

# 2SB561

Silicon PNP Epitaxial

REJ03G0645-0200  
(Previous ADE-208-1023)  
Rev.2.00  
Aug.10.2005

## Application

- Low frequency power amplifier
- Complementary pair with 2SD467

## Outline

RENESAS Package code: PRSS0003DA-A  
(Package name: TO-92 (1))



1. Emitter  
2. Collector  
3. Base

## Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	-25	V
Collector to emitter voltage	$V_{CEO}$	-20	V
Emitter to base voltage	$V_{EBO}$	-5	V
Collector current	$I_C$	-0.7	A
Collector peak current	$i_{C(peak)}$	-1.0	A
Collector power dissipation	$P_C$	0.5	W
Junction temperature	$T_J$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

## Electrical Characteristics

(Ta = 25°C)

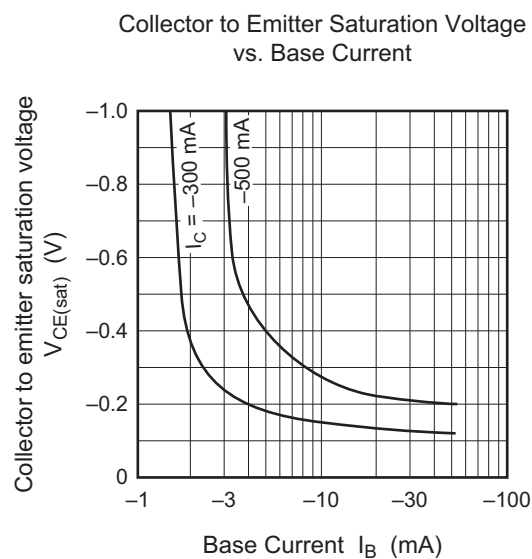
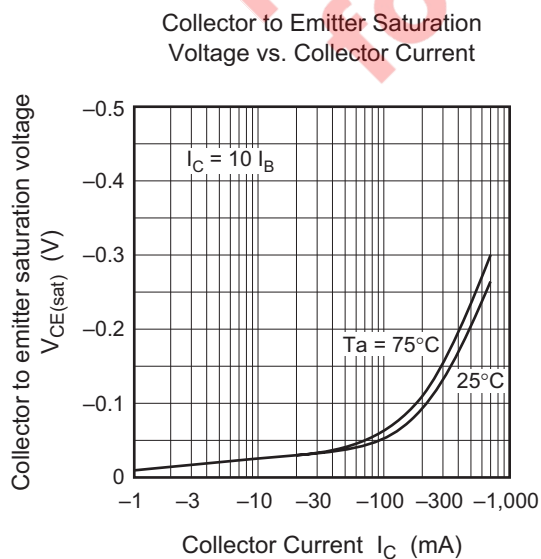
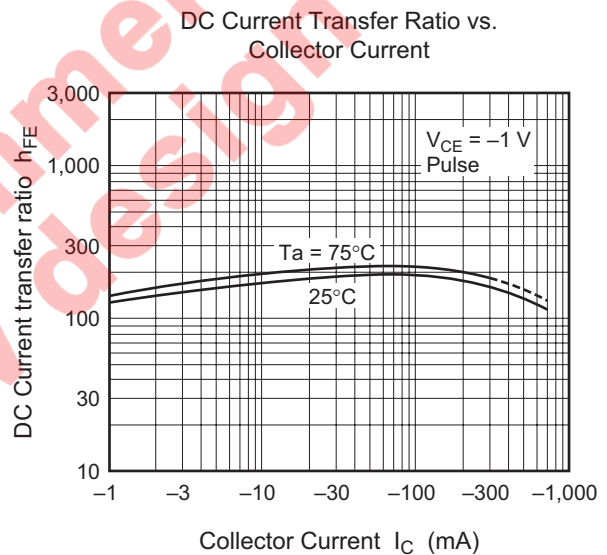
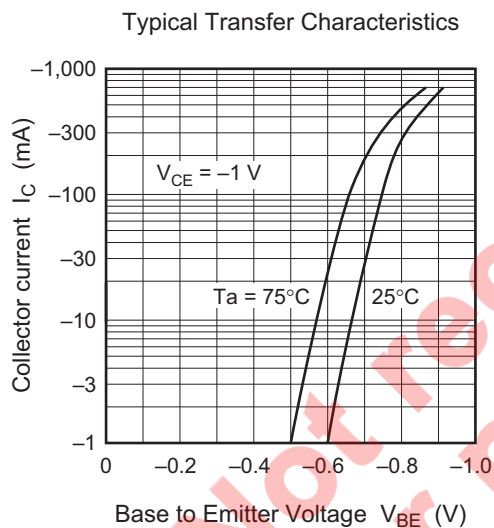
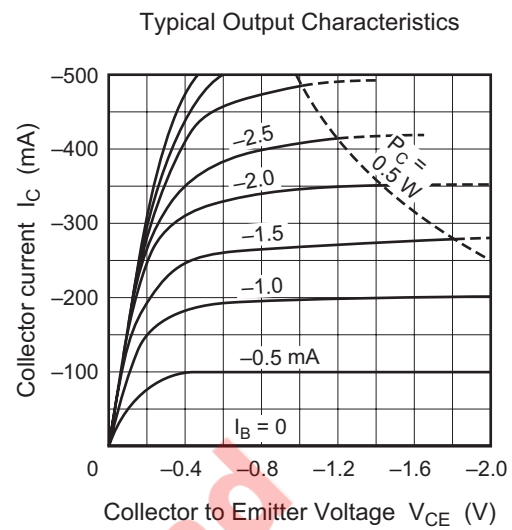
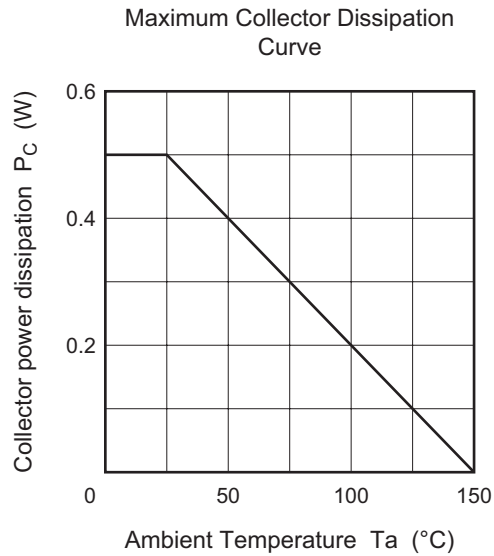
