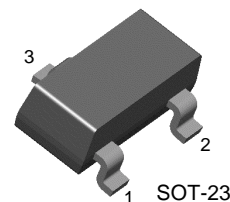


FJV992

Audio Frequency Low Noise Amplifier

- Complement to FJV1845



1. Base 2. Emitter 3. Collector

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Ratings | Units |
|-----------|-----------------------------|-----------|------------------|
| V_{CBO} | Collector-Base Voltage | -120 | V |
| V_{CEO} | Collector-Emitter Voltage | -120 | V |
| V_{EBO} | Emitter-Base Voltage | -5 | V |
| I_C | Collector Current | -50 | mA |
| P_C | Collector Power Dissipation | 300 | mW |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature | -55 ~ 150 | $^\circ\text{C}$ |

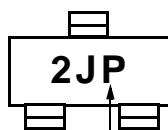
Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Max. | Units |
|------------------------|--------------------------------------|--|------------|-------|-------|
| BV_{CBO} | Collector-Base Breakdown Voltage | $I_C = -100\mu\text{A}, I_E = 0$ | -120 | | V |
| BV_{CEO} | Collector-Emitter Breakdown Voltage | $I_C = -1\text{mA}, I_B = 0$ | -120 | | V |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E = -10\mu\text{A}, I_C = 0$ | -5 | | V |
| I_{EBO} | Emitter-Base Cutoff Current | $V_{EB} = -6\text{V}, I_C = 0$ | | -30 | nA |
| h_{FE1} h_{FE2} | DC Current Gain | $V_{CE} = -6\text{V}, I_C = -0.1\text{mA}$ $V_{CE} = -6\text{V}, I_C = -1\text{mA}$ | 150 200 | 800 | |
| $V_{CE}(\text{sat})$ | Collector-Emitter Saturation Voltage | $I_C = -10\text{mA}, I_B = -1\text{mA}$ | | -300 | mV |
| $V_{BE}(\text{on})$ | Base-Emitter On Voltage | $V_{CE} = -6\text{V}, I_C = -1\text{mA}$ | -0.55 | -0.65 | V |
| f_T | Current Gain Bandwidth Product | $V_{CE} = -6\text{V}, I_C = -1\text{mA}$ | 50 | | MHz |
| C_{ob} | Output Capacitance | $V_{CB} = -30\text{V}, I_E = 0, f = 1\text{MHz}$ | | 3 | pF |
| NV | Noise Voltage | $V_{CE} = -5.0\text{V}, I_C = -1.0\text{mA},$ $R_G = 100\text{KW}, G_V = 80\text{dB},$ $f = 10\text{Hz to } 1.0\text{KHz}$ | | 40 | mV |

h_{FE2} Classification

| Classification | P | F | E |
|----------------|-----------|-----------|-----------|
| h_{FE2} | 200 ~ 400 | 300 ~ 600 | 400 ~ 800 |

