2SD1994A

Silicon NPN epitaxial planar type

For low-frequency power strengthening and drive Complementary to 2SB1322A

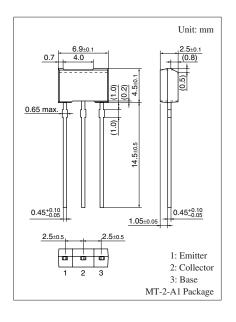
■ Features

- Low collector-emitter saturation voltage V_{CE(sat)}
- Allowing supply with the radial taping

■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	60	V
Collector-emitter voltage (Base open)	V _{CEO}	50	V
Emitter-base voltage (Collector open)	V_{EBO}	5	V
Collector current	I_C	1	A
Peak collector current	I_{CP}	1.5	A
Collector power dissipation *	P _C	1	W
Junction temperature	T_j	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

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



■ Electrical Characteristics $T_a = 25$ °C ± 3 °C

Parameter	Symbol	Conditions		Тур	Max	Unit
Collector-base voltage (Emitter open)	V _{CBO}	$I_C = 10 \mu\text{A}, I_E = 0$	60			V
Collector-emitter voltage (Base open)	V _{CEO}	$I_C = 2 \text{ mA}, I_B = 0$	50			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}	$V_{CB} = 20 \text{ V}, I_{E} = 0$			0.1	μΑ
Forward current transfer ratio *1	h _{FE1} *2	$V_{CE} = 10 \text{ V}, I_{C} = 500 \text{ mA}$	85		340	_
	h _{FE2}	$V_{CE} = 5 \text{ V}, I_{C} = 1 \text{ A}$	50			
Collector-emitter saturation voltage *1	V _{CE(sat)}	$I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$		0.2	0.4	V
Base-emitter saturation voltage *1	V _{BE(sat)}	$I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$		0.85	1.20	V
Transition frequency *1	f_T	$V_{CB} = 10 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$		200		MHz
Collector output capacitance	C _{ob}	$V_{CB} = 10 \text{ V}, I_{E} = 0, f = 1 \text{ MHz}$		11	20	pF
(Common base, input open circuited)						

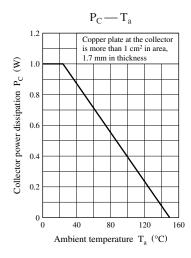
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

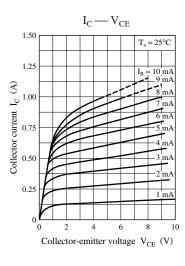
2. *1: Pulse measurement

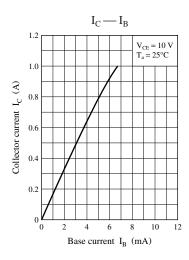
*2: Rank classification

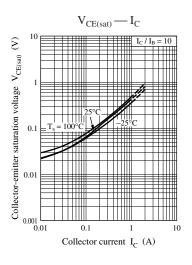
Rank	Q	R	S	No rank
h _{FE1}	85 to 170	120 to 240	170 to 340	85 to 340

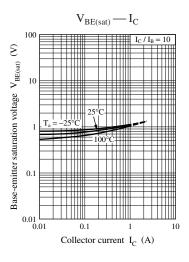
Product of no-rank classification is not marked.

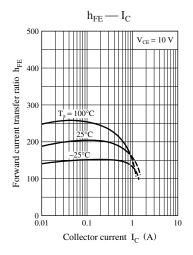


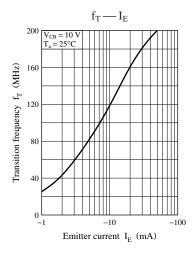


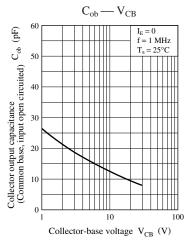


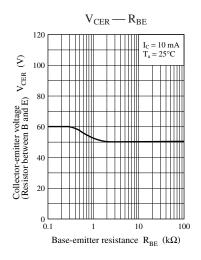


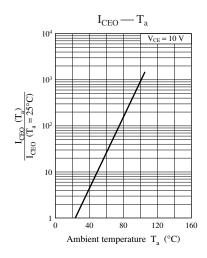


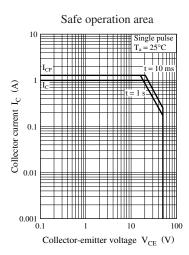












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