

PNP Transistor

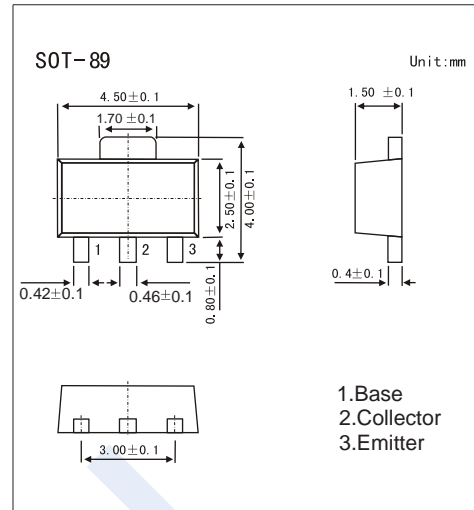
2KB4006

■ Features

- Low $V_{CE(sat)}$.

$V_{CE(sat)} = -0.5V$ (Typ.)

($I_C/I_B = -2A / -0.2A$)

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

| Parameter | Symbol | Rating | Unit |
|-----------------------------|------------|-------------|------------|
| Collector-base Voltage | V_{CBO} | -40 | V |
| Collector-emitter Voltage | V_{CEO} | -32 | V |
| Emitter-base Voltage | V_{EBO} | -5 | V |
| Collector current | I_C | -2 | A |
| | I_{CP}^* | -3 | A |
| Collector power dissipation | P_C | 0.5 | W |
| Junction temperature | T_j | 150 | $^\circ C$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ C$ |

* $PW=100ms$

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

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|---------------------------------------|-----|------|------|---------|
| Collector-base breakdown voltage | BV_{CBO} | $I_C = -50 \mu A$ | -40 | | | V |
| Collector-emitter breakdown voltage | BV_{CEO} | $I_C = -1mA$ | -32 | | | V |
| Emitter-base breakdown voltage | BV_{EBO} | $I_E = -50 \mu A$ | -5 | | | V |
| Collector cutoff current | I_{CBO} | $V_{CB} = -20V$ | | | -1 | μA |
| Emitter cutoff current | I_{EBO} | $V_{EB} = -4V$ | | | -1 | μA |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = -2A, I_B = -0.2A$ | | -0.5 | -0.8 | V |
| DC current transfer ratio | h_{FE} | $V_{CE} = -3V, I_C = -0.5A$ | 120 | | 270 | |
| Output Capacitance | C_{ob} | $V_{CB} = -10V, I_E = 0, f = 1MHz$ | | 50 | | pF |
| Transition frequency | f_T | $V_{CE} = -5V, I_E = 0.5A, f = 30MHz$ | | 100 | | MHz |

■ Marking

| Marking | 2K2* |
|---------|------|
| | |

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■ Typical Characteristics

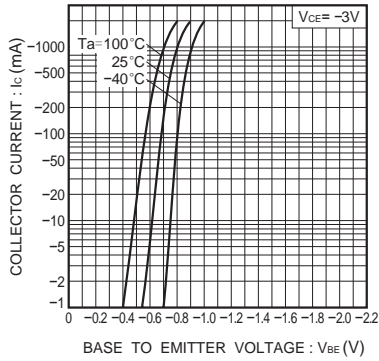


Fig.1 Grounded emitter propagation characteristics

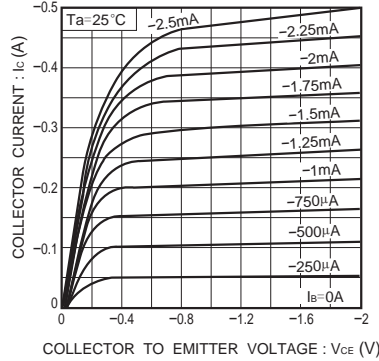


Fig.2 Grounded emitter output characteristics

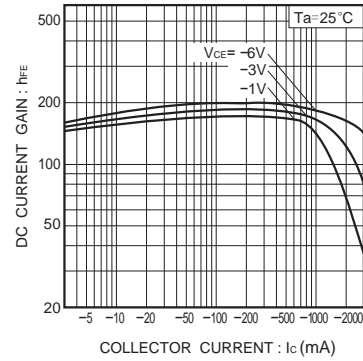


Fig.3 DC current gain vs. collector current (I)

