

TOSHIBA

FILE NO. 810-200547

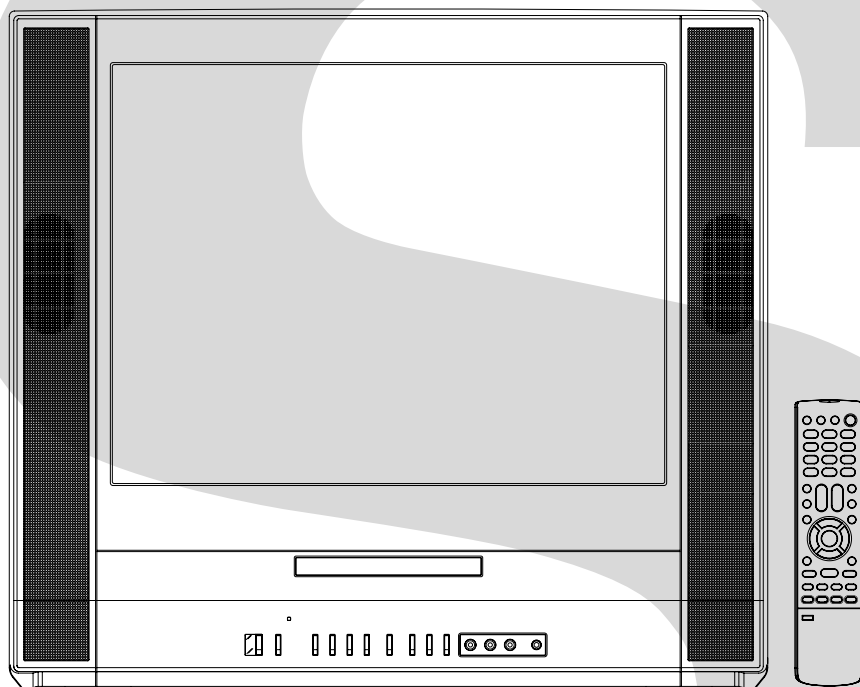
REVISED . 1

SERVICE MANUAL

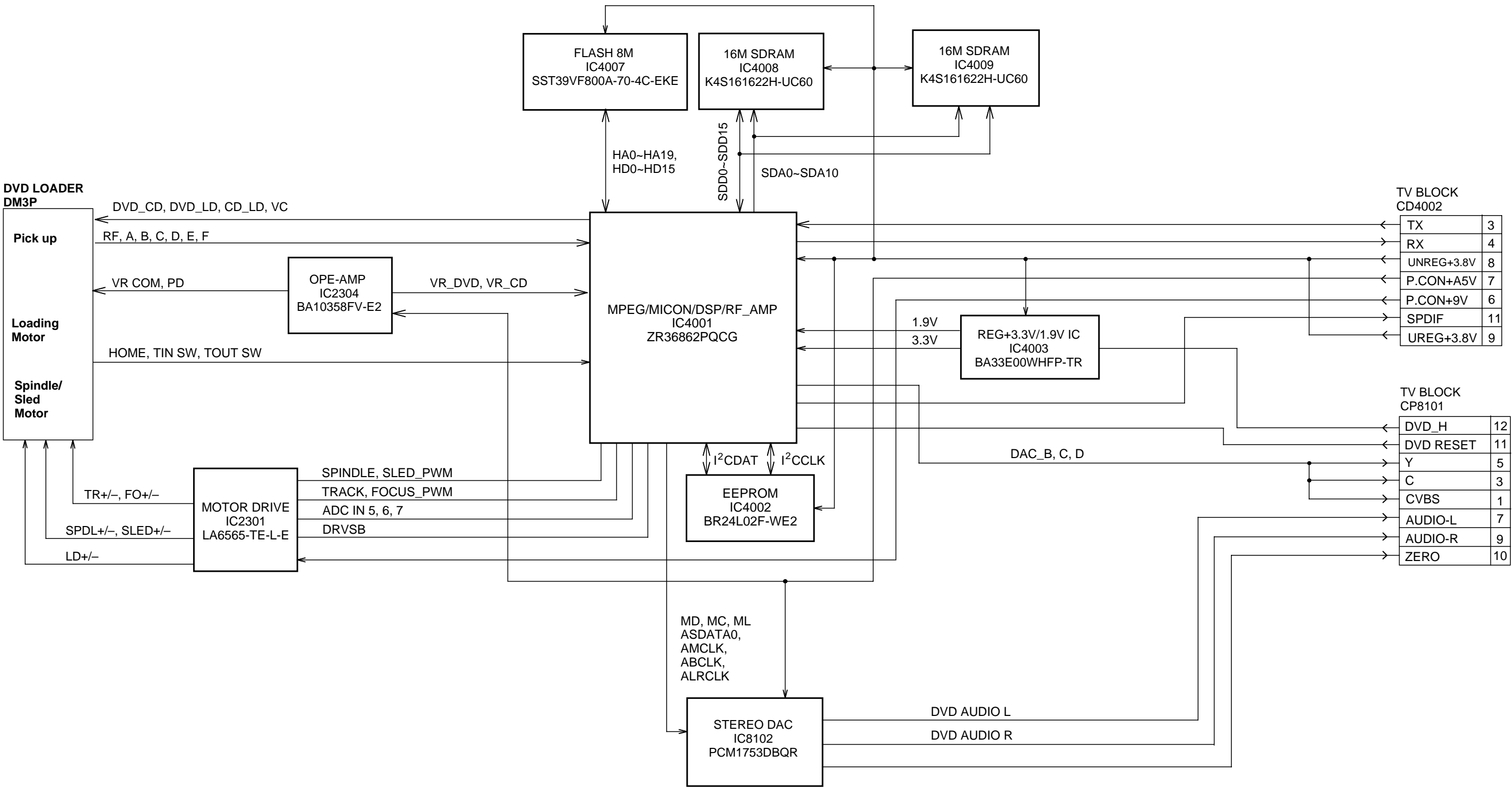


COMBINATION 21" FLAT TV AND DVD VIDEO PLAYER TELE TEXT

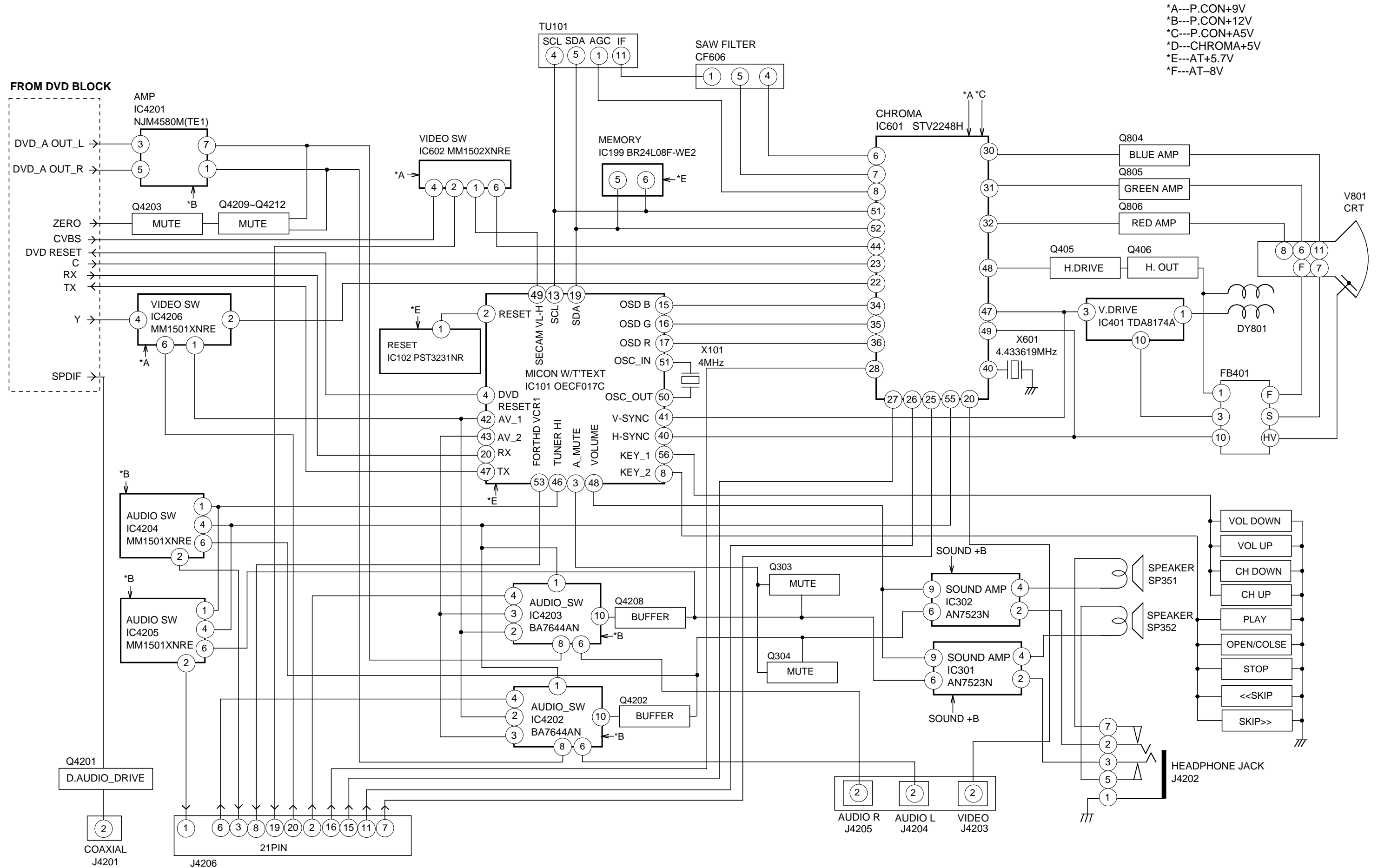
VTD21FQR



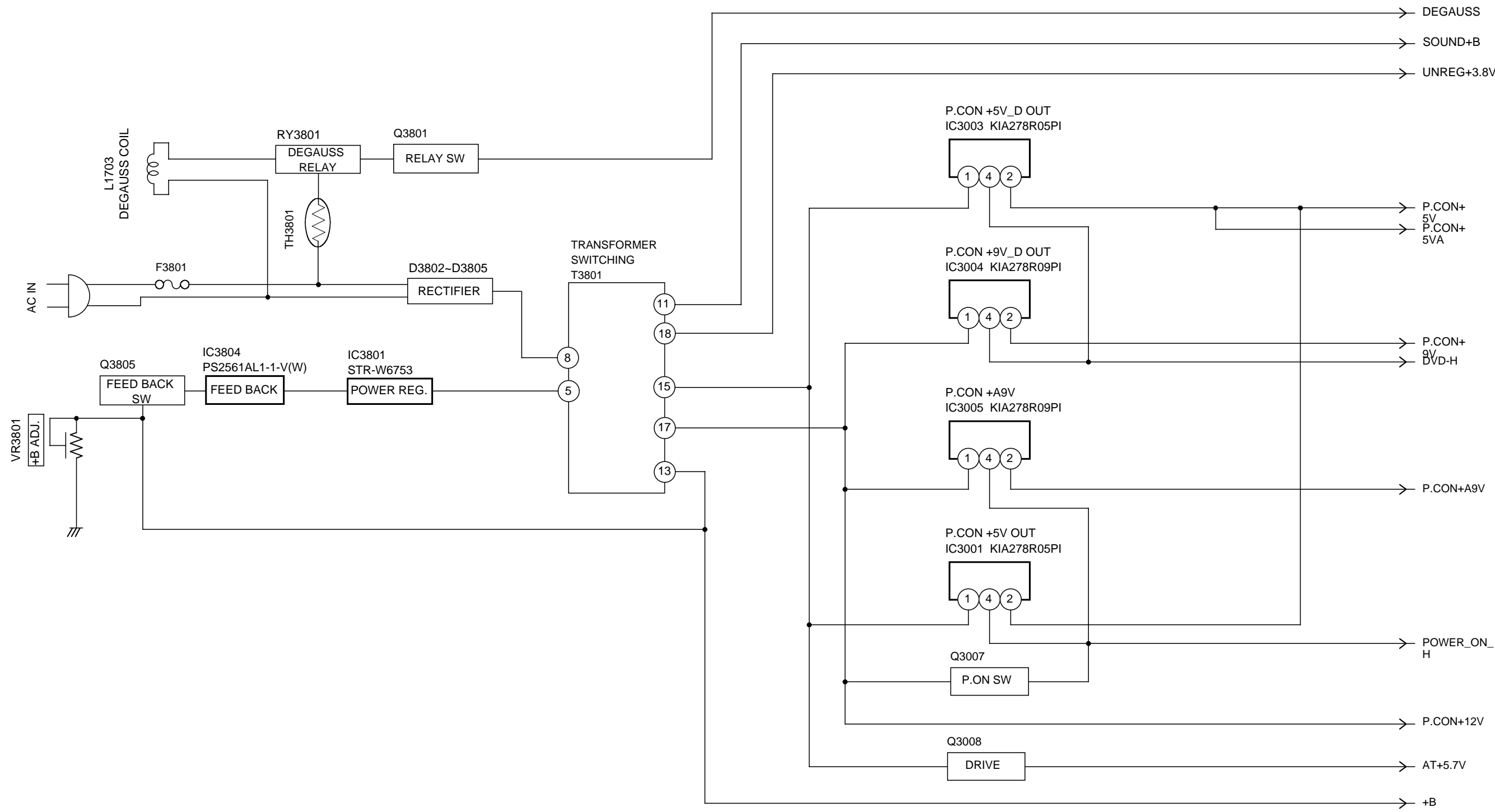
DVD BLOCK DIAGRAM



TV BLOCK DIAGRAM

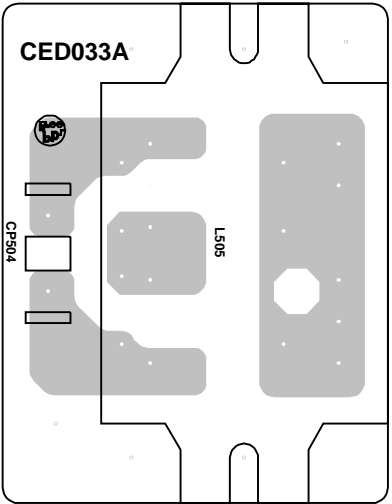


POWER BLOCK DIAGRAM

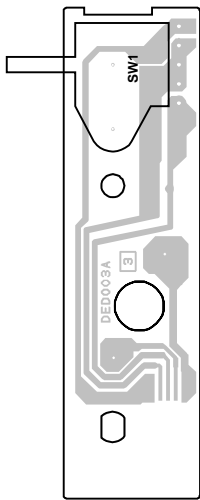


PRINTED CIRCUIT BOARDS

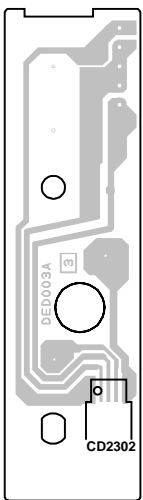
FILTER
SOLDER SIDE



