

**SANYO**

No.575D

**2SB764/2SD863**

PNP/NPN Epitaxial Planar Silicon Transistors  
Voltage Regulator, Relay Lamp Driver  
Electrical Equipment Applications

( ):2SB764

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

|                              |           |             | unit |
|------------------------------|-----------|-------------|------|
| Collector to Base Voltage    | $V_{CBO}$ | (-)60       | V    |
| Collector to Emitter Voltage | $V_{CEO}$ | (-)50       | V    |
| Emitter to Base Voltage      | $V_{EBO}$ | (-)5        | V    |
| Collector Current            | $I_C$     | (-)1        | A    |
| Collector Current(Pulse)     | $I_{CP}$  | (-)2        | A    |
| Collector Dissipation        | $P_C$     | 0.9         | W    |
| Junction Temperature         | $T_J$     | 150         | °C   |
| Storage Temperature          | $T_{stg}$ | -55 to +150 | °C   |

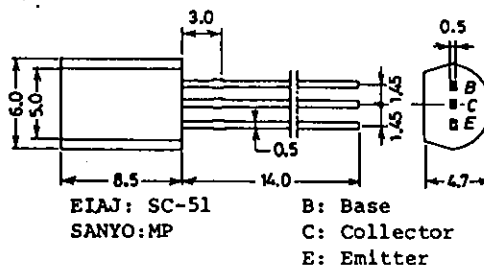
**Electrical Characteristics at Ta=25°C**

|                          |               |                              | min   | typ           | max  | unit    |
|--------------------------|---------------|------------------------------|-------|---------------|------|---------|
| Collector Cutoff Current | $I_{CBO}$     | $V_{CB}=(-)50V, I_E=0$       |       |               | (-)1 | $\mu A$ |
| Emitter Cutoff Current   | $I_{EBO}$     | $V_{EB}=(-)4V, I_C=0$        |       |               | (-)1 | $\mu A$ |
| DC Current Gain          | $h_{FE}(1)$   | $V_{CE}=(-)2V, I_C=(-)50mA$  | 60*   |               | 320* |         |
|                          | $h_{FE}(2)$   | $V_{CE}=(-)2V, I_C=(-)1A$    | 30    |               |      |         |
| Gain-Bandwidth Product   | $f_T$         | $V_{CE}=(-)10V, I_C=(-)50mA$ |       | 150           |      | MHz     |
| Output Capacitance       | $c_{ob}$      | $V_{CE}=(-)10V, f=1MHz$      |       | (20)          |      | pF      |
|                          |               |                              |       | 12            |      | pF      |
| C-E Saturation Voltage   | $V_{CE(sat)}$ | $I_C=(-)500mA, I_B=(-)50mA$  |       | (-0.2)(-0.7)  |      | V       |
|                          |               |                              |       | 0.15          | 0.5  | V       |
| B-E Saturation Voltage   | $V_{BE(sat)}$ | $I_C=(-)500mA, I_B=(-)50mA$  |       | (-)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    | $V_{(BR)EBO}$ | $I_E=(-)10\mu A, I_C=0$      | (-)5  |               |      | V       |

\* The 2SB764/2SD863 are classified by 50mA  $h_{FE}$  as follows.

