

### / Descriptions

TO-92          PNP          Silicon PNP transistor in a TO-92 Plastic Package.

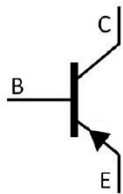
### / Features

$P_C$ ,  $I_C$  , 3DA8050  
High  $P_C$  and  $I_C$ , complementary pair with 3DA8050.

### / Applications

2W  
2W output amplifier of portable radios in class B push-pull operation.

### / Equivalent Circuit



### / Pinning



PIN1   Base          PIN 2   Collector          PIN 3   Emitter

### / $h_{FE}$ Classifications & Marking

| $h_{FE}$ Classifications<br>Symbol | B      | C       | D       |
|------------------------------------|--------|---------|---------|
| $h_{FE}$ Range                     | 85~160 | 120~200 | 160~300 |

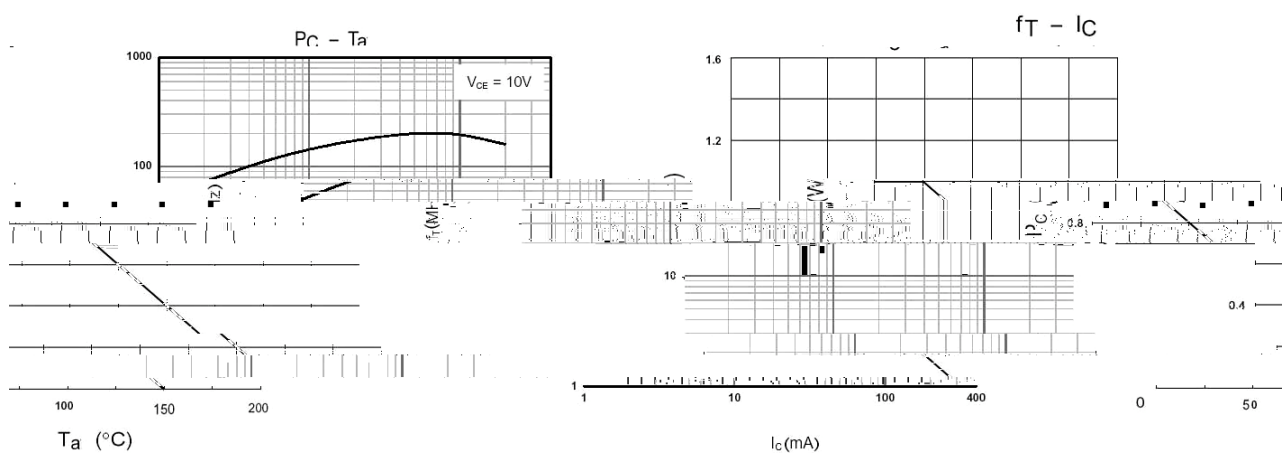
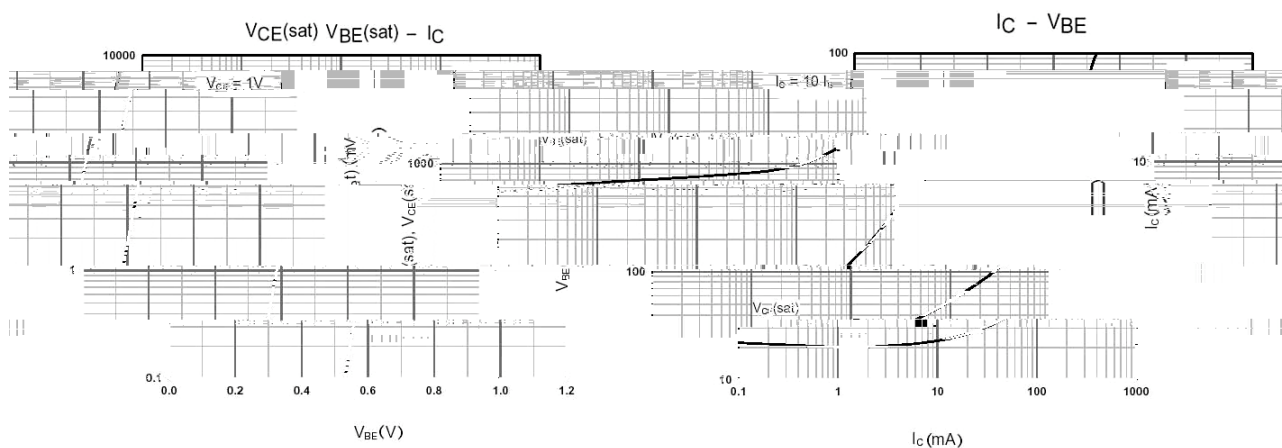
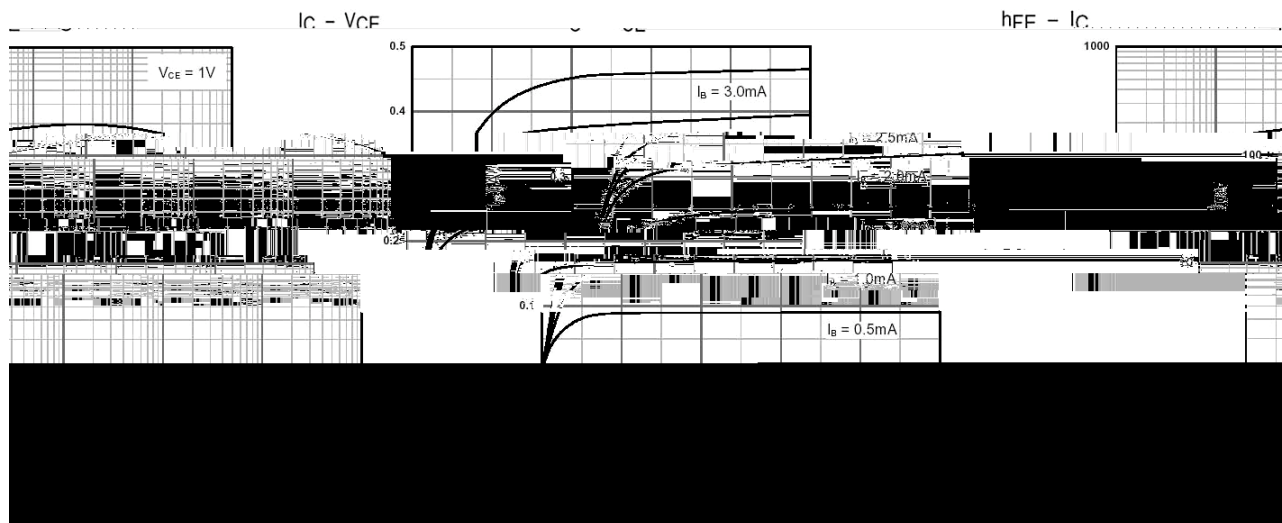
**/ Absolute Maximum Ratings(Ta=25 )**

