

AN5753

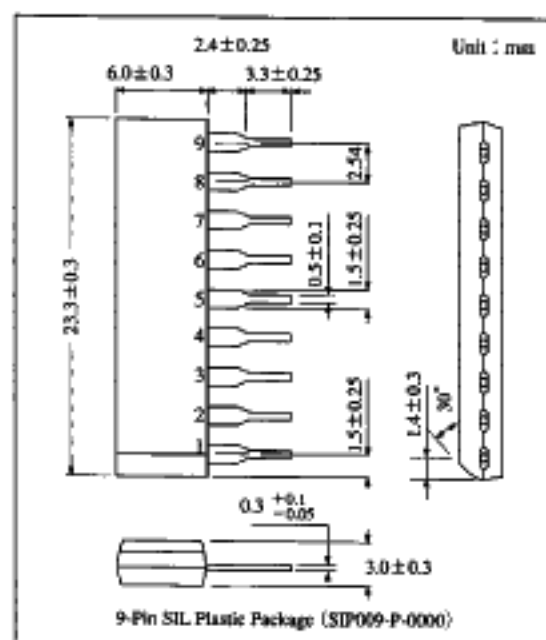
Horizontal Deflection-Signal Processing IC for B/W TV

Overview

The AN5753 is one of the AN5700 series for 12V voltage operating Black/White TV. It is an integrated circuit for B/W TV-horizontal deflection-signal processing circuit.

Features

- Level switch type horizontal oscillation circuit is incorporated, for economical circuit with fewer external components.
- Horizontal oscillator circuit featuring highly stable operation vs. temperature and supply voltage changes
- Low operation starting voltage

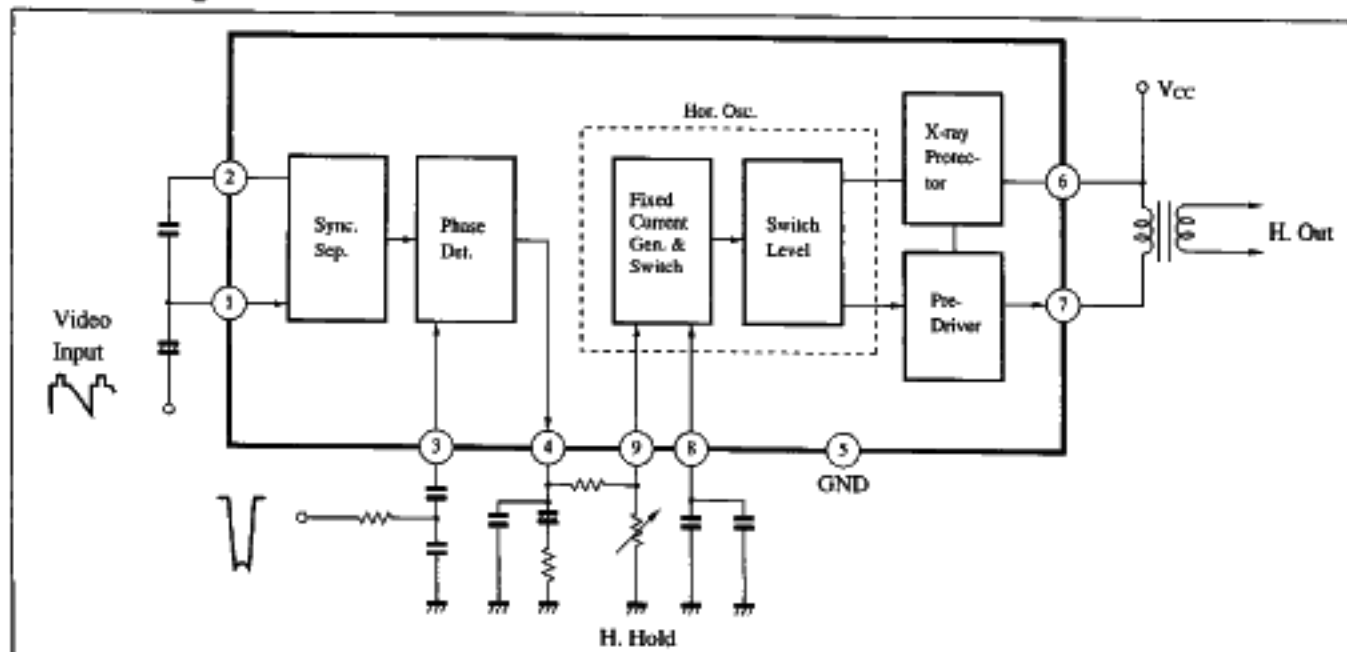


ICs for TV

Pin Descriptions

Pin No.	Pin name	Pin No.	Pin name
1	Video input	6	V _{cc}
2	Sync. sep. output	7	Hor. drive output
3	Flyback pulse input	8	Saw-tooth wave generator
4	AFC output	9	Ref. voltage for H-osc. circuit
5	GND		

Block Diagram



■ Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit	
Supply voltage	V_{CC}	13.2	V	
Supply current	I_{CC}	50	mA	
Power dissipation	P_D	660	mW	
Temperature	Operating ambient temperature	T_{OP}	-20 to +70	$^\circ\text{C}$
	Storage temperature	T_{stg}	-40 to +150	$^\circ\text{C}$

■ Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Condition	min	typ	max	Unit
Total circuit current	I_{tot}	$V_{CC} = 11\text{V}$	25	32	39	mA
Sync. sep. pulse width	$\tau_{(sync)}$	Video input signal 4.5 μs , APL = 50%, 1.5V _{p-p}	4.1	4.7	5.3	μs
Sync. sep. amplification	$V_{(sync)}$	Video input signal 4.5 μs , APL = 50%, 1.5V _{p-p}	9	—	—	V
Horizontal oscillation starting voltage	$V_{OSC(st)}$	$f_{HO} = 11\text{kHz to } 19\text{kHz}$	3	—	—	V
Horizontal pulse width (duty)	$\tau_{(HO)}$	$V_{CC} = 11\text{V}$	28.5	33	38	%
Horizontal oscillation frequency	f_{HO}	$V_{CC} = 11\text{V}$	15.0	15.75	16.5	kHz
f_{HO} supply voltage dependency	$\Delta f_{HO}/V_{CC}$	$f_{HO} _{8.8\text{V}} - f_{HO} _{11\text{V}}$	—	—	130	Hz
f_{HO} ambient temperature dependency	$\Delta f_{HO}/T_a$	$f_{HO} _{-20^\circ\text{C}} - f_{HO} _{60^\circ\text{C}}$	—	—	260	Hz
Frequency control sensitivity	β	$\Delta I_O = \pm 25 \mu\text{A}$	14.6	15.6	16.6	Hz/ μA
Oscillation output saturation voltage	$V_{7.5}$	$V_{CC} = 11\text{V}$ $I_1 = 3 \mu\text{A}$	—	1.2	2	V
Oscillation output driving current	I_1	$V_{CC} = 11\text{V}$ $V_{6.5} = 9\text{V}$	300	—	—	mA
DC loop gain	f_{DC}	$\mu \times \beta$	—	620	—	Hz/ μs
X-ray protection circuit operation voltage	$V_{6.5}$		13.3	14.1	14.6	V

■ Application Circuit

