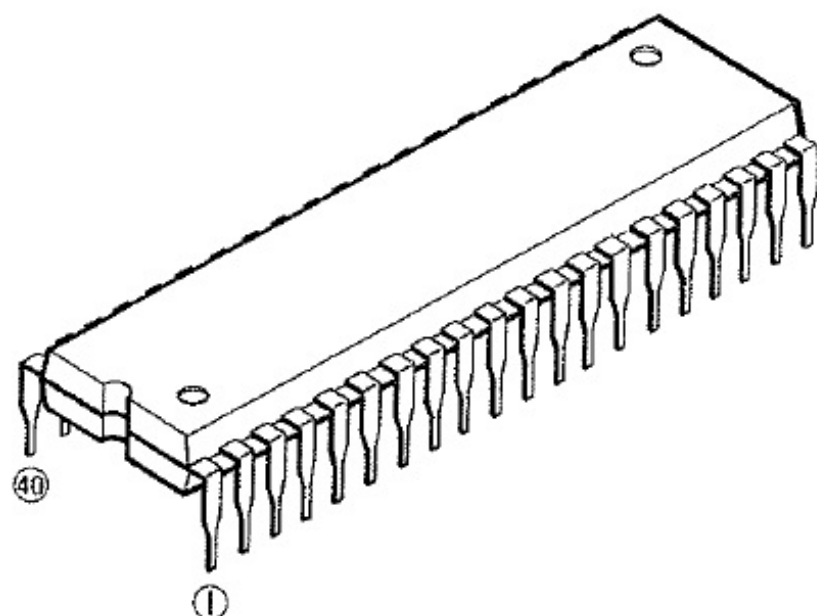


YM24800

Part No. YM24800
made by YAMAHA

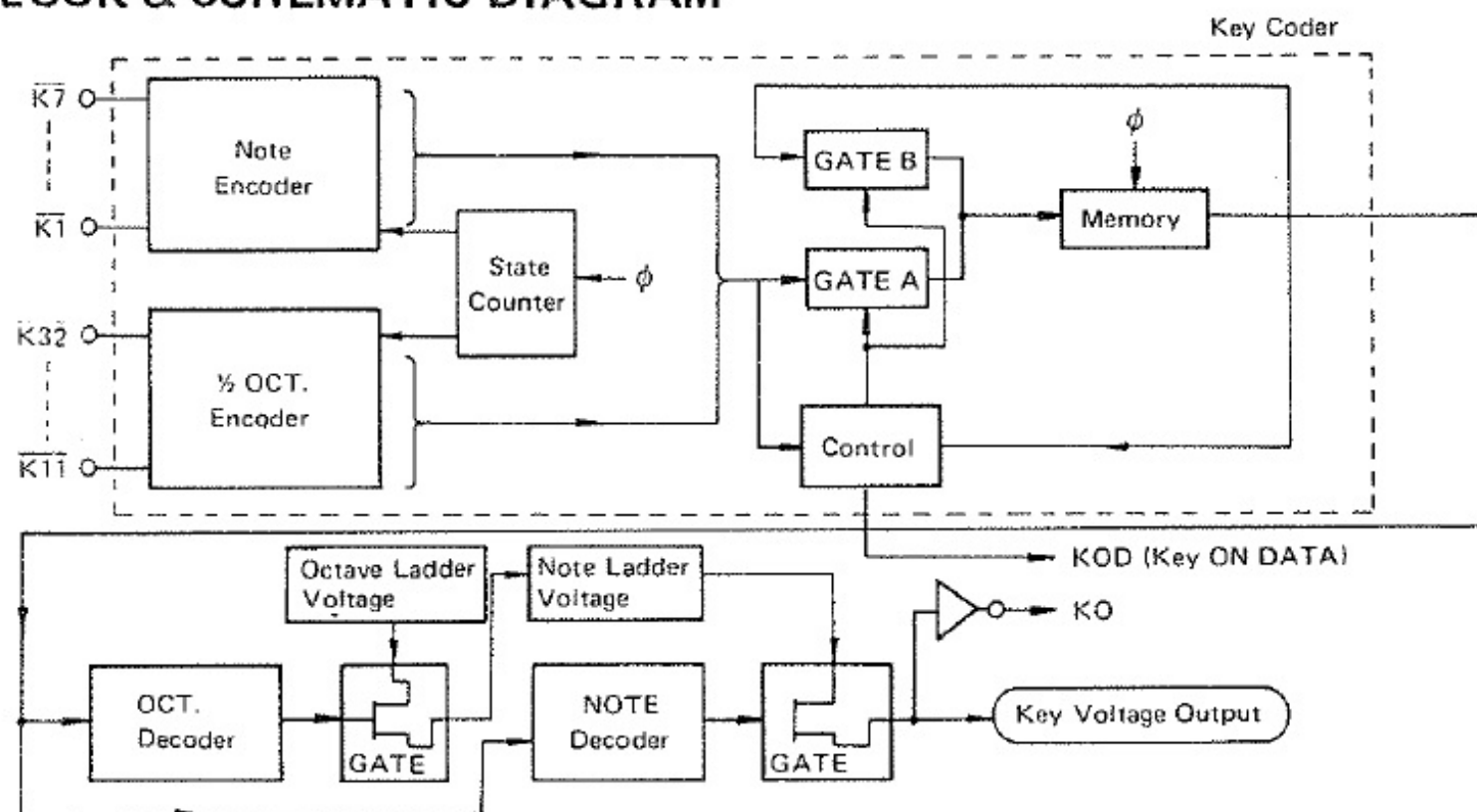
• FUNCTION
Single Synthesizer key Assigner

• OUTLINE DRAWING



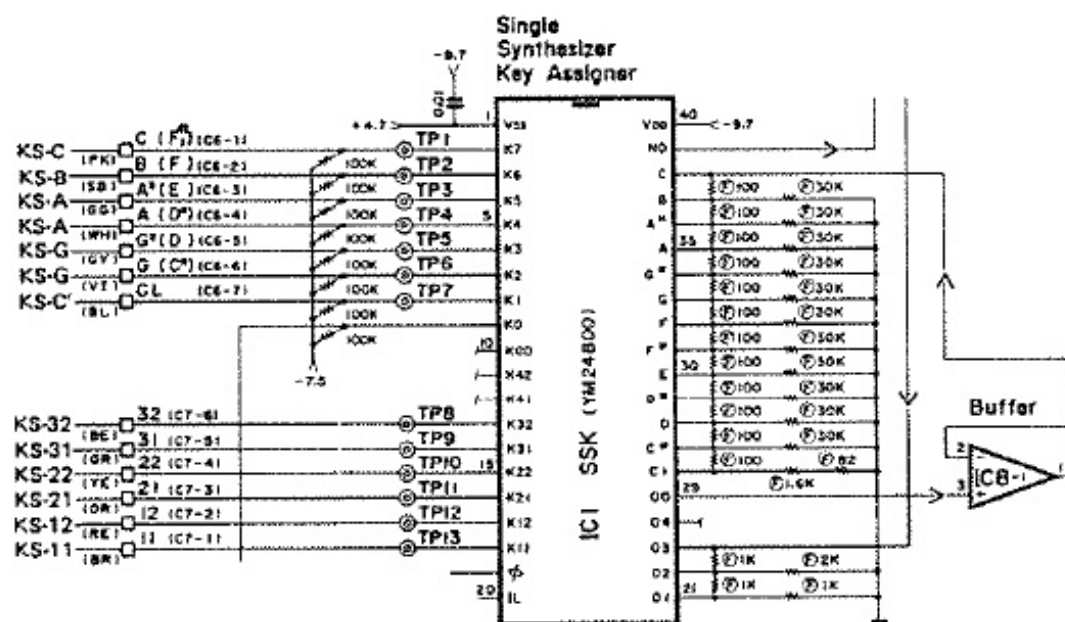
No.	Name	Description	No.	Name	Description
1	V _{SS}	+DC voltage supply	40	V _{DD}	-DC voltage supply
2	K ₇	F [#] , C	39	N0	Key voltage output
3	K ₆	F, B	38	C	
4	K ₅	E, A [#]	37	B	
5	K ₄	D [#] , A Note Data Input	36	A [#]	
6	K ₃	D, G [#]	35	A	
7	K ₂	C [#] , G	34	G [#]	
8	K ₁	CL (Lowest C Note Data Input)	33	G	
9	K ₀	Key on trigger	32	F [#]	
10	KOD	Key On Data (CS-5,15:Not used)	31	F	Key voltage input
11	K42	(37 keys: Not used)	30	E	
12	K41		29	D [#]	
13	K32		28	D	
14	K31	1/2 Octave Data	27	C [#]	
15	K22		26	C ₁	
16	K21		25	00	Octave voltage output
17	K12		24	04	(37 keys: Not used)
18	K11		23	03	
19	φ	Clock Pulse input	22	02	Octave voltage input
20	IC	Initial Clear	21	01	