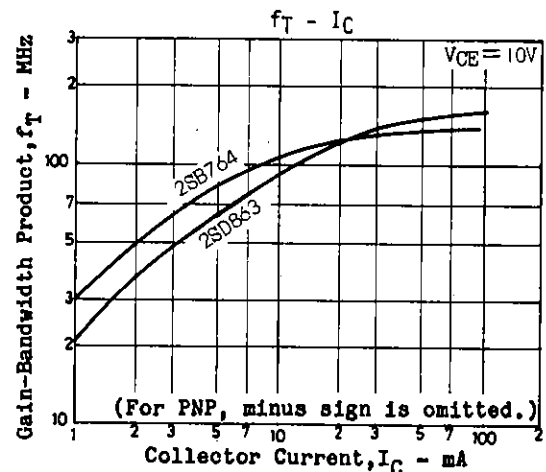
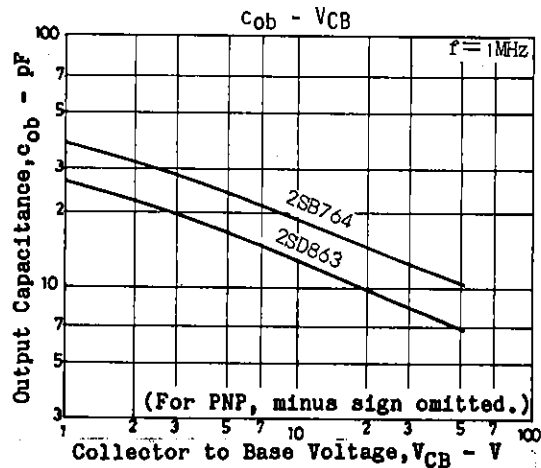
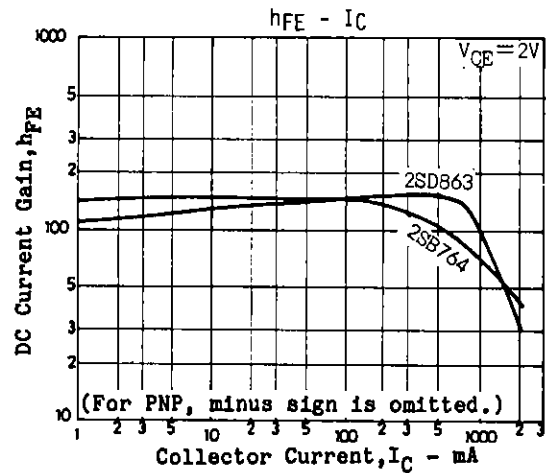
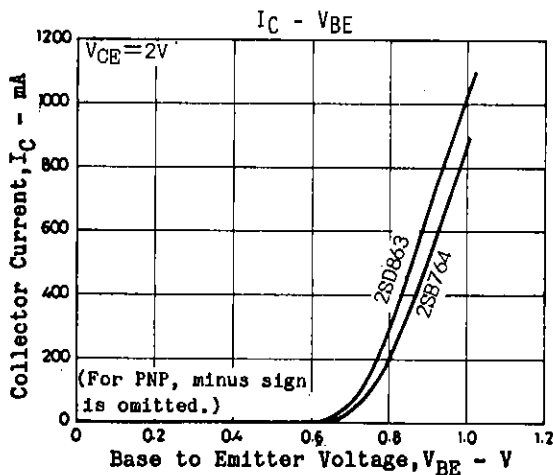
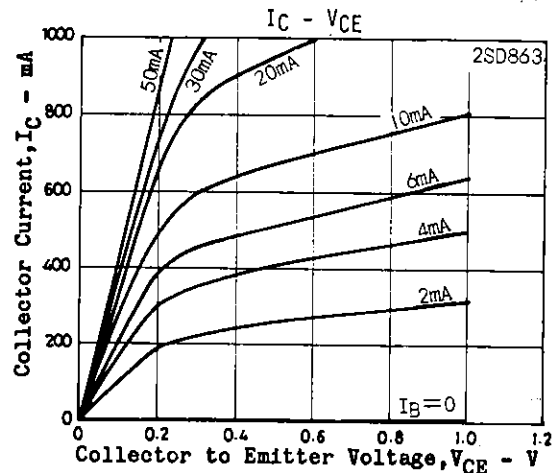
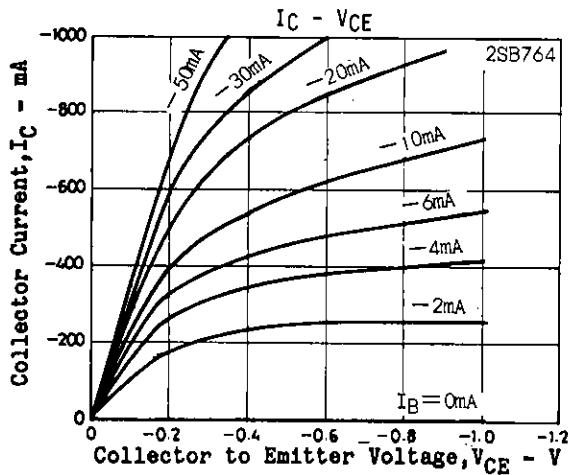
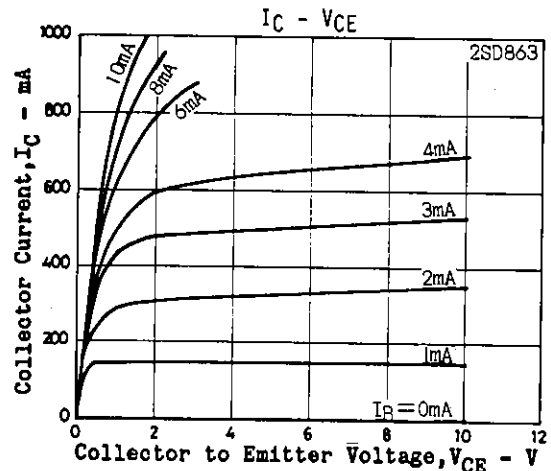
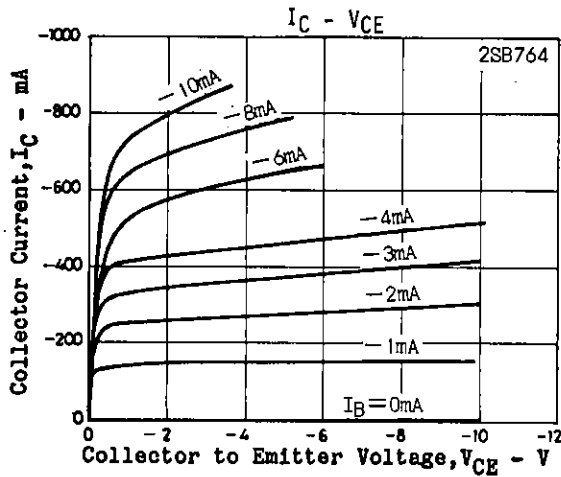
|    |   |     |     |   |     |     |   |     |
|----|---|-----|-----|---|-----|-----|---|-----|
| 60 | D | 120 | 100 | E | 200 | 160 | F | 320 |
|----|---|-----|-----|---|-----|-----|---|-----|

