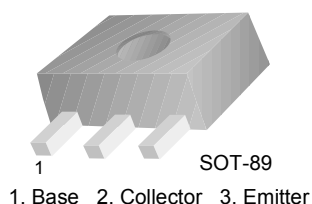


KSB798

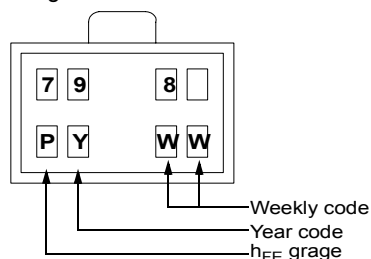
PNP Epitaxial Silicon Transistor

Audio Frequency Power Amplifier

- Collector Current : $I_C = -1A$
- Collector Power Dissipation : $P_C = 2W$



Marking



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

| Symbol | Parameter | Ratings | Units |
|-----------|-----------------------------|-----------|------------------|
| V_{CBO} | Collector-Base Voltage | -30 | V |
| V_{CEO} | Collector-Emitter Voltage | -25 | V |
| V_{EBO} | Emitter-Base Voltage | -5 | V |
| I_C | Collector Current (DC) | -1.0 | A |
| I_{CP} | Collector Current (Pulse) * | -1.5 | A |
| P_C | Collector Power Dissipation | 2.0 | W |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature | -55 ~ 150 | $^\circ\text{C}$ |

* $PW \leq 10\text{ms}$, Duty cycle $\leq 50\%$

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

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|------------------------|--------------------------------------|--|----------|------|------|---------------|
| BV_{CBO} | Collector-Base Breakdown Voltage | $I_C = -100\mu\text{A}$, $I_E = 0$ | -30 | | | V |
| BV_{CEO} | Collector-Emitter Breakdown Voltage | $I_C = -1\text{mA}$, $I_B = 0$ | -25 | | | V |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E = -100\mu\text{A}$, $I_C = 0$ | -5 | | | V |
| I_{CBO} | Collector Cut-off Current | $V_{CB} = -30\text{V}$, $I_E = 0$ | | | -0.1 | μA |
| I_{EBO} | Emitter Cut-off Current | $V_{EB} = -5\text{V}$, $I_C = 0$ | | | -0.1 | μA |
| h_{FE1} h_{FE2} | DC Current Gain | $V_{CE} = -1\text{V}$, $I_C = -0.1\text{A}$ $V_{CE} = -1\text{V}$, $I_C = -1.0\text{A}$ | 90 50 | | 400 | |
| $V_{CE}(\text{sat})$ | Collector-Emitter Saturation Voltage | $I_C = -1.0\text{A}$, $I_B = -0.1\text{A}$ | | | -0.4 | V |
| $V_{BE}(\text{sat})$ | Base-Emitter Saturation Voltage | $I_C = -1.0\text{A}$, $I_B = -0.1\text{A}$ | | | -1.2 | V |
| $V_{BE}(\text{on})$ | Base-Emitter On Voltage | $V_{CE} = -6\text{V}$, $I_C = -10\text{mA}$ | -0.6 | | -0.7 | V |
| f_T | Current Gain Bandwidth Product | $V_{CE} = -6\text{V}$, $I_C = -10\text{mA}$ | | 110 | | MHz |
| C_{ob} | Output Capacitance | $V_{CB} = -6\text{V}$, $I_E = 0$, $f = 1\text{MHz}$ | | 18 | | pF |

h_{FE} Classification

| Classification | O | Y | G |
|----------------|----------|-----------|-----------|
| h_{FE1} | 90 ~ 180 | 135 ~ 270 | 200 ~ 400 |

Package Marking and Ordering Information

| Device Marking | Device | Package | Reel Size | Tape Width | Quantity |
|----------------|--------|---------|-----------|------------|----------|
| 798 | KSB798 | SOT-89 | 13" | -- | 4,000 |

