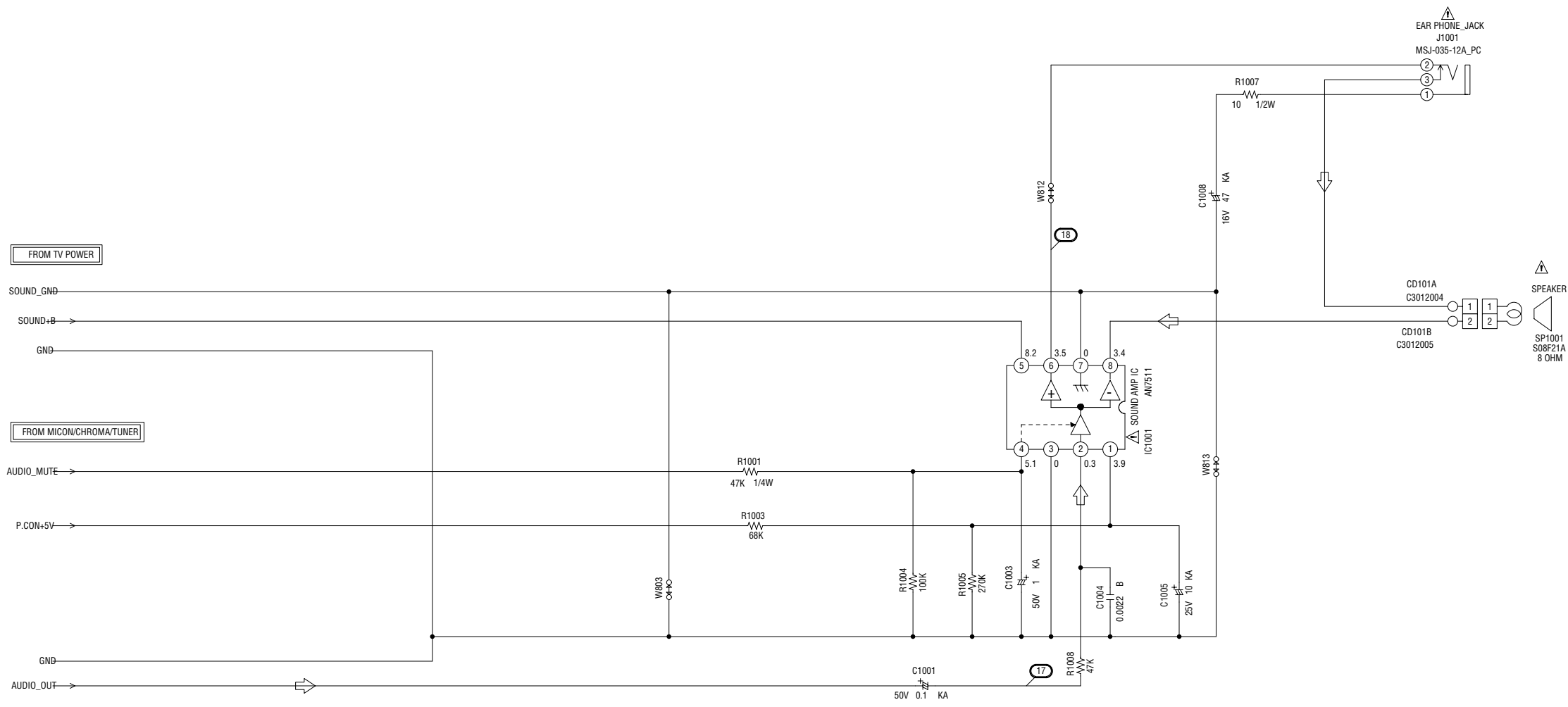
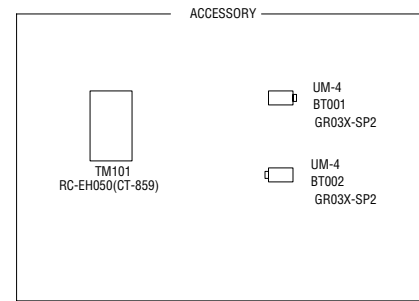
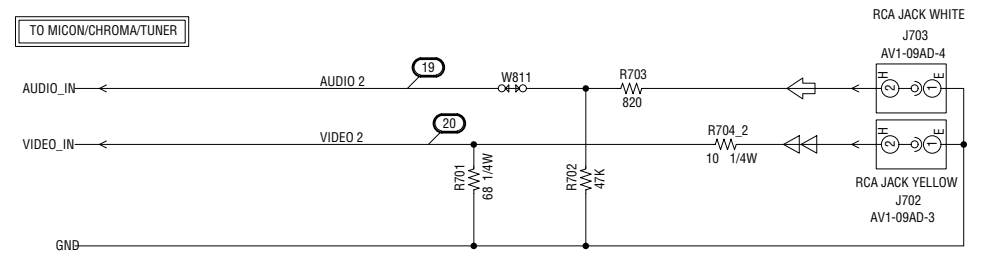
NOTE: THE RESISTOR MARKED F IS FUSE RESISTOR. THE ALUMI ELECTROLYTIC CAPACITOR MARKED NP IS NON POLAR ONE.

