

2SA872, 2SA872A

Silicon PNP Epitaxial

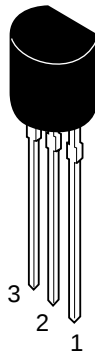
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Application

- Low frequency low noise amplifier
- Complementary pair with 2SC1775/A

Outline

TO-92 (1)



1. Emitter
2. Collector
3. Base

Absolute Maximum Ratings (Ta = 25°C)

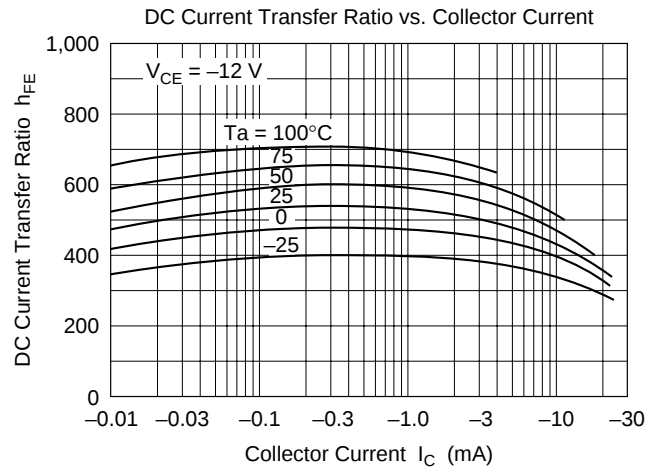
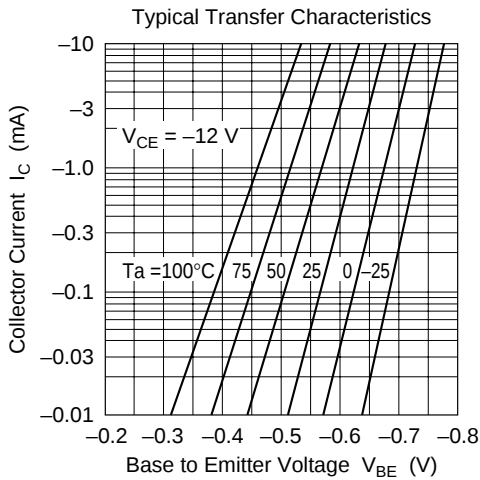
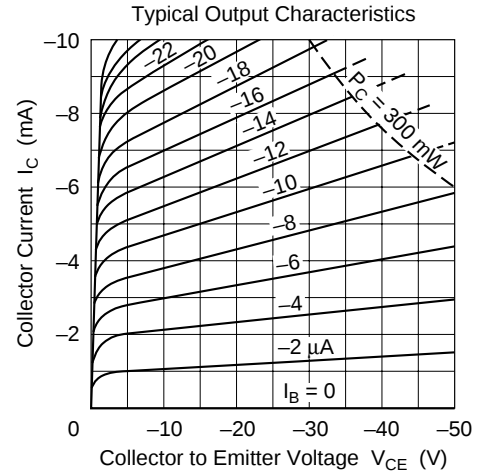
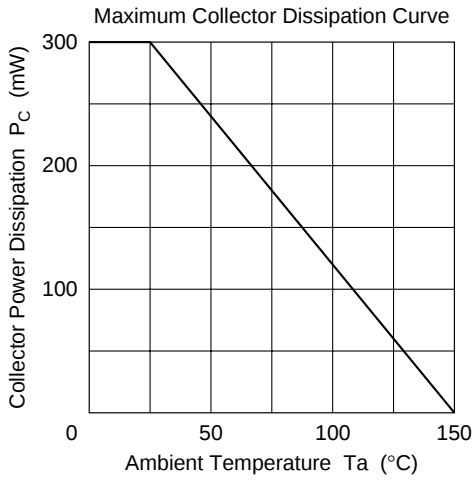
Item	Symbol	2SA872	2SA872A	Unit
Collector to base voltage	V _{CBO}	−90	−120	V
Collector to emitter voltage	V _{CEO}	−90	−120	V
Emitter to base voltage	V _{EBO}	−5	−5	V
Collector current	I _C	−50	−50	mA
Collector power dissipation	P _C	300	300	mW
Junction temperature	T _j	150	150	°C
Storage temperature	T _{stg}	−55 to +150	−50 to +150	°C

Electrical Characteristics (Ta = 25°C)

