

2SD1368

Silicon NPN Epitaxial

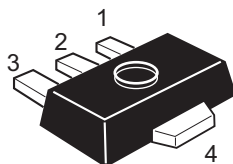
REJ03G0786-0200
(Previous ADE-208-1148)
Rev.2.00
Aug.10.2005

Application

- Low frequency power amplifier
- Complementary pair with 2SB1002

Outline

RENESAS Package code: PLZZ0004CA-A
(Package name: UPAK[®])



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	$i_{C(peak)}^{*1}$	1.5	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 x 20 x 0.7 mm)

Electrical Characteristics

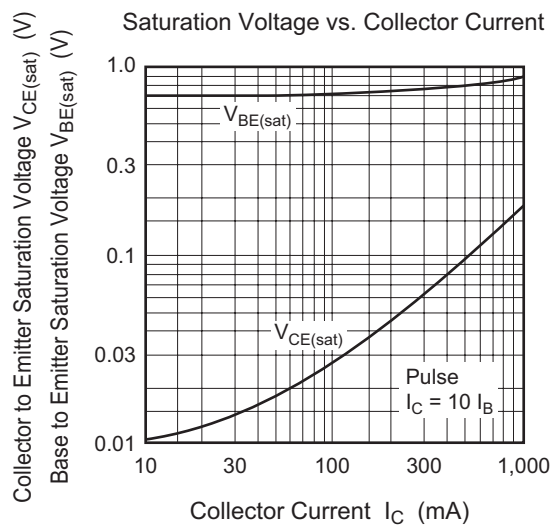
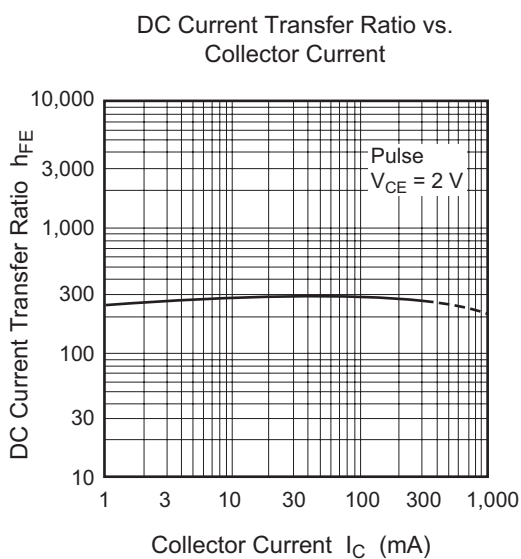
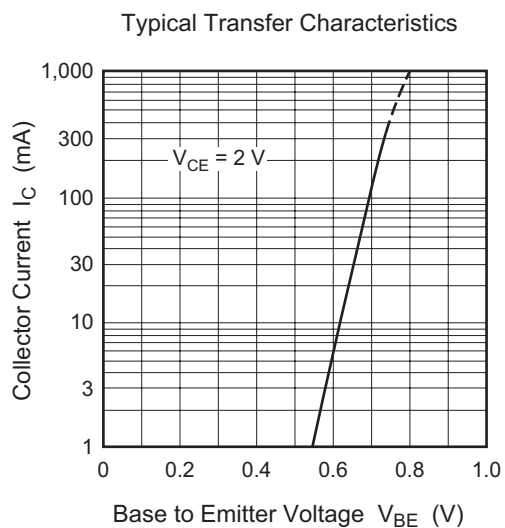
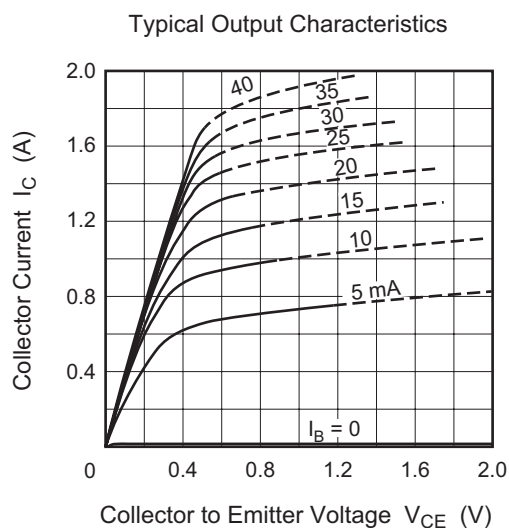
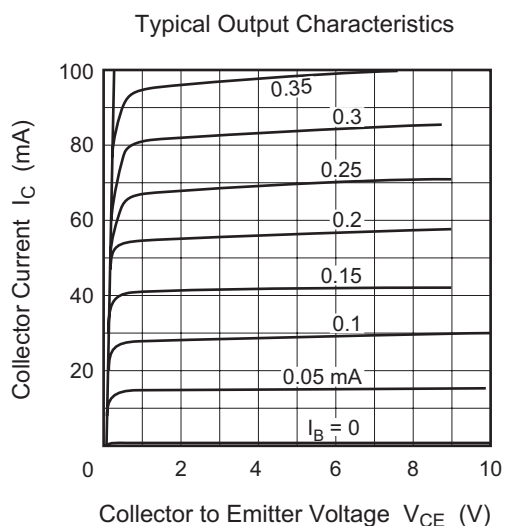
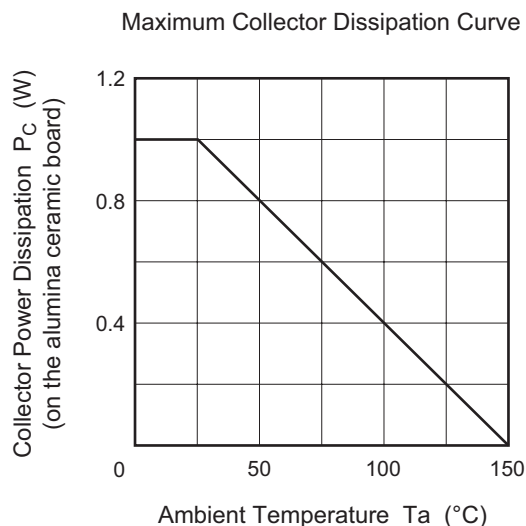
(Ta = 25°C)

