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# 2SC1890, 2SC1890A

Silicon NPN Epitaxial

# HITACHI

ADE-208-1057 (Z)

1st. Edition

Mar. 2001

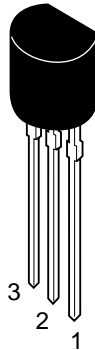
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## Application

- 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 <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

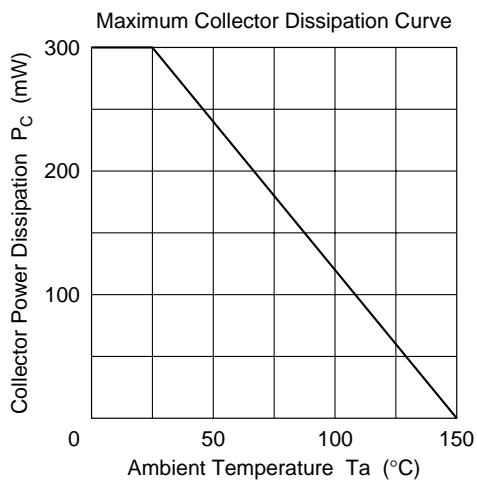
Electrical Characteristics (Ta = 25°C)

Item	Symbol	2SC1890			2SC1890A			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 tarnsfer ratio	h <sub>FE</sub> <sup>*1</sup>	250	—	1200	250	—	1200		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>	—	200	—	—	200	—	MHz	V <sub>CE</sub> = 12 V, I <sub>C</sub> = 2 mA
Collector output capacitance	Cob	—	1.6	—	—	1.6	—	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 2SC1890/A is grouped by h<sub>FE</sub> as follows.

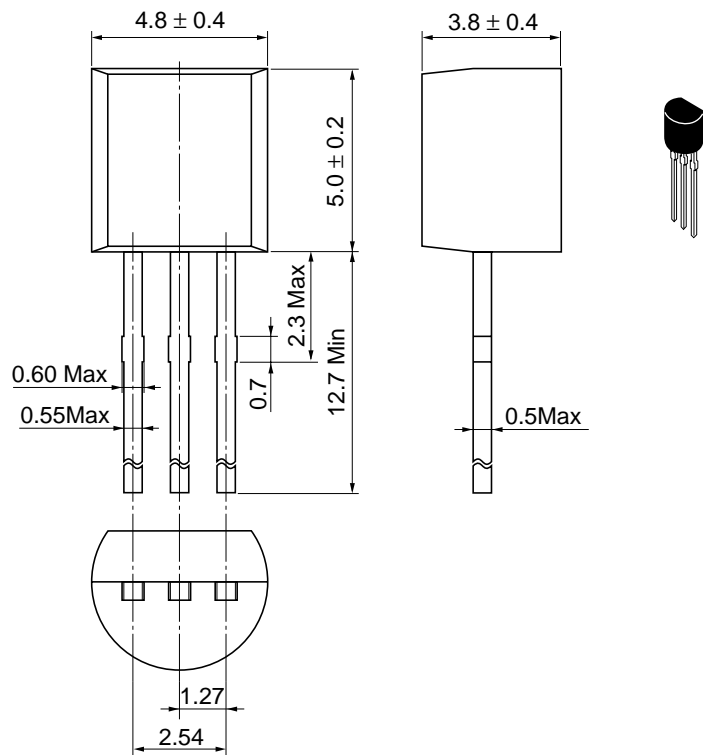
D	E	F
250 to 500	400 to 800	600 to 1200

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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