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NTE1248 Integrated Circuit Phase Lock Loop (PLL) FM Multiplex Stereo Demod

Description:

The NTE1248 is a phase lock loop (PLL) system monolithic integrated circuit in a 16-Lead DIP type package designed as an FM multiplex stereo demodulator.

Features:

- A PLL for High Multiplex-Efficiency Operation.
- Stable Operation at Low Voltages ($V_{CC} = 5.4V$ Min)
- Low Lamp Lighting Level (6.5mV typ)
- Separation Control Pin (Pin8)
- Ability to Stop the VCO for Monaural Muting (Pin9)
- Output Voltage Available with Low Loss ($G_V = -1dB$ typically)
- Typically 0.3% Distortion
- SCA Rejection Ratio (80dB)

Applications:

- Stereo Radio Cassette Tape Recorders
- Car Stereos
- Home Stereos

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

Supply Voltage, V_{CC}	14V
Lamp Indicator Current, I_{LAMP}	75mA
Power Dissipation, P_d	550mW
Operating Temperature Range, T_{opr}	-25° to $+75^\circ C$
Storage Temperature Range, T_{stg}	-55° to $+125^\circ C$

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{CC} = 12\text{V}$, $V_{IN} = 350\text{mV}$, $L + R = 90\%$, $Pilot = 10\%$, $f = 1\text{kHz}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Voltage	V_{IN1}	THD = 1%, L + R = 90%, P = 10%	350	–	–	mV
	V_{IN2}	THD = 1%	350	–	–	mV
Input Impedance	Z_{in}		–	30	–	k Ω
Channel Separation	Sep		35	40	–	dB
Output Voltage	V_{OUT}	$V_{IN} = 350\text{mV}$	–	310	–	–
Channel Balance	CB		–	–	2	dB
Total Harmonic Distortion	THD		–	0.3	–	%
Lamp Voltage	Lon	Pilot Level	–	6.5	–	mV
Hysteresis	Hys		–	3	–	dB
Capture Range	CR		–	± 5	–	%
Carrier Leak	CL	$f = 19\text{kHz}$	–	35	–	dB
		$f = 38\text{kHz}$	–	45	–	dB
SCA Rejection Ratio	SCA-R	L + R = 80%, P = 10%, SCA = 10%	–	80	–	dB
Threshold Voltage	V_{TH}		–	1	–	V
Supply Voltage	V_{CC}		5.4	–	14	V
Quiescent Current	I_Q		–	15	–	mA

Pin Connection Diagram



