



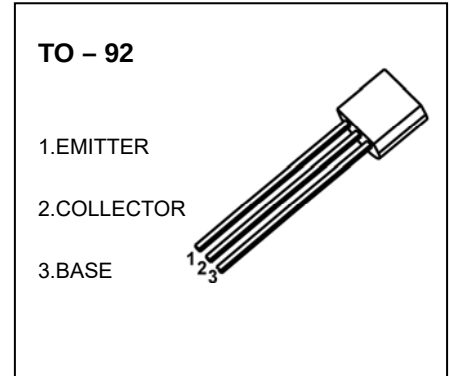
JIANGSU CHANGJING ELECTRONICS TECHNOLOGY CO., LTD.

## TO-92 Plastic-Encapsulate Transistors

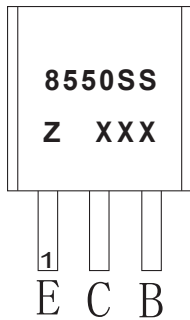
### 8550SS TRANSISTOR (PNP)

#### FEATURES

- General Purpose Switching and Amplification.

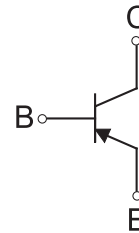


#### MARKING



8550SS=Device code  
Z=Rank of  $h_{FE}$   
XXX=Code  
GXX=Green molding compound device  
CXX=Normal molding compound device

#### Equivalent Circuit



#### ORDERING INFORMATION

| Part Number | Package | Packing Method | Pack Quantity |
|-------------|---------|----------------|---------------|
| 8550SS      | TO-92   | Bulk           | 1000pcs/Bag   |
| 8550SS-TA   | TO-92   | Tape           | 2000pcs/Box   |

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

| Symbol          | Parameter                                        | Value    | Unit                          |
|-----------------|--------------------------------------------------|----------|-------------------------------|
| $V_{CBO}$       | Collector-Base Voltage                           | -40      | V                             |
| $V_{CEO}$       | Collector-Emitter Voltage                        | -25      | V                             |
| $V_{EBO}$       | Emitter-Base Voltage                             | -5       | V                             |
| $I_C$           | Collector Current -Continuous                    | -1.5     | A                             |
| $P_C$           | Collector Power Dissipation                      | 1        | W                             |
| $R_{\theta JA}$ | Thermal Resistance From Junction To Ambient      | 125      | $^{\circ}\text{C} / \text{W}$ |
| $T_J, T_{stg}$  | Operation Junction and Storage Temperature Range | -55~+150 | $^{\circ}\text{C}$            |

