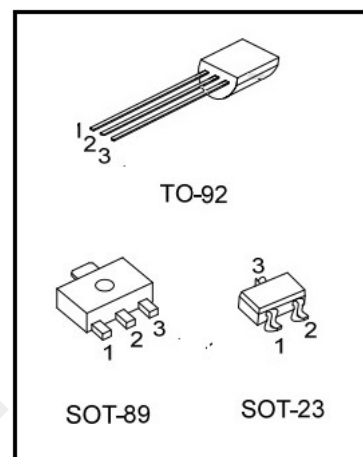


## FEATURES

- Complementary to SS8550
- Package: TO-92/SOT-23/SOT-89

## Maximum Ratings (Ta = 25°)

| Parameter                   | Symbol     | Rating   |     | Unit |
|-----------------------------|------------|----------|-----|------|
| Collector-base voltage      | $BV_{CBO}$ | 40       |     | V    |
| Collector-emitter voltage   | $BV_{CEO}$ | 25       |     | V    |
| Emitter-base voltage        | $BV_{EBO}$ | 5        |     | V    |
| Collector current           | $I_{CM}$   | 1.5      |     | A    |
| Collector Power Dissipation | $P_C$      | TO-92    | 1.0 | W    |
|                             |            | SOT-23   | 0.3 |      |
|                             |            | SOT-89   | 0.5 |      |
| Junction Temperature        | $T_j$      | 150      |     | °C   |
| Storage Temperature         | $T_{stg}$  | -55~+150 |     | °C   |



| Package | Pin assignment |   |   |
|---------|----------------|---|---|
|         | 1              | 2 | 3 |
| TO-92   | E              | B | C |
| SOT-89  | B              | C | E |
| SOT-23  | B              | E | C |

## Electrical Characteristics (Ta=25°C)

| Parameter                            | Symbol      | Test Condition         | Min | Typ | Max | Unit    |
|--------------------------------------|-------------|------------------------|-----|-----|-----|---------|
| 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       | $BV_{EBO}$  | $I_E=100\mu A, I_C=0$  | 5   |     |     | V       |
| collector-base cut-off current       | $I_{CBO}$   | $V_{CB}=40V, I_E=0$    |     |     | 0.1 | $\mu A$ |
| collector-emitter cut-off current    | $I_{CEO}$   | $V_{CE}=20V, I_B=0$    |     |     | 0.1 | $\mu A$ |
| emitter-base cut-off current         | $I_{EBO}$   | $V_{EB}=5V, I_C=0$     |     |     | 0.1 | $\mu A$ |
| DC current gain                      | $H_{FE}$    | $V_{CE}=1V, I_C=100mA$ | 120 |     | 400 |         |
|                                      |             | $V_{CE}=1V, I_C=800mA$ | 50  |     |     |         |
| collector-emitter saturation voltage | $V_{CESAT}$ | $I_C=800mA, I_B=80mA$  |     |     | 0.6 | V       |
| Base-Emitter Saturation Voltage      | $V_{BESAT}$ | $I_C=800mA, I_B=80mA$  |     |     | 1.2 |         |
| Transition frequency                 | $f_T$       | $V_{CE}=10V, I_C=50mA$ | 100 |     |     | MHz     |

## Classification of $H_{FE}$

| Rank  | SS8050-L | SS8050-H | SS8050-J |
|-------|----------|----------|----------|
| Range | 120-200  | 200-350  | 300-400  |