

2SD2583 TRANSISTOR (NPN)

FEATURES

Power dissipation

$$P_{CM}: 1 \text{ W (Tamb=25°C)}$$

Collector current

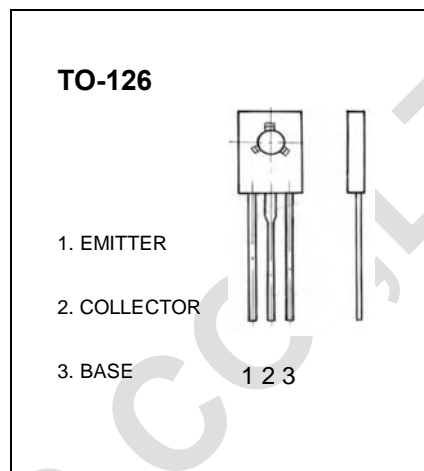
$$I_{CM}: 5 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: 30 \text{ V}$$

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 | TYP | MAX | UNIT |
|--------------------------------------|---------------|--|-----|-----|---------------------|---------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=0.1mA, I_E=0$ | 30 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=1mA, I_B=0$ | 30 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=0.1mA, I_C=0$ | 6 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=30V, I_E=0$ | | | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=6V, I_C=0$ | | | 0.1 | μA |
| DC current gain | $h_{FE(1)}$ | $V_{CE}=2V, I_C=1A$ | 150 | | 600 | |
| | $h_{FE(2)}$ | $V_{CE}=2V, I_C=4A$ | 50 | | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=1A, I_B=50mA$ $I_C=2A, I_B=100mA$ $I_C=4A, I_B=200mA$ | | | 0.15 0.25 0.5 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C=2A, I_B=100mA$ | | | 1.5 | V |
| Transition frequency | f_T | $V_{CE}=10V, I_C=50mA$ | | 120 | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB}=10V, I_E=0, f=1MHz$ | | 77 | | pF |