## ELECTRICAL CHARACTERISTICS

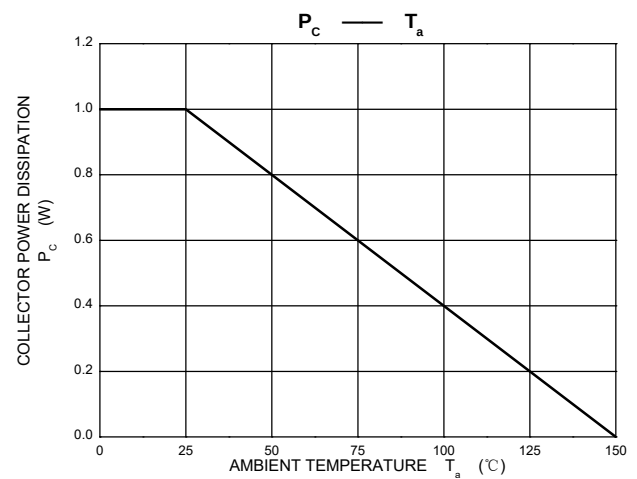
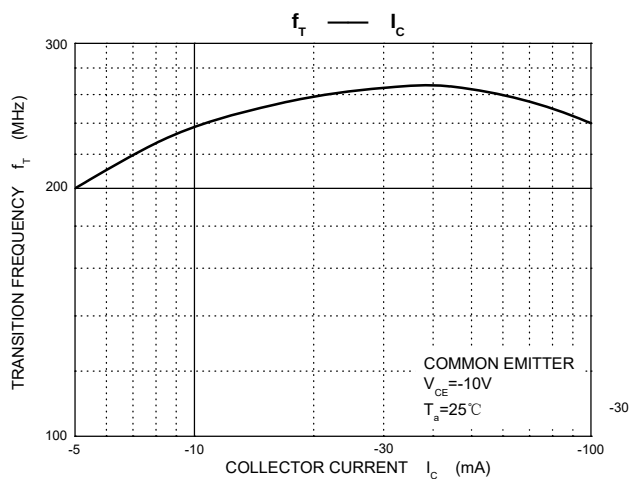
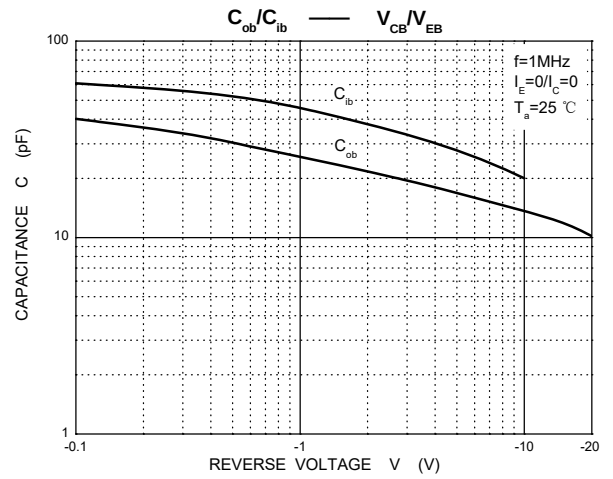
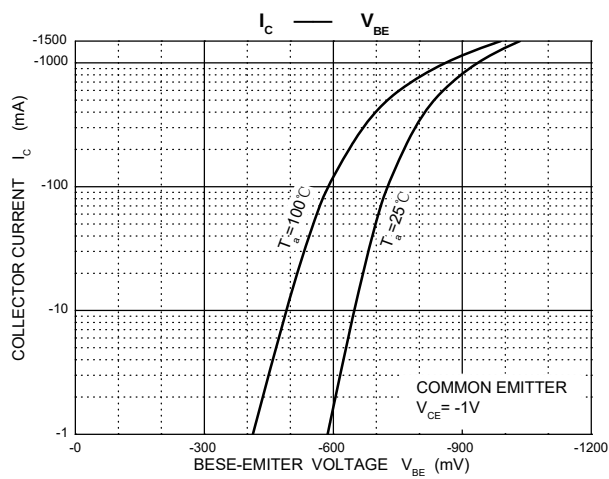
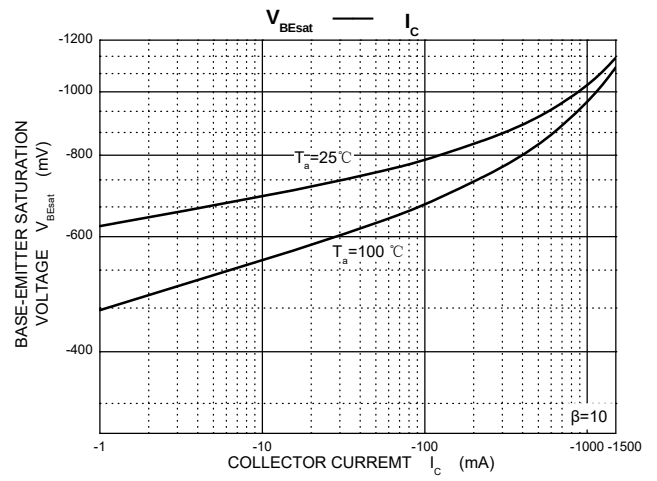
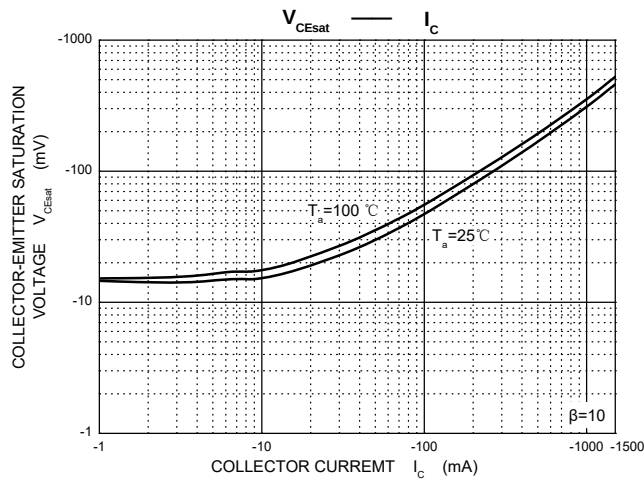
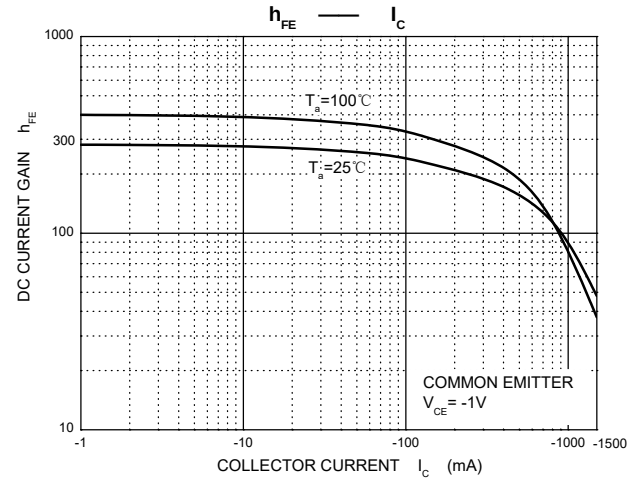
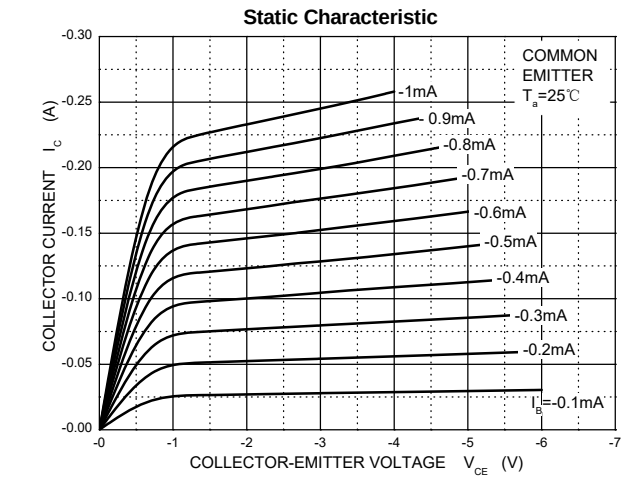
$T_a = 25^\circ\text{C}$  unless otherwise specified

