


**Shantou Huashan Electronic Devices Co.,Ltd.**

# HC8550

## PNP EPITAXIAL SILICON TRANSISTOR

2W OUTPUT AMPLIFIER PORTABLE RADIO IN CLASS

B PUSH-PULL OPERATION.

## ABSOLUTE MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ )

 $T_{\text{stg}}$ —Storage Temperature.....  $-55\sim 150^{\circ}\text{C}$ 
 $T_j$ —Junction Temperature.....  $150^{\circ}\text{C}$ 
 $P_C$ —Collector Dissipation..... 1W

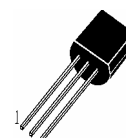
 $V_{\text{CBO}}$ —Collector-Base Voltage..... -40V

 $V_{\text{CEO}}$ —Collector-Emitter Voltage..... -25V

 $V_{\text{EBO}}$ —Emitter-Base Voltage..... -6V

 $I_C$ —Collector Current..... -1.5A

TO-92



1—Emitter, E  
2—Collector, C  
3—Base, B

## ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}\text{C}$ )

| Symbol               | Characteristics                       | Min      | Typ | Max  | Unit          | Test Conditions                                                                                                        |
|----------------------|---------------------------------------|----------|-----|------|---------------|------------------------------------------------------------------------------------------------------------------------|
| $I_{\text{CBO}}$     | Collector Cut-off Current             |          |     | -0.1 | $\mu\text{A}$ | $V_{\text{CB}}=-35\text{V}$ , $I_{\text{E}}=0$                                                                         |
| $I_{\text{EBO}}$     | Emitter Cut-off Current               |          |     | -0.1 | $\mu\text{A}$ | $V_{\text{EB}}=-6\text{V}$ , $I_{\text{C}}=0$                                                                          |
| $h_{\text{FE}}$      | DC Current Gain                       | 85<br>40 |     | 500  |               | $V_{\text{CE}}=-1\text{V}$ , $I_{\text{C}}=-100\text{mA}$<br>$V_{\text{CE}}=-1\text{V}$ , $I_{\text{C}}=-800\text{mA}$ |
| $V_{\text{BE}}$      | Base- Emitter Voltage                 |          |     | -1   | V             | $V_{\text{CE}}=-1\text{V}$ , $I_{\text{C}}=-10\text{mA}$                                                               |
| $V_{\text{CE(sat)}}$ | Collector- Emitter Saturation Voltage |          |     | -0.5 | V             | $I_{\text{C}}=-800\text{mA}$ , $I_{\text{B}}=-80\text{mA}$                                                             |
| $V_{\text{BE(sat)}}$ | Base- Emitter Saturation Voltage      |          |     | -1.2 | V             | $I_{\text{C}}=-800\text{mA}$ , $I_{\text{B}}=-80\text{mA}$                                                             |
| $BV_{\text{CBO}}$    | Collector-Base Breakdown Voltage      | -40      |     |      | V             | $I_{\text{C}}=-100\mu\text{A}$ , $I_{\text{E}}=0$                                                                      |
| $BV_{\text{CEO}}$    | Collector-Emitter Breakdown Voltage   | -25      |     |      | V             | $I_{\text{C}}=-2\text{mA}$ , $I_{\text{B}}=0$                                                                          |
| $BV_{\text{EBO}}$    | Emitter- Base Breakdown Voltage       | -6       |     |      | V             | $I_{\text{E}}=-100\mu\text{A}$ , $I_{\text{C}}=0$                                                                      |
| $f_{\text{T}}$       | Current Gain-Bandwidth Product        | 100      |     |      | MHz           | $V_{\text{CE}}=-10\text{V}$ , $I_{\text{C}}=-50\text{mA}$                                                              |

## $h_{\text{FE}}$ Classification

| B      | C       | D       | E       |
|--------|---------|---------|---------|
| 85—160 | 120—200 | 160—300 | 270—500 |



