

## Descriptions

- High current application
- Audio power amplifier

## Features

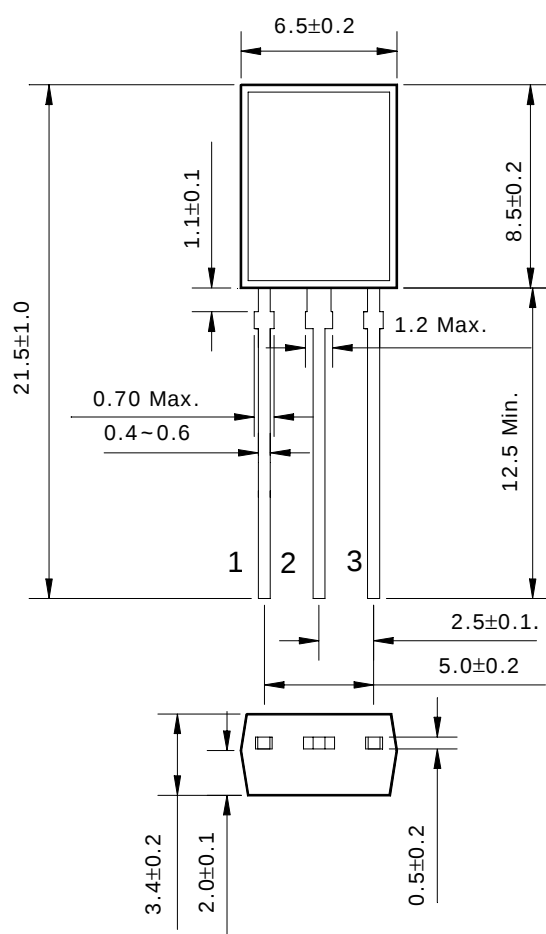
- High current :  $I_C = 2A$
- Complementary pair with STA353

## Ordering Information

| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| STC352   | STC352  | MPT          |

## Outline Dimensions

unit : mm



### PIN Connections

1. Emitter
2. Collector
3. Base

## Absolute maximum ratings

(Ta=25°C)

| Characteristic            | Symbol    | Ratings   | Unit |
|---------------------------|-----------|-----------|------|
| Collector-Base voltage    | $V_{CBO}$ | 40        | V    |
| Collector-Emitter voltage | $V_{CEO}$ | 30        | V    |
| Emitter-Base voltage      | $V_{EBO}$ | 5         | V    |
| Collector current         | $I_C$     | 2         | A    |
| Emitter Current           | $I_E$     | -2        | A    |
| Collector dissipation     | $P_C$     | 1.2       | W    |
| Junction temperature      | $T_j$     | 150       | °C   |
| Storage temperature       | $T_{stg}$ | -55 ~ 150 | °C   |

## Electrical Characteristics

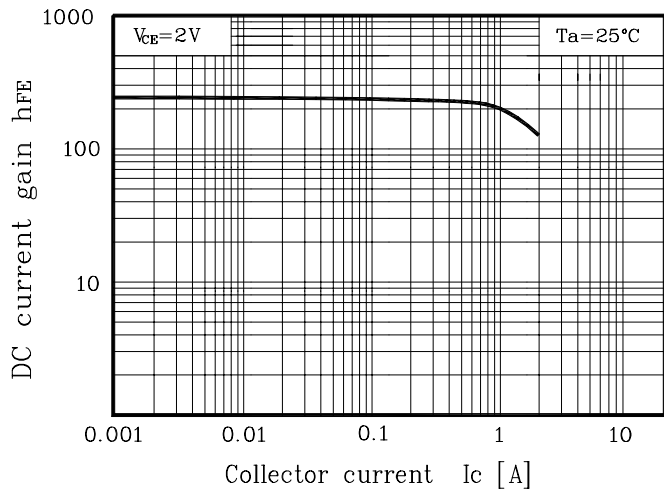
(Ta=25°C)

