

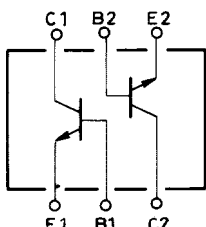
**FC118**

## NPN Epitaxial Planar Silicon Composite Transistor Low-Frequency General-Purpose Amp Applications

### Features

- Composite type with 2 transistors contained in the CP package currently in use, improving the mounting efficiency greatly.
- The FC118 is formed with two chips, being equivalent to the 2SC4577, placed in one package.
- Low collector to emitter saturation voltage.
- Excellent in thermal equilibrium and pair capability.

### Electrical Connection



### Specifications

#### Absolute Maximum Ratings at Ta = 25°C

| Parameter                    | Symbol    | Conditions | Ratings     | Unit |
|------------------------------|-----------|------------|-------------|------|
| Collector-to-Base Voltage    | $V_{CB0}$ |            | 20          | V    |
| Collector-to-Emitter Voltage | $V_{CEO}$ |            | 15          | V    |
| Emitter-to-Base Voltage      | $V_{EBO}$ |            | 5           | V    |
| Collector Current            | $I_C$     |            | 500         | mA   |
| Collector Current (Pulse)    | $I_{CP}$  |            | 1           | A    |
| Base Current                 | $I_B$     |            | 100         | mA   |
| Collector Dissipation        | $P_C$     | 1 unit     | 200         | mW   |
| Total Power Dissipation      | $P_T$     |            | 300         | mW   |
| 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 | $I_{CBO}$             | $V_{CB}=15V, I_E=0$      |         |      | 0.1 | $\mu A$ |
| Emitter Cutoff Current   | $I_{EBO}$             | $V_{EB}=4V, I_C=0$       |         |      | 0.1 | $\mu A$ |
| DC Current Gain          | $h_{FE(1)}$           | $V_{CE}=2V, I_C=10mA$    | 160     |      | 560 |         |
|                          | $h_{FE(2)}$           | $V_{CE}=2V, I_C=400mA$   | 80      |      |     |         |
| DC Current Gain Ratio    | $h_{FE(small/large)}$ | $V_{CE}=2V, I_C=10mA$    | 0.8     | 0.98 |     |         |
| Gain-Bandwidth Product   | $f_T$                 | $V_{CE}=2V, I_C=50mA$    |         | 300  |     | MHz     |
| Output Capacitance       | $C_{ob}$              | $V_{CE}=10V, f=1MHz$     |         | 4    |     | pF      |
| C-E Saturation Voltage   | $V_{CE(sat)1}$        | $I_C=5mA, I_B=0.5mA$     |         | 15   | 30  | mV      |
|                          | $V_{CE(sat)2}$        | $I_C=200mA, I_B=10mA$    |         | 160  | 300 | mV      |
| B-E Saturation Voltage   | $V_{BE(sat)}$         | $I_C=200mA, I_B=10mA$    |         | 0.95 | 1.2 | V       |
| C-B Breakdown Voltage    | $V_{(BR)CBO}$         | $I_C=10\mu A, I_E=0$     | 20      |      |     | V       |
| C-E Breakdown Voltage    | $V_{(BR)CEO}$         | $I_C=1mA, R_{BE}=\infty$ | 15      |      |     | V       |
| E-B Breakdown Voltage    | $V_{(BR)EBO}$         | $I_E=10\mu A, I_C=0$     | 5       |      |     | V       |

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

Marking:110

**SANYO Electric Co.,Ltd. Semiconductor Business Headquarters**

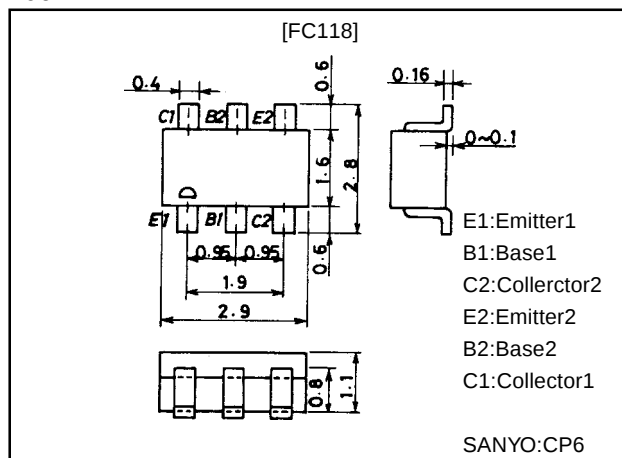
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