● BLOCK & SCHEMATIC DIAGRAM



● CIRCUIT ILLUSTRATION

MODEL CS-5
CIRCUIT BOARD . . PN1 2/2

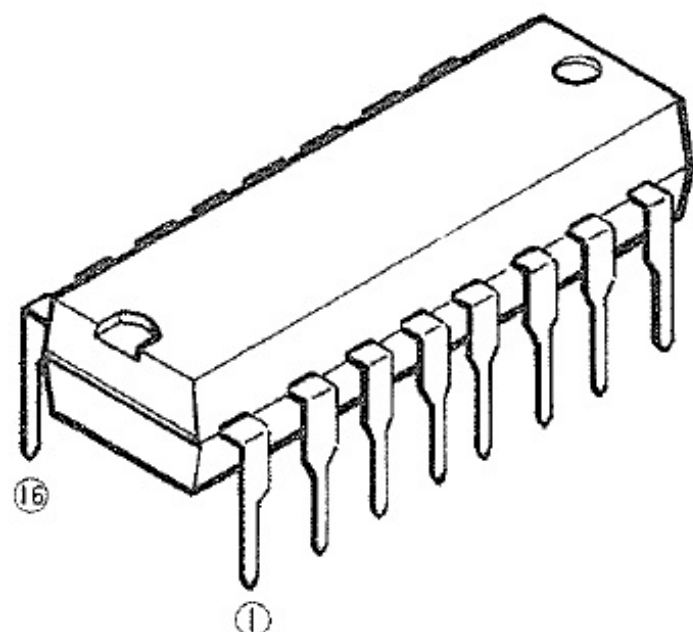


iG00153

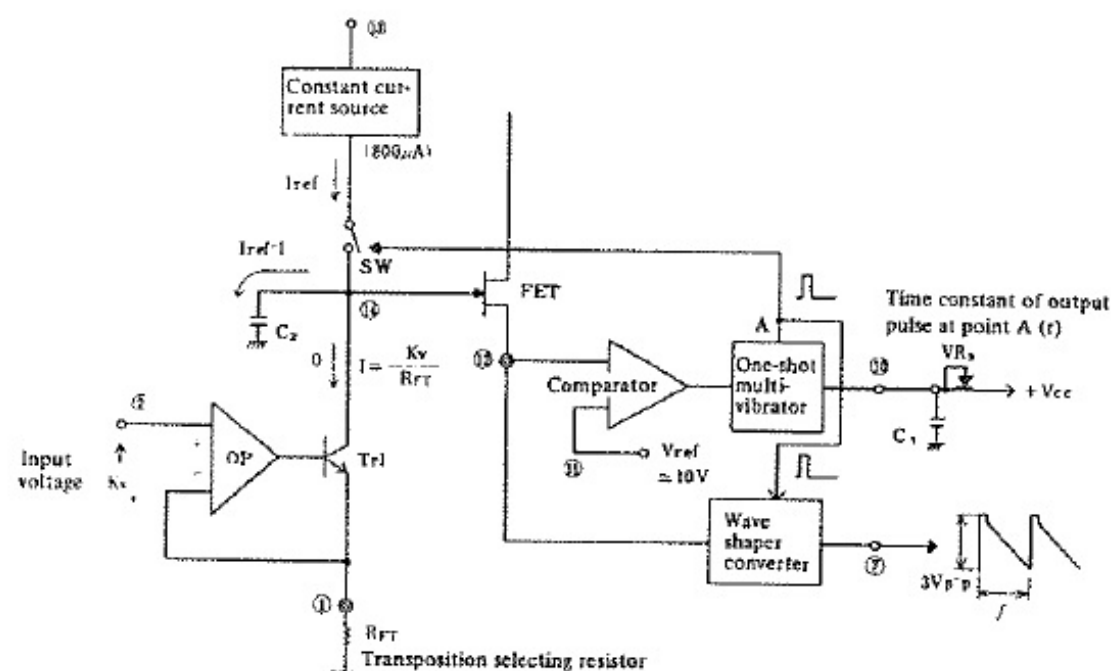
Part No. iG00153
made by MITSUBISHI

• FUNCTION
VCO III

• OUTLINE DRAWING



• BLOCK & SCHEMATIC DIAGRAM



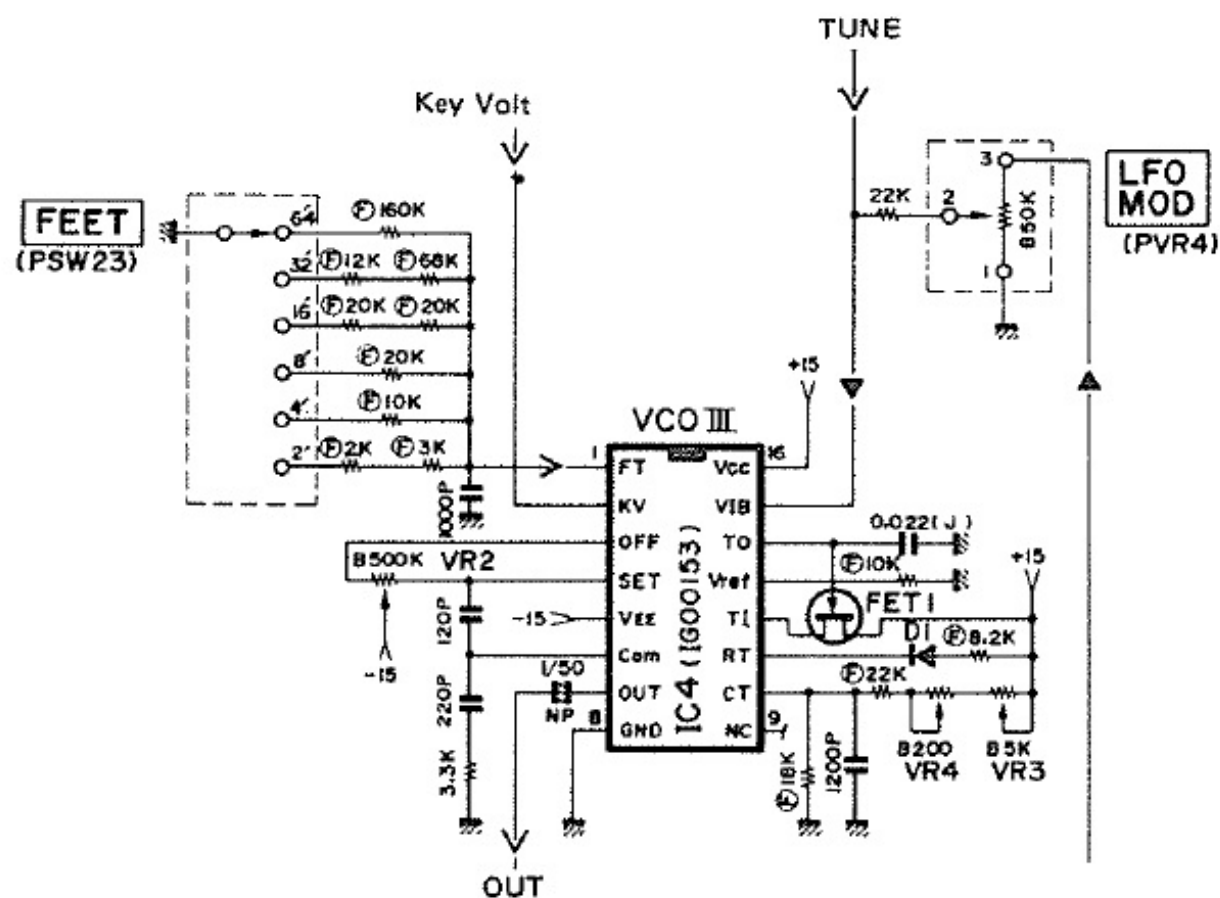
NOTE: Numbers in circle represent pin numbers of IC

No.	Name	Description	No.	Name	Description
1	FT	Feet determination	16	Vcc	+15V voltage supply
2	KV	Key voltage input	15	VIB	VIBRATO modulation signal input
3	OFF-SET	Off-set adjustment	14	TO	Output of time constant circuit
4			13	Iref	Reference current circuit
5	VEE	-15V DC voltage supply	12	TI	Input for the comparator
6	COM	Phase compensation	11	RT	Time constant circuit
7	OUT	Output	10	CT	Time constant circuit
8	GND	Ground	9	Vref	Non-connection

