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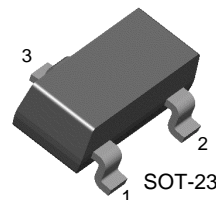
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KST4403

KST4403

Switching Transistor



1. Base 2. Emitter 3. Collector

PNP Epitaxial Silicon Transistor

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

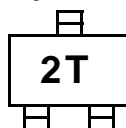
| Symbol | Parameter | Value | Units |
|-----------|-----------------------------|-------|------------------|
| V_{CBO} | Collector-Base Voltage | -40 | V |
| V_{CEO} | Collector-Emitter Voltage | -40 | V |
| V_{EBO} | Emitter-Base Voltage | -5 | V |
| I_C | Collector Current | -600 | mA |
| P_C | Collector 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 | $I_C = -0.1\text{mA}, I_E = 0$ | -40 | | V |
| BV_{CEO} | * Collector-Emitter Breakdown Voltage | $I_C = -1.0\text{mA}, I_B = 0$ | -40 | | V |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E = -0.1\text{mA}, I_C = 0$ | -5 | | V |
| I_{BEV} | Base Cut-off Current | $V_{CE} = -35\text{V}, V_{BE} = -0.4\text{V}$ | | -0.1 | μA |
| I_{CEX} | Collector Cut-off Current | $V_{CE} = -35\text{V}, V_{BE} = -0.4\text{V}$ | | -0.1 | μA |
| h_{FE} | DC Current Gain | $V_{CE} = -1\text{V}, I_C = -0.1\text{mA}$ $V_{CE} = -1\text{V}, I_C = -1.0\text{mA}$ $V_{CE} = -1\text{V}, I_C = -10\text{mA}$ * $V_{CE} = -2\text{V}, I_C = -150\text{mA}$ * $V_{CE} = -2\text{V}, I_C = -500\text{mA}$ | 30 60 100 100 20 | 300 | |
| $V_{CE}(\text{sat})$ | * Collector-Emitter Saturation Voltage | $I_C = -150\text{mA}, I_B = -15\text{mA}$ $I_C = -500\text{mA}, I_B = -50\text{mA}$ | | -0.4 -0.75 | V |
| $V_{BE}(\text{sat})$ | * Base-Emitter Saturation Voltage | $I_C = -150\text{mA}, I_B = -15\text{mA}$ $I_C = -500\text{mA}, I_B = -50\text{mA}$ | -0.75 | -0.95 -1.3 | V |
| f_T | Current Gain Bandwidth Product | $I_C = -20\text{mA}, V_{CE} = -10\text{V}$ $f = 100\text{MHz}$ | 200 | | MHz |
| C_{ob} | Output Capacitance | $V_{CB} = -10\text{V}, I_E = 0$ $f = 140\text{KHz}$ | | 8.5 | pF |
| t_{ON} | Turn On Time | $V_{CC} = -30\text{V}, V_{BE} = -2\text{V}$ $I_C = -150\text{mA}, I_{B1} = -15\text{mA}$ | | 35 | ns |
| t_{OFF} | Turn Off Time | $V_{CC} = -30\text{V}, I_C = -150\text{mA}$ $I_{B1} = I_{B2} = -15\text{mA}$ | | 255 | ns |

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

Marking



Typical Characteristics

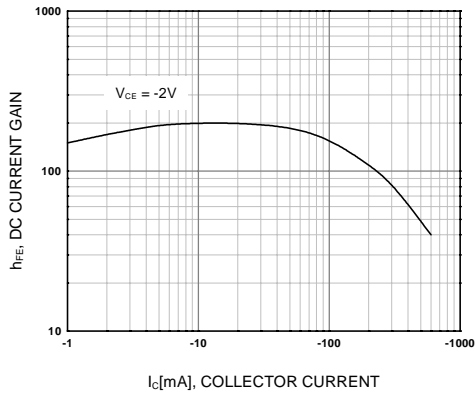


Figure 1. DC current Gain

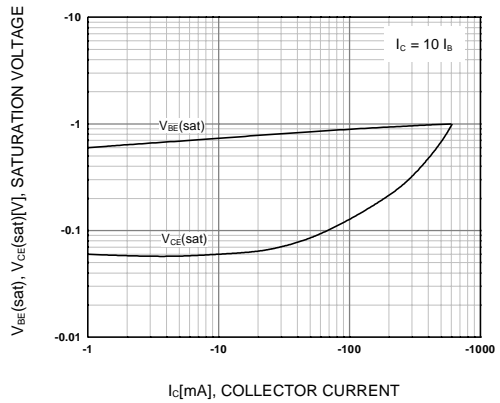


Figure 2. Base-Emitter Saturation Voltage
Collector-Emmitter Saturation Voltage

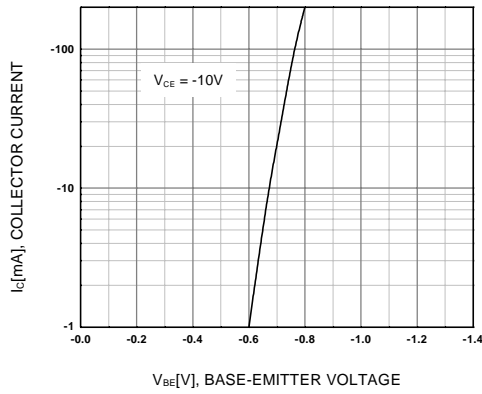


Figure 3. Base-Emitter On Voltage

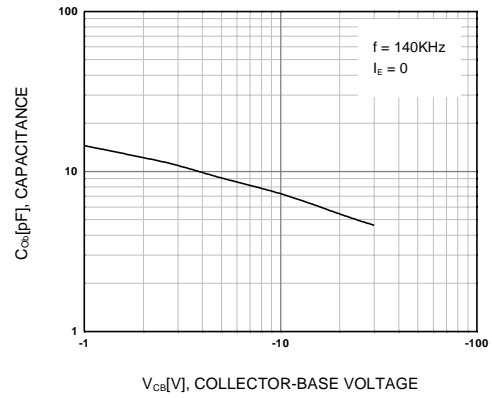


Figure 4. Collector-Base Capacitance

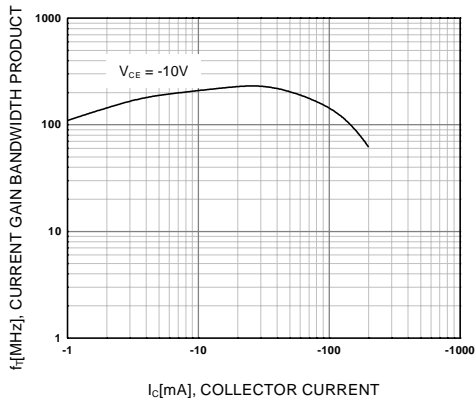


Figure 5. Current Gain Bandwidth Product

Package Dimensions

SOT-23



Dimensions in Millimeters

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