2SA893, 2SA893A

Silicon PNP Epitaxial

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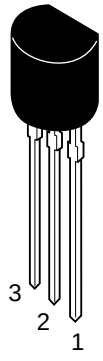
Application

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

Outline

TO-92 (1)



1. Emitter
2. Collector
3. Base

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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

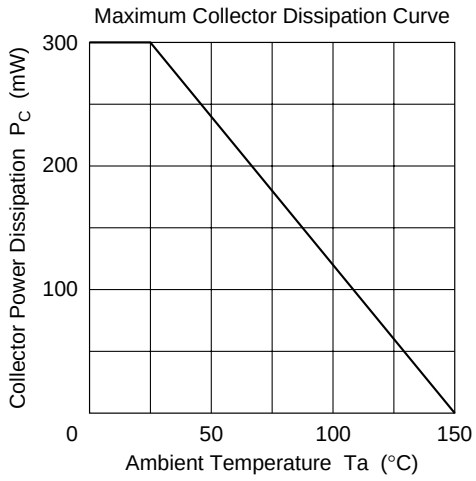
Electrical Characteristics (Ta = 25°C)

		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

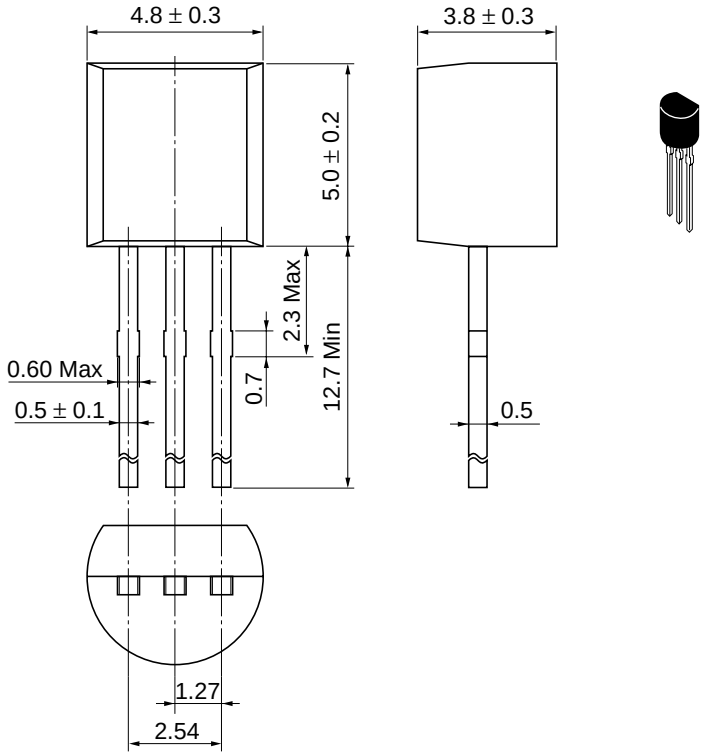
Note: 1. The 2SA893/A is grouped by h_{FE} as follows.

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)

Unit: mm



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

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