

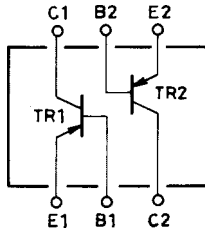
**FC117**

PNP 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 FC117 is formed with two chips, being equivalent to the 2SA1753, placed in one package.
- Low collector to emitter saturation voltage.
- Excellent in thermal equilibrium and pair capability.

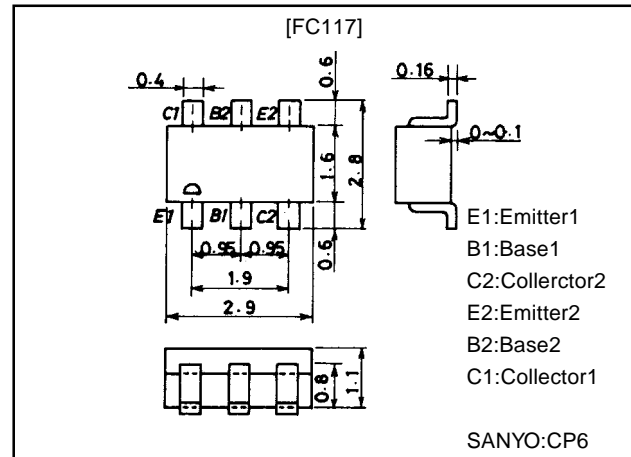
Electrical Connection



Package Dimensions

unit:mm

2067



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_{CE0} | | -15 | V |
| Emitter-to-Base Voltage | V_{EB0} | | -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 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=-4V, I_C=0$ | | | -0.1 | μA |
| DC Current Gain | $h_{FE}(1)$ | $V_{CE}=-2V, I_C=-10mA$ | 160 | | 560 | |
| | $h_{FE}(2)$ | $V_{CE}=-2V, I_C=-400mA$ | 70 | | | |
| DC Current Gain Ratio | $h_{FE}(\text{small/large})$ | $V_{CE}=-2V, I_C=-10mA$ | 0.8 | 0.98 | | |
| Gain-Bandwidth Product | f_T | $V_{CE}=-2V, I_C=-50mA$ | | 400 | | MHz |
| Output Capacitance | C_{ob} | $V_{CE}=-10V, f=1MHz$ | | 6.5 | | pF |
| C-E Saturation Voltage | $V_{CE(sat)1}$ | $I_C=-5mA, I_B=-0.5mA$ | -15 | | -35 | mV |
| | $V_{CE(sat)2}$ | $I_C=-200mA, I_B=-10mA$ | -200 | | -360 | 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 |

