

2SC4112

2018A

NPN/PNP Epitaxial Planar
Silicon Transistors

2SA1581

Switching Applications (with Bias Resistance)

(CP)

Applications

- Switching circuit, inverter circuit, interface circuit, driver circuit

Features

- On-chip bias resistance ($R_1=2.2\text{kohms}$, $R_2=\infty$)
- Small-sized package (CP)

(): 2SA1581

Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

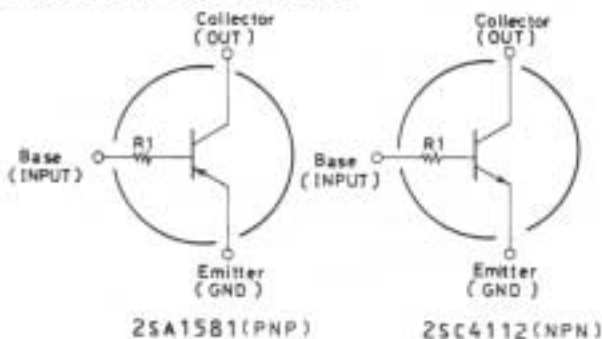
| | | | unit |
|------------------------------|-----------|-------------|------------------|
| Collector to Base Voltage | V_{CBO} | (-)50 | V |
| Collector to Emitter Voltage | V_{CEO} | (-)50 | V |
| Emitter to Base Voltage | V_{EBO} | (-)5 | V |
| Collector Current | I_C | (-)100 | mA |
| Peak Collector Current | i_{cp} | (-)200 | mA |
| Collector Dissipation | P_C | 200 | mW |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

Electrical Characteristics at $T_a=25^\circ\text{C}$

| | | | min | typ | max | unit |
|--------------------------|---------------|--|--------|--------------|--------|---------------|
| Collector Cutoff Current | I_{CBO} | $V_{CB}=(-)40\text{V}, I_E=0$ | | | (-)0.1 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=(-)5\text{V}, I_C=0$ | | | (-)0.1 | μA |
| DC Current Gain | h_{FE} | $V_{CE}=(-)5\text{V}, I_C=(-)10\text{mA}$ | 100 | | | |
| Gain-Bandwidth Product | f_T | $V_{CE}=(-)10\text{V}, I_C=(-)5\text{mA}$ | | 250 (200) | | MHz |
| Output Capacitance | c_{ob} | $V_{CB}=(-)10\text{V}, f=1\text{MHz}$ | | 3.5 (5.3) | | pF |
| C-E Saturation Voltage | $V_{CE(sat)}$ | $I_C=(-)10\text{mA}, I_B=(-)0.5\text{mA}$ | | (-)0.1 | (-)0.3 | V |
| C-B Breakdown Voltage | $V_{(BR)CBO}$ | $I_C=(-)10\mu\text{A}, I_E=0$ | (-)50 | | | V |
| C-E Breakdown Voltage | $V_{(BR)CEO}$ | $I_C=(-)100\mu\text{A}, R_{BE}=\infty$ | (-)50 | | | V |
| Input OFF-State Voltage | $V_{I(off)}$ | $V_{CE}=(-)5\text{V}, I_C=(-)100\mu\text{A}$ | (-)0.4 | (-)0.55 | (-)0.8 | V |
| Input ON-State Voltage | $V_{I(on)}$ | $V_{CE}=(-)0.2\text{V}, I_C=(-)10\text{mA}$ | (-)0.6 | (-)0.8 | (-)1.5 | V |
| Input Resistance | R_1 | | 1.5 | 2.2 | 2.9 | kohm |

Marking on device 2SA1581:VL, 2SC4112:DT

Electrical Connection



Case Outline 2018A

(unit:mm)

