

## NPN Silicon Epitaxial Planar Transistor

## S9011

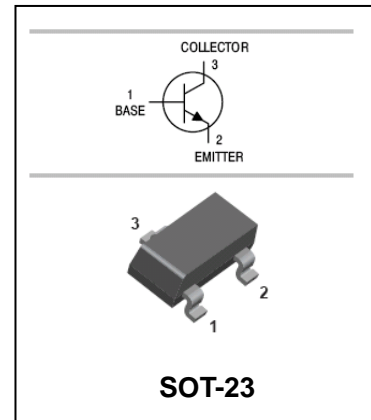
### FEATURES

- Collector Current.( $I_C=30\text{mA}$ )
- Power dissipation.( $P_C=200\text{mW}$ )



### APPLICATIONS

- AM converter, AM/FM if amplifier general purpose transistor.



### ORDERING INFORMATION

| Type No. | Marking | Package Code |
|----------|---------|--------------|
| S9011    | 1T      | SOT-23       |

### MAXIMUM RATING @ $T_a=25^\circ\text{C}$ unless otherwise specified

| Symbol         | Parameter                        | Value   | Units            |
|----------------|----------------------------------|---------|------------------|
| $V_{CBO}$      | Collector-Base Voltage           | 50      | V                |
| $V_{CEO}$      | Collector-Emitter Voltage        | 30      | V                |
| $V_{EBO}$      | Emitter-Base Voltage             | 5       | V                |
| $I_C$          | Collector Current -Continuous    | 30      | mA               |
| $P_C$          | Collector Dissipation            | 200     | mW               |
| $T_j, T_{stg}$ | Junction and Storage Temperature | -55~150 | $^\circ\text{C}$ |

### ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

| Parameter                            | Symbol        | Test conditions                           | MIN | MAX | UNIT          |
|--------------------------------------|---------------|---|-----|-----|---------------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C=100\mu\text{A}, I_E=0$               | 50  |     | V             |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C=0.1\text{mA}, I_B=0$                 | 30  |     | V             |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E=100\mu\text{A}, I_C=0$               | 5   |     | V             |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB}=50\text{V}, I_E=0$                |     | 0.1 | $\mu\text{A}$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB}=5\text{V}, I_C=0$                 |     | 0.1 | $\mu\text{A}$ |
| DC current gain                      | $h_{FE}$      | $V_{CE}=5\text{V}, I_C=1\text{mA}$        | 28  | 198 |               |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=10\text{mA}, I_B=1\text{mA}$         |     | 0.3 | V             |
| Transition frequency                 | $f_T$         | $V_{CE}=5\text{V}, I_C=1\text{mA}$        | 150 |     | MHz           |
| Output capacitance                   | $C_{ob}$      | $V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$ |     | 4   | pF            |

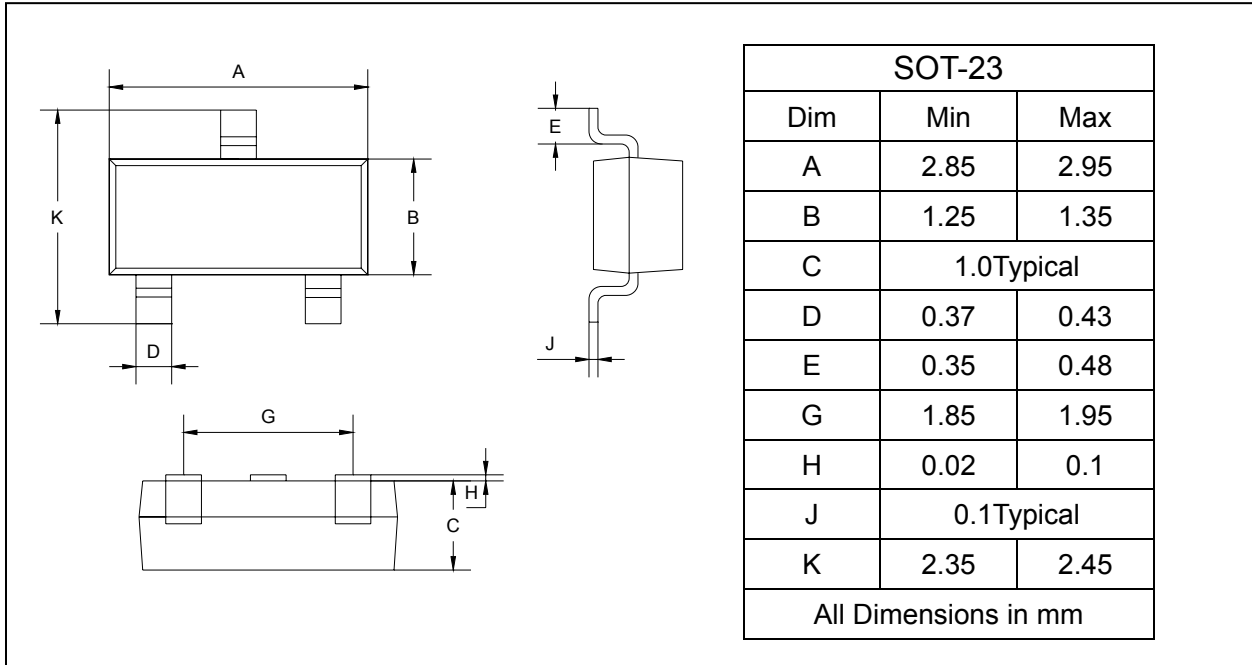
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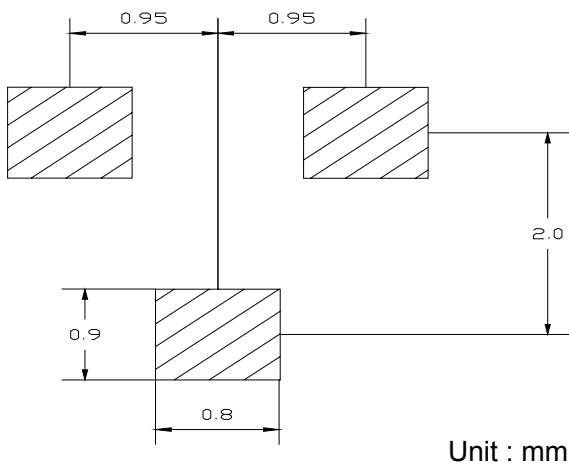
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



### SOLDERING FOOTPRINT



### PACKAGE INFORMATION

| Device | Package | Shipping       |
|--------|---------|----------------|
| S9011  | SOT-23  | 3000/Tape&Reel |