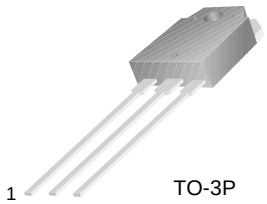
FAIRCHILD
SEMICONDUCTOR®

# KSA1695

## Audio Power Amplifier

- High Current Capability : $I_C$ = -8A
- High Power Dissipation
- Wide S.O.A
- Complement to KSC4468



1 TO-3P

1.Base 2.Collector 3.Emitter

## PNP Epitaxial Silicon Transistor

### Absolute Maximum Ratings $T_C$=25°C unless otherwise noted

| Symbol | Parameter | Ratings | Units |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | -160 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | -140 | V |
| $V_{EBO}$ | Emitter-Base Voltage | -6 | V |
| $I_C$ | Collector Current (DC) | -8 | A |
| $I_{CP}$ | Collector Current (Pulse) | -16 | A |
| $P_C$ | Collector Dissipation ($T_C$=25°C) | 80 | W |
| $T_J$ | Junction Temperature | 150 | °C |
| $T_{STG}$ | Storage Temperature | - 55 ~ 150 | °C |

### Electrical Characteristics $T_C$=25°C unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|---|
| $BV_{CBO}$ | Collector-Base Breakdown Voltage | $I_C$=-5mA, $I_E$=0 | -160 | | | V |
| $BV_{CEO}$ | Collector-Emitter Breakdown Voltage | $I_C$=-10mA, $R_{BE}$=∞ | -140 | | | V |
| $BV_{EBO}$ | Emitter-Base Breakdown Voltage | $I_E$=-5mA, $I_C$=0 | -6 | | | V |
| $I_{CBO}$ | Collector Cut-off Current | $V_{CB}$=-80V, $I_E$=0 | | | -0.1 | mA |
| $I_{EBO}$ | Emitter Cut-off Current | $V_{EB}$=-4V, $I_C$=0 | | | -0.1 | mA |
| $h_{FE1}$ | * DC Current Gain | $V_{CE}$=-5V, $I_C$=-1A | 60 | | 200 | |
| $h_{FE2}$ | DC Current Gain | $V_{CE}$=-5V, $I_C$=-6A | 20 | | | |
| $V_{CE}$(sat) | Collector-Emitter Saturation Voltage | $I_C$=-5A, $I_B$=-0.5A | | | -2.5 | V |
| $V_{BE}$(on) | Base-Emitter ON Voltage | $V_{CE}$=-5V, $I_C$=-1A | | | -1.5 | V |
| $f_T$ | Current Gain Bandwidth Product | $V_{CE}$=-5V, $I_C$=-1A | | 30 | | MHz |
| $C_{ob}$ | Output Capacitance | $V_{CB}$=-10V, f=1MHz | | 300 | | pF |
| $t_{ON}$ | Turn ON Time | $V_{CC}$=-20V, $I_C$ = 1A = 10$I_{B1}$ = -10$I_{B2}$ $R_L$ = 20Ω | | 0.25 | | µs |
| $t_F$ | Fall Time | | | 0.53 | | µs |
| $t_{STG}$ | Storage Time | | | 1.61 | | µs |

