



## 2SA608N/2SC536N

### Low-Frequency General-Purpose Amplifier Applications

#### Applications

- Capable of being used in the low frequency to high frequency range.

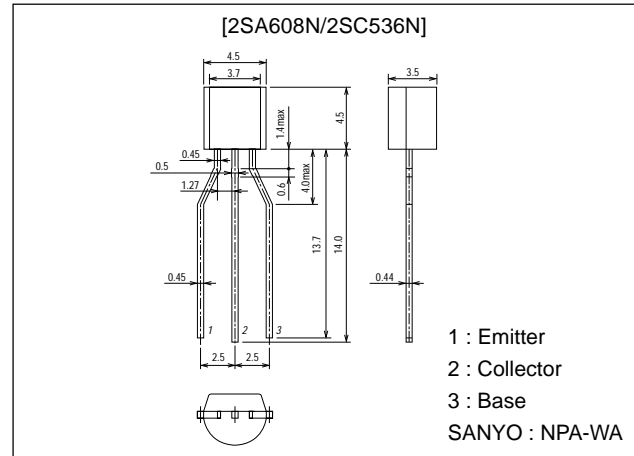
#### Features

- Large current capacity and wide ASO.

#### Package Dimensions

unit:mm

2164



( ) : 2SA608N

#### Specifications

##### Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

| Parameter                    | Symbol    | Conditions | Ratings     | Unit             |
|------------------------------|-----------|------------|-------------|------------------|
| Collector-to-Base Voltage    | $V_{CB0}$ |            | (-50)60     | V                |
| Collector-to-Emitter Voltage | $V_{CE0}$ |            | (-50)       | V                |
| Emitter-to-Base Voltage      | $V_{EB0}$ |            | (-6)        | V                |
| Collector Current            | $I_C$     |            | (-150)      | mA               |
| Collector Current (Pulse)    | $I_{CP}$  |            | (-400)      | mA               |
| Collector Dissipation        | $P_C$     |            | 500         | mW               |
| Junction Temperature         | $T_J$     |            | 150         | $^\circ\text{C}$ |
| Storage Temperature          | $T_{stg}$ |            | -55 to +150 | $^\circ\text{C}$ |

##### Electrical Characteristics at $T_a = 25^\circ\text{C}$

| Parameter                | Symbol    | Conditions                                 | Ratings |     |        | Unit          |
|--------------------------|-----------|--|---------|-----|--------|---------------|
|                          |           |  | min     | typ | max    |               |
| Collector Cutoff Current | $I_{CB0}$ | $V_{CB}=(-)40\text{V}, I_E=0$              |         |     | (-0.1) | $\mu\text{A}$ |
| Emitter Cutoff Current   | $I_{EB0}$ | $V_{EB}=(-)5\text{V}, I_C=0$               |         |     | (-0.1) | $\mu\text{A}$ |
| DC Current Gain          | $h_{FE1}$ | $V_{CE}=(-)6\text{V}, I_C=(-)1\text{mA}$   | 160*    |     | 560*   |               |
|                          | $h_{FE2}$ | $V_{CE}=(-)6\text{V}, I_C=(-)0.1\text{mA}$ | 70      |     |        |               |

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\* The 2SA608N/2SC536N are classified by 1mA  $h_{FE}$  as follow

| Rank     | F          | G          |
|----------|------------|------------|
| $h_{FE}$ | 160 to 320 | 280 to 560 |

