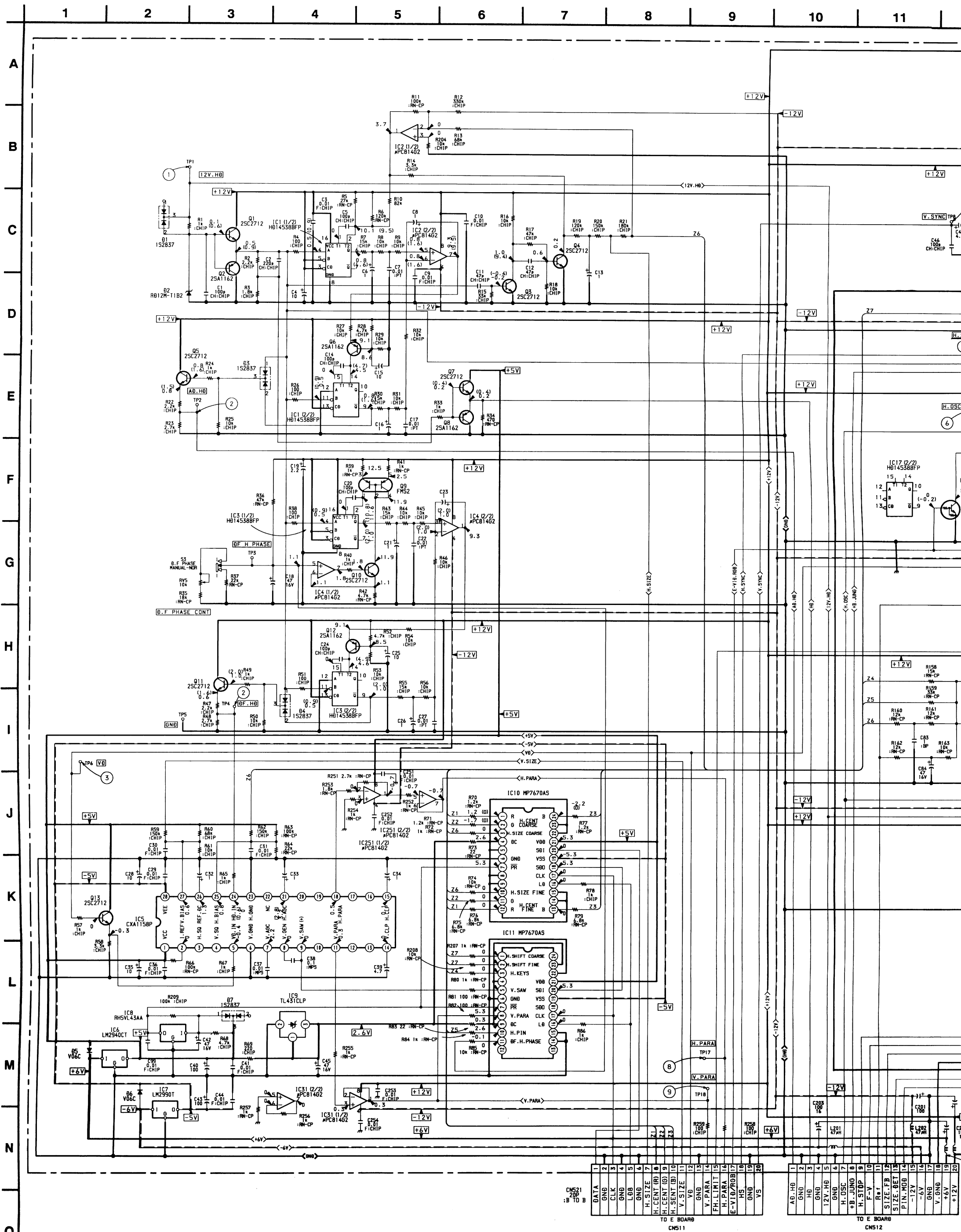
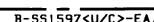
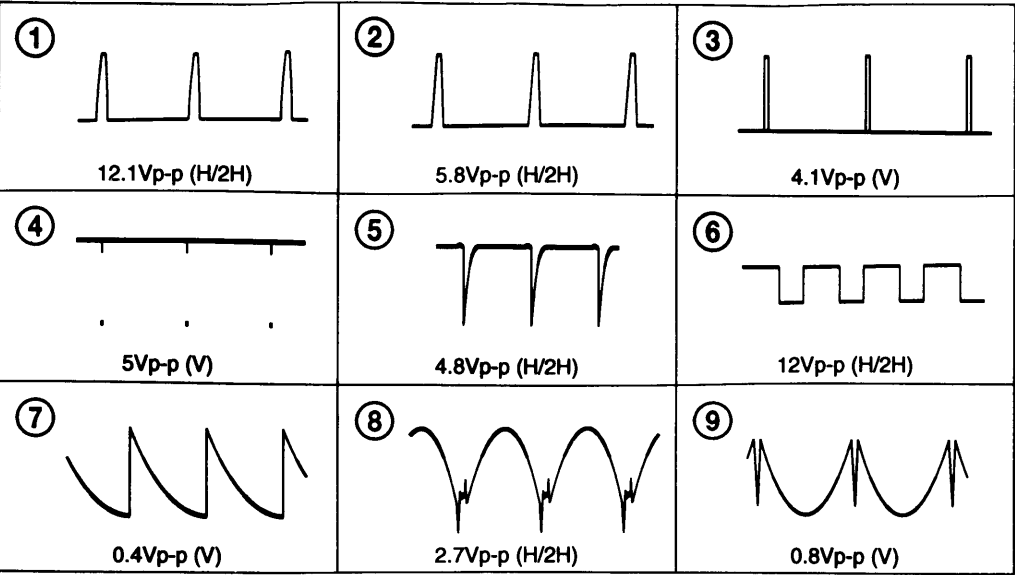


- **EA (AFC, H SHIFT, H SIZE CENT ADJ) DIAGRAM**
- Refer to page 4-156 for Waveforms
- Refer to page 4-156 for Function of Semiconductor
- Refer to page 4-157 for IC Block Diagrams



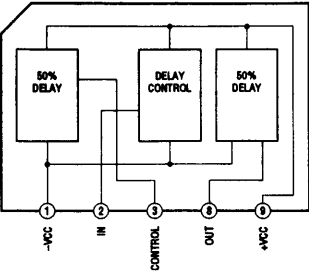


EA Board Waveforms

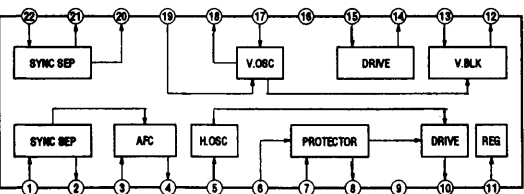


EA Board IC Block Diagrams

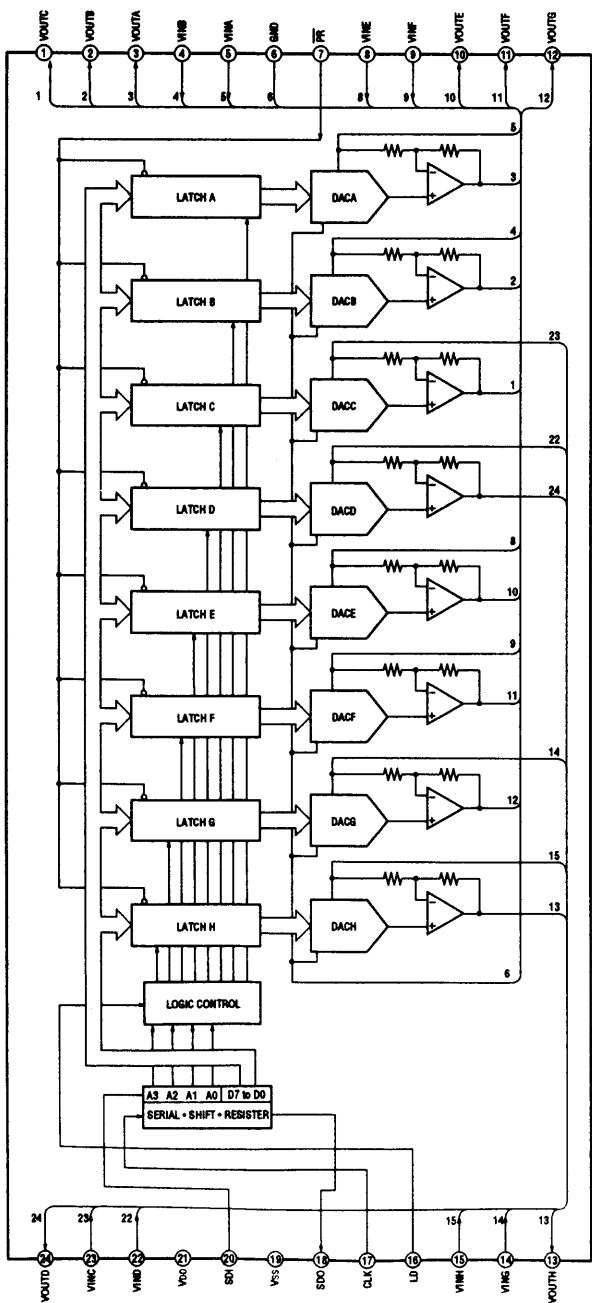
MC8639A2 (IC15)



μPC1377C (IC16)



MP7670AS (IC10, 11)



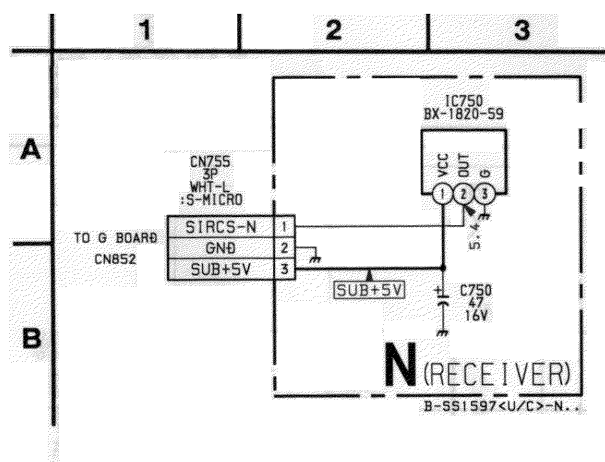
EA BOARD

Function of Semiconductor

D1	1S2837	SPEED UP-1	Q14	2SK523-M1	V.SYNC INV
D2	RD12M-B2	HD PROT	Q15	2SC2712-YG	VD BUFFER
D3	1S2837	ADFD HD MIX	Q16	2SC2712-YG	V AFC AMP
D4	1S2837	DFHD, HD MIX	Q17	2SC2712-YG	V AFC SW
D5	V06C	PROTECT	Q18	2SC2712-YG	V PULSE BUFFER
D6	V06C	PROTECT	Q19	2SC2712-YG	V PULSE INVERTER
D7	1S2837	+5V DISCHARGE	Q20	2SC2712-YG	H OSC BUFF-1
D8	1S2837	V SYNC CLAMP	Q21	2SA1162-YG	H OSC BUFF-2
D9	ERA22-06AVRBT	H OUT PROT	Q22	DTC144EKA-T146	SW-1
D10	1S2837	SPEED UP-2	Q23	DTC144EKA-T146	SW-2
D11	1S2837	SPEED UP	Q24	FMS2	CURRENT MIRROR
D12	1SS123	LEVEL SHIFT	Q25	FMW5	V-1 CONVERTER
D13	1SS123	H OSC CLAMP	Q26	2SA1162-YG	VIDEO F/V BUFFER
D14	1S2837	F-V PULSE CLAMP	Q27	DTC144EKA-T146	SW-3
D15	1S2837	H SIZE PROT SW	Q28	DTC144EKA-T146	VIDEO/RGB SW INVERTER
D16	1S2837	H STOP GATE-1	Q29	2SK523-M1	F-V SW
D17	1SS123	H STOP GATE-2			
D301	1S2837	F/H LIMITTER			
D302	1S2837	PROTECT			
D303	RD4.7M-B2	PROTECT			
IC1	HD14538BFP-TL	AD HD GENERATOR			
IC2	UPC814G2-E2	AD HD COMP			
IC3	HD14538BFP	D.F HD GEN			
IC4	UPC814G2-E2	D.F HD COMP			
IC5	CXA1158P	WAVEFORM GENERATOR			
IC6	LM2940CT-5.0	+5V REG			
IC7	LM2990T-5.0	-5V REG			
IC8	RH5VL43AA-T1	POWER ON RESET			
IC9	TL431CLP-Z	VOLTAGE REF			
IC10	MP7670AS-TE2	H SIZE CENT ADJ			
IC11	MP7670AS-TE2	H SHIFT, H KEY, DF PHASE			
IC12	HD14538BFP-TL	VD GEN			
IC13	UPC4558G2-T2	V AFC 1			
IC14	UPC393G2-T2	V AFC 2			
IC15	MC-8639A	H SHIFT			
IC16	UPC1377C	AFC			
IC17	HD14538BFP-TL	PULSE GEN			
IC18	UPC814G2-E2	F/V BUFF			
IC19	UPC4558G2-T2	F-V AMP			
IC20	UPC4558G2-T2	F-V AMP			
IC21	HD14538BFP-TL	H PULSE GENERATOR			
IC22	UPC814G2-E2	F-V AMP			
IC23	UPC814G2-E2	F-V AMP			
IC24	UPC393G2-T2	H SIZE PROTECT			
IC31	UPC814G2-E2	D.F.V.P BUFFER			
IC251	UPC814G2-E2	D.F.H.P AMP			
IC301	UPC4558G2-T2	FH LIMIT COMP			
Q1	2SC2712-YG	HD BUFFER-1			
Q2	2SA1162-YG	HD BUFFER-2			
Q3	2SC2712-YG	HD AMP-1			
Q4	2SC2712-YG	HD AMP-2			
Q5	2SC2712-YG	HD BUFFER			
Q6	2SA1162-YG	V.I CONVERTER			
Q7	2SC2712-YG	HD BUFFER 3			
Q8	2SA1162-YG	HD BUFFER 4			
Q9	FMS2	CURRENT MIRROR			
Q10	2SC2712-YG	D.F.P CONT BUFFER			
Q11	2SC2712-YG	DF HD BUFFER			
Q12	2SA1162-YG	V-I CONVERTER			
Q13	2SC2712-YG	VD BUFFER			

(RECEIVER) BOARD

— N BOARD — <Conductor side>



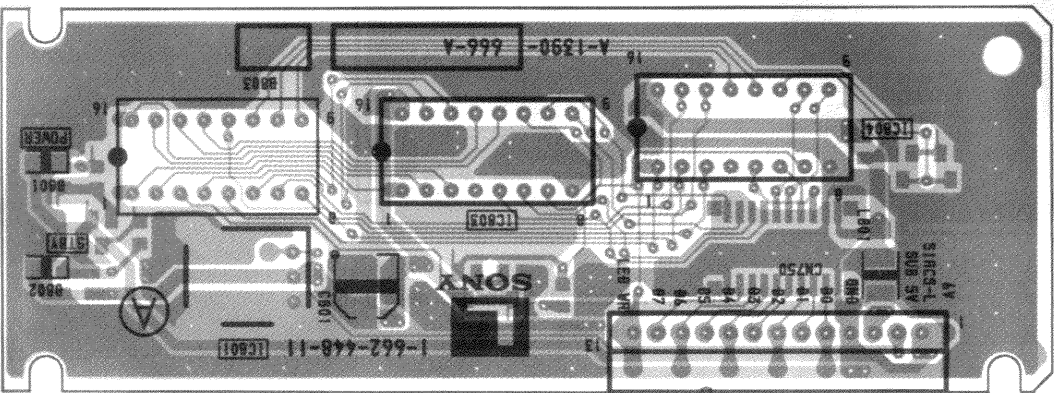
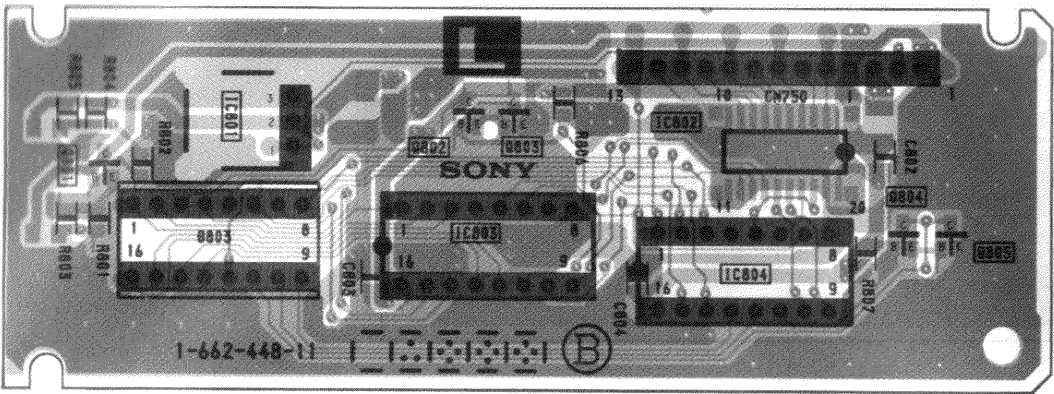
N BOARD

