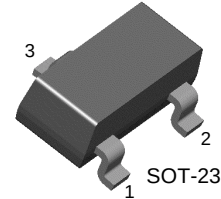


# KST2907A

KST2907A

## General Purpose Transistor



1. Base 2. Emitter 3. Collector

## PNP Epitaxial Silicon Transistor

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

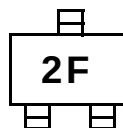
| Symbol    | Parameter                   | Value | Units            |
|-----------|-----------------------------|-------|------------------|
| $V_{CBO}$ | Collector-Base Voltage      | -60   | V                |
| $V_{CEO}$ | Collector-Emitter Voltage   | -60   | V                |
| $V_{EBO}$ | Emitter-Base Voltage        | -5    | V                |
| $I_C$     | Collector Current           | -600  | mA               |
| $P_C$     | Collector Power Dissipation | 350   | mW               |
| $T_{STG}$ | Storage Temperature         | 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       | $I_C = -10\mu\text{A}, I_E = 0$                                                                                                                                                                                                          | -60                           |              | V             |
| $BV_{CEO}$           | * Collector-Emitter Breakdown Voltage  | $I_C = -10\text{mA}, I_B = 0$                                                                                                                                                                                                            | -60                           |              | V             |
| $BV_{EBO}$           | Emitter-Base Breakdown Voltage         | $I_E = -10\mu\text{A}, I_C = 0$                                                                                                                                                                                                          | -5                            |              | V             |
| $I_{CBO}$            | Collector Cut-off Current              | $V_{CB} = -50\text{V}, I_E = 0$                                                                                                                                                                                                          |                               | -0.01        | $\mu\text{A}$ |
| $h_{FE}$             | DC Current Gain                        | $V_{CE} = -10\text{V}, I_C = -0.1\text{mA}$<br>$V_{CE} = -10\text{V}, I_C = -1.0\text{mA}$<br>$V_{CE} = -10\text{V}, I_C = -10\text{mA}$<br>$*V_{CE} = -10\text{V}, I_C = -150\text{mA}$<br>$*V_{CE} = -10\text{V}, I_C = -500\text{mA}$ | 75<br>100<br>100<br>100<br>50 | 300          |               |
| $V_{CE}(\text{sat})$ | * Collector-Emitter Saturation Voltage | $I_C = -150\text{mA}, I_B = -15\text{mA}$<br>$I_C = -500\text{mA}, I_B = -50\text{mA}$                                                                                                                                                   |                               | -0.4<br>-1.6 | V<br>V        |
| $V_{BE}(\text{sat})$ | * Base-Emitter Saturation Voltage      | $I_C = -150\text{mA}, I_B = -15\text{mA}$<br>$I_C = -500\text{mA}, I_B = -50\text{mA}$                                                                                                                                                   |                               | -1.3<br>-2.6 | V<br>V        |
| $f_T$                | Current Gain Bandwidth Product         | $I_C = -50\text{mA}, V_{CE} = -20\text{V}$<br>$f = 100\text{MHz}$                                                                                                                                                                        | 200                           |              | MHz           |
| $C_{ob}$             | Output Capacitance                     | $V_{CB} = -10\text{V}, I_E = 0, f = 1.0\text{MHz}$                                                                                                                                                                                       |                               | 8            | pF            |
| $t_{ON}$             | Turn On Time                           | $V_{CC} = -30\text{V}, I_C = -150\text{mA}$<br>$I_{B1} = -15\text{mA}$                                                                                                                                                                   |                               | 50           | ns            |
| $t_{OFF}$            | Turn Off Time                          | $V_{CC} = -6\text{V}, I_C = -150\text{mA}$<br>$I_{B1} = I_{B2} = -15\text{mA}$                                                                                                                                                           |                               | 110          | ns            |

