



ELECTRONICS, INC.
 44 FARRAND STREET
 BLOOMFIELD, NJ 07003
 (973) 748-5089

NTE1206 Integrated Circuit Phase Lock Loop (PLL) Stereo Decoder

Features:

- Requires No Inductors
- Low External Part Count
- Only Oscillator Frequency Adjustment Necessary
- Integral Stereo/Monaural Switch 75mA Lamp Driving Capability
- Wide Dynamic Range: Typically up to 1.3V(RMS) Composite Input Signal
- Wide Supply Voltage: 8V to 16V
- Excellent Channel Separation Maintained Over Entire Audio Frequency Range
- Low Distortion: Typically 0.15% THD at 560mV_(RMS) Composite Input Signal
- Excellent SCA Rejection

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

| | |
|--|---|
| Supply Voltage, V_{CC} | 16V |
| Lamp Voltage, V_{LAMP} | 30V |
| Lamp Current, (Note 1), I_{LAMP} | 75mA |
| Power Dissipation, P_D | 625mW |
| Derated Above 25°C | 5mW/ $^{\circ}\text{C}$ |
| Operating Temperature Range, T_{opr} | -25° to $+75^{\circ}\text{C}$ |
| Storage Temperature Range, T_{stg} | -55° to $+150^{\circ}\text{C}$ |

Note 1. Not exceed indicator lamp current 60mA when used at $V_{CC} = 14\text{V}$ to 16V .

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

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--------------------------|--------------------------|----------------------------------|-----|-----|-----|------------|
| Supply Voltage | V_{CC} | | 8 | 12 | 16 | V |
| Current Drain | I_{CC} | At Lamp OFF | – | 13 | – | mA |
| Max. Comp. Input Voltage | V_{IN} Max (Stereo) | THD = 0.5%, L + R = 90%, P = 10% | – | 1.3 | – | V |
| Max. Mono Input Voltage | V_{IN} Max (Stereo) | THD = 1%, f = 1kHz | – | 1.3 | – | V |
| Input Resistance | R_{IN} | | – | 50 | – | k Ω |

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

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit | |
|---------------------------|----------------|---|-----------|---------|------|------|----|
| Separation | Sep | P = 56mV, L + R = 504mV | f = 100Hz | - | 38 | - | dB |
| | | | f = 1kHz | 30 | 40 | - | dB |
| | | | f = 10kHz | - | 38 | - | dB |
| Total Harmonic Distortion | THD (Stereo) | P 56mV, L + R = 504mV | f = 100Hz | - | 0.25 | - | % |
| | | | f = 1kHz | - | 0.15 | - | % |
| | | | f = 10kHz | - | 0.3 | - | % |
| Voltage Gain | G_V | $V_{IN} = 560mV$ (Standard) | -7.5 | -5.0 | -2.5 | dB | |
| Channel Balance | CB | $V_{IN} = 560mV$ | - | 0.2 | 1.5 | dB | |
| Total Harmonic Distortion | THD (Monaural) | $V_{IN} = 560mV$, f = 1kHz | - | 0.15 | 0.7 | % | |
| Carrier Leak | CL | P = 56mV, L + R = 504mV (Standard) | f = 19kHz | - | 35 | - | dB |
| | | | f = 38kHz | - | 45 | - | dB |
| SCA Rejection | SCA Rej. | P = 56mV, L + R = 448mV (Standard), SCA = 56mV, $f_{SCA} = 67kHz$ | - | 75 | - | dB | |
| Lamp ON Sensitivity | $V_{L(ON)}$ | Pilot Input | 12 | 16 | 20 | mV | |
| Hysteresis | V_H | Lamp Turn OFF to Turn ON | - | 6 | - | dB | |
| Capture Range | CR | P = 56mV | - | ± 3 | - | % | |
| Signal-to-Noise Ratio | S/N | $V_{IN} = 560mV$ (Standard), $R_g = 4k\Omega$ | - | 76 | - | dB | |

Pin Connection Diagram