Function of Semiconductor

IC750	SBX1820-59	IR RECEIVER
-------	------------	-------------

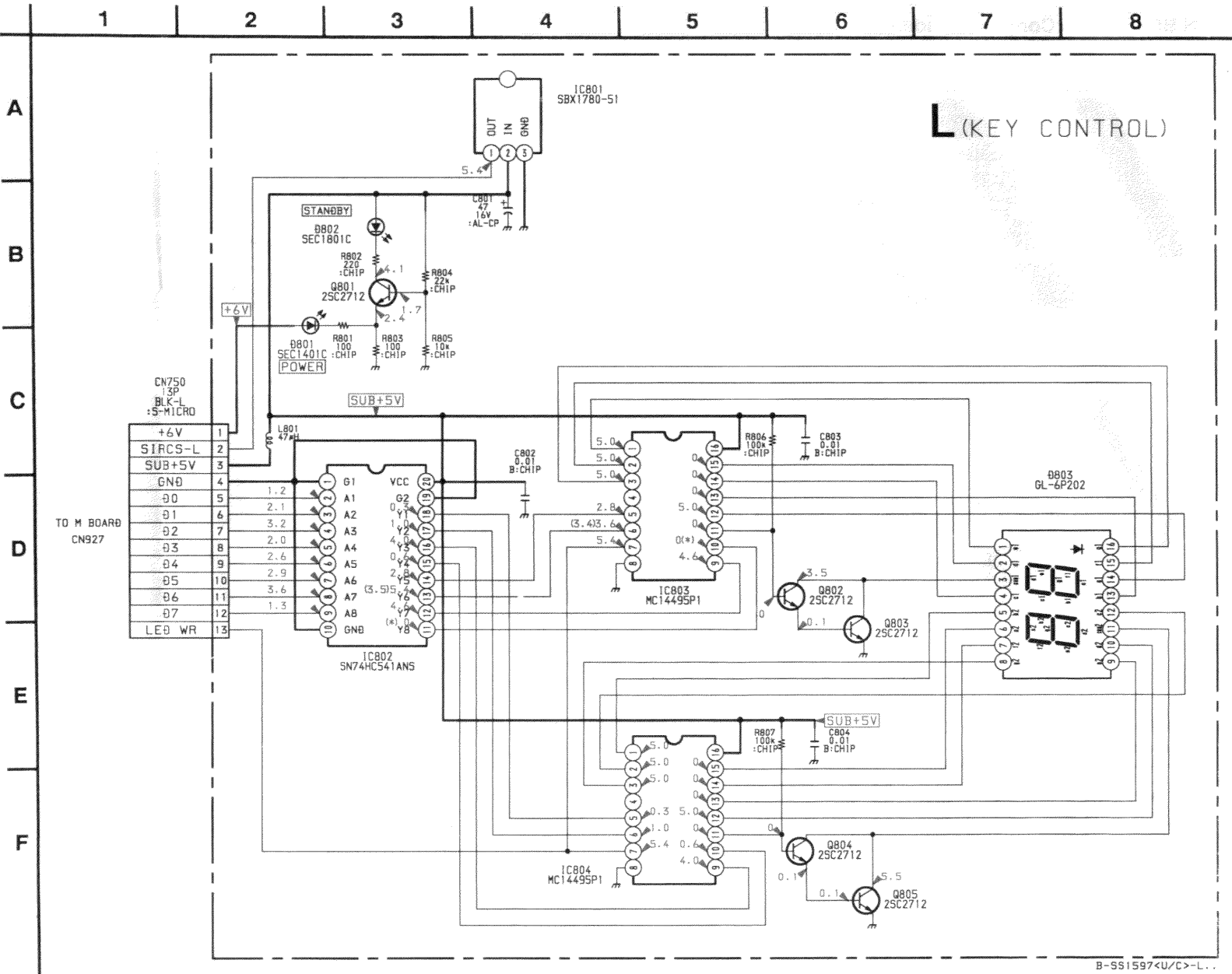
L (KEY CONTROL) BOARD

— L BOARD — <Conductor side>



- Pattern from the side which enables seeing.
- Pattern of the rear side.

• L (KEY CONTROL) DIAGRAM



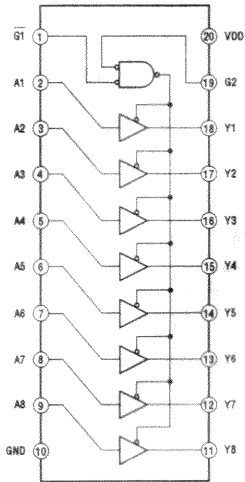
L BOARD

Function of Semiconductor

D801	SEC1401C	POWER LED
D802	SEC1801C	STANDBY LED
D803	GL-6P202	INDICATOR
IC801	SBX1780-51	IR RECEIVER
IC802	SN74HC541ANS	BUFFER
IC803	MC14495P1	7 SEGM DECODER
IC804	MC14495P1	7 SEGM DECODER
Q801	2SC2712-YG	LED DRIVE
Q802	2SC2712-YG	COM DRIVE
Q803	2SC2712-YG	COM DRIVE
Q804	2SC2712-YG	COM DRIVE
Q805	2SC2712-YG	COM DRIVE

L Board IC Block Diagrams

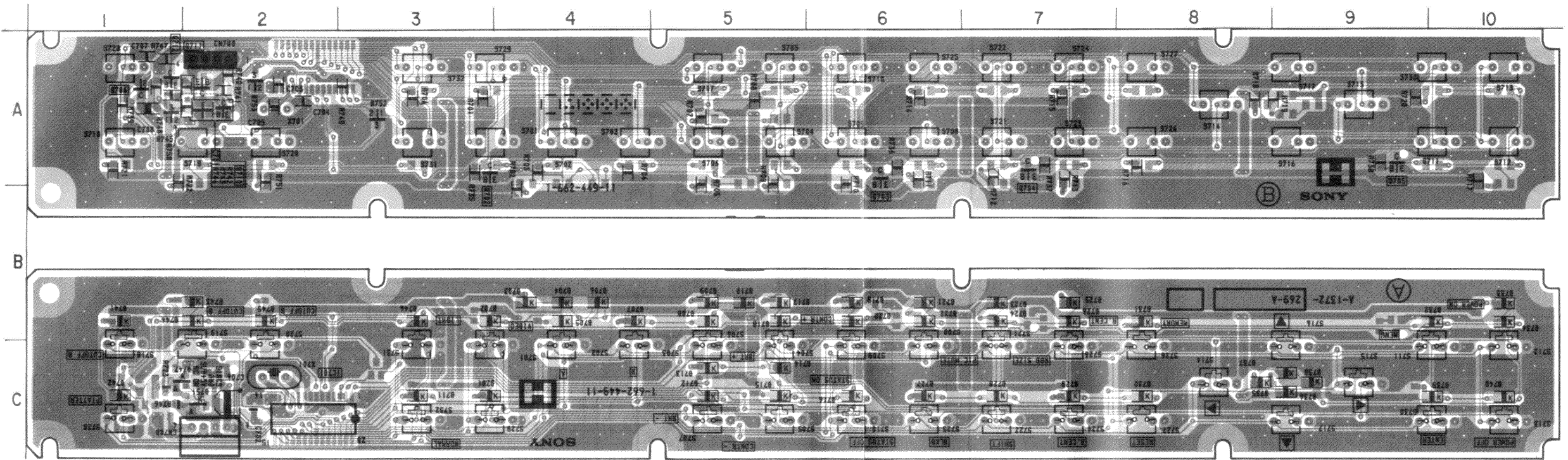
SN74HC541ANS(IC802)





H

(CUSTOMER CONTROL) BOARD

— H BOARD — <Conductor side>



-  : Pattern from the side which enables seeing.
-  : Pattern of the rear side.

H BOARD

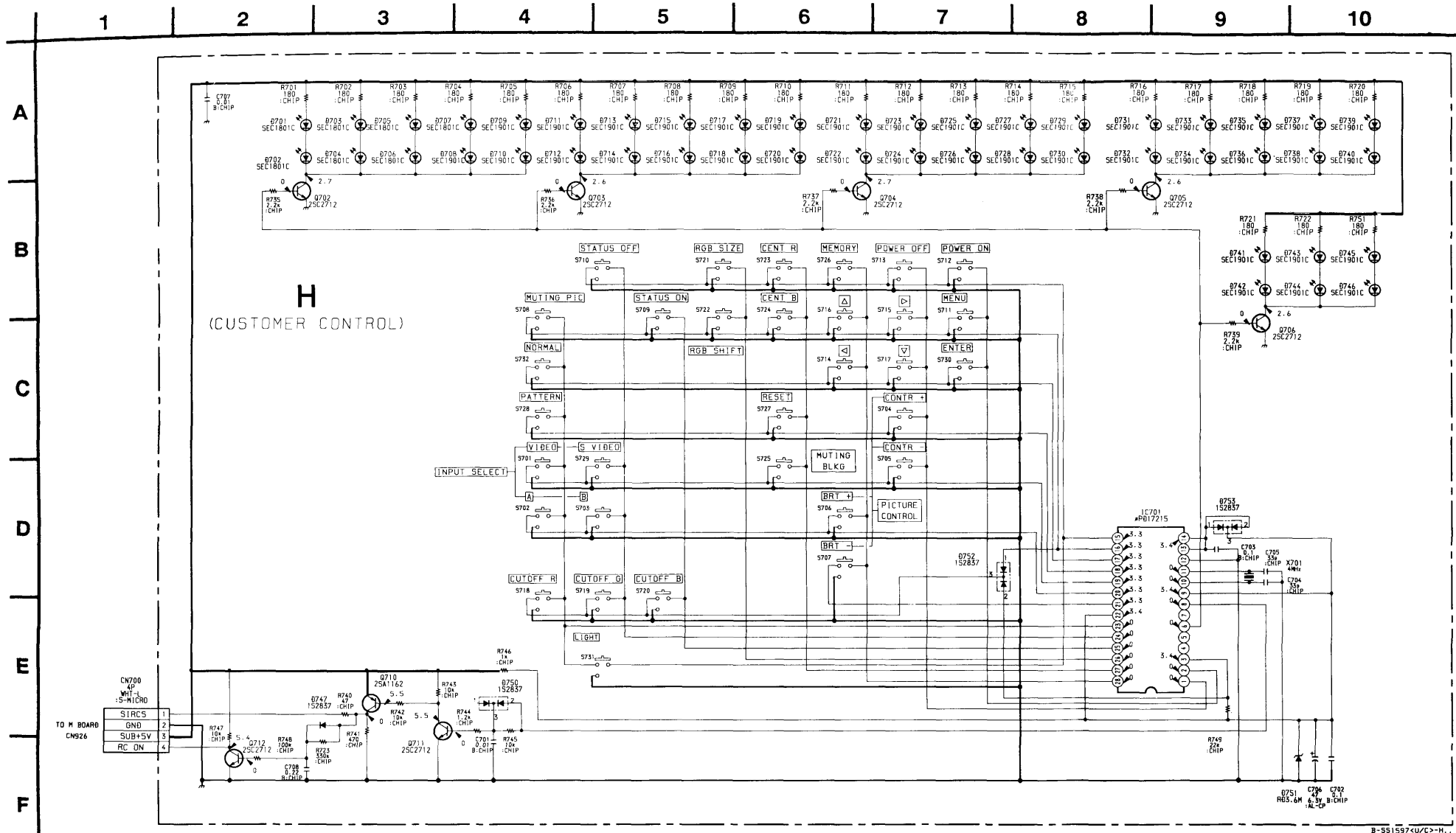
Semiconductor Location

DIODE					
		D721	B-6	D744	B-2
		D722	B-6	D745	B-2
		D723	B-7	D746	B-3
D701	C-3	D724	B-7	D747	C-1
D702	B-3	D725	B-7	D750	A-1
D703	B-4	D726	B-7	D751	C-2
D704	B-4	D727	C-6	D752	A-3
D705	B-4	D728	C-7		
D706	B-4	D729	C-7	D753	A-2
D707	B-4	D730	C-8		
D708	C-5			IC	
D709	C-5	D731	B-8		
D710	C-5	D732	B-10	IC701	C-2
		D733	B-10		
		D734	B-10	TRANSISTOR	
D711	C-3	D735	C-8		
D712	C-5	D736	C-9	Q702	A-3
D713	C-5	D737	C-9	Q703	A-6
D714	C-5	D738	C-9	Q704	A-7
D715	C-5	D739	C-10	Q705	A-10
D716	C-6	D740	C-10	Q706	A-1
D717	B-5	D741	B-1	Q710	A-2
D718	B-5	D742	C-1	Q711	A-2
D719	B-6	D743	B-2	Q712	A-1
D720	B-6				

Schematic Diagram

← **L** board

• H (CUSTOMER CONTROL) DIAGRAM



H BOARD

Function of Semiconductor

D701	SEC1801C	INDICATOR	D720	SEC1901C	INDICATOR	D739	SEC1901C	INDICATOR	Q705	2SC2712-YG	LED DRIVE
D702	SEC1801C	INDICATOR	D721	SEC1901C	INDICATOR	D740	SEC1901C	INDICATOR	Q706	2SC2712-YG	LED DRIVE
D703	SEC1801C	INDICATOR	D722	SEC1901C	INDICATOR	D741	SEC1901C	INDICATOR	Q710	2SA1162-YG	SERCS DET
D704	SEC1801C	INDICATOR	D723	SEC1901C	INDICATOR	D742	SEC1901C	INDICATOR	Q711	2SC2712-YG	SERCS DET
D705	SEC1801C	INDICATOR	D724	SEC1901C	INDICATOR	D743	SEC1901C	INDICATOR	Q712	2SC2712-YG	SERCS DET
D706	SEC1801C	INDICATOR	D725	SEC1901C	INDICATOR	D744	SEC1901C	INDICATOR			
D707	SEC1801C	INDICATOR	D726	SEC1901C	INDICATOR	D745	SEC1901C	INDICATOR			
D708	SEC1901C	INDICATOR	D727	SEC1901C	INDICATOR	D746	SEC1901C	INDICATOR			
D709	SEC1901C	INDICATOR	D728	SEC1901C	INDICATOR	D747	1S2837	SERCS DET			
D710	SEC1901C	INDICATOR	D729	SEC1901C	INDICATOR	D750	1S2837	SERCS DET			
D711	SEC1901C	INDICATOR	D730	SEC1901C	INDICATOR	D751	RD3.6M-B2	DC SHIFT			
D712	SEC1901C	INDICATOR	D731	SEC1901C	INDICATOR	D752	1S2837	CUT OFF SW			
D713	SEC1901C	INDICATOR	D732	SEC1901C	INDICATOR	D753	1S2837	PROTECT			
D714	SEC1901C	INDICATOR	D733	SEC1901C	INDICATOR						
D715	SEC1901C	INDICATOR	D734	SEC1901C	INDICATOR	IC701	UPD17215	SERCS ENCODER			
D716	SEC1901C	INDICATOR	D735	SEC1901C	INDICATOR						
D717	SEC1901C	INDICATOR	D736	SEC1901C	INDICATOR	Q702	2SC2712-YG	LED DRIVE			
D718	SEC1901C	INDICATOR	D737	SEC1901C	INDICATOR	Q703	2SC2712-YG	LED DRIVE			
D719	SEC1901C	INDICATOR	D738	SEC1901C	INDICATOR	Q704	2SC2712-YG	LED DRIVE			

PA

(HV REG, G2 CONTROL, DF (HV) BUFFER) BOARD

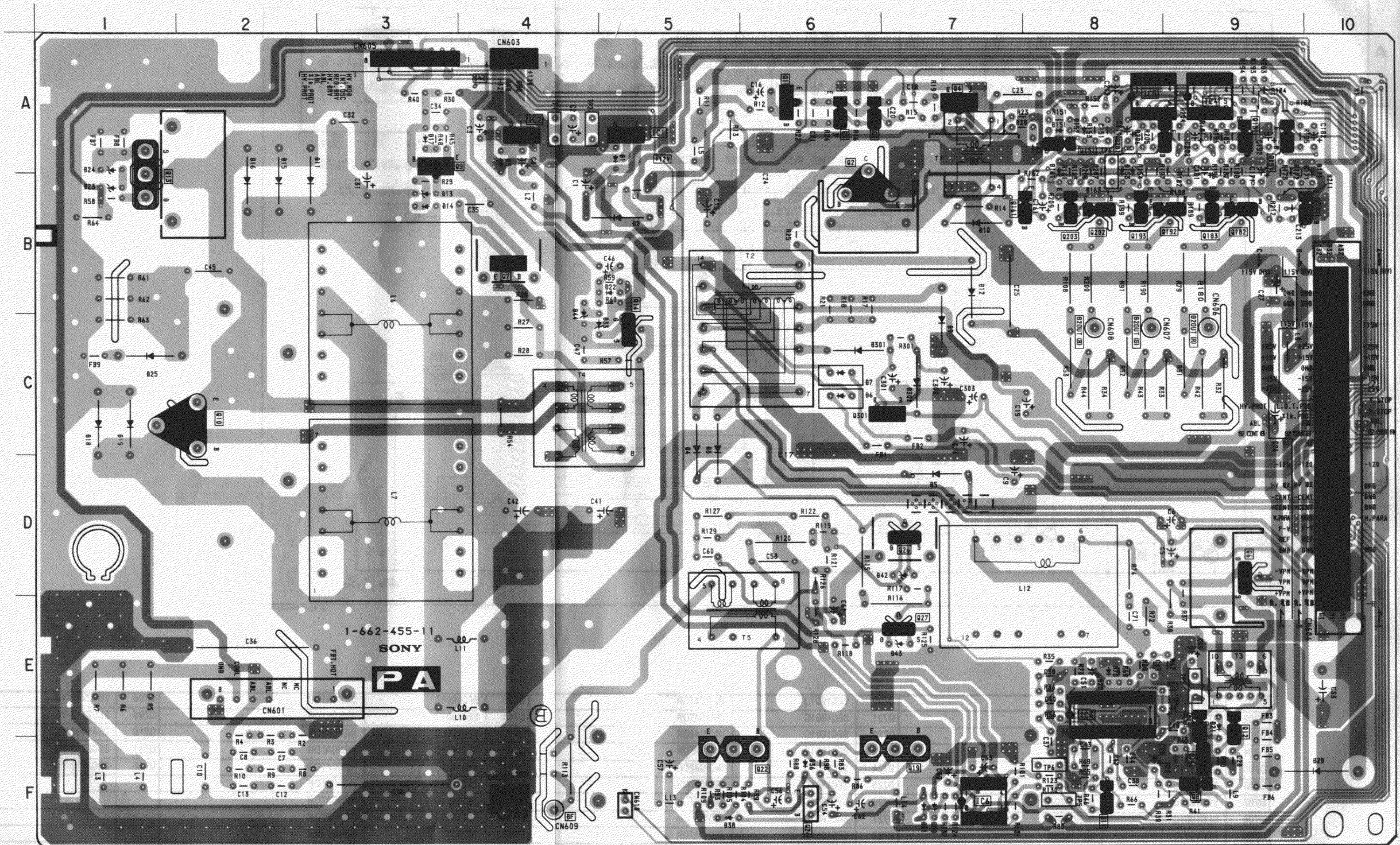
— PA BOARD — <Conductor side>

PA BOARD
Semiconductor Location

DIODE	TRANSISTOR
D1 A-5	Q1 A-6
D2 B-5	Q2 B-6
D3 A-4	Q3 A-6
D4 C-5	Q4 A-7
D5 D-7	Q5 A-6
D6 C-6	Q6 D-9
D7 C-6	Q7 B-4
D8 C-5	Q8 F-9
D9 C-7	Q9 A-3
D10 B-7	Q10 C-2
D11 B-2	Q11 F-8
D12 B-7	Q12 E-9
D13 B-3	Q13 A-1
D14 B-3	Q14 C-5
D15 B-2	Q15 E-9
D16 B-2	Q16 F-9
D17 A-3	Q19 F-7
D18 C-1	Q22 F-6
D19 C-1	Q24 F-6
D20 F-10	Q26 D-7
D21 F-9	Q27 E-7
D22 B-5	Q151 A-8
D23 B-1	Q161 B-7
D24 A-1	Q171 B-10
D25 C-1	Q181 A-9
D26 F-9	Q182 B-9
D27 E-8	Q183 B-9
D31 F-7	Q191 A-9
D33 C-5	Q192 B-9
D36 F-6	Q193 B-8
D38 F-5	Q201 A-8
D39 F-7	Q202 B-8
D42 D-7	Q203 B-8
D43 E-7	Q301 C-6
D44 B-4	
D151 A-8	TEST POINT
D152 A-8	TP1 A-4
D153 A-8	TP2 A-4
D161 A-8	TP3 E-9
D163 A-8	TP4 A-8
D171 A-10	TP5 F-8
D301 C-6	TP6 F-8
D302 C-7	
IC	
IC1 A-5	
IC2 A-4	
IC3 E-8	
IC4 A-9	
IC5 A-8	
IC6 F-7	

