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# 2SA893, 2SA893A

Silicon PNP Epitaxial

# HITACHI

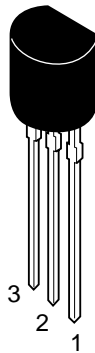
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## Application

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

## Outline

TO-92 (1)



1. Emitter
2. Collector
3. Base

2SA893, 2SA893A

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	2SA893	2SA893A	Unit
Collector to base voltage	V <sub>CBO</sub>	−90	−120	V
Collector to emitter voltage	V <sub>CEO</sub>	−90	−120	V
Emitter to base voltage	V <sub>EBO</sub>	−5	−5	V
Collector current	I <sub>C</sub>	−50	−50	mA
Collector power dissipation	P <sub>C</sub>	300	300	mW
Junction temperature	T <sub>j</sub>	150	150	°C
Storage temperature	T <sub>stg</sub>	−55 to +150	−55 to +150	°C

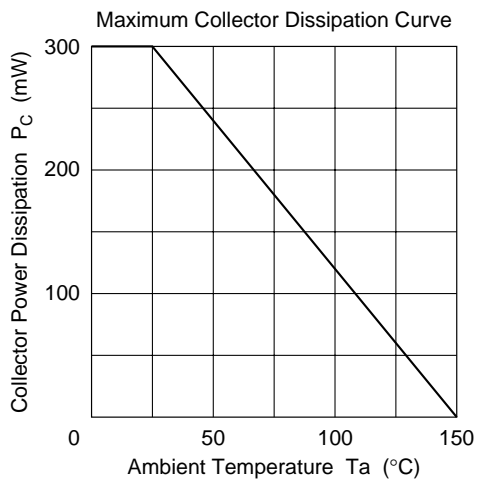
Electrical Characteristics (Ta = 25°C)

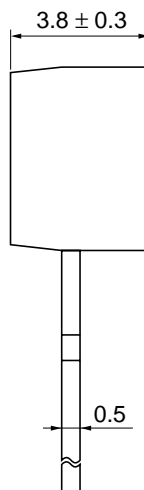
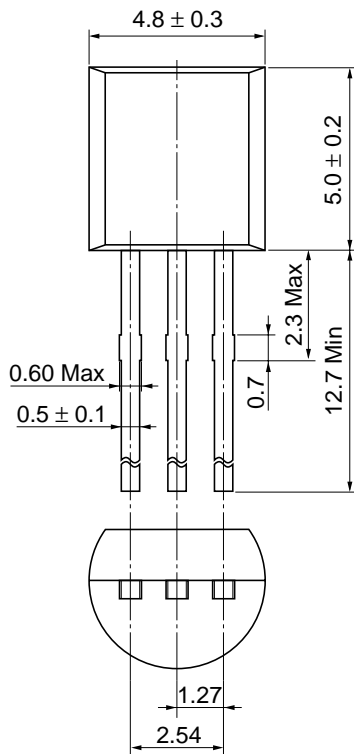
Item	Symbol	2SA893			2SA893A			Unit	Test conditions
		Min	Typ	Max	Min	Typ	Max		
Collector to emitter breakdown voltage	V <sub>(BR)CEO</sub>	−90	—	—	−120	—	—	V	I <sub>C</sub> = −1 mA, R <sub>BE</sub> = ∞
Collector cutoff current	I <sub>CBO</sub>	—	—	−0.5	—	—	—	μA	V <sub>CB</sub> = −75 V, I <sub>E</sub> = 0
		—	—	—	—	—	−0.5	μA	V <sub>CB</sub> = −100 V, I <sub>E</sub> = 0
DC current transfer ratio	h <sub>FE</sub> *1	250	—	800	250	—	800		V <sub>CE</sub> = −12 V, I <sub>C</sub> = −2 mA
Base to emitter voltage	V <sub>BE</sub>	—	—	−0.75	—	—	−0.75	V	V <sub>CE</sub> = −12 V, I <sub>C</sub> = −2 mA
Collector to emitter saturation voltage	V <sub>CE(sat)</sub>	—	—	−0.5	—	—	−0.5	V	I <sub>C</sub> = −10 mA, I <sub>B</sub> = −1 mA
Gain bandwidth product	f <sub>T</sub>	—	120	—	—	120	—	MHz	V <sub>CE</sub> = −12 V, I <sub>C</sub> = −2 mA
Collector output capacitance	Cob	—	1.8	—	—	1.8	—	pF	V <sub>CB</sub> = −25 V, I <sub>E</sub> = 0, f = 1 MHz
Noise figure	NF	—	2	10	—	2	10	dB	V <sub>CE</sub> = −6 V, I <sub>C</sub> = −50 μA R <sub>g</sub> = 50 kΩ, f = 1 kHz

Note: 1. The 2SA893/A is grouped by h<sub>FE</sub> as follows.

D	E
250 to 500	400 to 800

See characteristic curves of 2SA872 and 2SA872A





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

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