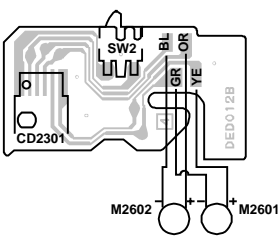
LOADING MOTOR (INSERTED PARTS)
SOLDER SIDE



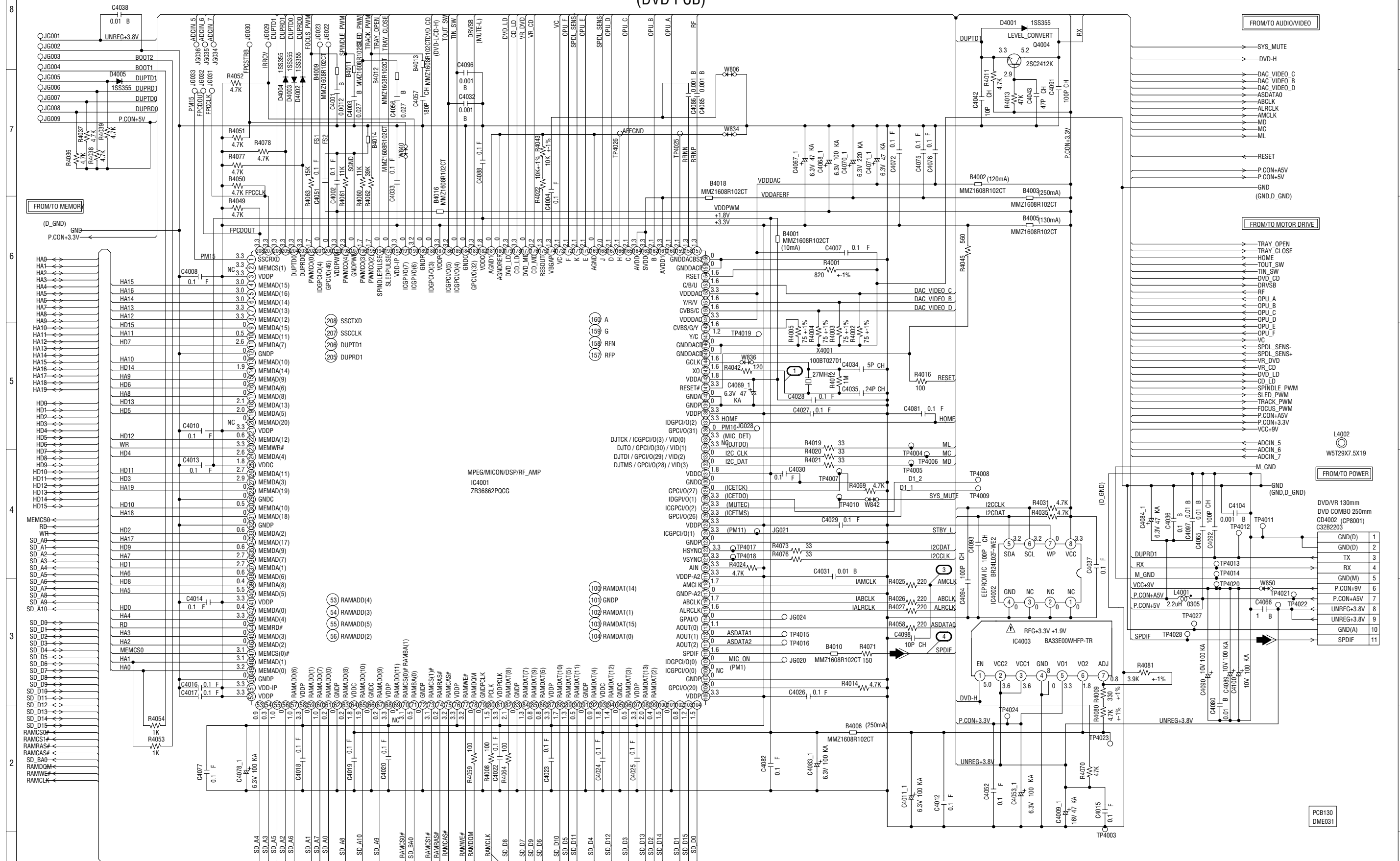
LOADING MOTOR (CHIP MOUNTED PARTS)
SOLDER SIDE



SW
SOLDER SIDE



MPEG/MICON/DSP/RF_AMP SCHEMATIC DIAGRAM



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

NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

ATTENTION: LES PIÈCES RÉPARÉES PAR UN ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

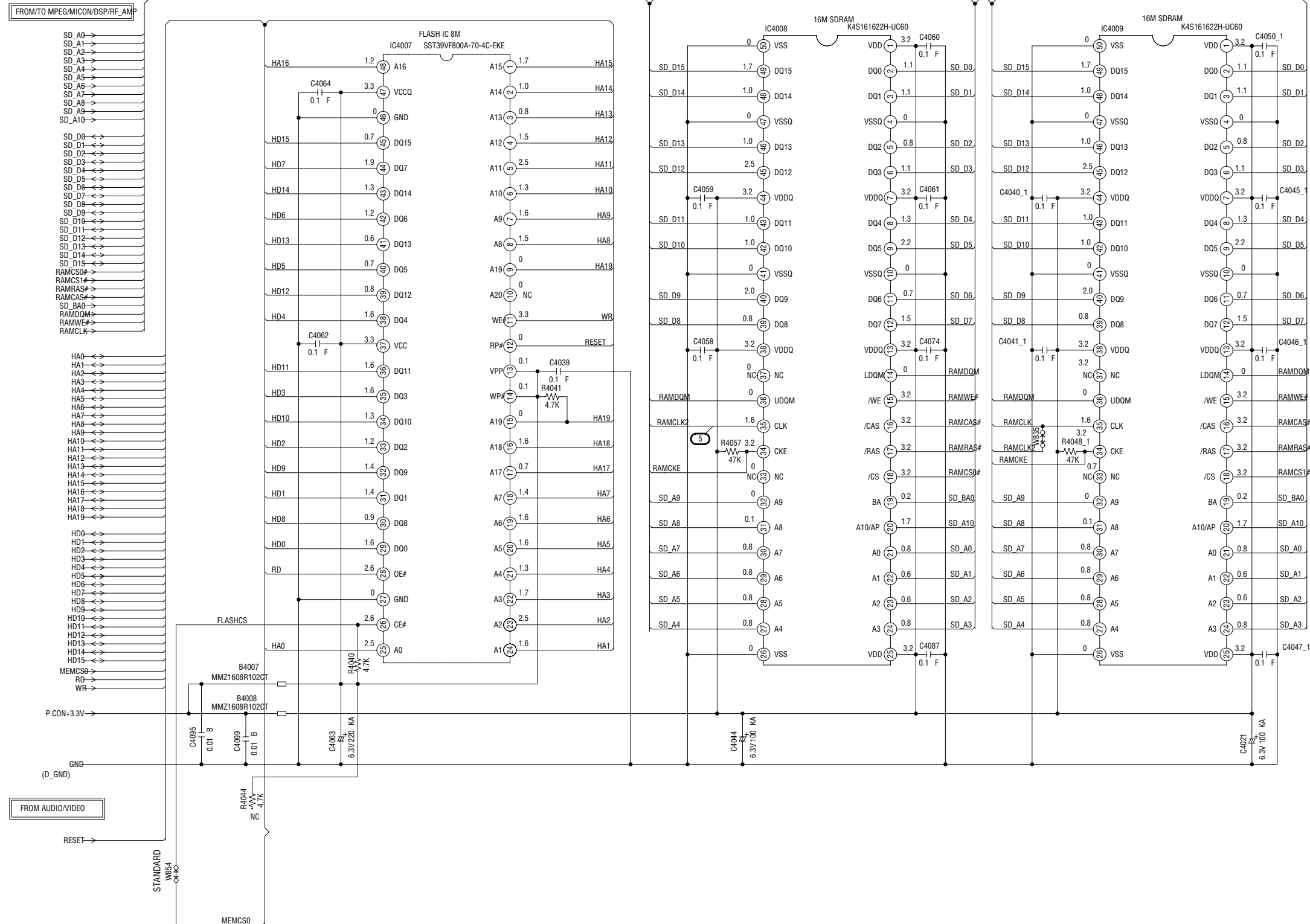
CAUTION SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

