ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089

NTE1295
Integrated Circuit
TV Signal Processor

Description:

The NTE1295 is an integrated circuit in an 18–Lead DIP type package designed for color TV deflection signal processing circuit. It can be operated with 12V power supply and is suitable for compact and medium–sized color TV sets.

Features:

- Built–In Vertical Deflection Driver Circuit
- Incorporating Vertical and Horizontal Oscillator Circuit, Operations Highly Stable Against Changes in Supply Voltage and Temperature.
- Highly Stable Synchronous Separation Circuit Against Noise
- Built–In High Tension Protector Circuit (X–Ray Protection)
- 12V Supply Voltage Operation.

Absolute Maximum Ratings: (T_A = +25°C, Note 1 unless otherwise specified)

Supply Voltage
- $V_{7–8}$ 10.5V
- $V_{15–8}$ 14.4V

Circuit Voltage
- $V_{1–8}$ . . . . . 0 to 10V
- $V_{10–8}$ . . . . . 0 to $V_{15–8}$
- $V_{12–8}$ . . . . . 0 to $V_{15–8}$
- $V_{17–8}$ . . . . . –0.6 to 6.0V
- $V_{18–8}$ . . . . . –3 to +2V

Supply Current
- I_7 . . . . . 15mA
- I_{15} 20mA

Circuit Current
- I_2 . . . . . –3 to +3mA
- I_3 . . . . . –5 to 0mA
- I_4 . . . . . –5 to +5mA
- I_5 . . . . . –1 to +1mA
- I_6 . . . . . –20 to 0mA
- I_9 . . . . . –15 to 0mA
- I_{12} . . . . . –1 to +150mA
- I_{13} . . . . . 0 to 40mA

Power Dissipation, P_D 450mW

Operating Ambient Temperature Range, T_{opr} . . . . . –20° to +70°C

Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

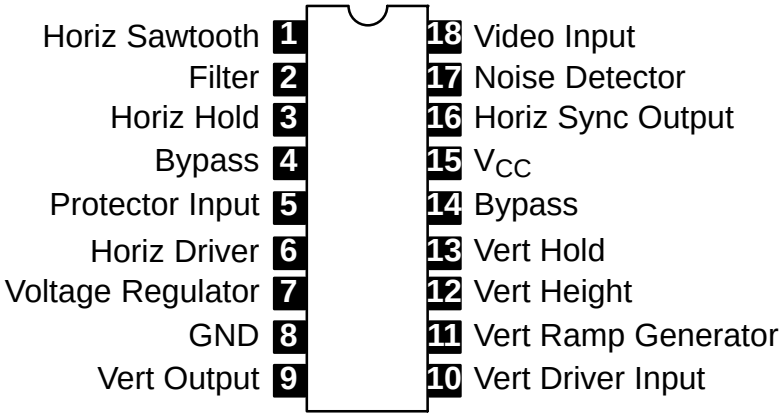
Note 1. $\oplus$ and $\ominus$ are flow–in and flow–out currents to/from the circuit, respectively.

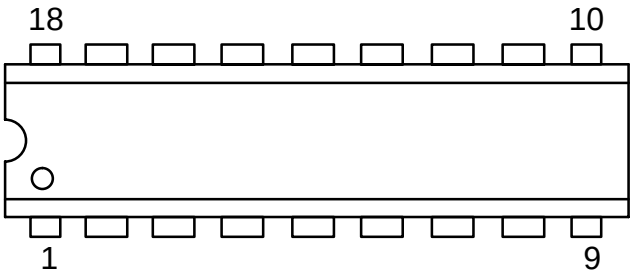
Electrical Characteristics: (T_A = +25°C unless otherwise specified)

