

2SD0968A (2SD968A)

Silicon NPN epitaxial planar type

For low-frequency driver amplification

Complementary to 2SB0789A (2SB789A)

■ Features

- High collector to emitter voltage V_{CEO}
- Large collector power dissipation P_C
- Mini Power type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing

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

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	120	V
Collector to emitter voltage	V_{CEO}	120	V
Emitter to base voltage	V_{EBO}	5	V
Peak collector current	I_{CP}	1	A
Collector current	I_C	0.5	A
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

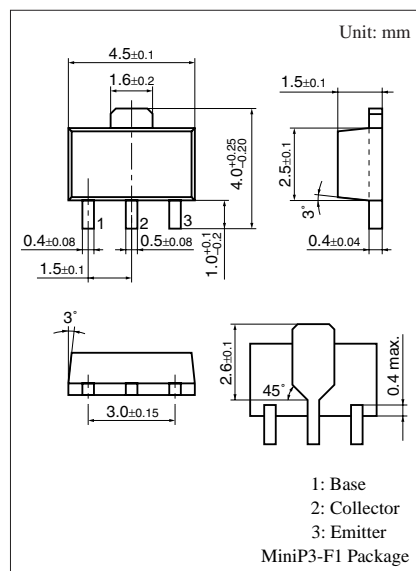
■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector to emitter voltage	V_{CEO}	$I_C = 100\ \mu\text{A}$, $I_B = 0$	120			V
Emitter to base voltage	V_{EBO}	$I_E = 10\ \mu\text{A}$, $I_C = 0$	5			V
Forward current transfer ratio *1	h_{FE1} *2	$V_{CE} = 10\ \text{V}$, $I_C = 150\ \text{mA}$	130		330	
	h_{FE2}	$V_{CE} = 5\ \text{V}$, $I_C = 500\ \text{mA}$	50	100		
Collector to emitter saturation voltage *1	$V_{CE(sat)}$	$I_C = 500\ \text{mA}$, $I_B = 50\ \text{mA}$		0.2	0.6	V
Base to emitter saturation voltage *1	$V_{BE(sat)}$	$I_C = 500\ \text{mA}$, $I_B = 50\ \text{mA}$		0.85	1.2	V
Transition frequency	f_T	$V_{CB} = 10\ \text{V}$, $I_E = -50\ \text{mA}$, $f = 200\ \text{MHz}$		120		MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\ \text{V}$, $I_E = 0$, $f = 1\ \text{MHz}$		11	20	pF

Note) *1: Pulse measurement

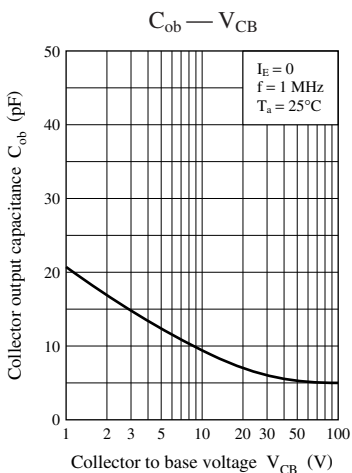
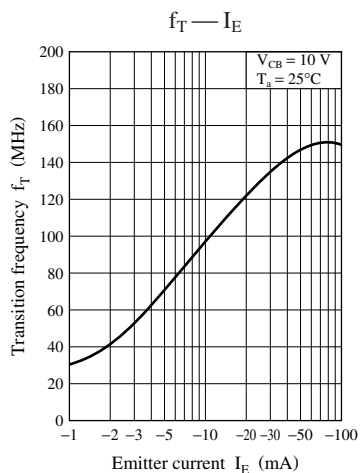
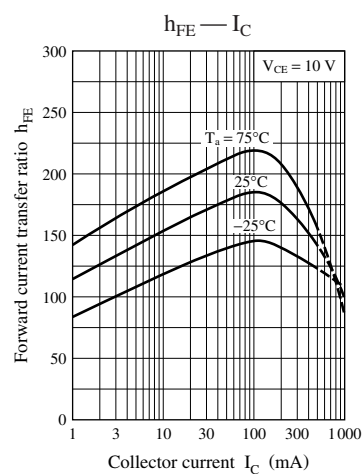
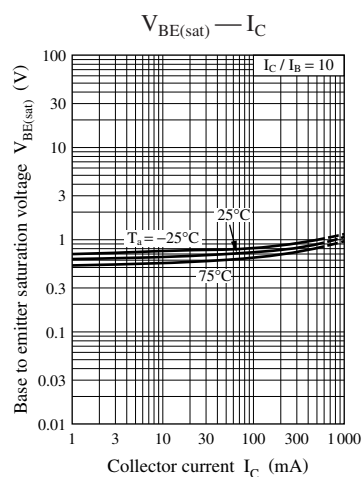
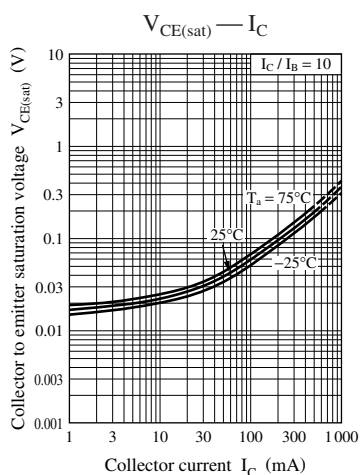
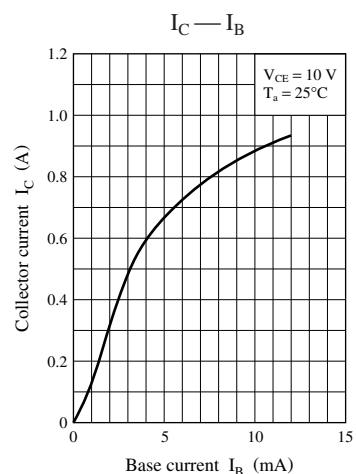
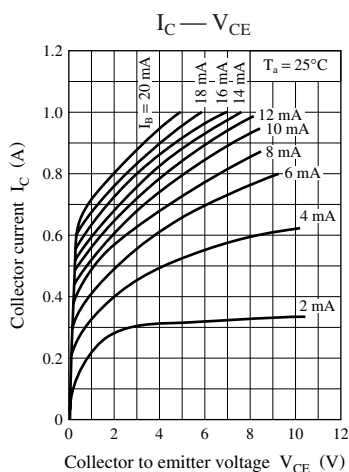
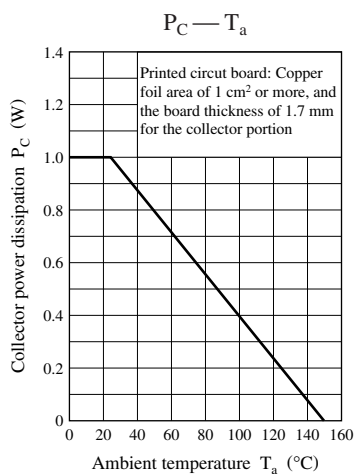
*2: h_{FE} Rank classification

Rank	R	S
h_{FE1}	130 to 220	185 to 330
Marking symbol	VR	VS



Marking symbol: V

Note) The part number in the parenthesis shows conventional part number.



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