

**2SC3495**

High h_{FE} , Low-Frequency General-Purpose Amplifier Applications

Applications

- AF amplifier, various driver, muting circuit.

Features

- Adoption of FBET process.
- High DC current gain ($h_{FE}=500$ to 2000).
- High breakdown voltage ($V_{CEO} \geq 100V$).
- Low collector-to-emitter saturation voltage ($V_{CE(sat)} \leq 0.5V$).
- High V_{EBO} ($V_{EBO} \geq 15V$).
- Small C_{ob} ($C_{ob}=1.8pF$ typ).

Specifications

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

| Parameter | Symbol | Conditions | Ratings | Unit |
|------------------------------|-----------|------------|-------------|------------|
| Collector-to-Base Voltage | V_{CBO} | | 120 | V |
| Collector-to-Emitter Voltage | V_{CEO} | | 100 | V |
| Emitter-to-Base Voltage | V_{EBO} | | 15 | V |
| Collector Current | I_C | | 50 | mA |
| Collector Current (Pulse) | I_{CP} | | 100 | mA |
| Base Current | I_B | | 10 | mA |
| Collector Dissipation | P_C | | 500 | mW |
| Junction Temperature | T_J | | 150 | $^\circ C$ |
| Storage Temperature | T_{stg} | | -55 to +150 | $^\circ C$ |

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

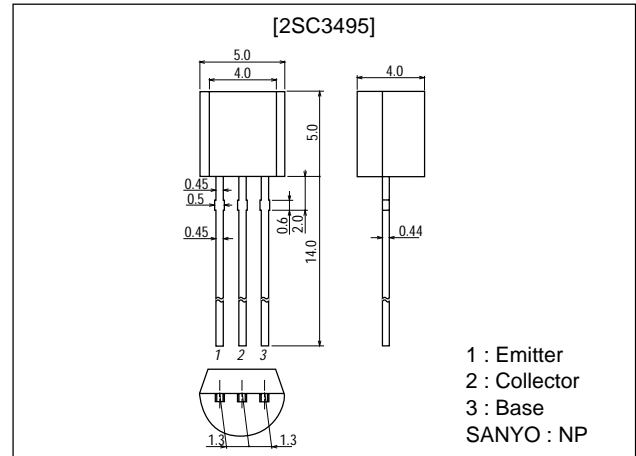
| Parameter | Symbol | Conditions | Ratings | | | Unit |
|--------------------------|-----------|------------------------|---------|------|------|---------|
| | | | min | typ | max | |
| Collector Cutoff Current | I_{CBO} | $V_{CB}=80V, I_E=0$ | | | 0.1 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=10V, I_C=0$ | | | 0.1 | μA |
| DC Current Gain | h_{FE} | $V_{CE}=5V, I_C=10mA$ | 500 | 1000 | 2000 | |
| Gain-Bandwidth Product | f_T | $V_{CE}=10V, I_C=10mA$ | | 170 | | MHz |
| Output Capacitance | C_{ob} | $V_{CB}=10V, f=1MHz$ | | 1.8 | | pF |