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-25	—	—	V	$I_C = -10\ \mu A$ , $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-20	—	—	V	$I_C = -1\ mA$ , $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-5	—	—	V	$I_E = -10\ \mu A$ , $I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	-1.0	$\mu A$	$V_{CB} = -20\ V$ , $I_E = 0$
DC current transfer ratio	$h_{FE}^{*1}$	85	—	240		$V_{CE} = -1\ V$ , $I_C = -0.15\ A$ (Pulse test)
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	-0.2	-0.5	V	$I_C = -0.5\ A$ , $I_B = -0.05\ A$
Base to emitter voltage	$V_{BE}$	—	-0.75	-1.0	V	$V_{CE} = -1\ V$ , $I_C = -0.15\ A$
Gain bandwidth product	$f_T$	—	350	—	MHz	$V_{CE} = -1\ V$ , $I_C = -0.15\ A$
Collector output capacitance	$C_{ob}$	—	20	—	pF	$V_{CB} = -10\ V$ , $I_E = 0$ $f = 1\ MHz$

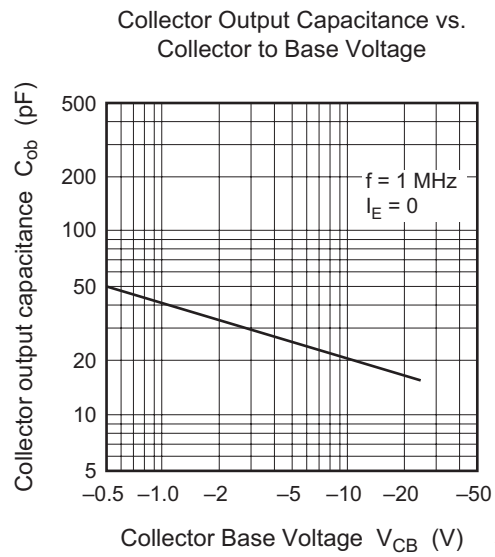
Note: 1. The 2SB561 is grouped by  $h_{FE}$  as follows.