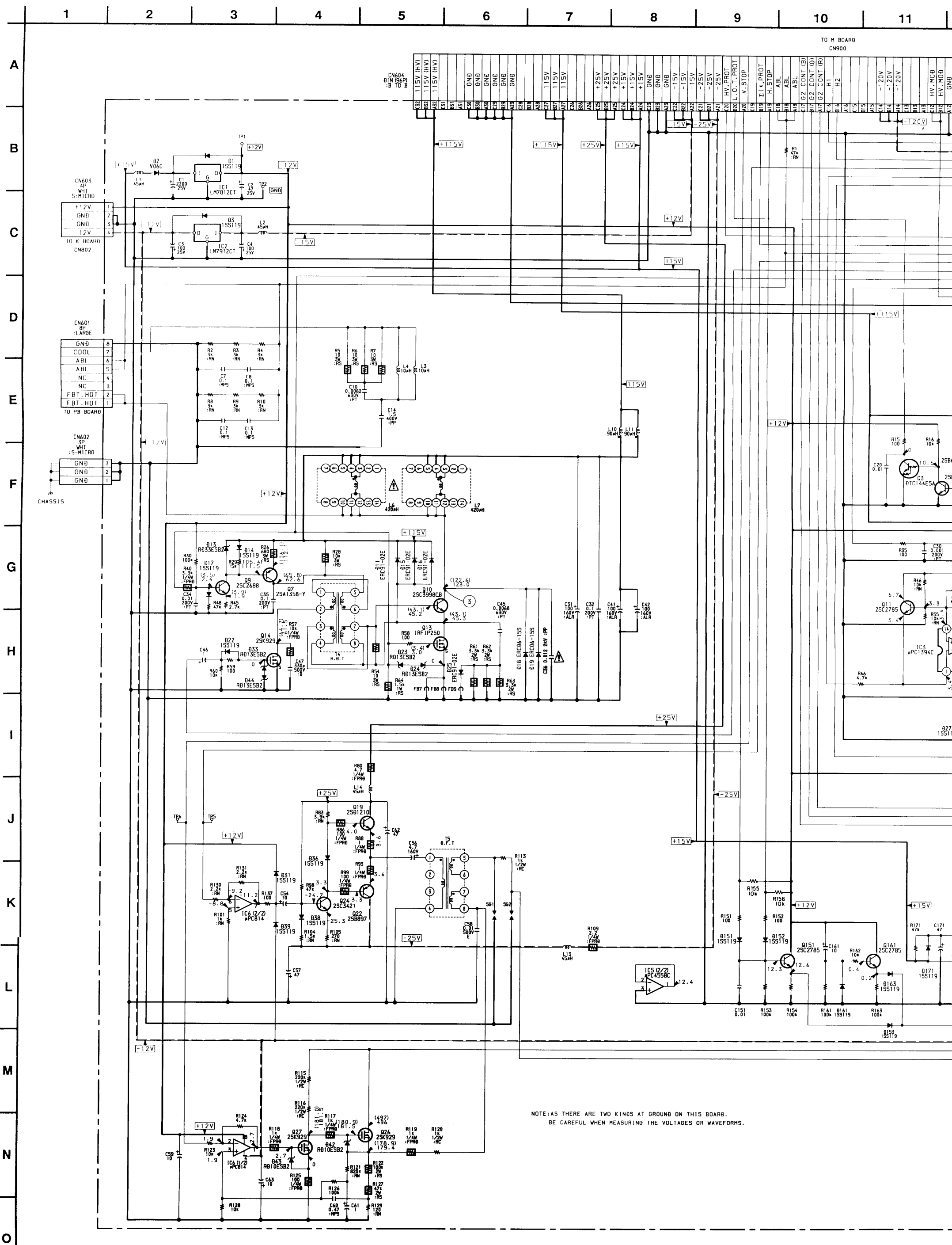
Schematic Diagram

← **H** board

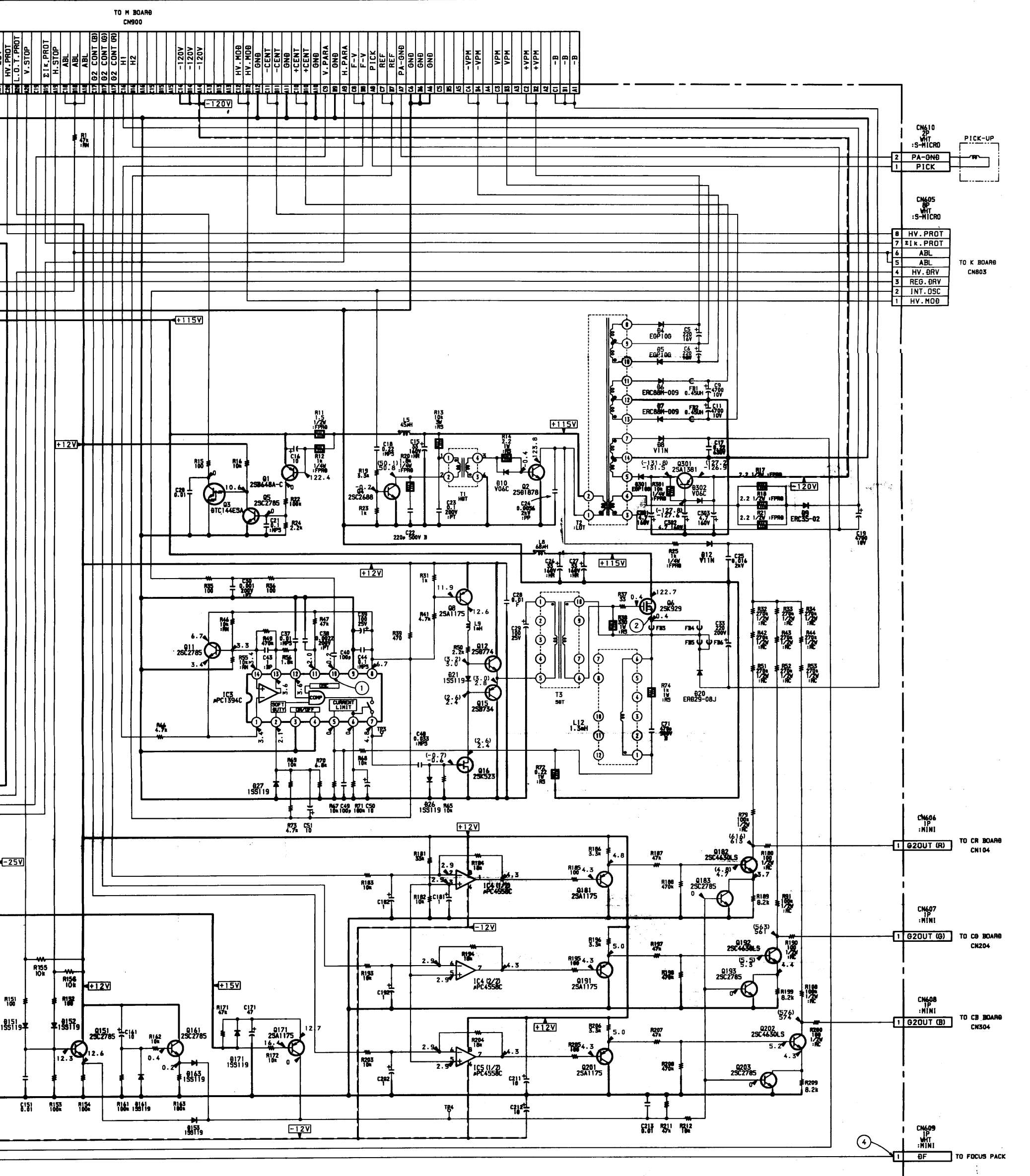


- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

- **PA (HV REG, G2 CONTROL, DF (H/V) BUFFER) DIAGRAM**
- Refer to page 4-170 for Waveforms
- Refer to page 4-170 for Function of Semiconductor



NOTE: AS THERE ARE TWO KINDS AT GROUND ON THIS BOARD.
BE CAREFUL WHEN MEASURING THE VOLTAGES OR WAVEFORMS.



PA (HV REG, G2 CONTROL,
DF (H/V) BUFFER)

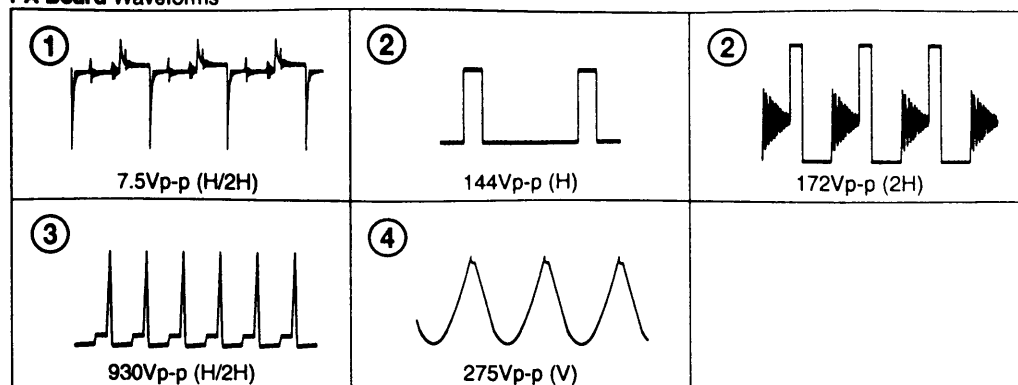
Note:
The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par un hachure et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Schematic Diagram

PB board \rightarrow

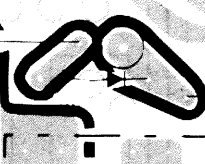
PA Board Waveforms



PA BOARD

Function of Semiconductor

D1	1SS119-25	IC1 PROTECTOR	IC1	TA7812CT	+12V REG
D2	V06C	+12V HOLD	IC2	LM7912CT	-12V REG
D3	1SS119-25	IC2 PROTECTOR	IC3	UPC1394C	PIN MOD REG CONTROL
D4	EGP10GPKG23	+ VPM RECT	IC4	UPC4558C	
D5	EGP10GPKG23	- VPM RECT	IC5	UPC4558C	
D6	ERC88M-009	+ CENT RECT	IC6	UPC814C	
D7	ERC88M-009	- CENT RECT			
D8	V11N	DF (V) POW RECT	Q1	2SB648A-C	LOT PROT DET
D9	ERC35-02	HEATER RECT	Q2	2SD1878-CA	LOT CONV
D10	V06C	SPEED UP	Q3	DTC144ESA	LOT PROT OUT
D11	ERC91-02E	HV REG SW1	Q4	2SC2688-LK	LOT CONV DRIVE
D12	V11N	G2 RECT	Q5	2SC2785-HFE	LOT PROT BUFF
D13	RD33ESB2	CLAMP	Q6	2SK929	PIN MOD REG
D14	1SS119-25	BIAS	Q7	2SA1358-Y	HV CONV DRIVE CONTROL 2
D15	ERC91-02E	HV REG SW2	Q8	2SA1175-HFE	POWER OFF PROT
D16	ERC91-02E	HV REG SW3	Q9	2SC2688-LK	HV CONV DRIVE CONTROL 1
D17	1SS119-25	Q9 PROTECTOR	Q10	2SC3998-CB	HV CONV
D18	ERC06-15SA	DUMPER	Q11	2SC2785-HFE	POWER ON BIAS
D19	ERC06-15SA	DUMPER	Q12	2SD774-34	PIN MOD DRIVE 1
D20	ERD29-08J	PIN MOD RECT	Q13	IRFIP250	HV REG
D21	1SS119-25	PIN MOD REG DRIVE BIAS	Q14	2SK929	HV CONV DRIVE
D22	1SS119-25	SPEED UP	Q15	2SB734-34	PIN MOD DRIVE 2
D23	RD13ESB2	Q13 PROTECTOR	Q16	2SK523-M1	PIN MOD PRE-DRIVE
D24	RD13ESB2	Q13 PROTECTOR	Q19	2SD1210 (LK)	DF (H) DRIVE 1
D25	ERC91-02E	HV REG SW 4	Q22	2SB897 (LK)	DF (H) DRIVE 2
D26	1SS119-25	CLAMP	Q24	2SC3421-Y	DF (H) DRIVE CONTROL
D27	1SS119-25	IC3 PROTECTOR	Q26	2SK929	DF (V) DRIVE
D31	1SS119-25	IC6 PROTECTOR	Q27	2SK929	DF (V) DRIVE CONTROL
D33	RD13ESB2	Q14 PROTECTOR	Q151	2SC2785-HFE	G2 STOP CONTROL (H/V STOP)
D36	1SS119-25	Q19 BIAS	Q161	2SC2785-HFE	G2 STOP CONTROL (POWER ON)
D38	1SS119-25	Q24 PROTECTOR	Q171	2SA1175-HFE	G2 STOP CONTROL (POWER OFF)
D39	1SS119-25	IC6 PROTECTOR	Q181	2SA1175-HFE	G2 CONTROL BUFF (R) 2
D42	RD10ESB2	Q26 PROTECTOR	Q182	2SC4630LS	G2 OUT (R)
D43	RD10ESB2	Q27 PROTECTOR	Q183	2SC2785-HFE	G2 STOP (R)
D44	RD13ESB2	Q14 PROTECTOR	Q191	2SA1175-HFE	G2 CONTROL BUFF (G) 2
D151	1SS119-25	V.STOP SW	Q192	2SC4630LS	G2 OUT (G)
D152	1SS119-25	H.STOP SW	Q193	2SC2785-HFE	G2 STOP (G)
D153	1SS119-25	G2 STOP CONTROL SW (H/V STOP)	Q201	2SA1175-HFE	G2 CONTROL BUFF (B) 2
D161	1SS119-25	DISCHARGE	Q202	2SC4630LS	G2 OUT (B)
D163	1SS119-25	G2 STOP CONTROL SW (POWER-ON)	Q203	2SC2785-HFE	G2 STOP (B)
D171	1SS119-25	HOLD SW	Q301	2SA1381-E	-120V REG
D301	EGP10GPKG23	-120V RECT			
D302	V06C	Q301 PROTECTOR			