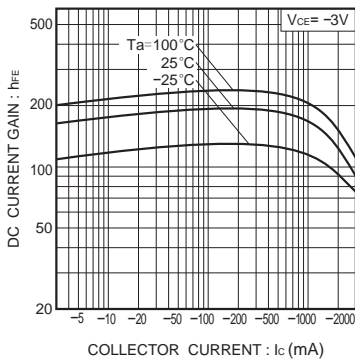


Fig.4 DC current gain vs. collector current (II)

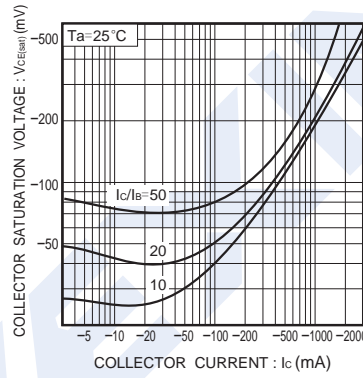


Fig.5 Collector-emitter saturation voltage vs. collector current (I)

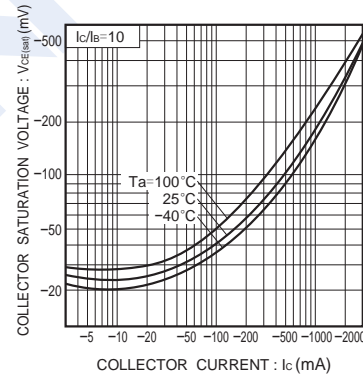


Fig.6 Collector-emitter saturation voltage vs. collector current (II)

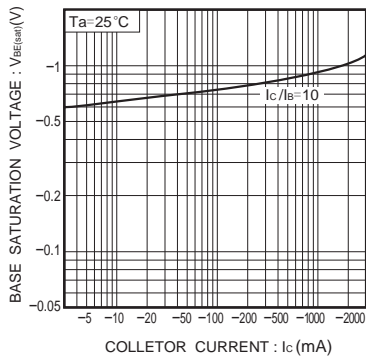


Fig.7 Base-emitter saturation voltage vs. collector current

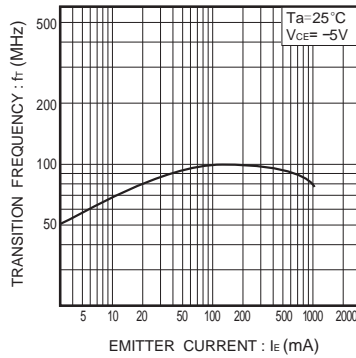


Fig.8 Gain bandwidth product vs. emitter current

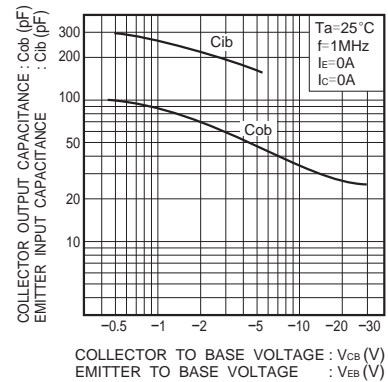


Fig.9 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

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■ Typical Characteristics

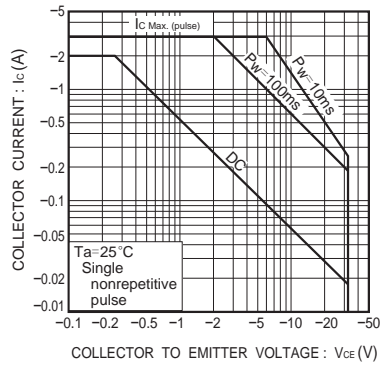


Fig.10 Safe operation area