

SANYO

No. 2505

2SA1582/2SC4113

PNP/NPN Epitaxial Planar Silicon Transistors

Switching Applications
(with Bias Resistance)

Applications

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

Features

- . On-chip bias resistance ($R_1 = 2.2k\Omega, R_2 = \infty$)
- . Small-sized package (SPA)

(): 2SA1582

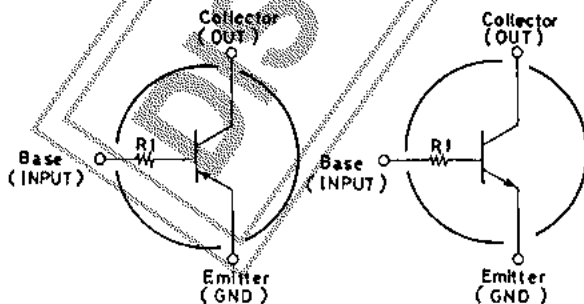
Absolute Maximum Ratings at $T_a = 25^\circ C$

| | | | 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 |
| Collector Current (Pulse) | I_{CP} | (-)200 | mA |
| Collector Dissipation | P_C | 300 | mW |
| Junction Temperature | T_j | 150 | $^\circ C$ |
| Storage Temperature | T_{stg} | -55 to +150 | $^\circ C$ |

Electrical Characteristics at $T_a = 25^\circ C$

| | | min | typ | max | unit |
|--------------------------|--|--------|--------------|--------------|------------|
| Collector Cutoff Current | I_{CBO} $V_{CB} = (-)40V, I_E = 0$ | | | (-)0.1 | μA |
| Emitter Cutoff Current | I_{EBO} $V_{EB} = (+)5V, I_C = 0$ | | | (-)0.1 | μA |
| DC Current Gain | h_{FE} $V_{CE} = (-)5V, I_C = (-)10mA$ | 100 | | | |
| Gain-Bandwidth Product | f_T $V_{CE} = (-)10V, I_C = (-)5mA$ | | 250 (200) | | MHz |
| Output Capacitance | c_{ob} $V_{CB} = (-)10V, f = 1MHz$ | | 3.7 (5.5) | | pF |
| C-E Saturation Voltage | $V_{CE(sat)}$ $I_C = (-)10mA, I_B = (-)0.5mA$ | | | (-)0.1(-)0.3 | V |
| C-B Breakdown Voltage | $V_{(BR)CBO}$ $I_C = (-)10\mu A, I_E = 0$ | (-)50 | | | V |
| C-E Breakdown Voltage | $V_{(BR)CEO}$ $I_C = (-)100\mu A, R_{BE} = \infty$ | (-)50 | | | V |
| Input OFF-State Voltage | $V_{I(off)}$ $V_{CE} = (-)5V, I_C = (-)100\mu A$ | (-)0.4 | (-)0.55 | (-)0.8 | V |
| Input ON-State Voltage | $V_{I(on)}$ $V_{CE} = (-)0.2V, I_C = 10mA$ | (-)0.6 | (-)0.8 | (-)1.5 | V |
| Input Resistance | R_I | 1.5 | 2.2 | 2.9 | k Ω |

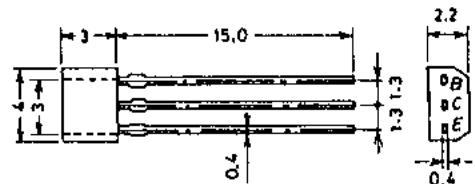
Electrical Connection



2SA1582(PNP)

2SC4113(NPN)

Case Outline 2033
(unit:mm)

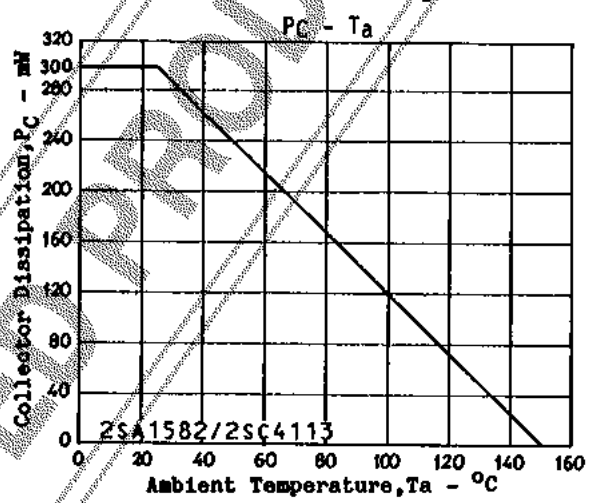
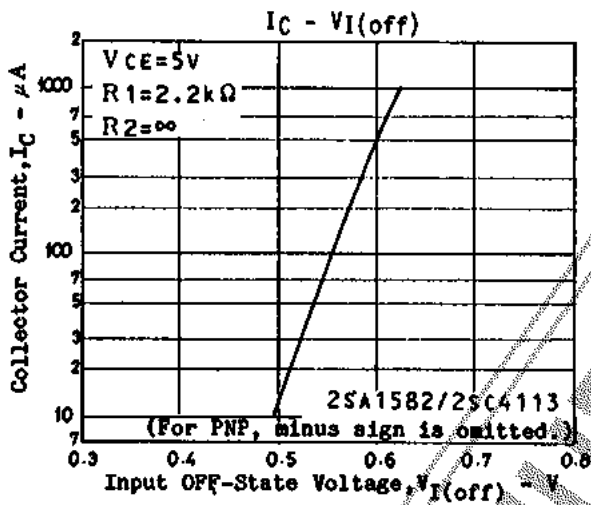
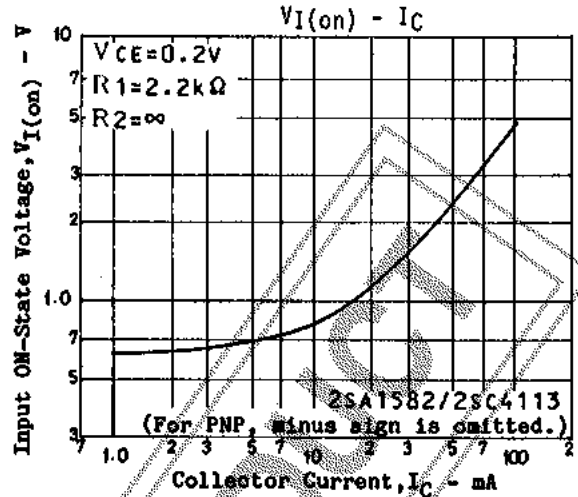
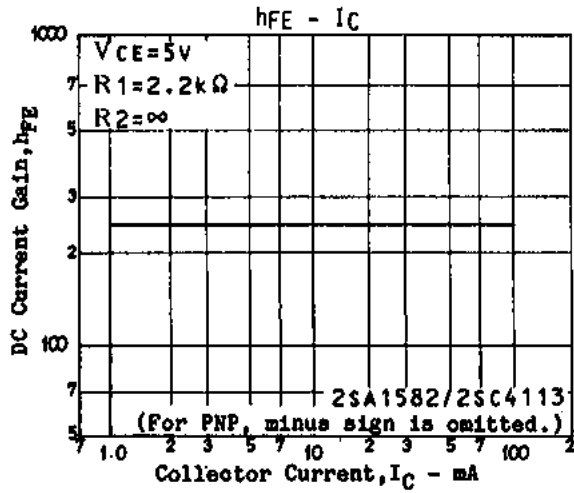


B: Base
C: Collector
E: Emitter

SANYO: SPA

Specifications and information herein are subject to change without notice.

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