## 2SA1982

## Silicon PNP epitaxial planar type

For low-frequency high breakdown voltage amplification Complementary to 2SC5346

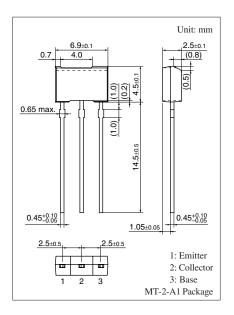
#### ■ Features

- Satisfactory linearity of forward current transfer ratio h<sub>FE</sub>
- $\bullet$  High collector-emitter voltage (Base open)  $V_{\text{CEO}}$
- $\bullet$  Small collector output capacitance (Common base, input open circuited)  $C_{ob}$

### ■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	-150	V	
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	-150	V	
Emitter-base voltage (Collector open)	$V_{EBO}$	-5	V	
Collector current	$I_{C}$	-50	mA	
Peak collector current	$I_{CP}$	-100	mA	
Collector power dissipation *	$P_{C}$	1	W	
Junction temperature	$T_{j}$	150	°C	
Storage temperature	T <sub>stg</sub>	-55 to +150	°C	

Note) \*: Printed circuit board: Copper foil area of 1 cm $^2$  or more, and the board thickness of 1.7 mm for the collector portion



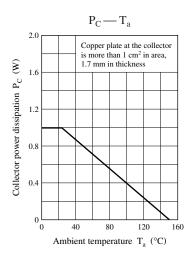
### ■ Electrical Characteristics $T_a = 25$ °C $\pm 3$ °C

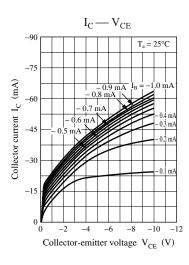
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	$I_C = -0.1 \text{ mA}, I_B = 0$	-150			V
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = -10 \ \mu A, I_C = 0$	-5			V
Collector-base cutoff current (Emitter open)	$I_{CBO}$	$V_{CB} = -100 \text{ V}, I_E = 0$			-1	μΑ
Forward current transfer ratio *	h <sub>FE</sub>	$V_{CE} = -5 \text{ V}, I_{C} = -10 \text{ mA}$	130		330	_
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	$I_C = -30 \text{ mA}, I_B = -3 \text{ mA}$			-1	V
Transition frequency	$f_T$	$V_{CB} = -10 \text{ V}, I_E = 10 \text{ mA}, f = 200 \text{ MHz}$		200		MHz
Collector output capacitance	C <sub>ob</sub>	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$			5	pF
(Common base, input open circuited)						
Noise voltage	NV	$V_{CE} = -10 \text{ V}, I_{C} = -1 \text{ mA}, G_{V} = 80 \text{ dB}$		150	300	mV
		$R_g = 100 \text{ k}\Omega$ , Function = FLAT				

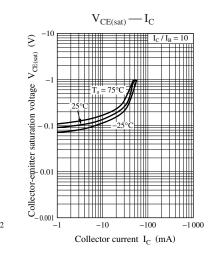
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

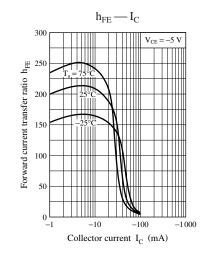
#### 2. \*: Rank classification

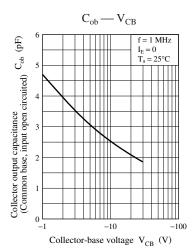
Rank	R	S
$h_{FE}$	130 to 220	185 to 330











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