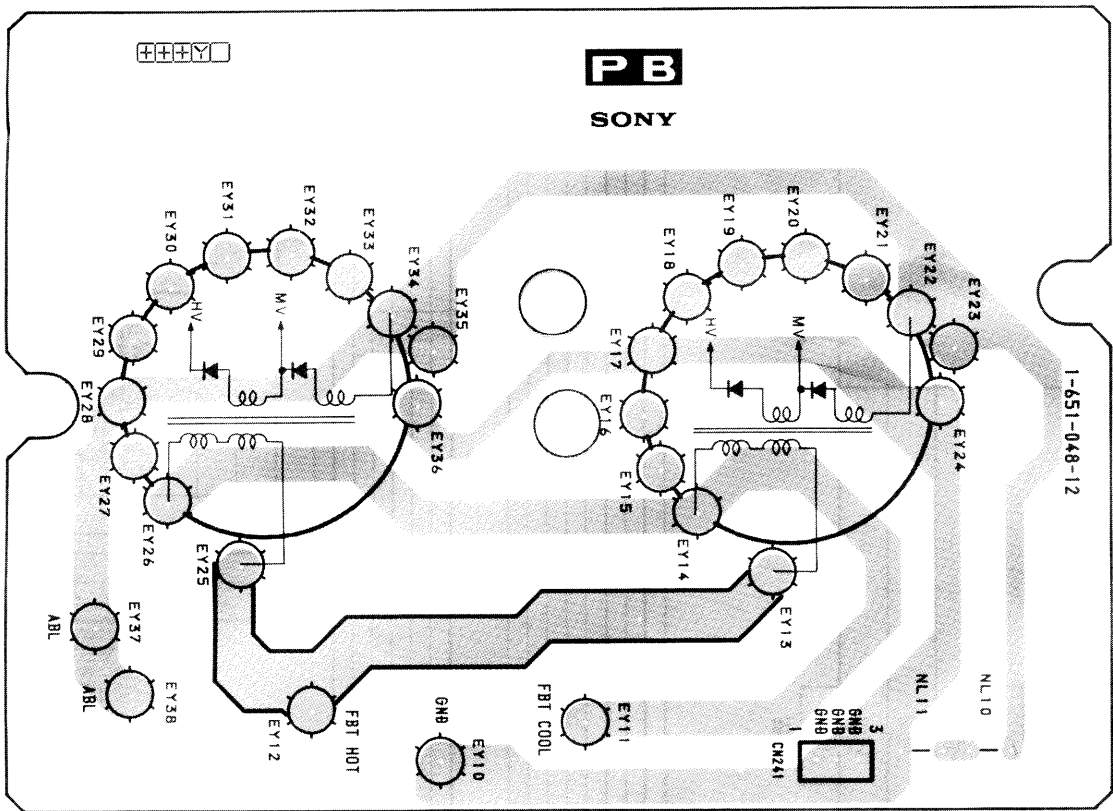


NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

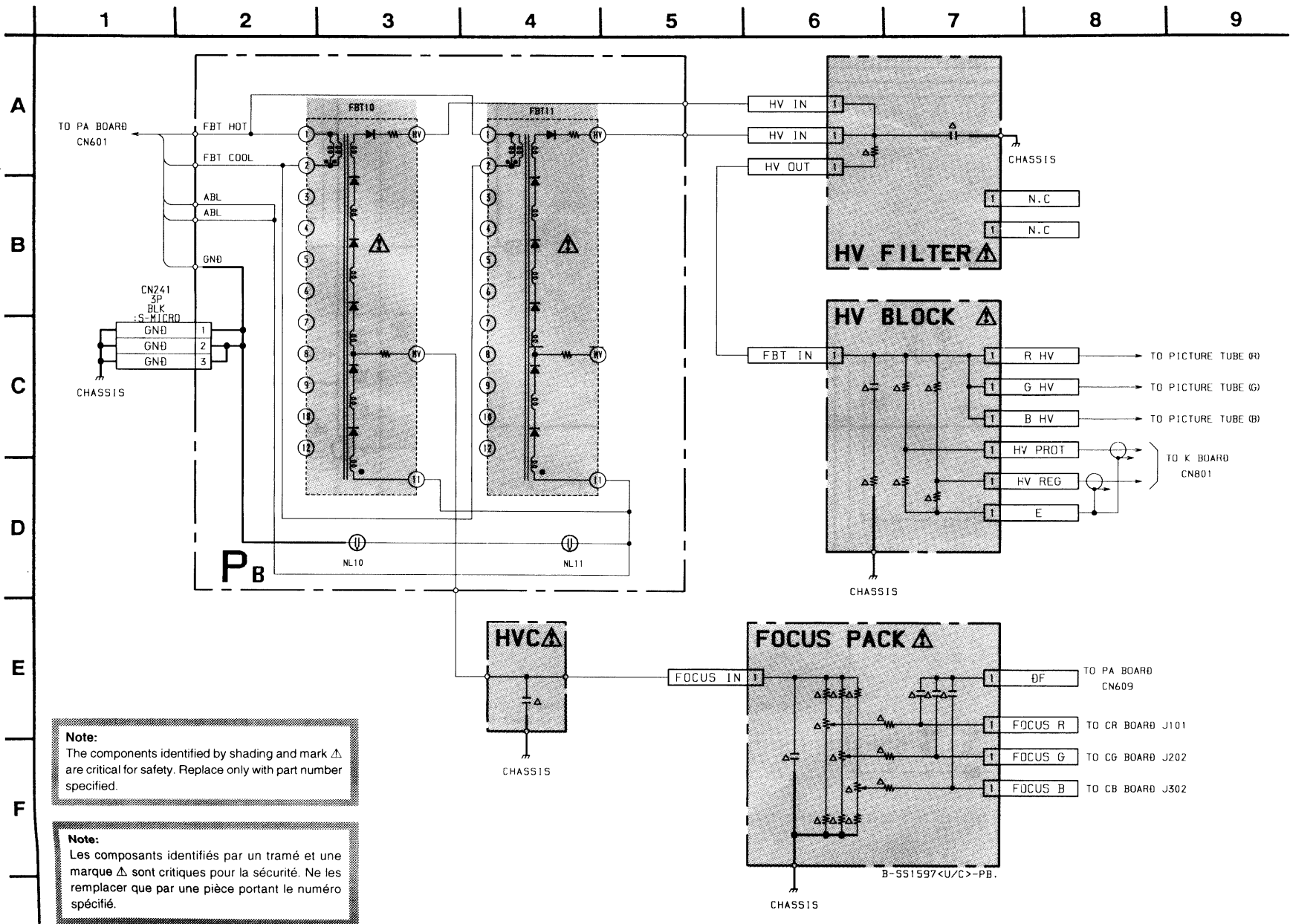
PB

(F.B.T) BOARD

— PB BOARD — <Conductor side>

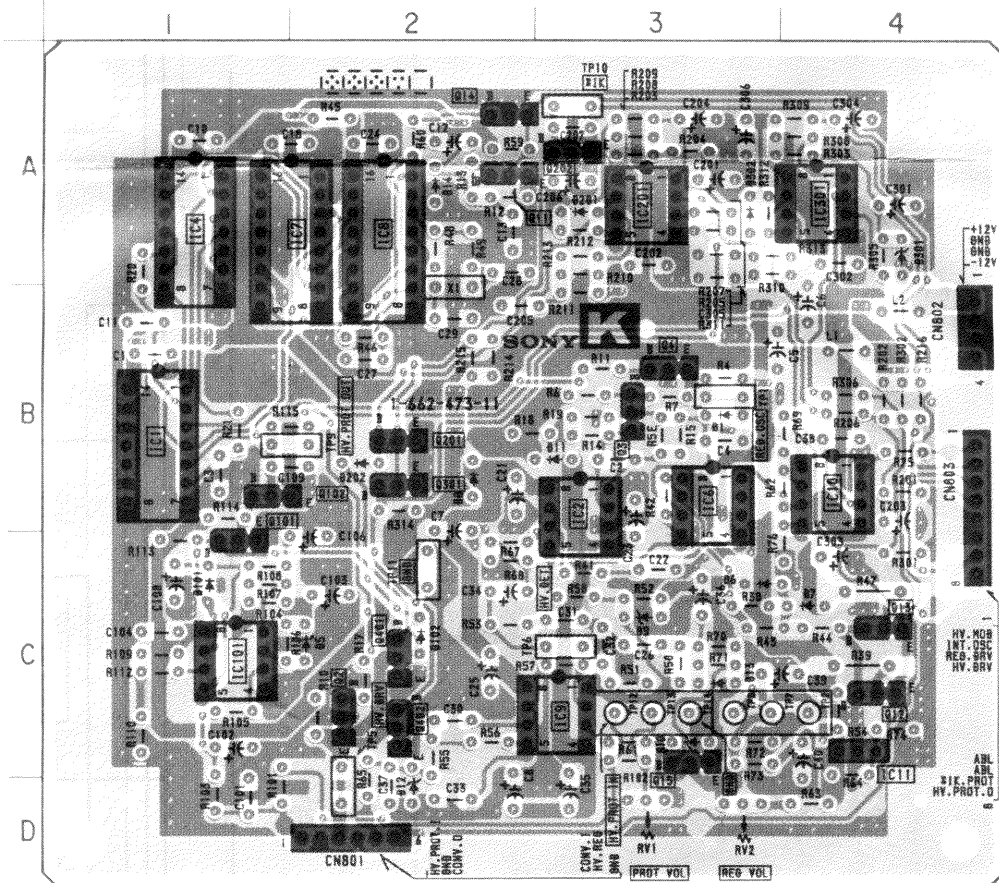



• PB (F.B.T) DIAGRAM



(HV REG. CONTROL, OSC DEV, HV REG. OUT) BOARD

— K BOARD — <Conductor side>



- : Pattern from the side which enables seeing.
-  : Pattern of the rear side.

K BOARD

Semiconductor Location

DIODE		TRANSISTOR	
D1	B-3	Q2	C-2
D5	C-2	Q3	B-3
D6	C-3	Q4	B-3
D7	C-4	Q11	A-2
D8	B-2	Q12	C-4
D9	C-3	Q13	C-4
D10	C-3	Q14	A-2
D11	B-3	Q15	C-3
D12	D-2	Q101	C-1
D13	C-3	Q102	B-1
D14	A-2	Q201	B-2
D101	C-1	Q202	A-3
D102	C-2	Q301	B-2
D201	A-3	Q401	C-2
D202	B-2	Q402	C-2
D301	A-4		
D302	A-3		
IC		VARIABLE RESISTOR	
IC1	B-1	RV1	D-3
IC2	B-3	RV2	D-3
IC4	A-1		
IC6	B-3		
IC7	A-2		
IC8	A-2		
IC9	C-3		
IC10	B-4		
IC11	C-4		
IC101	C-1		
IC201	A-3		
IC301	A-4		
		TEST POINT	
		TP1	B-3
		TP5	C-2
		TP6	C-3
		TP9	B-1
		TP10	A-3
		TP11	C-2

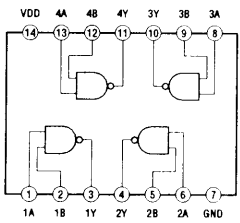
K BOARD

Function of Semiconductor

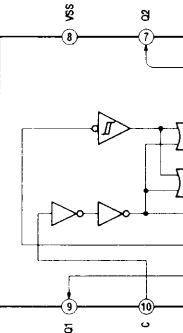
D1	1SS119-25	PROT	IC10	UPC4558C	HV DET AMP, HV MOD BUFFER
D5	RD5.1ESB2	HV PROT REF	IC11	TL431CLP-Z	HV REG REF
D6	1SS119-25	PROT	IC101	LM393P	HV PROT COMP, HOLD
D7	1SS119-25	PROT	IC201	LM393P	IK PROT 1
D8	1SS119-25	+12V HOLD	IC301	LM393P	IK PROT 2
D9	RD3.3ESB2	PROT			
D10	RD13ESB2	PROT	Q2	2SA1175-HFE	HV DRV OUT
D11	1SS119-25	-12V HOLD	Q3	2SC2785-HFE	REG OSC BUFFER
D12	RD13ESB2	PROT	Q4	2SA1175-HFE	REG OSC OUT
D13	1SS119-25	PROT	Q11	2SC2785-HFE	SOFT START
D14	1SS119-25	PROT	Q12	2SD774-34	HV REG OUT 1
D101	1SS119-25	HV PROT HOLD SW	Q13	2SB734-34	HV REG OUT 2
D102	1SS119-25	HV PROT DRV STOP SW	Q14	2SA1175-HFE	INT OSC OUT
D201	1SS119-25	IK PROT HOLD SW 1	Q15	2SC2785-HFE	SOFT START
D202	1SS119-25	IK PROT DRV STOP SW	Q101	DTC144ESA	HV PROT SW
D301	RD5.1ESB2	IK PROT 2 REF	Q102	DTC144ESA	HV PROT OUT
D302	1SS119-25	IK PROT HOLD SW 2	Q201	DTC144ESA	IK PROT SW 1
			Q202	DTC144ESA	IK PROT OUT 1
			Q301	DTC144ESA	IK PROT SW 2
			Q401	DTC144ESA	HV DRV STOP 1
			Q402	DTC144ESA	HV DRV STOP 2
IC1	MC14001BCP	OSC DEV4			
IC2	TL082CP	HV LIMIT, REG CONT-2			
IC4	UPD4011BCP	OSC DEV3			
IC6	LM393P	HV REG COMP			
IC7	MC14040BCP	OSC DEV2			
IC8	MC14572UBCP	OSC DEV1			
IC9	TL082CP	HV REG CONT, HV DET BUFFER			

K Board IC Block Diagrams

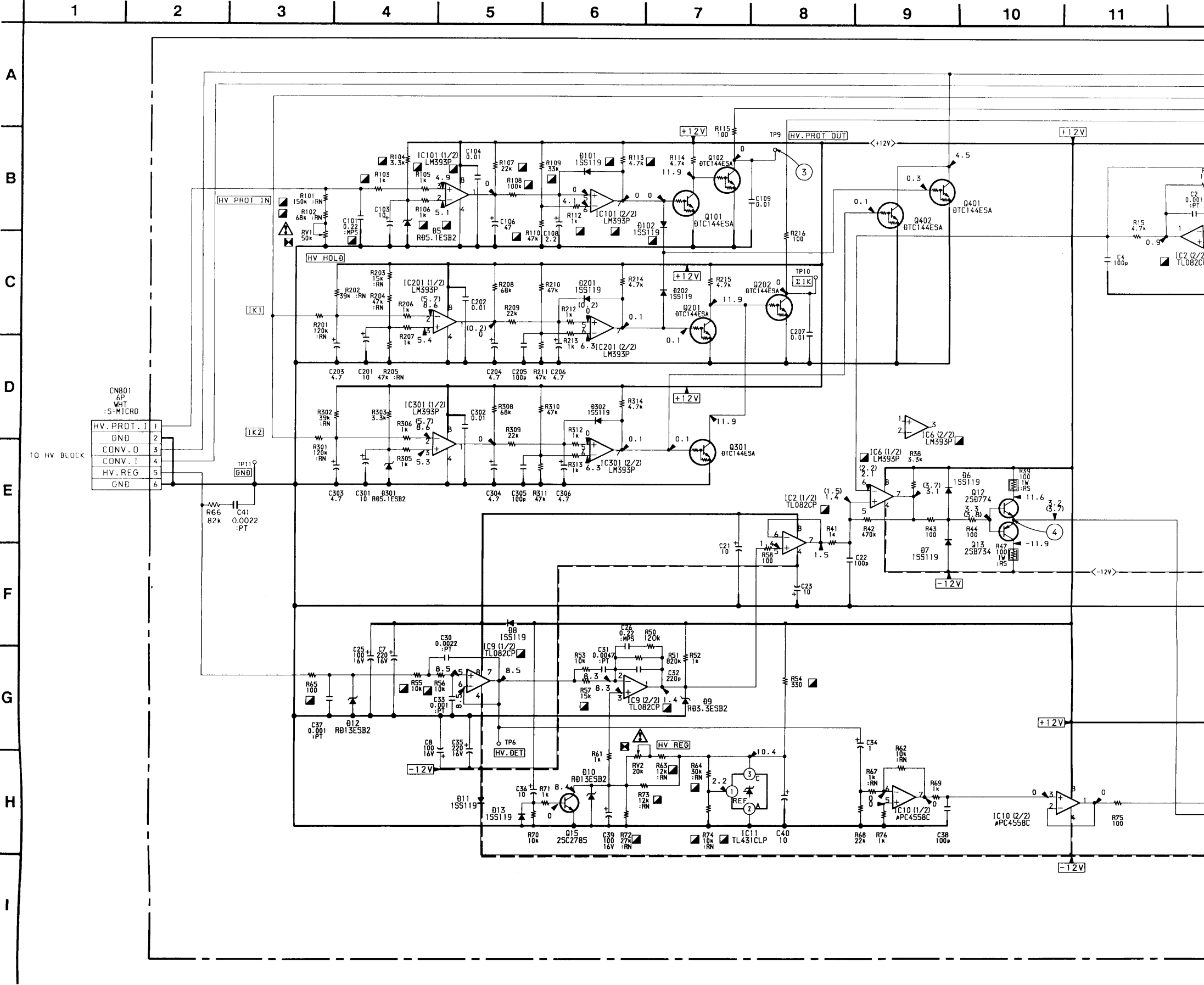
MC14011BCP(IC1, 4)



MC14040BCP(IC10, 4)

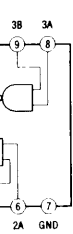


• K (HV REG. CONTROL, OSC DEV, HV REG. OUT) DIAGRAM

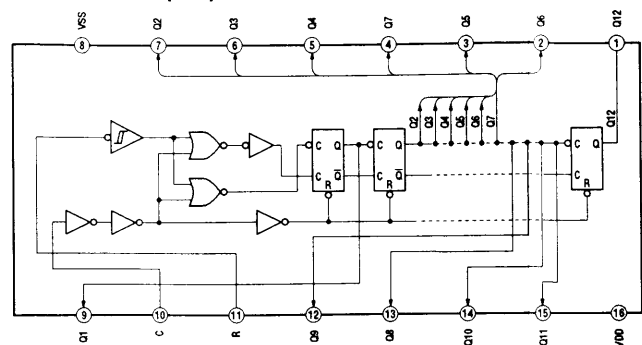


Block Diagrams

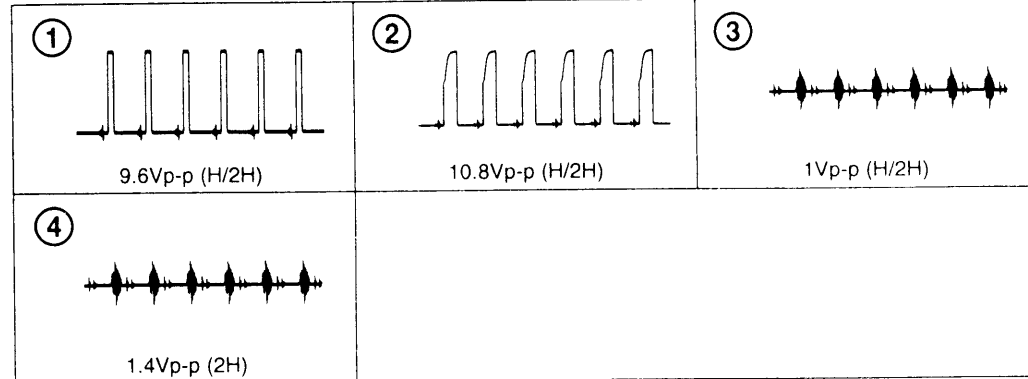
IC1, 4)



