

To our customers,

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## Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

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## 2SB1025

Silicon PNP Epitaxial

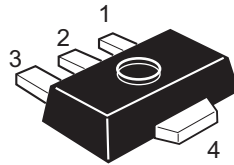
REJ03G0661-0200  
 (Previous ADE-208-1036)  
 Rev.2.00  
 Aug.10.2005

### Application

- Low frequency power amplifier
- Complementary pair with 2SD1418

### Outline

RENESAS Package code: PLZZ0004CA-A  
 (Package name: UPAK<sup>®</sup>)



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

\*UPAK is a trademark of Renesas Technology Corp.

### Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	-120	V
Collector to emitter voltage	$V_{CEO}$	-80	V
Emitter to base voltage	$V_{EBO}$	-5	V
Collector current	$I_C$	-1	A
Collector peak current	$i_{C(peak)}^{*1}$	-2	A
Collector power dissipation	$P_C^{*2}$	1	W
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

Notes: 1.  $PW \leq 10$  ms, Duty cycle  $\leq 20\%$

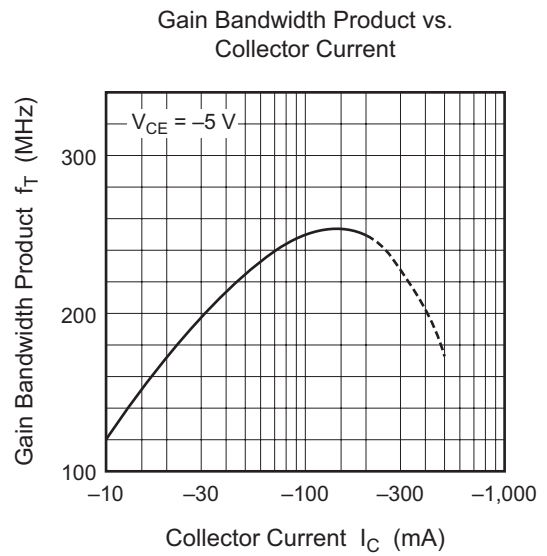
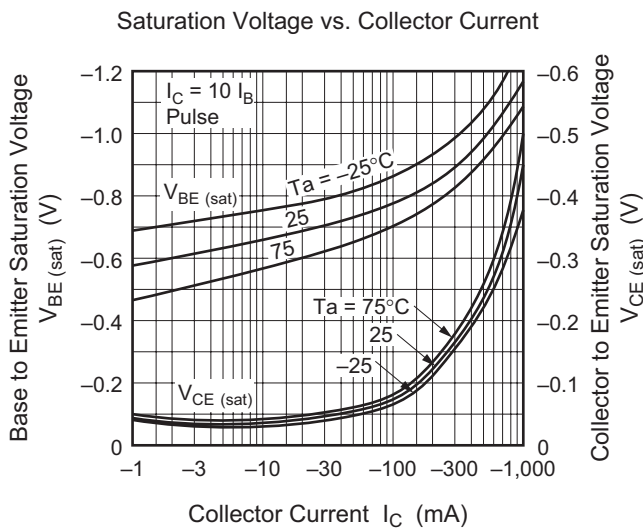
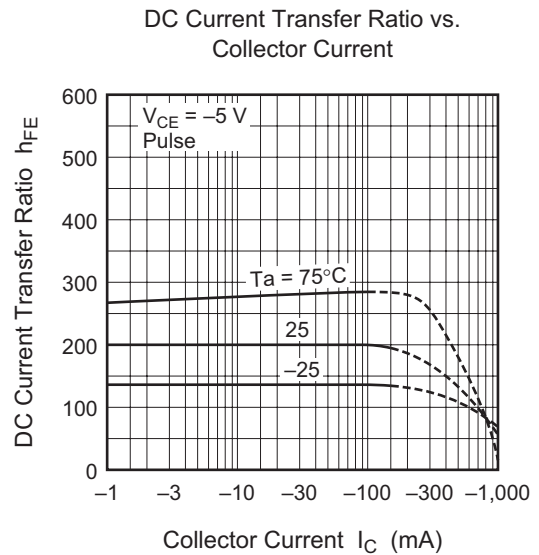
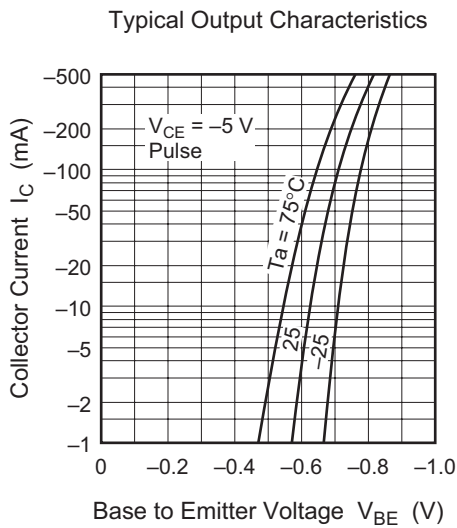
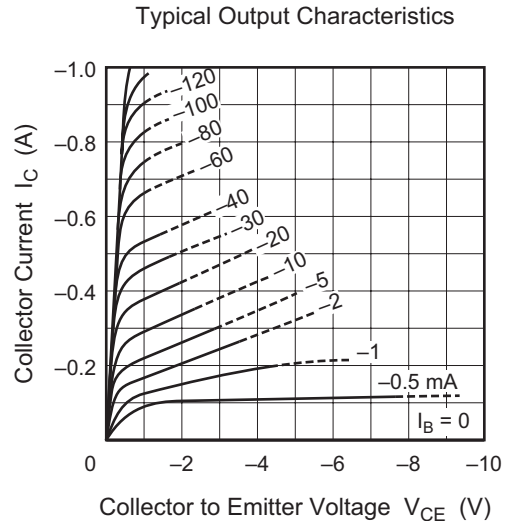
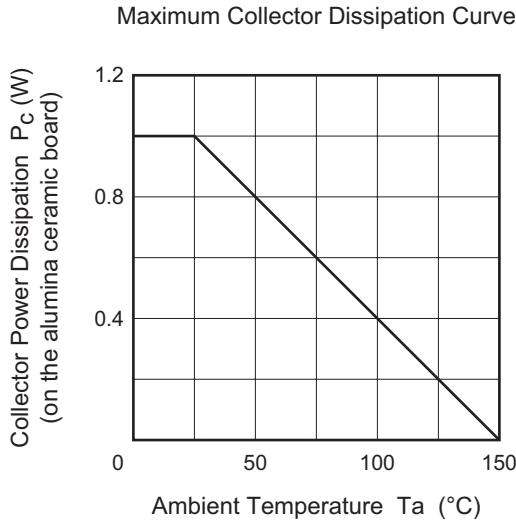
2. Value on the alumina ceramic board (12.5 × 20 × 0.7 mm)

