



## 2SA1703/2SC4483

### Low-Frequency Amplifier, Electronic Governor Applications

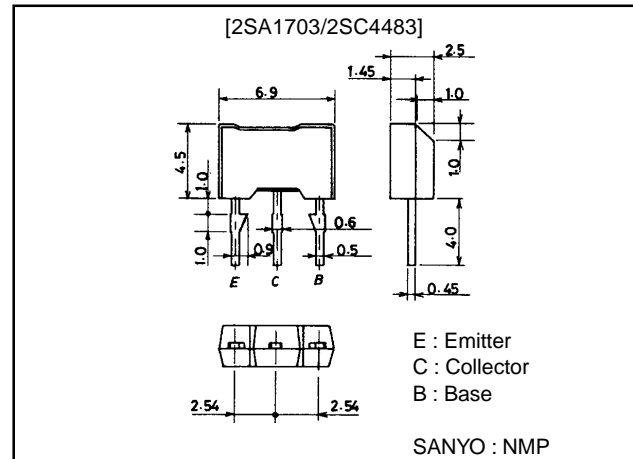
#### Features

- Low collector-to-emitter saturation voltage.

#### Package Dimensions

unit:mm

2064



() : 2SA1703

#### Specifications

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

| Parameter                    | Symbol    | Conditions | Ratings     | Unit |
|------------------------------|-----------|------------|-------------|------|
| Collector-to-Base Voltage    | $V_{CB0}$ |            | (-)30       | V    |
| Collector-to-Emitter Voltage | $V_{CEO}$ |            | (-)25       | V    |
| Emitter-to-Base Voltage      | $V_{EBO}$ |            | (-)5        | V    |
| Collector Current            | $I_C$     |            | (-)1.5      | A    |
| Collector Current (Pulse)    | $I_{CP}$  |            | (-)3        | A    |
| Collector Dissipation        | $P_C$     |            | 1           | W    |
| 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 | $I_{CBO}$ | $V_{CB}=(-)20V, I_E=0$       |         |       | (-)100 | nA   |
| Emitter Cutoff Current   | $I_{EBO}$ | $V_{EB}=(-)4V, I_C=0$        |         |       | (-)100 | nA   |
| DC Current Gain          | $h_{FE1}$ | $V_{CE}=(-)2V, I_C=(-)50mA$  | 100*    |       | 400*   |      |
|                          | $h_{FE2}$ | $V_{CE}=(-)2V, I_C=(-)1A$    | 40      |       |        |      |
| Gain-Bandwidth Product   | $f_T$     | $V_{CE}=(-)10V, I_C=(-)50mA$ |         | (180) |        | MHz  |
|                          |           |                              |         | 150   |        | MHz  |

