

## 2SD1368

Silicon NPN Epitaxial

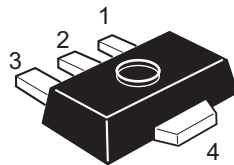
REJ03G0786-0200  
 (Previous ADE-208-1148)  
 Rev.2.00  
 Aug.10.2005

### Application

- Low frequency power amplifier
- Complementary pair with 2SB1002

### 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	$V_{CBO}$	100	V
Collector to emitter voltage	$V_{CEO}$	50	V
Emitter to base voltage	$V_{EBO}$	6	V
Collector current	$I_C$	1	A
Collector peak current	$i_{C(peak)}$ * <sup>1</sup>	1.5	A
Collector power dissipation	$P_C$ * <sup>2</sup>	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 x 20 x 0.7 mm)

## Electrical Characteristics

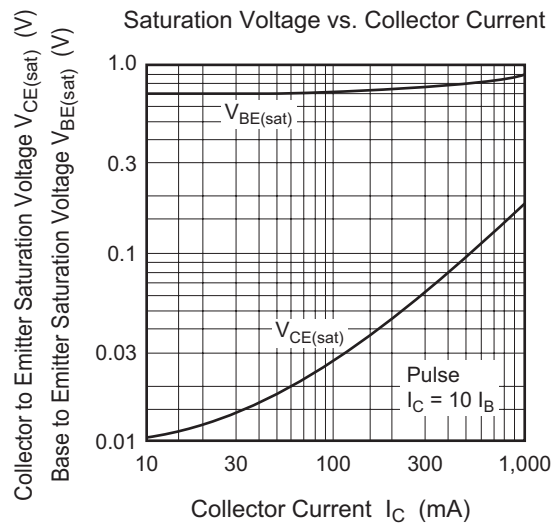
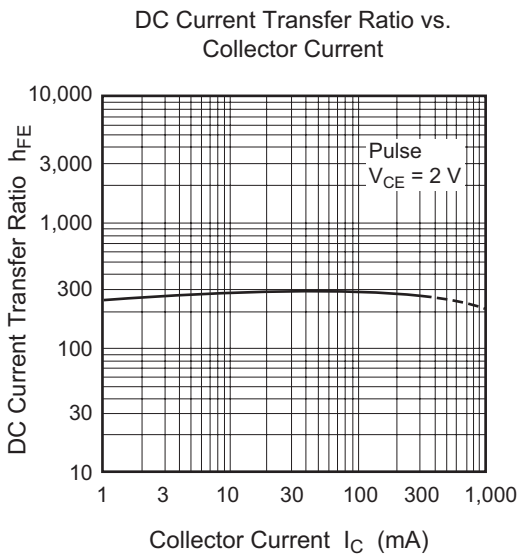
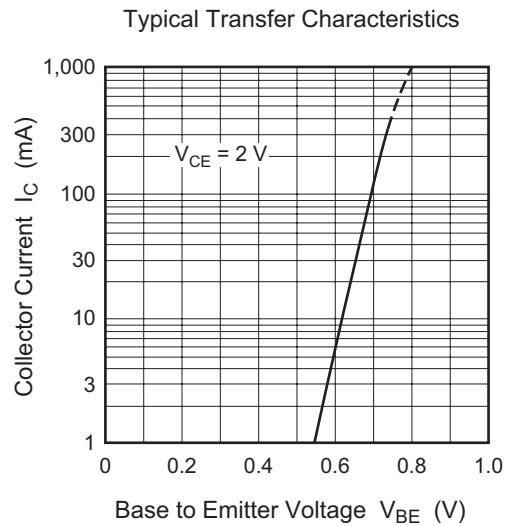
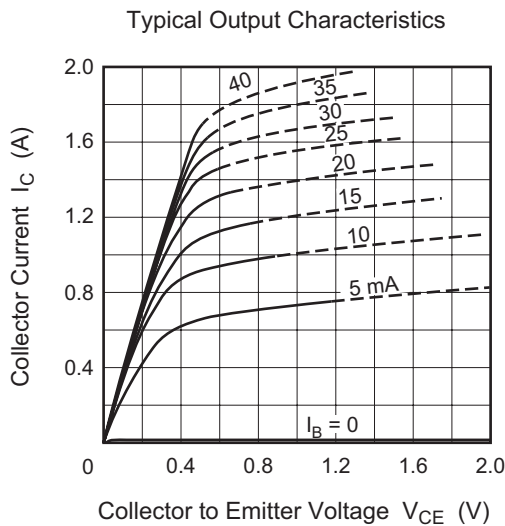
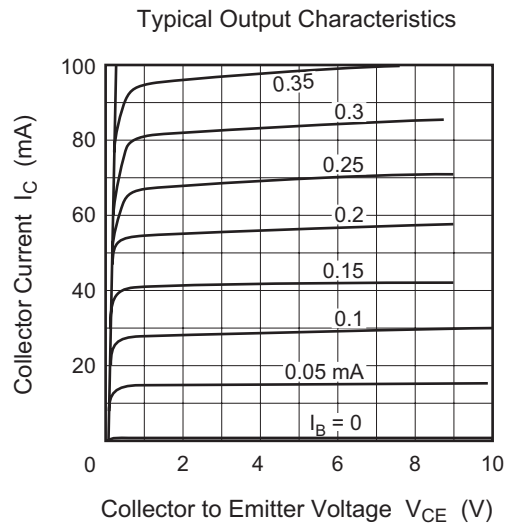
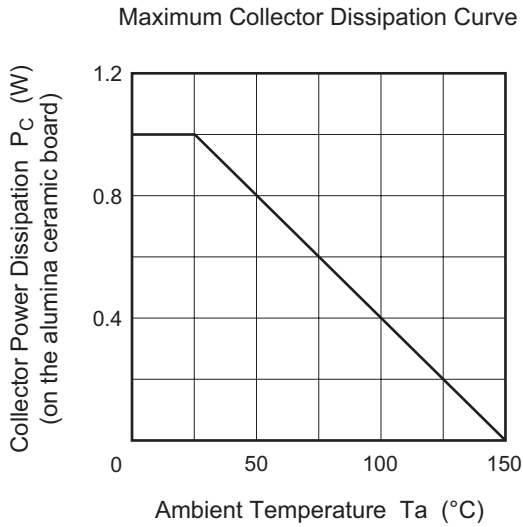
(Ta = 25°C)

