

Description

- General purpose amplifier
- D-PAK for surface mount applications

Features

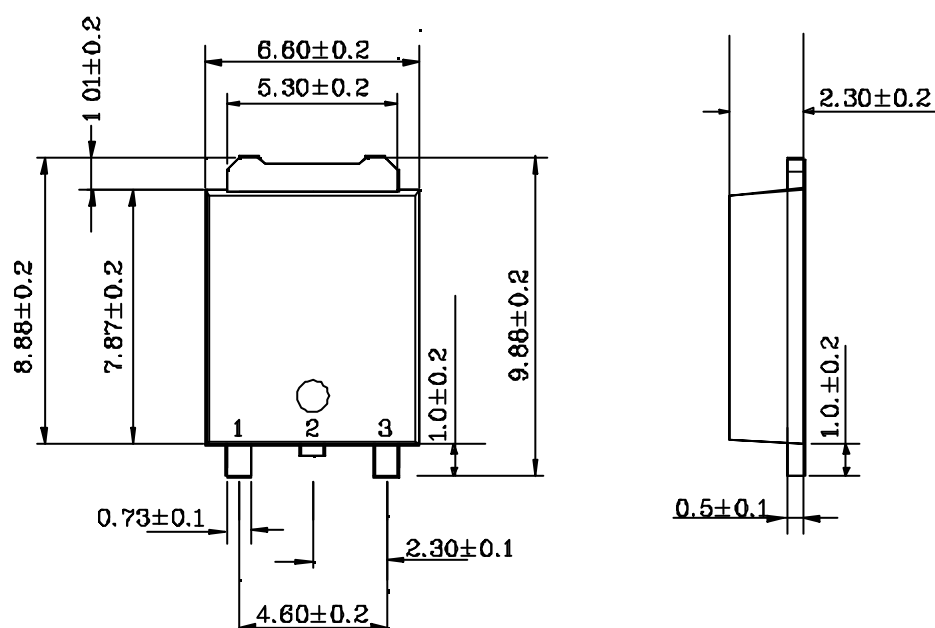
- P_c (Collector dissipation) = 15W
- Low speed switching applications
- Complementary pair with STC722D

Ordering Information

| Type NO. | Marking | Package Code |
|----------|---------|--------------|
| STA723D | STA723 | D-PAK |

Outline Dimensions

unit : mm



PIN Connections

1. Base
2. Collector
3. Emitter

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 | -3 | A |
| Collector dissipation | P_C | 15 | 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} | $I_C = -50\mu A, I_B = 0$ | -40 | - | - | V |
| Collector-Emitter breakdown voltage | BV_{CEO} | $I_C = -1mA, I_B = 0$ | -30 | - | - | V |
| Emitter-Base breakdown voltage | BV_{EBO} | $I_E = -50\mu A, I_B = 0$ | -5 | - | - | V |
| Collector cut-off current | I_{CBO} | $V_{CB} = -20V, I_B = 0$ | - | - | -1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = -4V, V_{BE} = 0$ | - | - | -1 | μA |
| DC current gain | h_{FE} | $V_{CE} = -3V, I_C = -500mA$ | 80 | - | 390 | - |
| | | $V_{CE} = -3V, I_C = -3A$ | 10 | - | - | - |
| Collector-Emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -2A, I_B = -200mA$ | - | -0.5 | -0.8 | V |
| Transition frequency | f_T | $V_{CE} = -5V, I_C = -500mA, f = 1MHz$ | - | 120 | - | MHz |
| Collector output capacitance | C_{ob} | $V_{CB} = -10V, I_E = 0, f = 1MHz$ | - | 13 | - | pF |

* : h_{FE} rank / O : 80~218, Y : 120~270, G : 180~390

Electrical Characteristic Curves

Fig. 1 $h_{FE} - I_C$

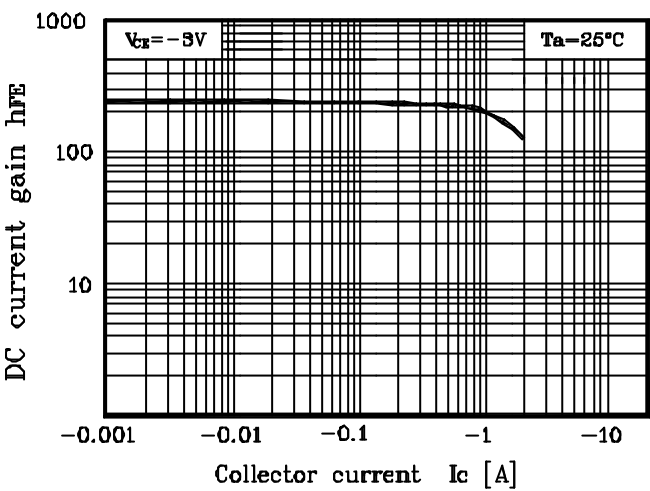


Fig. 2 $V_{CE(sat)} - I_C$

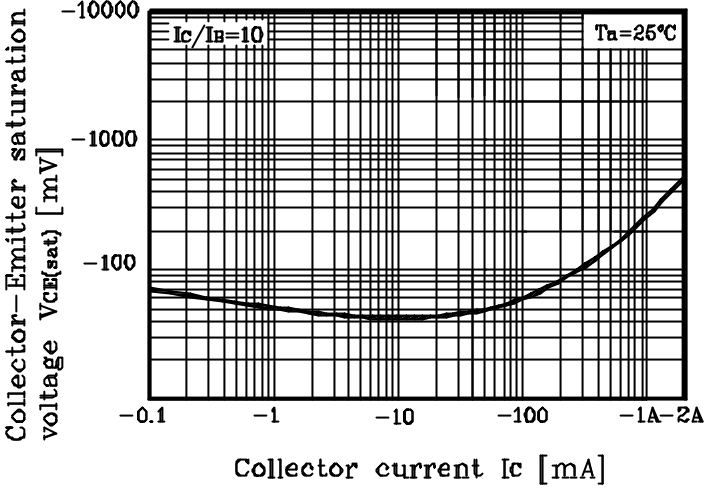


Fig. 3 $f_T - I_C$

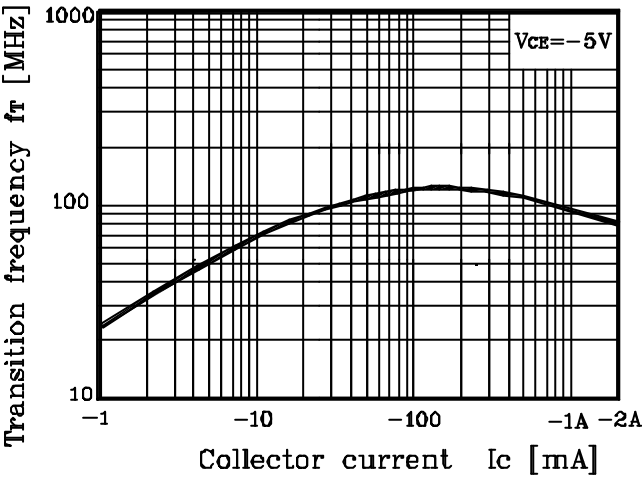


Fig. 4 $C_{ob} - V_R$