\* Pulse Test:  $PW \leq 300\mu\text{s}$ , Duty Cycle  $\leq 2\%$

### Marking



## Typical Characteristics

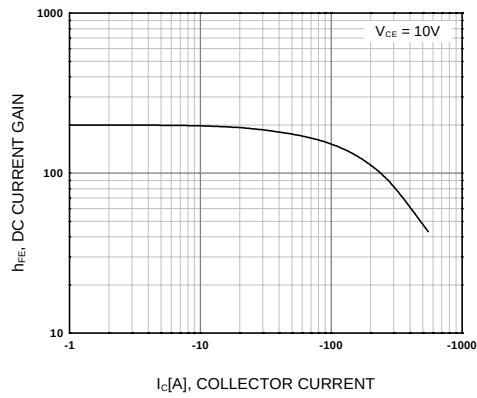


Figure 1. DC current Gain

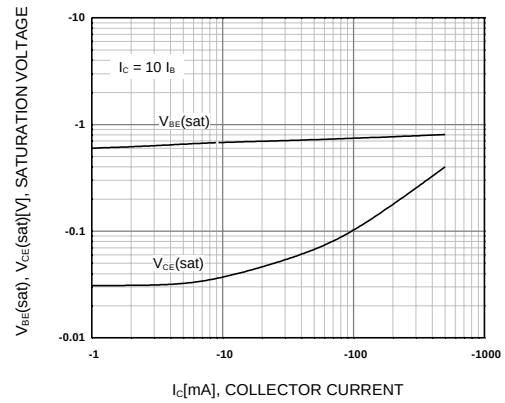


Figure 2. Collector-Emitter Saturation Voltage  
Base-Emitter Saturation Voltage

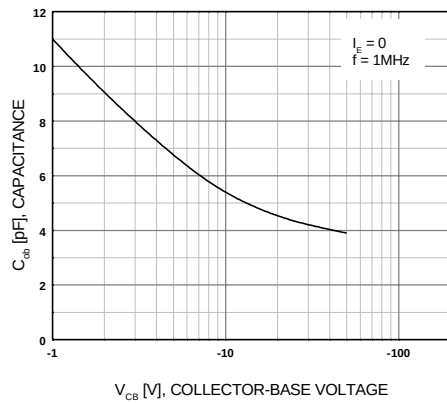


Figure 3. Output Capacitance

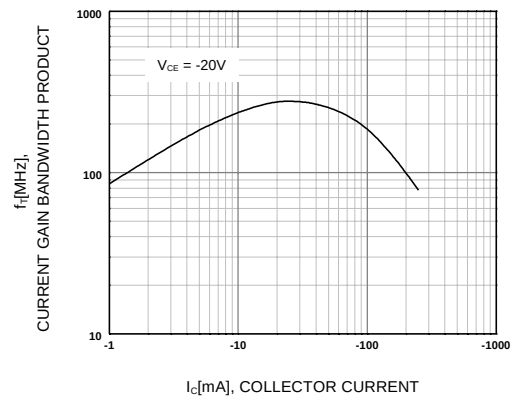
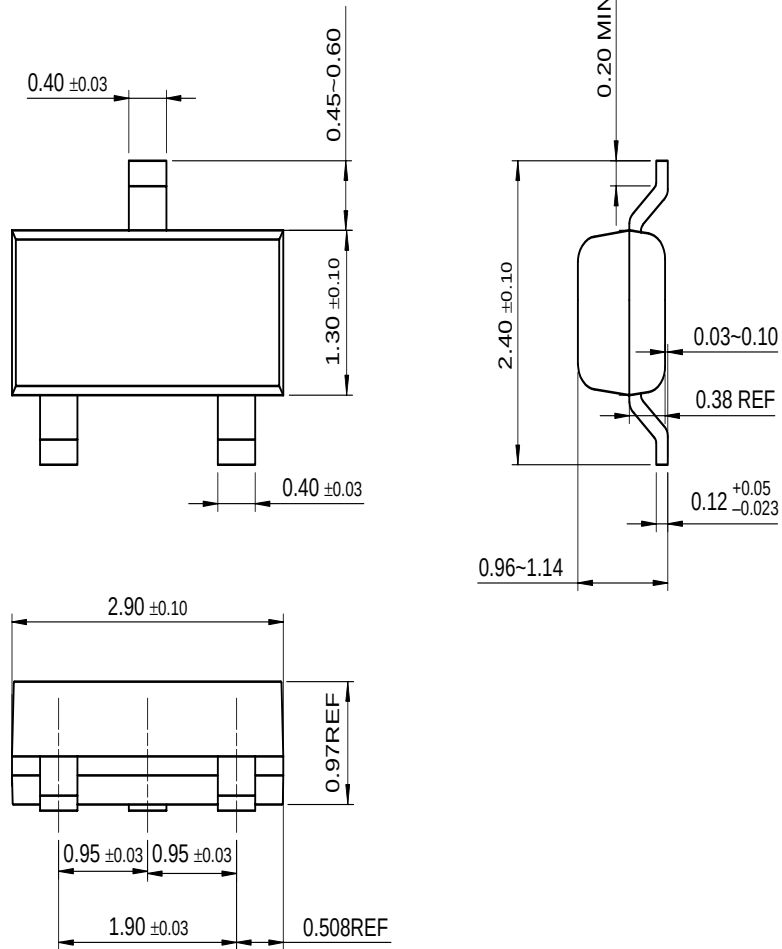


Figure 4. Current Gain Bandwidth Product

# Package Dimensions

## SOT-23



Dimensions in Millimeters

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