MC14040BCP(IC7)



K Board Waveforms



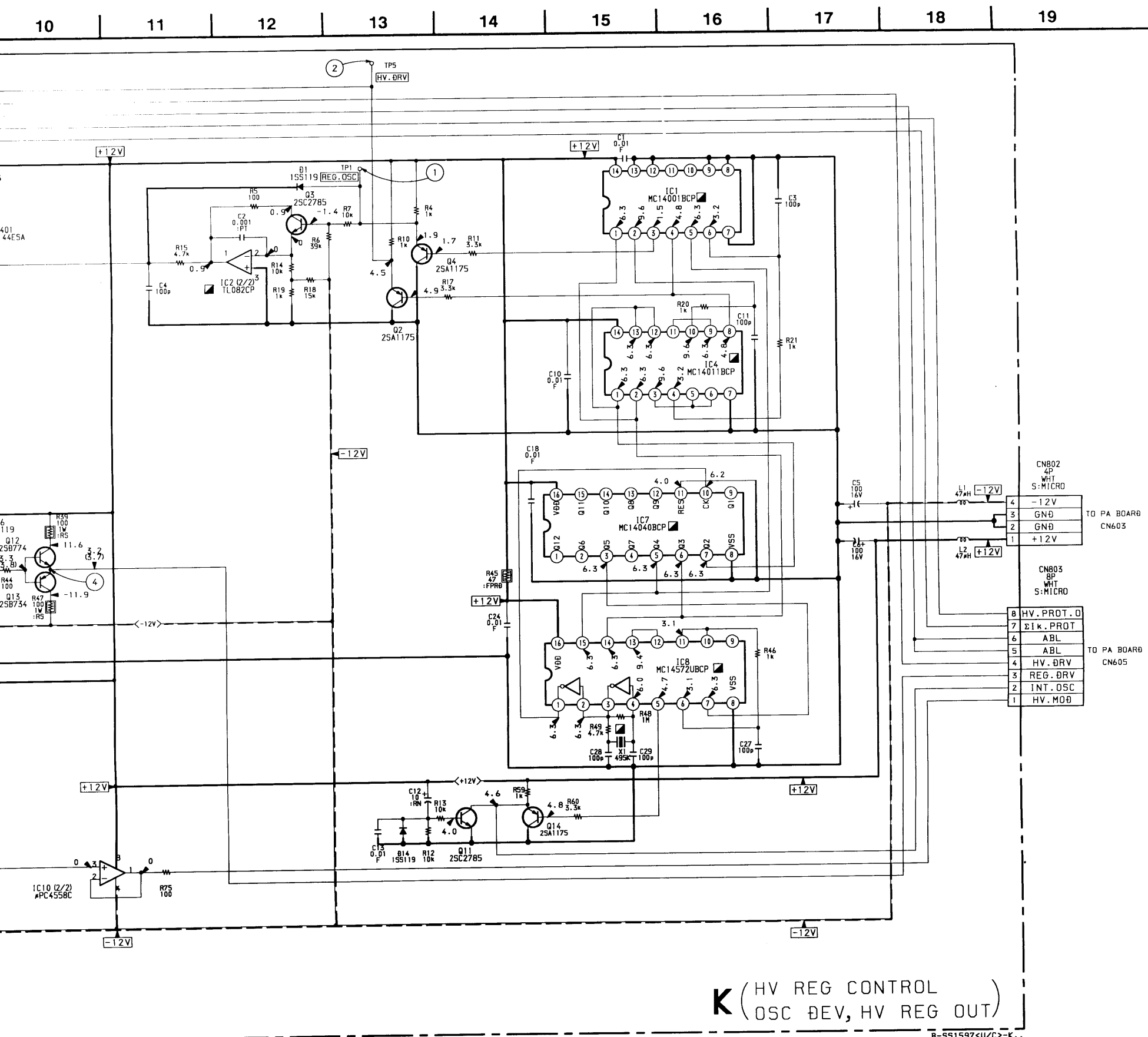
Note:

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

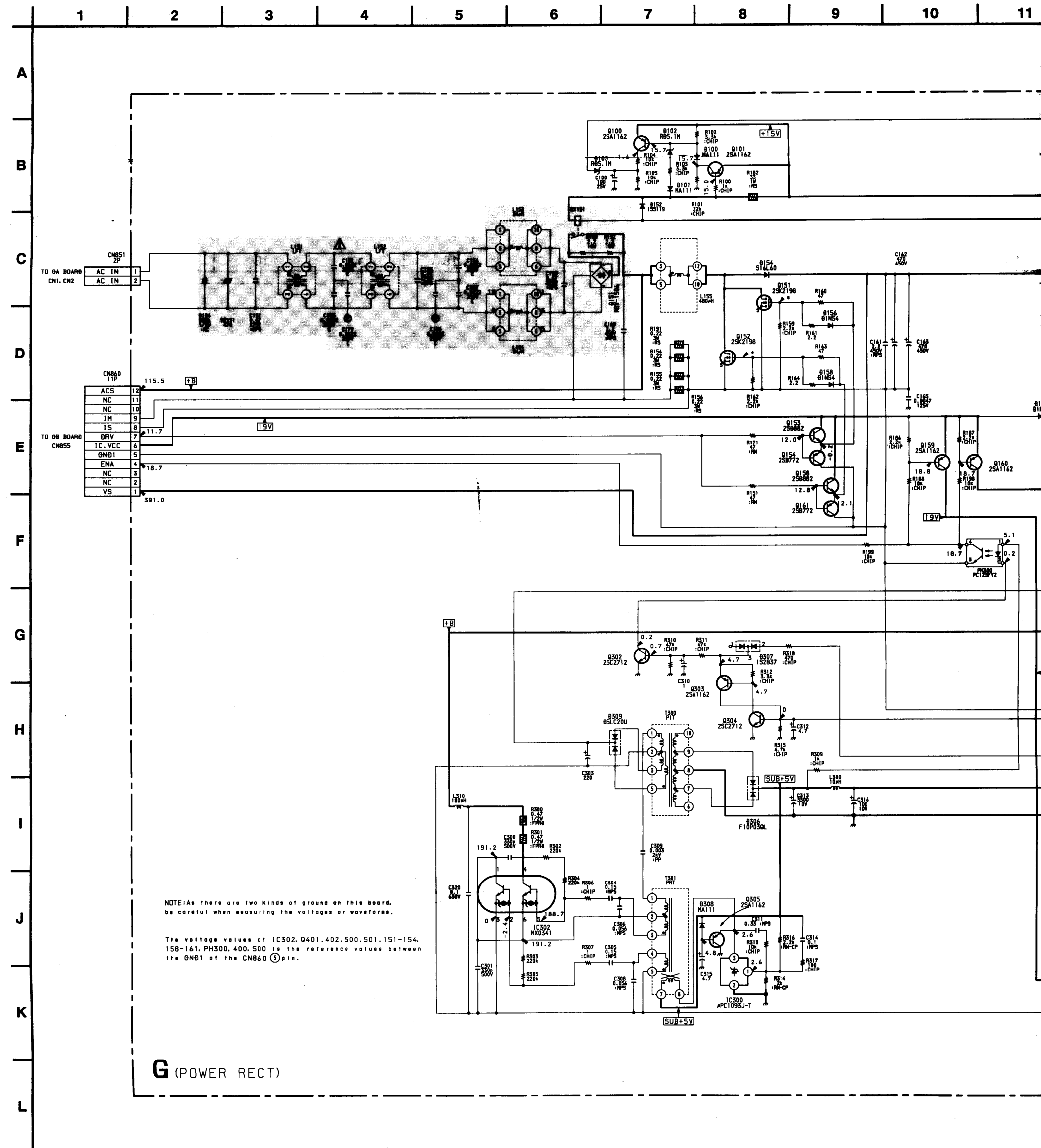
Note:

Les composants identifiés par un trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- The components identified by Δ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used. (Refer to page 3-13.)

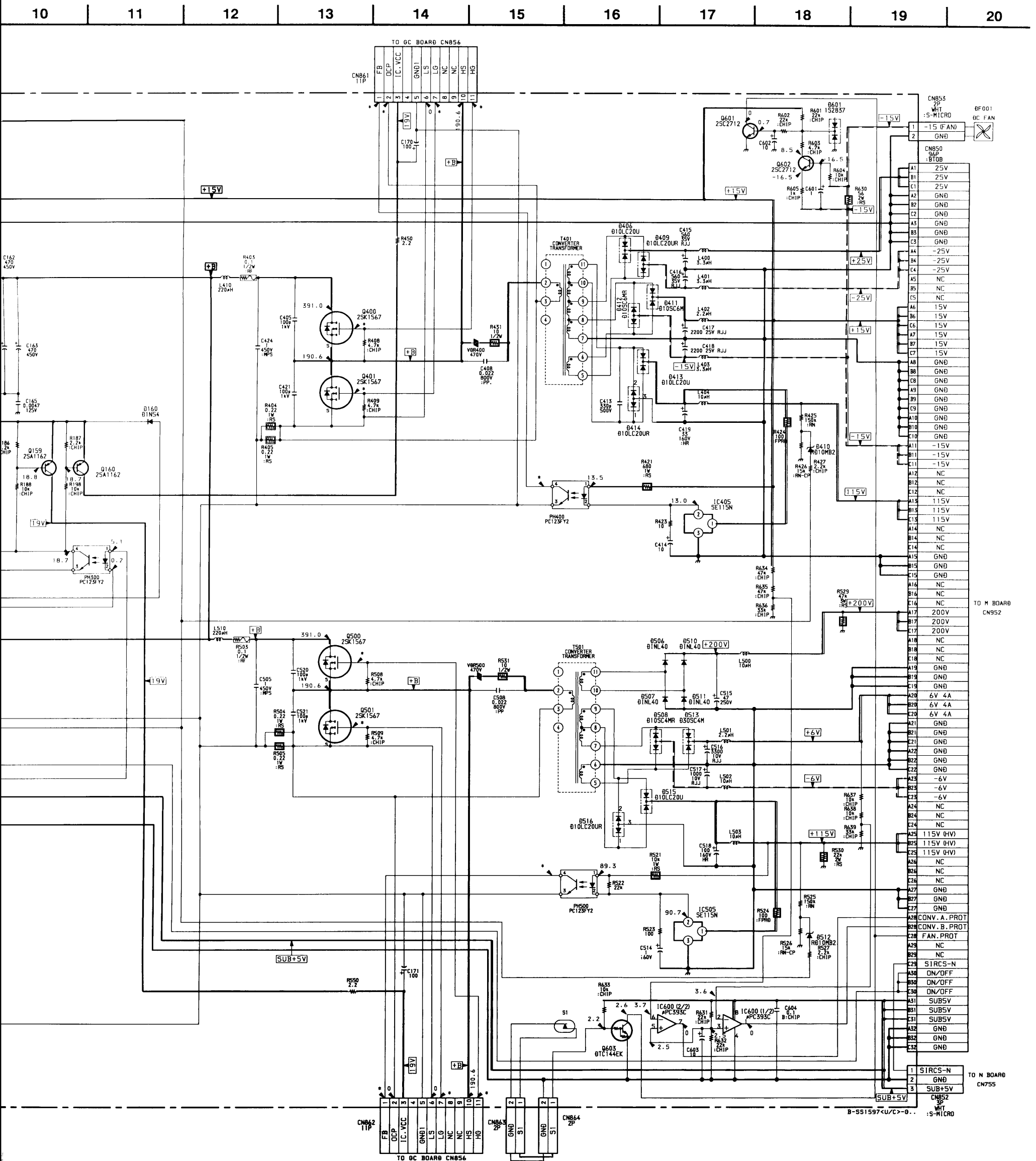


- Refer to page 4-181 for Function of Semiconductor



Note:
The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

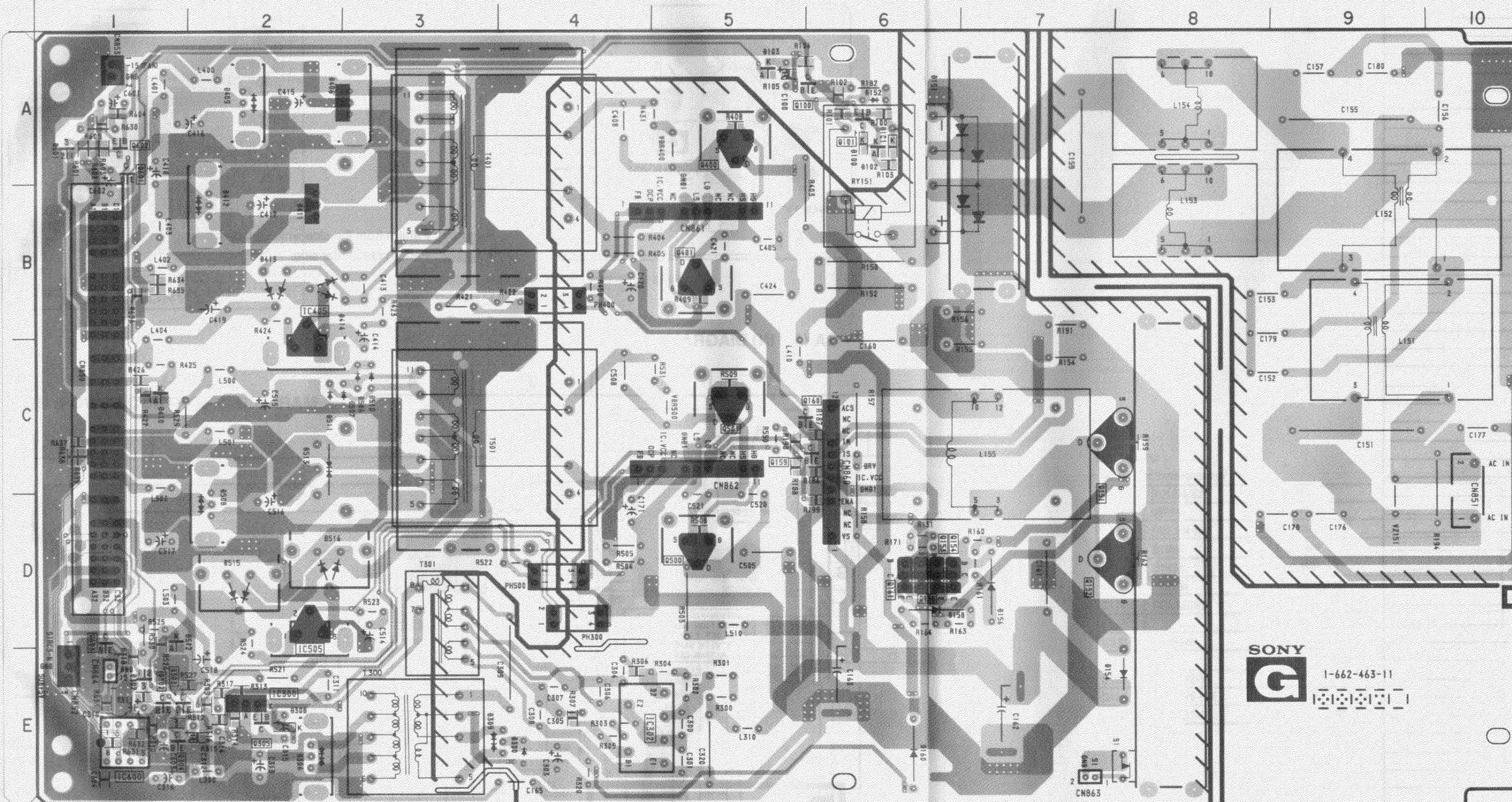
Note:
Les composants identifiés par un tramé et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



G

(POWER RECT) BOARD

— G BOARD — <Conductor side>



- Pattern from the side which enables seeing.
- Pattern of the rear side.

