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NTE1540 Integrated Circuit B/W TV Synchronization, Deflection Circuit

Features:

- Multifunction and small size (16 Lead DIP)
- Minimum number of parts required
- Horizontal and vertical oscillators being stable to variation of ambient temperature and supply voltage owing to small warming-up drift.
- Small variation of horizontal oscillation frequency.
- Good linearity and interlace owing to DC bias at vertical output stage being sampling controlled within retrace time.
- Vertical blanking pulse width being freely set up according to peripheral parts.

Functions:

- Synchro Separator
- Horizontal AGC
- Vertical Driver
- Horizontal & Vertical Oscillator
- Vertical Blanking Pulse Making

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

Maximum Supply Voltage, V_{12}, V_{15} 14V
 Allowable Power Dissipation ($T_A = +60^\circ\text{C}$), P_{Dmax} 450mW
 Operating Temperature Range, T_{opr} -20° to $+85^\circ\text{C}$
 Storage Temperature Range, T_{stg} -55° to $+125^\circ\text{C}$

Recommended Operating Conditions: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Supply Voltage, V_{12}, V_{15} 12V

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{12} = V_{15} = 12\text{V}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
V_{CC12} Current Drain	I_{CC12}		10.0	-	19.0	mA
V_{CC15} Current Drain	I_{CC15}		6.0	-	11.0	mA
Vertical Frequency Pull-In Range			9.0	-	11.0	Hz
Vertical Free-Running Frequency	f_V	f_V center 55Hz	50	-	60	Hz
Supply Voltage Dependence of Vertical Frequency		$V_{12} = 12 \pm 1\text{V}$, 55Hz at 12V	-0.5	-	+0.5	Hz
Temperature Characteristic of Vertical Frequency		$T_A = -10^\circ$ to $+60^\circ\text{C}$	-0.028	-	+0.028	Hz/ $^\circ\text{C}$
Vertical Driver Amplification Factor			4.0	-	7.0	times

Electrical Characteristics (Cont'd): ($T_A = +25^\circ\text{C}$, $V_{12} = V_{15} = 12\text{V}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Horizontal Free-Running Frequency	f_H	f_H center 15.750kHz	-750	-	+750	Hz
Supply Voltage Dependence of Horizontal Frequency		$V_{12} = 12 \pm 1\text{V}$, 55Hz at 12V	-50	-	+50	Hz
Temperature Characteristic of Horizontal Frequency		$T_A = -10^\circ$ to $+60^\circ\text{C}$	-3.4	-	+3.4	Hz/ $^\circ\text{C}$
Horizontal Output Pulse Width		$f_H = 15.750\text{kHz}$	21.5	-	26.5	μs
Horizontal Output Drive Current			4.2	-	7.8	mA

Pin Connection Diagram

