

To our customers,

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## Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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Not recommended  
for new design

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To all our customers

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Renesas Technology Home Page: <http://www.renesas.com>

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

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# 2SA1468

Silicon PNP Epitaxial

**RENESAS**

ADE-208-1018 (Z)

1st. Edition

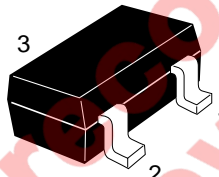
Mar. 2001

## Application

High voltage amplifier

## Outline

MPAK



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

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V <sub>CBO</sub>	−180	V
Collector to emitter voltage	V <sub>CEO</sub>	−180	V
Emitter to base voltage	V <sub>EBO</sub>	−5	V
Collector current	I <sub>C</sub>	−100	mA
Collector power dissipation	P <sub>C</sub>	150	mW
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	−55 to +150	°C

Electrical Characteristics (Ta = 25°C)

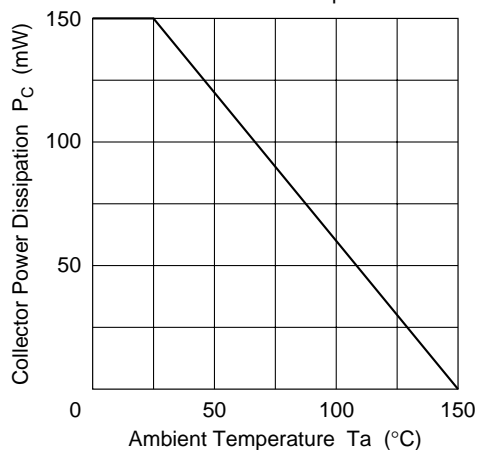
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	V <sub>(BR)CBO</sub>	−180	—	—	V	I <sub>C</sub> = −10 μA, I <sub>E</sub> = 0
Collector to emitter breakdown voltage	V <sub>(BR)CEO</sub>	−180	—	—	V	I <sub>C</sub> = −0.5 mA, R <sub>BE</sub> = ∞
Emitter to base breakdown voltage	V <sub>(BR)EBO</sub>	−5	—	—	V	I <sub>E</sub> = −10 μA, I <sub>C</sub> = 0
DC current transfer ratio	h <sub>FE</sub> <sup>*1</sup>	100	—	320		V <sub>CE</sub> = −12 V, I <sub>C</sub> = −2 mA <sup>*2</sup>
Collector to emitter saturation voltage	V <sub>CE(sat)</sub>	—	—	−0.5	V	I <sub>C</sub> = −30 mA, I <sub>B</sub> = −3 mA <sup>*2</sup>
Base to emitter voltage	V <sub>BE</sub>	—	—	−1.0	V	V <sub>CE</sub> = −12 V, I <sub>C</sub> = −2 mA
Gain bandwidth product	f <sub>T</sub>	—	200	—	MHz	V <sub>CE</sub> = −12 V, I <sub>C</sub> = −10 mA
Collector output capacitance	Cob	—	3.5	—	pF	V <sub>CB</sub> = −10 V, I <sub>E</sub> = 0, f = 1 MHz

Notes: 1. The 2SA1468 is grouped by h<sub>FE</sub> as follows.

