

## 2SB1048

Silicon PNP Epitaxial, Darlington

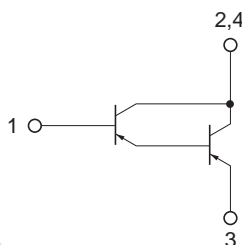
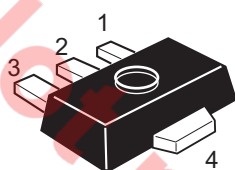
REJ03G0665-0200  
 (Previous ADE-208-1040)  
 Rev.2.00  
 Aug.10.2005

### Application

High gain amplifier

### Outline

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



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

Note: Marking is "BT"

\*UPAK is a trademark of Renesas Technology Corp.

### Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	-60	V
Collector to emitter voltage	$V_{CEO}$	-60	V
Emitter to base voltage	$V_{EBO}$	-7	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 × 30 × 0.7 mm)

## Electrical Characteristics

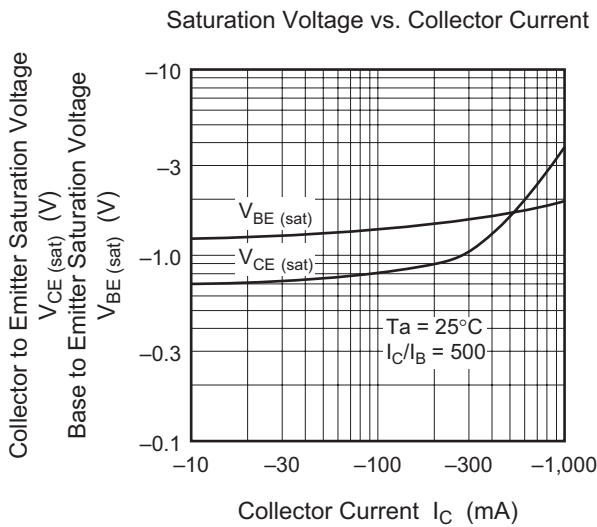
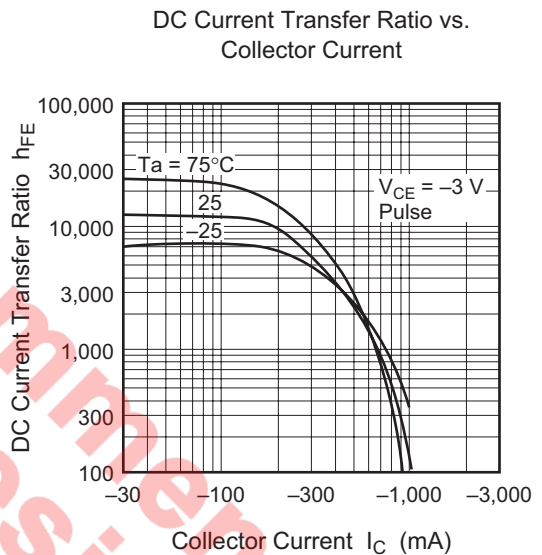
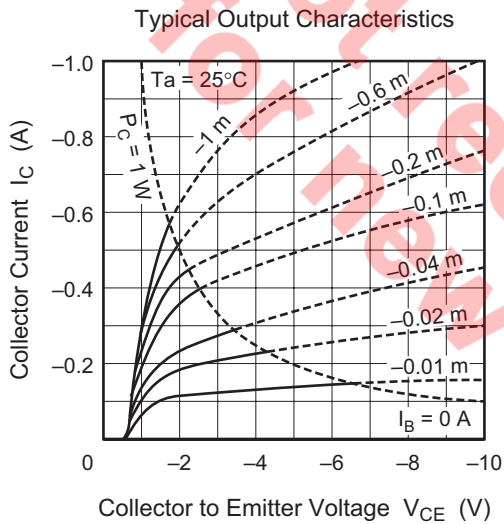
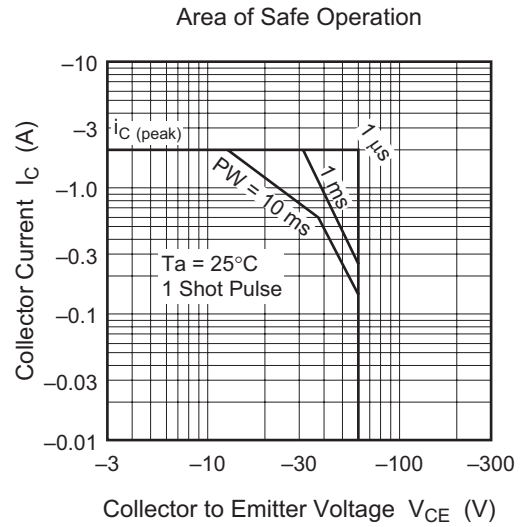
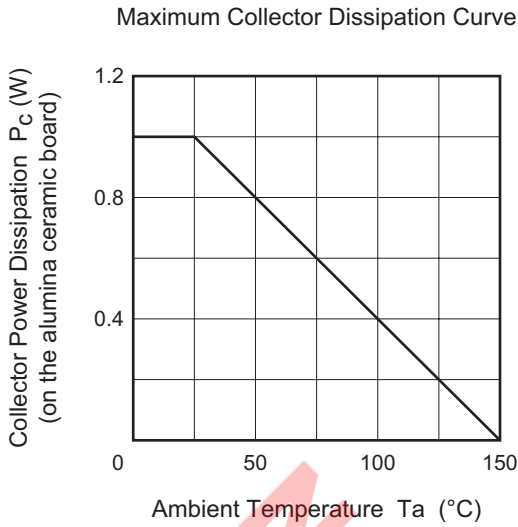
(Ta = 25°C)

