

**2SA1020** TRANSISTOR (PNP)**FEATURES**

Power dissipation

$$P_{CM} : 900 \text{ mW (Tamb=25°C)}$$

Collector current

$$I_{CM} : -2 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO} : -50 \text{ V}$$

Operating and storage junction temperature range

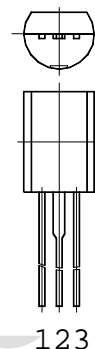
$$T_J, T_{stg} : -55^\circ\text{C to } +150^\circ\text{C}$$

**TO-92MOD**

1. EMITTER

2. COLLECTOR

3. BASE

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

| Parameter                            | Symbol        | Test conditions                                | MIN | TYP | MAX  | UNIT          |
|--------------------------------------|---------------|--|-----|-----|------|---------------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C = -100 \mu\text{A}, I_E = 0$              | -50 |     |      | V             |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C = -1 \text{ mA}, I_B = 0$                 | -50 |     |      | V             |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E = -100 \mu\text{A}, I_C = 0$              | -5  |     |      | V             |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = -50 \text{ V}, I_E = 0$              |     |     | -1   | $\mu\text{A}$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = -5 \text{ V}, I_C = 0$               |     |     | -1   | $\mu\text{A}$ |
| DC current gain                      | $h_{FE(1)}$   | $V_{CE} = -2 \text{ V}, I_C = -500 \text{ A}$  | 70  |     | 240  |               |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -1 \text{ A}, I_B = -50 \text{ mA}$     |     |     | -0.5 | V             |
| Base-emitter saturation voltage      | $V_{BE(sat)}$ | $I_C = -1 \text{ A}, I_B = -50 \text{ mA}$     |     |     | -1.2 | V             |
| Transition frequency                 | $f_T$         | $V_{CE} = -2 \text{ V}, I_C = -500 \text{ mA}$ |     | 100 |      | MHz           |

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

| Rank  | O      | Y       |
|-------|--------|---------|
| Range | 70-140 | 120-240 |