

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise stated)

| Parameter | Test Conditions | Min. | Typ. | Max. | Unit | |
|----------------------------------|--|---|------|------|---------------|-----|
| OFF CHARACTERISTICS | | | | | | |
| $V_{(BR)CEO}$ | Collector Emitter Breakdown Voltage ¹ | $I_C = 100\text{mA}$ $I_B = 0$ | 80 | | V | |
| I_{CEX} | Collector Cutoff Current | $V_{CE} = 100\text{V}$ $V_{BE} = 1.5\text{V}$ | | 100 | μA | |
| | | $V_{CE} = 70\text{V}$ $V_{BE} = 1.5\text{V}$ $T_A = 150^\circ\text{C}$ | | 1.0 | | |
| I_{EBO} | Emitter Base Cutoff Current | $V_{EB} = 6\text{V}$ $I_C = 0$ | | 0.75 | mA | |
| I_{CEO} | Collector Emitter Cutoff Current | $V_{CE} = 80\text{V}$ $I_B = 0$ | | 0.7 | | |
| I_{CBO} | Collector Base Cutoff Current | $V_{CB} = 100\text{V}$ $I_E = 0$ | | 0.1 | | |
| ON CHARACTERISTICS | | | | | | |
| h_{FE} | DC Current Gain | $I_C = 50\text{mA}$ $V_{CE} = 5\text{V}$ | 30 | | — | |
| | | $I_C = 500\text{mA}$ $V_{CE} = 5\text{V}$ | 40 | 160 | | |
| | | $I_C = 1.0\text{A}$ $V_{CE} = 10\text{V}$ | 20 | | | |
| $V_{CE(sat)}$ | Collector Emitter Saturation Voltage | $I_C = 1.0\text{A}$ $I_B = 0.1\text{A}$ | | 2.5 | V | |
| V_{BE} | Base Emitter Voltage | $I_C = 1.0\text{A}$ $V_{CE} = 10\text{V}$ | | 1.5 | | |
| TRANSIENT CHARACTERISTICS | | | | | | |
| f_T | Transistion Frequency | $V_{CE} = 10\text{V}$ $I_C = 500\text{mA}$ $f = 10\text{MHz}$ | | | 10 | MHz |
| C_{OB} | Common Base Output Capacitance | $V_{CB} = 10\text{V}$ $I_C = 0\text{A}$ $f = 100\text{KHz}$ | | | 50 | pF |
| h_{fe} | Small Signal Current Gain | $V_{CE} = 10\text{V}$ $I_C = 100\text{mA}$ $f = 1.0\text{kHz}$ | 40 | | | — |

- 1) Pulse test : Pulse Width < 100 μs ,Duty Cycle <1%
- 2) f_t is defined as the frequency at which $|h_{fe}|$ extrapolates to unity.

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