

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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# 2SC1214

Silicon NPN Epitaxial

**RENESAS**

ADE-208-1050 (Z)

1st. Edition

Mar. 2001

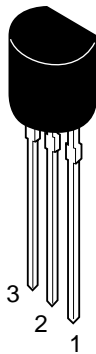
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## Application

Low frequency amplifier

## Outline

TO-92 (1)



1. Emitter
2. Collector
3. Base

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

Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	50	V
Collector to emitter voltage	$V_{CEO}$	50	V
Emitter to base voltage	$V_{EBO}$	4	V
Collector current	$I_C$	500	mA
Collector power dissipation	$P_C$	600	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

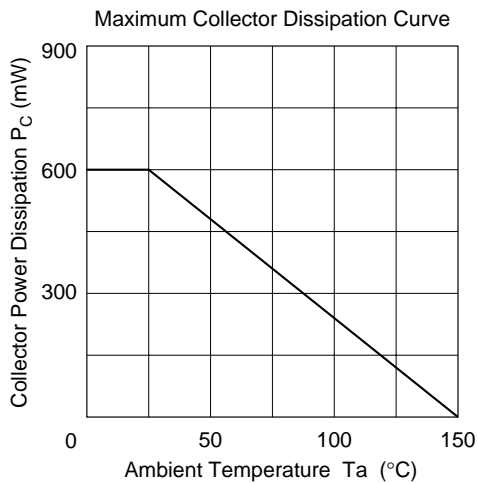
## Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	50	—	—	V	$I_C = 10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	50	—	—	V	$I_C = 1 \text{ mA}, R_{BE} =$
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	$\mu A$	$V_{CB} = 20 \text{ V}, I_E = 0$
DC current transfer ratio	$h_{FE}^*$	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)
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	0.2	0.6	V	$I_C = 150 \text{ mA}, I_B = 15 \text{ mA}$ (Pulse test)
Base to emitter voltage	$V_{BE}$	—	0.64	—	V	$V_{CE} = 3 \text{ V}, I_C = 10 \text{ mA}$

Note: 1. The 2SC1214 is grouped by  $h_{FE}$  as follows.

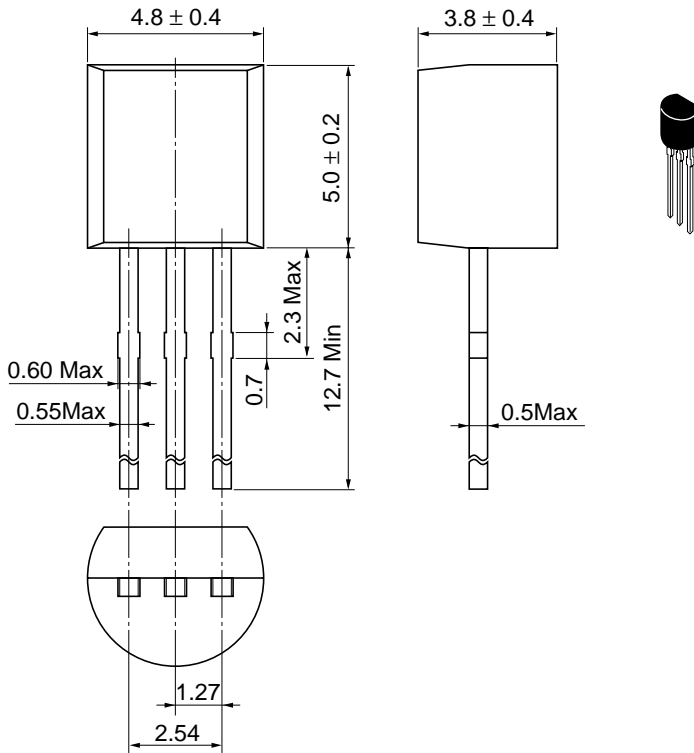
B	C	D
60 to 120	100 to 200	160 to 320

See characteristic curves of 2SC1213.



Package Dimensions

As of January, 2001  
Unit: mm



Hitachi Code	TO-92 (1)
JEDEC	Conforms
EIAJ	Conforms
Mass (reference value)	0.25 g

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