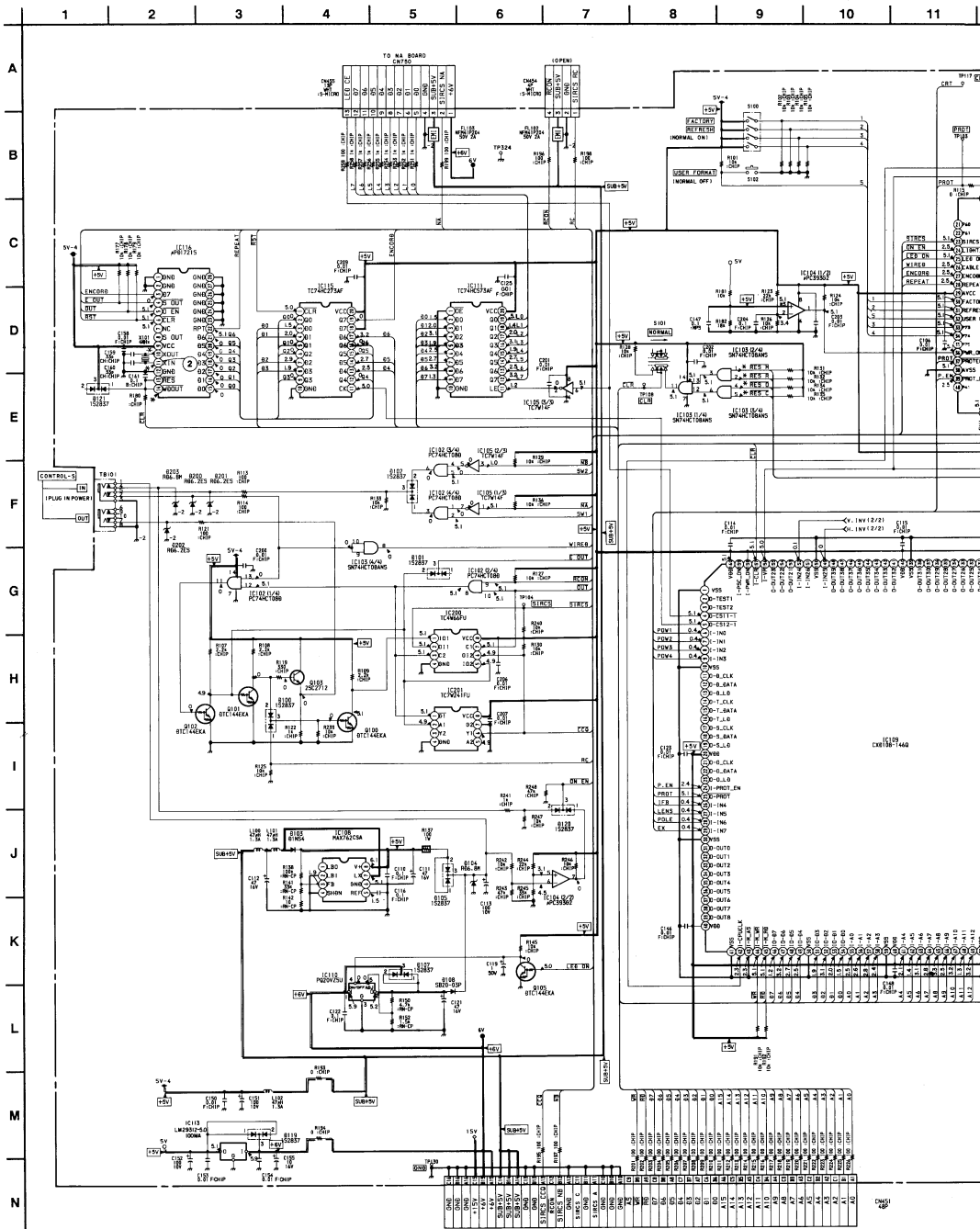
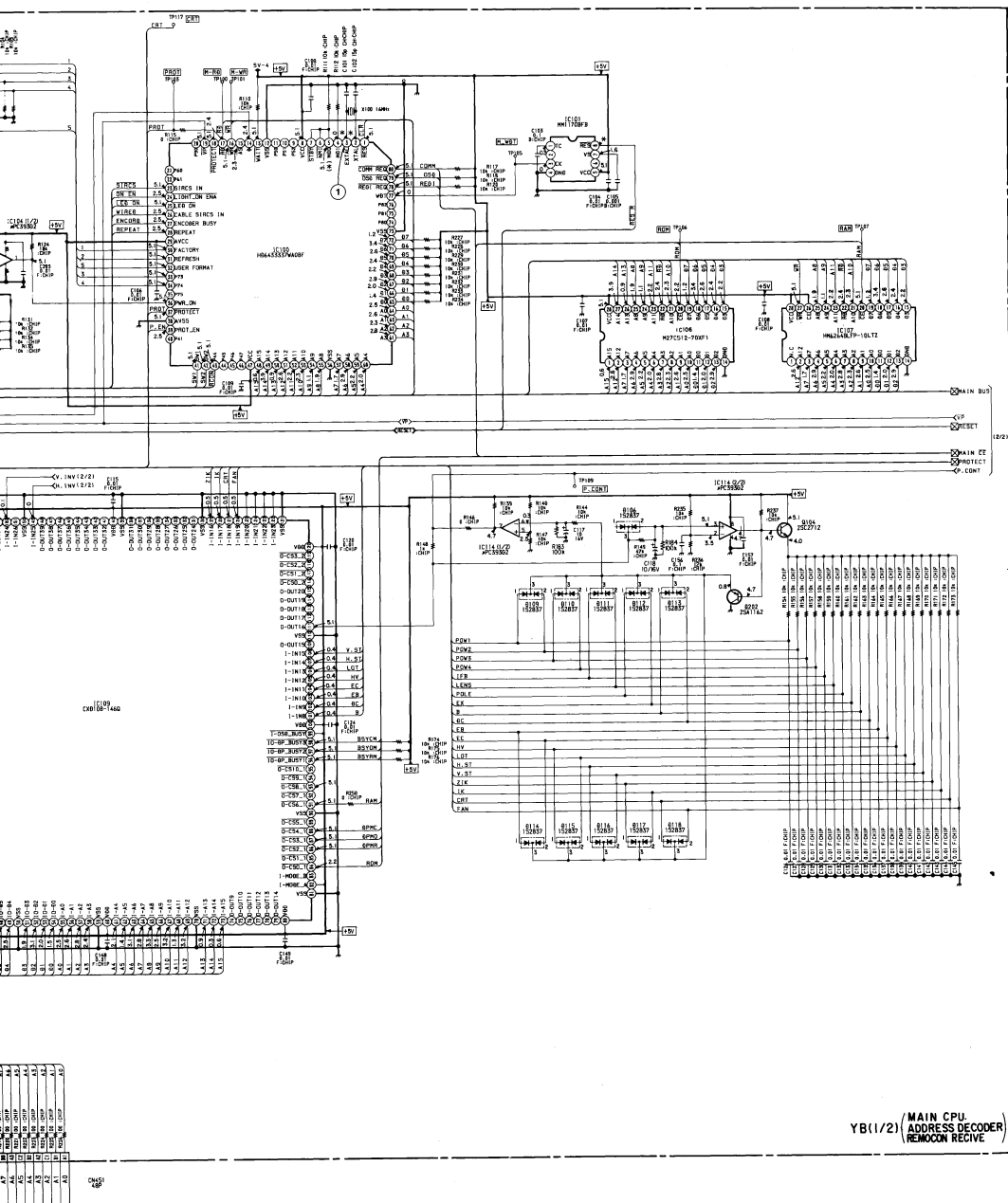


• YB (1/2) (MAIN CPU, ADDRESS DECODER, REMOTE COMMANDER (RECEIVER) DIAGRAM

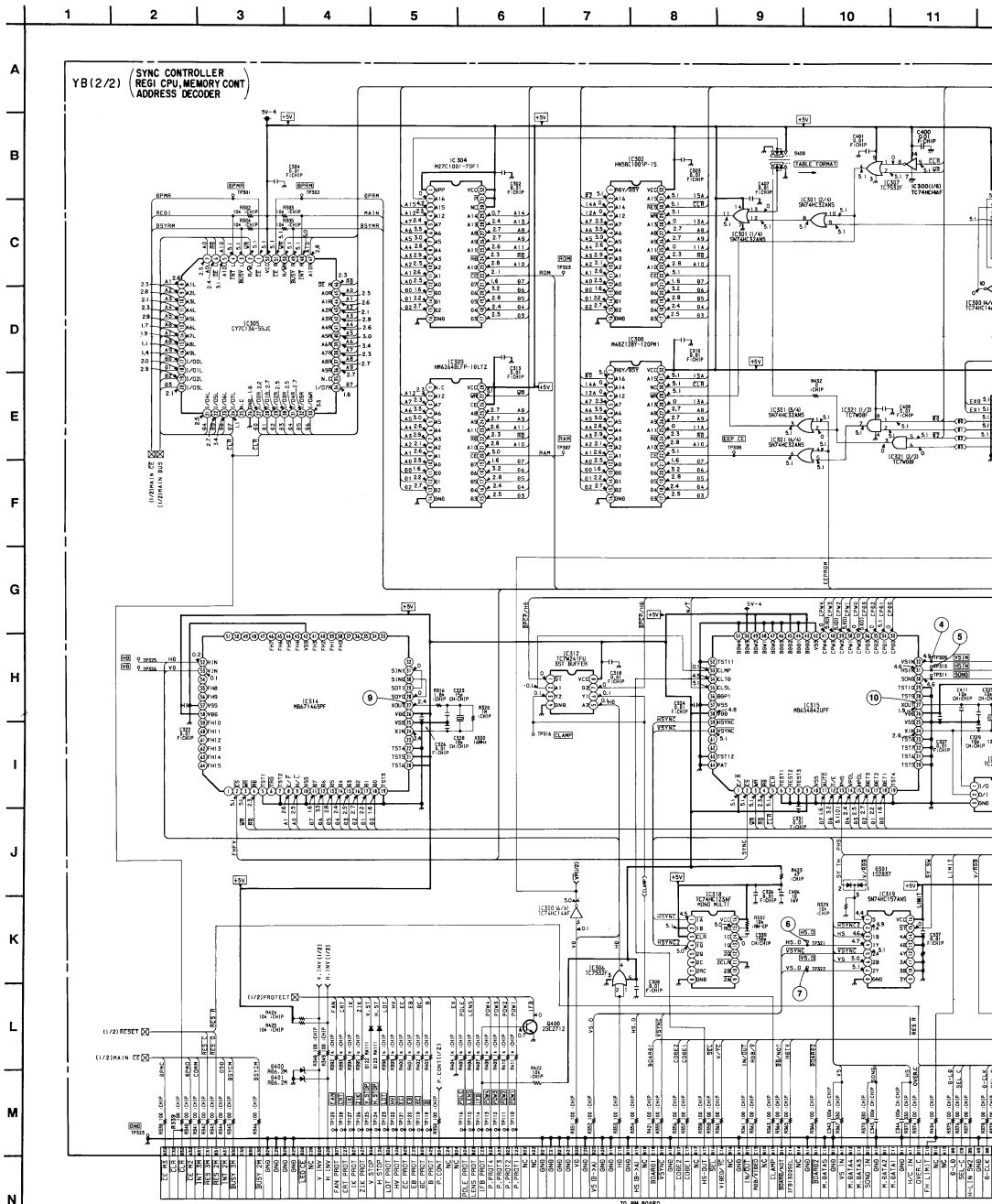
- Refer to page 4-115 for Printed Wiring Board
- Refer to page 4-118 for Waveforms
- Refer to page 4-119 for Function of Semiconductor
- Refer to page 4-120 for IC Block Diagram

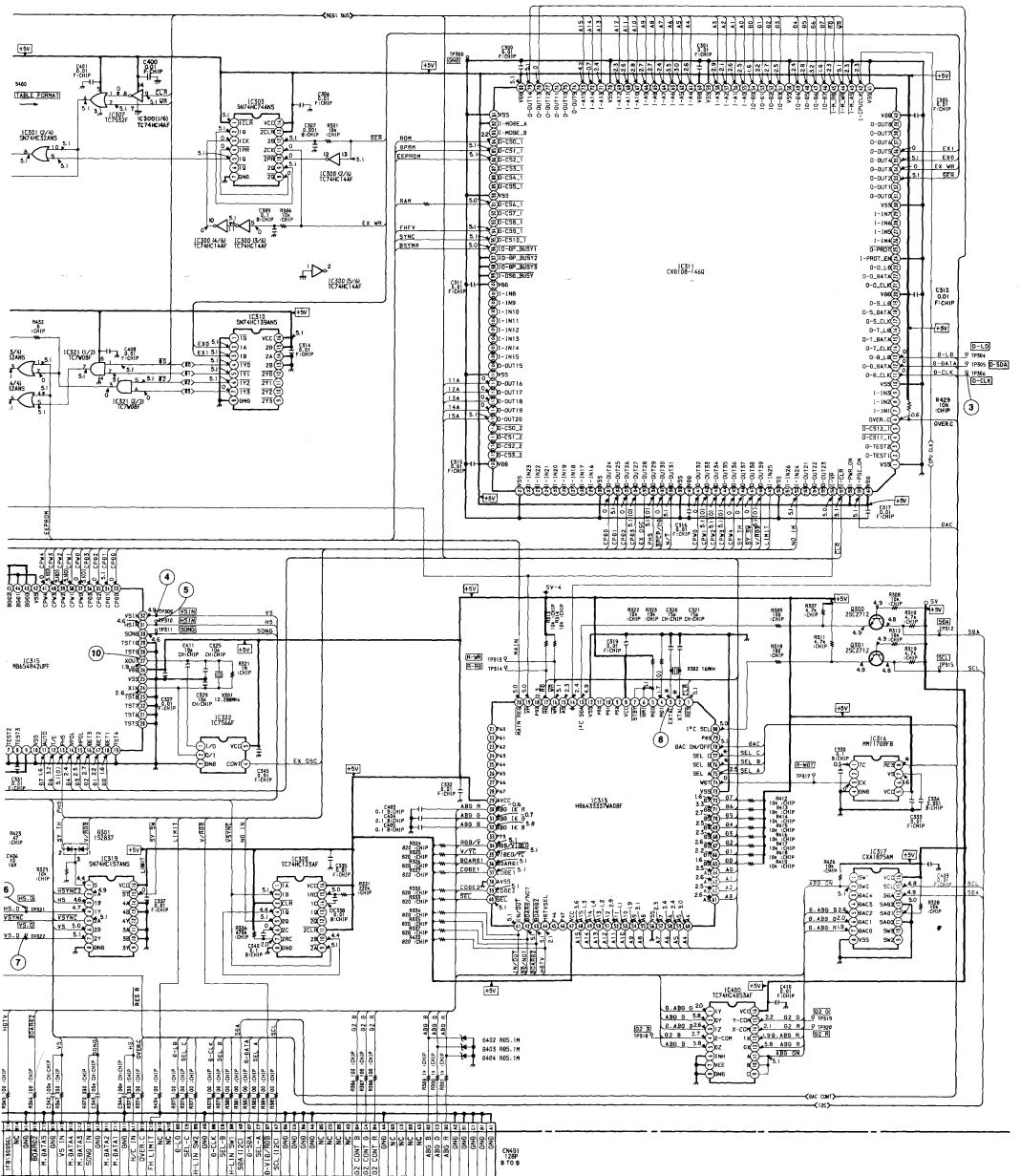




YB(1/2) / MAIN CPU ADDRESS DECODER
REMOCON RECEIVE

- YB (2/2) (SYNC CONTROLLER, REGI CPU, ADDRESS DECODER, MEMORY CONTROL) DIAGRAM
- Refer to page 4-118 for Waveforms
- Refer to page 4-119 for Function of Semiconductor
- Refer to page 4-120 for IC Block Diagram

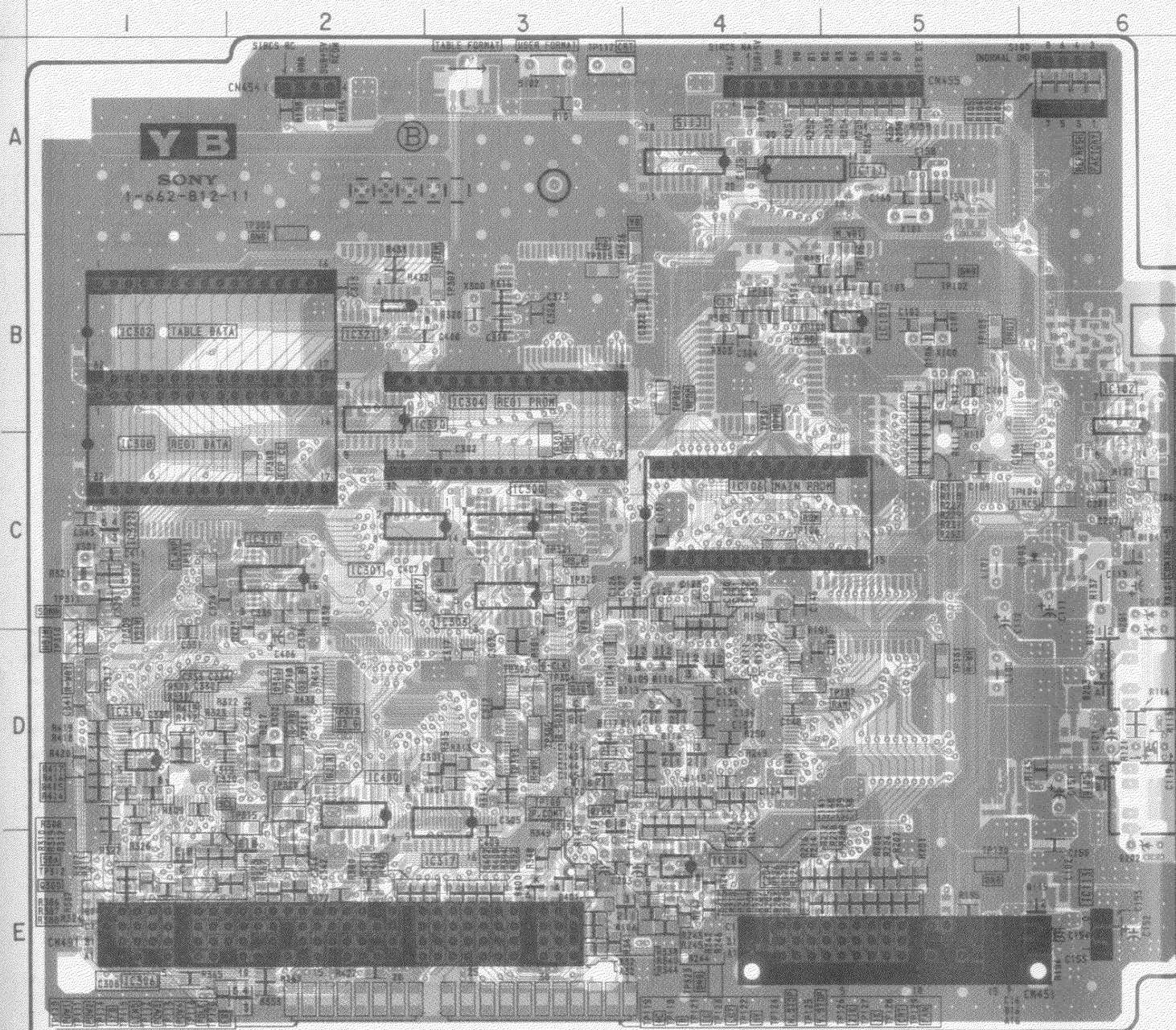




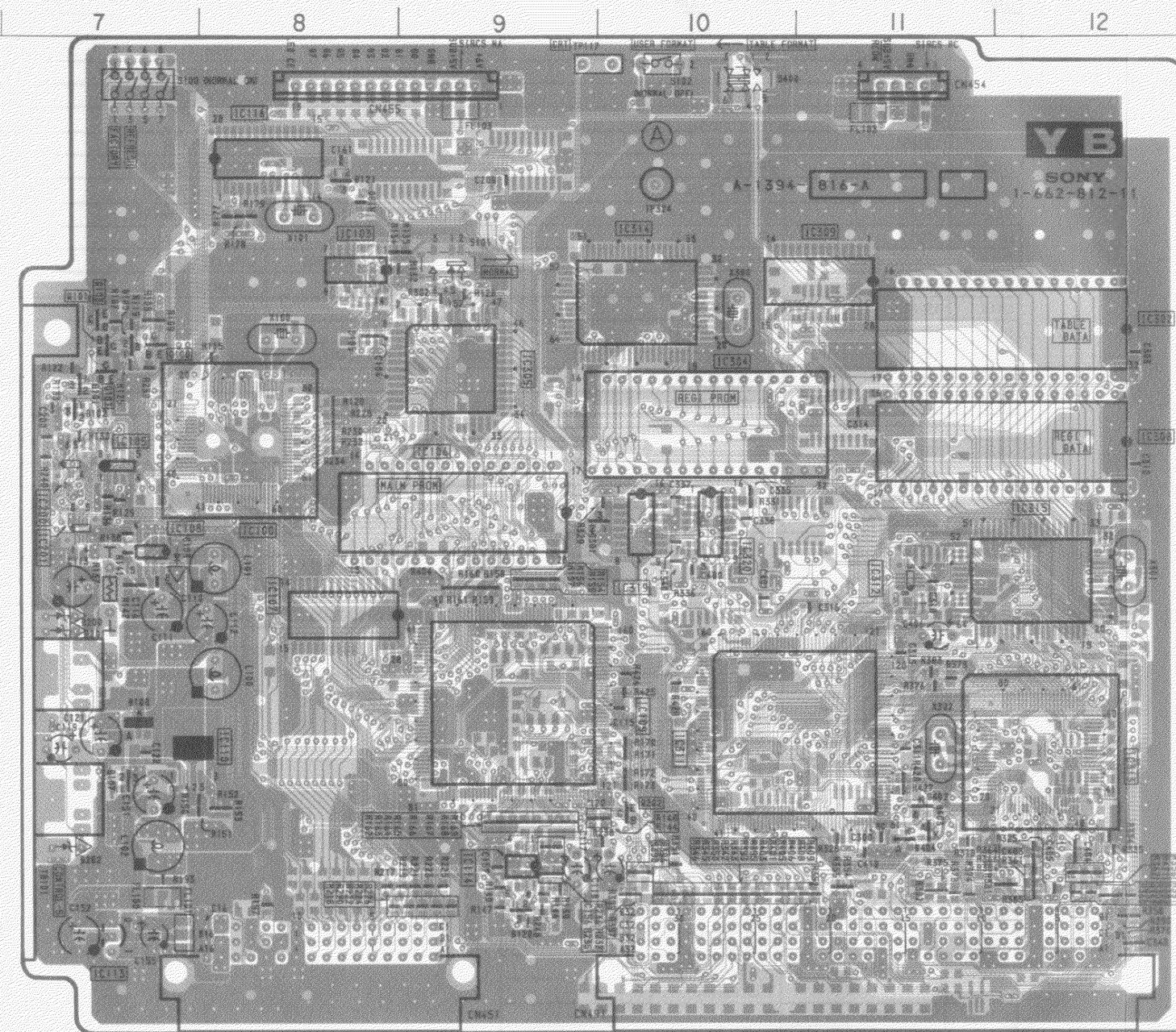
YB

(MAIN CPU, ADDRESS DECODER, SYNC CONTROLLER, REGI CPU, REMOTE COMMANDER RECEIVER, MEMORY CONTROL) BOARD

— YB BOARD — <Component side>



— YB BOARD — <Conductor side>



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

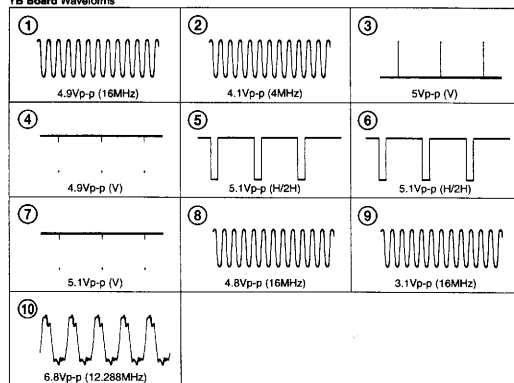
YB BOARD

VPH-G70Q/G70QM/G70QMG

Semiconductors Location

DIODE		IC115 A-4	TP110 E-1
		IC200 C-7	TP111 E-1
		IC201 C-7	TP112 E-1
D101 B-7		IC300 C-3	TP113 E-1
D102 B-7		IC301 C-2	TP114 E-1
D103 C-6		IC302 B-1	TP115 E-1
D104 C-6		IC303 C-3	TP116 E-1
D105 D-6			TP117 A-3
D106 E-3		IC304 B-3	TP118 E-4
D107 D-7		IC305 B-9	TP119 E-4
D108 D-7		IC306 E-1	
D109 D-4		IC307 C-3	TP120 E-1
D110 D-4		IC308 C-1	TP121 E-4
		IC309 B-11	TP122 E-4
D111 D-4		IC310 B-2	TP123 E-4
D112 D-4		IC312 C-11	TP124 E-4
D113 D-4		IC313 D-12	TP125 E-4
D114 D-4		IC314 B-10	TP126 E-5
D115 D-4			TP127 E-5
D116 D-4		IC315 C-12	TP128 E-5
D117 D-3		IC316 D-1	TP129 E-5
D118 D-3		IC317 E-3	
D119 E-6		IC318 C-2	TP130 E-5
D120 E-9		IC319 C-10	TP300 A-2
		IC320 C-10	TP301 B-4
D121 A-8		IC321 B-2	TP302 B-4
D200 C-6		IC322 C-1	TP303 C-3
D201 C-6		IC400 D-2	TP304 D-3
D202 E-6			TP305 D-3
D203 D-6		TRANSISTOR	TP306 D-3
D301 C-9			TP307 B-3
D400 E-3		Q100 B-7	TP308 C-2
D401 E-3		Q101 B-7	
D402 D-11		Q102 B-7	TP309 D-1
D403 D-11		Q103 B-7	TP310 D-1
		Q104 D-3	TP311 C-1
D404 D-11		Q105 D-6	TP312 E-1
		Q202 D-10	TP313 D-3
IC		Q300 E-1	TP314 D-2
		Q301 D-2	TP315 E-2
		Q400 D-3	TP316 C-1
			TP317 D-1
IC100 C-8		TEST POINT	TP318 D-2
IC101 B-5			
IC102 B-6		TP100 B-4	TP319 D-2
IC103 B-8		TP101 D-5	TP320 D-2
IC104 E-4		TP102 B-5	TP321 C-3
IC105 C-7		TP103 B-5	TP322 C-3
IC106 C-4		TP104 C-6	TP323 E-4
IC107 C-8		TP105 B-5	TP324 A-10
IC108 C-7		TP106 C-4	TP325 B-3
IC110 D-7		TP107 D-5	TP326 B-4
IC111 A-4		TP108 B-4	
IC113 E-6		TP109 D-3	
IC114 E-9			

