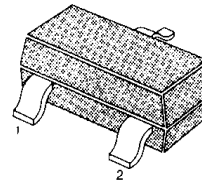


**KST05/06****NPN EPITAXIAL SILICON TRANSISTOR****DRIVER TRANSISTOR****ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25 °C)**

| Characteristic                         | Symbol               | Rating | Unit |
|----------------------------------------|----------------------|--------|------|
| Collector Base Voltage                 | V <sub>CBO</sub>     | 60     | V    |
| :KST05                                 |                      | 80     | V    |
| Collector-Emitter Voltage              | V <sub>CEO</sub>     | 60     | V    |
| :KST05                                 |                      | 80     | V    |
| Emitter-Base Voltage                   | V <sub>EBO</sub>     | 4      | V    |
| Collector Current                      | I <sub>C</sub>       | 500    | mA   |
| Collector Dissipation                  | P <sub>C</sub>       | 350    | mW   |
| Storage Temperature                    | T <sub>STG</sub>     | 150    | °C   |
| Thermal Resistance junction to Ambient | R <sub>TH(j-a)</sub> | 357    | °C/w |

• Refer to KSP05 for graphs

SOT-23



1. Base 2. Emitter 3. Collector

**ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25 °C)**

| Characteristic                       | Symbol               | Test Conditions                             | Min | Max  | Unit |
|--------------------------------------|----------------------|---------------------------------------------|-----|------|------|
| *Collector-Emitter Breakdown Voltage | BV <sub>CEO</sub>    | I <sub>C</sub> =1mA, I <sub>B</sub> =0      | 60  |      | V    |
| :KST05                               |                      |                                             | 80  |      | V    |
| Emitter-Base Breakdown Voltage       | BV <sub>EBO</sub>    | I <sub>E</sub> =100μA, I <sub>C</sub> =0    | 4   |      | V    |
| Collector Cut-off Current            | I <sub>CBO</sub>     | V <sub>CB</sub> =60V, I <sub>E</sub> =0     |     | 0.1  | μA   |
| :KST05                               |                      | V <sub>CB</sub> =80V, I <sub>E</sub> =0     |     | 0.1  | μA   |
| Collector Cut-off Current            | I <sub>CEO</sub>     | V <sub>CE</sub> =60V, I <sub>B</sub> =0V    |     | 0.1  | μA   |
| DC Current Gain                      | h <sub>FE</sub>      | V <sub>CE</sub> =1V, I <sub>C</sub> =10mA   | 50  |      |      |
|                                      |                      | V <sub>CE</sub> =1V, I <sub>C</sub> =100mA  | 50  |      |      |
| Collector-Emitter Saturation Voltage | V <sub>CE(sat)</sub> | I <sub>C</sub> =100mA, I <sub>B</sub> =10mA |     | 0.25 | V    |
| Base-Emitter On Voltage              | V <sub>BE(on)</sub>  | V <sub>CE</sub> =1V, I <sub>C</sub> =100mA  |     | 1.2  | V    |
| Crrnt Gain Bandwidth Product         | f <sub>T</sub>       | V <sub>CE</sub> =2V, I <sub>C</sub> =100mA  | 100 |      | MHz  |
|                                      |                      | f=100MHz                                    |     |      |      |

\*Pulse Test: PW≤ 300μs, Duty Cycle≤ 2%

**MARKING CODE**

| TYPE | KST05 | KST06 |
|------|-------|-------|
| MARK | 1H    | 1G    |

**Marking**