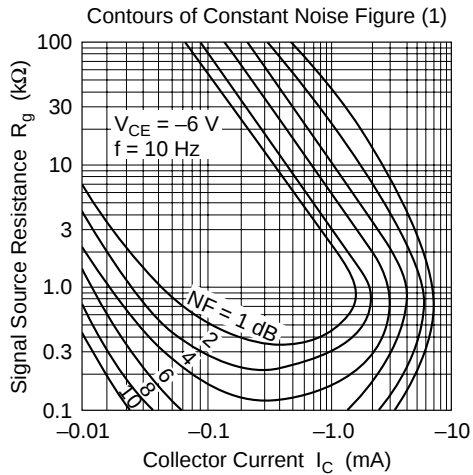
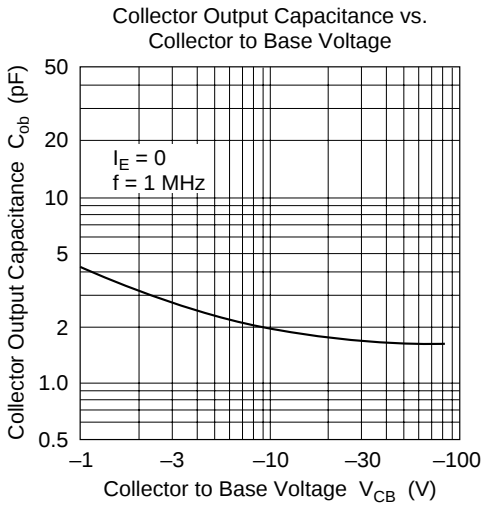
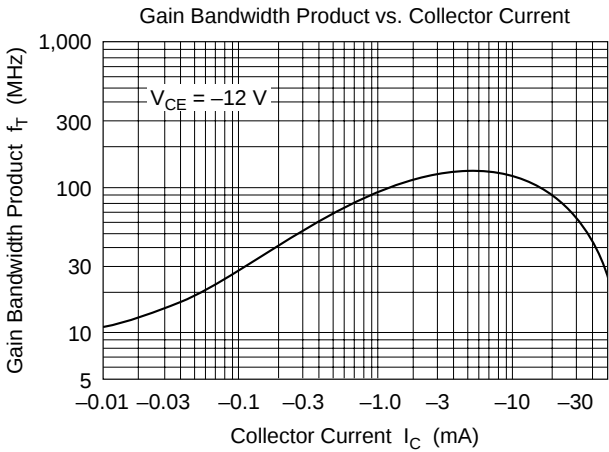
Item	Symbol	2SA872			2SA872A			Unit	Test conditions
		Min	Typ	Max	Min	Typ	Max		
Collector to emitter breakdown voltage	V _{(BR)CEO}	−90	—	—	−120	—	—	V	I _C = −1 mA, R _{BE} = ∞
Collector cutoff current	I _{CBO}	—	—	−0.5	—	—	—	μA	V _{CB} = −75 V, I _E = 0
		—	—	—	—	—	−0.5	μA	V _{CE} = −100 V, I _E = 0
DC current tarnsfer ratio	h _{FE1} ^{*1}	250	—	800	250	—	800		V _{CE} = −12 V, I _C = −2 mA
	h _{FE2}	160	—	—	160	—	—		V _{CE} = −12 V, I _C = −0.1 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	—	—	5.0	—	—	5.0	dB	V _{CE} = −6 V, f = 10 Hz I _C = −50 μA R _g = 50 kΩ
		—	—	1.5	—	—	1.5	dB	f = 1 kHz

Note: 1. The 2SA872/A is grouped by h_{FE1} as follows.

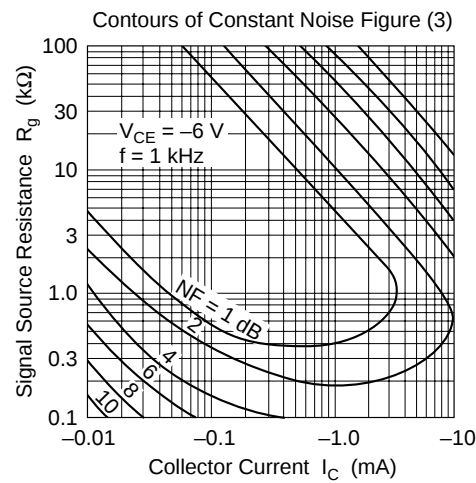
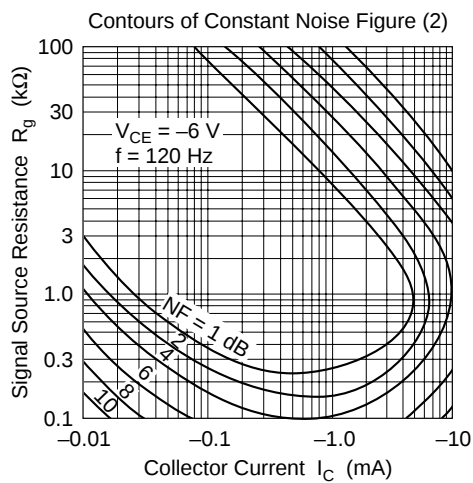
D	E
250 to 500	400 to 800

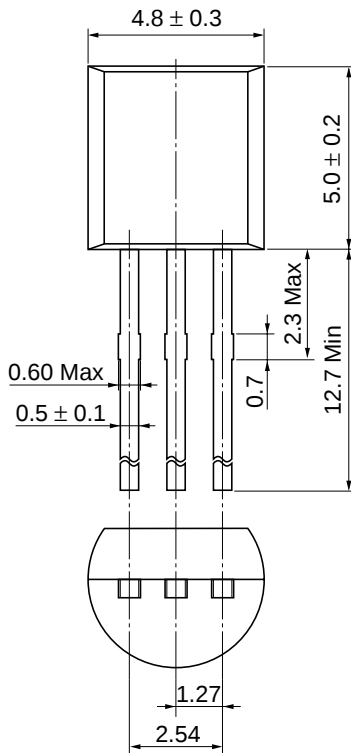


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Hitachi Code	TO-92 (1)
JEDEC	Conforms
EIAJ	Conforms
Weight (reference value)	0.25g

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