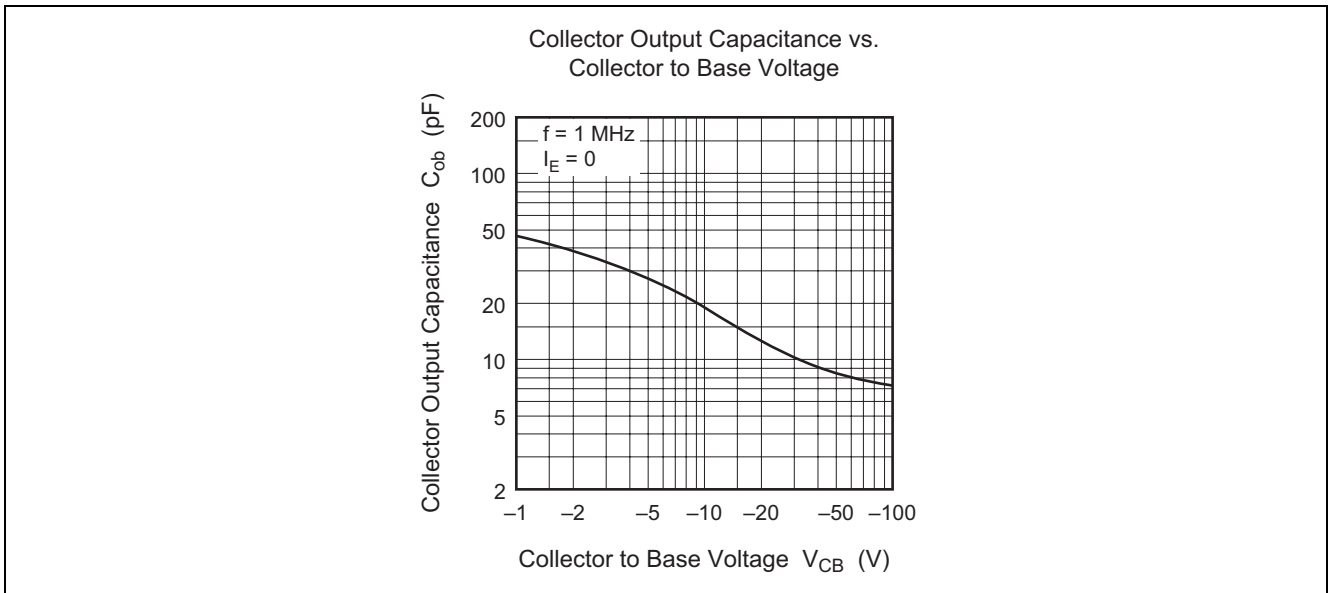
## Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-120	—	—	V	$I_C = -10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-80	—	—	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	$I_{CBO}$	—	—	-10	$\mu A$	$V_{CB} = -100 \text{ V}, I_E = 0$
DC current transfer ratio	$h_{FE1}$	100	—	200		$V_{CE} = -5 \text{ V}, I_C = -150 \text{ mA}$
	$h_{FE2}$	30	—	—		$V_{CE} = -5 \text{ V},$ $I_C = -500 \text{ mA}$ (Pulse test)
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	-1	V	$I_C = -500 \text{ mA},$ $I_B = -50 \text{ mA}$ (Pulse test)
Base to emitter voltage	$V_{BE}$	—	—	-0.9	V	$V_{CE} = -5 \text{ V}, I_C = -150 \text{ mA}$
Gain bandwidth product	$f_T$	—	140	—	MHz	$V_{CE} = -5 \text{ V}, I_C = -150 \text{ mA}$
Collector output capacitance	$C_{ob}$	—	20	—	pF	$V_{CB} = -10 \text{ V}, I_E = 0,$ $f = 1 \text{ MHz}$

Main Characteristics







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