



ELECTRONICS, INC.
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NTE186A (NPN) & NTE187A (PNP) Silicon Complementary Transistors Medium Power Audio Amplifier

Features:

- 5W Output in Complementary Pair

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

| | |
|--|----------------|
| Collector–Base Voltage, V_{CBO} | 50V |
| Collector–Emitter Voltage, V_{CEO} | 40V |
| Emitter–Base Voltage, V_{EBO} | 5V |
| Peak Collector Current, I_{CP} | 3A |
| Base Current, I_B | 600mA |
| Collector Power Dissipation ($T_C = +25^\circ\text{C}$), P_C | 10W |
| Operating Junction Temperature, T_J | +150°C |
| Storage Temperature Range, T_{stg} | -55° to +150°C |

Electrical Characteristics: ($T_C = +25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|--|-----|-----|-----|---------------|
| Collector–Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C = 1\text{mA}, I_E = 0$ | 50 | – | – | V |
| Collector–Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C = 10\text{mA}, I_B = 0$ | 40 | – | – | V |
| Collector Cutoff Current | I_{CBO} | $V_{CB} = 20\text{V}, I_E = 0$ | – | – | 1 | μA |
| | I_{CEO} | $V_{CE} = 12\text{V}, I_B = 0$ | – | – | 100 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB} = 5\text{V}, I_C = 0$ | – | – | 100 | μA |
| DC Current Gain | h_{FE} | $V_{CE} = 5\text{V}, I_C = 1\text{A}$ | 50 | 120 | 220 | |
| Transition Frequency | f_T | $V_{CE} = 5\text{V}, I_C = 500\text{mA}$ | – | 150 | – | MHz |
| Base–Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C = 2\text{A}, I_B = 200\text{mA}$ | – | – | 1.5 | V |
| Collector–Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 2\text{A}, I_B = 200\text{mA}$ | – | 0.4 | 1.0 | V |
| Collector Output Capacitance | C_{ob} | $V_{CB} = 5\text{V}, I_E = 0, f = 1\text{MHz}$ | – | 50 | – | pF |

