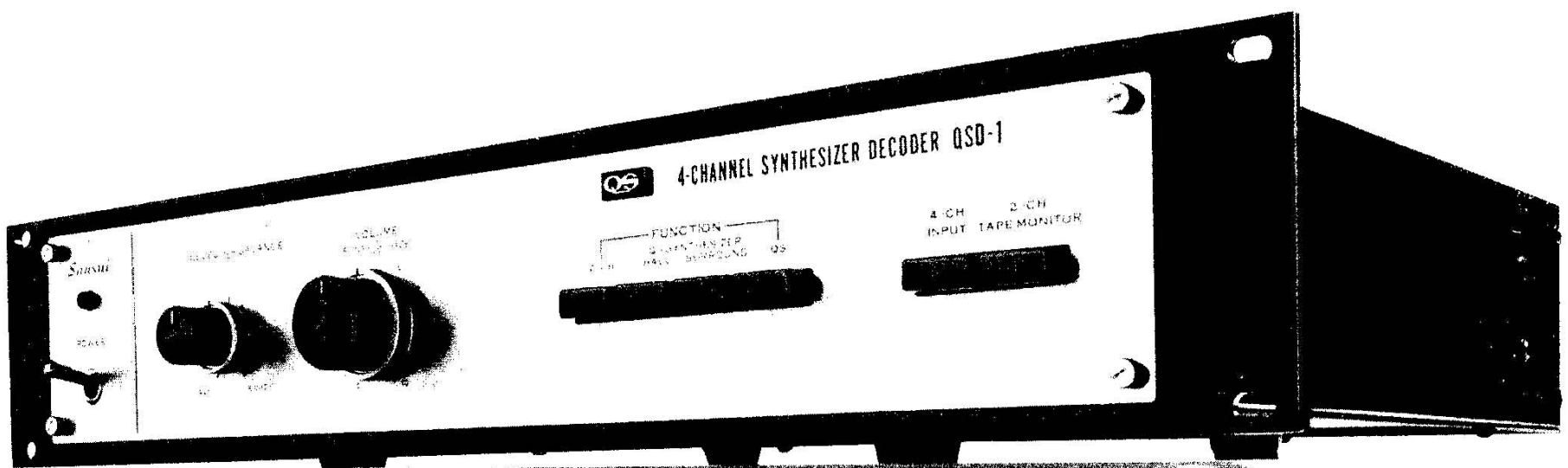


# SERVICE MANUAL

4-CHANNEL SYNTHESIZER DECODER

## SANSUI QSD-1



*Sansui*

SAKURA ELECTRIC CO., LTD.

# 1. SPECIFICATIONS

## 4-CHANNEL DECODER SECTION

TYPE ..... QS Decoder/QS Synthesizer  
 (QS vario-matrix circuit built in)

## SEPARATION

ADJACENT CHANNELS .... 20dB  
 DIAGONAL CHANNELS .. 30dB  
 TOTAL HARMONIC DISTORTION (1,000Hz)  
 ..... less than 0.1%

FREQUENCY RESPONSE .... 20 to 30,000Hz

## INPUT SENSITIVITY

2-CHANNEL INPUT ..... 100mV  
 TAPE MONITOR (2-CH) .. 100mV  
 4-CHANNEL INPUT ..... 140mV  
 Max. input capability (Level set at MIN THD 0.5%)  
 ..... 25V

## OUTPUT VOLTAGE

4-CHANNEL OUTPUT .... 300mV  
 NOISE LEVEL (Level Control at MAX.)  
 ..... less than 250µV

## GENERAL

POWER REQUIREMENTS .... 100V, 120V, 220V, 240V  
 50/60Hz

POWER CONSUMPTION .... 10W

## SEMICONDUCTORS

TRANSISTORS ..... 35  
 DIODES ..... 16  
 L.E.D ..... 1  
 ZENER DIODE ..... 1  
 ICs ..... 12

\* Design and specifications are subject to change for possible improvements.

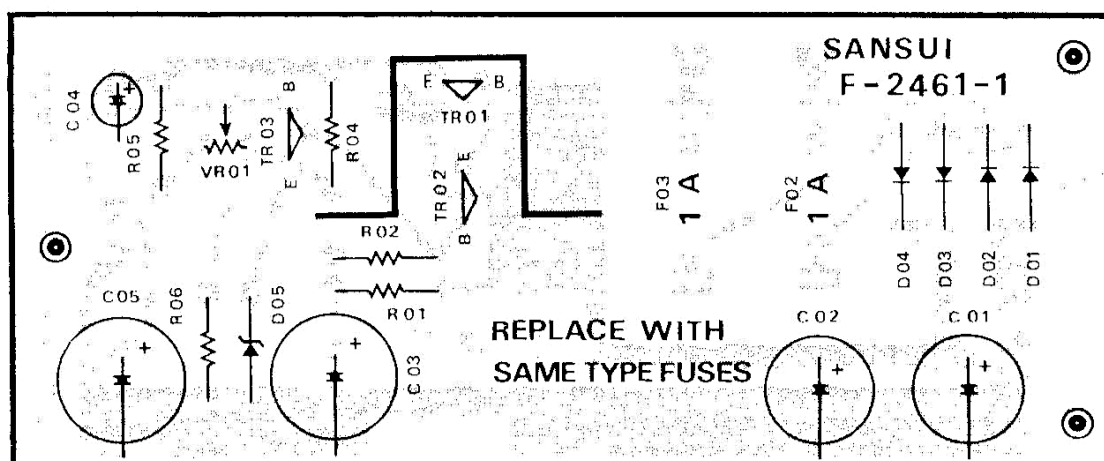
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## 2. PARTS LOCATIONS AND PARTS LIST

### 2-1. F-2461 Power Circuit Board (Stock No. 7501020 Complete Circuit Board F-2461)

Conductor Side



- Abbreviations:**
- C.R. : Carbon Resistor
  - S.R. : Solid Resistor
  - Ce.R. : Cement Resistor
  - M.R. : Metallized Film Resistor
  - M.C. : Mylar Capacitor
  - E.C. : Electrolytic Capacitor
  - BP.E.C.: Bi-Polar Electrolytic Capacitor
  - C.C. : Ceramic capacitor
  - Mi.C. : Mica Capacitor
  - O.C. : Oil Capacitor
  - P.C. : Polystyrene Capacitor
  - T.C. : Tantalum Capacitor

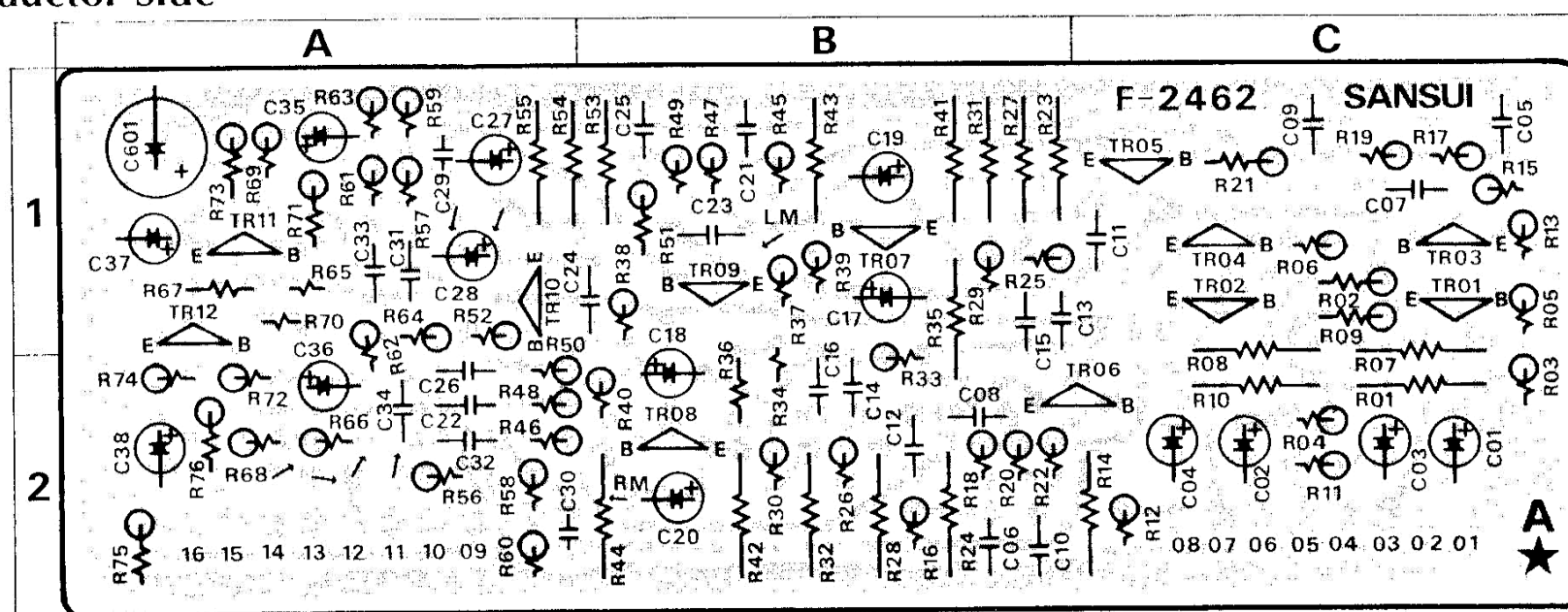
### Parts List

Parts No.	Stock No.	Description	Parts No.	Stock No.	Description	Parts No.	Stock No.	Description
TR01	0308392	2SD313E	C01	0515471	470 $\mu$ F	R05	0107183	18k $\Omega$
TR02	0305731	2SC711E	C02	0515471	470 $\mu$ F	R06	0107562	5.6k $\Omega$
TR03	0305731	2SC711E	C03	0515221	220 $\mu$ F			
		Transistor	C04	0513100	10 $\mu$ F	F02,03	0439620	1A 20mm AC Fuse
D01	0310340		10D-1	C05	0515101	100 $\mu$ F		
D02	0310340		10D-1					
D03	0310340	10D-1				VR601	1035310	1k $\Omega$ B Volume
D04	0310340	10D-1	R01	0107103	10k $\Omega$		2310150	P Type Fuse Holder
D05	0315530	RD-6A(K)	R02	0107472	4.7k $\Omega$			
		Zener Diode	R04	0107562	5.6k $\Omega$			

