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NTE1039 Integrated Circuit FM IF Amplifier

Description:

The NTE1039 is a silicon monolithic integrated circuit designed for use as a FM-IF amplifier. It features the capability of nonsaturating limiter operation with a suitable output load, rendering it ideally adaptable to FM-IF limiter applications.

Applications:

- FM-IF Limiter Amplifiers
- TV Sound IF Amplifiers
- Chroma Reference Oscillators for Color TVs

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

| | |
|--|-------------------------------------|
| Supply Voltage, V_{CC} | 20V |
| Input Voltage, V_{IN} | $\pm 5V$ |
| Power Dissipation, P_D | 200mW |
| Operating Temperature Range, T_{opr} | -30° to $+70^\circ\text{C}$ |
| Storage Temperature Range, T_{stg} | -55° to $+125^\circ\text{C}$ |

Electrical Characteristics: ($T_A = 25^\circ\text{C}$, $V_{CC} = 12V$, unless otherwise specified)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|-------------------------|---------|---|----------------------|-------|------|------|
| Power Dissipation | P_D | | - | 110 | 170 | mW |
| DC Total Current | I_r | | 5.4 | 9.15 | 14.1 | mA |
| Power Gain | PG | $f = 10.7\text{MHz}$ | 27 | 31 | - | dB |
| Forward Transadmittance | $ Y_f $ | $V_{IN} = 10\text{mV}_{rms}$, $f = 10.7\text{MHz}$ | - | 30 | - | mhos |
| Reverse Transadmittance | $ Y_r $ | | - | 0.002 | - | mhos |
| Input Conductance | g_i | | - | 0.4 | - | mhos |
| Input Capacitance | C_i | | - | 7.0 | - | pF |
| Output Conductance | g_o | | - | 0.03 | - | mhos |
| Output Capacitance | C_o | | - | 2.5 | - | pF |
| Noise Figure | NF | | $f = 10.7\text{MHz}$ | - | 6 | - |

Pin Connection Diagram

