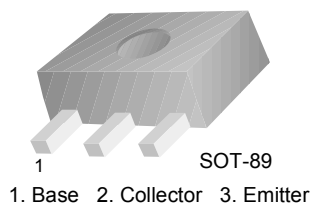


FJC1386

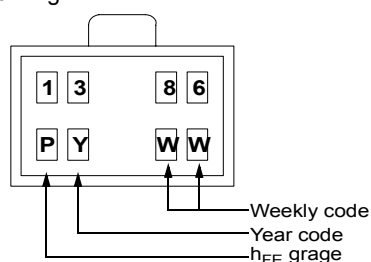
PNP Epitaxial Silicon Transistor

Low Saturation Transistor Medium Power Amplifier

- Complement to FJC2098
- High Collector Current
- Low Collector-Emitter Saturation Voltage



Marking



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

| Symbol | Parameter | Value | Units |
|-----------|--|-------------|------------------|
| V_{CBO} | Collector-Base Voltage | -30 | V |
| V_{CEO} | Collector-Emitter Voltage | -20 | V |
| V_{EBO} | Emitter-Base Voltage | -6 | V |
| I_C | Collector Current (DC) | -5 | A |
| P_C | Power Dissipation ($T_a = 25^\circ\text{C}$) | 0.5 | W |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature | -55 to +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 | $I_C = -50\mu\text{A}$, $I_E = 0$ | -30 | | V |
| BV_{CEO} | Collector-Emitter Breakdown Voltage | $I_C = -1\text{mA}$, $I_B = 0$ | -20 | | V |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E = -50\mu\text{A}$, $I_C = 0$ | -6 | | V |
| I_{CBO} | Collector-Cutoff Current | $V_{CB} = -20\text{V}$, $V_B = 0$ | | -0.5 | μA |
| I_{EBO} | Emitter-Cutoff 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 | |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = -4\text{A}$, $I_B = -0.1\text{A}$ | | -1.0 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C = -4\text{A}$, $I_B = -0.1\text{A}$ | | -1.5 | V |

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

| Symbol | Parameter | Max. | Units |
|-----------------|---|------|--------------------|
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 250 | $^\circ\text{C/W}$ |

 h_{FE} Classification

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

Package Marking and Ordering Information

| Device Marking | Device | Package | Reel Size | Tape Width | Quantity |
|----------------|---------|---------|-----------|------------|----------|
| 1386 | FJC1386 | SOT-89 | 13" | -- | 4,000 |