Japanese Model only

### 2-2. F-2462 Filter Circuit Board (Stock No. 7650320 Complete Circuit Board F-2462)

Conductor Side



### Parts List

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	
TR01,02	0306091	2SC1312G	1C	C35,36	0514339	3.3 $\mu$ F 35V E.C.	1A.2A	R37,38	0113225	2.2M $\Omega$	1 $\frac{1}{2}$ W S.R.	
TR03,04	0306091	2SC1312G	1C	C37,38	0515109	1 $\mu$ F 50V E.C.	1A.2A	R39,40	0106102	1k $\Omega$	1B.2B	
TR05,06	0306091	2SC1312G	1C.2B,C					R41,42	0107682	6.8k $\Omega$	1B.2B	
TR07,08	0306091	2SC1312G	1B.2B	R01	0107224	220k $\Omega$	2C	R43,44	0107104	100k $\Omega$	1B.2B	
TR09,10	0306091	2SC1312G	1B.1A	R02	0106224	220k $\Omega$	1C	R45,46	0106153	15k $\Omega$	1B.2A	
TR11,12	0306091	2SC1312G	1A	R03,04	0106104	100k $\Omega$	2C	R47,48	0106153	15k $\Omega$	1B.2A	
		Transistor		R05,06	0106152	1.5k $\Omega$	1C	R49,50	0106153	15k $\Omega$	1B.2A	
C01,02	0514339		3.3 $\mu$ F	2C	R07,08	0107682	6.8k $\Omega$	2C	R51,52	0106102	1k $\Omega$	1B.1A
C03,04	0514339		3.3 $\mu$ F	2C	R09	0106682	6.8k $\Omega$	1C	R53,54	0107682	6.8k $\Omega$	1B.1A
C05,06	0600396		0.0039 $\mu$ F	1C.2B	R10	0107682	6.8k $\Omega$	2C	R55	0107104	100k $\Omega$	1A
C07,08	0600187		0.0018 $\mu$ F	1C.2B	R11,12	0106104	100k $\Omega$	2C	R56	0106104	100k $\Omega$	2A
C09,10	0670621		620pf	1C.2B	R13	0106682	6.8k $\Omega$	1C	R57,58	0106102	1k $\Omega$	1A.2A
C11,12	0600187		0.018 $\mu$ F	1C.2B	R14	0107682	6.8k $\Omega$	2C	R59,60	0106103	10k $\Omega$	1A.2A
C13,14	0600187		0.018 $\mu$ F	1B.2B	R15,16	0106153	15k $\Omega$	1C.2B	R61,62	0106682	6.8k $\Omega$	1A.1.2A
C15,16	0600187		0.018 $\mu$ F	1B.2B	R17,18	0106153	15k $\Omega$	1C.2B	R63,64	0106683	68k $\Omega$	1A
C17,18	0514339		3.3 $\mu$ F	1B.2B	R19,20	0106153	15k $\Omega$	1C.2B	R65,66	0106391	390 $\Omega$	1A.2A
C19,20	0515109		1 $\mu$ F	1B.2B	R21,22	0106102	1k $\Omega$	1C.2B	R67,68	0106392	3.9k $\Omega$	1A.2A
C21,22	0600227		0.022 $\mu$ F	1B.2A	R23,24	0107682	6.8k $\Omega$	1B.2B	R69,70	0113225	2.2M $\Omega$	1 $\frac{1}{2}$ W S.R.
C23,24	0600687	0.068 $\mu$ F	1B	R25,26	0106102	1k $\Omega$	1B.2B	R71,72	0106102	1k $\Omega$	1A.2A	
C25,26	0600336	0.0033 $\mu$ F	1B.2A	R27,28	0107103	10k $\Omega$	1B.2B	R73,74	0106682	6.8k $\Omega$	1 $\frac{1}{2}$ W C.R.	
C27,28	0515109	1 $\mu$ F	1A	R29,30	0106682	6.8k $\Omega$	1B.2B	R75,76	0106104	100k $\Omega$	2A	
C29,30	0600336	0.0033 $\mu$ F	1A.2A	R31,32	0107683	68k $\Omega$	1B.2B					
C31,32	0600336	0.0033 $\mu$ F	1A.2A	R33,34	0106391	390 $\Omega$	2B					
C33,34	0600336	0.0033 $\mu$ F	1A.2A	R35,36	0107392	3.9k $\Omega$	1,2B.2B					

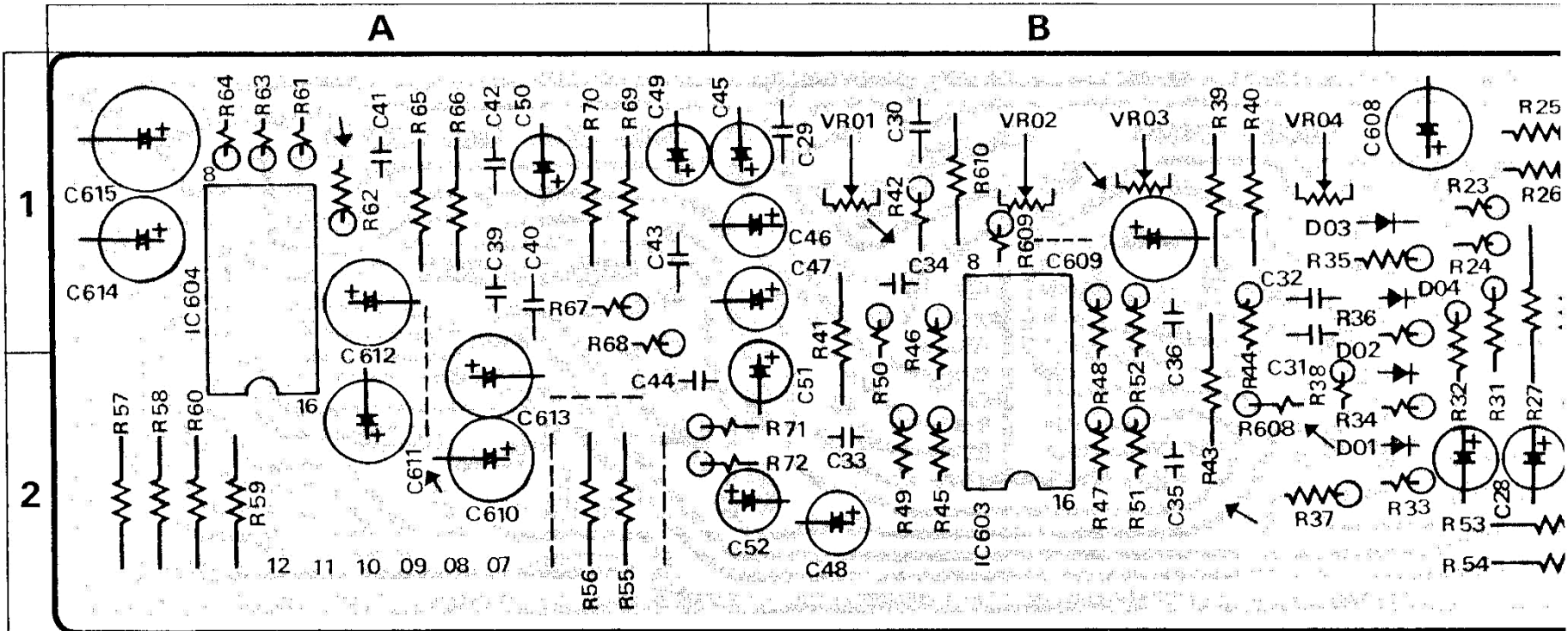


2-3. F-2463 QS Vario-Matrix Circuit Board (Low Band) (Stock No. 7650330)

2-4. F-2464 QS Vario-Matrix Circuit Board (Middle Band) (Stock No. 7650340)

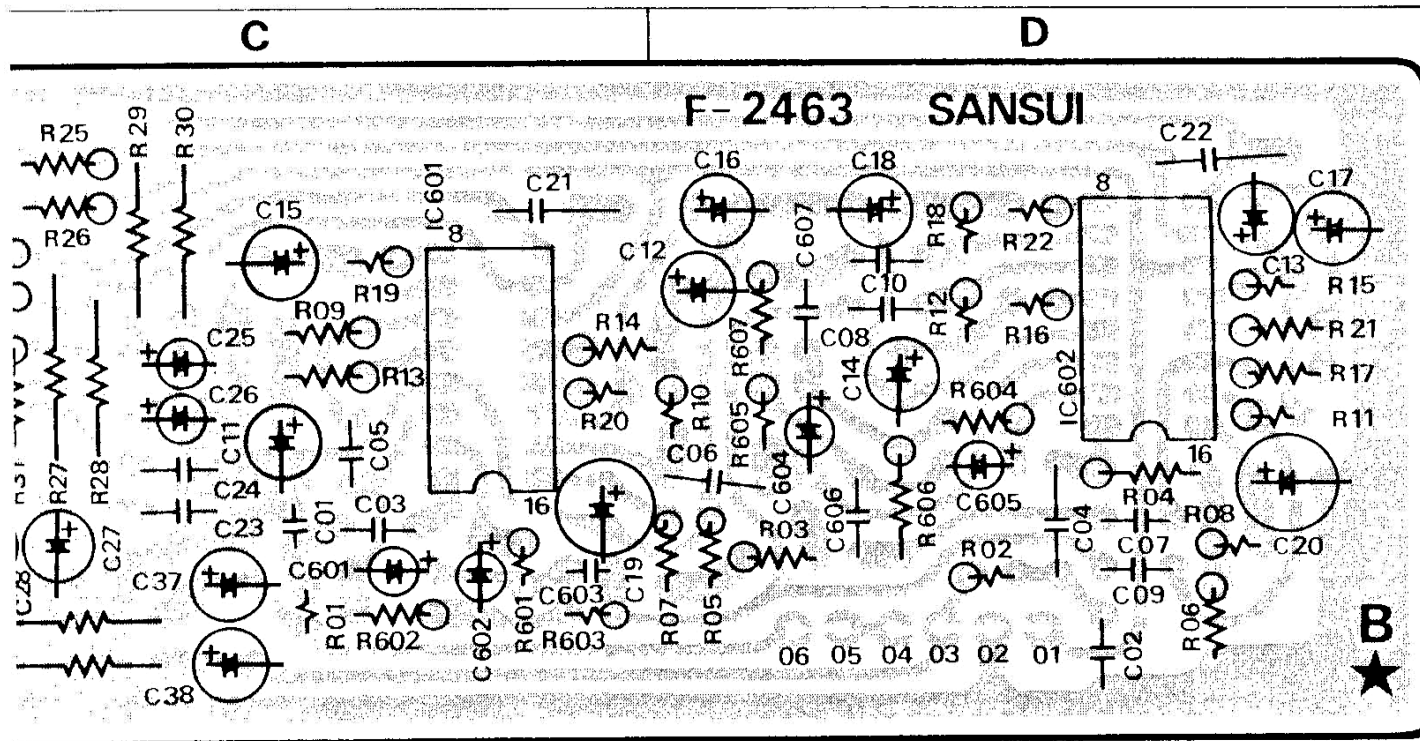
2-5. F-2465 QS Vario-Matrix Circuit Board (High Band) (Stock No. 7650350)