◀ DIGITAL AUDIO SIGNAL(PB)

PCB130
DME031

MEMORY SCHEMATIC DIAGRAM

(DVD PCB)

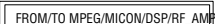


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

PCB130
DME031

(DVD PCB)



NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

PCB130
DME031

AUDIO/VIDEO SCHEMATIC DIAGRAM
(DVD PCB)

	1	2	3	4
A	Y	G	CVBS	Y
B	V	R	Y	V
C	U	B	C	U
D	C	CVBS	CVBS	CVBS

FROM/TO MPEG/MICON/DSP/RF AMP

P.CON+5V
DAC_VIDEO_C
DAC_VIDEO_B
DAC_VIDEO_D
P.CON+5V

RESET
MC
MD
ML
AMCLK
ABCLK
ALRCLK
ASDATA0

DVD-H
SYS_MUTE
GND
(GND_D_GND)

TO MEMORY

RESET

TO MOTOR DRIVER

CD_LD_CTL

A

B

C

D

E

F

G

H

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

NOTE: THE DC VOLTAGE EACH PART WAS
MEASURED WITH THE DIGITAL TESTER
DURING PLAYBACK.

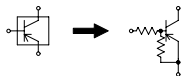
◀ PLAYBACK COLOR SIGNAL

◀ AUDIO SIGNAL(PB)

◀ R.SIGNAL + COMPONENT SIGNAL(U)

◀ B.SIGNAL + COMPONENT SIGNAL(V)

CAUTION: DIGITAL TRANSISTOR



FROM/TO TUNER/JACK

DVD/VR 95mm
CP8101_2 IMSA-9604S-12F
DVD-H(GND) 12
DVD RESET 11
ZERO 10
AUDIO-R 9
GND 8
AUDIO-L 7
GND 6
Y 5
GND 4
C 3
GND 2
CVBS 1

FFC(1.0mm pitch)
CD8101
2FC1602

PCB130
DME031

H-7

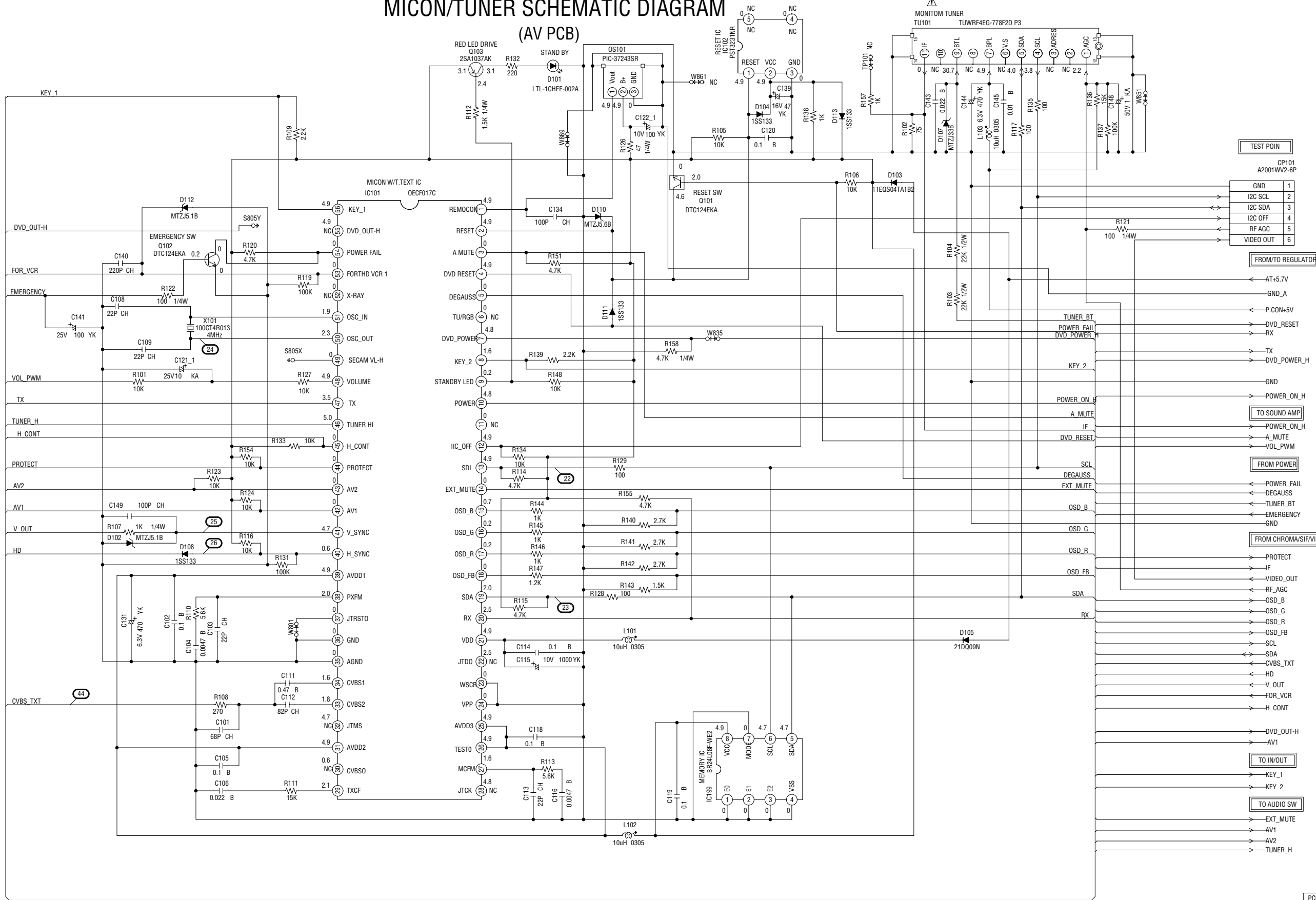
H-8

(AV PCB)




- ◀◀ DIGITAL AUDIO SIGNAL(PB)
- ◀◀ AUDIO SIGNAL(PB)
- ◀◀ PLAYBACK LUMINANCE SIGNAL
- ◀◀ PLAYBACK COLOR SIGNAL


MICON/TUNER SCHEMATIC DIAGRAM (AV PCB)



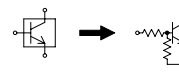
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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

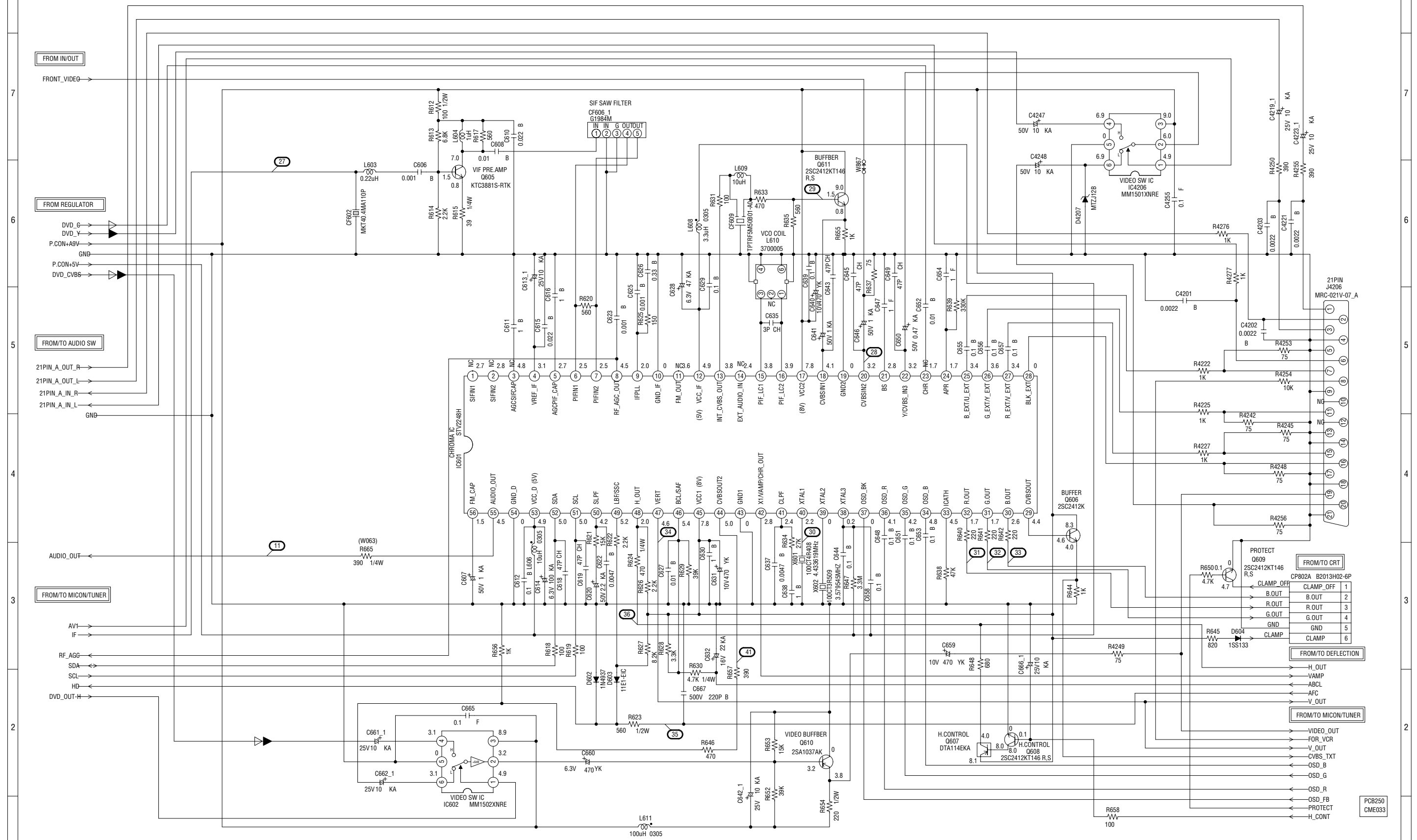
ATTENTION: LES PIÈCES RÉPARÉES PAR UN  ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ, N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

