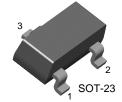


### KST2484

### **Low Noise Transistor**



1. Base 2. Emitter 3. Collector

## **NPN Epitaxial Silicon Transistor**

### **Absolute Maximum Ratings** $T_a$ =25°C unless otherwise noted

| Symbol           | Parameter                   | Value | Units |
|------------------|-----------------------------|-------|-------|
| V <sub>CBO</sub> | Collector Base Voltage      | 60    | V     |
| V <sub>CEO</sub> | Collector-Emitter Voltage   | 60    | V     |
| V <sub>EBO</sub> | Emitter-Base Voltage        | 6     | V     |
| I <sub>C</sub>   | Collector Current           | 50    | mA    |
| P <sub>C</sub>   | Collector Power Dissipation | 350   | mW    |
| T <sub>STG</sub> | Storage Temperature         | 150   | °C    |

Refer to KSP5088 for graphs

## $\textbf{Electrical Characteristics} \ \, \textbf{T}_{a} \!\!=\!\! 25^{\circ} \textbf{C} \ \, \text{unless otherwise noted}$

| Symbol                | Parameter                            | Test Condition  | Min. | Max. | Units |
|-----------------------|--------------------------------------|---|------|------|-------|
| BV <sub>CBO</sub>     | Collector-Base Breakdown Voltage     | I <sub>C</sub> =10μA, I <sub>E</sub> =0                   | 60   |      | V     |
| BV <sub>CEO</sub>     | Collector-Emitter Breakdown Voltage  | I <sub>C</sub> =10mA, I <sub>B</sub> =0                   | 60   |      | V     |
| BV <sub>EBO</sub>     | Emitter-Base Breakdown Voltage       | I <sub>E</sub> =10μA, I <sub>C</sub> =0                   | 5    |      | V     |
| I <sub>CBO</sub>      | Collector Cut-off Current            | V <sub>CB</sub> =45V, I <sub>E</sub> =0                   |      | 10   | nA    |
| I <sub>EBO</sub>      | Emitter Cut-off Current              | V <sub>EB</sub> =5V, I <sub>C</sub> =0                    |      | 10   | nA    |
| h <sub>FE</sub>       | DC Current Gain                      | $V_{CE}$ =5V, $I_{C}$ =1mA<br>$V_{CE}$ =5V, $I_{C}$ =10mA | 250  | 800  |       |
| V <sub>CE</sub> (sat) | Collector-Emitter Saturation Voltage | I <sub>C</sub> =1mA, I <sub>B</sub> =0.1mA                |      | 0.35 | V     |
| V <sub>BE</sub> (on)  | Base-Emitter On Voltage              | I <sub>C</sub> =1mA, V <sub>CE</sub> =5V                  |      | 0.95 | V     |
| C <sub>ob</sub>       | Output Capacitance                   | V <sub>CB</sub> =5.0V, I <sub>E</sub> =0, f=1MHz,         |      | 6    | pF    |
| NF                    | Noise Figure                         | $I_C$ =10μA, $V_{CE}$ =5V $R_S$ =10ΚΩ, f=1KHz             |      | 3    | dB    |

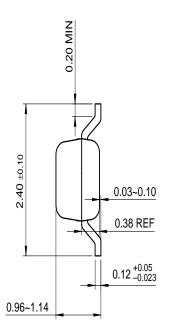
Marking

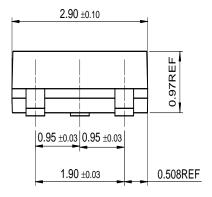


# **Package Dimensions**

## **SOT-23**







Dimensions in Millimeters

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| Bottomless™                | FAST <sup>®</sup>    | LittleFET™             | Power247™                | SuperSOT™-3           |
| CoolFET™                   | FASTr™               | MicroFET™              | PowerTrench <sup>®</sup> | SuperSOT™-6           |
| CROSSVOLT™                 | FRFET™               | MicroPak™              | QFET™                    | SuperSOT™-8           |
| DOME™                      | GlobalOptoisolator™  | MICROWIRE™             | $QS^{TM}$                | SyncFET™              |
| EcoSPARK™                  | GTO™                 | MSX™                   | QT Optoelectronics™      | TinyLogic™            |
| E <sup>2</sup> CMOS™       | HiSeC™               | MSXPro™                | Quiet Series™            | TruTranslation™       |
| EnSigna™                   | $I^2C^{TM}$          | $OCX^{TM}$             | RapidConfigure™          | UHC™                  |
| Across the board.          | . Around the world.™ | OCXPro™                | RapidConnect™            | UltraFET <sup>®</sup> |
| The Power Franchise™       |                      | OPTOLOGIC <sup>®</sup> | SILENT SWITCHER®         | $VCX^{TM}$            |
| Programmable Active Droop™ |                      | OPTOPLANAR™            | SMART START™             |                       |

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|--------------------------|---------------------------|---|
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