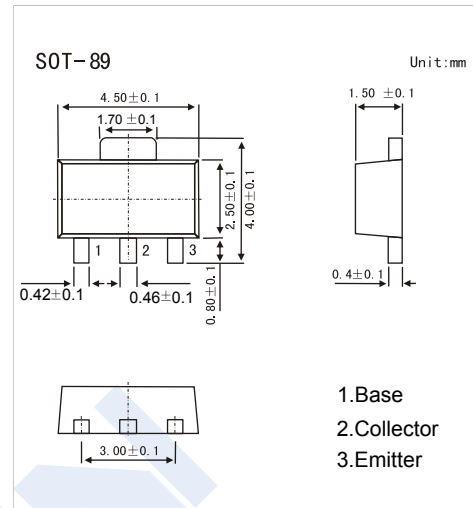


NPN Transistors

2SD1006

■ Features

- High collector to emitter voltage: $V_{CE0} > 100V$.

■ Absolute Maximum Ratings $T_a = 25^\circ C$

| Parameter | Symbol | Rating | Unit |
|-------------------------------|-------------|-------------|------------|
| Collector-base voltage | V_{CBO} | 100 | V |
| Collector-emitter voltage | V_{CEO} | 100 | V |
| Emitter-base voltage | V_{EBO} | 5 | V |
| Collector current | I_C | 0.7 | A |
| Collector current (pulse) * | $I_{C(pu)}$ | 1.2 | A |
| Collector I power dissipation | P_c | 2 | W |
| Junction temperature | T_j | 150 | $^\circ C$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ C$ |

*. $PW \leq 10ms$, duty cycle $\leq 50\%$

■ Electrical Characteristics $T_a = 25^\circ C$

| Parameter | Symbol | Testconditions | Min | Typ | Max | Unit |
|--|---------------|-------------------------------------|-----|-----|-----|------|
| Base-emitter voltage * | V_{BE} | $V_{CE} = 10V, I_C = 10mA$ | 550 | 620 | 650 | mV |
| Collector cutoff current | I_{CBO} | $V_{CB} = 100V, I_E = 0$ | | | 100 | nA |
| Emitter cutoff current | I_{EBO} | $V_{EB} = 5V, I_C = 0$ | | | 100 | nA |
| DC current gain * | h_{FE} | $V_{CE} = 1V, I_C = 5.0mA$ | 45 | 200 | | |
| | | $V_{CE} = 1V, I_C = 100mA$ | 90 | 200 | 400 | |
| Collector-emitter saturation voltage * | $V_{CE(sat)}$ | $I_C = 500mA, I_B = 50mA$ | | 0.3 | 0.6 | V |
| Base-emitter saturation voltage * | $V_{BE(sat)}$ | $I_C = 500mA, I_B = 50mA$ | | 0.9 | 1.5 | V |
| Output capacitance | C_{ob} | $V_{CB} = 10V, I_E = 0, f = 1.0MHz$ | | 10 | | pF |
| Transition frequency | f_T | $V_{CE} = 10V, I_E = -10mA$ | | 90 | | MHz |