| Parameter                            | Symbol        | Test conditions                                              | Min | Typ | Max  | Unit          |
|--------------------------------------|---------------|--------------------------------------------------------------|-----|-----|------|---------------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C = -0.1\text{mA}, I_E = 0$                               | -40 |     |      | V             |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C = -0.1\text{mA}, I_B = 0$                               | -25 |     |      | V             |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E = -0.1\text{mA}, I_C = 0$                               | -5  |     |      | V             |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = -40\text{V}, I_E = 0$                              |     |     | -0.1 | $\mu\text{A}$ |
| Collector cut-off current            | $I_{CEO}$     | $V_{CE} = -20\text{V}, I_B = 0$                              |     |     | -0.1 | $\mu\text{A}$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = -5\text{V}, I_C = 0$                               |     |     | -0.1 | $\mu\text{A}$ |
| DC current gain                      | $h_{FE(1)}$   | $V_{CE} = -1, I_C = -100\text{mA}$                           | 85  |     | 300  |               |
|                                      | $h_{FE(2)}$   | $V_{CE} = -1\text{V}, I_C = -800\text{mA}$                   | 40  |     |      |               |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -800\text{mA}, I_B = -80\text{mA}$                    |     |     | -0.5 | V             |
| Base-emitter saturation voltage      | $V_{BE(sat)}$ | $I_C = -800\text{mA}, I_B = -80\text{mA}$                    |     |     | -1.2 | V             |
| Transition frequency                 | $f_T$         | $V_{CE} = -10\text{V}, I_C = -50\text{mA}, f = 30\text{MHz}$ | 100 |     |      | MHz           |

