



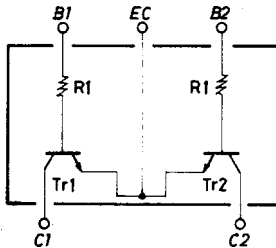
FC126

NPN Epitaxial Planar Silicon Composite Transistor Switching Applications (with Bias Resistance)

Features

- On-chip bias resistance ($R1=47k\Omega$).
- Composite type with 2 transistors contained in the CP package currently in use, improving the mounting efficiency greatly.
- The FC126 is formed with two chips, being equivalent to the 2SC3898, placed in one package.
- Excellent in thermal equilibrium and pair capability.

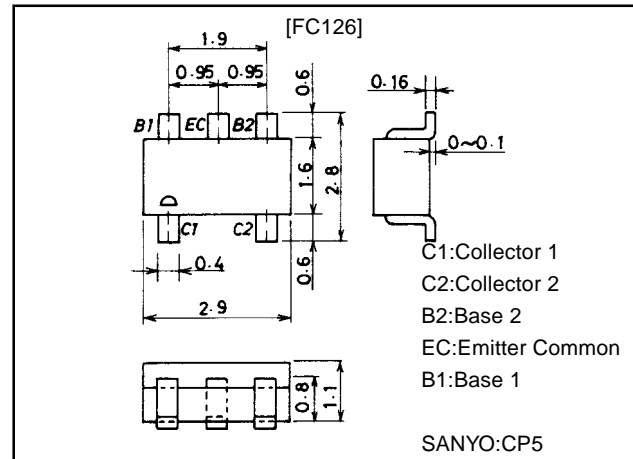
Electrical Connection



Package Dimensions

unit:mm

2066



Specifications

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

| Parameter | Symbol | Conditions | Ratings | 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 | 1 unit | 200 | mW |
| Total Power Dissipation | P_T | | 300 | mW |
| Junction Temperature | T_J | | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | | -55 to +150 | $^\circ\text{C}$ |

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

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|--------------------------|---------------|--|---------|------|-----|---------------|
| | | | min | typ | max | |
| 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 | | MHz |
| Output Capacitance | C_{ob} | $V_{CB}=10\text{V}, f=1\text{MHz}$ | | 3.3 | | pF |
| C-E Saturation Voltage | $V_{CE(sat)}$ | $I_C=5\text{mA}, I_B=0.25\text{mA}$ | | 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 | $V_{I(on)}$ | $V_{CE}=0.2\text{V}, I_C=5\text{mA}$ | 0.8 | 2.0 | 4.0 | V |
| Input Resistance | R_1 | | 33 | 47 | 61 | $k\Omega$ |

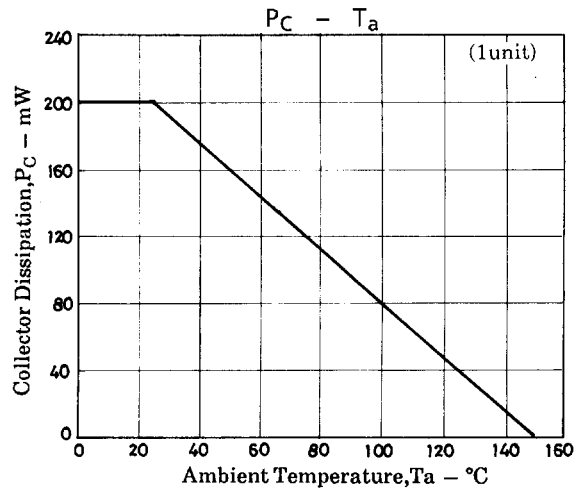
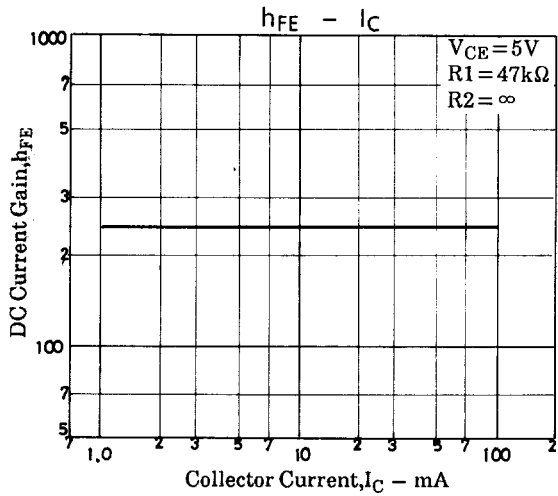
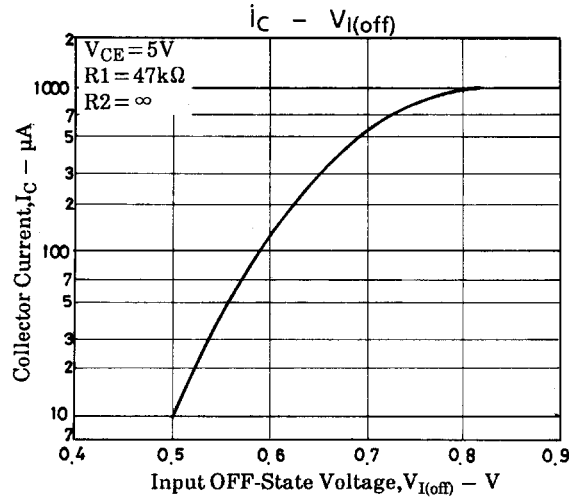
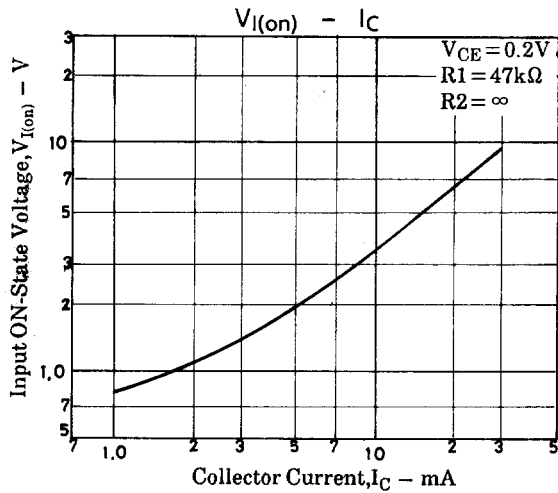
Note: The specifications shown above are for each individual transistor.

Marking: 126

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FC126



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