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

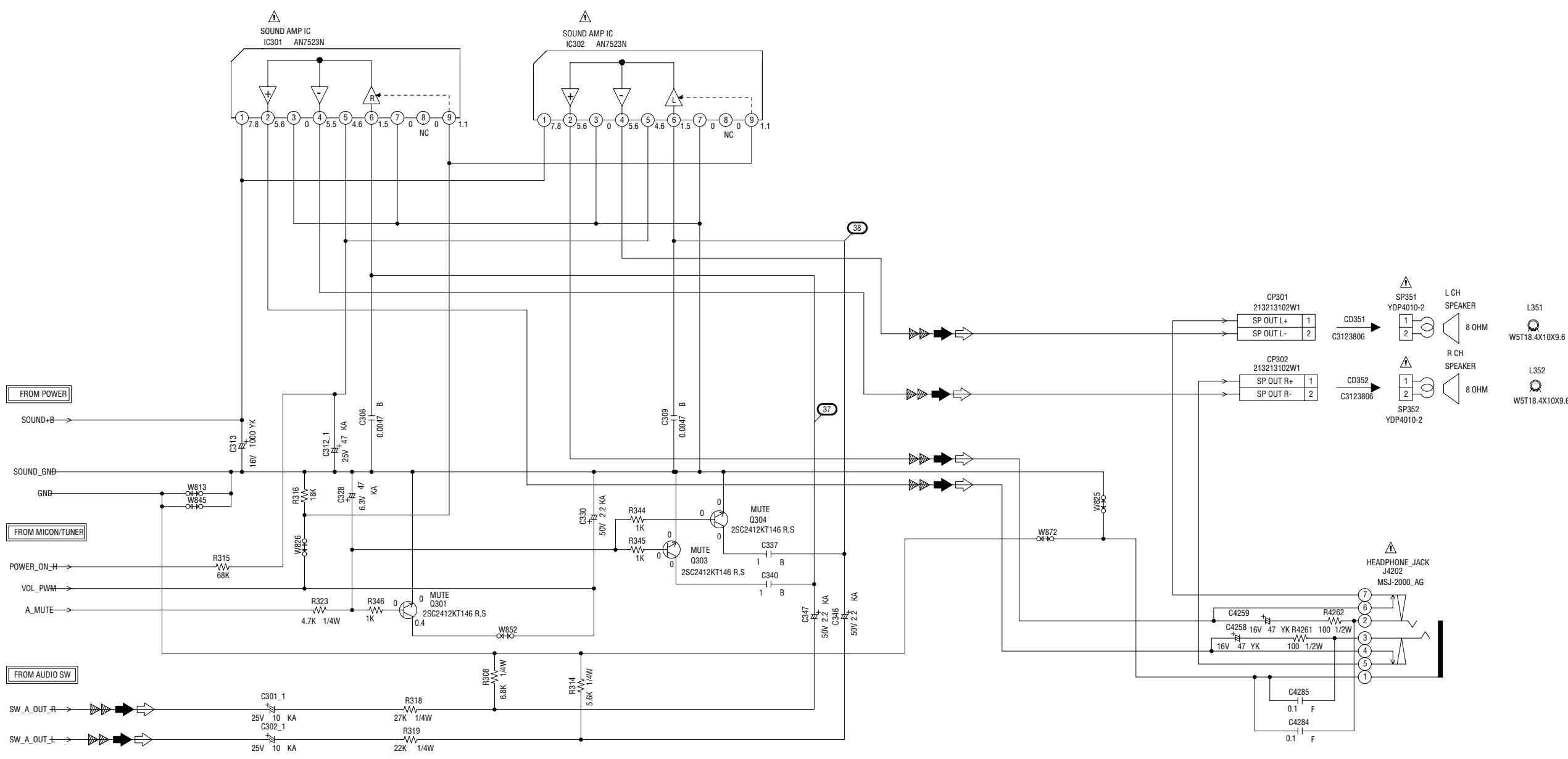
CAUTION: DIGITAL TRANSISTOR



CHROMA/SIF/VIF/21PIN SCHEMATIC DIAGRAM (AV PCB)



SOUND AMP SCHEMATIC DIAGRAM
(AV PCB)



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

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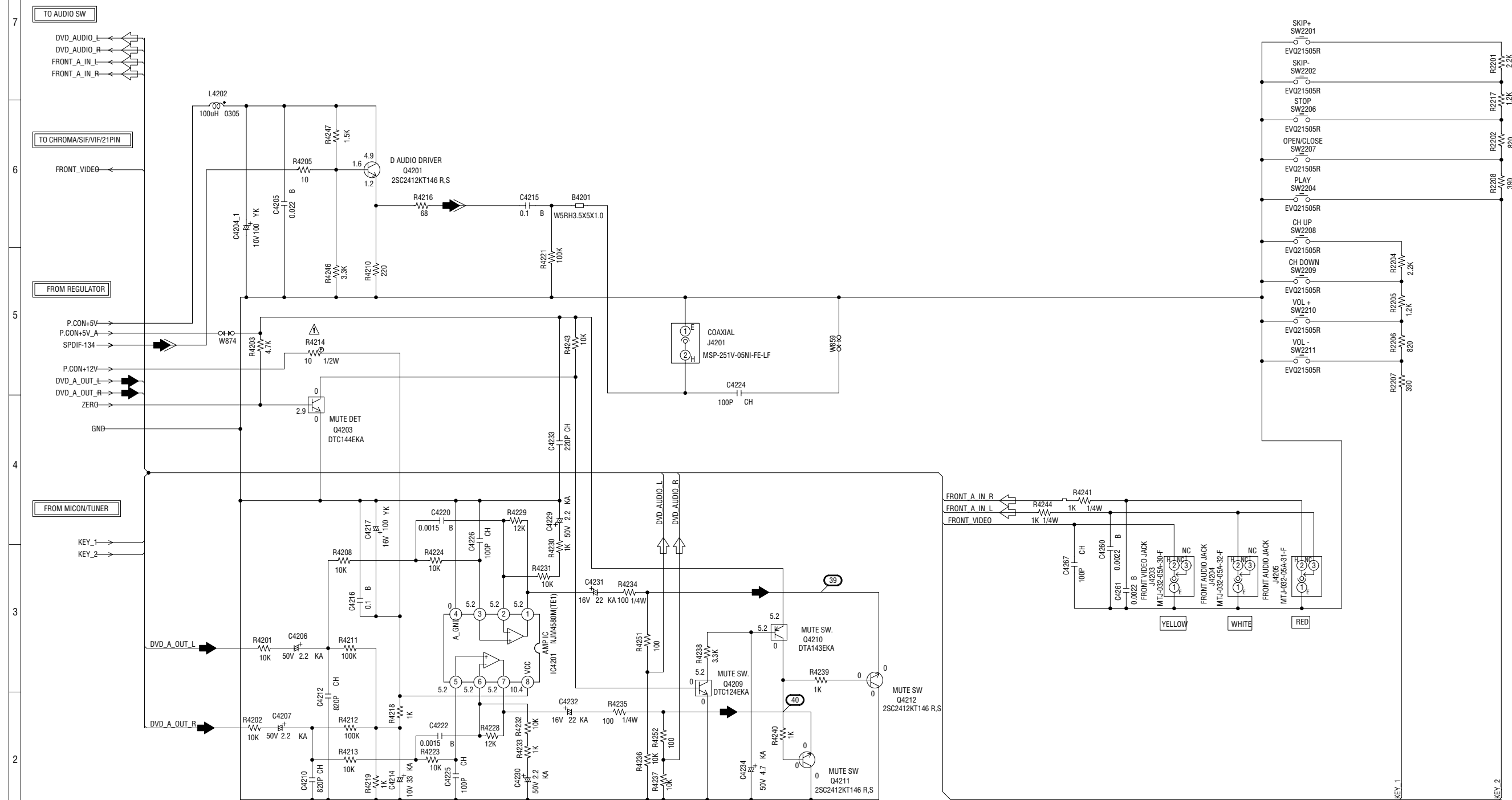
ATTENTION: LES PIÈCES RÉPARÉES PAR UN ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ, N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

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

AUDIO SIGNAL
 AUDIO SIGNAL (PB)
 TUNER AUDIO SIGNAL

PCB250
CME033

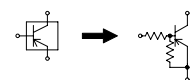
IN/OUT SCHEMATIC DIAGRAM (AV PCB)



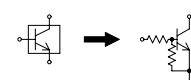
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

CAUTION: DIGITAL TRANSISTOR



CAUTION: DIGITAL TRANSISTOR

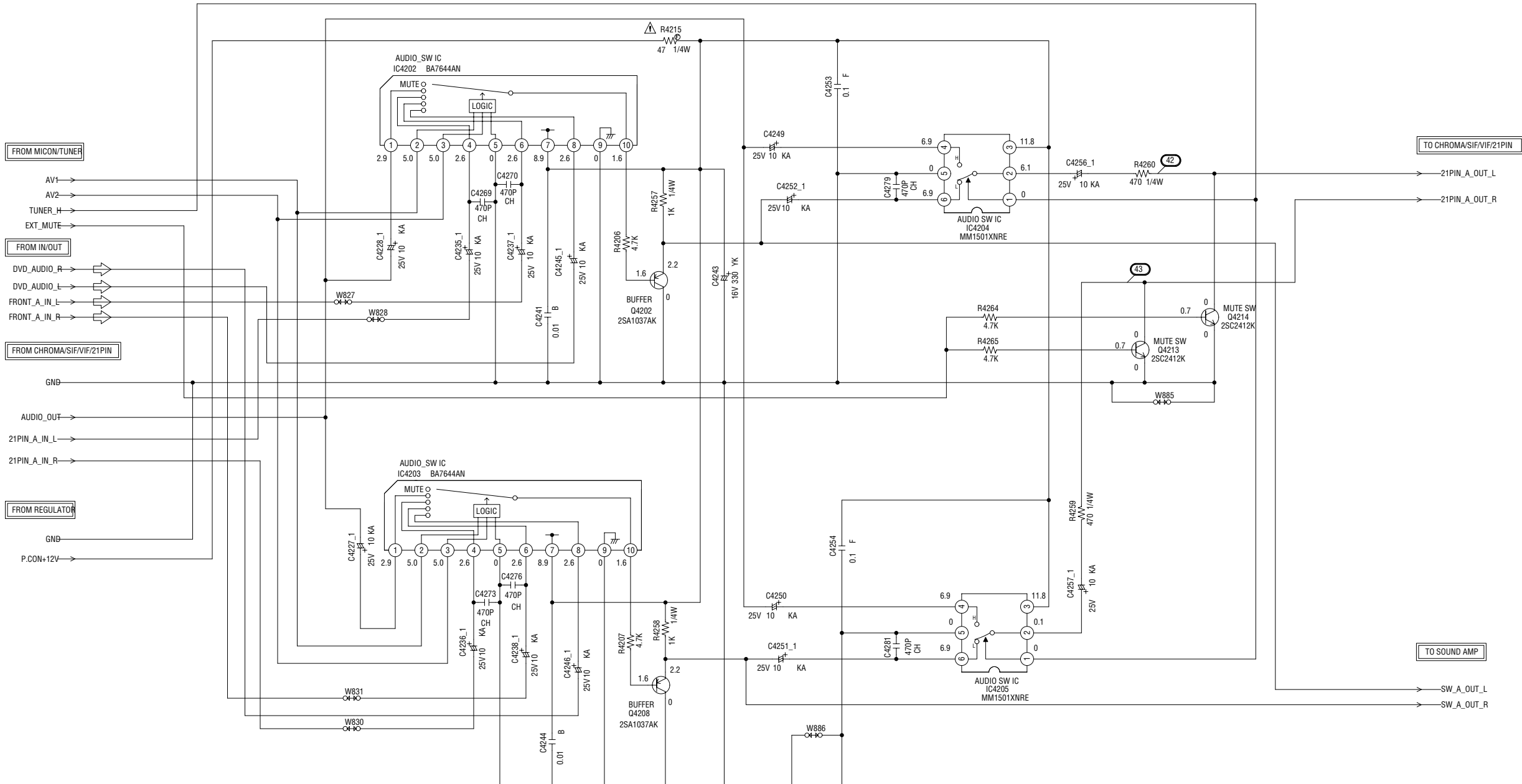


- ↶ AUDIO SIGNAL
- ➡ AUDIO SIGNAL(PB)
- ➡➡ DIGITAL AUDIO SIGNAL(PB)

