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Renesas Technology Corp.
Customer Support Dept.
April 1, 2003

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2SA1025, 2SA1081, 2SA1082

Silicon PNP Epitaxial

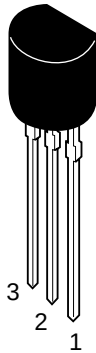
RENESAS

Application

- Low frequency amplifier
- Complementary pair with 2SC2396, 2SC2543 and 2SC2544

Outline

TO-92 (1)



1. Emitter
2. Collector
3. Base

2SA1025, 2SA1081, 2SA1082

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	2SA1025	2SA1081	2SA1082	Unit
Collector to base voltage	V _{CBO}	−60	−90	−120	V
Collector to emitter voltage	V _{CEO}	−60	−90	−120	V
Emitter to base voltage	V _{EBO}	−5	−5	−5	V
Collector current	I _C	−100	−100	−100	mA
Emitter current	I _E	100	100	100	mA
Collector power dissipation	P _C	400	400	400	mW
Junction temperature	T _j	150	150	150	°C
Storage temperature	T _{stg}	−55 to +150	−55 to +150	−55 to +150	°C

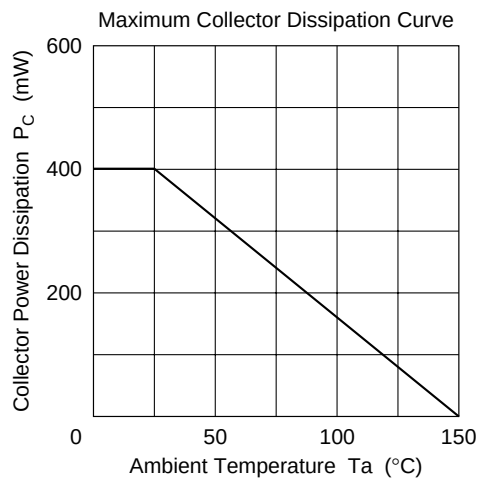
Electrical Characteristics (Ta = 25°C)

Item	Symbol	2SA1025			2SA1081			2SA1082			Unit	Test conditions
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max		
Collector to base breakdown voltage	V _{(BR)CBO}	−60	—	—	−90	—	—	−120	—	—	V	I _C = −10 μA, I _E = 0
Collector to emitter breakdown voltage	V _{(BR)CEO}	−60	—	—	−90	—	—	−120	—	—	V	I _C = −1 mA, R _{BE} = ∞
Emitter to base breakdown voltage	V _{(BR)EBO}	−5	—	—	−5	—	—	−5	—	—	μA	I _E = −10 μA, I _C = 0
Collector cutoff current	I _{CBO}	—	—	−0.1	—	—	−0.1	—	—	−0.1	μA	V _{CB} = −50 V, I _E = 0
Emitter cutoff current	I _{EBO}	—	—	−0.1	—	—	−0.1	—	—	−0.1		V _{EB} = −2 V, I _C = 0
DC current transfer ratio	h _{FE} ^{*1}	250	—	800	250	—	800	250	—	800		V _{CE} = −12 V, I _C = −2 mA
Collector to emitter saturation voltage	V _{CE(sat)}	—	—	−0.2	—	—	−0.2	—	—	−0.2	V	I _C = −10 mA, I _B = −1 mA
Base to emitter voltage	V _{BE}	—	−0.6	—	—	−0.6	—	—	−0.6	—	V	V _{CE} = −12 V, I _C = −2 mA
Gain bandwidth product	f _T	—	90	—	—	90	—	—	90	—	MHz	V _{CE} = −12 V, I _C = −2 mA
Collector output capacitance	Cob	—	3.5	—	—	3.5	—	—	3.5	—	pF	V _{CB} = −10 V, I _E = 0, f = 1 MHz

Note: 1. The 2SA1025, 2SA1081 and 2SA1082 are grouped by h_{FE} as follows.

D	E
250 to 500	400 to 800

See characteristic curves of 2SA1083.



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