

NTE1005 Integrated Circuit FM Stereo Demodulator

Functions:

Composite signal amp., doubler, decoder, separation controller, and lamp driver

Features:

- 19kHz and 38kHz Coils
- SCA Rejection Ratio: 50dB
- No Special Adjusting Needed for SCA Rejecting
- Also Separation Controller

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

Maximum Supply Voltage (V_{1-7} , V_{6-7}), V_{CCmax} 20V

Lamp Driving Current, I_L 40mA

Allowable Power Dissipation, P_{Dmax} 370mW

Operation Temperature Range, T_{opg} -20° to $+80^\circ\text{C}$

Storage Temperature Range, T_{stg} -40° to $+125^\circ\text{C}$

Recommended Operation Condition: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Recommended Supply Voltage, V_{CC}

Without 1500p at Pin2 5.5 to 12V

With 1500p at Pin2 7.5 to 12V

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{CC} = 9\text{V}$, $R_L = 2.2\text{k}\Omega$, Input 100mV, $f = 1\text{kHz}$, $L + R = 90\%$, pilot = 10% unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Current	I_{CCO}		–	10	16	mA
Input Resistance	r_i		–	20k	–	Ω
Channel Separation	Sep		30	45	–	dB
Total Harmonic Distortion (L + R)	THD		–	0.3	1.0	%
Input Voltage for Lamp ON	V_i		50	70	100	mV
Output Voltage	V_O		47	70	100	mV
Channel Balance	CB		–	–	2.0	dB
SCA Rejection		L + R = 80%, Pilot = 10%, SCA = 10%	–	55	–	dB

Pin Connection Diagram

19kHz Tank	1	14	Bypass
Mono/Stereo Switch	2	13	38kHz Tank
Demod Composite	3	12	Lt Audio Output
Compensation	4	11	Rt Audio Output
Separation Control	5	10	38kHz
Stereo Indicator	6	9	V _{CC}
GND	7	8	Bypass

