

**KSR1111**

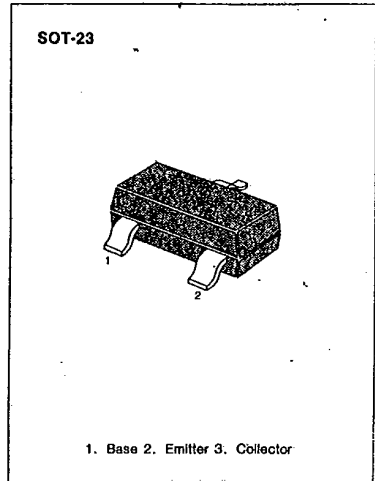
**NPN EPITAXIAL SILICON TRANSISTOR**

**SWITCHING APPLICATION (Bias Resistor Built In)**

- Switching Circuit, Inverter, Interface circuit Driver circuit
- Built in bias Resistor (R=22KΩ)
- Complement to KSR2111

**ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub> = 25°C)**

| Characteristic            | Symbol           | Rating    | Unit |
|---------------------------|------------------|-----------|------|
| Collector-Base Voltage    | V <sub>CB0</sub> | 40        | V    |
| Collector-Emitter Voltage | V <sub>CE0</sub> | 40        | V    |
| Emitter-Base Voltage      | V <sub>EB0</sub> | 5         | V    |
| Collector Current         | I <sub>c</sub>   | 100       | mA   |
| Collector Dissipation     | P <sub>c</sub>   | 200       | mW   |
| Junction Temperature      | T <sub>j</sub>   | 150       | °C   |
| Storage Temperature       | T <sub>stg</sub> | -55 ~ 150 | °C   |

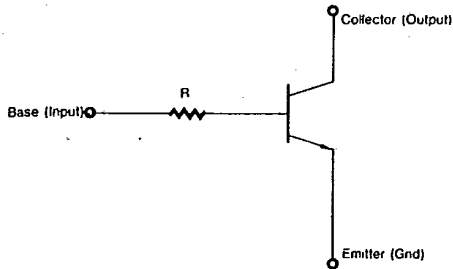


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**ELECTRICAL CHARACTERISTICS (T<sub>a</sub> = 25°C)**

| Characteristic                       | Symbol               | Test Condition  | Min | Typ | Max | Unit |
|--------------------------------------|----------------------|---|-----|-----|-----|------|
| Collector-Base Breakdown Voltage     | BV <sub>CB0</sub>    | I <sub>c</sub> = 100μA, I <sub>E</sub> = 0            | 40  |     |     | V    |
| Emitter-Base Breakdown Voltage       | BV <sub>CE0</sub>    | I <sub>E</sub> = 1mA, I <sub>B</sub> = 0              | 40  |     |     | V    |
| Collector Cutoff Current             | I <sub>CB0</sub>     | V <sub>CB</sub> = 30V, I <sub>E</sub> = 0             |     |     | 0.1 | μA   |
| DC Current Gain                      | h <sub>FE</sub>      | V <sub>CE</sub> = 5V, I <sub>c</sub> = 1mA            | 100 |     | 600 |      |
| Collector-Emitter Saturation Voltage | V <sub>CE(sat)</sub> | I <sub>c</sub> = 10mA, I <sub>B</sub> = 1mA           |     |     | 0.3 | V    |
| Output Capacitance                   | C <sub>ob</sub>      | V <sub>CB</sub> = 10V, I <sub>E</sub> = 0<br>f = 1MHz |     | 3.7 |     | pF   |
| Current Gain-Bandwidth Product       | f <sub>T</sub>       | V <sub>CE</sub> = 10V, I <sub>c</sub> = 5mA           |     | 250 |     | MHz  |
| Input Resistor                       | R                    |   | 15  | 22  | 29  | KΩ   |

**Equivalent Circuit**



**Marking**