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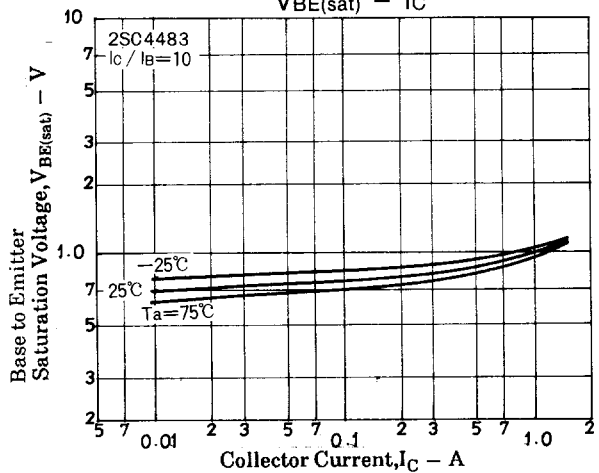
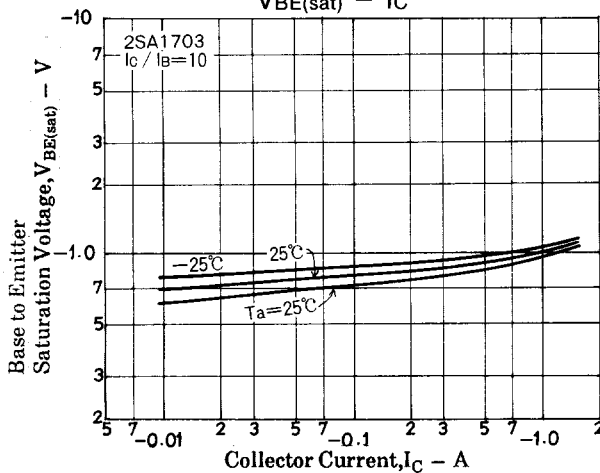
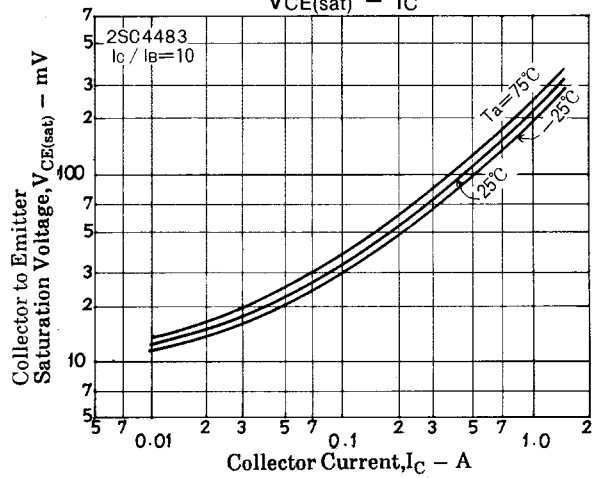
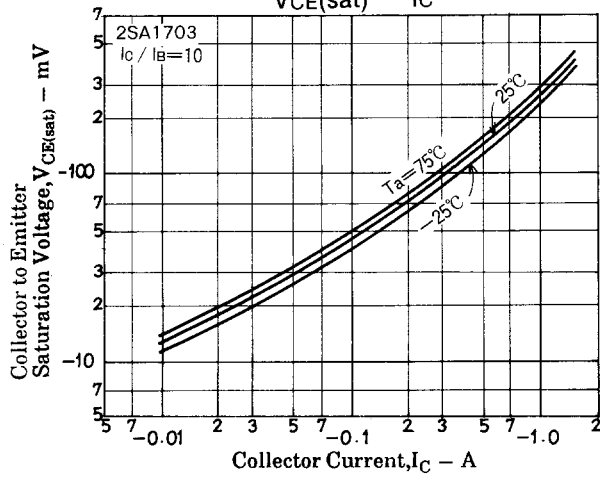
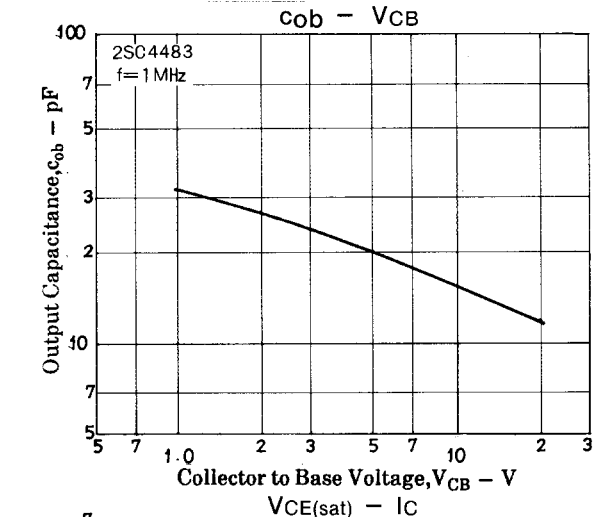
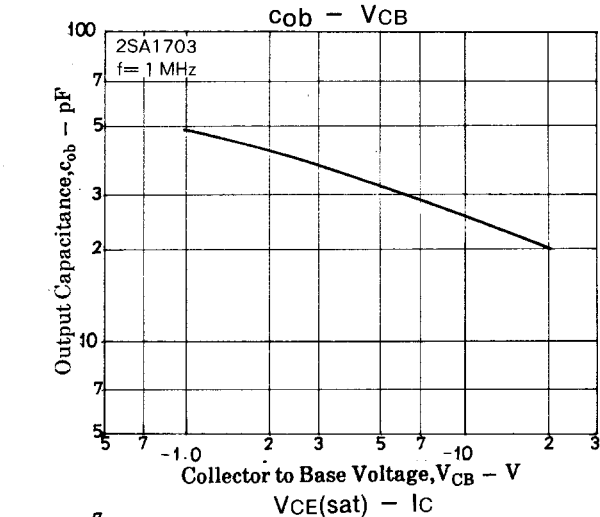
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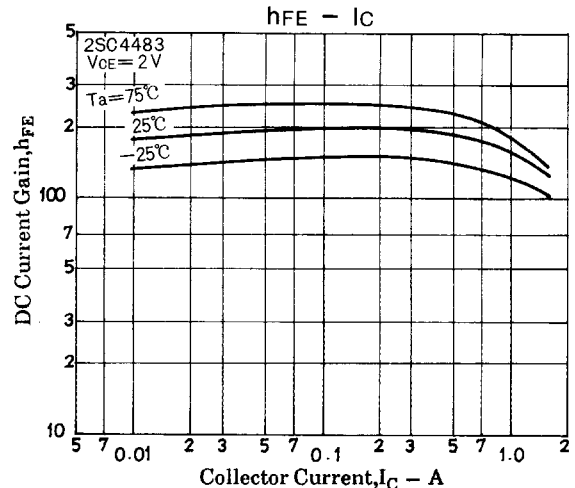
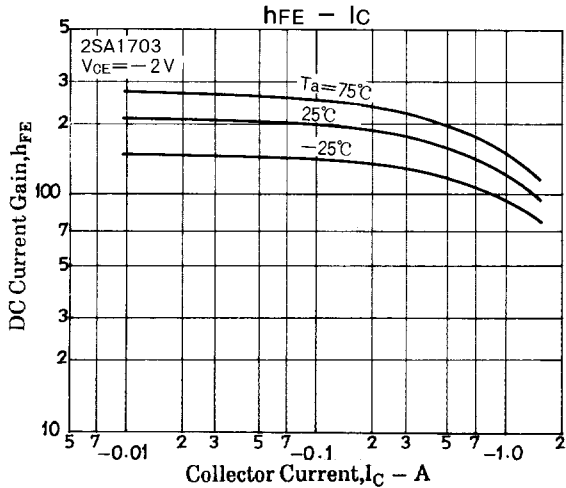
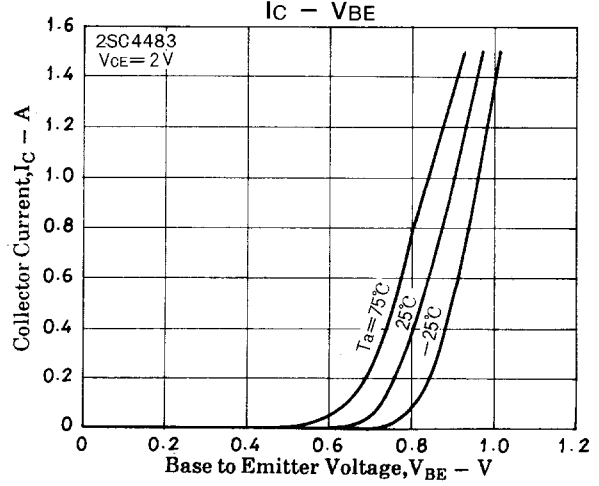
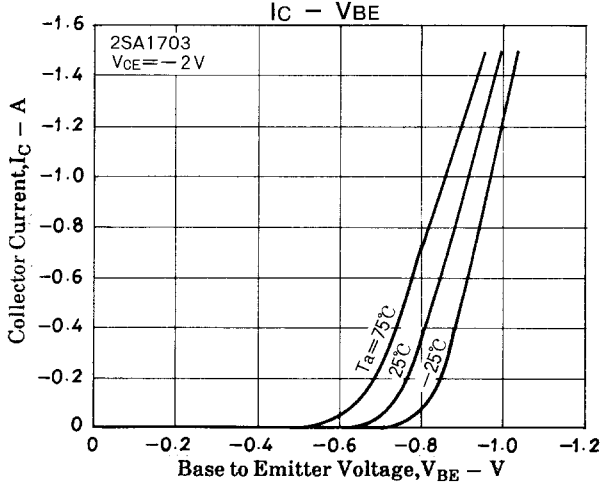
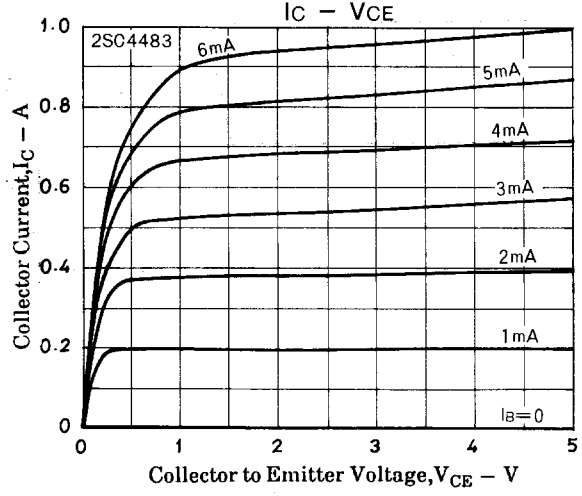
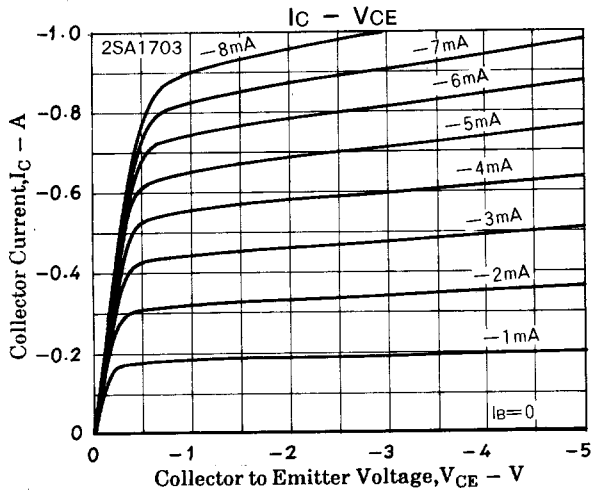
