

|              |         |  |
|--------------|---------|--|
| <b>SANYO</b> | No.3022 | <b>2SA1701/2SC4481</b>                       |
|              |         | PNP/NPN Epitaxial Planar Silicon Transistors |

**Low-Frequency  
General-Purpose Amp Applications**

**Applications**

· AF power amp, medium-speed switching, small-sized motor driver applications.

**Features**

· Large current capacity.  
· Low collector-to-emitter saturation voltage.

( ) : 2SA1701

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

|                              |                  |               | unit |
|------------------------------|------------------|---------------|------|
| Collector to Base Voltage    | V <sub>CB0</sub> | (- )15        | V    |
| Collector to Emitter Voltage | V <sub>CE0</sub> | (- )15        | V    |
| Emitter to Base Voltage      | V <sub>EB0</sub> | (- )5         | V    |
| Collector Current            | I <sub>C</sub>   | (- )1.5       | A    |
| Collector Current(Pulse)     | I <sub>CP</sub>  | (- )3         | A    |
| Collector Dissipation        | P <sub>C</sub>   | 0.9           | W    |
| Junction Temperature         | T <sub>j</sub>   | 150           | °C   |
| Storage Temperature          | T <sub>stg</sub> | - 55 to + 150 | °C   |

**Electrical Characteristics at Ta = 25°C**

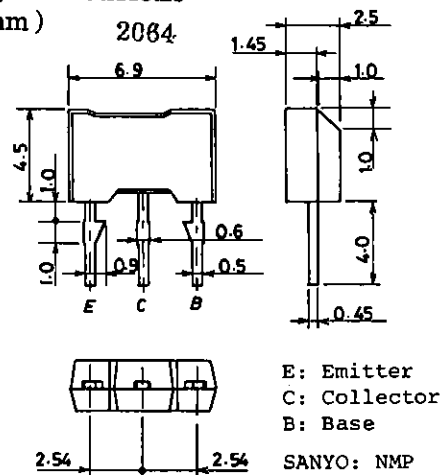
|                          |                          |   | min    | typ      | max     | unit |
|--------------------------|--------------------------|---|--------|----------|---------|------|
| Collector Cutoff Current | I <sub>CB0</sub>         | V <sub>CB</sub> = (-)12V, I <sub>E</sub> = 0        |        |          | (- )100 | nA   |
| Emitter Cutoff Current   | I <sub>EB0</sub>         | V <sub>EB</sub> = (-)4V, I <sub>C</sub> = 0         |        |          | (- )100 | nA   |
| DC Current Gain          | h <sub>FE</sub> (1)      | V <sub>CE</sub> = (-)2V, I <sub>C</sub> = (-)50mA   | 140    |          | 560     |      |
|                          | h <sub>FE</sub> (2)      | V <sub>CE</sub> = (-)2V, I <sub>C</sub> = (-)1A     | 70     |          |         |      |
| Gain-Bandwidth Product   | f <sub>T</sub>           | V <sub>CE</sub> = (-)2V, I <sub>C</sub> = (-)50mA   |        | (300)200 |         | MHz  |
| C-E Saturation Voltage   | V <sub>CE(sat)</sub> (1) | I <sub>C</sub> = (-)5mA, I <sub>B</sub> = (-)0.5mA  |        | (- )10   | (- )25  | mV   |
|                          | V <sub>CE(sat)</sub> (2) | I <sub>C</sub> = (-)400mA, I <sub>B</sub> = (-)20mA |        | (- )100  | (- )200 | mV   |
| B-E Saturation Voltage   | V <sub>BE(sat)</sub>     | I <sub>C</sub> = (-)400mA, I <sub>B</sub> = (-)20mA |        | (- )0.9  | (- )1.2 | V    |
| Output Capacitance       | c <sub>ob</sub>          | V <sub>CB</sub> = (-)10V, f = 1MHz                  |        | (15)10   |         | pF   |
| C-B Breakdown Voltage    | V <sub>(BR)CBO</sub>     | I <sub>C</sub> = (-)10μA, I <sub>E</sub> = 0        | (- )15 |          |         | V    |
| C-E Breakdown Voltage    | V <sub>(BR)CEO</sub>     | I <sub>C</sub> = (-)1mA, R <sub>BE</sub> = ∞        | (- )15 |          |         | V    |
| E-B Breakdown Voltage    | V <sub>(BR)EBO</sub>     | I <sub>E</sub> = (-)10μA, I <sub>C</sub> = 0        | (- )5  |          |         | V    |

※ : The 2SA1701/2SC4481 are classified by 50mA h<sub>FE</sub> as follows :