YB Board Waveforms

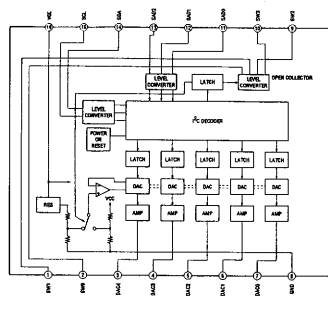


YB BOARD

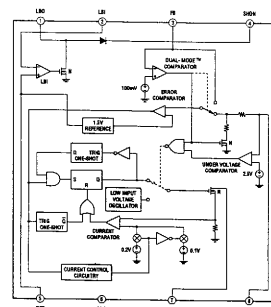
Function of Semiconductor

D100	1S2837	OR (SIRCS)	IC307	TC7S32F	OR
D101	1S2837	SIRCS OUT ENABLE SW	IC308	N482128V-120PM1	BATTERY S RAM
D102	1S2837	OR (SIRCS)	IC309	HM8264BLP-10LT2	S-RAM
D103	D1H6A-1P2	STEP-UP	IC310	SN74HC138ANS-E05	EEP ROM SELECT
D104	RO6.1M-82	PROTECTOR	IC311	CXD108-1400	REGI ADDRESS DECODER
D105	1S2837	PROTECT	IC312	TC7W41FU-TE12R	CLAMP SELECT
D106	1S2837	DISCHARGE	IC313	HD643337WA08F	REGI MCU
D107	1S2837	DISCHARGE	IC314	MB671469PF	PHYF COUNTER
D108	SB20-03P-TD	PROTECTOR	IC315	MB654842UPF	SYNC CONTROLLER
D109	1S2837	OR (PROTECTOR)	IC316	MM11708FB	RESET (WD TIMER)
D110	1S2837	OR (PROTECTOR)	IC317	CXA1875AM-T4	DIAC (for G2 CONTROL)
D111	1S2837	OR (PROTECTOR)	IC318	TC74HC123AF-TP2	H SYNC REFORM
D112	1S2837	OR (PROTECTOR)	IC319	SN74HC157ANS-E05	SYNC SELECT
D113	1S2837	OR (PROTECTOR)	IC320	TC74HC123AF-TP2	V-SYNC DETECT
D114	1S2837	OR (PROTECTOR)	IC321	TC7W05F	AND
D115	1S2837	OR (PROTECTOR)	IC322	TC7S66F	ANALOG SW (for OSC SELECT)
D116	1S2837	OR (PROTECTOR)	IC400	TC74HC4053AF(EL)	ANALOG SW (for G2 SELECT)
D117	1S2837	OR (PROTECTOR)			
D118	1S2837	OR (PROTECTOR)	Q100	DT144EKA-T146	BUFFER (INV.)
D119	1S2837	DISCHARGE	Q101	DT144EKA-T146	BUFFER (INV.)
D120	1S2837	OR	Q102	DT144EKA-T146	BUFFER (INV.)
D121	1S2837	POWER SW	Q103	25C2712-VG-TE8SL	BUFFER
D200	RO6.2ES-82	PROTECTOR	Q104	25C2712-VG-TE8SL	PROTECT ENABLE SWITCH
D201	RO6.2ES-82	PROTECTOR	Q105	DT144EKA-T146	LED REG SW
D202	RO6.2ES-82	PROTECTOR	Q202	25A1182-VG-TE8SL	PROTECT ENABLE SWITCH
D203	RO6.8M-82	PROTECTOR	Q200	25C2712-VG-TE8SL	BUS SWITCH
D301	1S2837	OR	Q301	25C2712-VG-TE8SL	BUS SWITCH
D400	RO6.2ES-82	PROTECTOR	Q400	25C2712-VG-TE8SL	INVERTER
D401	RO6.2ES-82	PROTECTOR			
D402	RO6.2ES-82	PROTECTOR			
D403	RO6.2ES-82	PROTECTOR			
D404	RO6.2ES-82	PROTECTOR			
IC100	HD643337WA08F	MAIN CPU			
IC101	MM11708FB	RESET (WD TIMER)			
IC102	SN74HCT08ANS-E05	AND			
IC103	SN74HCT08ANS-E05	AND			
IC104	uPC390G2	COMPARATOR (VOLTAGE DETECT)			
IC105	TC7W14F	INVERTER			
IC106	M270512-10F1	PROGRAM ROM (for MAIN MCU)			
IC107	HM8264BLP-10LT2	S-RAM			
IC108	MAX7623SA-TE2	STEP-UP			
IC109	CXD108-1400	MAIN ADDRESS DECODER			
IC110	PQ20V25U	REGULATOR			
IC111	TC74HC573A	8-LATCH			
IC113	LM28312-5.0	SV REGULATOR			
IC114	uPC390G2-T2	COMPARATOR			
IC115	TC74HC273AF	8-BIT WITH CLR			
IC116	uPD17215	SIRCS ENCODER			
IC300	TC74W6PU	ANALOG SWITCH			
IC201	TC7W41FU-TE12R	3ST BUFFER			
IC300	TC74HC14NF	INVERTER			
IC301	SN74HC74ANS-E05	OR			
IC302	HN8C1001P-15	EEP ROM (for BACK-UP DATA)			
IC303	SN74HC74ANS-E05	MEMORY GUARD			
IC304	M27C1001-10F1	PROGRAM ROM (for REGI MCU)			
IC305	CY7C136-55JC-TEL	DUAL PORT RAM (MAIN->REGI)			
IC306	TC7S32F	BUFFER			

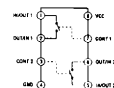
CXA1675AM (IC317)



MAX762LSA (IC108)



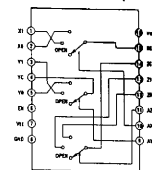
TC4W66FU
(IC200)



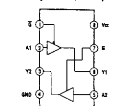
TC7S66F
(IC322)



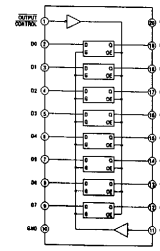
TC74HC4063AF (IC400)



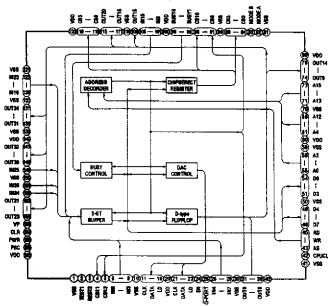
TC7W241FU
(IC201, 312)



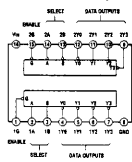
TC74HC573AF (IC111)



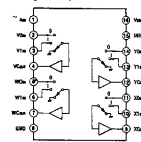
CXD108-146Q (IC109, 311)



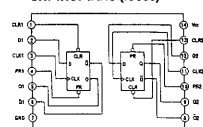
SN74HC139ANS (IC310)



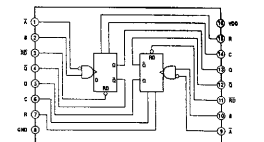
SN74HC157ANS
(IC319)



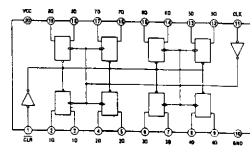
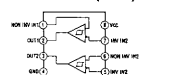
SN74HC74ANS (IC303)

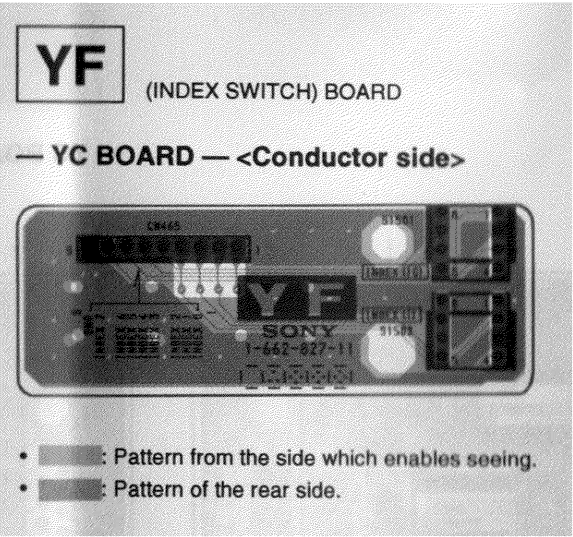


TC74HC123AF (IC318, 320)

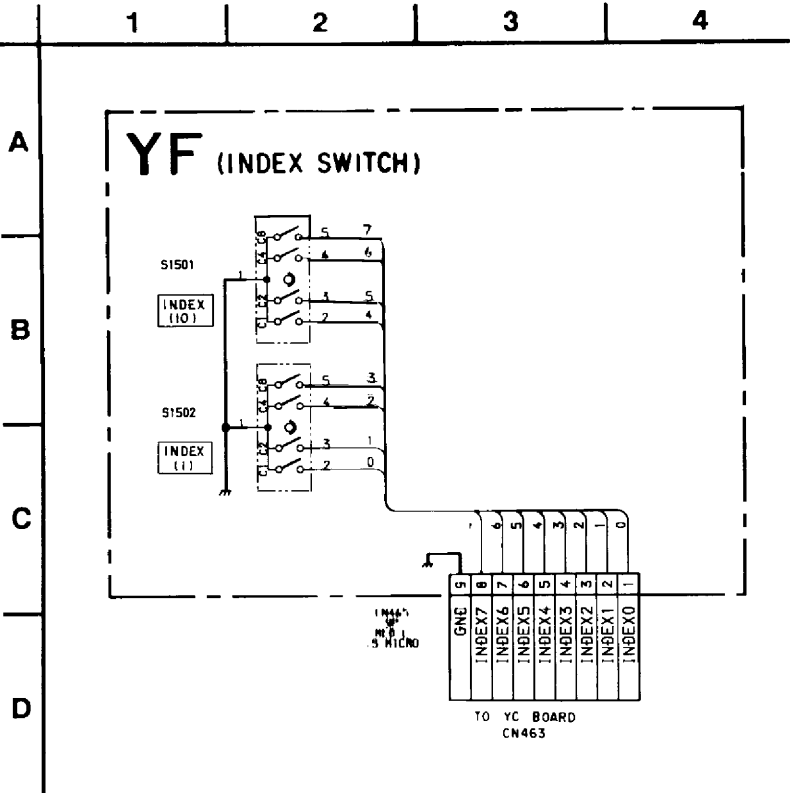


TC74HC273AF (IC115)

**SN75157 (IC515)**



• YF (INDEX SWITCH) DIAGRAM

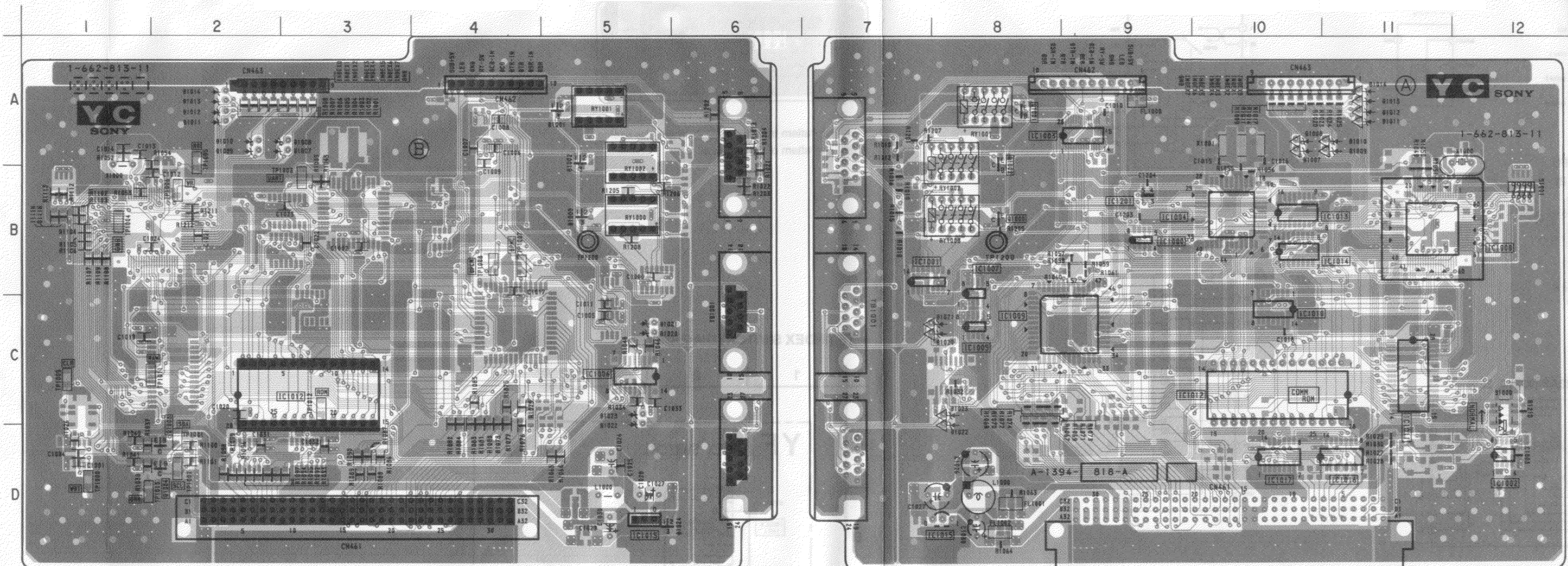


YC

(REMOTE (RS-422A), COMM CPU) BOARD

— YC BOARD — <Conductor side>

— YC BOARD — <Component side>



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

YC BOARD

Semiconductors Location

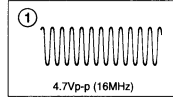
DIODE	
D1007	A-3
D1008	A-3
D1009	A-2
D1010	A-2
D1011	A-2
D1012	A-2
D1013	A-2
D1014	A-2
D1024	D-5
IC	
IC1000	B-9
IC1001	B-7
IC1002	D-12
IC1008	B-11
IC1009	C-8
IC1010	C-16
IC1011	C-11
IC1012	C-3
IC1013	B-10
IC1014	B-10
IC1015	D-5
TRANSISTOR	
Q1003	D-2
Q1004	D-2
TEST POINT	
TP1000	D-1
TP1001	D-2
TP1002	D-2
TP1004	B-1
TP1005	A-2
TP1006	B-2
TP1007	B-4
TP1008	B-4
TP1009	C-1
TP1011	C-1
TP1012	C-3
TP1013	D-1
TP1200	B-5

YC BOARD

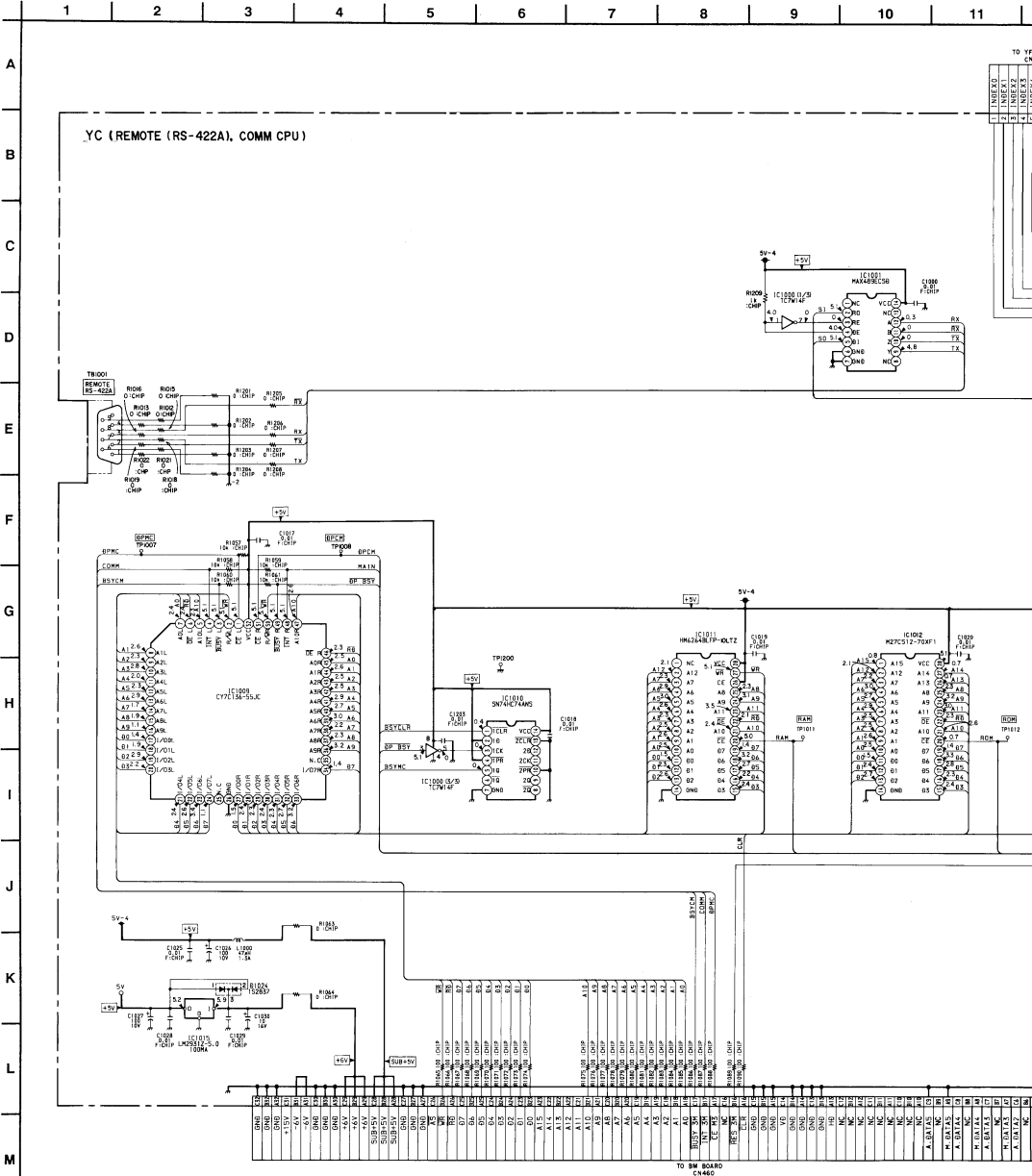
Function of Semiconductor

D1007	RD6.2ES-B2	PROTECTOR	IC1013	SN74HC13ANS-E05
D1008	RD6.2ES-B2	PROTECTOR	IC1014	SN74HC11ANS-E05
D1009	RD6.2ES-B2	PROTECTOR	IC1015	LM2831Z-5.0
D1010	RD6.2ES-B2	PROTECTOR		
D1011	RD6.2ES-B2	PROTECTOR	D1003	2SC2712-YG
D1012	RD6.2ES-B2	PROTECTOR	D1004	2SC2712-YG
D1013	RD6.2ES-B2	PROTECTOR		
D1014	RD6.2ES-B2	PROTECTOR		
D1024	1S2837	DC LEVEL SHIFT		
IC1000	TC7W14F	ANALOG SW		
IC1001	MAX489ECSD-TE2	RS-422A TRANSCEIVER		
IC1002	MM11708FB	WD TIMER		
IC1008	HD6433337WA08F	COMM CPU		
IC1009	CY7C136-55JC-TEL	DUAL PORT RAM (MAIN->COMM)		
IC1010	SN74HC74ANS-E05	EEP ROM		
IC1011	HMM254BLFP-10LTZ	RAM		
IC1012	M270512-10P1	ROM		

YC Board Waveforms



YC (REMOTE (RS-422A), COMM CPU) DIAGRAM



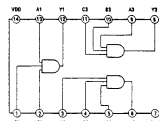
YC BOARD IC Block Diagrams

IC1013	SN74HC138ANS-E05	ADDRESS DECODER
IC1014	SN74HC11ANS-E05	3-INPUT AND
IC1015	LM2891Z-5.0	5V REG
Q1003	2SC2712-YG	BUS SW 1
Q1004	2SC2712-YG	BUS SW 3

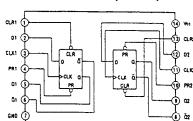
MAX489ECSD
(IC1002)



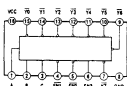
SN74HC11ANS (IC1014)



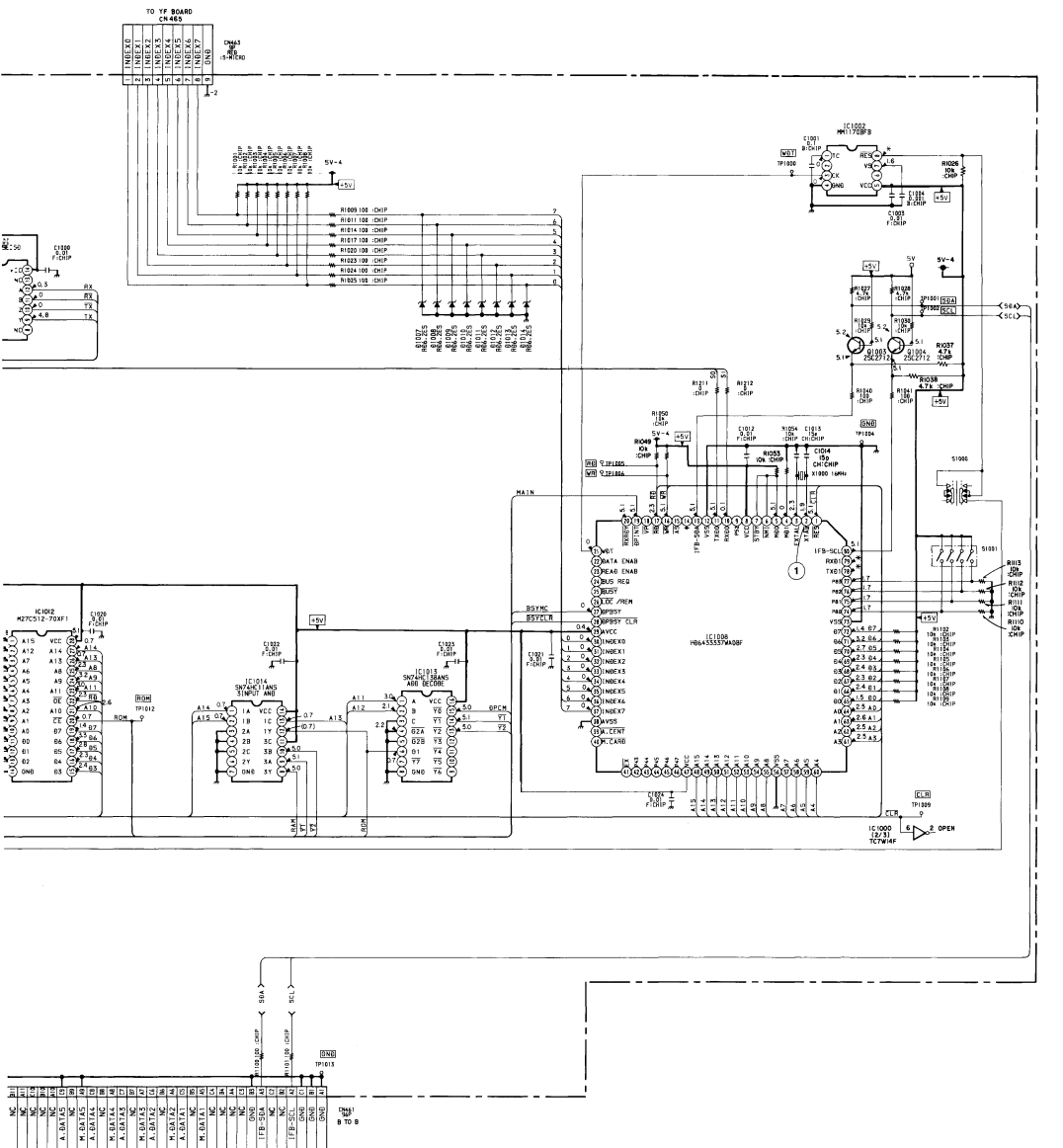
SN74HC74ANS (IC1010)

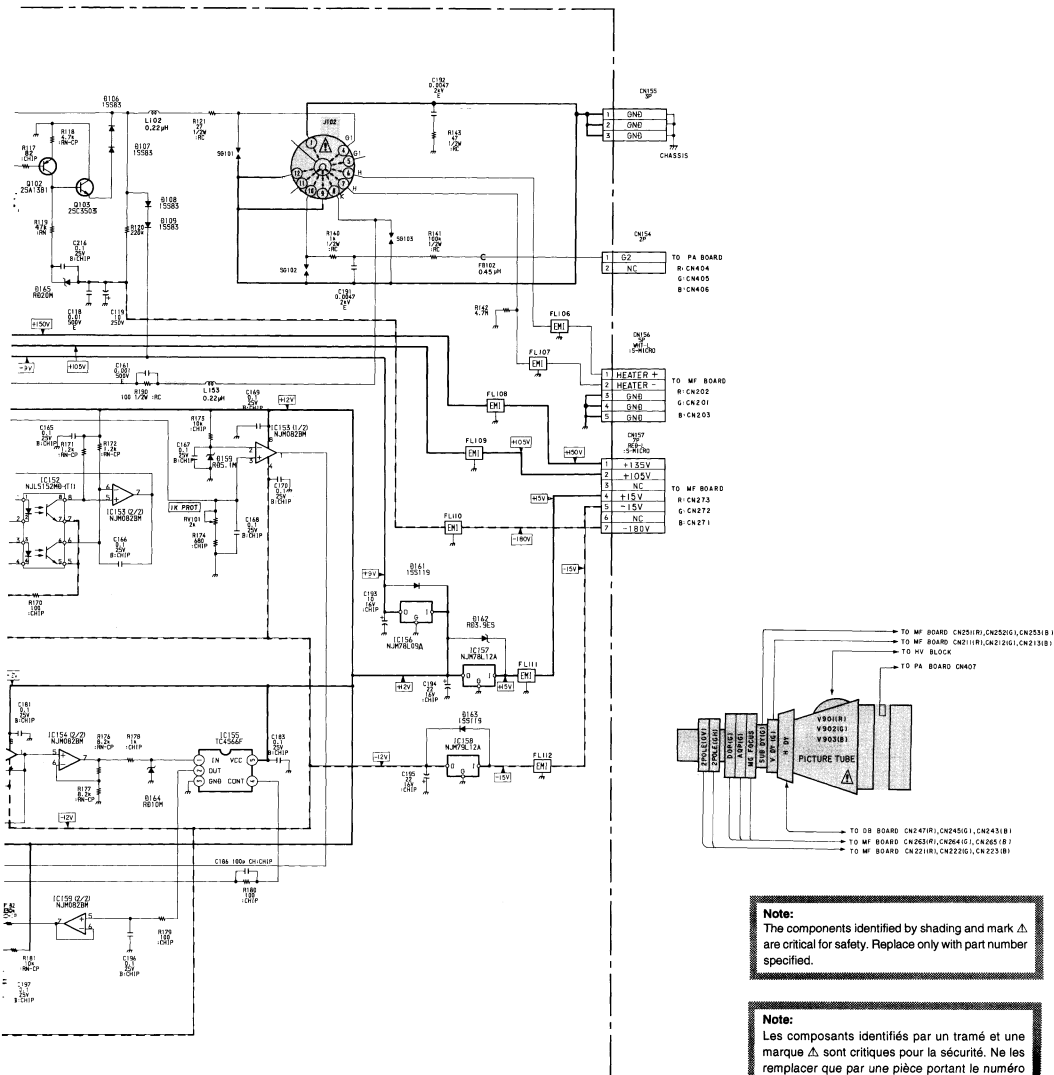


SN74HC138ANS (IC1013)



10 11 12 13 14 15 16 17 18 19 20 21





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

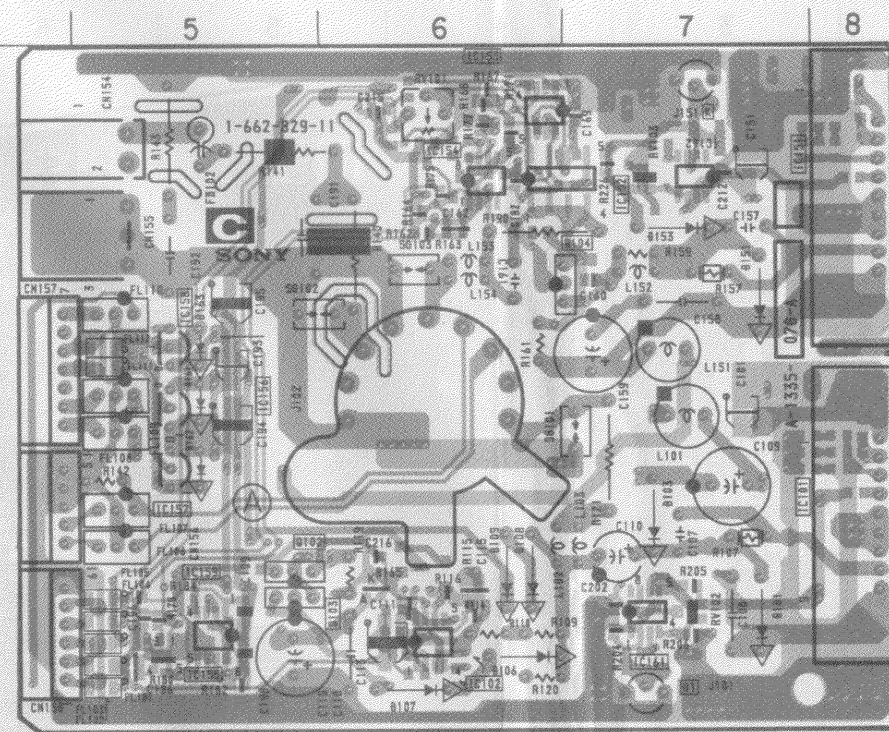
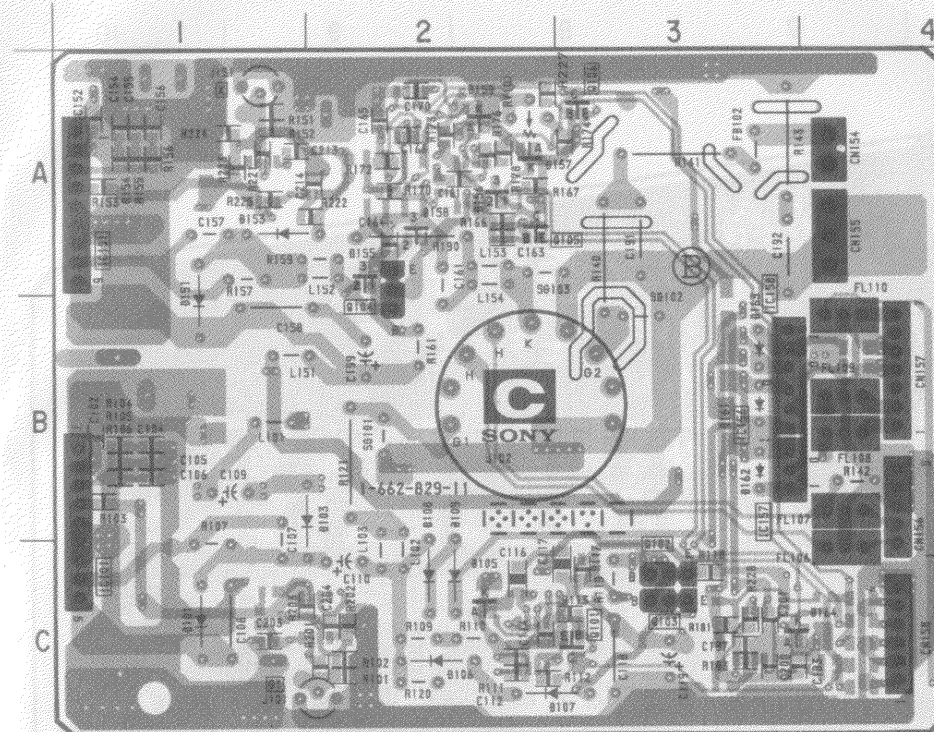
Note:
Les composants identifiés par un trameé et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