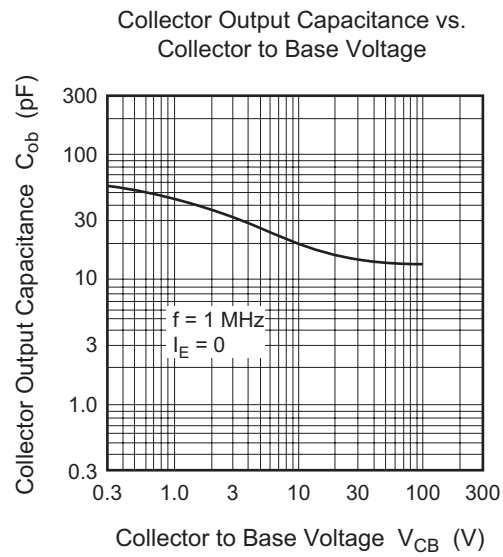
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	100	—	—	V	$I_C = 10\ \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	50	—	—	V	$I_C = 1\ mA, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	6	—	—	V	$I_E = 10\ \mu A, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	0.1	μA	$V_{CB} = 80\ V, I_E = 0$
Emitter cutoff current	I_{EBO}	—	—	0.1	μA	$V_{EB} = 4\ V, I_C = 0$
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	$I_C = 1\ A, I_B = 0.1\ A$, Pulse
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	1.2	V	$I_C = 1\ A, I_B = 0.1\ A$, Pulse
Gain bandwidth product	f_T	—	100	—	MHz	$V_{CE} = 2\ V, I_C = 10\ mA$, 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

JEITA Package Code	RENESAS Code	Package Name	MASS[Typ.]	Unit: mm
SC-62	PLZZ0004CA-A	UPAK / UPAKV	0.050g	

The drawing shows three views of the package: a top view, a side view, and an end view. The top view shows a rectangular package with a central circular feature of diameter $\phi 1$. Dimensions include a total width of 4.5 ± 0.1 mm, a maximum width of 1.8 mm, a height of 0.4 mm, a maximum height of 2.5 ± 0.1 mm, a minimum height of 0.8 mm, and a maximum height of 4.25 mm. The side view shows a maximum width of 1.5 ± 0.1 mm, a maximum height of 0.44 mm, and a maximum height of 0.44 mm. The end view shows a maximum width of 1.5 mm, a maximum height of 2.5 mm, and a maximum height of 0.4 mm. The bottom view shows a maximum width of 3.0 mm and a maximum height of 0.53 mm.

Ordering Information

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