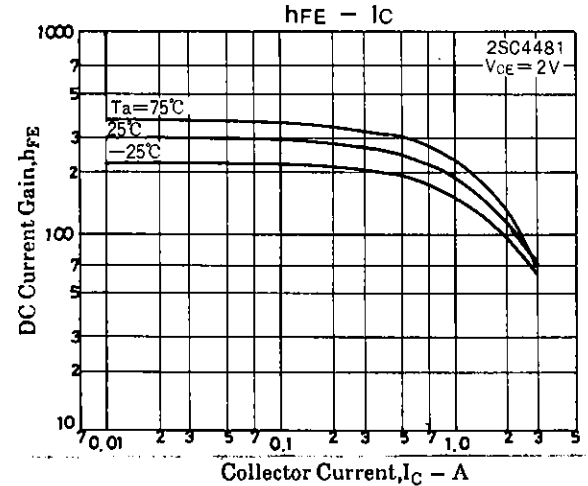
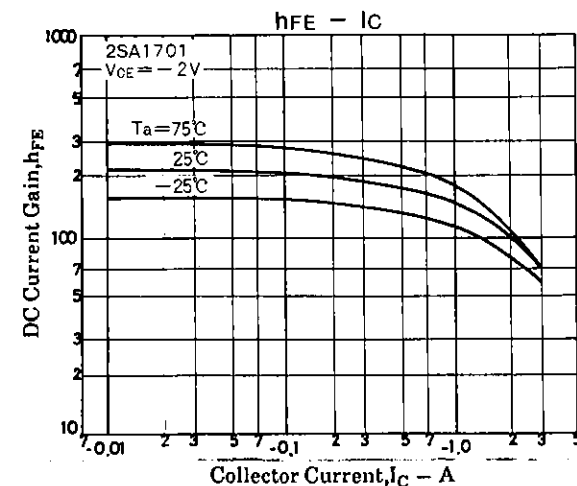
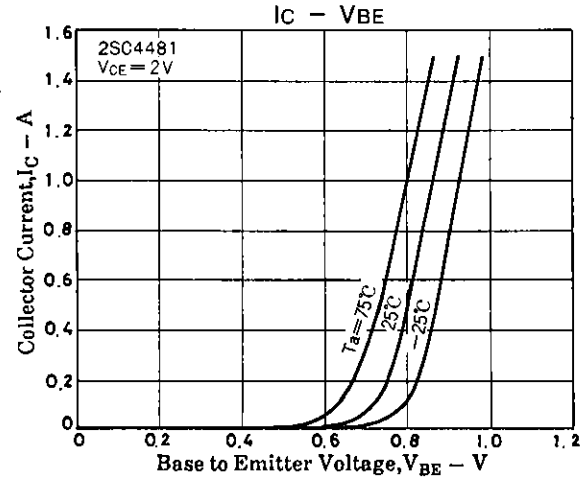
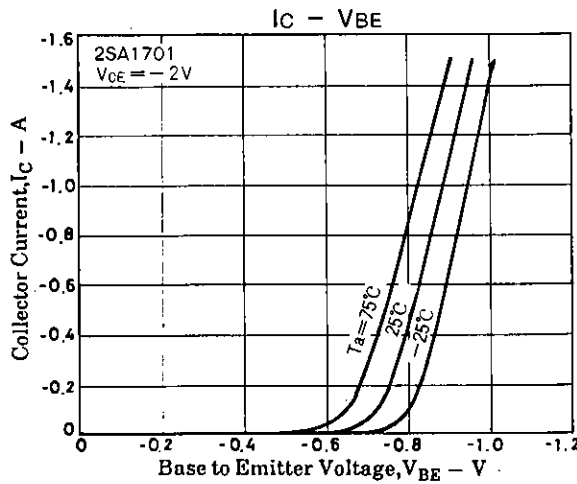
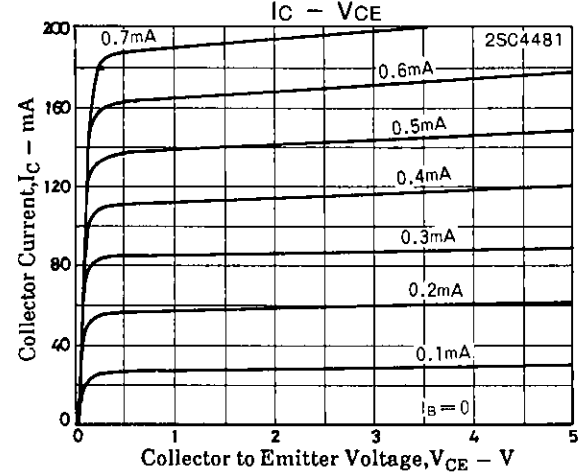
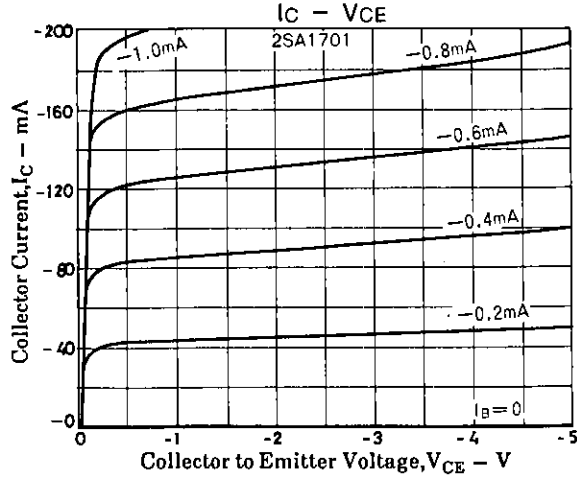
