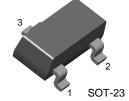


## KSC3265

### **Low Frequency Amplifier**

Complement to KSA1298



1. Base 2. Emitter 3. Collector

## **NPN Epitaxial Silicon Transistor**

### **Absolute Maximum Ratings** T<sub>a</sub>=25°C unless otherwise noted

| Symbol           | Parameter                   | Value     | Units |
|------------------|-----------------------------|-----------|-------|
| $V_{CBO}$        | Collector-Base Voltage      | 30        | V     |
| V <sub>CEO</sub> | Collector-Emitter Voltage   | 25        | V     |
| V <sub>EBO</sub> | Emitter-Base Voltage        | 5         | V     |
| I <sub>C</sub>   | Collector Current           | 800       | mA    |
| I <sub>B</sub>   | Base Current                | 160       | mA    |
| P <sub>C</sub>   | Collector Power Dissipation | 200       | mW    |
| TJ               | Junction Temperature        | 150       | °C    |
| T <sub>STG</sub> | Storage Temperature         | -55 ~ 150 | °C    |

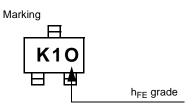
<sup>\*</sup> Refer to KSD261 for graphs

### **Electrical Characteristics** T<sub>a</sub>=25°C unless otherwise noted

| Symbol                               | Parameter                            | Test Condition   | Min.      | Тур. | Max. | Units |
|--------------------------------------|--------------------------------------|--|-----------|------|------|-------|
| BV <sub>CEO</sub>                    | Collector-Emitter Breakdown Voltage  | I <sub>C</sub> =10mA, I <sub>B</sub> =0  | 25        |      |      | V     |
| BV <sub>EBO</sub>                    | Emitter-Base Breakdown Voltage       | I <sub>E</sub> =1mA, I <sub>C</sub> =0   | 5         |      |      | V     |
| I <sub>CBO</sub>                     | Collector Cut-off Current            | V <sub>CB</sub> =30V, I <sub>E</sub> =0  |           |      | 100  | nA    |
| I <sub>EBO</sub>                     | Emitter Cut-off Current              | V <sub>EB</sub> =5V, I <sub>C</sub> =0   |           |      | 100  | nA    |
| h <sub>FE1</sub><br>h <sub>FE2</sub> | DC Current Gain                      | V <sub>CE</sub> =1V, I <sub>C</sub> =100mA<br>V <sub>CE</sub> =6V, I <sub>C</sub> =800mA | 100<br>40 |      | 320  |       |
| V <sub>CE</sub> (sat)                | Collector-Emitter Saturation Voltage | I <sub>C</sub> =500mA, I <sub>B</sub> =20mA  |           |      | 0.4  | V     |
| V <sub>BE</sub> (on)                 | Base-Emitter On Voltage              | V <sub>CE</sub> =1V, I <sub>C</sub> =10mA  | 0.5       |      | 0.8  | V     |
| f <sub>T</sub>                       | Current Gain Bandwidth Product       | V <sub>CE</sub> =5V, I <sub>C</sub> =10mA  |           | 120  |      | MHz   |
| C <sub>ob</sub>                      | Output Capacitance                   | V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz  |           | 13   |      | pF    |

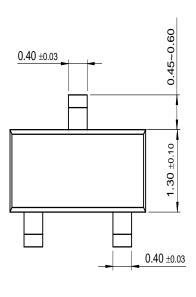
## $h_{\mbox{\scriptsize FE}}$ Classification

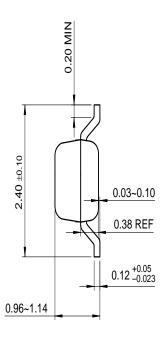
| Classification  | 0         | Y         |  |
|-----------------|-----------|-----------|--|
| h <sub>FE</sub> | 100 ~ 200 | 160 ~ 320 |  |

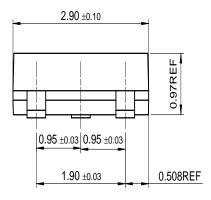


# **Package Dimensions**

## **SOT-23**







Dimensions in Millimeters

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| $ACEx^{TM}$          | FACT™                | ImpliedDisconnect™     | PACMAN™                  | SPM <sup>TM</sup>     |
|----------------------|----------------------|------------------------|--------------------------|-----------------------|
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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 Ad      | ctive Droop™         | OPTOPLANAR™            | SMART START™             |                       |

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