

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_{FE}
- High collector-emitter voltage (Base open) V_{CEO}
- Small collector output capacitance (Common base, input open circuited) C_{ob}

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	-150	V
Collector-emitter voltage (Base open)	V_{CEO}	-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	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Note) *: Printed circuit board: Copper foil area of 1 cm² or more, and the board thickness of 1.7 mm for the collector portion

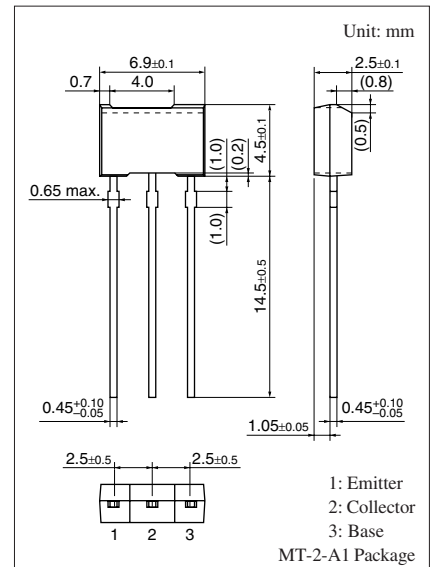
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

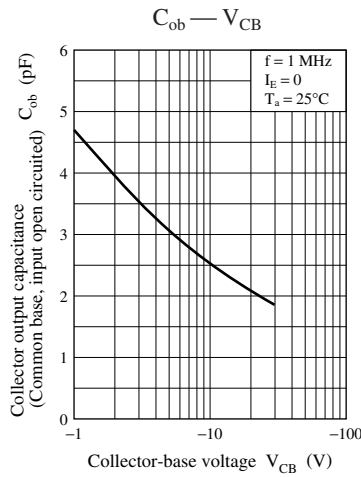
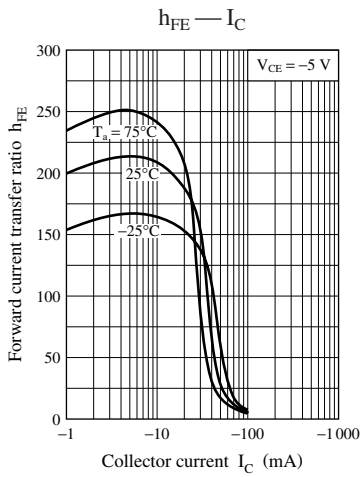
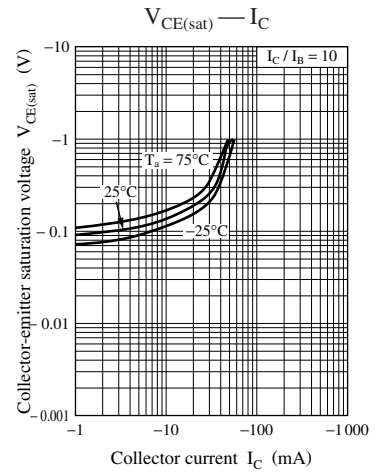
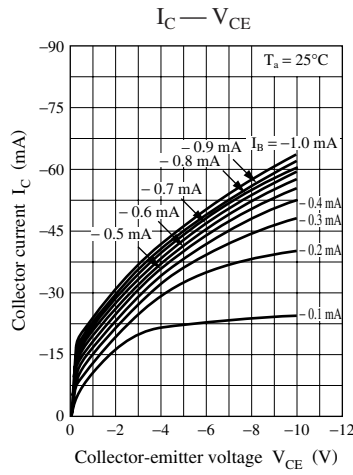
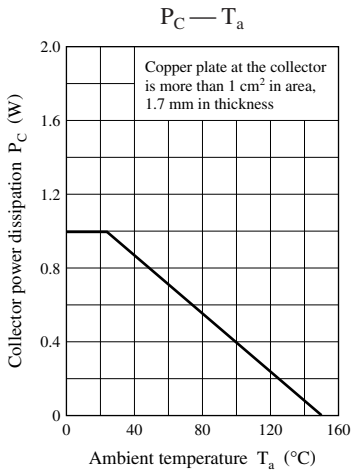
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -0.1 \text{ mA}, I_B = 0$	-150			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = -10 \mu\text{A}, I_C = 0$	-5			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = -100 \text{ V}, I_E = 0$			-1	μA
Forward current transfer ratio *	h_{FE}	$V_{CE} = -5 \text{ V}, I_C = -10 \text{ mA}$	130		330	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -30 \text{ mA}, I_B = -3 \text{ mA}$			-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 (Common base, input open circuited)	C_{ob}	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$			5	pF
Noise voltage	NV	$V_{CE} = -10 \text{ V}, I_C = -1 \text{ mA}, G_V = 80 \text{ dB}$ $R_g = 100 \text{ k}\Omega, \text{Function} = \text{FLAT}$		150	300	mV

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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