| Parameter                      | Symbol    | Rating  | Unit |
|--------------------------------|-----------|---------|------|
| Collector to Base Voltage      | $V_{CBO}$ | -40     | V    |
| Collector to Emitter Voltage   | $V_{CEO}$ | -25     | V    |
| Emitter to Base Voltage        | $V_{EBO}$ | -6.0    | V    |
| Collector Current - Continuous | $I_C$     | -1.5    | A    |
| Base Current - Continuous      | $I_B$     | -0.5    | A    |
| Collector Power Dissipation    | $P_C$     | 1.0     | W    |
| Junction Temperature           | $T_j$     | 150     | °C   |
| Storage Temperature Range      | $T_{stg}$ | -55~150 | °C   |

**/ Electrical Characteristics(Ta=25 )**

| Parameter                               | Symbol        | Test Conditions                  | Min  | Typ   | Max  | Unit |
|-----------------------------------------|---------------|----------------------------------|------|-------|------|------|
| Collector to Base Breakdown Voltage     | $V_{CBO}$     | $I_C=-0.1mA$ $I_E=0$             | -40  |       |      | V    |
| Collector to Emitter Breakdown Voltage  | $V_{CEO}$     | $I_C=-2.0mA$ $I_B=0$             | -25  |       |      | V    |
| Emitter to Base Breakdown Voltage       | $V_{EBO}$     | $I_E=-0.1mA$ $I_C=0$             | -6.0 |       |      | V    |
| Collector Cut-Off Current               | $I_{CBO}$     | $V_{CB}=-35V$ $I_E=0$            |      |       | -0.1 | μA   |
| Emitter Cut-Off Current                 | $I_{EBO}$     | $V_{EB}=-6.0V$ $I_C=0$           |      |       | -0.1 | μA   |
| DC Current Gain                         | $h_{FE(1)}$   | $V_{CE}=-1.0V$ $I_C=-100mA$      | 85   |       | 300  |      |
|                                         | $h_{FE(2)}$   | $V_{CE}=-1.0V$ $I_C=-800mA$      | 40   |       |      |      |
|                                         | $h_{FE(3)}$   | $V_{CE}=-1.0V$ $I_C=-5.0mA$      | 45   |       |      |      |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=-800mA$ $I_B=-80mA$         |      | -0.28 | -0.5 | V    |
| Base to Emitter Saturation Voltage      | $V_{BE(sat)}$ | $I_C=-800mA$ $I_B=-80mA$         |      | -0.98 | -1.2 | V    |
| Base to Emitter Voltage                 | $V_{BE}$      | $V_{CE}=-1.0V$ $I_C=-10mA$       |      | -0.66 | -1.0 | V    |
| Transition Frequency                    | $f_T$         | $V_{CE}=-10V$ $I_C=-50mA$        | 100  | 200   |      | MHz  |
| Collector Output Capacitance            | $C_{ob}$      | $V_{CB}=-10V$ $f=1.0MHz$ $I_E=0$ |      | 15    |      | pF   |

