

NTE1300 Integrated Circuit TV Remote Control

Description:

The NTE1300 is a silicon monolithic integrated circuit in an 8-Lead SIP type package designed for use as a Frequency Servo Control System for tape recorders and VCRs.

Functions:

- Wave Shaping Circuit
- Sawtooth Wave Generator
- Comparator
- DC Amplifier
- Regulator

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Supply Voltage, V_{CC} 17V
 Input Voltage, V_i +4.5V to -2.0V
 Power Dissipation, P_D 600mW
 Operating Temperature Range, T_{opr} -10° to $+60^\circ\text{C}$
 Storage Temperature Range, T_{stg} -50° to $+125^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Current	I_D	$V_{CC} = 15\text{V}$, 437Hz, Pulse Input	4.0	7.0	10.0	mA
Pin8 Voltage	V_8	$V_{CC} = 15\text{V}$, 437Hz, Sine $1V_{P-P}$	4.55	4.80	5.00	V
Pin5 Voltage	V_5	$V_{CC} = 15\text{V}$, No Input Signal	10.3	11.2	12.0	V
Reference Voltage	V_{ref}	$V_{CC} = 15\text{V}$, No Input Signal	1.76	1.88	2.00	V
Pin3 Voltage	$V_3 (1)$	$V_{CC} = 15\text{V}$, No Input Signal	—	40	70	mV
	$V_3 (2)$	$V_{CC} = 15\text{V}$, No Input Signal	—	1.0	5.0	mV
Pin5 Output Voltage	$V_g (1)$	$V_{CC} = 15\text{V}$, 437Hz, Pulse Input	2.5	2.8	3.1	V
	$V_g (2)$	$V_{CC} = 20\text{V}$, 437Hz, Pulse Input	2.5	2.9	3.2	V
Saturation Voltage	$V_{sat} (1)$	$V_{CC} = 15\text{V}$, No Input Signal	—	130	200	mV
	$V_{sat} (2)$	$V_{CC} = 15\text{V}$, No Input Signal	—	140	200	mV
Output Voltage	V_{out}	$V_{CC} = 15\text{V}$, 437Hz, Pulse Input	1.0	1.6	2.5	V
Maximum Output Current	I_{out}	$V_{CC} = 15\text{V}$, 437Hz, Pulse Input	10	15	20	mA
Voltage Difference	ΔV	$\Delta V = (V_g (1)) - (V_{out})$	1.0	1.3	1.6	V
Output Pulse Width	PW	$V_{CC} = 15\text{V}$, 437Hz, Sine $1V_{P-P}$	100	150	200	μs

Pin Connection Diagram
(Front View)