Typical Performance Characteristics

Figure 1. Static Characteristic

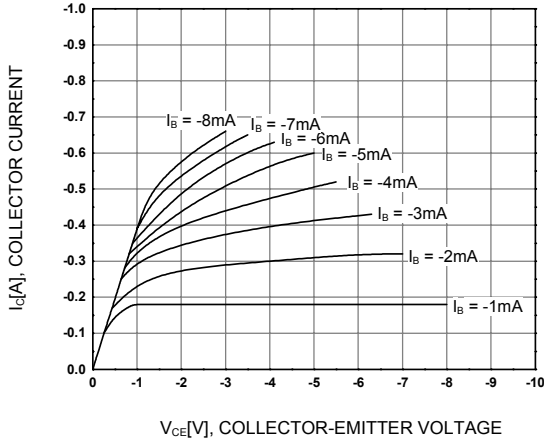
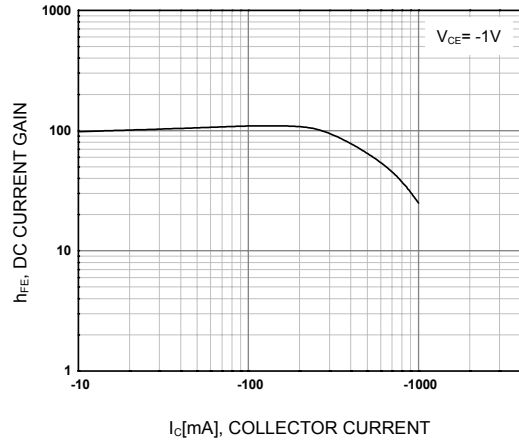