Conductor Side



**Common Parts List**

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	
IC601	0360090	HA-1327	1, 2 C	R04	0106684	680kΩ	2 D	R43	0107105	1MΩ	1/4 W C.R.	1, 2 B
IC602	0360090	HA-1327	1, 2 D	R05	0106394	390kΩ	2 D	R44	0106105	1MΩ	1, 2 B	
IC603	0360100	HD-3103P	1, 2 B	R06	0106394	390kΩ	2 D	R49	0106104	100kΩ	2 B	
IC604	0360210	HA-3128	1, 2 A	R07	0106684	680kΩ	2 D	R50	0106104	100kΩ	1/4 W C.R. (E.L.R.)	1, 2 B
D01	0311160	1S2473D	2 C	R08	0106684	680kΩ	2 D	R51	0106104	100kΩ	2 B	
D02	0311160	1S2473D	2 C	R09	0106274	270kΩ	1 C	R52	0106104	100kΩ	1, 2 B	
D03	0311160	1S2473D	1 B, C	R10	0106274	270kΩ	1, 2 D	R53	0107123	12kΩ	2 C	
D04	0311160	1S2473D	1 C	R11	0106274	270kΩ	1 D	R54	0107123	12kΩ	2 C	
C11	0513100	10μF	1, 2 C	R12	0106274	270kΩ	1 D	R55	0107273	27kΩ	1/4 W C.R.	2 A
C12	0513100	10μF	1 D	R13	0106124	120kΩ	1 C	R56	0107273	27kΩ	2 A	
C13	0513100	10μF	1 D	R14	0106124	120kΩ	1 C	R57	0107153	15kΩ	2 A	
C14	0513100	10μF	1, 2 D	R15	0106124	120kΩ	1/4 W C.R. (E.L.R.)	1 D	R58	0107153	15kΩ	2 A
C15	0513100	10μF	1 C	R16	0106124	120kΩ	1 D	R59	0106153	15kΩ	2 A	
C16	0513100	10μF	25V E.C.	R17	0106274	270kΩ	1 D	R60	0106153	15kΩ	1/4 W C.R. (E.L.R.)	2 A
C17	0513100	10μF	1 D	R18	0106274	270kΩ	1 D	R61	0106153	15kΩ	1 A	
C18	0513100	10μF	1 D	R19	0106394	390kΩ	1 C	R62	0106153	15kΩ	1 A	
C19	0513330	33μF	2 C	R20	0106394	390kΩ	1 C	R63	0107153	15kΩ	1 A	
C20	0513330	33μF	2 D	R21	0106124	120kΩ	1 D	R64	0107153	15kΩ	1/4 W C.R.	1 A
C33	0601226	0.0022μF	2 B	R22	0106124	120kΩ	1 D	R65	0107470	47kΩ	1 A	
C34	0601226	0.0022μF	1 B	R23	0106124	120kΩ	1 C	R66	0107470	47kΩ	1 A	
C35	0601226	0.0022μF	50V M.C.	R24	0106124	120kΩ	1 C	R67	0106470	47kΩ	1/4 W C.R. (E.L.R.)	1 A
C36	0601226	0.0022μF	2 B	R25	0106124	120kΩ	1 C	R68	0106470	47kΩ	1, 2 A	
C41	0601336	0.0033μF	1 A	R26	0106124	120kΩ	1 C	R601	0106472	4.7kΩ	2 C	
C42	0601336	0.0033μF	1 A	R27	0107563	56kΩ	1, 2 C	R602	0106472	4.7kΩ	2 C	
C43	0601336	0.0033μF	50V M.C.	R28	0107563	56kΩ	1, 2 C	R603	0106273	27kΩ	2 C	
C44	0601336	0.0033μF	1 A	R29	0107563	56kΩ	1/4 W C.R.	R604	0106472	4.7kΩ	1, 2 D	
C608	0513330	33μF	2 A, B	R30	0107563	56kΩ	1 C	R605	0106472	4.7kΩ	1/4 W C.R. (E.L.R.)	1, 2 D
C609	0513330	33μF	1 C	R33	0113225	2.2MΩ	2 C	R606	0106473	47kΩ	2 D	
C610	0511101	100μF	25V E.C.	R34	0113225	2.2MΩ	2 C	R607	0106473	47kΩ	1 D	
C611	0511101	100μF	10V E.C.	R35	0113155	1.5MΩ	1/4 W S.R.	R608	0106103	10kΩ	2 B	
C612	0512470	47μF	10V E.C.	R36	0113155	1.5MΩ	1 C	R609	0106272	27kΩ	1 B	
C613	0511470	47μF	2 A	R37	0106474	470kΩ	1/4 W C.R. (E.L.R.)	R610	0107472	4.7kΩ	1/4 W C.R.	1 B
C614	0511470	47μF	1 A	R38	0106474	470kΩ	1/4 W C.R. (E.L.R.)	VR01	1035490	1MΩ(B)	1 B	
R01	0106333	33kΩ	2 C	R39	0107334	330kΩ	1 B	VR02	1035490	1MΩ(B)	Semi-Variabile Resistor	1 B
R02	0106333	33kΩ	1/4 W C.R. (E.L.R.)	R40	0107334	330kΩ	1/4 W C.R.	VR03	1035490	1MΩ(B)	1 B	
R03	0106684	680kΩ	2 D	R41	0107105	1MΩ	1, 2 B	VR04	1035490	1MΩ(B)	1 B	
				R42	0106105	1MΩ	1/4 W C.R. (E.L.R.)		2420290		Connect Pin Housing	



- Abbreviations**
- C.R. : Carbon Resistor
  - S.R. : Solid Resistor
  - Ce.R. : Cement Resistor
  - M.R. : Metallized Film Resistor
  - M.C. : Mylar Capacitor
  - E.C. : Electrolytic Capacitor
  - BP.E.C. : Bi-Polar Electrolytic Capacitor
  - C.C. : Ceramic capacitor
  - Mi.C. : Mica Capacitor
  - O.C. : Oil Capacitor
  - P.C. : Polystyrene Capacitor
  - T.C. : Tantalum Capacitor

**Other Parts List**

**F-2463**

Parts No.	Stock No.	Description	Position
C01	0600826	0.0082µF	2C
C02	0600826	0.0082µF	2D
C03	0600126	0.0012µF	2C
C04	0600126	0.0012µF	2D
C05	0600126	0.0012µF	2C
C06	0600126	0.0012µF	50V M.C.
C07	0600126	0.0012µF	2D
C08	0600126	0.0012µF	1D
C09	0600126	0.0012µF	2D
C10	0600126	0.0012µF	1D
C21	0601188	0.18µF	1C
C22	0601338	0.33µF	1D
C23	0601227	0.022µF	50V M.C.
C24	0601227	0.022µF	2C
C25	0573228	0.22µF	35V T.C.
C26	0573228	0.22µF	1, 2C
C27	0515109	1µF	50V E.C.
C28	0515109	1µF	2C
C29	0601826	0.0082µF	1B
C30	0601826	0.0082µF	50V M.C.
C31	0601477	0.047µF	1B
C32	0601477	0.047µF	1B
C37	0513100	10µF	25V E.C.
C38	0513100	10µF	2C
C39	0660151	150pF	50V C.C.
C40	0660151	150pF	1A
C45	0519001	10µF	1B
C46	0519001	10µF	25V E.C. (BRN)
C47	0519001	10µF	1B
C48	0519001	10µF	2B
C601	0573338	0.33µF	35V T.C.
C602	0573338	0.33µF	2C
C603	0600686	0.0068µF	50V M.C.
C604	0573688	0.68µF	35V T.C.
C605	0573688	0.68µF	2D
C606	0600686	0.0068µF	50V M.C.
C607	0600686	0.0068µF	1D
C615	0515330	33µF	50V E.C.
R31	0106683	68kΩ	1/4W C.R. (E.L.R)
R32	0106683	68kΩ	1, 2C
R45	0106332	3.3kΩ	2B
R46	0106332	3.3kΩ	1/4W C.R. (E.L.R)
R47	0106332	3.3kΩ	2B
R48	0106332	3.3kΩ	1, 2B
R69	0107182	1.8kΩ	1/4W C.R.
R70	0107182	1.8kΩ	1A
R71	0106122	1.2kΩ	2A, B
R72	0106122	1.2kΩ	1/4W C.R. (E.L.R)

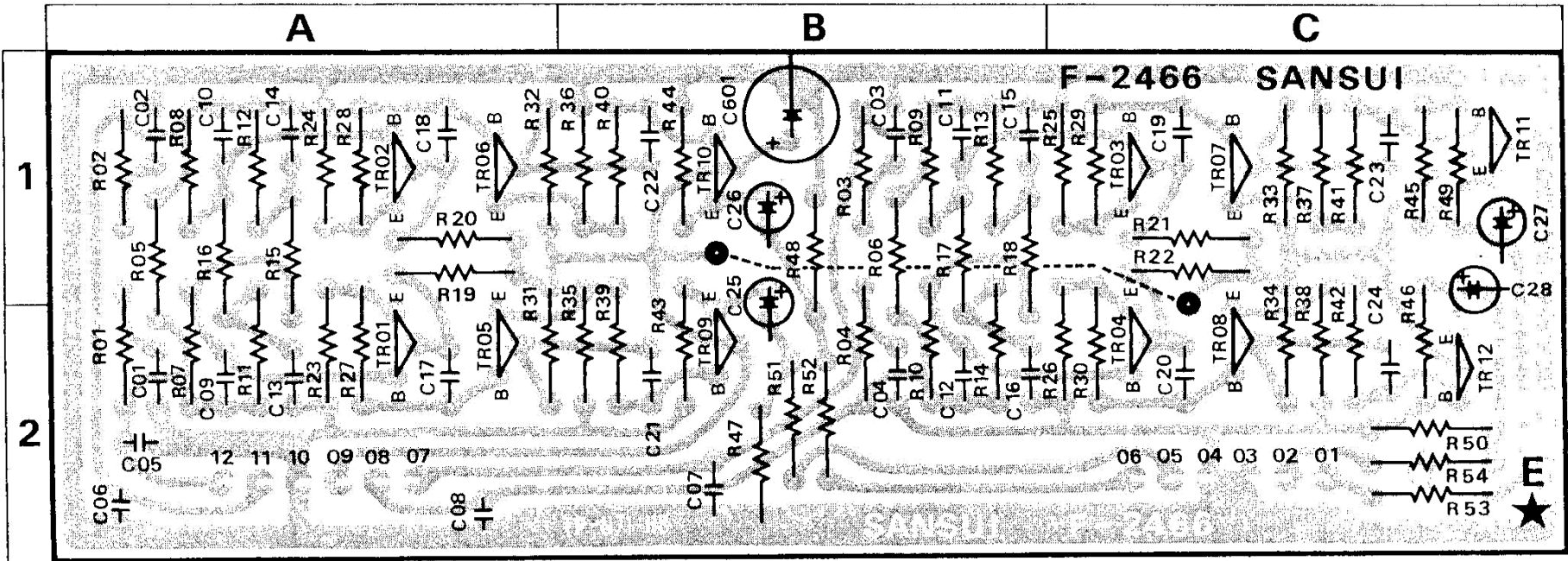
**F-2464**

Parts No.	Stock No.	Description	Position
C01	0600156	0.0015µF	50V M.C.
C02	0600156	0.0015µF	2D
C03	0620561	560pF	50V P.C.
C04	0620561	560pF	2D
C05	0600186	0.0018µF	2C
C06	0600186	0.0018µF	2D
C07	0600186	0.0018µF	2D
C08	0600186	0.0018µF	1D
C09	0600186	0.0018µF	2D
C10	0600186	0.0018µF	1D
C21	0601827	0.028µF	50V M.C.
C22	0601128	0.12µF	1D
C23	0601477	0.047µF	2C
C24	0601477	0.047µF	2C
C25	0601827	0.082µF	1C
C26	0601827	0.082µF	1, 2C
C29	0601476	0.0047µF	1B
C30	0601476	0.0047µF	1B
C31	0601107	0.01µF	50V M.C.
C32	0601107	0.01µF	1B
C37	0515479	4.9µF	50V E.C.
C38	0515479	4.9µF	2C
C39	0600106	0.001µF	50V M.C.
C40	0600106	0.001µF	1A
C45	0519106	4.7µF	1B
C46	0519106	4.7µF	50V E.C. (BRN)
C47	0519106	4.7µF	1B
C48	0519106	4.7µF	2B
C601	0600477	0.047µF	2C
C602	0600477	0.047µF	2C
C603	0600106	0.001µF	50V M.C.
C604	0600108	0.1µF	1, 2D
C605	0600108	0.1µF	2D
C606	0600106	0.001µF	2D
C607	0600106	0.001µF	1D
R31	0106104	100kΩ	1, 2C
R32	0106104	100kΩ	1, 2C
R45	0106122	1.2kΩ	2B
R46	0106122	1.2kΩ	1/4W C.R. (E.L.R)
R47	0106122	1.2kΩ	2B
R48	0106122	1.2kΩ	1, 2B

