

## 2SD1419

Silicon NPN Epitaxial

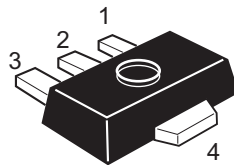
REJ03G0788-0200  
(Previous ADE-208-1150)  
Rev.2.00  
Aug.10.2005

### Application

- Low frequency power amplifier
- Complementary pair with 2SB1026

### Outline

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



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

Note: Marking is "DE".

\*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	$V_{CEO}$	100	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 ≤ 10 ms, Duty cycle ≤ 20%

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

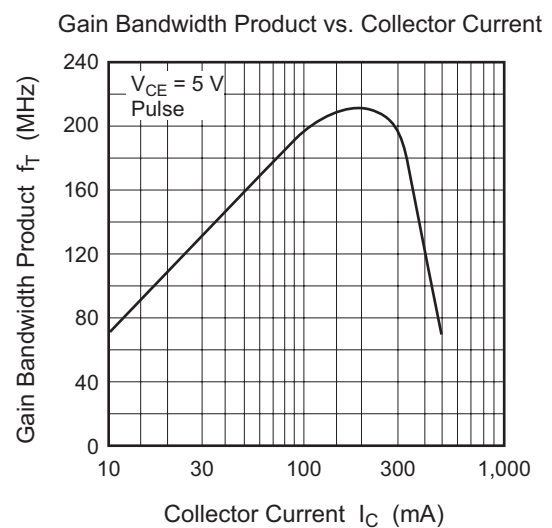
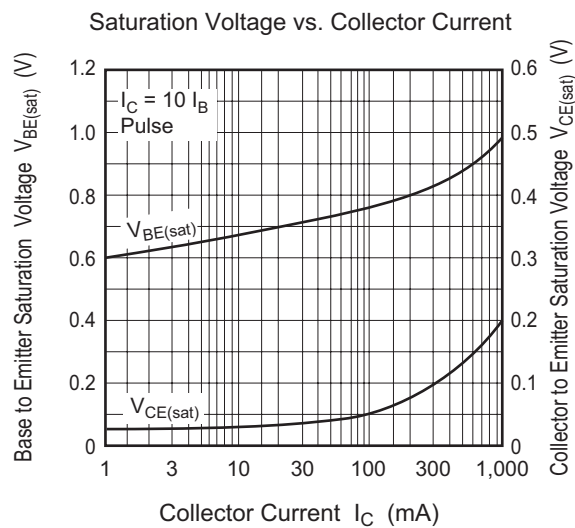
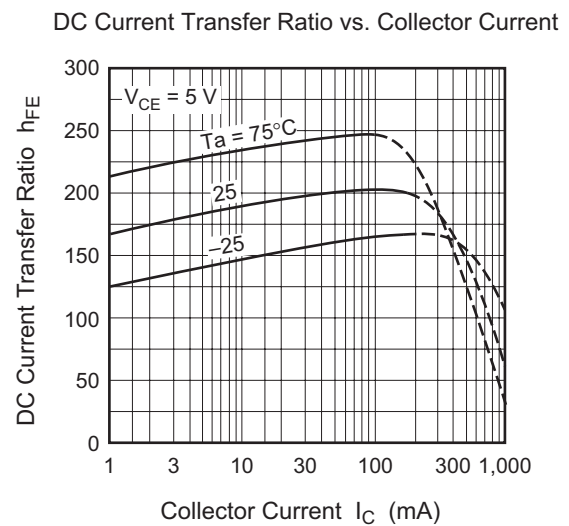
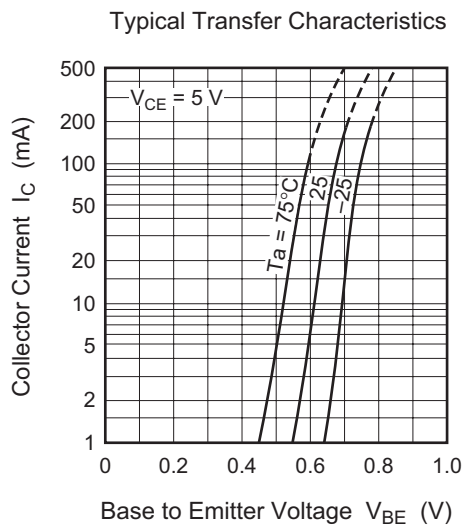
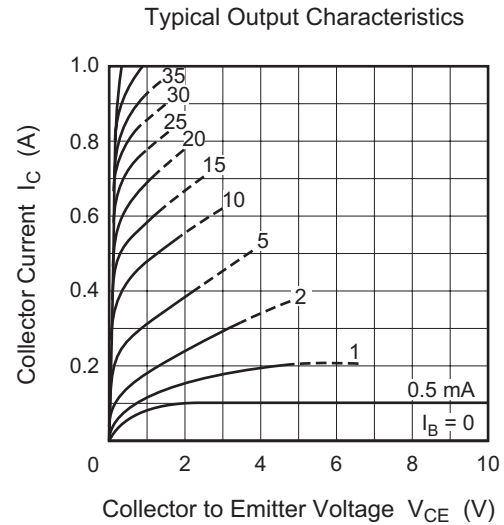
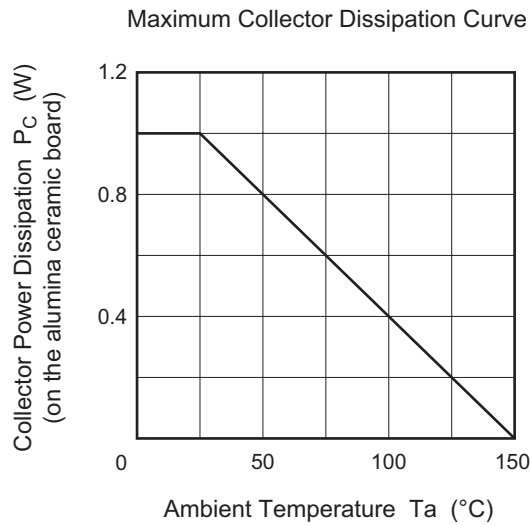
## Electrical Characteristics