C

(R.G.B) (VIDEO OUT) BOARD

— C BOARD — <Conductor side>

— C BOARD — <Component side>



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

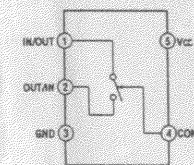
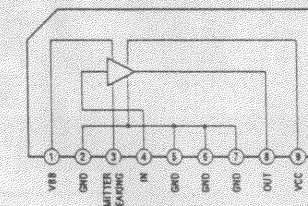
C BOARD
Semiconductors Location

DIODE		IC152 A-7	
D101 C-1		IC153 A-6	
D103 B-3		IC154 A-6	
D105 C-2		IC155 C-5	
D106 C-2		IC156 B-3	
D107 C-3		IC157 B-3	
D108 C-2		IC158 B-3	
D109 C-2		IC159 C-5	
D151 A-1		IC161 C-7	
D153 A-1		IC162 A-7	
D155 A-2		TRANSISTOR	
D157 A-2		Q101 C-3	
D158 A-2		Q102 C-3	
D159 A-2		Q103 C-3	
D161 B-3		Q104 A-2	
D162 B-3		Q105 A-2	
D163 B-3		Q106 A-3	
D164 C-3		VARIABLE RESISTOR	
D165 C-6		RV101 A-2	
IC		RV102 C-7	
IC102 C-6		RV103 A-7	
IC151 A-1			

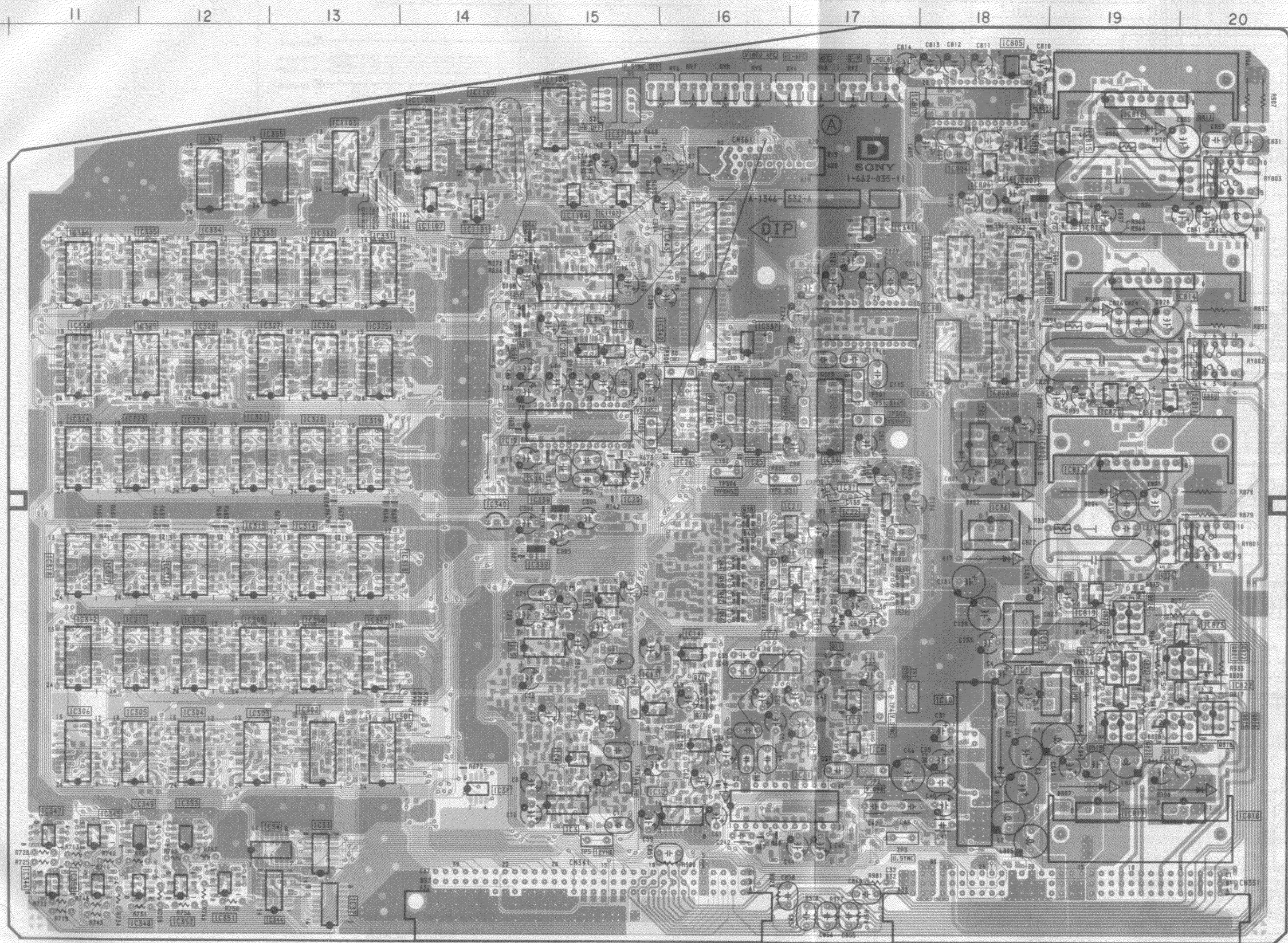
C BOARD

Function of Semiconductor

D101	1SS83TD	VIDEO AMP PROTECTOR	IC154	NJM082BM-T1	BUFFER, AMP
D103	1SS83TD	VIDEO AMP PROTECTOR	IC155	TC4S66F-TE85R	SAMPLE HOLD
D105	RD10M-B2	IC102 PROTECTOR	IC156	NJM78L09A	+9V REG.
D106	1SS83TD	BRT CLAMP	IC157	NJM78L12A	+12V REG.
D107	1SS83TD	BRT CLAMP	IC158	NJM79L12A	-12V REG.
D108	1SS83TD	PROTECTOR	IC159	NJM082BM-T1	G2 CONTROL
D109	1SS83TD	PROTECTOR	IC161	EL2160CS-TE2	K AMP.
D151	1SS83TD	VIDEO AMP PROTECTOR	IC162	EL2160CS-TE2	G1 AMP.
D153	1SS83TD	VIDEO AMP PROTECTOR			
D155	1SS123	K DRIVE	Q101	2SK160-K5	BRT SAMPLE HOLD
D156	1SS123	PROTECTOR	Q102	2SA1381-E	BRT CLAMP
D157	RD9.1M-B2	PROTECTOR	Q103	2SC3503-E	BRT CLAMP
D158	1SS123	K DRIVE	Q104	2SA1406-E	IK DETECTOR
D159	RD5.1M-B2	IK DETECTOR	Q105	2SC3545-T44	IK DETECTOR SW
D161	1SS119-25TD	PROTECTOR	Q106	DTC144EKA	IK PROTECTOR
D162	RD3.9ES-B	PROTECTOR			
D163	1SS119-25TD	PROTECTOR			
D164	RD10M-B2	IC155 PROTECTOR			
D165	RD20M-B2	BRT CLAMP			
IC101	VPH06	G1 VIDEO AMP.			
IC102	NJM082BM-T1	BUFFER, BRT CLAMP			
IC151	VPA15H	K VIDEO AMP.			
IC152	NJL5152MD-T1	IK DETECTOR			
IC153	NJM082BM-T1	IK PROTECTOR, IK DETECTOR			

C BOARD IC Block Diagrams**TC4S66F (IC155)****VPH06, VPA15H (IC101, 151)**

— D BOARD — <Component side>



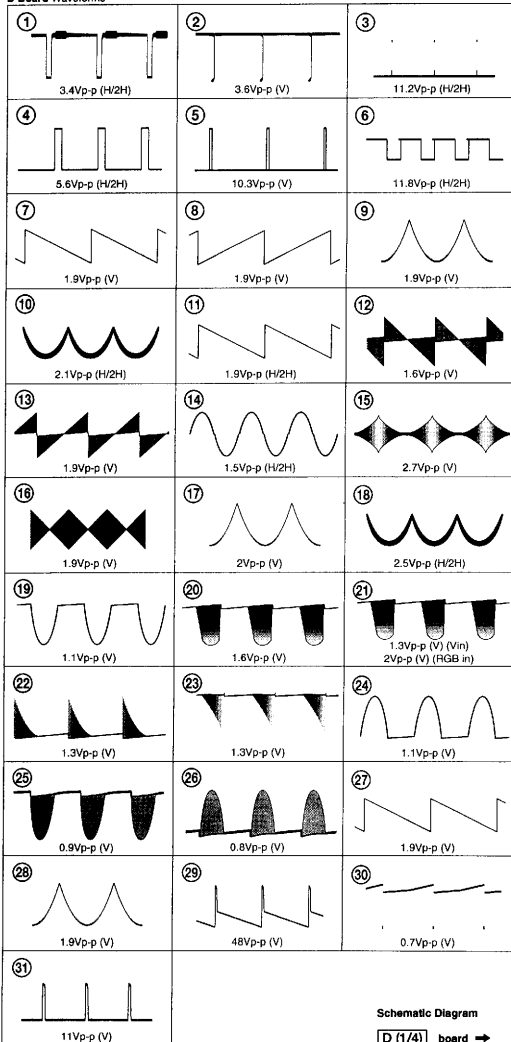
• : Pattern from the side which enables seeing.
 • : Pattern of the rear side.

D BOARD (Component side)
Semiconductors Location

DIODE		IC319	D-13	IC1107	B-14
		IC320	D-13	IC1108	A-14
D809	E-20	IC321	D-12	TRANSISTOR	
D815	E-19	IC322	D-12		
D816	E-19	IC323	D-11	Q7	E-15
D817	D-20	IC324	D-11	Q23	F-16
D818	F-19	IC325	C-13	Q24	F-16
IC		IC326	C-13	Q36	E-17
		IC327	C-13	Q38	D-16
		IC328	C-12	Q40	D-16
		IC329	C-12	Q42	E-16
IC3	G-15	IC330	C-11	Q44	E-16
IC4	F-15			Q46	E-16
IC5	E-15			Q48	E-16
IC6	E-15	IC331	B-13		
IC7	E-16	IC332	B-13		
IC8	F-17	IC333	B-12	Q50	C-14
IC9	F-17	IC334	B-12	Q52	C-14
IC12	G-16	IC335	B-12	Q54	B-15
IC13	F-15	IC336	B-11	Q56	B-15
IC14	E-16	IC337	C-16	Q802	A-18
		IC338	D-15	Q827	A-18
IC15	F-16	IC339	E-15		
IC16	D-15	IC341	B-17		
IC18	C-15				
IC19	E-19	IC342	C-16		
IC20	D-15	IC343	B-16		
IC21	D-17	IC344	G-13		
IC22	E-17	IC345	G-11		
IC23	E-17	IC346	G-11		
IC24	D-17	IC347	G-11		
IC25	D-16	IC348	G-12		
		IC349	G-12		
IC26	D-16	IC350	G-11		
IC27	C-15	IC351	G-12		
IC28	C-15				
IC29	B-15	IC352	G-12		
IC31	D-17	IC353	G-12		
IC32	G-13	IC354	B-12		
IC33	G-13	IC355	B-13		
IC34	G-13	IC804	B-18		
IC37	A-15	IC805	A-18		
IC38	F-14	IC807	B-18		
		IC808	C-18		
IC301	F-13	IC809	B-18		
IC302	F-13	IC810	B-18		
IC303	F-12				
IC304	F-12	IC811	C-19		
IC305	F-11	IC813	B-19		
IC306	F-11	IC815	A-19		
IC307	E-13	IC819	E-19		
IC308	E-13	IC820	C-19		
IC309	E-12	IC821	C-18		
IC310	E-12	IC822	F-22		
		IC823	E-20		
IC311	E-11	IC824	F-19		
IC312	E-11	IC1100	A-15		
IC313	E-13				
IC314	E-13	IC1101	B-14		
IC315	E-12	IC1102	B-15		
IC316	E-12	IC1103	B-13		
IC317	E-11	IC1104	B-15		
IC318	E-11	IC1105	A-14		

Semiconductors Location

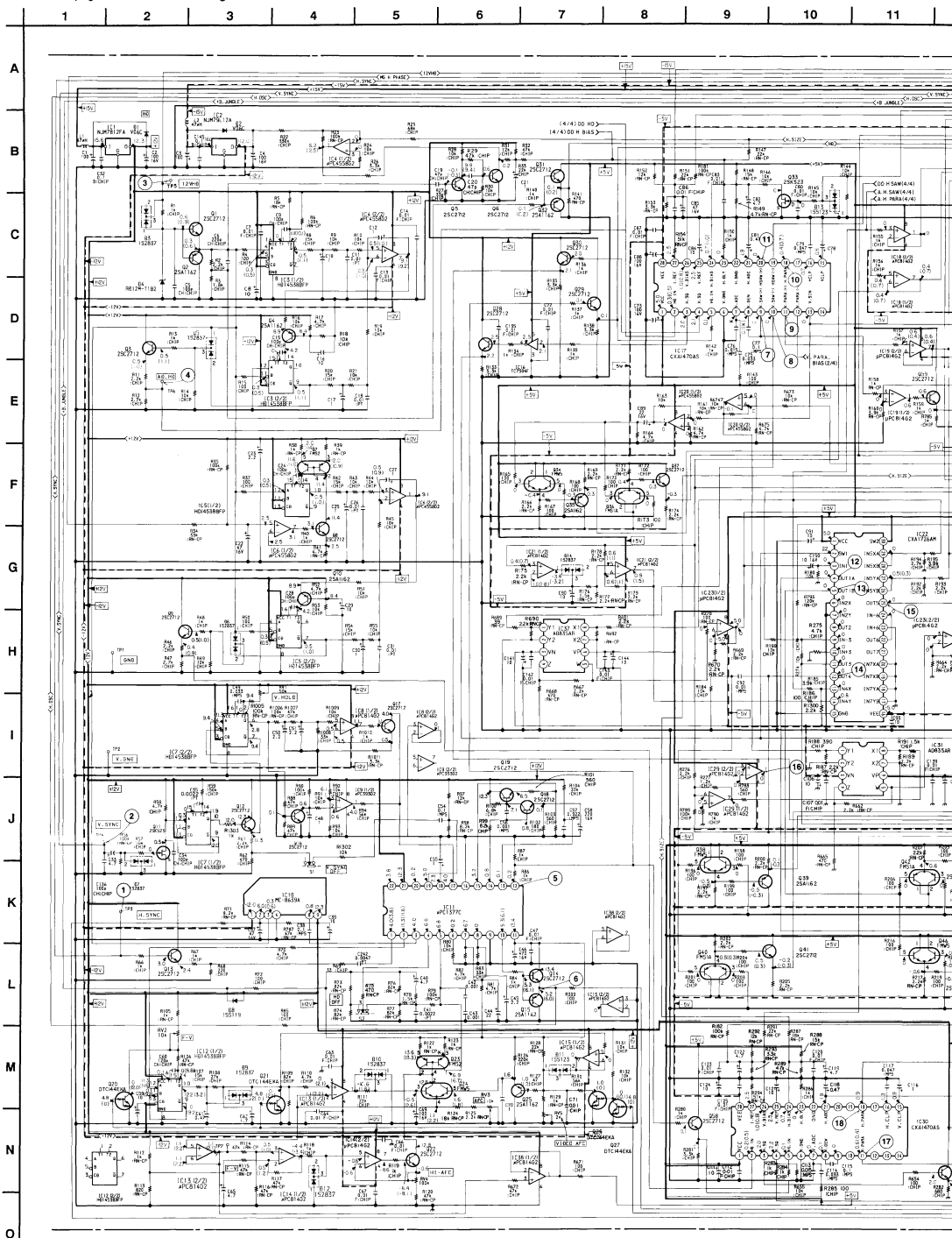
DIODE		IC319	D-13	IC1107 B-14	
				IC320	D-13
D809	E-20	IC321	D-12		
D815	E-19	IC322	D-12		
D816	E-19	IC323	D-11	Q7	E-15
D817	D-20	IC324	D-11	Q23	F-16
D818	F-19	IC325	C-13	Q24	F-16
IC		IC326	C-13	Q36	E-17
		IC327	C-13	Q38	D-16
		IC328	C-12	Q40	D-16
		IC329	C-12	Q42	E-16
		IC330	C-11	Q44	E-16
IC3	G-15			Q46	E-16
IC4	F-15			Q48	E-16
IC5	E-15				
IC6	E-15	IC331	B-13		
IC7	E-16	IC332	B-13		
IC8	F-17	IC333	B-12	Q50	C-14
IC9	F-17	IC334	B-12	Q52	C-14
IC12	G-16	IC335	B-12	Q54	B-15
IC13	F-15	IC336	B-11	Q56	B-15
IC14	E-16	IC337	C-16	Q802	A-18
		IC338	D-15	Q827	A-18
IC15	F-16	IC339	E-15		
IC16	D-15	IC341	B-17		
IC18	C-15				
IC19	E-19	IC342	C-16		
IC20	D-15	IC343	B-16		
IC21	D-17	IC344	G-13		
IC22	E-17	IC345	G-11		
IC23	E-17	IC346	G-11		
IC24	D-17	IC347	G-11		
IC25	D-16	IC348	G-12		
		IC349	G-12		
IC26	D-16	IC350	G-11		
IC27	C-15	IC351	G-12		
IC28	C-15				
IC29	B-15	IC352	G-12		
IC31	D-17	IC353	G-12		
IC32	G-13	IC354	B-12		
IC33	G-13	IC355	B-13		
IC34	G-13	IC804	B-18		
IC37	A-15	IC805	A-18		
IC38	F-14	IC807	B-18		
		IC808	C-18		
IC301	F-13	IC809	B-18		
IC302	F-13	IC810	B-18		
IC303	F-12				
IC304	F-12	IC811	C-19		
IC305	F-11	IC813	B-19		
IC306	F-11	IC815	A-19		
IC307	E-13	IC819	E-19		
IC308	E-13	IC820	C-19		
IC309	E-12	IC821	C-18		
IC310	E-12	IC822	F-22		
		IC823	E-20		
		IC824	F-19		
IC311	E-11	IC1100	A-15		
IC312	E-11				
IC313	E-13				
IC314	E-13	IC1101	B-14		
IC315	E-12	IC1102	B-15		
IC316	E-12	IC1103	B-13		
IC317	E-11	IC1104	B-15		
IC318	E-11	IC1105	A-14		



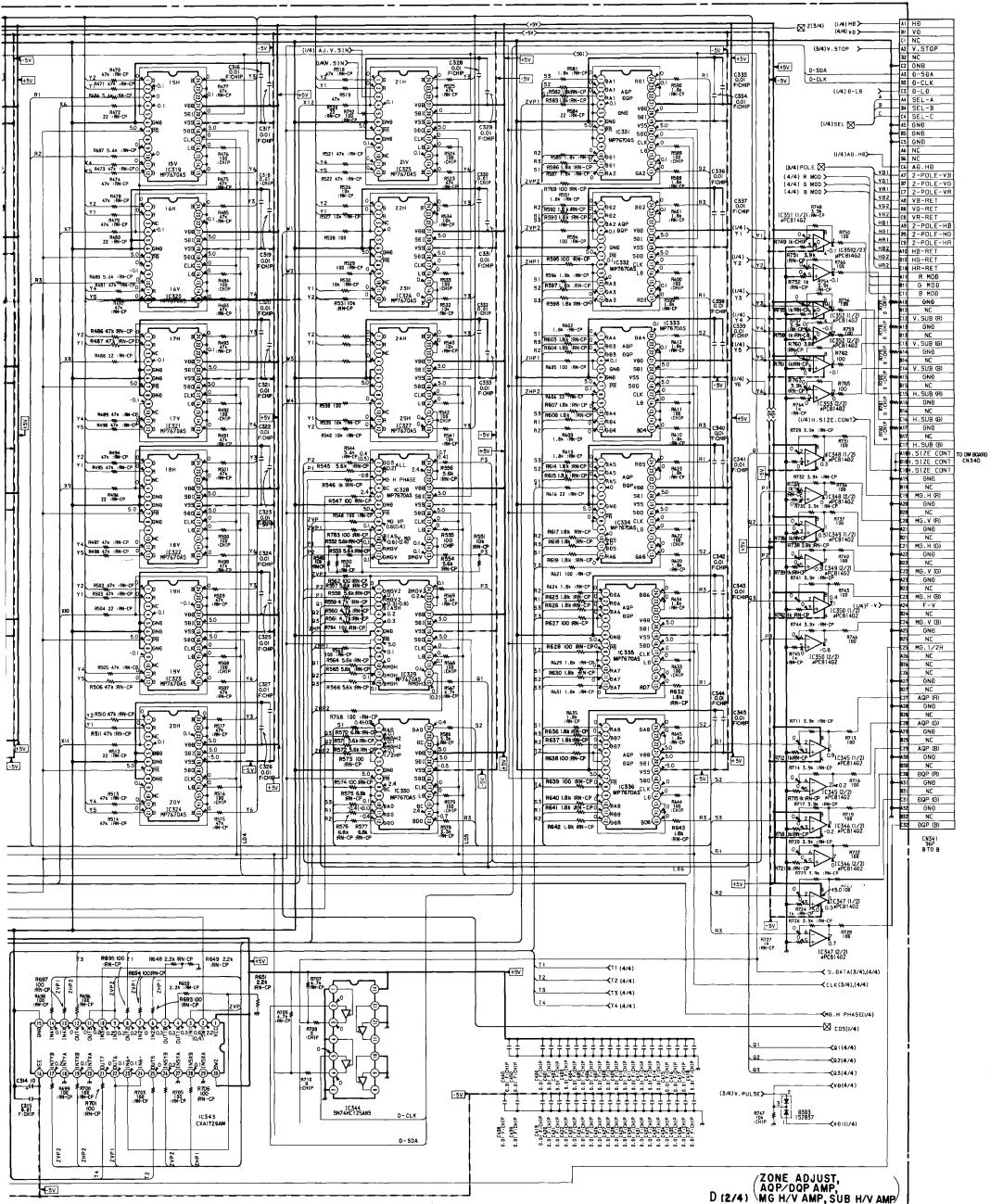
D (1/4) board →

• D (1/4) (HD, VD GENERATOR, ADDRESS DECODER) DIAGRAM

- Refer to page 4-135 for Printed Wiring Board
- Refer to page 4-139 for Waveforms
- Refer to page 4-152 for Function of Semiconductor
- Refer to page 4-155 for IC Block Diagram



- 4-144

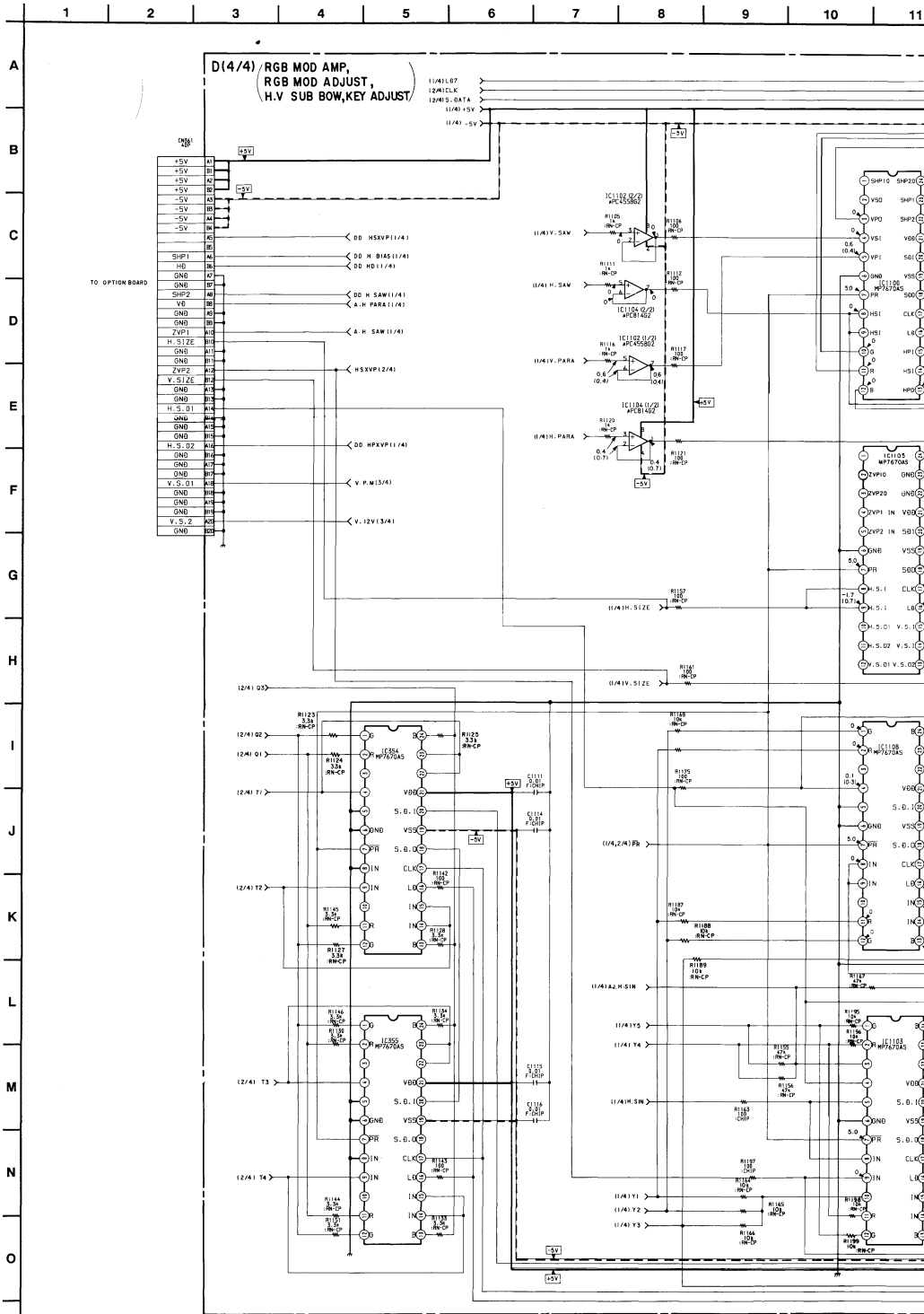


- | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|----|----|





- D (4/4) (H.V. SUB BOW/KEY ADJ, R.G.B MOD ADJ, R.G.B MOD AMP) DIAGRAM
- Refer to page 4-135 for Printed Wiring Board
- Refer to page 4-139 for Waveforms
- Refer to page 4-152 for Function of Semiconductor
- Refer to page 4-155 for IC Block Diagram





D BOARD

Function of Semiconductor (1/3)