Marking



h_{FE} Classification

Typical Characteristics

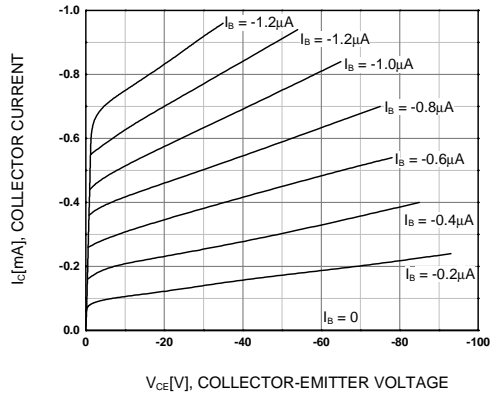


Figure 1. Static Characteristic

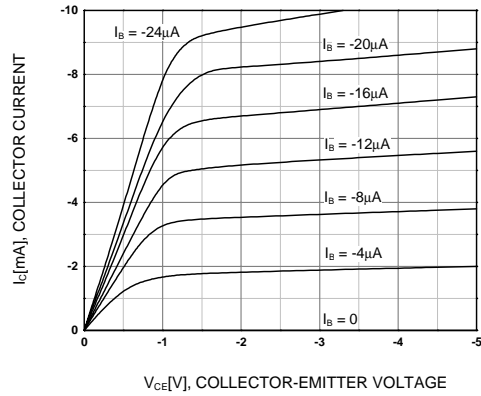


Figure 2. Static Characteristic

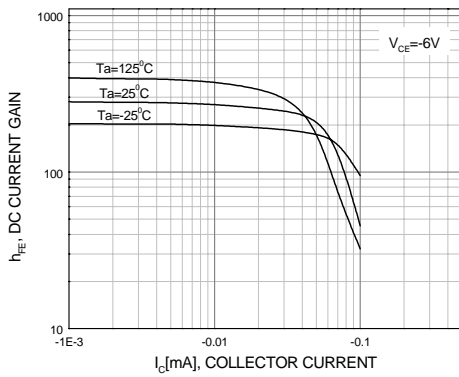


Figure 3. DC current Gain

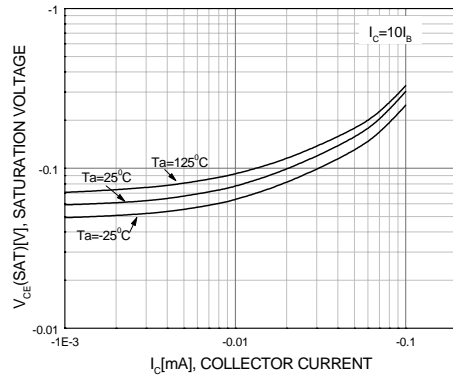


Figure 4. Collector-Emitter Saturation Voltage

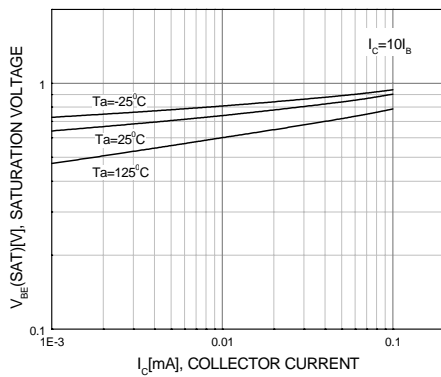


Figure 5. Base-Emitter Saturation Voltage

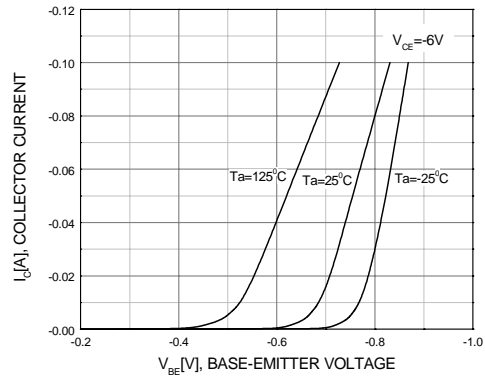


Figure 6. Base-Emitter Voltage

Typical Characteristics (Continued)