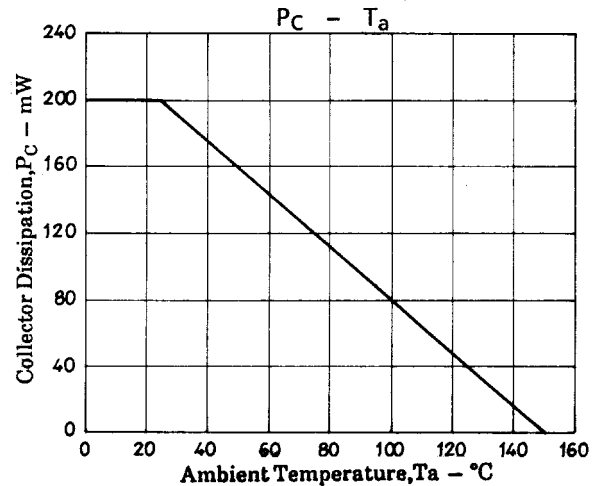
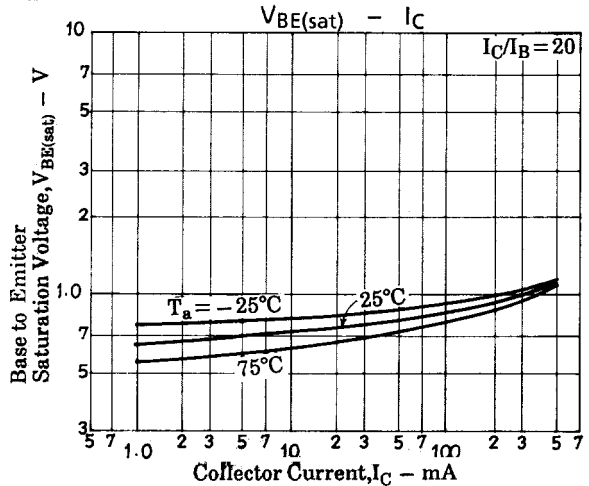
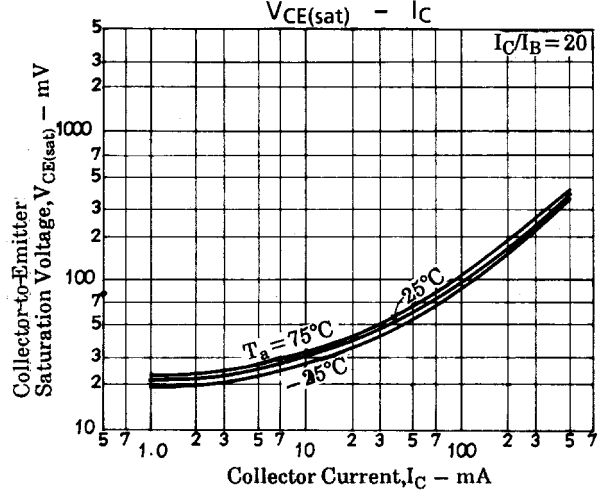
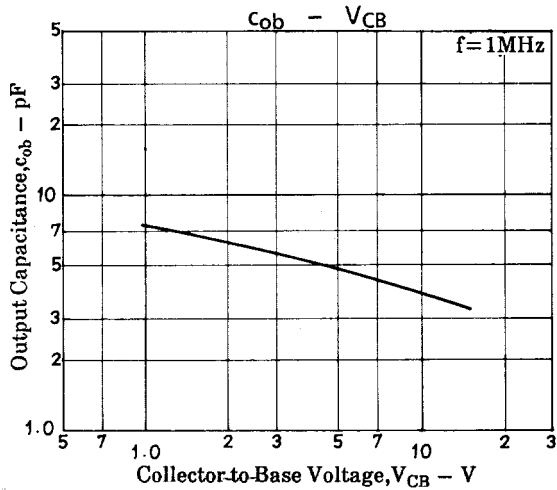
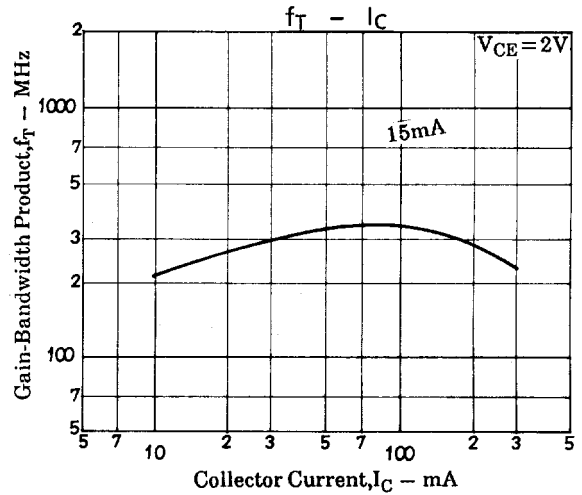
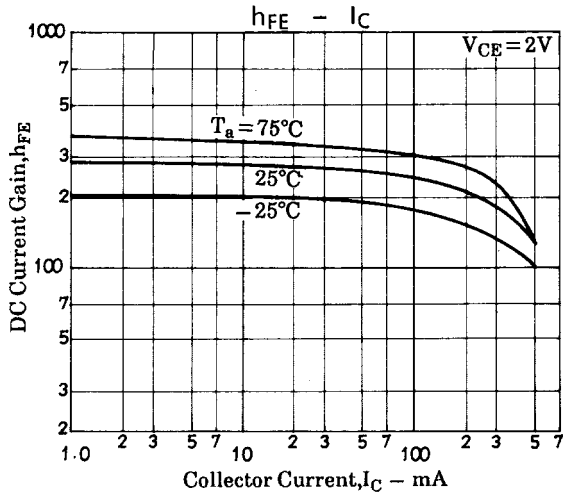