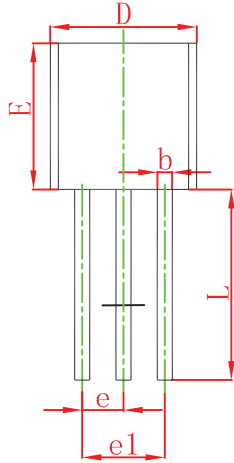
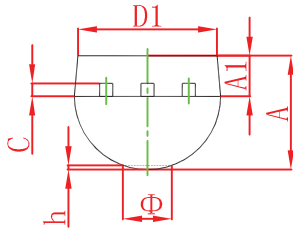
### CLASSIFICATION OF $h_{FE(1)}$

| RANK  | B      | C       | D       |
|-------|--------|---------|---------|
| RANGE | 85-160 | 120-200 | 160-300 |

# Typical Characteristics

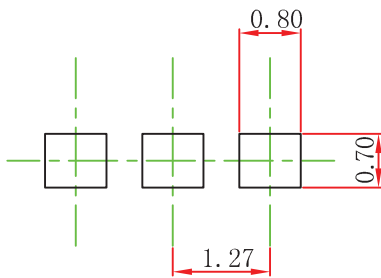


## TO-92 Package Outline Dimensions



| Sym ol | imensions In Millimeters |        | imensions In Inches |       |
|--------|--------------------------|--------|---------------------|-------|
|        | Min                      | Max    | Min                 | Max   |
| A      | 3.300                    | 3.700  | 0.130               | 0.146 |
| A1     | 1.100                    | 1.400  | 0.043               | 0.055 |
| b      | 0.380                    | 0.550  | 0.015               | 0.022 |
| c      | 0.360                    | 0.510  | 0.014               | 0.020 |
| D      | 4.300                    | 4.700  | 0.169               | 0.185 |
| D1     | 3.430                    |        | 0.135               |       |
| E      | 4.300                    | 4.700  | 0.169               | 0.185 |
| e      | 1.270 TYP                |        | 0.050 TYP           |       |
| e1     | 2.440                    | 2.640  | 0.096               | 0.104 |
| L      | 14.100                   | 14.500 | 0.555               | 0.571 |
| K      |                          | 1.600  |                     | 0.063 |
| h      | 0.000                    | 0.380  | 0.000               | 0.015 |