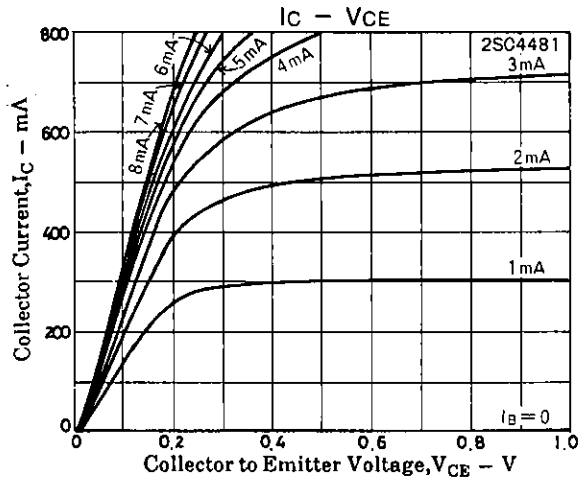
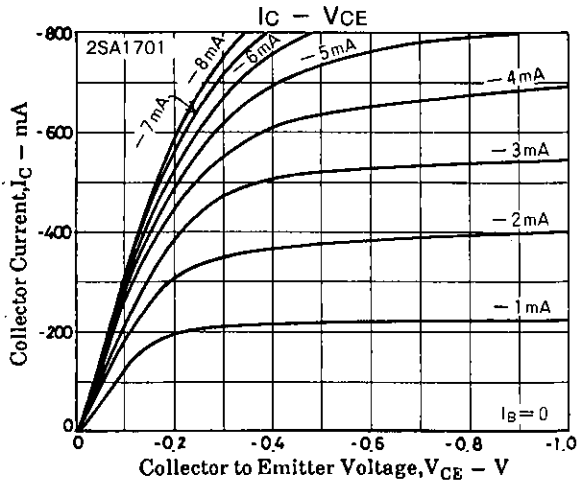
|           |           |           |
|-----------|-----------|-----------|
| 140 S 280 | 200 T 400 | 280 U 560 |
|-----------|-----------|-----------|