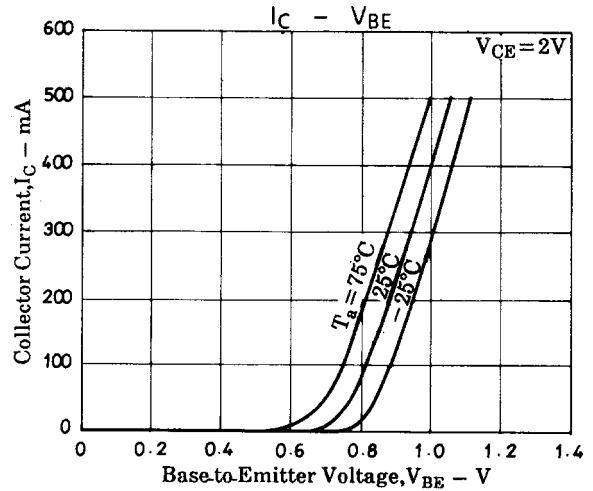
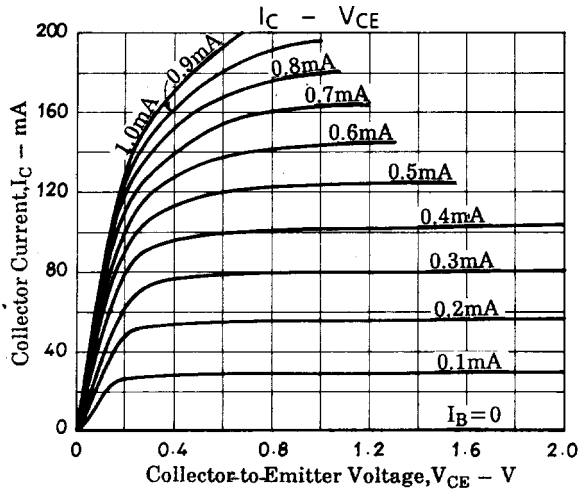
52098HA (KT)/5129MO, TS No.3116-1/3

### Package Dimensions

unit:mm

2067





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