

## 2SC5850

Silicon NPN Epitaxial

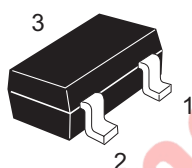
REJ03G0760-0100  
(Previous ADE-208-1479)  
Rev.1.00  
Aug.10.2005

### Features

Low frequency amplifier

### Outline

RENESAS Package code: PTSP0003ZA-A  
(Package name: CMPAK<sup>®</sup>)



- 1. Emitter
- 2. Base
- 3. Collector

\*CMPAK is a trademark of Renesas Technology Corp.

### Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CB0}$	50	V
Collector to emitter voltage	$V_{CEO}$	40	V
Emitter to base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	100	mA
Emitter current	$I_E$	-100	mA
Collector power dissipation	$P_C^*$	150	mW
Junction temperature	$T_J$	150	°C
Storage temperature	$T_{stg}$	-55 to +125	°C

\*Value on the glass epoxy board (10 mm x 10 mm x 0.7 mm)

## Electrical Characteristics

(Ta = 25°C)

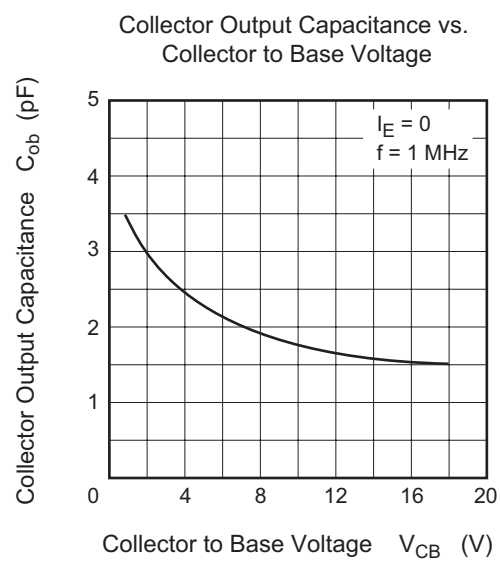
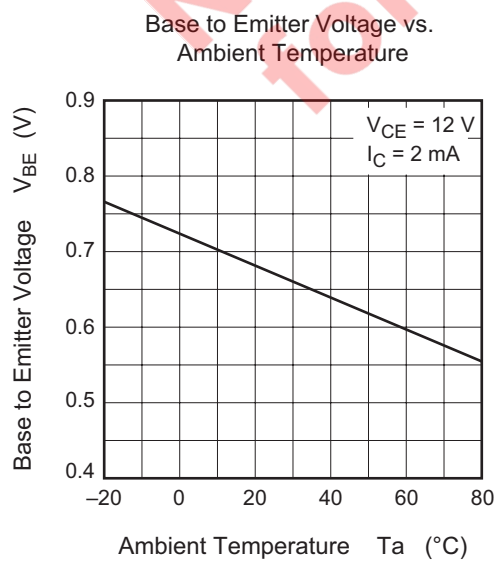
