To all our customers

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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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2SA893, 2SA893A

Silicon PNP Epitaxial

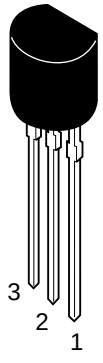
ADE-208-1002 (Z)
1st. Edition
Mar. 2001

Application

- Low frequency high voltage amplifier
- Complementary pair with 2SC1890/A

Outline

TO-92 (1)



1. Emitter
2. Collector
3. Base

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	2SA893	2SA893A	Unit
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	Tj	150	150	°C
Storage temperature	Tstg	–55 to +150	–55 to +150	°C

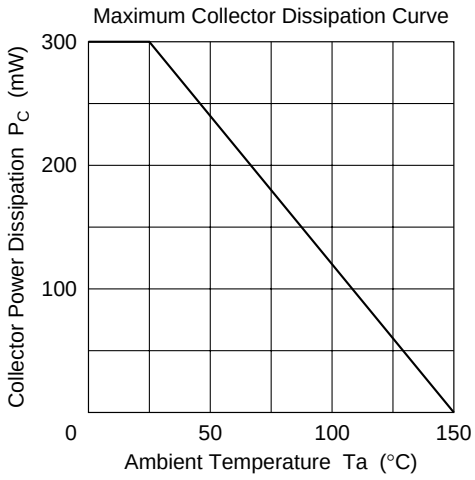
Electrical Characteristics (Ta = 25°C)

		2SA893			2SA893A				
Item	Symbol	Min	Typ	Max	Min	Typ	Max	Unit	Test conditions
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 transfer ratio	h_{FE}*[1]	250	—	800	250	—	800		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	—	120	—	—	120	—	MHz	V_{CE} = –12 V, I_C = –2 mA
Collector output capacitance	Cob	—	1.8	—	—	1.8	—	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 kΩ, f = 1 kHz

Note: 1. The 2SA893/A is grouped by h_{FE} as follows.

D	E
250 to 500	400 to 800

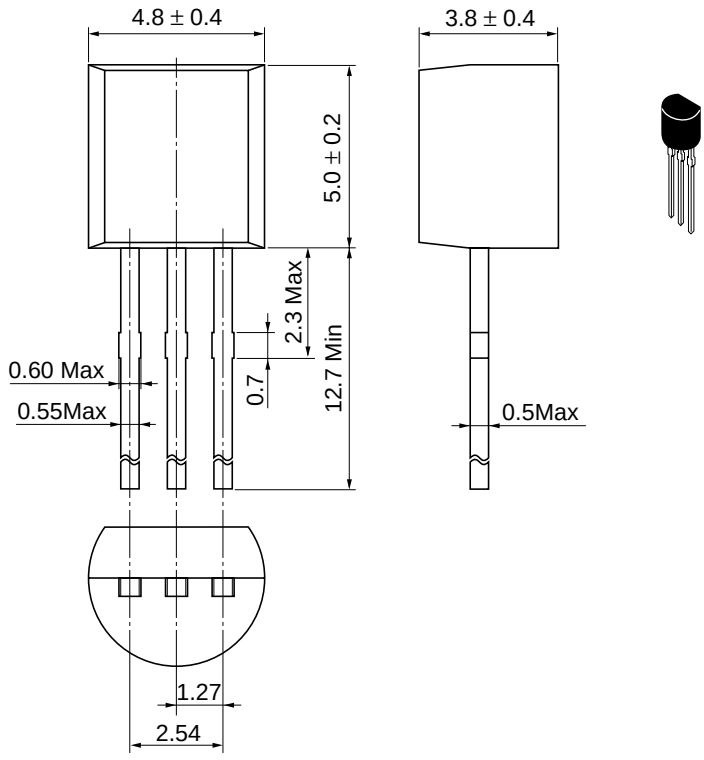
See characteristic curves of 2SA872 and 2SA872A


Maximum Collector Dissipation Curve
Collector Power Dissipation P_C (mW)
300
200
100
0
50
100
150
Ambient Temperature Ta (°C)

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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