



SCH2102

PNP Epitaxial Planar Silicon Transistor

Switching, Driver Applications

Applications

- Low-frequency power amplifier, high-speed switching, motor drivers, muting.

Features

- Composite type with 2 PNP transistors contained in a single package, facilitating high-density mounting.
- Ultrasmall package permitting applied sets to be small and slim.
- Low Ron.

Specifications

Absolute Maximum Ratings at Ta=25°C

| Parameter | Symbol | Conditions | Ratings | Unit |
|------------------------------|------------------|---|-------------|------|
| Collector-to-Base Voltage | V _{CB0} | | -15 | V |
| Collector-to-Emitter Voltage | V _{CEO} | | -12 | V |
| Emitter-to-Base Voltage | V _{EBO} | | -5 | V |
| Collector Current | I _C | | -500 | mA |
| Collector Current (Pulse) | I _{CP} | | -1.0 | A |
| Collector Dissipation | P _C | When mounted on ceramic substrate (900mm ² ×0.8mm) 1unit | 0.4 | W |
| Junction Temperature | T _j | | 150 | °C |
| Storage Temperature | T _{stg} | | -55 to +150 | °C |

Electrical Characteristics at Ta=25°C

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|--------------------------|------------------|---|---------|-----|------|------|
| | | | min | typ | max | |
| Collector Cutoff Current | I _{CBO} | V _{CB} =-12V, I _E =0A | | | -100 | nA |
| Emitter Cutoff Current | I _{EBO} | V _{EB} =-4V, I _C =0A | | | -100 | nA |
| DC Current Gain | h _{FE} | V _{CE} =-2V, I _C =-10mA | 300 | | 700 | |
| Gain-Bandwidth Product | f _T | V _{CE} =-2V, I _C =-50mA | | 490 | | MHz |
| Output Capacitance | C _{ob} | V _{CB} =-10V, f=1MHz | | 4 | | pF |

Marking : EE

Continued on next page.

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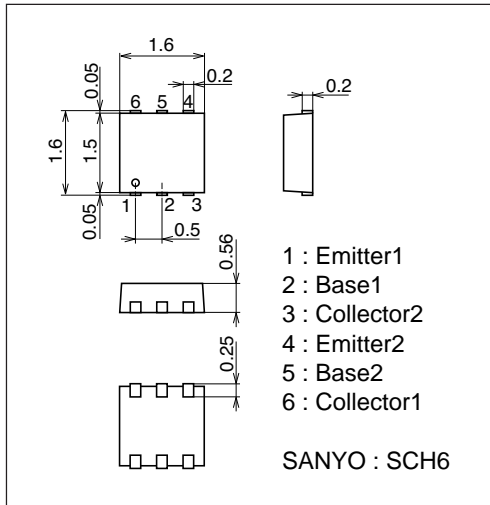
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| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---------------|-------------------------------|---------|------|------|------|
| | | | min | typ | max | |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = -200mA, I_B = -10mA$ | | -150 | -300 | mV |
| Base-to-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C = -200mA, I_B = -10mA$ | | -0.9 | -1.2 | V |
| Collector-to-Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C = -10\mu A, I_E = 0A$ | -15 | | | V |
| Collector-to-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C = -1mA, R_{BE} = \infty$ | -12 | | | V |
| Emitter-to-Base Breakdown Voltage | $V_{(BR)EBO}$ | $I_E = -10\mu A, I_C = 0A$ | -5 | | | V |
| Turn-ON Time | t_{on} | See specified test circuit. | | 30 | | ns |
| Storage Time | t_{stg} | See specified test circuit. | | 57 | | ns |
| Fall Time | t_f | See specified test circuit. | | 30 | | ns |

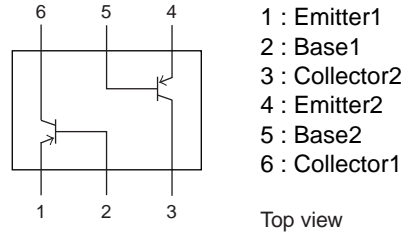
Package Dimensions

unit : mm (typ)