D1	V06C	REG PROTECTOR-1	IC18	uPC81462-T1	H SAW/PARA BUFFER
D2	V06C	REG PROTECTOR-2	IC19	uPC81462-T1	V PARA/SAW BUFFER
D3	1S2837	SPEED UP-1	IC20	uPC45862-T2	V SIN AMP
D4	RD12M-82		IC21	uPC81462-T1	H SIN CONVERTER
D5	1S2837	AD HD SW	IC22	CXA1726AM-T6	MULTIPLY
D6	1S2837	MG HD SW	IC23	uPC81462-T1	REGI BUFFER
D7	1S2837	V SYNC CLAMP	IC24	CXA1726AM-T6	REGI MULTIPLEX-1
D8	1S119-25TD	H OUT PROTECTOR	IC25	CXA1726AM-T6	REGI MULTIPLEX-2
D9	1S2837	SPEED UP-2	IC26	CXA1726AM-T6	REGI MULTIPLEX-3
D10	1S2837	SPEED UP-3	IC27	uPC81462-T1	H SOW CONVERTER
D11	1S1123	LEVEL SHIFT	IC28	CXA1726AM-T6	REGI MULTIPLEX-4
D12	1S2837	LIMITER-1	IC29	uPC81462-T1	REGI BUFFER
D13	1S1123	LIMITER-2	IC30	CXA1470AS	MG WAVE FORM
D14	1S2837	PEEK HOLD-1	IC31	AD835AR	
D15	1S1123	V SIZE LIMITER	IC32	TC74HC238AF-VEL	ADDRESS-DEC-1
D16	V06C	REG PROTECTOR-3	IC33	SN74HC08ANS-E05	ADDRESS-DEC-2
D17	V06C	REG PROTECTOR-4	IC34	SN74HC08ANS-E05	ADDRESS-DEC-3
D18	1S2837	PEED HOLD-2	IC35	LM2907-5.0	+5V REG-1
D19	1S2837	DISCHARGE-1	IC36	LM2907-5.0	-5V REG-2
D20	1S2837	DISCHARGE-2	IC37	AD835AR	
D21	1S2837	VD OR	IC38	uPC81462-T1	
D22	1S2837	RESET	IC39	MP7670AS-T62	H SIZE, CENT ADJ
D23	V06C	REG PROTECTOR-5	IC40	MP7670AS-T62	H SKW ADJ
D24	V06C	REG PROTECTOR-6	IC41	MP7670AS-T62	H BOWLIN ADJ
D25	1S2837	DISCHARGE-3	IC42	MP7670AS-T62	V BOWLIN ADJ
D26	V06C	PULSE CHARGE-1	IC43	MP7670AS-T62	H SIZE/V SKW ADJ
D27	V06C	PULSE CHARGE-2	IC44	MP7670AS-T62	KEYS ADJ
D28	V06C	PULSE CHARGE-3	IC45	MP7670AS-T62	ZONE 2, 3 ADJ
D29	V06C	REG PROTECTOR-7	IC46	MP7670AS-T62	V CENT/ZONE 4 ADJ
D30	V06C	REG PROTECTOR-8	IC47	MP7670AS-T62	ZONE 5 ADJ
D31	1S1123		IC48	MP7670AS-T62	ZONE 6 ADJ
D32	1S2837	GATE-1	IC49	MP7670AS-T62	ZONE 7 ADJ
D33	1S2837	GATE-2	IC50	MP7670AS-T62	ZONE 8 ADJ
D34	1S2837	GATE-3	IC51	MP7670AS-T62	ZONE 9 ADJ
D35	1S2837	RY PROTECTOR	IC52	MP7670AS-T62	ZONE 10 ADJ
D36	1S2837	GEATE-4	IC53	MP7670AS-T62	ZONE 11 ADJ
D37	1S1123		IC54	MP7670AS-T62	ZONE 12 ADJ
D38	1S1123		IC55	MP7670AS-T62	ZONE 13 ADJ
D39	1S1123		IC56	MP7670AS-T62	ZONE 14 ADJ
D40	1S1123		IC57	MP7670AS-T62	ZONE 15 ADJ
D41	1S1123		IC58	MP7670AS-T62	ZONE 16 ADJ
D42	1S1123		IC59	MP7670AS-T62	ZONE 17 ADJ
D43	1S1123		IC60	MP7670AS-T62	ZONE 18 ADJ
D44	1S1123		IC61	MP7670AS-T62	ZONE 19 ADJ
D45	1S1123		IC62	MP7670AS-T62	ZONE 20 ADJ
D46	1S1123		IC63	MP7670AS-T62	ZONE 21 ADJ
D47	1S1123		IC64	MP7670AS-T62	ZONE 22, 23 ADJ
D48	1S1123		IC65	MP7670AS-T62	ZONE 24, 25 ADJ
D49	1S1123		IC66	MP7670AS-T62	MG ALL, ZONE 1 ADJ
D50	1S1123		IC67	MP7670AS-T62	MG ZONE 2, 3 ADJ
D51	1S1123		IC68	MP7670AS-T62	MG ZONE 4/ADP, DOP ADJ
D52	1S1123		IC69	MP7670AS-T62	AOP & DOP ZONE 1, 2 ADJ
D53	1S1123		IC70	MP7670AS-T62	AOP & DOP ZONE 2, 3 ADJ
D54	1S1123		IC71	MP7670AS-T62	AOP & DOP ZONE 3, 4 ADJ
D55	1S1123		IC72	MP7670AS-T62	AOP & DOP ZONE 5, 6 ADJ
D56	1S1123		IC73	MP7670AS-T62	AOP & DOP ZONE 6, 7 ADJ
D57	1S1123		IC74	MP7670AS-T62	AOP & DOP ZONE 7, 8 ADJ
D58	1S1123		IC75	MP7670AS-T62	AOP & DOP BUFFER
D59	1S1123		IC76	RV5V143AA-T1	P-ON RESET-1

D BOARD

Function of Semiconductor (2/3)

IC39	RV5V143AA-T1	P-ON RESET-2	Q10	25A1162-YG	V-I CONVERTER-3
IC40	TL431CLP-Z20	VOLTAGE REF-1	Q11	25K523TP-M1	V SYNC INVERTER
IC41	uPC81462-T1	MG HP, VP BUFFER	Q12	25C2712-YG	V SYNC BUFFER
IC42	CXA1726AM-T6	AOP & DOP WAVE FORM GEN-1	Q13	25C2712-YG	H SYNC BUFFER
IC43	CXA1726AM-T6	AOP & DOP WAVE FORM GEN-2	Q14	25C2712-YG	H OSC BUFFER-1
IC44	SN74HC125ANS-E06	DATA, ACK BUFFER	Q15	25A1162-YG	H OSC BUFFER-2
IC45	uPC81462-T1	AOP BUFFER AMP	Q16	25C2712-YG	V AFC SW
IC46	uPC81462-T1	AOP, DOP BUFFER AMP	Q17	25C2712-YG	V AFC AMP
IC47	uPC81462-T1	DOP BUFFER AMP	Q18	25C2712-YG	V AMP-1
IC48	uPC81462-T1	MG BUFFER AMP-1	Q19	25C2712-YG	V AMP-2
IC49	uPC81462-T1	MG BUFFER AMP-2	Q20	DT144EKA	SW-2
IC50	uPC81462-T1	MG BUFFER AMP-3	Q21	DT144EKA	SW-1
IC51	uPC81462-T1	SUB BUFFER AMP-1	Q22	25C2712-YG	V-I CONVERTER-3
IC52	uPC81462-T1	SUB BUFFER AMP-2	Q23	FM52	CURRENT MIRROR
IC53	uPC81462-T1	SUB BUFFER AMP-3	Q24	FM52	V-I CONVERTER-4
IC54	MP7670AS-T62	MG CO ADJ-1	Q25	25A1162-YG	VIDEO AFC
IC55	MP7670AS-T62	MG CO ADJ-2	Q26	DT144EKA	SW-3
IC56	LM2907-5.0	+5V REG-2	Q27	DT144EKA	INVERTER
IC57	LM2907-5.0	-5V REG-2	Q28	25C2712-YG	1/2N BUFFER
IC58	CXA1470AS	V WAVE FORM	Q29	25C2712-YG	VD BUFFER
IC59	uPC45862-T2	V SAW AMP	Q30	25C2712-YG	1/2V BUFFER
IC60	uPC45862-T2	V SIN BUFFER	Q31	25C2712-YG	HD BUFFER-3
IC61	TL431CLP-Z20	VOLTAGE REF-2	Q32	25A1162-YG	HD BUFFER-4
IC62	RV5V143AA-T1	P-ON RESET-3	Q33	25K523TP-M1	BIAS
IC63	MP7670AS-T62	R V ADJ	Q34	FMW5	V SIN 1 SW
IC64	MP7670AS-T62	G V ADJ	Q35	25A1162-YG	V SIN 1 BUFFER
IC65	MP7670AS-T62	B V ADJ	Q36	FM51A	V SIN 2 SW
IC66	uPC45862-T2	R V AMP	Q37	25C2712-YG	V SIN 2 BUFFER
IC67	uPC1496H	R V OUT	Q38	FMW5	H SIN 1 SW
IC68	uPC45862-T2	G V AMP	Q39	25A1162-YG	H SIN 1 BUFFER
IC69	uPC1496H	G V OUT	Q40	FM51A	H SIN 2 SW
IC70	uPC45862-T2	B V AMP	Q41	25C2712-YG	H SIN 2 BUFFER
IC71	uPC1496H	B V OUT	Q42	FM51A	TILT 1 SW
IC72	LM7912FA	+12V REG-2	Q43	25C2712-YG	TILT 1 BUFFER
IC73	LM7912FA	+12V REG-2	Q44	FM51A	TILT 4 SW
IC74	uPC45862-T2	V PULSE GENERATOR	Q45	25C2712-YG	TILT 4 BUFFER
IC75	uPC3962-T2	V STOP COUNT SW	Q46	FMW5	TILT 5 SW
IC76	MP7670AS-T62	2 POLE ADJ-1	Q47	25A1162-YG	TILT 3 BUFFER
IC77	uPC45862-T2	2 POLE AMP-1	Q48	FMW5	TILT 2 SW
IC78	uPC45862-T2	2 POLE AMP-2	Q49	25A1162-YG	TILT 2 BUFFER
IC79	uPC45862-T2	2 POLE AMP-3	Q50	FMW5	ZONE 24 SW
IC80	MP7670AS-T62	MOD ADJ-1	Q51	25A1162-YG	ZONE 24 BUFFER
IC81	uPC81462-T1	MOD BUFFER AMP-1	Q52	FM51A	ZONE 25 SW
IC82	uPC45862-T2	V SAW, PARA BUFFER	Q53	25C2712-YG	ZONE 25 BUFFER
IC83	MP7670AS-T62	V SUB BOW, KEY ADJ	Q54	FMW5	ZONE 22 SW
IC84	uPC81462-T1	H SAW, PARA BUFFER	Q55	25A1162-YG	ZONE 22 BUFFER
IC85	MP7670AS-T62	MOD ADJ-2	Q56	FM51A	ZONE 23 SW
IC86	uPC81462-T1	MOD BUFFER AMP-2	Q57	25C2712-YG	ZONE 23 BUFFER
IC87	MP7670AS-T62	H SUB BOW, KEY ADJ	Q58	25C2712-YG	VD BUFFER
Q1	25C2712-YG	HD BUFFER-1	Q59	25C2712-YG	V SAW BUFFER
Q2	25A1162-YG	HD BUFFER-2	Q60	25C2712-YG	V SIZE LIMITER
Q3	25C2712-YG	AD HD BUFFER	Q61	25A1162-YG	MG 1/2N BUFFER
Q4	25A1162-YG	V-I CONVERTER-1	Q62	FM51A	V SIN 1 SW
Q5	25C2712-YG	HD AMP-1	Q63	25C2712-YG	V SIN 1 BUFFER
Q6	25C2712-YG	HD AMP-2	Q64	25C2712-YG	V SIN 2 BUFFER
Q7	FM52	V-I CONVERTER-2	Q65	25K523TP-M1	RAMP
Q8	25C2712-YG	MG HD BUFFER	Q66	25C2712-YG	V PULSE DETECTOR-1
Q9	25C2712-YG	MG HD BUFFER	Q67	25C2712-YG	V PULSE BUFFER

D BOARD

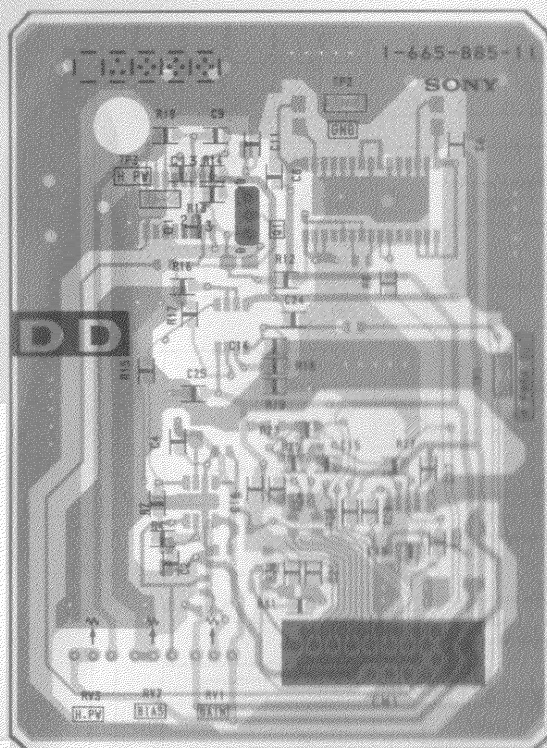
Function of Semiconductor (3/3)

Q809	2SK2251-01	G-VRP
Q810	2SC2712-YG	V PULSE DETECTOR-2
Q811	2SK2251-01	B-VRP
Q812	2SC2712-YG	V PULSE DETECTOR-3
Q813	2SC2712-YG	V PUR SW-1
Q814	2SC2712-YG	V PUR SW-2
Q815	2SC3421-Y	VB 2 POLE BUFFER-1
Q816	2SA1358-Y	VB 2 POLE BUFFER-2
Q817	2SC3421-Y	VG 2 POLE BUFFER-1
Q818	2SA1358-Y	VG 2 POLE BUFFER-2
Q819	2SC3421-Y	VR 2 POLE BUFFER-1
Q820	2SA1358-Y	VR 2 POLE BUFFER-2
Q821	2SC3421-Y	HB 2 POLE BUFFER-1
Q822	2SA1358-Y	HB 2 POLE BUFFER-2
Q823	2SC3421-Y	HG 2 POLE BUFFER-1
Q824	2SA1358-Y	HG 2 POLE BUFFER-2
Q825	2SC3421-Y	HR 2 POLE BUFFER-1
Q826	2SA1358-Y	HR 2 POLE BUFFER-2
Q827	FMW5	V SIN SW

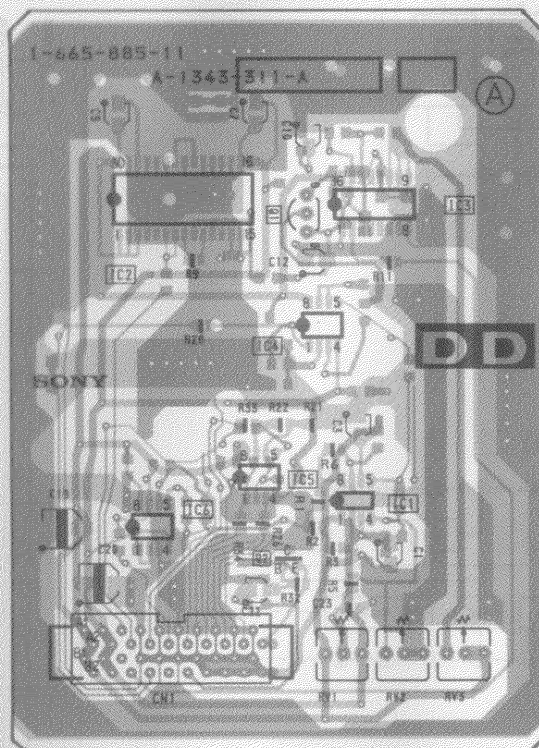
DD

(WAVEFORM GENERATOR) BOARD

— DD BOARD — <Conductor side>

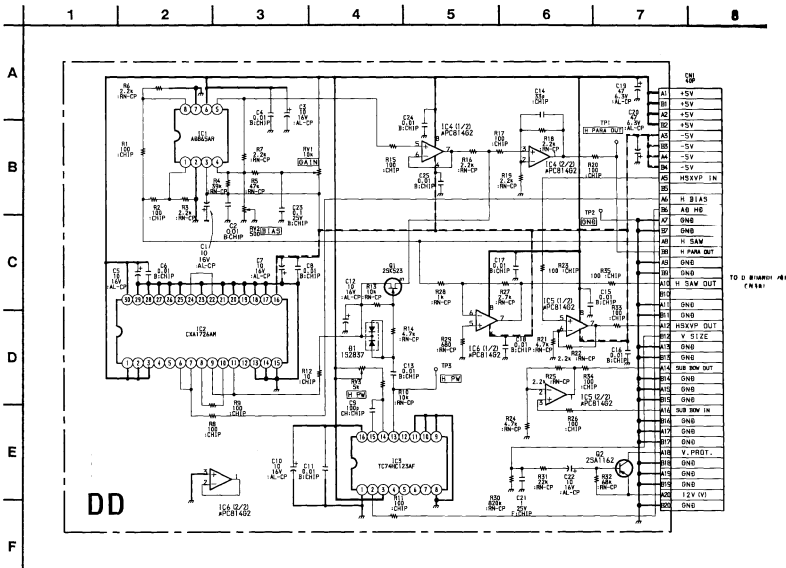


— DD BOARD — <Component side>



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

• DD (WAVEFORM GENERATOR) DIAGRAM



DD BOARD

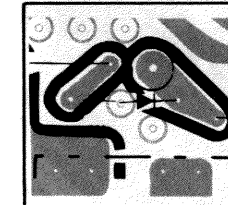
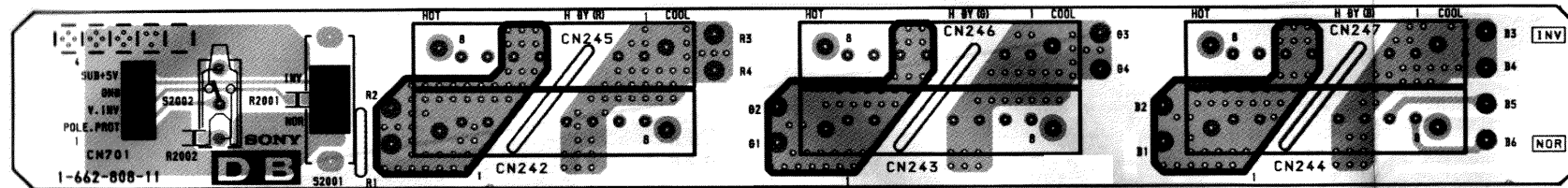
Function of Semiconductor

D1	1S2837	BIAS
IC1	AD835AR	WAVE FORM SHAPER
IC2	CXA1726AM	WAVE FORM GENERATOR
IC3	TC74HC123AF	PULSE GEN
IC4	uPC814G2	H PARA AMP
IC5	uPC814G2	H XVP AMP
IC6	uPC814G2	SUB BOW AMP
Q1	2SK523TP	SWITCH
Q2	2SA1162-YG	V SIZE PROTECT

DB

(H POLARITY CHANGE) BOARD

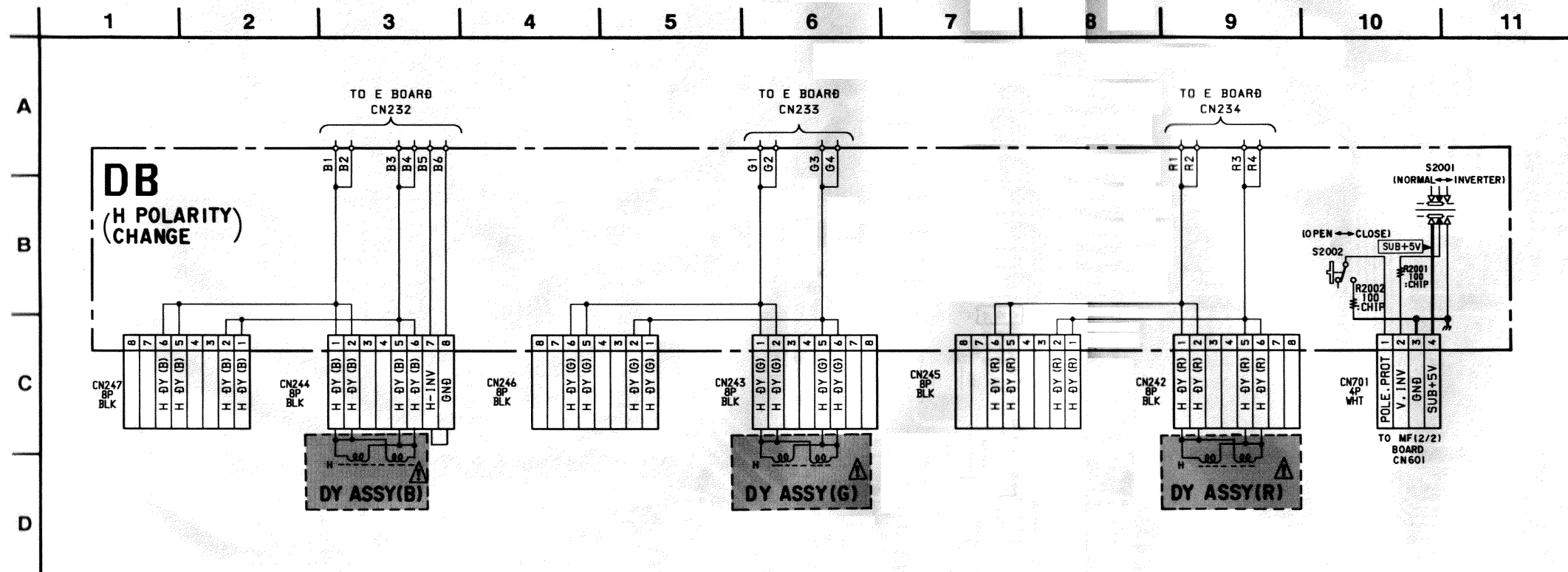
— DB BOARD — <Conductor side>

**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.

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

• DB (H POLARITY CHANGE) DIAGRAM

**Note:**

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

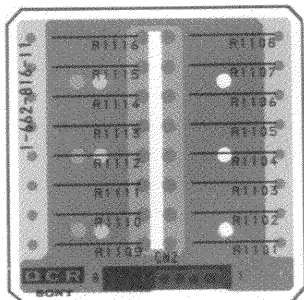
Note:

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.

