

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%, $f = 1\text{kHz}$	–	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

