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## 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<sub>(RMS)</sub> 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 $25^{\circ}\text{C}$ .....	5mW/ $^{\circ}\text{C}$
Operating Temperature Range, $T_{opr}$ .....	$-25^{\circ}$ to $+75^{\circ}\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-55^{\circ}$ to $+150^{\circ}\text{C}$

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

**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 $\Omega$

**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	-	$\pm 3$	-	%	
Signal-to-Noise Ratio	S/N	$V_{IN} = 560mV$ (Standard), $R_g = 4k\Omega$	-	76	-	dB	

**Pin Connection Diagram**