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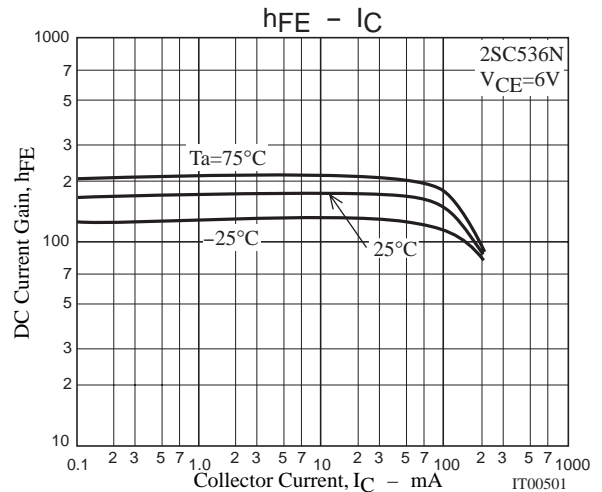
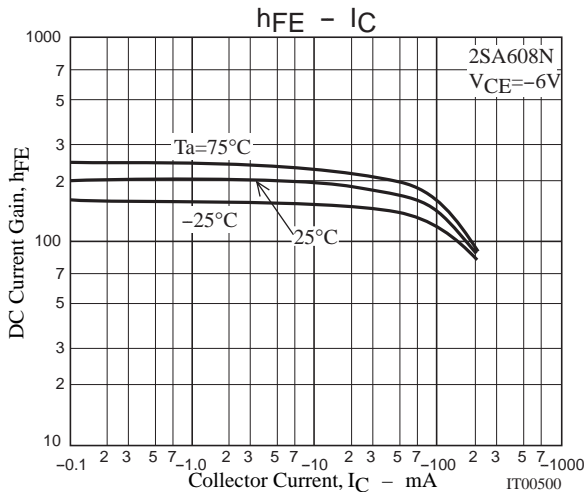
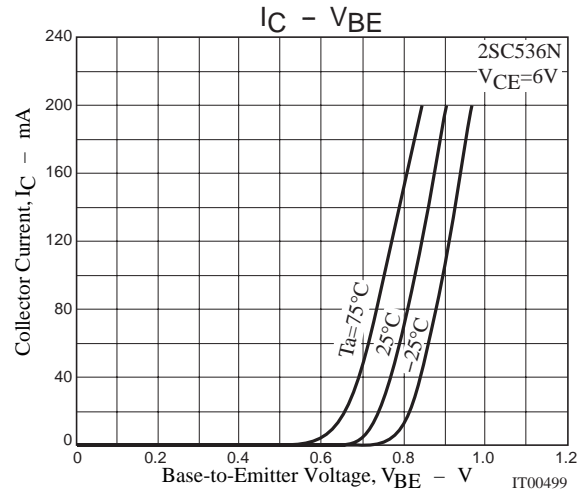
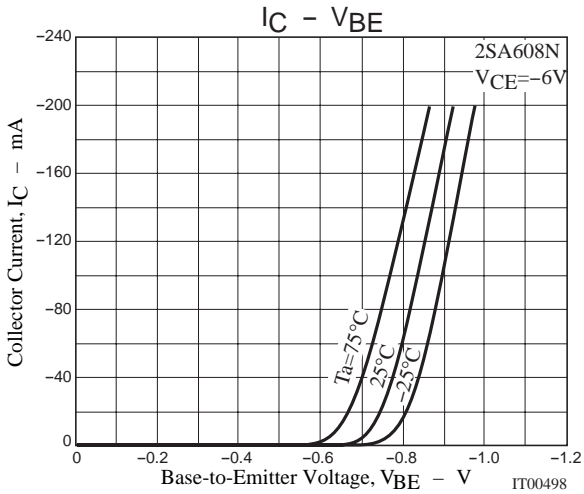
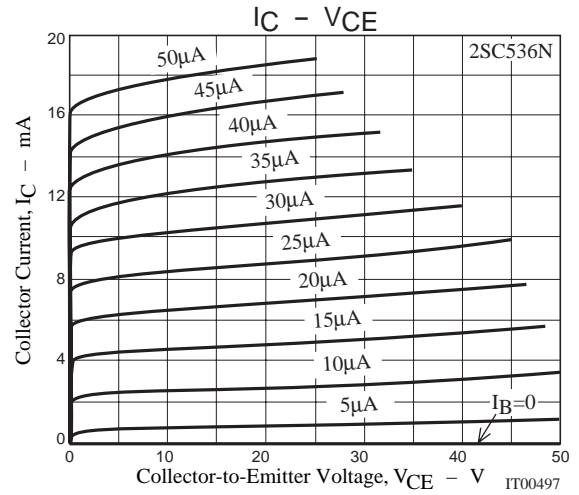
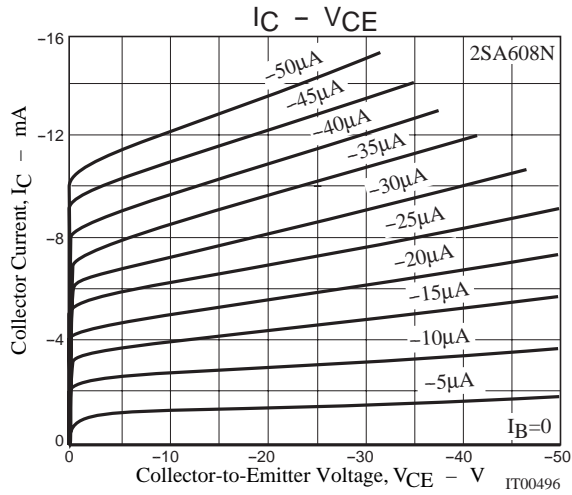
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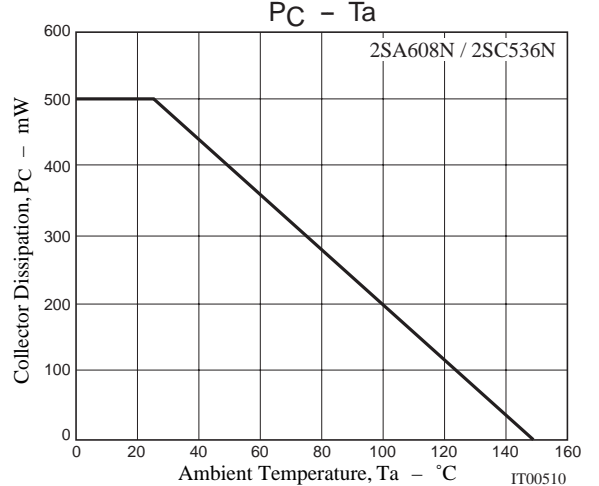
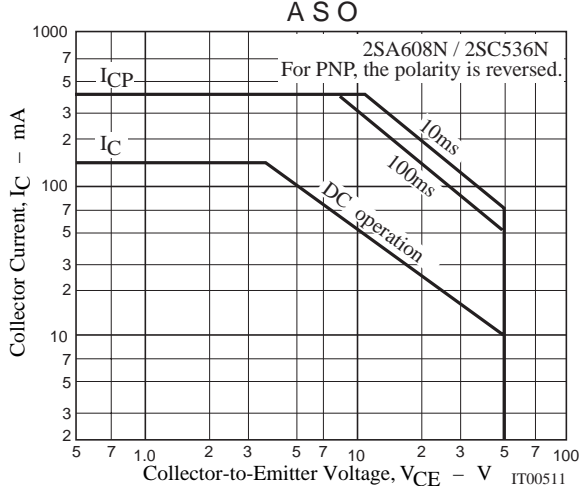
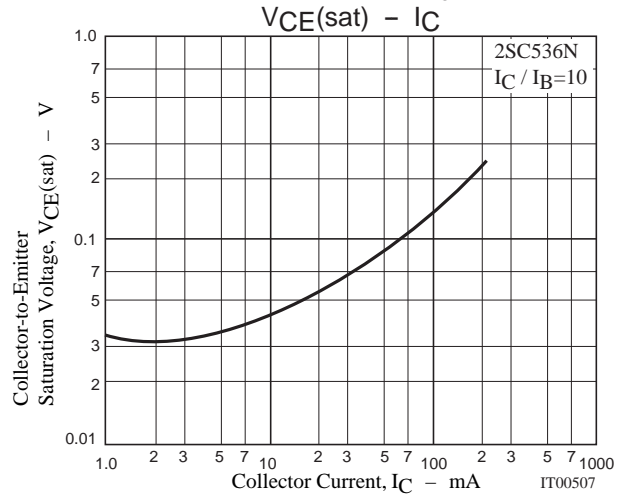
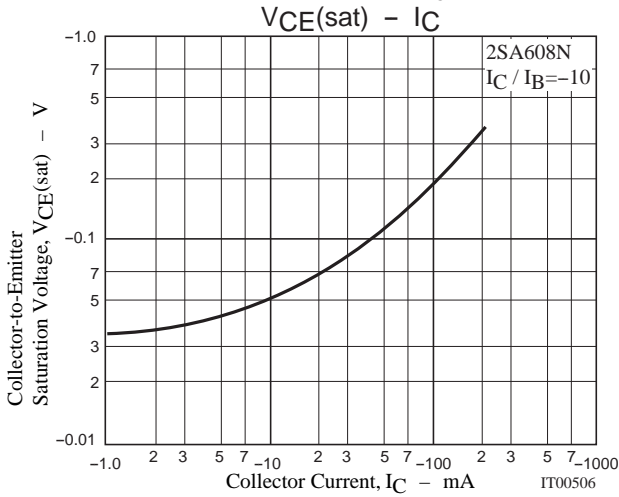
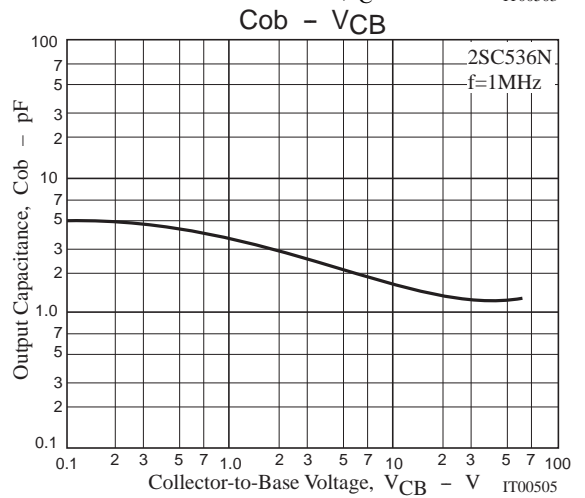
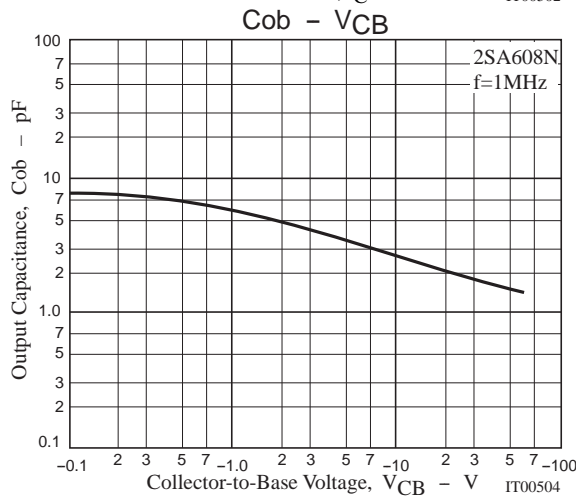
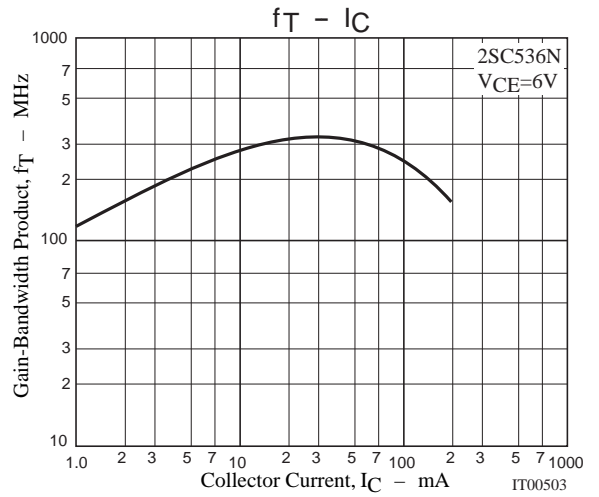