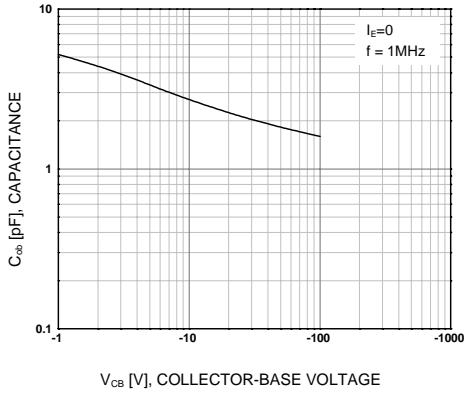


Figure 7. Collector Output Capacitance

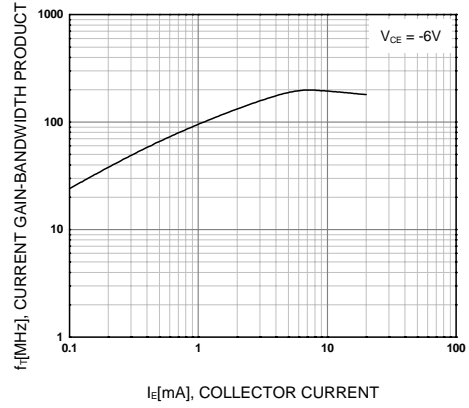


Figure 8. Current Gain Bandwidth Product

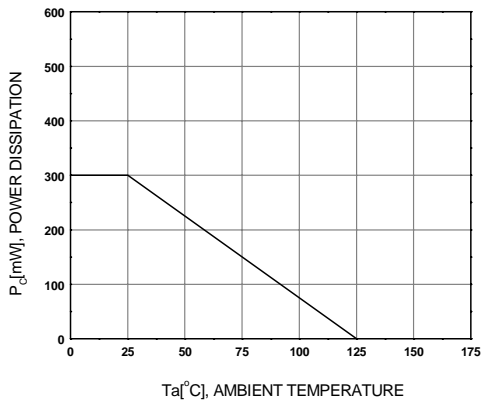
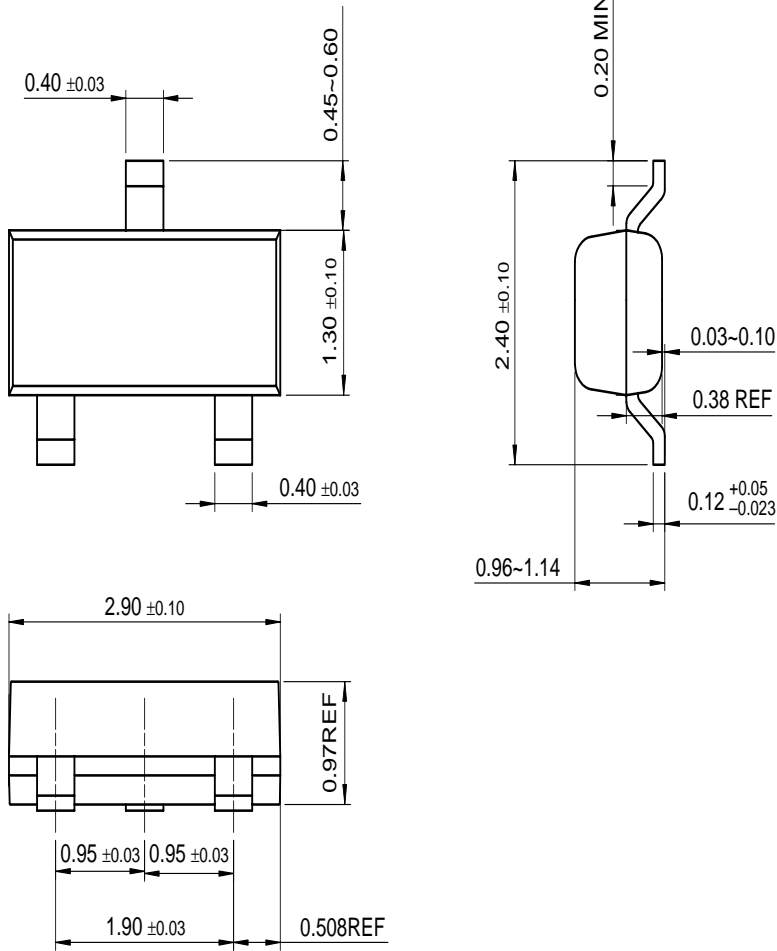


Figure 9. Power Derating

Package Dimensions

SOT-23



Dimensions in Millimeters

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