● CIRCUIT ILLUSTRATION

MODEL CS-5

CIRCUIT BOARD .. PN1 2/2



TA 7505M

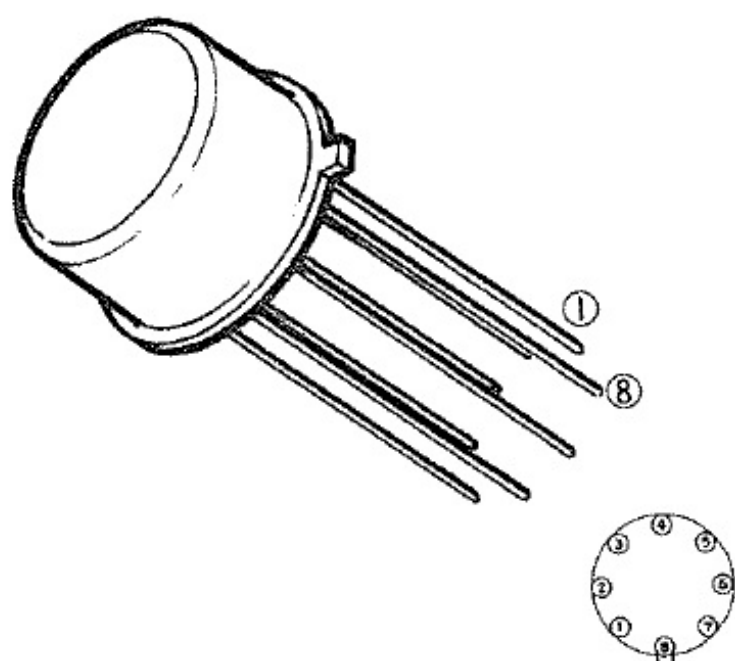
Part No. iG02560

made by TOSHIBA

• FUNCTION

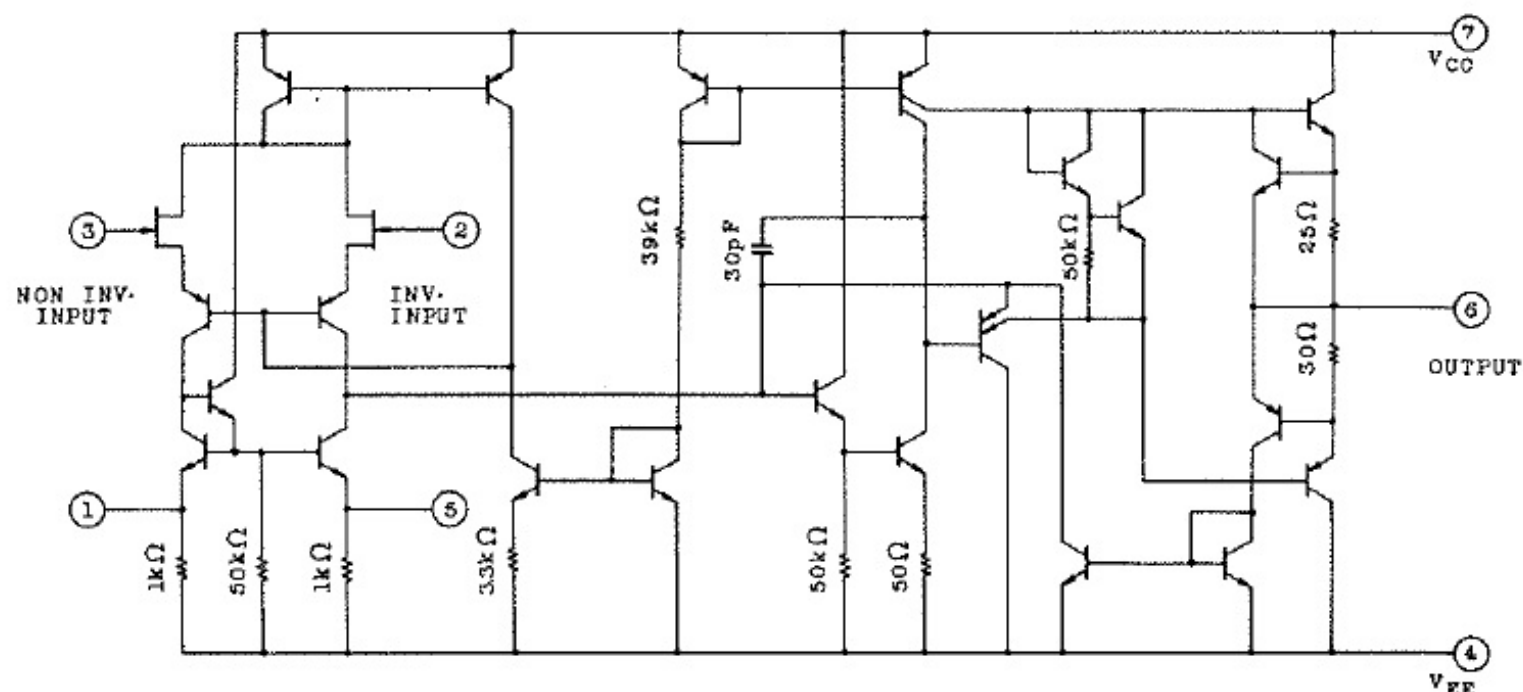
High Input Impedance OP. Amp.

• OUTLINE DRAWING



[Bottom View]

• BLOCK & SCHEMATIC DIAGRAM

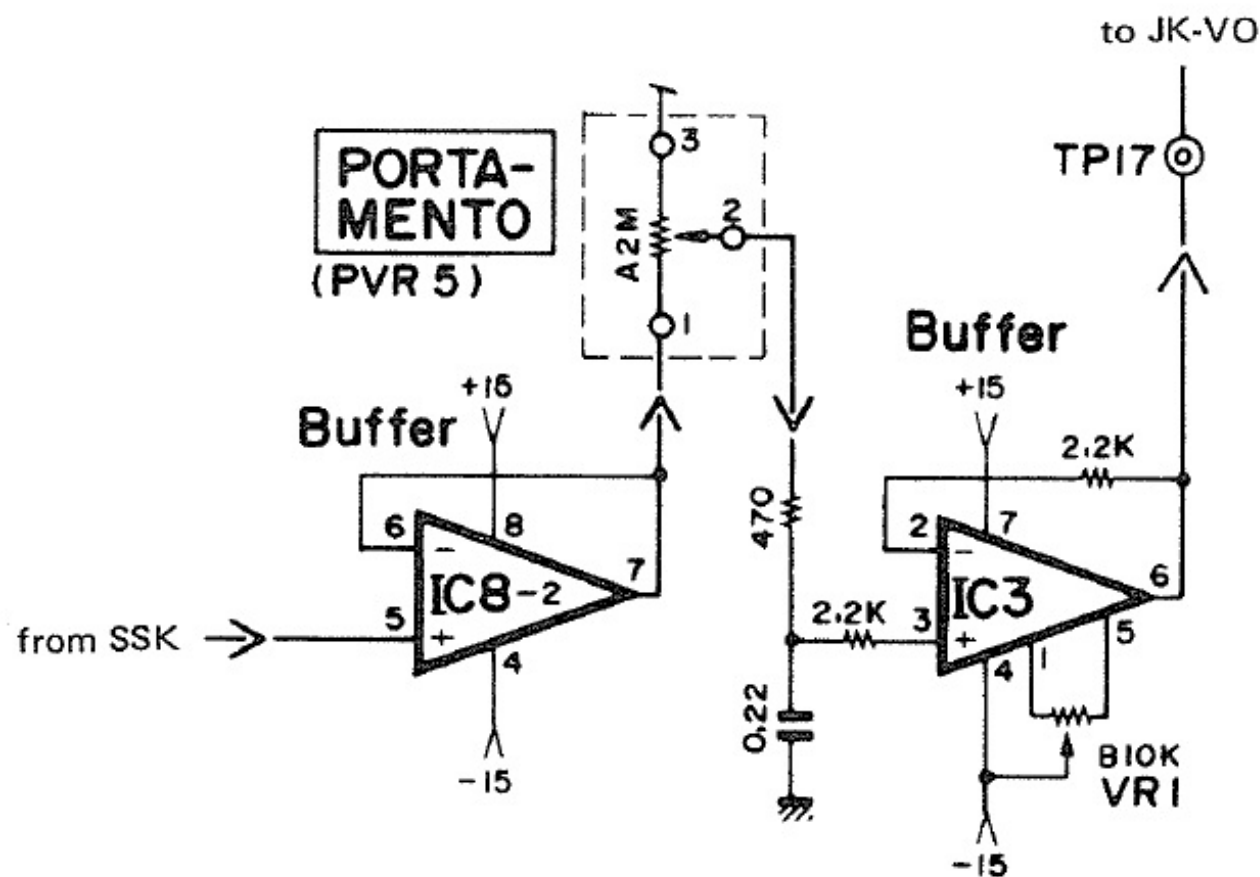


No.	Name	Description	No.	Name	Description
1		Offset Null			
2	- IN	Inverting Input			
3	+ IN	Non-Inverting input			
4	VEE	-DC voltage supply			
5		Offset Null			
6	Out	Output			
7	Vcc	+DC voltage supply			
8		Offset Voltage Null			