**F-2465**

Parts No.	Stock No.	Description	Position
C01	0600476	0.0047µF	50V M.C.
C02	0600476	0.0047µF	2D
C03	0620241	240pF	2C
C04	0620241	240pF	2D
C05	0620681	680pF	2C
C06	0620681	680pF	50V P.C.
C07	0620681	680pF	2D
C08	0620681	680pF	1D
C09	0620681	680pF	2D
C10	0620681	680pF	1D
C21	0601397	0.039µF	1C
C22	0601827	0.082µF	1D
C23	0601277	0.027µF	50V M.C.
C24	0601277	0.027µF	2C
C25	0601477	0.047µF	1C
C26	0601477	0.047µF	1, 2C
C27	0573338	0.33µF	35V T.C.
C28	0573338	0.33µF	2C
C29	0601276	0.0027µF	1B
C30	0601276	0.0027µF	50V M.C.
C31	0601566	0.0056µF	1B
C32	0601566	0.0056µF	1B
C37	0515339	3.3µF	50V E.C.
C38	0515339	3.3µF	2C
C39	0660101	100pF	50V C.C.
C40	0660101	100pF	1A
C45	0519102	3.3µF	1B
C46	0519102	3.3µF	50V E.C. (BRN)
C47	0519102	3.3µF	1B
C48	0519102	3.3µF	2B
C601	0600157	0.015µF	50V M.C.
C602	0600157	0.015µF	2C
C603	0620221	220pF	50V P.C.
C604	0600277	0.027µF	50V M.C.
C605	0600277	0.027µF	2D
C606	0620271	270pF	50V P.C.
C607	0620271	270pF	1D
R31	0106823	82kΩ	1, 2C
R32	0106823	82kΩ	1, 2C
R45	0106122	1.2kΩ	2B
R46	0106122	1.2kΩ	1/4W C.R. (E.L.R)
R47	0106122	1.2kΩ	2B
R48	0106122	1.2kΩ	1, 2B

**2-6. F-2466 Phase Shifter** (Stock No. 7650360 Complete Board F-2466)  
Conductor Side



**Parts List**

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position
TR01,02	0306091	2SC1312G	2 A. 1 A	C21,22	0600276	0.0027 $\mu$ F 50V M.C.	2 B. 1 B	R23,24	0107472	4.7k $\Omega$	1,2A. 1 A
TR03,04	0306091	2SC1312G	1 C. 2 C	C23,24	0620471	470pF 50V P.C.	1 C. 2 C	R25,26	0107472	4.7k $\Omega$	1 C. 1,2C
TR05,06	0306091	2SC1312G	2 A. 1 A	C25,26	0515109	1 $\mu$ F 50V E.C.	1.2B. 1 B	R27,28	0107333	33k $\Omega$	1,2A. 1 A
TR07,08	0306091	2SC1312G	1 C. 2 C	C27,28	0515109	1 $\mu$ F 50V E.C.	1 C. 1,2C	R29,30	0107333	33k $\Omega$	1 C. 1,2C
TR09,10	0306091	2SC1312G	2 B. 1 B	C601	0515330	33 $\mu$ F 50V E.C.	1 B	R31,32	0107472	4.7k $\Omega$	1,2 A. 1 A
TR11,12	0306091	2SC1312G	1 C. 2 C	R01,02	0107223	22k $\Omega$	1,2A. 1 A	R33,34	0107472	4.7k $\Omega$	1 C. 1,2C
C01,02	0600567	0.056 $\mu$ F } 50V M.C.	2 A. 1 A	R03,04	0107223	22k $\Omega$	1 B. 1, 2 B	R35,36	0107472	4.7k $\Omega$	1, 2B. 1 B
C03,04	0600567	0.056 $\mu$ F } 50V P.C.	1 B. 2 B	R05,06	0107393	39k $\Omega$	1,2A. 1,2B	R37,38	0107472	4.7k $\Omega$	1 C. 1,2C
C05,06	0620821	820 pF } 50V P.C.	2 A	R07,08	0107224	220k $\Omega$	1,2A. 1 A	R39,40	0107333	33k $\Omega$	1, 2B. 1 B
C07,08	0620821	820 pF } 50V M.C.	2 B. 2 A	R09,10	0107224	220k $\Omega$	1 B. 1, 2B	R41,42	0107333	33k $\Omega$	1 C. 1,2C
C09,10	0600227	0.022 $\mu$ F } 50V M.C.	2 A. 1 A	R11,12	0107104	100k $\Omega$	1,2A. 1 A	R43,44	0107472	4.7k $\Omega$	1, 2B. 1 B
C11,12	0600227	0.022 $\mu$ F } 50V M.C.	1 B. 2 B	R13,14	0107104	100k $\Omega$	1 B. 1, 2B	R45,46	0107472	4.7k $\Omega$	1 C. 1,2C
C13,14	0600227	0.022 $\mu$ F } 50V M.C.	2 A. 1 A	R15,16	0107124	120k $\Omega$	1, 2 A	R47,48	0107124	120k $\Omega$	2 B. 1, 2B
C15,16	0600227	0.022 $\mu$ F } 50V M.C.	1 B. 2 B	R17,18	0107124	120k $\Omega$	1, 2 B	R49,50	0107124	120k $\Omega$	1 C. 2 C
C17,18	0600567	0.056 $\mu$ F } 50V M.C.	2 A. 1 A	R19,20	0107472	4.7k $\Omega$	1 A	R51,52	0107561	560 $\Omega$	2 B
C19,20	0600107	0.01 $\mu$ F } 50V M.C.	1 C. 2 B	R21,22	0107472	4.7k $\Omega$	1 C	R53,54	0107561	560 $\Omega$	2 C
								2420290		Connect Pin Housing	

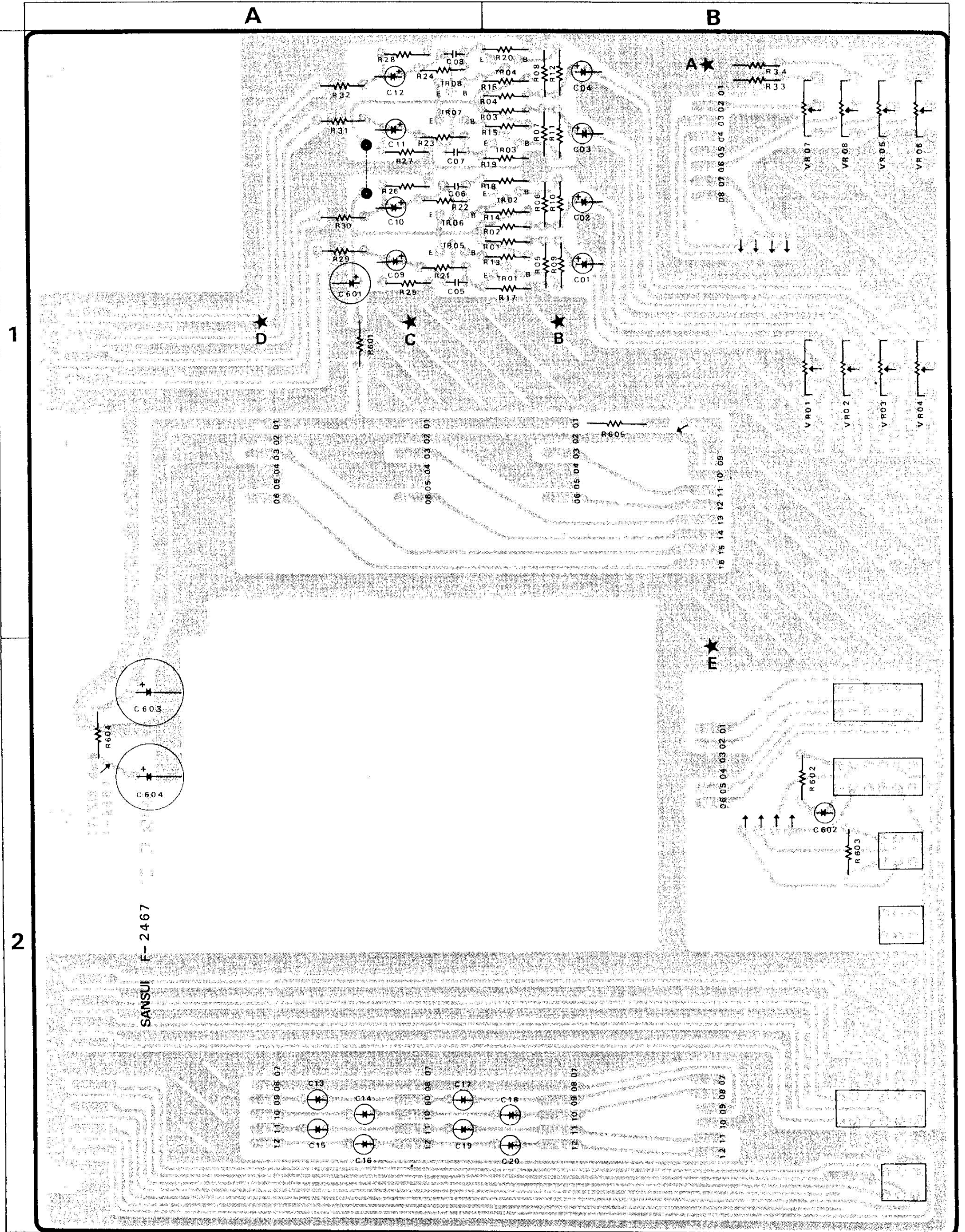
**2-7. F-2467 Include in all Circuit (Flat Amp.)** (Stock No. 7592280 Complete Circuit Board F-2048)