G BOARD
 Semiconductor Location

DIODE		TRANSISTOR	
D100	A-6	Q100	A-5
D101	A-6	Q101	A-6
D102	A-6	Q151	D-7
D103	A-5	Q152	D-7
D151	A-6	Q153	D-6
D152	A-6	Q154	D-6
D154	E-8	Q158	D-6
D156	D-7	Q159	C-6
D158	D-6	Q160	C-5
D160	E-6	Q161	D-6
D306	E-2	Q302	E-1
D307	E-1	Q303	E-1
D308	E-2	Q304	E-1
D309	E-3	Q305	E-2
D406	A-2	Q400	A-5
D409	A-2	Q401	B-5
D410	C-1	Q500	D-5
D411	B-2	Q501	C-5
D412	B-2	Q601	A-1
D413	B-2	Q602	A-1
D414	B-2	Q603	D-1
D506	C-3		
D507	C-2		
D508	D-2		
D510	C-3		
D511	C-2		
D512	D-1		
D513	C-2		
D515	D-2		
D516	D-2		
D601	A-1		
IC			
IC300	E-2		
IC302	E-4		
IC405	B-2		
IC505	D-2		
IC600	E-1		
PHOTO COUPLER			
PH300	D-4		
PH400	B-4		
PH500	D-4		

G BOARD

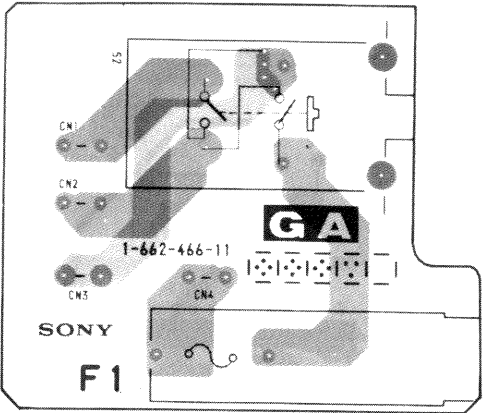
Function of Semiconductor

D100	MA111	CLAMP
D101	MA111	RY PROTECT
D102	RD5.1M-B2	RY PROTECT
D103	RD5.1M-B2	RY PROTECT
D151	RBV-1506	AC RECT
D152	1SS119-25	CLAMP
D154	S16L60	+B RECT
D156	D1NS4	SWITCH
D158	D1NS4	SWITCH
D160	D1NS4	VCC RECT
D306	F10P03QL	SUB +5V RECT
D307	1SS184	ON/OFF RECT
D308	MA111	DISCHARGE
D309	D5LC20U	VCC RECT
D406	D10LC20U	+25V RECT
D409	D10LC20UR	-25V RECT
D410	RD10M-B2	OVP 2
D411	D10SC6M	+15V RECT
D412	D10SC6MR	-15V RECT
D413	D10LC20U	+115V RECT
D414	D10LC20UR	+115V RECT
D506	D1NL40-TR2	+200V RECT
D507	D1NL40-TR2	+200V RECT
D508	D10SC4MR	-6V RECT
D510	D1NL40-TR2	+200V RECT
D511	D1NL40-TR2	+200V RECT
D512	RD10M-B2	OVP 3
D513	D30SC4M	+6V RECT
D515	D10LC20U	+115V (HD) RECT
D516	D10LC20UR	+115V (HV) RECT
D601	1SS184	PROTECT
IC300	UPC1093J	SUB 5V REG
IC302	MX0341B-F	SWITCH
IC405	SE115N	+115V REG OUT
IC505	SE115N	+115V (HV) REG OUT
IC600	UPC393C	COMPARATOR
PH300	PC123FY2	VCC ON/OFF
PH400	PC123FY2	FEEDBACK 1
PH500	PC123FY2	FEEDBACK 2
Q100	2SA1162-G	RY PROTECT
Q101	2SA1162-G	RY PROTECT
Q151	2SK2198	SWITCH
Q152	2SK2198	SWITCH
Q153	2SD882-P	BUFFER
Q154	2SB772-Q	BUFFER
Q158	2SD882-P	BUFFER
Q159	2SA1162-G	VCC ON/OFF
Q160	2SA1162-G	VCC ON/OFF
Q161	2SB772-Q	BUFFER
Q302	2SC2712-YG	ON/OFF SWITCH
Q303	2SA1162-G	PROTECT
Q304	2SC2712-YG	PROTECT
Q305	2SA1162-G	SOFT START
Q400	2SK1567	SWITCH
Q401	2SK1567	SWITCH
Q500	2SK1567	SWITCH
Q501	2SK1567	SWITCH
Q601	2SC2712-YG	FAN PROTECT
Q602	2SC2712-YG	FAN PROTECT
Q603	DTC144EKA-T146	THERM PROTECT

GA

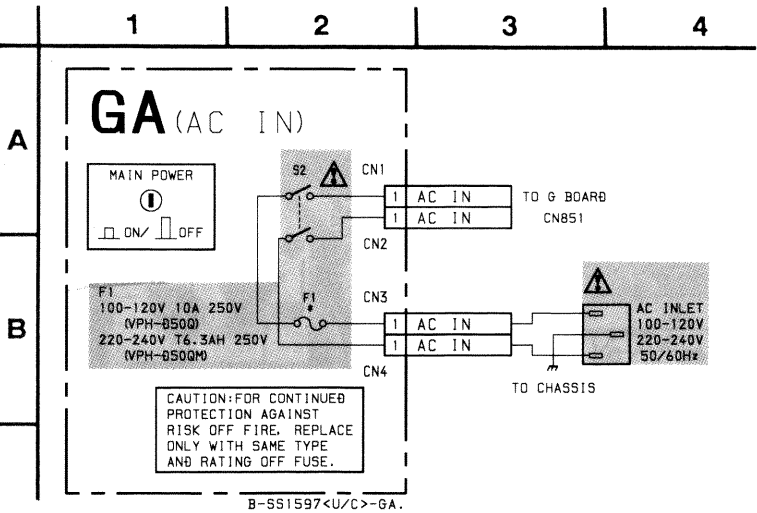
(AC IN) BOARD

— GA BOARD — <Conductor side>



- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

• GA (AC IN) DIAGRAM

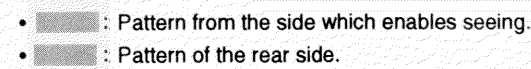
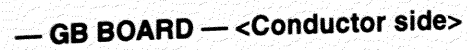


Note:
The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Note:
Les composants identifiés par un tramé et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Schematic Diagram

GA board →



GB (POWER CONTROL 1)

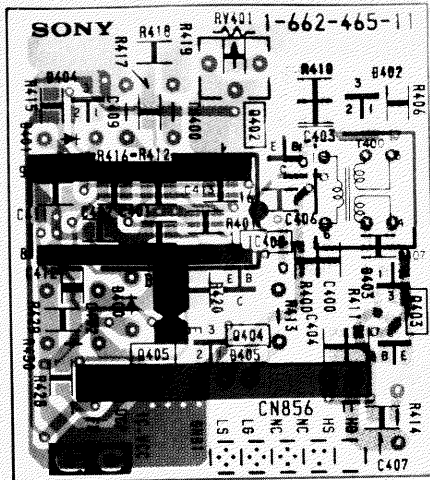
Pin	Signal
12	ACS
11	NC
10	NC
9	IM
8	IS
7	DRV
6	IC.VCC
5	GND1
4	ENA
3	NC
2	NC
1	VS

D159	RD12M-B2	OVP 1
D161	Q3P2M	LUTCH
D162	RD7.5M-B2	CLAMP
D163	D1NS4	CLAMP
D172	D1NS4	CLAMP
D173	1SS184	DISCHARGE
D174	RD6.8ESB2	CLAMP
IC151	UC3854N	POWER CONTROL 1
Q155	2SC2712-YG	LUTCH
Q156	2SA1175-HFE	DRIVE
Q157	2SA1162-G	VCC ON/OFF

GC

(POWER CONTROL 2) BOARD

— GC BOARD — <Conductor side>

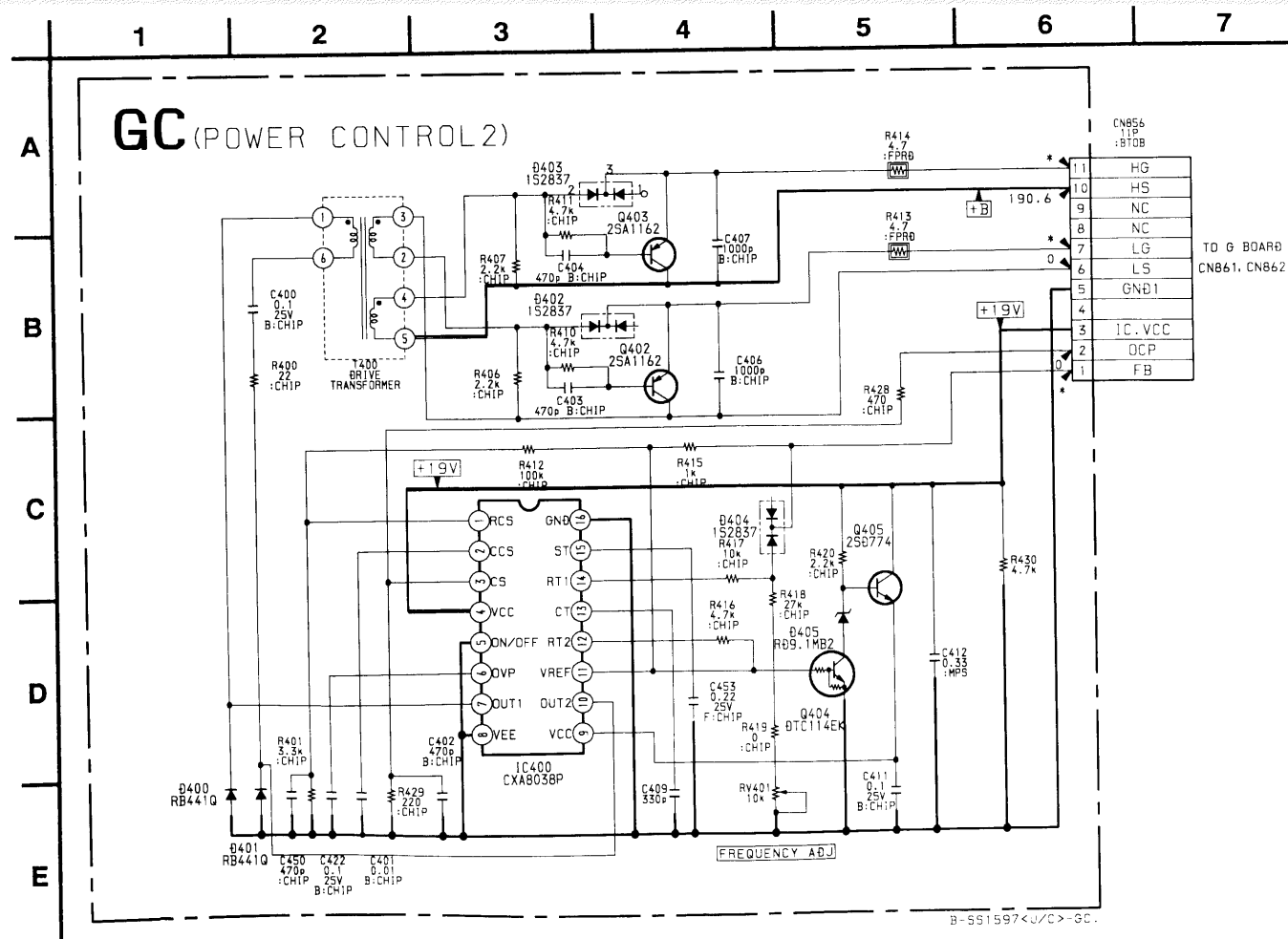
**GC BOARD**

Function of Semiconductor

D400	RB441Q	CLAMP
D401	RB441Q	CLAMP
D402	1SS184	DRV RECT
D403	1SS184	DRV RECT
D404	1SS184	FB RECT
D405	RD9.1M-B2	DRV REG
IC400	CXA8038P	POWER CONTROL 2
Q402	2SA1162-G	PROTECT
Q403	2SA1162-G	PROTECT
Q404	DTC114EK	DRV ON/OFF
Q405	2SD774-34	DRV REG

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

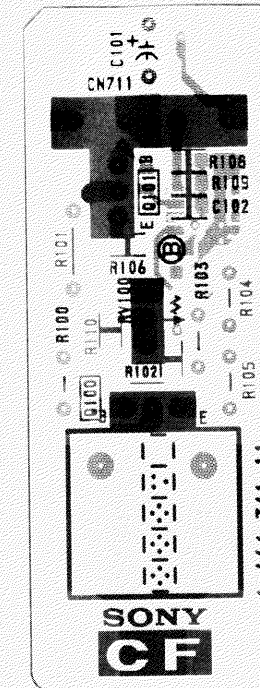
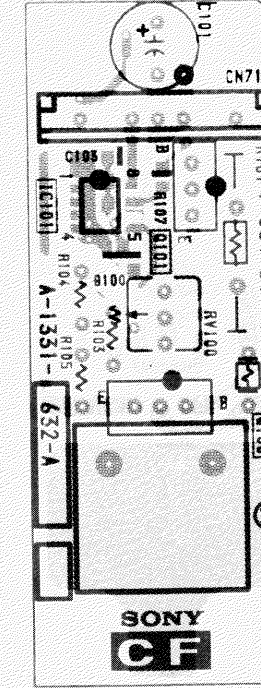
• GC (POWER CONTROL 2) DIAGRAM



