

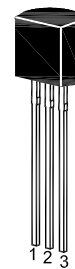
# 2SC5344

## NPN Silicon Epitaxial Planar Transistor

Audio power amplifier applications.

The transistor is subdivided into two groups O and Y according to its DC current gain.

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



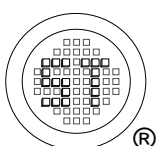
1. Emitter 2. Collector 3. Base  
TO-92 Plastic Package

### 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               |
| Collector Dissipation     | $P_{tot}$ | 625           | mW               |
| Junction Temperature      | $T_j$     | 150           | $^\circ\text{C}$ |
| Storage Temperature Range | $T_{stg}$ | - 55 to + 150 | $^\circ\text{C}$ |

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

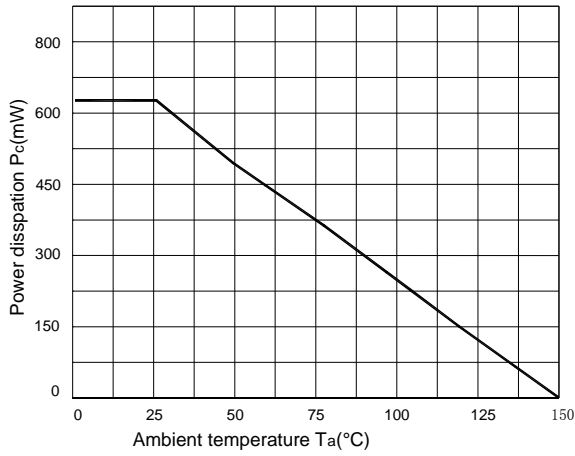
| Parameter  | Symbol        | Min. | Typ. | Max. | Unit          |
|--|---------------|------|------|------|---------------|
| DC Current Gain<br>at $V_{CE} = 1\text{ V}$ , $I_C = 100\text{ mA}$<br>Current Gain Group O<br>Y | $h_{FE}$      | 100  | -    | 200  | -             |
|  | $h_{FE}$      | 160  | -    | 320  | -             |
| Collector Base Cutoff Current<br>at $V_{CB} = 35\text{ V}$                                       | $I_{CBO}$     | -    | -    | 0.1  | $\mu\text{A}$ |
| Emitter Base Cutoff Current<br>at $V_{EB} = 5\text{ V}$  | $I_{EBO}$     | -    | -    | 0.1  | $\mu\text{A}$ |
| Collector Base Breakdown Voltage<br>at $I_C = 100\text{ }\mu\text{A}$                            | $V_{CBO}$     | 35   | -    | -    | V             |
| Collector Emitter Breakdown Voltage<br>at $I_C = 10\text{ mA}$                                   | $V_{CEO}$     | 30   | -    | -    | V             |
| Emitter Base Breakdown Voltage<br>at $I_E = 10\text{ }\mu\text{A}$                               | $V_{EBO}$     | 5    | -    | -    | V             |
| Collector-Emitter Saturation Voltage<br>at $I_C = 500\text{ mA}$ , $I_B = 50\text{ mA}$          | $V_{CE(sat)}$ | -    | -    | 0.5  | V             |
| Transition Frequency<br>at $V_{CE} = 5\text{ V}$ , $I_C = 10\text{ mA}$                          | $f_T$         | -    | 120  | -    | MHz           |
| Collector Output Capacitance<br>at $V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$                   | $C_{ob}$      | -    | 13   | -    | pF            |



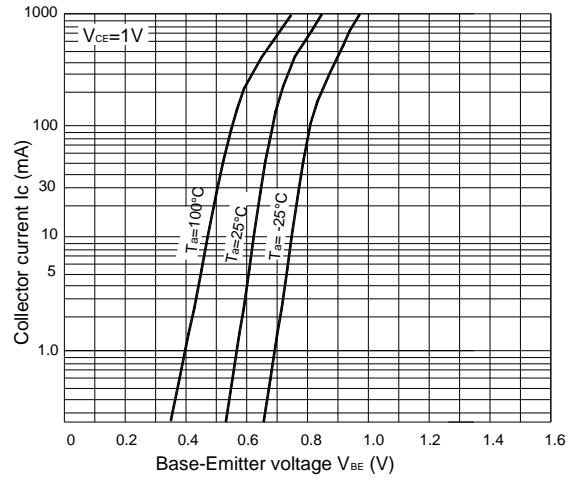
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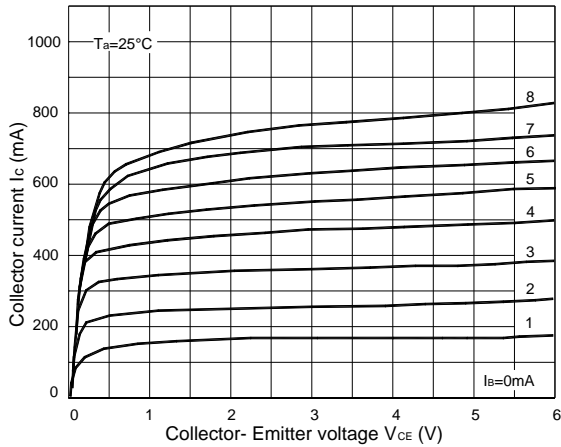
**Fig. 1  $P_c - T_a$**



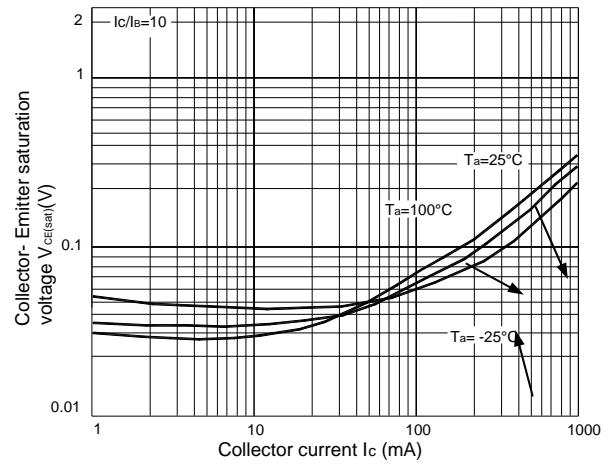
**Fig. 2  $I_c - V_{BE}$**



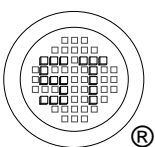
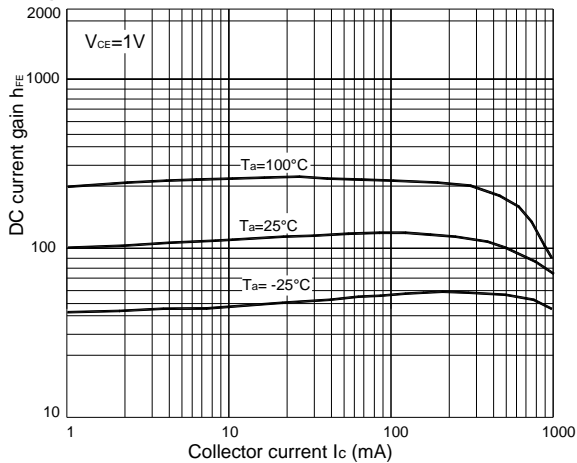
**Fig. 3  $I_c - V_{CE}$**



**Fig. 4  $V_{CE(sat)} - I_c$**



**Fig.5  $h_{FE} - I_c$**



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