

NTE58 (NPN) & NTE59 (PNP) Silicon Complementary Transistors High Power Audio Output

Features:

- High Power Dissipation
- Wide Safe Operating Area

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

| | |
|--|----------------|
| Collector–Base Voltage, V_{CBO} | 200V |
| Collector–Emitter Voltage, V_{CEO} | 200V |
| Emitter–Base Voltage, V_{EBO} | 6V |
| Continuous Collector Current, I_C | 17A |
| Continuous Base Current, I_B | 5A |
| Total Device Dissipation ($T_{FL} = +25^\circ\text{C}$), P_C | 200W |
| Junction Temperature, T_J | +150°C |
| Storage Temperature Range, T_{stg} | –55° to +150°C |

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

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|---|-----|-----|-----|------|
| Collector–Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C = 50\text{mA}$ | 200 | – | – | V |
| Maximum Collector Cutoff Current | I_{CBO} | $V_{CB} = 200\text{V}, I_E = 0$ | – | – | 0.1 | mA |
| Maximum Emitter Cutoff Current | I_{EBO} | $V_{EB} = 6\text{V}, I_C = 0$ | – | – | 0.1 | mA |
| DC Forward Current Transfer Ratio | h_{FE} | $V_{CE} = 4\text{V}, I_C = 8\text{A}$ | 20 | – | – | |
| Collector–Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 10\text{A}, I_B = 1\text{A}$ | – | – | 2.5 | V |
| Second Breakdown Collector Current | $I_{S/b}$ | $V_{CE} = 100\text{V}, t = 1\text{sec}$ | 1 | – | – | A |
| Cutoff Frequency | f_T | $V_{CE} = 12\text{V}, I_E = 1\text{A}$ | – | 20 | – | MHz |