| Characteristic                       | 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  | $BV_{CEO}$     | $I_C=10mA, I_B=0$           | 30   | -    | -    | V       |
| Emitter-Base breakdown voltage       | $BV_{EBO}$     | $I_E=1mA, I_C=0$            | 5    | -    | -    | V       |
| Collector cut-off current            | $I_{CBO}$      | $V_{CB}=40V, I_E=0$         | -    | -    | 0.1  | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$      | $V_{EB}=5V, I_C=0$          | -    | -    | 0.1  | $\mu A$ |
| DC current gain                      | $h_{FE}^*$     | $V_{CE}=2V, I_C=500mA$      | 100  | -    | 320  | -       |
| Base-Emitter on voltage              | $V_{BE(ON)}$   | $V_{CE}=2V, I_C=500mA$      | -    | -    | 1    | V       |
| Collector-Emitter saturation voltage | $V_{CE(sat)1}$ | $I_C=2A, I_B=0.2A$          | -    | -    | 0.8  | V       |
|                                      | $V_{CE(sat)2}$ | $I_C=1.5A, I_B=0.03A$       | -    | -    | 2    |         |
| Transition frequency                 | $f_T$          | $V_{CE}=5V, I_C=500mA$      | -    | 120  | -    | MHz     |
| Collector output capacitance         | $C_{ob}$       | $V_{CB}=10V, I_E=0, f=1MHz$ | -    | 13   | -    | pF      |

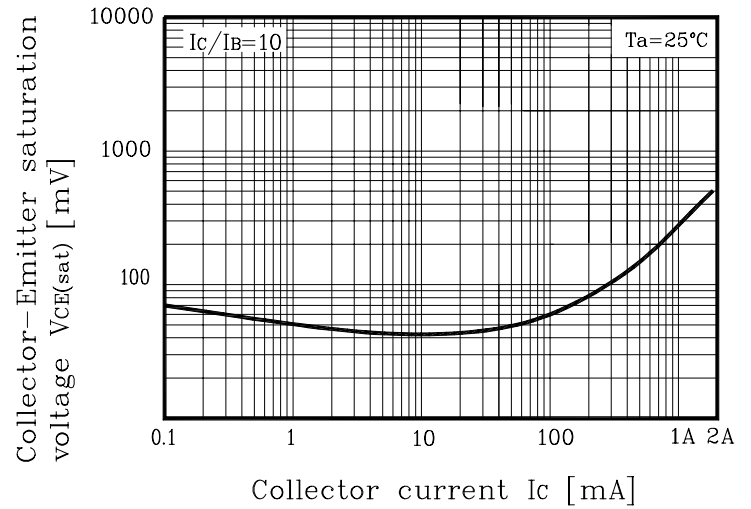
\* :  $h_{FE}$  rank / O : 100~200, Y : 160~320

## Electrical Characteristic Curves

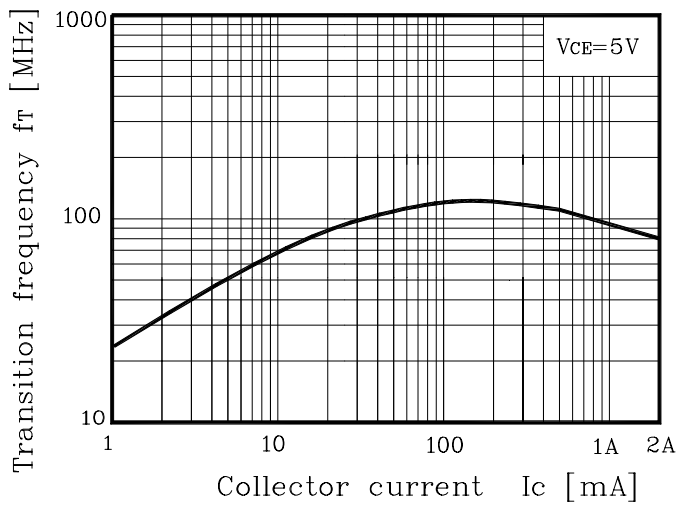
**Fig. 1  $h_{FE} - I_C$**



**Fig. 2  $V_{CE(sat)} - I_C$**



**Fig. 3  $f_T - I_C$**



**Fig. 4  $C_{ob} - V_R$**

