
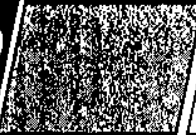


| | | |
|---|---|---|
|  | No.1288C | <h1>2SA1346/2SC3400</h1> |
| |  | PNP/NPN Epitaxial Planar Silicon Transistors Switching Applications (with Bias Resistance) |

Applications

Switching circuit, inverter, interface circuit, driver

Features

- Built-in bias resistor ($R_1=22k\Omega$, $R_2=22k\Omega$).
- Small-sized package (SPA).

(): 2SA1346

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

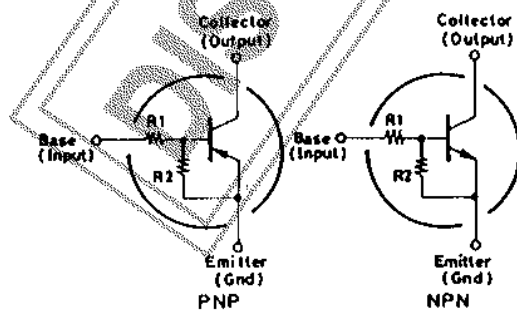
| | | | unit |
|------------------------------|-----------|-------------|------------------|
| Collector to Base Voltage | V_{CB0} | (-)50 | V |
| Collector to Emitter Voltage | V_{CE0} | (-)50 | V |
| Emitter to Base Voltage | V_{EB0} | (-)10 | V |
| Collector Current | I_C | (-)100 | mA |
| Collector Current(Pulse) | I_{CP} | (-)200 | mA |
| Collector Dissipation | P_C | 300 | mW |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

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

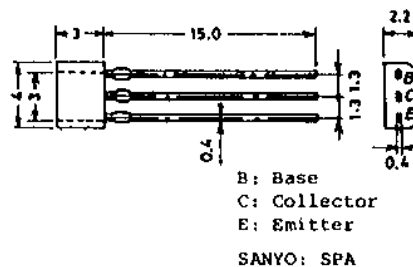
| | | | min | typ | max | unit |
|---|---------------|---|-------|--------------|---------------|---------------|
| Collector Cutoff Current | I_{CBO} | $V_{CB} = (-)40\text{V}, I_E = 0$ | | | (-)0.1 | μA |
| Collector Cutoff Current | I_{CEO} | $V_{CE} = (-)40\text{V}, I_B = 0$ | | | (-)0.5 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB} = (-)5\text{V}, I_C = 0$ | (-)70 | (-)113 | (-)150 | μA |
| DC Current Gain | h_{FE} | $V_{CE} = (-)5\text{V}, I_C = (-)5\text{mA}$ | 50 | | | |
| Gain-bandwidth product | f_T | $V_{CE} = (-)10\text{V}, I_C = (-)5\text{mA}$ | | 250 (200) | | MHz |
| Output Capacitance | c_{ob} | $V_{CB} = (-)10\text{V}, f = 1\text{MHz}$ | | 3.7 (5.5) | | pF |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = (-)10\text{mA}, I_B = (-)0.5\text{mA}$ | | | (-)0.1 (-)0.3 | V |

Continued on next page.

Electrical Connection



Case Outline 2033
(unit: mm)



Specifications and information herein are subject to change without notice.

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Continued from preceding page.

| | | | min | typ | max | unit |
|--|---------------|----------------------------------|--------|--------|--------|------------|
| Collector to Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C=(-)10\mu A, I_E=0$ | (-)50 | | | V |
| Collector to Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C=(-)100\mu A, R_{BE}=\infty$ | (-)50 | | | V |
| Input Off Voltage | $V_{I(off)}$ | $V_{CE}=(-)5V, I_C=(-)100\mu A$ | (-)0.8 | (-)1.1 | (-)1.5 | V |
| Input On Voltage | $V_{I(on)}$ | $V_{CE}=(-)0.2V, I_C=(-)5mA$ | (-)1.0 | (-)1.9 | (-)3.0 | V |
| Input Resistance | R_1 | | 15 | 22 | 29 | k Ω |
| Input Resistance Ratio | R_1/R_2 | | 0.9 | 1.0 | 1.1 | |

■ Sample Application Circuit

