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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	–	kΩ	
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 = 30mV L+R = 270mV	19kHz	55	60	dB
			38kHz	–	35	dB
SCA Rejection Ratio	SCAm R_{ej}	P = 30mV L+R = 270mV, SCA = 30mV, $f_{sca} = 67\text{kHz}$	–	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 = 30mV	–	± 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

