

|              |         |  |
|--------------|---------|--|
| <b>SANYO</b> | No.3484 | <b>2SC4705</b>   |
|              |         | NPN Epitaxial Planar Silicon Transistor<br><b>Low-Frequency General-Purpose Amp</b><br>Applications (High $h_{FE}$ ) |

**Applications**

- Low-frequency general-purpose amp, drivers, muting circuits

**Features**

- High DC current gain ( $h_{FE} = 800$  to  $3200$ )
- Low collector-to-emitter saturation voltage :  $V_{CE(sat)} \leq 0.5V$  max
- High  $V_{EBO}$  :  $V_{EBO} \geq 15V$
- Small size making it easy to provide high-density, hybrid ICs.

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

|                              |           |  | unit       |
|------------------------------|-----------|--|------------|
| Collector to Base Voltage    | $V_{CBO}$ | 60   | V          |
| Collector to Emitter Voltage | $V_{CEO}$ | 50   | V          |
| Emitter to Base Voltage      | $V_{EBO}$ | 15   | V          |
| Collector Current            | $I_C$     | 200  | mA         |
| Collector Current(Pulse)     | $I_{CP}$  | 300  | mA         |
| Base Current                 | $I_B$     | 40   | mA         |
| Collector Dissipation        | $P_C$     | Mounted on ceramic board<br>( $250mm^2 \times 0.8mm$ ) | 1.3 W      |
| Junction Temperature         | $T_j$     | 150  | $^\circ C$ |
| Storage Temperature          | $T_{stg}$ | - 55 to + 150  | $^\circ C$ |

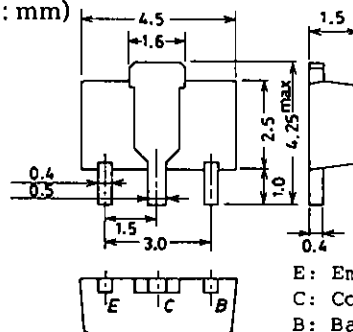
**Electrical Characteristics at  $T_a = 25^\circ C$**

|                          |               |                              | min | typ  | max  | unit    |
|--------------------------|---------------|------------------------------|-----|------|------|---------|
| Collector Cutoff Current | $I_{CBO}$     | $V_{CB} = 40V, I_E = 0$      |     |      | 0.1  | $\mu A$ |
| Emitter Cutoff Current   | $I_{EBO}$     | $V_{EB} = 10V, I_C = 0$      |     |      | 0.1  | $\mu A$ |
| DC Current Gain          | $h_{FE}$      | $V_{CE} = 5V, I_C = 100mA$   | 800 | 1500 | 3200 |         |
| Gain-Bandwidth Product   | $f_T$         | $V_{CE} = 10V, I_C = 10mA$   |     | 250  |      | MHz     |
| Output Capacitance       | $c_{ob}$      | $V_{CB} = 10V, f = 1MHz$     |     | 4.0  |      | pF      |
| C-E Saturation Voltage   | $V_{CE(sat)}$ | $I_C = 100mA, I_B = 2mA$     |     | 0.12 | 0.5  | V       |
| B-E Saturation Voltage   | $V_{BE(sat)}$ | $I_C = 100mA, I_B = 2mA$     |     | 0.85 | 1.2  | V       |
| C-B Breakdown Voltage    | $V_{(BR)CBO}$ | $I_C = 10\mu A, I_E = 0$     | 60  |      |      | V       |
| C-E Breakdown Voltage    | $V_{(BR)CEO}$ | $I_C = 1mA, R_{BE} = \infty$ | 50  |      |      | V       |
| E-B Breakdown Voltage    | $V_{(BR)EBO}$ | $I_E = 10\mu A, I_C = 0$     | 15  |      |      | V       |

