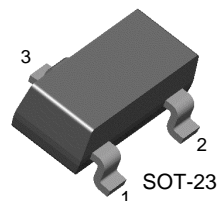


KST05/06

Driver Transistor

- Collector-Emitter Voltage: V_{CE0} = KST05: 60V
KST06: 80V
- Collector Power Dissipation: P_C (max) = 350mW
- Complement to KST55/56



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

NPN Epitaxial Silicon Transistor

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

| Symbol | Parameter | Value | Units |
|---------------|--|-------|--------------------|
| V_{CBO} | Collector-Base Voltage | | |
| | : KST05 | 60 | V |
| | : KST06 | 80 | V |
| V_{CEO} | Collector-Emitter Voltage | | |
| | : KST05 | 60 | V |
| | : KST06 | 80 | V |
| V_{EBO} | Emitter-Base Voltage | 4 | V |
| I_C | Collector Current | 500 | mA |
| P_C | Collector Power Dissipation | 350 | mW |
| T_{STG} | Storage Temperature | 150 | $^\circ\text{C}$ |
| $R_{TH(j-a)}$ | Thermal Resistance junction to Ambient | 357 | $^\circ\text{C/W}$ |

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

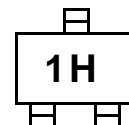
| Symbol | Parameter | Test Condition | Min. | Max. | Units |
|---------------|---------------------------------------|---|------|------|---------------|
| BV_{CEO} | * Collector-Emitter Breakdown Voltage | | | | |
| | : KST05 | $I_C=1\text{mA}, I_B=0$ | 60 | | V |
| | : KST06 | | 80 | | V |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E=100\mu\text{A}, I_C=0$ | 4 | | V |
| I_{CBO} | Collector Cut-off Current | $V_{CB}=60\text{V}, I_E=0$ | | 0.1 | μA |
| | : KST05 | $V_{CB}=80\text{V}, I_E=0$ | | 0.1 | μA |
| | : KST06 | | | 0.1 | μA |
| I_{CEO} | Collector Cut-off Current | $V_{CE}=60\text{V}, I_B=0$ | | 0.1 | μA |
| h_{FE} | DC Current Gain | $V_{CE}=1\text{V}, I_C=10\text{mA}$ | 50 | | |
| | | $V_{CE}=1\text{V}, I_C=100\text{mA}$ | 50 | | |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C=100\text{mA}, I_B=10\text{mA}$ | | 0.25 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $V_{CE}=1\text{V}, I_C=100\text{mA}$ | | 1.2 | V |
| f_T | Current Gain Bandwidth Product | $V_{CE}=2\text{V}, I_C=100\text{mA}, f=100\text{MHz}$ | 100 | | MHz |

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

Marking Code

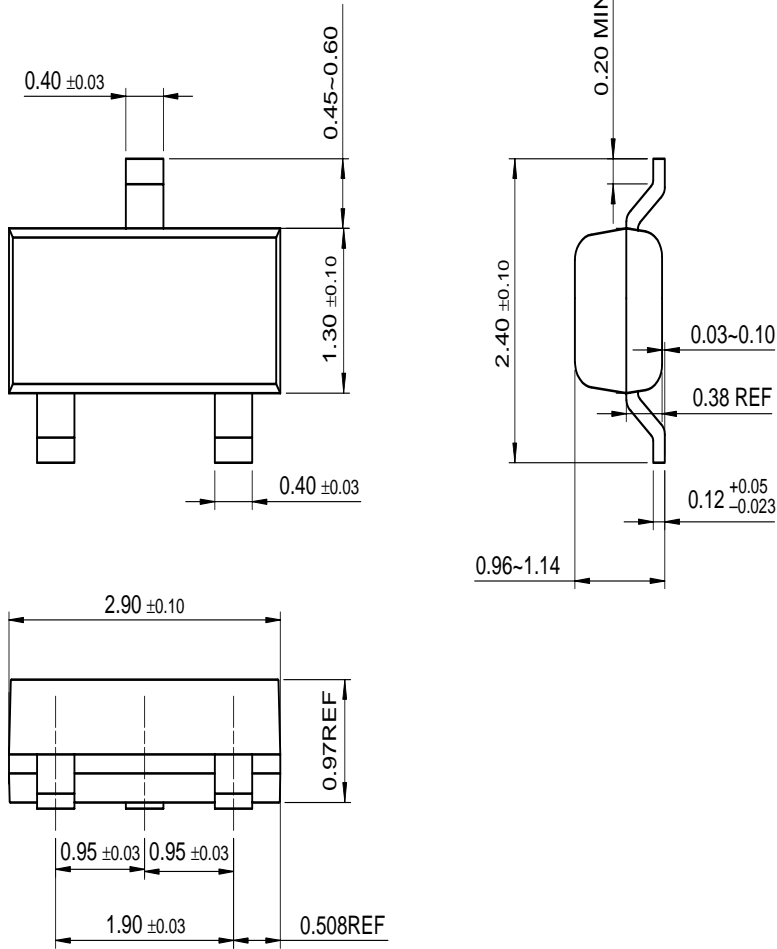
| | | |
|------|-------|-------|
| Type | KST05 | KST06 |
| Mark | 1H | 1G |

Marking



Package Dimensions

SOT-23



Dimensions in Millimeters

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