• CIRCUIT ILLUSTRATION

MODEL CS-5

CIRCUIT BOARD .. PN1 2/2



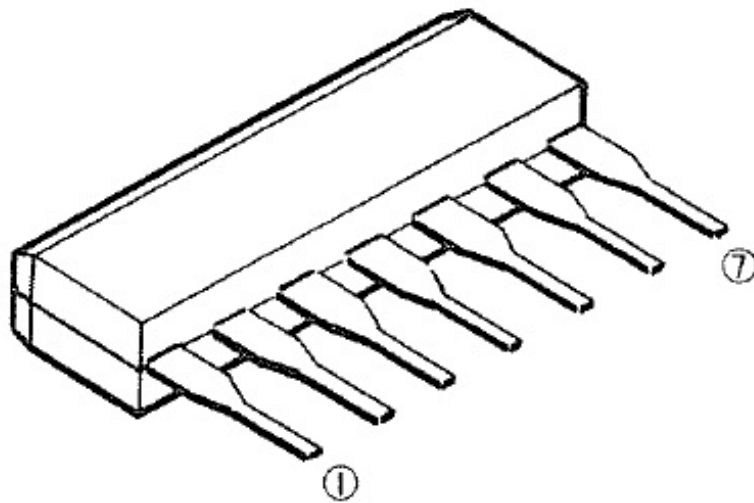
IC3 TA7505M

TA7504S

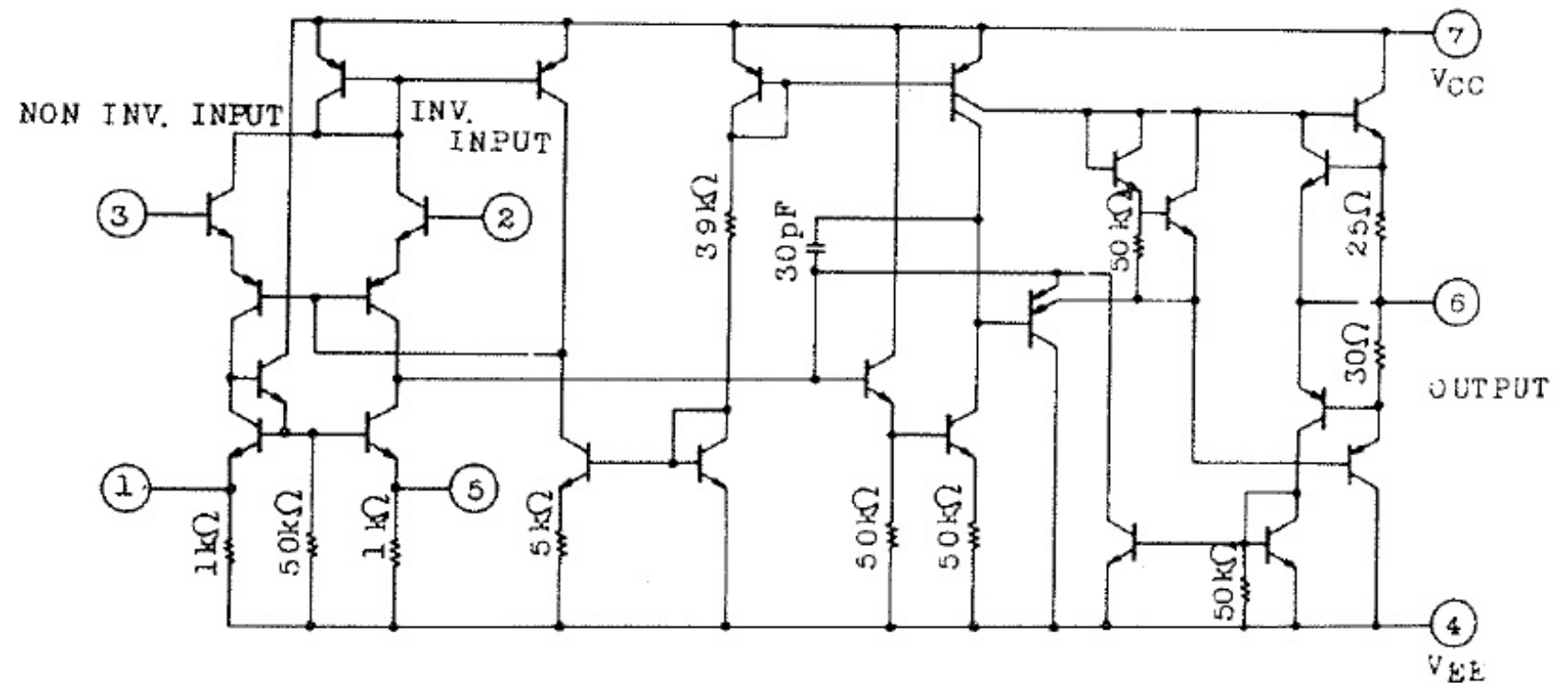
Part No. iG02550
made by TOSHIBA

• FUNCTION
Operational Amplifier

• OUTLINE DRAWING



• BLOCK & SCHEMATIC DIAGRAM

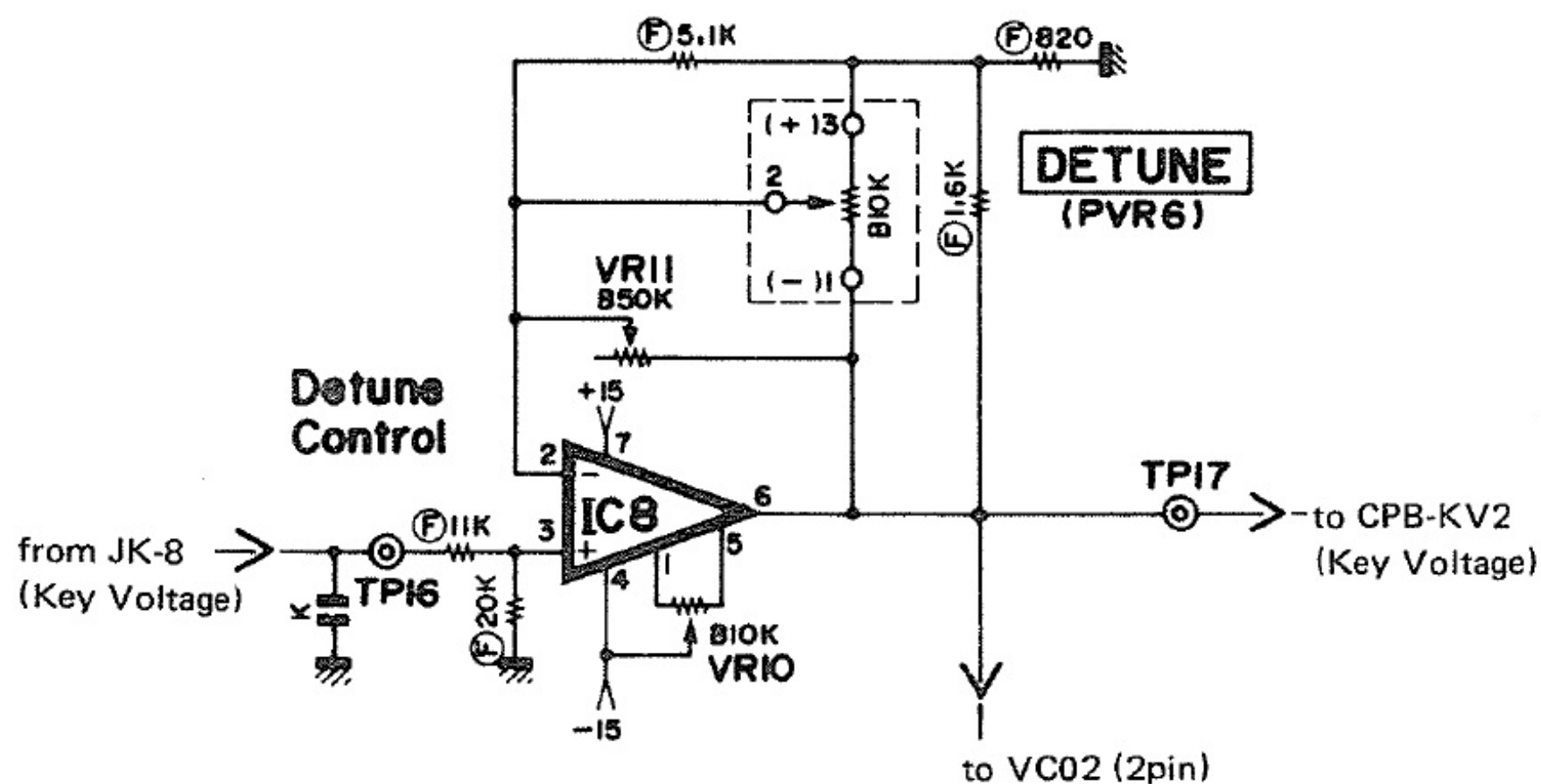


No.	Name	Description	No.	Name	Description
1		Offset Null			
2	- IN	Inverting input			
3	+ IN	Non-Inverting input			
4	VEE	-DC voltage supply			
5		Offset Null			
6	Out	Output			
7	Vcc	+DC voltage supply			