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Package Dimensions

unit:mm

2003A



1 : Emitter
2 : Collector
3 : Base
SANYO : NP

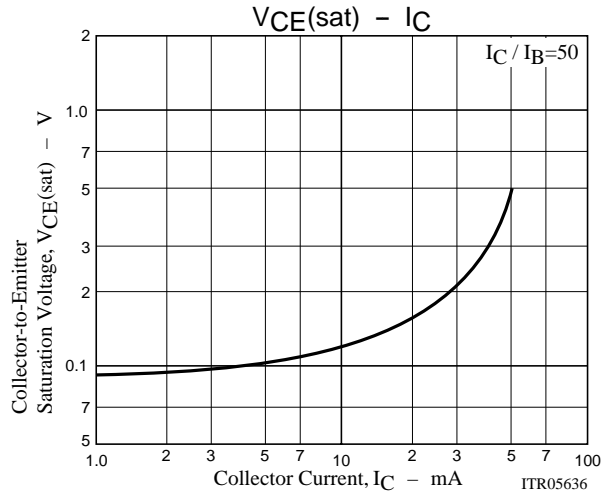
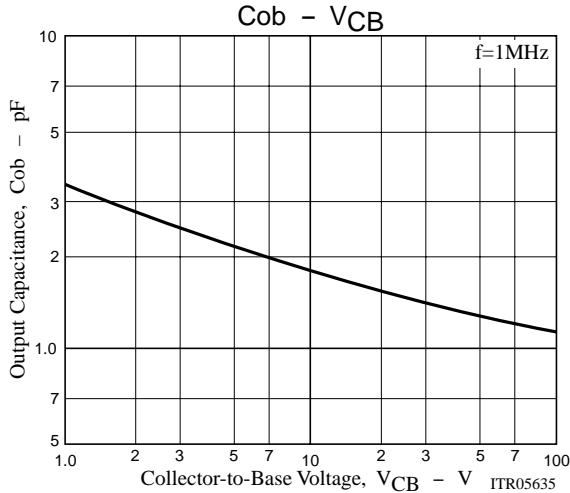
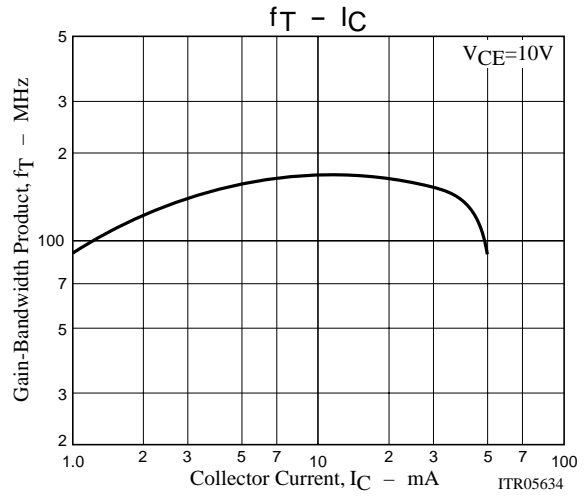
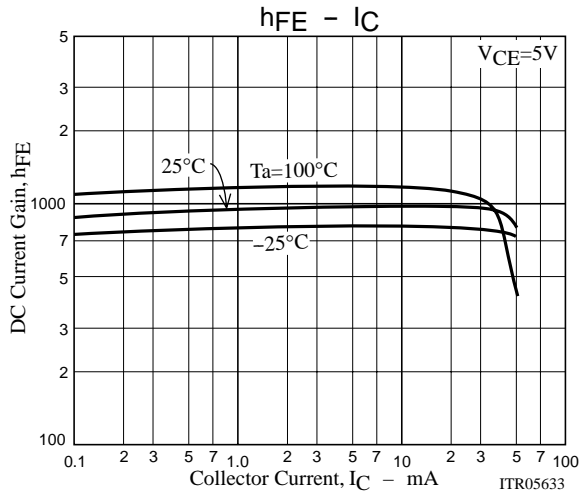
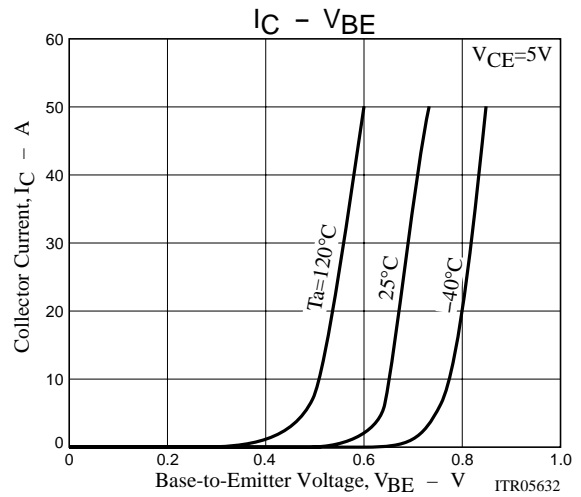
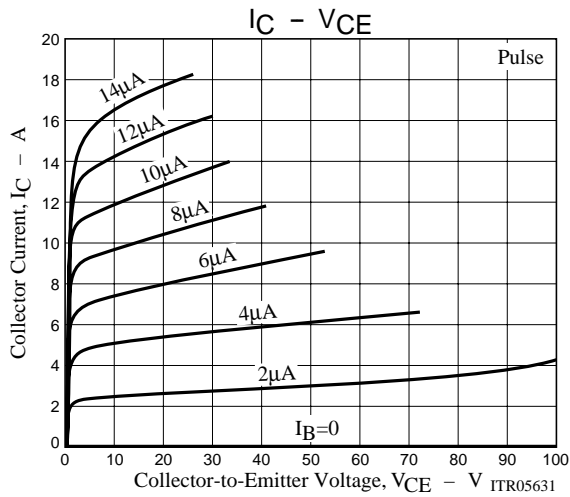
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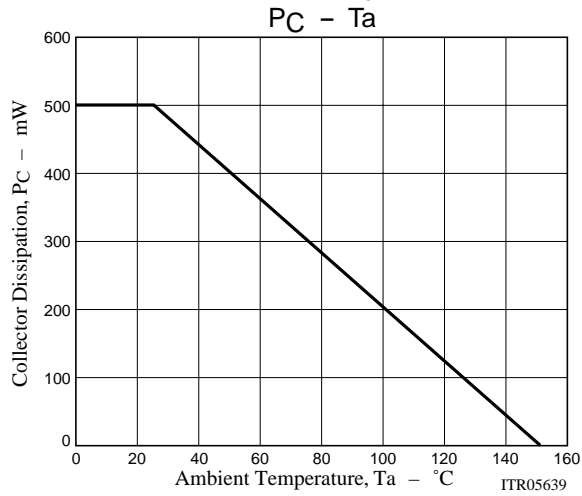
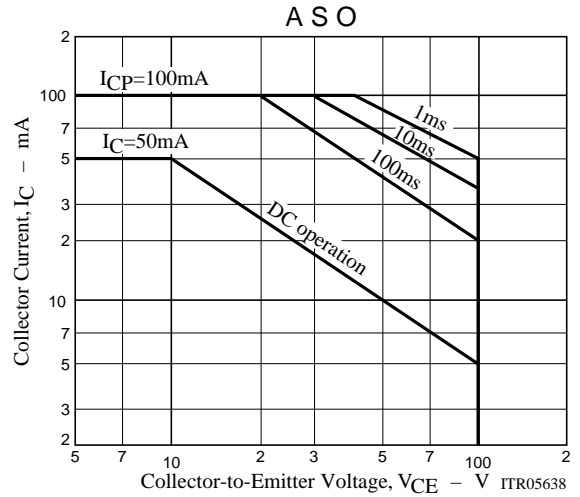
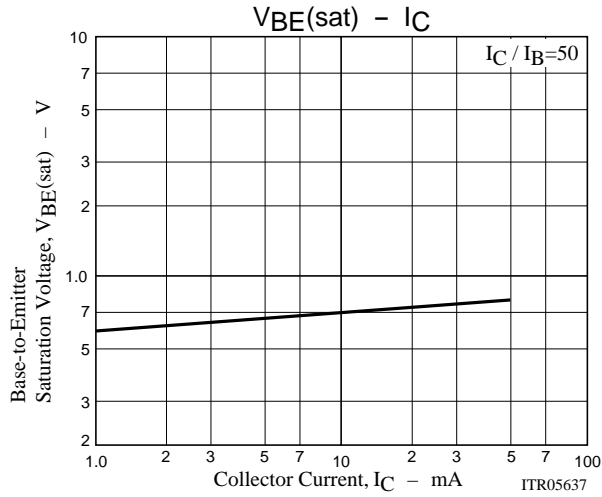
2SC3495

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| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---------------|--------------------------|---------|-----|-----|------|
| | | | min | typ | max | |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=10mA, I_B=200\mu A$ | | 0.1 | 0.5 | V |
| Base-to-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C=10mA, I_E=200\mu A$ | | 0.7 | 1.0 | V |
| Collector-to-Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C=10\mu A, I_E=0$ | 120 | | | V |
| Collector-to-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C=1mA, R_{BE}=\infty$ | 100 | | | V |
| Emitter-to-Base Breakdown Voltage | $V_{(BR)EBO}$ | $I_E=10\mu A, I_C=0$ | 15 | | | V |



2SC3495



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