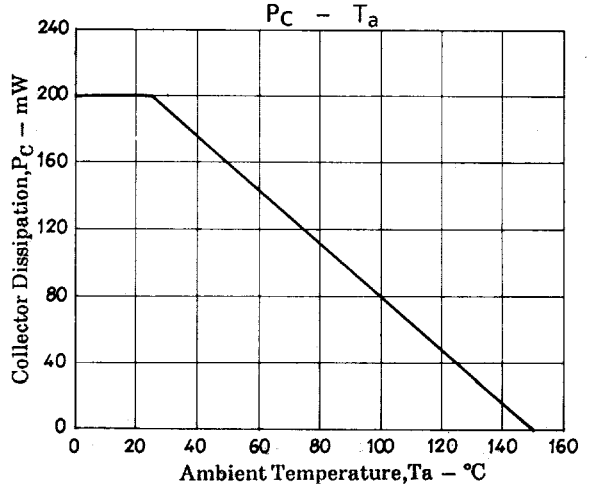
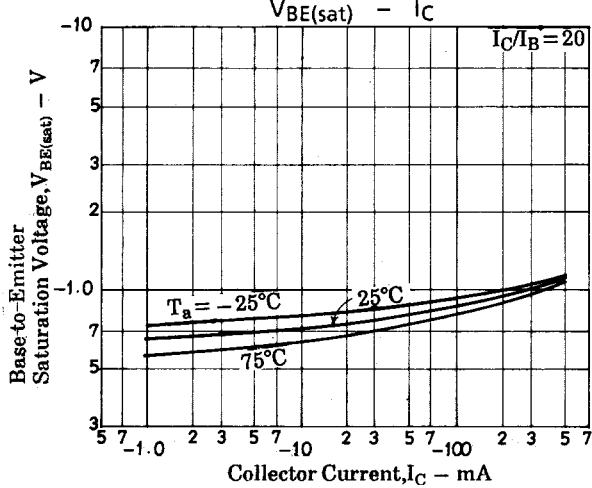
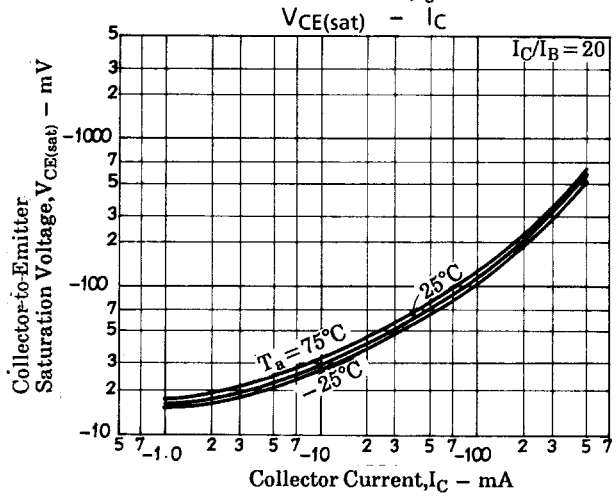
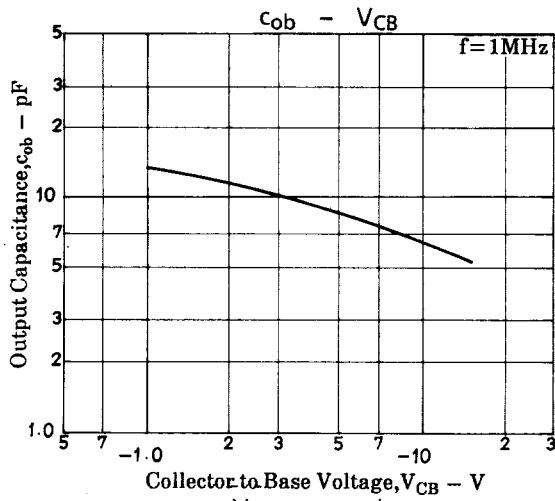
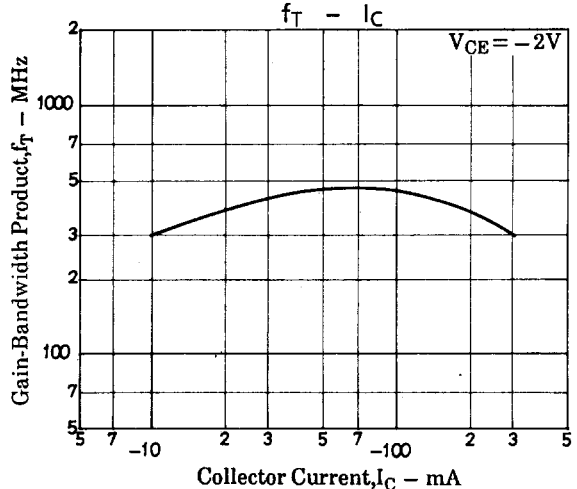
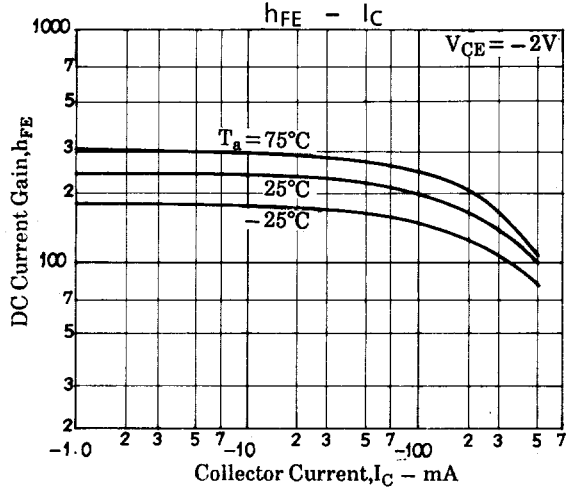
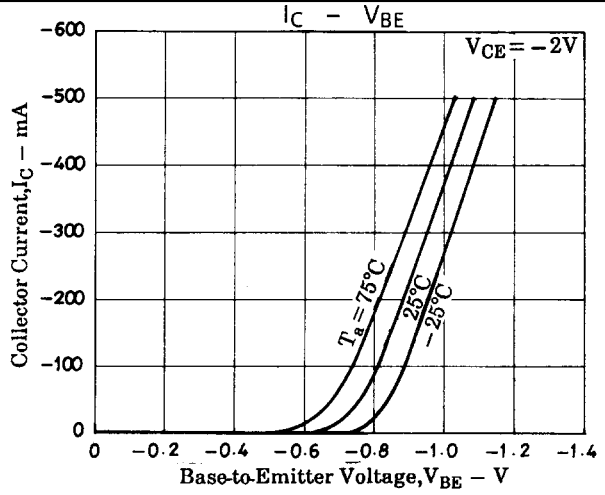
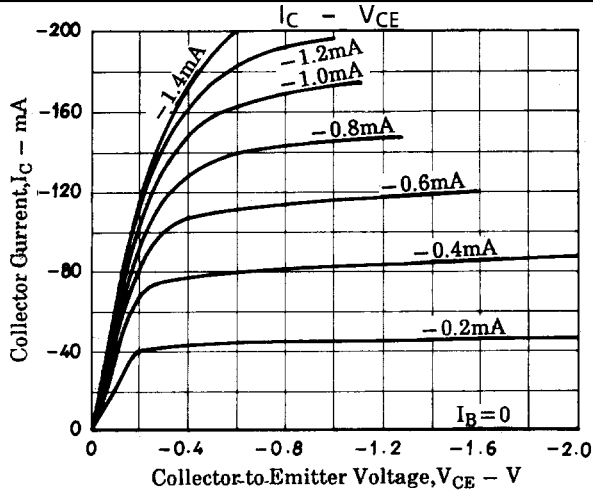
Note: The specifications shown above are for each individual transistor.

Marking:117

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FC117



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