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NTE7123
Integrated Circuit
Sync Deflection Circuit for Color TV

Description:

The NTE7123 is an integrated circuit that has a wide vertical pull–in range of 20Hz and contains a generator of horizontal, vertical blanking as well as the main functions required to provide synchronization and deflection in color CRT displays and also accepts TTL input. It is a multifunctional IC aiming at high–quality picture reproduction.

Features:

- Non–adjusting at vertical sync 50Hz/60Hz due to vertical pull–in range of 20Hz.
- Horizontal and vertical oscillations are stable against variations in ambient temperature and supply voltage due to small warm–up drift.
- Small variation in horizontal oscillation frequency.
- Good linearity and interlace because DC bias at vertical output stage is subjected to sampling control within retrace time.
- Any vertical blanking pulse width can be set by peripheral parts.
- The AFC defeat function is eliminated during vertical trigger period to use the NTE7123 as horizontal/vertical sync seperate input type only.
- Multifunctional and small–sized 6 Pin Dual–In–Line Package.

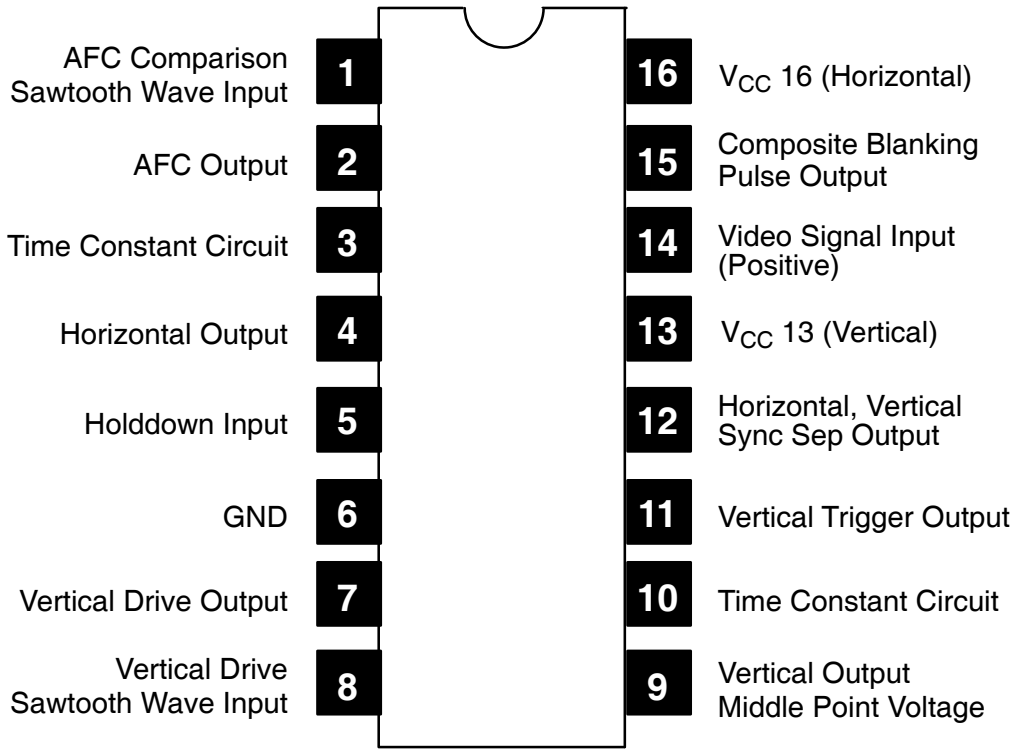
Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