● CIRCUIT ILLUSTRATION

MODEL CS-15

CIRCUIT BOARD .. CPA

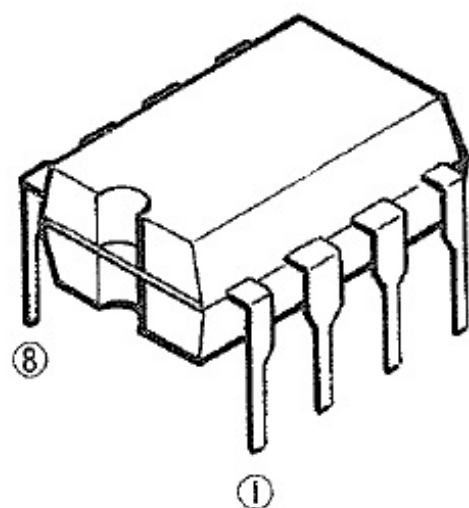


iG00150

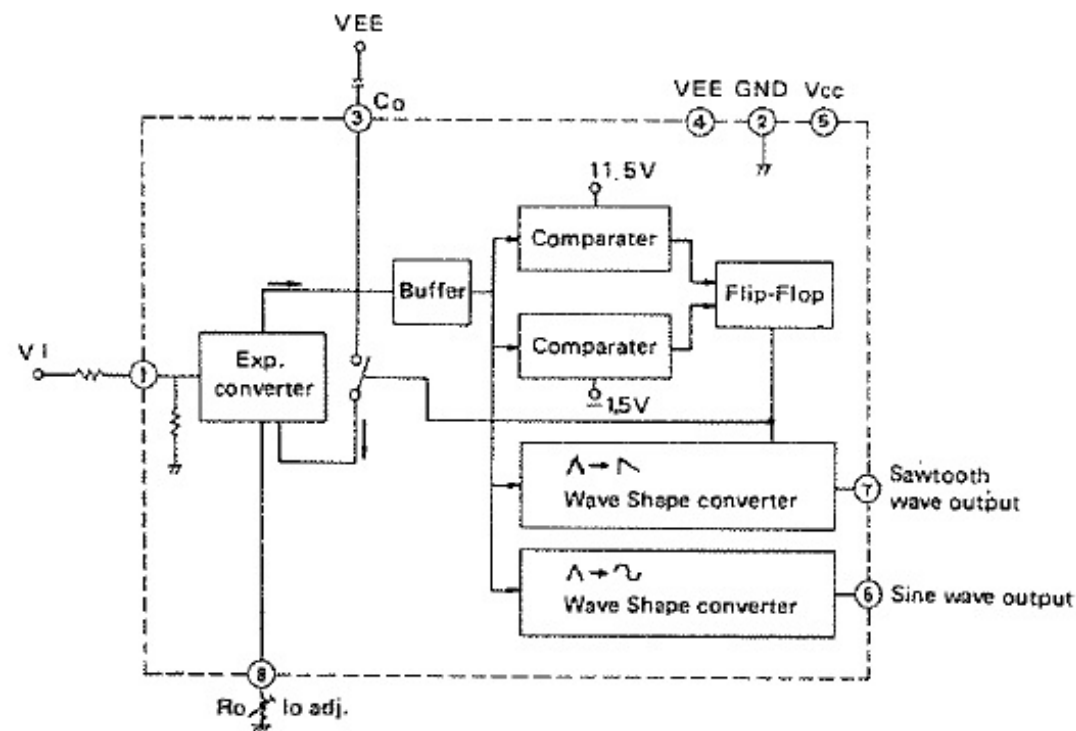
Part No. iG00150
made by MITSUBISHI

• FUNCTION
VCOII

• OUTLINE DRAWING



• BLOCK & SCHEMATIC DIAGRAM

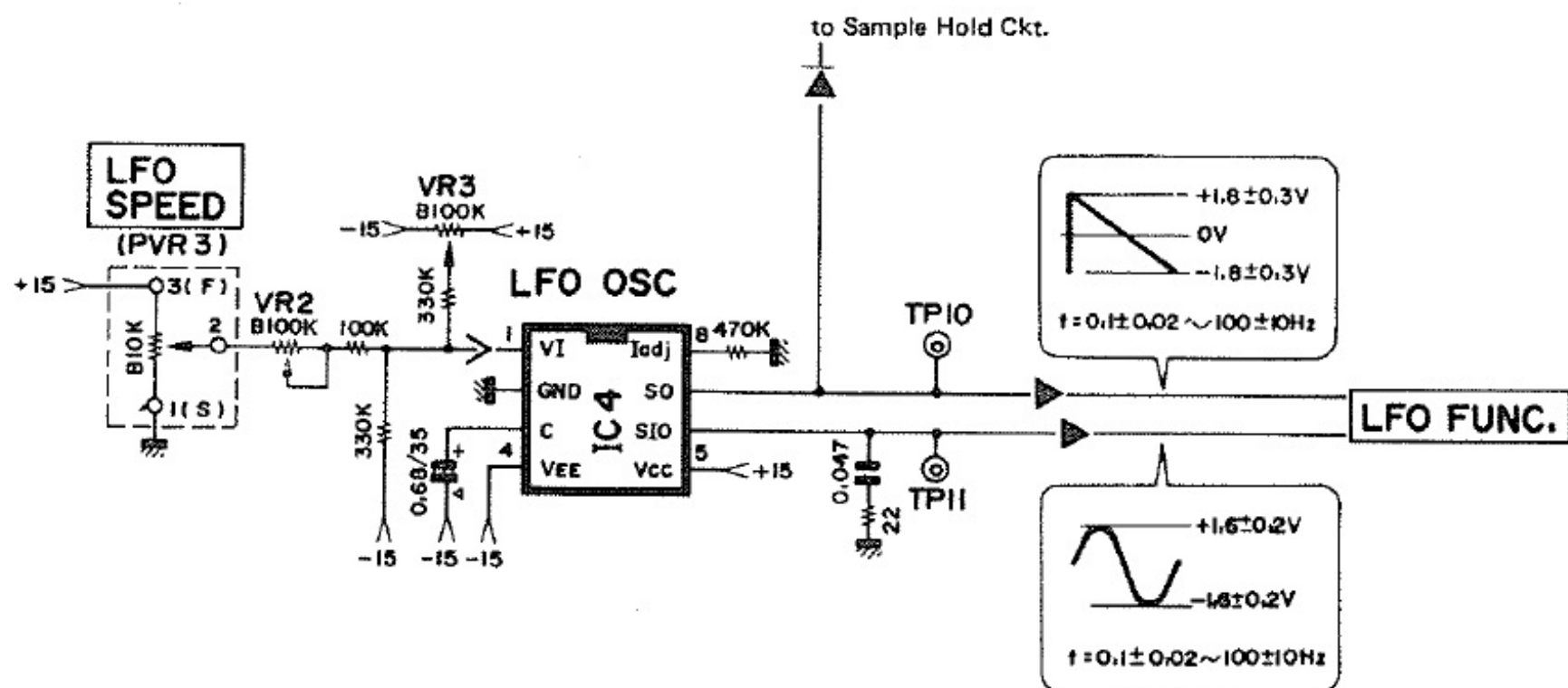


No.	Name	Description	No.	Name	Description
1	VI	Control voltage input			
2	GND	Ground			
3	Co	Capacitor for determination of the frequency			
4	VEE	-15V DC voltage supply			
5	Vcc	+15V DC voltage supply			
6	SIO	Sine wave output			
7	SO	Sawtooth wave output			
8	Io adj.	Reference current adjustment			

● CIRCUIT ILLUSTRATION

MODEL CS-15

CIRCUIT BOARD .. CPA



NJM4558

Part No.

iG00139

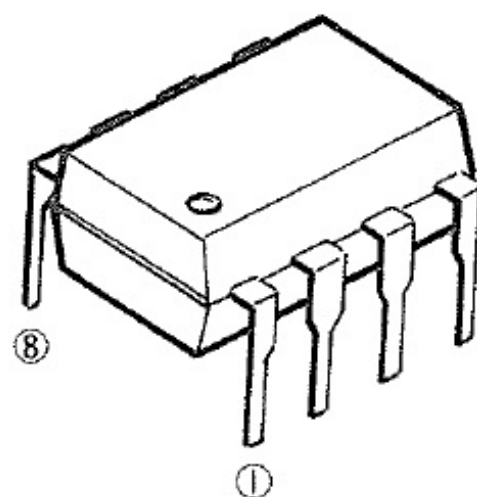
made by

JRC

• FUNCTION

Dual OP Amp.

