2SB1001

Silicon PNP Epitaxial

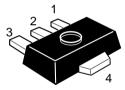
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Application

- Low frequency power amplifier
- Complementary pair with 2SD1367

Outline

UPAK



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



2SB1001

Absolute Maximum Ratings ($Ta = 25^{\circ}C$)

Item	Symbol	Ratings	Unit
Collector to base voltage	V _{CBO}	-20	V
Collector to emitter voltage	V _{CEO}	-16	V
Emitter to base voltage	V_{EBO}	-6	V
Collector current	I _c	-2	A
Collector peak current	i _{C(peak)} *1	-3	A
Collector power dissipation	P _c * ²	1	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C

Notes: 1. PW ≤ 10 ms, Duty cycle ≤ 20%

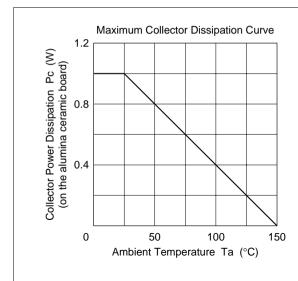
2. Value on the alumina ceramic board (12.5 \times 20 \times 0.7 mm)

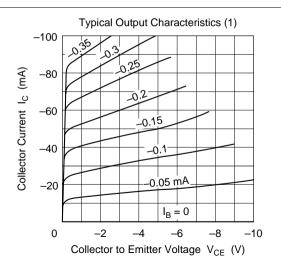
Electrical Characteristics ($Ta = 25^{\circ}C$)

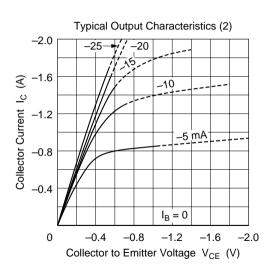
Item	Symbol	Min	Тур	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-20	_	_	V	$I_{c} = -10 \ \mu A, \ I_{E} = 0$
Collector to emitter breakdown voltage	$V_{\text{(BR)CEO}}$	-16	_	_	V	$I_{c} = -1 \text{ mA}, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-6	_	_	V	$I_{E} = -10 \mu\text{A}, \ I_{C} = 0$
Collector cutoff current	I _{CBO}	_	_	-0.1	μΑ	$V_{CB} = -16 \text{ V}, I_{E} = 0$
Emitter cutoff current	I _{EBO}	_	_	-0.1	μΑ	$V_{EB} = -5 \text{ V}, I_{C} = 0$
DC current transfer ratio	h _{FE} *1	100	_	320		$V_{CE} = -2 \text{ V},$ $I_{C} = -0.1 \text{ A (Pulse test)}$
Collector to emitter saturation voltage	$V_{\text{CE(sat)}}$	_	-0.15	-0.3	V	$I_{c} = -1 \text{ A},$ $I_{B} = -0.1 \text{ A (Pulse test)}$
Base to emitter saturation voltage	$V_{BE(sat)}$	_	-1.0	-1.2	V	$I_{c} = -1 \text{ A},$ $I_{B} = -0.1 \text{ A (Pulse test)}$
Gain bandwidth product	f _T	_	150	_	MHz	$V_{CE} = -2 \text{ V},$ $I_{C} = -10 \text{ mA}$
Collector output capacitance	Cob	_	50	_	pF	$V_{CB} = -10 \text{ V}, I_{E} = 0,$ f = 1 MHz

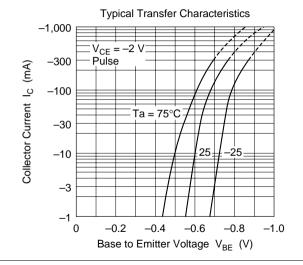
Note: 1. The 2SB1001 is grouped by h_{FE} as follows.

Mark	ВН	BJ		
h _{FE}	100 to 200	160 to 320		

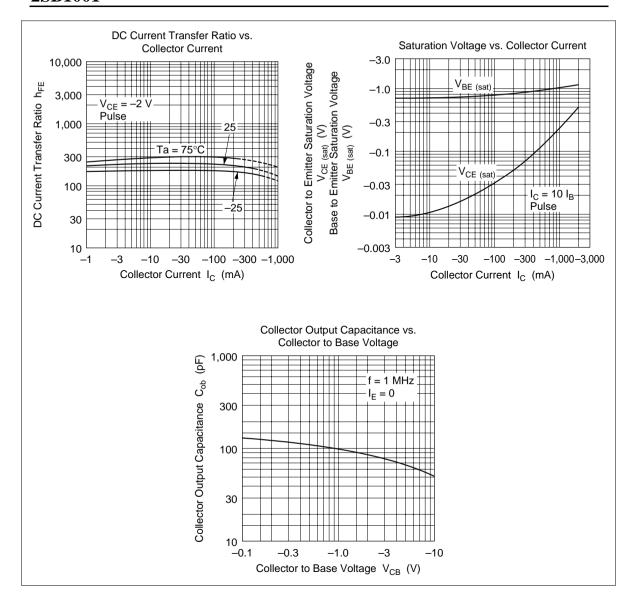




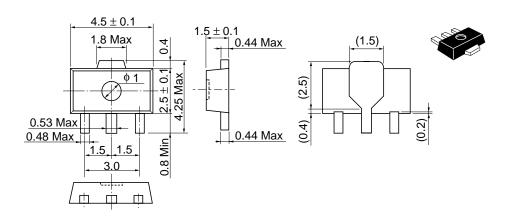




2SB1001



Unit: mm



Hitachi Code	UPAK
JEDEC	_
EIAJ	Conforms
Weight (reference value)	0.050 g

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