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## NTE158 Germanium PNP Transistor Audio Power Amplifier

**Description:**

The NTE158 is a germanium PNP triode transistor in a TO1 type package designed for low-power, large signal audio applications.

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

|  |                                    |
|--|------------------------------------|
| Collector-Base Voltage, $V_{CBO}$ .....  | 32V                                |
| Collector-Emitter Voltage ( $R_{BE} \leq 500\Omega$ ), $V_{CER}$ .....                 | 32V                                |
| Emitter-Base Voltage, $V_{EBO}$ .....  | 10V                                |
| Collector Current, $I_C$ .....   | 1A                                 |
| Base Current, $I_B$ .....  | 40mA                               |
| Power Dissipation ( $T_A = +25^\circ\text{C}$ ), $P_C$ .....                           | 550mW                              |
| Derate Above $25^\circ\text{C}$ .....  | 0.3mW/ $^\circ\text{C}$            |
| Storage Temperature Range, $T_{stg}$ .....   | $-55^\circ$ to $+90^\circ\text{C}$ |
| Lead Temperature (During Soldering, 1/16" $\pm$ 1/32" from case for 5sec), $T_L$ ..... | $+245^\circ\text{C}$               |

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

| Parameter                                 | Symbol        | Test Conditions                                | Min | Typ | Max | Unit          |
|---|---------------|--|-----|-----|-----|---------------|
| Collector-Base Breakdown Voltage          | $V_{(BR)CBO}$ | $I_C = 200\mu\text{A}, I_E = 0$                | 32  | -   | -   | V             |
| Emitter-Base Breakdown Voltage            | $V_{(BR)EBO}$ | $I_E = 200\mu\text{A}, I_C = 0$                | 10  | -   | -   | V             |
| Collector Cutoff Current                  | $I_{CBO}$     | $V_{CB} = -10\text{V}, I_E = 0$                | -   | -   | 10  | $\mu\text{A}$ |
| Emitter Cutoff Current                    | $I_{EBO}$     | $V_{EB} = -5\text{V}, T_J = +75^\circ\text{C}$ | -   | -   | 500 | $\mu\text{A}$ |
| DC Current Gain                           | $h_{FE}$      | $V_{CB} = 1\text{V}, I_C = 300\text{mA}$       | 60  | 90  | 175 |               |
| Base-Emitter Voltage                      | $V_{BE}$      | $V_{CE} = 1\text{V}, I_C = 300\text{mA}$       | 280 | -   | 380 | mV            |
| Forward Current Transfer Cutoff Frequency | $f_{hfe}$     |  | 10  | -   | 20  | kc            |
| Output Capacitance                        | $C_{ob}$      | $V_{CB} = -5\text{V}, I_E = 0 @ 0.45\text{mc}$ | 80  | -   | 105 | pF            |