• OUTLINE DRAWING

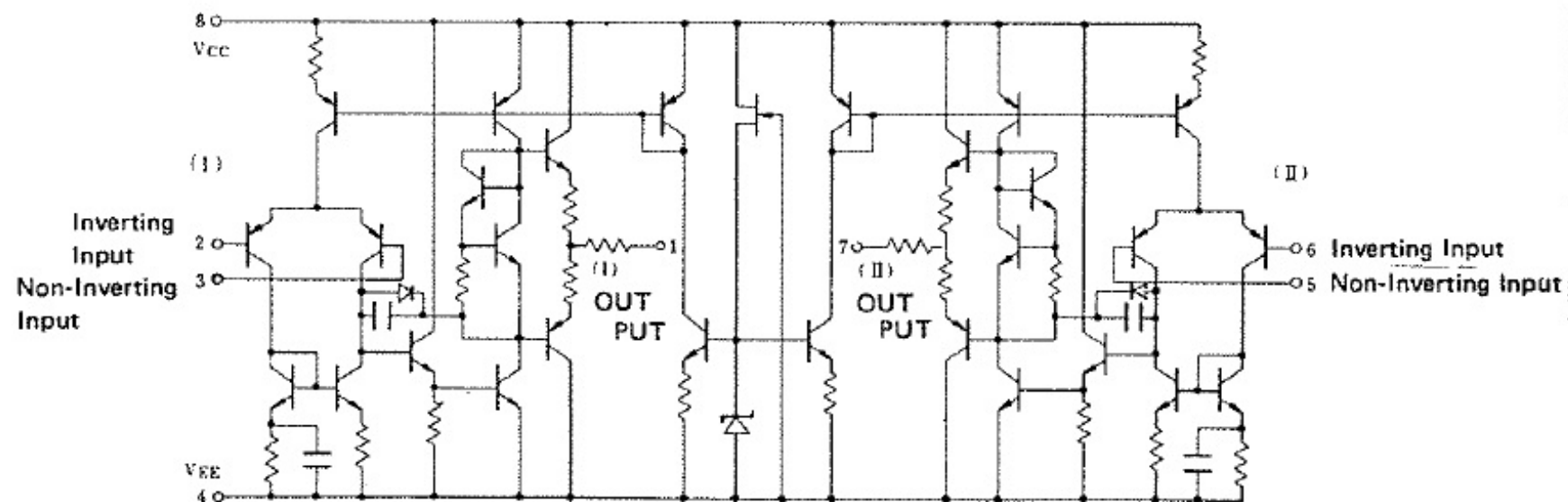


[Interchangeable parts]

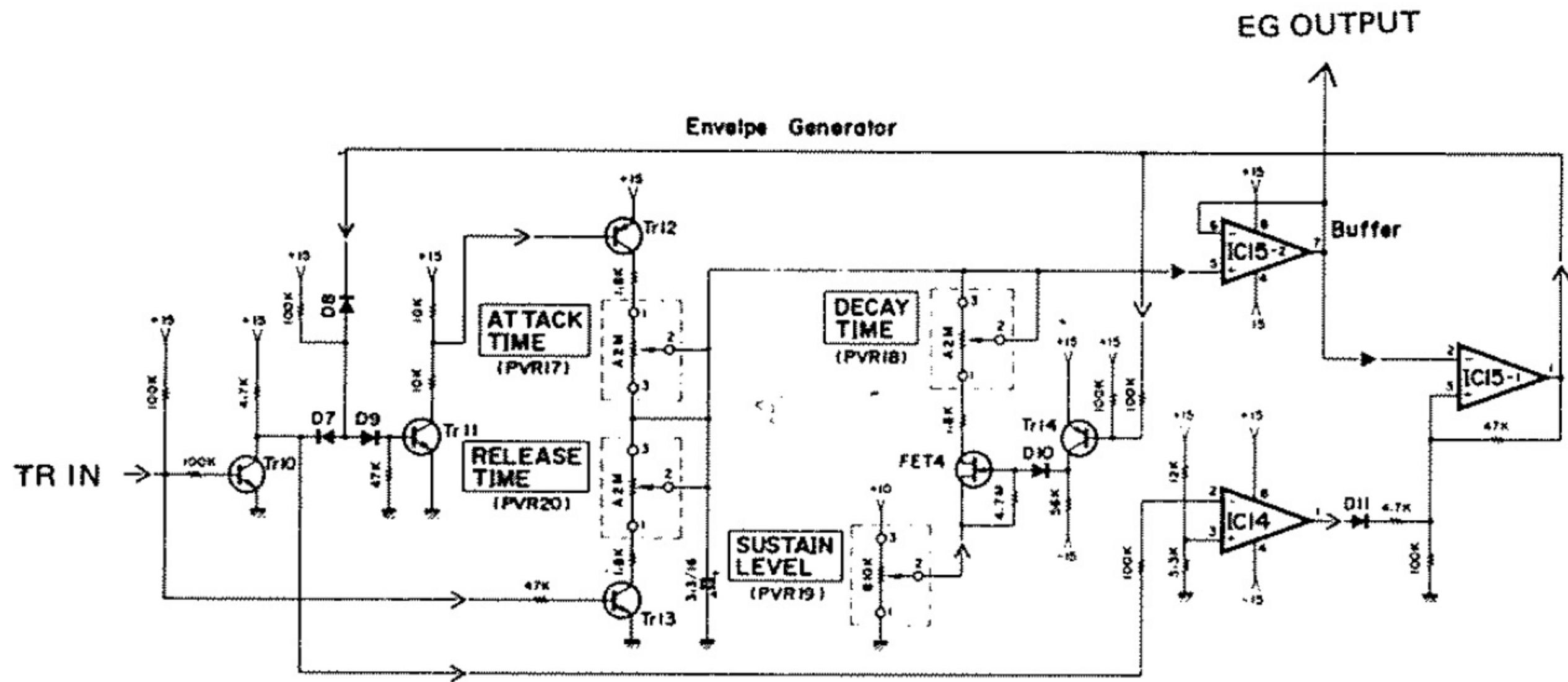
RC4558 RAYTHEON

MC4558 MOTOROLA

• BLOCK & SCHEMATIC DIAGRAM



No.	Name	Description	No.	Name	Description
1	Out 1	Output 1	8	Vcc	+DC voltage supply
2	- IN 1	Inverting input 1	7	OUT2	Output 2
3	+ IN 1	Non-Inverting input 1	6	-IN2	Inverting input 2
4	VEE	-DC voltage supply	5	+IN2	Non-Inverting input 2



