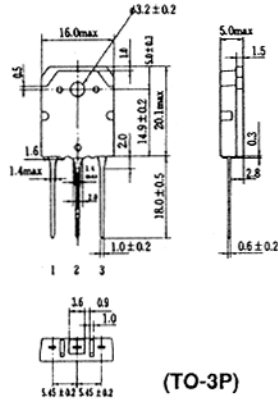


## 2SB1032(K)

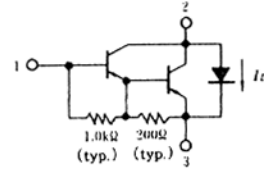
SILICON PNP TRIPLE DIFFUSED

POWER SWITCHING

COMPLEMENTARY PAIR WITH 2SD1436(K)



1. Base
2. Collector (Flange)
3. Emitter (Dimensions in mm)

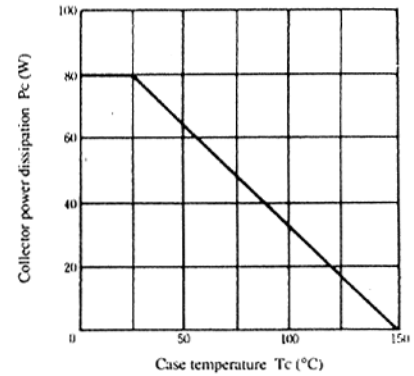


### ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

| Item                         | Symbol               | 2SB1032(K)  | Unit |
|------------------------------|----------------------|-------------|------|
| Collector to base voltage    | V <sub>CB0</sub>     | -120        | V    |
| Collector to emitter voltage | V <sub>CE0</sub>     | -120        | V    |
| Emitter to base voltage      | V <sub>EBO</sub>     | -7          | V    |
| Collector current            | I <sub>C</sub>       | -10         | A    |
| Collector peak current       | i <sub>C(peak)</sub> | -15         | A    |
| C to E diode forward current | I <sub>D*</sub>      | 10          | A    |
| Collector power dissipation  | P <sub>C*</sub>      | 80          | W    |
| Junction temperature         | T <sub>j</sub>       | 150         | °C   |
| Storage temperature          | T <sub>stg</sub>     | -55 to +150 | °C   |