PC8250
CME033

AUDIO SW SCHEMATIC DIAGRAM

(AV PCB)



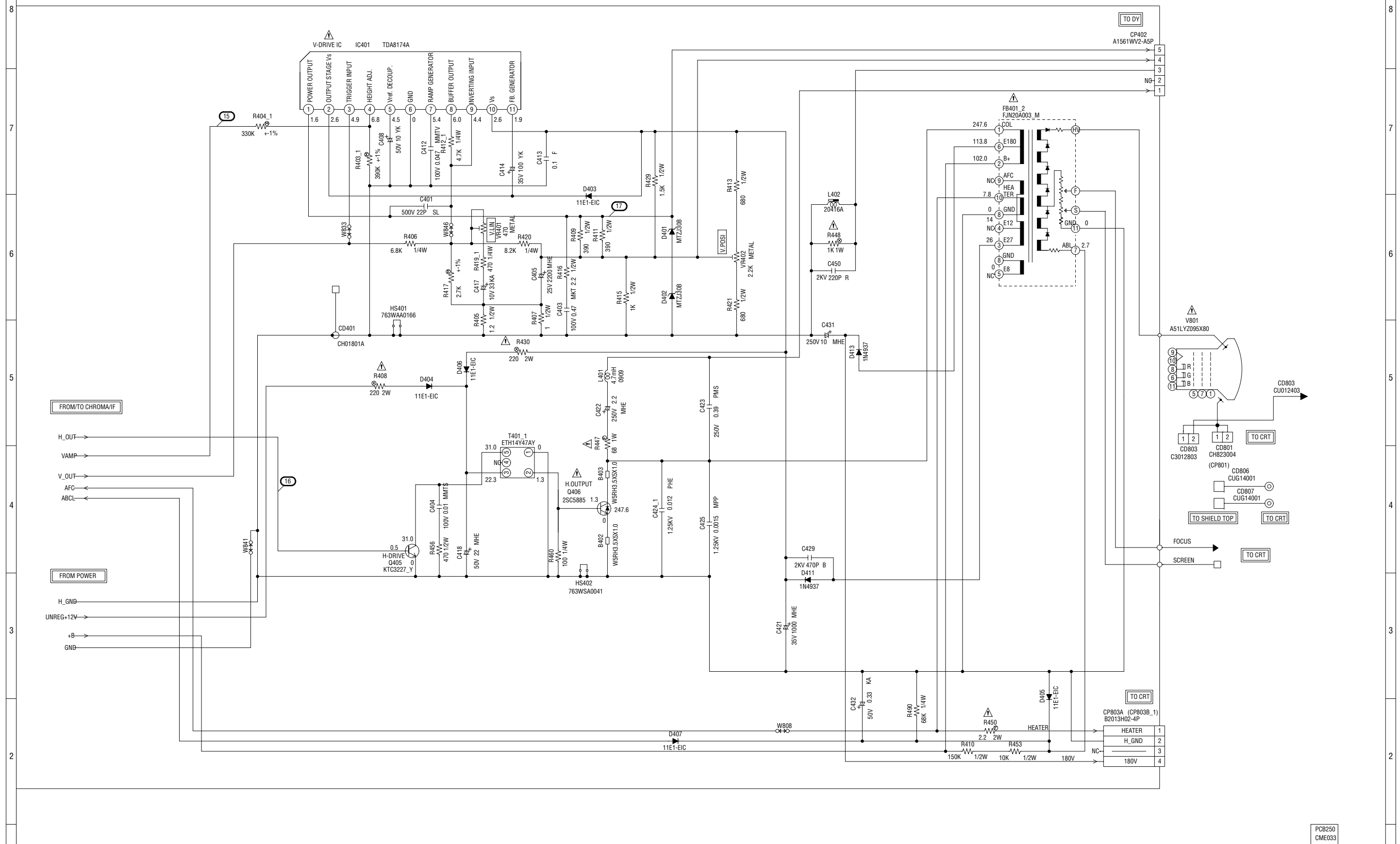
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

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.

← AUDIO SIGNAL(REC

PCB250
CME033

DEFLECTION SCHEMATIC DIAGRAM (AV 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.

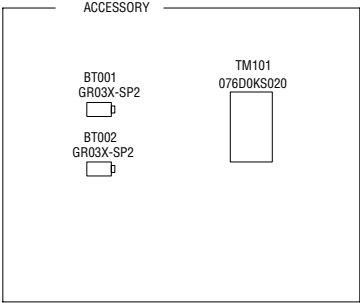
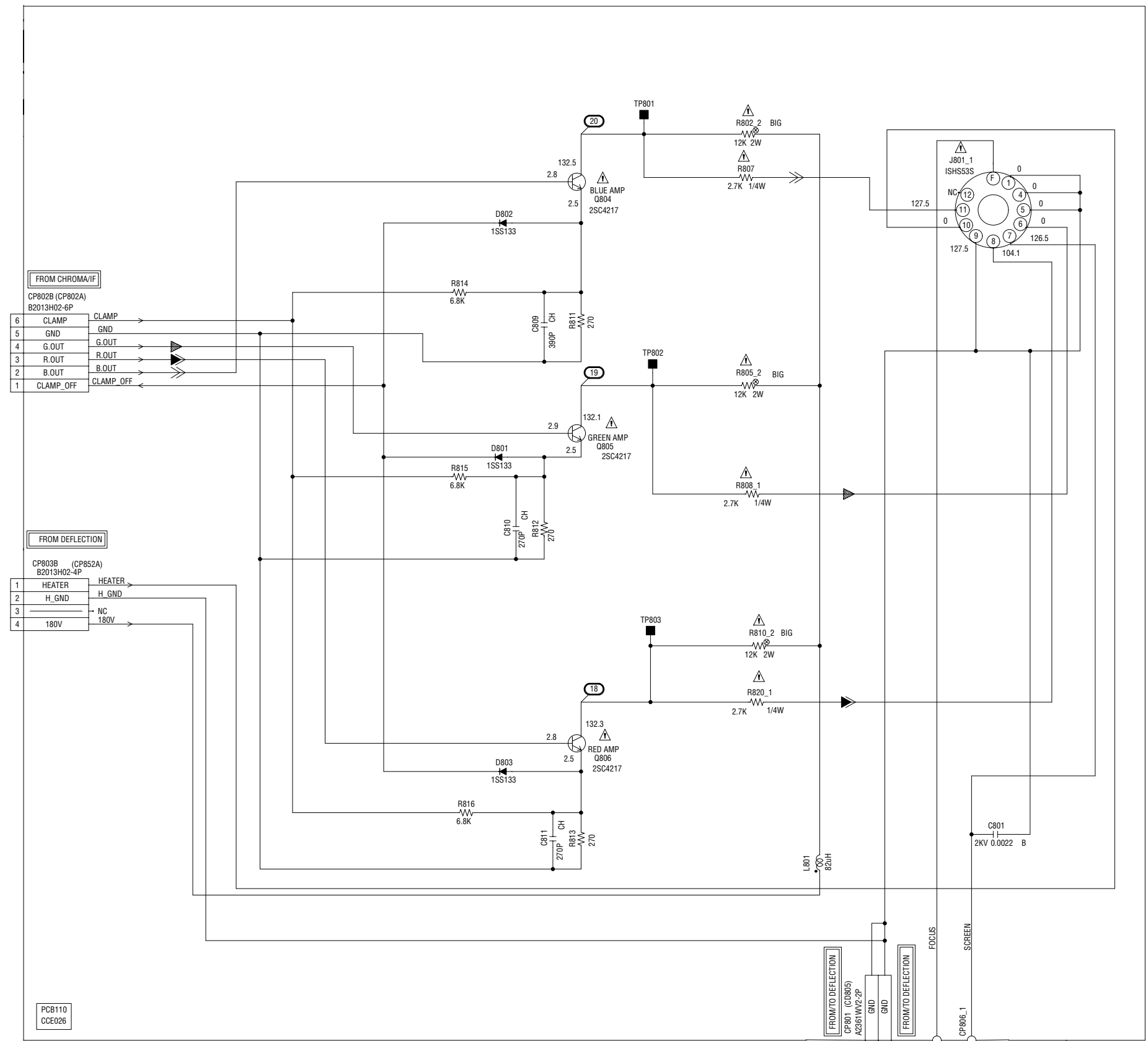
NOTE: THE RESISTOR MARKED F IS FUSE RESISTOR.
THE ALUMI ELECTROLYTIC CAPACITOR MARKED NP
IS NON POLAR ONE.

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

ATTENTION: LES PIÈCES RÉPARÉES PAR UN  ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

PCB250
CME033

CRT SCHEMATIC DIAGRAM
(CRT PCB)



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.

