

2SA1160 TRANSISTOR (PNP)

FEATURE

Power dissipation

$$P_{CM}: 0.9 \text{ W (Tamb=25}^\circ\text{C)}$$

Collector current

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

Collector-base voltage

$$V_{(BR)CBO}: -20 \text{ V}$$

Operating and storage junction temperature range

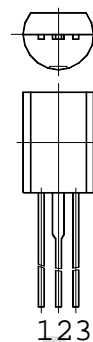
$$T_J, T_{stg}: -55^\circ\text{C to } +150^\circ\text{C}$$

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 | $V_{(BR)CBO}$ | $I_C = -1\text{mA}, I_E = 0$ | -20 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C = -10\text{mA}, I_B = 0$ | -10 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E = -1\text{mA}, I_C = 0$ | -6 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB} = -20 \text{ V}, I_E = 0$ | | | -0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB} = -6 \text{ V}, I_C = 0$ | | | -0.1 | μA |
| DC current gain | $h_{FE(1)}$ | $V_{CE} = -1\text{V}, I_C = -0.5\text{A}$ | 140 | | 600 | |
| | $h_{FE(2)}$ | $V_{CE} = -1\text{V}, I_C = -4\text{A}$ | 60 | | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -2\text{A}, I_B = -50\text{mA}$ | | -0.2 | -0.5 | V |
| Transition frequency | f_T | $V_{CE} = -1\text{V}, I_C = -0.5\text{A}$ | | 140 | | MHz |
| Output capacitance | C_{ob} | $V_{CE} = -10\text{V}, I_E = 0, f = 1 \text{ MHz}$ | | 50 | | pF |

CLASSIFICATION OF h_{FE}

| Rank | A | B | C |
|-------|---------|---------|---------|
| Range | 140-280 | 200-400 | 300-600 |