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

Cautions

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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2SC1890, 2SC1890A

Silicon NPN Epitaxial

RENESAS

ADE-208-1057 (Z)

1st. Edition

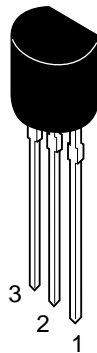
Mar. 2001

Application

- Low frequency high voltage amplifier
- Complementary pair with 2SA893/A

Outline

TO-92 (1)



1. Emitter
2. Collector
3. Base

2SC1890, 2SC1890A

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings		Unit
		2SC1890	2SC1890A	
Collector to base voltage	V _{CBO}	90	120	V
Collector to emitter voltage	V _{CEO}	90	120	V
Emitter to base voltage	V _{EBO}	5	5	V
Collector current	I _C	50	50	mA
Collector power dissipation	P _C	300	300	mW
Junction temperature	T _j	150	150	°C
Storage temperature	T _{stg}	−55 to +150	−55 to +150	°C

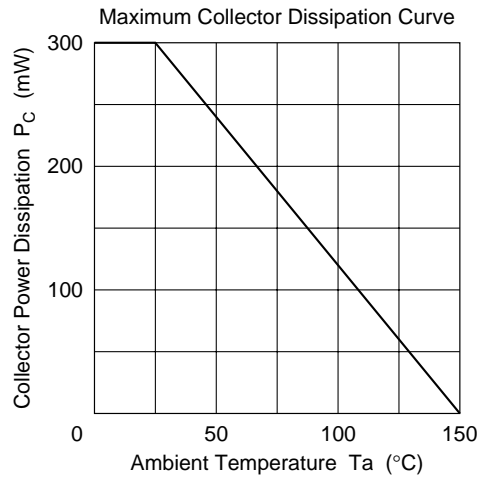
Electrical Characteristics (Ta = 25°C)

Item	Symbol	2SC1890			2SC1890A			Unit	Test conditions
		Min	Typ	Max	Min	Typ	Max		
Collector to emitter breakdown voltage	V _{(BR)CEO}	90	—	—	120	—	—	V	I _C = 1 mA, R _{BE} =
Collector cutoff current	I _{CBO}	—	—	0.5	—	—	—	μA	V _{CB} = 75 V, I _E = 0
		—	—	—	—	—	0.5	μA	V _{CB} = 100 V, I _E = 0
DC current tarnsfer ratio	h _{FE} ^{*1}	250	—	1200	250	—	1200		V _{CE} = 12 V, I _C = 2 mA
Base to emitter voltage	V _{BE}	—	—	0.75	—	—	0.75	V	V _{CE} = 12 V, I _C = 2 mA
Collector to emitter saturation voltage	V _{CE(sat)}	—	—	0.5	—	—	0.5	V	I _C = 10 mA, I _B = 1 mA
Gain bandwidth product	f _T	—	200	—	—	200	—	MHz	V _{CE} = 12 V, I _C = 2 mA
Collector output capacitance	Cob	—	1.6	—	—	1.6	—	pF	V _{CB} = 25 V, I _E = 0, f = 1 MHz
Noise figure	NF	—	2	10	—	2	10	dB	V _{CE} = 6 V, I _C = 50 μA, R _g = 50 k, f = 1 kHz

Note: 1. The 2SC1890/A is grouped by h_{FE} as follows.

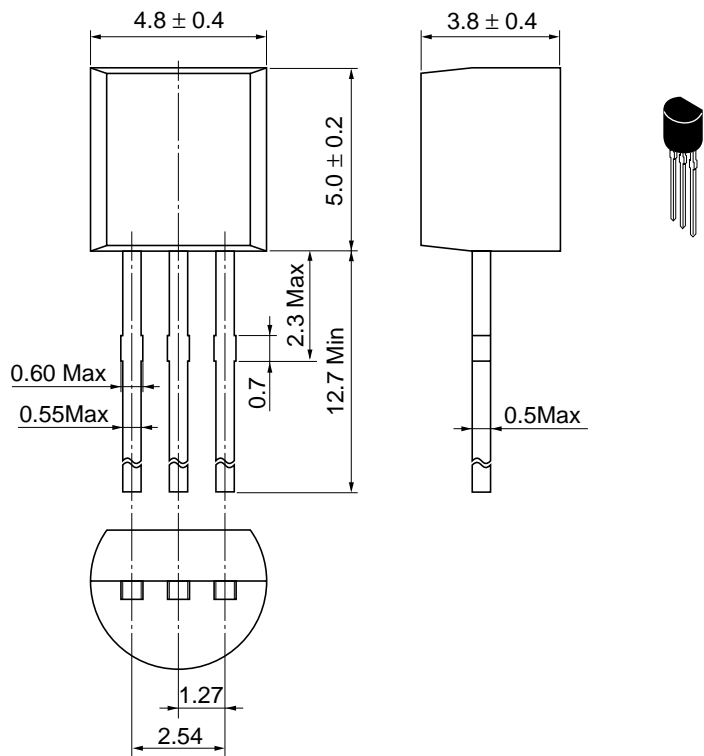
D	E	F
250 to 500	400 to 800	600 to 1200

See characteristic curves of 2SC1775 and 2SC1775A.



Package Dimensions

As of January, 2001
Unit: mm



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

Cautions

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HITACHI

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
	Asia	:	http://sicapac.hitachi-asia.com
	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 Straße 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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