DCR

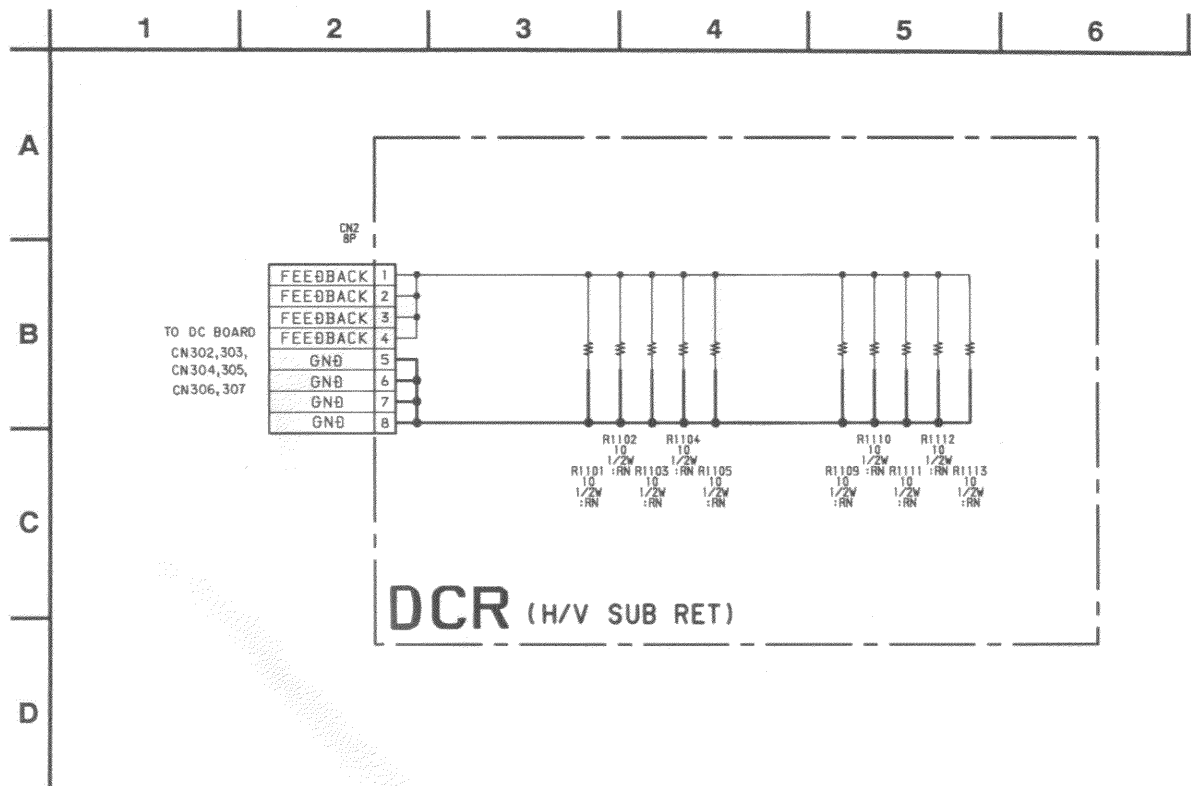
(H/V SUB RET) BOARD

— DCR BOARD — <Conductor side>



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

• DCR (H/V SUB RET) DIAGRAM



DC

(H/V SUB OUT) BOARD

— DC BOARD — <Conductor side>

DC BOARD

Semiconductors Location

DIODE

D1	B-5
D2	B-4
D3	C-3
D4	B-3
D17	F-10
D18	B-6

IC

IC1	B-3
IC2	B-4
IC3	F-8
IC4	B-8

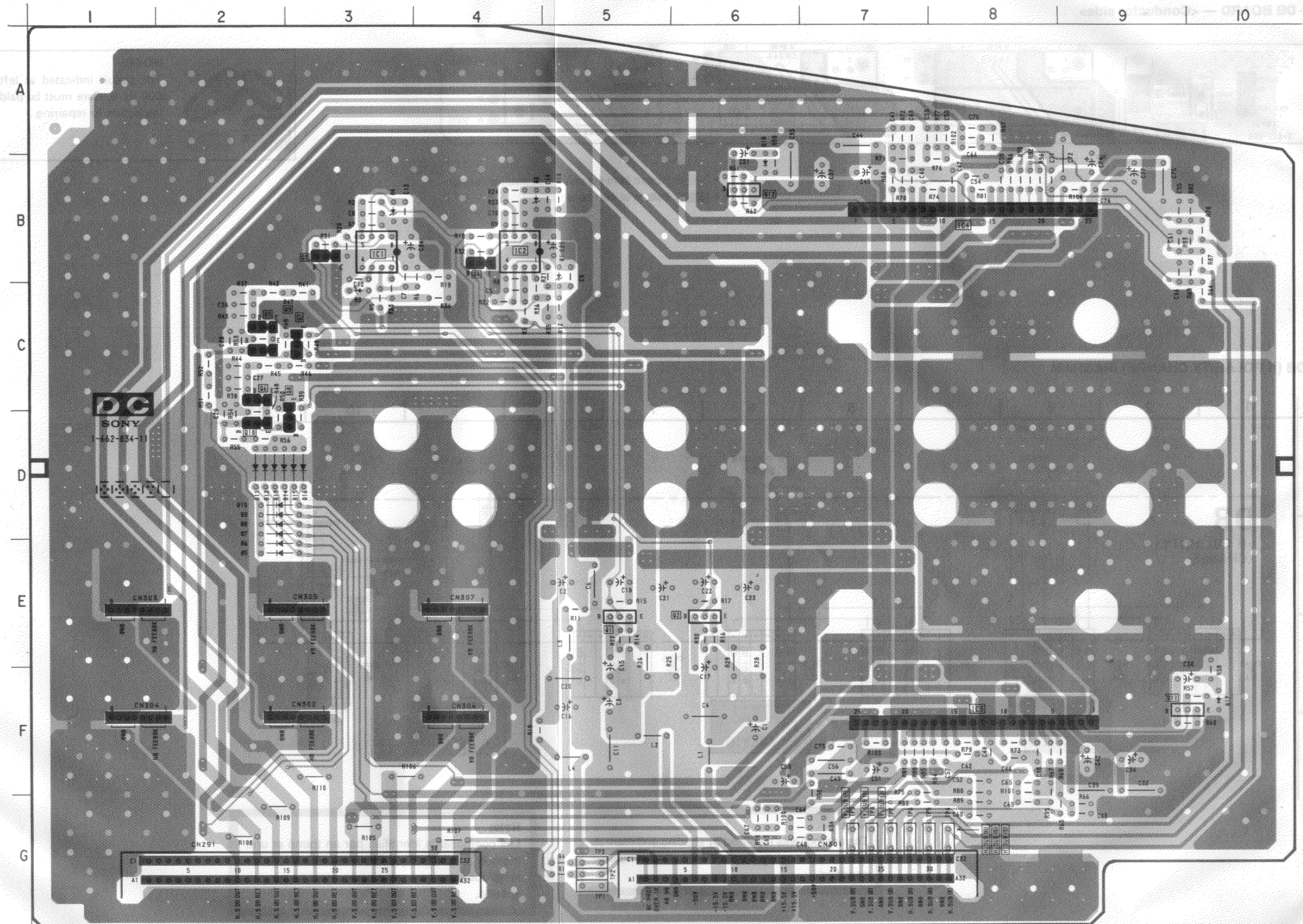
TRANSISTOR

Q1	E-5
Q2	E-6
Q3	B-3
Q4	B-4
Q5	C-2
Q6	C-2
Q7	C-3
Q8	D-3
Q9	C-2
Q10	D-2

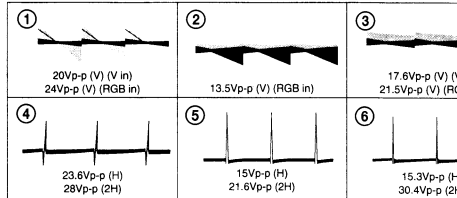
Q11	F-9
Q12	B-6

TEST POINT

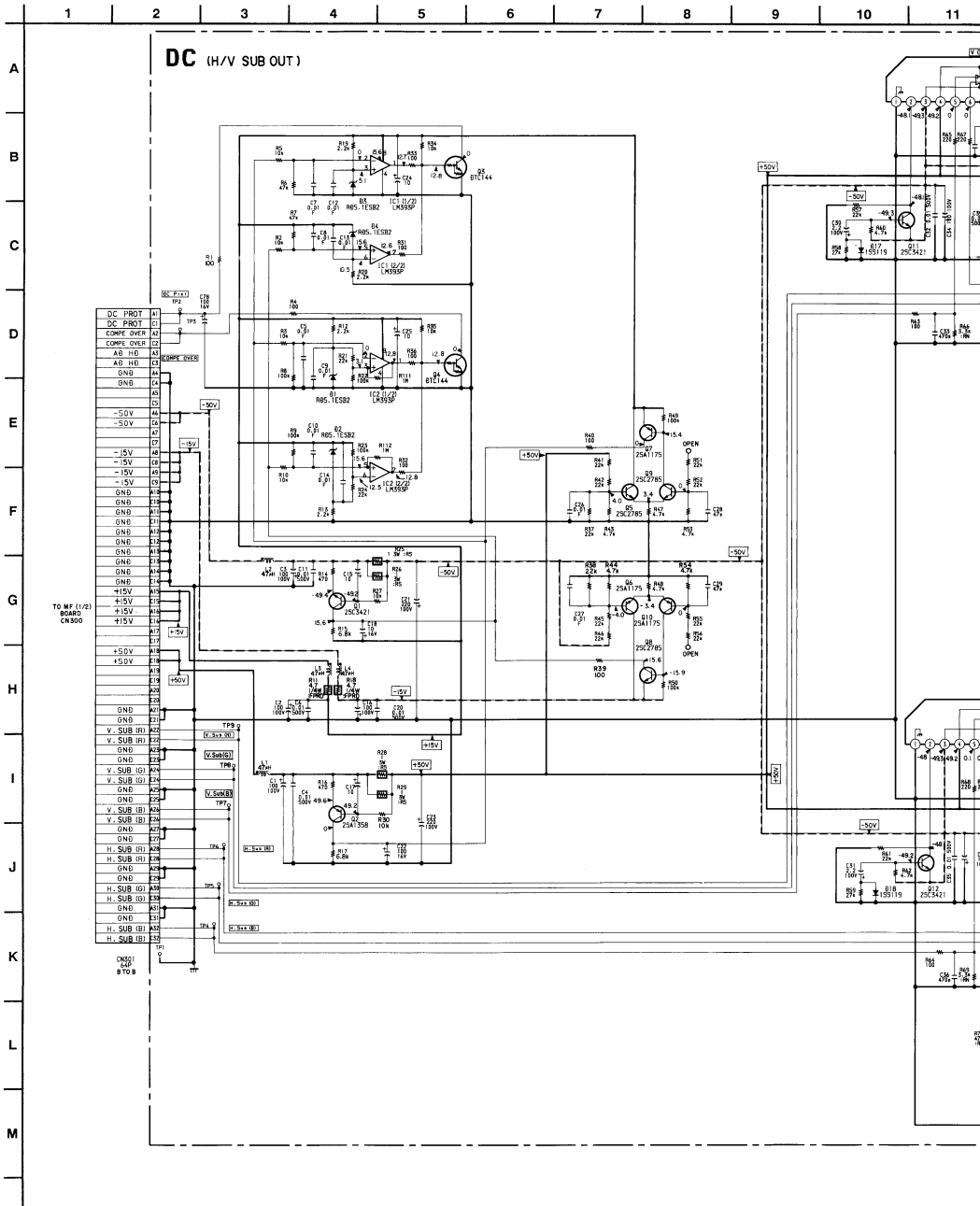
TP1	G-5
TP2	G-5
TP3	G-5
TP4	G-8
TP5	G-7
TP6	G-7
TP7	G-7
TP8	G-7
TP9	G-7



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

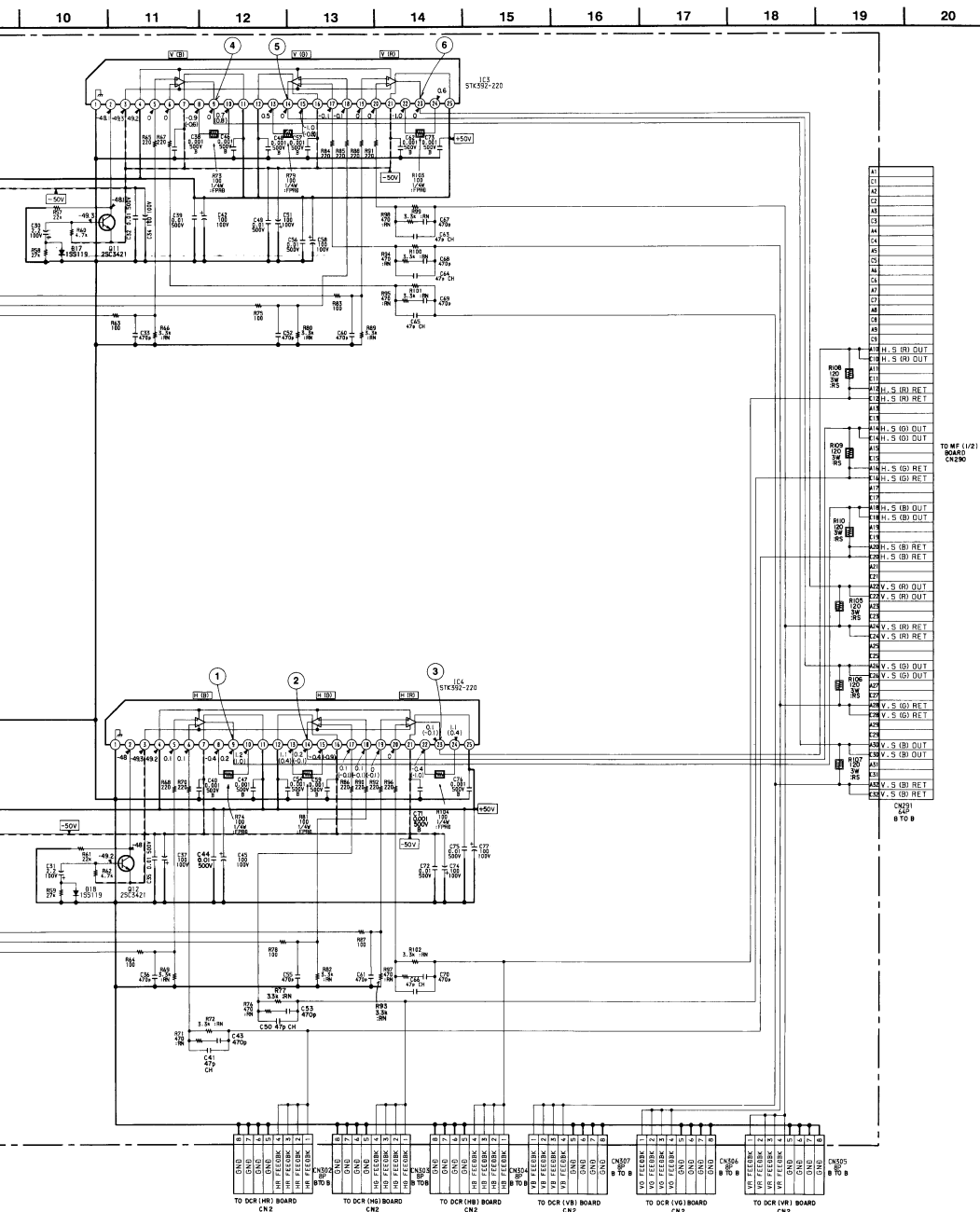
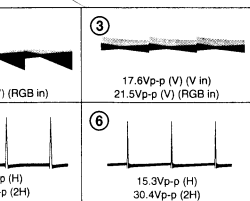


• DC (H/V SUB OUT) DIAGRAM

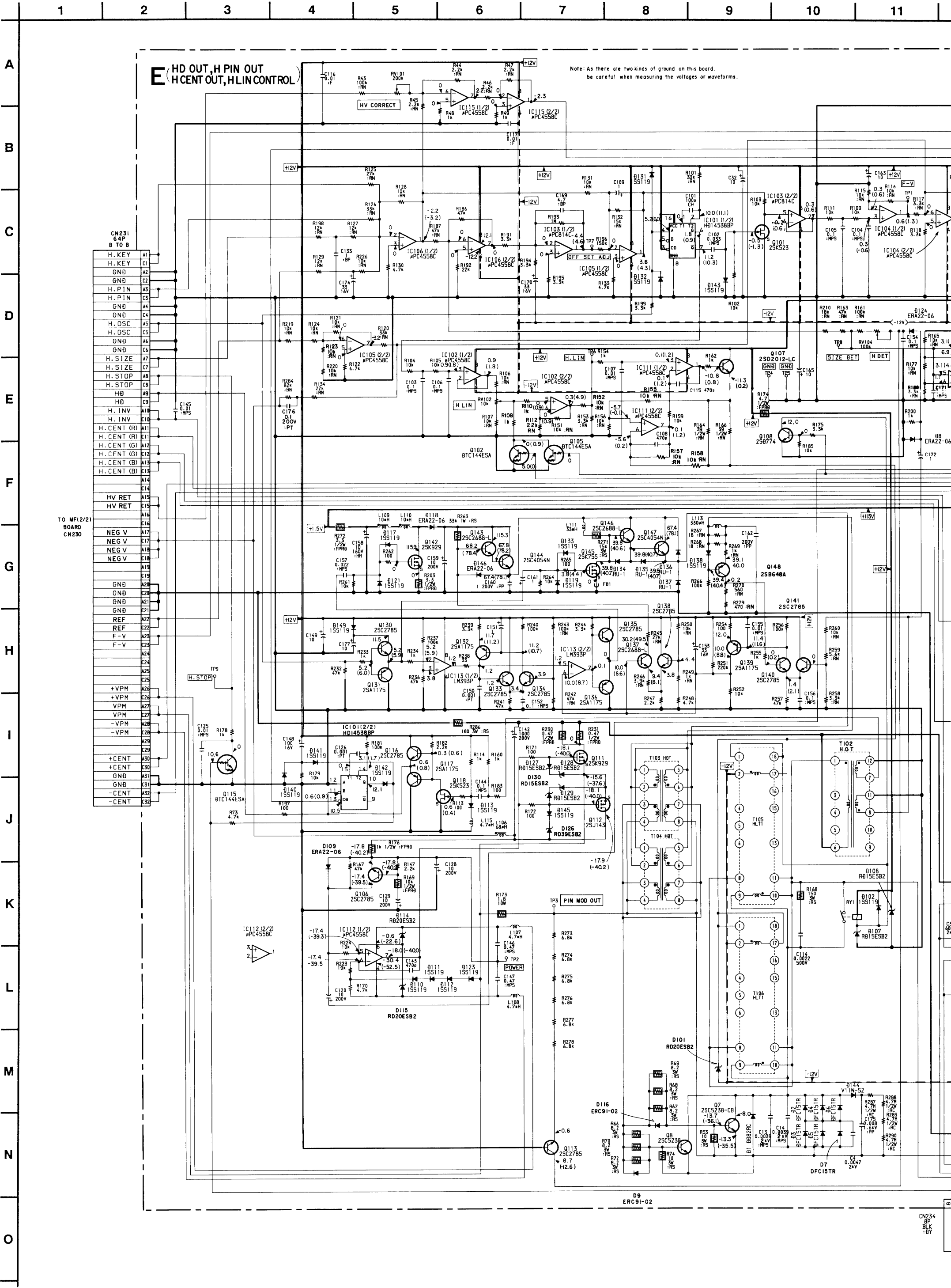


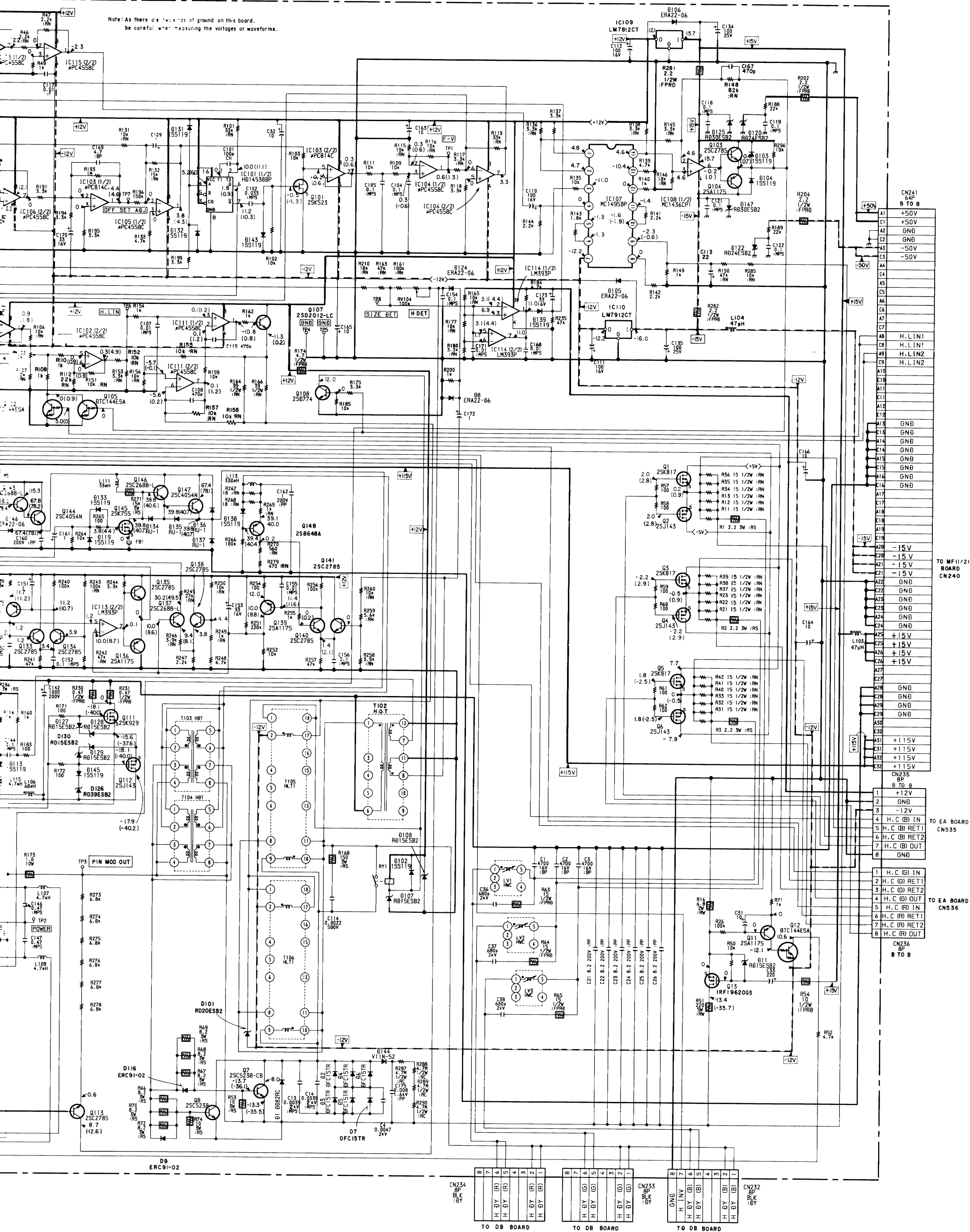
Function of Semiconductor

D1	RDS.1ESB2	IKO (+) REF Z	Q1	25C3421-Y	-50 K DETECTOR
D2		IKO (-) REF Z	Q2	25A1358-Y	+50 K DETECTOR
D3	RDS.1ESB2	DCP (+) REF Z	Q3	DT144ESA	DC PROTECTOR SW
D4	RDS.1ESB2	DCP (-) REF Z	Q4	DT144ESA	IK OVER SW
D7	15S119-25TD	VPR CLP	Q5	25C2785TP-HFE	+50 REF BUFFER
D18	15S119-25TD	HPR CLP	Q6	25A1175TP-HFE	-50 REF BUFFER
			Q7	25A1175TP-HFE	+50 OVER SW
IC11(1/2)	LM393P	DC PROTECTOR (+)	Q8	25C2785TP-HFE	-50 OVER SW
IC11(2)	LM393P	DC PROTECTOR (-)	Q9	25C2785TP-HFE	+50 PEAK BUFFER
IC21(1/2)	LM393P	IK OVER (+)	Q10	25A1175TP-HFE	-50 PEAK BUFFER
IC21(2)	LM393P	IK OVER (-)	G11	25C3421-Y	VSA POWER ON RESET
IC3	STK-392-220	V SUB AMP	Q12	25C3421-Y	HSA POWER ON RESET
IC4	STK-392-220	H SUB AMP			

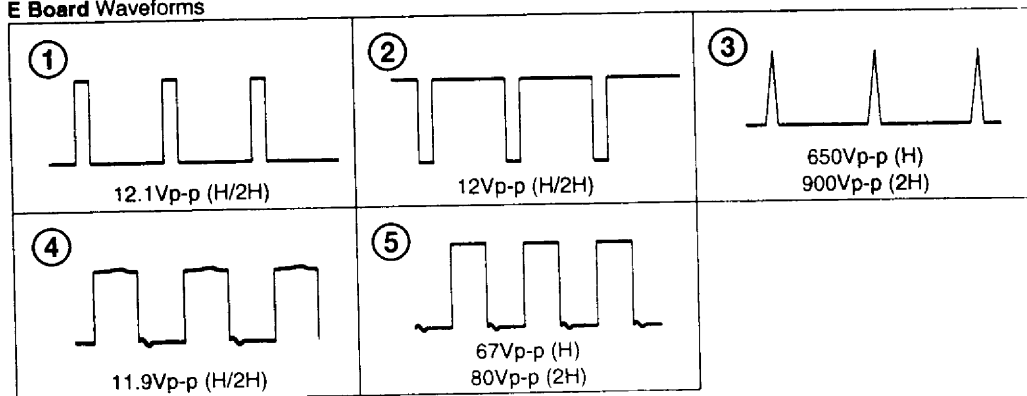


• E (HD OUT, H PIN OUT, H CENT OUT, H LIN CONTROL) DIAGRAM
• Refer to page 4-173 for Function of Semiconductor





E Board Waveforms

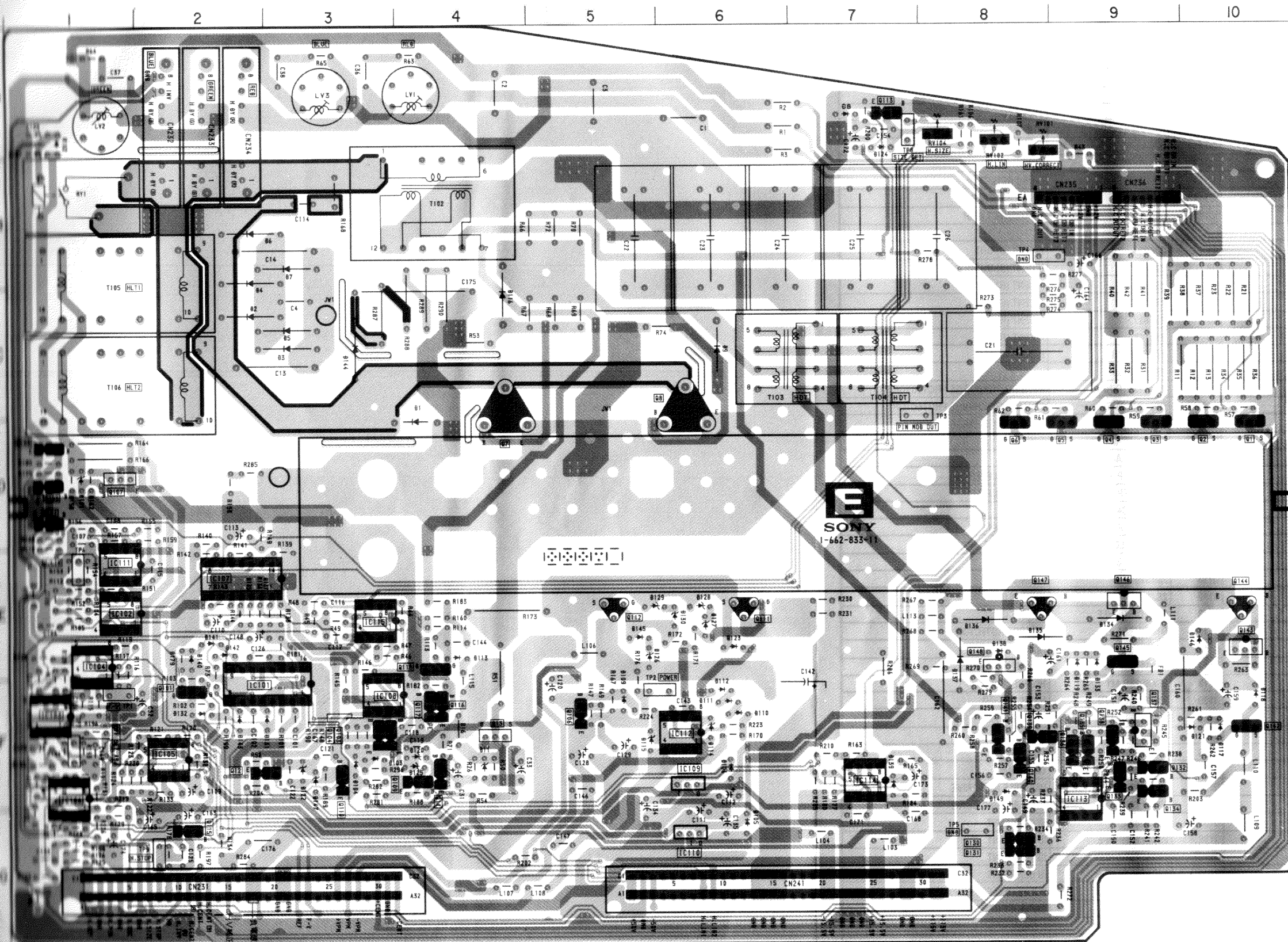


E

(HD OUT, H PIN OUT, H CENT OUT, H LIN CONTROL) BOARD

E BOARD — <Conductor side>**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.



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

E BOARD

Semiconductors Location

DIODE	D145	E-5	Q137	F-9
D1	D-4		Q138	F-9
D2	C-2	D146 E-10	Q139	F-8
D3	C-3	D147 F-3	Q140	F-8
D4	B-2	D149 F-8	Q141	F-8
D5	C-3	IC	Q142	F-10
D6	B-2	IC101 F-2	Q143	E-10
D7	B-3	IC102 E-1	Q144	E-10
D8	A-7	IC103 F-1	Q145	E-9
D9	C-6	IC104 E-1	Q146	E-9
D10	D-1	IC105 F-2	Q147	E-8
		IC106 E-1	Q148	E-8
D11	F-4	IC107 E-1	VARIABLE RESISTOR	
D102	A-1	IC108 F-3		
D103	F-3	IC109 F-6		
D104	F-3	IC110 G-6		
D105	G-6	IC111 E-1	TEST POINT	
D106	F-6	IC112 F-6		
D107	A-1	IC113 F-9		
D108	A-1	IC114 F-7		
D109	F-5	IC115 E-3	TRANSISTOR	
D110	F-6			
D111	F-6	Q1 D-10		
D112	F-6	Q2 D-10		
D113	E-4	Q3 D-9	TP1	F-1
D114	F-6	Q4 D-9	TP2	F-5
D115	F-5	Q5 D-9	TP3	D-7
D116	C-4	Q6 D-8	TP4	B-8
D117	F-10	Q7 C-4	TP5	G-8
D118	F-10	Q8 C-6	TP6	E-1
D119	E-9	Q11 F-4	TP7	F-1
D120	F-4	Q12 F-2	TP8	A-7
D121	F-10		TP9	G-2
D122	F-3	Q13 F-4		
D123	E-6	Q101 F-2		
D124	A-7	Q102 D-1		
D125	F-4	Q103 F-3		
D126	E-5	Q104 F-3		
D127	E-6	Q105 D-1		
D128	E-6	Q106 F-5		
D129	E-5	Q107 D-1		
D130	E-6	Q108 D-1		
		Q111 E-6		
D131	F-2	Q112 E-5		
D132	F-2	Q113 A-7		
D133	E-9	Q115 G-2		
D134	E-9	Q116 F-4		
D135	E-8	Q117 F-4		
D136	E-8	Q118 E-4		
D137	E-8	Q130 G-8		
D138	E-8	Q131 G-8		
D139	F-7	Q132 F-9		
D140	E-2	Q133 F-9		
D141	E-2			
D142	E-2	Q134 F-9		
D143	F-2	Q135 F-9		
D144	C-3	Q136 F-9		

E BOARD

Function of Semiconductor (1/2)