Schematic Diagram

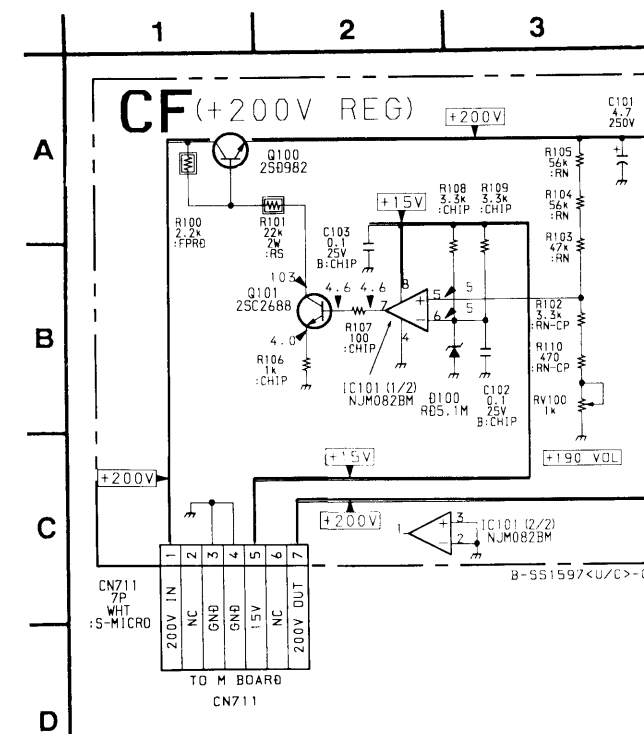
← **GB** board**CF**

(+200V REG.) BOARD

— CF BOARD —
<Conductor side>— CF BOARD —
<Component side>

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

• CF (+200V REG.) DIAGRAM

**CF BOARD**

Function of Semiconductor

D100	RD5.1M-B2	BIAS
IC101	NJM082BM-T1	REG AMP
Q100	2SD982	+200V REG
Q101	2SC2688-K	REG DRIVE

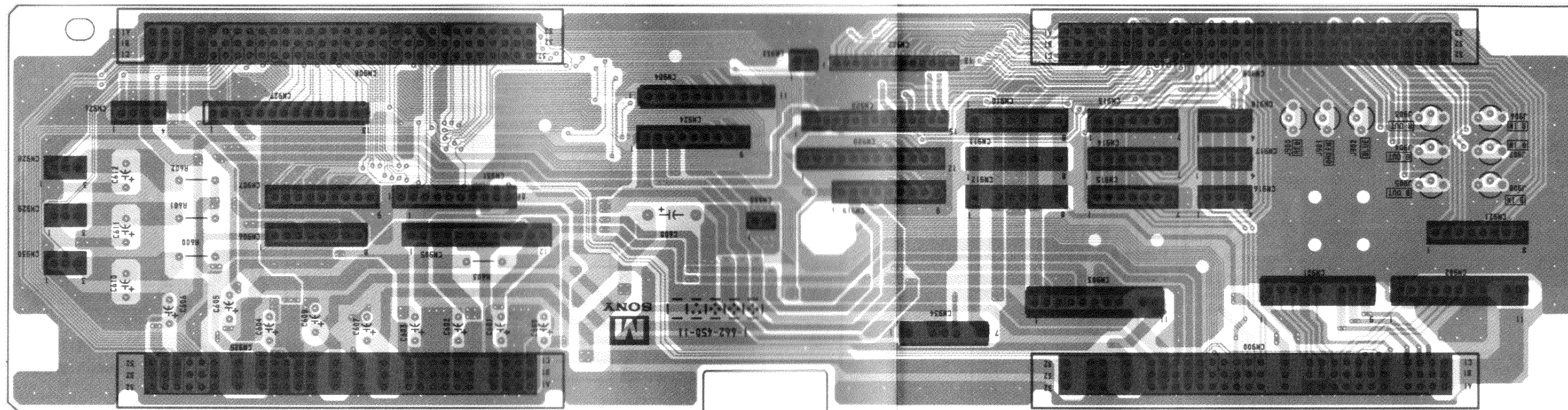
Schematic Diagram

CF board →

M

(MOTHER) BOARD

— M BOARD — <Conductor side>

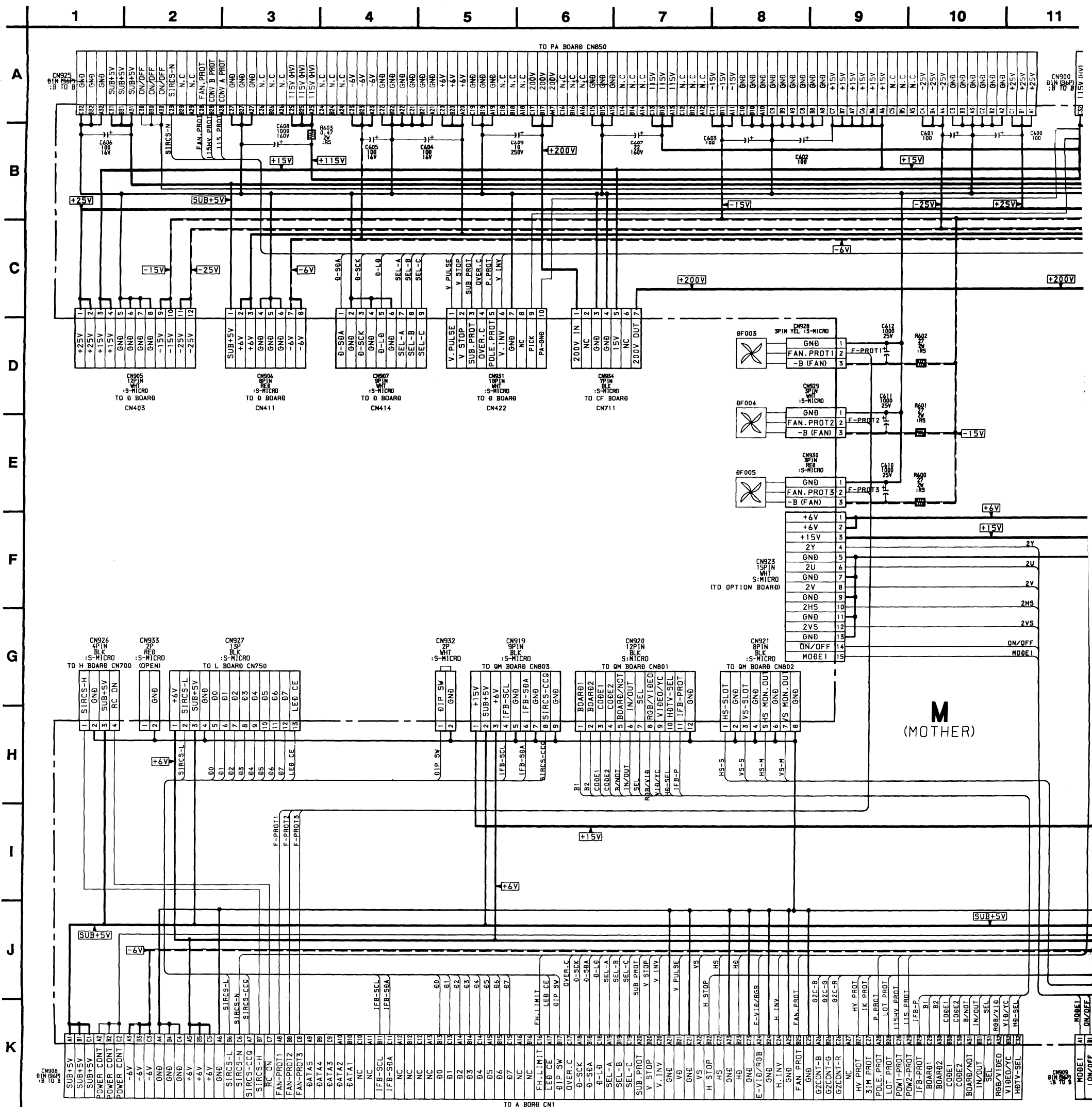


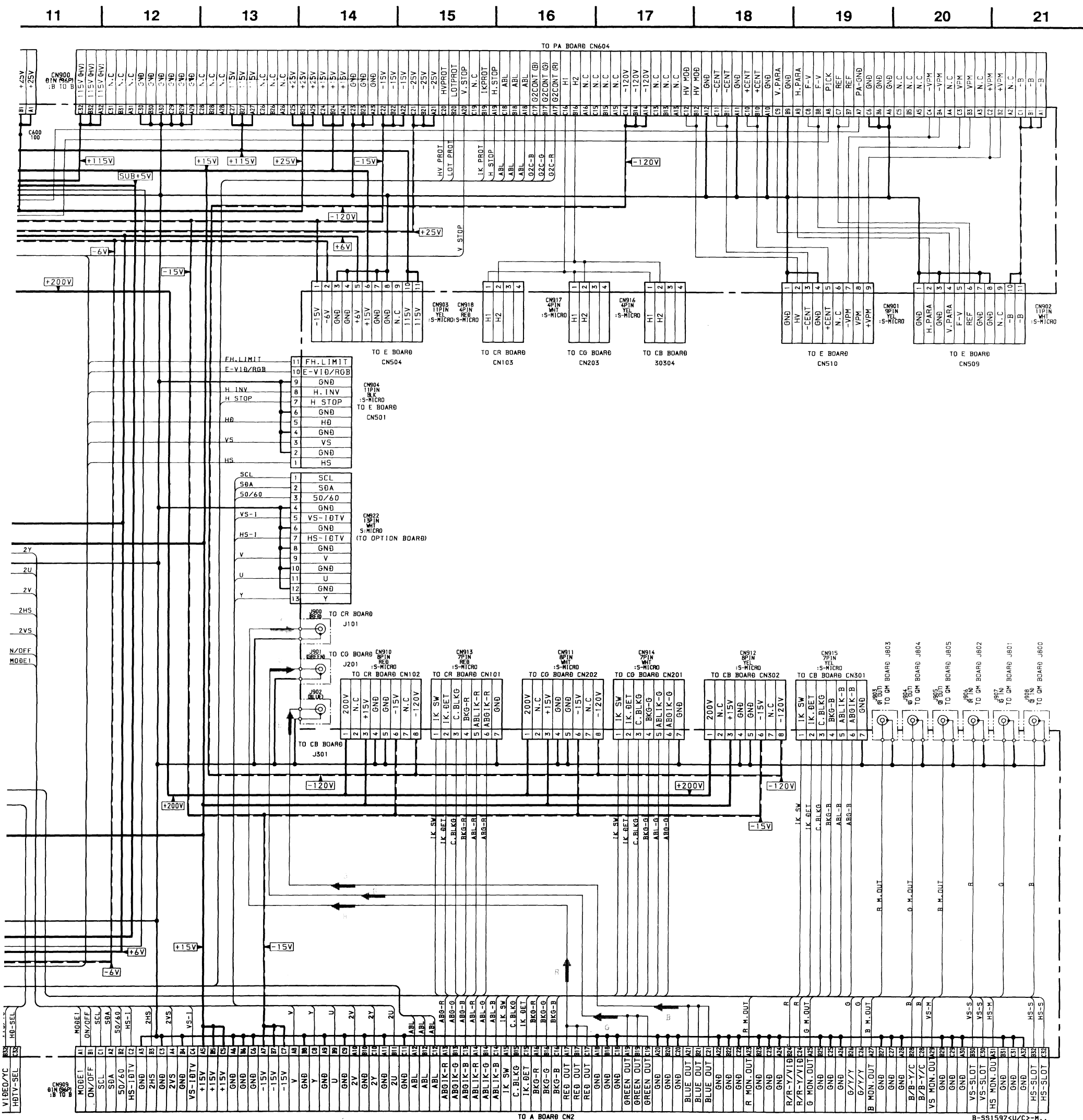
- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

Schematic Diagram

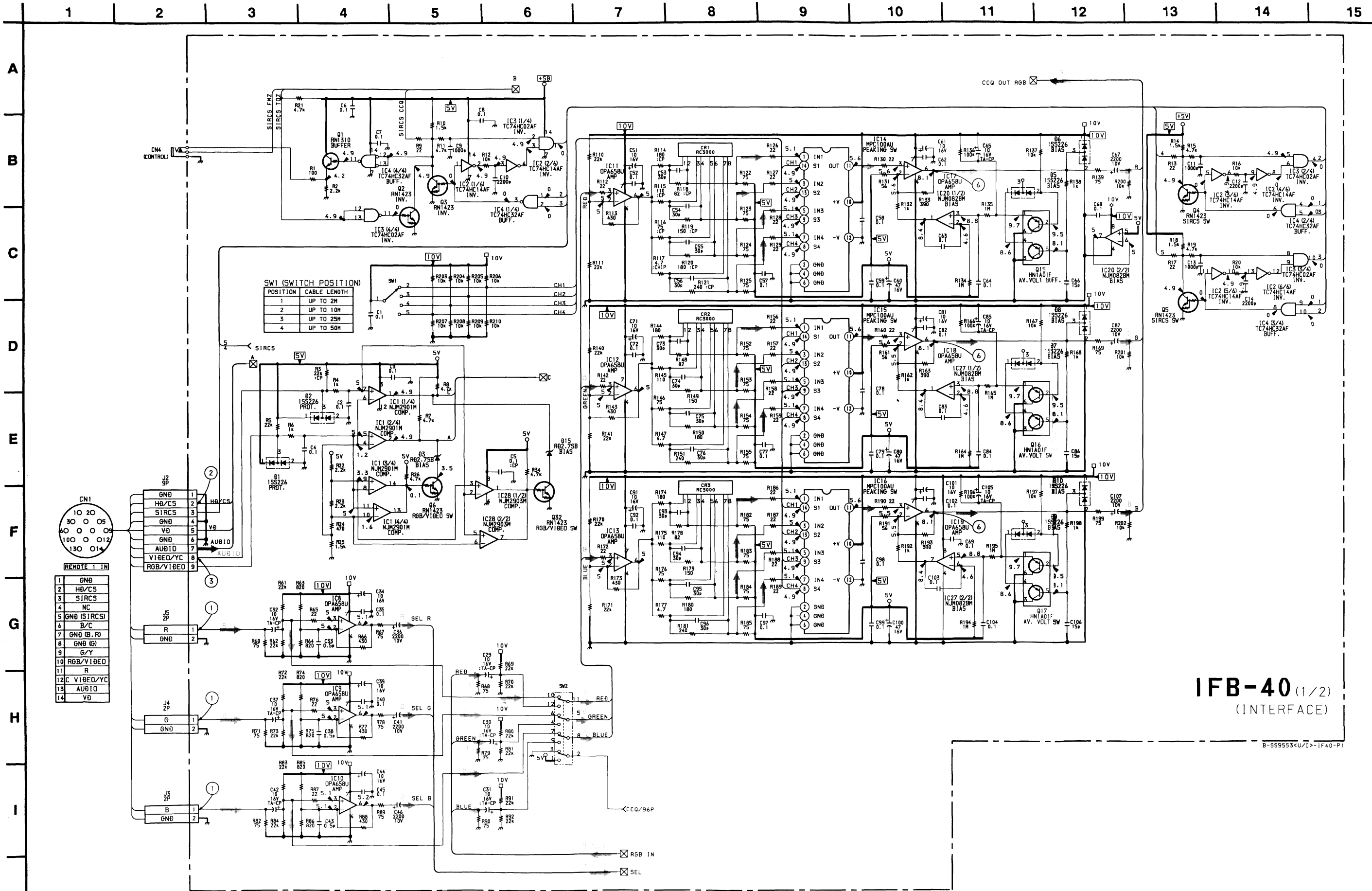
**QM** board

- **M (MOTHER) DIAGRAM**



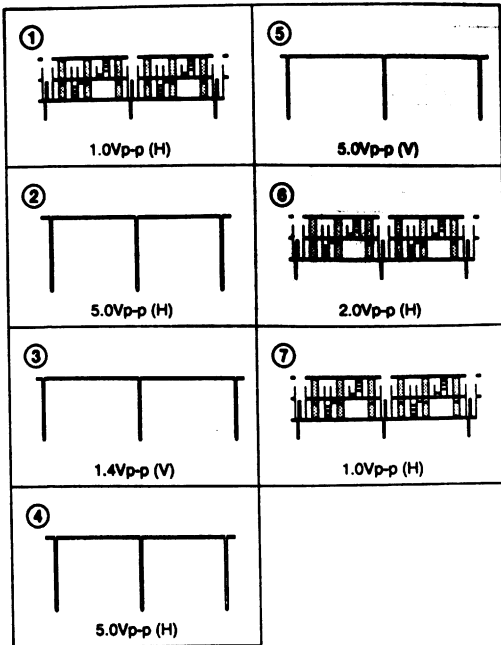


• IFB-40 (1/2) (INTERFACE) DIAGRAM
• Refer to page 4-199 for Printed Wiring Board

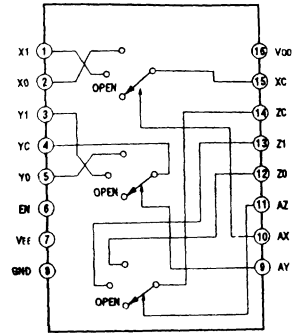


IFB-40 IC BLOCK DIAGRAMS

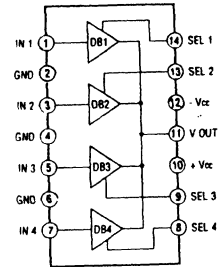
IFB-40 Board Waveforms



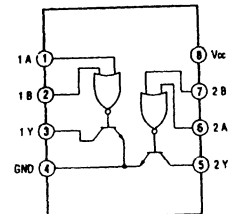
MC74HC4053F (IC21, 22)



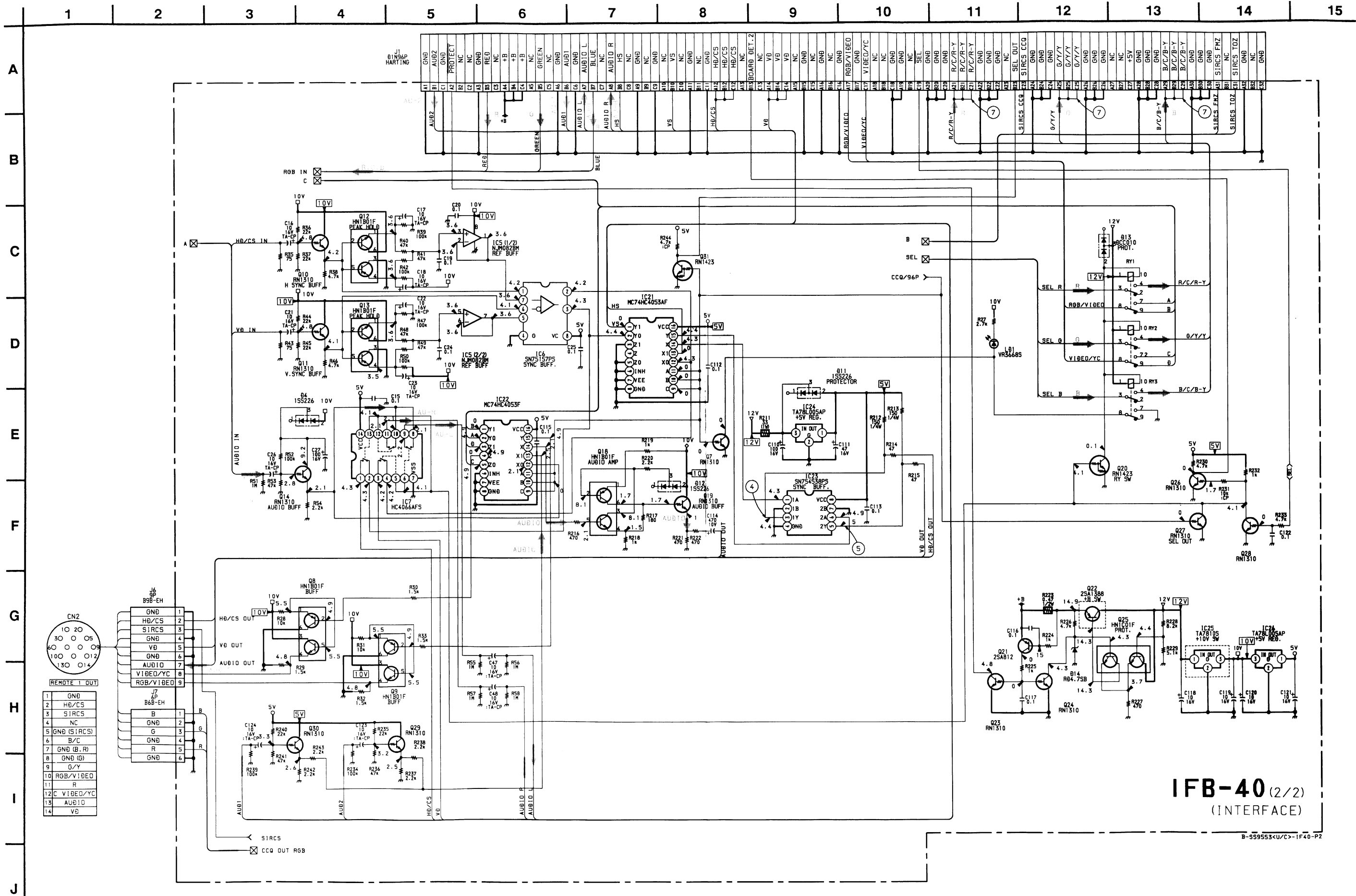
MPC100AU (IC14-16)



SN75453BPS (IC23)



- IFB-40 (1/2) (INTERFACE) DIAGRAM
- Refer to page 4-199 for Printed Wiring Board