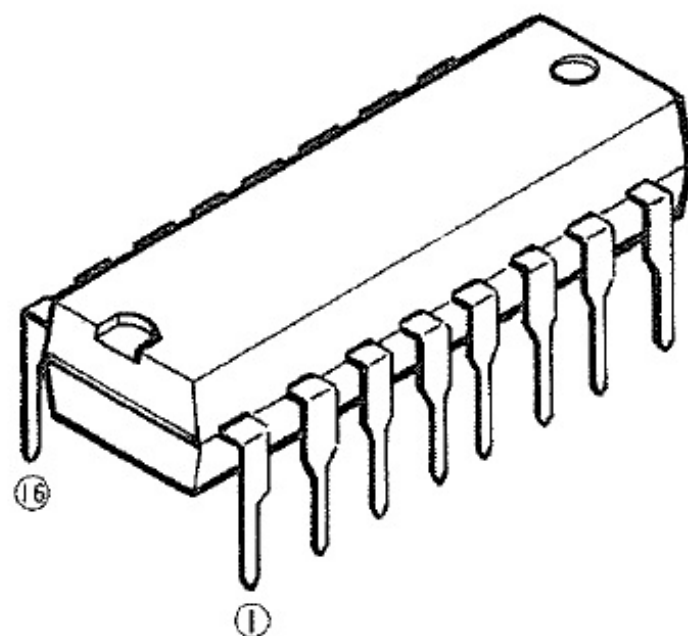
IC4 & 5 NJM4558DV

iG00156

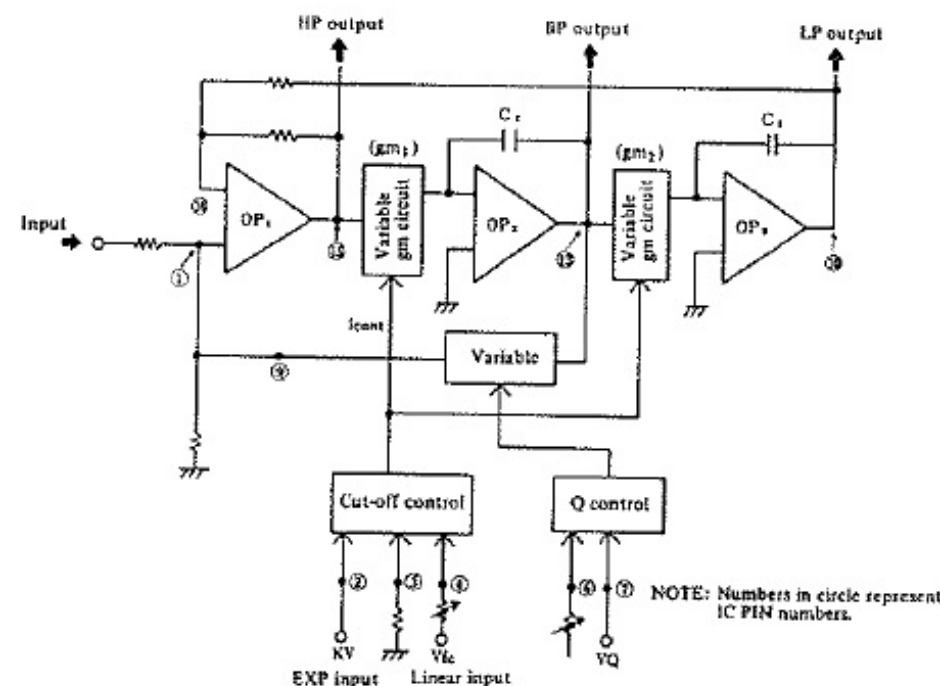
Part No. iG00156
made by MITSUBISHI

• FUNCTION
(+) VCF

• OUTLINE DRAWING



• BLOCK & SCHEMATIC DIAGRAM

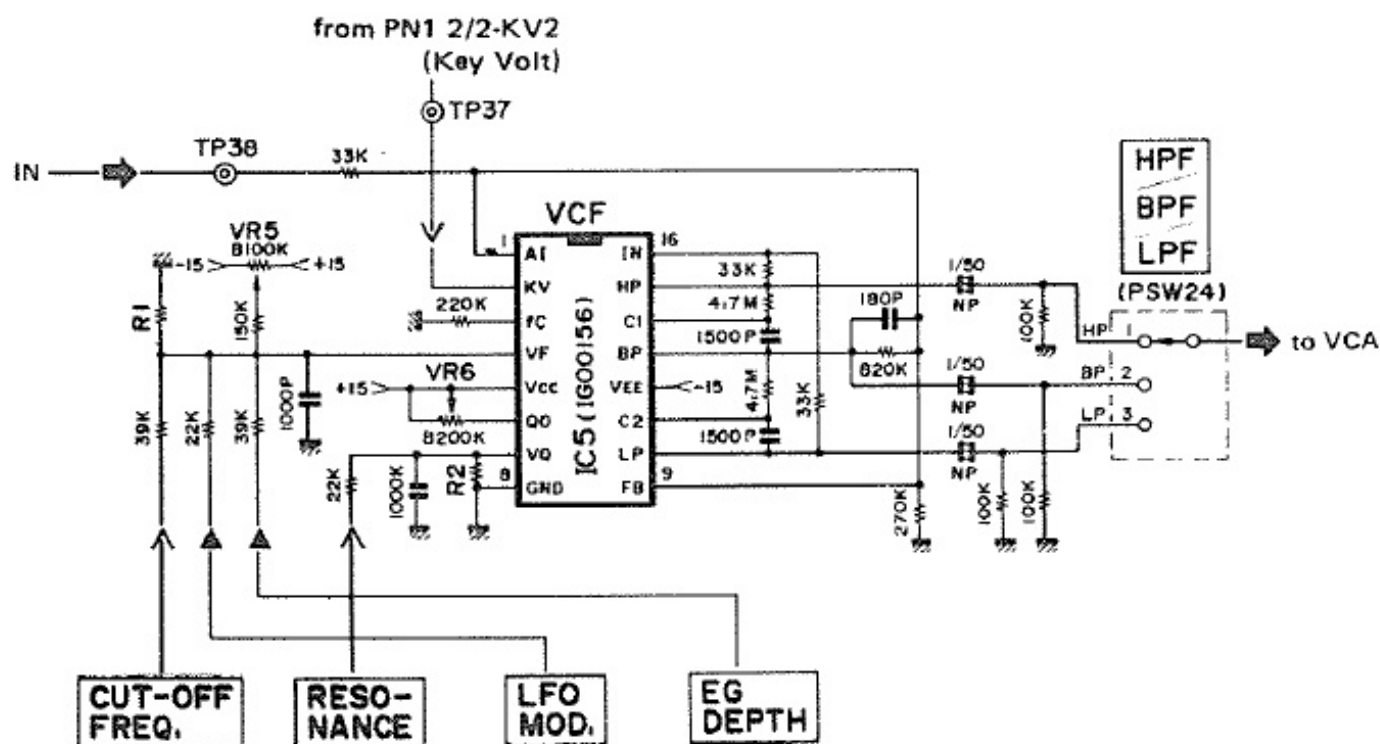


No.	Name	Description	No.	Name	Description
1	AI	Signal input	16	FBIN	Input of feed back
2	KV	Key voltage input	15	HP	Hi-pass output
3	fc	Adjustment of the cut off frequency	14	C ₁	Capacitor1 (fc determination)
4	Vf	Input of the cut off voltage	13	BP	Band-pass output
5	Vcc	+15V DC voltage supply	12	VEE	-15V DC voltage supply
6	Qo	Qo adjustment	11	C ₂	Capacitor2 (fc determination)
7	VQ	Voltage input of Qo control	10	LP	Low-pass output
8	GND	Ground	9	FB	Q feed back