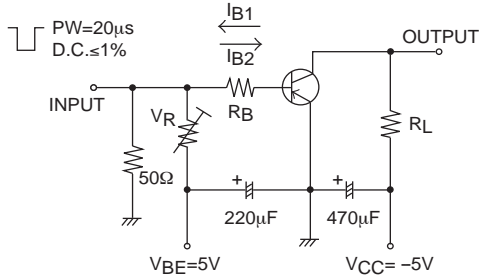
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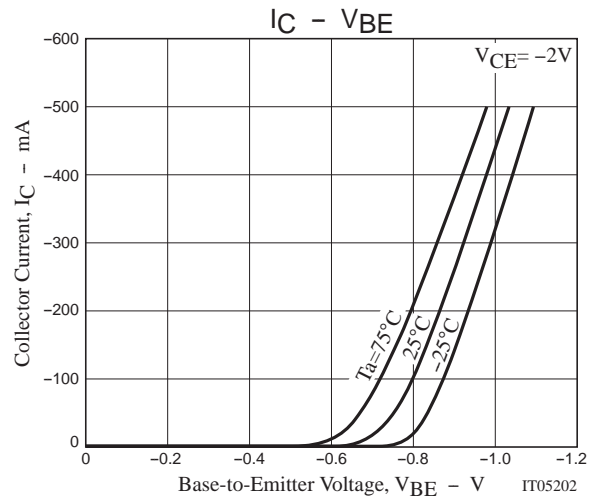
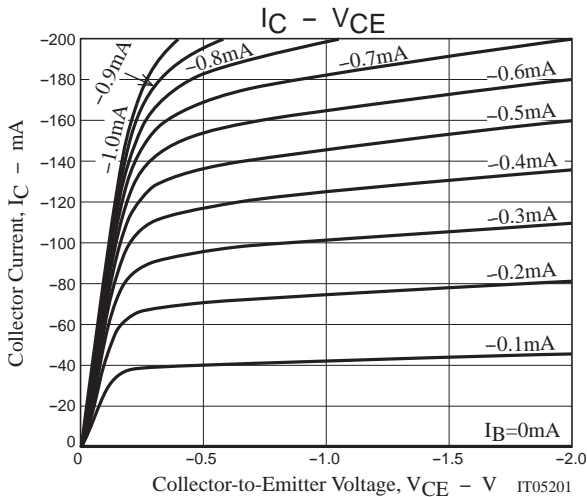
Electrical Connection



