

KSA931

Low Frequency Amplifier & Medium Speed Switching

- Complement to KSC2331
- Collector-Base Voltage : $V_{CBO} = -80V$
- Collector Power Dissipation : $P_C = 1W$



PNP Epitaxial Silicon Transistor

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

| Symbol | Parameter | Ratings | Units |
|-----------|-----------------------------|-----------|------------|
| V_{CBO} | Collector-Base Voltage | -80 | V |
| V_{CEO} | Collector-Emitter Voltage | -60 | V |
| V_{EBO} | Emitter-Base Voltage | -8 | V |
| I_C | Collector Current | -700 | mA |
| P_C | Collector Power Dissipation | 1 | W |
| T_J | Junction Temperature | 150 | $^\circ C$ |
| T_{STG} | Storage Temperature | -55 ~ 150 | $^\circ C$ |

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

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|---------------|--|------------------------------------|------|------|------|---------|
| BV_{CBO} | Collector-Base Breakdown Voltage | $I_C = -100\mu A, I_E = 0$ | -80 | | | V |
| BV_{CEO} | Collector-Emitter Breakdown Voltage | $I_C = -10mA, I_B = 0$ | -60 | | | V |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E = -100\mu A, I_C = 0$ | -8 | | | V |
| I_{CBO} | Collector Cut-off Current | $V_{CB} = -60V, I_E = 0$ | | | -0.1 | μA |
| I_{EBO} | Emitter Cut-off Current | $V_{EB} = -5V, I_C = 0$ | | | -0.1 | μA |
| h_{FE} | * DC Current Gain | $V_{CE} = -2V, I_C = -50mA$ | 40 | | 240 | |
| $V_{CE(sat)}$ | * Collector-Emitter Saturation Voltage | $I_C = -500mA, I_B = -50mA$ | | -0.3 | -0.7 | V |
| $V_{BE(sat)}$ | * Base-Emitter Saturation Voltage | $I_C = -500mA, I_B = -50mA$ | | -0.9 | -1.2 | V |
| f_T | Current Gain Bandwidth Product | $V_{CE} = -10V, I_C = -50mA$ | | 100 | | MHz |
| C_{ob} | Output Capacitance | $V_{CB} = -10V, I_E = 0, f = 1MHz$ | | 13 | | pF |

* Pulse Test: $PW \leq 350\mu s$, Duty cycle $\leq 2\%$

h_{FE} Classification

| Classification | R | O | Y |
|----------------|---------|----------|-----------|
| h_{FE} | 40 ~ 80 | 70 ~ 140 | 120 ~ 240 |