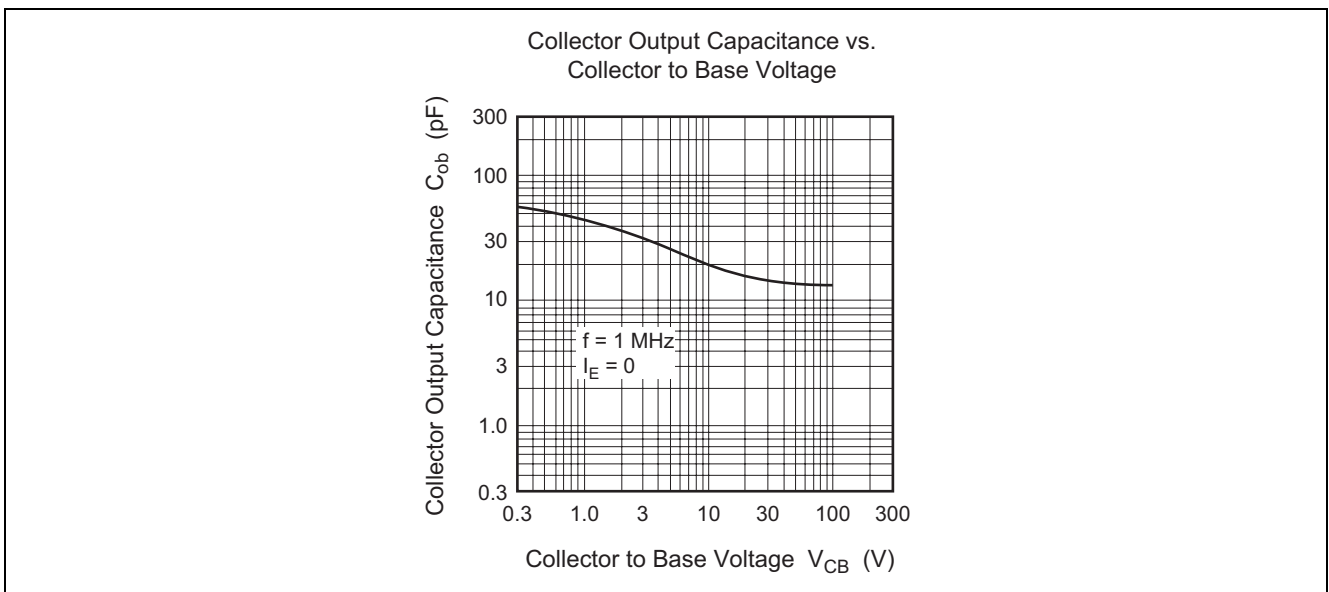
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	100	—	—	V	$I_C = 10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	50	—	—	V	$I_C = 1 mA, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	6	—	—	V	$I_E = 10 \mu A, I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	0.1	$\mu A$	$V_{CB} = 80 V, I_E = 0$
Emitter cutoff current	$I_{EBO}$	—	—	0.1	$\mu A$	$V_{EB} = 4 V, I_C = 0$
DC current transfer ratio	$h_{FE}^{*1}$	160	—	500		$V_{CE} = 2 V, I_C = 0.1 A$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	0.3	V	$I_C = 1 A, I_B = 0.1 A, \text{Pulse}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	1.2	V	$I_C = 1 A, I_B = 0.1 A, \text{Pulse}$
Gain bandwidth product	$f_T$	—	100	—	MHz	$V_{CE} = 2 V, I_C = 10 mA, \text{Pulse}$
Collector output capacitance	$C_{ob}$	—	20	—	pF	$V_{CB} = 10 V, I_E = 0, f = 1 MHz$