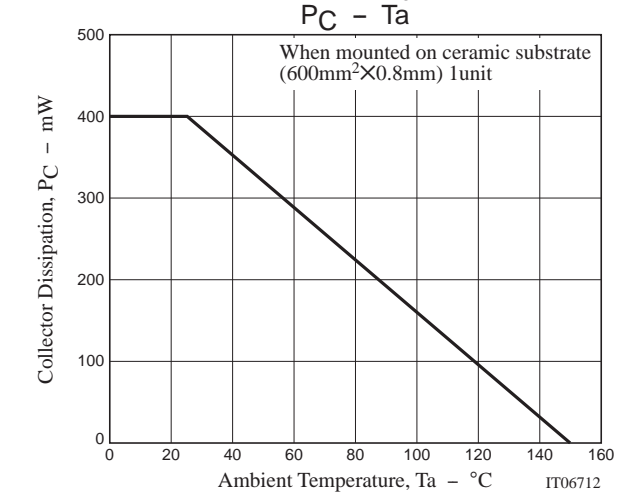
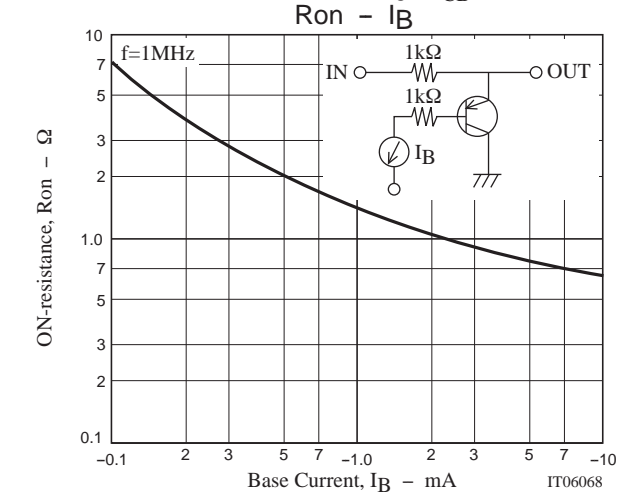
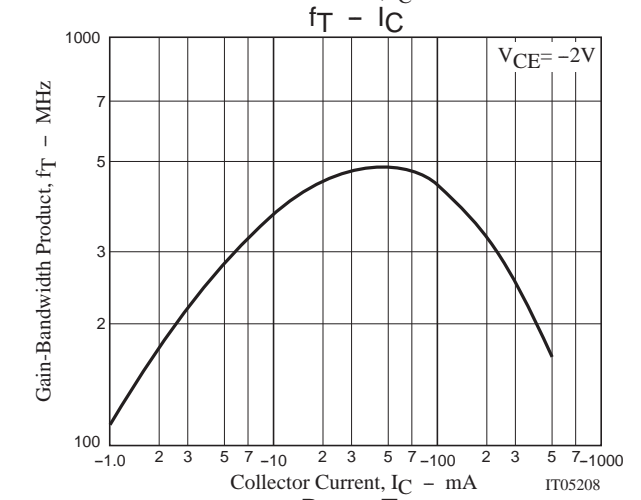
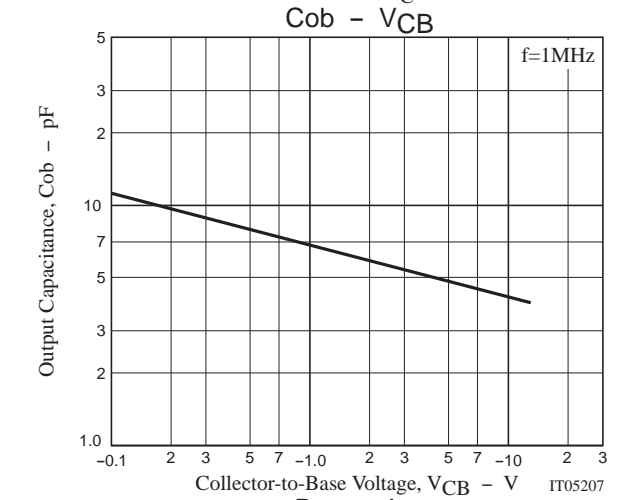
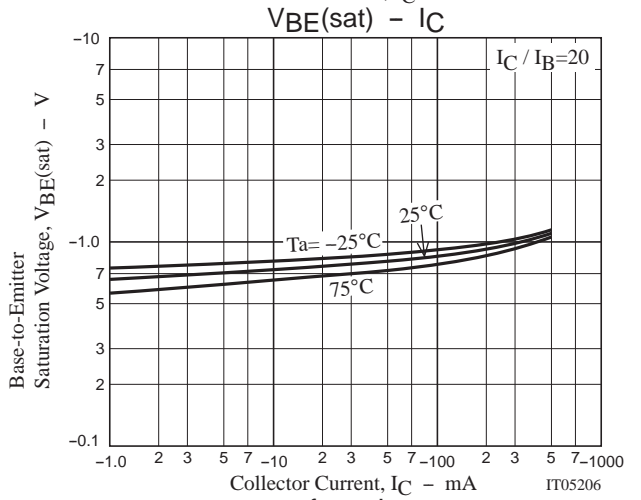
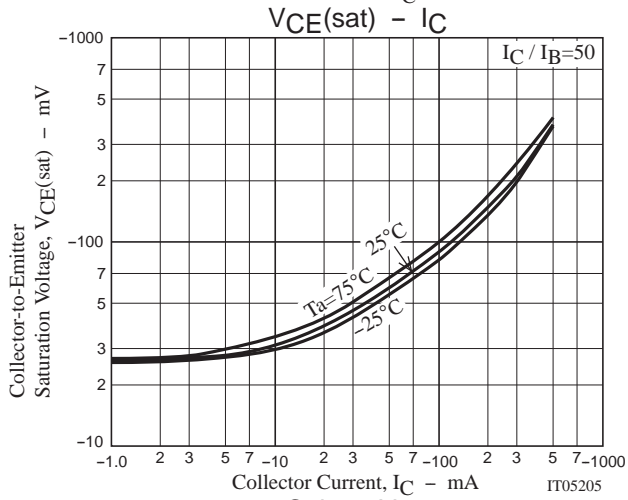
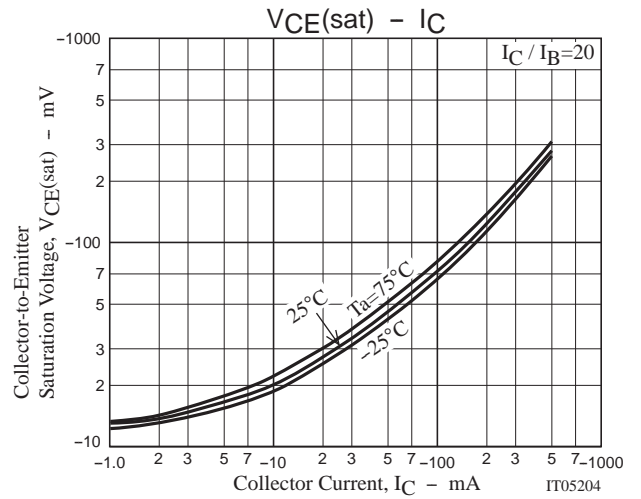
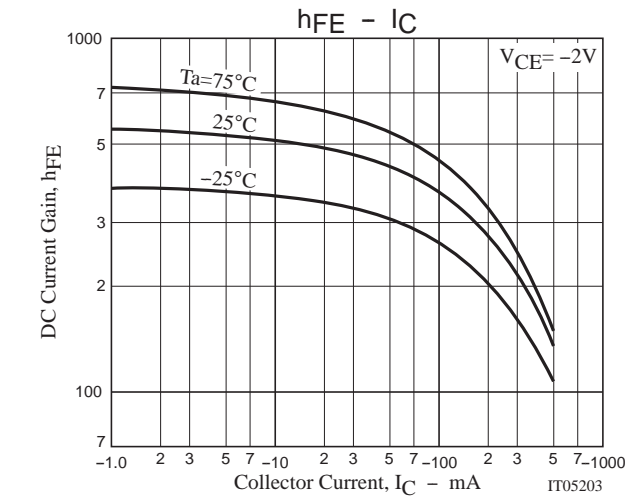
Switching Time Test Circuit



$$I_C = 20I_{B1} = -20I_{B2} = -400mA$$



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