**Package Dimensions**

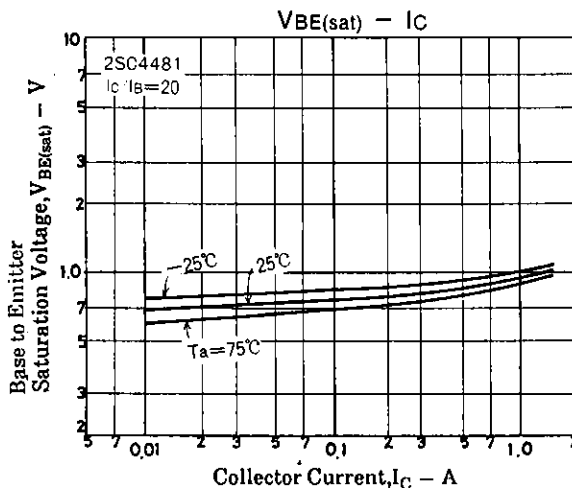
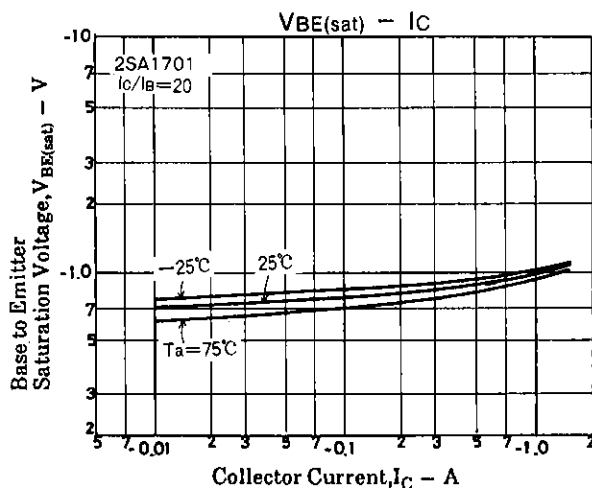
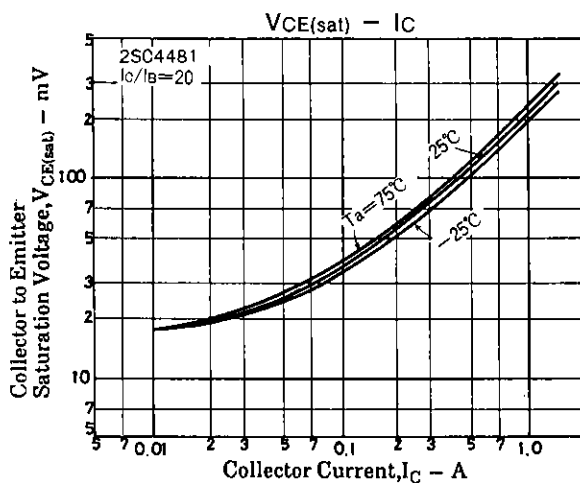
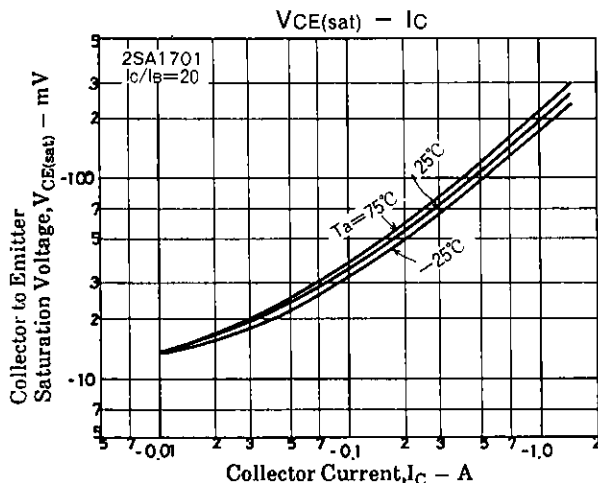
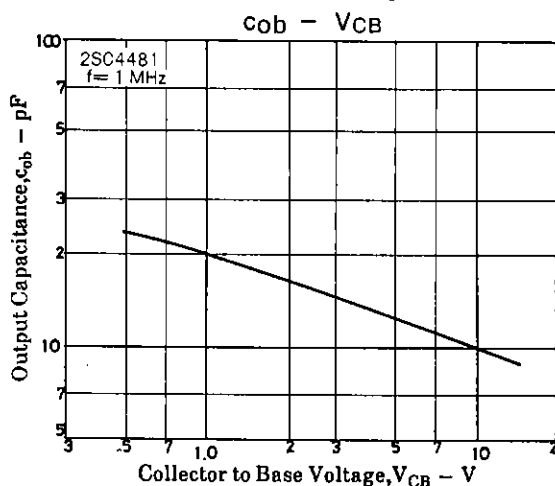
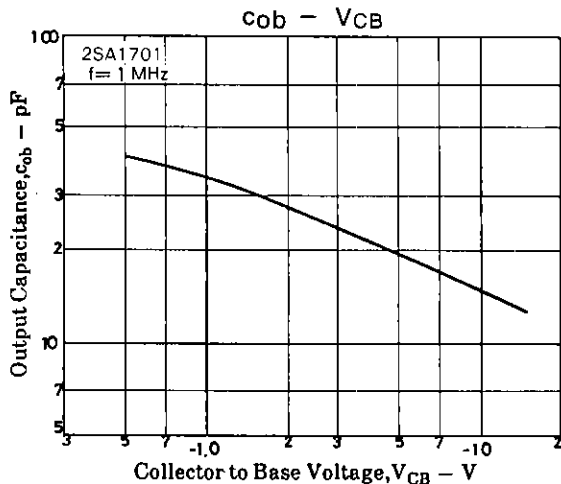
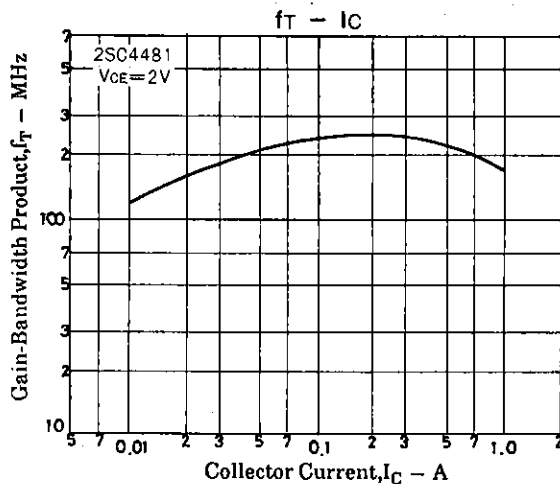
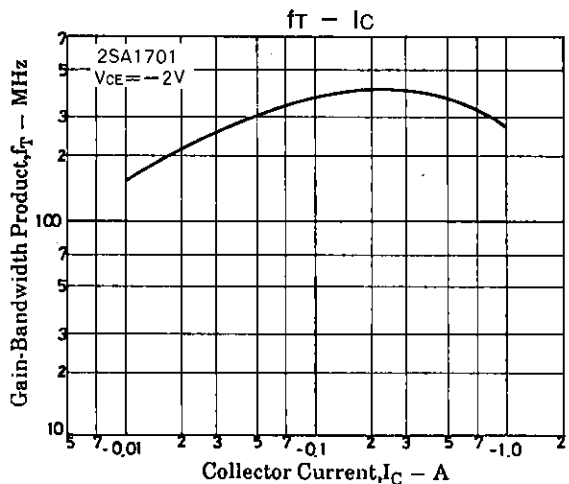
( unit: mm )