Typical Performance Characteristics

Figure 1. Static Characteristic

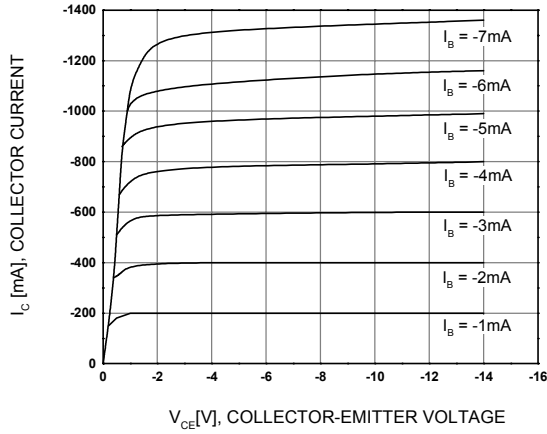


Figure 2. DC Current Gain

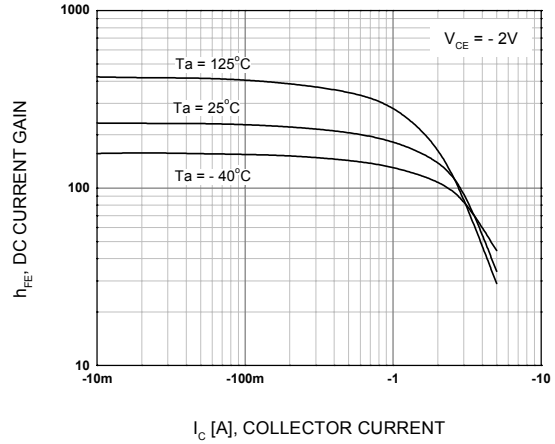


Figure 3. Collector-Emitter Saturation Voltage

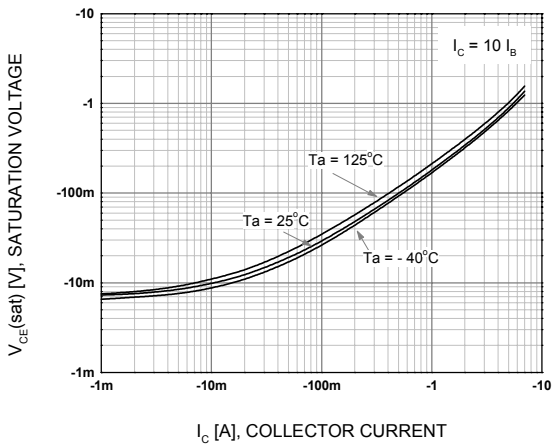


Figure 4. Base-Emitter Saturation Voltage

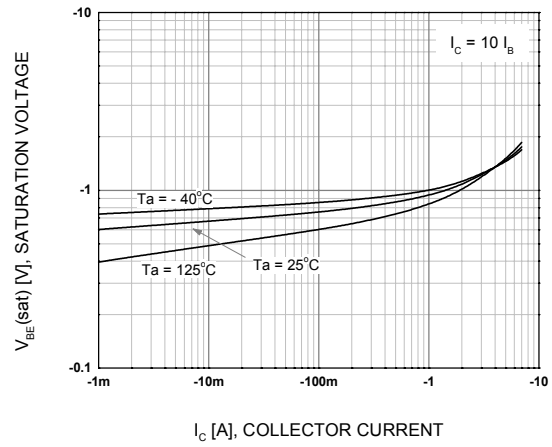


Figure 5. Base-Emitter On Voltage

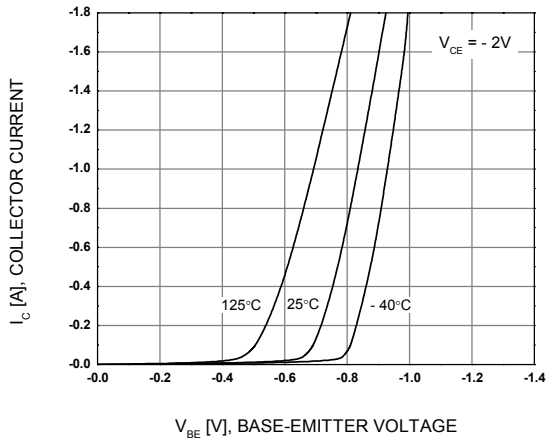
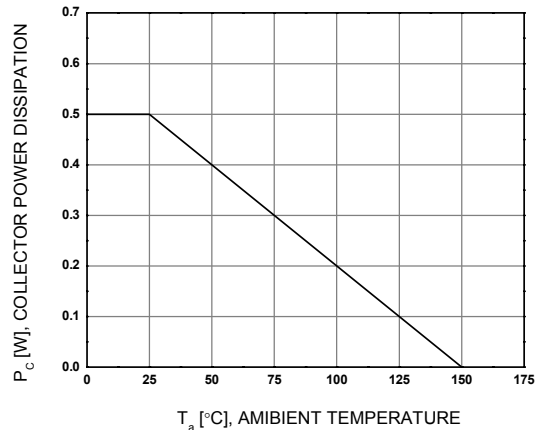
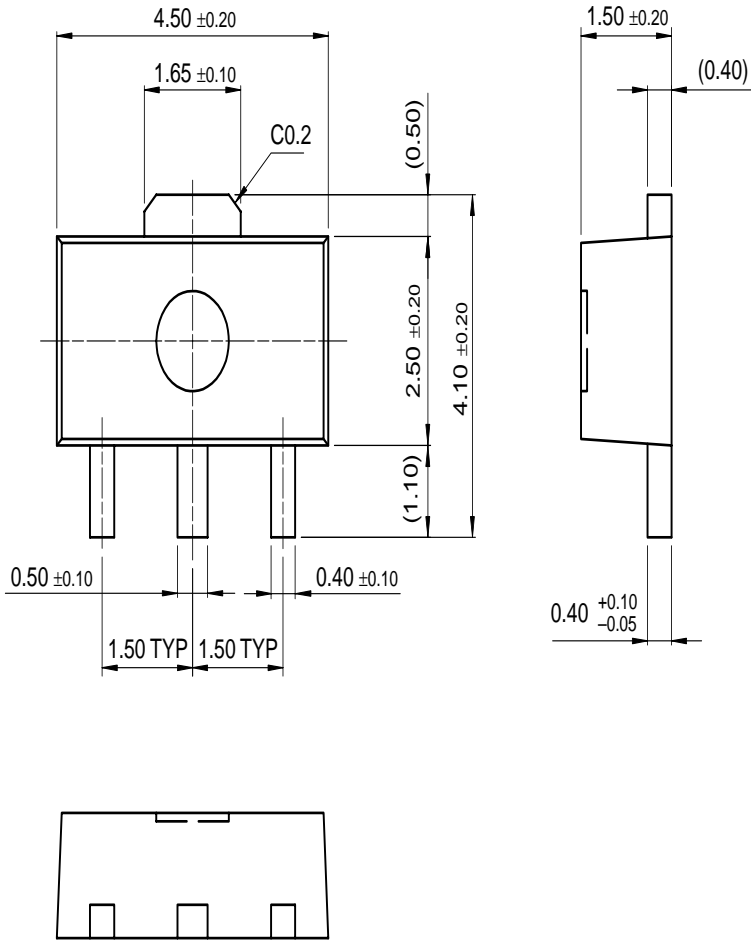


Figure 6. Power Derating



Mechanical Dimensions

SOT-89



Dimensions in Millimeters

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| ActiveArray™ | FASTr™ | LittleFET™ | PowerTrench® | SyncFET™ |
| Bottomless™ | FPS™ | MICROCOUPLER™ | QFET® | TinyLogic® |
| Build it Now™ | FRFET™ | MicroFET™ | QS™ | TINYOPTO™ |
| CoolFET™ | GlobalOptoisolator™ | MicroPak™ | QT Optoelectronics™ | TruTranslation™ |
| CROSSVOLT™ | GTO™ | MICROWIRE™ | Quiet Series™ | UHC™ |
| DOME™ | HiSeC™ | MSX™ | RapidConfigure™ | UltraFET® |
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| E ² CMOS™ | i-Lo™ | OCX™ | μSerDes™ | VCX™ |
| EnSigna™ | ImpliedDisconnect™ | OCXPro™ | SILENT SWITCHER® | Wire™ |
| FACT™ | IntelliMAX™ | OPTOLOGIC® | SMART START™ | |
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| The Power Franchise® | | POP™ | SuperFET™ | |
| Programmable Active Droop™ | | Power247™ | SuperSOT™-3 | |
| | | PowerEdge™ | SuperSOT™-6 | |

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