

2N6515

NPN EPITAXIAL SILICON TRANSISTOR

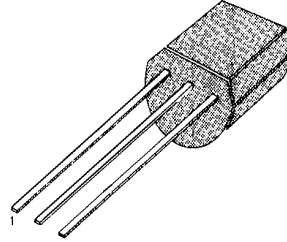
HIGH VOLTAGE TRANSISTOR

- Collector-Emitter Voltage: $V_{CE0} = 250V$
- Collector Dissipation: $P_C(\text{max}) = 625mW$

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ C$)

| Characteristic | Symbol | Rating | Unit |
|---------------------------|-----------|-----------|------------|
| Collector-Base Voltage | V_{CBO} | 250 | V |
| Collector-Emitter Voltage | V_{CEO} | 250 | V |
| Emitter-Base Voltage | V_{EBO} | 6 | V |
| Collector Current | I_C | 500 | mA |
| Collector Dissipation | P_C | 625 | mW |
| Junction Temperature | T_J | 150 | $^\circ C$ |
| Storage Temperature | T_{STG} | -55 ~ 150 | $^\circ C$ |

TO-92



1. Emitter 2. Base 3. Collector

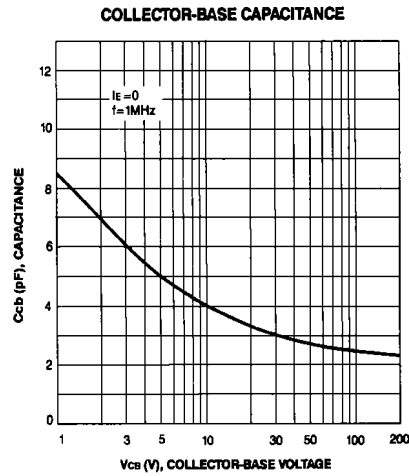
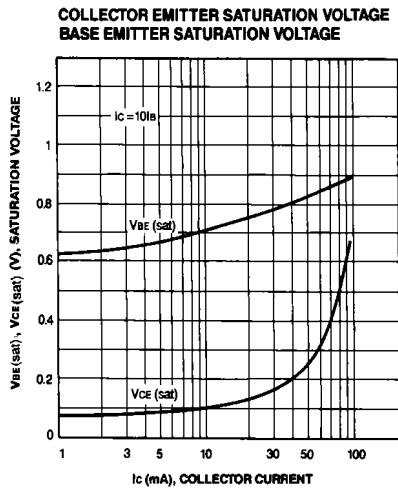
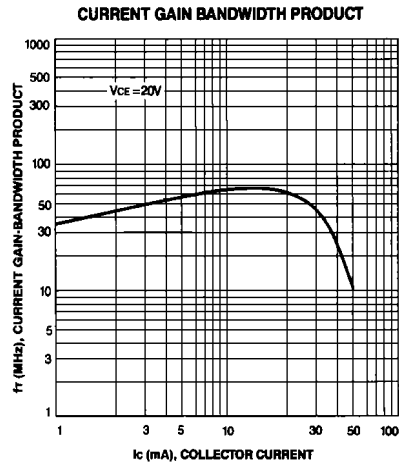
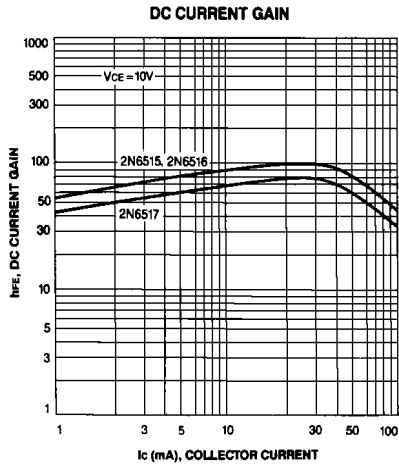
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ C$)

| Characteristic | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|--------------------------------------|-----|-----|------|------|
| Collector-Emitter Breakdown Voltage | BV_{CEO} | $I_C = 1mA, I_B = 0$ | 250 | | | V |
| * Collector-Base Breakdown Voltage | BV_{CBO} | $I_C = 100\mu A, I_E = 0$ | 250 | | | V |
| Emitter-Base Breakdown Voltage | BV_{EBO} | $I_E = 10\mu A, I_C = 0$ | 6 | | | V |
| Collector Cut-off Current | I_{CBO} | $V_{CB} = 150V, I_E = 0$ | | | 50 | nA |
| Emitter Cut-off Current | I_{EBO} | $V_{BE} = 5V, I_C = 0$ | | | 50 | nA |
| * DC Current Gain | h_{FE} | $I_C = 1mA, V_{CE} = 10V$ | 35 | | | |
| | | $I_C = 10mA, V_{CE} = 10V$ | 50 | | | |
| | | $I_C = 30mA, V_{CE} = 10V$ | 50 | | 300 | |
| | | $I_C = 50mA, V_{CE} = 10V$ | 45 | | 220 | |
| | | $I_C = 100mA, V_{CE} = 10V$ | 25 | | | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 10mA, I_B = 1mA$ | | | 0.3 | V |
| | | $I_C = 20mA, I_B = 2mA$ | | | 0.35 | V |
| | | $I_C = 30mA, I_B = 3mA$ | | | 0.5 | V |
| | | $I_C = 50mA, I_B = 5mA$ | | | 1 | V |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C = 10mA, I_B = 1mA$ | | | 0.75 | V |
| | | $I_C = 20mA, I_B = 2mA$ | | | 0.85 | V |
| | | $I_C = 30mA, I_B = 3mA$ | | | 0.9 | V |
| Collector-Base Capacitance | C_{OB} | $V_{CB} = 20V, I_E = 0$ | | | 6 | pF |
| Current Gain Bandwidth Product | f_T | $f = 1MHz, I_C = 10mA, V_{CE} = 20V$ | 40 | | 200 | MHz |
| Base Emitter On Voltage | $V_{BE(on)}$ | $I_C = 100mA, V_{CE} = 10V$ | | | 2 | V |

* Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$

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|--------------------------|------------------------|---|
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