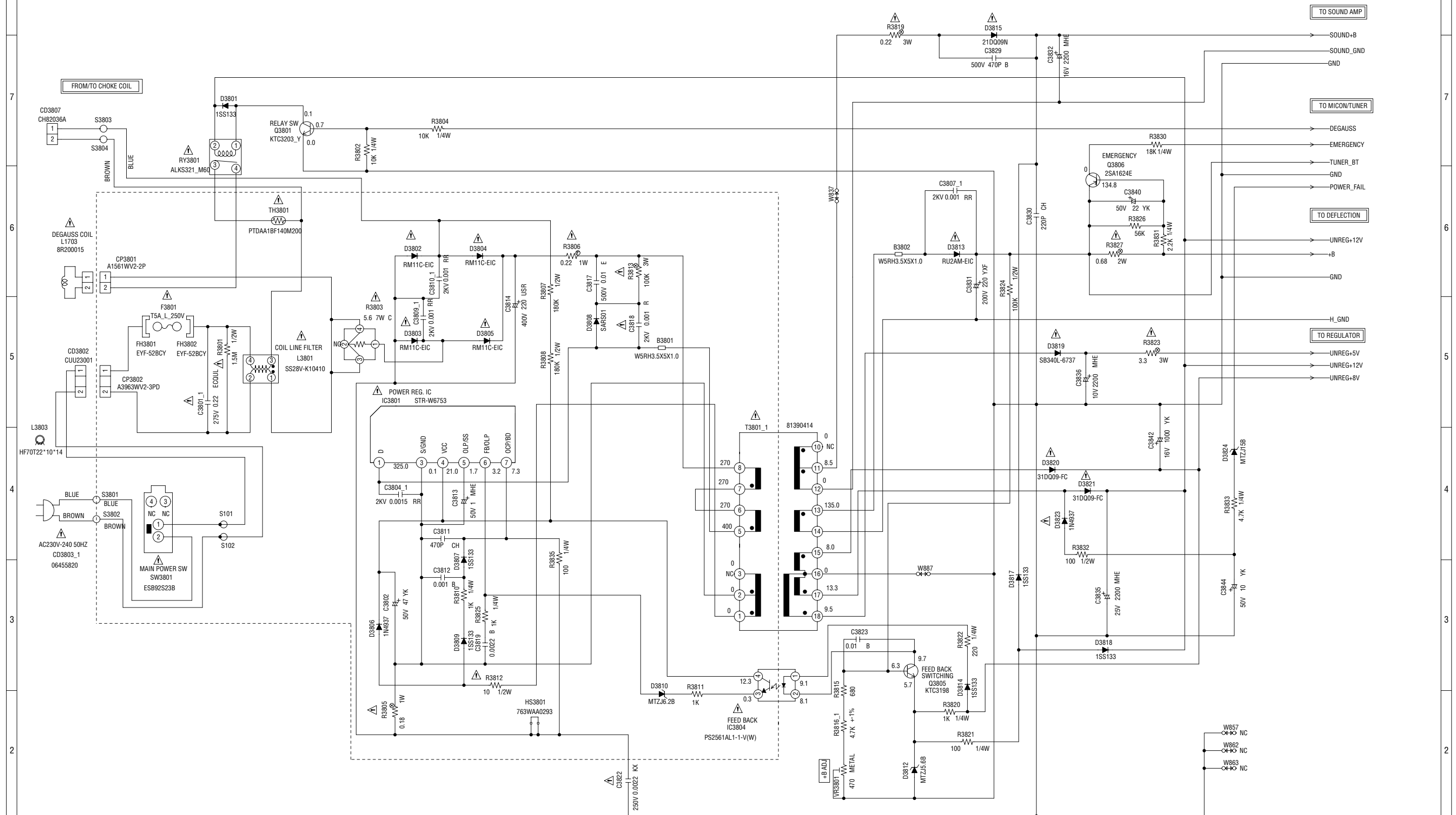
NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

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 AU POINT DE VUE SECURITE
N'UTILISER QUE CELLES DECRITES
DANS LA NOMENCLATURE DES PIECES.

◀ R.SIGNAL
◀ G.SIGNAL
◀ B.SIGNAL

POWER SCHEMATIC DIAGRAM (AV PCB)



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

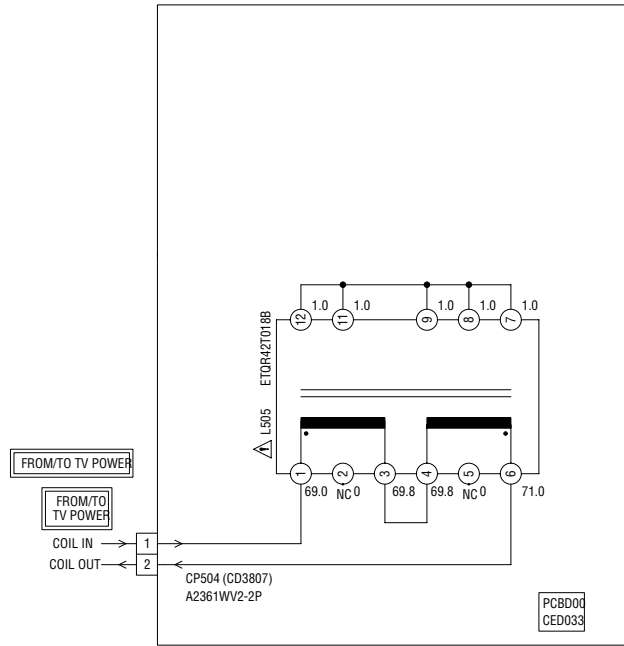
CAUTION SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

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.


PC8250
CME033


CHOKES COIL SCHEMATIC DIAGRAM
(FILTER PCB)



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

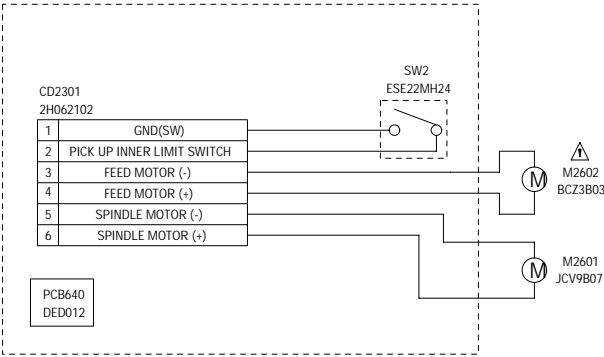
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

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

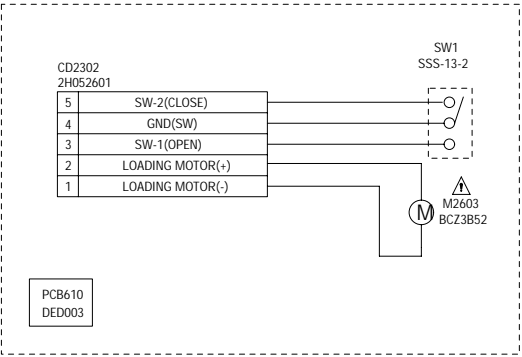
ATTENTION LES PIECES REPARÉES PAR UN  ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ, N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

LOADING MOTOR/SW SCHEMATIC DIAGRAM

(SW PCB)

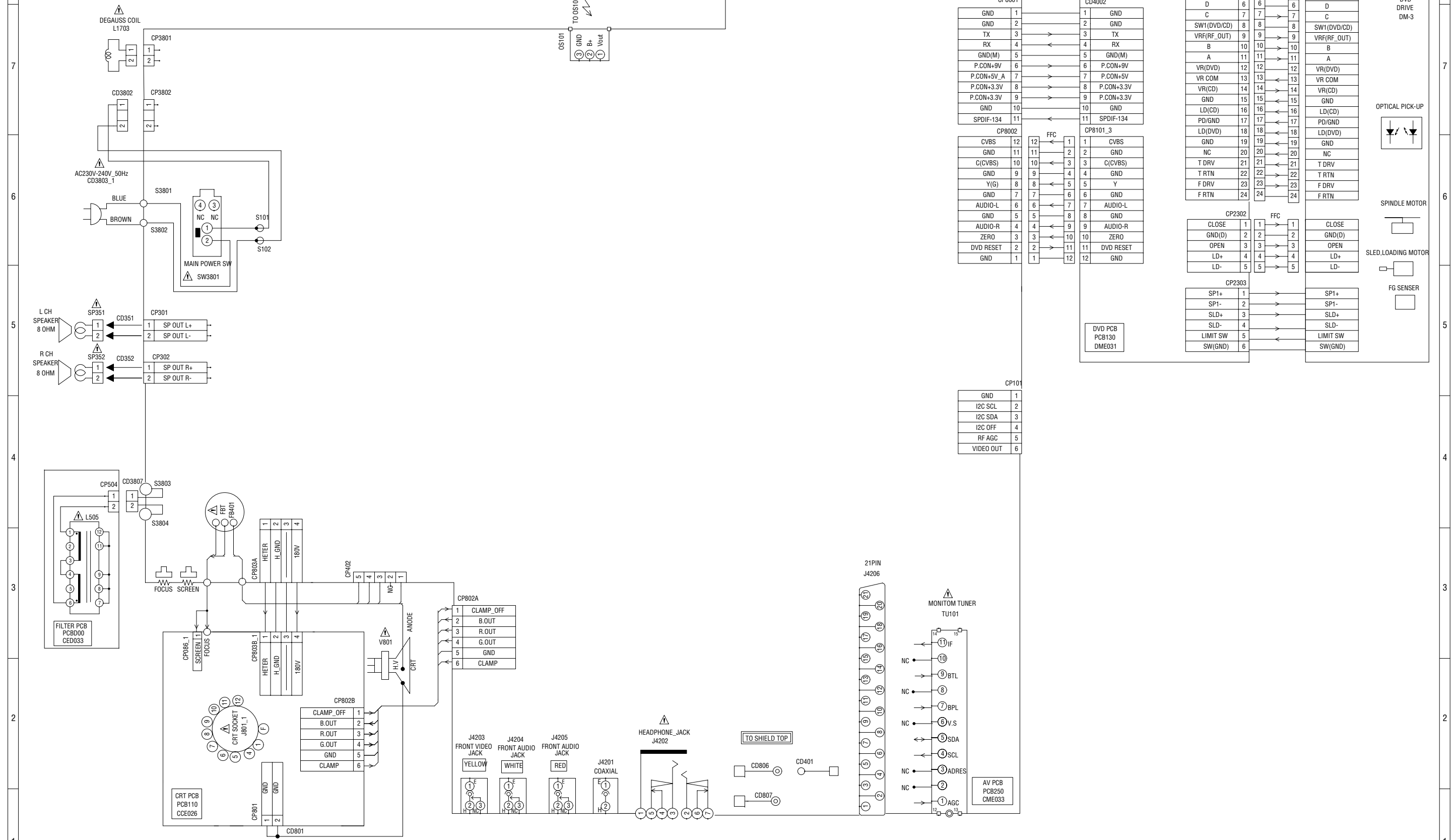


(LOADING MOTOR PCB)



