



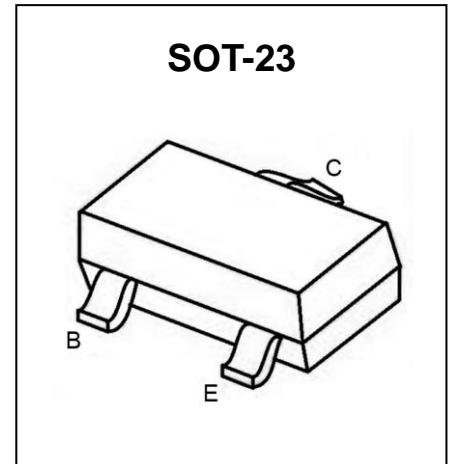
S9014 Transistor(NPN)

Feature

- NPN epitaxial silicon , planar design
- Collector-emitter voltage $V_{CE}=45V$
- Collector current $I_C=0.1A$
- High breakdown voltage

MAXIMUM RATINGS ($T_a=25^{\circ}C$ unless otherwise noted)

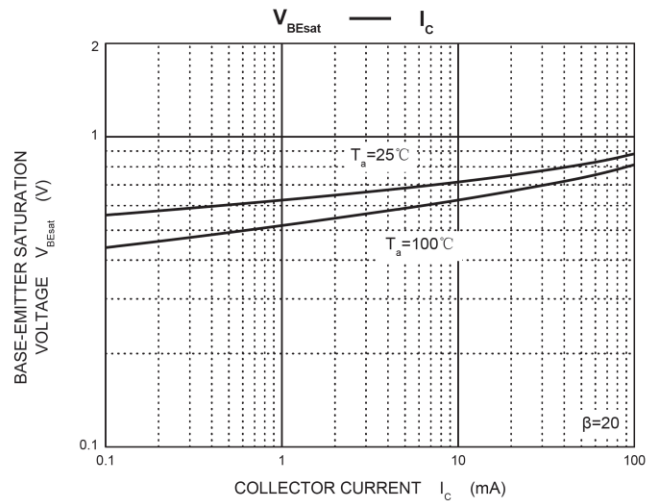
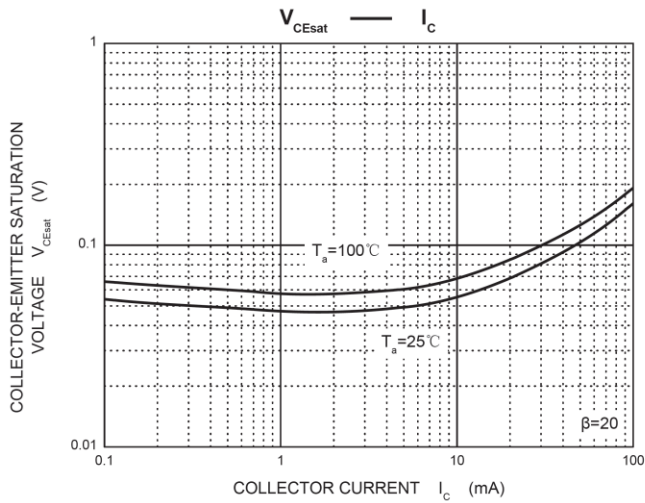
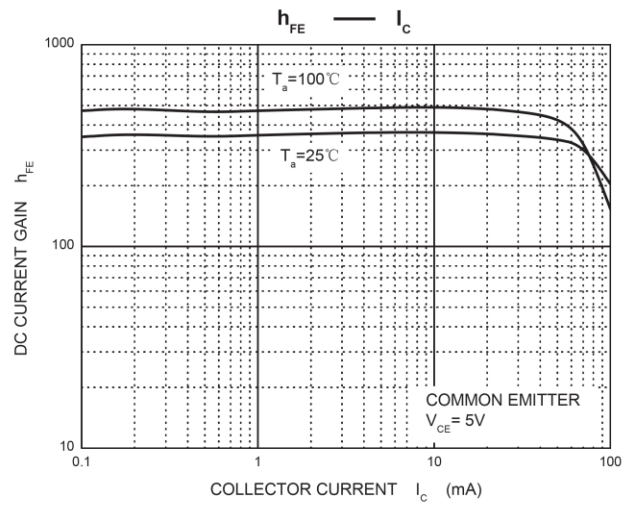
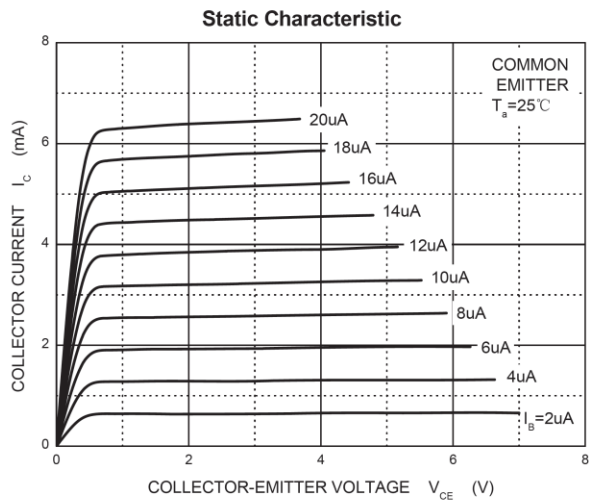
| Parameter | Symbol | Value | Unit |
|-------------------------------|-----------|-----------|-------------|
| Collector-Base Voltage | V_{CBO} | 50 | V |
| Collector-Emitter Voltage | V_{CEO} | 45 | V |
| Emitter-Base Voltage | V_{EBO} | 5 | V |
| Collector Current -Continuous | I_C | 0.1 | A |
| Power Dissipation | P_d | 0.45 | W |
| Junction Temperature | T_J | 150 | $^{\circ}C$ |
| Storage Temperature | T_{STG} | -55~ +150 | $^{\circ}C$ |

