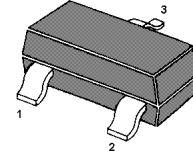


## PNP Silicon Epitaxial Planar Transistors

for audio power amplifier applications.



1.Base 2.Emitter 3.Collector  
SOT-23 Plastic Package

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

| Parameter                 | Symbol     | Value         | Unit             |
|---------------------------|------------|---------------|------------------|
| Collector Base Voltage    | $-V_{CBO}$ | 35            | V                |
| Collector Emitter Voltage | $-V_{CEO}$ | 30            | V                |
| Emitter Base Voltage      | $-V_{EBO}$ | 5             | V                |
| Collector Current         | $-I_C$     | 800           | mA               |
| Power Dissipation         | $P_{tot}$  | 200           | mW               |
| Junction Temperature      | $T_j$      | 150           | $^\circ\text{C}$ |
| Storage Temperature Range | $T_{stg}$  | - 55 to + 150 | $^\circ\text{C}$ |

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

| Parameter   | Symbol               | Min.     | Typ. | Max. | Unit |   |
|---|----------------------|----------|------|------|------|---|
| DC Current Gain<br>at $-V_{CE} = 1\text{ V}$ , $-I_C = 100\text{ mA}$                     | Current Gain Group O | $h_{FE}$ | 100  | -    | 200  | - |
|   | Y                    | $h_{FE}$ | 160  | -    | 320  | - |
| Collector Base Cutoff Current<br>at $-V_{CB} = 35\text{ V}$                               | $-I_{CBO}$           | -        | -    | 100  | nA   |   |
| Emitter Base Cutoff Current<br>at $-V_{EB} = 5\text{ V}$                                  | $-I_{EBO}$           | -        | -    | 100  | nA   |   |
| Collector Base Breakdown Voltage<br>at $-I_C = 500\text{ }\mu\text{A}$                    | $-V_{(BR)CBO}$       | 35       | -    | -    | V    |   |
| Collector Emitter Breakdown Voltage<br>at $-I_C = 1\text{ mA}$                            | $-V_{(BR)CEO}$       | 30       | -    | -    | V    |   |
| Emitter Base Breakdown Voltage<br>at $-I_E = 50\text{ }\mu\text{A}$                       | $-V_{(BR)EBO}$       | 5        | -    | -    | V    |   |
| Collector Emitter Saturation Voltage<br>at $-I_C = 500\text{ mA}$ , $-I_B = 20\text{ mA}$ | $-V_{CE(sat)}$       | -        | -    | 0.5  | V    |   |
| Transition Frequency<br>at $-V_{CE} = 5\text{ V}$ , $-I_E = 10\text{ mA}$                 | $f_T$                | -        | 120  | -    | MHz  |   |
| Collector Output Capacitance<br>at $-V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$           | $C_{ob}$             | -        | 19   | -    | pF   |   |



**CHINA BASE**  
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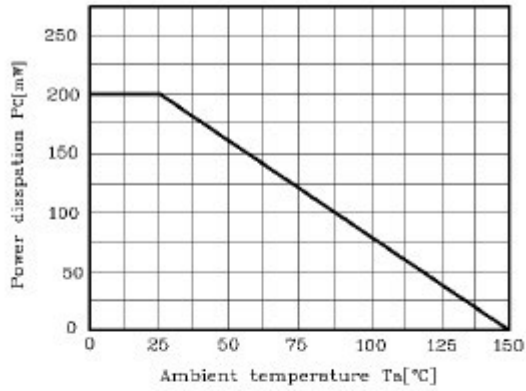
**SOT-23**



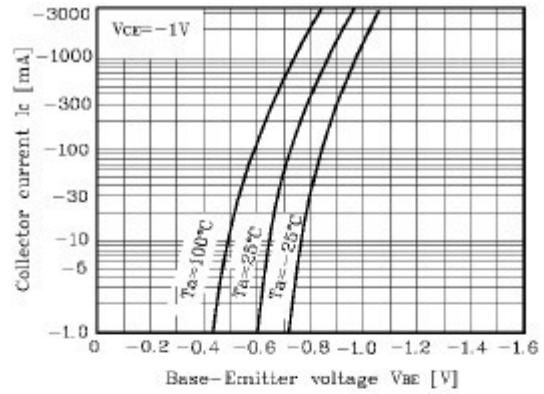
**MMBTSA1981**

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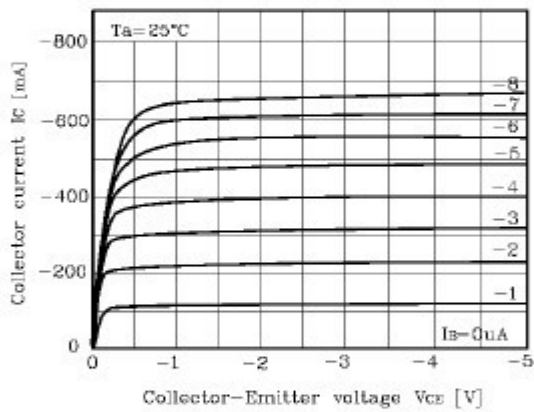
**Pc-Ta**



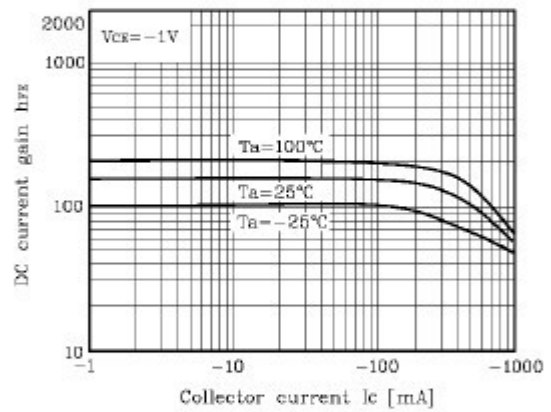
**Ic - V<sub>BE</sub>**



**Ic - V<sub>CE</sub>**



**h<sub>FE</sub> - Ic**



**V<sub>CE(SAT)</sub> - Ic**

