

To all our customers

勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-54151736
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

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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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2SC2396, 2SC2543, 2SC2544

Silicon NPN Epitaxial

RENESAS

ADE-208-1062A (Z)
2nd. Edition
Mar. 2001

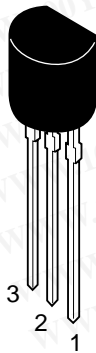
Application

- Low frequency amplifier

Outline

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TO-92 (1)



1. Emitter
2. Collector
3. Base

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	2SC2396	2SC2543	2SC2544	Unit
Collector to base voltage	V _{CBO}	60	90	120	V
Collector to emitter voltage	V _{CEO}	60	90	120	V
Emitter to base voltage	V _{EBO}	5	5	5	V
Collector current	I _C	100	100	100	mA
Emitter current	I _E	-100	-100	-100	mA
Collector power dissipation	P _C	400	400	400	mW
Junction temperature	T _j	150	150	150	°C
Storage temperature	T _{stg}	-55 to +150	-55 to +150	-55 to +150	°C

Electrical Characteristics (Ta = 25°C)

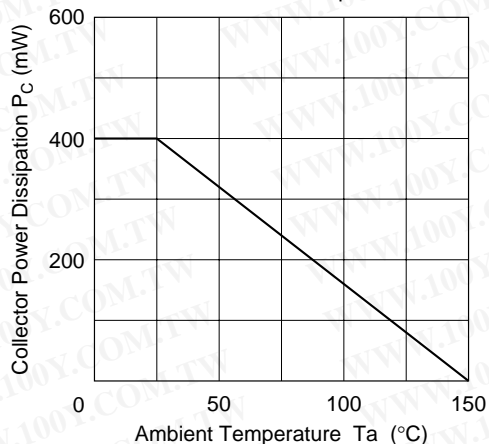
Item	Symbol	2SC2396			2SC2543			2SC2544			Unit	Test conditions
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max		
Collector to base breakdown voltage	V _{(BR)CBO}	60	—	—	90	—	—	120	—	—	V	I _C = 10 μA, I _E = 0
Collector to emitter breakdown voltage	V _{(BR)CEO}	60	—	—	90	—	—	120	—	—	V	I _C = 1 mA, R _{BE} =
Emitter to base breakdown voltage	V _{(BR)EBO}	5	—	—	5	—	—	5	—	—	V	I _E = 10 μA, I _C = 0
Collector cutoff current	I _{CBO}	—	—	0.1	—	—	0.1	—	—	0.1	μA	V _{CB} = 50 V, I _E = 0
Emitter cutoff current	I _{EBO}	—	—	0.1	—	—	0.1	—	—	0.1	μA	V _{EB} = 2 V, I _C = 0
DC current transfer ratio	h _{FE} *1	250	—	1200	250	—	1200	250	—	800		V _{CE} = 12 V, I _C = 2 mA
Collector to emitter saturation voltage	V _{CE(sat)}	—	—	0.2	—	—	0.2	—	—	0.2	V	I _C = 10 mA, I _B = 1 mA
Base to emitter voltage	V _{BE}	—	0.6	—	—	0.6	—	—	0.6	—	V	V _{CE} = 12 V, I _C = 2 mA
Gain bandwidth product	f _T	—	90	—	—	90	—	—	90	—	MHz	V _{CE} = 12 V, I _C = 2 mA
Collector output capacitance	Cob	—	3.0	—	—	3.0	—	—	3.0	—	pF	V _{CB} = 10 V, I _E = 0, f = 1 MHz

Note: 1. The 2SC2396, 2SC2543 and 2SC2544 are grouped by h_{FE1} as follows.

	D	E	F
2SC2396, 2SC2543	250 to 500	400 to 800	600 to 1200
2SC2544	250 to 500	400 to 800	—

See characteristic curves of 2SC2545, 2SC2546 and 2SC2547.

Maximum Collector Dissipation Curve

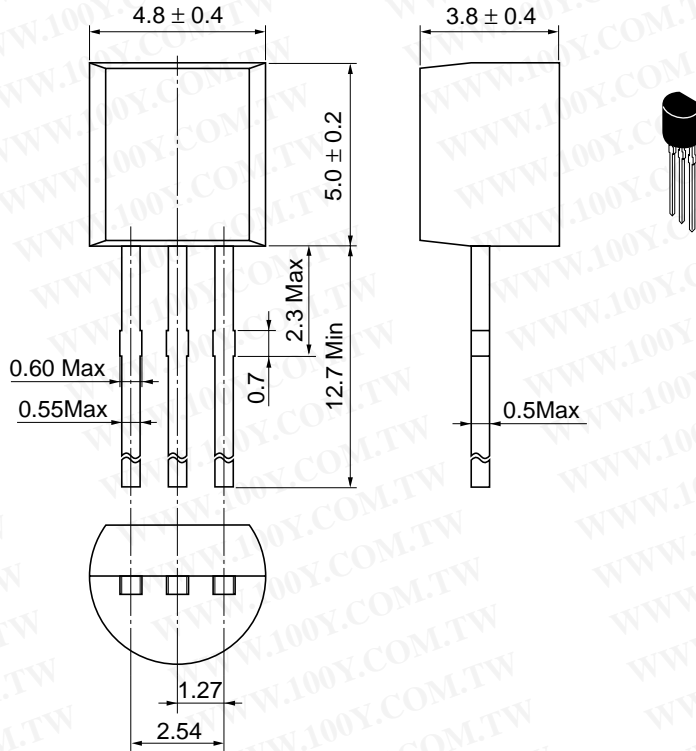


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Package Dimensions

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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Hitachi, Ltd.

Semiconductor & Integrated Circuits.

Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan
Tel: Tokyo (03) 3270-2111 Fax: (03) 3270-5109

URL	NorthAmerica	: http://semiconductor.hitachi.com/
	Europe	: http://www.hitachi-eu.com/hel/ecg
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	Japan	: http://www.hitachi.co.jp/Sicd/indx.htm

For further information write to:

Hitachi Semiconductor
(America) Inc.
179 East Tasman Drive,
San Jose, CA 95134
Tel: <1> (408) 433-1990
Fax: <1> (408) 433-0223

Hitachi Europe GmbH
Electronic Components Group
Dornacher StraÙe 3
D-85622 Feldkirchen, Munich
Germany
Tel: <49> (89) 9 9180-0
Fax: <49> (89) 9 29 30 00

Hitachi Europe Ltd.
Electronic Components Group.
Whitebrook Park
Lower Cookham Road
Maidenhead
Berkshire SL6 8YA, United Kingdom
Tel: <44> (1628) 585000
Fax: <44> (1628) 585160

Hitachi Asia Ltd.
Hitachi Tower
16 Collyer Quay #20-00,
Singapore 049318
Tel : <65>-538-6533/538-8577
Fax : <65>-538-6933/538-3877
URL : <http://www.hitachi.com.sg>

Hitachi Asia Ltd.
(Taipei Branch Office)
4/F, No. 167, Tun Hwa North Road,
Hung-Kuo Building,
Taipei (105), Taiwan
Tel : <886>-(2)-2718-3666
Fax : <886>-(2)-2718-8180
Telex : 23222 HAS-TP
URL : <http://www.hitachi.com.tw>

Hitachi Asia (Hong Kong) Ltd.
Group III (Electronic Components)
7/F., North Tower,
World Finance Centre,
Harbour City, Canton Road
Tsim Sha Tsui, Kowloon,
Hong Kong
Tel : <852>-(2)-735-9218
Fax : <852>-(2)-730-0281
URL : <http://www.hitachi.com.hk>

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