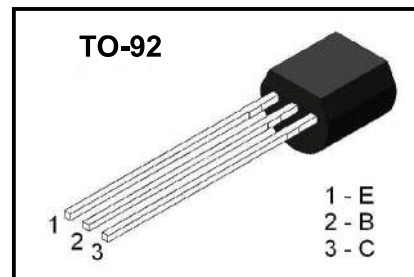


**NPN Plastic-Encapsulate**

**2W Output Amplifier of Portable Radios  
in Class B Push-pull Operation.**

**Features**

- Complimentary to SS8550
- Collector Current:  $I_C=1.5A$
- Collector Power Dissipation:  $P_C=2W$  ( $T_C=25^{\circ}C$ )



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

| Parameter                   | Symbol     | Value    | Unit        |
|-----------------------------|------------|----------|-------------|
| Collector-Base Voltage      | $BV_{CBO}$ | 40       | V           |
| Collector-Emitter Voltage   | $BV_{CEO}$ | 25       | V           |
| Emitter-Base Voltage        | $BV_{EBO}$ | 6        | V           |
| Collector Current           | $I_C$      | 1.5      | A           |
| Collector Power Dissipation | $P_C$      | 1        | W           |
| Junction Temperature        | $T_j$      | 150      | $^{\circ}C$ |
| Storage Temperature         | $T_{stg}$  | -55~+150 | $^{\circ}C$ |

**Electrical Characteristics ( $T_a=25^{\circ}C$ )**

| Parameter                            | Symbol        | Conditions                 | Value |     |     | Unit    |
|--------------------------------------|---------------|----------------------------|-------|-----|-----|---------|
|                                      |               |                            | Min   | Typ | Max |         |
| Collector-base breakdown voltage     | $BV_{CBO}$    | $I_C = 100\mu A, I_E = 0$  | 40    |     |     | V       |
| Collector-emitter breakdown voltage  | $BV_{CEO}$    | $I_C = 1mA, I_B = 0$       | 25    |     |     | V       |
| Emitter-base breakdown voltage       | $BV_{EBO}$    | $I_E = 100\mu A, I_C = 0$  | 6     |     |     | V       |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = 35V, I_E = 0$    |       |     | 0.1 | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = 6V, I_C = 0$     |       |     | 0.1 | $\mu A$ |
| DC current gain                      | $h_{FE1}$     | $V_{CE} = 1V, I_C = 5m$    | 45    |     |     |         |
|                                      | $h_{FE2}$     | $V_{CE} = 1V, I_C = 100mA$ | 85    |     | 300 |         |
|                                      | $h_{FE3}$     | $V_{CE} = 1V, I_C = 800mA$ | 40    |     |     |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 500mA, I_B = 50mA$  |       |     | 0.6 | V       |
| base -emitter saturation voltage     | $V_{BE(sat)}$ | $I_C = 500mA, I_B = 50mA$  |       |     | 1.2 | V       |
| Transition frequency                 | $f_T$         | $V_{CE} = 6V, I_B = 20mA$  | 100   |     |     | MHz     |

**$h_{FE2}$  Classification**

| Classification | B      | C       | D       |
|----------------|--------|---------|---------|
| Range          | 85-160 | 120-200 | 160-320 |

