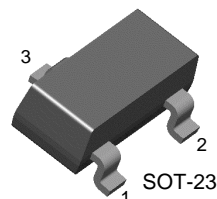


KST63/64

Darlington 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 | -30 | V |
| V_{CES} | Collector-Emitter Voltage | -30 | V |
| V_{EBO} | Emitter-Base Voltage | -10 | 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

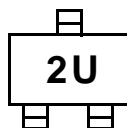
| Symbol | Parameter | Test Condition | Min. | Max. | Units |
|----------------------|--------------------------------------|---|------|------|-------|
| BV_{CES} | Collector-Emitter Breakdown Voltage | $I_C = -100, V_{BE} = 0$ | -30 | | V |
| I_{CBO} | Collector Cut-off Current | $V_{CE} = -30V, I_E = 0$ | | -100 | nA |
| I_{EBO} | Emitter Cut-off Current | $V_{EB} = -10V, I_C = 0$ | | -100 | nA |
| h_{FE} | * DC Current Gain | | | | |
| | : KST63 | $V_{CE} = -5V, I_C = -10mA$ | 5K | | |
| | : KST64 | | 10K | | |
| | : KST63 | $V_{CE} = -5V, I_C = -100mA$ | 10K | | |
| | : K ST64 | | 20K | | |
| $V_{CE}(\text{sat})$ | Collector-Emitter Saturation Voltage | $I_C = -100mA, I_B = -0.1mA$ | | -1.5 | V |
| $V_{BE}(\text{on})$ | Base-Emitter On Voltage | $V_{CE} = -5V, I_C = -100mA$ | | -2.0 | V |
| f_T | Current Gain Bandwidth Product | $V_{CE} = -5V, I_C = -10mA$ $f = 100MHz$ | 125 | | MHz |

* Pulse test: $PW \leq 300\mu s$, Duty Cycle $\leq 2\%$

Marking Code

| Type | KST63 | KST64 |
|------|-------|-------|
| Mark | 2U | 2V |

Marking



Typical Characteristics

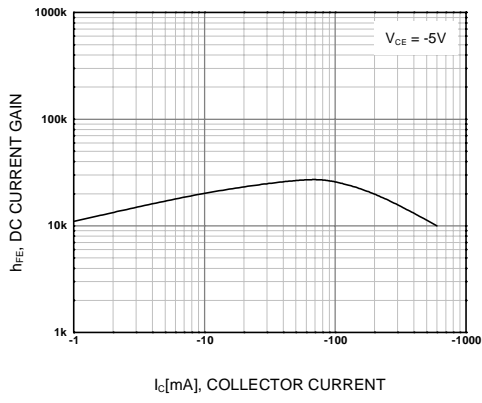


Figure 1. DC current Gain

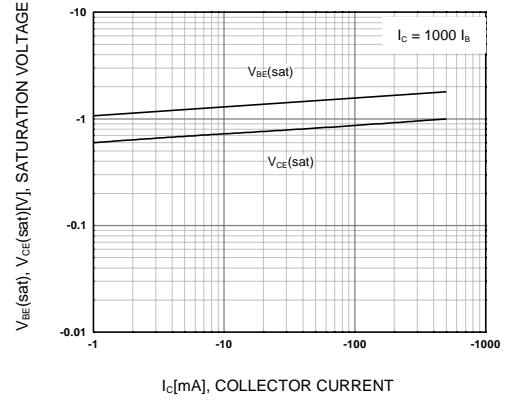


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

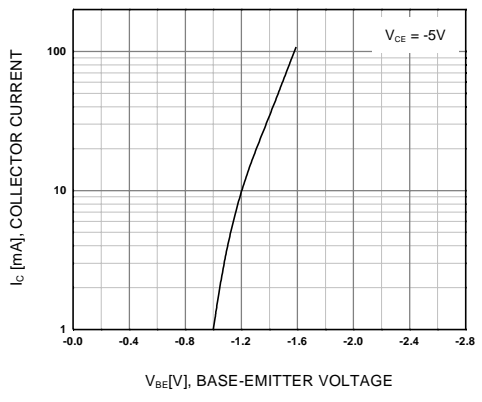


Figure 3. Base-Emitter On Voltage

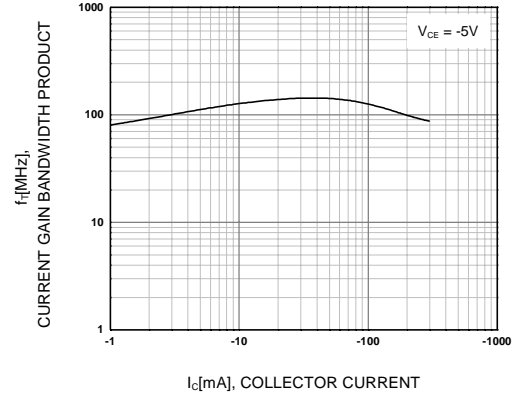


Figure 4. Current Gain Bandwidth Product

Package Dimensions

SOT-23



Dimensions in Millimeters

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| Bottomless [™] | FAST [®] | LittleFET [™] | Power247 [™] | SuperSOT [™] -3 |
| CoolFET [™] | FAST ^r [™] | MicroFET [™] | PowerTrench [®] | SuperSOT [™] -6 |
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