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

INTERCONNECTION DIAGRAM



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

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

CP8001	
GND	1
GND	2
TX	3
RX	4
GND(M)	5
P.CON+9V	6
P.CON+5V_A	7
P.CON+3.3V	8
P.CON+3.3V	9
GND	10
SPDIF-134	11

CP8002	
CVBS	12
GND	11
C(CVBS)	10
GND	9
Y(G)	8
GND	7
AUDIO-L	6
GND	5
AUDIO-R	4
ZERO	3
DVD RESET	2
GND	1

CP101	
GND	1
I2C SCL	2
I2C SDA	3
I2C OFF	4
RF AGC	5
VIDEO OUT	6

CP8001	
GND	1
GND	2
TX	3
RX	4
GND(M)	5
P.CON+9V	6
P.CON+5V	7
P.CON+3.3V	8
P.CON+3.3V	9
GND	10
SPDIF-134	11

CP8002	
CVBS	12
GND	11
C(CVBS)	10
GND	9
Y(G)	8
GND	7
AUDIO-L	6
GND	5
AUDIO-R	4
ZERO	3
DVD RESET	2
GND	1

CP101	
GND	1
I2C SCL	2
I2C SDA	3
I2C OFF	4
RF AGC	5
VIDEO OUT	6

CP2301	
GND	1
F	2
Vref	3
VCC	4
E	5
D	6
C	7
SW1(DVD/CD)	8
VRF(RF_OUT)	9
B	10
A	11
VR(DVD)	12
VR COM	13
VR(CD)	14
GND	15
LD(CD)	16
PD/GND	17
LD(DVD)	18
GND	19
NC	20
T DRV	21
T RTN	22
F DRV	23
F RTN	24

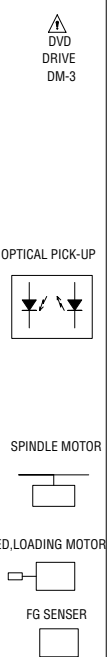
CP2302	
CLOSE	1
GND(D)	2
OPEN	3
LD+	4
LD-	5

CP2303	
SP1+	1
SP1-	2
SLD+	3
SLD-	4
LIMIT SW	5
SW(GND)	6

CP2301	
GND	1
F	2
Vref	3
VCC	4
E	5
D	6
C	7
SW1(DVD/CD)	8
VRF(RF_OUT)	9
B	10
A	11
VR(DVD)	12
VR COM	13
VR(CD)	14
GND	15
LD(CD)	16
PD/GND	17
LD(DVD)	18
GND	19
NC	20
T DRV	21
T RTN	22
F DRV	23
F RTN	24

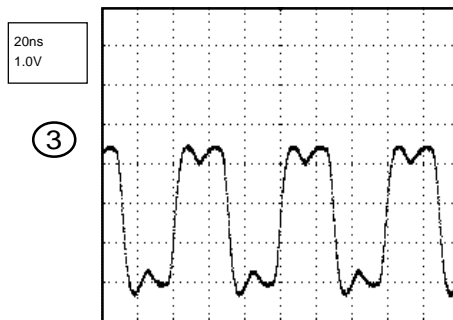
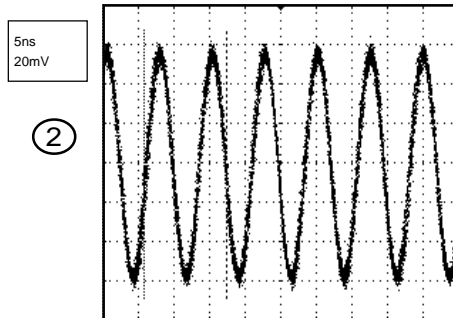
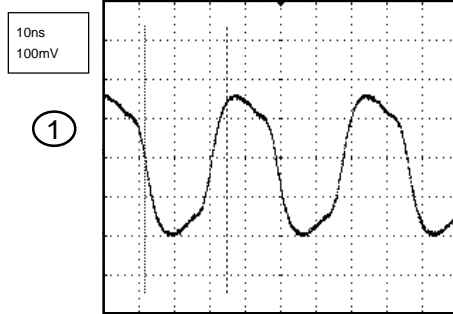
CP2302	
CLOSE	1
GND(D)	2
OPEN	3
LD+	4
LD-	5

CP2303	
SP1+	1
SP1-	2
SLD+	3
SLD-	4
LIMIT SW	5
SW(GND)	6

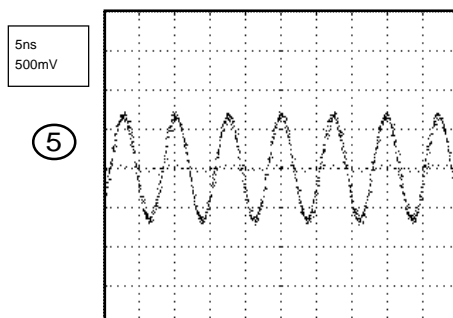


WAVEFORMS

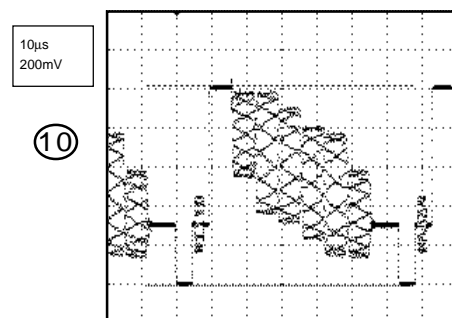
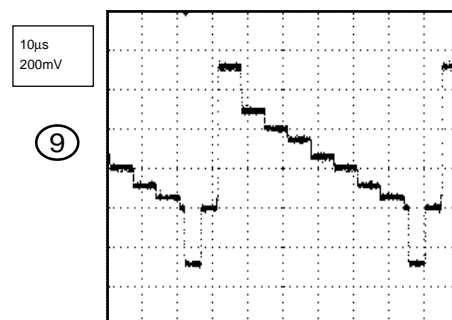
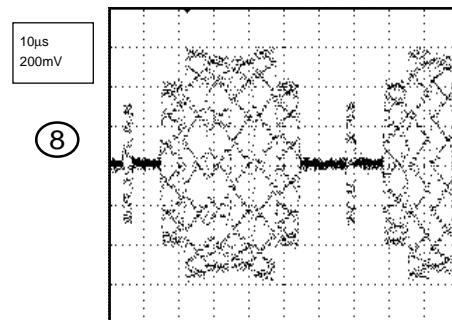
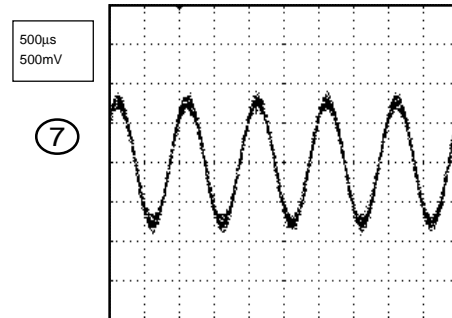
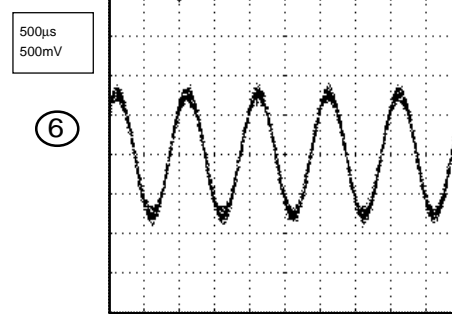
MPEG/MICON/DSP/RF_AMP



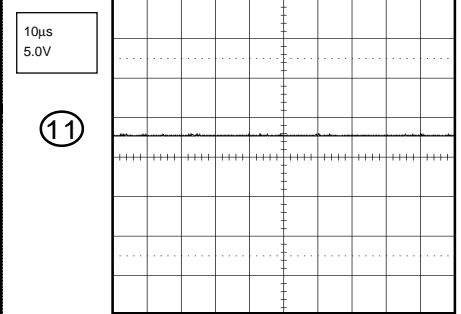
MEMORY



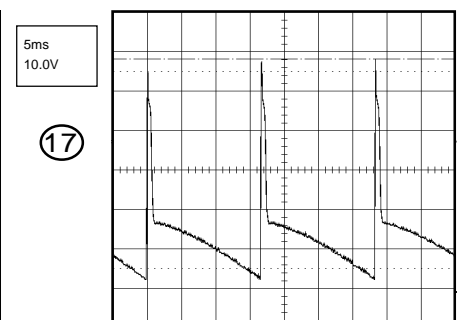
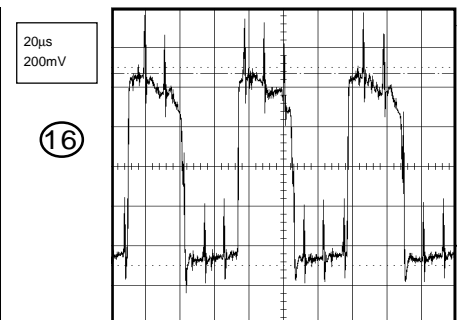
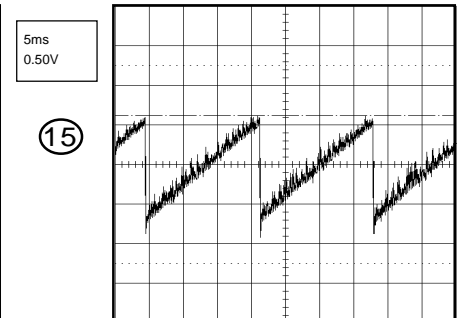
AUDIO/VIDEO



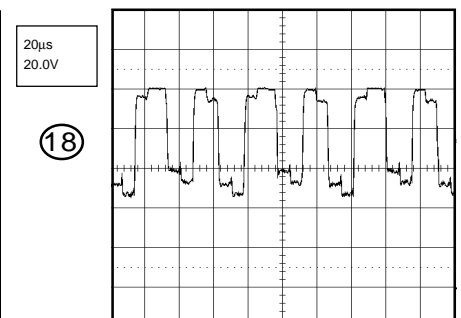
CHROMA/SIF/VIF/21PIN



DEFLECTION

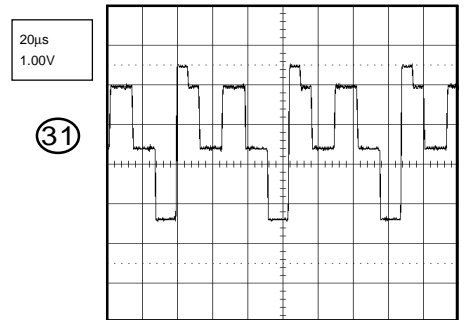
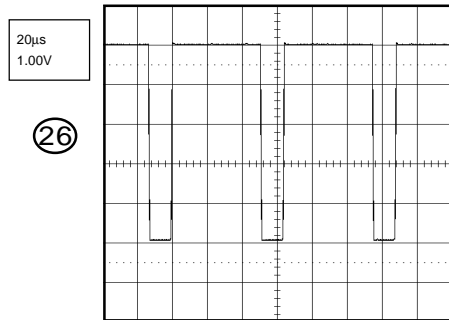
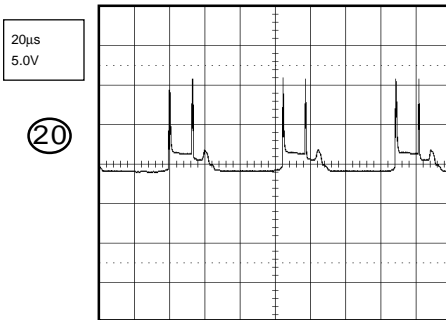
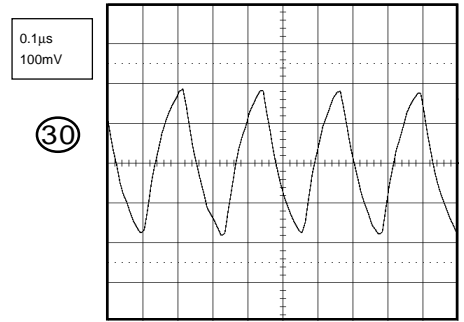
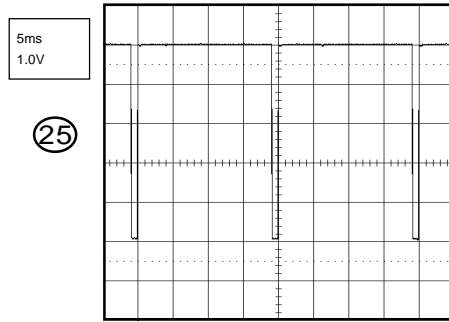
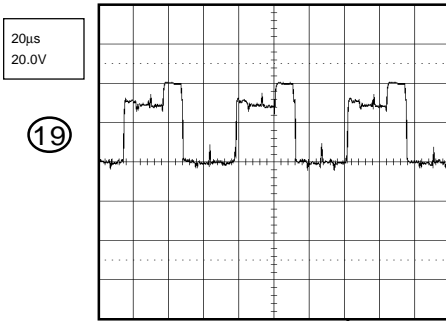