\* Value at T<sub>c</sub> = 25°C

### MAXIMUM COLLECTOR DISSIPATION CURVE

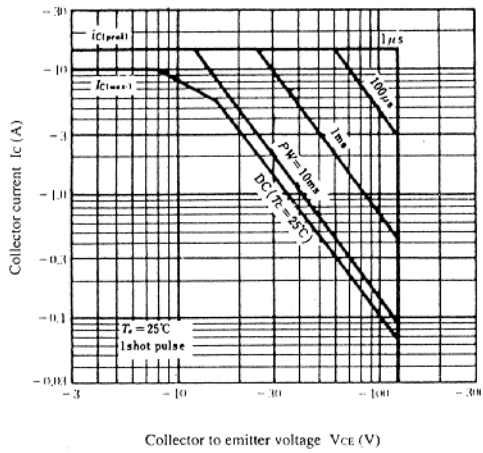


### ELECTRICAL CHARACTERISTICS (Ta=25°C)

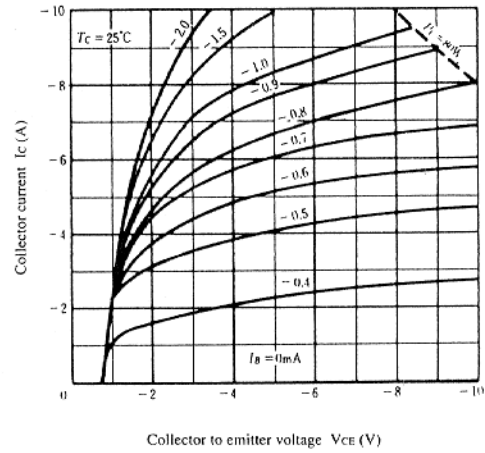
| Item                                    | Symbol                | Test Condition   | min. | typ. | max.  | Unit |
|---|-----------------------|--|------|------|-------|------|
| Collector to emitter breakdown voltage  | V <sub>(BR)CEO</sub>  | I <sub>C</sub> = -25mA, R <sub>BE</sub> = ∞                      | -120 | —    | —     | V    |
| Emitter to base breakdown voltage       | V <sub>(BR)EBO</sub>  | I <sub>E</sub> = -200mA, I <sub>C</sub> = 0                      | -7   | —    | —     | V    |
| Collector cutoff current                | I <sub>CBO</sub>      | V <sub>CB</sub> = -120V, I <sub>E</sub> = 0                      | —    | —    | -100  | μA   |
|   | I <sub>CEO</sub>      | V <sub>CE</sub> = -100V, R <sub>BE</sub> = ∞                     | —    | —    | -10   | μA   |
| DC current transfer ratio               | h <sub>FE</sub>       | V <sub>CE</sub> = -3V, I <sub>C</sub> = -5A*                     | 1000 | —    | 20000 |      |
| Collector to emitter saturation voltage | V <sub>CE(sat)1</sub> | I <sub>C</sub> = -5A, I <sub>B</sub> = -10mA*                    | —    | —    | -1.5  | V    |
|   | V <sub>CE(sat)2</sub> | I <sub>C</sub> = -10A, I <sub>B</sub> = -0.1A*                   | —    | —    | -3.0  | V    |
| Base to emitter saturation voltage      | V <sub>BE(sat)1</sub> | I <sub>C</sub> = -5A, I <sub>B</sub> = -10mA*                    | —    | —    | -2.0  | V    |
|   | V <sub>BE(sat)2</sub> | I <sub>C</sub> = -10A, I <sub>B</sub> = -0.1A*                   | —    | —    | -3.5  | V    |
| C to E diode forward voltage            | V <sub>D</sub>        | I <sub>D</sub> = 10A*  | —    | —    | 3.0   | V    |
| Turn on time                            | t <sub>on</sub>       | V <sub>CC</sub> = -30V,  | —    | 0.8  | —     | μs   |
| Turn off time                           | t <sub>off</sub>      | I <sub>C</sub> = -5A, I <sub>B1</sub> = -I <sub>B2</sub> = -10mA | —    | 4.0  | —     | μs   |

\* Pulse Test

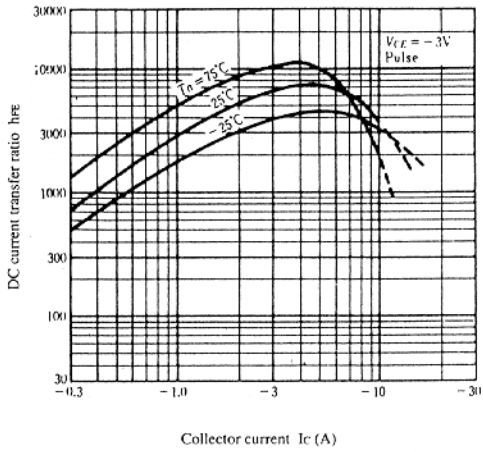
AREA OF SAFE OPERATION



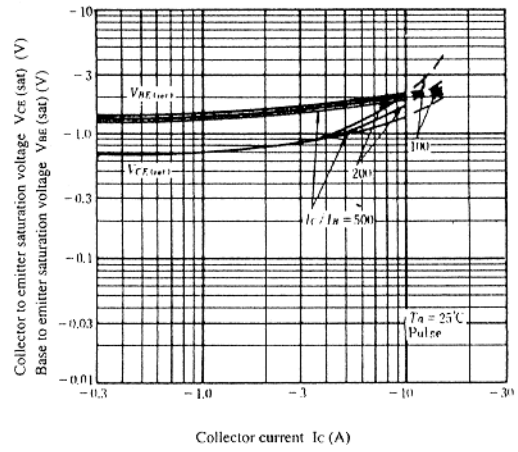
TYPICAL OUTPUT CHARACTERISTICS



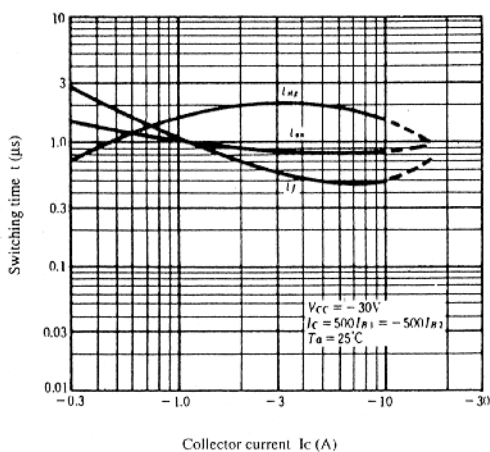
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



SATURATION VOLTAGE VS. COLLECTOR CURRENT



SWITCHING TIME VS. COLLECTOR CURRENT



DIODE CURRENT VS. FORWARD VOLTAGE

