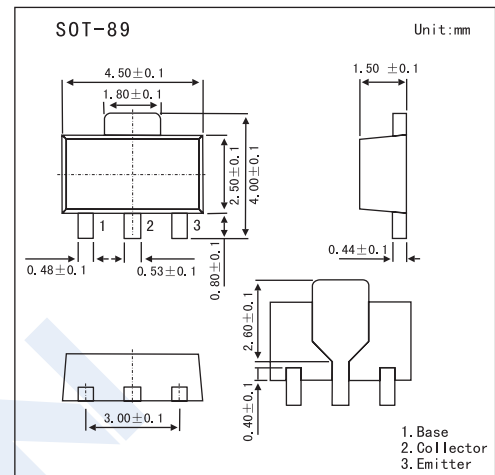


## Audio Frequency Amplifier Applications

## 2SA1203

## ■ Features

- Suitable For Output Stage of 3 Watts Amplifier
- Small Flat Package
- $P_c = 1$  to 2W (mounted on ceramic substrate)
- Complementary to 2SC2883

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

| Parameter                   | Symbol    | Rating      | Unit             |
|-----------------------------|-----------|-------------|------------------|
| Collector-Base Voltage      | $V_{CB0}$ | -30         | V                |
| Collector-Emitter Voltage   | $V_{CE0}$ | -30         | V                |
| Emitter-Base Voltage        | $V_{EB0}$ | -5          | V                |
| Collector Current           | $I_C$     | -1.5        | A                |
| Base Current                | $I_B$     | -0.3        | A                |
| Collector Power Dissipation | $P_C$     | 500         | mW               |
|                             | $P_{C^*}$ | 1000        |                  |
| Junction temperature        | $T_j$     | 150         | $^\circ\text{C}$ |
| Storage temperature Range   | $T_{stg}$ | -55 to +150 | $^\circ\text{C}$ |

\* Mounted on ceramic substrate ( $250\text{ mm}^2 \times 0.8\text{ t}$ )

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

| Parameter                            | Symbol        | Test conditions                                        | Min | Typ | Max  | Unit          |
|--------------------------------------|---------------|--------------------------------------------------------|-----|-----|------|---------------|
| Collector Cut-off Current            | $I_{CBO}$     | $V_{CB} = -30\text{V}$ , $I_E = 0$                     |     |     | -0.1 | $\mu\text{A}$ |
| Emitter Cut-off Current              | $I_{EBO}$     | $V_{EB} = -5\text{V}$ , $I_C = 0$                      |     |     | -0.1 | $\mu\text{A}$ |
| Collector-Emitter Breakdown Voltage  | $V_{(BR)CEO}$ | $I_C = -10\text{mA}$ , $I_B = 0$                       | -30 |     |      | V             |
| Emitter-Base Breakdown Voltage       | $V_{(BR)EBO}$ | $I_E = -1\text{mA}$ , $I_C = 0$                        | -5  |     |      | V             |
| DC Current Gain                      | $h_{FE}$      | $V_{CE} = -2\text{V}$ , $I_C = -500\text{mA}$          | 100 |     | 320  |               |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = -1.5\text{A}$ , $I_B = -0.03\text{A}$           |     |     | -2.0 | V             |
| Base-Emitter Voltage                 | $V_{BE}$      | $V_{CE} = -2\text{V}$ , $I_C = -500\text{mA}$          |     |     | -1.0 | V             |
| Transition Frequency                 | $f_T$         | $V_{CE} = -2\text{V}$ , $I_C = -500\text{mA}$          |     | 120 |      | MHz           |
| Collector Output Capacitance         | $C_{ob}$      | $V_{CB} = -10\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$ |     |     | 50   | pF            |

## 2SA1203

## ■ hFE Classification

| Marking | H         |           |
|---------|-----------|-----------|
| Rank    | O         | Y         |
| hFE     | 100 ~ 200 | 160 ~ 320 |

## ■ Electrical Characteristics Curves