● CIRCUIT ILLUSTRATION

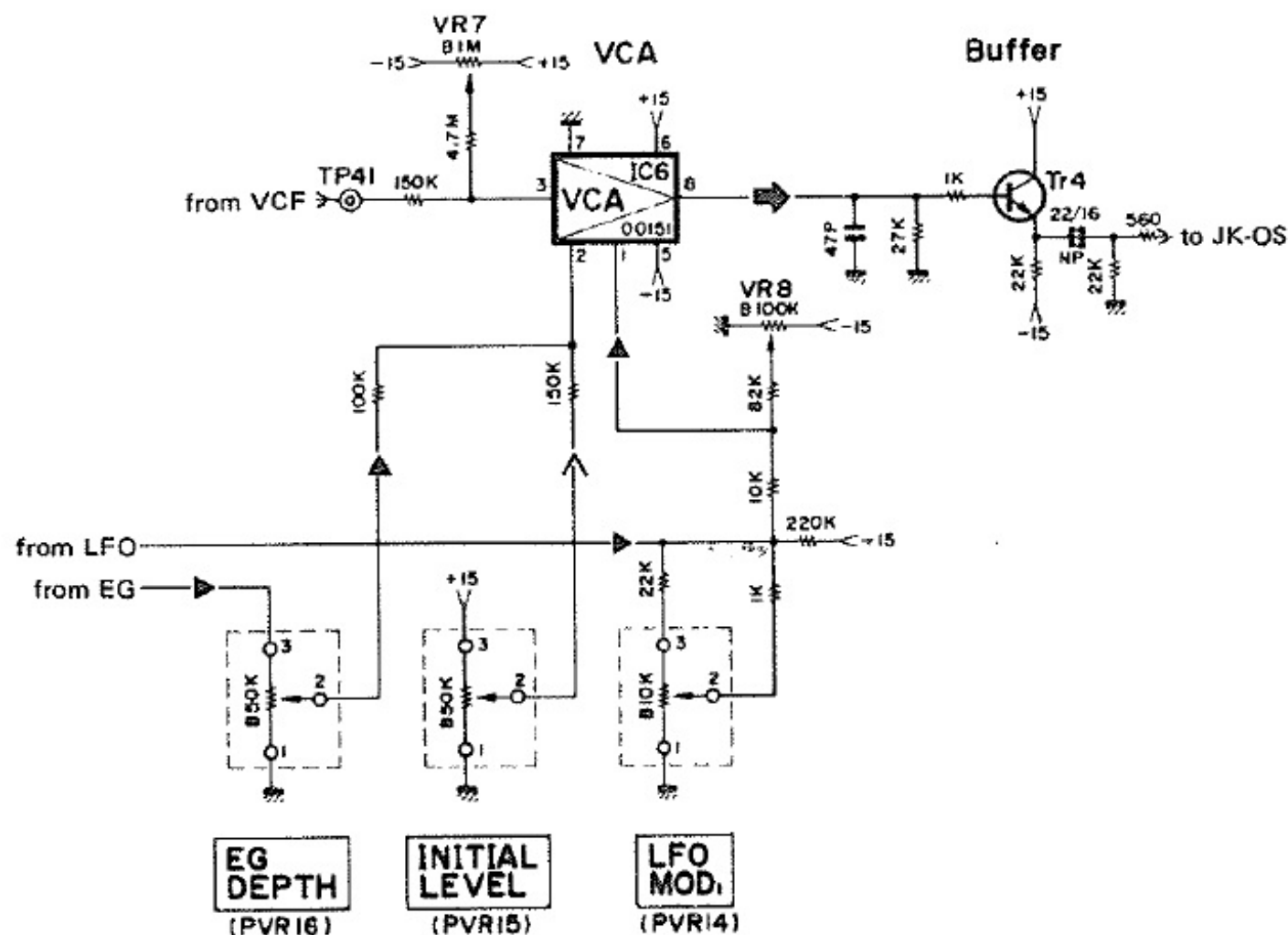
MODEL CS-5

CIRCUIT BOARD . . PN1 1/2



● CIRCUIT ILLUSTRATION

MODELCS-5
CIRCUIT BOARD ..PN1 1/2

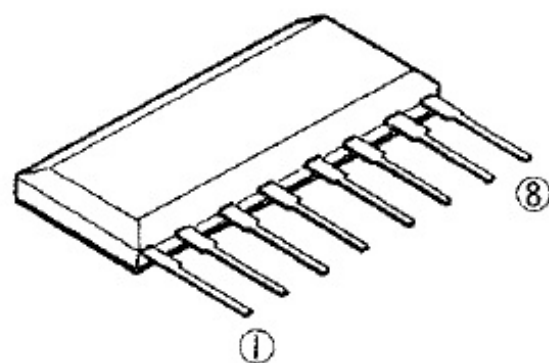


iG00151

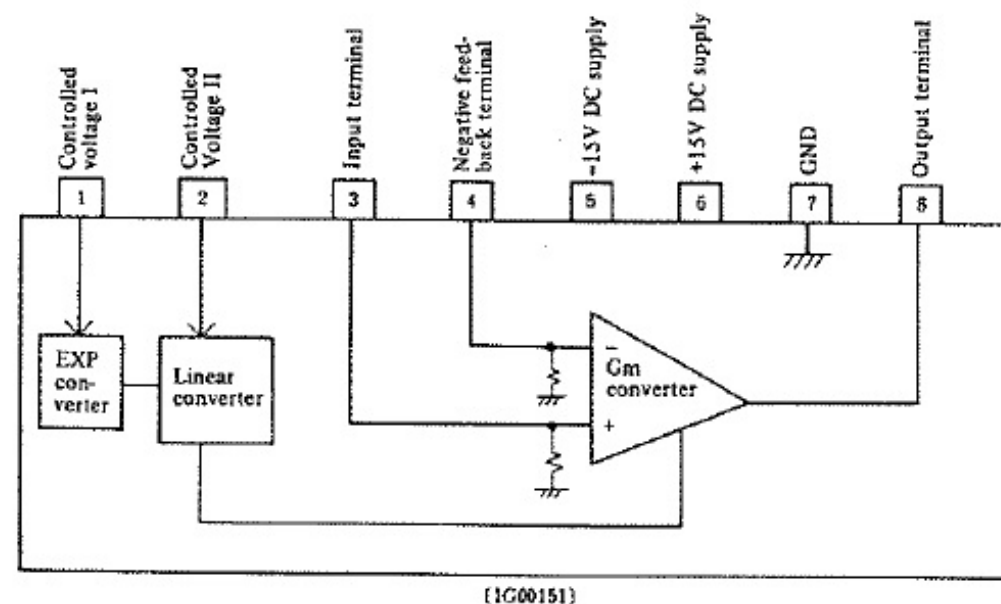
Part No. iG00151
made by MITSUBISHI

• FUNCTION
Voltage Controlled Amplifier

• OUTLINE DRAWING



• BLOCK & SCHEMATIC DIAGRAM



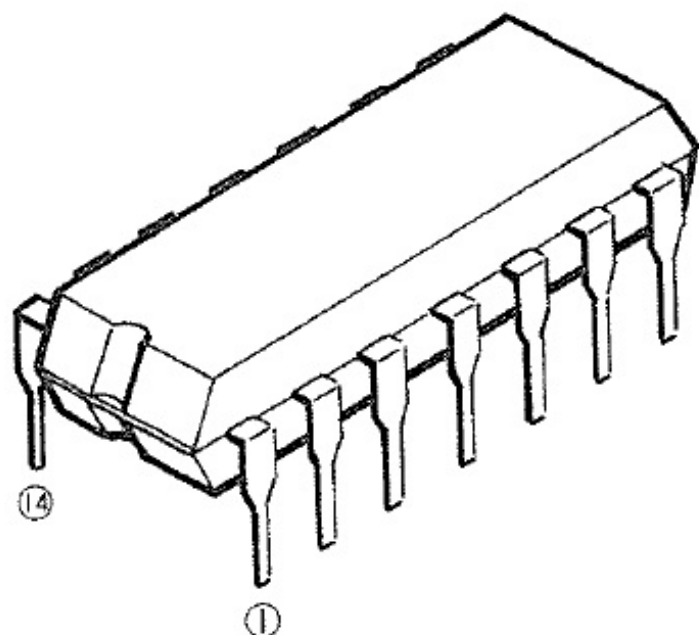
No.	Name	Description	No.	Name	Description
1	EI	Control voltage 1			
2	LI	Control voltage 2			
3	IN	Input			
4	-IN	Negative Feedback			
5	VEE	-DC voltage supply			
6	Vcc	+DC voltage supply			
7	GND	Ground			
8	OUT	Output			

TA7179P

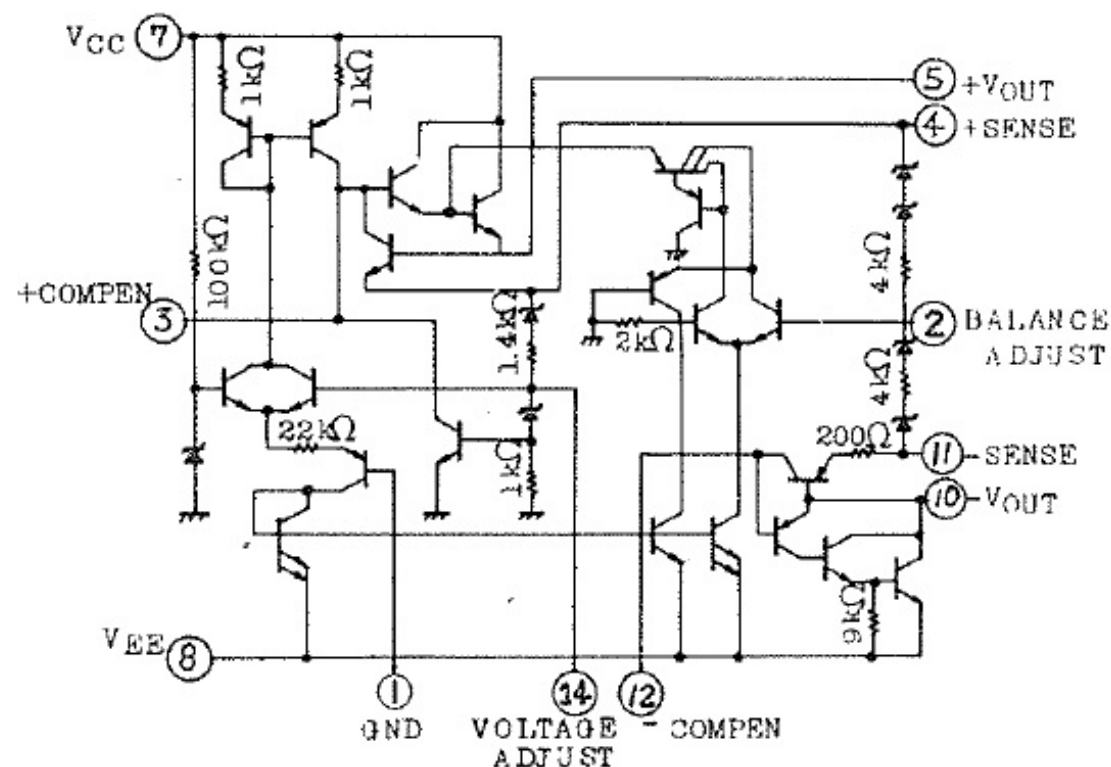
Part No. iG03201
made by TOSHIBA

• FUNCTION
Dual $\pm 15V$ Tracking Regulator

• OUTLINE DRAWING



• BLOCK & SCHEMATIC DIAGRAM



No.	Name	Description	No.	Name	Description
1	GND	Ground	14	ADJ	Voltage adjust
2	BAL	Balance adjust	13	NC	Non connection
3	+COMP	+ Compensation	12	-COMP	- Compensation
4	+SENSE	+ Sense	11	-SENSE	- Sense
5	+V out	+DC voltage output	10	-Vout	-DC voltage output
6	NC	Non-connection	9	NC	Non-connection
7	Vcc	+ Voltage input	8	VEE	- Voltage input

● CIRCUIT ILLUSTRATION

MODEL CS-5

CIRCUIT BOARD . . REG