* Pulse Test : PW=20us

## *$h_{FE}$ Classification

| Classification | O | Y |
|---|---|---|
| $h_{FE1}$ | 60 ~ 120 | 100 ~ 200 |

# Typical Characteristics

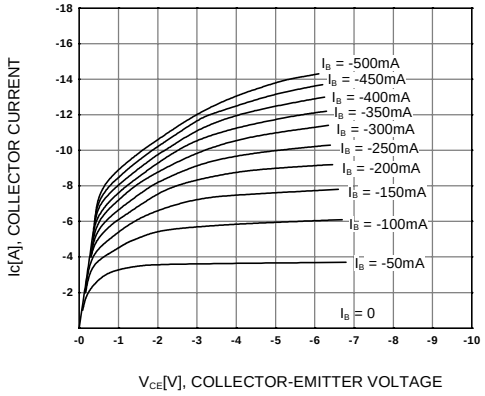



**Figure 1. Static Characteristic**

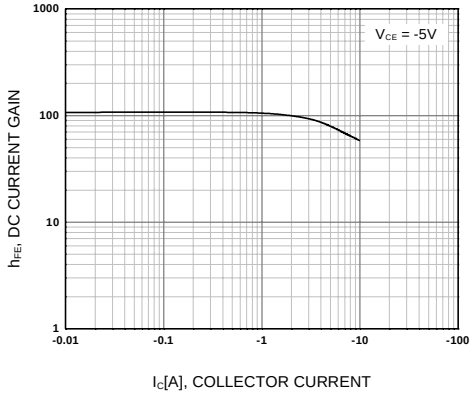



**Figure 2. DC current Gain**

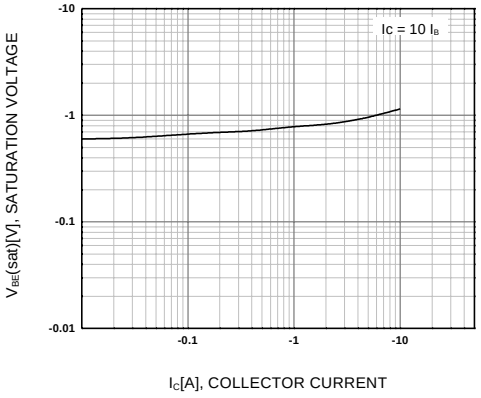



**Figure 3. Base-Emitter Saturation Voltage**

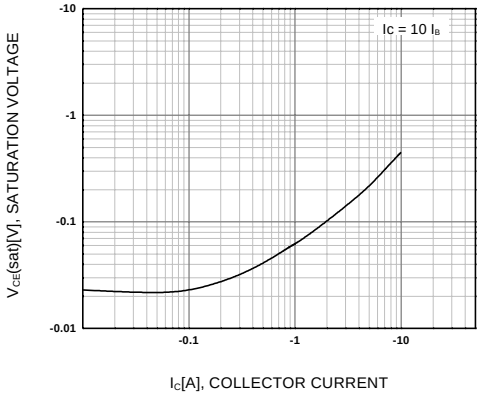



**Figure 4. Collector-Emitter Saturation Voltage**

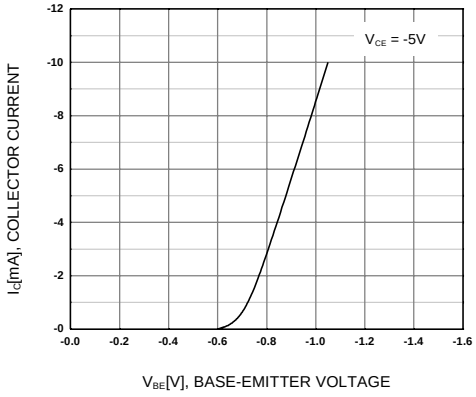



**Figure 5. Base-Emitter On Voltage**

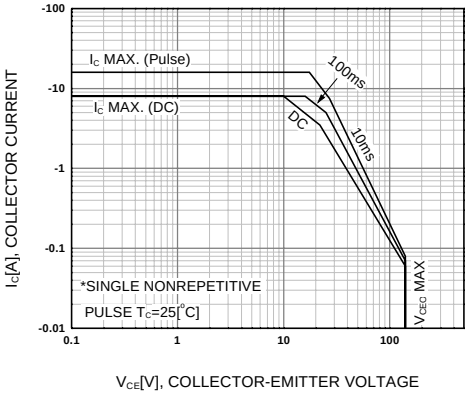



**Figure 6. Safe Operating Area**

## Typical Characteristics (Continued)

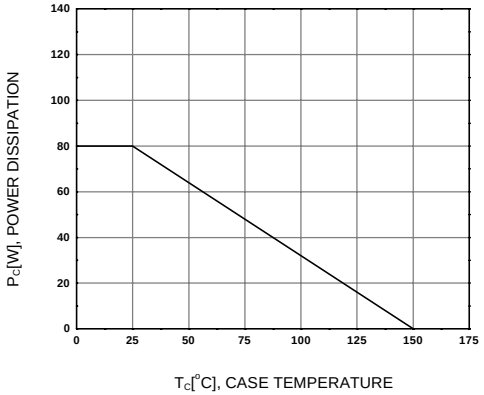
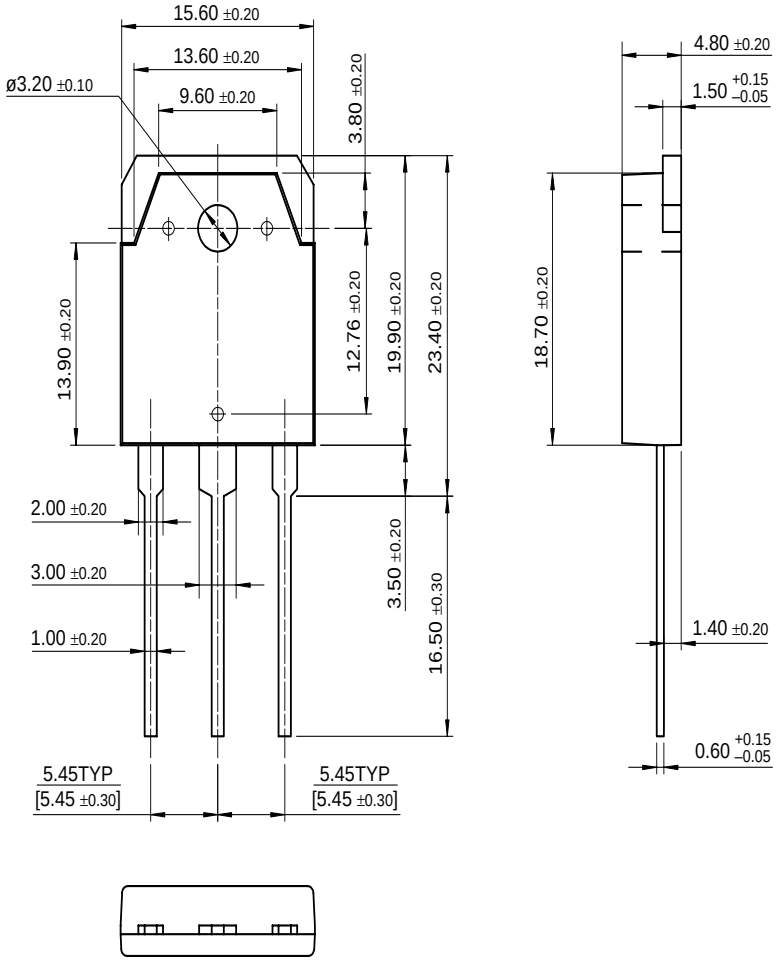



**Figure 7. Power Derating**

## Package Demensions

TO-3P




Dimensions in Millimeters

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|---|---|---|
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