**Parts List**

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position
TR01,02	0306091	2SC1312G	1 B	C603	0514102	1000 $\mu$ F } 35V E.C.	2 A	R27,28	0107154	150k $\Omega$	1 A
TR03,04	0306091	2SC1312G	1 B	C604	0514102	1000 $\mu$ F } 35V E.C.	2 A	R29,30	0107331	330 $\Omega$	1 A
TR05,06	0300410	2SA726F	1 A	R01,02	0107684	680k $\Omega$	1 B	R31,32	0107331	330 $\Omega$	1 A
TR07,08	0300410	2SA726F	1 A	R03,04	0107684	680k $\Omega$	1 B	R33,34	0107103	10k $\Omega$	1 B
C01,02	0515109	1 $\mu$ F } 50V E.C.	1 B	R05,06	0107154	150k $\Omega$	1 B	R601	0107271	270 $\Omega$	1 A
C03,04	0515109	1 $\mu$ F } 50V E.C.	1 B	R07,08	0107154	150k $\Omega$	1 B	R602	0107123	12k $\Omega$	2 B
C05,06	0660470	47pF } 50V C.C.	1 A	R09,10	0107152	1.5k $\Omega$	1 B	R603	0107183	18k $\Omega$	2 B
C07,08	0660470	47pF } 50V C.C.	1 A	R11,12	0107152	1.5k $\Omega$	1 B	R604	0107820	82 $\Omega$	2 A
C09,10	0515109	1 $\mu$ F } 50V E.C.	1 A	R13,14	0107683	68k $\Omega$	1 B	R605	0104152	1.5k $\Omega$	1 W C.R.
C11,12	0515109	1 $\mu$ F } 50V E.C.	1 A	R15,16	0107683	68k $\Omega$	1 B	VR01,02	1060400, 1	20k $\Omega$ (B) x 4	Variable Resistor
C13,14	0530100	10 $\mu$ F } 6.3V BP.E.C.	2 A	R17,18	0107472	4.7k $\Omega$	1 B	VR03,04	1060400, 1	250k $\Omega$ (B) x 4	Variable Resistor
C15,16	0350100	10 $\mu$ F } 6.3V BP.E.C.	2 A	R19,20	0107472	4.7k $\Omega$	1 B				
C17,18	0350100	10 $\mu$ F } 6.3V BP.E.C.	2 A. 2 B	R21,22	0107103	10k $\Omega$	1 A				
C19,20	0350100	10 $\mu$ F } 6.3V BP.E.C.	2 A. 2 B	R23,24	0107103	10k $\Omega$	1 A				
C601	0515330	33 $\mu$ F } 50V E.C.	1 A	R25,26	0107154	150k $\Omega$	1 A				
								2410730		Connector Pin Ass'y	
								2410740		Connector Pin Ass'y	

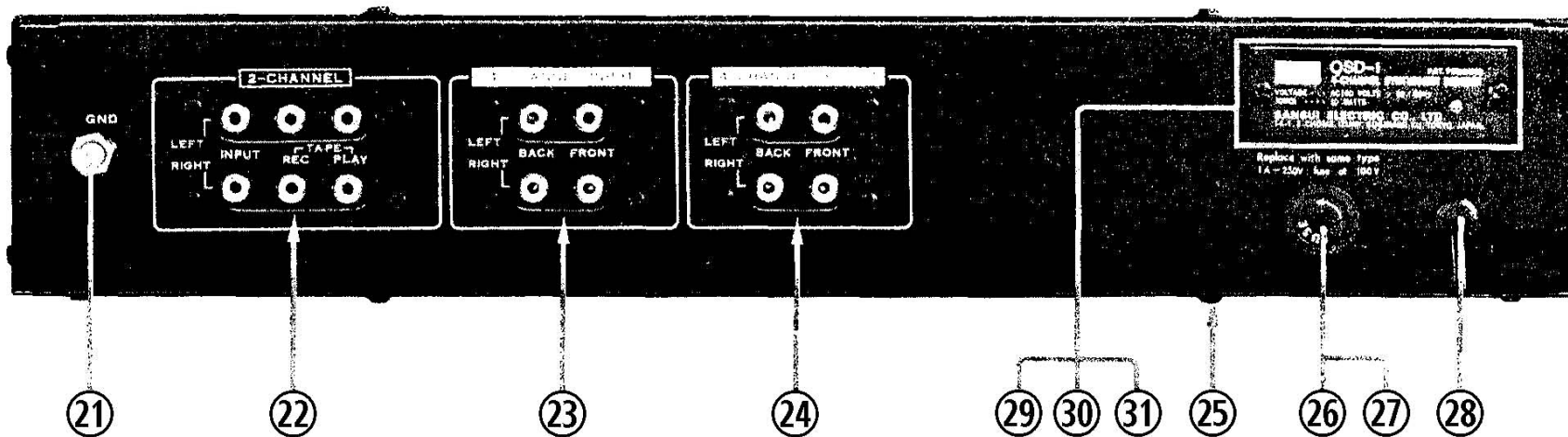
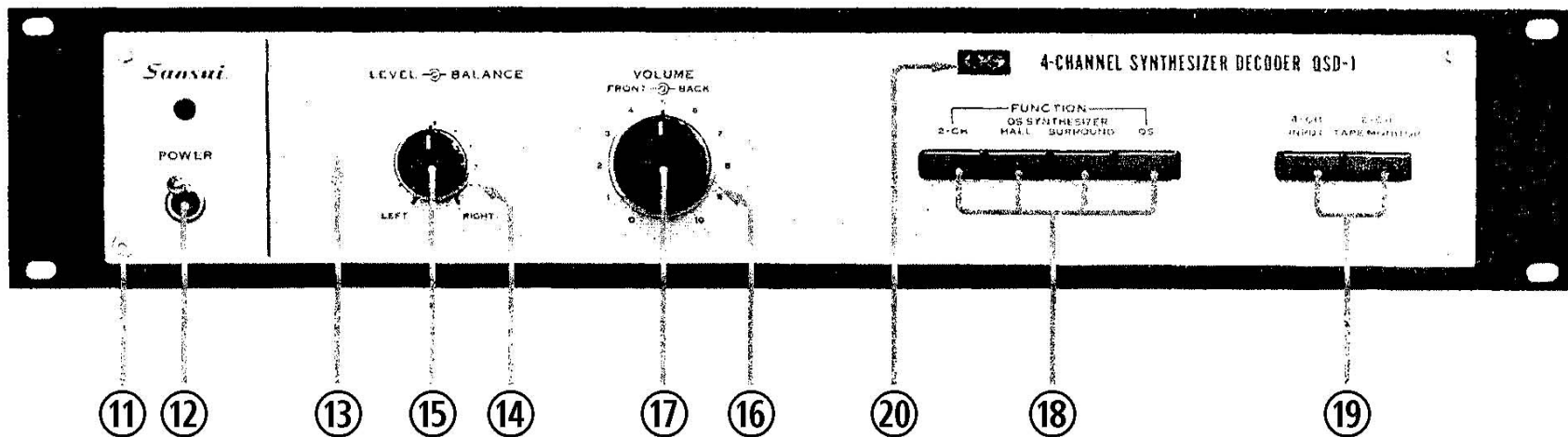
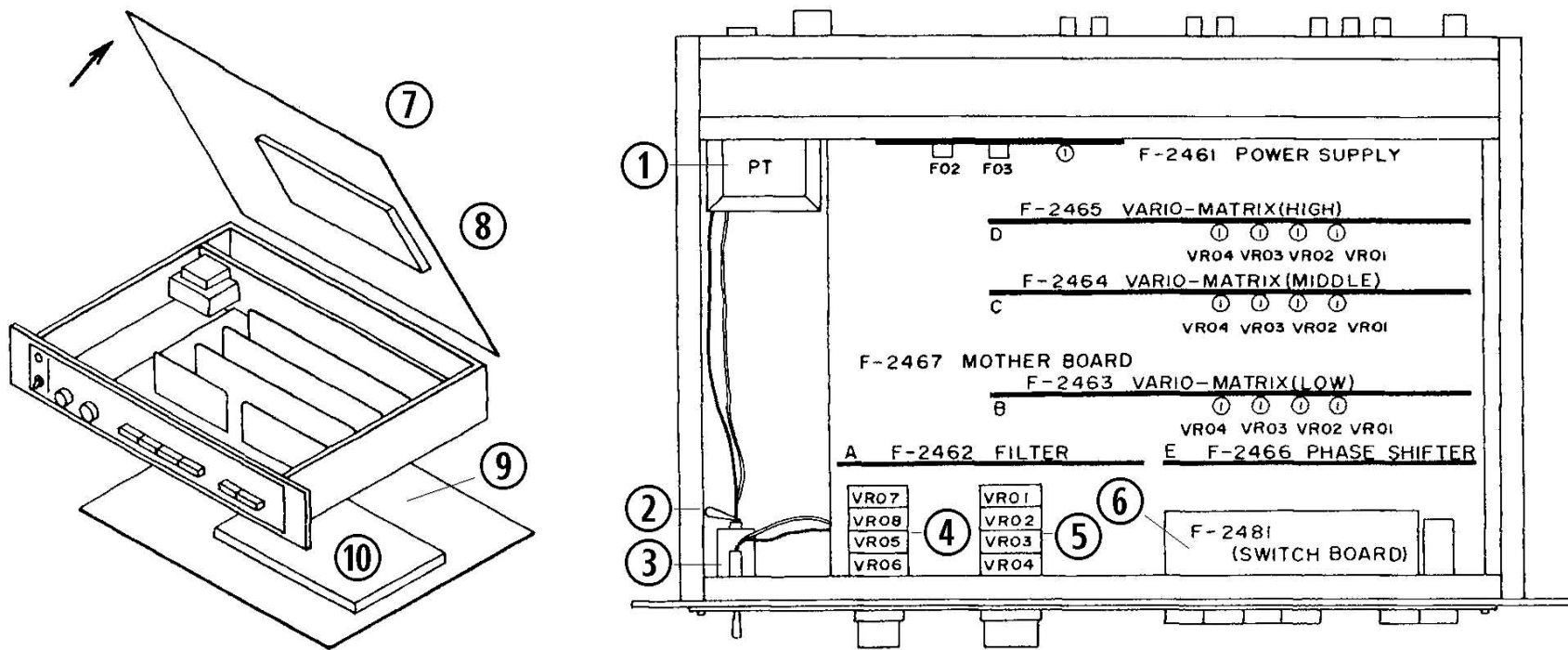


Conductor Side





### 2-8. Other Parts




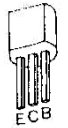

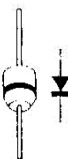
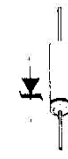
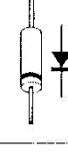
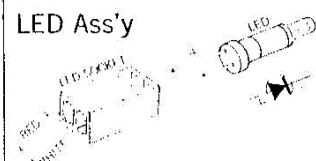
### Parts List

