



## SOT-23-3L Plastic-Encapsulated Transistors

### 2SA1235A TRANSISTOR (PNP)

#### FEATURES

Power dissipation

$$P_{CM} : 0.2 \text{ W (Tamb=25°C)}$$

Collector current

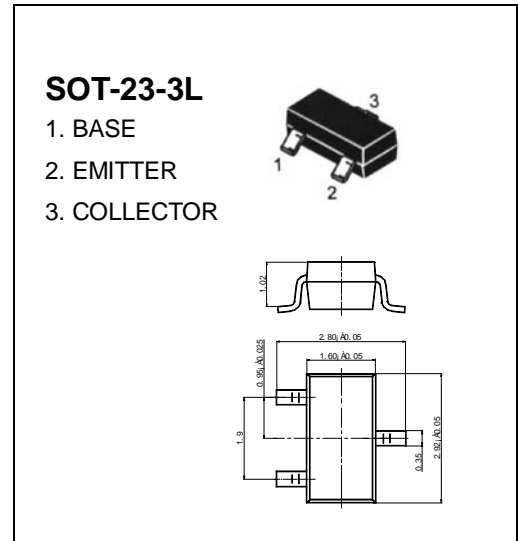
$$I_{CM} : -0.2 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO} : -60 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg} : -55°C \text{ to } +150°C$$



#### ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

| Parameter                            | Symbol        | Test conditions                                | MIN | MAX  | UNIT    |
|--------------------------------------|---------------|--|-----|------|---------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C = -100 \mu A, I_E = 0$                    | -60 |      | V       |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C = -0.1 \text{ mA}, I_B = 0$               | -50 |      | V       |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E = -100 \mu A, I_C = 0$                    | -6  |      | V       |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = -60 \text{ V}, I_E = 0$              |     | -0.1 | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = -6 \text{ V}, I_C = 0$               |     | -0.1 | $\mu A$ |
| DC current gain                      | $h_{FE(1)}$   | $V_{CE} = -6 \text{ V}, I_C = -1 \text{ mA}$   | 150 | 500  |         |
|                                      | $h_{FE(2)}$   | $V_{CE} = -6 \text{ V}, I_C = -0.1 \text{ mA}$ | 90  |      |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -100 \text{ mA}, I_B = -10 \text{ mA}$  |     | -0.3 | V       |
| Base-emitter voltage                 | $V_{BE(sat)}$ | $I_C = -100 \text{ mA}, I_B = -10 \text{ mA}$  |     | -1   | V       |
| Transition frequency                 | $f_T$         | $V_{CE} = -6 \text{ V}, I_C = -10 \text{ mA}$  | 180 |      | MHz     |

#### CLASSIFICATION OF $h_{FE(1)}$

| Marking | M-E     | M-F     |
|---------|---------|---------|
| Range   | 150-300 | 250-500 |