



# FUKUCOM COMPANY LTD.

福 靈 有 限 公 司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,  
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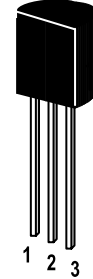
## ST 2SA683 / 2SA684

### PNP Silicon Epitaxial Planar Transistor

for low frequency power amplification and driver amplification

The transistor is subdivided into three group, Q,  
R and S according to its DC current gain.

On special request, these transistors can be  
manufactured in different pin configurations.



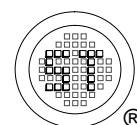
1. Emitter 2. Collector 3. Base  
TO-92 Plastic Package  
Weight approx. 0.19g

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

| Parameter                 | Symbol     | Value         | Unit             |
|---------------------------|------------|---------------|------------------|
| Collector Base Voltage    | $-V_{CBO}$ | 30            | V                |
| Collector Emitter Voltage | $-V_{CEO}$ | 25            | V                |
| Emitter Base Voltage      | $-V_{EBO}$ | 5             | V                |
| Collector Current         | $-I_C$     | 1             | A                |
| Peak Collector Current    | $-I_P$     | 1.5           | A                |
| Power Dissipation         | $P_{tot}$  | 1             | W                |
| Junction Temperature      | $T_j$      | 150           | $^\circ\text{C}$ |
| Storage Temperature Range | $T_S$      | - 55 to + 150 | $^\circ\text{C}$ |

### Characteristics at $T_{amb} = 25^\circ\text{C}$

| Parameter  | Symbol                            | Min.     | Typ. | Max. | Unit          |   |
|--|-----------------------------------|----------|------|------|---------------|---|
| DC Current Gain<br>at $-V_{CE} = 10\text{ V}$ , $-I_C = 500\text{ mA}$                           | Current Gain Group<br>Q<br>R<br>S | $h_{FE}$ | 85   | -    | 170           | - |
|  |                                   | $h_{FE}$ | 120  | -    | 240           | - |
|  |                                   | $h_{FE}$ | 170  | -    | 340           | - |
| at $-V_{CE} = 5\text{ V}$ , $-I_C = 1\text{ A}$  |                                   | $h_{FE}$ | 50   | -    | -             | - |
| Collector Cutoff Current<br>at $-V_{CB} = 20\text{ V}$   | $-I_{CBO}$                        | -        | -    | 0.1  | $\mu\text{A}$ |   |
| Collector Base Breakdown Voltage<br>at $-I_C = 10\text{ }\mu\text{A}$                            | $-V_{(BR)CBO}$                    | 30       | -    | -    | V             |   |
| Collector Emitter Breakdown Voltage<br>at $-I_C = 2\text{ mA}$                                   | $-V_{(BR)CEO}$                    | 25       | -    | -    | V             |   |
| Emitter Base Breakdown Voltage<br>at $-I_C = 10\text{ }\mu\text{A}$                              | $-V_{(BR)EBO}$                    | 5        | -    | -    | V             |   |
| Collector Emitter Saturation Voltage<br>at $-I_C = 500\text{ mA}$ , $-I_B = 50\text{ mA}$        | $-V_{CEsat}$                      | -        | -    | 0.4  | V             |   |
| Base Emitter Saturation Voltage<br>at $-I_C = 500\text{ mA}$ , $-I_B = 50\text{ mA}$             | $-V_{BEsat}$                      | -        | -    | 1.2  | V             |   |
| Transition Frequency<br>at $-V_{CB} = 10\text{ V}$ , $I_E = 50\text{ mA}$ , $f = 200\text{ MHz}$ | $f_T$                             | -        | 200  | -    | MHz           |   |
| Collector Output Capacitance<br>at $-V_{CB} = 10\text{ V}$ , $I_E = 0$ , $f = 1\text{ MHz}$      | $C_{ob}$                          | -        | -    | 30   | pF            |   |