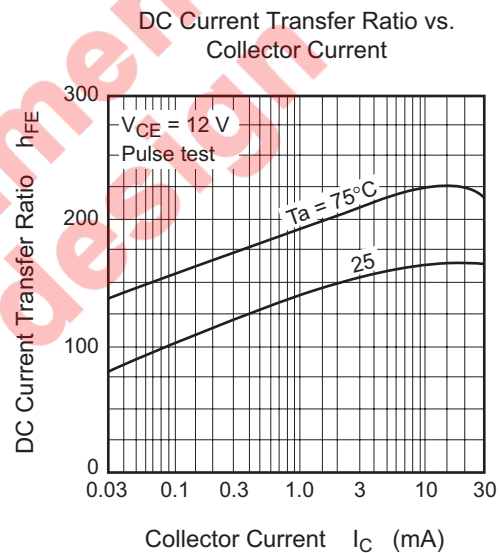
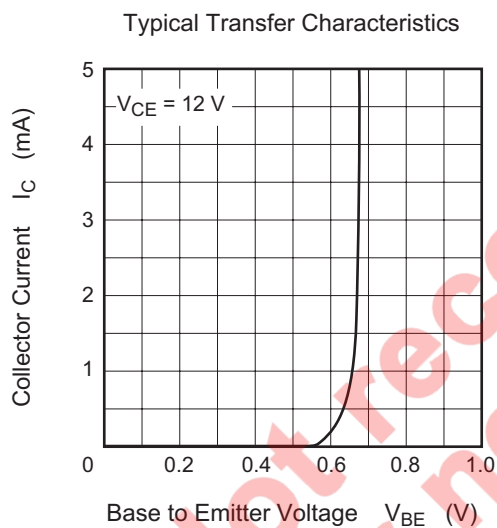
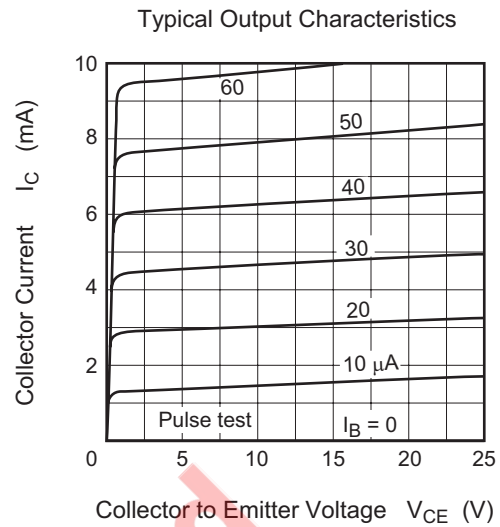
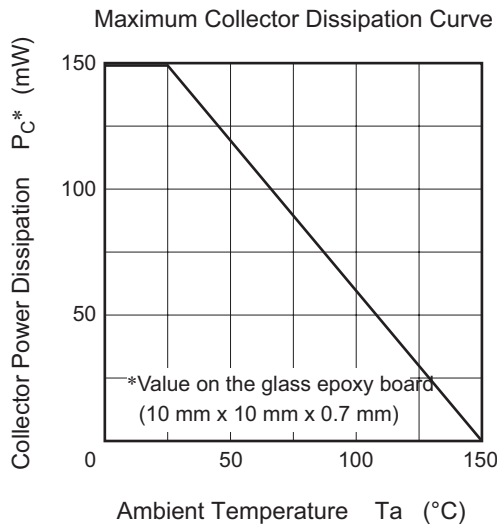
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	50	—	—	V	$I_C = 10\ \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	40	—	—	V	$I_C = 1\ mA, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	—	—	V	$I_E = 10\ \mu A, I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	0.5	$\mu A$	$V_{CB} = 30\ V, I_E = 0$
Emitter cutoff current	$I_{EBO}$	—	—	0.5	$\mu A$	$V_{EB} = 2\ V, I_C = 0$
DC current transfer ratio	$h_{FE}^{*1}$	100	—	500		$V_{CE} = 12\ V, I_C = 2\ mA$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	0.2	V	$I_C = 10\ mA, I_B = 1\ mA$
Base to emitter voltage	$V_{BE}$	—	—	0.75	V	$V_{CE} = 12\ V, I_C = 2\ mA$

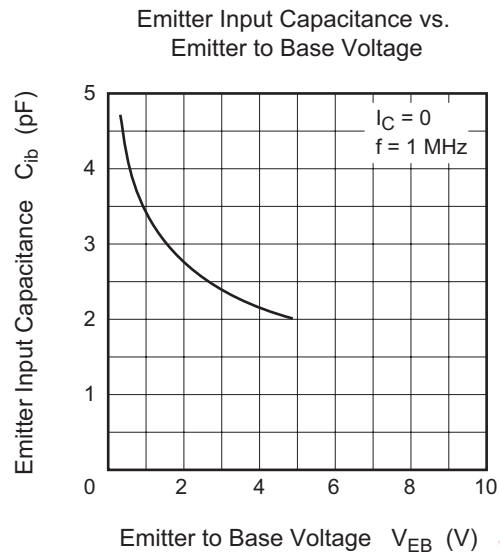
Notes: 1. The 2SC5850 is grouped by  $h_{FE}$  as follows.

