

NTE1804 Integrated Circuit Vertical Deflection Circuit for Large Screen TV

Description:

The NTE1804 is an integrated circuit in a 13-Lead SIP type package designed for vertical deflection in video monitors and large screen color television receivers, e.g. 30AX and PIL-S4 systems.

Features:

- Oscillator; Switch Capability for 50Hz/60Hz Operation
- Synchronization Circuit
- Blanking Pulse Generator with Guard Circuit
- Sawtooth Generator with Buffer Stage
- Preamplifier with Fed-Out Inputs
- Output Stage with Thermal and Short-Circuit Protection
- Flyback Generator
- Voltage Stabilizer

Absolute Maximum Ratings:

Supply Voltage (V_9), V_{CC} 40V
Supply Voltage Output Stage (Pin5), V_5 58V

Voltages

Pin3, V_3 7V
Pin13, V_{13} 7V
Pin4 & Pin10, V_4 , V_{10} 24V
Pin6, V_6 58V
Pin6, $-V_6$ 0V
Pin7 & Pin11, V_7 , V_{11} 40V

Currents

Pin1, I_1 0mA
Pin1, $-I_1$ 1mA
Pin2, $\pm I_2$ 10mA
Pin3, I_{P3} 0mA
Pin3, $-I_3$ 5mA
Pin7, I_7 1.2A
Pin7, $-I_7$ 1.5A
Pin11, I_{11} 50mA
Pin11, $-I_{11}$ 1mA
Pin12, I_{12} 3mA
Pin12, $-I_{12}$ 0mA

Operating Ambient Temperature Range, T_A -20° to $+85^\circ\text{C}$

Storage Temperature Range, T_{stg} -25° to $+150^\circ\text{C}$

Note 1. Pin5, Pin6, and Pin8: internally limited by the short-circuit protection circuit.

Note 2. Total power dissipation: internally limited by the thermal protection circuit.

DC Electrical Characteristics: ($T_A = +25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Voltage	V_{CC}		9	–	30	V
Output Voltage	V_6	$-I_6 = 1.1\text{A}$	$V_5 - 2.2$	$V_5 - 1.9$	–	V
		$I_6 = 1.1\text{A}$	–	1.3	1.6	V
Flyback Generator Output Voltage	V_7	$-I_6 = 1.1\text{A}$	–	$V_{CC} - 2.2$	–	V
Peak Output Current	$\pm I_6$		–	–	1.2	A
Flyback Generator Peak Current	$\pm I_7$		–	–	1.2	A
Feedback						
Input Quiescent Current	$-I_4, -I_{10}$		–	0.1	–	μA
Synchronization						
Sync Input Pulse	V_2		1	–	12	V
Tracking Range			–	28	–	%
Oscillator/Sawtooth Generator						
Oscillator Frequency Control Input Range	V_1		6	–	9	V
Sawtooth Generator Output Voltage	V_3		0	–	$V_{CC} - 1$	V
	V_{11}		0	–	$V_{CC} - 2$	V
Sawtooth Generator Output Current	$-I_3$		0	–	4	mA
	I_{11}		–2	–	–	μA
			–	–	+30	mA
Oscillator Temperature Dependency	$(\Delta f/f)/\Delta T_C$	$T_C = +20^{\circ}$ to $+100^{\circ}\text{C}$	–	10^4	–	$^{\circ}\text{C}$
Oscillator Voltage Dependency	$(\Delta f/f)/\Delta V_S$	$V_S = 10\text{V}$ to 30V	–	4×10^4	–	V^{-1}
Blanking Pulse Generator						
Output Voltage	V_2	$V_S = 24\text{V}, I_2 = 1\text{mA}$	–	18.5	–	V
Output Current	$-I_2$		–	–	3	mA
Output Resistance	R_2		–	410	–	Ω
Blanking Pulse Duration	t_B	At 50Hz Sync	–	1.4 ± 0.07	–	ms
50Hz/60Hz Switch Capability						
Saturation Voltage, LOW Voltage Level	V_{12}		–	1	–	V
Output Leakage Current	I_{12}		–	1	–	μA

Pin Connection Diagram (Front View)