Marking : CP

**Package Dimensions 2038**

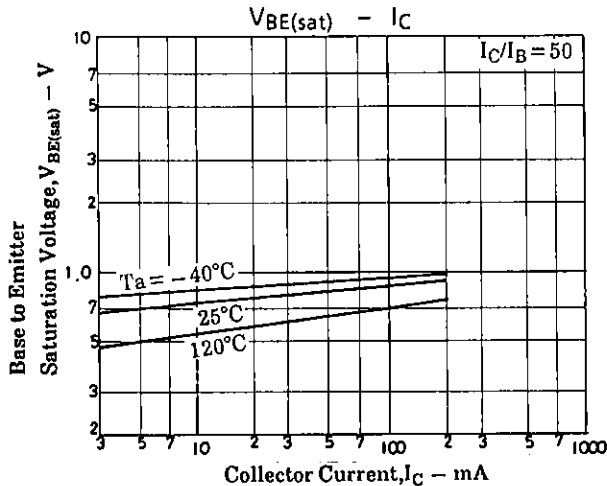
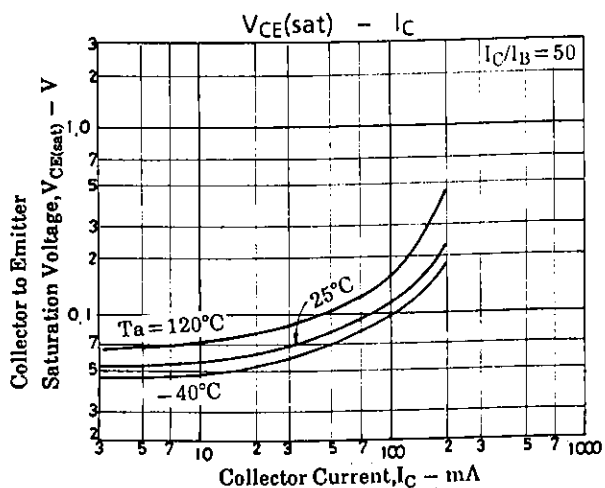
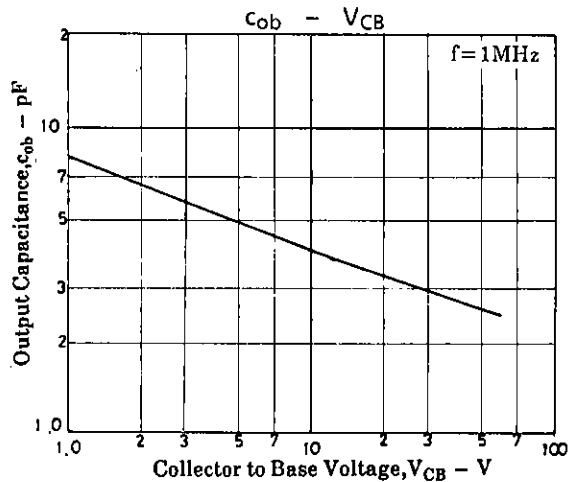
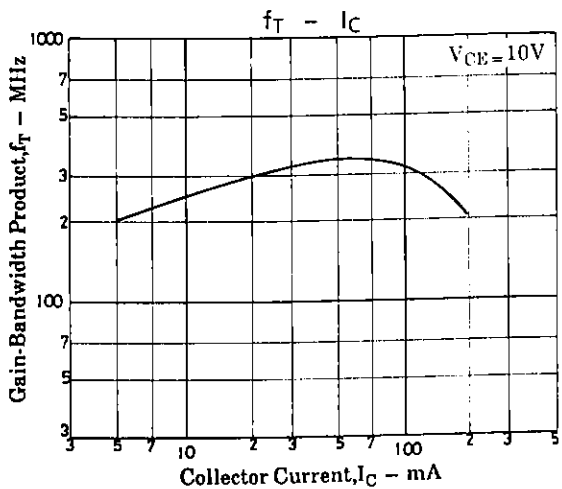
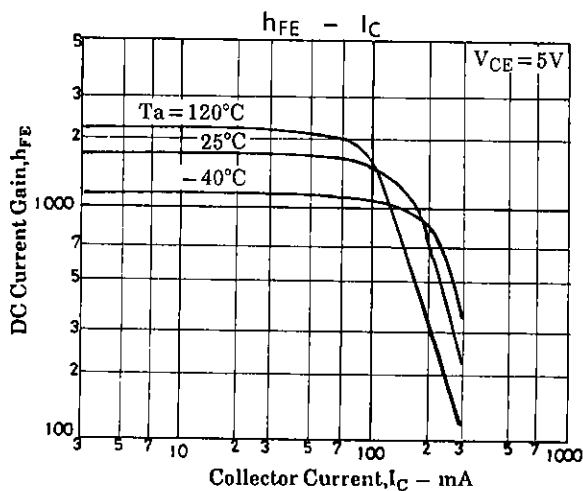
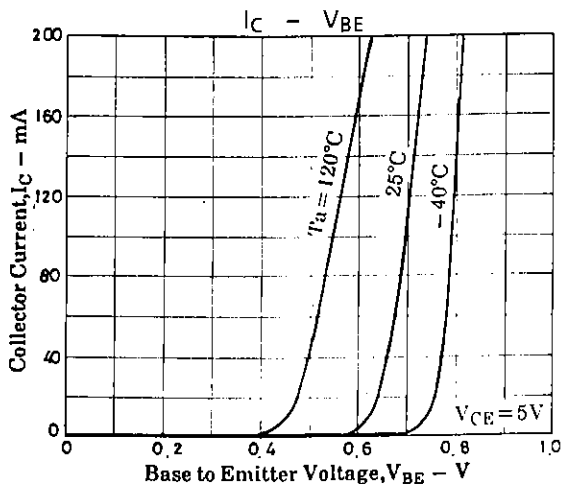
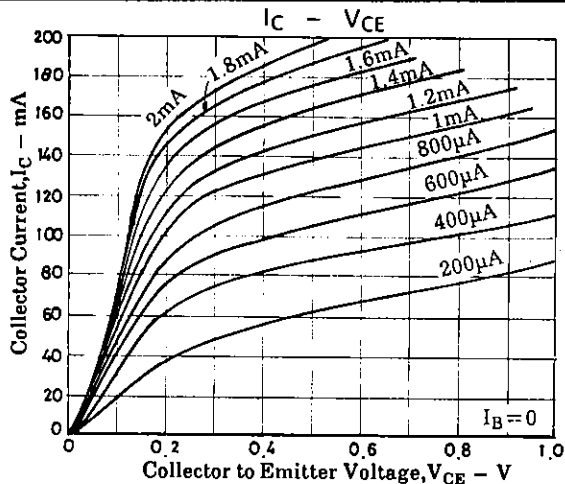
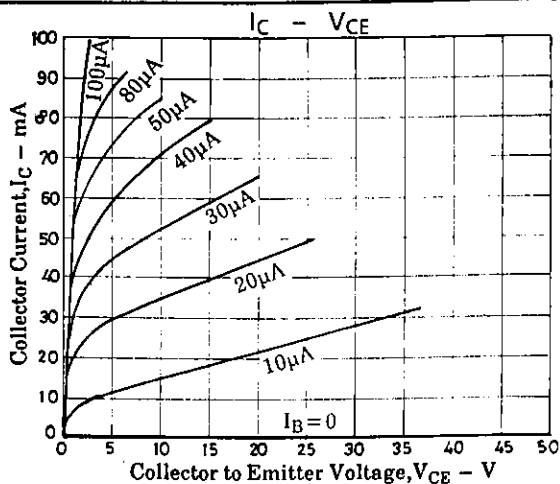
(unit : mm)



