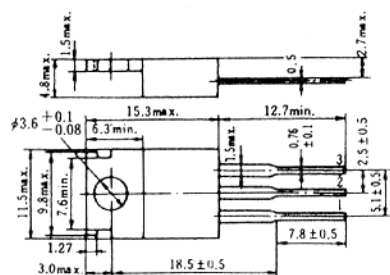


## 2SB1101, 2SB1102

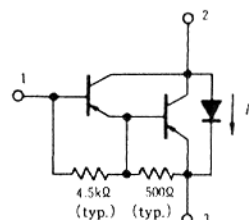
SILICON PNP TRIPLE DIFFUSED

## LOW FREQUENCY POWER AMPLIFIER

COMPLEMENTARY PAIR WITH 2SD1601, 2SD1602



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



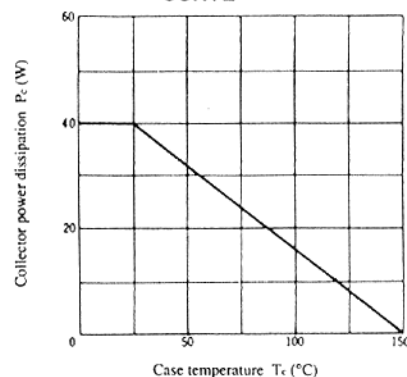
(JEDEC TO-220AB)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

| Item                         | Symbol               | 2SB1101     | 2SB1102     | Unit |
|------------------------------|----------------------|-------------|-------------|------|
| Collector to base voltage    | V <sub>CB0</sub>     | -60         | -80         | V    |
| Collector to emitter voltage | V <sub>CE0</sub>     | -60         | -80         | V    |
| Emitter to base voltage      | V <sub>EB0</sub>     | -7          | -7          | V    |
| Collector current            | I <sub>C</sub>       | -4          | -4          | A    |
| Collector peak current       | i <sub>C(peak)</sub> | -8          | -8          | A    |
| Collector power dissipation  | P <sub>C</sub> *     | 40          | 40          | W    |
| Junction temperature         | T <sub>j</sub>       | 150         | 150         | °C   |
| Storage temperature          | T <sub>stg</sub>     | -55 to +150 | -55 to +150 | °C   |
| C to E diode forward current | I <sub>D</sub> *     | 4           | 4           | A    |

\* Value at  $T_c = 25^\circ\text{C}$ 

MAXIMUM COLLECTOR DISSIPATION  
CURVE



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

| Item                                    | Symbol         | Test Condition                            | 2SB1101 |      |       | 2SB1102 |      |       | Unit    |
|-----------------------------------------|----------------|-------------------------------------------|---------|------|-------|---------|------|-------|---------|
|                                         |                |                                           | min.    | typ. | max.  | min.    | typ. | max.  |         |
| Collector to emitter breakdown voltage  | $V_{(BR)CEO}$  | $I_C = -25mA, R_{BE} = \infty$            | -60     | —    | —     | -80     | —    | —     | V       |
| Emitter to base breakdown voltage       | $V_{(BR)EBO}$  | $I_E = -50mA, I_C = 0$                    | -7      | —    | —     | -7      | —    | —     | V       |
| Collector cutoff current                | $I_{CBO}$      | $V_{CB} = -60V, I_E = 0$                  | —       | —    | -100  | —       | —    | -100  | $\mu A$ |
|                                         | $I_{CEO}$      | $V_{CE} = -50V, R_{BE} = \infty$          | —       | —    | -10   | —       | —    | -10   | $\mu A$ |
| DC current transfer ratio               | $h_{FE}$       | $V_{CE} = -3V, I_C = -2A^*$               | 1000    | —    | 20000 | 1000    | —    | 20000 |         |
| Collector to emitter saturation voltage | $V_{CE(sat)1}$ | $I_C = -2A, I_B = -4mA^*$                 | —       | —    | -1.5  | —       | —    | -1.5  | V       |
|                                         | $V_{CE(sat)2}$ | $I_C = -4A, I_B = -40mA^*$                | —       | —    | -3.0  | —       | —    | -3.0  |         |
| Base to emitter saturation voltage      | $V_{BE(sat)1}$ | $I_C = -2A, I_B = -4mA^*$                 | —       | —    | -2.0  | —       | —    | -2.0  | V       |
|                                         | $V_{BE(sat)2}$ | $I_C = -4A, I_B = -40mA^*$                | —       | —    | -3.5  | —       | —    | -3.5  |         |
| C to E diode forward voltage            | $V_D$          | $I_D = 4A$                                | —       | —    | 3.0   | —       | —    | 3.0   | V       |
| Turn on time                            | $t_{on}$       | $I_C = -2A,$<br>$I_{B1} = -I_{B2} = -4mA$ | —       | 0.8  | —     | —       | 0.8  | —     | $\mu s$ |
| Storage time                            | $t_{stg}$      |                                           | —       | 4.0  | —     | —       | 4.0  | —     |         |
| Fall time                               | $t_f$          |                                           | —       | 1.0  | —     | —       | 1.0  | —     |         |

### \* Pulse Test