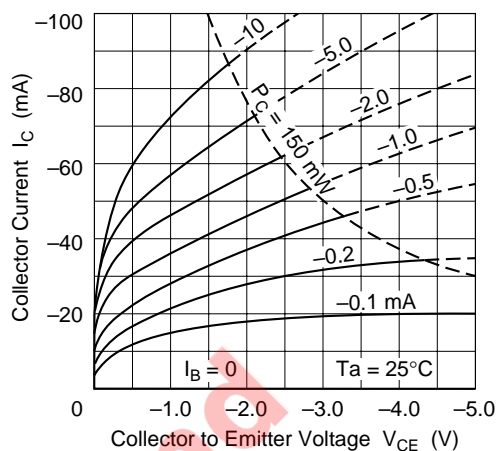
2. Pulse test

Grade	B	C
Mark	INB	INC
h <sub>FE</sub>	100 to 200	160 to 320

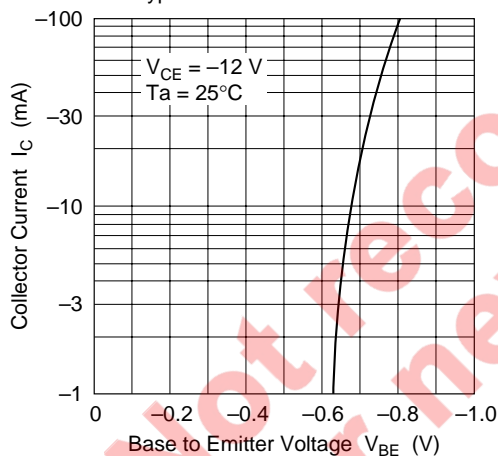
Maximum Collector Dissipation Curve



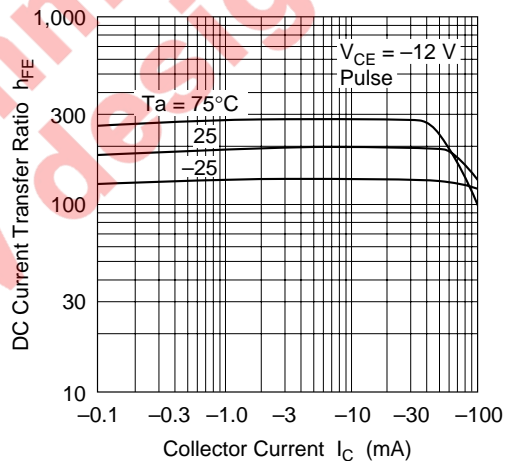
Typical Output Characteristics

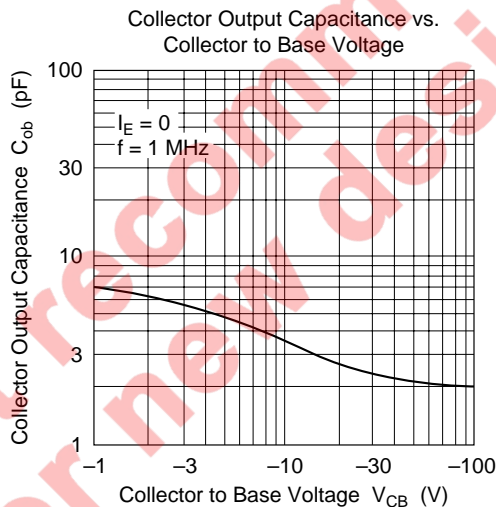
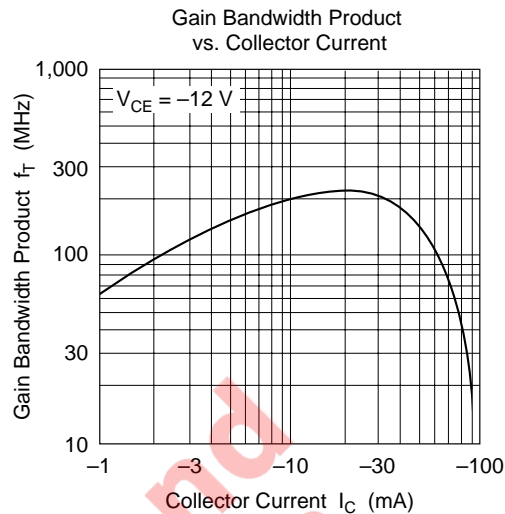
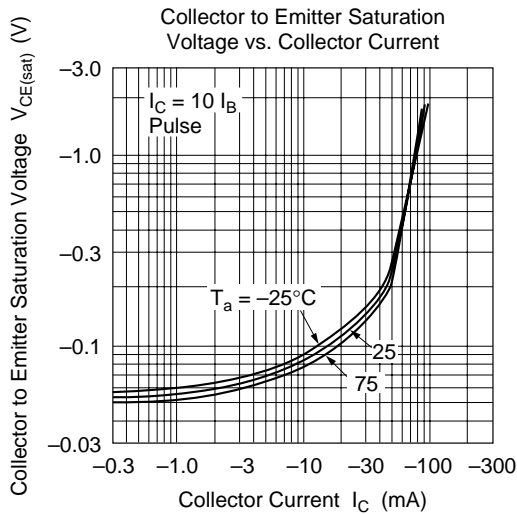


Typical Transfer Characteristics



DC Current Transfer Ratio vs. Collector Current

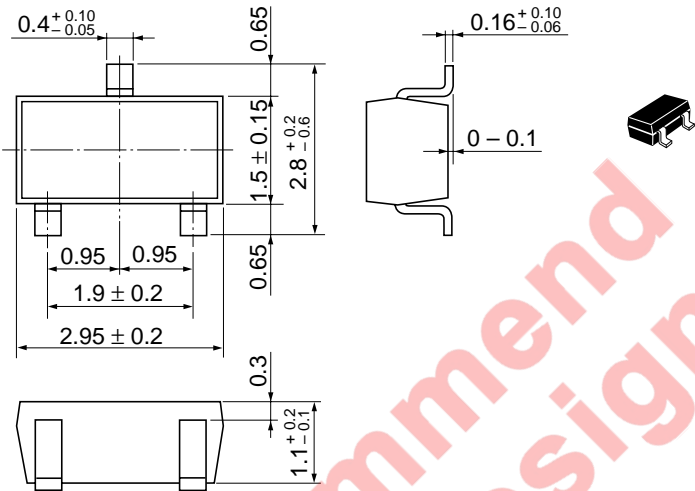






Package Dimensions

As of January, 2001  
Unit: mm



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

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