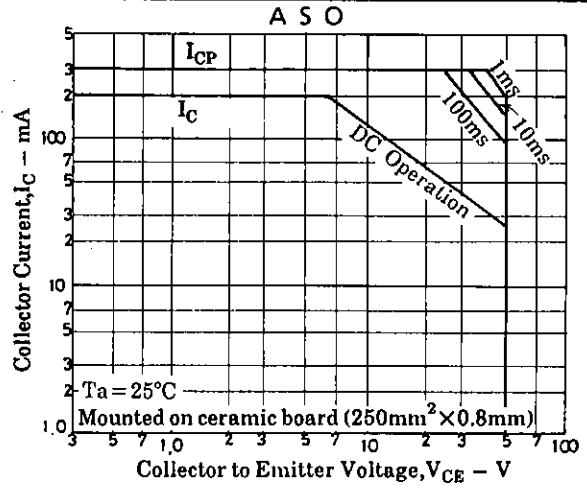
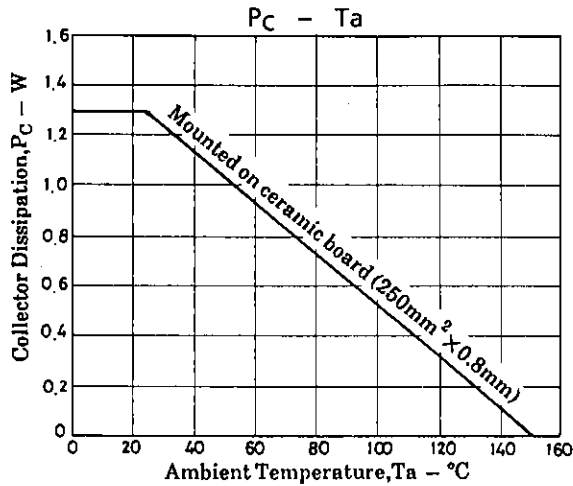
E: Emitter  
C: Collector  
B: Base

SANYO: PCP  
(Bottom View)

2SC4705



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