D1	DD82RC-SONY	H OUT DAMPER	IC101	HD14538BP	H PULSE GENERATOR
D2	DFC15TR	H OUT DAMPER	IC102	uPC4558C	H LIN CONT
D3	DFC15TR	H OUT DAMPER	IC103	uPC814C	F-V AMP
D4	DFC15TR	H OUT DAMPER	IC104	uPC4558C	F-V AMP
D5	DFC15TR	H OUT DAMPER	IC105	uPC4558C	F-V AMP
D6	DFC15TR	H OUT DAMPER	IC106	uPC4558C	F-V AMP
D7	DFC15TR		IC107	MC1495BP	MOD LEVEL CONT
D8	ERA22-06AVRBT		IC108	MC1436CPI	PIN MOD PRE AMP
D9	ERC91-02		IC109	LM7812CT	+12V REG
D11	RD15ES-B2	PROTECTOR	IC110	LM7912CT	-12V REG
D101	RD20ES-B2	PROTECTOR	IC111	uPC4558C	H LIN CONT
D102	1SS119-25TD	RELAY PROTECTOR	IC112	uPC4558C	PIN MOD AMP
D103	1SS119-25TD	PROTECTOR	IC113	LM393P	H OSC DETECTOR
D104	1SS119-25TD	PROTECTOR	IC114	LM393P	H SIZE PROTECTOR
D105	ERA22-06AVRVT	-12V REG PROTECTOR	IC115	uPC4558C	HV CORRECT AMP
D106	ERA22-06AVRVT	+12V REG PROTECTOR			
D107	RD15ES-B2	PROTECTOR	Q1	2SK817	H CENT (B) OUT
D108	RD15ES-B2	PROTECTOR	Q2	2SJ143	H CENT (B) OUT
D109	ERA22-06AVRBT	CLAMP	Q3	2SK817	H CENT (G) OUT
D110	1SS119-25TD	LEVEL SHIFT	Q4	2SJ143	H CENT (G) OUT
D111	1SS119-25TD	LEVEL SHIFT	Q5	2SK817	H CENT (R) OUT
D112	1SS119-25TD	LEVEL SHIFT	Q6	2SJ143	H CENT (R) OUT
D113	1SS119-25TD	CLAMP	Q7	2SC5238-CB	H OUT
D114	RD20ES-B2	PROTECTOR	Q8	2SC5238-CB	
D115	RD20ES-B2	PROTECTOR	Q11	2SA1175TP-HFE	PIN MOD DISCHARGE PROTECTOR
D116	ERC91-02	SPEED UP	Q12	DTC144ESA-TP	PIN MOD DISCHARGE PROTECTOR
D117	1SS119-25TD	SPEED UP	Q13	IRFI9620GS	PIN MOD DISCHARGE
D118	ERA22-06AVRBT	RECT	Q101	2SK523TP-M1	F-V SW
D119	1SS119-25TD	CLAMP	Q102	DTC144ESA-TP	H LIN SW
D120	RD24ES-B2	REFERENCE	Q103	2SC2785TP-HFE	PIN MOD BUFFER
D121	1SS119-25TD	CLAMP	Q104	2SA1175TP-HFE	PIN MOD BUFFER
D122	RD24ES-B2	REFERENCE	Q105	DTC144ESA-TP	H LIN SW
D123	1SS119-25TD	LEVEL SHIFT	Q106	2SC2785TP-HFE	PIN MOD BUFFER
D124	ERA22-06AVRBT	H SIZE DETECTOR	Q107	2SD2012-LC	LIN CONT OUT
D125	RD30ES-B2	PROTECTOR	Q108	2SD774-T-34	RELAY CONT
D126	RD39ES-B2	PROTECTOR	Q111	2SK929	H PIN OUT
D127	RD15ES-B2	PROTECTOR	Q112	2SJ143	H PIN OUT
D128	RD15ES-B2	PROTECTOR	Q113	2SC2785TP-HFE	H SIZE CONST
D129	RD15ES-B2	PROTECTOR	Q115	DTC144ESA-TP	H STOP PROTECTOR
D130	RD15ES-B2	PROTECTOR	Q116	2SC2785TP-HFE	HD OUT
D131	1SS119-25TD	PROTECTOR	Q117	2SA1175TP-HFE	HD OUT
D132	1SS119-25TD	PROTECTOR	Q118	2SK523TP-M1	HD PRE DRIVE
D133	1SS119-25TD	SPEED UP	Q130	2SC2785TP-HFE	H OSC BUFFER
D134	RU-1	H DRIVE PROTECTOR	Q131	2SA1175TP-HFE	H OSC BUFFER
D135	RU-1	H DRIVE PROTECTOR	Q132	2SA1175TP-HFE	CONST AMP
D136	RU-1	H DRIVE PROTECTOR	Q133	2SC2785TP-HFE	CONST AMP
D137	RU-1	H DRIVE PROTECTOR	Q134	2SC2785TP-HFE	CONST AMP
D138	1SS119-25TD	THERM CANCEL	Q135	2SC2785TP-HFE	VARIABLE REG DRIVE
D139	1SS119-25TD	H SIZE PROT SW	Q136	2SA1175TP-HFE	VARIABLE REG DRIVE
D140	1SS119-25TD	DISCHARGE	Q137	2SC2688-L	IB CONSTANT
D141	1SS119-25TD	H STOP GATE	Q138	2SC2785TP-HFE	IB CONSTANT
D142	1SS119-25TD	H STOP GATE	Q139	2SA1175TP-HFE	IB CONSTANT
D143	1SS119-25TD	CLAMP	Q140	2SC2785TP-HFE	IB CONSTANT
D144	V11N-52	PULSE	Q141	2SC2785TP-HFE	PULSE DETECTOR
D145	1SS119-25TD	PIN MOD PROTECTOR	Q142	2SK929	VARIABLE REG OUT
D146	ERA22-06AVRBT	PROTECTOR	Q143	2SC2688-L	H DRIVE REG
D147	RD30ES-B2	PROTECTOR	Q144	2SC4054N	H DRIVE REG
D149	1SS119-25TD	CHARGE	Q145	2SK755	H DRIVE

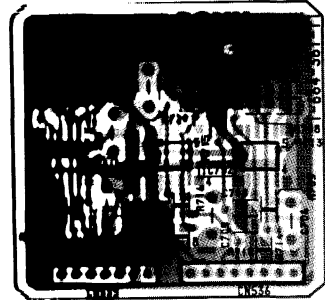
E BOARD

Function of Semiconductor (2/2)

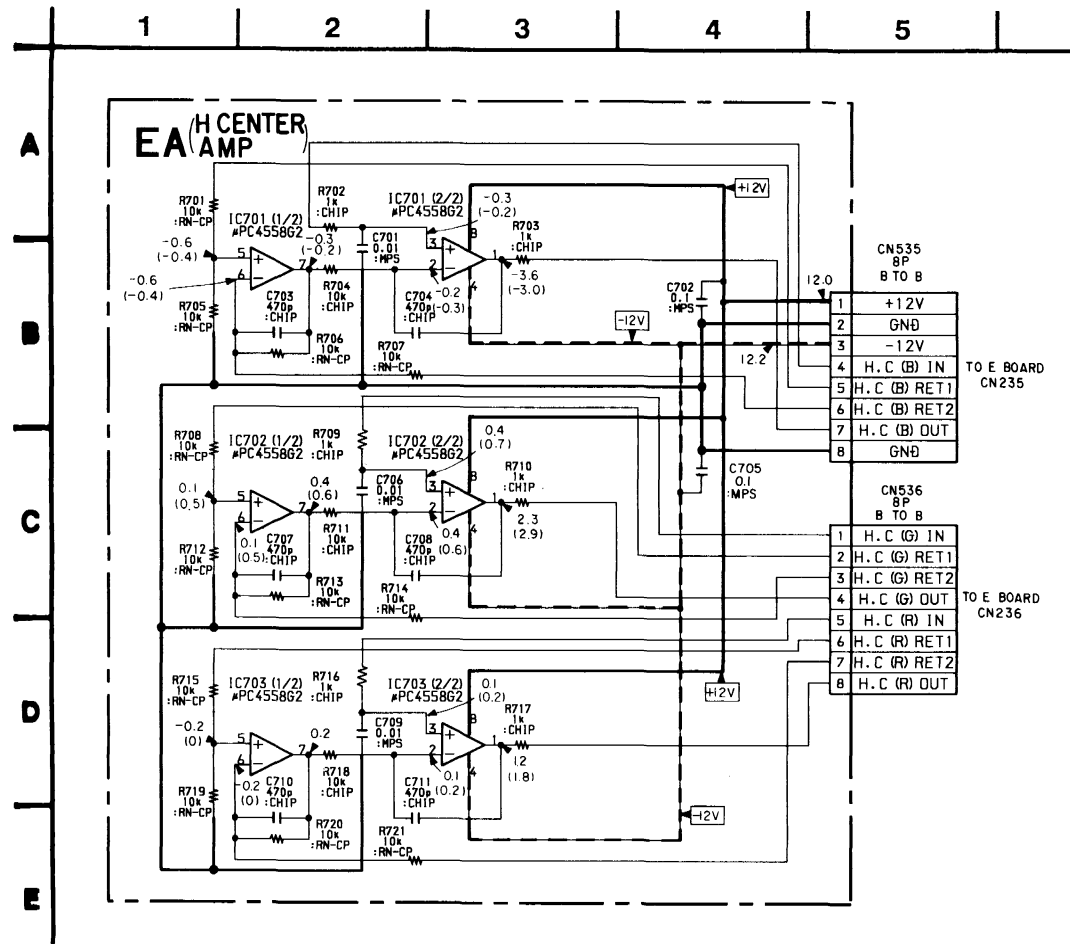
Q146	2SC2688-L	H DRIVE
Q147	2SC4054N	H DRIVE
Q148	2SB648A-C	IB DETECTOR

EA (H.CENTR AMP) BOARD

— EA BOARD — <Conductor side>



• EA (H.CENTR AMP) DIAGRAM



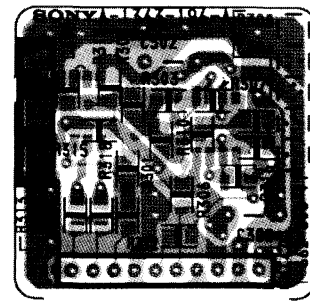
EA BOARD

Function of Semiconductor

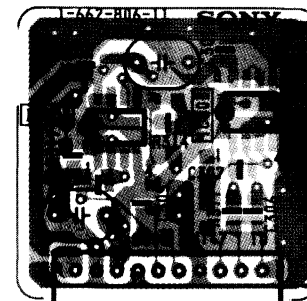
IC701	uPC4558G2	H CENT B CONT
IC702	uPC4558G2	H CENT G CONT
IC703	uPC4558G2	H CENT R CONT

EBA (R.G.B) (MG H/V AMP) BOARD

— EBA BOARD —
<Conductor side>

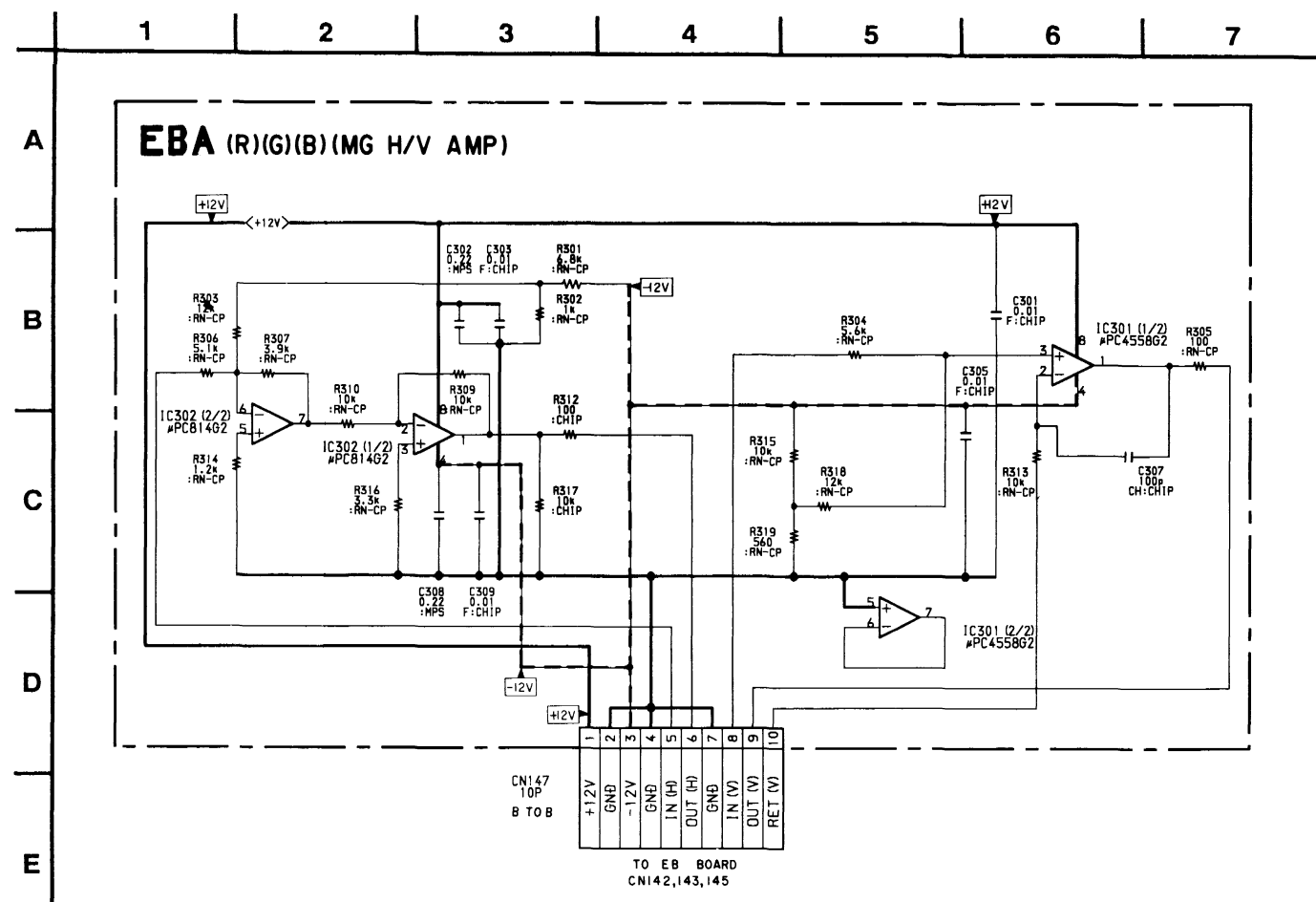


— EBA BOARD —
<Component side>



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

• EBA (R.G.B) (MG H/V AMP) DIAGRAM



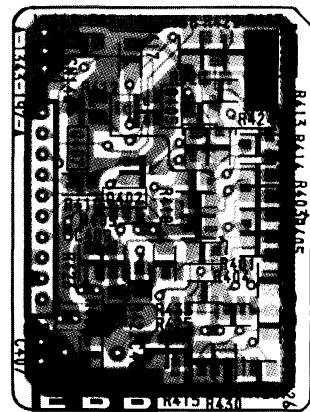
EBA BOARD

Function of Semiconductor

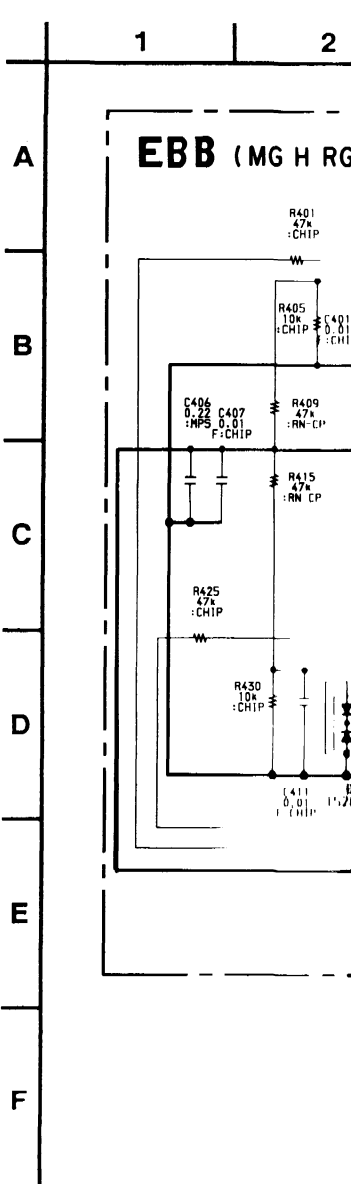
IC301	uPC4558G2-T2	MG V AMP
IC302	uPC814G2-T1	MG H AMP

EBB (MG H.RGB AMP) BOARD

— EBB BOARD —
<Conductor side>



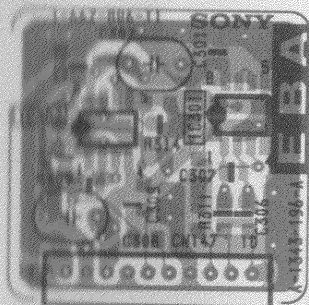
• EBB (MG H.RGB AMP) D



F

(R/G/B) (MG H/V AMP) BOARD

— EBA BOARD —
 «Component side»

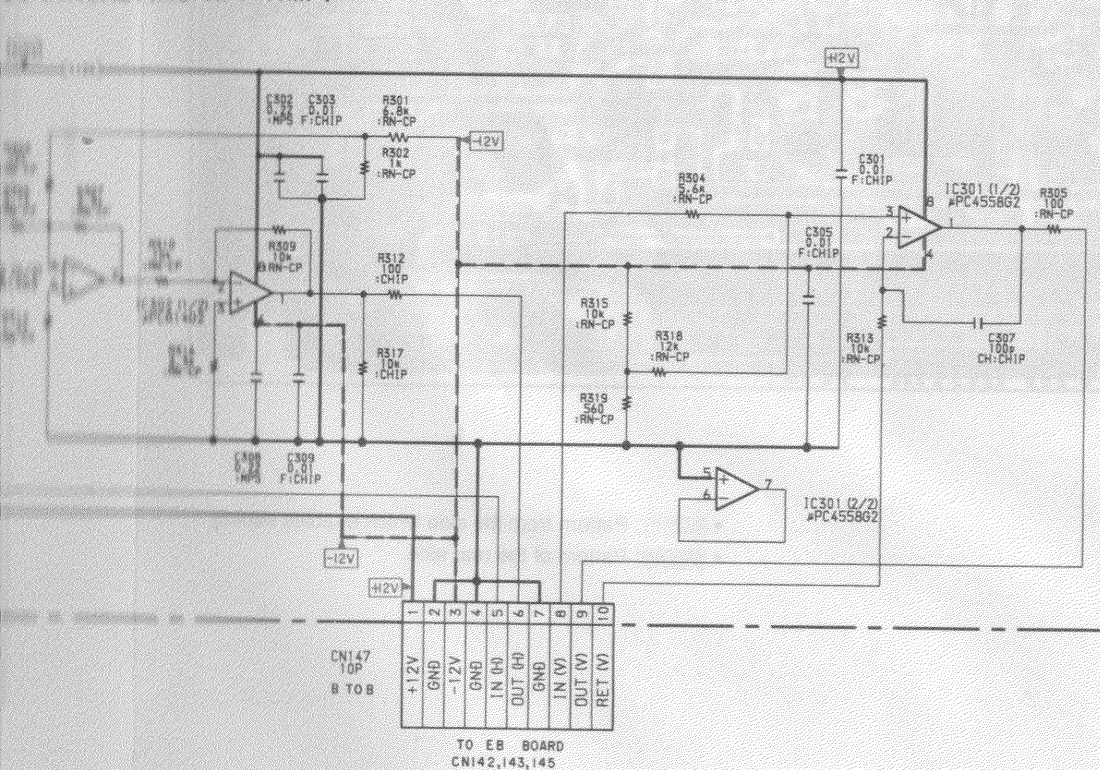


- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

(MG H/V AMP) DIAGRAM

1 2 3 4 5 6 7

A (R/G/B) (MG H/V AMP)

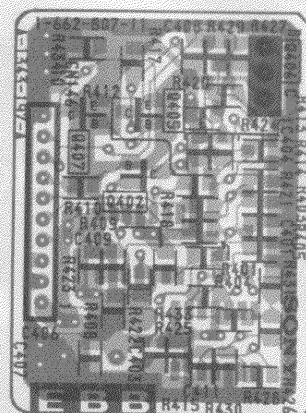


TO EB BOARD
 CN142, 143, 145

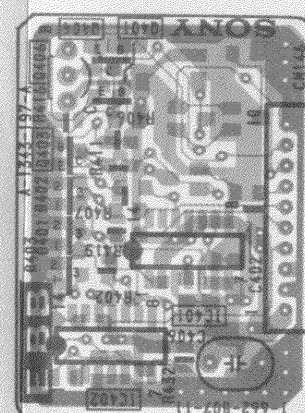
EBB

(MG H.RGB AMP) BOARD

— EBB BOARD —
 «Conductor side»



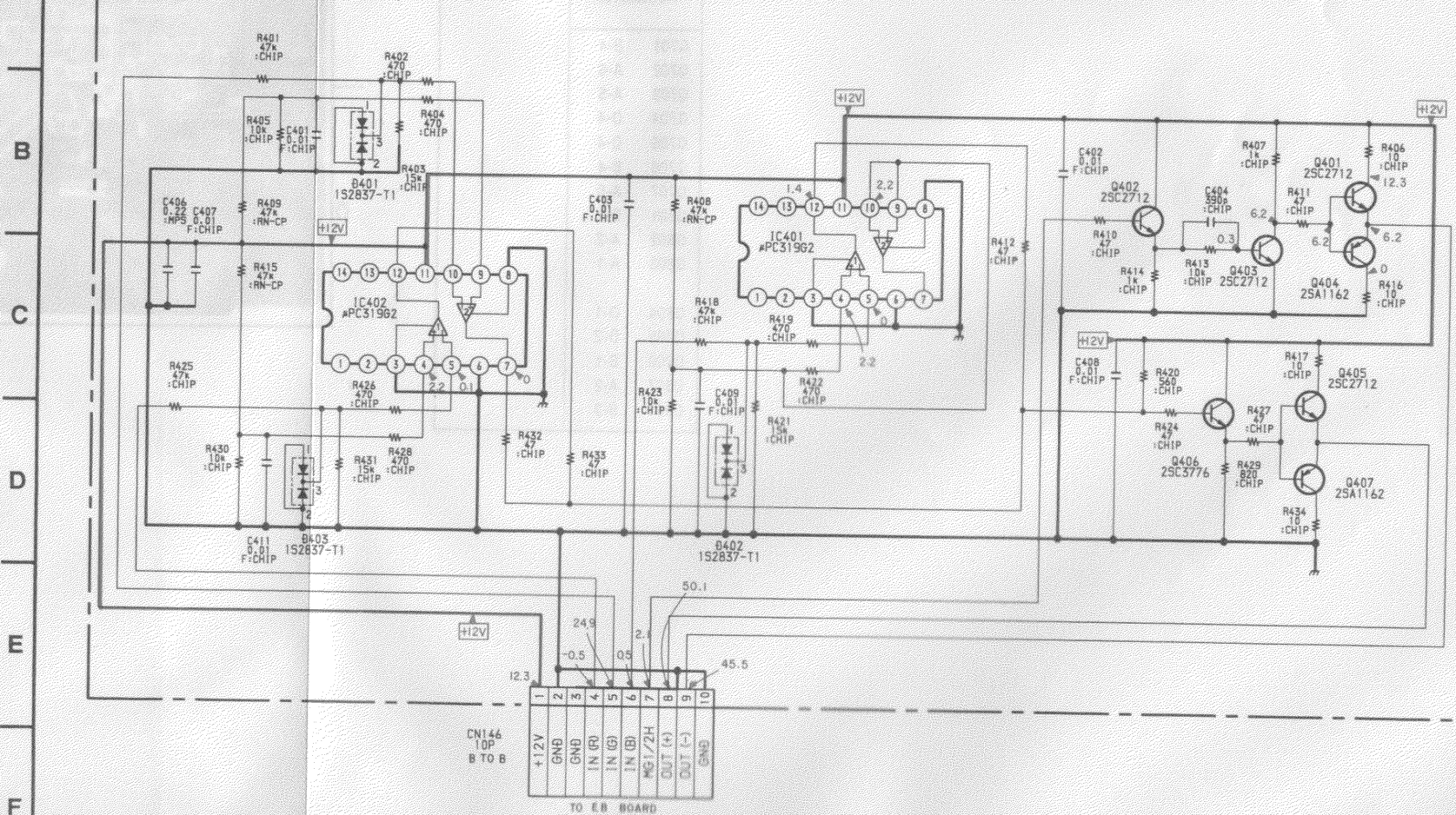
— EBB BOARD —
 «Component side»



• EBB (MG H.RGB AMP) DIAGRAM

1 2 3 4 5 6 7 8 9

A EBB (MG H RGB AMP)



Schematic Diagram

← EA EBA EBB board

EBB BOARD

Function of Semiconductor

D401	1S2837	PROTECTOR
D402	1S2837	PROTECTOR
D403	1S2837	PROTECTOR
IC401	uPC319G2-T1	+PULSE GENERATOR
IC402	uPC319G2-T1	+PULSE GENERATOR
Q401	2SC2712-YG	+PULSE BUFFER
Q402	2SC2712-YG	+PULSE BUFFER
Q403	2SC2712-YG	+PULSE INVERTER
Q404	2SA1162-YG	+PULSE BUFFER
Q405	2SC2712-YG	-PULSE BUFFER
Q406	2SC3776-CD-AA	-PULSE BUFFER
Q407	2SA1162-YG	-PULSE BUFFER

EB

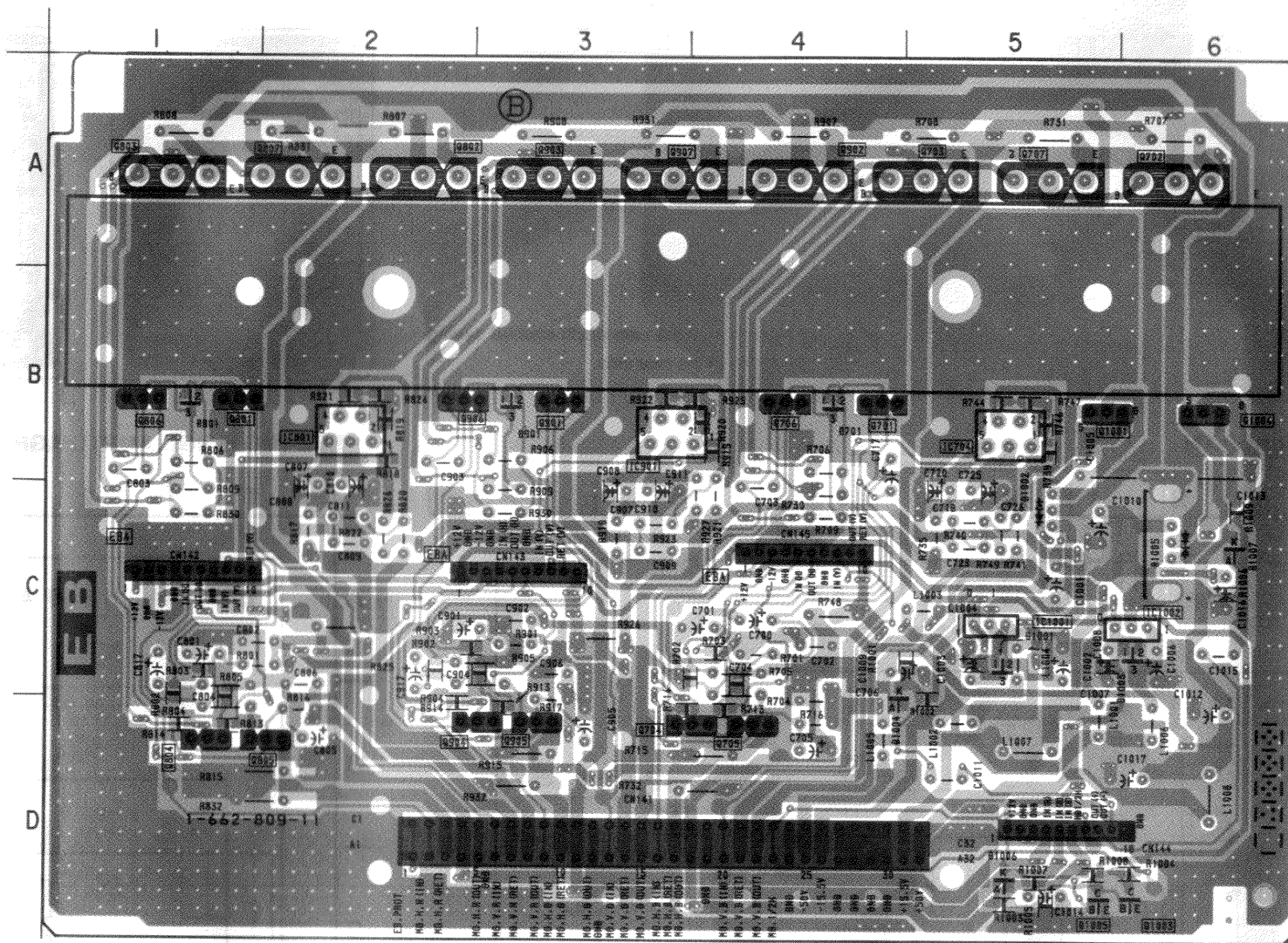
(MG H/V RGB OUT) BOARD



— EB BOARD — <Conductor side>

EB BOARD

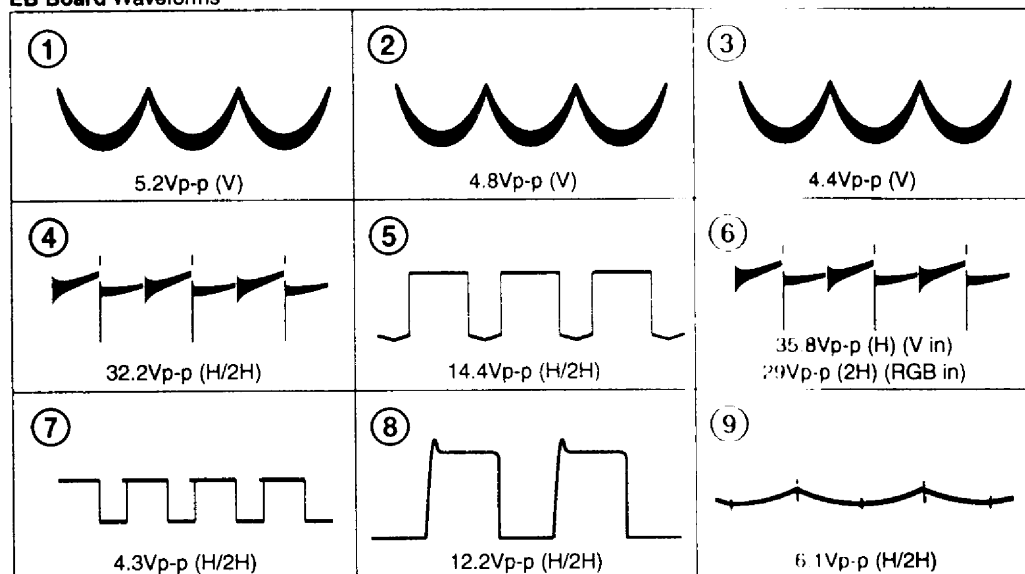
Semiconductors Location

DIODE	Q902	A-4
	Q903	A-3
	Q904	D-3
	Q905	D-3
	Q906	B-2
	Q907	A-3
	D701	B-4
	D802	B-1
	D901	B-3
	D1001	C-5
	D1002	C-5
	D1003	C-6
	D1004	D-4
	D1005	C-6
	D1006	D-5
	D1007	C-6
IC	IC704	B-5
	IC801	B-2
	IC901	B-3
	IC1001	C-5
	IC1002	C-6
TRANSISTOR	Q701	B-4
	Q702	A-6
	Q703	A-5
	Q704	D-4
	Q705	D-4
	Q706	B-4
	Q707	A-5
	Q801	B-1
	Q802	A-2
	Q803	A-1
	Q804	D-1
	Q805	D-2
	Q806	B-1
	Q807	A-2
	Q901	B-3