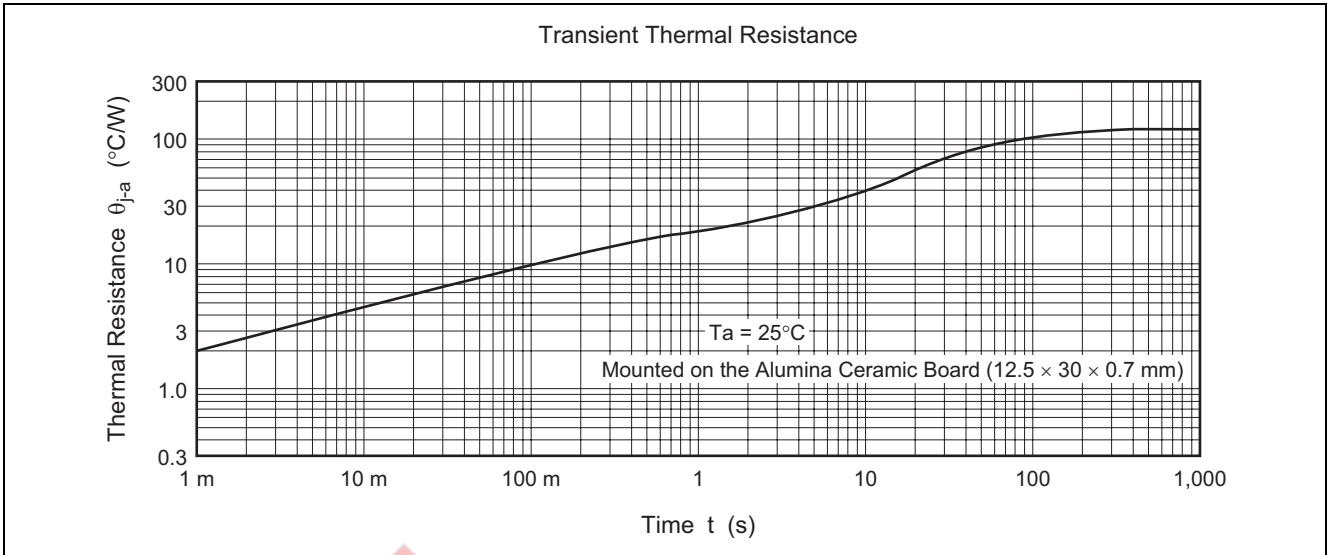
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-60	—	—	V	$I_C = -10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-60	—	—	V	$I_C = -1 \text{ mA}, R_{BE} = \infty$
Collector cutoff current	$I_{CBO}$	—	—	-10	$\mu A$	$V_{CB} = -60 \text{ V}, I_E = 0$
Emitter cutoff current	$I_{EBO}$	—	—	-10	$\mu A$	$V_{EB} = -7 \text{ V}, I_E = 0$
DC current transfer ratio	$h_{FE}$	2000	—	100000		$V_{CE} = -3 \text{ V}, I_C = -500 \text{ mA}^{*1}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	-2.0	V	$I_C = -500 \text{ mA}, I_B = -1 \text{ mA}^{*1}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	-2.0	V	$I_C = -500 \text{ mA}, I_B = -1 \text{ mA}^{*1}$