Parts No.	Stock No.	Description	Parts No.	Stock No.	Description	Parts No.	Stock No.	Description
1	4002260	Power Transformer	13	5309480	Front Panel	26	2300060	Fuse Holder
2	0605227	0.022μF 250V M.C.	14	5318090	Balance Knob, WO-6	27	0433220	1A 100~120V
3	7726080	LED Ass'y, Power Indicator	15	5318110	Level Knob, V-5	28	0433210	0.5A 220~240V
4	1060410, 1	Level, Balance Volume	16	5318110	Volume Knob (Back), WO-7	28	3800010	Power Cord
5	1060400, 1	Volume	17	5318120	Volume Knob (Front), W-5	29	5388040	Name Plate
6	2592230	Switch Board, F-2481	18	1131010	Function Switch	30	2410830	Voltage Selector, Socket
7	5058280	Upper Plate	19	1131020	4-CH Input Switch		2410090	Voltage Selector, Plug
	5109222	Screw for Upper Plate, 3×8	20	5336431	QS Badge			
8	5506790	Packing, Upper Plate	21	2230051	Ground Terminal	※ Japanese Model only		
9	5058290	Bottom Plate	22	2200330	6P Input Terminal	1	4002191	Power Transformer
	5109222	Screw for Bottom Plate, 3×8	23	2200320	4P Input Terminal	12	1140040	Power Switch
10	5506800	Packing, Bottom Plate	24	2200320	4P Input Terminal	27	0431220	1A 250V AC Fuse
11	5166590	Screw for Panel Plate	25	5516940	Foot	28	3800020	Power Cord
12	1140050	Power Switch		5166520	Screw for Foot, 3×12	29	5387640	Name Plate



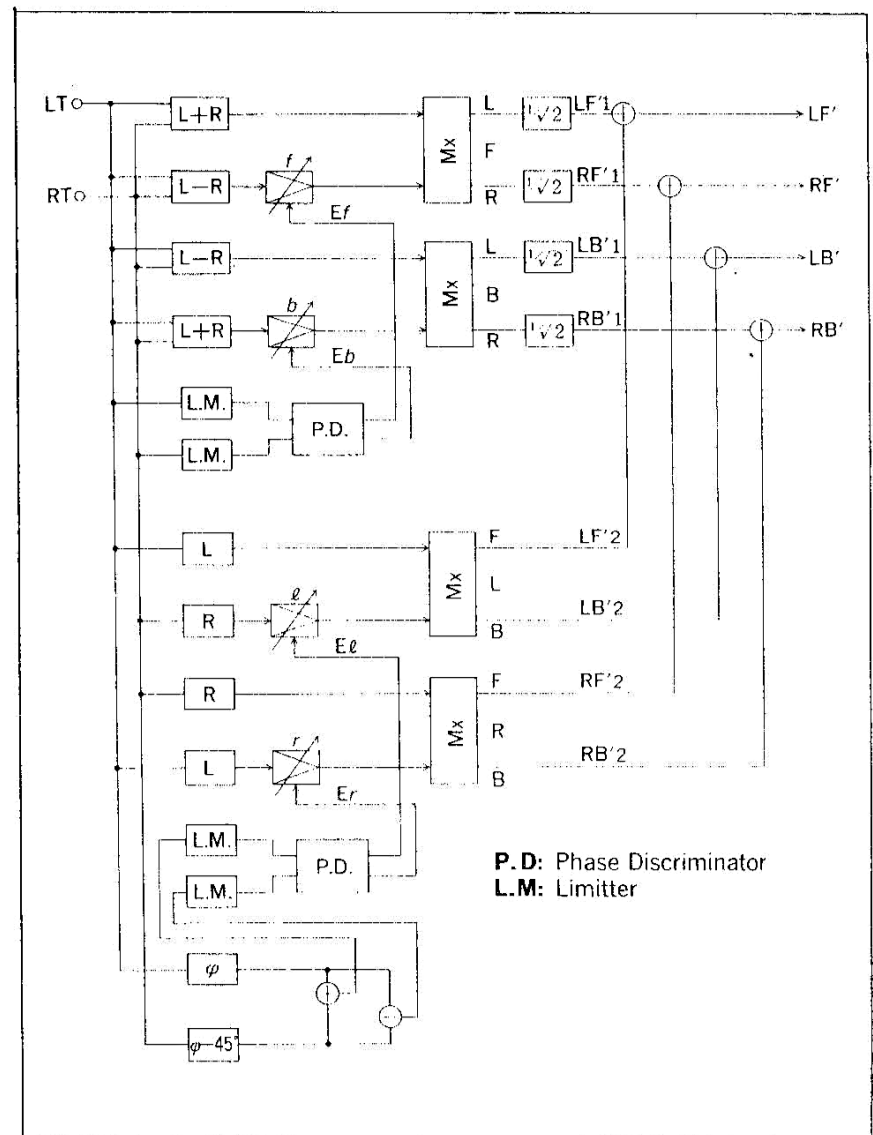
### 3. BLOCK DIAGRAM (1)

#### 3-1. FIGURES

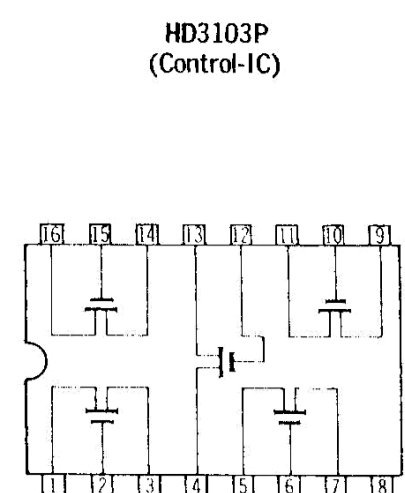
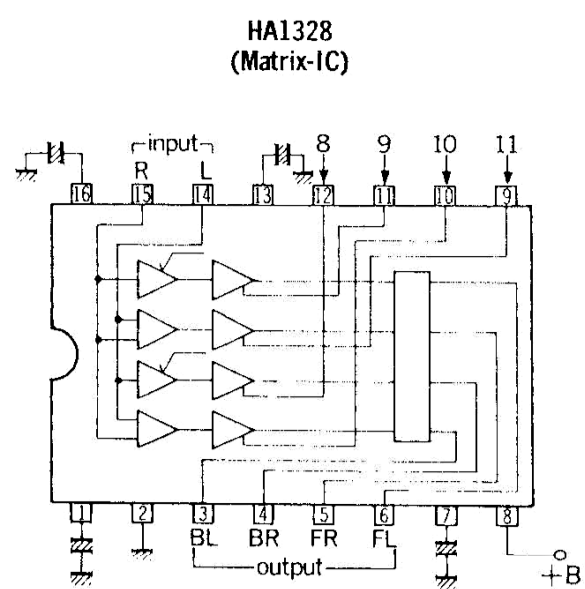
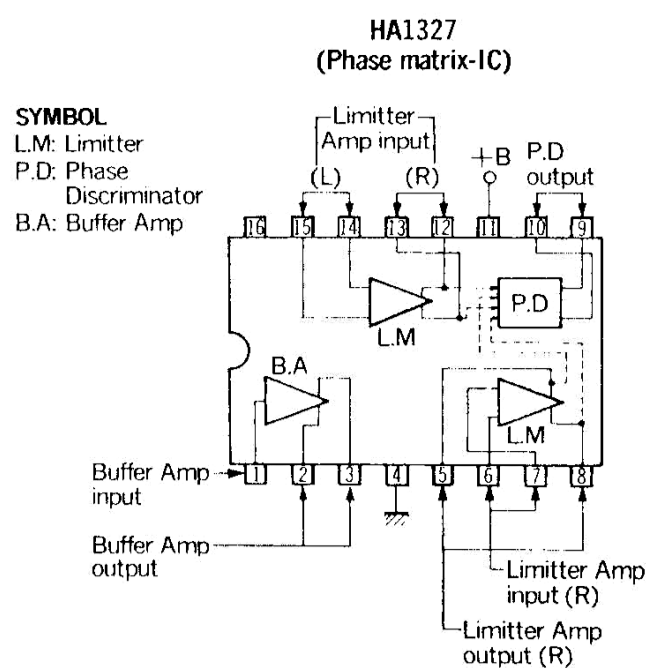
SEMICONDUCTORS	COMPLETE CIRCUIT BOARD
HA1327 HA1328 HD3103P 	F-2463 F-2464 F-2465
2SA726 2SC711 2SC1312 	F-2461 F-2462 F-2466 F-2467
2SD313 	F-2461
10D1 	F-2461
RD6A 	F-2461
IS2473 	F-2463 F-2464 F-2465
LED Ass'y 	POWER INDICATOR

#### 3-2. QS VARIO-MATRIX BLOCK DIAGRAM

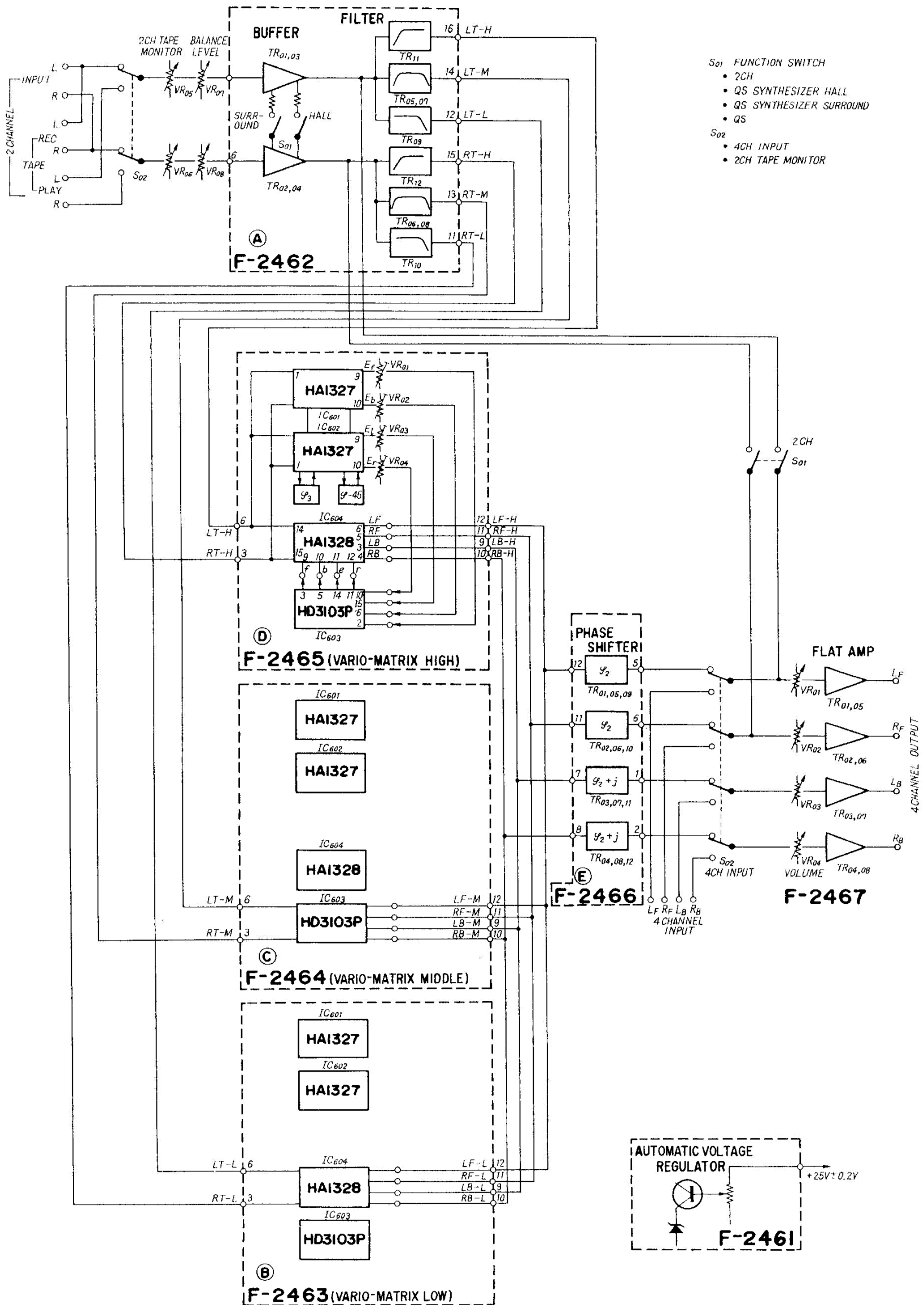
F-2463 (LOW RANGE)  
F-2464 (MIDLE RANGE)  
F-2465 (HIGH RANGE)



