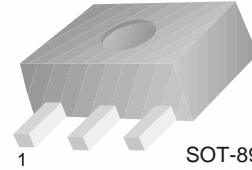


FAIRCHILD
SEMICONDUCTOR®

FJC1308

Audio Power Amplifier Applications

- Complement to FJC1963
- High Collector Current
- Low Collector-Emitter Saturation Voltage



1. Base 2. Collector 3. Emitter

PNP Epitaxial Silicon Transistor

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

| Symbol | Parameter | Value | Units |
|-----------|--|-----------|------------------|
| V_{CBO} | Collector-Base Voltage | -30 | V |
| V_{CEO} | Collector-Emitter Voltage | -30 | V |
| V_{EBO} | Emitter-Base Voltage | -6 | V |
| I_C | Collector Current (DC) | -3 | A |
| P_C | Power Dissipation ($T_C=25^\circ\text{C}$) | 0.5 | W |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature | -55 ~ 150 | $^\circ\text{C}$ |

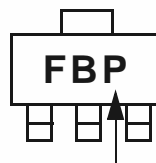
Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|----------------------|--------------------------------------|---------------------------------------|------|------|-------|---------------|
| BV_{CBO} | Collector-Base Breakdown Voltage | $I_C=-50\mu\text{A}, I_E=0$ | -30 | | | V |
| BV_{CEO} | Collector-Emitter Breakdown Voltage | $I_C=-1\text{mA}, I_B=0$ | -30 | | | V |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E=-50\mu\text{A}, I_C=0$ | -6 | | | V |
| I_{CEO} | Collector Cut-off Current | $V_{CE}=-20\text{V}, V_B=0$ | | | -0.5 | μA |
| I_{EBO} | Emitter Cut-off Current | $V_{EB}=-5\text{V}, I_C=0$ | | | -0.5 | μA |
| h_{FE} | DC Current Gain | $V_{CE}=-2\text{V}, I_C=-0.5\text{A}$ | 80 | | 390 | |
| $V_{CE}(\text{sat})$ | Collector-Emitter Saturation Voltage | $I_C=-1.5, I_B=-0.15\text{A}$ | | | -0.45 | V |
| $V_{BE}(\text{sat})$ | Base-Emitter Saturation Voltage | $I_C=-1.5, I_B=-0.15\text{A}$ | | | -1.5 | V |

h_{FE} Classification

| Classification | P | Q | R |
|----------------|----------|-----------|-----------|
| h_{FE} | 80 ~ 180 | 120 ~ 270 | 180 ~ 390 |

