

## 2SB831

Silicon PNP Epitaxial

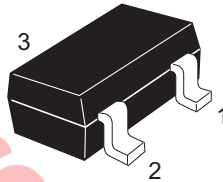
REJ03G0653-0200  
(Previous ADE-208-1033)  
Rev.2.00  
Aug.10.2005

### Application

- Low frequency amplifier
- Complementary pair with 2SD1101

### Outline

RENESAS Package code: PLSP0003ZB-A  
(Package name: MPAK)



1. Emitter
2. Base
3. Collector

### Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	-25	V
Collector to emitter voltage	$V_{CEO}$	-20	V
Emitter to base voltage	$V_{EBO}$	-5	V
Collector current	$I_C$	-0.7	A
Collector peak current	$i_{C(peak)}$	-1	A
Collector power dissipation	$P_C$	150	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

## Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-25	—	—	V	$I_C = -10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-20	—	—	V	$I_C = -1 \text{ mA}, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-5	—	—	V	$I_E = -10 \mu A, I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	-1.0	$\mu A$	$V_{CB} = -20 \text{ V}, I_E = 0$
DC current transfer ratio	$h_{FE}^{*1}$	85	—	240		$V_{CE} = -1 \text{ V}, I_C = -0.15 \text{ A}^{*2}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	-0.5	V	$I_C = -0.5 \text{ A}, I_B = -0.05 \text{ A}^{*2}$
Base to emitter voltage	$V_{BE}$	—	—	-1.0	V	$V_{CE} = -1 \text{ V}, I_C = -0.15 \text{ A}^{*2}$

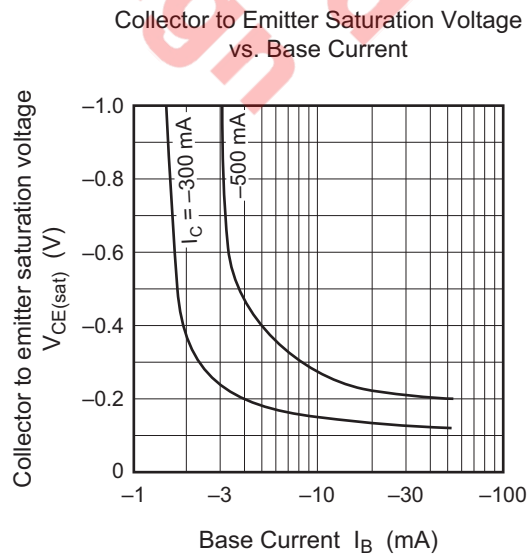
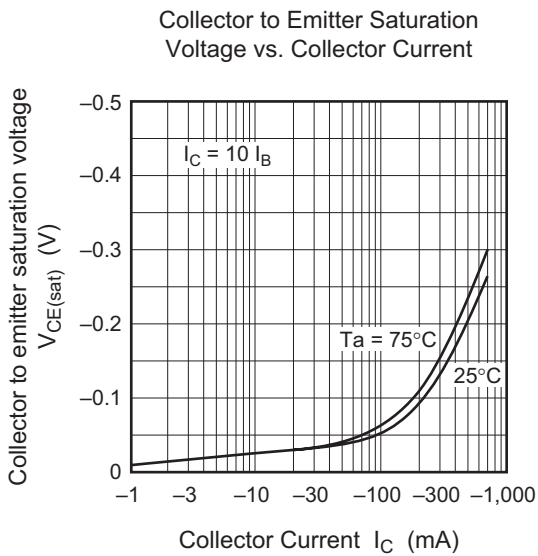
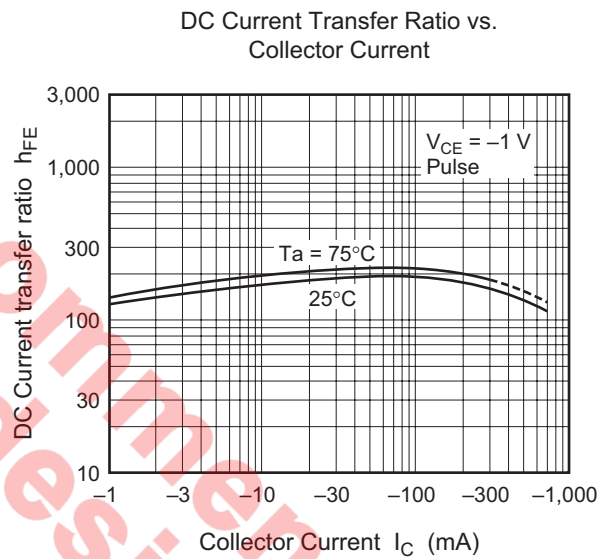
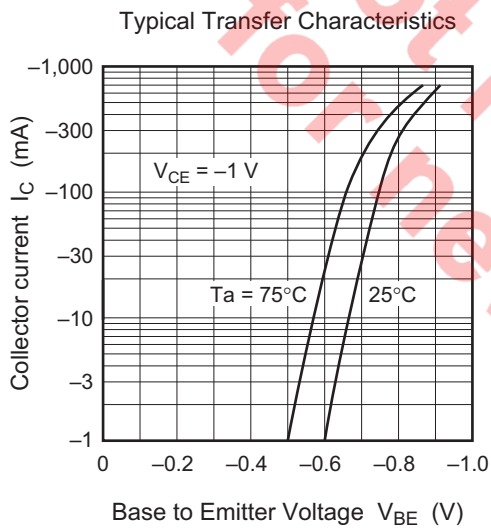
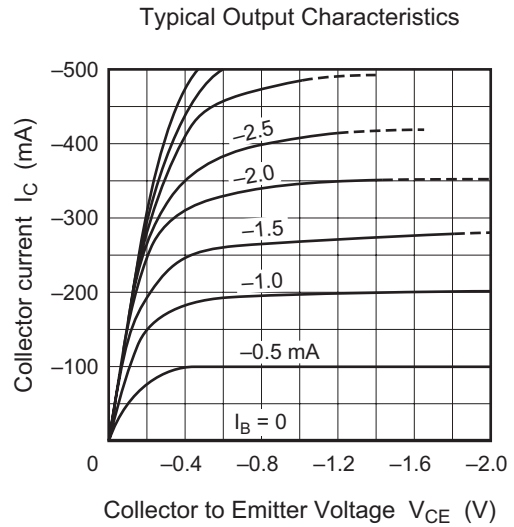
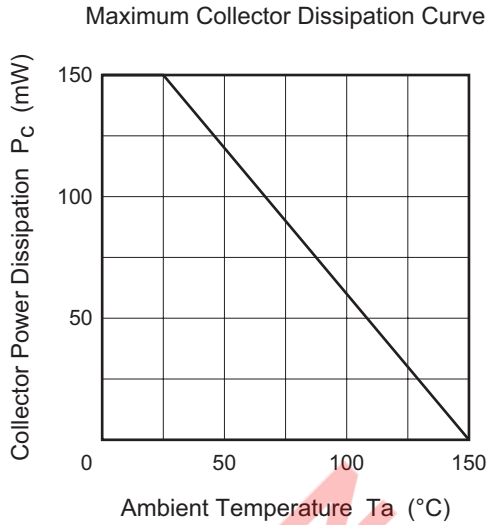
Notes: 1. The 2SB831 is grouped by  $h_{FE}$  as follows.