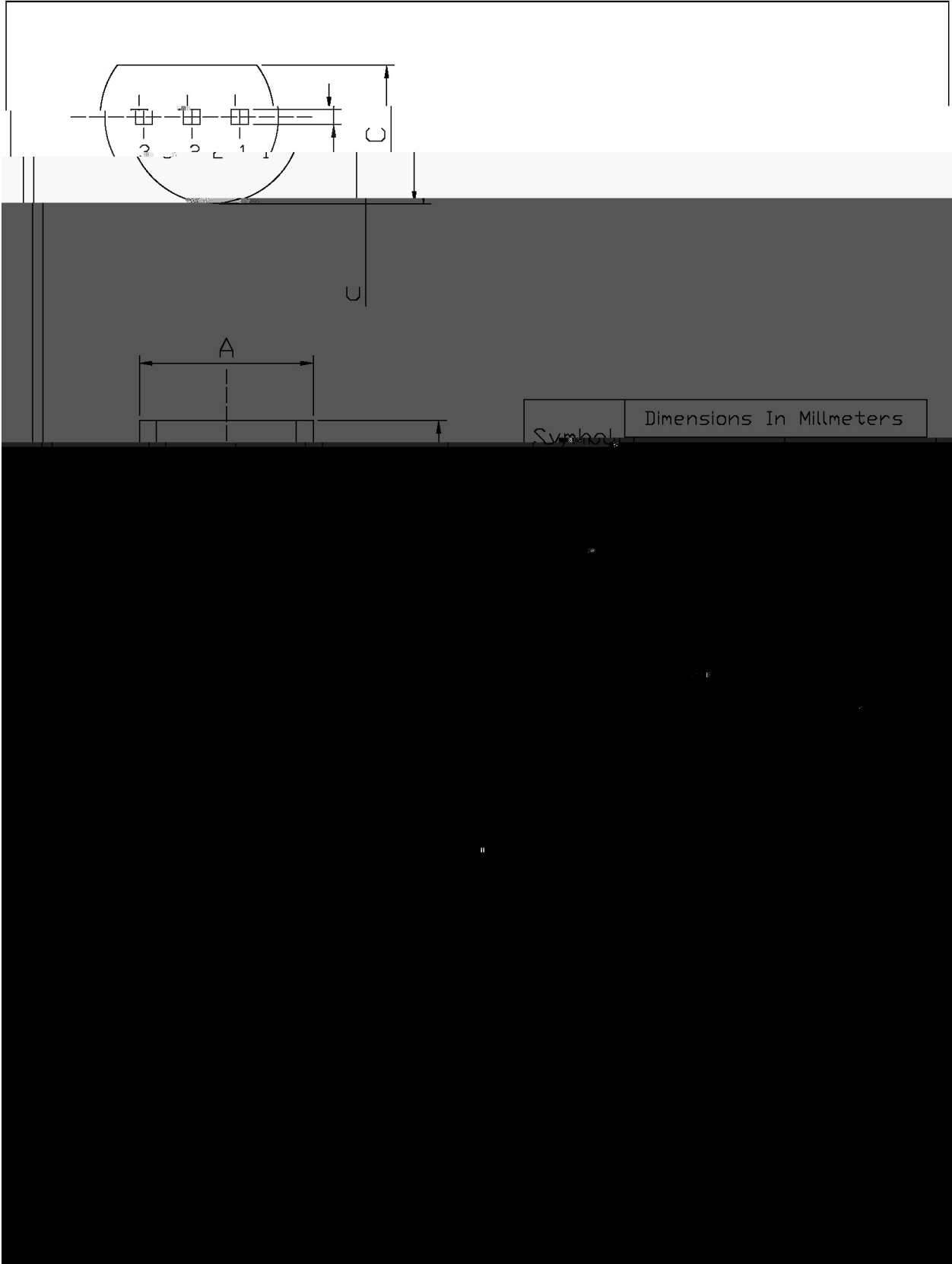
/ Electrical Characteristic Curve



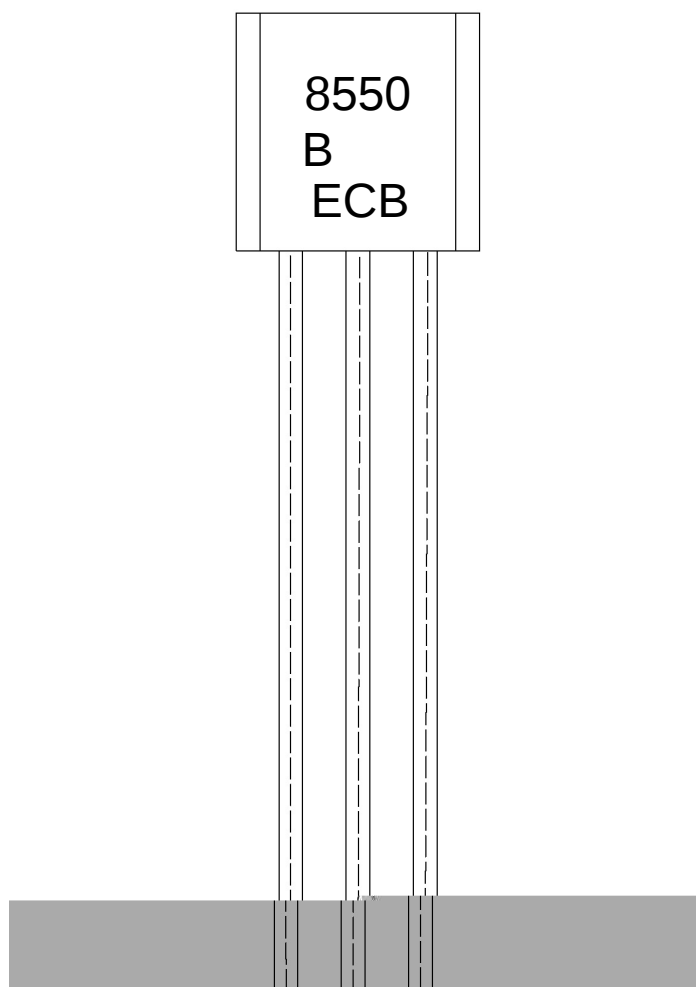
/ Package Dimensions

T0-92

Unit: mm



/ Marking Instructions



8550

B:  $h_{FE}$

\*\*\*\*

ECB:

Note:

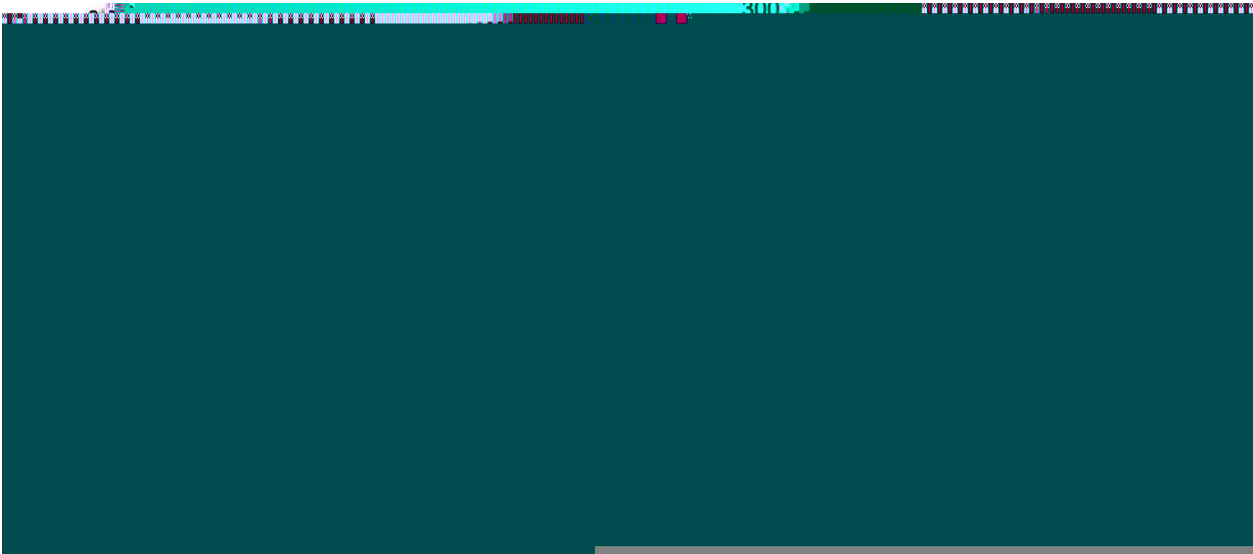
8550: Product Type.

B:  $h_{FE}$  Classifications Symbol.

\*\*\*\*: Lot No. Code, code change with Lot No.

ECB Pinning

(     ) / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- |   |       |     |           |                                         |                                      |
|---|-------|-----|-----------|-----------------------------------------|--------------------------------------|
| 1 | 25    | 150 | 60        | 90sec;                                  | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 255±5 |     | 5±0.5sec; | 2.Peak Temp.:255±5 , Duration:5±0.5sec. |                                      |
| 3 |       | 2   | 10        | /sec.                                   | 3. Cooling Speed: 2~10 /sec.         |

/ Resistance to Soldering Heat Test Conditions

|       |           |              |
|-------|-----------|--------------|
| 270±5 | 10±1 sec. | Temp.:270±5℃ |
|-------|-----------|--------------|