



CHENMKO ENTERPRISE CO.,LTD

2SB1386PT

SMALL FLAT PNP Epitaxial Transistor

VOLTAGE 20 Volts CURRENT 5 Amperes

Lead free devices

APPLICATION

* Power driver and Strobe Flash .

FEATURE

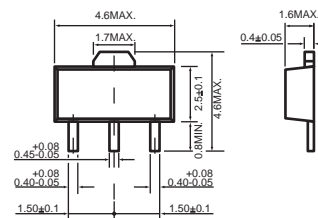
- * Small flat package. (SC-62/SOT-89)
- * Low saturation voltage $V_{CE(sat)} = -0.35V$ (Typ.) ($I_C/I_B = -4A/-0.1A$)
- * $PC = 2.0W$ (mounted on ceramic substrate).
- * High saturation current capability.

MARKING

- * hFE Classification P : P86
- Q : Q86
- R : R86



SC-62/SOT-89

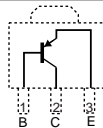


- 1 Base
- 2 Collector (Heat Sink)
- 3 Emitter

Dimensions in millimeters

SC-62/SOT-89

CIRCUIT



MAXIMUM RATINGS (At $T_A = 25^{\circ}C$ unless otherwise noted)

| RATINGS | CONDITION | SYMBOL | 2SB1386PT | UNITS |
|-------------------------------|---------------------------------|-----------|-------------|-------------|
| Collector - Base Voltage | Open Emitter | V_{CBO} | -30 | Volts |
| Collector - Emitter Voltage | Open Base | V_{CEO} | -20 | Volts |
| Emitter - Base Voltage | Open Collector | V_{EBO} | -6 | Volts |
| Collector Current DC | | I_C | -5 | Amps |
| Peak Collector Current | | I_{CM} | -10 | Amps |
| Total Power Dissipation | $T_A \leq 25^{\circ}C$; Note 1 | P_{TOT} | 2.0 | W |
| Storage Temperature | | T_{STG} | -55 to +150 | $^{\circ}C$ |
| Junction Temperature | | T_J | +150 | $^{\circ}C$ |
| Operating Ambient Temperature | | T_{AMB} | -55 to +150 | $^{\circ}C$ |

Note

- 1. Transistor mounted on ceramic substrate by 40mmX40mmx0.7mm.

2004-11

RATING CHARACTERISTIC CURVES (2SB1386PT)

CHARACTERISTICS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

| PARAMETERS | CONDITION | SYMBOL | MIN. | TYPE | MAX. | UNITS |
|--------------------------------------|--|-------------|------|-------|------|---------------|
| Collector-Base breakdown voltage | $I_C = -50\mu\text{A}$ | BV_{CB0} | -30 | - | - | Volts |
| Collector-Emitter breakdown voltage | $I_C = -1\text{mA}$ | BV_{CEO} | -20 | - | - | Volts |
| Emitter-Base breakdown voltage | $I_E = -50\mu\text{A}$ | BV_{EBO} | -6 | - | - | Volts |
| Collector Cut-off Current | $I_E = 0; V_{CB} = -200\text{V}$ | I_{CBO} | - | - | -0.5 | μA |
| Emitter Cut-off Current | $I_C = 0; V_{EB} = -5\text{V}$ | I_{CEO} | - | - | -0.5 | μA |
| DC Current Gain | $V_{CE} = -2\text{V}; \text{Note 1}$ $I_C = -0.5\text{A}$ | h_{FE} | 82 | - | 390 | |
| Collector-Emitter Saturation Voltage | $I_C = -4\text{A}; I_B = -0.1\text{A}$ | V_{CEsat} | - | -0.35 | -1.0 | Volts |
| Output Capacitance | $I_E = I_C = 0; V_{CB} = -20\text{V};$ $f = 1\text{MHz}$ | C_C | - | 60 | - | pF |
| Transition Frequency | $I_E = -0.05\text{A}; V_{CE} = -6.0\text{V};$ $f = 100\text{MHz}$ | f_T | - | 120 | - | MHz |

Note :

1. $h_{FE(2)}$ Classification P: 82 to 180, Q: 120 to 270, R: 180 to 390.

RATING CHARACTERISTIC CURVES (2SB1386PT)

Fig.1 Grounded emitter propagation characteristics

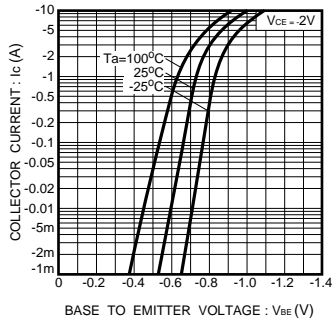


Fig.2 Grounded emitter output characteristics

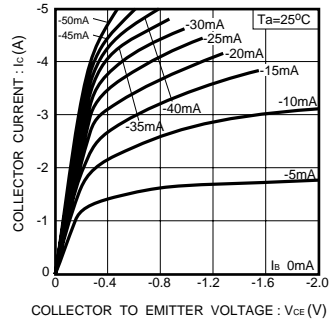


Fig.3 DC current gain vs. collector current (I)

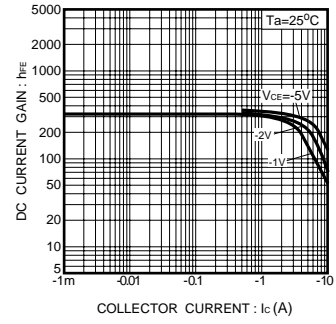


Fig.4 DC current gain vs. collector current (II)

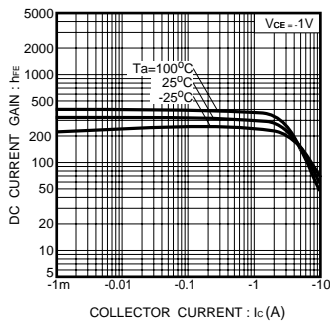


Fig.5 DC current gain vs. collector current (III)

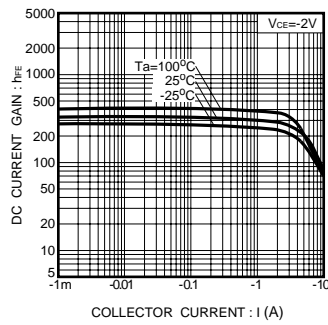


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

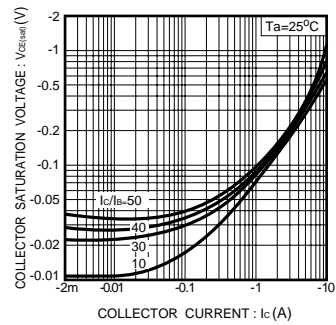


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

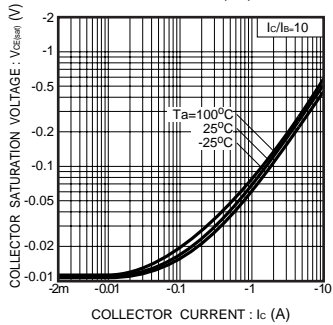


Fig.8 Collector-emitter saturation voltage vs. collector current (III)

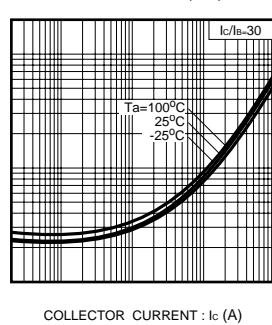


Fig.9 Collector-emitter saturation voltage vs. collector current (IV)