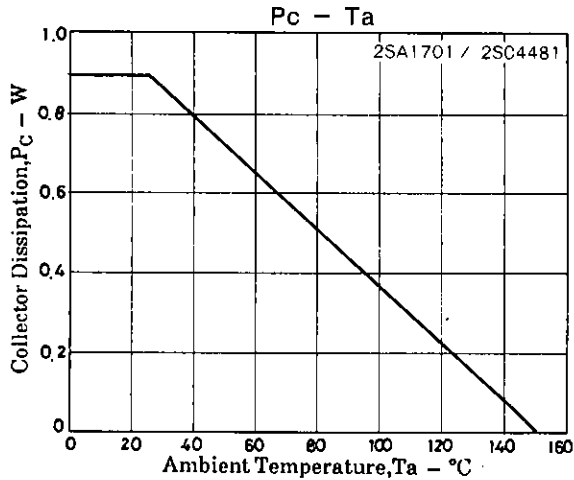
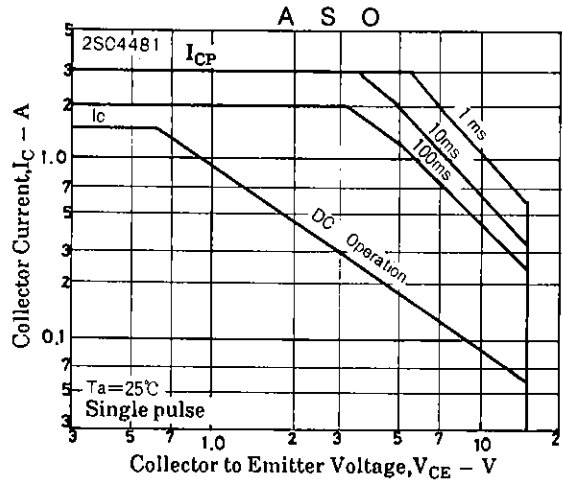
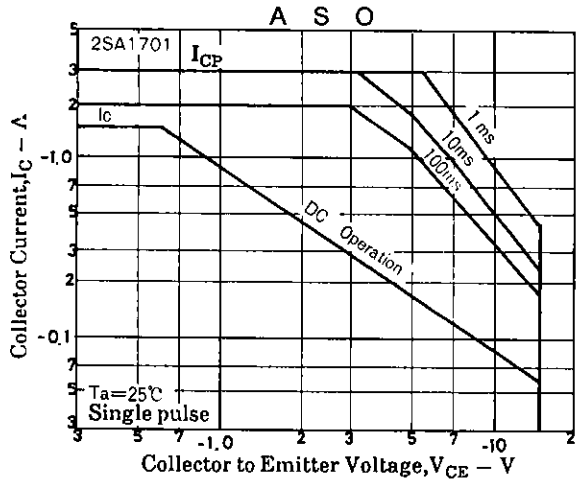


2SA1701/2SC4481



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