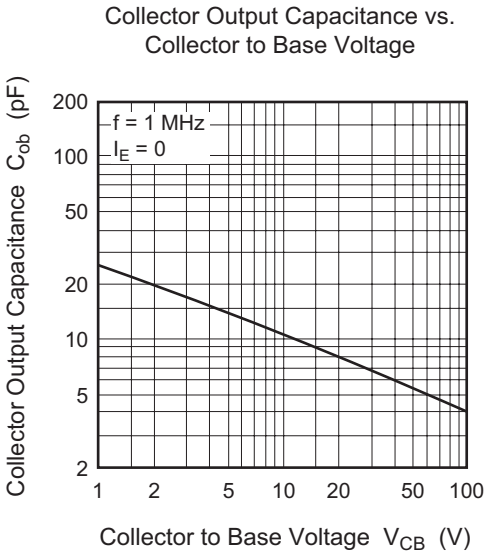
(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	120	—	—	V	$I_C = 10\ \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	100	—	—	V	$I_C = 1\ mA, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	—	—	V	$I_E = 10\ \mu A, I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	10	$\mu A$	$V_{CB} = 100\ V, I_E = 0$
DC current transfer ratio	$h_{FE1}$	100	—	200		$V_{CE} = 5\ V, I_C = 150\ mA^{*1}$
	$h_{FE2}$	30	—	—		$V_{CE} = 5\ V, I_C = 500\ mA^{*1}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1	V	$I_C = 500\ mA, I_B = 50\ mA^{*1}$
Base to emitter voltage	$V_{BE}$	—	—	1.5	V	$V_{CE} = 5\ V, I_C = 150\ mA^{*1}$
Gain bandwidth product	$f_T$	—	140	—	MHz	$V_{CE} = 5\ V, I_C = 150\ mA^{*1}$
Collector output capacitance	$C_{ob}$	—	12	—	pF	$V_{CB} = 10\ V, I_E = 0, f = 1\ MHz$

Notes: 1. Pulse test

## Main Characteristics

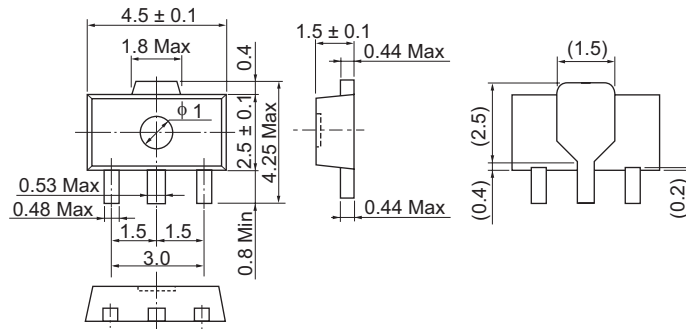




## Package Dimensions

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

Unit: mm



## Ordering Information

Part Name	Quantity	Shipping Container
2SD1419DETL-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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