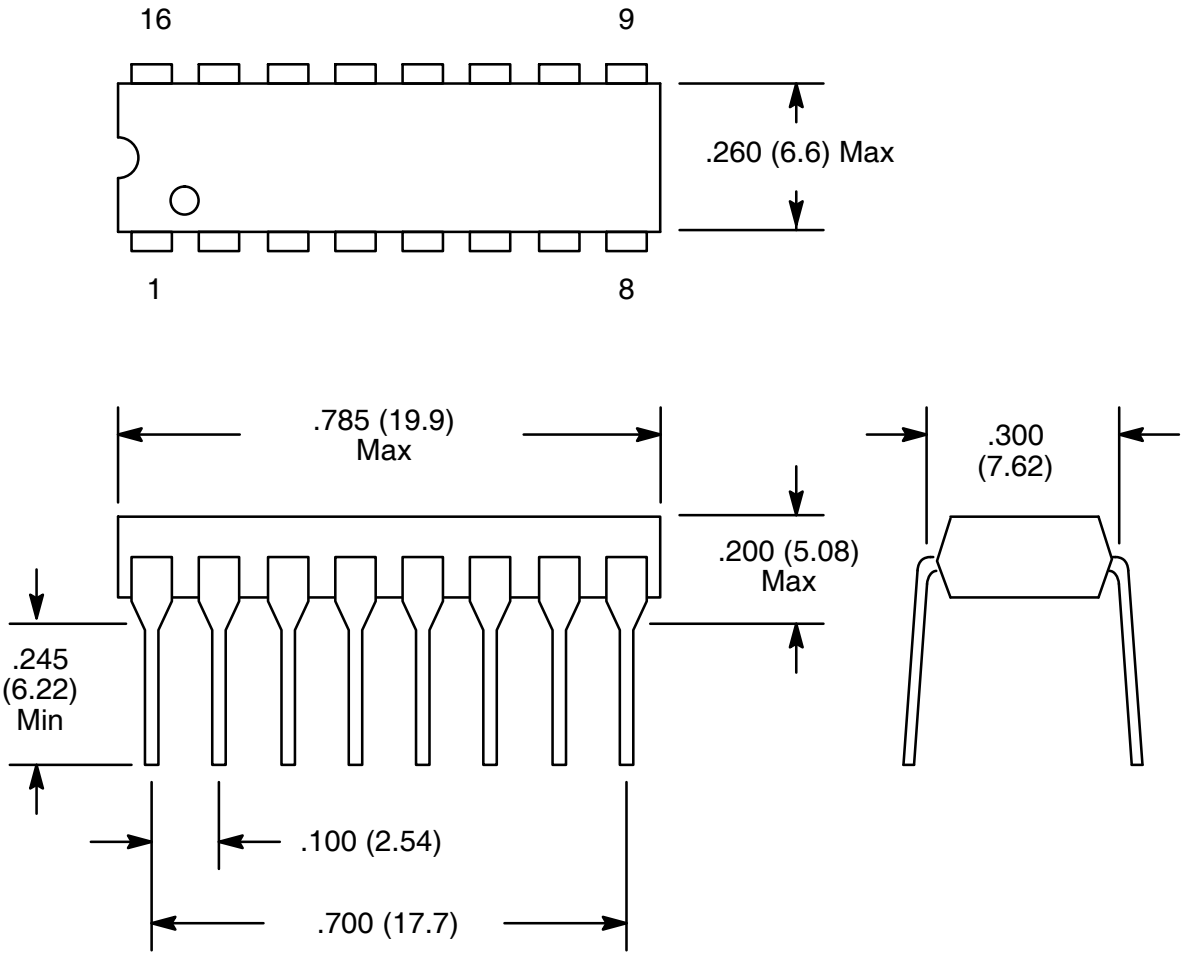
Maximum Supply Voltage, V_{CC13} 14V
Maximum Current Dissipation, I_{CC16} 16mA
Allowable Power Dissipation (T_A = +65°C), P_{Dmax} 570mW
Operating Temperature Range, T_{opr} . . . . . –20° to +85°C
Storage Temperature Range, T_{stg} . . . . . –55° to +125°C

Electrical Characteristics: (T_A = +25°C, V_{CC13} = 12V, I_{CC16} = 13mA unless otherwise specified)

Parameter	Test Conditions	Min	Typ	Max	Unit
V_{CC13} Current Dissipation	I_{CC13}	14.7	–	22.2	mA
V_{CC16} Supply Voltage		11.8	–	13.2	V
Vertical Frequency Pull−In Range		19.0	–	23.0	Hz
Vertical Free−Running Frequency	f_v center 55Hz	50	–	60	Hz
Supply Voltage Dependance of Vertical Frequency	V_{13} = 12±1V, 55Hz at 12V	−0.5	–	0.5	Hz
Temperature Characteristics of Vertical Frequency	T_A = −10° to 60°C	−0.028	–	0.028	Hz/°C
Vertical Driver Amplification Factor		12	–	17	dB
Horizontal Free−Running Frequency	f_H center 15.73kHz	−750	–	750	Hz
Reduced Voltage Characteristic of Horizontal Frequency	V_Z − V_Z x 90%	−50	–	50	Hz
Temperature Characteristic of Horizontal Frequency	T_A = −10° to +60°C (IC Alone)	−3.4	–	3.4	Hz/°C
Horizontal Output Pulse Width	f_H = 15.73kHz	21.5	–	26.5	μs
Horizontal Output Drive Current		6.6	–	10.0	mA

Pin Connection Diagram




16
9
.260 (6.6) Max
1
8
.785 (19.9)
Max
.300
(7.62)
.200 (5.08)
Max
.245
(6.22)
Min
.100 (2.54)
.700 (17.7)