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## NTE1072 Integrated Circuit FM-AM IF Amp & AF Amp

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

|  |                                     |
|--|-------------------------------------|
| Supply Voltage ( $V_{CC}$ ), $V_{8-3}$ ..... | 7.5 V                               |
| Circuit Current, $I_7$ .....                 | 20mA                                |
| Total Circuit Current, $I_{tot}$ .....       | 40mA                                |
| Total Power Dissipation, $P_T$ .....         | 300mW                               |
| Operating Temperature Range, $T_{opr}$ ..... | $-20^\circ$ to $+75^\circ\text{C}$  |
| Storage Temperature Range, $T_{stg}$ .....   | $-65^\circ$ to $+150^\circ\text{C}$ |

**Electrical Characteristics:** ( $V_{CC} = 5V$ ,  $T_A = +25^\circ\text{C}$  unless otherwise specified)

| Parameter                | Symbol               | Test Conditions                                 | Min  | Typ  | Max  | Unit |
|--------------------------|----------------------|---|------|------|------|------|
| Total Circuit Current    | $I_{tot}$            |   | 5.4  | 15   | 23.5 | mA   |
| Circuit Current          | $I_7$                | $V_7/100\Omega$                                 | 3.6  | 5.7  | 7.7  | mA   |
|                          | $I_9$                |   | 0.9  | 2.5  | 3.75 | mA   |
| Bias Reference Voltage   | $V_{12-16}$          |   | 1.25 | 1.5  | 1.75 | V    |
| Detection Output Voltage | FM-IF<br>$V_{O(FM)}$ | $f = 10.7\text{MHz}$ , $V_{IN} = 10\mu\text{V}$ | 1.8  | 3    | 5    | mV   |
|                          | AM-IF<br>$V_{O(AM)}$ | $f = 455\text{kHz}$ , $V_{IN} = 32\mu\text{V}$  | 2.2  | 3.5  | 5.6  | mV   |
| Output Noise Voltage     | $V_N$                | $R_g = 5k\Omega$                                | -    | -    | 1.2  | mV   |
| Output Voltage           | $V_{7-3}$            | $f = 1\text{kHz}$ , $V_{IN} = 1\text{mV}$       | 0.35 | 0.47 | 0.56 | V    |

### Pin Connection Diagram

|                     |          |           |                     |
|---------------------|----------|-----------|---------------------|
| IF Input AM/FM      | <b>1</b> | <b>16</b> | IF Amp Circuit      |
| FM Detector Circuit | <b>2</b> | <b>15</b> | AM Detector Circuit |
| AF Circuit          | <b>3</b> | <b>14</b> | AM Detector Circuit |
| AF Input            | <b>4</b> | <b>13</b> | AM IF Amp Circuit   |
| AF Circuit          | <b>5</b> | <b>12</b> | Bypass              |
| GND                 | <b>6</b> | <b>11</b> | Bypass              |
| AF Output           | <b>7</b> | <b>10</b> | Bypass              |
| $V_{CC}$            | <b>8</b> | <b>9</b>  | FM Detector Circuit |

