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NTE1482 Integrated Circuit PLL FM Stereo Demodulator w/ Pilot Cancel

Features:

- External parts are small. Coil is not used.
- Pilot cancel function built-in.
- Other functions: stereo demodulation, stereo/monaural automatic changeover and stereo indicator lamp driving circuit.
- Stereo indicator lamp lighting and stereo/Monaural changeover operations are synchronous.
- Low distortion by the adoption of 100% local feedback circuit. (0.01% typ., 300mV Monaural input.)
- High input impedance (75k Ω typ.)
- High S/N. (86dB typ. 300mV input)
- Distortion factor improved by PLL circuit (0.06% typ. 10kHz, Main-ch input)

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

Supply Voltage, V_{CC}	16V
Power Dissipation ($T_A = +75^\circ\text{C}$), P_D	500mW
Lamp Drive Current, I_L	
Continuos	75mA
Peak	100mA
Operating Temperature Range, T_{opr}	-20° to $+75^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+125^\circ\text{C}$

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{CC} = 13\text{V}$, $f = 1\text{kHz}$, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Input Impedance	Z_{in}		30	75	–	k Ω	
Channel Separation	Sep	P = 30mV L+R = 270mV	100Hz	–	40	–	dB
			1kHz	35	45	–	dB
Stereo Total Harmonic Distortion	ST, THD		100Hz	–	0.04	–	%
			1kHz	–	0.02	0.08	%
			10kHz	–	0.05	–	%

Electrical Characteristics (Cont'd): ($T_A = +25^\circ\text{C}$, $V_{CC} = 13\text{V}$, $f = 1\text{kHz}$, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Output Voltage	V_{OUT}	$V_{in} = 300\text{mV}$	185	240	310	mV	
Channel Balance	CB		-	0	-	dB	
Monaural Total Harmonic Distortion	$M_{ono, THD}$		-	0.01	0.08	%	
Pilot Level for Lamp ON	$L_{(ON)}$		8	11.5	15	mV	
Stereo Lamp Hysteresis			-	4	-	dB	
Carrier Leak	CL	$P = 30\text{mV}$ $L+R = 270\text{mV}$	19kHz	55	60	-	dB
			38kHz	-	35	-	dB
SCA Rejection Ratio	SCAm R_{ej}	$P = 30\text{mV}$ $L+R = 270\text{mV}$, $SCA = 30\text{mV}$, $f_{sca} = 67\text{kHz}$	-	80	-	dB	
Signal-to-Noise Ratio	S/N	$V_{in} = 300\text{mV}$, $R_g = 4.7\text{k}\Omega$	80	86	-	dB	
Capture Range	CR	$P = 30\text{mV}$	-	± 3.5	-	%	
Max Input Signal	V_{in}	$P = 10\%$, $L+R = 90\%$, $THD \leq 0.5\%$	-	1.2	-	V	
Total Current Drain	I_T		-	17	-	mA	

Pin Connection Diagram