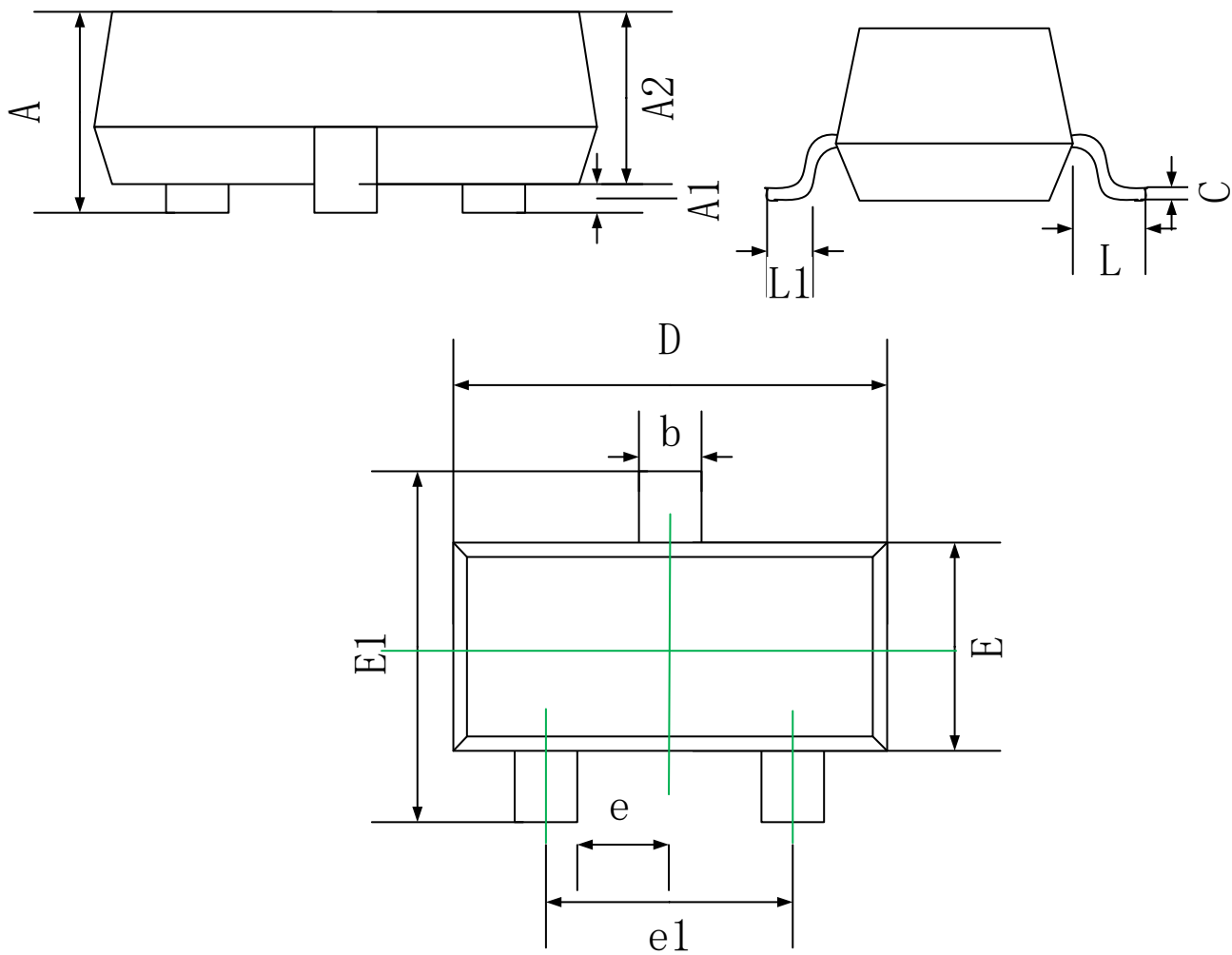


ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}C$ unless otherwise noted)

| Parameter | Symbol | Test Condition | Min | Max | Unit |
|--------------------------------------|---------------|--------------------------------|-----|-----|------|
| Collector-base breakdown voltage | $V(BR)_{CBO}$ | $I_C=100\mu A, I_E=0$ | 50 | | V |
| Collector-emitter breakdown voltage | $V(BR)_{CEO}$ | $I_C=100\mu A, I_B=0$ | 45 | | V |
| Emitter-base breakdown voltage | $V(BR)_{EBO}$ | $I_E=100\mu A, I_C=0$ | 5 | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=50V, I_E=0$ | | 100 | nA |
| Collector cut-off current | I_{CEO} | $V_{CE}=45V, I_B=0$ | | 100 | nA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=5V, I_C=0$ | | 100 | nA |
| DC current gain | h_{FE} | $V_{CE}=1V, I_C=50mA$ | 300 | 400 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=500mA, I_B=50mA$ | | 0.3 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C=500mA, I_B=50mA$ | | 1.1 | V |
| Transition frequency | f_T | $V_{CE}=5V, I_C=10mA, f=30MHz$ | 150 | | MHZ |

Typical Characteristics



SOT-23 Package Information


| Symbol | Dimensions In Millimeters | |
|--------|---------------------------|------|
| | Min. | Max. |
| A | 0.90 | 1.15 |
| A1 | 0.00 | 0.10 |
| A2 | 0.90 | 1.05 |
| b | 0.30 | 0.50 |
| c | 0.08 | 0.15 |
| D | 2.80 | 3.00 |
| E | 1.20 | 1.40 |
| E1 | 2.25 | 2.55 |
| e | 0.95 REF. | |
| e1 | 1.80 | 2.00 |
| L | 0.55 REF. | |
| L1 | 0.30 | 0.50 |