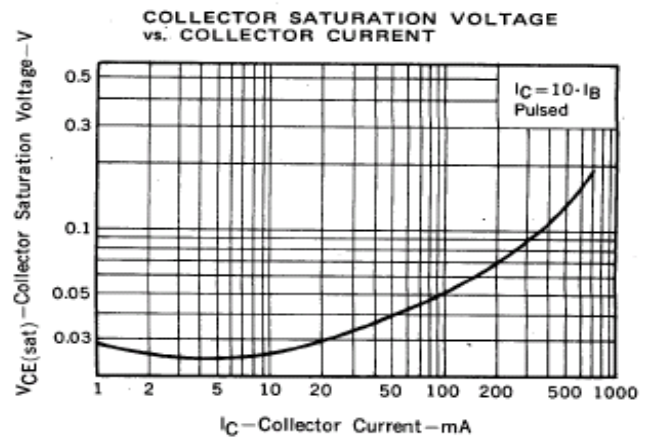
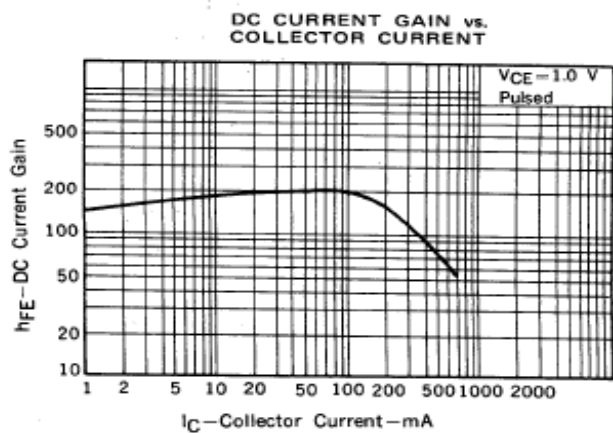
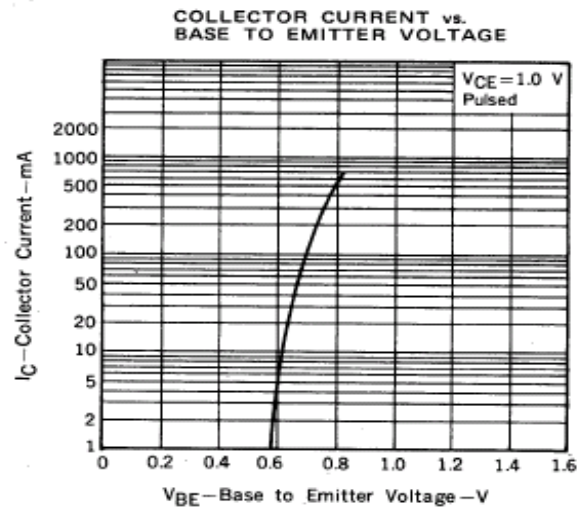
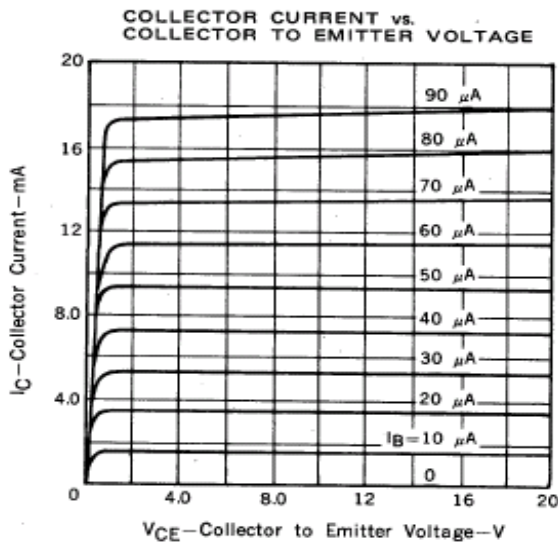
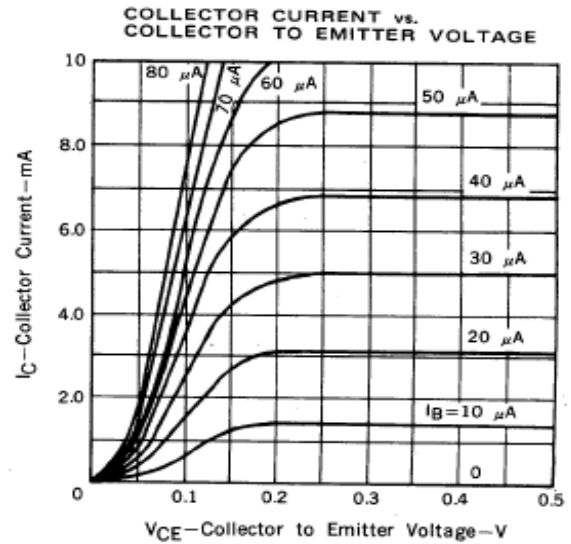
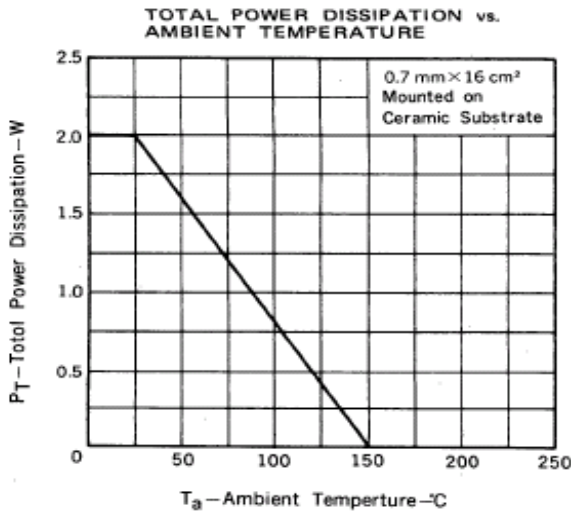
*. $PW \leq 350\mu s$, duty cycle $\leq 2\%$

■ h_{FE} Classification(2)

| Marking | HM | HL | HK |
|----------|--------|---------|---------|
| h_{FE} | 90~180 | 135~270 | 200~400 |

NPN Transistors 2SD1006

■ Typical Characteristics



NPN Transistors

2SD1006

■ Typical Characteristics

