

## NTE801 Integrated Circuit FM Stereo Demodulator

### **Description:**

The NTE801 is a monolithic device in a 14-Lead DIP type package designed for use in solid-state stereo receivers.

### **Features:**

- Requires No Inductors
- Low External Part Count
- Only Oscillator Frequency Adjustment Necessary
- Integral Stereo/Monaural Switch 75mA Lamp Driving Capability
- Wide Dynamic Range: 0.5 to 2.8V<sub>(p-p)</sub> Composite Input Signal
- Wide Supply Range: 8V to 14V
- Excellent Channel Separation Maintained Over Entire Audio Frequency Range
- Low Distortion: Typically 0.3% THD at 560mV (RMS) Composite Input Signal
- Excellent SCA Rejection

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

Power Supply Voltage .....	14V
Lamp Current .....	75mA
Power Dissipation (Package Limitation) .....	625mW
Derate Above T <sub>A</sub> = +25°C .....	5.0mW/°C
Operating Temperature Range, T <sub>A</sub> .....	-40° to +85°C
Storage Temperature Range, T <sub>stg</sub> .....	-65° to +150°C

**Electrical Characteristics:** ( $V_{CC} = +12V$ ,  $T_A = +25^{\circ}C$ ,  $V_{in} = 560mV_{RMS}$  ( $2.8V_{(P-P)}$ ),  $f_m = 1kHz$  (L or R only), Pilot Level =  $100mV_{(RMS)}$  (10%), unless otherwise specified)

Parameter	Test Conditions	Min	Typ	Max	Unit
Maximum Standard Composite Input Signal	THD = 0.5%	2.8	–	–	$V_{P-P}$
Maximum Monaural Input Signal	THD = 1.0%	2.8	–	–	$V_{P-P}$
Input Impedance	Pin2	20	50	–	$k\Omega$
Stereo Channel Separation		30	40	–	dB
Audio Output Voltage	Desired Channel	–	485	–	$mV_{rms}$
Monaural Channel Balance	Pilot Level = 0V	–	–	1.5	dB
Total Harmonic Distortion		–	< 0.3	–	%
Ultrasonic Frequency Rejection	19kHz	–	34.4	–	dB
	38kHz	–	45	–	dB
SCA Rejection	67kHz, No Modulation, Measured 9kHz Beat	–	75	–	dB
Stereo Switch Level	Pilot Only, Lamp ON	–	18	23	$mV_{rms}$
	Pilot Only, Lamp OFF	5.0	10	–	$mV_{rms}$
Capture Range	Permissible Tuning Error	–	3.5	–	%
Supply Current	Lamp OFF	–	13	–	mA

### Pin Connection Diagram