IFB-40

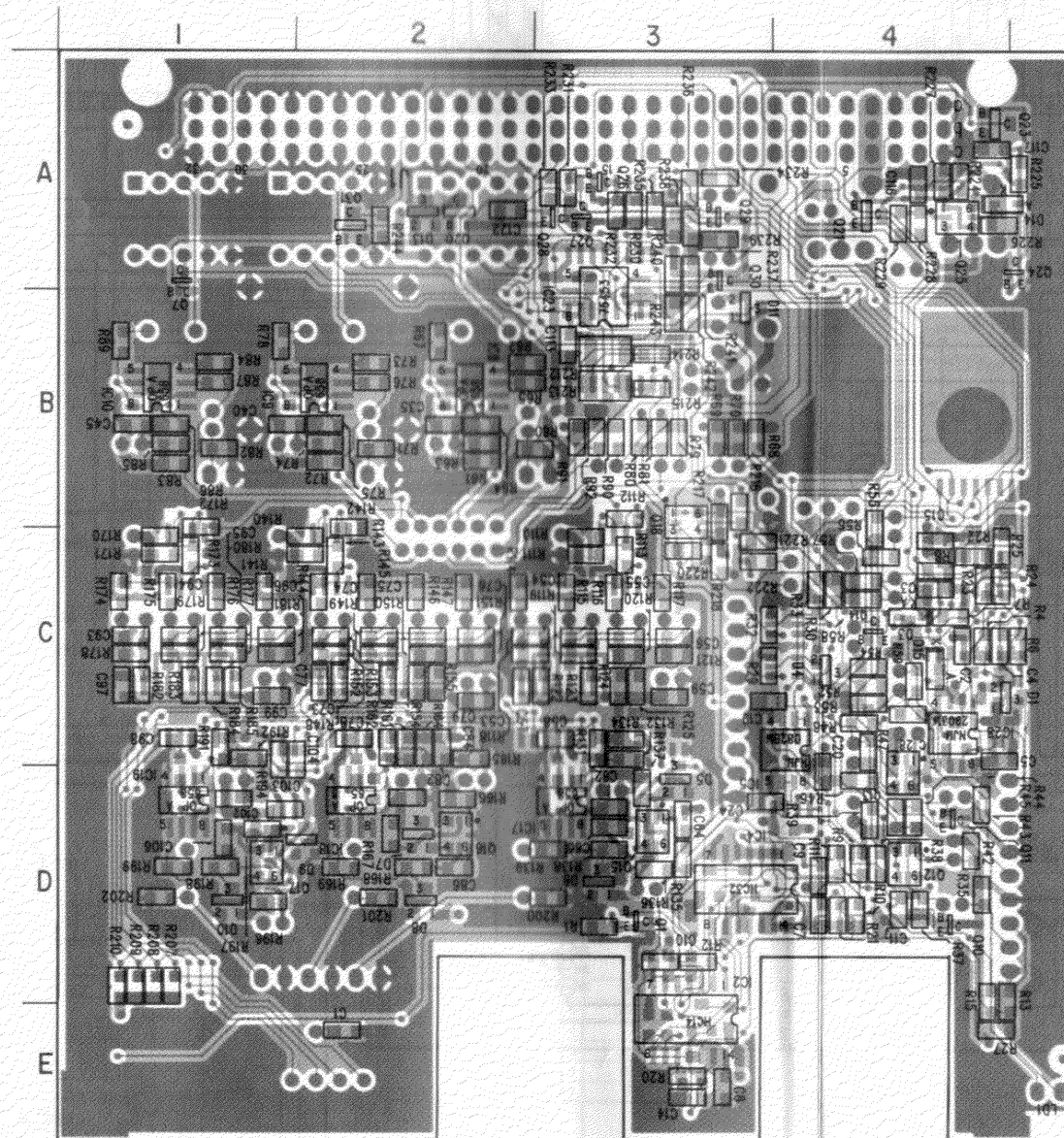
(INTERFACE) BOARD

— IFB-40 BOARD — <Conductor side>

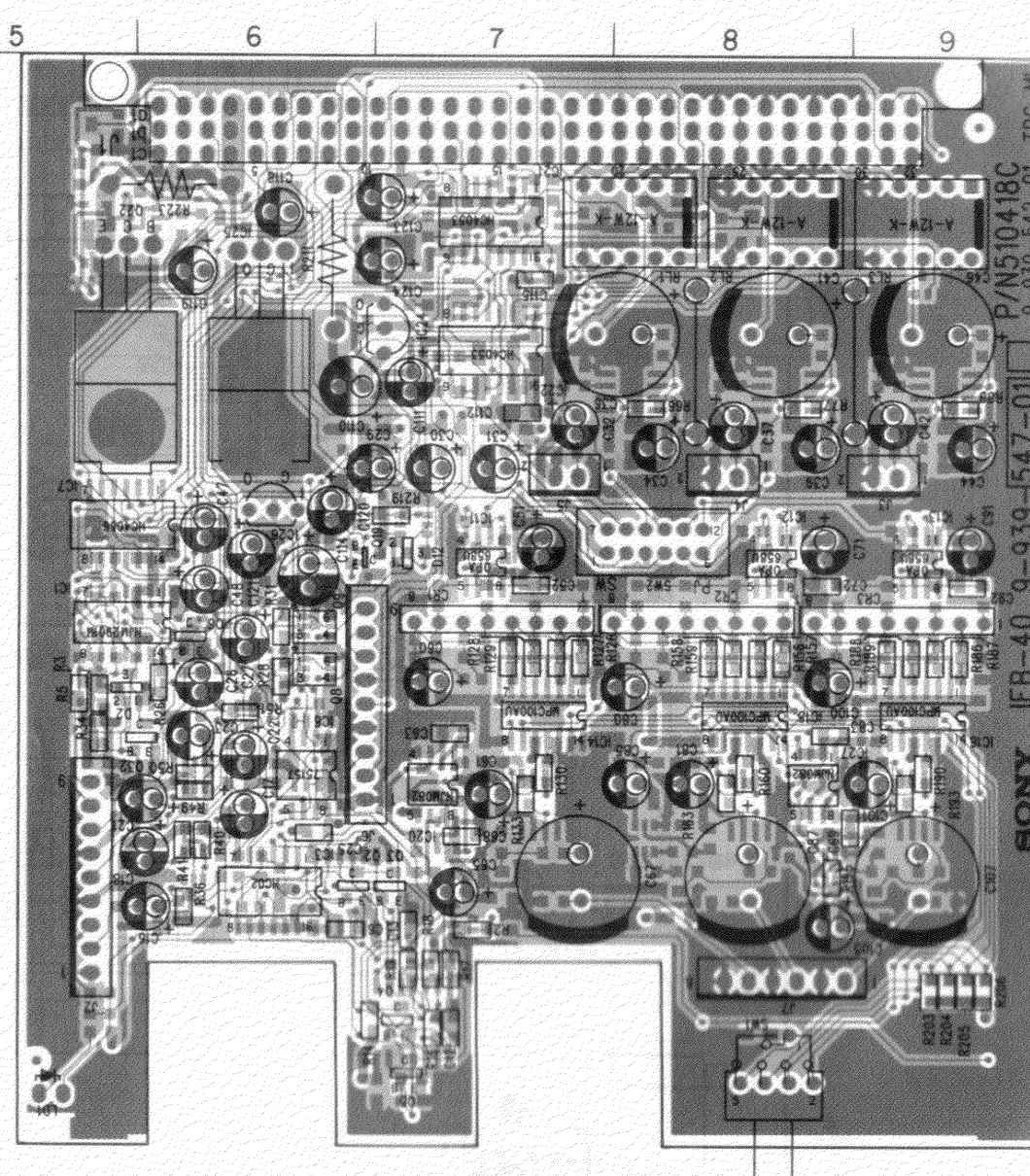
IFB-40 BOARD

Semiconductor Location

DIODE		IC22	B-7
		IC23	B-3
		IC24	B-7
D1	C-4	IC25	B-6
D2	C-5	IC26	B-6
D3	C-4	IC27	D-8
D5	D-3	IC28	C-4
D6	D-3	TRANSISTOR	
D7	D-2		
D8	D-2		
D9	D-2		
D10	D-1	Q1	D-3
D11	B-3	Q2	D-6
		Q3	D-7
		Q4	E-7
D12	C-7	Q5	E-7
D13	A-2	Q6	C-6
D14	A-5	Q7	A-1
D15	C-4	Q8	C-6
LD1	E-5	Q9	C-6
		Q10	D-4
IC			
IC1	C-5	Q11	D-4
IC2	E-3	Q12	D-4
IC3	D-6	Q13	D-4
IC4	D-3	Q14	C-4
IC5	C-4	Q15	D-3
IC6	D-6	Q16	D-2
IC7	B-5	Q17	D-1
IC8	B-2	Q18	B-3
IC9	B-2	Q19	C-6
IC10	B-1	Q20	A-2
		Q21	A-4
IC11	C-7	Q22	B-6
IC12	C-8	Q23	A-4
IC13	C-9	Q24	A-5
IC14	C-7	Q25	A-4
IC15	C-8	Q26	A-3
IC16	C-9	Q27	A-3
IC17	D-3	Q28	A-3
IC18	D-2	Q29	A-3
IC19	D-1	Q30	B-3
IC20	D-7		
		Q31	A-2
IC21	A-7	Q32	C-6



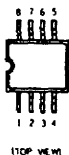
— IFB-40 BOARD — <Component side>



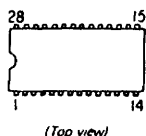
- **Side pattern**: Pattern from the side which enables seeing.
- **Rear pattern**: Pattern of the rear side.

4-5. SEMICONDUCTOR LOCATIONS

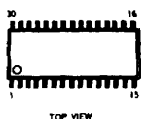
CXA1450M-T4
EL2186CS-TE2
GS1881-CKA
MAX4121CSA-TE2
MAX762CSA-TE2
MM1112XFF
NJM082BM-T1
NJM2235M-T1
NJM2240M
NJM4200M-T1
TC4W53F
TC4W66FU
TC7W04FU
TC7W08F
TC7W14F
TC7W24FU-TE12R
TC7W32F
TL082CPS-E-20
 μ PC393G2
 μ PC4082G2
 μ PC4588G2



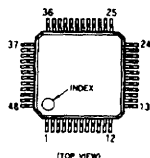
CXA1158P
LM1282N
M27C512-10F1
M48Z30Y-100PM1



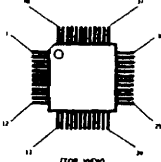
CXA1726AM-T6



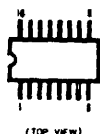
CXA1839Q
CXA2011Q



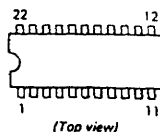
CXA1855Q



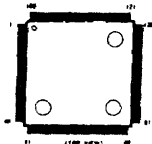
CXA1875AM-T4
CXA8038P
MAX8213BCSE-TE2
MC74HC4053F-T2
MC74HC4538AF
PCF8574T-T
SN74HC123AF
SN74HC138ANS
SN74HC139ANS
SN74HC157ANS
SN75123NS
TC74HC123AF
TC74HC153F
TC74HC4053AF



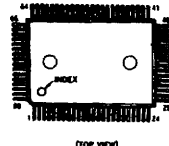
CXA2016S
 μ PC1377C



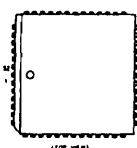
CXD108-146Q



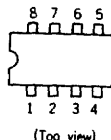
CXD2024AQ



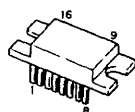
CY7C136-55JC-TEL
EPM7032QC-44-12-IRE



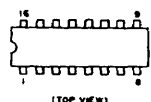
EL2160CN
LM393P
LM6361M-T1
MM1170BFB
SN5157PS
TL082CP
 μ PC393C
 μ PC4558C
 μ PC814C
 μ PC814G2-T1



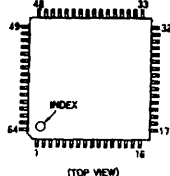
GL6P202



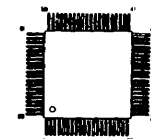
HD14538BFP-TL
MC14040BCP
MC14495P1
MC14572UBCP
TDA4665T-T
TC74HC238AP
 μ C3854N



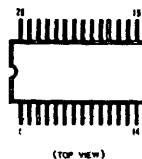
HD6433257A33F



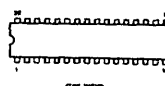
HD643337WA08F



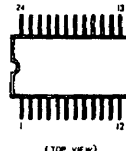
HM6264BLFP-10LTZ
MAX211ESAI-TE2
 μ PD17215



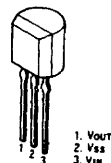
HN58C1001P-15
M27C1001-10F1



ICS1522MT
MB86022PF
MP7670AS-TE2



LM2931Z-5.0



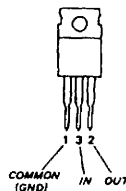
LM2940CT-5.0
LM7812CT
NJM7809FA



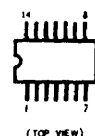
LM2990T-5.0



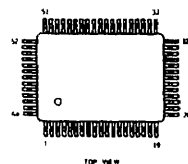
LM7912CT



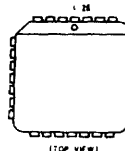
MAX487ECSA-TE2
MAX489ECSD-TE2
MC74HC02AF-T2
MC74HC4078FEL
NJM084M-TE2
SN74HC00ANS
SN74HC04ANS
SN74HC08ANS
SN74HC11ANS
SN74HC164ANS
SN74HC32ANS
SN74HC74ANS
SN74HCT08ANS
TC74HC4066AF
TC74VHC08F
TC74VHC132F
TC74VHC14F
TC74VHC164F
TC74VHC32F
TC74VHC74F
TC7S14F



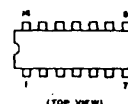
MB654842UPF
MB671469PF
MB90091APF-114



MC10H64CFNR2



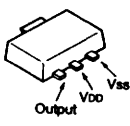
MC14001BCP
MC14011BCP
MC1436CP1
MC1495BP
SN74HC08AN
SN74HC125AN
TC74HC107AF
TC74HC14AF
 μ PC1394C



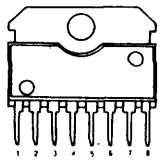
MC8639A



RH5VL43AA-T1



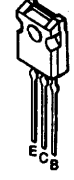
μPC1498H



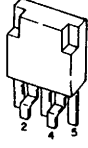
FMW1-T-148
FMW5-T-148



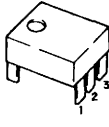
2SA1358-Y
2SC3421-Y



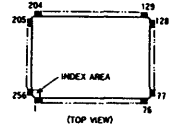
MX0341B-F



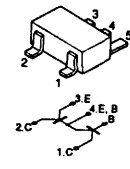
SBX1780-51



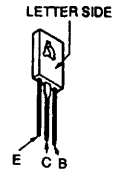
μPD65806GD-064-LML



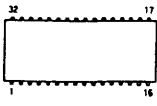
FMY3A-T-148



2SA1381-E
2SB648A-C
2SB772-P
2SC2688-L
2SC2688-LK
2SC3955DE
2SD882



M27C4001-10F1
TDA9141-N2C



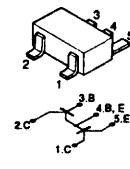
SE11SN



VPH06



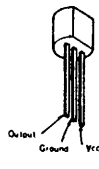
FMY4A-T-148



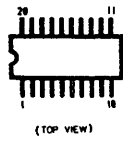
2SA1462-T1Y34



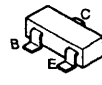
NJM78L12A



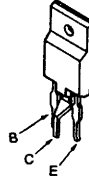
SN74HC541ANS
TC74HC273AF
TC74HC573AF



DTA144EKA-T146
DTC144EKA-T146
2SA1162-YG-TE85L
2SC2712-YG-TE85L
2SC3545-T44



IRFI9620GS



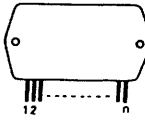
2SB772-P
2SK523TP-M1



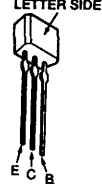
NJM79L12A



STK392-040



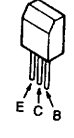
DTC144ESA
DTC144ESA-TP
2SA1175-F
2SA1175TP-HFE



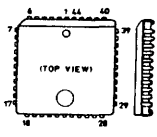
IRFIP250



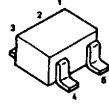
2SB734-T-34
2SD774-T-34



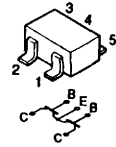
PC16550DV-FL63



TC4S66F
TC7S00F
TC7S04F
TC7S08FU
TC7S32F
TC7S66F



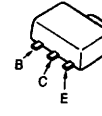
FMS1-T-148



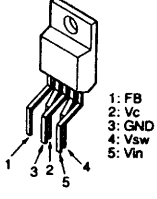
IRFP460



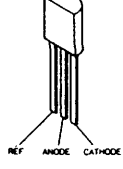
2SB798-DLKD



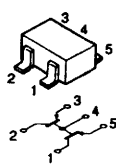
PQ20VZ5U



TL431CLP
μPC1093J



FMS2-T-148



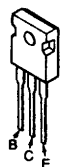
2SA1207-AA
2SC1906



2SB897
2SC4054N
2SD1210



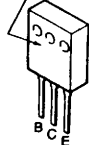
2SC3938-CB



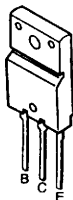
2SC3950E



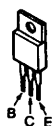
2SC3997CA
MARKING SIDE VIEW



2SC4630LS



2SD982



2SJ143
2SK755
2SK929



2SK160-K4K5K6



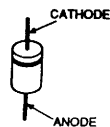
2SK817



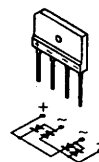
DAN202K-T-146
1S2837-T1



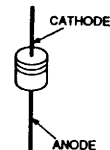
DFC15TR
ERC35-02
ERD29-08J



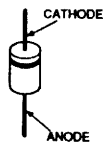
D1NL40-TR2
RBV-1506



D1NS4-TA
RB441Q
RD13ES-T1B2
RD15ES-T1B2
RD20ES-T1B2
RD33ESB2
RD33ES-T1B2
RD39ES-T1B2
RD5.1ESB2
RD6.2ES-T1B2
1SS119



D1NS-TR2
ERA22-06AVRBT
RD10ES-T1B2
RD2.2M-T1B
RD6.8ES-T1B2
1SS83TD



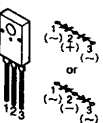
D10SC4MR
D10LC20UR



D10SC6M



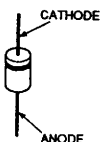
D10SC6MR



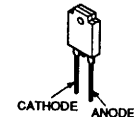
D30SC4M
F10P03QL



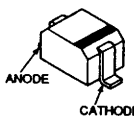
EGP10GPKG23
ERC06-155A
ERC91-02
ERC91-02E
RU-1



ERC88M-009



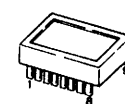
MA111



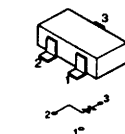
FMP-G5FS



GL-6P202



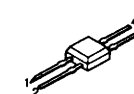
RD10M-B2
RD12M-B2
RD3.6M-B2
RD5.1M-B2
RD6.2M-B2
RD7.5M-B2
RD9.1M-B2



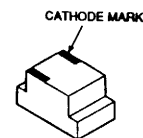
RD10M-T182



SB20-03P-TD



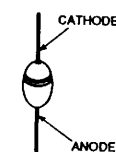
SEC1401C
SEC1801C



S16L60



V06C-T52
V11N-T52



1SS123-T1



03P2M

