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NTE1550 Integrated Circuit TV Sync Signal Processor

Functions:

- Sync Separator
- Horizontal Automatic Frequency Control (AFC)
- Horizontal Oscillator
- X-Ray Protector
- Vertical Oscillator
- Vertical Driver

Features:

- Fewer External Components
- 10V_{p-p} Sync Separator Output
- Voltage Regulator for Horizontal Supply Voltage
- 7.5Hz/rad Horizontal AFC DC Loop Gain
- Output Stage Positive Feedback Eliminated by Vertical Oscillator's Astable Multivibrator
- Vertical Oscillator Waveform used for Vertical Output Drive; Only One High-Stability (Tantalum) Capacitor Required for Vertical Stage
- Vertical Output Stage Stabilized by DC Feedback to Pin3
- Vertical Linearity Adjustment can be Eliminated

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

Supply Voltage, V _{CC}	16V
Power Dissipation (T _A = +75°C), P _T	500mW
Output Current (Pin2, Pin10, and Pin16), I _O	20mA
Operating Temperature Range, T _{opr}	-20° to + 75°C
Storage Temperature Range, T _{stg}	-55° to +125°C

Electrical Characteristics:

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Line Circuitry						
Regulated Voltage	V ₁₁	I _{CC} = 15mA	-	12.8	-	V
Supply Current	I _{CC}		-	15	-	mA
Free-Running Frequency	f _{oh}	R _h = 12.6kΩ, C _h = 5.6nF	14,734	15,734	16,734	Hz
Pull-In Range	Δf _{ph}		±450	±650	-	Hz
APC Loop Gain	f _c		577.5	750	1070	Hz/μs
Temperature Coefficient	Δf _{oh}		-6.0	-3.0	0	Hz/°C
Output Pulse Width	t _{hw}	Pin10	22.5	25.0	27.5	μs

Electrical Characteristics (Cont'd):

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Frame Circuitry						
Free-Running Frequency	f_{ov}	$R_V = 5.2k\Omega$	55	60	65	Hz
Pull-In Range	Δf_{pv}		-	-10	-7.5	Hz
Temperature Coefficient	Δf_{ov}		-0.03	0	+0.03	Hz/°C
Sync Separator						
Input Voltage Peak-to-Peak Value	V_{15}	Negative-Going Sync	0.2	-	-	V
Output Voltage	V_{sy}	Peak-to-Peak Value	8.0	10.0	-	V
Output Pulse Width	t_{sy}	Pin16	4.5	5.0	5.5	μs

Pin Connection Diagram