**CAUTION** SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

- R.SIGNAL
- G.SIGNAL
- B.SIGNAL
- DEFLECTION SIGNAL

**ATTENTION** LES PIECES REPARÉES PAR UN ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

# SOUND/AV SCHEMATIC DIAGRAM (MAIN PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

**CAUTION** SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

**ATTENTION** LES PIECES REPARÉES PAR UN ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

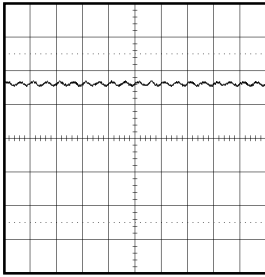
TUNER VIDEO SIGNAL  
 AUDIO SIGNAL

PC8010  
CMD009

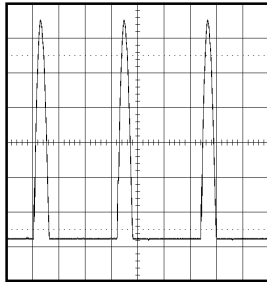


# WAVEFORMS

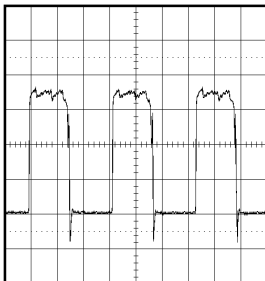
## MICON/CHROMA/TUNER



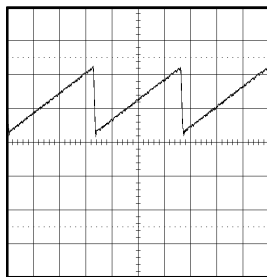
① 0.5V 2ms/div



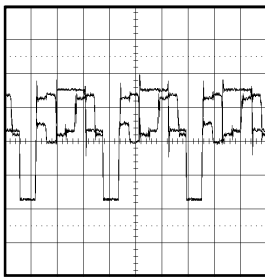
② 20V 20μs/div



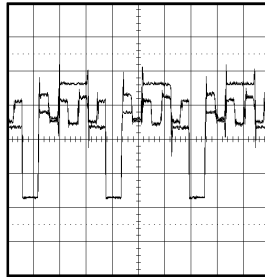
③ 200mV 20μs/div



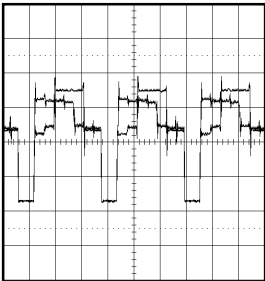
④ 0.5V 5ms/div



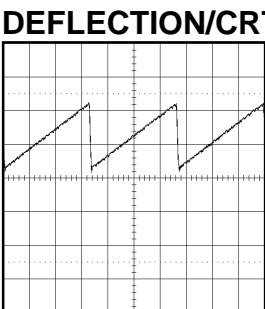