Typical Characteristics

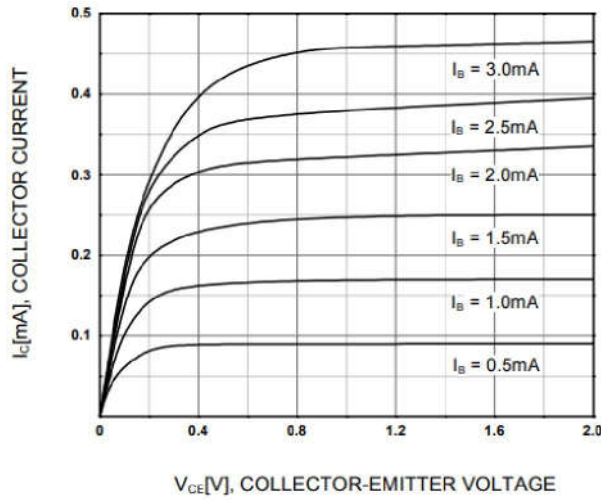


Figure 1. Static Characteristic

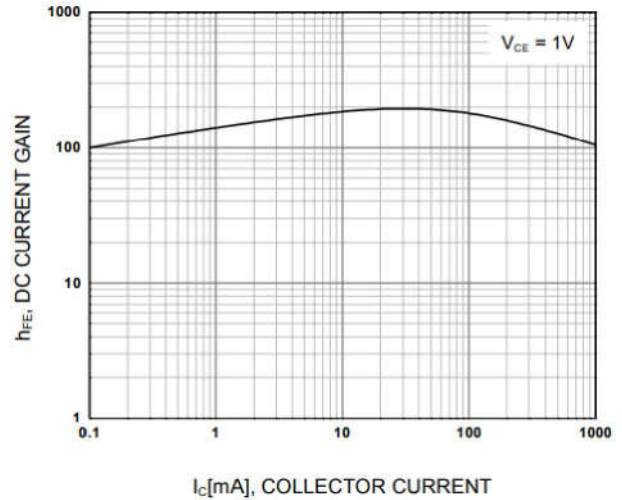


Figure 2. DC current Gain

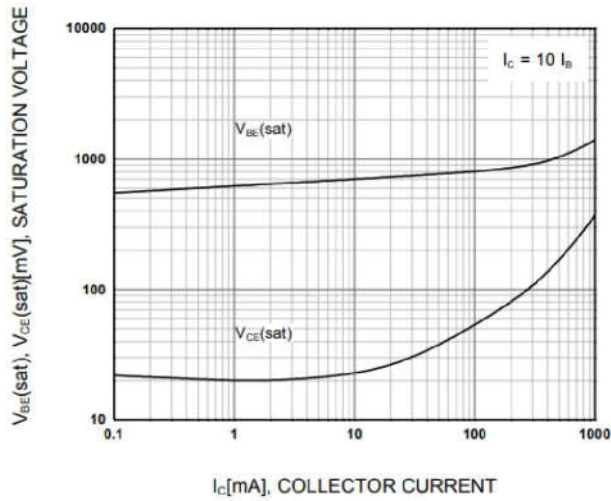


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

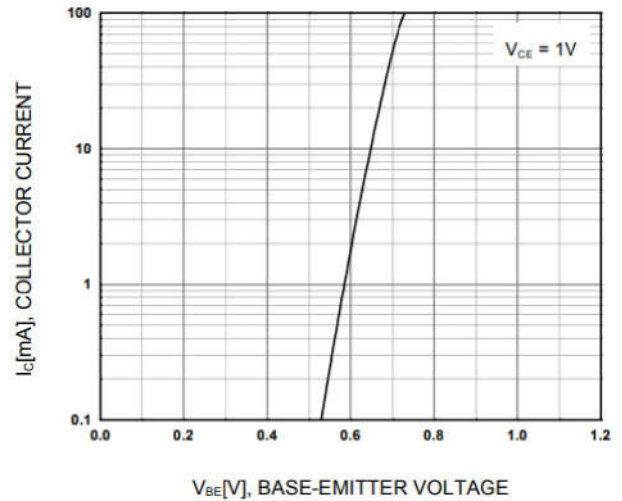


Figure 4. Base-Emitter On Voltage

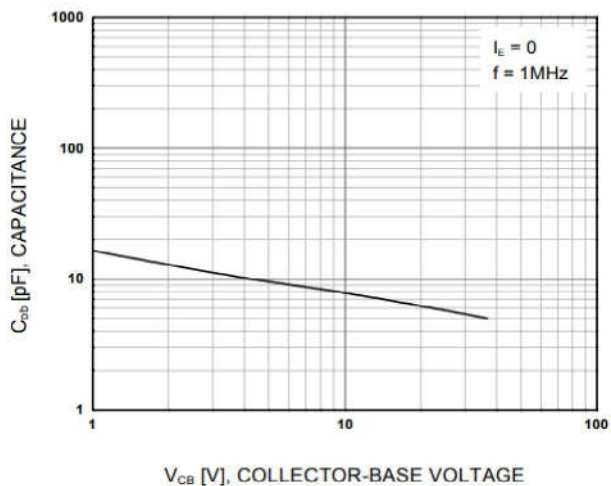


Figure 5. Collector Output Capacitance

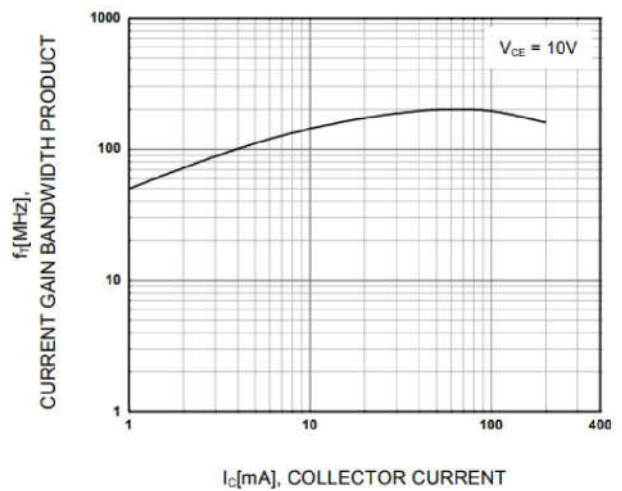


Figure 6. Current Gain Bandwidth Product

Package Dimensions

TO-92

| Symbol | Millimeter |       | Inches |       |
|--------|------------|-------|--------|-------|
|        | Min.       | Max.  | Min.   | Max.  |
| A      | 3.30       | 3.70  | 0.130  | 0.146 |
| A1     | 2.30       | 2.70  | 0.091  | 0.106 |
| b      | 0.40       | 0.50  | 0.016  | 0.020 |
| b1     | 0.50       | 0.70  | 0.020  | 0.028 |
| c      | 0.35       | 0.45  | 0.014  | 0.018 |
| D      | 4.45       | 4.70  | 0.175  | 0.185 |
| E      | 4.40       | 4.65  | 0.173  | 0.183 |
| e      | 1.17       | 1.37  | 0.046  | 0.054 |
| e1     | 2.34       | 2.64  | 0.092  | 0.104 |
| L      | 13.50      | 14.50 | 0.531  | 0.571 |
| L1     | 1.80       | 2.20  | 0.071  | 0.087 |

Order Information

| Part Number | Package | Marking     | Packing | Packing Quantity |
|-------------|---------|-------------|---------|------------------|
| SS8050      | TO-92   | SS8050 XXXX | Bag     | 1000PCS          |