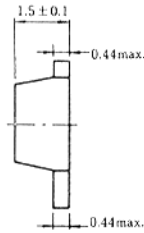
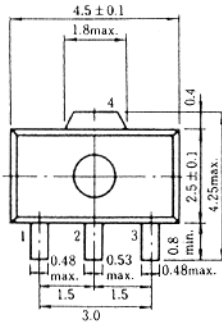


## 2SB1001

SILICON PNP EPITAXIAL

LOW FREQUENCY POWER AMPLIFIER

Complementary pair with 2SD1367



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

(UPAK)

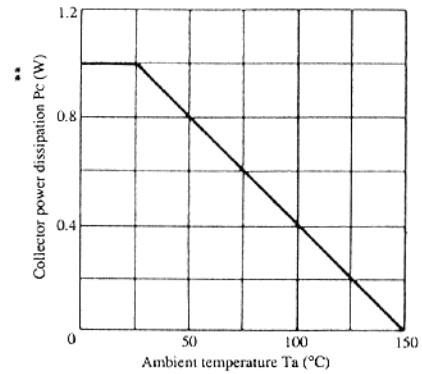
### ■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SB1001	Unit
Collector to base voltage	V <sub>CB0</sub>	-20	V
Collector to emitter voltage	V <sub>CEO</sub>	-16	V
Emitter to base voltage	V <sub>EBO</sub>	-6	V
Collector current	I <sub>C</sub>	-2	A
Collector peak current	i <sub>C(peak)*</sub>	-3	A
Collector power dissipation	P <sub>C**</sub>	1	W
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

\* PW ≤ 10ms, Duty cycle ≤ 20%

\*\* Value on the alumina ceramic board (12.5 × 20 × 0.7mm)

### MAXIMUM COLLECTOR DISSIPATION CURVE



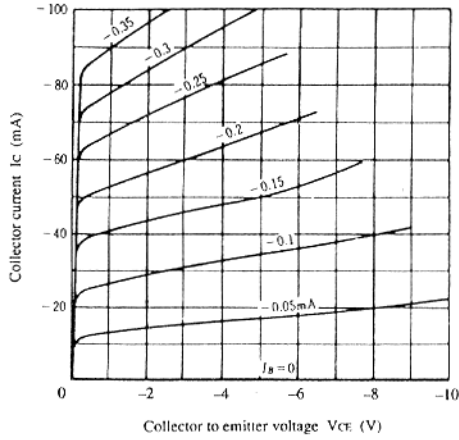
### ■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = -10μA, I <sub>E</sub> = 0	-20	—	—	V
Collector to emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = -1mA, R <sub>BE</sub> = ∞	-16	—	—	V
Emitter to base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = -10μA, I <sub>C</sub> = 0	-6	—	—	V
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> = -16V, I <sub>E</sub> = 0	—	—	-0.1	μA
Emitter cutoff current	I <sub>EBO</sub>	V <sub>EB</sub> = -5V, I <sub>C</sub> = 0	—	—	-0.1	μA
DC current transfer ratio	h <sub>FE</sub> *	V <sub>CE</sub> = -2V, I <sub>C</sub> = -0.1A, (Pulse test)	100	—	320	
Collector to emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -1A, I <sub>B</sub> = -0.1A, (Pulse test)	—	-0.15	-0.3	V
Base to emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = -1A, I <sub>B</sub> = -0.1A, (Pulse test)	—	-1.0	-1.2	V
Gain bandwidth product	f <sub>T</sub>	V <sub>CE</sub> = -2V, I <sub>C</sub> = -10mA	—	150	—	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -10V, I <sub>E</sub> = 0, f = 1MHz	—	50	—	pF

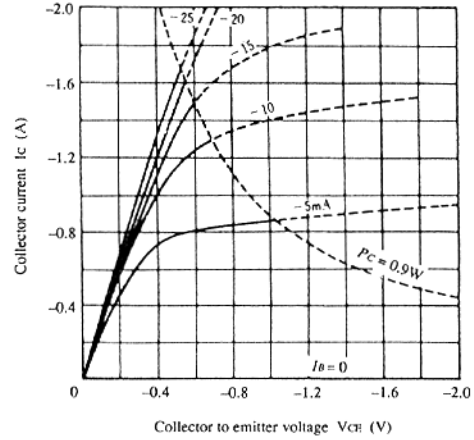
\* The 2SB1001 is grouped by h<sub>FE</sub> as follows.

Mark	BH	BJ
h <sub>FE</sub>	100 to 200	160 to 320

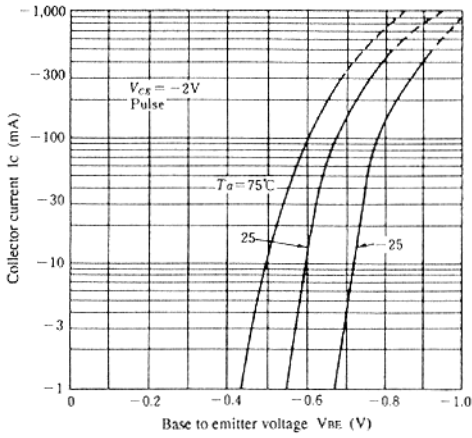
**TYPICAL OUTPUT CHARACTERISTICS (1)**



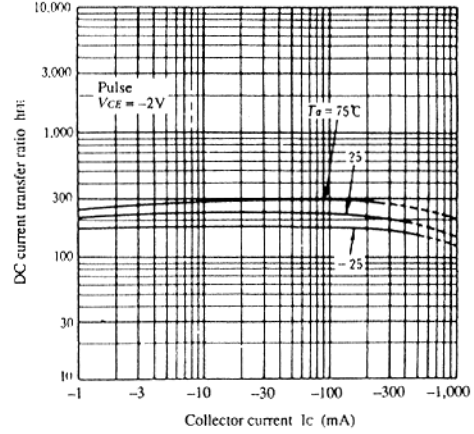
**TYPICAL OUTPUT CHARACTERISTICS (2)**



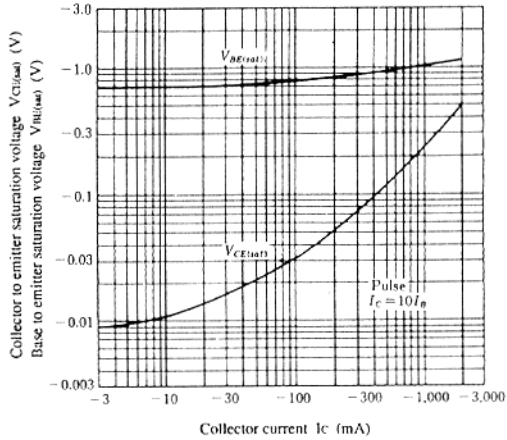
**TYPICAL TRANSFER CHARACTERISTICS**



**DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT**



**SATURATION VOLTAGE VS. COLLECTOR CURRENT**



**COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE**