Figure 2. DC Current Gain



**Figure 3. Base-Emitter Saturation Voltage
Collector-Emmitter Saturation Voltage**

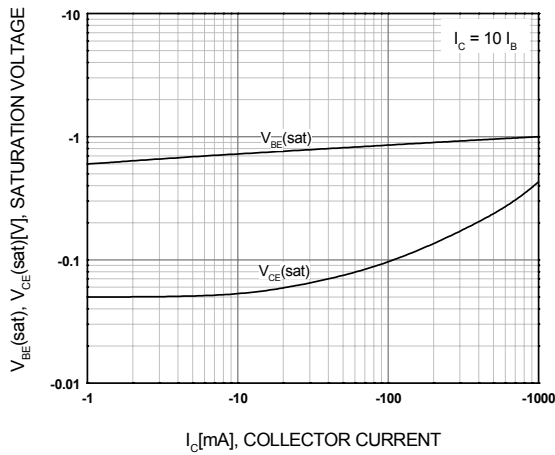


Figure 4. Collector Output Capacitance

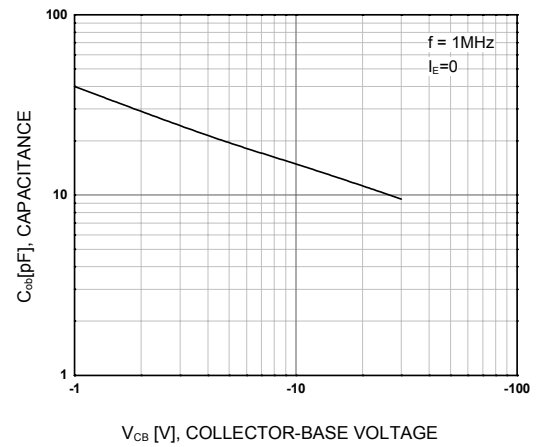


Figure 5. Current Gain Bandwidth Product

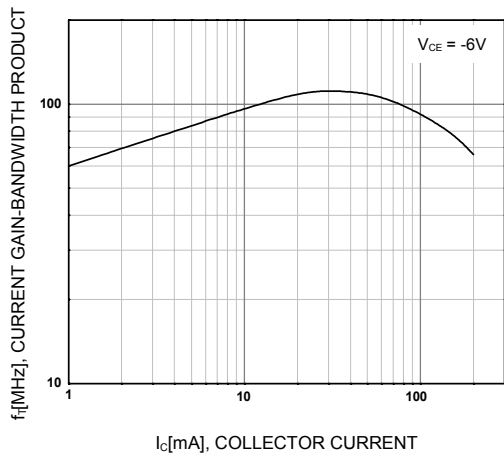
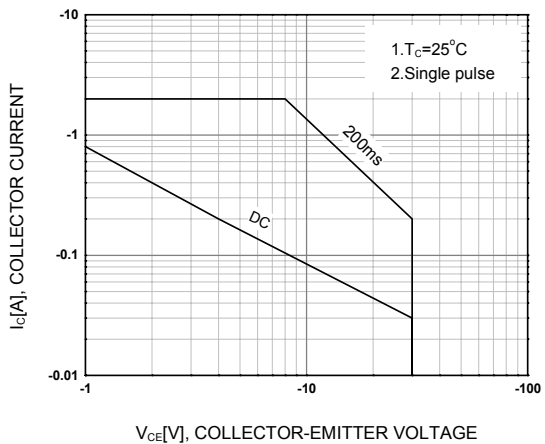
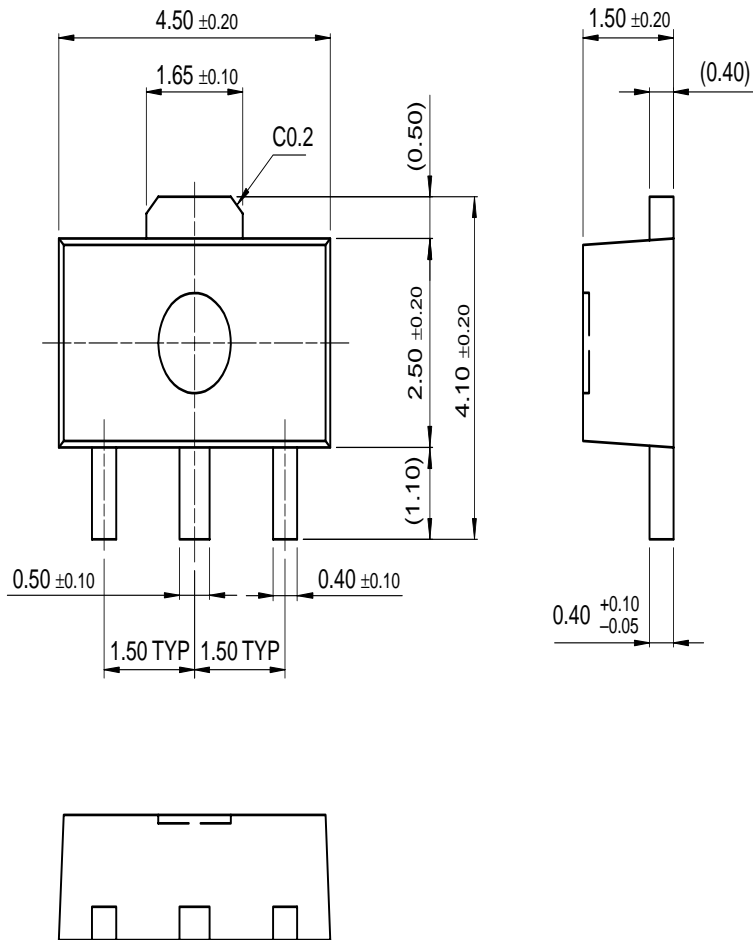


Figure 6. Safe Operating Area



Mechanical Dimensions

SOT-89



Dimensions in Millimeters

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| | | | | |
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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® |
| EcoSPARK™ | I ² C™ | MSXPro™ | RapidConnect™ | UniFET™ |
| E ² CMOS™ | i-Lo™ | OCX™ | μSerDes™ | VCX™ |
| EnSigna™ | ImpliedDisconnect™ | OCXPro™ | SILENT SWITCHER® | Wire™ |
| FACT™ | IntelliMAX™ | OPTOLOGIC® | SMART START™ | |
| FACT Quiet Series™ | | OPTOPLANAR™ | SPM™ | |
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| The Power Franchise® | | POP™ | SuperFET™ | |
| Programmable Active Droop™ | | Power247™ | SuperSOT™-3 | |
| | | PowerEdge™ | SuperSOT™-6 | |

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Rev. 116