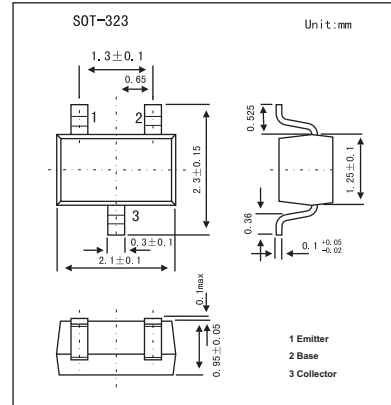


## Silicon PNP Epitaxial Planar Type

## 2SB1219A

## ■ Features

- Large collector current  $I_c$ .

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

| Parameter                   | Symbol    | Rating      | Unit             |
|-----------------------------|-----------|-------------|------------------|
| Collector-base voltage      | $V_{CB0}$ | -60         | V                |
| Collector-emitter voltage   | $V_{CEO}$ | -50         | V                |
| Emitter-base voltage        | $V_{EBO}$ | -5          | V                |
| Peak collector current      | $I_{CP}$  | -1          | A                |
| Collector current           | $I_c$     | -500        | mA               |
| Collector power dissipation | $P_c$     | 150         | mW               |
| Junction temperature        | $T_j$     | 150         | $^\circ\text{C}$ |
| Storage temperature         | $T_{stg}$ | -55 to +150 | $^\circ\text{C}$ |

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

| Parameter                            | Symbol        | Testconditions   | Min | Typ   | Max  | Unit          |
|--------------------------------------|---------------|--|-----|-------|------|---------------|
| Collector-base voltage               | $V_{CB0}$     | $I_c = -10 \mu\text{A}$ , $I_E = 0$                                      | -60 |       |      | V             |
| Collector-emitter voltage            | $V_{CEO}$     | $I_c = -2 \text{ mA}$ , $I_B = 0$  | -50 |       |      | V             |
| Emitter-base voltage                 | $V_{EBO}$     | $I_E = -10 \mu\text{A}$ , $I_c = 0$                                      | -5  |       |      | V             |
| Collector-base cutoff current        | $I_{CBO}$     | $V_{CB} = -20 \text{ V}$ , $I_E = 0$                                     |     |       | -0.1 | $\mu\text{A}$ |
| Forward current transfer ratio       | $h_{FE}$      | $V_{CE} = -10 \text{ V}$ , $I_c = -150 \text{ mA}$                       | 85  |       | 340  |               |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_c = -300 \text{ mA}$ , $I_B = -30 \text{ mA}$                         |     | -0.35 | -0.6 | V             |
| Base-emitter saturation voltage      | $V_{BE(sat)}$ | $I_c = -300 \text{ mA}$ , $I_B = -30 \text{ mA}$                         |     | -1.1  | -1.5 |               |
| Transition frequency                 | $f_T$         | $V_{CB} = -10 \text{ V}$ , $I_E = 50 \text{ mA}$ , $f = 200 \text{ MHz}$ |     | 200   |      | MHz           |
| Collector output capacitance         | $C_{ob}$      | $V_{CB} = -10 \text{ V}$ , $I_E = 0$ , $f = 1 \text{ MHz}$               |     | 6     | 15   | pF            |

■  $h_{FE}$  Classification

| Marking  | DQ     | DR      | DS      | D      |
|----------|--------|---------|---------|--------|
| $h_{FE}$ | 85~170 | 120~240 | 170~340 | 85~340 |