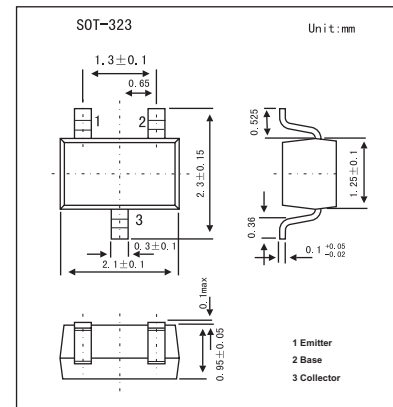


## Silicon PNP Epitaxial Planar Type

## 2SA1739

## ■ Features

- High speed switching.
- Low collector-emitter saturation voltage  $V_{CE(sat)}$ .

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

| Parameter                   | Symbol    | Rating      | Unit             |
|-----------------------------|-----------|-------------|------------------|
| Collector-base voltage      | $V_{CBO}$ | -15         | V                |
| Collector-emitter voltage   | $V_{CEO}$ | -15         | V                |
| Emitter-base voltage        | $V_{EBO}$ | -4          | V                |
| Collector current           | $I_C$     | -50         | mA               |
| Peak collector current      | $I_{CP}$  | -100        | 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 cutoff current        | $I_{CBO}$     | $V_{CB} = -8\text{ V}, I_E = 0$                                 |     |      | -0.1 | $\mu\text{A}$ |
| Emitter-base cutoff current          | $I_{EBO}$     | $V_{CE} = -3\text{ V}, I_C = 0$                                 |     |      | -0.1 | $\mu\text{A}$ |
| Forward current transfer ratio       | $h_{FE}$      | $V_{CE} = -1\text{ V}, I_C = -10\text{ mA}$                     | 50  |      | 150  |               |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -10\text{ mA}, I_B = -1\text{ mA}$                       |     | -0.1 | -0.2 | V             |
| Transition frequency                 | $f_T$         | $V_{CB} = -10\text{ V}, I_E = 10\text{ mA}, f = 200\text{ MHz}$ | 800 | 1500 |      | MHz           |
| Collector output capacitance         | $C_{ob}$      | $V_{CB} = -5\text{ V}, I_E = 0, f = 1\text{ MHz}$               |     | 1    |      | pF            |
| Turn-on time                         | $t_{on}$      |                                                                 |     | 12   |      | ns            |
| Turn-off time                        | $t_{off}$     |                                                                 |     | 20   |      | ns            |
| Storage time                         | $t_{stg}$     |                                                                 |     | 19   |      | ns            |

■  $h_{FE}$  Classification

| Marking  | AX     |        |         |
|----------|--------|--------|---------|
| Rank     | Q      | R      | No-rank |
| $h_{FE}$ | 50~120 | 90~150 | 50~150  |