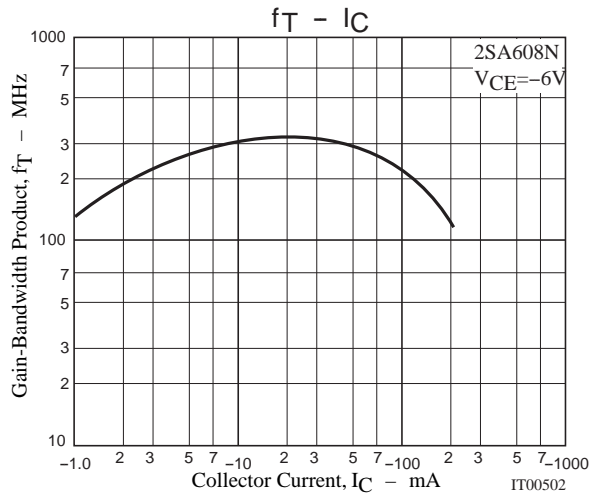
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| Parameter                               | Symbol        | Conditions                  | Ratings |       |        | Unit |
|---|---------------|-----------------------------|---------|-------|--------|------|
|   |               |                             | min     | typ   | max    |      |
| Gain-Bandwidth Product                  | $f_T$         | $V_{CE}=(-)6V, I_C=(-)10mA$ |         | 200   |        | MHz  |
| Output Capacitance                      | $C_{ob}$      | $V_{CB}=(-)6V, f=1MHz$      |         | 3.0   |        | pF   |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=(-)100mA, I_B=(-)10mA$ |         | (4.5) |        | pF   |
| Base-to-Emitter Saturation Voltage      | $V_{BE(sat)}$ | $I_C=(-)100mA, I_B=(-)10mA$ |         |       | (-1.0) | V    |
| Collector-to-Base Breakdown Voltage     | $V_{(BR)CBO}$ | $I_C=(-)10\mu A, I_E=0$     | (-60)   |       |        | V    |
| Collector-to-Emitter Breakdown Voltage  | $V_{(BR)CEO}$ | $I_C=(-)1mA, R_{BE}=\infty$ | (-50)   |       |        | V    |
| Emitter-to-Base Breakdown Voltage       | $V_{(BR)EBO}$ | $I_E=(-)10\mu A, I_C=0$     | (-6)    |       |        | V    |



# 2SA608N/2SC536N



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