Marking



h_{FE} grade

Typical Characteristics

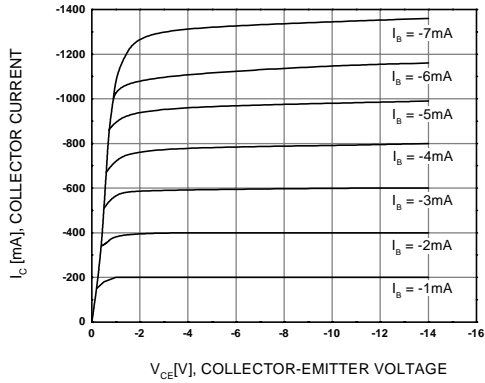


Figure 1. Static Characteristic

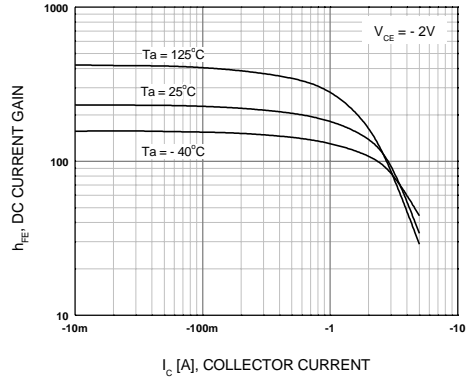


Figure 2. DC current Gain

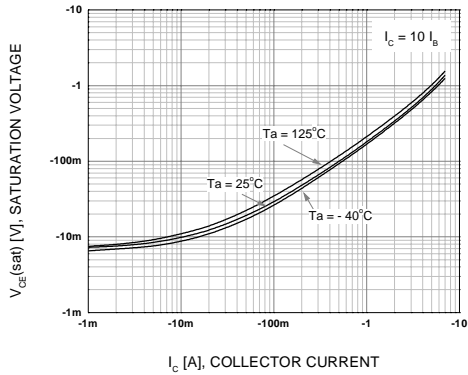


Figure 3. Collector-Emitter Saturation Voltage

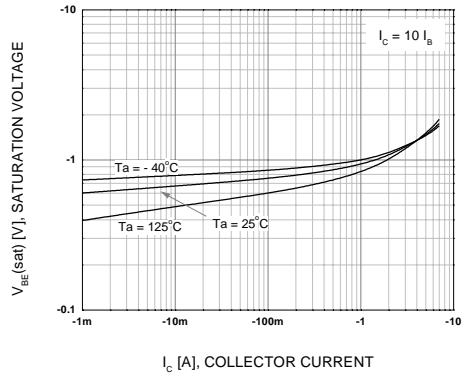


Figure 4. Base-Emitter Saturation Voltage

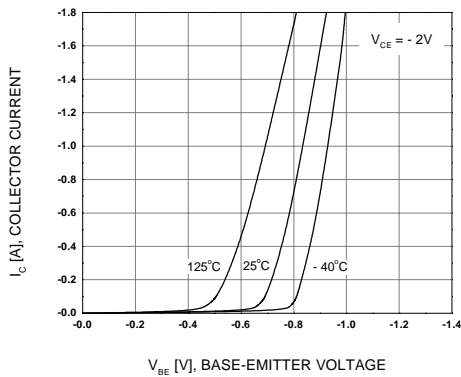


Figure 5. Base-Emitter On Voltage

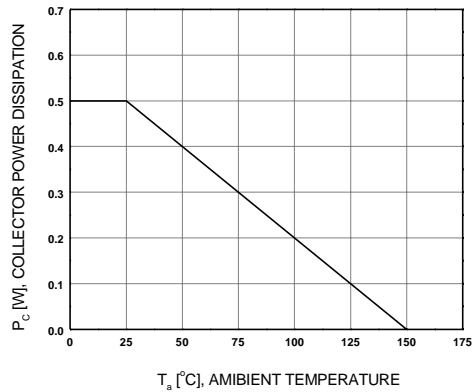
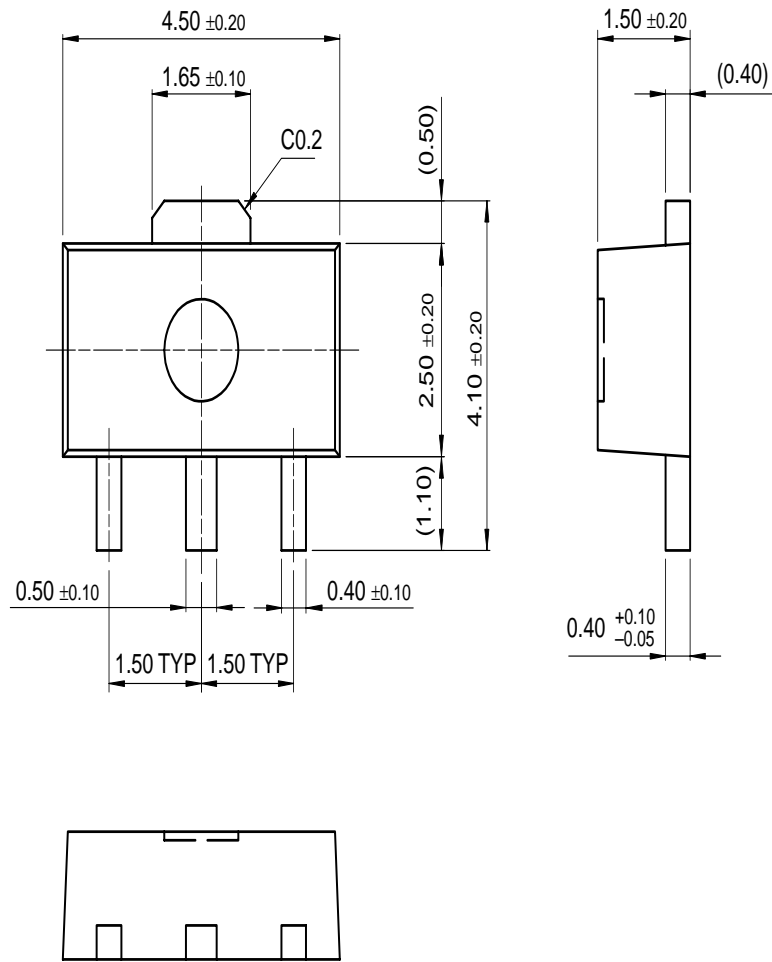


Figure 6. Power Derating

Package Dimensions

SOT-89



Dimensions in Millimeters

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| Bottomless™ | FAST® | LittleFET™ | Power247™ | SuperSOT™-3 |
| CoolFET™ | FASTr™ | MicroFET™ | PowerTrench® | SuperSOT™-6 |
| CROSSVOLT™ | FRFET™ | MicroPak™ | QFET™ | SuperSOT™-8 |
| DOMET™ | GlobalOptoisolator™ | MICROWIRE™ | QS™ | SyncFET™ |
| EcoSPARK™ | GTO™ | MSX™ | QT Optoelectronics™ | TinyLogic™ |
| E ² CMOS™ | HiSeC™ | MSXPro™ | Quiet Series™ | TruTranslation™ |
| EnSigna™ | I ² C™ | OCX™ | RapidConfigure™ | UHC™ |
| Across the board. Around the world.™ | | OCXPro™ | RapidConnect™ | UltraFET® |
| The Power Franchise™ | | OPTOLOGIC® | SILENT SWITCHER® | VCX™ |
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