AN5753

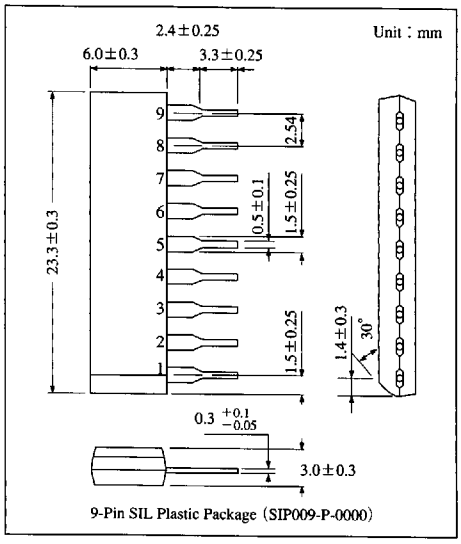
Horizontal Deflection-Signal Processing IC for B/W TV

■ 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

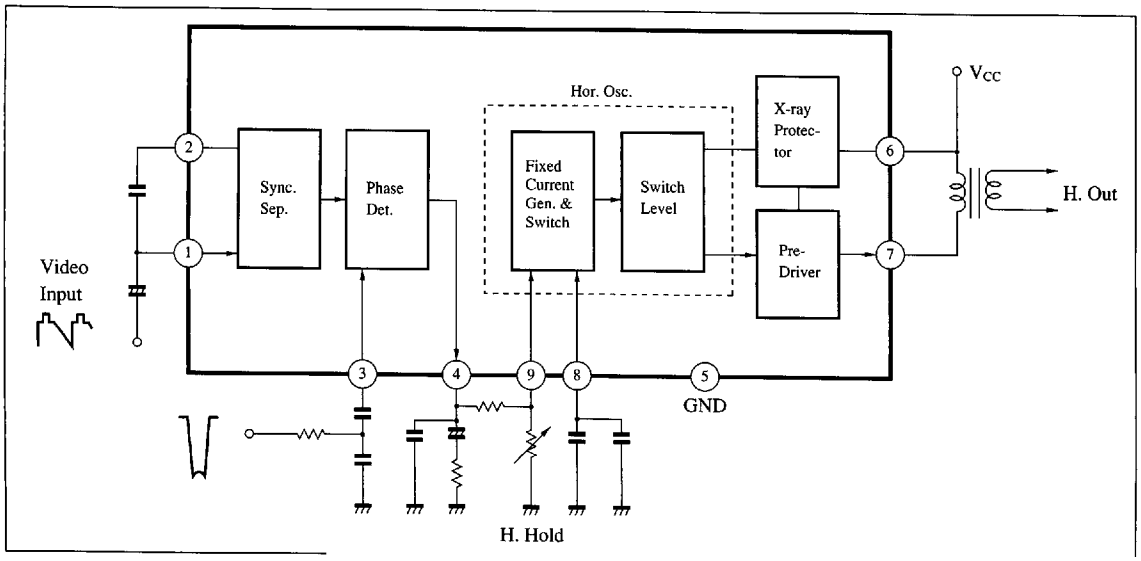


9-Pin SIL Plastic Package (SIP009-P-0000)

■ 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℃)

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℃)

Parameter	Symbol	Condition	min	typ	max	Unit
Total circuit current	I_{tot}	V_{CC}=11V	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	$\upsilon_{(sync)}$	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)	$\tau_{(HO)}$	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	$\Delta f_{HO}/V_{CC}$	f_{HO}|8.8V−f_{HO}|11V	—	—	130	Hz
f_{HO} ambient temperature dependency	$\Delta f_{HO}/Ta$	f_{HO}|−20℃−f_{HO}|60℃	—	—	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