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NTE1700 Integrated Circuit 2, 4, & 6 Hour Auto Discriminator for VCR

Description:

The NTE1700 is an integrated circuit in an 18-Lead DIP type package designed for 2Hr/4Hr/6Hr auto-automatic selection in video cassette recorders.

Features:

- The Functions Consist of:
 - Capstan FG Frequency Divider
 - Monostable Multivibrator
 - Sample & Hold Circuit
- Supply Voltage Either 9V or 12V

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

Supply Voltage, V_{CC} 13V
 Power Dissipation ($T_A = +70^{\circ}\text{C}$), P_D 500mW
 Operating Ambient Temperature Range, T_{opr} -20° to $+70^{\circ}\text{C}$
 Storage Temperature Range, T_{stg} -40° to $+150^{\circ}\text{C}$

Electrical Characteristics: ($V_{CC} = V_{14-1} = 12\text{V}$, $T_A = +25^{\circ}\text{C} \pm 2^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Current	I_{14}		24	–	40	mA
Input Blind Level	V_2		–	–	150	mV _{P-P}
Playback Control Amp Sensitivity	S_2		350	–	–	mV _{P-P}
X9 Select Sensitivity	S_3	SW. A to 1	3.3	–	–	V
X2 Select Sensitivity	S_{4-1}	SW. A to 2	5.5	–	–	V
1/2 Slow Select Sensitivity	S_{4-2}	SW. A to 3	–	–	1.45	V
Triangular Wave Reference Voltage	V_7	$V_{6-1} = 0$, from Pin7 30k Ω to GND	2.9	–	3.6	V
Pause "L" Voltage	V_{11}	$V_{5-1} = 7\text{V}$, $V_{10-1} = 5.5\text{V}$	3.3	–	4.1	V
S/H Output Voltage	V_{OL11}	SW. to 1	1.85	–	2.15	V
	$V_{O(C-11)}$	SW. to 3	3.25	–	3.80	V
	V_{OH11}	SW. to 2	6.25	–	7.15	V

Note 1. Operating Supply Voltage: $V_{CC(opr)} = 8.5\text{V}$ to 12.5V

Electrical Characteristics (Cont'd): ($V_{CC} = V_{14-1} = 12V$, $T_A = +25^{\circ}C \pm 2^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
2H Select Sensitivity	S_{12-1}	$V_{13-1} = 3.3V$, SW. to 1	5.5	–	–	V
4H Select Sensitivity	S_{12-2}	$V_{13-1} = 3.3V$, SW. to 2	2.4	–	3.8	V
6H Select Sensitivity	S_{12-3}	$V_{13-1} = 3.3V$, SW. to 3	–	–	1.45	V
Record Select Sensitivity	S_{13}		3.3	–	–	V
A Output "H" Voltage	V_{15H}	$I_{15-1} = -3mA$, $V_{12-1} = 1.45V$, $V_{13-1} = 3.3V$	10	–	–	V
A Output "L" Voltage	V_{15L}	$I_{15-1} = 5mA$, $V_{12-1} = 5.5V$, $V_{13-1} = 3.3V$	–	–	0.55	V
B Output "H" Voltage	V_{16H}	$I_{16-1} = -3mA$, $V_{12-1} = 1.45V$, $V_{13-1} = 3.3V$	10	–	–	V
B Output "L" Voltage	V_{16L}	$I_{16-1} = 5mA$, $V_{12-1} = 5.5V$, $V_{13-1} = 3.3V$	–	–	0.55	V
Muting Output "H" Voltage	V_{18H}		5.2	–	–	V
Muting Output "L" Voltage	V_{18L}		–	–	0.2	V
A Schmitting Output "H" Voltage	$V_{OH(A)}$		5.6	–	6.5	V
A Schmitting Output "L" Voltage	$V_{OL(A)}$		2.8	–	3.4	V
B Schmitting Output "H" Voltage	$V_{OH(B)}$		4.15	–	4.8	V
B Schmitting Output "L" Voltage	$V_{OL(B)}$		2.8	–	3.4	V

Note 1. Operating Supply Voltage: $V_{CC(opr)} = 8.5V$ to $12.5V$

Pin Connection Diagram