Dated : 09/06/2006



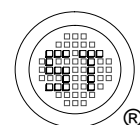
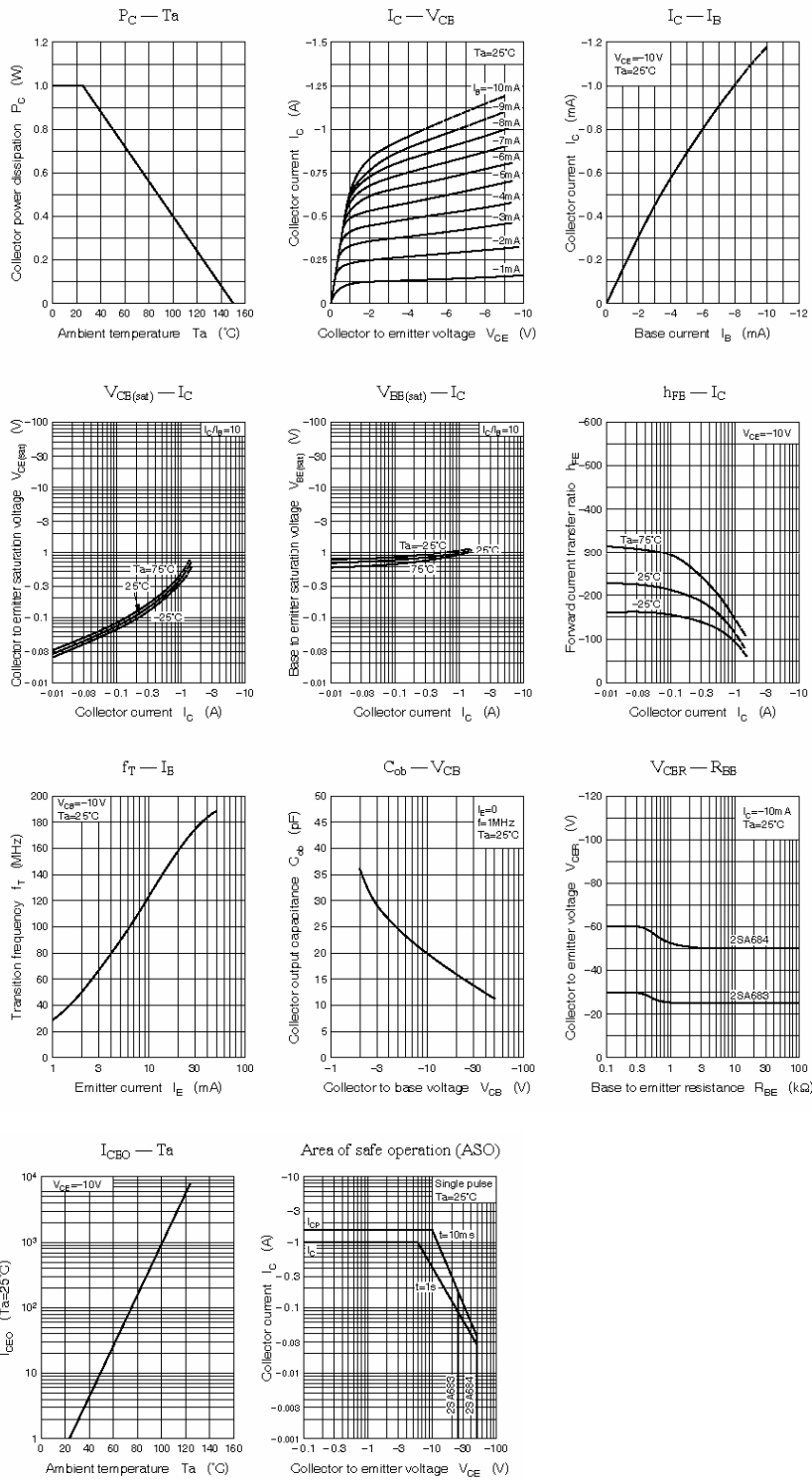
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