## Typical Characteristics

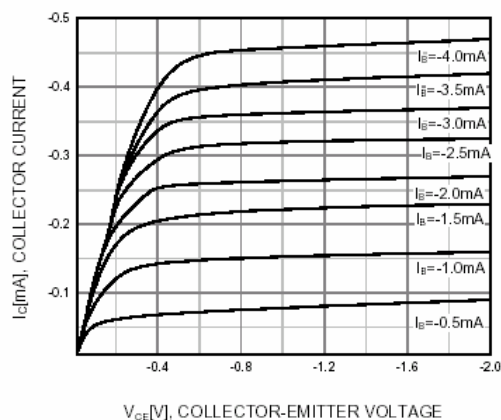


Figure 1. Static Characteristic

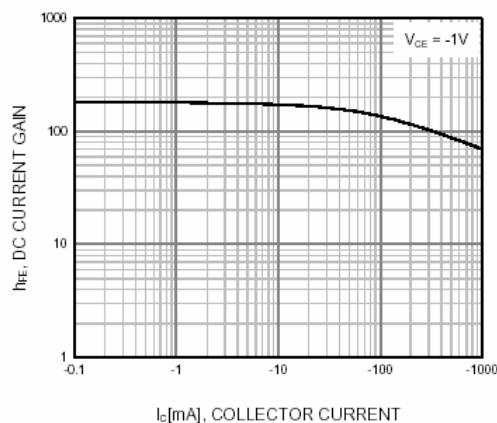


Figure 2. DC current Gain

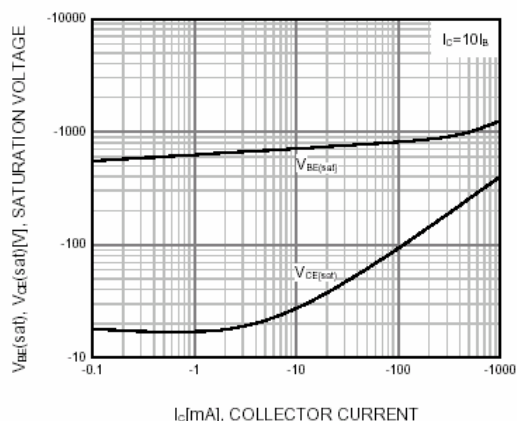


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

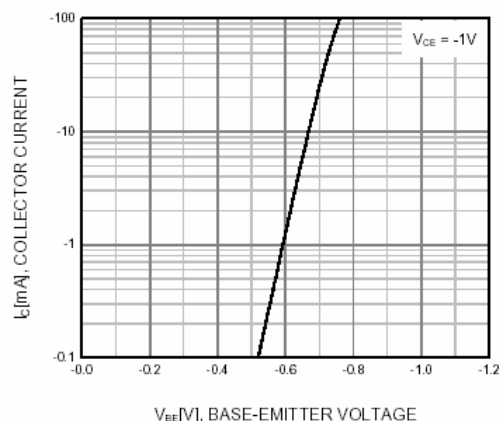


Figure 4. Base-Emitter On Voltage

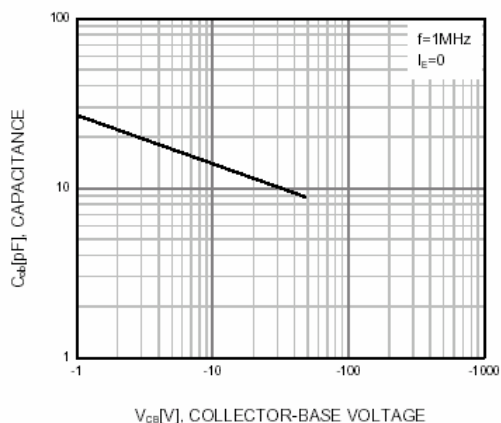


Figure 5. Collector Output Capacitance

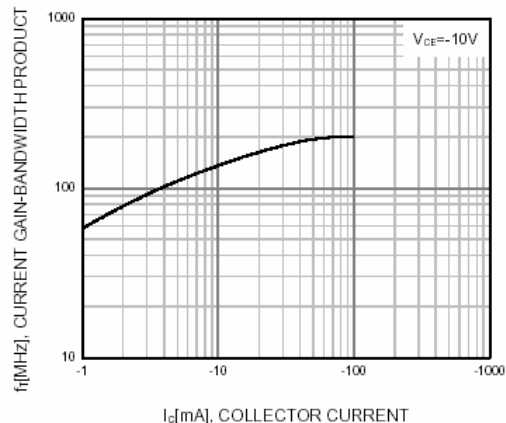


Figure 6. Current Gain Bandwidth Product