

AN5753

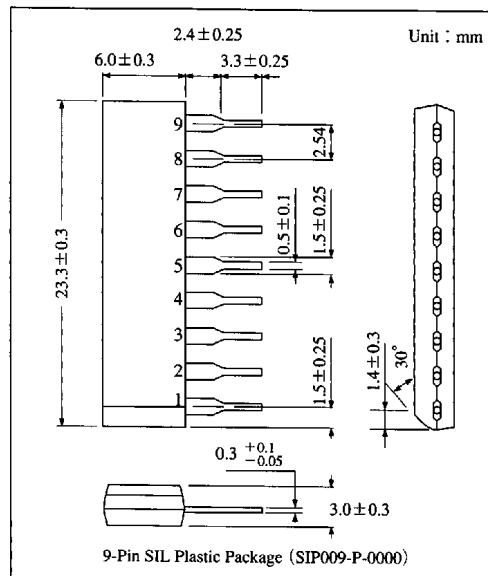
Horizontal Deflection-Signal Processing IC for B/W TV

■ 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

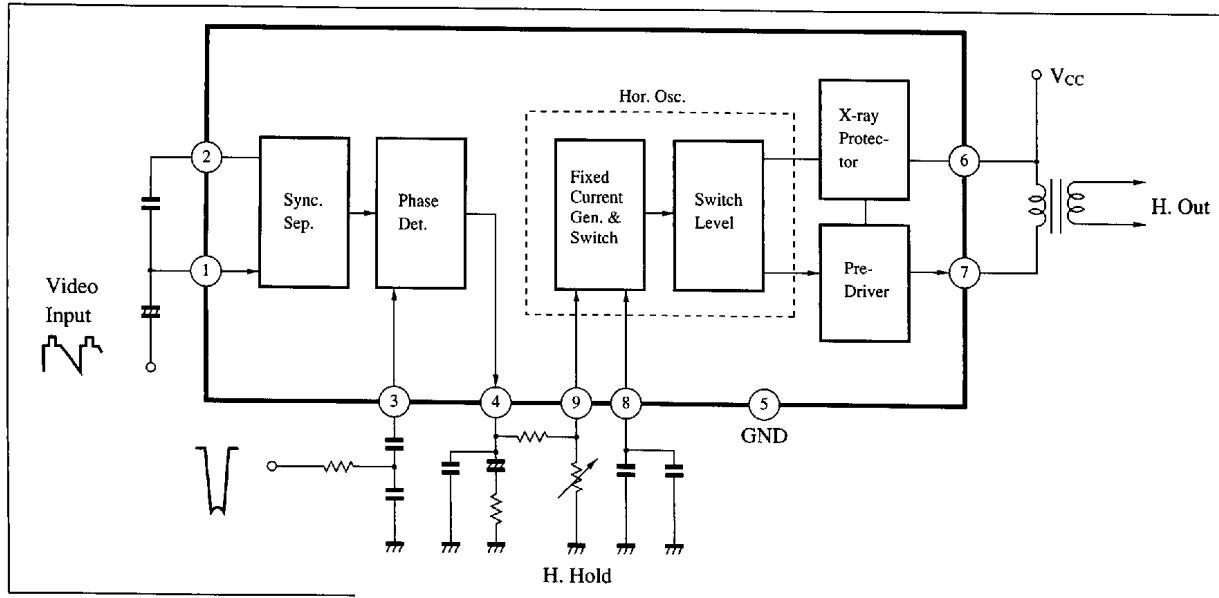


ICs for
TV

■ 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 (Ta=25°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 _{opr}	−20 to +70
	Storage temperature	T _{stg}	−40 to +150

■ Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	min	typ	max	Unit
Total circuit current	I _{tot}	V _{CC} =11V	25	32	39	mA
Sync. sep. pulse width	τ _(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-(H)}	f _{HO} =11kHz to 19kHz	3	—	—	V
Horizontal pulse width (duty)	τ _(HO)	V _{CC} =11V	28.5	33	38	%
Horizontal oscillation frequency	f _{HO}	V _{CC} =11V	15.0	15.75	16.5	kHz
f _{HO} supply voltage dependency	Δf _{HO} /V _{CC}	f _{HO} 8.8V − f _{HO} 11V	—	—	130	Hz
f _{HO} ambient temperature dependency	Δf _{HO} /Ta	f _{HO} −20°C − f _{HO} 60°C	—	—	260	Hz
Frequency control sensitivity	β	ΔI _O =±25 μA	14.6	15.6	16.6	Hz/μA
Oscillation output saturation voltage	V ₇₋₅	V _{CC} =11V I _I =3 μA	—	1.2	2	V
Oscillation output driving current	I ₇	V _{CC} =11V V ₈₋₅ =9V	300	—	—	mA
DC loop gain	f _{DC}	μ × β	—	620	—	Hz/μs
X-ray protection circuit operation voltage	V ₆₋₅		13.3	14.1	14.6	V

■ Application Circuit