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

EB Board Waveforms

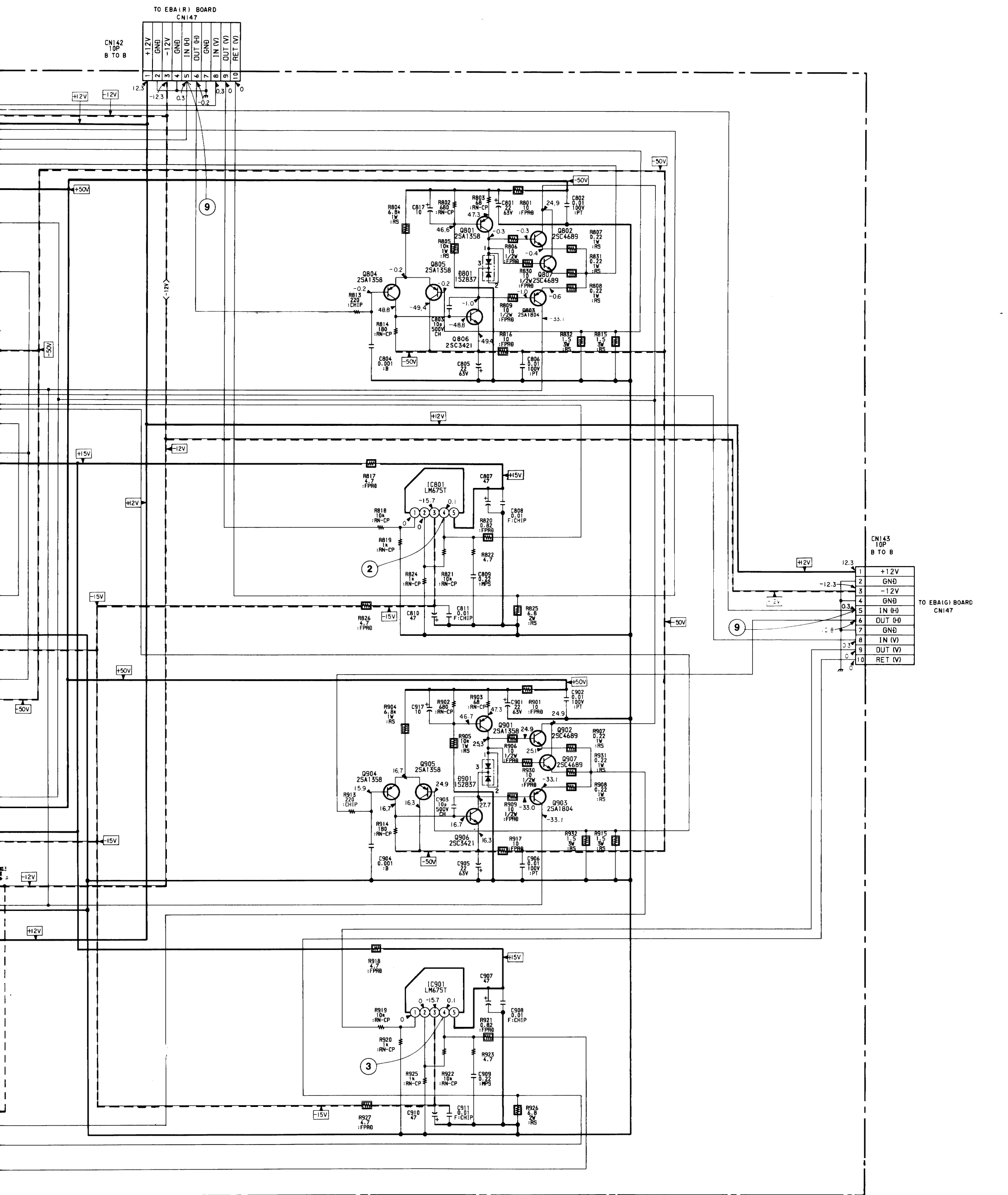


EB BOARD

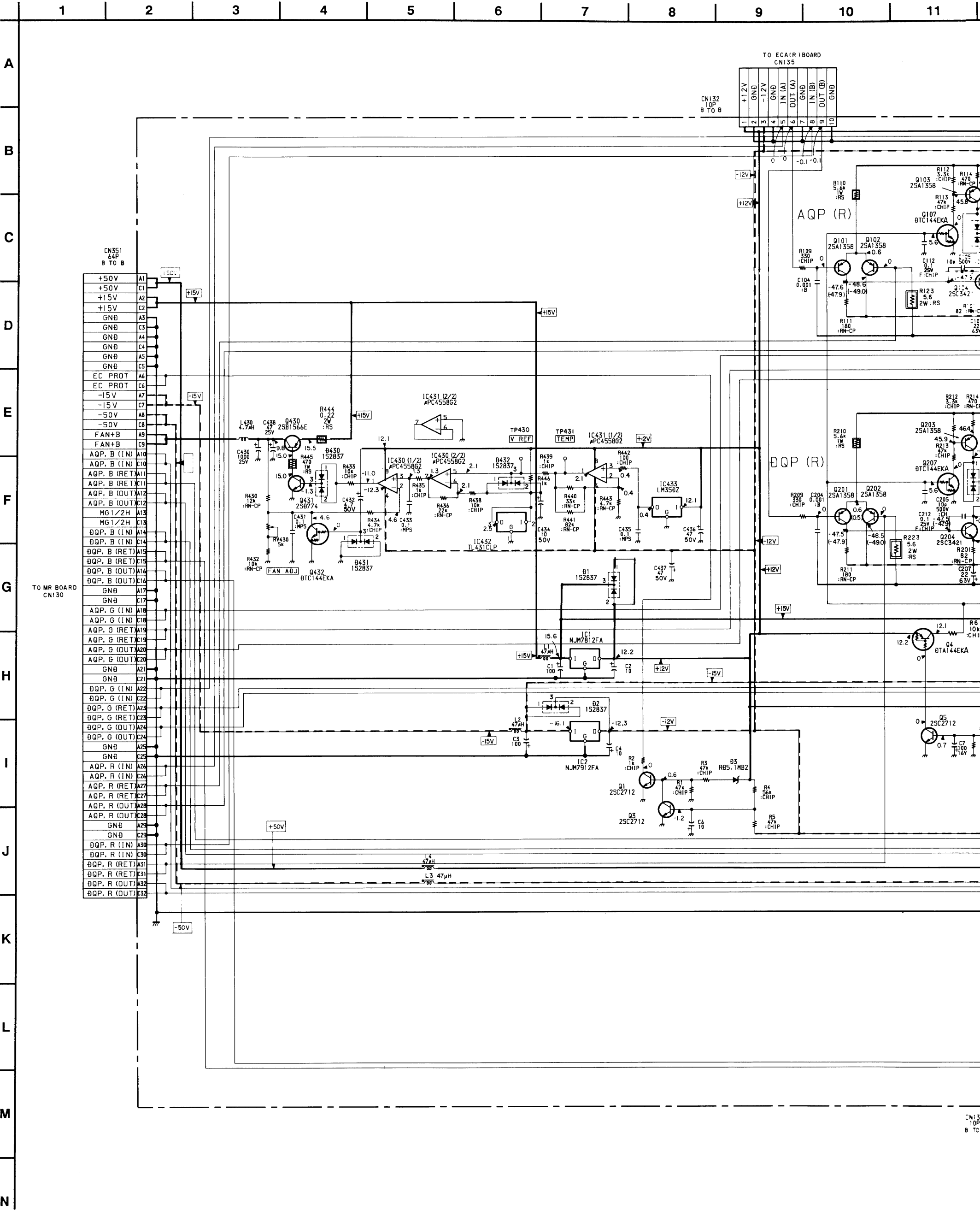
Function of Semiconductor

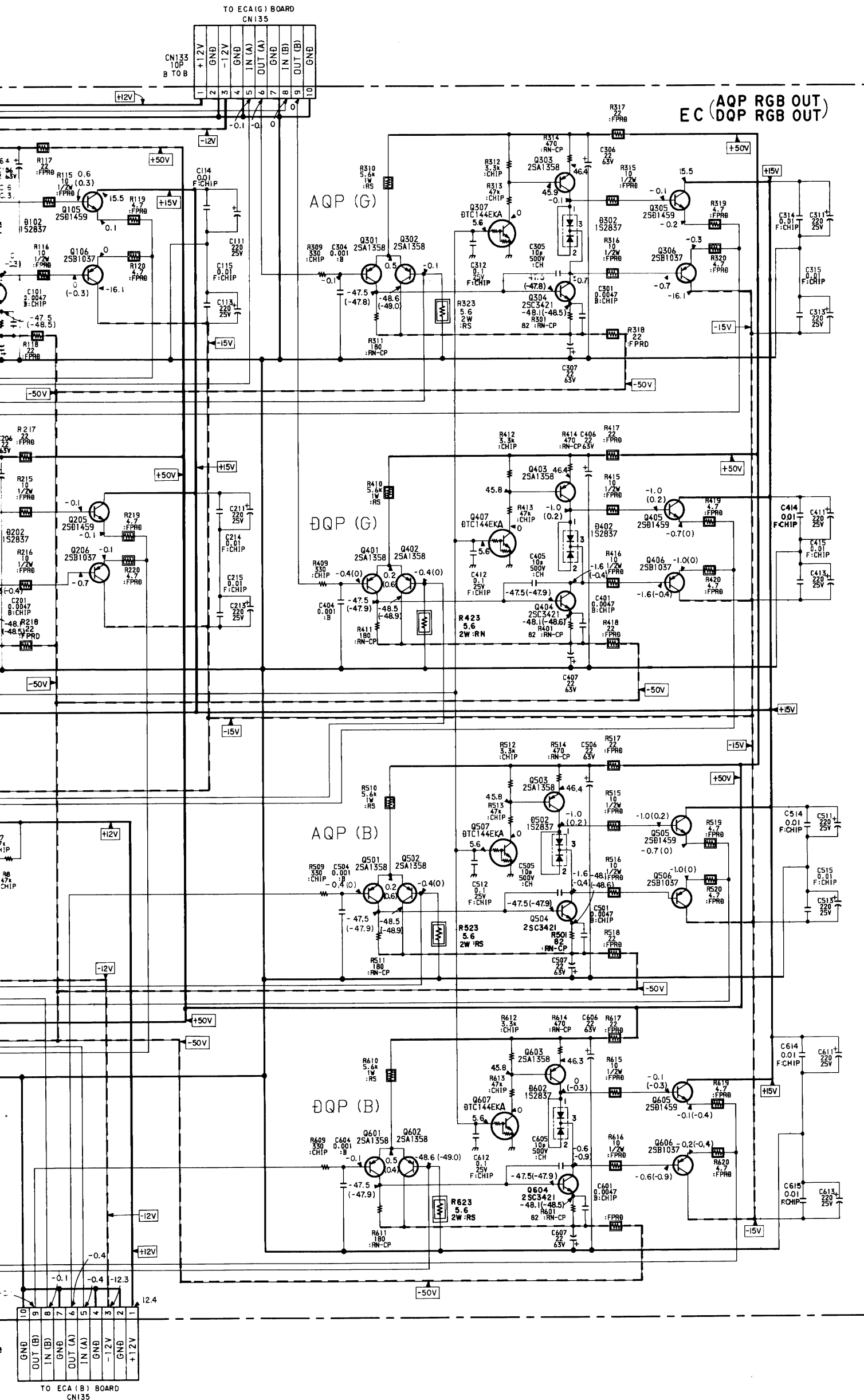
D701	1S2837	LEVEL SHIFT	Q803	2SA1804-RO	MG (G) H OUT
D801	1S2837	LEVEL SHIFT	Q804	2SA1358-Y	MG (G) H AMP
D901	1S2837	LEVEL SHIFT	Q805	2SA1358-Y	MG (G) H AMP
D1001	1S2837	PROTECTOR	Q806	2SC3421-Y	MG (G) H AMP
D1002	D8LC20UR	-50, -15V SW	Q807	2SC4689-RO	MG (G) H OUT
D1003	1S2837	PROTECTOR	Q901	2SA1358-Y	MG (R) H BUFFER
D1005	D8LC20U	+50, +15V SW	Q902	2SC4689-RO	MG (R) H OUT
D1006	RD5.1M-B2	LEVEL SHIFT	Q903	2SA1804-RO	MG (R) H OUT
D1007	RD15M-B2	PROTECTOR	Q904	2SA1358-Y	MG (R) H AMP
			Q905	2SA1358-Y	MG (R) H AMP
IC704	LM675T	MG (B) V OUT	Q906	2SC3421-Y	MG (R) H AMP
IC801	LM675T	MG (G) V OUT	Q907	2SC4689-RO	MG (R) H OUT
IC901	LM675T	MG (R) V OUT	Q1001	2SK817	-50V SW
IC1001	NJM7912FA	-12V REG	Q1003	2SC2712-YG	EB PROTECTOR
IC1002	NJM7812FA	+12V REG	Q1004	2SJ143	+50V SW
			Q1005	2SC2712-YG	EB PROTECTOR
Q701	2SA1358-Y	MG (B) H BUFFER			
Q702	2SC4689-RO	MG (B) H OUT			
Q703	2SA1804-RO	MG (B) H OUT			
Q704	2SA1358-Y	MG (B) H AMP			
Q705	2SA1358-Y	MG (B) H AMP			
Q706	2SC3421-Y	MG (B) H AMP			
Q707	2SC4689-RO	MG (B) H OUT			
Q801	2SA1358-Y	MG (G) H BUFFER			
Q802	2SC4689-RO	MG (G) H OUT			

[illegible]



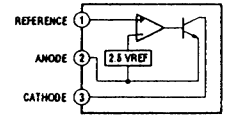
• EC (AQP/DQP (R.G.B) OUT) DIAGRAM





EC BOARD IC Block Diagrams

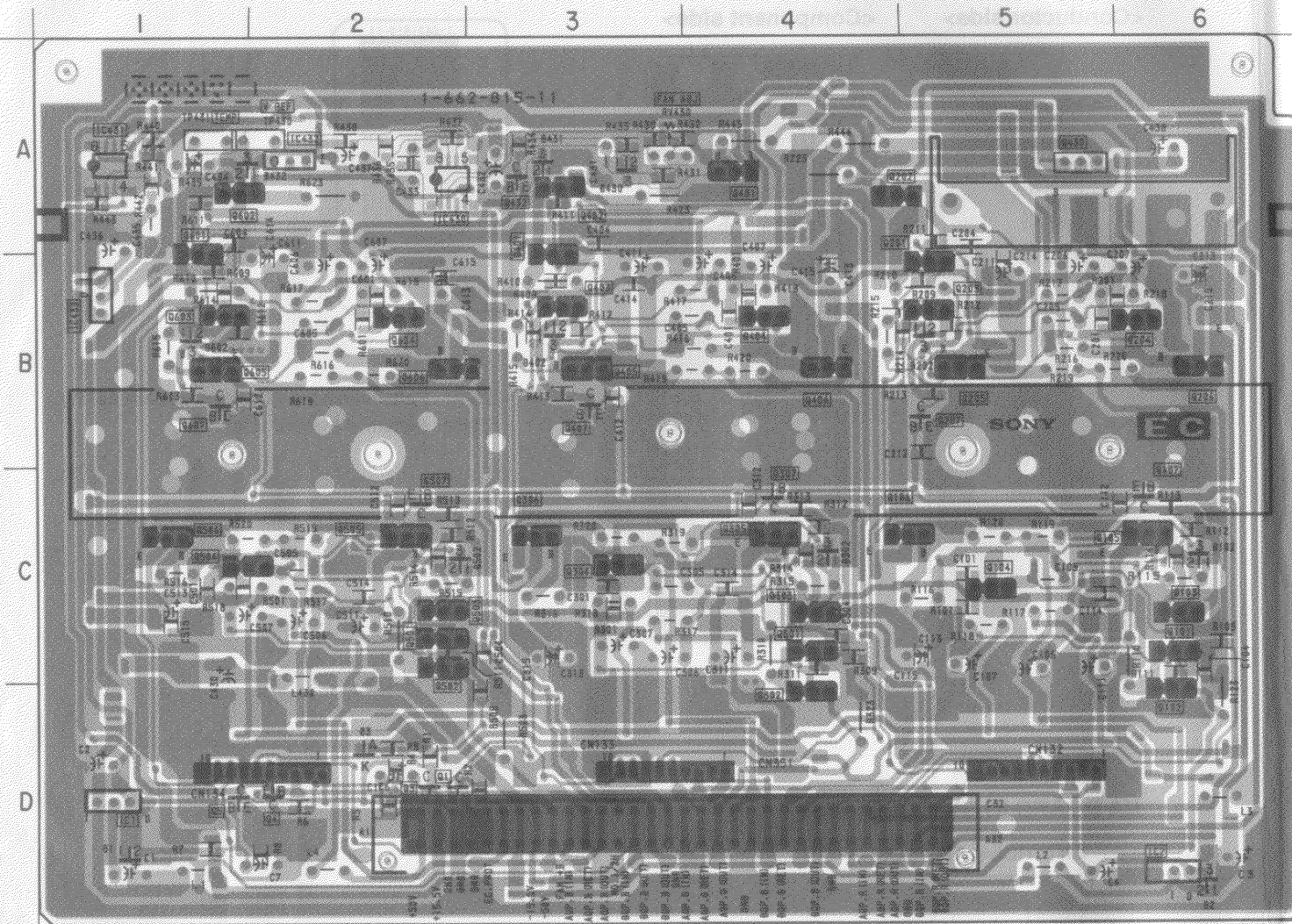
TL431CLP (IC432)



EC

(AQP/DQP (R.G.B) OUT) BOARD

— EC BOARD — <Conductor side>

**EC BOARD**

Semiconductors Location

DIODE		Q201	B-5	Q607	B-1
		Q202	A-3	VARIABLE RESISTOR	
D1	D-1	Q203	B-5		
D2	D-6	Q204	B-6	RV430	A-3
D3	D-2	Q205	B-5		
D102	C-6	Q206	B-6	TEST POINT	
D202	B-5	Q207	B-5		
D302	C-4	Q301	C-4	TP430	A-2
D402	B-3	Q302	D-4		
D430	A-3	Q303	C-4	TP431	A-1
D431	A-3	Q304	C-3		
D432	A-1	Q305	C-4		
		Q306	C-3		
D502	C-2	Q307	C-4		
D602	B-1	Q401	A-3		
IC		Q402	A-3		
		Q403	B-3		
		Q404	B-4		
		Q405	B-3		
		Q406	B-4		
IC1	D-1	Q407	B-3		
IC2	D-6	Q430	A-5		
IC430	A-2	Q431	A-3		
IC431	A-1	Q432	A-3		
IC432	A-2	Q501	C-2		
IC433	B-1	Q502	C-2		
TRANSISTOR		Q503	C-2		
		Q504	C-1		
		Q505	C-2		
		Q506	C-1		
		Q507	C-2		
		Q601	A-1		
		Q602	A-1		
		Q603	B-1		
		Q604	B-2		
		Q605	B-1		
		Q606	B-2		

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

EC BOARD

Function of Semiconductor

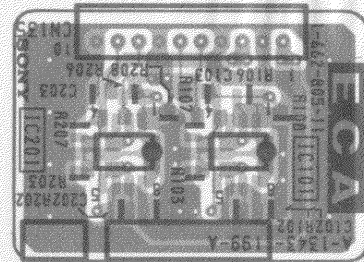
D1	1S2837	DISCHARGE	Q1	2SC2712-YG	EC PROTECTOR
D2	1S2837	DISCHARGE	Q3	2SC2712-YG	EC PROTECTOR
D3	RD5.1M-B2	LEVEL SHIFT	Q4	DTA144EKA	ON MUTE
D102	1S2837	LEVEL SHIFT	Q5	2SC2712-YG	EC PROTECTOR
D202	1S2837	LEVEL SHIFT	Q101	2SA1358-Y	R AMP
D302	1S2837	LEVEL SHIFT	Q102	2SA1358-Y	R AMP
D402	1S2837	LEVEL SHIFT	Q103	2SA1358-Y	R AMP
D430	1S2837	PROTECTOR	Q104	2SC3421-Y	R AMP
D431	1S2837	DISCHARGE	Q105	2SD1459	A QP (R) OUT
D432	1S2837	PROTECTOR	Q106	2SB1037-R	A QP (R) OUT
D502	1S2837	LEVEL SHIFT	Q107	DTC144EKA	ON MUTE
D602	1S2837	LEVEL SHIFT	Q201	2SA1358-Y	R AMP
			Q202	2SA1358-Y	R AMP
			Q203	2SA1358-Y	R AMP
			Q204	2SC3421-Y	R AMP
			Q205	2SD1459	DQP (R) OUT
			Q206	2SB1037-R	DQP (R) OUT
			Q207	DTC144EKA	ON MUTE
			Q301	2SA1358-Y	G AMP
			Q302	2SA1358-Y	G AMP
IC1	NJM7812FA	+12V REG			
IC2	NJM7912FA	-12V REG			
IC430	uPC4558GS	AMP			
IC431	uPC4558GS	AMP			
IC432	TL431CLP	REF			
IC433	LM35DZ	THERM SENSOR			

Q303	2SA1358-Y	G AMP	Q506	2SB1037-R	AQP (B) OUT
Q304	2SC3421-Y	G AMP	Q507	DTC144EKA	ON MUTE
Q305	2SD1459	AQP (G) OUT	Q601	2SA1358-Y	B AMP
Q306	2SB1037-R	AQP (G) OUT	Q602	2SA1358-Y	B AMP
Q307	DTC144EKA	ON MUTE	Q603	2SA1358-Y	B AMP
Q401	2SA1358-Y	G AMP	Q604	2SC3421-Y	B AMP
Q402	2SA1358-Y	G AMP	Q605	2SD1459	DQP (B) OUT
Q403	2SA1358-Y	G AMP	Q606	2SB1037-R	DQP (B) OUT
Q404	2SC3421-Y	G AMP	Q607	DTC144EKA	ON MUTE
Q405	2SD1459	DQP (G) OUT			
Q406	2SB1037-R	DQP (G) OUT			
Q407	DTC144EKA	ON MUTE			
Q430	2SB1566E	FAN +B OUT			
Q431	2SD774-T-34	BUFFER			
Q432	DTC144EKA	ON RESET			
Q501	2SA1358-Y	B AMP			
Q502	2SA1358-Y	B AMP			
Q503	2SA1358-Y	B AMP			
Q504	2SC3421-Y	B AMP			
Q505	2SD1459	AQP (B) OUT			

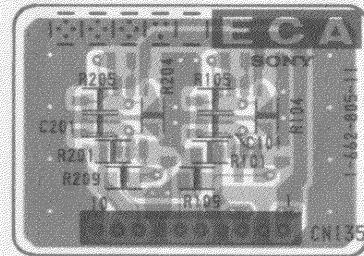
ECA

(R.G.B) (AQP/DQP AMP) BOARD

— ECA BOARD — <Conductor side>



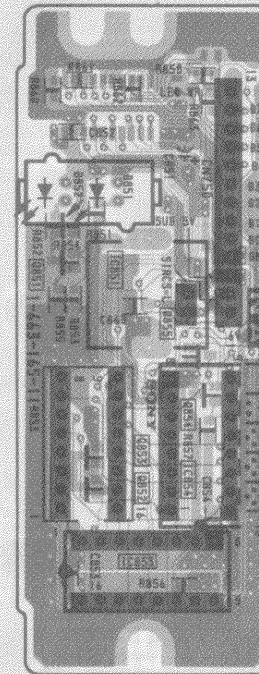
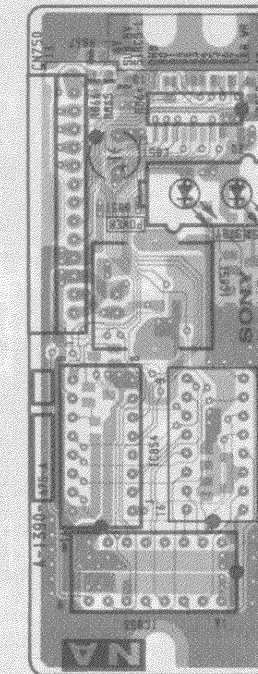
— ECA BOARD — <Component side>



