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## NTE1484 Integrated Circuit Phase Lock Loop (PLL) Stereo Demod

**Features:**

- High-Quality FM Stereo Demodulator using PLL Technique for Separating L and R Signals from Composite Signal
- Less Peripheral Components; No Coils
- Total System – Including Stereo Demodulator, Automatic Stereo-Monaural Switching Circuit, and Stereo Indicator Lamp Driver
- Separation Controllable, Plus Very High Separation (Sep; 55dB Typ. at f = 1kHz)
- Low Total Harmonic Distortion during Stereo and Monaural Operation by using New Circuit (Mono; 0.05%, Stereo; 0.1% at f = 1kHz, V<sub>in</sub> = 200mV)
- Fully Synchronized Stereo Indicator Lamp
- High-Output Voltage Level (V<sub>out</sub> = 1.2V at V<sub>in</sub> = 200mV)
- Low Total Harmonic Distortion at High Frequency; (Main; 0.4%, L or R; 0.15%, Sub; 0.3% at f = 10kHz)
- Low Shock Noise during Stereo-Monaural Switching

**Absolute Maximum Ratings:** (T<sub>A</sub> = +25°C unless otherwise specified)

Supply Voltage, V <sub>CC</sub> .....	15V
Lamp Current, I <sub>L</sub> .....	75mA
Power Dissipation (T <sub>A</sub> = +70°C), P <sub>T</sub> .....	490mW
Operating Temperature Range, T <sub>opr</sub> .....	-20° to +70°C
Storage Temperature Range, T <sub>stg</sub> .....	-55° to +125°C

**Electrical Characteristics:** (V<sub>CC</sub> = 12V, f = 1kHz, T<sub>A</sub> = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Input Impedance	Z <sub>in</sub>		-	75	-	kΩ	
Channel Separation	Sep	P = 20mV, L + R = 180mV, VCO freq = 76kHz	f = 100Hz	-	42	-	dB
			f = 1kHz	40	55	-	dB
			f = 10kHz	-	42	-	dB
Stereo Total Harmonic Distortion	ST THD	P = 20mV, L + R = 180mV, (L + R = 45%, L - R = 45%, P = 10%)	f = 100Hz	-	0.1	-	%
			f = 10kHz	-	0.1	0.3	%
			f = 10kHz	-	0.15	-	%

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Output Voltage	$V_{out}$	$V_{in} = 200mV$	-	1.2	-	V	
Channel Balance	CB	$V_{in} = 200mV$	-1.5	-	+1.5	dB	
Monaural Total Harmonic Distortion	MONO THD	$V_{in} = 200mV$	-	0.05	0.25	%	
Carrier Lock	CL	P = 20mV, L = R = 180mV, Note 1	f = 19kHz	-	30	-	dB
			f = 38kHz	-	30	-	dB
SCA Rejection Ratio	SCA Rej	P = 20mA, L + R = 180mV, SCA = 20mV, $f_{SCA} = 67kHz$	-	75	-	dB	
Pilot Level for Lamp ON	$L_{(ON)}$		4	7	13	mV	
Stereo Lamp Hysteresis			-	6	-	dB	
Capture Range	CR	P = 14mV	-	$\pm 3$	-	%	
Signal-To-Noise Ratio	S/N						
Total Current Drain	$I_T$	lamp OFF	-	17.5	-	mA	
Maximum Input Signal	$V_{in}$	Monaural THD = 1%	-	400	-	mV	
Threshold Voltage Stereo-Monaural Switching		Pin12 Voltage for Lamp OFF	-	0.55	-	V	

Note 1. Output terminal of IC