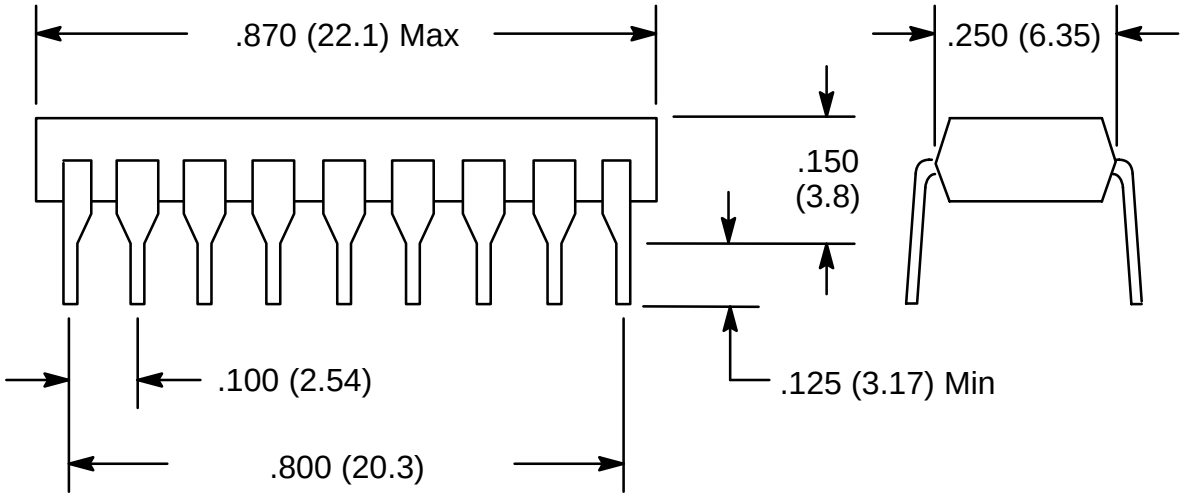
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Circuit Current	I_7	Apply 12V with 240Ω to Pin7	7.5	11.2	15.0	mA
	I_{15}	$V_{15–8}$ = 12V	15.5	23.0	32.0	mA
Protector Operating Voltage	$V_{5–8}$	Apply 12V with 240Ω to Pin7	0.64	0.70	0.76	V
Oscillation Starting Voltage (V • O_{sc})	$V_{OSC–S}$	f_{VO} = 40 to 70Hz, 1.0$V_{P–P}$ or More	–	–	6.2	V
Vertical Oscillation Frequency	f_{VO}	V_{CC1} = 12V	53	55	58	Hz
f_{VO} Change with Supply Voltage	$\Delta f_{VO}/V_{CC}$	$f_{VO\|9.6V}$ to $f_{VO\|14.4V}$	0	0.93	1.3	Hz
Pulse Width (V • O_{sc})	τ	V_{CC1} = 12V	500	600	820	µs
Vertical Pull–In Range	f_{VP}	R_{OSC} = 10.93kΩ, (f_{VO} = 48 ±1.5Hz)	–	–	50	Hz
Vertical Sawtooth Wave Amplification	$v_{(saw)}$	R_{SAW} = 26.4kΩ	1.8	2.0	2.2	$V_{P–P}$
f_{VO} Change with Ambient Temperature	$\Delta f_{VO}/T_A$	T_A = –20° to +70°C, Note 2	–220	–170	0	ppm/°C
$v_{(saw)}$ Change with Ambient Temperature	$\Delta v_{(saw)/T}A$	T_A = –20° to +70°C, Note 2	–	–	30	$mV_{P–P}$/°C
Vertical Output Tr Drive Current	I_9		–	–	7.5	mA
Oscillation Starting Voltage (H • O_{sc})	$V_{OSC–S}$	f_{HO} = 10 to 20kHz, 1.4$V_{P–P}$ or More (V_{CC2} = 6.5V)	–	–	6	V
Horizontal Oscillation Frequency	f_{HO}	V_{CC2} = 12V	15.0	15.6	16.25	kHz
f_{HO} Change with Supply Voltage	$\Delta f_{HO}/V_{CC}$	$f_{HO\|13V}$ to $fH_{O\|10V}$	0	25	45	Hz
Pulse Width Duty Ratio (H • O_{sc})	τ	V_{CC2} = 12V	32.0	36.0	39.5	%
f_{HO} Control Sensitivity	β	I_O = ±100mA	19	21	23	Hz/µA
f_{HO} Change with Ambient Temperature	$\Delta f_{HO}/T_A$	T_A = –20° to +70°C, Note 2	–210	–100	0	ppm/°C
AFC Loop Gain	f_{AFC}	μ x β	5800	7700	9600	Hz/rad

Note 2. Design reference value.

Pin Connection Diagram




18
10
1
9


.870 (22.1) Max
.250 (6.35)
.150
(3.8)
.100 (2.54)
.125 (3.17) Min
.800 (20.3)