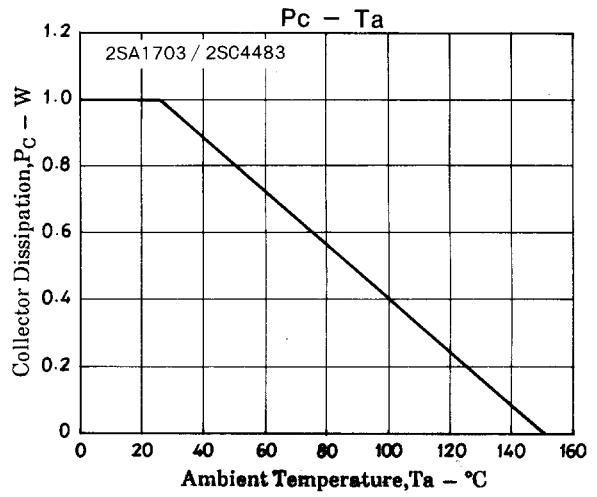
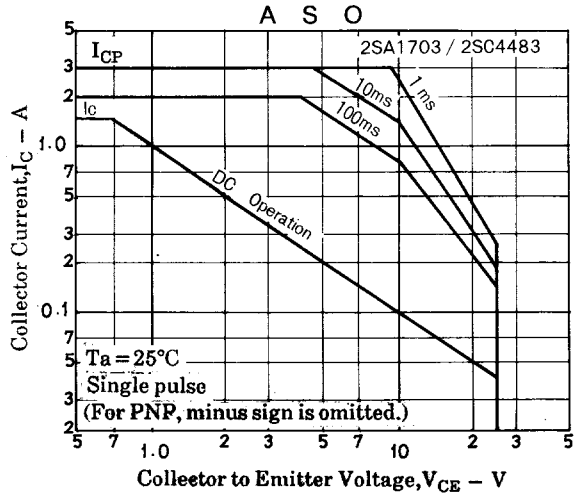
| Parameter                               | Symbol        | Conditions                  | Ratings |         |        | Unit |
|---|---------------|-----------------------------|---------|---------|--------|------|
|   |               |                             | min     | typ     | max    |      |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=(-)500mA, I_B=(-)50mA$ |         | (-0.15) | (-0.5) | V    |
|   |               |                             |         | 0.12    | 0.3    | V    |
| Base-to-Emitter Saturation Voltage      | $V_{BE(sat)}$ | $I_C=(-)500mA, I_B=(-)50mA$ |         | (-0.9)  | (-1.2) | V    |
| Output Capacitance                      | $C_{ob}$      | $V_{CB}=(-)10V, f=1MHz$     |         | (25)15  |        | pF   |
| Collector-to-Base Breakdown Voltage     | $V_{(BR)CBO}$ | $I_C=(-)10\mu A, I_E=0$     | (-30)   |         |        | V    |
| Collector-to-Emitter Breakdown Voltage  | $V_{(BR)CEO}$ | $I_C=(-)1mA, R_{BE}=\infty$ | (-25)   |         |        | V    |
| Emitter-to-Base Breakdown Voltage       | $V_{(BR)EBO}$ | $I_E=(-)10\mu A, I_C=0$     | (-5)    |         |        | V    |