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

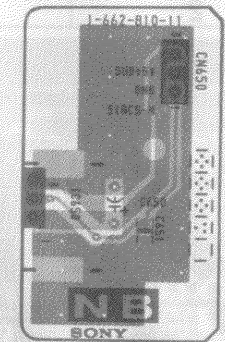
NA

(INDEX COUNTER, SIRCS RECEIVER) BOARD

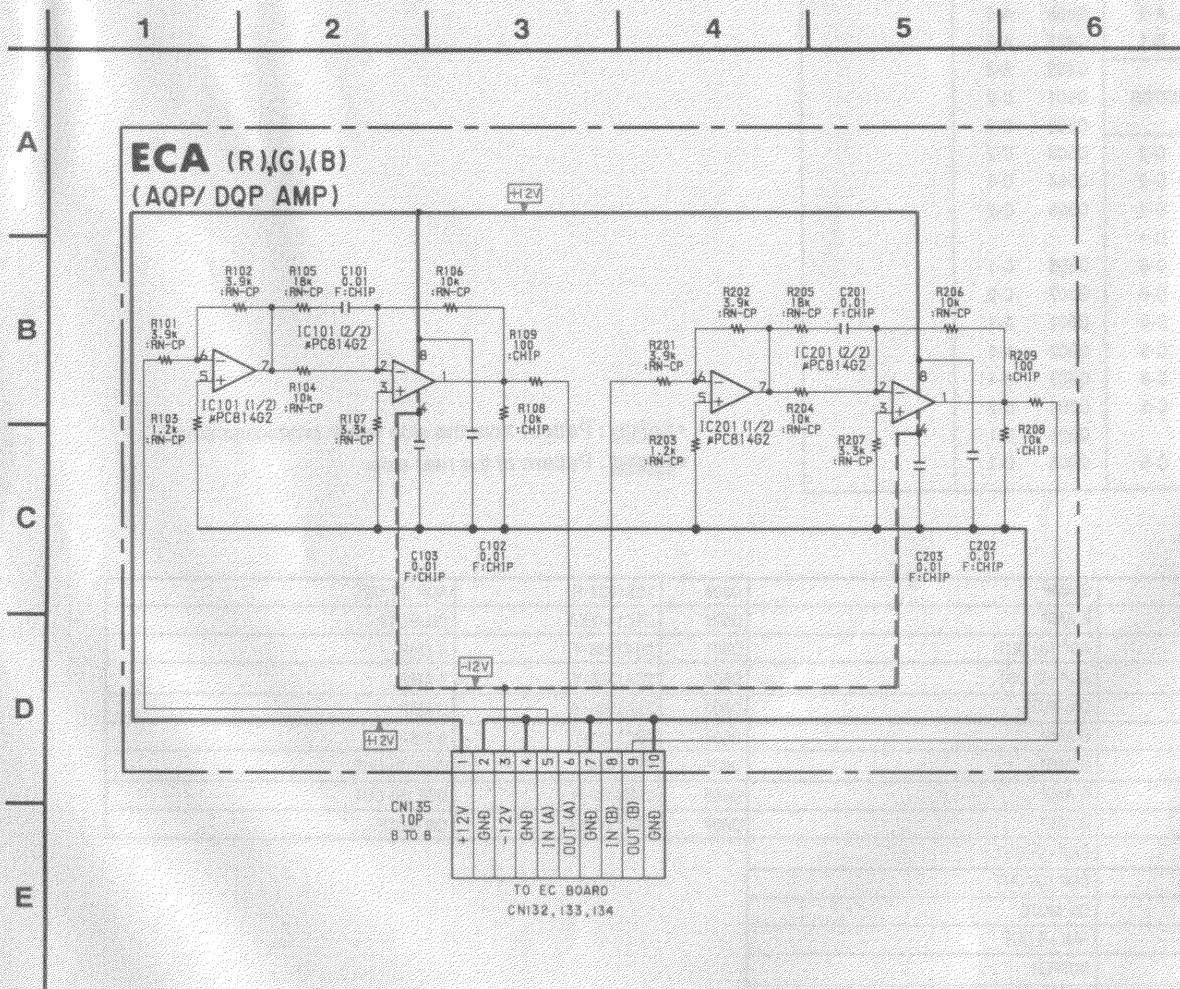
— NA BOARD —
<Conductor side>

— NA BOARD —
<Component side>

NB

(REMOTE SENSOR) BOARD

— NB BOARD — <Conductor side>

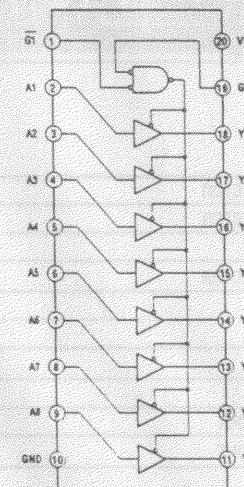


- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

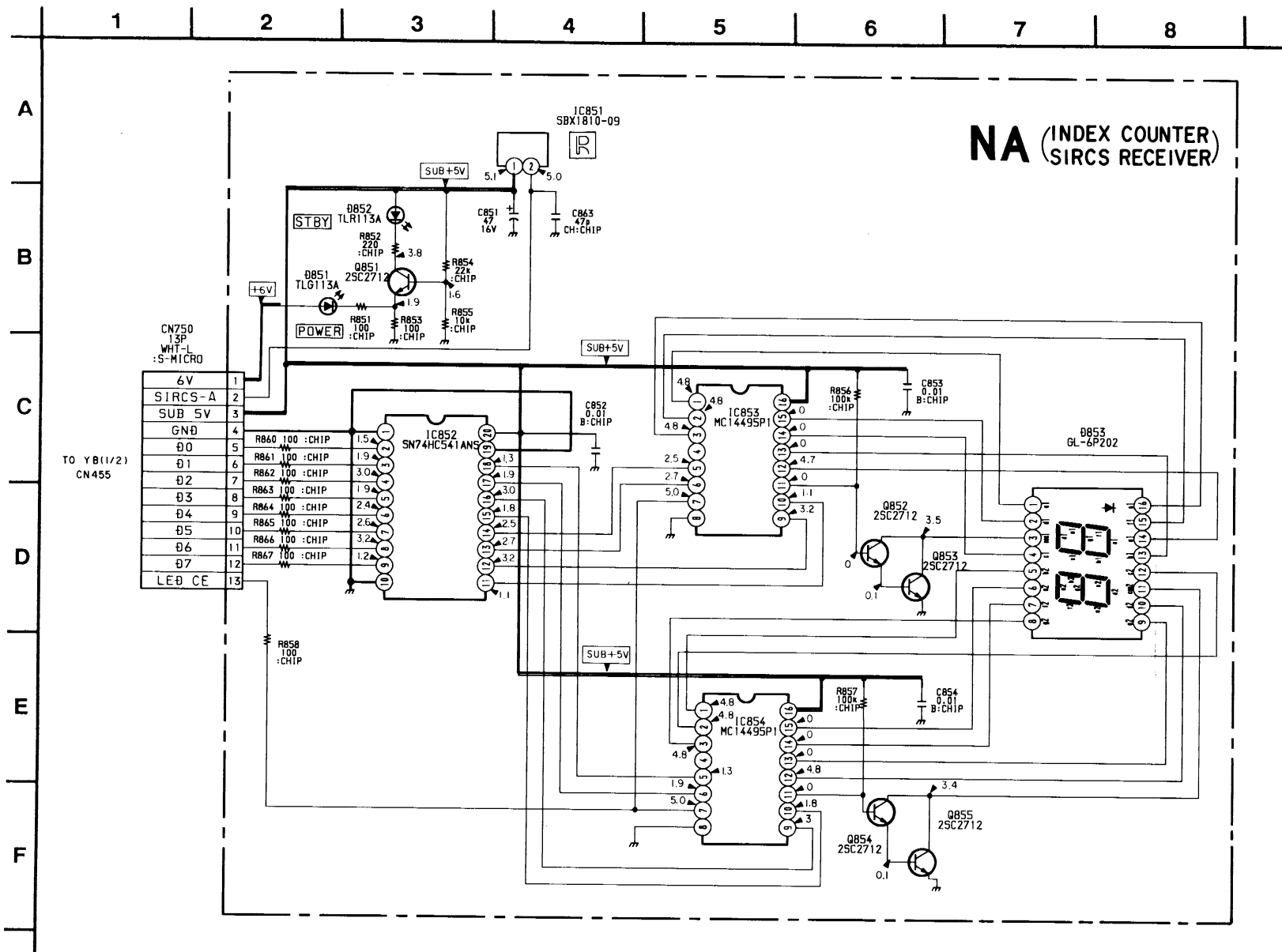

ECA BOARD

Function of Semiconductor

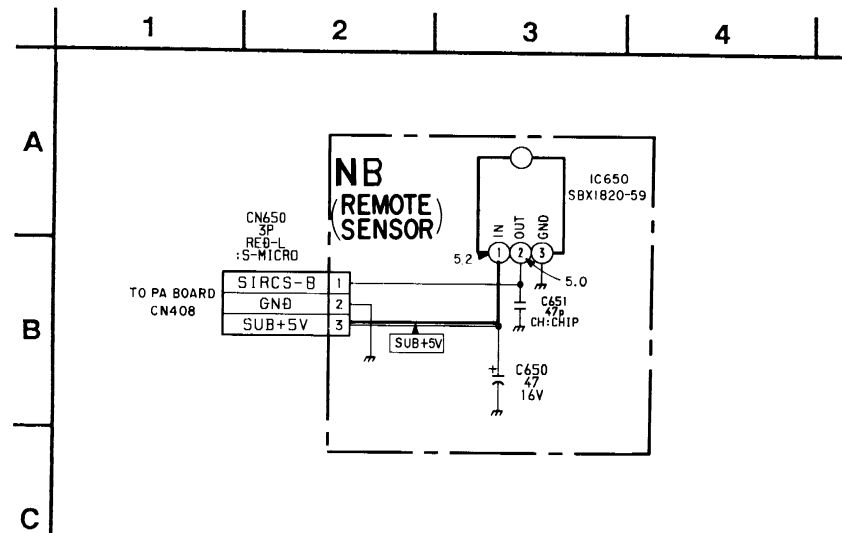
IC101	uPC814G2-T1	AMP
IC201	uPC814G2-T1	AMP

NA BOARD IC Block Diagrams
SN74HC541ANS (IC852)


• NA (INDEX COUNTER, SIRCS RECEIVER) DIAGRAM



• NB (REMOTE SENSOR) DIAGRAM



NA BOARD

Function of Semiconductor

D851	TLG113A	POWER LED
D852	TLR113A	STANDBY LED
D853	GL-6P202	ERROR DISPLAY
IC851	SBX1810-09	SIRCS RECEIVER
IC852	SN74HC541ANS-E20	BUFFER
IC853	MC14495P1	LED DRIVER
IC854	MC14495P1	LED DRIVER
Q851	2SC2712-YG	LED DRIVER
Q852	2SC2712-YG	LED DRIVER
Q853	2SC2712-YG	LED DRIVER
Q854	2SC2712-YG	LED DRIVER
Q855	2SC2712-YG	LED DRIVER

NB BOARD

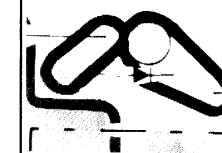
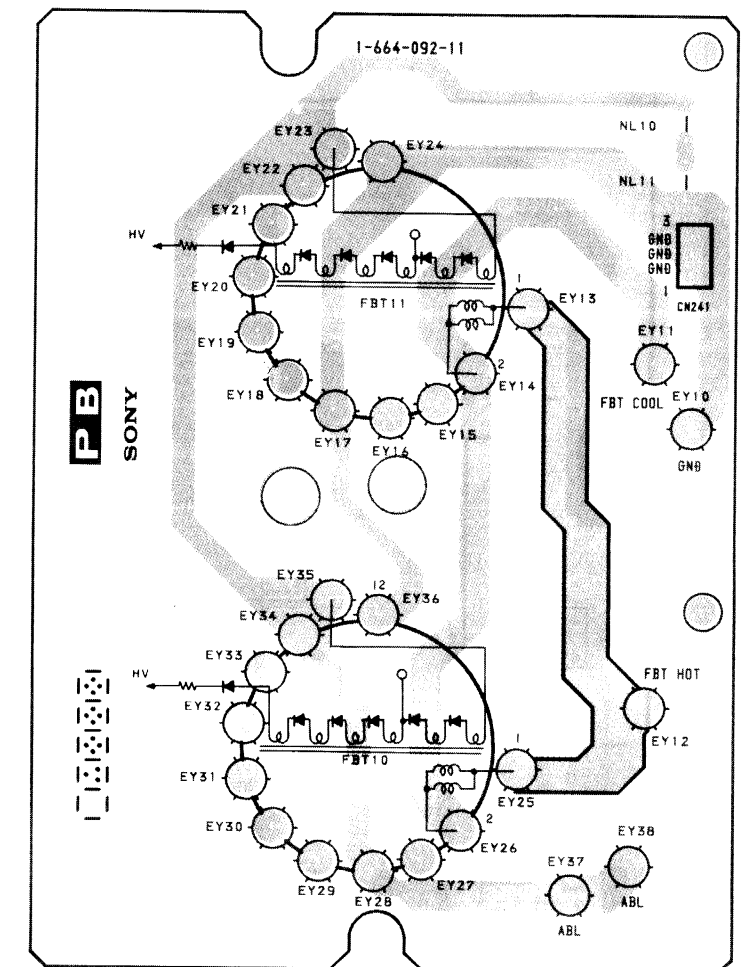
Function of Semiconductor

IC650	SBX1820-59	SIRCS RECEIVER
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PB

(F.B.T, HV BLOCK) BOARD

— PB BOARD — <Conductor side>

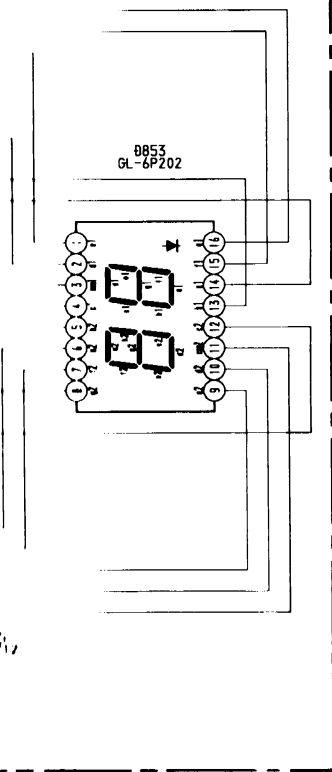


NOTE:

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.

7 8

NA (INDEX COUNTER) SIRCS RECEIVER

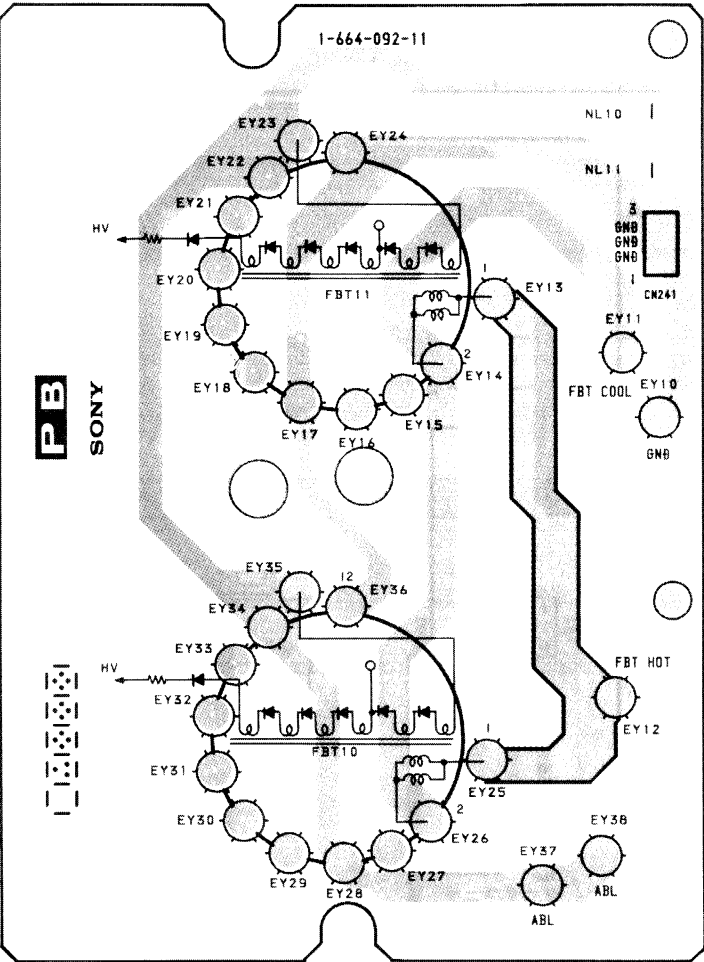


POWER LED
STANDBY LED
ERROR DISPLAY
SIRCS RECEIVER
BUFFER
LED DRIVER
LED DRIVER
LED DRIVER
LED DRIVER
LED DRIVER
LED DRIVER

SIRCS RECEIVER

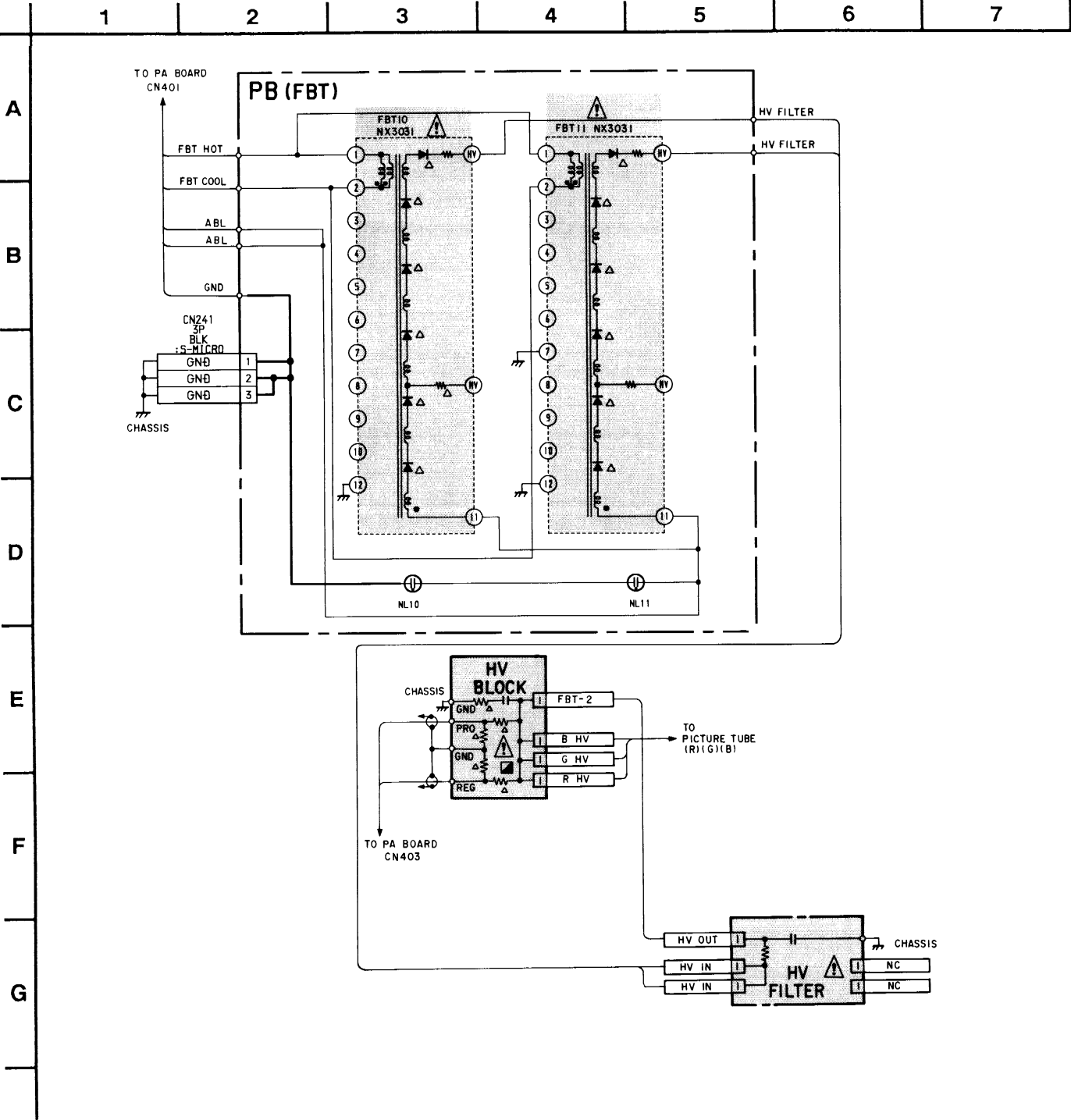
PB (F.B.T, HV BLOCK) BOARD

— PB BOARD — <Conductor side>



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, HV BLOCK) 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 trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Schematic Diagram

← **NA** **NB** board

PA

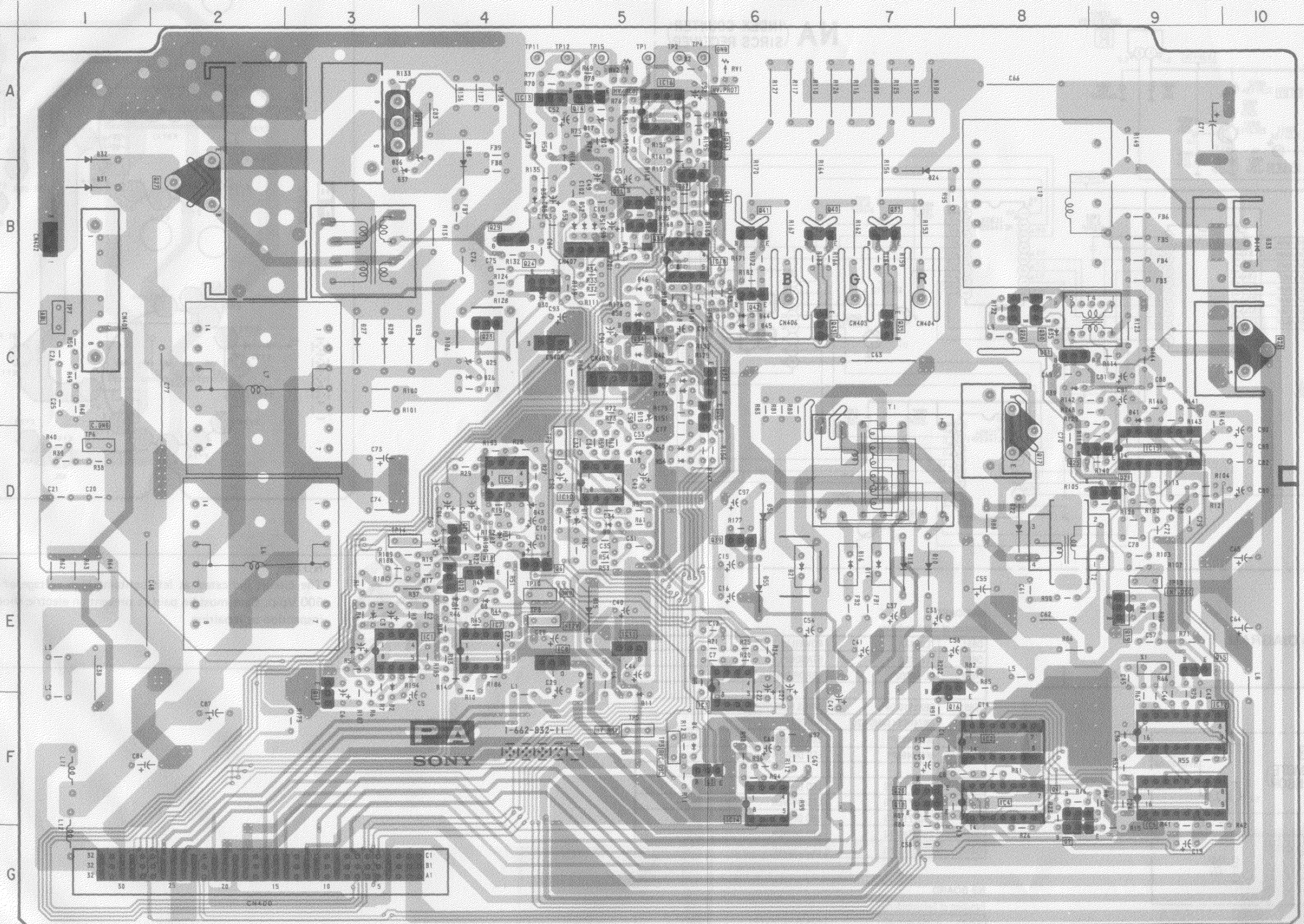
(HIGH VOLTAGE GENERATOR) BOARD

— PA BOARD — <Conductor side>

PA BOARD

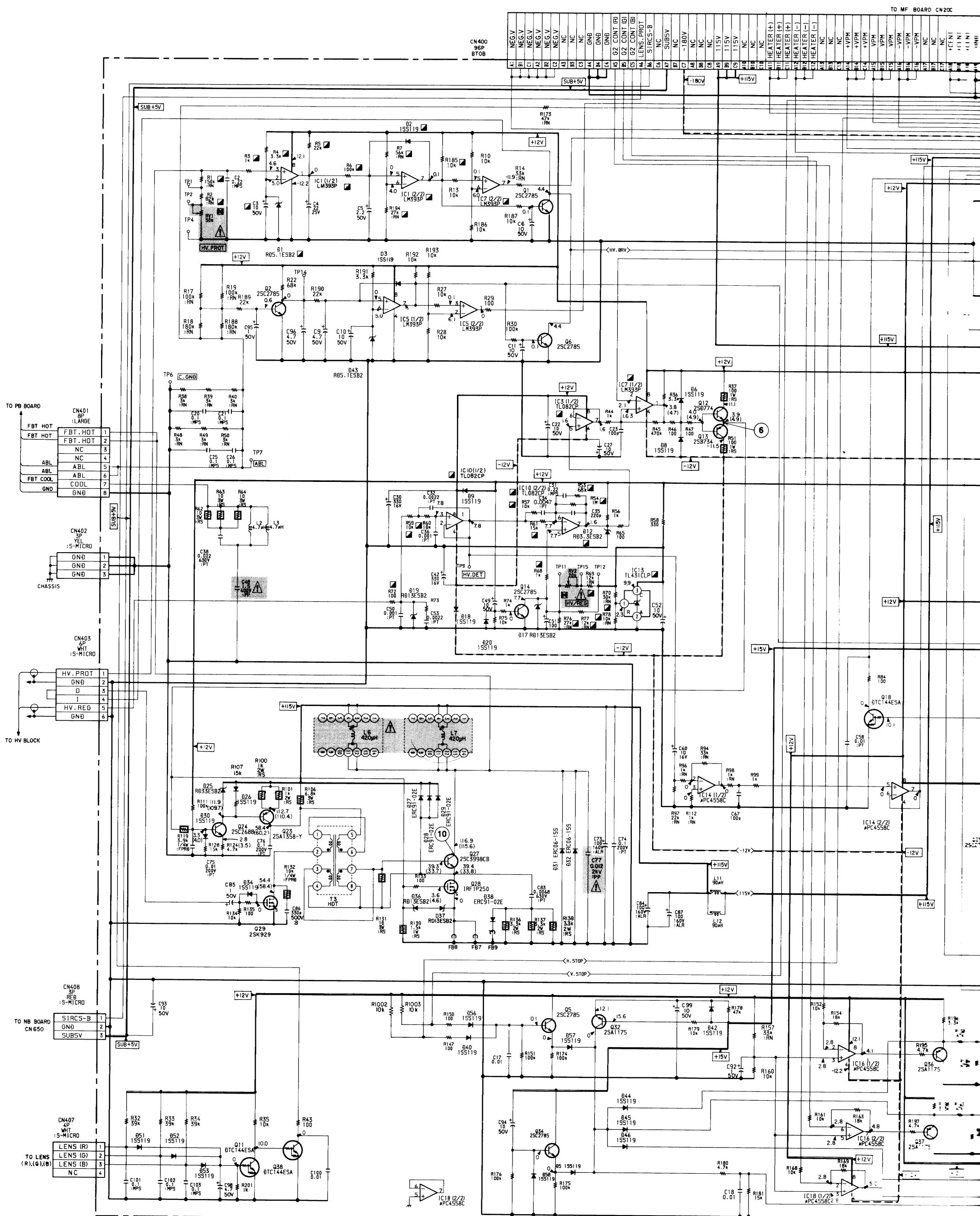
Semiconductors Location


DIODE		IC		Q40	B-6
				Q41	B-6
				Q42	B-6
D1	E-3	IC1	E-3	Q43	C-6
D2	E-3	IC2	F-8		
D3	D-4	IC3	E-6	Q44	B-6
D4	F-6	IC4	F-8		
D5	C-5	IC5	D-4	VARIABLE RESISTOR	
D6	E-4	IC7	E-4		
D7	E-5	IC8	F-4		
D8	E-4	IC9	F-9	RV1	A-6
D9	D-5	IC10	D-5	RV2	A-5
D10	E-7	IC11	E-5	TEST POINT	
D11	F-5	IC12	F-9		
D12	D-5	IC13	A-4	TP1	A-5
D13	E-7	IC14	F-6	TP2	A-5
D14	E-7	IC15	D-9	TP3	F-5
D15	E-5	IC16	A-5	TP4	A-6
D16	E-7	IC18	B-5	TP5	F-5
D17	A-5	TRANSISTOR		TP6	D-1
D18	D-5			TP7	C-1
D19	C-5			TP8	E-4
D20	A-5			TP9	D-5
		Q1	F-3	TP10	E-4
		Q2	D-4		
D21	E-6	Q3	F-6		
D22	D-8	Q4	F-8	TP11	A-4
D24	B-7	Q5	C-6	TP12	A-5
D25	C-4	Q6	E-4	TP13	E-9
D26	C-4	Q7	G-8	TP14	D-3
D27	C-3	Q11	B-5	TP15	A-5
D28	C-3	Q12	E-4		
D29	C-3	Q13	E-4		
D30	C-4				
D31	B-1	Q14	A-5		
		Q15	E-9		
D32	A-1	Q16	E-7		
D33	B-10	Q17	D-8		
D34	B-4	Q18	F-7		
D35	C-8	Q19	E-9		
D36	A-4	Q20	F-7		
D37	B-3	Q21	D-9		
D38	A-4	Q22	C-10		
D39	C-8	Q23	C-4		
D40	D-5				
D41	C-9	Q24	B-4		
		Q25	D-9		
D42	C-5	Q26	C-8		
D43	D-4	Q27	B-2		
D44	C-6	Q28	A-3		
D45	C-6	Q29	B-4		
D46	B-5	Q30	C-8		
D51	B-5	Q31	C-8		
D52	B-5	Q32	C-6		
D53	B-5	Q33	B-7		
D54	D-6				
D55	E-6	Q34	C-5		
		Q35	C-7		
D56	D-5	Q36	A-6		
D57	C-5	Q37	B-6		
D58	C-5	Q38	B-5		
		Q39	D-6		



- PA (HIGH VOLTAGE GENERATOR) DIAGRAM
- Refer to page 4-201 for Waveforms
- Refer to page 4-202 for Function of Semiconductor
- Refer to page 4-201 for IC Block Diagram

The components identified in this diagram have been carefully selected in order to satisfy regulatory requirements. Should replacement be necessary, the original components should be used. (Refer to page 3-20)



• The components identified by  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 3-20.)

Note:
The components identified by shading are critical for safety. Replace only with specified.