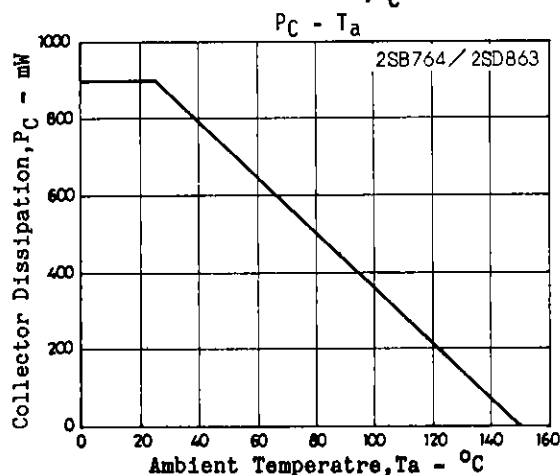
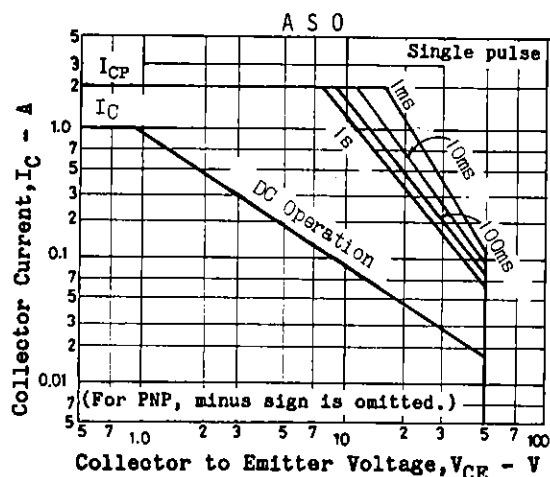
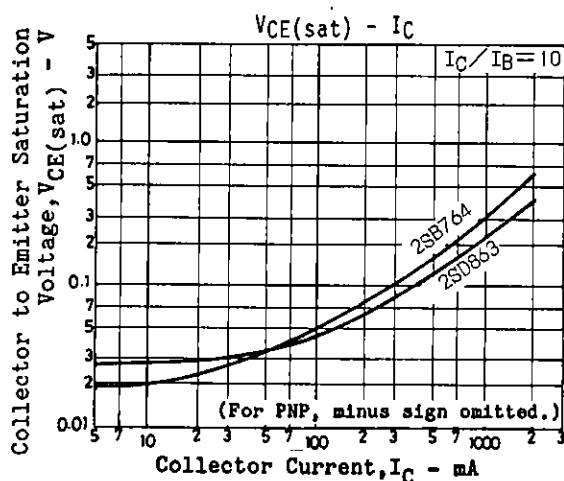
**Package Dimensions 2006A**  
(unit: mm)



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