\* : The 2SA1703/2SC4483 are classified by 50mA  $h_{FE}$  as follows :

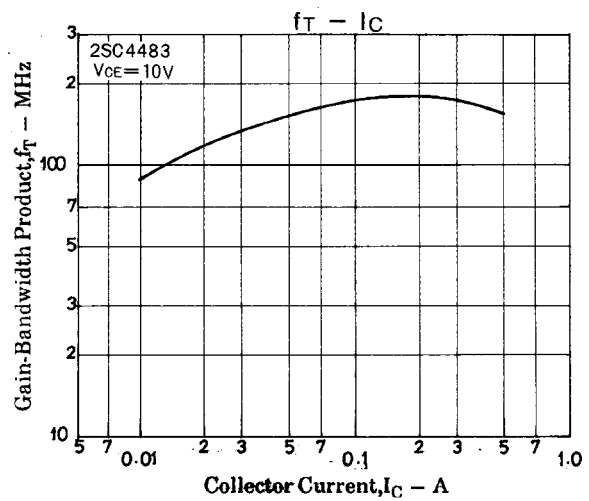
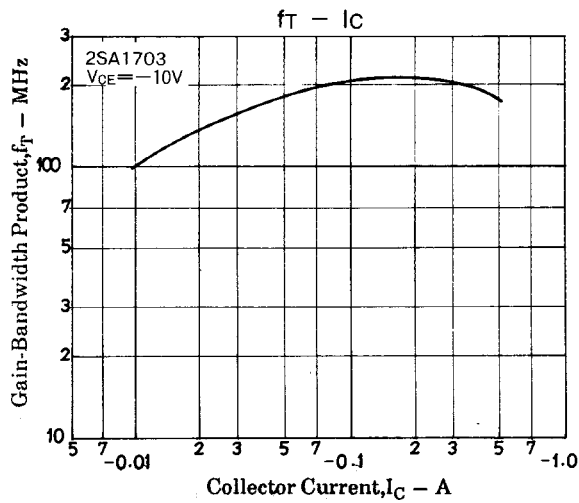
|       |     |       |     |       |     |
|-------|-----|-------|-----|-------|-----|
| 100 R | 200 | 140 S | 280 | 200 T | 400 |
|-------|-----|-------|-----|-------|-----|



# 2SA1703/2SC4483



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