Note: 1. The 2SD1368 is grouped by  $h_{FE}$  as follows.

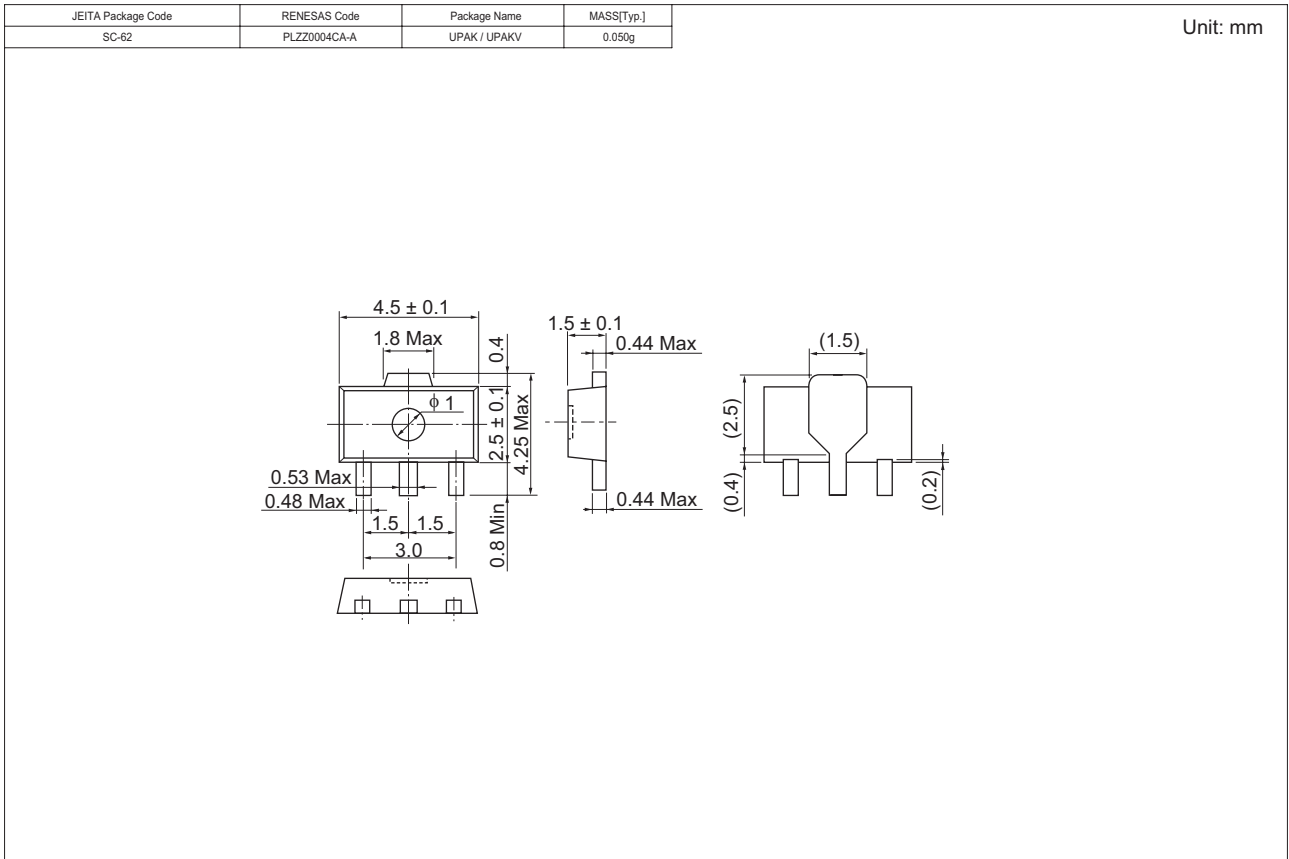
Mark	CB	CC
$h_{FE}$	160 to 320	250 to 500

### Main Characteristics





## Package Dimensions



## Ordering Information

Part Name	Quantity	Shipping Container
2SD1368CBTL-E 2SD1368CCTL-E	1000	$\phi$ 178 mm Reel, 12 mm Emboss Taping

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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