Notes: 1. Pulse test

Not recommend  
for new design

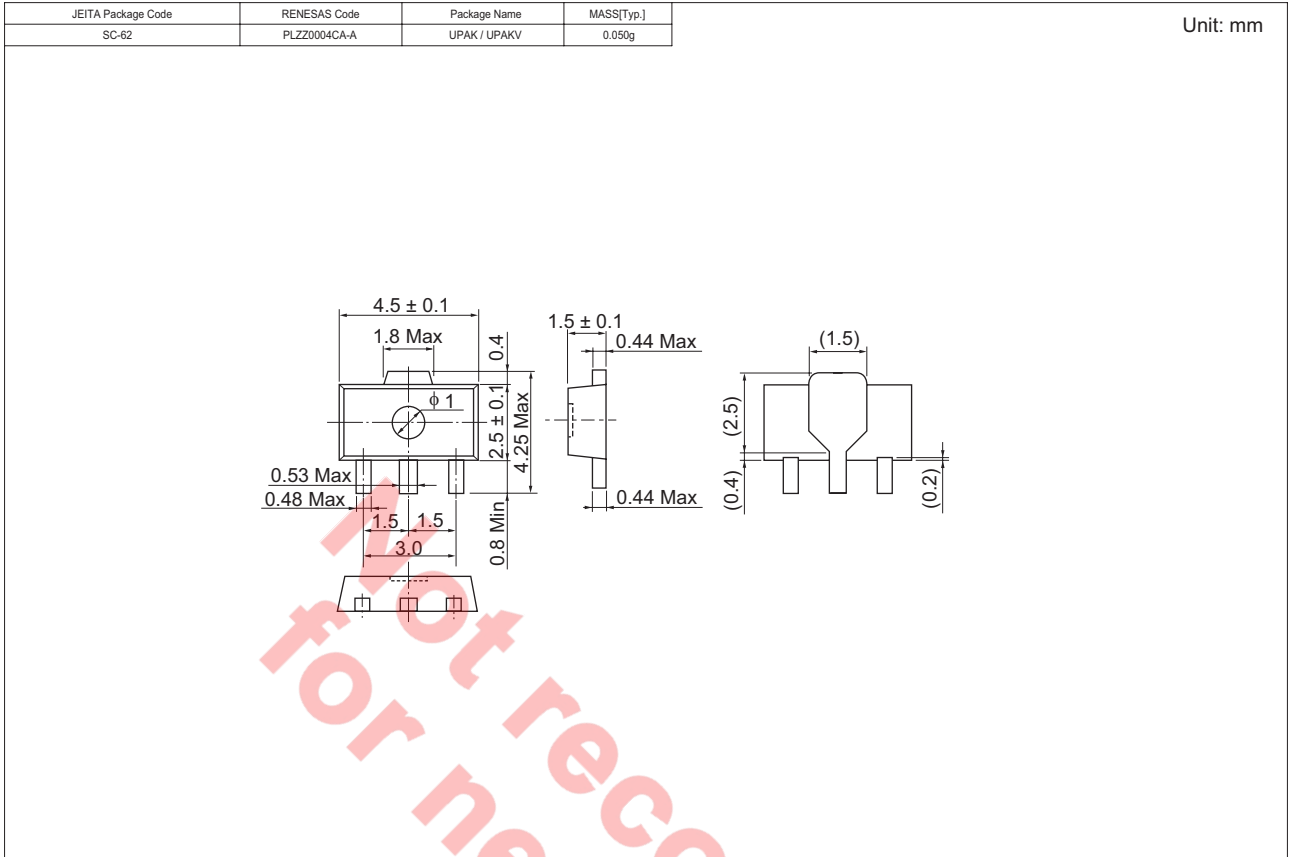
Main Characteristics





Not recommend  
for new design

Package Dimensions



Ordering Information

Part Name	Quantity	Shipping Container
2SB1048BTTR-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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