

## NTE1237 Integrated Circuit AM Radio without Audio Stage

**Features:**

- Small External Part Count
- Tuning Meter Circuit
- Wide AGC Range

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

|  |                                     |
|--|-------------------------------------|
| Supply Voltage, $V_{CC}$ .....               | 18V                                 |
| Power Dissipation, $P_T$ .....               | 500mW                               |
| Operating Temperature Range, $T_{opr}$ ..... | $-20^\circ$ to $+70^\circ\text{C}$  |
| Storage Temperature Range, $T_{stg}$ .....   | $-55^\circ$ to $+125^\circ\text{C}$ |

**Electrical Characteristics:** ( $V_{CC} = 12\text{V}$ ,  $f = 1\text{MHz}$  unless otherwise specified)

| Parameter                 | Symbol       | Test Conditions                                  | Min                        | Typ  | Max  | Unit |    |
|---------------------------|--------------|--|----------------------------|------|------|------|----|
| Maximum Sensitivity       | MS           | $f_M = 400\text{Hz}$ , MOD = 30%, Output=50mV    | 37.5                       | 40.0 | 42.5 | dB   |    |
| Signal-to-Noise Ratio     | S/N          | $f_M = 400\text{Hz}$ ,<br>MOD = 30%              | Input = 40dB/m             | 8    | 12   | –    | dB |
|                           |              |  | Input = 74dB/m             | 42   | 45   | –    | dB |
| Total Harmonic Distortion | THD          | $f_M = 400\text{Hz}$                             | MOD = 30%, Input = 74dB/m  | –    | 1.0  | 2.0  | %  |
|                           |              |  | MOD = 80%, Input = 74dB/m  | –    | 1.5  | 3.0  | %  |
|                           |              |  | MOD = 30%, Input = 120dB/m | –    | 2.5  | 10   | %  |
| Detector Voltage          | $V_{O(DET)}$ | $f_M = 400\text{Hz}$ , MOD = 30%, Input = 74dB/m | 140                        | 170  | 230  | mW   |    |
| Tuning Meter Circuit      | TM           | Input = 74dB/m                                   | 50                         | –    | 100  | %    |    |
| Quiescent Current         | $I_Q$        |  | –                          | 13   | 21   | mA   |    |

### Pin Connection Diagram