⑤ 1V 20μs/div



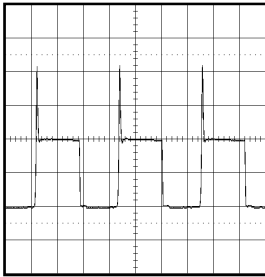
⑥ 1V 20μs/div



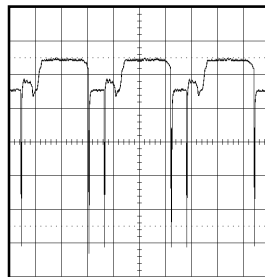
⑦ 1V 20μs/div



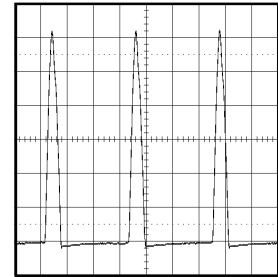
⑧ 0.5V 5ms/div



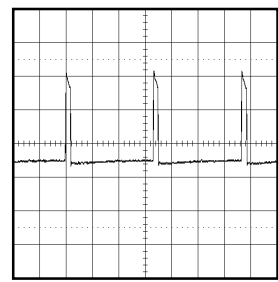
⑨ 20V 20μs/div



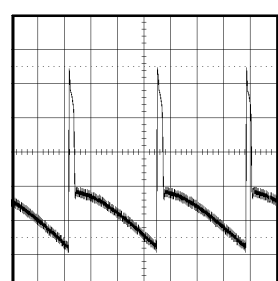
⑩ 2V 20μs/div



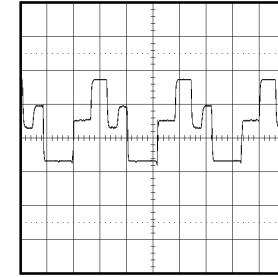
⑪ 200V 20μs/div



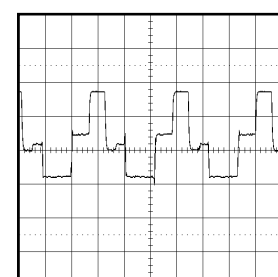
⑫ 10V 5ms/div



⑬ 10V 5ms/div



⑭ 50V 20μs/div

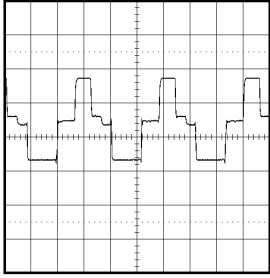


⑮ 50V 20μs/div

## DEFLECTION/CRT

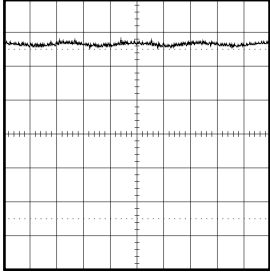
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

# WAVEFORMS

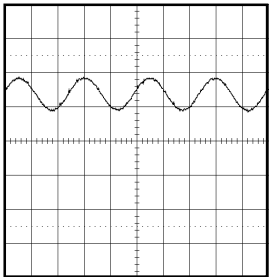


⑩ 50V 20µs/div

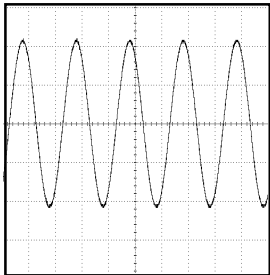
## SOUND/AV



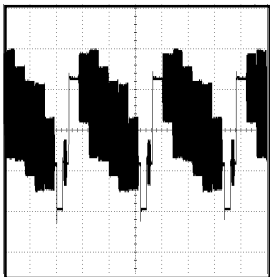
⑪ 0.5V 1ms/div



⑫ 1V 1ms/div



⑬ 200mV 500µs/div



⑭ 500mV 20µs/div

**NOTE:** The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.