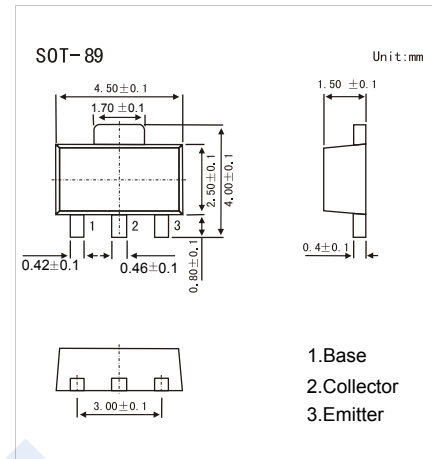


NPN Transistors

KTD1302

■ Features

- Small Flat Package
- Audio Muting Application
- High Emitter-Base Voltage

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

| Parameter | Symbol | Rating | Unit |
|---|-----------------|------------|---------------------------|
| Collector - Base Voltage | V_{CB0} | 25 | V |
| Collector - Emitter Voltage | V_{CE0} | 20 | |
| Emitter - Base Voltage | V_{EB0} | 12 | |
| Collector Current - Continuous | I_c | 300 | mA |
| Collector Power Dissipation | P_c | 500 | mW |
| Thermal Resistance From Junction To Ambient | $R_{\theta JA}$ | 250 | $^\circ\text{C}/\text{W}$ |
| Junction Temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | -55 to 150 | |

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

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|--|-----|-----|------|---------------|
| Collector- base breakdown voltage | V_{CB0} | $I_c = 100 \mu\text{A}$, $I_E = 0$ | 25 | | | V |
| Collector- emitter breakdown voltage | V_{CE0} | $I_c = 1 \text{ mA}$, $I_B = 0$ | 20 | | | |
| Emitter - base breakdown voltage | V_{EB0} | $I_E = 100 \mu\text{A}$, $I_c = 0$ | 12 | | | |
| Collector-base cut-off current | I_{CB0} | $V_{CB} = 25 \text{ V}$, $I_E = 0$ | | | 0.1 | μA |
| Emitter cut-off current | I_{EB0} | $V_{EB} = 12 \text{ V}$, $I_c = 0$ | | | 0.1 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_c = 100 \text{ mA}$, $I_B = 10 \text{ mA}$ | | | 0.25 | V |
| Base - emitter saturation voltage | $V_{BE(sat)}$ | $I_c = 100 \text{ mA}$, $I_B = 10 \text{ mA}$ | | | 1 | |
| DC current gain | h_{FE} | $V_{CE} = 2 \text{ V}$, $I_c = 4 \text{ mA}$ (FOR) | 200 | | 800 | |
| | | $V_{CE} = 2 \text{ V}$, $I_c = 4 \text{ mA}$ (REV) | 20 | | | |
| Collector output capacitance | C_{ob} | $V_{CB} = 10 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$ | | 10 | | pF |
| Transition frequency | f_T | $V_{CE} = 10 \text{ V}$, $I_c = 1 \text{ mA}$, $f = 100 \text{ MHz}$ | | 60 | | MHz |

■ Marking

| | |
|---------|------|
| Marking | 1302 |
|---------|------|