AN5534

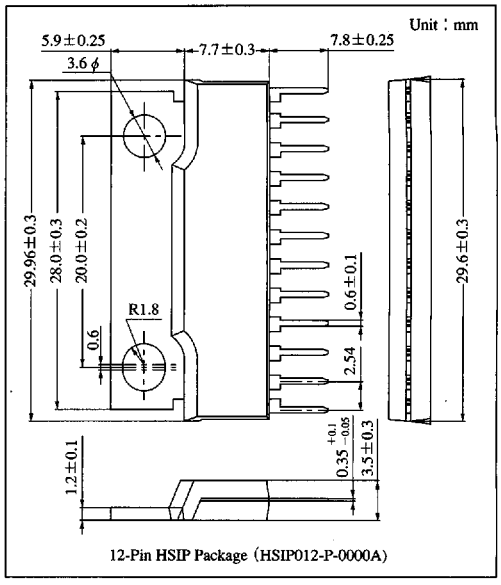
Vertical Deflection Output IC

■ Overview

The AN5534 is a vertical deflection output IC for TV and CRT monitor. It can form an AC/DC feedback-loop by itself with built-in saw-tooth wave generator.

■ Features

- A built-in stable saw-tooth wave generator independent of input pulse width
- 50/60Hz switchable
- Minimum fly-back time of saw-tooth wave signal : 100 μs

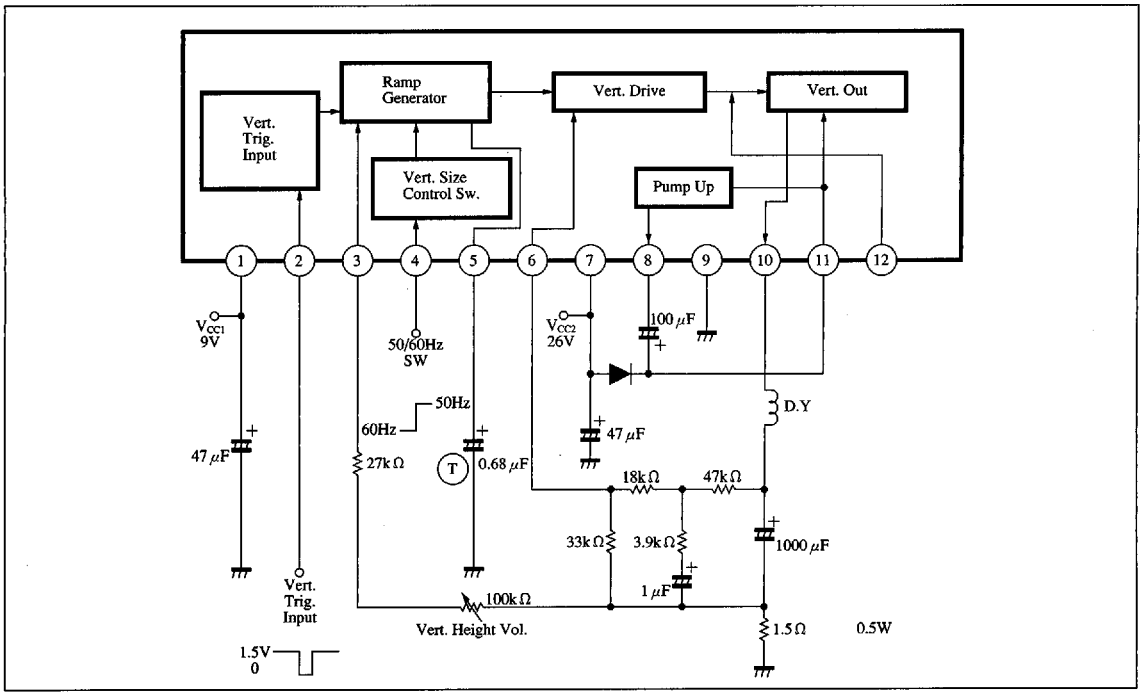


12-Pin HSIP Package (HSIP012-P-0000A)

■ Pin Descriptions

Pin No.	Pin name	Pin No.	Pin name
1	$V_{CC(1)}$	7	$V_{CC(2)}$
2	Ver. pulse input	8	Pulse amplification
3	Ver. amplitude control	9	GND
4	50/60Hz change-over	10	Ver. output
5	Saw-tooth waveform generation	11	Power supply for Ver. output
6	AC/DC feedback input	12	Oscillation prevention

■ Block Diagram



■ Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Supply voltage	V_{CC1}	15	V
	V_{CC2}	30	
Pin voltage	V_{2-9}	0 to 2.7	V
	V_{4-9}	0 to V_{1-9}	V
	V_{10-9}	0 to 61	V
	V_{11-9}	0 to 61	V
	V_{5-9}	0 to V_{1-9}	V
	V_{6-9}	0 to V_{1-9}	V
Supply current	I_{CC1}	20	mA
Pin current	I_3	−0.2 to 0	mA
	I_8	−1.8 to +1.8	A_{O-P}
	I_{10}	−2.2 to +2.2	A_{O-P}
Power dissipation	P_D	27	W
Operating ambient temperature Note1)	T_{opr}	−20 to +70	℃
Storage temperature Note1)	T_{stg}	−55 to +150	℃

Note 1) Ta=25℃ except operating ambient temperature and storage temperature.

■ Recommended Operating Range (Ta=25℃)

Parameter	Symbol	Range
Operating supply voltage range	V_{CC1}	7V to 15V
	V_{CC2}	10V to 30V

■ Electrical Characteristics (Ta=25±2℃)

Parameter	Symbol	Condition	min	typ	max	Unit
Load shorting	R. Short	V_{CC2}=26V	Should not be damaged			—
Deflection current	I_{HP-P}	I_{10} in V_{CC2}=26V, e_0=2.5V_{P-P}	1.8	2.0	2.2	A_{P-P}
Vertical amp. distortion ratio	THD_H	Pin⑩ distortion ratio in V_{CC2}=26V, e_0=2.2V_{P-P}	—	2.0	5.0	%
Input threshold voltage	V_2		0.5	0.7	1.0	V
Saw-tooth wave generating start voltage	V_5		3.6	4.5	5.4	V
Center voltage	V_{MID}		11.5	12.8	14.1	V
Idling current	I_{11}		21.0	36.0	51.0	mA
Output saturation voltage (up)	V_{11-10}	V_{CC5}=0V	—	3.0	4.0	V
Output saturation voltage (down)	V_{10-9}	V_{CC5}=8V	—	1.5	2.5	V
Pump-up charge saturation voltage	V_{8-9}	V_{CC5}=0V	—	0.2	0.5	V
Pump-up discharge saturation voltage	V_{7-8}	V_{CC5}=0V	—	4.3	5.5	V