CRT

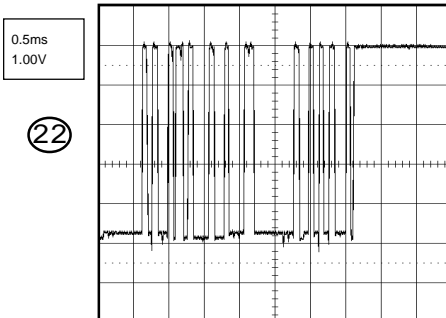


The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

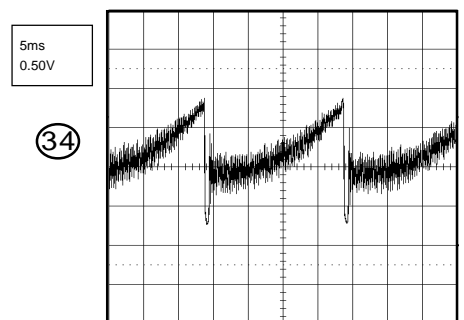
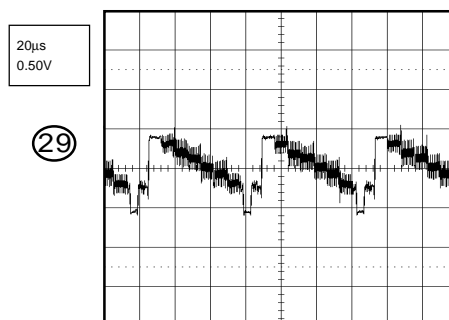
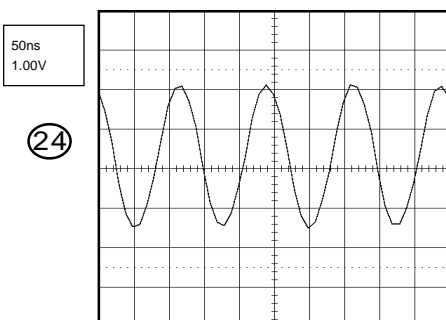
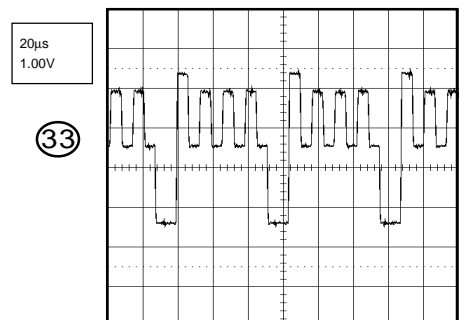
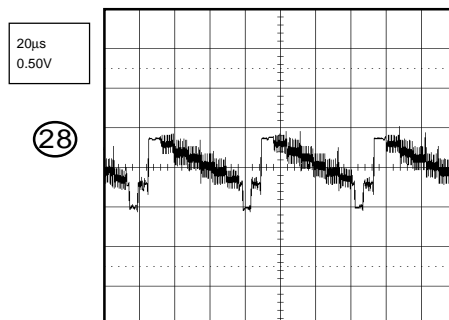
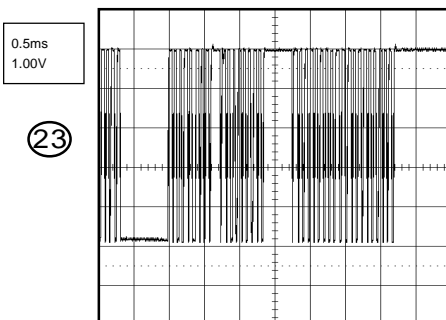
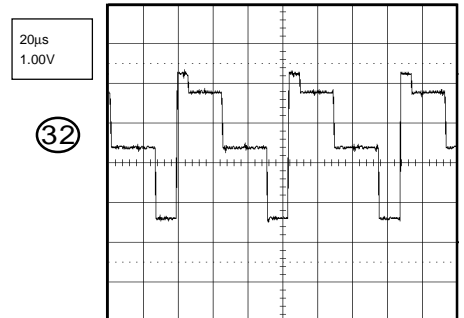
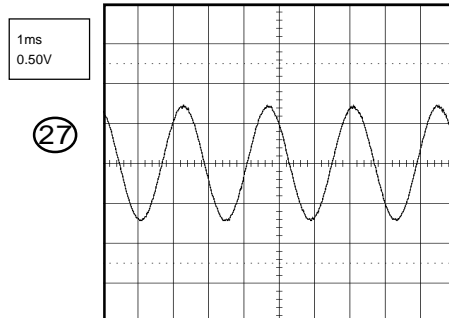
WAVEFORMS



MICON/TUNER

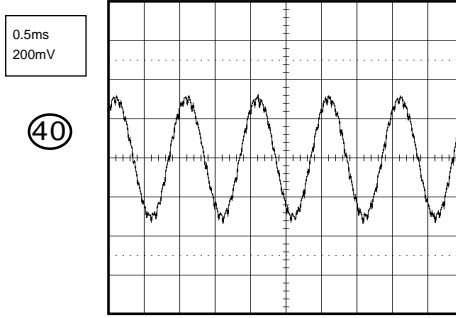
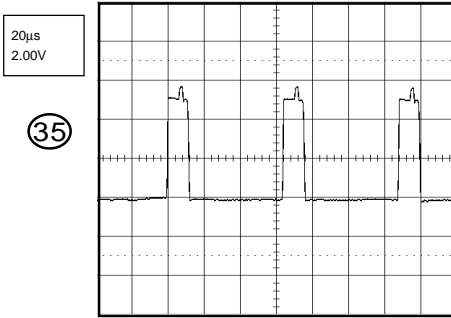


CHROMA/SIF/VIF/21PIN

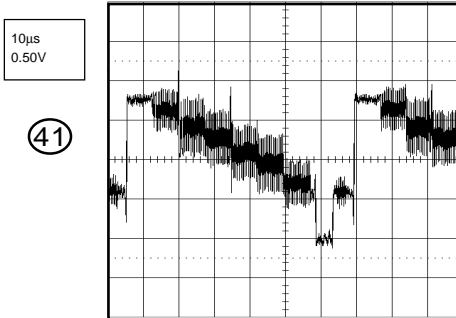
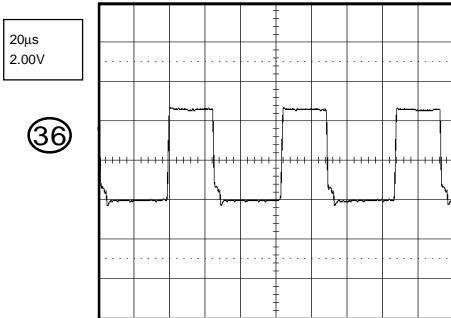


NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

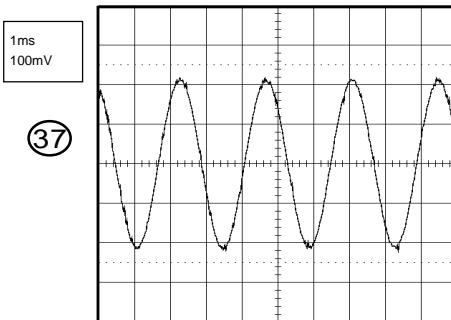
WAVEFORMS



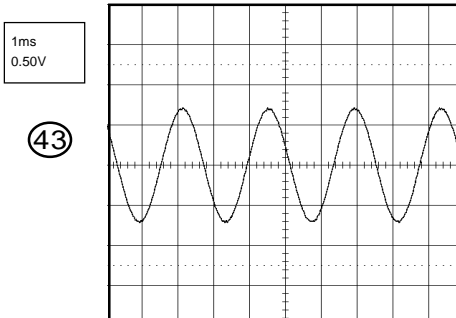
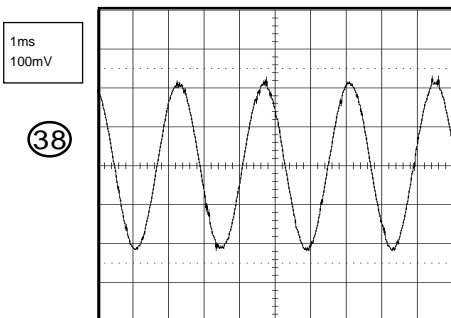
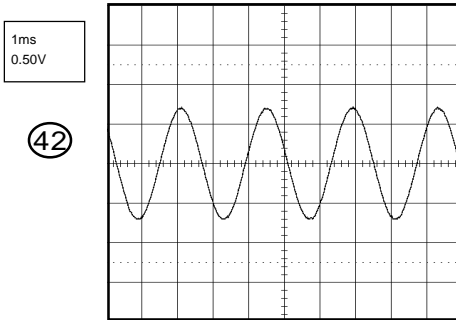
CHROMA/SIF/VIF/21PIN



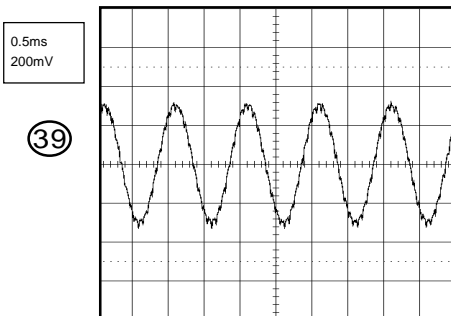
SOUND AMP



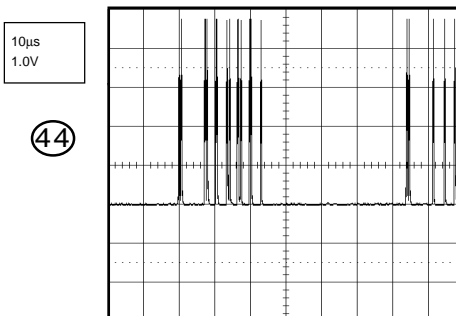
AUDIO SW



IN/OUT



MICON/TUNER



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