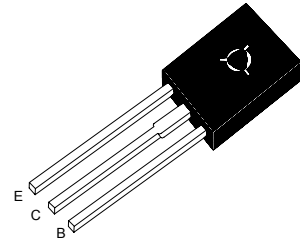


# ST 2SB772T

## PNP SILICON EPITAXIAL POWER TRANSISTOR

These devices are intended for use in audio frequency power amplifier and low speed switching applications



TO-126 Plastic Package

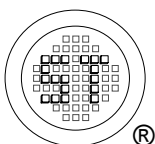
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| Parameter  | Symbol     | Value         | Unit             |
|--|------------|---------------|------------------|
| Collector Base Voltage                             | $-V_{CBO}$ | 40            | V                |
| Collector Emitter Voltage                          | $-V_{CEO}$ | 30            | V                |
| Emitter Base Voltage                               | $-V_{EBO}$ | 5             | V                |
| Collector Current - DC                             | $-I_C$     | 3             | A                |
| Collector Current - Pulse <sup>1)</sup>            | $-I_C$     | 7             | A                |
| Base Current - DC                                  | $-I_B$     | 0.6           | A                |
| Total Power Dissipation @ $T_C = 25^\circ\text{C}$ | $P_D$      | 10            | W                |
| Total Power Dissipation @ $T_A = 25^\circ\text{C}$ | $P_D$      | 1.0           | W                |
| Operating and Storage Junction Temperature Range   | $T_J, T_s$ | - 65 to + 150 | $^\circ\text{C}$ |

<sup>1)</sup> PW=10ms, Duty Cycle  $\leq$  50%

### Characteristics at $T_a = 25^\circ\text{C}$

| Parameter   | Symbol         | Min.     | Typ. | Max. | Unit          |
|---|----------------|----------|------|------|---------------|
| DC Current Gain<br>at $-V_{CE} = 2\text{ V}, -I_C = 20\text{ mA}$<br>at $-V_{CE} = 2\text{ V}, -I_C = 1\text{ A}$ | R              | $h_{FE}$ | 30   | -    | -             |
|   | Q              | $h_{FE}$ | 60   | -    | 120           |
|   | P              | $h_{FE}$ | 100  | -    | 200           |
|   | E              | $h_{FE}$ | 160  | -    | 320           |
|   | E              | $h_{FE}$ | 200  | -    | 400           |
| Collector Emitter Breakdown Voltage<br>at $-I_C = 1\text{ mA}$  | $-V_{(BR)CEO}$ | 30       | -    | -    | V             |
| Collector Base Breakdown Voltage<br>at $-I_C = 1\text{ mA}$   | $-V_{(BR)CBO}$ | 40       | -    | -    | V             |
| Emitter Base Breakdown Voltage<br>at $-I_E = 1\text{ mA}$   | $-V_{(BR)EBO}$ | 5        | -    | -    | V             |
| Collector Cutoff Current<br>at $-V_{CB} = 30\text{ V}$  | $-I_{CBO}$     | -        | -    | 1    | $\mu\text{A}$ |
| Emitter Cutoff Current<br>at $-V_{EB} = 3\text{ V}$   | $-I_{EBO}$     | -        | -    | 1    | $\mu\text{A}$ |
| Collector Emitter Saturation Voltage<br>at $-I_C = 2\text{ A}, -I_B = 200\text{ mA}$                              | $-V_{CE(sat)}$ | -        | -    | 0.5  | V             |
| Base Emitter Saturation Voltage<br>at $-I_C = 2\text{ A}, -I_B = 200\text{ mA}$                                   | $-V_{BE(sat)}$ | -        | -    | 2    | V             |
| Output Capacitance<br>at $-V_{CB} = 10\text{ V}, f = 1\text{ MHz}$  | $C_O$          | -        | 55   | -    | pF            |
| Current Gain Bandwidth Product<br>at $-I_C = 100\text{ mA}, -V_{CE} = 5\text{ V}$                                 | $f_T$          | -        | 80   | -    | MHz           |



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001:2004  
Certificate No. 7116



ISO 9001:2000  
Certificate No. 050098

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