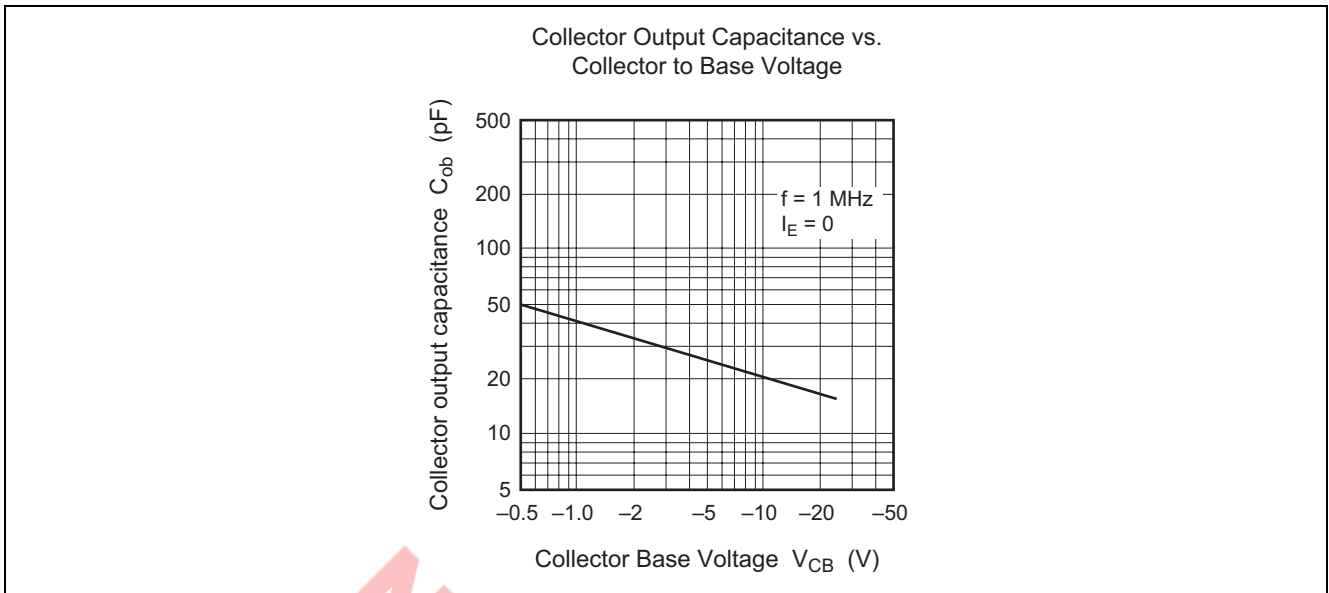
2. Pulse test

Grade	B	C
Mark	BB	BC
$h_{FE}$	85 to 170	120 to 240

Not recommend  
for new design

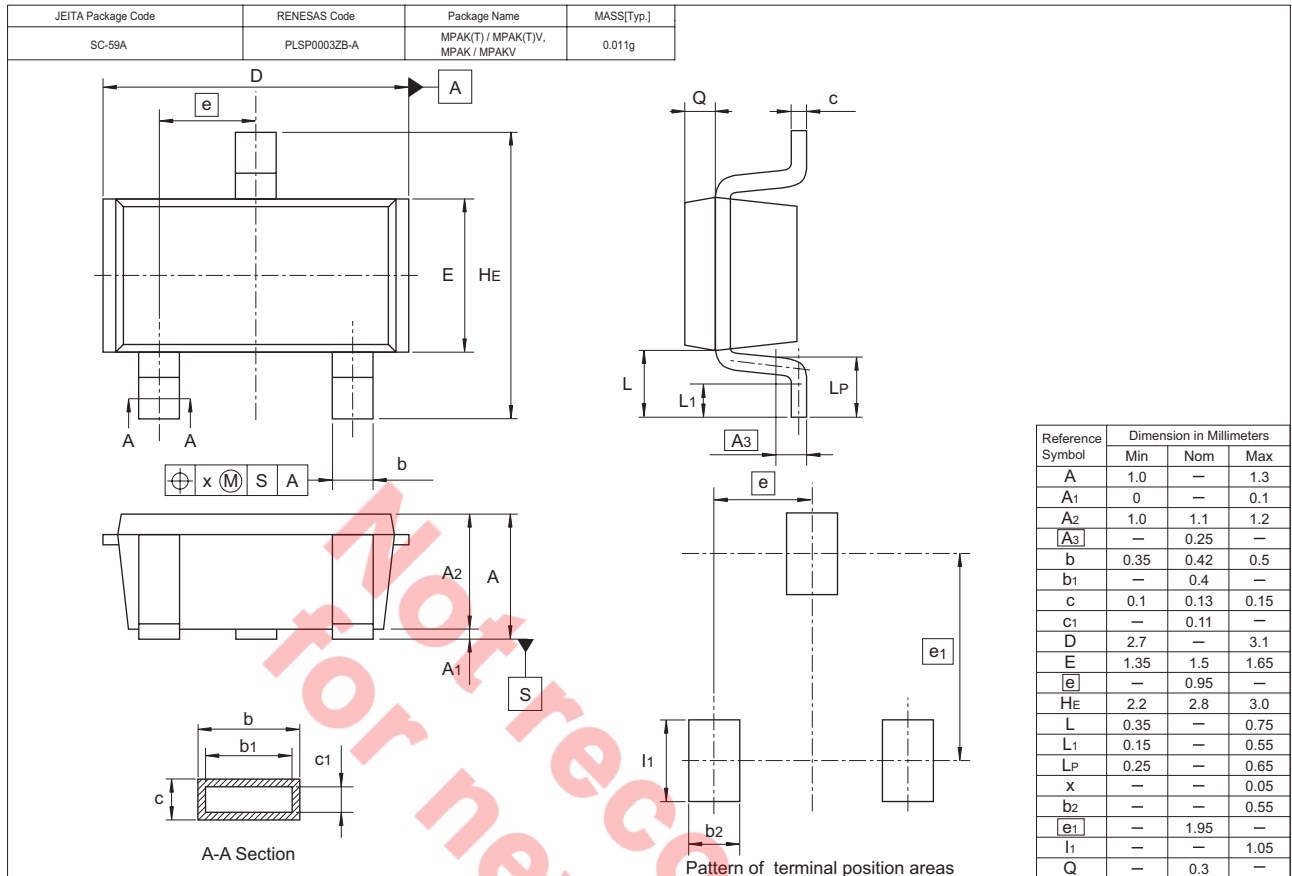
Main Characteristics





Not recommend  
for new design

### Package Dimensions



### Ordering Information

Part Name	Quantity	Shipping Container
2SB831BBTL-E	3000	φ 178 mm Reel, 8 mm Emboss Taping
2SB831BCTL-E		

Note: For some grades, production may be terminated. Please contact the Renesas sales office to check the state of production before ordering the product.

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