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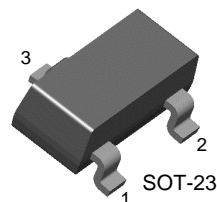
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KST5401

KST5401

High Voltage Transistor



SOT-23
1. Base 2. Emitter 3. Collector

PNP Epitaxial Silicon Transistor

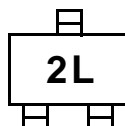
Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|-----------|-----------------------------|-------|------------------|
| V_{CBO} | Collector-Base Voltage | -160 | V |
| V_{CEO} | Collector-Emitter Voltage | -150 | V |
| V_{EBO} | Emitter-Base Voltage | -5 | V |
| I_C | Collector Current | -500 | 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 | $I_C = -100\mu\text{A}, I_E = 0$ | -160 | | V |
| BV_{CEO} | Collector-Emitter Breakdown Voltage | $I_C = -1.0\text{mA}, I_B = 0$ | -150 | | V |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E = -10\mu\text{A}, I_C = 0$ | -5 | | V |
| I_{CBO} | Collector Cut-off Current | $V_{CB} = -100\text{V}, I_E = 0$ | | -50 | nA |
| h_{FE} | DC Current Gain | $V_{CE} = -5\text{V}, I_C = -1.0\text{mA}$ $V_{CE} = -5\text{V}, I_C = -10\text{mA}$ $V_{CE} = -5\text{V}, I_C = -50\text{mA}$ | 50 60 50 | 240 | |
| $V_{CE}(\text{sat})$ | Collector-Emitter Saturation Voltage | $I_C = -10\text{mA}, I_B = -1.0\text{mA}$ $I_C = -50\text{mA}, I_B = -5\text{mA}$ | | -0.2 -0.5 | V V |
| $V_{BE}(\text{sat})$ | Base-Emitter Saturation Voltage | $I_C = -10\text{mA}, I_B = -1.0\text{mA}$ $I_C = -50\text{mA}, I_B = -5\text{mA}$ | | -1.0 -1.0 | V V |
| f_T | Current Gain Bandwidth Product | $I_C = -10\text{mA}, V_{CE} = -10\text{V}$ $f = 100\text{MHz}$ | 100 | 300 | MHz |
| C_{ob} | Output Capacitance | $V_{CB} = -10\text{V}, I_E = 0, f = 1.0\text{MHz}$ | | 6.0 | pF |
| NF | Noise Figure | $V_{CE} = -5\text{V}, I_C = -200\mu\text{A}$ $R_S = 10\text{K}\Omega, f = 10\text{Hz to } 15.7\text{KHz}$ | | 8.0 | dB |