Typical Characteristics

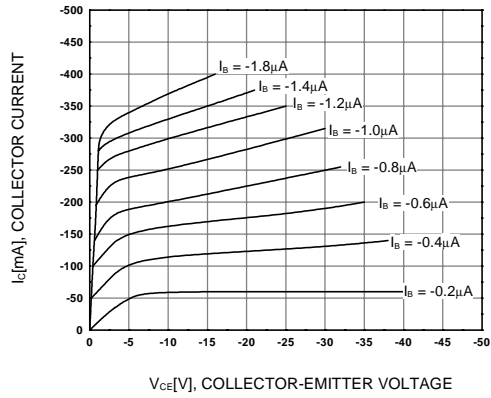


Figure 1. Static Characteristic

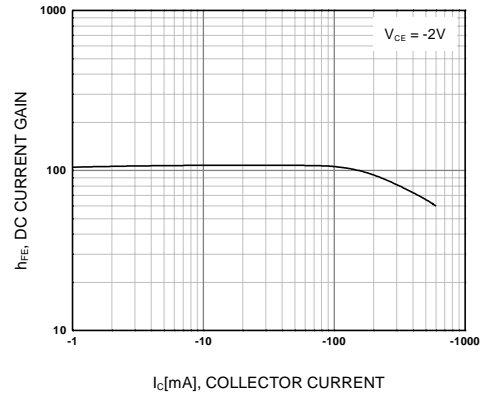


Figure 2. DC current Gain

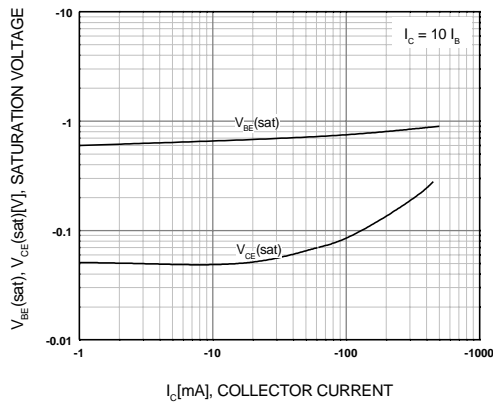


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

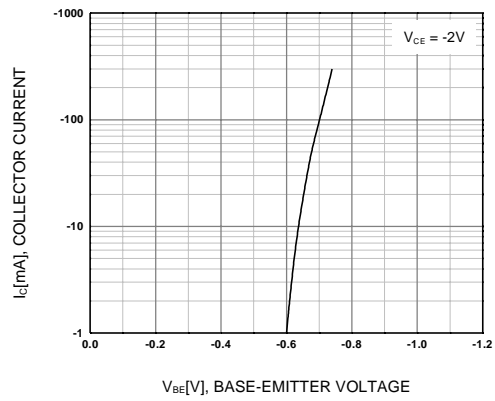


Figure 4. Base-Emitter On Voltage

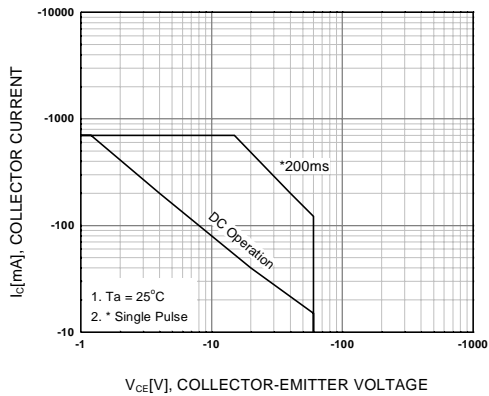


Figure 5. Safe Operating Area

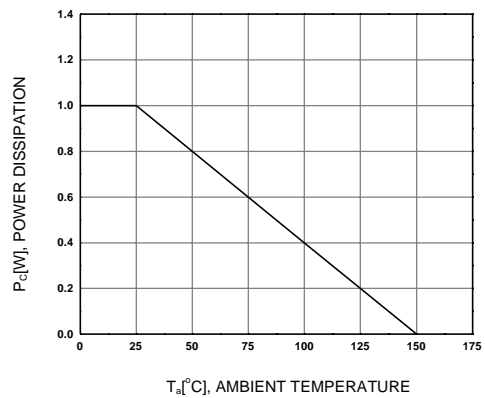
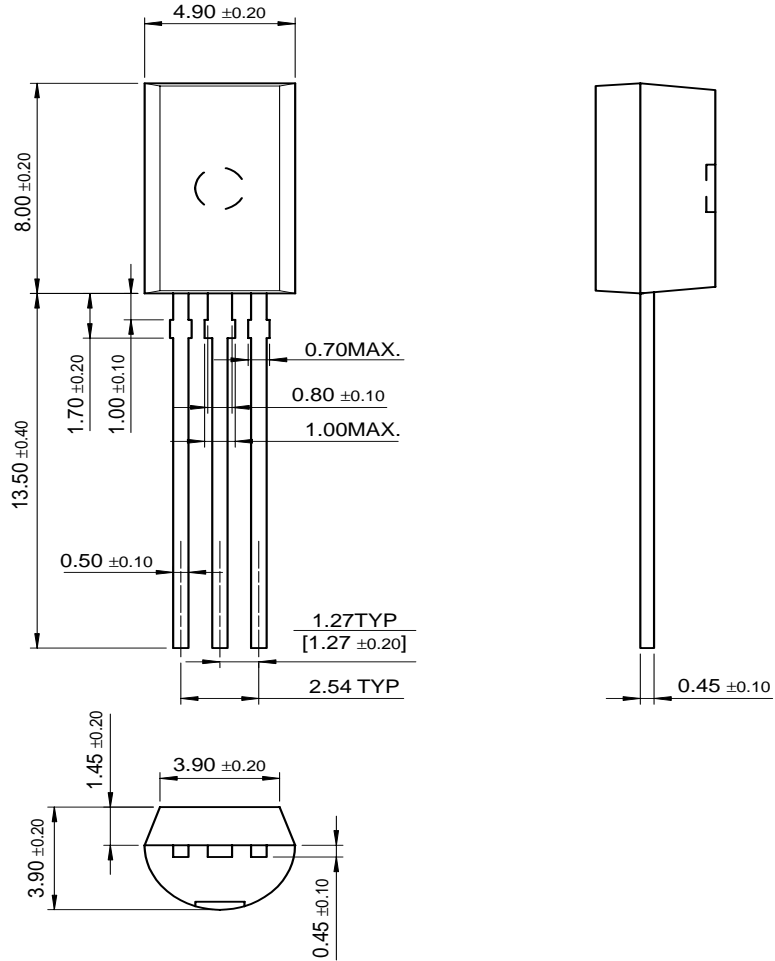


Figure 6. Power Derating

Package Dimensions

TO-92L



Dimensions in Millimeters

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