B	C
85 to 170	120 to 240

Not recommend  
for new design

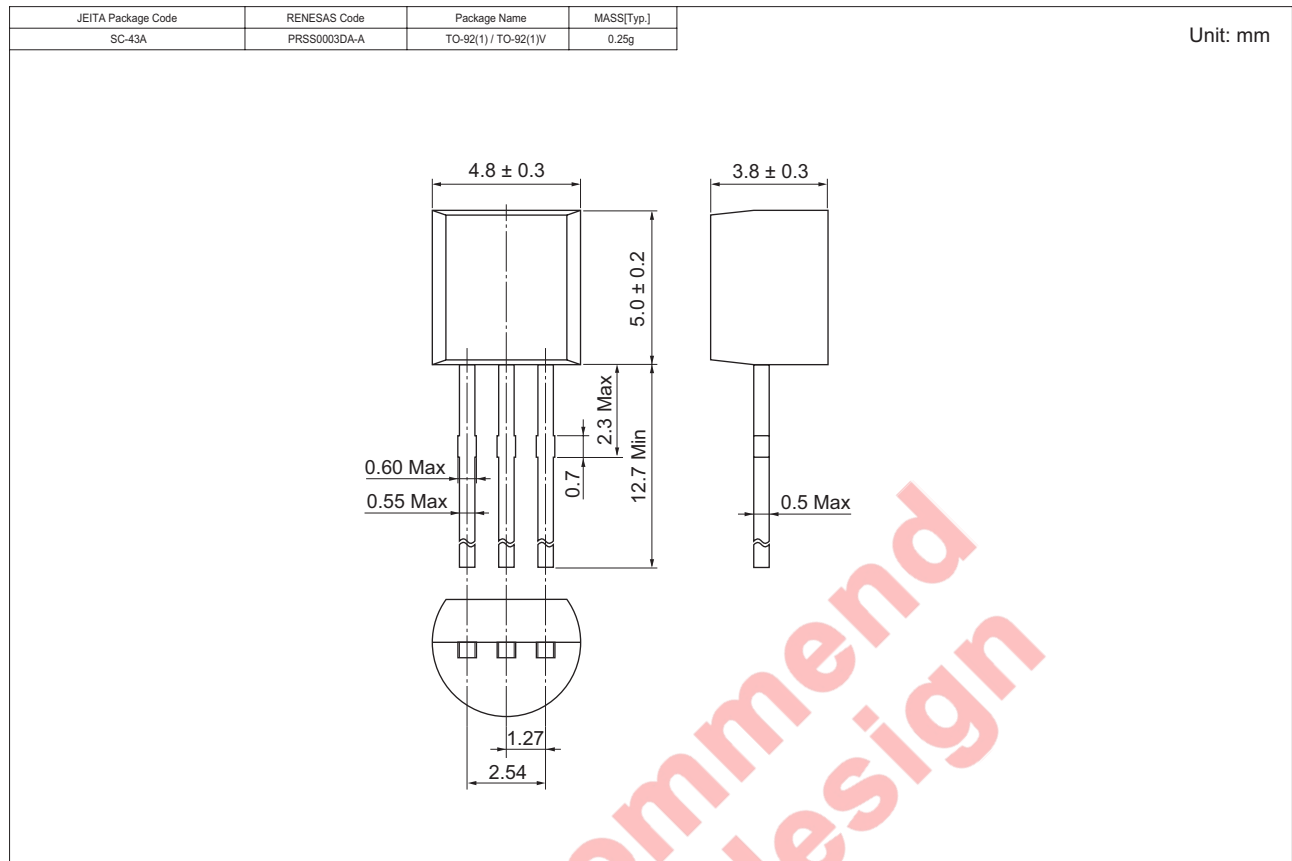
## Main Characteristics





Not recommended  
for new design

## Package Dimensions



## Ordering Information

Part Name	Quantity	Shipping Container
2SB561BTZ-E	2500	Hold Box, Radial Taping
2SB561CTZ-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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