## TO-92 Suggested Pad Layout



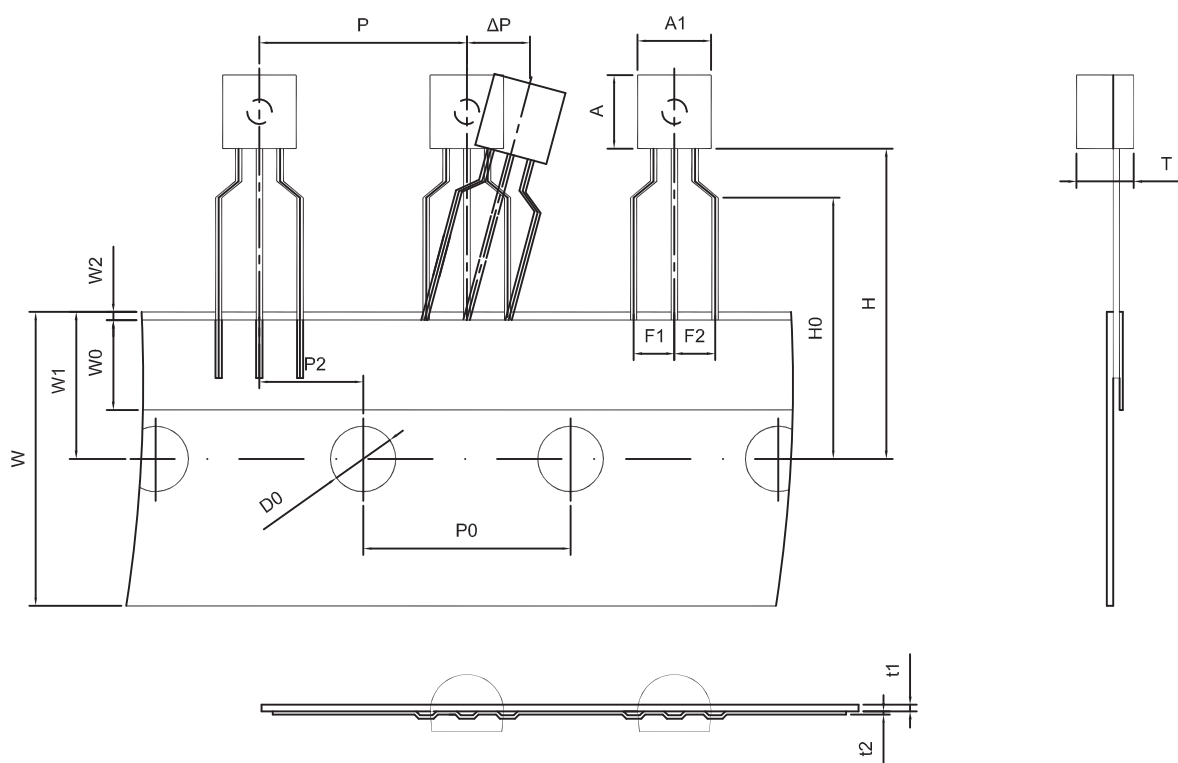
Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.

### NOTICE

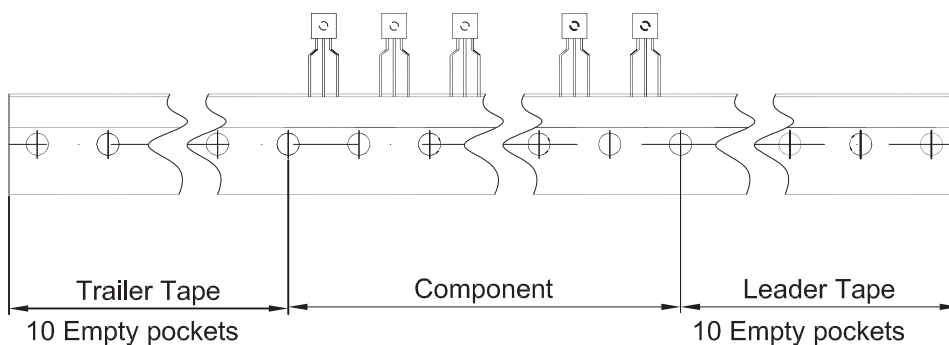
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# TO-92 PACKAGE TAPING DIMENSION



Dimiensions are in millimeter

| A1  | A   | T        | P    | P0   | P2   | F1  | F2  | W    |
|-----|-----|----------|------|------|------|-----|-----|------|
| 4.5 | 4.5 | 3.5      | 12.7 | 12.7 | 6.35 | 2.5 | 2.5 | 18.0 |
| W0  | W1  | W2       | H    | H0   | D0   | t1  | t2  | ΔP   |
| 6.0 | 9.0 | 1.0 MAX. | 19.0 | 16.0 | 4.0  | 0.4 | 0.2 | 0    |



| Package | Box      | Box Size(mm) | Carton     | Carton Size(mm) |
|---------|----------|--------------|------------|-----------------|
| TO-92   | 2000 pcs | 333×162×43   | 20,000 pcs | 350×340×250     |