Marking



Typical Characteristics

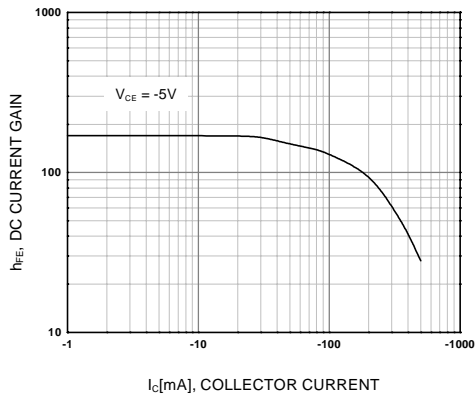


Figure 1. DC current Gain

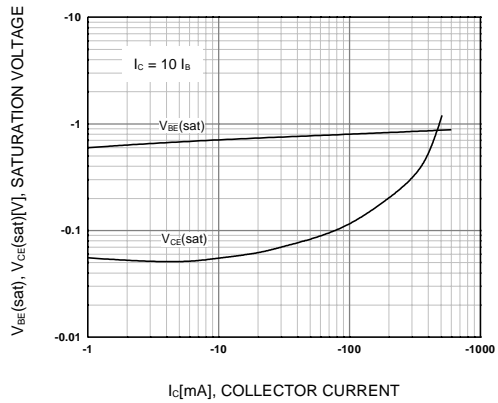


Figure 2. Base-Emitter Saturation Voltage
Collector-Emmitter Saturation Voltage

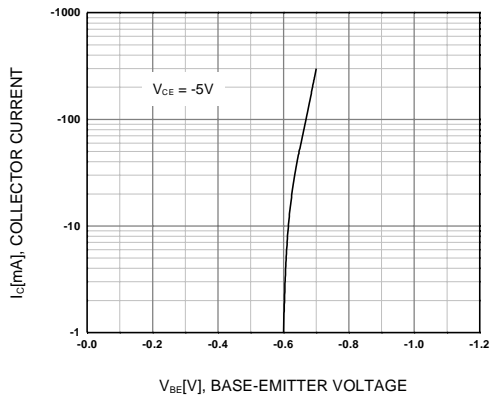


Figure 3. Base-Emitter On Voltage

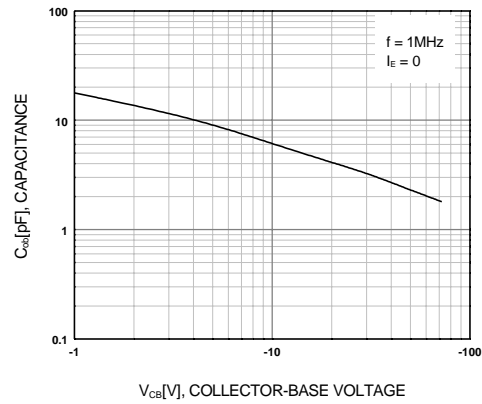


Figure 4. Output Capacitance

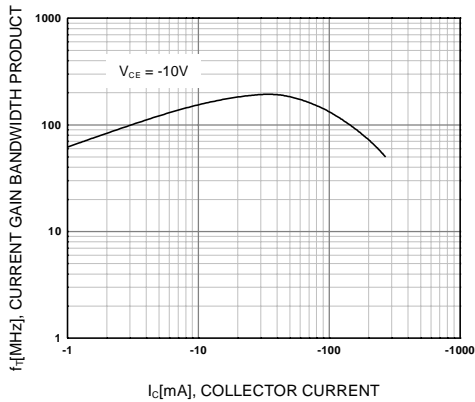
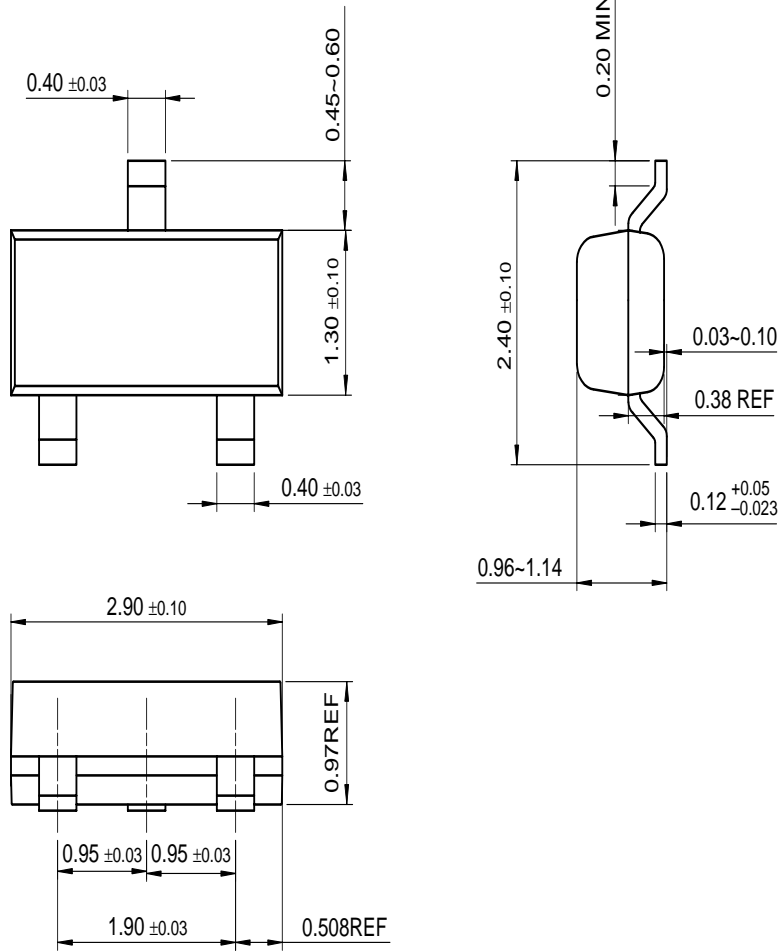


Figure 5. Current Gain Bandwidth Product

Package Dimensions

SOT-23



Dimensions in Millimeters

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