#### 3-3. IC CONFIGURATION



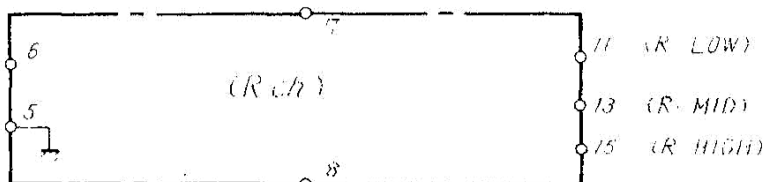
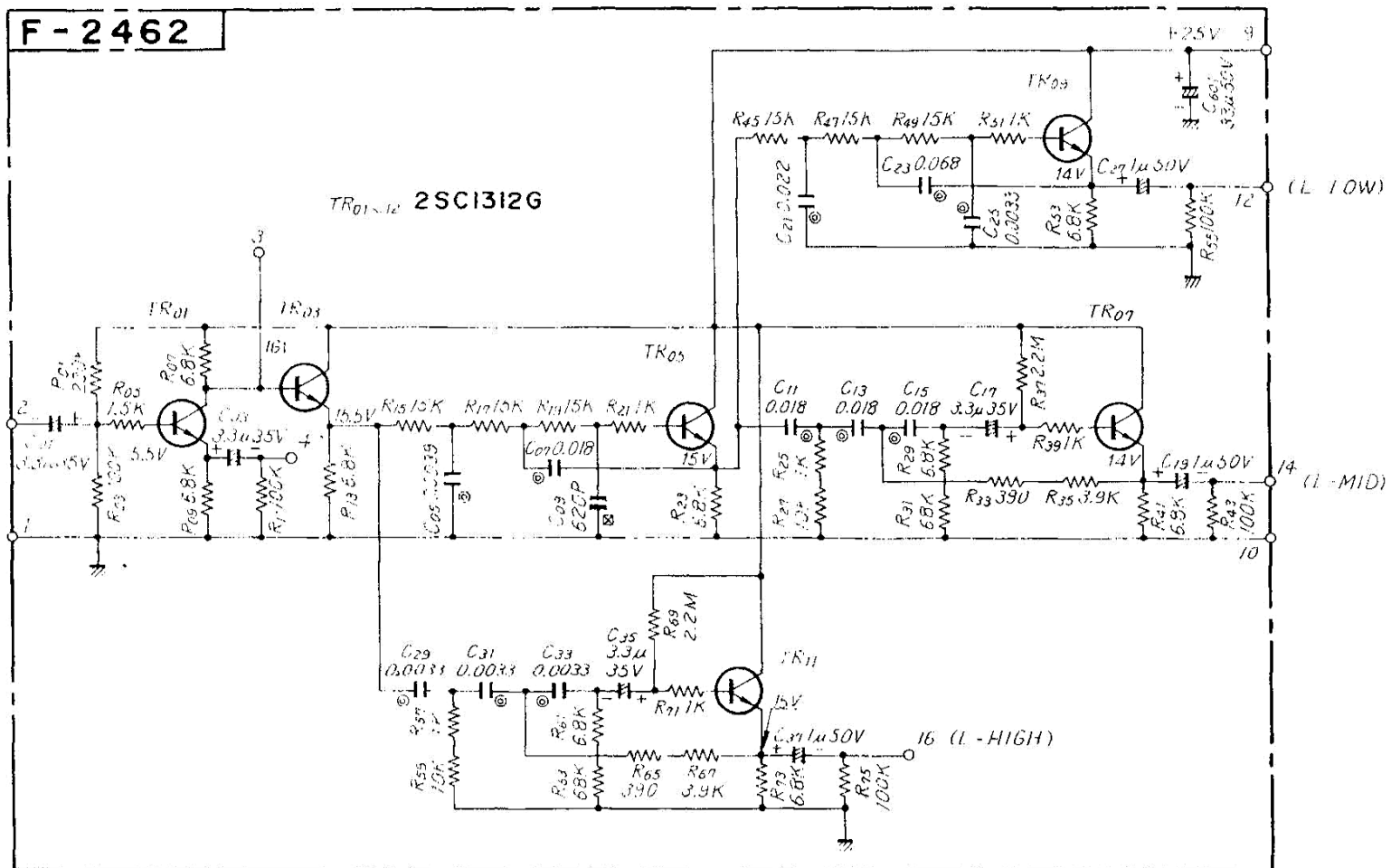
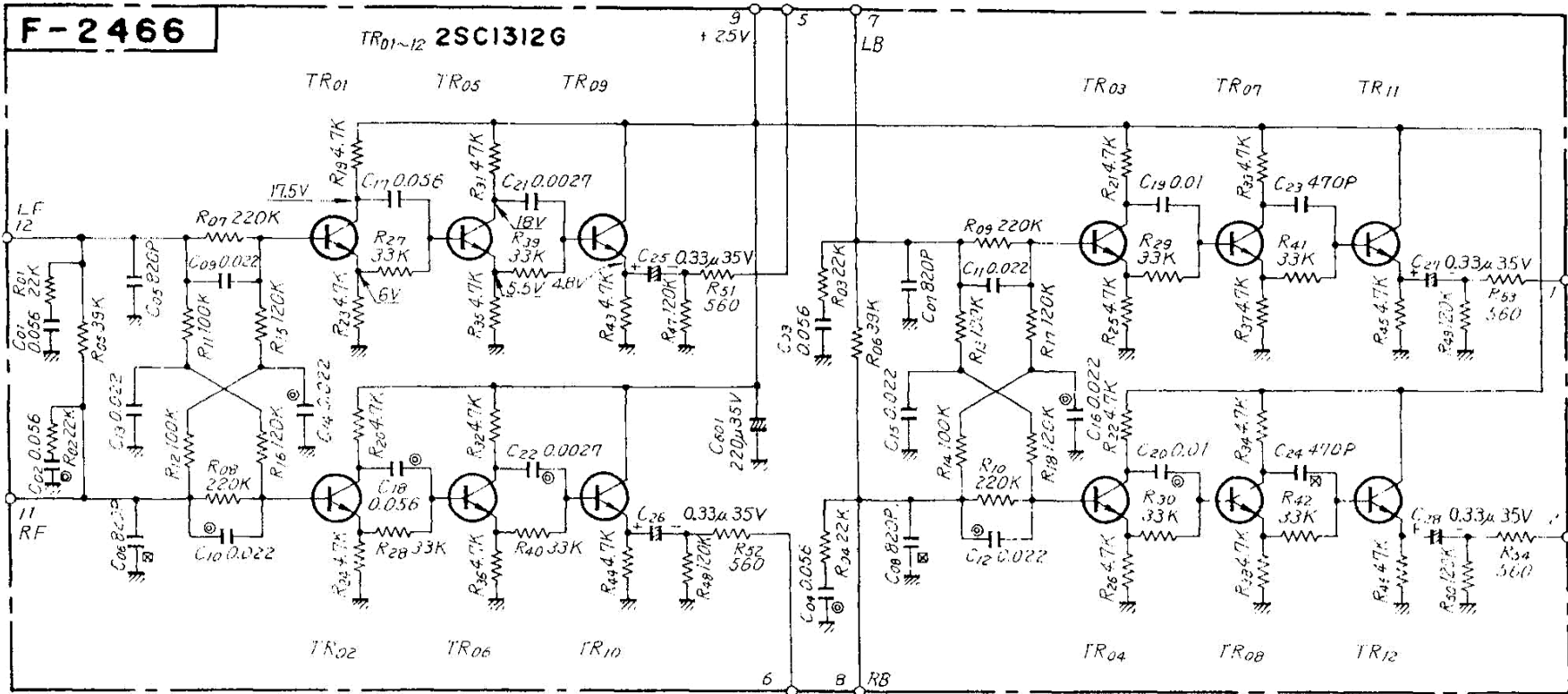
# BLOCK DIAGRAM (2)