Grade	B	C	D
Mark	LB	LC	LD
$h_{FE}$	100 to 200	160 to 320	250 to 500

Not recommend  
for new design

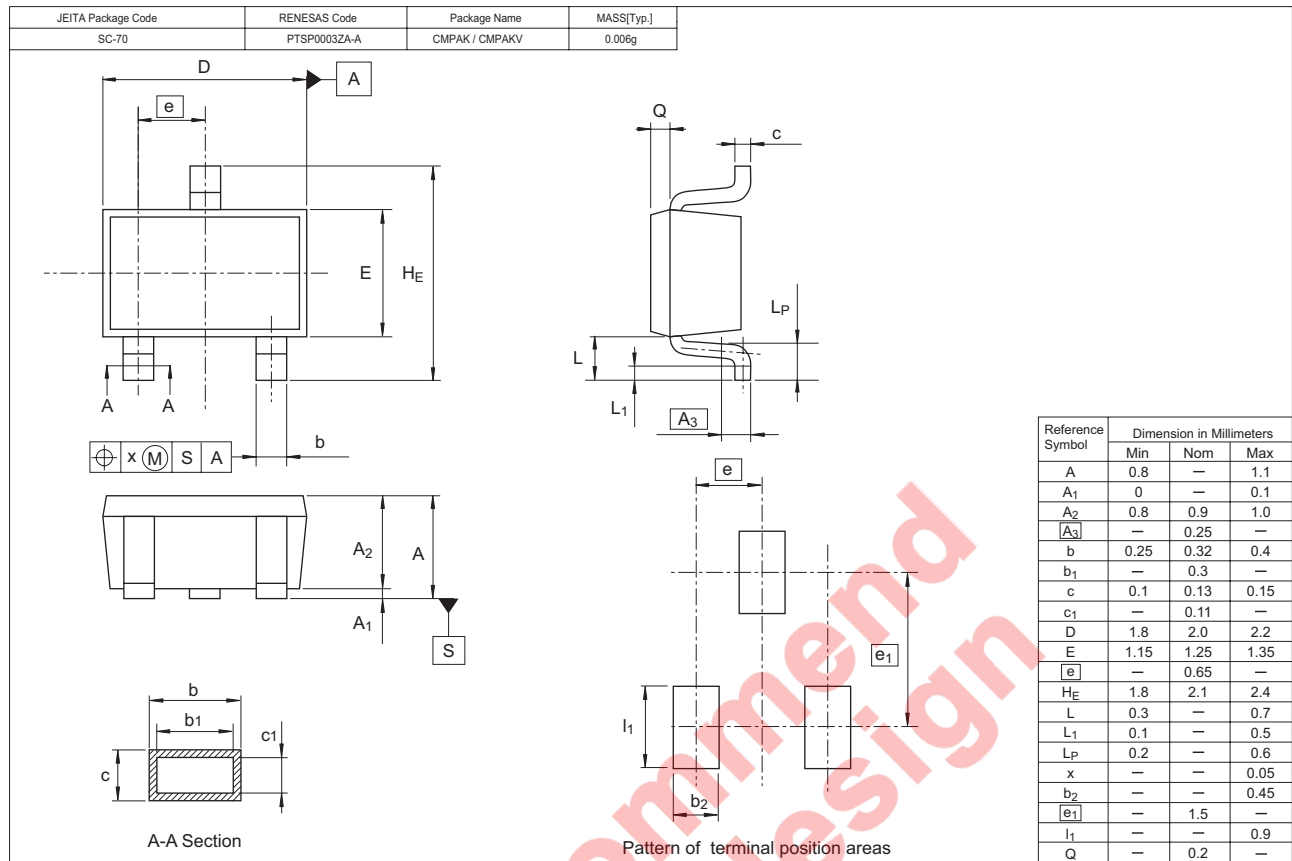
## Main Characteristics





Not recommended  
for new design

## Package Dimensions



## Ordering Information

Part Name	Quantity	Shipping Container
2SC5850LBTL-E	3000	φ 178 mm Reel, 8 mm Emboss Taping
2SC5850LCTL-E		
2SC5850LDTL-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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