

To all our customers

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Renesas Technology Corp.  
Customer Support Dept.  
April 1, 2003

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Keep safety first in your circuit designs!

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Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of nonflammable material or (iii) prevention against any malfunction or mishap.

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# 2SA1121

Silicon PNP Epitaxial

**RENESAS**

ADE-208-1008 (Z)  
1st. Edition  
Mar. 2001

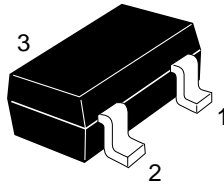
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## Application

- Low frequency amplifier
- Complementary pair with 2SC2618

## Outline

MPAK



1. Emitter
2. Base
3. Collector

## Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	-35	V
Collector to emitter voltage	$V_{CEO}$	-35	V
Emitter to base voltage	$V_{EBO}$	-4	V
Collector current	$I_C$	-500	mA
Collector power dissipation	$P_C$	150	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

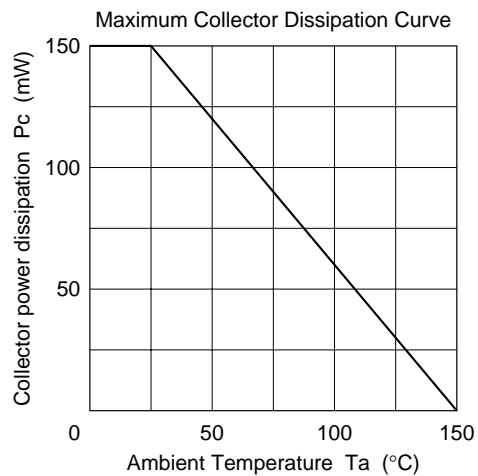
## Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-35	—	—	V	$I_C = -10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-35	—	—	V	$I_C = -1 \text{ mA}, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-4	—	—	V	$I_E = -10 \mu A, I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	-0.5	$\mu A$	$V_{CB} = -20 \text{ V}, I_E = 0$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	-0.2	-0.6	V	$I_C = -150 \text{ mA}, I_B = -15 \text{ mA}$
DC current transfer ratio	$h_{FE}^{*1}$	60	—	320		$V_{CE} = -3 \text{ V}, I_C = -10 \text{ mA}$
	$h_{FE}$	10	—	—		$V_{CE} = -3 \text{ V}, I_C = -500 \text{ mA}$ (Pulse test)
Base to emitter voltage	$V_{BE}$	—	-0.64	—	V	$V_{CE} = -3 \text{ V}, I_C = -10 \text{ mA}$

Note: 1. The 2SA1121 is grouped by  $h_{FE}$  as follows.

Grade	B	C	D
Mark	SB	SC	SD
$h_{FE}$	60 to 120	100 to 200	160 to 320

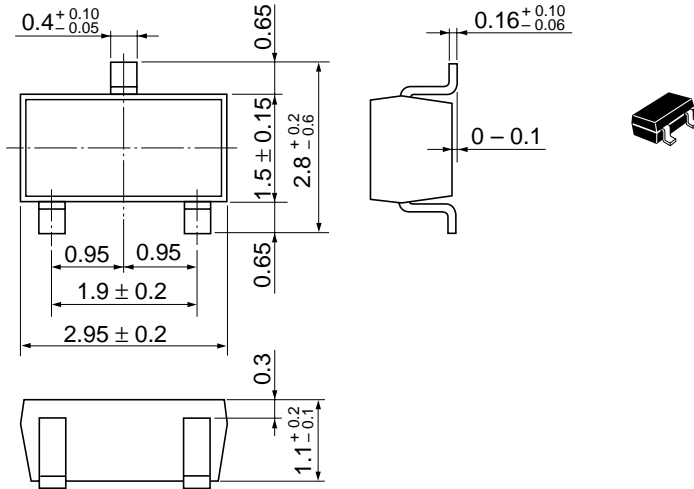
See characteristic curves of 2SA673.



Package Dimensions

As of January, 2001

Unit: mm



Hitachi Code	MPAK
JEDEC	—
EIAJ	Conforms
Mass (reference value)	0.011 g

## Cautions

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