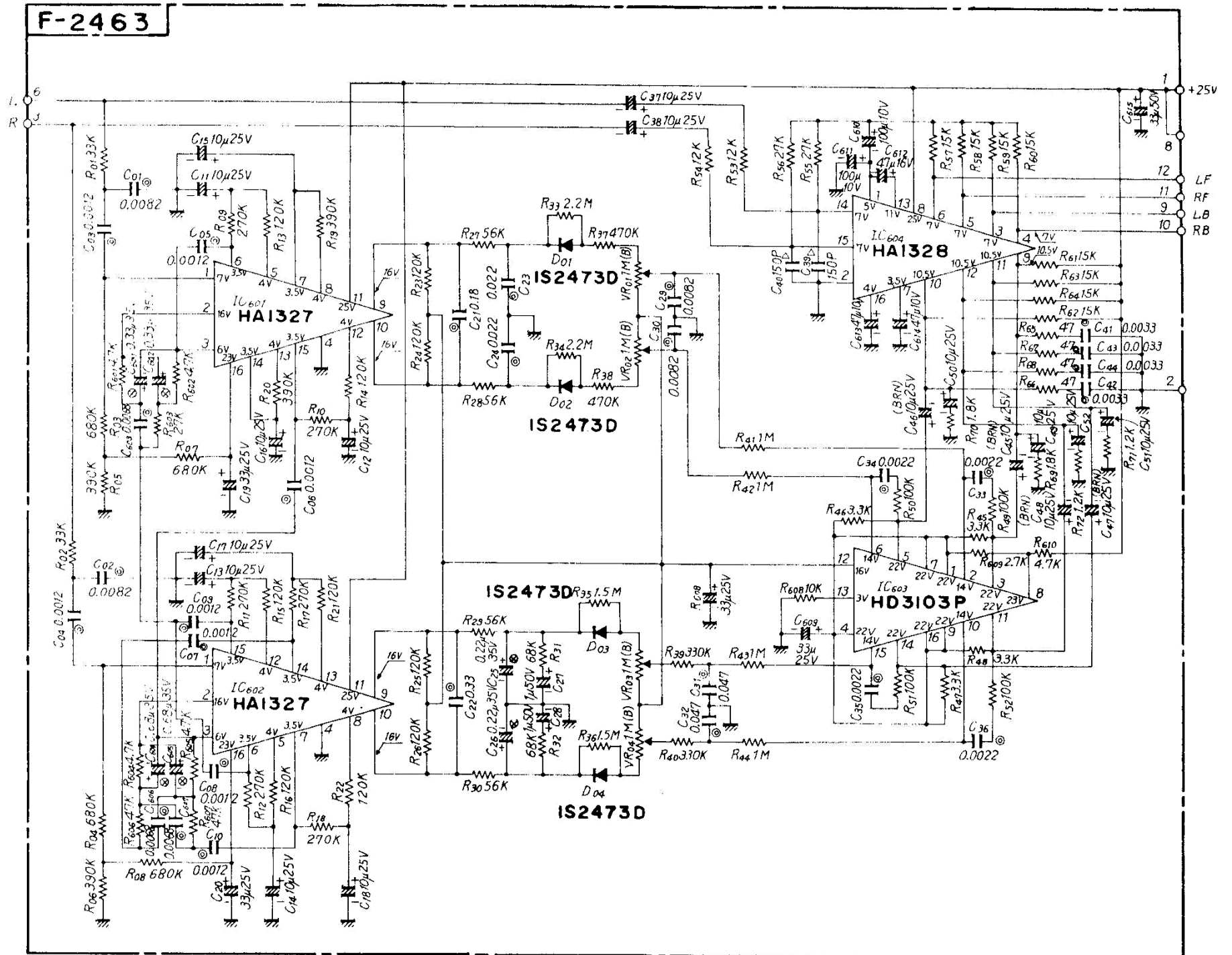


**4-2. F-2466 PHASE SHIFTER, F-2462 FILTER**

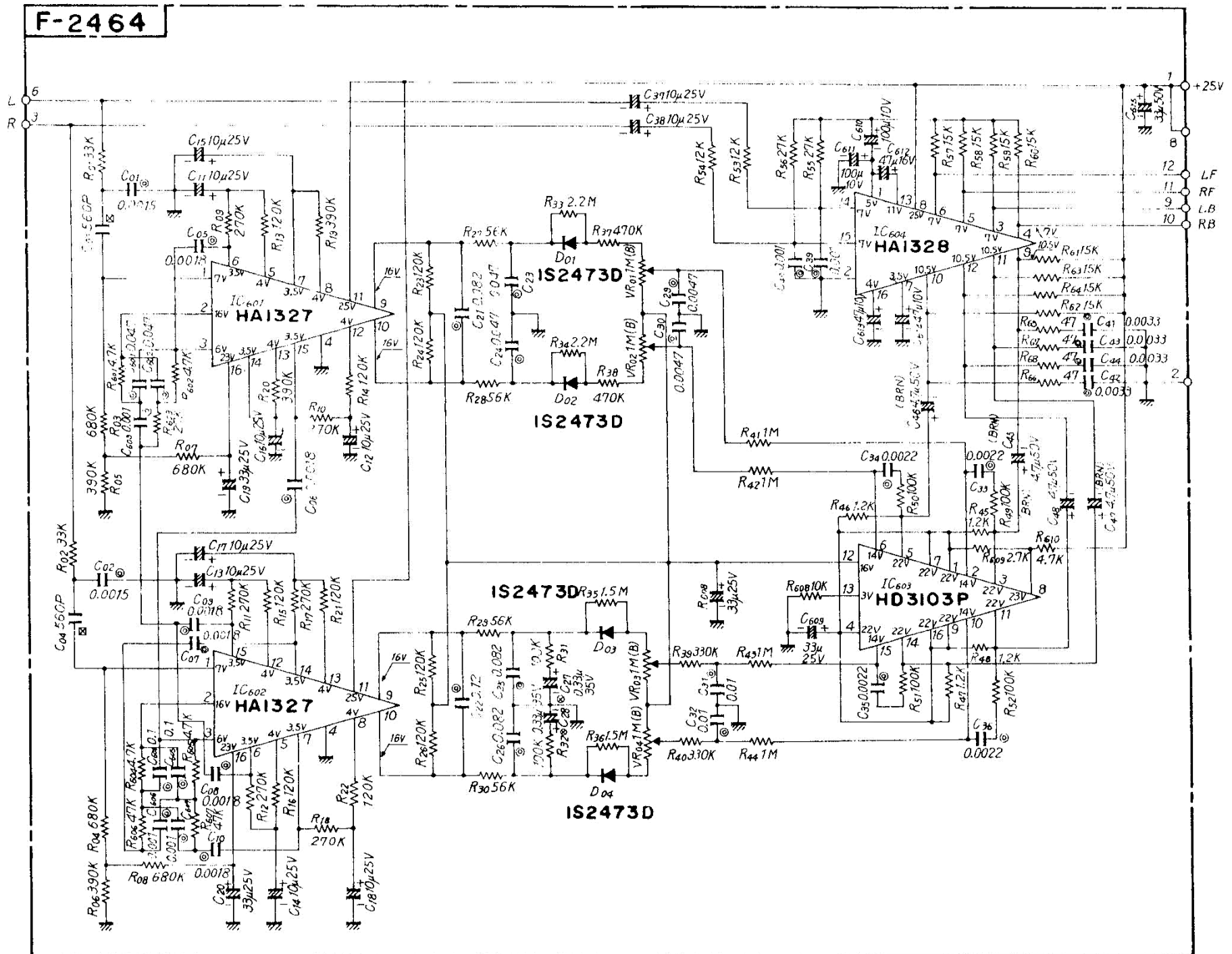




### 4-3. F-2463 VARIO-MATRIX (LOW RANGE)

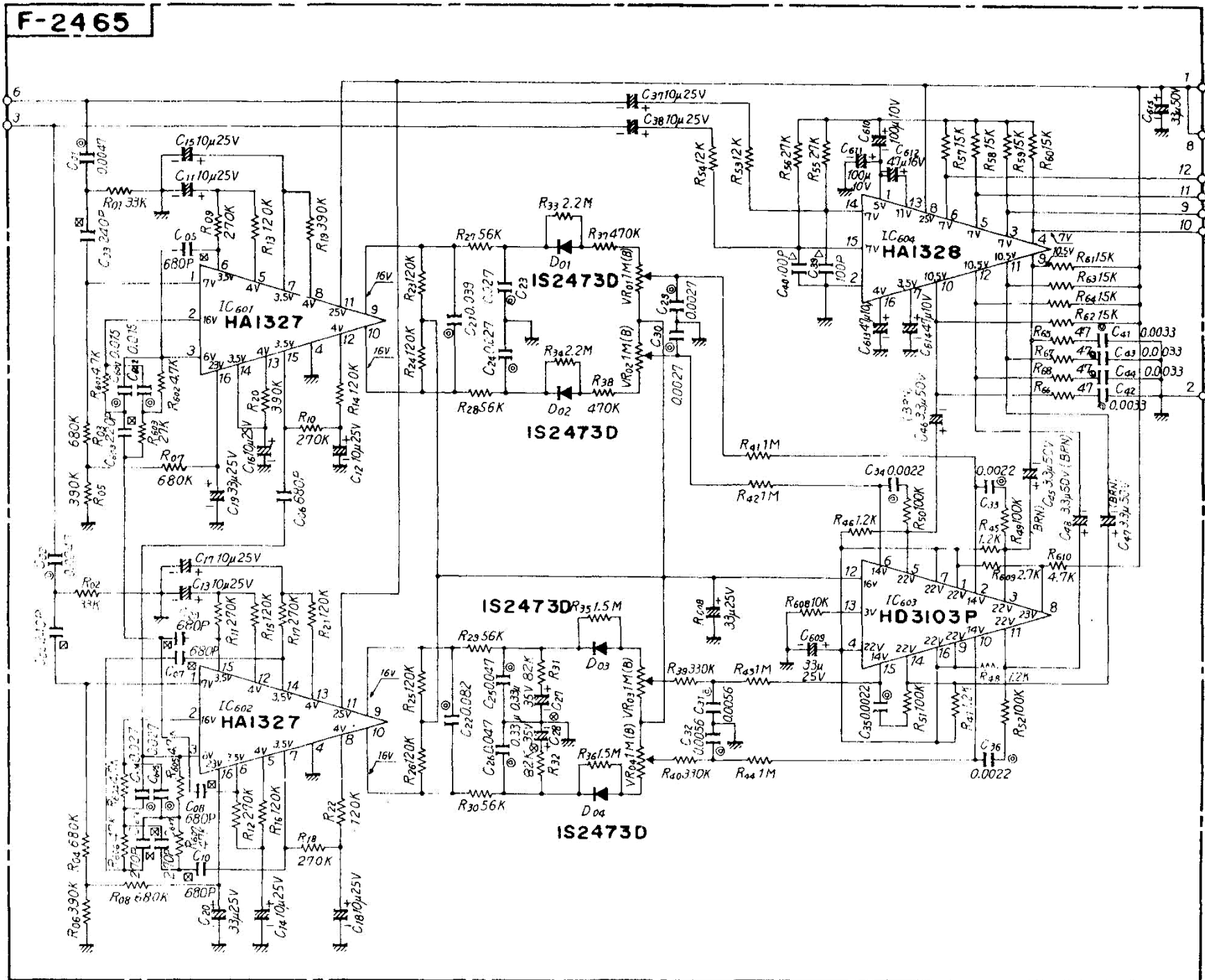


**4-4. F-2464 VARIO-MATRIX (MIDDLE RANGE)**





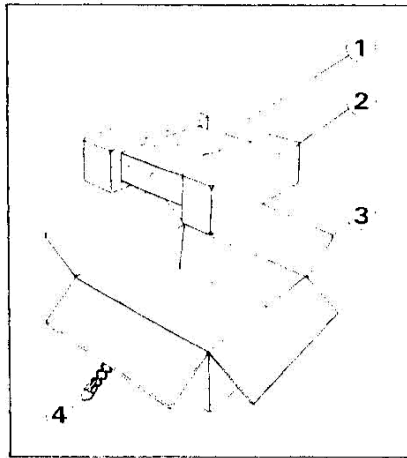
### 4-5. F-2465 VARIO-MATRIX (HIGH RANGE)



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## 5. PACKING LIST

Parts No.	Stock No.	Description
1	9027850	Stylofoam Packing
2	9116143	Vinyl Cover
3	9008210	Carton Case
4	5996080	Curl stopper



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## 6. ACCESSORY PARTS LIST

Parts No.	Stock No.	Description
1	3810180, 1	Pinplug Cord
2	9208900	Operating Instructions
※ Japanese Model Only		
2	9208610	Operating Instructions

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SANSUI ELECTRIC CO., LTD.  
14-1, 2-chome, Izumi, Suginami-ku, Tokyo 168, Japan  
TELEPHONE: (03) 323-1111 / TELEX: 232-2076

SM035

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